PLAN PREPARATION

PENNDOT PROJECT MANAGER: THOMAS J. MCCLELLAND, PE

DESIGNER: ms consultants, Inc.

A-2020-3022605

DISTRICT	COUNTY	TOWNSHIP	CITY	ROUTE	SECTION	TOTAL SHEETS
1-0	ERIE		ERIE	4034	A01	141

ECMS NO. 108952

CERTIFIED CORRECT PLANS

William D. [illegible] P.E.

Professional Engineer

Approved by Bureau of Technical Utility Services

PA PUBLIC UTILITY COMMISSION

ATTEST Rosemary Chiavetta

Secretary

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS

FOR

CONSTRUCTION

OF

STATE ROUTE 4034 SECTION A01

IN ERIE COUNTY

FROM STA. 499+70.00 TO STA. 555+02.00 LENGTH 5432.00 FT. 1.029 MI.

FROM SEG. 0050 OFFSET 2614 TO SEG. 0080 OFFSET 0379

ALSO

STATE ROUTE 8034

FROM STA. 1518+50.00 TO STA. 1532+50.00

PUC APPLICATION DOCKET NO. A-2020-3022605

ALSO INCLUDED:

TRAFFIC CONTROL PLAN	273 SHEETS
SIGNING PLAN	36 SHEETS
PAVEMENT MARKING PLAN	21 SHEETS
UTILITY RELOCATION PLANS	
SASSAFRAS STREET WATERLINE RELOCATION PLAN	2 SHEETS
STATE STREET ELECTRICAL AND TELECOM RELOCATION PLAN	25 SHEETS
STATE STREET 60" SEWER RELOCATION PLAN	3 SHEETS
HOLLAND STREET WATERLINE RELOCATION PLAN	3 SHEETS
HOLLAND STREET 15" SEWER RELOCATION PLAN	3 SHEETS
HOLLAND STREET 60" SEWER RELOCATION PLAN	3 SHEETS
ROADSIDE DEVELOPMENT PLAN	24 SHEETS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	64 SHEETS
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	23 SHEETS
HIGHWAY LIGHTING PLAN	36 SHEETS
ITS PLAN	3 SHEETS
RECTANGULAR RAPID FLASHING BEACON PLAN	12 SHEETS
TRAFFIC SIGNAL PLAN	7 SHEETS
STRUCTURE PLANS	
L-430 (HOLLAND STREET PEDESTRIAN BRIDGE)	137 SHEETS
S-41005 (STATE STREET BRIDGE)	64 SHEETS
S-41006 (WEST BAYFRONT PARKWAY RAMP)	56 SHEETS
S-41007 (EAST BAYFRONT PARKWAY RAMP)	54 SHEETS
S-40690P (RETAINING WALL A)	14 SHEETS
S-41019 (RETAINING WALL B)	34 SHEETS
S-41009D (RETAINING WALLS C & D)	19 SHEETS
S-41008 (RETAINING WALL E)	12 SHEETS
DEMOLITION OF EXISTING CSX STRUCTURE	12 SHEETS
CROSS SECTIONS	123 SHEETS
EXISTING STRUCTURE PLANS	50 SHEETS
S-17717A (SR 4034 SINGLE SPAN P/S CONCRETE SPREAD BOX BEAM BRIDGE)	

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DESIGN DESIGNATION

SR 4034

HIGHWAY CLASSIFICATION - COMMUNITY ARTERIAL - URBAN
DESIGN SPEED - 35 MPH
PAVEMENT WIDTH - 44'-0"
SHOULDER WIDTH - 4'-0"

TRAFFIC DATA

LETTING YEAR A.D.T. - 22,700 (2022)
DESIGN YEAR A.D.T. - 25,700 (2042)
D.H.V. - 2,310
D - 51%
T - 3%

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PREPARED BY:
ms consultants, inc.
300 CORPORATE CENTER DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

James P. O'Mara 8/23/2022

REGISTERED PROFESSIONAL ENGINEER DATE
PENNA. NO. 079501

RECOMMENDED Brian A. Mulka DATE: 2022.08.24 09:18:45 -04'00'

DISTRICT EXECUTIVE

RECOMMENDED DATE:

DEPUTY SECRETARY

APPROVED DATE:

SECRETARY OF TRANSPORTATION
(ON BEHALF OF THE GOVERNOR AS WELL AS THE SECRETARY)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	2 OF 141
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LIST OF PROPERTY OWNERS

2 — ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITIC

3 — CITY OF ERIE, A THIRD CLASS CITY

6A — ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

8 — SCOTT'S BAYFRONT DEVELOPMENT, INC., A PENNSYLVANIA CORPORATION

13 — UPMC HAMOT, A NONPROFIT CORPORATION

16 — ERIE CITY WATER AUTHORITY

17 — MARY E. WATSON

18 — JAMES M. TIMON AND JANET L. TIMON, HIS WIFE

19 — GARY R. CHRISTENSEN

20 — STEFANUS TSJIAM

21 — DYLAN J, POMORSKI & JAMIE A. KEIM

22 — R. CHRISTOPHER BRODE

23 — DANIEL J. DAHLKEMPER AND KATHLEEN A. DAHLKEMPER, HIS WIFE

24 — MCERIE PARTNERS, LP

25 — JESSE D. LOCKETT, JR AND RICHARD D. COLUCCI, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP

26 — TIM BRENNAN, SINGLE

27 — CHRISTOPHER W. EDGETT

28 — CHRISTOPHER W. EDGETT AND KATHLEEN M. EDGETT, HIS WIFE (OWNERS OF AN UNDIVIDED ONE-HALF INTEREST), AS TENANTS BY THE ENTIRETIES, AND JAMES S. EDGETT & MARY LOUISE EDGETT, HIS WIFE, (OWNERS OF AN UNDIVIDED ONE-HALF INTEREST) AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP TO EACH OTHER

30 — PHOENIX REALTY DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION

31 — NEW MILLENNIUM REALTY DEVELOPMENT CORPORATION

32 — BAYSIDE DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION

33 — THE HAMOT MEDICAL CENTER OF THE CITY OF ERIE, PENNSYLVANIA, A PENNSYLVANIA NONPROFIT CORPORATION

34 — MacDONALD, ILLIG, JONES & BRITTON LLP ("MIJB"), A 27.86% INTEREST AND DANIEL J. PRISCHAK, DENNIS J. PRISCHAK, DAVID J. PRISCHAK, DOUGLAS J. PRISCHAK, AND DONALD J. PRISCHAK, A 72.14% INTEREST, AS TENANTS-IN-COMMON

69 — MCERIE PARTNERS, LP

74 — BAYSIDE DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION

75 — BAYSIDE DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION

76 — CHRISTOPHER W. EDGETT AND KATHLEEN M. EDGETT, HIS WIFE (OWNERS OF AN UNDIVIDED ONE-THIRD INTEREST), AS TENANTS BY THE ENTIRETIES, AND JAMES S. EDGETT & MARY LOUISE EDGETT, HIS WIFE, (OWNERS OF AN UNDIVIDED TWO-THIRDS INTEREST) AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP TO EACH OTHER

72 — CHRISTOPHER W. EDGETT

1 DISTRICT
DISTRICT OFFICE
PROJECT LOCATION

LIMIT OF WORK
STA 499+70.00
SEG 0050 OFFSET 2614
SR 4034 SECTION A01
CITY OF ERIE
ERIE COUNTY

START WORK
STA 500+20.00
SEG 0050 OFFSET 2664
SR 4034 SECTION A01

START WORK
STA 0+90.00
SASSAFRAS ST EXT

STOP WORK
STA 7+56.71
SASSAFRAS ST EXT

SASSAFRAS ST EXT SURVEY & CONSTR ℄

SR 4034 SURVEY & CONSTR ℄

SR 4034 SURVEY & CONSTR ℄
POT STA 518+50.00 =
SR 8034 CONSTR ℄
POT STA 1518+50.00

STOP WORK
STA 114+50.00
STATE ST

STATE ST SURVEY & CONSTR ℄

START WORK
STA 102+82.14
STATE ST

SASSAFRAS ROUNDABOUT
CONSTR ℄

SR 4034 SURVEY & CONSTR ℄

SR 8034
CONSTR ℄

2.1 MILES
TO SR 0079

500 505 510 515 520 525 1525 1530 1535

W FRONT STREET
MYRTLE STREET
SASSAFRAS STREET
W BAYFRONT PARKWAY
SHORT STREET
CHESTNUT STREET
SASSAFRAS STREET EXTENSION
STATE STREET
W 2ND STREET

102 117 103 118 104 119 140 112 135 105 120 127 131 106 121 128 132 107 122 129 133 114 137 113 136 115 110

CONTINUED ON SHEET 3 OF 141

LEGEND

PLAN

PROFILE

PARCEL IDENTIFICATION NUMBER

PARCEL IDENTIFICATION NUMBER-NO TAKE

SHEET BREAK

SCALE IN FEET
0 100 200

INDEX MAP

REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501
COMMONWEALTH OF PENNSYLVANIA

DES: MJQ | CKD: JPO | DWG: DMC | CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDId 01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	3 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LIST OF PROPERTY OWNERS

- 6A — ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY
- 8 — SCOTT'S BAYFRONT DEVELOPMENT, INC., A PENNSYLVANIA CORPORATION
- 10 — THE COUNTY OF ERIE
- 11 — ERIE METROPOLITAN TRANSIT AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY
- 12 — 302 ASSOCIATES REALTY PARTNERSHIP, A PENNSYLVANIA PARTNERSHIP
- 13 — UPMC HAMOT, A NONPROFIT CORPORATION
- 32 — BAYSIDE DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION
- 40 — MEDICOR REALTY, L.P., A PENNSYLVANIA LIMITED PARTNERSHIP
- 41 — THE COUNTY OF ERIE
- 42 — PIERRE McCORMICK, AS TRUSTEE OF THE PIERRE McCORMICK REVOCABLE TRUST
- 43 — BLUE PIKE PROPERTIES, LLC
- 44 — STELLA BEVELACQUA
- 45 — BLUE PIKE PROPERTIES, LLC
- 46 — JAMES KOWALSKI
- 47 — DOROTHY A. GOLAB
- 48 — JDPERO RENTALS, LLC, A PENNSYLVANIA LIMITED LIABILITY COMPANY
- 49 — TIMOTHY SHANNON AND DIANE SHANNON, HUSBAND AND WIFE
- 70 — NEW YORK CENTRAL LINES, LLC (CSX BY MERGER)
- 77 — ADVANCED ELECTROCIRCUITS CORP.

RECORD OF EXISTING ROAD TYPES

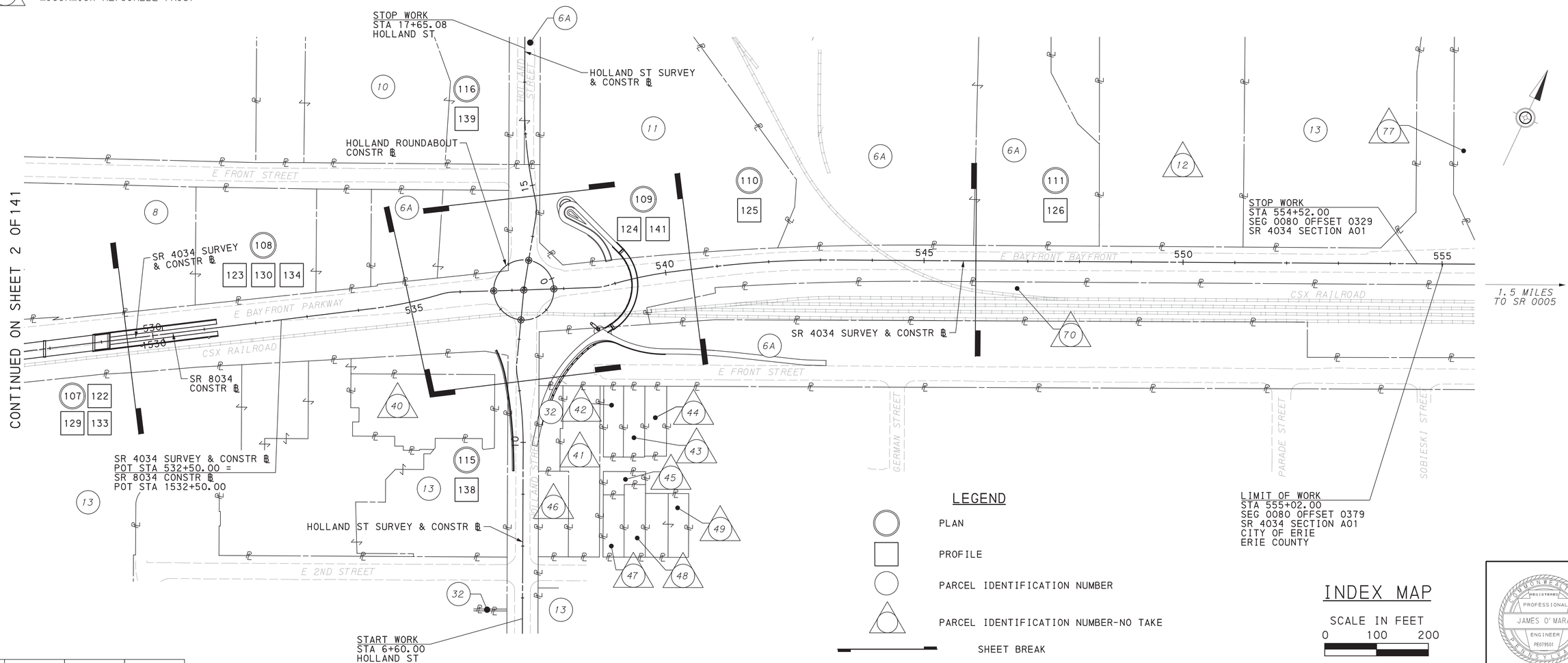
SR 4034 LIMIT OF WORK ADJACENT TO STA 499+70.00 SEG 0050 OFFSET 2614	40′ OF 1" OF SUPERPAVE, THIN HMA, 76-22, 6.3 MM, SRL-H ON 40′ OF 1½" OF SUPERPAVE, HMA WRG, 64-22, 9.5 MM, SRL-G ON 40′ OF 2½" OF SUPERPAVE, HMA BNDR, 64-22, 19.0 MM ON 40′ OF 4" OF SUPERPAVE, HMA BASE, 64-22, 25.0 MM ON 40′ OF 10" OF DOWELLED PCCP ON 40′ OF 4" OF OGS SUBBASE ON 40′ OF 4" OF 2A SUBBASE
STA 499+70.00 TO STA 525+80.58	40′ OF 1" OF SUPERPAVE, THIN HMA, 76-22, 6.3 MM, SRL-H ON 40′ OF 1½" OF SUPERPAVE, HMA WRG, 64-22, 9.5 MM, SRL-G ON 40′ OF 2½" OF SUPERPAVE, HMA BNDR, 64-22, 19.0 MM ON 40′ OF 4" OF SUPERPAVE, HMA BASE, 64-22, 25.0 MM ON 40′ OF 10" OF DOWELLED PCCP ON 40′ OF 4" OF OGS SUBBASE ON 40′ OF 4" OF 2A SUBBASE
STA 525+80.58 TO STA 555+02.00	40′ OF 10" OF DOWELLED PCCP ON 40′ OF 4" OF OGS SUBBASE ON 40′ OF 4" OF 2A SUBBASE
LIMIT OF WORK ADJACENT TO STA 555+02.00 SEG 0080 OFFSET 0379	40′ OF 10" OF DOWELLED PCCP ON 40′ OF 4" OF OGS SUBBASE ON 40′ OF 4" OF 2A SUBBASE

NOTE:
THE DEPTHS OF MATERIAL SHOWN ARE FOR DESIGN PURPOSES ONLY. ANY RISK OF UNANTICIPATED COSTS ASSOCIATED WITH DIFFERENCES BETWEEN THE LISTED DEPTHS AND THE ACTUAL DEPTHS SHALL BE ACCEPTED BY THE CONTRACTOR.

TABULATION OF SEGMENT EQUALITIES

SR 4034
SEG 0060 OFFSET 0000 = STA 503+13.58
SEG 0070 OFFSET 0000 = STA 525+80.58
SEG 0080 OFFSET 0000 = STA 551+22.58

SR 8034
SEG 0070 OFFSET 0000 = STA 525+80.58



LEGEND

- PLAN
- PROFILE
- PARCEL IDENTIFICATION NUMBER
- PARCEL IDENTIFICATION NUMBER-NO TAKE
- SHEET BREAK

INDEX MAP

SCALE IN FEET
0 100 200

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDId 02.dgn

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDgn 01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	4 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF OVERALL LENGTH

SR 4034
STA 499+70.00 TO STA 555+02.00 = 5532.00 FT = 1.048 MI

TABULATION OF CONSTRUCTION LENGTH

SR 4034
STA 500+20.00 TO STA 554+52.00 = 5432.00 FT = 1.029 MI

TABULATION OF EQUALITIES

NONE

LIST OF ALIGNMENT EQUALITIES

SR 4034 SURVEY & CONSTR ℄
POT STA 512+96.64 =
SASSAFRAS ST EXT SURVEY & CONSTR ℄
POT STA 0+00.00

SR 4034 SURVEY & CONSTR ℄
POT STA 518+50.00 =
SR 8034 CONSTR ℄
POT STA 1518+50.00

SR 4034 SURVEY & CONSTR ℄
POT STA 532+50.00 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1532+50.00

SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

SR 4034 SURVEY & CONSTR ℄
POT STA 537+22.88 =
HOLLAND ST SURVEY & CONSTR ℄
POT STA 12+95.38

SR 4034 SURVEY & CONSTR ℄
POT STA 512+36.80 =
SASSAFRAS ROUNDABOUT CONSTR ℄
POC STA 1+98.09
POT STA 512+36.80 =
SASSAFRAS ROUNDABOUT CONSTR ℄
POC STA 1+98.09

SR 4034 SURVEY & CONSTR ℄
POC STA 513+57.25 =
SASSAFRAS ROUNDABOUT CONSTR ℄
POC STA 3+64.15

SR 4034 SURVEY & CONSTR ℄
POT STA 536+64.88 =
HOLLAND ROUNDABOUT CONSTR ℄
POC STA 1+61.46

SR 4034 SURVEY & CONSTR ℄
POT STA 537+80.88 =
HOLLAND ROUNDABOUT CONSTR ℄
POC STA 3+44.02

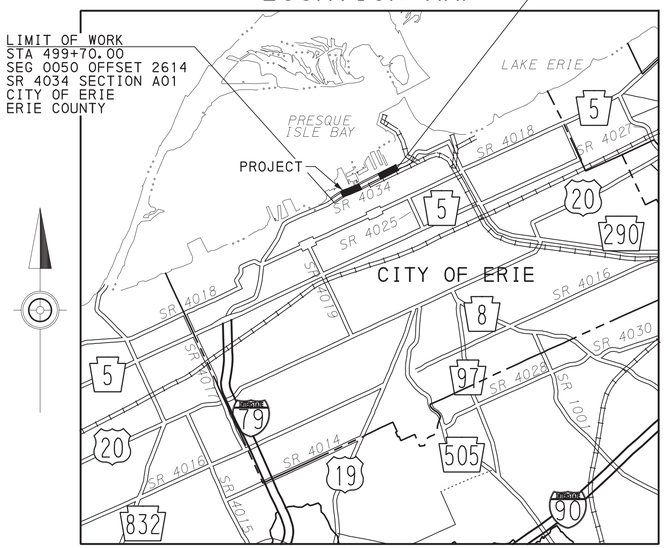
SASSAFRAS ST EXT SURVEY & CONSTR ℄
POT STA 0+58.00 =
SASSAFRAS ROUNDABOUT CONSTR ℄
POC STA 0+91.11

HOLLAND ST SURVEY & CONSTR ℄
POT STA 12+37.38 =
HOLLAND ROUNDABOUT CONSTR ℄
POC STA 2+45.31

HOLLAND ST SURVEY & CONSTR ℄
POT STA 13+53.38 =
HOLLAND ROUNDABOUT CONSTR ℄
POC STA 0+59.21

LIMIT OF WORK
STA 555+02.00
SEG 0080 OFFSET 0379
SR 4034 SECTION A01
CITY OF ERIE
ERIE COUNTY

LOCATION MAP



SCALE
0 1 2 MILES

LEGEND
STATE ROUTE
TOWNSHIP ROAD
MUNICIPAL BOUNDARY
RAILROAD
PROJECT

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY), FROM STA 499+70.00 TO STA 503+38.00 AND STA 543+00.00 TO STA 555+02.00 IS VARIABLE IN WIDTH BASED ON PLAN OF SR 4034, SECTION A00 R/W, SIGNED FEBRUARY 6, 1991, AND RECORDED MARCH 1, 1991 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 16 PAGE 105.

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY), FROM STATION 514+20.60 TO STATION 540+91.00, IS VARIABLE IN WIDTH, BASED ON RIGHT-OF-WAY PLAN OF SR 4034, SECTION A01 GR/W, SIGNED ON FEBRUARY 4, 2021, AND RECORDED ON AUGUST 6, 2021 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 001, AND RE-AUTHORIZED ON JUNE 28, 2022 AND RE-RECORDED ON JULY 8, 2022 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 008.

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY), FROM STA 503+38.00 TO STA 543+00.00 IS VARIABLE IN WIDTH BASED ON PLAN OF SR 4034, SECTION A01 R/W, SIGNED JULY 26, 2022, AND RECORDED AUGUST 4, 2022, IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 10.

THE LEGAL RIGHT-OF-WAY ON SASSAFRAS STREET, FROM STATION 0+95.20 TO STATION 4+35.00, IS VARIABLE IN WIDTH, BASED ON RIGHT-OF-WAY PLAN OF SR 4034, SECTION A01 R/W, SIGNED JULY 26, 2022, AND RECORDED AUGUST 4, 2022, IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 10.

THE LEGAL RIGHT-OF-WAY ON SASSAFRAS STREET, FROM STATION 4+35.00 TO STATION 7+56.71, IS 60 FEET BASED ON THE LAWS AND ORDINANCES OF THE CITY OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE.

THE LEGAL RIGHT-OF-WAY ON STATE STREET, FROM STATION 102+82.14 TO STATION 109+10.32 AND FROM STATION 111+66.00 TO STATION 114+50.00, IS 100 FEET BASED ON THE LAWS AND ORDINANCES OF THE CITY OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE.

THE LEGAL RIGHT-OF-WAY ON STATE STREET, FROM STATION 110+87.60 TO STATION 111+66.00 IS VARIABLE IN WIDTH, BASED ON RIGHT-OF-WAY PLAN OF SR 4034, SECTION A01 R/W, SIGNED JULY 26, 2022, AND RECORDED AUGUST 4, 2022, IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 10.

THE LEGAL RIGHT-OF-WAY ON HOLLAND STREET, FROM STATION 6+60.00 TO STATION 9+87.00 AND FROM STATION 15+40.58 TO STATION 17+65.08, IS 60 FEET BASED ON THE LAWS AND ORDINANCES OF THE CITY OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE.

THE LEGAL RIGHT-OF-WAY ON HOLLAND STREET, FROM STATION 9+87.00 TO STATION 11+83.62 AND FROM STATION 13+98.69 TO STATION 15+40.58 VARIABLE IN WIDTH, BASED ON RIGHT-OF-WAY PLAN OF SR 4034, SECTION A01 R/W, SIGNED JULY 26, 2022, AND RECORDED AUGUST 4, 2022, IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 18 PAGE 10.

THE LEGAL RIGHT-OF-WAY ON 2ND STREET IS 60 FEET BASED ON THE LAWS AND ORDINANCES OF THE CITY OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE.

THE LEGAL RIGHT-OF-WAY ON W. FRONT STREET AKA BAYFRONT PROMENADE IS VARIABLE IN WIDTH BASED ON THE LAWS AND ORDINANCES OF THE CITY OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE, PENNSYLVANIA, IN FORCE APRIL 4, 1896, CODIFIED AND PUBLISHED BY THE AUTHORITY OF THE MAYOR AND COUNCILS OF ERIE AND PLAN OF SR 4034, SECTION A00 R/W, SIGNED FEBRUARY 6, 1991, AND RECORDED MARCH 1, 1991 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE IN RIGHT-OF-WAY BOOK 16 PAGE 105.

THE LEGAL RIGHT-OF-WAY ON E. FRONT STREET, FROM STATE STREET TO HOLLAND STREET, IS 50 FEET BASED ON REPLOT OF LAND OF PENNSYLVANIA ELECTRIC COMPANY, RECORDED IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE ON JANUARY 27, 1994, AND RECORDED IN PLAN BOOK 1994 PAGE 21.

REMOVE BUILDINGS AND STRUCTURES MARKED [R] UNDER THE ITEM FOR CLEARING AND GRUBBING.

DEMOLISH AND REMOVE BUILDINGS AND STRUCTURES MARKED [D] AS LUMP SUM ITEMS AT THE LOCATIONS INDICATED.

BUILDINGS AND STRUCTURES MARKED [O] ARE ENCROACHMENTS WHICH ARE THE RESPONSIBILITY OF THE PROPERTY OWNERS TO REMOVE.

DO NOT INTERFERE WITH THE OPERATION OF ANY FIRE HYDRANT, FIRE CALL BOX OR POLICE CALL BOX.

THIS IS A FEDERAL-AID PROJECT AND AS SUCH IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE FEDERAL HIGHWAY ADMINISTRATION AND THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION.

THREE TO TEN WORKING DAYS PRIOR TO EXCAVATION BASED ON THE COMPLEXITY OF THE PROJECT, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776, SERIAL NO. ---------- FOR THE CITY OF ERIE.

THE CONTRACTOR IS REQUIRED TO NOTIFY THE DEPARTMENT AND SUBMIT AN ALLEGED VIOLATION REPORT (AVR) TO THE PA PUBLIC UTILITY COMMISSION THROUGH THE PA ONE CALL SYSTEM, WWW.PA1CALL.ORG, WITHIN TEN (10) BUSINESS DAYS AFTER A UTILITY LINE IS STRUCK, DAMAGED, OR PREVIOUS DAMAGE IS DISCOVERED AS REQUIRED BY PENNSYLVANIA'S UNDERGROUND UTILITY LINE PROTECTION LAW ACT 50 (P.L.852, NO. 287 AMENDED OCT. 30, 2017).

GENERAL NOTES (CONTINUED)

TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

DRAINAGE EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE DEPARTMENT'S PIPE OR DITCH WITHOUT ADVANCED WRITTEN APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.

SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.

UNDERGROUND STRUCTURE SUPPORT EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF UNDERGROUND STRUCTURE SUPPORT ELEMENTS. THE EASEMENT SHALL NOT PREVENT THE OWNER FROM MAKING USE OF THE SURFACE FOR FARMING, PARKING AND SIMILAR LEGAL PURPOSES WHICH SHALL NOT INJURE THE STRUCTURE SUPPORT ELEMENTS. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED THEREON, NOR IS ANY EXCAVATION OR DRILLING ALLOWED WITHOUT ADVANCED WRITTEN APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.

PRIVATE ACCESS. LAND ACQUIRED IN THE INTEREST DESIGNATED (EITHER FEE SIMPLE OR EASEMENT FOR DRIVEWAY PURPOSE) FOR THE BENEFIT AND USE OF THE PROPERTY OR PROPERTIES DESIGNATED, ALONG WITH A TEMPORARY CONSTRUCTION EASEMENT FOR THE BENEFIT AND USE OF THE COMMONWEALTH, IF NECESSARY. TITLE SHALL VEST IN THE OWNERS OF THE DESIGNATED PROPERTIES UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON THE COMPLETION OF CONSTRUCTION, IF ANY.

THE HORIZONTAL CONTROL IS TIED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83) (NORTH ZONE). THE AVERAGE COMBINED SCALE FACTOR IS 1.000012520.

ALL CURVE DATA BASED ON ARC DEFINITION UNLESS OTHERWISE NOTED.

THE VERTICAL CONTROL IS BASED UPON THE USGS NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD 1988).

THE HALF CIRCLED NUMBER INDICATES A SCALED DIMENSION. (+85 / 50')

ADA CURB RAMPS ARE TO BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR. LOCATIONS AND QUANTITIES OF PUSH BUTTONS, STUB POLES, TRENCH, CONDUIT AND SIGNAL CABLE MAY CHANGE BASED ON THE FINAL APPROVED ADA CURB RAMP DESIGN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF PEDESTRIAN PUSH BUTTONS AND STUB POLES WITH THE DESIGN AND CONSTRUCTION OF ADA CURB RAMPS TO ENSURE THAT ALL ADA CRITERIA ARE SATISFIED.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	5 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SHEET INDEX BLOCK

DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2 - 3
GENERAL NOTES AND LOCATION MAP	4
PUBLIC UTILITIES, SHEET INDEX AND STANDARD DRAWINGS	5
PROJECT COORDINATES	6
MONUMENT AND BENCHMARK LOCATIONS	7
TYPICAL SECTIONS	8 - 16
DETAIL SHEETS	17 - 42
SUMMARY SHEETS	43 - 48
TABULATION SHEETS	49 - 101
PLAN SHEETS	102 - 116
PROFILE SHEETS	117 - 141

DETAILS, OTHER THAN THOSE INDICATED, ARE ON THE FOLLOWING STANDARD DRAWINGS:

RC-10M		JUNE 1, 2010	TC-8600	(13 SHEETS)	JUNE 13, 2013
RC-11M	(2 SHEETS)	JUNE 1, 2010	TC-8602	(4 SHEETS)	JUNE 13, 2013
RC-12M	(2 SHEETS)	FEB 8, 2019	TC-8604	(5 SHEETS)	AUG 17, 2021
RC-13M		JUNE 1, 2010	TC-8700C	(31 SHEETS)	JUNE 13, 2013
RC-20M	(15 SHEETS)	NOV 30, 2021	TC-8701D	(13 SHEETS)	JUNE 13, 2013
RC-23M	(3 SHEETS)	FEB 8, 2019	TC-8701E	(2 SHEETS)	JUNE 13, 2013
RC-24M	(3 SHEETS)	FEB 19, 2021	TC-8702A	(8 SHEETS)	JUNE 13, 2013
RC-28M	(2 SHEETS)	FEB 8, 2019	TC-8702B	(9 SHEETS)	JUNE 13, 2013
RC-30M	(5 SHEETS)	NOV 30, 2021	TC-8702C	(2 SHEETS)	JUNE 13, 2013
RC-31M	(3 SHEETS)	NOV 30, 2021	TC-8702D	(2 SHEETS)	JUNE 13, 2013
RC-32M		JUNE 1, 2010	TC-8702E	(5 SHEETS)	JUNE 13, 2013
RC-33M	(2 SHEETS)	JUNE 1, 2010	TC-8716		JUNE 13, 2013
RC-35M		JUNE 1, 2010	TC-8717		JUNE 13, 2013
RC-38M	(3 SHEETS)	SEPT 15, 2016	TC-8801	(10 SHEETS)	DEC 12, 2011
RC-39M	(30 SHEETS)	NOV 30, 2021	TC-8802		DEC 12, 2011
RC-40M		FEB 8, 2019	TC-8803	(4 SHEETS)	DEC 12, 2011
RC-45M	(24 SHEETS)	FEB 19, 2021	TC-8804	(2 SHEETS)	DEC 12, 2011
RC-46M	(34 SHEETS)	FEB 19, 2021	TC-8805		DEC 12, 2011
RC-50M	(12 SHEETS)	FEB 19, 2021	BC-701M	(3 SHEETS)	FEB 19, 2021
RC-51M	(16 SHEETS)	NOV 30, 2021	BC-709M	(12 SHEETS)	FEB 19, 2021
RC-58M	(4 SHEETS)	AUG 4, 2017	BC-721M	(2 SHEETS)	FEB 19, 2021
RC-64M	(2 SHEETS)	FEB 19, 2021	BC-722M	(2 SHEETS)	FEB 19, 2021
RC-65M		DEC 17, 2019	BC-732M	(3 SHEETS)	JAN 31, 2019
RC-67M	(14 SHEETS)	FEB 19, 2021	BC-734M	(2 SHEETS)	FEB 19, 2021
RC-70M	(3 SHEETS)	FEB 8, 2019	BC-735M		SEPT 30, 2016
RC-71M	(4 SHEETS)	AUG 4, 2017	BC-736M	(3 SHEETS)	JAN 31, 2019
RC-72M	(7 SHEETS)	FEB 8, 2019	BC-751M	(7 SHEETS)	JAN 31, 2019
RC-73M	(4 SHEETS)	FEB 8, 2019	BC-752M	(2 SHEETS)	FEB 19, 2021
RC-75M		JUNE 1, 2010	BC-755M	(4 SHEETS)	JAN 31, 2019
RC-77M		DEC 17, 2019	BC-756M	(6 SHEETS)	SEPT 30, 2016
RC-80M	(2 SHEETS)	JUNE 1, 2010	BC-757M	(3 SHEETS)	SEPT 30, 2016
RC-81M		JUNE 1, 2010	BC-766M	(2 SHEETS)	JAN 31, 2019
RC-82M	(2 SHEETS)	JUNE 1, 2010	BC-767M	(6 SHEETS)	FEB 19, 2021
RC-83M	(2 SHEETS)	FEB 8, 2019	BC-772M	(5 SHEETS)	SEPT 30, 2016
RC-84M	(2 SHEETS)	JUNE 1, 2010	BC-775M	(3 SHEETS)	SEPT 30, 2016
			BC-788M	(12 SHEETS)	JAN 31, 2019
			BC-790M		JAN 31, 2019
			BC-794M		JAN 31, 2019
			BC-799M	(13 SHEETS)	FEB 19, 2021

PUBLIC UTILITIES

SYMBOL	PUBLIC UTILITIES	REP./PHONE NO.
—UCTV— —CTV1— —UCTV—	CHARTER COMMUNICATIONS 2904 STATE ROAD ASHTABULA, OH 44004	ATTN: DANIEL BANISTER PHONE: (216) 575-8016 (OFFICE) PHONE: (440) 384-9903 (CELL) DANIEL.BANISTER@CHARTER.COM
—S1— —S1—	ERIE CITY BUREAU OF SEWERS 626 STATE STREET, ROOM 400 ERIE, PA 16501	ATTN: JASON SAYERS PHONE: (814) 870-1397 JSAYERS@ERIE.PA.US
—S2— —S2—	ERIE SEWER AUTHORITY 120 WEST 10TH STREET ERIE, PA 16501	ATTN: TIMOTHY SENNETT PHONE: (814) 459-2800 TSENNETT@KMGSLAW.COM
—W— —W—	ERIE WATER WORKS 240 WEST 12TH STREET ERIE, PA 16501	ATTN: CRAIG PALMER, P.E. PHONE: (814) 870-8000 EXT 208 CPALMER@ERIEWATERWORKS.ORG
—G— —G—	NATIONAL FUEL DISTRIBUTION CORP. 1100 STATE STREET PO BOX 2081 ERIE, PA 16512	ATTN: JASON FLEEK PHONE: (814) 871-8633 FLEEKJ@NATFUEL.COM
—E— —EU— —E— —EU—	PENNSYLVANIA ELECTRIC COMPANY 5404 EVANS ROAD PO BOX 1101 ERIE, PA 16558	ATTN: CHRIS BEYER PHONE: (814) 868-8737 CBEYER@FIRSTENERGYCORP.COM
—CTV2—	VELOCITY NET COMMUNICATIONS, INC PO BOX 9008 ERIE, PA 16505	ATTN: MAT KACPROWICZ PHONE: (814) 835-2736 MAT.KACPROWICZ@VELOCITYNETWORK.NET
—TU— —T— —TU—	VERIZON NORTH, LLC. 20 EAST 10TH STREET ERIE, PA 16501	ATTN: ERIC RODRIGUES PHONE: (814) 871-2317 ERIC.RODRIGUES@VERIZON.COM

PA ONE-CALL SYSTEM, INC. PHONE NO. 1-800-242-1776
SERIAL NUMBERS: 20222081433 CITY OF ERIE
20222081434 CITY OF ERIE

EARTHWORK SUMMARY ENTIRE PROJECT

THE INFORMATION ON ESTIMATED AMOUNTS OF EARTHWORK HAS BEEN USED IN THE PRELIMINARY ESTIMATE. DO NOT USE AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACTS.

CUBIC YARDS OF EXCAVATION					* CUBIC YDS OF COMPLETED EMBANKMENT	CUBIC YDS OF SELECTED BORROW EXCAVATION, NO. 1	** CUBIC YDS OF SELECTED BORROW EXCAVATION, NO. 57	** CUBIC YDS OF SELECTED BORROW EXC STR BACKFILL	CUBIC YDS OF FOREIGN BORROW EXCAVATION	CUBIC YDS OF WASTE
CLASS 1	CLASS 1B	CLASS 2	** CLASS 3	SPECIAL EXCAVATION						
44,127	2,537	4,586	35,939	3,340	70,614	12,405	5,242	23,646	3,735	64,943

* INCLUDES ALL BORROW ITEMS.
** PART OF LUMP SUM STRUCTURE ITEMS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDgn 02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	6 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 4034 SURVEY & CONSTR ℄	493+07.22	POT	724258.8095	1331309.6962	N 50°57′21" E
	496+46.06	PC	724472.2505	1331572.8593	
	498+12.24	PI	724576.9277	1331701.9216	N 54°16′43" E
	499+78.32	PT	724673.9488	1331836.8338	
	500+67.92	PC	724726.2636	1331909.5798	
	502+61.98	PI	724839.5635	1332067.1284	N 65°52′56" E
	504+54.71	PT	724918.8585	1332244.2462	
	506+60.95	PC	725003.1314	1332432.4829	
	507+75.11	PI	725049.7766	1332536.6724	N 76°07′43" E
	508+88.65	PRC	725077.1444	1332647.4977	
	510+10.15	PI	725106.2720	1332765.4495	N 58°58′26" E
	511+29.82	PRC	725168.8941	1332869.5625	
	511+42.67	PI	725175.5160	1332880.5718	N 72°51′36" E
	511+55.39	PT	725179.3022	1332892.8486	
	512+96.64	PI	725220.9299	1333027.8260	
	512+97.16	PC	725220.7439	1333028.3065	S 68°50′48" E
	514+36.67	PI	725170.3977	1333158.4201	
	515+69.27	PT	725194.6908	1333295.8032	N 79°58′20" E
	519+55.02	PC	725261.8608	1333675.6651	
	522+08.36	PI	725305.9744	1333925.1378	
	524+55.44	PT	725440.5364	1334139.7903	N 57°55′02" E
	534+26.04	PC	725956.0688	1334962.1651	
	534+94.05	PI	725992.1908	1335019.7868	
	535+61.73	PRC	726037.4626	1335070.5365	N 48°15′54" E
	535+75.62	PI	726046.7061	1335080.8985	
	535+89.35	PT	726052.9536	1335093.2994	N 63°15′41" E
	537+22.88	PI	726113.0344	1335212.5559	
	538+60.17	PC	726175.5411	1335334.7852	N 62°54′55" E
	538+73.54	PI	726181.6297	1335346.6912	
	538+86.77	PRC	726190.4962	1335356.7015	N 48°28′03" E
	539+53.35	PI	726234.6388	1335406.5386	
	540+19.62	PT	726270.0000	1335462.9467	N 57°55′02" E
	540+82.06	PC	726303.1642	1335515.8500	
	542+05.16	PI	726368.5505	1335620.1539	
	543+27.93	PT	726420.0050	1335731.9889	N 65°17′35" E
	557+77.15	PC	727025.7456	1337048.5498	
	558+45.79	PI	727054.4363	1337110.9082	
	559+14.07	PT	727071.5510	1337177.3824	N 75°33′43" E
	561+34.49	PC	727126.5086	1337390.8392	
	562+80.62	PI	727162.9436	1337532.3539	
	564+19.10	PT	727268.8667	1337633.0229	N 43°32′35" E
	568+10.09	PC	727552.2790	1337902.3770	
	571+33.43	PI	727786.6539	1338125.1261	
	574+39.06	PT	727863.2109	1338439.2722	N 76°18′15" E
	576+35.89	POT	727909.8146	1338630.5071	
SR 8034 CONSTR ℄	1518+50.00	POT	725243.5739	1333572.2482	N 79°58′20" E
	1519+55.02	PC	725261.8608	1333675.6651	
	1522+08.36	PI	725305.9744	1333925.1378	
	1524+55.44	PT	725440.5364	1334139.7903	N 57°55′02" E
	1532+50.00	POT	725862.5659	1334813.0097	

NOTE:
FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SASSAFRAS ST EXT SURVEY & CONSTR ℄	0+00.00	POT	725220.9299	1333027.8260	N 01°45′51" W
	1+40.71	PC	725361.5762	1333023.4943	
	1+58.61	PI	725379.4639	1333022.9434	N 21°01′09" W
	1+76.17	PRC	725396.1692	1333016.5245	
	2+40.03	PI	725455.7851	1332993.6173	
	3+03.63	PT	725518.2659	1332980.3907	N 11°57′09" W
	3+25.85	PC	725540.0006	1332975.7897	
	3+60.13	PI	725573.5368	1332968.6904	
	3+94.11	PT	725604.6071	1332954.2089	N 24°59′23" W
	8+04.47	POT	725976.5465	1332780.8521	
STATE ST SURVEY & CONSTR ℄					
	95+00.00	POT	724169.5984	1334864.0499	N 24°48′33" W
	121+00.00	POT	726529.6451	1333773.0964	
HOLLAND ST SURVEY & CONSTR ℄	0+00.00	POT	724938.7419	1335756.1368	N 24°50′22" W
	9+89.11	PC	725836.3472	1335340.6346	
	10+58.38	PI	725899.2077	1335311.5365	N 34°42′44" W
	11+27.30	PRC	725956.1481	1335272.0911	
	11+40.86	PI	725967.2912	1335264.3717	
	11+54.26	PT	725980.0638	1335259.8307	N 19°34′18" W
	12+95.38	PI	726113.0344	1335212.5559	
	14+35.84	PC	726248.2267	1335174.4697	N 15°44′01" W
	14+55.85	PI	726267.4908	1335169.0426	
	14+75.36	PRC	726283.2758	1335156.7384	N 37°56′10" W
	15+67.42	PI	726355.8846	1335100.1404	
	16+58.68	PT	726439.4296	1335061.4673	N 24°50′22" W
	23+05.01	POT	727025.9653	1334789.9595	
SASSAFRAS ROUNDABOUT CONSTR ℄					N 1°45′51" W
	0+00.00	PC	725222.7153	1333085.7985	
	1+82.21	PT	725219.1444	1332969.8535	S 1°45′51" E
	1+92.21	PC	725209.1491	1332970.1614	
	3+74.42	PT	725212.7201	1333086.1064	N 1°45′51" W
	3+82.33	PC	725222.7153	1333085.7985	
HOLLAND ROUNDABOUT CONSTR ℄					
	0+00.00	POC	726155.6178	1335251.9343	
	3+64.42	POC	726155.6178	1335251.9343	

NOTE:
FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDgn 03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	7 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

BM-1 ELEV 579.76
SR 4034 SURVEY & CONSTR ℄
20.19' LT STA 498+79.02
SQUARE CUT ON BACK OF INLET CURB TOP

BM-2 ELEV 583.76
SR 4034 SURVEY & CONSTR ℄
17.31' LT STA 507+96.33
SQUARE CUT ON THE NE CORNER CONC SIGN BASE

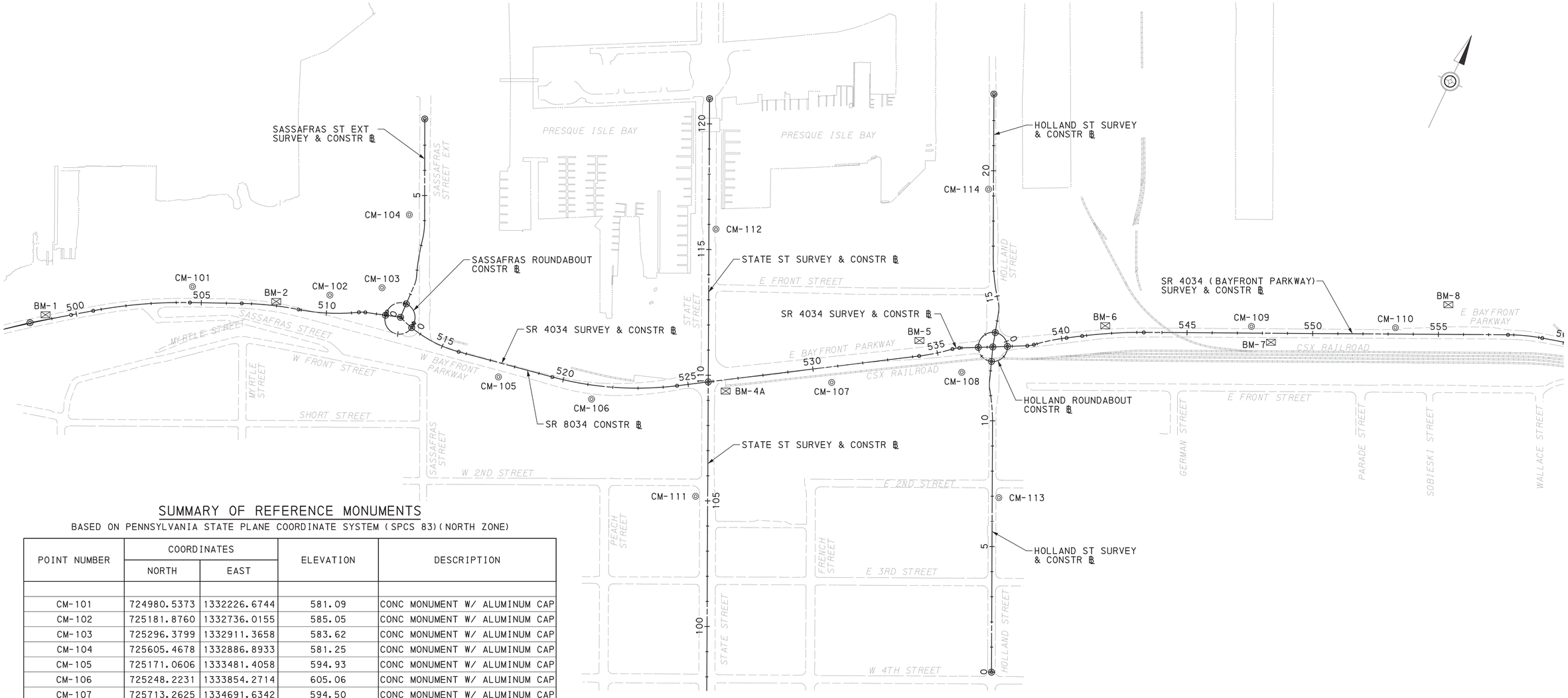
BM-4A ELEV 604.50
SR 4034 SURVEY & CONSTR ℄
44.75' RT STA 526+45.02
"L" CUT IN CONC RETAINING WALL

BM-5 ELEV 588.52
SR 4034 SURVEY & CONSTR ℄
61.00' LT STA 534+35.54
BENCH TIE IN UTILITY POLE #E-6016

BM-6 ELEV 585.56
SR 4034 SURVEY & CONSTR ℄
31.61' LT STA 541+76.68
BENCH TIE IN POLE #19166

BM-7 ELEV 587.10
SR 4034 SURVEY & CONSTR ℄
35.91' RT STA 548+33.85
BENCH TIE IN UTILITY POLE #GTE 52

BM-8 ELEV 594.47
SR 4034 SURVEY & CONSTR ℄
118.23' LT STA 555+39.06
BENCH TIE UTILITY POLE #ZMO1-010



SUMMARY OF REFERENCE MONUMENTS

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

POINT NUMBER	COORDINATES		ELEVATION	DESCRIPTION
	NORTH	EAST		
CM-101	724980.5373	1332226.6744	581.09	CONC MONUMENT W/ ALUMINUM CAP
CM-102	725181.8760	1332736.0155	585.05	CONC MONUMENT W/ ALUMINUM CAP
CM-103	725296.3799	1332911.3658	583.62	CONC MONUMENT W/ ALUMINUM CAP
CM-104	725605.4678	1332886.8933	581.25	CONC MONUMENT W/ ALUMINUM CAP
CM-105	725171.0606	1333481.4058	594.93	CONC MONUMENT W/ ALUMINUM CAP
CM-106	725248.2231	1333854.2714	605.06	CONC MONUMENT W/ ALUMINUM CAP
CM-107	725713.2625	1334691.6342	594.50	CONC MONUMENT W/ ALUMINUM CAP
CM-108	725969.2139	1335143.3410	598.00	CONC MONUMENT W/ ALUMINUM CAP
CM-109	726623.2429	1336109.9505	586.84	CONC MONUMENT W/ ALUMINUM CAP
CM-110	726861.0725	1336630.9422	590.98	CONC MONUMENT W/ ALUMINUM CAP
CM-111	725073.6014	1334393.1448	631.06	CONC MONUMENT W/ ALUMINUM CAP
CM-112	726070.5317	1334016.0475	581.83	CONC MONUMENT W/ ALUMINUM CAP
CM-113	725579.9172	1335488.3289	634.40	CONC MONUMENT W/ ALUMINUM CAP
CM-114	726674.1210	1334931.0285	579.79	CONC MONUMENT W/ ALUMINUM CAP

NOTE: FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

NOTE:
ALL MONUMENTS ARE PENNDOT BRASS DISK IN CONCRETE.

MONUMENT AND BENCHMARK LOCATIONS

SCALE IN FEET
0 200 400

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

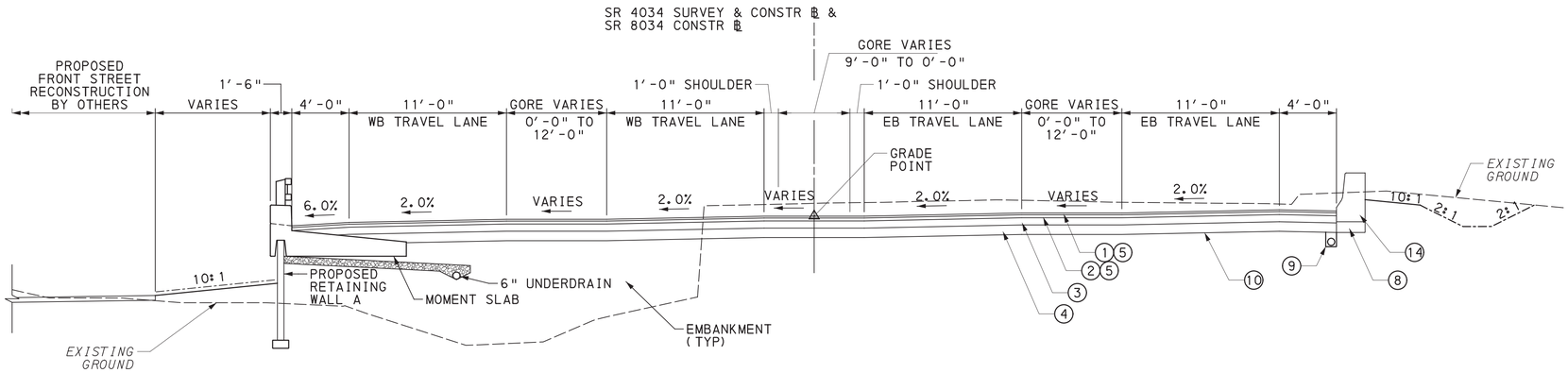
SURVEY BOOK #20550

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDgn 04.dgn

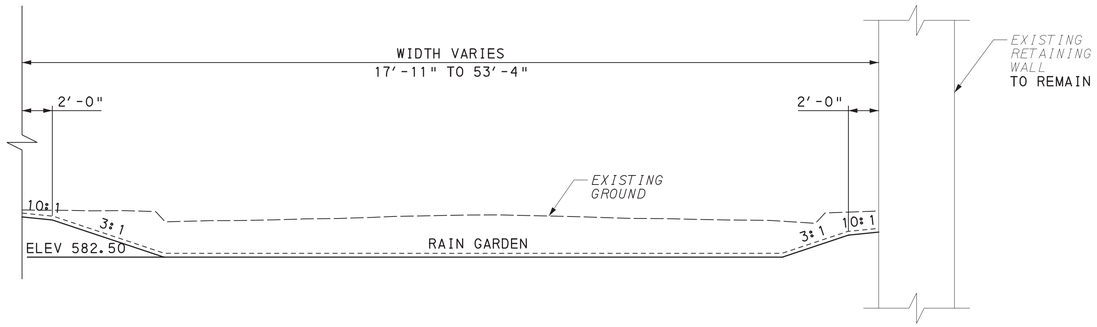
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	8 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



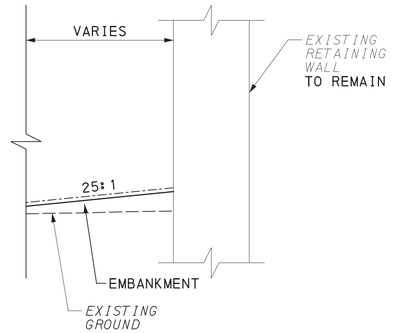
TYPICAL SUPERELEVATED SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 518+69.02 TO STA 519+55.02 (S.E. TRANSITION, INSIDE LANES)
STA 518+47.02 TO STA 519+55.02 (S.E. TRANSITION, OUTSIDE LANES)



PARTIAL SECTION - EXISTING RETAINING WALL

NOT TO SCALE
STA 509+92.68 TO STA 512+35.95



PARTIAL SECTION - EXISTING RETAINING WALL

NOT TO SCALE
STA 504+23.53 TO STA 509+92.68
STA 512+35.95 TO STA 516+38.97

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

-·-·-·- SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

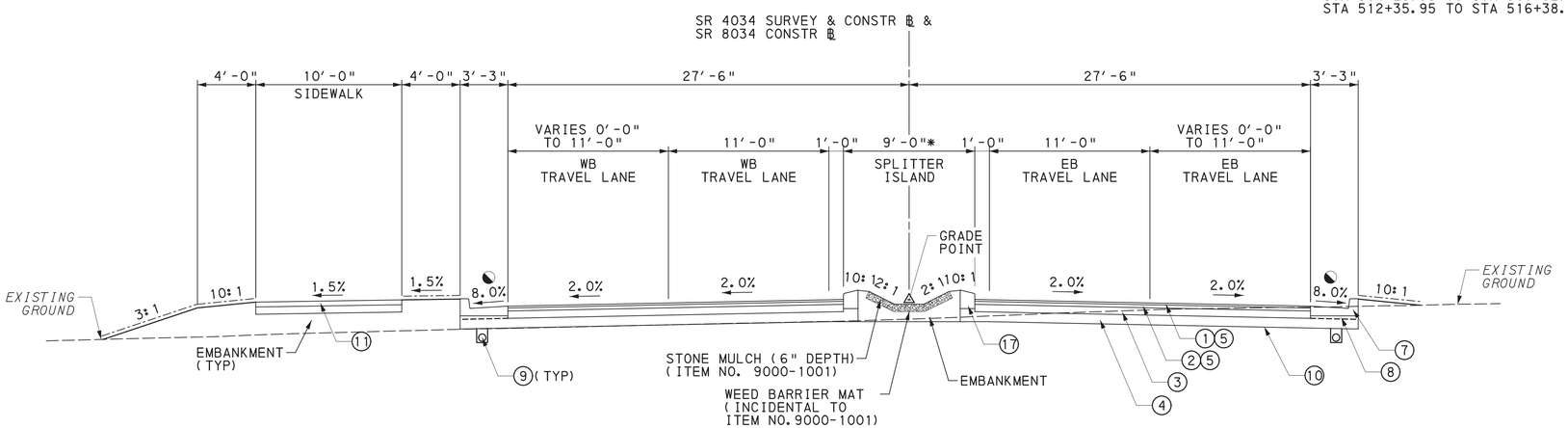
·····-·····- SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

------ SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* WIDTH VARIES:

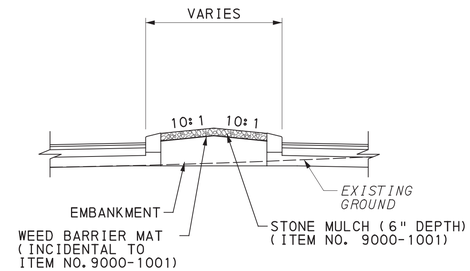
11.0′ AT STA 511+29.82 TO 59.2′ AT STA 512+22.64
59.7′ AT STA 513+70.71 TO 11.0′ AT STA 514+80.57
11.0′ AT STA 535+61.73 TO 55.3′ AT STA 536+48.88
41.8′ AT STA 538+12.88 TO 11.0′ AT STA 538+86.77

◒ CROSS SLOPE IS 2.0% AT CROSSWALK LOCATIONS



TYPICAL TANGENT SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 503+50.00 TO STA 512+22.64
STA 513+70.71 TO STA 518+97.69 (INSIDE LANES) /STA 518+73.69 (OUTSIDE LANES)
STA 531+36.35 TO STA 536+48.88
STA 538+12.88 TO STA 551+25.00
FOR STA 512+22.64 TO STA 513+70.71, SEE TYPICAL ROUNDABOUT SECTION - SASSAFRAS STREET EXTENSION
FOR STA 536+48.88 TO STA 538+12.88, SEE TYPICAL ROUNDABOUT SECTION - HOLLAND STREET



PARTIAL SECTION - SR 4034 MEDIAN

NOT TO SCALE
STA 511+48.00 TO STA 512+15.00
STA 513+76.00 TO STA 514+50.00
STA 535+68.00 TO STA 536+45.00
STA 538+00.00 TO STA 538+84.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

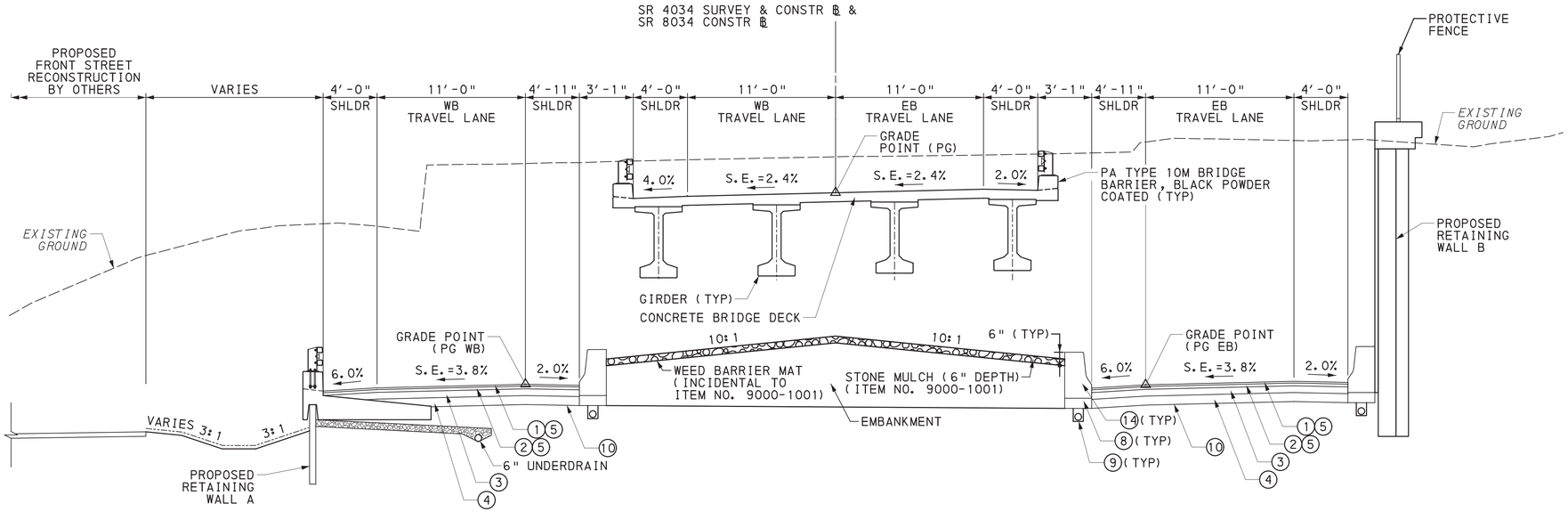
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 01.dgn

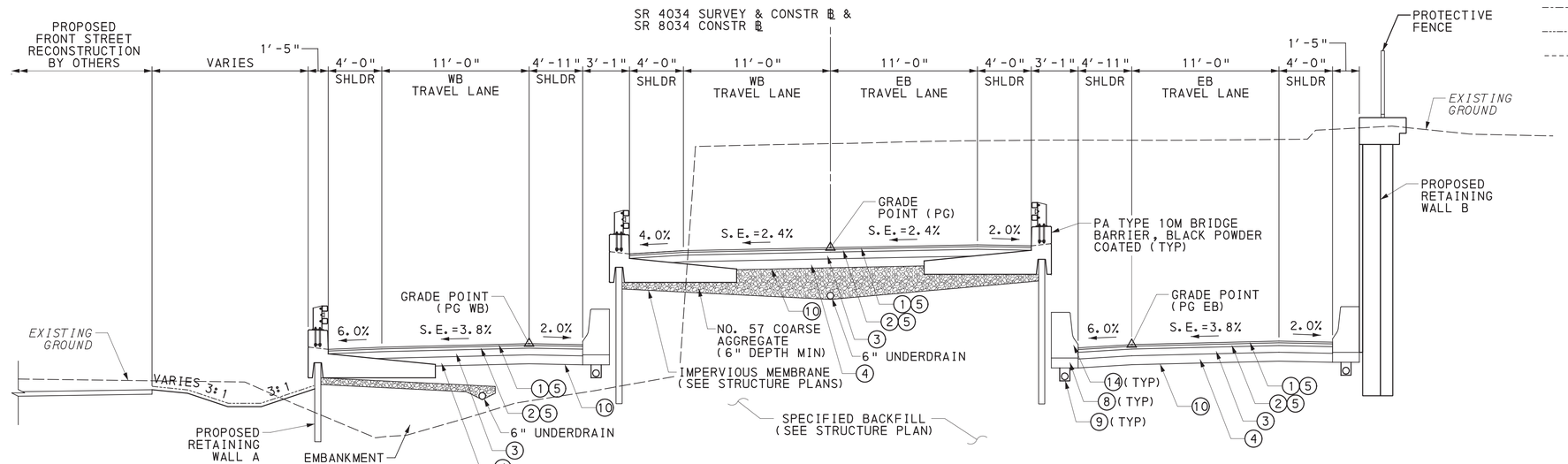
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	9 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SUPERELEVATED BRIDGE SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 522+26.67 TO STA 524+36.44 (FULL S.E. = 2.4%, INSIDE LANES)
STA 522+26.67 TO STA 524+25.44 (FULL S.E. = 3.8%, OUTSIDE LANES)
STA 524+36.44 TO STA 524+58.22 (S.E. TRANSITION, INSIDE LANES)
STA 524+25.44 TO STA 525+63.44 (S.E. TRANSITION, OUTSIDE LANES)



TYPICAL SUPERELEVATED SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 519+55.02 TO STA 519+74.02 (S.E. TRANSITION, INSIDE LANES)
STA 519+55.02 TO STA 519+85.02 (S.E. TRANSITION, OUTSIDE LANES)
STA 519+74.02 TO STA 522+26.67 (FULL S.E. = 2.4%, INSIDE LANES)
STA 519+85.02 TO STA 522+26.67 (FULL S.E. = 3.8%, OUTSIDE LANES)

LEGEND

(1) SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H

(2) SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH

(3) SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH

(4) SUBBASE 8" DEPTH (NO. 2A)

(5) ASPHALT TACK COAT (NTT/CNTT)

(6) PLAIN CEMENT CONCRETE CURB, 8" HEIGHT

(7) PLAIN CEMENT CONCRETE CURB GUTTER

(8) SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)

(9) 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1

(10) GEOTEXTILE, CLASS 4, TYPE A

(11) CEMENT CONCRETE SIDEWALK, 4" DEPTH

(12) SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB

(13) PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH

(14) SINGLE FACE CONCRETE BARRIER

(15) PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB

(16) REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH

(17) PLAIN CONCRETE MOUNTABLE CURB, TYPE A

(18) SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G

(19) MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

+ = CUT SLOPE ROUNDING IN ACCORDANCE WITH RC-10M

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

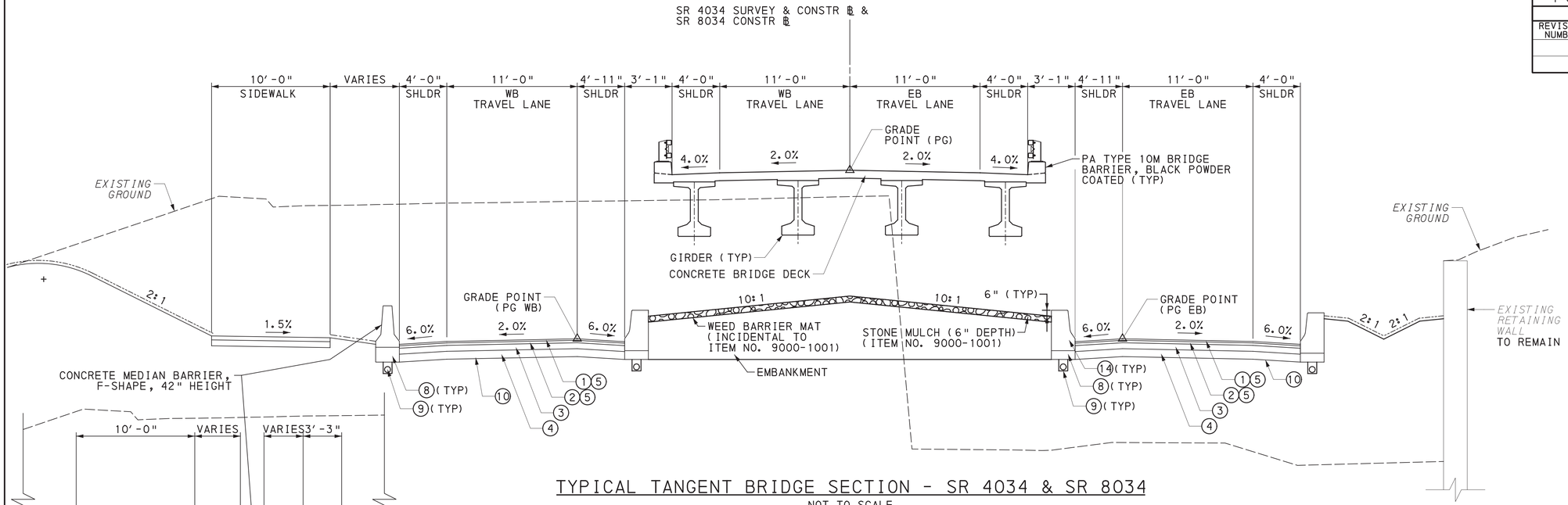
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 02.dgn

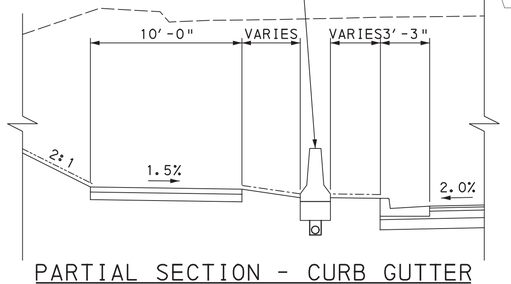
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	10 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



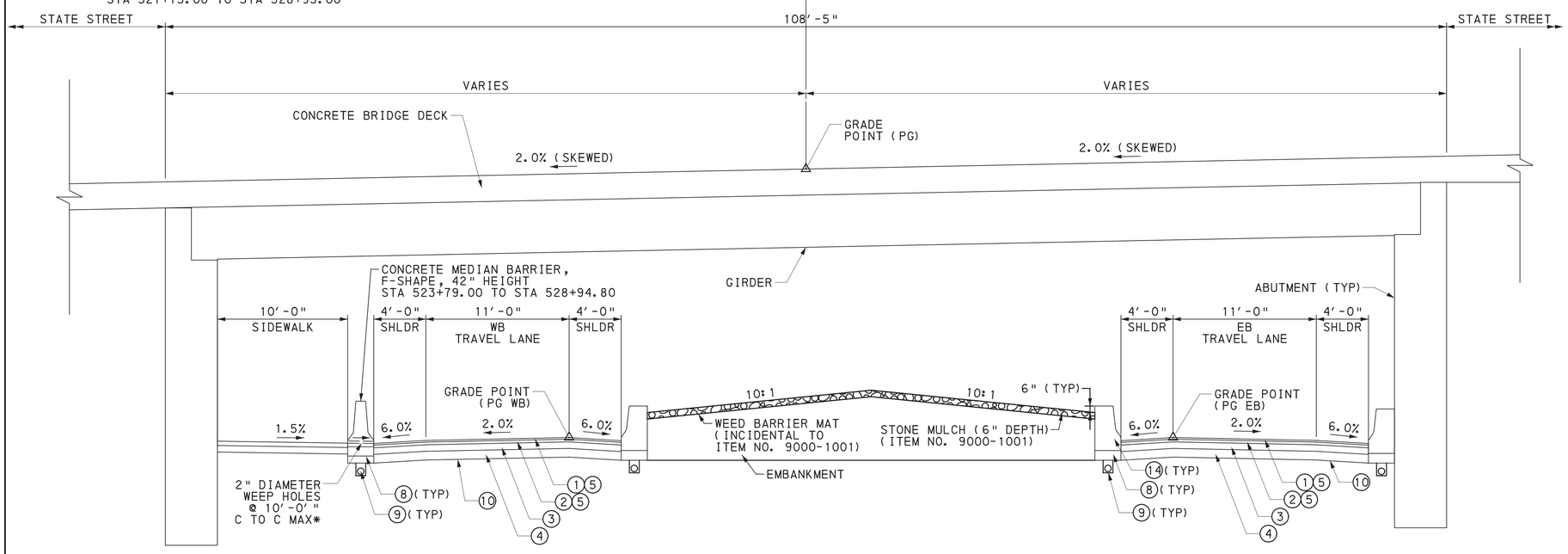
TYPICAL TANGENT BRIDGE SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 526+93.36 TO STA 529+14.87



PARTIAL SECTION - CURB GUTTER

NOT TO SCALE
STA 527+75.00 TO STA 528+95.00



TYPICAL SUPERELEVATED BRIDGE SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 524+58.22 TO STA 526+93.36 (INSIDE LANES)
STA 525+63.44 TO STA 526+93.36 (OUTSIDE LANES)

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 ½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 ½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH, INCLUDES ADDITIONAL SUBBASE
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH, INCLUDES ADDITIONAL SUBBASE
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF BITUMINOUS PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* = INCIDENTAL TO CONCRETE MEDIAN BARRIER

+ = CUT SLOPE ROUNDING IN ACCORDANCE WITH RC-10M

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 03.dgn

PLOTTED: 8/18/2022
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	11 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

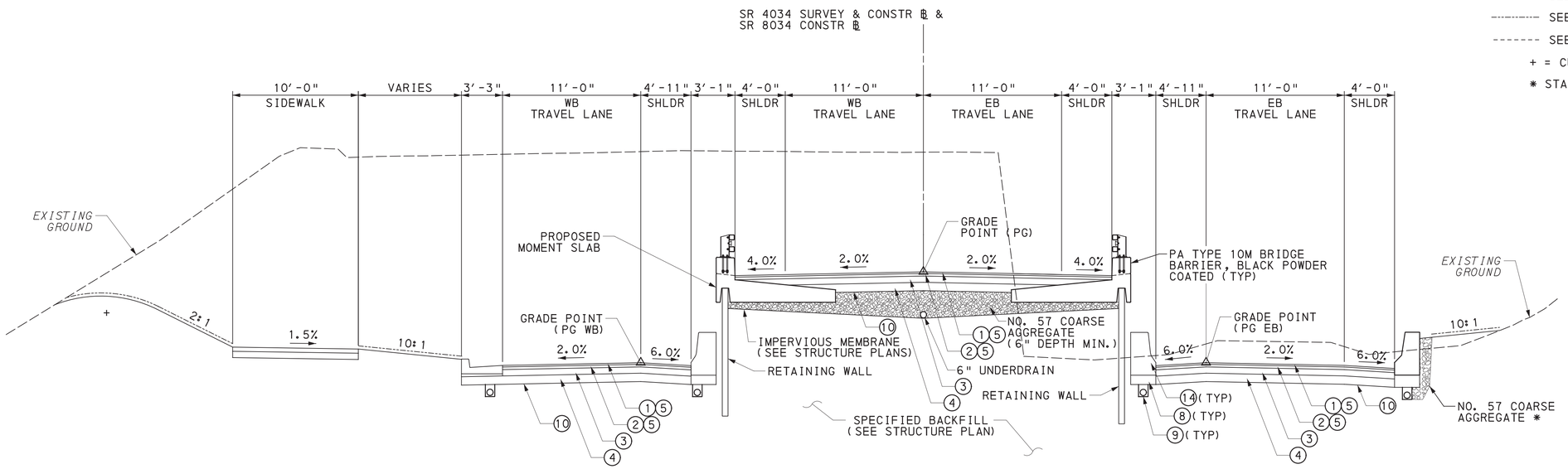
LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH
SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH
SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

\+ = CUT SLOPE ROUNDING IN ACCORDANCE WITH RC-10M

* STA 529+00 TO 531+00



TYPICAL TANGENT SECTION - SR 4034 & SR 8034

NOT TO SCALE
STA 529+14.87 TO STA 531+36.35

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

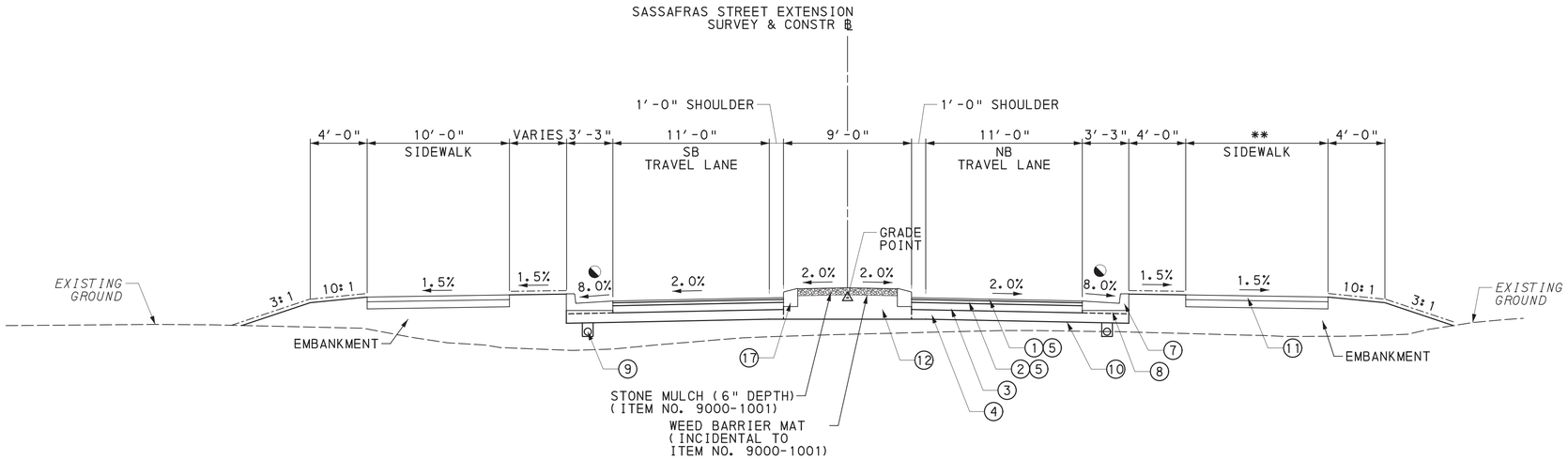
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\roadway\sheets\RDts 05.dgn

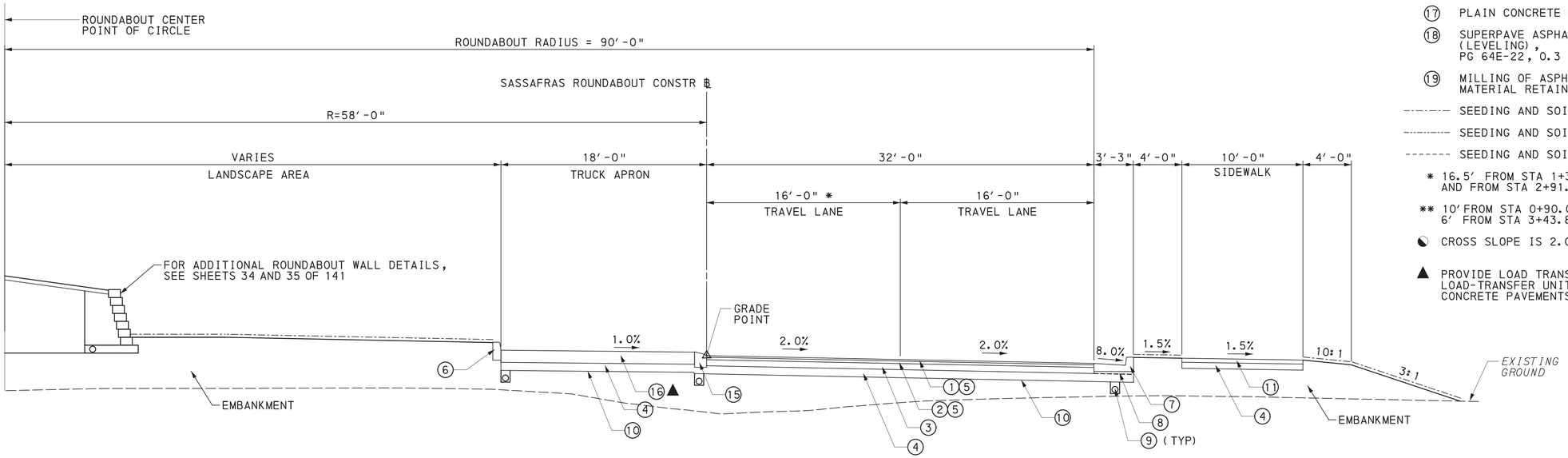
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	12 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL TANGENT SECTION - SASSAFRAS STREET EXTENSION

NOT TO SCALE
STA 0+90.00 TO STA 5+00.00



TYPICAL ROUNDABOUT SECTION - SASSAFRAS STREET EXTENSION

NOT TO SCALE
STA 0+00.00 TO STA 3+64.42

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* 16.5′ FROM STA 1+39.40 TO STA 1+84.12
AND FROM STA 2+91.27 TO STA 3+36.26

** 10′ FROM STA 0+90.00 TO STA 2+69.22
6′ FROM STA 3+43.80 TO STA 5+00.00

CROSS SLOPE IS 2.0% AT CROSSWALK LOCATIONS

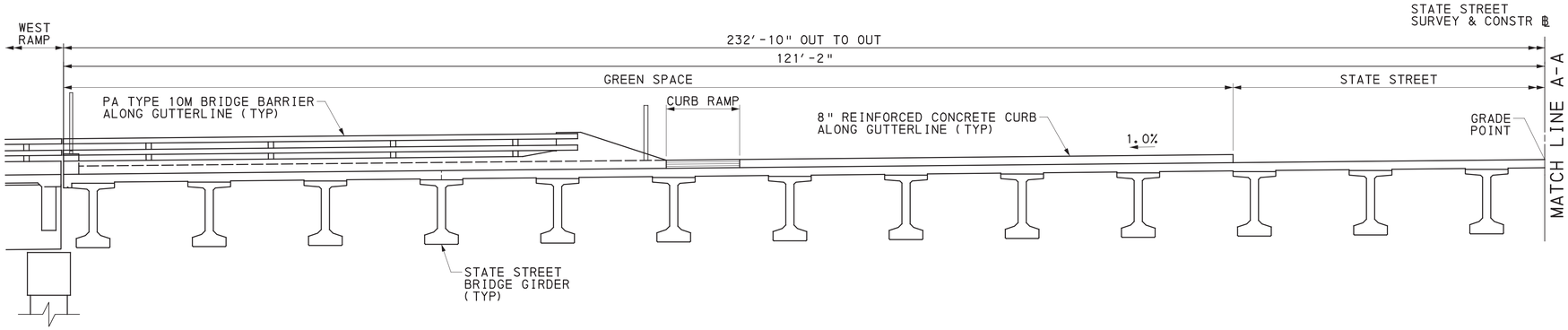
▲ PROVIDE LOAD TRANSFER UNITS PER PUB 408 SECTION 705.3 LOAD-TRANSFER UNITS FOR REINFORCED AND PLAIN CEMENT CONCRETE PAVEMENTS

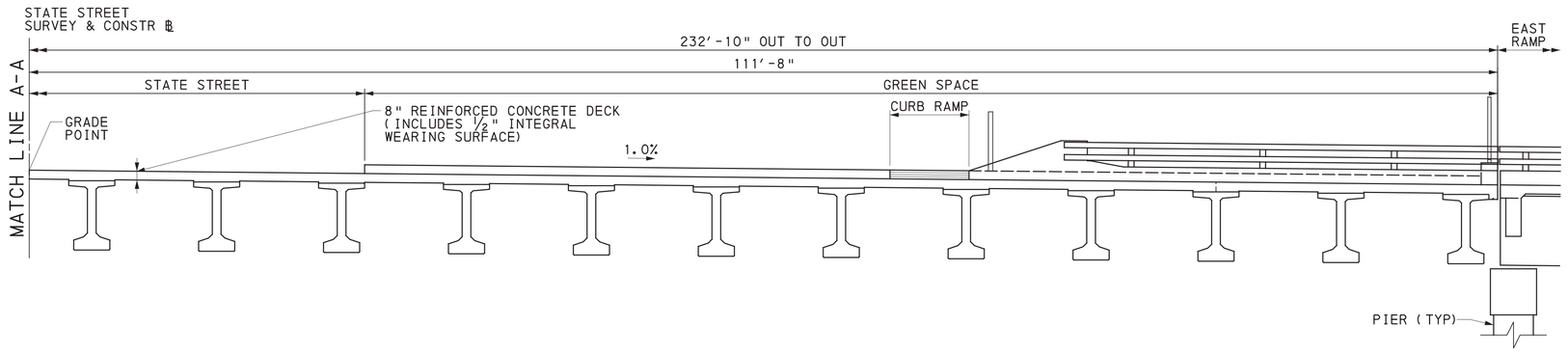
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	13 OF 141
CITY OF ERIE				

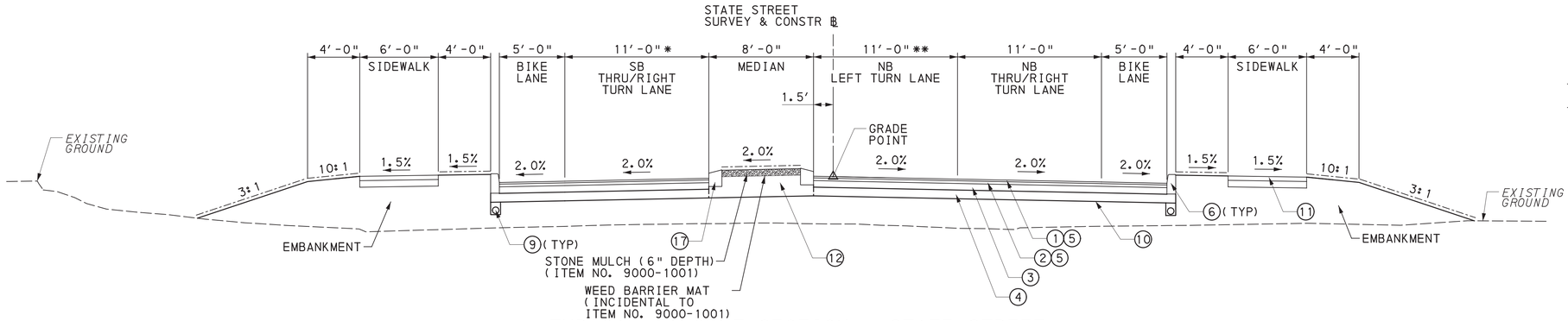
REVISION NUMBER	REVISIONS	DATE	BY





TYPICAL TANGENT BRIDGE SECTION - STATE STREET

NOT TO SCALE
STA 109+31.04 TO STA 110+15.73



TYPICAL TANGENT SECTION - STATE STREET

NOT TO SCALE
STA 105+84.00 TO STA 109+31.04
STA 112+00.00 TO STA 113+00.00

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

-·-·-·- SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

-·-·-·-·- SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

------ SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* WIDTH VARIES:
22.0' AT STA 112+00.00 TO 11.0' AT STA 112+50.00

** WIDTH VARIES:
0.0' AT STA 112+00.00 TO 11.0' AT STA 112+50.00

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

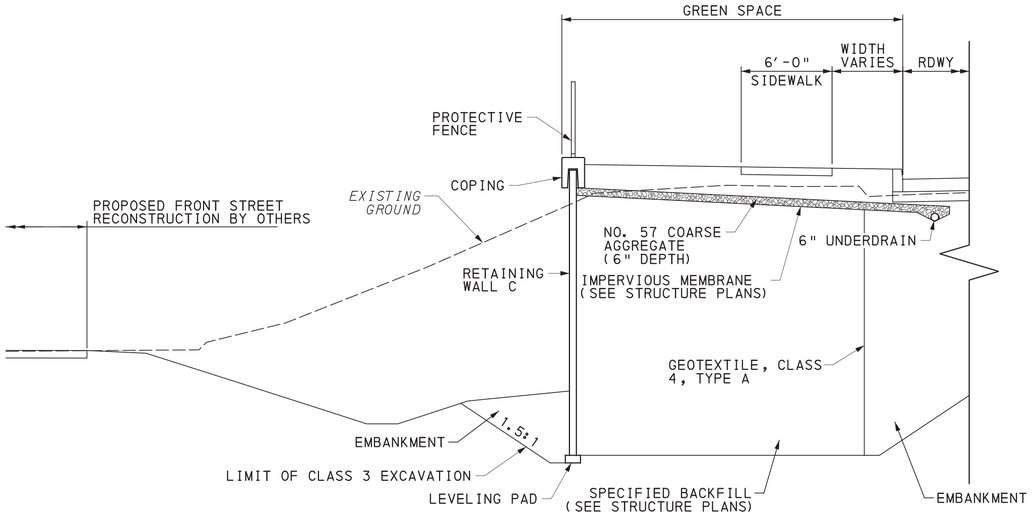
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDTs 06.dgn

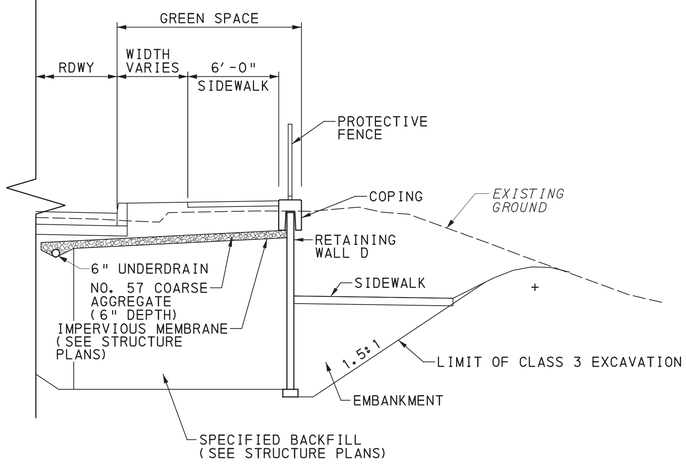
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	14 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



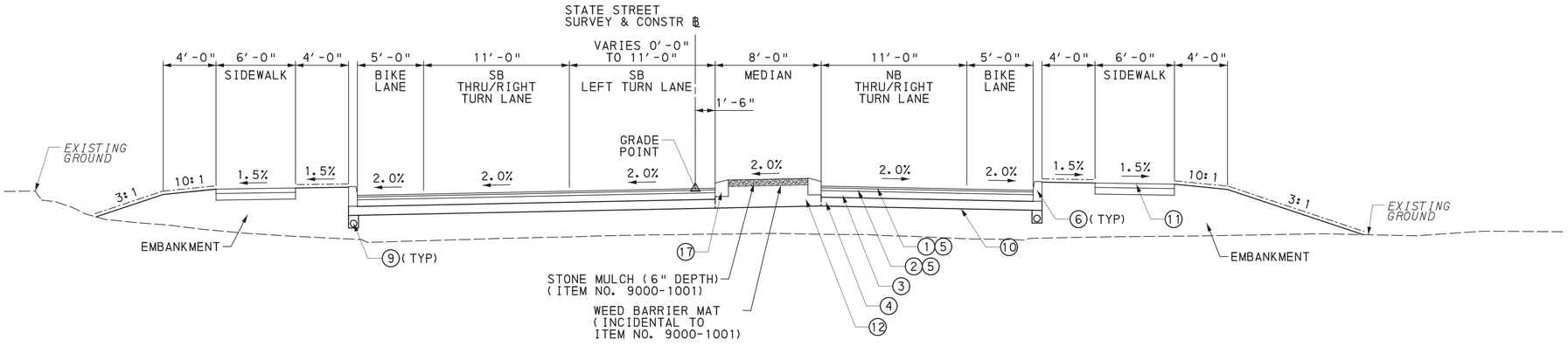
PARTIAL SECTION - WALL C

NOT TO SCALE
STA 110+15.90 TO STA 112+00.00



PARTIAL SECTION - WALL D

NOT TO SCALE
STA 110+45.76 TO STA 112+46.00



TYPICAL TANGENT SECTION - STATE STREET

NOT TO SCALE
STA 110+15.73 TO STA 112+00.00
STA 113+00.00 TO STA 114+50.00

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

---·---·-- SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

---··---··-- SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

------ SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* WIDTH VARIES:
22.0' AT STA 112+00.00 TO 11.0' AT STA 112+50.00

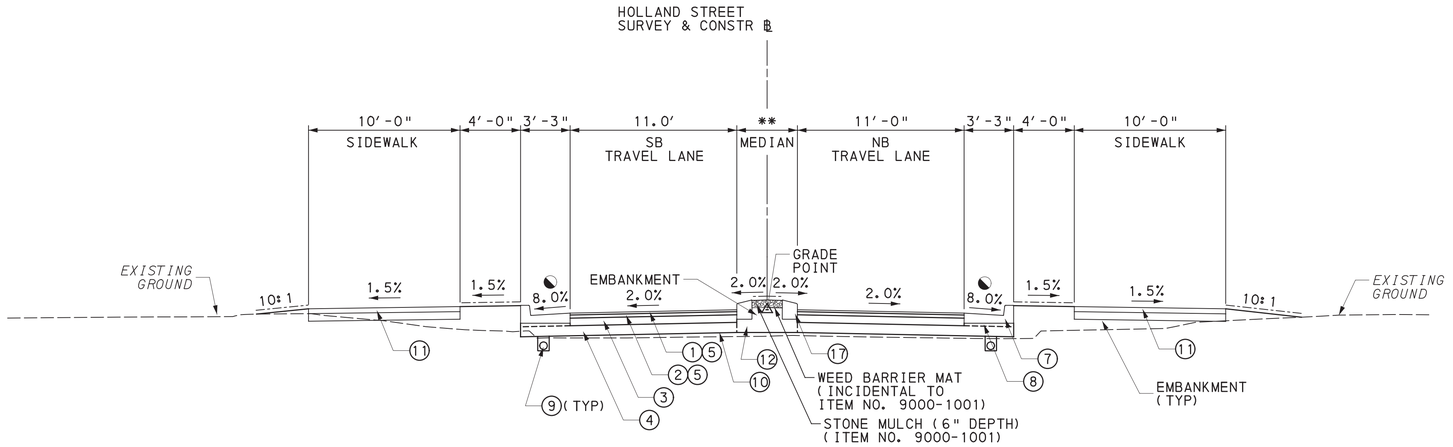
** WIDTH VARIES:
0.0' AT STA 112+00.00 TO 11.0' AT STA 112+50.00

+ = CUT SLOPE ROUNDING IN ACCORDANCE WITH RC-10M

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

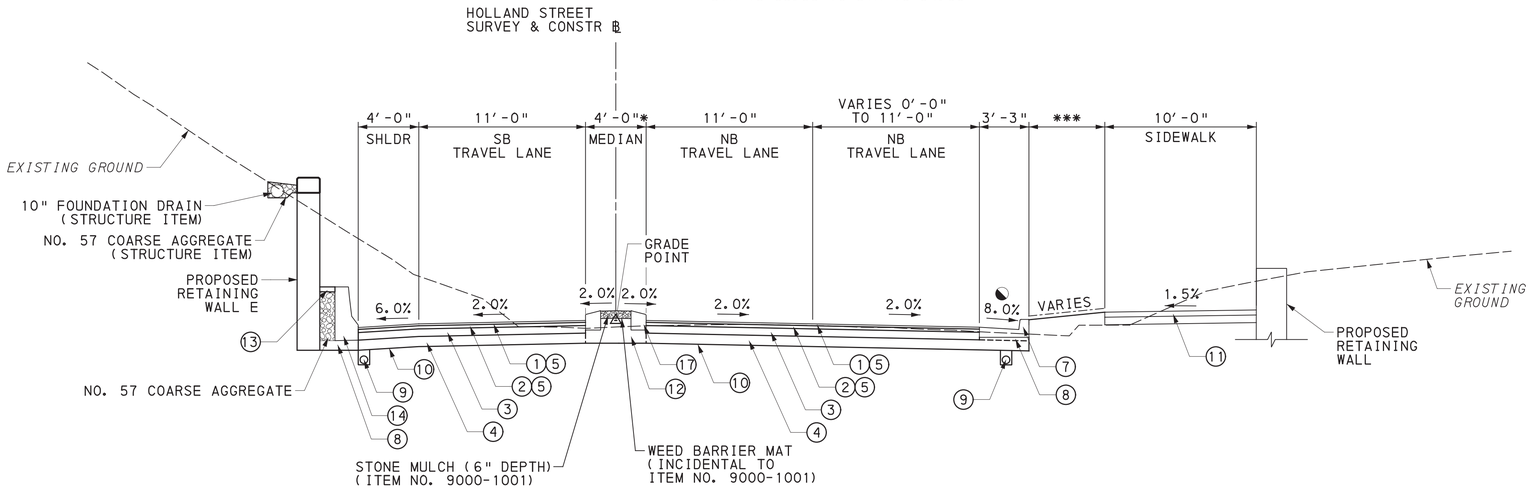
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 07.dgn



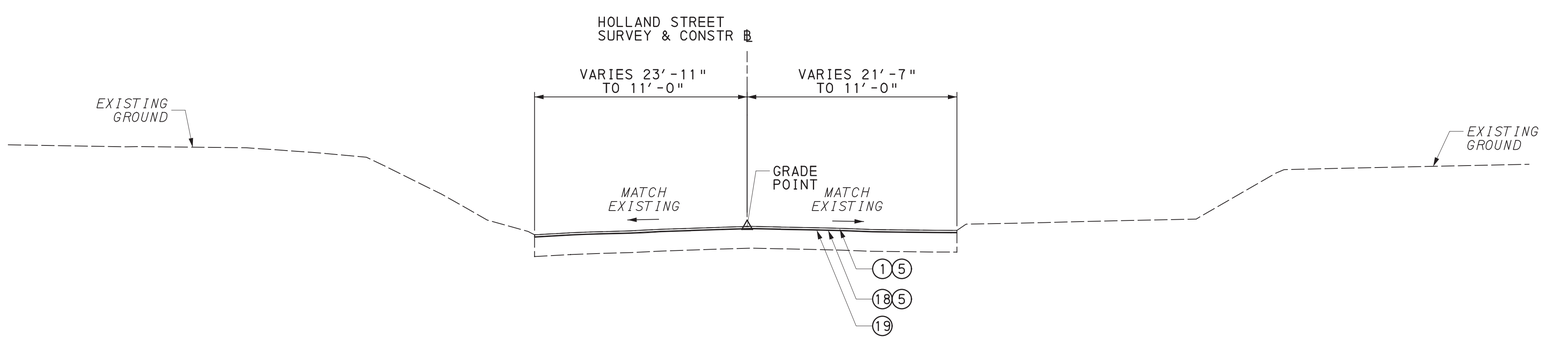
TYPICAL TANGENT SECTION - HOLLAND STREET

NOT TO SCALE
STA 13+85.38 TO STA 16+94.00



TYPICAL TANGENT SECTION - HOLLAND STREET

NOT TO SCALE
STA 9+30.00 TO STA 12+05.38



TYPICAL TANGENT SECTION - HOLLAND STREET

NOT TO SCALE
STA 7+68.00 TO STA 9+30.00

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH
SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH
SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* WIDTH VARIES:

0.0′ FROM STA 7+60.00 TO STA 8+90.37
4.0′ AT STA 11+27.30 TO 38.8′ AT STA 12+05.38

** WIDTH VARIES:

48.4′ AT STA 13+85.38 TO 4.9′ AT STA 14+61.65
0.0′ FROM STA 14+61.65 TO STA 17+65.00

*** WIDTH VARIES:

0.0′ FROM STA 9+30.00 TO STA 10+34.10
0.0′ AT STA 10+34.10 TO 70.8′ AT STA 12+05.38

CROSS SLOPE IS 2.0% AT CROSSWALK LOCATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

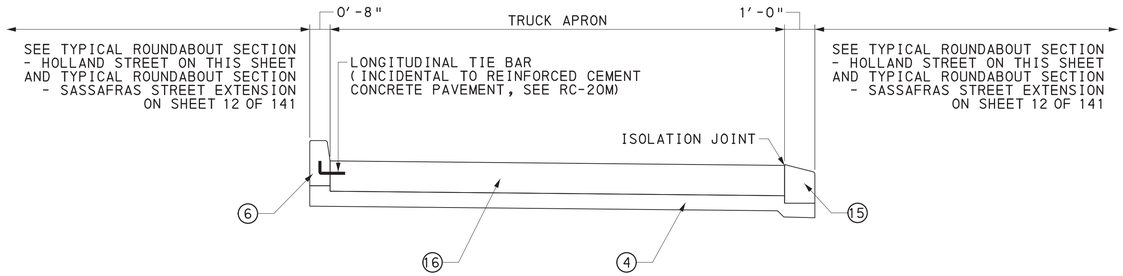
PLOTTED: 8/18/2022
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 08.dgn

PLOTTED: 8/18/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDTs 09.dgn

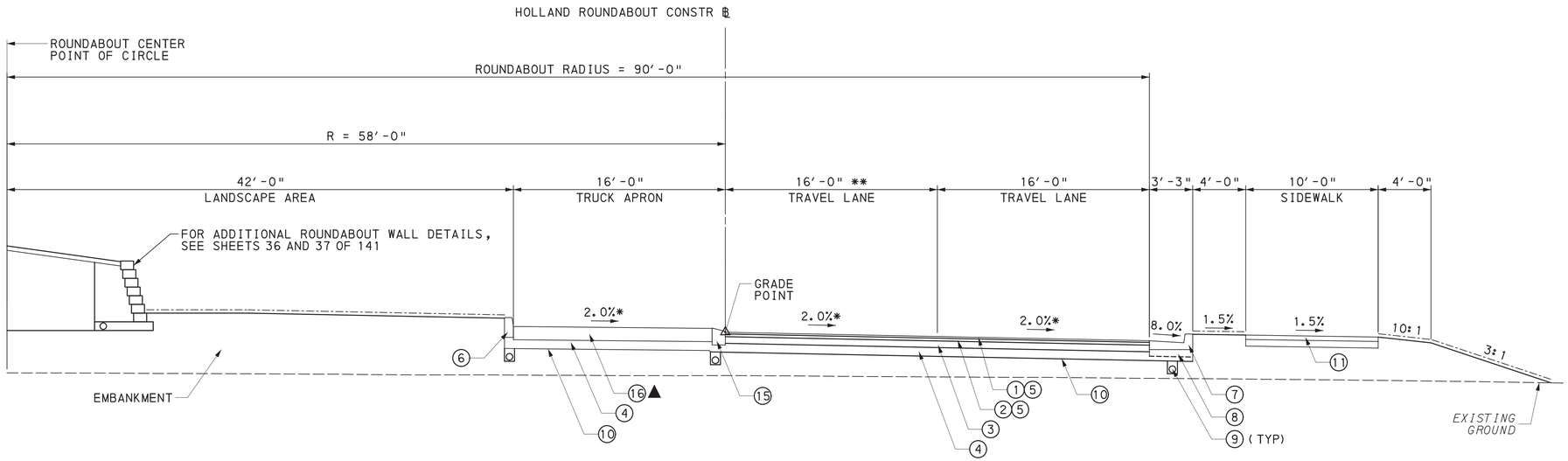
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	16 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



CURB AND TRUCK APRON TIE DETAIL

NOT TO SCALE



TYPICAL ROUNDABOUT SECTION - HOLLAND STREET

NOT TO SCALE
STA 0+00.00 TO STA 3+64.42

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
7. PLAIN CEMENT CONCRETE CURB GUTTER
8. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
9. 6" PAVEMENT BASE DRAIN WITH GEOTEXTILE, CLASS 1
10. GEOTEXTILE, CLASS 4, TYPE A
11. CEMENT CONCRETE SIDEWALK, 4" DEPTH
12. SUBBASE (NO. 2A) INCIDENTAL TO PLAIN CONCRETE MOUNTABLE CURB
13. PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
14. SINGLE FACE CONCRETE BARRIER
15. PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB
16. REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH, INTEGRAL COLOR FINISH
17. PLAIN CONCRETE MOUNTABLE CURB, TYPE A
18. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G
19. MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH

SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH

* CROSS SLOPE VARIES
STA 0+59.21, -2.00%
STA 1+61.46, +1.00%
STA 2+45.31, +4.00%
STA 3+44.02, +1.00%

** 16.5' FROM STA 1+37.84 TO STA 1+78.85 AND FROM STA 3+24.93 TO STA 3+53.23

▲ PROVIDE LOAD TRANSFER UNITS PER PUB 408 SECTION 705.3 LOAD-TRANSFER UNITS FOR REINFORCED AND PLAIN CEMENT CONCRETE PAVEMENTS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

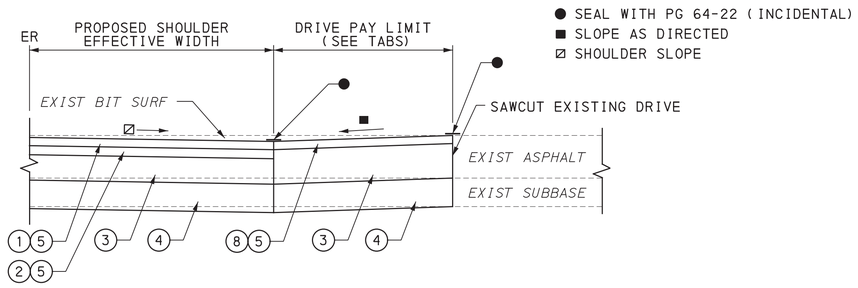
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDd1 01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	17 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

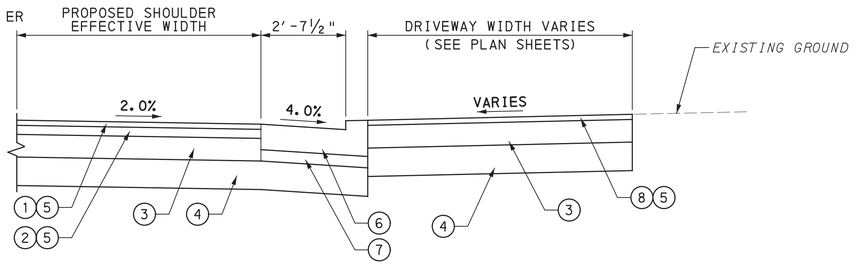


● SEAL WITH PG 64-22 (INCIDENTAL)
■ SLOPE AS DIRECTED
⊠ SHOULDER SLOPE

ASPHALT DRIVE RECONSTRUCTION

NOT TO SCALE

STA 4+11.18 TO STA 4+80.66, LT (SASSAFRAS STREET)
STA 15+95.57 TO STA 16+55.53, LT (HOLLAND STREET)
STA 14+67.91 TO STA 15+37.96, LT (HOLLAND STREET)



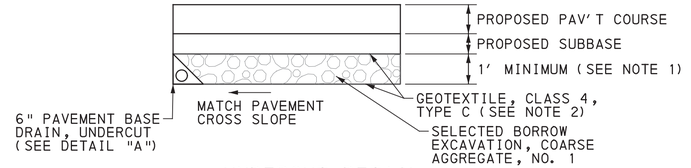
ASPHALT DRIVE RECONSTRUCTION WITH DEPRESSED CURB

NOT TO SCALE

STA 502+72.82 TO STA 503+38.95, LT (SR 4034)
STA 547+57.63 TO STA 548+54.33, LT (SR 4034)

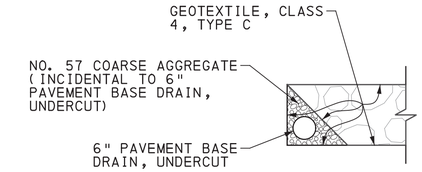
LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. PLAIN CEMENT CONCRETE CURB GUTTER
7. SUBBASE (NO. 2A) INCIDENTAL TO SUBBASE 8" DEPTH (NO. 2A)
8. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H



UNDERCUT DETAIL

NOT TO SCALE

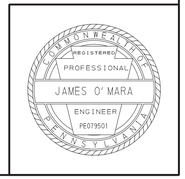


DETAIL "A"

NOT TO SCALE

NOTES:

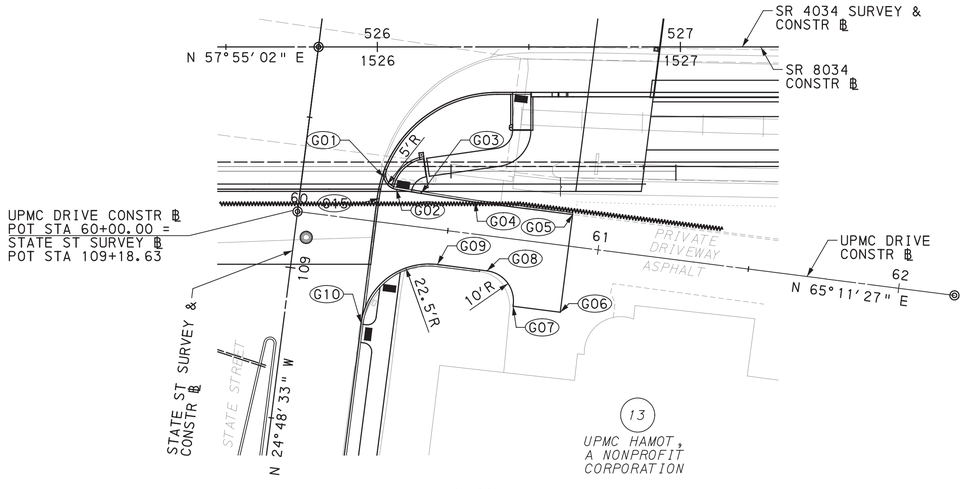
1. MINIMUM DEPTH OF UNDERCUT IS MEASURED FROM THE BOTTOM OF PROPOSED SUBBASE OR EXISTING GROUND, WHICHEVER IS LOWER.
2. GEOTEXTILE SHOULD BE WRAPPED COMPLETELY AROUND THE SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1.
3. A MINIMUM OF 8" OF SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 MUST BE IN PLACE OVER THE GEOTEXTILE BEFORE EQUIPMENT IS ALLOWED TO PASS OVER IT.
4. PLACE AND COMPACT IN LAYERS NOT TO EXCEED 8".
5. TRANSITION UNDERCUTS INTO EXISTING SUBGRADE AT THE BEGINNING AND END OF EACH UNDERCUT AREA AT A SLOPE RATIO NO STEEPER THAN 8H:1V.
6. PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PENNDOT PUB. 408 (2020), SECTION 208. UNDERCUT A MINIMUM OF 1'-0" OR AS DIRECTED WHERE SOFT/LOOSE SOILS ARE ENCOUNTERED.
7. PREPARE SUBGRADE AT BASE OF UNDERCUT IN ACCORDANCE WITH SECTION 210.
8. PAVEMENT BASE DRAIN, UNDERCUT AND OUTLET PIPE TO BE INSTALLED AS DIRECTED BY THE ENGINEER.
9. DO NOT UNDERCUT UNLESS DIRECTED BY THE ENGINEER.



DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	18 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



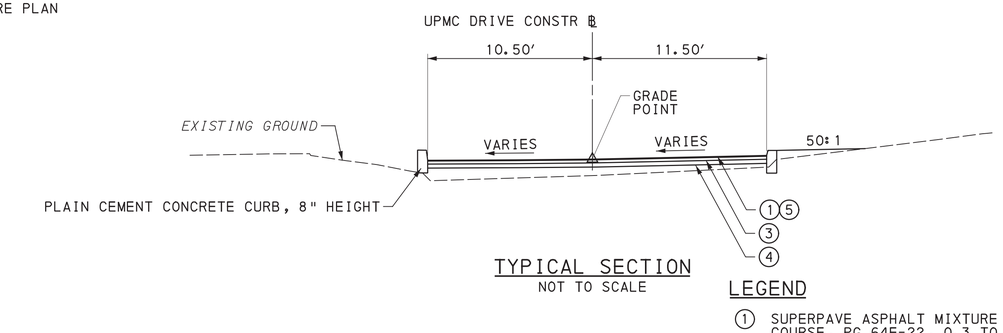
PLAN

SCALE IN FEET

0 25 50

UPMC DRIVE			
POINT NO.	STATION	OFFSET	ELEV
G01	60+26.83	14.86′ LT	*
G02	60+31.43	11.37′ LT	*
G03	60+39.65	11.10′ LT	*
G04	60+57.78	10.50′ LT	605.46
G05	60+90.20	10.50′ LT	602.43
G06	60+90.20	22.00′ RT	603.03
G07	60+74.51	22.00′ RT	604.04
G08	60+64.51	11.50′ RT	605.15
G09	60+48.00	11.50′ RT	606.74
G10	60+25.50	34.00′ RT	608.48

* SEE STRUCTURE PLAN

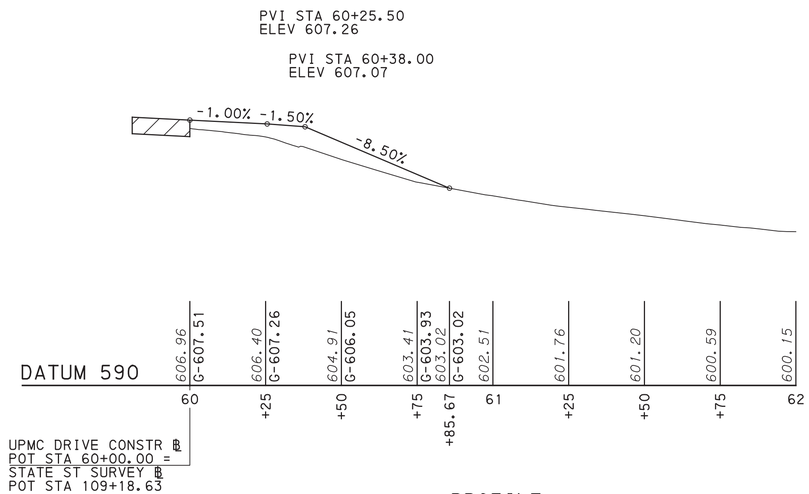


TYPICAL SECTION

NOT TO SCALE

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)



PROFILE

SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SUMMARY OF PROJECT COORDINATES

BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS83) NORTH ZONE

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
UPMC DRIVE CONSTR ℄					N 65°11′27" E
	60+00.00	POT	725457.3050	1334268.7956	
	62+18.55	POT	725549.0084	1334467.1764	

NOTE: FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

AVERAGE COMBINED SCALE FACTOR 1.000012520

UPMC DRIVE DETAIL

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEETS
PLAN - UPMC DRIVE	107

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/18/2022

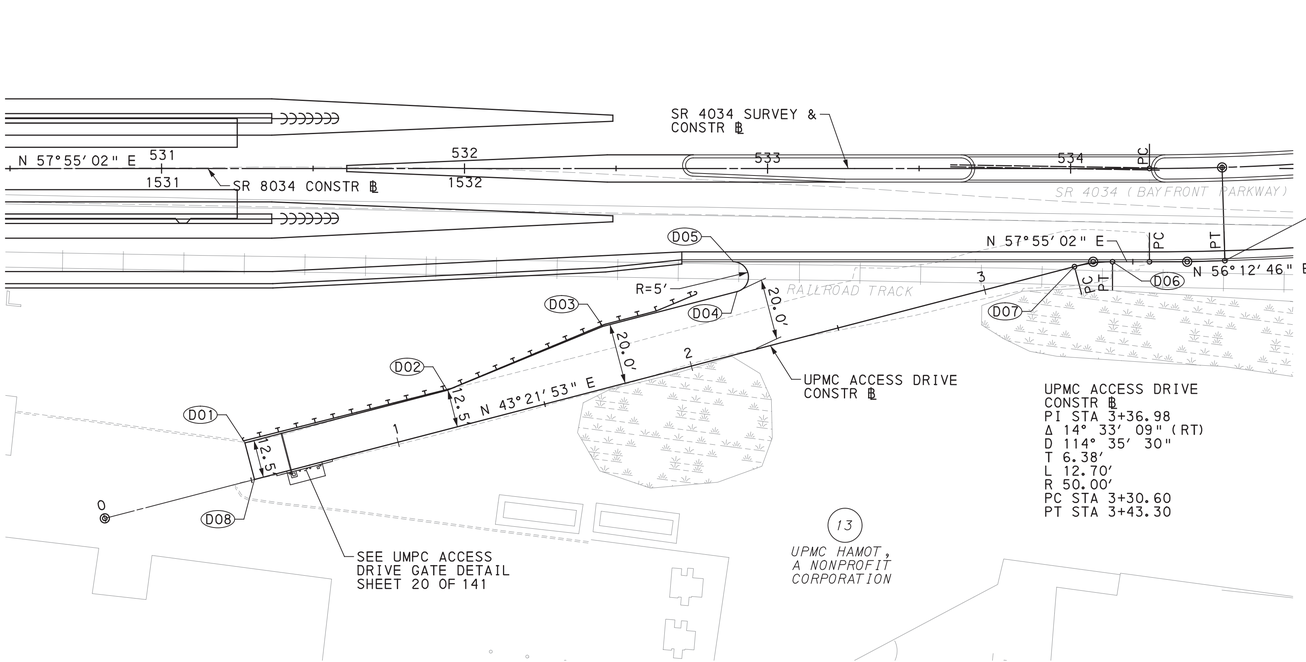
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 02.dgn

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	19 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



UPMC ACCESS DRIVE
CONSTR ℄
PI STA 3+67.94
Δ 1° 42' 15" (LT)
D 6° 51' 05"
T 12.44'
L 24.88'
R 836.27'
PC STA 3+55.50
PT STA 3+80.38

UPMC ACCESS DRIVE
CONSTR ℄
PI STA 3+36.98
Δ 14° 33' 09" (RT)
D 114° 35' 30"
T 6.38'
L 12.70'
R 50.00'
PC STA 3+30.60
PT STA 3+43.30

UPMC DRIVE

POINT NO.	STATION	OFFSET	ELEV
D01	0+51.02	12.50' LT	602.89
D02	1+20.00	12.50' LT	596.46
D03	1+75.00	20.00' LT	590.83
D04	2+20.78	20.00' LT	588.14
D05	2+22.04	29.84' LT	586.71
D06	3+43.30	0.00'	587.95
D07	3+30.60	0.00'	588.02
D08	0+51.02	0.00'	603.14

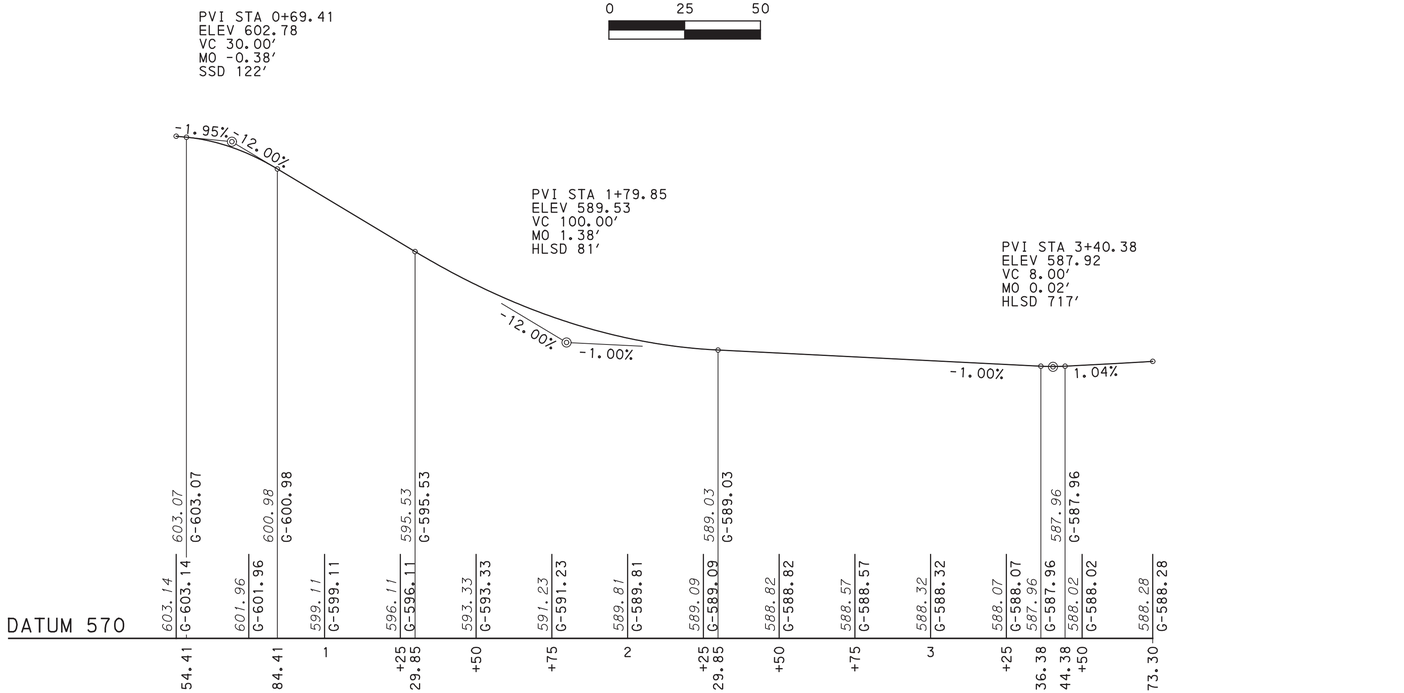
LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)

PLAN

SCALE IN FEET

0 25 50



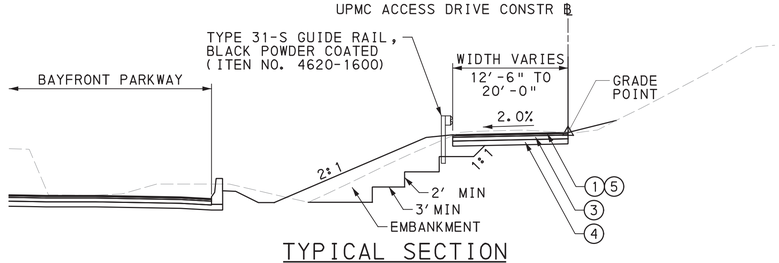
PROFILE

SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

UPMC ACCESS DRIVE CONSTR ℄
PT STA 3+73.30 =
SR 4034 SURVEY & CONSTR ℄
POC STA 534+50.00



TYPICAL SECTION

STA 0+51.02 TO 2+20.78
NOT TO SCALE

SUMMARY OF PROJECT COORDINATES

BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS83) (NORTH ZONE))

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
UPMC DRIVE CONSTR ℄					
	0+00.00	POT	725675.1390	1334731.3752	N 43°21'53" E
	3+30.60	PC	725915.4835	1334958.3769	
	3+36.98	PI	725920.1247	1334962.7604	
	3+43.30	PT	725923.5156	1334968.1695	N 57°55'02" E
	3+55.50	PC	725929.9972	1334978.5090	
	3+67.94	PI	725936.6039	1334989.0479	
	3+80.38	PT	725943.5210	1334999.3856	N 56°12'46" E

NOTE: FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

AVERAGE COMBINED SCALE FACTOR 1.000012520

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

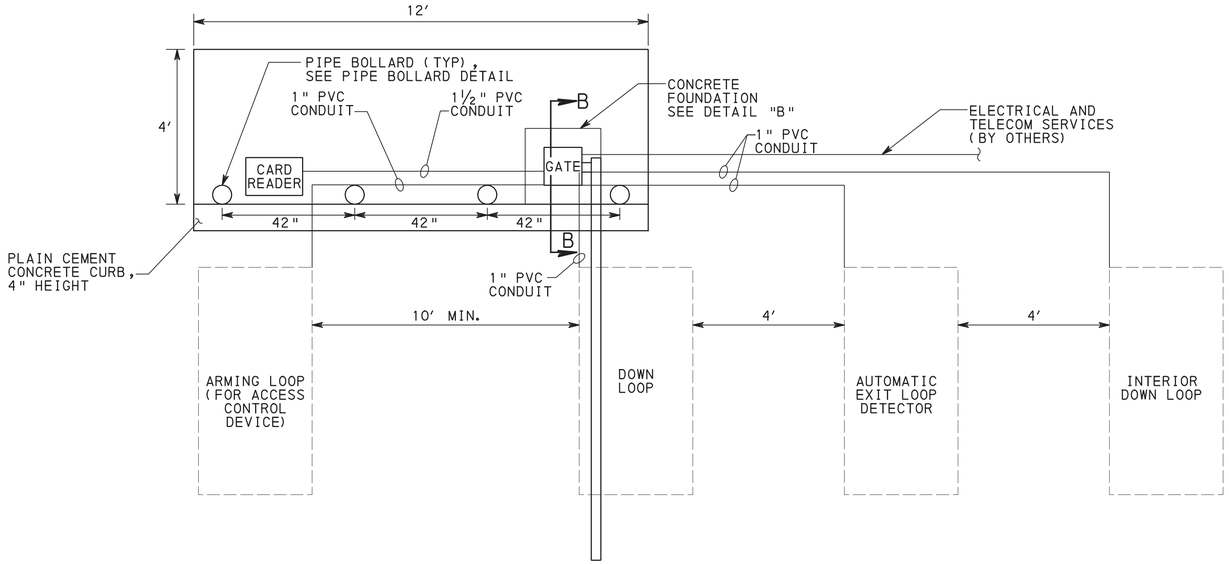
REFERENCE DRAWINGS	SHEETS
PLAN - UPMC ACCESS	108

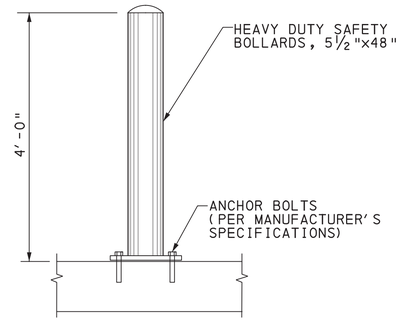
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

UPMC ACCESS DRIVE DETAIL

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	20 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



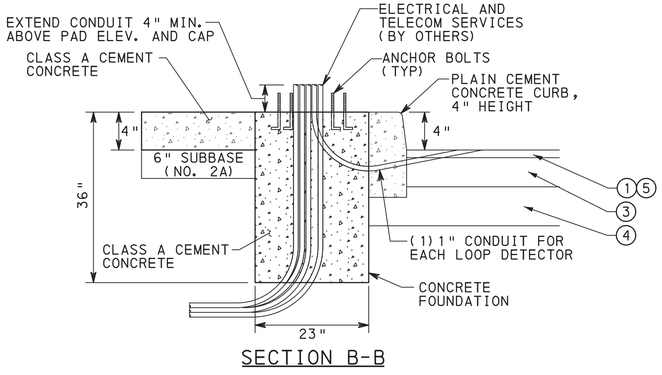


NOTES:

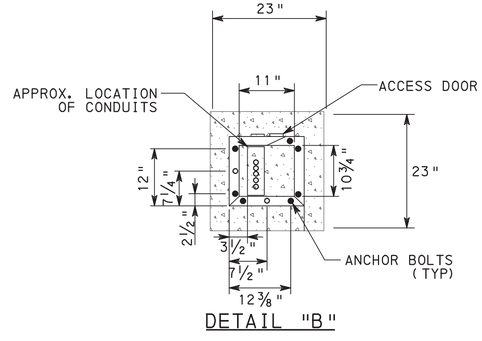
1. PIPE BOLLARD LOCATIONS SHALL BE APPROVED BY UPMC REPRESENTATIVE PRIOR TO INSTALLATION.
2. CONTRACTOR IS ONLY ALLOWED TO CORE DRILL HOLES FOR BOLLARD ANCHORS. THESE HOLES CONNOT BE DRILLED UNTIL CONCRETE STRENGTH IS AT LEAST 75% OF DESIGN STRENGTH.
3. PIPE BOLLARDS ARE INCIDENTAL TO ITEM NO. 9000-0011.

PIPE BOLLARD DETAIL

NOT TO SCALE



SECTION B-B



DETAIL "B"

UPMC ACCESS DRIVE GATE DETAIL

ITEM NO. 9000-0011 - LUMP SUM
NOT TO SCALE

NOTES:

1. CONTRACTOR TO COORDINATE ALL WORK WITH UPMC REPRESENTATIVE.
2. ELECTRICAL AND TELECOM SERVICE AND ASSOCIATED CONDUITS ARE TO BE FURNISHED AND INSTALLED BY OTHERS (UPMC). CONTRACTOR TO COORDINATE LOCATION OF EQUIPMENT AND CONDUITS WITH UPMC REPRESENTATIVE.
3. CONTRACTOR TO INSTALL (1) 1½" PVC CONDUIT FROM GATE HOUSING TO CARD READER HOUSING.
4. CONTRACTOR TO INSTALL (1) 1" PVC CONDUIT TO EACH LOOP SENSOR.
5. EXTEND ALL CONDUITS A MINIMUM OF 4" ABOVE CONCRETE FOUNDATION.
6. INSTALL LOOP SENSORS PRIOR TO PLACEMENT OF PAVEMENT (SEE LEGEND). INSTALL LOOP SENSORS PER MANUFACTURER'S SPECIFICATIONS.
7. CONTRACTOR TO VERIFY ALL ANCHOR BOLTS AND FOUNDATION DIMENSIONS WITH EQUIPMENT MANUFACTURERS.

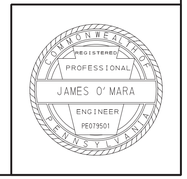
LEGEND

(1) SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H

(3) SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH

(4) SUBBASE 8" DEPTH (NO. 2A)

(5) ASPHALT TACK COAT (NTT/CNTT)



DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

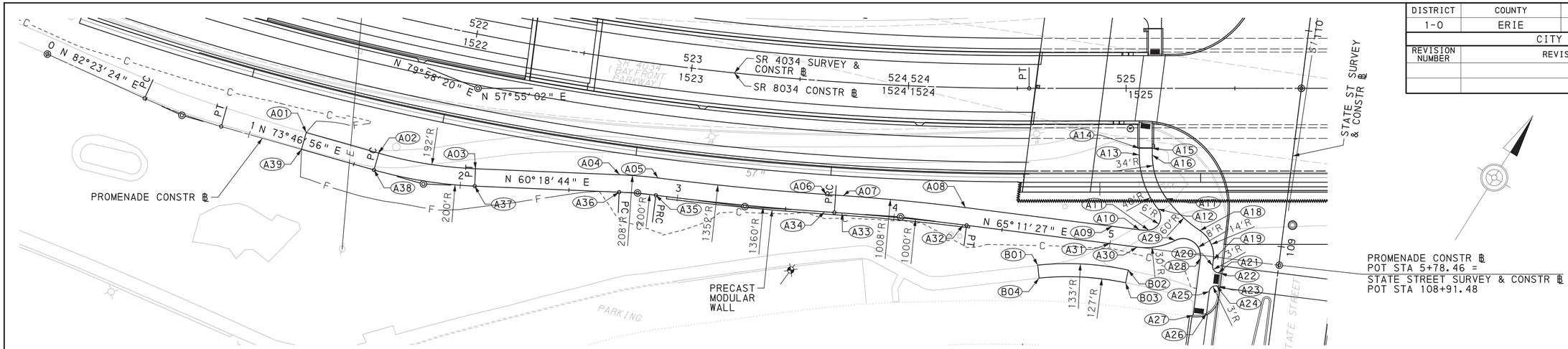
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 04.dgn

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	21 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SUMMARY OF PROJECT COORDINATES

BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS83) NORTH ZONE

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
PROMENADE CONSTR ℄	0+00.00	POT	725214.1856	1333749.0871	N 82°23'24" E
	0+49.08	PC	725220.6858	1333797.7382	
	0+67.90	PI	725223.1774	1333816.3869	N 73°46'56" E
	0+86.64	PT	725228.4321	1333834.4527	
	1+59.64	PC	725248.8189	1333904.5434	
	1+83.26	PI	725255.4153	1333927.2220	N 60°18'44" E
	2+06.66	PT	725267.1128	1333947.7402	
	2+73.08	PC	725300.0087	1334005.4414	
	2+81.55	PI	725304.2065	1334012.8047	N 65°09'56" E
	2+90.02	PRC	725307.7663	1334020.4967	
	3+31.26	PI	725325.0865	1334057.9220	N 61°41'31" E
	3+72.47	PRC	725344.6424	1334094.2291	
	4+03.01	PI	725359.1262	1334121.1193	N 65°11'27" E
	4+33.54	PT	725371.9418	1334148.8433	
	5+78.46	POT	725432.7526	1334280.3945	

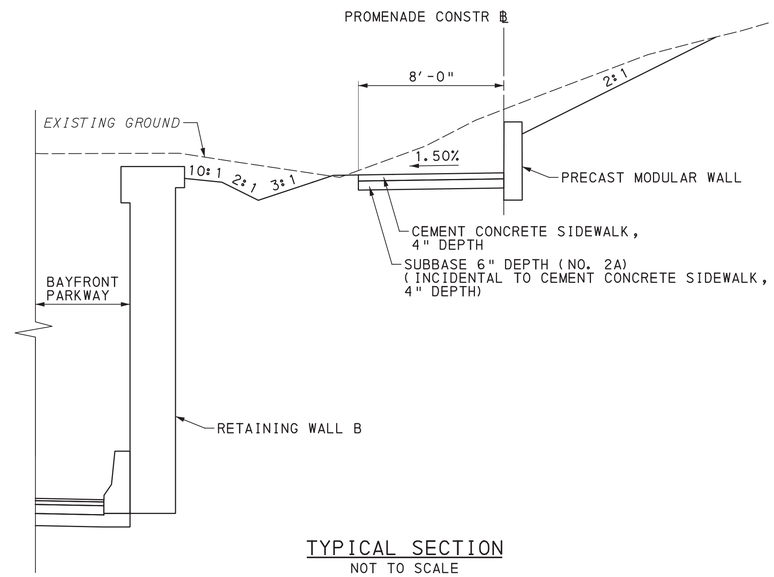
NOTE: FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

AVERAGE COMBINED SCALE FACTOR 1.000012520

PLAN

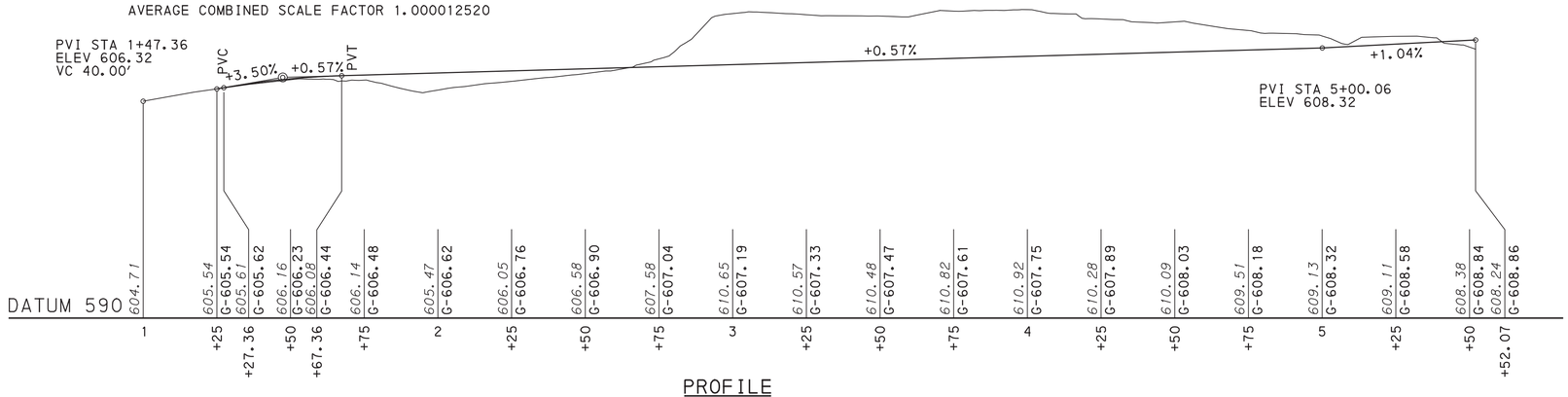
SCALE IN FEET

0 25 50



TYPICAL SECTION

NOT TO SCALE



PROFILE

SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

PROMENADE SIDEWALK

POINT NO	STATION	OFFSET	ELEV
A01	1+25.00	8.00'LT	605.66
A02	1+59.64	8.00'LT	606.37
A03	2+06.66	8.00'LT	606.51
A04	2+73.08	8.00'LT	606.90
A05	2+90.02	8.00'LT	607.01
A06	3+68.00	8.00'LT	607.48
A07	3+76.00	8.00'LT	607.53
A08	4+32.00	8.00'LT	607.87
A09	5+00.00	8.00'LT	608.20
A10	5+12.65	8.00'LT	608.25
A11	5+16.82	8.40'LT	608.25
A12	5+19.88	18.58'LT	607.97
A13	5+08.19	42.09'LT	607.24
A14	5+07.79	45.19'LT	607.15
A15	5+13.75	45.95'LT	607.20
A16	5+14.14	42.85'LT	607.28
A17	5+23.13	23.83'LT	607.84
A18	5+40.26	11.17'LT	608.40
A19	5+48.07	1.38'RT	608.80
A20	5+48.07	4.05'RT	608.87
A21	5+51.07	7.05'RT	609.09
A22	5+52.07	7.05'RT	609.15
A23	5+52.07	13.05'RT	609.41
A24	5+51.07	13.05'RT	609.35
A25	5+48.07	16.05'RT	609.18
A26	5+48.07	26.06'RT	609.54
A27	5+42.07	27.84'RT	609.25
A28	5+42.07	1.38'RT	608.61
A29	5+29.56	5.22'LT	608.42
A30	5+12.65	0.00'	608.36
A31	5+00.00	0.00'	608.32
A32	4+32.00	0.00'	607.99
A33	3+76.00	0.00'	607.65
A34	3+68.00	0.00'	607.60
A35	2+90.02	0.00'	607.13
A36	2+73.08	0.00'	607.02
A37	2+06.66	0.00'	606.63
A38	1+59.64	0.00'	606.34
A39	1+25.00	0.00'	605.54
B01	4+68.30	14.02'RT	612.25
B02	5+09.90	10.99'RT	610.28
B03	5+09.40	16.97'RT	610.40
B04	4+69.67	19.86'RT	612.33

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

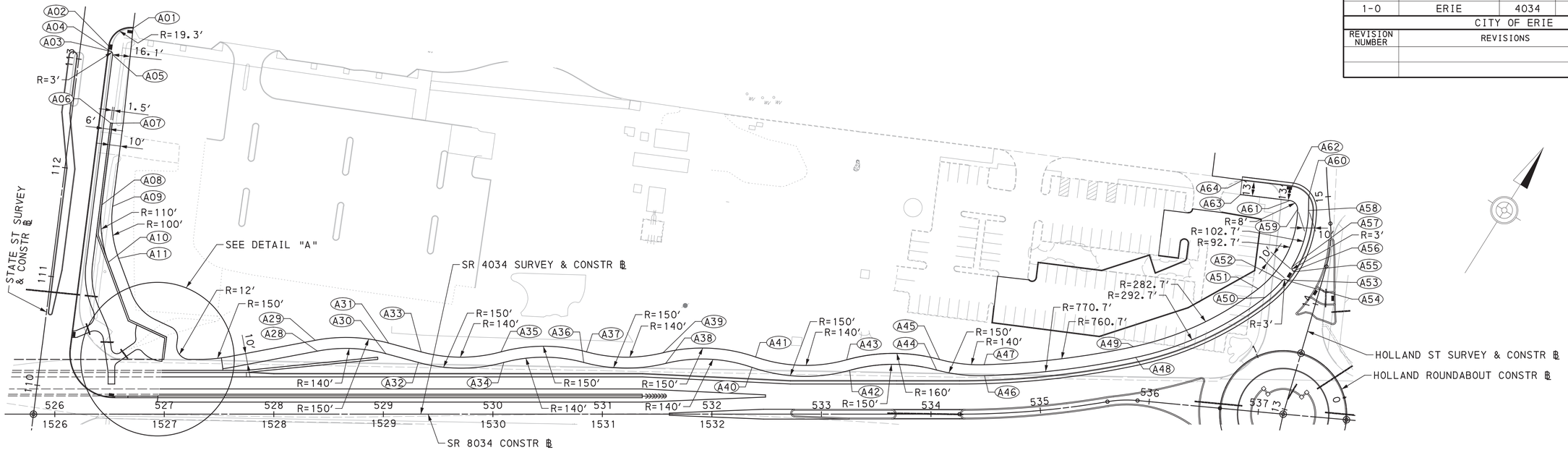
REFERENCE DRAWINGS	SHEETS
PLAN - PROMENADE	106,107

PROMENADE DETAIL

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

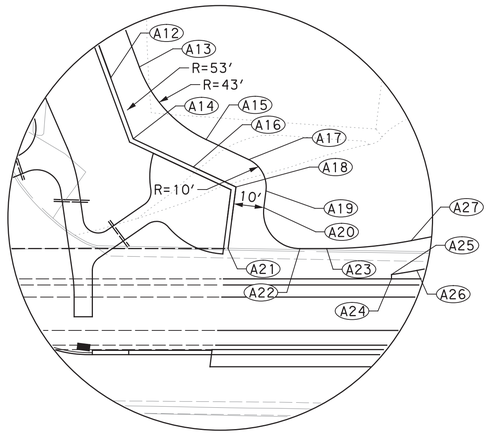
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	22 OF 141
	CITY OF ERIE			

REVISION NUMBER	REVISIONS	DATE	BY



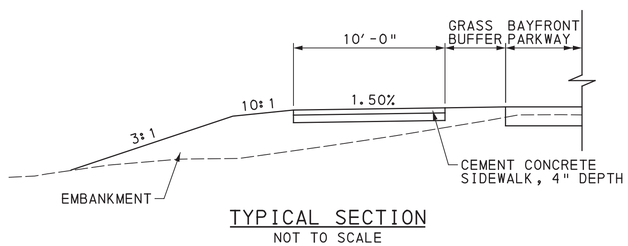
BAYFRONT BIKEWAY DETAIL

SCALE IN FEET
0 25 50



DETAIL "A"

SCALE IN FEET
0 50 100



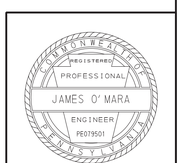
TYPICAL SECTION
NOT TO SCALE

BAYFRONT BIKEWAY				
ROUTE	POINT NO.	STATION	OFFSET	ELEV
STATE ST SURVEY & CONSTR ℄	A01	113+34.11	45.62′ RT	586.52
	A02	113+14.77	26.17′ RT	587.49
	A03	113+10.83	26.17′ RT	587.71
	A04	113+10.83	27.17′ RT	587.72
	A05	113+07.83	30.17′ RT	587.93
	A06	112+45.79	36.17′ RT	592.13
	A07	112+45.79	37.67′ RT	591.83
	A08	111+70.61	37.67′ RT	588.26
	A09	111+70.61	47.67′ RT	588.11
	A10	111+19.54	50.24′ RT	585.74
	A11	111+24.18	59.10′ RT	585.59
	A12	110+89.14	66.17′ RT	584.10
	A13	110+93.78	75.03′ RT	584.00
	A14	110+70.03	76.01′ RT	583.15
	A15	110+72.82	99.91′ RT	582.00
	A16	110+63.31	96.84′ RT	582.16
	A17	110+68.04	114.74′ RT	581.26
	A18	110+58.52	111.67′ RT	581.41
	A19	110+58.52	121.67′ RT	580.88
	A20	110+52.95	121.67′ RT	580.86
SR 4034 SURVEY & CONSTR ℄	A21	526+99.53	50.00′ LT	581.11
	A22	527+23.24	50.00′ LT	581.06
	A23	527+32.06	50.00′ LT	581.06
	A24	527+53.46	40.00′ LT	581.16
	A25	527+53.46	41.44′ LT	581.13
	A26	527+61.83	42.79′ LT	581.21
	A27	527+59.97	52.62′ LT	581.36
	A28	528+39.78	57.56′ LT	582.01
	A29	528+37.92	67.38′ LT	582.16
	A30	529+02.28	55.17′ LT	582.66
	A31	529+04.88	64.83′ LT	582.81
	A32	529+31.95	47.17′ LT	583.14
	A33	529+34.55	56.83′ LT	583.29
	A34	530+10.05	47.17′ LT	585.38
	A35	530+07.45	56.83′ LT	585.53
	A36	530+82.95	47.17′ LT	586.11
	A37	530+85.55	56.83′ LT	586.26
	A38	531+57.70	46.31′ LT	586.85
	A39	531+55.32	56.02′ LT	587.00
	A40	532+36.66	42.69′ LT	587.66

BAYFRONT BIKEWAY				
ROUTE	POINT NO.	STATION	OFFSET	ELEV
SR 4034 SURVEY & CONSTR ℄	A41	532+39.92	52.14′ LT	587.81
	A42	533+25.77	39.99′ LT	588.45
	A43	533+23.09	49.62′ LT	588.60
	A44	534+05.22	40.26′ LT	588.86
	A45	534+07.83	49.92′ LT	589.42
	A46	534+49.93	34.77′ LT	588.89
	A47	534+49.93	44.77′ LT	589.03
	A48	535+85.44	39.08′ LT	591.08
	A49	535+83.63	48.75′ LT	590.93
HOLLAND ST SURVEY & CONSTR ℄	A50	13+92.81	46.00′ LT	588.46
	A51	13+98.68	54.09′ LT	588.31
	A52	14+12.15	34.96′ LT	587.70
	A53	14+13.80	31.29′ LT	587.61
	A54	14+13.42	30.10′ LT	587.63
	A55	14+22.87	26.81′ LT	587.13
	A56	14+23.21	27.88′ LT	587.11
	A57	14+26.83	29.86′ LT	586.90
	A58	14+88.97	18.76′ LT	584.06
	A59	14+90.77	28.62′ LT	583.88
	A60	15+01.20	17.56′ LT	583.69
	A61	14+98.98	35.03′ LT	583.53
	A62	15+11.19	32.29′ LT	583.27
	A63	15+06.89	79.73′ LT	583.47
	A64	15+18.55	77.46′ LT	583.05

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEETS
PLAN - BAYFRONT BIKEWAY	107, 108, 109, 114, 116

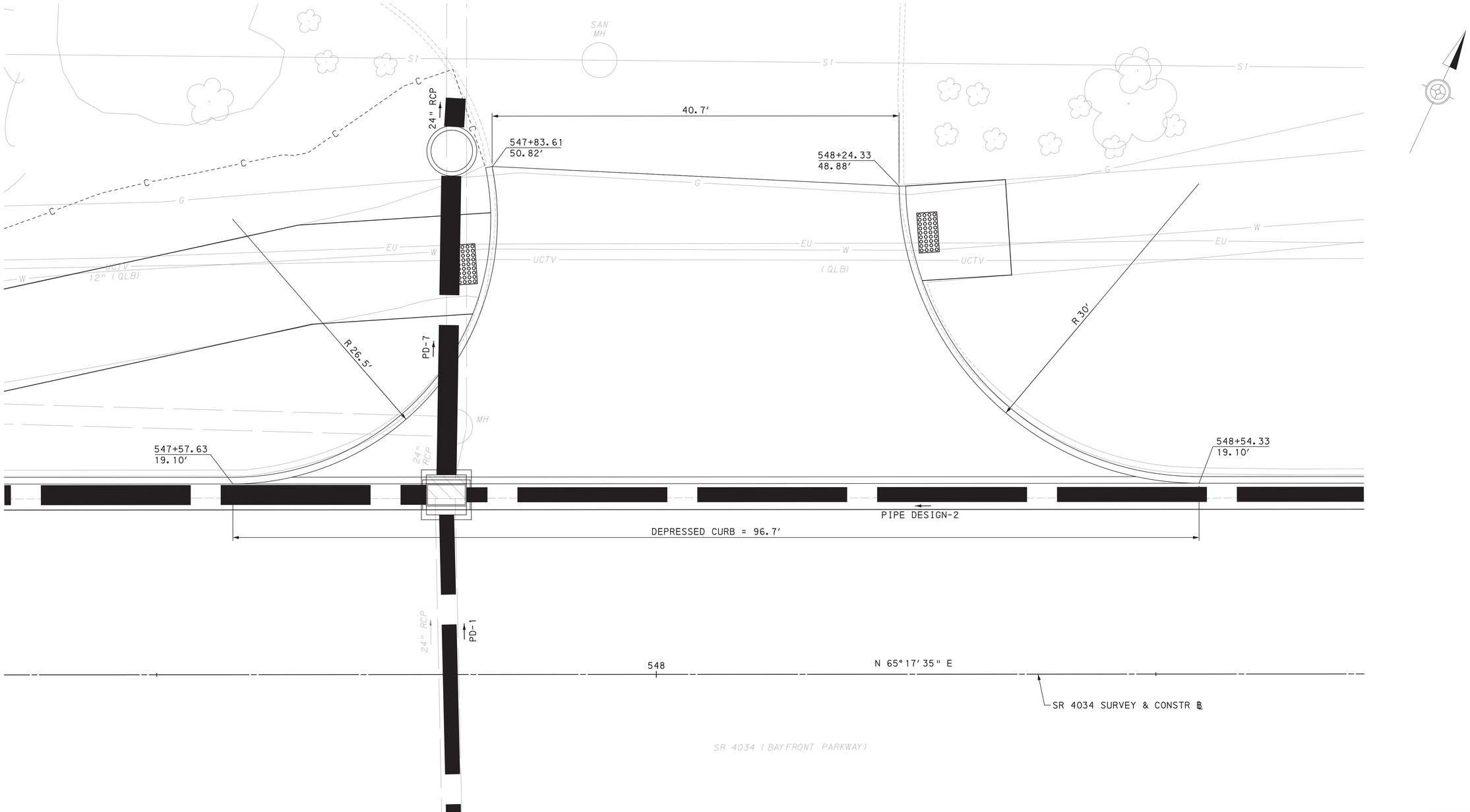


PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	23 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

——F—— FILL LINE

----C---- CUT LINE

ASPHALT DRIVE RECONSTRUCTION WITH DEPRESSED CURB

BAYFRONT PARKWAY
STA 548+04, LT

REFERENCE DRAWINGS	SHEET
DETAIL - ASPHALT DRIVE RECONSTR W/DEP CURB	17
PLAN - SR 4034	111

SCALE IN FEET

0 5 10

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501
COMMONWEALTH OF PENNSYLVANIA

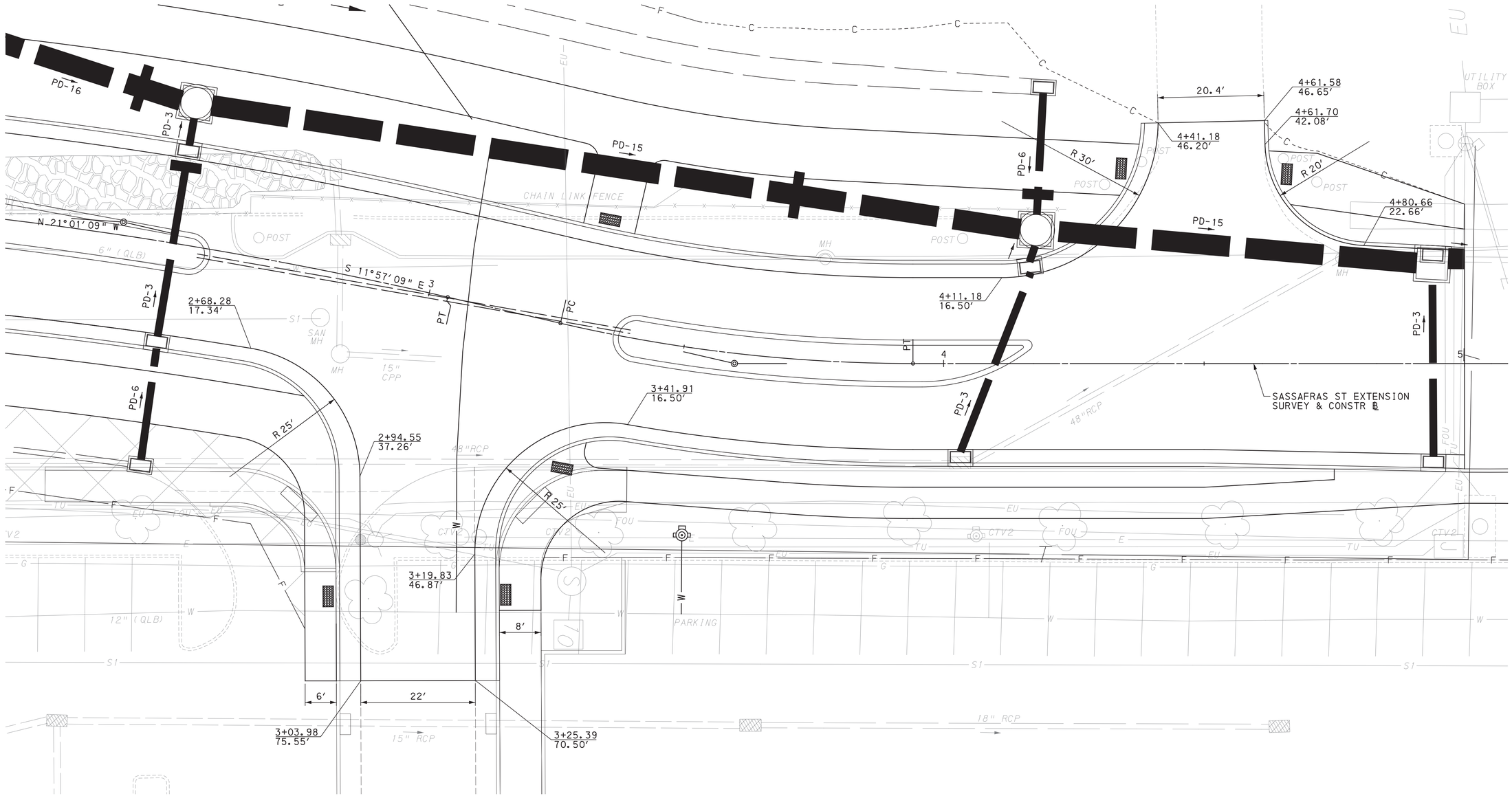
PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 07.dgn

PLOTTED: 8/18/2022
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	24 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

—— F —— FILL LINE

---- C ---- CUT LINE

ASPHALT DRIVE RECONSTRUCTION

SASSAFRAS STREET EXT
STA 3+06, RT

ASPHALT DRIVE RECONSTRUCTION

SASSAFRAS STREET EXT
STA 4+46, LT

SCALE IN FEET
0 10 20

REFERENCE DRAWINGS	SHEET
DETAIL - ASPHALT DRIVE RECONSTR	17
PLAN - SASSAFRAS STREET EXTENSION	112

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

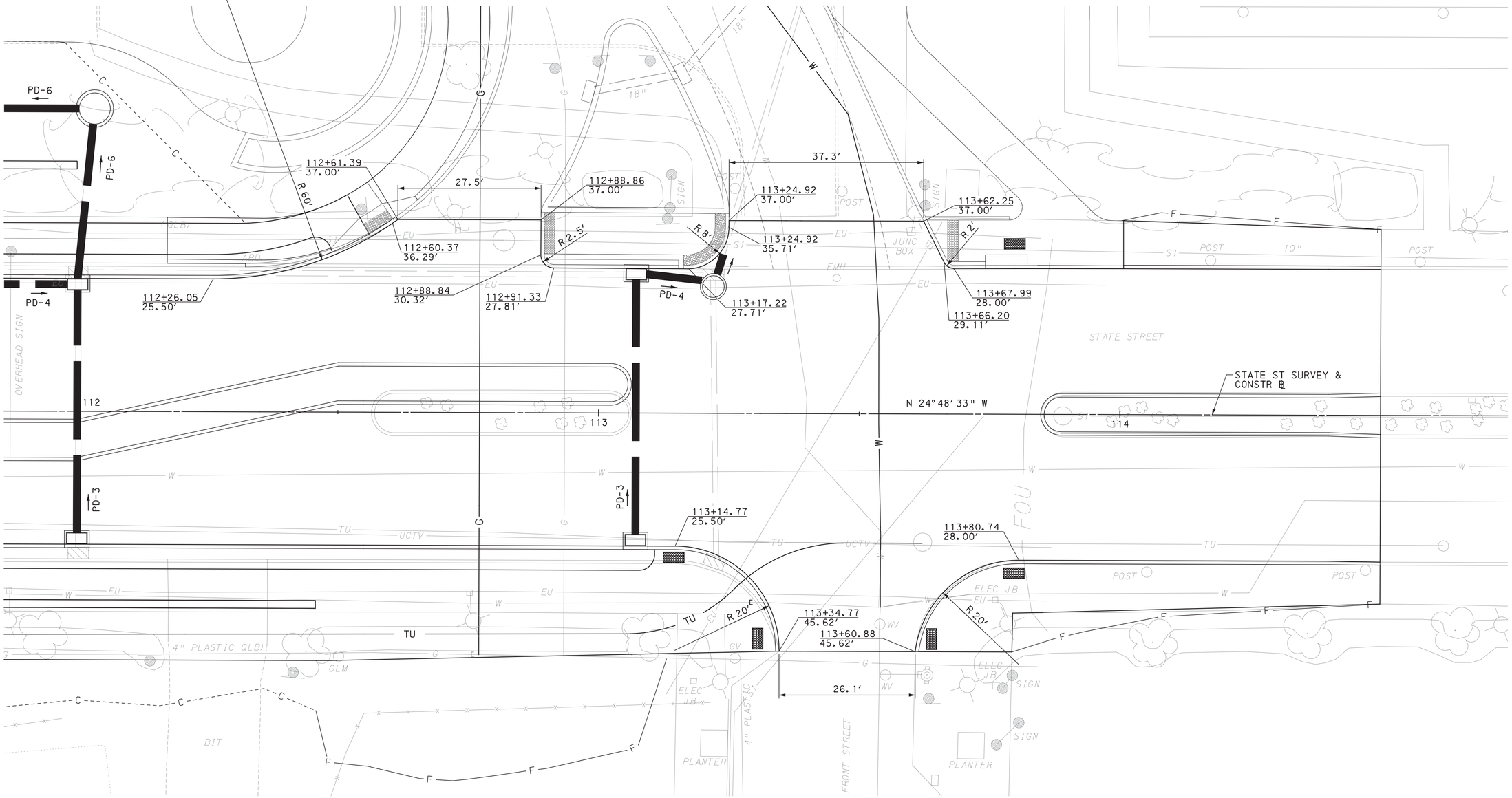
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	25 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

ASPHALT DRIVE RECONSTRUCTION
STATE STREET
STA 112+75, LT

ASPHALT DRIVE RECONSTRUCTION
STATE STREET
STA 113+44, LT



LEGEND

—— F —— FILL LINE

---- C ---- CUT LINE

ASPHALT DRIVE RECONSTRUCTION
STATE STREET
STA 113+48, RT

REFERENCE DRAWINGS	SHEET
DETAIL - ASPHALT DRIVE RECONSTR	17
PLAN - STATE STREET	114

SCALE IN FEET
0 10 20

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

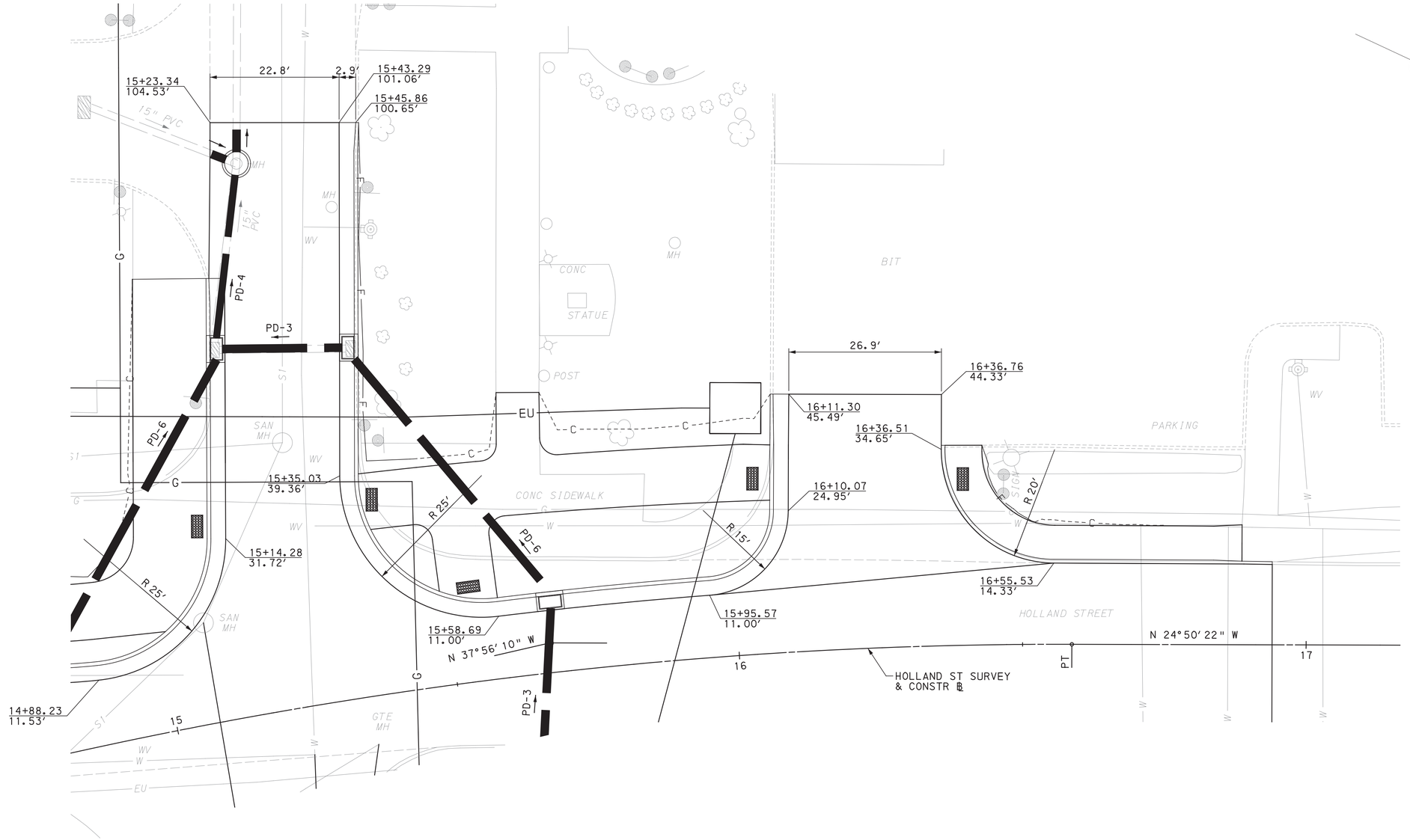
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	26 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



ASPHALT DRIVE RECONSTRUCTION
HOLLAND STREET
STA 15+23, LT

ASPHALT DRIVE RECONSTRUCTION
HOLLAND STREET
STA 16+26, LT

LEGEND
—— F —— FILL LINE
---- C ---- CUT LINE

REFERENCE DRAWINGS	SHEET
DETAIL - ASPHALT DRIVE RECONSTR	17
PLAN - HOLLAND STREET	116

SCALE IN FEET
0 10 20

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

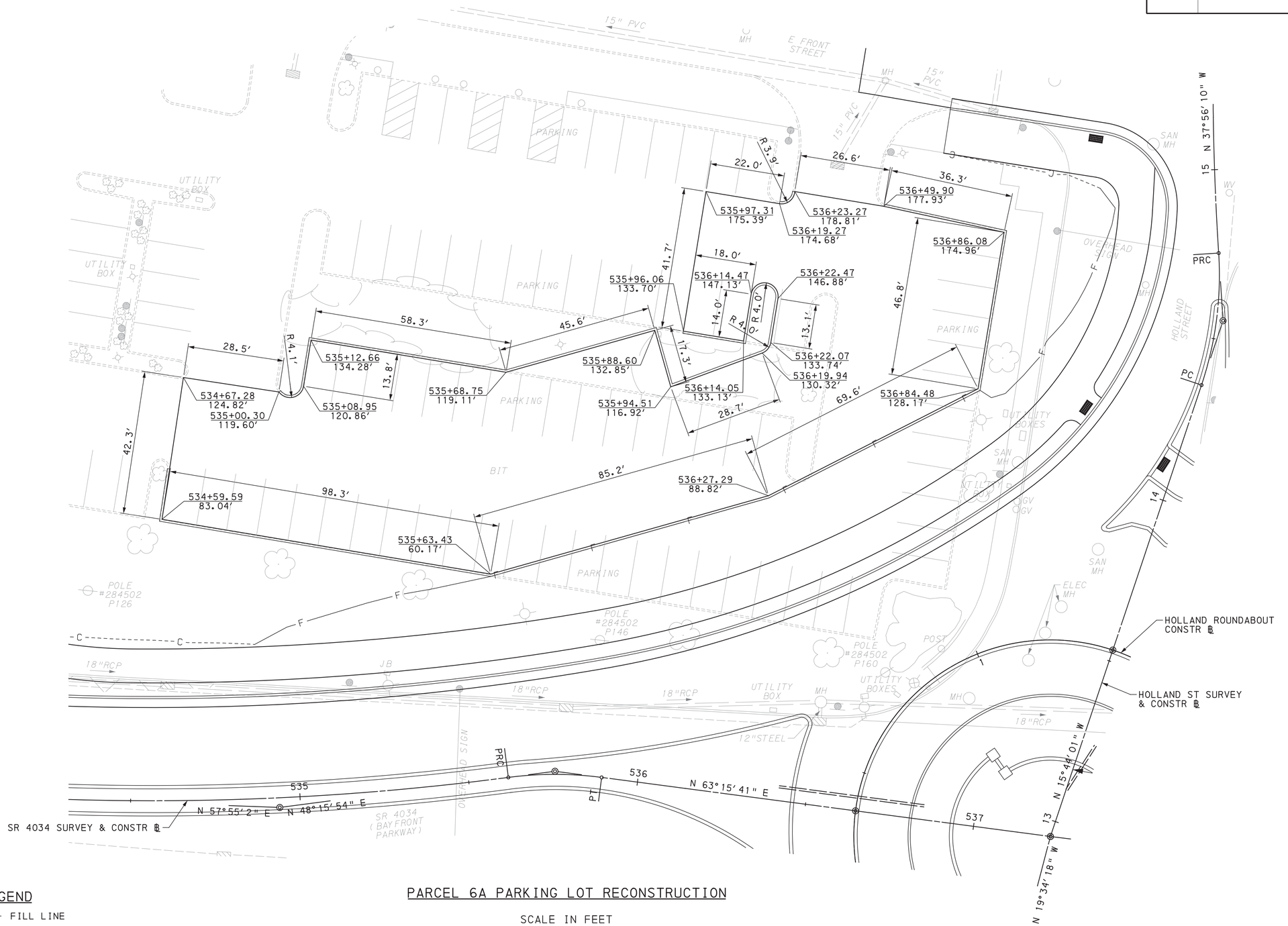
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	27 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

—— F —— FILL LINE

---- C ---- CUT LINE

PARCEL 6A PARKING LOT RECONSTRUCTION

SCALE IN FEET

0 15 30

REFERENCE DRAWINGS	SHEETS
PLAN - (EWPPA) PARKING LOT	108, 109, 116

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

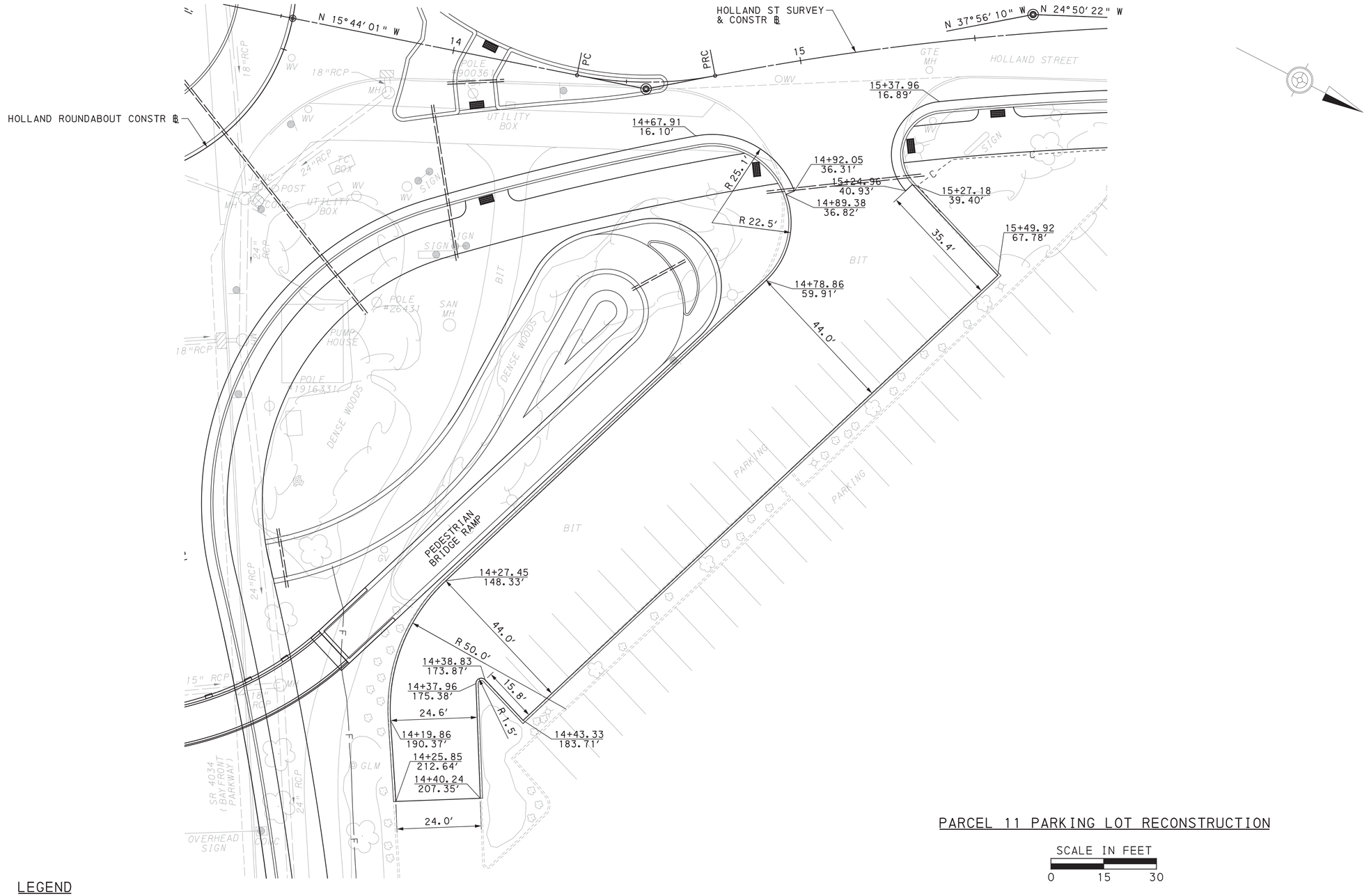
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	28 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



PARCEL 11 PARKING LOT RECONSTRUCTION

SCALE IN FEET

0 15 30

LEGEND

——F—— FILL LINE

----C---- CUT LINE

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEETS
PLAN - (EMTA) PARKING LOT	109, 116

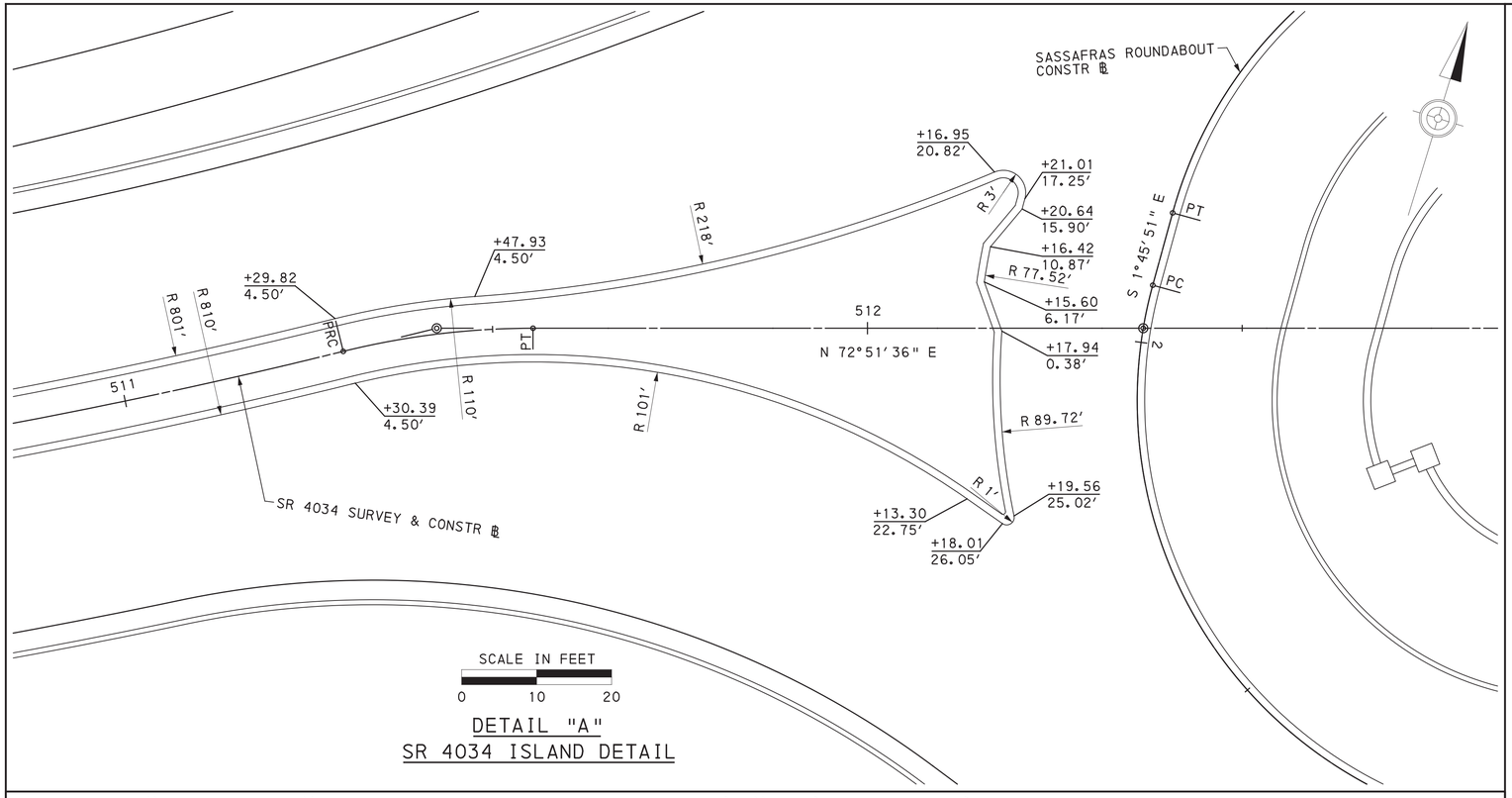
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

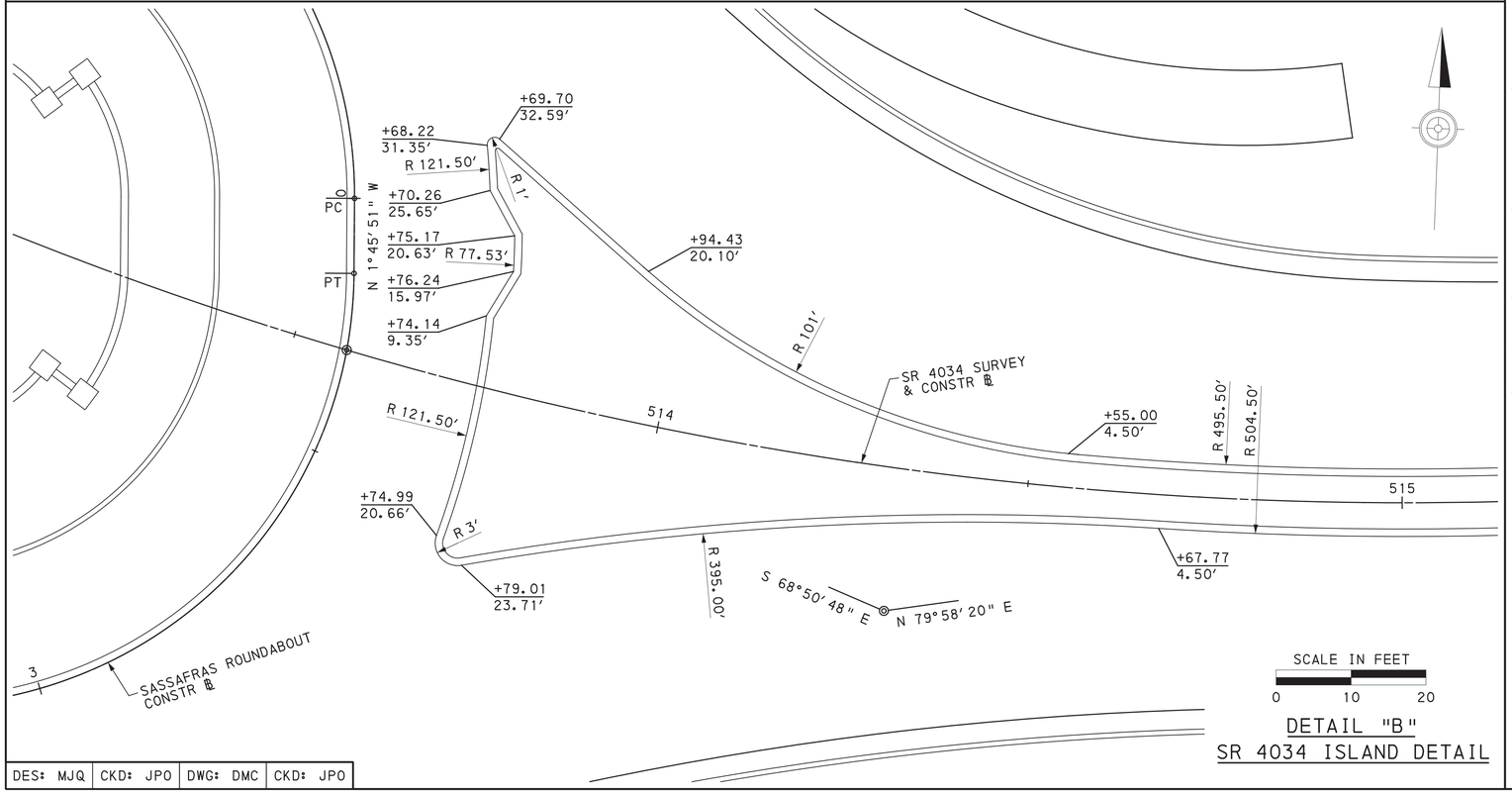
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDd† 12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	29 OF 141
CITY OF ERIE				

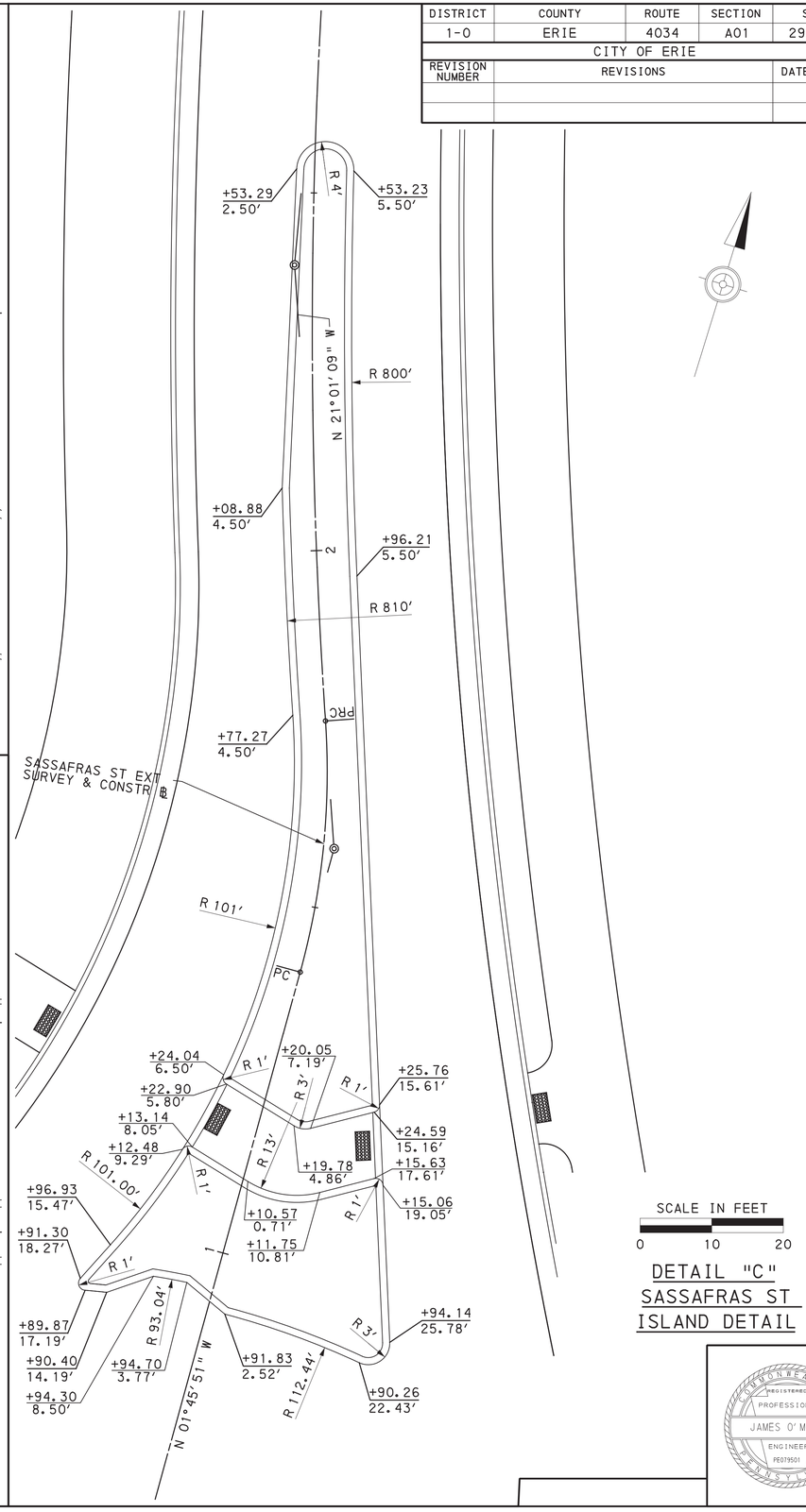
REVISION NUMBER	REVISIONS	DATE	BY



DETAIL "A"
SR 4034 ISLAND DETAIL



DETAIL "B"
SR 4034 ISLAND DETAIL



DETAIL "C"
SASSAFRAS ST
ISLAND DETAIL

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

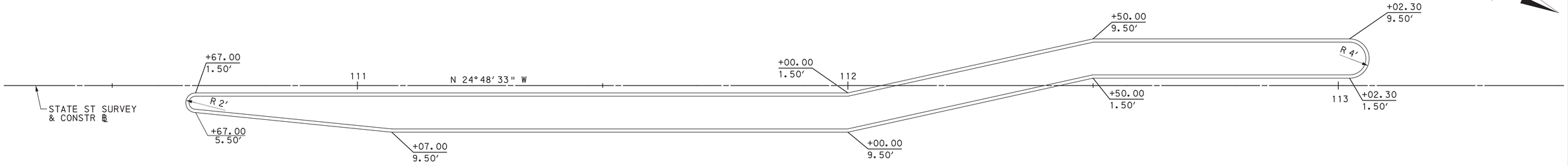
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	30 OF 141
CITY OF ERIE				

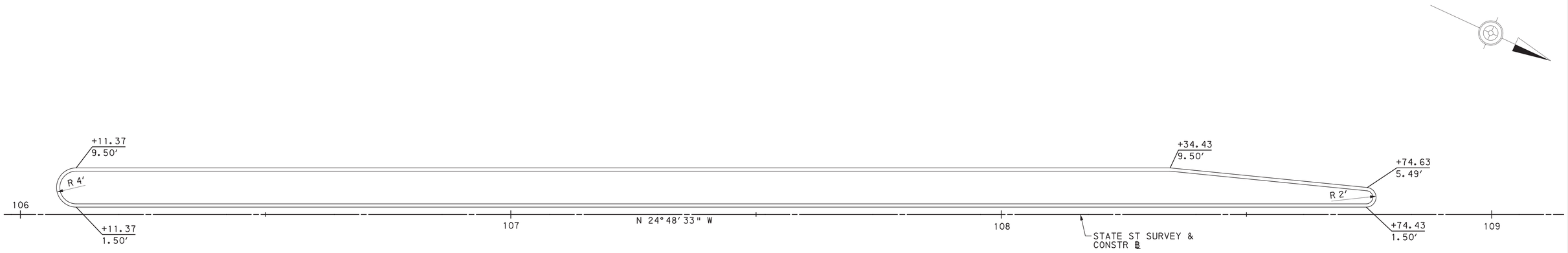
REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

0 10 20

DETAIL "D"
STATE ST ISLAND DETAIL



SCALE IN FEET

0 10 20

DETAIL "E"
STATE ST ISLAND DETAIL

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	31 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SCALE IN FEET
0 10 20

DETAIL "F"
SR 4034 ISLAND DETAIL

+32.16 / 50.76'
27.7'
HOLLAND ROUNDABOUT CONSTR ℄
+86.90 / 32.08'
10' (TYP)
+44.68 / 26.07'
19.5'
R 3'
+48.75 / 22.61'
R 430'
+67.86 / 4.50'
+61.73 / 4.50'
PRC
23.0'
R 801'
R 810'
SR 4034 SURVEY & CONSTR ℄
+24.72 / 4.50'
536
N 63°15'41" E
PT
R 86'
537
13
N 15°44'01"
HOLLAND ST SURVEY & CONSTR ℄
535
+61.73 / 4.50'
R 110'
R 101'
18.0'
R 1-
+39.66 / 17.92'
+50.12 / 21.94'
+48.66 / 23.10'
+24.72 / 4.50'
23.0'
+34.43 / 27.50'
36.2'
+28.33 / 53.10'
N 19°34'18" W
2

+18.31 / 48.71'
32.9'
HOLLAND ROUNDABOUT CONSTR ℄
+00.22 / 27.50'
+19.62 / 4.50'
+98.62 / 22.30'
+97.13 / 21.33'
+07.49 / 17.22'
19.2'
0
R 1-
R 101'
SR 4034 SURVEY & CONSTR ℄
+84.40 / 4.47'
R 110'
PRC
+27.60 / 4.50'
540
N 57°55'02" E
PT
+19.62 / 4.50'
539
R 810'
R 801'
+27.60 / 4.50'
23.0'
+19.62 / 27.50'
538
N 62°54'55" E
R 195.02'
+80.66 / 4.50'
+86.77 / 4.50'
+96.82 / 23.38'
19.5'
R 3'
R 435'
+00.93 / 26.52'
26.4'
+32.20 / 41.76'
3
+12.96 / 49.98'

SCALE IN FEET
0 10 20

DETAIL "G"
SR 4034 ISLAND DETAIL

DES: MJQ | CKD: JPO | DWG: DMC | CKD: JPO

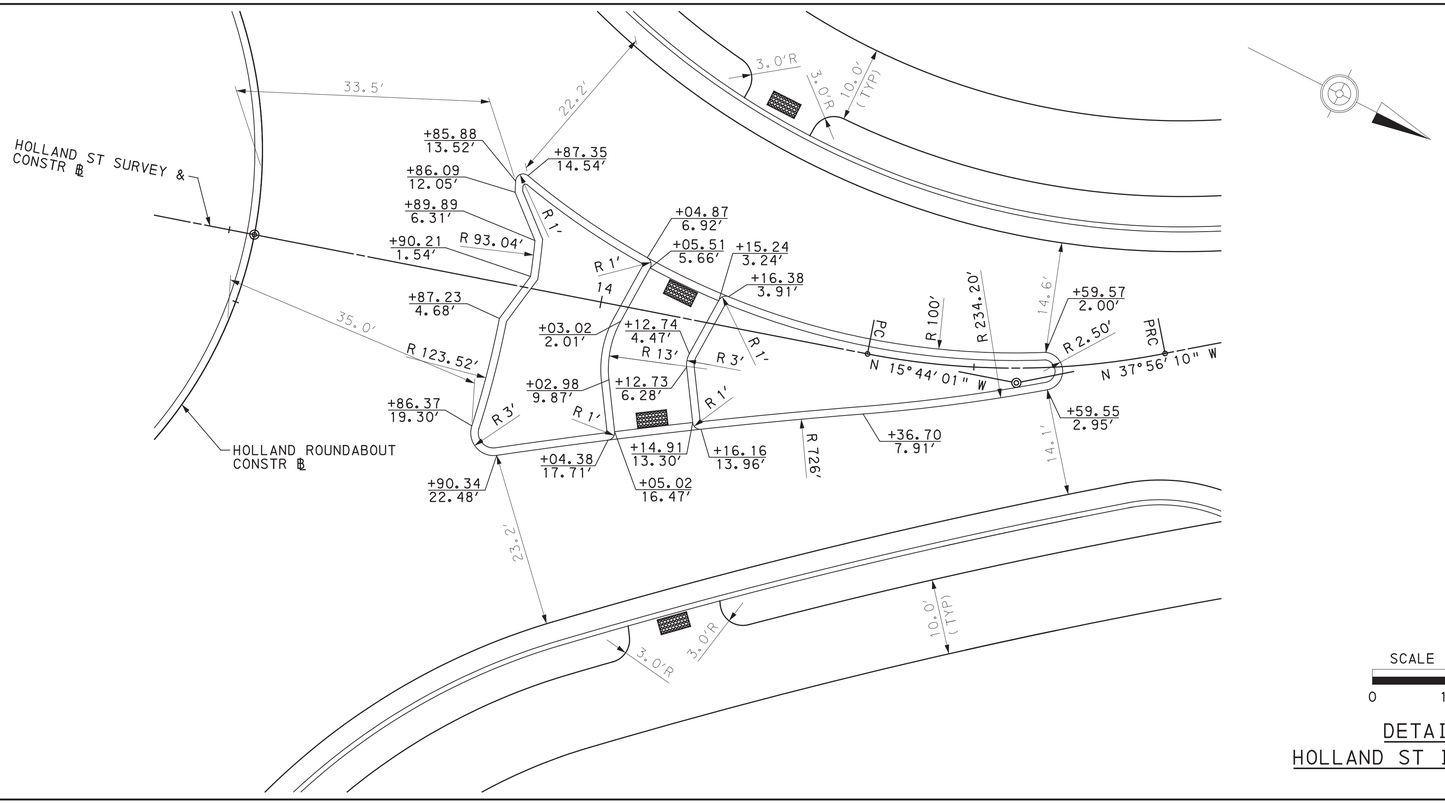
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	32 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

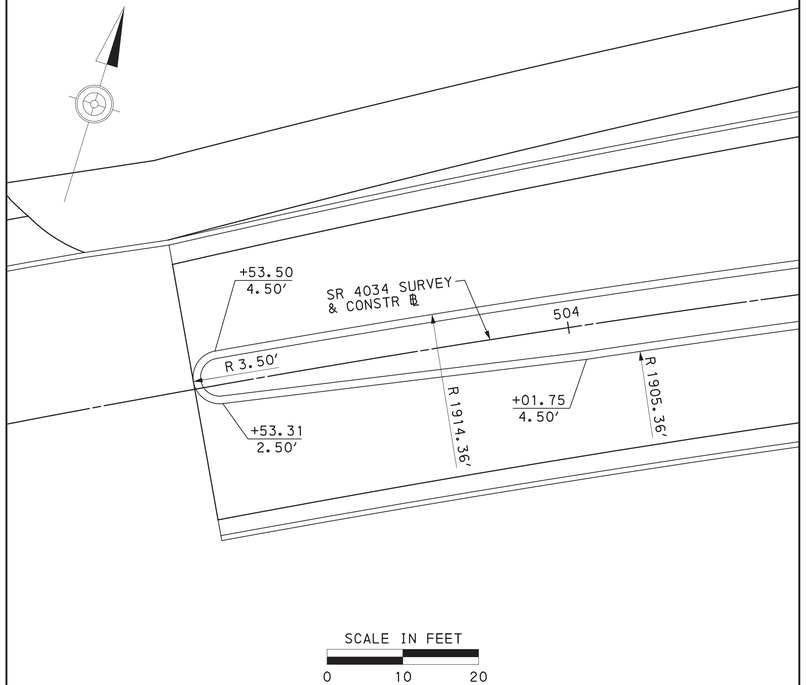
REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/18/2022

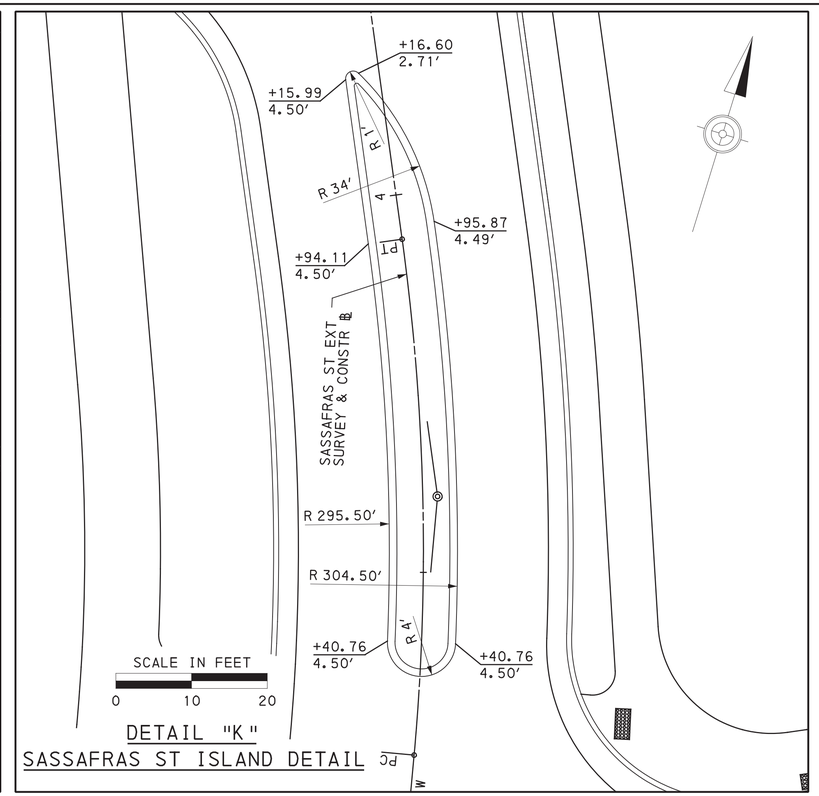
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	33 OF 141
CITY OF ERIE				

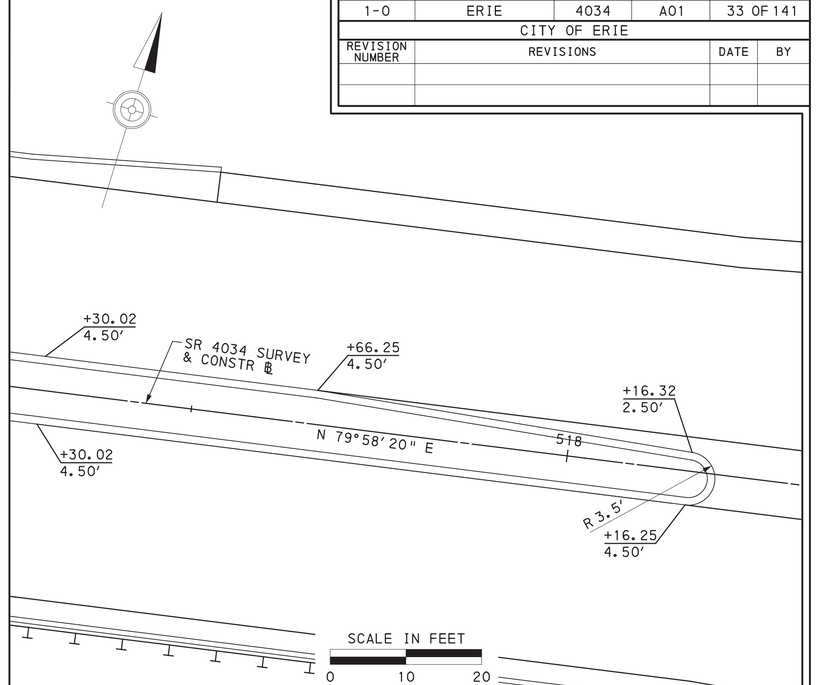
REVISION NUMBER	REVISIONS	DATE	BY



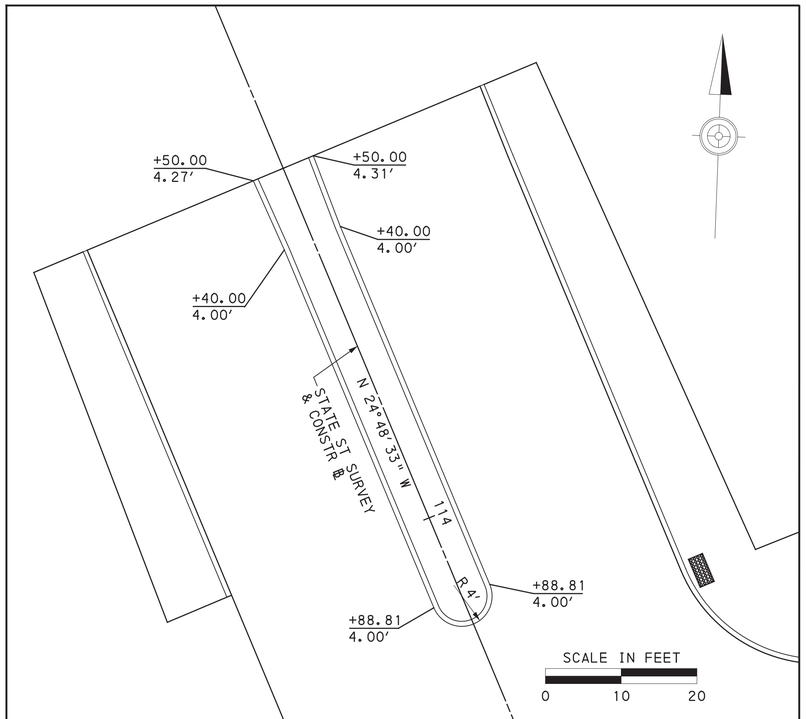
DETAIL "J"
SR 4034 ISLAND DETAIL



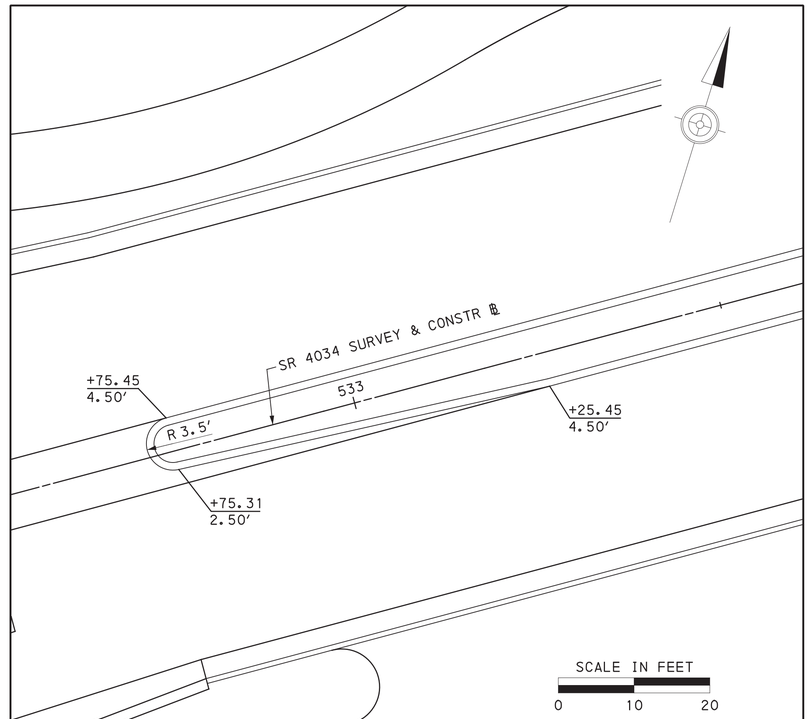
DETAIL "K"
SASSAFRAS ST ISLAND DETAIL



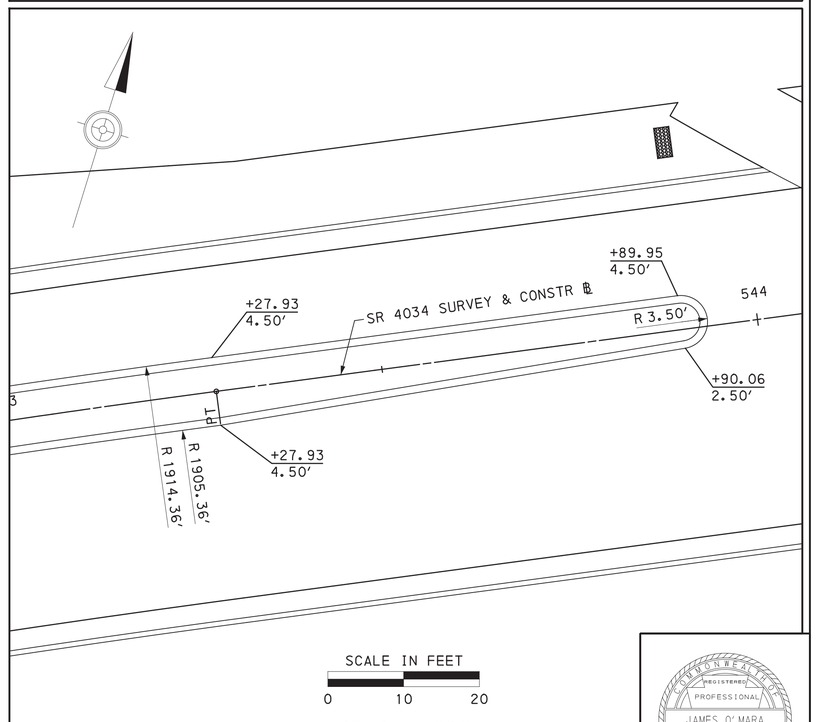
DETAIL "L"
SR 4034 ISLAND DETAIL



DETAIL "M"
STATE ST ISLAND DETAIL



DETAIL "N"
SR 4034 ISLAND DETAIL



DETAIL "O"
SR 4034 ISLAND DETAIL

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

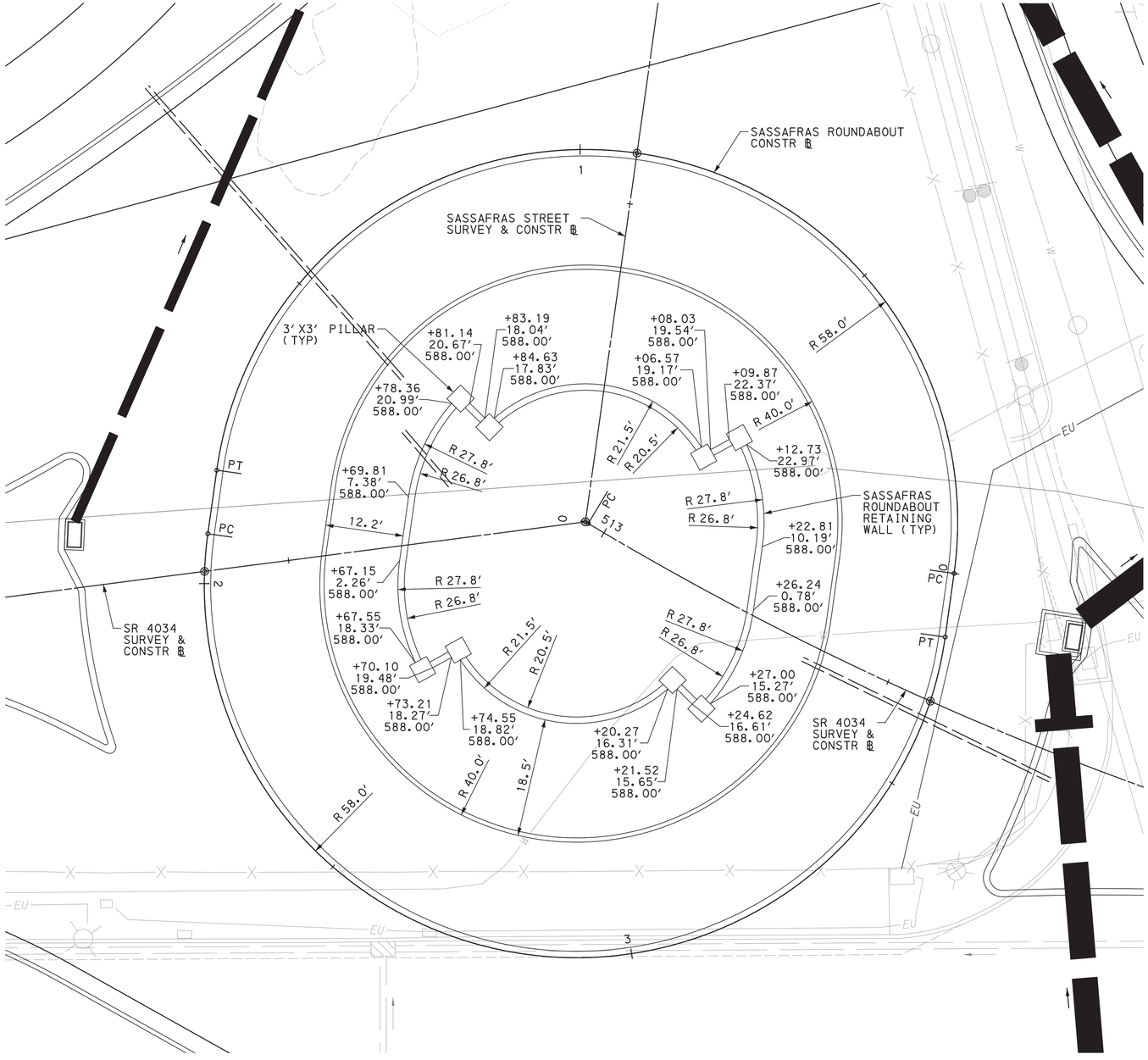
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 7.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	34 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SASSAFRAS ROUNDABOUT RETAINING WALL

SCALE IN FEET
0 10 20

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
DETAIL - SASSAFRAS ROUNDABOUT RETAINING WALL	35

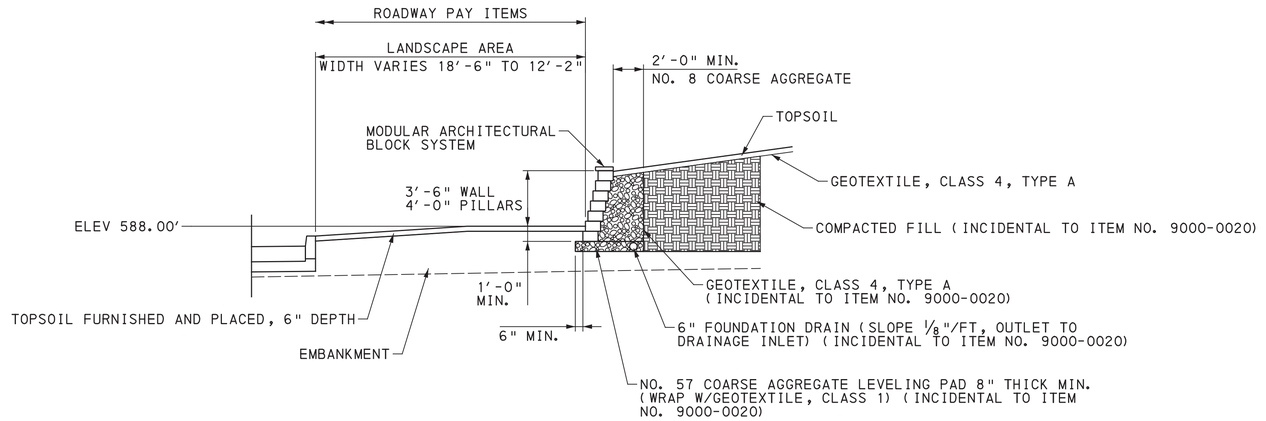
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

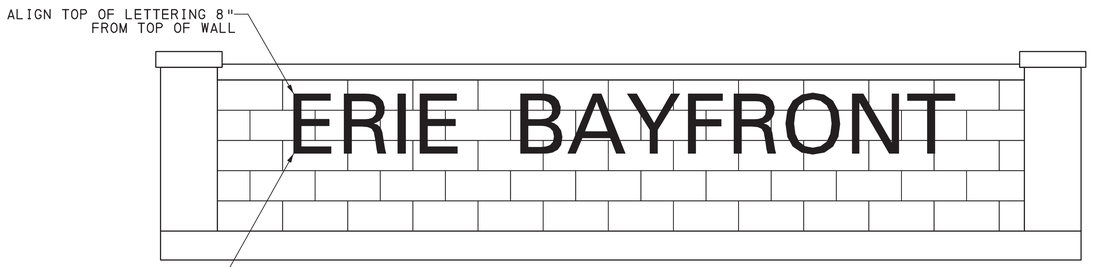
FILE NAME: \\msconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDdt 18.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	35 OF 141
CITY OF ERIE				

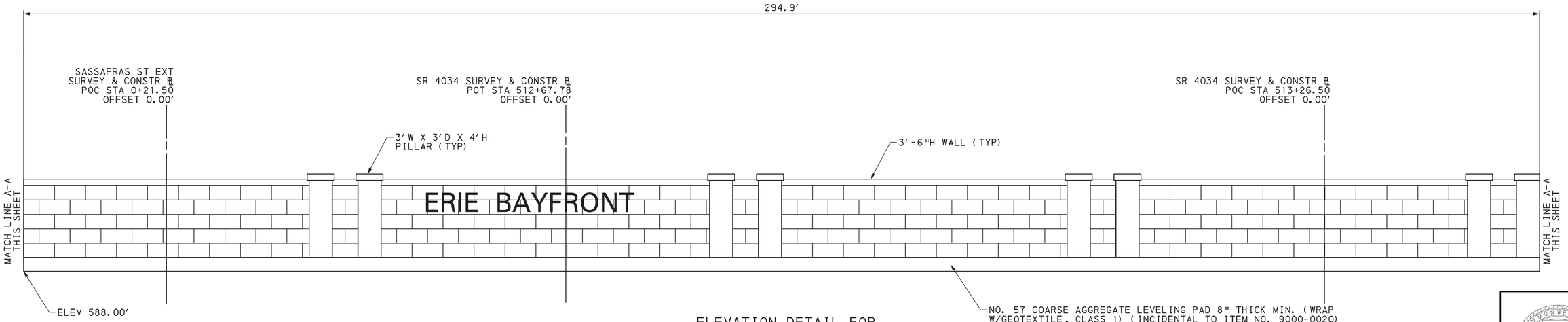
REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION FOR
MODULAR ARCHITECTURAL BLOCK SYSTEM, SPECIFIED STYLE
ITEM NO. 9000-0020
SASSAFRAS ROUNDABOUT RETAINING WALL
NOT TO SCALE



GATEWAY SIGN
ITEM NO. 9000-0004
NOT TO SCALE



ELEVATION DETAIL FOR
MODULAR ARCHITECTURAL BLOCK SYSTEM, SPECIFIED STYLE
ITEM NO. 9000-0020
SASSAFRAS ROUNDABOUT RETAINING WALL
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

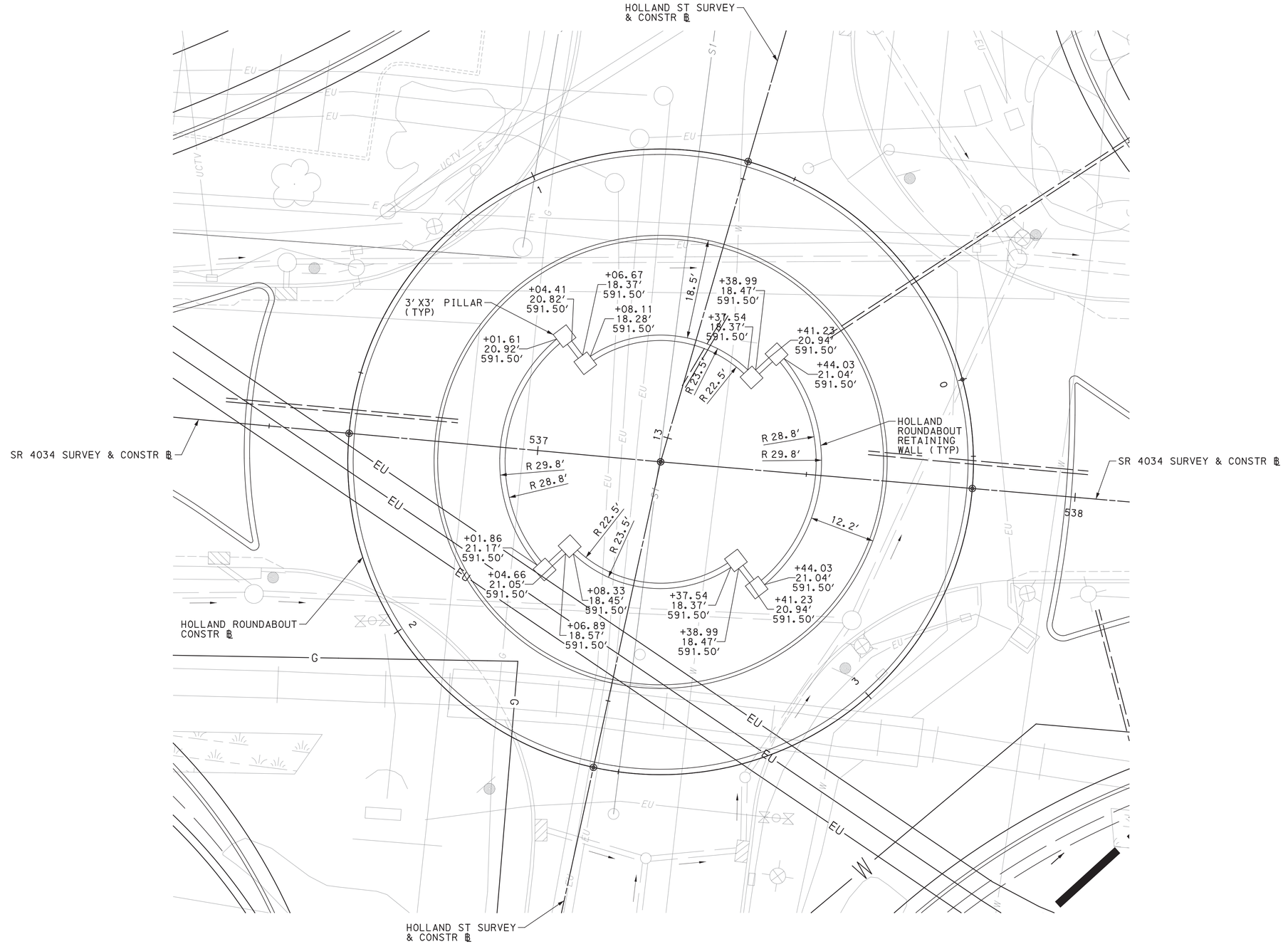
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 19.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	36 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND ROUNDABOUT RETAINING WALL

SCALE IN FEET
0 10 20

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
DETAIL - HOLLAND ROUNDABOUT RETAINING WALL	37

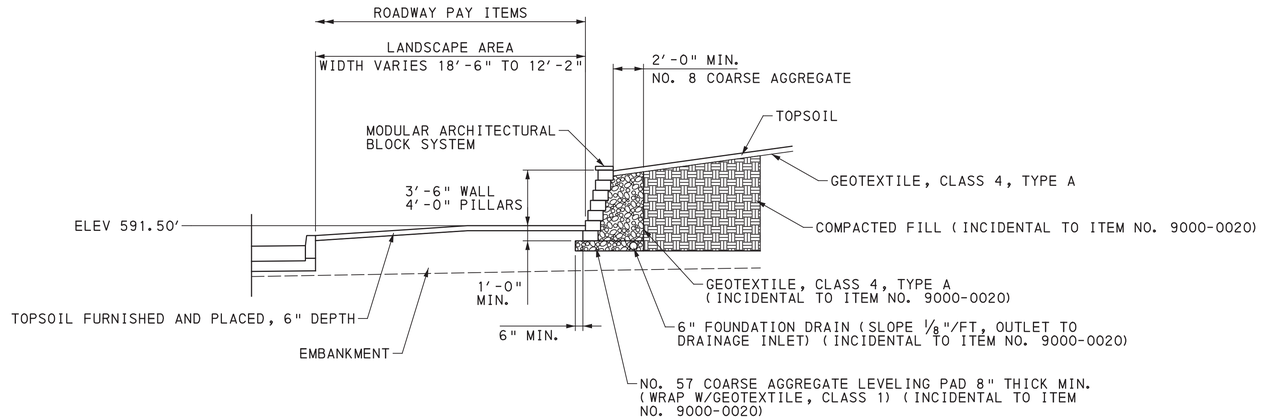
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

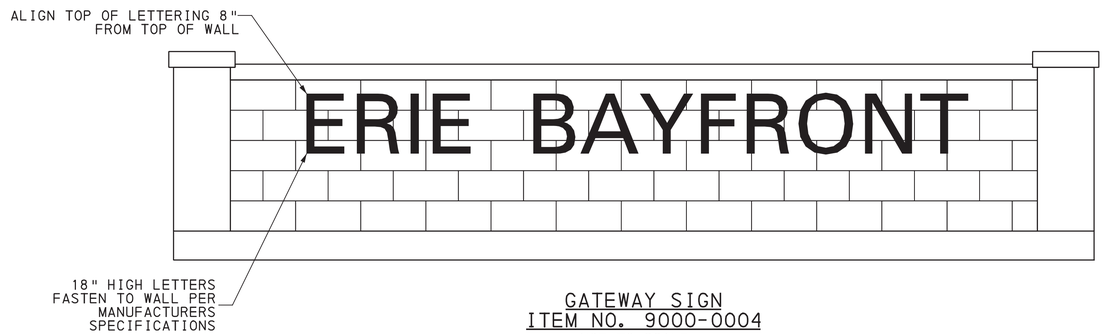
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 20.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	37 OF 141
CITY OF ERIE				

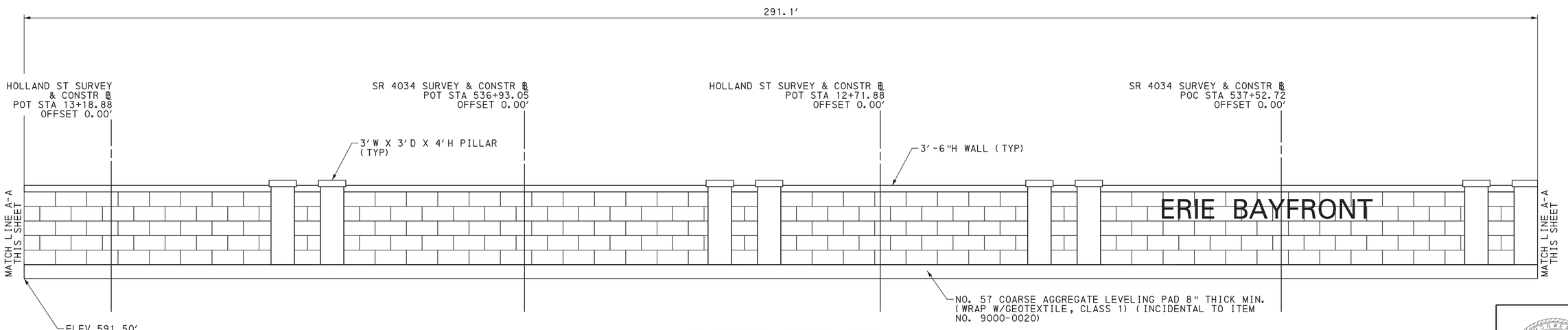
REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION FOR
MODULAR ARCHITECTURAL BLOCK SYSTEM. SPECIFIED STYLE
ITEM NO. 9000-0020
HOLLAND ROUNDABOUT RETAINING WALL
NOT TO SCALE



GATEWAY SIGN
ITEM NO. 9000-0004
NOT TO SCALE



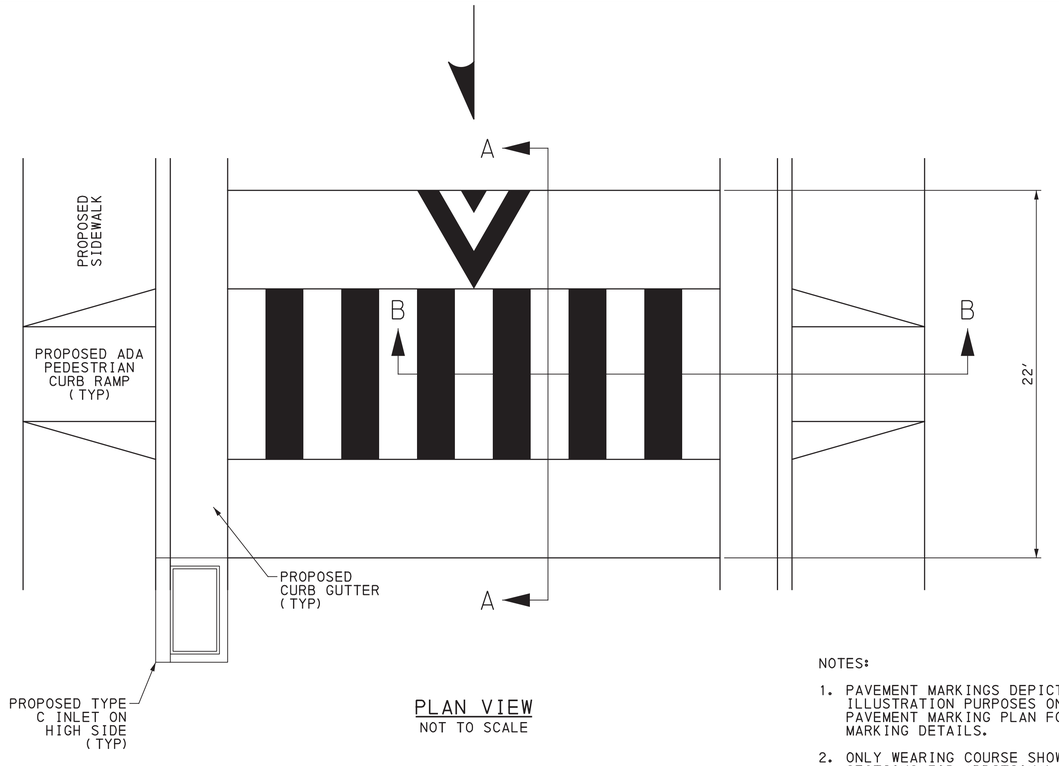
ELEVATION DETAIL FOR
MODULAR ARCHITECTURAL BLOCK SYSTEM. SPECIFIED STYLE
ITEM NO. 9000-0020
HOLLAND ROUNDABOUT RETAINING WALL
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDd t 21.dgn

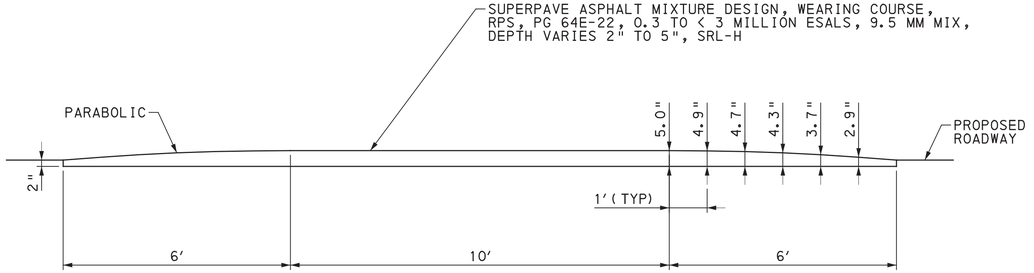


PLAN VIEW
NOT TO SCALE

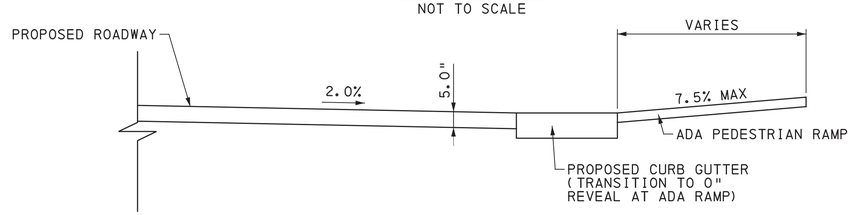
NOTES:

1. PAVEMENT MARKINGS DEPICTED ARE FOR ILLUSTRATION PURPOSES ONLY. REFER TO PAVEMENT MARKING PLAN FOR CROSSWALK MARKING DETAILS.
2. ONLY WEARING COURSE SHOWN. SEE TYPICAL SECTIONS FOR ADDITIONAL PAVEMENT ITEMS.

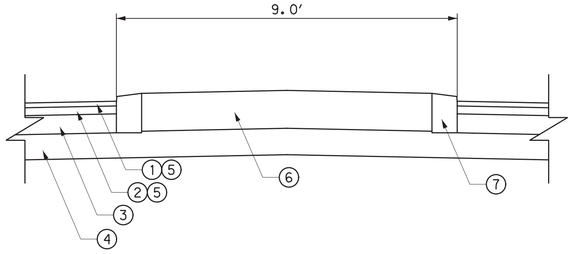
RAISED CROSSWALK DETAIL
NOT TO SCALE



SECTION A-A
NOT TO SCALE



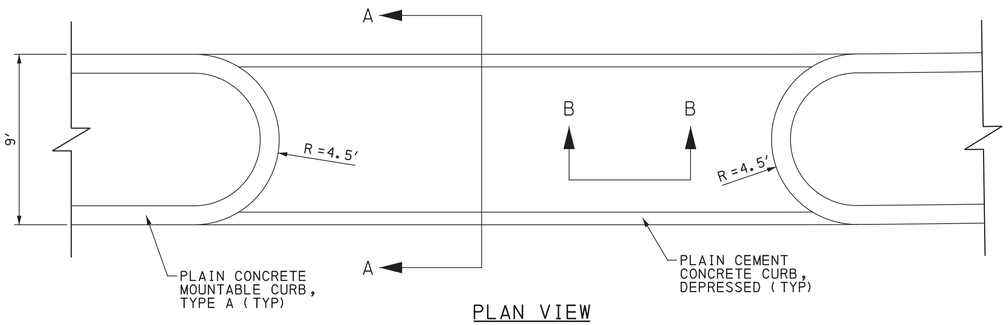
SECTION B-B
NOT TO SCALE



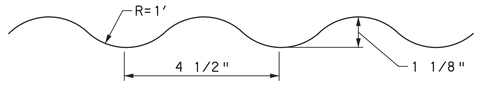
SECTION A-A
NOT TO SCALE

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2½" DEPTH
3. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH
4. SUBBASE 8" DEPTH (NO. 2A)
5. ASPHALT TACK COAT (NTT/CNTT)
6. CONCRETE RUMBLE TRAFFIC SEPARATOR, 12" DEPTH
7. PLAIN CEMENT CONCRETE CURB, DEPRESSED



PLAN VIEW
NOT TO SCALE

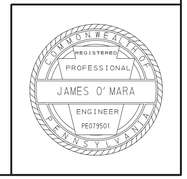


NOTE:
MAKE A WAVE PATTERN 4 1/2" CENTER TO CENTER, MEASUREMENT FROM HIGH POINT OF PEAK TO LOW POINT OF VALLEY IS 1 1/8", 1" RADIUS

SECTION B-B
NOT TO SCALE

CONCRETE RUMBLE TRAFFIC SEPARATOR
ITEM NO. 9000-0002
NOT TO SCALE

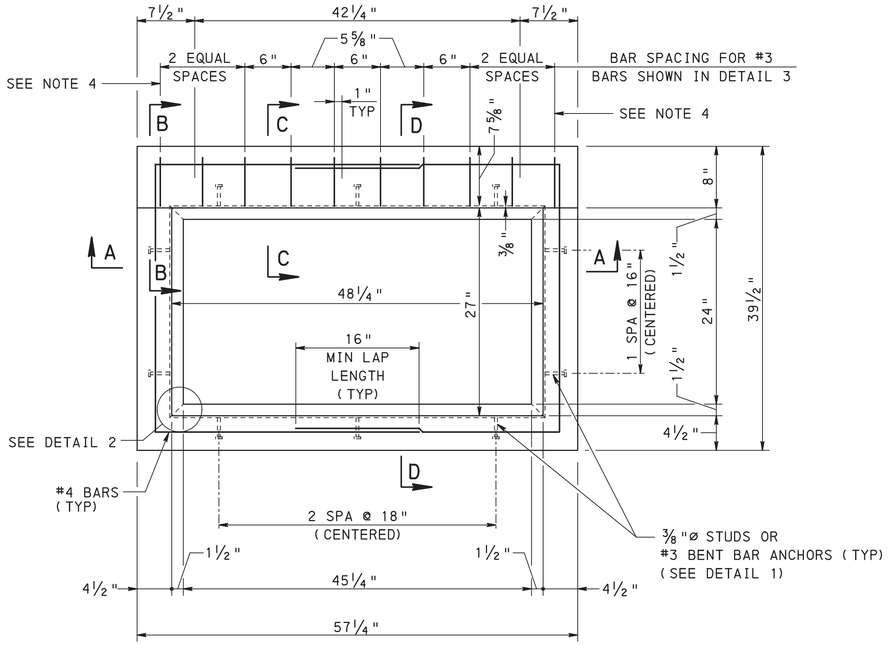
SR 4034 (BAYFRONT PARKWAY) STA 533+68.38 TO STA 534+26.64



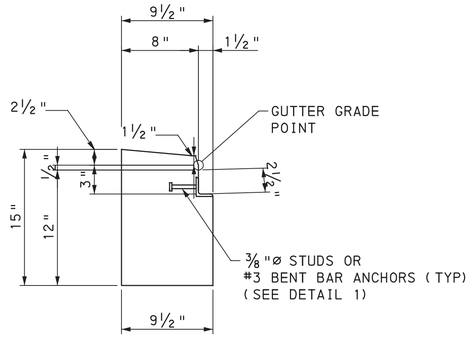
DES: MJQ | CKD: JPO | DWG: DMC | CKD: JPO

PLOTTED: 8/18/2022
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 22.dgn

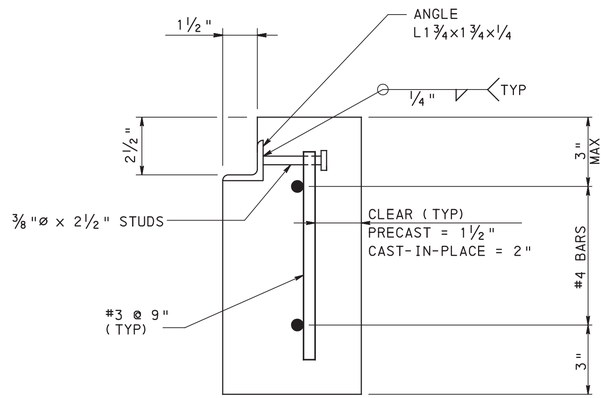
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	39 OF 141
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY



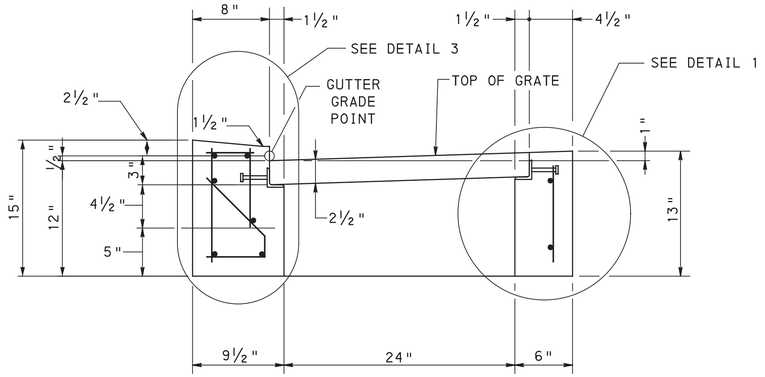
PLAN VIEW
NOT TO SCALE



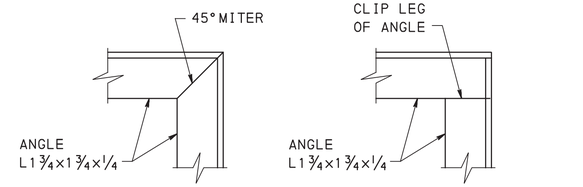
SECTION C-C
NOT TO SCALE



DETAIL 1
NOT TO SCALE



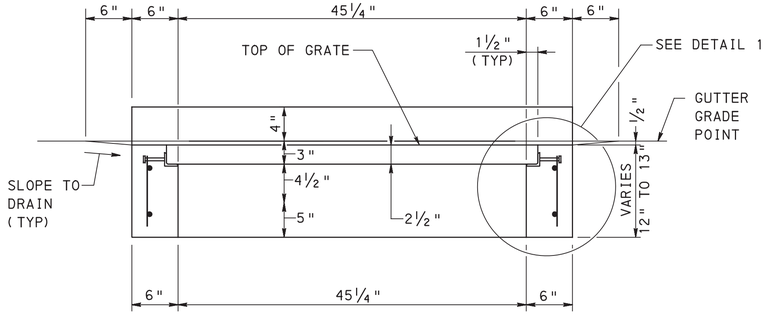
SECTION D-D
NOT TO SCALE



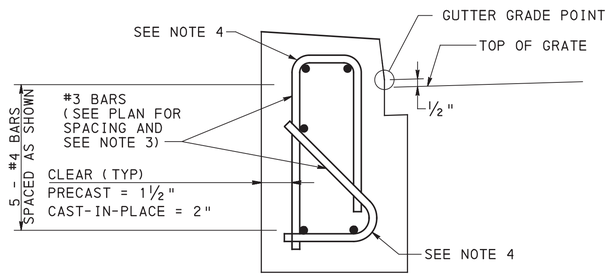
OPTION 1
(MITERED)

OPTION 2
(CLIPPED LEG)

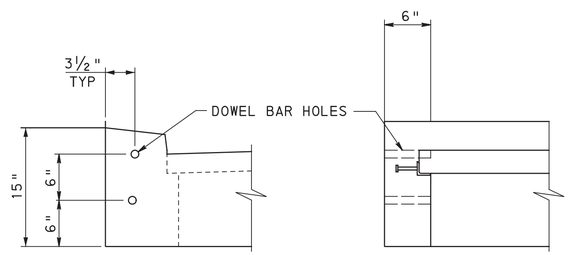
DETAIL 2
NOT TO SCALE



SECTION A-A
NOT TO SCALE



DETAIL 3
NOT TO SCALE



SECTION B-B
NOT TO SCALE

FRONT ELEVATION
NOT TO SCALE

NOTES

1. FOR ADDITIONAL NOTES AND DETAILS NOT SHOWN, REFER TO RC-45M.
2. A MAXIMUM OF TWO HOLES ARE PERMITTED IN THE PLATE TO POSITION AND HOLD THE PLATE IN PLACE DURING FABRICATION. HOLES ARE NOT PERMITTED TO BE GREATER THAN ¼" DIAMETER.
3. FABRICATOR TO DETERMINE NUMBER OF BARS REQUIRED TO MATCH SHAPE INDICATED. PROVIDE ONE, TWO, OR THREE BARS AS REQUIRED.
4. BEND OUTSIDE STIRRUP TO ACCOMMODATE DOWEL BARS AND STILL MAINTAIN CLEARANCE REQUIREMENTS.

TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB ITEM NO. 9000-0302

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

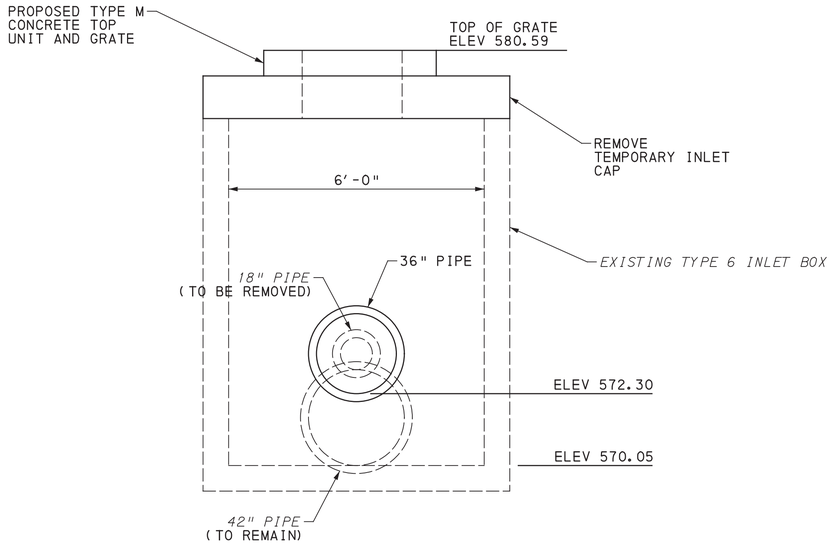
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

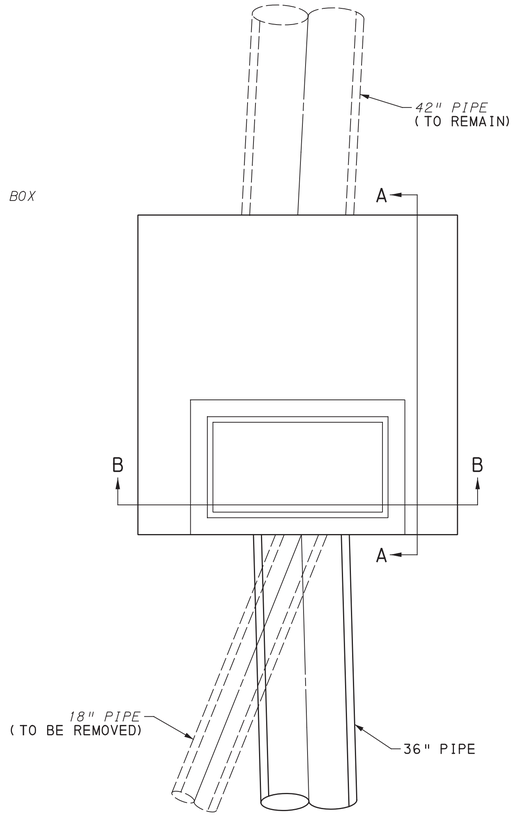
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RD01 23.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	40 OF 141
CITY OF ERIE				

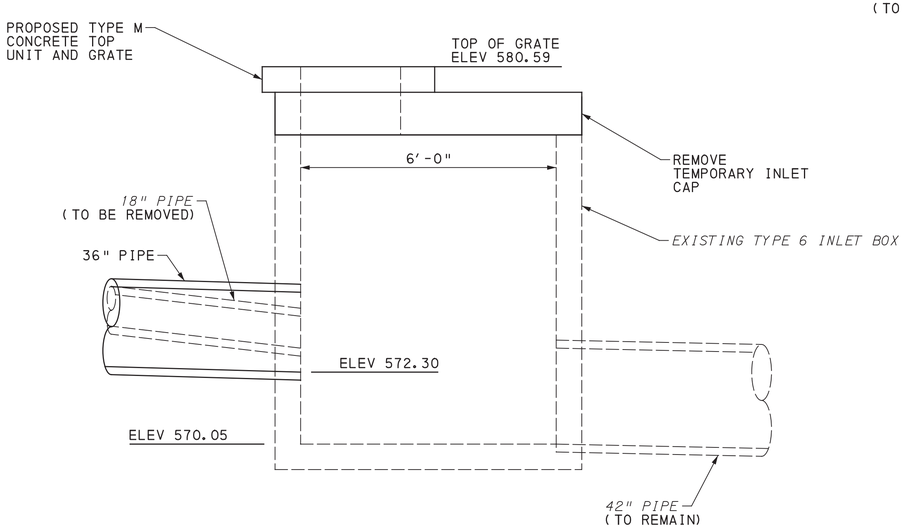
REVISION NUMBER	REVISIONS	DATE	BY



SECTION B-B
NOT TO SCALE



PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX ITEM NO. 9000-0304

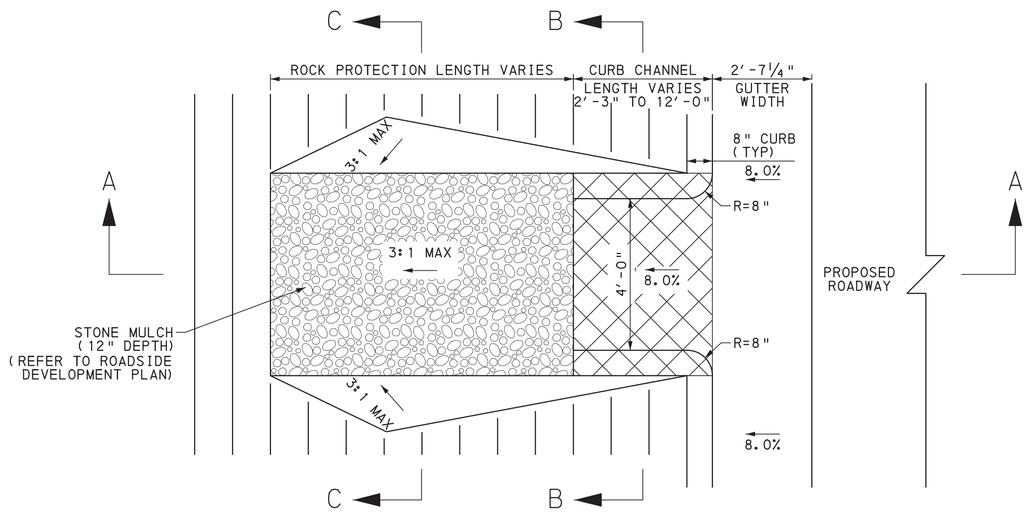
SR 4034, STA 521+13.79, 47.35' LT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

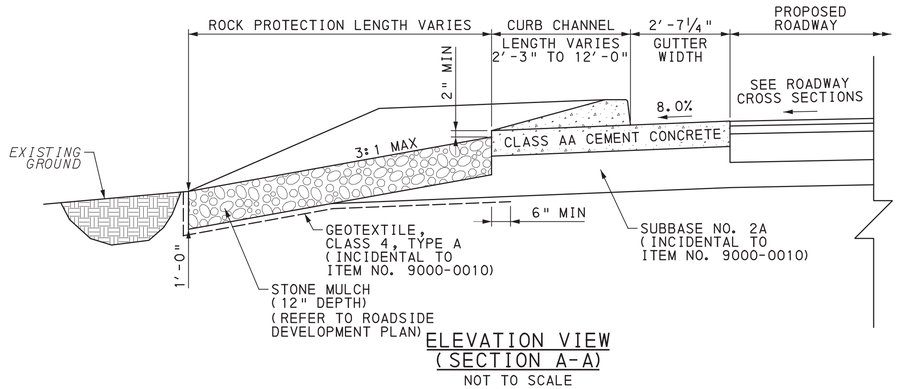
PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDdt 24.dgn

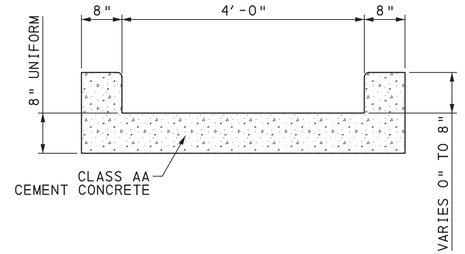


PLAN VIEW
NOT TO SCALE

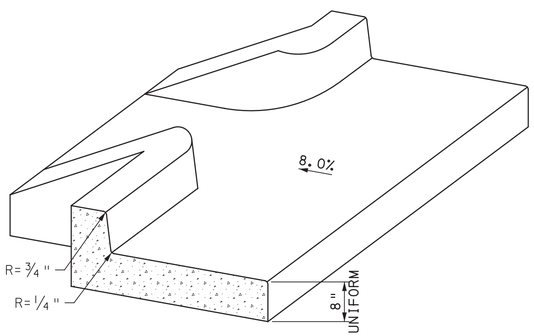
BAYFRONT PARKWAY
STA 510+25 RT
STA 511+50 RT
STA 517+50 RT
STA 535+00 RT
STA 546+75 RT
STA 548+50 RT
STA 550+00 RT



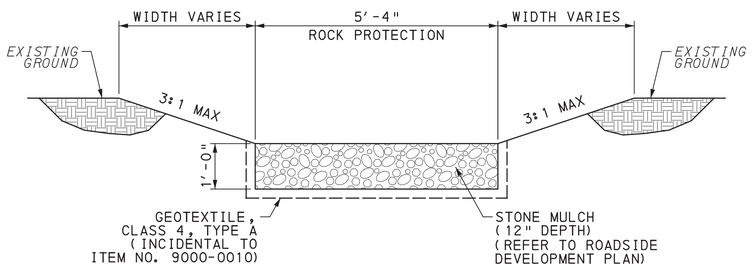
ELEVATION VIEW (SECTION A-A)
NOT TO SCALE



CURB CHANNEL VIEW (SECTION B-B)
NOT TO SCALE



ISOMETRIC VIEW
NOT TO SCALE



CHANNEL VIEW (SECTION C-C)
NOT TO SCALE

LEGEND

PAY LIMIT FOR CURB CUT

CURB CUT
ITEM NO. 9000-0010

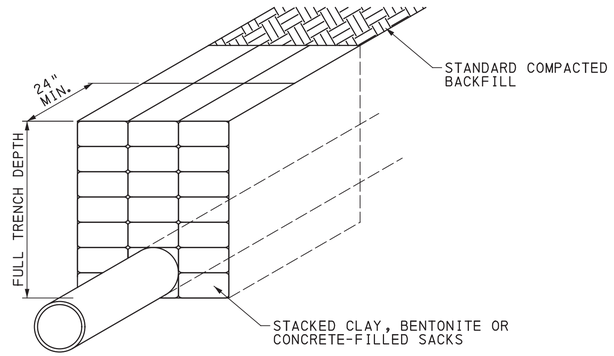
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

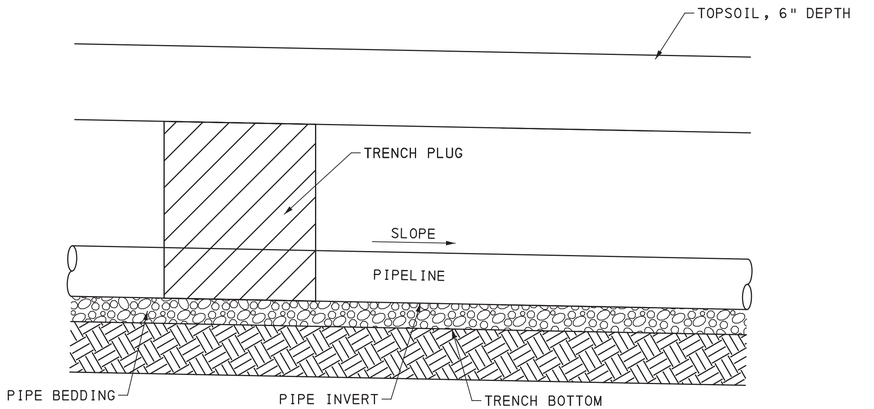
PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDd1 25.dgn

REVISION NUMBER	REVISIONS	DATE	BY



SECTION VIEW
NOT TO SCALE

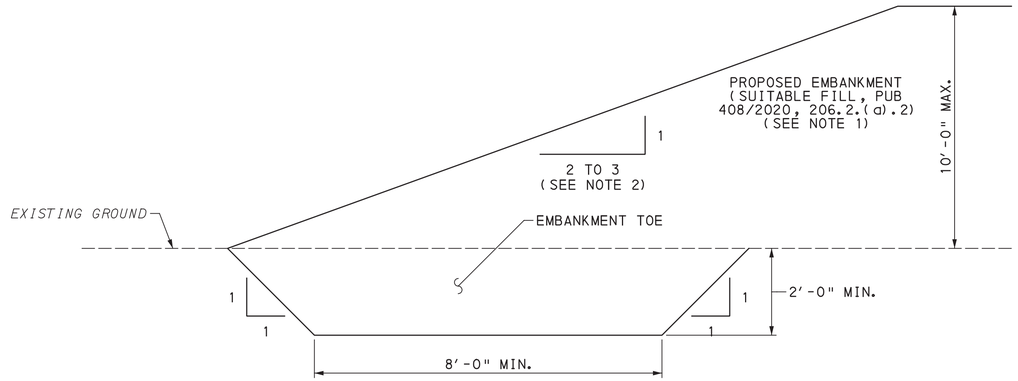


ELEVATION
NOT TO SCALE

TRENCH PLUG
ITEM NO. 9000-0106

NOTES:

1. REFER TO PLAN FOR LOCATIONS.



EMBANKMENT TOE
NOT TO SCALE
STA 516+75.00 TO STA 517+75.00
STA 535+55.00 TO STA 536+25.00

NOTES:

1. PLACE AND COMPACT THE EMBANKMENT TOE AND EMBANKMENT SOIL IN ACCORDANCE WITH SECTION 206 (PUB 408/2020).
2. APPLICABLE TO SLOPE RATIOS OF 2H:1V TO 3H:1V AND UP TO 10'-0" HIGH.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDd t 26.dgn

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	43 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	0201 0001 / LS	CLEARING AND GRUBBING		NO TAB
	0202 0001 / LS	DEMOLITION		85
33640	0203 0001 / CY	CLASS 1 EXCAVATION		TCP , L-430, 49
2537	0203 0004 / CY	CLASS 1B EXCAVATION		TCP
12405	0203 0005 / CY	CLASS 1C EXCAVATION		49
8419	0203 0006 / LF	SAW CUTTING		TCP , 50-57
4586	0204 0001 / CY	CLASS 2 EXCAVATION		49, 78-81
3735	0205 0100 / CY	FOREIGN BORROW EXCAVATION		49
1608	0205 0285 / CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57		50-57, 100-101
11659	0212 0001 / LF	GEOTEXTILE, CLASS 1		82-83, 100-101
47187	0212 0014 / SY	GEOTEXTILE, CLASS 4, TYPE A		50-57
25953	0212 0016 / SY	GEOTEXTILE, CLASS 4, TYPE C		49
197	0220 0020 / CY	FLOWABLE BACKFILL, TYPE C		78-81
39502	0313 0426 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH		50-57
2934	0313 0437 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX		TCP
50105	0350 0108 / SY	SUBBASE 8" DEPTH (NO. 2A)		TCP , 50-57
25000	0405 0001 / DOLLA	ASPHALT PAVEMENT LONGITUDINAL JOINT DENSITY INCENTIVE/DISINCENTIVE		NO TAB
3689	0413 0383 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H		50-57
15	0413 2145 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G		50-57
42402	0413 3470 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H		TCP , 50-57
50	0413 3480 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H		50-57
2	0413 6047 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX		TCP
35638	0413 8097 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		50-57
50000	0413 9999 / DOLLA	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE		NO TAB
	0460 0003 / SY	ASPHALT TACK COAT (NTT/CNTT)		TCP , 50-57
510	0491 0013 / SY	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		50-57
108	0501 0020 / SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		50-57
175	0501 0032 / SY	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH		50-57
1131	0501 0204 / SY	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH		50-57
8	0601 0312 / LF	15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		64-77
8	0601 0313 / LF	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		64-77
5	0601 5431 / CY	CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE		86-99
5	0601 7005 / LF	12" REINFORCED CONCRETE PIPE, TYPE A, 30' - 1.5' FILL		100-101
4	0601 7008 / LF	15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL		64-77
20	0601 7014 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		64-77
EITHER 957	0601 7014 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	1	64-77
OR 957	0601 9444 / LF	21" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	1	64-77
EITHER 53	0601 7027 / LF	24" REINFORCED CONCRETE PIPE, TYPE A, 10' - 2' FILL, 100 YEAR DESIGN LIFE	9	64-77
OR 53	0601 9445 / LF	24" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	9	64-77
OR 53	0601 2898 / LF	24" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	9	64-77
EITHER 98	0601 7028 / LF	24" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	7	64-77
OR 98	0601 9447 / LF	30" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	7	64-77
EITHER 65	0601 7058 / LF	36" REINFORCED CONCRETE PIPE, TYPE A, 15' - 3' FILL, 100 YEAR DESIGN LIFE	11	64-77
OR 65	0601 9449 / LF	36" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	11	64-77
EITHER 288	0601 7072 / LF	48" REINFORCED CONCRETE PIPE, TYPE A, 10' - 2' FILL, 100 YEAR DESIGN LIFE	14	64-77
OR 288	0601 9451 / LF	48" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	14	64-77
20	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL		64-77
EITHER 655	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	3	64-77
OR 655	0601 9364 / LF	21" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	3	64-77
EITHER 394	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	5	64-77
OR 394	0601 9363 / LF	18" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	5	64-77
OR 394	0601 2823 / LF	18" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	5	64-77
EITHER 464	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	6	64-77
OR 464	0601 9365 / LF	24" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	6	64-77
OR 464	0601 2825 / LF	24" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	6	64-77
12	0601 7326 / LF	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		64-77
EITHER 51	0601 7354 / LF	36" REINFORCED CONCRETE PIPE, TYPE B, 10' - 3' FILL	13	64-77
OR 51	0601 9369 / LF	36" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	13	64-77
OR 51	0601 2849 / LF	36" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 14 GAGE	13	64-77
4	0601 7355 / LF	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		64-77
EITHER 160	0601 7370 / LF	48" REINFORCED CONCRETE PIPE, TYPE B, 10' - 3' FILL	16	64-77
OR 160	0601 9371 / LF	48" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	16	64-77
OR 160	0601 2871 / LF	48" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE	16	64-77
8	0601 7371 / LF	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		64-77
EITHER 2397	0604 7014 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 15' - 2' FILL, 100 YEAR DESIGN LIFE	2	64-77
OR 2397	0604 9434 / LF	21" PERFORATED CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	2	64-77
EITHER 968	0604 7027 / LF	24" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 10' - 2' FILL, 100 YEAR DESIGN LIFE	8	64-77
OR 968	0604 9437 / LF	30" PERFORATED CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	8	64-77
EITHER 467	0604 7042 / LF	30" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 10' - 3' FILL, 100 YEAR DESIGN LIFE	10	64-77
OR 467	0604 5047 / LF	30" PERFORATED REINFORCED CONCRETE PIPE, TYPE A, 40' - 1.5' FILL, 100 YEAR DESIGN LIFE	10	64-77
EITHER 212	0604 7057 / LF	36" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 10' - 3' FILL, 100 YEAR DESIGN LIFE	12	64-77
OR 212	0604 9439 / LF	36" PERFORATED CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	12	64-77
EITHER 523	0604 7072 / LF	48" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 10' - 2' FILL, 100 YEAR DESIGN LIFE	15	64-77
OR 523	0604 4072 / LF	48" PERFORATED REINFORCED CONCRETE PIPE, TYPE A, 10' - 2' FILL, 100 YEAR DESIGN LIFE	15	64-77
EITHER 731	0604 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, (OPEN JOINT), 15' - 1.5' FILL	4	64-77
OR 731	0604 9363 / LF	18" PERFORATED CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	4	64-77
OR 731	0604 2823 / LF	18" PERFORATED CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	4	64-77
3	0605 2401 / SET	MANHOLE FRAME AND COVER		58-63
4	0605 2600 / EACH	TYPE D ENDWALL		58-63
20	0605 2730 / SET	TYPE M CONCRETE TOP UNIT AND GRATE		58-63
49	0605 2731 / SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		58-63
115	0605 2850 / EACH	STANDARD INLET BOX, HEIGHT < /= 10'		58-63
11	0605 2854 / EACH	TYPE 4 INLET BOX, HEIGHT < /= 10'		58-63
5	0605 2855 / EACH	TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20'		58-63
1	0605 2856 / EACH	TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30'		58-63
14	0605 2862 / EACH	TYPE 6 INLET BOX, HEIGHT < /= 10'		58-63
3	0605 3011 / EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		58-63
1	0605 3012 / EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'		58-63
1	0605 3021 / EACH	TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		58-63
1	0605 3031 / EACH	TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		58-63
2	0605 3032 / EACH	TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'		58-63
1	0605 3041 / EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		58-63
1	0605 3051 / EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		58-63

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	44 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
70	0605 5721 / SET	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE		58-63
	0608 0001 / LS	MOBILIZATION		NO TAB
	0609 0002 / LS	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE A		NO TAB
	0609 0009 / LS	EQUIPMENT PACKAGE ♦		NO TAB
472	0610 0001 / LF	4" PIPE UNDERDRAIN, TYPE I BACKFILL		100-101
1498	0610 0002 / LF	6" PIPE UNDERDRAIN TYPE I BACKFILL		L-430, 50-57
11187	0610 7002 / LF	6" PAVEMENT BASE DRAIN		82-83
3991	4610 7002 / LF	6" PAVEMENT BASE DRAIN IN UNDERCUT ♦		49
5	0618 0021 / EACH	CONCRETE COLLAR FOR 15" PIPE EXTENSION		64-77
10	0618 0022 / EACH	CONCRETE COLLAR FOR 18" PIPE EXTENSION		64-77
2	0618 0024 / EACH	CONCRETE COLLAR FOR 24" PIPE EXTENSION		64-77
1	0618 0028 / EACH	CONCRETE COLLAR FOR 36" PIPE EXTENSION		64-77
2	0618 0030 / EACH	CONCRETE COLLAR FOR 48" PIPE EXTENSION		64-77
4	4619 0744 / EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE V, TEST LEVEL 3, MASH, WIDTHS LESS THAN OR EQUAL TO 36 INCHES, BLACK POWDER COATED ♦		84
711	0620 0503 / LF	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)		84
413	4620 1600 / LF	TYPE 31-S GUIDE RAIL BLACK POWDER COATED ♦		84
2	4620 1660 / EACH	TYPE 31-STRONG POST ANCHOR TERMINAL BLACK POWDER COATED ♦		84
2	4620 2020 / EACH	THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION WITHOUT CURB BLACK POWDER COATED ♦		84
4262	0623 0052 / LF	SINGLE FACE CONCRETE BARRIER		84
1	0623 0122 / EACH	END TRANSITION, SINGLE FACE CONCRETE BARRIER		84
2128	0623 0275 / LF	REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER		84
514	0623 0302 / LF	CONCRETE MEDIAN BARRIER, F-SHAPE, 42" HEIGHT		84
1	0627 0011 / EACH	TEMPORARY END TRANSITION		TCP
1628	0627 3019 / LF	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'		TCP
2444	0627 3020 / LF	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'		TCP
3607	0628 3019 / LF	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'		TCP
9872	0628 3020 / LF	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'		TCP
4755	0630 0041 / LF	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		50-57
5880	0633 0200 / LF	PLAIN CONCRETE MOUNTABLE CURB, TYPE A		50-57
748	0633 0230 / LF	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		50-57
3267	0641 0005 / SY	PLAIN CEMENT CONCRETE CURB GUTTER		50-57
273	4664 0100 / SF	MODULAR ARCHITECTURAL BLOCK SYSTEM, MATCH EXISTING ♦		85
8251	0676 0001 / SY	CEMENT CONCRETE SIDEWALK		L-430, 50-57
909	4676 0001 / SY	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS ♦		50-57
	0686 0010 / LS	CONSTRUCTION SURVEYING, TYPE A		NO TAB
	0689 0005 / LS	CPM SCHEDULE, WITH UPDATES		NO TAB
10000	0690 0003 / DOLLA	FORMAL FACILITATION		NO TAB
408	4695 0004 / SF	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE ♦		50-57
10	0696 0600 / EACH	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2		TCP
38	0697 0600 / EACH	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2		TCP
199	0703 0022 / CY	NO. 8 COARSE AGGREGATE		L-430
3996	0802 0001 / CY	TOPSOIL FURNISHED AND PLACED		RDP
1633	0804 0001 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH		RDP
279	0804 0003 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH		86-99
269	0804 0004 / LB	SEEDING - FORMULA E, INCLUDING MULCH		86-99
272	0804 0005 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH		RDP
5	0804 0007 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH		86-99
5465	0805 0015 / SY	MULCHING - SHREDDED BARK		RDP
5369	0806 0113 / SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D		86-99
186	0806 0140 / SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A		86-99
12	4808 0100 / EACH	TREE - PLATANUS OCCIDENTALIS - SYCAMORE - 2.5" CAL B&B ♦		100-101
25	4808 0101 / EACH	TREE - BETULA NIGRA 'HERITAGE' - HERTIAGE RIVER BIRCH - 8-12' HT. MULTI STEM B&B ♦		100-101
22	4808 0106 / EACH	TREE - ACER RUBRUM 'OCTOBER GLORY' - OCTOBER GLORY RED MAPLE - 2.5" CAL B&B ♦		RDP
57	4808 0107 / EACH	TREE - NYSSA SYLVATICA 'TUPELO TOWER' - TUPELO TOWER BLACK GUM - 2.5" CAL B&B ♦		RDP
4	4808 0108 / EACH	TREE - GLEDITSIA 'SHADEMASTER' - SHADEMASTER HONEYLOCUST - 2.5" CAL B&B ♦		RDP
10	4808 0109 / EACH	TREE - CLADRASTIS KENTUKEA 'PERKINS PINK' - YELLOWWOOD 'PERKINS PINK' - 2.5" CAL B&B ♦		RDP
12	4808 0110 / EACH	TREE - LIRIODENDRON TULIPIFERA - TULIP TREE - 2.5" CAL B&B ♦		RDP
12	4808 0111 / EACH	TREE - PLATANUS OCCIDENTALIS - SYCAMORE - 2.5" CAL B&B ♦		RDP
24	4808 0112 / EACH	TREE - ACER FREMANII 'ARMSTRONG' - FREEMAN MAPLE, COLUMNAR - 2.5" CAL B&B ♦		RDP
10	4808 0113 / EACH	TREE - CARPINUS BETULUS 'FASTIGIATA' - FASTIGIATE EUROPEAN HORNBEAM - 2.5" CAL B&B ♦		RDP
52	4808 0114 / EACH	TREE - QUERCUS ROBUR × ALBA 'STREETSPIRE' - STREETSPIRE ENGLISH OAK - 2.5" CAL B&B ♦		RDP
56	4808 0115 / EACH	TREE - LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE' - SLENDER SILHOUETTE SWEETGUM - 2.5" CAL B&B ♦		RDP
20	4808 0116 / EACH	TREE - CORNUS FLORIDA VAR. RUBRA - PINK DOGWOOD - 2" CAL B&B ♦		RDP
25	4808 0117 / EACH	TREE - BETULA NIGRA 'HERITAGE' - HERTIAGE RIVER BIRCH - 8-12' HT. MULTI STEM B&B ♦		RDP
8	4808 0118 / EACH	TREE - HYDRANGEA 'VANILLA STRAWBERRY' - VANILLA STRAWBERRY HYDRANGEA - 6' HT. TREE FORM, 5 GAL. ♦		RDP
44	4808 0119 / EACH	TREE - SYRINGA RETICULATA 'IVORY SILK' - SYRINGA RETICULATA 'IVORY SILK' - 2" CAL B&B ♦		RDP
12	4808 0120 / EACH	SHRUB - PICEA GLAUCA - WHITE SPRUCE - 10'-12' HT B&B ♦		RDP
29	4808 0121 / EACH	SHRUB - ABIES CONCOLOR - WHITE FIR - 10'-12' HT B&B ♦		RDP
282	4808 0122 / EACH	SHRUB - THUJA OCCIDENTALIS 'EMERALD GREEN' - ARBORVITAE 'EMERALD GREEN' - 7-8' HT B&B ♦		RDP
267	4808 0123 / EACH	SHRUB - HYDRANGEA PANICULATA 'LIMELIGHT' - LIMELIGHT HYDRANGEA - 3 GAL. FULL, PLANT 60" OC. ♦		RDP
265	4808 0124 / EACH	SHRUB - SPIRAEA NIPPONICA 'SNOWMOUND' - SPRIREA SNOWMOUND - 3 GAL. FULL, PLANT 36" OC. ♦		RDP
83	4808 0125 / EACH	SHRUB - PINUS MUGO - MUGO PINE - 3 GAL. FULL, PLANT 48" OC. ♦		RDP
131	4808 0126 / EACH	SHRUB - JUNIPERUS × PFITZERIANA 'SEA GREEN' - SEA GREEN JUNIPER - 3 GAL. FULL, PLANT 60" OC. ♦		RDP
1568	4808 0127 / EACH	SHRUB - CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' - KARL FORESTER FEATHER REED GRASS - #2 CONT., FULL, PLANT 30" OC. ♦		RDP
704	4808 0128 / EACH	SHRUB - PENNISETUM ALOPECUROIDES ' HAMELN' - HAMELN FOUNTAIN GRASS - #2 CONT., FULL, PLANT 18" OC. ♦		RDP
828	4808 0129 / EACH	SHRUB - HELICTOTRICHON SEMPERVIRENS - BLUE OAT GRASS - #2 CONT., FULL, PLANT 24" OC. ♦		RDP
1182	4808 0130 / EACH	PLANTINGS - RUDBECKIA FULGIDA VAR SULLIVANTII 'GOLDSTRUM' - GOLDSTRUM BLACK EYED SUSAN - #2 CONT., FULL, PLANT 18" OC. ♦		RDP
67	4808 0131 / EACH	PLANTINGS - PEROVSKIA ATRIPLICIFOLIA 'ROCKETMAN' - ROCKETMAN RUSSIAN SAGE - #2 CONT., FULL, PLANT 24" OC. ♦		RDP
971	4808 0132 / EACH	PLANTINGS - HEMEROCALLIS 'CATHERINE WOODBURY' - CATHERINE WOODBURY DAYLILY - 1 GAL. FULL, PLANT 18" OC. ♦		RDP
766	4808 0133 / EACH	PLANTINGS - HEMEROCALLIS 'JERSEY SPIDER' - JERSEY SPIDER DAYLILY - 1 GAL. FULL, PLANT 18" OC. ♦		RDP
1190	4808 0134 / EACH	PLANTINGS - HEMEROCALLIS 'HAPPY RETURNS' - HAPPY RETURNS DAYLILY - 1 GAL. FULL, PLANT 18" OC. ♦		RDP
21464	4808 0135 / EACH	PLANTINGS - NARCISSUS - ICE FOLLIES & KING ALFRED'S - 50% MIX OF ICE FOLLIES & KING ALFRED'S. PLANT 4 BULBS WITH EACH ♦		RDP
299	0811 0003 / LF	TEMPORARY PROTECTIVE FENCE		86-99
10000	0845 0001 / DOLLA	UNFORESEEN WATER POLLUTION CONTROL		NO TAB
18	0849 0020 / EACH	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		86-99
352	0850 0032 / CY	ROCK, CLASS R-4		100-101
33	0851 0003 / SY	ROCK APRON		100-101
16	0854 0002 / EACH	TEMPORARY SLOPE PIPE		86-99
8	0855 0003 / EACH	PUMPED WATER FILTER BAG		86-99
8	0855 0004 / EACH	REPLACEMENT PUMPED WATER FILTER BAG		86-99
172	0860 0000 / EACH	INLET FILTER BAG FOR TYPE M INLET		86-99
77	0860 0002 / EACH	INLET FILTER BAG FOR TYPE C INLET		86-99
16705	0867 0012 / LF	COMPOST FILTER SOCK, 12" DIAMETER		86-99

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	45 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
462	0867 0018 / LF	COMPOST FILTER SOCK, 18" DIAMETER		86-99
994	0867 0022 / LF	COMPOST FILTER SOCK, 24" DIAMETER		86-99
246	0867 0032 / LF	COMPOST FILTER SOCK, 32" DIAMETER		86-99
2	0875 0001 / EACH	CONCRETE OUTLET STRUCTURE		100-101
	0901 0001 / LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION ♦		TCP
579	0901 0222 / EACH	TEMPORARY LANE SEPARATOR CURB		TCP
1095	0901 0231 / DAY	ADDITIONAL WARNING LIGHTS, TYPE B		TCP
2090	0901 0240 / SF	ADDITIONAL TRAFFIC CONTROL SIGNS		TCP
59571	0901 0320 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		TCP
351	0901 0324 / LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		TCP
37335	0901 0330 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
2134	0901 0331 / LF	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
2237	0901 0332 / LF	8" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
494	0901 0334 / LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
6	0901 0460 / EACH	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS		TCP
37	0910 0002 / EACH	JUNCTION BOXES J.B.-2		HLP, TSP
58	4910 0154 / EACH	POLE FOUNDATION, TYPE FC, MODIFIED BOLT CIRCLE ♦		HLP
752	0910 4067 / LF	AWG 10 ABOVE GROUND CABLE, COPPER, 1 CONDUCTOR		TSP
1828	0910 4114 / LF	AWG 4 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR		HLP
20300	0910 4115 / LF	AWG 6 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR		HLP
57534	0910 4116 / LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR		RRFBP, ITS, HLP, TSP
2610	0910 4117 / LF	AWG 10 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR		HLP
2137	0910 5051 / LF	1" DIRECT BURIAL CONDUIT		HLP
21109	0910 5055 / LF	2" DIRECT BURIAL CONDUIT		ITS, HLP
462	0910 5171 / LF	1" EXPOSED CONDUIT, PAINTED ♦		HLP
994	0910 5175 / LF	2" EXPOSED CONDUIT, WITH PULL BOX ♦		TSP
246	0910 5179 / LF	3" EXPOSED CONDUIT, WITH PULL BOX ♦		TSP
2	0910 5305 / LF	2" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT		TSP
35	0910 5313 / LF	1 1/2" LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT		TSP
11145	0910 6000 / LF	TRENCH		HLP
1	4910 7020 / EACH	COMPLETE POWER SUPPLY SYSTEM, PAD MOUNTED ♦		HLP
	0910 7210 / LS	TESTING OF ENTIRE LIGHTING SYSTEM		HLP
701	0931 0003 / SF	POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST		SP , TSP
18	0932 0001 / SF	POST MOUNTED SIGNS, TYPE C		SP
146	0934 0002 / SF	POST MOUNTED SIGNS, TYPE E		SP
384	0935 0001 / SF	POST MOUNTED SIGNS, TYPE F		SP , TSP
14	0935 0421 / EACH	RECTANGULAR RAPID FLASHING BEACON ASSEMBLY WITH ACCESSIBLE PEDESTRIAN SIGNAL (SINGLE SIDED)		RRFBP
6	0935 0424 / EACH	RECTANGULAR RAPID FLASHING BEACON ASSEMBLY WITH ACCESSIBLE PEDESTRIAN SIGNAL (DOUBLE SIDED)		RRFBP
252	0936 0010 / SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS		SP
124	4936 0010 / SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS WITH AIRCRAFT WIRE ROPE ♦		TSP
7	0937 0106 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/B)		PMP
22	0937 0207 / EACH	BARRIER MOUNTED DELINEATOR, TOP AND SIDE-MOUNT TYPE R, (Y/B)		PMP
42	0937 0208 / EACH	BARRIER MOUNTED DELINEATOR, TOP AND SIDE-MOUNT TYPE R, (W/B)		PMP
24	0937 0300 / EACH	FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, WHITE POST WITH WHITE SHEETING		PMP
125	0937 0301 / EACH	FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING		PMP
6	0937 0317 / EACH	FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-2, RED POST WITH RED/WHITE SHEETING		PMP
18	0937 0320 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-1, WHITE POST WITH WHITE SHEETING		PMP
3	0941 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE B		SP
3	0945 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE F		HLP
2	0950 0001 / EACH	TRAFFIC SIGNAL INTERSECTION REMOVAL		TSP
5	0951 0230 / EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM, POWDER COATED		TSP
1	0951 0235 / EACH	TRAFFIC SIGNAL SUPPORT, 35' MAST ARM, POWDER COATED		TSP
2	0951 0240 / EACH	TRAFFIC SIGNAL SUPPORT, 40' MAST ARM, POWDER COATED		TSP
1	4951 0250 / EACH	TRAFFIC SIGNAL SUPPORT, 50' MAST ARM, POWDER COATED, STRUCTURE MOUNTED ♦		TSP
1	4951 2235 / EACH	TRAFFIC SIGNAL SUPPORT, 35' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), POWDER COATED, 4" STUB ♦		TSP
1	0951 3901 / EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30' MOUNTING HEIGHT) 1,000 POUNDS DESIGN TENSION, POWDER COATED		RRFBP
3	4951 3901 / EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30' MOUNTING HT) 1,000 LBS DESIGN TENSION, POWDER COATED, STRUCTURE MOUNTED ♦		TSP
21	0951 4106 / EACH	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL, POWDER COATED		RRFBP, TSP
2	4951 4106 / EACH	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL, POWDER COATED, STRUCTURE MOUNTED ♦		TSP
1	4951 7401 / EACH	TRAFFIC SIGNAL SUPPORT, 40' & 45' MAST ARMS WITH LUMINAIRE ARM (30' MOUNTING HEIGHT) POWDER COATED, 4" STUB ♦		TSP
1	0952 3000 / EACH	CONTROLLER MODIFICATION, RETIMING		TSP
	0953 0802 / LS	UNIFIED COMMAND AND CONTROL INTEGRATION		TSP
687	0954 0012 / LF	2 INCH CONDUIT		TSP
1032	0954 0013 / LF	3 INCH CONDUIT		RRFBP, TSP
444	0954 0014 / LF	4 INCH CONDUIT		TSP
828	0954 0151 / LF	TRENCH AND BACKFILL, TYPE I		RRFBP, TSP
177	0954 0152 / LF	TRENCH AND BACKFILL, TYPE II		RRFBP
23	4954 0152 / LF	TRENCH AND BACKFILL, TYPE II, FULL SLAB REPLACEMENT MODIFIED ♦		RRFBP
629	0954 0154 / LF	TRENCH AND BACKFILL, TYPE IV		RRFBP, TSP
3636	0954 0201 / LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR		TSP
5206	0954 0202 / LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR		TSP
561	0954 0203 / LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR		TSP
23	0954 0304 / EACH	JUNCTION BOX, JB-27 GALVANIZED STEEL		RRFBP, TSP
1	0954 0402 / EACH	ELECTRICAL SERVICE, TYPE B		RRFBP
1	4954 0403 / EACH	ELECTRICAL SERVICE, TYPE C, WITH SEPARATE BREAKER ♦		TSP
1	0954 0600 / EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS)		TSP
4	4955 2082 / EACH	VEHICULAR SIGNAL HEAD, ONE 8" SECTION WITH ALUMINUM HOUSING ♦		TSP
14	4955 3208 / EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS WITH ALUMINUM HOUSING ♦		TSP
2	4955 3209 / EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS WITH ALUMINUM HOUSING ♦		TSP
10	0955 3722 / EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A		TSP
1	0956 0712 / EACH	OMNI-VIEW VIDEO DETECTION SYSTEM		TSP
10	4956 0790 / EACH	ACCESSIBLE PEDESTRIAN SIGNAL 2 WIRE SYSTEM ♦		TSP
1	0958 0021 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)		TCP
1	0958 0022 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)		TCP
1	0958 0023 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)		TCP
1	0958 0024 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)		TCP
1	0958 0041 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (4 OR MORE APPROACHES)		TCP
1	0958 0121 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)		TCP
1	0958 0122 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)		TCP
1	0958 0123 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)		TCP
1	0958 0221 / EACH	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)		TCP
1	0958 0222 / EACH	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)		TCP
1	0958 0261 / EACH	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET		TCP

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	46 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
1	0958 0262 EACH	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET		TCP
1	0958 0263 EACH	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET		TCP
1	0958 0341 EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (3 APPROACHES)		TCP
1	0958 0421 EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)		TCP
1	0958 0422 EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)		TCP
1	0958 0423 EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)		TCP
2	0962 1060 EACH	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8"		TCP
8	0962 1061 EACH	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0"		TCP
29	0962 1062 EACH	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"		TCP
41803	0963 0001 SF	PAVEMENT MARKING REMOVAL		TCP
63	0963 0010 EACH	PAVEMENT MARKING REMOVAL (LEGENDS AND SYMBOLS)		TCP
3940	0964 0001 LF	4" WHITE EPOXY PAVEMENT MARKINGS		PMP
11403	0964 0002 LF	4" YELLOW EPOXY PAVEMENT MARKINGS		PMP
12782	0964 0005 LF	6" WHITE EPOXY PAVEMENT MARKINGS		PMP
713	4964 0005 LF	6" WHITE EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
3809	0964 0008 LF	8" WHITE EPOXY PAVEMENT MARKINGS		PMP , TSP
3340	4964 0008 LF	8" WHITE EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
5313	0964 0009 LF	8" YELLOW EPOXY PAVEMENT MARKINGS		PMP
750	4964 0009 LF	8" YELLOW EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
2295	0964 0021 LF	24" WHITE EPOXY PAVEMENT MARKINGS		PMP , TSP
1133	4964 0021 LF	24" WHITE EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
1166	4964 0022 LF	24" YELLOW EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
1	4964 0101 EACH	WHITE EPOXY LEGEND, "ONLY", 8' - 0", RECESSED ♦		PMP
3	4964 0151 EACH	WHITE EPOXY LEGEND, "RR CROSSING", 6' - 6", 11' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS), RECESSED ♦		PMP
4	4964 0171 EACH	WHITE EPOXY LEGEND, ROUNDABOUT CIRCULATION ARROW, RECESSED ♦		PMP
4	4964 0172 EACH	WHITE EPOXY LEGEND, ROUNDABOUT STRAIGHT ARROW, RECESSED ♦		PMP
4	4964 0175 EACH	WHITE EPOXY LEGEND, ROUNDABOUT LEFT-STRAIGHT ARROW, RECESSED ♦		PMP
6	4964 0220 EACH	WHITE EPOXY LEGEND, "STRAIGHT ARROW", 12' - 0" X 1' - 8", RECESSED ♦		PMP
2	4964 0222 EACH	WHITE EPOXY LEGEND, "RIGHT ARROW", 12' - 0" X 3' - 0", RECESSED ♦		PMP
4	0964 0224 EACH	WHITE EPOXY LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"		TSP
12	4964 0224 EACH	WHITE EPOXY LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0", RECESSED ♦		PMP
8	0964 0226 EACH	WHITE EPOXY LEGEND, "THRU AND RIGHT ARROW", 20' - 0" X 3' - 7"		PMP , TSP
9	4964 0226 EACH	WHITE EPOXY LEGEND, "THRU AND RIGHT ARROW", 20' - 0" X 3' - 7", RECESSED ♦		PMP
11	4964 0228 EACH	WHITE EPOXY LEGEND, "THRU AND LEFT ARROW", 20' - 0" X 3' - 7", RECESSED ♦		PMP
2	4964 0231 EACH	WHITE EPOXY LEGEND, "LEFT AND RIGHT ARROW" , 12'-0" X 5'6", RECESSED ♦		PMP
3	4964 0232 EACH	WHITE EPOXY LEGEND, "LANE REDUCTION TRANSITION ARROW - RIGHT LANE" , 18'-0" X 5'-6", RECESSED ♦		PMP
3	4964 0233 EACH	WHITE EPOXY LEGEND, "LANE REDUCTION TRANSITION ARROW - LEFT LANE" , 18'-0" X 5'-6", RECESSED ♦		PMP
12	4964 0404 EACH	WHITE EPOXY PAVEMENT LEGEND, "D", 8'-0", RECESSED ♦		PMP
12	4964 0405 EACH	WHITE EPOXY PAVEMENT LEGEND, "E", 8'-0", RECESSED ♦		PMP
12	4964 0409 EACH	WHITE EPOXY PAVEMENT LEGEND, "I", 8'-0", RECESSED ♦		PMP
12	4964 0412 EACH	WHITE EPOXY PAVEMENT LEGEND, "L", 8'-0", RECESSED ♦		PMP
12	4964 0425 EACH	WHITE EPOXY PAVEMENT LEGEND, "Y", 8'-0", RECESSED ♦		PMP
8	4964 0428 EACH	WHITE EPOXY LEGEND, "BICYCLE WITH RIDER", 6' - 0" X 3'-4", RECESSED ♦		PMP
8	4964 0429 EACH	WHITE EPOXY LEGEND, "STRAIGHT ARROW", 6' - 0" X 1' - 8", RECESSED ♦		PMP
3	0971 0001 EACH	REMOVE POST MOUNTED SIGNS, TYPE B		SP
2	0975 0001 EACH	REMOVE POST MOUNTED SIGNS, TYPE F		SP
150200	1002 0193 LB	REINFORCEMENT BARS, EPOXY COATED		S-41019
1705	5005 1410 LF	MANDATORY PREDRILLING FOR DRIVEN PILES MODIFIED ♦		S-41005
2620	5005 1825 LF	STEEL HP12X74 PRODUCTION PILE MODIFIED ♦		S-41005
X	1018 0001 LS	REMOVAL OF EXISTING BRIDGE ♦		DEMO CSXT
215	1022 0001 LF	STEEL BRIDGE HAND RAILING		L-430
1	1201 1300 EACH	ITS DEVICE FIELD ENCLOSURE, POLE MOUNT		ITS
X	1201 3000 LS	ITS DEVICE TESTING, COMPLETE		ITS
X	1202 0001 LS	ATMS ITS DEVICE INTEGRATION		ITS
88	1204 0100 LF	STANDARD FIBER OPTIC CABLE		TSP
2	1204 0200 EACH	OUTDOOR WIRELESS RADIO		ITS
1	5210 0001 EACH	ITS CLOSED CIRCUIT TELEVISION, CAMERA SUBSYSTEM, POLE MOUNT, TOP MOUNT ♦		ITS
7000	1999 9999 HOUR	TRAINEES		NO TAB
EITHER	8030 0001 LS	BRIDGE STRUCTURE, AS DESIGNED, S-41005 ♦	17	S-41005
AND 243000	1002 0052 LB	REINFORCEMENT BARS, EPOXY COATED	17	S-41005
AND 835	1002 0138 EACH	MECHANICAL SPLICE SYSTEM FOR NO. 4 REINFORCEMENT BARS, EPOXY COATED	17	S-41005
AND 285	1002 0140 EACH	MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEMENT BARS, EPOXY COATED	17	S-41005
AND 145	1002 0142 EACH	MECHANICAL SPLICE SYSTEM FOR NO. 6 REINFORCEMENT BARS, EPOXY COATED	17	S-41005
AND 42	1002 0148 EACH	MECHANICAL SPLICE SYSTEM FOR NO. 9 REINFORCEMENT BARS, EPOXY COATED	17	S-41005
OR	8000 0001 LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	17	S-41005
OR	8100 0001 LS	STEEL BRIDGE STRUCTURE ♦	17	S-41005
EITHER	8030 0002 LS	BRIDGE STRUCTURE, AS DESIGNED, S-41007 ♦	18	S-41007
AND 116730	1002 0190 LB	REINFORCEMENT BARS, EPOXY COATED	18	S-41007
AND 27	1005 1925 EACH	STEEL HP12X74 PILE TIP REINFORCEMENT (NORMAL DUTY)	18	S-41007
AND 275	1005 2825 LF	STEEL HP12X74 PRODUCTION PILE, GALVANIZED	18	S-41007
OR	8000 0002 LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	18	S-41007
OR	8100 0002 LS	STEEL BRIDGE STRUCTURE ♦	18	S-41007
EITHER	8030 0003 LS	BRIDGE STRUCTURE, AS DESIGNED, S-41006 ♦	19	S-41006
AND 115300	1002 0191 LB	REINFORCEMENT BARS, EPOXY COATED	19	S-41006
AND 27	1005 1925 EACH	STEEL HP12X74 PILE TIP REINFORCEMENT (NORMAL DUTY)	19	S-41006
AND 425	1005 2825 LF	STEEL HP12X74 PRODUCTION PILE, GALVANIZED	19	S-41006
OR	8000 0003 LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	19	S-41006
OR	8100 0003 LS	STEEL BRIDGE STRUCTURE ♦	19	S-41006
OR	8030 0004 LS	BRIDGE STRUCTURE, AS DESIGNED, L-430 ♦		L-430
OR	8610 0003 LS	CONCRETE RETAINING WALL, AS DESIGNED, L-430 ♦		L-430
EITHER	8621 0001 LS	MECHANICALLY STABILIZED RETAINING WALL, S-40690P ♦	20	S-40690P
OR	8610 0001 LS	CONCRETE RETAINING WALL ♦	20	S-40690P
OR	8620 0001 LS	PREFABRICATED WALL ♦	20	S-40690P
EITHER	8621 0002 LS	MECHANICALLY STABILIZED RETAINING WALL, S-41009D ♦	21	S-41009D
OR	8610 0002 LS	CONCRETE RETAINING WALL ♦	21	S-41009D
OR	8620 0002 LS	PREFABRICATED WALL ♦	21	S-41009D
EITHER	8621 0003 LS	MECHANICALLY STABILIZED RETAINING WALL, S-41007 ♦		S-41007
EITHER	8621 0004 LS	MECHANICALLY STABILIZED RETAINING WALL, S-41006 ♦		S-41006
OR	8643 0001 LS	SOIL NAIL RETAINING WALL, AS DESIGNED, L-430 ♦		L-430
OR	8643 0002 LS	GEOSYNTHETIC REINFORCED SOIL SLOPE, AS DESIGNED, L-430 ♦		L-430
EITHER	8700 0001 LS	ANCHORED SOLDIER PILE RETAINING WALL, S-41019 ♦		S-41019
EITHER	8710 0001 LS	SOIL NAIL RETAINING WALL, S-41008 ♦	22	S-41008
AND 7110	1002 0192 LB	REINFORCEMENT BARS, EPOXY COATED	22	S-41008

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	47 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
OR	8620 0003 / LS	PREFABRICATED WALL ♦	22	S-41008
46	9000 0002 / SY	CONCRETE RUMBLE TRAFFIC SEPARATOR ♦		50-57
2	9000 0004 / EACH	GATEWAY SIGN ♦		85
7	9000 0010 / EACH	CURB CUT ♦		50-57
	9000 0011 / LS	UPMC ACCESS DRIVE GATE ♦		85
2010	9000 0020 / SF	MODULAR ARCHITECTURAL BLOCK SYSTEM, SPECIFIED STYLE ♦		85
	9000 0100 / LS	WASTE MANAGEMENT PLAN ♦		85
24	9000 0101 / EACH	SOLIDS SAMPLING AND TESTING ♦		85
3340	9000 0102 / CY	TRANSPORTATION AND DISPOSAL OF SOLID WASTE ♦		85
	9000 0103 / LS	CONSTRUCTION OF WASTE MANAGEMENT STOCKPILE AREA AND DECONTAMINATION AREA ♦		85
3340	9000 0104 / CY	SPECIAL EXCAVATION ♦		85
10	9000 0106 / EACH	TRENCH PLUG ♦		85
3280	9000 0200 / SY	AESTHETIC COLOR COATING (EXISTING WALLS) ♦		S-41019, 85
	9000 0201 / LS	VIBRATION MONITORING AND CONTROL ♦		S-41019
	9000 0202 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		DEMO CSXT
	9000 0203 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		S-40690P
	9000 0204 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		S-41019
	9000 0205 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		S-41007
	9000 0206 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		S-41006
	9000 0207 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM ♦		L-430
30	9000 0301 / LF	12" TRENCH DRAIN ♦		58-63
4	9000 0302 / SET	TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB ♦		58-63
5	9000 0303 / LF	10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL ♦		64-77
	9000 0304 / LS	TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX ♦		58-63

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
55	9000 0401 / LF	PEDESTRIAN RAILING, TYPE A ♦		L-430
55	9000 0402 / LF	PEDESTRIAN RAILING, TYPE B ♦		L-430
14	9000 0500 / EACH	TEMPORARY INLET CAP ♦		86-99
28	9000 0501 / EACH	TEMPORARY PIPE CONNECTION ♦		86-99
11	9000 0502 / EACH	TEMPORARY PIPE CAP ♦		86-99
2	9000 0504 / EACH	TEMPORARY INLET ♦		86-99
19	9000 0505 / EACH	TEMPORARY ROCK BARRIER ♦		86-99
71	9000 0601 / EACH	200W LED LUMINAIRE, PENDANT MOUNT ♦		HLP
9	9000 0602 / EACH	60W LED LUMINAIRE, PENDANT MOUNT ♦		HLP
37	9000 0603 / EACH	100W LED LUMINAIRE, POST TOP MOUNT ♦		HLP
6	9000 0604 / EACH	78W UNDERPASS LUMINAIRE ♦		HLP
442	9000 0605 / LF	37W LED LINEAR LUMINAIRE, WALL MOUNTED ♦		HLP
33	9000 0606 / EACH	LED FLOOD LIGHT, GROUND MOUNT ♦		HLP
34	9000 0607 / EACH	STEEL POLE WITH 6-FOOT BRACKET ARM (23.5' MOUNTING HEIGHT) ♦		HLP
26	9000 0608 / EACH	STEEL POLE WITH 6-FOOT BRACKET ARM (23.5' MOUNTING HEIGHT AND 15' MOUNTING HEIGHT) ♦		HLP
8	9000 0609 / EACH	STEEL POLE WITH TWO 6-FOOT BRACKET ARMS (23.5' MOUNTING HEIGHT) ♦		HLP
10	9000 0610 / EACH	15-FOOT CONCRETE POLE ♦		HLP
30	9000 0611 / EACH	LED IN-GRADE UPLIGHT ♦		HLP
2	9000 0612 / EACH	MODIFICATION OF EXISTING POWER SUPPLY SYSTEM ♦		HLP
	9000 0613 / LS	REMOVE EXISTING LUMINAIRE AND POLE ♦		HLP
	9000 0617 / LS	ACCENT LIGHTING CONTROL SYSTEM ♦		HLP
4870	9000 0618 / LF	LIGHTING CONTROL NETWORK F.O. CABLE ♦		HLP
1	9000 0700 / EACH	INSTALLATION OF B.E.S.T. SIGN ♦		SP
4	9000 0701 / EACH	REMOVE AND RESET EXISTING SQUARE METAL POSTS, TYPE E ♦		SP

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
3	9000 0800 / EACH	WHITE EPOXY LEGEND, "LEFT, THRU, AND RIGHT ARROW", RECESSED ♦		PMP
9	9000 0900 / EACH	90-WATT LED LUMINAIRE, ARM MOUNT ♦		RRFBP, TSP
106	9000 0901 / LF	4" EXPOSED CONDUIT, WITH PULL BOX ♦		TSP
100	9000 0902 / LF	3" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT ♦		TSP
20	9000 0903 / LF	4" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT ♦		TSP
1	9000 0904 / EACH	NEMA TS-2 CONTROLLER ASSEMBLY, (ECONOLITE) TYPE 1 MOUNTING ♦		TSP
3	9000 0905 / EACH	PEDESTRIAN STUB POLE, TYPE B OR TYPE E, POWDER COATED, STRUCTURE MOUNTED ♦		TSP
1	9000 0906 / EACH	RELCO PREEMPTION SYSTEM ♦		TSP
1	9000 0907 / EACH	TRAFFIC SIGNAL SUPPORT, 60' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT) AND EXTENSION, POWDER COATED, STRUCTURE ♦		TSP
1	9000 0908 / EACH	5 PORT MANAGED ETHERNET SWITCH ♦		TSP
29	9000 1000 / EACH	PLANTER TREE BOX ♦		RDP
18138	9000 1001 / SF	STONE MULCH ♦		RDP
5236	9000 1002 / LF	METAL EDGING ♦		RDP
2	9000 1003 / EACH	STRAIGHT BENCH: 6' BOWERY STRAIGHT BENCH WITH CENTER ARM AND BACK ♦		RDP
7	9000 1004 / EACH	CURVED BENCH: 6' BOWERY CURVED BENCH WITH CENTER ARM AND BACK ♦		RDP
5	9000 1005 / EACH	LITTER RECEPTACLE ♦		RDP
96825	9000 1006 / SF	IRRIGATION SYSTEM (WATER SUPPLLY, BACKFLOW PREVENTER, IRRIGATION CONTROLLER & INCIDENTALS BY OTHERS) ♦		RDP
142	9000 1007 / SF	STABILIZED AGGREGATE PATH ♦		RDP
7480	9000 1008 / SY	PLANT BED PREPARATION INCLUDING PLANTING MIXTURE ♦		RDP
650	9000 1009 / EACH	TREE PIT PREPARATION INCLUDING PLANTING MIXTURE ♦		RDP
	9000 1100 / LS	SASSAFRAS WATERLINE RELOCATION ♦		NO TAB
	9000 1101 / LS	HOLLAND WATERLINE RELOCATION ♦		NO TAB
	9000 1102 / LS	STATE STREET 60 INCH SEWER RELOCATION ♦		NO TAB
	9000 1103 / LS	15 INCH SEWER RELOCATION ♦		NO TAB

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	9000 1104 / LS	INSTALLATION OF UNDERGROUND TELEPHONE FACILITIES ♦		NO TAB
	9000 1105 / LS	INSTALLATION OF UNDERGROUND ELECTRIC FACILITIES ♦		NO TAB
	9000 1106 / LS	HOLLAND STREET PRIVATE SEWER RELOCATION ♦		NO TAB
	9000 1107 / LS	SASSAFRAS STREET PRIVATE SEWER RELOCATION ♦		NO TAB
3	9000 1108 / EACH	IRRIGATION STATION ♦		NO TAB
13	9000 1109 / EACH	GRADE ADJUST MAINTENANCE COMPARTMENT, ECBS ♦		NO TAB
2	9000 1110 / EACH	GRADE ADJUST MAINTENANCE COMPARTMENT, ESA ♦		NO TAB
6	9000 1111 / EACH	GRADE ADJUST MAINTENANCE COMPARTMENT, VERIZON ♦		NO TAB
10	9000 1112 / EACH	GRADE ADJUST WATER VALVE BOX ♦		NO TAB
4	9000 1113 / EACH	REMOVE EXISTING FIRE HYDRANT ♦		NO TAB
4	9000 1114 / EACH	GRADE ADJUST EXISTING FIRE HYDRANT ♦		NO TAB
4	9000 1116 / EACH	GRADE ADJUST MAINTENANCE COMPARTMENT, PENELEC ♦		NO TAB
20000	9000 1117 / DOLLA	UNFORESEEN UTILITY COORDINATION ♦		NO TAB
20	9000 1118 / LF	SEWER ENCASEMENT ♦		NO TAB
	9000 1119 / LS	HOLLAND STREET 60" SEWER RELOCATION ♦		NO TAB
2374	9000 1200 / LF	SIDEWALK PROTECTIVE FENCE STEEL PORTABLE ♦		TCP
	9000 1202 / LS	DESIGN OF TEMPORARY TRAFFIC SIGNAL PLAN ♦		TCP
	9000 1203 / LS	CONSTRUCTION OF TEMPORARY TRAFFIC SIGNAL PLAN ♦		TCP
1	9000 1204 / EACH	TEMPORARY ADA CURB RAMP ♦		TCP
75	9000 1205 / SF	CHEEK WALL ♦		TCP
1136	9000 1300 / CY	AMENDED SOIL ♦		100-101

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800
MPMS: 108952
ECMS: 108952
8/23/2022 10:04:58 AM

TCP TRAFFIC CONTROL PLAN
SP SIGNING PLAN
PMP PAVEMENT MARKNING PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

URP UTILITY RELOCATION PLAN
RDP ROADSIDE DEVELOPMENT PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	48 OF 141
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
1	9000 1400 / EACH	MPLS EQUIPMENT ♦		ITS
49	9000 5001 / EACH	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS ♦		50-57
	9000 5100 / LS	ELECTRONIC TICKETING SYSTEM ♦		NO TAB
1	9000 6000 / EACH	REMOVAL OF EXISTING SIGN AND FOUNDATION ♦		85
698	9910 5175 / LF	2" EXPOSED CONDUIT, PAINTED ♦		HLP

HLP HIGHWAY LIGHTING PLAN
ITS ITS PLAN
RRFBP RECTANGULAR RAPID FLASHING BEACON PLAN
TSP TRAFFIC SIGNAL PLAN
STR STRUCTURE PLANS
S-XXXXX = STRUCTURE NUMBERED PLAN
L-430 = HOLLAND STREET PEDESTRIAN BRIDGE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	49 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

EARTHWORK

CLASS 1 EXCAVATION 0203 0001 CY	CLASS 1C EXCAVATION 0203 0005 CY	CLASS 2 EXCAVATION 0204 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 4, TYPE C 0212 0016 SY	6" PAVEMENT BASE DRAIN IN UNDERCUT 4610 7002 LF	EMBANKMENT (FOR INFORMATION ONLY) CY	BENCH EMBANKMENT (FOR INFORMATION ONLY) CY						REMARKS	SIDE	STATIONS
												ITEM NUMBER	UNIT			
														SR 4034		
			3081											AS DIRECTED	LT / RT	503+50.00 to 552+35.00
24439		1153				20061	115							ENTIRE PROJECT	LT / RT	503+50.00 to 552+35.00
	11065			19918	2932									UNDERCUTTING AS DIRECTED	LT / RT	503+50.00 to 552+35.00
104							104							EMBANKMENT TOE KEY	LT	516+75.00 to 517+75.00
106							106							EMBANKMENT TOE KEY	RT	535+55.00 to 536+25.00
														SASSAFRAS STREET EXTENSION		
			654											AS DIRECTED	LT / RT	0+90.00 to 5+00.00
646						977								ENTIRE PROJECT	LT / RT	0+90.00 to 5+00.00
	278			1254	246									UNDERCUTTING AS DIRECTED	LT / RT	0+90.00 to 5+00.00
														STATE STREET		
3565		69				1363								ENTIRE PROJECT	LT / RT	105+84.00 to 114+50.00
	569			2561	425									UNDERCUTTING AS DIRECTED	LT / RT	105+84.00 to 114+50.00
														HOLLAND STREET		
2208						365								ENTIRE PROJECT	LT / RT	7+68.00 to 16+94.00
	493			2220	388									UNDERCUTTING AS DIRECTED	LT / RT	9+30.00 to 17+65.00
31068	12405	1222	3735	25953	3991	22766	325							TOTALS		

CLASS 1 EXCAVATION 0203 0001 CY	CLASS 1C EXCAVATION 0203 0005 CY	CLASS 2 EXCAVATION 0204 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 4, TYPE C 0212 0016 SY	6" PAVEMENT BASE DRAIN IN UNDERCUT 4610 7002 LF	EMBANKMENT (FOR INFORMATION ONLY) CY	BENCH EMBANKMENT (FOR INFORMATION ONLY) CY						REMARKS	SIDE
												ITEM NUMBER	UNIT	

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	50 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER UNIT		
																											SR 4034		
																66											DEPRESSED CURB	LT	502+72.82 to 503+38.95
		39	39	39	39					39																	DRIVEWAY ADJUSTMENT	LT	502+72.82 to 503+38.97
																				1073								LT	503+29.52 to 512+59.64
																12												LT	503+38.95 to 503+50.00
41																												LT / RT	503+50.00 to 503+50.00
		121		121															121									LT	503+50.00 to 506+82.27
		1672	1672	1672			1672		1672	3344																		RT	503+50.00 to 512+55.58
		2206	2206	2206			2206		2206	4412																		LT	503+50.00 to 512+96.60
		553		553															553									RT	503+50.00 to 518+85.20
																	1796											LT / RT	503+52.00 to 512+19.14
		4		4															4									DEPRESSED CURB	LT	506+82.27 to 506+93.29
		211		211															211										LT	506+93.29 to 512+67.51
																								1				RT	510+25.00
																								1				RT	511+50.00
		1118	1118	1118			1118		1118	2236																		LT	512+96.95 to 517+50.00
		158		158															158										LT	513+13.49 to 517+50.00
																				173								LT	513+23.20 to 514+92.61
		1045	1045	1045			1045		1045	2090																		RT	513+42.67 to 517+50.00
																	966											LT / RT	513+68.51 to 518+19.75
																								1				RT	517+50.00
	719	903														688											SUBSURFACE DRAINAGE ITEMS FOR RETAINING WALL A	LT	517+50.00 to 523+79.00
		3003	3003	3003			3003		3003	6006																		LT / RT	517+50.00 to 524+63.28
		449	449	449			449		449	899																		LT	517+50.00 to 527+75.00
		1231	1231	1231			1231		1231	2462																		LT	518+42.52 to 532+48.94
		1243	1243	1243			1243		1243	2487																		RT	518+42.52 to 532+48.94
		620	620	620			620		620	1241																		RT	518+85.42 to 532+71.68
	71	21														122											SUBSURFACE DRAINAGE ITEMS FOR BAYFRONT PARKWAY WEST RAMP	LT / RT	521+02.25 to 522+24.67

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES

ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	51 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER UNIT		
																				421	27							RT	521+10.96 to 525+43.36
																				1586								LT	522+92.54 to 536+95.65
		287	287	287			287		287	574																		RT	524+53.56 to 526+88.81
																				28								RT	524+59.39 to 525+01.03
		287	287	287			287		287	574																		LT	524+60.74 to 526+96.04
																						8			1			RT	525+09.00
																						8			1			LT	525+13.00
																						8			1			RT	526+47.00
																						8			1			LT	526+52.00
		831	831	831			831		831	1662																		RT	526+88.81 to 533+68.62
		822	822	822			822		822	1644																		LT	526+96.04 to 533+68.62
		346		346															346									LT	527+75.00 to 536+92.94
	37																										BACKUP MATERIAL BEHIND BARRIER	RT	529+00.00 to 531+00.00
	120	18													105												SUBSURFACE DRAINAGE ITEMS FOR BAYFRONT PARKWAY EAST RAMP	LT / RT	529+14.94 to 530+19.94
		1220	1220	1220			1220		1220	2440																		LT / RT	529+16.87 to 533+68.62
		488	488	488	488					488																	PARCEL 13 (UPMC) ACCESS DRIVEWAY	RT	531+28.00 to 534+14.00
		6		6															6									RT	532+71.68 to 532+88.70
																	202											LT / RT	532+71.95 to 533+63.88
		46		46															46								DEPRESSED CURB	RT	532+88.70 to 534+13.84
																	135										DEPRESSED CURB	LT / RT	533+63.88 to 534+31.14
		46		46																			46					LT	533+68.38 to 534+26.64
		827	827	827			827		827	1654																		RT	533+68.62 to 536+90.54
		782	782	782			782		782	1564																		LT	533+68.62 to 537+28.22
		105		105															105									RT	534+13.84 to 536+73.57
																	507											LT / RT	534+31.14 to 536+50.12
																351											PARCEL 6A (LIBRARY PARKING LOT)	LT	534+58.75 to 536+49.90
		1610	1610	1610	1610					1610																	PARCEL 6A (LIBRARY PARKING LOT)	LT	534+59.59 to 536+86.08
301																												LT	534+62.22 to 536+85.14

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	52 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER / UNIT			
																							1				RT	535+00.00
																235										PARCEL 6A (LIBRARY PARKING LOT)	LT	535+00.30 to 535+96.06
																7										PARCEL 6A (LIBRARY PARKING LOT)	LT	536+19.00 to 536+23.00
		3209	3209	3209			3209		3209	6418																	LT / RT	537+39.92 to 544+85.25
		275		275															275								RT	537+77.88 to 544+92.68
																	1252										LT / RT	537+96.82 to 543+93.45
		210		210															210								LT	538+26.55 to 544+08.29
																				618	17						LT	538+30.48 to 544+03.72
26																											LT	539+68.98 to 539+71.54
																						8		1			LT	543+91.00
		121		121															121								LT	544+20.92 to 547+57.42
																				376	36						LT	544+21.13 to 547+81.65
																						8		1			LT	544+22.00
		3641	3641	3641			3641		3641	7282																	LT / RT	544+26.01 to 551+25.00
		262		262															262								RT	545+11.08 to 552+25.00
																								1			RT	546+75.00
		35		35															35							DEPRESSED CURB	LT	547+57.42 to 548+54.12
		170	170	170	170					170																DRIVEWAY ADJUSTMENT	LT	547+57.63 to 548+54.33
																						8					LT	547+82.00
41																											LT	547+83.60 to 548+25.00
																						8					LT	548+26.00
																					11						LT	548+26.64 to 548+35.58
																								1			RT	548+50.00
		138		138															138								LT	548+54.12 to 552+35.00
																								1			RT	550+00.00
41																											LT / RT	552+35.00 to 552+35.00
																										SASSAFRAS STREET EXTENSION		
																				207	65						RT	0+90.00 to 2+99.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	53 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER / UNIT		
		99		99															99								RT	0+90.00 to 3+00.05
		139		139															139								LT	0+90.00 to 4+31.16
																				319	87						LT	0+90.00 to 4+40.81
		1593	1593	1593			1593		1593	3186																	LT / RT	0+90.00 to 5+00.00
		280															446										SPLITTER ISLAND	LT / RT	0+90.26 to 2+57.23
								13																			RAISED CROSSWALK	LT	1+07.72 to 1+34.87
																					29							LT / RT	1+13.00 to 1+22.00
																						8			1			LT	1+17.00
																						8			1			RT	1+19.00
																						8			1			LT	1+26.00
																						8			1			RT	1+31.00
								12																			RAISED CROSSWALK	RT	1+70.50 to 1+35.90
																						8			1			RT	2+94.00
		84		84															84								RT	3+19.83 to 5+00.00
																				161	43						RT	3+26.70 to 5+79.87
																						8			1			RT	3+27.00
																						8			1			LT	3+31.00
																						8			1			RT	3+32.00
		75															174										SPLITTER ISLAND	LT / RT	3+36.26 to 4+17.88
		89	89	89	89					89																	DRIVEWAY ADJUSTMENT	LT	4+11.18 to 4+80.66
																						8			1			LT	4+34.00
20																												LT	4+41.18 to 4+61.58
																54												LT	4+61.64 to 5+00.00
																				18	17							LT	4+61.77 to 5+00.00
																						8			1			LT	4+66.00
42																												LT / RT	5+00.00 to 5+00.00
																80												RT	5+00.00 to 5+79.87
																6												RT	5+90.76 to 5+96.76

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	54 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER / UNIT			
																										SASSAFRAS ROUNDABOUT		
																		384									LT	0+00.00 to 3+64.42
		613		613										613													LT	0+00.00 to 3+64.45
		1606	1606	1606			1606		1606	3212																	RT	0+00.00 to 3+64.45
																271											LT	512+54.64 to 513+38.48
																										STATE STREET		
79																											LT / RT	105+84.00 to 105+86.42
		1553	1553	1553			1553		1553	3106																	LT / RT	105+84.00 to 108+96.72
																				175	53						RT	105+84.00 to 109+02.74
																350											RT	105+84.00 to 109+07.09
																276											LT	105+87.02 to 108+41.03
																				203	44						LT	105+87.22 to 108+41.01
																						8			1		LT	105+90.00
																						8			1		LT	105+97.00
																						8			1		RT	105+97.00
		229														545										SPLITTER ISLAND	LT / RT	106+07.37 to 108+85.80
		32	32	32	32					32																DRIVEWAY ADJUSTMENT	LT	108+31.66 to 108+73.08
																34										DEPRESSED CURB	LT	108+35.25 to 108+69.49
																						8			1		LT	108+39.00
21																											LT	108+41.70 to 108+62.92
																74											LT	108+63.59 to 109+28.78
																						8			1		LT	108+66.00
																						8			1		RT	108+81.00
																						8			1		LT	108+82.00
		175	175	175									175			44										DRIVEWAY ADJUSTMENT AND DEPRESSED CURB	RT	108+89.83 to 109+33.49
79																											RT	108+96.68 to 109+29.18
																						8			1		RT	108+97.00
																64											RT	109+29.05 to 109+36.24

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	55 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER / UNIT		
																					8			1			RT	109+32.00
																				25							RT	109+35.66 to 109+54.98
																292											LT	109+80.01 to 112+43.08
																				463	17						LT	109+92.52 to 112+55.86
																378											RT	109+98.32 to 113+34.11
																				602	74						RT	110+09.29 to 113+34.11
	230	555													212											SUBSURFACE DRAINAGE ITEMS FOR RETAINING WALL C	LT	110+15.90 to 112+00.00
	134	528													241											SUBSURFACE DRAINAGE ITEMS FOR RETAINING WALL D	RT	110+15.90 to 112+00.00
																						8		1			LT	110+44.00
																						8		1			RT	110+50.00
		2119	2119	2119			2119		2119	4238																	LT / RT	110+60.13 to 114+50.00
		204														492										SPLITTER ISLAND	LT / RT	110+65.00 to 113+06.30
																						8		1			RT	113+14.00
																						8		1			RT	113+31.00
26																											RT	113+34.77 to 113+60.88
																98				50	43						RT	113+61.55 to 114+50.00
																						8		1			RT	113+64.00
																						8		1			LT	113+80.00
																						8		1			RT	113+80.00
		58														135										SPLITTER ISLAND	LT / RT	113+84.81 to 114+50.00
																59										SIDEWALK	LT	113+91.04 to 114+50.00
																				44							LT	114+00.63 to 114+50.00
48																											LT / RT	114+50.00 to 114+50.00
																										HOLLAND STREET		
																					6						RT	7+13.66 to 7+21.69
																					6						LT	7+13.71 to 7+21.78
																						8		1			LT	7+67.00
																						8		1			RT	7+68.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	56 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER UNIT		
						15	510			1020	510																LT / RT	7+68.00 to 9+30.00
																						8			1		LT	7+73.00
																						8			1		RT	7+75.00
28																											LT / RT	9+30.00 to 9+30.00
																				125							RT	9+30.00 to 10+34.86
		112	112	112			112		112	223																	LT	9+30.00 to 11+77.90
		97		97															97								RT	9+30.00 to 11+98.27
		1236	1236	1236			1236		1236	2472																	LT / RT	9+30.00 to 12+05.38
	34											26															ITEMS FOR RETAINING WALL E	LT	9+45.00 to 11+75.00
		98															158										SPLITTER ISLAND	LT / RT	11+44.29 to 12+03.57
												82																LT / RT	11+45.27 to 12+02.68
		63		63															63								RT	13+58.08 to 14+91.66
																				115	62						RT	13+64.96 to 14+80.05
		1385	1385	1385			1385		1385	2770																	LT / RT	13+85.38 to 16+94.00
		64		64															64								LT	13+88.54 to 15+21.51
		136															244										SPLITTER ISLAND	LT / RT	13+89.47 to 14+61.64
																				113	87						LT	13+92.81 to 15+14.97
								12																			RT	13+99.80 to 14+26.32
								13																			LT	14+00.16 to 14+27.67
																					24						LT / RT	14+05.51 to 14+15.20
																						8			1		RT	14+09.00
																						8			1		LT	14+10.00
																						8			1		RT	14+18.00
																						8			1		LT	14+19.00
		1131	1131	1131	1131					1131						498											RT	14+25.00 to 15+50.00
																						8			1		RT	14+82.00
																						8			1		LT	15+10.00
		65		65															65								RT	15+21.52 to 16+91.62

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES
ROADWAY AND SHOULDERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	57 OF 141
				CITY OF ERIE				

SAW CUTTING	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-G	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, RPS, PG 64E-22, 0.3 < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	PLAIN CEMENT CONCRETE PAVEMENT, 10" DEPTH	REINFORCED CEMENT CONCRETE PAVEMENT, 12" DEPTH	6" PIPE UNDERDRAIN TYPE I BACKFILL	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	PLAIN CEMENT CONCRETE CURB GUTTER	CEMENT CONCRETE SIDEWALK	CEMENT CONCRETE SIDEWALK FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	CONCRETE RUMBLE TRAFFIC SEPARATOR	CURB CUT	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0006 LF	0205 0285 CY	0212 0014 SY	0313 0426 SY	0350 0108 SY	0413 0383 SY	0413 2145 TON	0413 3470 SY	0413 3480 TON	0413 8097 SY	0460 0003 SY	0491 0013 SY	0501 0020 SY	0501 0032 SY	0501 0204 SY	0610 0002 LF	0630 0041 LF	0633 0200 LF	0633 0230 LF	0641 0005 SY	0676 0001 SY	4676 0001 SY	4695 0004 SF	9000 0002 SY	9000 0010 EACH	9000 5001 EACH		ITEM NUMBER / UNIT		
53																											LT	15+22.64 to 15+45.86
																						8			1		RT	15+28.00
																				105	71						RT	15+28.09 to 16+88.18
		65		65															65								LT	15+39.80 to 16+10.75
																						8			1		LT	15+40.00
																				31	76						LT	15+40.37 to 16+07.03
																						8			1		LT	15+54.00
																						8			1		RT	15+54.00
		115	115	115	115					115																	LT	15+95.88 to 16+50.15
																						8			1		LT	16+05.00
39																											LT	16+08.68 to 16+36.65
																70											LT	16+36.00 to 16+94.00
																				27	14						LT	16+37.17 to 16+88.65
																						8			1		LT	16+40.00
		15	15	15	15					15																	RT	16+70.66 to 16+94.00
																						8			1		RT	16+82.00
50																											LT / RT	16+94.00 to 16+94.00
		518		518										518				364									LT	0+00.00 to 3+64.42
		1541	1541	1541			1541		1541	3082																	RT	0+00.00 to 3+64.45
																264											LT	536+80.88 to 537+60.24
935	1345	47187	39502	44067	3689	15	36148	50	35638	75987	510	108	175	1131	1368	4755	5880	748	3267	7058	909	408	46	7	49		TOTALS		

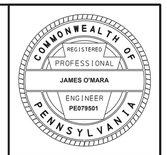
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:50:18 AM

TABULATION OF QUANTITIES

DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	58 OF 141
				CITY OF ERIE				



0605 2401 SET MANHOLE FRAME AND COVER	0605 2600 EACH TYPE D ENDWALL	0605 2730 SET TYPE M CONCRETE TOP UNIT AND GRATE	0605 2731 SET TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	0605 2850 EACH STANDARD INLET BOX, HEIGHT < /= 10'	0605 2854 EACH TYPE 4 INLET BOX, HEIGHT < /= 10'	0605 2855 EACH TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20'	0605 2856 EACH TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30'	0605 2862 EACH TYPE 6 INLET BOX, HEIGHT < /= 10'	0605 3011 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3012 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3021 EACH TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3031 EACH TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3032 EACH TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3041 EACH TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3051 EACH TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 5721 SET TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE	9000 0301 LF 12" TRENCH DRAIN	9000 0302 SET TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB	9000 0304 LS TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																				SR 4034		
				1													1				A2	RT	503+52.41
		1		1																	A4	LT	503+53.24
		1		1																	A3	RT	503+53.94
		1		1																	A5	LT	503+54.55
				1													1				A1	LT	503+55.00
				1													1				B2	RT	506+88.00
				1															1		B1	LT	506+89.00
				1													1				B6	LT	507+10.11
		1		1																	B5	LT	507+10.13
				1													1				B3	LT	510+00.00
				1													1				B4	RT	510+00.00
			1	1																	C8	LT	512+15.97
			1					1													C12	LT	513+75.75
								1									1				C9	LT	513+99.62
								1									1				C13	RT	514+02.23
				1													1				C10	LT	514+21.58
								1									1				C14	RT	514+22.32
				1													1				C11	LT	514+49.81
		1		1																	C20	CL	514+50.00
								1									1				C15	RT	514+50.00
				1													1				D5	LT	517+00.00
								1									1				D6	RT	517+00.00
		1						1													D62	RT	517+00.00
																1					D68	RT	517+38.53
															1						D69	RT	518+46.30
			1			1															D4	LT	518+90.00
			1		1																D7	RT	518+90.00

TABULATION OF QUANTITIES

DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	59 OF 141
				CITY OF ERIE				

MANHOLE FRAME AND COVER	TYPE D ENDWALL	TYPE M CONCRETE TOP UNIT AND GRATE	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 INLET BOX, HEIGHT < /= 10'	TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20'	TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30'	TYPE 6 INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE	12" TRENCH DRAIN	TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB	TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX								REMARKS	SIDE	STATIONS
0605 2401 SET	0605 2600 EACH	0605 2730 SET	0605 2731 SET	0605 2850 EACH	0605 2854 EACH	0605 2855 EACH	0605 2856 EACH	0605 2862 EACH	0605 3011 EACH	0605 3012 EACH	0605 3021 EACH	0605 3031 EACH	0605 3032 EACH	0605 3041 EACH	0605 3051 EACH	0605 5721 SET	9000 0301 LF	9000 0302 SET	9000 0304 LS								ITEM NUMBER UNIT		
			1	1																						D11	RT	519+57.38
			1	1																						D51	RT	519+57.38
			1	1																						D10	LT	519+57.44
			1	1																						D50	LT	519+57.44
																			X							D66	LT	521+13.79
			1				1																			D3	LT	521+14.11
			1	1																						D8	LT	521+14.11
			1	1																						D9	LT	521+14.11
			1	1																						D12	RT	521+25.00
			1	1																						D13	RT	521+25.00
		1		1																						D63	RT	521+25.00
			1	1																						D52	LT	522+11.00
			1	1																						D53	RT	522+11.00
			1			1																				D14	LT	523+38.03
	1																									EW-02	LT	523+40.00
		1		1																						I3	LT	524+60.17
			1	1																						D23	RT	525+00.00
			1	1																						D24	RT	525+00.00
			1		1																					D15	LT	525+56.25
			1	1																						D16	LT	525+56.25
			1	1																						D21	RT	525+68.35
			1	1																						D22	RT	525+68.35
			1		1																					D17	LT	525+96.25
			1	1																						D18	LT	525+96.25
			1		1																					D19	RT	526+08.35
			1	1																						D20	RT	526+08.35
			1		1																					D37	LT	526+36.25
			1		1																					D38	LT	526+36.25

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:53:44 AM

TABULATION OF QUANTITIES
DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	60 OF 141
				CITY OF ERIE				

MANHOLE FRAME AND COVER	TYPE D ENDWALL	TYPE M CONCRETE TOP UNIT AND GRATE	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 INLET BOX, HEIGHT < /= 10'	TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20'	TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30'	TYPE 6 INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE	12" TRENCH DRAIN	TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB	TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX								REMARKS	SIDE	STATIONS
0605 2401 SET	0605 2600 EACH	0605 2730 SET	0605 2731 SET	0605 2850 EACH	0605 2854 EACH	0605 2855 EACH	0605 2856 EACH	0605 2862 EACH	0605 3011 EACH	0605 3012 EACH	0605 3021 EACH	0605 3031 EACH	0605 3032 EACH	0605 3041 EACH	0605 3051 EACH	0605 5721 SET	9000 0301 LF	9000 0302 SET	9000 0304 LS								ITEM NUMBER UNIT		
			1		1																					D26	RT	526+48.35
			1		1																					D25	RT	526+48.54
			1		1																					D27	RT	528+85.00
			1	1																						D72	RT	528+87.34
			1		1																					D40	LT	529+32.00
			1	1																						D54	LT	529+32.00
			1	1																						D55	RT	529+32.00
			1	1																						D28	RT	529+60.79
			1	1																						D29	RT	529+60.79
		1		1																						D71	RT	529+60.79
			1	1																						D41	LT	530+00.00
			1	1																						D42	LT	530+80.00
			1	1																						D43	RT	530+80.00
			1	1																						D46	LT	531+12.40
			1	1																						D44	RT	531+12.40
			1	1																						D47	LT	531+33.97
			1			1																				D57	LT	531+33.97
				1												1										D73	LT	531+33.97
			1	1																						D45	RT	531+33.97
			1	1																						D56	RT	531+33.97
		1		1																						D64	RT	531+33.97
				1												1										D39	LT	532+74.07
		1		1																						D67	LT	532+77.61
					1											1										D48	LT	534+00.00
		1		1																						D49	RT	534+34.62
		1		1																						D65	CL	534+36.57
				1												1										F18	RT	538+21.85
		1		1																						F23	RT	538+23.78

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:53:44 AM

TABULATION OF QUANTITIES

DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	61 OF 141
				CITY OF ERIE				

| MANHOLE FRAME AND COVER | | TYPE D ENDWALL | | TYPE M CONCRETE TOP UNIT AND GRATE | | TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE | | STANDARD INLET BOX, HEIGHT < /= 10' | | TYPE 4 INLET BOX, HEIGHT < /= 10' | | TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20' | | TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30' | | TYPE 6 INLET BOX, HEIGHT < /= 10' | | TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' | | TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' | | TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' | | TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' | | TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' | | TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' | | TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' | | TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE | | 12" TRENCH DRAIN | | TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB | | TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX | | | | | | | | | | | | | | REMARKS | SIDE | STATIONS |
|---|---|---|---|---|---|---|---|---

TABULATION OF QUANTITIES

DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	62 OF 141
				CITY OF ERIE				

MANHOLE FRAME AND COVER 0605 2401 SET	TYPE D ENDWALL 0605 2600 EACH	TYPE M CONCRETE TOP UNIT AND GRATE 0605 2730 SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2731 SET	STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2855 EACH	TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30' 0605 2856 EACH	TYPE 6 INLET BOX, HEIGHT < /= 10' 0605 2862 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3021 EACH	TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3031 EACH	TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3032 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3051 EACH	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5721 SET	12" TRENCH DRAIN 9000 0301 LF	TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB 9000 0302 SET	TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX 9000 0304 LS	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
				1													1				F5	RT	552+29.61
				1													1				F30	LT	552+29.81
																					SASSAFRAS STREET EXTENSION		
			1					1													C6	LT	0+94.47
								1									1				C22	LT	1+12.05
								1									1				C7	RT	1+14.81
1								1													C5	LT	1+15.31
				1													1				C4	RT	2+49.84
				1													1				C23	LT	2+49.96
1								1													C3	LT	2+50.00
		1		1																	C18	RT	2+50.54
				1													1				C21	RT	4+03.23
				1													1				C24	LT	4+16.48
1								1													C16	LT	4+17.72
		1		1																	C17	LT	4+19.17
								1									1				C1	LT	4+94.00
				1													1				C2	RT	4+94.00
																					STATE STREET		
				1													1				D35	RT	105+87.00
				1														1			D36	LT	105+91.12
				1													1				D58	LT	106+37.00
				1													1				D59	RT	106+37.00
											1										D70	RT	106+37.06
				1													1				D60	LT	107+20.00
				1													1				D61	RT	107+20.00
				1													1				D34	LT	108+00.00
				1													1				D33	RT	108+00.00
				1													1				D31	RT	108+73.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:53:44 AM

TABULATION OF QUANTITIES
DRAINAGE - STRUCTURES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	63 OF 141
				CITY OF ERIE				

0605 2401 SET MANHOLE FRAME AND COVER	0605 2600 EACH TYPE D ENDWALL	0605 2730 SET TYPE M CONCRETE TOP UNIT AND GRATE	0605 2731 SET TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	0605 2850 EACH STANDARD INLET BOX, HEIGHT < /= 10'	0605 2854 EACH TYPE 4 INLET BOX, HEIGHT < /= 10'	0605 2855 EACH TYPE 4 INLET BOX, HEIGHT > 10' AND < /= 20'	0605 2856 EACH TYPE 4 INLET BOX, HEIGHT > 20' AND < /= 30'	0605 2862 EACH TYPE 6 INLET BOX, HEIGHT < /= 10'	0605 3011 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3012 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3021 EACH TYPE 5 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3031 EACH TYPE 6 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3032 EACH TYPE 6 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3041 EACH TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3051 EACH TYPE 8 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 5721 SET TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND BICYCLE SAFE GRATE	9000 0301 LF 12" TRENCH DRAIN	9000 0302 SET TYPE C CONCRETE TOP UNIT AND ADA COMPLIANT GRATE, DEPRESSED CURB	9000 0304 LS TYPE M CONCRETE TOP UNIT AND GRATE ON EXISTING TYPE 6 INLET BOX	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
				1														1		D32	LT	108+75.00
																		30		TRENCH DRAIN IN PARCEL 13 (UPMC) DRIVEWAY	RT	108+96.63 to 109+26.36
				1													1			D74	RT	109+28.98
				1													1			D30	RT	109+29.40
				1													1			E3	LT	111+00.00
				1													1			E4	RT	111+00.00
	1																			EW-03	LT	111+80.00
				1													1			E5	LT	112+00.00
				1													1			E6	RT	112+00.00
												1								E7	LT	112+03.20
				1													1			E2	RT	113+07.15
				1													1			E1	LT	113+07.17
									1											E8	LT	113+21.95
																				HOLLAND STREET		
			1	1																F20	LT	11+50.00
				1													1			F19	RT	11+51.08
			1	1																G4	LT	13+90.08
				1													1			G9	RT	14+04.90
				1													1			G3	LT	14+05.54
				1													1			G7	RT	14+66.48
				1													1			G2	LT	14+79.69
				1													1			G1	LT	15+17.25
									1											G10	LT	15+26.38
				1													1			G8	LT	15+40.56
				1													1			H4	RT	15+63.00
				1													1			H3	LT	15+67.86
3	4	20	49	115	11	5	1	14	3	1	1	1	2	1	1	70	30	4	---	TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:53:44 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	64 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
																											SR 4034		
						19																					A2 TO A5	RT	503+52.41 to 503+54.55
													18														A4 TO A1	LT	503+53.24 to 503+55.00
													9														A3 TO A2	RT	503+53.94 to 503+52.41
				4																							EXISTING TO A3	RT	503+54.18 to 503+53.94
						16																					A5 TO A1	LT	503+54.55 to 503+55.00
				4																							A1 TO EXISTING	LT	503+55.00 to 503+50.00
																											CONCRETE PIPE COLLAR	LT	503+55.05
																											CONCRETE PIPE COLLAR	RT	503+55.05
				4																							EXISTING TO A2	RT	503+58.24 to 503+52.41
						45																					B2 TO B1	LT / RT	506+88.00 to 506+89.00
																											CONCRETE PIPE COLLAR	LT	506+89.00
				4																							B1 TO EXISTING	LT	506+89.00 to 506+88.70
																									18		B6 TO B1	LT	507+10.11 to 506+89.00
													24														B5 TO B6	LT	507+10.13 to 507+10.11
																									286		B3 TO B6	LT	510+00.00 to 507+10.11
						56																					B4 TO B3	LT / RT	510+00.00 to 510+00.00
						129																					C8 TO C5	LT	512+15.97 to 512+85.92
										38																	C12 TO C9	LT	513+75.75 to 513+99.62
										106																	C9 TO C7	LT	513+99.62 to 512+96.64
										66																	C13 TO C12	LT / RT	514+02.23 to 513+75.75
																									18		C10 TO C9	LT	514+21.58 to 513+99.62
																											C14 TO C13	RT	514+22.32 to 514+02.23
																									24		C11 TO C10	LT	514+49.81 to 514+21.58
																											C15 TO C14	RT	514+50.00 to 514+22.32
						35																					C20 TO C11	LT	514+50.00 to 514+49.81
																											D6 TO C15	RT	517+00.00 to 514+50.00
																					4						D62 TO D6	RT	517+00.00 to 517+00.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	65 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

| PIPE DESIGN DESIGN NO. 15 | PIPE DESIGN DESIGN NO. 4 | CONCRETE COLLAR FOR 15" PIPE EXTENSION | CONCRETE COLLAR FOR 18" PIPE EXTENSION | CONCRETE COLLAR FOR 24" PIPE EXTENSION | CONCRETE COLLAR FOR 36" PIPE EXTENSION | CONCRETE COLLAR FOR 48" PIPE EXTENSION | | 10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL | | | |

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	66 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
																							187				D5 TO D4	LT	517+00.00 to 518+90.00
																				4							EXISTING TO D68	RT	517+34.94 to 517+38.84
																											CONCRETE PIPE COLLAR	RT	517+36.14
																			36								D68 TO D62	RT	517+38.84 to 517+00.00
																42											D69 TO D7	RT	518+46.30 to 518+90.00
																											CONCRETE PIPE COLLAR	RT	518+49.53
																	4										EXISTING TO D69	RT	518+53.31 to 518+46.30
									65																		D7 TO D4	LT / RT	518+90.00 to 518+90.00
																										212	D4 TO D3	LT	518+90.00 to 521+14.11
						5																					D51 TO D11	RT	519+57.38 to 519+57.38
						25																					D11 TO D10	LT / RT	519+57.38 to 519+57.44
						5																					D10 TO D50	LT	519+57.44 to 519+57.44
																							147				D50 TO D8	LT	519+57.44 to 521+14.11
																9											D3 TO D66	LT	521+14.11 to 521+13.79
						13																					D8 TO D3	LT	521+14.11 to 521+14.11
						4																					D9 TO D8	LT	521+14.11 to 521+14.11
																							167				D12 TO D51	RT	521+25.00 to 519+57.38
						15																					D13 TO D12	RT	521+25.00 to 521+25.00
													8														D63 TO D13	RT	521+25.00 to 521+25.00
																							108				D52 TO D9	LT	522+11.00 to 521+14.11
						25																					D53 TO D52	LT / RT	522+11.00 to 522+11.00
																									218		D14 TO D3	LT	523+38.03 to 521+14.11
														117													I3 TO EW-02	LT	524+59.15 to 523+40.00
						15																					D24 TO D23	RT	525+00.00 to 525+00.00
																							65				D23 TO D21	RT	525+00.00 to 525+68.35
																									212		D15 TO D14	LT	525+56.25 to 523+38.03
						13																					D16 TO D15	LT	525+56.25 to 525+56.25
						15																					D22 TO D21	RT	525+68.35 to 525+68.35

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	67 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

PIPE DESIGN DESIGN NO. 15 0604 (+) LF	PIPE DESIGN DESIGN NO. 4 0604 (+) LF	CONCRETE COLLAR FOR 15" PIPE EXTENSION 0618 0021 EACH	CONCRETE COLLAR FOR 18" PIPE EXTENSION 0618 0022 EACH	CONCRETE COLLAR FOR 24" PIPE EXTENSION 0618 0024 EACH	CONCRETE COLLAR FOR 36" PIPE EXTENSION 0618 0028 EACH	CONCRETE COLLAR FOR 48" PIPE EXTENSION 0618 0030 EACH	10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL 9000 0303 LF	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
									D5 TO D4	LT	517+00.00 to 518+90.00
									EXISTING TO D68	RT	517+34.94 to 517+38.84
						1			CONCRETE PIPE COLLAR	RT	517+36.14
									D68 TO D62	RT	517+38.84 to 517+00.00
									D69 TO D7	RT	518+46.30 to 518+90.00
					1				CONCRETE PIPE COLLAR	RT	518+49.53
									EXISTING TO D69	RT	518+53.31 to 518+46.30
									D7 TO D4	LT / RT	518+90.00 to 518+90.00
									D4 TO D3	LT	518+90.00 to 521+14.11
									D51 TO D11	RT	519+57.38 to 519+57.38
									D11 TO D10	LT / RT	519+57.38 to 519+57.44
									D10 TO D50	LT	519+57.44 to 519+57.44
									D50 TO D8	LT	519+57.44 to 521+14.11
									D3 TO D66	LT	521+14.11 to 521+13.79
									D8 TO D3	LT	521+14.11 to 521+14.11
									D9 TO D8	LT	521+14.11 to 521+14.11
									D12 TO D51	RT	521+25.00 to 519+57.38
									D13 TO D12	RT	521+25.00 to 521+25.00
									D63 TO D13	RT	521+25.00 to 521+25.00
									D52 TO D9	LT	522+11.00 to 521+14.11
									D53 TO D52	LT / RT	522+11.00 to 522+11.00
									D14 TO D3	LT	523+38.03 to 521+14.11
									I3 TO EW-02	LT	524+59.15 to 523+40.00
									D24 TO D23	RT	525+00.00 to 525+00.00
									D23 TO D21	RT	525+00.00 to 525+68.35
									D15 TO D14	LT	525+56.25 to 523+38.03
									D16 TO D15	LT	525+56.25 to 525+56.25
									D22 TO D21	RT	525+68.35 to 525+68.35

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	68 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
																							37				D21 TO D19	RT	525+68.35 to 526+08.35
																									37		D17 TO D15	LT	525+96.25 to 525+56.25
								13																			D18 TO D17	LT	525+96.25 to 525+96.25
							40																				D19 TO D18	LT / RT	526+08.35 to 525+96.25
						13																					D20 TO D19	RT	526+08.35 to 526+08.35
																								37			D37 TO D17	LT	526+36.25 to 525+96.25
								10																			D38 TO D37	LT	526+36.25 to 526+36.25
																								37			D25 TO D19	RT	526+48.35 to 526+08.35
								10																			D26 TO D25	RT	526+48.35 to 526+48.35
																											CONCRETE PIPE COLLAR	RT	526+51.51
																							233				D27 TO D26	RT	528+85.00 to 526+48.35
											4																EXISTING TO D72	RT	528+86.03 to 528+87.34
													5														D72 TO D27	RT	528+87.34 to 528+85.00
																											CONCRETE PIPE COLLAR	RT	528+87.36
																							280				D40 TO D38	LT	529+32.00 to 526+36.25
						5																					D54 TO D40	LT	529+32.00 to 529+32.00
						25																					D55 TO D54	LT / RT	529+32.00 to 529+32.00
																											CONCRETE PIPE COLLAR	RT	529+60.79
																							72				D28 TO D27	RT	529+60.79 to 528+85.00
						15																					D29 TO D28	RT	529+60.79 to 529+60.79
													3														D71 TO D28	RT	529+60.79 to 529+60.79
	4																										EXISTING TO D71	RT	529+60.79 to 529+60.79
																							77				D41 TO D42	LT	530+00.00 to 530+80.00
																							29				D42 TO D46	LT	530+80.00 to 531+12.40
																							29				D43 TO D44	RT	530+80.00 to 531+12.40
																							18				D46 TO D47	LT	531+12.40 to 531+33.97
																							18				D44 TO D45	RT	531+12.40 to 531+33.97
																								211			D57 TO D40	LT	531+33.97 to 529+32.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	69 OF 141
				CITY OF ERIE				

PIPE DESIGN DESIGN NO. 15	PIPE DESIGN DESIGN NO. 4	CONCRETE COLLAR FOR 15" PIPE EXTENSION	CONCRETE COLLAR FOR 18" PIPE EXTENSION	CONCRETE COLLAR FOR 24" PIPE EXTENSION	CONCRETE COLLAR FOR 36" PIPE EXTENSION	CONCRETE COLLAR FOR 48" PIPE EXTENSION		10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL																						REMARKS	SIDE	STATIONS
0604 (+) LF	0604 (+) LF	0618 0021 EACH	0618 0022 EACH	0618 0024 EACH	0618 0028 EACH	0618 0030 EACH		9000 0303 LF																				ITEM NUMBER UNIT		
																										D21 TO D19	RT	525+68.35 to 526+08.35
																										D17 TO D15	LT	525+96.25 to 525+56.25
																										D18 TO D17	LT	525+96.25 to 525+96.25
																										D19 TO D18	LT / RT	526+08.35 to 525+96.25
																										D20 TO D19	RT	526+08.35 to 526+08.35
																										D37 TO D17	LT	526+36.25 to 525+96.25
																										D38 TO D37	LT	526+36.25 to 526+36.25
																										D25 TO D19	RT	526+48.35 to 526+08.35
																										D26 TO D25	RT	526+48.35 to 526+48.35
			1																							CONCRETE PIPE COLLAR	RT	526+51.51
																										D27 TO D26	RT	528+85.00 to 526+48.35
																										EXISTING TO D72	RT	528+86.03 to 528+87.34
																										D72 TO D27	RT	528+87.34 to 528+85.00
			1																							CONCRETE PIPE COLLAR	RT	528+87.36
																										D40 TO D38	LT	529+32.00 to 526+36.25
																										D54 TO D40	LT	529+32.00 to 529+32.00
																										D55 TO D54	LT / RT	529+32.00 to 529+32.00
			1																							CONCRETE PIPE COLLAR	RT	529+60.79
																										D28 TO D27	RT	529+60.79 to 528+85.00
																										D29 TO D28	RT	529+60.79 to 529+60.79
																										D71 TO D28	RT	529+60.79 to 529+60.79
																										EXISTING TO D71	RT	529+60.79 to 529+60.79
																										D41 TO D42	LT	530+00.00 to 530+80.00
																										D42 TO D46	LT	530+80.00 to 531+12.40
																										D43 TO D44	RT	530+80.00 to 531+12.40
																										D46 TO D47	LT	531+12.40 to 531+33.97
																										D44 TO D45	RT	531+12.40 to 531+33.97
																										D57 TO D40	LT	531+33.97 to 529+32.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	70 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL 0601 0312 LF	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL 0601 0313 LF		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL 0601 7008 LF	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE 0601 7014 LF			PIPE DESIGN DESIGN NO. 1 0601 (+) LF	PIPE DESIGN DESIGN NO. 9 0601 (+) LF	PIPE DESIGN DESIGN NO. 7 0601 (+) LF	PIPE DESIGN DESIGN NO. 11 0601 (+) LF	PIPE DESIGN DESIGN NO. 14 0601 (+) LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL 0601 7313 LF	PIPE DESIGN DESIGN NO. 3 0601 (+) LF	PIPE DESIGN DESIGN NO. 5 0601 (+) LF	PIPE DESIGN DESIGN NO. 6 0601 (+) LF	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL 0601 7326 LF		PIPE DESIGN DESIGN NO. 13 0601 (+) LF	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL 0601 7355 LF		PIPE DESIGN DESIGN NO. 16 0601 (+) LF	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL 0601 7371 LF		PIPE DESIGN DESIGN NO. 2 0604 (+) LF	PIPE DESIGN DESIGN NO. 8 0604 (+) LF	PIPE DESIGN DESIGN NO. 10 0604 (+) LF	PIPE DESIGN DESIGN NO. 12 0604 (+) LF	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
									5																			D47 TO D57	LT	531+33.97 to 531+33.97
							12																					D73 TO D57	LT	531+33.97 to 531+33.97
									25																			D45 TO D47	LT / RT	531+33.97 to 531+33.97
									5																			D56 TO D45	RT	531+33.97 to 531+33.97
							23																					D64 TO D56	RT	531+33.97 to 531+33.97
																									137				D39 TO D73	LT	532+74.07 to 531+33.97
							27																					D67 TO D39	LT	532+77.61 to 532+74.07
																									123				D48 TO D39	LT	534+00.00 to 532+74.07
							34																					D49 TO D65	LT / RT	534+34.62 to 534+36.57
							43																					D65 TO D48	LT	534+36.57 to 534+00.00
														4														F18 TO F23	RT	538+21.85 to 538+23.78
													84															F23 TO EW-04	RT	538+23.78 to 539+00.00
							56																					F17 TO F16	LT / RT	540+55.00 to 540+55.00
																									174				F16 TO F14	LT	540+55.00 to 542+30.00
							50																					F15 TO F14	LT / RT	542+30.00 to 542+30.00
																									97				F14 TO F29	LT	542+30.00 to 543+28.88
											4																	EXISTING TO F28	LT	542+30.52 to 542+30.92
																												CONCRETE PIPE COLLAR	RT	542+30.54
													17															F28 TO F15	RT	542+30.92 to 542+30.00
																										23		F29 TO F22	LT	543+28.88 to 543+55.00
							15																					F25 TO F29	LT	543+28.91 to 543+28.88
							36																					F24 TO F25	RT	543+29.46 to 543+28.91
															4													F33 TO EXISTING	LT	543+54.36 to 543+61.38
								5																				F22 TO F33	LT	543+55.00 to 543+54.36
																												CONCRETE PIPE COLLAR	LT	543+58.20
																									36				F13 TO F22	LT	543+94.90 to 543+55.00
							46																					F12 TO F13	LT / RT	544+00.00 to 543+94.90
																									32				F10 TO F12	RT	544+35.00 to 544+00.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	71 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

| PIPE DESIGN DESIGN NO. 15 | PIPE DESIGN DESIGN NO. 4 | CONCRETE COLLAR FOR 15" PIPE EXTENSION | CONCRETE COLLAR FOR 18" PIPE EXTENSION | CONCRETE COLLAR FOR 24" PIPE EXTENSION | CONCRETE COLLAR FOR 36" PIPE EXTENSION | CONCRETE COLLAR FOR 48" PIPE EXTENSION | | 10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL | | | |

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	72 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
																							40				F9 TO F8	LT	544+35.00 to 544+78.00
																							17				F11 TO F10	RT	544+55.00 to 544+35.00
											4																F8 TO EXISTING	LT	544+78.00 to 544+78.00
																											CONCRETE PIPE COLLAR	LT	544+78.14
													167														F31 TO F7	RT	546+00.00 to 547+80.00
															4												EXISTING TO F27	LT	546+21.69 to 546+28.68
																											CONCRETE PIPE COLLAR	LT	546+25.69
																								147			F26 TO F2	LT	546+28.53 to 547+79.00
							8																				F27 TO F26	LT	546+28.68 to 546+28.53
								30																			F2 TO F1	LT	547+79.00 to 547+79.56
															4												F1 TO EXISTING	LT	547+79.56 to 547+79.97
																											CONCRETE PIPE COLLAR	LT	547+79.80
						44																					F6 TO F2	LT / RT	547+80.00 to 547+79.00
													11														F7 TO F6	RT	547+80.00 to 547+80.00
													48														EW-01 TO F7	RT	548+28.32 to 547+80.00
																							147				F21 TO F2	LT	549+29.00 to 547+79.00
						42																					F4 TO F3	LT / RT	550+76.71 to 550+77.00
																							145				F3 TO F21	LT	550+77.00 to 549+29.00
																											CONCRETE PIPE COLLAR	LT	550+78.91
			4																								EXISTING TO F3	LT	550+82.84 to 550+77.00
																							149				F5 TO F4	RT	552+29.61 to 550+76.71
						36																					F30 TO F5	LT / RT	552+29.61 to 552+29.61
																											CONCRETE PIPE COLLAR	RT	552+31.57
				4																							EXISTING TO F5	RT	552+35.00 to 552+29.61
																											SASSAFRAS STREET EXTENSION		
										26																	C6 TO C22	LT	0+94.47 to 1+12.05
										6																	C22 TO C5	LT	1+12.05 to 1+15.31
										46																	C7 TO C6	LT / RT	1+14.81 to 0+94.47

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	73 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

PIPE DESIGN DESIGN NO. 15 0604 (+) LF	PIPE DESIGN DESIGN NO. 4 0604 (+) LF	CONCRETE COLLAR FOR 15" PIPE EXTENSION 0618 0021 EACH	CONCRETE COLLAR FOR 18" PIPE EXTENSION 0618 0022 EACH	CONCRETE COLLAR FOR 24" PIPE EXTENSION 0618 0024 EACH	CONCRETE COLLAR FOR 36" PIPE EXTENSION 0618 0028 EACH	CONCRETE COLLAR FOR 48" PIPE EXTENSION 0618 0030 EACH	10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL 9000 0303 LF	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
								F9 TO F8	LT	544+35.00 to 544+78.00
								F11 TO F10	RT	544+55.00 to 544+35.00
								F8 TO EXISTING	LT	544+78.00 to 544+78.00
			1					CONCRETE PIPE COLLAR	LT	544+78.14
								F31 TO F7	RT	546+00.00 to 547+80.00
								EXISTING TO F27	LT	546+21.69 to 546+28.68
				1				CONCRETE PIPE COLLAR	LT	546+25.69
								F26 TO F2	LT	546+28.53 to 547+79.00
								F27 TO F26	LT	546+28.68 to 546+28.53
								F2 TO F1	LT	547+79.00 to 547+79.56
								F1 TO EXISTING	LT	547+79.56 to 547+79.97
				1				CONCRETE PIPE COLLAR	LT	547+79.80
								F6 TO F2	LT / RT	547+80.00 to 547+79.00
								F7 TO F6	RT	547+80.00 to 547+80.00
								EW-01 TO F7	RT	548+28.32 to 547+80.00
								F21 TO F2	LT	549+29.00 to 547+79.00
								F4 TO F3	LT / RT	550+76.71 to 550+77.00
								F3 TO F21	LT	550+77.00 to 549+29.00
		1						CONCRETE PIPE COLLAR	LT	550+78.91
								EXISTING TO F3	LT	550+82.84 to 550+77.00
								F5 TO F4	RT	552+29.61 to 550+76.71
								F30 TO F5	LT / RT	552+29.61 to 552+29.61
			1					CONCRETE PIPE COLLAR	RT	552+31.57
								EXISTING TO F5	RT	552+35.00 to 552+29.61
								SASSAFRAS STREET EXTENSION		
								C6 TO C22	LT	0+94.47 to 1+12.05
								C22 TO C5	LT	1+12.05 to 1+15.31
								C7 TO C6	LT / RT	1+14.81 to 0+94.47

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	74 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
																				120							C5 TO C3	LT	1+15.31 to 2+50.00
												36															C4 TO C23	LT / RT	2+49.84 to 2+49.96
												6															C23 TO C3	LT	2+49.96 to 2+50.00
																											C3 TO C16	LT	2+50.00 to 4+17.72
														22													C18 TO C4	RT	2+50.54 to 2+49.84
												37															C21 TO C24	LT / RT	4+03.23 to 4+16.48
												4															C24 TO C16	LT	4+16.48 to 4+17.72
																											C16 TO C1	LT	4+17.72 to 4+94.00
														24													C17 TO C16	LT	4+19.17 to 4+17.72
												34															C2 TO C1	LT / RT	4+94.00 to 4+94.00
																					4						C1 TO EXISTING	LT	4+94.00 to 5+00.00
																											CONCRETE PIPE COLLAR	LT	4+97.00
																											STATE STREET		
																											EXISTING TO D36	LT	105+84.11 to 105+91.12
																											D35 TO D59	RT	105+87.00 to 106+37.00
												54															D36 TO D35	LT / RT	105+91.15 to 105+87.00
	4																										EXISTING TO D70	RT	106+30.56 to 106+37.06
																											CONCRETE PIPE COLLAR	LT	106+34.33
																											D58 TO D60	LT	106+37.00 to 107+20.00
																											D59 TO D61	RT	106+37.00 to 107+20.00
														6													D70 TO D59	RT	106+37.06 to 106+37.00
																											D60 TO D34	LT	107+20.00 to 108+00.00
																											D61 TO D33	RT	107+20.00 to 108+00.00
																											D34 TO D32	LT	108+00.00 to 108+91.81
																											D33 TO D31	RT	108+00.00 to 108+91.81
												47															D32 TO D31	LT / RT	108+91.81 to 108+91.81
												61															D31 TO D30	RT	108+91.81 to 109+29.40
											4																D74 TO EXISTING	RT	109+28.98 to 109+28.31

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	75 OF 141
				CITY OF ERIE				

PIPE DESIGN DESIGN NO. 15	PIPE DESIGN DESIGN NO. 4	CONCRETE COLLAR FOR 15" PIPE EXTENSION	CONCRETE COLLAR FOR 18" PIPE EXTENSION	CONCRETE COLLAR FOR 24" PIPE EXTENSION	CONCRETE COLLAR FOR 36" PIPE EXTENSION	CONCRETE COLLAR FOR 48" PIPE EXTENSION	10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	REMARKS	SIDE	STATIONS
0604 (+) LF	0604 (+) LF	0618 0021 EACH	0618 0022 EACH	0618 0024 EACH	0618 0028 EACH	0618 0030 EACH	9000 0303 LF	ITEM NUMBER UNIT		
								C5 TO C3	LT	1+15.31 to 2+50.00
								C4 TO C23	LT / RT	2+49.84 to 2+49.96
								C23 TO C3	LT	2+49.96 to 2+50.00
157								C3 TO C16	LT	2+50.00 to 4+17.72
								C18 TO C4	RT	2+50.54 to 2+49.84
								C21 TO C24	LT / RT	4+03.23 to 4+16.48
								C24 TO C16	LT	4+16.48 to 4+17.72
71								C16 TO C1	LT	4+17.72 to 4+94.00
								C17 TO C16	LT	4+19.17 to 4+17.72
								C2 TO C1	LT / RT	4+94.00 to 4+94.00
								C1 TO EXISTING	LT	4+94.00 to 5+00.00
						1		CONCRETE PIPE COLLAR	LT	4+97.00
								STATE STREET		
							5	EXISTING TO D36	LT	105+84.11 to 105+91.12
	47							D35 TO D59	RT	105+87.00 to 106+37.00
								D36 TO D35	LT / RT	105+91.15 to 105+87.00
								EXISTING TO D70	RT	106+30.56 to 106+37.06
			1					CONCRETE PIPE COLLAR	LT	106+34.33
	79							D58 TO D60	LT	106+37.00 to 107+20.00
	80							D59 TO D61	RT	106+37.00 to 107+20.00
								D70 TO D59	RT	106+37.06 to 106+37.00
	77							D60 TO D34	LT	107+20.00 to 108+00.00
	77							D61 TO D33	RT	107+20.00 to 108+00.00
	88							D34 TO D32	LT	108+00.00 to 108+91.81
	88							D33 TO D31	RT	108+00.00 to 108+91.81
								D32 TO D31	LT / RT	108+91.81 to 108+91.81
								D31 TO D30	RT	108+91.81 to 109+29.40
								D74 TO EXISTING	RT	109+28.98 to 109+28.31

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	76 OF 141
				CITY OF ERIE				

15" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		15" REINFORCED CONCRETE PIPE, TYPE A, 20' - 1.5' FILL	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		PIPE DESIGN DESIGN NO. 1	PIPE DESIGN DESIGN NO. 9	PIPE DESIGN DESIGN NO. 7	PIPE DESIGN DESIGN NO. 11	PIPE DESIGN DESIGN NO. 14	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	PIPE DESIGN DESIGN NO. 3	PIPE DESIGN DESIGN NO. 5	PIPE DESIGN DESIGN NO. 6	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL		PIPE DESIGN DESIGN NO. 13	36" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 16	48" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL		PIPE DESIGN DESIGN NO. 2	PIPE DESIGN DESIGN NO. 8	PIPE DESIGN DESIGN NO. 10	PIPE DESIGN DESIGN NO. 12	REMARKS	SIDE	STATIONS
0601 0312 LF	0601 0313 LF		0601 7008 LF	0601 7014 LF		0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7313 LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 7326 LF		0601 (+) LF	0601 7355 LF		0601 (+) LF	0601 7371 LF		0604 (+) LF	0604 (+) LF	0604 (+) LF	0604 (+) LF	ITEM NUMBER UNIT		
												15															D30 TO D74	RT	109+29.40 to 109+28.98
												47															E4 TO E3	LT / RT	111+00.00 to 111+00.00
																											E3 TO E5	LT	111+00.00 to 112+00.00
												47															E6 TO E5	LT / RT	112+00.00 to 112+00.00
														30													E5 TO E7	LT	112+00.00 to 112+03.20
														21													E7 TO EW-03	LT	112+03.20 to 111+80.00
												49															E2 TO E1	LT / RT	113+07.15 to 113+07.17
																											E1 TO E8	LT	113+07.17 to 113+21.95
											4																E8 TO EXISTING	LT	113+21.95 to 113+23.88
																											CONCRETE PIPE COLLAR	LT	113+22.70
																											HOLLAND STREET		
												56															F20 TO F19	LT / RT	11+50.00 to 11+51.08
														123													F19 TO F23	RT	11+51.08 to 12+56.03
												30															G4 TO G3	LT	13+90.08 to 14+05.54
												47															G9 TO G4	LT / RT	14+04.90 to 13+90.08
																											G3 TO G2	LT	14+05.54 to 14+79.69
												33															G7 TO G2	LT / RT	14+66.48 to 14+79.69
														63													G2 TO G1	LT	14+79.69 to 15+17.25
																											G1 TO G10	LT	15+17.25 to 15+26.38
4																											EXISTING TO G10	LT	15+22.75 to 15+26.38
																											CONCRETE PIPE COLLAR	LT	15+24.83
4																											G10 TO EXISTING	LT	15+26.38 to 15+27.25
																											CONCRETE PIPE COLLAR	LT	15+26.74
												22															G8 TO G1	LT	15+40.56 to 15+17.25
														54													H3 TO G8	LT	15+63.00 to 15+40.56
												30															H4 TO H3	LT / RT	15+63.00 to 15+67.86
8	8		4	20		957	53	98	65	288	20	655	394	464	12		51	4		160	8		2397	968	467	212	TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

TABULATION OF QUANTITIES

DRAINAGE - PIPES

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	77 OF 141
				CITY OF ERIE				

PIPE DESIGN DESIGN NO. 15	PIPE DESIGN DESIGN NO. 4	CONCRETE COLLAR FOR 15" PIPE EXTENSION	CONCRETE COLLAR FOR 18" PIPE EXTENSION	CONCRETE COLLAR FOR 24" PIPE EXTENSION	CONCRETE COLLAR FOR 36" PIPE EXTENSION	CONCRETE COLLAR FOR 48" PIPE EXTENSION		10" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL																					REMARKS	SIDE	STATIONS
0604 (+) LF	0604 (+) LF	0618 0021 EACH	0618 0022 EACH	0618 0024 EACH	0618 0028 EACH	0618 0030 EACH		9000 0303 LF																			ITEM NUMBER UNIT		
																									D30 TO D74	RT	109+29.40 to 109+28.98
																									E4 TO E3	LT / RT	111+00.00 to 111+00.00
	97																								E3 TO E5	LT	111+00.00 to 112+00.00
																									E6 TO E5	LT / RT	112+00.00 to 112+00.00
																									E5 TO E7	LT	112+00.00 to 112+03.20
																									E7 TO EW-03	LT	112+03.20 to 111+80.00
																									E2 TO E1	LT / RT	113+07.15 to 113+07.17
	4																								E1 TO E8	LT	113+07.17 to 113+21.95
																									E8 TO EXISTING	LT	113+21.95 to 113+23.88
			1																						CONCRETE PIPE COLLAR	LT	113+22.70
																									HOLLAND STREET		
																									F20 TO F19	LT / RT	11+50.00 to 11+51.08
																									F19 TO F23	RT	11+51.08 to 12+56.03
																									G4 TO G3	LT	13+90.08 to 14+05.54
																									G9 TO G4	LT / RT	14+04.90 to 13+90.08
	65																								G3 TO G2	LT	14+05.54 to 14+79.69
																									G7 TO G2	LT / RT	14+66.48 to 14+79.69
																									G2 TO G1	LT	14+79.69 to 15+17.25
	29																								G1 TO G10	LT	15+17.25 to 15+26.38
																									EXISTING TO G10	LT	15+22.75 to 15+26.38
		1																							CONCRETE PIPE COLLAR	LT	15+24.83
																									G10 TO EXISTING	LT	15+26.38 to 15+27.25
		1																							CONCRETE PIPE COLLAR	LT	15+26.74
																									G8 TO G1	LT	15+40.56 to 15+17.25
																									H3 TO G8	LT	15+63.00 to 15+40.56
																									H4 TO H3	LT / RT	15+63.00 to 15+67.86
523	731	5	10	2	1	2		5																	TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 10:57:43 AM

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	78 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

REMOVAL OF EXISTING DRAINAGE

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
			SR 4034		
60		60	REMOVAL OF EXISTING PIPE	LT	503+54.72 to 505+04.51
5		5	REMOVAL OF EXISTING INLET	LT	505+04.51
13		13	REMOVAL OF EXISTING PIPE	LT / RT	505+04.51 to 505+04.70
5		5	REMOVAL OF EXISTING INLET	RT	505+04.70
5		5	REMOVAL OF EXISTING INLET	RT	506+88.21
62		62	REMOVAL OF EXISTING PIPE	LT	506+88.81 to 508+06.02
5		5	REMOVAL OF EXISTING INLET	RT	508+04.46
14		14	REMOVAL OF EXISTING PIPE	LT / RT	508+04.46 to 508+06.02
7		7	REMOVAL OF EXISTING INLET	LT	508+06.02
77		77	REMOVAL OF EXISTING PIPE	LT	508+06.02 to 509+57.34
4		4	REMOVAL OF EXISTING INLET	RT	509+52.95
12		12	REMOVAL OF EXISTING PIPE	LT / RT	509+52.95 to 509+57.34
6		6	REMOVAL OF EXISTING INLET	LT	509+57.34
70		70	REMOVAL OF EXISTING PIPE	RT	509+57.34 to 510+99.72
4		4	REMOVAL OF EXISTING INLET	RT	510+88.56
12		12	REMOVAL OF EXISTING PIPE	RT	510+88.56 to 510+99.72
6		6	REMOVAL OF EXISTING INLET	RT	510+99.72
69		69	REMOVAL OF EXISTING PIPE	RT	510+99.72 to 512+56.93
5		5	REMOVAL OF EXISTING INLET	RT	512+52.03
15		15	REMOVAL OF EXISTING PIPE	RT	512+52.03 to 512+56.93
6		6	REMOVAL OF EXISTING INLET	RT	512+56.93
81		81	REMOVAL OF EXISTING PIPE	RT	512+56.93 to 514+83.47
11		11	REMOVAL OF EXISTING MANHOLE	LT	513+98.28
6		6	REMOVAL OF EXISTING PIPE	LT	513+98.28 to 514+14.28
35		35	REMOVAL OF EXISTING PIPE	LT / RT	513+98.28 to 514+62.00
243		243	REMOVAL OF EXISTING PIPE	LT	513+98.28 to 515+60.86
7		7	REMOVAL OF EXISTING MANHOLE	LT	514+14.28

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
83		83	REMOVAL OF EXISTING PIPE	LT	514+14.28 to 515+60.86
5		5	REMOVAL OF EXISTING INLET	RT	514+62.00
17		17	REMOVAL OF EXISTING PIPE	RT	514+62.00 to 514+83.47
5		5	REMOVAL OF EXISTING INLET	LT	514+83.47
51		51	REMOVAL OF EXISTING MANHOLE	RT	515+51.72
55		55	REMOVAL OF EXISTING PIPE	LT / RT	515+51.72 to 515+60.86
211		211	REMOVAL OF EXISTING PIPE	RT	515+51.72 to 516+37.94
17		17	REMOVAL OF EXISTING VAULT	LT	515+60.86
41		41	REMOVAL OF EXISTING MANHOLE	RT	516+37.94
7		7	REMOVAL OF EXISTING PIPE	RT	516+37.94 to 516+40.27
163		163	REMOVAL OF EXISTING PIPE	RT	516+37.94 to 516+96.50
6		6	REMOVAL OF EXISTING INLET	RT	516+40.27
7		7	REMOVAL OF EXISTING PIPE	RT	518+46.30 to 518+76.34
7		7	REMOVAL OF EXISTING INLET	RT	518+76.34
16		16	REMOVAL OF EXISTING PIPE	LT / RT	518+76.34 to 518+82.12
3		3	REMOVAL OF EXISTING PIPE	LT	518+81.61 to 518+82.12
5		5	REMOVAL OF EXISTING INLET	LT	518+82.12
14		14	REMOVAL OF EXISTING PIPE	LT	520+73.57 to 521+09.23
8		8	REMOVAL OF EXISTING MANHOLE	LT	521+09.23
14		14	REMOVAL OF EXISTING PIPE	LT	522+57.80 to 522+92.71
6		6	REMOVAL OF EXISTING INLET	LT	522+92.71
93		93	REMOVAL OF EXISTING PIPE	LT	522+92.71 to 524+73.26
4		4	REMOVAL OF EXISTING INLET	RT	524+72.75
48		48	REMOVAL OF EXISTING PIPE	LT / RT	524+72.75 to 524+73.26
5		5	REMOVAL OF EXISTING INLET	LT	524+73.26
64		64	REMOVAL OF EXISTING PIPE	LT / RT	524+73.26 to 526+31.78
4		4	REMOVAL OF EXISTING INLET	RT	526+31.25
7		7	REMOVAL OF EXISTING PIPE	RT	526+31.25 to 526+31.78

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	79 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

REMOVAL OF EXISTING DRAINAGE

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS (ITEM NUMBER / UNIT)	SIDE	STATIONS
4		4	REMOVAL OF EXISTING INLET	RT	526+31.78
15		15	REMOVAL OF EXISTING PIPE	RT	526+31.78 to 526+77.88
4		4	REMOVAL OF EXISTING INLET	RT	526+77.88
85		85	REMOVAL OF EXISTING PIPE	RT	526+77.88 to 528+87.93
7		7	REMOVAL OF EXISTING PIPE	RT	528+87.32 to 528+87.93
5		5	REMOVAL OF EXISTING INLET	RT	528+87.93
19		19	REMOVAL OF EXISTING PIPE	RT	531+36.92 to 531+75.75
5		5	REMOVAL OF EXISTING INLET	RT	531+75.75
6		6	REMOVAL OF EXISTING PIPE	RT	531+75.75 to 531+77.74
5		5	REMOVAL OF EXISTING INLET	RT	532+75.84
2		2	REMOVAL OF EXISTING PIPE	RT	532+75.84 to 532+77.68
	7		PLUG EXISTING PIPE	RT	532+75.84 to 533+75.93
5		5	REMOVAL OF EXISTING INLET	LT	533+33.55
49		49	REMOVAL OF EXISTING PIPE	LT	533+33.55 to 534+61.09
8		8	REMOVAL OF EXISTING INLET	RT	533+75.93
4		4	REMOVAL OF EXISTING PIPE	RT	533+75.93 to 533+77.14
	7		PLUG EXISTING PIPE	RT	533+75.93 to 534+74.65
5		5	REMOVAL OF EXISTING INLET	LT	534+61.09
48		48	REMOVAL OF EXISTING PIPE	LT	534+61.09 to 535+78.29
8		8	REMOVAL OF EXISTING INLET	RT	534+74.65
4		4	REMOVAL OF EXISTING PIPE	RT	534+74.65 to 534+77.00
	7		PLUG EXISTING PIPE	RT	534+74.65 to 535+75.19
7		7	REMOVAL OF EXISTING INLET	RT	535+75.19
4		4	REMOVAL OF EXISTING PIPE	RT	535+75.19 to 535+78.70
	5		PLUG EXISTING PIPE	RT	535+75.19 to 536+50.03
5		5	REMOVAL OF EXISTING INLET	LT	535+78.29
	5		PLUG EXISTING PIPE	LT	535+78.29 to 536+50.55
3		3	REMOVAL OF EXISTING PIPE	RT	536+42.98 to 536+50.03

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS (ITEM NUMBER / UNIT)	SIDE	STATIONS
12		12	REMOVAL OF EXISTING MANHOLE	RT	536+50.03
	13		PLUG EXISTING PIPE	RT	536+50.03 to 537+60.69
14		14	REMOVAL OF EXISTING MANHOLE	LT	536+50.55
2		2	REMOVAL OF EXISTING PIPE	LT	536+50.55 to 536+50.79
	9		PLUG EXISTING PIPE	LT	536+50.55 to 537+85.58
8		8	REMOVAL OF EXISTING INLET	LT	536+50.79
16		16	REMOVAL OF EXISTING MANHOLE	LT	536+93.80
	2		PLUG EXISTING PIPE	RT	537+05.90 to 537+26.41
7		7	REMOVAL OF EXISTING INLET	RT	537+06.85
5		5	REMOVAL OF EXISTING MANHOLE	RT	537+26.36
	2		PLUG EXISTING PIPE	RT	537+26.41 to 537+44.17
14		14	REMOVAL OF EXISTING MANHOLE	RT	537+43.45
	3		PLUG EXISTING PIPE	RT	537+43.45 to 537+60.69
9		9	REMOVAL OF EXISTING INLET	RT	537+44.17
	1		PLUG EXISTING PIPE	RT	537+44.17 to 537+43.45
10		10	REMOVAL OF EXISTING INLET	LT	537+50.27
	1		PLUG EXISTING PIPE	LT	537+51.27 to 537+55.47
11		11	REMOVAL OF EXISTING MANHOLE	LT	537+55.47
	6		PLUG EXISTING PIPE	LT	537+55.47 to 537+85.58
13		13	REMOVAL OF EXISTING MANHOLE	RT	537+60.69
	9		PLUG EXISTING PIPE	LT / RT	537+60.69 to 537+85.58
13		13	REMOVAL OF EXISTING MANHOLE	LT	537+85.58
	5		PLUG EXISTING PIPE	LT	537+85.85 to 538+25.79
13		13	REMOVAL OF EXISTING MANHOLE	LT	538+25.79
	1		PLUG EXISTING PIPE	LT	538+25.79 to 538+25.88
	12		PLUG EXISTING PIPE	LT	538+25.79 to 539+33.18
9		9	REMOVAL OF EXISTING INLET	LT	538+25.88
29		29	REMOVAL OF EXISTING PIPE	LT / RT	538+25.88 to 538+29.06

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	80 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

REMOVAL OF EXISTING DRAINAGE

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS (ITEM NUMBER / UNIT)	SIDE	STATIONS
7		7	REMOVAL OF EXISTING INLET	RT	538+29.06
7		7	REMOVAL OF EXISTING INLET	RT	539+26.91
	2		PLUG EXISTING PIPE	LT / RT	539+26.91 to 539+31.72
8		8	REMOVAL OF EXISTING INLET	LT	539+31.72
	1		PLUG EXISTING PIPE	LT	539+31.72 to 539+33.18
12		12	REMOVAL OF EXISTING PIPE	LT	539+33.18
	12		PLUG EXISTING PIPE	LT	539+33.18 to 540+31.47
6		6	REMOVAL OF EXISTING INLET	LT	540+28.60
	2		PLUG EXISTING PIPE	LT / RT	540+28.60 to 540+30.79
7		7	REMOVAL OF EXISTING INLET	LT	540+30.79
	1		PLUG EXISTING PIPE	LT	540+30.79 to 540+31.47
12		12	REMOVAL OF EXISTING MANHOLE	LT	540+31.47
7		7	REMOVAL OF EXISTING INLET	RT	541+28.87
	2		PLUG EXISTING PIPE	LT / RT	541+28.87 to 541+29.00
12		12	REMOVAL OF EXISTING MANHOLE	LT	541+28.90
7		7	REMOVAL OF EXISTING INLET	LT	541+29.00
	1		PLUG EXISTING PIPE	LT	541+29.00 to 541+28.90
4		4	REMOVAL OF EXISTING INLET	RT	543+53.72
17		17	REMOVAL OF EXISTING PIPE	RT	543+53.72 to 544+09.15
6		6	REMOVAL OF EXISTING INLET	RT	543+54.54
3		3	REMOVAL OF EXISTING PIPE	RT	543+54.54 to 543+53.72
18		18	REMOVAL OF EXISTING PIPE	LT / RT	543+54.71 to 543+54.54
4		4	REMOVAL OF EXISTING INLET	RT	544+09.15
20		20	REMOVAL OF EXISTING PIPE	LT / RT	544+78.02 to 545+10.08
5		5	REMOVAL OF EXISTING INLET	RT	545+10.08
3		3	REMOVAL OF EXISTING PIPE	RT	545+10.08 to 545+21.87
	2		PLUG EXISTING PIPE	LT / RT	546+28.54 to 546+28.61
8		8	REMOVAL OF EXISTING INLET	RT	546+28.61

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS (ITEM NUMBER / UNIT)	SIDE	STATIONS
72		72	REMOVAL OF EXISTING PIPE	RT	547+79.59 to 549+28.18
5		5	REMOVAL OF EXISTING INLET	RT	549+28.18
14		14	REMOVAL OF EXISTING PIPE	LT / RT	549+28.18 to 549+29.16
74		74	REMOVAL OF EXISTING PIPE	RT	549+28.18 to 550+77.95
32		32	REMOVAL OF EXISTING PIPE	RT	550+77.95 to 552+29.43
			SASSAFRAS STREET EXTENSION		
76		76	REMOVAL OF EXISTING PIPE	RT	0+00.00 to 0+38.31
10		10	REMOVAL OF EXISTING MANHOLE	RT	0+38.31
9		9	REMOVAL OF EXISTING MANHOLE	RT	1+01.03
	61		PLUG EXISTING PIPE	RT	1+01.03 to 2+08.16
5		5	REMOVAL OF EXISTING INLET	RT	1+97.37
	2		PLUG EXISTING PIPE	RT	1+97.46 to 2+08.16
8		8	REMOVAL OF EXISTING INLET	RT	2+08.22
189		189	REMOVAL OF EXISTING PIPE	RT	2+08.22 to 4+03.20
7		7	REMOVAL OF EXISTING INLET	RT	4+03.20
96		96	REMOVAL OF EXISTING PIPE	LT / RT	4+03.20 to 4+76.23
			STATE STREET		
	15		PLUG EXISTING PIPE	RT	106+37.06 to 108+63.13
6		6	REMOVAL OF EXISTING MANHOLE	RT	108+63.13
	1		PLUG EXISTING PIPE	RT	108+63.13 to 108+72.37
7		7	REMOVAL OF EXISTING PIPE	RT	108+77.25 to 108+97.14
3		3	REMOVAL OF EXISTING INLET	LT	108+91.64
3		3	REMOVAL OF EXISTING INLET	LT	108+96.53
12		12	REMOVAL OF EXISTING PIPE	LT / RT	108+96.53 to 108+97.14
5		5	REMOVAL OF EXISTING MANHOLE	RT	108+97.14
17		17	REMOVAL OF EXISTING PIPE	RT	108+97.14 to 109+29.73
4		4	REMOVAL OF EXISTING INLET	LT	110+22.98
41		41	REMOVAL OF EXISTING PIPE	LT	110+22.98 to 111+24.69

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	81 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

REMOVAL OF EXISTING DRAINAGE

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
6		6	REMOVAL OF EXISTING INLET	LT	111+24.69
34		34	REMOVAL OF EXISTING PIPE	LT	111+24.69 to 112+00.16
6		6	REMOVAL OF EXISTING INLET	LT	112+00.16
50		50	REMOVAL OF EXISTING PIPE	LT	112+00.16 to 113+21.98
21		21	REMOVAL OF EXISTING PIPE	LT / RT	113+21.98 to 113+22.66
5		5	REMOVAL OF EXISTING INLET	RT	113+22.66
			HOLLAND STREET		
4		4	REMOVAL OF EXISTING INLET	RT	11+39.28
5		5	REMOVAL OF EXISTING INLET	RT	11+39.99
7		7	REMOVAL OF EXISTING PIPE	RT	11+39.99 to 11+43.79
6		6	REMOVAL OF EXISTING MANHOLE	RT	11+43.79
34		34	REMOVAL OF EXISTING PIPE	RT	11+43.79 to 12+23.01
4		4	REMOVAL OF EXISTING INLET	RT	11+44.39
6		6	REMOVAL OF EXISTING PIPE	RT	11+44.39 to 11+43.79
5		5	REMOVAL OF EXISTING INLET	RT	11+47.33
3364	197	3364	TOTALS		

CLASS 2 EXCAVATION 0204 0001 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE
			TOTALS	

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	82 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

PAVEMENT BASE DRAIN

GEOTEXTILE, CLASS 1 0212 0001 LF	6" PAVEMENT BASE DRAIN 0610 7002 LF	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
		SR 4034		
330	330	OUTLET TO INLET	RT	503+54.44 to 506+85.96
332	332	OUTLET TO INLET	LT	503+57.19 to 506+87.16
310	310	OUTLET TO INLET	RT	506+90.04 to 509+98.05
313	313	OUTLET TO INLET	RT	510+01.94 to 513+53.80
272	272	OUTLET TO INLET	LT	510+02.18 to 512+59.43
380	380	OUTLET TO INLET	LT / RT	512+38.71 to 513+54.60
269	269	OUTLET TO INLET	LT / RT	512+55.74 to 513+37.81
48	48	OUTLET TO INLET	LT	513+21.86 to 513+69.20
59	59	OUTLET TO INLET	RT	513+53.80 to 513+99.34
240	240	OUTLET TO INLET	LT	514+51.47 to 516+97.99
187	187	OUTLET TO INLET	RT	517+01.89 to 518+88.31
21	21	OUTLET TO INLET	RT	531+33.97 to 531+49.66
249	249	OUTLET TO INLET	RT	531+49.66 to 533+98.11
329	329	OUTLET TO INLET	RT	534+01.89 to 536+81.95
254	254	OUTLET TO INLET	LT	534+02.40 to 536+46.74
360	360	OUTLET TO INLET	LT / RT	536+65.55 to 537+80.21
262	262	OUTLET TO INLET	LT / RT	536+81.22 to 537+64.55
130	130	OUTLET TO INLET	RT	537+38.26 to 538+19.69
236	236	OUTLET TO INLET	RT	538+23.14 to 540+53.11
157	157	OUTLET TO INLET	LT	539+00.22 to 540+53.11
169	169	OUTLET TO INLET	RT	540+56.89 to 542+28.09
165	165	OUTLET TO INLET	RT	542+31.92 to 543+98.11
30	30	OUTLET TO INLET	RT	544+56.89 to 544+87.28
146	146	OUTLET TO INLET	LT	544+80.39 to 546+26.14
260	260	OUTLET TO INLET	RT	545+18.31 to 547+78.11
293	293	OUTLET TO INLET	RT	547+81.89 to 550+74.77
149	149	OUTLET TO INLET	LT	550+79.05 to 552+27.91

GEOTEXTILE, CLASS 1 0212 0001 LF	6" PAVEMENT BASE DRAIN 0610 7002 LF	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
		SR 4034 EB		
150	150	OUTLET TO INLET	RT	518+91.99 to 520+39.09
87	87	OUTLET TO INLET	RT	520+39.09 to 521+23.17
381	381	OUTLET TO INLET	RT	521+26.83 to 524+98.11
376	376	OUTLET TO INLET	LT	521+26.98 to 524+98.11
65	65	OUTLET TO INLET	RT	525+01.89 to 525+66.46
36	36	OUTLET TO INLET	RT	525+70.24 to 526+06.46
36	36	OUTLET TO INLET	RT	526+10.24 to 526+46.32
308	308	OUTLET TO INLET	LT	526+50.74 to 529+58.90
169	169	OUTLET TO INLET	LT	529+62.68 to 531+32.08
171	171	OUTLET TO INLET	RT	529+62.68 to 531+32.08
		SR 4034 WB		
192	192	OUTLET TO INLET	RT	523+62.00 to 525+54.36
36	36	OUTLET TO INLET	RT	525+58.26 to 525+94.36
36	36	OUTLET TO INLET	RT	525+98.14 to 526+33.86
494	494	OUTLET TO INLET	LT	526+38.14 to 531+32.08
		SASSAFRAS STREET		
108	108	OUTLET TO INLET	RT	0+48.10 to 1+12.63
46	46	OUTLET TO INLET	LT	0+71.60 to 1+09.77
129	129	OUTLET TO INLET	LT	1+13.52 to 2+47.63
141	141	OUTLET TO INLET	RT	1+16.03 to 2+47.38
151	151	OUTLET TO INLET	RT	2+52.27 to 4+00.85
159	159	OUTLET TO INLET	LT	2+52.30 to 4+14.28
86	86	OUTLET TO INLET	RT	4+05.62 to 4+91.65
71	71	OUTLET TO INLET	LT	4+19.09 to 4+90.26
		STATE STREET		
43	43	OUTLET TO INLET	LT	105+93.02 to 106+34.61
103	103	OUTLET TO INLET	RT	112+01.89 to 113+05.27

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	83 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

PAVEMENT BASE DRAIN

GEOTEXTILE, CLASS 1 0212 0001 LF	6" PAVEMENT BASE DRAIN 0610 7002 LF	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
103	103	OUTLET TO INLET	LT	112+02.39 to 113+05.15
141	141	OUTLET TO INLET	LT	113+09.05 to 114+50.00
141	141	OUTLET TO INLET	RT	113+09.05 to 114+50.00
		HOLLAND STREET		
218	218	OUTLET TO INLET	RT	9+30.00 to 11+48.54
221	221	OUTLET TO INLET	LT	9+30.00 to 11+49.24
54	54	OUTLET TO INLET	LT / RT	13+35.39 to 13+87.09
83	83	OUTLET TO INLET	LT	13+40.13 to 14+03.36
135	135	OUTLET TO INLET	RT	13+62.92 to 14+02.72
70	70	OUTLET TO INLET	RT	14+06.07 to 14+64.69
66	66	OUTLET TO INLET	LT	14+06.73 to 14+77.68
92	92	OUTLET TO INLET	RT	14+68.01 to 15+61.08
86	86	OUTLET TO INLET	LT	14+81.31 to 15+65.50
127	127	OUTLET TO INLET	RT	15+64.94 to 16+94.00
126	126	OUTLET TO INLET	LT	15+70.20 to 16+94.00
11187	11187	TOTALS		

GEOTEXTILE, CLASS 1 0212 0001 LF	6" PAVEMENT BASE DRAIN 0610 7002 LF	REMARKS ITEM NUMBER UNIT	SIDE
		TOTALS	

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	84 OF 141
				CITY OF ERIE				

TABULATION OF QUANTITIES

GUIDE RAIL AND BARRIER

PERMANENT IMPACT ATTENUATING DEVICE, TYPE V, TEST LEVEL 3, MASH, WIDTHS LESS THAN OR EQUAL TO 36 INCHES, BLACK POWDER COATED	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)	TYPE 31-S GUIDE RAIL BLACK POWDER COATED	TYPE 31-STRONG POST ANCHOR TERMINAL BLACK POWDER COATED	THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION WITHOUT CURB BLACK POWDER COATED	SINGLE FACE CONCRETE BARRIER	END TRANSITION, SINGLE FACE CONCRETE BARRIER	REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER	CONCRETE MEDIAN BARRIER, F-SHAPE, 42" HEIGHT					REMARKS	SIDE	STATIONS
4619 0744 EACH	0620 0503 LF	4620 1600 LF	4620 1660 EACH	4620 2020 EACH	0623 0052 LF	0623 0122 EACH	0623 0275 LF	0623 0302 LF					ITEM NUMBER UNIT		
													SR 4034		
	84.4													LT	514+95.56 to 515+80.77
							956							LT	515+77.35 to 525+32.45
		250		2										RT	516+38.84 to 518+85.16
					1402									RT	518+85.14 to 532+71.68
1														LT	519+55.02
1														RT	519+55.02
					49									LT	519+55.02 to 520+03.76
					56									RT	519+55.02 to 520+10.75
					1175									LT	519+55.02 to 531+36.35
					1188									RT	519+55.02 to 531+36.35
								514						LT	523+79.00 to 528+94.80
							1014							RT	526+37.32 to 536+50.97
	626.6													LT	526+93.78 to 533+20.01
					11									LT	531+24.99 to 531+36.35
					11									RT	531+24.99 to 531+36.35
1														LT	531+36.40
1														RT	531+36.40
													UPMC ACCESS DRIVE		
		162.5	2											LT	0+51.00 to 2+08.00
													HOLLAND STREET		
							158							LT	8+87.38 to 10+45.69
					370									LT	9+30.00 to 12+25.38
						1								LT	12+25.38
4	711	412.5	2	2	4262	1	2128	514					TOTALS		

PERMANENT IMPACT ATTENUATING DEVICE, TYPE V, TEST LEVEL 3, MASH, WIDTHS LESS THAN OR EQUAL TO 36 INCHES, BLACK POWDER COATED	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)	TYPE 31-S GUIDE RAIL BLACK POWDER COATED	TYPE 31-STRONG POST ANCHOR TERMINAL BLACK POWDER COATED	THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION WITHOUT CURB BLACK POWDER COATED	SINGLE FACE CONCRETE BARRIER	END TRANSITION, SINGLE FACE CONCRETE BARRIER	REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER	CONCRETE MEDIAN BARRIER, F-SHAPE, 42" HEIGHT					REMARKS	SIDE
4619 0744 EACH	0620 0503 LF	4620 1600 LF	4620 1660 EACH	4620 2020 EACH	0623 0052 LF	0623 0122 EACH	0623 0275 LF	0623 0302 LF					ITEM NUMBER UNIT	
													TOTALS	

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

TABULATION OF QUANTITIES

MISCELLANEOUS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	85 OF 141
				CITY OF ERIE				

DEMOLITION 0202 0001 LS	MODULAR ARCHITECTURAL BLOCK SYSTEM, MATCH EXISTING 4664 0100 SF	GATEWAY SIGN 9000 0004 EACH	UPMC ACCESS DRIVE GATE 9000 0011 LS	MODULAR ARCHITECTURAL BLOCK SYSTEM, SPECIFIED STYLE 9000 0020 SF	WASTE MANAGEMENT PLAN 9000 0100 LS	SOLIDS SAMPLING AND TESTING 9000 0101 EACH	TRANSPORTATION AND DISPOSAL OF SOLID WASTE 9000 0102 CY	CONSTRUCTION OF WASTE MANAGEMENT STOCKPILE AREA AND DECONTAMINATION AREA 9000 0103 LS	SPECIAL EXCAVATION 9000 0104 CY	TRENCH PLUG 9000 0106 EACH	AESTHETIC COLOR COATING (EXISTING WALLS) 9000 0200 SY	REMOVAL OF EXISTING SIGN AND FOUNDATION 9000 6000 EACH	EMBANKMENT (FOR INFORMATION ONLY) INFO	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
														SR 4034		
					X	12	2228	X	2228				2228		SPECIAL EXCAVATION ON PARCEL 2	LT	503+00.00 to 513+00.00
											2900				EXISTING WALL	RT	504+23.00 to 516+39.00
										1						LT	507+78.00
										1						LT	510+00.00
		1													SASSAFRAS ROUNDABOUT	LT / RT	512+67.78
				679											SASSAFRAS ROUNDABOUT RETAINING WALL	LT / RT	512+67.78 to 513+26.50
										1						LT	513+78.00
						12	1112		1112				1112		RAILROAD BALLAST	LT / RT	514+50.00 to 539+50.00
				662											BAYFRONT PROMENADE RETAINING WALL	RT	522+95.81 to 524+29.36
				669											HOLLAND ROUNDABOUT RETAINING WALL	LT / RT	536+93.05 to 537+52.72
		1													HOLLAND ROUNDABOUT	LT / RT	537+52.72
X															ABANDONED PUMP HOUSE	LT	538+25.00
															SASSAFRAS STREET EXTENSION		
										1						RT	0+93.00
										1						LT	1+04.00
										1						LT	1+07.00
										1						LT	2+40.00
										1						LT	2+50.00
										1						LT	3+69.00
										1						LT	4+18.00
															UPMC ACCESS DRIVE		
			X													LT / RT	0+46.45 to 0+77.50
															HOLLAND STREET		
	273														HOLLAND STREET RETAINING WALL, MATCH EXISTING RETAINING WALL COLOR (BRICK RED)	RT	9+76.63 to 10+31.93
												1			PARCEL 13 (UPMC HAMOT) SIGN	LT	11+65.08
---	273	2	---	2010	---	24	3340	---	3340	10	2900	1	3340		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:09:57 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	86 OF 141
				CITY OF ERIE				

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT		
																											ENTIRE PROJECT		
	279	269	5						8	8			320														ENTIRE PROJECT	LT / RT	500+50.00 to 554+39.00
																											STAGE 1 - SR 4034		
													115															LT	503+28.77 to 504+38.97
																		1										LT	503+52.75
												1																LT	503+55.00
				570																	1						VS-04	MED	503+55.00 to 511+48.00
							1																					LT	504+00.00
								1																				LT	505+04.58 to 506+86.69
													88															LT	505+96.95 to 506+82.91
																		1										LT	506+88.98
												1																LT	506+89.00
								1																				LT	506+90.70 to 508+04.00
													895															LT	506+98.17 to 512+89.70
												1																LT	507+10.00
											1																	LT	507+10.00
				560																	1						VS-02	LT	507+10.00 to 511+89.00
																				1								MED	508+05.59
								1																				LT / RT	508+07.00 to 509+35.83
											1																TEMPORARY INLET	MED	508+60.00
																		1										LT	509+35.83
												1															EXISTING INLET	MED	509+58.00
												1																LT	510+00.00
											1																	MED	512+17.00
													261															LT / RT	512+56.89 to 513+37.35
											1																	MED	513+74.00
																			1									RT	513+88.75
												1																LT	513+99.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	87 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE 0601 5431 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH 0804 0003 LB	SEEDING - FORMULA E, INCLUDING MULCH 0804 0004 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH 0804 0007 LB	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D 0806 0113 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A 0806 0140 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	TEMPORARY SLOPE PIPE 0854 0002 EACH	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	COMPOST FILTER SOCK, 12" DIAMETER 0867 0012 LF	COMPOST FILTER SOCK, 18" DIAMETER 0867 0018 LF	COMPOST FILTER SOCK, 24" DIAMETER 0867 0022 LF	COMPOST FILTER SOCK, 32" DIAMETER 0867 0032 LF	TEMPORARY INLET CAP 9000 0500 EACH	TEMPORARY PIPE CONNECTION 9000 0501 EACH	TEMPORARY PIPE CAP 9000 0502 EACH	TEMPORARY INLET 9000 0504 EACH	TEMPORARY ROCK BARRIER 9000 0505 EACH							REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
												1																	LT	514+21.00
																		1											LT	514+49.97
								1																					LT / RT	514+49.97 to 515+54.19
												1																	LT	514+50.00
												1																EXISTING INLET	MED	514+84.00
													347																LT	514+92.00 to 518+35.95
																		1											LT	515+54.19
												1																	LT	517+00.00
											1																		LT	518+90.00
																			1										LT	518+90.07
													251																LT	519+43.33 to 522+01.89
				99																	1							VS-12C	LT	520+00.00 to 521+13.00
											1																		LT	521+14.00
											1																		LT	521+14.00
																			1										LT	522+00.22
											1																EXISTING INLET		RT	530+76.00
														139															RT	531+50.18 to 532+85.61
													118																RT	531+63.29 to 532+79.71
											1																EXISTING INLET		RT	531+76.00
											1																		RT	532+76.00
												1																	RT	532+78.00
																		1											RT	533+76.65
																												STAGE 1 - SASSAFRAS STREET EXTENSION		
				378																	1							VS-03	LT	0+50.00 to 4+17.00
											1																		MED	0+91.00
																			1										LT	0+91.35
																	1												LT	1+12.00
												1																	RT	1+14.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	88 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
																			1										RT	2+49.97
																	1												LT	2+50.00
																			1										RT	4+07.73
								1																					RT	4+13.44 to 4+94.21
																	1												LT	4+17.00
											1																		LT	4+19.00
																		1											RT	4+34.05
													50																LT	4+63.22 to 5+09.02
												1																	LT	4+94.00
																		1											RT	4+94.18
																												STAGE 2 - SR 4034		
												1																	RT	503+52.00
											1																		RT	503+54.00
											1																		LT	503+55.00
											1																		MED	503+58.00
												1																	RT	506+88.00
														462															RT	509+90.77 to 512+13.09
												1																	RT	510+00.00
											1																		RT	510+03.00
											1																		RT	510+11.00
												1																	RT	514+02.00
												1																	RT	514+22.00
																			1										MED	514+49.97
												1																	RT	514+50.00
															855														RT	516+89.90 to 525+17.84
											1																		RT	517+00.00
				132																								VS-13C	RT	517+02.00 to 518+85.00
													320																RT	517+09.09 to 520+25.85

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	89 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT		
								1																				RT	518+80.45 to 519+57.37
				175																							VS-13B	RT	518+85.00 to 521+25.00
											1																	RT	518+90.00
																		1										MED	518+90.24
											2																	RT	519+57.00
																		1										MED	519+57.37
											3																	RT	521+25.00
				284																							VS-13A	LT	521+25.00 to 524+94.00
											1																	MED	524+72.00
											2																	RT	525+00.00
																		1										MED	525+36.87
								1																				LT / RT	525+36.87 to 526+04.43
											1																	RT	525+68.00
																		1										MED	526+03.68
											2																	RT	526+08.00
											2																	RT	526+48.00
				86																	1						PC-01	RT	527+10.00 to 528+87.00
											1																	RT	528+85.00
											1																	RT	528+87.00
																		1										RT	529+60.79
								1																				RT	529+60.79 to 531+33.95
											3																	RT	529+61.00
													133															RT	531+19.69 to 532+52.68
																		1										MED	531+33.95
								1																				RT	531+33.95 to 534+35.98
											3																	RT	531+34.00
				55																	1						VS-14B	RT	531+34.00 to 532+12.00
													94															RT	534+22.68 to 535+12.31

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	90 OF 141
				CITY OF ERIE				

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
													88																RT	534+26.57 to 535+08.38
				105																	1						VS-14A	RT	534+34.00 to 535+67.00
											1																	RT	534+35.00
																		1									MED	534+36.34
							1																					RT	535+00.00
													133															LT	535+53.57 to 536+69.65
																246												RT	537+51.96 to 539+49.55
													295															RT	537+56.83 to 540+45.35
													228															LT	539+28.33 to 541+41.38
													485															RT	540+00.97 to 544+89.76
																		1									MED	540+54.86
								1																				RT	540+54.86 to 541+28.90
																	1											RT	540+55.00
							1																					RT	541+00.00
																		1									MED	541+28.68
																		1									MED	542+29.90
																	1											RT	542+30.00
																		1									MED	543+28.99
								1																				RT	543+28.99 to 543+52.59
											1																	RT	543+29.00
																		1									MED	543+55.05
								1																				RT	543+56.48 to 543+99.81
																		1									MED	543+97.29
																	1											RT	544+00.00
																	1											RT	544+35.00
																	1											RT	544+55.00
													702															RT	545+35.02 to 552+34.52
				237																	1						VS-10	RT	546+10.00 to 547+78.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	91 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

0601 5431 CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE CY	0804 0003 SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH LB	0804 0004 SEEDING - FORMULA E, INCLUDING MULCH LB	0804 0007 SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH LB	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D SY	0806 0140 PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A SY	0811 0003 TEMPORARY PROTECTIVE FENCE LF	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK EACH	0854 0002 TEMPORARY SLOPE PIPE EACH	0855 0003 PUMPED WATER FILTER BAG EACH	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG EACH	0860 0000 INLET FILTER BAG FOR TYPE M INLET EACH	0860 0002 INLET FILTER BAG FOR TYPE C INLET EACH	0867 0012 COMPOST FILTER SOCK, 12" DIAMETER LF	0867 0018 COMPOST FILTER SOCK, 18" DIAMETER LF	0867 0022 COMPOST FILTER SOCK, 24" DIAMETER LF	0867 0032 COMPOST FILTER SOCK, 32" DIAMETER LF	9000 0500 TEMPORARY INLET CAP EACH	9000 0501 TEMPORARY PIPE CONNECTION EACH	9000 0502 TEMPORARY PIPE CAP EACH	9000 0504 TEMPORARY INLET EACH	9000 0505 TEMPORARY ROCK BARRIER EACH						ITEM NUMBER / UNIT REMARKS	SIDE	STATIONS
											1																	RT	546+11.00
													524															RT	546+27.92 to 551+45.72
																		1									MED	546+28.50
																	1										RT	547+80.00
											1																RT	547+80.00
																		1									MED	547+80.40
								1																			RT	547+81.35 to 549+26.73
				318																1						VS-11	RT	548+30.00 to 551+25.00
																		1									MED	549+28.52
								1																			RT	549+30.72 to 550+75.21
																		1									MED	550+75.88
																	1										RT	550+77.00
							1																				RT	552+00.00
																		1									MED	552+29.66
																	1										RT	552+30.00
																										STAGE 2 - SASSAFRAS STREET EXTENSION		
													352														RT	0+19.35 to 2+84.22
													271														RT	0+38.63 to 2+72.39
					186															1						VS-05	RT	0+50.00 to 2+48.00
												1															RT	2+50.00
											1																RT	2+50.00
												1															RT	4+03.00
												1															RT	4+94.00
																										STAGE 3 - SR 4034		
													236														LT	503+42.75 to 505+74.52
													348														LT	503+48.14 to 506+86.32
				431																1						VS-01	LT	503+54.00 to 506+75.00
											1																LT	518+90.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	92 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
							1																						LT	519+00.00
											2																		LT	519+57.00
													285																LT	521+04.93 to 523+97.12
													235																LT	521+06.82 to 523+47.16
																			1										LT	521+10.76
				250																	1							VS-12B	LT	521+13.00 to 523+35.00
											3																		LT	521+14.00
											1																		LT	523+38.00
													101																RT	524+57.98 to 525+10.24
											1																		LT	524+60.00
													74																LT	524+69.76 to 525+09.48
											2																		RT	525+00.00
													89																RT	525+14.21 to 525+41.37
													85																LT	525+17.68 to 525+61.47
											2																		LT	525+56.00
											2																		RT	525+68.00
											2																		LT	525+96.00
													62																RT	526+04.60 to 526+43.79
											2																		RT	526+08.00
													89																LT	526+16.12 to 526+48.30
											2																		LT	526+36.00
											2																		RT	526+49.00
													55																RT	526+52.53 to 526+94.86
													79																LT	526+55.45 to 526+96.33
													902																LT	526+56.65 to 534+98.17
													729																LT	527+93.08 to 535+24.57
											1																		LT	529+32.00
											2	1																	LT	531+34.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	93 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
												1																		LT	532+74.00
				155																	2						VS-07	MED	532+75.00 to 535+68.00
																			1									MED	532+77.52
												2																LT	534+00.00
																		1										MED	534+33.73
								1																				MED	534+33.82 to 534+36.57
																		1										MED	534+36.78
							1																					LT	535+00.00
																			1									MED	540+54.93
							1																					MED	541+56.00
																			1									LT	541+66.45
												1																LT	542+30.00
												1																LT	543+29.00
																	1											MED	543+30.00
																												LT	543+54.61
												1																LT	543+55.00
												1																LT	543+95.00
												1																LT	544+35.00
																												LT	544+78.00
												1																LT	544+78.00
												1																LT	546+29.00
																		1										LT	547+78.94
											1																	LT	547+79.00
													430															LT	548+27.44 to 552+42.72
												1																LT	549+29.00
												1																LT	550+77.00
							1																					MED	552+00.00
												1																LT	552+30.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	94 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

0601 5431 CY CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	0804 0003 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	0804 0004 LB SEEDING - FORMULA E, INCLUDING MULCH	0804 0007 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	0806 0113 SY TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	0806 0140 SY PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	0811 0003 LF TEMPORARY PROTECTIVE FENCE	0849 0020 EACH ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	0854 0002 EACH TEMPORARY SLOPE PIPE	0855 0003 EACH PUMPED WATER FILTER BAG	0855 0004 EACH REPLACEMENT PUMPED WATER FILTER BAG	0860 0000 EACH INLET FILTER BAG FOR TYPE M INLET	0860 0002 EACH INLET FILTER BAG FOR TYPE C INLET	0867 0012 LF COMPOST FILTER SOCK, 12" DIAMETER	0867 0018 LF COMPOST FILTER SOCK, 18" DIAMETER	0867 0022 LF COMPOST FILTER SOCK, 24" DIAMETER	0867 0032 LF COMPOST FILTER SOCK, 32" DIAMETER	9000 0500 EACH TEMPORARY INLET CAP	9000 0501 EACH TEMPORARY PIPE CONNECTION	9000 0502 EACH TEMPORARY PIPE CAP	9000 0504 EACH TEMPORARY INLET	9000 0505 EACH TEMPORARY ROCK BARRIER							ITEM NUMBER / UNIT REMARKS	SIDE	STATIONS
																												STAGE 3 - SASSAFRAS STREET EXTENSION		
											1																	MED	0+93.00
												1																	LT	1+12.00
												1																	RT	1+14.00
											1																	LT	4+19.00
																												STAGE 3 - STATE STREET		
							1																					LT	105+75.00
												1																	RT	105+87.00
												1																	LT	105+90.00
													238																LT	106+00.79 to 108+37.45
													277																RT	106+01.63 to 108+77.28
												2																	LT / RT	106+37.00
												2																	LT / RT	107+20.00
												2																	LT / RT	108+00.00
						37																							LT	108+35.80 to 108+68.66
												2																	LT / RT	108+75.00
												2																	RT	109+28.00
													216																LT	110+29.80 to 112+02.35
				233																	1						VS-12A	LT	110+35.00 to 111+75.00
													232																LT	110+40.36 to 112+28.73
													203																LT	110+46.77 to 112+47.67
													256																LT	110+55.26 to 113+09.92
												2																	LT / RT	111+00.00
													172																RT	111+59.20 to 113+28.77
												2																	LT / RT	112+00.00
							1																						RT	112+82.00
													36																LT	112+91.08 to 113+23.40
												2																	LT / RT	113+07.00

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	95 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES O'MARA — PE079501

0601 5431 CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE (CY)	0804 0003 SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH (LB)	0804 0004 SEEDING - FORMULA E, INCLUDING MULCH (LB)	0804 0007 SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH (LB)	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D (SY)	0806 0140 PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A (SY)	0811 0003 TEMPORARY PROTECTIVE FENCE (LF)	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK (EACH)	0854 0002 TEMPORARY SLOPE PIPE (EACH)	0855 0003 PUMPED WATER FILTER BAG (EACH)	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG (EACH)	0860 0000 INLET FILTER BAG FOR TYPE M INLET (EACH)	0860 0002 INLET FILTER BAG FOR TYPE C INLET (EACH)	0867 0012 COMPOST FILTER SOCK, 12" DIAMETER (LF)	0867 0018 COMPOST FILTER SOCK, 18" DIAMETER (LF)	0867 0022 COMPOST FILTER SOCK, 24" DIAMETER (LF)	0867 0032 COMPOST FILTER SOCK, 32" DIAMETER (LF)	9000 0500 TEMPORARY INLET CAP (EACH)	9000 0501 TEMPORARY PIPE CONNECTION (EACH)	9000 0502 TEMPORARY PIPE CAP (EACH)	9000 0504 TEMPORARY INLET (EACH)	9000 0505 TEMPORARY ROCK BARRIER (EACH)							ITEM NUMBER / UNIT REMARKS	SIDE	STATIONS
													62																	LT	113+96.95 to 114+57.33
																													STAGE 4 - SR 4034		
											4																			LT / RT	519+57.00
							1																							MED	520+00.00
											2																			LT	521+14.00
											2																			RT	521+25.00
											1																			LT	523+38.00
											2																			RT	525+00.00
											2																			LT	525+56.00
											2																			RT	525+68.00
											2																			LT	525+96.00
											2																			RT	526+08.00
											2																			LT	526+36.00
											2																			RT	526+49.00
											1																			RT	528+85.00
											1																			LT	529+32.00
											2																			RT	529+61.00
							1																							MED	530+00.00
											4																			LT / RT	531+34.00
												1																		LT	532+74.00
						262																								RT	533+63.58 to 536+23.73
												1																		LT	534+00.00
											1																			RT	534+35.00
													212																	RT	534+41.46 to 536+48.36
							1																							RT	535+00.00
													163																	RT	535+01.07 to 536+52.58
				88																									PC-02	RT	535+67.00 to 536+50.00
													198																	RT	536+82.92 to 537+63.02

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	96 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
													420											RT	537+43.37 to 540+12.24
												1												RT	538+21.00
											1													RT	538+23.78
													417											RT	538+81.11 to 543+22.92
													169											RT	538+92.45 to 540+49.43
				592																	1		VS-09	RT	539+00.00 to 543+28.00
							1																	RT	540+00.00
													466											RT	540+21.53 to 544+91.26
								1																RT	540+54.80 to 541+28.90
							1																	RT	543+00.00
																	1							MED	543+30.00
																							STAGE 4 - HOLLAND STREET		
							1																	MED	7+60.00
				78																			PC-03	RT	11+05.00 to 12+55.00
											1	1												LT / RT	11+50.00
																							STAGE 5 - SR 4034		
											4													LT / RT	519+57.00
											2													LT	521+14.00
											2													RT	521+25.00
											1													LT	523+38.00
											2													RT	525+00.00
											2													LT	525+56.00
											2													RT	525+68.00
											2													LT	525+96.00
											2													RT	526+08.00
											2													LT	526+36.00
											2													RT	526+49.00
											1													RT	528+85.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	97 OF 141
				CITY OF ERIE				

0601 5431 CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE (CY)	0804 0003 SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH (LB)	0804 0004 SEEDING - FORMULA E, INCLUDING MULCH (LB)	0804 0007 SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH (LB)	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D (SY)	0806 0140 PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A (SY)	0811 0003 TEMPORARY PROTECTIVE FENCE (LF)	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK (EACH)	0854 0002 TEMPORARY SLOPE PIPE (EACH)	0855 0003 PUMPED WATER FILTER BAG (EACH)	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG (EACH)	0860 0000 INLET FILTER BAG FOR TYPE M INLET (EACH)	0860 0002 INLET FILTER BAG FOR TYPE C INLET (EACH)	0867 0012 COMPOST FILTER SOCK, 12" DIAMETER (LF)	0867 0018 COMPOST FILTER SOCK, 18" DIAMETER (LF)	0867 0022 COMPOST FILTER SOCK, 24" DIAMETER (LF)	0867 0032 COMPOST FILTER SOCK, 32" DIAMETER (LF)	9000 0500 TEMPORARY INLET CAP (EACH)	9000 0501 TEMPORARY PIPE CONNECTION (EACH)	9000 0502 TEMPORARY PIPE CAP (EACH)	9000 0504 TEMPORARY INLET (EACH)	9000 0505 TEMPORARY ROCK BARRIER (EACH)							ITEM NUMBER / UNIT REMARKS	SIDE	STATIONS
											1																				LT	529+32.00
											2																				RT	529+61.00
											4	1																			LT / RT	531+34.00
													354																		LT	534+49.99 to 536+48.96
							1																								LT	535+00.00
													249																		LT	535+00.33 to 537+12.48
													210																		LT	536+82.58 to 537+63.20
													188																		LT	537+87.45 to 538+94.46
													548																		LT	537+89.28 to 542+99.76
													493																		LT	539+20.65 to 543+90.14
5																															RT	540+54.86 to 541+28.90
												1																			LT	540+55.00
							1																								LT	541+50.00
												1																			LT	542+30.00
												1																			LT	543+29.00
												1																			LT	543+55.00
												1																			LT	543+95.00
													376																		LT	544+05.00 to 547+75.14
												1																			LT	544+35.00
												1																			LT	544+78.00
											1																				LT	546+29.00
													102																		LT	546+85.84 to 547+78.75
											1																				LT	547+79.00
																														STAGE 5 - HOLLAND STREET		
											1																				MED	13+89.00
												2																			LT / RT	14+05.00
													67																		LT	14+26.01 to 14+97.87
													64																		RT	14+26.19 to 14+76.35

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES O'MARA
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	98 OF 141
				CITY OF ERIE				

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
												1																	RT	14+66.00
												1																	LT	14+80.00
												1																	LT	15+18.00
													156																RT	15+27.27 to 16+88.56
												1																	LT	15+40.00
													40																LT	15+43.98 to 15+59.85
													53																LT	15+59.24 to 16+06.36
													117																RT	15+60.30 to 16+78.89
																	1												RT	15+63.00
												1																	LT	15+68.00
													36																LT	15+71.98 to 16+06.60
													46																LT	16+44.64 to 16+87.45
																												STAGE 6 - SR 4034		
											1																		MED	513+75.00
											1																		MED	514+50.00
				224																	1						VS-06	MED	514+50.00 to 517+66.00
											2																		LT / RT	519+57.00
											3																		LT	521+14.00
											2																		RT	521+25.00
											2																		LT / RT	522+11.00
											1																		RT	525+00.00
											1																		LT	525+56.00
											1																		RT	525+68.00
											1																		LT	525+96.00
											1																		RT	526+08.00
											1																		LT	526+36.00
											1																		RT	526+48.00
											1																		RT	528+85.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	99 OF 141
				CITY OF ERIE				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JAMES O'MARA — ENGINEER — PE079501

CLASS C CEMENT CONCRETE FOR MISCELLANEOUS DRAINAGE	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	TEMPORARY SLOPE PIPE	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY INLET CAP	TEMPORARY PIPE CONNECTION	TEMPORARY PIPE CAP	TEMPORARY INLET	TEMPORARY ROCK BARRIER						REMARKS	SIDE	STATIONS
0601 5431 CY	0804 0003 LB	0804 0004 LB	0804 0007 LB	0806 0113 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0854 0002 EACH	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0500 EACH	9000 0501 EACH	9000 0502 EACH	9000 0504 EACH	9000 0505 EACH						ITEM NUMBER UNIT			
											3																		LT / RT	529+32.00
											1																		LT	530+00.00
											2																		LT / RT	530+80.00
											2																		LT / RT	531+12.00
											1																		MED	532+77.00
											1																		MED	534+36.00
												1																	RT	538+21.00
				319																	2						VS-08	MED	538+83.00 to 543+28.00
											1																		MED	543+29.00
																												STAGE 6 - HOLLAND STREET		
											1	1																	LT / RT	11+50.00
5	279	269	5	5369	186	299	18	16	8	8	172	77	16705	462	994	246	14	28	11	2	19							TOTALS		

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:12:45 AM

TABULATION OF QUANTITIES

POST CONSTR STORMWATER MANAGEMENT

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	100 OF 141
				CITY OF ERIE				

| SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57 | GEOTEXTILE, CLASS 1 | 12" REINFORCED CONCRETE PIPE, TYPE A, 30' - 1.5' FILL | 4" PIPE UNDERDRAIN, TYPE I BACKFILL | TREE - PLATANUS OCCIDENTALIS - SYCAMORE - 2.5" CAL B&B | TREE - BETULA NIGRA 'HERITAGE' - HERTIAGE RIVER BIRCH - 8-12' HT. MULTI STEM B&B | ROCK, CLASS R-4 | ROCK APRON | CONCRETE OUTLET STRUCTURE | AMENDED SOIL | | | |

TABULATION OF QUANTITIES

POST CONSTR STORMWATER MANAGEMENT

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	101 OF 141
				CITY OF ERIE				

SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57	GEOTEXTILE, CLASS 1	12" REINFORCED CONCRETE PIPE, TYPE A, 30' - 1.5' FILL	4" PIPE UNDERDRAIN, TYPE I BACKFILL	TREE - PLATANUS OCCIDENTALIS - SYCAMORE - 2.5" CAL B&B	TREE - BETULA NIGRA 'HERITAGE' - HERTIAGE RIVER BIRCH - 8-12' HT. MULTI STEM B&B	ROCK, CLASS R-4	ROCK APRON	CONCRETE OUTLET STRUCTURE	AMENDED SOIL																			REMARKS	SIDE	STATIONS
0205 0285 CY	0212 0001 LF	0601 7005 LF	0610 0001 LF	4808 0100 EACH	4808 0101 EACH	0850 0032 CY	0851 0003 SY	0875 0001 EACH	9000 1300 CY																			ITEM NUMBER UNIT		
																											STATE STREET		
									28																			VS-12A	LT	110+35.00 to 111+75.00
							11																					EW-03	LT	111+80.00
263	472	5	472	12	25	352	33	2	1136																			TOTALS		

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/23/2022 11:18:26 AM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

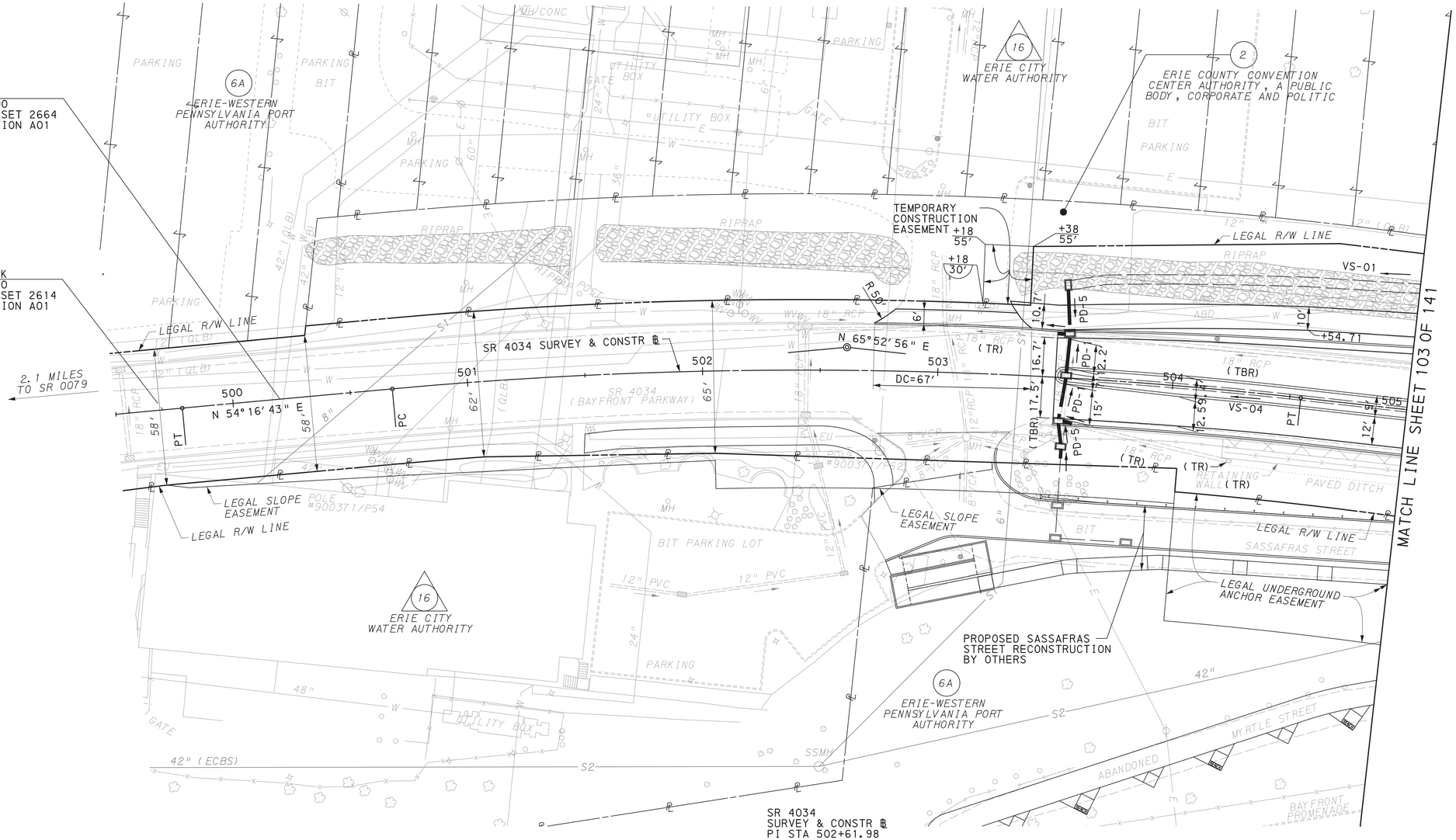
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	102 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034
SURVEY & CONSTR ℄
PI STA 498+12.24
Δ 3° 19′ 21" (RT)
D 1° 00′ 00"
T 166.18′
L 332.26′
R 5,729.58′
PC STA 496+46.06
PT STA 499+78.32
SUPERELEVATE NORMAL CROWN

START WORK
STA 500+20.00
SEG 0050 OFFSET 2664
SR 4034 SECTION A01

LIMIT OF WORK
STA 499+70.00
SEG 0050 OFFSET 2614
SR 4034 SECTION A01
CITY OF ERIE
ERIE COUNTY



SR 4034
SURVEY & CONSTR ℄
PI STA 502+61.98
Δ 11° 36′ 13" (RT)
D 3° 00′ 00"
T 194.06′
L 386.79′
R 1,909.86′
PC STA 500+67.92
PT STA 504+54.71
SUPERELEVATE NORMAL CROWN

LEGEND

DC	DEPRESSED CURB
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
ABD	ABANDONDED

EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL "J" - SR 4034 ISLAND	33
PROFILE - SR 4034	117

SCALE IN FEET
0 25 50

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

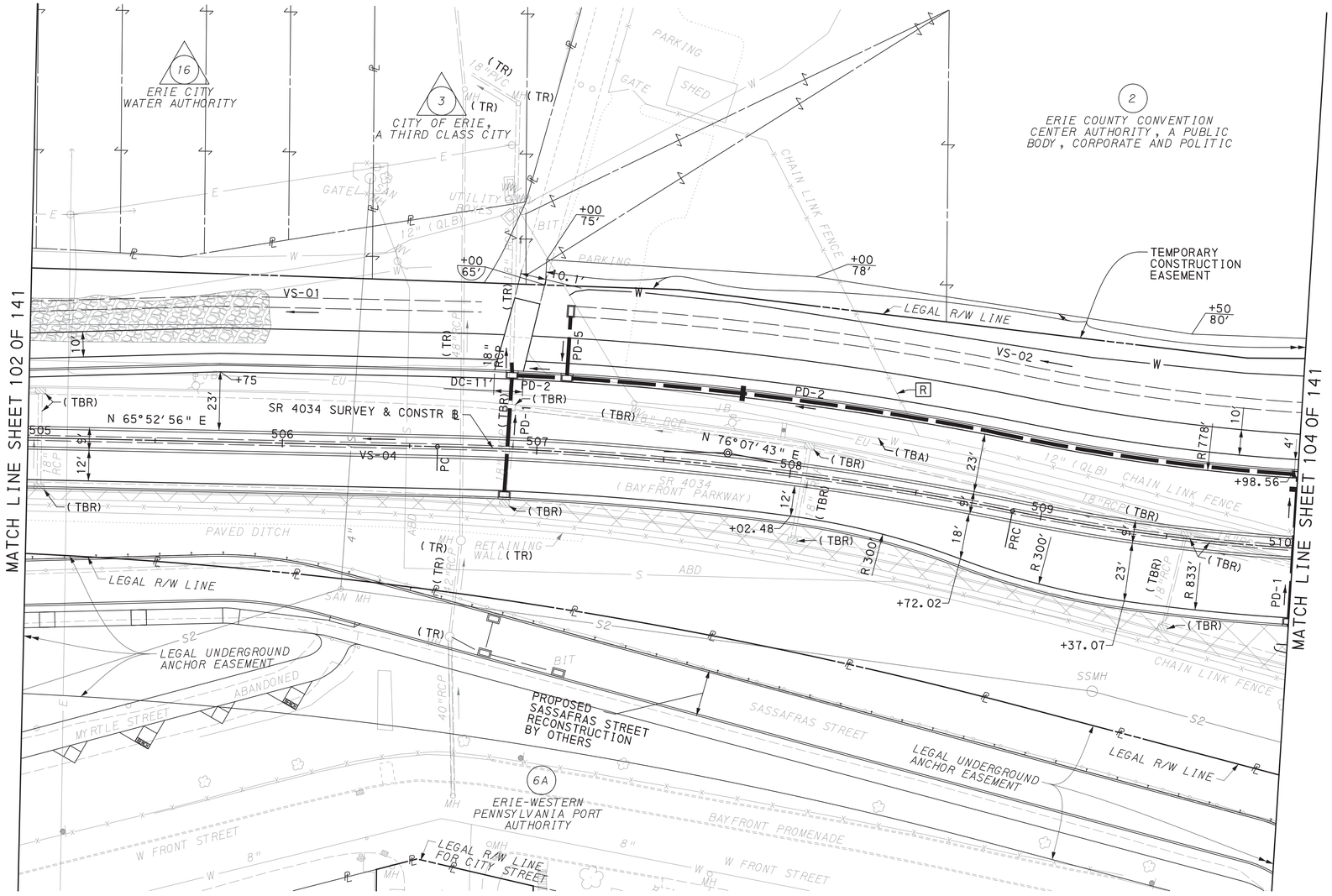
PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp101.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	103 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034
SURVEY & CONSTR ℄
PI STA 510+10.15
Δ 17° 09′ 17" (LT)
D 7° 06′ 47"
T 121.50′
L 241.17′
R 805.50′
PRC STA 508+88.65
PRC STA 511+29.82
SUPERELEVATE NORMAL CROWN



SR 4034
SURVEY & CONSTR ℄
PI STA 507+75.11
Δ 10° 14′ 47" (RT)
D 4° 30′ 00"
T 114.15′
L 227.70′
R 1,273.24′
PC STA 506+60.95
PRC STA 508+88.65
SUPERELEVATE NORMAL CROWN

LEGEND

▌	TRENCH PLUG
DC	DEPRESSED CURB
(TR)	TO REMAIN
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
	EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
PROFILE - SR 4034	118

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 02.dgn

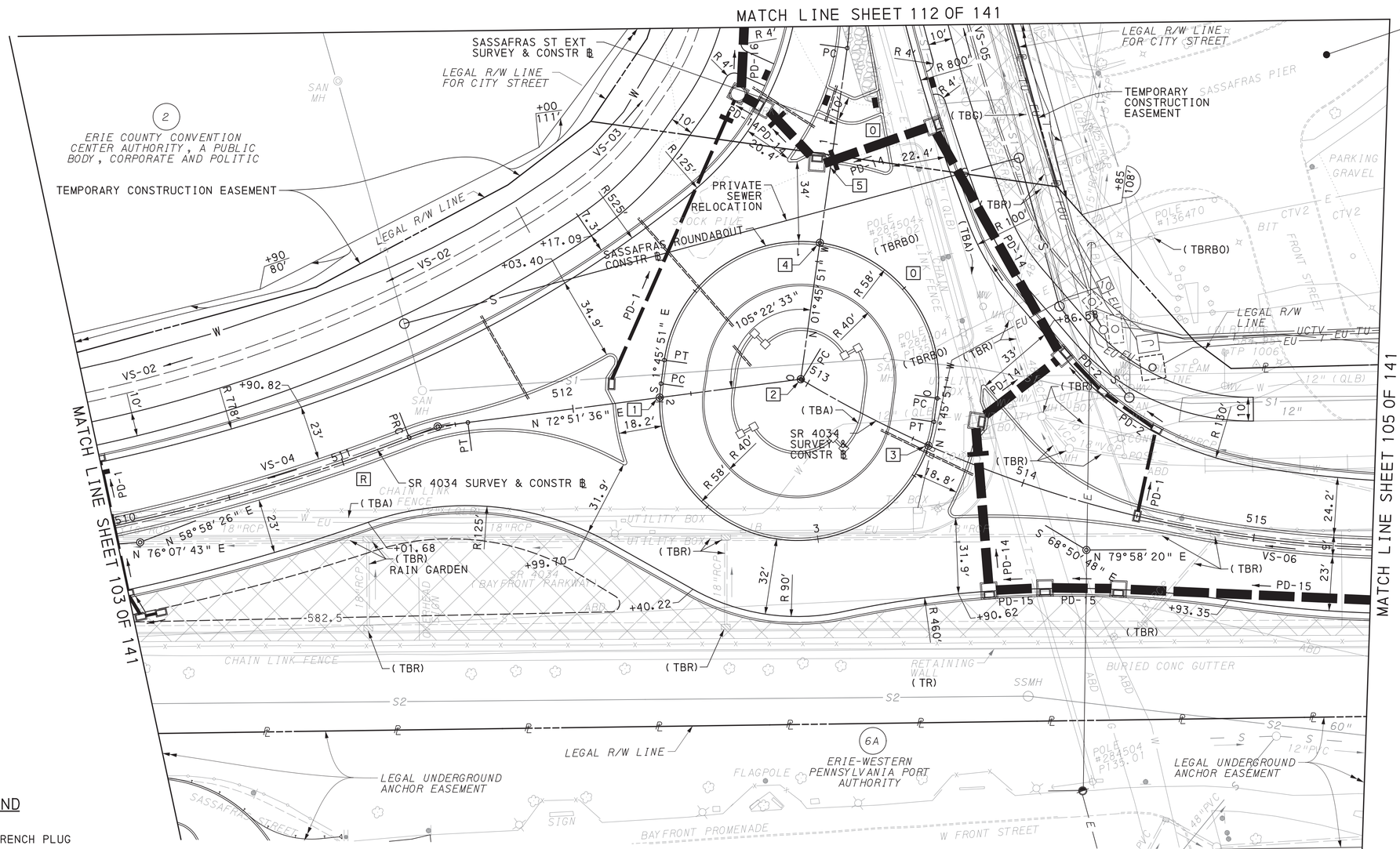
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	104 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034
SURVEY & CONSTR ℄
PI STA 510+10.15
Δ 17° 09′ 17" (LT)
D 7° 06′ 47"
T 121.50′
L 241.17′
R 805.50′
PRC STA 508+88.65
PRC STA 511+29.82
SUPERELEVATE NORMAL CROWN

SASSAFRAS ST
SURVEY & CONSTR ℄
PI STA 1+58.61
Δ 19° 15′ 18" (LT)
D 54° 18′ 32"
T 17.90′
L 35.45′
R 105.50′
PC STA 1+40.71
PRC STA 1+76.17
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 514+36.67
Δ 31° 10′ 53" (LT)
D 11° 27′ 33"
T 139.51′
L 272.11′
R 500.00′
PC STA 512+97.16
PT STA 515+69.27
SUPERELEVATE NORMAL CROWN



SASSAFRAS ROUNDABOUT CONSTR ℄
[1] POC STA 1+98.09 = SR 4034 SURVEY & CONSTR ℄
POT STA 512+36.80

[2] SR 4034 SURVEY & CONSTR ℄ POT STA 512+96.64 = SASSAFRAS ST EXT SURVEY & CONSTR ℄
POT STA 0+00.00

SASSAFRAS ROUNDABOUT CONSTR ℄
[3] POC STA 3+64.15 = SR 4034 SURVEY & CONSTR ℄
POC STA 513+57.25

SASSAFRAS ROUNDABOUT CONSTR ℄
[4] POC STA 0+91.11 = SASSAFRAS ST EXT SURVEY & CONSTR ℄
POT STA 0+58.00

[5] START WORK
STA 0+90.00
SASSAFRAS ST EXT

LEGEND

▮	TRENCH PLUG
═══	IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBRBO)	TO BE REMOVED BY OTHERS
(TBA)	TO BE ABANDONED
(TBG)	TO BE GROUTED
ABD	ABANDONED

EXISTING PAVEMENT TO BE REMOVED

SR 4034
SURVEY & CONSTR ℄
PI STA 511+42.67
Δ 13° 53′ 10" (RT)
D 54° 18′ 32"
T 12.85′
L 25.57′
R 105.50′
PRC STA 511+29.82
PT STA 511+55.39
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 512+96.64
Δ 38° 17′ 36" (RT)
NO CURVE

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAILS "A" & "B" - SR 4034 ISLANDS DETAIL "C" - SASSAFRAS ISLAND	33

REFERENCE DRAWINGS	SHEET
DETAL - SASSAFRAS ROUNDABOUT RETAINING WALL	34 & 35
PROFILE - SR 4034	119
PROFILE - SASSAFRAS STREET EXTENSION	135
PROFILE - SASSAFRAS ROUNDABOUT	140

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

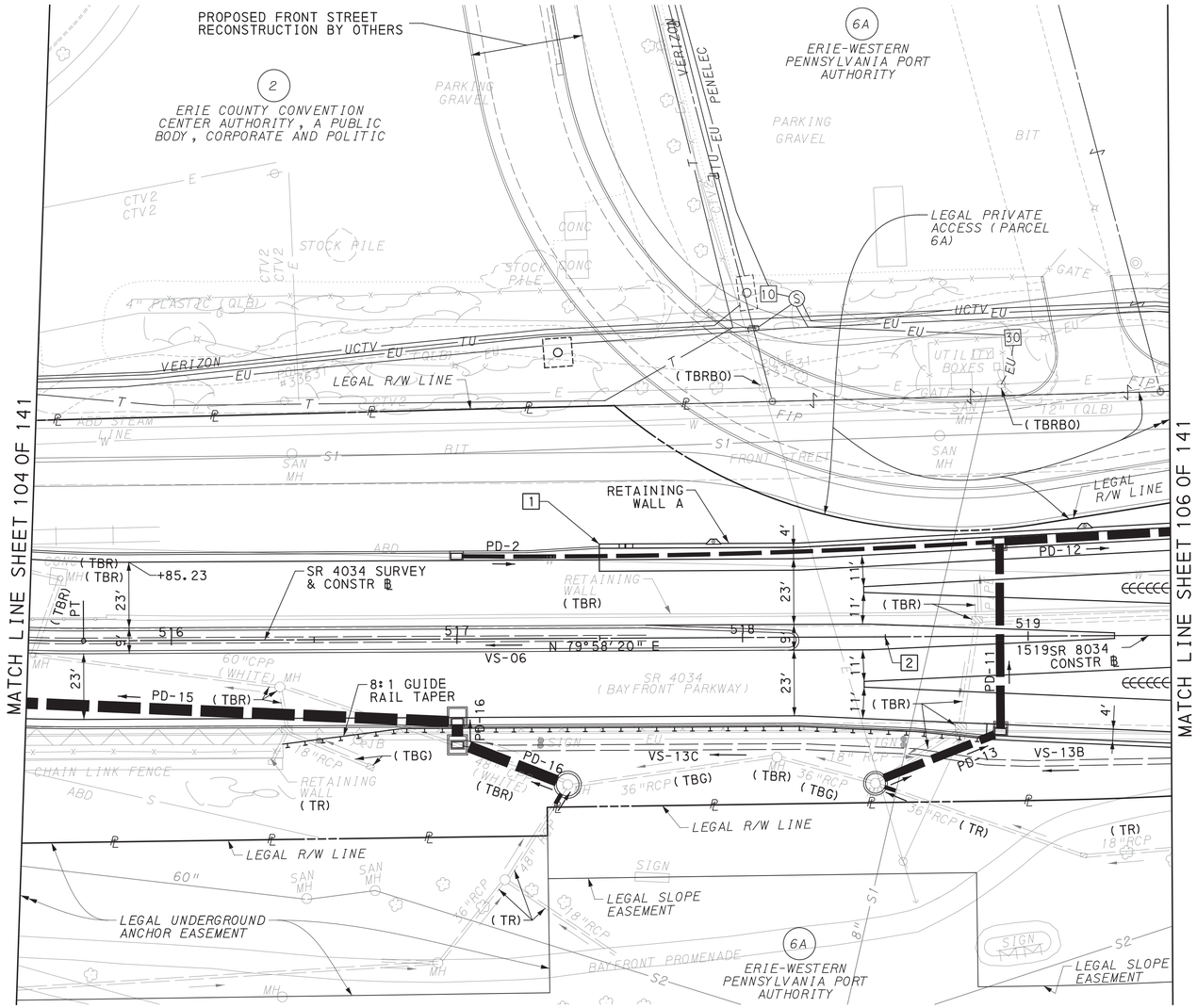
PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp1 03.dgn

SR 4034
SURVEY & CONSTR ℄
PI STA 514+36.67
Δ 31° 10′ 53" (LT)
D 11° 27′ 33"
T 139.51′
L 272.11′
R 500.00′
PC STA 512+97.16
PT STA 515+69.27
SUPERELEVATE NORMAL CROWN

1 BEGIN RETAINING WALL A AND MOMENT SLAB STA 517+50.00

2 SR 4034 SURVEY & CONSTR ℄ POT STA 518+50.00 = SR 8034 CONSTR ℄ POT STA 1518+50.00



LEGEND

⇐⇐⇐⇐⇐⇐⇐	ATTENUATOR
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBRBO)	TO BE REMOVED BY OTHERS
(TBG)	TO BE GROUTED
ABD	ABANDONED

EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL "L" - SR 4034 ISLAND	33
PROFILE - SR 4034 & SR 8034	120
PROFILE - SR 4034 EASTBOUND (PG EB)	127
PROFILE - SR 4034 WESTBOUND (PG WB)	131

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 04.dgn

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp1 05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	106 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034 SURVEY & CONSTR ℄
PI STA 522+08.36
Δ 22° 03′ 18" (LT)
D 4° 24′ 27"
T 253.34′
L 500.41′
R 1,300.00′
PC STA 519+55.02
PT STA 524+55.44
SUPERELEVATE = 2.4% (INSIDE LANES)
SUPERELEVATE = 3.8% (OUTSIDE LANES)

PROPOSED STRUCTURE
(WEST RAMP)

STA 523+57.19
SR 4034 SURVEY & CONSTR ℄
SPAN: 100′-0", 100′-0"
TYPE: COMPOSITE PRESTRESSED
CONCRETE PS BULB-TEE BEAMS
CLEARANCE: N/A
SKEW: 89°15′37.5"
(ABUTMENT 1) 84°51′10"
CLEAR RDWY WIDTH: 30′-0"
STRUCTURE: S-41006

EXISTING STRUCTURE

STA 524+50
SR 4034 SURVEY & CONSTR ℄
SPAN: VARIES FROM 36′-0" TO 47′-7¾"
TYPE: COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAMS
CLEARANCE: 19′-8" OVER CSXT
SKEW: VARIES
CLEAR RDWY WIDTH: VARIES

PROPOSED STRUCTURE
(EAST RAMP)

STA 527+89.38
SR 4034 SURVEY & CONSTR ℄
SPAN: 95′-0", 95′-0"
TYPE: COMPOSITE PRESTRESSED
CONCRETE PS BULB-TEE BEAMS
CLEARANCE: N/A
SKEW: 82°43′35"
CLEAR RDWY WIDTH: 30′-0"
STRUCTURE: S-41007

1 BEGIN EASTBOUND MOMENT SLAB
STA 520+10.35

2 BEGIN WESTBOUND MOMENT SLAB
STA 520+03.76

3 BEGIN RETAINING WALL B
STA 520+25.00

4 END WESTBOUND MOMENT SLAB
STA 521+03.76

5 END EASTBOUND MOMENT SLAB
STA 521+05.35

6 BEGIN APPROACH SLAB
STA 522+26.67

END APPROACH SLAB
7 BEGIN WEST RAMP STRUCTURE
STA 522+56.67

8 END RETAINING WALL A
STA 523+62.00

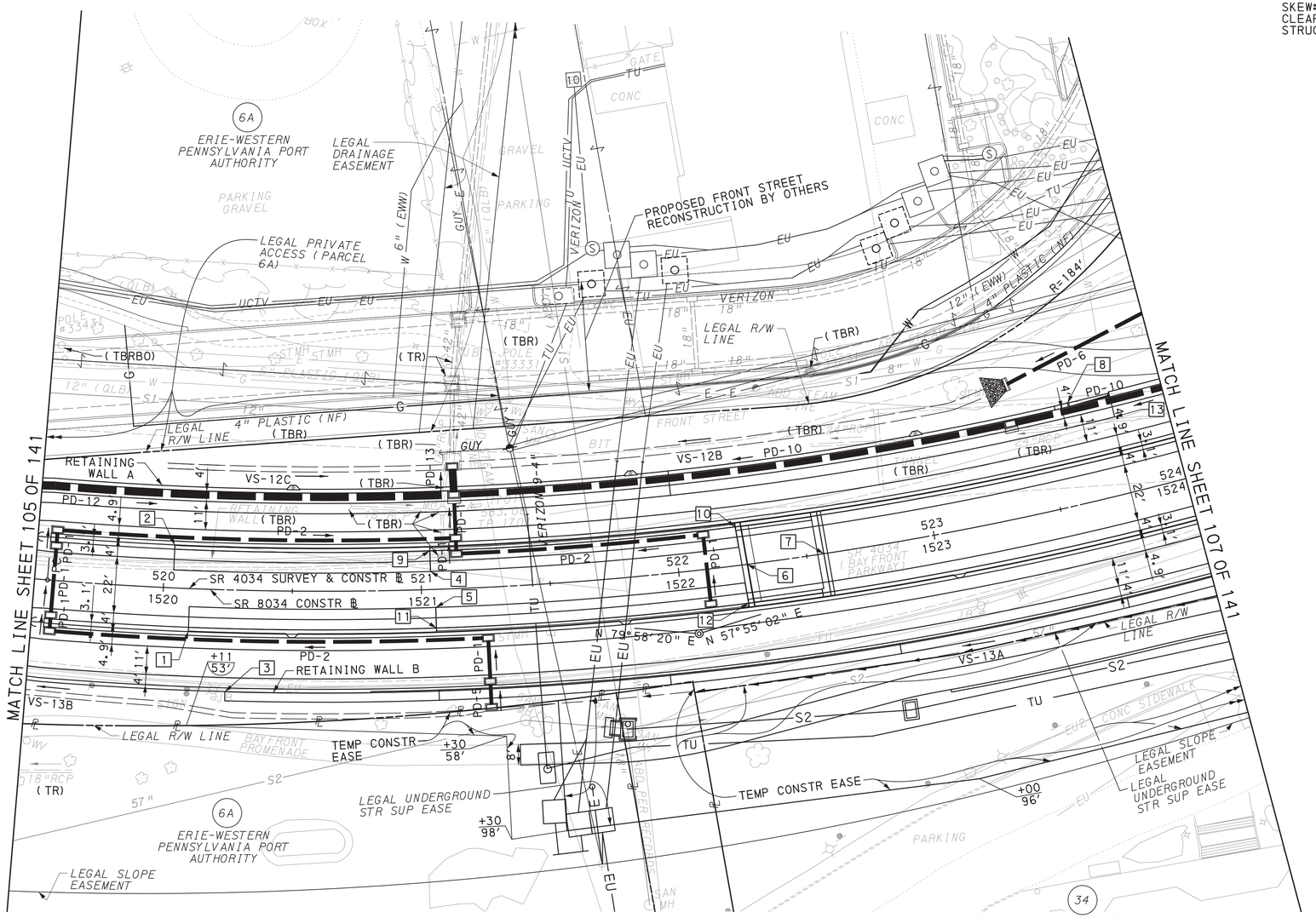
9 BEGIN NORTH WALL
STA 521+03.76

10 END NORTH WALL
STA 522+23.80

11 BEGIN SOUTH WALL
STA 521+05.35

12 END SOUTH WALL
STA 522+25.39

13 END MOMENT SLAB
STA 523+79.00



LEGEND

ATTENUATOR
(TR) TO REMAIN
(TBR) TO BE REMOVED
(TBRBO) TO BE REMOVED BY OTHERS

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
PROFILE - SR 4034 & SR 8034	121
PROFILE - SR 4034 EASTBOUND (PG EB)	128
PROFILE - SR 4034 WESTBOUND (PG WB)	132

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	107 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034 SURVEY & CONSTR ℄
PI STA 522+08.36
Δ 22° 03′ 18" (LT)
D 4° 24′ 27"
T 253.34′
L 500.41′
R 1,300.00′
PC STA 519+55.02
PT STA 524+55.44
SUPERELEVATE = 2.4% (INSIDE LANES)
SUPERELEVATE = 3.8% (OUTSIDE LANES)

EXISTING STRUCTURE
STA 524+50
SR 4034 SURVEY & CONSTR ℄
SPAN: VARIES FROM 36′-0" TO 47′-7 ¾"
TYPE: COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAMS
CLEARANCE: 19′-8" OVER CSXT
SKEW: VARIES
CLEAR RDWY WIDTH: VARIES

PROPOSED STRUCTURE (STATE STREET BRIDGE)
STA 109+73.39
STATE ST SURVEY & CONSTR ℄
SPAN: 103′-4"
TYPE: COMPOSITE PRESTRESSED CONCRETE PS BULB-TEE BEAMS
CLEARANCE: 16′-6⅝"
SKEW: 82°43′34.66"
CLEAR RDWY WIDTH: VARIES
STRUCTURE: S-41005

PROPOSED STRUCTURE (EAST RAMP)
STA 527+89.38
SR 4034 SURVEY & CONSTR ℄
SPAN: 95′-0", 95′-0"
TYPE: COMPOSITE PRESTRESSED CONCRETE PS BULB-TEE BEAMS
CLEARANCE: N/A
SKEW: 82°43′35"
CLEAR RDWY WIDTH: 30′-0"
STRUCTURE: S-41007

PROPOSED STRUCTURE (WEST RAMP)
STA 523+57.19
SR 4034 SURVEY & CONSTR ℄
SPAN: 100′-0", 100′-0"
TYPE: COMPOSITE PRESTRESSED CONCRETE PS BULB-TEE BEAMS
CLEARANCE: N/A
SKEW: 89°15′37.5"
(ABUTMENT 1) 84°51′10"
CLEAR RDWY WIDTH: 30′-0"
STRUCTURE: S-41006

1 END WEST RAMP STRUCTURE
STA 524+58.22

2 SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

3 BEGIN EAST RAMP STRUCTURE
STA 526+93.15

END EAST RAMP STRUCTURE
4 BEGIN APPROACH SLAB
STA 528+84.87

5 END APPROACH SLAB
STA 529+14.87

6 BEGIN APPROACH SLAB
STA 109+01.09

END APPROACH SLAB
7 BEGIN STRUCTURE
STA 109+26.09

END STRUCTURE
8 BEGIN APPROACH SLAB
STA 110+30.76

9 END APPROACH SLAB
STA 110+55.76

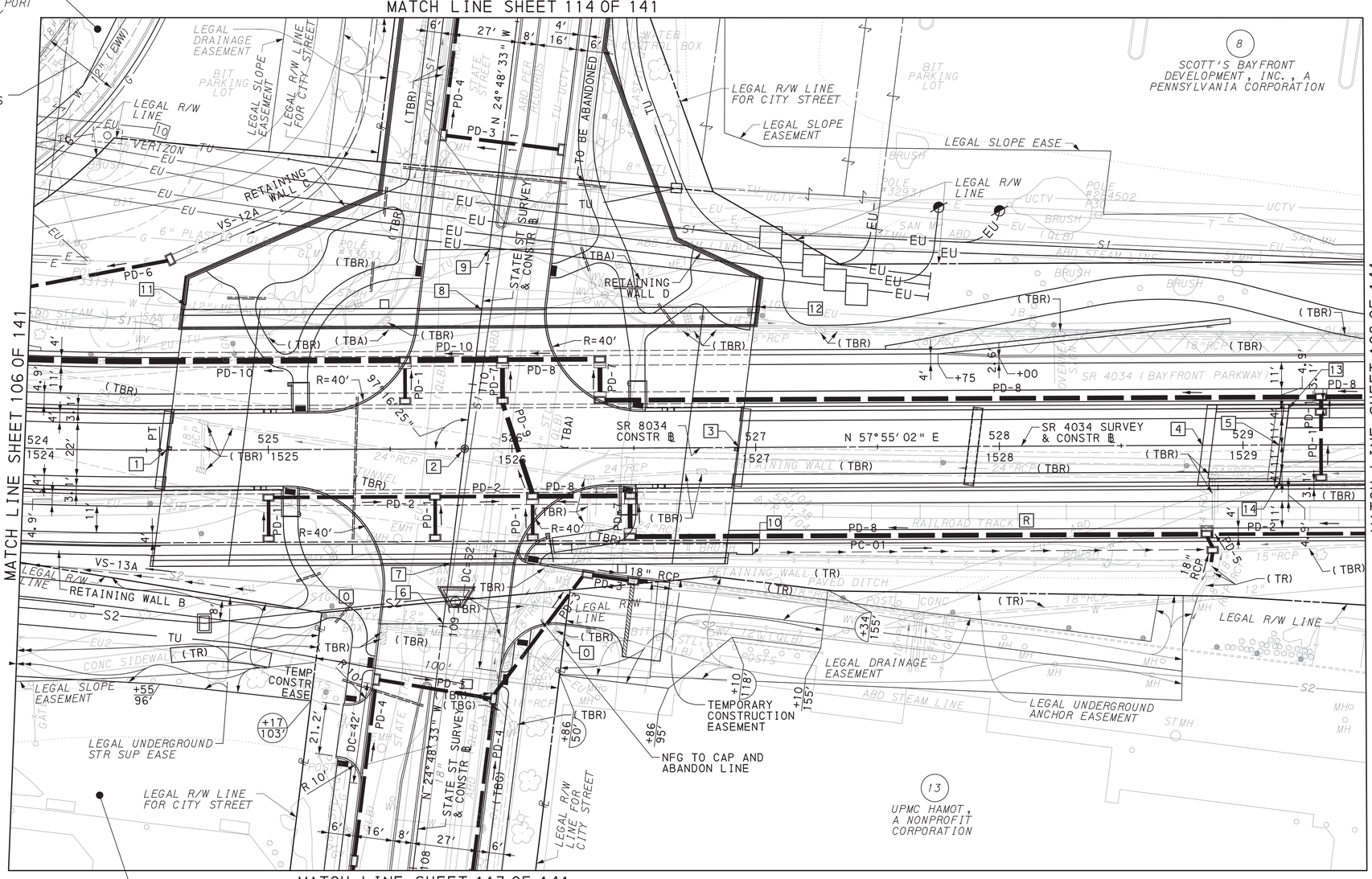
10 END RETAINING WALL B
STA 526+98.50

11 BEGIN RETAINING WALL C
STA 110+15.95

12 BEGIN RETAINING WALL D
STA 110+45.88

13 BEGIN NORTH WALL
STA 529+18.93

14 BEGIN SOUTH WALL
STA 529+14.94



LEGEND

~~	IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
DC	DEPRESSED CURB
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBA)	TO BE ABANDONED
	EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - UPMC DRIVE	18
DETAIL - BAYFRONT BIKEWAY	22
DETAILS "D" & "E" - STATE STREET ISLANDS	30
PROFILE - SR 4034 & SR 8034	122
PROFILE - SR 4034 EASTBOUND (PG EB)	129
PROFILE - SR 4034 WESTBOUND (PG WB)	133
PROFILE - STATE STREET	136 - 137

SCALE IN FEET
0 25 50

REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501
COMMONWEALTH OF PENNSYLVANIA

SURVEY BOOK #20550

DES: MJQ | CKD: JPO | DWG: DMC | CKD: JPO

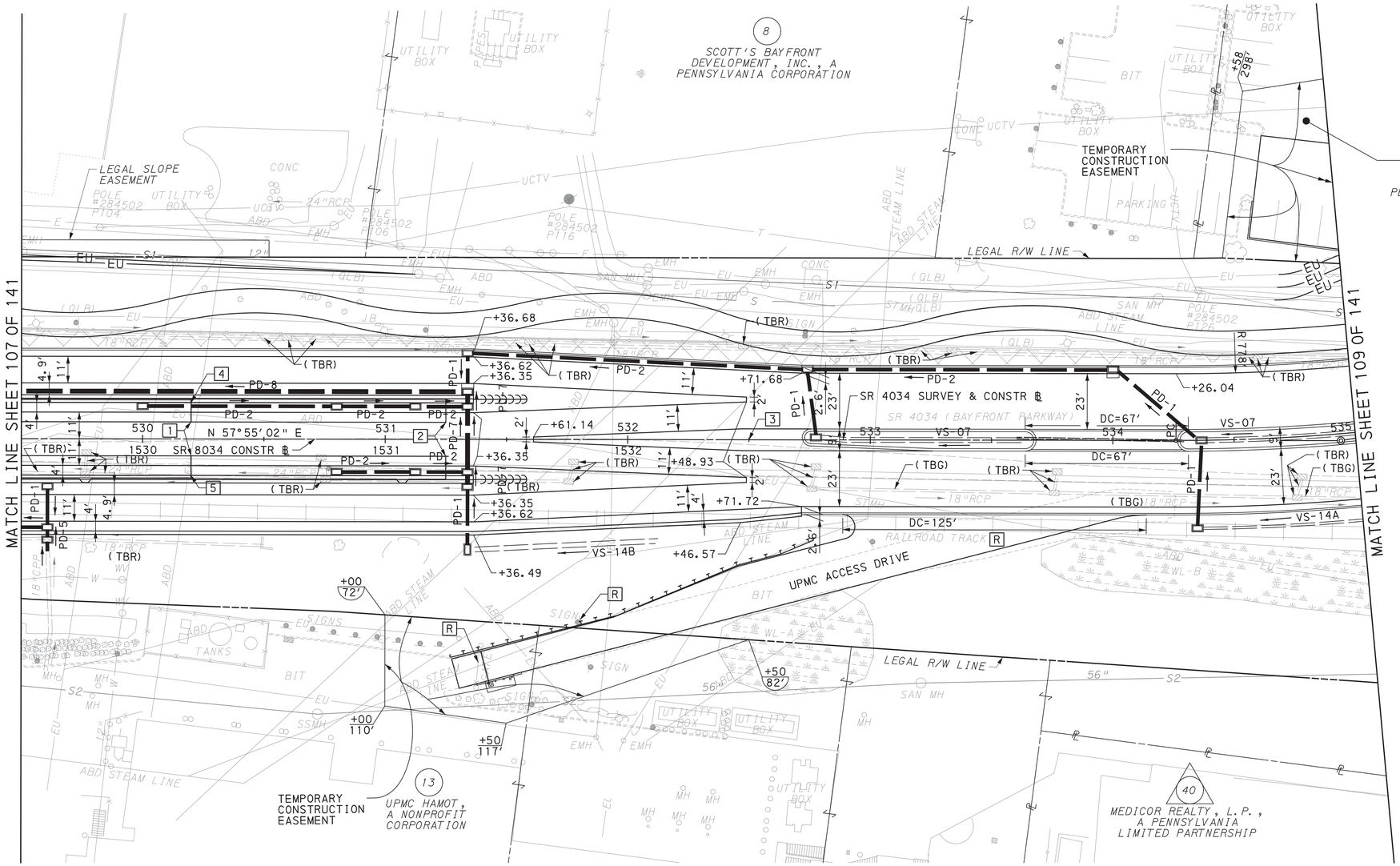
PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp1 06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	108 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034 SURVEY & CONSTR ℄
PI STA 534+94.05
Δ 9° 39′ 07" (LT)
D 7° 06′ 47"
T 68.01′
L 135.69′
R 805.50′
PC STA 534+26.04
PRC STA 535+61.73
SUPERELEVATE NORMAL CROWN



1 BEGIN MOMENT SLAB
STA 530+19.98

2 END MOMENT SLAB
STA 531+24.98

SR 4034 SURVEY & CONSTR ℄
3 POT STA 532+50.00 =
SR 8034 CONSTR ℄
POT STA 1532+50.00

4 END NORTH WALL
STA 530+19.94

5 END SOUTH WALL
STA 530+19.94

LEGEND

- ATTENUATOR
- IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
- DC — DEPRESSED CURB
- (TBR) — TO BE REMOVED
- (TBG) — TO BE GROUTED
- EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - UMPC ACCESS DRIVE	19
DETAIL - BAYFRONT BIKEWAY	22
DETAIL "N" - SR 4034 ISLAND	33
DETAIL - CONCRETE RUMBLE TRAFFIC SEPARATOR	38
PROFILE - SR 4034 & SR 8034	123
PROFILE - SR 4034 EASTBOUND (PG EB)	130
PROFILE - SR 4034 WESTBOUND (PG WB)	134

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	109 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034 SURVEY & CONSTR ℄
PI STA 534+94.05
Δ 9° 39' 07" (LT)
D 7° 06' 47"
T 68.01'
L 135.69'
R 805.50'
PC STA 534+26.04
PRC STA 535+61.73
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 535+75.62
Δ 14° 59' 46" (RT)
D 54° 18' 32"
T 13.89'
L 27.61'
R 105.50'
PRC STA 535+61.73
PT STA 535+89.35
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 537+22.88
Δ 0° 20' 46" (LT)
NO CURVE

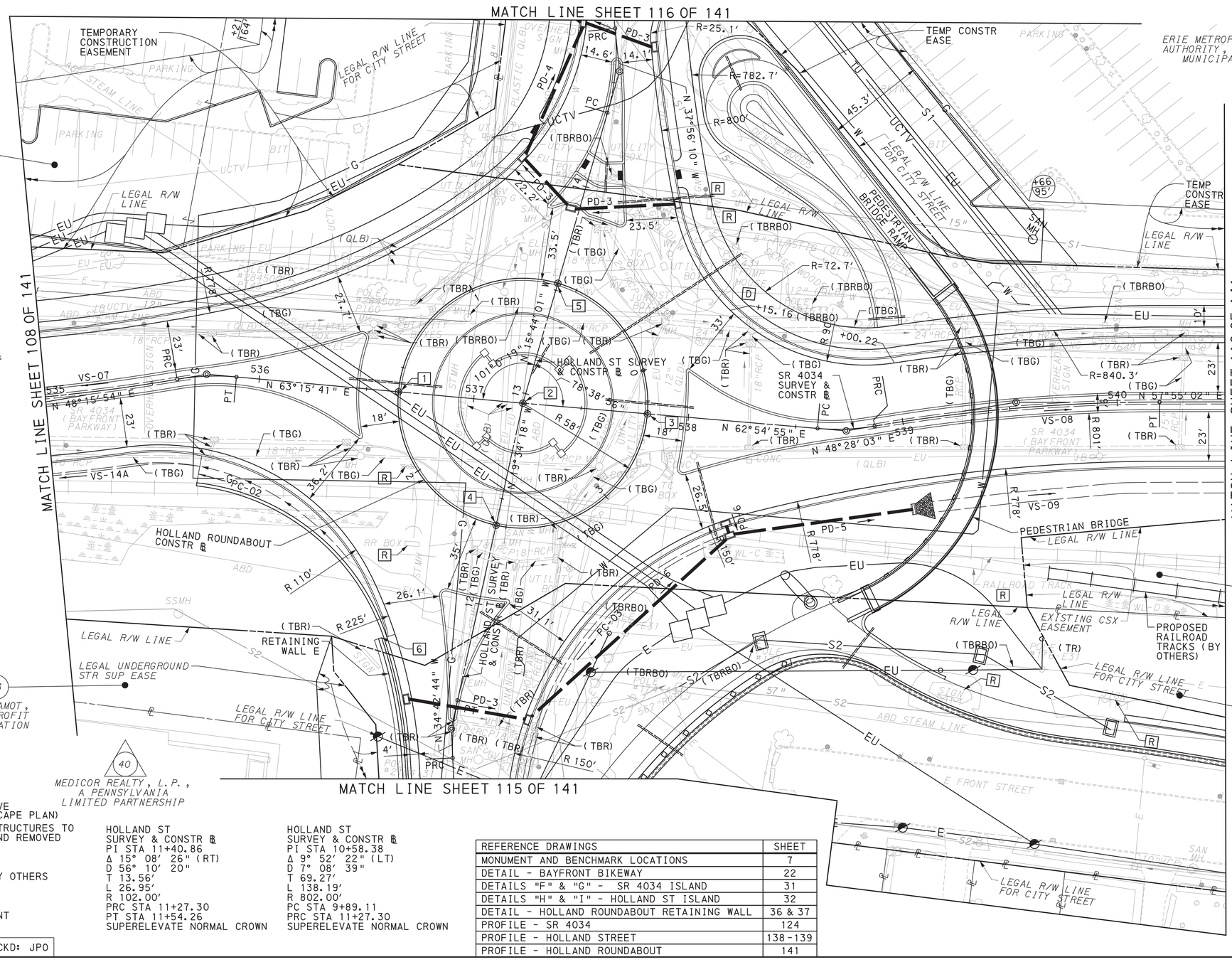
HOLLAND ST
SURVEY & CONSTR ℄
PI STA 12+95.38
Δ 3° 20' 46" (RT)
NO CURVE

HOLLAND ST
SURVEY & CONSTR ℄
PI STA 14+55.85
Δ 22° 12' 09" (LT)
D 56° 10' 20"
T 20.01'
L 39.53'
R 102.00'
PC STA 14+35.84
PRC STA 14+75.36
SUPERELEVATE NORMAL CROWN

HOLLAND ST
SURVEY & CONSTR ℄
PI STA 15+67.42
Δ 13° 05' 48" (RT)
D 7° 08' 39"
T 92.06'
L 183.32'
R 802.00'
PRC STA 14+75.36
PT STA 16+58.68
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 538+73.54
Δ 14° 26' 52" (LT)
D 54° 18' 32"
T 13.37'
L 26.60'
R 105.50'
PC STA 538+60.17
PRC STA 538+86.77
SUPERELEVATE NORMAL CROWN

SR 4034
SURVEY & CONSTR ℄
PI STA 539+53.35
Δ 9° 26' 59" (RT)
D 7° 06' 47"
T 66.58'
L 132.85'
R 805.50'
PRC STA 538+86.77
PT STA 540+19.62
SUPERELEVATE NORMAL CROWN



6A
ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

11
ERIE METROPOLITAN TRANSIT AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY

70
NEW YORK CENTRAL LINES, LLC (CSX BY MERGER)

13
UPMC HAMOT, A NONPROFIT CORPORATION

40
MEDICOR REALTY, L.P., A PENNSYLVANIA LIMITED PARTNERSHIP

PROPOSED STRUCTURE
(HOLLAND STREET PEDESTRIAN BRIDGE)

STA 539+33.71
SR 4034 SURVEY & CONSTR ℄
SPAN: 158'-0"
TYPE: CABLE STAY CIP POST TENSIONED BOX GIRDER
CLEARANCE: 17'-6"
SKEW: N/A
CLEAR RDWY WIDTH: VARIES
STRUCTURE: L-430

HOLLAND ROUNDABOUT CONSTR ℄
[1] POC STA 1+61.46 = SR 4034 SURVEY & CONSTR ℄ POT STA 536+64.88

[2] SR 4034 SURVEY & CONSTR ℄ POT STA 537+22.88 = HOLLAND ST SURVEY & CONSTR ℄ POT STA 12+95.38

HOLLAND ROUNDABOUT CONSTR ℄
[3] POC STA 3+44.02 = SR 4034 SURVEY & CONSTR ℄ POT STA 537+80.88

HOLLAND ROUNDABOUT CONSTR ℄
[4] POC STA 2+45.31 = HOLLAND SURVEY & CONSTR ℄ POT STA 12+37.38

HOLLAND ROUNDABOUT CONSTR ℄
[5] POC STA 0+59.21 = HOLLAND ST SURVEY & CONSTR ℄ POT STA 13+53.38

[6] END RETAINING WALL E STA 11+75.00

LEGEND

=====	IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
D	BUILDINGS AND STRUCTURES TO BE DEMOLISHED AND REMOVED
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBRBO)	TO BE REMOVED BY OTHERS
(TBG)	TO BE GROUTED
	EXISTING PAVEMENT TO BE REMOVED

HOLLAND ST
SURVEY & CONSTR ℄
PI STA 11+40.86
Δ 15° 08' 26" (RT)
D 56° 10' 20"
T 13.56'
L 26.95'
R 102.00'
PRC STA 11+27.30
PT STA 11+54.26
SUPERELEVATE NORMAL CROWN

HOLLAND ST
SURVEY & CONSTR ℄
PI STA 10+58.38
Δ 9° 52' 22" (LT)
D 7° 08' 39"
T 69.27'
L 138.19'
R 802.00'
PC STA 9+89.11
PRC STA 11+27.30
SUPERELEVATE NORMAL CROWN

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - BAYFRONT BIKEWAY	22
DETAILS "F" & "G" - SR 4034 ISLAND	31
DETAILS "H" & "I" - HOLLAND ST ISLAND	32
DETAIL - HOLLAND ROUNDABOUT RETAINING WALL	36 & 37
PROFILE - SR 4034	124
PROFILE - HOLLAND STREET	138-139
PROFILE - HOLLAND ROUNDABOUT	141

SCALE IN FEET
0 25 50

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

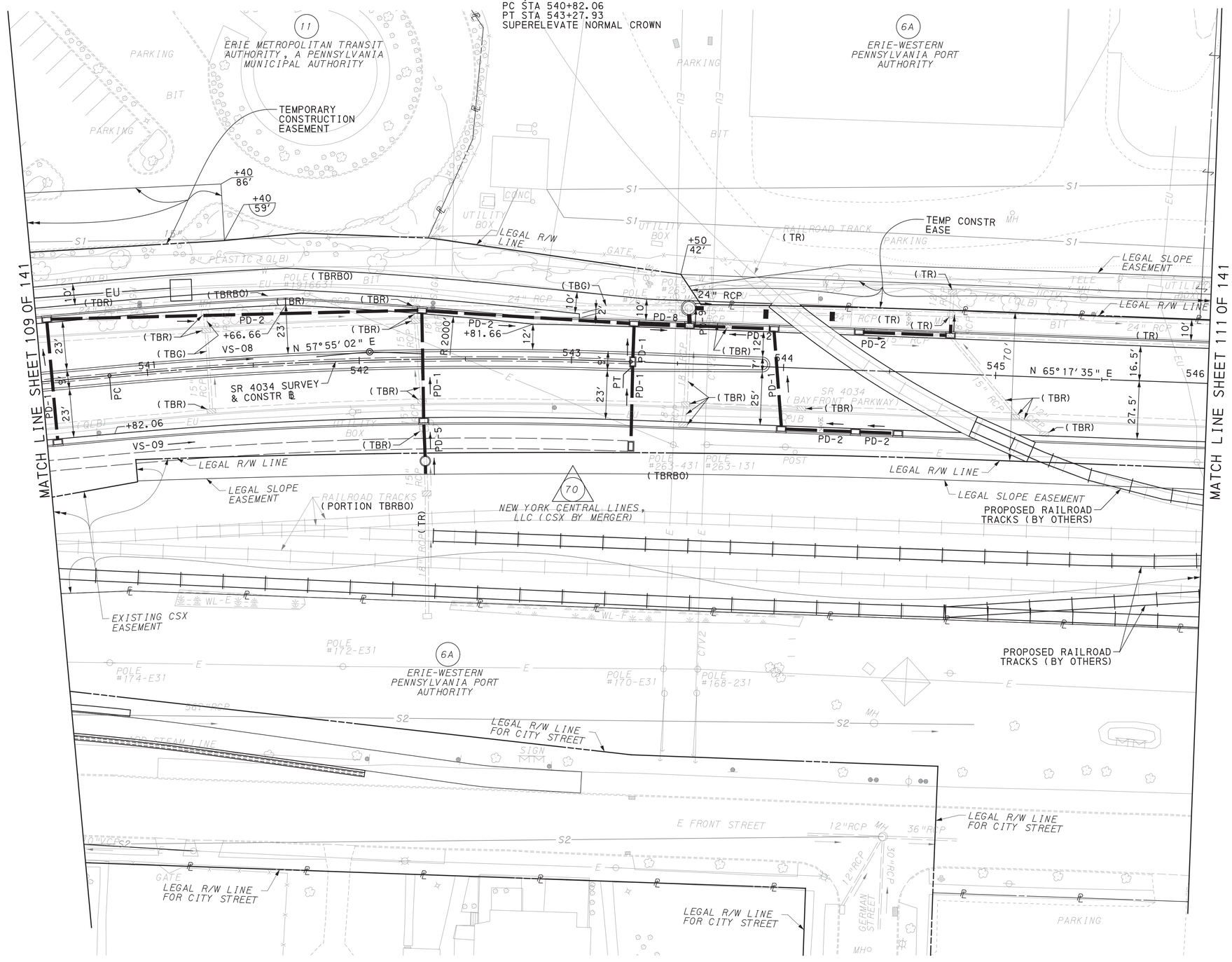
PLOTTED: 8/19/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp1 08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	110 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034
SURVEY & CONSTR ℄
PI STA 542+05.16
Δ 7° 22' 34" (RT)
D 3° 00' 00"
T 123.10'
L 245.87'
R 1,909.86'
PC STA 540+82.06
PT STA 543+27.93
SUPERELEVATE NORMAL CROWN



LEGEND

(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBG)	TO BE GROUTED
(TBRBO)	TO BE REMOVED BY OTHERS

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL "O" - SR 4034 ISLAND	33
PROFILE - SR 4034	125

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

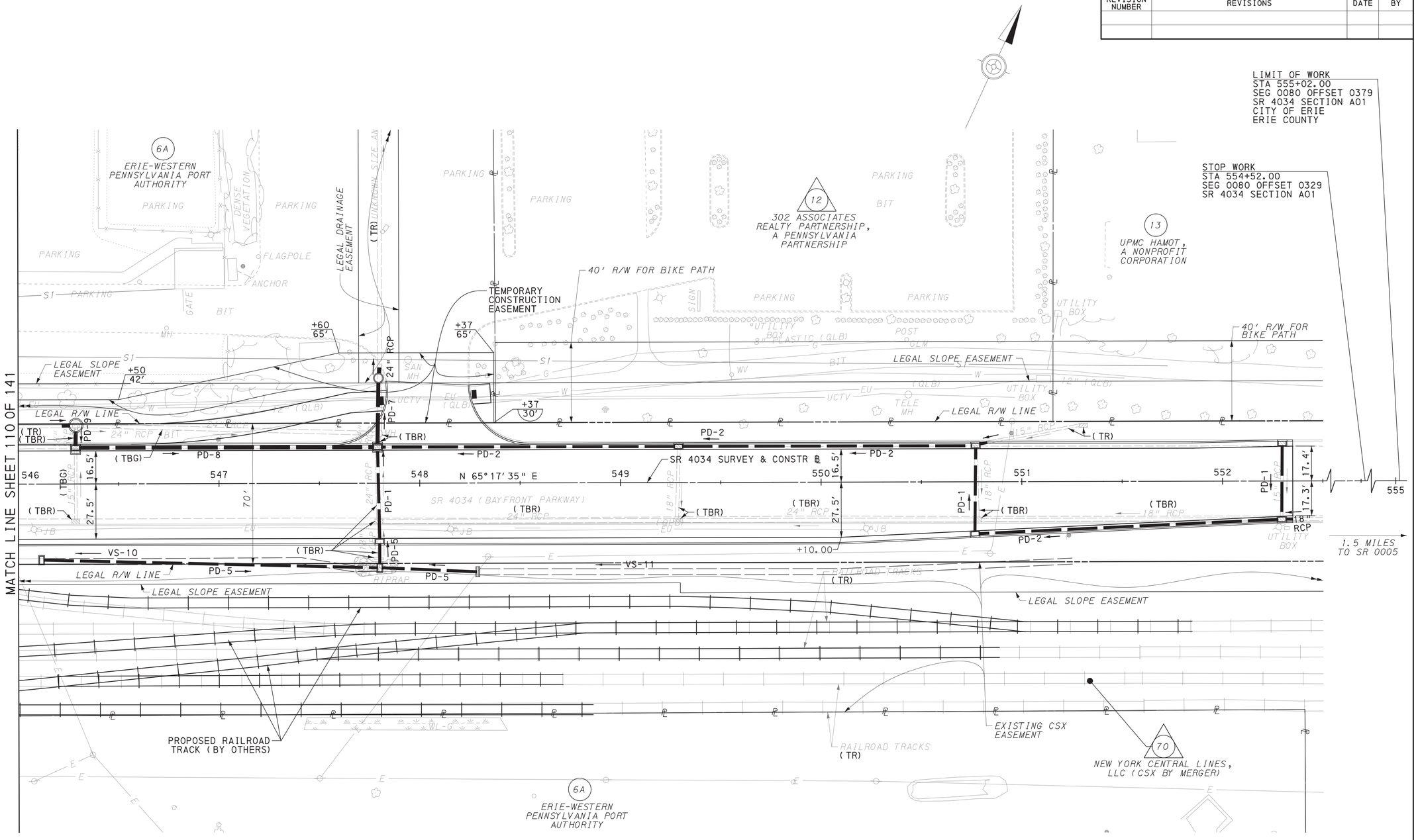
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDp1 09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	111 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LIMIT OF WORK
STA 555+02.00
SEG 0080 OFFSET 0379
SR 4034 SECTION A01
CITY OF ERIE
ERIE COUNTY

STOP WORK
STA 554+52.00
SEG 0080 OFFSET 0329
SR 4034 SECTION A01



LEGEND

(TR) TO REMAIN
(TBR) TO BE REMOVED
(TBG) TO BE GROUTED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - BAYFRONT DRIVE	23
PROFILE - SR 4034	126

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ | CKD: JPO | DWG: DMC | CKD: JPO

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

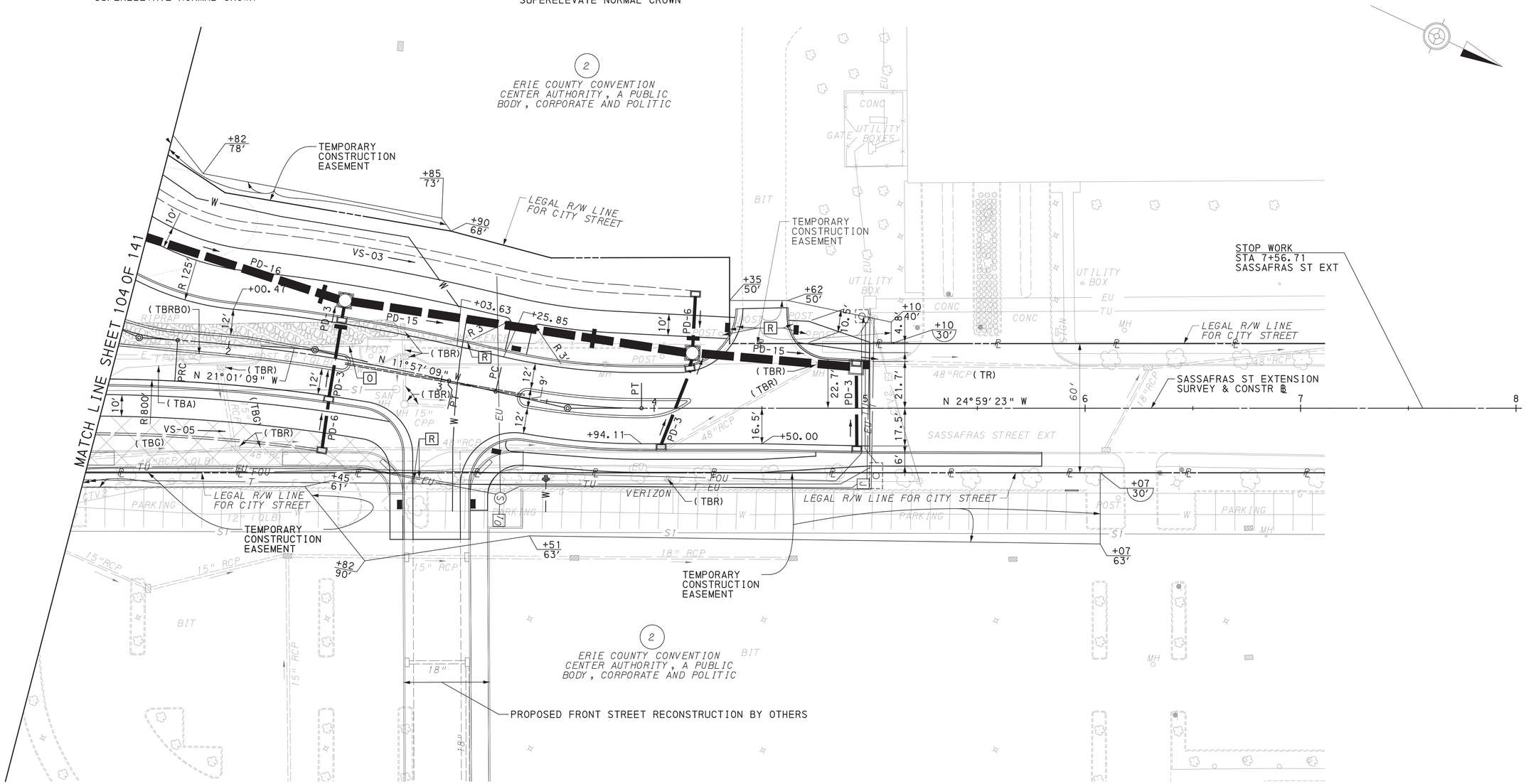
FILE NAME: \\msconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDpl 10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	112 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SASSAFRAS ST
SURVEY & CONSTR ℄
PI STA 1+58.61
Δ 19° 15′ 18" (LT)
D 54° 18′ 32"
T 17.90′
L 35.45′
R 105.50′
PC STA 1+40.71
PRC STA 1+76.17
SUPERELEVATE NORMAL CROWN

SASSAFRAS ST
SURVEY & CONSTR ℄
PI STA 3+60.13
Δ 13° 02′ 14" (RT)
D 19° 05′ 55"
T 34.28′
L 68.26′
R 300.00′
PC STA 3+25.85
PT STA 3+94.11
SUPERELEVATE NORMAL CROWN



LEGEND

▌	TRENCH PLUG
═══	IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TBA)	TO BE ABANDONED
(TBG)	TO BE GROUTED
▨	EXISTING PAVEMENT TO BE REMOVED

SASSAFRAS ST
SURVEY & CONSTR ℄
PI STA 2+40.03
Δ 9° 04′ 00" (RT)
D 7° 06′ 47"
T 63.87′
L 127.46′
R 805.50′
PRC STA 1+76.17
PT STA 3+03.63
SUPERELEVATE NORMAL CROWN

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL "C" - SASSAFRAS ST ISLAND	29
DETAIL - SASSAFRAS STREET DRIVES	24
PROFILE - SASSAFRAS STREET EXTENSION	135

SCALE IN FEET
0 25 50

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

SURVEY BOOK #20550

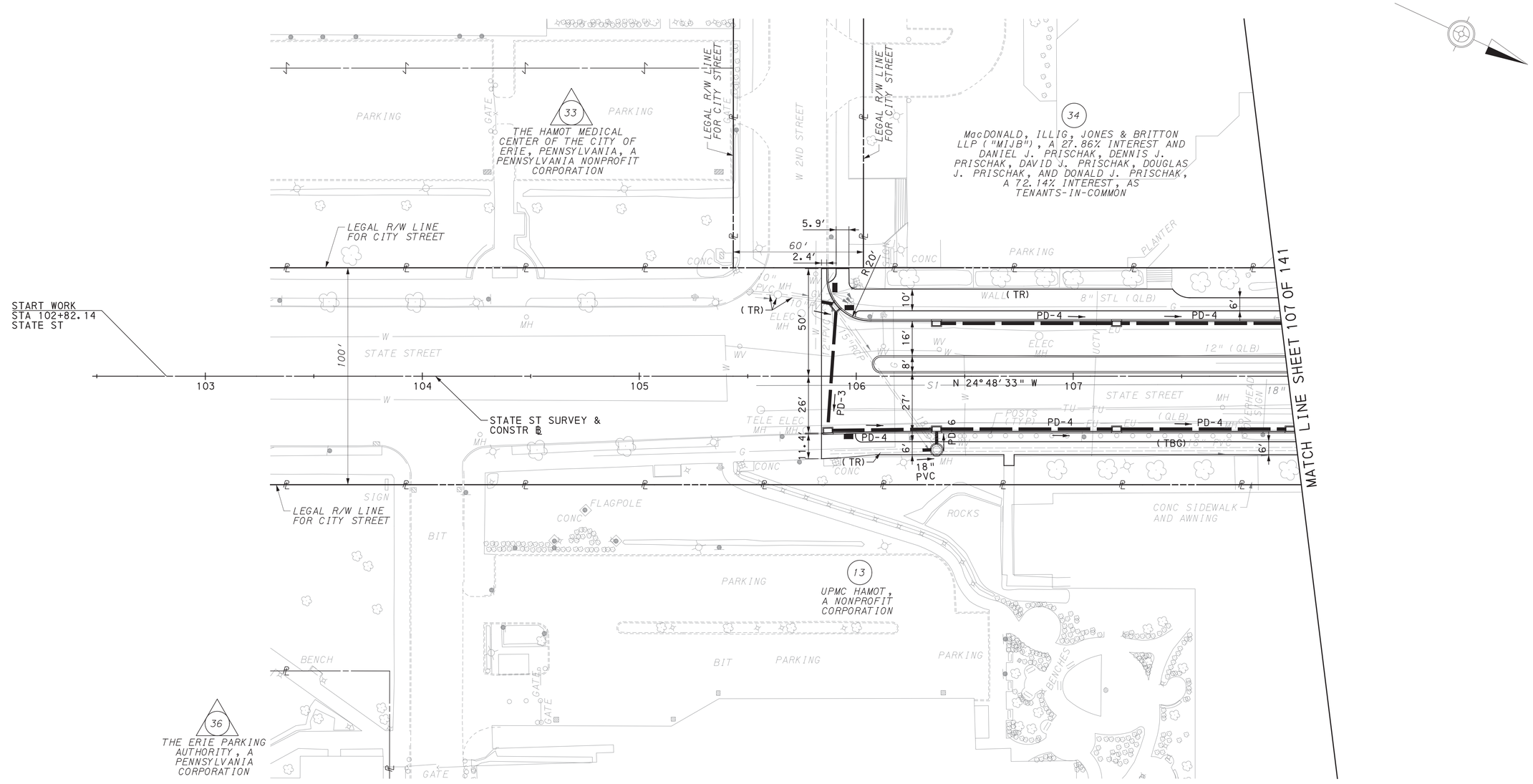
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	113 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TR) TO REMAIN
(TBR) TO BE REMOVED
(TBG) TO BE GROUTED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL "C" - SASSAFRAS ST ISLAND	30
PROFILE - STATE STREET	136

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/18/2022

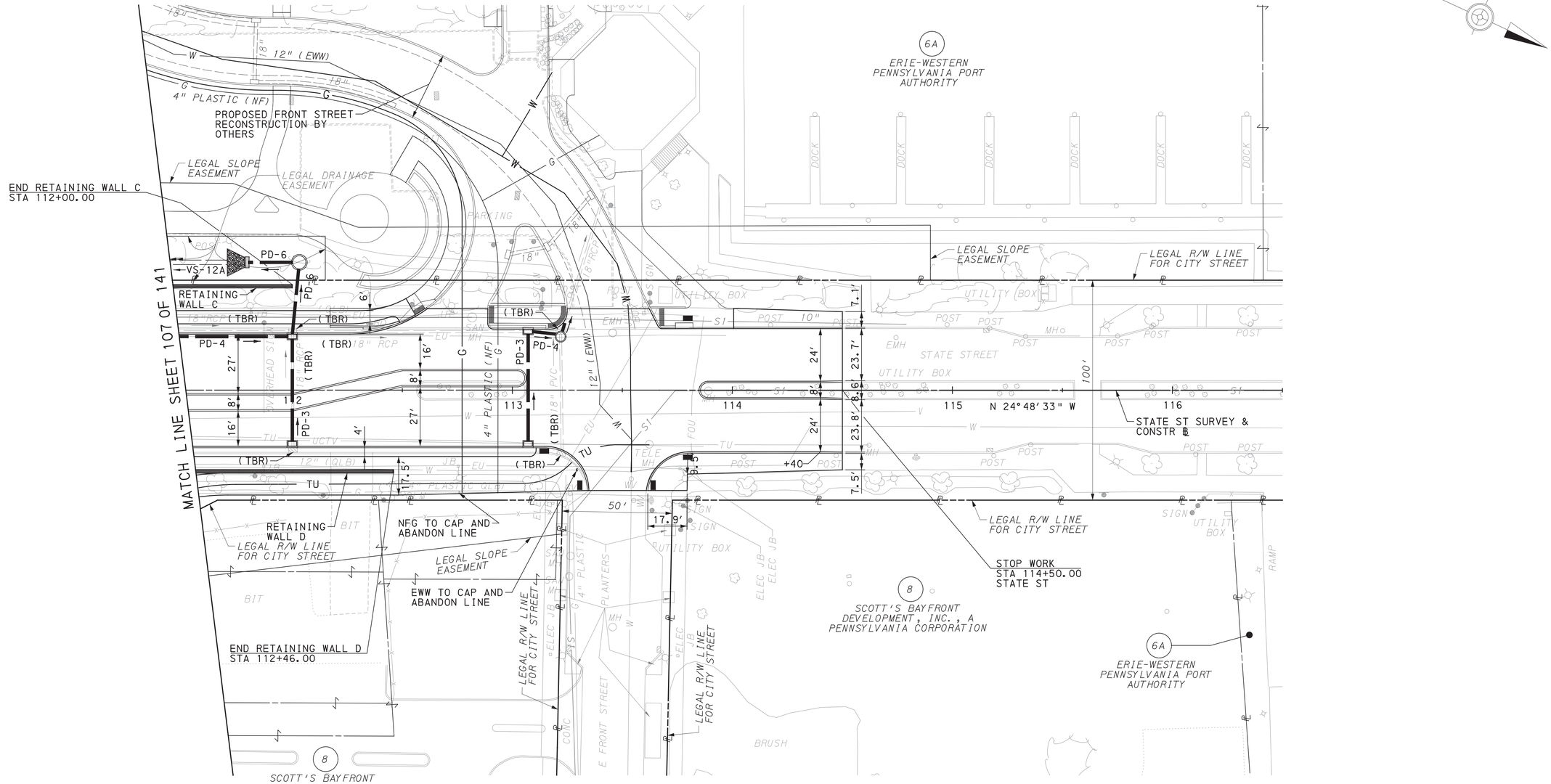
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 12.dgn

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\Files\Production\08\60\06808\roadway\sheets\RDp1 13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	114 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TR) TO REMAIN
(TBR) TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - BAYFRONT BIKEWAY	22
DETAIL - STATE STREET DRIVES	25
DETAIL "D" - STATE ST ISLAND	30
DETAIL "M" - STATE ST ISLAND	33
PROFILE - STATE STREET	137

SCALE IN FEET
0 25 50

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

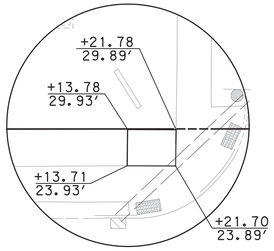
PLOTTED: 8/18/2022

FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 14.dgn

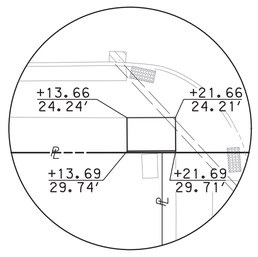
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	115 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

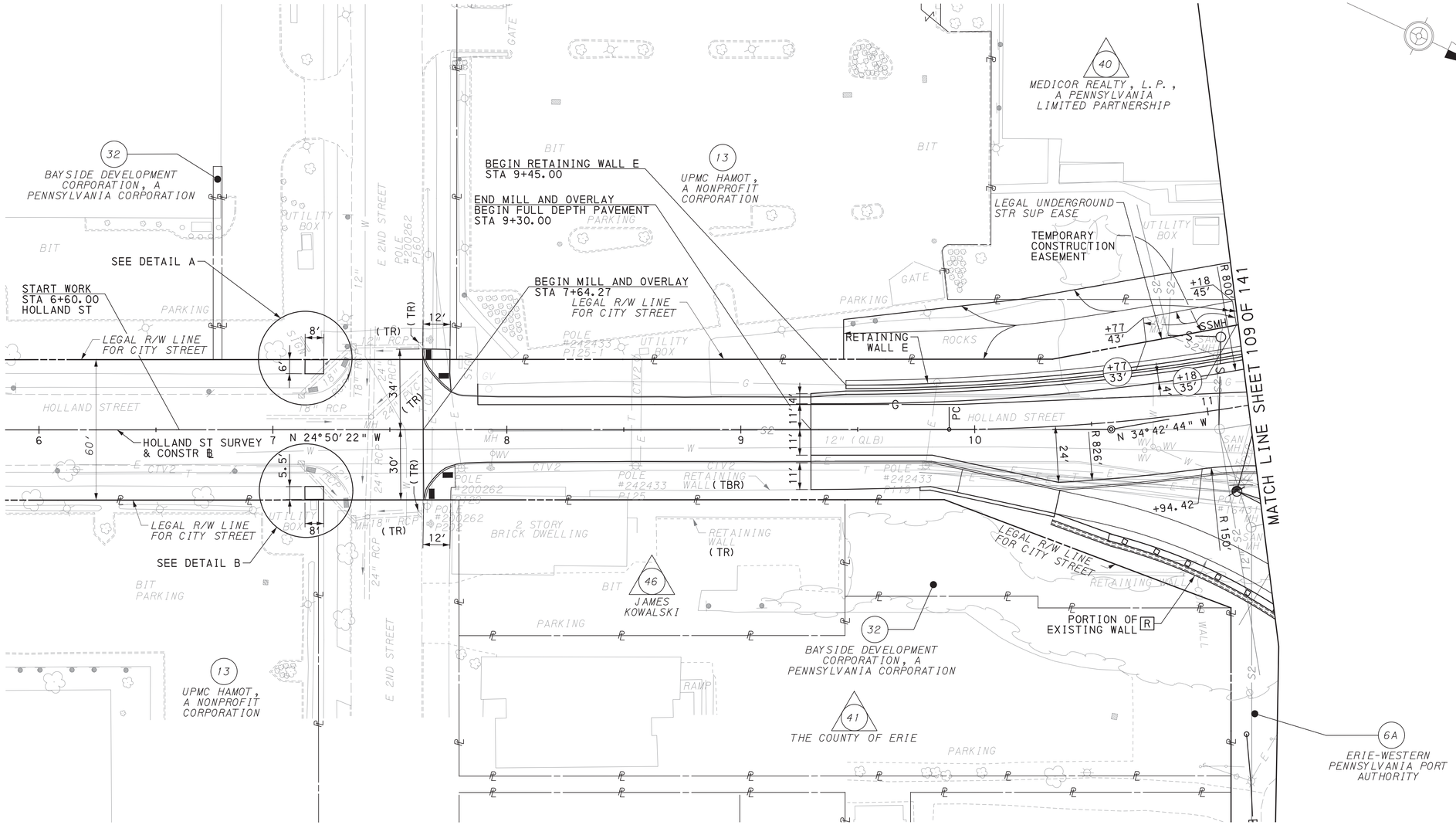
HOLLAND ST
SURVEY & CONSTR ℄
PI STA 10+58.38
Δ 9° 52′ 22" (LT)
D 7° 08′ 39"
T 69.27′
L 138.19′
R 802.00′
PC STA 9+89.11
PRC STA 11+27.30
SUPERELEVATE NORMAL CROWN



DETAIL A



DETAIL B



LEGEND

(TR) TO REMAIN
(TBR) TO BE REMOVED

EXISTING PAVEMENT TO BE REMOVED

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
PROFILE - HOLLAND STREET	138

SCALE IN FEET
0 25 50

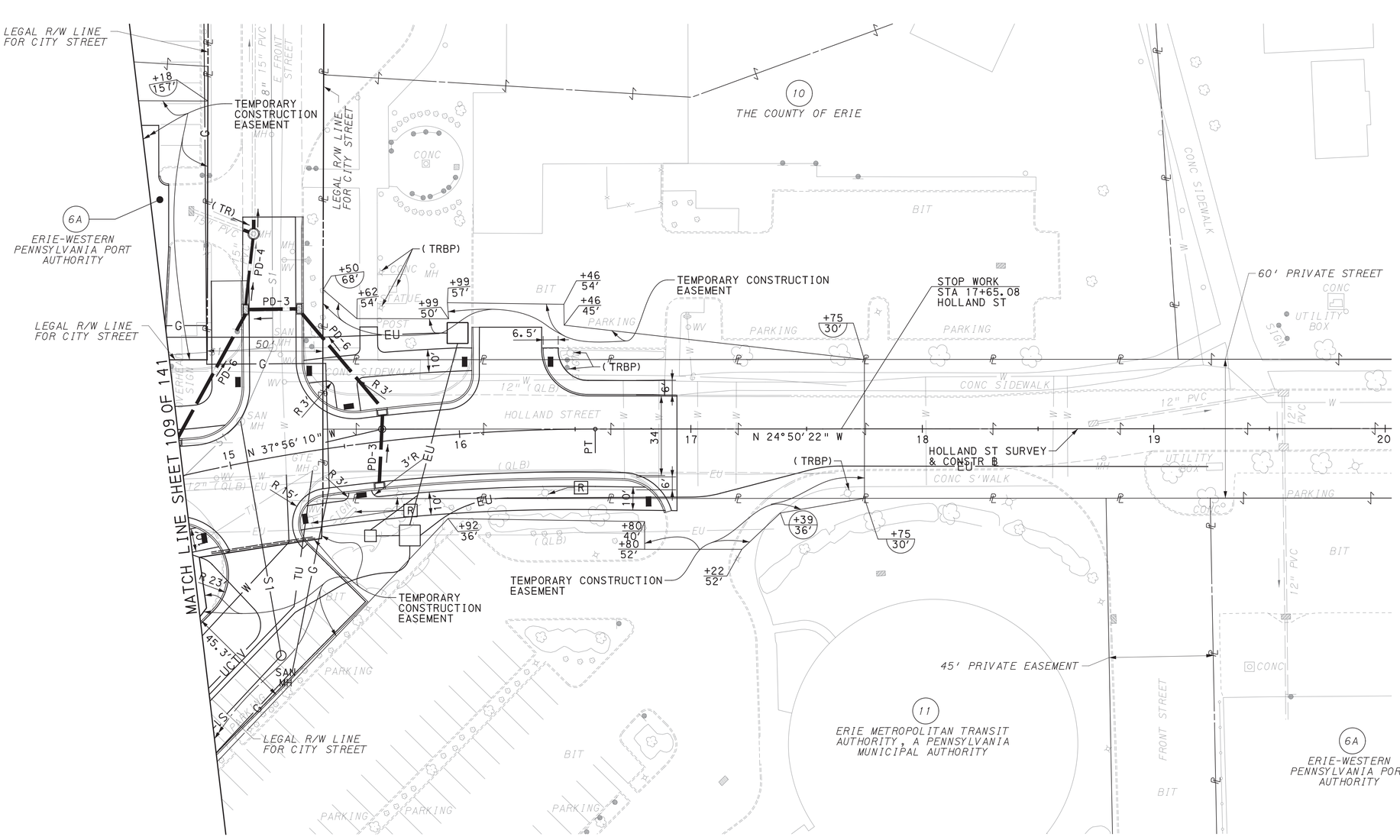
SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	116 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

-----	IRRIGATION SLEEVE (REFER TO LANDSCAPE PLAN)
(TR)	TO REMAIN
(TBR)	TO BE REMOVED
(TRBP)	TO REMAIN AND BE PROTECTED

HOLLAND ST
SURVEY & CONSTR ℄
PI STA 15+67.42
Δ 13° 05' 48" (RT)
D 7° 08' 39"
T 92.06'
L 183.32'
R 802.00'
PRC STA 14+75.36
PT STA 16+58.68
SUPERELEVATE NORMAL CROWN

REFERENCE DRAWINGS	SHEET
MONUMENT AND BENCHMARK LOCATIONS	7
DETAIL - BAYFRONT BIKEWAY	22
DETAIL - HOLLAND DRIVES	26
PROFILE - HOLLAND STREET	139

SCALE IN FEET
0 25 50

SURVEY BOOK #20550

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

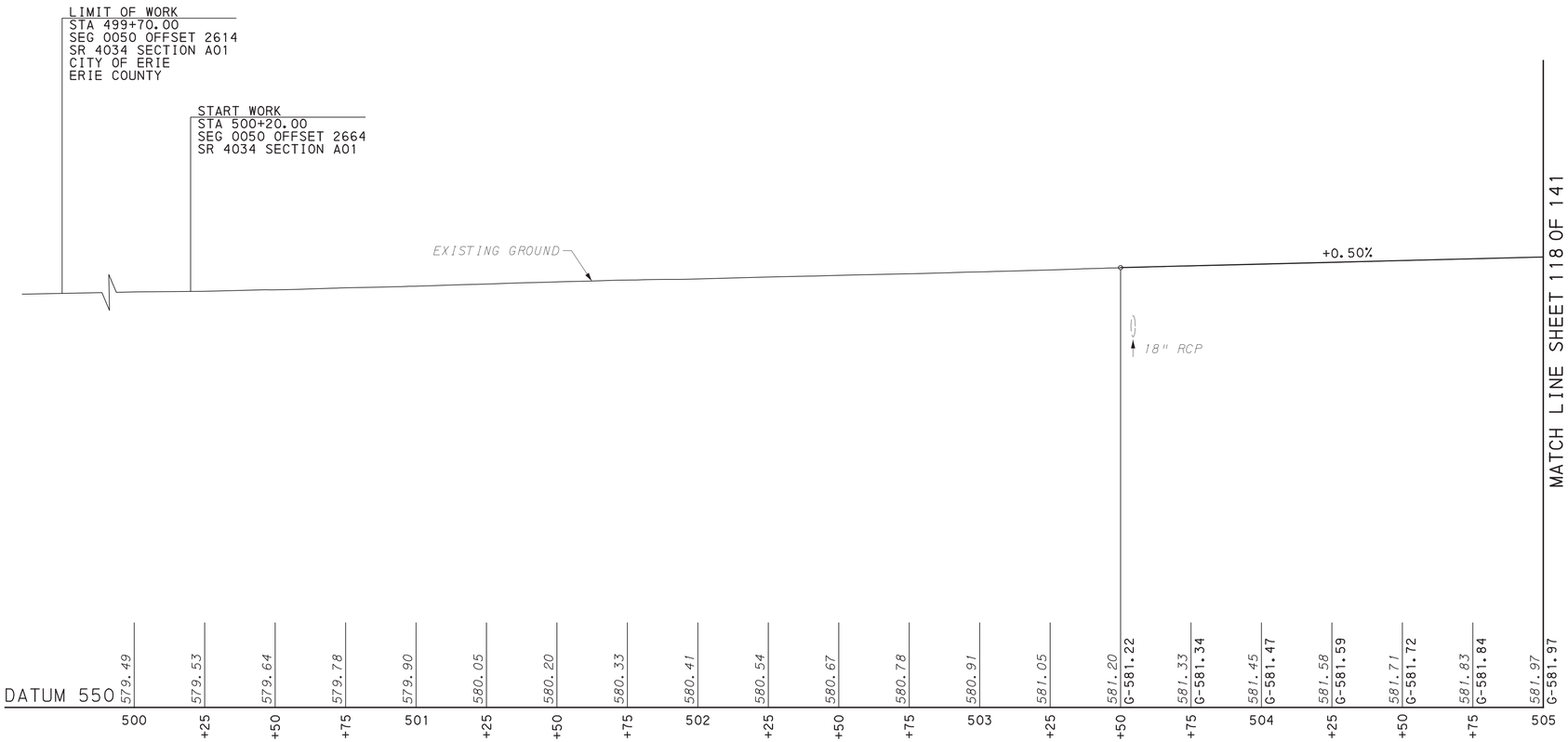
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpl 15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	117 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	102

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501
COMMONWEALTH OF PENNSYLVANIA

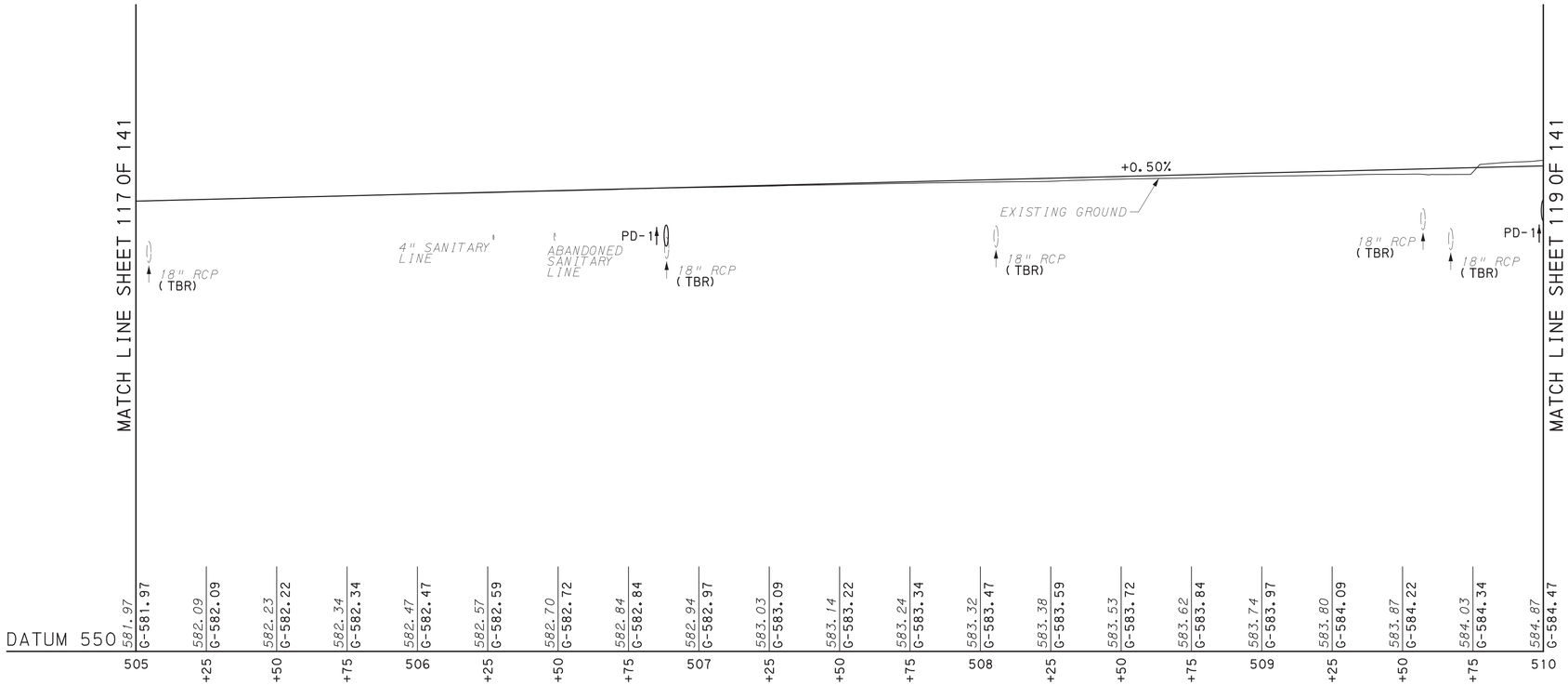
PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr01_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	118 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

ELECTRIC LINE



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	103

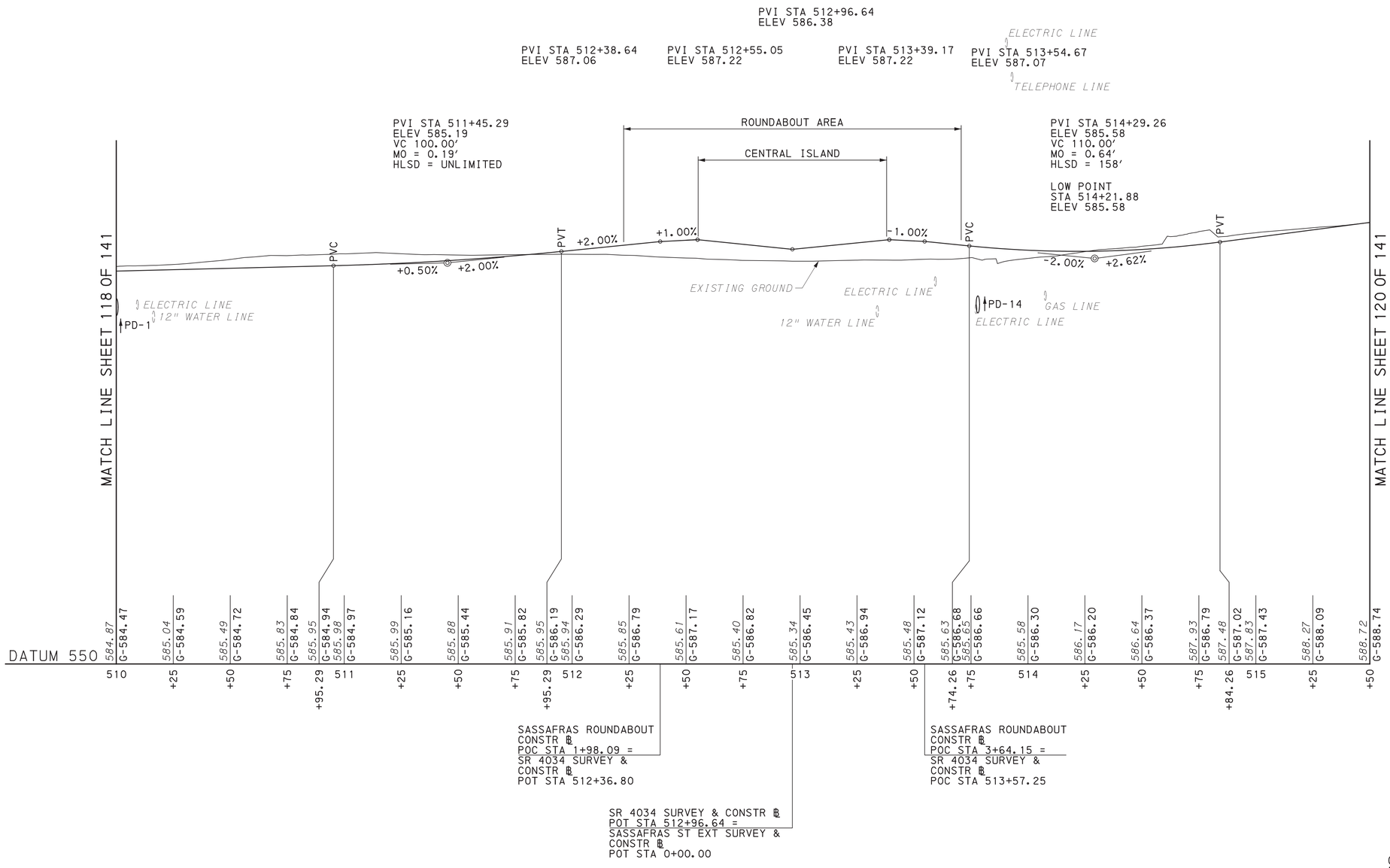
REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr02_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	119 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	104

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

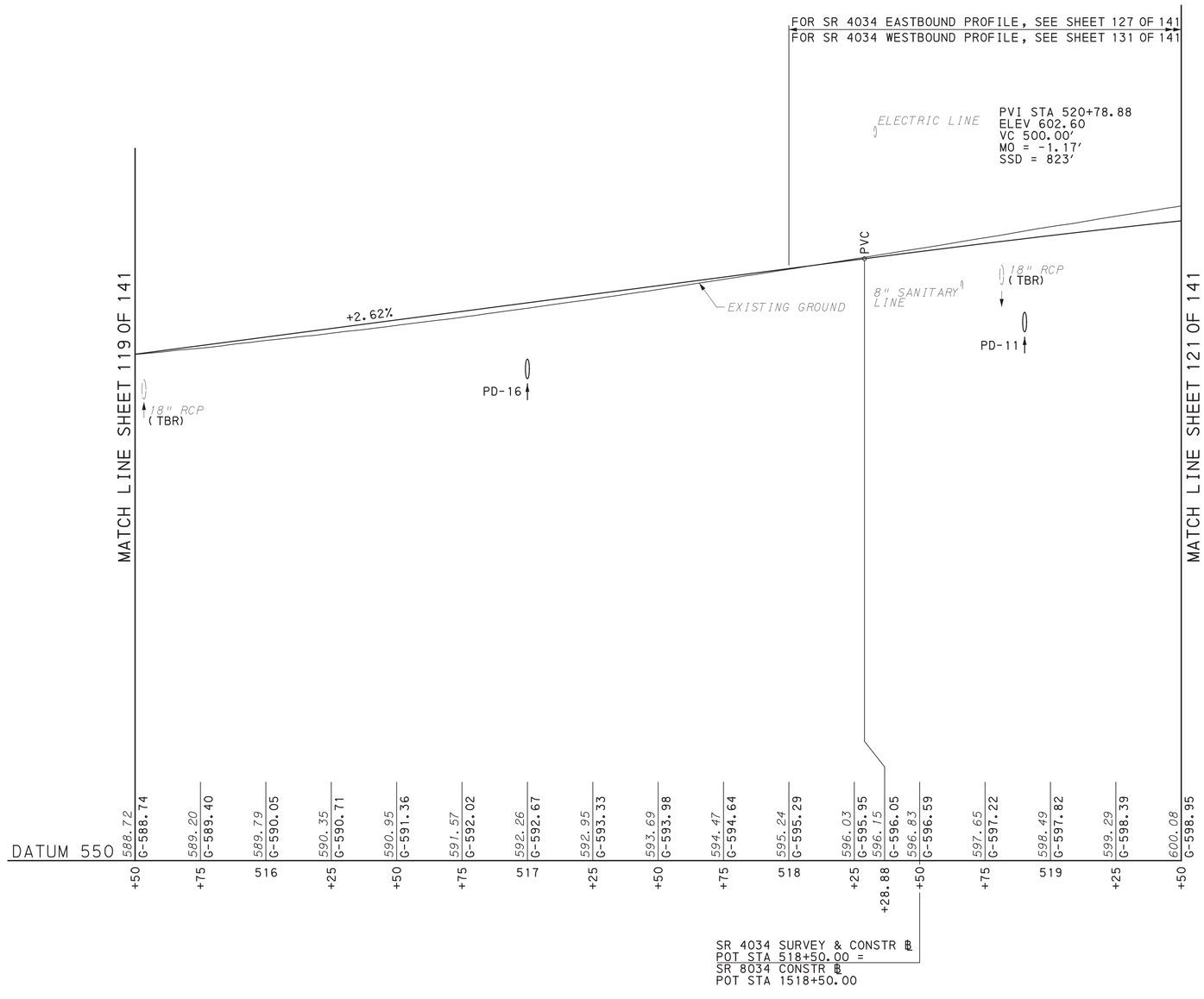
PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr03_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	120 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

FOR SR 4034 EASTBOUND PROFILE, SEE SHEET 127 OF 141
FOR SR 4034 WESTBOUND PROFILE, SEE SHEET 131 OF 141



REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	105

SCALE IN FEET
HORIZONTAL= 0 25 50
VERTICAL= 0 5 10

SR 4034 & SR 8034

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

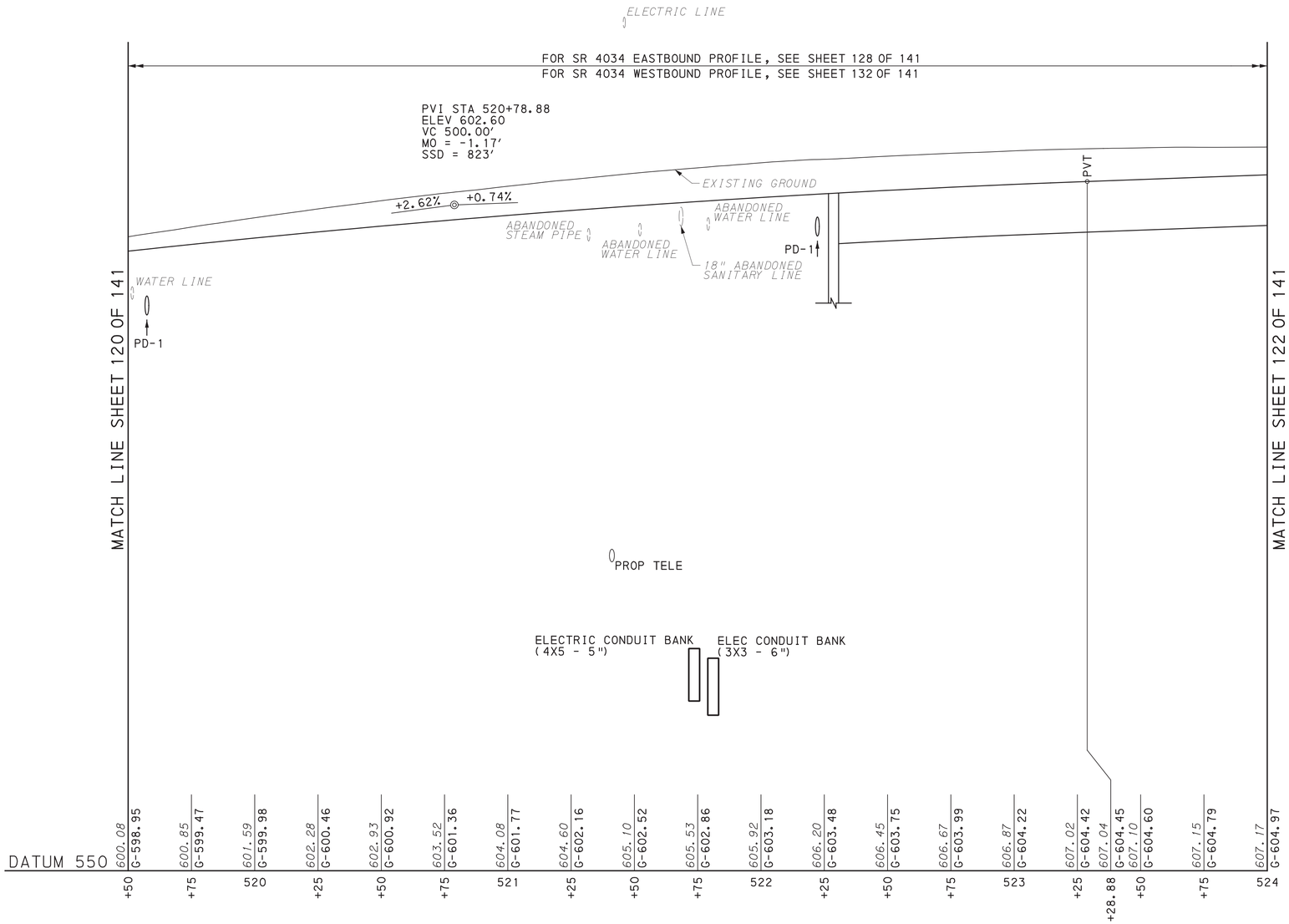
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr04_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	121 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 & SR 8034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	106

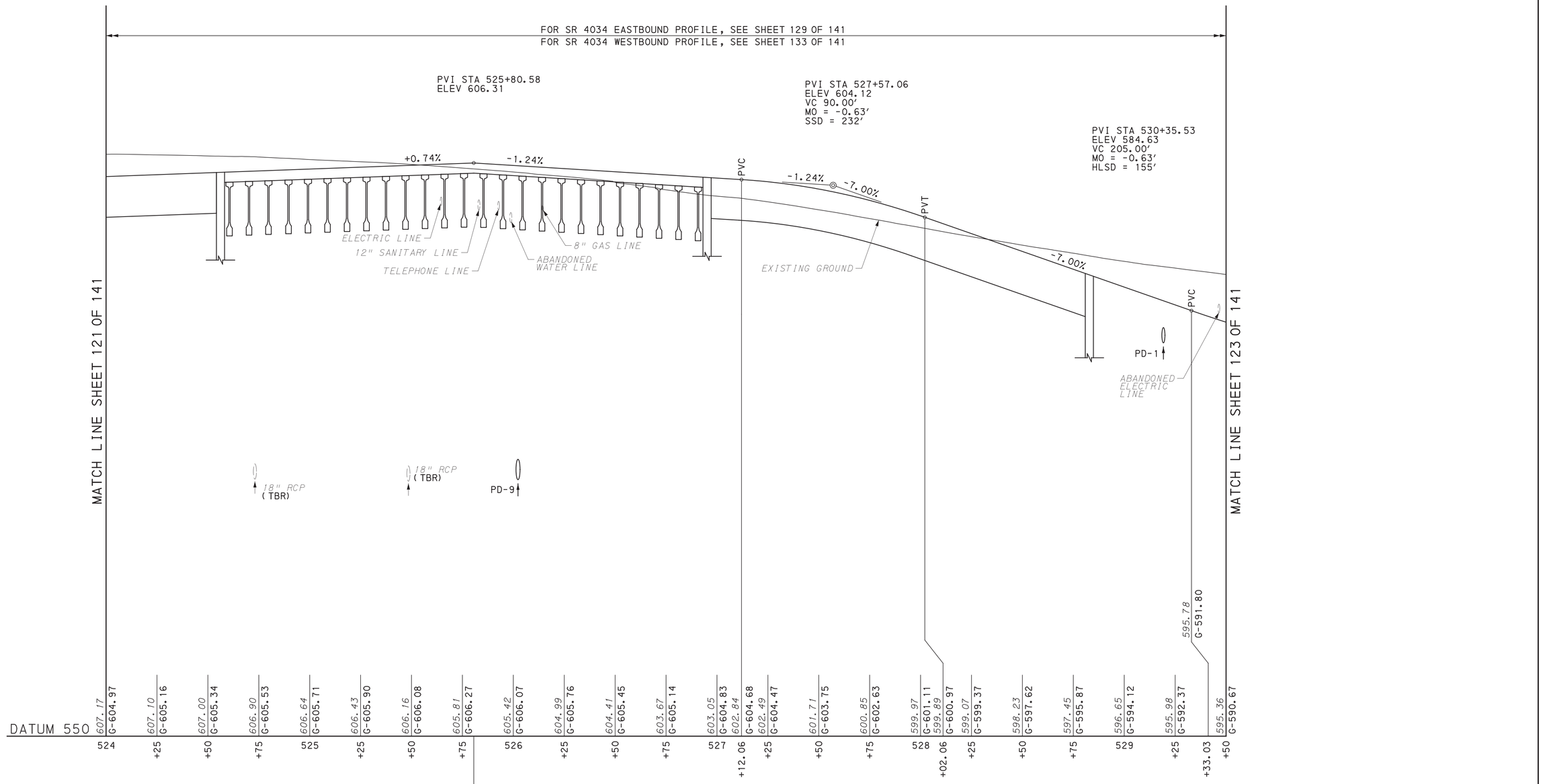
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr05_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	122 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 & SR 8034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	107

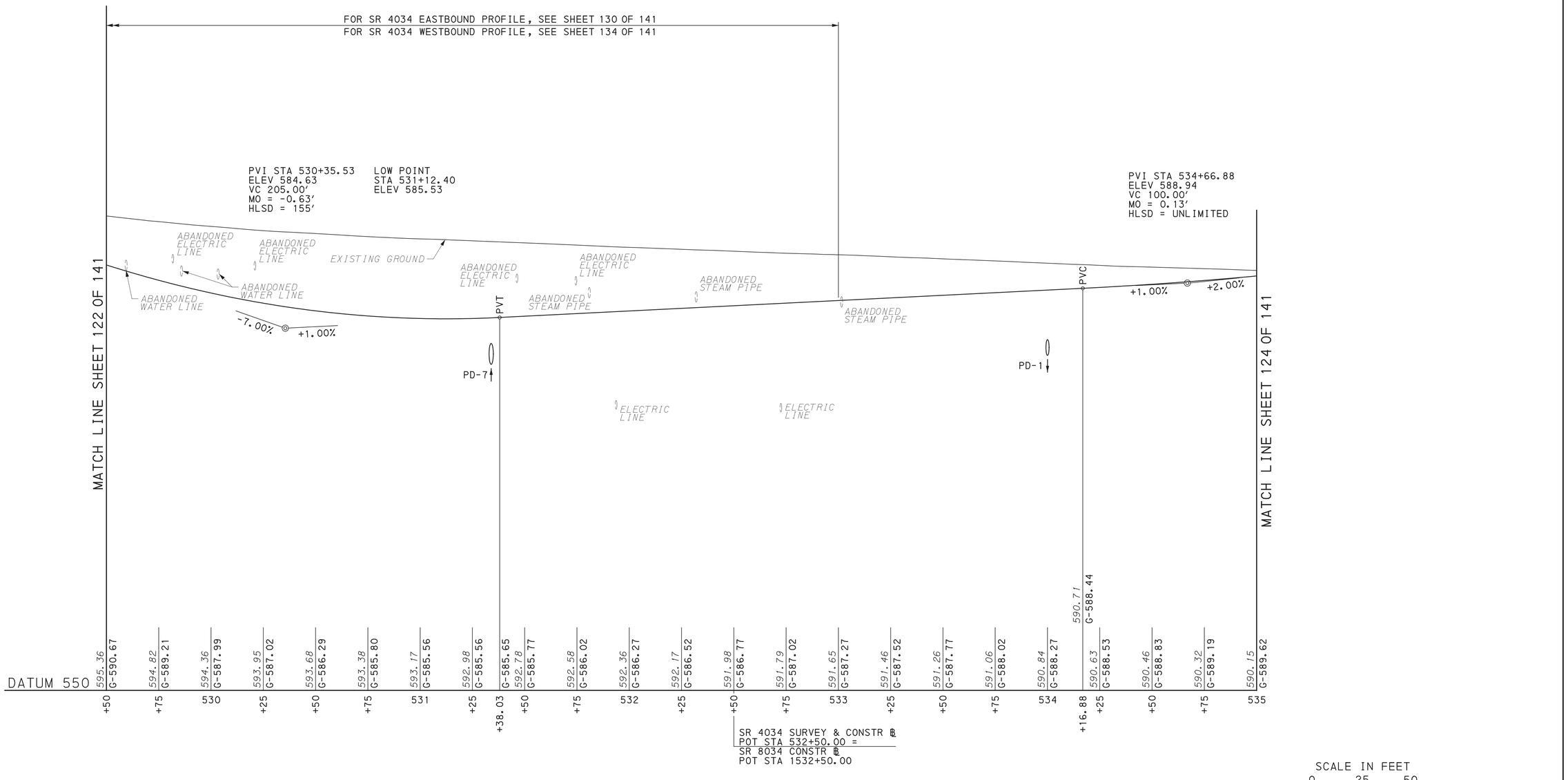
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDprf06_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	123 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL = 0 25 50

VERTICAL = 0 5 10

SR 4034 & SR 8034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	108

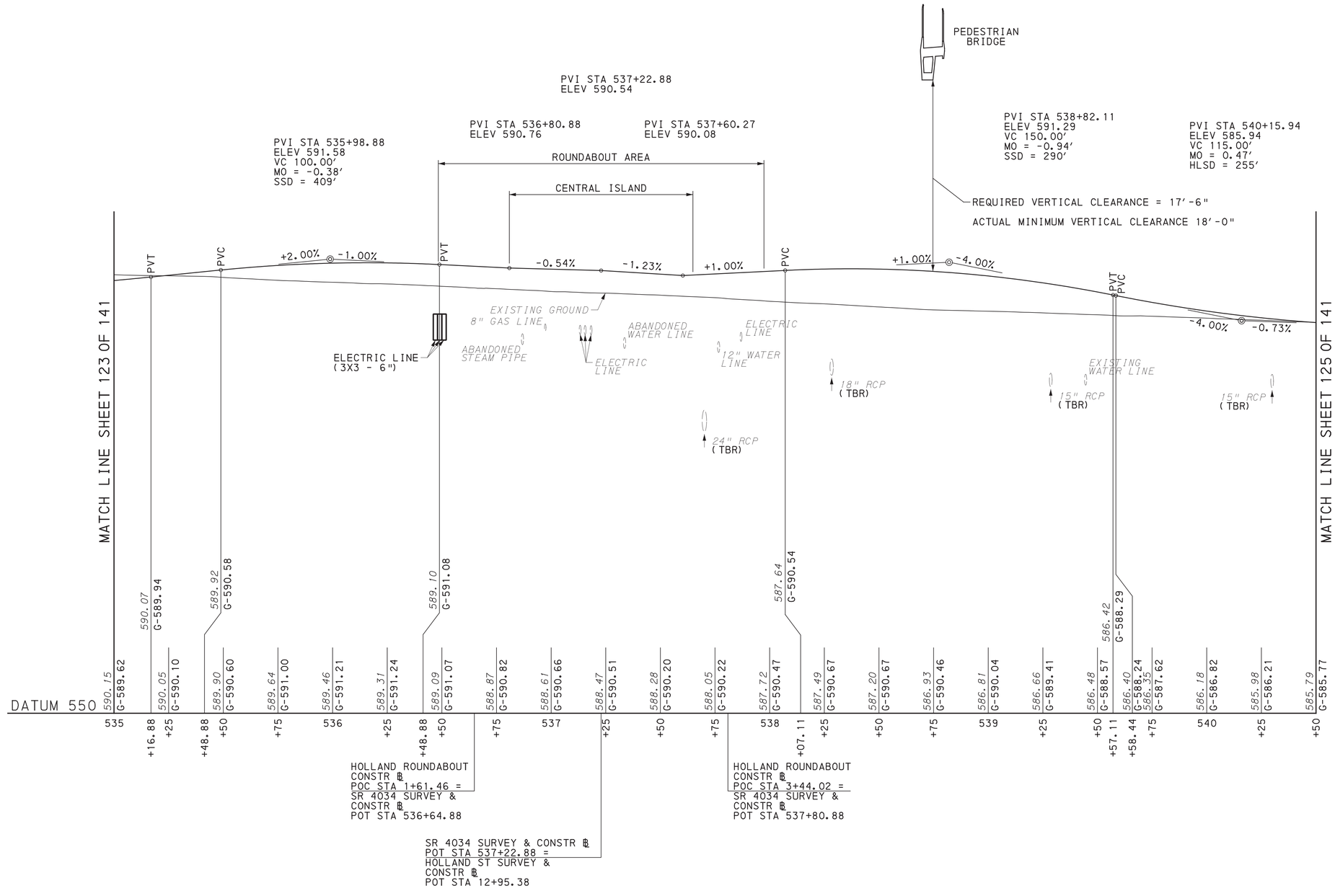
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDprf07_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	124 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	109

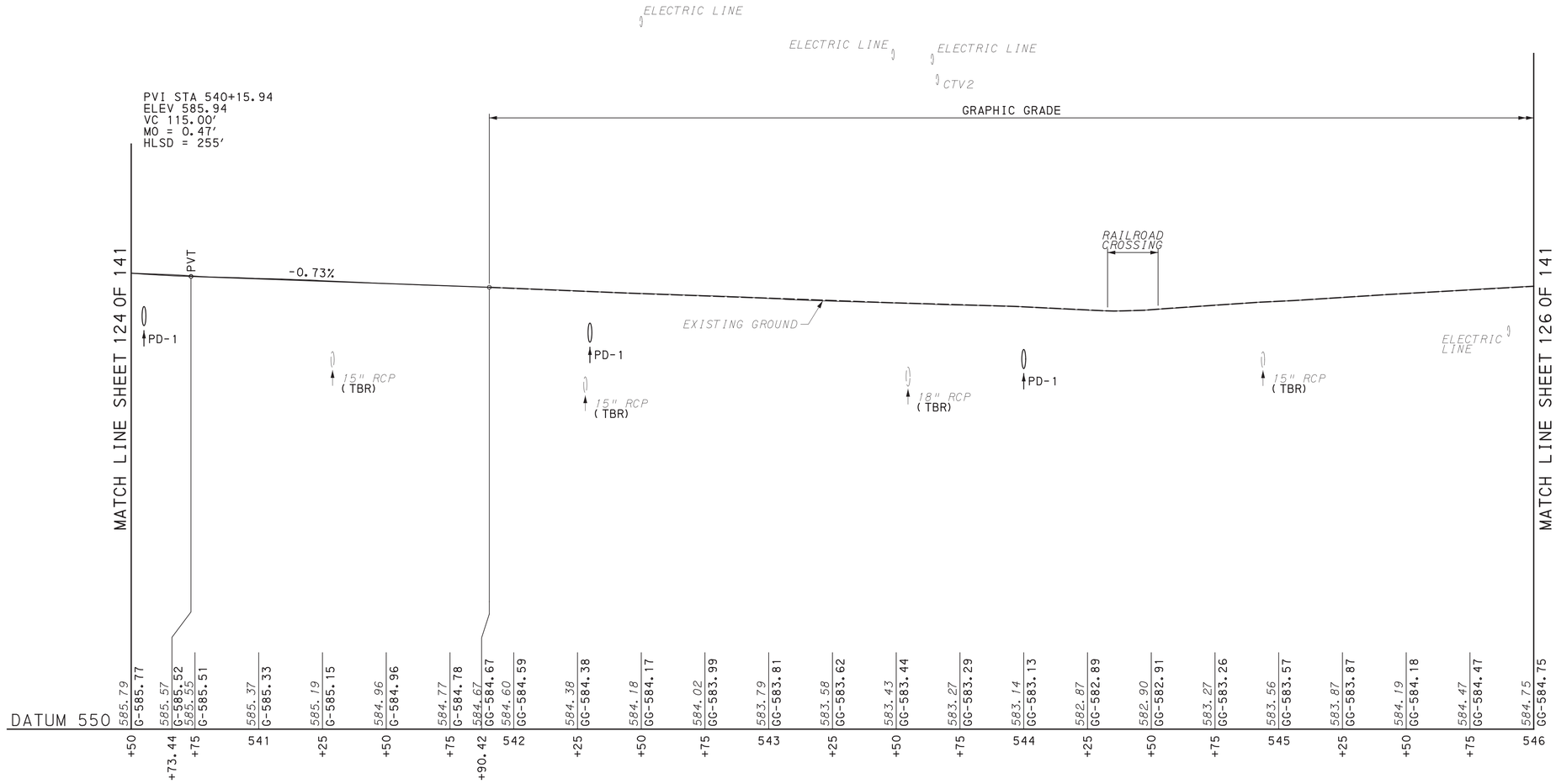
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr08_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	125 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	110

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

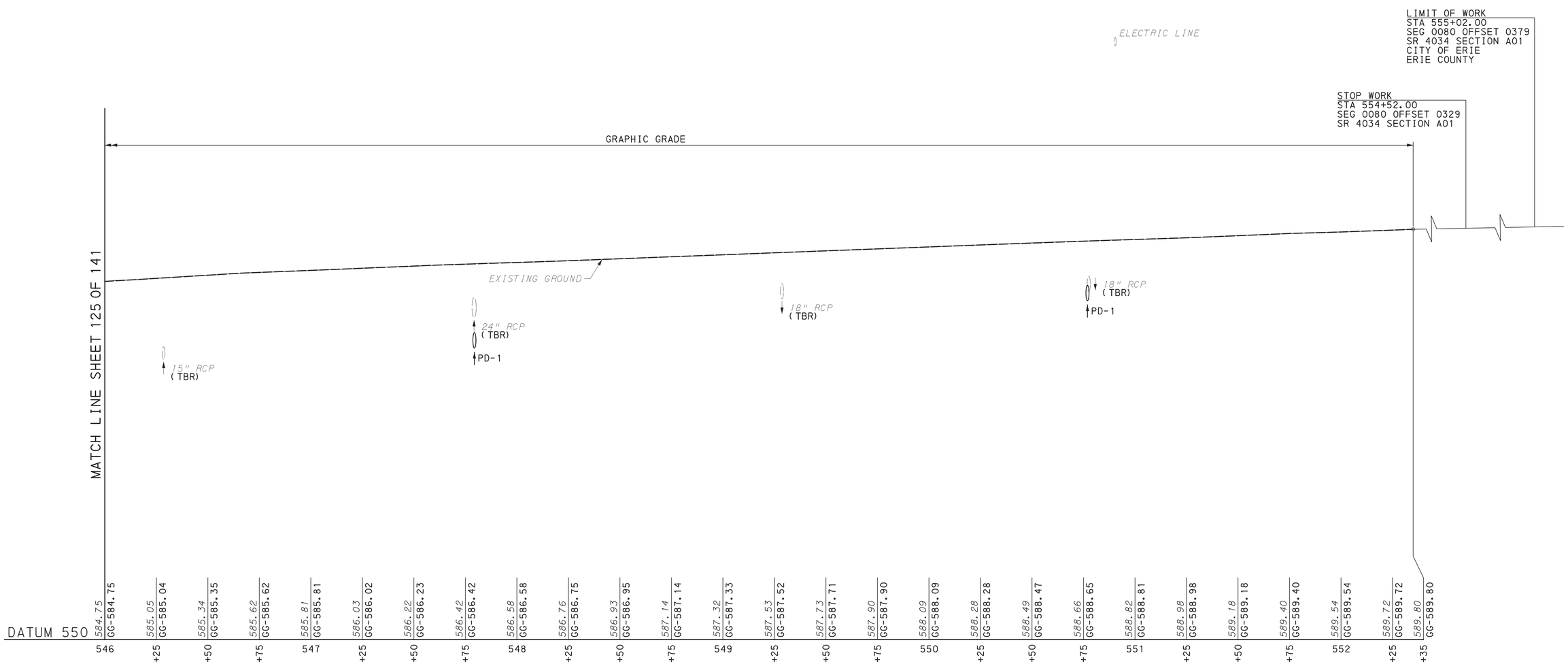
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr09_SR4034.dgn

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr10_SR4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	126 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034

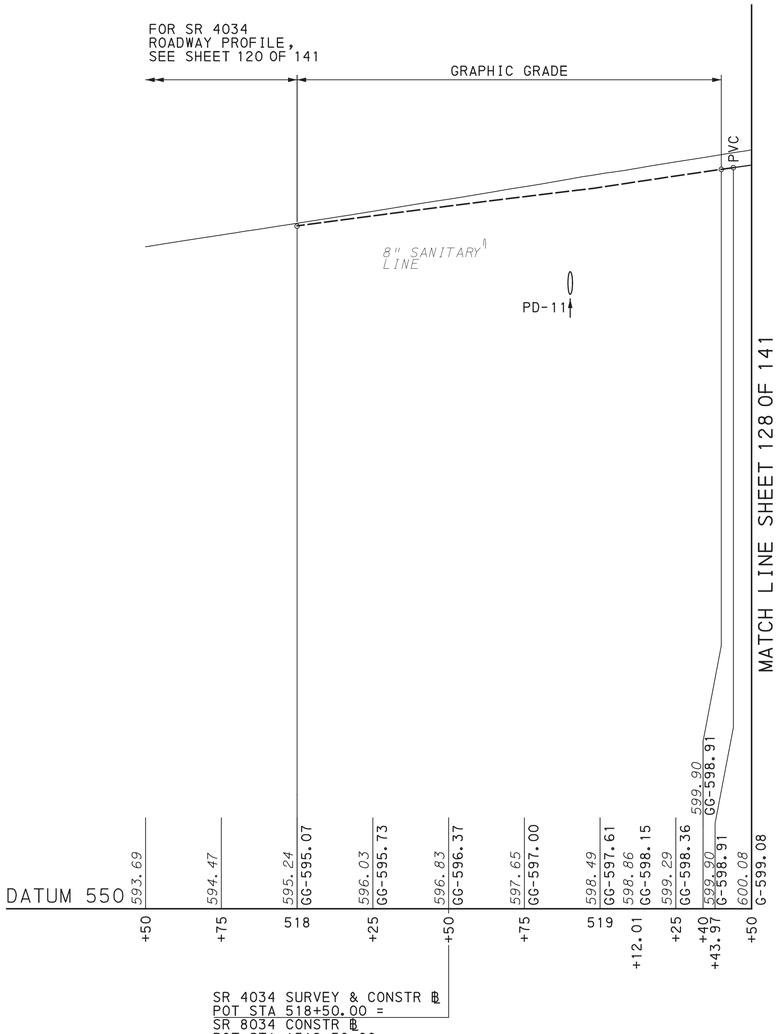
DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	111

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	127 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 EASTBOUND (PG EB) & SR 8034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	105

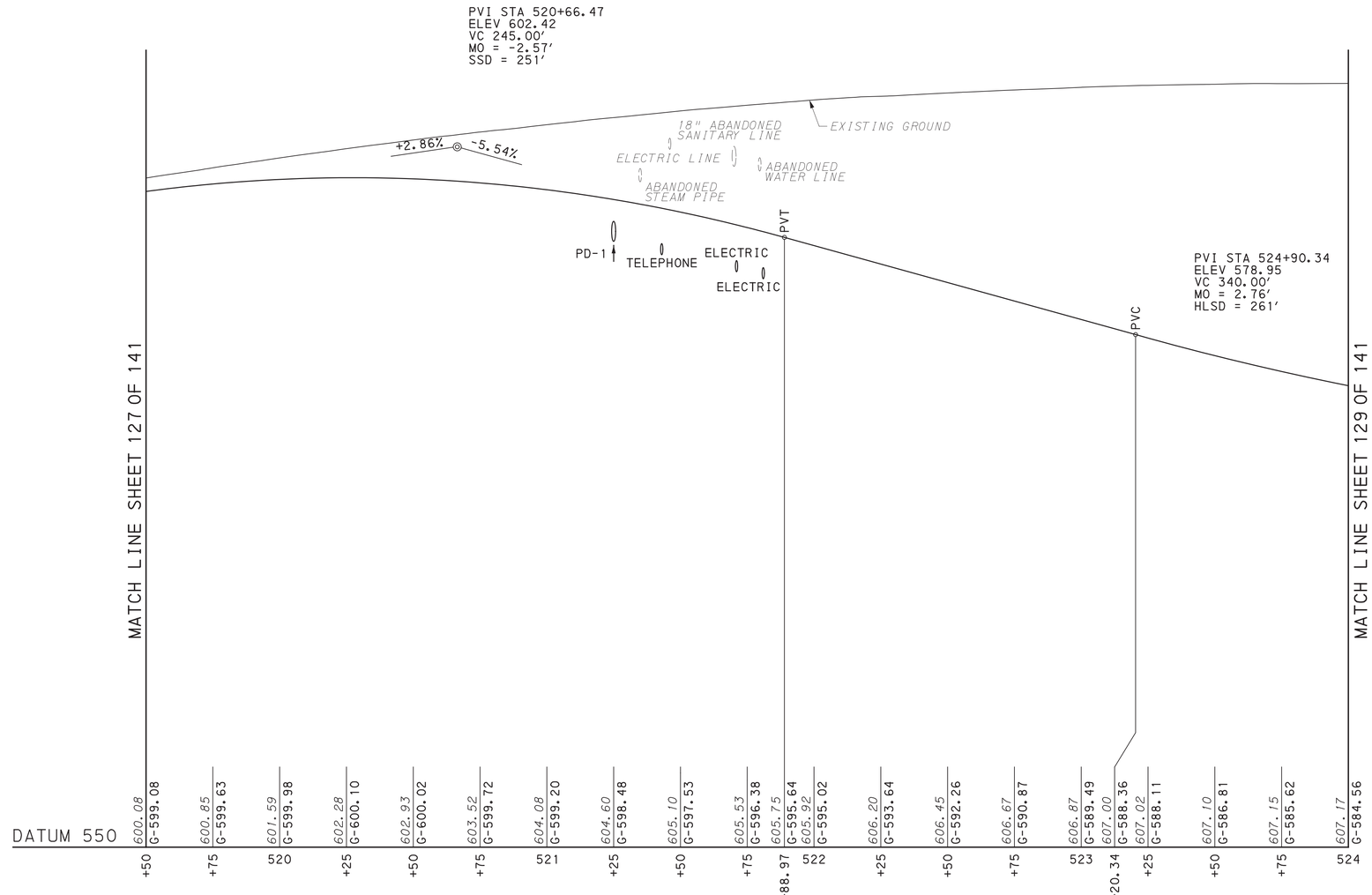
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr01_BypassEB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	128 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 EASTBOUND (PG EB)

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	106

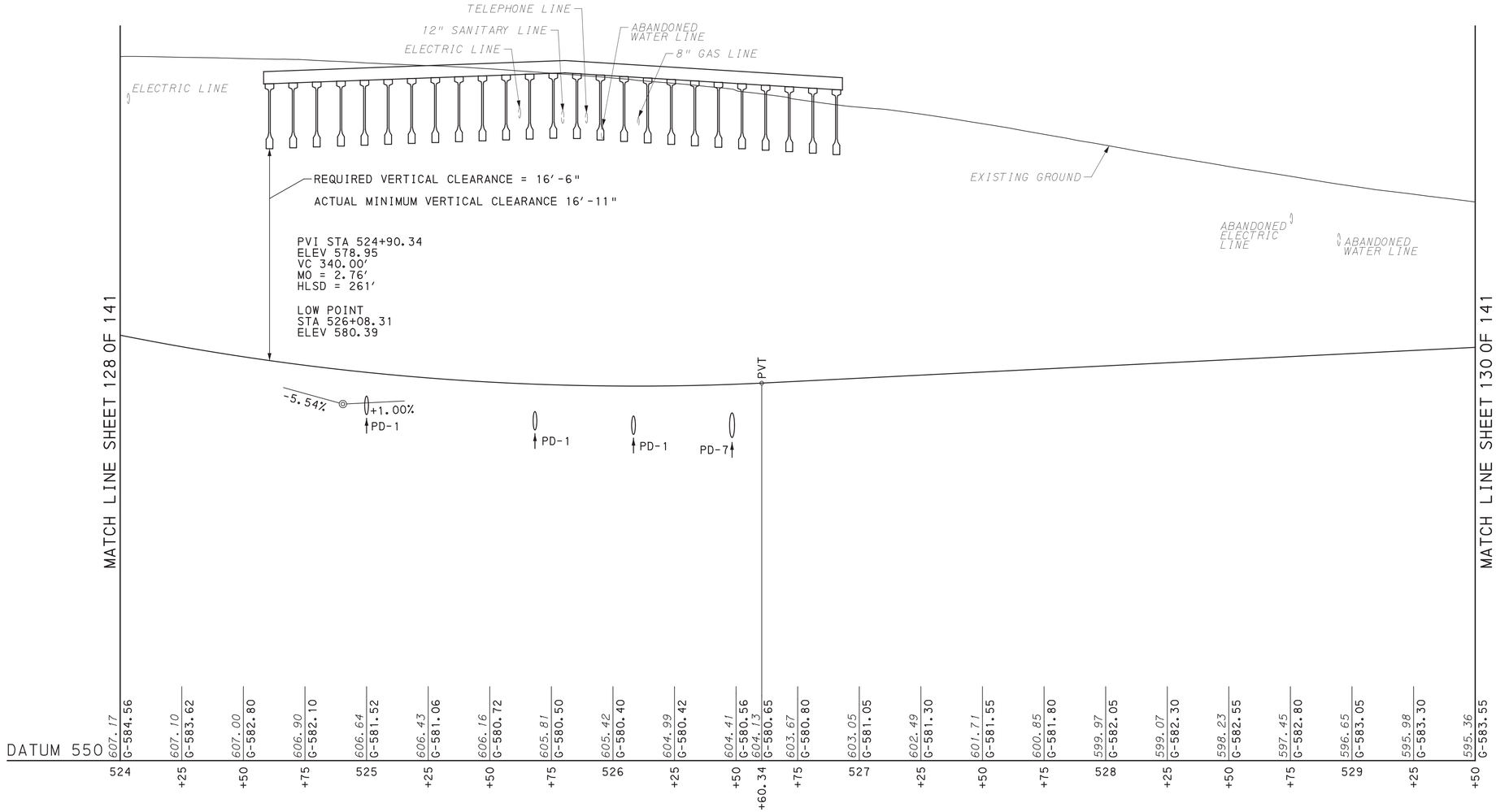
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr02_BypassEB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	129OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 EASTBOUND (PG EB)

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	107

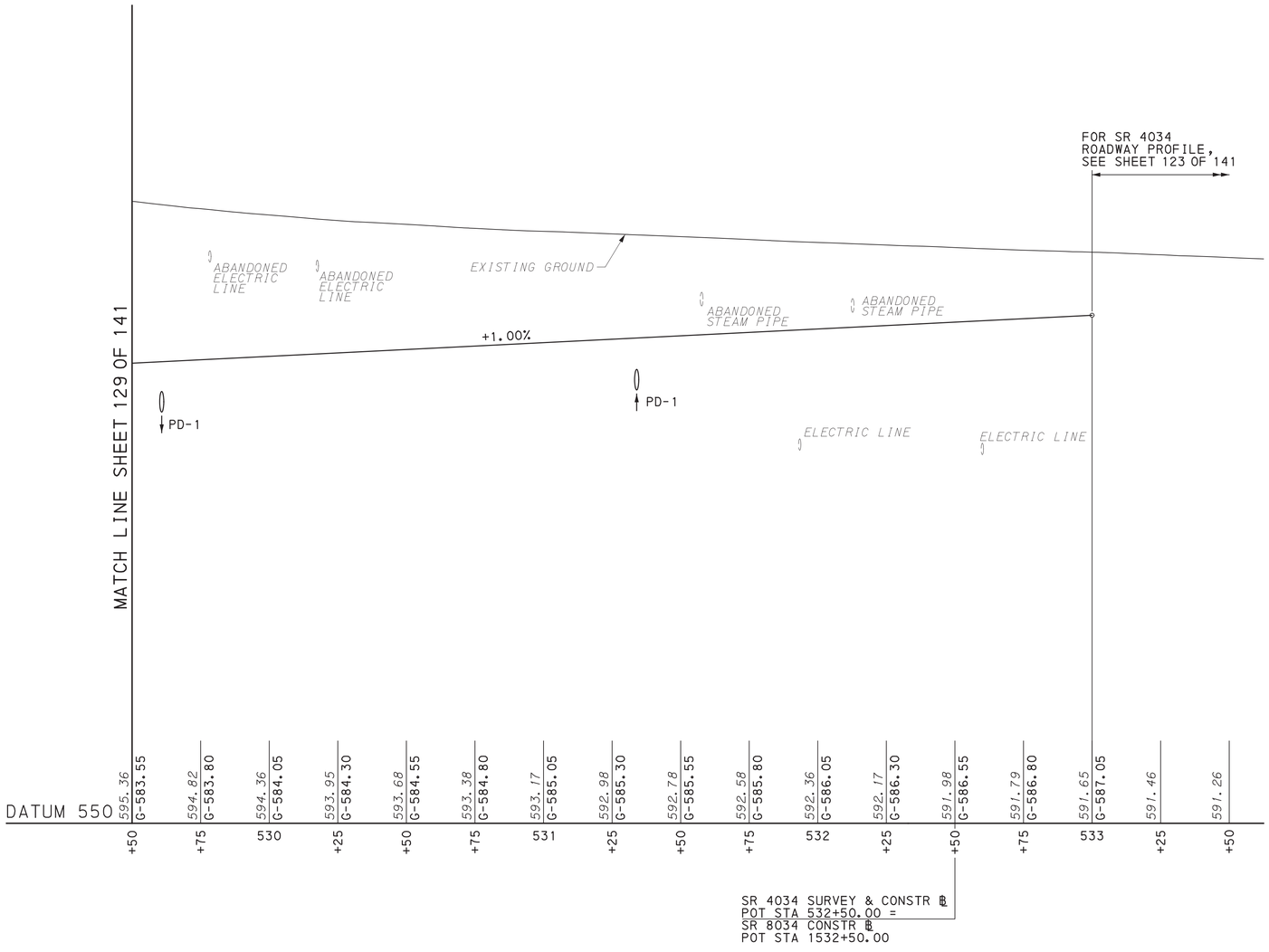
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr03_BypassEB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	130 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 8034 & SR 4034 EASTBOUND (PG EB)

REFERENCE DRAWINGS	SHEET
PLAN - SR 8034 & SR 4034	108

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

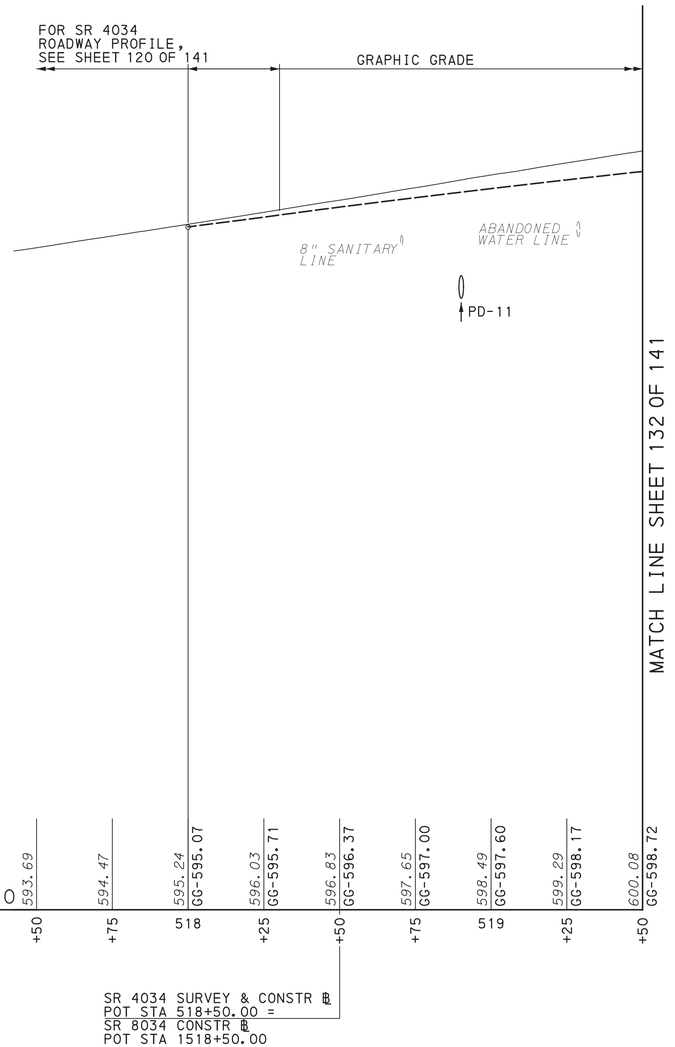
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr04_BypassEB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	131 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 EASTBOUND (PG WB) & SR 8034

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034 & SR 8034	105

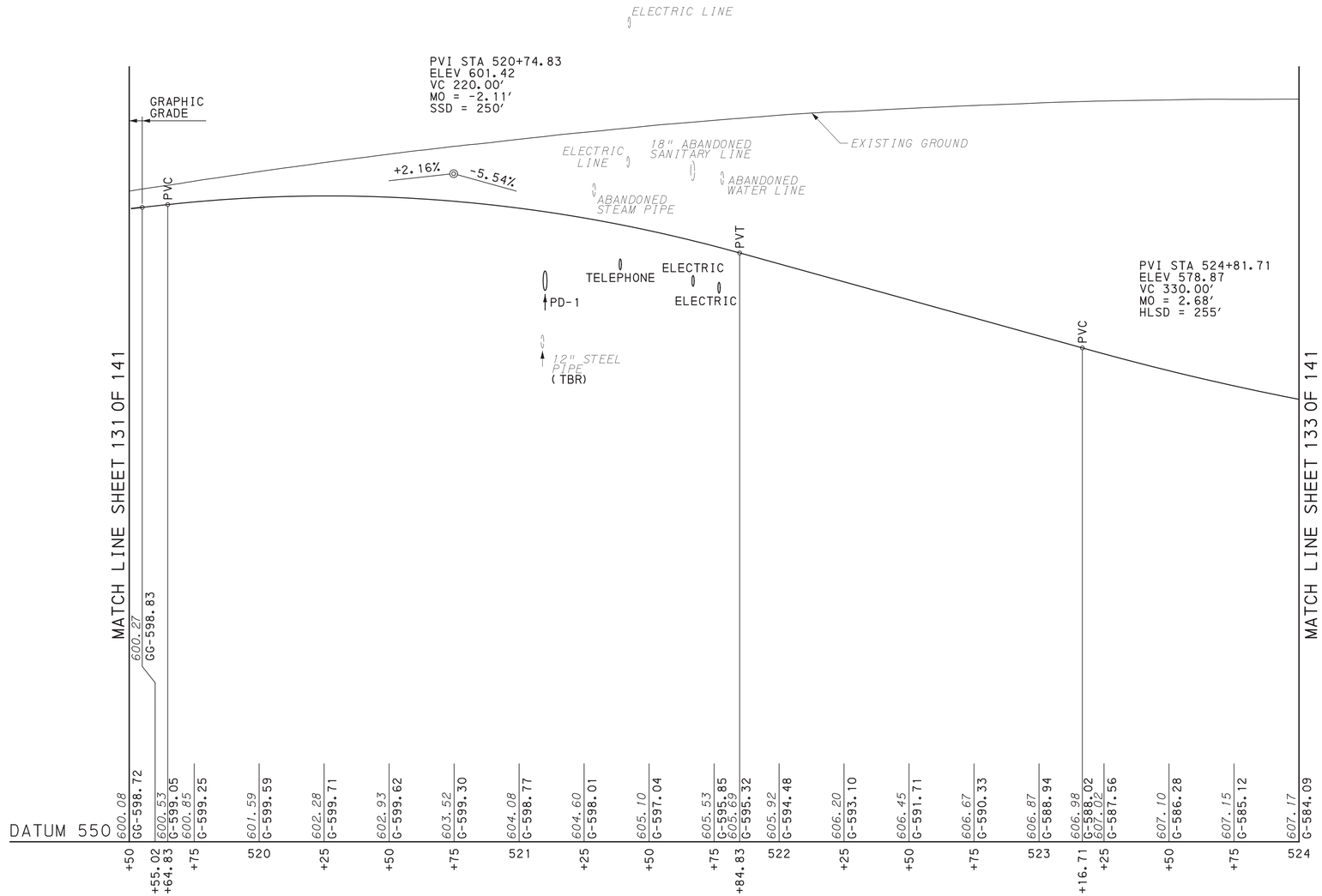
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr01_BypassWB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	132 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 WESTBOUND (PG WB)

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	106

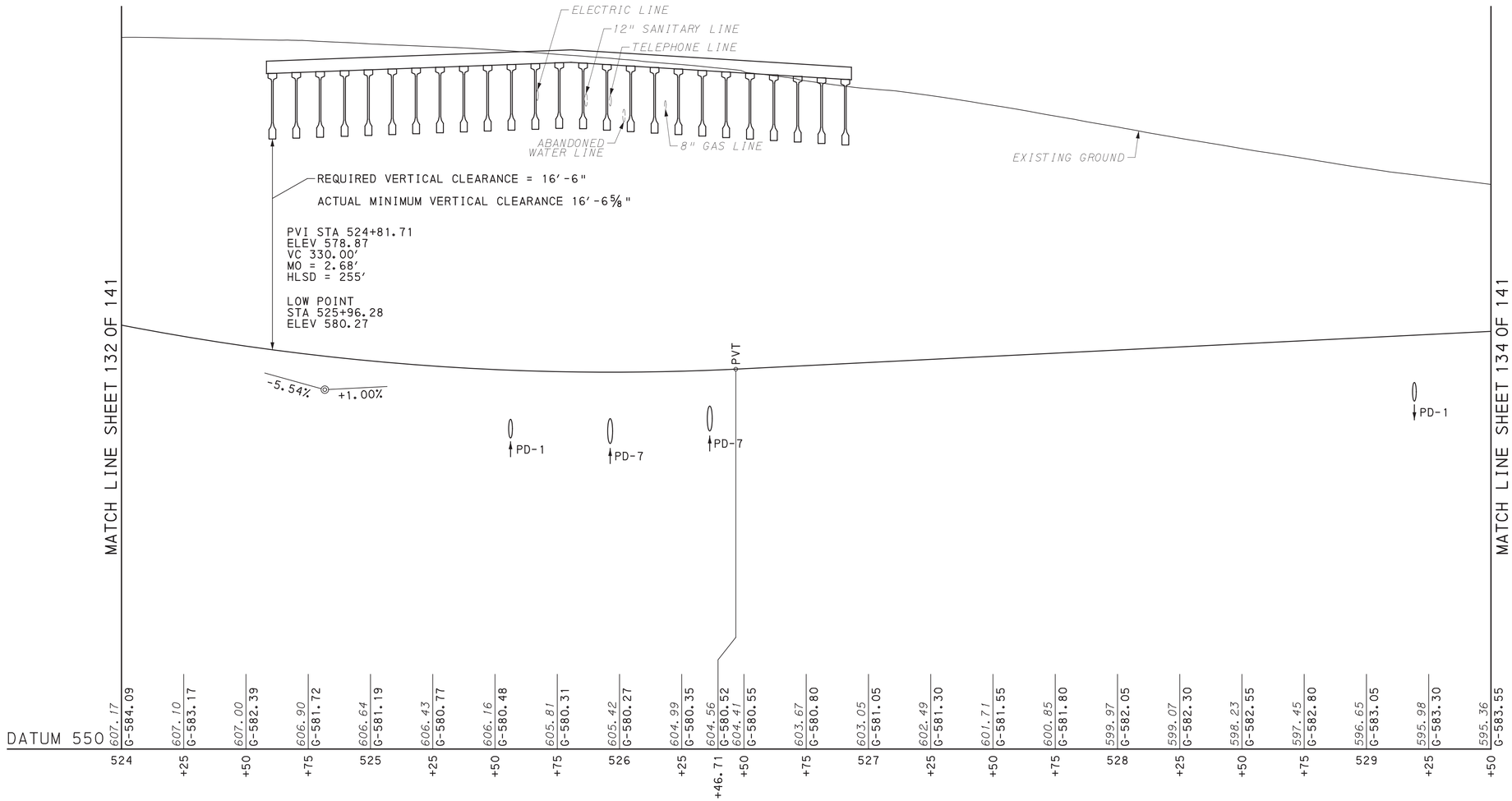
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr02_BypassWB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	133 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 4034 WESTBOUND (PG WB)

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	107

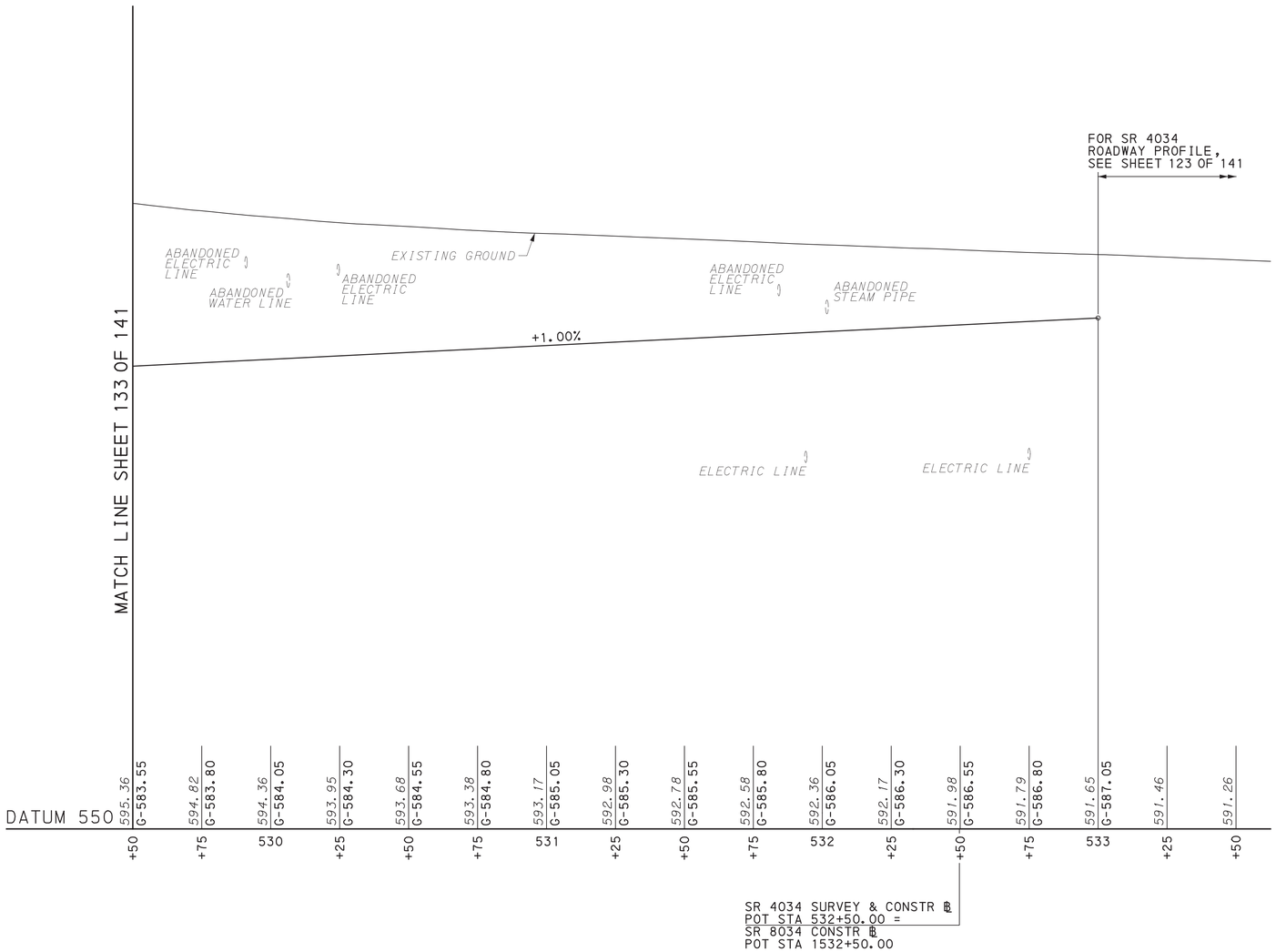
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr03_BypassWB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	134 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SR 8034 & SR 4034 WESTBOUND (PG WB)

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

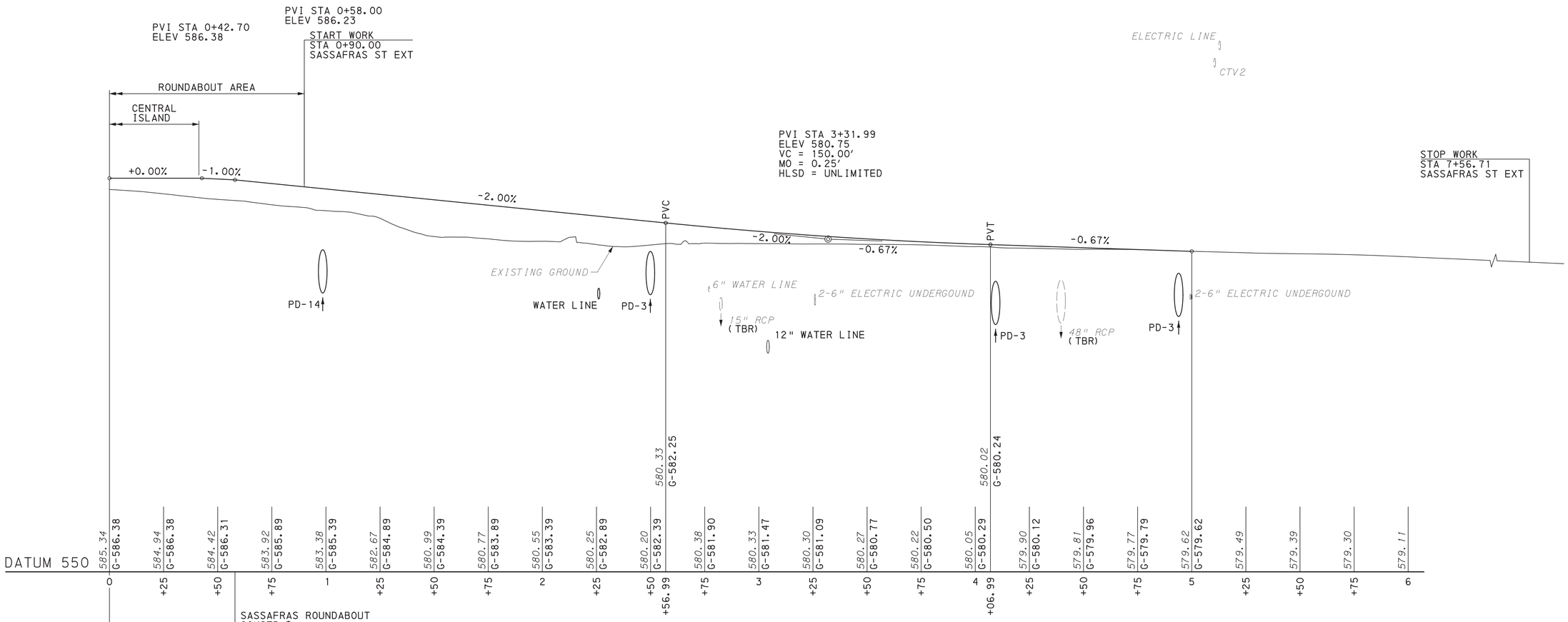
REFERENCE DRAWINGS	SHEET
PLAN - SR 8034 & SR 4034	108

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr04_BypassWB.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	135 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

SASSAFRAS STREET EXTENSION

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SASSAFRAS STREET EXTENSION	104,112

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDprf01_Sassafras.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	136 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

START WORK
STA 102+82.14
STATE ST

GRAPHIC GRADE

PD-3

GAS LINE

WATER LINE

PVC

PVI STA 108+77.38
ELEV 608.23
VC = 130.00'
MO = 0.81'
HLSD = 161'

WATER LINE

-7.00%

-2.00%

SANITARY LINE

PD-3

WATER LINE

8" GAS LINE

CABLE TV LINE

PVT

ABANDONED STEAM PIPE

ELECTRIC LINE

57" SANITARY LINE

EXISTING GROUND

REQUIRED VERTICAL CLEARANCE = 16'-6"

ACTUAL MINIMUM VERTICAL CLEARANCE 16'-11"

SR 4034 SURVEY & CONSTR ℄

EXISTING TUNNEL (TBR)

PD-2

24" RCP (TBR)

PD-10

ELECTRIC LINE

PVI STA 110+65.00
ELEV 604.48
VC = 75.00'
MO = -0.47'
SSD = 253'

PVC

-2.00%

-2.00%

-7.00%

PVT

-7.00%

12" WATER LINE

ELECTRIC LINE

6" PLASTIC GAS LINE

ABANDONED STEAM PIPE

TELEPHONE LINE

SANITARY LINE

CABLE TV LINE

PD-3

ELECTRIC LINE

ELECTRIC LINE (35KV 18-6") (6W X 3H)

ELECTRIC LINE (2) (12KV 20-5") (4W X 5H)

REQUIRED VERTICAL CLEARANCE = 16'-6"

ACTUAL MINIMUM VERTICAL CLEARANCE 16'-6⅝"

MATCH LINE SHEET 137 OF 141

DATUM 580	630.63	629.73	628.86	628.49	627.70	626.17	624.34	622.58	620.79	618.97	617.25	615.47	613.65	612.73	611.83	610.08	608.68	607.52	606.79	616.75	606.19	605.70	605.12	604.46	604.36	603.41	602.46	601.28	601.11	599.93	598.42	596.78
	+25	+50	+75	+84	106	+25	+50	+75	107	+25	+50	+75	108	+12.38	+25	+50	+75	109	+25	+42.38	+50	+75	110	+25	+27.50	+50	+75	111	+02.50	+25	+50	+75
	G-628.49	G-627.70	G-626.17	G-624.34	G-622.58	G-620.79	G-618.97	G-617.25	G-615.47	G-613.65	G-612.78	G-611.93	G-610.42	G-609.15	G-608.12	G-607.34	G-606.93	G-606.78	G-606.28	G-605.78	G-605.28	G-605.23	G-604.61	G-603.53	G-602.03	G-601.85	G-600.28	G-598.53	G-596.78				

SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

STATE STREET

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - STATE STREET	107, 113, 114

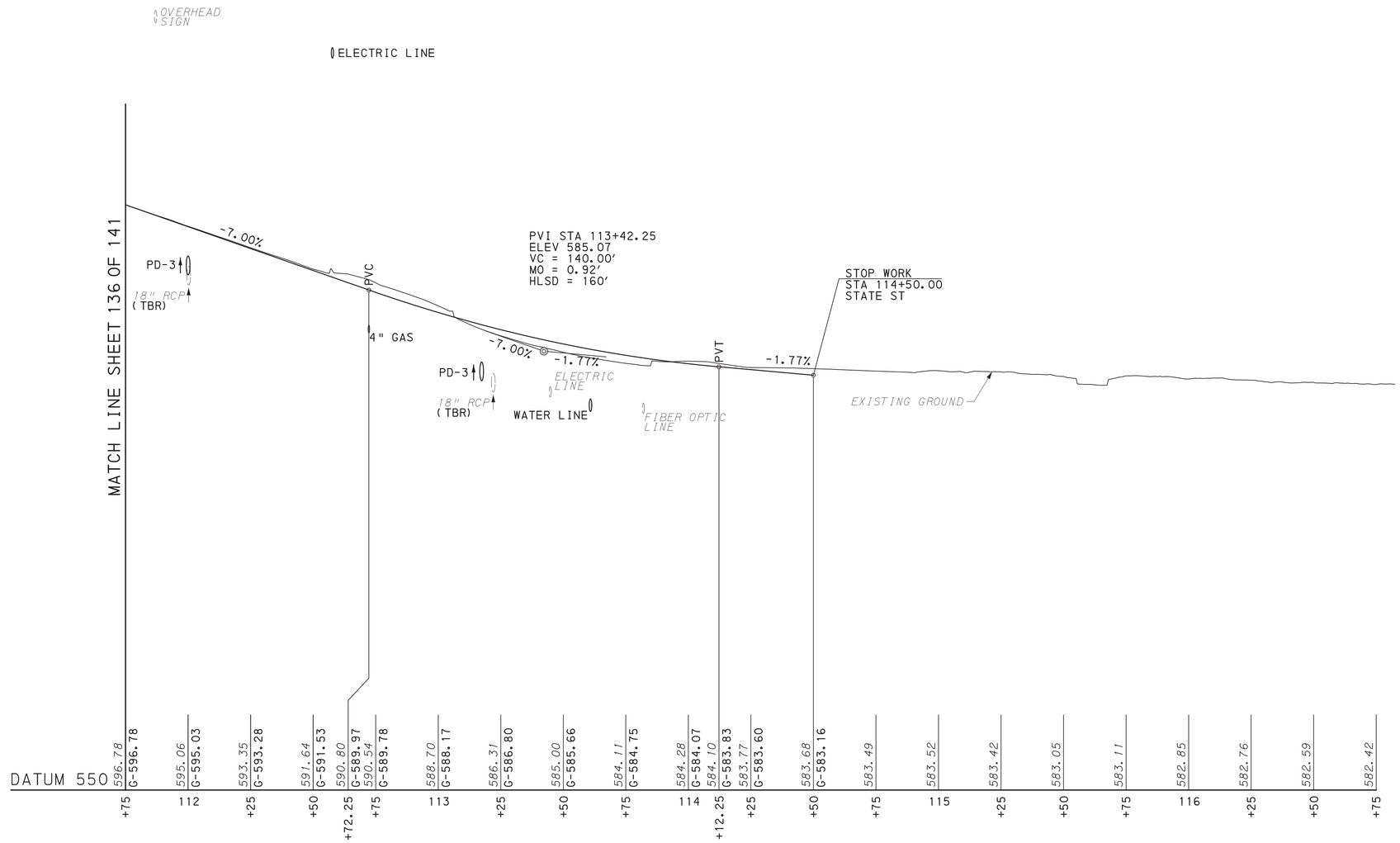
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr01_State.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	137 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

STATE STREET

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - STATE STREET	114

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/18/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr02_State.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	138 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/18/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr01_Holland.dgn

ELECTRIC LINE
ELECTRIC LINE
ELECTRIC LINE
TELEPHONE LINE

START WORK
STA 6+60.00
HOLLAND ST

BEGIN MILL AND OVERLAY
STA 7+64.27

GRAPHIC GRADE

ELECTRIC LINE

EXISTING GROUND

END MILL AND OVERLAY
BEGIN FULL DEPTH PAVEMENT
STA 9+30.00

ELECTRIC LINE
CABLE TV LINE
TELEPHONE LINE

PVI STA 11+62.20
ELEV = 595.78
VC = 110.00'
MO = 0.65'
HLSD = 155'

PVI STA 12+53.38
ELEV = 592.13

PVI STA 13+37.38
ELEV = 588.94

PVI STA 14+12.26
ELEV = 587.44
VC = 50.00'
MO = 0.19'
SSD = 384'

ELECTRIC LINE

ROUNDABOUT AREA

TELEPHONE LINE

CENTRAL ISLAND

ELECTRIC LINE

-8.74%
PVC
-8.74%
-4.00%
PVT
-4.00%
-3.80%
-2.00%
PVC
-2.00%
-5.00%

WATER LINE
10" SANITARY LINE
8" GAS LINE
12" SANITARY

PD-3
8" GAS LINE
56" SANITARY LINE

ABANDONED STEAM PIPE

ELECTRIC LINE
ELECTRIC LINE
ELECTRIC LINE
ELECTRIC LINE
ELECTRIC LINE (2-5" & 1-3")
ELECTRIC LINE
ABANDONED WATER LINE
PD-3
GAS LINE
ELECTRIC LINE
CABLE TV LINE

18" RCP (TBR)
24" RCP (TBR)
18" RCP (TBR)
PIPE

MATCH LINE SHEET 139 OF 141

DATUM 570	633.33	632.65	631.99 GG-631.99	631.25 GG-631.25	629.27 GG-629.27	626.93 GG-626.93	624.60 GG-624.60	622.27 GG-622.27	619.93 GG-619.93	617.58 GG-617.58	615.22 GG-615.22	612.86 GG-612.86	610.50 GG-610.50	608.14 GG-608.14	605.77 GG-605.77	604.27 GG-604.27	603.36 G-603.40	600.78 G-601.21	600.06 G-600.58	598.29 G-599.10	595.70 G-597.24	592.85 G-595.65	590.40 G-594.33	589.12 G-593.58	588.79 G-593.27	588.69 G-592.27	588.62 G-591.31	588.45 G-590.36	587.90 G-589.41	587.24 G-588.69	586.45 G-588.19	586.12 G-587.94	585.72 G-587.64	584.90 G-586.76
	+25	+50	+64.27	+75	8	+25	+50	+75	9	+25	+30	+50	+75	10	+25	+50	+64.97	+75	11	+07.20	+25	+50	+75	12	+17.20	+25	+50	+75	13	+25	+50	+75	+87.26	14	+25

HOLLAND ROUNDABOUT
CONSTR ℄
POC STA 2+45.31 =
HOLLAND SURVEY &
CONSTR ℄
POT STA 12+37.38

SR 4034 SURVEY & CONSTR ℄
POT STA 537+22.88 =
HOLLAND ST SURVEY &
CONSTR ℄
POT STA 12+95.38

HOLLAND ROUNDABOUT
CONSTR ℄
POC STA 0+59.21 =
HOLLAND ST SURVEY &
CONSTR ℄
POT STA 13+53.38

SCALE IN FEET
HORIZONTAL = 0 25 50
VERTICAL = 0 5 10

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - HOLLAND STREET	109, 115

HOLLAND STREET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	139 OF 141
CITY OF ERIE				

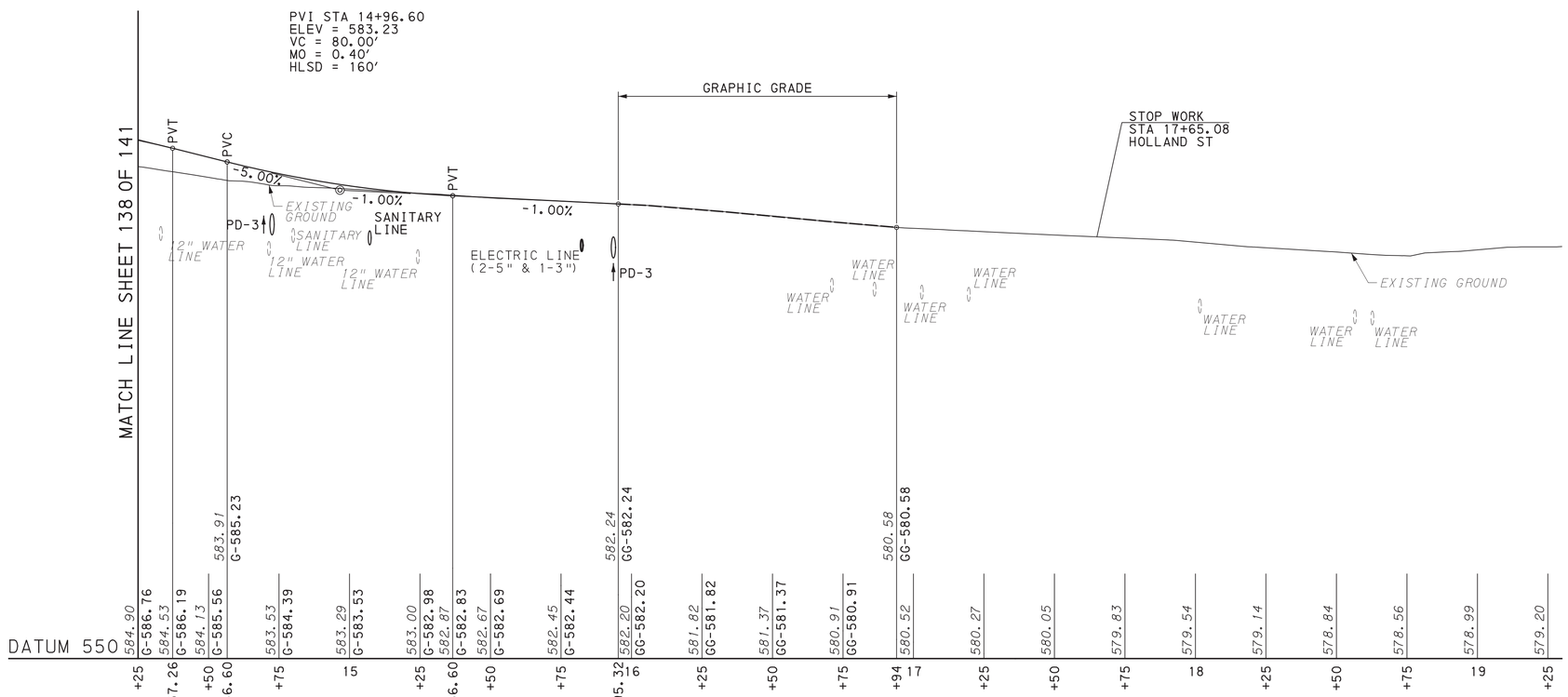
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/18/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr02_Holland.dgn

PVI STA 14+12.26
ELEV = 587.44
VC = 50.00'
MO = 0.19'
SSD = 384'

PVI STA 14+96.60
ELEV = 583.23
VC = 80.00'
MO = 0.40'
HLSD = 160'



SCALE IN FEET
HORIZONTAL= 0 25 50
VERTICAL= 0 5 10

HOLLAND STREET

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - HOLLAND STREET	109,116

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

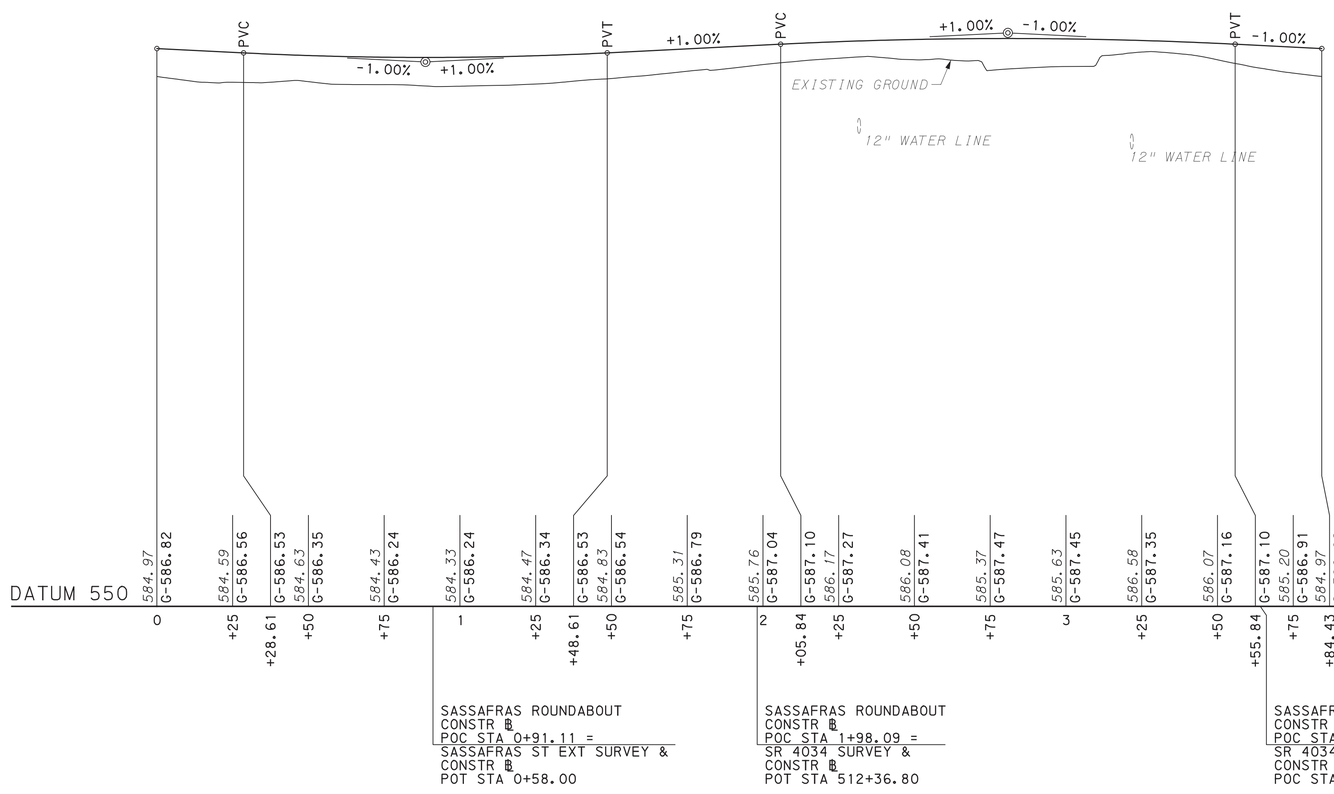
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	140 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA 0+88.61
ELEV = 585.93
VC = 120.00'
MO = 0.30'
HLSD = UNLIMITED

LOW POINT
STA 0+88.61
ELEV 586.23

PVI STA 2+80.84
ELEV = 587.85
VC = 150.00'
MO = -0.38'
SSD = 614'



SASSAFRAS ROUNDABOUT
CONSTR ℄
POC STA 0+91.11 =
SASSAFRAS ST EXT SURVEY &
CONSTR ℄
POT STA 0+58.00

SASSAFRAS ROUNDABOUT
CONSTR ℄
POC STA 1+98.09 =
SR 4034 SURVEY &
CONSTR ℄
POT STA 512+36.80

SASSAFRAS ROUNDABOUT
CONSTR ℄
POC STA 3+64.15 =
SR 4034 SURVEY &
CONSTR ℄
POC STA 513+57.25

SCALE IN FEET
HORIZONTAL = 0 25 50
VERTICAL = 0 5 10

SASSAFRAS ROUNDABOUT

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	104

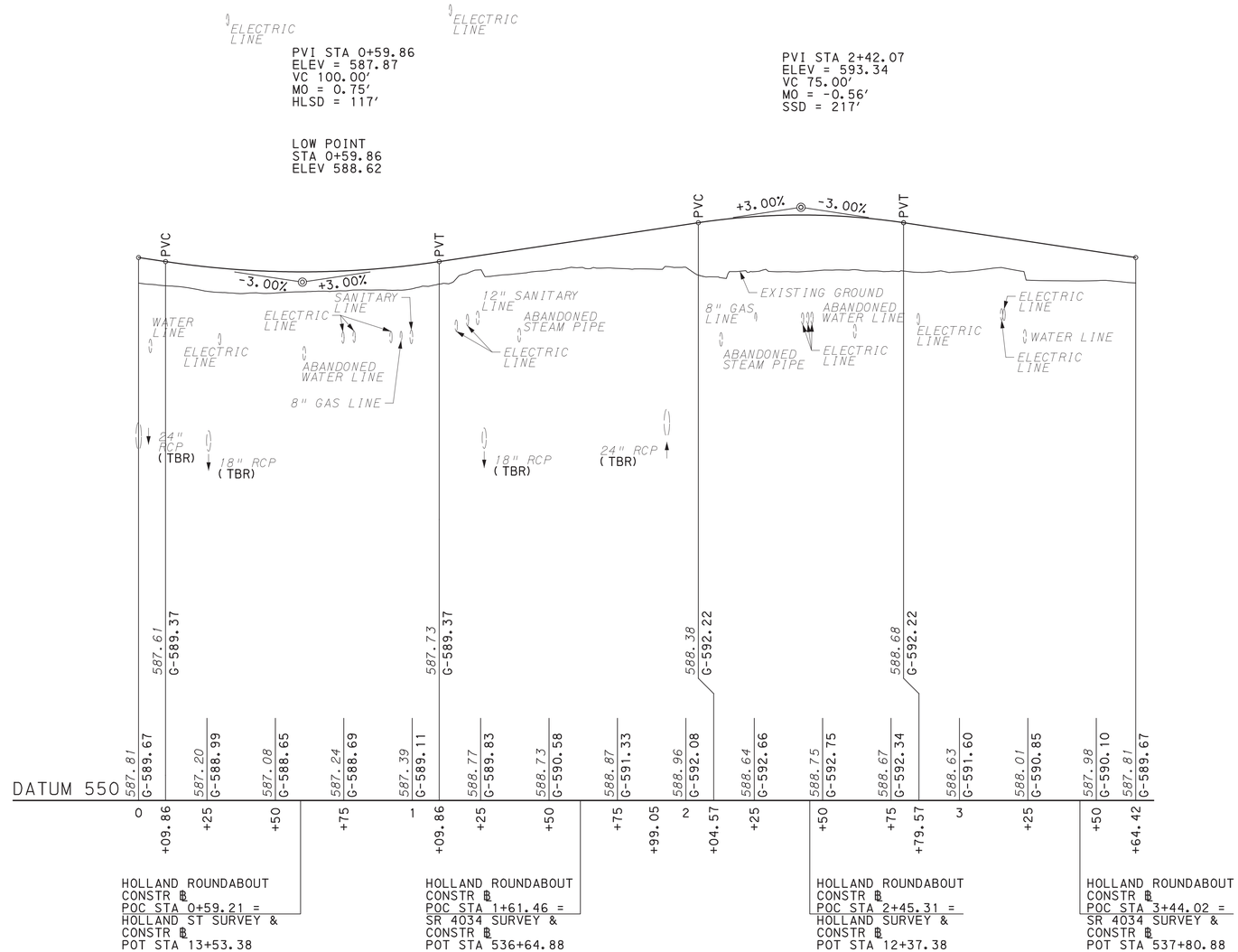
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDprf02_Sassafras.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	141 OF 141
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

HORIZONTAL= 0 25 50

VERTICAL= 0 5 10

HOLLAND ROUNDABOUT

DES: MJQ	CKD: JPO	DWG: DMC	CKD: JPO

REFERENCE DRAWINGS	SHEET
PLAN - SR 4034	109

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O'MARA
ENGINEER
PE079501

PLOTTED: 8/18/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\roadway\sheets\RDpr03_Holland.dgn

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mp1\sheets\TCgn01.dgn

GENERAL NOTES

THIS WORK CONSISTS OF THE MAINTENANCE OF TRAFFIC AND THE PROTECTION OF THE TRAVELING PUBLIC APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF THE CONSTRUCTION AND ON APPROVED DETOURS.

FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES AND MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION AND AT ALL OTHER TIMES IN ACCORDANCE WITH THE METHODS INDICATED ON THESE DRAWINGS AND THE FOLLOWING:

1. THE SPECIAL PROVISIONS OF THE CONTRACT.
2. PENNDOT PUBLICATION NO. 213, TEMPORARY TRAFFIC CONTROL GUIDELINES, APRIL 2022.
3. PENNDOT PUBLICATION NO. 212, (PA CODE, TITLE 67, CHAPTER 212), OFFICIAL TRAFFIC CONTROL DEVICES, MARCH 2006.
4. PENNDOT PUBLICATION NO. 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15), CURRENT REVISION.
5. PENNDOT PUBLICATION NO. 408, SPECIFICATIONS AND CURRENT REVISIONS.
6. PENNDOT PUBLICATION 236, HANDBOOK OF APPROVED SIGNS, NOVEMBER 2013 AND CURRENT REVISIONS.
7. PENNDOT PUBLICATION NO. 111, TRAFFIC CONTROL, PAVEMENT MARKINGS, AND SIGNING STANDARDS, TC-8600 AND TC-8700 SERIES, AUGUST 2021.
8. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) 2009 EDITION AND CURRENT REVISIONS.
9. PENNDOT PUBLICATION 148, TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, DECEMBER 2011.
10. PENNDOT PUBLICATION 149, TRAFFIC SIGNAL DESIGN HANDBOOK, OCTOBER 2010 (MAY 2013 UPDATE).
11. PENNDOT PUBLICATION 46, TRAFFIC ENGINEERING MANUAL, MARCH 2014.
12. PENNDOT PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION, JUNE 2010 AND CURRENT REVISIONS.

IMMEDIATELY UPON COMPLETION OF THE WORK, REMOVE THE DEVICES AND RETAIN THE DEVICES UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS. PENNDOT WILL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY DEPARTMENT FORCES.

THE INSPECTOR-IN-CHARGE WILL INSPECT ALL TRAFFIC CONTROL DEVICES PRIOR TO START OF WORK.

COVER OR REMOVE ALL SIGNS NOT IN USE.

NOTIFY DISTRICT TRAFFIC ENGINEER PRIOR TO IMPLEMENTING ANY CHANGES TO THE TRAFFIC CONTROL PLAN.

TURNING OF BARRICADE MOUNTED SIGNS WILL NOT BE PERMITTED.

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776 AT LEAST THREE (3) FULL WORKING DAYS BEFORE DIGGING.

ALL SIGNS AND DEVICES ON THIS PROJECT MUST COMPLY WITH CURRENT M.A.S.H CRITERIA.

ALL TRAFFIC CONTROL DEVICES SHALL BE IN PLACE AND INSPECTED BY THE PROJECT INSPECTOR DAILY PRIOR TO THE START OF WORK AND END OF WORK.

MAINTAIN CONSTANT SURVEILLANCE OF TRAFFIC CONTROL OPERATIONS AND SATISFACTORILY REPLACE OR CORRECT ALL MISSING, DAMAGED, INEFFECTIVE, OR MISALIGNED EQUIPMENT TO THE SATISFACTION OF THE INSPECTOR-IN-CHARGE.

CONSTRUCTION ENGINEER SHALL REPORT ALL TRAFFIC INCIDENTS TO THE DISTRICT TRAFFIC ENGINEER BY COPY OF THE TRAFFIC ACCIDENT REPORT FROM THE PENNSYLVANIA STATE POLICE.

WHEN TRAFFIC CONTROL SIGNS ARE PLACED IN A TEMPORARY TRAFFIC CONTROL AREA, ALL PERMANENT SIGNS THAT PROVIDE A CONFLICTING MESSAGE SHALL BE COVERED OR REMOVED. SEE PUBLICATION 408, SECTION 901.3(a), FOR DETAILS ON COVERING SIGNS.

ALL SIGNS AND DEVICES ARE TO BE NEW AT THE BEGINNING OF THE PROJECT AND ARE TO BE MAINTAINED TO PENNDOT'S SATISFACTION THROUGHOUT THE PROJECT DURATION.

MAINTAIN TRAVEL LANE IN GOOD CONDITION WHEN IN USE, TO THE SATISFACTION OF THE INSPECTOR-IN-CHARGE.

SIGN SHEETING SHALL BE LISTED IN PUBLICATION 35 (BULLETIN 15). SIGNS MANUFACTURED WITH A MESH OR TRANSPARENT QUALITY ARE PROHIBITED. REFER TO THE 2011 TRAFFIC SIGN RETROREFLECTIVE SHEETING IDENTIFICATION GUIDE IN APPENDIX B OF PENNDOT PUBLICATION 213 OR PENNDOT PUBLICATION 46, EXHIBITS 2-3 AND 2-4, FOR RETROREFLECTIVE MATERIAL AND LEVEL INFORMATION. SIGNS BEARING TYPE VII THROUGH XI RETROREFLECTIVE MATERIAL ARE CONSIDERED EQUIVALENT AND INTERCHANGEABLE.

THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES AS SPECIFIED IN SECTION 901.3 OF PUBLICATION NO. 408.

ADJUST ALL DISTANCES SLIGHTLY TO FIT FIELD CONDITIONS. ERECT ALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH PENNDOT PUBLICATION 213, GENERAL NOTE A-2.

WHEN WORK IS SUSPENDED FOR MORE THAN ONE HOUR, EQUIPMENT, VEHICLES, AND MATERIAL SHALL BE STORED A MINIMUM OF 30' FROM THE EDGE OF THE NEAREST OPEN TRAVEL LANE OR BEHIND A LONGITUDINAL BARRIER. IF THIS CANNOT BE ACCOMPLISHED, STORE THESE ITEMS AS FAR AS PRACTICAL FROM THE NEAREST ROADWAY EDGE AND DELINEATE WITH CHANNELIZING DEVICES.

THE TRAFFIC CONTROL DEVICES SHOWN DO NOT NECESSARILY DEPICT THE ACTUAL NUMBER OF DEVICES REQUIRED. PLACE ANY ADDITIONAL DEVICES AS DIRECTED BY THE INSPECTOR-IN-CHARGE.

ERADICATE ALL CONFLICTING PAVEMENT MARKINGS USING APPROVED METHODS. REPLACE ALL PAVEMENT MARKINGS UPON COMPLETION OF THE CONTRACT.

ALL FLAGGERS ARE TO BE IN RADIO COMMUNICATION AT ALL TIMES DURING WORKING HOURS.

ANY SPECIAL SIGNS ARE TO BE FABRICATED IN ACCORDANCE WITH THE MOST CURRENT TC-8700 STANDARDS.

PROVIDE NEW REFLECTIVE SHEETING FOR ALL SIGNS AND DEVICES, E.G. SUPPORTS, SIGN BLANKS, DRUMS, VERTICAL PANELS, ETC. THESE DEVICES SHALL BE CLEAN AND FREE FROM ALL DEFECTS.

MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. INSTALL DRUM MOUNTED "ENTER HERE" SIGNS AT BUSINESS DRIVES WHEN DIRECTED BY THE INSPECTOR-IN-CHARGE. PROVIDE TEMPORARY ACCESS DRIVES OF A WIDTH ADEQUATE TO ACCOMMODATE COMMERCIAL OR TWO-WAY TRAFFIC WHERE APPLICABLE.

PROVIDE ADEQUATE NUMBER OF TYPE III BARRICADES AND CHANNELIZING DEVICES AT ROAD CLOSURE LOCATIONS TO COMPLETELY CLOSE THE ROADWAY.

NOTIFY THE DISTRICT TRAFFIC ENGINEER IN WRITING AT LEAST 12 WORKING DAYS PRIOR TO MAKING ANY TRAFFIC PATTERN CHANGES AND WHEN PROJECT IS COMPLETE.

DOCUMENT NOTIFICATION TO THE APPROPRIATE MUNICIPAL OFFICIALS, POSTAL SERVICE, SCHOOLS, AND EMERGENCY AUTHORITIES (POLICE, FIRE, AND AMBULANCE SERVICES) A MINIMUM OR TWO (2) WEEKS PRIOR TO SIGNIFICANT TRAFFIC IMPACTS.

VERIFY THE ACTUAL START OF WORK ONE (1) DAY IN ADVANCE. NOTIFY ALL AGENCIES ONE (1) WEEK PRIOR TO OPENING ROAD.

ALL SHORT-TERM OPERATIONS LEAD IN SIGNS SHOULD BE MOUNTED ON PORTABLE SIGN STANDS ONLY AS STATED IN BULLETIN 15.

WORKERS ENGAGED IN OR ENTERING INTO ANY FIELD OPERATION ARE REQUIRED TO WEAR HARD HATS MEETING ANSI TYPE I REQUIREMENTS AND HIGH VISIBILITY VESTS, T-SHIRTS, OR SWEATSHIRTS WHICH MEET THE ANSI CLASS 2 OR 3 SAFETY GARMENT REQUIREMENTS. A RAINCOAT OR JACKET WHICH MEETS ANSI CLASS 2 OR 3 SAFETY GARMENT REQUIREMENTS MAY BE WORN DURING INCLEMENT WEATHER. FURTHERMORE:

- ALL VISITORS AND OTHERS PRESENT ON A WORK SITE IN AN OFFICIAL CAPACITY MUST COMPLY WITH THE REQUIREMENTS.
- PENNDOT EMPLOYEES SHALL REFER TO PUBLICATION 445, SAFETY POLICY HANDBOOK, AND ANY APPLICABLE PENNDOT MEMORANDA REGARDING PERSONAL PROTECTIVE EQUIPMENT (PPE) AND WORK ATTIRE.
- EMERGENCY, INCIDENT RESPONDERS, AND LAW ENFORCEMENT PERSONNEL WITHIN TTC ZONES SHOULD WEAR HIGH VISIBILITY PUBLIC SAFETY VESTS THAT MEET THE PERFORMANCE REQUIREMENTS OF THE ANSI/ISEA 207-2011 (REFER TO MUTCD SECTION 1A.11).

ANY PROPOSED CHANGES TO THE APPROVED TRAFFIC CONTROL PLAN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA, SHALL BE CONSISTENT WITH STANDARD DESIGN PRACTICES, AND SHALL BE SUBMITTED AT LEAST THREE WEEKS PRIOR TO PLANNED IMPLEMENTATION. NO CONSTRUCTION ACTIVITY WILL BE ALLOWED UNTIL THE CONTRACTOR'S ALTERNATE PLANS ARE APPROVED IN WRITING BY THE DISTRICT TRAFFIC ENGINEER. ALTERNATE PLANS MUST OFFER BENEFITS EQUAL TO OR BETTER THAN THE ORIGINAL TCP. MODIFICATIONS TO THE APPROVED TCP PLAN THAT BECOME NECESSARY SHALL ALSO BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER.

CONTRACTOR SHALL NOTIFY LOCAL EMERGENCY AUTHORITIES (E.G. POLICE, FIRE, MEDICAL), AFFECTED POST OFFICE(S), BUSINESSES, SCHOOL DISTRICT(S), AUTOMATED PERMIT ROUTING/ANALYSIS SYSTEM (APRAS) COORDINATOR AT LEAST 14 DAYS PRIOR TO ANY SIGNIFICANT TRAFFIC IMPACTS (E.G. LATERAL WIDTH RESTRICTIONS LESS THAN 12 FEET, DETOURS).

INPUT FORM M-937R, ROUTE/BRIDGE RESTRICTION FORM INTO PPCC UNDER SUBMITTAL TYPE "TRAFFIC ROUTE BRIDGE RESTRICTION" A MINIMUM OF THREE (3) WEEKS PRIOR TO THE START OF CONSTRUCTION. CONTACT MRS. BECKY KELLEY (PHONE: 814-678-7038) TO VERIFY THE ACTUAL START OF WORK ONE (1) DAY IN ADVANCE. NOTIFY MRS. BECKY KELLEY ONE (1) DAY PRIOR TO OPENING ROADWAY TO NORMAL, UNRESTRICTED TRAFFIC FLOW.

CONTRACTOR SHALL ENSURE PROPER TEMPORARY BARRIER DEFLECTION DISTANCES TO DROPOFFS AND OBSTRUCTIONS ARE MAINTAINED IN ACCORDANCE WITH PENNDOT PUBLICATION 213.

INVENTORY EXISTING SEGMENT PADDLES WITHIN THE PROJECT LIMITS. ALL SIGNS DISTURBED OR REMOVED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY ROAD CLOSURE, LANE CLOSURE, OR LANE RESTRICTION OVER 15 MINUTES NEEDS TO BE REPORTED TO THE TRAFFIC MANAGEMENT CENTER (814-678-5003) TO ENSURE ROAD CONDITION REPORTING SYSTEM (RCRS) DATA IS ENTERED WHEN LANE RESTRICTIONS OR CLOSURES ARE IN PLACE. INFORMATION REQUIRED AT TIME OF CALL: COUNTY, NEAREST TOWN, SR, NEAREST ROADS TO LOCATION, THE BEGINNING TIME, EXPECTED ENDING TIME, DETOUR ROUTE IF APPLICABLE, CONTACT NAME, AND PHONE NUMBER (WHO CAN BE REACHED IF THERE ARE ANY QUESTIONS OR CONCERNS).

NOTIFY THE ASSISTANT CONSTRUCTION ENGINEER AND INSPECTOR IN CHARGE IN WRITING A MINIMUM OF THREE (3) WEEKS PRIOR TO THE START OF CONSTRUCTION. CONTACT THE ASSISTANT CONSTRUCTION ENGINEER TO VERIFY THE ACTUAL START OF WORK ONE (1) DAY IN ADVANCE. NOTIFY ALL AGENCIES ONE WEEK PRIOR TO OPENING ROAD.

IN PEDESTRIAN AREAS, DELINEATE OPEN EXCAVATION, OBSTRUCTIONS, OR OTHER EXPOSED HAZARDS. PROVIDE DETECTABLE DELINEATION IN SUCH AREAS USING ORANGE, REFLECTIVE SAFETY FENCE. MAINTAIN PEDESTRIAN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	1 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

INDEX OF DRAWINGS

GENERAL NOTES	1 - 2
TABULATION OF QUANTITIES	3 - 10
TYPICAL SECTIONS	11 - 27
DETAIL SHEETS	28 - 32
SIGN FABRICATIONS	33 - 40
STAGE 1B	41 - 48
STAGE 1C	49 - 58
STAGE 1D	59 - 67
STAGE 2A	68 - 84
STAGE 2B	85 - 101
STAGE 3A	102 - 117
STAGE 3B	118 - 133
STAGE 3D	134 - 135
STAGE 3E	136 - 137
STAGE 3F	138 - 139
STAGE 4	140 - 155
STAGE 5A	156 - 171
STAGE 5B	172 - 187
STAGE 5C	188 - 203
STAGE 5D	204 - 219
STAGE 6	220 - 235
DETOUR SHEETS	236 - 254
TEMPORARY TRAFFIC SIGNALS	255 - 273

TRAFFIC CONTROL PLAN
GENERAL NOTES

RECOMMENDED:

Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2022.08.24 09:01:45 -04'00'

DISTRICT TRAFFIC ENGINEER — DATE

PREPARED BY:
ms consultants, inc.
300 CORPORATE CENTER DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAMIAN JOSEPH GEORGE — ENGINEER — PE075334

Damian J. George
PROFESSIONAL ENGINEER
08/01/2022
DATE

PREPARED BY:
ms consultants, inc.
300 CORPORATE CENTER DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MEGAN S. McDERMOTT — ENGINEER — PE076999

Megan S. McDermott
PROFESSIONAL ENGINEER
08/01/2022
DATE

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	2 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TEMPORARY SIGNAL CONSTRUCTION NOTES

1. THE USE OF PORTABLE TRAFFIC CONTROL SIGNALS IN PENNSYLVANIA FOR LONG-TERM OPERATIONS SHALL WITH THE PROVISIONS OF THESE FIGURES.
2. REFER TO APPENDIX D OF PUBLICATION 213 FOR ADDITIONAL NOTES AND PERMIT INFORMATION PERTAINING TO PORTABLE TRAFFIC CONTROL SIGNALS.
3. FURNISH, ERECT, AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION AND AT ALL OTHER TIMES IN ACCORDANCE WITH THE METHODS INDICATED ON THESE DRAWINGS AND IN:
   - PUBLICATION 149, TRAFFIC SIGNAL DESIGN HANDBOOK.
   - PUBLICATION 212, OFFICIAL TRAFFIC CONTROL DEVICES.
   - PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES.
4. REMOVE CONFLICTING PAVEMENT MARKINGS.
5. STOP BARS SHALL BE INSTALLED WITH PORTABLE TRAFFIC CONTROL SIGNALS FOR LONG-TERM OPERATIONS. EXISTING CONFLICTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS BETWEEN STOP BARS SHALL BE REMOVED. AFTER PORTABLE TRAFFIC CONTROL SIGNALS ARE REMOVED, THE STOP BARS SHALL BE REMOVED AND THE PERMANENT PAVEMENT MARKINGS RESTORED. THIS WORK WILL BE INCIDENTAL TO 0958-00** (0021, 0022, 0023, 0024, 0041, 0121, 0122, 0123, 0221, 0222, 0261, 0262, 0263, 0341, 0421, 0422, 0423).
6. SEE ADDITIONAL NOTES CONCERNING SIGNAL PERMIT IN PUBLICATION 213, PATA 706 AND APPENDIX D.
7. PAYMENT FOR PORTABLE TEMPORARY TRAFFIC SIGNALS TO INCLUDE ALL REQUIRED UNITS, VIDEO DETECTION, STOP BARS, PAINT, AND ERADICATION REQUIRED TO OPERATE AND MAINTAIN THE SITE PROPERLY.
8. DETAILS OTHER THAN THOSE INDICATED ARE ON THE FOLLOWING STANDARD DRAWINGS:
   - TC-8600 (JUNE 13, 2013)
   - TC-8716 (JUNE 13, 2013)
   - TC-8717 (JUNE 13, 2013)
9. SIGNAL SUPPORTS SHALL BE A MINIMUM OF 2 FEET OFF THE EDGE OF TRAVEL WAY. IF THIS OFFSET IS NOT POSSIBLE, THE SUPPORTS SHALL BE ADEQUATELY PROTECTED BY BARRIER, GUIDE RAIL, OR CHANNELIZING DEVICES.
10. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
11. INSTALL SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY WITH THE BOTTOMS NOT LESS THAN 17 FEET NOR MORE THAN 18 FEET ABOVE THE ROADWAY.
12. SIGNS ARE TO BE NEW OR IN LIKE NEW CONDITION. ANCHOR POST SHALL NOT EXTEND HIGHER THAN 4 INCHES ABOVE GROUND LEVEL.
13. ADVANCE WRITTEN APPROVAL MUST BE OBTAINED FROM PENNDOT PRIOR TO USING TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS FOR LONG-TERM STATIONARY OPERATIONS ON ANY PUBLIC HIGHWAY. A PENNDOT TEMPORARY TRAFFIC CONTROL SIGNAL PERMIT AND SITE-SPECIFIC DRAWING ARE REQUIRED FOR LONG-TERM OPERATIONS, AND A COPY MUST BE MAINTAINED ON-SITE DURING THE PERIOD OF THE TEMPORARY TRAFFIC CONTROL SIGNAL USAGE.
14. SOME DISTANCES MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
15. WITHIN 5 HOURS OF NOTIFICATION OF A FLASH CONDITION OR VEHICULAR SIGNAL DISPLAY OUTAGE, QUALIFIED PERSONNEL ARE TO BE ON-SITE MAKING REPAIRS AND/OR CONTROLLING TRAFFIC.
16. A MINIMUM OF TWO SIGNAL FACES ON EACH APPROACH SHALL BE CONTINUOUSLY VISIBLE TO APPROACHING TRAFFIC FROM A POINT MEETING THE MINIMUM SIGNAL FACE VISIBILITY DISTANCES SPECIFIED IN FIGURE 1 ON THIS SHEET.
17. ADDITIONAL SIGNS AND DEVICES SHALL BE INSTALLED AS REQUIRED IN PENNDOT PUBLICATIONS 212 AND 213, AND AS REQUIRED BASED ON ACTUAL SITE CONDITIONS.
18. SIGNAL MODULES MUST BE REPLACED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND A RECORD OF THIS REPLACEMENT MUST BE MAINTAINED BY THE USER.
19. WHEN NOT IN OPERATION, SIGNAL HEADS SHALL BE REMOVED FROM THE VIEW OF TRAFFIC OR HOODED WITH A MATERIAL THAT COVERS THE SIGNAL INDICATIONS FROM THE VIEW OF TRAFFIC. ALL INAPPROPRIATE SIGNS SHALL ALSO BE REMOVED, COVERED, FOLDED, OR TURNED SO THAT THEY ARE NOT READABLE BY ONCOMING TRAFFIC WHEN THE TEMPORARY TRAFFIC CONTROL SIGNAL IS NOT IN OPERATION.
20. PROVIDE MANUAL CORD FOR TRAFFIC CONTROL OPERATIONS.
21. PENNDOT RESERVES THE RIGHT TO INSPECT EACH TEMPORARY TRAFFIC CONTROL SIGNAL USAGE. PENNDOT ALSO RESERVES THE RIGHT TO REVOKE A TEMPORARY TRAFFIC CONTROL SIGNAL PERMIT IF THE USER SHALL AT ANY TIME WILLFULLY OR NEGLIGENTLY FAIL TO COMPLY WITH THE CONDITIONS CONTAINED IN THE PERMIT OR PUBLICATION 213, OR FAIL TO MAKE ANY CHANGES IN THE OPERATION OF THE SIGNAL, OR TO REMOVE IT, WHEN SO ORDERED BY PENNDOT. THE USER SHALL NOT MAKE ANY CHANGE IN THE OPERATION OF THE TEMPORARY TRAFFIC CONTROL SIGNAL AS DEFINED IN THE PERMIT DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL OF PENNDOT.
22. WHEN THE TEMPORARY TRAFFIC CONTROL SIGNAL IS CHANGED TO FLASHING MODE, EITHER MANUALLY OR AUTOMATICALLY, RED SIGNAL INDICATIONS SHALL BE FLASHED TO ALL APPROACHES.
23. LOCATE AND INSTALL VIDEO DETECTORS PER MANUFACTURER RECOMMENDATION TO PROVIDE DETECTION ZONES AS SHOWN ON PLAN.

FIGURE 1
MINIMUM LENGTH OF GREEN INTERVAL

ANNUAL AVERAGE DAILY TRAFFIC (VEH/DAY)	REQUIRED MINIMUM LENGTH OF GREEN INTERVAL (SEC)
LESS THAN 1000	10
LESS THAN 1500	10
LESS THAN 2000	10
LESS THAN 2500	10
LESS THAN 3000	15
LESS THAN 3500	15
LESS THAN 4000	15
LESS THAN 4500	20
LESS THAN 5000	20
LESS THAN 5500	20
LESS THAN 6000	25
LESS THAN 6500	25
LESS THAN 7000	25
LESS THAN 7500	30
LESS THAN 8000	30
LESS THAN 8500	30
LESS THAN 9000	35
LESS THAN 9500	35
UP TO 10000	40

FIGURE 2
MINIMUM LENGTH OF ALL RED CLEARANCE

LENGTH OF 1-LANE 2-WAY TRAFFIC BETWEEN STOP BARS (FT)	REQUIRED MINIMUM LENGTH OF ALL RED CLEARANCE (SEC)		
	15 MPH	20 MPH	25 MPH
1000	45	34	27
950	43	32	26
900	41	31	25
850	39	29	23
800	36	27	22
750	34	26	20
700	32	24	19
650	30	22	18
600	27	20	16
550	25	19	15
500	23	17	14
450	20	15	12
400	18	14	11
350	16	12	10
300	14	10	8

FIGURE 3
SIGN SPACING

CONDITION	DISTANCE			
	A	B	C	D
	FEET	FEET	FEET	FEET
URBAN (35 MPH OR LESS)	100	100	100	100
URBAN (GREATER THAN 35 MPH)	350	350	350	350
RURAL	500	500	500	500

FIGURE 4
MINIMUM TRAFFIC SIGNAL VISIBILITY

NORMAL SPEED LIMIT (MPH)	MINIMUM VISIBILITY DISTANCE (FEET)
25	215
30	270
35	325
40	390
45	460
50	540
55	625

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

TRAFFIC CONTROL PLAN
GENERAL NOTES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\npr\sheets\TCgn02.dgn

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	3 OF 273
				CITY OF ERIE				

ITEM NUMBER	UNIT	CLASS 1 EXCAVATION 0203 0001 CY	CLASS 1B EXCAVATION 0203 0004 CY	SAW CUTTING 0203 0006 LF	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX 0313 0437 TON	SUBBASE 8" DEPTH (NO. 2A) 0350 0108 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H 0413 3470 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX 0413 6047 TON	ASPHALT TACK COAT (NTT/CNTT) 0460 0003 SY	TEMPORARY END TRANSITION 0627 0011 EACH	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1' 0627 3019 LF	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2' 0627 3020 LF	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1' 0628 3019 LF	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2' 0628 3020 LF	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2 0696 0600 EACH	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2 0697 0600 EACH	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION 0901 0001 LS	TEMPORARY LANE SEPARATOR CURB 0901 0222 EACH	ADDITIONAL WARNING LIGHTS, TYPE B 0901 0231 DAY	ADDITIONAL TRAFFIC CONTROL SIGNS 0901 0240 SF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW 0901 0320 LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW 0901 0324 LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE 0901 0330 LF	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE 0901 0331 LF	8" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE 0901 0332 LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE 0901 0334 LF	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS 0901 0460 EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES) 0958 0021 EACH	REMARKS	SIDE	STATIONS
																													ENTIRE PROJECT		
								2											X		1095	2090									499+50.00 to 550+00.00
																													STAGE 1A		
					91	169	169		339																				SASSAFRAS STREET		3+25.00 to 5+24.00
					24																								SR 4034 (BAYFRONT PARKWAY)		509+87.00 to 510+75.00
																													STAGE 1B		
					378	791	791		1581														1179		674	183	51	35			SASSAFRAS STREET		10+15.00 to 16+96.00
					482	1007	1007		2015														4782		1314	183	134	43			SR 4034 (BAYFRONT PARKWAY)		201+65.00 to 225+79.00
											898	886			6														1	ENTIRE STAGE 1B		499+50.00 to 550+00.00
																													STAGE 1C		
																								183		150				SASSAFRAS STREET		10+55.00 to 17+35.00
					155	322	322		645																				SR 4034 (BAYFRONT PARKWAY)		204+32.00 to 235+47.00
													646	175		2													ENTIRE STAGE 1C		499+50.00 to 550+00.00
																													STAGE 1D		
																							660		767		93				SASSAFRAS STREET		11+15.00 to 17+78.00
					58	120	120		239														886		654						SR 4034 (BAYFRONT PARKWAY)		204+97.00 to 232+57.00
													28	176		2												2		ENTIRE STAGE 1D		499+50.00 to 550+00.00
																													STAGE 2A		
53		85	193															374			416		631			17			SASSAFRAS STREET		0+59.00 to 5+00.00
					15	31	31		62	1															109		148				STATE STREET		104+56.00 to 112+57.00
											730	1081	898	886	4	6												4		ENTIRE STAGE 2A		499+50.00 to 550+00.00
					347	725	725		1449														12007	351	4891	440	82	122			SR 4034 (BAYFRONT PARKWAY)		500+20.00 to 554+35.00
																													STAGE 2B		
																													SASSAFRAS STREET		0+55.00 to 4+29.00
		91	67		649	1356	1572		2929																				SR 4034 (BAYFRONT PARKWAY)		523+44.00 to 540+50.00
																													STAGE 3A		
																							384		295						SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
		5	54																				1232		568		167				SASSAFRAS STREET		0+41.00 to 6+68.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	4 OF 273
				CITY OF ERIE				

TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8"	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0"	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL (LEGENDS AND SYMBOLS)	SIDEWALK PROTECTIVE FENCE STEEL PORTABLE	DESIGN OF TEMPORARY TRAFFIC SIGNAL PLAN	CONSTRUCTION OF TEMPORARY TRAFFIC SIGNAL PLAN	TEMPORARY ADA CURB RAMP	CHEEK WALL		REMARKS	SIDE	STATIONS
0958 0022 EACH	0958 0023 EACH	0958 0024 EACH	0958 0041 EACH	0958 0121 EACH	0958 0122 EACH	0958 0123 EACH	0958 0221 EACH	0958 0222 EACH	0958 0261 EACH	0958 0262 EACH	0958 0263 EACH	0959 0341 EACH	0958 0421 EACH	0958 0422 EACH	0958 0423 EACH	0962 1060 EACH	0962 1061 EACH	0962 1062 EACH	0963 0001 SF	0963 0010 EACH	9000 1200 LF	9000 1202 LS	9000 1203 LS	9000 1204 EACH	9000 1205 SF			ITEM NUMBER UNIT		
																											ENTIRE PROJECT		
																						X	X					499+50.00 to 550+00.00
																											STAGE 1A		
																											SASSAFRAS STREET		3+25.00 to 5+24.00
																											SR 4034 (BAYFRONT PARKWAY)		509+87.00 to 510+75.00
																											STAGE 1B		
																			358	7	590						SASSAFRAS STREET		10+15.00 to 16+96.00
																2	2	3	4354	3	1784						SR 4034 (BAYFRONT PARKWAY)		201+65.00 to 225+79.00
				1																							ENTIRE STAGE 1B		499+50.00 to 550+00.00
																											STAGE 1C		
																			41								SASSAFRAS STREET		10+55.00 to 17+35.00
																			60								SR 4034 (BAYFRONT PARKWAY)		204+32.00 to 235+47.00
																											ENTIRE STAGE 1C		499+50.00 to 550+00.00
																											STAGE 1D		
																			837								SASSAFRAS STREET		11+15.00 to 17+78.00
																			501	3							SR 4034 (BAYFRONT PARKWAY)		204+97.00 to 232+57.00
																											ENTIRE STAGE 1D		499+50.00 to 550+00.00
																											STAGE 2A		
																			22								SASSAFRAS STREET		0+59.00 to 5+00.00
																	2	2	544	8					75		STATE STREET		104+56.00 to 112+57.00
1	1		1		1				1																		ENTIRE STAGE 2A		499+50.00 to 550+00.00
																		7	5750	9							SR 4034 (BAYFRONT PARKWAY)		500+20.00 to 554+35.00
																											STAGE 2B		
																											SASSAFRAS STREET		0+55.00 to 4+29.00
																											SR 4034 (BAYFRONT PARKWAY)		523+44.00 to 540+50.00
																											STAGE 3A		
																			57								SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
																			811								SASSAFRAS STREET		0+41.00 to 6+68.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	5 OF 273
				CITY OF ERIE				

CLASS 1 EXCAVATION	CLASS 1B EXCAVATION	SAW CUTTING	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX	ASPHALT TACK COAT (NTT/CNTT)	TEMPORARY END TRANSITION	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	TEMPORARY LANE SEPARATOR CURB	ADDITIONAL WARNING LIGHTS, TYPE B	ADDITIONAL TRAFFIC CONTROL SIGNS	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	8" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	REMARKS	SIDE	STATIONS
0203 0001 CY	0203 0004 CY	0203 0006 LF	0313 0437 TON	0350 0108 SY	0413 3470 SY	0413 6047 TON	0460 0003 SY	0627 0011 EACH	0627 3019 LF	0627 3020 LF	0628 3019 LF	0628 3020 LF	0696 0600 EACH	0697 0600 EACH	0901 0001 LS	0901 0222 EACH	0901 0231 DAY	0901 0240 SF	0901 0320 LF	0901 0324 LF	0901 0330 LF	0901 0331 LF	0901 0332 LF	0901 0334 LF	0901 0460 EACH	0958 0021 EACH	ITEM NUMBER / UNIT		
																			811		134	101		35			STATE STREET		103+36.00 to 114+81.00
											380	2693		6													ENTIRE STAGE 3A		499+50.00 to 550+00.00
88	80	396	329	687	687		1375												9167		7036	483		45			SR 4034 (BAYFRONT PARKWAY)		500+56.00 to 554+39.00
																											STAGE 3B		
169	207	637																	559		373						SASSAFRAS STREET		0+56.00 to 5+18.00
																					17						SASSAFRAS ROUNDABOUT		1+26.00 to 1+65.00
																					59						HOLLAND STREET		13+42.00 to 13+88.00
																			658		481	56		34			STATE STREET		103+79.00 to 108+15.00
											1079	1863		10													ENTIRE STAGE 3B		499+50.00 to 550+00.00
344	74	308																	4808		1261			12			SR 4034 (BAYFRONT PARKWAY)		516+06.00 to 554+38.00
																											STAGE 3D		
	20	169																									SASSAFRAS STREET		3+36.00 to 4+18.00
																			790			201	173	68			STATE STREET		103+36.00 to 114+81.00
																											ENTIRE STAGE 3D		499+50.00 to 550+00.00
			285	594	594		1189																				SR 4034 (BAYFRONT PARKWAY)		526+97.00 to 531+36.00
																											STAGE 3E		
			8	16	16		32																				STATE STREET		108+95.00 to 109+33.00
			106	220	220		440																				SR 4034 (BAYFRONT PARKWAY)		541+65.00 to 543+93.00
																											STAGE 3F		
	24	143																	58		237			14			STATE STREET		106+11.00 to 109+07.00
																											STAGE 4		
																					62						SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
																			549		425						SASSAFRAS STREET		0+40.00 to 5+18.00
																					161						HOLLAND STREET		13+42.00 to 15+04.00
																			902		1293	50	382	2			STATE STREET		103+01.00 to 113+84.00
											576	2344		4													ENTIRE STAGE 4		499+50.00 to 550+00.00
	616	1778																	6600		5015	221		21			SR 4034 (BAYFRONT PARKWAY)		513+16.00 to 554+38.00
																											STAGE 5A		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	6 OF 273
				CITY OF ERIE				

ITEM NUMBER	UNIT	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8"	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0"	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL (LEGENDS AND SYMBOLS)	SIDEWALK PROTECTIVE FENCE STEEL PORTABLE	DESIGN OF TEMPORARY TRAFFIC SIGNAL PLAN	CONSTRUCTION OF TEMPORARY TRAFFIC SIGNAL PLAN	TEMPORARY ADA CURB RAMP	CHEEK WALL		REMARKS	SIDE	STATIONS
		0958 0022	0958 0023	0958 0024	0958 0041	0958 0121	0958 0122	0958 0123	0958 0221	0958 0222	0958 0261	0958 0262	0958 0263	0959 0341	0958 0421	0958 0422	0958 0423	0962 1060	0962 1061	0962 1062	0963 0001	0963 0010	9000 1200	9000 1202	9000 1203	9000 1204	9000 1205					
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SF	EACH	LF	LS	LS	EACH	SF					
																					905	2								STATE STREET		103+36.00 to 114+81.00
									1					1																	ENTIRE STAGE 3A		499+50.00 to 550+00.00
																				8	4858	7								SR 4034 (BAYFRONT PARKWAY)		500+56.00 to 554+39.00
																														STAGE 3B		
																					320									SASSAFRAS STREET		0+56.00 to 5+18.00
																					8									SASSAFRAS ROUNDABOUT		1+26.00 to 1+65.00
																														HOLLAND STREET		13+42.00 to 13+88.00
																					310									STATE STREET		103+79.00 to 108+15.00
									1					1																	ENTIRE STAGE 3B		499+50.00 to 550+00.00
																					1705	6								SR 4034 (BAYFRONT PARKWAY)		516+06.00 to 554+38.00
																														STAGE 3D		
																														SASSAFRAS STREET		3+36.00 to 4+18.00
																				2	557									STATE STREET		103+36.00 to 114+81.00
															1															ENTIRE STAGE 3D		499+50.00 to 550+00.00
																														SR 4034 (BAYFRONT PARKWAY)		526+97.00 to 531+36.00
																														STAGE 3E		
																														STATE STREET		108+95.00 to 109+33.00
																														SR 4034 (BAYFRONT PARKWAY)		541+65.00 to 543+93.00
																														STAGE 3F		
																					12									STATE STREET		106+11.00 to 109+07.00
																														STAGE 4		
																					19									SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
																					354									SASSAFRAS STREET		0+40.00 to 5+18.00
																			2		75	5								HOLLAND STREET		13+42.00 to 15+04.00
																				1	283									STATE STREET		103+01.00 to 113+84.00
			1														1													ENTIRE STAGE 4		499+50.00 to 550+00.00
																				4	2750									SR 4034 (BAYFRONT PARKWAY)		513+16.00 to 554+38.00
																														STAGE 5A		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	7 OF 273
				CITY OF ERIE				

ITEM NUMBER	UNIT	CLASS 1 EXCAVATION	CLASS 1B EXCAVATION	SAW CUTTING	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX	SUBBASE 8" DEPTH (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX	ASPHALT TACK COAT (NTT/CNTT)	TEMPORARY END TRANSITION	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=1'	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	TEMPORARY LANE SEPARATOR CURB	ADDITIONAL WARNING LIGHTS, TYPE B	ADDITIONAL TRAFFIC CONTROL SIGNS	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	8" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	REMARKS	SIDE	STATIONS
0203 0001	CY	0203 0004	CY	0203 0006	LF	0313 0437	TON	0350 0108	SY	0413 3470	SY	0413 6047	TON	0460 0003	SY	0627 0011	EACH	0627 3019	LF	0627 3020	LF	0628 3019	LF	0628 3020	LF	0696 0600	EACH	0697 0600	EACH	0901 0001	LS	0901 0222	EACH	0901 0231	DAY	0901 0240	SF	0901 0320	LF	0901 0324	LF	0901 0330	LF	0901 0331	LF	0901 0332	LF	0901 0334	LF	0901 0460	EACH	0958 0021	EACH			
																																				406				442		177						SASSAFRAS STREET		0+45.00 to 6+40.00
																																							86								SASSAFRAS ROUNDABOUT		1+19.00 to 3+41.00
																																				736				922	115	276		24				HOLLAND STREET		7+82.00 to 16+86.00
																				239				1355				6																								ENTIRE STAGE 5A		499+50.00 to 550+00.00
		1020		2071																																4009				3613	26			22				SR 4034 (BAYFRONT PARKWAY)		508+02.00 to 548+48.00
																																																		STAGE 5B		
																																										77								HOLLAND STREET		16+76.00 to 17+45.00
					7																																													SR 4034 (BAYFRONT PARKWAY)		541+09.00 to 541+18.00
																																																		STAGE 5C		
																																										480		68						HOLLAND STREET		14+41.00 to 17+47.00
																																																		STAGE 5D		
																																																		STATE STREET		14+06.00 to 14+21.00
		4		56																																1332				1746								SR 4034 (BAYFRONT PARKWAY)		535+00.00 to 552+35.00
																																																		STAGE 6		
																																				395				349								HOLLAND ROUNDABOUT		0+00.00 to 3+64.00
																																																		SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
																																																		SASSAFRAS STREET		0+35.00 to 6+68.00
																																				1170				420		190						HOLLAND STREET		7+82.00 to 16+75.00
																																																		STATE STREET		103+36.00 to 113+84.00
																				238				380				2																								ENTIRE STAGE 6		499+50.00 to 550+00.00
		180		701																																5075				2637	75							SR 4034 (BAYFRONT PARKWAY)		500+20.00 to 554+35.00
																																																		STAGE 7		
		131		911																																															SR 4034 (BAYFRONT PARKWAY)		526+97.00 to 531+47.00
654		2537		7484		2934		6038		6254		2		12295		1		1628		2444		3607		9872		10		38		---		579		1095		2090		59571		351		37335		2134		2237		494		6		1		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	A01	8 OF 273
				CITY OF ERIE				

TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8"	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0"	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL (LEGENDS AND SYMBOLS)	SIDEWALK PROTECTIVE FENCE STEEL PORTABLE	DESIGN OF TEMPORARY TRAFFIC SIGNAL PLAN	CONSTRUCTION OF TEMPORARY TRAFFIC SIGNAL PLAN	TEMPORARY ADA CURB RAMP	CHEEK WALL		REMARKS	SIDE	STATIONS
0958 0022 EACH	0958 0023 EACH	0958 0024 EACH	0958 0041 EACH	0958 0121 EACH	0958 0122 EACH	0958 0123 EACH	0958 0221 EACH	0958 0222 EACH	0958 0261 EACH	0958 0262 EACH	0958 0263 EACH	0959 0341 EACH	0958 0421 EACH	0958 0422 EACH	0958 0423 EACH	0962 1060 EACH	0962 1061 EACH	0962 1062 EACH	0963 0001 SF	0963 0010 EACH	9000 1200 LF	9000 1202 LS	9000 1203 LS	9000 1204 EACH	9000 1205 SF			ITEM NUMBER UNIT		
																			183								SASSAFRAS STREET		0+45.00 to 6+40.00
																			6								SASSAFRAS ROUNDABOUT		1+19.00 to 3+41.00
																	2	2	153					1			HOLLAND STREET		7+82.00 to 16+86.00
						1				1	1																ENTIRE STAGE 5A		499+50.00 to 550+00.00
																			2273								SR 4034 (BAYFRONT PARKWAY)		508+02.00 to 548+48.00
																											STAGE 5B		
																			49								HOLLAND STREET		16+76.00 to 17+45.00
																											SR 4034 (BAYFRONT PARKWAY)		541+09.00 to 541+18.00
																											STAGE 5C		
																			137								HOLLAND STREET		14+41.00 to 17+47.00
																											STAGE 5D		
																											STATE STREET		14+06.00 to 14+21.00
																			1035	1							SR 4034 (BAYFRONT PARKWAY)		535+00.00 to 552+35.00
																											STAGE 6		
																			248								HOLLAND ROUNDABOUT		0+00.00 to 3+64.00
																			250								SASSAFRAS ROUNDABOUT		0+00.00 to 3+84.00
																			785								SASSAFRAS STREET		0+35.00 to 6+68.00
																			1359	4							HOLLAND STREET		7+82.00 to 16+75.00
																			1492	3							STATE STREET		103+36.00 to 113+84.00
																											ENTIRE STAGE 6		499+50.00 to 550+00.00
																			8342	5							SR 4034 (BAYFRONT PARKWAY)		500+20.00 to 554+35.00
																											STAGE 7		
																											SR 4034 (BAYFRONT PARKWAY)		526+97.00 to 531+47.00
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	8	29	41803	63	2374	---	---	1	75		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAMIAN JOSEPH GEORGE
075334

PROJECT ID: 4800 MPMS: 108952 ECMS: 108952 8/2/2022 11:18:17 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	9 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF TRAFFIC CONTROL DEVICES
INCLUDED IN ITEM 0901-0001 (FOR INFORMATION ONLY)

					QUANTITIES																								
					STAGE																								
STD. NO.	WIDTH	HEIGHT	SIZE/UNIT	DESCRIPTION	STAGE 1A (NO PLAN)	STAGE 1B	STAGE 1C	STAGE 1D	STAGE 1D DETOUR	STAGE 2A	STAGE 2B	STAGE 2A/2B DETOUR	STAGE 3A	STAGE 3A/3B/3C/3D/3E/3F DETOUR	STAGE 3B	STAGE 3C DETOUR	STAGE 3D	STAGE 3E	STAGE 3F	STAGE 4	STAGE 4 DETOUR	STAGE 5A	STAGE 5B	STAGE 5C	STAGE 5D	STAGE 5A/5B/5C/5D/6 DETOUR	STAGE 6	STAGE 6 DETOUR (EB BAYFRONT)	STAGE 6 DETOUR (WB BAYFRONT)	MAXIMUM REQUIRED	TOTAL SQUARE FOOT
R1-1	30	30	5.2	STOP		1	1			1	1																		1	5.2
R1-2	36	36	3.9	YIELD									3		3		3	3	3	3		3	3	3	3		7			7	27.3
R2-1	24	30	5.0	SPEED LIMIT (25)		4	4	4		8	8		6		6		6	6	6	6		6	6	6	6		6			8	40.0
R3-2	24	24	4.0	NO LEFT TURN		2	2	2		2	2		4		4		4	4	4	4		4	4	4	4		4			4	16.0
R3-7L	36	36	9.0	LEFT LANE MUST TURN LEFT						1	1									1		1	1	1	1		1			1	9.0
R3-7R	36	36	9.0	RIGHT LANE MUST TURN RIGHT									1		1															1	9.0
R3-8A(L-S)	30	30	6.3	LANE USE CONTROL (L-S)						2	2		2		1		1	1	1	2		2	2	2	1		2			2	12.5
R4-7	24	30	5.0	KEEP RIGHT		1	1	1					1		1		1	1	1	1		2	2	2	2		1			2	10.0
R5-1	30	30	6.3	DO NOT ENTER									1																	1	6.3
R6-1L	36	12	3.0	HORIZONTAL LEFT ONE-WAY																				4	4					4	12.0
R6-1R	36	12	3.0	HORIZONTAL RIGHT ONE-WAY									3		3		3	3	3	3		3	3	3	3		7			7	21.0
R6-4A	48	24	8.0	ROUNDABOUT DIRECTIONAL (3 CHEVRONS)									3		3		3	3	3	3		3	3	3	3		7			7	56.0
R7-302	12	18	1.5	NO PARKING/ARROW		1	1	1		1	1		1		2		2	2	2	1										2	3.0
R7-302 (R)	12	18	1.5	NO PARKING/ARROW									2		2		2	2	2				1							2	3.0
R7-302 (L)	12	18	1.5	NO PARKING/ARROW		1	1	1		1	2		3		3		3	3	3	1		1	1	1						3	4.5
R9-9	24	12	2.0	SIDEWALK CLOSED	2	2	2	3		5	5		10		8		8	8	8	4		7	6	5	5					10	20.0
R9-10	24	12	2.0	SIDEWALK CLOSED USED OTHER SIDE	2								2												2					2	4.0
R9-11A	24	12	2.0	SIDEWALK CLOSED CROSS HERE (RIGHT)	1			1				1	1	1							2	2	1			1	1			3	6.0
R9-11A	24	12	2.0	SIDEWALK CLOSED CROSS HERE (LEFT)	1							2	1	1							2	1	1			2	1			3	6.0
R11-2 MOD	48	30	10.0	LANE CLOSED		8	8	4		10	10		20		19		16	16	16	9		9	9	9	6		10			20	200.0
R11-2	48	30	10.0	ROAD CLOSED				17		19	8		11		13	6	8	13	8	15		20	20	20	20		10	6	6	22	220.0
R11-3A	60	30	12.5	ROAD CLOSED - LOCAL TRAFFIC ONLY (300 FT)						2	2																			2	25.0
R11-3A	60	30	12.5	ROAD CLOSED - LOCAL TRAFFIC ONLY (3/4 MILE)												1													1	1	12.5
R11-3A	60	30	12.5	ROAD CLOSED - LOCAL TRAFFIC ONLY (1 1/4 MILE)												1												1		1	12.5
W1-3L	30	30	6.3	LEFT REVERSE TURN						1	1											1	1	1	1					1	6.3
W1-3R	30	30	6.3	RIGHT REVERSE TURN						1	1											1	1	1	1					1	6.3
W1-4L	36	36	9.0	LEFT REVERSE CURVE	1															1										1	9.0
W1-4L	48	48	16.0	LEFT REVERSE CURVE									1																	1	16.0
W1-4R	30	30	6.3	RIGHT REVERSE CURVE	1															1										1	6.3
W1-6	48	24	8.0	LARGE SINGLE ARROW						1	1		1		1		1													1	8.0
W1-8	24	30	5.0	CHEVRON ALIGNMENT						2	2		2		2		2													2	10.0
W2-6	36	36	9.0	CIRCULAR INTERSECTION									3		3		3	3	3	3		3	3	3	3		7			7	63.0
W3-2	36	36	9.0	YIELD AHEAD									3		3		3	3	3	3		3	3	3	3		7			7	63.0
W5-5	36	36	9.0	LANES SHIFT		11	11	5		18	16		12		18		18	18	18	12		12	12	12	12		14			18	162.0
W5-5	48	48	16.0	LANES SHIFT		2	4	2		1	1		2		3		1	1	1											4	64.0
W6-3	36	36	9.0	TWO - WAY TRAFFIC																1		1	1	1	1					1	9.0
W9-3	36	36	9.0	CENTER LANE CLOSED	1															1										1	9.0
W10-1B	24	24	4.0	BICYCLISTS DISMOUNT									2		2		2	2	2					2						2	8.0
W11-2	30	30	6.3	PEDESTRIAN	2								2		2		2	2	2	6	4	16	16	12	14		16			16	100.0
W13-1P	18	18	2.3	ADVISORY SPEED PLAQUE (15)						2	2											2	2	2	2					2	4.5
W16-7P	24	12	2.0	DOWNWARD DIAGONAL POINTING ARROW PLAQUE									2		2		2	2	2	4	2	10	10	8	8		12			12	24.0
W16-9P	24	12	2.0	AHEAD PLAQUE	2								2							2	2	6	6	4	6		4			6	12.0
W16-17P	24	12	2.0	ROUNDABOUT PLAQUE									3		3		3	3	3	3		3	3	3	3		7			7	14.0
W20-1	36	36	9.0	ROAD WORK	5	5	6	5		24	23		27		27		28	28	28	21		17	17	20	20		17			28	252.0
W20-1	48	48	16.0	ROAD WORK		6	6	6		2	2		2		1		2	2	1	2		3	3	3	3		3			6	96.0
W20-2	36	36	9.0	ADVANCE DETOUR					6			3		3		16					11					10		16	22	38	342.0
W20-3	36	36	9.0	ROAD CLOSED					1			2		2		6					2					2		3	3	8	72.0
W20-3A	48	30	10.0	ROAD OPEN TO HAMOT SERVICE DRIVEWAY						1	1		1		1		1		1											1	10.0
W20-3A	48	36	12.0	ROAD OPEN TO SASSAFRAS PIER CONVENTION CTR												5												5		5	60.0
W20-3A	48	36	12.0	ROAD OPEN TO TRANSIT AND BUS STATION												4													4	4	48.0
W20-4	36	36	9.0	ONE LANE ROAD	4	1				2	1		1		1		1	1	1	2				1	1					4	36.0
W20-5L	48	48	16.0	LEFT LANE CLOSED													1	1	1											1	16.0
W20-7	36	36	9.0	FLAGGER SYMBOL	4	3				4	3		3		3		3	3	3	4				3	3					4	36.0
W21-5	30	30	6.3	SHOULDER WORK									1																	1	6.3
W21-10	24	24	4.0	STOP AND SLOW (PADDLE)	4																									4	16.0
W24-1R	36	36	9.0	SINGLE LANE DOUBLE REVERSE CURVE (RIGHT)		1	1						1																	1	9.0
W24-1L	36	36	9.0	SINGLE LANE DOUBLE REVERSE CURVE (LEFT)		1	1																							1	9.0
W30-1-1	20	6	0.8	DISTANCE (500 FT) (PANEL)		1	1	1	2	2	2	2	2	2	2	11	2	2	2	2	3	2	2	2	2	2	2	7	10	19	15.8
W30-1-2	20	6	0.8	DISTANCE (1000 FT) (PANEL)		1	1	1	2	2	2		2		2	9	2	2	2	2	2	1	1	1	1	2	1	4	7	12	10.0
W30-1-3	20	6	0.8	DISTANCE (1500 FT) (PANEL)					2							2					2					2		3	3	6	5.0
W30-1-6	20	6	0.8	DISTANCE (AHEAD) (PANEL)	7	14	15	8	1	35	31	3	32	3	36		38	38	38	25	4	26	26	26	26	4	28	5	5	41	34.2
W30-1-1	30	10	2.1	DISTANCE (500 FT) (PANEL)		1	1	1																						1	2.1
W30-1-2	30	10	2.1	DISTANCE (1000 FT) (PANEL)		1	1	1														1	1	1	1		1			1	2.1
W30-1-6	30	10	2.1	DISTANCE (AHEAD) (PANEL)		8	8	6		3	3		4		4		4	4	4	2		2	2	2	2		2			8	16.7
W23-2	36	36	9.0	NEW TRAFFIC PATTERN AHEAD						2	2		4		3		3	3	3	4		4	4	4	4		8			8	72.0
G20-1-2	48	36	12.0	ROAD WORK TO BEGIN NEXT WEEK	7																									7	84.0
G20-2	36	18	4.5	END ROAD WORK		4	4	4		9	9		11		8		7	7	8	8		8	8	7	8		8			11	49.5
G20-2	60	24	10.0	END ROAD WORK		1	1	1		1	1		1		1		1	1												1	10.0
G20-5AP	24	18	3.0	WORK ZONE PLAQUE		4	4	4		8	8		6		6		6	6	6	6		6	6	6	6		6			8	24.0
M1-1	24	24	3.2	INTERSTATE ROUTE MARKER (79)		1	3			3	3		3		3		3	3	3	2		2	2	2	2		3			3	9.6
M1-1	24	24	3.2	INTERSTATE ROUTE MARKER (90)		2	6			6	6		6		6		6	6	6	4		4	4	4	4		6			6	19.2
M3-2-1	24	12	2.0	INTERSTATE EAST MARKER		1	3			3	3		3		3		3	3	3	2		2	2	2	2		3			3	6.0
M3-4-1	24	12	2.0	INTERSTATE WEST MARKER		1	3			3	3		3		3		3	3	3	2		2	2	2	2		3			3	6.0
M4-5-1	24	12	2.0	INTERSTATE TO MARKER		3	9			9	9		9		9		9	9	9	6		6	6	6	6		9			9	18.0
M4-8A	24	18	3.0	END DETOUR		4	2	2	2	3	3	5	2	4	2	2	2	2	2	1	3	2	2	2	2	3		3	3	8	24.0

TRAFFIC CONTROL PLAN TABULATION SHEET

DES:	CKD:	DWG:	CKD:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/11/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtq01.dgn

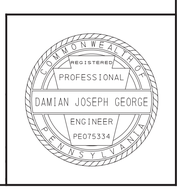
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	10 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF TRAFFIC CONTROL DEVICES
INCLUDED IN ITEM 0901-0001 (FOR INFORMATION ONLY) CONTINUED

					QUANTITIES																									
					STAGE																									
STD. NO.	WIDTH	HEIGHT	SIZE/ UNIT	DESCRIPTION	STAGE 1A (NO PLAN)	STAGE 1B	STAGE 1C	STAGE 1D	STAGE 1D DETOUR	STAGE 2A	STAGE 2B	STAGE 2A/2B DETOUR	STAGE 3A	STAGE 3A/3B/ 3C/3D/ 3E/3F DETOUR	STAGE 3B	STAGE 3C DETOUR	STAGE 3D	STAGE 3E	STAGE 3F	STAGE 4	STAGE 4 DETOUR	STAGE 5A	STAGE 5B	STAGE 5C	STAGE 5D	STAGE 5A/5B/5C /5D/6 DETOUR	STAGE 6	STAGE 6 DETOUR (EB BAYFRONT)	STAGE 6 DETOUR (WB BAYFRONT)	MAXIMUM REQUIRED	TOTAL SQUARE FOOT
M4-9A	30	24	5.0	BICYCLE/PEDESTRIAN DETOUR (STRAIGHT)		1	2	3		4	4		7		7		7	7	7	6				1	1					7	35.0
M4-9A	30	24	5.0	BICYCLE/PEDESTRIAN DETOUR (RIGHT)			5	4		4	4		2		2		2	2	2	2				2	2					5	25.0
M4-9A	30	24	5.0	BICYCLE/PEDESTRIAN DETOUR (LEFT)			5	3		4	4		2		2		2	2	2	2				2	3					5	25.0
M4-9L	30	24	5.0	DETOUR, LEFT					3			4		4		6					8					8		6	8	14	70.0
M4-9R	30	24	5.0	DETOUR, RIGHT					2			5		5		5					9					8		6	7	13	65.0
M4-9R	48	36	12.0	DETOUR, RIGHT												2												1	1	2	24.0
M4-9S	30	24	5.0	DETOUR, STRAIGHT					5			7		9		28					11					11		21	18	39	195.0
M4-9S	48	36	12.0	DETOUR, STRAIGHT												14												6	8	14	168.0
M4-9SL	30	24	5.0	LEFT ADVANCE DETOUR					3			4		4		6					4					5		6	8	14	70.0
M4-9SR	30	24	5.0	RIGHT ADVANCE DETOUR					2			5		5		5					4					3		5	7	12	60.0
M4-9SR	48	36	12.0	RIGHT ADVANCE DETOUR												2												1	1	2	24.0
M4-9-1AL	30	24	5.0	LEFT ADVANCE 45 DETOUR												7												3	4	7	35.0
M4-9-1AR	48	36	12.0	RIGHT ADVANCE 45 DETOUR												7												5	2	7	84.0
M4-9-1BL	30	24	5.0	45 LEFT TURN DETOUR												7												3	4	7	35.0
M4-9-1BR	48	36	12.0	45 RIGHT TURN DETOUR												7												5	2	7	84.0
M4-9B	30	24	5.0	PEDESTRIAN DETOUR (STRAIGHT)		1		2		2	2	14		13							14			1		9				16	80.0
M4-9B	30	24	5.0	PEDESTRIAN DETOUR (RIGHT)		1				1	1	7		5							7	2	2	2		5				8	40.0
M4-9B	30	24	5.0	PEDESTRIAN DETOUR (LEFT)		2		2		2	2	7		6							7	3	2	1		4				9	45.0
M4-9C	30	24	5.0	BICYCLE DETOUR (STRAIGHT)				2		2	2																				2	10.0
M4-9C	30	24	5.0	BICYCLE DETOUR (LEFT)				2		2	2																				2	10.0
M6-1-1	21	15	2.2	INTERSTATE 90 DEGREE TURN (RIGHT)		2	5			5	5		5		5					4		3	3	3	3		5			5	10.9
M6-1-1	21	15	2.2	INTERSTATE 90 DEGREE TURN (LEFT)		1	4			4	4		4		4					2		3	3	3	3		4			4	8.8
D1-1	72	12	6	SASSAFRASS ST EXT									1		1		1	1	1	1		1	1	1	1		1			1	6.0
D1-1	72	12	6	BAYFRONT PARKWAY									2		2		2	2	2	2		2	2	2	2		4			4	24.0
D1-1	72	12	6	HOLLAND ST																							2			2	12.0
D9-2	24	24	4	HOSPITAL SIGN						3	3		3		2		2	2	2	2	2	2	2	2	2		2			4	16.0
D9-2-2	24	12	2	SERVICES ARROW (STRAIGHT)						1	1																			1	2.0
D9-2-2	24	12	2	SERVICES ARROW (RIGHT)						1	1		1		1		1	1	1	1		1	1	1	1		1			1	2.0
D9-2-2	24	12	2	SERVICES ARROW (LEFT)						1	1		2		1		1	1	1	1	2	1	1	1	1		1			3	6.0
OM1-3	18	18	2.3	OBJECT MARKER									1		1		1	1	1	1		1	1	1	1		1			1	2.3
SS-1	48	24	8.0	SASSAFRAS ST EXT					24																					24	192.0
SS-2	66	60	27.5	SASSAFRAS ST EXT CLOSED BETWEEN BAYFRONT PKWY AND FRONT ST					3																					3	82.5
SS-3	60	60	25.0	STATE ST CLOSED BETWEEN FRONT ST AND W 2ND ST										5																5	125.0
SS-4	60	60	25.0	STATE ST CLOSED BETWEEN BAYFRONT PKWY AND W 2ND ST								5																		5	125.0
SS-5	30	24	5.0	STATE STREET								59		60																60	300.0
SS-6	30	24	5.0	SIDEWALK CLOSED AHEAD								5		5							4					3				5	25.0
SS-7	30	24	5.0	W 2ND STREET								5																		5	25.0
SS-8	42	36	10.5	BAYFRONT PARKWAY WEST												47													45	47	493.5
SS-9	54	42	15.8	BAYFRONT PARKWAY WEST												14													14	14	220.5
SS-10	42	36	10.5	BAYFRONT PARKWAY EAST												35												33		35	367.5
SS-11	54	42	15.8	BAYFRONT PARKWAY EAST												18												18		18	283.5
SS-12	84	66	38.5	BAYFRONT PKWY EASTBOUND CLOSED AT SASSAFRAS ST EXT												6												6		6	231.0
SS-13	54	60	22.5	BAYFRONT PKWY WESTBOUND CLOSED AT HOLLAND ST												5													5	5	112.5
SS-14	36	24	6.0	HOLLAND STREET																	57					57				57	342.0
SS-15	54	60	22.5	HOLLAND STREET CLOSED BETWEEN BAYFRONT PKWY AND FRONT STREET																						4				4	90.0
SS-16	48	24	8.0	ROAD OPEN TO E 2ND STREET																	1									1	8.0
SS-17	54	24	9.0	ROAD OPEN TO BAYFRONT PKWY																	1					1				1	9.0
SS-18	54	60	22.5	HOLLAND STREET CLOSED BETWEEN BAYFRONT PKWY AND E 2ND ST																	4									4	90.0
SS-19	30	24	5.0	E 2ND STREET																	12									12	60.0
SS-20	30	36	7.5	TO STATE STREET																	21					20		22	22	44	330.0
SS-21	54	48	18.0	ACCESS TO STATE ST CLOSED																	2					2				2	36.0
SS-22	54	60	22.5	STATE STREET ACCESS FROM BAYFRONT PKWY CLOSED																	1					2		5	5	10	225.0
SS-23	42	36	10.5	TO BAYFRONT PARKWAY																	13					13		14	14	28	294.0
SS-24	54	60	22.5	BAYFRONT PKWY ACCESS FROM STATE STREET CLOSED																	2					2				2	45.0
SS-25	30	30	6.3	CIRCULATE ROUNDABOUT FOR RIGHT TURN																							1			1	6.3
SS-26	36	24	6.0	TRACTOR TRAILER RIGHT TURNS																							1			1	6.0
SS-27	24	36	6.0	AUTHORIZED VEHICLES AND CONTRACTOR ACCESS ONLY						2	2		3		2		2	2	2	2		2	2	2	2		2			3	18.0
SS-28	30	24	5.0	BAYFRONT PROMENADE								14		15																15	75.0
			TOTALS		44	105	132	99	58	238	219	145	268	137	259	284	243	244	239	211	225	231	229	234	231	185	249	219	239	1089	8249

		QUANTITIES																										
		STAGE																										
SIZE/ UNIT	DESCRIPTION	STAGE 1A (NO PLAN)	STAGE 1B	STAGE 1C	STAGE 1D	STAGE 1D DETOUR	STAGE 2A	STAGE 2B	STAGE 2A/2B DETOUR	STAGE 3A	STAGE 3A/3B/ 3C/3D/ 3E/3F DETOUR	STAGE 3B	STAGE 3C DETOUR	STAGE 3D	STAGE 3E	STAGE 3F	STAGE 4	STAGE 4 DETOUR	STAGE 5A	STAGE 5B	STAGE 5C	STAGE 5D	STAGE 5A/5B/5C /5D DETOUR	STAGE 6	STAGE 6 DETOUR (EB BAYFRONT)	STAGE 6 DETOUR (WB BAYFRONT)	MAXIMUM REQUIRED
EACH	CHANNELIZING DEVICES	63	217	254	183		467	412		649		481		469	469	471	452		359	355	368	482		354			649
EACH	TYPE B LIGHT (YELLOW)		28	27	54	7	66	64	5	90	5	92	38	77	87	77	70	11	81	81	82	75	10	67	33	39	139
EACH	TYPE B LIGHT (RED)		1	1			1	1																			1
EACH	PORTABLE CHANGEABLE MESSAGE SIGN		2	2	2		2	2		2		2		2	2	2	2		2	2	2	2		2			2
EACH	TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE	6	14	18	25		29	29	54	23	28	24		24	24	24	15	36	11	9	13	11	20	2			83
EACH	TEMPORARY SUPPORT		2	6			11	11		11		10		10	8	8	6	2	6	6	10	10		8			11
LF	PEDESTRIAN DETECTABLE BARRICADES		2346	2227	820		1091	972		1268		2009		192			426		439	17	844	1198					2346
EACH	BARRICADES	17	51	49	62	27	122	99	37	143	44	136	152	126	129	125	114	86	130	130	131	129	82	134	117	120	371



TRAFFIC CONTROL PLAN TABULATION SHEET

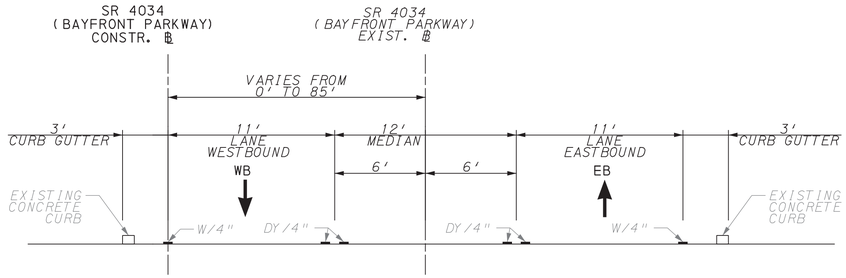
DES:	CKD:	DWG:	CKD:

PLOTTED: 8/11/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTqd2.dgn

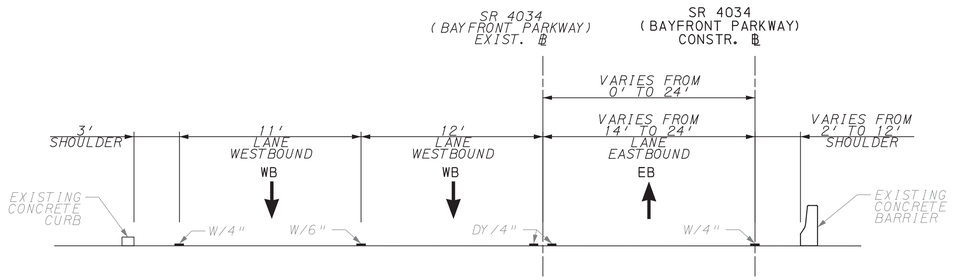
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	11 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



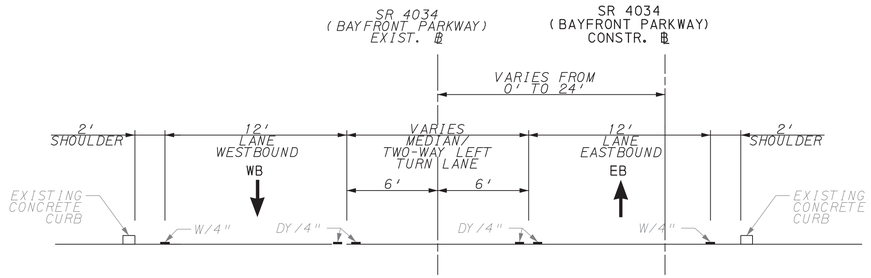
SR 4034 (BAYFRONT PARKWAY)
EXISTING TYPICAL

STA 200+19 TO STA 224+51



SR 4034 (BAYFRONT PARKWAY)
EXISTING TYPICAL

STA 224+51 TO STA 236+66



SR 4034 (BAYFRONT PARKWAY)
EXISTING TYPICAL

STA 236+66 TO STA 253+60

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

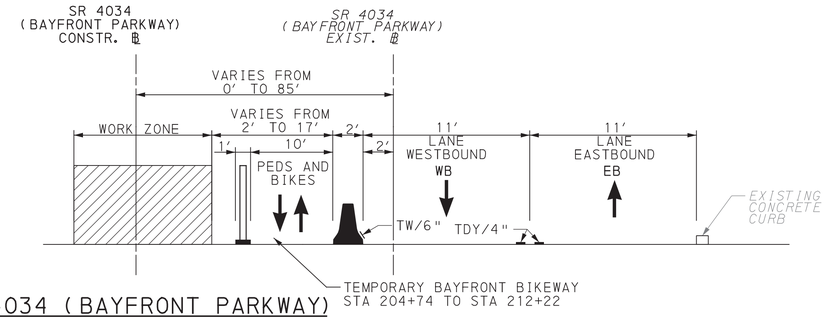
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs01.dgn

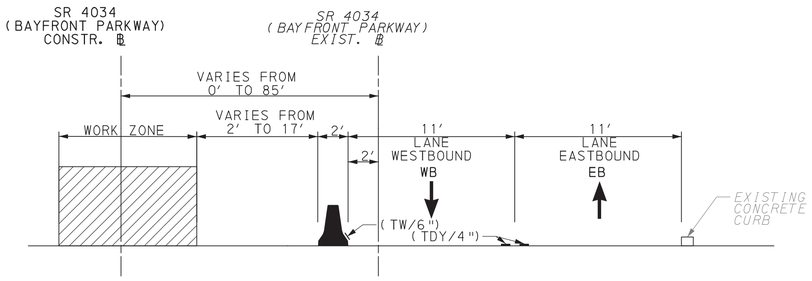
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	12 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SR 4034 (BAYFRONT PARKWAY)
STAGE 1B - LONG TERM

STA 204+74 TO STA 223+24

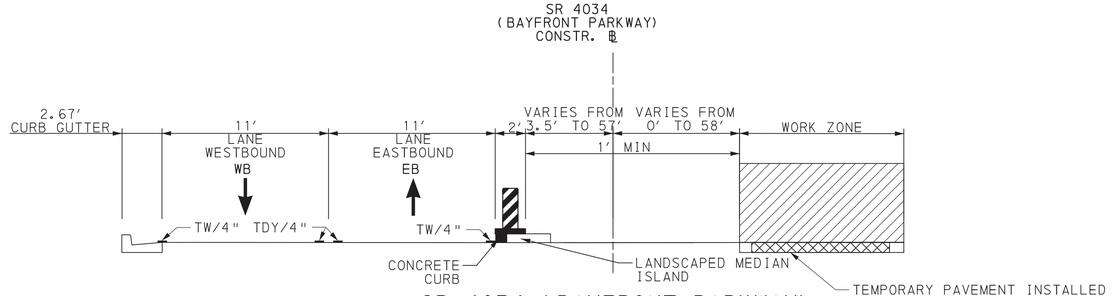


SR 4034 (BAYFRONT PARKWAY)
STAGE 1C - LONG TERM

STA 204+95 TO STA 223+24

SR 4034 (BAYFRONT PARKWAY)
STAGE 1D - LONG TERM

STA 204+95 TO STA 222+34



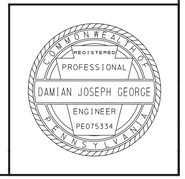
SR 4034 (BAYFRONT PARKWAY)
STAGES 2A/2B - LONG TERM

STA 515+50 TO STA 526+53

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS



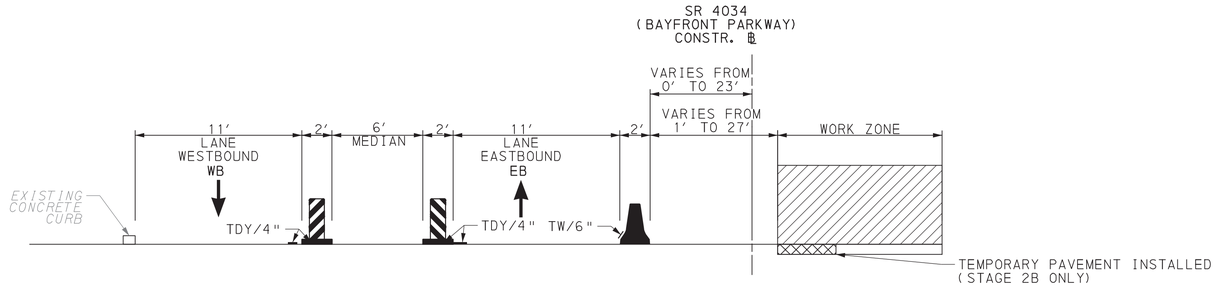
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTs02.dgn

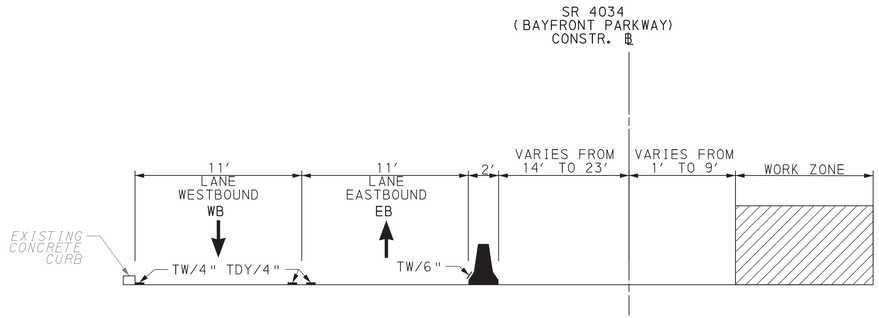
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	13 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



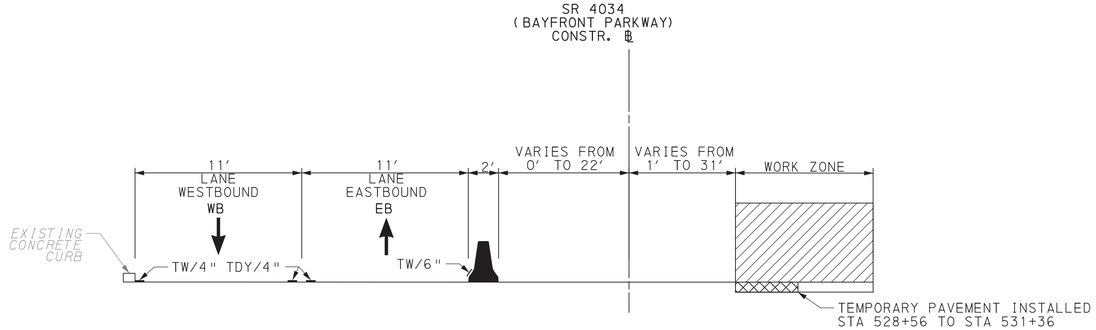
SR 4034 (BAYFRONT PARKWAY)
STAGES 2A/2B - LONG TERM

STA 526+53 TO STA 528+56



SR 4034 (BAYFRONT PARKWAY)
STAGE 2A - LONG TERM

STA 528+56 TO STA 533+25



SR 4034 (BAYFRONT PARKWAY)
STAGE 2B - LONG TERM

STA 528+56 TO STA 535+71

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

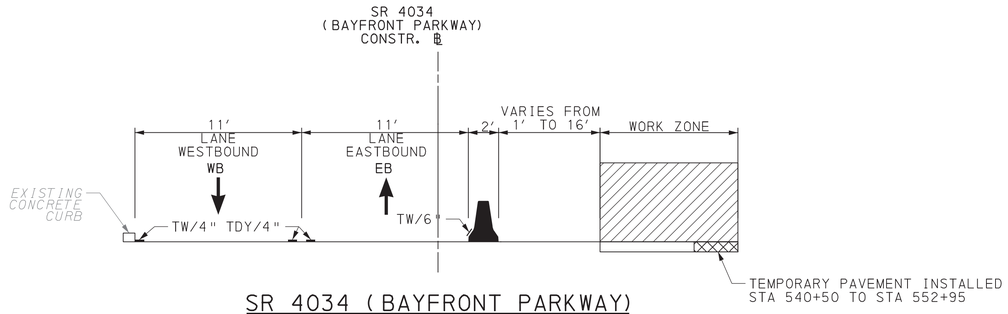
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCts03.dgn

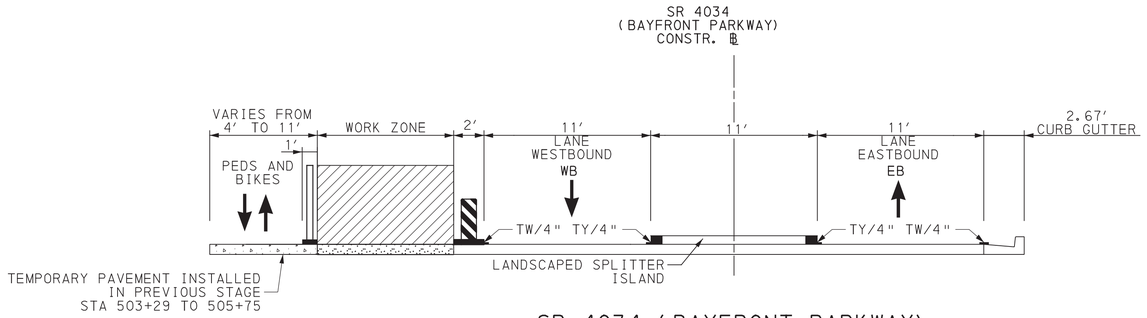
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	14 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



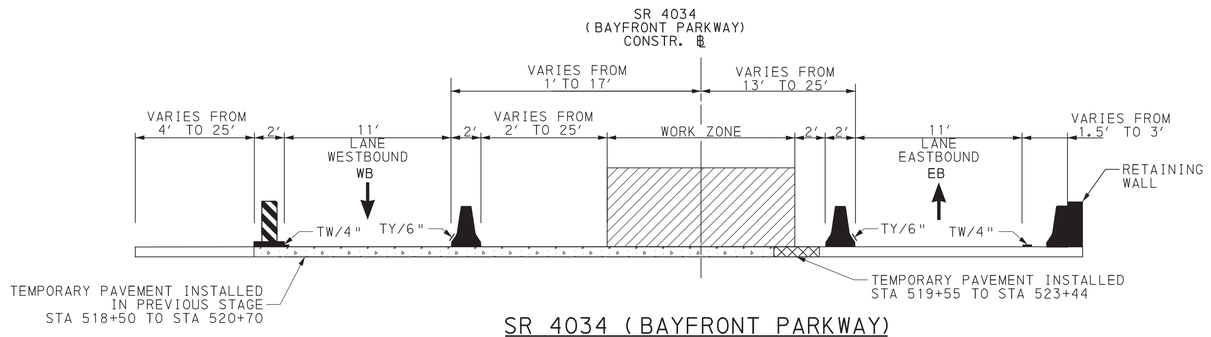
SR 4034 (BAYFRONT PARKWAY)
STAGES 2A/2B - LONG TERM

STA 540+50 TO STA 552+95



SR 4034 (BAYFRONT PARKWAY)
STAGE 3A - LONG TERM

STA 502+73 TO STA 505+75



SR 4034 (BAYFRONT PARKWAY)
STAGE 3A - LONG TERM

STA 518+50 TO STA 523+44

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

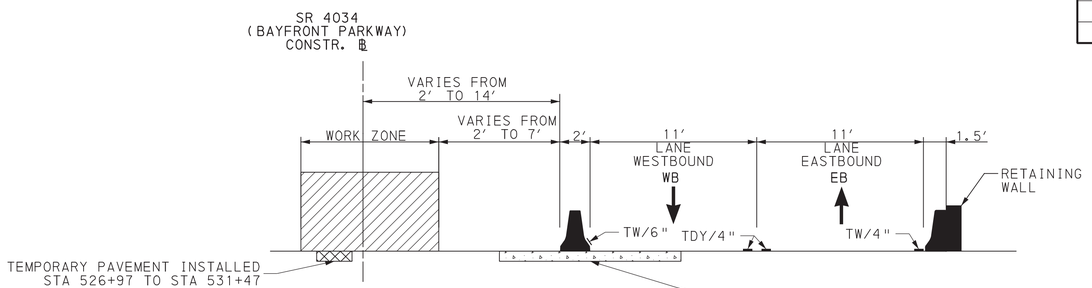
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs04.dgn

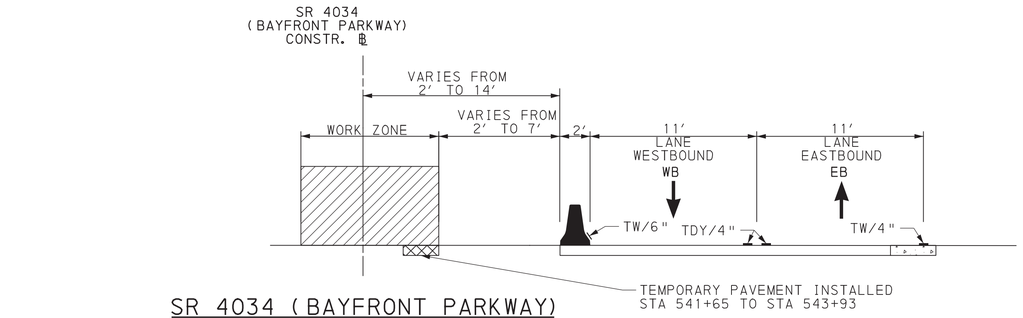
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	15 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



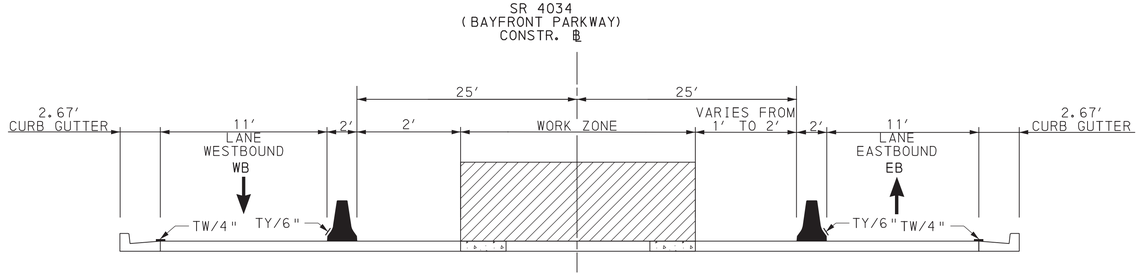
SR 4034 (BAYFRONT PARKWAY)
STAGE 3B/3C/3D/3E/3F - LONG TERM

STA 518+30 TO STA 535+00



SR 4034 (BAYFRONT PARKWAY)
STAGE 3B/3C/3D/3E/3F - LONG TERM

STA 541+65 TO STA 552+93



SR 4034 (BAYFRONT PARKWAY)
STAGE 4 - LONG TERM

STA 519+55 TO STA 530+36

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

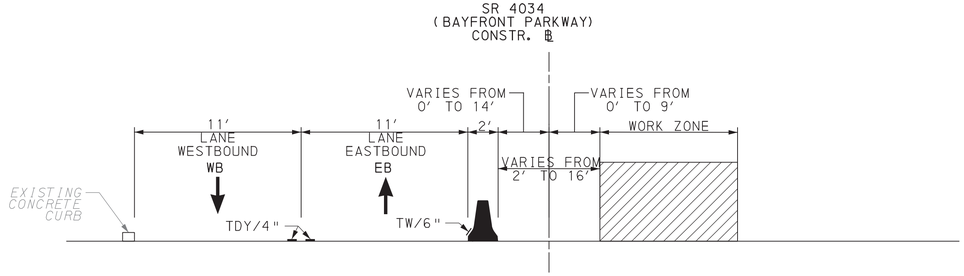
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTs05.dgn

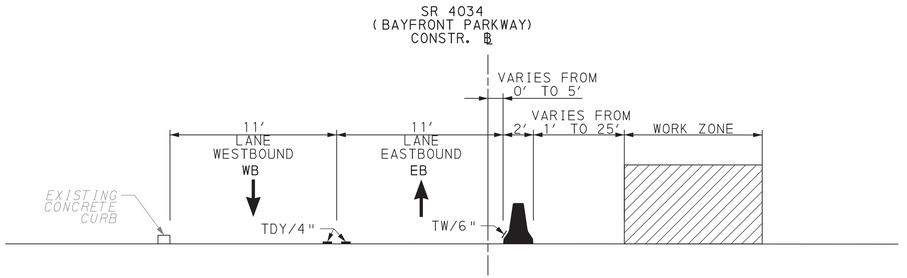
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	16 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



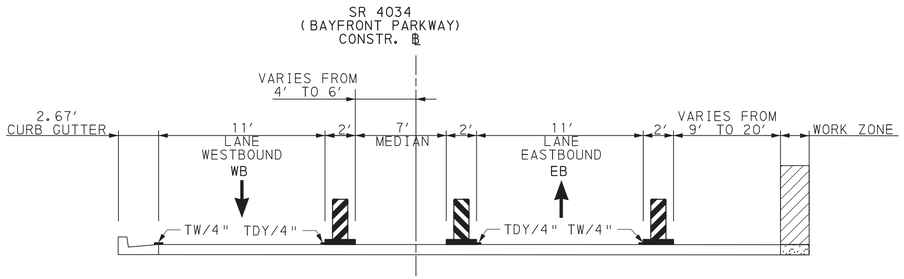
SR 4034 (BAYFRONT PARKWAY)
STAGE 4 - LONG TERM

STA 535+00 TO STA 540+21



SR 4034 (BAYFRONT PARKWAY)
STAGE 4 - LONG TERM

STA 540+21 TO STA 543+57



SR 4034 (BAYFRONT PARKWAY)
STAGE 4 - LONG TERM

STA 543+57 TO STA 550+10

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

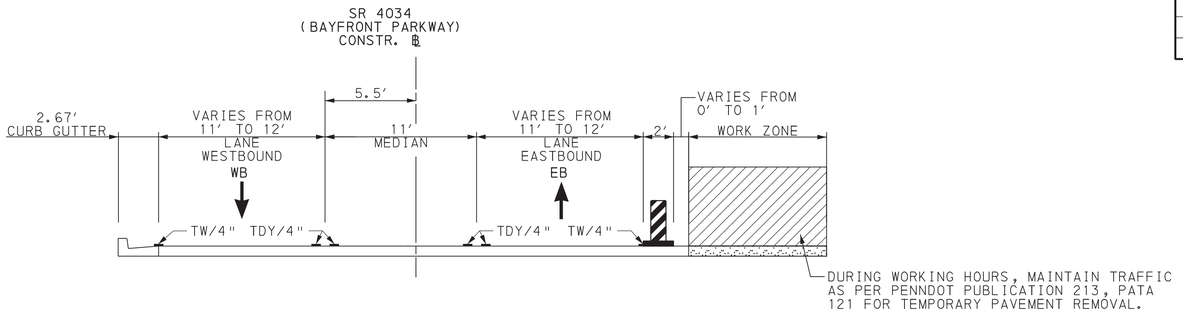
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCts06.dgn

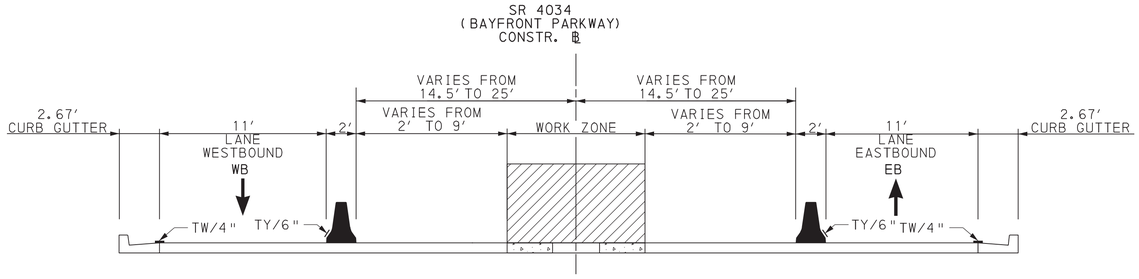
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	17 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



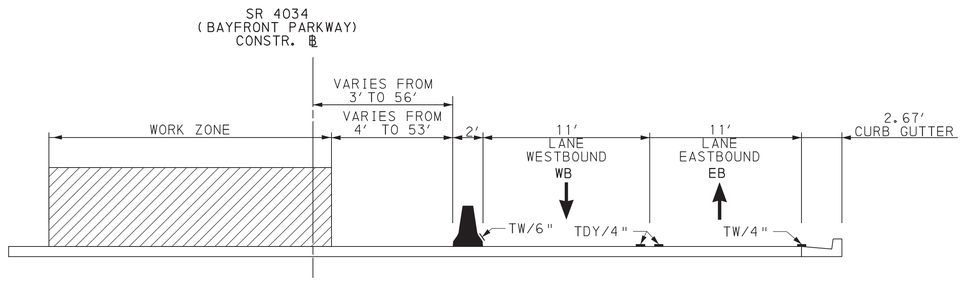
SR 4034 (BAYFRONT PARKWAY)
STAGE 4 - LONG TERM

STA 550+10 TO STA 552+95



SR 4034 (BAYFRONT PARKWAY)
STAGES 5A/5B/5C/5D - LONG TERM

STA 515+60 TO STA 530+32



SR 4034 (BAYFRONT PARKWAY)
STAGES 5A/5B - LONG TERM

STA 535+00 TO STA 541+65

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

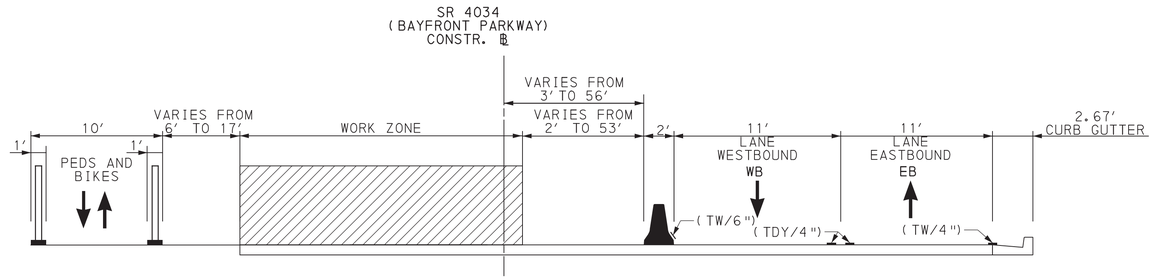
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs07.dgn

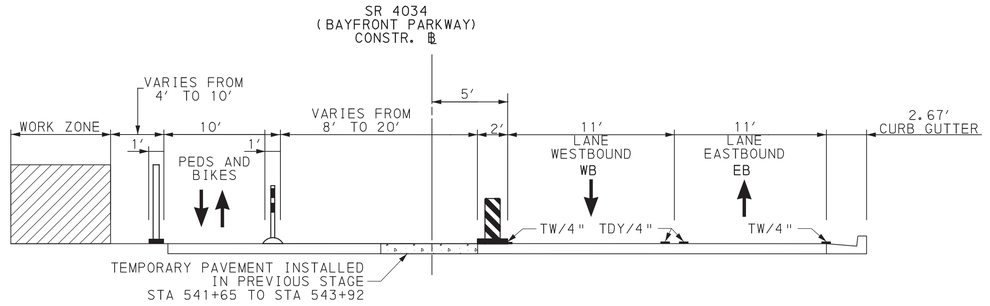
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	18 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



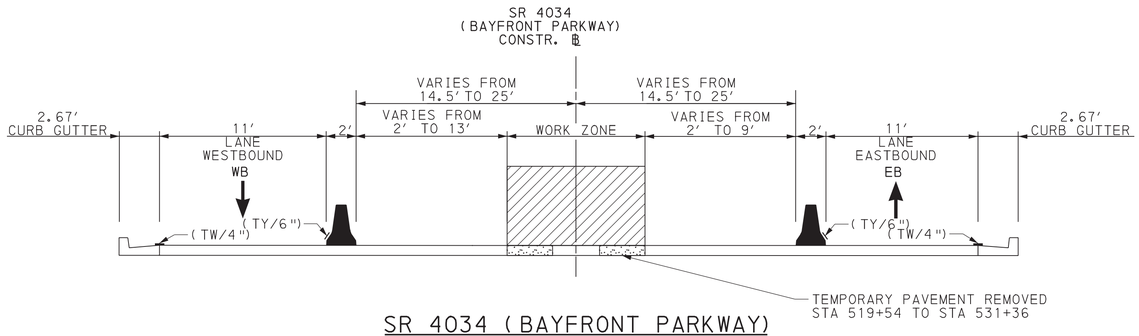
SR 4034 (BAYFRONT PARKWAY)
STAGE 5C - LONG TERM

STA 535+00 TO STA 541+69



SR 4034 (BAYFRONT PARKWAY)
STAGE 5D - LONG TERM

STA 541+08 TO STA 547+83



SR 4034 (BAYFRONT PARKWAY)
STAGE 6 - LONG TERM

STA 515+60 TO STA 536+45

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

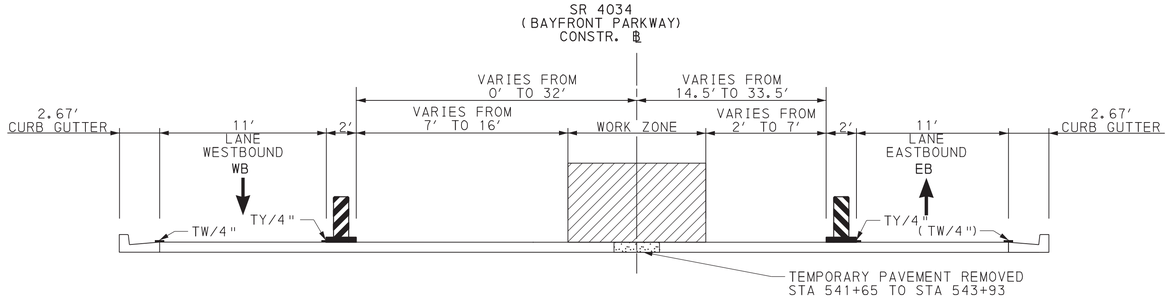
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs08.dgn

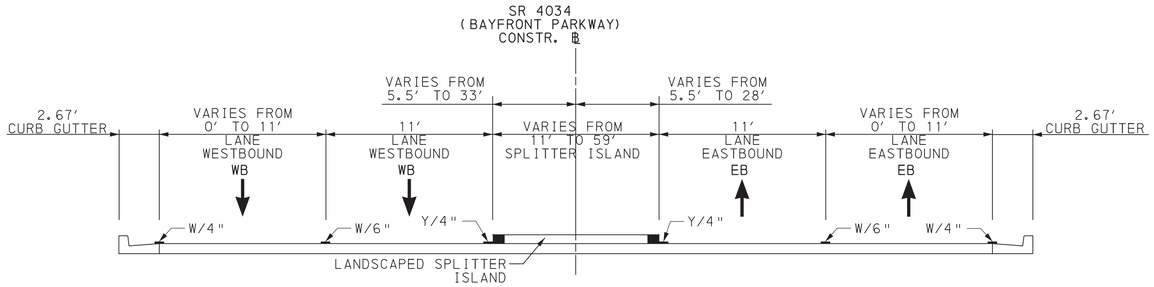
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	19 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



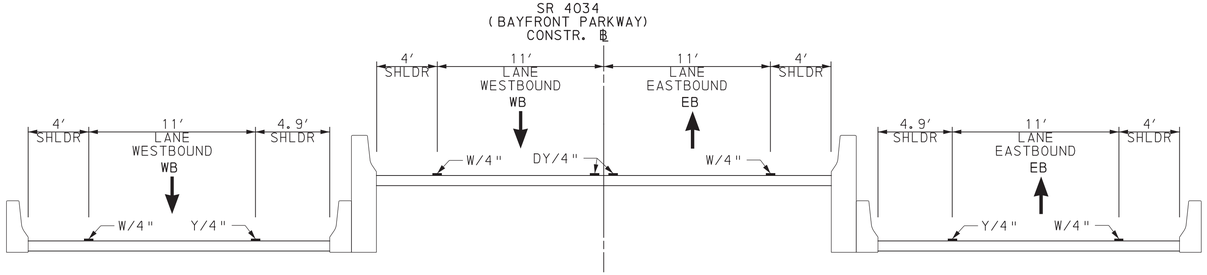
SR 4034 (BAYFRONT PARKWAY)
STAGE 6 - LONG TERM

STA 538+10 TO STA 543+93



SR 4034 (BAYFRONT PARKWAY)
FINAL TYPICAL

STA 503+50 TO STA 518+30



SR 4034 (BAYFRONT PARKWAY)
FINAL TYPICAL

STA 518+30 TO STA 532+61

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

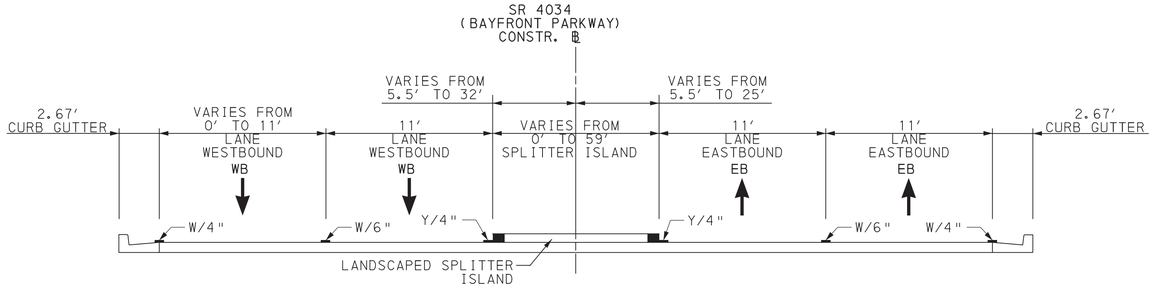
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs16.dgn

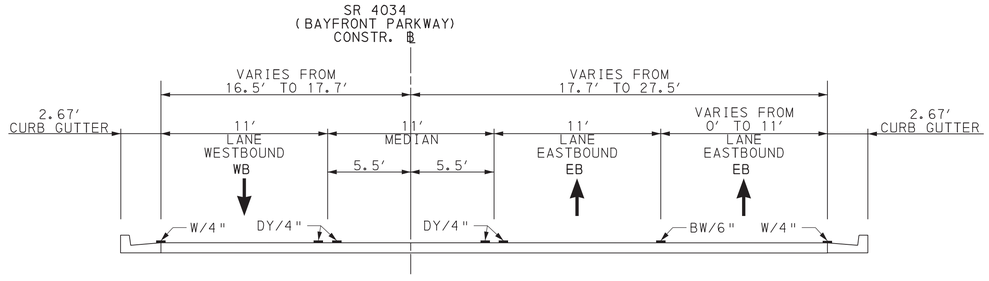
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	20 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



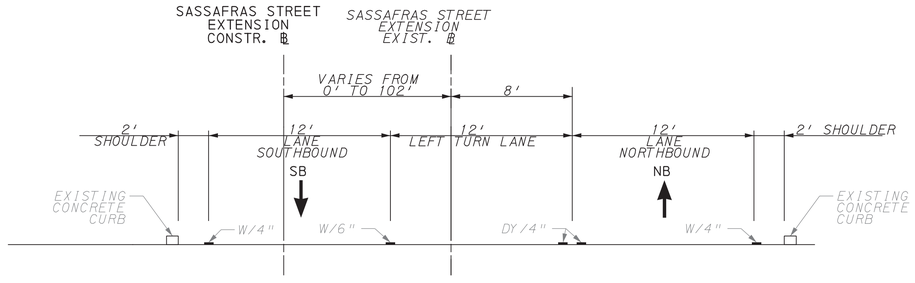
SR 4034 (BAYFRONT PARKWAY)
FINAL TYPICAL

STA 532+61 TO STA 543+93



SR 4034 (BAYFRONT PARKWAY)
FINAL TYPICAL

STA 543+93 TO STA 551+25



SASSAFRAS STREET EXTENSION
EXISTING TYPICAL

STA 10+20 TO STA 15+96

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

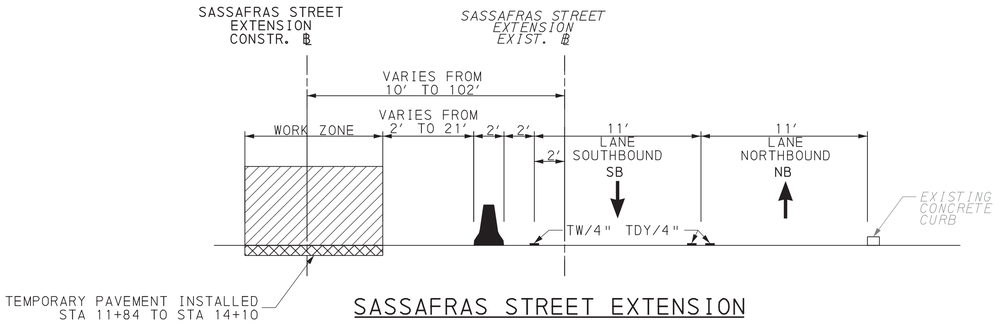
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCts17.dgn

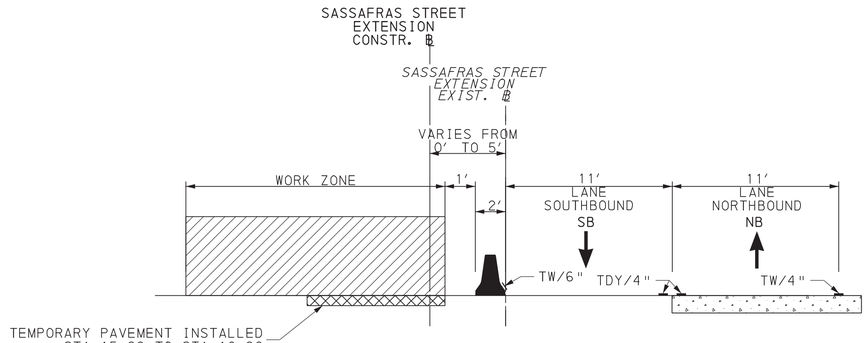
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	21 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



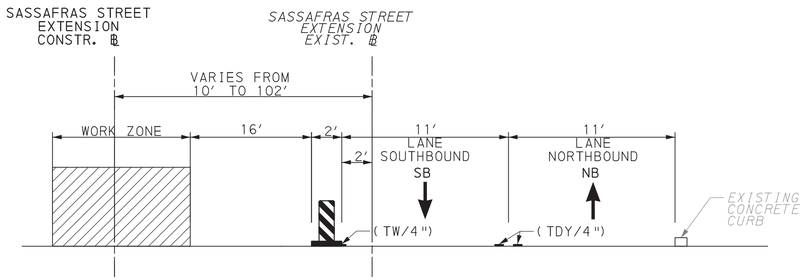
SASSAFRAS STREET EXTENSION
STAGE 1B - LONG TERM

STA 10+20 TO STA 14+10



SASSAFRAS STREET EXTENSION
STAGE 1B - LONG TERM

STA 14+10 TO STA 16+96



SASSAFRAS STREET EXTENSION
STAGE 1C - LONG TERM

STA 10+20 TO STA 12+20

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

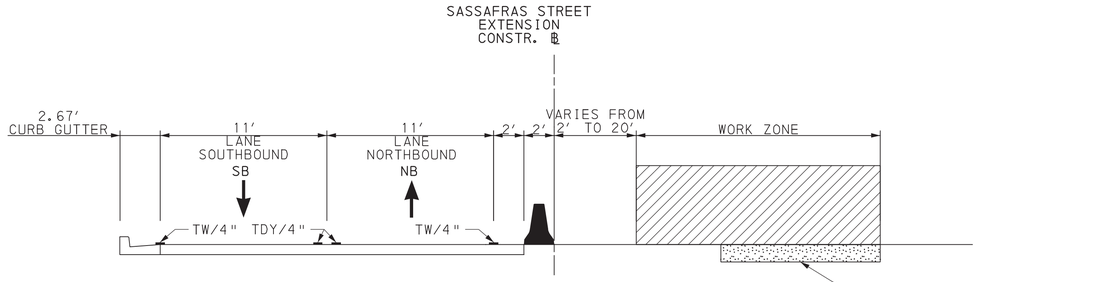
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTs09.dgn

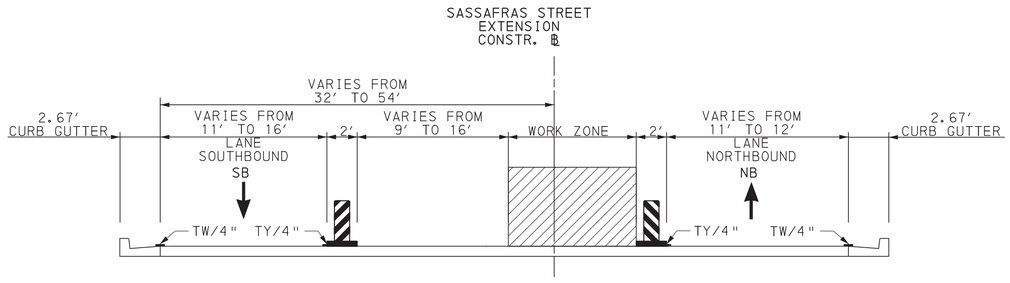
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	22 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



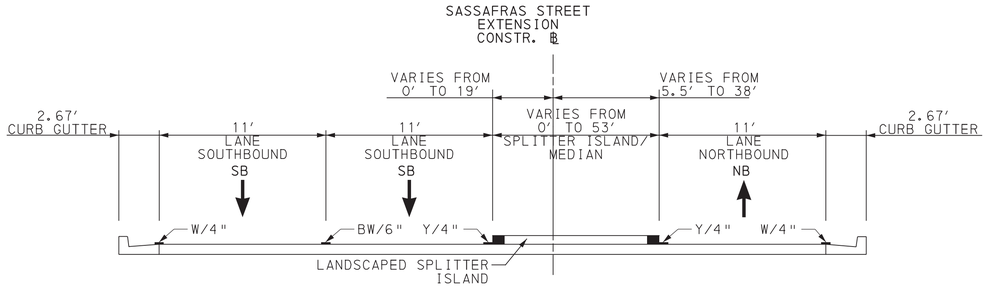
SASSAFRAS STREET EXTENSION
STAGE 2A/2B - LONG TERM

STA 1+18 TO STA 5+81



SASSAFRAS STREET EXTENSION
STAGE 3A - LONG TERM

STA 0+90 TO STA 1+76
STA 3+12 TO STA 5+00



SASSAFRAS STREET EXTENSION
FINAL TYPICAL

STA 0+91 TO STA 5+00

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

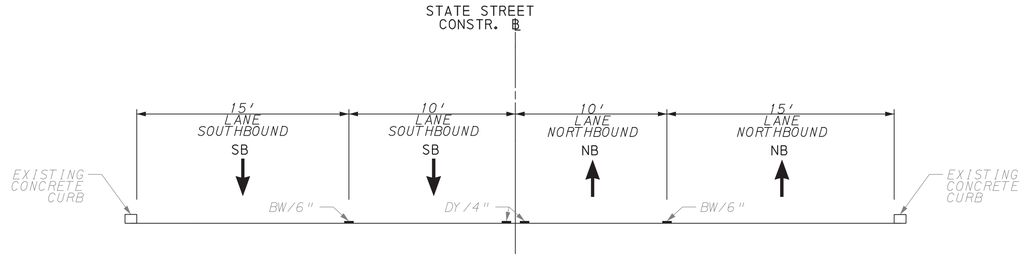
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCTs10.dgn

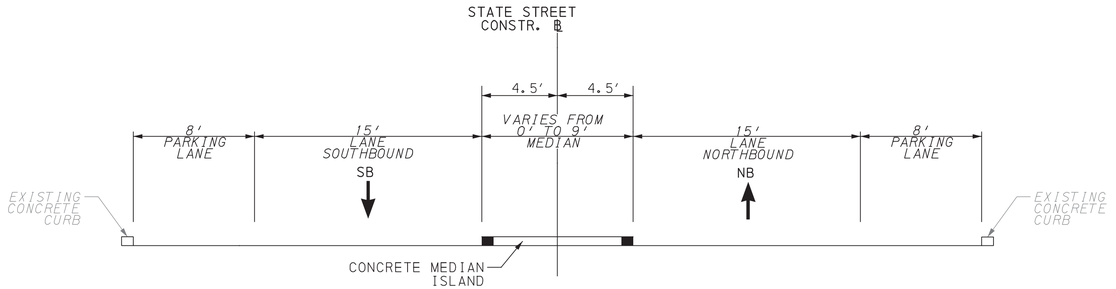
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	23 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



STATE STREET
EXISTING TYPICAL

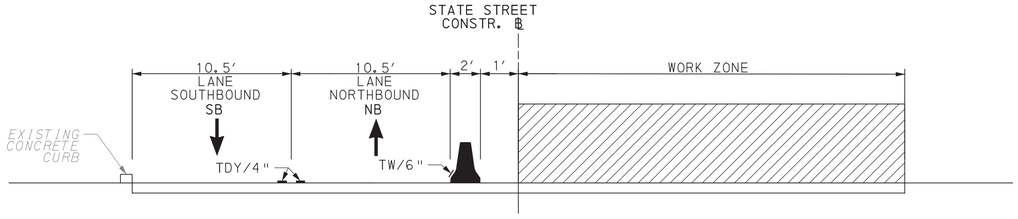
STA 106+00 TO STA 109+65



STATE STREET
EXISTING TYPICAL

STA 110+20 TO STA 114+50

NO EXISTING PAVEMENT MARKINGS PRESENT



STATE STREET
STAGE 3A - LONG TERM

STA 105+84 TO STA 109+04

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

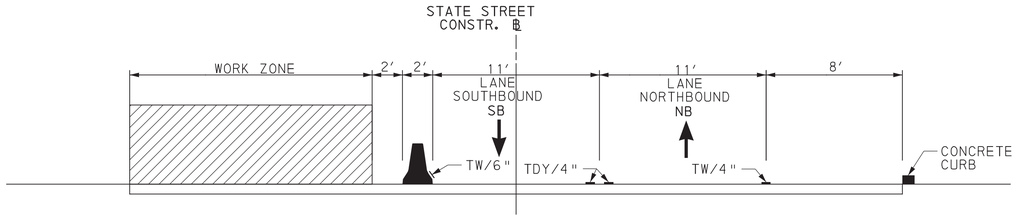
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsll.dgn

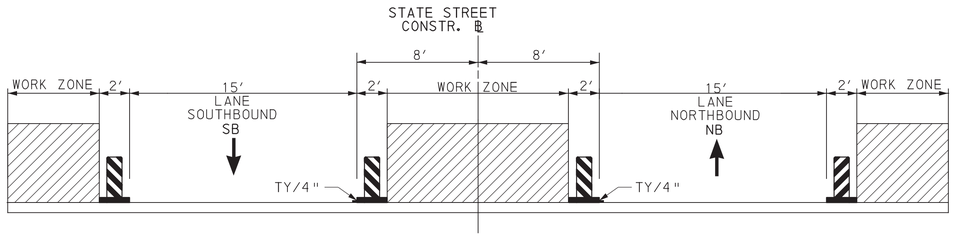
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	24 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



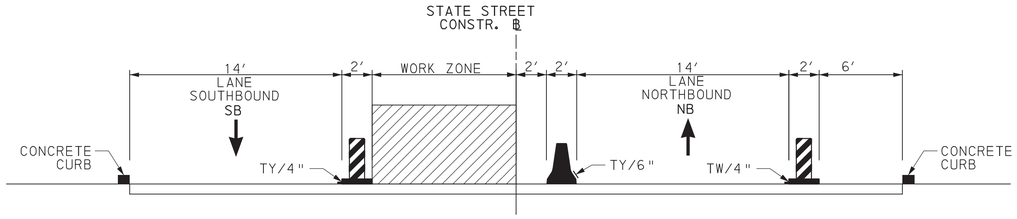
STATE STREET
STAGE 3B - LONG TERM

STA 105+84 TO STA 108+96



STATE STREET
STAGES 3A/3B - LONG TERM

STA 113+59 TO STA 114+50



STATE STREET
STAGE 3D - LONG TERM

STA 106+07 TO STA 107+84

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

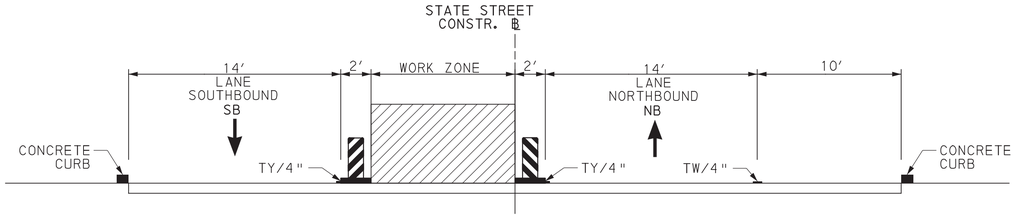
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTs12.dgn

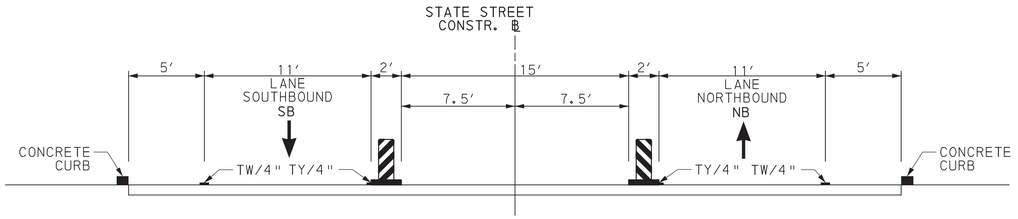
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	25 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



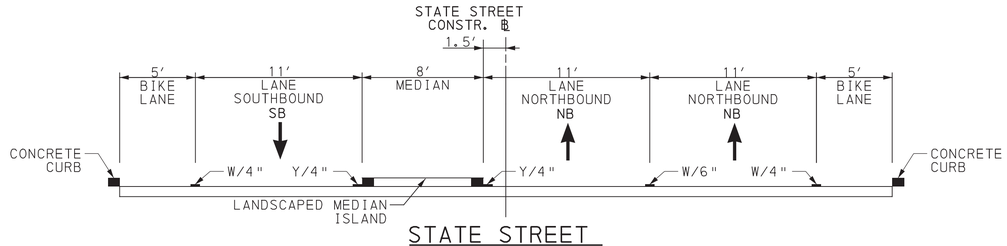
STATE STREET
STAGE 3F - LONG TERM

STA 107+84 TO STA 108+76



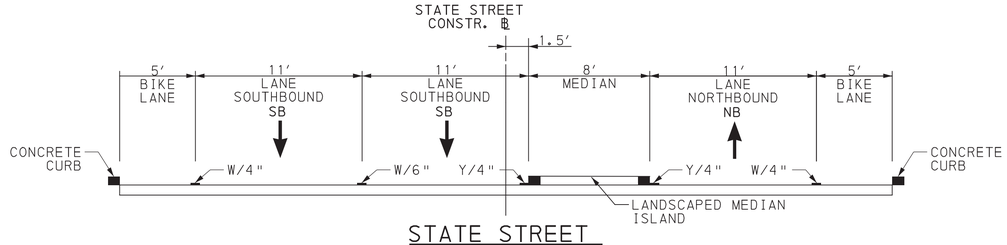
STATE STREET
STAGES 4/5/6 - LONG TERM

STA 106+07 TO STA 112+50



STATE STREET
FINAL TYPICAL

STA 105+84 TO STA 109+73



STATE STREET
FINAL TYPICAL

STA 109+73 TO STA 114+50

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

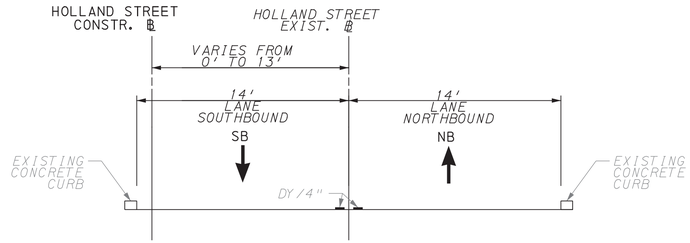
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCts13.dgn

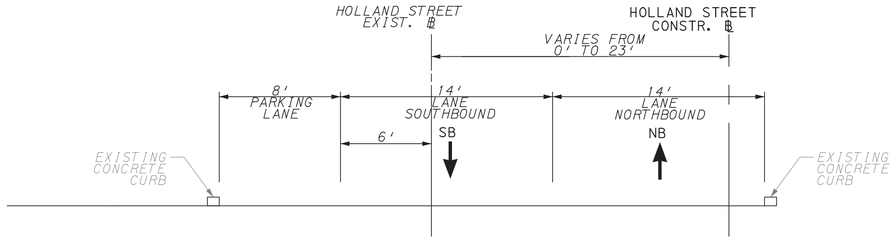
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	26 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET
EXISTING TYPICAL

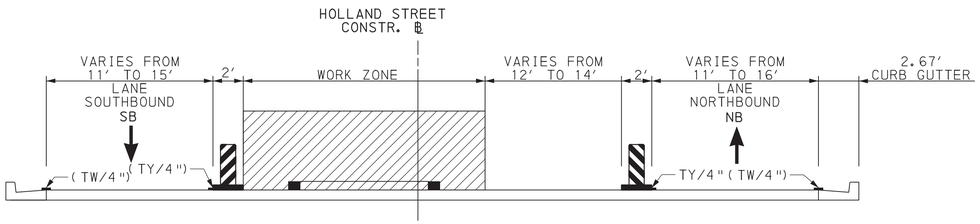
STA 104+60 TO STA 109+73



HOLLAND STREET
EXISTING TYPICAL

STA 110+26 TO STA 114+60

*NO EXISTING PAVEMENT MARKINGS PRESENT



HOLLAND STREET
STAGE 6 - LONG TERM

STA 11+27 TO STA 12+05

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

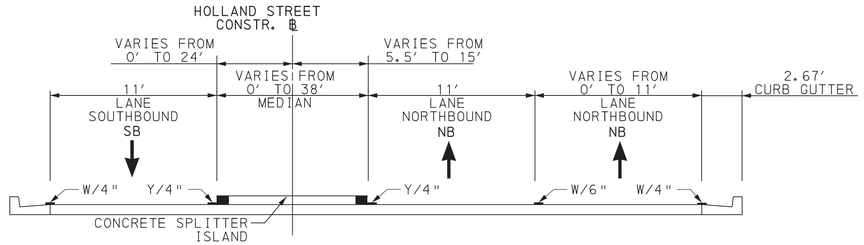
TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\rpt\sheets\TCts14.dgn

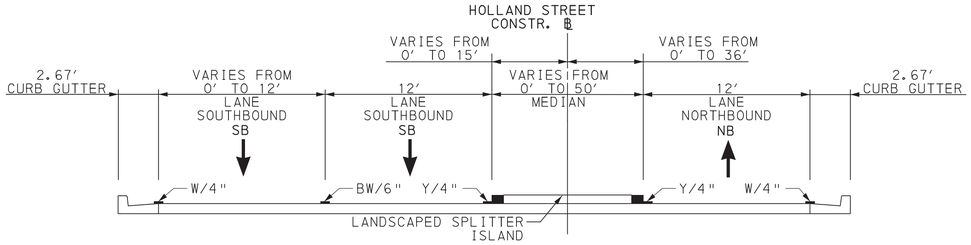
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	27 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET
FINAL TYPICAL

STA 7+60 TO STA 12+05



HOLLAND STREET
FINAL TYPICAL

STA 13+88 TO STA 17+65

- WORK AREA
- TEMPORARY PAVEMENT INSTALLED IN THIS STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT REMOVED IN THIS STAGE
- TEMPORARY BARRIER
- PORTABLE SIDEWALK PROTECTIVE FENCE
- LANE SEPARATOR CURB
- CHANNELIZING DEVICES
- TRAFFIC FLOW ARROW

Y/4"	- EXISTING SOLID YELLOW PAVEMENT MARKINGS/WIDTH
DY/4"	- EXISTING SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
W/4"	- EXISTING SOLID WHITE PAVEMENT MARKINGS/WIDTH
TY/4"	- TEMPORARY SOLID YELLOW PAVEMENT MARKINGS/WIDTH
TDY/4"	- TEMPORARY SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
TW/4"	- TEMPORARY SOLID WHITE PAVEMENT MARKINGS/WIDTH
(X/X")	- TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

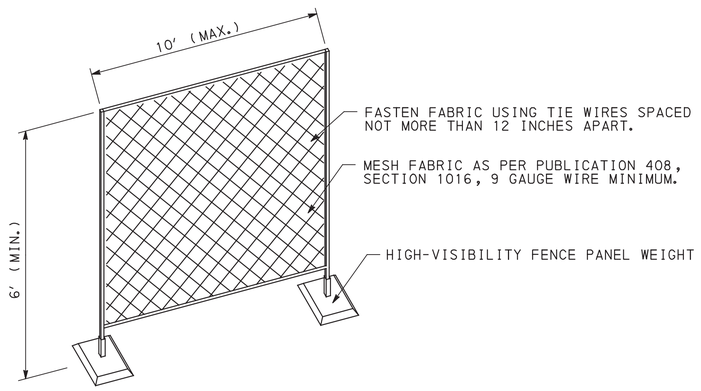
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTs15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	28 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SIDEWALK PROTECTIVE FENCE STEEL PORTABLE DETAIL
ITEM NO. 9000-1200

NOT TO SCALE

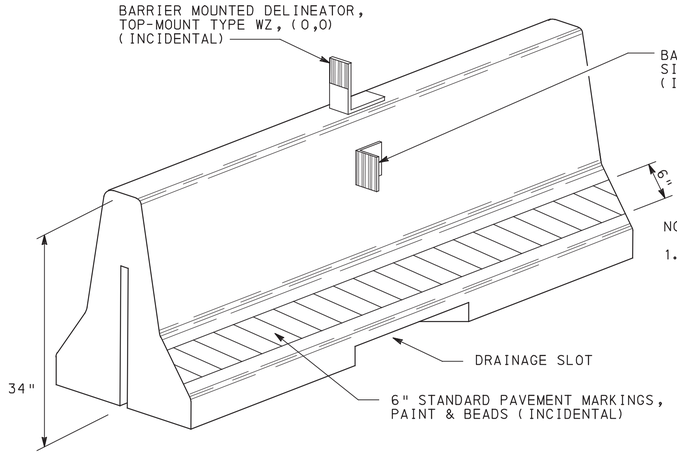
EXISTING BASELINE FOR STAGES 1B, 1C, 1D, 2A, AND 2B
SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR #034 (BAYFRONT PARKWAY) SURVEY @	220+20.51	PC	725230.2938	1333626.9055	N 79°28'01" E
	223+52.59	PI	725290.9997	1333953.3902	
	226+70.20	PT	725503.4301	1334208.6368	N 50°13'51" E
	226+74.79	PC	725506.3680	1334212.1668	
	227+32.97	PI	725543.5835	1334256.8832	N 58°56'26" E
	227+90.92	PT	725573.5984	1334306.7194	
	239+93.12	PC	726193.8455	1335336.5644	
	243+11.07	PI	726357.8854	1335608.9327	N 65°17'35" E
	246+28.37	PT	726490.7817	1335897.7790	
SASSAFRAS ST EXT SURVEY @	10+00.00	POT	725155.3367	1333145.0333	N 9°44'41" W
	10+27.23	PC	725182.1711	1333140.4249	
	10+64.03	PI	725218.4428	1333134.1957	N 24°59'23" W
	11+00.40	PT	725251.8002	1333118.6482	
	19+00.00	POT	725976.5465	1332780.8521	
STATE ST SURVEY @	94+94.48	POB	724164.5878	1334866.3660	N 24°48'33" W
	121+54.60	POE	726579.2083	1333750.1854	
HOLLAND ST SURVEY @	96+49.28	POB	724892.7141	1335777.4431	N 24°50'22" W
	120+53.57	POE	727074.5758	1334767.4577	

NOTE: FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

TEMPORARY BARRIER ITEMS PROVIDE A MASH APPROVED BARRIER AS SHOWN.



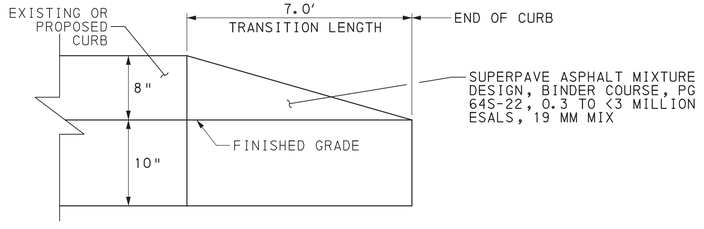
NOTES:

1. WATER BLAST THE TEMPORARY BARRIER WITH A MINIMUM OF 3000 PSI BEFORE PAINTING (INCIDENTAL)

(FOR ADDITIONAL DETAILS, SEE STD. DWG. RC-57M)
NOT TO SCALE

TEMPORARY BARRIER DETAIL

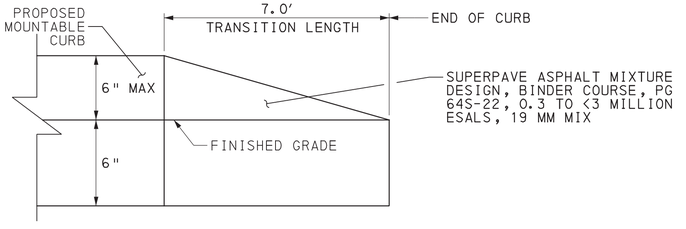
NOT TO SCALE



TEMPORARY CURB TRANSITION

NOT TO SCALE

STA 505+68 LT TO STA 505+75 LT - STAGE 1B
STA 541+67 LT TO STA 541+74 LT - STAGE 3B
STA 107+84 LT TO STA 107+91 LT - STAGE 3D
STA 107+84 RT TO STA 107+91 RT - STAGE 3D



TEMPORARY CURB TRANSITION

NOT TO SCALE

STA 515+60 LT TO STA 515+67 LT - STAGE 2B
STA 515+60 LT TO STA 515+67 RT - STAGE 2B
STA 541+65 LT TO STA 541+72 LT - STAGE 5C
STA 541+65 RT TO STA 541+72 RT - STAGE 5C

TRAFFIC CONTROL PLAN DETAIL SHEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

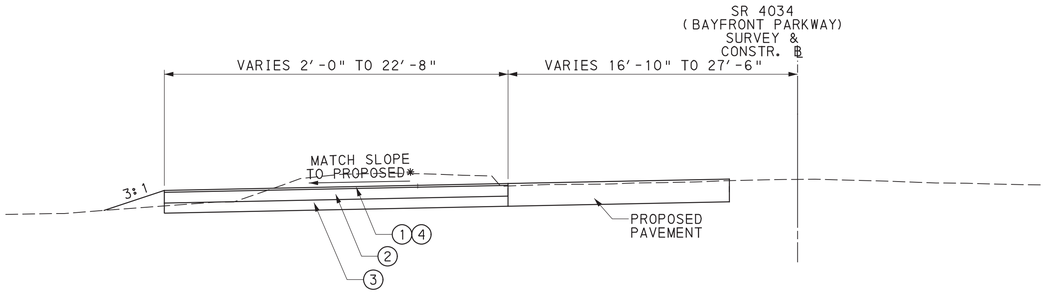
DES: SMR | CKD: DJG | DWG: SMR | CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdr01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	29 OF 273
CITY OF ERIE				

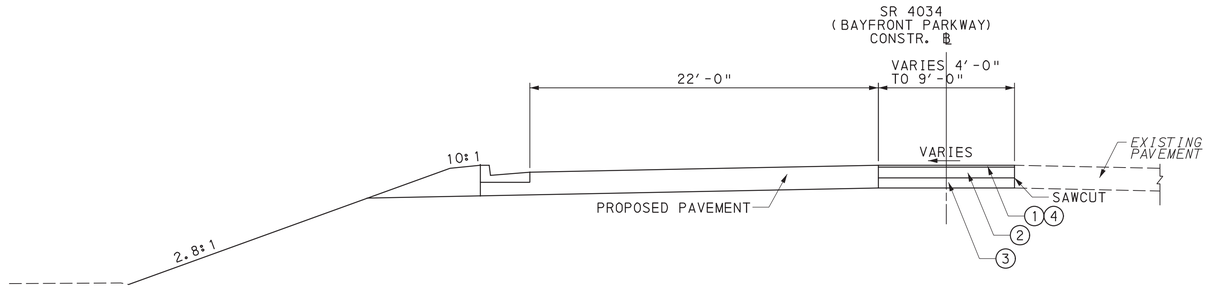
REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

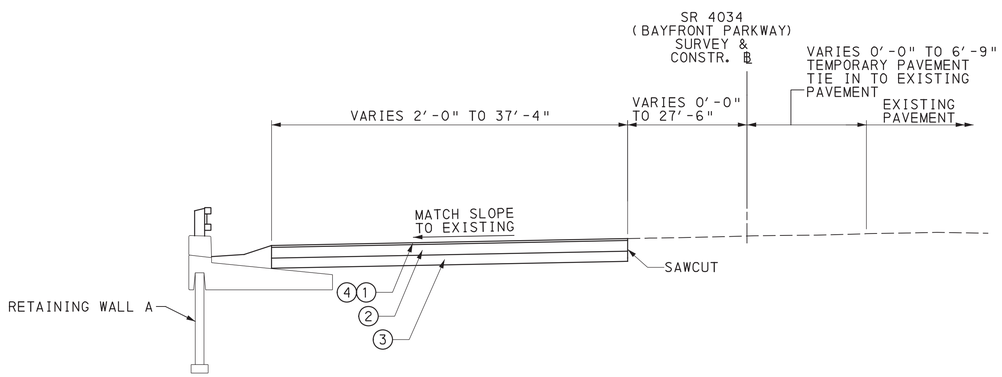
STA 502+72.82 LT TO STA 505+75.00 LT - STAGE 1B

NOTE:
MATCH SLOPE TO EXISTING PAVEMENT - STA 502+72.82 LT TO STA 503+50 LT



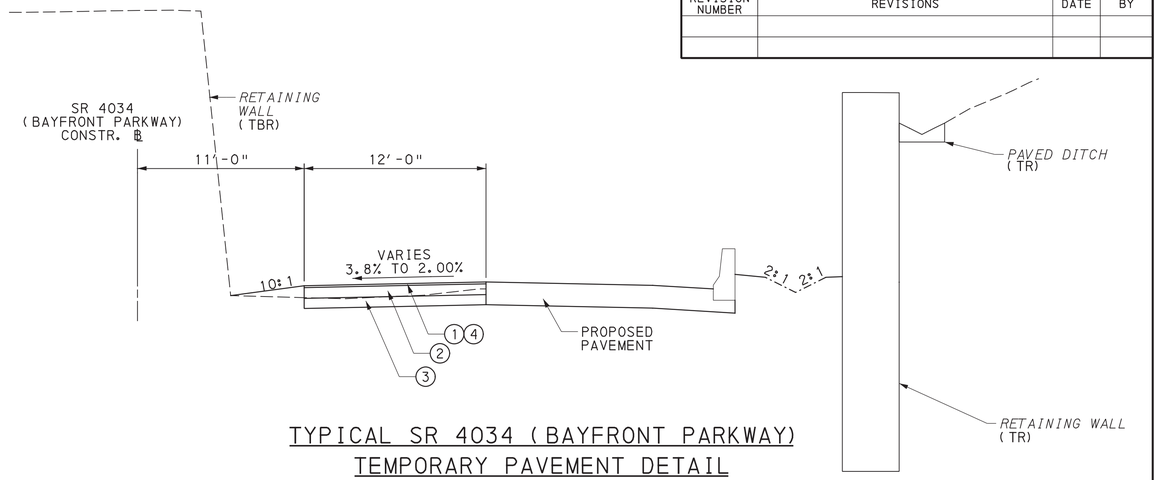
TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

STA 515+59.70 TO STA 517+07.62 - STAGE 1D
STA 516+45 TO STA 518+30.02 - STAGE 1C



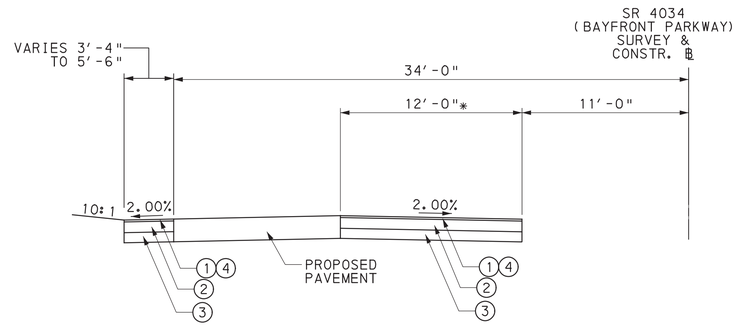
TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

STA 518+30.00 LT TO STA 520+70.18 LT - STAGE 1C



TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

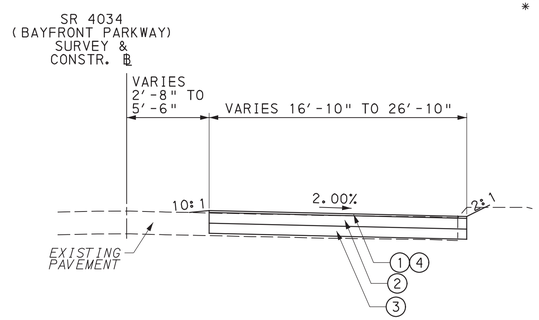
STA 519+55 RT TO STA 523+44.30 RT - STAGE 3A
STA 523+44.30 RT TO STA 531+36.35 RT - STAGE 2B



TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

STA 527+00 LT TO STA 531+46.83 LT - STAGE 3B

NOTE:
* STA 528+85.43 LT TO STA 531+35.78 LT - STAGE 3B



TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY TIE-IN PAVEMENT DETAIL

STA 539+50 RT TO STA 540+50 RT - STAGE 2A

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX (8½" DEPTH)
3. SUBBASE 8" DEPTH (NO. 2A)
4. ASPHALT TACK COAT (NTT/CNTT)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

TRAFFIC CONTROL PLAN SPECIAL DETAILS

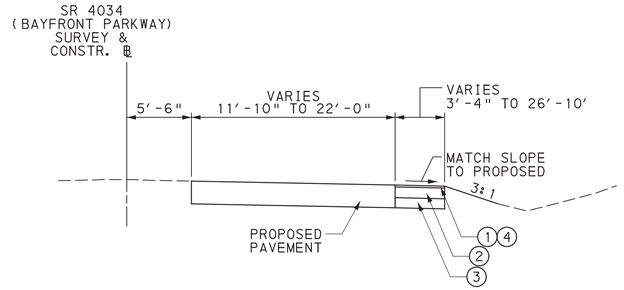
DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCd102.dgn

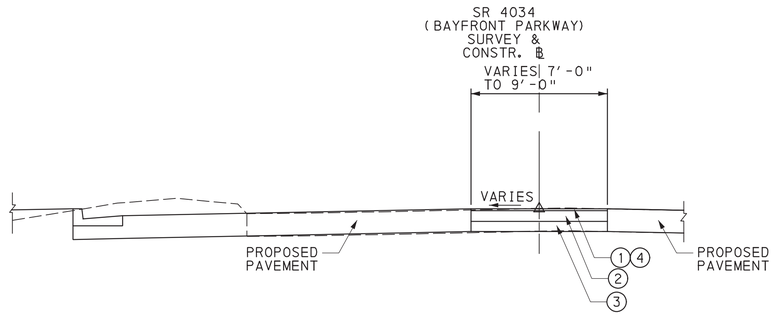
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	30 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



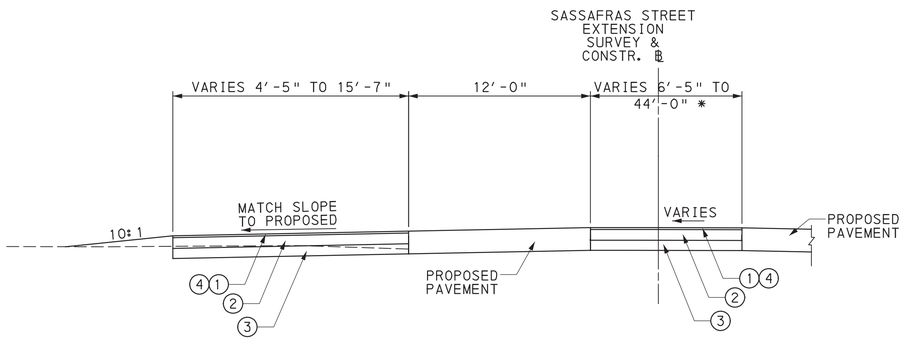
TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

STA 540+51.73 RT TO STA 544+92.68 RT - STAGE 2A
STA 545+11.08 RT TO STA 552+95.27 RT - STAGE 2A



TYPICAL SR 4034 (BAYFRONT PARKWAY) TEMPORARY PAVEMENT DETAIL

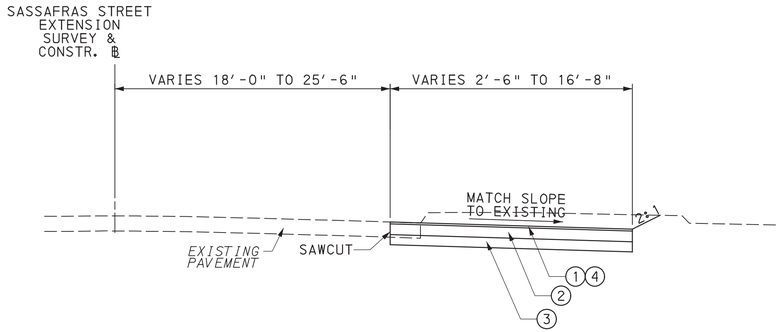
STA 541+65.13 TO STA 543+93.45 - STAGE 3B



TYPCIAL SASSAFRAS STREET EXT TEMPORARY PAVEMENT DETAIL

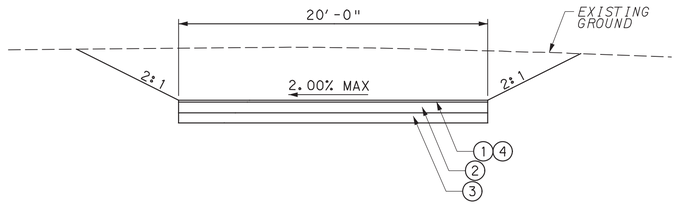
STA 0+52.88 TO STA 4+34.46 - STAGE 1B

NOTE:
* STA 0+90.26 TO STA 1+77.27 - STAGE 1B
STA 3+36.26 TO STA 4+17.99 - STAGE 1B



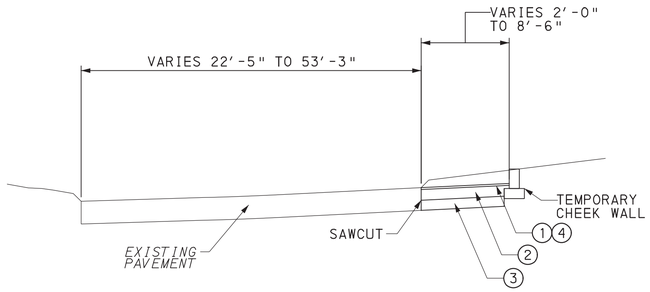
TYPCIAL SASSAFRAS STREET EXT TEMPORARY PAVEMENT DETAIL

STA 3+24.50 RT TO STA 5+79.90 RT - STAGE 1A

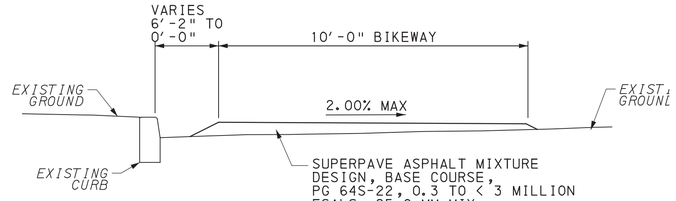


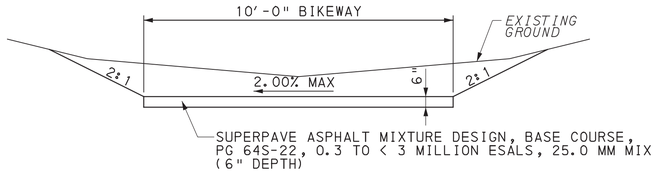
ACCESS TO UPMC HAMOT SERVICE DRIVE TEMPORARY PAVEMENT DETAIL

STA 533+66.64 LT TO STA 534+98.55 - STAGE 3A



UPMC HAMOT SERVICE DRIVEWAY TEMPORARY PAVEMENT DETAIL





BAYFRONT BIKEWAY NOTES:

1. MAXIMUM LONGITUDINAL GRADE OF BAYFRONT BIKEWAY SHALL BE 5%.
2. TEMPORARILY STABILIZE THE ADJACENT AREA UPON COMPLETION OF THE BAYFRONT BIKEWAY.
3. MAINTAIN THE BAYFRONT BIKEWAY UNTIL REMOVAL.
4. REMOVE THE BAYFRONT BIKEWAY WHEN DIRECTED AND RESTORE THE AREA TO ITS ORIGINAL CONDITION.

TEMPORARY BAYFRONT BIKEWAY

NOT TO SCALE

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX (8½" DEPTH)
3. SUBBASE 8" DEPTH (NO. 2A)
4. ASPHALT TACK COAT (NTT/CNTT)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

TRAFFIC CONTROL PLAN SPECIAL DETAILS

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

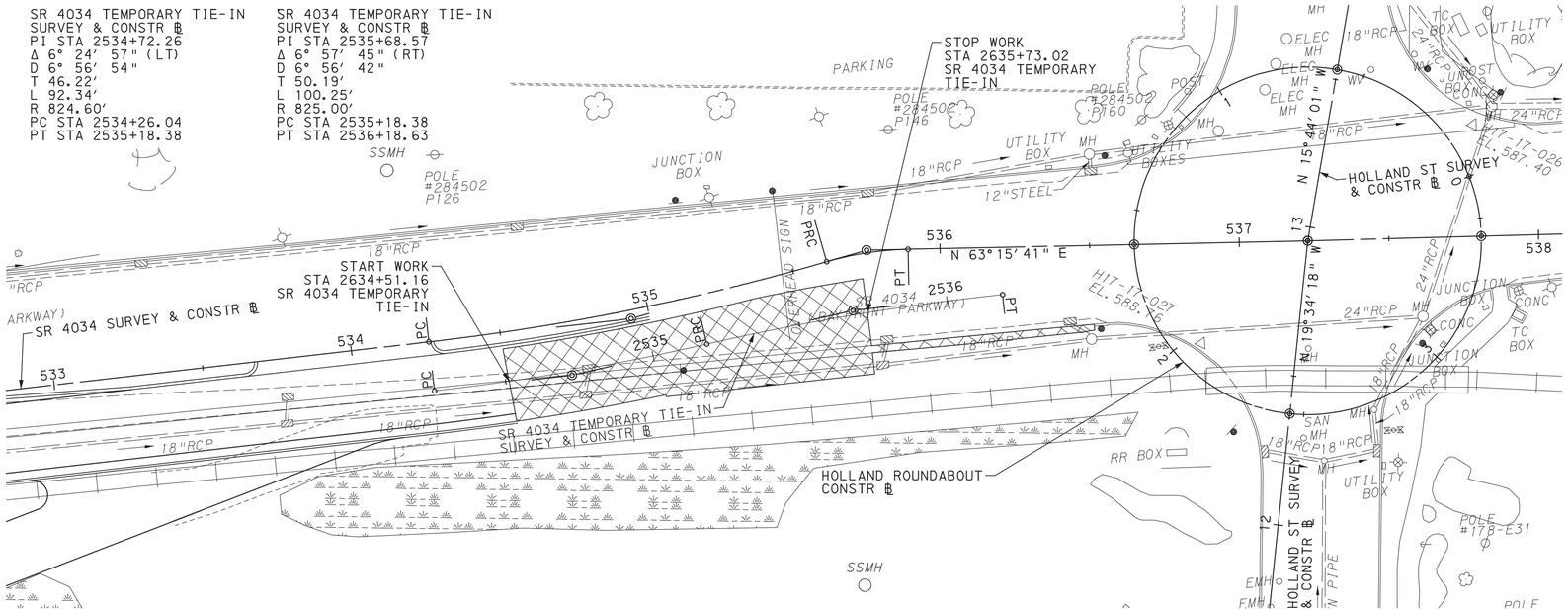
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCd103.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	31 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SR 4034 TEMPORARY TIE-IN
SURVEY & CONSTR ℄
PI STA 2534+72.26
Δ 6° 24′ 57" (LT)
D 6° 56′ 54"
T 46.22′
L 92.34′
R 824.60′
PC STA 2534+26.04
PT STA 2535+18.38

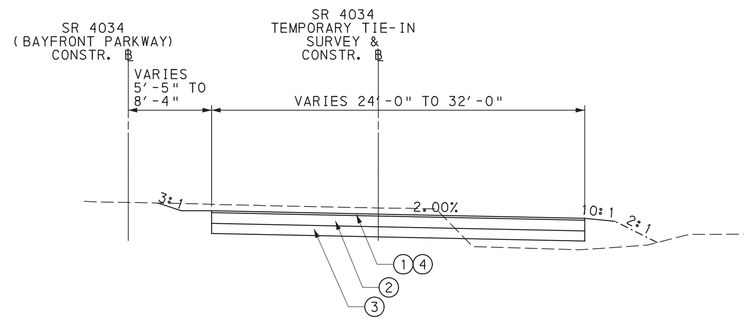
SR 4034 TEMPORARY TIE-IN
SURVEY & CONSTR ℄
PI STA 2535+68.57
Δ 6° 57′ 45" (RT)
D 6° 56′ 42"
T 50.19′
L 100.25′
R 825.00′
PC STA 2535+18.38
PT STA 2536+18.63



PLAN - SR 4034 TEMPORARY TIE-IN

LEGEND

SCALE IN FEET
0 25 50

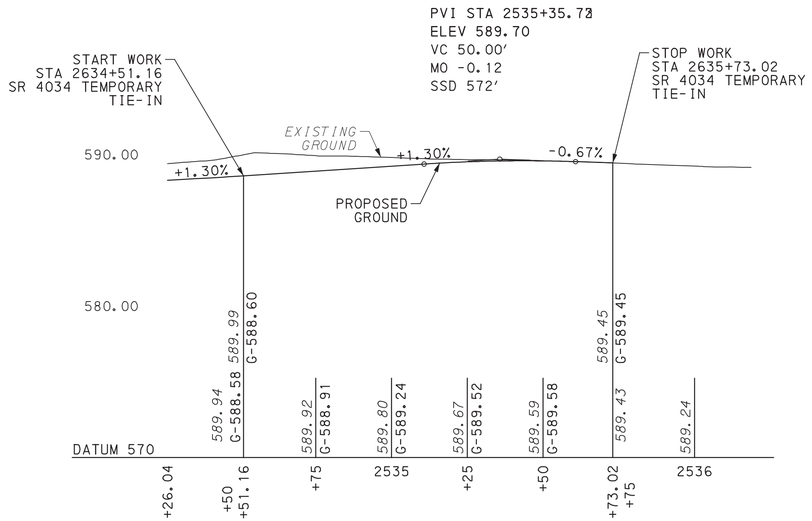


TYPICAL SR 4034 (BAYFRONT PARKWAY)
TEMPORARY TIE-IN

STA 534+50.00 TO STA 535+71.96

LEGEND

1. SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H
2. SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX (8½" DEPTH)
3. SUBBASE 8" DEPTH (NO. 2A)
4. ASPHALT TACK COAT (NTT/CNTT)



PROFILE - SR 4034 TEMPORARY TIE-IN

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 4034 TEMPORARY TIE-IN SURVEY & CONSTR ℄					
	2534+26.04	PC	725942.0887	1334970.9290	N 57°55′02" E
	2534+72.26	PI	725966.6366	1335010.0877	
	2535+18.38	PRC	725995.4065	1335046.2581	N 51°30′05" E
	2535+68.57	PI	726026.6483	1335085.5363	
	2536+18.63	PT	726052.8985	1335128.3119	N 58°27′49" E

TRAFFIC CONTROL PLAN
SPECIAL DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

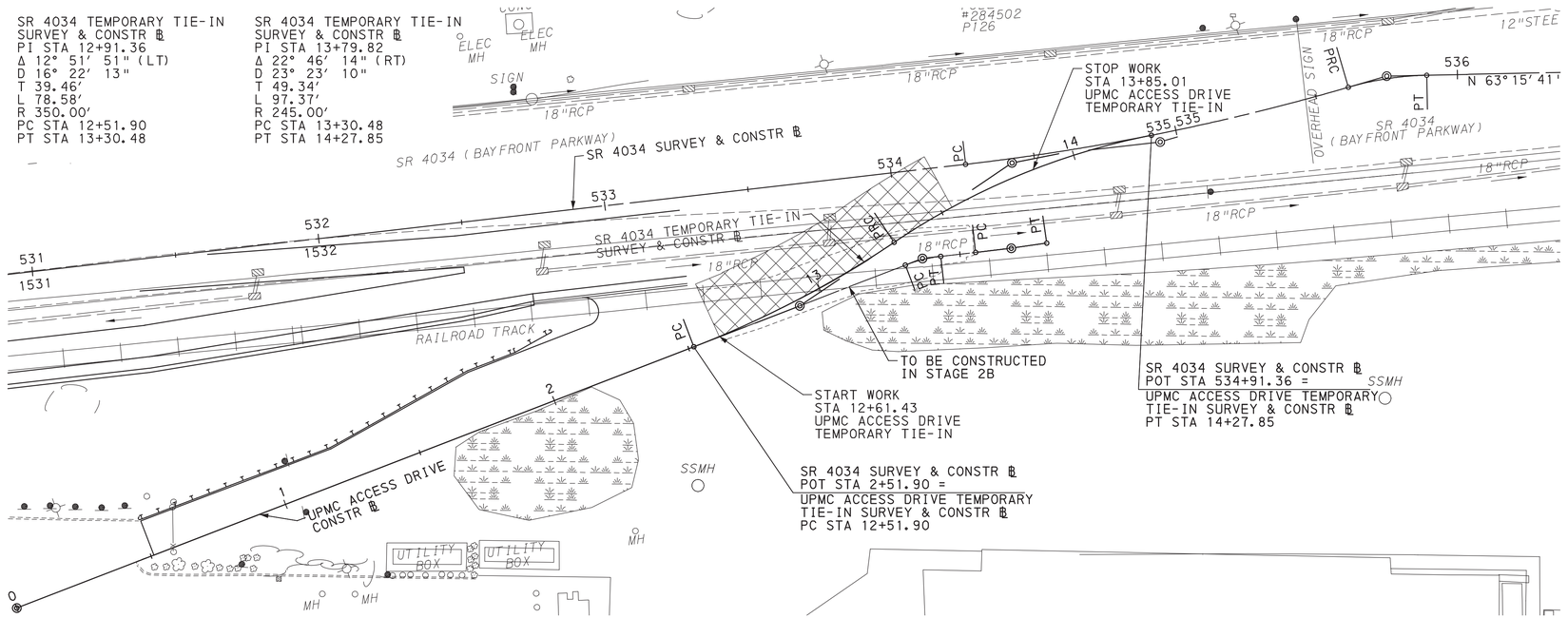
PLOTTED: 8/2/2022

FILE NAME: \\mscnsultants.com\files\Production\08\60\06808\mpt\sheets\TCd104.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	32 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

SR 4034 TEMPORARY TIE-IN
SURVEY & CONSTR ℄
PI STA 12+91.36
Δ 12° 51′ 51" (LT)
D 16° 22′ 13"
T 39.46′
L 78.58′
R 350.00′
PC STA 12+51.90
PT STA 13+30.48

SR 4034 TEMPORARY TIE-IN
SURVEY & CONSTR ℄
PI STA 13+79.82
Δ 22° 46′ 14" (RT)
D 23° 23′ 10"
T 49.34′
L 97.37′
R 245.00′
PC STA 13+30.48
PT STA 14+27.85



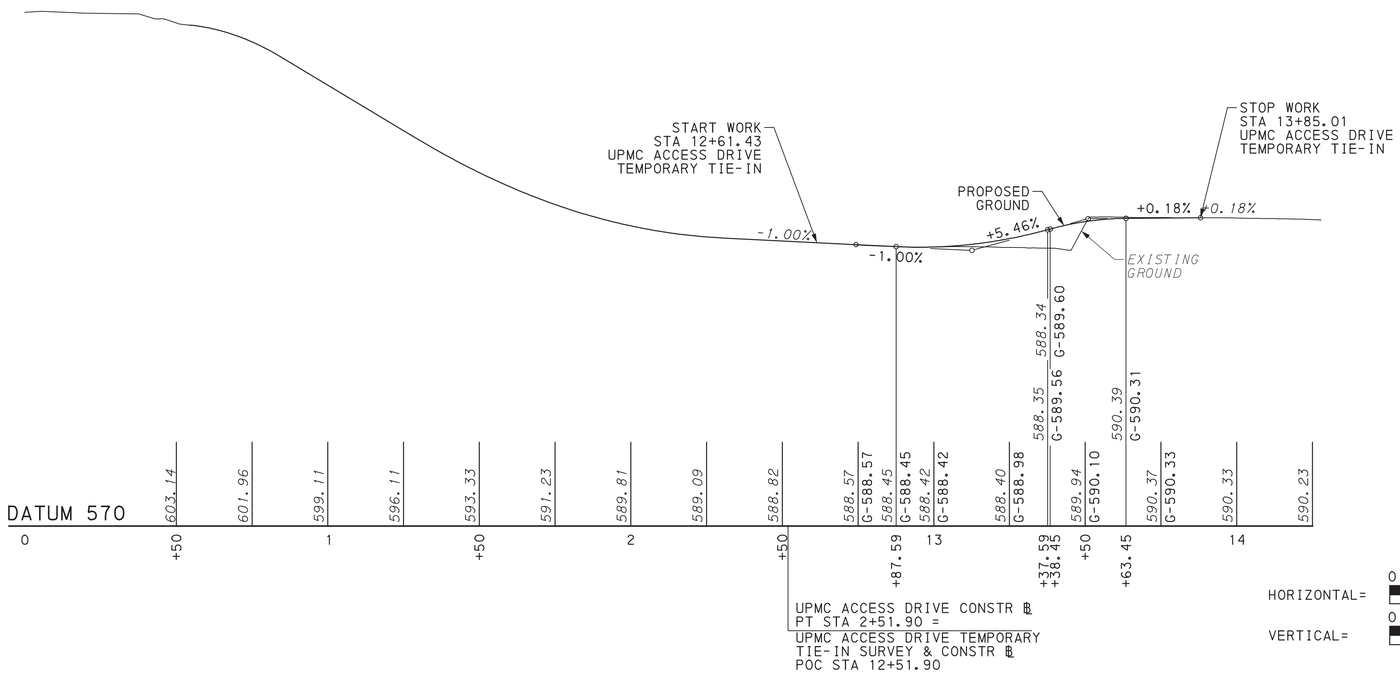
PLAN - UPMC ACCESS DRIVE TEMPORARY TIE-IN

LEGEND

SCALE IN FEET
0 25 50

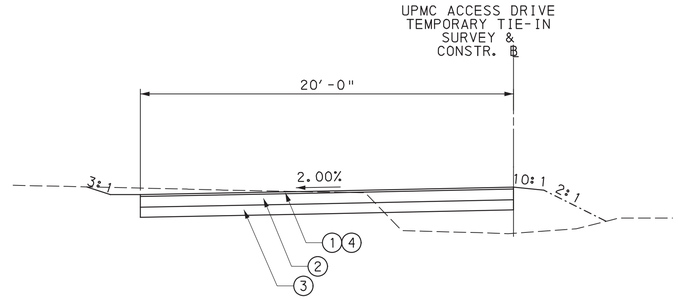
PVI STA 13+12.59
ELEV 588.20
VC 50.00′
MO 0.40′
SSD 76′

PVI STA 13+50.95
ELEV 590.29
VC 25.00′
MO -0.17′
SSD 216′



PROFILE - UPMC ACCESS DRIVE TEMPORARY TIE-IN

SCALE IN FEET
HORIZONTAL= 0 25 50
VERTICAL= 0 5 10



TYPICAL UPMC ACCESS DRIVE TEMPORARY TIE-IN

STA 2+70.00 TO STA 3+85.00

LEGEND

① SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1½" DEPTH, SRL-H

② SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX (8½" DEPTH)

③ SUBBASE 8" DEPTH (NO. 2A)

④ ASPHALT TACK COAT (NTT/CNTT)

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83)(NORTH ZONE)

ROUTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
UPMC ACCES DRIVE TEMPORARY TIE-IN SURVEY & CONSTR ℄					
	0+00.00	POT	725675.1390	1334731.3752	N 43°21′53" E
	2+51.90 BK= 12+51.90 AHD	PC	725858.2711	1334904.3406	
	12+91.36	PI	725886.9565	1334931.4335	
	13+30.48	PRC	725920.9538	1334951.4598	N 30°30′02" E
	13+79.82	PI	725963.4623	1334976.4997	
	4+27.85	PT	725992.9663	1335016.0406	N 53°16′16" E

TRAFFIC CONTROL PLAN SPECIAL DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: MCC	CKD: SMR	DWG: MCC	CKD: SMR

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdt05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	33 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCfb01.dgn

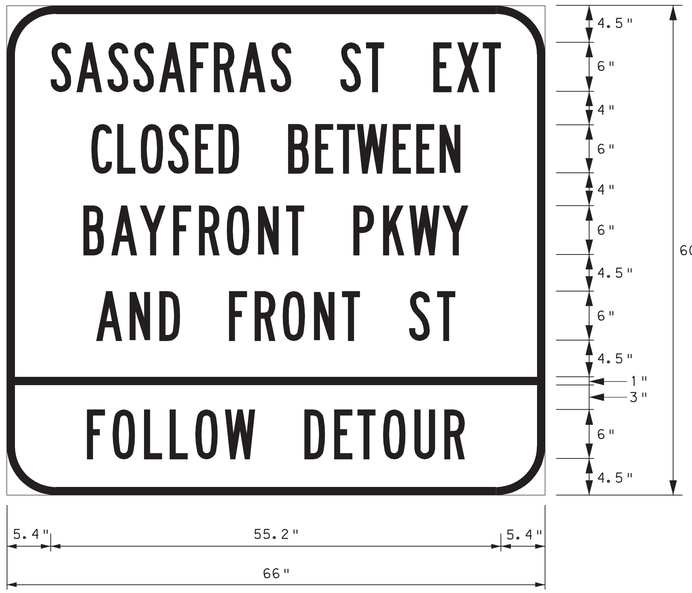
SS-1

1.0" BORDER WITH 4.0" RADIUS ON CORNERS

BLACK NON-REFLECTORIZED LEGEND AND BORDER ON ORANGE REFLECTORIZED BACKGROUND

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
4.5	11.7
4.3 - S	4.3 - S
4.8 - A	3.0 - T
4.3 - S	6.0
4.3 - S	4.0 - E
4.8 - A	4.2 - X
4.0 - F	3.0 - T
4.3 - R	11.8
4.8 - A	
3.3 - S	48.0
4.6	
48.0	

SS-2

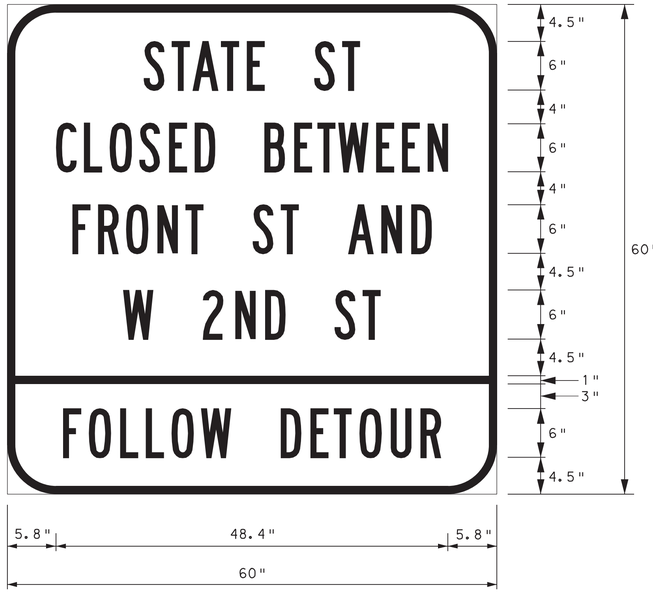


1.0" BORDER WITH 6.0" RADIUS ON CORNERS

BLACK NON-REFLECTORIZED LEGEND AND BORDER ON ORANGE REFLECTORIZED BACKGROUND

6" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 30%	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
5.4	8.8	9.3	10.9	9.6
3.1 - S	3.4 - C	3.4 - B	4.1 - A	3.2 - F
3.9 - A	3.2 - L	3.5 - A	3.7 - N	3.9 - O
3.1 - S	3.6 - O	4.1 - Y	2.5 - D	3.2 - L
3.2 - S	3.7 - S	3.2 - F	6.0	3.2 - L
3.8 - A	3.2 - E	3.4 - R	3.2 - F	3.6 - O
2.9 - F	2.5 - D	3.9 - O	3.4 - R	3.8 - W
3.1 - R	6.0	3.4 - N	3.9 - O	6.0
3.9 - A	3.7 - B	2.3 - T	3.4 - N	3.7 - D
2.5 - S	2.9 - E	6.0	2.3 - T	2.9 - E
6.0	2.6 - T	3.7 - P	6.0	3.2 - T
3.2 - S	4.7 - W	3.2 - K	3.4 - S	3.9 - O
2.2 - T	3.2 - E	4.1 - W	2.3 - T	3.7 - U
6.0	3.2 - E	3.2 - Y	10.9	2.5 - R
2.9 - E	2.5 - N	9.3		9.6
3.2 - X	8.8		66.0	
2.2 - T		66.0		66.0
5.4	66.0			
66.0				

SS-3



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
16.6	5.8	7.9	14.2	6.6
3.4 - S	3.4 - C	3.2 - F	3.8 - W	3.2 - F
2.6 - T	3.2 - L	3.4 - R	6.0	3.9 - O
3.5 - A	3.6 - O	3.9 - O	3.9 - 2	3.2 - L
3.2 - T	3.7 - S	3.4 - N	3.7 - N	3.2 - L
2.3 - E	3.2 - E	2.3 - T	2.5 - D	3.6 - O
6.0	2.5 - D	6.0	6.0	3.8 - W
3.4 - S	6.0	3.4 - S	3.4 - S	6.0
2.3 - T	3.7 - B	2.3 - T	2.3 - T	3.7 - D
16.7	2.9 - E	6.0	14.2	2.9 - E
	2.6 - T	4.1 - A		3.2 - T
60.0	4.7 - W	3.7 - N	60.0	3.9 - O
	3.2 - E	2.5 - D		3.7 - U
	3.2 - E	7.9		2.5 - R
	2.5 - N			6.6
	5.8	60.0		
				60.0
	60.0			

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

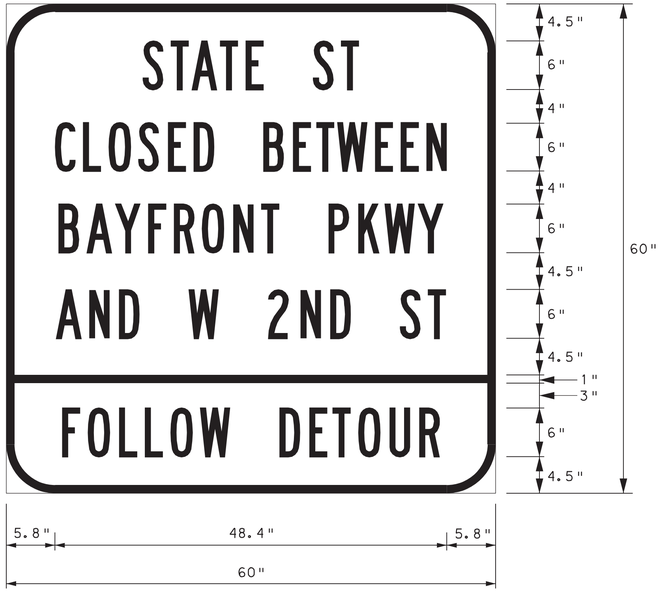
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	34 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCfb02.dgn

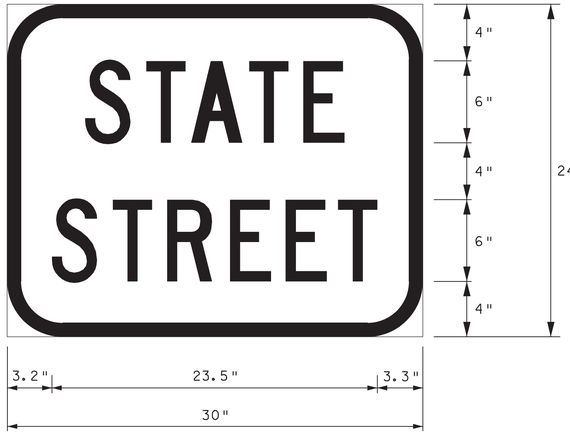
SS-4



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
16.6	5.8	6.3	6.0	6.6
3.4 - S	3.4 - C	3.4 - B	4.1 - A	3.2 - F
2.6 - T	3.2 - L	3.5 - A	3.7 - N	3.9 - O
3.5 - A	3.6 - O	4.1 - Y	2.5 - D	3.2 - L
3.2 - T	3.7 - S	3.2 - F	6.0	3.2 - L
2.3 - E	3.2 - E	3.4 - R	3.8 - W	3.6 - O
6.0	2.5 - D	3.9 - O	6.0	3.8 - W
3.4 - S	6.0	3.4 - N	4.0 - 2	6.0
2.3 - T	3.7 - B	2.3 - T	3.7 - N	3.7 - D
16.7	2.9 - E	6.0	2.5 - D	2.9 - E
	2.6 - T	3.7 - P	6.0	3.2 - T
60.0	4.7 - W	3.2 - K	3.4 - S	3.9 - O
	3.2 - E	4.1 - W	2.3 - T	3.7 - U
	3.2 - E	3.2 - Y	6.0	2.5 - R
	2.5 - N	6.3		6.6
	5.8		60.0	
	60.0	60.0		60.0

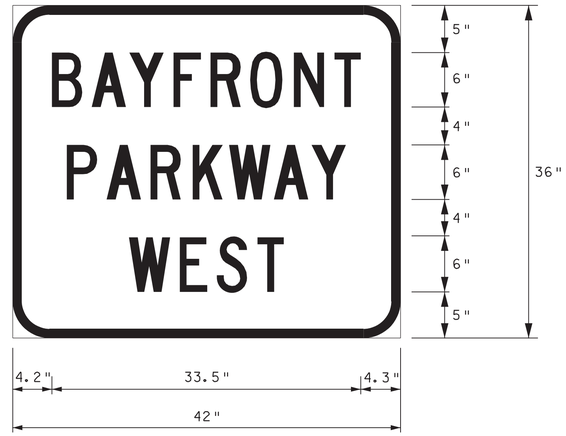
SS-5



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
5.6	3.2
4.3 - S	4.3 - S
3.3 - T	4.0 - T
4.1 - A	4.5 - R
4.0 - T	4.0 - E
3.0 - E	3.7 - E
5.7	3.0 - T
	3.3
30.0	30.0

SS-8



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

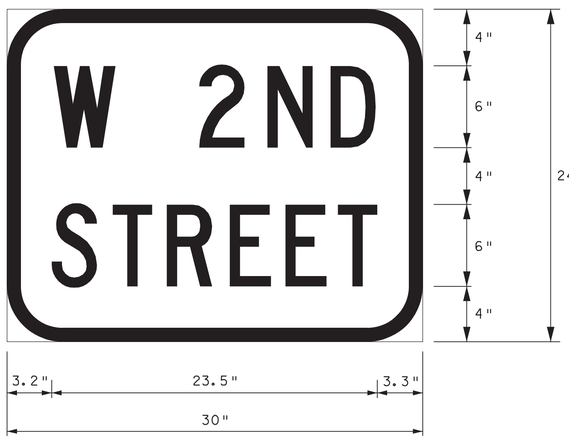
6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
4.2	5.8	12.6
4.3 - B	4.3 - P	5.5 - W
4.1 - A	4.8 - A	4.0 - E
4.8 - Y	4.5 - R	4.3 - S
4.0 - F	4.0 - K	3.0 - T
4.3 - R	4.8 - W	12.6
4.7 - O	4.1 - A	
4.3 - N	3.8 - Y	42.0
3.0 - T	5.9	
4.3		
	42.0	
42.0		

SS-6

0.8" BORDER WITH 3.0" RADIUS ON CORNERS

4" U.C. LET. LET. SERIES C	4" U.C. LET. LET. SERIES C	4" U.C. LET. LET. SERIES C
4.4	6.8	8.0
3.0 - S	2.9 - C	3.2 - A
1.4 - I	2.7 - L	3.0 - H
3.0 - D	3.0 - O	2.5 - E
2.5 - E	3.0 - S	3.2 - A
3.2 - W	2.7 - E	2.2 - D
3.2 - A	2.2 - D	7.9
2.7 - L	6.7	
2.2 - K		30.0
4.4	30.0	
30.0		

SS-7



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
3.4	3.2
4.5 - W	4.3 - S
6.0	4.0 - T
4.9 - 2	4.5 - R
4.5 - N	4.0 - E
3.3 - D	3.7 - E
3.4	3.0 - T
	3.3
30.0	30.0

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	35 OF 273
CITY OF ERIE				

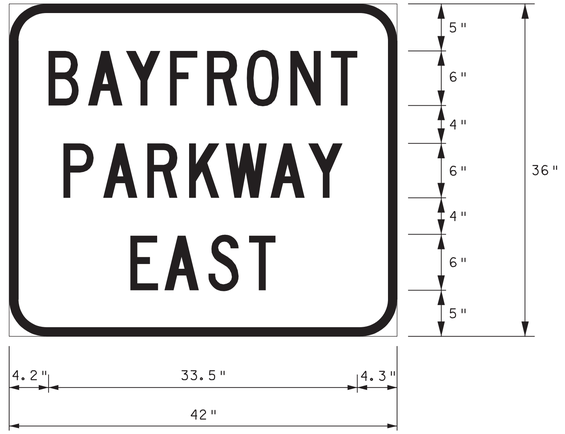
REVISION NUMBER	REVISIONS	DATE	BY

SS-9

1.0" BORDER WITH 4.0" RADIUS ON CORNERS

8" U.C. LET. LET. SERIES C	8" U.C. LET. LET. SERIES C	8" U.C. LET. LET. SERIES C
4.8	6.9	15.8
5.7 - B	5.7 - P	7.3 - W
5.4 - A	6.3 - A	5.3 - E
6.3 - Y	6.1 - R	5.7 - S
5.3 - F	5.3 - K	4.0 - T
5.7 - R	6.4 - W	15.9
6.3 - O	5.4 - A	54.0
5.7 - N	5.0 - Y	
4.0 - T	6.9	
4.8	54.0	
54.0		

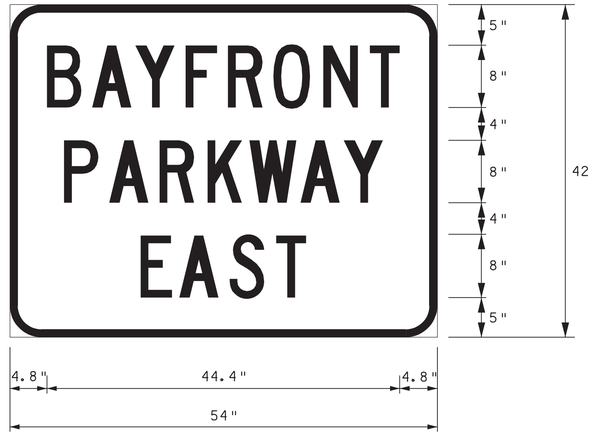
SS-10



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
4.2	5.8	13.1
4.3 - B	4.3 - P	3.7 - E
4.1 - A	4.8 - A	4.8 - A
4.8 - Y	4.5 - R	4.3 - S
4.0 - F	4.0 - K	3.0 - T
4.3 - R	4.8 - W	13.1
4.7 - O	4.1 - A	42.0
4.3 - N	3.8 - Y	
3.0 - T	5.9	
4.3	42.0	
42.0		

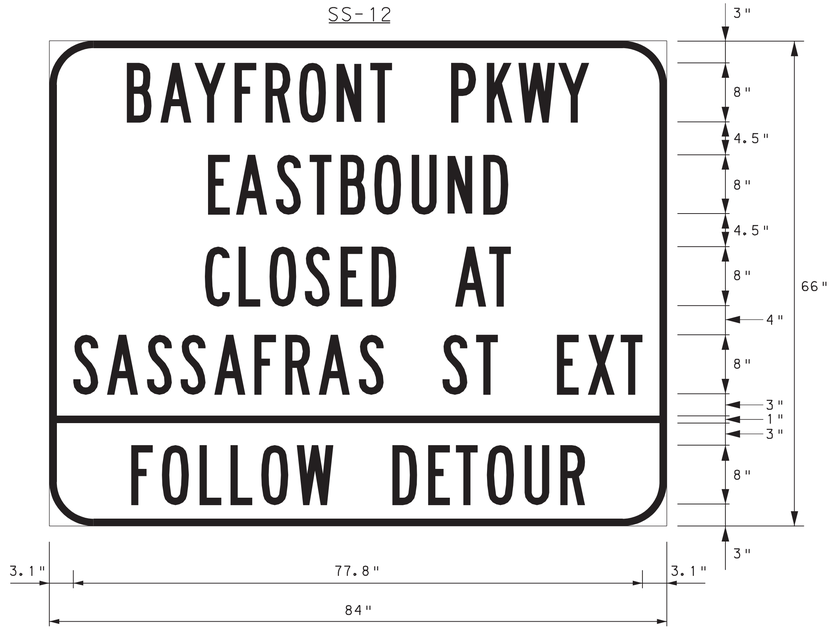
SS-11



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

8" U.C. LET. LET. SERIES C	8" U.C. LET. LET. SERIES C	8" U.C. LET. LET. SERIES C
4.8	6.9	16.5
5.7 - B	5.7 - P	4.9 - E
5.4 - A	6.3 - A	6.3 - A
6.3 - Y	6.1 - R	5.7 - S
5.3 - F	5.3 - K	4.0 - T
5.7 - R	6.4 - W	16.6
6.3 - O	5.4 - A	54.0
5.7 - N	5.0 - Y	
4.0 - T	6.9	
4.8	54.0	
54.0		

SS-12



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

8" U.C. LET. LET. SERIES B	8" U.C. LET. LET. SERIES B	8" U.C. LET. LET. SERIES B	8" U.C. LET. LET. SERIES B	8" U.C. LET. LET. SERIES B
10.4	21.5	21.1	3.1	11.1
4.6 - B	3.8 - E	4.6 - C	4.6 - S	4.2 - F
4.7 - A	5.5 - A	4.2 - L	5.5 - A	5.1 - O
5.5 - Y	4.6 - S	4.8 - O	4.6 - S	4.2 - L
4.2 - F	4.2 - T	4.9 - S	4.6 - S	4.2 - L
4.6 - R	4.6 - B	4.2 - E	5.5 - A	4.8 - O
5.1 - O	5.1 - O	3.4 - D	4.2 - F	5.0 - W
4.6 - N	4.9 - U	8.0	4.6 - R	8.0
3.0 - T	4.9 - N	4.7 - A	5.5 - A	4.9 - D
8.0	3.4 - D	3.0 - T	3.4 - S	3.8 - E
4.9 - P	21.5	21.1	8.0	4.2 - T
4.3 - K	84.0	84.0	4.6 - S	5.1 - O
5.4 - W			3.0 - T	4.9 - U
4.3 - Y			8.0	3.4 - R
10.4			4.2 - E	11.1
84.0			4.5 - X	84.0
			3.0 - T	
			3.1	
			84.0	

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

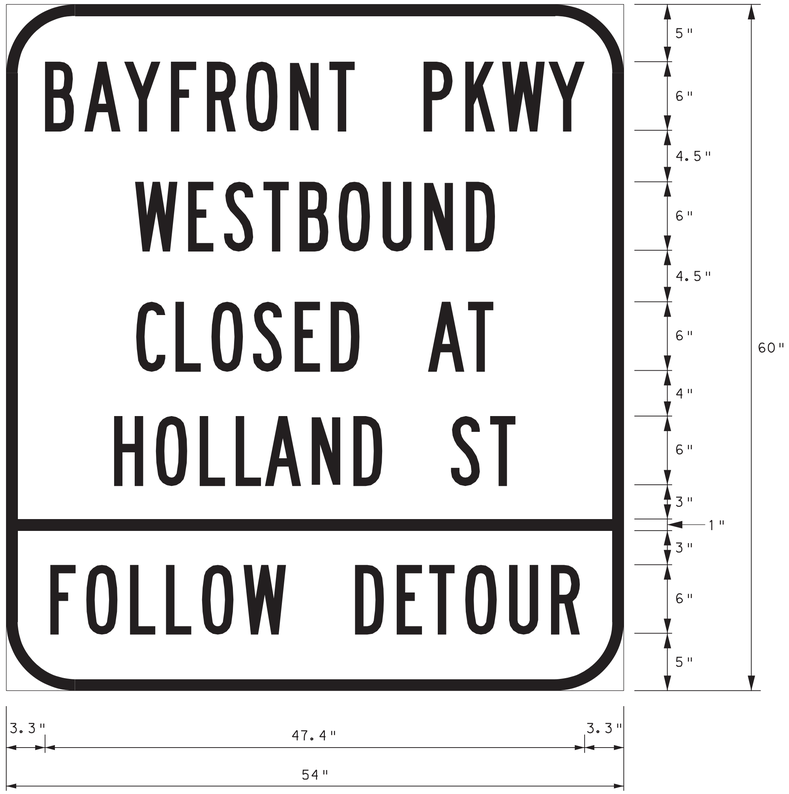
TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

PLOTTED: 8/2/2022
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mp1\sheets\TCfb03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-O	ERIE	4034	A01	36 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

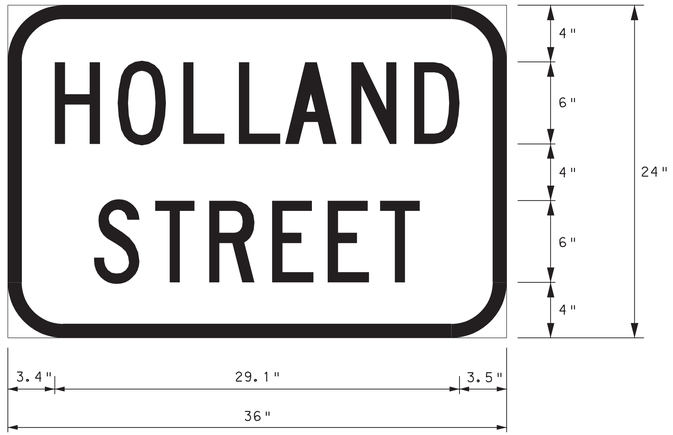
SS-13



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
3.3	11.1	11.3	9.3	3.6
3.4 - B	4.7 - W	3.4 - C	3.7 - H	3.2 - F
3.5 - A	3.2 - E	3.2 - L	3.9 - O	3.9 - O
4.1 - Y	3.4 - S	3.6 - O	3.2 - L	3.2 - L
3.2 - F	3.2 - T	3.7 - S	2.6 - L	3.2 - L
3.4 - R	3.4 - B	3.2 - E	4.1 - A	3.6 - O
3.9 - O	3.9 - O	2.5 - D	3.7 - N	3.8 - W
3.4 - N	3.7 - U	6.0	2.5 - D	6.0
2.3 - T	3.7 - N	3.5 - A	6.0	3.7 - D
6.0	2.5 - D	2.3 - T	3.4 - S	2.9 - E
3.7 - P	11.2	11.3	2.3 - T	3.2 - T
3.2 - K			9.3	3.9 - O
4.1 - W	54.0	54.0		3.7 - U
3.2 - Y			54.0	2.5 - R
3.3				3.6
54.0				54.0

SS-14



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
3.4	6.2
4.5 - H	4.3 - S
4.7 - O	4.0 - T
4.0 - L	4.5 - R
3.3 - L	4.0 - E
4.8 - A	3.7 - E
4.5 - N	3.0 - T
3.3 - D	6.3
3.5	
36.0	36.0

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

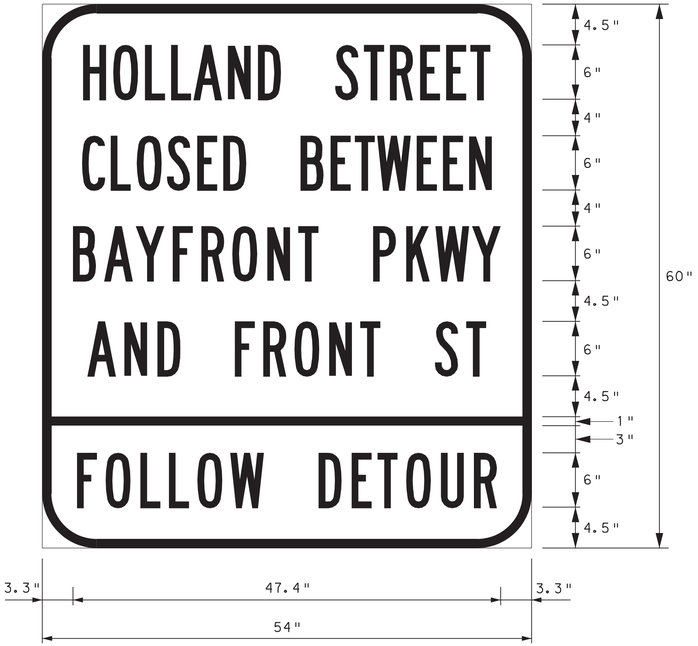
PLOTTED: 8/2/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCfb04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	37 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

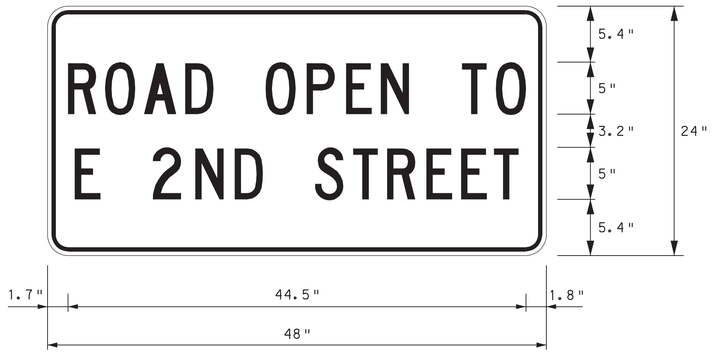
SS-15



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 30%	6" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 30%	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
4.5	4.4	3.3	4.9	3.6
3.3 - H	3.1 - C	3.4 - B	4.1 - A	3.2 - F
3.5 - O	2.9 - L	3.5 - A	3.7 - N	3.9 - O
2.9 - L	3.4 - O	4.1 - Y	2.5 - D	3.2 - L
2.5 - L	3.3 - S	3.2 - F	6.0	3.2 - L
3.8 - A	2.9 - E	3.4 - R	3.2 - F	3.6 - O
3.3 - N	2.5 - D	3.9 - O	3.4 - R	3.8 - W
2.5 - D	6.0	3.4 - N	3.9 - O	6.0
6.0	3.3 - B	2.3 - T	3.4 - N	3.7 - D
3.2 - S	2.7 - E	6.0	2.3 - T	2.9 - E
2.9 - T	2.4 - T	3.7 - P	6.0	3.2 - T
3.3 - R	4.4 - W	3.2 - K	3.4 - S	3.9 - O
2.9 - E	2.9 - E	4.1 - W	2.3 - T	3.7 - U
2.6 - E	2.9 - E	3.2 - Y	4.9	2.5 - R
2.3 - T	2.5 - N	3.3		3.6
4.5	4.4		54.0	
54.0	54.0	54.0		54.0

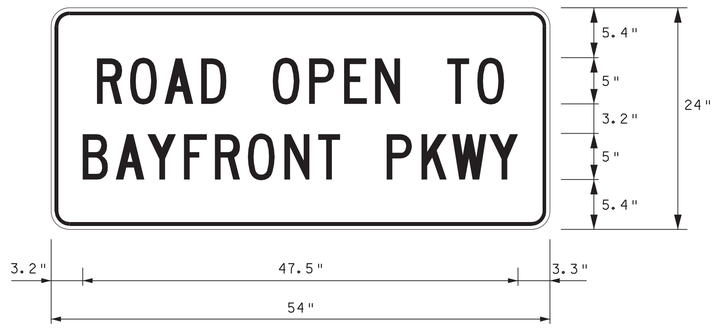
SS-16



0.4" BORDER WITH 2.0" RADIUS ON CORNERS AND 0.4" MARGIN

5" U.C. LET. LET. SERIES C	5" U.C. LET. LET. SERIES C
1.7	2.5
3.6 - R	2.5 - E
3.8 - O	5.0
4.0 - A	4.1 - 2
2.8 - D	3.8 - N
5.0	2.8 - D
4.0 - O	5.0
3.8 - P	3.6 - S
3.4 - E	3.4 - T
2.8 - N	3.8 - R
5.0	3.4 - E
3.4 - T	3.1 - E
2.9 - O	2.5 - T
1.8	2.5
48.0	48.0

SS-17



0.4" BORDER WITH 2.0" RADIUS ON CORNERS AND 0.4" MARGIN

5" U.C. LET. LET. SERIES C	5" U.C. LET. LET. SERIES C
4.7	3.2
3.6 - R	3.6 - B
3.8 - O	3.4 - A
4.0 - A	4.0 - Y
2.8 - D	3.4 - F
5.0	3.6 - R
4.0 - O	4.0 - O
3.8 - P	3.6 - N
3.4 - E	2.5 - T
2.8 - N	5.0
5.0	3.8 - P
3.4 - T	3.3 - K
2.9 - O	4.1 - W
4.8	3.2 - Y
	3.3
54.0	54.0

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCfb05.dgn

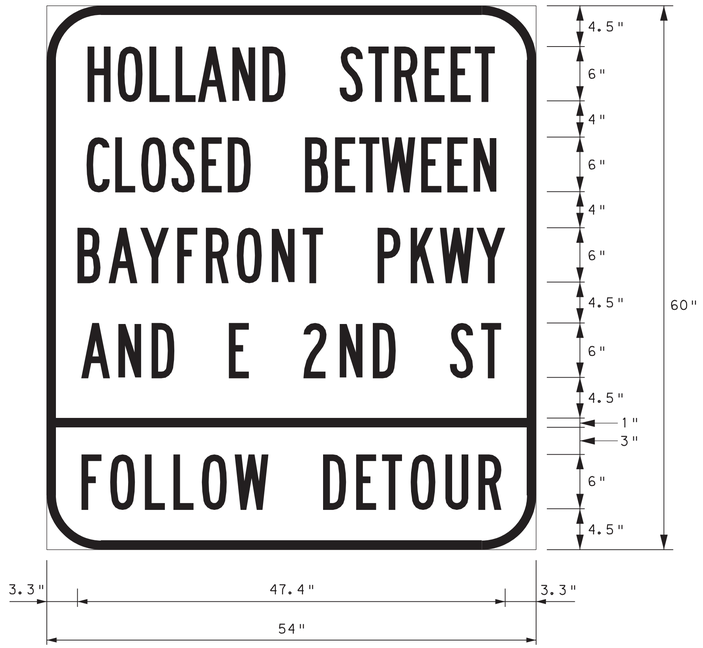
PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mp1\sheets\TCfb06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	38 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SS-18



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

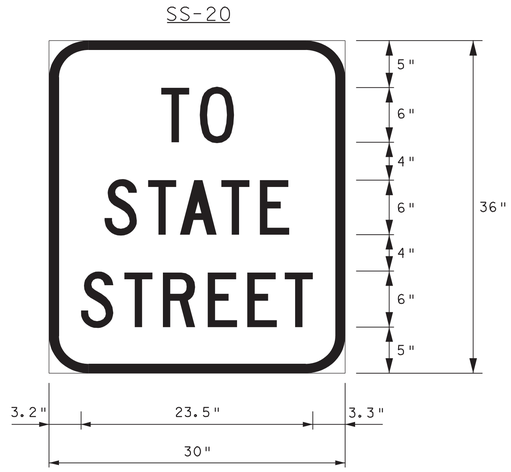
6" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 30%	6" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 30%	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
4.5	4.4	3.3	3.7	3.6
3.3 - H	3.1 - C	3.4 - B	4.1 - A	3.2 - F
3.5 - O	2.9 - L	3.5 - A	3.7 - N	3.9 - O
2.9 - L	3.4 - O	4.1 - Y	2.5 - D	3.2 - L
2.5 - L	3.3 - S	3.2 - F	6.0	3.2 - L
3.8 - A	2.9 - E	3.4 - R	2.3 - E	3.6 - O
3.3 - N	2.5 - D	3.9 - O	6.0	3.8 - W
2.5 - D	6.0	3.4 - N	4.0 - 2	6.0
6.0	3.3 - B	2.3 - T	3.7 - N	3.7 - D
3.2 - S	2.7 - E	6.0	2.5 - D	2.9 - E
2.9 - T	2.4 - T	3.7 - P	6.0	3.2 - T
3.3 - R	4.4 - W	3.2 - K	3.4 - S	3.9 - O
2.9 - E	2.9 - E	4.1 - W	2.3 - T	3.7 - U
2.6 - E	2.9 - E	3.2 - Y	3.8	2.5 - R
2.3 - T	2.5 - N	3.3	54.0	3.6
4.5	4.4	54.0		54.0
54.0	54.0			

SS-19

1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
4.1	3.2
3.0 - E	4.3 - S
6.0	4.0 - T
4.9 - 2	4.5 - R
4.5 - N	4.0 - E
3.3 - D	3.7 - E
4.2	3.0 - T
30.0	3.3
	30.0

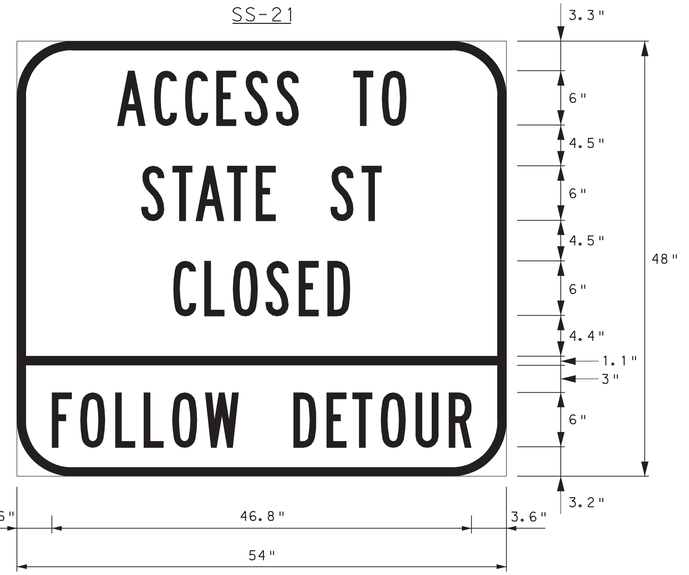
SS-20



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
11.2	5.6	3.2
4.0 - T	4.3 - S	4.3 - S
3.5 - O	3.3 - T	4.0 - T
11.3	4.1 - A	4.5 - R
30.0	4.0 - T	4.0 - E
	3.0 - E	3.7 - E
	5.7	3.0 - T
	30.0	3.3
		30.0

SS-21



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
11.0	13.6	17.2	3.6
4.1 - A	3.4 - S	3.4 - C	3.2 - F
3.4 - C	2.6 - T	3.2 - L	3.9 - O
3.4 - C	3.5 - A	3.6 - O	3.2 - L
3.2 - E	3.2 - T	3.7 - S	3.6 - O
3.4 - S	2.3 - E	3.2 - E	3.8 - W
2.5 - S	6.0	2.5 - D	6.0
6.0	3.4 - S	17.2	3.7 - D
3.2 - T	2.3 - T	54.0	2.9 - E
2.7 - O	13.7		3.2 - T
11.1	54.0		3.9 - O
54.0			3.7 - U
			2.5 - R
			3.6
			54.0

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

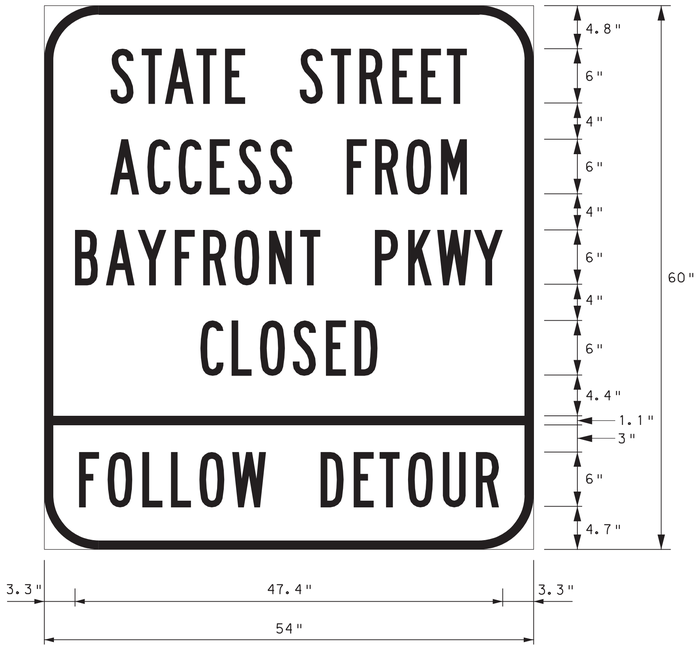
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	39 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCfb07.dgn

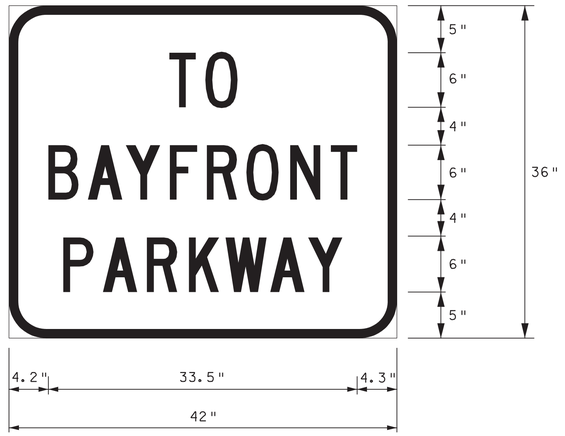
SS-22



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
7.1	7.3	3.3	17.2	3.6
3.4 - S	4.1 - A	3.4 - B	3.4 - C	3.2 - F
2.6 - T	3.4 - C	3.5 - A	3.2 - L	3.9 - O
3.5 - A	3.4 - C	4.1 - Y	3.6 - O	3.2 - L
3.2 - T	3.2 - E	3.2 - F	3.7 - S	3.2 - L
2.3 - E	3.4 - S	3.4 - R	3.2 - E	3.6 - O
6.0	2.5 - S	3.9 - O	2.5 - D	3.8 - W
3.4 - S	6.0	3.4 - N	17.2	6.0
3.2 - T	3.2 - F	2.3 - T		3.7 - D
3.7 - R	3.4 - R	6.0	54.0	2.9 - E
3.2 - E	3.9 - O	3.7 - P		3.2 - T
2.9 - E	2.9 - M	3.2 - K		3.9 - O
2.3 - T	7.3	4.1 - W		3.7 - U
7.2	54.0	3.2 - Y		2.5 - R
54.0		3.3		3.6
		54.0		54.0

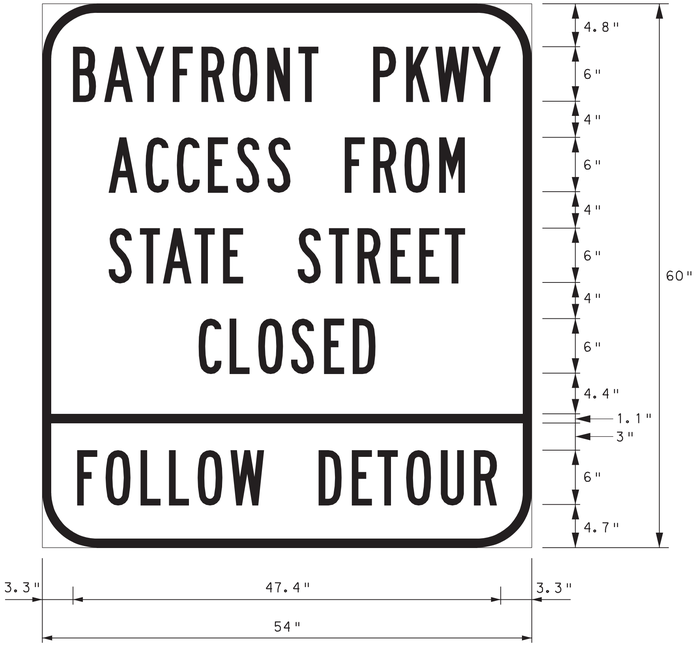
SS-23



1.0" BORDER WITH 4.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C	6" U.C. LET. LET. SERIES C
17.2	4.2	5.8
4.0 - T	4.3 - B	4.3 - P
3.5 - O	4.1 - A	4.8 - A
17.3	4.8 - Y	4.5 - R
42.0	4.0 - F	4.0 - K
	4.3 - R	4.8 - W
	4.7 - O	4.1 - A
	4.3 - N	3.8 - Y
	3.0 - T	5.9
	4.3	42.0
	42.0	

SS-24



1.0" BORDER WITH 6.0" RADIUS ON CORNERS

6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B	6" U.C. LET. LET. SERIES B
3.3	7.3	7.1	17.2	3.6
3.4 - B	4.1 - A	3.4 - S	3.4 - C	3.2 - F
3.5 - A	3.4 - C	2.6 - T	3.2 - L	3.9 - O
4.1 - Y	3.4 - C	3.5 - A	3.6 - O	3.2 - L
3.2 - F	3.2 - E	3.2 - T	3.7 - S	3.2 - L
3.4 - R	3.4 - S	2.3 - E	3.2 - E	3.6 - O
3.9 - O	2.5 - S	6.0	2.5 - D	3.8 - W
3.4 - N	6.0	3.4 - S	17.2	6.0
2.3 - T	3.2 - F	3.2 - T		3.7 - D
6.0	3.4 - R	3.7 - R	54.0	2.9 - E
3.7 - P	3.9 - O	3.2 - E		3.2 - T
3.2 - K	2.9 - M	2.9 - E		3.9 - O
4.1 - W	7.3	2.3 - T		3.7 - U
3.2 - Y	54.0	7.2		2.5 - R
3.3		54.0		3.6
54.0				54.0

NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

TRAFFIC CONTROL PLAN
SIGN FABRICATIONS

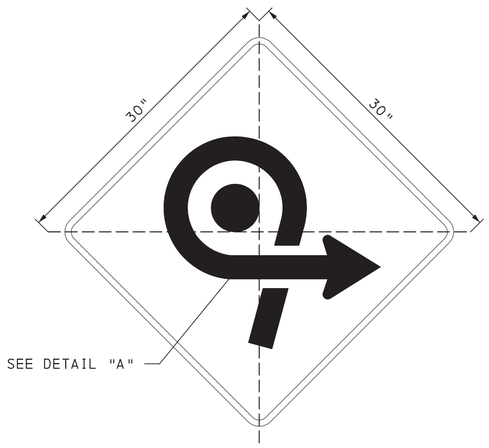
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	40 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

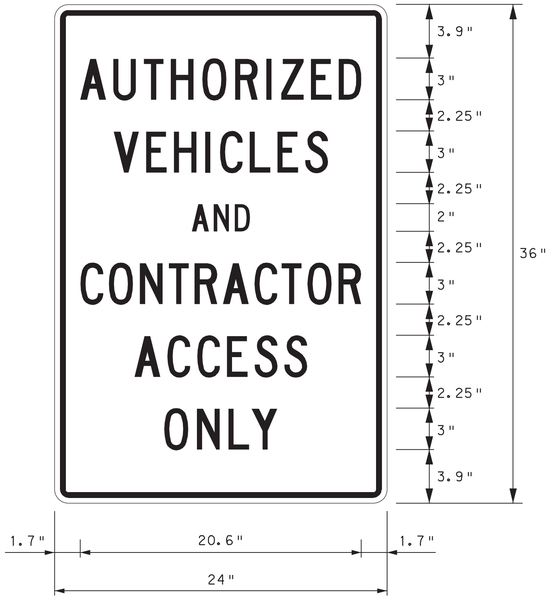
PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCfb08.dgn

SS-25



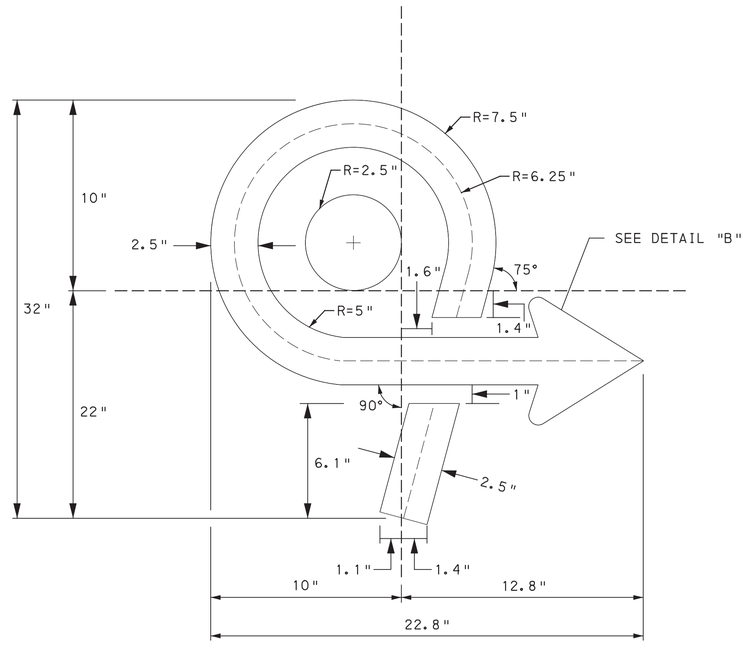
SS-27



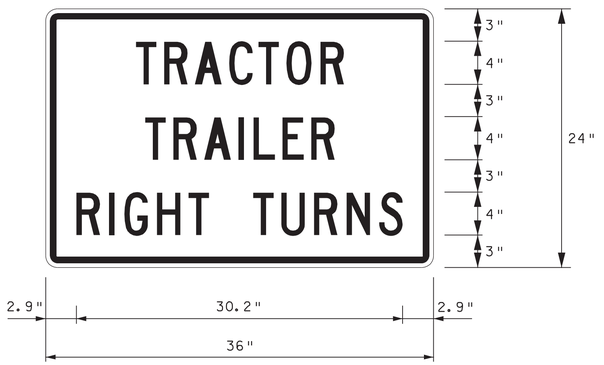
0.4" BORDER WITH 0.4" MARGIN AND 1" RADIUS ON CORNERS

3" U.C. LET. LET. SERIES C	3" U.C. LET. LET. SERIES C	2" U.C. LET. LET. SERIES C	3" U.C. LET. LET. SERIES C LEGEND COMPRESSED BY 20%	3" U.C. LET. LET. SERIES C	3" U.C. LET. LET. SERIES C
1.7	4.1	9.9	1.9	5.6	7.8
2.4 - A	2.4 - V	1.6 - A	2.0 - C	2.4 - A	2.4 - O
2.2 - U	2.0 - E	1.5 - N	2.3 - O	2.2 - C	2.3 - N
2.0 - T	2.3 - H	1.1 - D	2.0 - N	2.2 - C	1.7 - L
2.3 - H	1.1 - I	9.9	1.9 - T	2.0 - E	1.9 - Y
2.4 - O	2.2 - C	24.0	2.1 - R	2.2 - S	7.9
2.3 - R	2.0 - L		2.2 - A	1.7 - S	24.0
1.1 - I	2.0 - E		1.9 - C	5.7	
2.2 - Z	1.7 - S		2.0 - T	24.0	
2.0 - E	4.2		2.2 - O		
1.7 - D	24.0		1.6 - R		
1.7			1.9		
24.0			24.0		

DETAIL "A"



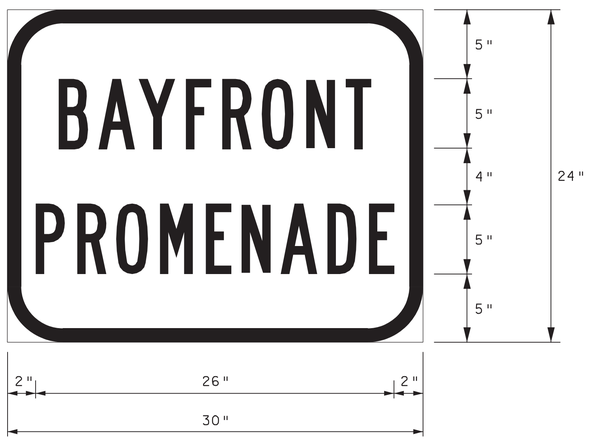
SS-26



0.6" BORDER WITH 1.1" RADIUS ON CORNERS

4" U.C. LET. LET. SERIES C	4" U.C. LET. LET. SERIES C	4" U.C. LET. LET. SERIES C
8.2	9.1	2.9
2.7 - T	2.7 - T	3.0 - R
2.9 - R	2.9 - R	1.4 - I
3.2 - A	3.2 - A	3.0 - G
2.6 - C	1.4 - I	2.9 - H
2.7 - T	2.7 - L	2.0 - T
3.2 - O	2.7 - E	4.0
2.2 - R	2.2 - R	2.7 - T
8.3	9.1	3.0 - U
36.0	36.0	3.0 - R
		3.0 - N
		2.2 - S
		2.9
		36.0

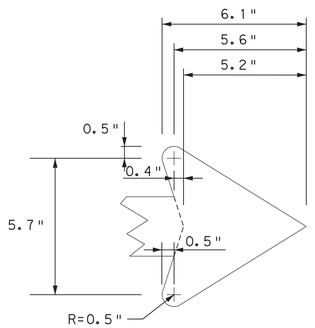
SS-28



1" BORDER AND 4" RADIUS ON CORNERS

5" U.C. LET. LET. SERIES B	5" U.C. LET. LET. SERIES B LEGEND COMPRESSED BY 5%
3.7	2.0
2.9 - B	3.0 - P
2.9 - A	2.9 - R
3.4 - Y	3.1 - O
2.6 - F	3.3 - M
2.9 - R	2.6 - E
3.2 - O	2.8 - N
2.8 - N	3.4 - A
1.9 - T	3.0 - D
3.7	1.9 - E
30.0	2.0
	30.0

DETAIL "B"



NOTES:

ALL SIGN FABRICATIONS SHALL HAVE A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND WITH BLACK NON-REFLECTORIZED LEGEND AND BORDER.

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

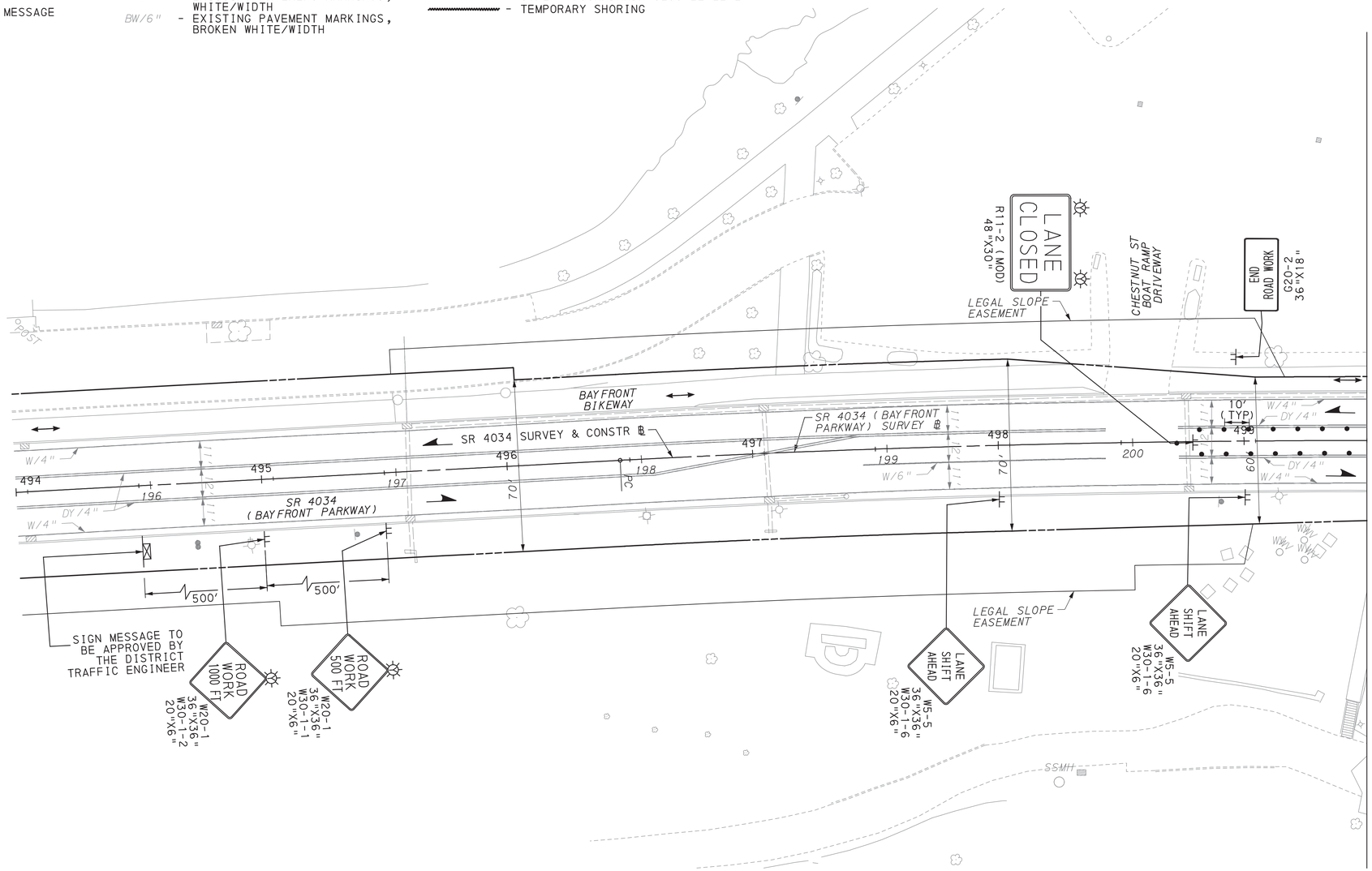
TRAFFIC CONTROL PLAN SIGN FABRICATIONS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	41 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

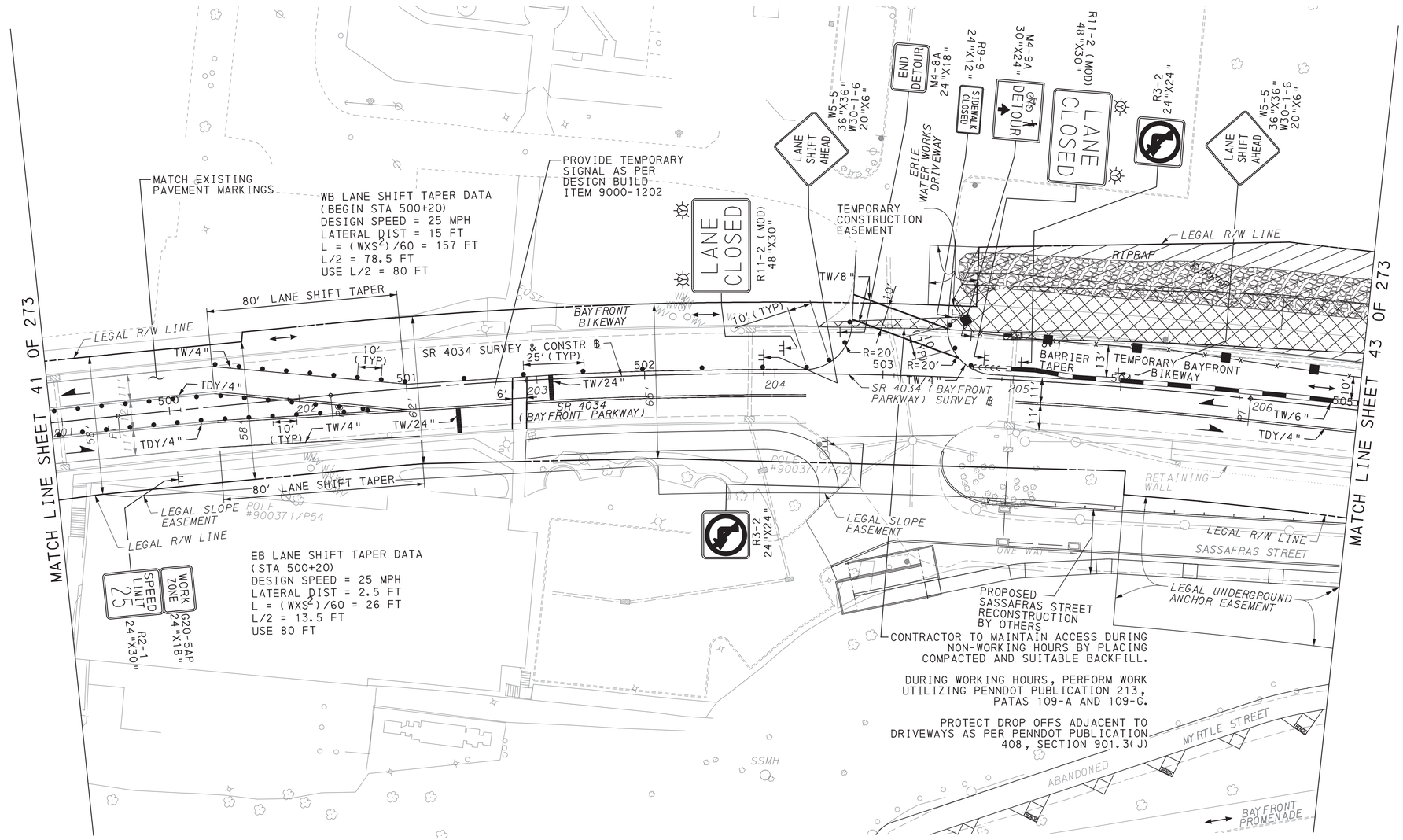
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTgIB_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	42 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

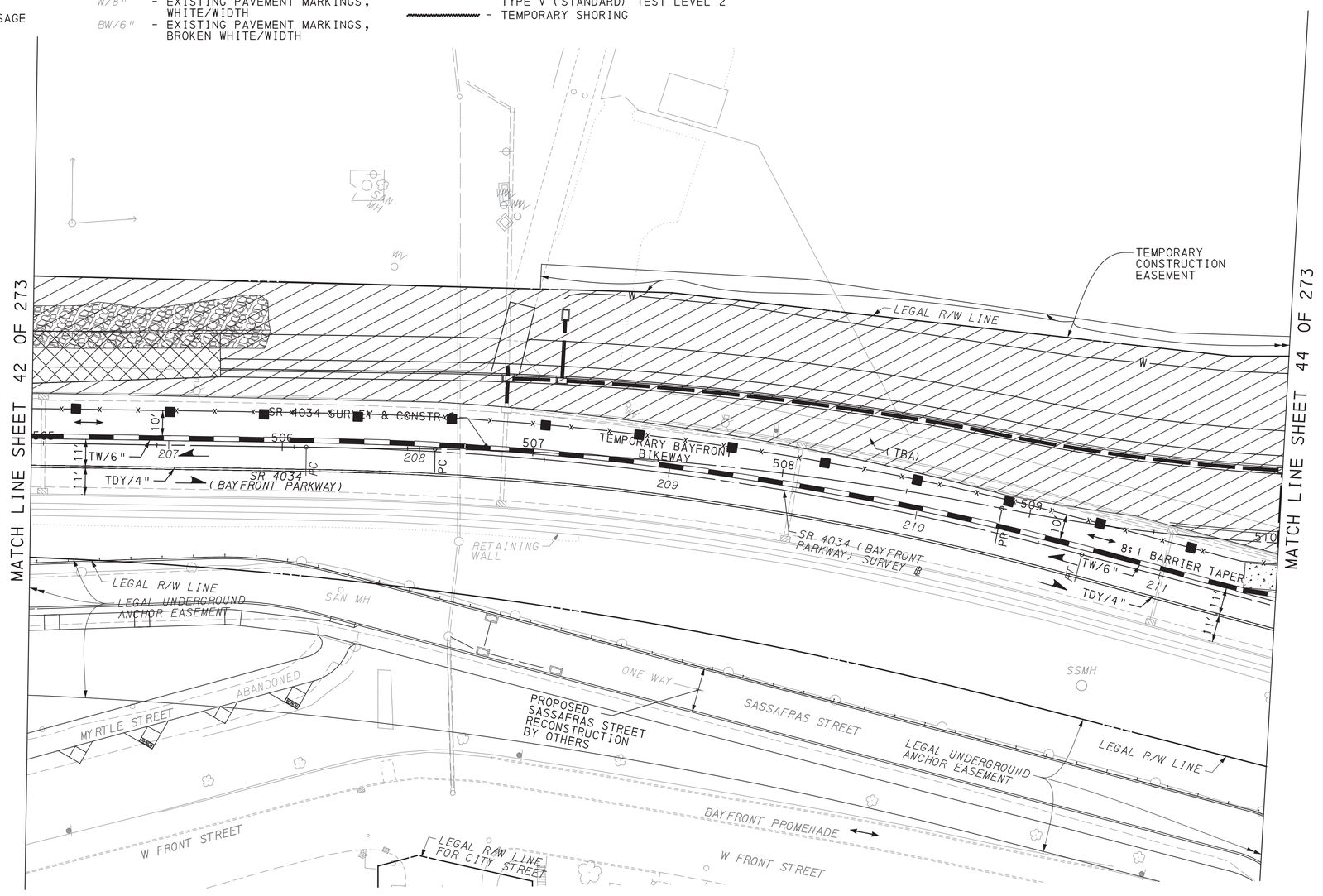
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg1B_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	43 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mscons ultants.com\files\Production\08\60\06808\mpr\sheets\TCplsstg1B_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	44 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

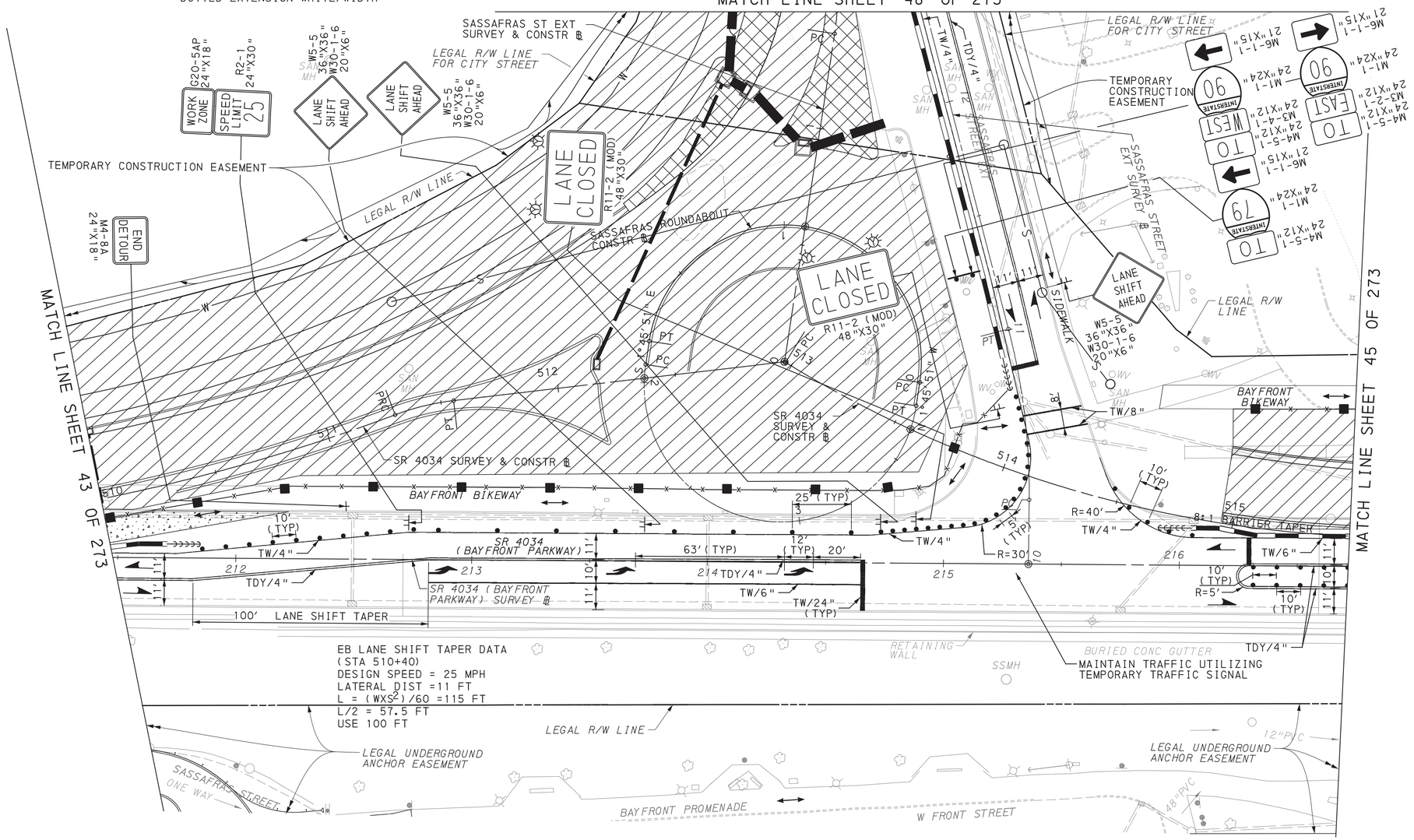
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

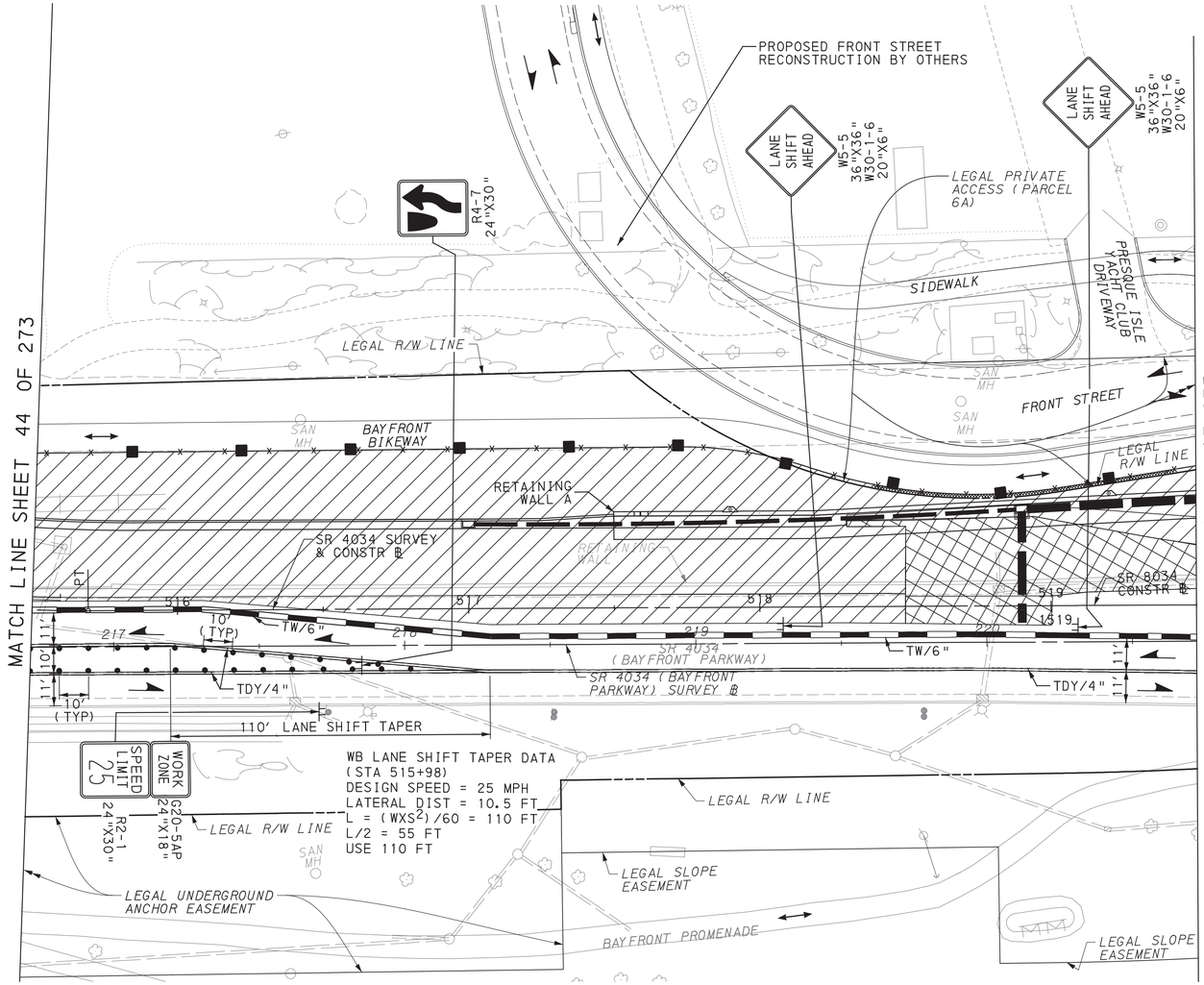
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpr\sheets\TCPlstg1B_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	45 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

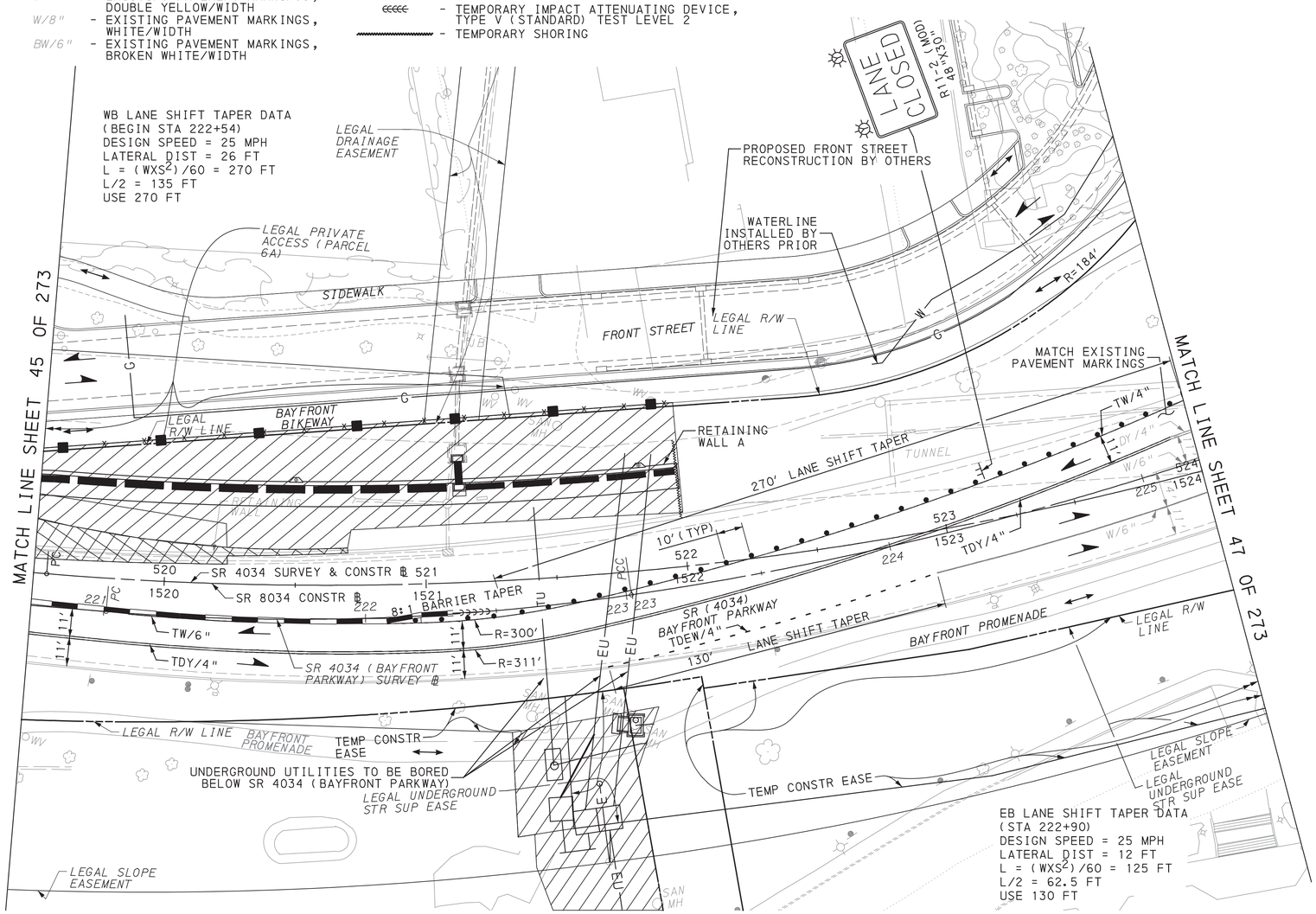
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg1B_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	46 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\Files\Production\08\60\06808\mpt\sheets\TCplstg1B_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	47 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg1B_07.dgn

MATCH LINE SHEET 46 OF 273

MATCH LINE

BAYFRONT BIKEWAY

LEGAL SLOPE EASEMENT

LEGAL DRAINAGE EASEMENT

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE

SIDEWALK

STATE ST SURVEY & CONSTR ℄

STATE STREET

PROPOSED SIDEWALK RECONSTRUCTION BY OTHERS

WORK ZONE

SPEED LIMIT 25

G20-5AP 24"X18"

R2-1 24"X30"

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

END ROAD WORK G20-2 36"X18"

UNDERGROUND UTLITIES TO BE BORED BELOW STATE STREET

LANE SHIFT AHEAD W5-5 48"X48" W30-1-6 30"X10"

ROAD WORK 500 FT W20-1 48"X48" W30-1-1 30"X10"

ROAD WORK 1000 FT W20-1 48"X48" W30-1-2 30"X10"

SIGN MESSAGE TO BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER

500'

SR 4034 (BAYFRONT PARKWAY)

SR 8034 CONSTR ℄

SR 4034 (BAYFRONT PARKWAY) SURVEY ℄

SR 4034 SURVEY & CONSTR ℄

RETAINING WALL

RAILROAD TRACK

UPMC HAMOT SERVICE DRIVEWAY

LEGAL DRAINAGE EASEMENT

LEGAL UNDERGROUND ANCHOR EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

TEMP CONSTR EASE

LEGAL SLOPE EASEMENTLEGAL UNDERGROUND STR SUP EASE

ABANDONED DRIVEWAY

TANKS

POLE #284502 A36

POLE #284502 P104

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY SHORING
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

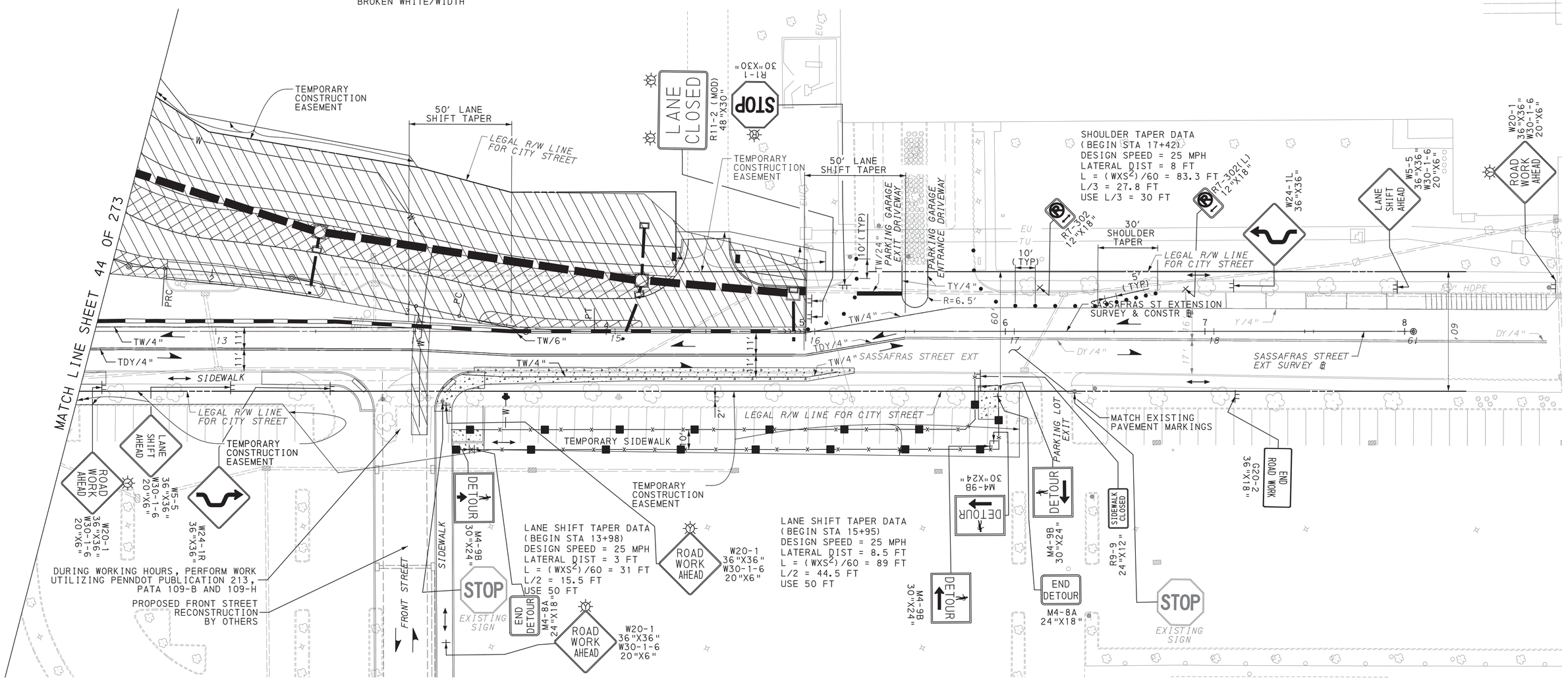
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	48 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg1B_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	49 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

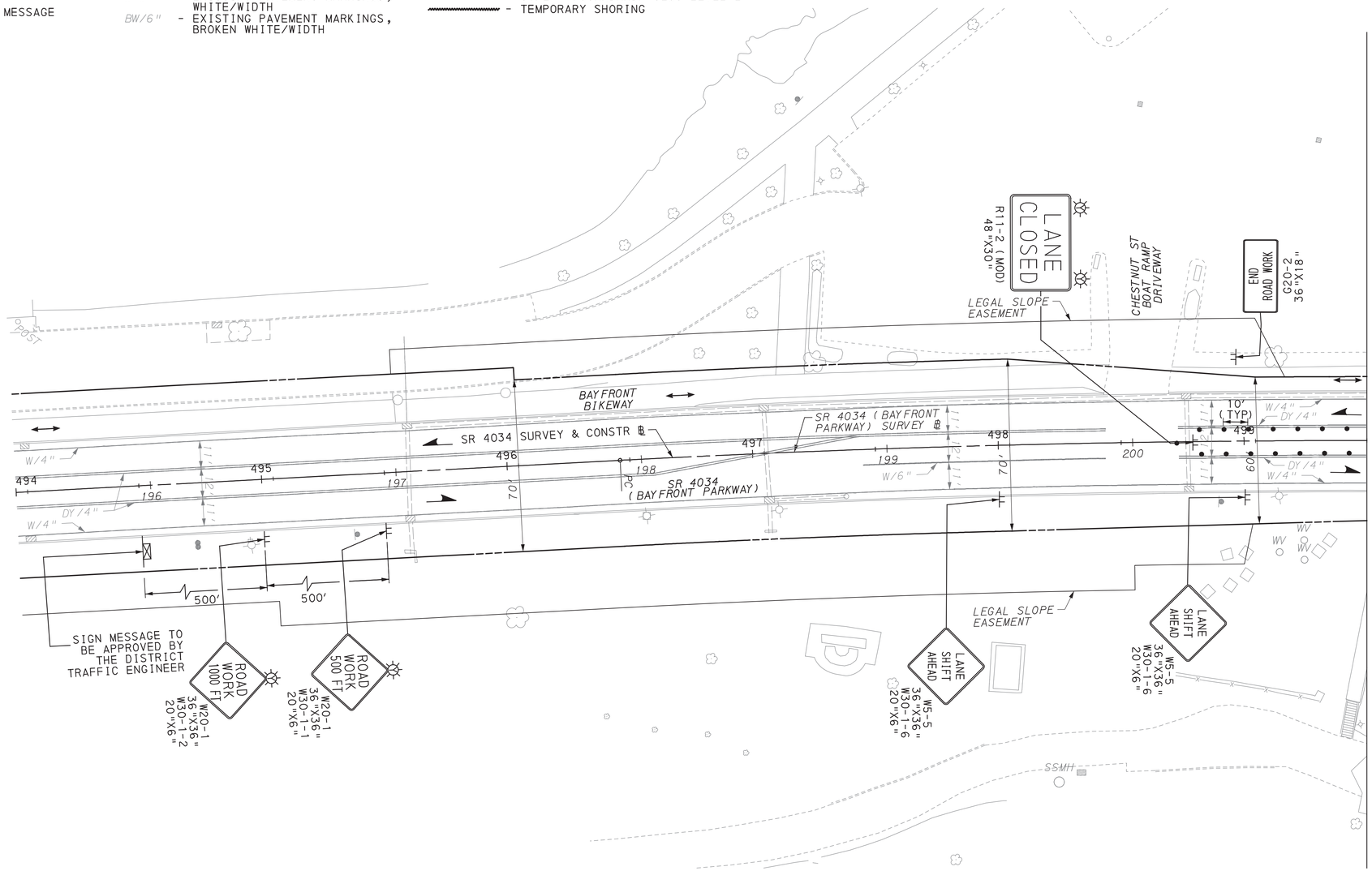
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

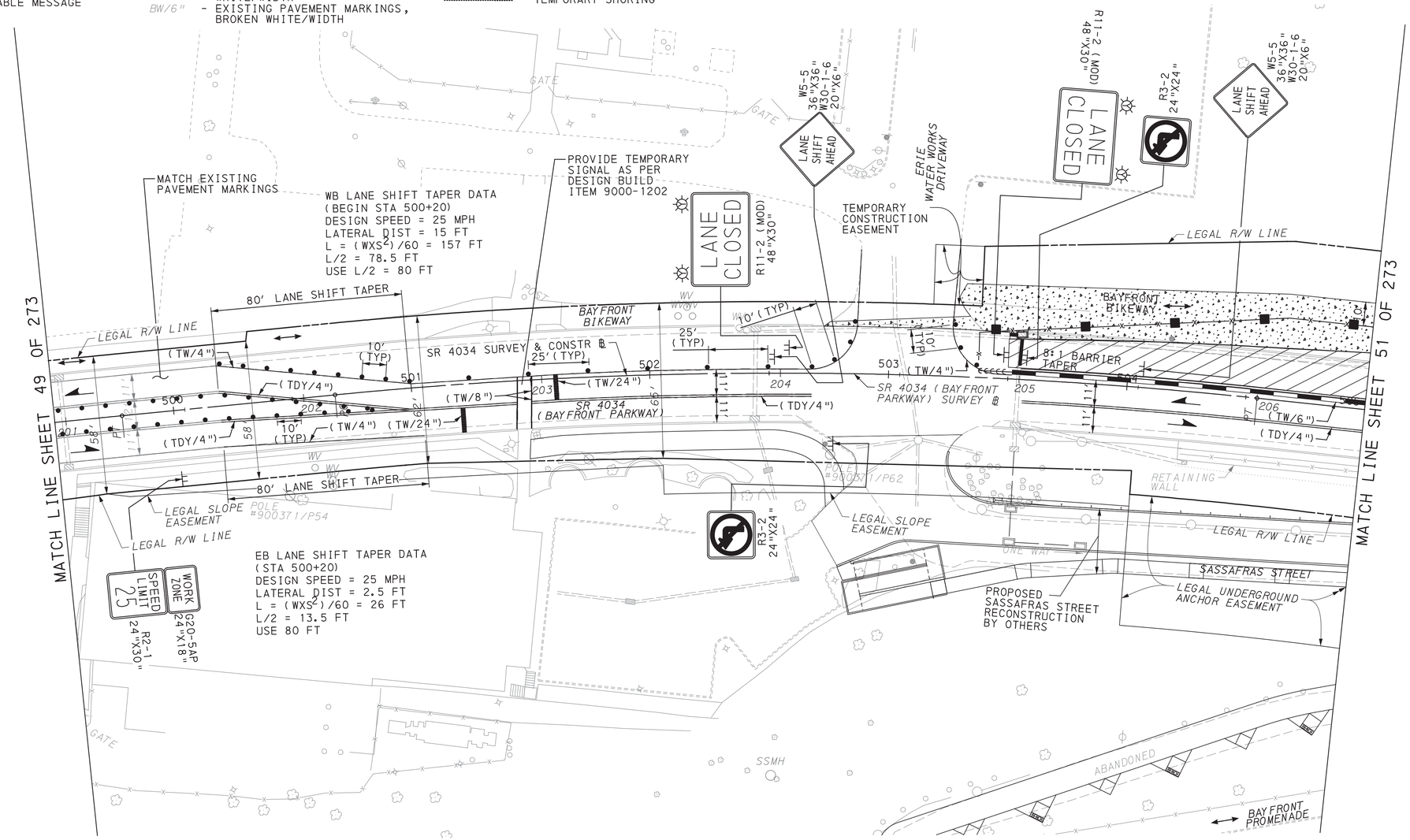
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP1stgIC_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	50 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

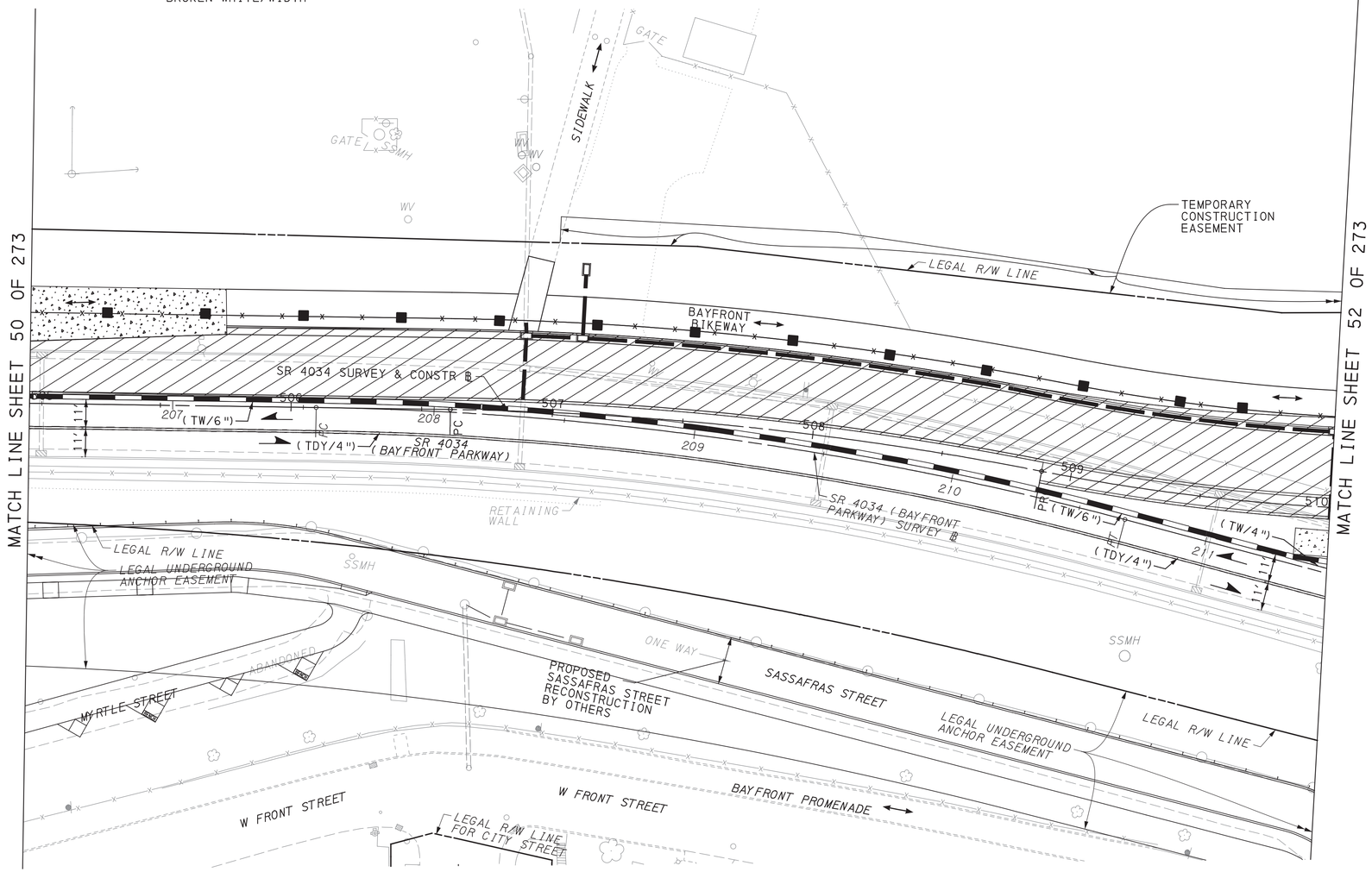
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTgIC_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	51 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

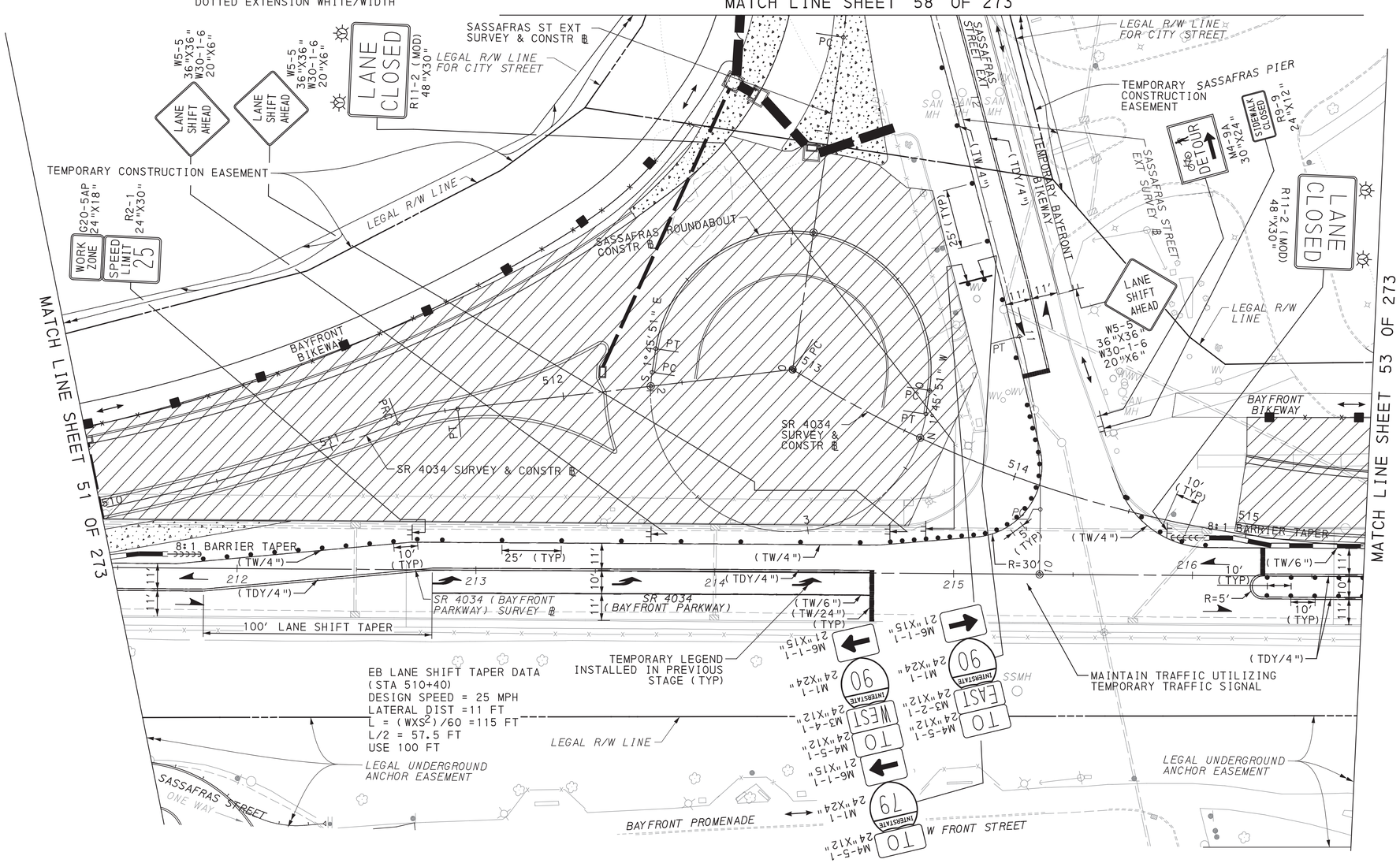
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrgIC_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	52 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

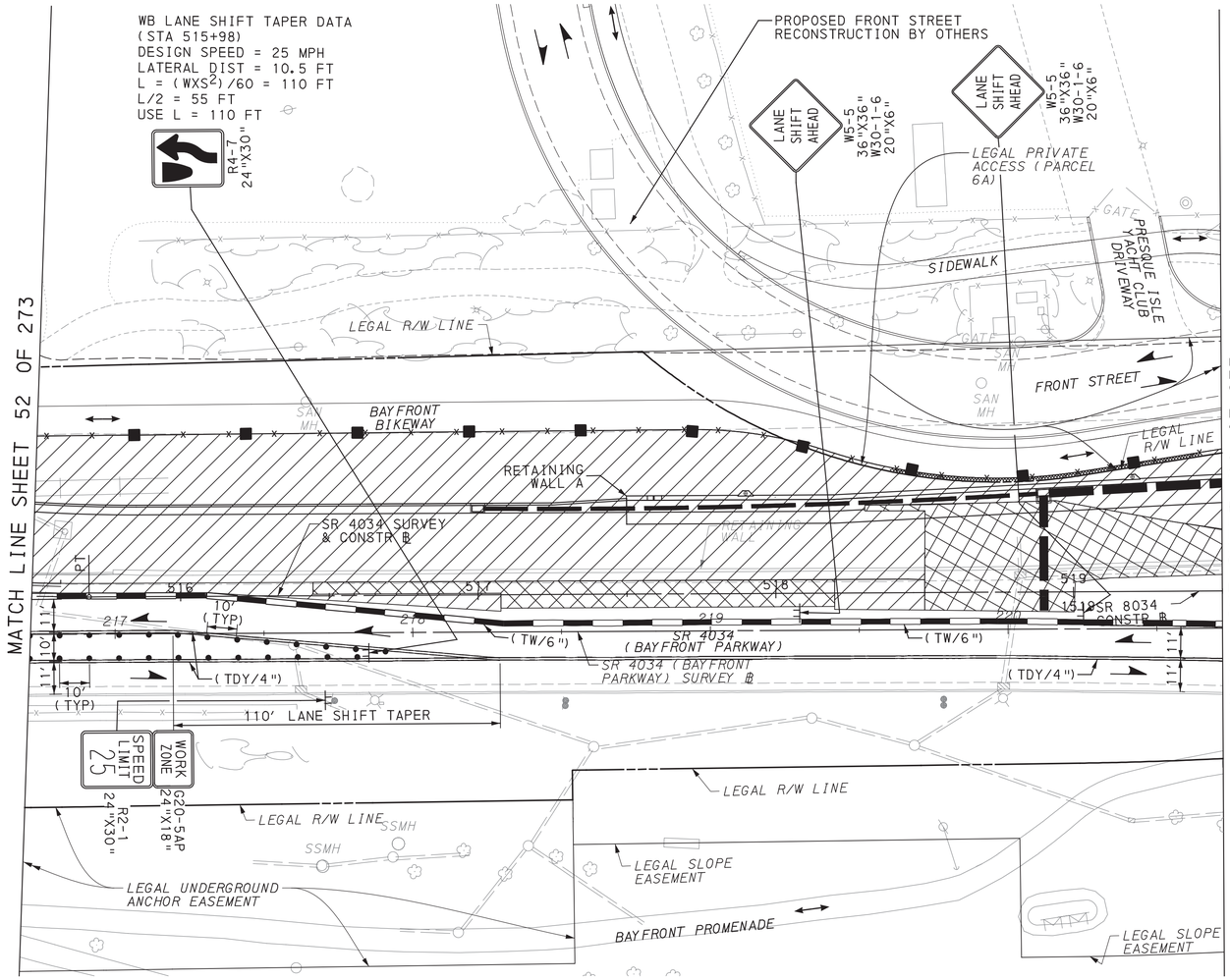
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsstgIC_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	53 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

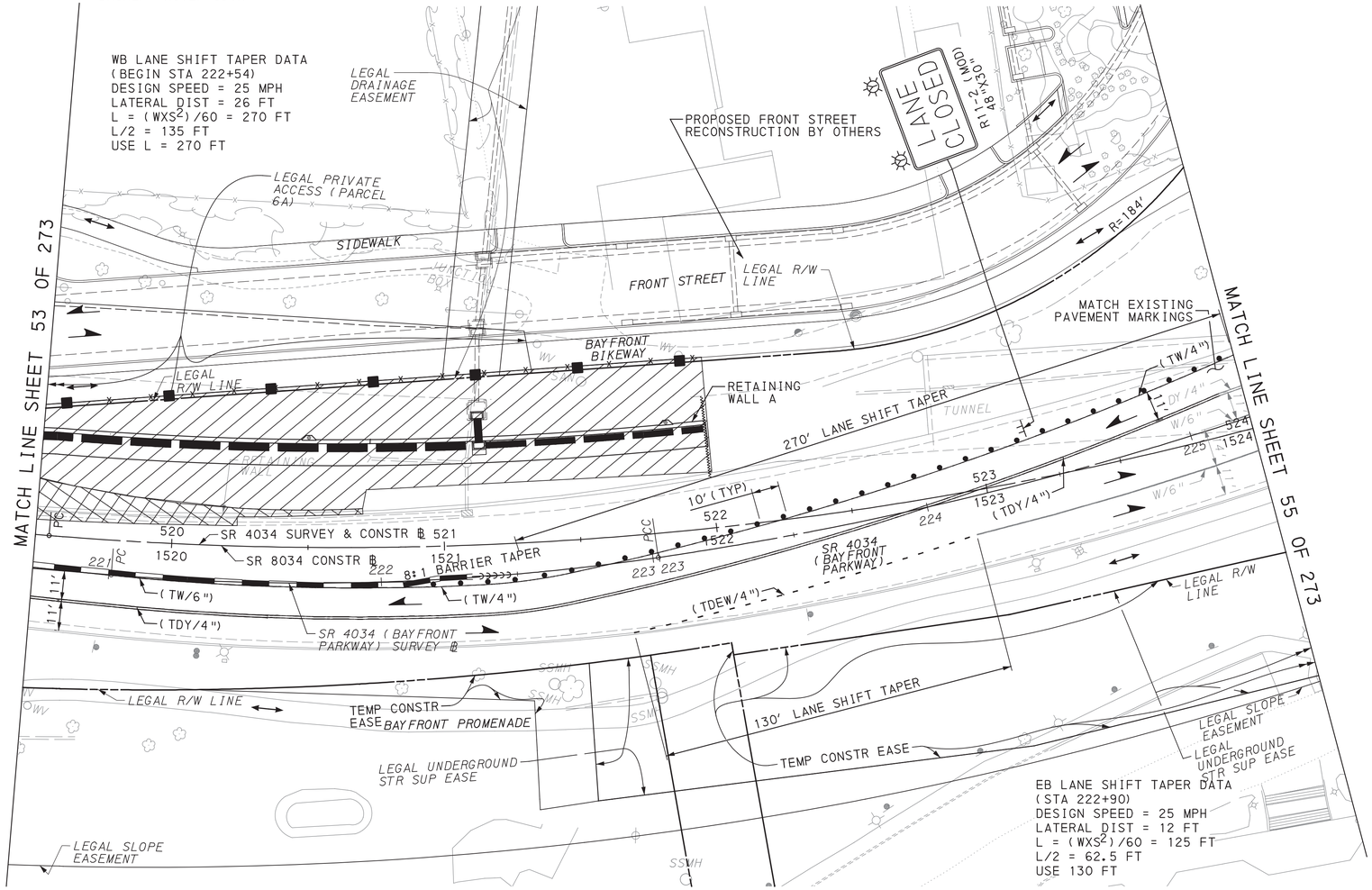
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg1C_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	54 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES


WB LANE SHIFT TAPER DATA
(BEGIN STA 222+54)
DESIGN SPEED = 25 MPH
LATERAL DIST = 26 FT
L = (WXS²)/60 = 270 FT
L/2 = 135 FT
USE L = 270 FT
LEGAL DRAINAGE EASEMENT
PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS
LANE CLOSED
48"x30" (MOD)
LEGAL PRIVATE ACCESS (PARCEL 6A)
SIDEWALK
JUNCTION BOX
FRONT STREET
LEGAL R/W LINE
R=184'
MATCH EXISTING PAVEMENT MARKINGS
MATCH LINE SHEET 53 OF 273
MATCH LINE SHEET 55 OF 273
BAYFRONT BIKEWAY
LEGAL R/W LINE
RETAINING WALL A
270' LANE SHIFT TAPER
TUNNEL
(TW/4")
11'
DY/4"
W/6"
524
1524
225
10' (TYP)
522
523
1523
(TDY/4")
224
520
SR 4034 SURVEY & CONSTR ℄ 521
1520
SR 8034 CONSTR ℄ 1521
221
222
8:1 BARRIER TAPER
223 223
1522
SR 4034 (BAYFRONT PARKWAY)
(TW/6")
(TW/4")
(TDY/4")
(TDEW/4")
11'
SR 4034 (BAYFRONT PARKWAY) SURVEY ℄
LEGAL R/W LINE
TEMP CONSTR EASE
BAYFRONT PROMENADE
LEGAL UNDERGROUND STR SUP EASE
130' LANE SHIFT TAPER
TEMP CONSTR EASE
LEGAL SLOPE EASEMENT
LEGAL UNDERGROUND STR SUP EASE
LEGAL SLOPE EASEMENT
EB LANE SHIFT TAPER DATA
(STA 222+90)
DESIGN SPEED = 25 MPH
LATERAL DIST = 12 FT
L = (WXS²)/60 = 125 FT
L/2 = 62.5 FT
USE 130 FT
SSMH
SSMH
SSMH

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	55 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

MATCH LINE SHEET 54 OF 273

MATCH LINE SHEET 56 OF 273

BAY FRONT PROMENADE TEMPORARY LEGENDS INSTALLED IN PREVIOUS STAGE

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

LEGAL DR. EASEMENT

LEGAL SLOPE EASEMENT

BAYFRONT BIKEWAY

LEGAL DRAINAGE EASEMENT

LEGAL R/W LINE FOR CITY STREET

STATE STREET

SIDEWALK

WATER CONTROL BOX

LEGAL R/W LINE

LEGAL R/W LINE FOR CITY STREET

END ROAD WORK G20-2 36"X18"

LANE SHIFT AHEAD W5-5 48"X48" W30-1-6 30"X10"

ROAD WORK 500 FT W20-1 48"X48" W30-1-1 30"X10"

LEGAL SLOPE EASEMENT

LEGAL SLOPE EASE

LEGAL R/W LINE

POLE #254502 A30

WORK ZONE G20-5AP 24"X18"

SPEED LIMIT 25 R2-1 24"X30"

LANE SHIFT AHEAD W5-5 48"X48" W30-1-6 30"X10"

PROPOSED SIDEWALK RECONSTRUCTION BY OTHERS

STATE ST SURVEY & CONSTR

JUNC BOX

EMH

SAN MH

TMH

SSMH

MH

GLM

GV

WV

500'

W/24" (TYP)

W/8" (TYP)

W/6"

W/4"

DY/4"

BW/6"

SR 4034 (BAYFRONT PARKWAY)

SR 4034 (BAYFRONT PARKWAY) SURVEY & CONSTR

SR 8034 CONSTR

SR 4034 SURVEY & CONSTR

RETAINING WALL

RAILROAD TRACK

UPMC HAMOT SERVICE DRIVEWAY

LEGAL DRAINAGE EASEMENT

LEGAL UNDERGROUND ANCHOR EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

TEMP CONSTR EASE

LEGAL SLOPE EASEMENT

LEGAL UNDERGROUND STR SUP EASE

ABANDONED DRIVEWAY

END ROAD WORK G20-2 60"X24"

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE FOR CITY STREET

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

100'

112

111

110

109

108

227

228

229

230

524

525

526

527

528

529

1524

1525

1526

1527

1528

1529

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY SHORING
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

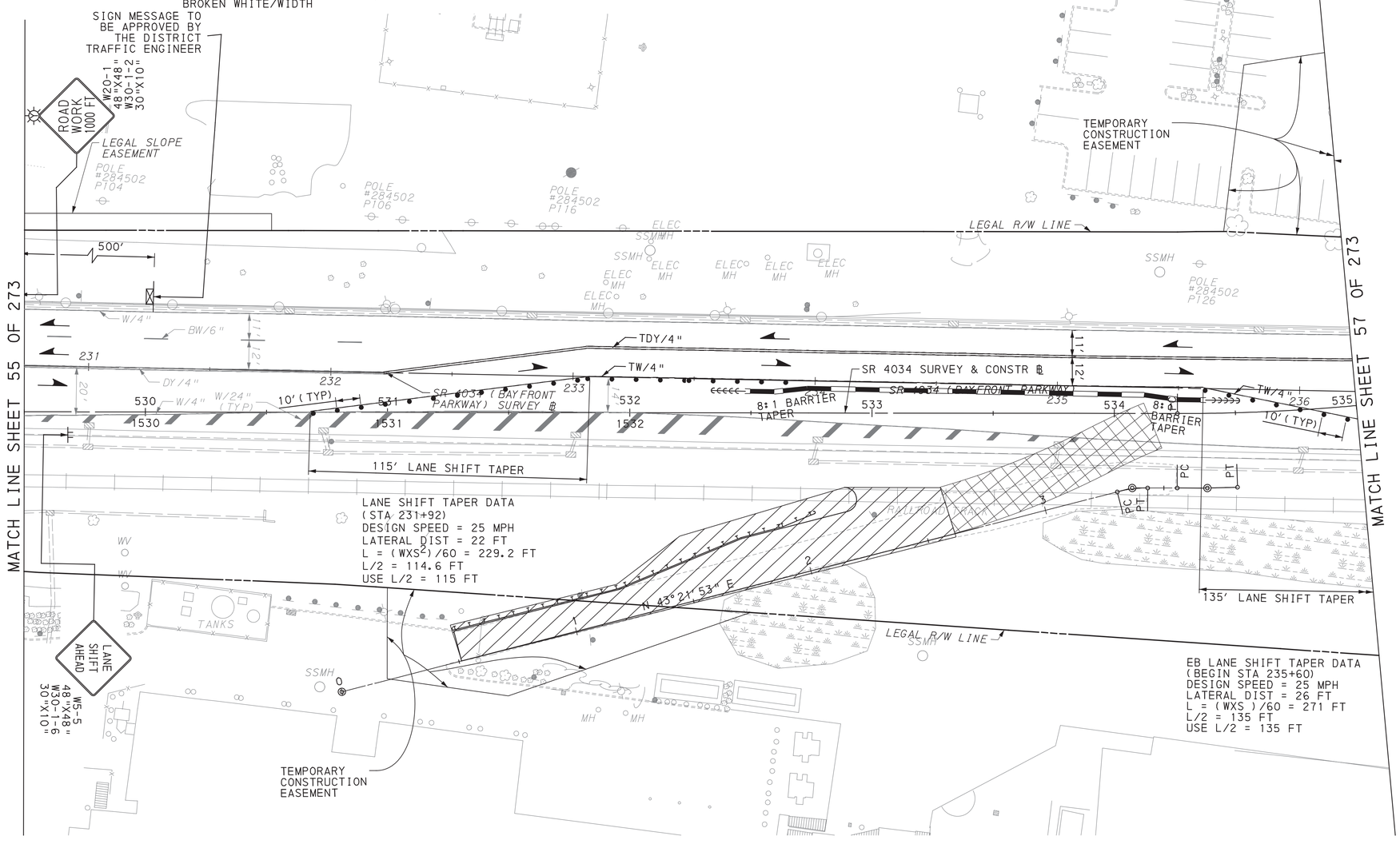
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrgIC_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	56 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplistgIC_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	57 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

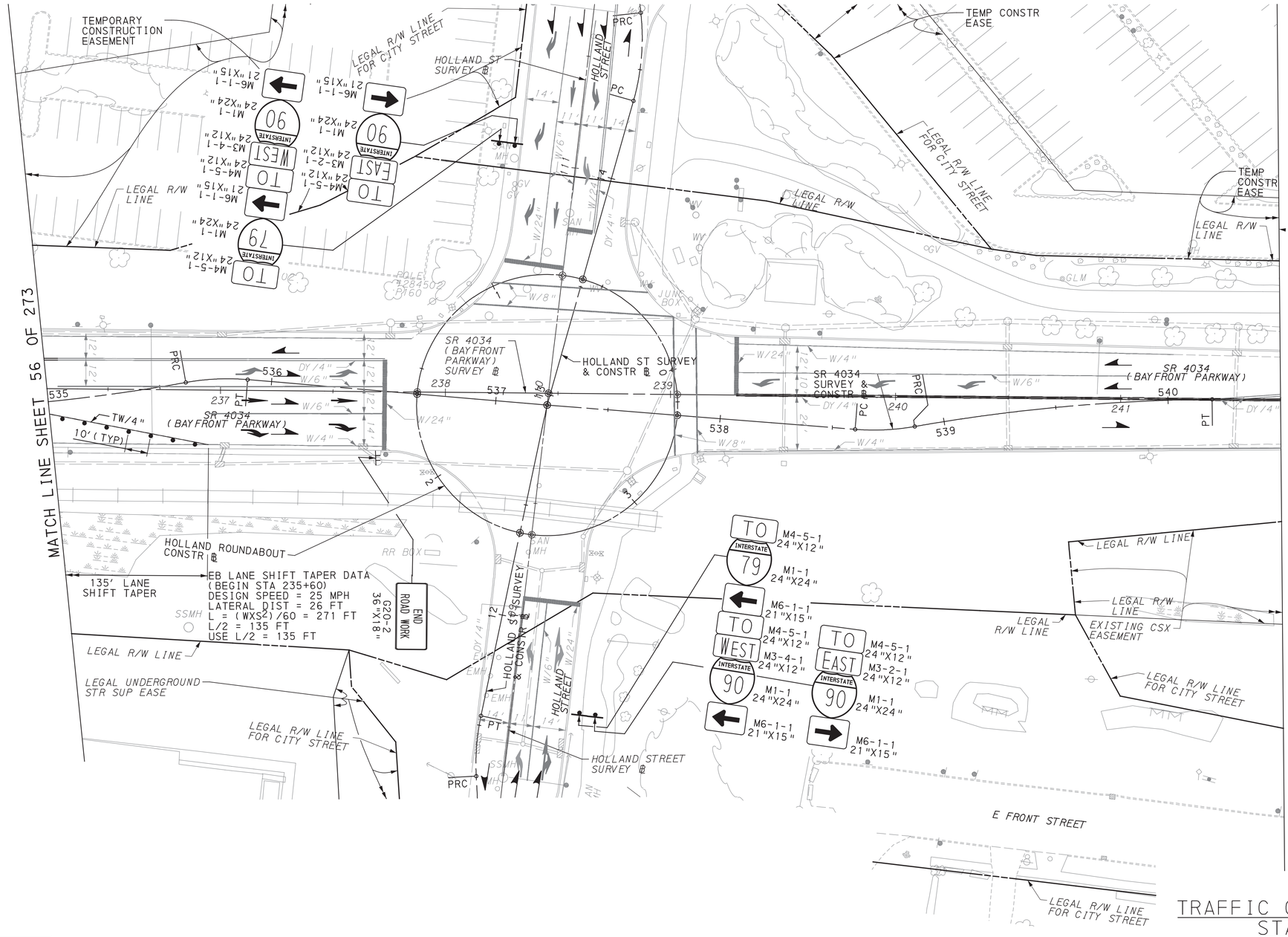
- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\rpt\sheets\TCplstg1C_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	58 OF 273
CITY OF ERIE				

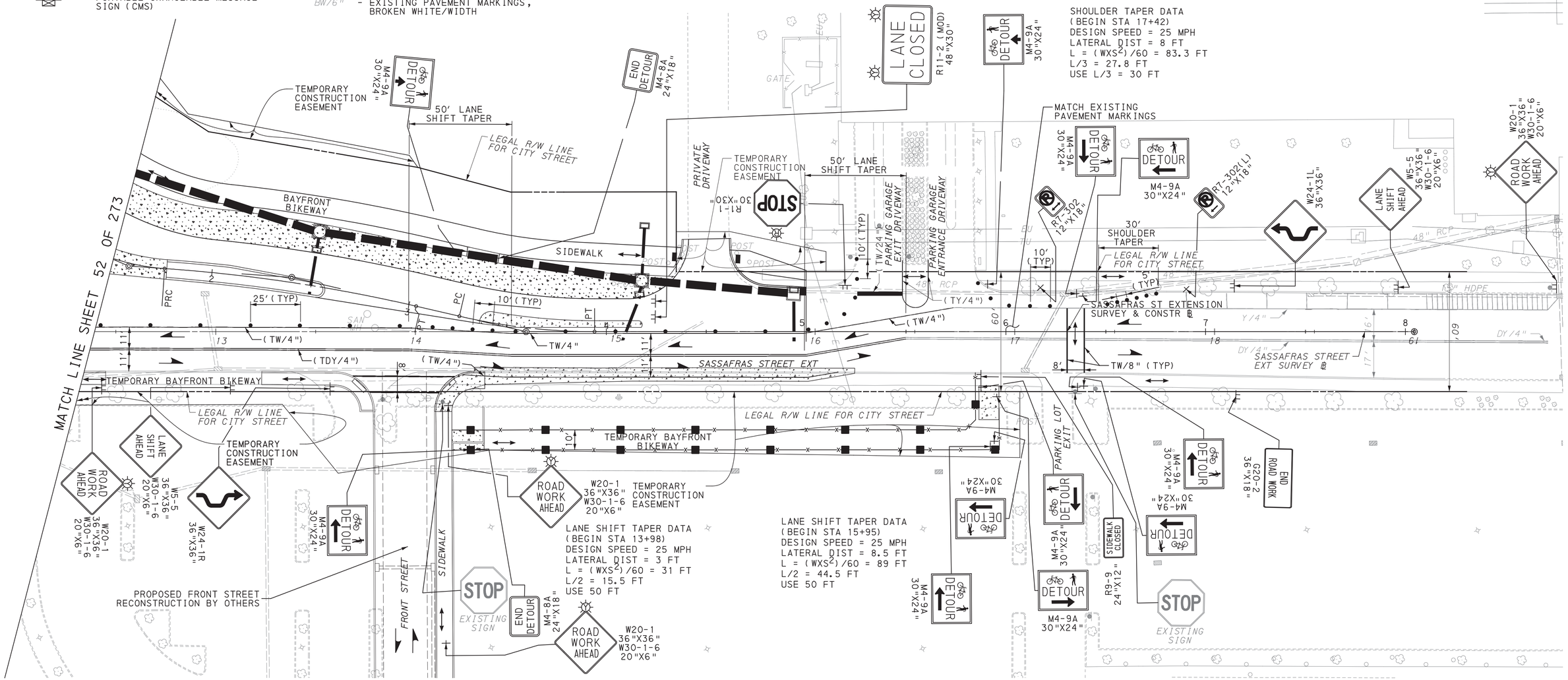
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mp1\sheets\TCplsrtgIC_09.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	59 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

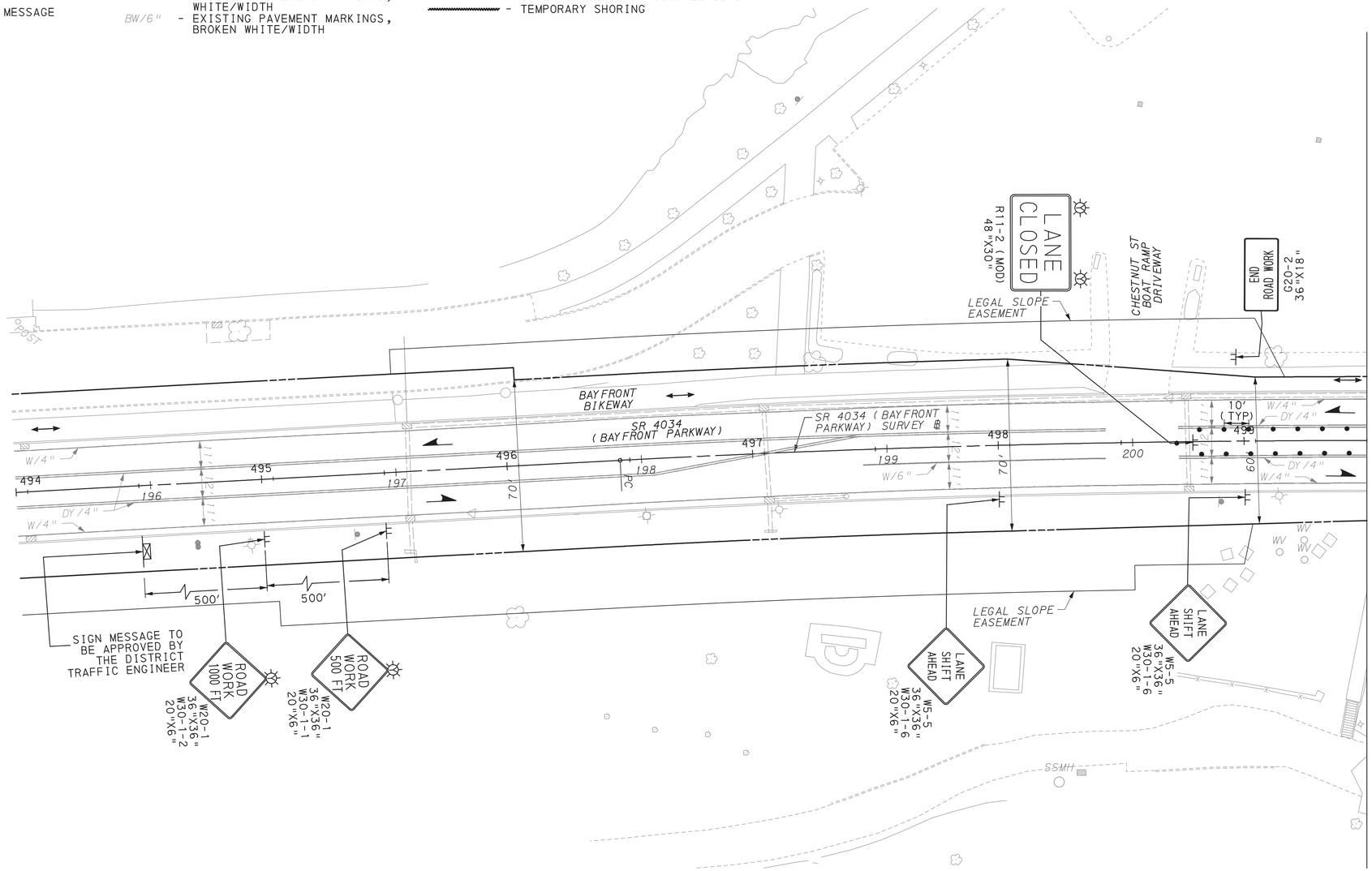
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

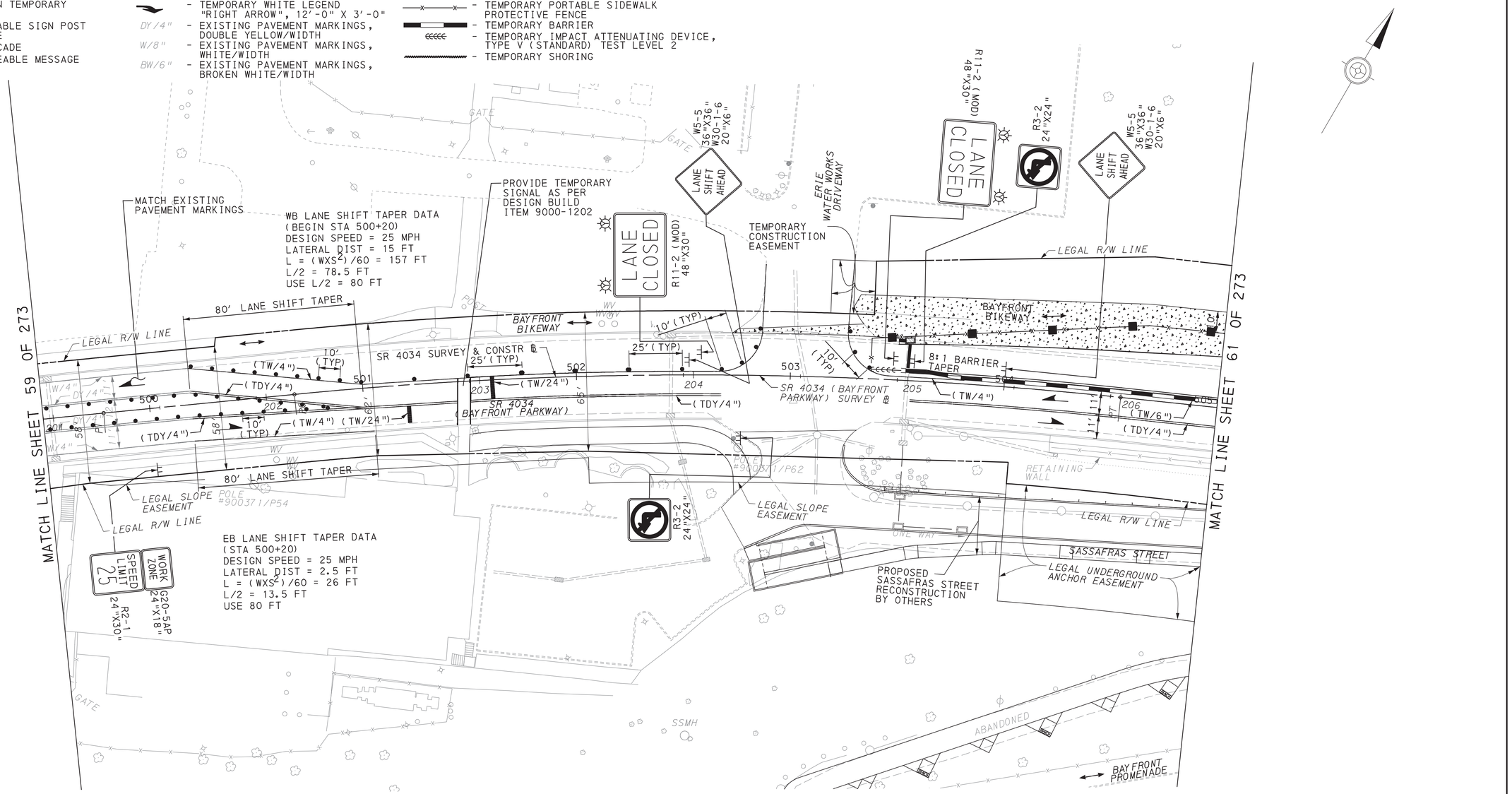
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg1D_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	60 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE
- TEMPORARY PORTABLE SI PROTECTIVE FENCE AND DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPsrgID_02.dgn

PLOTTED: 8/2/2022

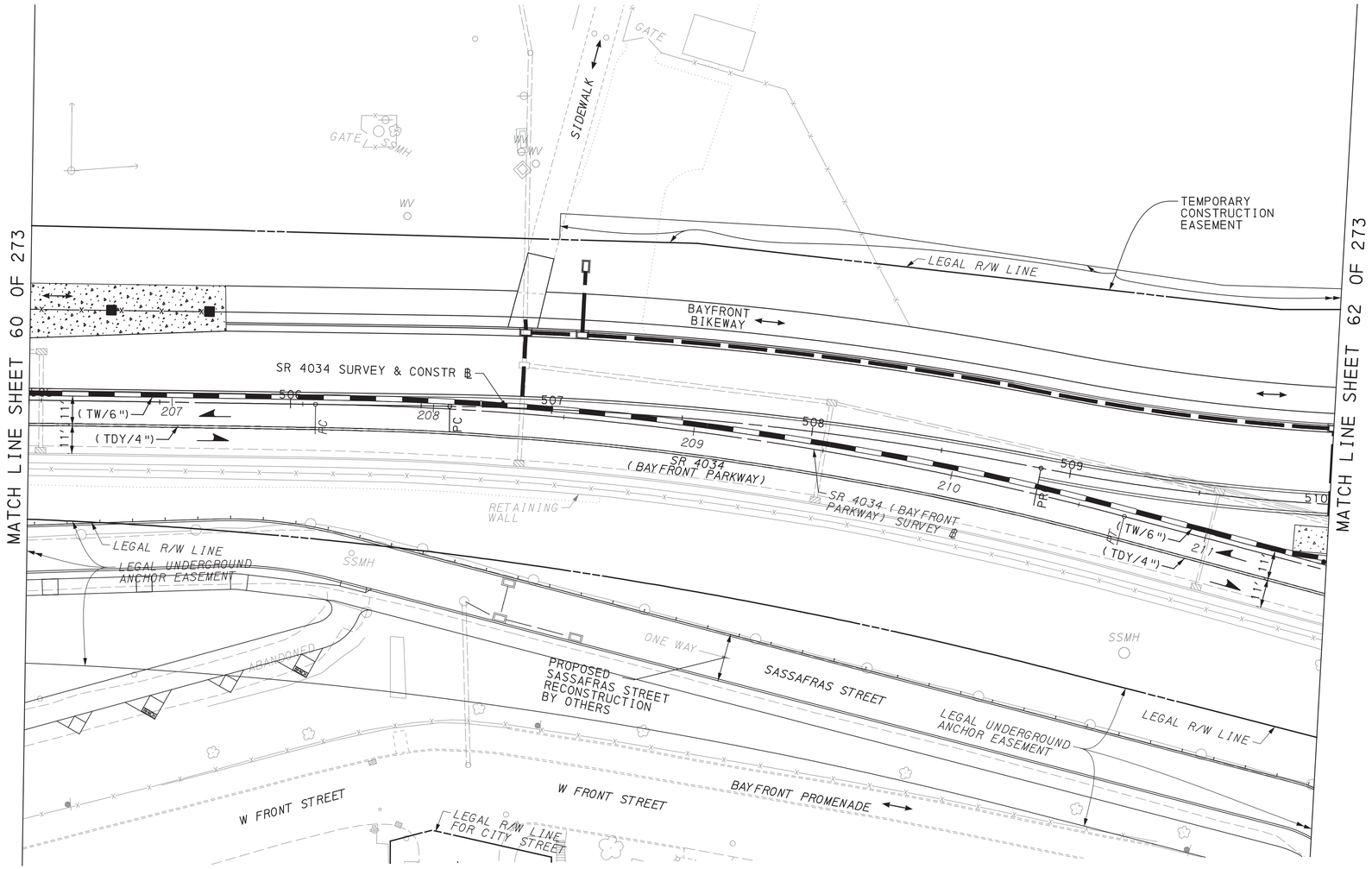
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg1D_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	61 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

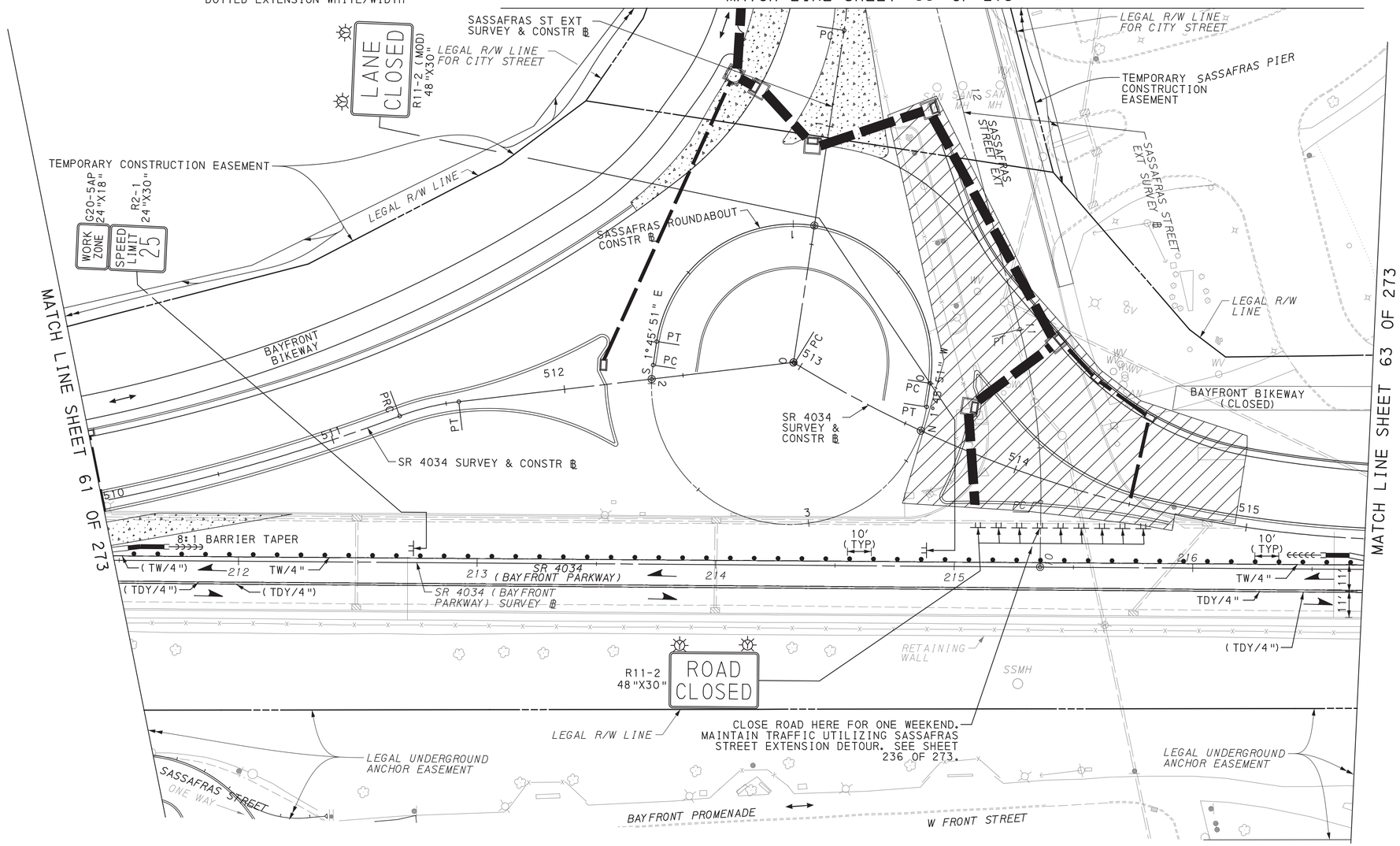
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	62 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpl\sheets\TCplstgID_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	63 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

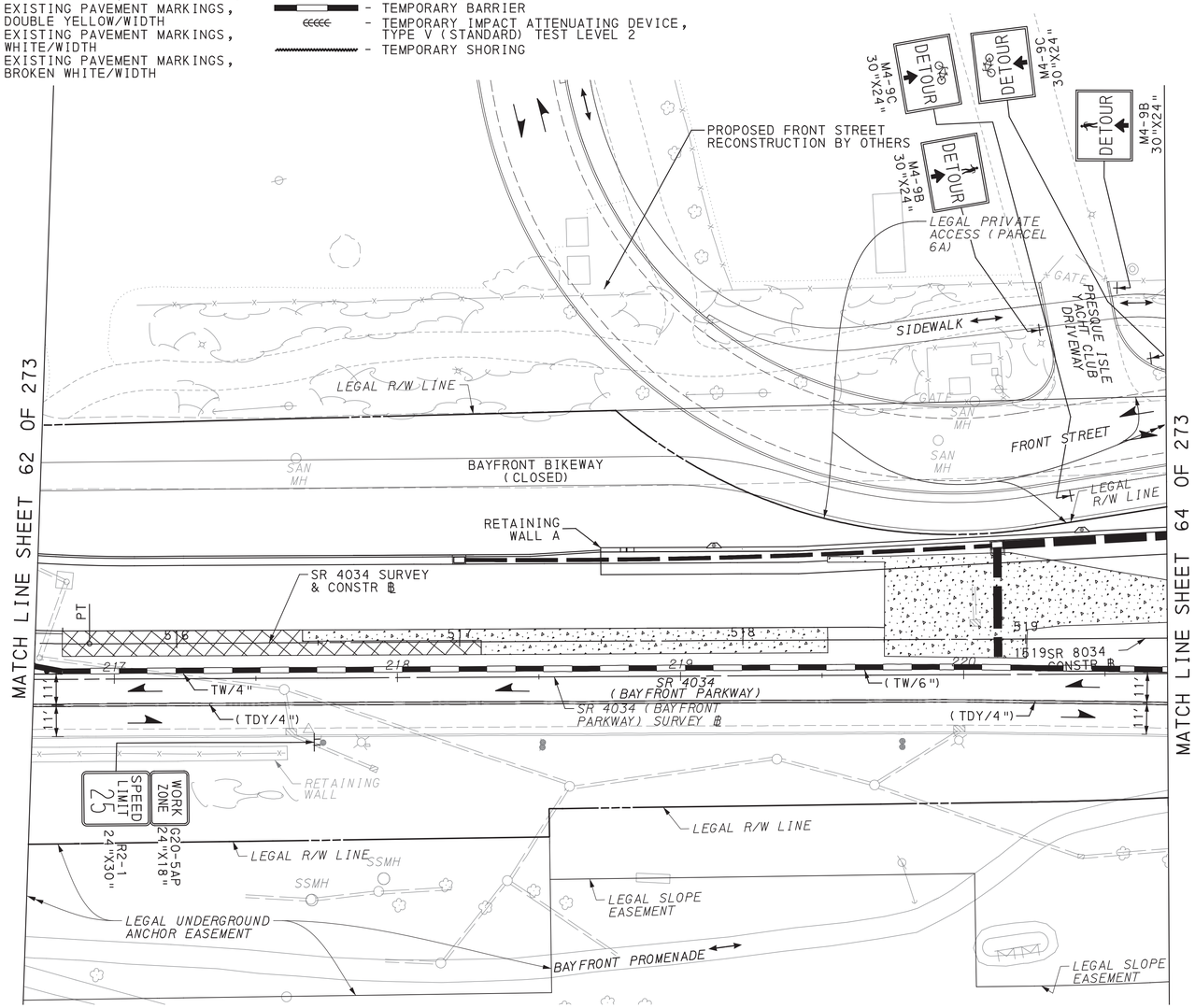
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1D

REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334
COMMONWEALTH OF PENNSYLVANIA

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

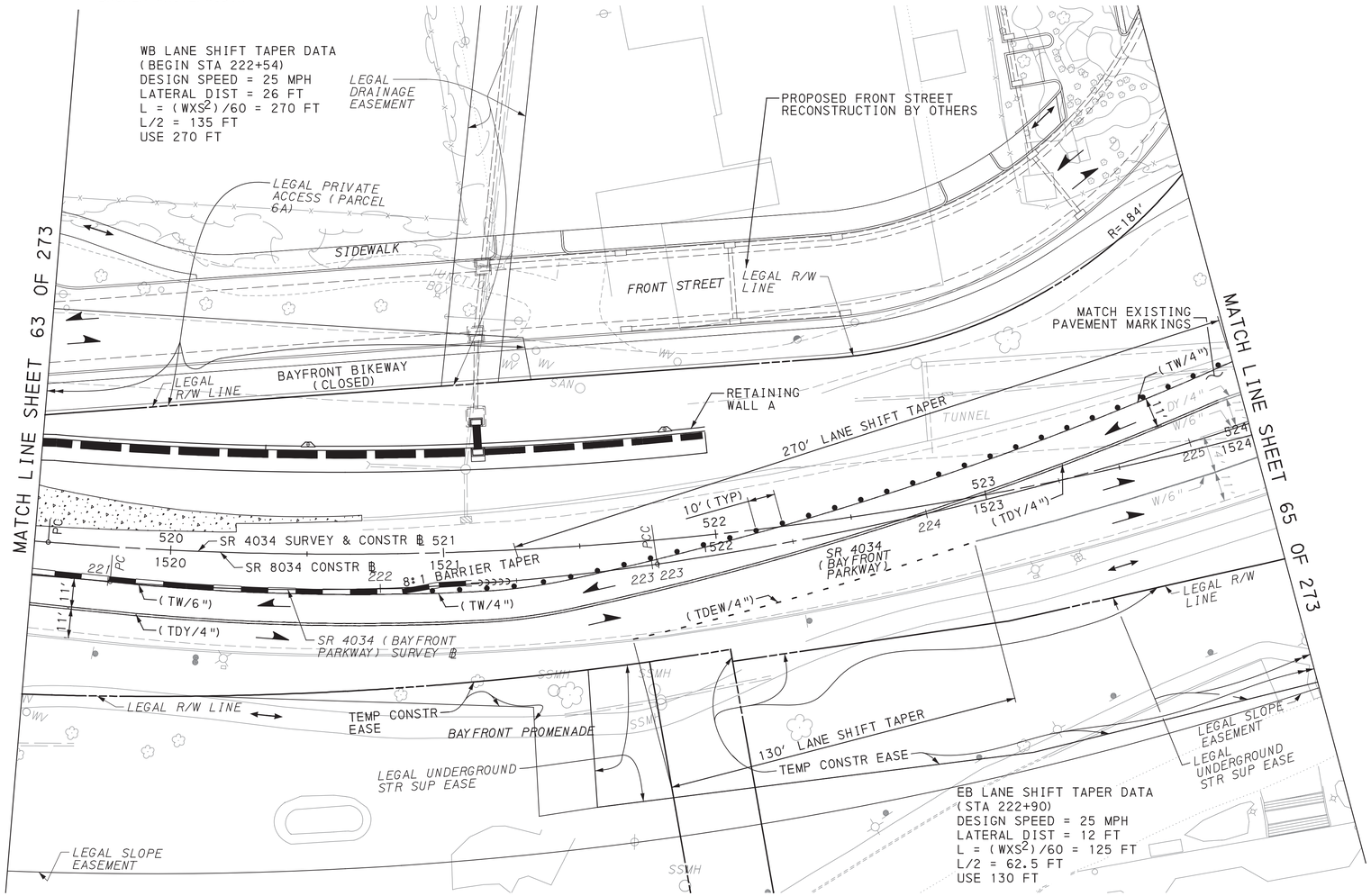
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg1D_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	64 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

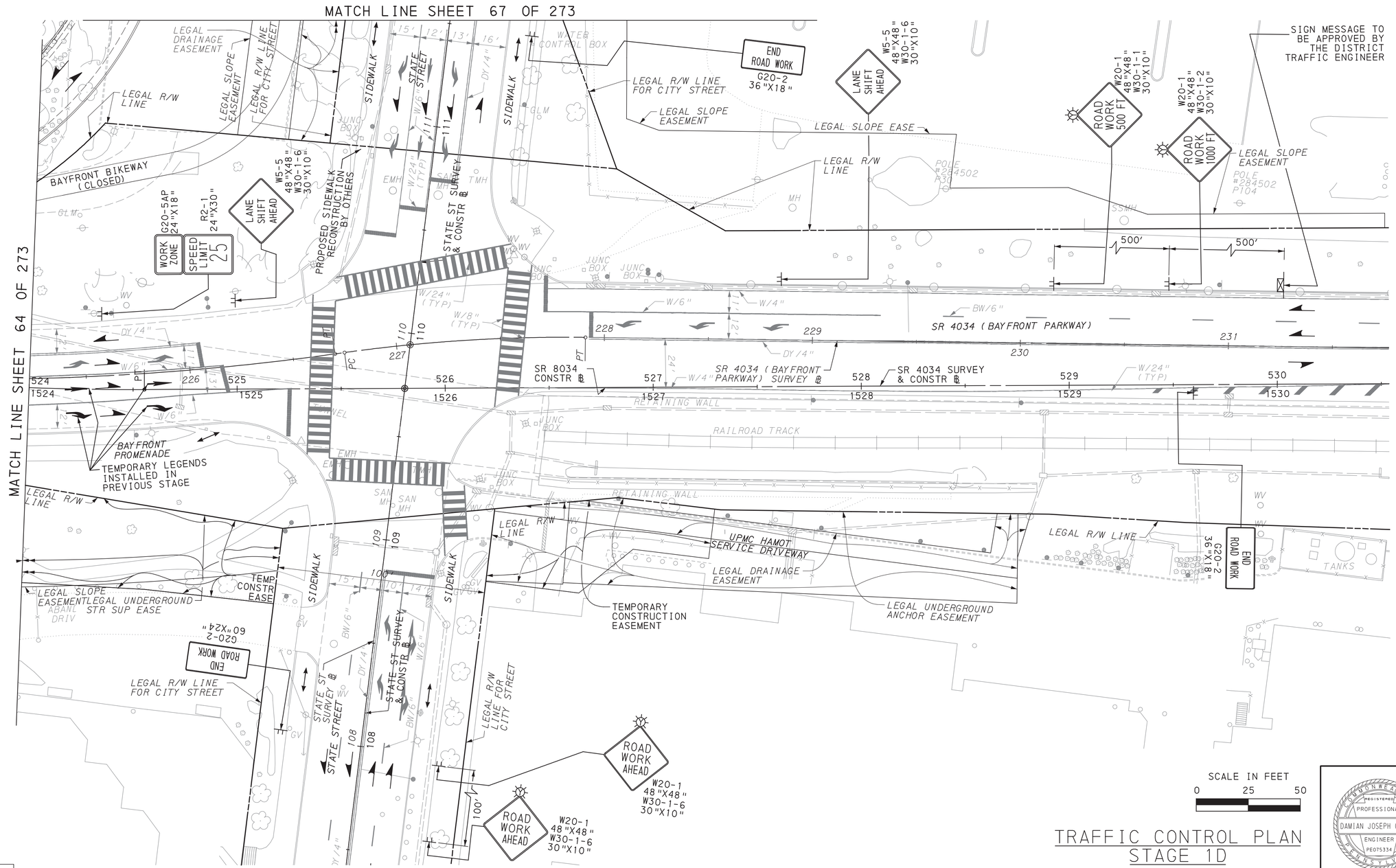
PLOTTED: 8/2/2022

FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrgID_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	65 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 1D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpr\sheets\TCPsIs1D_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	66 OF 273
CITY OF ERIE				

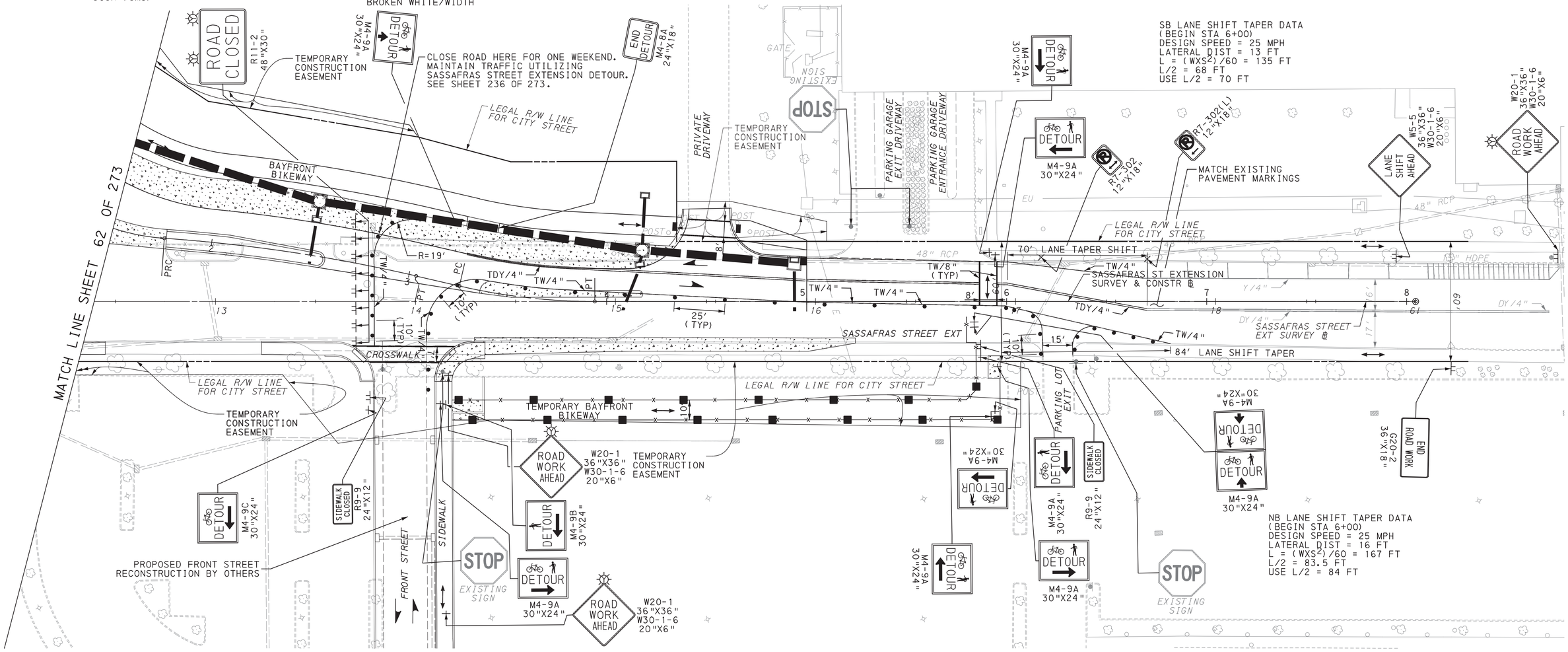
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg1D_08.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

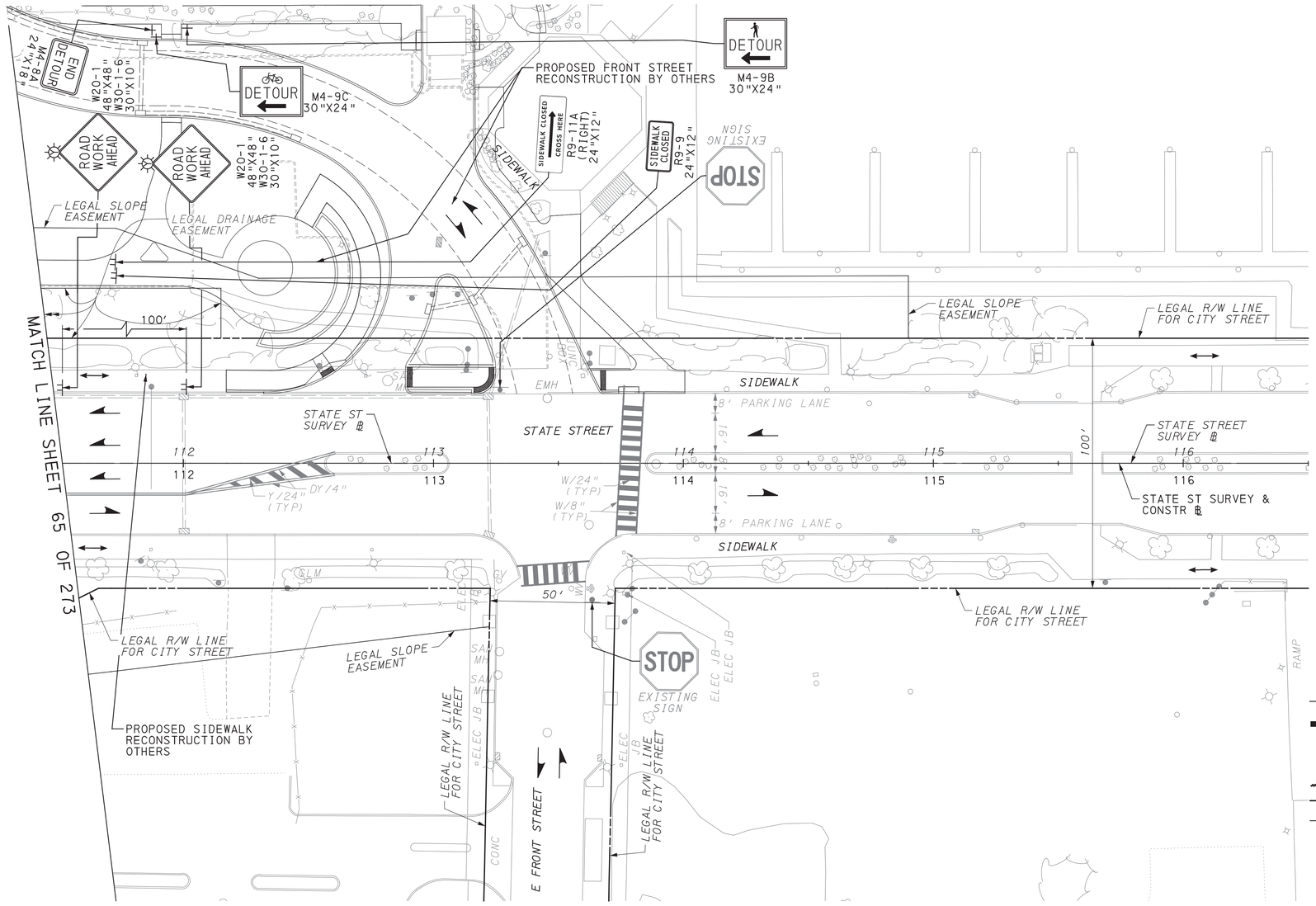
TRAFFIC CONTROL PLAN STAGE 1D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	67 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 1D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

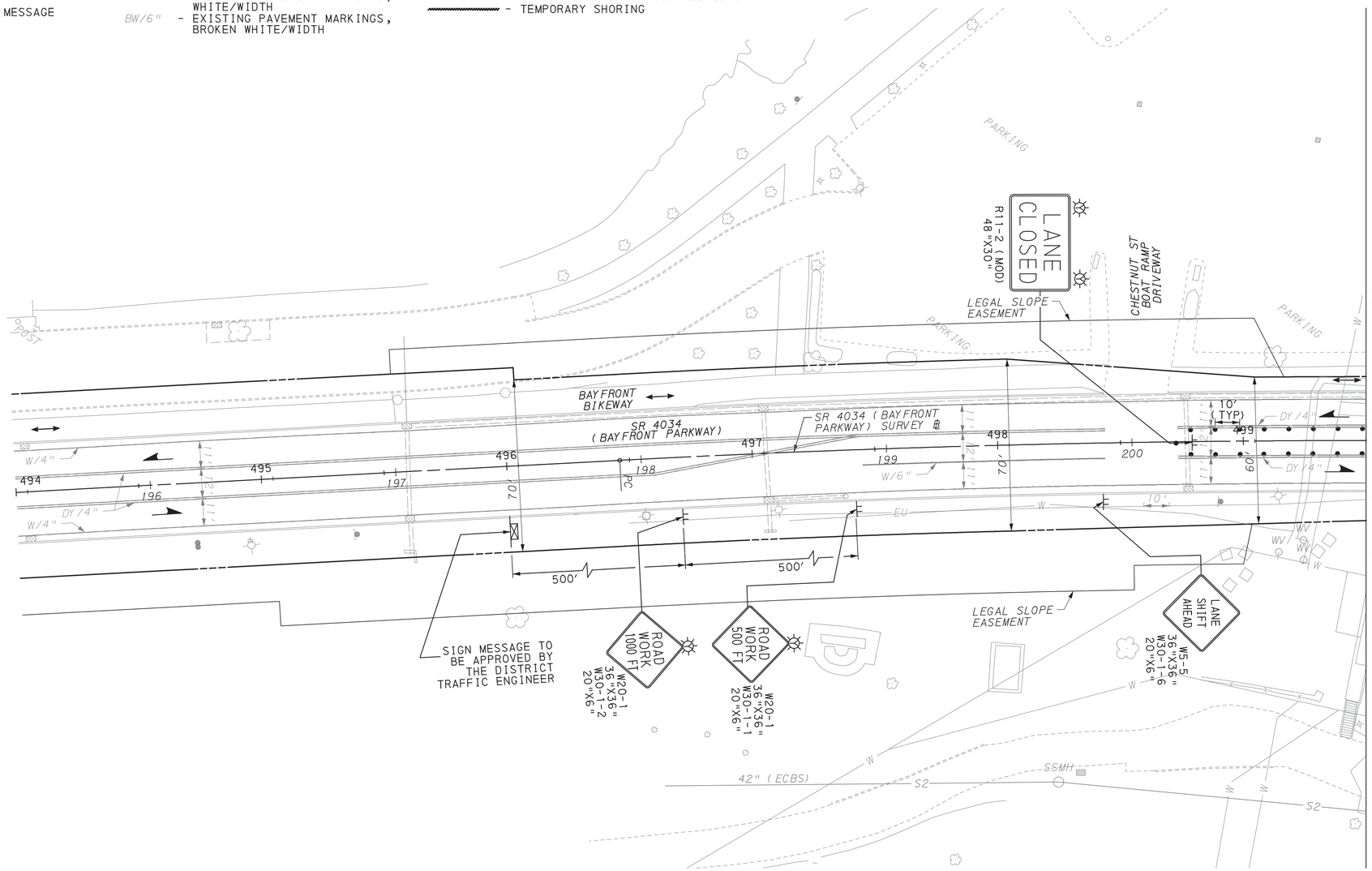
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg1D_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	68 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

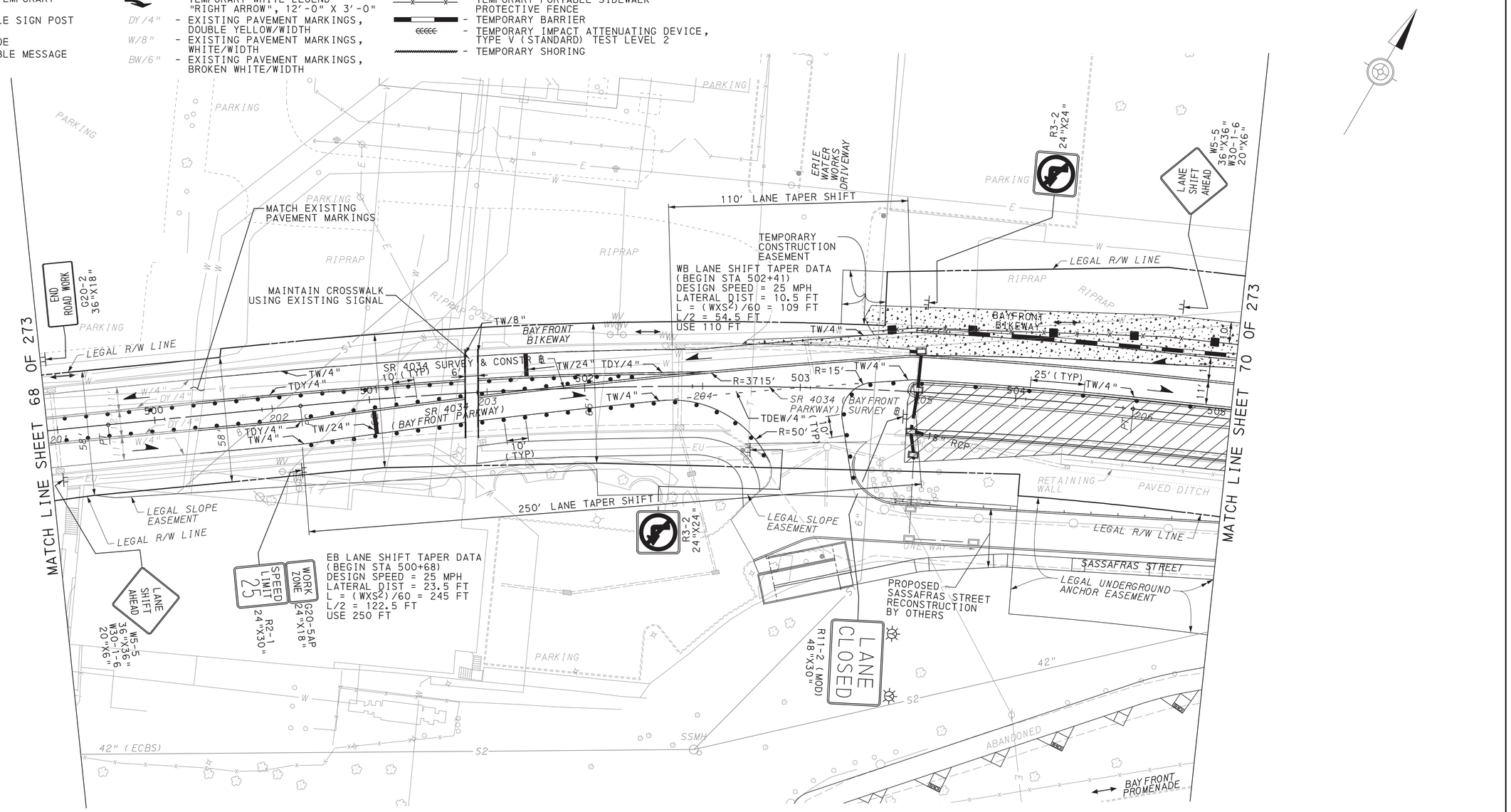
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPlsg2A_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	69 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

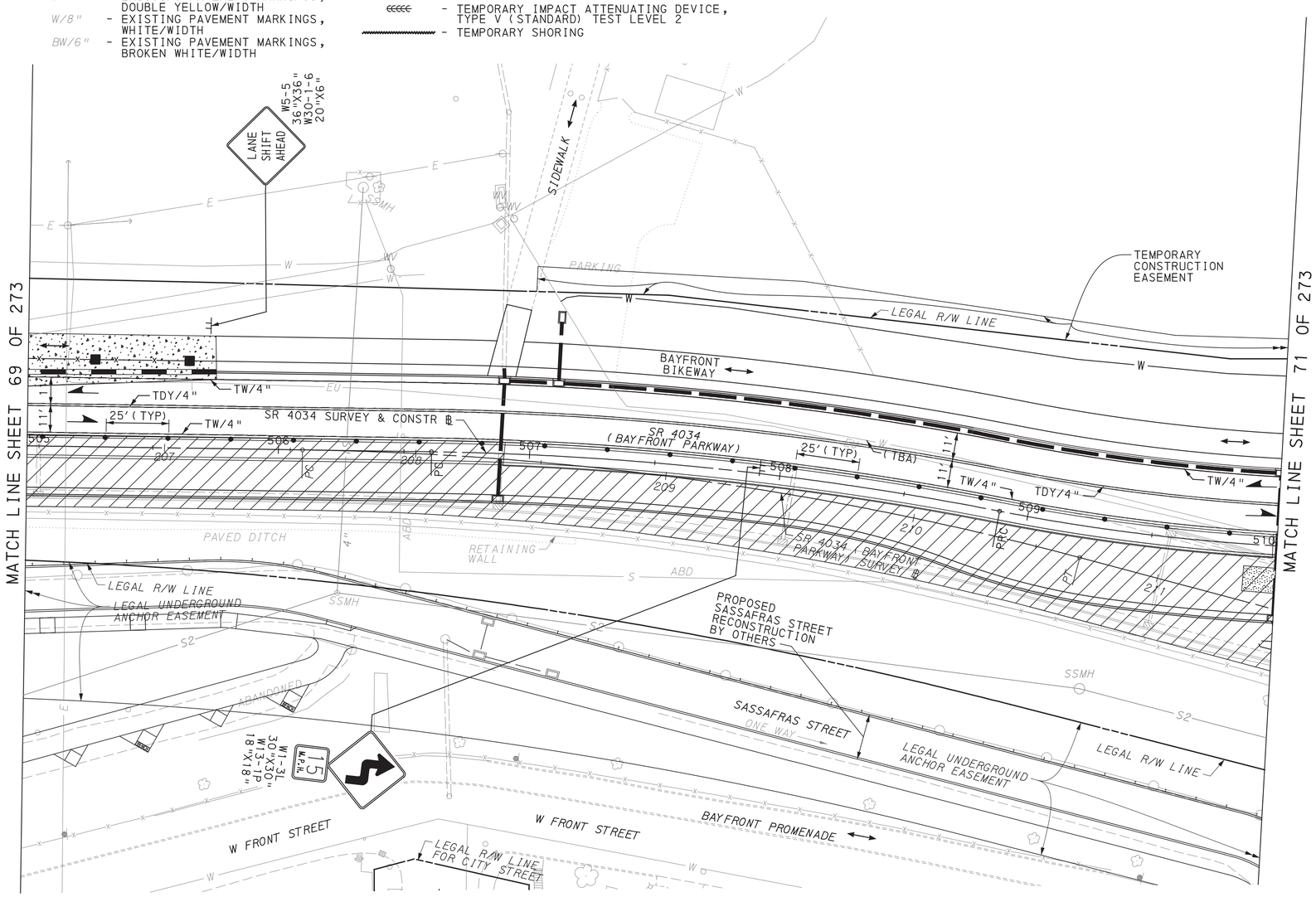
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg2A_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	70 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

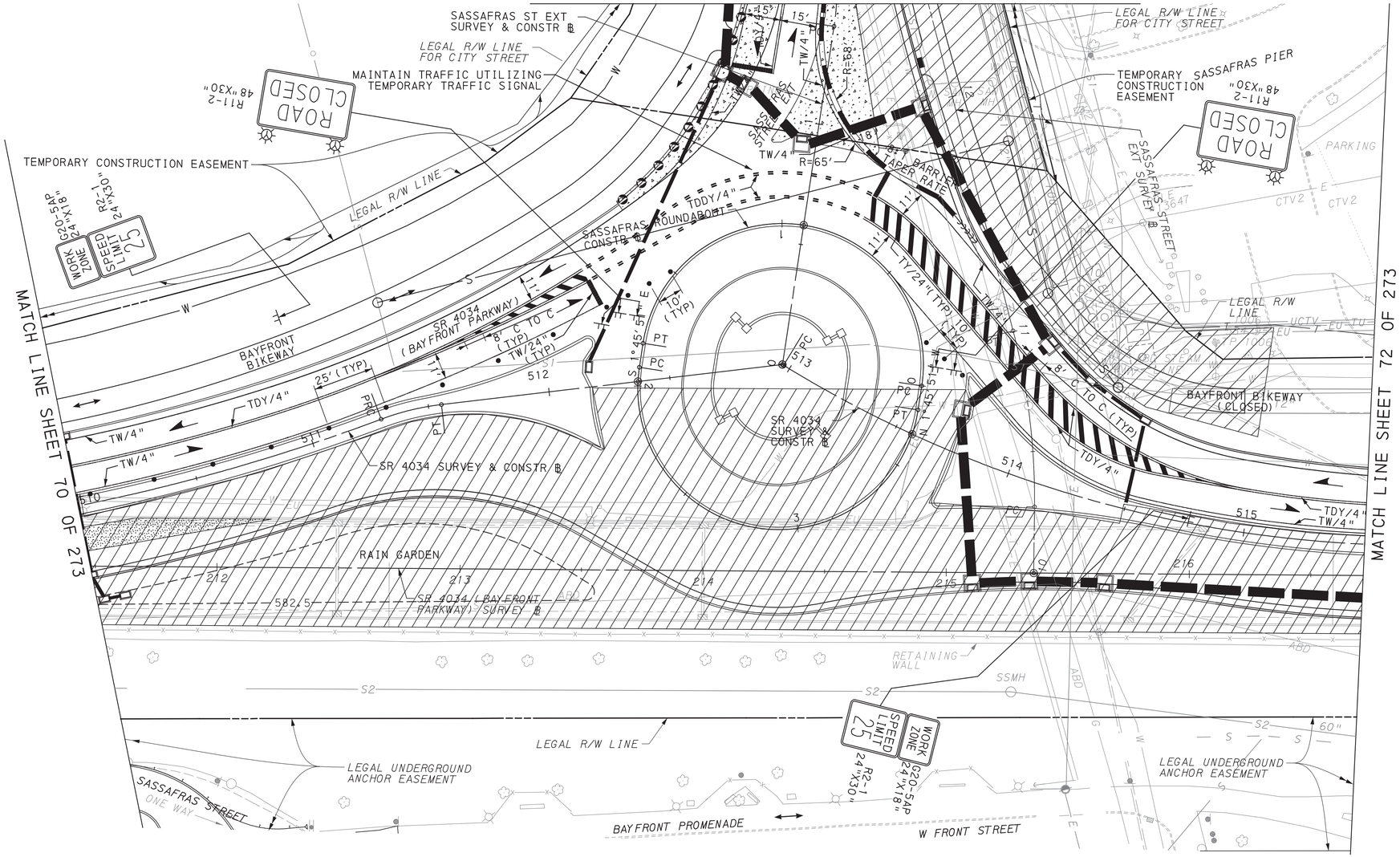
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP\stg2A_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	71 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

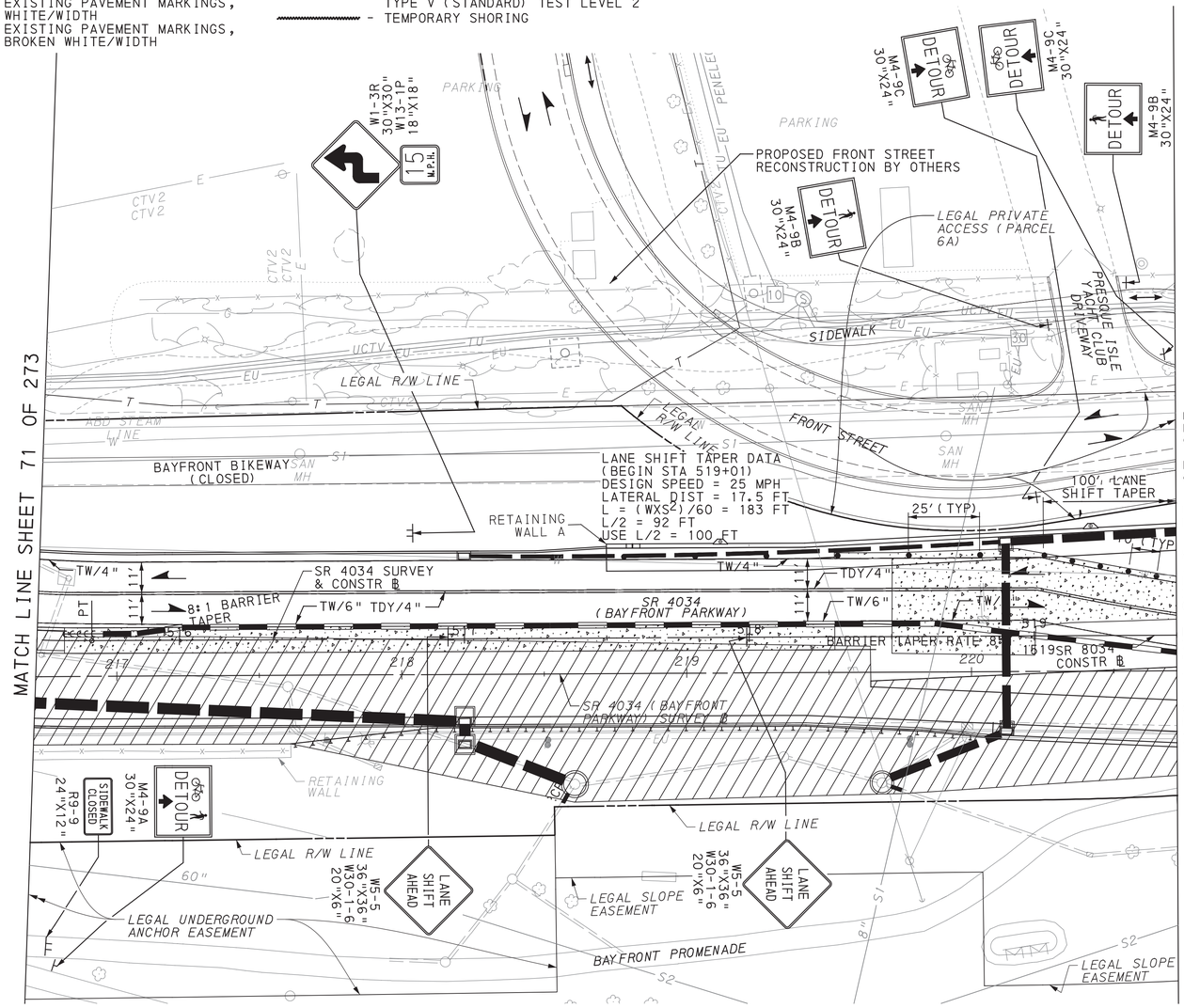
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg2A_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	72 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

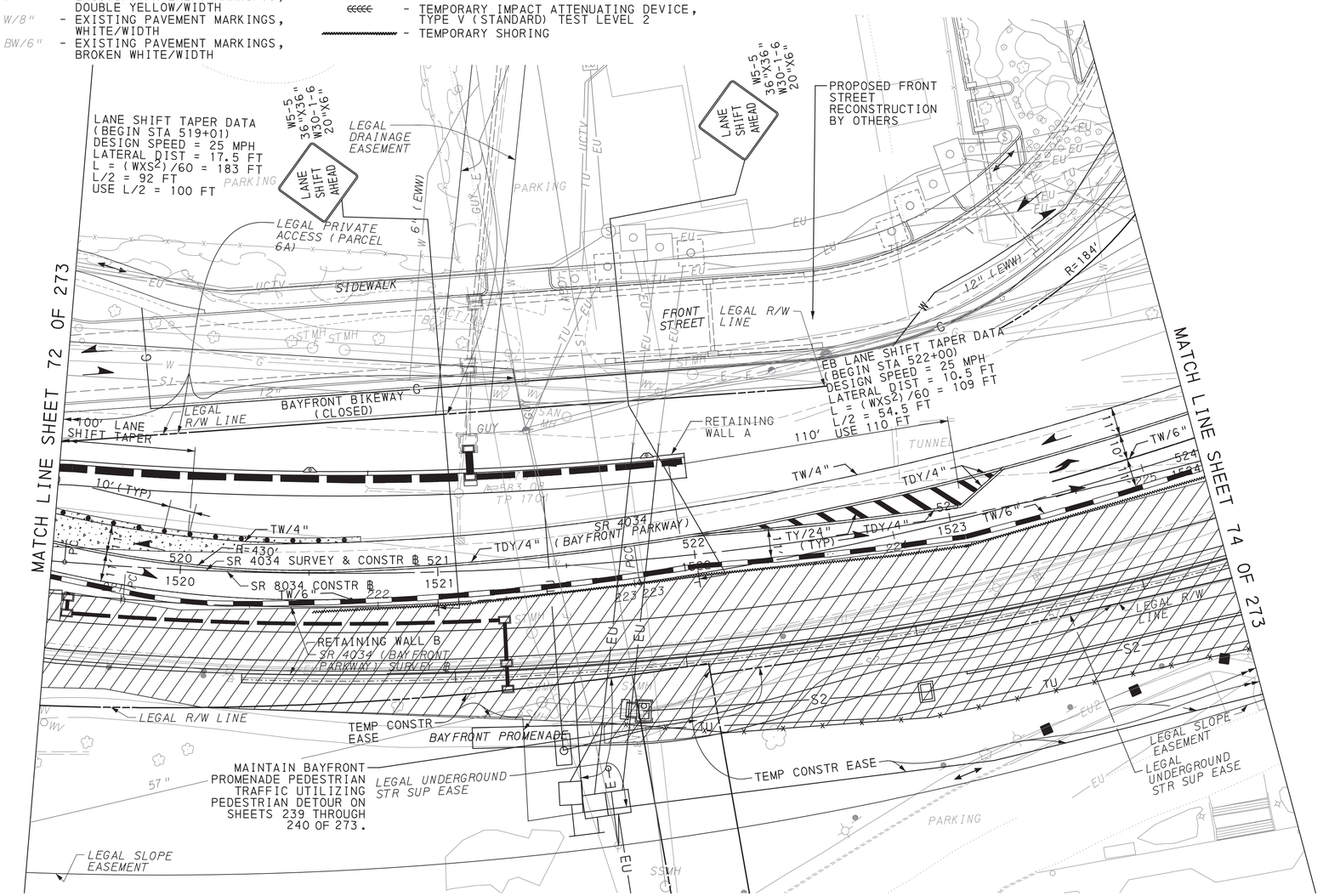
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2A_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	73 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2A_06.dgn

PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpr\sheets\TCp\stg2A_07.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	74 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

MATCH LINE SHEET 83 OF 273

MATCH LINE SHEET 73 OF 273

MATCH LINE SHEET 75 OF 273

MATCH LINE SHEET 82 OF 273

ROAD CLOSED R11-2 48"X30"

ROAD CLOSED HERE. MAINTAIN VEHICULAR TRAFFIC UTILIZING STATE STREET DETOUR ON SHEETS 237 THROUGH 238 OF 273. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR ON SHEETS 239 THROUGH 240 OF 273.

LANE SHIFT TAPER DATA
(BEGIN STA 527+56)
DESIGN SPEED = 25 MPH
LATERAL DIST = 9 FT
$L = (WXS^2)/60 = 94$ FT
L/2 = 47.5 FT
USE 100 FT

100' LANE SHIFT TAPER

SR 4034 (BAYFRONT PARKWAY)

SR 8034 CONSTR ℄

SR 4034 (BAYFRONT PARKWAY) SURVEY ℄

SR 4034 SURVEY & CONSTR ℄

STATE ST SURVEY & CONSTR ℄

STATE ST SURVEY ℄

STATE STREET

BAYFRONT BIKEWAY (CLOSED)

BAYFRONT PROMENADE

PROPOSED SIDEWALK RECONSTRUCTION BY OTHERS

TO BE ABANDONED SIDEWALK

MAINTAIN TRAFFIC UTILIZING TEMPORARY TRAFFIC SIGNAL

RETAINING WALL B

UPMC HAMOT SERVICE DRIVEWAY

TEMPORARY CONSTRUCTION EASEMENT

TIE BARRIER INTO SHORING GUIDERAIL

SIDEWALK

LEGAL DRAINAGE EASEMENT

LEGAL SLOPE EASEMENT

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE

LEGAL UNDERGROUND STR SUP EASE

LEGAL UNDERGROUND ANCHOR EASEMENT

TEMP CONSTR EASE

ABANDONED DRIVEWAY

END TRANSITION

W1-6 48"X24"

W1-8 24"X30"

W5-5 36"X36" W30-1-6 20"X6"

LANE SHIFT AHEAD

R2-1 24"X30"

G20-5AP 24"X18"

SPEED LIMIT 25

WORK ZONE

D9-2-2 24"X12"

D9-2 24"X24"

DURING WORKING HOURS, MAINTAIN ACCESS TO UPMC HAMOT SERVICE DRIVEWAY AT ALL TIMES UTILIZING PENNDOT PUBLICATION 213, PATAS 109-A AND 109-G. DURING NON-WORKING HOURS, MAINTAIN TRAFFIC USING TEMPORARY SIGNAL AS PER DESIGN-BUILD ITEM 9000-1202.

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	75 OF 273
CITY OF ERIE				

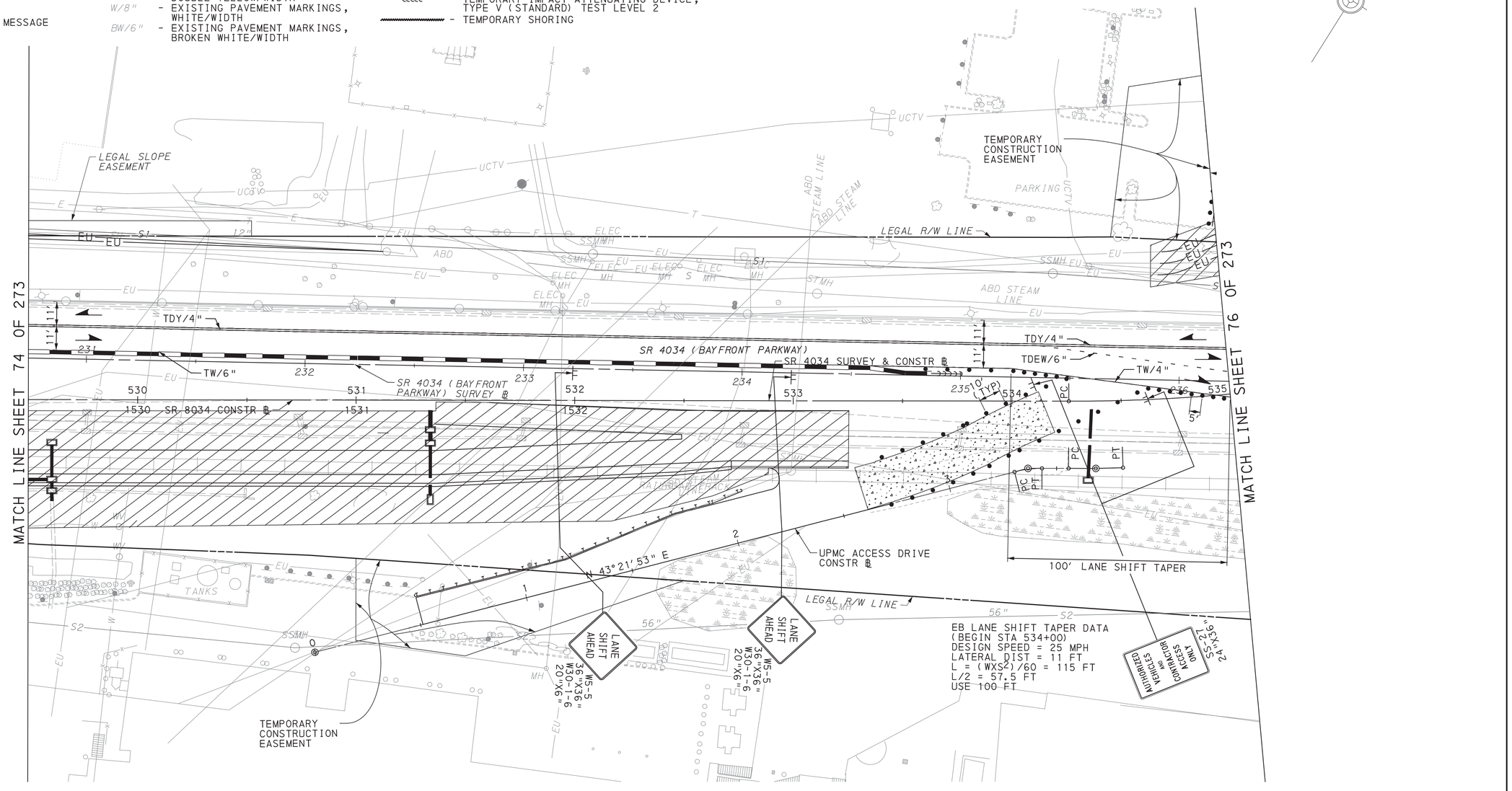
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg2A_08.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	76 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg2A_09.dgn

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

CONTRACTOR TO MAINTAIN ACCESS DURING NON-WORKING HOURS BY PLACING COMPACTED AND SUITABLE BACKFILL.

DURING WORKING HOURS, MAINTAIN TRAFFIC UTILIZING FLAGGERS.

PROTECT DROP OFFS ADJACENT TO DRIVEWAYS AS PER PENNDOT PUBLICATION 408, SECTION 901.3J

MATCH LINE SHEET 84 OF 273

MATCH LINE SHEET 75 OF 273

MATCH LINE SHEET 77 OF 273

TEMPORARY CONSTRUCTION EASEMENT

G20-5AP 24"X18"

R2-1 24"X30" SPEED LIMIT 25

WORK ZONE

ROAD CLOSED

R11-2 48"X30"

LEGAL R/W LINE FOR CITY STREET

HOLLAND ST SURVEY ℄

HOLLAND STREET

SIDEWALK

BAYFRONT BIKEWAY

D9-2 24"X24"

D9-2-2 24"X12"

TEMP CONSTR EASE

LEGAL R/W LINE

UCTV

STEAM LINE

PARKING

SR 4034 (BAYFRONT PARKWAY) SURVEY ℄

HOLLAND ST SURVEY & CONSTR ℄

SR 4034 SURVEY & CONSTR ℄

SR 4034 (BAYFRONT PARKWAY)

TDY/4"

TW/6"

TW/24"

TW/4"

W/8"

63'

57'

20'

12' (TYP)

10' (TYP)

11'

535

536

537

538

539

540

237

238

239

240

241

PRC

PT

PC

HOLLAND STREET SURVEY ℄

HOLLAND ROUNDABOUT CONSTR ℄

HOLLAND ST SURVEY & CONSTR ℄

MAINTAIN TRAFFIC UTILIZING TEMPORARY TRAFFIC SIGNAL

LANE CLOSED

R11-2 (MOD) 48"X30"

SPEED LIMIT 25

WORK ZONE

G20-5AP 24"X18"

R2-1 24"X30"

8:1 BARRIER TAPER RATE

100' LANE SHIFT TAPER

EB LANE SHIFT TAPER DATA
(BEGIN STA 539+50)
DESIGN SPEED = 25 MPH
LATERAL DIST = 11 FT
L = (WXS²)/60 = 115 FT
L/2 = 57.5 FT
USE 100 FT

REMOVE EXISTING SIGN

PROPOSED RAILROAD TRACKS (BY OTHERS)

LEGAL R/W LINE FOR CITY STREET

LEGAL UNDERGROUND STR SUP EASE

E FRONT STREET

ROAD WORK AHEAD

W20-1 36"X36"
W30-1-6 20"X6"

END ROAD WORK G20-2 36"X18"

CONTRACTOR TO MAINTAIN ACCESS DURING NON-WORKING HOURS BY PLACING COMPACTED AND SUITABLE BACKFILL.

DURING WORKING HOURS, MAINTAIN TRAFFIC UTILIZING PENNDOT PUBLICATION 213, PATAS 106, 110-G, 110-H, 110-Q, AND 110-R.

PROTECT DROP OFFS ADJACENT TO DRIVEWAYS AS PER PENNDOT PUBLICATION 408, SECTION 901.3J

M6-1-1 21"X15"
M1-1 24"X24"
M4-5-1 24"X12"
M3-4-1 24"X12"
M3-2-1 24"X12"
INTERSTATE 79
INTERSTATE 90
TO WEST
TO EAST

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	77 OF 273
CITY OF ERIE				

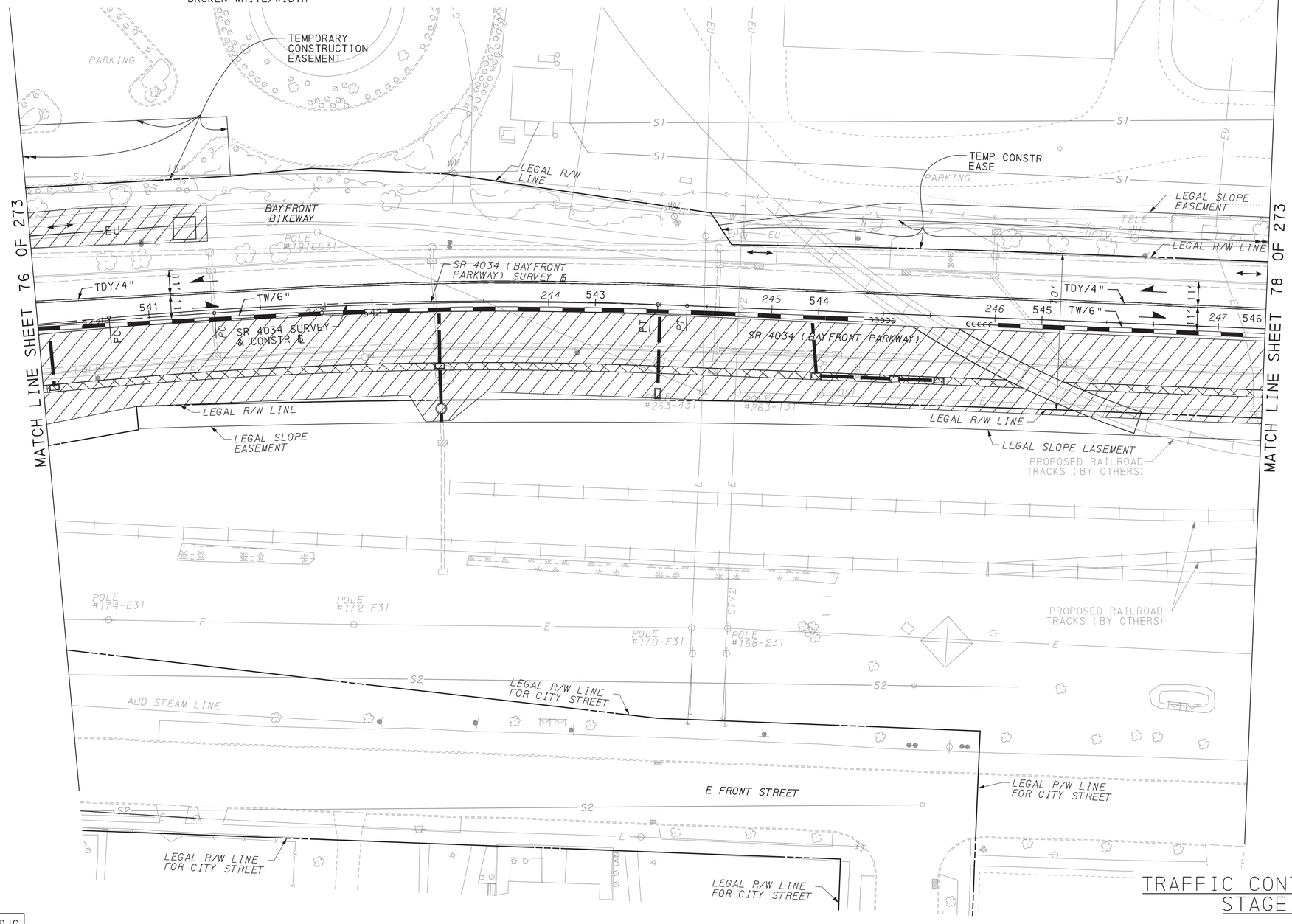
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg2A_10.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

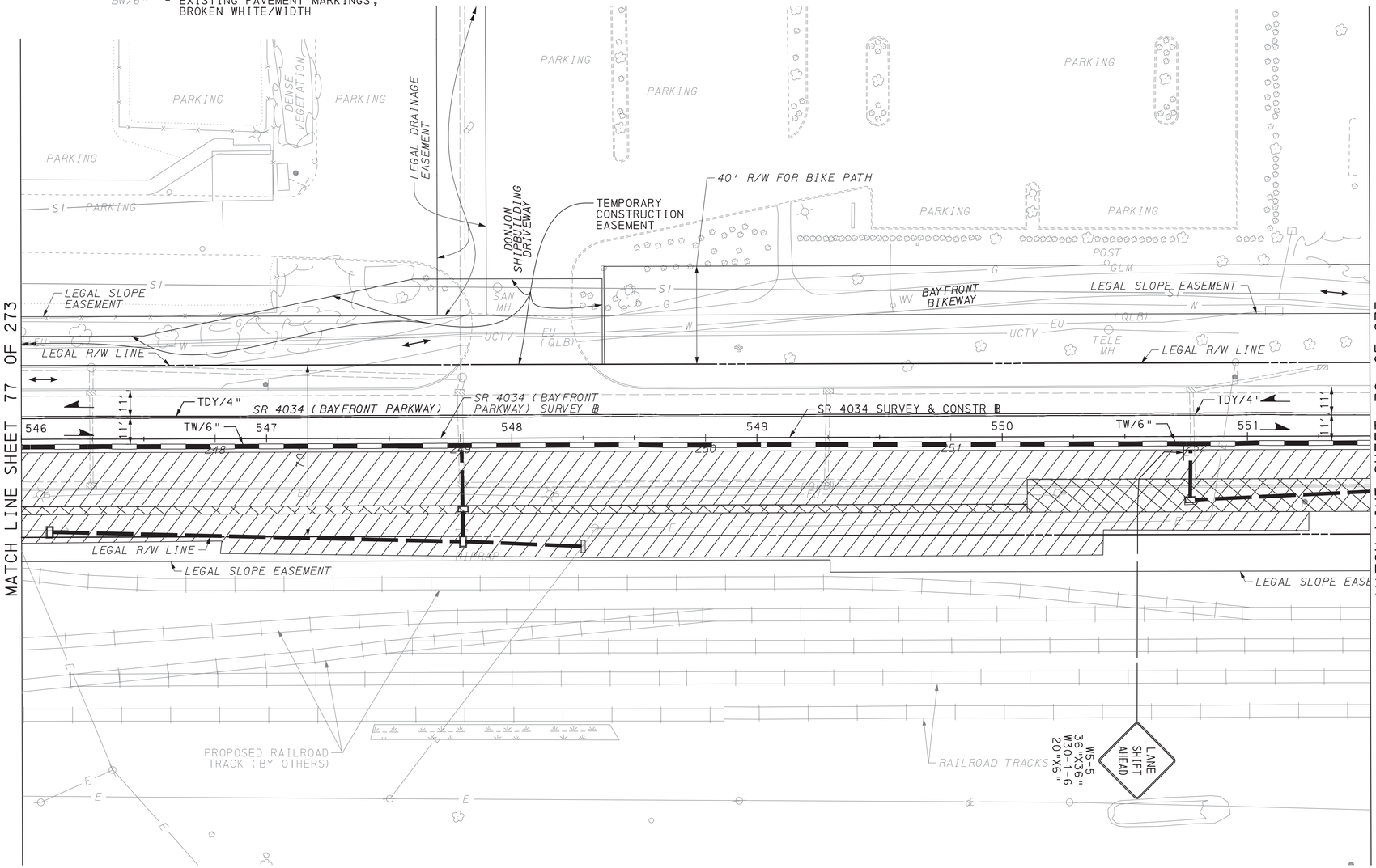
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	78 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

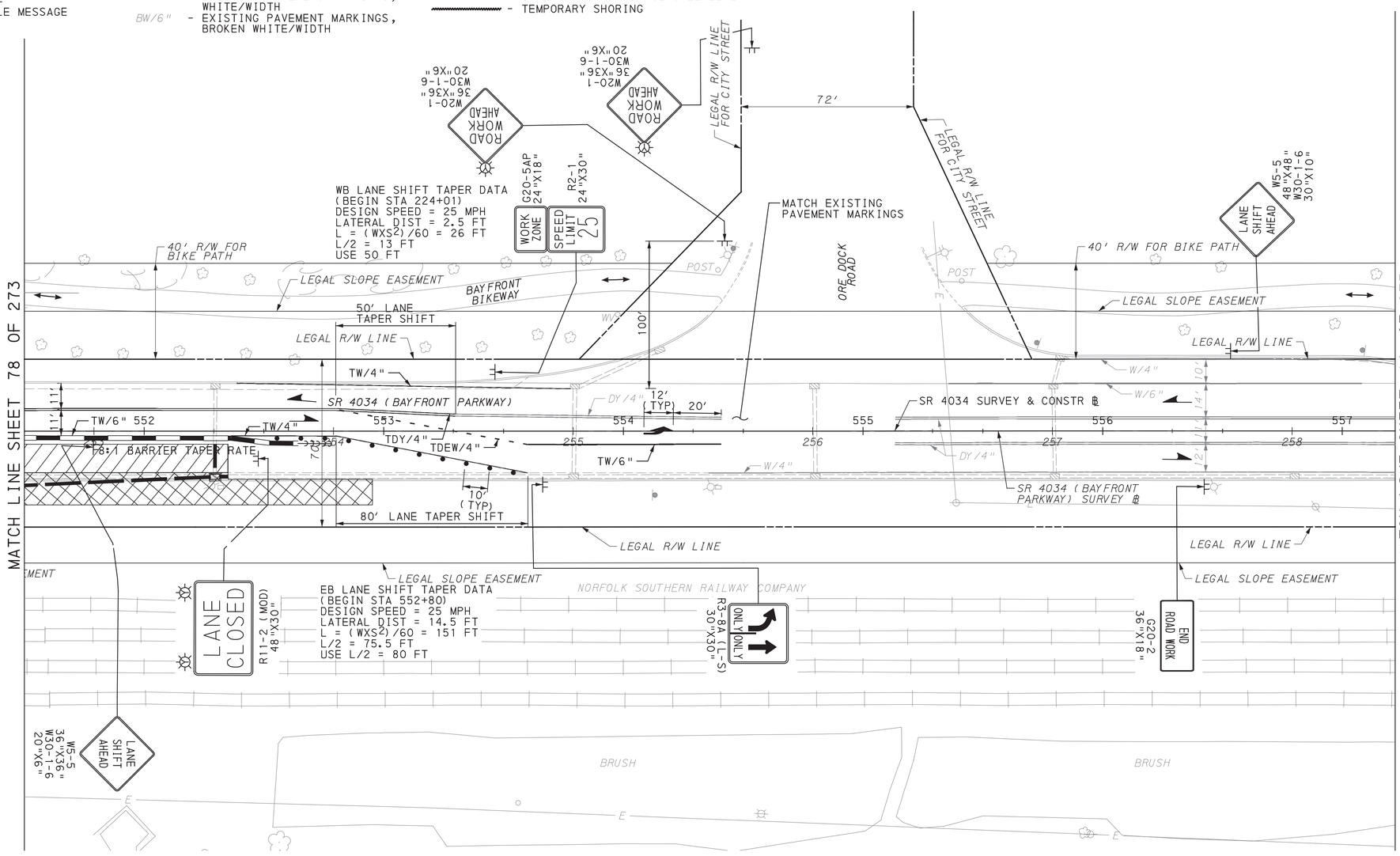
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg2A_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	79 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

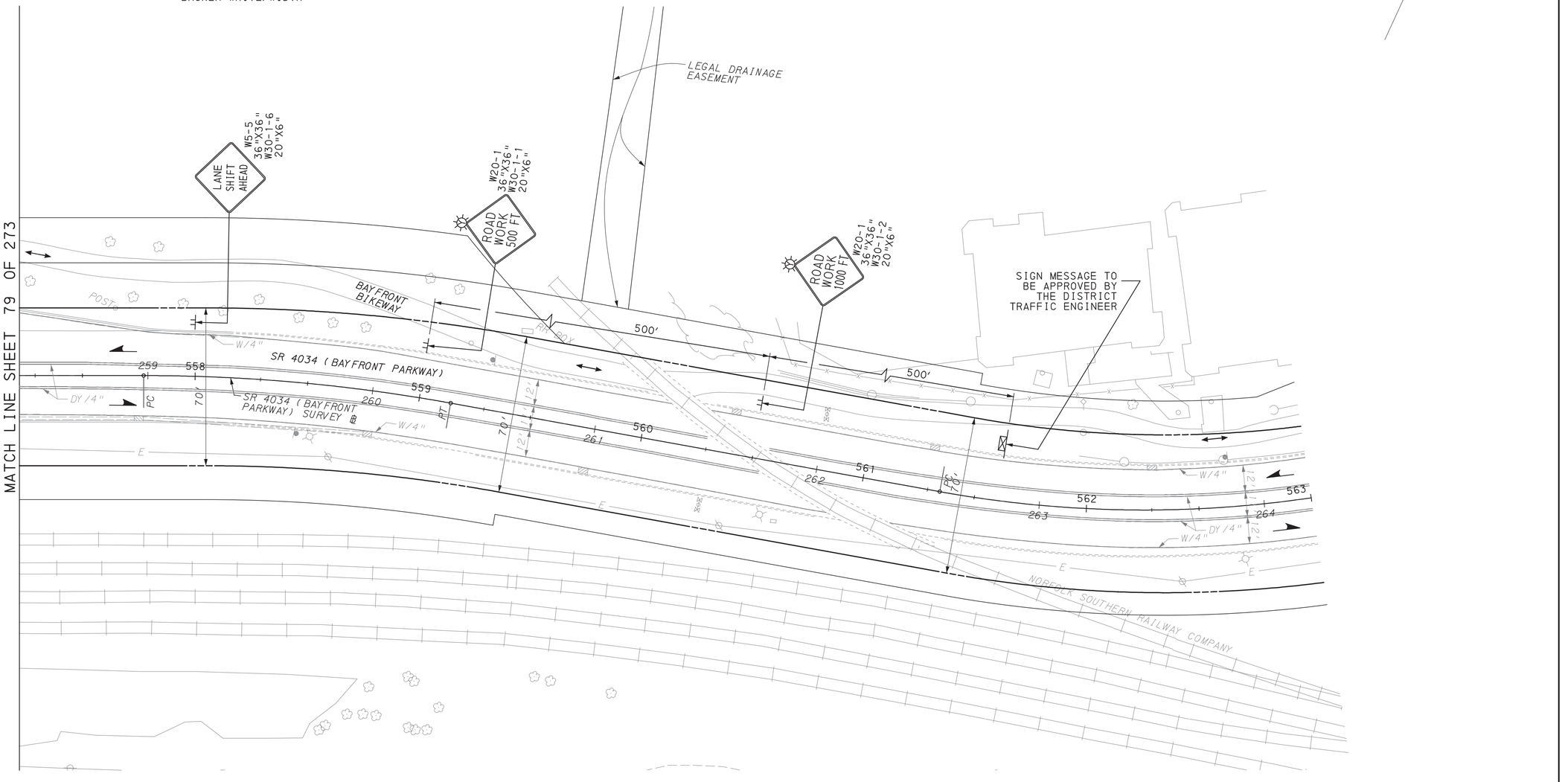
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\Tcpisstg2A_12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	80 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg2A_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	81 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg2A_14.dgn

MATCH LINE SHEET 71 OF 273

TO INTERSTATE 79 M4-5-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO WEST INTERSTATE 90 M4-5-1 24"X12" M3-4-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO EAST INTERSTATE 90 M4-5-1 24"X12" M3-2-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

M4-9A 30"X24" DETOUR

CONTRACTOR TO MAINTAIN ACCESS DURING NON-WORKING HOURS BY PLACING COMPACTED AND SUITABLE BACKFILL.

DURING WORKING HOURS, PERFORM WORK UTILIZING PENNDOT PUBLICATION 213, PATAS 109-A AND 109-G.

PROTECT DROP OFFS ADJACENT TO DRIVEWAYS AS PER PENNDOT PUBLICATION 408, SECTION 901.3J

END DETOUR M4-8A 24"X18"

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

(TW/4") (TDY/4")

(TW/6") PRIVATE DRIVEWAY

TEMPORARY CONSTRUCTION EASEMENT

EXISTING SIGN

STOP

PARKING GARAGE EXIT DRIVEWAY

PARKING GARAGE ENTRANCE DRIVEWAY

DETOUR M4-9A 30"X24"

SB LANE SHIFT TAPER DATA
(BEGIN STA 6+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 13 FT
L = (WXS²)/60 = 135 FT
L/2 = 68 FT
USE L/2 = 70 FT

W5-5 36"X36" W30-1-6 20"X6" LANE SHIFT AHEAD

W20-1 36"X36" W30-1-6 20"X6" ROAD WORK AHEAD

R7-302(L) 12"X18"

R7-302 12"X18"

MATCH EXISTING PAVEMENT MARKINGS

70' LANE TAPER SHIFT

48" RCP

HDPE577.86

SASSAFRAS ST EXTENSION SURVEY ℄

SASSAFRAS STREET EXT

SASSAFRAS STREET EXT SURVEY ℄

(TDY/4") (TW/8") (TW/4") 10' (TYP)

8:1 BARRIER TAPER

15' 85' LANE SHIFT TAPER

(TW/4")

PARKING LOT EXIT

LEGAL R/W LINE FOR CITY STREET

TEMPORARY CONSTRUCTION EASEMENT

TEMPORARY BAYFRONT BIKEWAY 10'

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

TEMPORARY CONSTRUCTION EASEMENT

SIDEWALK CLOSED R9-9 24"X12"

DETOUR M4-9C 30"X24"

DETOUR M4-9B 30"X24"

STOP R1-1 30"X30"

DETOUR M4-9A 30"X24"

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS

FRONT STREET

SIDEWALK

LANE CLOSED R11-2 (MOD) 48"X30"

M4-9A 30"X24" DETOUR

DETOUR M4-9A 30"X24"

SIDEWALK CLOSED R9-9 24"X12"

M4-9A 30"X24" DETOUR

DETOUR M4-9A 30"X24"

STOP EXISTING SIGN

NB LANE SHIFT TAPER DATA
(BEGIN STA 6+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 16 FT
L = (WXS²)/60 = 167 FT
L/2 = 83.5 FT
USE L/2 = 85 FT

G20-2 36"X18" END ROAD WORK

PARKING

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

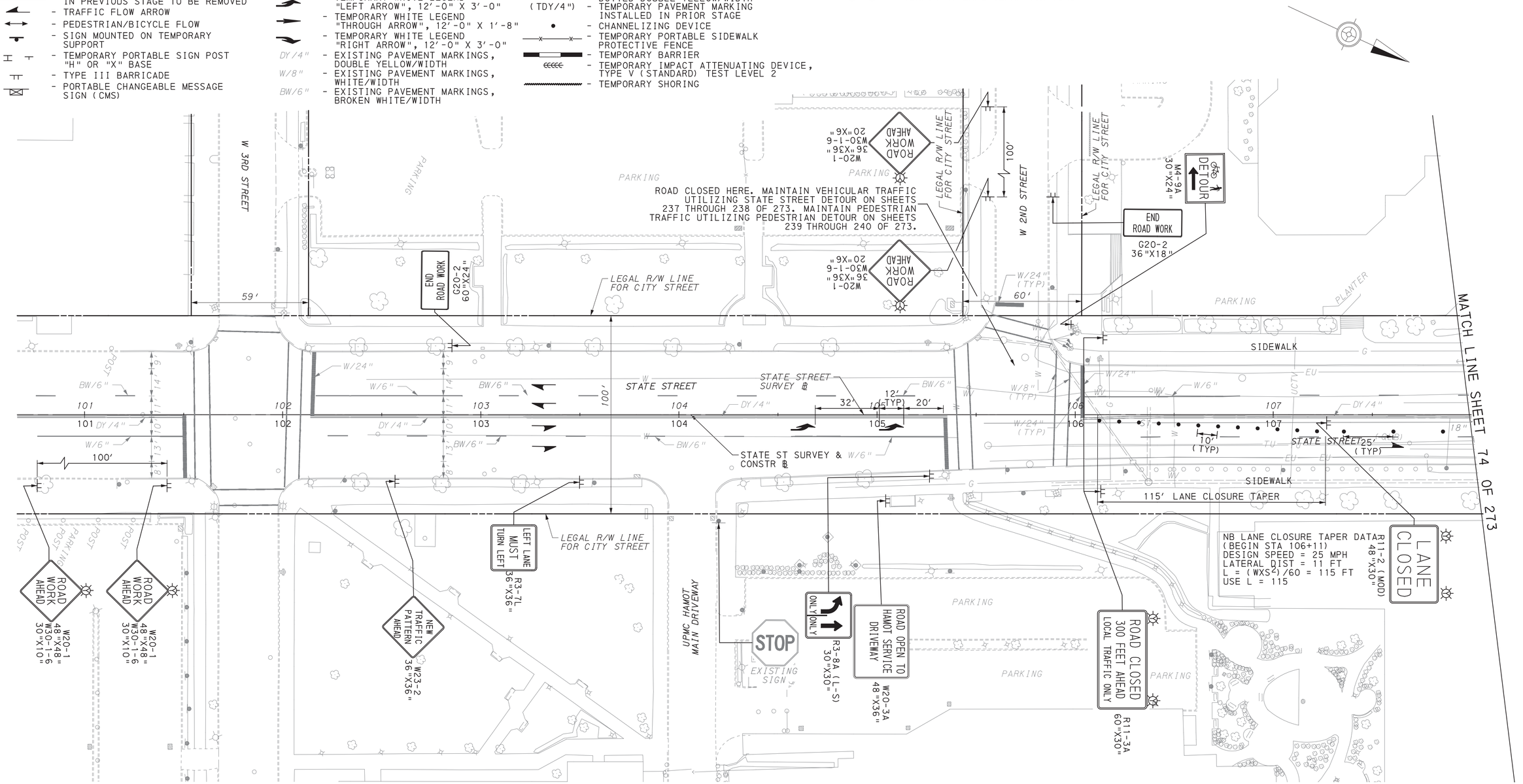
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	82 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12′-0" X 3′-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12′-0" X 1′-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12′-0" X 3′-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

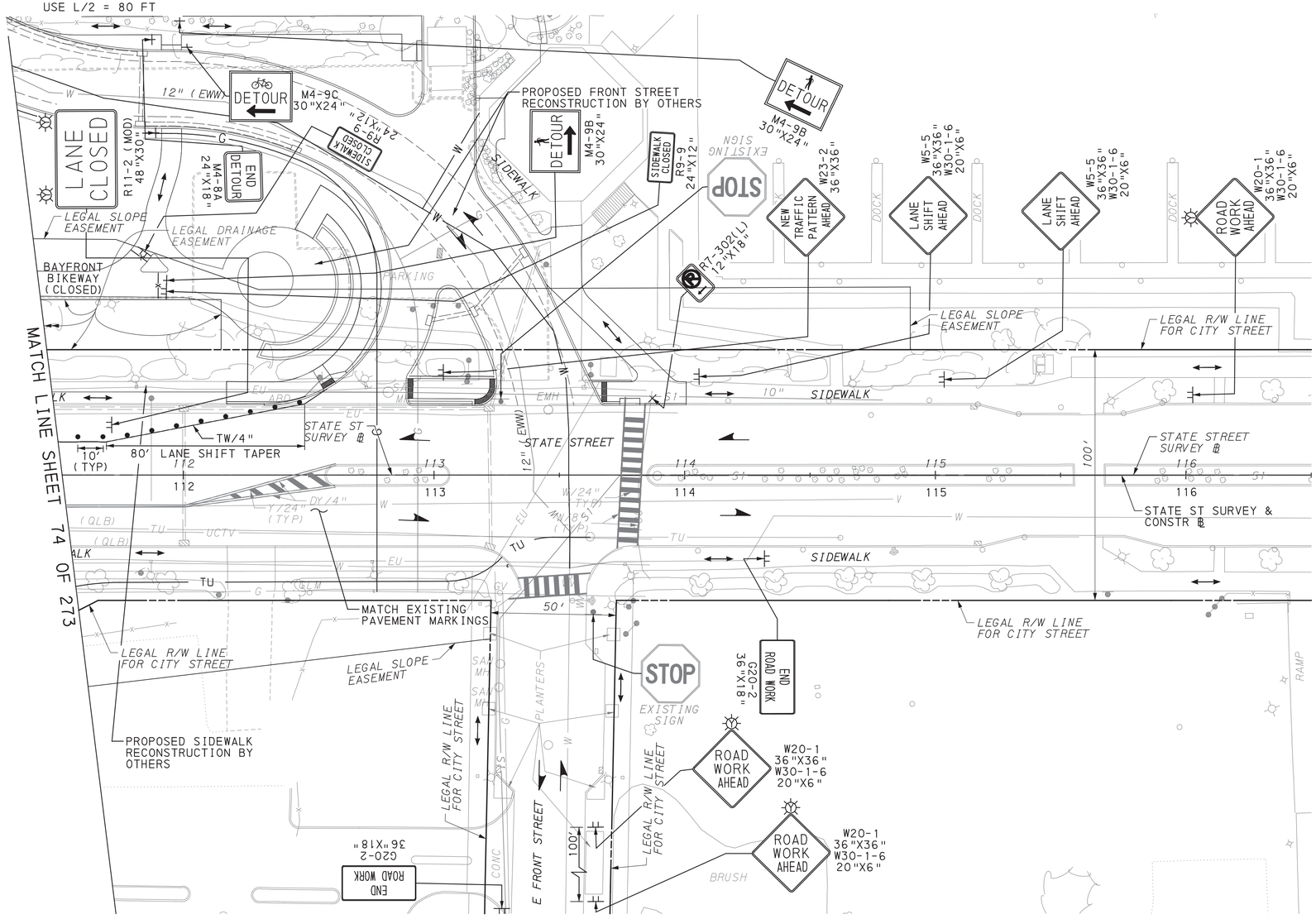
PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpr\sheets\TCPstg2A_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	83 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LANE SHIFT TAPER DATA
(BEGIN STA 111+69)
DESIGN SPEED = 25 MPH
LATERAL DIST = 15 FT
$L = (WXS^2)/60 = 156$ FT
L/2 = 78 FT
USE L/2 = 80 FT



LEGEND

- - WORK AREA
- - TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- - TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- - TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- - TRAFFIC FLOW ARROW
- - PEDESTRIAN/BICYCLE FLOW
- - SIGN MOUNTED ON TEMPORARY SUPPORT
- - TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- - TYPE III BARRICADE
- - PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- - TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- - TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- - TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- - TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- - TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- - CHANNELIZING DEVICE
- - TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- - TEMPORARY BARRIER
- - TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- - PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- - TEMPORARY SHORING
- - PEDESTRIAN DETECTABLE BARRICADES
- - TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- - TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

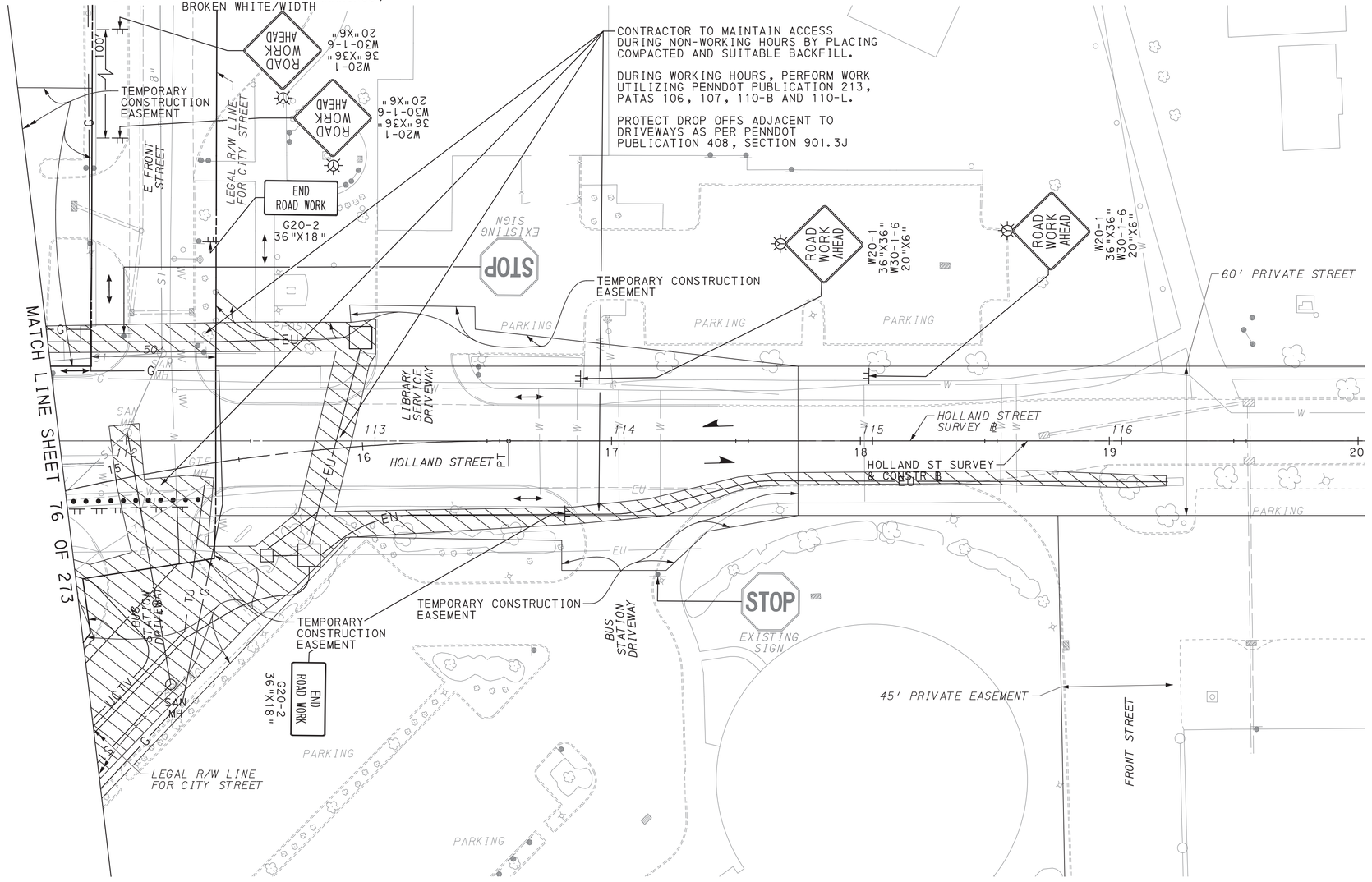
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPstg2A_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	84 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg2A_17.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	85 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

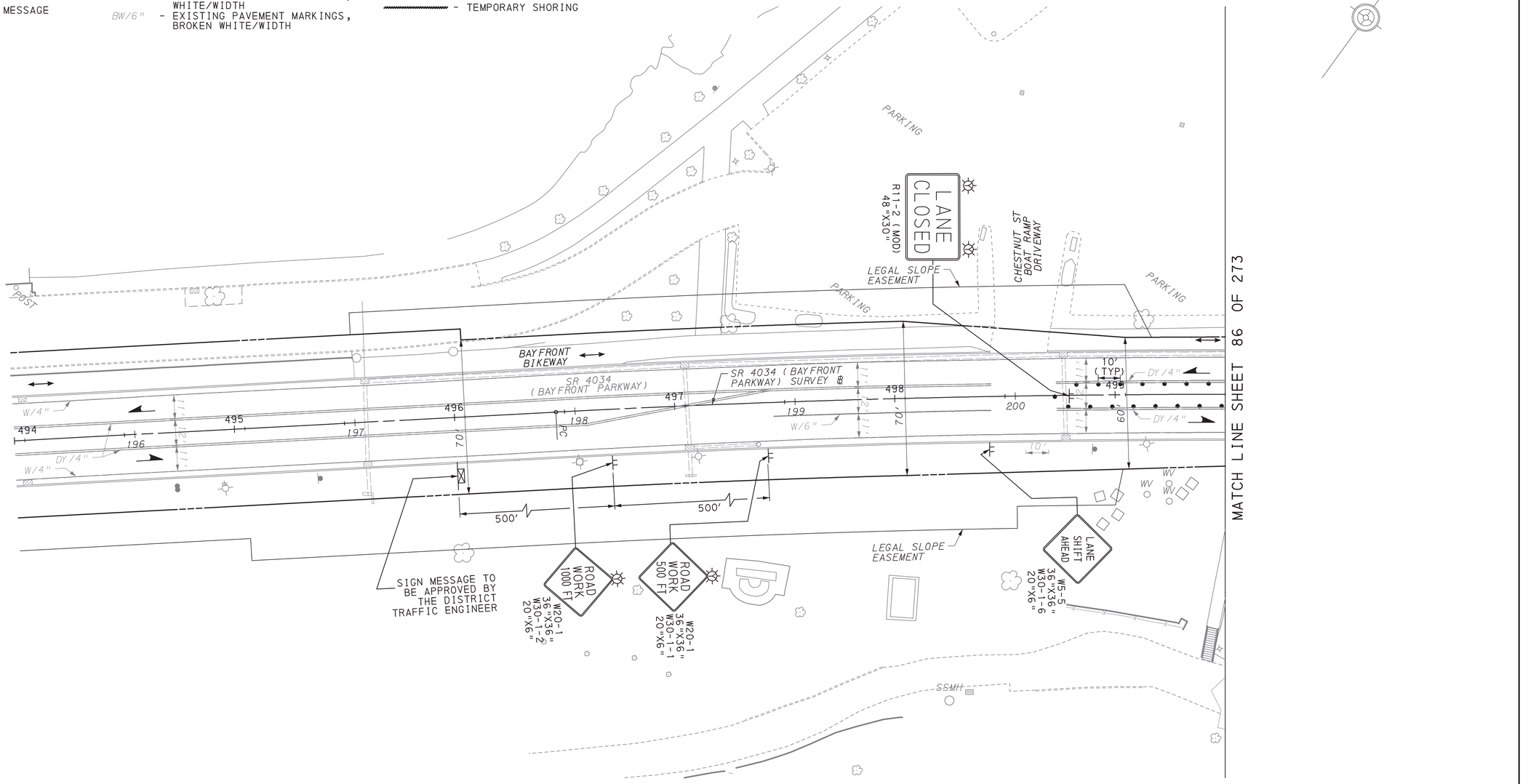
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

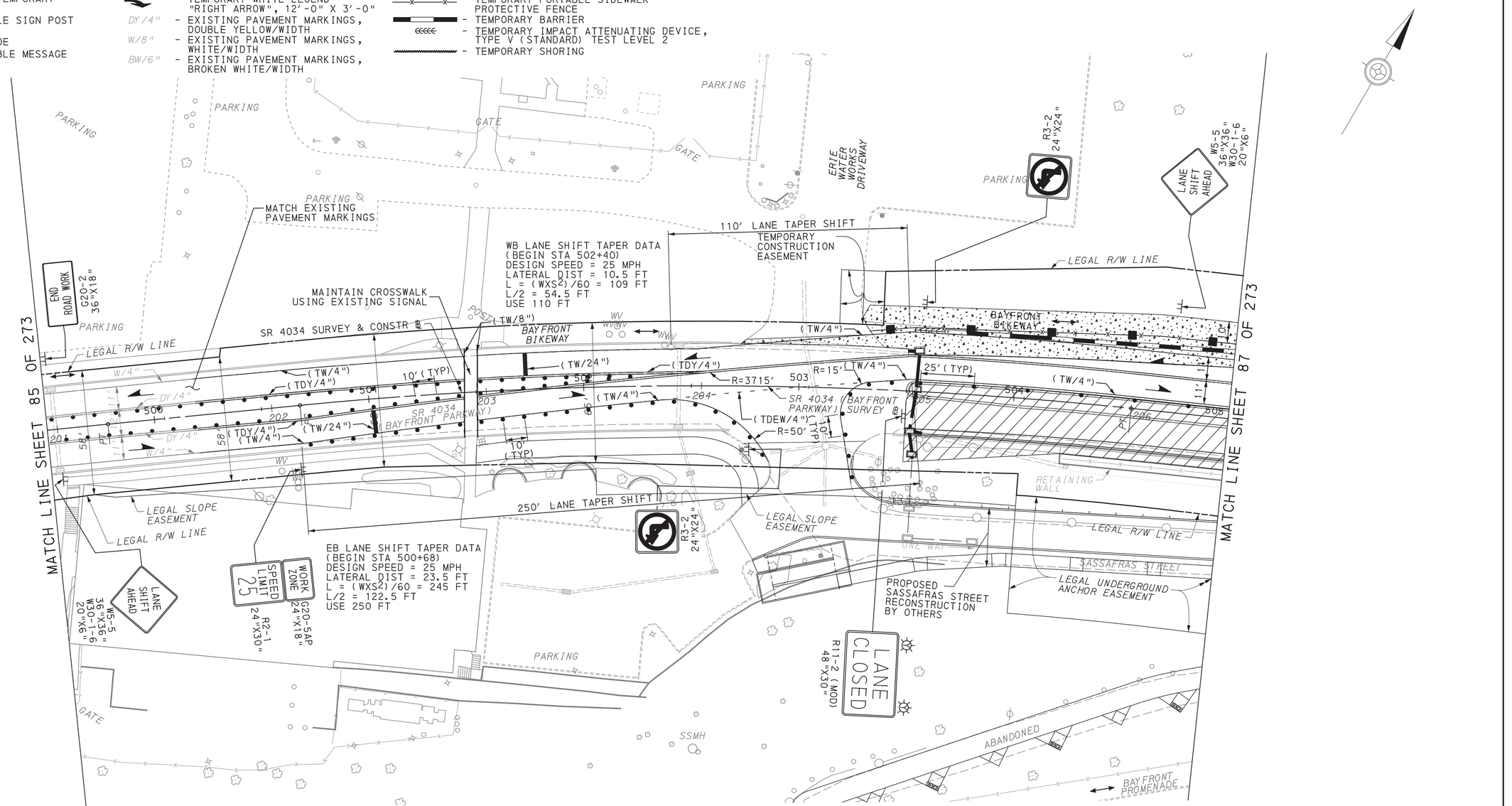
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2B_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	86 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

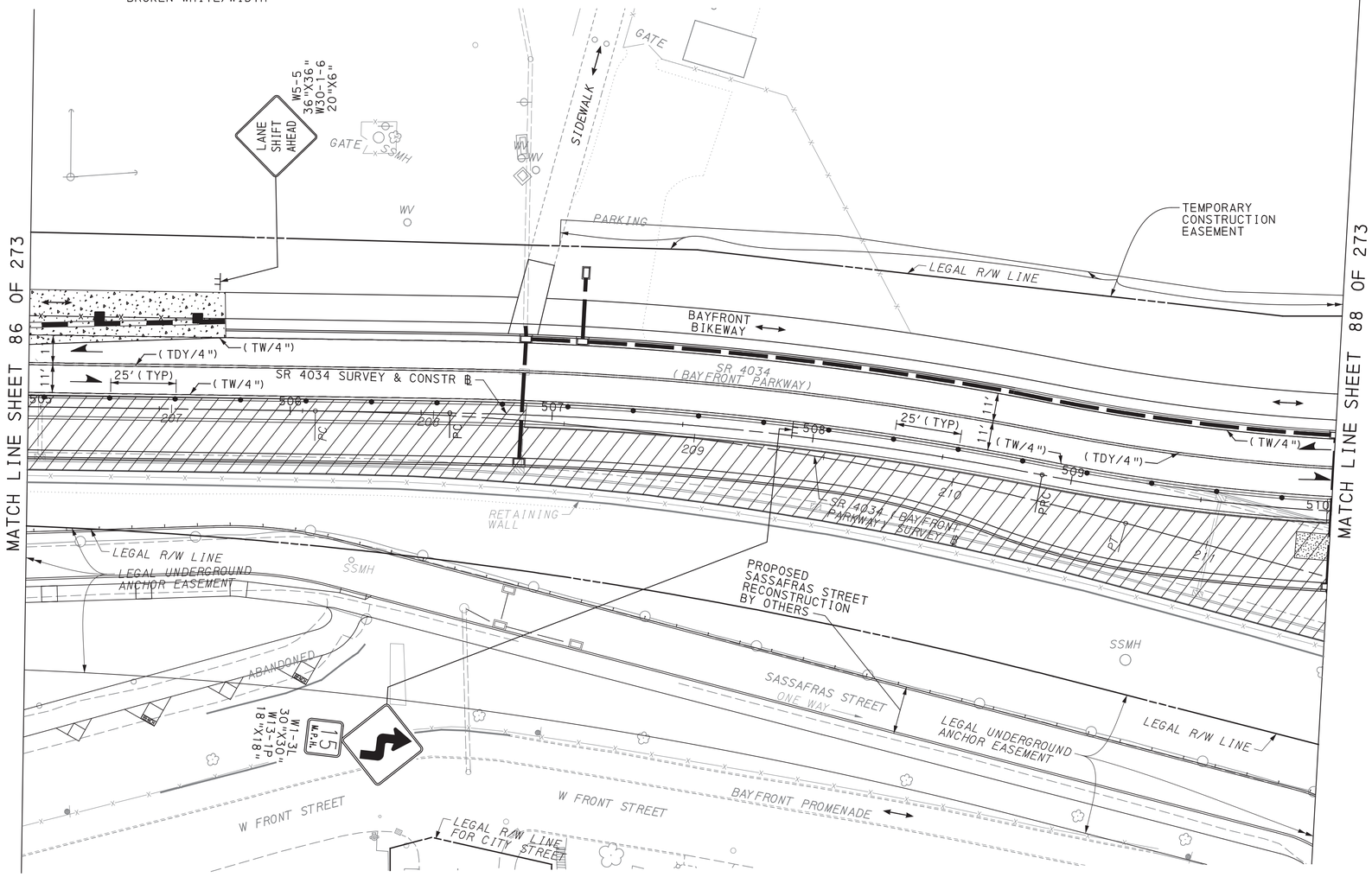
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg2B_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	87 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

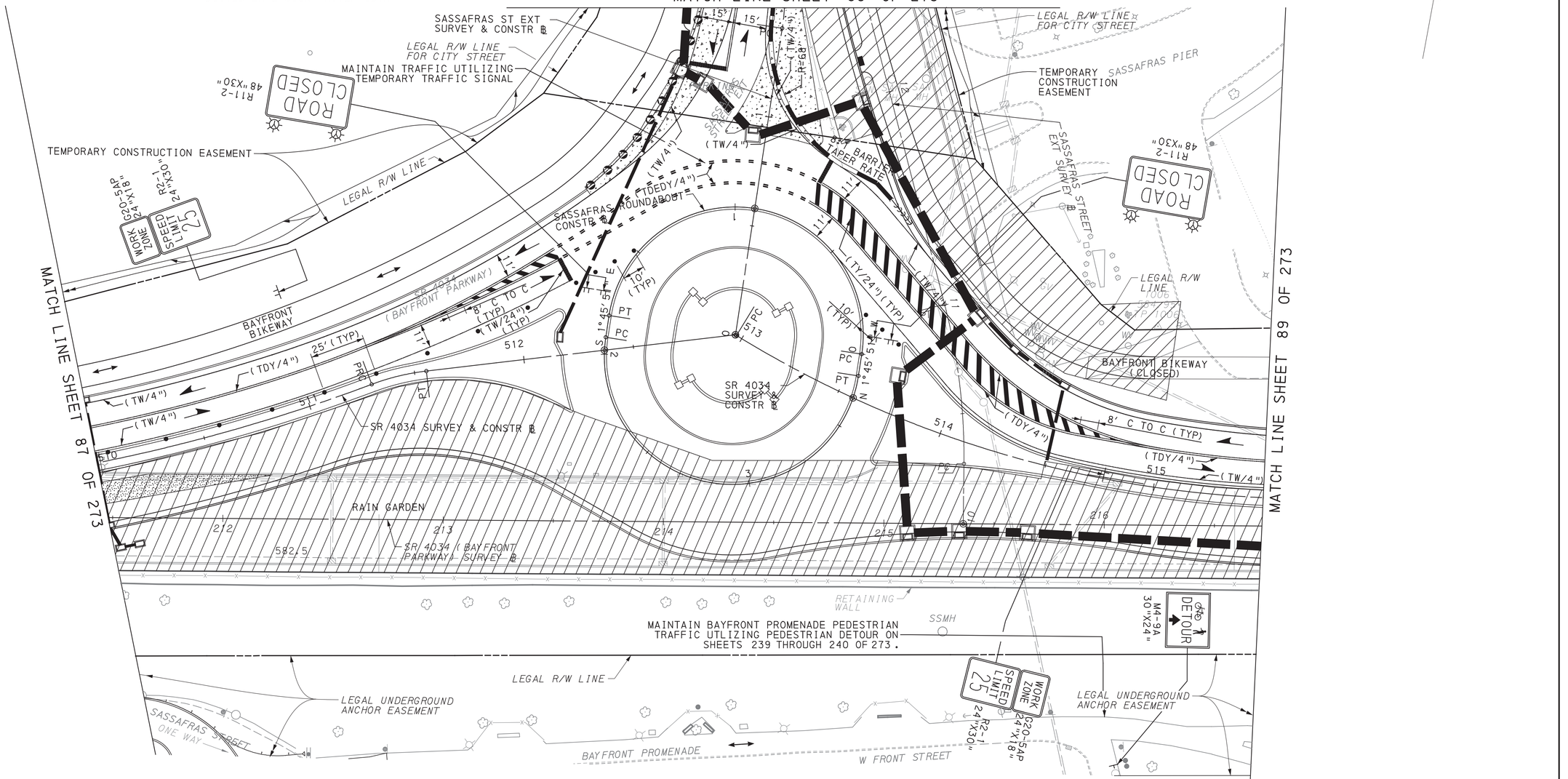
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP_Stg2B_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	88 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

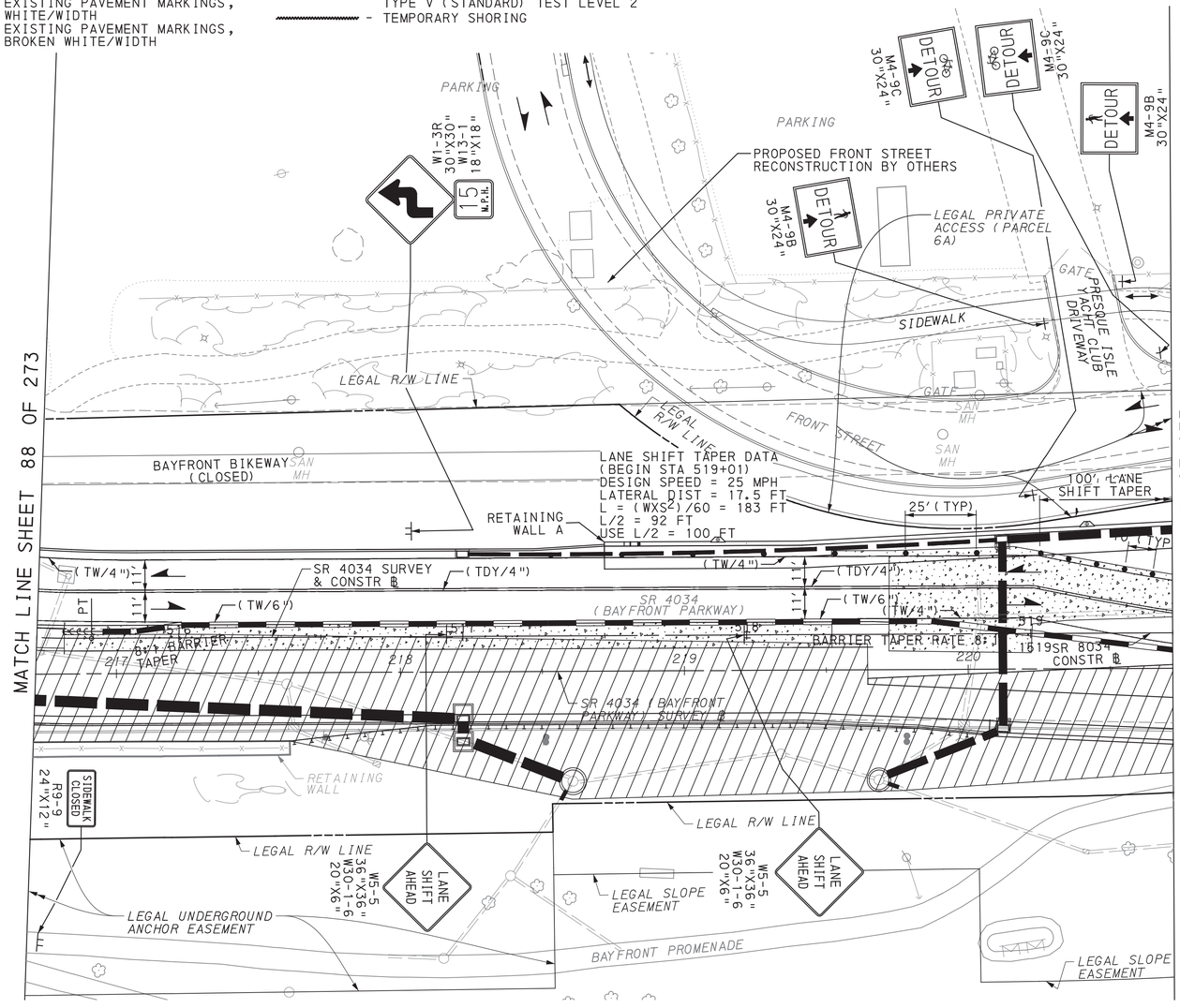
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2B_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	89 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

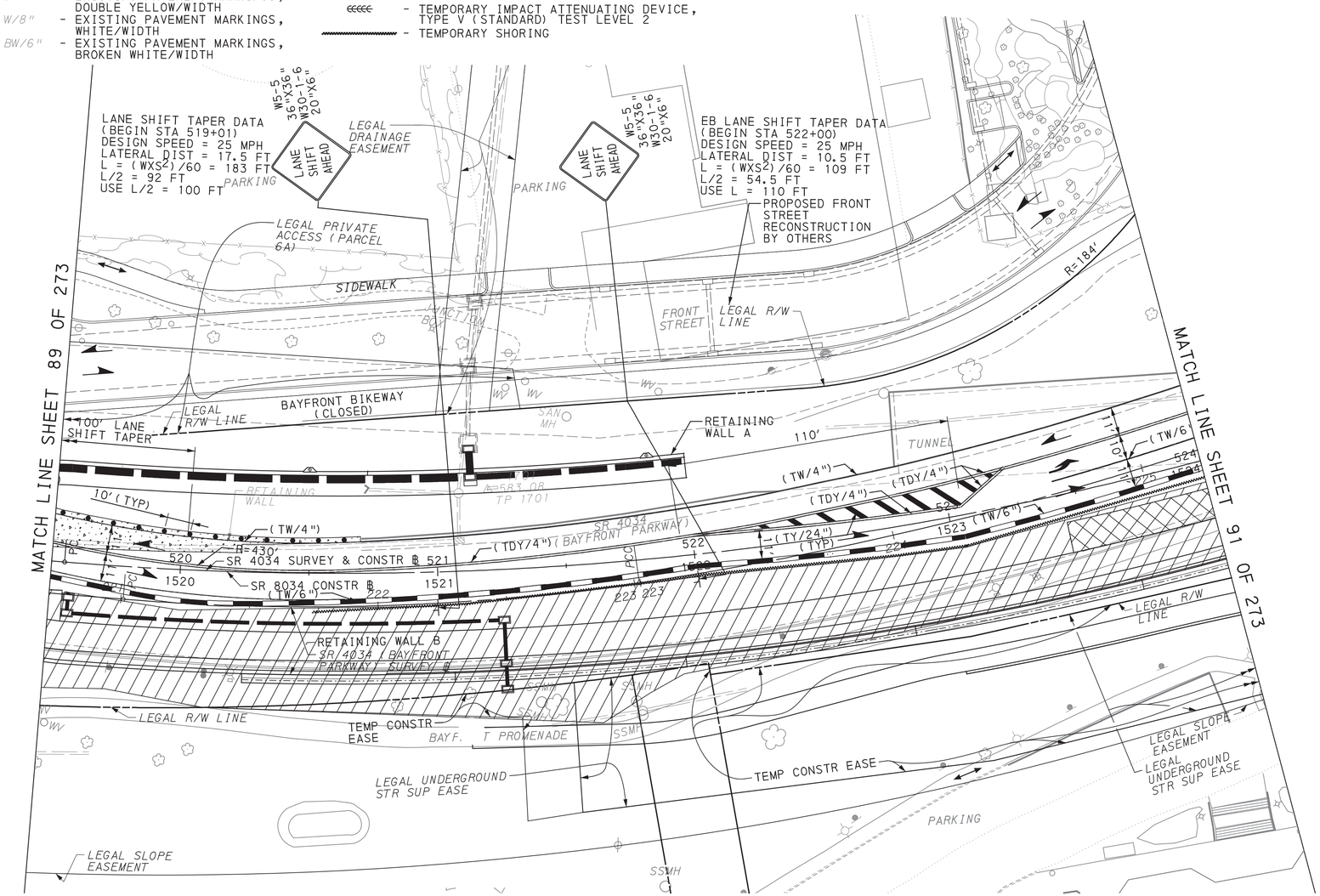
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg2B_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	90 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

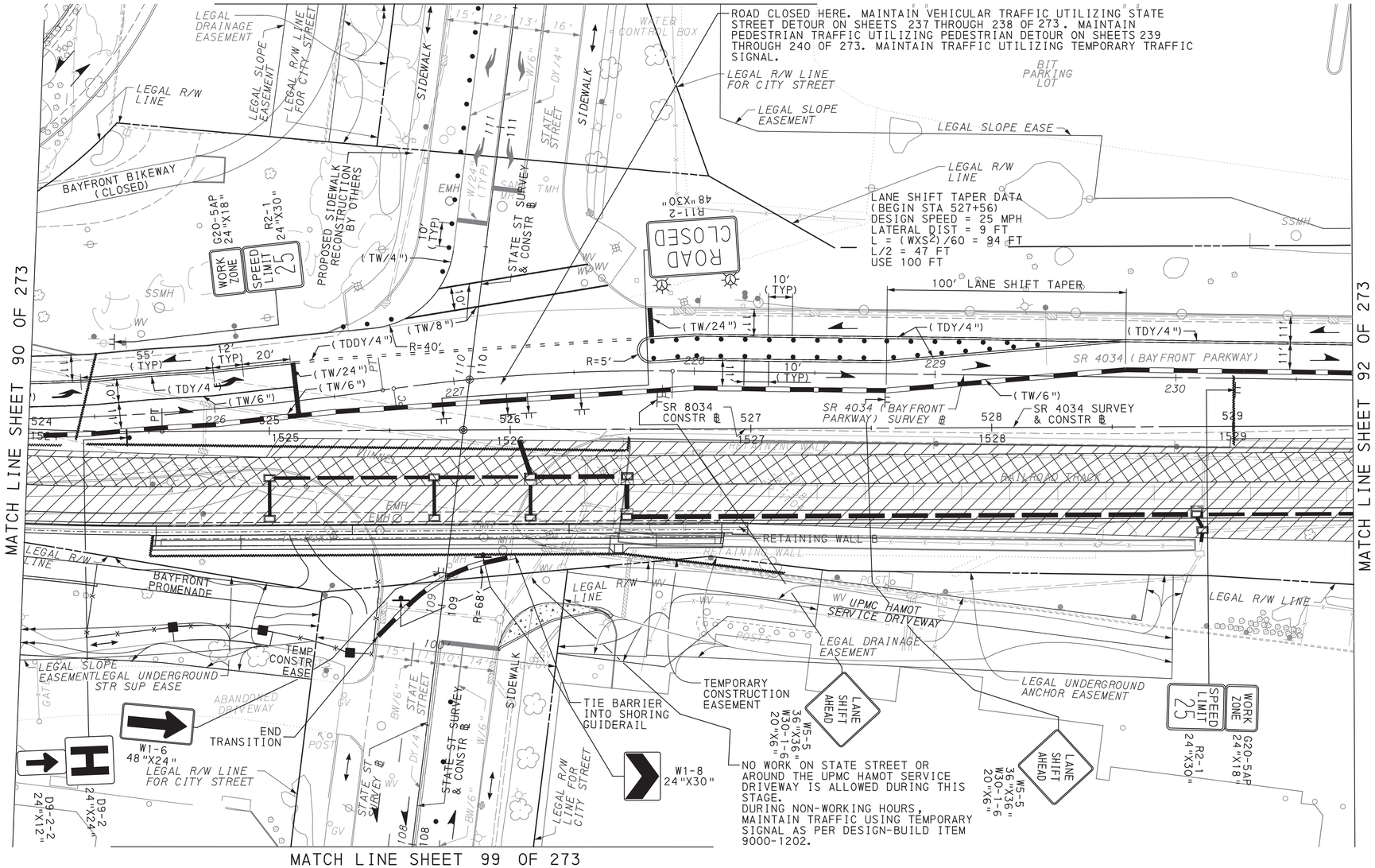

LANE SHIFT TAPER DATA
(BEGIN STA 519+01)
DESIGN SPEED = 25 MPH
LATERAL DIST = 17.5 FT
L = (WXS²)/60 = 183 FT
L/2 = 92 FT
USE L/2 = 100 FT
W5-5 36"X36" W30-1-6 20"X6"
LANE SHIFT AHEAD
LEGAL DRAINAGE EASEMENT
PARKING
LEGAL PRIVATE ACCESS (PARCEL 6A)
SIDEWALK
JUNCTION BOX
BAYFRONT BIKEWAY (CLOSED)
100' LANE SHIFT TAPER
LEGAL R/W LINE
SAN MH
RETAINING WALL A
110'
EB LANE SHIFT TAPER DATA
(BEGIN STA 522+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 10.5 FT
L = (WXS²)/60 = 109 FT
L/2 = 54.5 FT
USE L = 110 FT
PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS
FRONT STREET
R=184'
TUNNEL
MATCH LINE SHEET 89 OF 273
MATCH LINE SHEET 91 OF 273
10'(TYP)
(TW/4")
R=430'
SR 4034 SURVEY & CONSTR ℄ 521
SR 8034 CONSTR ℄
(TDY/4")
(BAYFRONT PARKWAY)
SR 4034
(TY/24") (TYP)
(TW/6")
RETAINING WALL B
SR 4034 (BAYFRONT PARKWAY) SURVEY ℄
TEMP CONSTR EASE
BAYF. T PROMENADE
LEGAL UNDERGROUND STR SUP EASE
LEGAL SLOPE EASEMENT
SSMH
SSMH
SSMH

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	91 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

DES: SMR | CKD: DJG | DWG: SMR | CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg2B_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	92 OF 273
CITY OF ERIE				

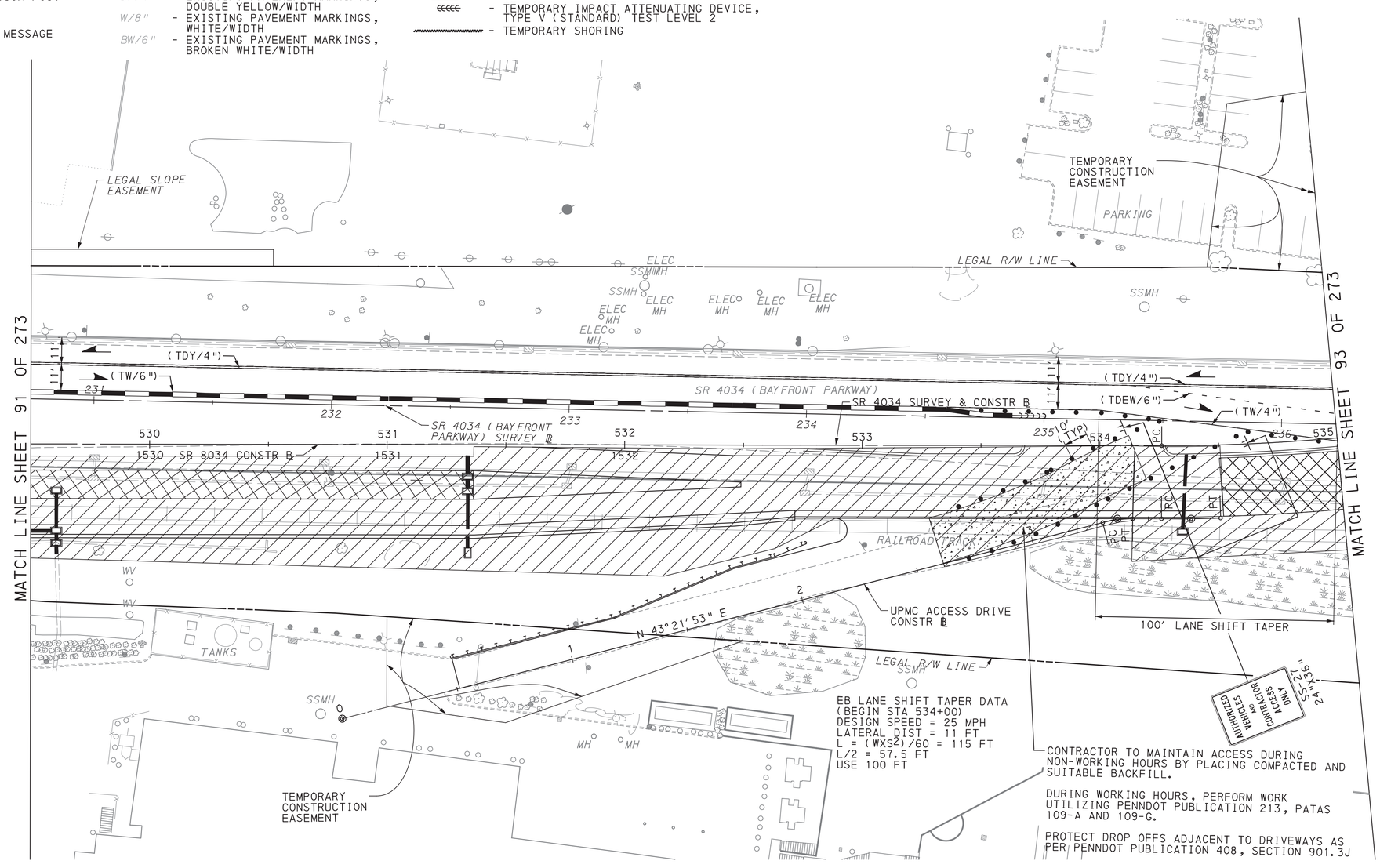
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg2B_08.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



EB LANE SHIFT TAPER DATA
(BEGIN STA 534+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 11 FT
L = (WXS²)/60 = 115 FT
L/2 = 57.5 FT
USE 100 FT

CONTRACTOR TO MAINTAIN ACCESS DURING NON-WORKING HOURS BY PLACING COMPACTED AND SUITABLE BACKFILL.

DURING WORKING HOURS, PERFORM WORK UTILIZING PENNDOT PUBLICATION 213, PATAS 109-A AND 109-G.

PROTECT DROP OFFS ADJACENT TO DRIVEWAYS AS PER PENNDOT PUBLICATION 408, SECTION 901.3J

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

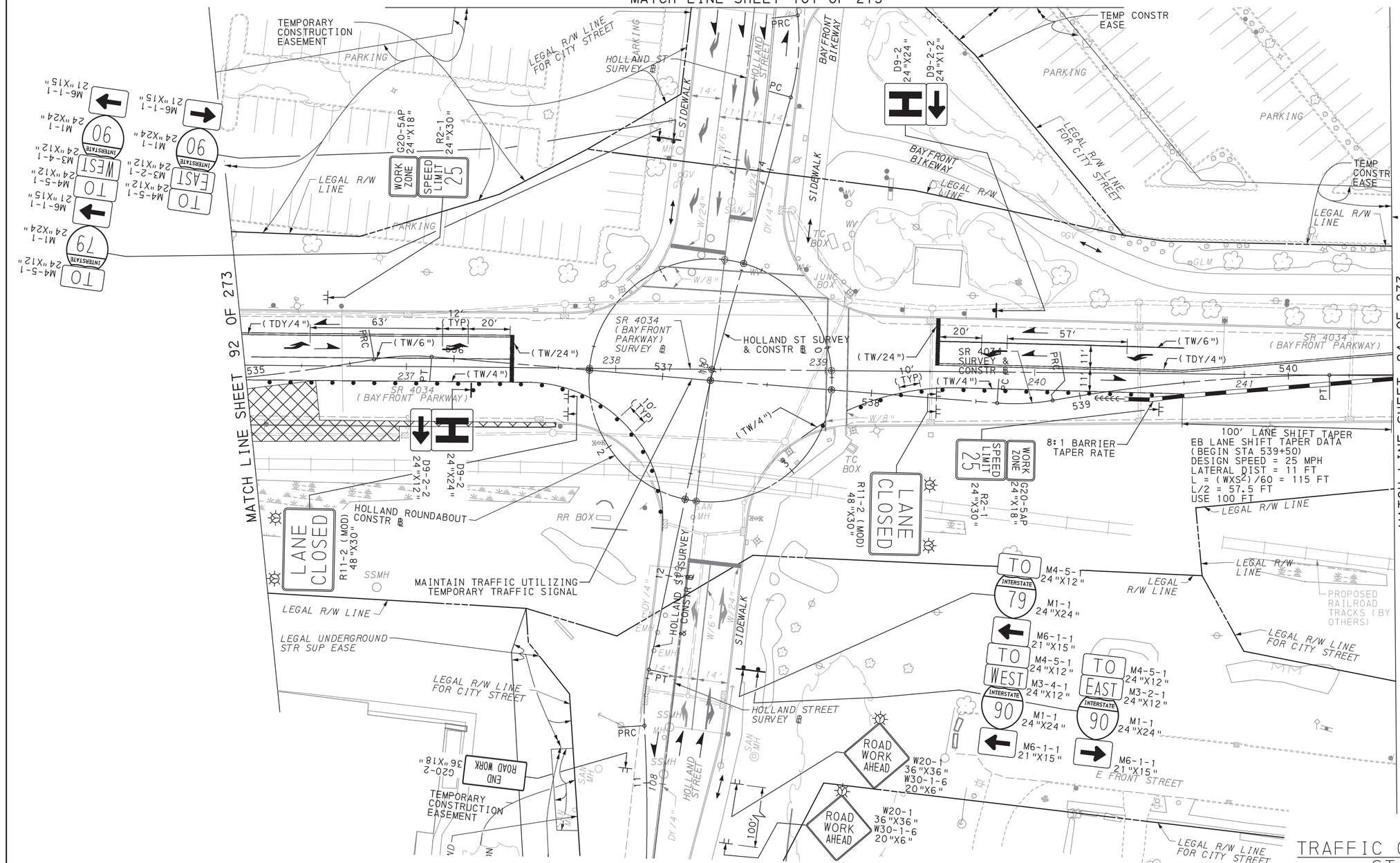
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	93 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

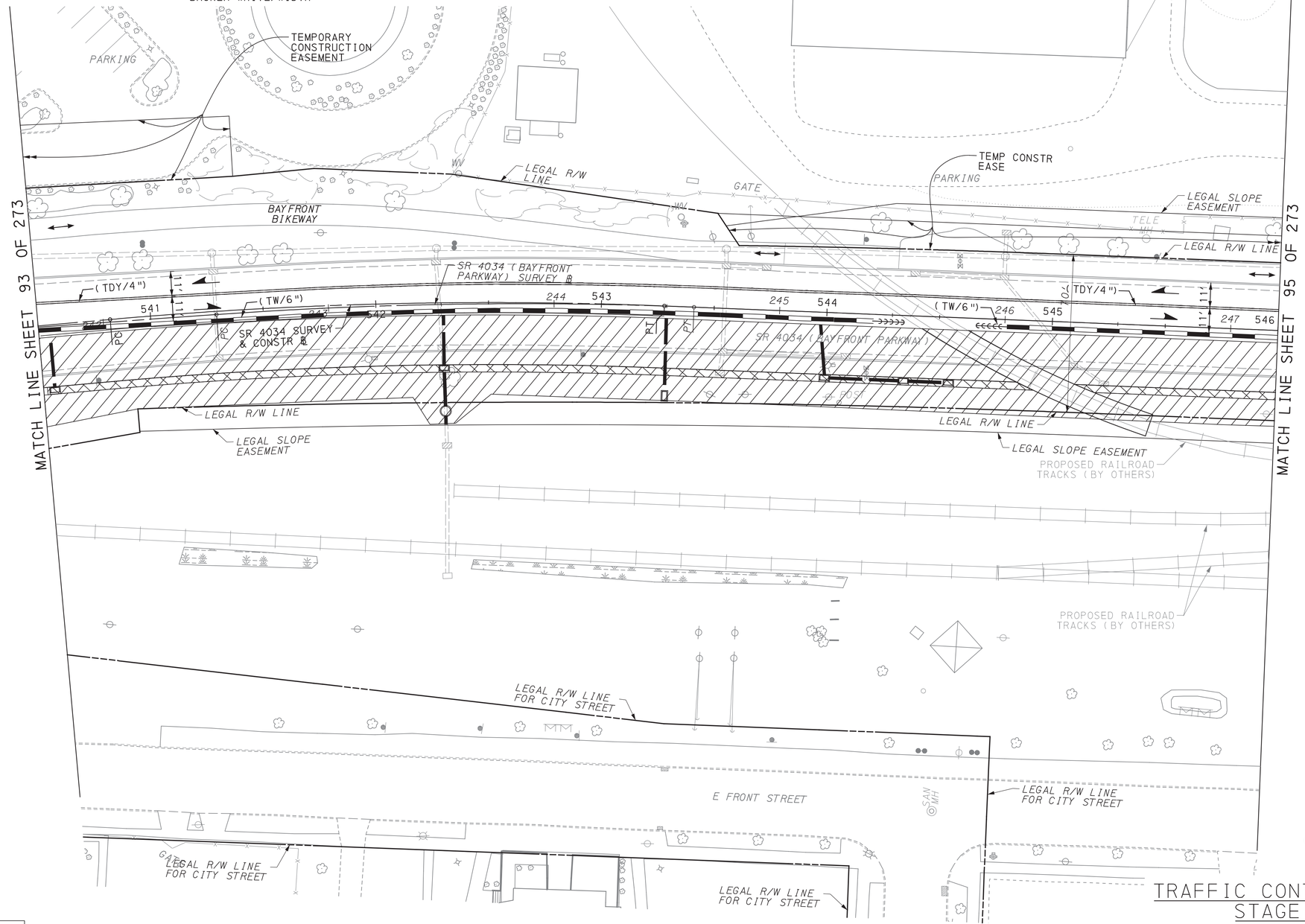
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2B_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	94 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

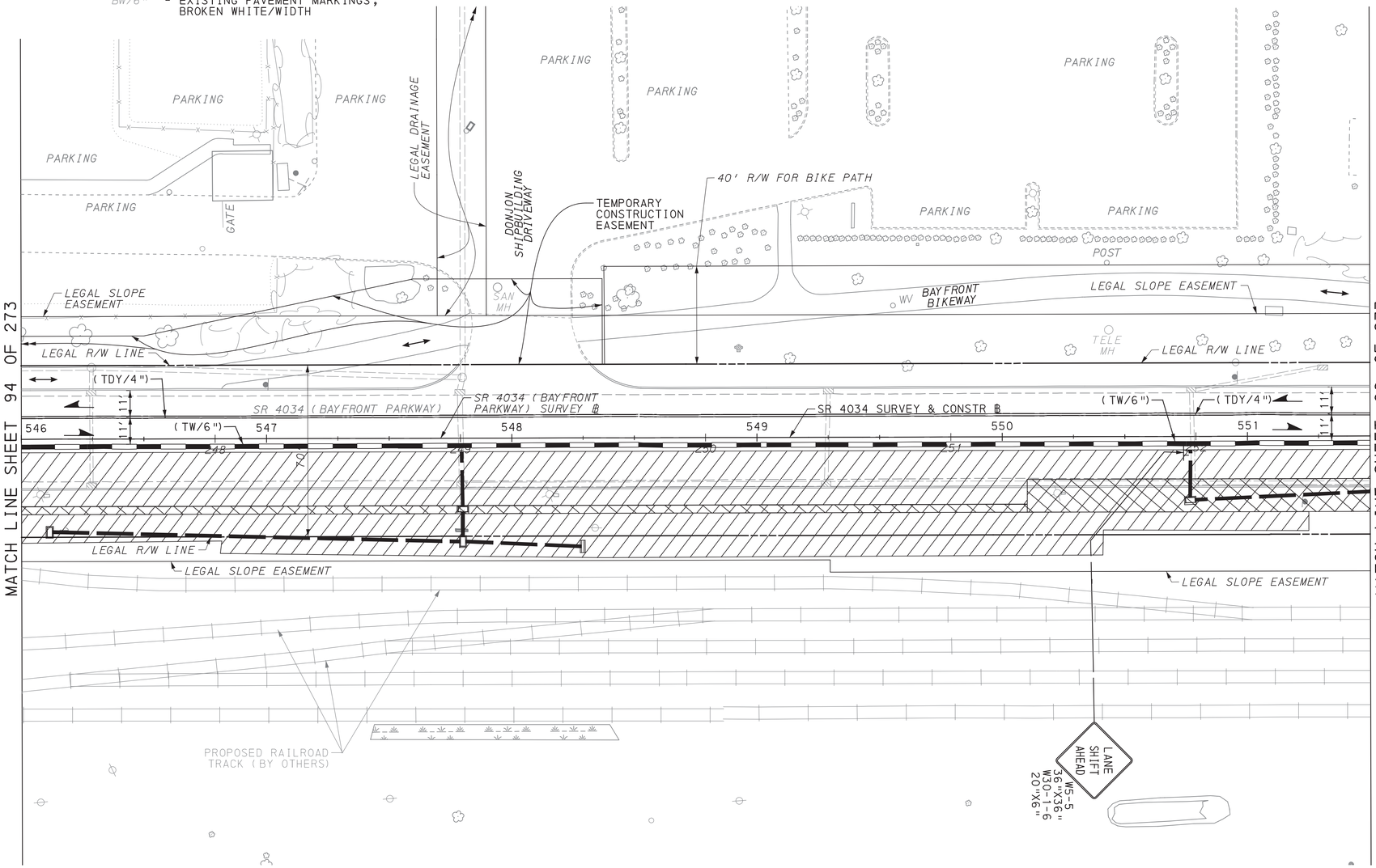
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1stg2B_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	95 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

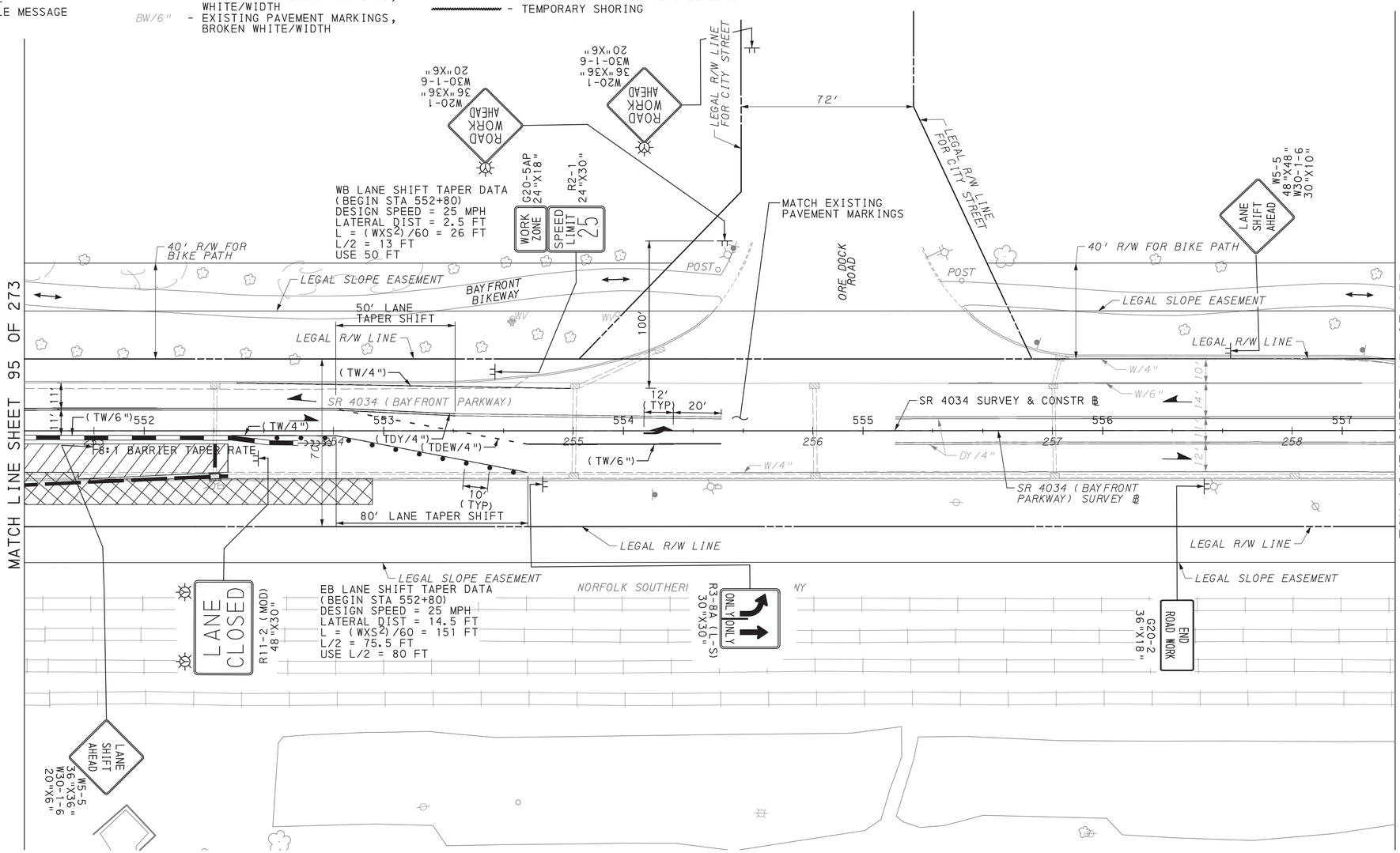
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg2B_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	96 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

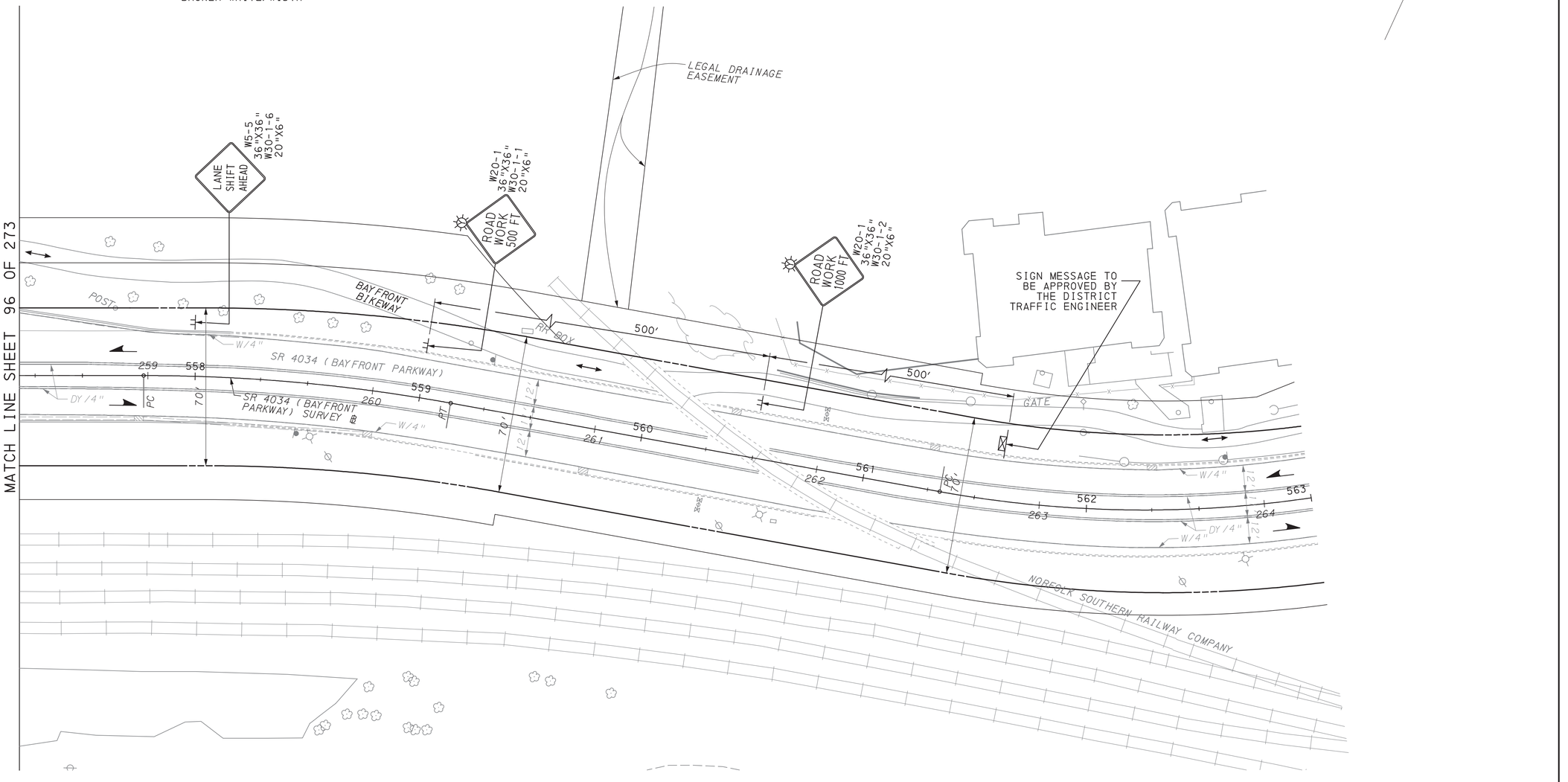
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg2B_12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	97 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg2B_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	98 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg2B_14.dgn

MATCH LINE SHEET 88 OF 273

TO INTERSTATE 79 M4-5-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO EAST INTERSTATE 90 M4-5-1 24"X12" M3-2-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO WEST INTERSTATE 90 M4-5-1 24"X12" M3-4-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

DETOUR M4-9A 30"X24"

END DETOUR M4-8A 24"X18"

CONTRACTOR TO MAINTAIN ACCESS DURING NON-WORKING HOURS BY PLACING COMPACTED AND SUITABLE BACKFILL.

DURING WORKING HOURS, PERFORM WORK UTILIZING PENNDOT PUBLICATION 213, PATAS 109-A AND 109-G.

PROTECT DROP OFFS ADJACENT TO DRIVEWAYS AS PER PENNDOT PUBLICATION 408, SECTION 901.3J

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

(TW/4")

(TDY/4")

(TW/4")

11'

PRC

PT

PCI

5' (TYP)

POST

SASSAFRAS STREET EXT

(TW/4")

(TW/6") PRIVATE DRIVEWAY

GATE EXISTING SIGN

STOP

TEMPORARY CONSTRUCTION EASEMENT

PARKING GARAGE EXIT DRIVEWAY

PARKING GARAGE ENTRANCE DRIVEWAY

EU

DETOUR M4-9A 30"X24"

LANE SHIFT TAPER DATA
(BEGIN STA 6+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 13 FT
L = (WXS²)/60 = 135 FT
L/2 = 68 FT
USE L/2 = 70 FT

R7-302(L) 12"X18"

R7-302 12"X18"

MATCH EXISTING PAVEMENT MARKINGS

W5-5 36"X36" W30-1-6 20"X6"

LANE SHIFT AHEAD

W20-1 36"X36" W30-1-6 20"X6"

ROAD WORK AHEAD

70' LANE TAPER SHIFT

LEGAL R/W LINE FOR CITY STREET

48" RCP

41' 48" HDPE

SASSAFRAS ST EXTENSION SURVEY ℄

(TDY/4") (TW/8")

(TW/4")

10' (TYP)

8:1 BARRIER TAPER

60'

(TDY/4")

SASSAFRAS STREET EXT SURVEY ℄

15'

(TW/4")

85' LANE SHIFT TAPER

PARKING

PARKING LOT EXIT

LEGAL R/W LINE FOR CITY STREET PARKING

TEMPORARY CONSTRUCTION EASEMENT

PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS

FRONT STREET

SIDEWALK

SIDEWALK CLOSED R9-9 24"X12"

DETOUR M4-9C 30"X24"

TEMPORARY BAYFRONT BIKEWAY

10'

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

TEMPORARY CONSTRUCTION EASEMENT

DETOUR M4-9B 30"X24"

STOP R1-1 30"X30"

DETOUR M4-9A 30"X24"

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

LANE CLOSED R11-2 (MOD) 48"X30"

DETOUR M4-9A 30"X24"

DETOUR M4-9A 30"X24"

DETOUR M4-9A 30"X24"

SIDEWALK CLOSED R9-9 24"X12"

DETOUR M4-9A 30"X24"

LANE SHIFT TAPER DATA
(BEGIN STA 6+00)
DESIGN SPEED = 25 MPH
LATERAL DIST = 16 FT
L = (WXS²)/60 = 167 FT
L/2 = 83.5 FT
USE L/2 = 85 FT

STOP EXISTING SIGN

END ROAD WORK G20-2 36"X18"

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

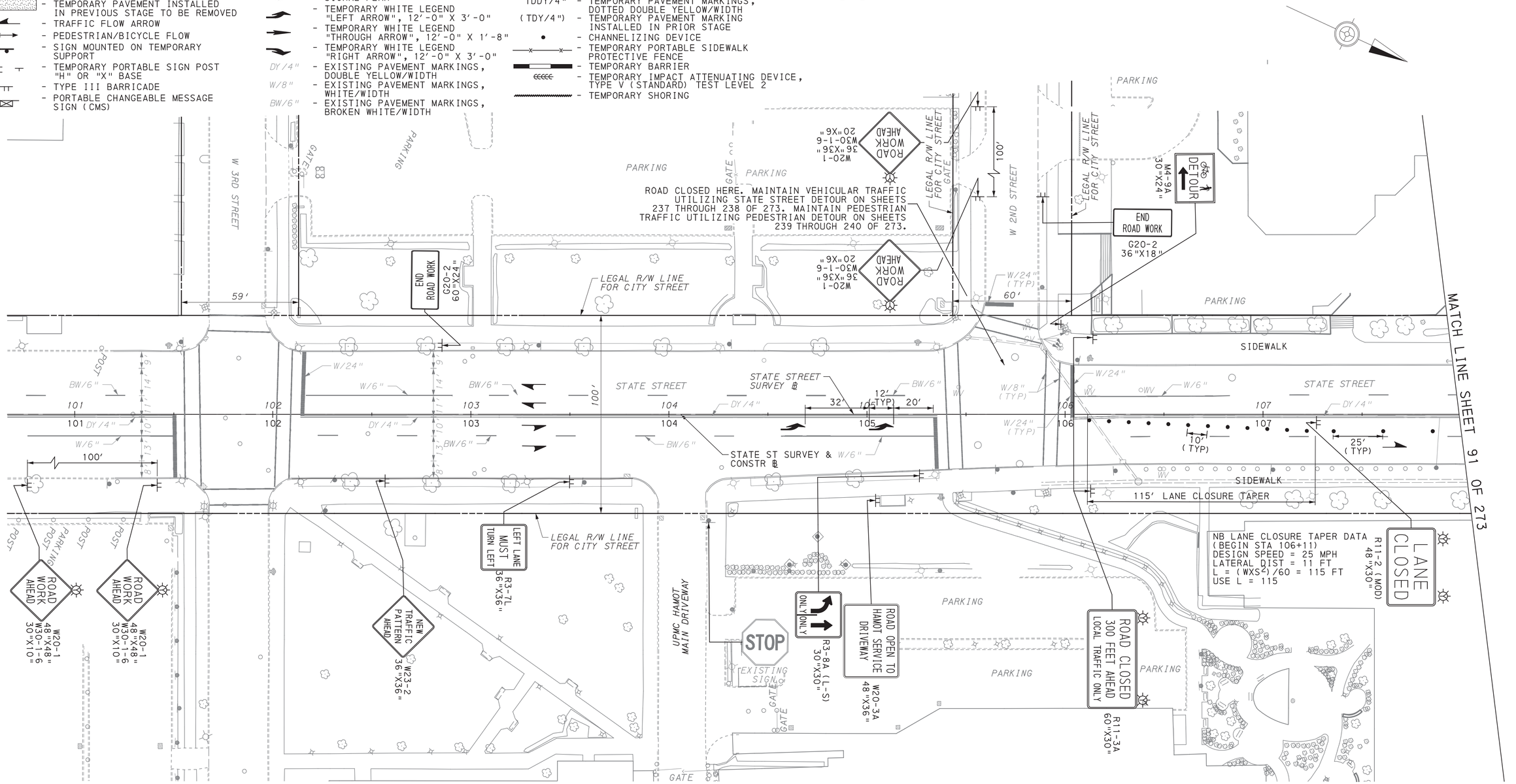
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	99 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12′-0" X 3′-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12′-0" X 1′-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12′-0" X 3′-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

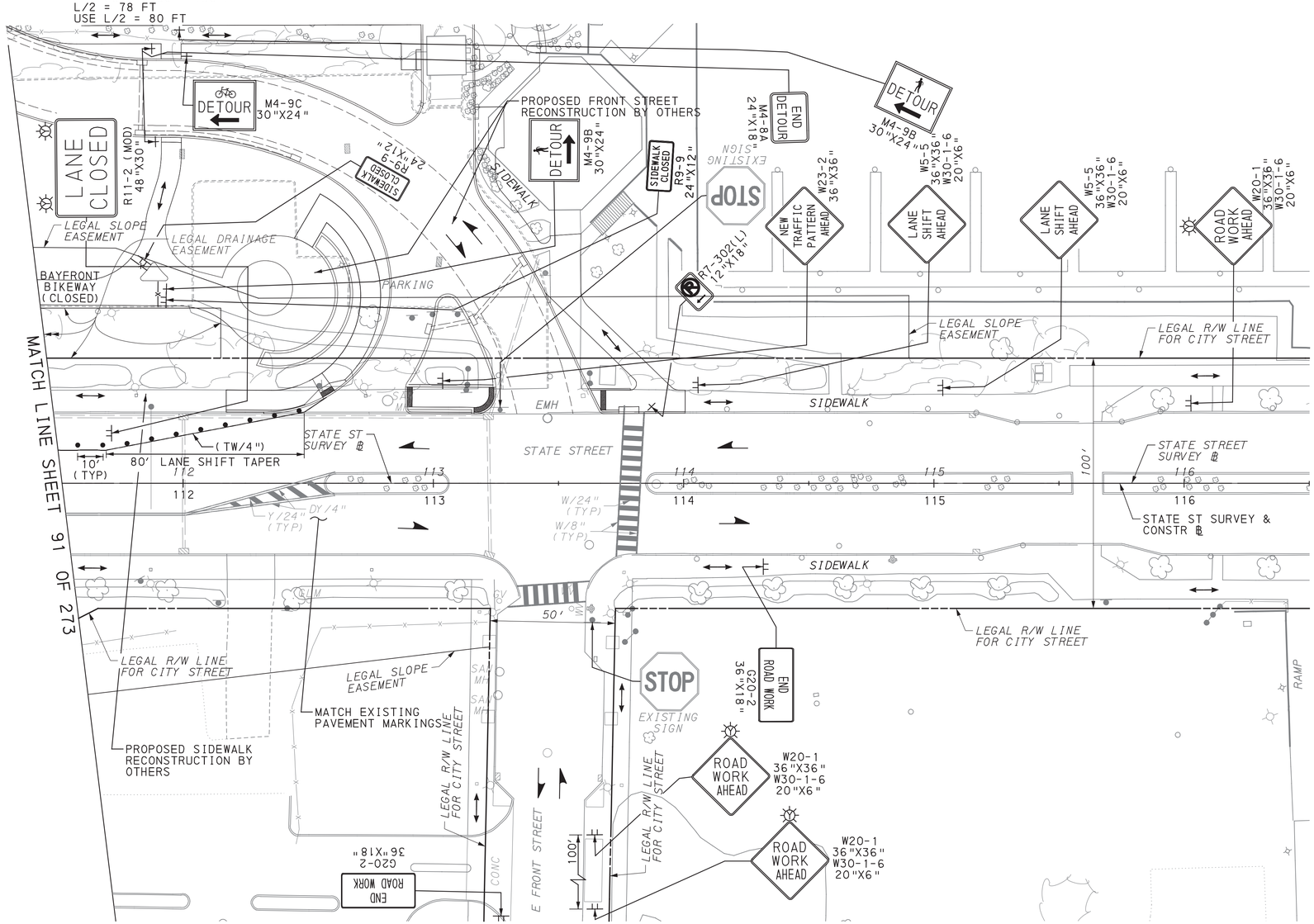
PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpt\sheets\TCPstg2B_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	100 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LANE SHIFT TAPER DATA
(BEGIN STA 111+69)
DESIGN SPEED = 25 MPH
LATERAL DIST = 15 FT
$L = (WXS^2)/60 = 156$ FT
L/2 = 78 FT
USE L/2 = 80 FT



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 2B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

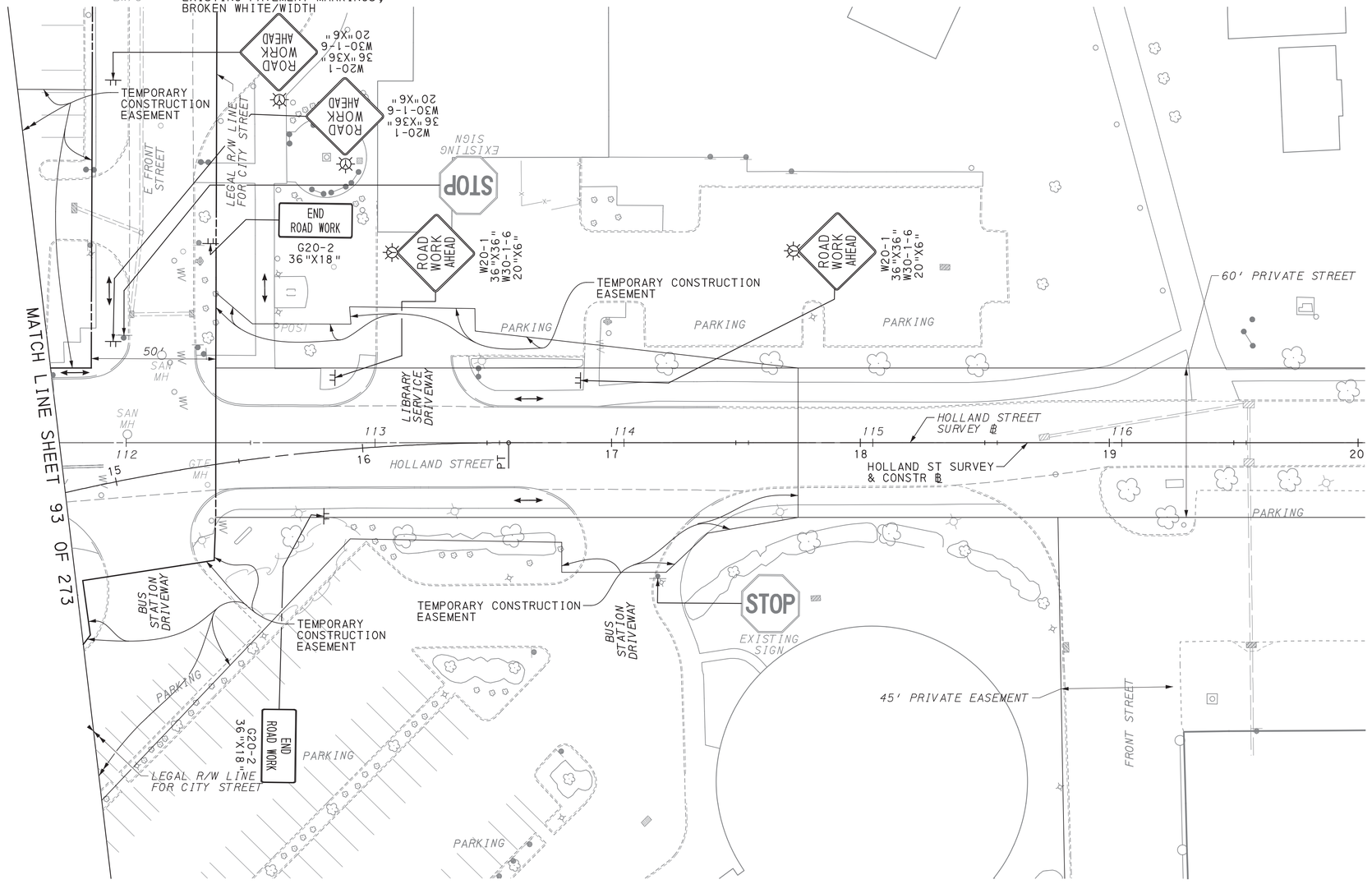
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg2B_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	101 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpl_stg2B_17.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	102 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3A_01.dgn

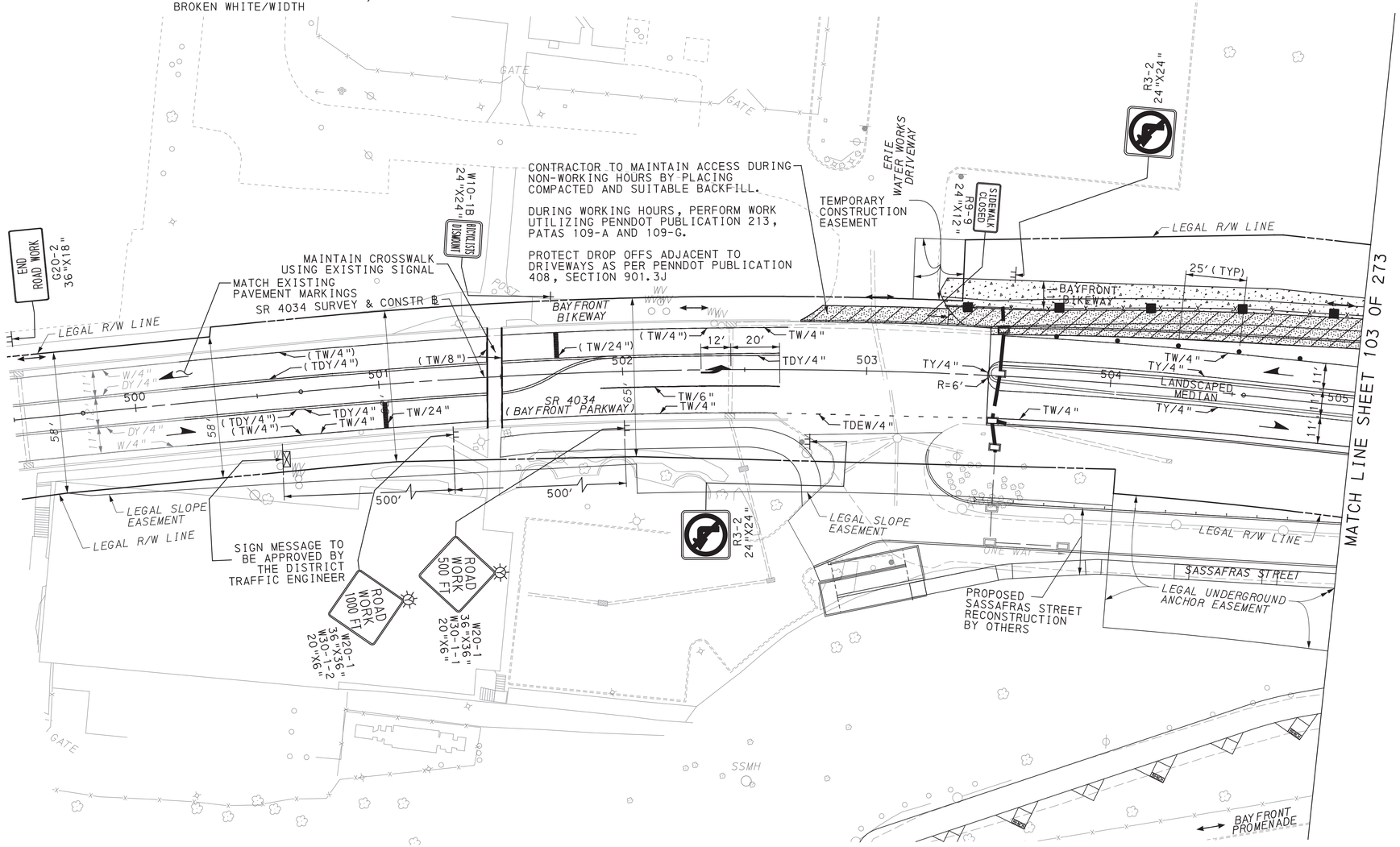
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	103 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg3A_02.dgn

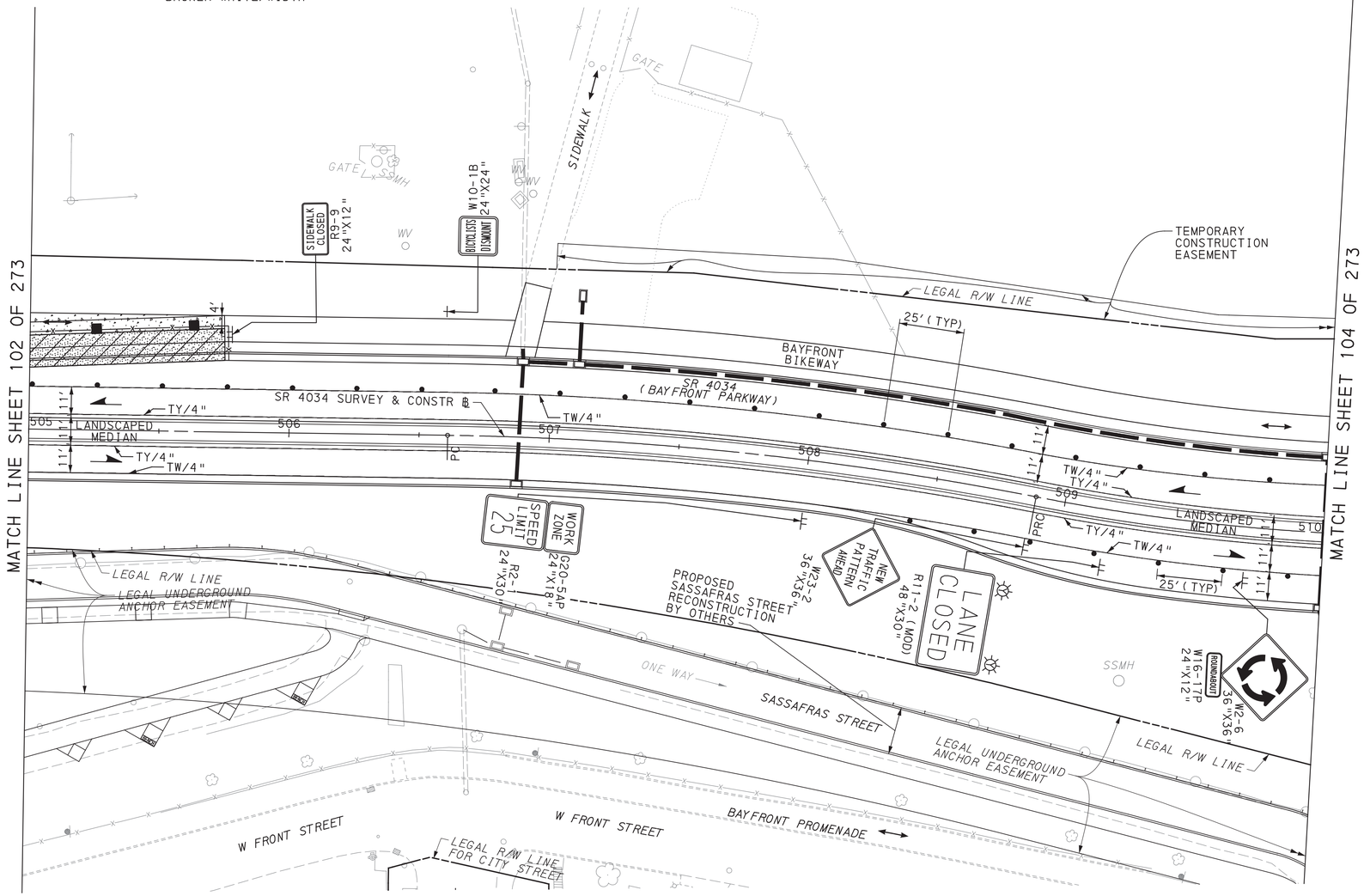
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg3A_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	104 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

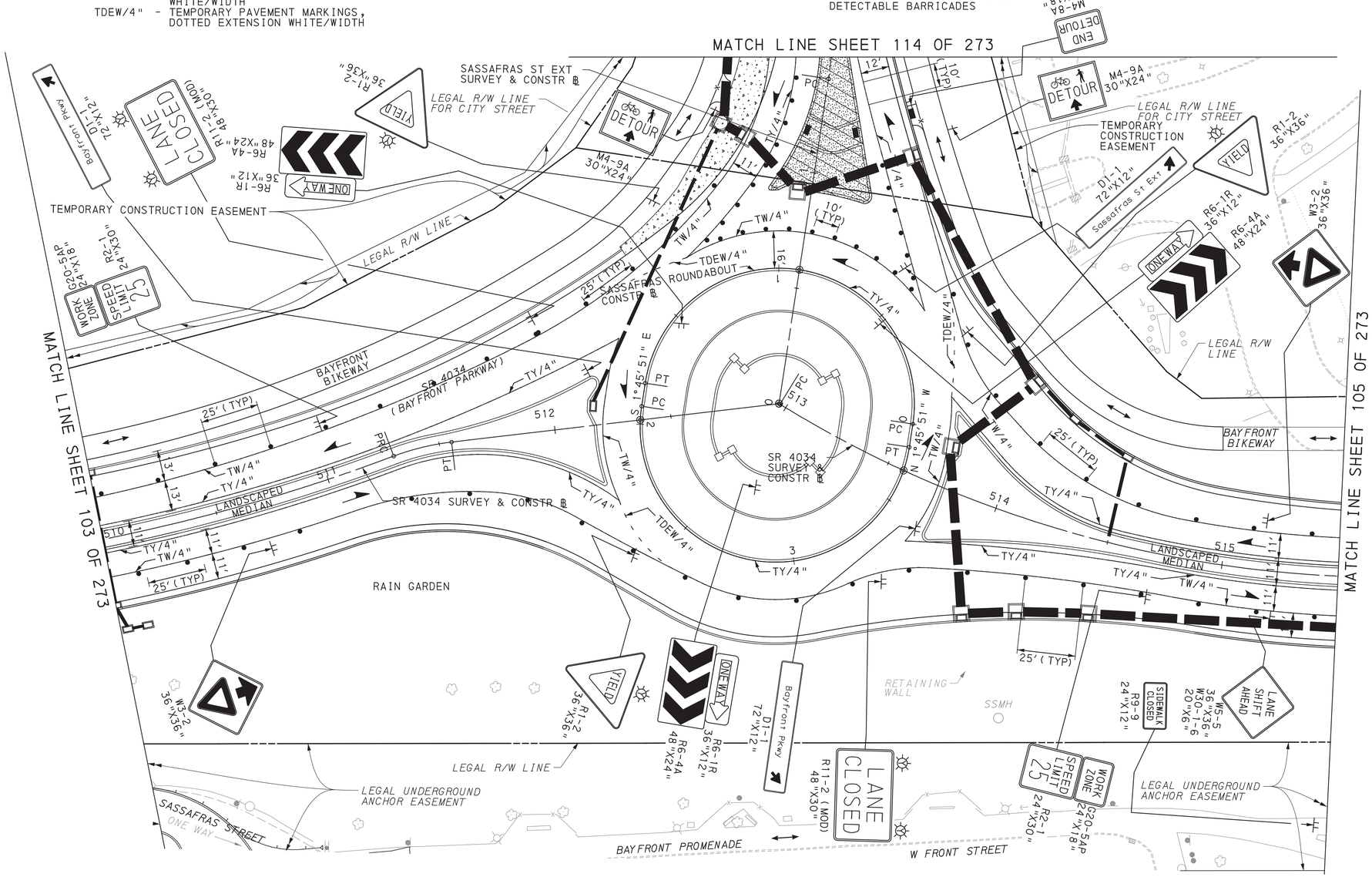
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

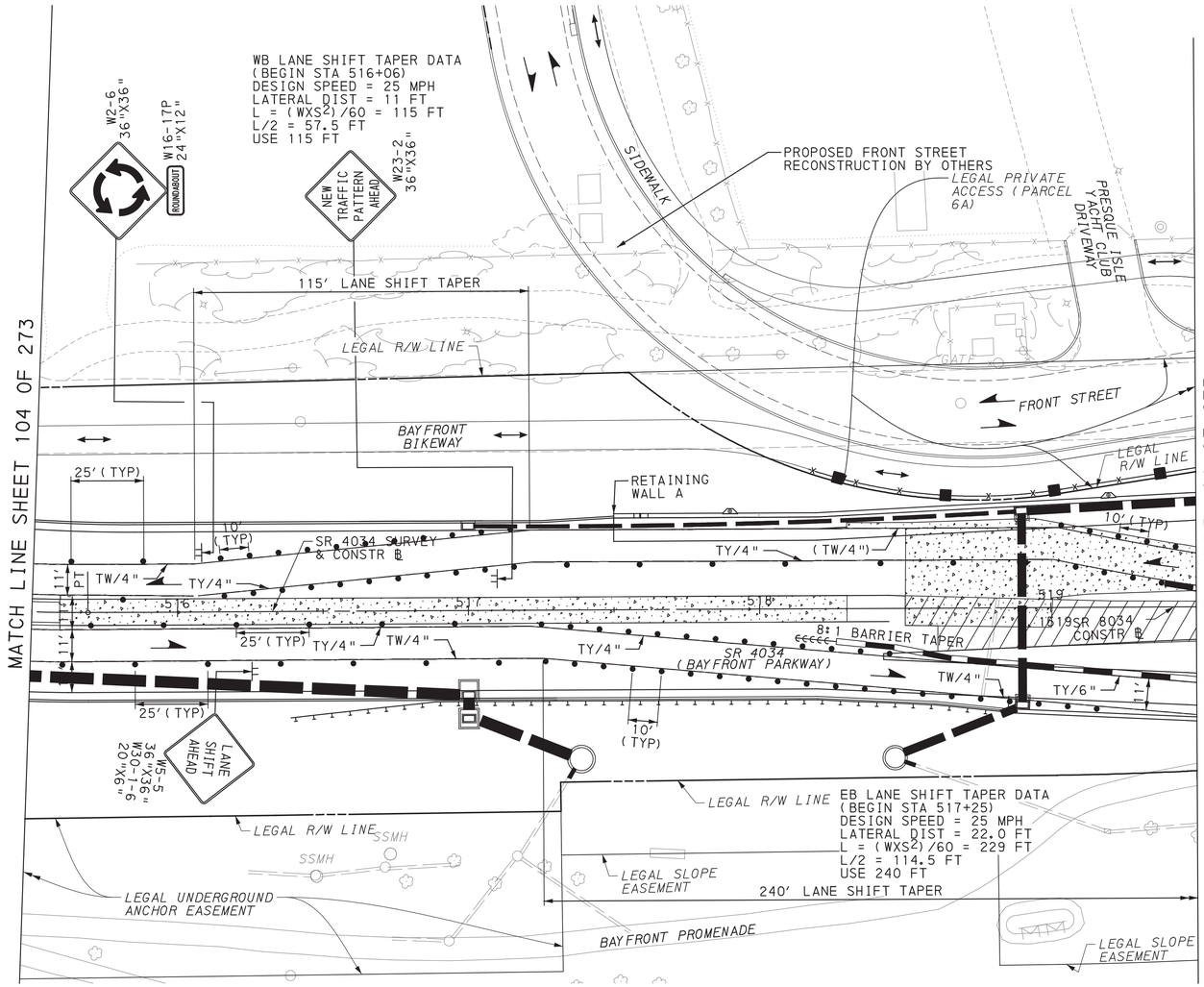
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	105 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

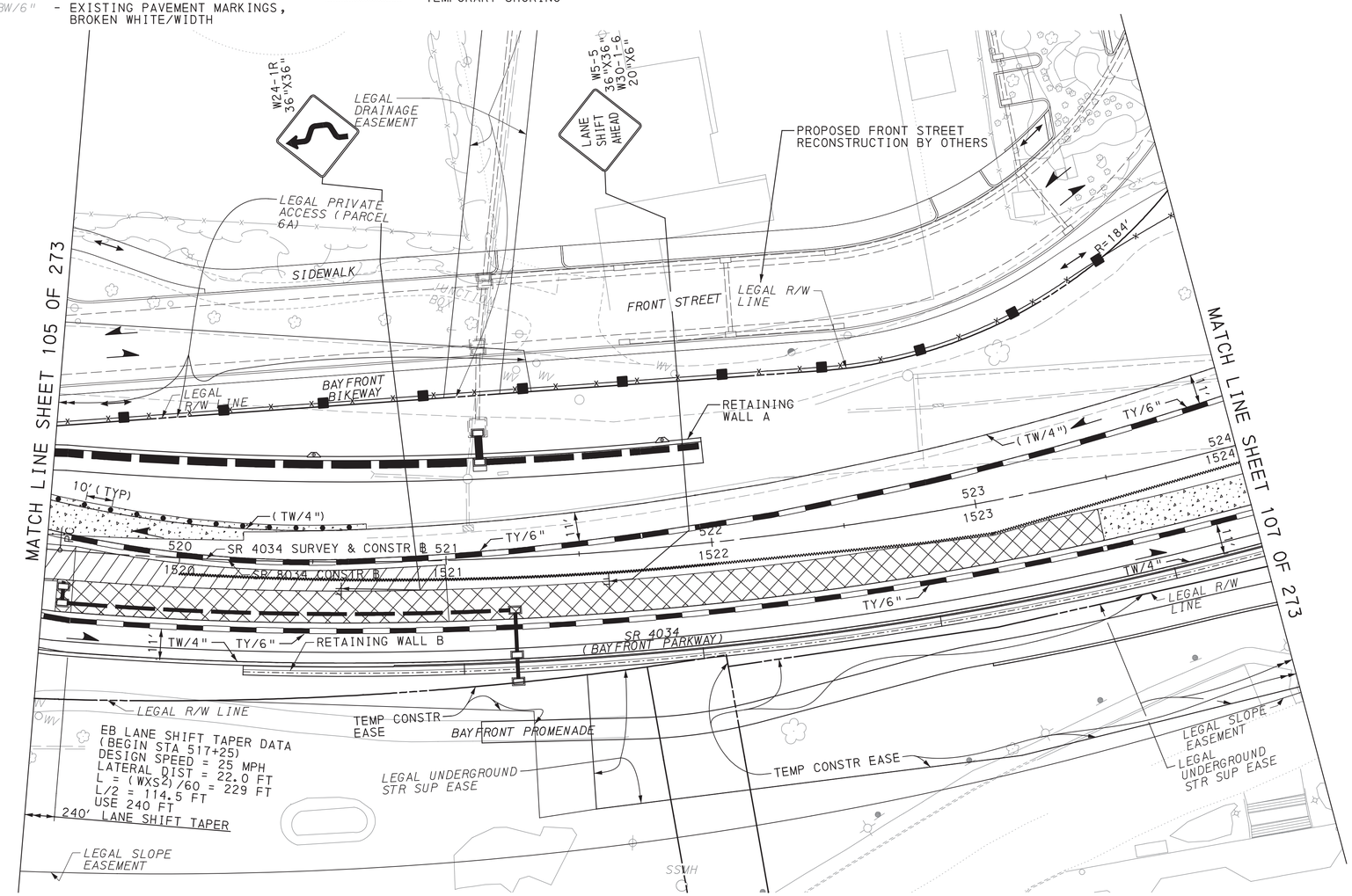
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mp\sheets\TCPlstg3A_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	106 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mkconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg3A_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	107 OF 273
CITY OF ERIE				

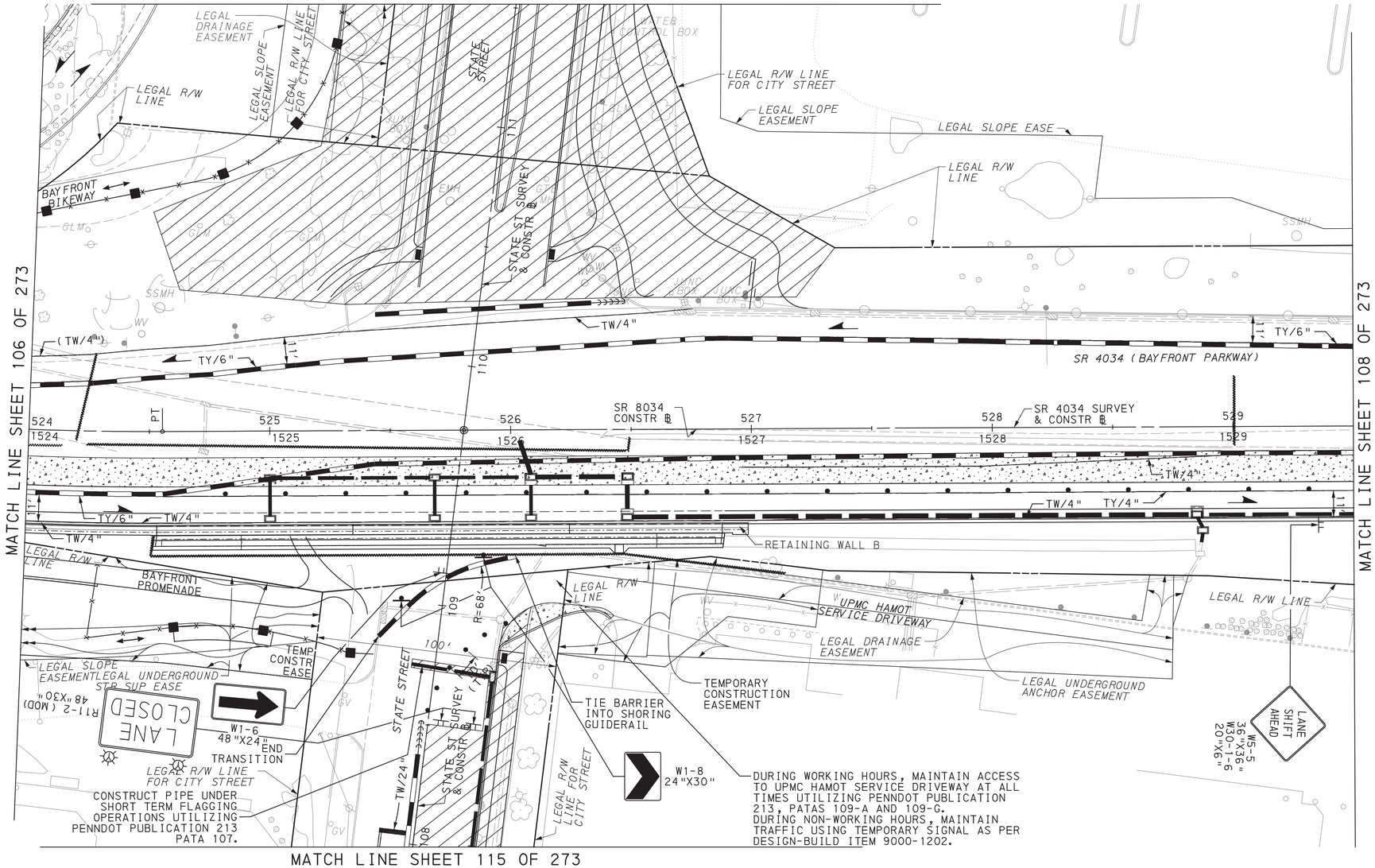
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsTg3A_06.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

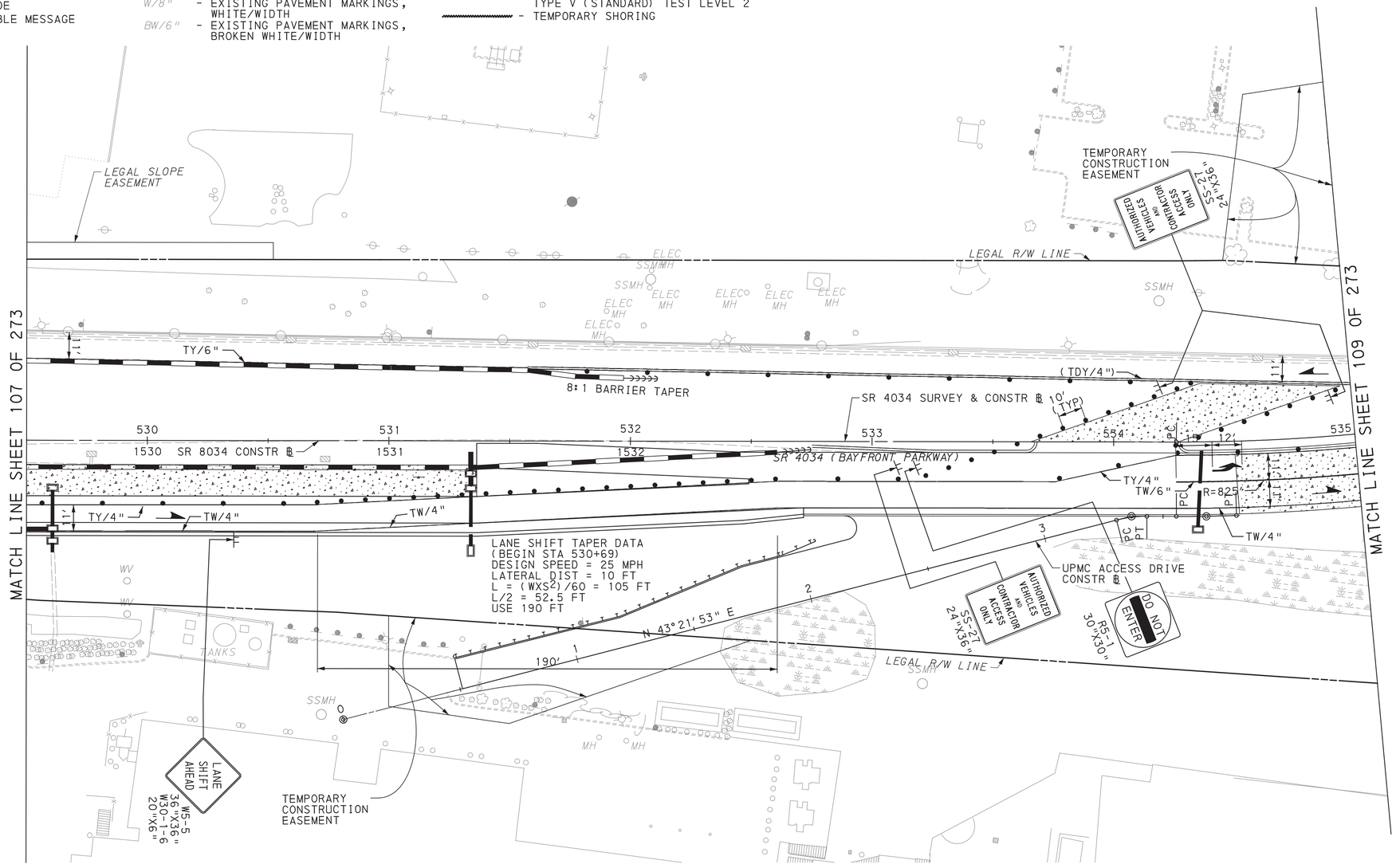
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	108 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg3A_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	109 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

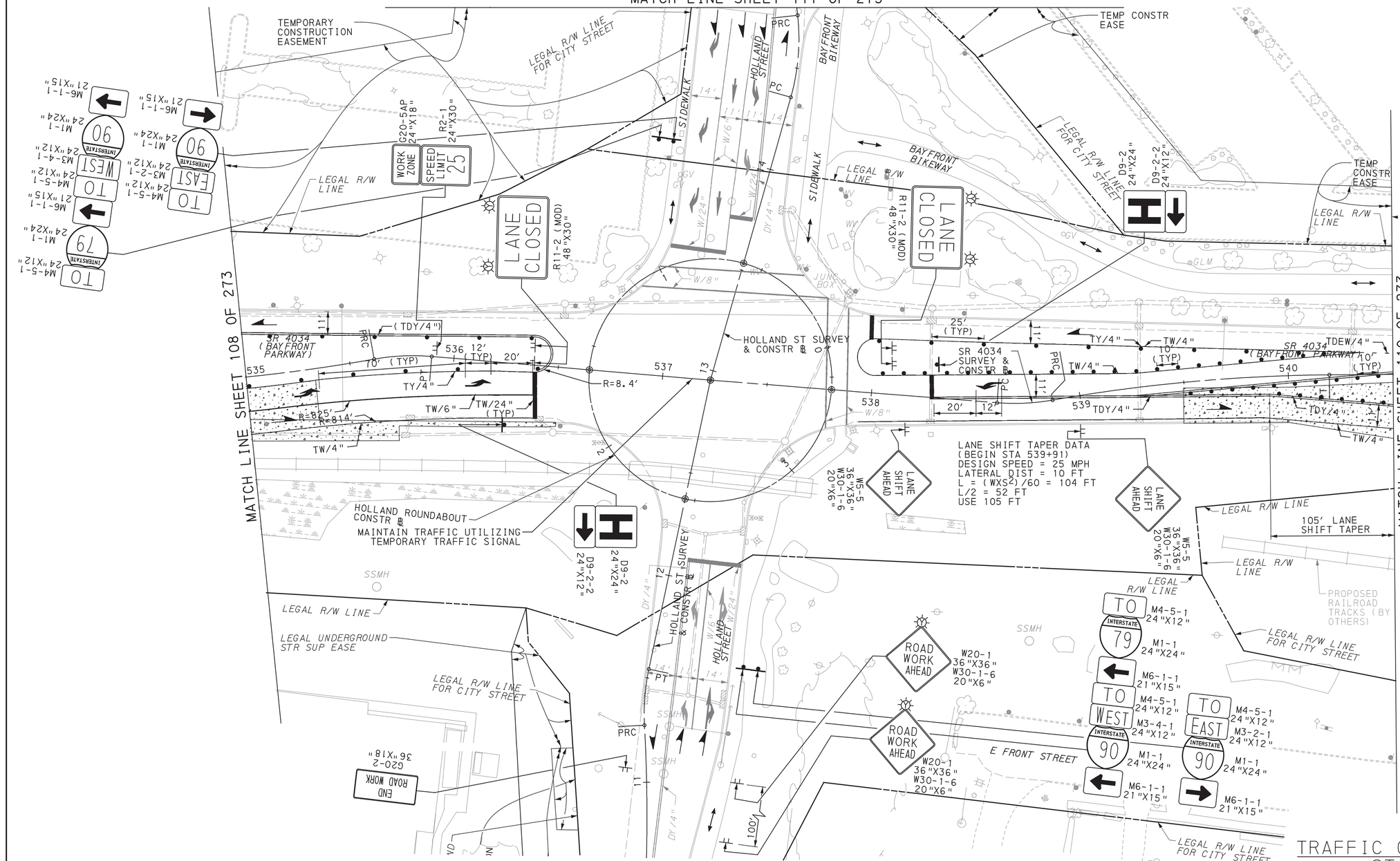
- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



TRAFFIC CONTROL PLAN STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

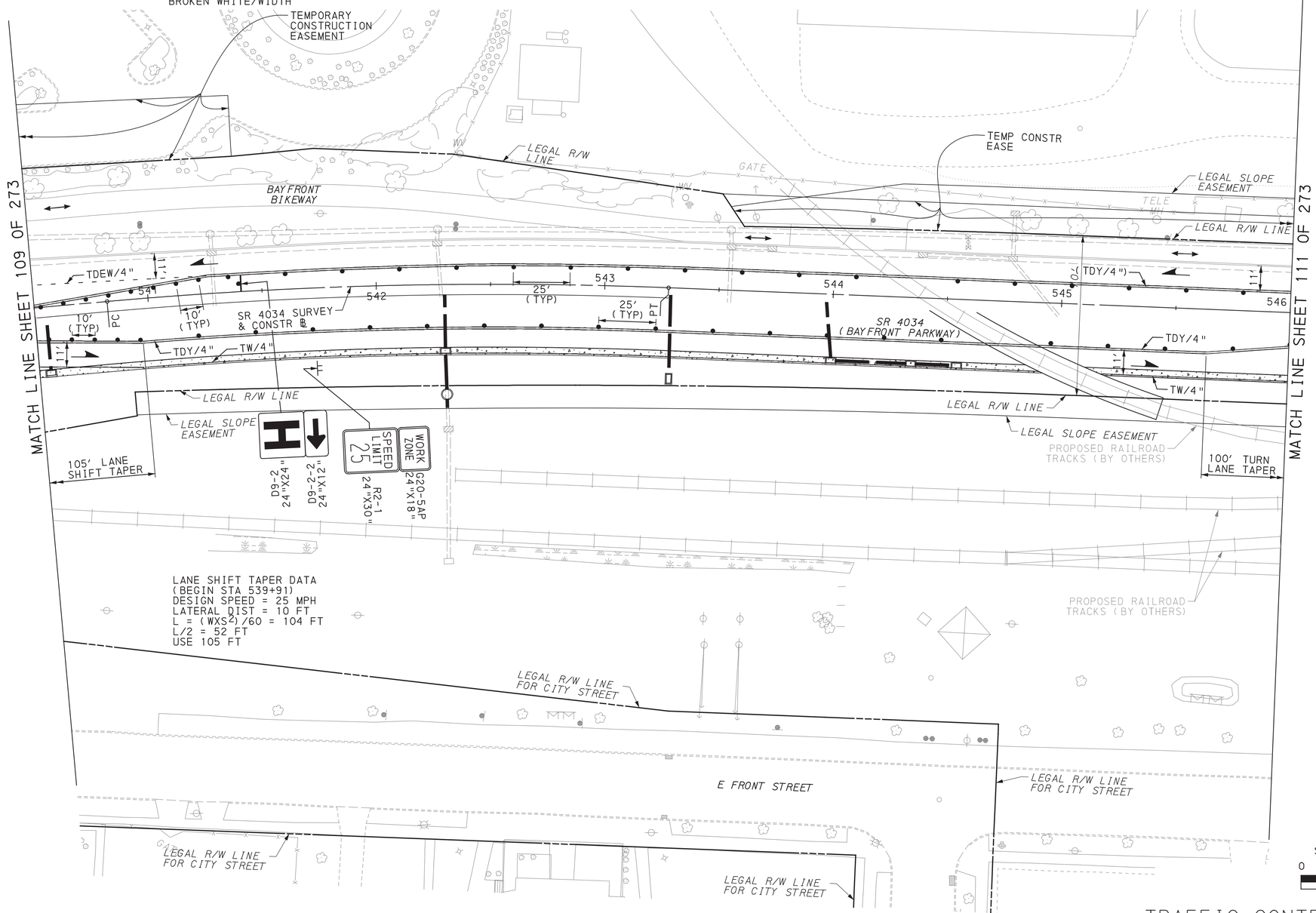
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg3A_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	110 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

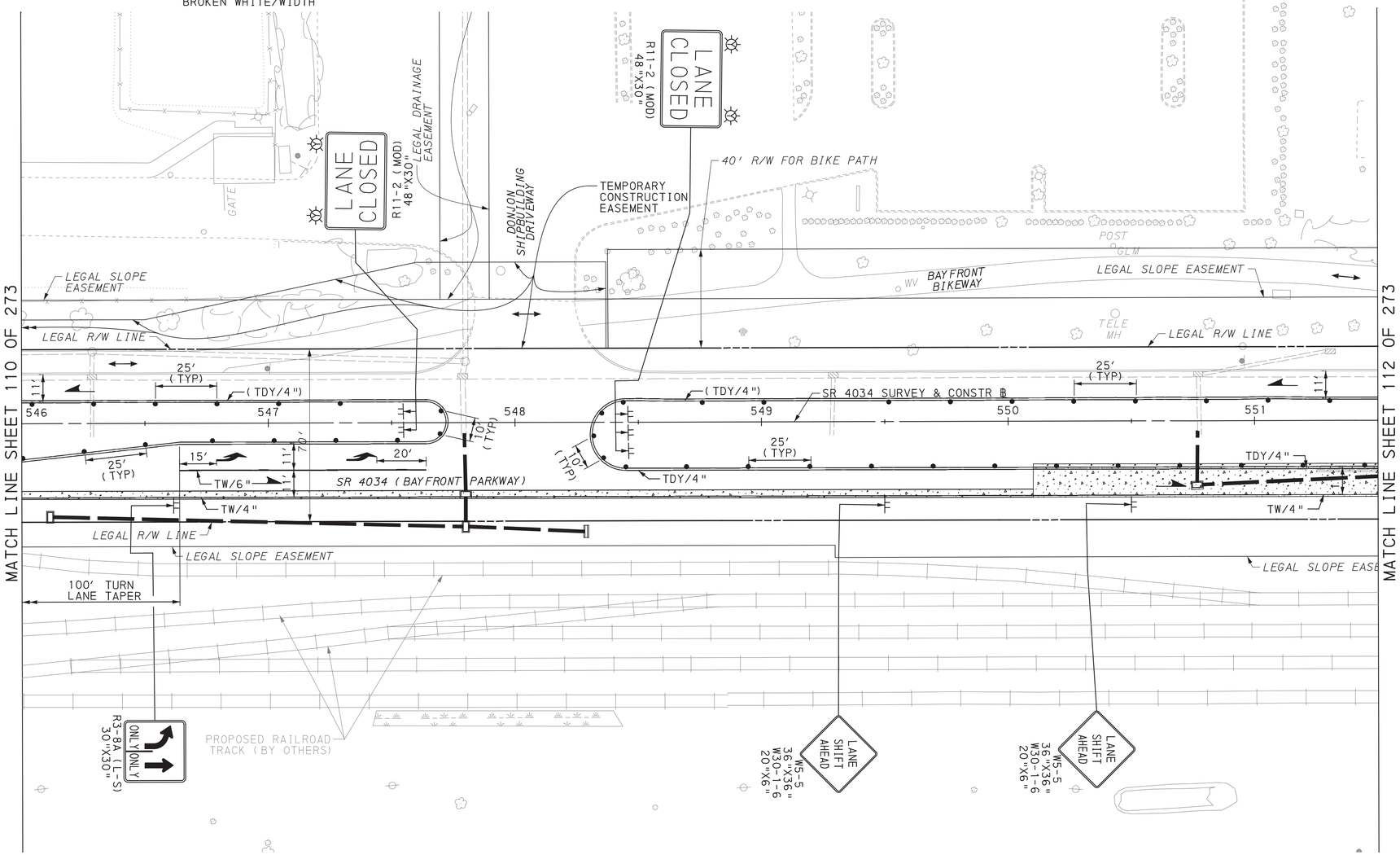
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1stg3A_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	111 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

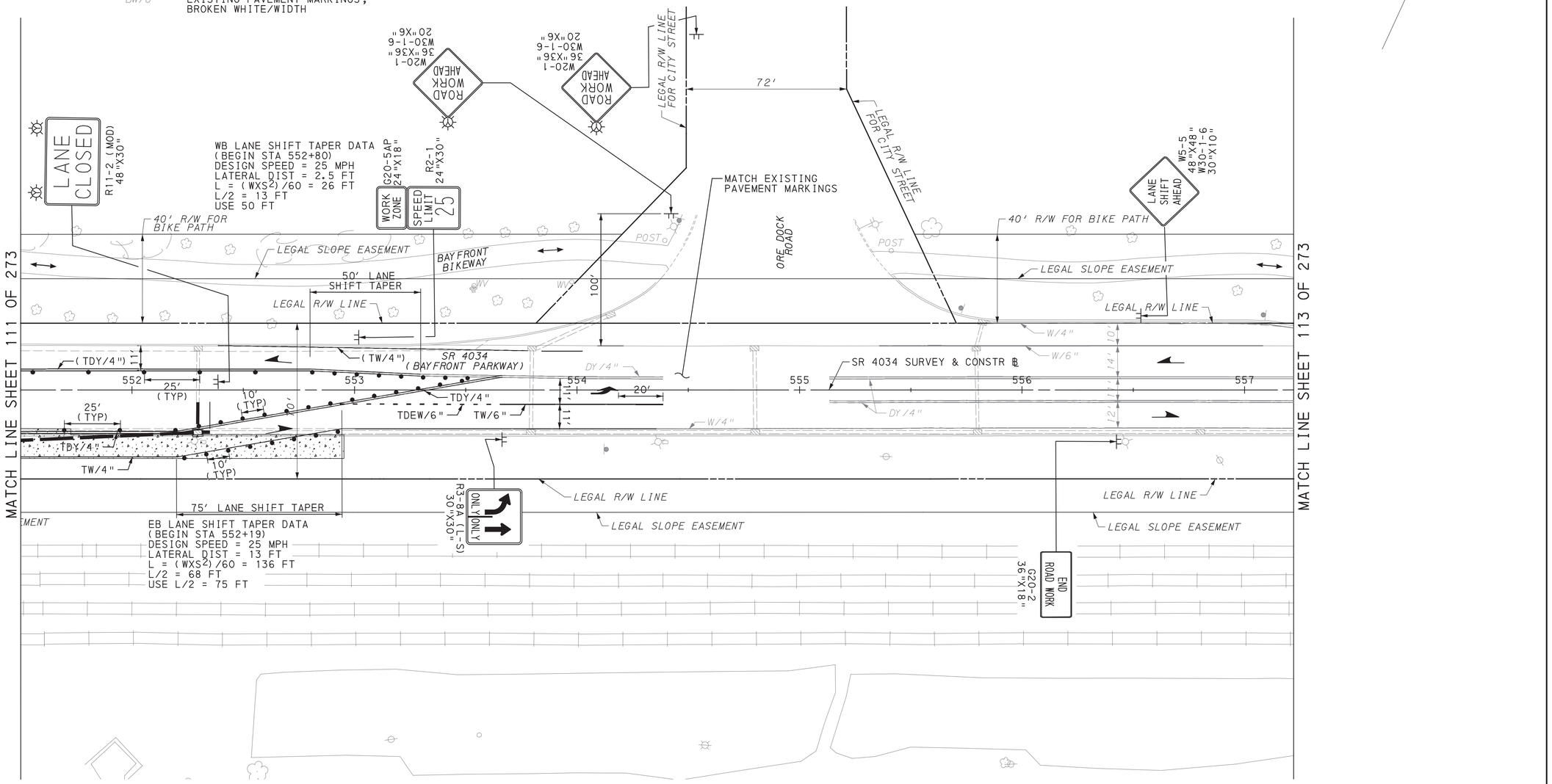
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPlsrg3A_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	112 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

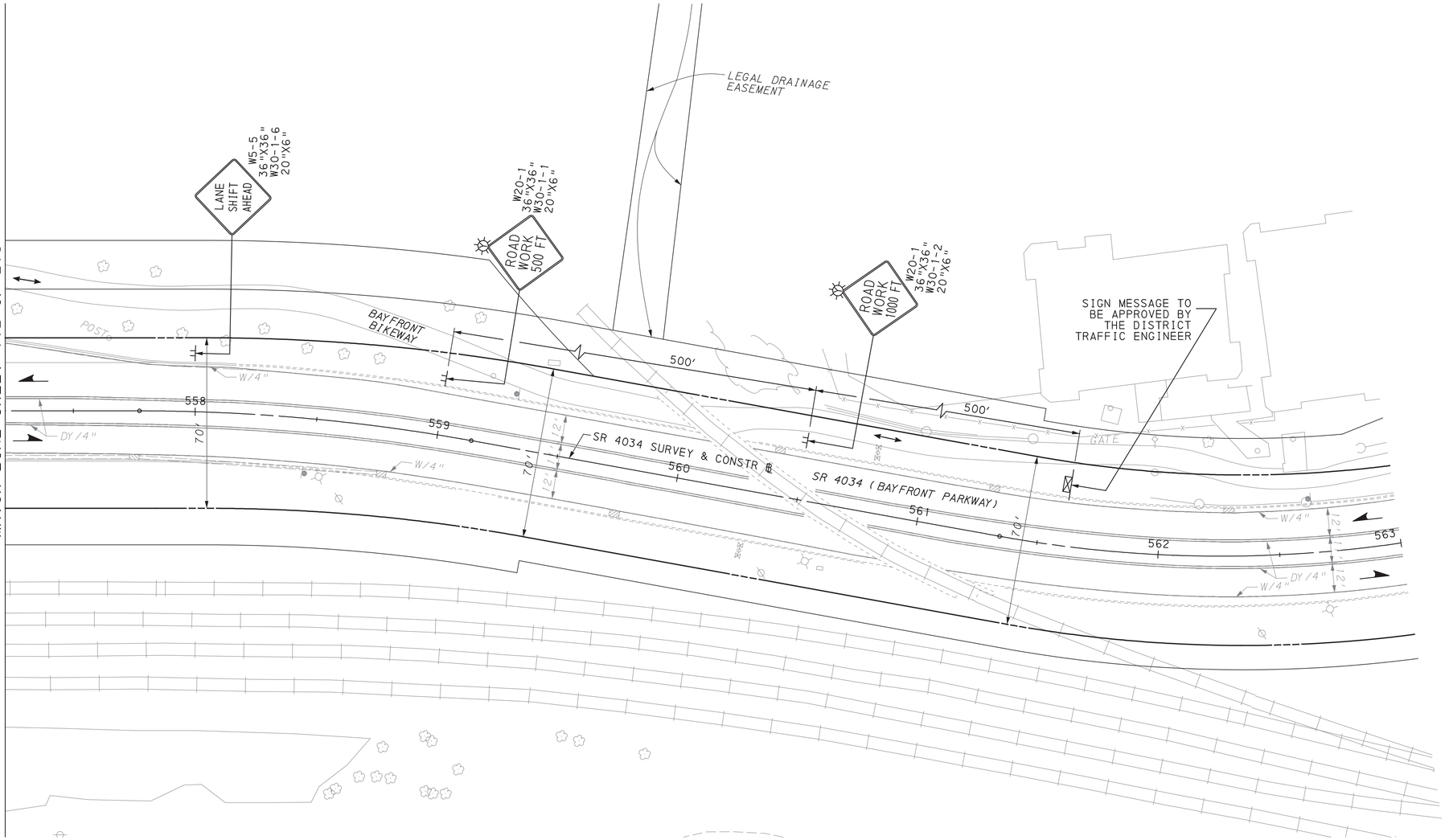
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg3A_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	113 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

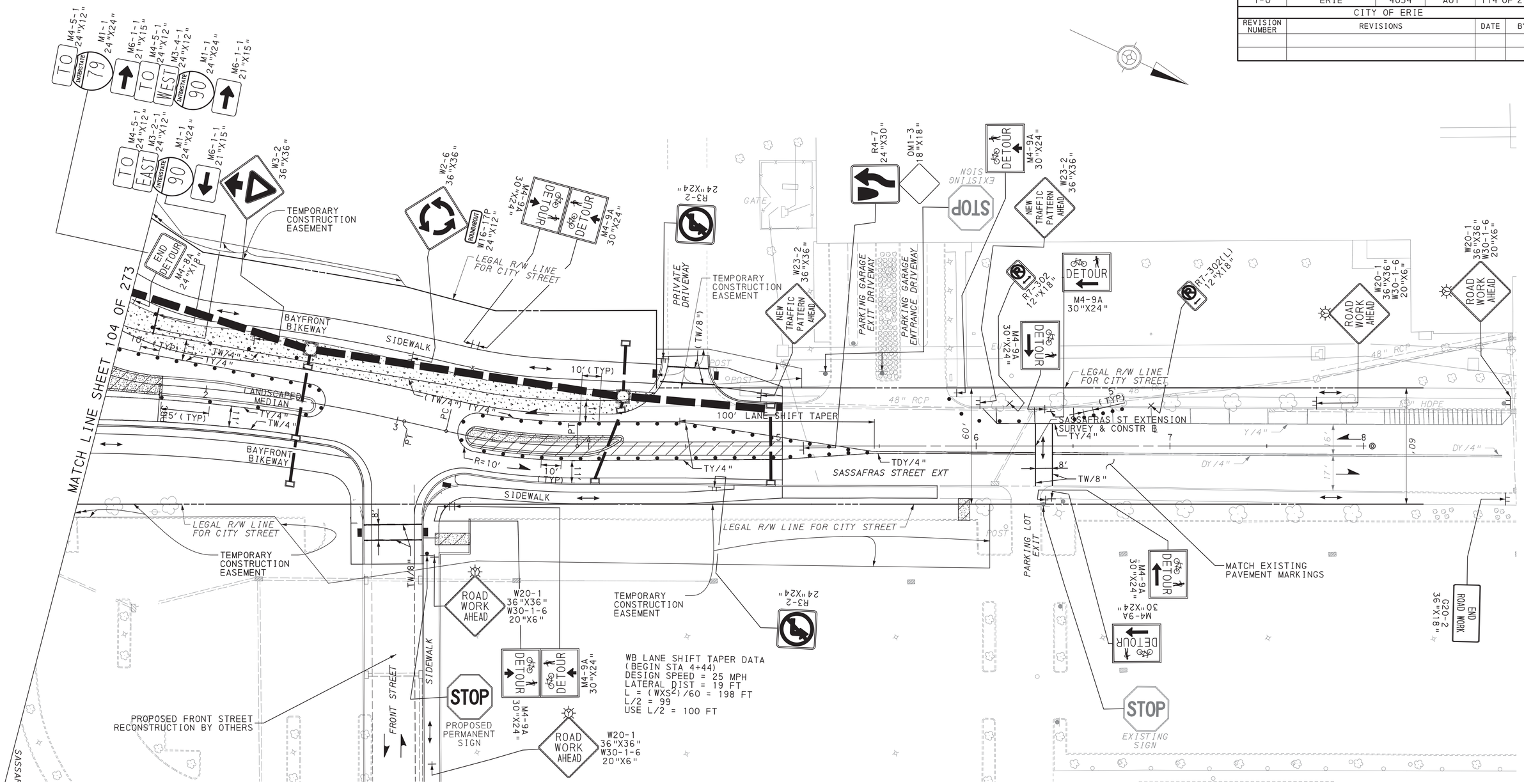
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3A_12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	114 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3A_13.dgn



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	115 OF 273
CITY OF ERIE				

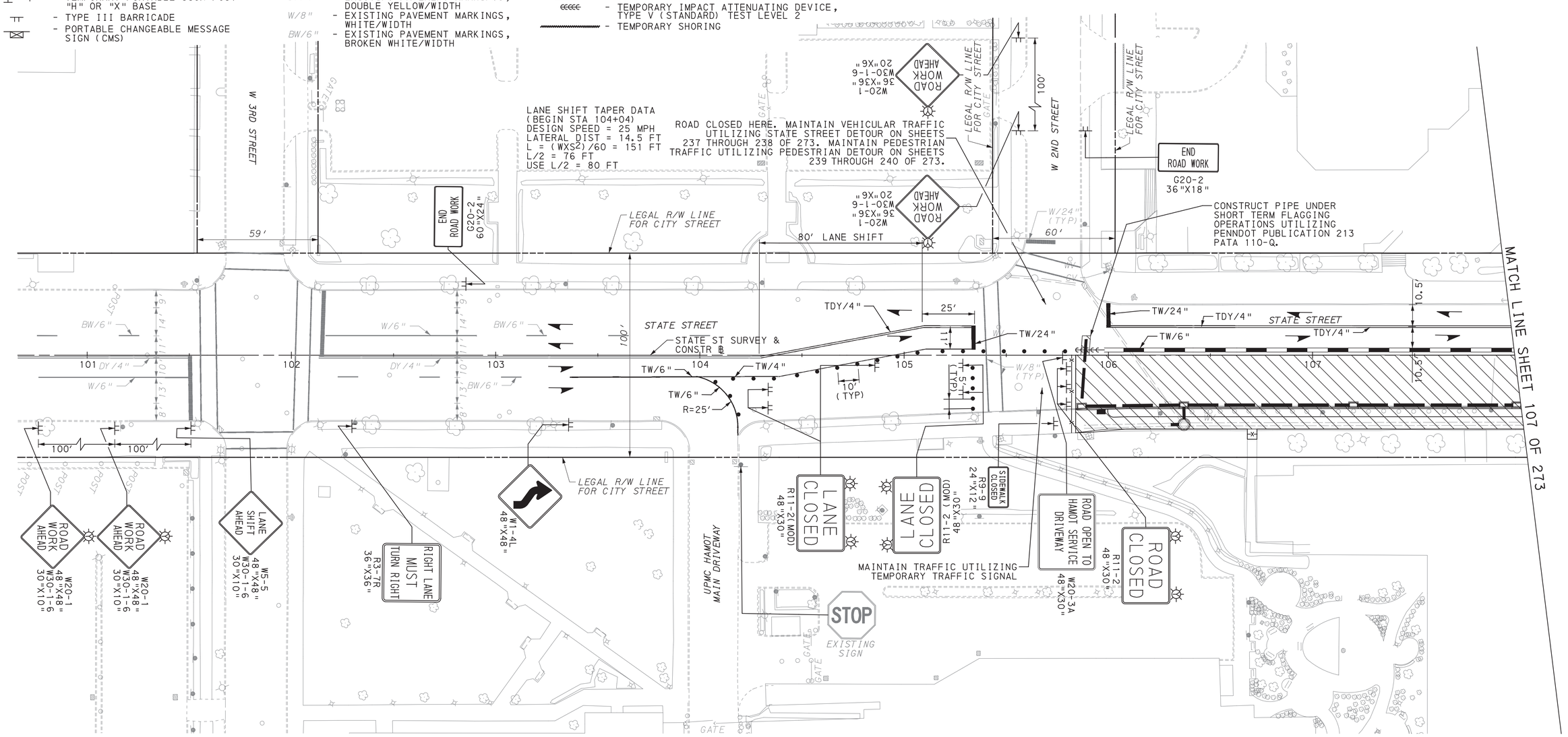
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg3A_14.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12′-0" X 3′-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12′-0" X 1′-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12′-0" X 3′-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

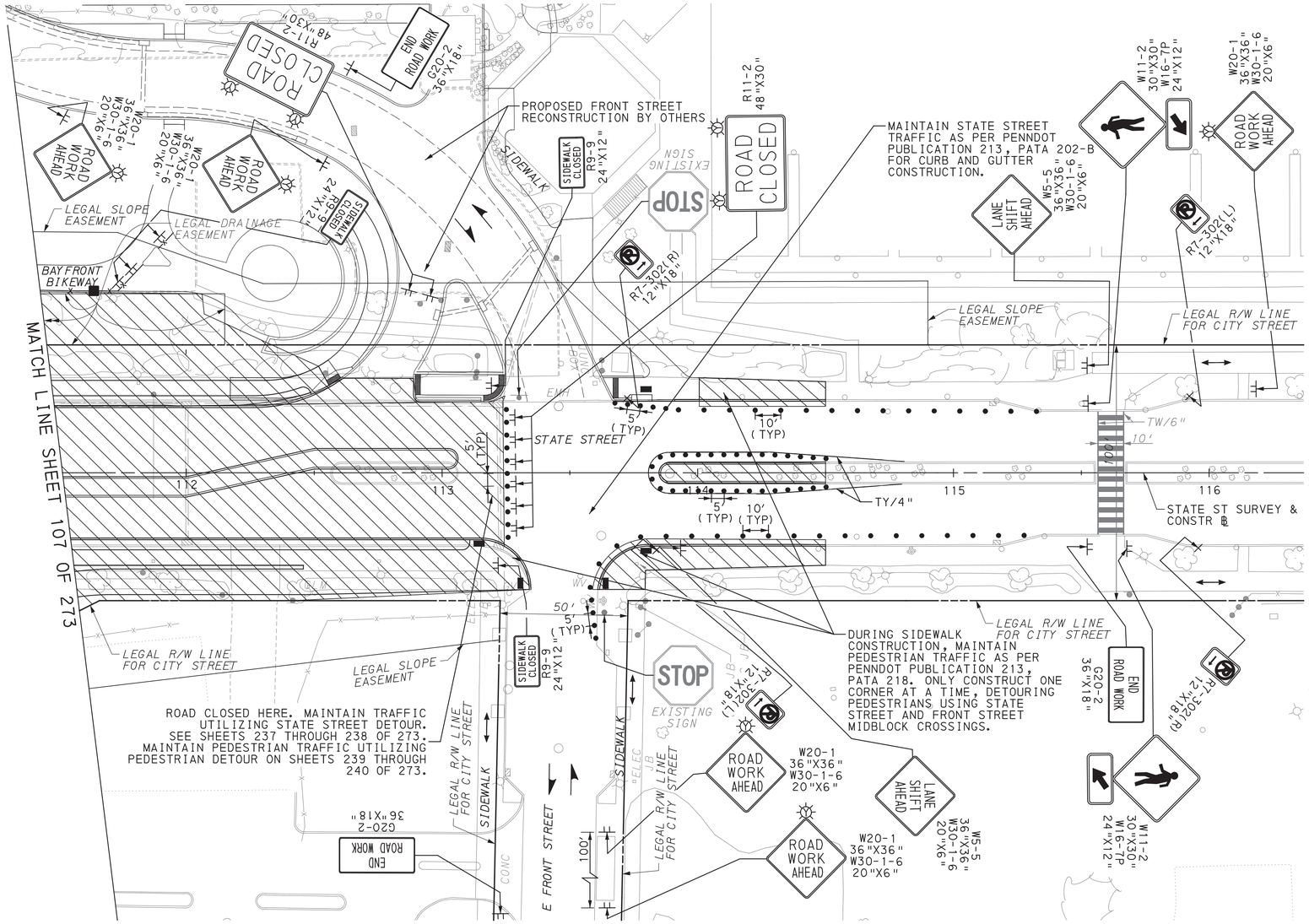
TRAFFIC CONTROL PLAN STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	116 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- H — TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- DY/4" — EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" — EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" — EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" — TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" — TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" — TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" — TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") — TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

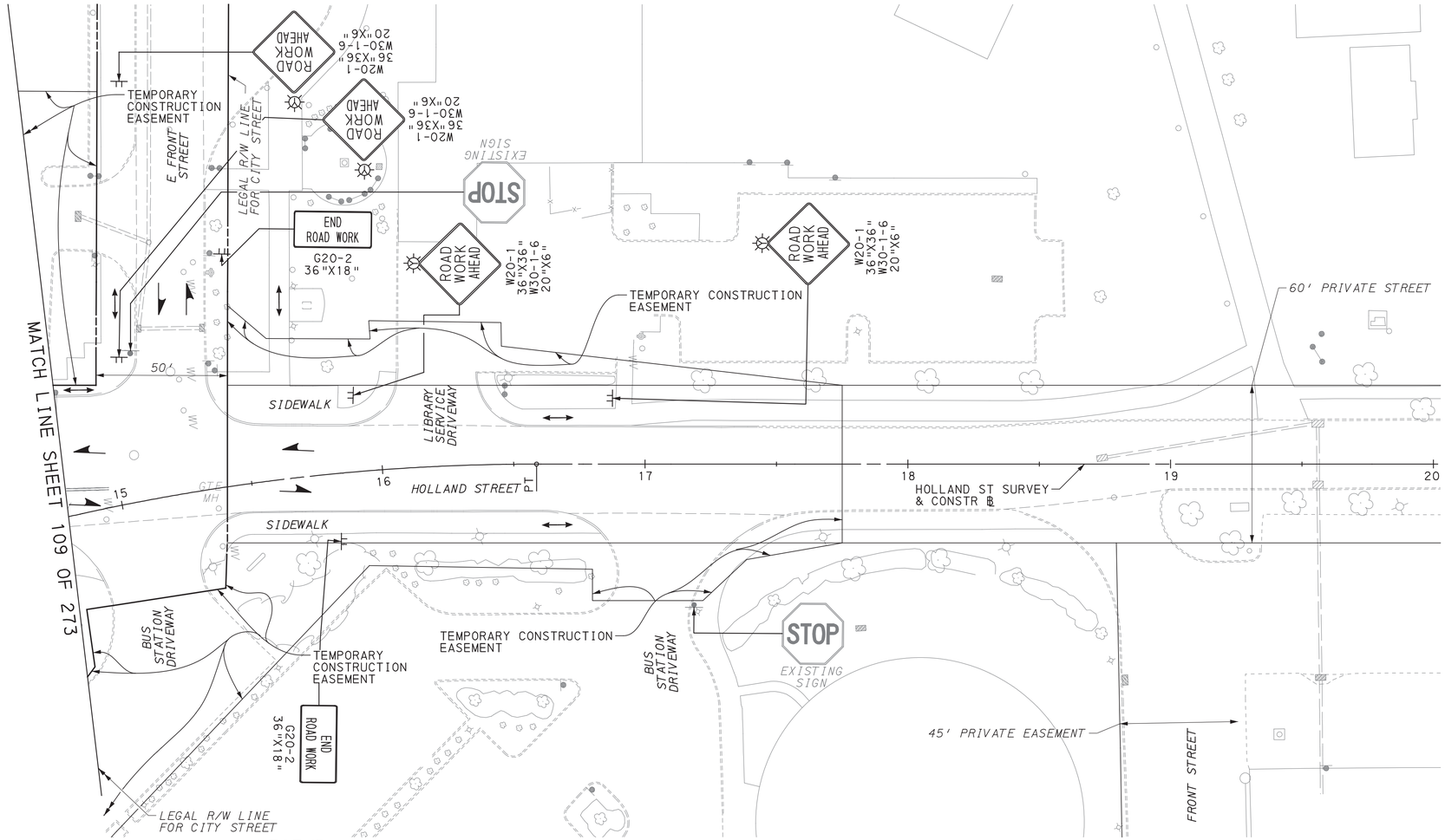
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\VTCplsTg3A_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	117 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg3A_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	118 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

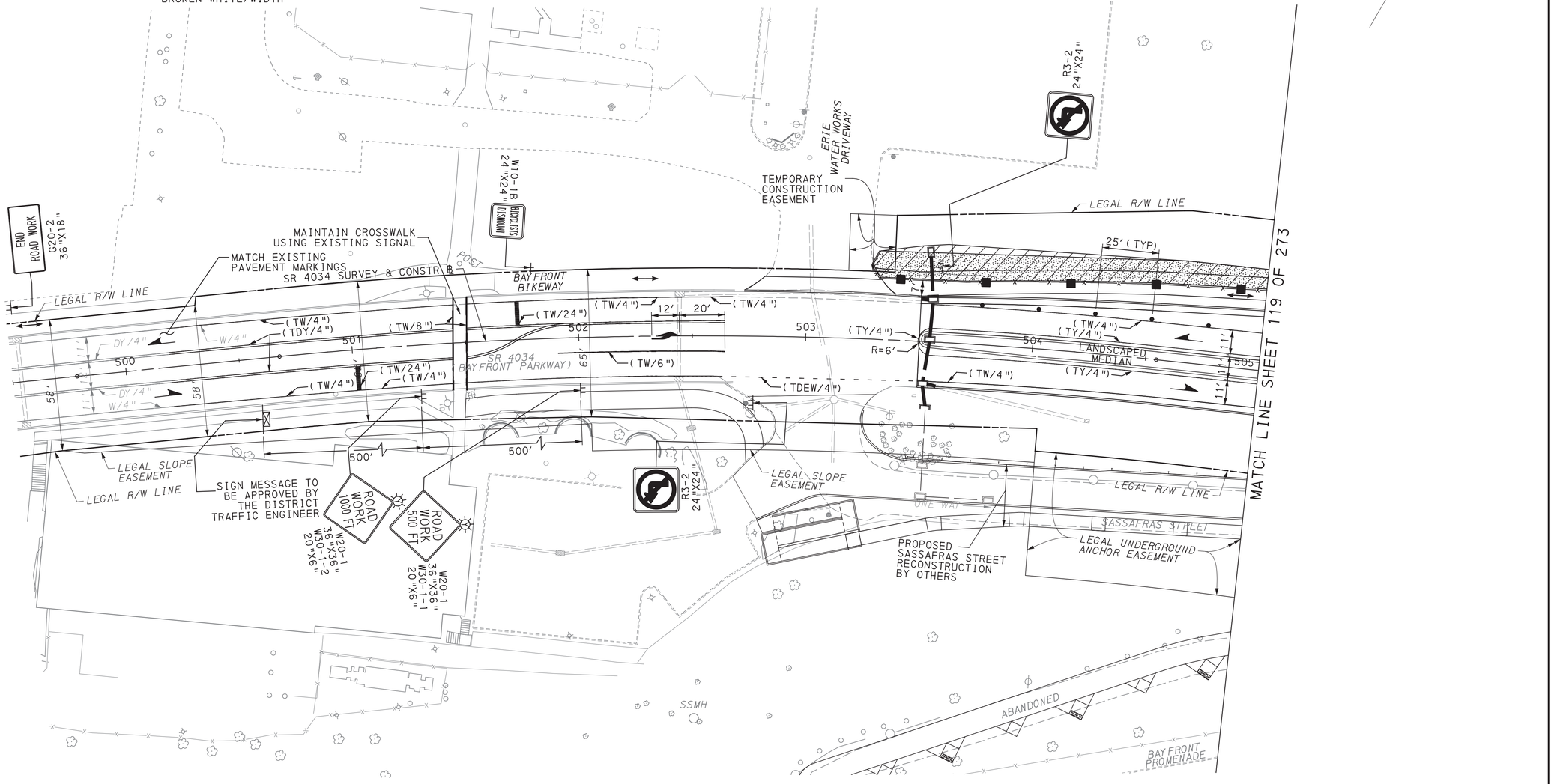
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

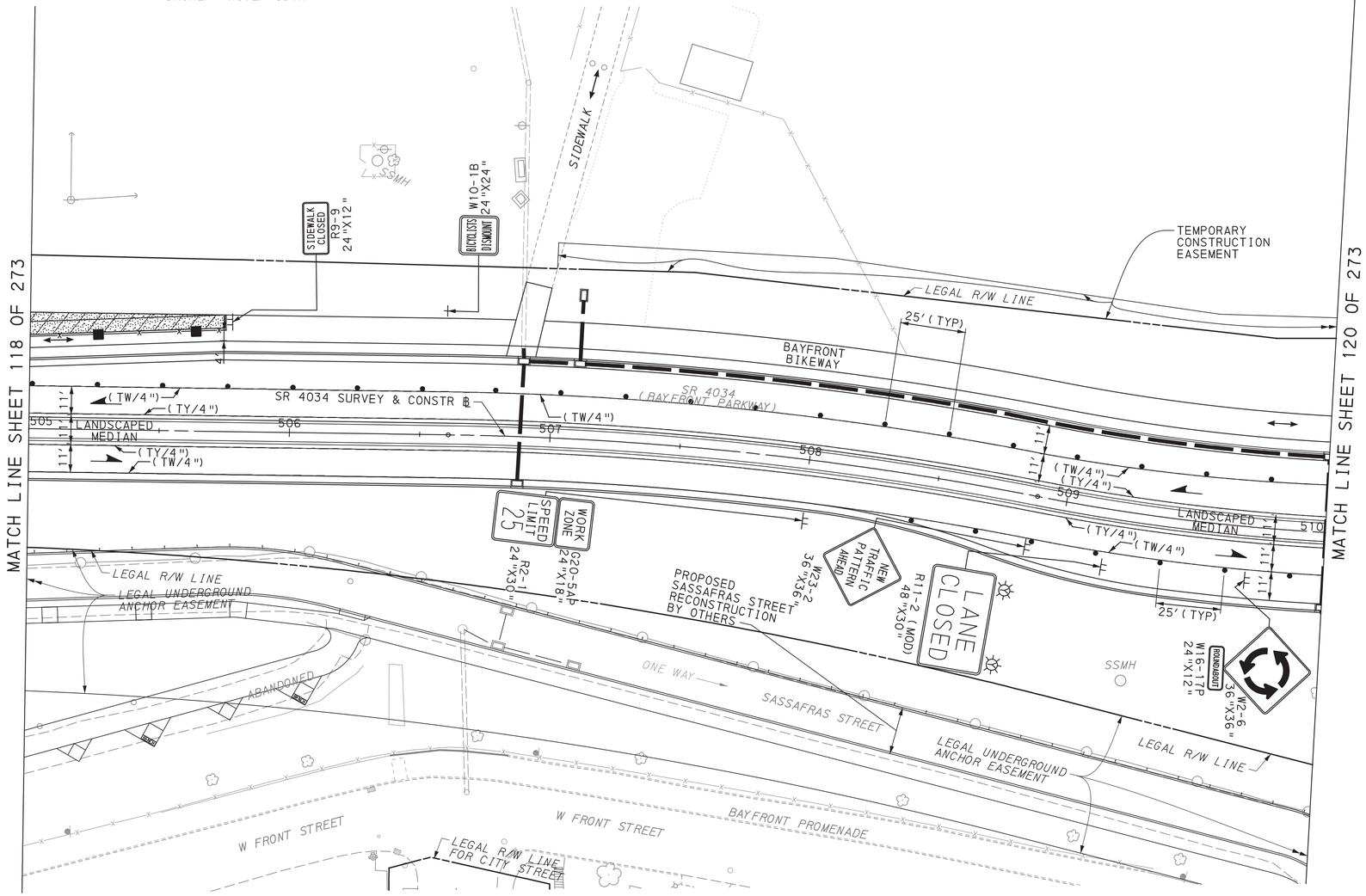
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg3B_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	119 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsTg3B_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	120 OF 273
CITY OF ERIE				

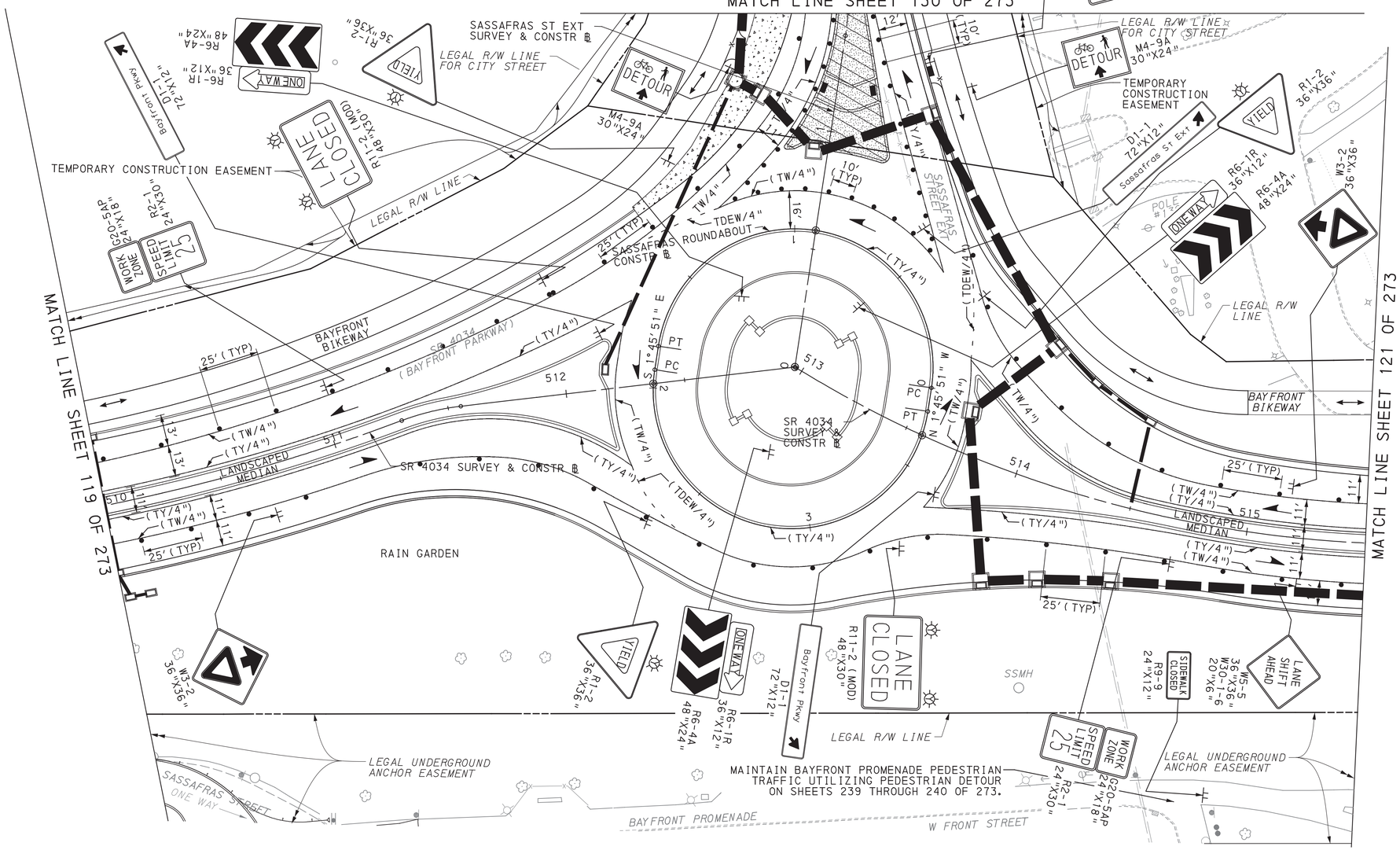
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg3B_03.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	121 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg3B_04.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

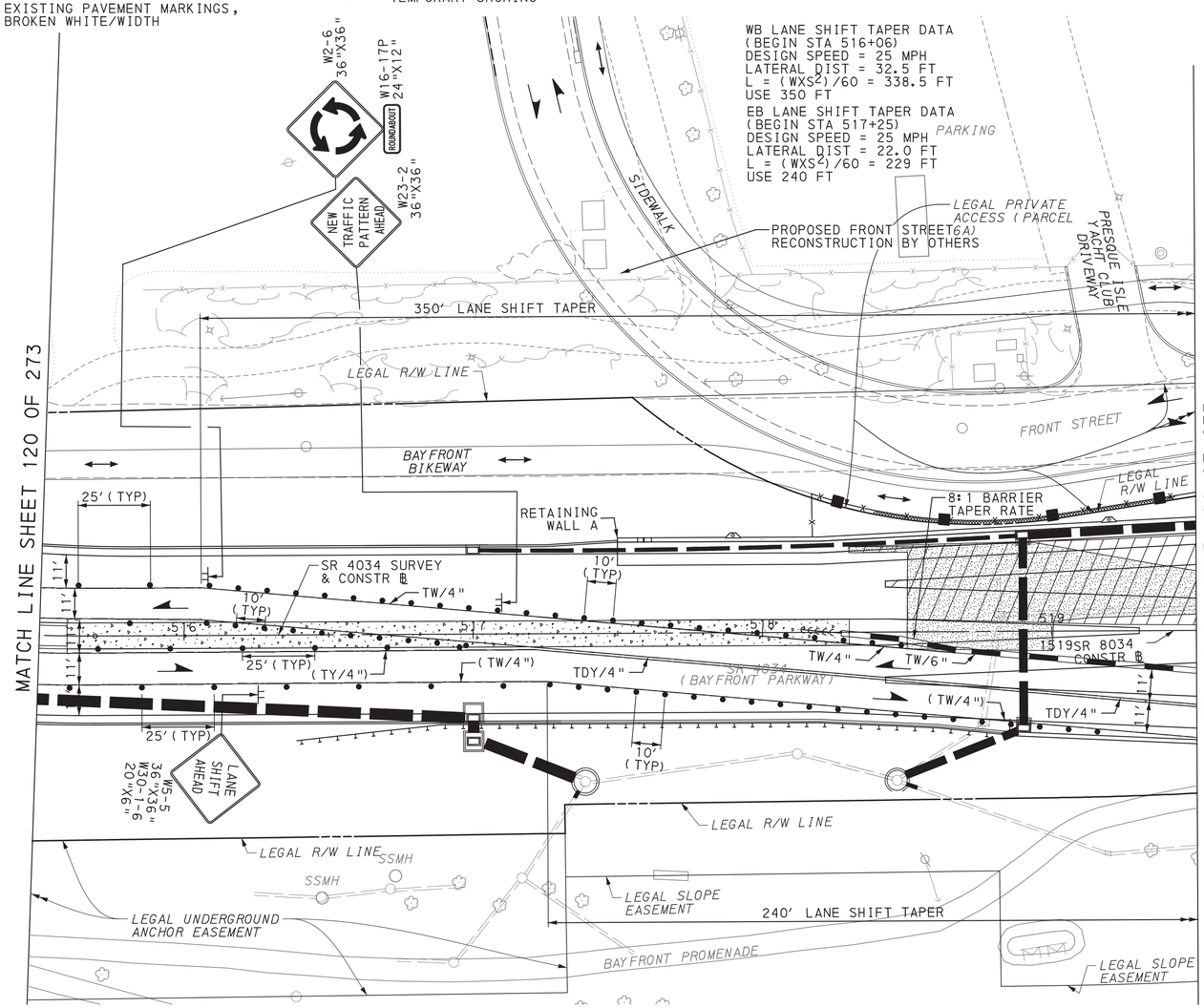
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	122 OF 273
CITY OF ERIE				

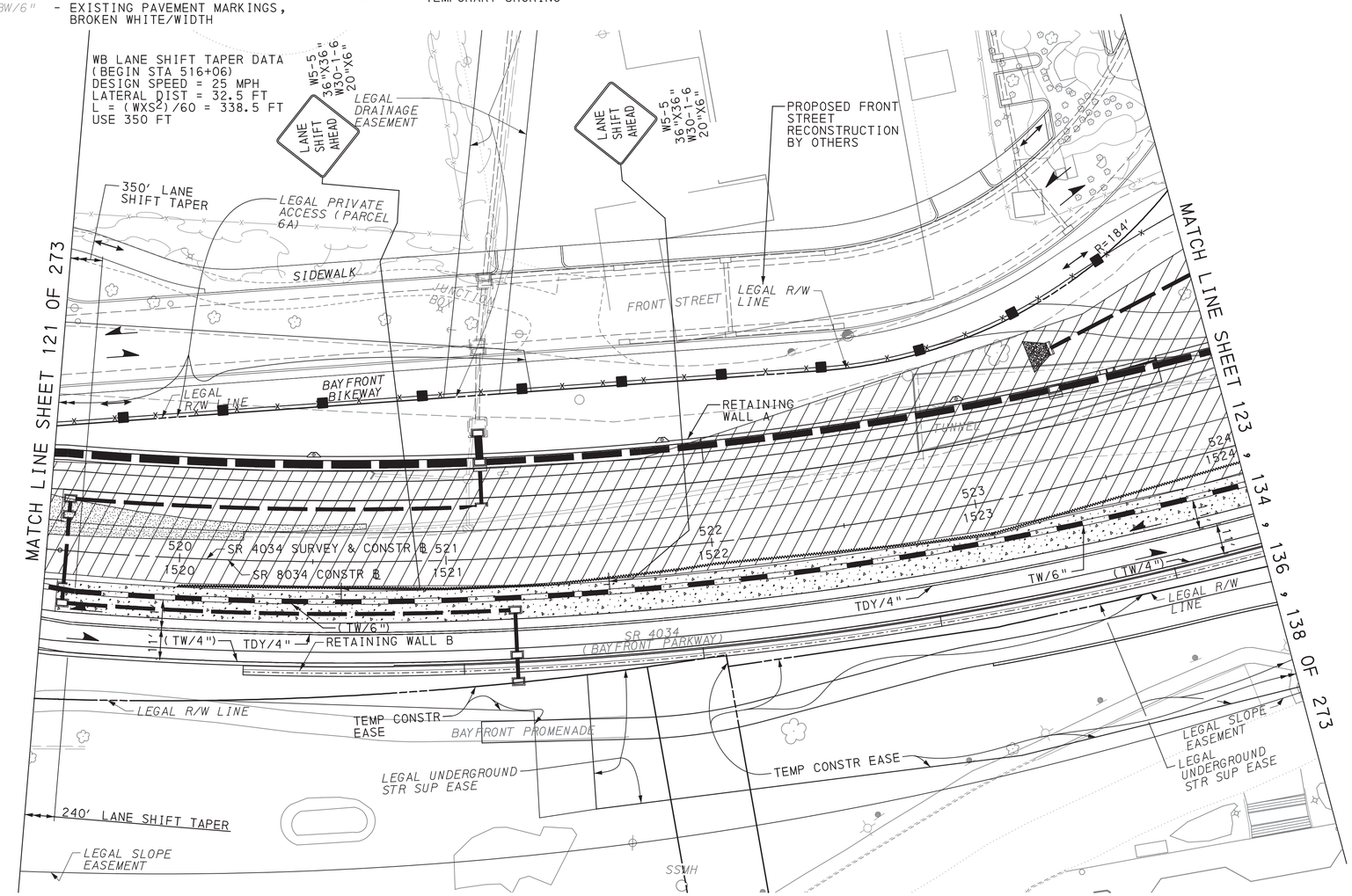
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg3B_05.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



EB LANE SHIFT TAPER DATA
(BEGIN STA 517+25)
DESIGN SPEED = 25 MPH
LATERAL DIST = 22.0 FT
L = (WXS²)/60 = 229 FT
USE L = 240 FT

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

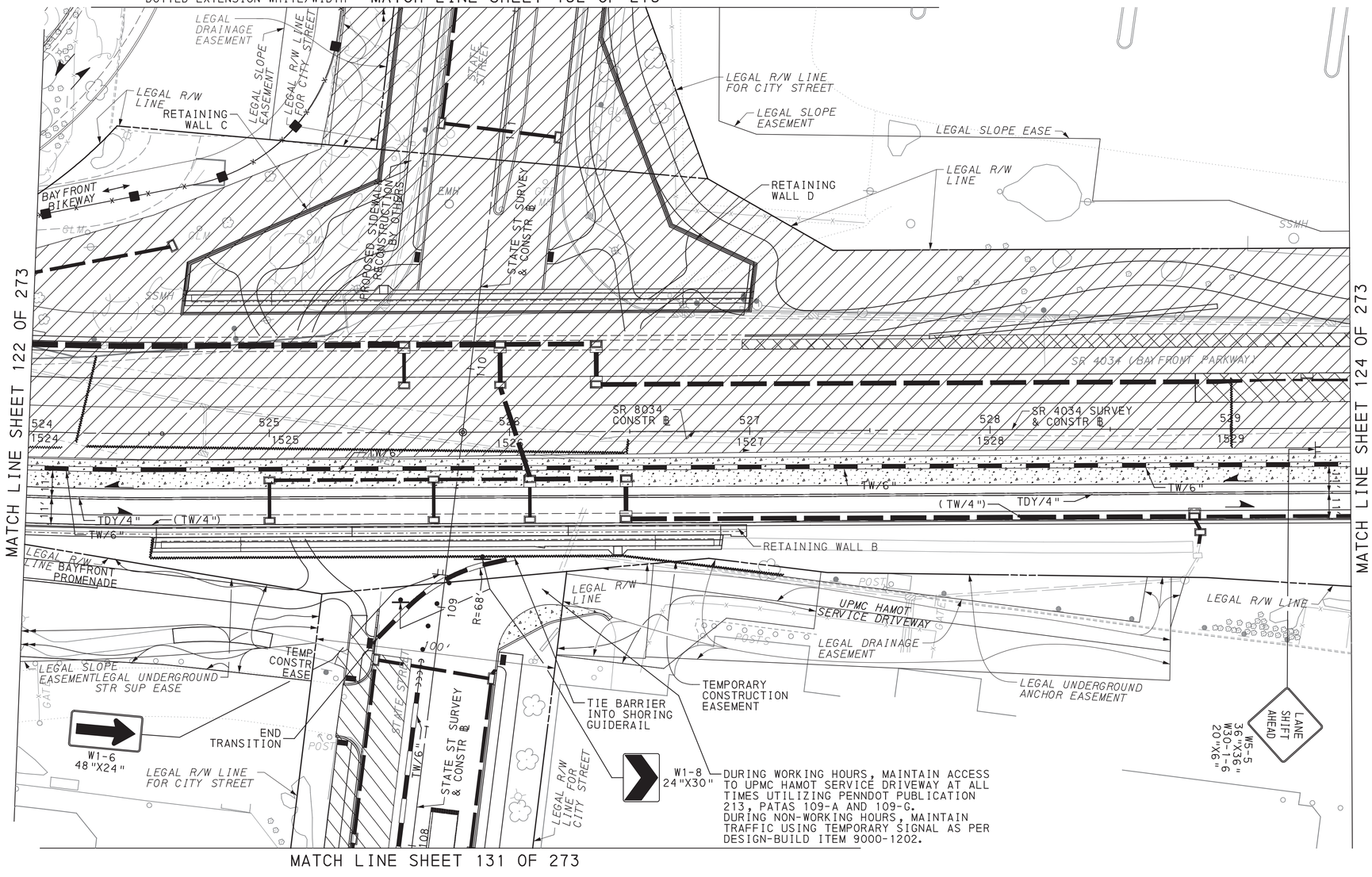
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	123 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

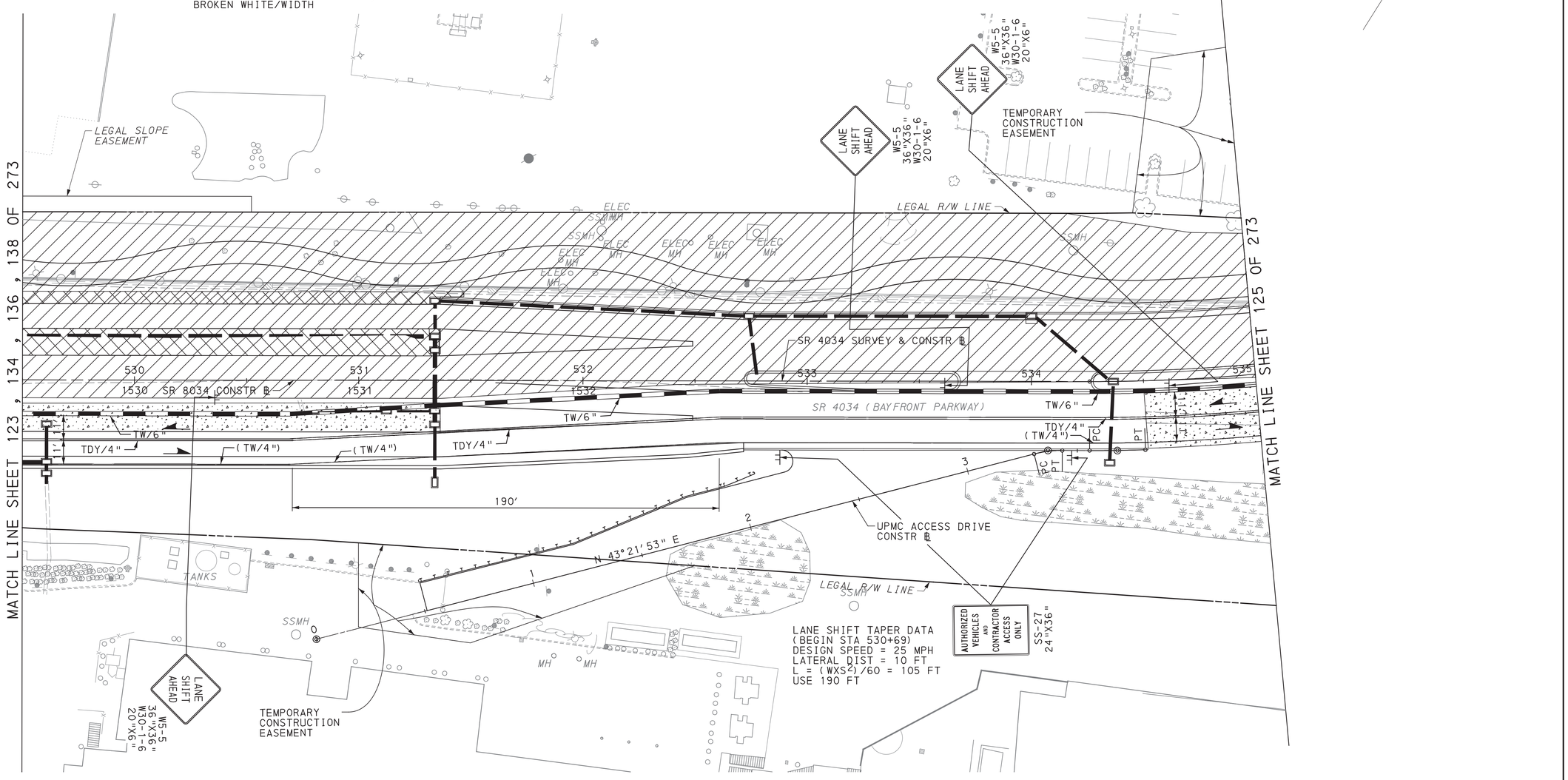
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpistg3B_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	124 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg3B_07.dgn

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsTg3B_08.dgn

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	125 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

MATCH LINE SHEET 133 OF 273

MATCH LINE SHEET 124 OF 273

MATCH LINE SHEET 126 OF 273

TEMPORARY CONSTRUCTION EASEMENT
LEGAL R/W LINE FOR CITY STREET
LEGAL R/W LINE
SIDEWALK
HOLLAND STREET
BAYFRONT BIKEWAY
TEMP CONSTR EASE
G20-5AP 24"X18"
WORK ZONE
R2-1 24"X30"
SPEED LIMIT 25
LANE CLOSED
R11-2 (MOD) 48"X30"
D9-2 24"X24"
D9-2-2 24"X12"
POLE #19764431
JUNC BOX
SR 4034 (BAYFRONT PARKWAY)
8:1 BARRIER TAPER RATE
R=90'
R=65'
HOLLAND ST SURVEY & CONSTR ℄
SR 4034 SURVEY & CONSTR ℄
10' (TYP)
TW/4"
TW/6"
TW/24"
TDY/4"
(TW/4")
(TW/24")
(TDY/4")
W/8"
W/6"
W/24"
DY/4" (PAINT)
LANE SHIFT TAPER DATA
(BEGIN STA 539+91)
DESIGN SPEED = 25 MPH
LATERAL DIST = 10 FT
L = (WXS²)/60 = 104 FT
L/2 = 52 FT
USE 105 FT
W5-5 36"X36" W30-1-6 20"X6"
LANE SHIFT AHEAD
105' LANE SHIFT TAPER
HOLLAND ROUNDABOUT CONSTR ℄
MAINTAIN TRAFFIC UTILIZING TEMPORARY TRAFFIC SIGNAL
HOLLAND ST SURVEY & CONSTR ℄
HOLLAND STREET
LEGAL R/W LINE FOR CITY STREET
LEGAL UNDERGROUND STR SUP EASE
PROPOSED RAILROAD TRACKS (BY OTHERS)
E FRONT STREET
ROAD WORK AHEAD
W20-1 36"X36" W30-1-6 20"X6"
G20-2 36"X18" END ROAD WORK
SSMH
SAN MH
POLE #2104131
POLE #178-E31
POLE #131
POLE #174-A3
POLE #5431
M6-1-1 21"X15"
M1-1 24"X24"
M4-5-1 24"X12"
M3-4-1 24"X12"
M3-2-1 24"X12"
TO WEST INTERSTATE 90
TO EAST INTERSTATE 90
TO INTERSTATE 79

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

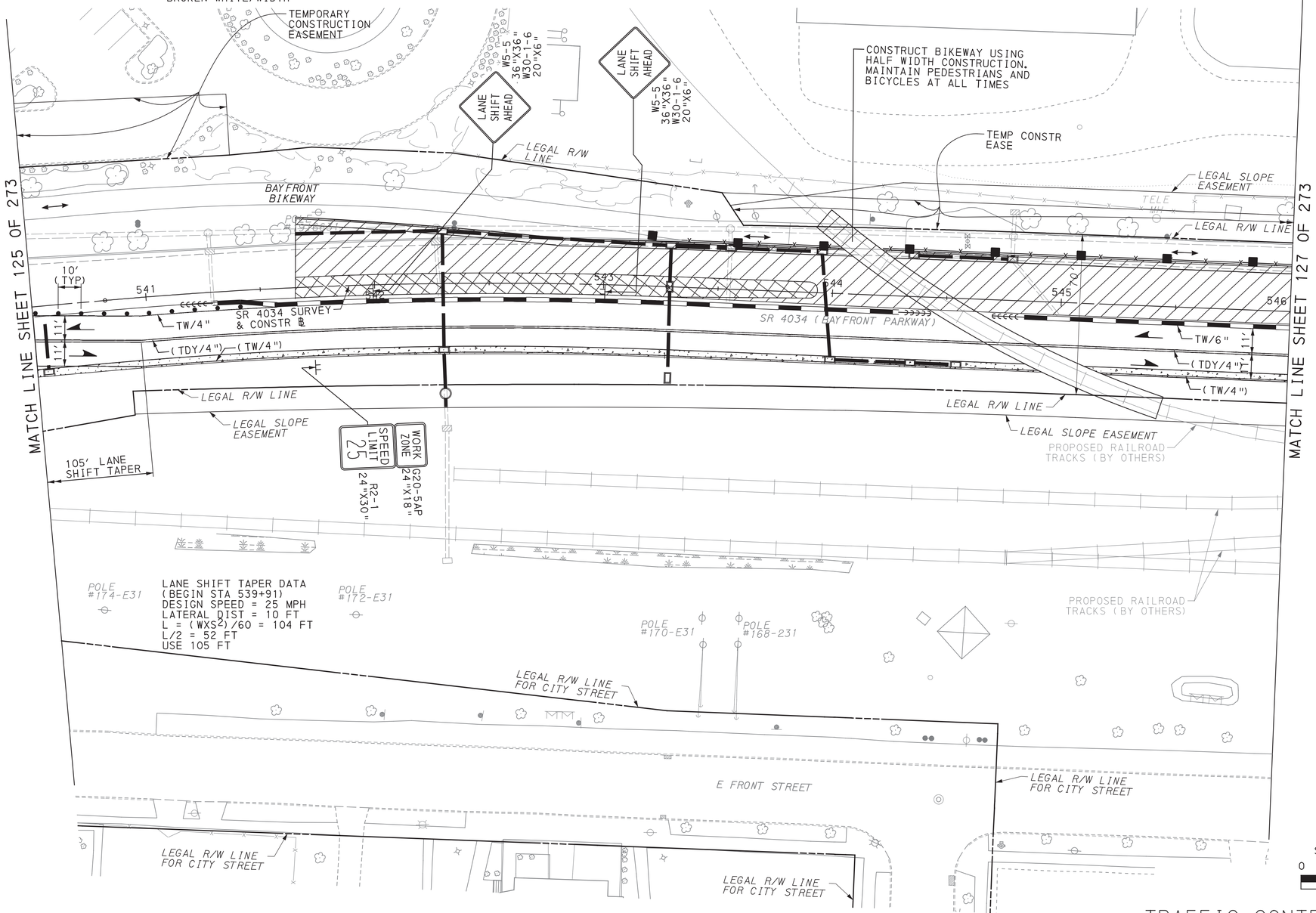
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	126 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

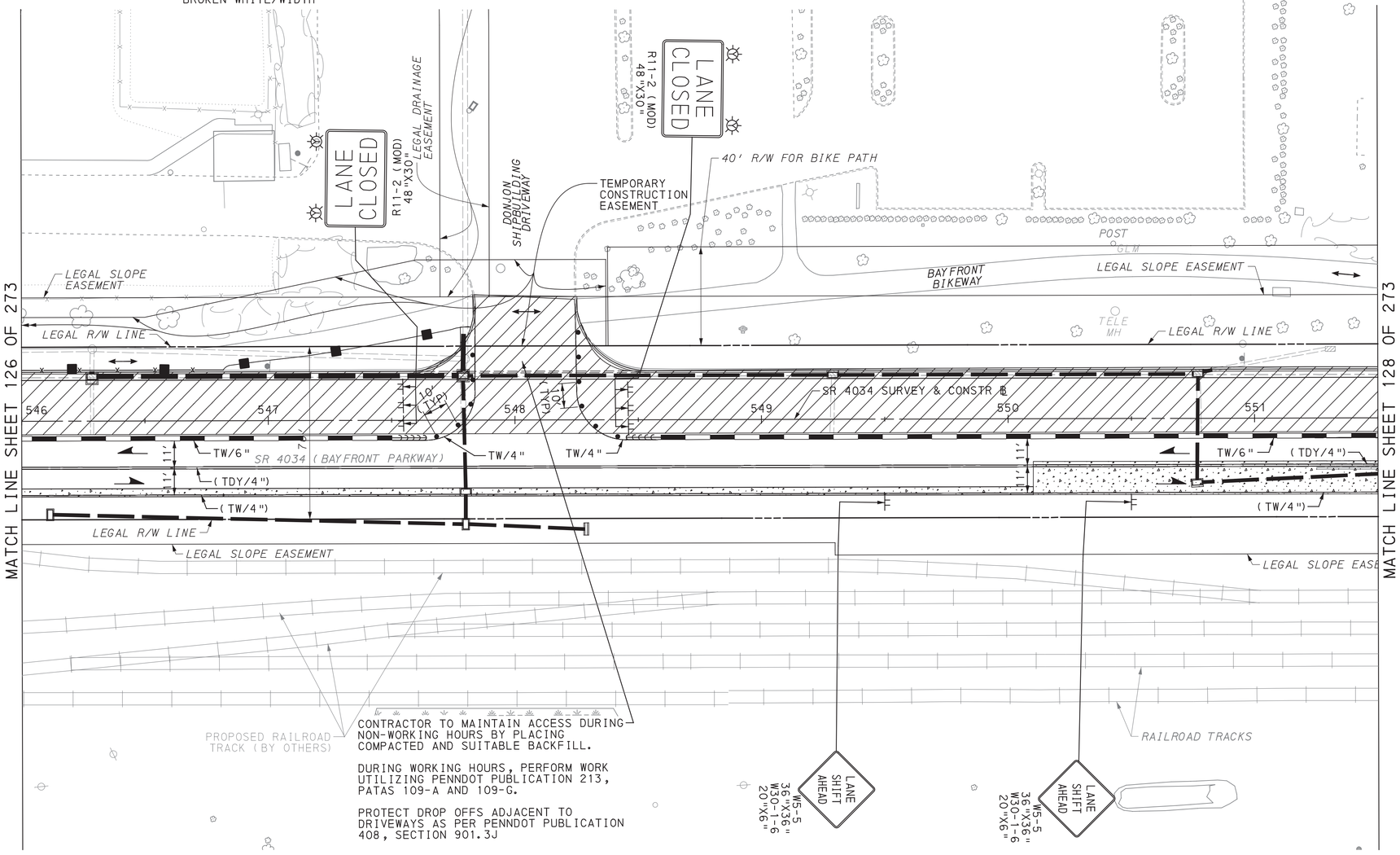
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1sr93B_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	127 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

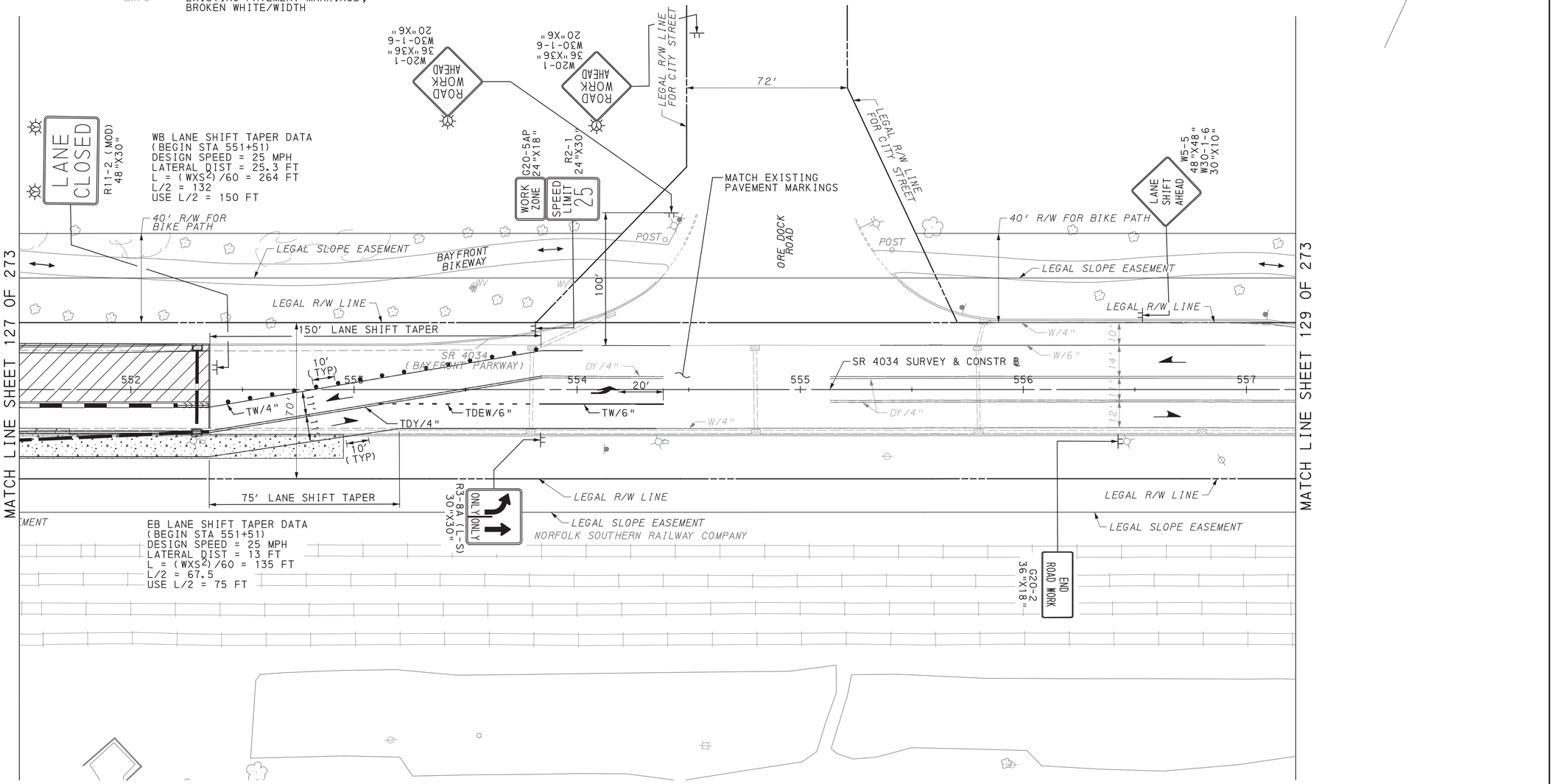
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg3B_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	128 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

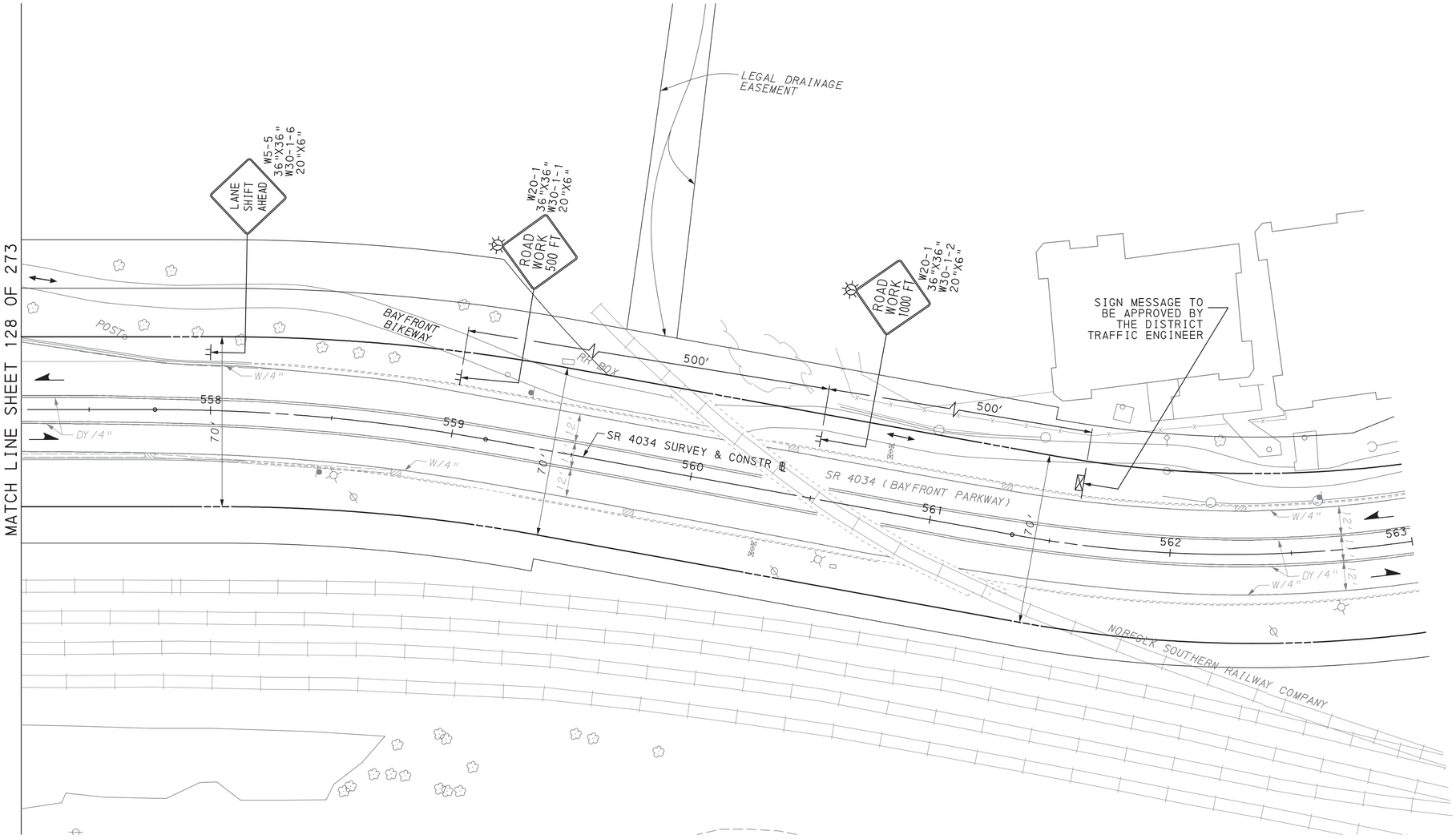
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPstg3B_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	129 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

DES: SMR | CKD: DJG | DWG: SMR | CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

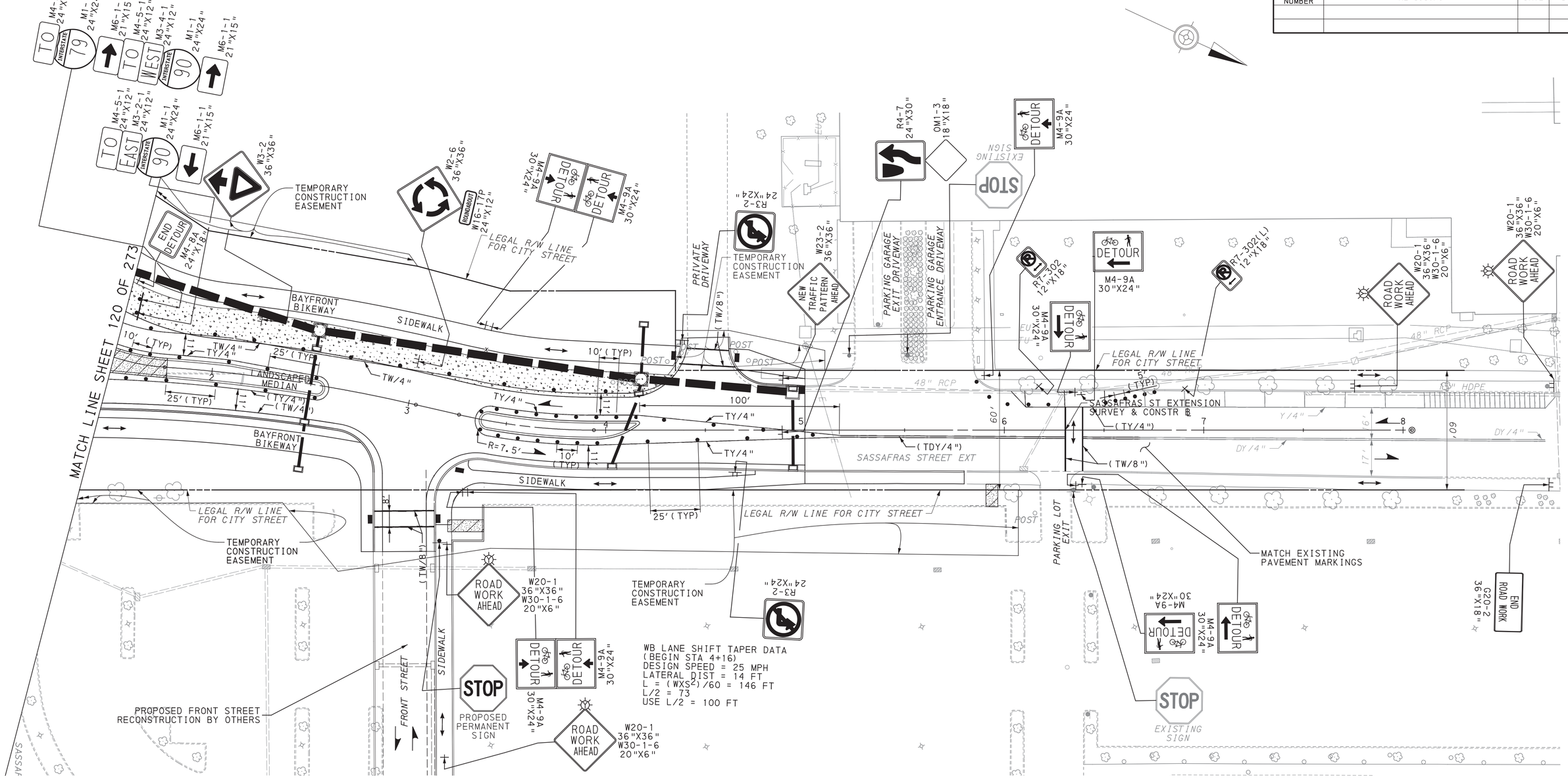
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3B_12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	130 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg3B_13.dgn



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

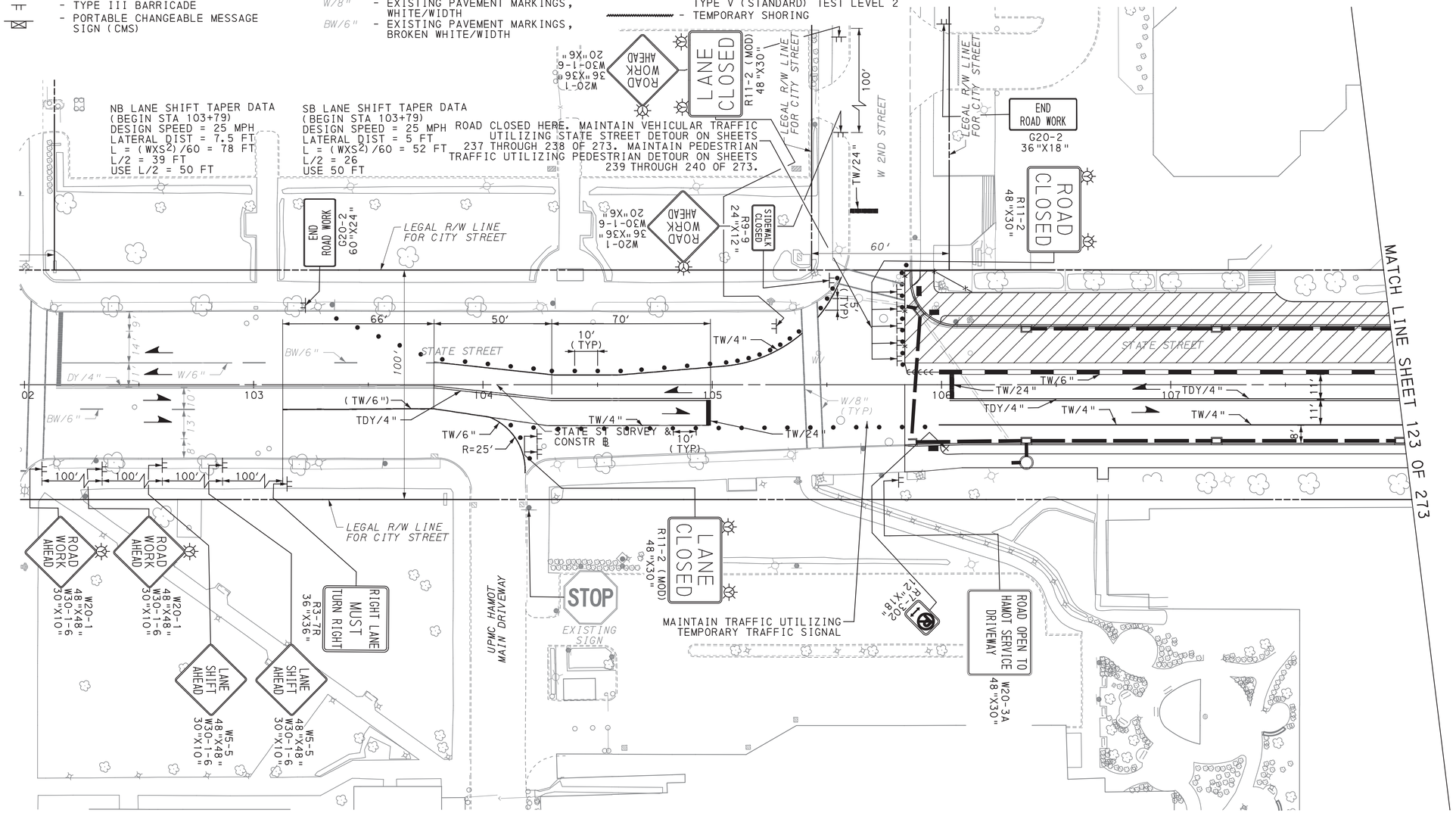
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	131 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

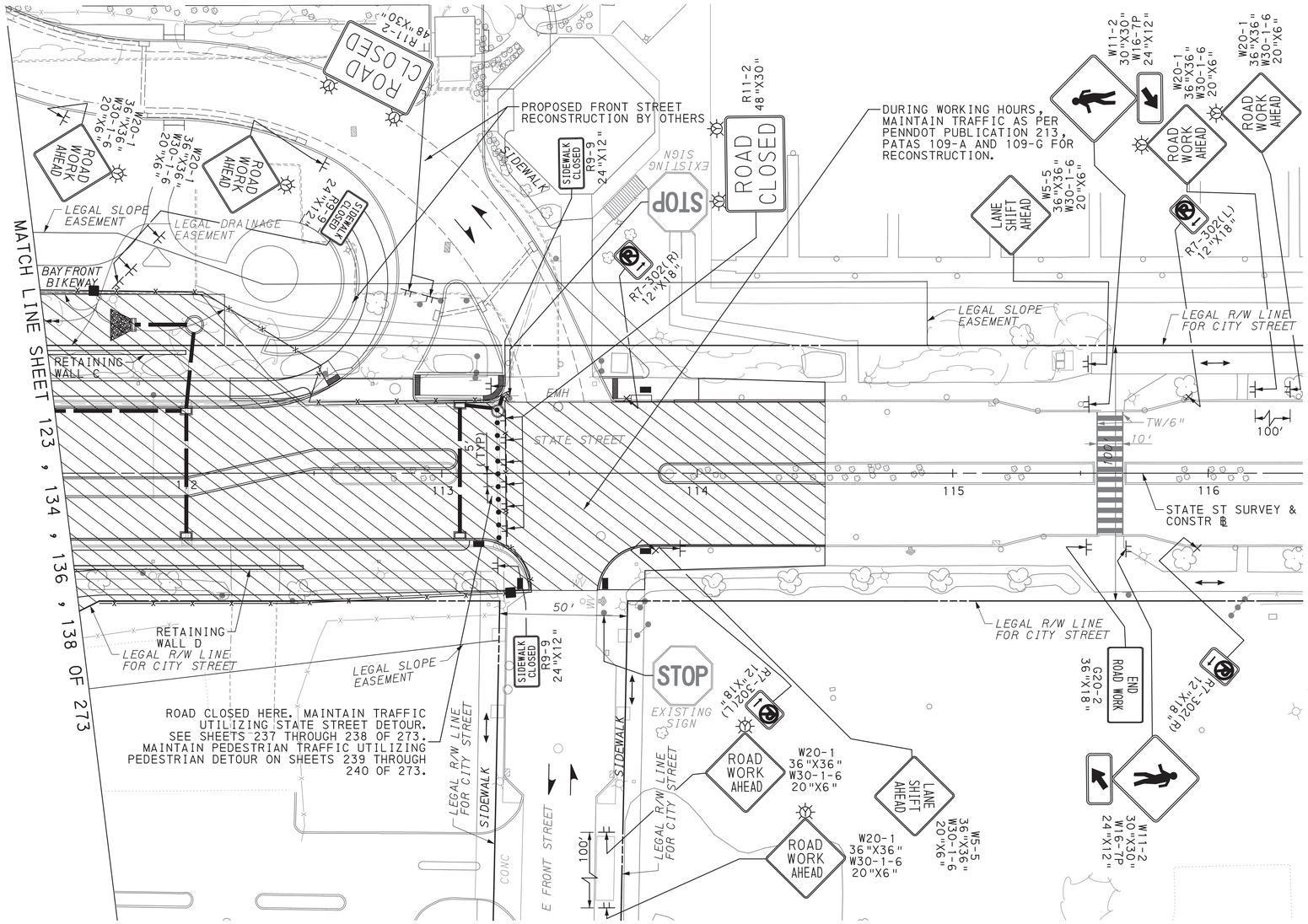
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP\stg3B_14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	132 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

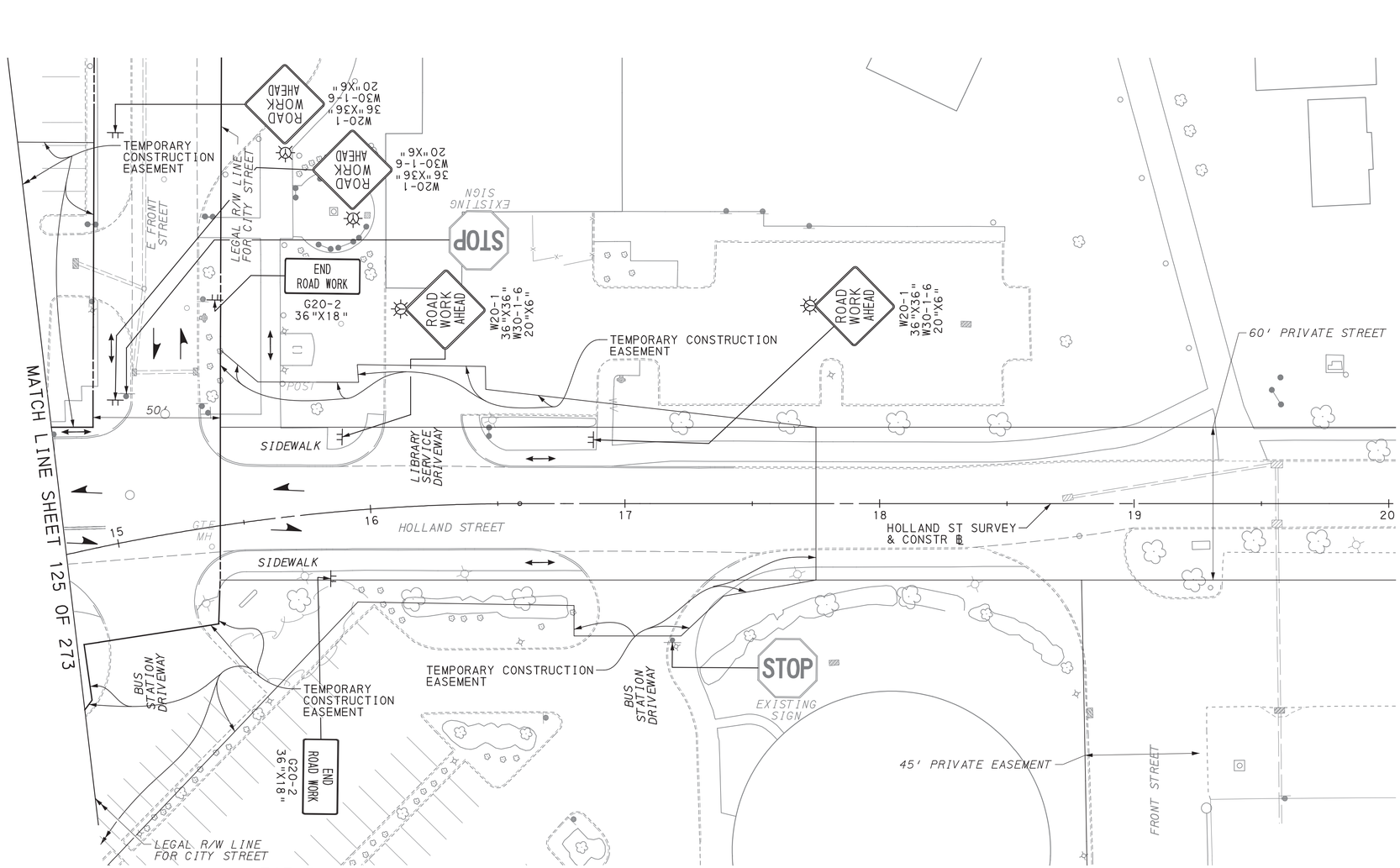
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg3B_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	133 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3B, 3D, 3E, 3F

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpl\sheets\TCplsTg3B_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	134 OF 273
CITY OF ERIE				

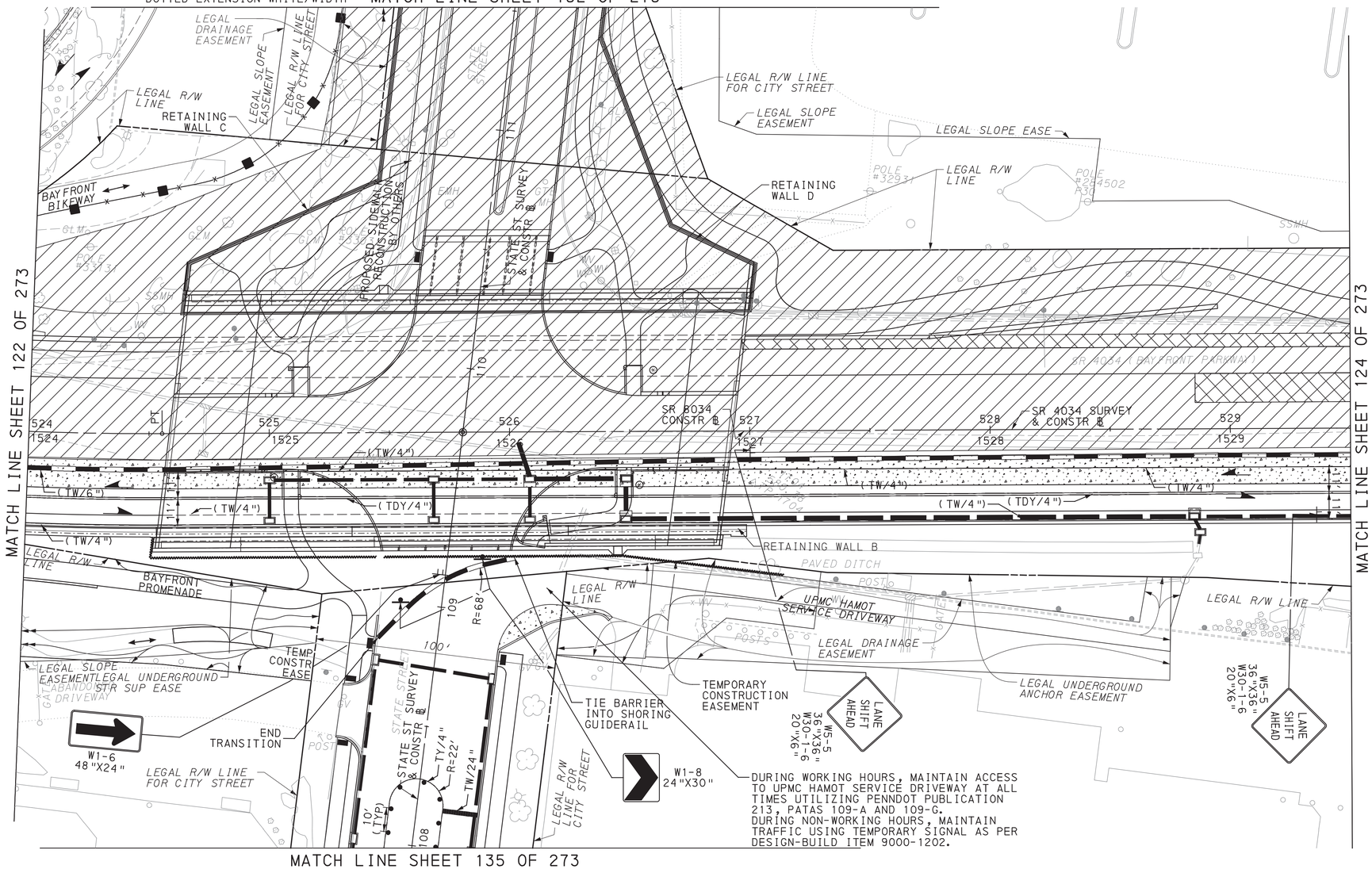
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3D_01.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	135 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg3D_02.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

W 3RD STREET
PARKING
GATE
LEGAL R/W LINE FOR CITY STREET
W 2ND STREET
ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"
ROAD CLOSED HERE. MAINTAIN VEHICULAR TRAFFIC UTILIZING STATE STREET DETOUR ON SHEETS 237 THROUGH 238 OF 273. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR ON SHEETS 239 THROUGH 240 OF 273.
END ROAD WORK G20-2 60"X24"
100'
59'
60'
STATE STREET
BW/6"
W/6"
DY/4"
TBW/6"
TDY/4"
TW/6"
TW/24" (TYP)
10' (TYP)
12' (TYP)
20'
15'
17'
R=22'
8' (TYP)
TW/8" (TYP)
TY/4"
14'
W/8"
101
102
103
104
105
106
107
STATE ST SURVEY & CONSTR ℄
MATCH LINE SHEET 134 OF 273
200'
POST
PARKING
ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"
LEFT LANE CLOSED AHEAD W20-5L 48"X48" W30-1-6 30"X10"
LEGAL R/W LINE FOR CITY STREET
UPMC HAMOT MAIN DRIVEWAY
STOP
EXISTING SIGN
MAINTAIN TRAFFIC UTILIZING TEMPORARY TRAFFIC SIGNAL
R2-1 30"X36"
ROAD OPEN TO HAMOT SERVICE DRIVEWAY W20-3A 48"X30"
GATE

NB SHOULDER CLOSURE TAPER DATA
(BEGIN STA 4+16)
DESIGN SPEED = 25 MPH
LATERAL DIST = 8 FT
$L = (WXS^2)/60 = 83$ FT
L/3 = 28
USE 50 FT

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

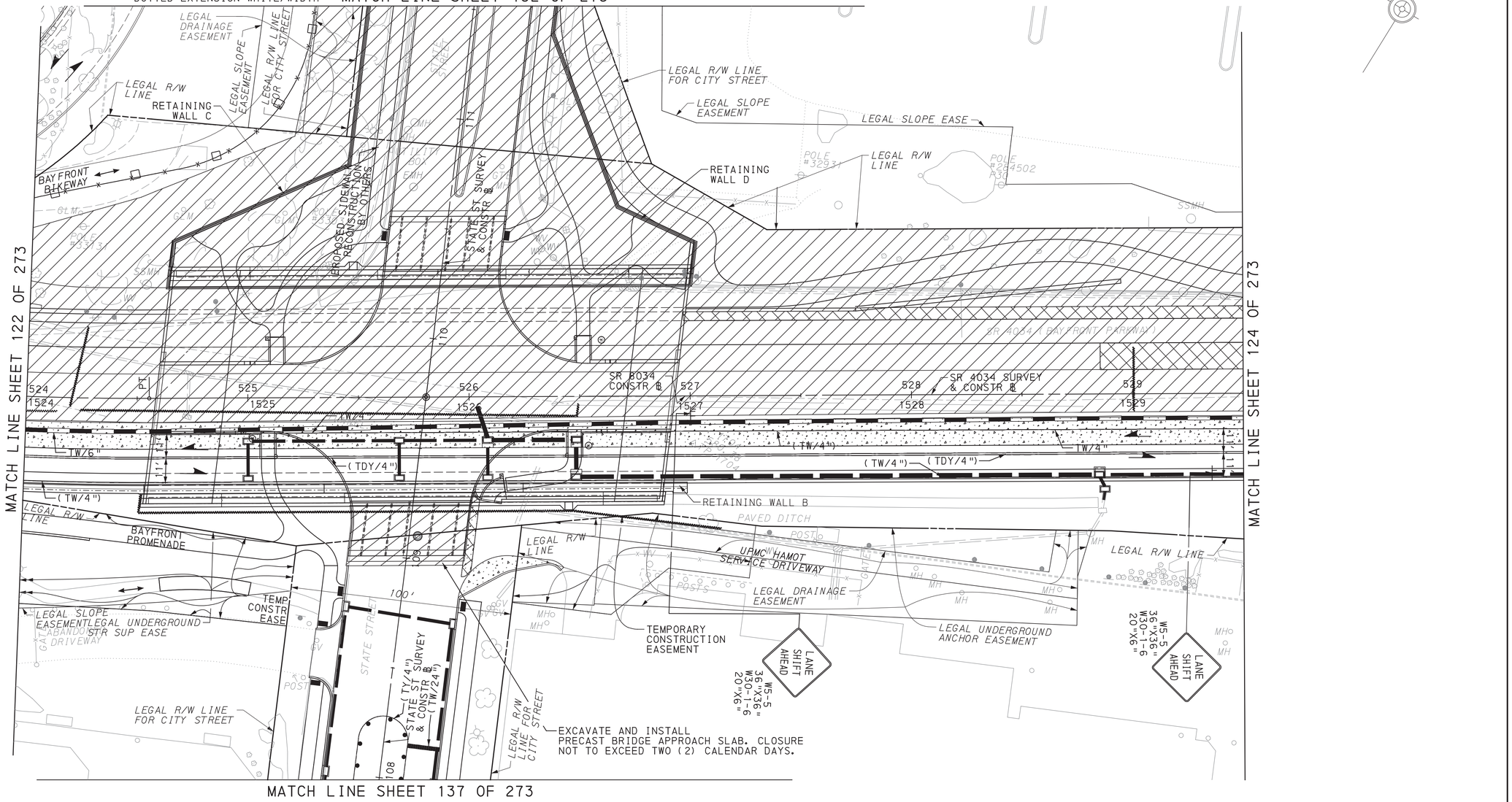
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	136 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3E

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3E_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	137 OF 273
CITY OF ERIE				

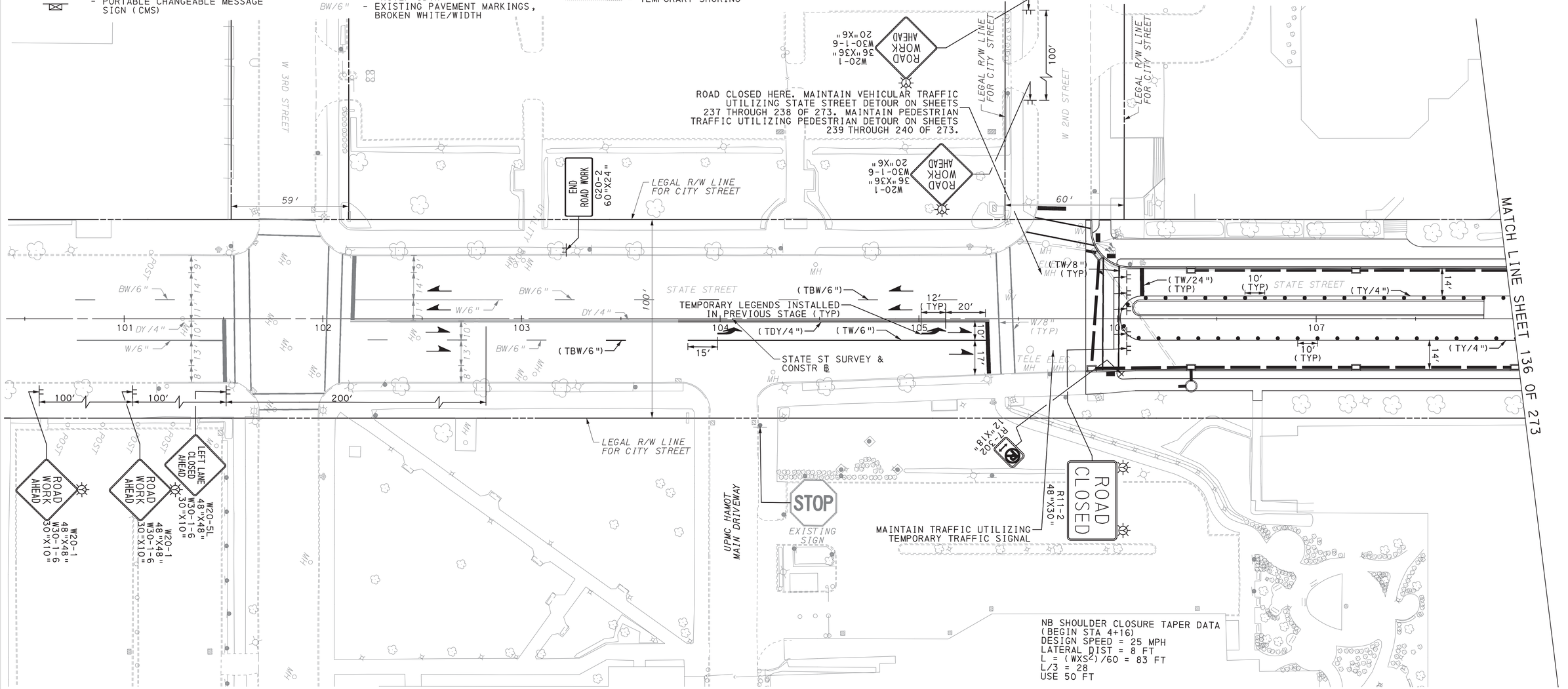
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg3E_02.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



NB SHOULDER CLOSURE TAPER DATA
(BEGIN STA 4+16)
DESIGN SPEED = 25 MPH
LATERAL DIST = 8 FT
L = (WXS^2)/60 = 83 FT
L/3 = 28
USE 50 FT

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3E

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	138 OF 273
CITY OF ERIE				

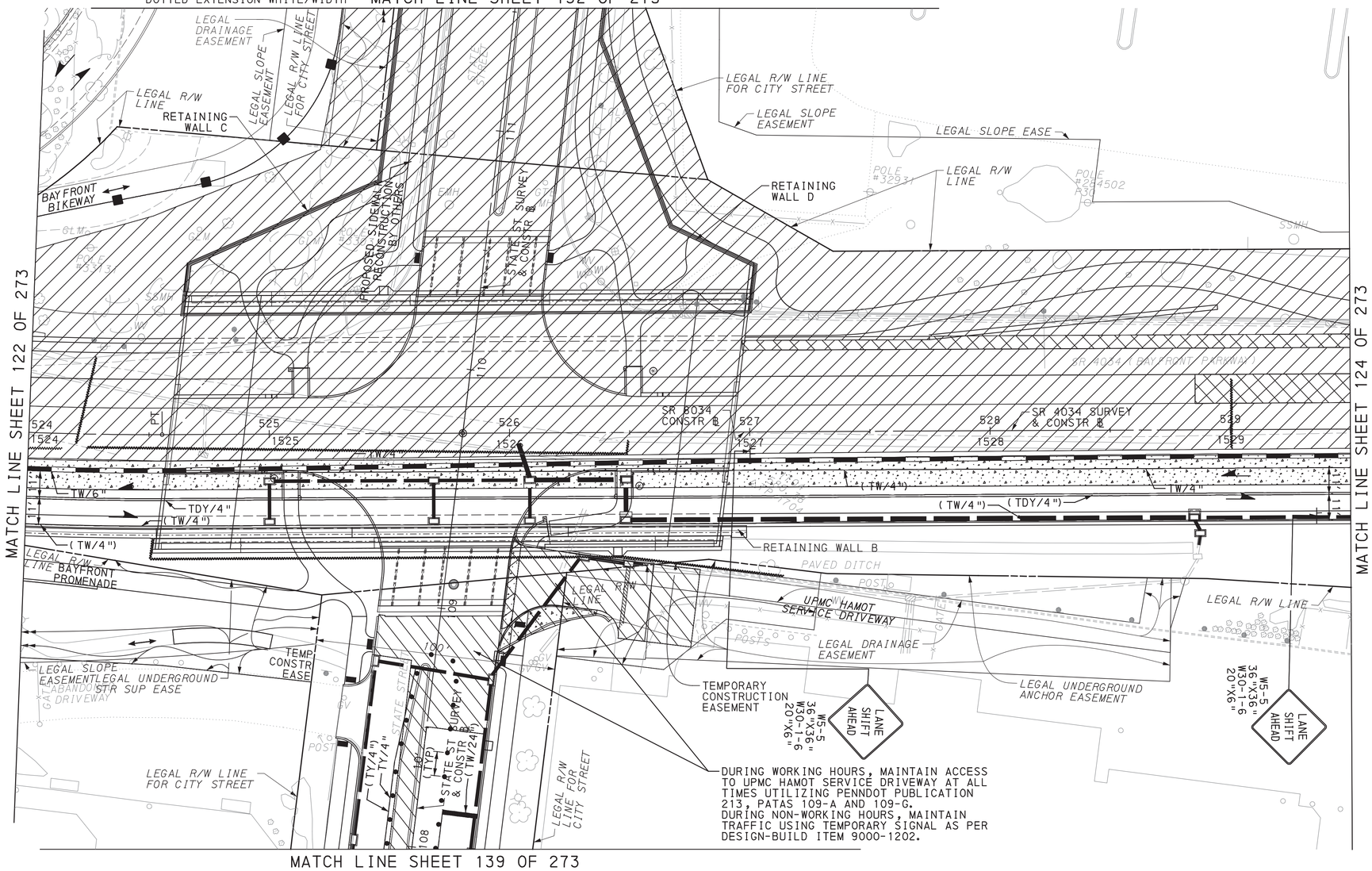
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg3F_01.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 3F

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

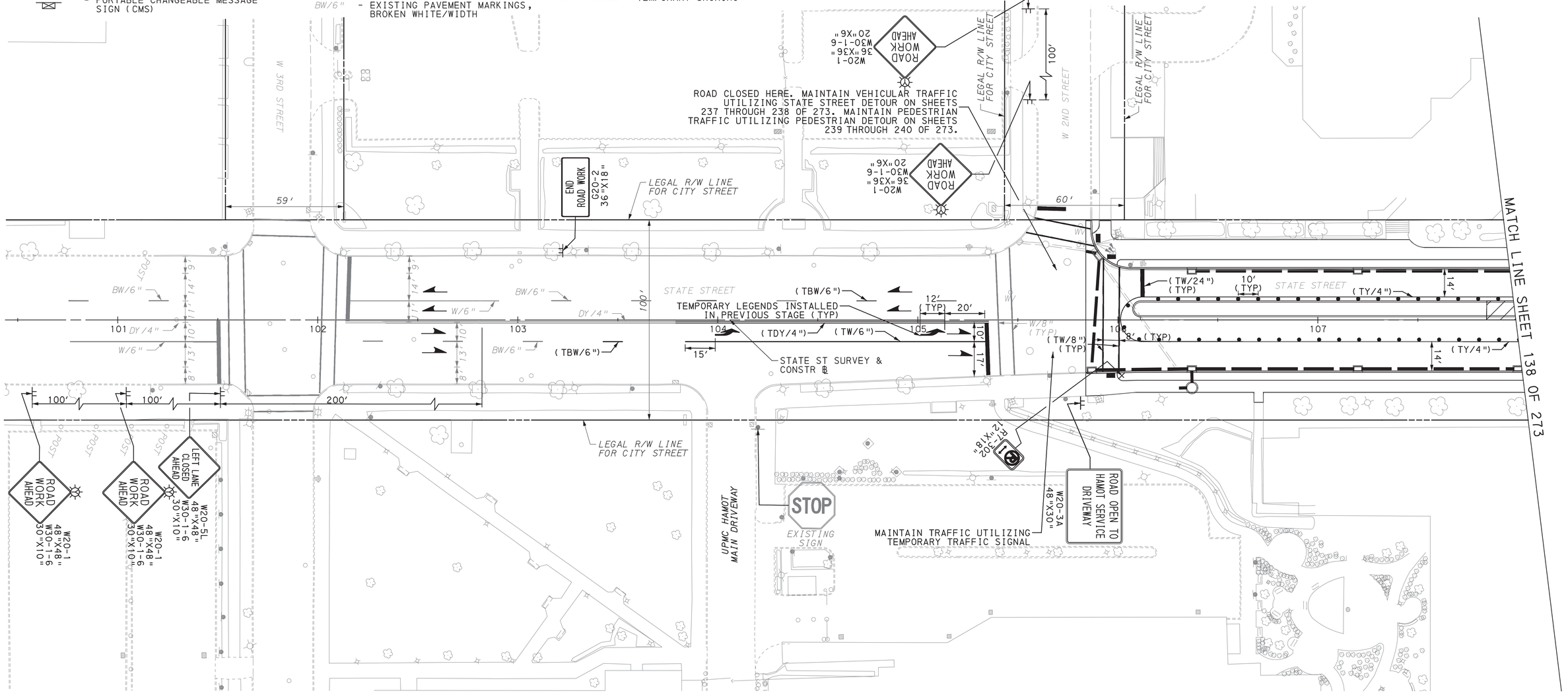
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	139 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 3F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

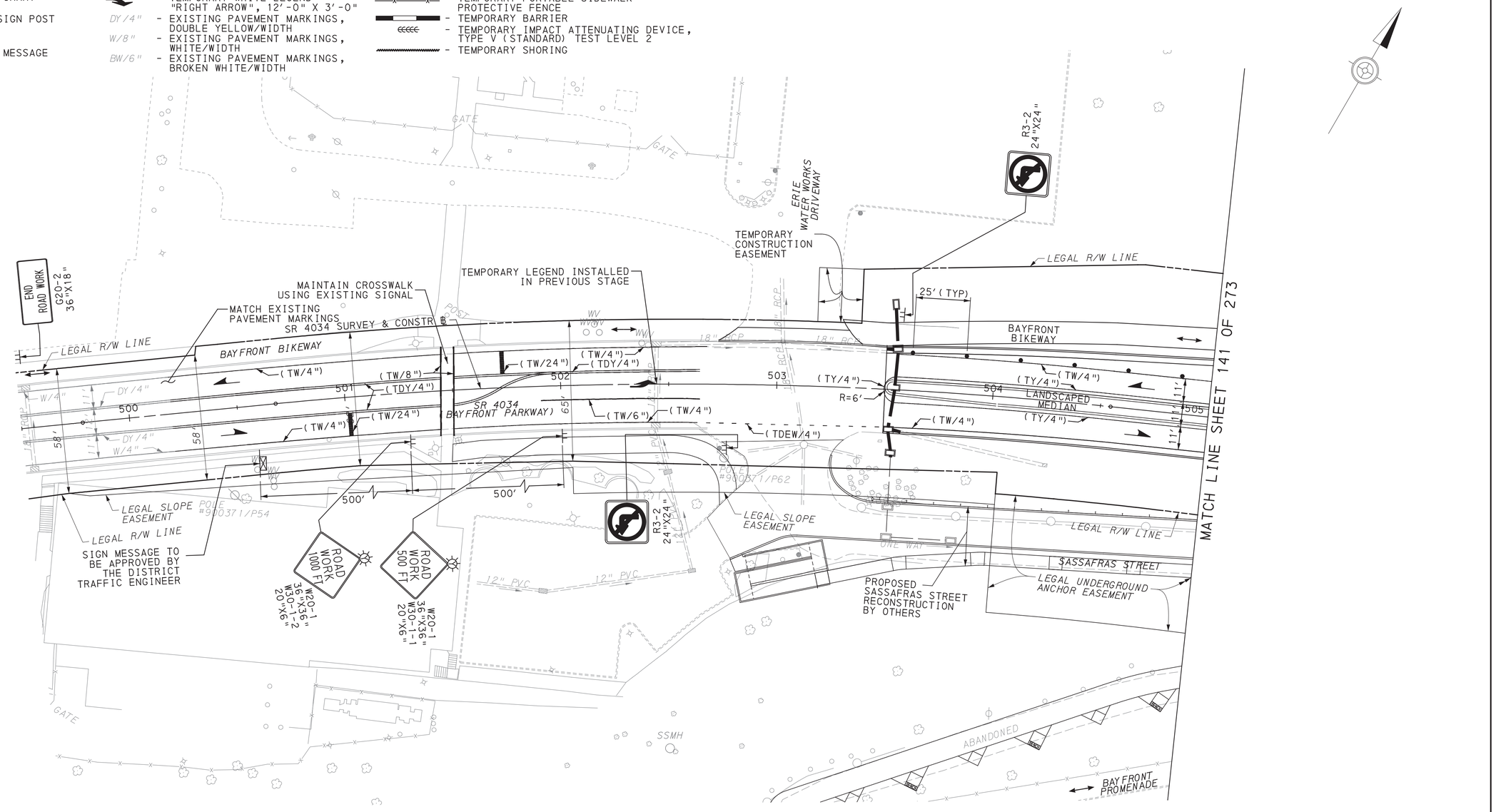
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1sTg3F_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	140 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

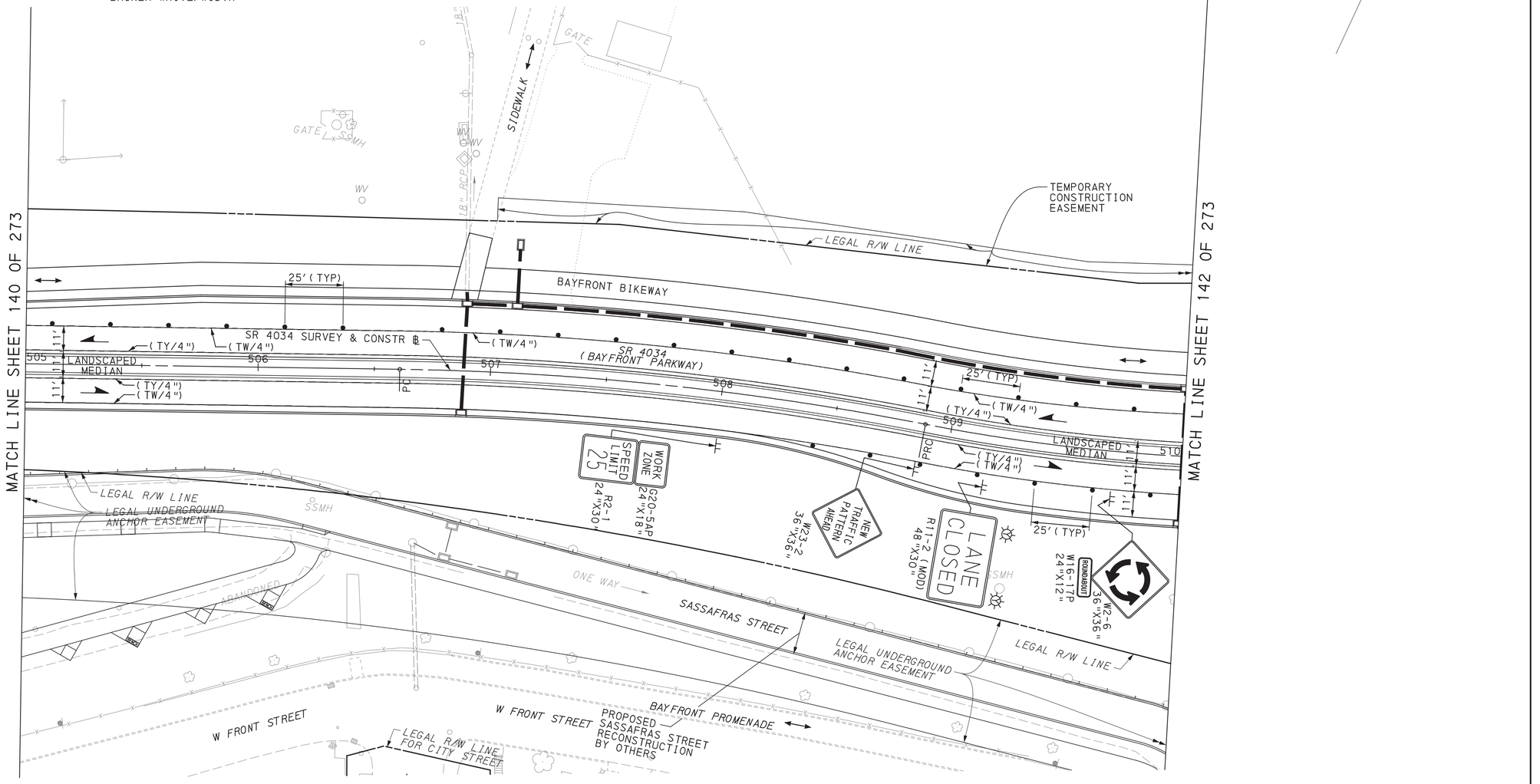
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg4_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	141 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

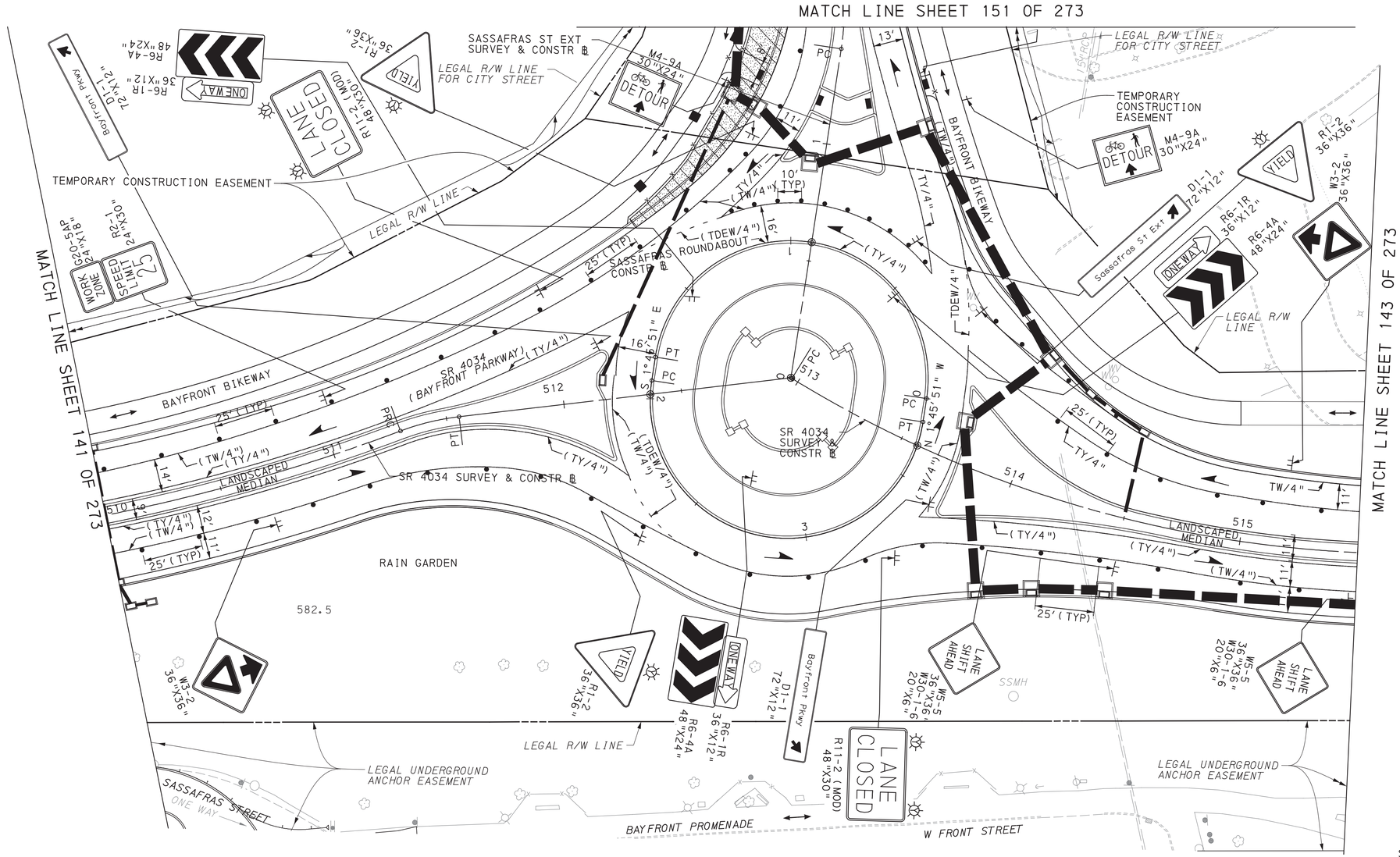
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg4_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	142 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



TRAFFIC CONTROL PLAN
STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

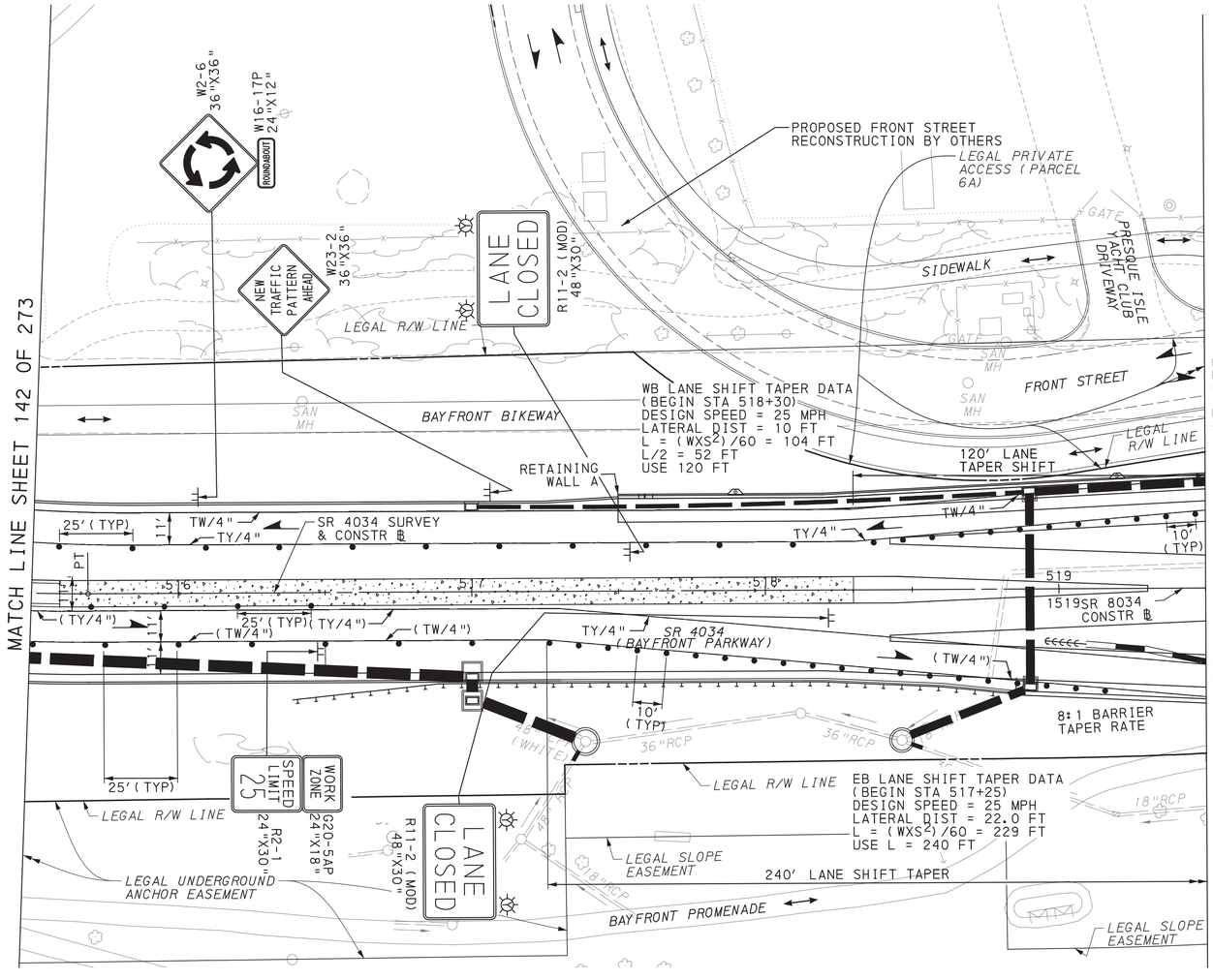
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPsheetstg4_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	143 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPistg4_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	144 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

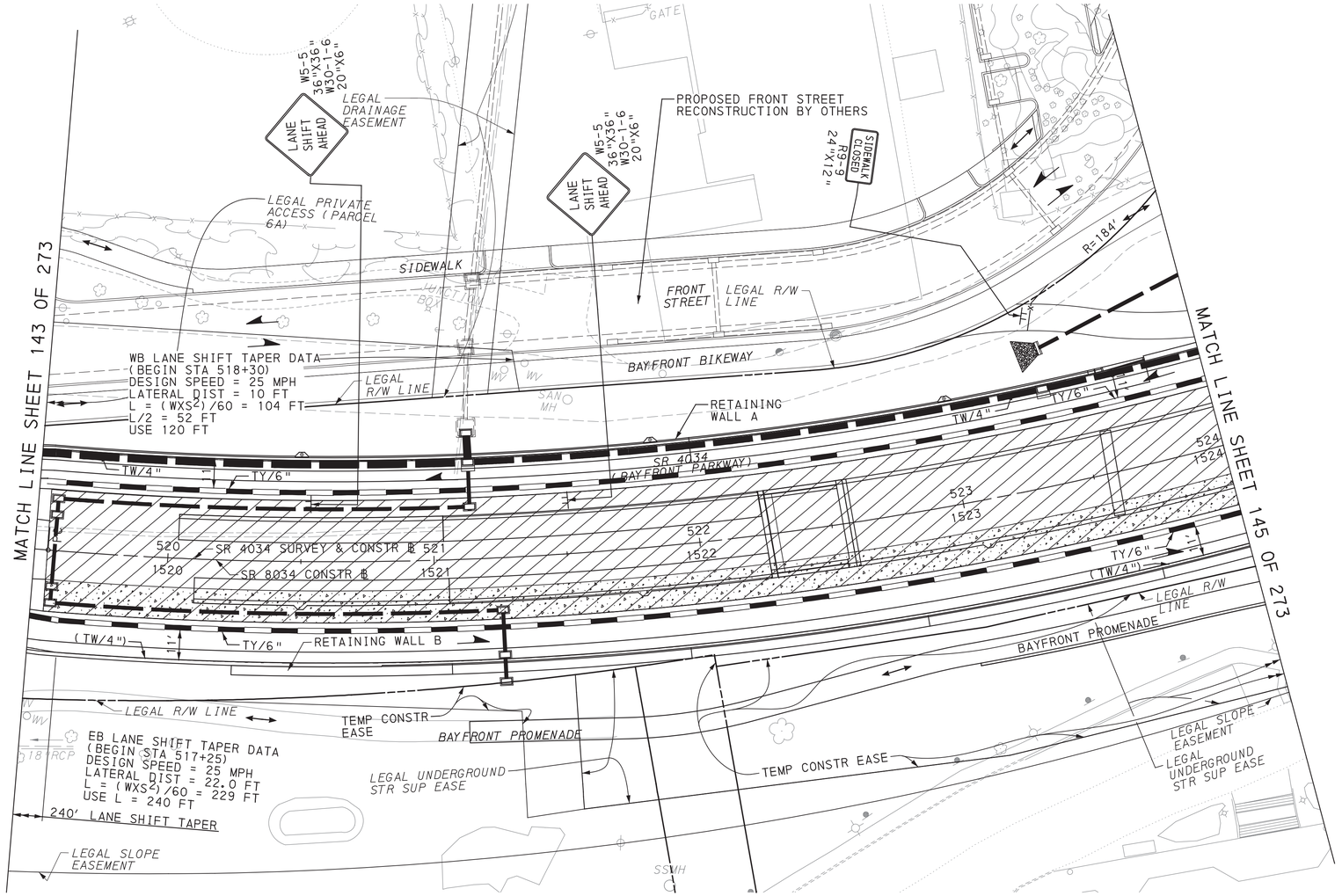
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

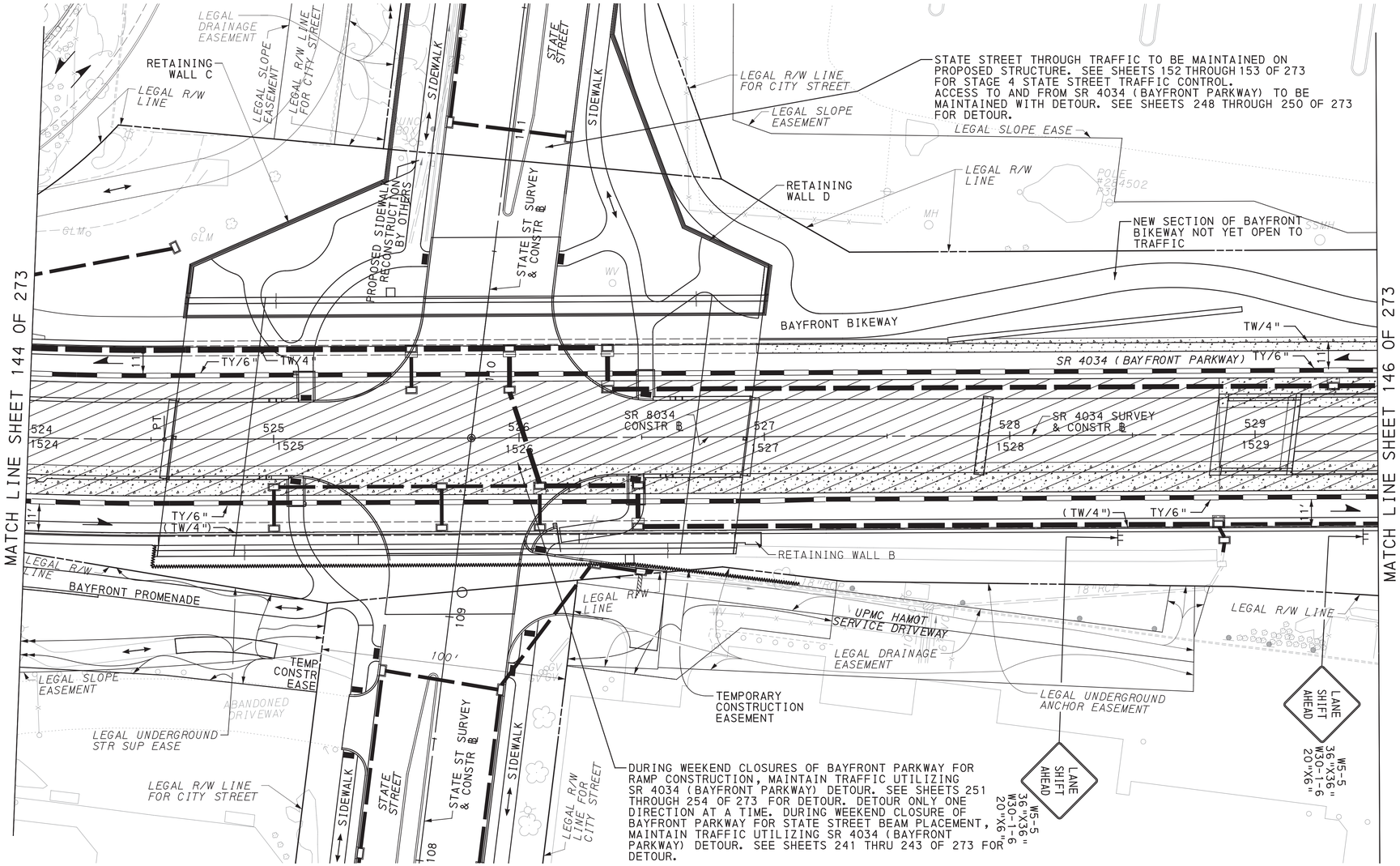
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg4_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	145 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/12/2022

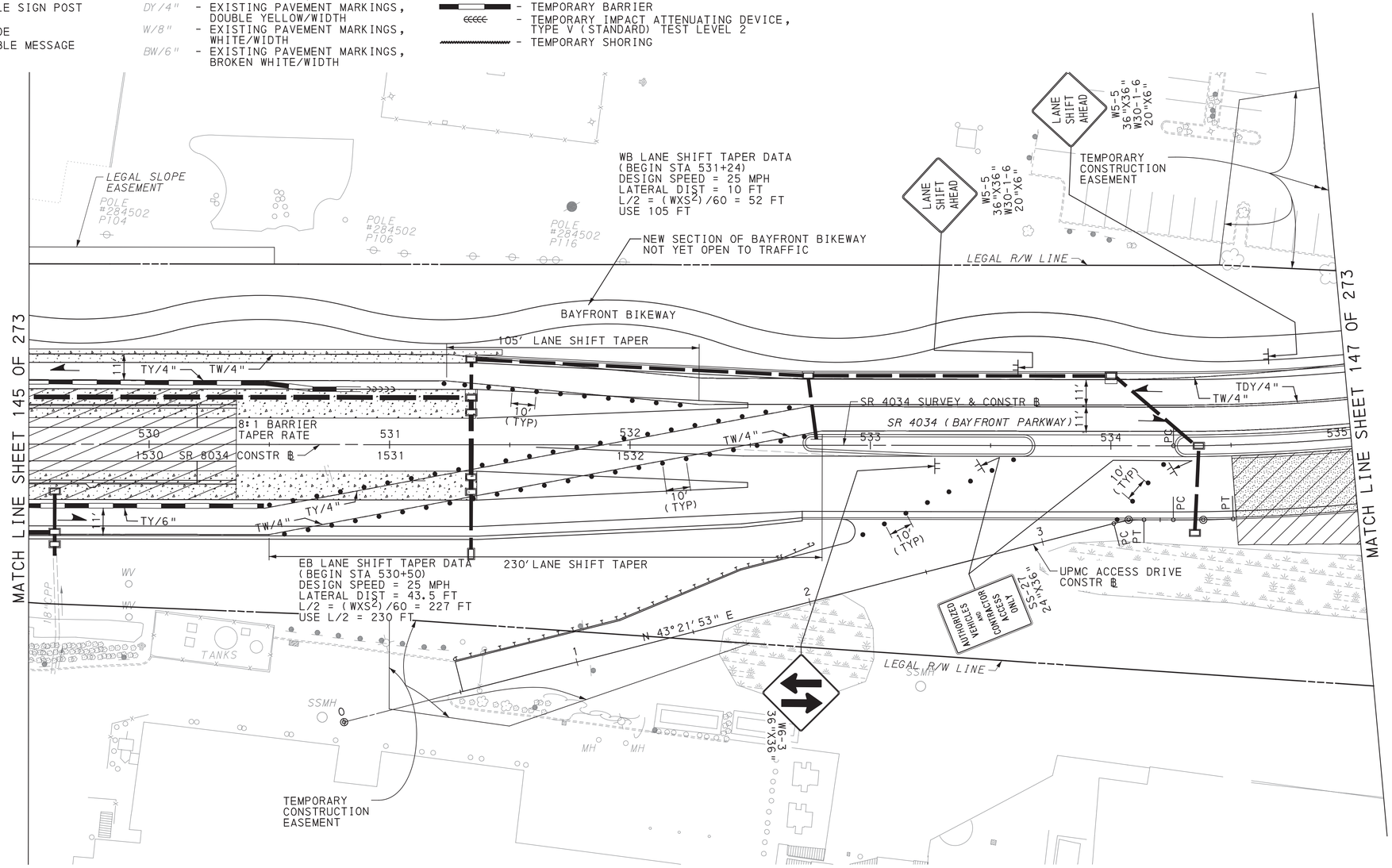
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg4_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	146 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg4_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	147 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

MATCH LINE SHEET 155 OF 273

MATCH LINE SHEET 146 OF 273

MATCH LINE SHEET 148 OF 273

MATCH LINE SHEET 154 OF 273

TEMPORARY CONSTRUCTION EASEMENT

LANE CLOSED R11-2 (MOD) 48"X30"

LEGAL R/W LINE FOR CITY STREET

TEMP CONSTR EASE

BAYFRONT BIKEWAY

LEGAL R/W LINE

MAINTAIN TRAFFIC UTILIZING TEMPORARY TRAFFIC SIGNAL. DETOUR SOUTH LEG OF HOLLAND STREET UTILIZING DETOUR ON SHEETS 244 THROUGH 245 OF 273. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR ON SHEETS 246 THROUGH 247 OF 273.

SIDEWALK

HOLLAND STREET

SR 4034 (BAYFRONT PARKWAY)

HOLLAND ROUNDABOUT CONSTR Ⓡ

HOLLAND ST SURVEY & CONSTR Ⓡ

SR 4034 SURVEY & CONSTR Ⓡ

RETAINING WALL E

LEGAL UNDERGROUND STR SUP EASE

E FRONT STREET

PROPOSED RAILROAD TRACKS (BY OTHERS)

D9-2 24"X24"

D9-2-2 24"X12"

R2-1 24"X30"

G20-5AP 24"X18"

WORK ZONE

SPEED LIMIT 25

M1-1 24"X24"

M3-2-1 24"X12"

M3-4-1 24"X12"

M4-5-1 24"X12"

M6-1-1 21"X15"

INTERSTATE 90 / 79

EAST / WEST / TO

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DAMIAN JOSEPH GEORGE — REGISTERED PROFESSIONAL ENGINEER — PE075334 — COMMONWEALTH OF PENNSYLVANIA

PLOTTED: 8/2/2022

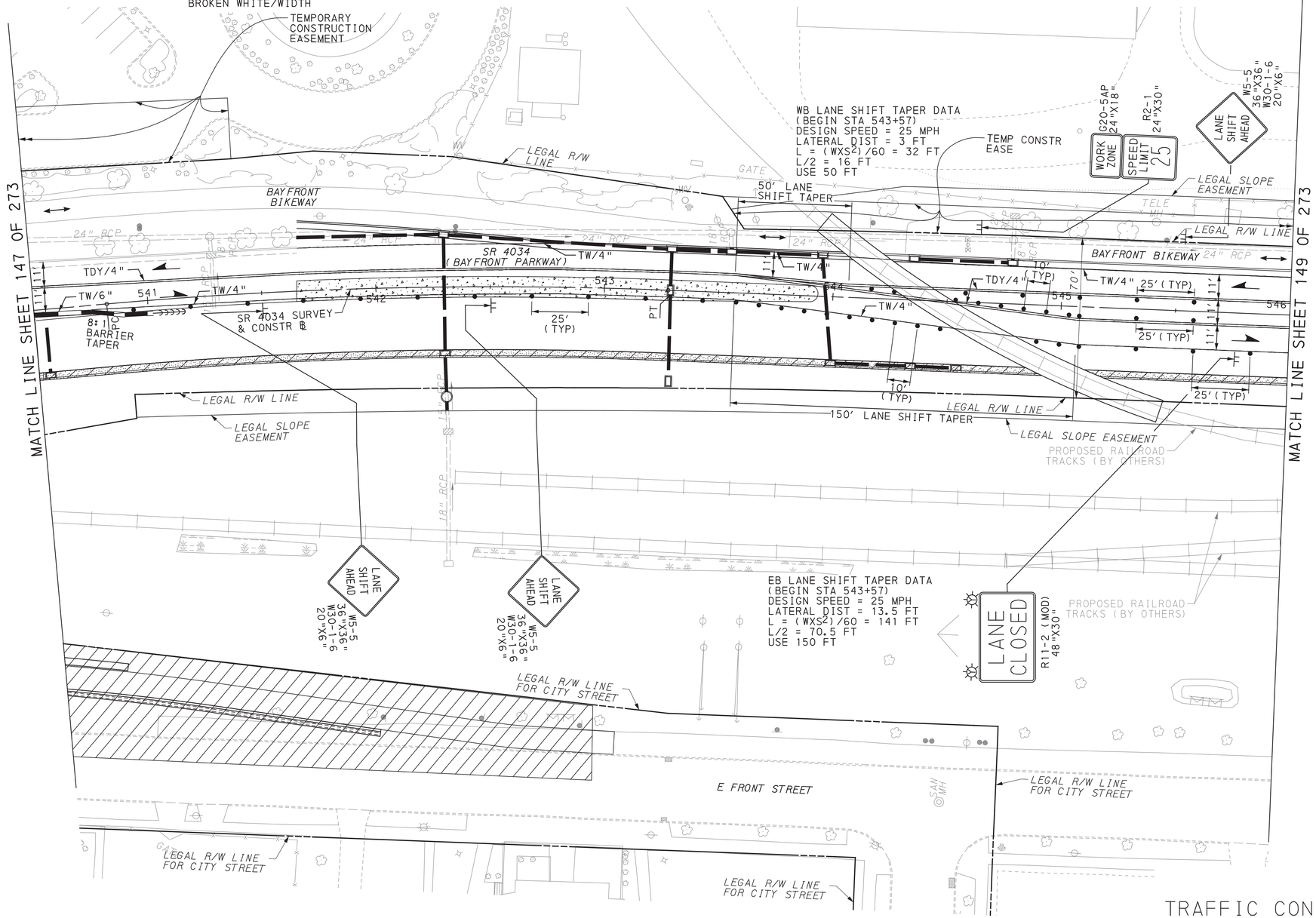
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1stg4_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	148 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

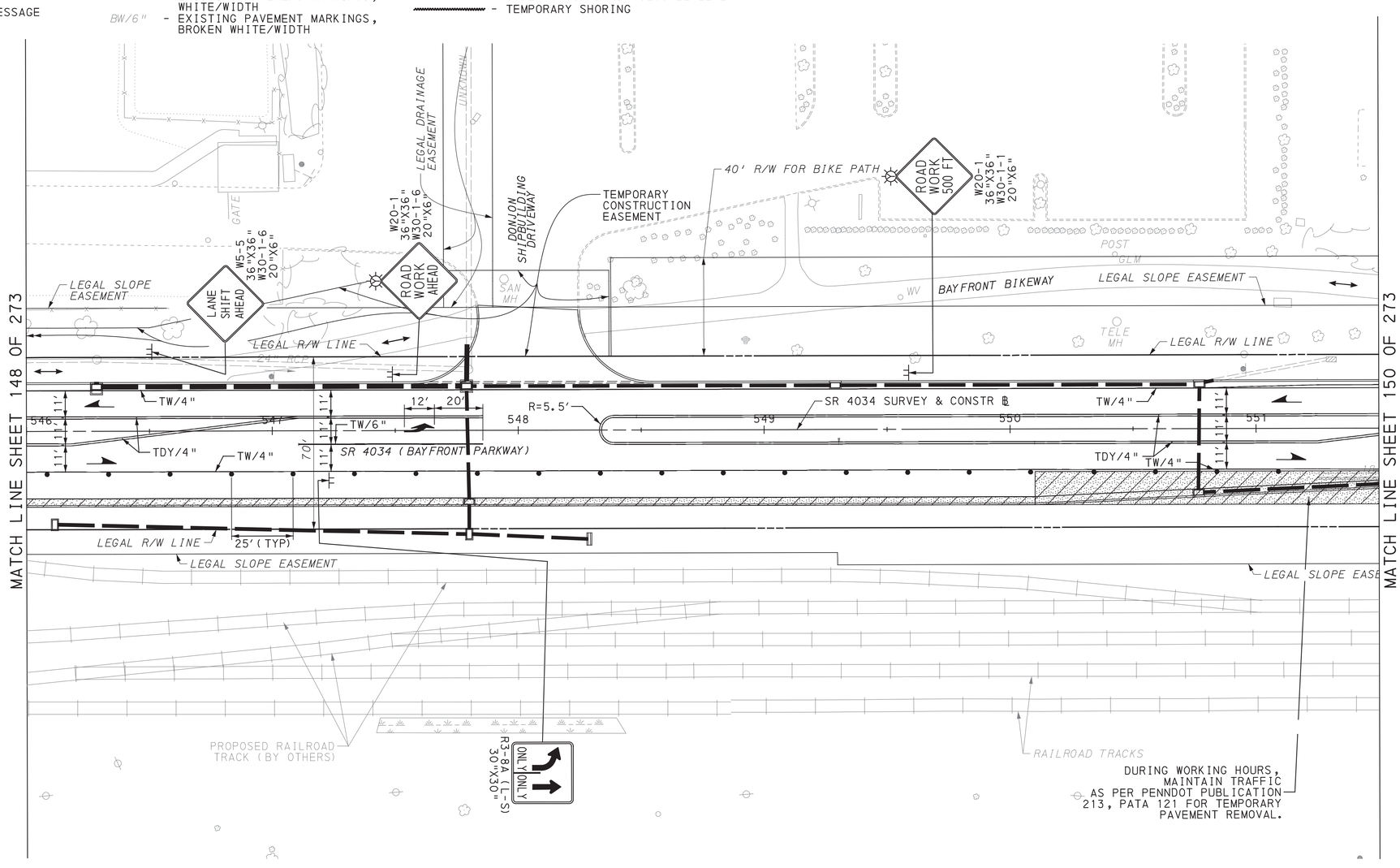
PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCpl_stg4_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	149 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpl_stg4_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	150 OF 273
CITY OF ERIE				

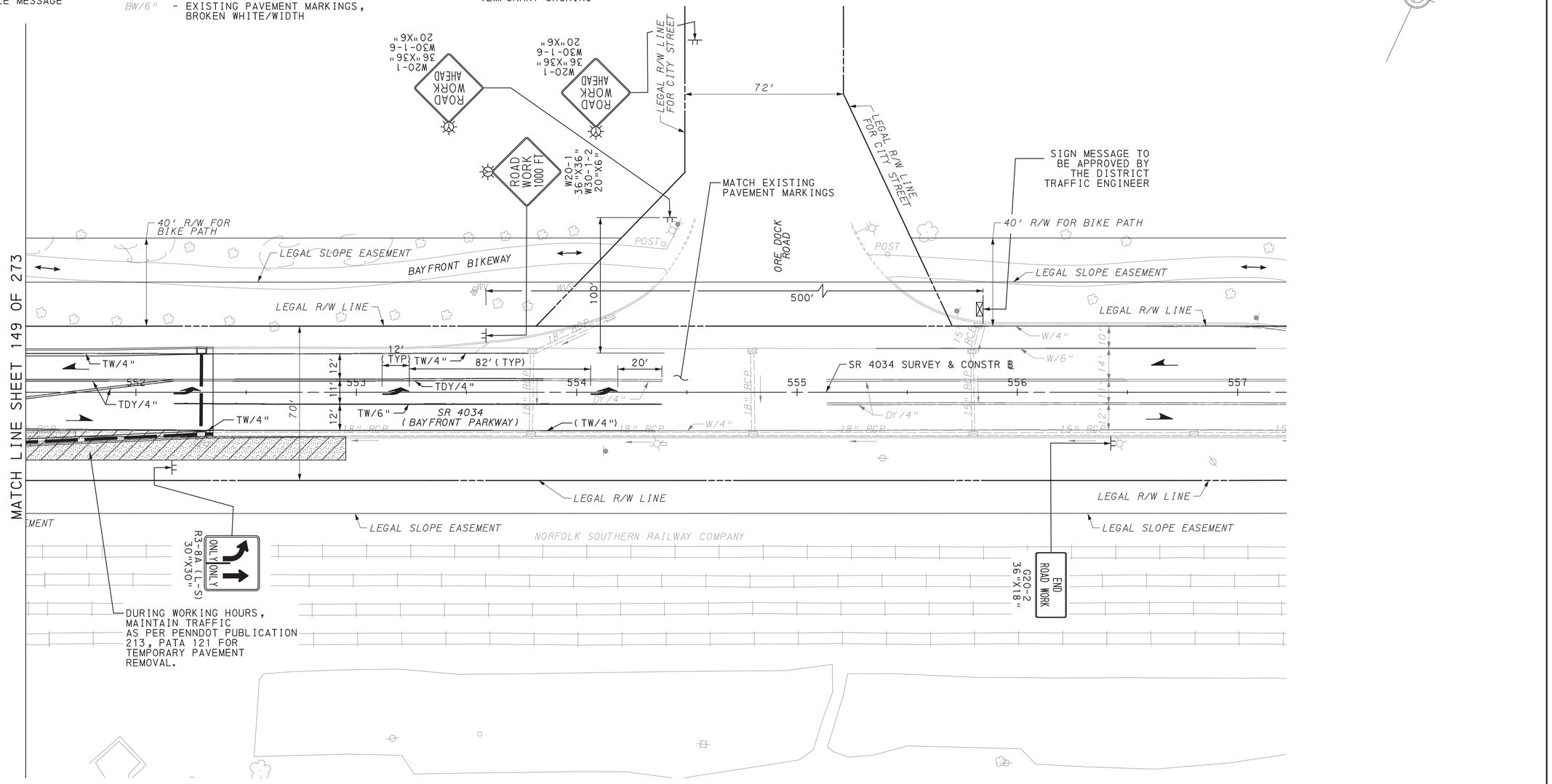
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg4_11.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

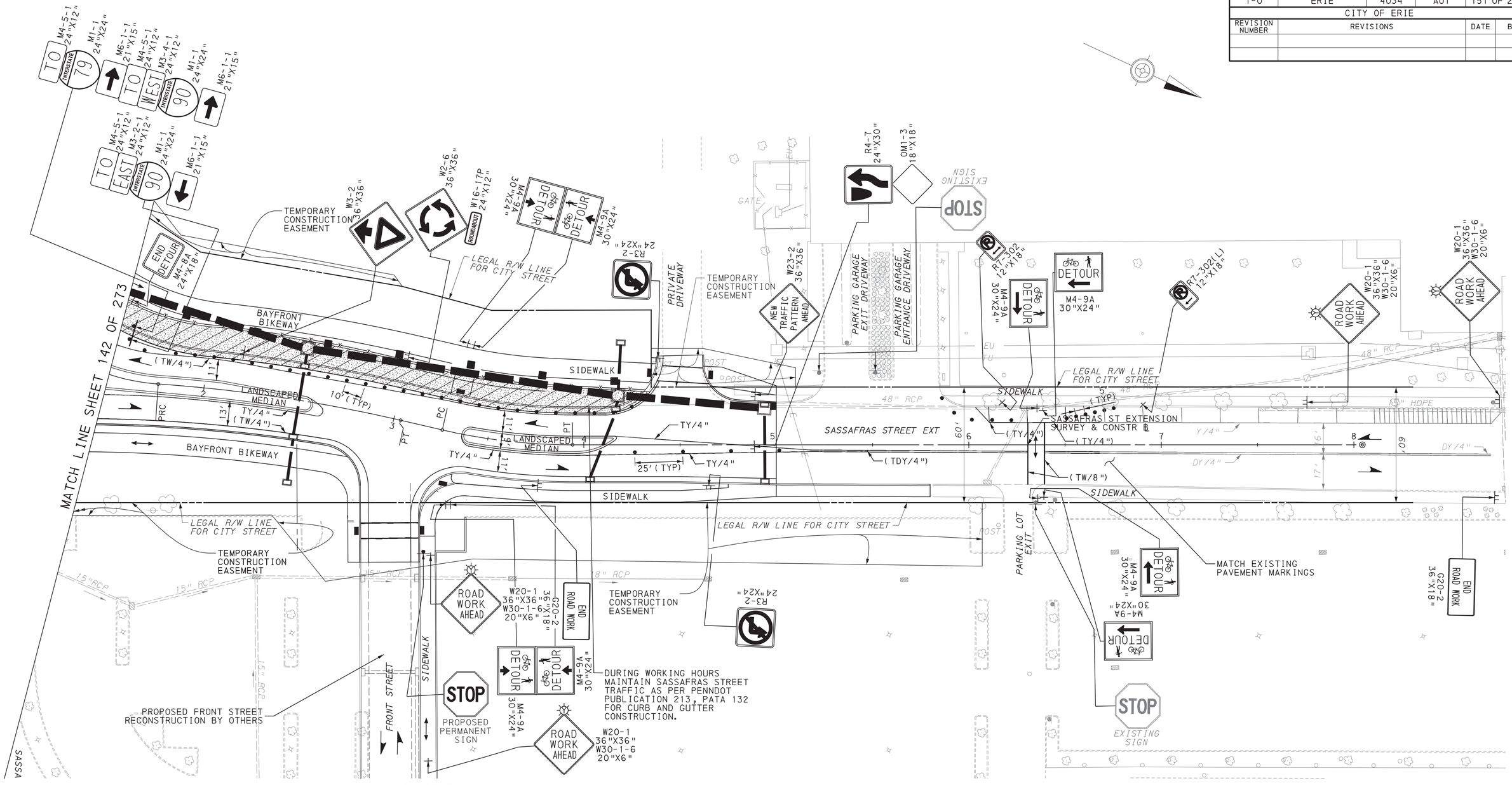
TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	151 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

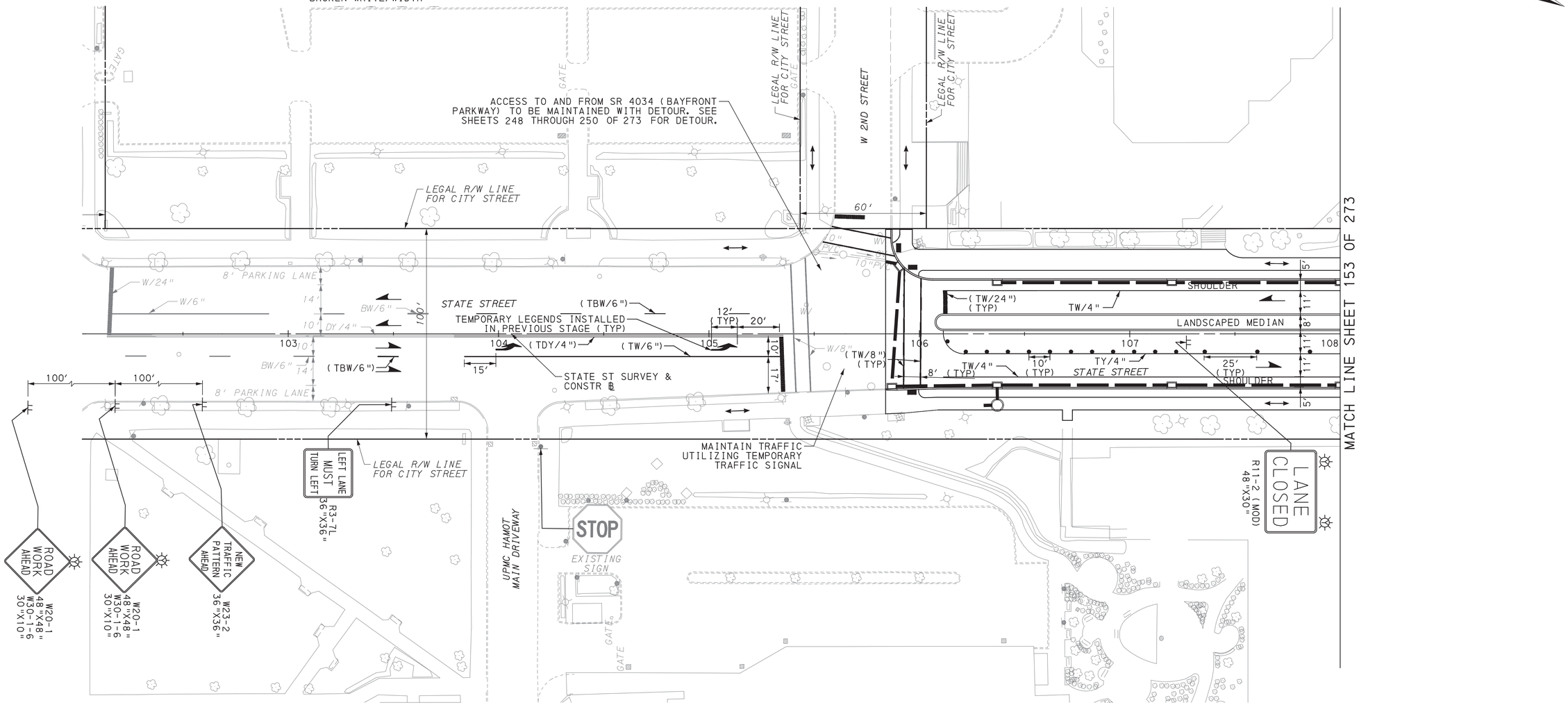
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsstg4_12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	152 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

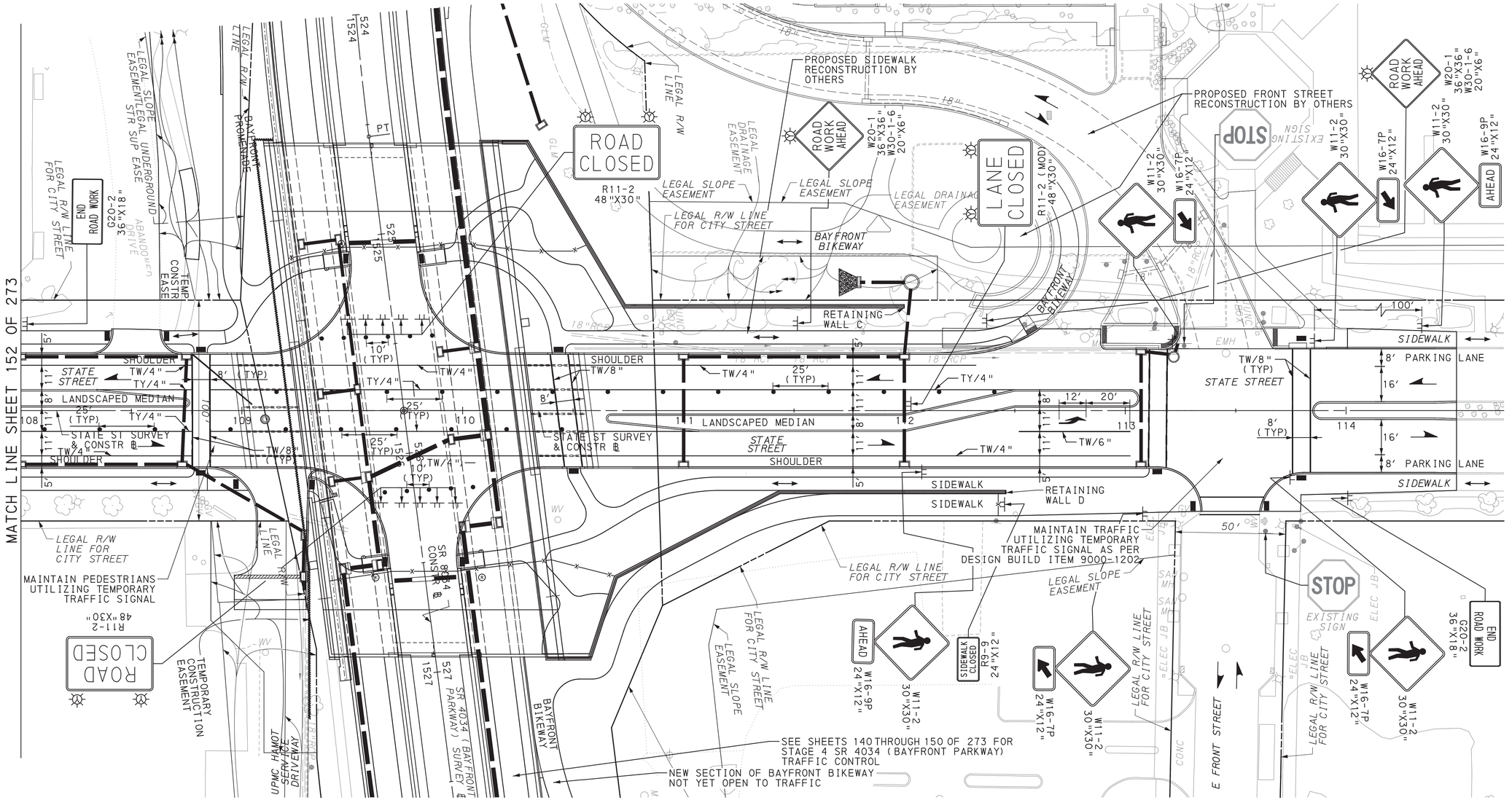
PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg4_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	153 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

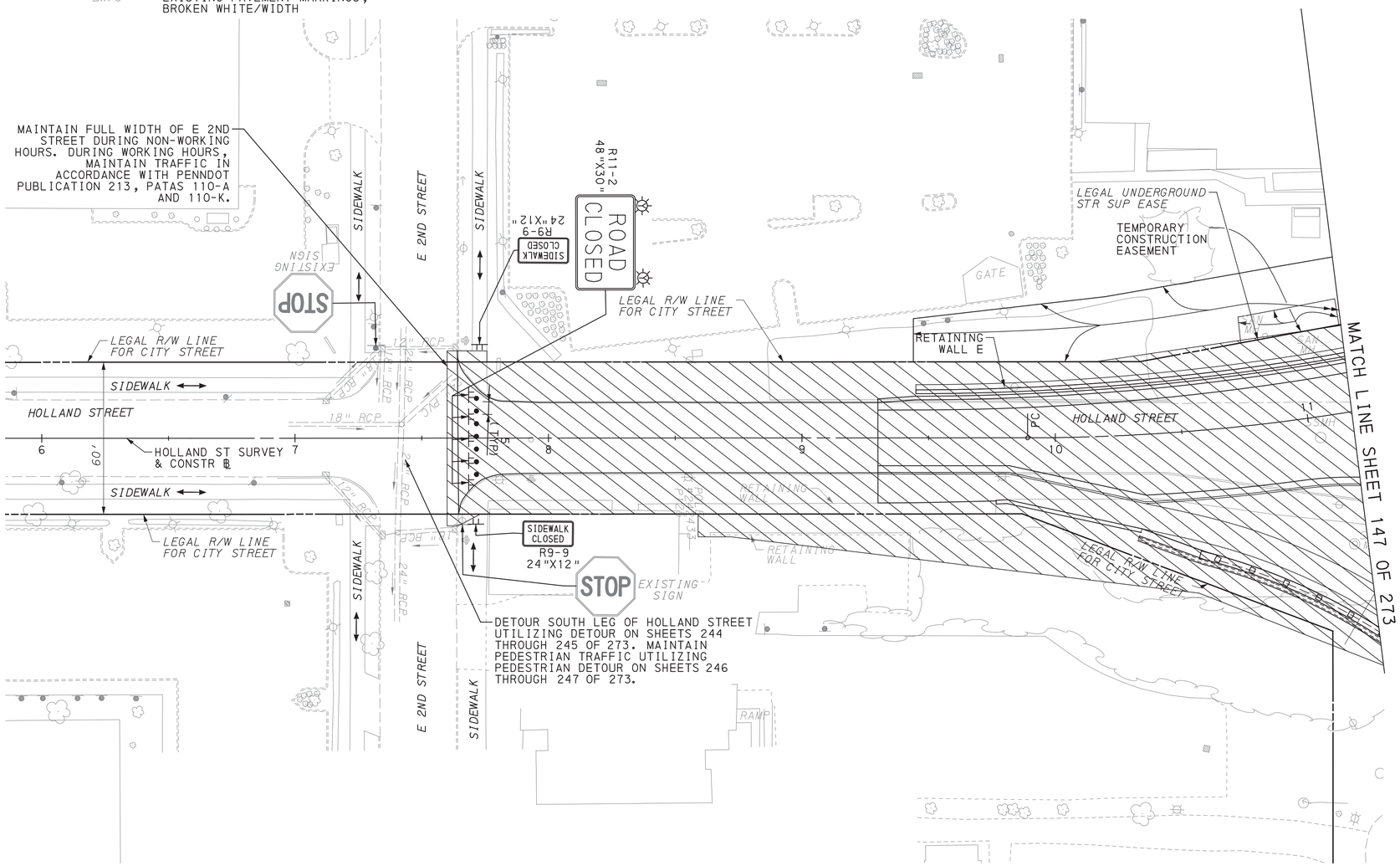
FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsstg4_14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	154 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

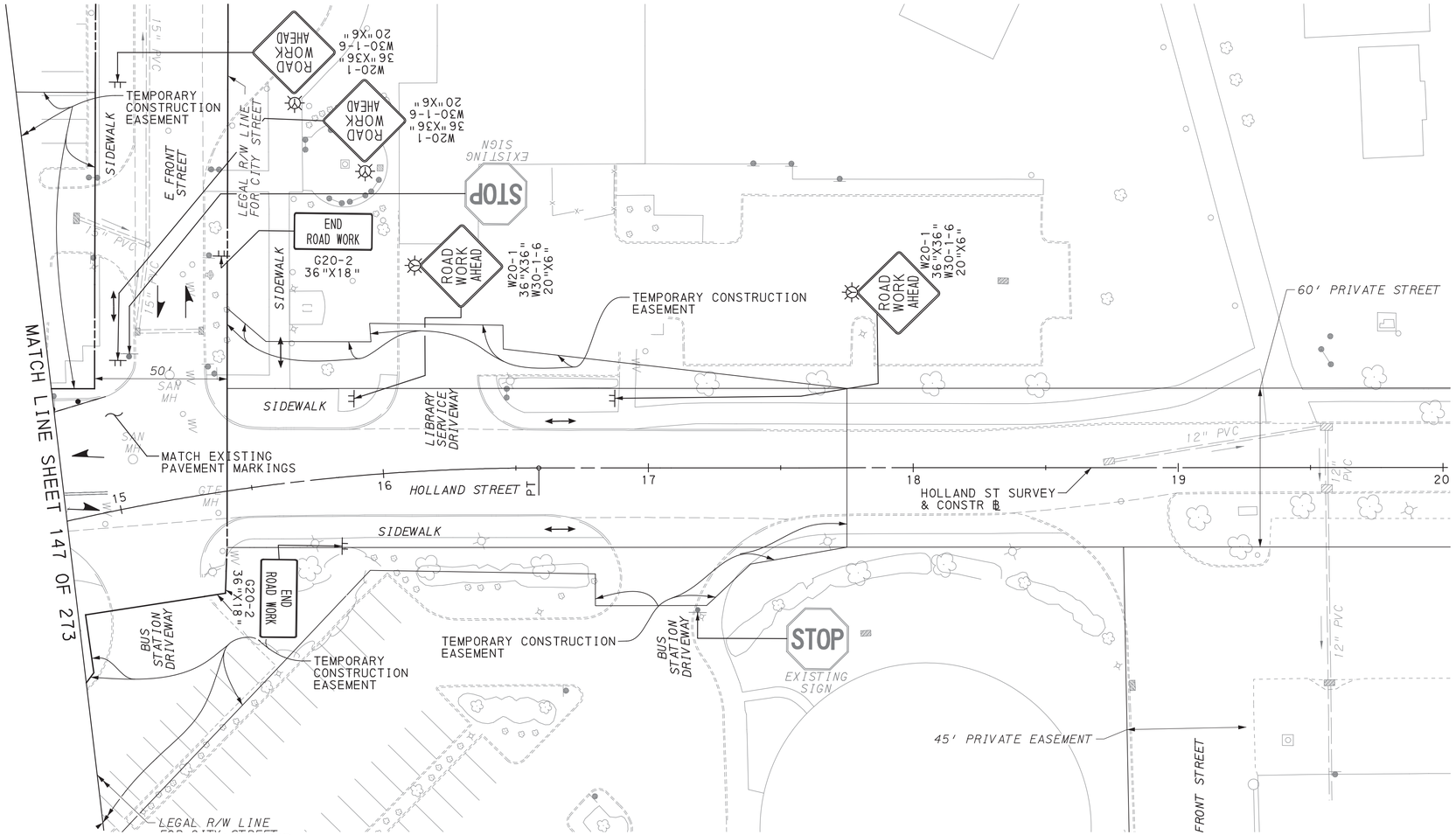
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPlstg4_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	155 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 4

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

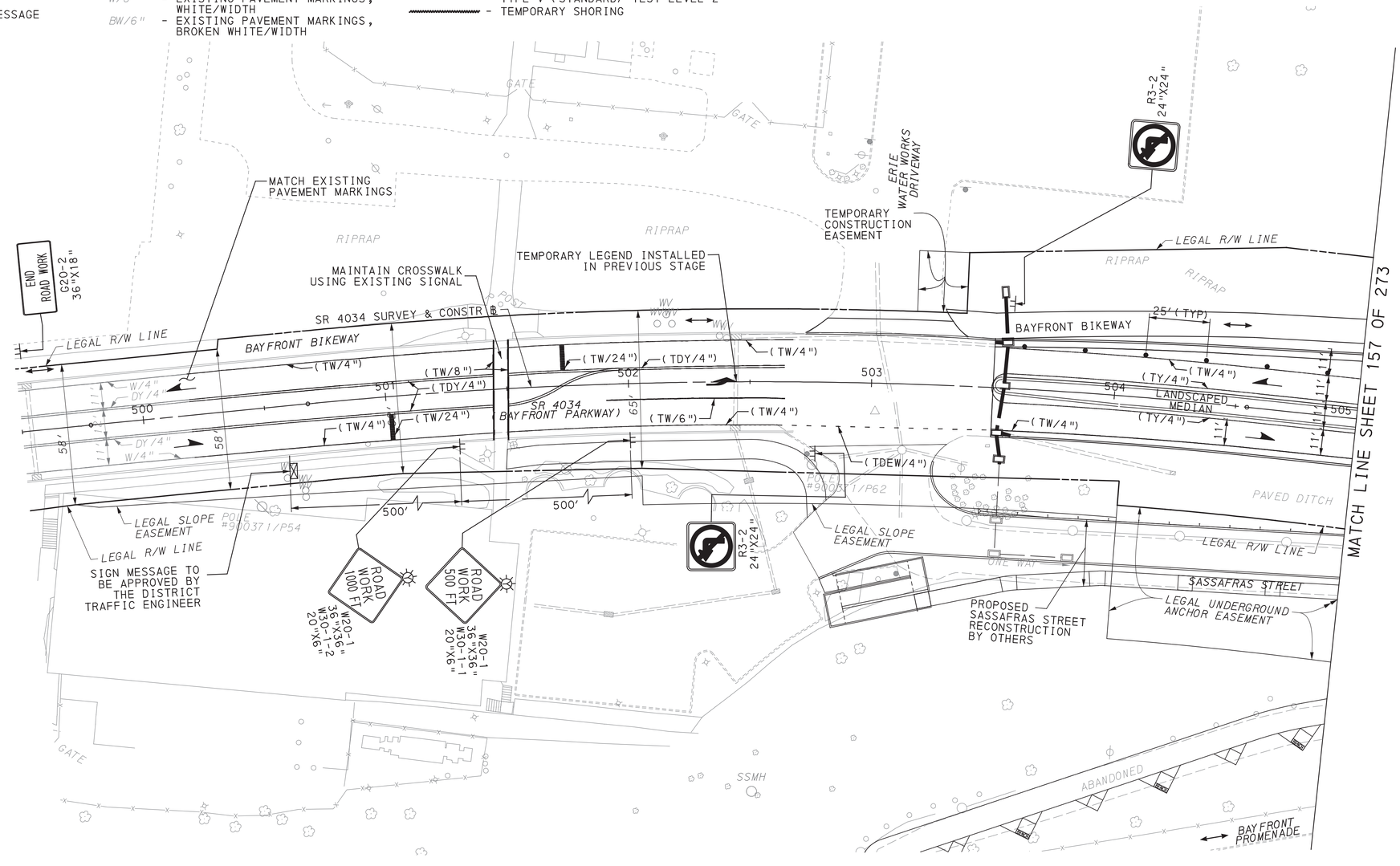
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg4_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	156 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

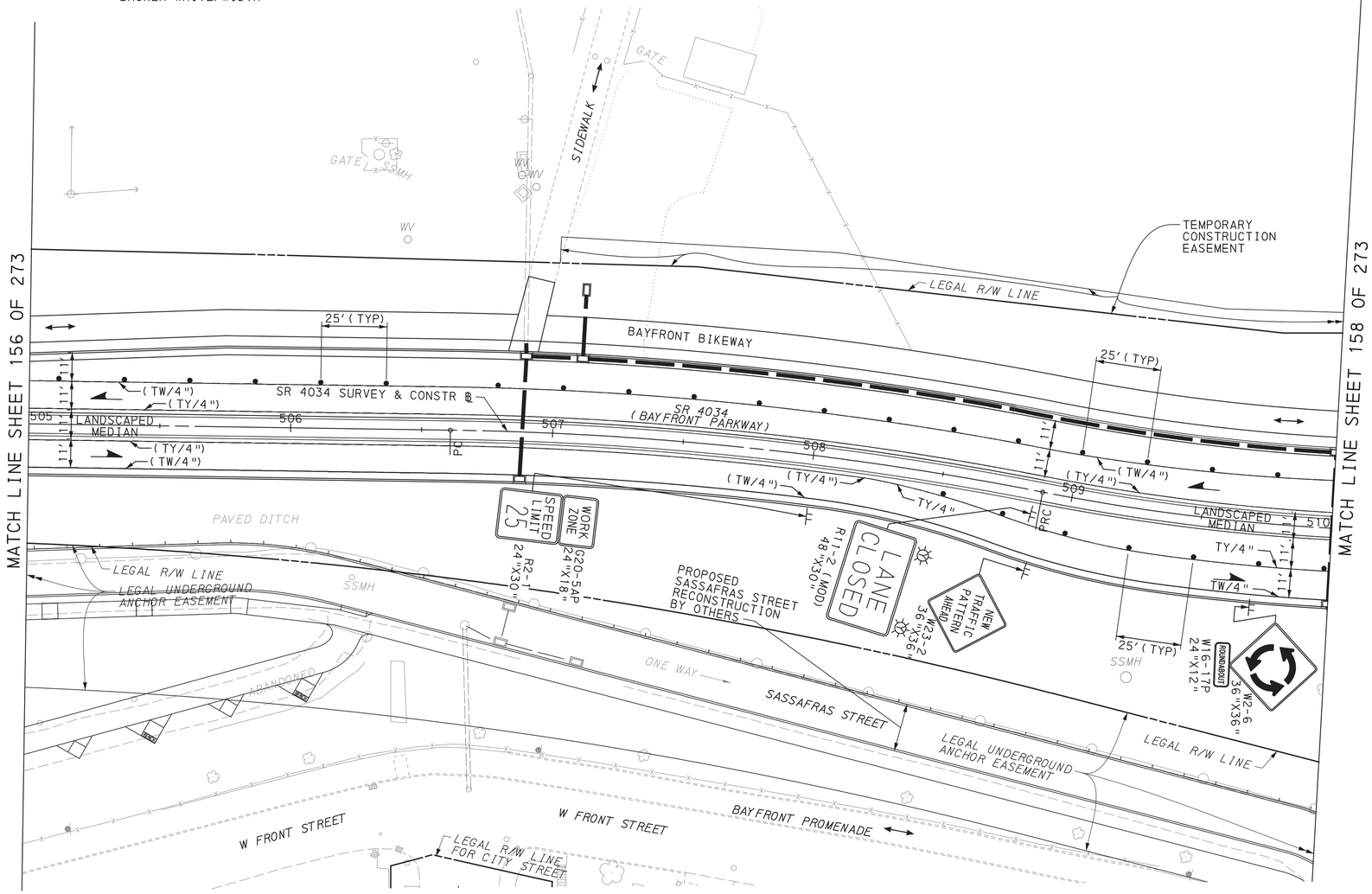
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPsrg5A_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	157 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

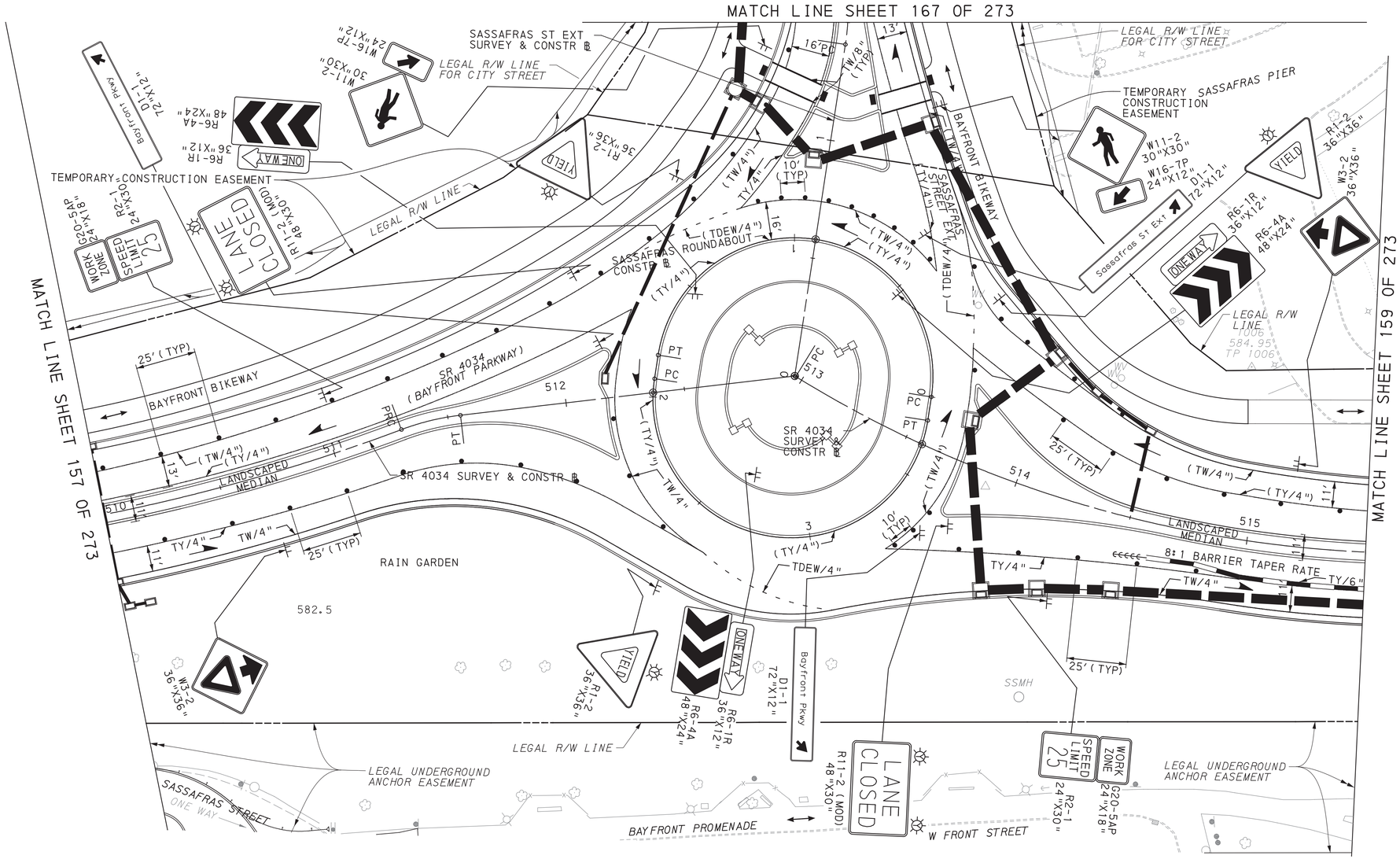
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTgSA_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	158 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

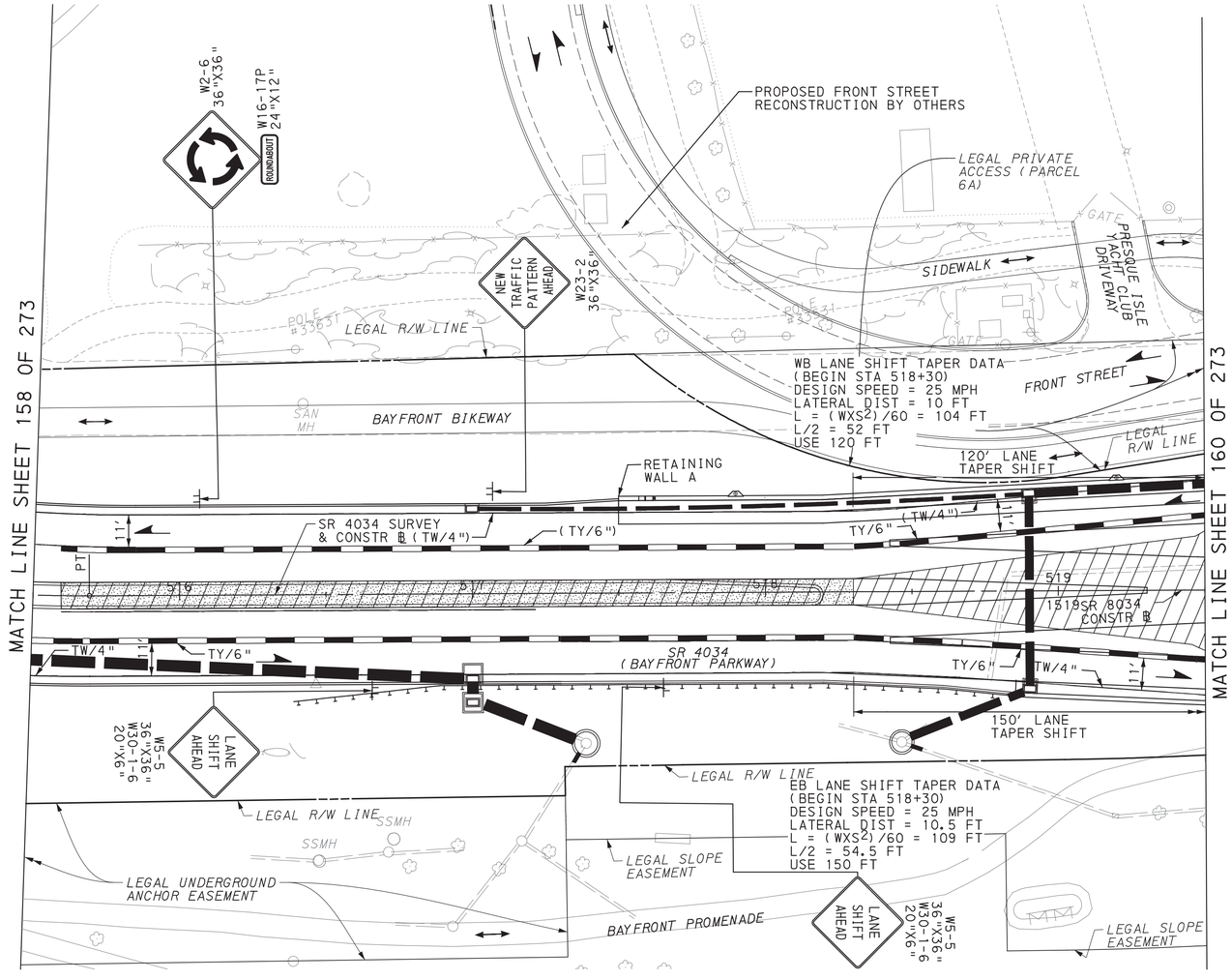
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP\stg5A_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	159 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

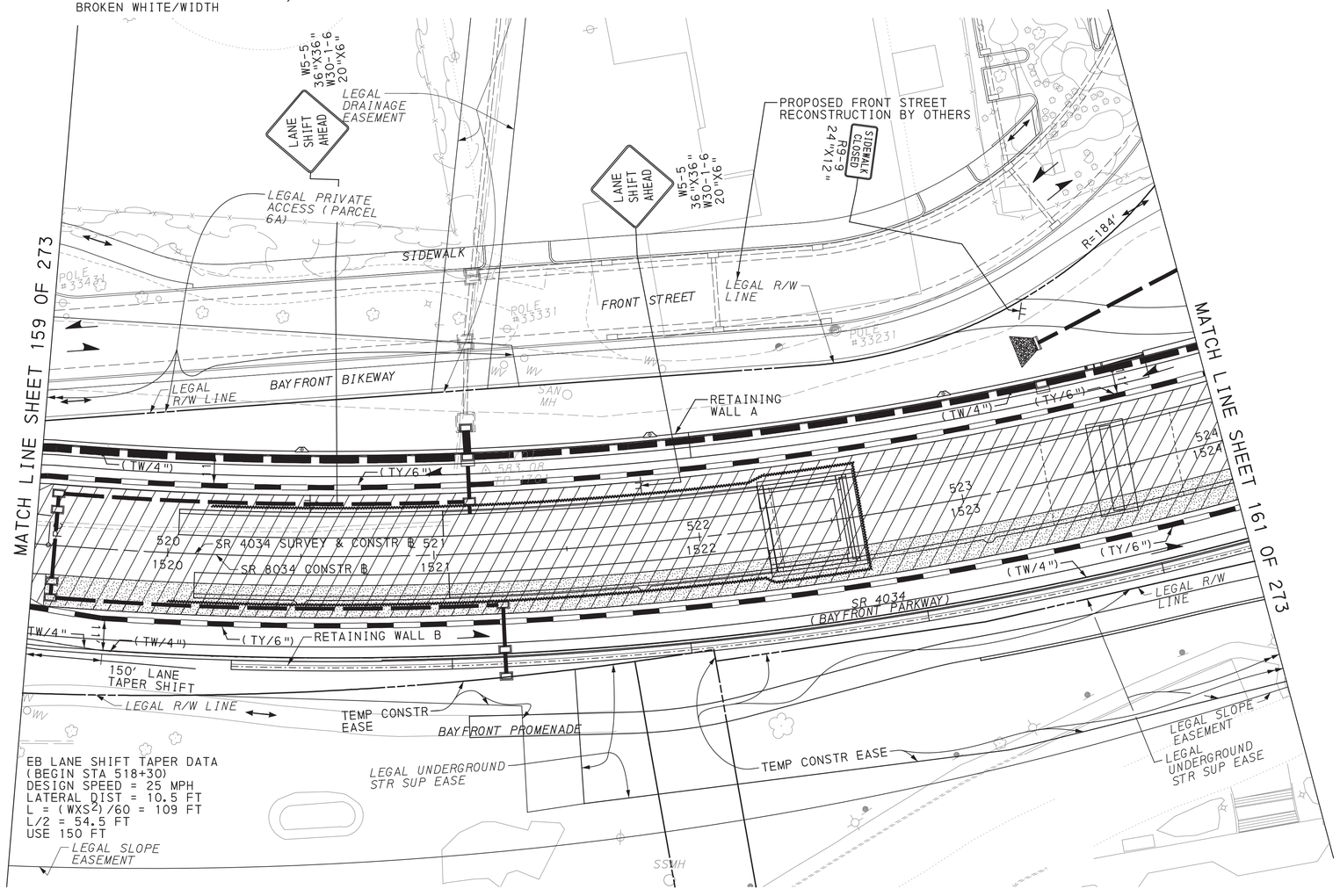
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\Tcplstg5A_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	160 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg5A_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	161 OF 273
CITY OF ERIE				

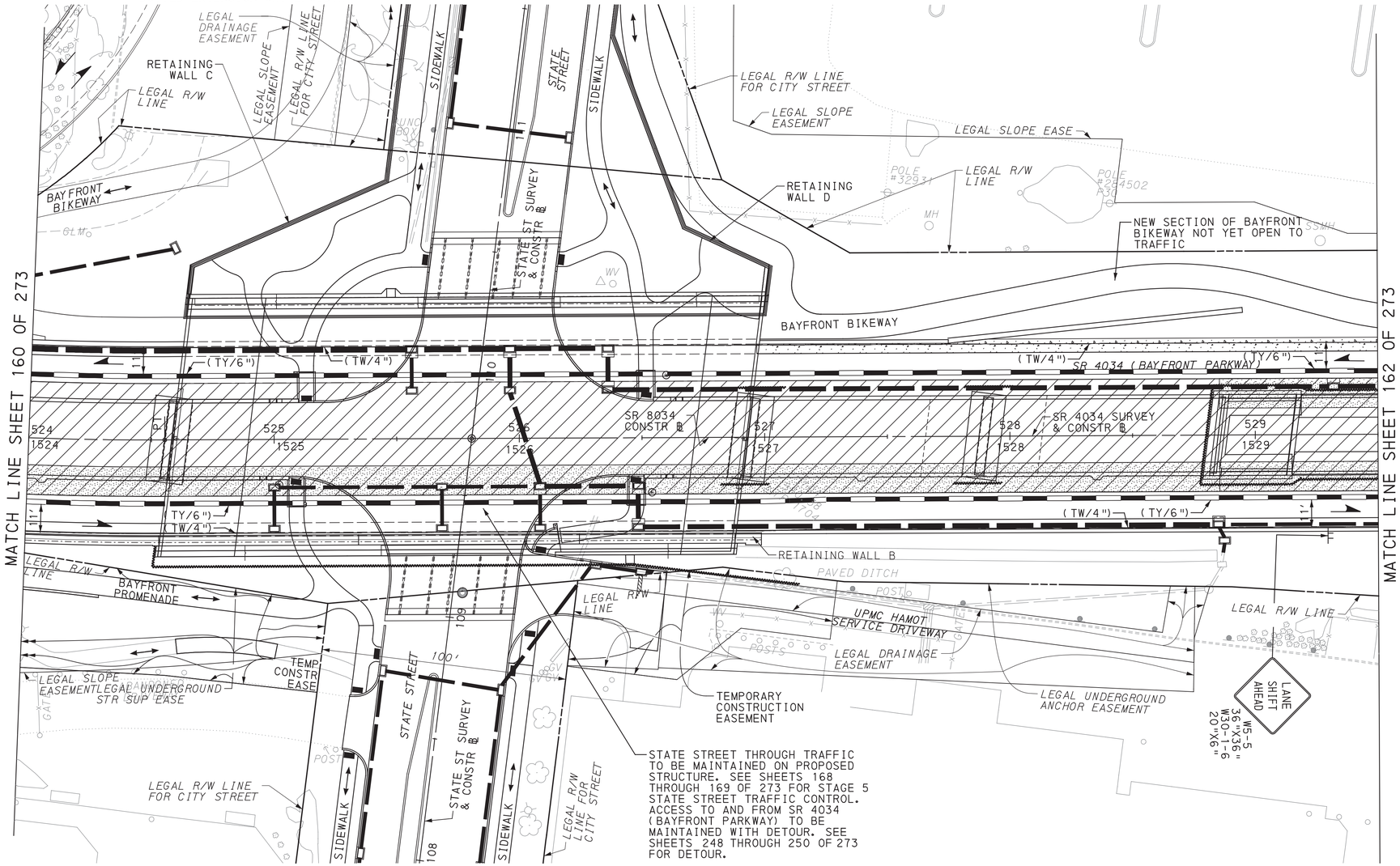
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mp\sheets\TCplsrg5A_06.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

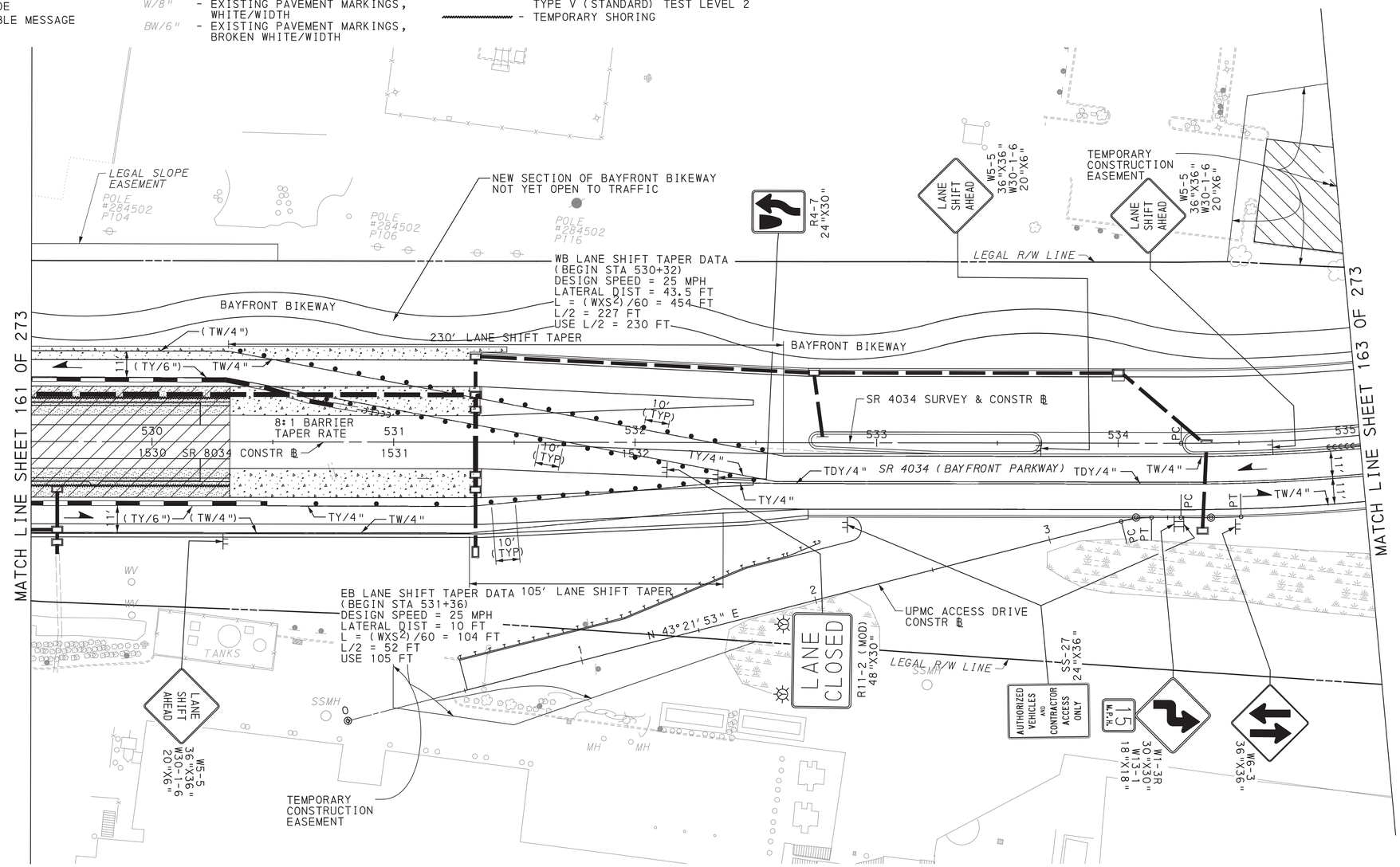
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	162 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

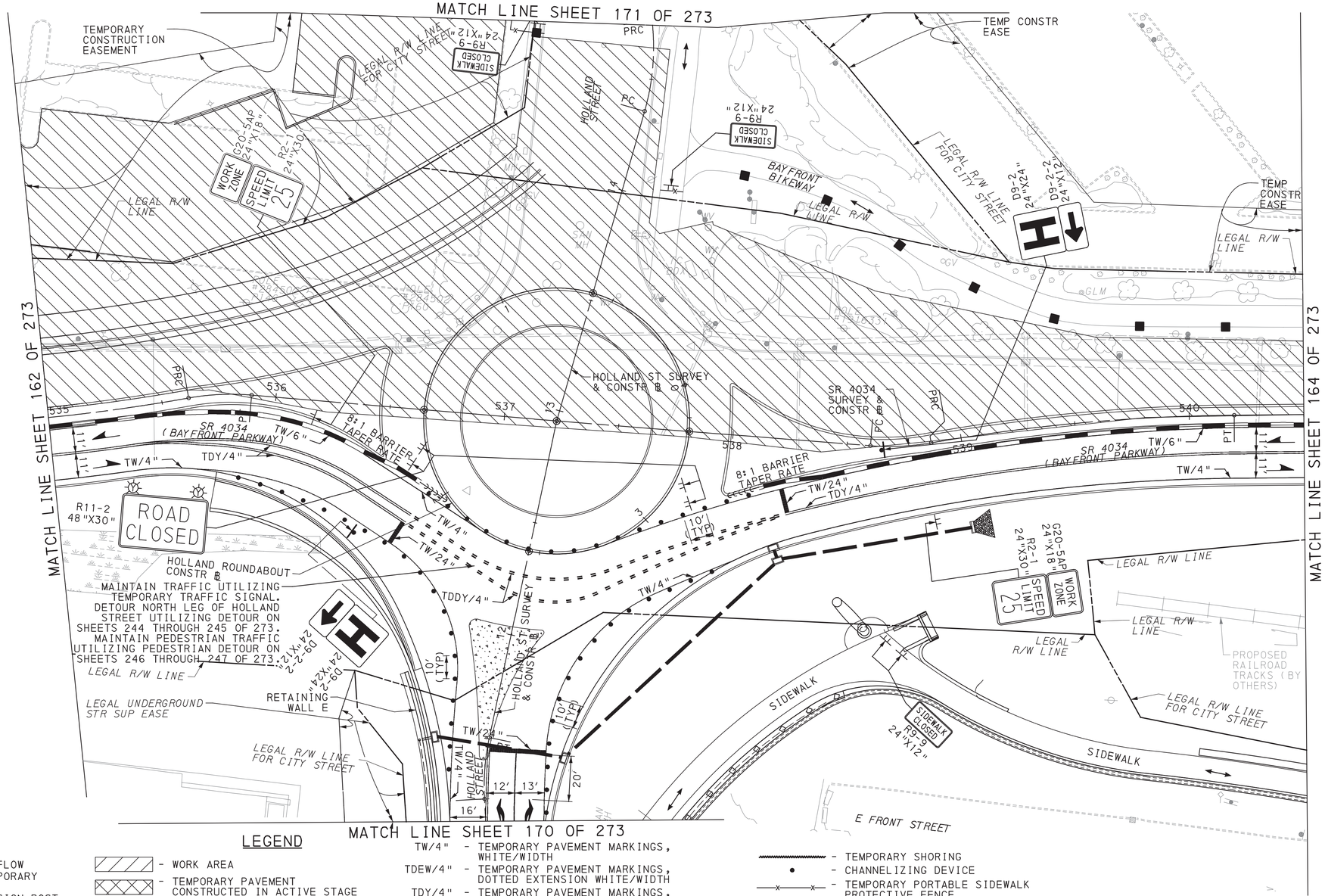
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg5A_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	163 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

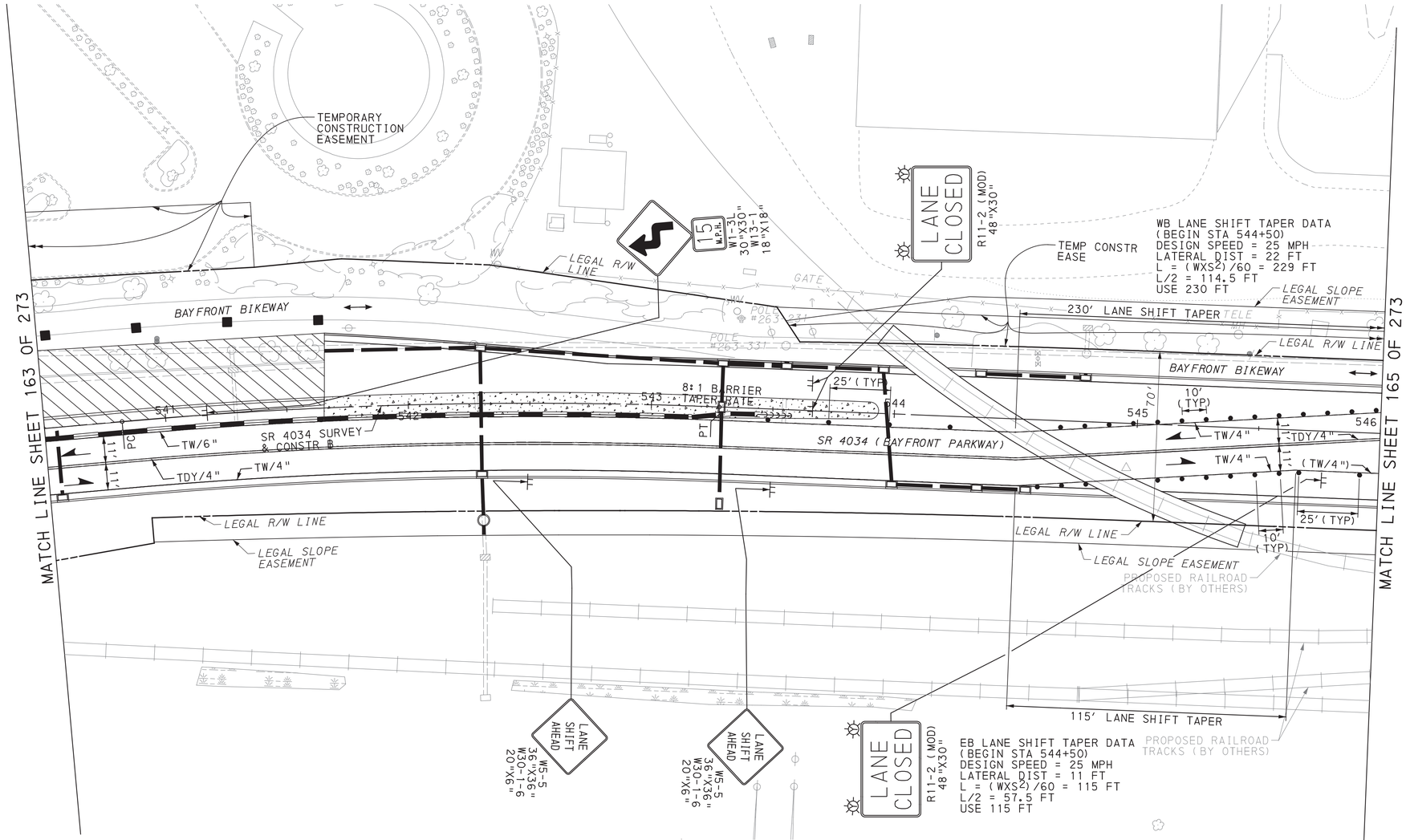
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPlsrg5A_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	164 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

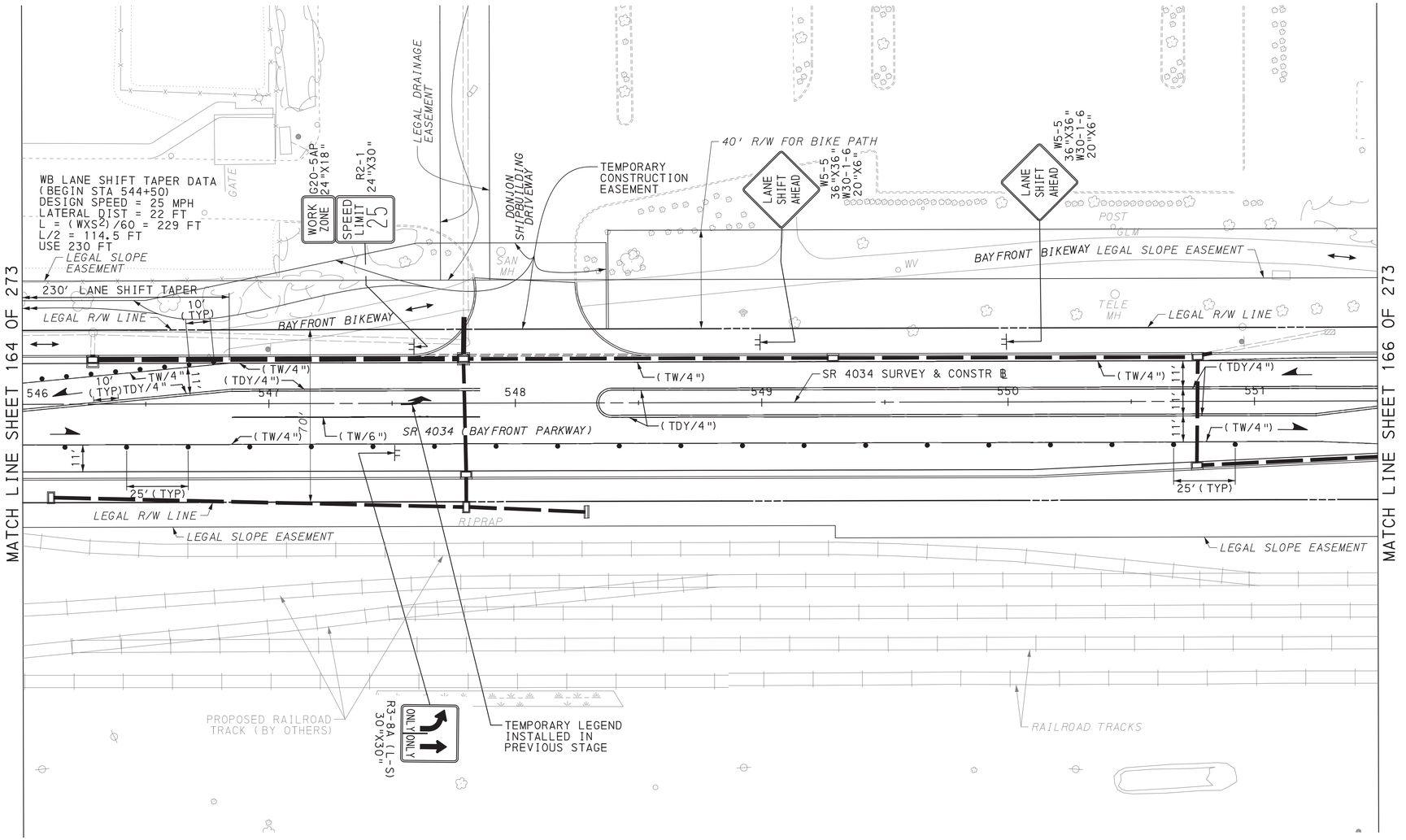
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5A_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	165 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

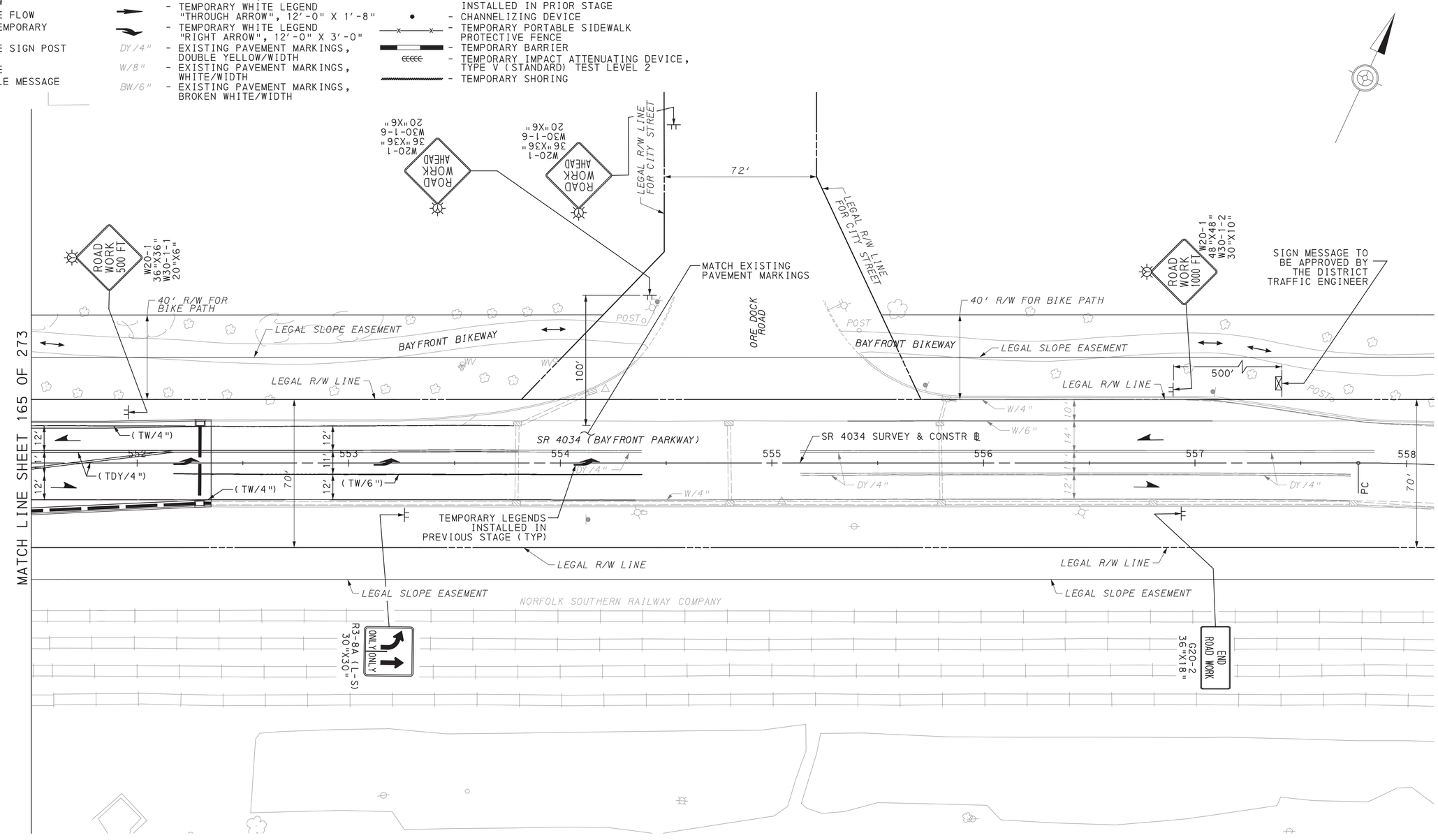
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPsrg5A_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	166 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg5A_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	167 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg5A_12.dgn

TO INTERSTATE 79 NORTH — M4-5-1 24"X12" — M1-1 24"X24" — M6-1-1 21"X15"

TO INTERSTATE 90 WEST — M6-1-1 21"X15" — M4-5-1 24"X12" — M3-4-1 24"X12" — M1-1 24"X24"

TO INTERSTATE 90 EAST — M4-5-1 24"X12" — M3-2-1 24"X12" — M1-1 24"X24" — M6-1-1 21"X15"

W3-2 36"X36" — W2-6 36"X36" — W16-17P 24"X12" ROUNDABOUT — W11-2 30"X30" — W16-7P 24"X12" — W11-2 30"X30" — W16-9P 24"X12" AHEAD

R4-7 24"X30" — OM1-3 18"X18" — EXISTING SIGN — STOP

SB LANE SHIFT TAPER DATA
(BEGIN STA 4+16)
DESIGN SPEED = 25 MPH
LATERAL DIST = 14 FT
$L = (WXS^2)/60 = 146$ FT
L/2 = 73 FT
USE 100 FT

MATCH LINE SHEET 158 OF 273

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

SIDEWALK

PRIVATE DRIVEWAY

GATE

R3-2 24"X24"

TEMPORARY CONSTRUCTION EASEMENT

W23-2 36"X36" NEW TRAFFIC PATTERN AHEAD

PARKING GARAGE EXIT DRIVEWAY

PARKING GARAGE ENTRANCE DRIVEWAY

W20-1 36"X36" W30-1-6 20"X6" ROAD WORK AHEAD

W20-1 36"X36" W30-1-6 20"X6" ROAD WORK AHEAD

48" RCP — 41" HDPE577.86

SASSAFRAS ST EXTENSION SURVEY & CONSTR ℄

SASSAFRAS STREET EXT

LANDSCAPED MEDIAN

PARKING LOT EXIT

MATCH EXISTING PAVEMENT MARKINGS

STOP EXISTING SIGN

G20-2 36"X18" END ROAD WORK

AHEAD W16-9P 24"X12" — W11-2 30"X30"

W16-7P 24"X12" — W11-2 30"X30"

STOP PROPOSED PERMANENT SIGN

W20-1 36"X36" W30-1-6 20"X6" ROAD WORK AHEAD

W20-1 36"X36" W30-1-6 20"X6" ROAD WORK AHEAD

PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS

FRONT STREET

TEMPORARY CONSTRUCTION EASEMENT

R3-2 24"X24"

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" — EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" — EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" — EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" — TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" — TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" — TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" — TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") — TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

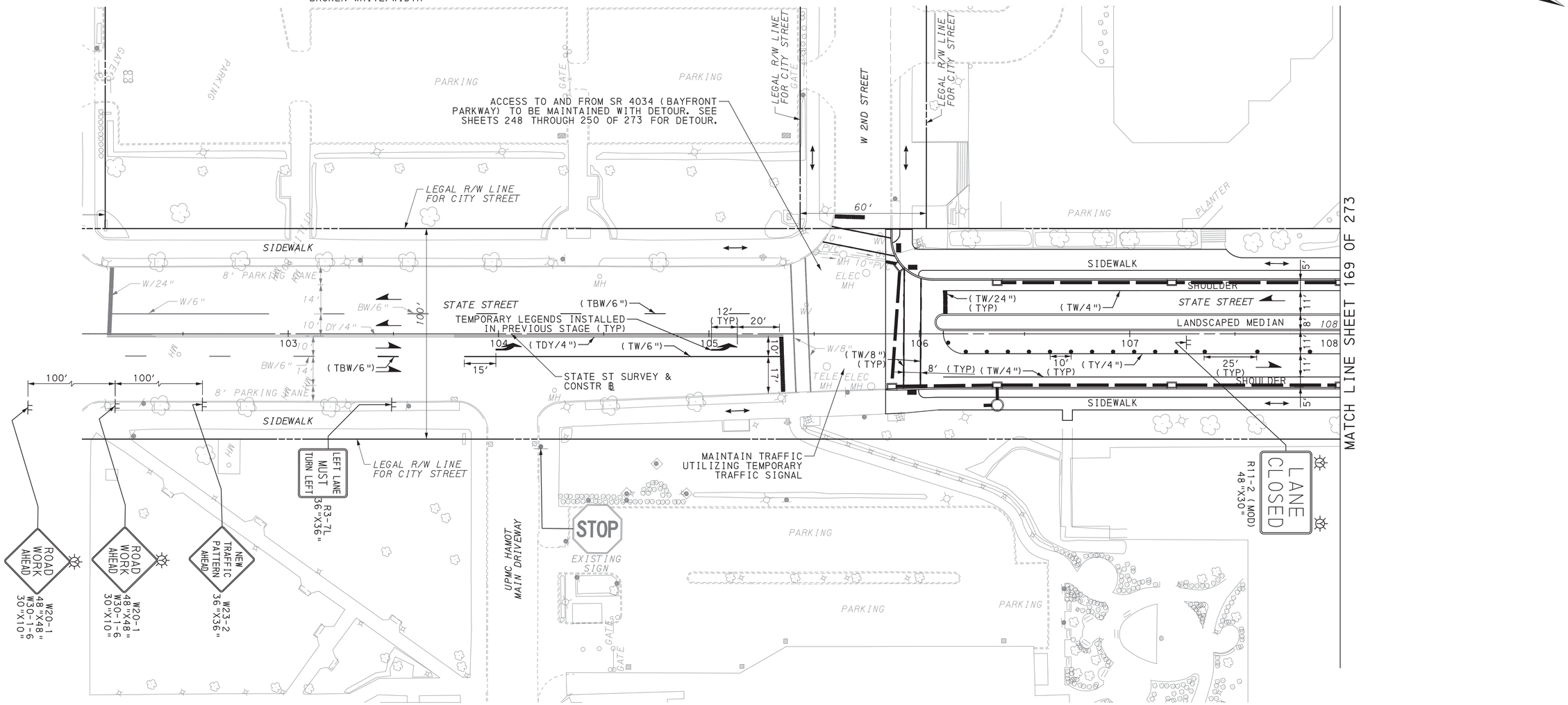
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	168 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

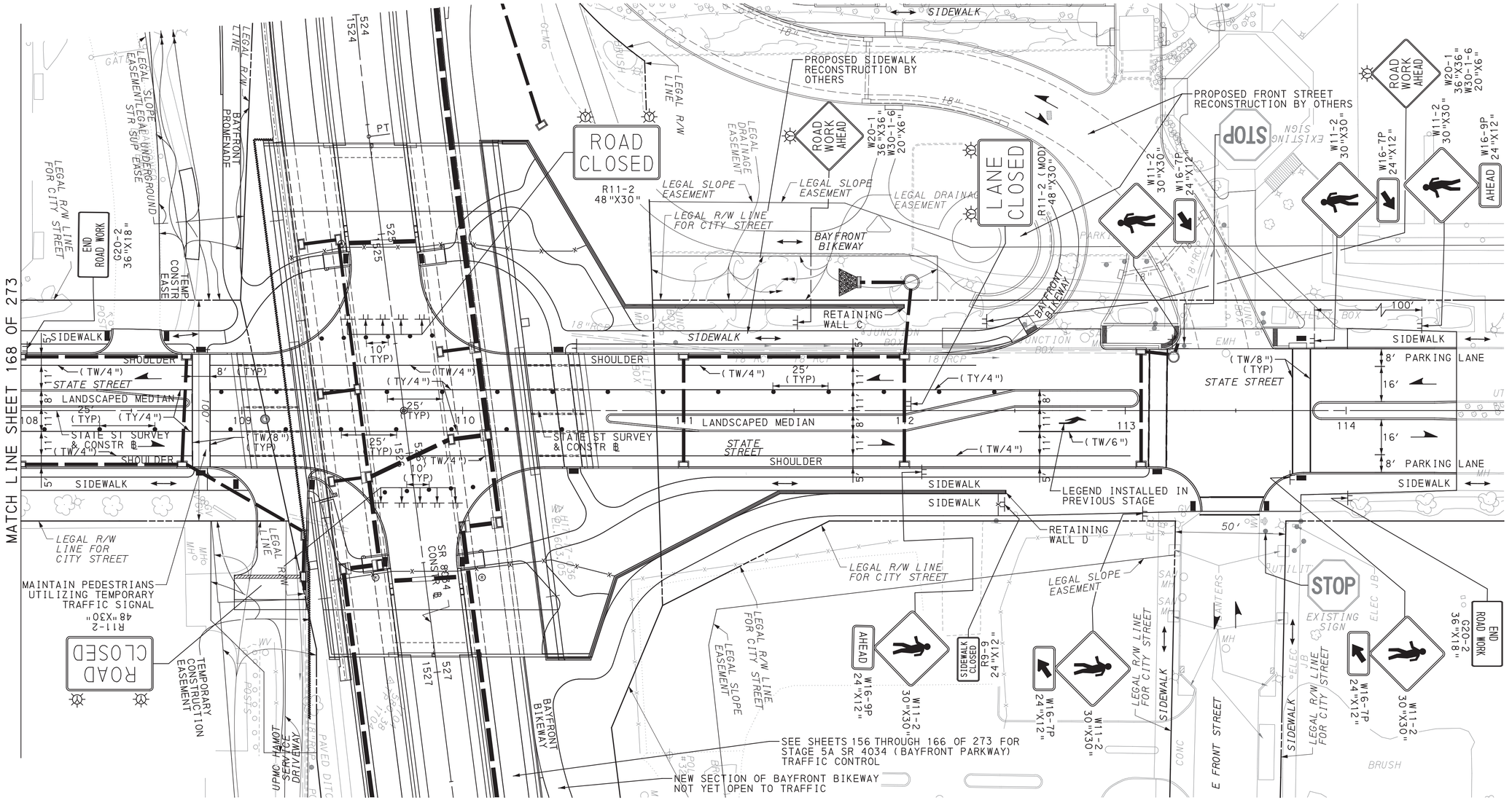
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5A_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	169 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

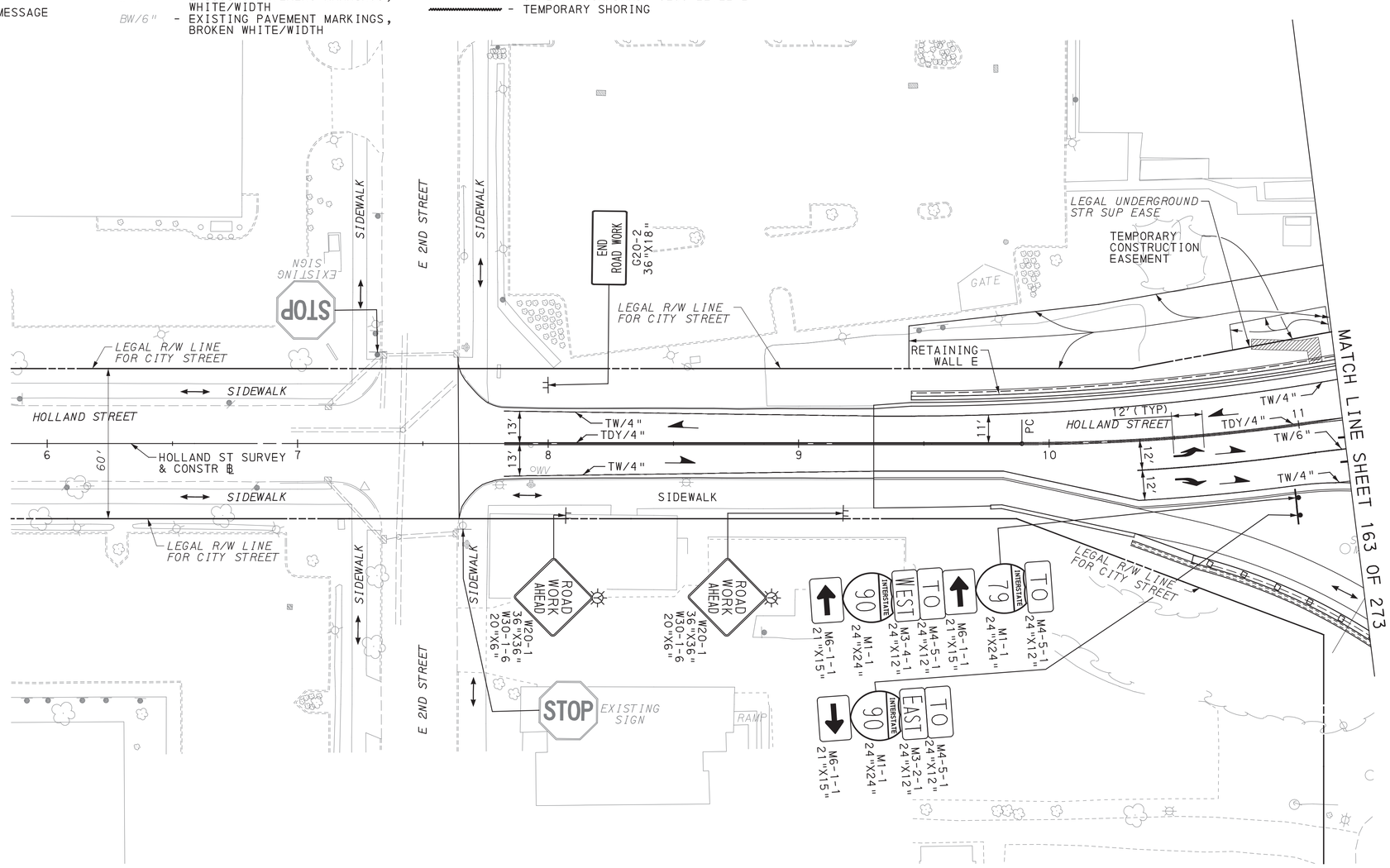
FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg5A_14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	170 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5A_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	171 OF 273
CITY OF ERIE				

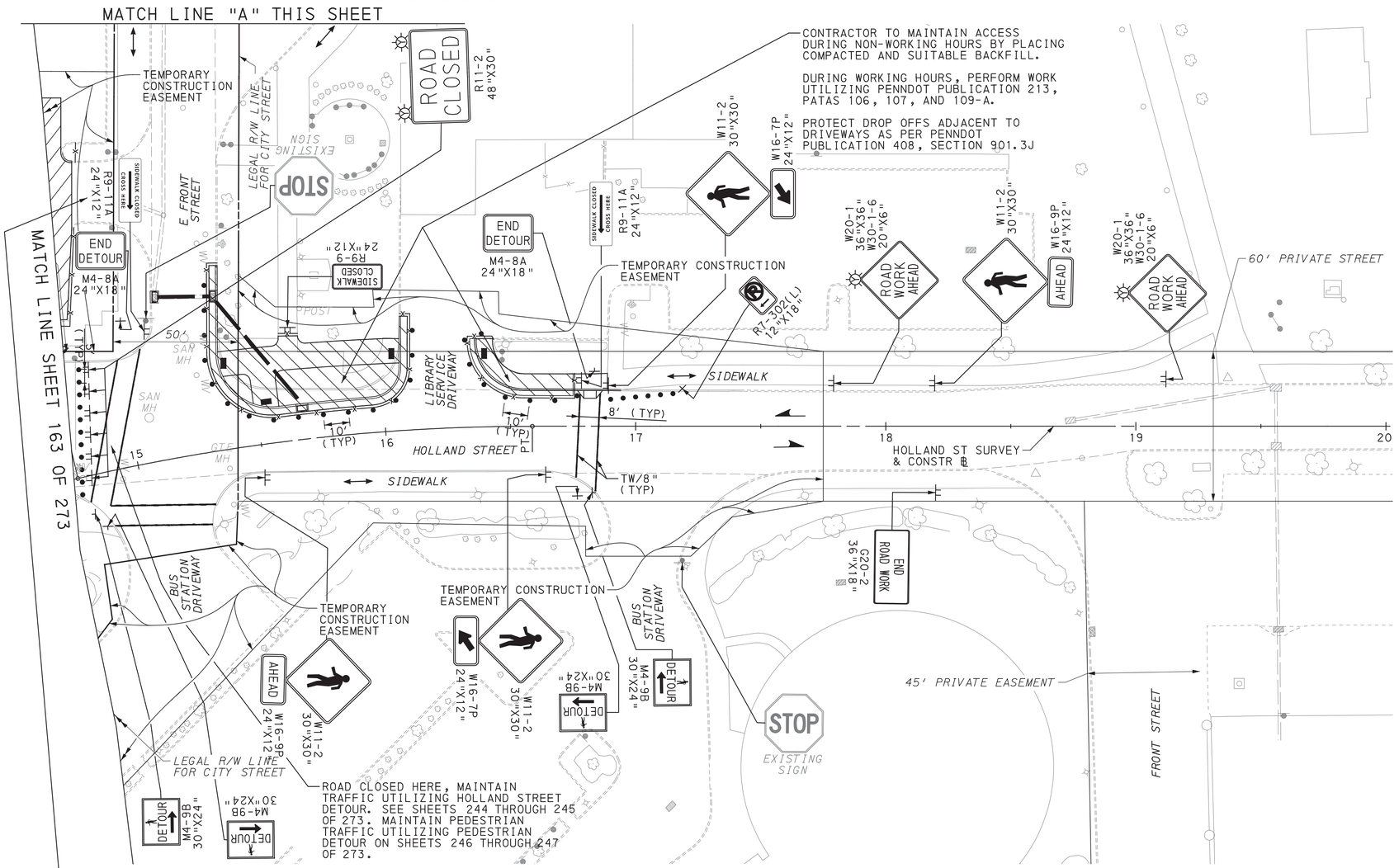
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mp\sheets\TCp1stg5A_16.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5A

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

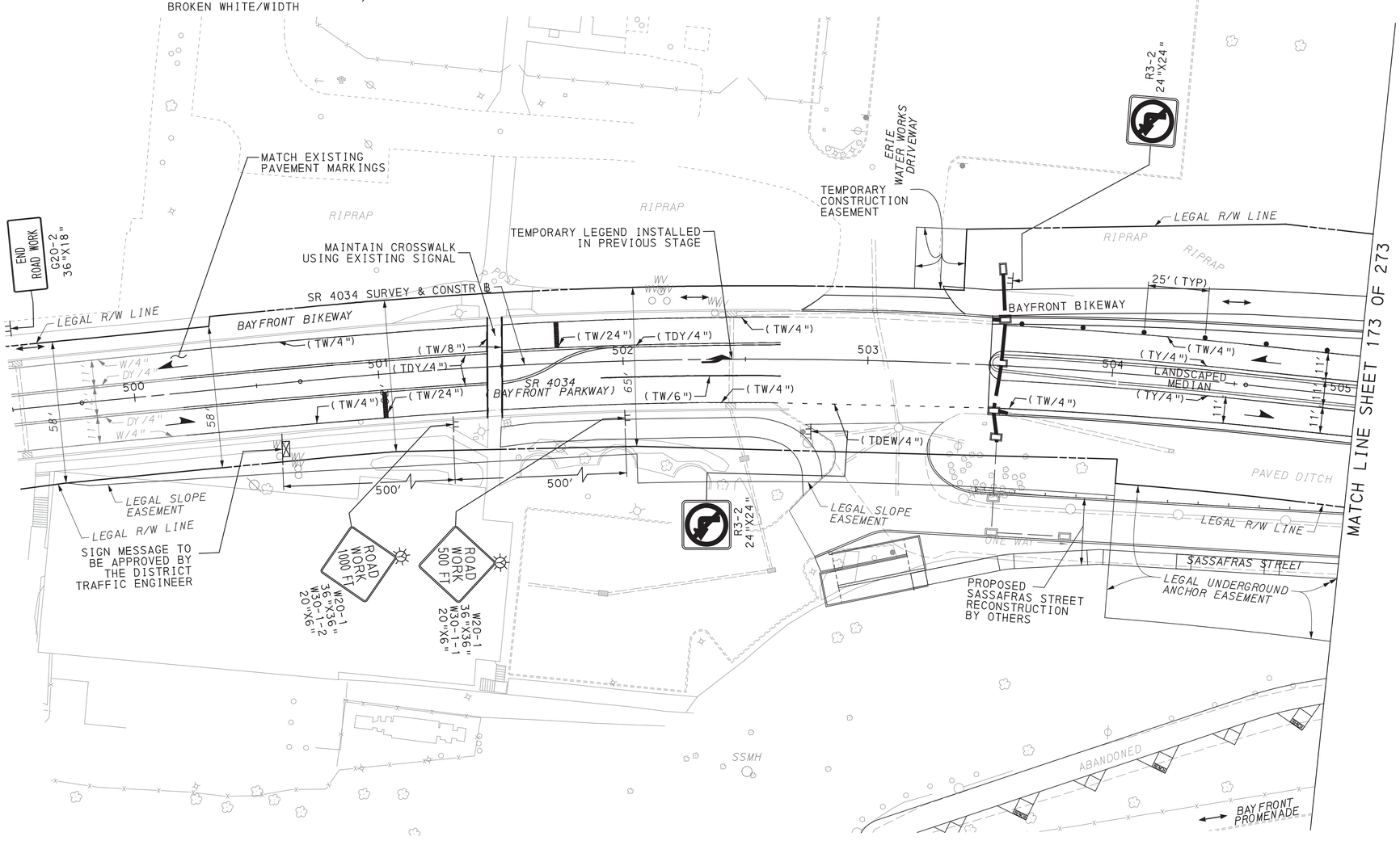
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	172 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

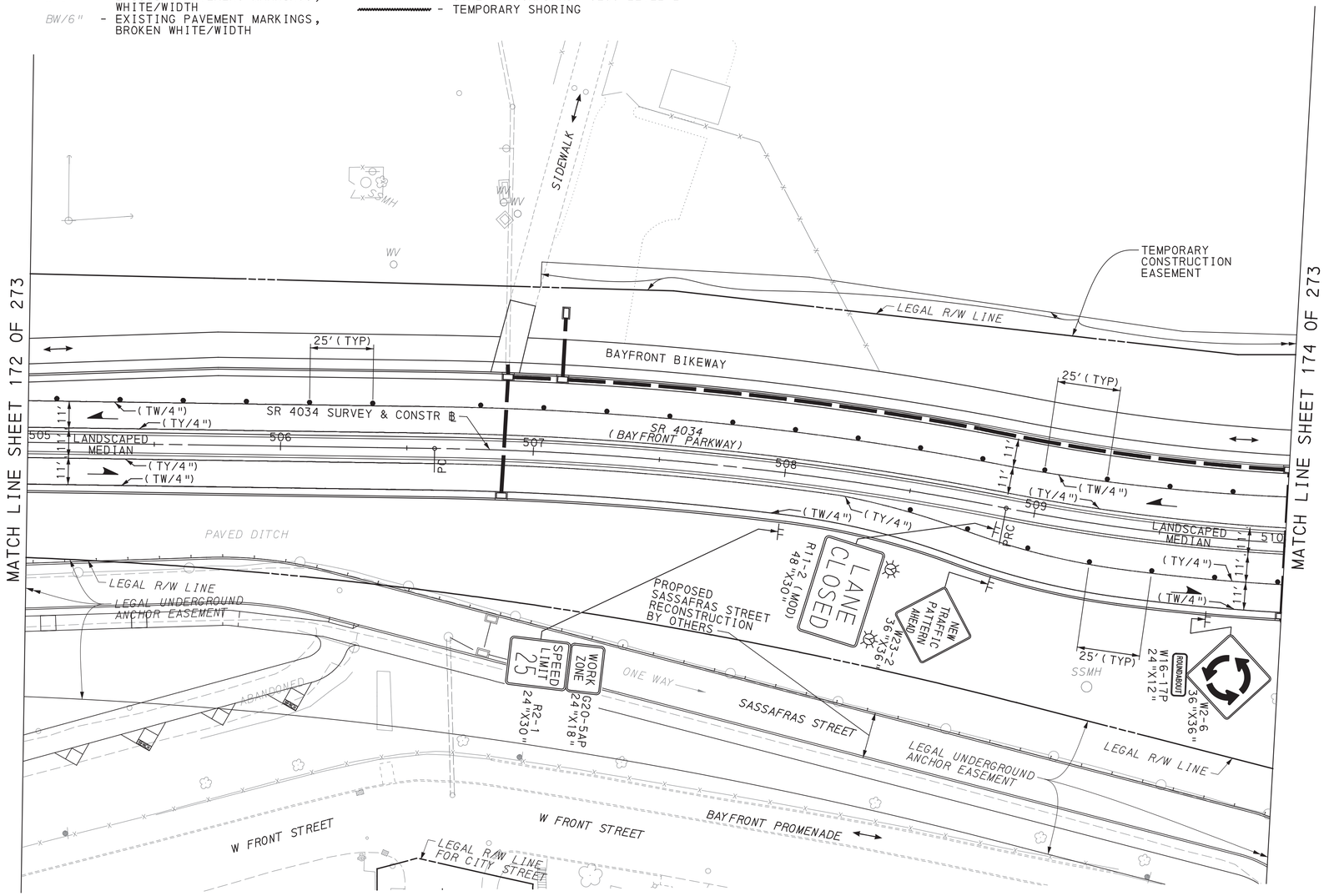
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPistg5B_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	173 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1stg5B_02.dgn

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg5B_03.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

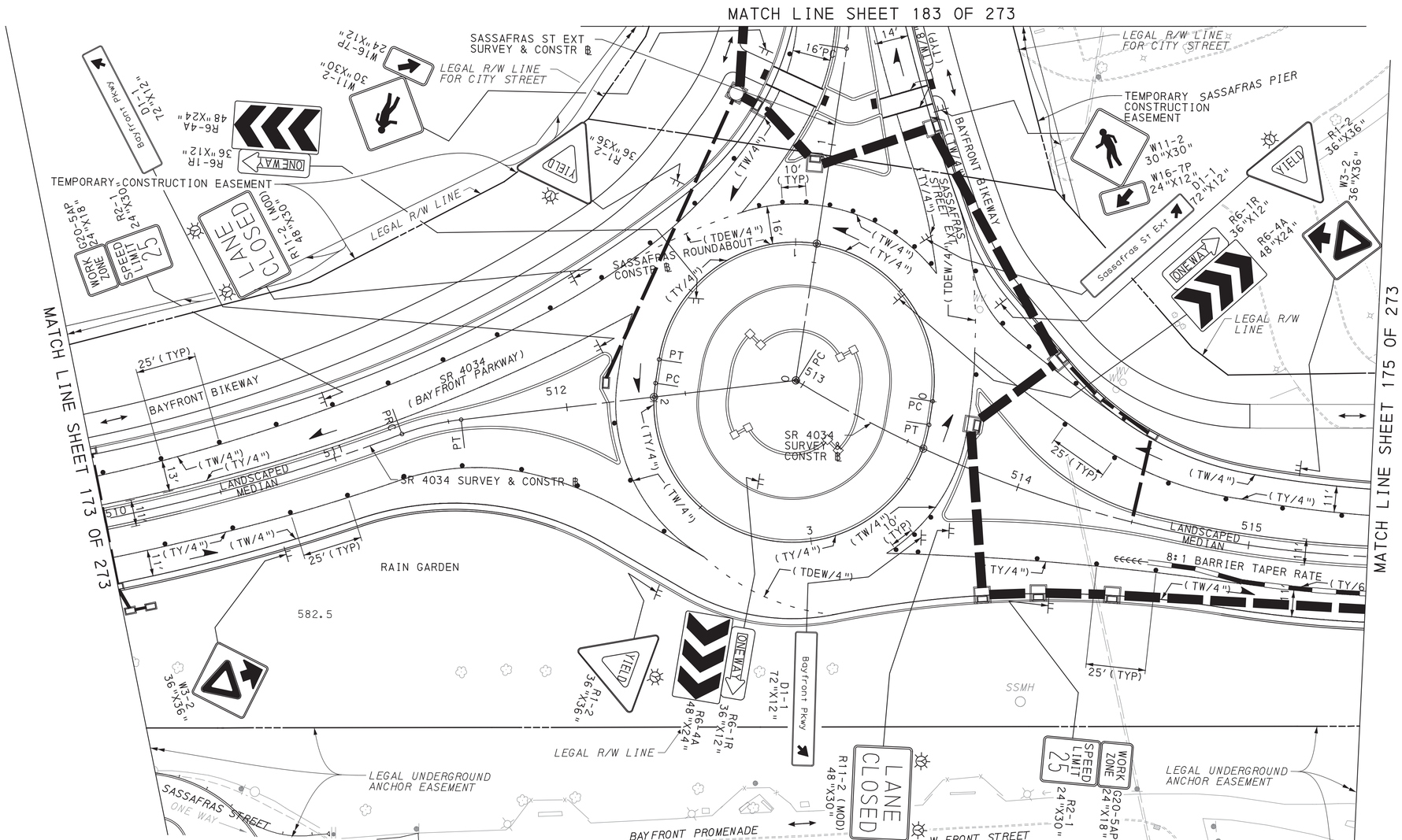
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	174 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



TRAFFIC CONTROL PLAN
STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

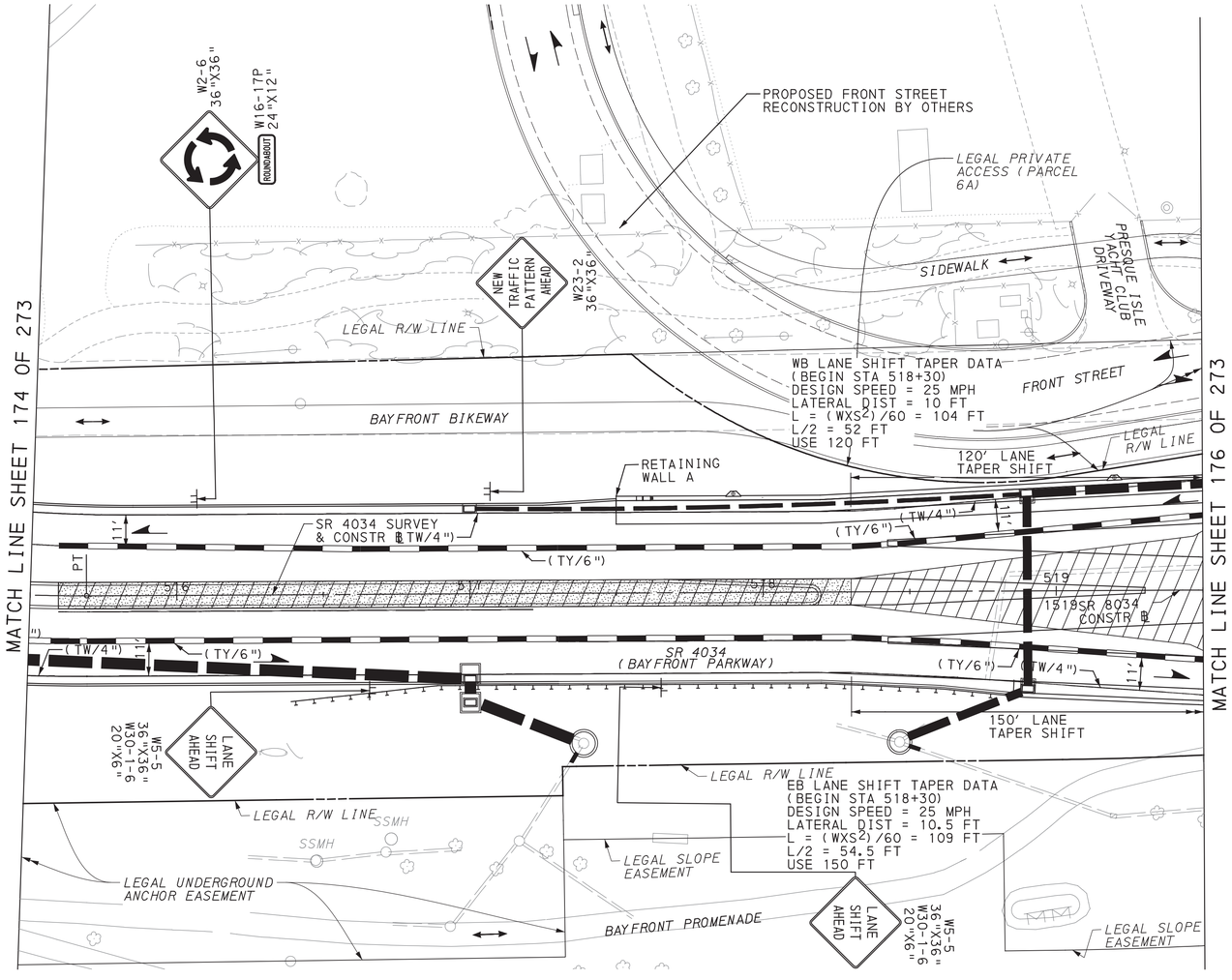
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334
COMMONWEALTH OF PENNSYLVANIA

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	175 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

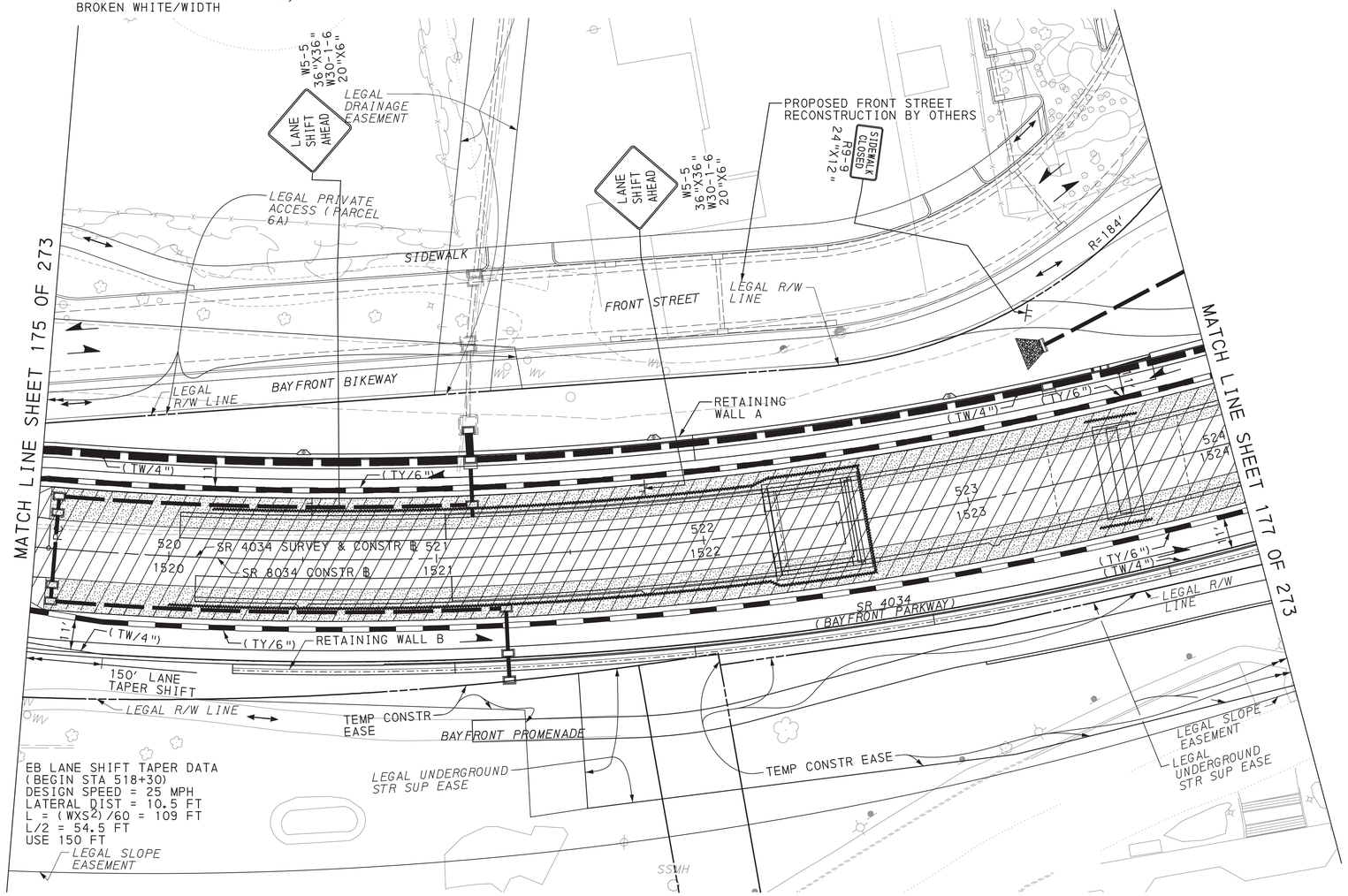
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplistg5B_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	176 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



EB LANE SHIFT TAPER DATA
(BEGIN STA 518+30)
DESIGN SPEED = 25 MPH
LATERAL DIST = 10.5 FT
$L = (WXS^2)/60 = 109$ FT
L/2 = 54.5 FT
USE 150 FT

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

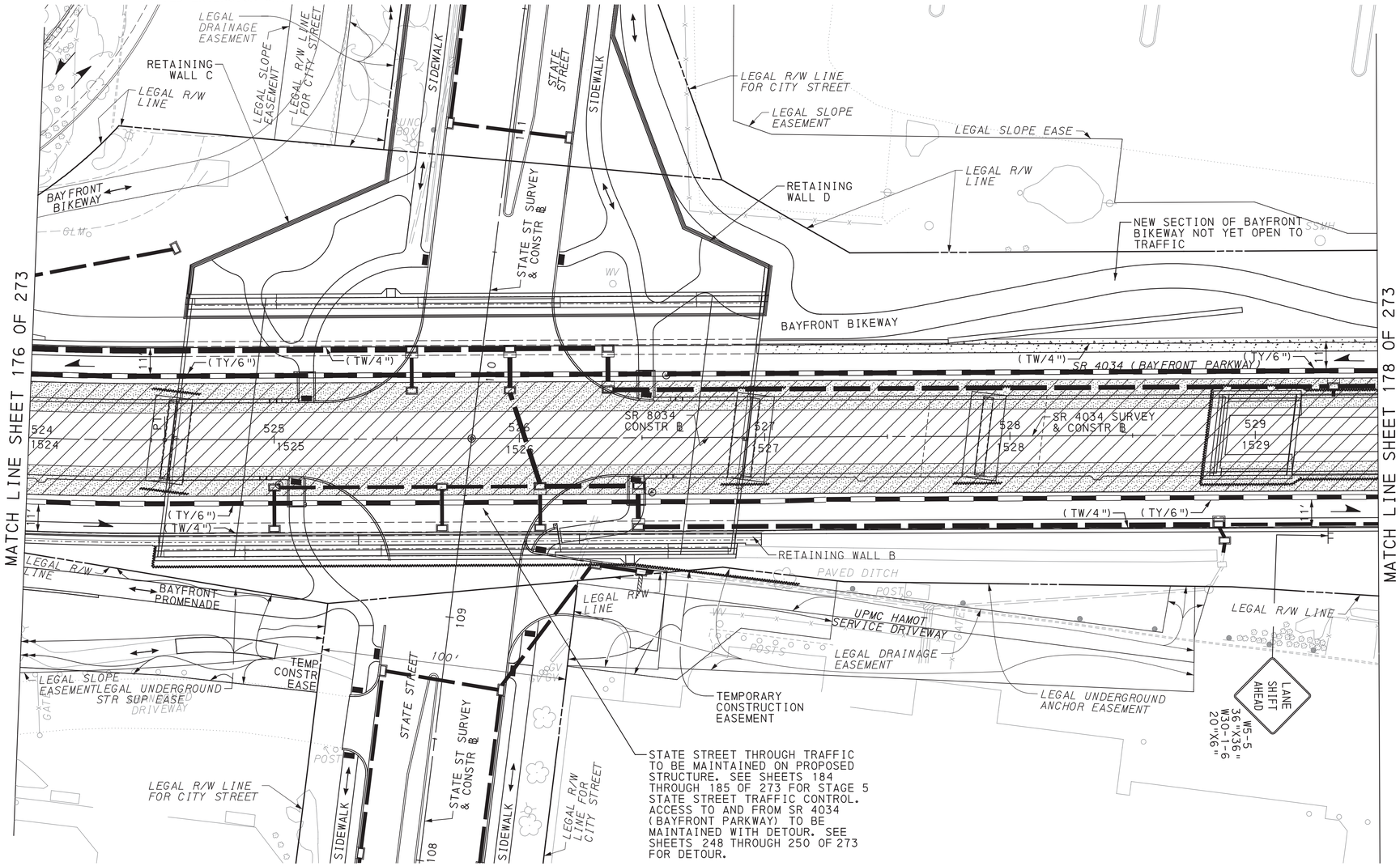
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg5B_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	177 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

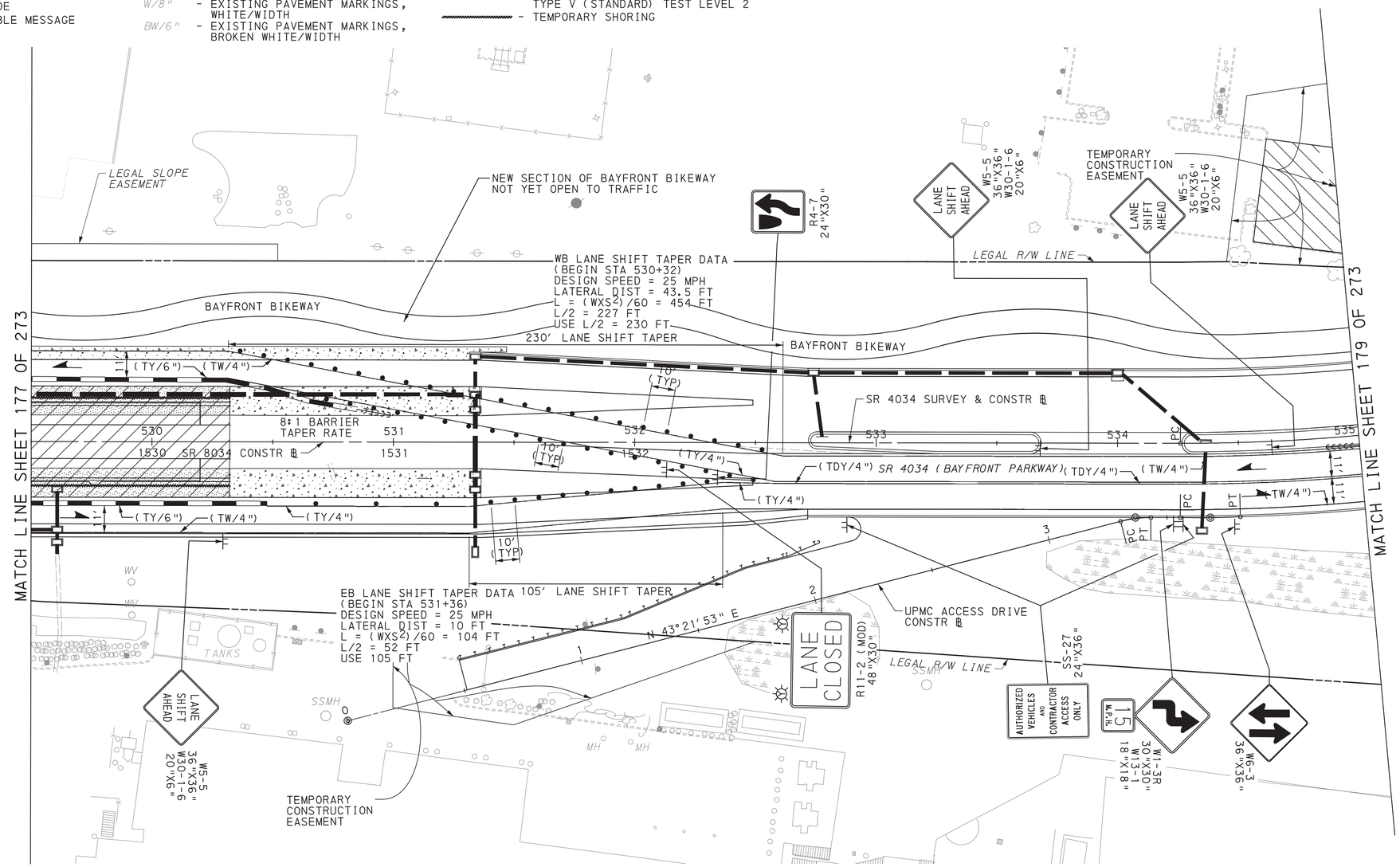
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\tmp\sheets\TCplsrgSB_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	178 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

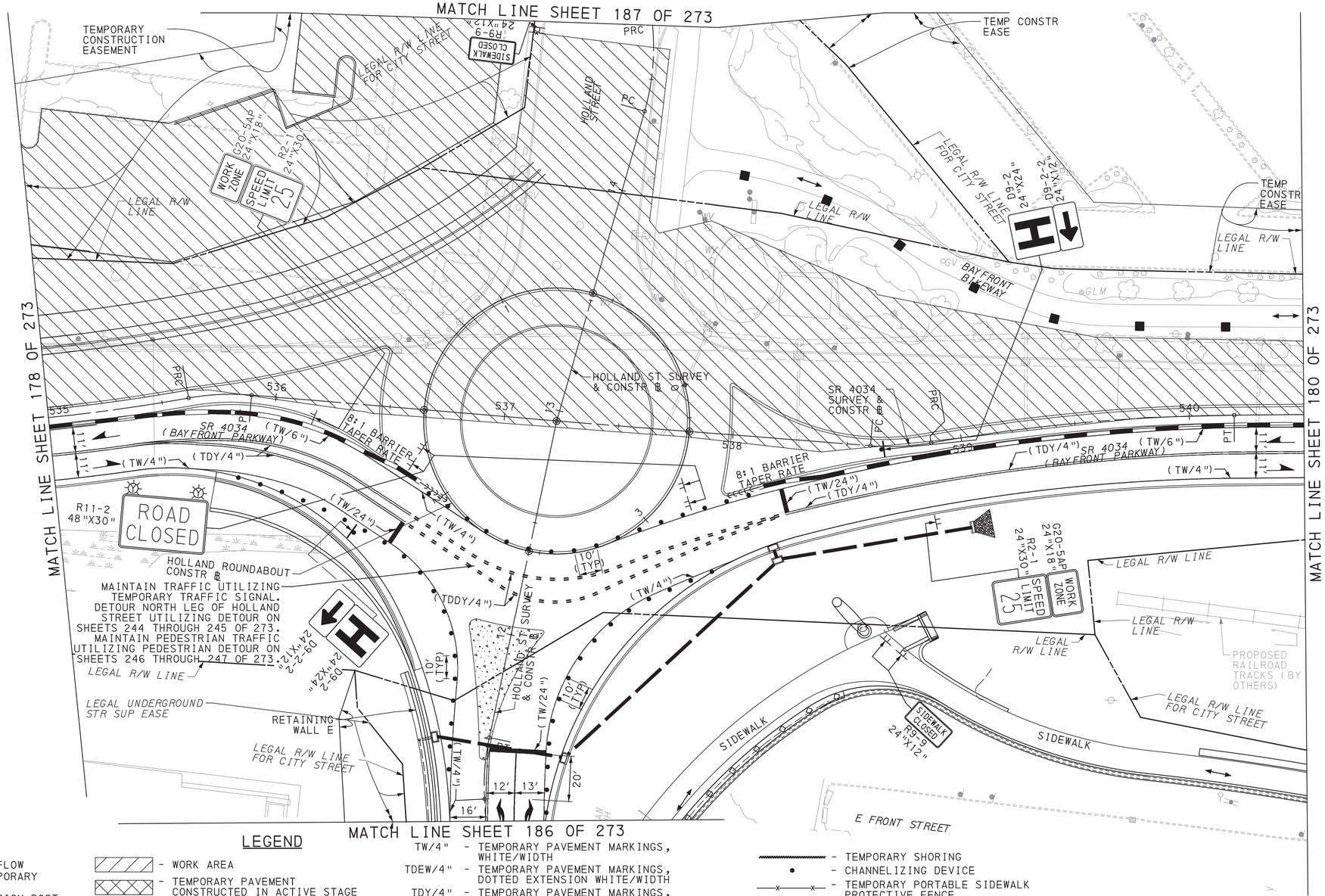
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg5B_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	179 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

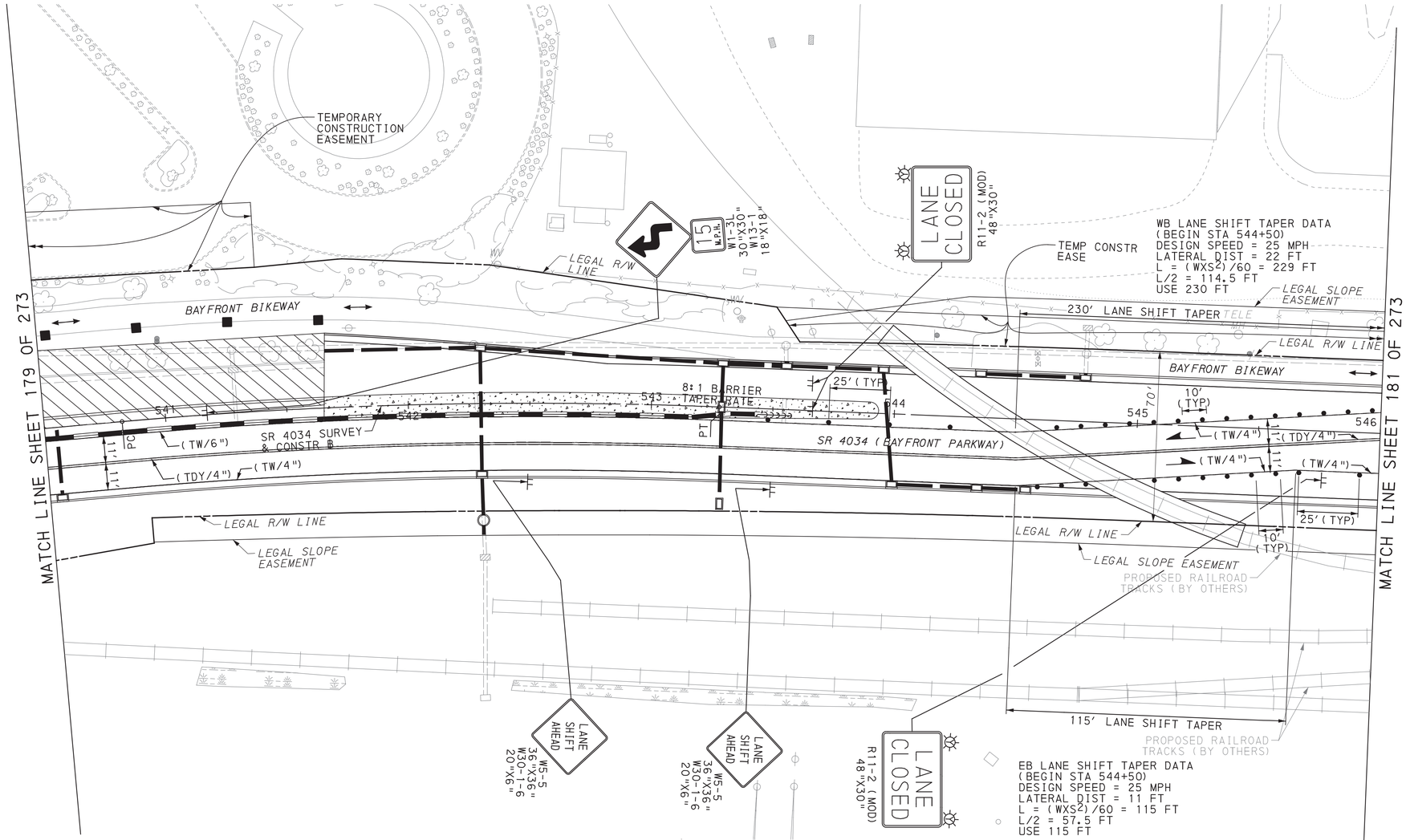
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPsrg5B_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	180 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

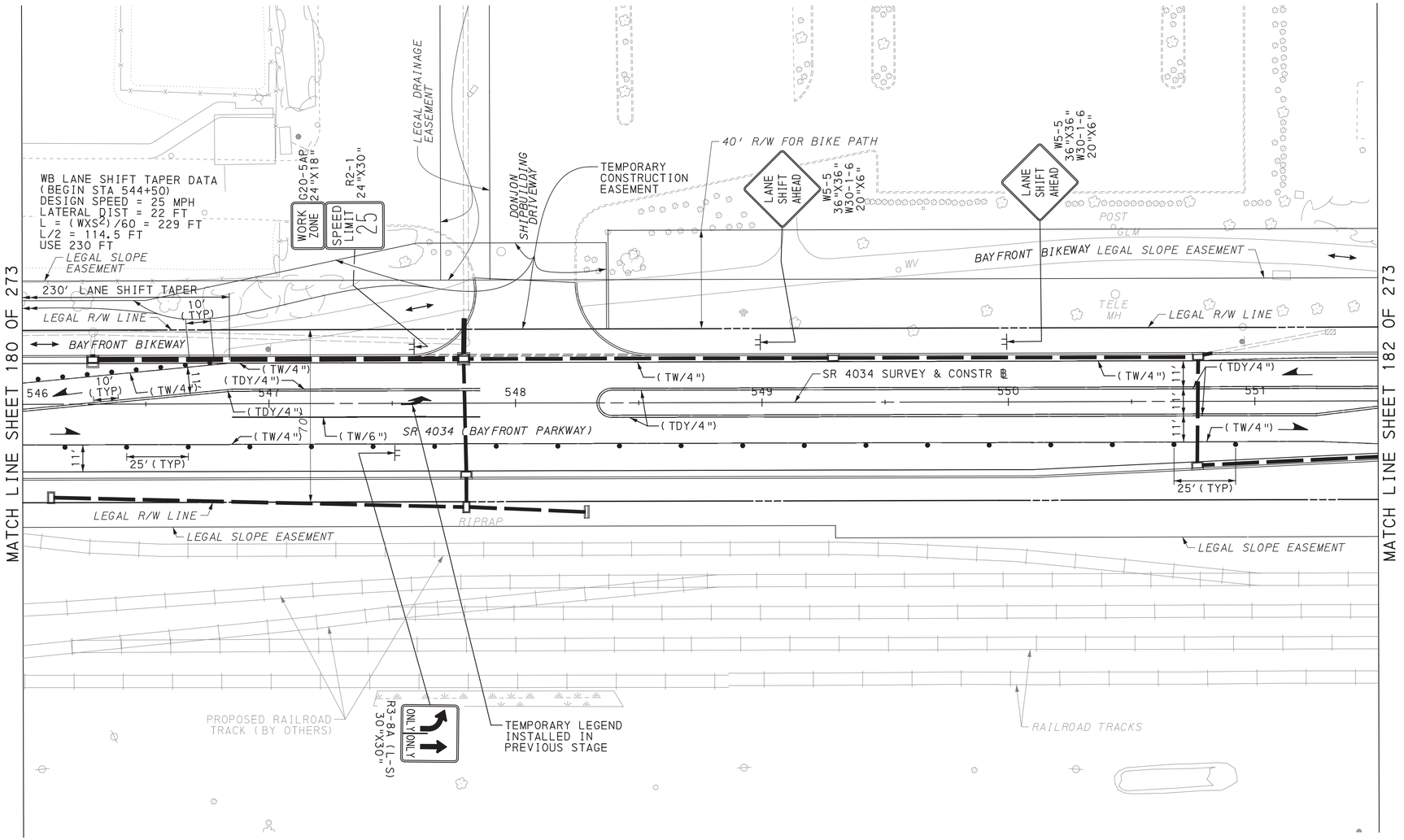
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpIsrg5B_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	181 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

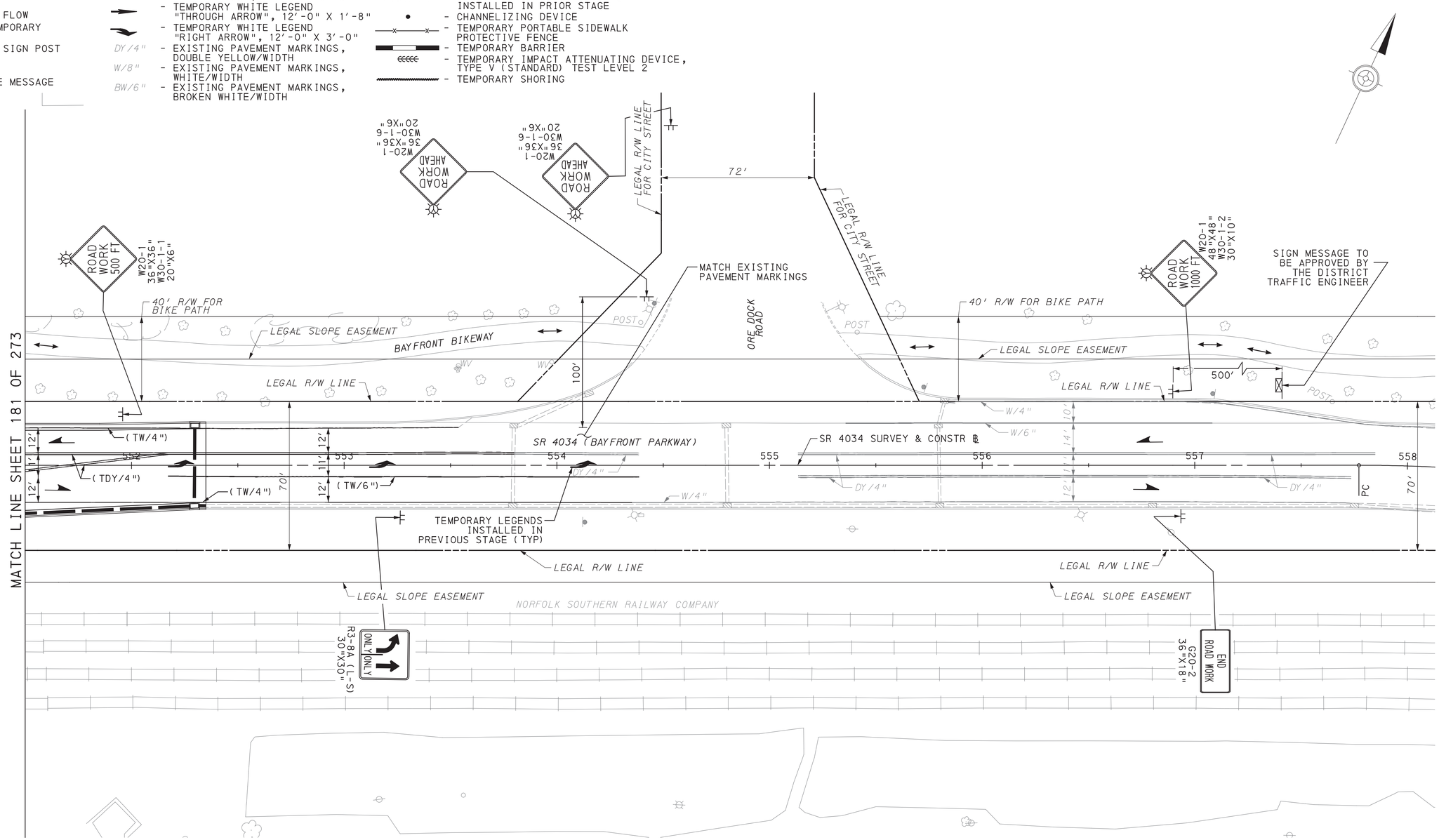
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPsrg5B_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	182 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrgSB_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	183 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5B_12.dgn

SB LANE SHIFT TAPER DATA
(BEGIN STA 4+16)
DESIGN SPEED = 25 MPH
LATERAL DIST = 14 FT
$L = (WXS^2)/60 = 146$ FT
L/2 = 73 FT
USE 100 FT

MATCH LINE SHEET 174 OF 273

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

SIDEWALK

LANDSCAPED MEDIAN

PRIVATE DRIVEWAY

PARKING GARAGE EXIT DRIVEWAY

PARKING GARAGE ENTRANCE DRIVEWAY

NEW TRAFFIC PATTERN AHEAD

SASSAFRAS ST EXTENSION SURVEY & CONSTR ℄

SASSAFRAS STREET EXT

PARKING LOT EXIT

MATCH EXISTING PAVEMENT MARKINGS

PROPOSED PERMANENT STOP SIGN

EXISTING STOP SIGN

PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS

FRONT STREET

48" RCP

48" HDPE

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

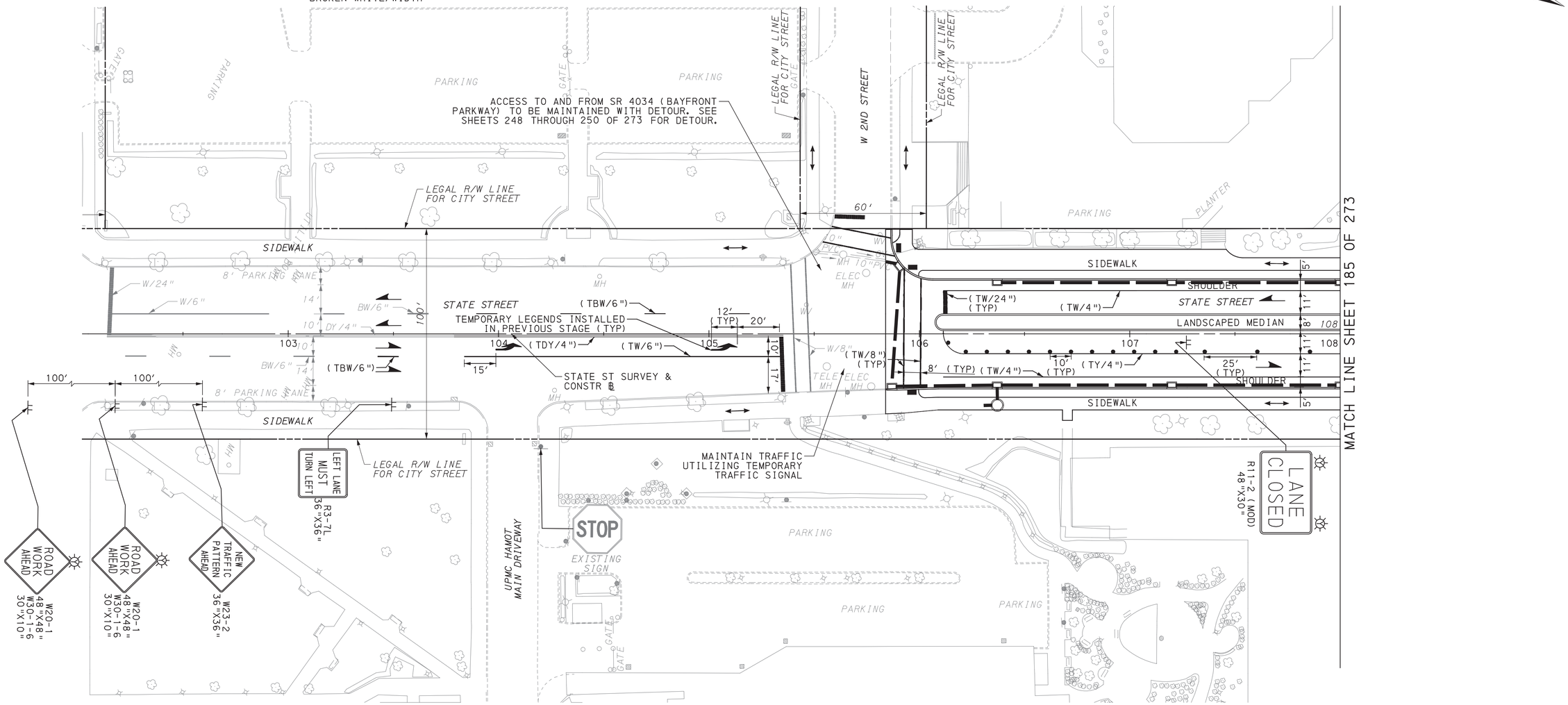
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	184 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mscnsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5B_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	185 OF 273
CITY OF ERIE				

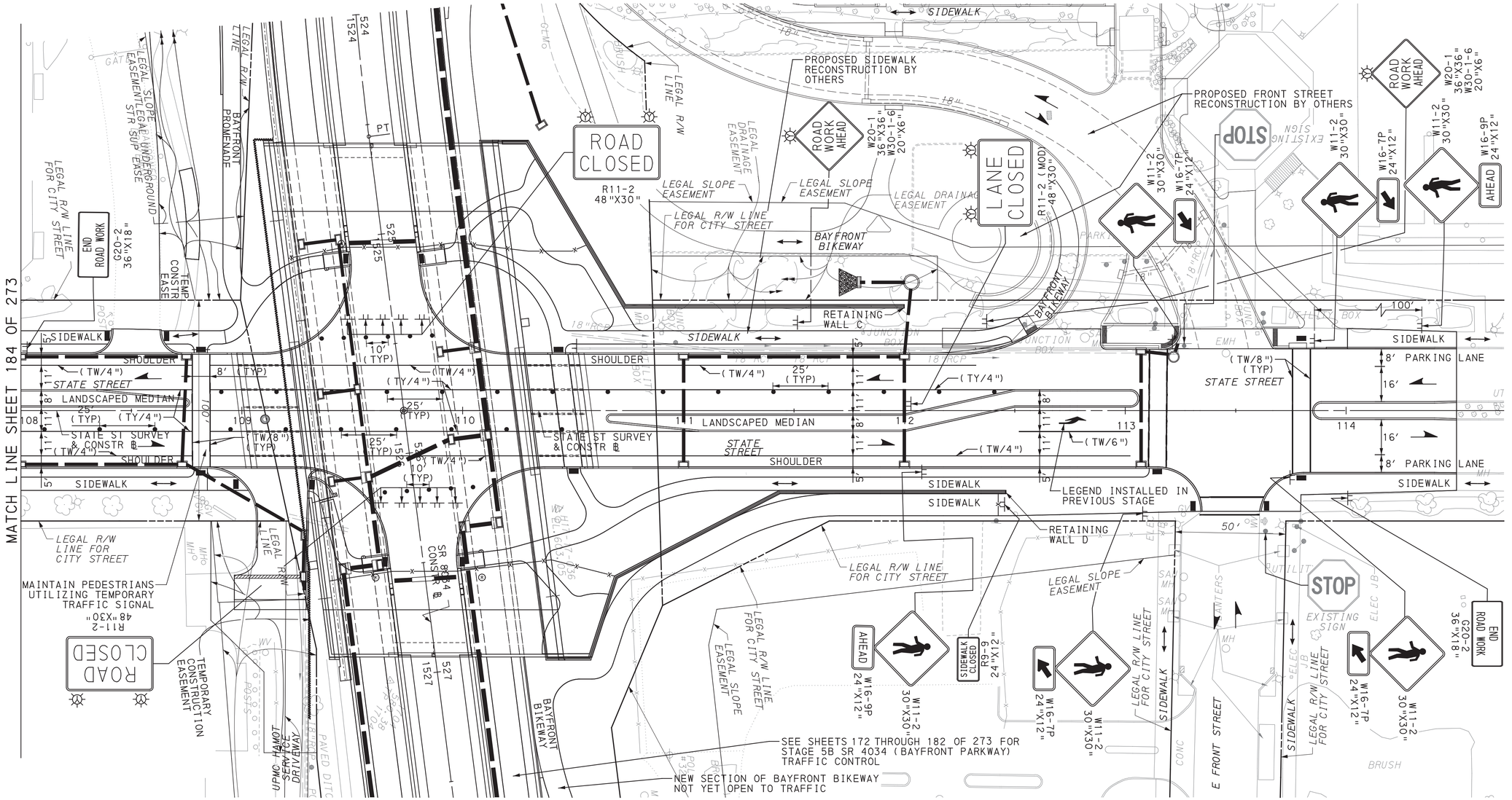
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mkconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5B_14.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

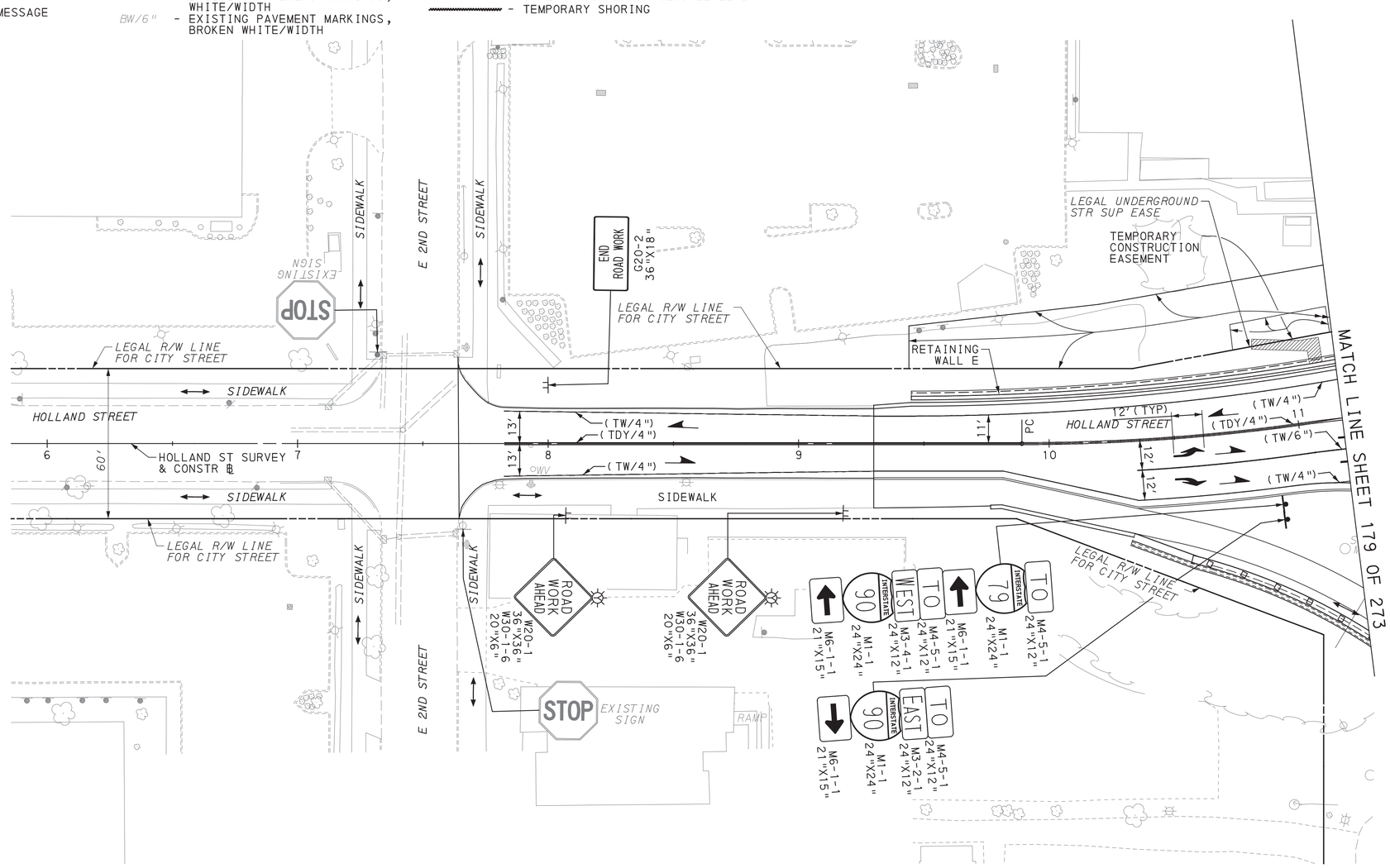
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	186 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpl_stg5B_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	187 OF 273
CITY OF ERIE				

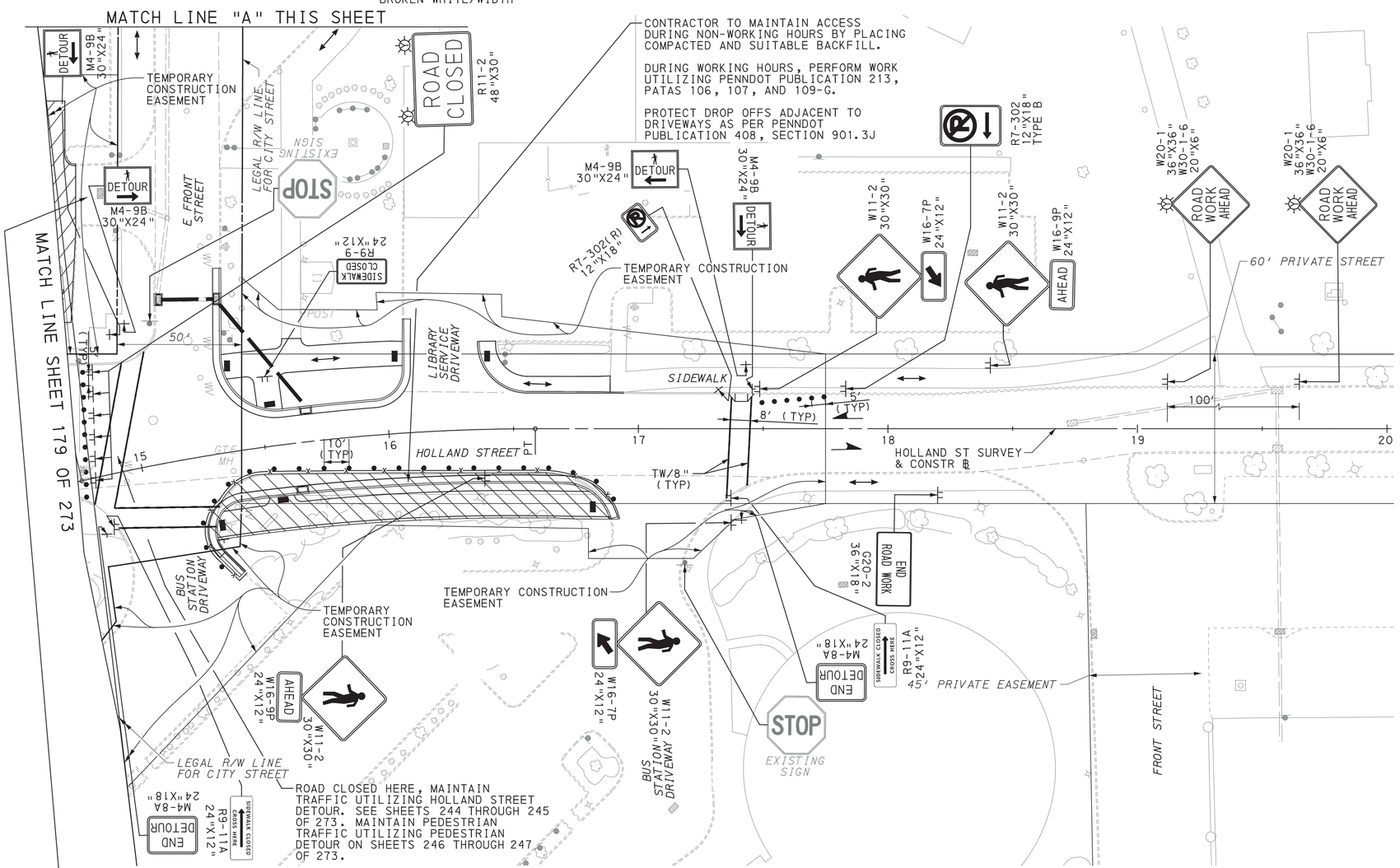
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg5B_16.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5B

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

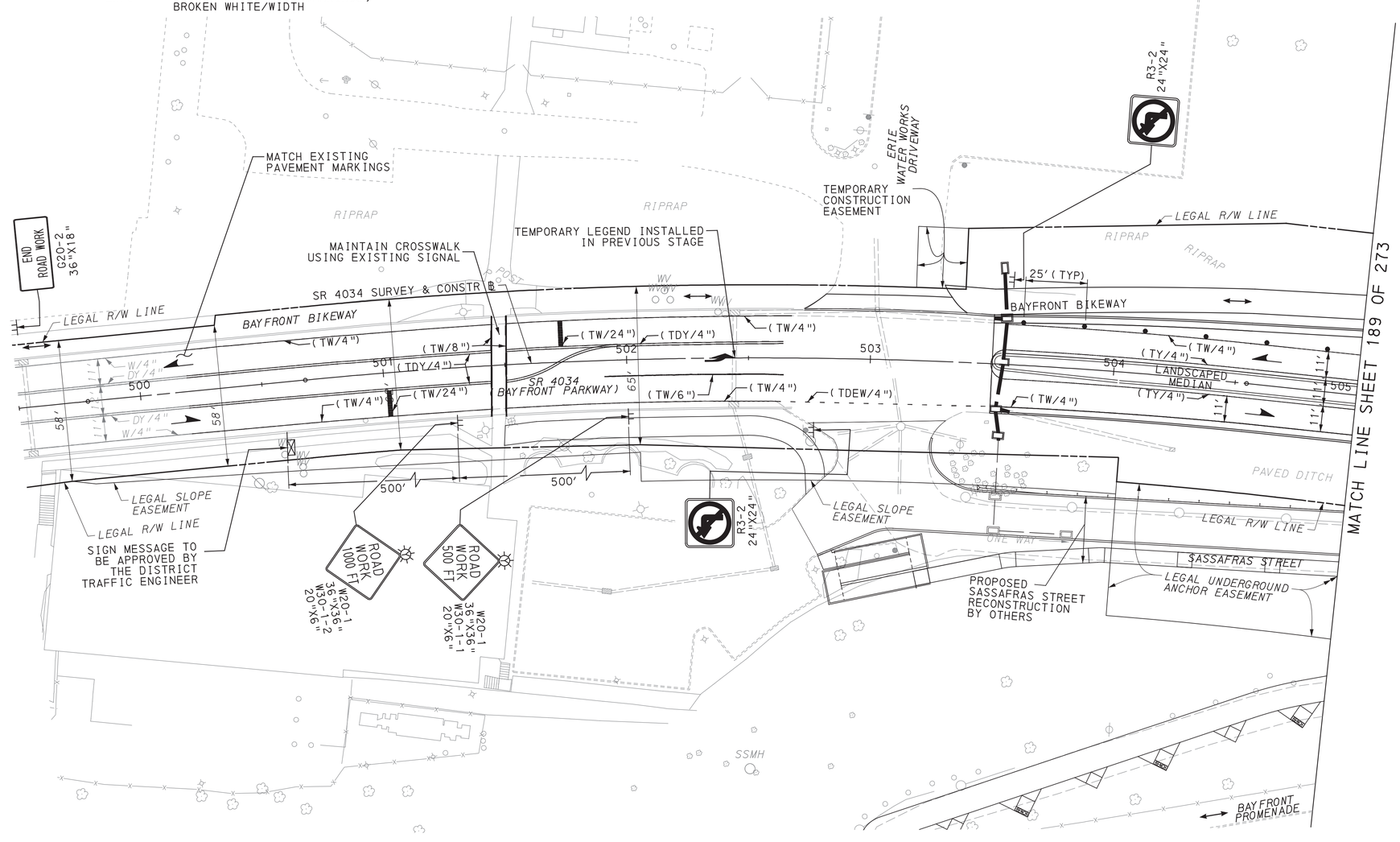
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	188 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

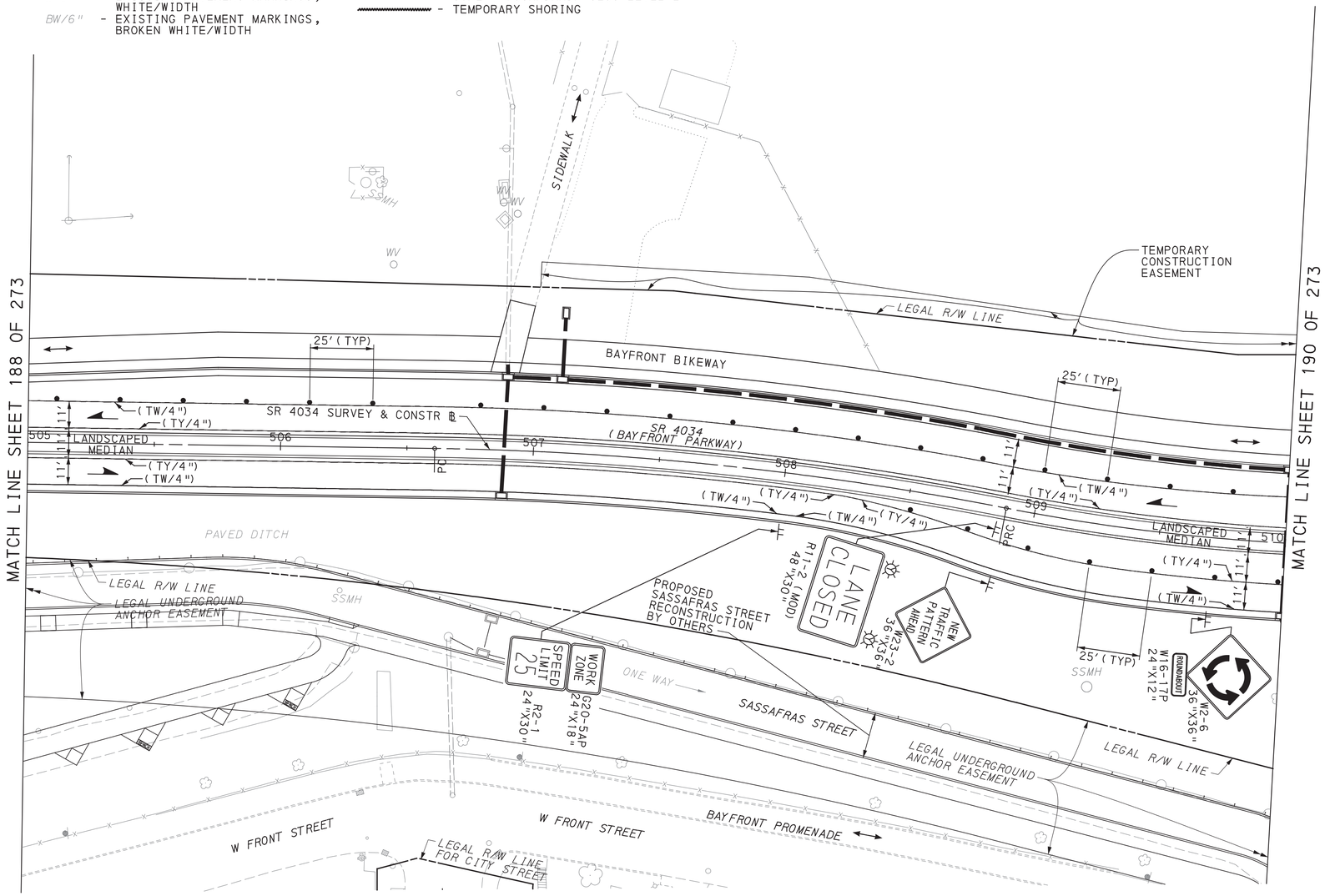
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPsrg5C_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	189 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

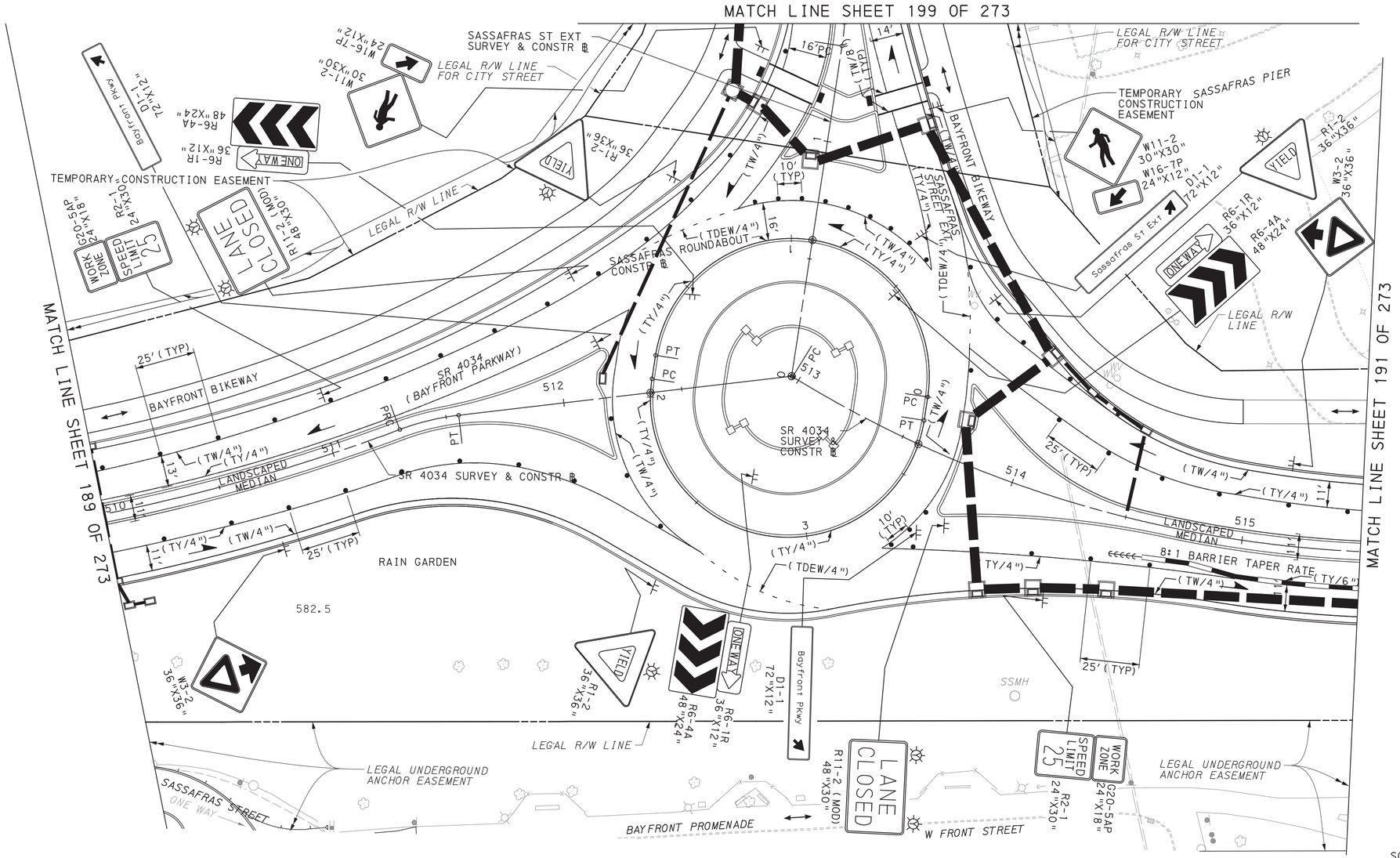
PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP1stg5C_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	190 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

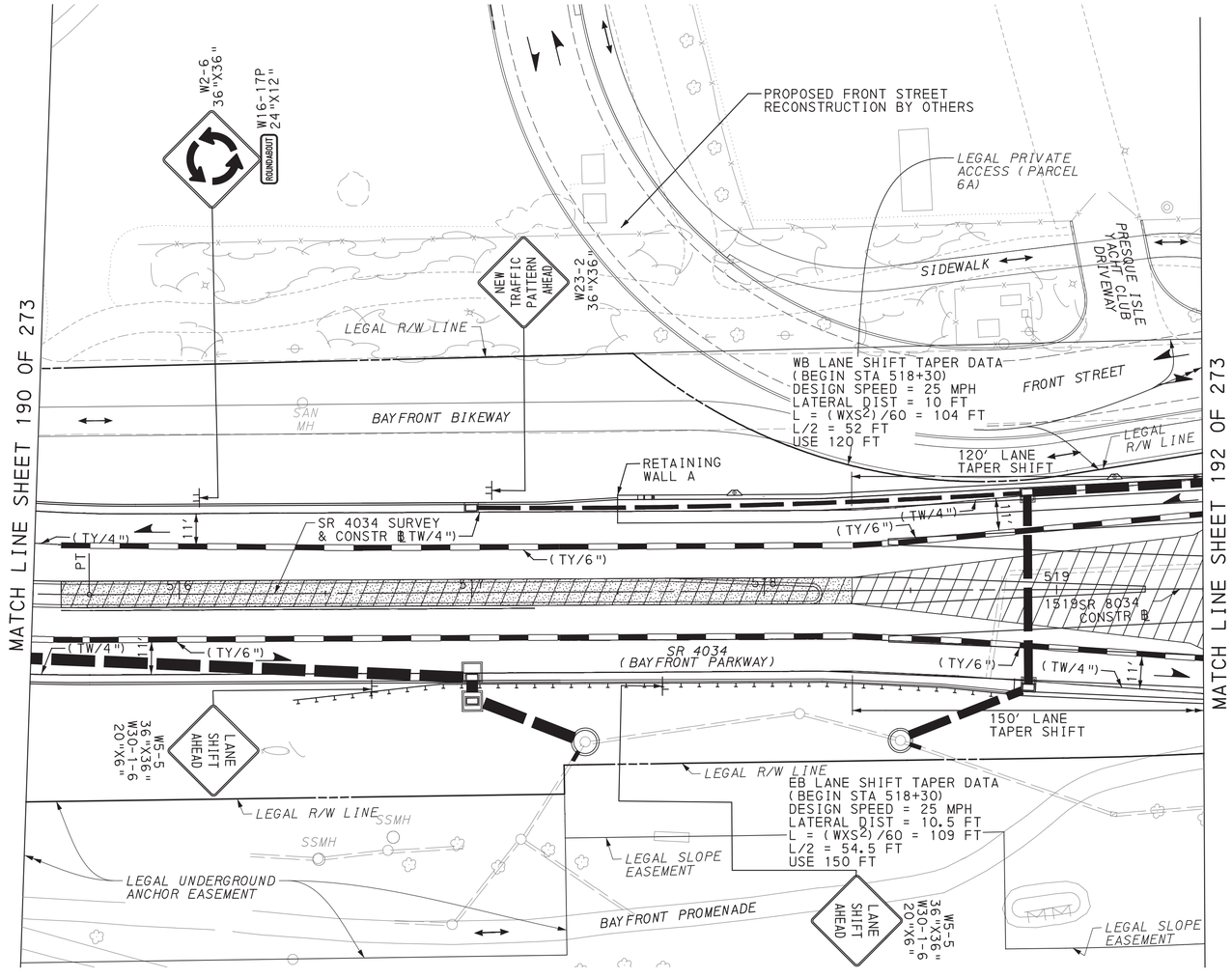
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg5C_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	191 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

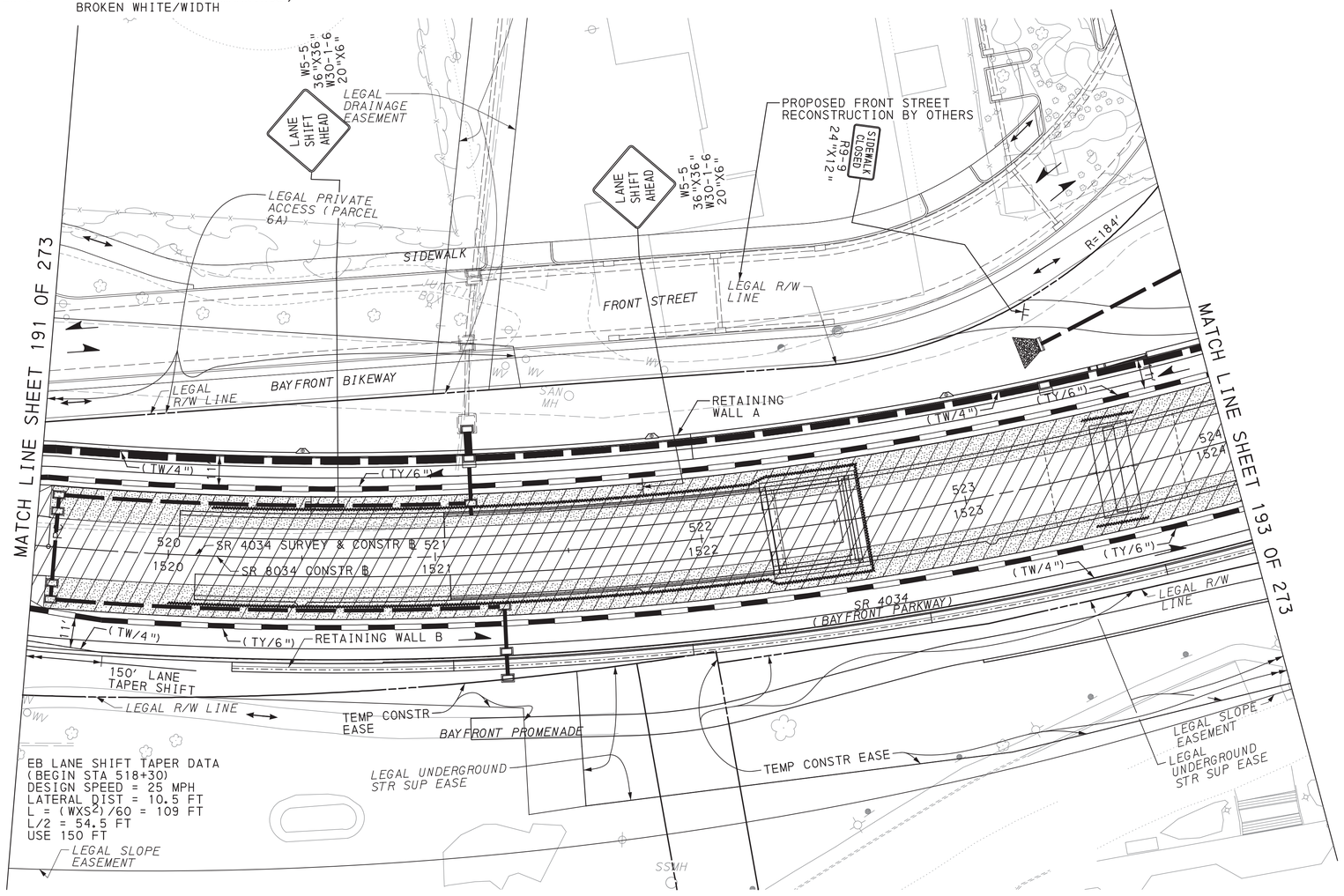
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplistg5C_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	192 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\Tcp1sTg5C_05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	193 OF 273
CITY OF ERIE				

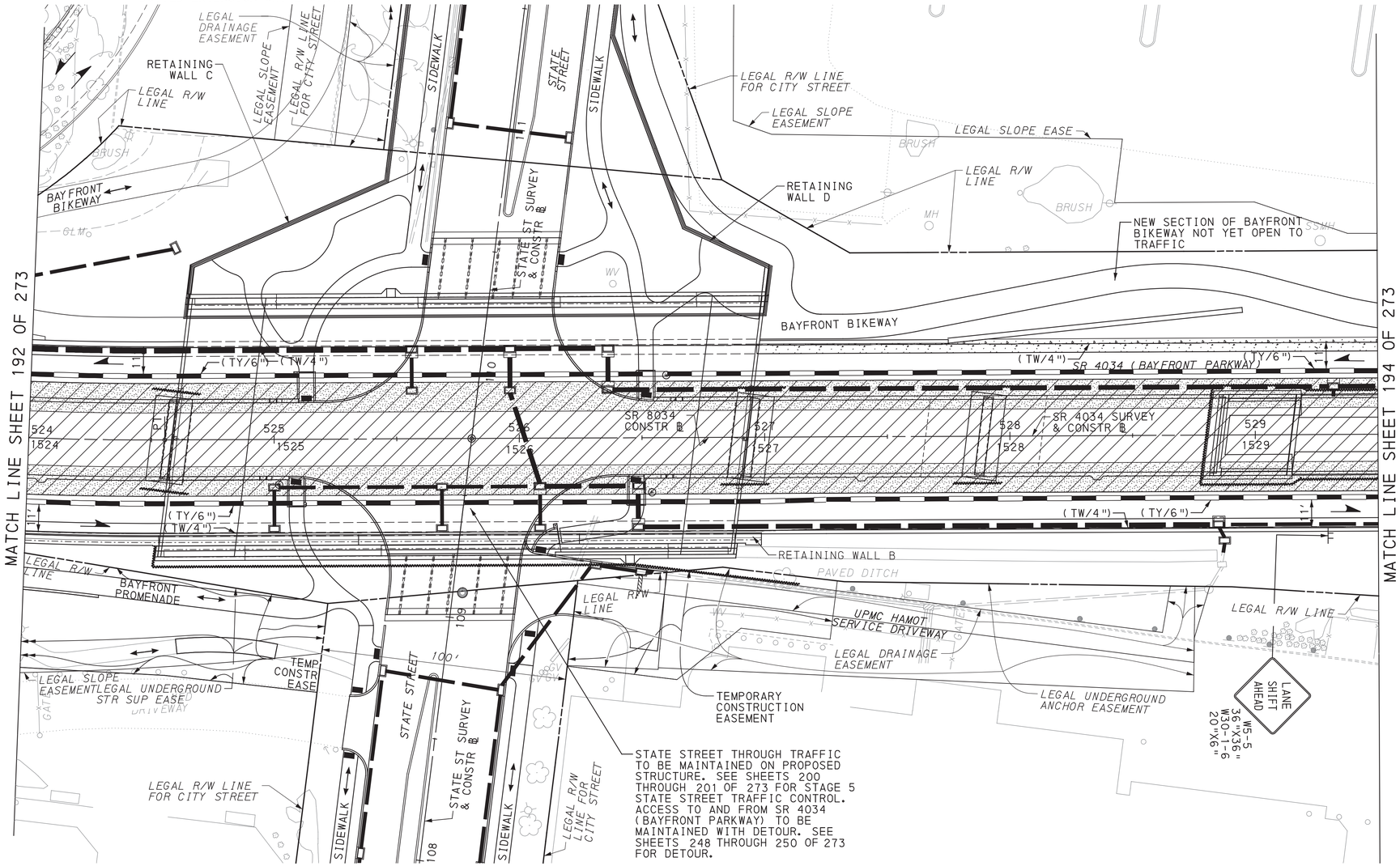
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mp1\sheets\TCplsg5C_06.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	194 OF 273
CITY OF ERIE				

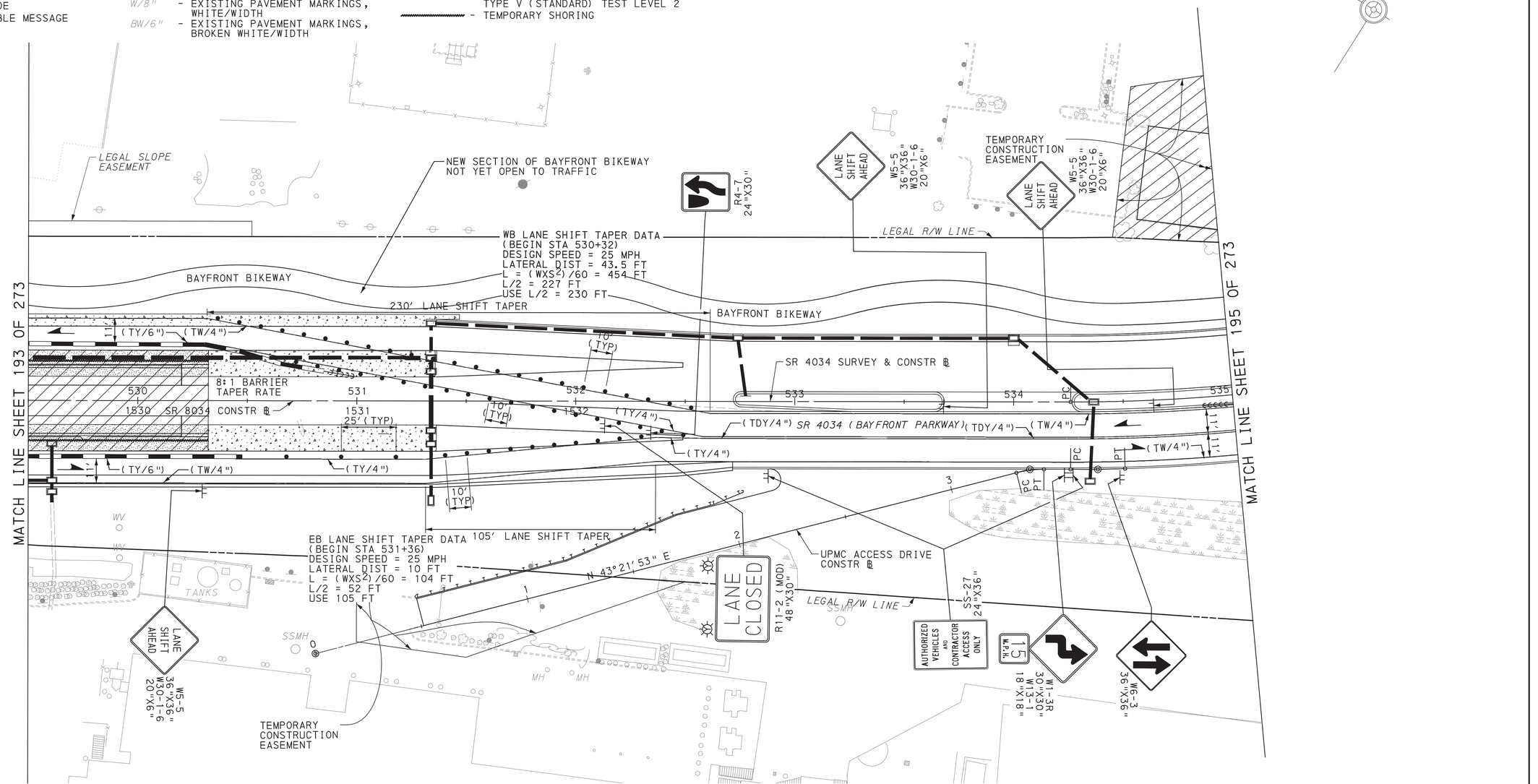
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCP\stg5C_07.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

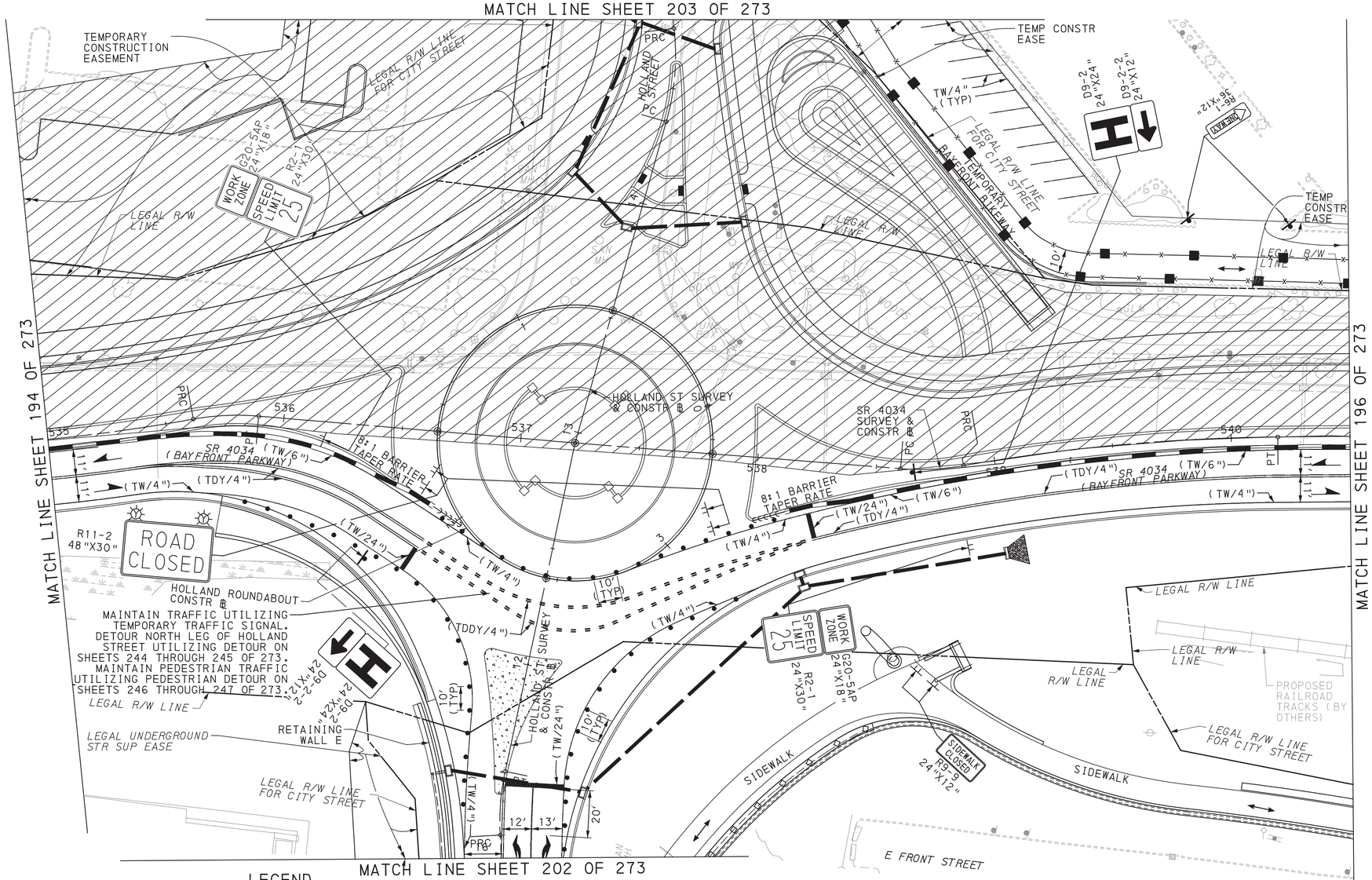
TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	195 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

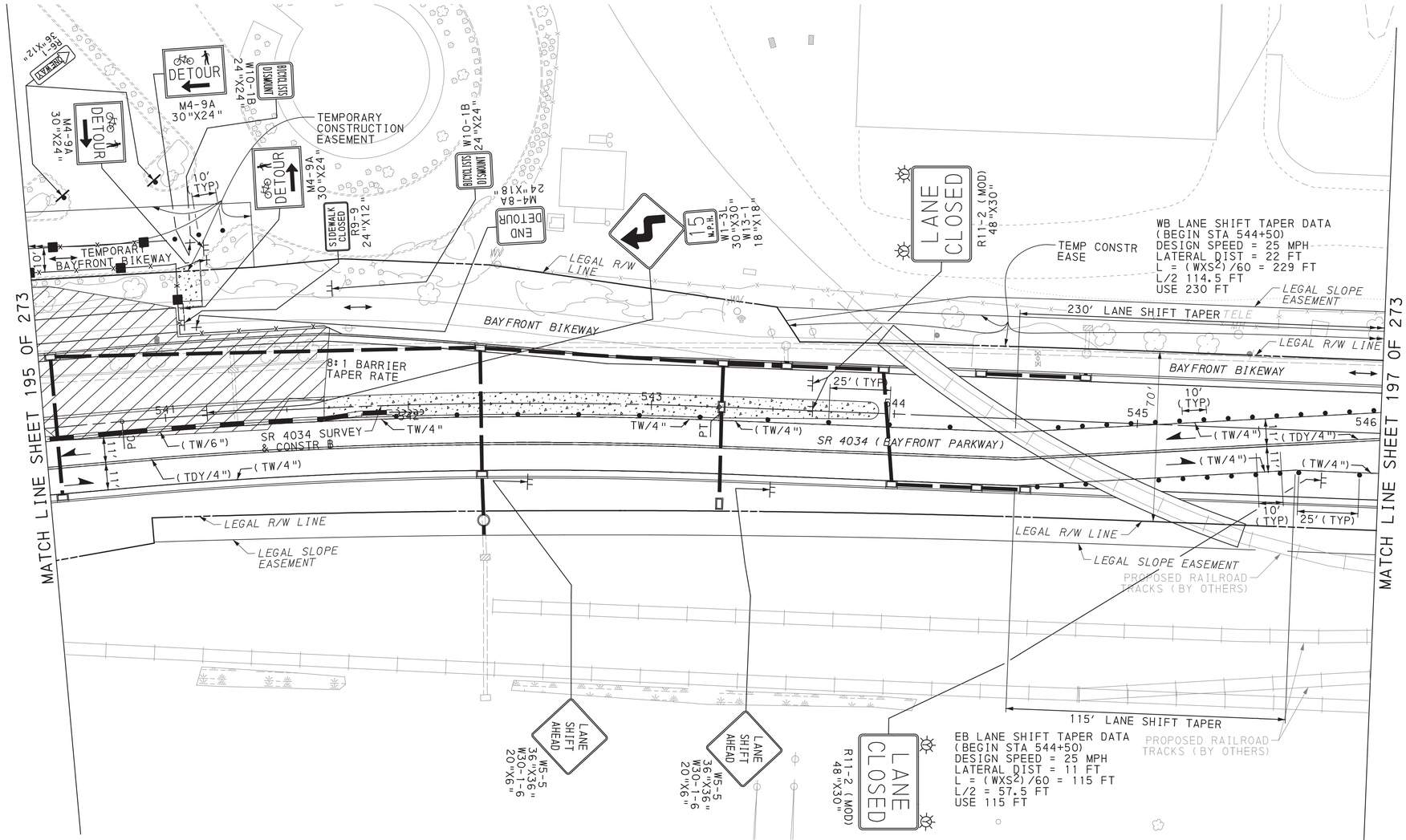
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg5C_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	196 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

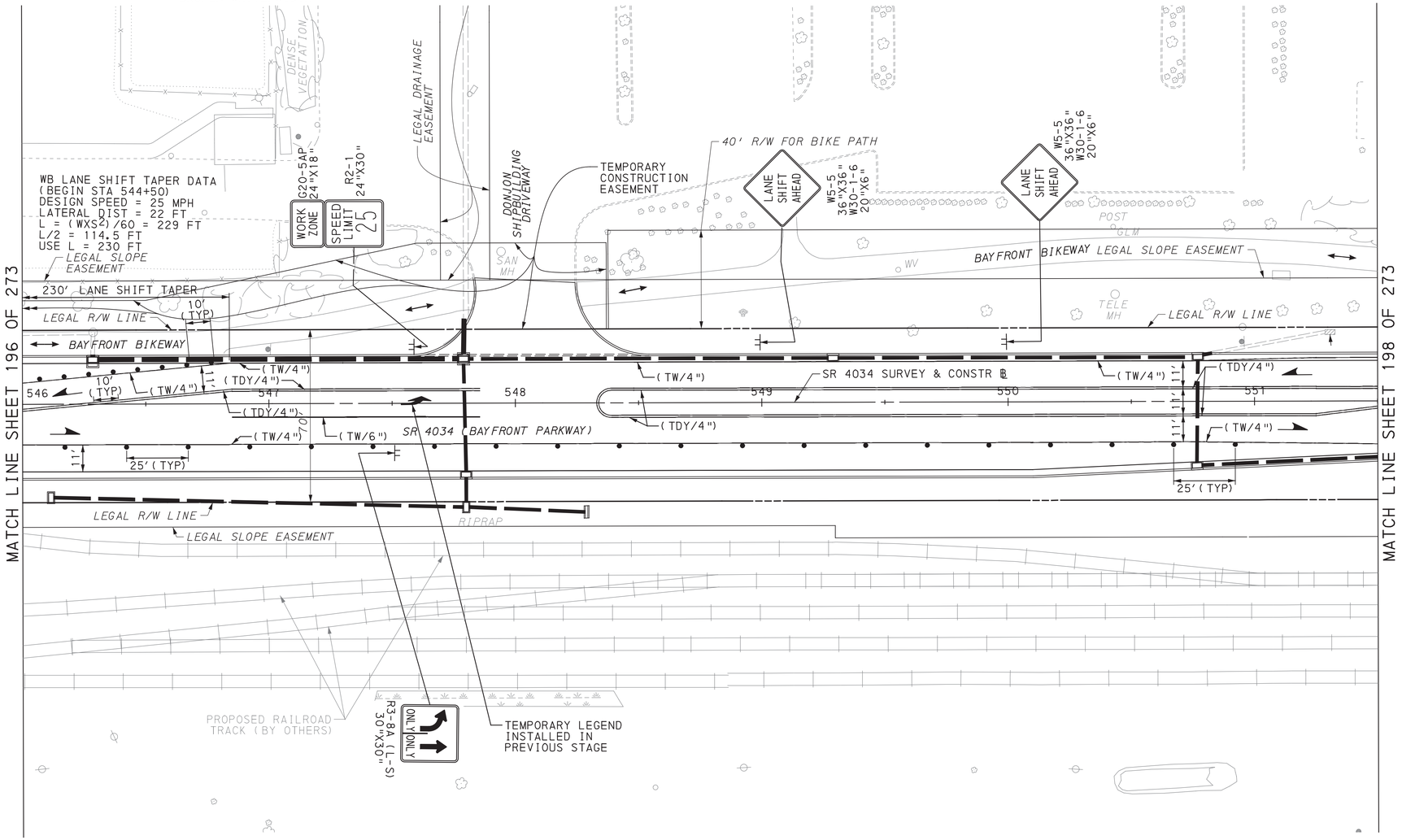
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5C_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	197 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

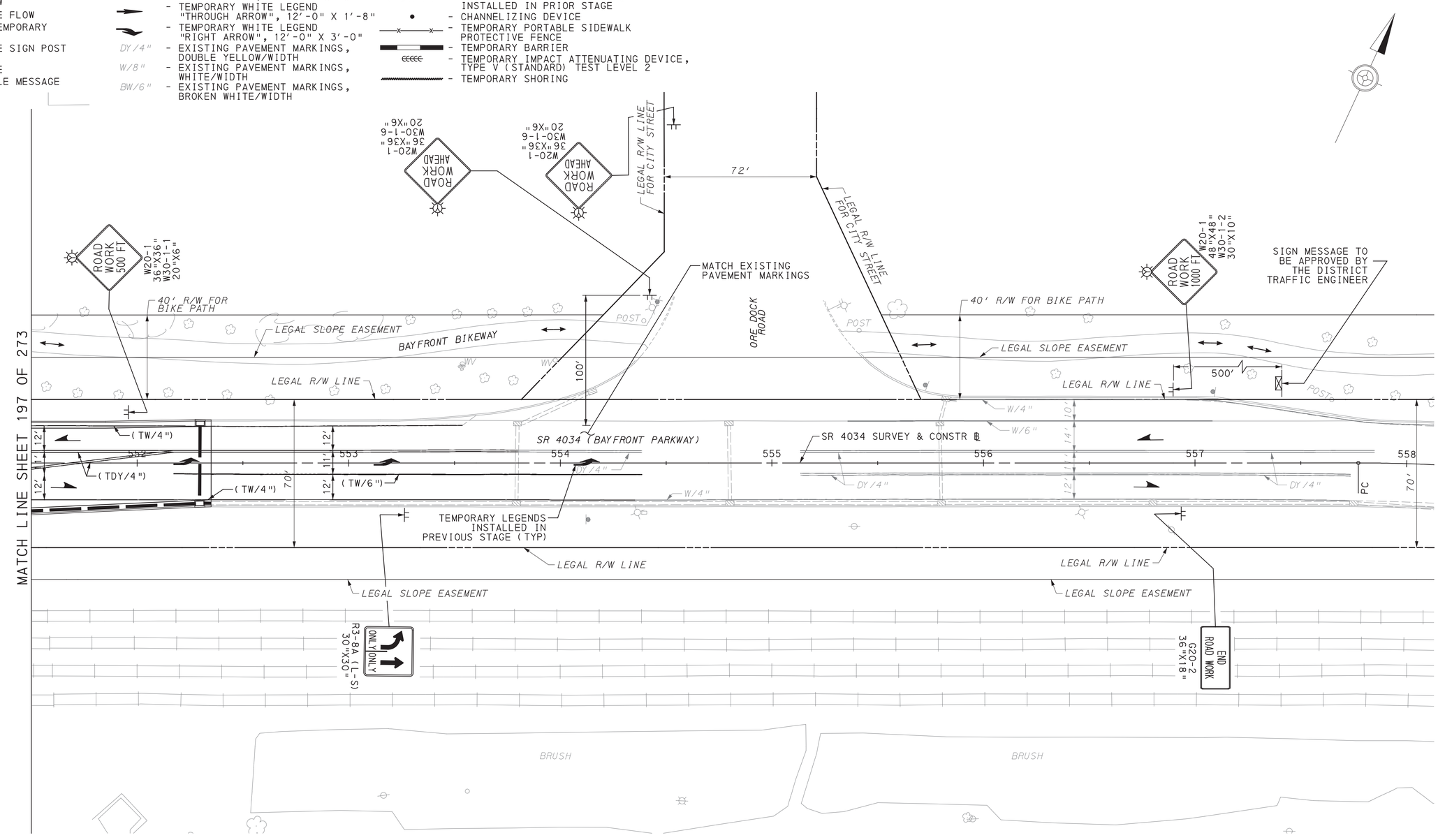
PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCp1sr95C_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	198 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg5C_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	199 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\tmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg5C_12.dgn

MATCH LINE SHEET 190 OF 273

TO INTERSTATE 79 M4-5-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO WEST INTERSTATE 90 M4-5-1 24"X12" M3-4-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

TO EAST INTERSTATE 90 M4-5-1 24"X12" M3-2-1 24"X12" M1-1 24"X24" M6-1-1 21"X15"

W3-2 36"X36" W2-6 36"X36" ROUNDABOUT W16-17P 24"X12" W11-2 30"X30" W16-7P 24"X12" W11-2 30"X30" W16-9P 24"X12" AHEAD

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

SIDEWALK

(TY/4") (TW/4") 11' 13' 11' (TY/4") (TW/4") PRC PT

(TW/8") (TYP) PC

LANDSCAPED MEDIAN 4

(TY/4") (TW/4") 100 5

(TY/4") 11' 11' (TY/4")

BAYFRONT BIKEWAY

SIDEWALK

LEGAL R/W LINE FOR CITY STREET

TEMPORARY CONSTRUCTION EASEMENT

AHEAD W16-9P 24"X12" W11-2 30"X30" W16-7P 24"X12" W11-2 30"X30"

PROPOSED FRONT STREET RECONSTRUCTION BY OTHERS

FRONT STREET

SIDEWALK

STOP PROPOSED PERMANENT SIGN

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

TEMPORARY CONSTRUCTION EASEMENT

R3-2 24"X24"

PRIVATE DRIVEWAY

R4-7 24"X30" OM1-3 18"X18"

EXISTING SIGN STOP

W23-2 36"X36" NEW TRAFFIC PATTERN AHEAD

PARKING GARAGE EXIT DRIVEWAY

PARKING GARAGE ENTRANCE DRIVEWAY

SB LANE SHIFT TAPER DATA
(BEGIN STA 4+16)
DESIGN SPEED = 25 MPH
LATERAL DIST = 14 FT
$L = (WXS^2)/60 = 146$ FT
L/2 = 73 FT
USE 100 FT

EU TU

48" RCP

LEGAL R/W LINE FOR CITY STREET

SIDEWALK

SASSAFRAS ST EXTENSION SURVEY & CONSTR ℄

60' (TY/4") 6 7 8 DY/4" 16' 17' 09'

(TDY/4") SASSAFRAS STREET EXT

SIDEWALK

LEGAL R/W LINE FOR CITY STREET

POST

PARKING LOT EXIT

STOP EXISTING SIGN

MATCH EXISTING PAVEMENT MARKINGS

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

ROAD WORK AHEAD W20-1 36"X36" W30-1-6 20"X6"

END ROAD WORK G20-2 36"X18"

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

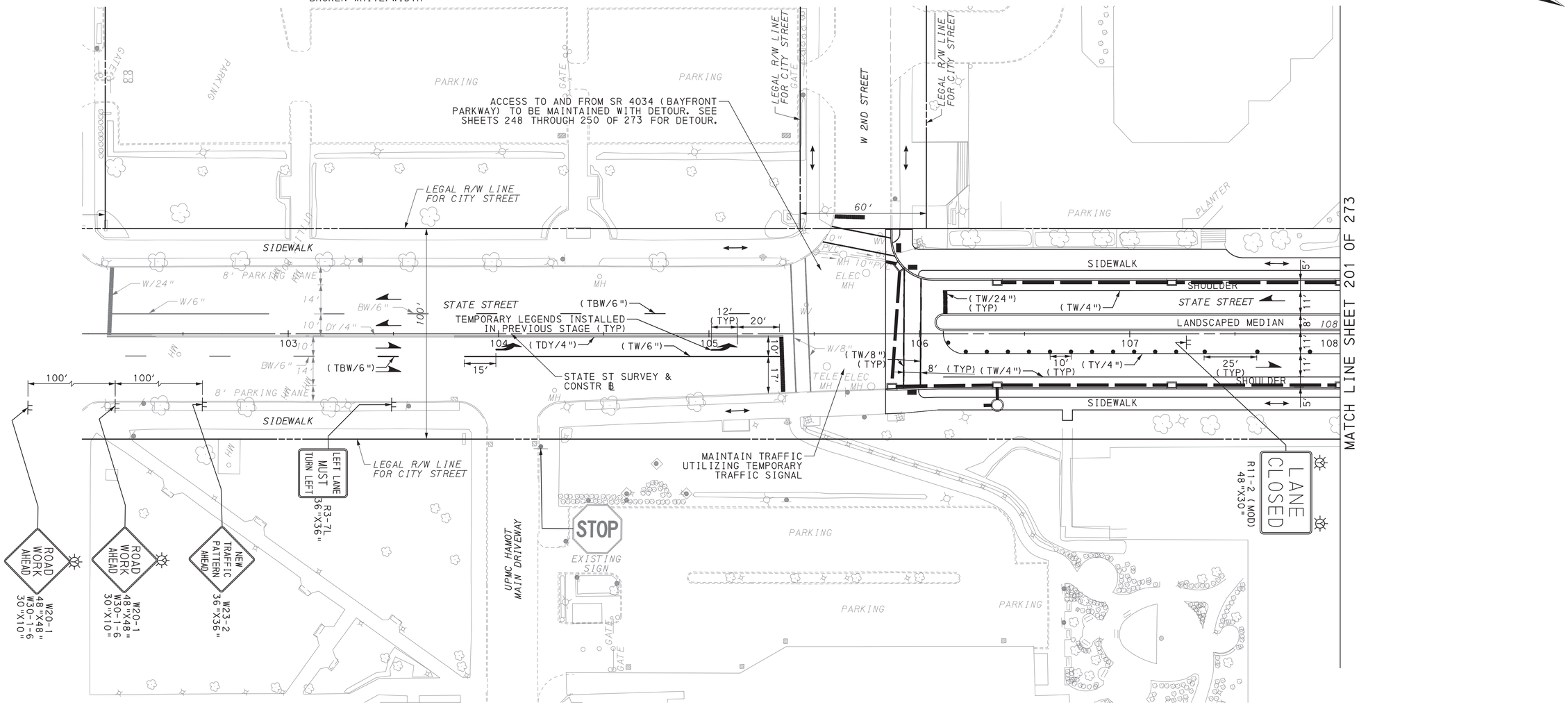
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	200 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5C_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	201 OF 273
CITY OF ERIE				

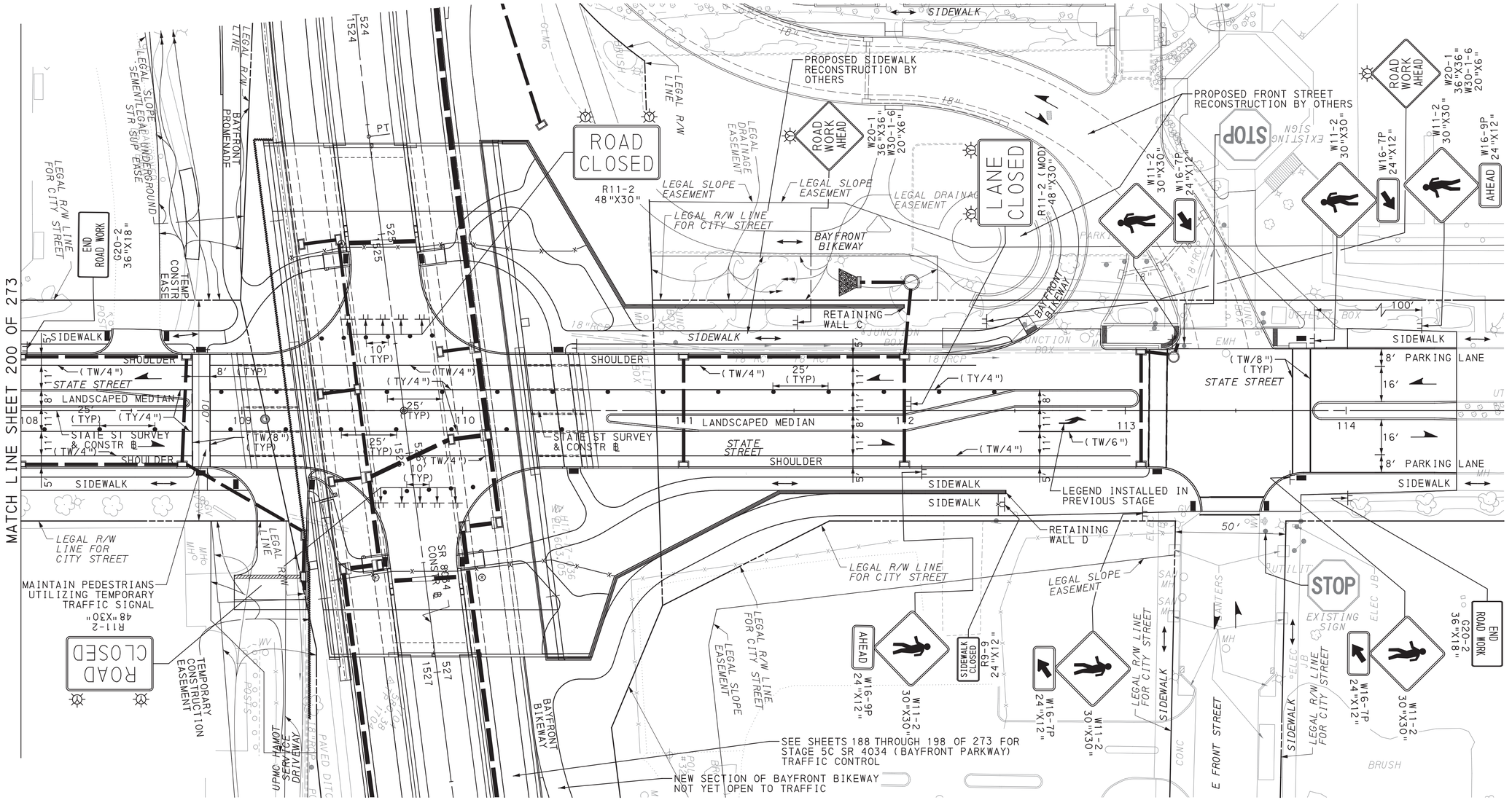
REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\mkconsultants.com\files\Production\08\60\06808\mp1\sheets\TCp1sr95C_14.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

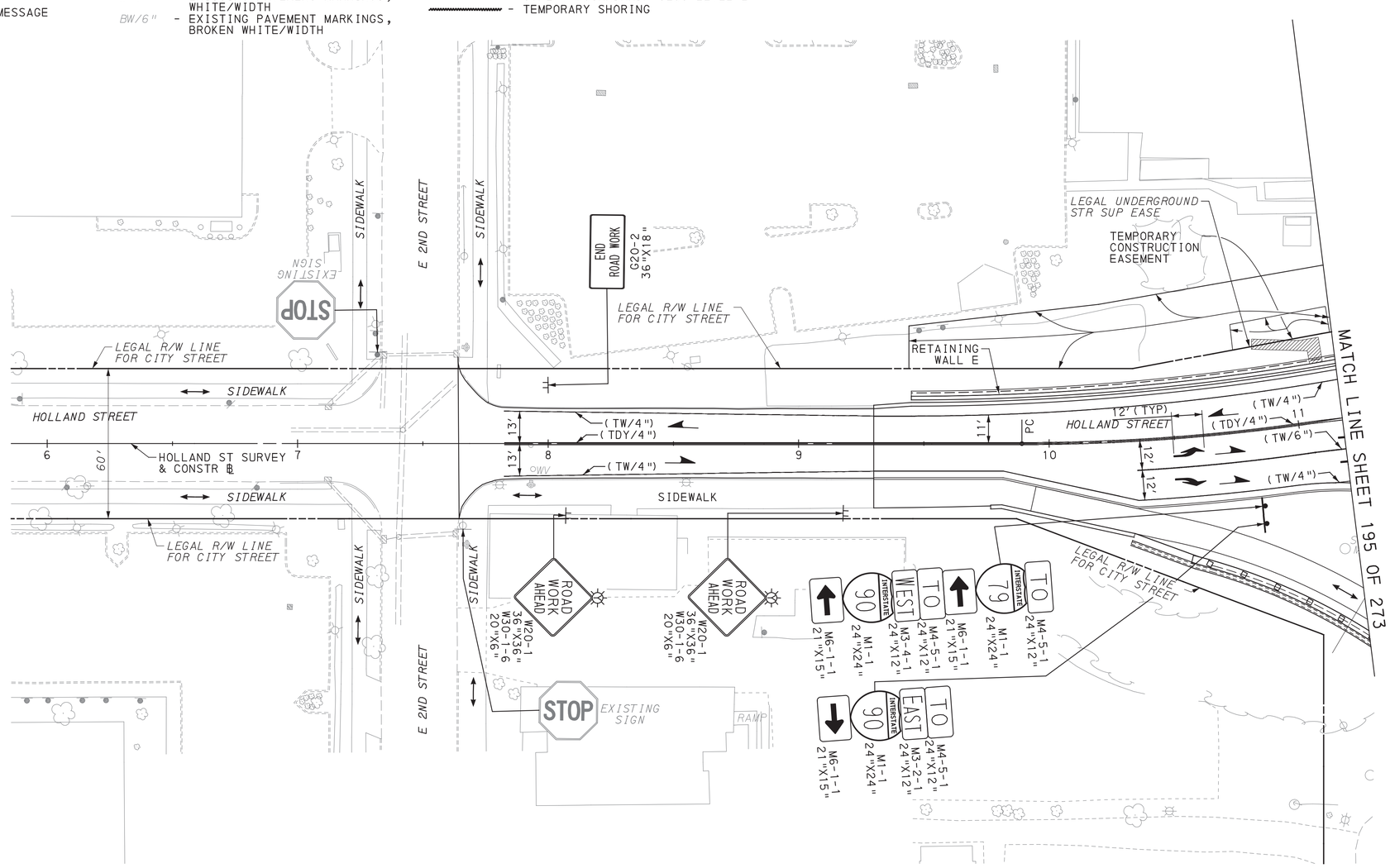
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	202 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5C

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg5C_15.dgn

PLOTTED: 8/2/2022

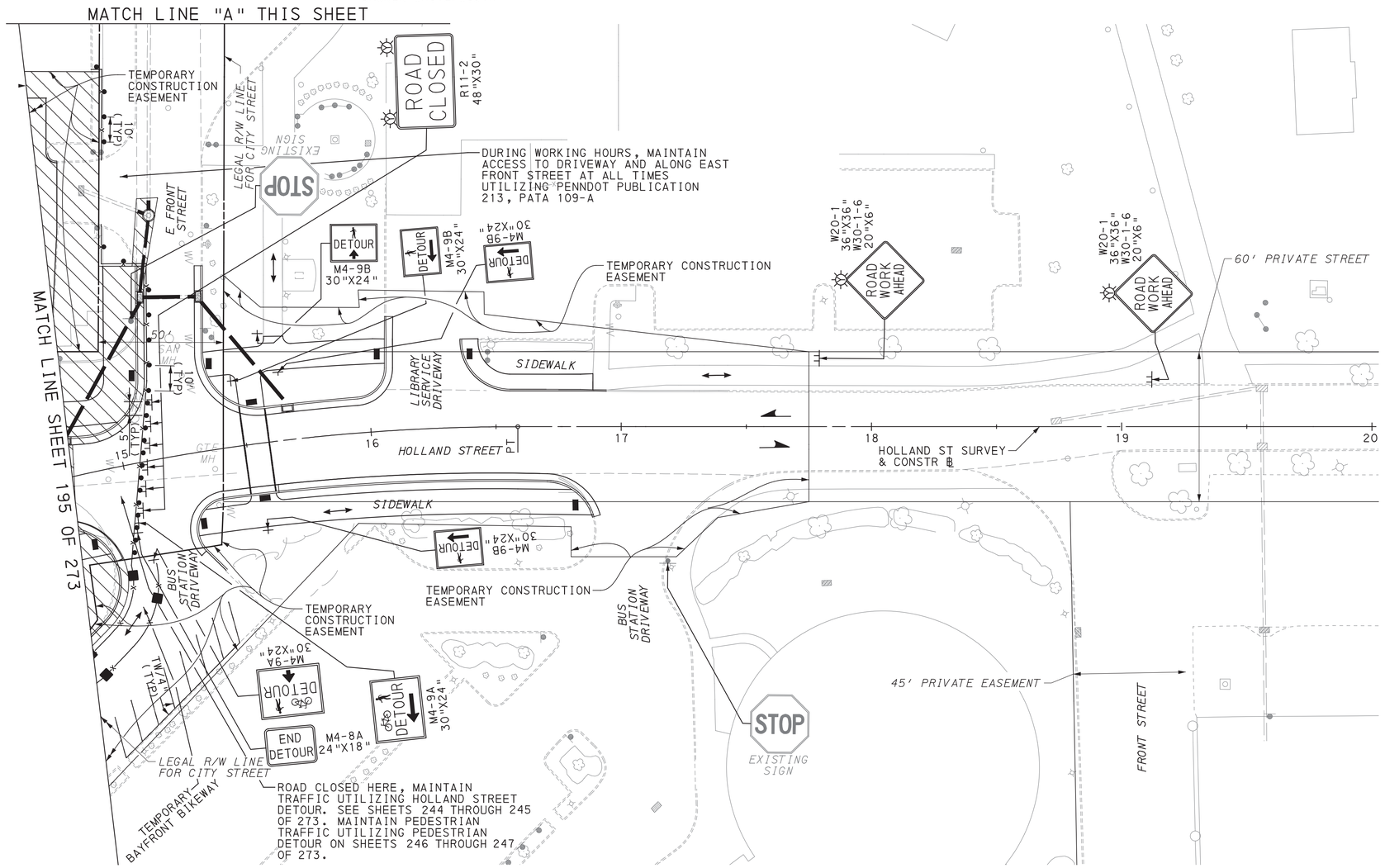
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg5C_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	203 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

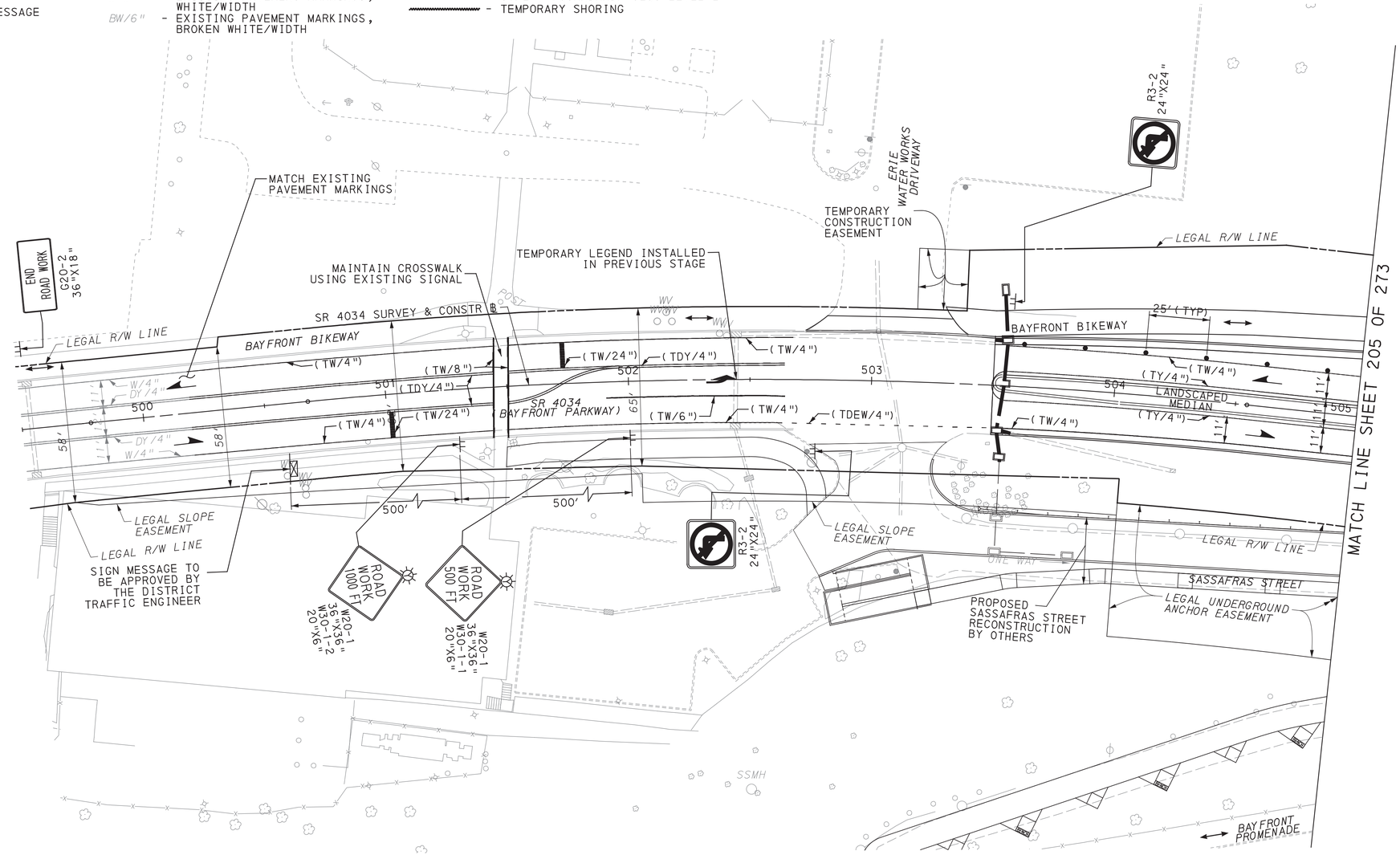
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	204 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP_stg5D_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	205 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

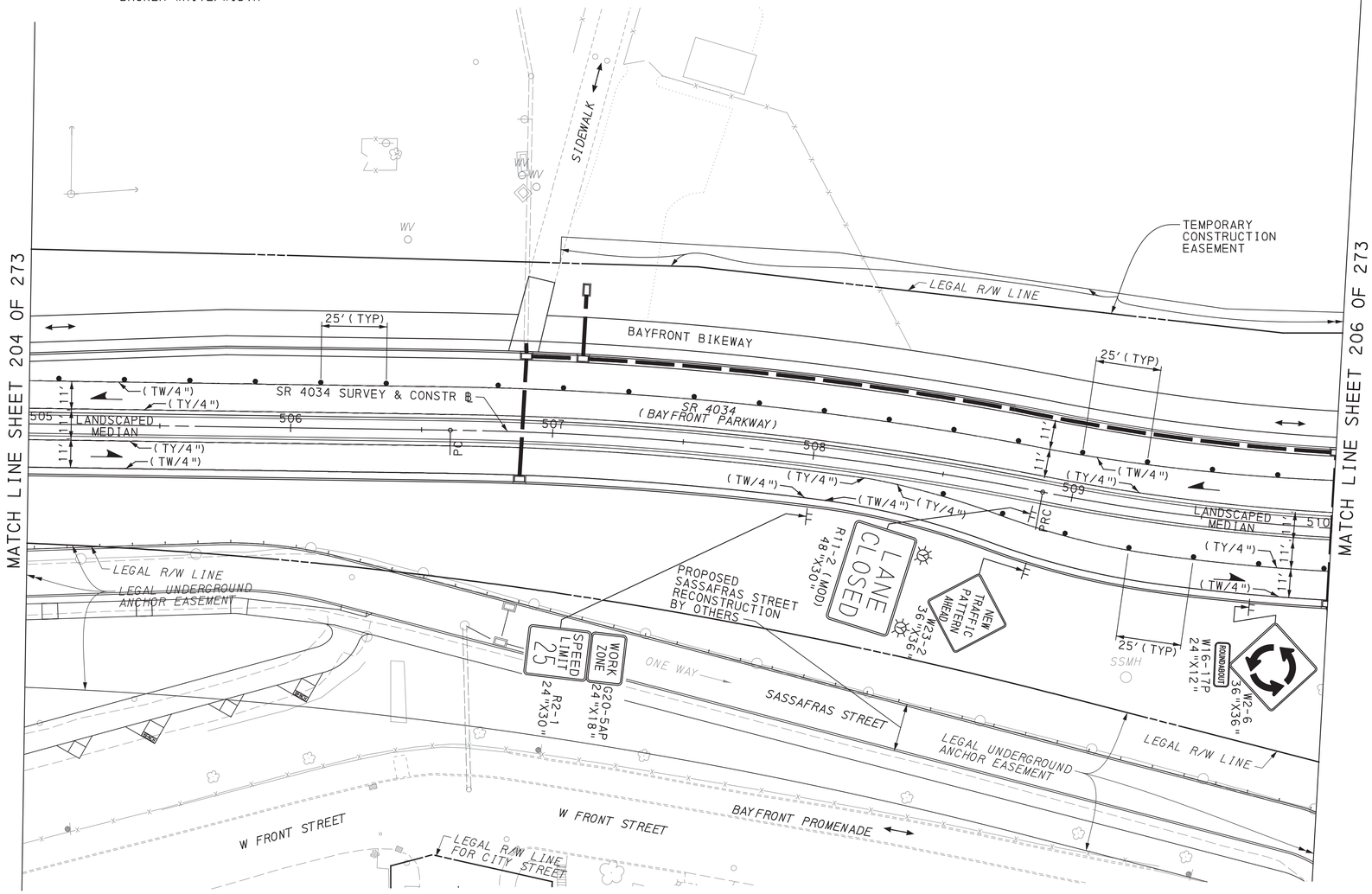
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

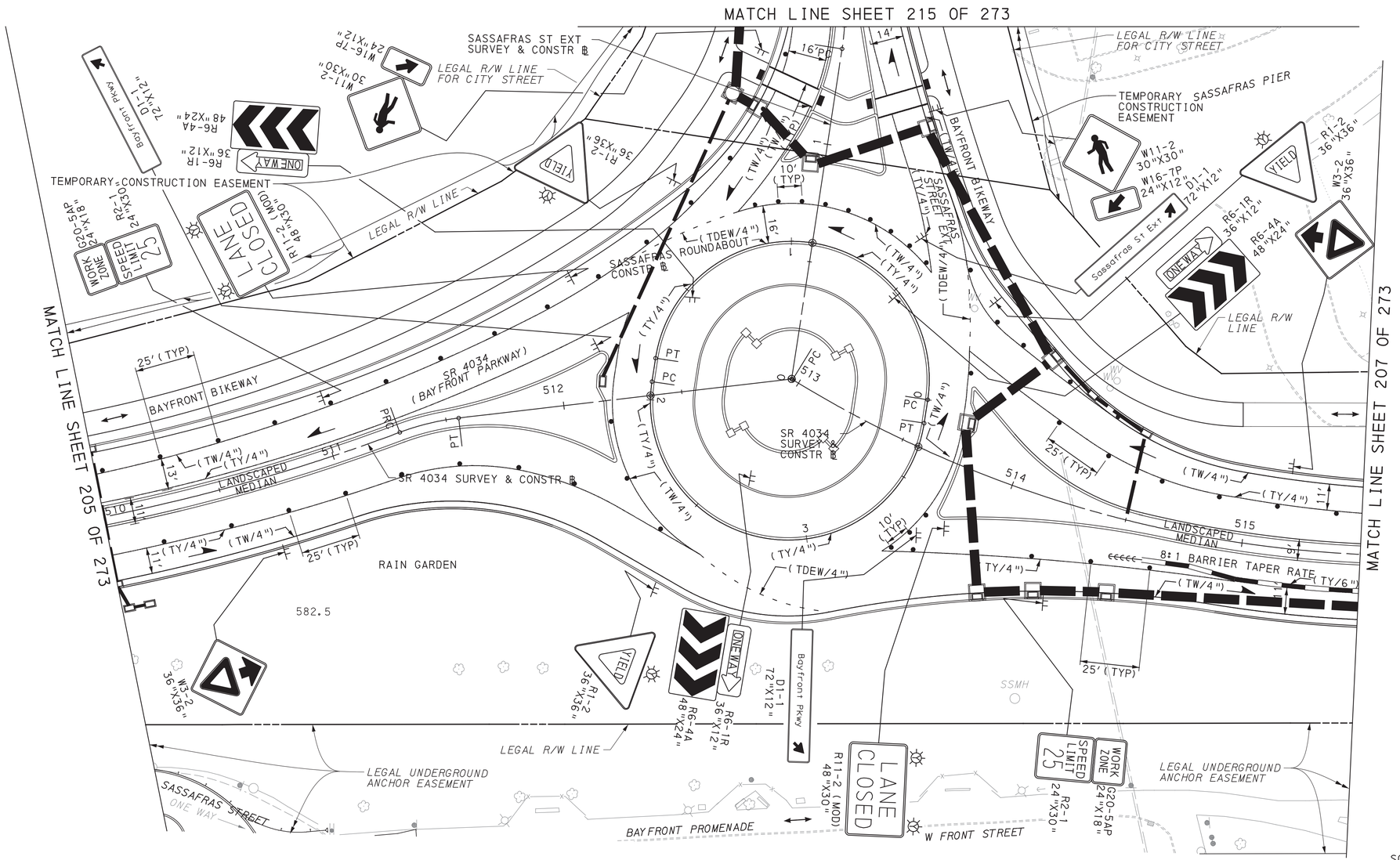
PLOTTED: 8/2/2022

FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP1stg5D_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	206 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

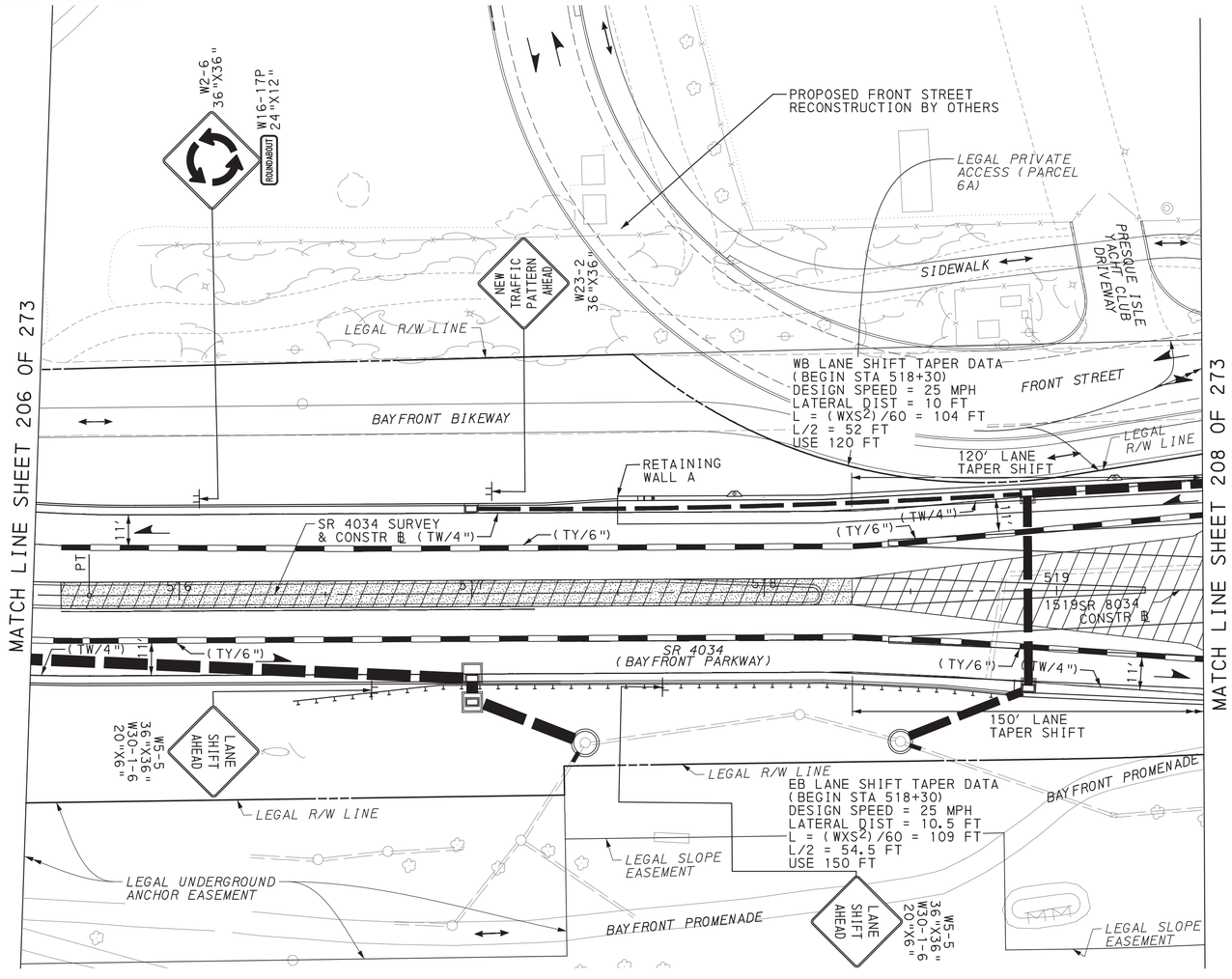
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlstg5D_03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	207 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\Tcplstg5D_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	208 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

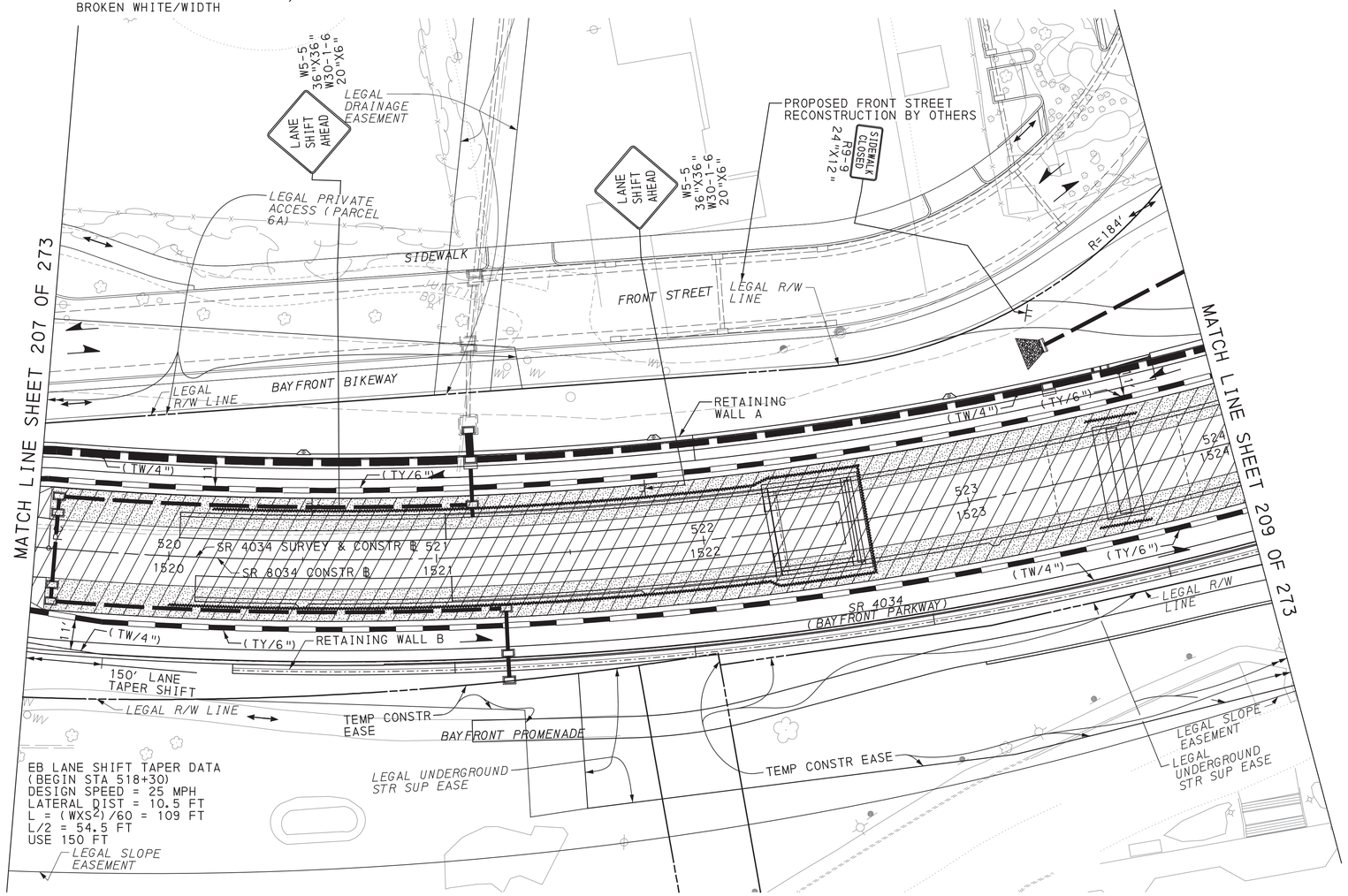
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg5D_05.dgn

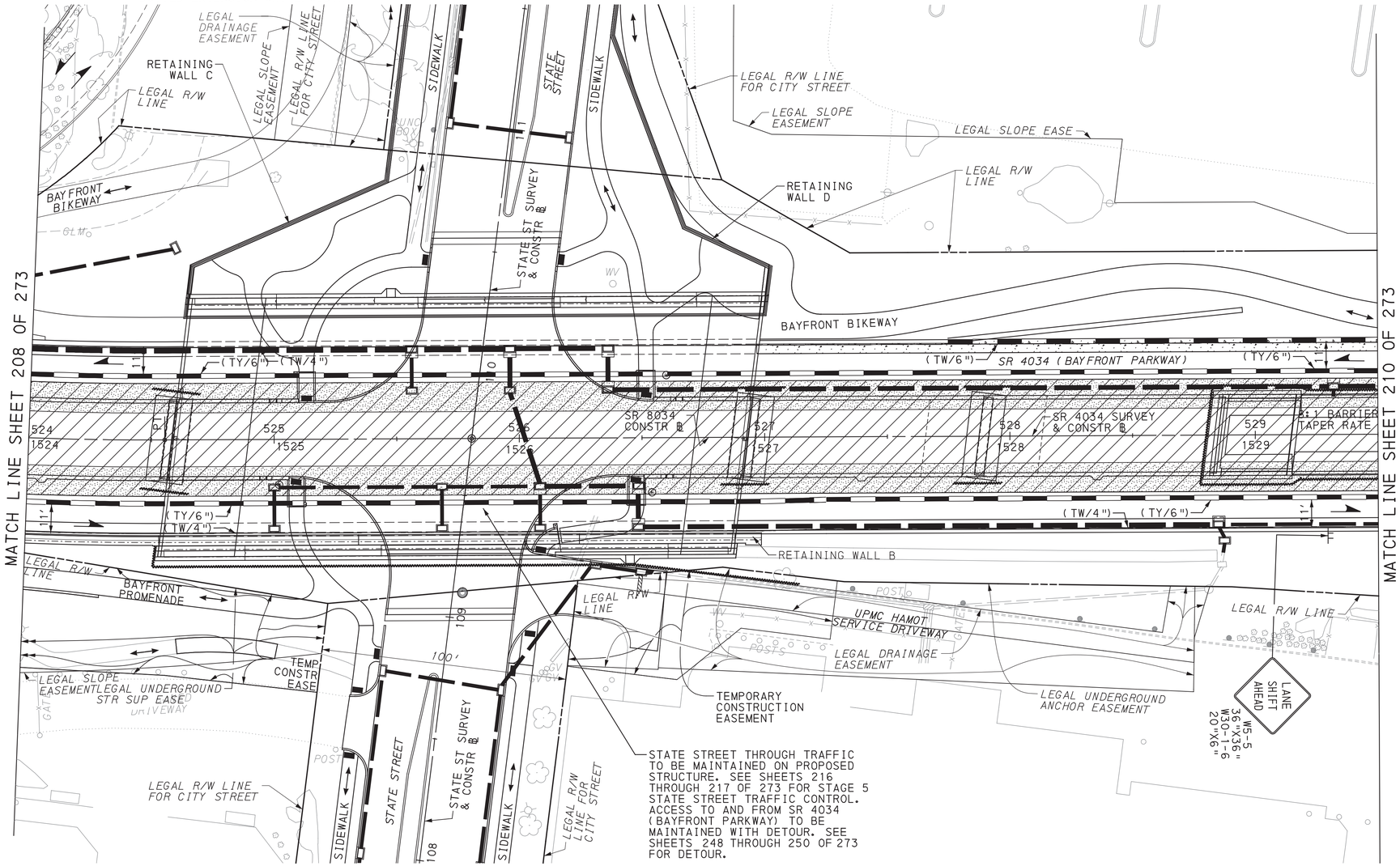
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	209 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY LANE SEPARATOR CURB
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

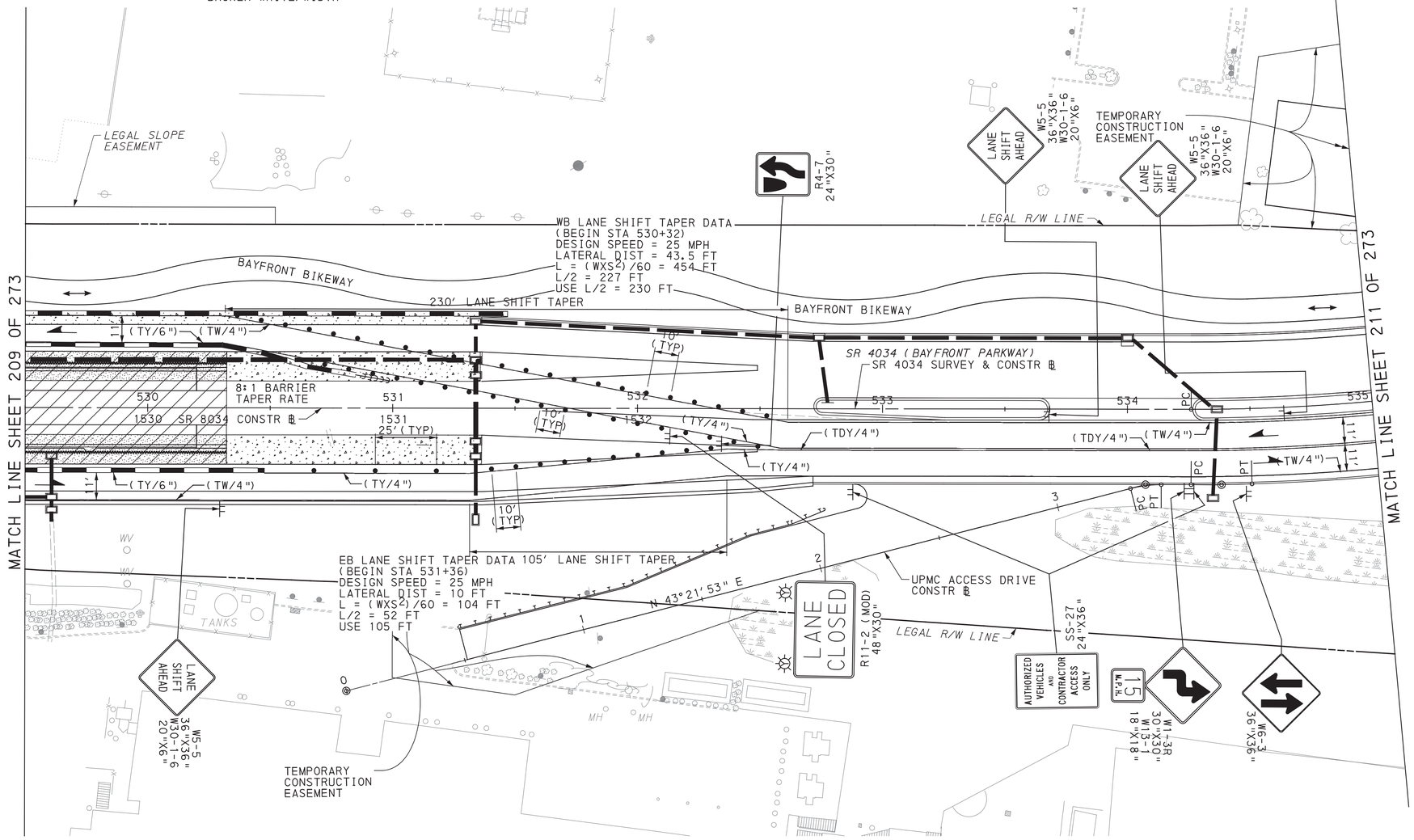
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mp1\sheets\TCplsTg5D_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	210 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

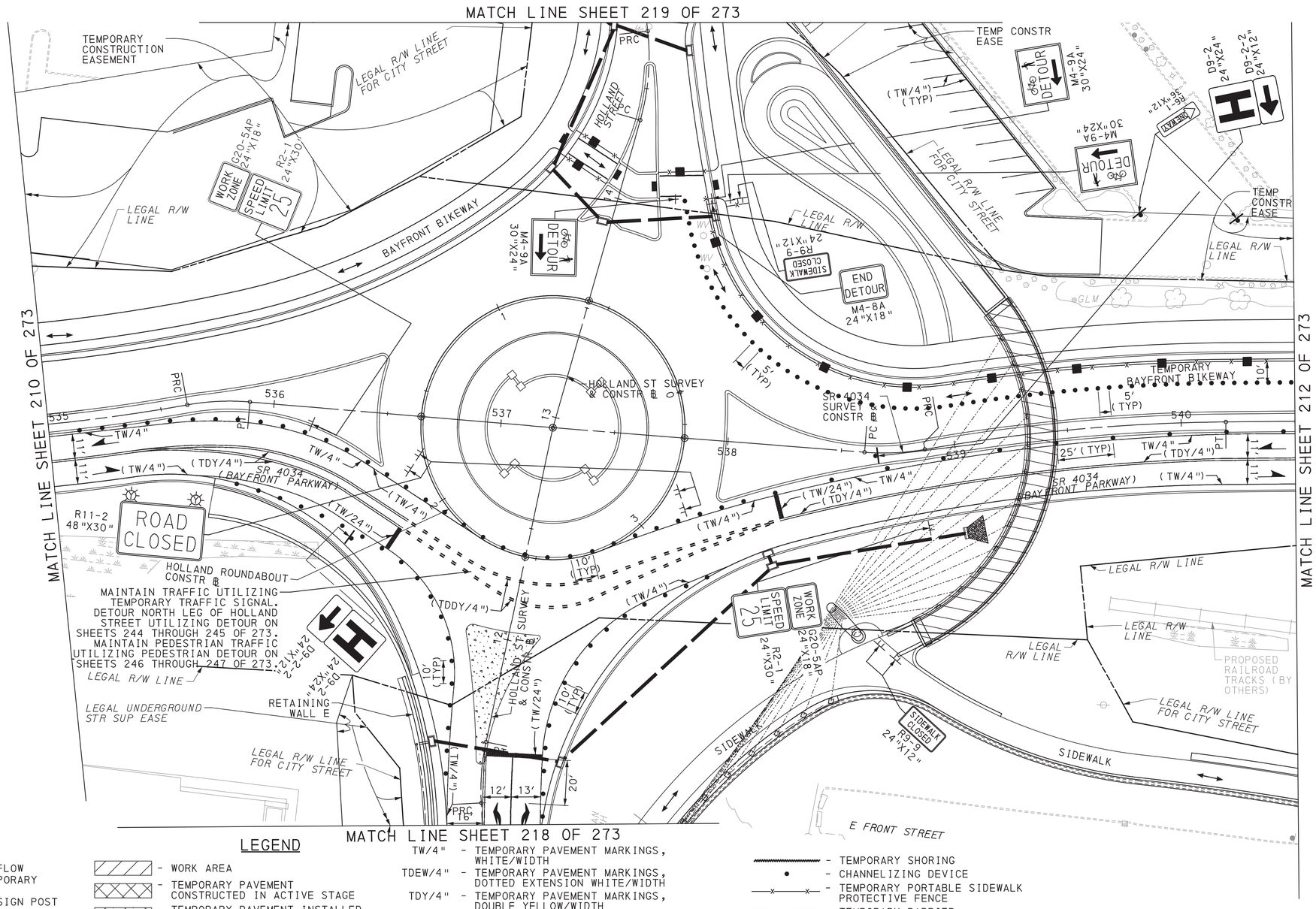
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5D_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	211 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\Tcpisg5D_08.dgn



LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

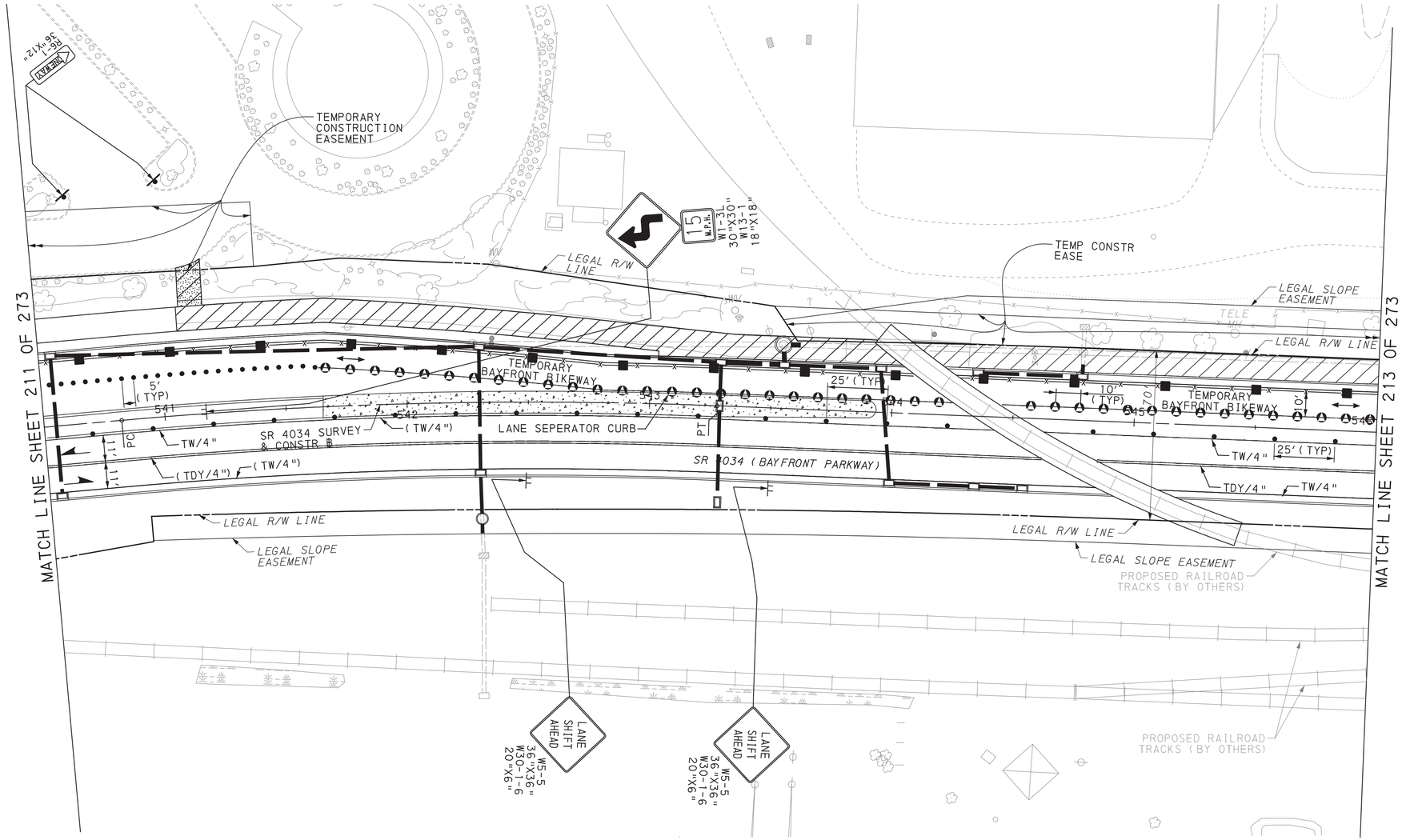
TRAFFIC CONTROL PLAN STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	212 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

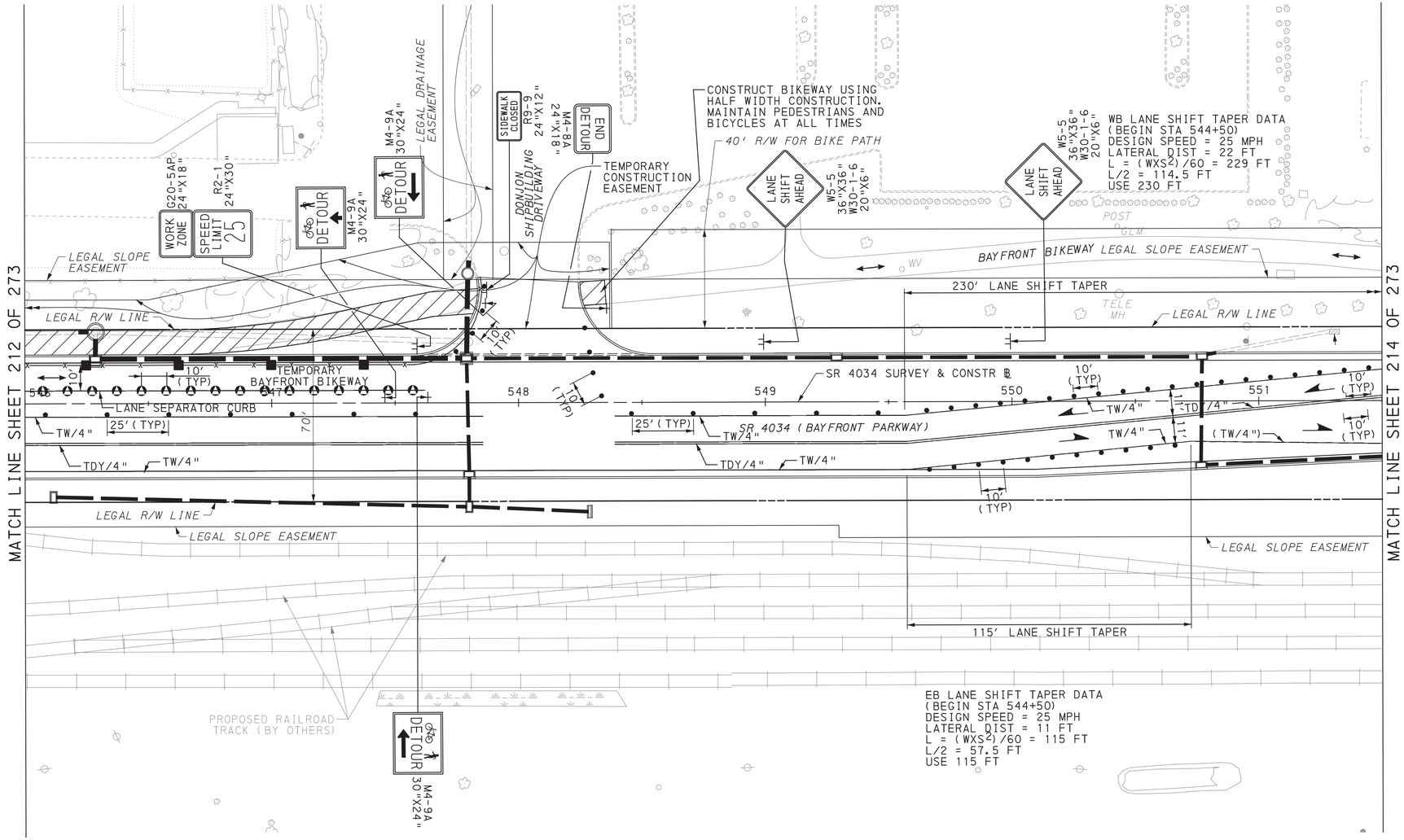
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1sTg5D_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	213 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

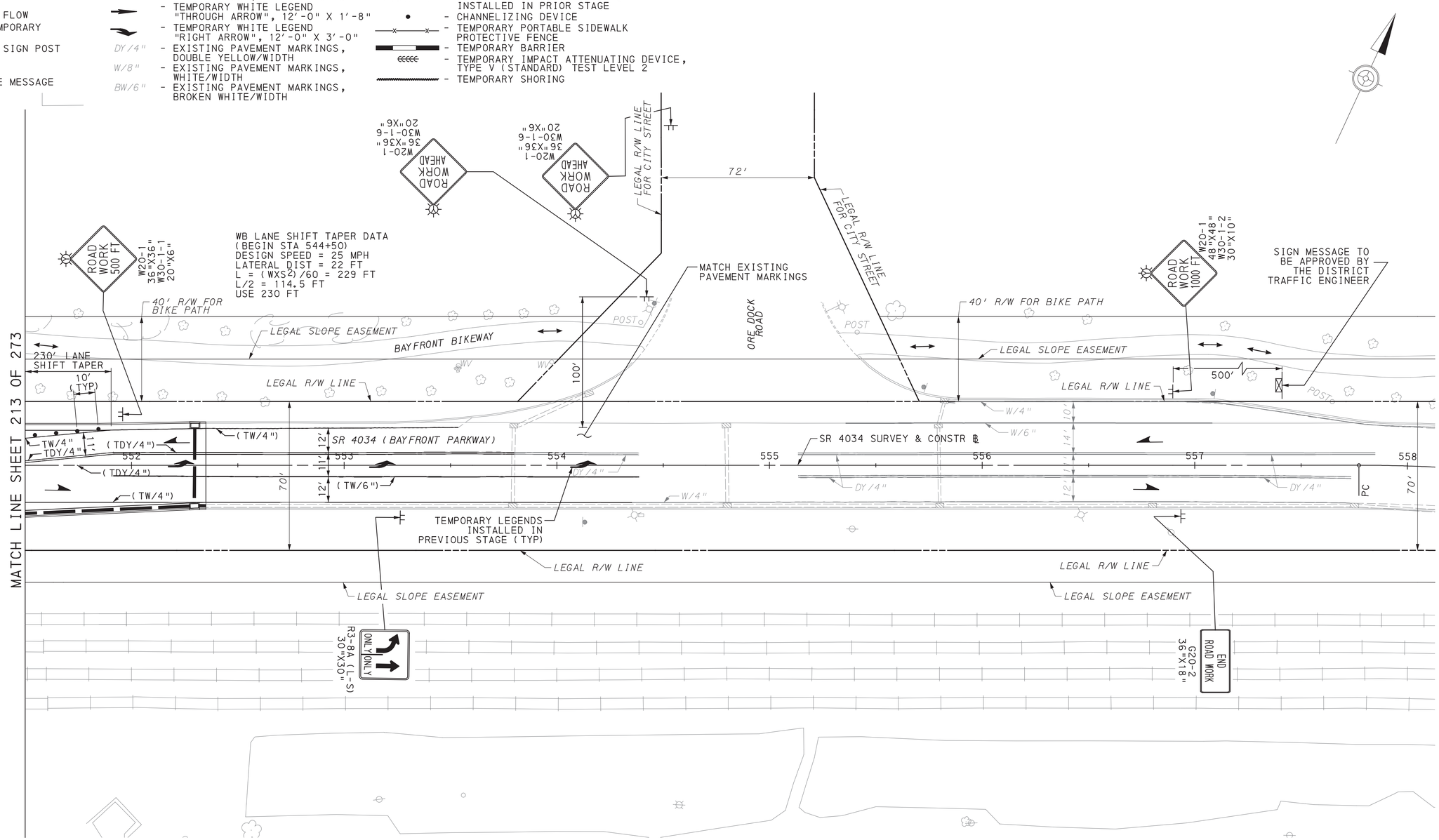
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCP1sr95D_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	214 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

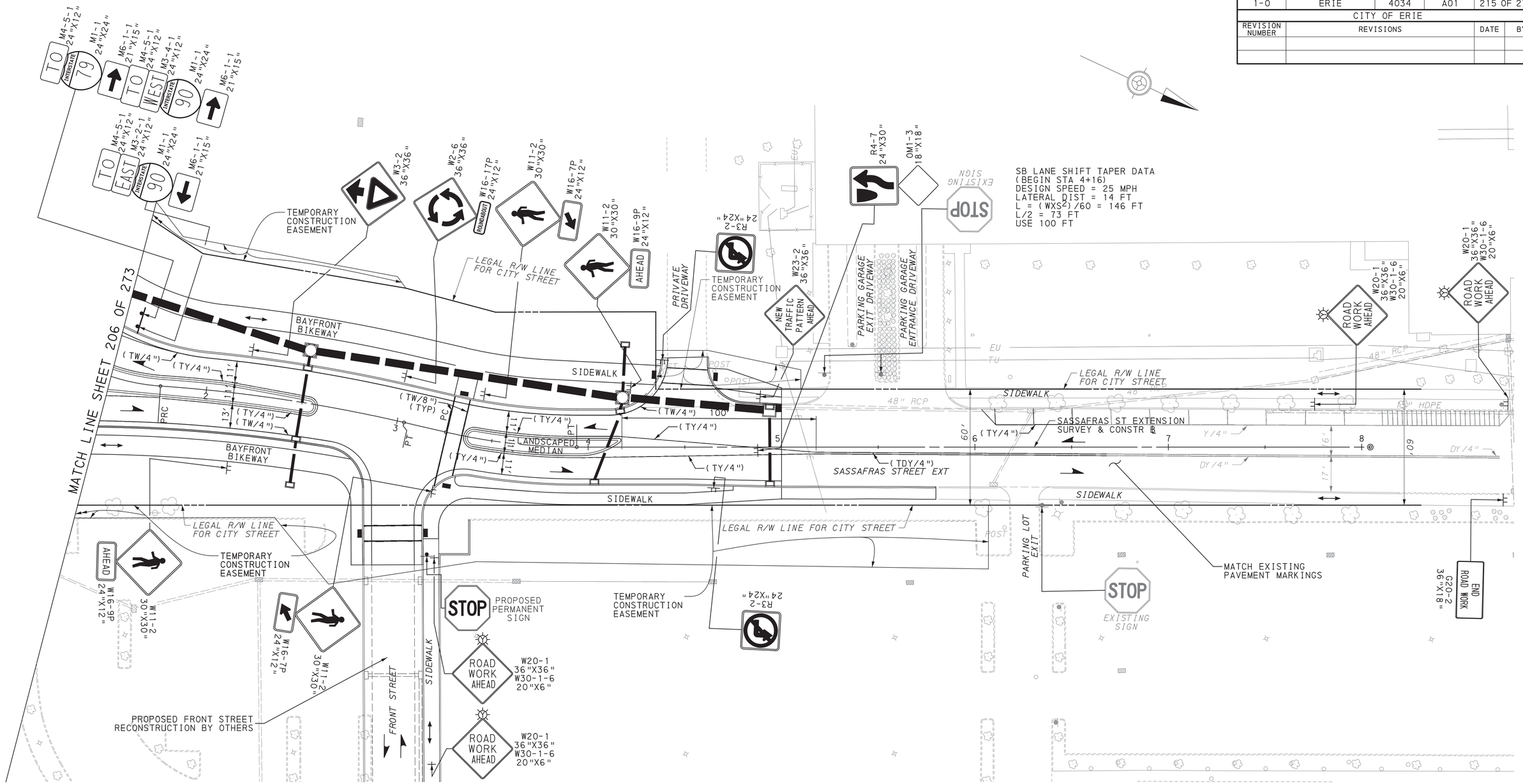
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5D_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	215 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTg5D_12.dgn



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

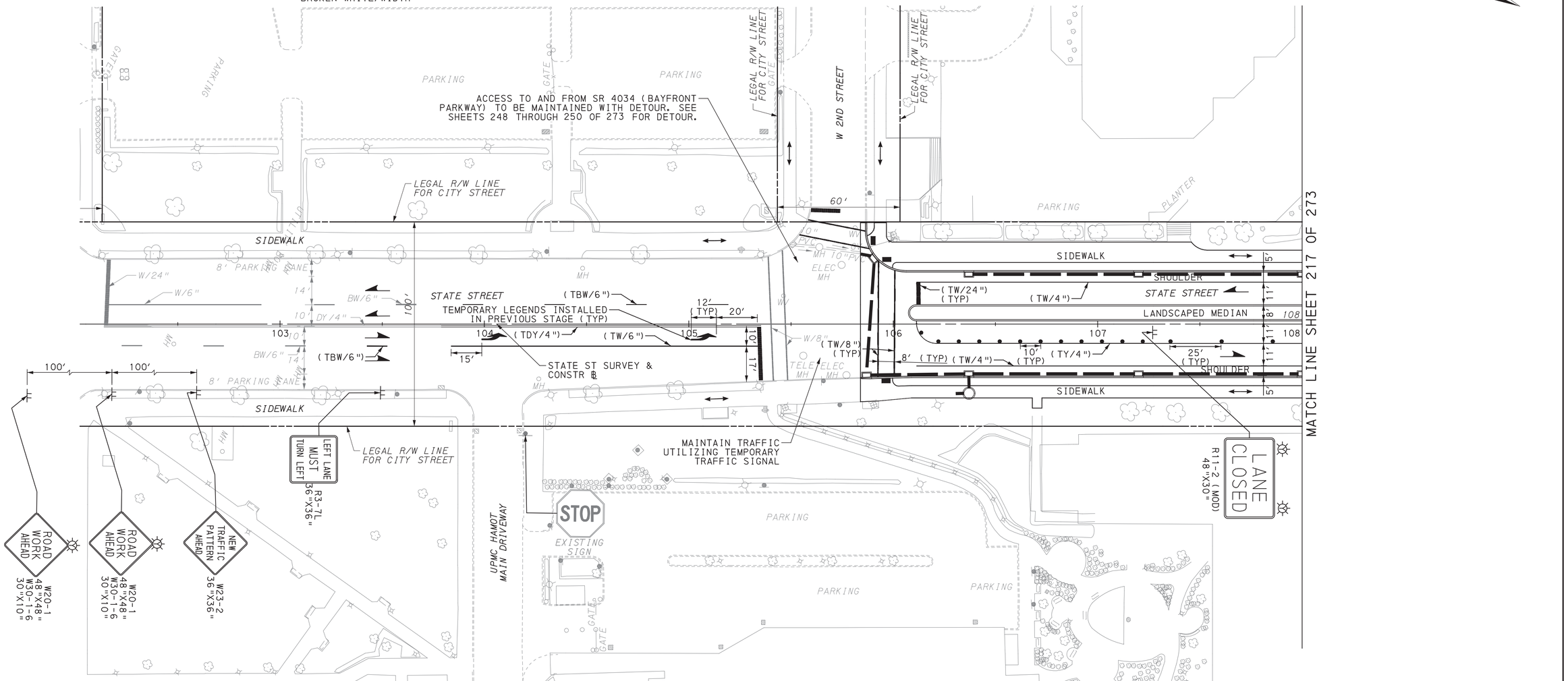
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	216 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5D_13.dgn

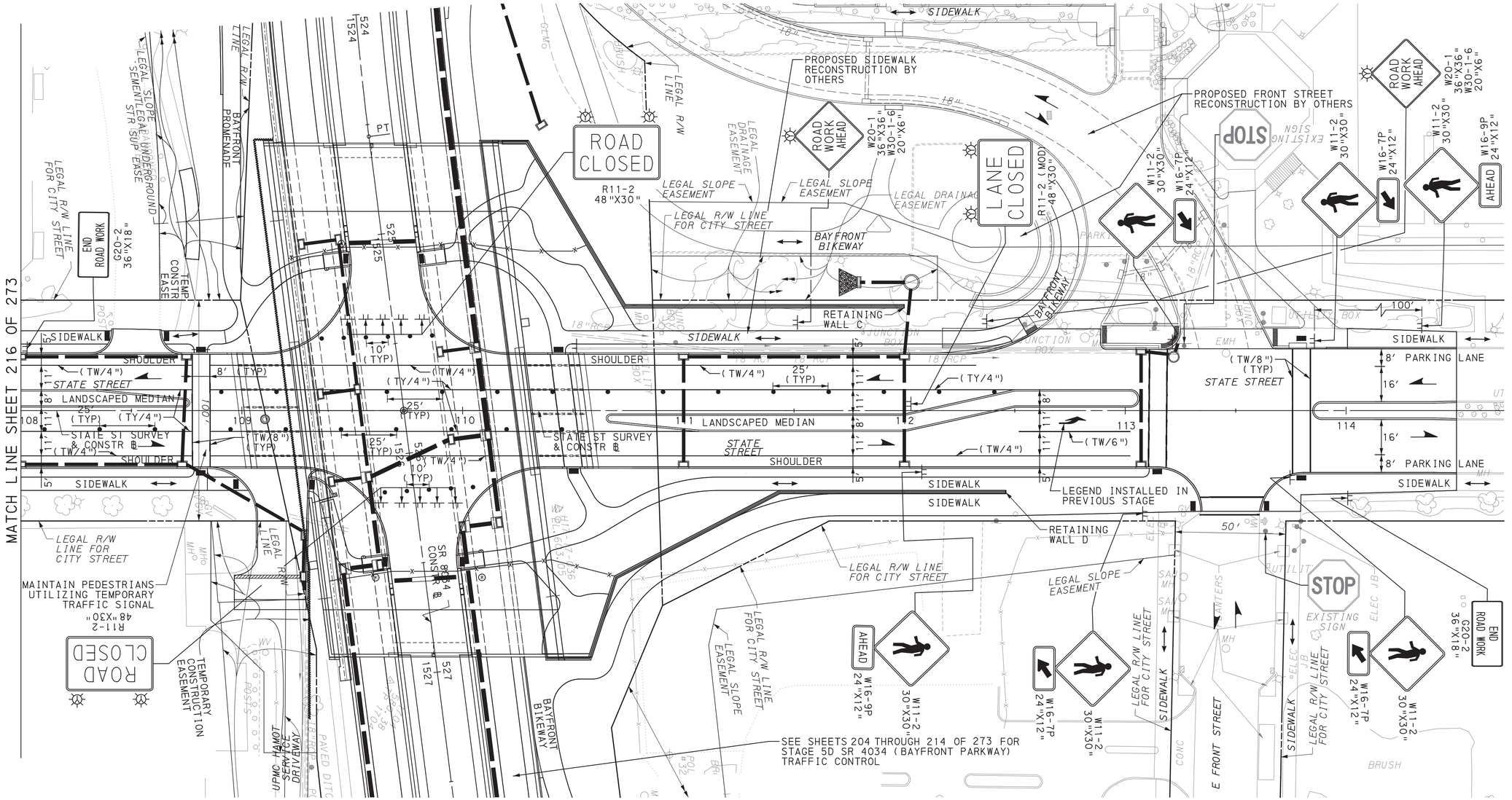
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	217 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



TRAFFIC CONTROL PLAN
STAGE 5D

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

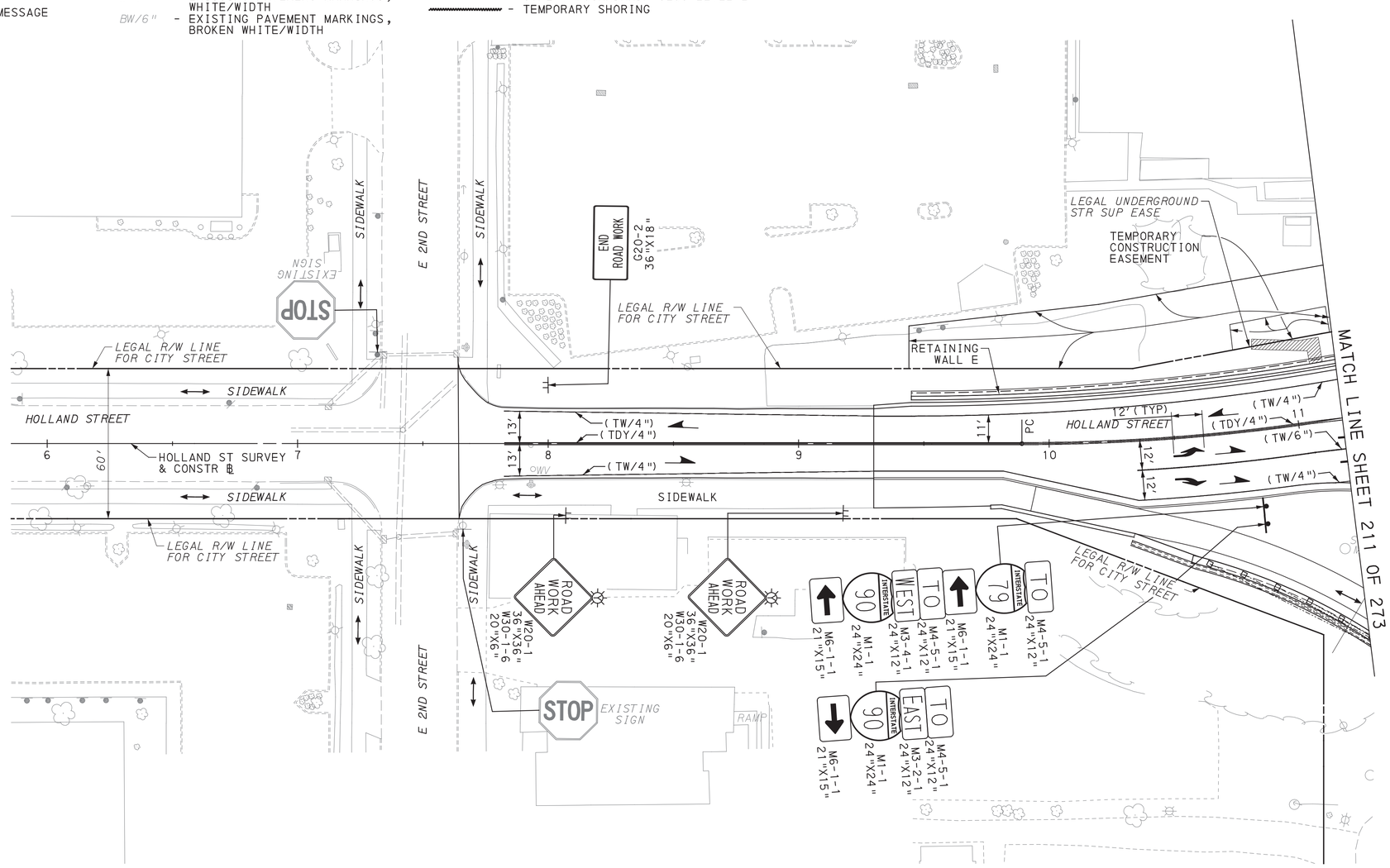
FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\mp1\sheets\TCp1stg5D_14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	218 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg5D_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	219 OF 273
CITY OF ERIE				

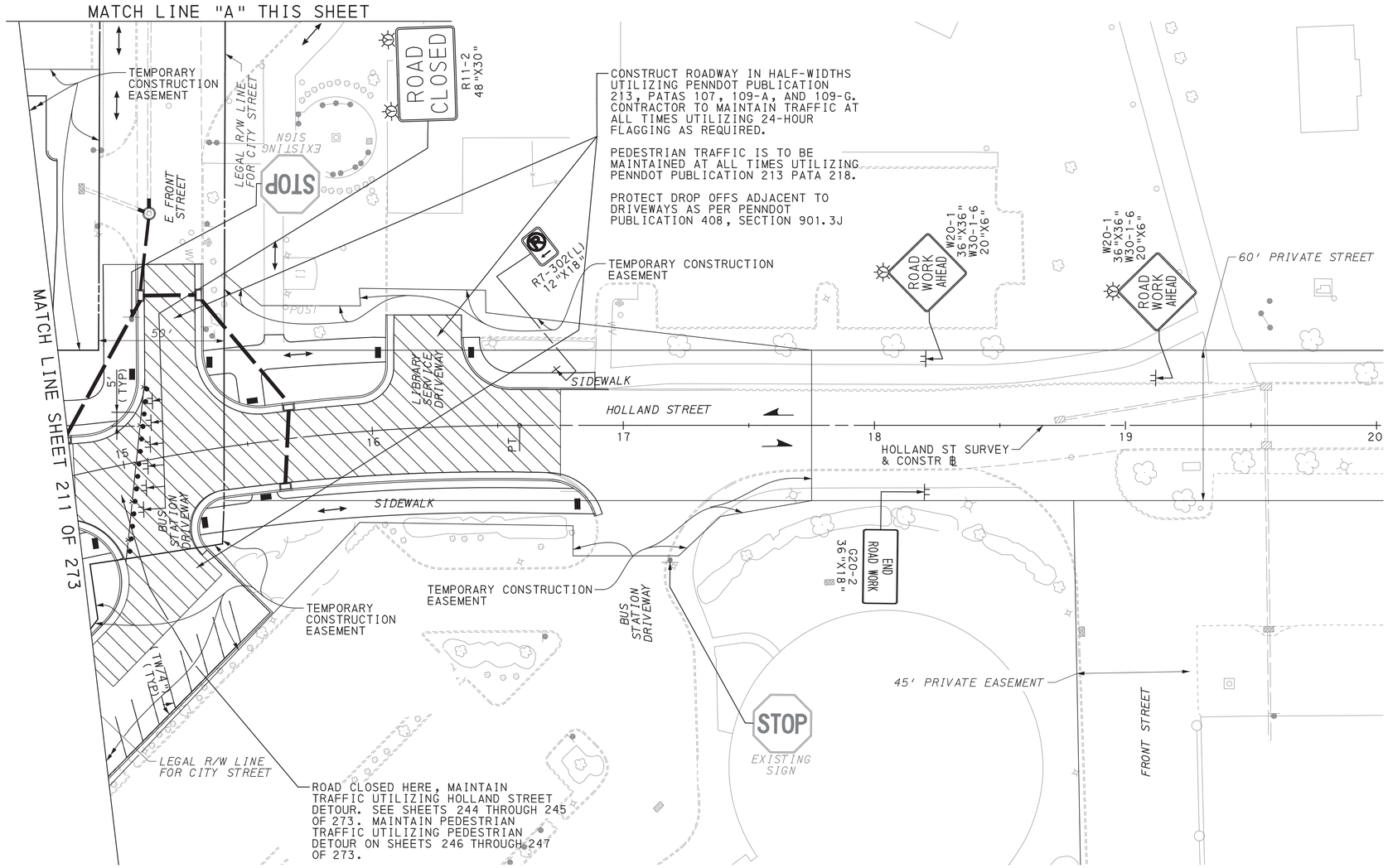
REVISION NUMBER	REVISIONS	DATE	BY

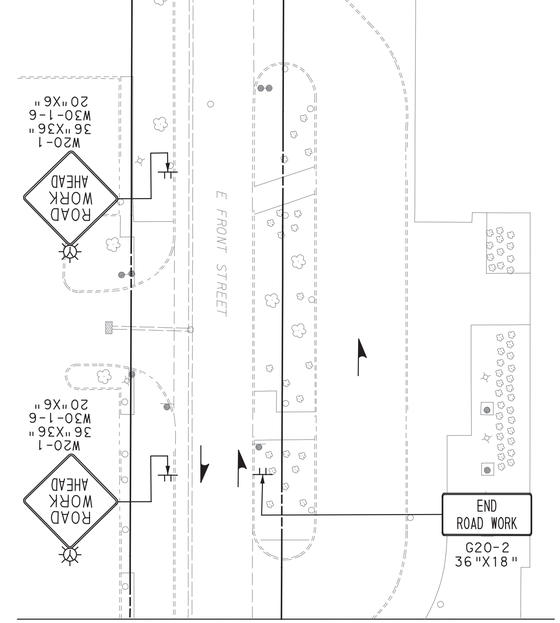
PLOTTED: 8/2/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg5D_16.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY LANE SEPARATOR CURB





SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 5D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

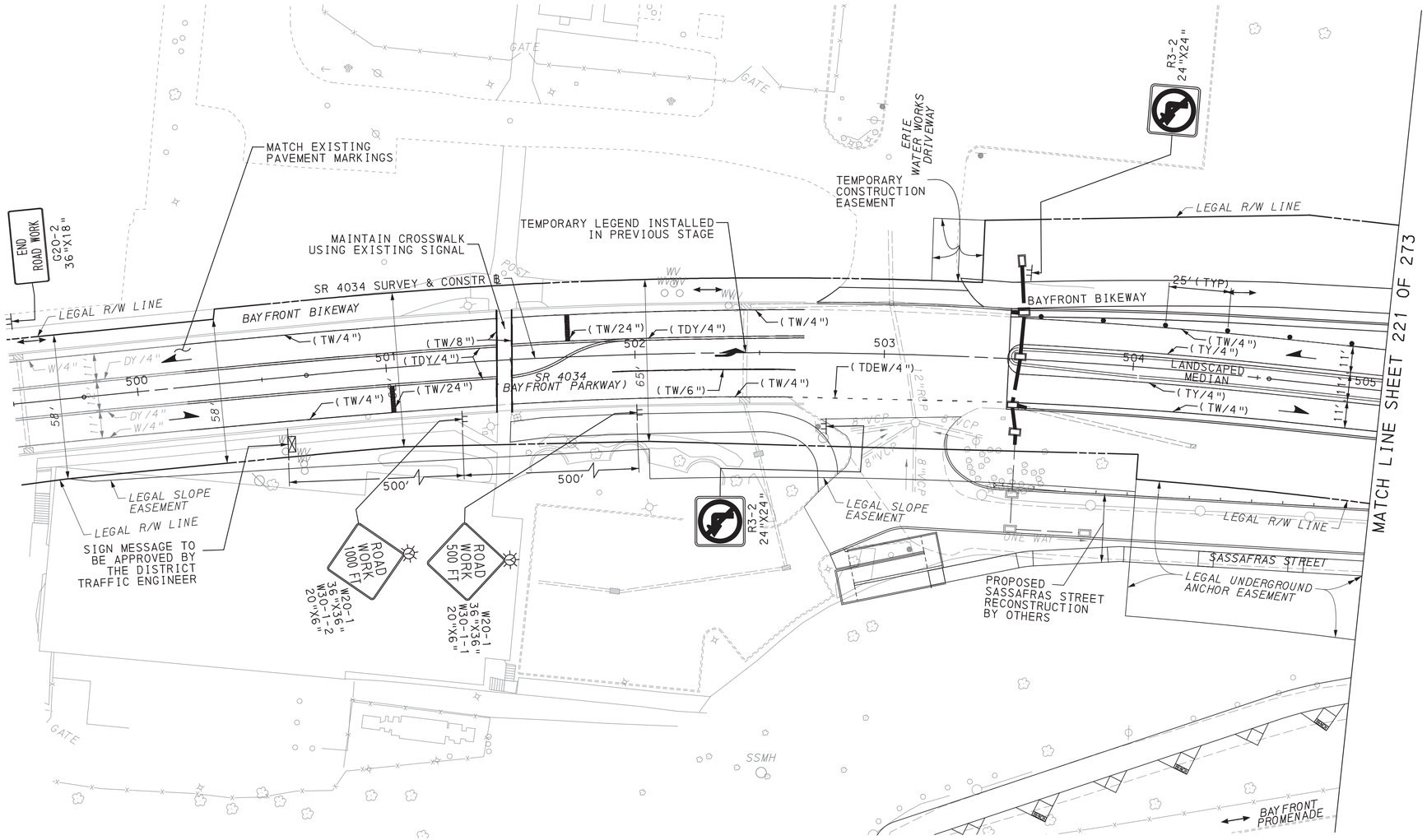
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	220 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg6_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	221 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg6_02.dgn

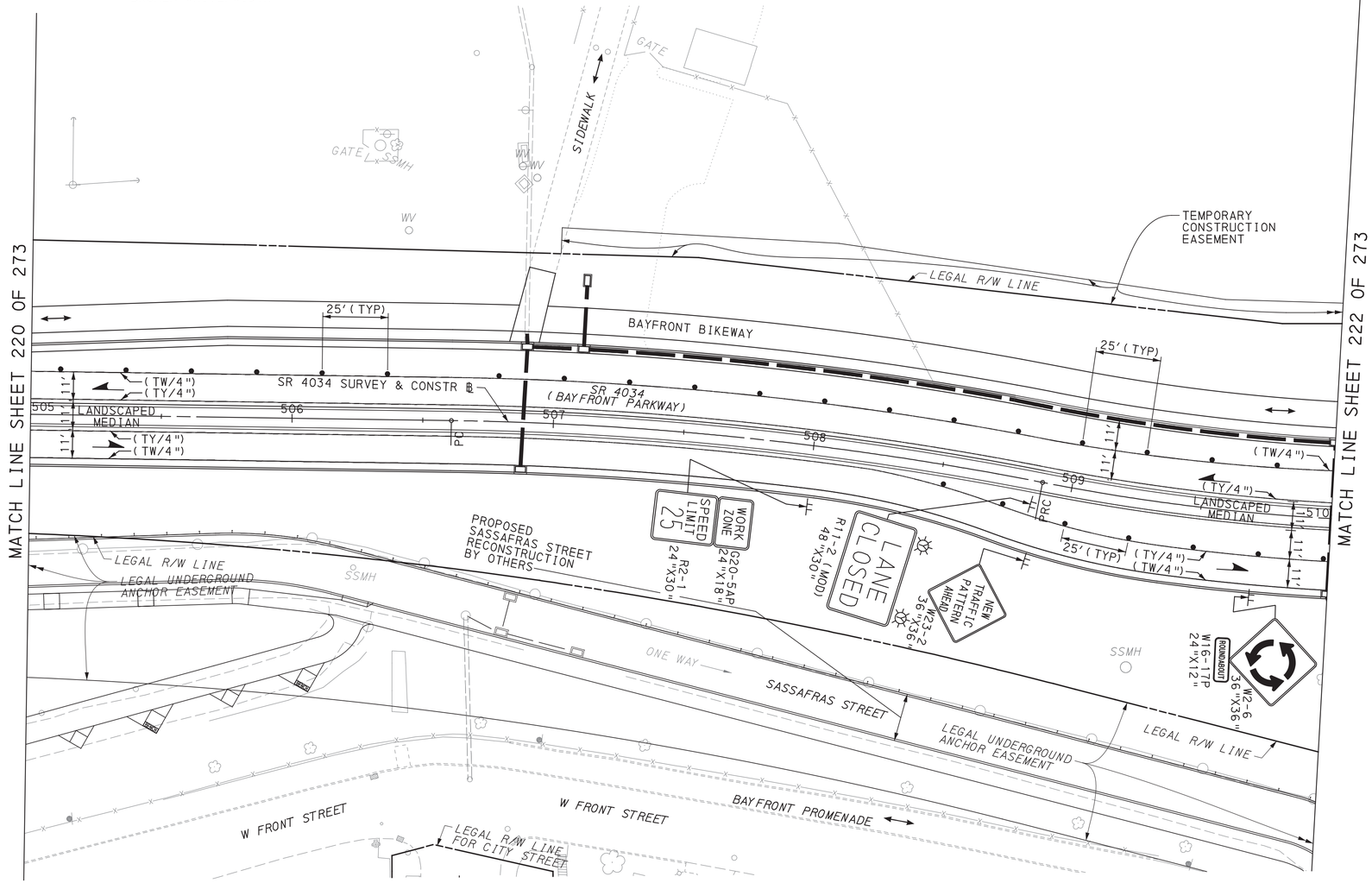
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCp1stg6_03.dgn

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

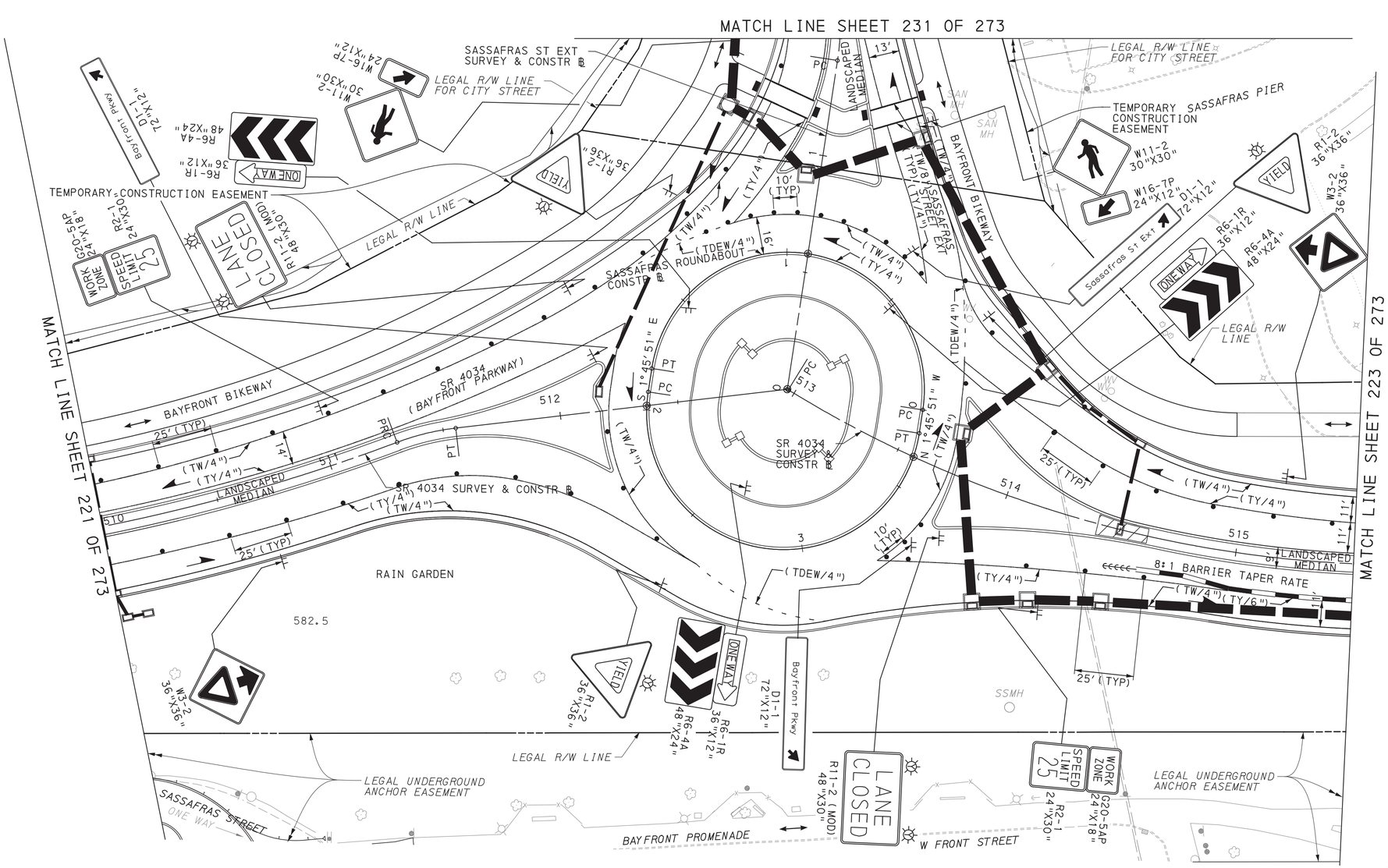
(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	222 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

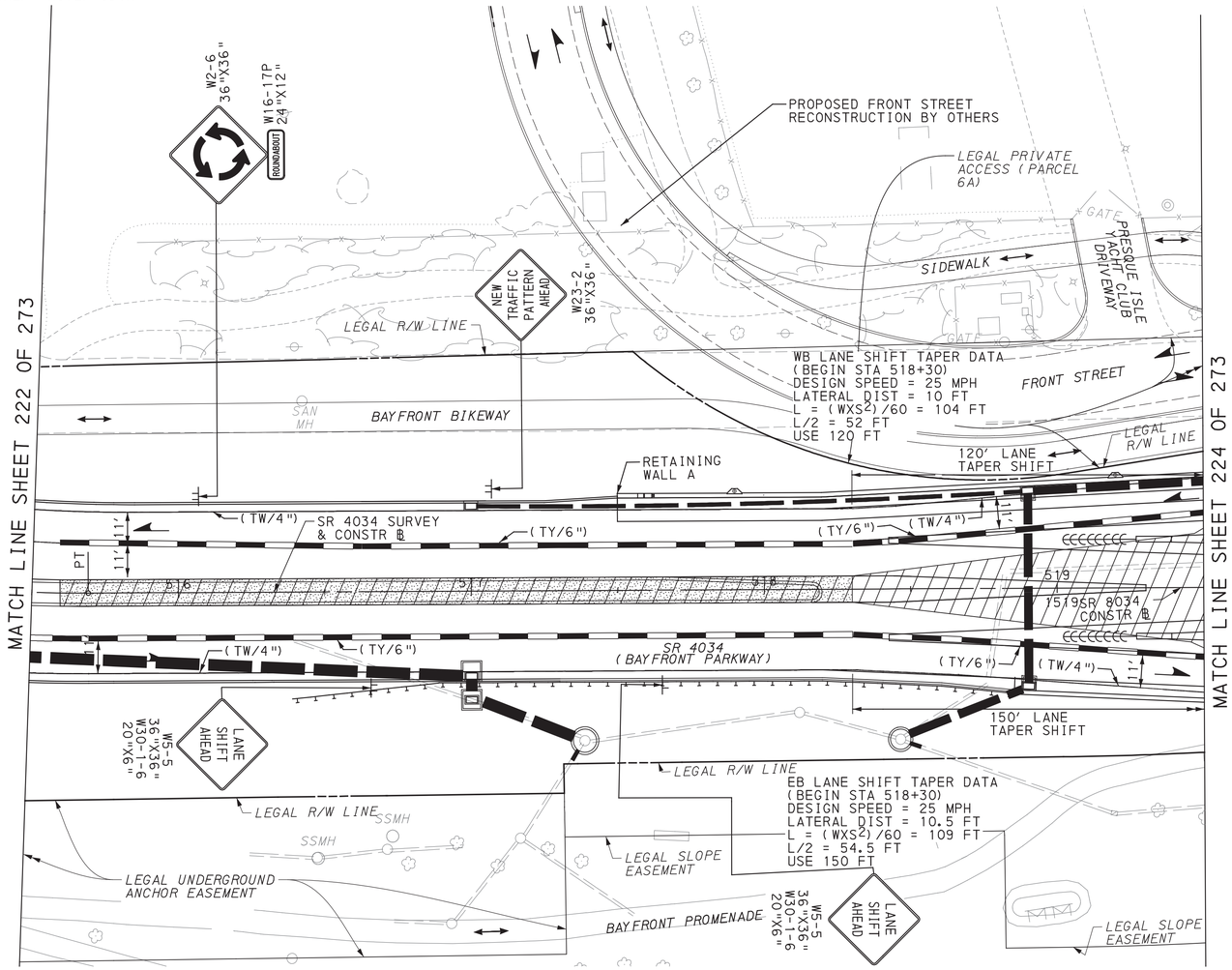
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	223 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg6_04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	224 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpistrg6_05.dgn

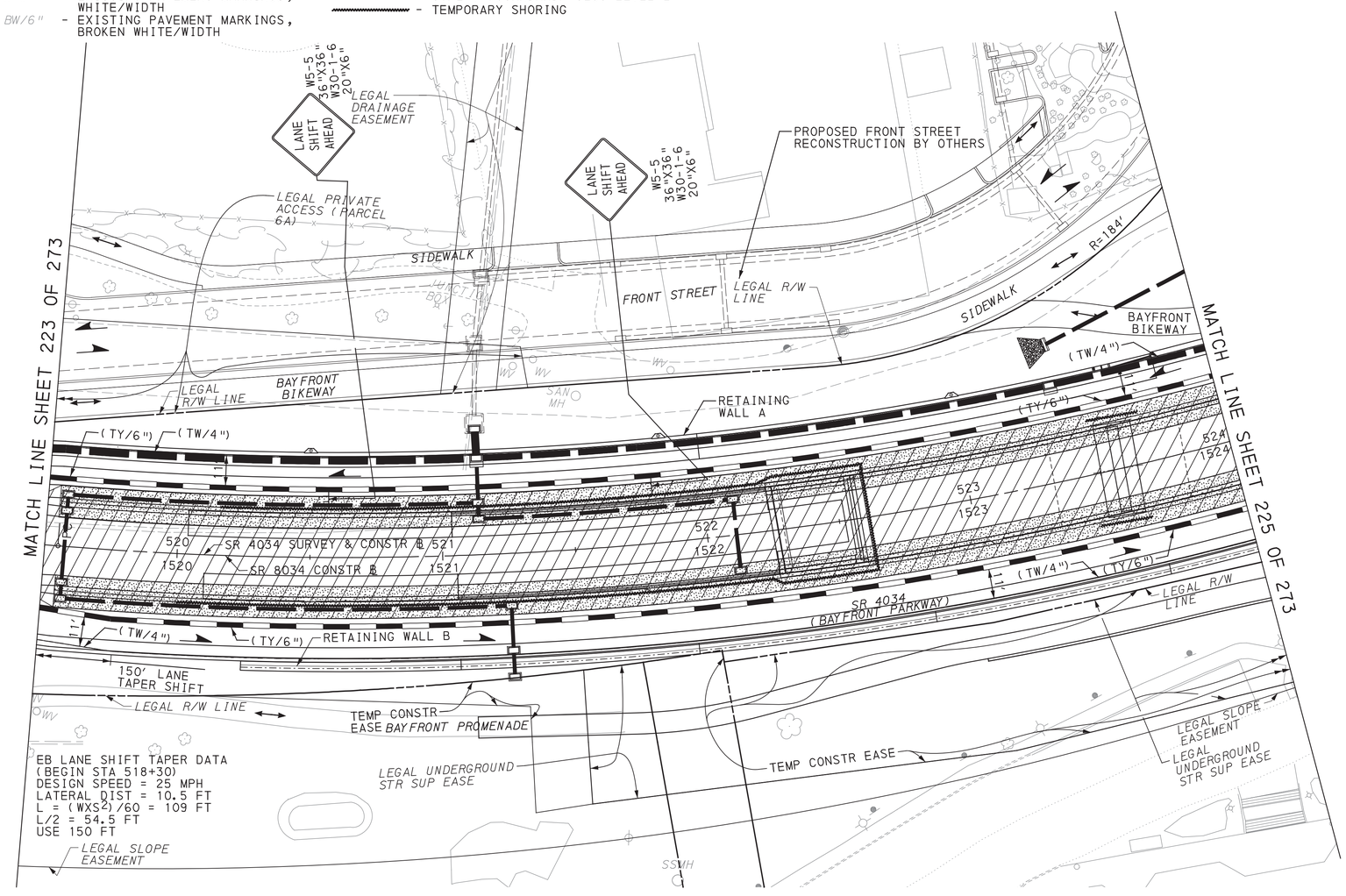
LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING

- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

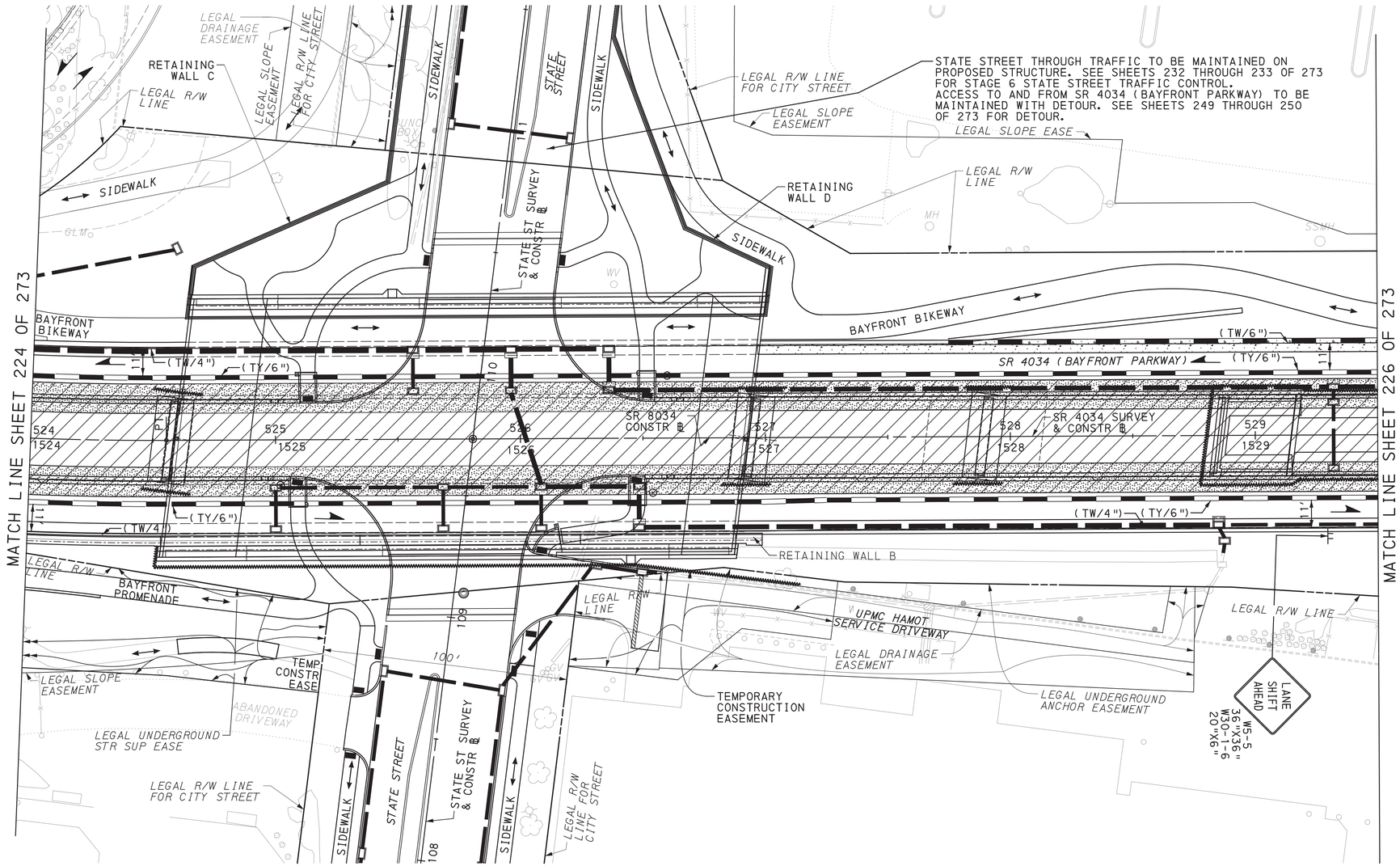
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	225 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/12/2022

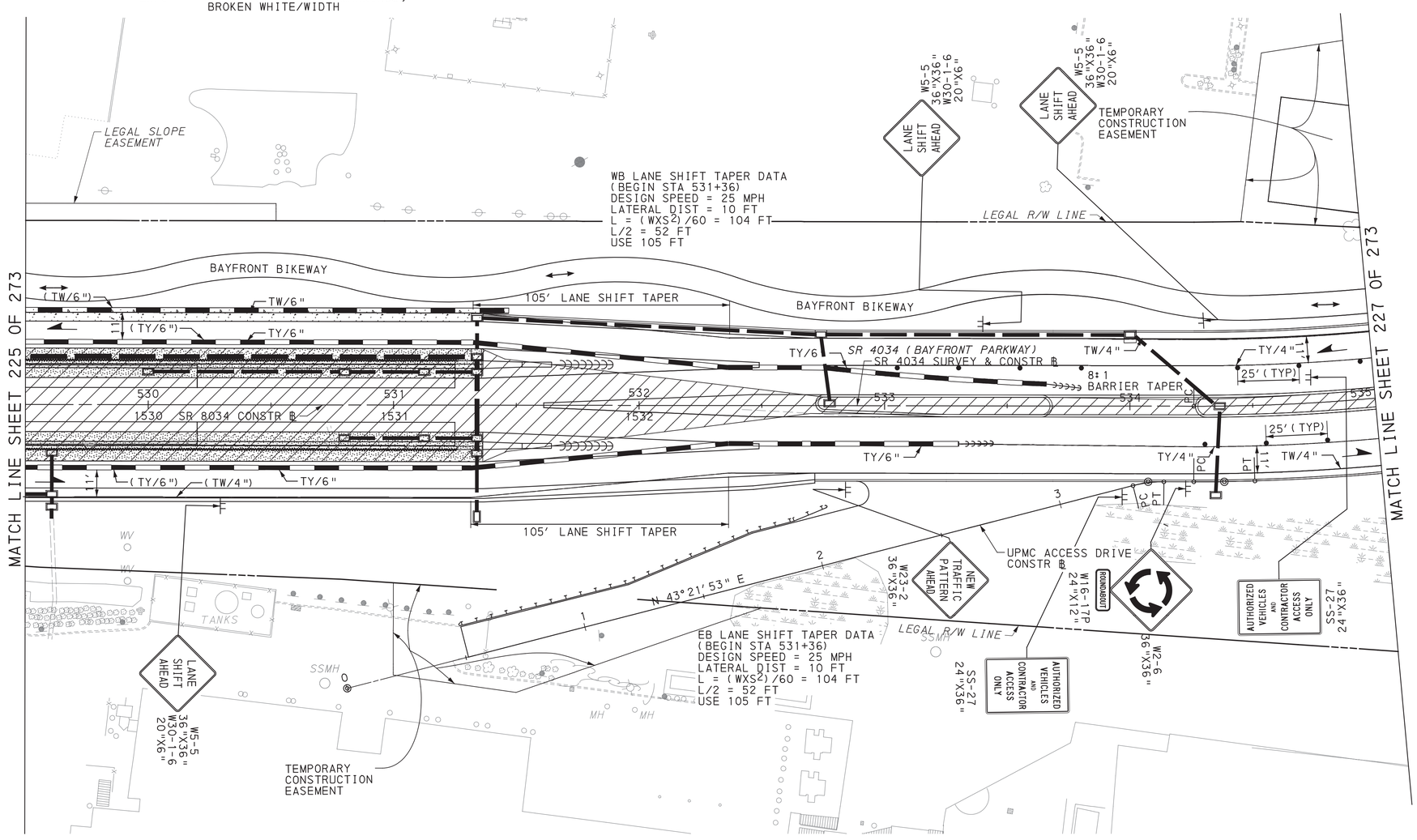
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCPsrg6_06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	226 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlsrg6_07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	227 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

MATCH LINE SHEET 235 OF 273

MATCH LINE SHEET 226 OF 273

MATCH LINE SHEET 228 OF 273

MATCH LINE SHEET 234 OF 273

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

HOLLAND ST SURVEY & CONSTR ℄

HOLLAND ROUNDABOUT CONSTR ℄

SR 4034 SURVEY & CONSTR ℄

SR 4034 (BAYFRONT PARKWAY)

Holland St

Bayfront Pkwy

HOLLAND STREET

LANDSCAPED MEDIAN

SIDEWALK

TEMP CONSTR EASE

UNDERGROUND STR SUP EASE

RETAINING WALL E

PROPOSED RAILROAD TRACKS (BY OTHERS)

E FRONT STREET

LEGEND

- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED

DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH

BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH

TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH

TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH

TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH

TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH

(TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE

- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"

- TEMPORARY SHORING
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/2/2022

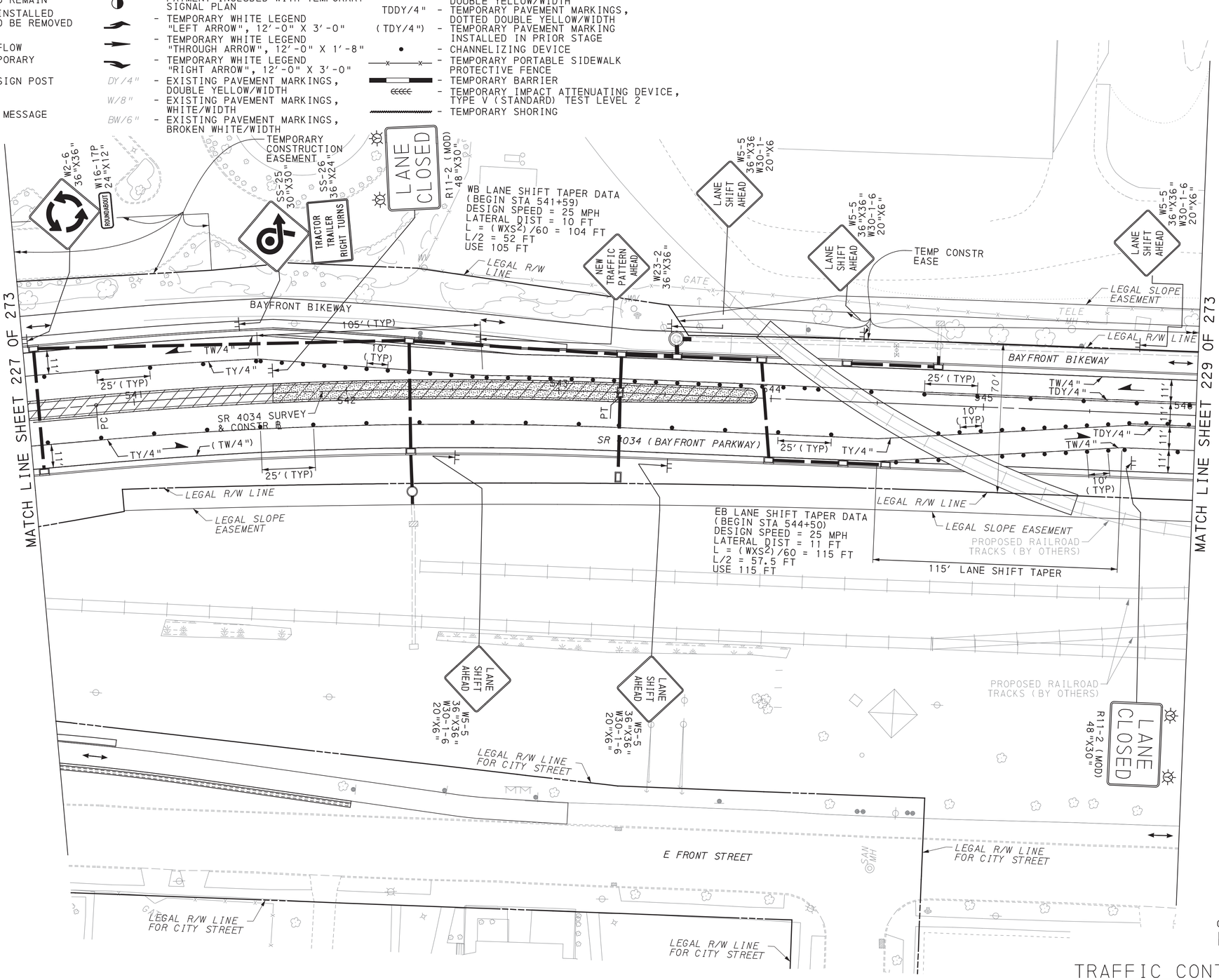
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplstg6_08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	228 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

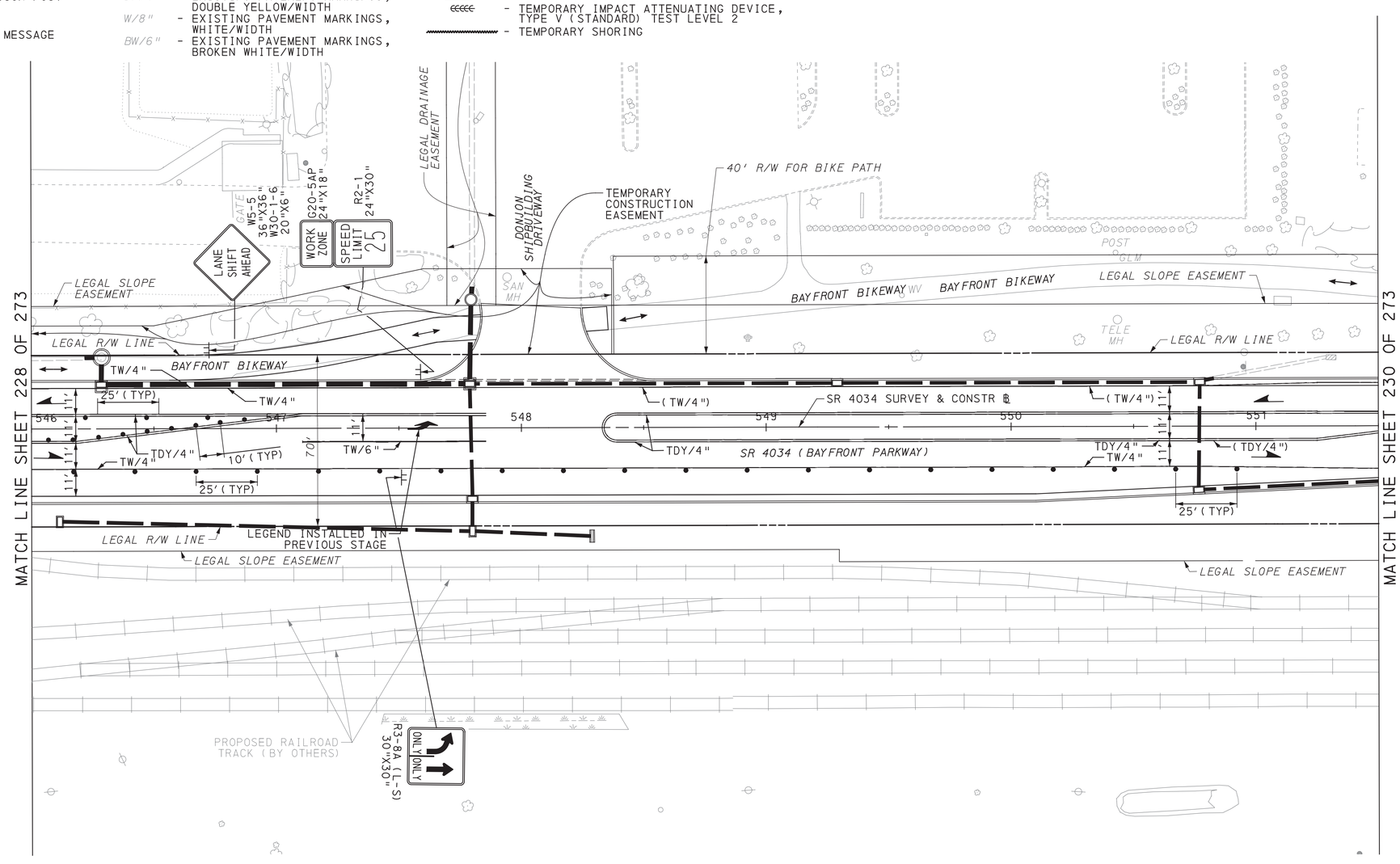
FILE NAME: \\mcsonsultants.com\Files\Production\08\60\06808\mpt\sheets\Tcp1stg6_09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	229 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

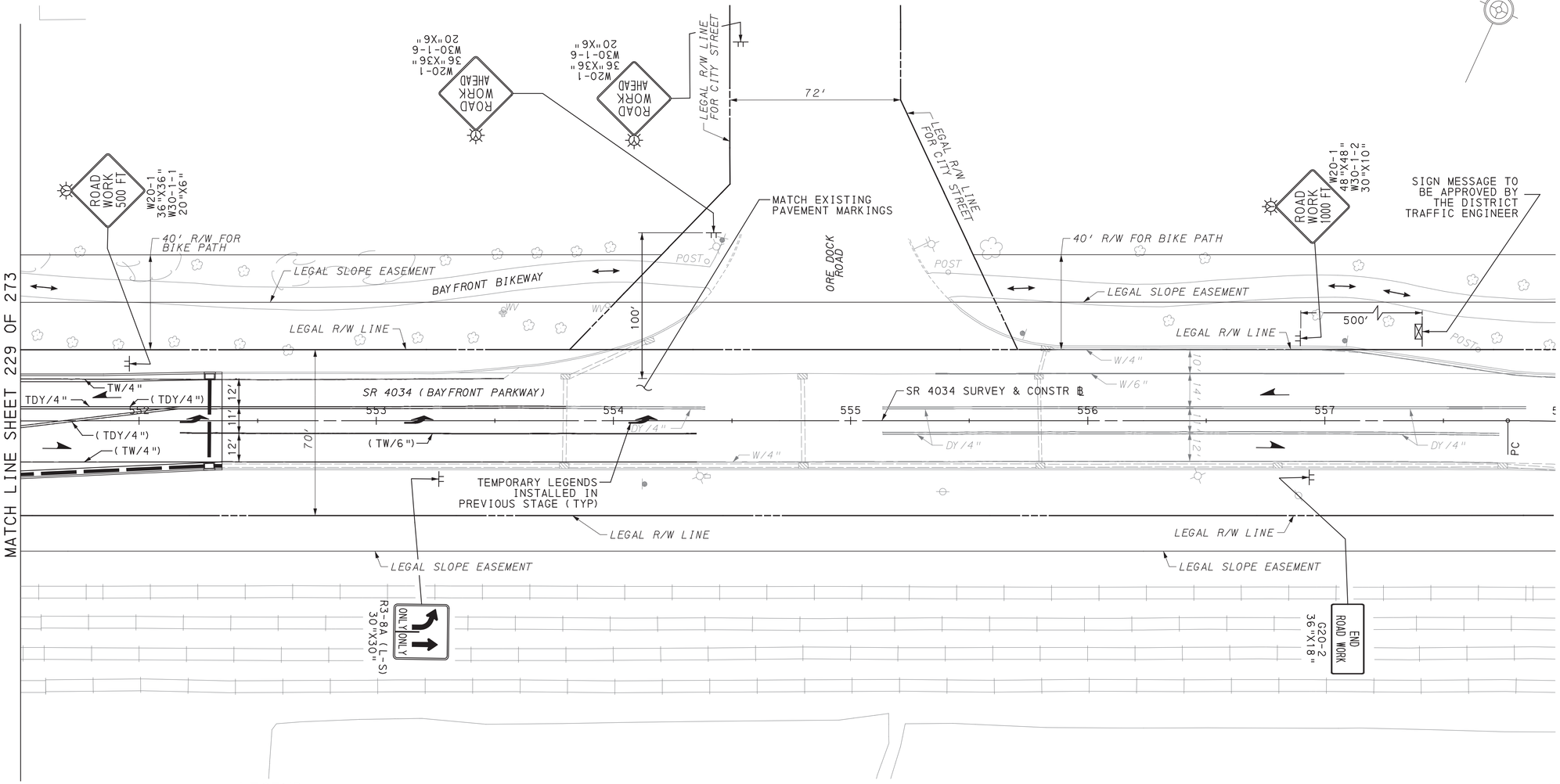
DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCpistg6_10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	230 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

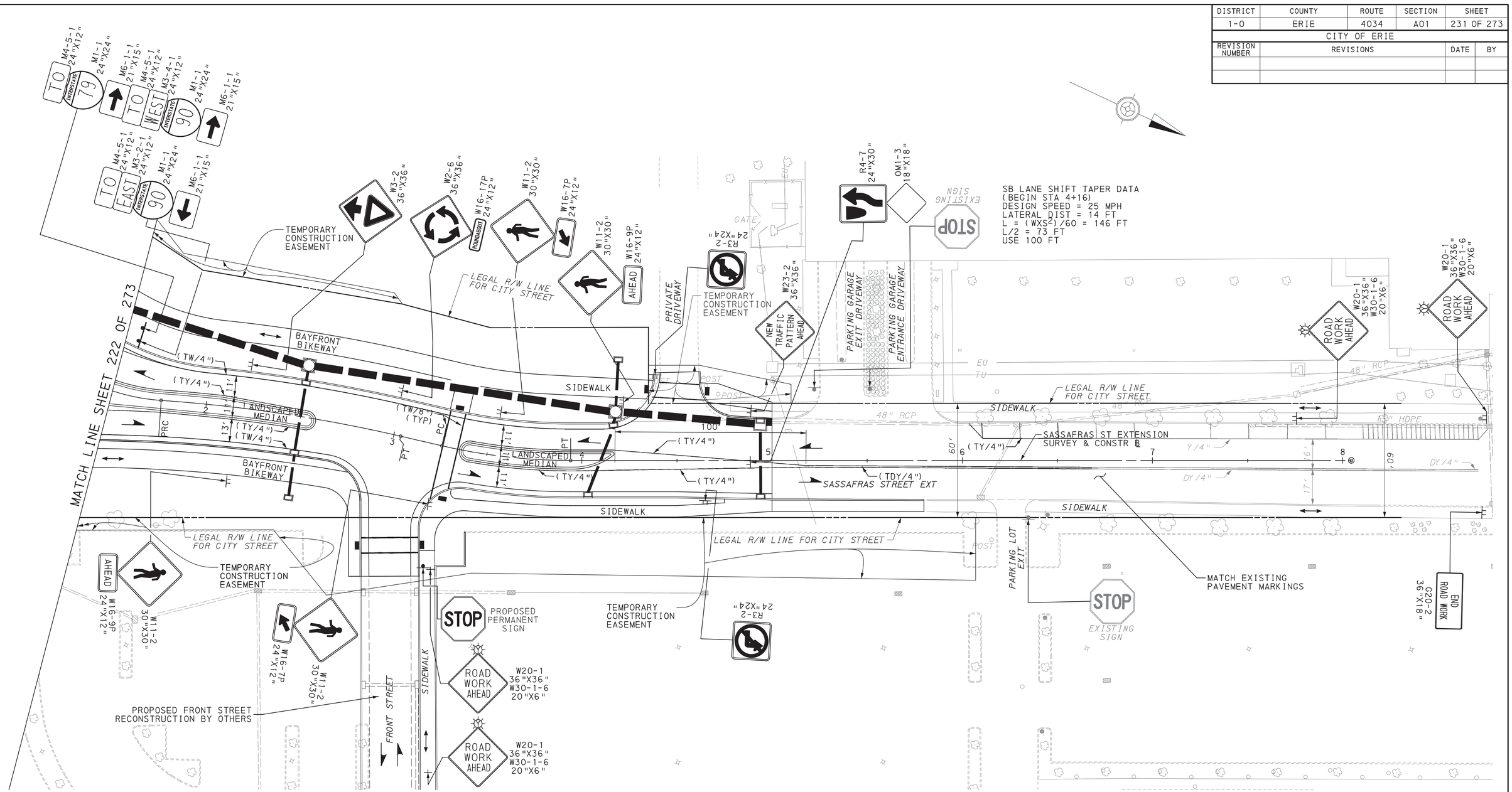
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\mpr\sheets\TCplsrg6_11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	231 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/2/2022

FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsrg6_12.dgn



LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES

SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

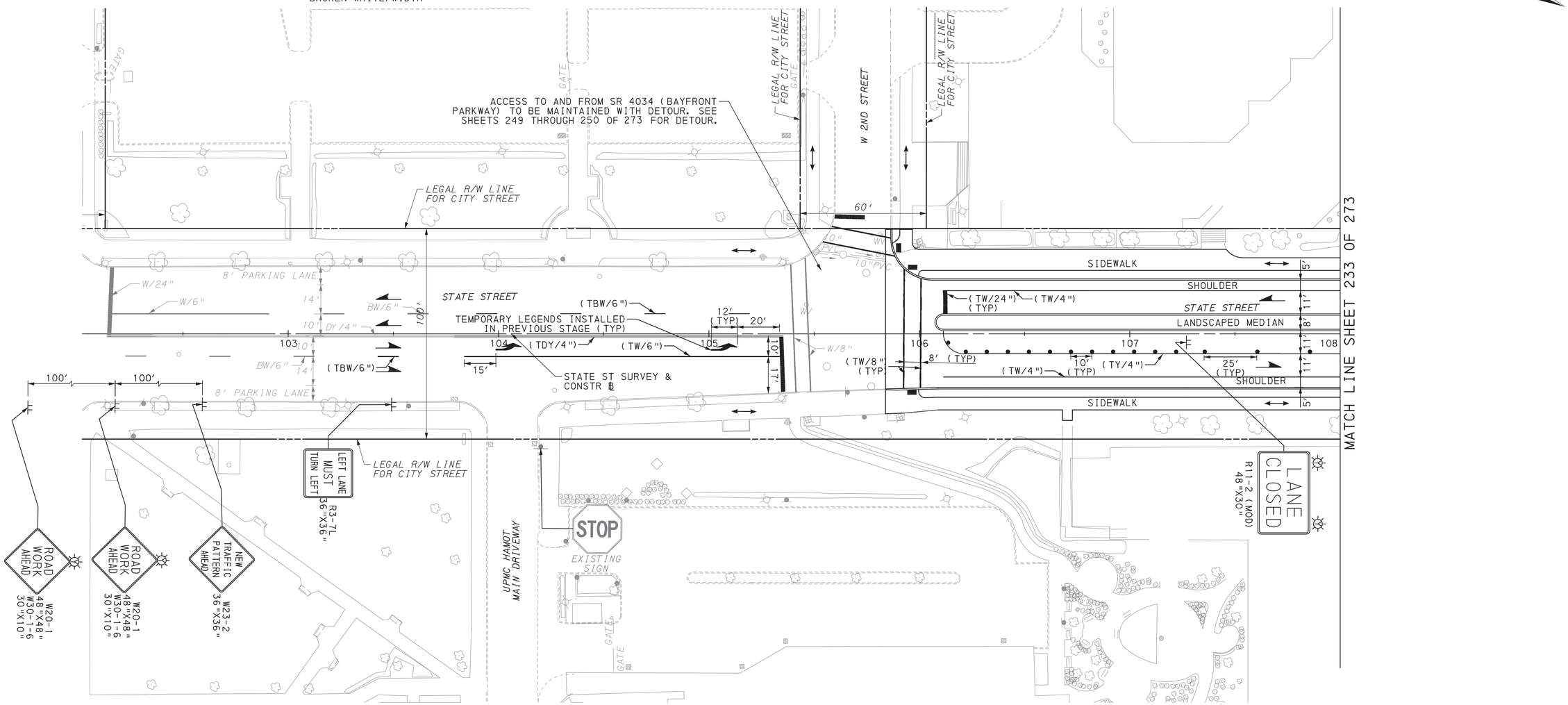
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	232 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

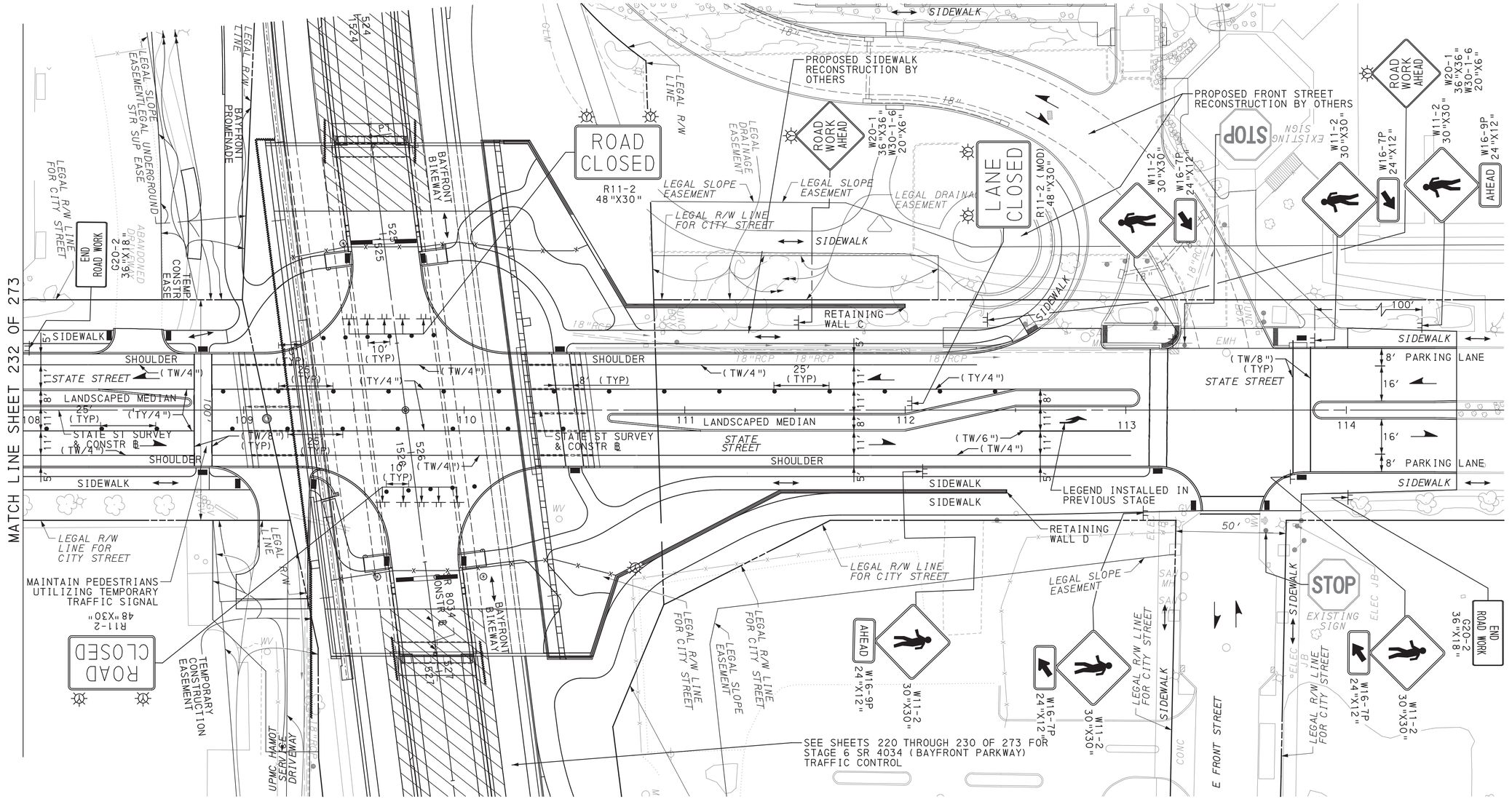
PLOTTED: 8/2/2022

FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\mpt\sheets\TCPlsrg6_13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	233 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



TRAFFIC CONTROL PLAN
STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

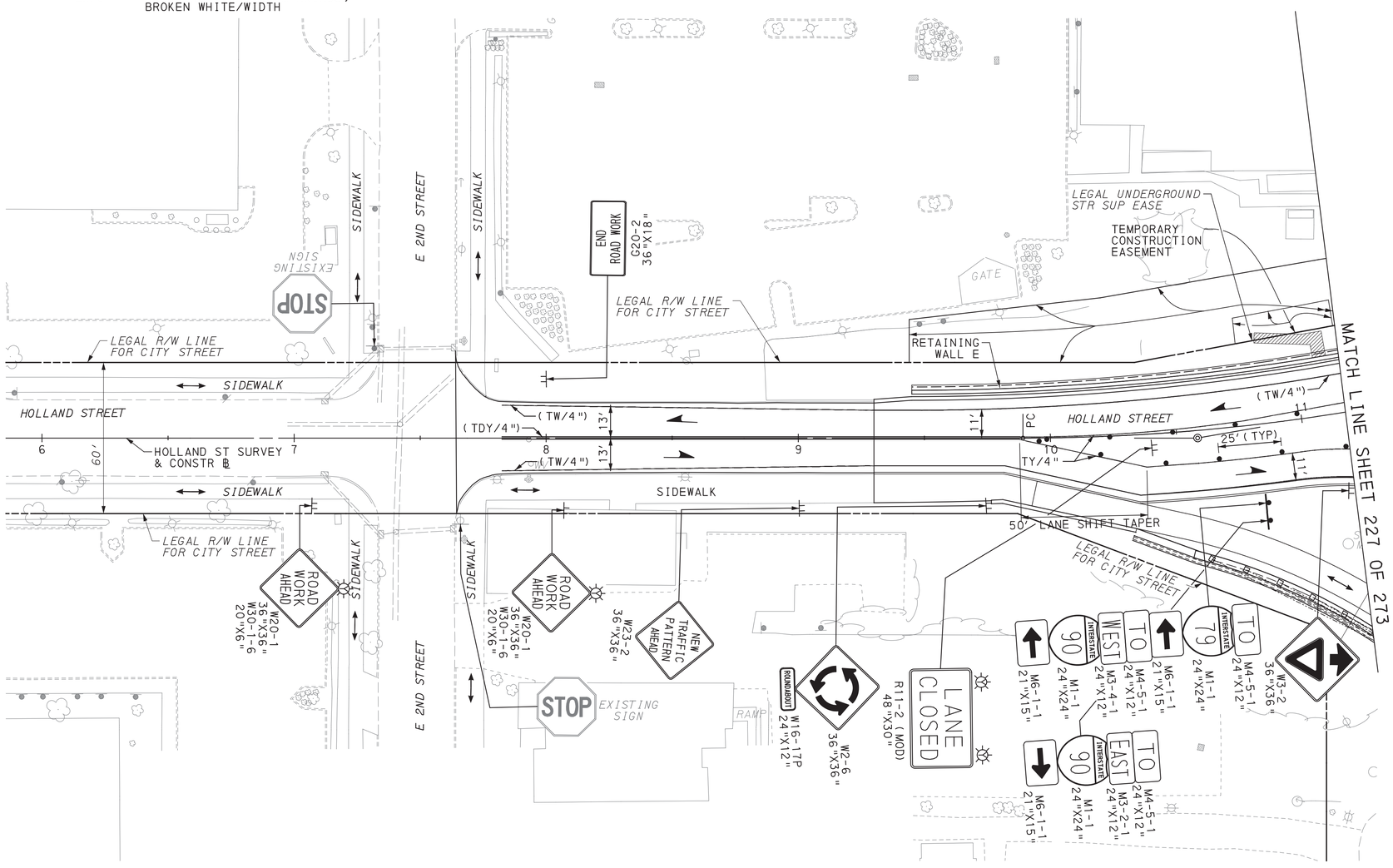
FILE NAME: \\rmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsstg6_14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	234 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

PLOTTED: 8/2/2022

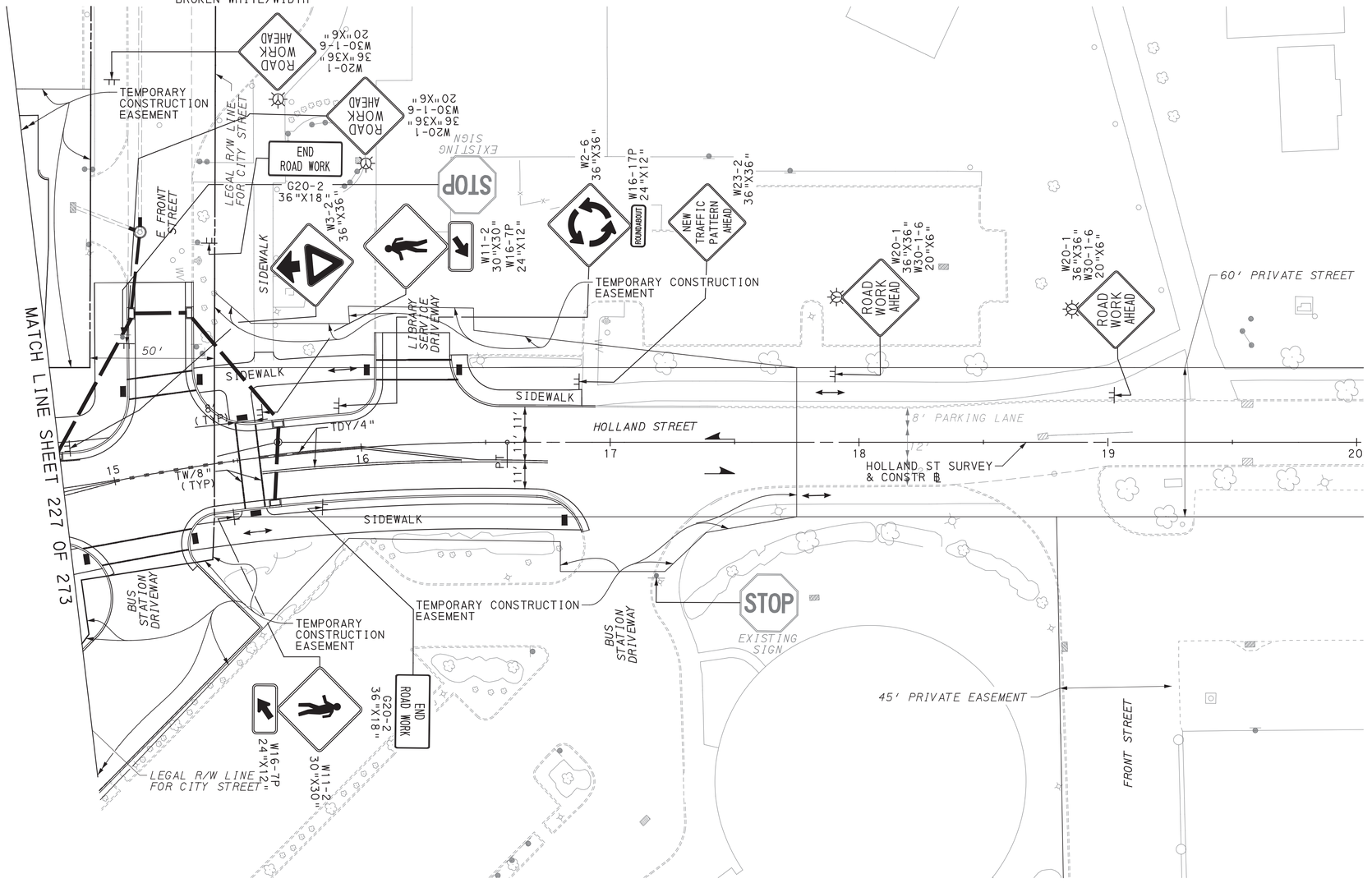
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsstg6_15.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	235 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- PEDESTRIAN/BICYCLE FLOW
- SIGN MOUNTED ON TEMPORARY SUPPORT
- TEMPORARY PORTABLE SIGN POST "H" OR "X" BASE
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN (CMS)
- TYPE B HIGH INTENSITY FLASHER WITH YELLOW LENS
- TYPE B HIGH INTENSITY FLASHER WITH RED LENS
- PAYMENT INCLUDED WITH TEMPORARY SIGNAL PLAN
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "THROUGH ARROW", 12'-0" X 1'-8"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- DY/4" - EXISTING PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- W/8" - EXISTING PAVEMENT MARKINGS, WHITE/WIDTH
- BW/6" - EXISTING PAVEMENT MARKINGS, BROKEN WHITE/WIDTH
- TW/4" - TEMPORARY PAVEMENT MARKINGS, WHITE/WIDTH
- TDEW/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED EXTENSION WHITE/WIDTH
- TDY/4" - TEMPORARY PAVEMENT MARKINGS, DOUBLE YELLOW/WIDTH
- TDDY/4" - TEMPORARY PAVEMENT MARKINGS, DOTTED DOUBLE YELLOW/WIDTH
- (TDY/4") - TEMPORARY PAVEMENT MARKING INSTALLED IN PRIOR STAGE
- CHANNELIZING DEVICE
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 2
- TEMPORARY SHORING
- PEDESTRIAN DETECTABLE BARRICADES
- TEMPORARY PORTABLE SIDEWALK PROTECTIVE FENCE AND PEDESTRIAN DETECTABLE BARRICADES



SCALE IN FEET
0 25 50

TRAFFIC CONTROL PLAN
STAGE 6

DES: SMR	CKD: DJG	DWG: SMR	CKD: DJG

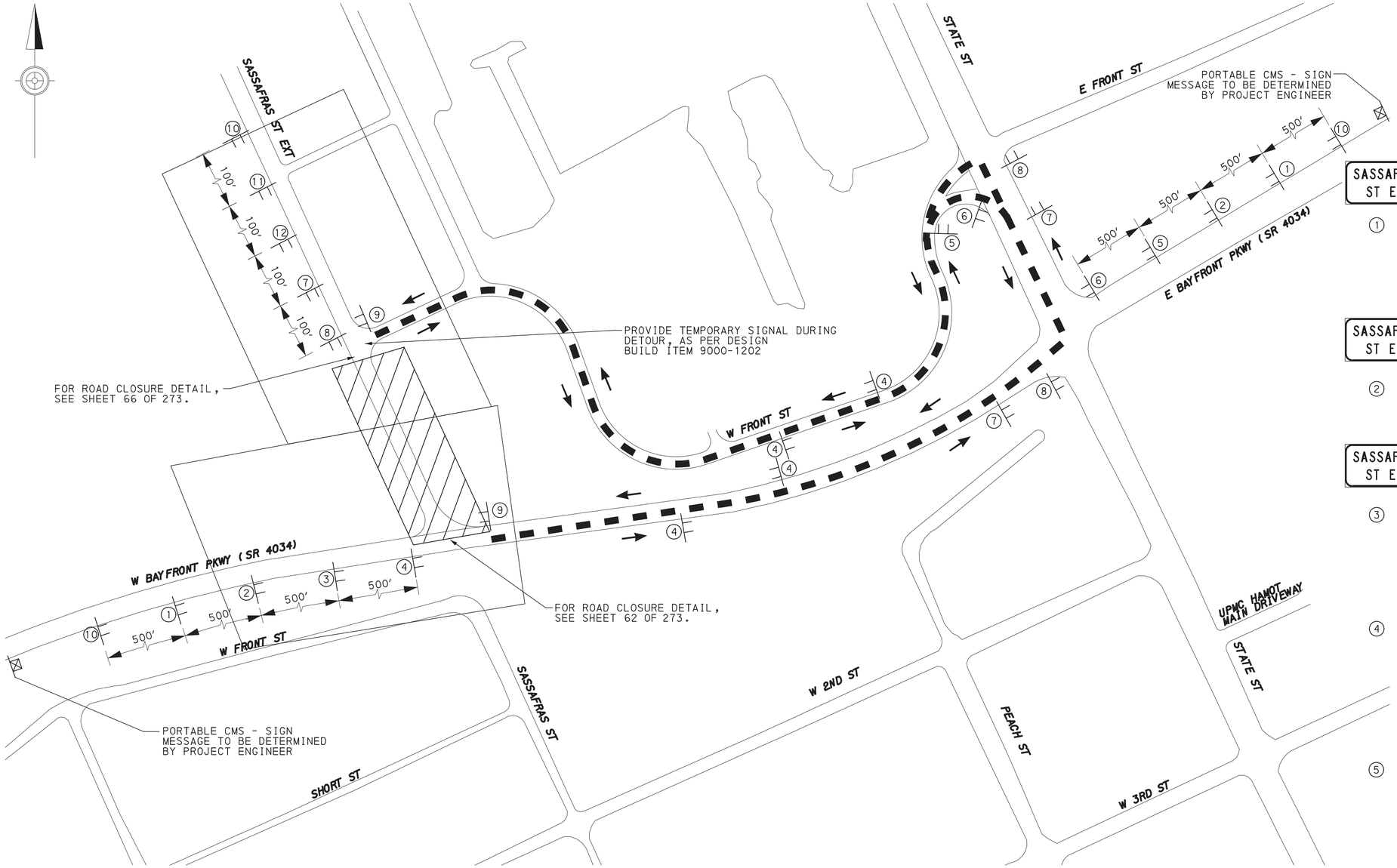
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/2/2022

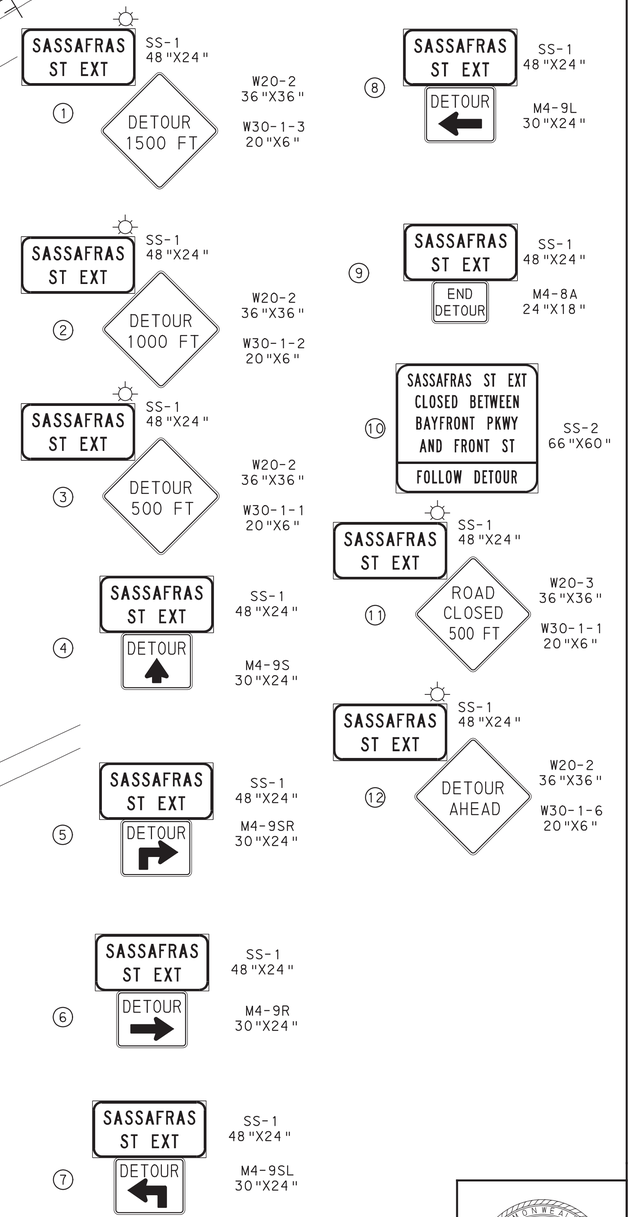
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCplsTG6_16.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	236 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SASSAFRAS STREET EXTENSION DETOUR
STAGE 1D



NOTES:

1. DETOUR LENGTH IS 0.6 MILES.
2. PEDESTRIANS TO BE MAINTAINED DURING CONSTRUCTION.
3. SEE THIS SHEET FOR DETOUR SIGN LEGEND.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- TYPE B HIGH INTENSITY FLASHER
- PORTABLE CHANGEABLE MESSAGE SIGN

SCALE IN FEET
0 100 200

TRAFFIC CONTROL PLAN
DETOUR PLAN

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

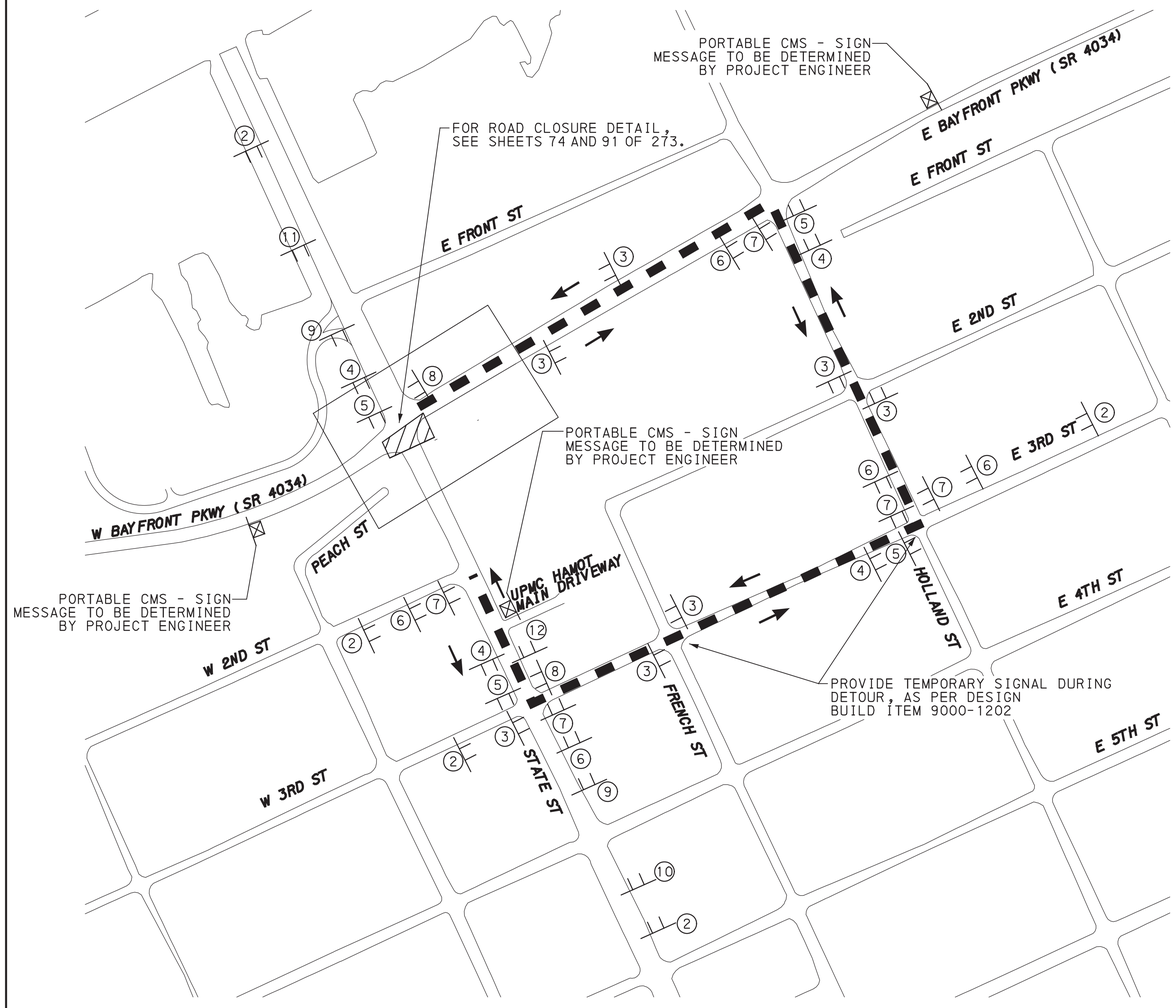
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	237 OF 273
CITY OF ERIE				

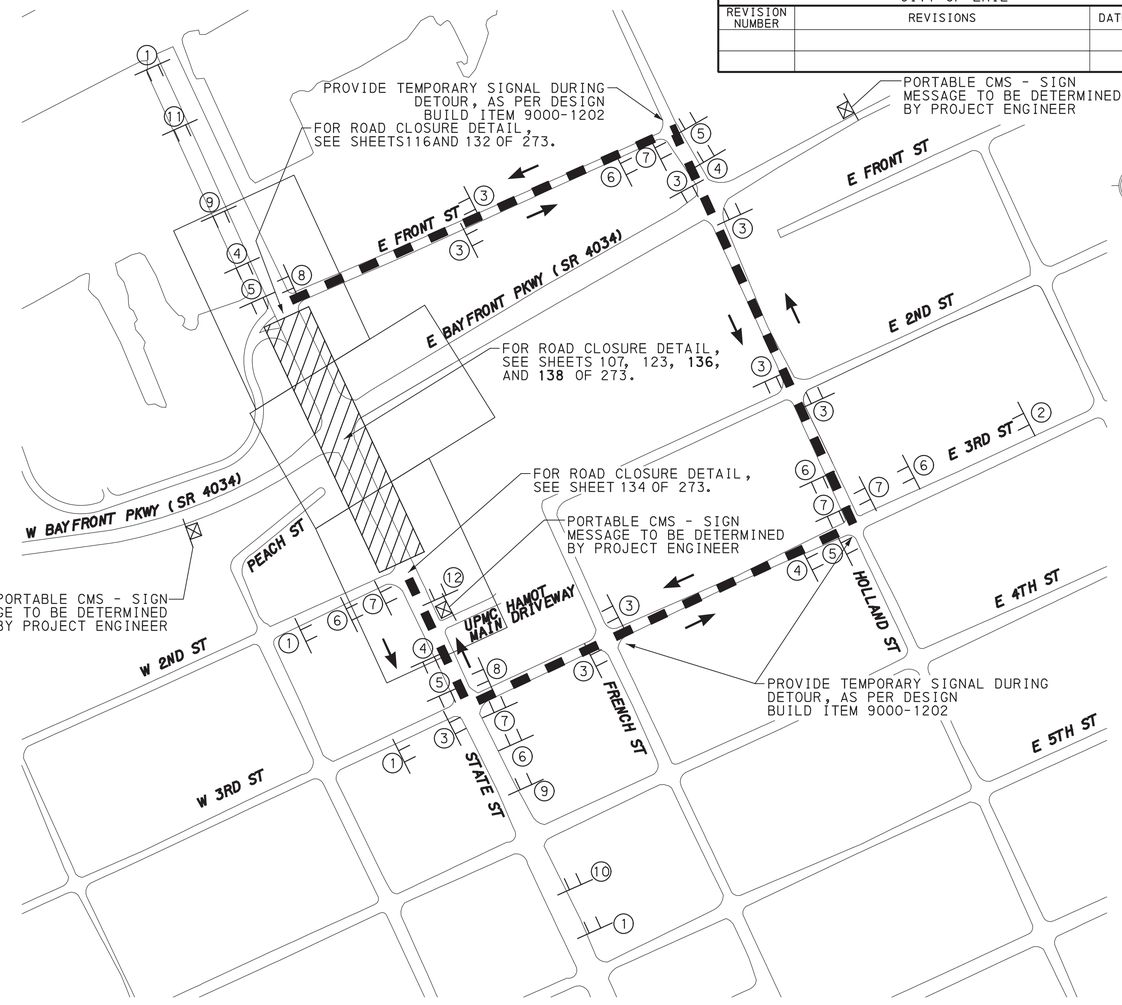
REVISION NUMBER	REVISIONS	DATE	BY



STATE STREET SOUTHERN CLOSURE DETOUR
STAGE 2A/2B

NOTES:

1. DETOUR LENGTH FOR SOUTHERN CLOSURE IS 0.7 MILES.
2. ACCESS TO BE MAINTAINED TO UPMC HAMOT HOSPITAL SERVICE ENTRANCE AT ALL TIMES FROM THE SOUTH.
3. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 238 OF 273.



STATE STREET FULL CLOSURE DETOUR
STAGE 3A/3B/3C/3D/3E/3F

NOTES:

1. DETOUR LENGTH FOR FULL CLOSURE IS 0.7 MILES.
2. ACCESS TO BE MAINTAINED TO UPMC HAMOT HOSPITAL SERVICE ENTRANCE AT ALL TIMES FROM THE SOUTH.
3. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 238 OF 273.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	238 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

① STATE ST / CLOSED BETWEEN / FRONT ST AND / W 2ND ST / FOLLOW DETOUR — SS-3 60"X60"

② STATE ST / CLOSED BETWEEN / BAYFRONT PKWY / AND W 2ND ST / FOLLOW DETOUR — SS-4 60"X60"

③ STATE STREET / DETOUR — SS-5 30"X24" / M4-9S 30"X24"

④ STATE STREET / DETOUR — SS-5 30"X24" / M4-9SL 30"X24"

⑤ STATE STREET / DETOUR — SS-5 30"X24" / M4-9L 30"X24"

⑥ STATE STREET / DETOUR — SS-5 30"X24" / M4-9SR 30"X24"

⑦ STATE STREET / DETOUR — SS-5 30"X24" / M4-9R 30"X24"

⑧ STATE STREET / END DETOUR — SS-5 30"X24" / M4-8A 24"X18"

⑨ STATE STREET / DETOUR AHEAD — SS-5 30"X24" / W20-2 36"X36" / W30-1-6 20"X6"

⑩ STATE STREET / DETOUR 500 FT — SS-5 30"X24" / W20-2 36"X36" / W30-1-1 20"X6"

⑪ STATE STREET / ROAD CLOSED 500 FT — SS-5 30"X24" / W20-3 36"X36" / W30-1-1 20"X6"

⑫ STATE STREET / ROAD CLOSED AHEAD — SS-5 30"X24" / W20-3 36"X36" / W30-1-6 20"X6"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAMIAN JOSEPH GEORGE — ENGINEER — PE075334

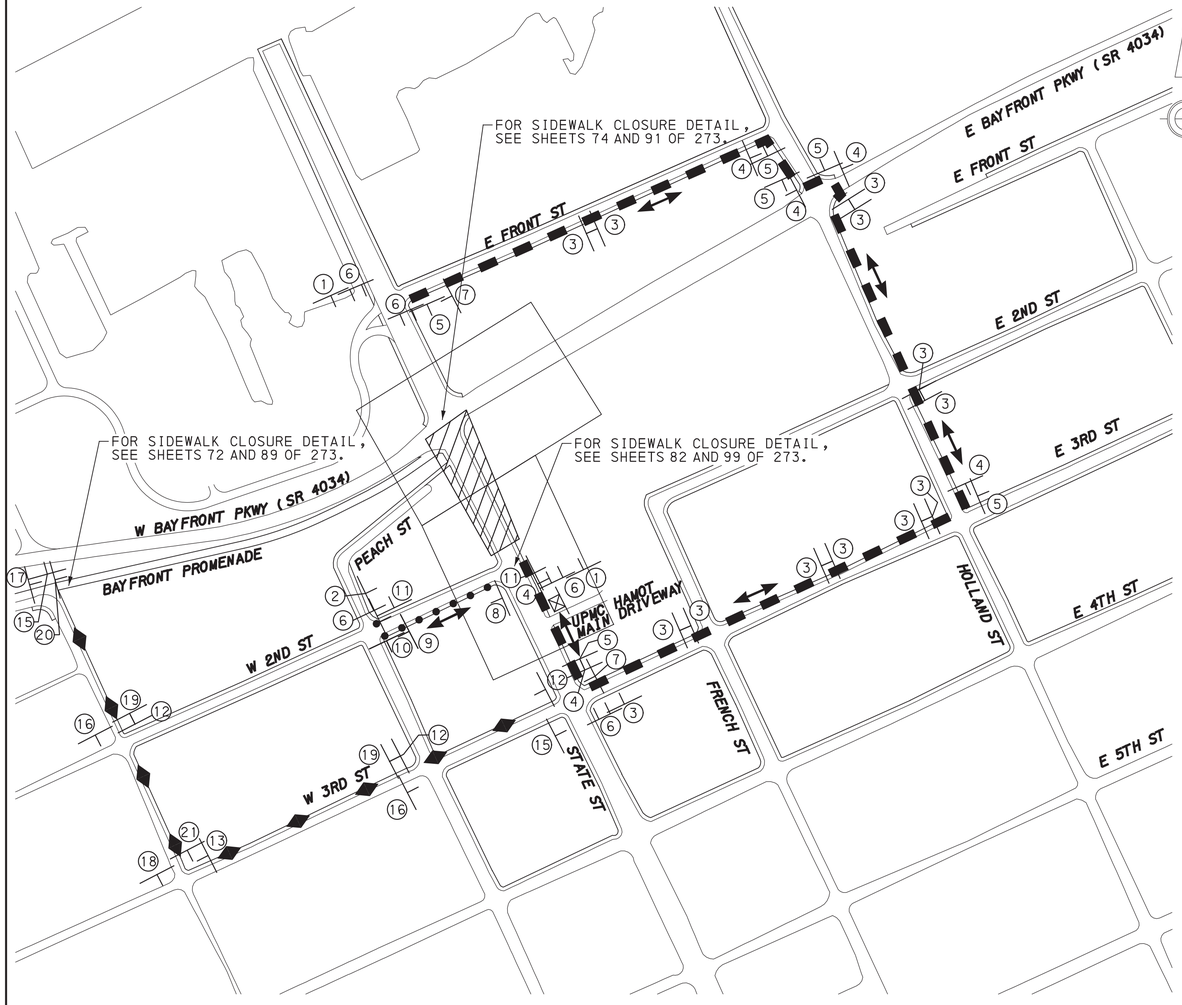
PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpl\sheets\TCdp03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	239 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY



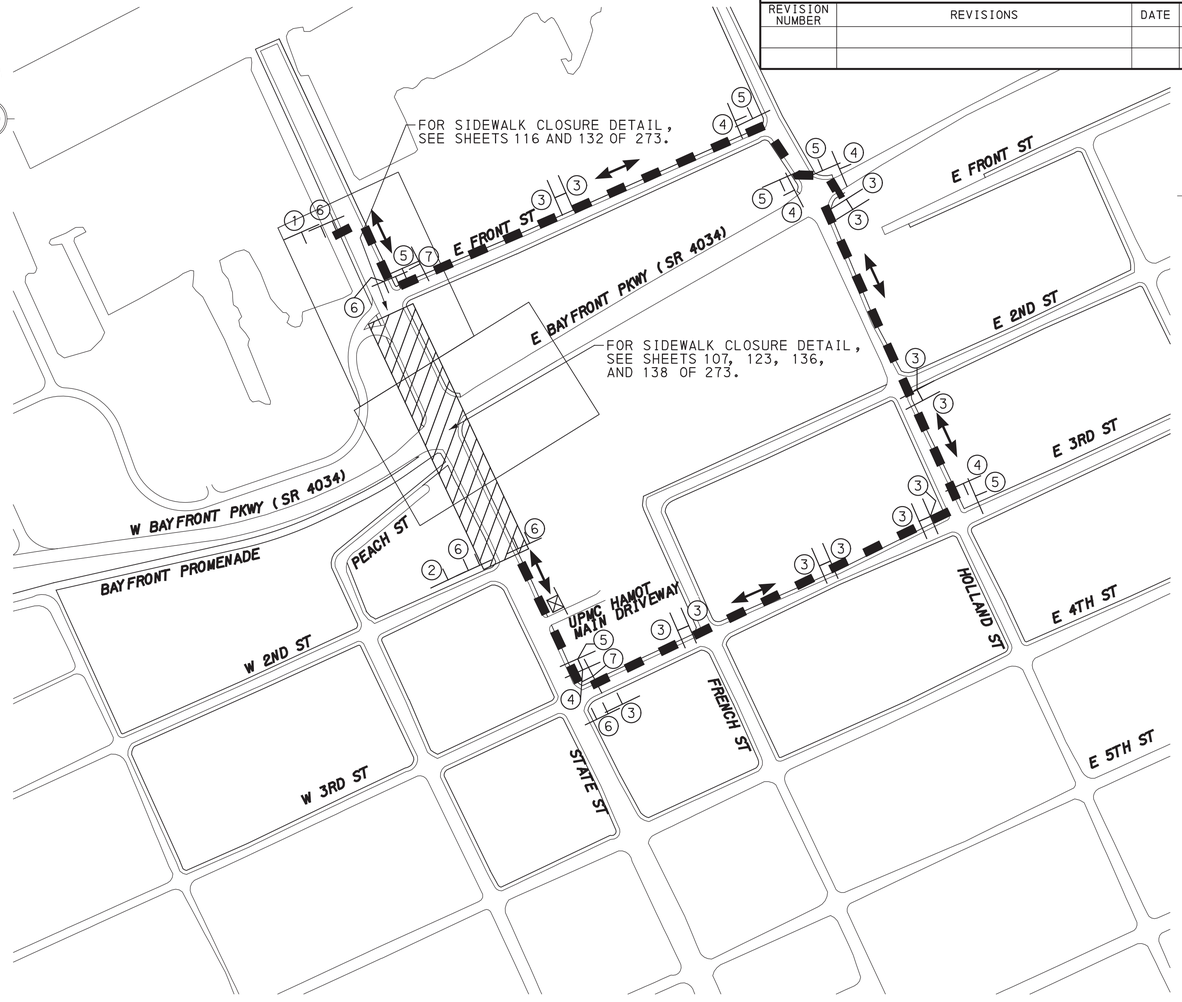
STATE STREET SOUTHERN CLOSURE
W 2ND STREET NORTHWEST CORNER CURB RAMP
PEDESTRIAN DETOUR
STAGE 2A/2B/3A/3B/3C

NOTES:

1. STATE STREET DETOUR LENGTH FOR SOUTHERN CLOSURE IS 0.7 MILES.
2. WEST 2ND STREET DETOUR LENGTH FOR SOUTHERN CLOSURE IS 400 FEET.
3. ACCESS TO BE MAINTAINED TO UPMC HAMOT HOSPITAL SERVICE ENTRANCE AT ALL TIMES FROM THE SOUTH.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 240 OF 273.

LEGEND

- STATE STREET DETOUR
- WEST 2ND STREET DETOUR
- BAYFRONT PROMENADE DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- TEMPORARY PORTABLE SIGN POST "X" OR "H" BASE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN



STATE STREET FULL CLOSURE
PEDESTRIAN DETOUR
STAGE 3D/3E/3F

NOTES:

1. STATE STREET DETOUR LENGTH FOR FULL CLOSURE IS 0.7 MILES.
2. ACCESS TO BE MAINTAINED TO UPMC HAMOT HOSPITAL SERVICE ENTRANCE AT ALL TIMES FROM THE SOUTH.
3. FOR DETOUR SIGN LEGEND, SEE SHEET 240 OF 273.

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
PEDESTRIAN DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	240 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

①

R9-11A (LEFT) 24"X12"

②

R9-11A (RIGHT) 24"X12"

③

SS-5 30"X24"
M4-9B 30"X24"

④

SS-5 30"X24"
M4-9B 30"X24"

⑤

SS-5 30"X24"
M4-9B 30"X24"

⑥

SS-6 30"X24"

⑦

SS-5 30"X24"
M4-8A 24"X18"

⑧

SS-7 30"X24"
M4-9B 30"X24"

⑨

SS-7 30"X24"
M4-9B 30"X24"

⑩

SS-7 30"X24"
M4-9B 30"X24"

⑪

SS-7 30"X24"
M4-8A 24"X18"

⑫

SS-28 30"X24"
M4-9A 30"X24"

⑬

SS-28 30"X24"
M4-9A 30"X24"

⑭

SS-28 30"X24"
M4-9A 30"X24"

⑮

SS-28 30"X24"
M4-8A 24"X18"

⑯

SS-28 30"X24"
M4-9B 30"X24"

⑰

SS-28 30"X24"
M4-9B 30"X24"

⑱

SS-28 30"X24"
M4-9B 30"X24"

⑲

SS-28 30"X24"
M4-9B 30"X24"

⑳

SS-28 30"X24"
M4-9B 30"X24"

㉑

SS-28 30"X24"
M4-9B 30"X24"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK | CKD: MSM | DWG: CPK | CKD: MSM

TRAFFIC CONTROL PLAN
PEDESTRIAN DETOUR PLAN SIGN DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	241 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/12/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp06.dgn

W BAYFRONT PARKWAY (SR 4034)
E BAYFRONT PARKWAY (SR 4034)
EAST AVENUE
E 4TH STREET
E 6TH STREET
ASH STREET
WAYNE STREET
PARADE STREET
HOLLAND STREET
STATE STREET
SASSAFRAS STREET
CHESTNUT STREET
E 10TH STREET
E 12TH STREET (SR 0005)
E 18TH STREET
CHERRY STREET
W 4TH STREET
W 6TH STREET
W 8TH STREET
LIBERTY STREET
CRANBERRY STREET
CASCADE STREET
W 10TH STREET
W 12TH STREET (SR 0005)
W 18TH STREET
MONOCA DRIVE
CHEROKEE DR
SEMINOLE DRIVE
LINCOLN AVENUE
S SHORE DRIVE
GSXT NORFOLK SOUTHERN
GREENGARDEN ROAD
PITTSBURGH AVE (SR 4017)
W 24TH STREET
W 26TH STREET
W 30TH STREET
W 32ND STREET
INTERSTATE 79
MATCH BREAK LINE A-A
MATCH BREAK LINE B-B
PORTABLE CMS - SIGN MESSAGE TO BE DETERMINED BY PROJECT ENGINEER
DMS

BAYFRONT PARKWAY (SR 4034) DETOUR STAGES 3C AND 4

LEGEND

- BAYFRONT PARKWAY (SR 4034) WESTBOUND DETOUR
- BAYFRONT PARKWAY (SR 4034) WESTBOUND DETOUR SIGN
- BAYFRONT PARKWAY (SR 4034) EASTBOUND DETOUR
- BAYFRONT PARKWAY (SR 4034) EASTBOUND DETOUR SIGN
- TYPE III BARRICADE
- TRAFFIC FLOW ARROW
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE SIGN
- DYNAMIC MESSAGE SIGN (DMS)
- DMS MESSAGE

NOTES:
1. DETOUR LENGTH IS 10.2 MILES.
2. FOR PEDESTRIAN DETOUR, SEE SHEETS 118THROUGH 133 OF 273.
3. FOR STATE STREET FULL CLOSURE DETOUR, SEE SHEETS 237 AND 238 OF 273.
4. FOR DETOUR SIGN LEGEND, SEE SHEETS 242 AND 243 OF 273.
5. DURING TIMES THAT THE DETOUR IS NOT BEING USED, CMS TO BE UTILIZED TO DIRECT TRAFFIC TO 12TH STREET AS AN ALTERNATIVE ROUTE.

* PROVIDE ENOUGH TYPE III BARRICADES TO COMPLETELY CLOSE ROADWAY.
# PLACE SIGN ON BOTH SIDES OF THE ROADWAY.

SCALE IN FEET
0 1000 2000

TRAFFIC CONTROL PLAN
DETOUR PLAN

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	242 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

① ROAD CLOSED — R11-2, 48"X30"

② ROAD CLOSED 500 FT — W20-3 36"X36", W30-1-1 20"X6"

③ ROAD CLOSED 1000 FT — W20-3 36"X36", W30-1-2 20"X6"

④ ROAD CLOSED 1500 FT — W20-3 36"X36", W30-1-3 20"X6"

⑤ BAYFRONT PARKWAY WEST / DETOUR ↑ — SS-8 42"X36", M4-9S 30"X24"

⑥ BAYFRONT PARKWAY WEST / DETOUR ↑ — SS-9 54"X42", M4-9S 48"X36"

⑦ BAYFRONT PARKWAY EAST / DETOUR ↑ — SS-10 42"X36", M4-9S 30"X24"

⑧ BAYFRONT PARKWAY EAST / DETOUR ↑ — SS-11 54"X42", M4-9S 48"X36"

⑨ BAYFRONT PARKWAY WEST / DETOUR ↗ — SS-9 54"X42", M4-9-1AR 48"X36"

⑩ BAYFRONT PARKWAY WEST / DETOUR ↗ — SS-9 54"X42", M4-9-1BR 48"X36"

⑪ BAYFRONT PARKWAY EAST / DETOUR ↗ — SS-11 54"X42", M4-9-1AR 48"X36"

⑫ BAYFRONT PARKWAY EAST / DETOUR ↗ — SS-11 54"X42", M4-9-1BR 48"X36"

⑬ BAYFRONT PARKWAY WEST / DETOUR → — SS-9 54"X42", M4-9SR 48"X36"

⑭ BAYFRONT PARKWAY WEST / DETOUR → — SS-9 54"X42", M4-9R 48"X36"

⑮ BAYFRONT PARKWAY EAST / DETOUR → — SS-11 54"X42", M4-9SR 48"X36"

⑯ BAYFRONT PARKWAY EAST / DETOUR → — SS-11 54"X42", M4-9R 48"X36"

⑰ BAYFRONT PARKWAY WEST / DETOUR ← — SS-8 42"X36", M4-9SL 30"X24"

⑱ BAYFRONT PARKWAY WEST / DETOUR ← — SS-8 42"X36", M4-9L 30"X24"

⑲ BAYFRONT PARKWAY EAST / DETOUR ← — SS-10 42"X36", M4-9SL 30"X24"

⑳ BAYFRONT PARKWAY EAST / DETOUR ← — SS-10 42"X36", M4-9L 30"X24"

㉑ BAYFRONT PARKWAY WEST / DETOUR → — SS-8 42"X36", M4-9SR 30"X24"

㉒ BAYFRONT PARKWAY WEST / DETOUR → — SS-8 42"X36", M4-9R 30"X24"

㉓ BAYFRONT PARKWAY EAST / DETOUR → — SS-10 42"X36", M4-9SR 30"X24"

㉔ BAYFRONT PARKWAY EAST / DETOUR → — SS-10 42"X36", M4-9R 30"X24"

㉕ BAYFRONT PARKWAY EAST / DETOUR 500 FT — SS-10 42"X36", W20-2 36"X36", W30-1-1 20"X6"

㉖ BAYFRONT PARKWAY WEST / DETOUR 500 FT — SS-8 42"X36", W20-2 36"X36", W30-1-1 20"X6"

㉗ BAYFRONT PARKWAY EAST / DETOUR 1000 FT — SS-10 42"X36", W20-2 36"X36", W30-1-2 20"X6"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334
COMMONWEALTH OF PENNSYLVANIA

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

PLOTTED: 8/1/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	243 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

(28) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR 1000 FT — W20-2, 36"X36"; W30-1-2, 20"X6"

(29) ROAD CLOSED 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A, 60"X30"

(30) ROAD CLOSED 3/4 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A, 60"X30"

(31) BAYFRONT PKWY EASTBOUND CLOSED AT SASSAFRAS ST EXT / FOLLOW DETOUR — SS-12, 84"X66"

(32) ROAD OPEN TO SASSAFRAS PIER CONVENTION CTR — W20-3A, 48"X36"

(33) ROAD OPEN TO TRANSIT AND BUS STATION — W20-3A, 48"X36"

(34) BAYFRONT PKWY WESTBOUND CLOSED AT HOLLAND ST / FOLLOW DETOUR — SS-13, 54"X60"

(35) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
END DETOUR — M4-8A, 24"X18"

(36) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
END DETOUR — M4-8A, 24"X18"

(37) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR — M4-9-1AL, 30"X24"

(38) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR — M4-9-1BL, 30"X24"

(39) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
DETOUR — M4-9-1AL, 30"X24"

(40) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
DETOUR — M4-9-1BL, 30"X24"

DMS MESSAGES

(A) MESSAGE TO BE DETERMINED

(B) MESSAGE TO BE DETERMINED

LEGEND

(5) SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

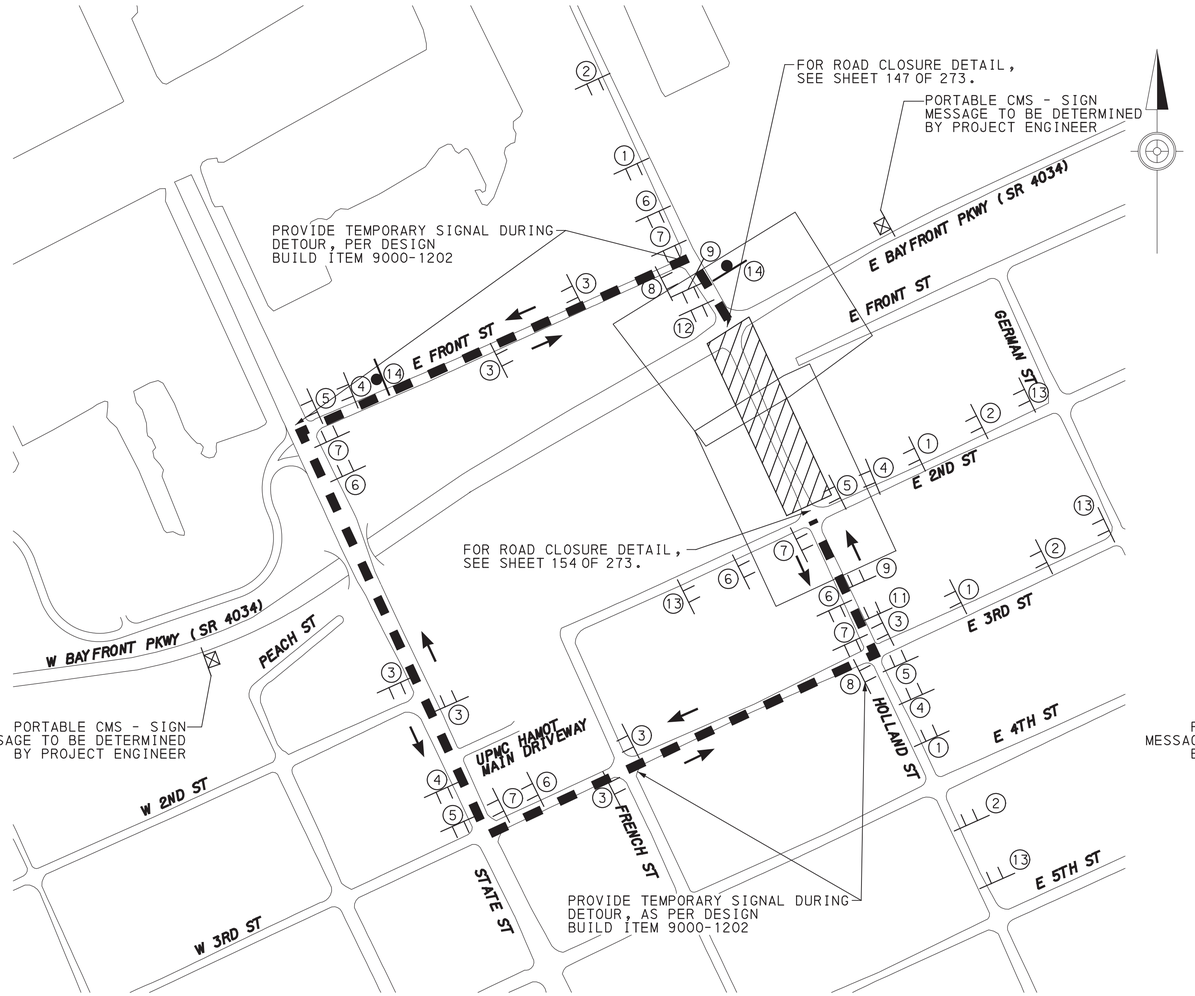
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAMIAN JOSEPH GEORGE — ENGINEER — PE075334

PLOTTED: 8/1/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	244 OF 273
CITY OF ERIE				

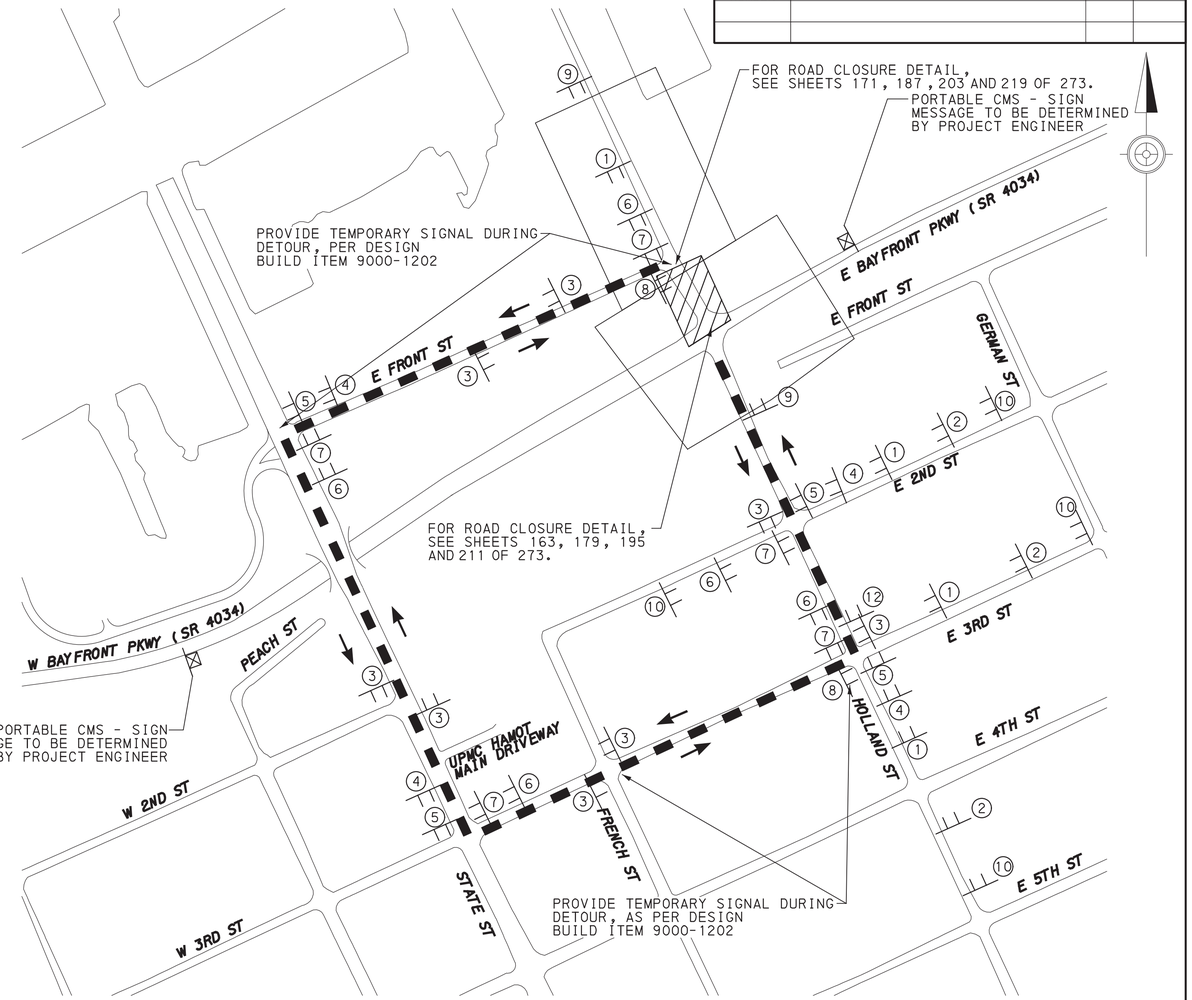
REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET SOUTHERN CLOSURE DETOUR
STAGE 4

NOTES:

1. DETOUR LENGTH IS 0.8 MILES.
2. DURING STAGE 4, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 245 OF 273.



HOLLAND STREET NORTHERN CLOSURE DETOUR
STAGE 5A/5B/5C/5D

NOTES:

1. DETOUR LENGTH IS 0.8 MILES.
2. DURING STAGE 5, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. MAINTAIN PEDESTRIAN TRAFFIC UTILIZING PEDESTRIAN DETOUR.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 245 OF 273.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SUPPORT

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
DETOUR PLAN

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

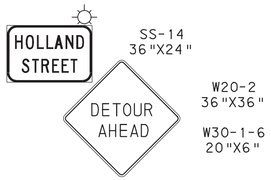
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

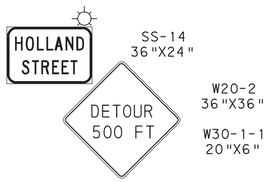
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	245 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

① 

SS-14 36"X24"
W20-2 36"X36"
W30-1-6 20"X6"

② 

SS-14 36"X24"
W20-2 36"X36"
W30-1-1 20"X6"

③

SS-14 36"X24"
M4-9S 30"X24"

④

SS-14 36"X24"
M4-9SL 30"X24"

⑤

SS-14 36"X24"
M4-9L 30"X24"

⑥

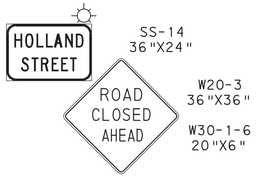
SS-14 36"X24"
M4-9SR 30"X24"

⑦

SS-14 36"X24"
M4-9R 30"X24"

⑧

SS-14 36"X24"
M4-8A 24"X18"

⑨ 

SS-14 36"X24"
W20-3 36"X36"
W30-1-6 20"X6"

⑩

SS-15 54"X60"

⑪

SS-16 48"X24"

⑫

SS-17 54"X24"

⑬

SS-18 54"X60"

⑭

D9-2 24"X24"
D9-2-2 24"X12"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

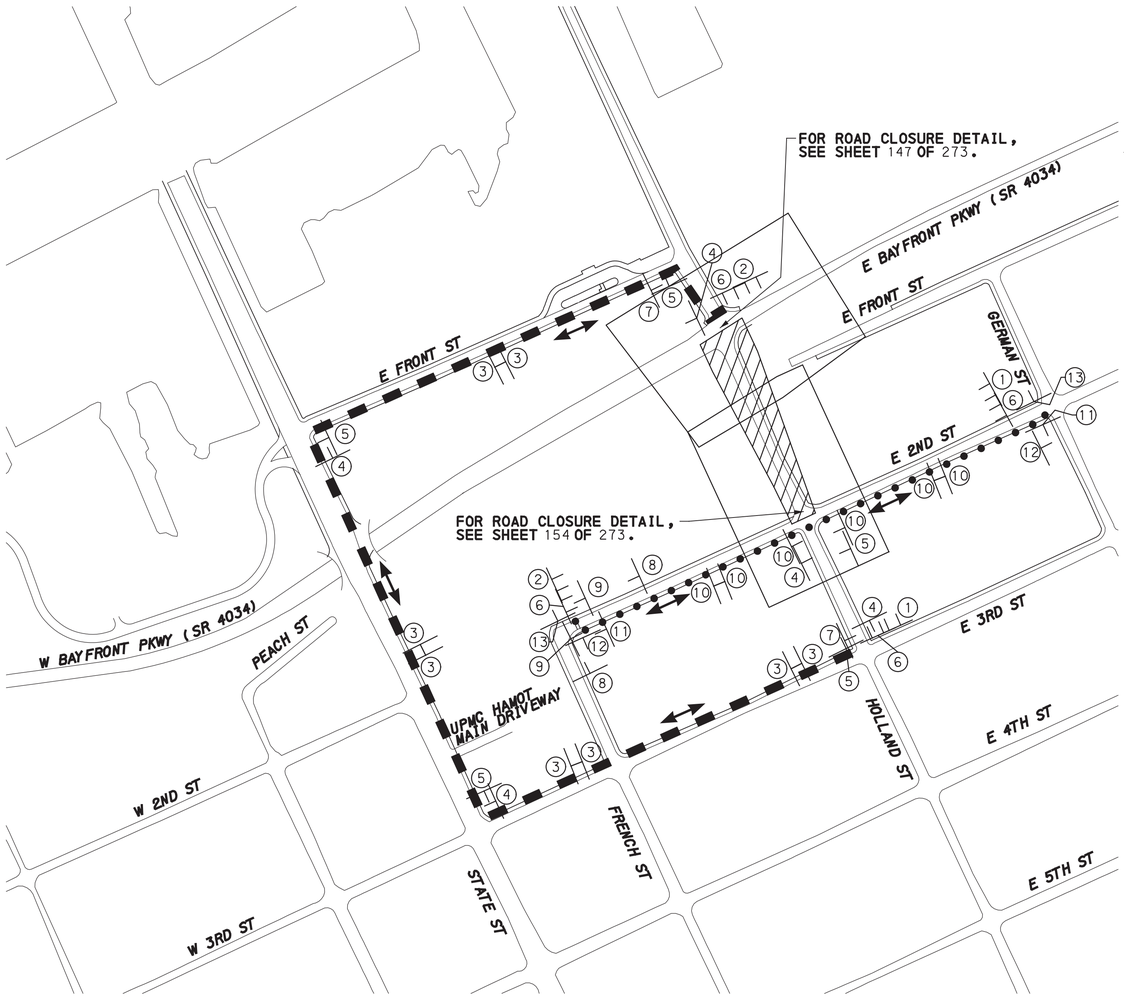
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

FILE NAME: \\mmsconsultants.com\Files\Production\08\60\06808\mpt\sheets\TCdp10.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	246 OF 273
CITY OF ERIE				

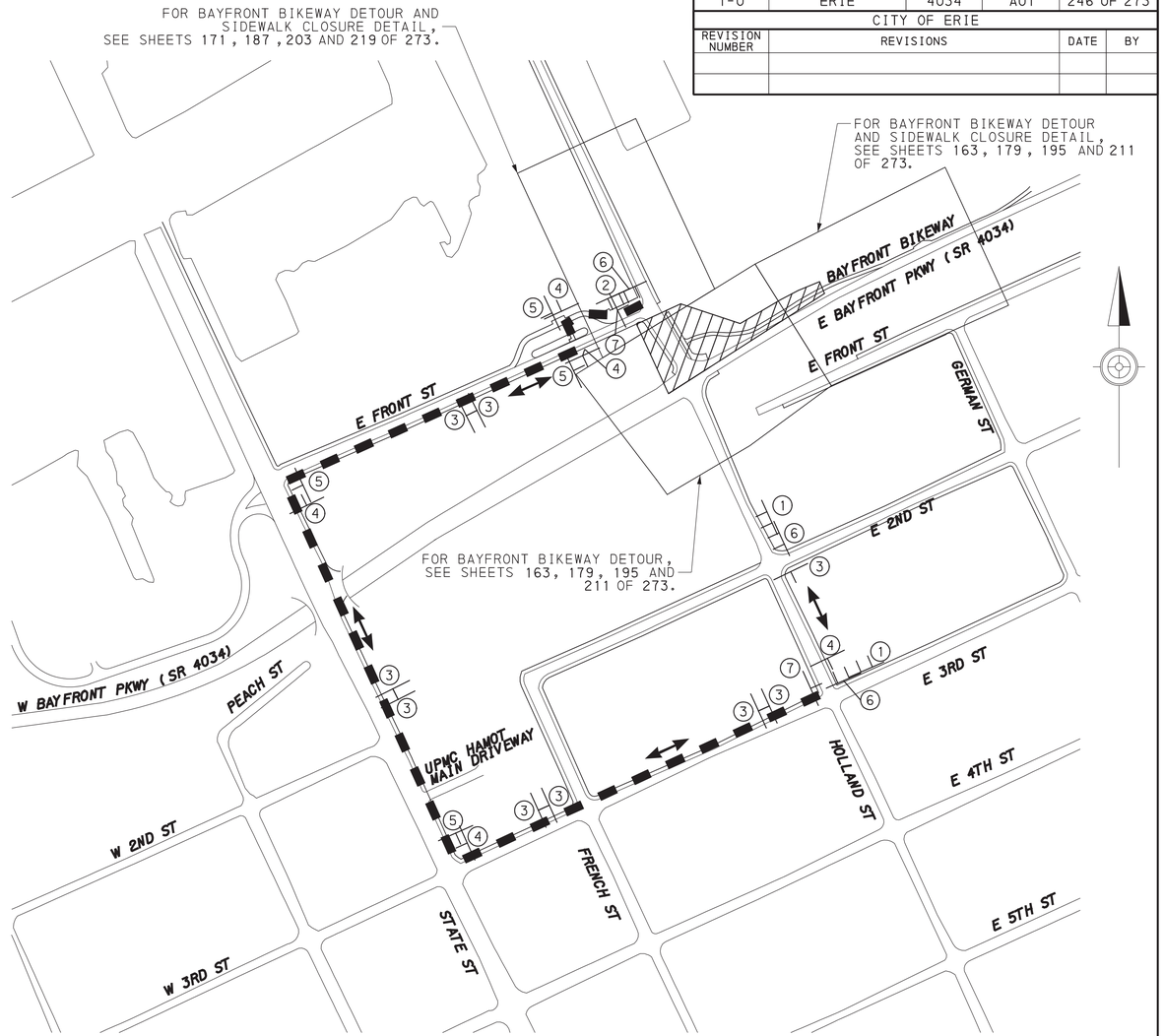
REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET SOUTHERN CLOSURE
PEDESTRIAN DETOUR
STAGE 4

NOTES:

1. HOLLAND STREET DETOUR LENGTH IS 0.7 MILES.
2. EAST 2ND STREET DETOUR LENGTH IS 1590 FEET.
3. DURING STAGE 4, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 247 OF 273.



HOLLAND STREET NORTHERN CLOSURE
PEDESTRIAN DETOUR
STAGE 5A/5B/5C/5D

NOTES:

1. DETOUR LENGTH IS 0.8 MILES.
2. DURING STAGE 5, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. FOR DETOUR SIGN LEGEND, SEE SHEET 247 OF 273.

LEGEND

- HOLLAND STREET DETOUR
- EAST 2ND STREET DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- TEMPORARY PORTABLE SIGN POST "X" OR "H" BASE
- ① SIGN IDENTIFICATION NUMBER

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
PEDESTRIAN DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/1/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp11.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	247 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

①

R9-11A (LEFT) 24"X12"

②

R9-11A (RIGHT) 24"X12"

③

SS-14 36"X24"
M4-9B 30"X24"

④

SS-14 36"X24"
M4-9B 30"X24"

⑤

SS-14 36"X24"
M4-9B 30"X24"

⑥

SS-6 30"X24"

⑦

SS-14 36"X24"
M4-8A 24"X18"

⑧

W11-2 30"X30"
W16-9P 24"X12"

⑨
W11-2 30"X30"
W16-7P 24"X12"

⑩

SS-19 30"X24"
M4-9B 30"X24"

⑪

SS-19 30"X24"
M4-9B 30"X24"

⑫

SS-19 30"X24"
M4-9B 30"X24"

⑬

SS-19 30"X24"
M4-8A 24"X18"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
PEDESTRIAN DETOUR PLAN SIGN DETAILS

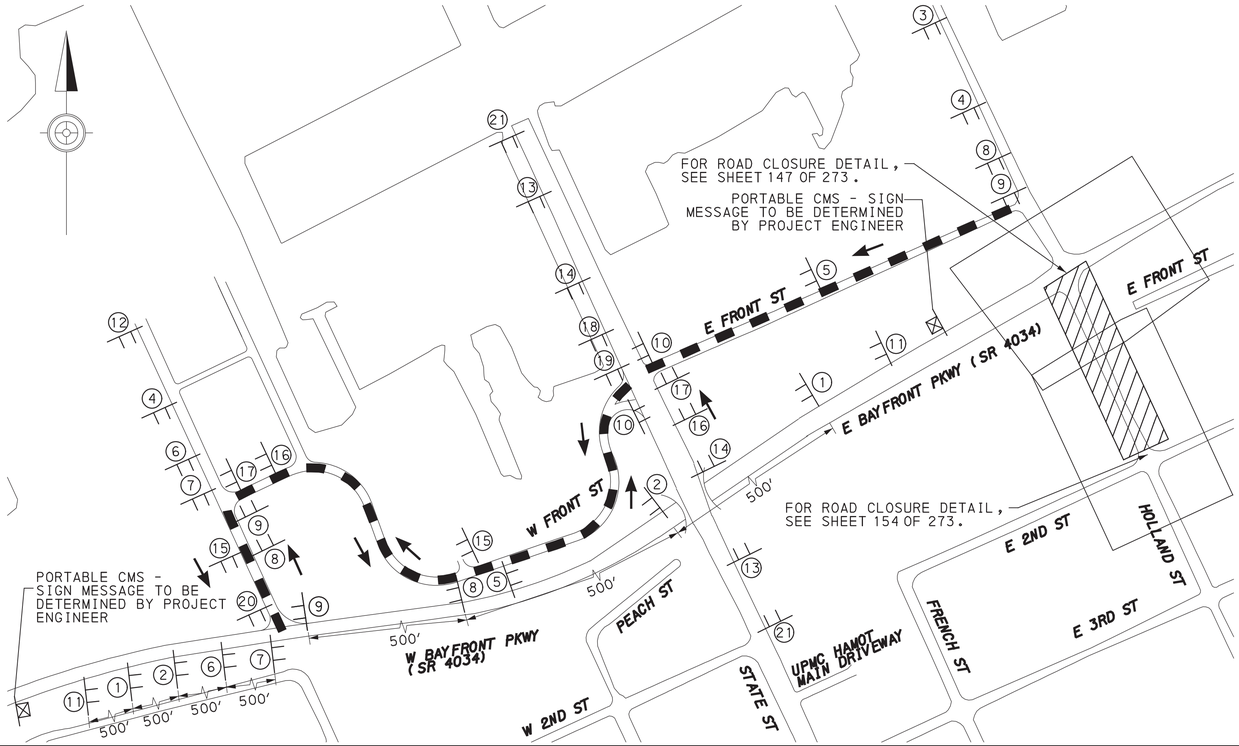
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\npr\sheets\TCdp12.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	248 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



BAYFRONT PARKWAY (SR 4034) AND STATE STREET
RESTRICTED ACCESS DETOUR
STAGE 4

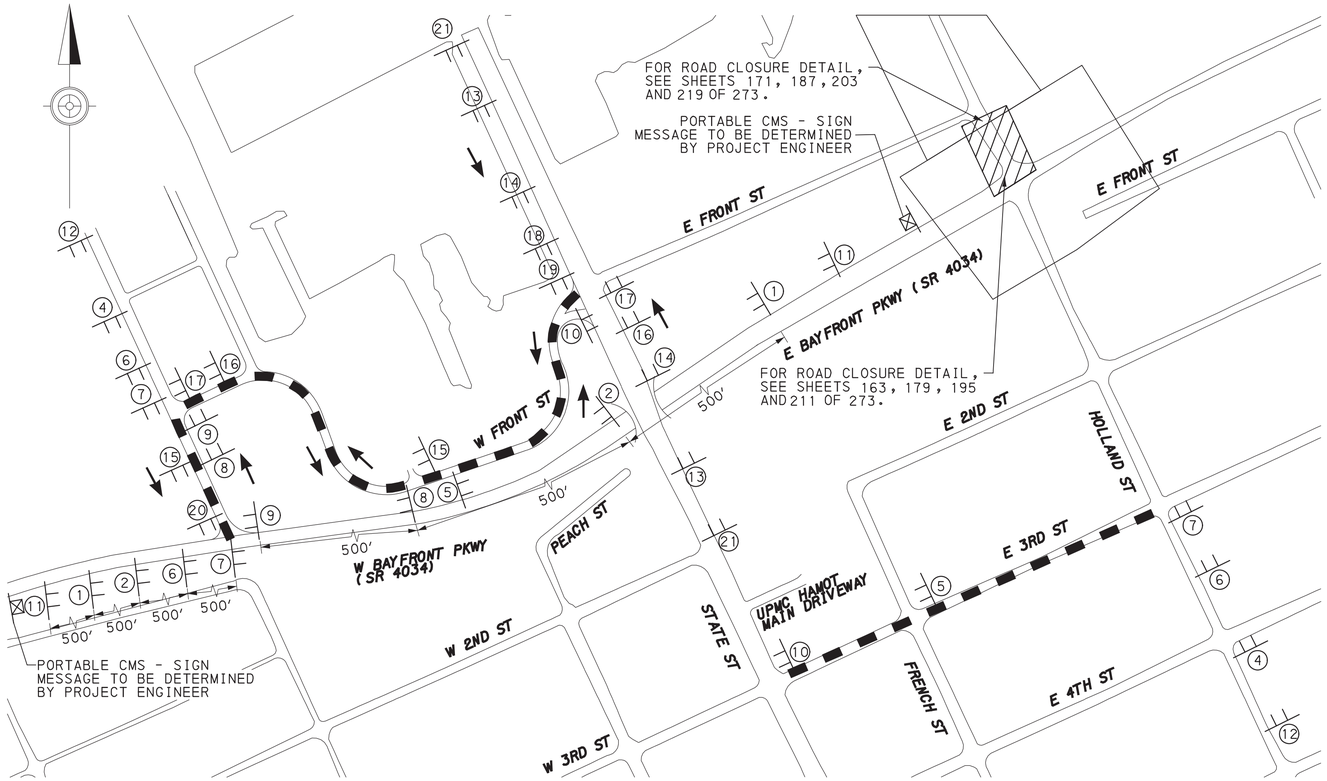
NOTES:

1. DETOUR LENGTH FOR SOUTHERN CLOSURE IS 0.3 MILES.
2. DURING STAGE 4, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. HOLLAND STREET PEDESTRIAN DETOUR TO BE USED DURING THIS STAGE.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 250 OF 273.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN

SCALE IN FEET
0 200 400



BAYFRONT PARKWAY (SR 4034) AND STATE STREET
RESTRICTED ACCESS DETOUR
STAGE 5A/5B/5C/5D

NOTES:

1. DETOUR LENGTH FOR SOUTHERN CLOSURE IS 0.5 MILES.
2. DURING STAGE 5, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. HOLLAND STREET PEDESTRIAN DETOUR TO BE USED DURING THIS STAGE.
4. FOR DETOUR SIGN LEGEND, SEE SHEET 250 OF 273.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

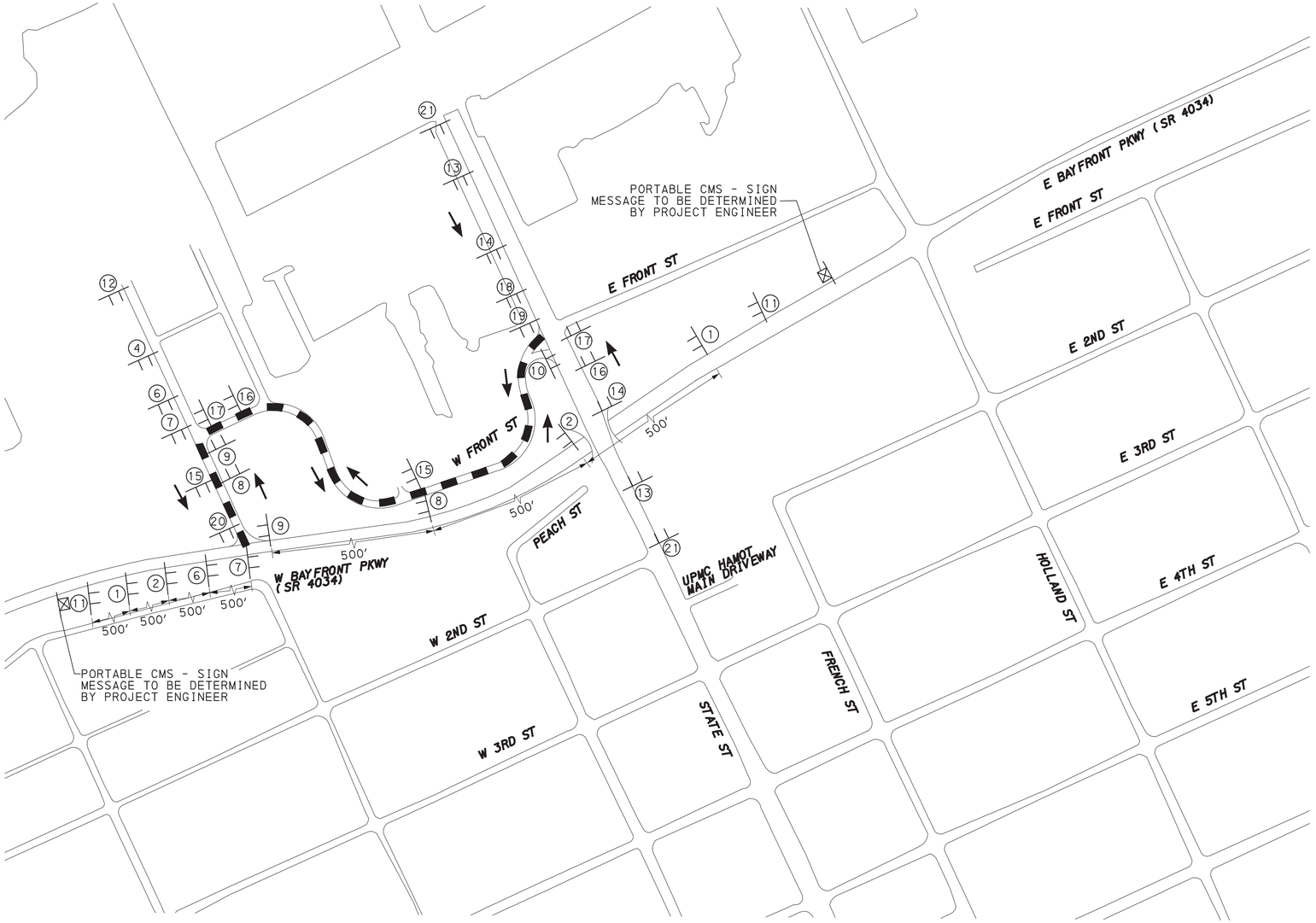
DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp13.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-O	ERIE	4034	A01	249 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



BAYFRONT PARKWAY (SR 4034) AND STATE STREET
RESTRICTED ACCESS DETOUR
STAGE 6

NOTES:

1. DETOUR LENGTH FOR SOUTHERN CLOSURE IS 0.3 MILES.
2. DURING STAGE 4, STATE STREET IS GRADE SEPARATED FROM BAYFRONT PARKWAY WITH NO ACCESS.
3. FOR DETOUR SIGN LEGEND, SEE SHEET 250 OF 273.

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- ① SIGN IDENTIFICATION NUMBER
- PORTABLE CHANGEABLE MESSAGE SIGN

SCALE IN FEET
0 200 400

TRAFFIC CONTROL PLAN
DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/1/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp14.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	250 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

PLOTTED: 8/1/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp15.dgn

① TO STATE STREET / DETOUR 1500 FT — SS-20 30"X36" — W20-2 36"X36" — W30-1-3 20"X6"

② TO STATE STREET / DETOUR 1000 FT — SS-20 30"X36" — W20-2 36"X36" — W30-1-2 20"X6"

③ TO STATE STREET / DETOUR 500 FT — SS-20 30"X36" — W20-2 36"X36" — W30-1-1 20"X6"

④ TO STATE STREET / DETOUR AHEAD — SS-20 30"X36" — W20-2 36"X36" — W30-1-6 20"X6"

⑤ TO STATE STREET / DETOUR — SS-20 30"X36" — M4-9S 30"X24"

⑥ TO STATE STREET / DETOUR — SS-20 30"X36" — M4-9SL 30"X24"

⑦ TO STATE STREET / DETOUR — SS-20 30"X36" — M4-9L 30"X24"

⑧ TO STATE STREET / DETOUR — SS-20 30"X36" — M4-9SR 30"X24"

⑨ TO STATE STREET / DETOUR — SS-20 30"X36" — M4-9R 30"X24"

⑩ TO STATE STREET / END DETOUR — SS-20 30"X36" — M4-8A 24"X18"

⑪ ACCESS TO STATE ST CLOSED / FOLLOW DETOUR — SS-21 54"X48"

⑫ STATE STREET ACCESS FROM BAYFRONT PKWY CLOSED / FOLLOW DETOUR — SS-22 54"X60"

⑬ TO BAYFRONT PARKWAY / DETOUR 500 FT — SS-23 48"X36" — W20-2 36"X36" — W30-1-1 20"X6"

⑭ TO BAYFRONT PARKWAY / DETOUR AHEAD — SS-23 48"X36" — W20-2 36"X36" — W30-1-6 20"X6"

⑮ TO BAYFRONT PARKWAY / DETOUR — SS-23 42"X36" — M4-9S 30"X24"

⑯ TO BAYFRONT PARKWAY / DETOUR — SS-23 42"X36" — M4-9SL 30"X24"

⑰ TO BAYFRONT PARKWAY / DETOUR — SS-23 42"X36" — M4-9L 30"X24"

⑱ TO BAYFRONT PARKWAY / DETOUR — SS-23 42"X36" — M4-9SR 30"X24"

⑲ TO BAYFRONT PARKWAY / DETOUR — SS-23 42"X36" — M4-9R 30"X24"

⑳ TO BAYFRONT PARKWAY / END DETOUR — SS-23 42"X36" — M4-8A 24"X18"

㉑ BAYFRONT PKWY ACCESS FROM STATE STREET CLOSED / FOLLOW DETOUR — SS-24 54"X60"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

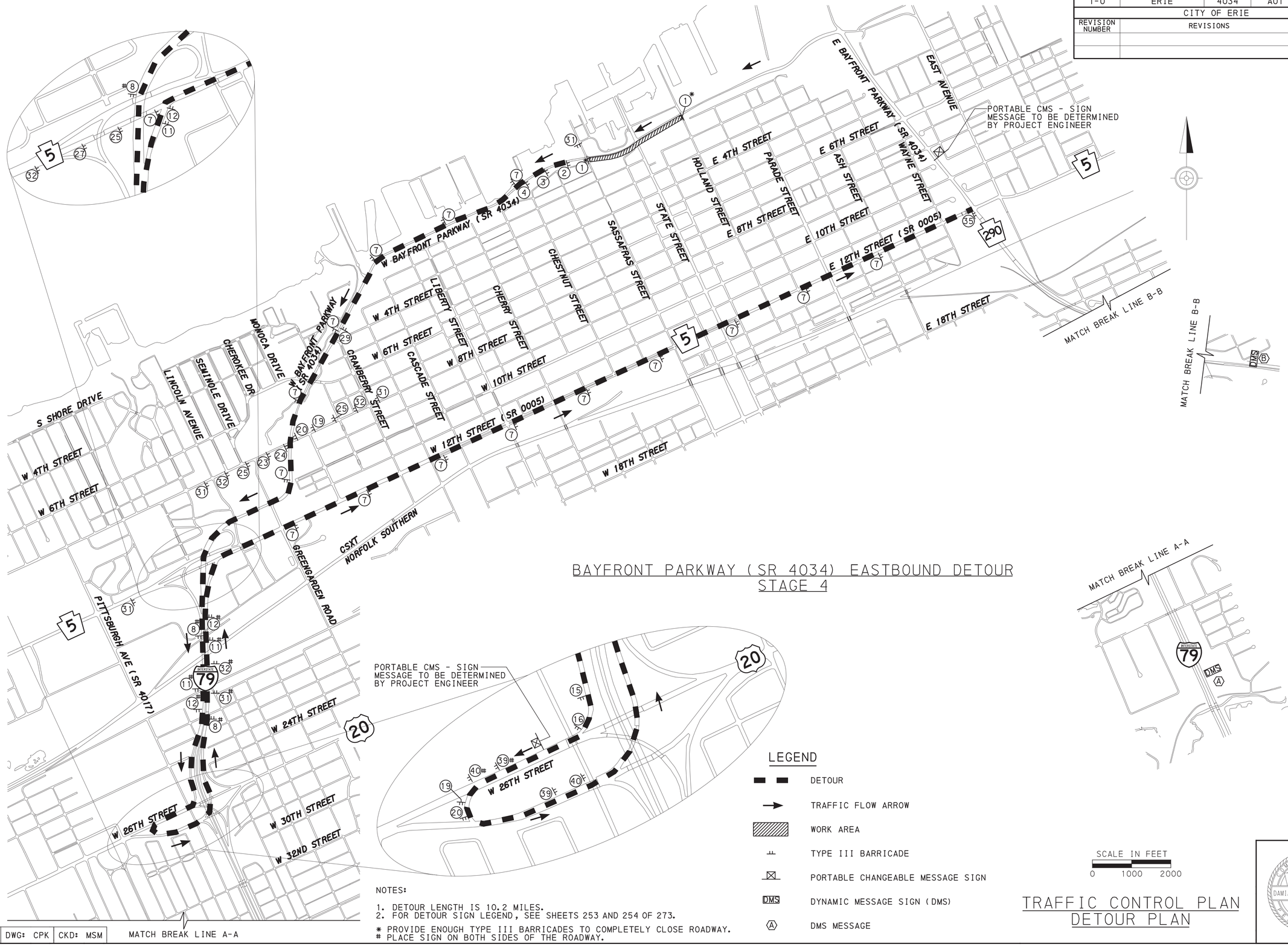
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	251 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/12/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp16.dgn



BAYFRONT PARKWAY (SR 4034) EASTBOUND DETOUR
STAGE 4

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN
- DYNAMIC MESSAGE SIGN (DMS)
- DMS MESSAGE

SCALE IN FEET
0 1000 2000

NOTES:

1. DETOUR LENGTH IS 10.2 MILES.
2. FOR DETOUR SIGN LEGEND, SEE SHEETS 253 AND 254 OF 273.

* PROVIDE ENOUGH TYPE III BARRICADES TO COMPLETELY CLOSE ROADWAY.
# PLACE SIGN ON BOTH SIDES OF THE ROADWAY.

TRAFFIC CONTROL PLAN
DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	252 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

BAYFRONT PARKWAY (SR 4034) WESTBOUND DETOUR
STAGE 4

LEGEND

- DETOUR
- TRAFFIC FLOW ARROW
- WORK AREA
- TYPE III BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN
- DYNAMIC MESSAGE SIGN (DMS)
- DMS MESSAGE

SCALE IN FEET
0 1000 2000

NOTES:

1. DETOUR LENGTH IS 10.2 MILES.
2. FOR DETOUR SIGN LEGEND, SEE SHEETS 253 AND 254 OF 273.

* PROVIDE ENOUGH TYPE III BARRICADES TO COMPLETELY CLOSE ROADWAY.
# PLACE SIGN ON BOTH SIDES OF THE ROADWAY.

TRAFFIC CONTROL PLAN
DETOUR PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

PLOTTED: 8/12/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCdp17.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	253 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

①

R11-2
48"X30"

②

W20-3
36"X36"
W30-1-1
20"X6"

③

W20-3
36"X36"
W30-1-2
20"X6"

④

W20-3
36"X36"
W30-1-3
20"X6"

⑤

SS-8
42"X36"
M4-9S
30"X24"

⑥

SS-9
54"X42"
M4-9S
48"X36"

⑦

SS-10
42"X36"
M4-9S
30"X24"

⑧

SS-11
54"X42"
M4-9S
48"X36"

⑨

SS-9
54"X42"
M4-9-1AR
48"X36"

⑩

SS-9
54"X42"
M4-9-1BR
48"X36"

⑪

SS-11
54"X42"
M4-9-1AR
48"X36"

⑫

SS-11
54"X42"
M4-9-1BR
48"X36"

⑬

SS-9
54"X42"
M4-9SR
48"X36"

⑭

SS-9
54"X42"
M4-9R
48"X36"

⑮

SS-11
54"X42"
M4-9SR
48"X36"

⑯

SS-11
54"X42"
M4-9R
48"X36"

⑰

SS-8
42"X36"
M4-9SL
30"X24"

⑱

SS-8
42"X36"
M4-9L
30"X24"

⑲

SS-10
42"X36"
M4-9SL
30"X24"

⑳

SS-10
42"X36"
M4-9L
30"X24"

㉑

SS-8
42"X36"
M4-9SR
30"X24"

㉒

SS-8
42"X36"
M4-9R
30"X24"

㉓

SS-10
42"X36"
M4-9SR
30"X24"

㉔

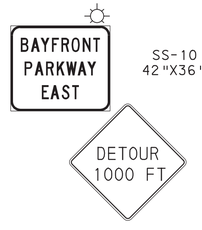
SS-10
42"X36"
M4-9R
30"X24"

㉕

SS-10
42"X36"
W20-2
36"X36"
W30-1-1
20"X6"

㉖

SS-8
42"X36"
W20-2
36"X36"
W30-1-1
20"X6"

㉗ 

SS-10
42"X36"
W20-2
36"X36"
W30-1-2
20"X6"

LEGEND

⑤ SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

PLOTTED: 8/1/2022

FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp18.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	254 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

(28) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR 1000 FT — W20-2, 36"X36"; W30-1-2, 20"X6"

(29) ROAD CLOSED 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A, 60"X30"

(30) ROAD CLOSED 3/4 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A, 60"X30"

(31) BAYFRONT PKWY EASTBOUND CLOSED AT SASSAFRAS ST EXT / FOLLOW DETOUR — SS-12, 84"X66"

(32) ROAD OPEN TO SASSAFRAS PIER CONVENTION CTR — W20-3A, 48"X36"

(33) ROAD OPEN TO TRANSIT AND BUS STATION — W20-3A, 48"X36"

(34) BAYFRONT PKWY WESTBOUND CLOSED AT HOLLAND ST / FOLLOW DETOUR — SS-13, 54"X60"

(35) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
END DETOUR — M4-8A, 24"X18"

(36) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
END DETOUR — M4-8A, 24"X18"

(37) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR — M4-9-1AL, 30"X24"

(38) BAYFRONT PARKWAY WEST — SS-8, 42"X36"
DETOUR — M4-9-1BL, 30"X24"

(39) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
DETOUR — M4-9-1AL, 30"X24"

(40) BAYFRONT PARKWAY EAST — SS-10, 42"X36"
DETOUR — M4-9-1BL, 30"X24"

DMS MESSAGES

(A) MESSAGE TO BE DETERMINED

(B) MESSAGE TO BE DETERMINED

LEGEND

(5) SIGN IDENTIFICATION

TYPE B HIGH INTENSITY FLASHER

DES: CPK	CKD: MSM	DWG: CPK	CKD: MSM

TRAFFIC CONTROL PLAN
DETOUR PLAN SIGN DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

PLOTTED: 8/1/2022

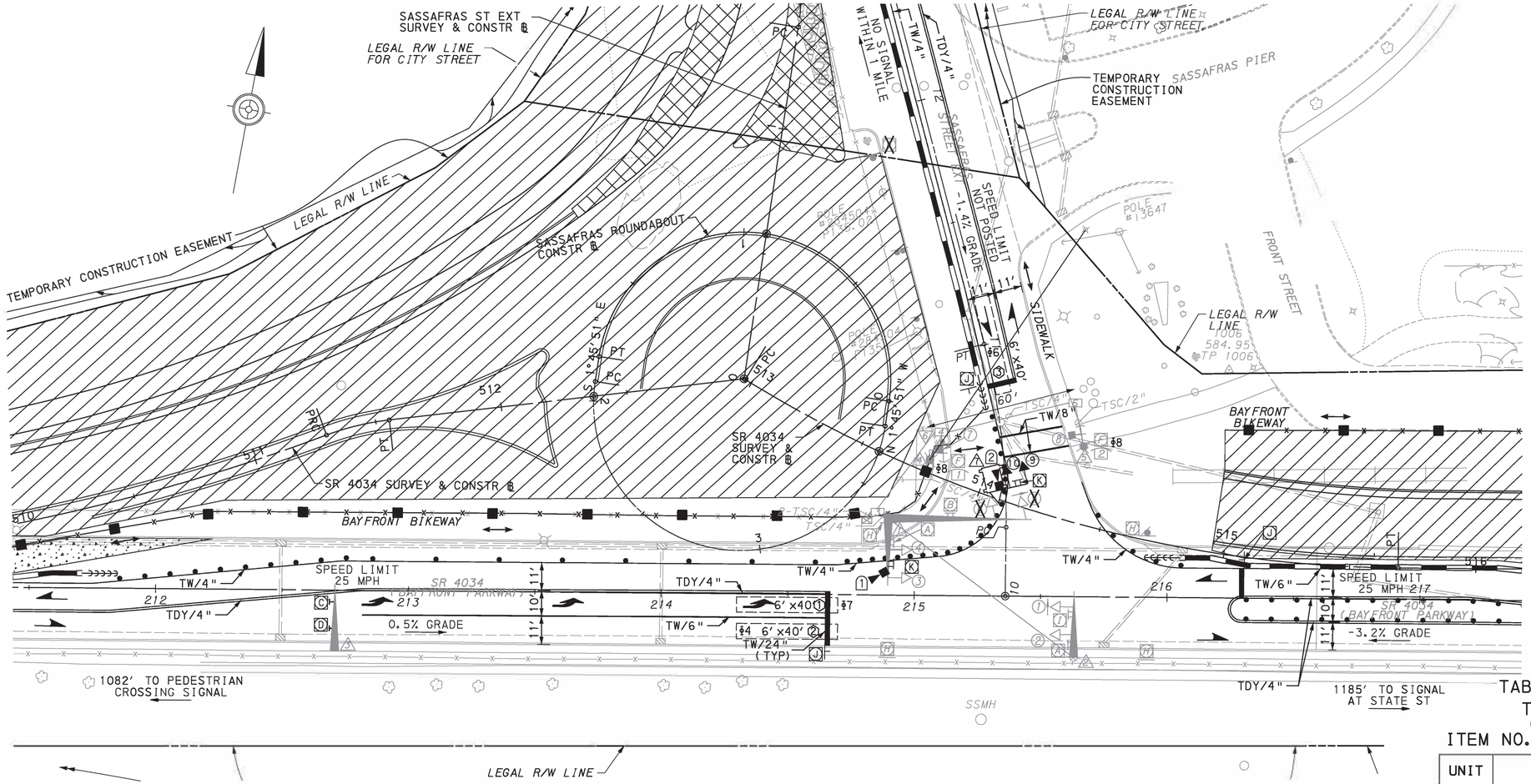
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCdp19.dgn

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mp\sheets\TCfsp_p101.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	255 OF 273
CITY OF ERIE				

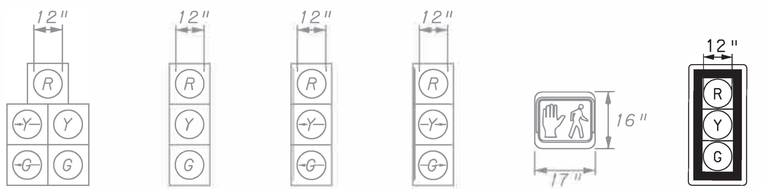
REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.:	SHEET: 2 OF 3
DATE ISSUED:	DATE REVISED:



SIGNAL NOTES

1. REMOVE CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
3. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
4. DISCONNECT AND REMOVE ALL EXISTING LOOPS.
5. INSTALL VIDEO DETECTORS (1) AND (2).
6. DISCONNECT AND REMOVE EXISTING SIGNAL HEADS (5) AND (6).
7. INSTALL SIGNAL HEADS (9) AND (10).
8. INTERCONNECT ALL PORTABLE TRAFFIC CONTROL SIGNAL TRAILERS TO EXISTING CONTROLLER VIA WIRELESS RADIO LINK OR OVERHEAD HARDWIRE TO ENSURE FAIL-SAFE OPERATION.



SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	D3-4	Sassafras Ext	EXISTING	2	0
B	D3-4	Bayfront Parkway	EXISTING	1	0
C	R3-5L	LEFT TURN	EXISTING	0	1
D	R3-5A	STRAIGHT-THROUGH	EXISTING	0	1
E	R3-8A	LANE USE CONTROL (L-R)	EXISTING	0	0
F	R10-3B	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON SIGNAL	EXISTING	2	0
H	R9-3	NO PEDESTRIAN CROSSING	EXISTING	4	0
J	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	1	0
J	R10-6AL	STOP HERE ON RED	24"X30"	2	1
K	R10-11	NO TURN ON RED	24"X30"	2	0

TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES) ITEM NO. 0958-0021, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	5.00
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	2
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	10.00
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	1
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	188
EACH	VIDEO DETECTOR	1

TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS) ITEM NO. 0958-0121, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	TRAILER-MOUNTED PORTABLE DEVICE INSTALLATION	1

TEMPORARY TRAFFIC SIGNAL STAGES 1B-1C

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- -TSC/2"- EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- -TSC/2"- TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND SASSAFRAS STREET EXTENSION
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR DATE

SCALE: 0 25 50

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCtsp_p102.dgn
D-9012 CADD (02-90) REVISED (10-04)
PLOTTED: 8/1/2022

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

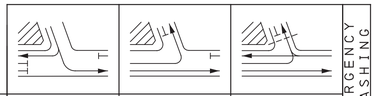
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	256 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 3 OF 3
DATE ISSUED: DATE REVISED:

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD



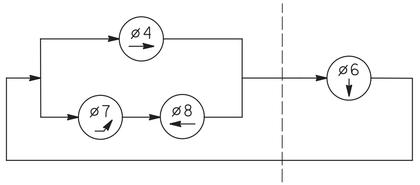
PHASE	PHASE 6				PHASE 4 + 7				PHASE 4 + 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3		1	2	3		1	2	3	4	
1	R	R	R		G	G	G		G	G	Y	R	R
2	R	R	R		G	G	G		G	G	Y	R	R
3, 4	R	R	R		R	R	R		G	G	Y	R	R
9, 10	G	Y	R		R	R	R		R	R	R	R	R
7, 8	DW	DW	DW		DW	DW	DW		W	FD	DW	DW	DW
FIXED		3	4			3	4				3.5	4	
MIN. INITIAL	8				8								
PASSAGE	3				3								
MAXIMUM I*	27				15				57				
MAXIMUM II*	27				15				27				
PEDESTRIAN**									7	14			
MEMORY	NL				L				MX				

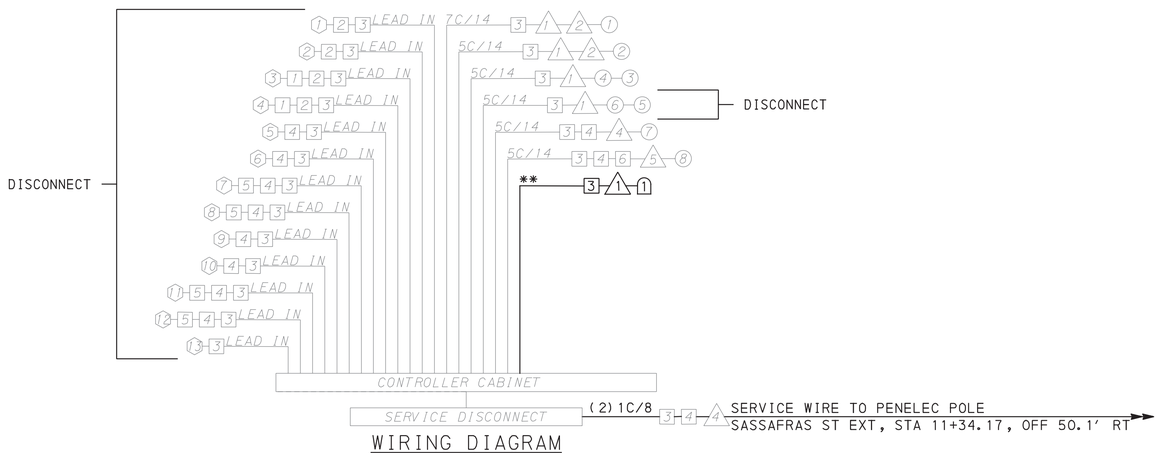
* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

PHASING DIAGRAM





WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

- EXISTING MAST ARM/POLE/PEDESTAL
- TEMPORARY POLE/PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- TEMPORARY PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING VIDEO DETECTOR
- TEMPORARY VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING JUNCTION BOX

TEMPORARY TRAFFIC SIGNAL STAGES 1B-1C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND SASSAFRAS STREET EXTENSION
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	257 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 2 OF 3

DATE ISSUED: DATE REVISED:

SIGNS

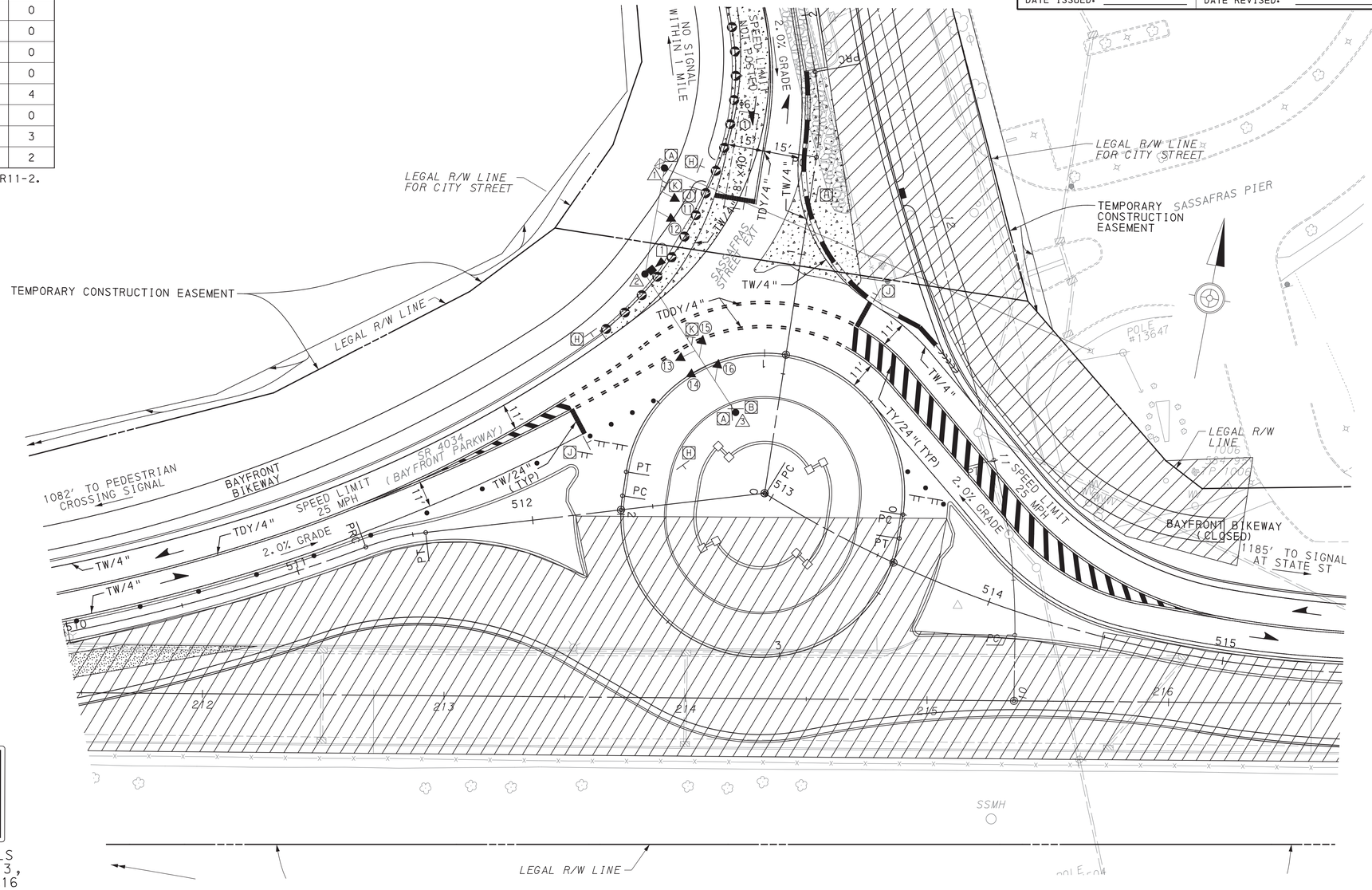
SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	D3-4	Sassafras Ext	EXISTING	0	2
B	D3-4	Bayfront Parkway	EXISTING	0	1
C	R3-5L	LEFT TURN	EXISTING	0	0
D	R3-5A	STRAIGHT-THROUGH	EXISTING	0	0
E	R3-8A	LANE USE CONTROL (L-R)	EXISTING	0	0
F	R10-3B	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON SIGNAL	EXISTING	0	0
H	R9-3	NO PEDESTRIAN CROSSING	EXISTING	0	4
I	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0
J	R10-6AL	STOP HERE ON RED	24"X30"	0	3
K	R10-11	NO TURN ON RED	24"X30"	0	2

NOTE: TYPE III BARRICADES SHOWN FOR INFORMATION ONLY AND MOUNTED WITH R11-2.

TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES) ITEM NO. 0958-0022, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	5
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	7
EACH	TEMPORARY SIGNAL SUPPORT POLE (WOOD OR STEEL)	3
EACH	NEMA TS-2; TYPE 1 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING	1
LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	40
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	340
EACH	ELECTRICAL SERVICE, TYPE B	1
EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6
EACH	RESET VIDEO DETECTOR	1



SIGNAL NOTES

1. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
2. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
3. RESET EXISTING VIDEO DETECTOR (1).
4. DISCONNECT AND REMOVE EXISTING SIGNAL HEADS (1), (2), (3), (4), (7), (8), (9) AND (10).
5. INSTALL SIGNAL HEADS (11), (12), (13), (14), (15) AND (16).

SIGNALS 11,12,13, 14,15,16

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- -TSC/2"- EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- -TSC/2"- TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND SASSAFRAS STREET EXTENSION
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR DATE

SCALE: 0 25 50

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08160\06808\mpt\sheets\TCTsp_p103.dgn
D-9012 CADD (02-90) REVISED (10-04)
PLOTTED: 8/1/2022

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	258 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 3 OF 3

DATE ISSUED: DATE REVISED:

MOVEMENT, PHASING, AND SEQUENCE

2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

PHASE	PHASE 6				PHASE 4 + 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	
11, 12	R	R	R		G	Y	R		R
13, 14	R	R	R		G	Y	R		R
15, 16	G	Y	R		R	R	R		R
FIXED	X	3	2.5		X	3	3.5		
MIN. INITIAL	8								
PASSAGE	3								
MAXIMUM I*	27				81				
MAXIMUM II*	27				51				
MEMORY	L				MX				

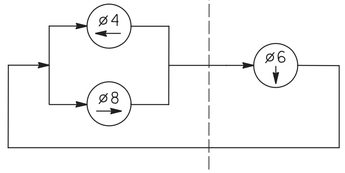
* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.

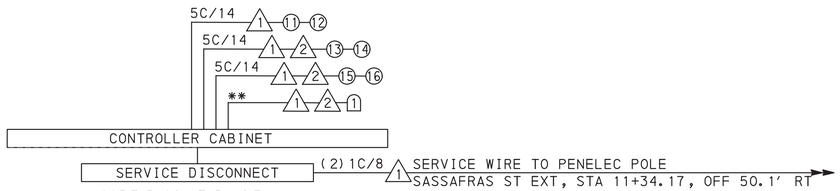
MEMORY:

MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

PHASING DIAGRAM





WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

- *EXISTING MAST ARM/POLE/PEDESTAL*
- TEMPORARY POLE/PEDESTAL
- *EXISTING PEDESTRIAN STUB POLE*
- *EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD*
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- *EXISTING PREEMPTION CONFIRMATION SIGNAL*
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- *EXISTING PREEMPTION RECEIVER*
- TEMPORARY PREEMPTION RECEIVER
- *EXISTING PEDESTRIAN PUSH BUTTON*
- *EXISTING VIDEO DETECTOR*
- TEMPORARY VIDEO DETECTOR
- *EXISTING LOOP DETECTOR*
- *EXISTING JUNCTION BOX*

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY: ERIE	
MUNICIPALITY: CITY OF ERIE	
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND SASSAFRAS STREET EXTENSION	
ACTIVITY: ROAD REHABILITATION	
PREPARED BY: MS CONSULTANTS	
CONTRACTOR	DATE

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p104.dgn

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTsp_p105.dgn

SIGNAL NOTES

1. REMOVE CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. DISCONNECT AND REMOVE PEDESTRIAN PUSH BUTTONS AND SIGNAL HEADS MARKED WITH AN "X".
3. DISCONNECT AND REMOVE PREEMPTION CONFIRMATION SIGNALS MARKED WITH AN "X".
4. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
5. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
6. DISCONNECT AND REMOVE ALL EXISTING LOOPS.
7. DISCONNECT AND REMOVE EXISTING VIDEO DETECTOR (2).
8. RESET EXISTING VIDEO DETECTORS (1) AND (3).
9. INSTALL PREEMPTION CONFIRMATION SIGNALS (E), (F) AND (G).
10. INSTALL PREEMPTION RECEIVERS (e), (f) AND (g).
11. DISCONNECT AND REMOVE EXISTING SIGNAL HEADS (1), (2), (3), (4), (5), (6), (8), (9), (12), (13), (14), (15), (16), (19) AND (20).
12. INSTALL SIGNAL HEADS (10), (11), (21), (22) AND (23).
13. RESET EXISTING SIGNAL HEAD (7).
14. INTERCONNECT ALL PORTABLE TRAFFIC CONTROL SIGNAL TRAILERS TO CONTROLLER VIA WIRELESS RADIO LINK OR OVERHEAD HARDWIRE TO ENSURE FAIL-SAFE OPERATION.

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	R10-3E (L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	EXISTING	1	0
B	R10-3E (R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	EXISTING	1	0
C	R3-5L	LEFT TURN	EXISTING	1	0
D	R10-11B	NO TURN ON RED SQUARE-SHAPED	EXISTING	0	2
E	R3-6SR	OPTIONAL RIGHT TURN	EXISTING	0	1
F	R10-10R	RIGHT TURN SIGNAL	EXISTING	0	0
G	R1-1	STOP	EXISTING	0	0
H	R3-5R	RIGHT TURN	EXISTING	0	1
I	R3-5A	STRAIGHT-THROUGH	EXISTING	0	0
K	R3-7R	RIGHT LANE MUST TURN RIGHT	EXISTING	0	0
L	D3-4	State	EXISTING	0	1
M	R3-7L	LEFT LANE MUST TURN LEFT	EXISTING	0	0
N	D3-4	Bayfront Parkway	EXISTING	0	1
O	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0
P	R3-8A	LANE USE CONTROL (L-S)	30"X30"	1	0
Q	R10-6AL	STOP HERE ON RED	24"X30"	2	0
R	R9-3	NO PEDESTRIAN CROSSING	18"X18"	2	0

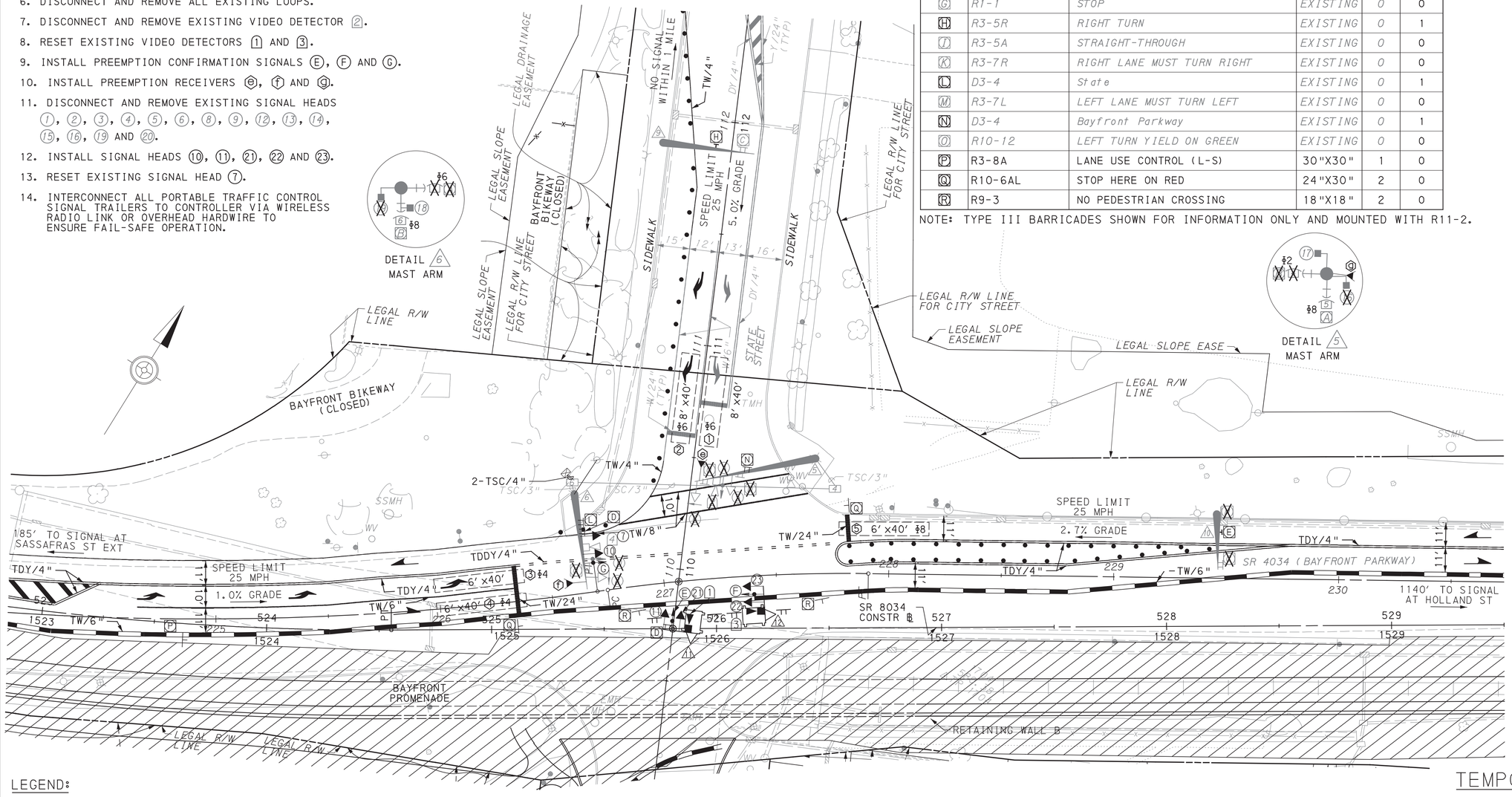
NOTE: TYPE III BARRICADES SHOWN FOR INFORMATION ONLY AND MOUNTED WITH R11-2.

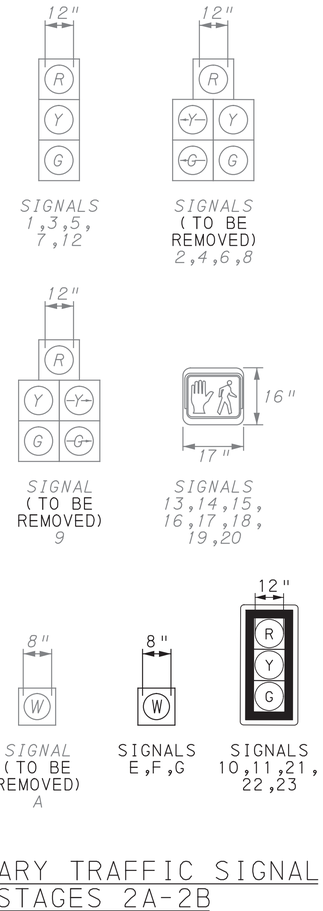
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	259 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 2 OF 3
DATE ISSUED: DATE REVISED:





LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" (TX/X") - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- TSC/2" - EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND STATE STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

SCALE: 0 25 50

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCtsp_pl06.dgn

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	260 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.:	SHEET: 3 OF 3
DATE ISSUED:	DATE REVISED:

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

	NORMAL OPERATION				EMERGENCY PREEMPTION												EMERGENCY FLASHING
PHASE	PHASE 6				PHASE 4 + 8				PHASE 4				PHASE 8				PHASE 6				
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
7, 10	R	R	R		G	G	Y	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	R	
11, 21	G	Y	R		R	R	R	R		R	R	R		R	R	R		G	Y	R	R	
17, 18	DW	DW	DW		W	FD	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW	
22, 23	R	R	R		G	G	Y	R		G	Y	R		R	R	R		R	R	R	R	
E	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	OFF	
F	OFF	OFF	OFF		OFF	OFF	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF	
G	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	OFF	
FIXED	X	3	3		X		3	3.5		X	3	3.5		X	3	3		X	3	3		
MIN. INITIAL	10				10					10				10				10				
PASSAGE	2				2					**				**				**				
MAXIMUM I*	23				85					60				60				60				
MAXIMUM II*	24				54																	
PEDESTRIAN***					7	28																
MEMORY	NL				MX																	

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
***UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

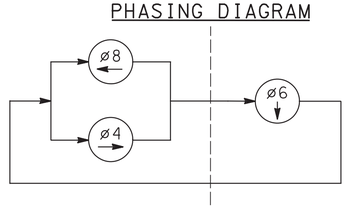
EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

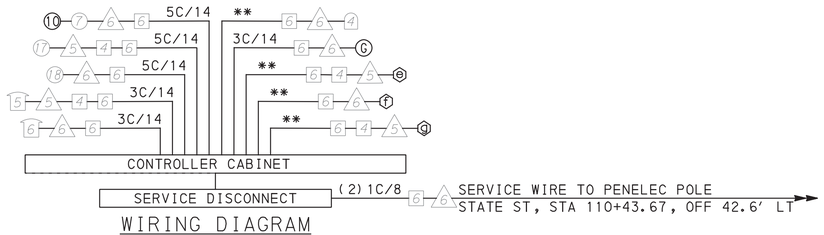
UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.
2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.
6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.
7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

PHASING DIAGRAM



WIRING DIAGRAM



5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

- *EXISTING MAST ARM/POLE/PEDESTAL*
- TEMPORARY POLE/PEDESTAL
- *EXISTING PEDESTRIAN STUB POLE*
- *EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD*
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- *EXISTING PREEMPTION CONFIRMATION SIGNAL*
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- *EXISTING PREEMPTION RECEIVER*
- TEMPORARY PREEMPTION RECEIVER
- *EXISTING PEDESTRIAN PUSH BUTTON*
- *EXISTING VIDEO DETECTOR*
- TEMPORARY VIDEO DETECTOR
- *EXISTING LOOP DETECTOR*
- *EXISTING JUNCTION BOX*

TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES) ITEM NO. 0958-0023, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	5
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	20.75
EACH	NEMA TS-2; TYPE 1 CONTROLLER ASSEMBLY, TYPE 1 MOUNTING	1
LF	4 INCH CONDUIT	10
LF	TRENCH AND BACKFILL, TYPE I	5
LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	84
LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	289
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	315
EACH	ELECTRICAL SERVICE, TYPE C	1
EACH	VEHICULAR SIGNAL HEAD, ONE 8" SECTION	3
EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1
EACH	RESET VIDEO DETECTOR	2
EACH	SONEM PREEMPTION SYSTEM	1

TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS) ITEM NO. 0958-0122, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	TRAILER-MOUNTED PORTABLE DEVICE INSTALLATION	1

TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET ITEM NO. 0958-0261, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	TRAILER-MOUNTED PORTABLE DEVICE RESET	1

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND STATE STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p107.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	261 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

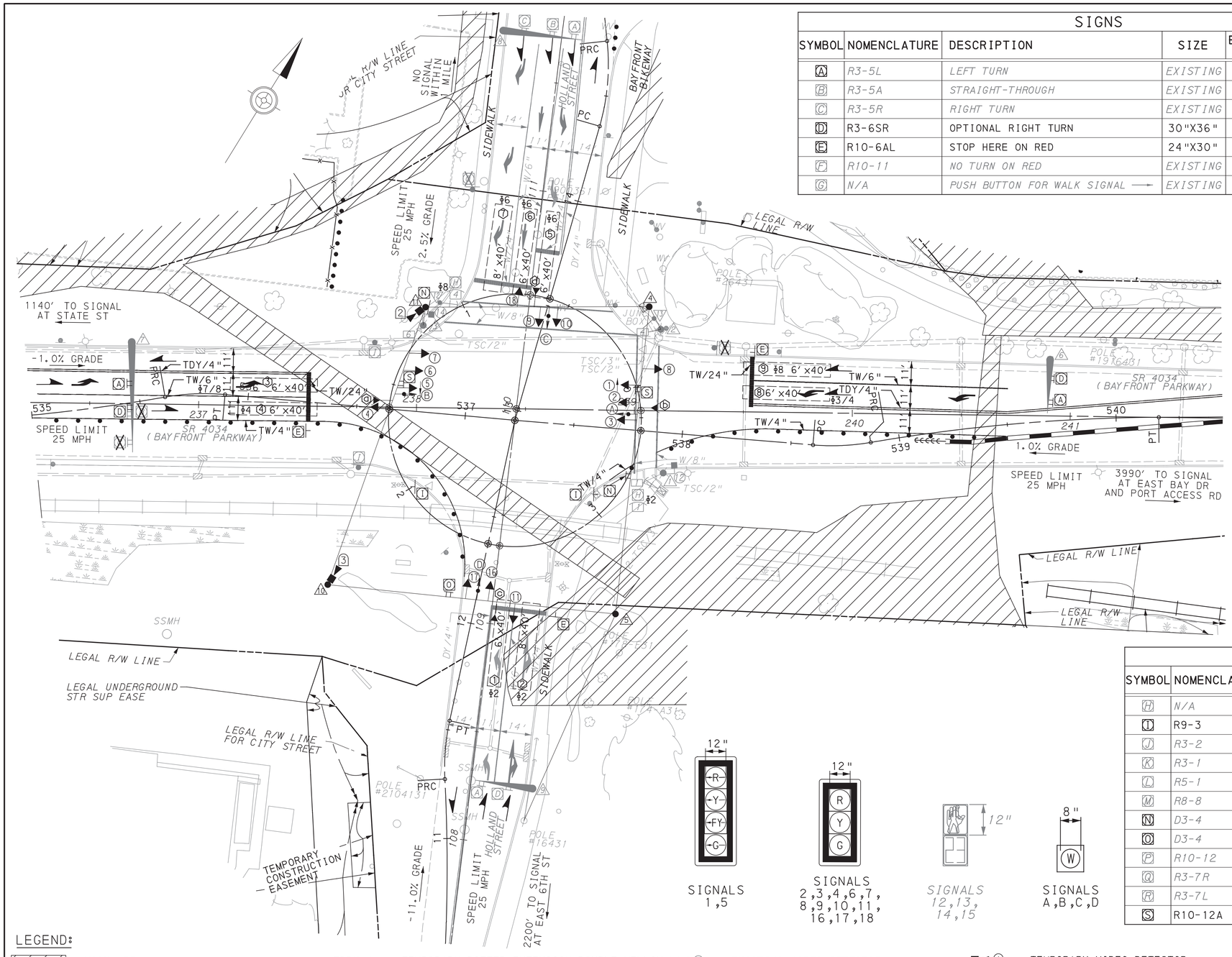
PERMIT NO.: SHEET: 2 OF 3
DATE ISSUED: DATE REVISED:

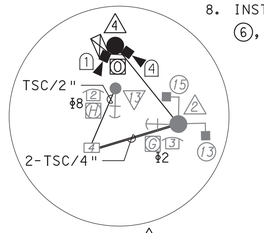
SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	EXISTING QTY	PROPOSED QTY	RESET QTY
A	R3-5L	LEFT TURN	EXISTING	2	0	2
B	R3-5A	STRAIGHT-THROUGH	EXISTING	1	0	0
C	R3-5R	RIGHT TURN	EXISTING	1	0	0
D	R3-6SR	OPTIONAL RIGHT TURN	30"X36"	1	1	1
E	R10-6AL	STOP HERE ON RED	24"X30"	0	3	0
F	R10-11	NO TURN ON RED	EXISTING	0	0	0
G	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	1	0	0

SIGNAL NOTES

1. REMOVE CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
3. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
4. DISCONNECT AND REMOVE ALL EXISTING LOOPS.
5. INSTALL VIDEO DETECTORS (1), (2), (3) AND (4).
6. INSTALL PREEMPTION CONFIRMATION SIGNALS (A), (B), (C) AND (D).
7. INSTALL PREEMPTION RECEIVERS (b), (c) AND (d).
8. INSTALL SIGNAL HEADS (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (16), (17) AND (18).





DETAIL (4)
TEMPORARY POLE

SIGNS (CONT.)

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	EXISTING QTY	PROPOSED QTY	RESET QTY
H	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	3	0	0
I	R9-3	NO PEDESTRIAN CROSSING	18"X18"	2	1	1
J	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0	0
K	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0	0
L	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0	0
M	R8-8	DO NOT STOP ON TRACKS	EXISTING	0	0	0
N	D3-4	HOLLAND ST	EXISTING	0	0	2
O	D3-4	BAYFRONT PARKWAY	EXISTING	0	0	2
P	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0	0
Q	R3-7R	RIGHT LANE MUST TURN RIGHT	EXISTING	0	0	0
R	R3-7L	LEFT LANE MUST TURN LEFT	EXISTING	0	0	0
S	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	0	2	0

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" (TX/X") - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- -TSC/2"- EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- -TSC/2"- TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

SCALE: 0 25 50

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

	NORMAL OPERATION																				EMERGENCY PREEMPTION																EMERGENCY FLASHING
PHASE	PHASE 2 + 6				PHASE 3 + 7				PHASE 4 + 7				PHASE 3 + 8					PHASE 4 + 8					PHASE 4 + 7				PHASE 3 + 8				PHASE 2				PHASE 6				
INTERVAL / SIGNALS	1	2	3	4	1	2	3		1	2	3		1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	-R-	-R-	-R-	-R-	-G-	-Y-①	-R-①		-G-	-Y-③	-R-③		-R-	-R-	-R-	-R-	-R-	-R-	-FY-	-FY-	-Y-	-R-	-G-	-Y-	-R-		-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	R
2, 3, 4	R	R	R	R	R	R	R		G	Y	R		R	R	R	R	R	G	G	G	Y	R	G	Y	R		R	R	R		R	R	R		R	R	R	R	
5	-R-	-R-	-R-	-R-	-G-	-Y-②	-R-②		-R-	-R-	-R-		-G-	-G-	-G-	-Y-④	-R-④	-R-	-FY-	-FY-	-Y-	-R-	-R-	-R-	-R-		-R-	-Y-	-R-		-R-	-R-	-R-		-R-	-R-	-R-	-R-	
6, 7, 8	R	R	R	R	R	R	R		R	R	R		G	G	G	Y④	R④	G	G	G	R	R	R	R	R		G	Y	R		R	R	R		R	R	R	R	
9, 10, 11	G	G	Y	R	R	R	R		R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R		G	Y	R		R	R	R		R	R	R	R	
12, 13	W	FD	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW	
14, 15	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW		W	W	FD	DW	DW	W	W	FD	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW	
16, 17, 18	G	G	Y	R	R	R	R		R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R		R	R	R		R	R	R		G	Y	R	R	
A	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF	
B	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF	
C	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	OFF	
D	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	OFF	
FIXED	X		4	4	X	3	4		X	3	4		2	X		3	4.5	2	X		3	4.5		3	4			X	3	4.5		4	4			X	3	3	
MIN. INITIAL	10				7				7				7					10					10				10				10				10			
PASSAGE	2.5				6				6				6					6					**				**				**				**			
MAXIMUM I*	37				7				7				7					66					60				60								60			
MAXIMUM II*	37				7				7				7					36																				
PEDESTRIAN***	7	17											⑦					7	22																			
MEMORY	NL				L				L				L					MX																				

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
***UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

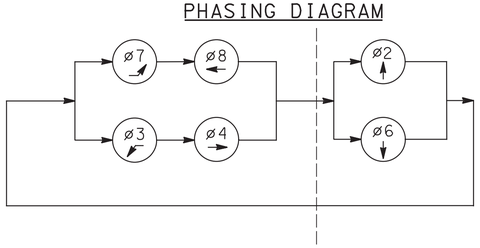
MEMORY:

MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

① - -G- IF FOLLOWED BY 4 + 7
② - -G- IF FOLLOWED BY 3 + 8
③ - -FY- IF FOLLOWED BY 4 + 8
④ - G IF FOLLOWED BY 4 + 8
⑤ - -FY- IF PRECEDED BY 4 + 7
⑥ - -FY- IF PRECEDED BY 3 + 8
⑦ - TIMING WILL BE SHOWN AS IN 4 + 8. INTERVAL 1 AND 2 MAY TIME OUT IN PHASE 4 + 8 OR BE COMPLETED IN THIS PHASE.

PHASING DIAGRAM

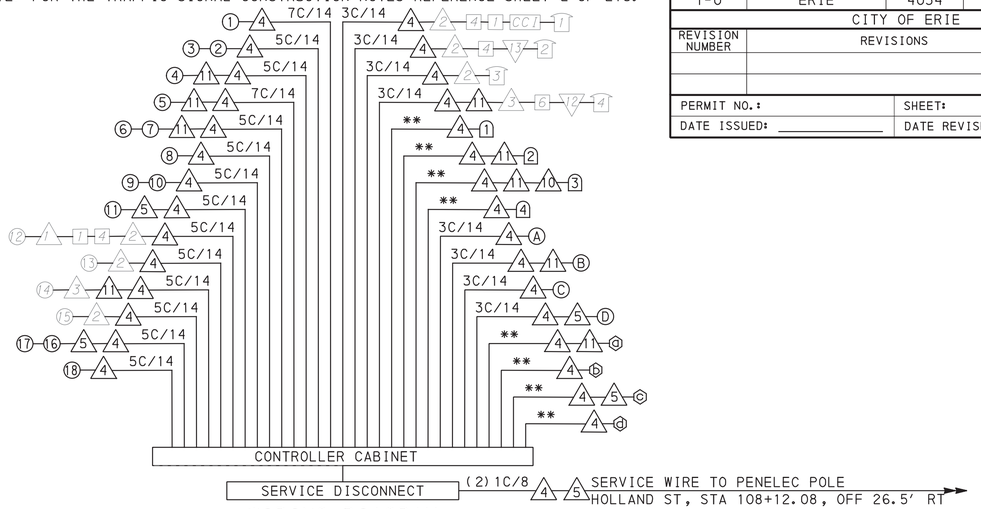


TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNALS
ON FIXED SUPPORTS (4 OR MORE APPROACHES)
ITEM NO. 0958-0041, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	22.50
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	7
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	7.25
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	1
EACH	TEMPORARY SIGNAL SUPPORT POLE (WOOD OR STEEL)	4
EACH	NEMA TS-2; TYPE 1 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING	1
LF	2 INCH CONDUIT	8
LF	4 INCH CONDUIT	16
LF	TRENCH AND BACKFILL, TYPE II	16
LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	334
LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	1100
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	1636
LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	245
EACH	ELECTRICAL SERVICE, TYPE B	1
EACH	VEHICULAR SIGNAL HEAD, ONE 8" SECTION	4
EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	12
EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	2
EACH	VIDEO DETECTION SYSTEM	1
EACH	SONEM PREEMPTION SYSTEM	1

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.



WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

△ - *EXISTING MAST ARM/POLE/PEDESTAL*
△ - TEMPORARY POLE/PEDESTAL
▽ - *EXISTING PEDESTRIAN STUB POLE*
Ⓘ - *EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD*
① - TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
Ⓐ - *EXISTING PREEMPTION CONFIRMATION SIGNAL*
Ⓐ - TEMPORARY PREEMPTION CONFIRMATION SIGNAL
ⓓ - *EXISTING PREEMPTION RECEIVER*
⬡ - TEMPORARY PREEMPTION RECEIVER
[T] - *EXISTING PEDESTRIAN PUSH BUTTON*
Ⓘ - *EXISTING VIDEO DETECTOR*
① - TEMPORARY VIDEO DETECTOR
Ⓘ - *EXISTING LOOP DETECTOR*
[ ] - *EXISTING JUNCTION BOX*

EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.
2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.
6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.
7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

TEMPORARY TRAFFIC SIGNAL STAGES 2A-2B

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	262 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 3 OF 3
DATE ISSUED: DATE REVISED:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p108.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	263 OF 273
	CITY OF ERIE			

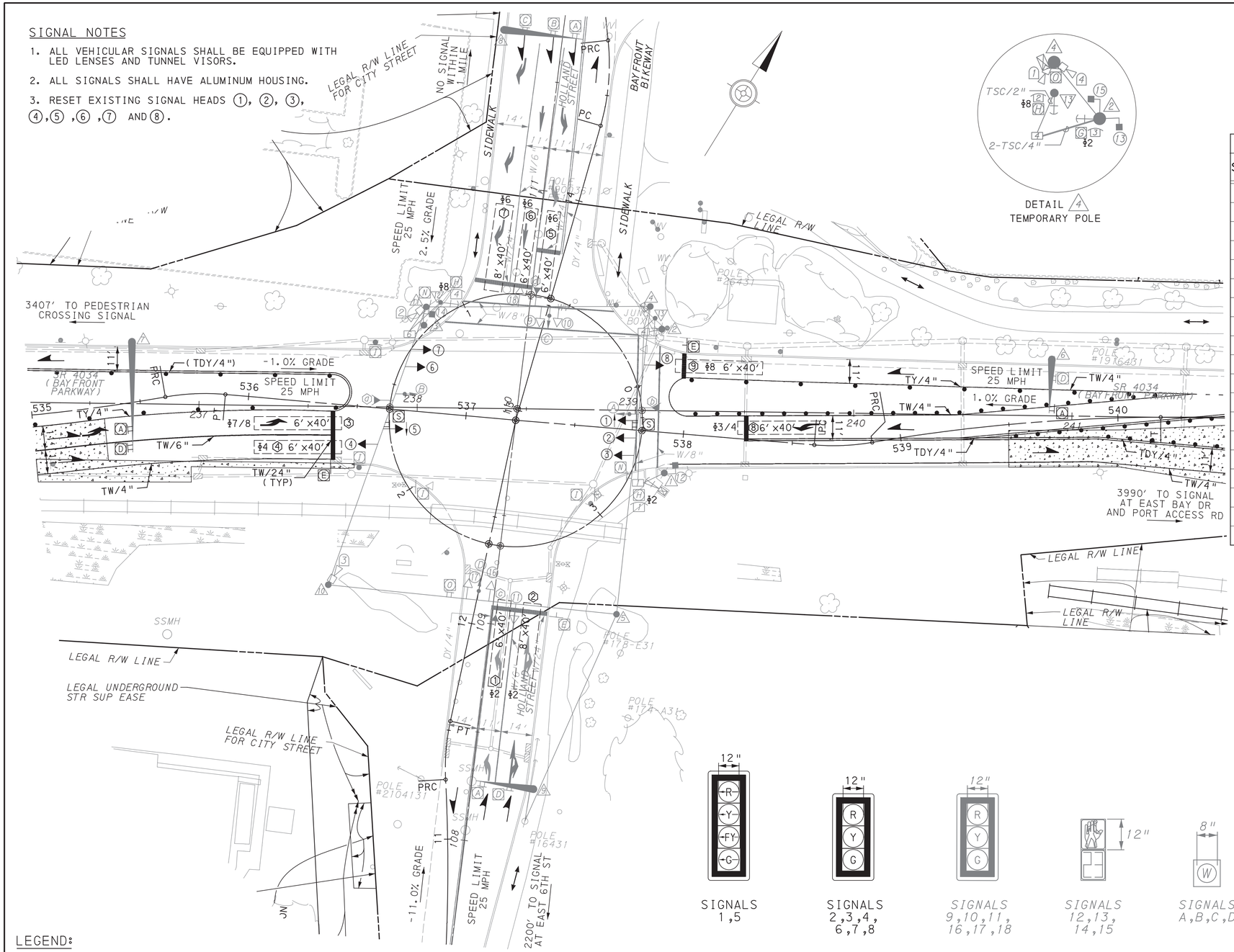
REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 2 OF 3

DATE ISSUED: DATE REVISED:

SIGNAL NOTES

1. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
2. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
3. RESET EXISTING SIGNAL HEADS ①, ②, ③, ④, ⑤, ⑥, ⑦ AND ⑧.



DETAIL 4
TEMPORARY POLE

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	R3-5L	LEFT TURN	EXISTING	2	2
B	R3-5A	STRAIGHT-THROUGH	EXISTING	1	0
C	R3-5R	RIGHT TURN	EXISTING	1	0
D	R3-6SR	OPTIONAL RIGHT TURN	EXISTING	2	1
E	R10-6AL	STOP HERE ON RED	24"X30"	1	2
F	R10-11	NO TURN ON RED	EXISTING	0	0
G	N/A	PUSH BUTTON FOR WALK SIGNAL →	EXISTING	1	0
H	N/A	PUSH BUTTON FOR WALK SIGNAL ←	EXISTING	3	0
I	R9-3	NO PEDESTRIAN CROSSING	18"X18"	4	0
J	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
K	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
L	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
M	R8-8	DO NOT STOP ON TRACKS	EXISTING	0	0
N	D3-4	HOLLAND ST	EXISTING	2	0
O	D3-4	BAYFRONT PARKWAY	EXISTING	2	0
P	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0
Q	R3-7R	RIGHT LANE MUST TURN RIGHT	EXISTING	0	0
R	R3-7L	LEFT LANE MUST TURN LEFT	EXISTING	0	0
S	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	0	2

TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)
ITEM NO. 0958-0221, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	5
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	2
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	549
LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	281
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6
EACH	RESET VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	2

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - *EXISTING WHITE PAVEMENT MARKING/WIDTH*
- DY/4" - *EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH*
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- *EXISTING MAST ARM*
- *EXISTING POLE/SIGNAL CABLE*
- *EXISTING PEDESTAL*
- *EXISTING PEDESTRIAN STUB POLE*
- *EXISTING VEHICULAR SIGNAL HEAD*
- *EXISTING PEDESTRIAN SIGNAL HEAD*
- *EXISTING PREEMPTION CONFIRMATION SIGNAL*
- *EXISTING PREEMPTION RECEIVER*
- *EXISTING PEDESTRIAN PUSH BUTTON/SIGN*
- *EXISTING VIDEO DETECTOR*
- *EXISTING LOOP DETECTOR*
- *EXISTING CONTROLLER ASSEMBLY*
- *EXISTING JUNCTION BOX*
- *EXISTING POST MOUNTED SIGN*
- *EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE*
- *EXISTING OVERHEAD SIGN*
- *EXISTING TRAFFIC SIGNAL CONDUIT/SIZE*
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TSC/2" - TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGE 3A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

LOCATION: SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET

ACTIVITY: ROAD REHABILITATION

PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

SCALE: 0 25 50

PLOTTED: 8/1/2022

D-9012 CADD (02-90) REVISED (10-04)

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08160\06808\mpr\sheets\TCTsp_p109.dgn

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	264 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY
PERMIT NO.:		SHEET: 3 OF 3		
DATE ISSUED:		DATE REVISED:		

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

	NORMAL OPERATION																				EMERGENCY PREEMPTION																EMERGENCY FLASHING
PHASE	PHASE 2 + 6				PHASE 3 + 7				PHASE 4 + 7				PHASE 3 + 8					PHASE 4 + 8					PHASE 4 + 7				PHASE 3 + 8				PHASE 2				PHASE 6				
INTERVAL / SIGNALS	1	2	3	4	1	2	3		1	2	3		1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	-R-	-R-	-R-	-R-	-G-	-Y-①	-R-①		-G-	-Y-③	-R-③		-R-	-FY-	-FY-	-Y-	-R-	-R-⑤	-FY-	-FY-	-Y-	-R-		-G-	-Y-	-R-		-R-	-R-	-R-		-R-	-R-	-R-		-R-	-R-	-R-		R
2, 3, 4	R	R	R	R	R	R	R		G	Y④	R④		R	R	R	R	R	G	G	G	Y	R		G	Y	R		R	R	R		R	R	R		R	R	R		R
5	-R-	-R-	-R-	-R-	-G-	-Y-②	-R-②		-FY-	-Y-	-R-		-G-	-G-	-G-	-Y④	-R-⑤	-R-⑤	-FY-	-FY-	-Y-	-R-		-R-	-R-	-R-		-G-	-Y-	-R-		-R-	-R-	-R-		-R-	-R-	-R-		R
6, 7, 8	R	R	R	R	R	R	R		R	R	R		G	G	G	Y④	R⑤	G	G	G	R	R		R	R	R		G	Y	R		R	R	R		R	R	R		R
9, 10, 11	G	G	Y	R	R	R	R		R	R	R		R	R	R	R	R	R	R	R	R	R		R	R	R		R	R	R		G	Y	R		R	R	R		R
12, 13	W	FD	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW
14, 15	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW		W	W	FD	DW	DW	W	W	FD	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW
16, 17, 18	G	G	Y	R	R	R	R		R	R	R		R	R	R	R	R	R	R	R	R	R		R	R	R		R	R	R		R	R	R		G	Y	R		R
A	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		OFF
B	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		OFF
C	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		OFF
D	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		OFF
FIXED			4	4		3	4			3	4		2			3	4	2			3	4		3	4			3	4			4	4			3	3		
MIN. INITIAL	10				7				7				7					10					10				10				10				10				
PASSAGE	2.5				6				6				6					6					**				**				**				**				
MAXIMUM I*	37				7				7				7					66					60				60				60				60				
MAXIMUM II*	37				7				7				7					36																					
PEDESTRIAN***	7	17											⑦					7	22																				
MEMORY	NL				L				L				L					MX																					

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
***UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

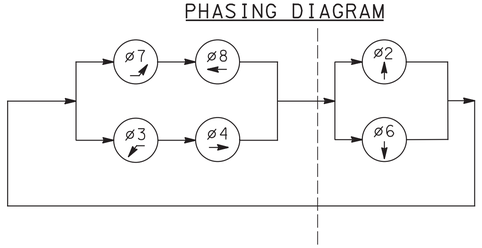
MEMORY:

MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

① - -G- IF FOLLOWED BY 4 + 7
② - -G- IF FOLLOWED BY 3 + 8
③ - -FY- IF FOLLOWED BY 4 + 8
④ - G IF FOLLOWED BY 4 + 8
⑤ - -FY- IF PRECEDED BY 4 + 7
⑥ - -FY- IF PRECEDED BY 3 + 8
⑦ - TIMING WILL BE SHOWN AS IN 4 + 8. INTERVAL 1 AND 2 MAY TIME OUT IN PHASE 4 + 8 OR BE COMPLETED IN THIS PHASE.

PHASING DIAGRAM



EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.

2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

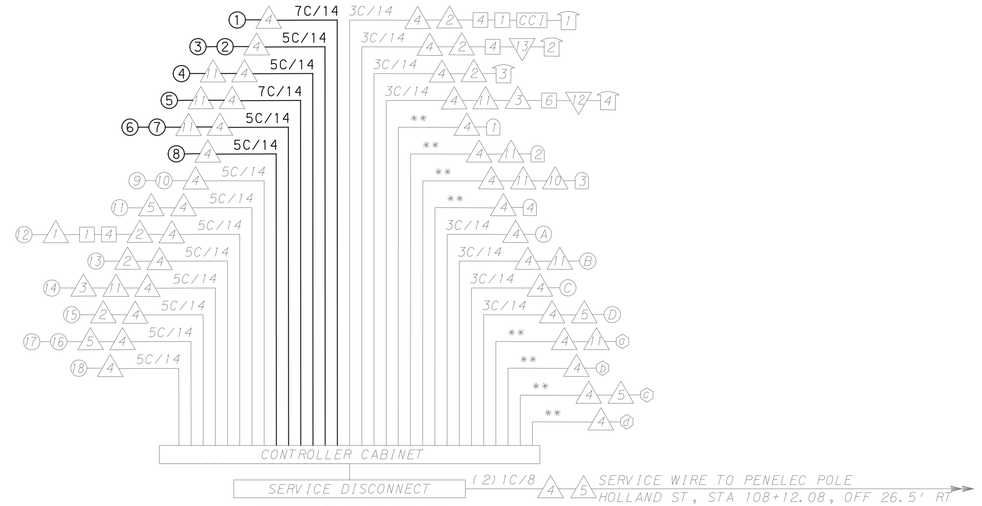
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.

4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.

5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.

6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.



WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

△ - EXISTING MAST ARM/POLE/PEDESTAL
⚠ - TEMPORARY POLE/PEDESTAL
▽ - EXISTING PEDESTRIAN STUB POLE
Ⓘ - EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
① - TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
Ⓐ - EXISTING PREEMPTION CONFIRMATION SIGNAL
Ⓐ - TEMPORARY PREEMPTION CONFIRMATION SIGNAL
Ⓒ - EXISTING PREEMPTION RECEIVER
Ⓒ - TEMPORARY PREEMPTION RECEIVER
Ⓟ - EXISTING PEDESTRIAN PUSH BUTTON
Ⓥ - EXISTING VIDEO DETECTOR
① - TEMPORARY VIDEO DETECTOR
Ⓛ - EXISTING LOOP DETECTOR
Ⓙ - EXISTING JUNCTION BOX

TEMPORARY TRAFFIC SIGNAL STAGE 3A

REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999 COMMONWEALTH OF PENNSYLVANIA

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p110.dgn

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p111.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	265 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY
PERMIT NO.:		SHEET: 2 OF 2		
DATE ISSUED:		DATE REVISED:		

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

MOVEMENT, PHASING, AND SEQUENCE

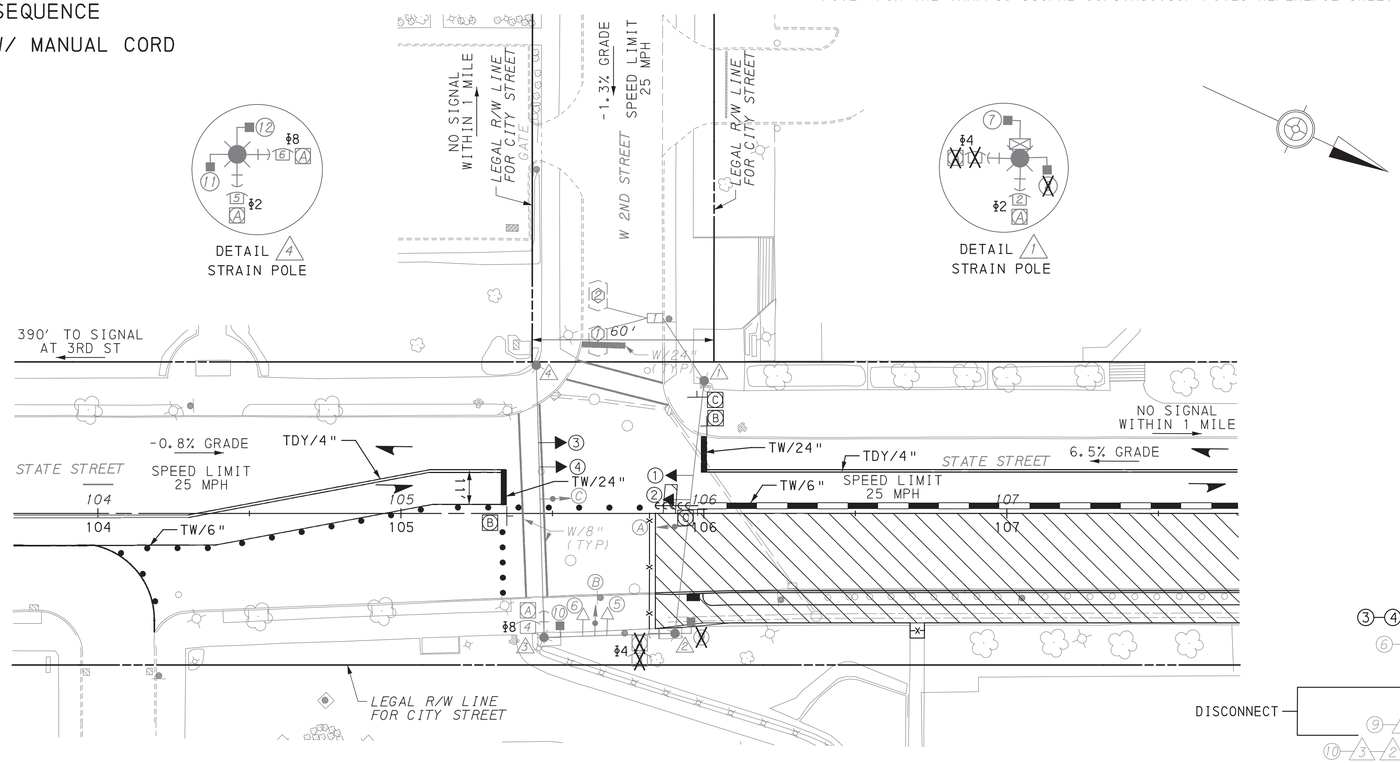
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

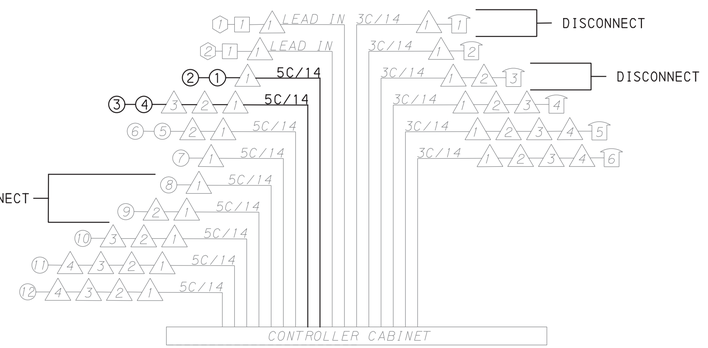
PHASE	PHASE 2 + 6				PHASE 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	
1, 2	G	G	Y	R	R	R	R	R	R
3, 4	G	G	Y	R	R	R	R	R	R
5, 6	R	R	R	R	G	G	Y	R	R
7, 12	W	FD	DW	DW	DW	DW	DW	DW	DW
10, 11	DW	DW	DW	DW	W	FD	DW	DW	DW
FIXED	X	X	3	2	X	X	3	2	
MIN. INITIAL					6				
PASSAGE					4				
MAXIMUM I*	85				25				
MAXIMUM II*	55				25				
PEDESTRIAN**	7	10			7	18			
MEMORY	MN				L				

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES





WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

- EXISTING MAST ARM/POLE/PEDESTAL
- TEMPORARY POLE/PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- TEMPORARY PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING VIDEO DETECTOR
- TEMPORARY VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING JUNCTION BOX

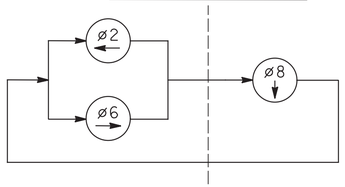
SIGNAL NOTES

1. COVER CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. DISCONNECT AND COVER PEDESTRIAN PUSH BUTTONS AND SIGNAL HEADS MARKED WITH AN "X".
3. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
4. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
5. DISCONNECT EXISTING SIGNAL HEADS (7), (8), (9) AND (12).
6. RESET EXISTING SIGNAL HEADS (1), (2), (3) AND (4).

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY
A	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	4
B	R10-6AL	STOP HERE ON RED	24"X30"	2
C	R9-3	NO PEDESTRIAN CROSSING	18"X18"	2

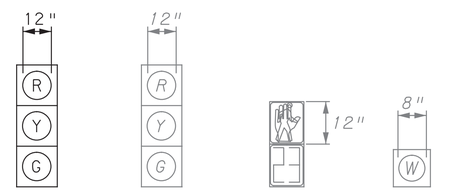
PHASING DIAGRAM



TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (3 APPROACHES) ITEM NO. 0958-0341, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	14.50
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	323
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4



LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- -TSC/2"- EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- -TSC/2"- TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER
- TYPE III BARRICADE

TEMPORARY TRAFFIC SIGNAL STAGE 3A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	STATE STREET AND WEST 2ND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

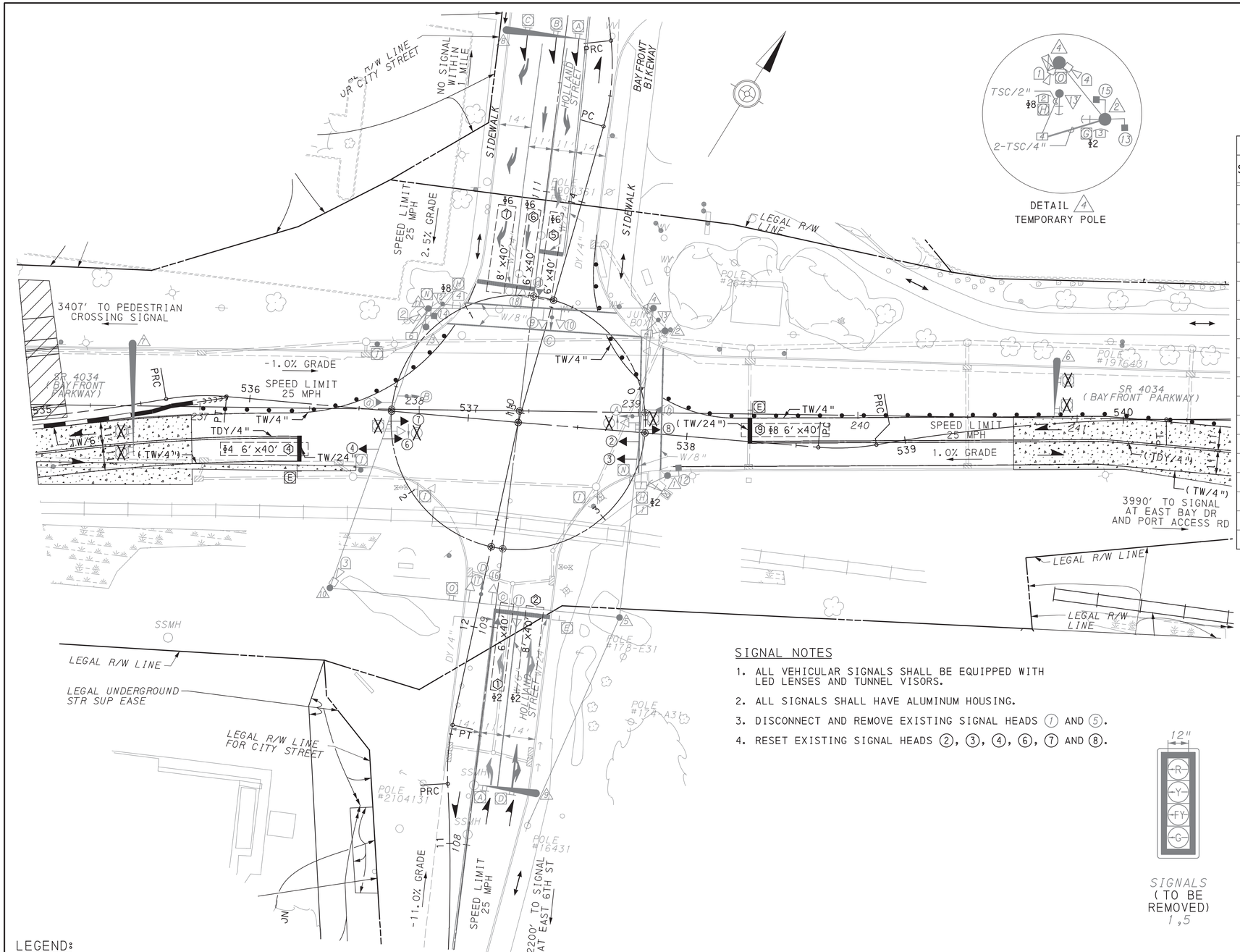
CONTRACTOR DATE

SCALE: 0 25 50

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	266 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.:	SHEET: 2 OF 3
DATE ISSUED:	DATE REVISED:



DETAIL 4
TEMPORARY POLE

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	R3-5L	LEFT TURN	EXISTING	2	0
B	R3-5A	STRAIGHT-THROUGH	EXISTING	1	0
C	R3-5R	RIGHT TURN	EXISTING	1	0
D	R3-6SR	OPTIONAL RIGHT TURN	EXISTING	1	0
E	R10-6AL	STOP HERE ON RED	24"X30"	1	2
F	R10-11	NO TURN ON RED	EXISTING	0	0
G	N/A	PUSH BUTTON FOR WALK SIGNAL →	EXISTING	1	0
H	N/A	PUSH BUTTON FOR WALK SIGNAL ←	EXISTING	3	0
I	R9-3	NO PEDESTRIAN CROSSING	18"X18"	4	0
J	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
K	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
L	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
M	R8-8	DO NOT STOP ON TRACKS	EXISTING	0	0
N	D3-4	HOLLAND ST	EXISTING	2	0
O	D3-4	BAYFRONT PARKWAY	EXISTING	2	0
P	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0
Q	R3-7R	RIGHT LANE MUST TURN RIGHT	EXISTING	0	0
R	R3-7L	LEFT LANE MUST TURN LEFT	EXISTING	0	0
S	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	0	0

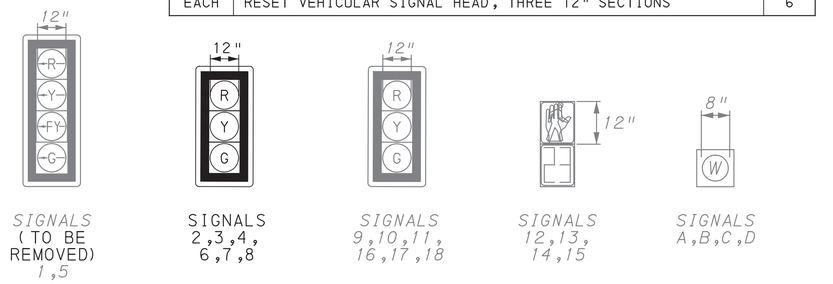
TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (4 OR MORE APPROACHES)
ITEM NO. 0958-0222, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	2
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	614
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6

SIGNAL NOTES

1. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
2. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
3. DISCONNECT AND REMOVE EXISTING SIGNAL HEADS (1) AND (5).
4. RESET EXISTING SIGNAL HEADS (2), (3), (4), (6), (7) AND (8).



SIGNALS (TO BE REMOVED) 1,5 | SIGNALS 2,3,4, 6,7,8 | *SIGNALS 9,10,11, 16,17,18* | *SIGNALS 12,13, 14,15* | *SIGNALS A,B,C,D*

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - *EXISTING WHITE PAVEMENT MARKING/WIDTH*
- DY/4" - *EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH*
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- *EXISTING MAST ARM*
- *EXISTING POLE/SIGNAL CABLE*
- *EXISTING PEDESTAL*
- *EXISTING PEDESTRIAN STUB POLE*
- *EXISTING VEHICULAR SIGNAL HEAD*
- *EXISTING PEDESTRIAN SIGNAL HEAD*
- *EXISTING PREEMPTION CONFIRMATION SIGNAL*
- *EXISTING PREEMPTION RECEIVER*
- *EXISTING PEDESTRIAN PUSH BUTTON/SIGN*
- *EXISTING VIDEO DETECTOR*
- *EXISTING LOOP DETECTOR*
- *EXISTING CONTROLLER ASSEMBLY*
- *EXISTING JUNCTION BOX*
- *EXISTING POST MOUNTED SIGN*
- *EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE*
- *EXISTING OVERHEAD SIGN*
- *EXISTING TRAFFIC SIGNAL CONDUIT/SIZE*
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TSC/2" - TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGE 3B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

SCALE: 0 25 50

PLOTTED: 8/1/2022

D-9012 CADD (02-90) REVISED (10-04)

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp-p112.dgn

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_p113.dgn

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

	NORMAL OPERATION				EMERGENCY PREEMPTION																
PHASE	PHASE 2 + 6				PHASE 4 + 8				PHASE 4				PHASE 8				PHASE 2				PHASE 6				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
2, 3, 4	R	R	R	R	G	G	Y	R	SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	R
6, 7, 8	R	R	R	R	G	G	R	R		R	R	R		G	Y	R		R	R	R		R	R	R	R
9, 10, 11	G	G	Y	R	R	R	R	R		R	R	R		R	R	R		G	Y	R		R	R	R	R
12, 13	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW
14, 15	W	FD	DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW
16, 17, 18	G	G	Y	R	R	R	R	R		R	R	R		R	R	R		R	R	R		G	Y	R	R
A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF
B	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF
C	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	OFF
D	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	OFF
FIXED			4	3.5			3	4.5		3	4			3	4.5			4	3.5			3	3		
MIN. INITIAL	10				10				10				10				10				10				
PASSAGE	2.5				6				**				**				**				**				
MAXIMUM I*	37				68				60				60				60				60				
MAXIMUM II*	37				38																				
PEDESTRIAN***	7	17			7	20																			
MEMORY	NL				MN																				

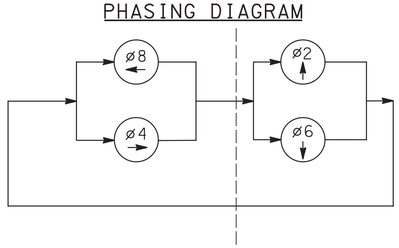
* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
***UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:

MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

PHASING DIAGRAM



EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.

2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.

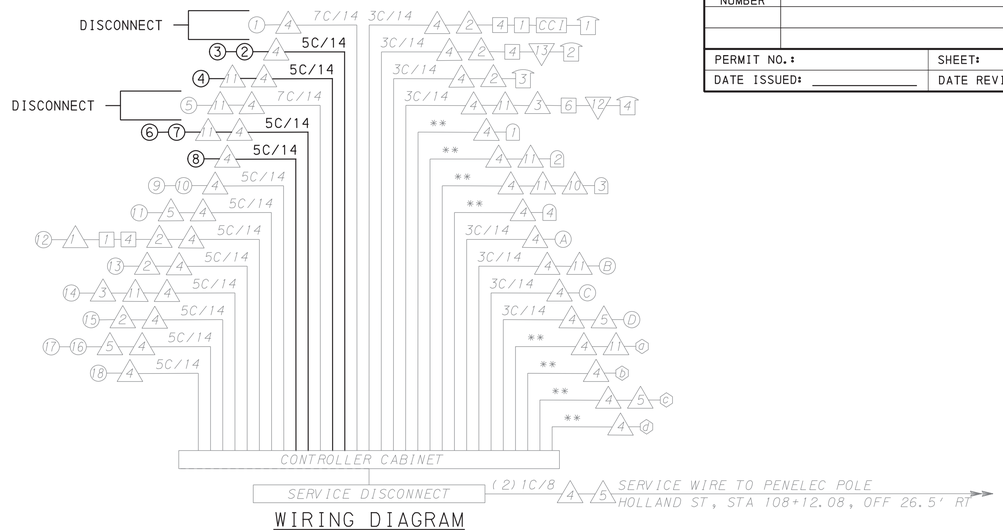
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.

5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.

6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.



WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

△ - EXISTING MAST ARM/POLE/PEDESTAL
△ - TEMPORARY POLE/PEDESTAL
▽ - EXISTING PEDESTRIAN STUB POLE
Ⓘ - EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
① - TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
Ⓐ - EXISTING PREEMPTION CONFIRMATION SIGNAL
Ⓐ - TEMPORARY PREEMPTION CONFIRMATION SIGNAL
ⓓ - EXISTING PREEMPTION RECEIVER
ⓓ - TEMPORARY PREEMPTION RECEIVER
Ⓘ - EXISTING PEDESTRIAN PUSH BUTTON
Ⓘ - EXISTING VIDEO DETECTOR
① - TEMPORARY VIDEO DETECTOR
Ⓘ - EXISTING LOOP DETECTOR
Ⓘ - EXISTING JUNCTION BOX

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	267 OF 273

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 3 OF 3
DATE ISSUED: DATE REVISED:

TEMPORARY TRAFFIC SIGNAL STAGE 3B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY)
AND HOLLAND STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

CONTRACTOR DATE

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpr\sheets\TCtsp_p114.dgn

MOVEMENT, PHASING, AND SEQUENCE

2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

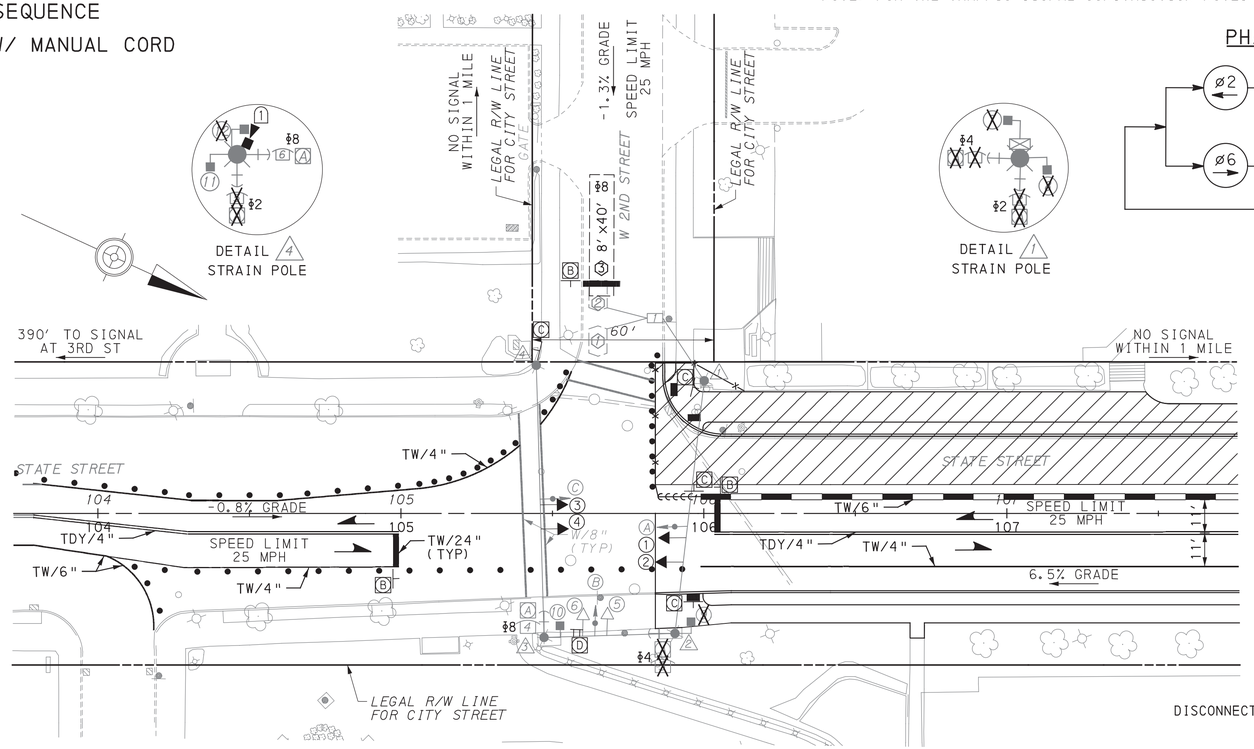
PHASE	PHASE 2 + 6				PHASE 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3		1	2	3	4	
1, 2	G	Y	R		R	R	R	R	R
3, 4	G	Y	R		R	R	R	R	R
5, 6	R	R	R		G	G	Y	R	R
10, 11	DW	DW	DW		W	FD	DW	DW	DW
FIXED	X	3	3		X		3	3	
MIN. INITIAL					6				
PASSAGE					4				
MAXIMUM I*	84				24				
MAXIMUM II*	54				24				
PEDESTRIAN**					7	13			
MEMORY	MN				L				

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

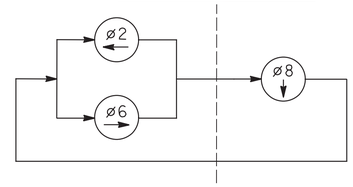
MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.



PHASING DIAGRAM



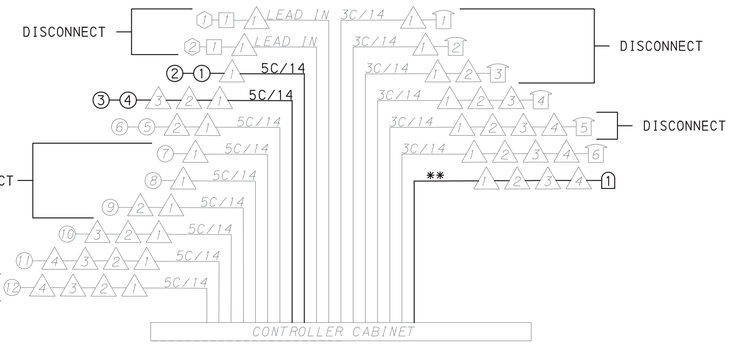
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	268 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.:	SHEET: 2 OF 2
DATE ISSUED:	DATE REVISED:

SIGNAL NOTES

1. COVER CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. DISCONNECT AND COVER PEDESTRIAN PUSH BUTTONS AND SIGNAL HEADS MARKED WITH AN "X".
3. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
4. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
5. DISCONNECT EXISTING LOOP DETECTORS (1) AND (2).
6. INSTALL VIDEO DETECTOR (1).
7. RESET EXISTING SIGNAL HEADS (1), (2), (3) AND (4).



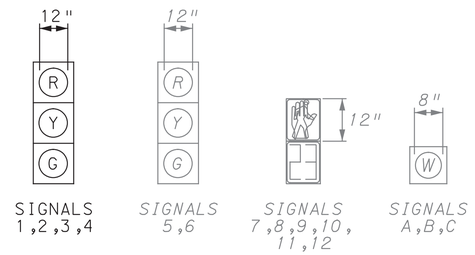
WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

- EXISTING MAST ARM/POLE/PEDESTAL
- TEMPORARY POLE/PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- TEMPORARY PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING VIDEO DETECTOR
- TEMPORARY VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING JUNCTION BOX

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	2	0
B	R10-6AL	STOP HERE ON RED	24"X30"	1	2
C	R9-3	NO PEDESTRIAN CROSSING	18"X18"	2	2
D	R10-11	NO TURN ON RED	24"X30"	1	0



TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES) ITEM NO. 0958-0421, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	5.00
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	9.50
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	4
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	323
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4
EACH	VIDEO DETECTOR	1

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- TSC/2" - EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TSC/2" - TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGE 3B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	STATE STREET AND WEST 2ND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

SCALE: 0 25 50

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp-p115.dgn
PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)

MOVEMENT, PHASING, AND SEQUENCE

2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

PHASE	PHASE 2 + 6				PHASE 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	
1, 2	G	G	Y	R	R	R	R	R	R
3, 4	G	G	Y	R	R	R	R	R	R
5, 6	R	R	R	R	G	G	Y	R	R
7, 12	W	FD	DW	DW	DW	DW	DW	DW	DW
8, 9	DW	DW	DW	DW	W	FD	DW	DW	DW
10, 11	DW	DW	DW	DW	W	FD	DW	DW	DW
FIXED			3	2.5			3	2.5	
MIN. INITIAL					6				
PASSAGE					4				
MAXIMUM I*	85				25				
MAXIMUM II*	55				25				
PEDESTRIAN**	7	10			7	18			
MEMORY	MN				L				

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

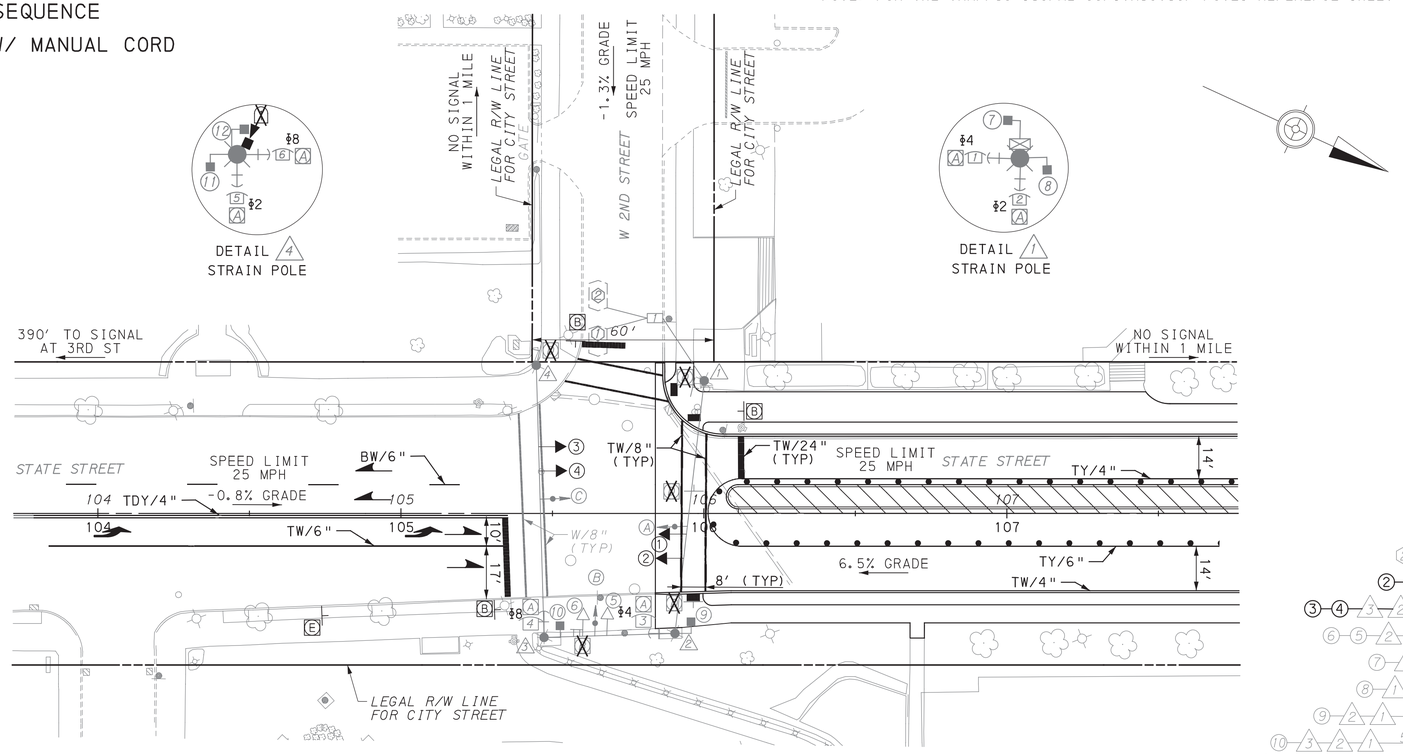
NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	269 OF 273

CITY OF ERIE

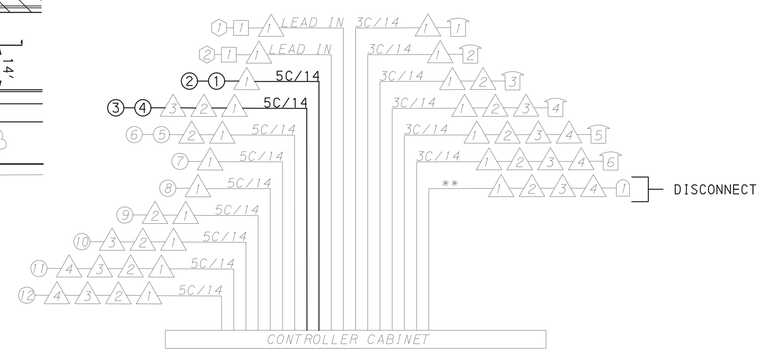
REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 2 OF 2
DATE ISSUED: DATE REVISED:



SIGNAL NOTES

1. REMOVE CONFLICTING SIGNS, INCLUDING SIGNS MARKED WITH AN "X".
2. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
3. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
4. DISCONNECT AND REMOVE EXISTING VIDEO DETECTOR (1).
5. RECONNECT EXISTING LOOP DETECTORS (1) AND (2).
6. RECONNECT EXISTING SIGNAL HEADS (7), (8), (9) AND (12).
7. RESET EXISTING SIGNAL HEADS (1), (2), (3) AND (4).



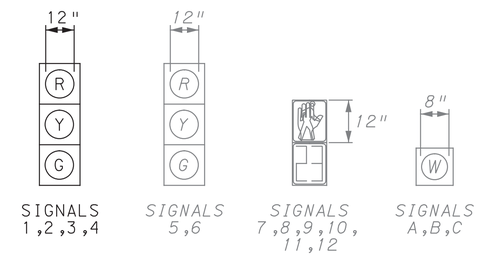
WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

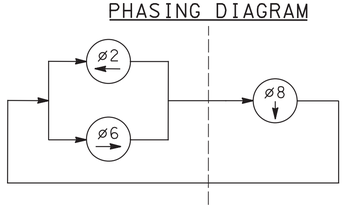
- EXISTING MAST ARM/POLE/PEDESTAL
- TEMPORARY POLE/PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- TEMPORARY PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING VIDEO DETECTOR
- TEMPORARY VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING JUNCTION BOX

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	6	0
B	R10-6AL	STOP HERE ON RED	24"X30"	0	3
C	R9-3	NO PEDESTRIAN CROSSING	18"X18"	0	0
D	R10-11	NO TURN ON RED	24"X30"	0	0
E	R3-8A	LANE USE CONTROL (L-S)	30"X30"	1	0



PHASING DIAGRAM



TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES) ITEM NO. 0958-0422, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	3
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	340
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" (TX/X") - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- TSC/2" - EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TSC/2" - TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER
- TYPE III BARRICADE

TEMPORARY TRAFFIC SIGNAL STAGES 3D-3F

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: STATE STREET AND WEST 2ND STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

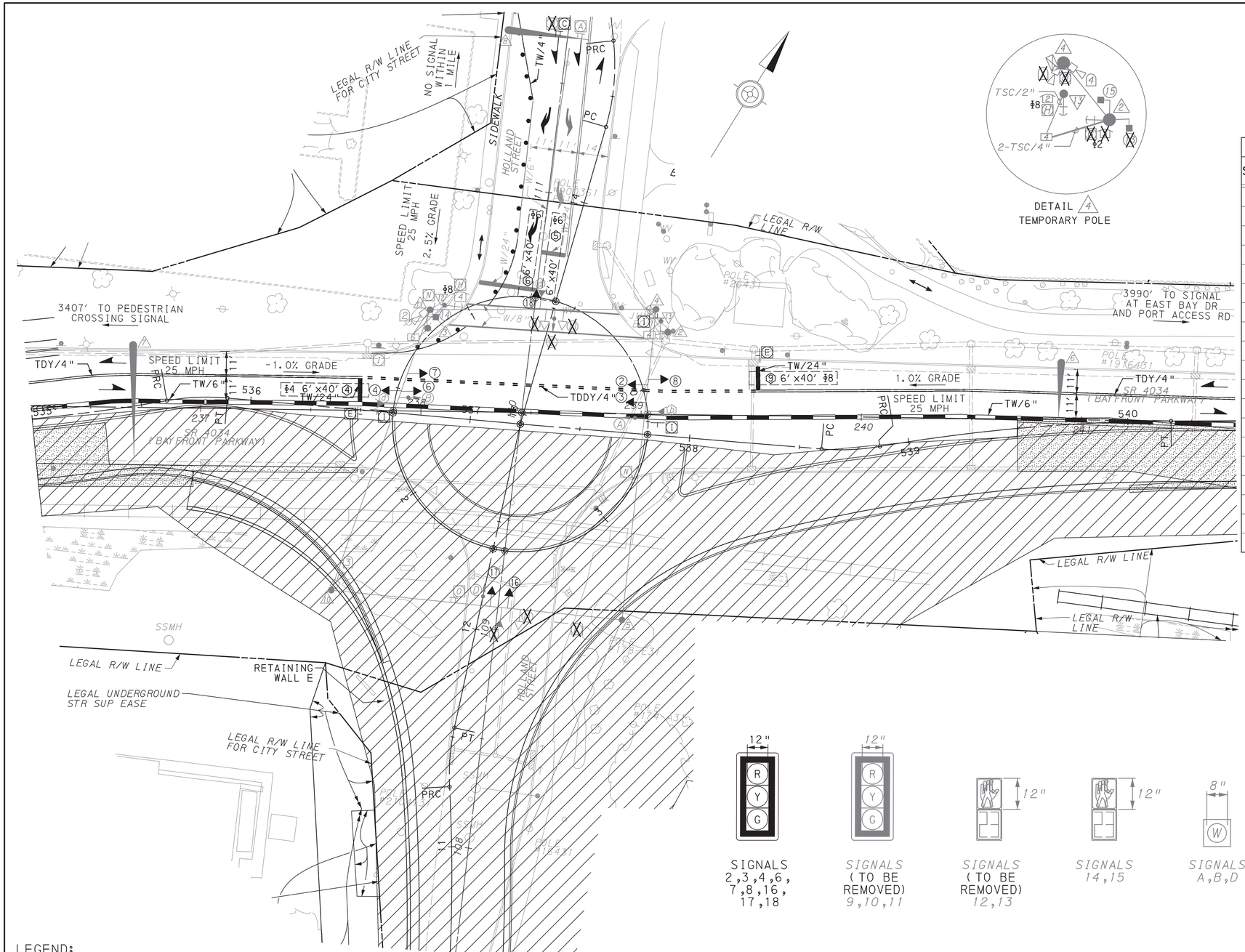
CONTRACTOR DATE

SCALE: 0 25 50

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	270 OF 273
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.:	SHEET: 2 OF 3
DATE ISSUED:	DATE REVISED:



PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\Files\Production\08\60\06808\mpt\sheets\TCtsp_p117.dgn

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	271 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY
PERMIT NO.:		SHEET: 3 OF 3		
DATE ISSUED:		DATE REVISED:		

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

	NORMAL OPERATION								EMERGENCY PREEMPTION												EMERGENCY FLASHING
PHASE	PHASE 6				PHASE 4 + 8				SELECTIVE CLEARANCE	PHASE 4			SELECTIVE CLEARANCE	PHASE 8			SELECTIVE CLEARANCE	PHASE 6			
INTERVAL / SIGNALS	1	2	3		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
2, 3, 4	R	R	R		G	G	Y	R		G	Y	R		R	R	R		R	R	R	R
6, 7, 8	R	R	R		G	G	R	R		R	R	R		G	Y	R		R	R	R	R
14, 15	DW	DW	DW		W	FD	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	DW
16, 17, 18	G	Y	R		R	R	R	R		R	R	R		R	R	R		G	Y	R	R
A	OFF	OFF	OFF		OFF	OFF	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF
B	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	OFF
D	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	OFF
FIXED	X	3	2.5		X		3	4.5	X		3	3.5	X		3	4.5	X		3	2.5	
MIN. INITIAL	10				10				10				10				10				
PASSAGE	2.5				6				**				**				**				
MAXIMUM I*	37				68				60				60				60				
MAXIMUM II*	37				38																
PEDESTRIAN***					7	20															
MEMORY	NL				MN																

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
***UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:

MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

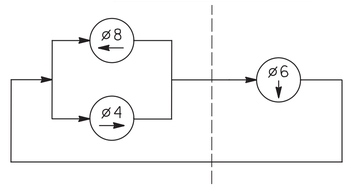
EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.
2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.
6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.
7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

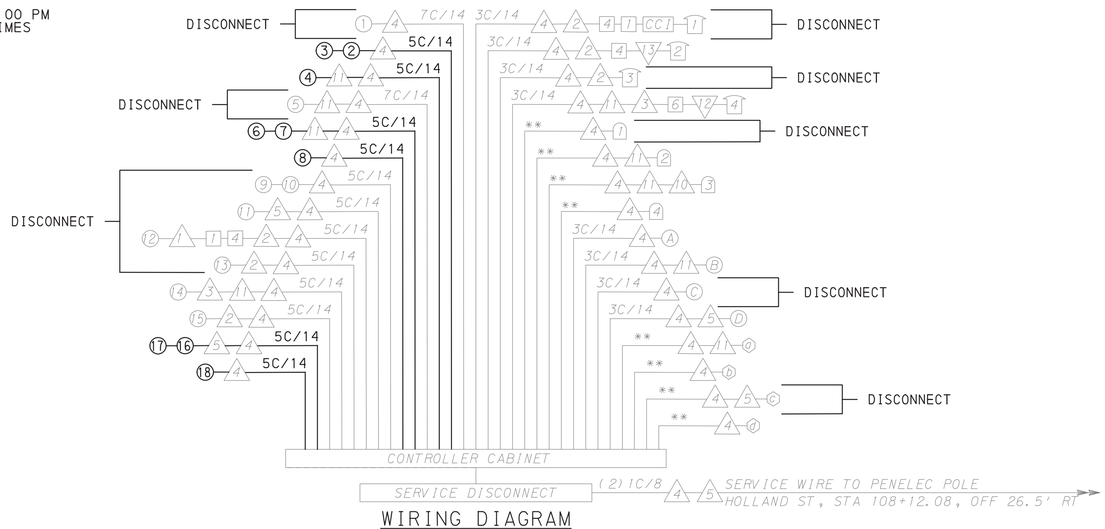
PHASING DIAGRAM



TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY TRAFFIC CONTROL SIGNALS
ON FIXED SUPPORTS (3 APPROACHES)
ITEM NO. 0958-0024, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	1
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	5
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	845
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	9



WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
*** - AS PER MANUFACTURER'S SPECIFICATIONS*

- *EXISTING MAST ARM/POLE/PEDESTAL*
- TEMPORARY POLE/PEDESTAL
- *EXISTING PEDESTRIAN STUB POLE*
- *EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD*
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- *EXISTING PREEMPTION CONFIRMATION SIGNAL*
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- *EXISTING PREEMPTION RECEIVER*
- TEMPORARY PREEMPTION RECEIVER
- *EXISTING PEDESTRIAN PUSH BUTTON*
- *EXISTING VIDEO DETECTOR*
- TEMPORARY VIDEO DETECTOR
- *EXISTING LOOP DETECTOR*
- *EXISTING JUNCTION BOX*

TEMPORARY TRAFFIC SIGNAL
STAGE 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	272 OF 273
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY
PERMIT NO.:		SHEET: 2 OF 2		
DATE ISSUED:		DATE REVISED:		

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

MOVEMENT, PHASING, AND SEQUENCE

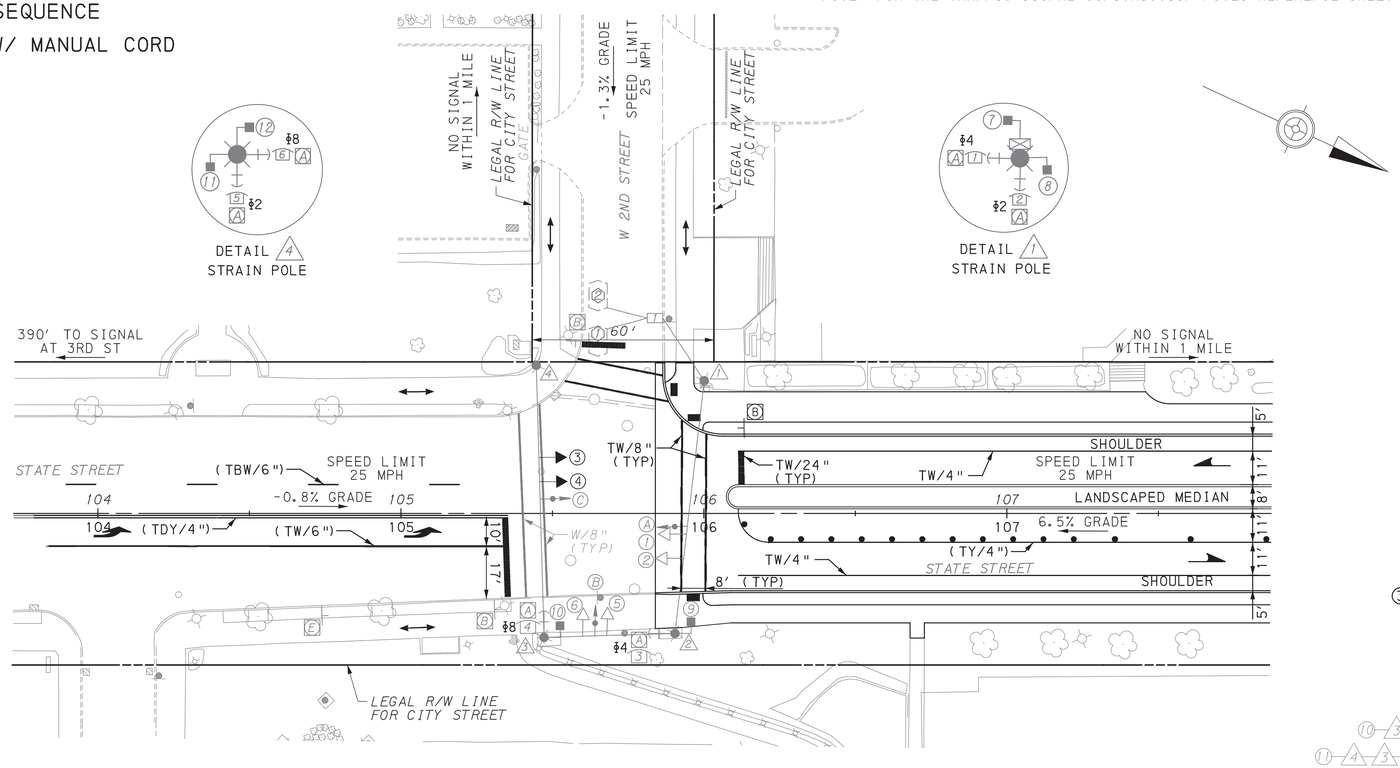
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

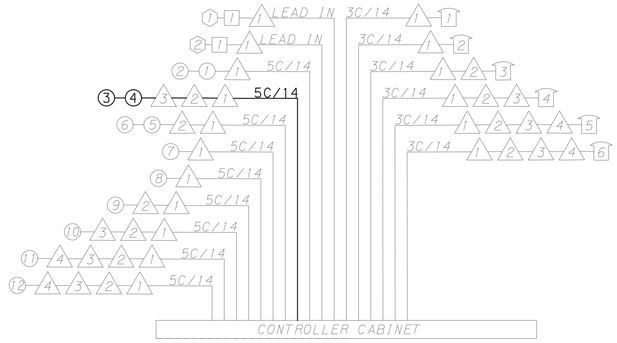
PHASE	PHASE 2 + 6				PHASE 8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	
1, 2	G	G	Y	R	R	R	R	R	R
3, 4	G	G	Y	R	R	R	R	R	R
5, 6	R	R	R	R	G	G	Y	R	R
7, 12	W	FD	DW	DW	DW	DW	DW	DW	DW
8, 9	DW	DW	DW	DW	W	FD	DW	DW	DW
10, 11	DW	DW	DW	DW	W	FD	DW	DW	DW
FIXED			3	2			3	2.5	
MIN. INITIAL					6				
PASSAGE					4				
MAXIMUM I*	85				25				
MAXIMUM II*	55				25				
PEDESTRIAN**	7	10			7	18			
MEMORY	MN				L				

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.

MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING

MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES





WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS

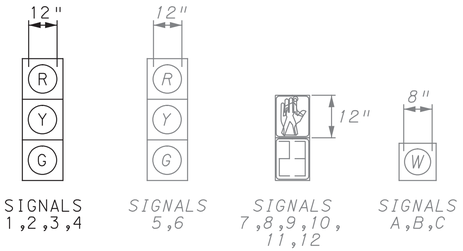
- EXISTING MAST ARM/POLE/PEDESTAL
- TEMPORARY POLE/PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR/PEDESTRIAN SIGNAL HEAD
- TEMPORARY VEHICULAR/PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- TEMPORARY PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING VIDEO DETECTOR
- TEMPORARY VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING JUNCTION BOX

SIGNAL NOTES

1. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
2. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
3. RESET EXISTING SIGNAL HEADS (3) AND (4).

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
A	N/A	PUSH BUTTON FOR WALK SIGNAL	EXISTING	6	0
B	R10-6AL	STOP HERE ON RED	24"X30"	2	1
C	R9-3	NO PEDESTRIAN CROSSING	18"X18"	0	0
D	R10-11	NO TURN ON RED	24"X30"	0	0
E	R3-8A	LANE USE CONTROL (L-S)	30"X30"	1	0



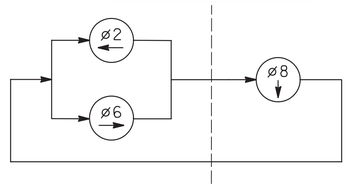
SIGNALS 1,2,3,4 | SIGNALS 5,6 | SIGNALS 7,8,9,10,11,12 | SIGNALS A,B,C

TABULATION OF TRAFFIC CONTROL DEVICES

TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL, RESET (3 APPROACHES)
ITEM NO. 0958-0423, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	1
EACH	CONTROLLER MODIFICATION, RETIMING	1
LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	238
EACH	RESET VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	2

PHASING DIAGRAM



LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- —TSC/2"— EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TEMPORARY TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- —TSC/2"— TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGES 4-6

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MEGAN S. McDERMOTT — ENGINEER — PE076999

Megan S. McDermott
MEGAN S. McDERMOTT, P.E.
DATE: 08/01/2022

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
LOCATION:	STATE STREET AND WEST 2ND STREET
ACTIVITY:	ROAD REHABILITATION
PREPARED BY:	MS CONSULTANTS

CONTRACTOR _____ DATE _____

SCALE: 0 25 50

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCtsp_pl18.dgn

NOTE: FOR THE TRAFFIC SIGNAL CONSTRUCTION NOTES REFERENCE SHEET 2 OF 273.

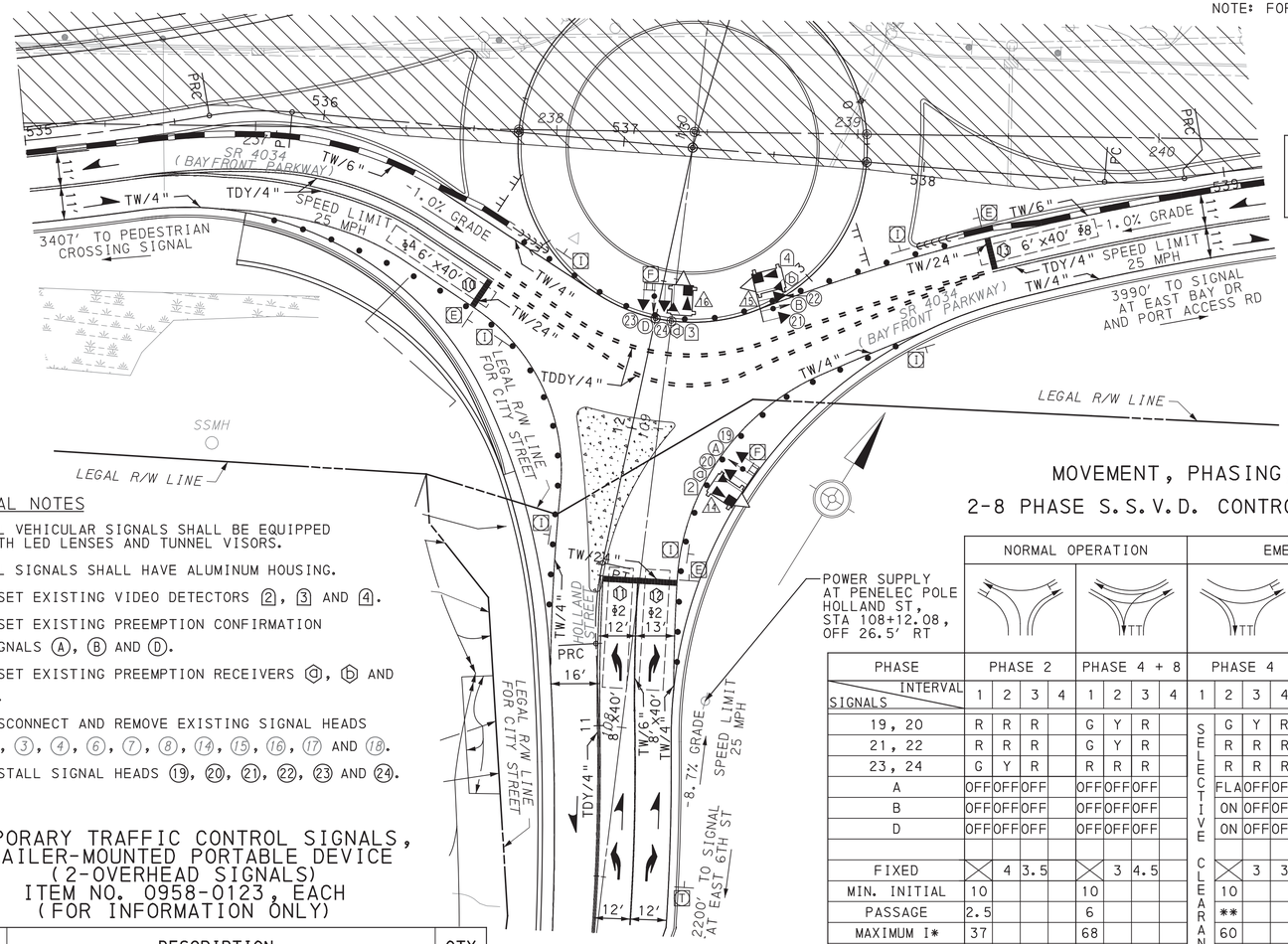
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	273 OF 273

CITY OF ERIE

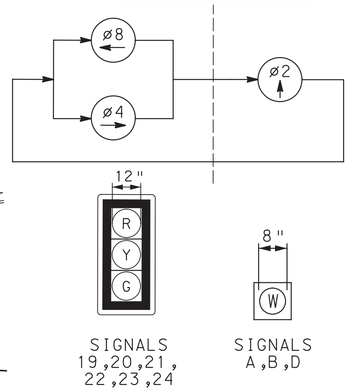
REVISION NUMBER	REVISIONS	DATE	BY

PERMIT NO.: SHEET: 2 OF 2

DATE ISSUED: DATE REVISED:



PHASING DIAGRAM



SIGNAL NOTES

1. ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH LED LENSES AND TUNNEL VISORS.
2. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING.
3. RESET EXISTING VIDEO DETECTORS (2), (3) AND (4).
4. RESET EXISTING PREEMPTION CONFIRMATION SIGNALS (A), (B) AND (D).
5. RESET EXISTING PREEMPTION RECEIVERS (a), (b) AND (d).
6. DISCONNECT AND REMOVE EXISTING SIGNAL HEADS (2), (3), (4), (6), (7), (8), (14), (15), (16), (17) AND (18).
7. INSTALL SIGNAL HEADS (19), (20), (21), (22), (23) AND (24).

MOVEMENT, PHASING, AND SEQUENCE
2-8 PHASE S.S.V.D. CONTROLLER W/ MANUAL CORD

POWER SUPPLY AT PENELEC POLE HOLLAND ST, STA 108+12.08, OFF 26.5' RT

	NORMAL OPERATION								EMERGENCY PREEMPTION												EMERGENCY FLASHING
PHASE	PHASE 2				PHASE 4 + 8				PHASE 4				PHASE 8				PHASE 2				
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
19, 20	R	R	R		G	Y	R		SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	R
21, 22	R	R	R		G	Y	R			R	R	R		G	Y	R		R	R	R	R
23, 24	G	Y	R		R	R	R			R	R	R		R	R	R		G	Y	R	R
A	OFF	OFF	OFF		OFF	OFF	OFF			FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF
B	OFF	OFF	OFF		OFF	OFF	OFF			ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	OFF
D	OFF	OFF	OFF		OFF	OFF	OFF			ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	OFF
FIXED	X	4	3.5		X	3	4.5			X	3	3		X	3	4.5		X	4	3.5	
MIN. INITIAL	10				10					10				10				10			
PASSAGE	2.5				6					**				**				**			
MAXIMUM I*	37				68					60				60				60			
MAXIMUM II*	37				38																
MEMORY	L				MN																

* ADJUST GREEN TIMES IN THE FIELD BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
** DURATION OF EMERGENCY VEHICLE ACTUATION
MEMORY:
MN - MIN. RECALL
L - LOCKING
NL - NON-LOCKING
MAX I: 3:00 PM TO 7:00 PM
MAX II: ALL OTHER TIMES

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY	RESET QTY
(A)	R3-5L	LEFT TURN	EXISTING	0	0
(B)	R3-5A	STRAIGHT-THROUGH	EXISTING	0	0
(C)	R3-5R	RIGHT TURN	EXISTING	0	0
(D)	R3-6SR	OPTIONAL RIGHT TURN	EXISTING	0	0
(E)	R10-6AL	STOP HERE ON RED	24"X30"	1	2
(F)	R10-11	NO TURN ON RED	24"X30"	2	0
(G)	N/A	PUSH BUTTON FOR WALK SIGNAL →	EXISTING	0	0
(H)	N/A	PUSH BUTTON FOR WALK SIGNAL ←	EXISTING	0	0
(I)	R9-3	NO PEDESTRIAN CROSSING	18"X18"	2	4
(J)	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
(K)	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
(L)	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED BLANKOUT SIGN)	EXISTING	0	0
(M)	R8-8	DO NOT STOP ON TRACKS	EXISTING	0	0
(N)	D3-4	HOLLAND ST	EXISTING	0	0
(O)	D3-4	BAYFRONT PARKWAY	EXISTING	0	0
(P)	R10-12	LEFT TURN YIELD ON GREEN	EXISTING	0	0
(Q)	R3-7R	RIGHT LANE MUST TURN RIGHT	EXISTING	0	0
(R)	R3-7L	LEFT LANE MUST TURN LEFT	EXISTING	0	0
(S)	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	0	0
(T)	R3-8A	LANE USE CONTROL (L-R)	30"X30"	0	1

NOTE: TYPE III BARRICADES SHOWN FOR INFORMATION ONLY AND MOUNTED WITH R11-2.

EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPTION PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.
2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.
6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.
7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

TEMPORARY TRAFFIC CONTROL SIGNALS, TRAILER-MOUNTED PORTABLE DEVICE (2-OVERHEAD SIGNALS) ITEM NO. 0958-0123, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
SF	TEMPORARY SIGNS ON PORTABLE SIGN POSTS	4.50
EACH	RESET TEMPORARY SIGNS ON PORTABLE SIGN POSTS	7
EACH	RESET VEHICULAR SIGNAL HEAD, ONE 8" SECTION	3
EACH	RESET VIDEO DETECTION SYSTEM	1
EACH	RESET SONEM PREEMPTION SYSTEM	1
EACH	TRAILER-MOUNTED PORTABLE DEVICE INSTALLATION	1

TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET ITEM NO. 0958-0262, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	TRAILER-MOUNTED PORTABLE DEVICE RESET	1

TEMPORARY TRAFFIC CONTROL SIGNAL, TRAILER-MOUNTED PORTABLE DEVICE, RESET ITEM NO. 0958-0263, EACH (FOR INFORMATION ONLY)

UNIT	DESCRIPTION	QTY
EACH	TRAILER-MOUNTED PORTABLE DEVICE RESET	1

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT CONSTRUCTED IN ACTIVE STAGE
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO REMAIN
- TEMPORARY PAVEMENT INSTALLED IN PREVIOUS STAGE TO BE REMOVED
- TRAFFIC FLOW ARROW
- CHANNELIZING DEVICE
- TEMPORARY BARRIER
- TEMPORARY IMPACT ATTENUATOR
- W/4" - EXISTING WHITE PAVEMENT MARKING/WIDTH
- DY/4" - EXISTING DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TDY/4" - TEMPORARY DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TW/4" - TEMPORARY WHITE PAVEMENT MARKING/WIDTH
- TDDY/4" - TEMPORARY DOTTED EXTENSION DOUBLE YELLOW PAVEMENT MARKING/WIDTH
- TY/4" - TEMPORARY YELLOW PAVEMENT MARKING/WIDTH
- (TX/X") - TEMPORARY PAVEMENT MARKING INSTALLED IN A PREVIOUS STAGE
- EXISTING MAST ARM
- EXISTING POLE/SIGNAL CABLE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN STUB POLE
- EXISTING VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PREEMPTION CONFIRMATION SIGNAL
- EXISTING PREEMPTION RECEIVER
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING VIDEO DETECTOR
- EXISTING LOOP DETECTOR
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- EXISTING POST MOUNTED SIGN
- EXISTING SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- EXISTING OVERHEAD SIGN
- TSC/2" - EXISTING TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY POLE/SIGNAL CABLE
- TEMPORARY VEHICULAR SIGNAL HEAD
- TEMPORARY PREEMPTION CONFIRMATION SIGNAL
- TEMPORARY PREEMPTION RECEIVER
- TEMPORARY VIDEO DETECTOR
- TEMPORARY VIDEO CAMERA ZONE
- TEMPORARY CONTROLLER ASSEMBLY
- TYPE III BARRICADE
- TEMPORARY SIGN ON PORTABLE SIGN POST "H" OR "X" BASE
- TEMPORARY OVERHEAD SIGN
- TSC/2" - TEMPORARY TRAFFIC SIGNAL CONDUIT/SIZE
- TEMPORARY WHITE LEGEND "LEFT ARROW", 12'-0" X 3'-0"
- TEMPORARY WHITE LEGEND "RIGHT ARROW", 12'-0" X 3'-0"
- TEMPORARY PORTABLE TRAFFIC SIGNAL TRAILER

TEMPORARY TRAFFIC SIGNAL STAGES 5A-5D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MEGAN S. McDERMOTT ENGINEER PE076999

Megan S. McDermott

MEGAN S. McDERMOTT, P.E.

DATE: 08/01/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
LOCATION: SR 4034 (BAYFRONT PARKWAY) AND HOLLAND STREET
ACTIVITY: ROAD REHABILITATION
PREPARED BY: MS CONSULTANTS

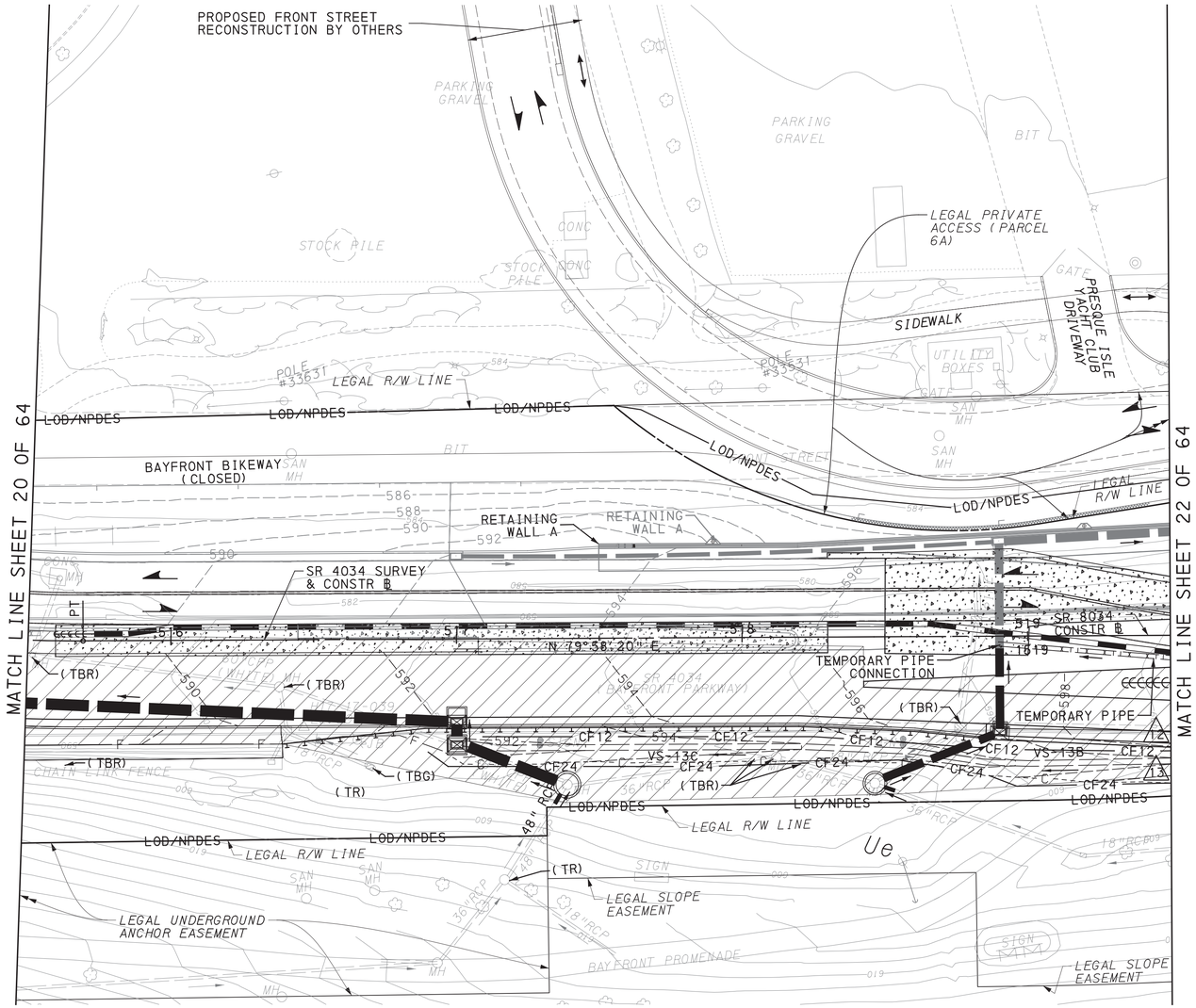
CONTRACTOR DATE

SCALE: 0 25 50

PLOTTED: 8/1/2022
D-9012 CADD (02-90) REVISED (10-04)
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\mpt\sheets\TCTsp_p119.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	21 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AaB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY			DP 000	STORMWATER DISCHARGE POINT
1 CFXX	COMPOST FILTER SOCK, XX" DIAMETER		TEMPORARY PAVEMENT		
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

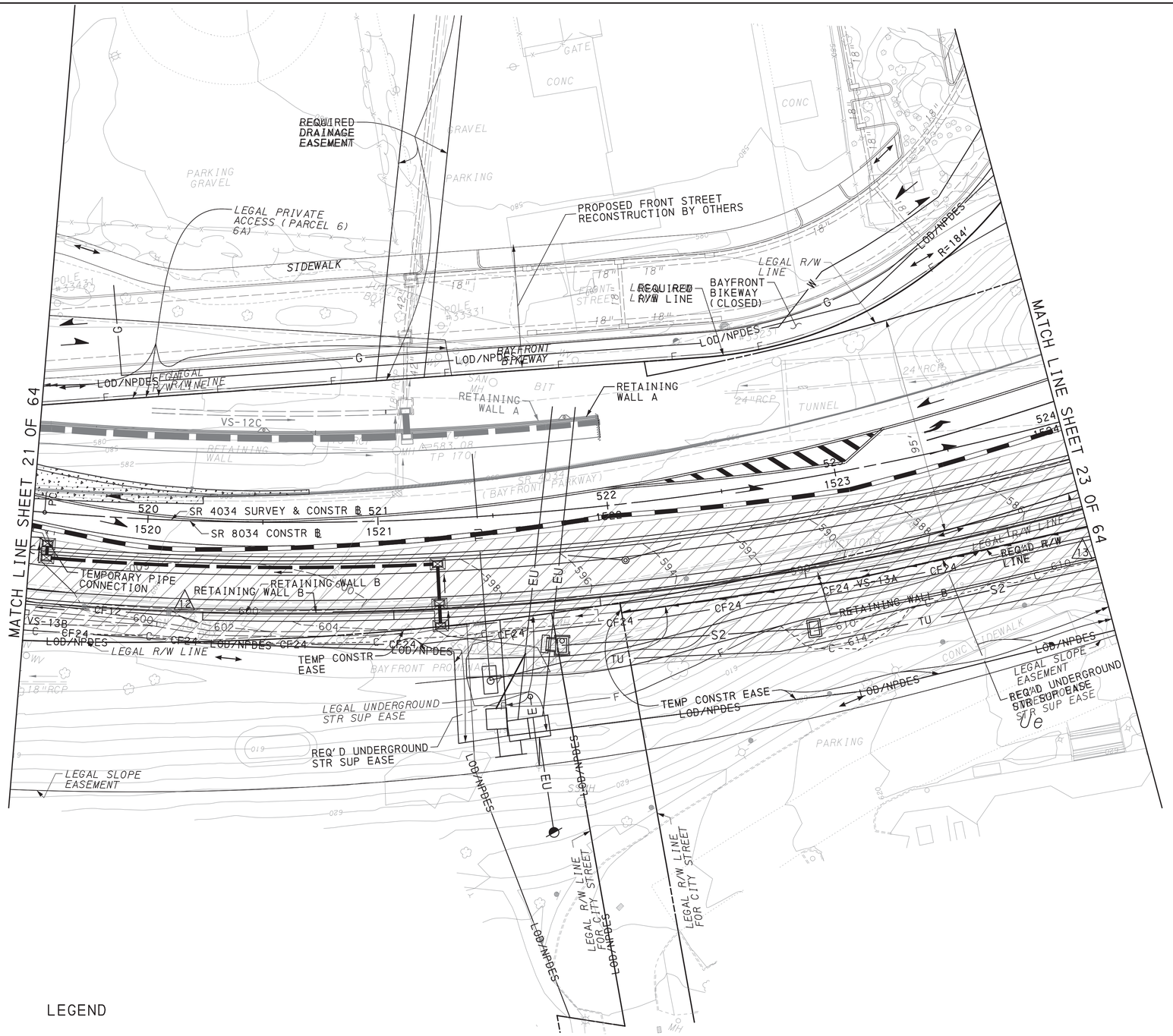
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESp1 stg2 04.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	22 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AaB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY			DP 000	STORMWATER DISCHARGE POINT
① CFXX	COMPOST FILTER SOCK, XX" DIAMETER		TEMPORARY PAVEMENT		
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

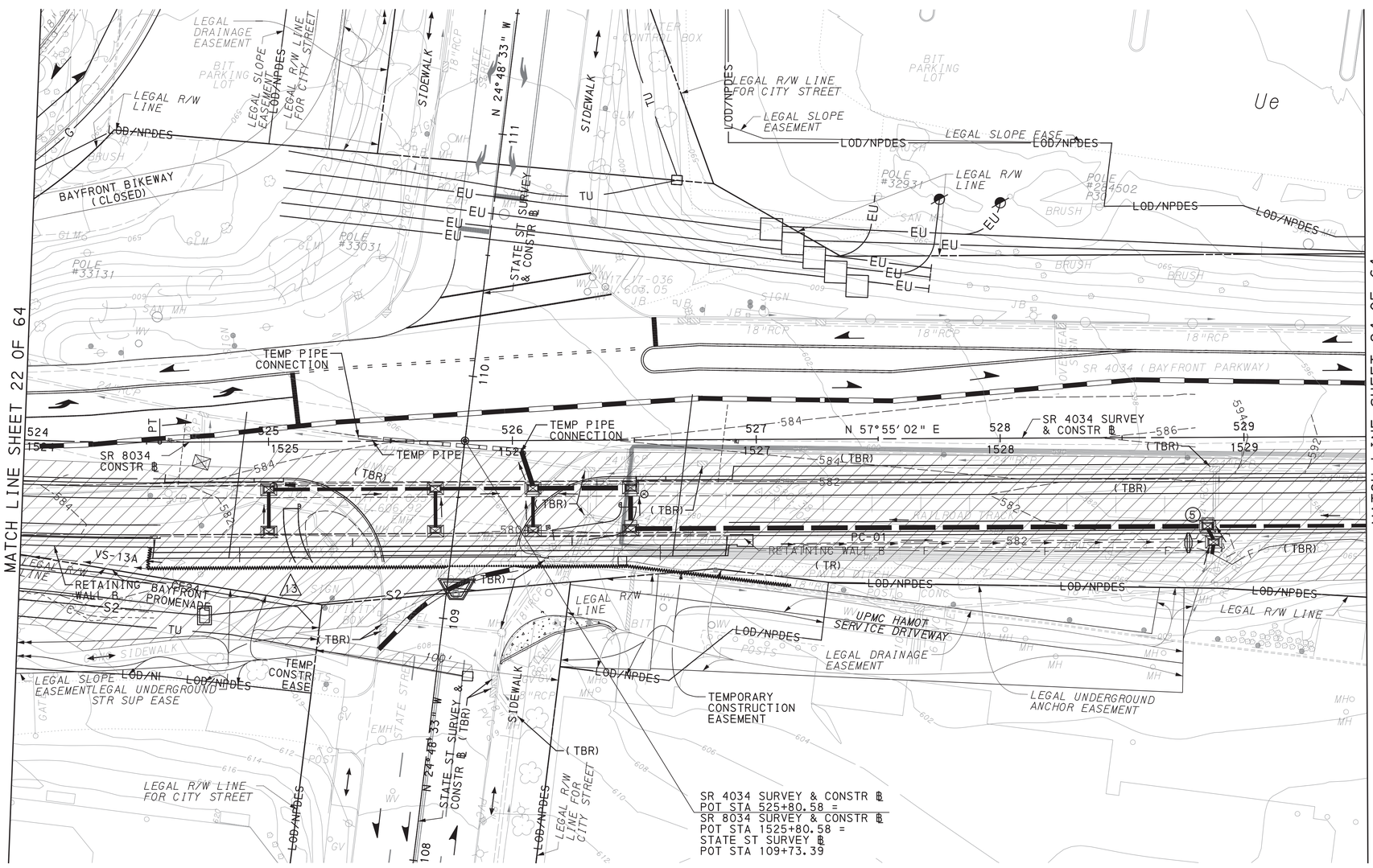
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESpl sig2 05.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	23 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AaB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING		
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
LOD	LIMIT OF DISTURBANCE BOUNDARY				TRAFFIC FLOW DIRECTION
NPDES	NPDES BOUNDARY		WORK ZONE		TEMPORARY BARRIER
1 CFXX	COMPOST FILTER SOCK, XX" DIAMETER		TEMPORARY PAVEMENT	DP 000	STORMWATER DISCHARGE POINT
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O' MARA ENGINEER PE079501

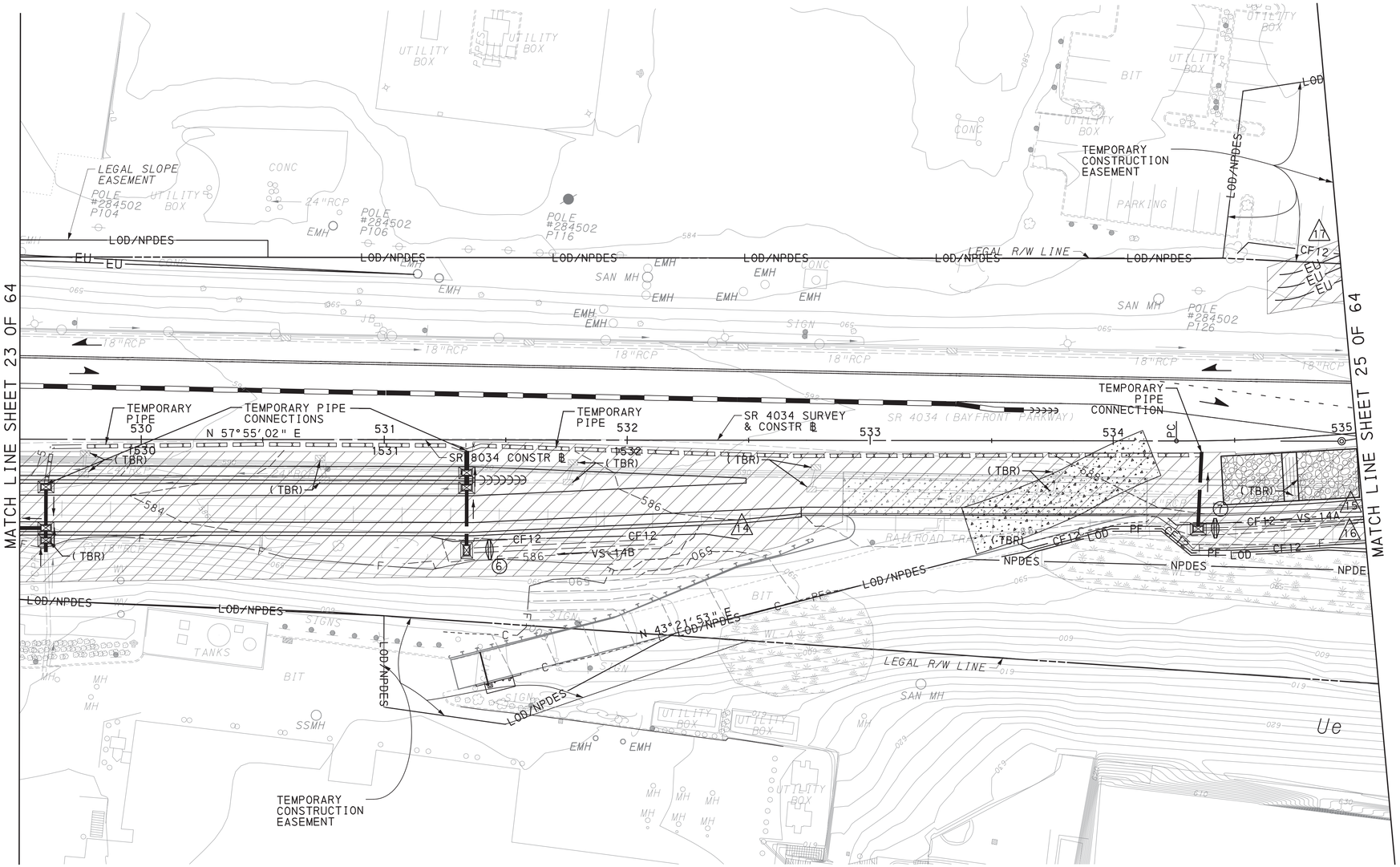
DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESp1 stg2 06.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	24 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AdB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY		TEMPORARY PAVEMENT	DP 000	STORMWATER DISCHARGE POINT
1 CFXX	COMPOST FILTER SOCK, XX" DIAMETER				
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

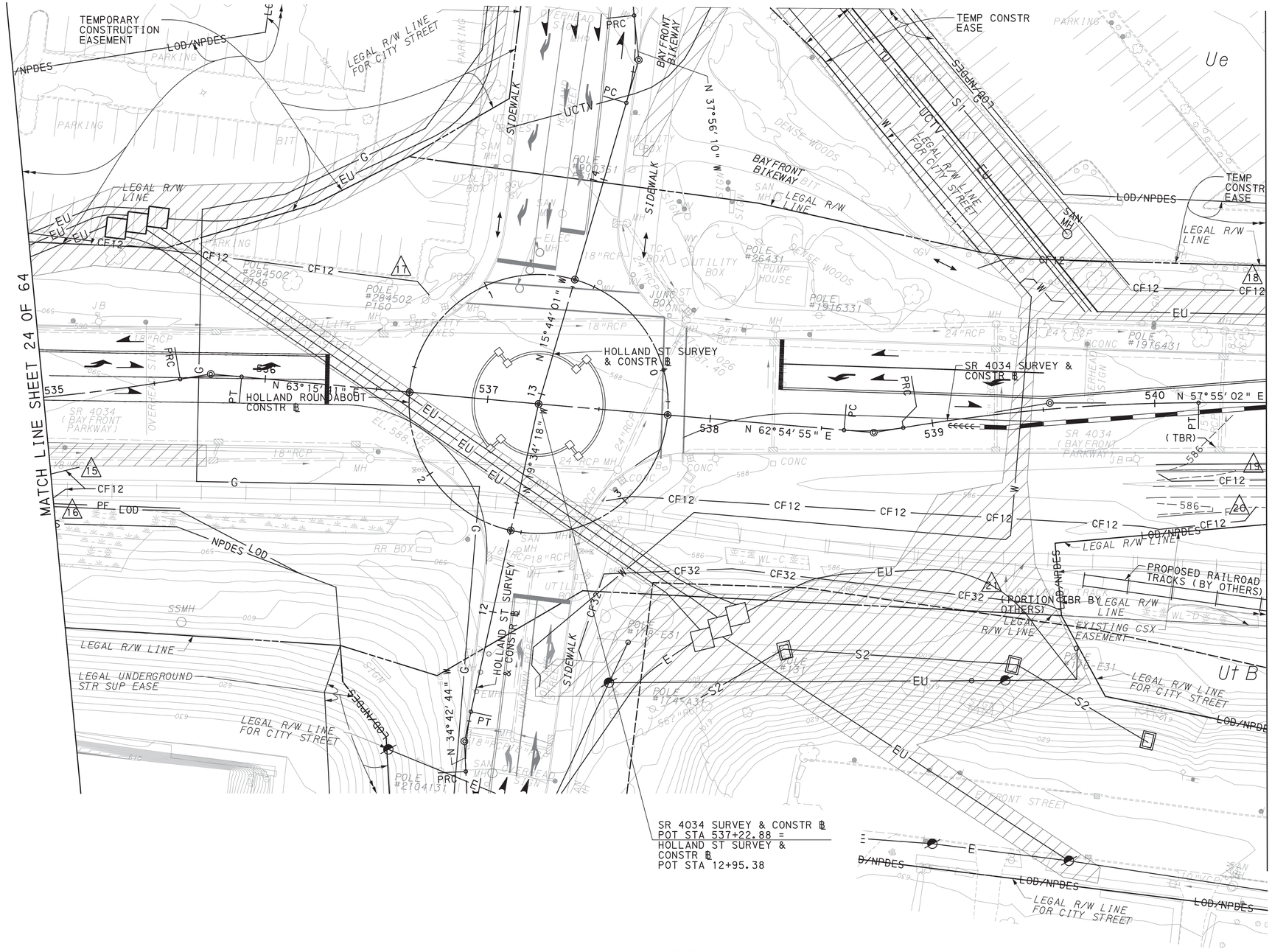
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESpl sig2 07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	25 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AaB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY		TEMPORARY PAVEMENT	DP 000	STORMWATER DISCHARGE POINT
1 CFXX	COMPOST FILTER SOCK, XX" DIAMETER				
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

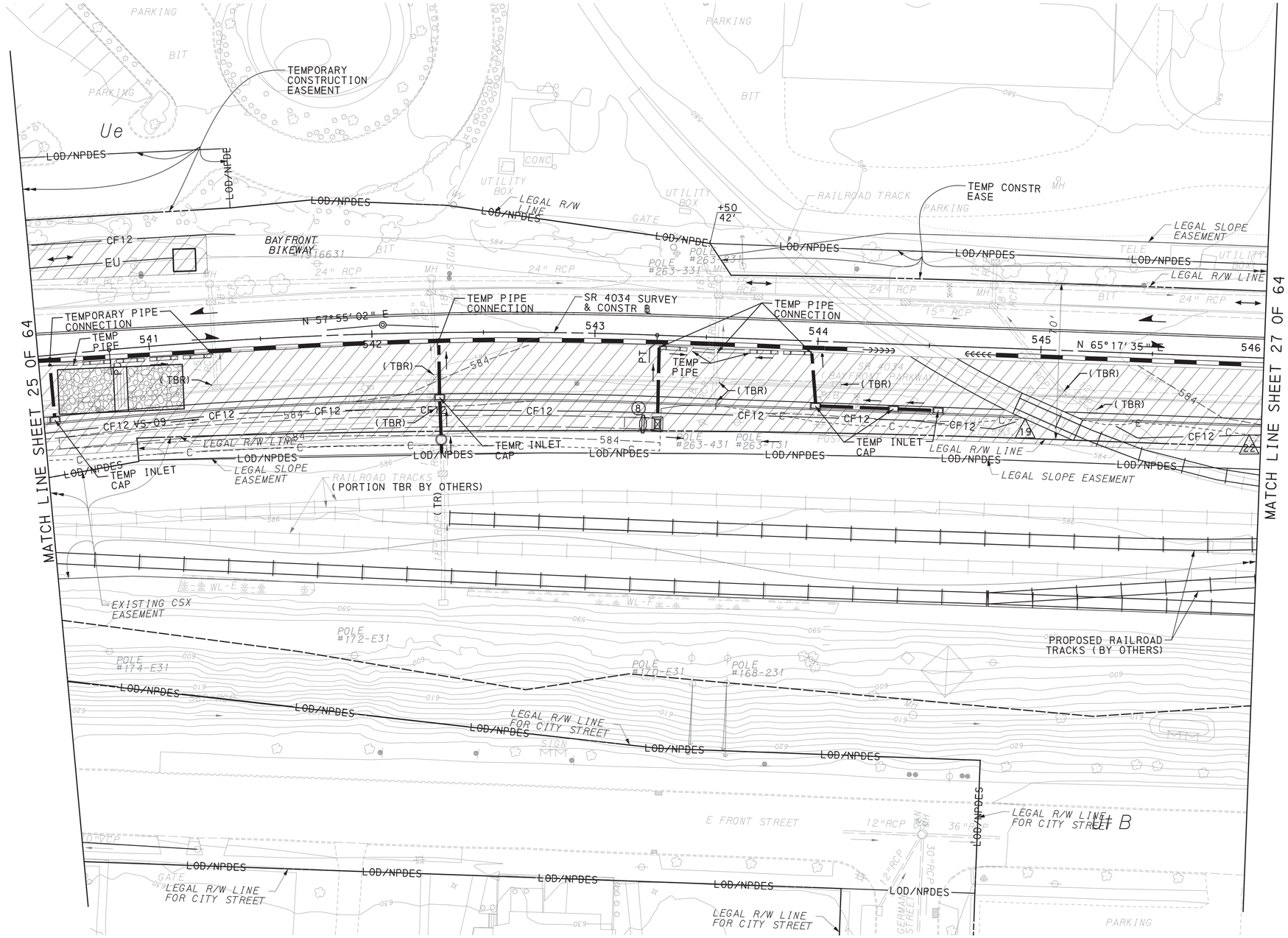
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES O'MARA ENGINEER PE079501

PLOTTED: 8/2/2022

FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\es\sheets\ESp1 sig2 08.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	26 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AdB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY		TEMPORARY PAVEMENT	DP 000	STORMWATER DISCHARGE POINT
① CFXX	COMPOST FILTER SOCK, XX" DIAMETER				
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

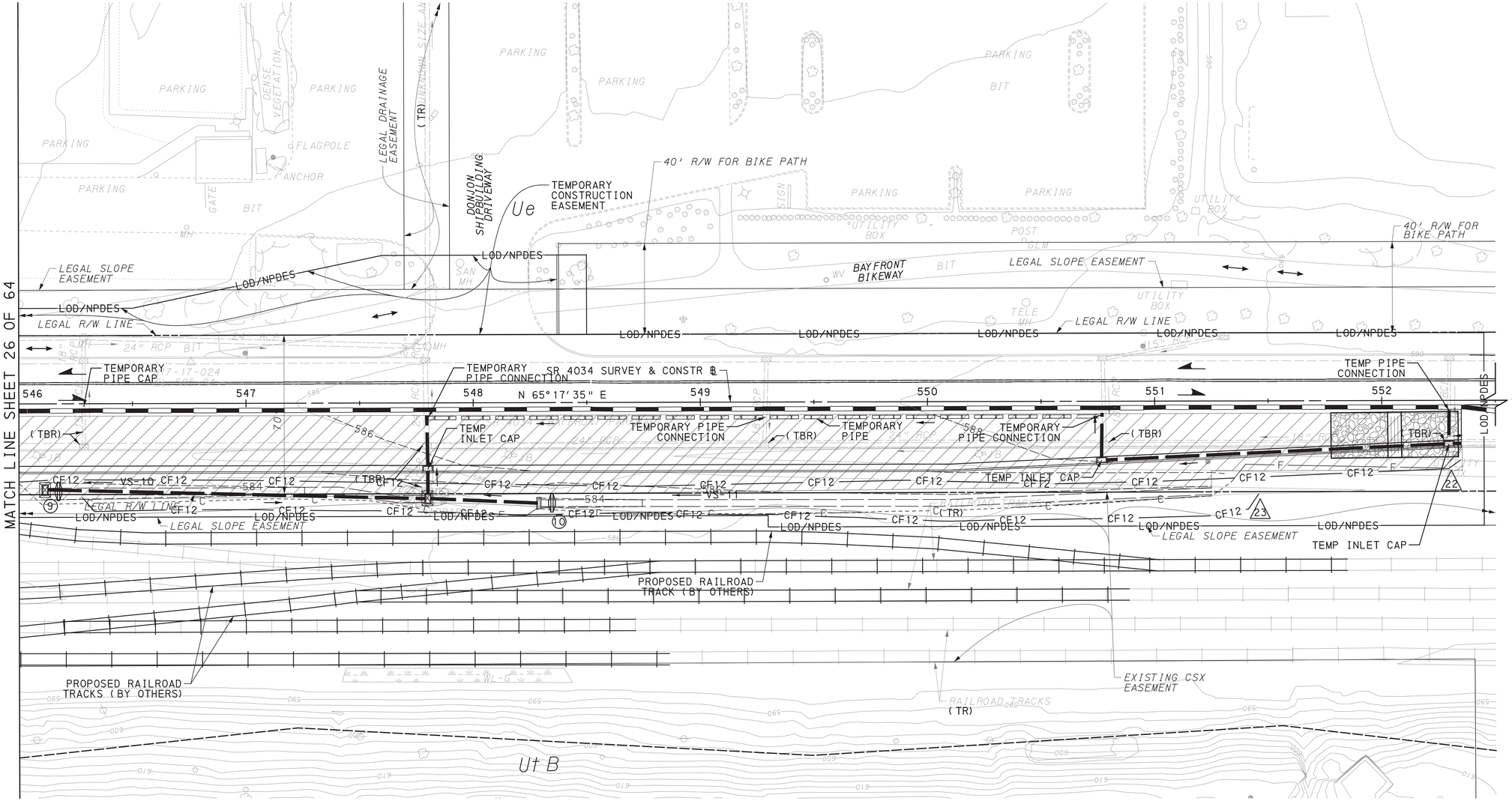
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESp1 sig2 09.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	27 OF 64
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

(TBG)	TO BE GROUTED	①	TEMPORARY ROCK BARRIER		INLET FILTER BAG
(TBR)	TO BE REMOVED		PROPOSED SWALE		TEMPORARY PIPE
(TR)	TO REMAIN		WETLAND BOUNDARY	AaB	SOIL SYMBOL AND BOUNDARY
1140	EXISTING CONTOURS		TEMPORARY SHORING	PF	HIGH VISIBLE PROTECTIVE WETLAND FENCING
1140	PROPOSED CONTOURS		ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		TRAFFIC FLOW DIRECTION
LOD	LIMIT OF DISTURBANCE BOUNDARY		WORK ZONE		TEMPORARY BARRIER
NPDES	NPDES BOUNDARY			DP 000	STORMWATER DISCHARGE POINT
⚠1 CFXX	COMPOST FILTER SOCK, XX" DIAMETER		TEMPORARY PAVEMENT		
	ROCK APRON				

SCALE IN FEET
0 25 50

STAGE 2
EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DES: PLW	CKD: MJQ	DWG: JDT	CKD: PLW

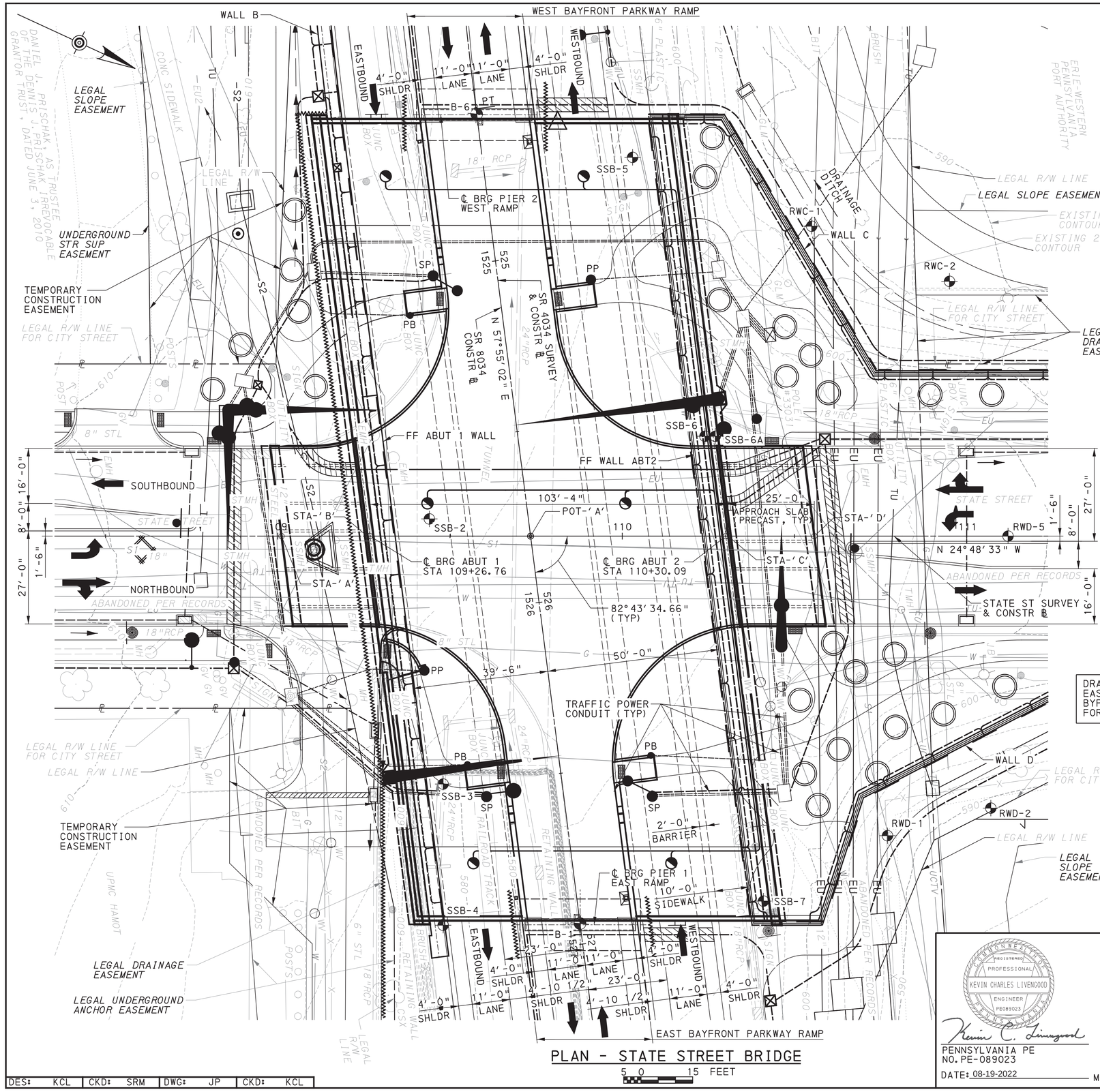
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES O' MARA
ENGINEER
PE079501

PLOTTED: 8/2/2022

FILE NAME: \\msconsultants.com\files\Production\08\60\06808\es\sheets\ESpl sig2 10.dgn

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTgp001.dgn



PLAN - STATE STREET BRIDGE

5 0 15 FEET

LEGENDS:

- UNDERPASS LUMINAIRE
- LED LINEAR LIGHT
- PLANTER BOX
- CONCRETE ENCASED CONDUIT
- LIGHTING JUNCTION BOX
- STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- POINT OF MINIMUM VERTICAL CLEARANCE
- PB - PEDESTRIAN PUSHBUTTON POLE
- PP - PEDESTRIAN POLE
- SP - STRAIN POLE
- TRAFFIC SIGNAL POLE WITH MAST ARM & LIGHTING LUMINAIRE
- TRAFFIC SIGNAL POLE WITH MAST ARM
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- BRIDGE SCUPPER, TYPE 1
- YARD DRAIN SCUPPER, TYPE 2
- TRAFFIC JUNCTION BOX
- TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (APPROXIMATE LOCATION)
- LIGHTING POLES & POST LIGHTS

STA 'A'
BEGIN APPROACH SLAB
STA 109+01.09

STA 'B'
END APPROACH SLAB
BEGIN STRUCTURE
STA 109+26.09

STA 'C'
END STRUCTURE
BEGIN APPROACH SLAB
STA 110+30.76

STA 'D'
END APPROACH SLAB
STA 110+55.76

POT 'A'
SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

DRAINAGE FOR SR 4034 EASTBOUND & WESTBOUND BYPASS (BELOW) NOT SHOWN FOR CLARITY

NOTES:

1. PROVIDE ELASTOMERIC BEARINGS AT SUBSTRUCTURE UNITS.
2. PROPOSED GRADING WITHIN THE GREEN SPACE AREAS IS NOT SHOWN FOR CLARITY.

REFERENCES:

FOR ELEVATION VIEW, SEE SHEET 2

FOR TYPICAL SECTION, SEE SHEET 3

FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE SHEET 2

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 2

FOR GENERAL NOTES, SEE SHEET 5 & 6

FOR INDEX OF DRAWINGS, SEE SHEET 4

FOR ADDITIONAL INFORMATION ON THE EAST BAYFRONT PARKWAY RAMP, WEST BAYFRONT PARKWAY RAMP, OR RETAINING WALL C&D/ABUTMENT 2 RETAINING WALL, SEE APPLICABLE STRUCTURE PLAN SET.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

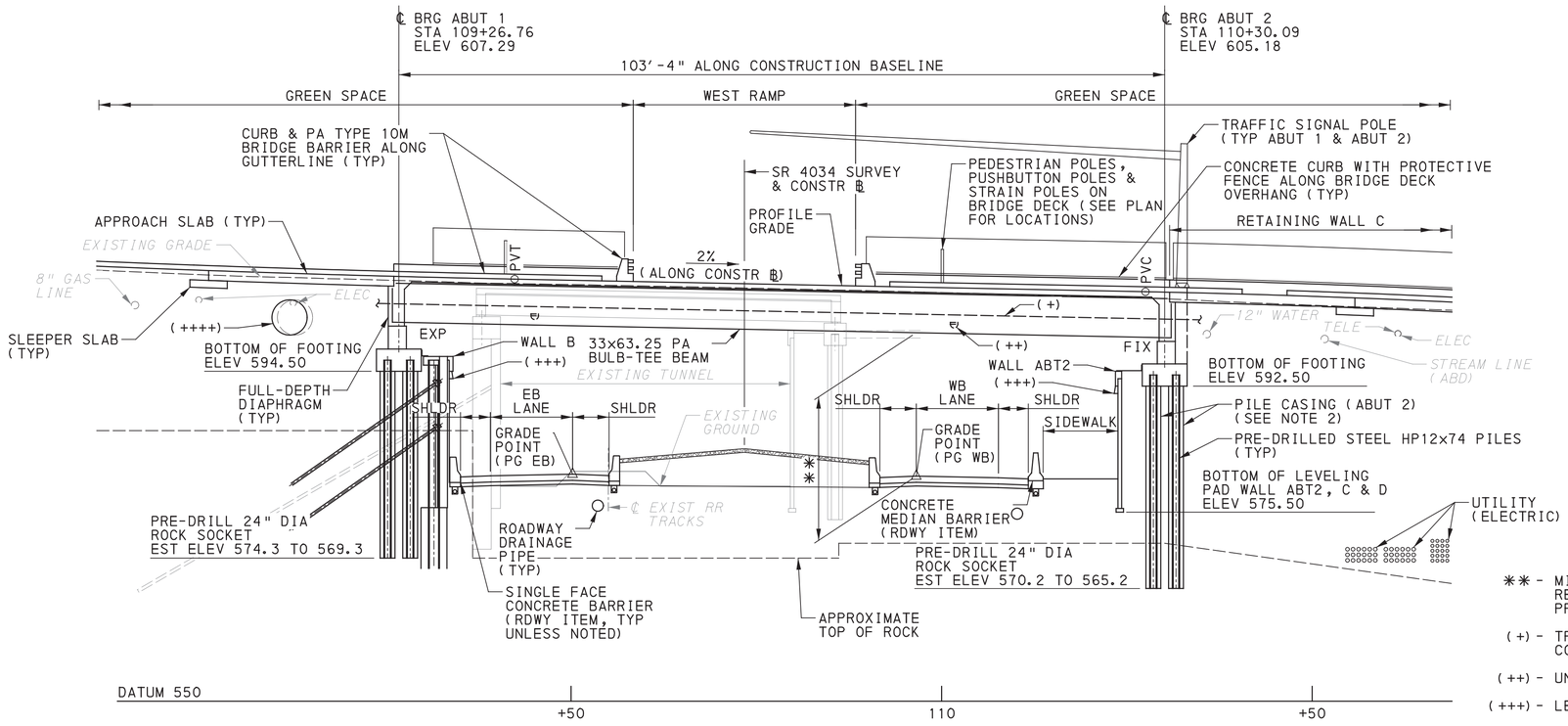
PENNSYLVANIA PE NO. PE-089023
DATE: 08-19-2022

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED
Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 15:00:36 -04'00'
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 64
+ SUPPLEMENTAL DRAWINGS
S-41005

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

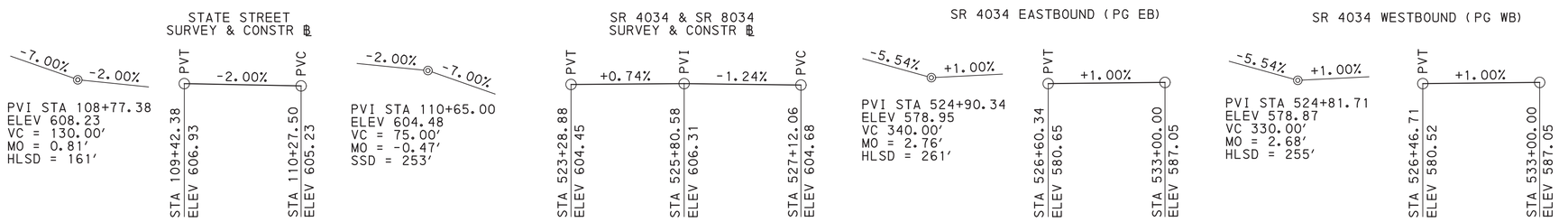


ELEVATION

(LOOKING STATIONS BACK - SR 4034)

5 0 5 10 FEET

VERTICAL ALIGNMENT DATA



HORIZONTAL ALIGNMENT DATA

STATE STREET SURVEY & CONSTR ℄	SR 4034 SURVEY & CONSTR ℄	
TANGENT	PI STA 522+08.36	TANGENT
N 24°48'33" W	Δ 22° 03' 18" (LT)	N 57°55'02" E
	D 4° 24' 27"	
	T 253.34'	
	L 500.41'	
	R 1,300.00'	
	PC STA 519+55.02	
	PT STA 524+55.44	
	SUPERELEVATE = 2.4% (INSIDE LANES)	
	SUPERELEVATE = 3.8% (OUTSIDE LANES)	

NOTES:

1. BEDROCK ELEVATION IS ASSUMED BASED ON THE EXISTING BRIDGE PLANS.
2. PROVIDE GALVANIZED PROTECTIVE CASING FOR ABUTMENT 2 FROM THE BOTTOM OF EXCAVATION FOR STRUCTURE S-41009D TO THE BOTTOM OF FOOTING IN ACCORDANCE WITH BC-799M.

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
PA TYPE 10M BRIDGE BARRIER	BC-709M	2/19/2021
ELECTRICAL DETAILS	BC-721M	2/19/2021
PERMANENT METAL DECK FORMS	BC-732M	1/31/2019
ANCHOR SYSTEMS	BC-734M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
BRIDGE DRAINAGE	BC-751M	1/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	2/19/2021
BEARINGS	BC-755M	1/31/2019
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	9/30/2016
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	2/19/2021
PRESTRESSED CONCRETE BEAM BRACING	BC-772M	9/30/2016
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	9/30/2016
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
UTILITY ATTACHMENT & SUPPORT DETAILS, PRESTRESSED BRIDGES	BC-794M	1/31/2019
TRAFFIC SIGNAL SUPPORT	TC-8801	12/12/2011
MISCELLANEOUS	TC-8803	12/12/2011

** - MINIMUM VERTICAL CLEARANCE:
REQUIRED = 16'-6"
PROVIDED = 16'-6 5/8" (LOCATED @ BEAM B1)

(+) - TRAFFIC POWER CONDUITS, LIGHTING POWER CONDUITS & IRRIGATION PIPE

(++) - UNDERPASS LUMINAIRE (TYP)

(+++) - LED LINEAR LIGHT ALONG WALL

(++++) - SANITARY LINE (RELOCATED), SR 4034 STA BACK
EXIST SANITARY LINE (TO BE REMOVED), SR 4034 STA BACK
EXIST SANITARY LINE (TO REMAIN), SR 4034 STA AHD

REFERENCES:

FOR GENERAL PLAN, SEE SHEET 1

FOR TYPICAL SECTION, SEE SHEET 3

FOR TYPICAL SECTION THROUGH GREEN SPACE, SEE SHEET 3

FOR GENERAL NOTES, SEE SHEET 5 & 6

FOR ADDITIONAL PILE CASING NOTES, SEE SHEET 15

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 64

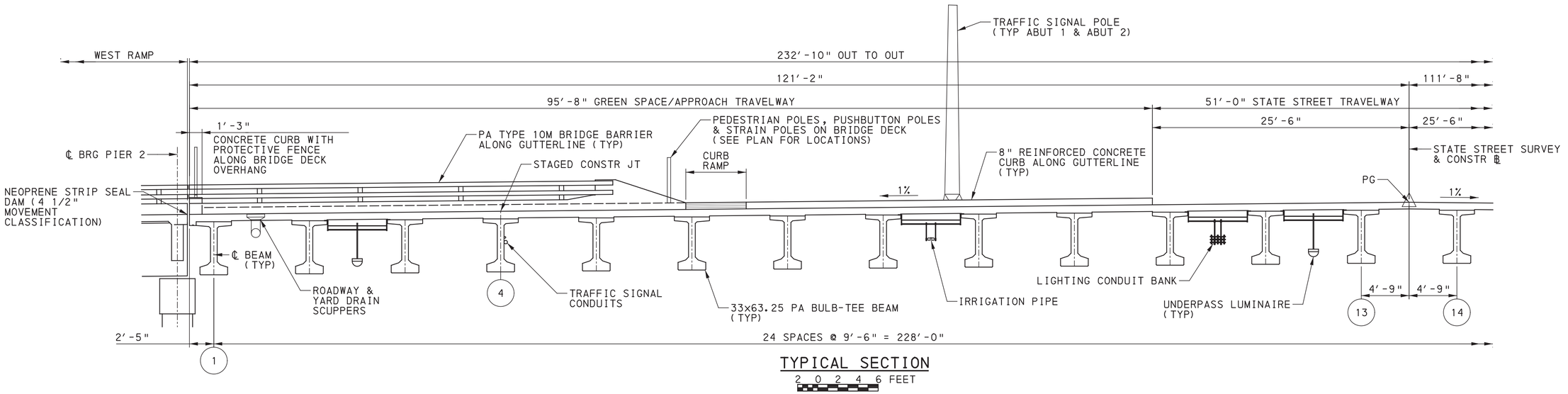
S-41005

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022

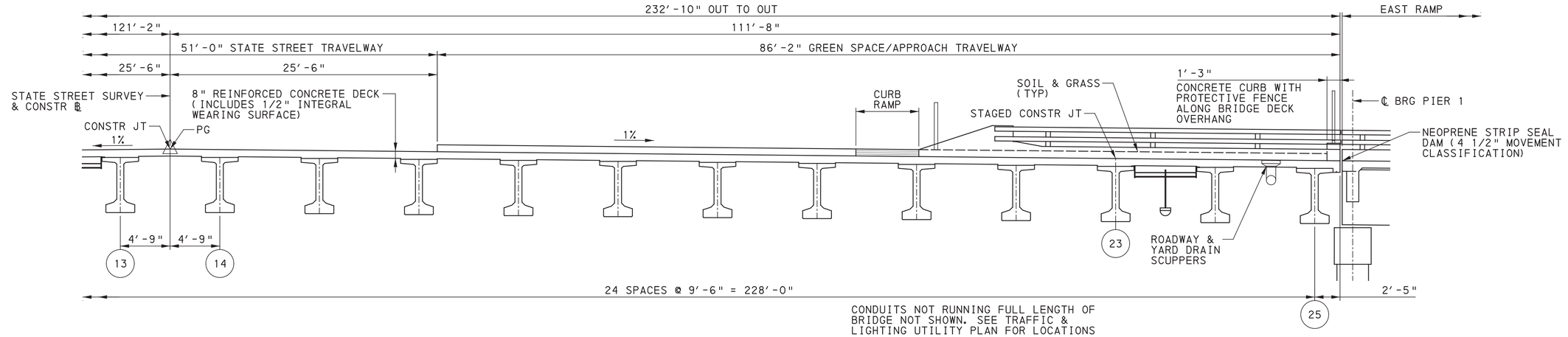
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTgp002.dgn

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTs001.dgn



TYPICAL SECTION

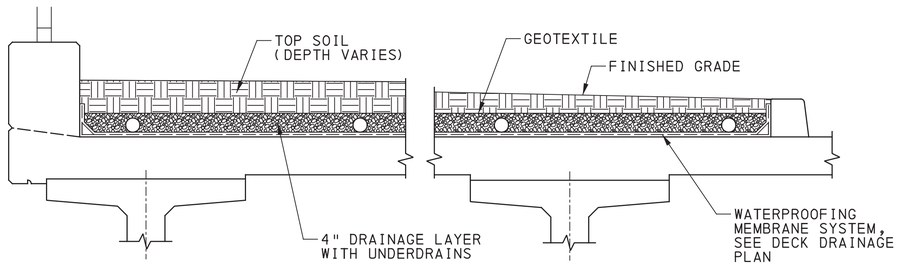
2 0 2 4 6 FEET



CONDUITS NOT RUNNING FULL LENGTH OF BRIDGE NOT SHOWN. SEE TRAFFIC & LIGHTING UTILITY PLAN FOR LOCATIONS

TYPICAL SECTION (CONTINUED)

2 0 2 4 6 FEET



SIDEWALK NOT SHOWN, SEE ROADSIDE DEVELOPEMENT PLANS FOR GREEN SPACE SIDEWALK DETAILS

TYPICAL SECTION - GREEN SPACE

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES:

1. DIMENSIONS ARE MEASURED PERPENDICULAR TO THE STATE STREET SURVEY & CONSTR ℄.

REFERENCES:

FOR DECK DRAINAGE PLAN, SEE SHEET 50

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTIn001.dgn

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN
2	ELEVATION
3	TYPICAL SECTION
4	INDEX OF DRAWINGS
5	GENERAL NOTES - 1
6	GENERAL NOTES - 2
7	SUMMARY OF QUANTITIES - 1
8	SUMMARY OF QUANTITIES - 2
9	STAGING DETAILS
10	STAKE-OUT PLAN
11	ABUTMENT 1 KEY PLAN & ELEVATION
12	ABUTMENT 1 FOOTING PLAN
13	ABUTMENT 1 ELEVATION
14	ABUTMENT 1 DETAILS
15	MISCELLANEOUS ABUTMENT DETAILS
16	ABUTMENT 1 REBAR SCHEDULE
17	ABUTMENT 2 KEY PLAN & ELEVATION
18	ABUTMENT 2 FOOTING PLAN
19	ABUTMENT 2 ELEVATION
20	ABUTMENT 2 DETAILS
21	ABUTMENT 2 REBAR SCHEDULE
22	FRAMING PLAN
23	BEAM DETAILS - 1
24	BEAM DETAILS - 2
25	BEAM DETAILS - 3
26	BEARING DETAILS
27	DECK GEOMETRY PLAN
28	DECK SLAB PLAN
29	DECK SLAB - PARTIAL PLANS
30	DECK SLAB - TYPICAL SECTIONS - 1
31	DECK SLAB - TYPICAL SECTIONS - 2
32	CURBS AND BARRIERS - 1
33	CURBS AND BARRIERS - 2
34	CURBS AND BARRIERS - 3
35	CURBS AND BARRIERS - 4
36	CURBS AND BARRIERS - 5
37	TRAFFIC & LIGHTING UTILITY PLAN
38	POLE PEDESTAL DETAILS
39	FINISHED DECK ELEVATIONS
40	DECK ELEVATIONS ALONG CL BEAMS
41	MISCELLANEOUS DECK ELEVATIONS
42	DECK REBAR SCHEDULE - 1
43	DECK REBAR SCHEDULE - 2
44	END DIAPHRAGM - ABUTMENT 1
45	END DIAPHRAGM - ABUTMENT 2
46	END DIAPHRAGM - SECTIONS
47	INTERMEDIATE DIAPHRAGMS
48	MISCELLANEOUS DIAPHRAGM DETAILS
49	DIAPHRAGM REBAR SCHEDULE
50	DECK DRAINAGE PLAN
51	DRAINAGE DETAILS
52	APPROACH SLAB - ABUTMENT 1
53	APPROACH SLAB - ABUTMENT 2
54	APPROACH SLAB DETAILS - 1
55	APPROACH SLAB DETAILS - 2
56	APPROACH SLAB - ABUTMENT 1 ELEVATIONS
57	APPROACH SLAB - ABUTMENT 2 ELEVATIONS
58	APPROACH SLAB CONSTRUCTION DETAILS
59	STRUCTURE BORINGS (SHEET 1 OF 6)
60	STRUCTURE BORINGS (SHEET 2 OF 6)
61	STRUCTURE BORINGS (SHEET 3 OF 6)
62	STRUCTURE BORINGS (SHEET 4 OF 6)
63	STRUCTURE BORINGS (SHEET 5 OF 6)
64	STRUCTURE BORINGS (SHEET 6 OF 6)

DES: JP	CKD: KCL	DWG: JP	CKD: KCL

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
INDEX OF DRAWINGS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 64

S-41005

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTgn001.dgn

GENERAL NOTES:

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019

AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION 2015.

LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4 DISTRIBUTION FACTORS.

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LIVE LOADS

PHL-93, P-82 (204K PERMIT LOAD) AND P2016-13 (330K PERMIT LOAD) FOR BEAMS CARRYING STATE STREET.

FATIGUE DESIGN IS BASED ON THE FOLLOWING

PRESTRESSED CONCRETE: ADTT = 405 (2043)
(ONE DIRECTIONAL)

MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE: $0.0948\sqrt{f'c}$

DEAD LOADS:

INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS THAT TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE STAY-IN-PLACE FORMS.

INCLUDES A DENSITY OF 0.135 KCF TO ACCOUNT FOR THE SOIL, CURBS, AND SIDEWALKS WITHIN THE GREEN SPACE AREAS IN EACH QUADRANT OF THE BRIDGE DECK.

INCLUDES A SURFACE AREA DENSITY OF 0.006 KSF TO ACCOUNT FOR THE MAXIMUM ALLOWABLE FUTURE LANDSCAPING THAT CAN BE INSTALLED WITHIN THE GREEN SPACE AREAS.

THE MAXIMUM PERMISSIBLE SNOW SURFACE AREA DENSITY THAT THE BRIDGE CAN CARRY IS 0.152 KSF, WHICH EQUATES TO THE FOLLOWING DEPTHS:

FRESHLY FALLEN SNOW (0.006 KCF):	25.33 FT
ACCUMULATED DEPTH (0.019 KCF):	8.00 FT
COMPACTED DEPTH (0.031 KCF):	4.90 FT

GENERAL CONSTRUCTION:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5:2015 (USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015) BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

DECK SLAB THICKNESS INCLUDES A ½ INCH INTEGRAL WEARING SURFACE.

USE EITHER PERMANENT METAL DECK FORMS OR REMOVABLE FORMS TO CONSTRUCT THE DECK SLAB. USE REMOVABLE FORMS TO CONSTRUCT THE OVERHANGS OUTSIDE THE EXTERIOR BEAMS.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEG F.

PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE. DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT THE INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.

PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(K)9.

PROVIDE A MINIMUM WIDTH OF 2 1/2" AT 68°F FOR STRIP SEAL INSTALLATIONS UNLESS OTHERWISE INDICATED.

DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.

DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.

SITE CLASS IS NOT CLASS E OR F.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND THE DESIGN OF ANY TEMPORARY SHORING AND BRACING THAT MAY BE USED. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

DIRECT ALL SURFACE RUNOFF AWAY FROM EXCAVATIONS.

CONCRETE:

USE CEMENT CONCRETE WITH A MINIMUM 28 DAY DESIGN COMPRESSIVE STRENGTH OF 5000 PSI IN PRECAST CONCRETE UNLESS OTHERWISE NOTED.

USE CLASS AAAP CEMENT CONCRETE IN THE DECK SLAB, HAUNCHES, CURB RAMPS, AND PEDESTALS POURED INTEGRAL WITH THE CURB RAMPS.

USE CLASS AAA CEMENT CONCRETE, ACCELERATED IN THE DECK CLOSURE POURS AT THE APPROACH SLABS.

USE CLASS AA CEMENT CONCRETE IN THE CURBS AND BARRIERS MOUNTED TO THE DECK, DIAPHRAGMS, CHEEKWALLS, AND SHEAR BLOCKS.

USE CLASS A CEMENT CONCRETE IN THE ABUTMENT STEMS AND FOOTINGS, MAST ARM SUPPORT PEDESTALS, AND STRAIN POLE PEDESTALS.

USE ULTRA HIGH PERFORMANCE CONCRETE FOR CLOSURE POURS BETWEEN PRECAST CONCRETE APPROACH SLAB PANELS.

USE NON-SHRINK GROUT WITH A MINIMUM 24 HOUR COMPRESSIVE STRENGTH OF 5000 PSI.

A HIGHER CLASS OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS OF CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT ENGINEER.

PROVIDE 2-INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

PLACE CHEEKWALL CONCRETE AND CONCRETE SHEAR BLOCKS AFTER BEAMS ARE SET IN POSITION.

USE RETARDER ADMIXTURE CONFORMING TO PUBLICATION 408/2020 IN THE CONCRETE DECK SLAB.

USE CORROSION INHIBITING ADMIXTURE IN THE CONCRETE DECK SLAB.

REINFORCEMENT STEEL:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, BARRIERS, OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED, UNLESS SPECIFIED.

PRESTRESSED CONCRETE BEAM NOTES:

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

STABILITY OF PARTIAL BEAMS AND COMPLETE BEAMS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION, UNTIL BEAMS AND DIAPHRAGMS ARE IN PLACE. ERECTION LOADS, INCLUDING SELF WEIGHT OF THE CONCRETE MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS, ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE BRIDGE MEMBERS DURING ANY STAGE OF ERECTION.

BRACE PRESTRESSED CONCRETE MEMBERS IN LONGITUDINAL AND LATERAL DIRECTIONS UNTIL MEMBERS ARE IN STABLE (FINAL BRACED) CONDITION.

PRIOR TO ERECTING THE BEAMS, AND IN ACCORDANCE WITH SECTION 1050(c) 2.d, SUBMIT AN ERECTION PLAN SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR REVIEW AND APPROVAL.

APPLY AESTHETIC COLOR COATING (MEDIUM GRAY) TO EXPOSED OUTSIDE FACE AND BOTTOM OF FASCIA BEAMS. COLOR SHALL MATCH FEDERAL COLOR ID 36492. SUBMIT COLOR CHIP FOR APPROVAL.

APPROACH SLAB NOTES:

APPROACH SLABS AND SLEEPER SLABS SHALL BE PRECAST AND INSTALLED ONCE THE CONCRETE END DIAPHRAGMS AND BRIDGE DECK ARE CONSTRUCTED TO THE LIMITS IDENTIFIED.

CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES AT ABUTMENT 1 WITH UPMC HAMOT.

SHOW LIFTING LOCATIONS FOR ALL COMPONENTS. CONTRACTOR TO DESIGN LIFTING HARDWARE.

THE CONTRACTOR MAY SUBSTITUTE ALTERNATE LEVELING DEVICES PROVIDED THEY CAN PRODUCE A STRUCTURE WITHIN THE SPECIFIED ERECTION TOLERANCES.

USE A TROWEL FINISH ON THE TOP SURFACES OF ALL PRECAST ELEMENTS.

UTILITY NOTES:

COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY, TYPE, SIZE, AND LOCATION OF UTILITIES.

DES: KCL	CKD: SRM	DWG: JP	CKD: KCL

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL NOTES - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 64

S-41005

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SS\sheets\FINAL\bridge_SSSTgn002.dgn

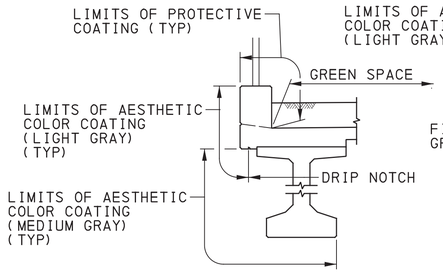
PROTECTIVE/AESTHETIC COATINGS:

APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUPERSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE EXPOSED SURFACES OF THE DECK WITHIN THE TRAVELWAY, TO THE APPROACH SLABS, TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE FASCIA BARRIERS (INCLUDING DOWN TO THE UNDERSIDE OF DECK TO THE DRIP NOTCH), AND TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE TYPE 10M BRIDGE BARRIERS.

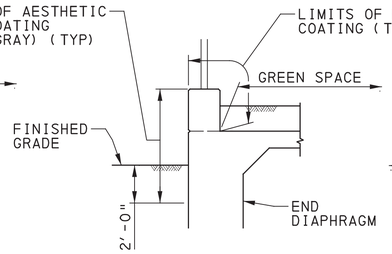
APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUBSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE EXPOSED OUTSIDE FACES OF THE CHEEKWALLS.

APPLY AESTHETIC COLOR COATING TO THE OUTSIDE FACE AND UNDERSIDE OF THE FASCIA BARRIERS, TO THE OUTSIDE OF THE END BARRIERS, AND ON THE EXPOSED FACE OF THE CHEEKWALLS (EXTENDING 2'-0" BELOW FINISHED GROUND WHERE APPLICABLE).

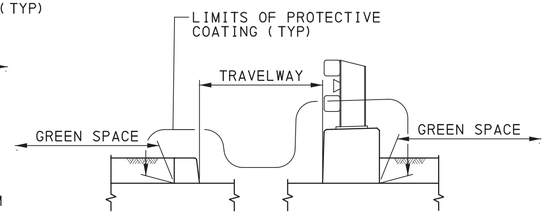
COLORS SHALL MATCH FEDERAL COLOR ID 36650 (LIGHT GRAY) AND 36492 (MEDIUM GRAY). SUBMIT COLOR CHIPS FOR APPROVAL.



FASCIA BARRIERS



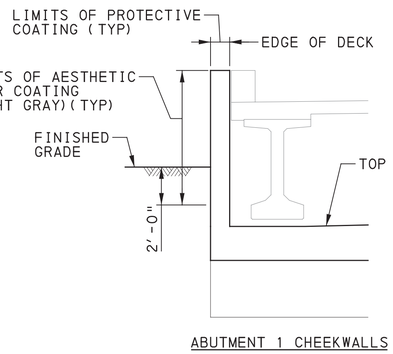
END BARRIER
(SW QUADRANT)



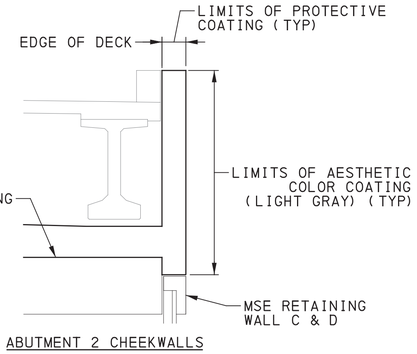
TRAVELWAY / CURBS / TYPE 10M BRIDGE BARRIER

SUPERSTRUCTURE COATING LIMITS

NOT TO SCALE



ABUTMENT 1 CHEEKWALLS



ABUTMENT 2 CHEEKWALLS

SUBSTRUCTURE COATING LIMITS

NOT TO SCALE

FOUNDATION NOTES:

PROVIDE HP 12X74 PILES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTION 1005.2(C).

EXCAVATE TO THE BOTTOM OF PILE CAP ELEVATION BEFORE PRE-DRILLING.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

PRE-DRILL ALL PILES TO THE BOTTOM OF ROCK SOCKET ELEVATION. PRE-DRILLED HOLES AND ROCK SOCKETS SHALL BE A MINIMUM OF 2.0 FEET IN DIAMETER.

ATTACH WELDED SHEAR STUDS TO THE LOWER PORTION OF THE PILES AND ENCASE THE STUDS IN THE CONCRETE OF THE ROCK SOCKET. VIBRATE THE PILES TO ENSURE THE CONCRETE ADHERES TO THE STUDS.

IF ANCHORS FROM EXISTING WALL NEAR ABUTMENT 1 ARE NOT REMOVED, PREDRILLING THROUGH EXISTING ANCHORS MAY BE REQUIRED.

CLEAN THE PRE-DRILLED HOLES TO REMOVE LOOSE/SOFT MATERIAL AT THE BOTTOM OF THE HOLE. UTILIZE TEMPORARY CASING AS NECESSARY TO MAINTAIN CLEAN OPEN HOLES. PRE-DRILLED HOLES SHALL BE INSPECTED AND APPROVED BY THE REPRESENTATIVE.

THE REPRESENTATIVE IS TO INSPECT AND APPROVE OF THE PILE INSTALLATION METHOD. PROVIDE A MINIMUM OF 48 HOUR NOTICE TO THE REPRESENTATIVE FOR INSPECTION.

PLACE PILES INTO PRE-DRILLED HOLES PRIOR TO BACKFILLING. BACKFILL PRE-DRILLED HOLES WITH CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI TO THE TOP-OF-ROCK SOCKET (TRS) ELEVATIONS USING THE TREMIE METHOD. BACKFILL THE PRE-DRILLED HOLES IN ACCORDANCE WITH THE DETAIL, H-PILE SOCKET DETAIL. DO NOT DRIVE PILES.

BACKFILL THE REMAINDER OF THE PRE-DRILLED HOLES WITH NO. 57 COARSE AGGREGATE.

BRIDGE LOAD RATINGS TABLE (WITH FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 464 (2021)								
ADTT: 540 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
		33/63.25 P/S CONCRETE PA BULB-TEE BEAMS						
		H-20	HS-20	ML-80	TK-527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B21	B21	B21	B21	B22	-----	-----
	DISTRIBUTION FACTOR	(2)	(2)	(2)	(2)	(2)	-----	-----
	LOCATION (DISTANCE)	0.50L	0.50L	0.50L	0.50L	0.50L	-----	-----
	LIMIT STATE	SER-IIIP	SER-IIIP	SER-IIIP	SER-IIIP	SER-III	-----	-----
	RATING FACTOR	1.38 M	1.38 M	1.00 M	1.15 M	1.03 M	-----	-----
OPERATING RATING (OR)	CRITICAL MEMBER	B22	B22	B22	B22	B22	B22	B16
	DISTRIBUTION FACTOR	(2)	(2)	(2)	(2)	(2)	(2)	0.918
	LOCATION (DISTANCE)	0.60L	0.60L	0.60L	0.60L	0.60L	0.60L	0.94L
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.26 S	2.26 S	1.63 S	1.87 S	1.34 S	1.28 S	1.24 S
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KSI): 0.268								
LOCATION: 0.50L								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 176.0 (B22) / 506.7 (B16)								
LOCATION: 0.60L (B22) / 0.94L (B16)								

BRIDGE LOAD RATINGS TABLE (WITHOUT FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 464 (2021)								
ADTT: 540 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
		33/63.25 P/S CONCRETE PA BULB-TEE BEAMS						
		H-20	HS-20	ML-80	TK-527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B21	B21	B21	B21	B22	-----	-----
	DISTRIBUTION FACTOR	(2)	(2)	(2)	(2)	(2)	-----	-----
	LOCATION (DISTANCE)	0.50L	0.50L	0.50L	0.50L	0.60L	-----	-----
	LIMIT STATE	SER-IIIP	SER-IIIP	SER-IIIP	SER-IIIP	STR-I	-----	-----
	RATING FACTOR	1.47 M	1.47 M	1.06 M	1.22 M	1.08 S	-----	-----
OPERATING RATING (OR)	CRITICAL MEMBER	B22	B22	B22	B22	B22	B22	B16
	DISTRIBUTION FACTOR	(2)	0.918	(2)	(2)	(2)	(2)	0.918
	LOCATION (DISTANCE)	0.60L	0.60L	0.60L	0.60L	0.60L	0.60L	0.94L
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.36 S	2.36 S	1.70 S	1.96 S	1.40 S	1.34 S	1.31 S
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KSI): 0.268								
LOCATION: 0.50L								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 176.0 (B22) / 519.7 (B16)								
LOCATION: 0.60L (B22) / 0.94L (B16)								

NOTES:
1. "M" DENOTES MOMENT (FLEXURE) GOVERNS, "S" DENOTES SHEAR GOVERNS THE RATING FACTOR.
2. THE GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING. DISTRIBUTION FACTORS ARE NOT USED FOR FLOORBEAMS PER PENNDOT'S FBLRFD PROGRAM, VERSION 1.7.0.0, OUTPUT.
3. "L" DENOTES SPAN LENGTH OF 103.33 FEET.
4. FLEXURE RATINGS ARE OBTAINED FROM PENNDOT'S PSLRFD PROGRAM, VERSION 2.14.0.0 FOR BEAMS AND FLOORBEAMS.
5. SHEAR RATINGS FOR BEAMS B11-B16 ARE OBTAINED FROM PSLRFD MODELS.
6. SHEAR RATINGS FOR THE REMAINING BEAMS ARE OBTAINED FROM A SPREADSHEET COMBINING LIVE LOAD REACTIONS FROM FBLRFD MODELS AND DEAD LOAD REACTIONS FROM PSLRFD MODELS.
7. LOAD RATINGS INCLUDE A 6 PSF DC2 DEAD LOAD WITHIN THE GREEN SPACE AREAS TO ACCOUNT FOR FUTURE LANDSCAPING.
8. ADTT VALUES PROVIDED ARE FOR STATE STREET. DESIGN YEAR ADTT (2043) FOR THE WEST RAMP AND EAST RAMP ARE 155 AND 84 RESPECTIVELY.

TEST PILE DATA						
SUBSTRUCTURE UNIT	PILE TYPE	PILE TIP (NONE/NORMAL /HEAVY DUTY)	PILE TIP ELEVATION	FACTORED DESIGN LOAD (KIP)	ULTIMATE PILE CAPACITY AT END OF DRIVING (KIP)	WEAP OR PDA
ABUTMENT 1						
ABUTMENT 2						

THIS TABLE IS TO BE COMPLETED FOR THE TEST PILES AFTER INSTALLATION ON THE "AS-BUILT" PLANS.

Mark	Description	By	Chk'd.	Rec'm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

GENERAL NOTES - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 6 OF 64

S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: REB

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTqu001.dgn

ALTERNATE STRUCTURE ITEMS

ITEM NO	DESCRIPTION		UNIT	TOTAL
8030-0001	BRIDGE STRUCTURE, AS DESIGNED, S-41005	(2)	LS	LUMP SUM
8000-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE	(2)	LS	LUMP SUM
8100-0001	STEEL BRIDGE STRUCTURE	(2)	LS	LUMP SUM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION		UNIT	ABUT 1	ABUT 2	SUPER-STRUCTURE	TOTAL
8030-0001	BRIDGE STRUCTURE, AS DESIGNED, S-41005	(2)	LS				
(1)	CLASS 3 EXCAVATION	(3)	CY	760			760
(1)	ELASTOMER WATERPROOFING MEMBRANE ON BRIDGE DECK	(2)	SY			1315	1315
(1)	MEMBRANE WATERPROOFING INSTALLED ON BRIDGE DECK, MODIFIED	(2)	SY			1315	1315
(1)	MEMBRANE WATERPROOFING INSTALLED ON OTHER SURFACES	(4)	SY	195	205		400
(1)	CLASS AAAP CEMENT CONCRETE	(5)	CY			755	755
(1)	CLASS AAA CEMENT CONCRETE, ACCELERATED	(6)	CY			20	20
(1)	CLASS AA CEMENT CONCRETE	(7)	CY	6	2	245	253
(1)	CLASS A CEMENT CONCRETE		CY	220	216	2	438
(1)	ULTRA HIGH PERFORMANCE CONCRETE	(2)	CY			10	10
(1)	NON-SHRINK GROUT	(8)	CY			5	5
(1)	STRUCTURE BACKFILL	(9)	CY	350			350
(1)	GEOTEXTILE, CLASS 4, TYPE A		SY			1250	1250
(1)	NO. 57 COARSE AGGREGATE	(10)	CY	40		140	180
(1)	6" STRUCTURE FOUNDATION DRAIN		LF	240			240
(1)	3" UNDERDRAIN		LF			2580	2580
(1)	4" UNDERDRAIN		LF			510	510
(1)	YARD DRAIN	(2)	EACH			14	14
(1)	SCUPPER, TYPE 1		EACH			2	2
(1)	SCUPPER, TYPE 2		EACH			2	2
(1)	DOWNSPOUTING	(11)	LF			150	150
(1)	PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 63.25"		LF			2625	2625
(1)	PRECAST APPROACH SLAB PANEL		EACH	6	6		12
(1)	PRECAST SLEEPER SLAB		EACH	1	1		2
(1)	LAMINATED NEOPRENE BEARING PAD	(12)	EACH	26	25		51
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE SURFACES), MODIFIED	(2)(13)	SY			1880	1880
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUBSTRUCTURE SURFACES)	(13)	SY	1	1		2
(1)	HIGH MOLECULAR WEIGHT METHACRYLATE DECK JOINT SEALER	(2)	SF			80	80
(1)	MECHANICAL TEXTURING WITH LONGITUDINAL SAWED GROOVES		SY			1650	1650
(1)	AESTHETIC COLOR COATING (LIGHT GRAY)	(2)	SY	8	12	95	115
(1)	AESTHETIC COLOR COATING (MEDIUM GRAY)	(2)	SY			225	225

(1) COMPONENT ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8030-0001 GIVEN FOR INFORMATION ONLY.

(2) SEE SPECIAL PROVISIONS.

(3) CLASS 3 EXCAVATION REQUIRED AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(4) INCLUDES THE MEMBRANE WATERPROOFING INSTALLED ALONG THE REAR FACE OF THE END DIAPHRAGMS AND ABUTMENT STEMS PER THE STANDARD DRAWINGS.

(5) INCLUDES APPROXIMATELY 56 CUBIC YARDS TO ACCOUNT FOR STAY-IN-PLACE FORMS.

(6) INCLUDES CLASS AAA CEMENT CONCRETE, ACCELERATED IN THE CLOSURE POUR BETWEEN THE DECK AND END DIAPHRAGMS AT THE APPROACH SLABS.

(7) INCLUDES CLASS AA CEMENT CONCRETE IN THE CONCRETE DIAPHRAGMS, CHEEKWALLS, AND SHEAR BLOCKS.

(8) INCLUDES GROUT BELOW THE PRECAST CONCRETE SLEEPER SLABS, AND BENEATH THE ENDS OF THE PRECAST CONCRETE APPROACH SLABS ALONG THE PAVING NOTCHES AND SLEEPER SLABS.

(9) INCLUDES STRUCTURE BACKFILL AT ABUTMENT 1 ONLY. BACKFILL AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(10) GEOTEXTILE, CLASS 1 ALONG THE STRUCTURE FOUNDATION DRAIN IS INCIDENTAL TO THIS ITEM.

(11) LENGTH OF DOWNSPOUTING INCLUDES BOTH THE 8" AND 10" DIAMETER PIPES. HANGER SYSTEMS AND DRAIN BOXES ARE INCIDENTAL TO THIS ITEM.

(12) INCLUDES 1 TEST BEARING AT ABUTMENT 1. INCLUDES 1 TEST BEARING AT ABUTMENT 1. COST OF BEARINGS ARE INCIDENTAL TO PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 63.25"

(13) ONLY APPLY PROTECTIVE COATING IF CONCRETE IS POURED BETWEEN SEPTEMBER 1 AND MARCH 1, PER PUBLICATION 408, SECTION 1001.3(k)6.

(14) ATTACHMENT TO CONCRETE BARRIER IS INCIDENTAL TO THIS ITEM.

(15) GALVANIZED PIPE OVER EACH PILE AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(16) INCLUDES APPROXIMATELY 1215 LBS OF STAINLESS STEEL DOWELS.

(17) STUDS WELDED TO THE STEEL H-PILE ARE INCIDENTAL TO THIS ITEM. NO 57 COARSE AGGREGATE AND CLASS A CEMENT CONCRETE USED TO BACKFILL THE PREDRILLED HOLES ARE ALSO INCIDENTAL TO THIS ITEM.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
SUMMARY OF QUANTITIES - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 64

S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: REB

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTqu002.dgn

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION		UNIT	ABUT 1	ABUT 2	SUPER-STRUCTURE	TOTAL
(1)	ORNAMENTAL PEDESTRIAN RAILING	(2)	LF			220	220
(1)	PA TYPE 10M BRIDGE BARRIER, MODIFIED	(2)(14)	LF			155	155
(1)	1" CONDUIT IN STRUCTURE		LF	5			5
(1)	2" CONDUIT IN STRUCTURE		LF	85	80	30	195
(1)	3" CONDUIT IN STRUCTURE		LF	10	15	25	50
(1)	4" CONDUIT IN STRUCTURE		LF	35	20		55
(1)	FABRICATED STRUCTURAL STEEL, GALVANIZED		LB			1600	1600
AND							
1002-0052	REINFORCEMENT BARS, EPOXY COATED	(16)	LB	19000	19500	204500	243000
AND							
1002-0138	MECHANICAL SPLICE SYSTEM FOR NO. 4 REINFORCEMENT BARS, EPOXY COATED		EACH			835	835
AND							
1002-0140	MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEMENT BARS, EPOXY COATED		EACH			285	285
AND							
1002-0142	MECHANICAL SPLICE SYSTEM FOR NO. 6 REINFORCEMENT BARS, EPOXY COATED		EACH			145	145
5005-1410	MANDATORY PREDRILLING FOR DRIVEN PILES, MODIFIED	(2)	LF	1210	495		1705
5005-1825	STEEL HP12x74 PRODUCTION PILE, MODIFIED	(2)(15)(17)	LF	1260	1360		2620

(1) COMPONENT ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8030-0001 GIVEN FOR INFORMATION ONLY.

(2) SEE SPECIAL PROVISIONS.

(3) CLASS 3 EXCAVATION REQUIRED AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(4) INCLUDES THE MEMBRANE WATERPROOFING INSTALLED ALONG THE REAR FACE OF THE END DIAPHRAGMS AND ABUTMENT STEMS PER THE STANDARD DRAWINGS.

(5) INCLUDES APPROXIMATELY 56 CUBIC YARDS TO ACCOUNT FOR STAY-IN-PLACE FORMS.

(6) INCLUDES CLASS AAA CEMENT CONCRETE, ACCELERATED IN THE CLOSURE POUR BETWEEN THE DECK AND END DIAPHRAGMS AT THE APPROACH SLABS.

(7) INCLUDES CLASS AA CEMENT CONCRETE IN THE CONCRETE DIAPHRAGMS, CHEEKWALLS, AND SHEAR BLOCKS.

(8) INCLUDES GROUT BELOW THE PRECAST CONCRETE SLEEPER SLABS, AND BENEATH THE ENDS OF THE PRECAST CONCRETE APPROACH SLABS ALONG THE PAVING NOTCHES AND SLEEPER SLABS.

(9) INCLUDES STRUCTURE BACKFILL AT ABUTMENT 1 ONLY. BACKFILL AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(10) GEOTEXTILE, CLASS 1 ALONG THE STRUCTURE FOUNDATION DRAIN IS INCIDENTAL TO THIS ITEM.

(11) LENGTH OF DOWNSPOUTING INCLUDES BOTH THE 8" AND 10" DIAMETER PIPES. HANGER SYSTEMS AND DRAIN BOXES ARE INCIDENTAL TO THIS ITEM.

(12) INCLUDES 1 TEST BEARING AT ABUTMENT 1. INCLUDES 1 TEST BEARING AT ABUTMENT 1. COST OF BEARINGS ARE INCIDENTAL TO PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 63.25"

(13) ONLY APPLY PROTECTIVE COATING IF CONCRETE IS POURED BETWEEN SEPTEMBER 1 AND MARCH 1, PER PUBLICATION 408, SECTION 1001.3(k)6.

(14) ATTACHMENT TO CONCRETE BARRIER IS INCIDENTAL TO THIS ITEM.

(15) GALVANIZED PIPE OVER EACH PILE AT ABUTMENT 2 IS INCIDENTAL TO STRUCTURE S-41009D.

(16) INCLUDES APPROXIMATELY 1215 LBS OF STAINLESS STEEL DOWELS.

(17) STUDS WELDED TO THE STEEL H-PILE ARE INCIDENTAL TO THIS ITEM. NO 57 COARSE AGGREGATE AND CLASS A CEMENT CONCRETE USED TO BACKFILL THE PREDRILLED HOLES ARE ALSO INCIDENTAL TO THIS ITEM.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
SUMMARY OF QUANTITIES - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

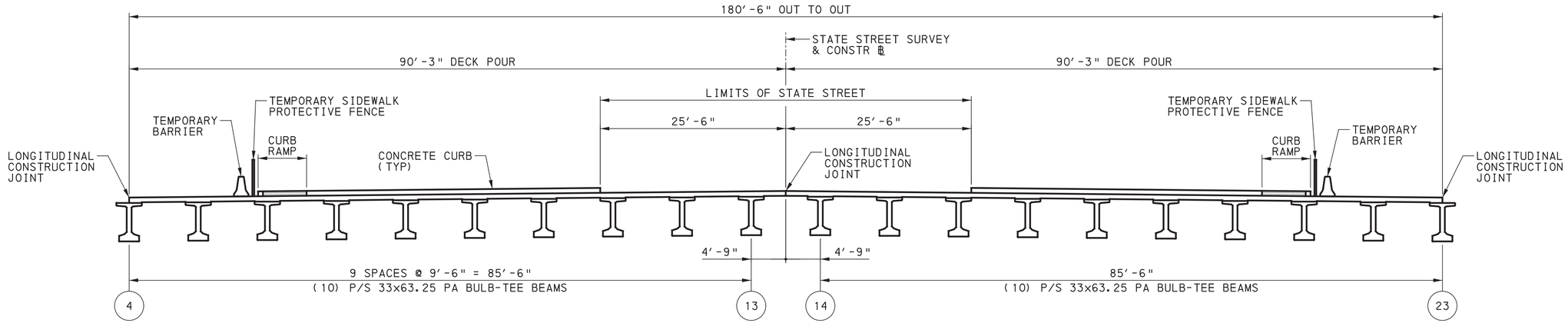
RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 64

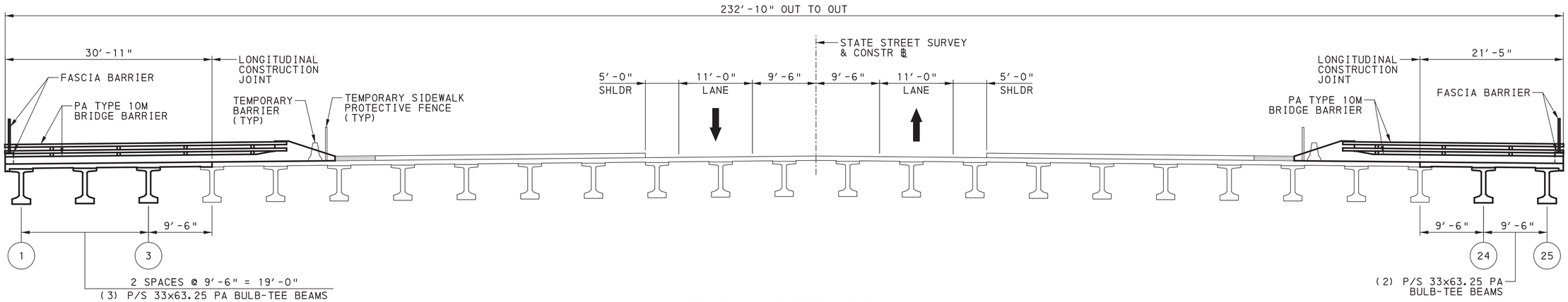
S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: REB

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SS\sheets\FINAL\bridge_SS\Tpc001.dgn



STAGE 3 CONSTRUCTION
(ROAD CLOSED)



STAGE 4 CONSTRUCTION

CONSTRUCTION SEQUENCE

STAGE 2A

1. CONSTRUCT ABUTMENT 1.

STAGE 3B

1. CONSTRUCT ABUTMENT 2.
2. PLACE BEAMS B4-B23.
3. CONSTRUCT DECK IN TWO (2) POURS TO THE LIMITS OF THE BLOCKOUT AT EACH ABUTMENT.
4. CONSTRUCT END DIAPHRAGMS TO THE ROUGH CONSTRUCTION JOINT LIMITS.
5. CONSTRUCT CONCRETE CURBS, CURB RAMPS, SIDEWALKS, AND TRAFFIC POLE PEDESTALS. INSTALL TRAFFIC CONTROL EQUIPMENT.

STAGE 3E

1. INSTALL PRECAST SLEEPER SLABS AND PLACE GROUT BELOW THE SLABS (CURE 8 HOURS).
2. INSTALL PRECAST APPROACH SLAB PANELS.
3. PLACE ULTRA HIGH PERFORMANCE CONCRETE IN THE LONGITUDINAL APPROACH SLAB JOINTS AND UTILITY HOLE BLOCKOUT (CURE 8 HOURS).
4. PLACE GROUT BELOW APPROACH SLABS (CURE 8 HOURS).
5. PLACE CLASS AAA CEMENT CONCRETE, ACCELERATED FOR THE DECK CLOSURE POUR (CURE 24 HOURS).
6. PLACE 3" WIDE HIGH MOLECULAR WEIGHT METHACRYLATE DECK JOINT SEALER (HMWM) ALONG THE CONSTRUCTION JOINT.
7. OPEN STATE STREET TO TRAFFIC.

STAGE 4

1. PLACE BEAMS B1-B3 AND B24-B25.
2. CONSTRUCT REMAINING DECK AND DIAPHRAGMS.
3. PLACE 3" WIDE HMWM DECK JOINT SEALER ALONG THE CONSTRUCTION JOINTS.
4. CONSTRUCT PA TYPE 10M BRIDGE BARRIERS, FASCIA BARRIERS, AND INSTALL FENCING.
5. INSTALL MEMBRANE WATERPROOFING AND DRAINAGE SYSTEM ON THE DECK.

NOTES:

1. STAGE NUMBERS CORRESPOND TO THOSE DETAILED IN THE TRAFFIC CONTROL PLANS.

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 3

FOR LIMITS OF TEMPORARY BARRIER AND PROTECTIVE FENCE, SEE TRAFFIC CONTROL PLANS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
STAGING DETAILS

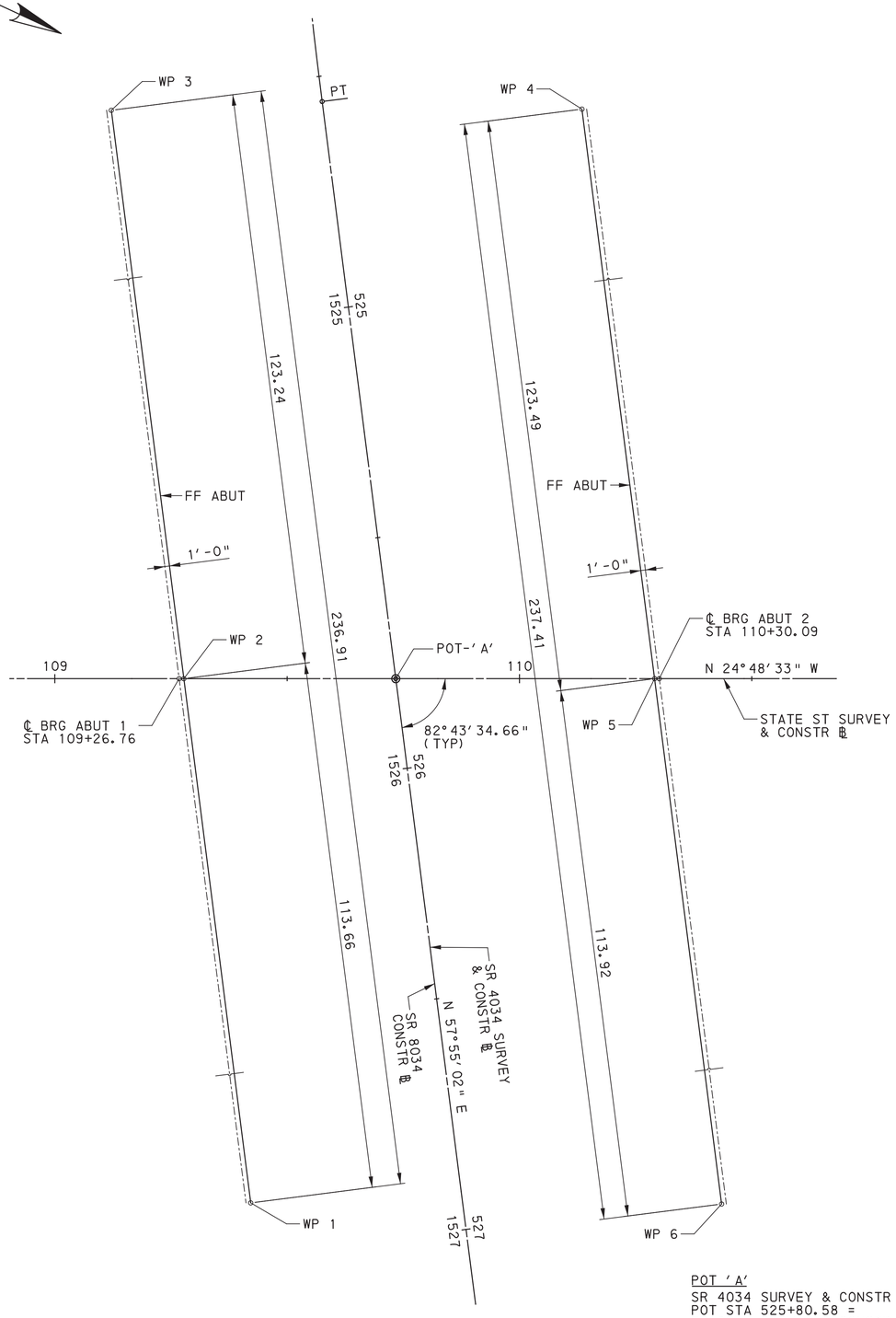
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — KEVIN CHARLES LIVENGOOD — ENGINEER — PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: REB



STAKE-OUT PLAN

5 0 15 FEET

POT 'A'
SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

WORK POINTS				
WORK POINTS	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	109+42.16	112.75' RT	725525.9706	1334361.2679
WP 2	109+27.77	0.00'	725465.5982	1334264.9620
WP 3	109+12.16	122.25' LT	725400.1388	1334160.5416
WP 4	110+13.45	122.50' LT	725491.9699	1334117.8164
WP 5	110+29.08	0.00'	725557.5631	1334222.4503
WP 6	110+43.51	113.00' RT	725618.0695	1334318.9698

LEGEND

WP = WORKPOINT

NOTES:

1. FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

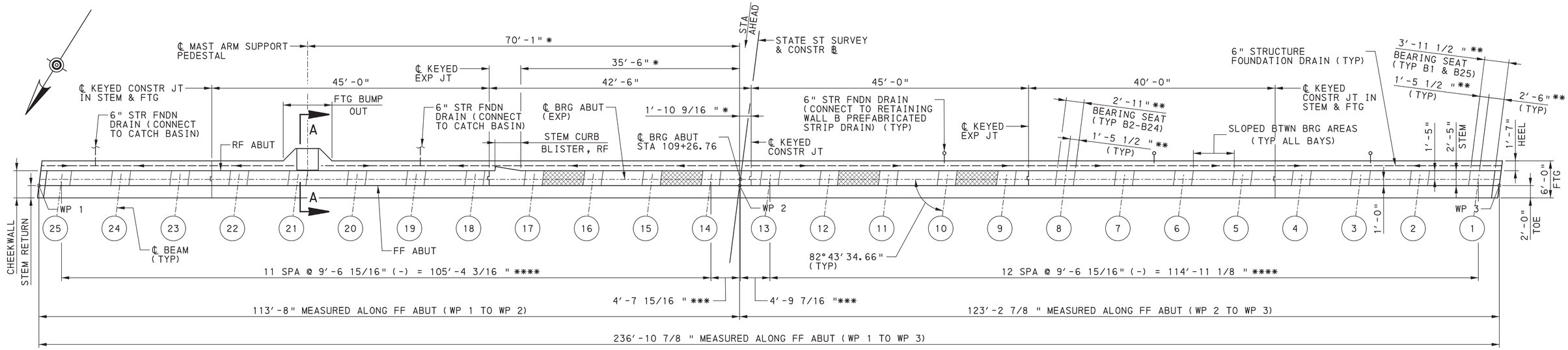
SHEET 10 OF 64

S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

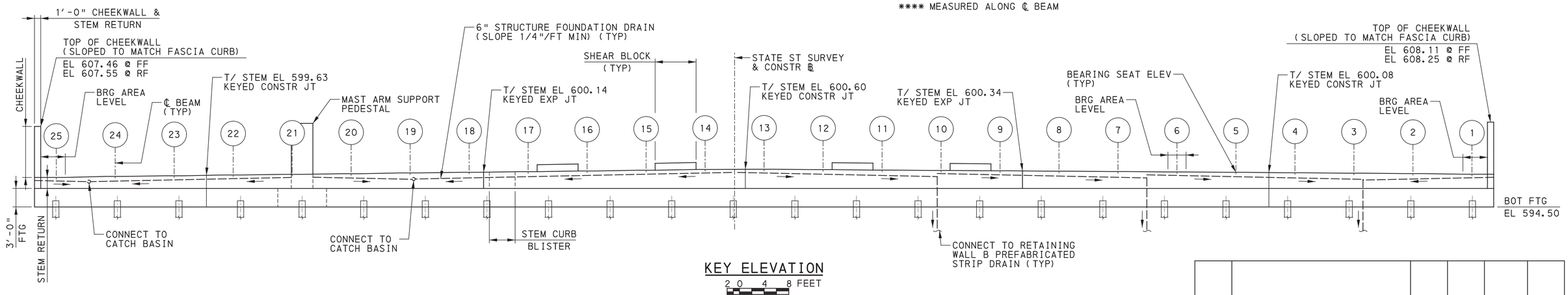
PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTsp001.dgn



KEY PLAN
2 0 4 8 FEET

* MEASURED FROM WP 2 ALONG ABUT FF
** MEASURED NORMAL TO ℄ BEAM
*** MEASURED FROM THE INTERSECTION OF STATE ST SURVEY & CONSTR ℄ ALONG ℄ BRG
**** MEASURED ALONG ℄ BEAM



KEY ELEVATION
2 0 4 8 FEET

BEARING SEAT ELEVATIONS																									
BEAM NO	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25
ELEVATION	599.81	599.91	599.98	600.04	600.12	600.18	600.24	600.30	600.36	600.42	600.48	600.55	600.61	600.58	600.45	600.33	600.22	600.12	600.02	599.89	599.79	599.69	599.55	599.45	599.29

LEGEND:

(#) - DENOTES BEAM NUMBER

- DENOTES SHEAR BLOCK

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 14
FOR STEM REINFORCEMENT, SEE SHEET 13
FOR FOOTING REINFORCEMENT, SEE SHEET 12
FOR MAST ARM SUPPORT PEDESTAL, SECTION A-A, SEE SHEET 15
FOR STEM CURB BLISTER DETAIL, SEE SHEET 14
FOR SHEAR BLOCK DETAILS, SEE SHEET 14
FOR STAKE-OUT PLAN, SEE SHEET 10

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 KEY PLAN & ELEVATION

REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023 COMMONWEALTH OF PENNSYLVANIA

RECOMMENDED AUGUST 22, 2022

SHEET 11 OF 64

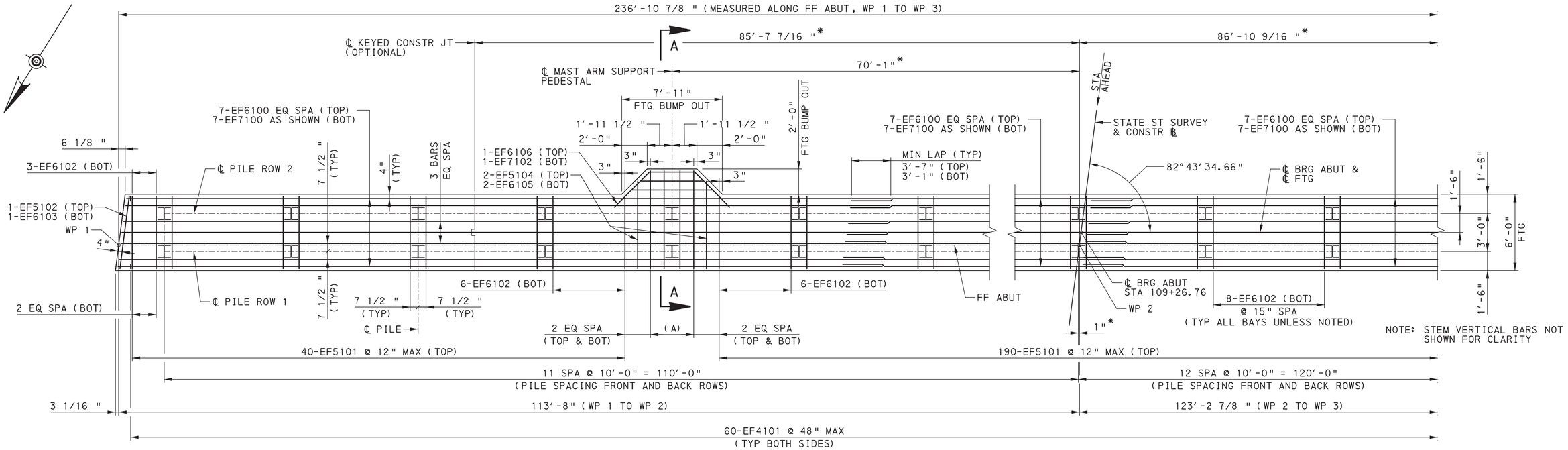
S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\06\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa1002.dgn

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SSSTa1001.dgn



ABUTMENT PILE LOADS

LOCATION	CONTROLLING LIMIT STATE		AXIAL (KIPS)		LATERAL (KIPS)	
			FACTORED LOAD	RESISTANCE	FACTORED LOAD	RESISTANCE
ABUT 1	STRENGTH	STR-III	359.61	432.00	-	-
	STRENGTH	STR-I	-	-	9.65	SEE NOTE

NOTE: LATERAL RESISTANCE IS TO BE PROVIDED BY RETAINING WALL B.

PLAN
2 0 2 4 FEET

(A) 5-EF5103 @ 12" MAX (TOP)
4-EF6104 @ 15" MAX (BOT)

* MEASURED FROM WP 2 ALONG ABUT FF

LEGEND:

I INDICATES VERTICAL PILES, HP12x74

NOTES:

1. PLACE BOTTOM MAT REINFORCEMENT AT EQUAL SPACES BETWEEN PILES AS SHOWN WITH 1" MINIMUM CLEAR SPACE AT PILES.

REFERENCES:

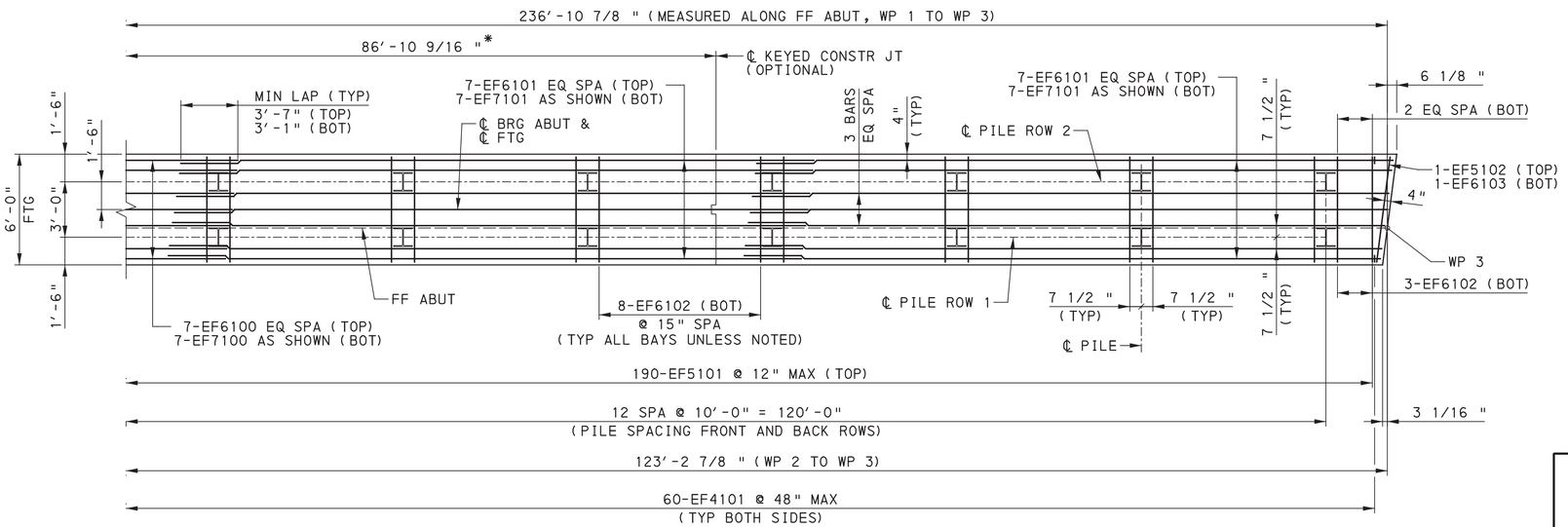
FOR STAKE-OUT PLAN, SEE SHEET 10

FOR TYPICAL SECTION, SEE SHEET 14

FOR STEM REINFORCEMENT, SEE SHEET 13

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 16

FOR SECTION A-A, SEE SHEET 15



NOTE: STEM VERTICAL BARS NOT SHOWN FOR CLARITY

PLAN
2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

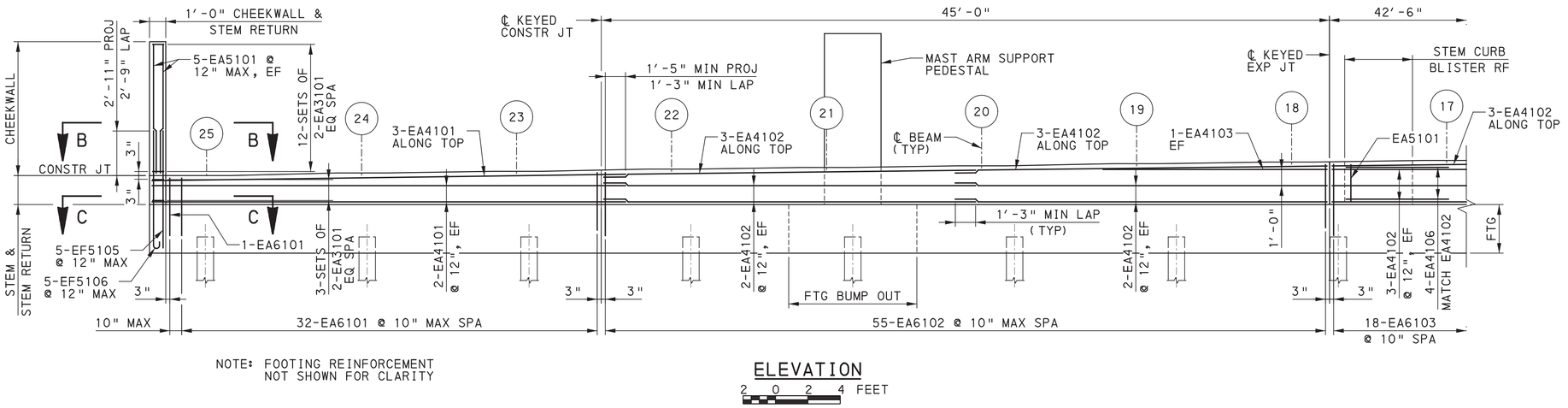
RECOMMENDED AUGUST 22, 2022

SHEET 12 OF 64

S-41005

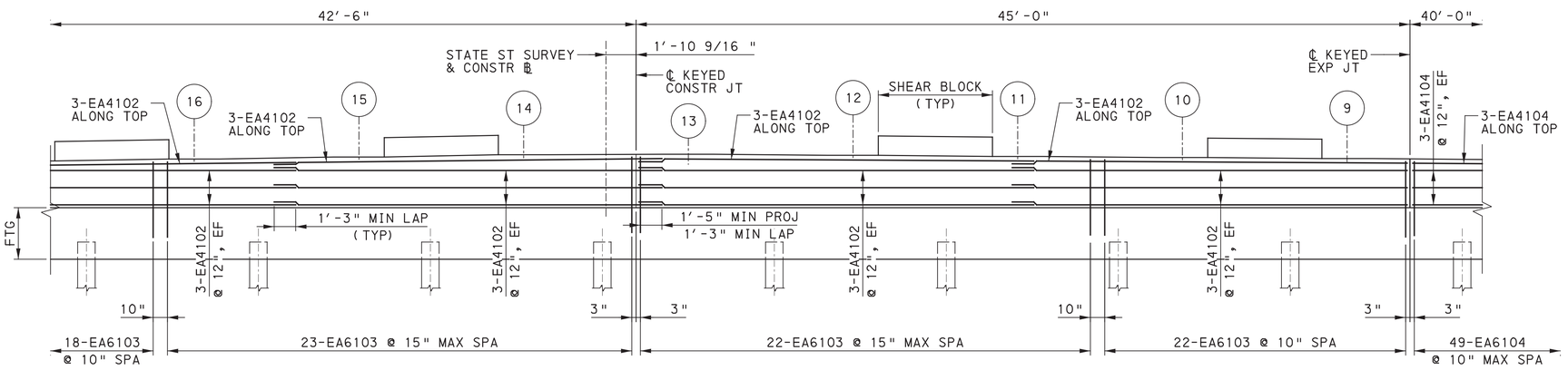
DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa1003.dgn



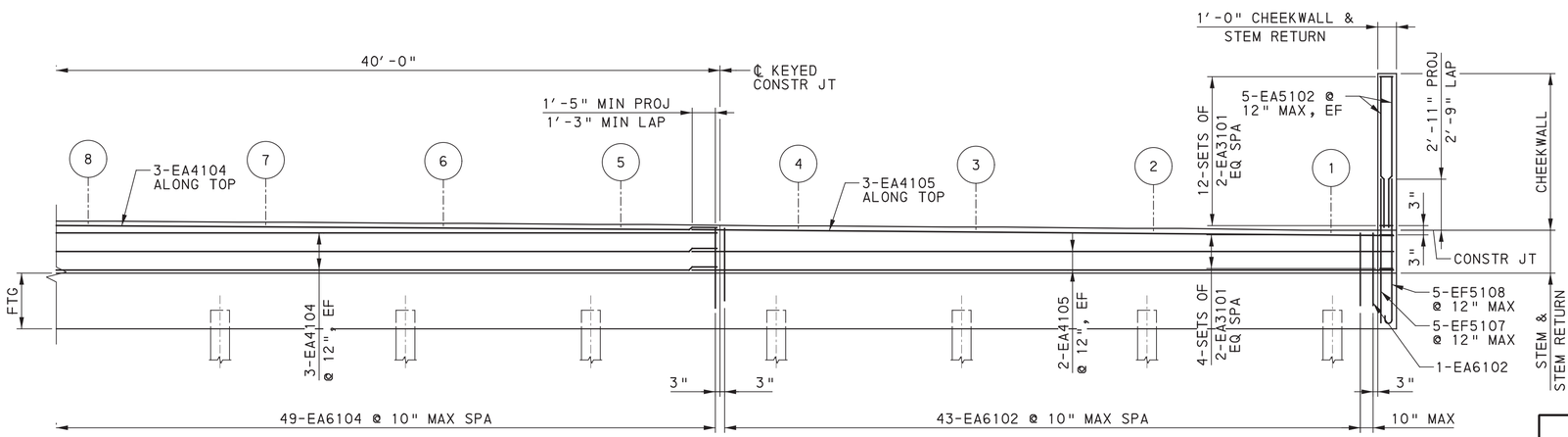
NOTE: FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

ELEVATION
2 0 2 4 FEET



NOTE: FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

ELEVATION
2 0 2 4 FEET



NOTE: FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

ELEVATION
2 0 2 4 FEET

REFERENCES:

FOR ABUTMENT DIMENSIONS AND ELEVATIONS, SEE SHEET 11
FOR FOOTING BAR DESIGNATIONS, SEE SHEET 12
FOR ADDITIONAL STEM REINFORCEMENT DETAILS, SEE SHEET 14
FOR TYPICAL SECTION AND SECTIONS B-B & C-C, SEE SHEET 14
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 16

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

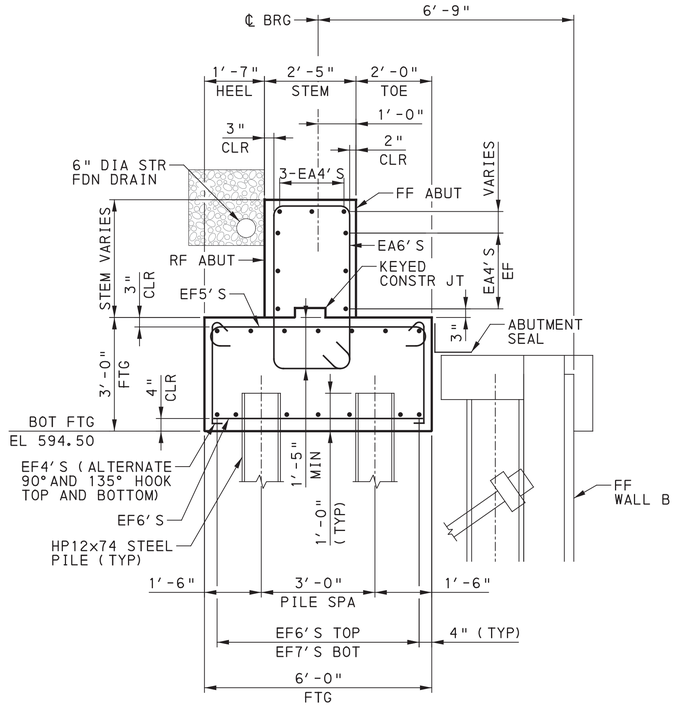
RECOMMENDED AUGUST 22, 2022

SHEET 13 OF 64

S-41005

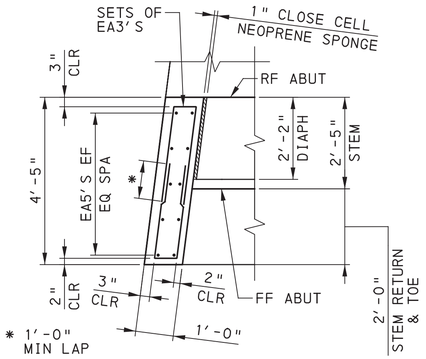
DES:	KCL	CKD:	SRM	DWG:	KCL	CKD:	SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mnsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa1004.dgn



TYPICAL SECTION

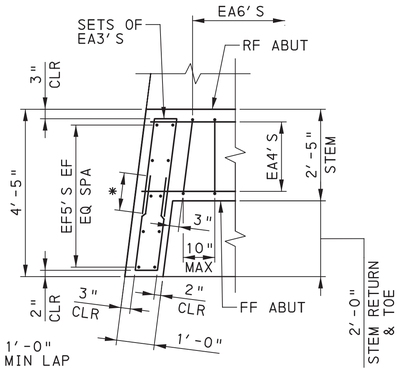
1 0 1 2 FEET



CHEEKWALL SECTION B-B

1 0 1 2 FEET

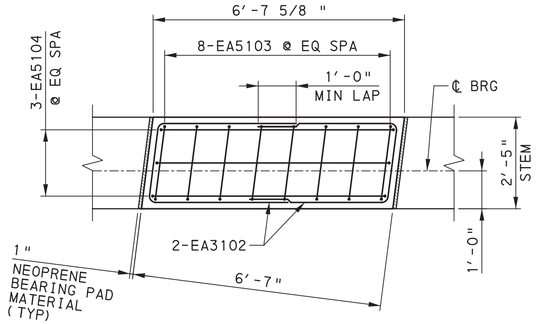
BEAM B25 SHOWN
(BEAM B1 SIMILAR)



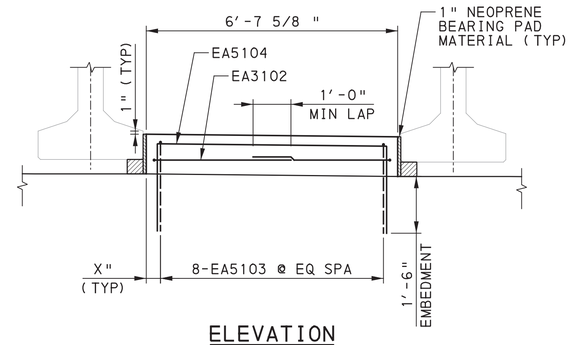
STEM RETURN SECTION C-C

1 0 1 2 FEET

BEAM B25 SHOWN
(BEAM B1 SIMILAR)



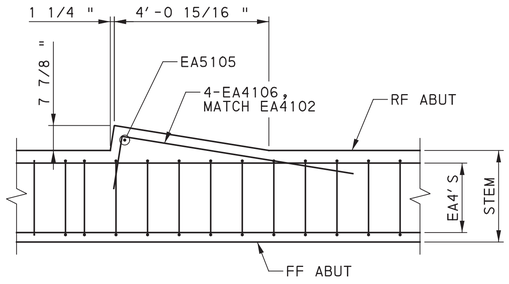
PLAN



ELEVATION

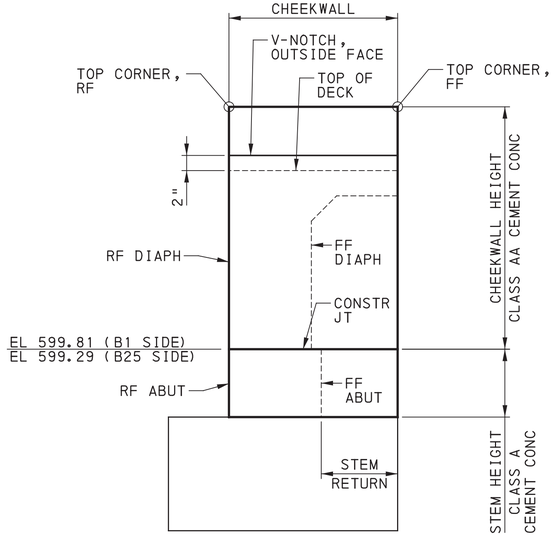
SHEAR BLOCK DETAILS

1 0 1 2 FEET



STEM CURB BLISTER DETAIL

1 0 1 2 FEET



STEM AND CHEEKWALL ELEVATION

NOT TO SCALE
BEAM B25 SHOWN
(BEAM B1 SIMILAR)

REFERENCES:

FOR PRE-DRILLED H-PILE WITH ROCK SOCKET DETAIL, SEE SHEET 15

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 16

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

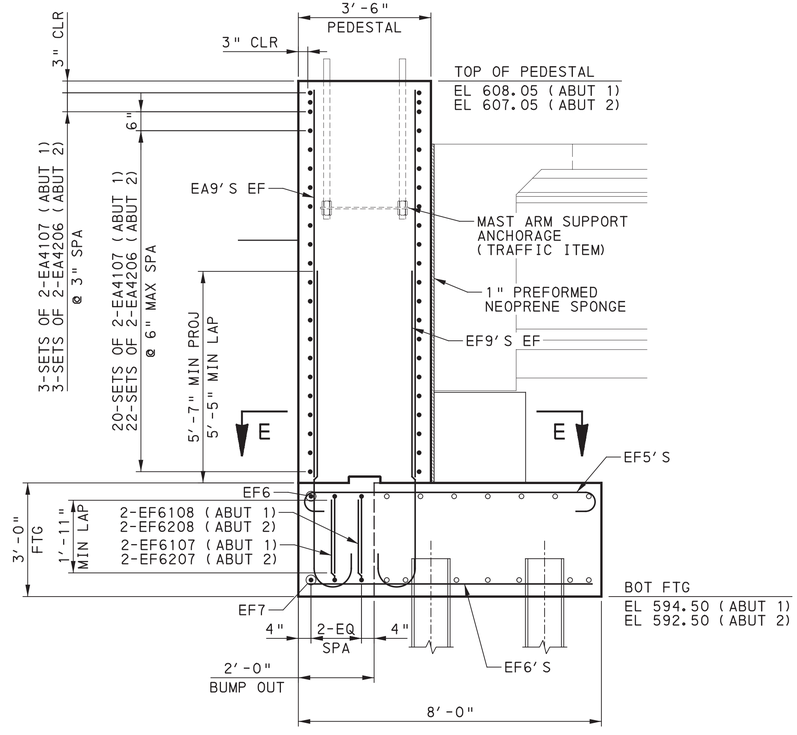
RECOMMENDED AUGUST 22, 2022

SHEET 14 OF 64

S-41005

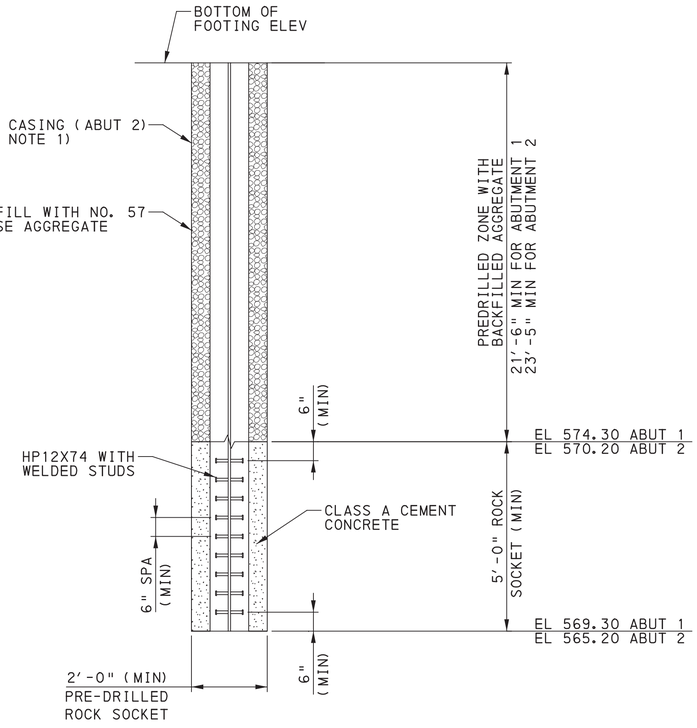
DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSST01005.dgn



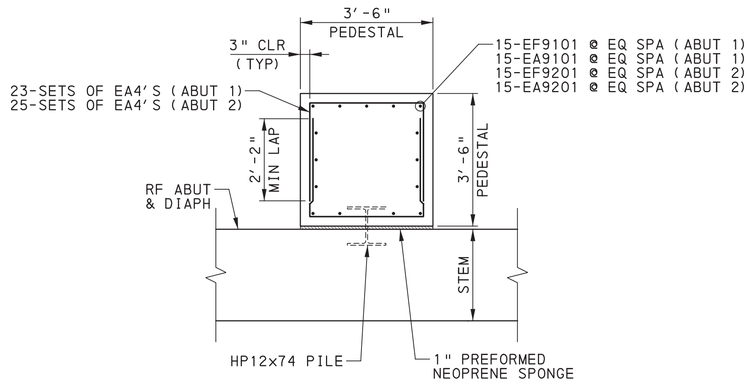
MAST ARM SUPPORT PEDESTAL SECTION A-A

1 0 1 2 FEET



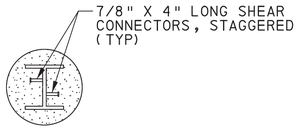
PRE-DRILLED H-PILE WITH ROCK SOCKET

NOT TO SCALE



SECTION E-E

1 0 1 2 FEET



STUDDED PILE DETAIL

NOT TO SCALE

NOTES:

1. PROVIDE GALVANIZED PROTECTIVE CASING FOR ABUTMENT 2 AFTER EXCAVATION AND PRIOR TO CONSTRUCTION OF STRUCTURE S-41009D IN ACCORDANCE WITH BC-799M.

REFERENCES:

FOR PILE CASING LIMITS, SEE SHEET 2

FOR MAST ARM ANCHORAGE DETAILS AND NOTES, SEE TC-8801

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
MISCELLANEOUS ABUTMENT DETAILS

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — KEVIN CHARLES LIVENGOOD — ENGINEER — PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 15 OF 64

S-41005

DES:	KCL	CKD:	SRM	DWG:	KCL	CKD:	SRM

PLOTTED: 8/20/2022

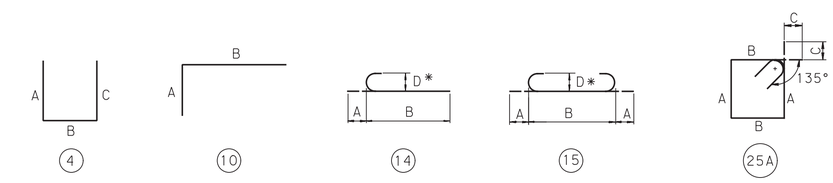
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSStairb01.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT 1	FOOTING										
EF4101	4	120	3′-2"	26	4 1/2"	2′-5"	4 1/2"			1"	
EF5101	5	230	6′-10"	15	7"	5′-8"					
EF5102	5	2	6′-10 1/2"	15	7"	5′-8 1/2"					
EF5103	5	5	8′-10"	15	7"	7′-8"					
EF5104	5	2	8′-0"	15	7"	6′-10"					
EF5105	5	5	7′-4 1/2"	STR							
EF5106	5	5	7′-11 1/2"	14	7"	7′-4 1/2"					
EF5107	5	5	7′-10 3/4"	STR							
EF5108	5	5	8′-5 3/4"	14	7"	7′-10 3/4"					
EF6100	6	21	60′-0"	STR							
EF6101	6	14	35′-6"	STR							
EF6102	6	186	5′-8"	STR							
EF6103	6	2	5′-8 1/2"	STR							
EF6104	6	4	7′-8"	STR							
EF6105	6	2	6′-10"	STR							
EF6106	6	1	15′-0"	54	5′-8"	3′-8"	5′-8"	4′-0 1/8"	4′-0 1/8"		
EF6107	6	2	10′-10 1/2"	4	2′-2"	6′-6 1/2"	2′-2"				
EF6108	6	2	9′-5 1/2"	4	2′-2"	5′-1 1/2"	2′-2"				
EF7100	7	21	60′-0"	STR							
EF7101	7	14	34′-6"	STR							
EF7102	7	1	14′-4"	54	5′-4"	3′-8"	5′-4"	3′-9 1/4"	3′-9 1/4"		
EF9101	9	15	9′-6"	14	1′-3"	8′-3"					

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT 1	STEM										
EA3101	3	62	5′-9"	M6	2′-7"	7"	2′-7"	7/8"			
EA3102	3	8	9′-5 1/8"	M6	3′-8"	2′-1 1/8"	3′-8"	3 1/4"			
EA4101	4	7	29′-5"	STR							
EA4102	4	50	23′-0"	STR							
EA4103	4	2	18′-0"	STR							
EA4104	4	9	39′-8"	STR							
EA4105	4	7	38′-0"	STR							
EA4106	4	4	7′-1"	10	1′-4"	5′-9"					
EA4107	4	46	8′-2"	4	2′-7"	3′-0"	2′-7"				
EA5101	5	10	7′-10"	STR							
EA5102	5	10	7′-11 5/8"	STR							
EA5103	5	32	6′-10 3/8"	4	2′-5"	2′-0 3/8"	2′-5"				
EA5104	5	12	11′-0 7/8"	4	2′-5"	6′-2 7/8"	2′-5"				
EA5105	5	1	2′-3 3/8"	STR							
EA6101	6	33	12′-4 3/4"	25A	3′-6 3/8"	2′-0"	8"				
EA6102	6	99	13′-1 1/4"	25A	3′-10 5/8"	2′-0"	8"				
EA6103	6	85	14′-1"	25A	4′-4 1/2"	2′-0"	8"				
EA6104	6	49	13′-11"	25A	4′-3 1/2"	2′-0"	8"				
EA9101	9	15	10′-2 1/2"	STR							



4 · 10 · 14 · 15 · 25A · 26 · 54 · M6

NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 5 & 6

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

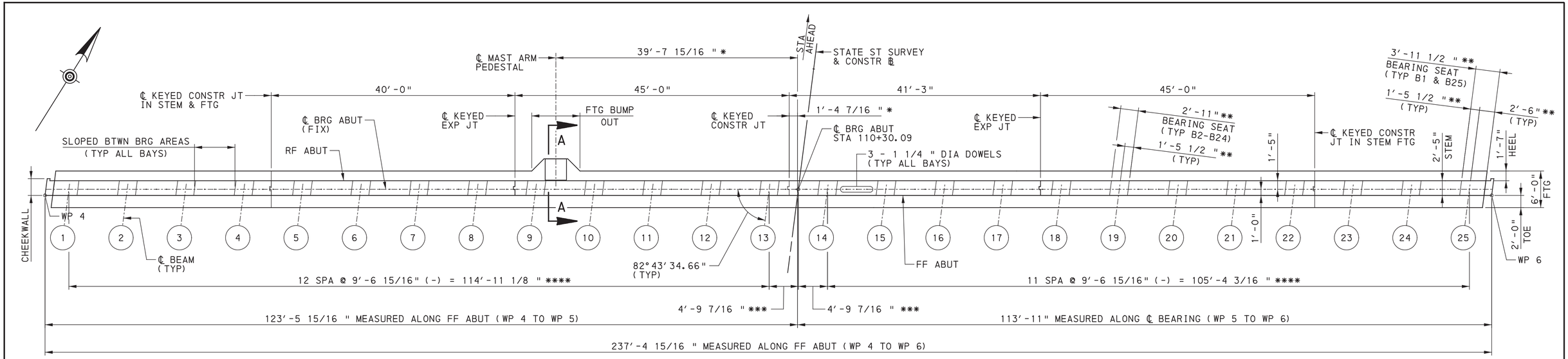
ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 REBAR SCHEDULE

RECOMMENDED AUGUST 22, 2022

SHEET 16 OF 64

S-41005

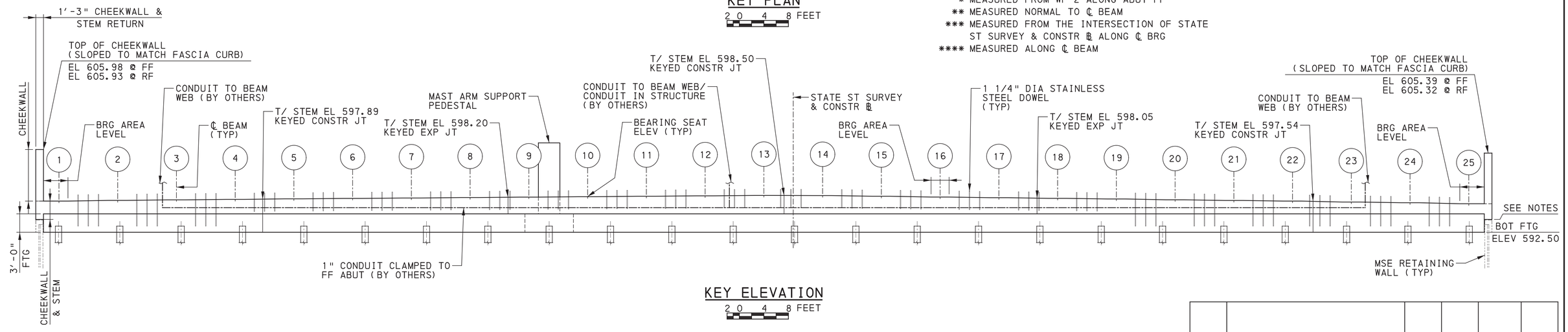
PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa2002.dgn



KEY PLAN

2 0 4 8 FEET

* MEASURED FROM WP 2 ALONG ABUT FF
** MEASURED NORMAL TO ℄ BEAM
*** MEASURED FROM THE INTERSECTION OF STATE ST SURVEY & CONSTR ℄ ALONG ℄ BRG
**** MEASURED ALONG ℄ BEAM



KEY ELEVATION

2 0 4 8 FEET

BEARING SEAT ELEVATIONS																								
BEAM NO	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25
ELEVATION	597.57	597.69	597.78	597.85	597.94	598.01	598.08	598.15	598.22	598.29	598.36	598.43	598.50	598.48	598.36	598.23	598.13	598.02	597.92	597.79	597.68	597.58	597.42	597.31	597.14

LEGEND:

(#) - DENOTES BEAM NUMBER

▨ - DENOTES SHEAR BLOCK

NOTES:

1. THE CHEEKWALL SHALL BE CONSTRUCTED ON THE 1" STYRAFOAM PLACED ALONG THE TOP OF THE ABUTMENT 2 RETAINING WALL COPING.

   BOT CHEEKWALL ELEV = 594.58

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 20

FOR STEM REINFORCEMENT, SEE SHEET 19

FOR SIZE AND SPACING OF DOWELS, SEE SHEET 19

FOR FOOTING REINFORCEMENT, SEE SHEET 18

FOR MAST ARM SUPPORT PEDESTAL, SECTION A-A, SEE SHEET 15

FOR ADDITIONAL CONDUIT DETAILS, SEE THE HIGHWAY LIGHTING PLAN

DES: KCL	CKD: SRM	DWG: KCL	CKD: SRM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

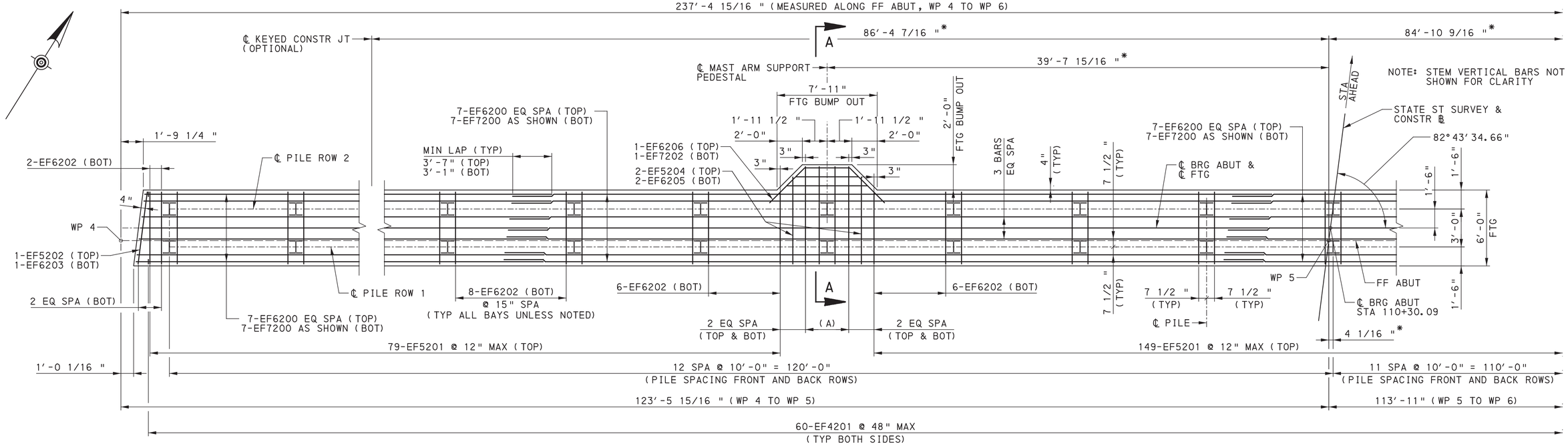
ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 KEY PLAN & ELEVATION

RECOMMENDED AUGUST 22, 2022

SHEET 17 OF 64

S-41005

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa2001.dgn



ABUTMENT PILE LOADS

LOCATION	CONTROLLING LIMIT STATE		AXIAL (KIPS)		LATERAL (KIPS)	
			FACTORED LOAD	RESISTANCE	FACTORED LOAD	RESISTANCE
ABUT 2	STRENGTH	STR-III	359.61	432.00	-	-
	STRENGTH	STR-I	-	-	9.52	SEE NOTE

NOTE: LATERAL RESISTANCE IS TO BE PROVIDED BY RETAINING WALL B.

PLAN
2 0 2 4 FEET

(A) 5-EF5XX @ 12" MAX (TOP)
4-EF6XX @ 15" MAX (BOT)

* MEASURED FROM WP 5 ALONG ABUT FF

LEGEND:

I INDICATES VERTICAL PILES, HP12x74

NOTES:

1. PLACE BOTTOM MAT REINFORCEMENT AT EQUAL SPACES BETWEEN PILES AS SHOWN WITH 1" MINIMUM CLEAR SPACE AT PILES.

REFERENCES:

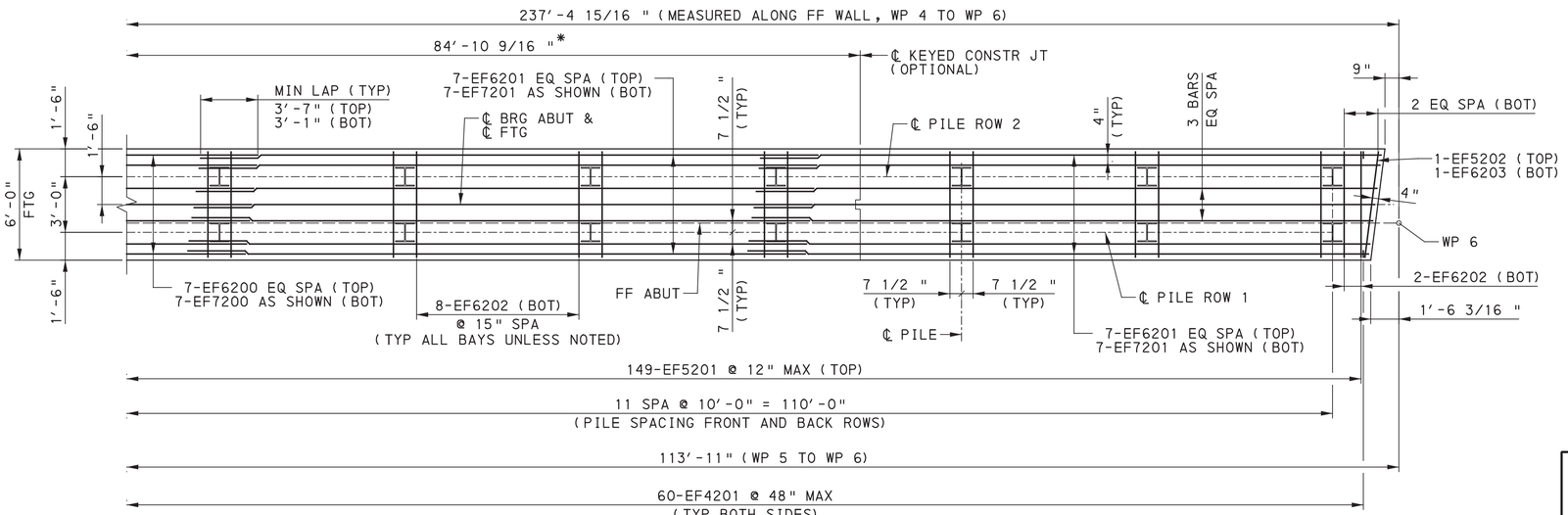
FOR STAKE-OUT PLAN, SEE SHEET 10

FOR TYPICAL SECTION, SEE SHEET 20

FOR STEM REINFORCEMENT, SEE SHEET 19

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 21

FOR SECTION A-A, SEE SHEET 15



NOTE: STEM VERTICAL BARS NOT SHOWN FOR CLARITY

PLAN
2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 FOOTING PLAN

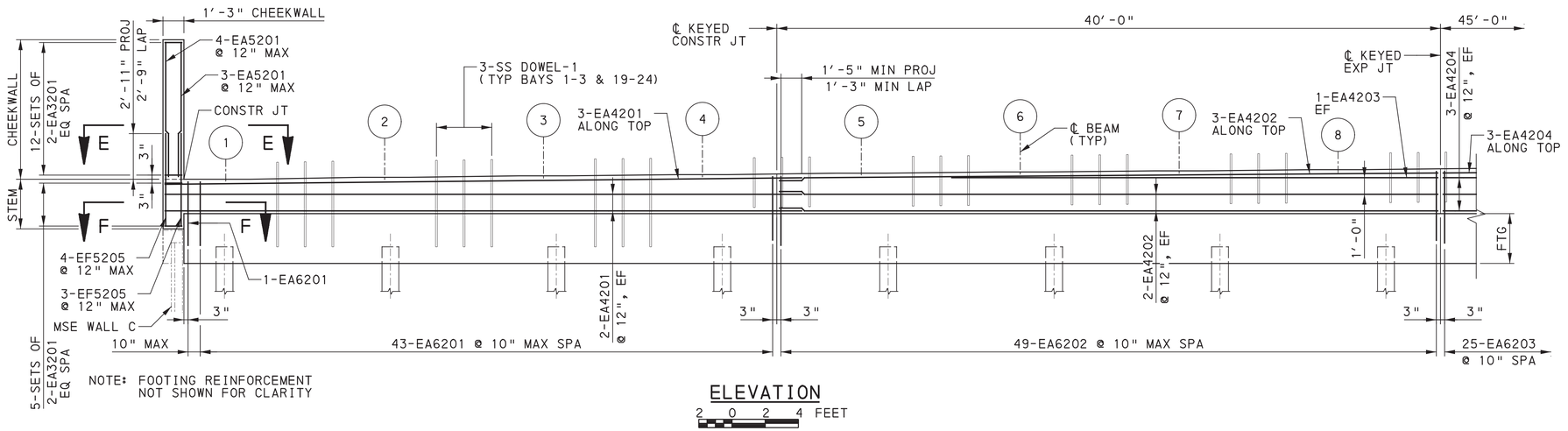
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 18 OF 64

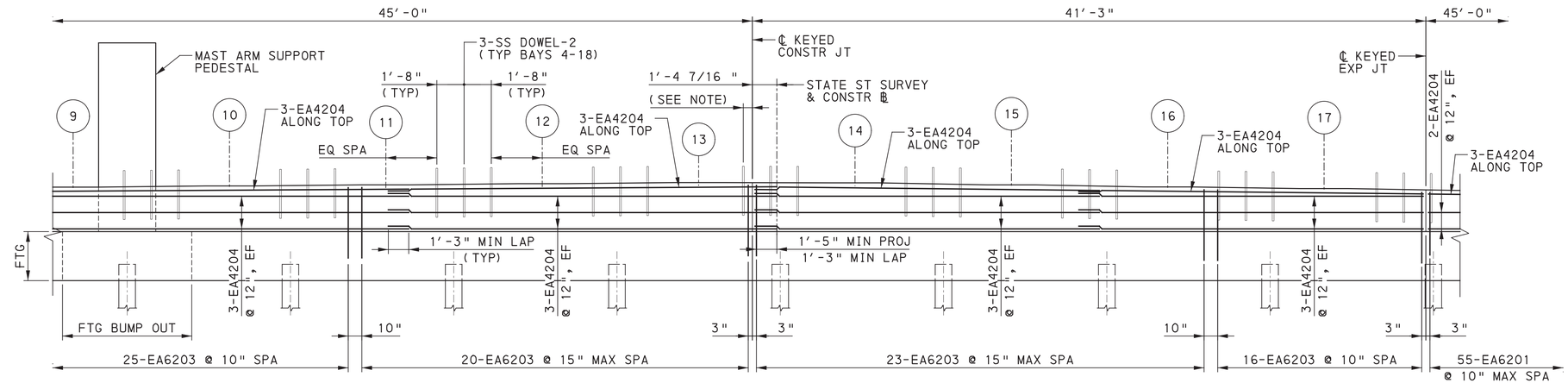
S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM



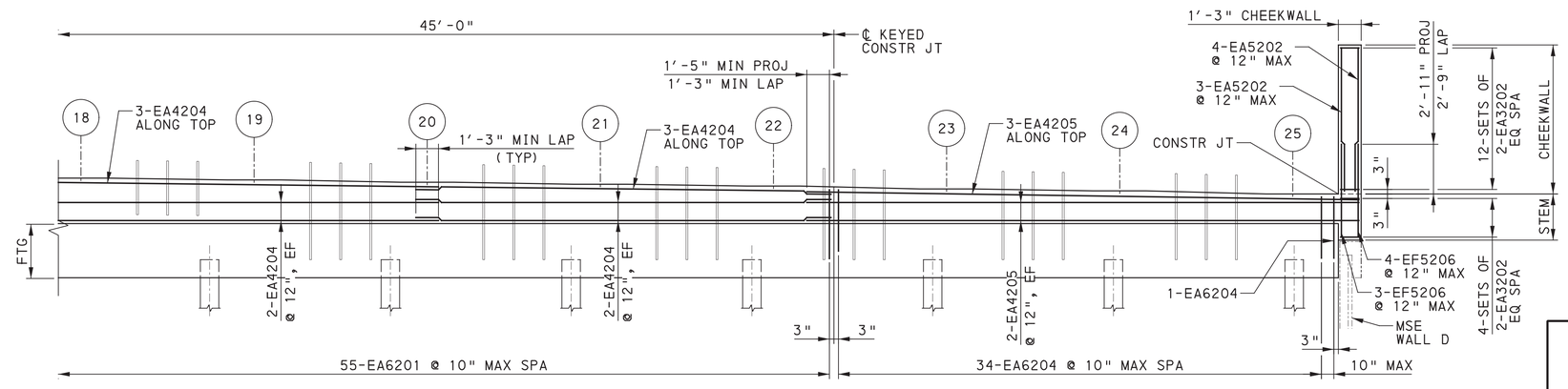
ELEVATION

2 0 2 4 FEET



ELEVATION

2 0 2 4 FEET



ELEVATION

2 0 2 4 FEET

NOTES:

1. SHIFT DOWELS IN BAYS WITH A CONSTRUCTION JOINT TO PROVIDE A MINIMUM 3" CLEARANCE, IF REQUIRED, WHILE MAINTAINING THE TYPICAL SPACING.

REFERENCES:

FOR ABUTMENT DIMENSIONS AND ELEVATIONS, SEE SHEET 17

FOR FOOTING BAR DESIGNATIONS, SEE SHEET 18

FOR SECTION E-E & F-F, SEE SHEET 20

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 21

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

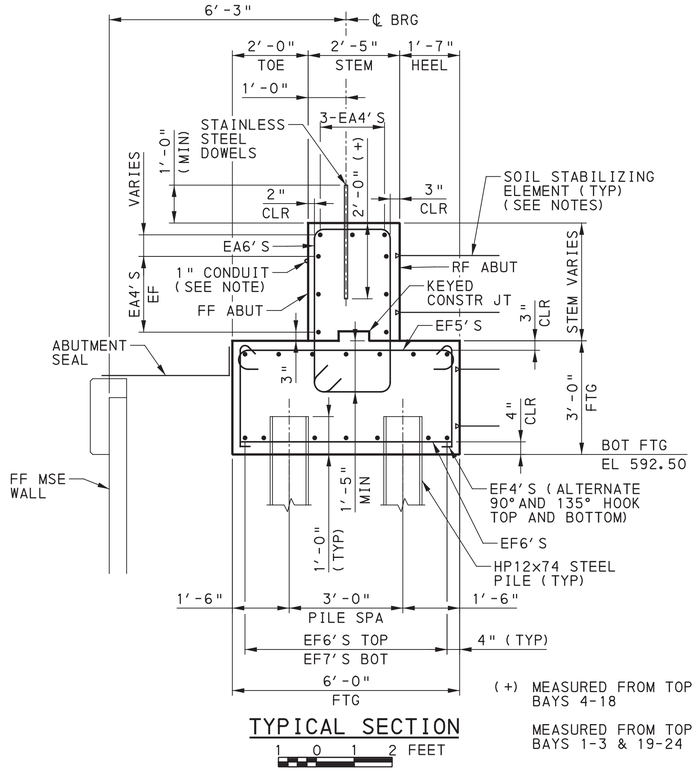
SHEET 19 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SSSTa2003.dgn

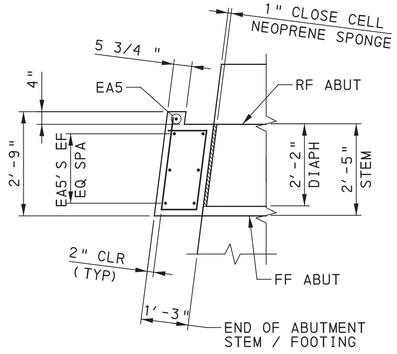


(+) MEASURED FROM TOP OF STEM IN BAYS 4-18

MEASURED FROM TOP OF FOOTING IN BAYS 1-3 & 19-24

TYPICAL SECTION

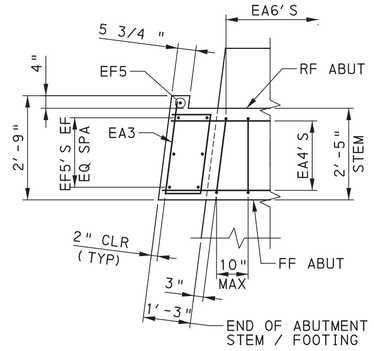
1 0 1 2 FEET



CHEEKWALL SECTION E-E

1 0 1 2 FEET

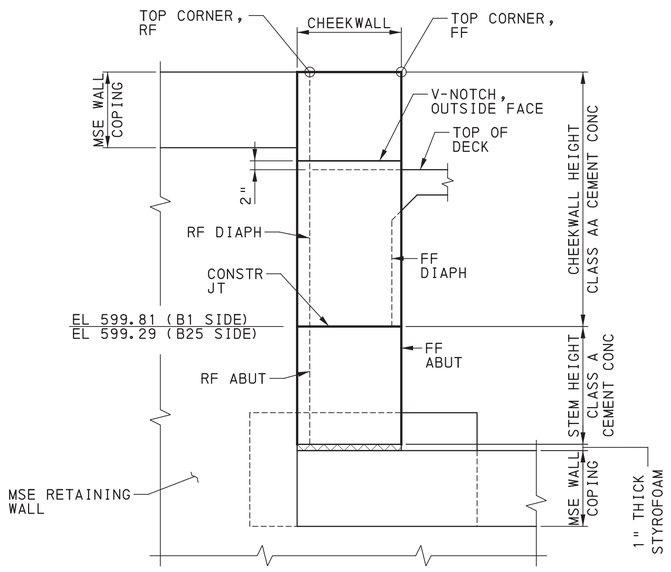
BEAM B1 SHOWN
(BEAM B25 SIMILAR)



STEM SECTION F-F

1 0 1 2 FEET

BEAM B1 SHOWN
(BEAM B25 SIMILAR)



STEM AND CHEEKWALL ELEVATION

NOT TO SCALE

NOTES:

1. SOIL STABILIZING ELEMENTS TO BE DESIGNED AND DETAILED (NUMBER, SIZE AND SPACING) BY THE CONTRACTOR FOR FORCES INDICATED ON THE RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL PLAN SET.
2. LIGHTING CONDUIT TO BE CLAMPED TO THE FF OF ABUTMENT AS REQUIRED PER THE HIGHWAY LIGHTING PLAN.

REFERENCES:

FOR PRE-DRILLED H-PILE WITH ROCK SOCKET DETAIL, SEE SHEET 15

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 21

FOR ADDITIONAL MSE WALL DETAILS, SEE RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL PLAN SET

FOR LIGHTING CONDUIT AND OTHER APPURTENANCE INFORMATION, SEE HIGHWAY LIGHTING PLAN.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 20 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSST02004.dgn

PLOTTED: 8/20/2022

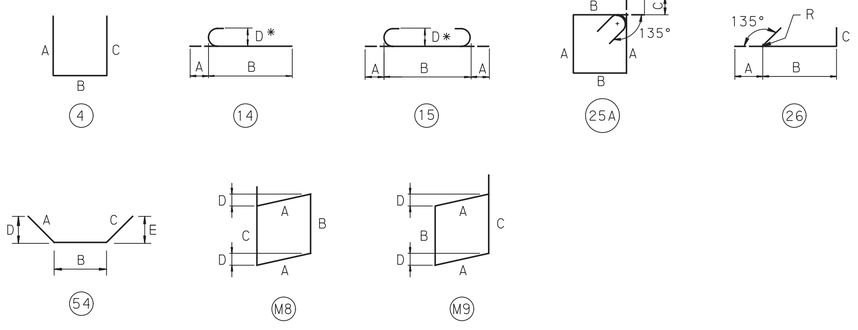
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTa2rb01.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT 2	FOOTING										
EF4201	4	120	3′-2"	26	4 1/2"	2′-5"	4 1/2"			1"	
EF5201	5	228	6′-10"	15	7"	5′-8"					
EF5202	5	2	6′-10 1/2"	15	7"	5′-8 1/2"					
EF5203	5	5	8′-10"	15	7"	7′-8"					
EF5204	5	2	8′-0"	15	7"	6′-10"					
EF5205	5	7	5′-9"	STR							
EF5206	5	7	5′-4"	STR							
EF6200	6	21	60′-0"	STR							
EF6201	6	14	34′-6"	STR							
EF6202	6	184	5′-8"	STR							
EF6203	6	2	5′-8 1/2"	STR							
EF6204	6	4	7′-8"	STR							
EF6205	6	2	6′-10"	STR							
EF6206	6	1	15′-0"	54	5′-8"	3′-8"	5′-8"	4′-0 1/8"	4′-0 1/8"		
EF6207	6	2	10′-10 1/2"	4	2′-2"	6′-6 1/2"	2′-2"				
EF6208	6	2	9′-5 1/2"	4	2′-2"	5′-1 1/2"	2′-2"				
EF7200	7	21	60′-0"	STR							
EF7201	7	14	33′-6"	STR							
EF7202	7	1	14′-4"	54	5′-4"	3′-8"	5′-4"	3′-9 1/4"	3′-9 1/4"		
EF9201	9	15	9′-6"	14	1′-3"	8′-3"					

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT 2	STEM										
EA3201	3	34	6′-4 1/4"	M8	11"	2′-1 1/8"	2′-5 1/8"	1 3/8"			
EA3202	3	32	6′-4 1/4"	M9	11"	2′-1 1/8"	2′-5 1/8"	1 3/8"			
EA4201	4	7	38′-6"	STR							
EA4202	4	7	39′-8"	STR							
EA4203	4	2	37′-0"	STR							
EA4204	4	50	23′-9"	STR							
EA4205	4	7	30′-9"	STR							
EA4206	4	50	8′-2"	4	2′-7"	3′-0"	2′-7"				
EA5201	5	7	8′-0 1/4"	STR							
EA5202	5	7	7′-10 1/8"	STR							
EA6201	6	99	12′-11 1/2"	25A	3′-9 3/4"	2′-0"	8"				
EA6202	6	49	13′-7 1/4"	25A	4′-1 5/8"	2′-0"	8"				
EA6203	6	84	13′-11 1/4"	25A	4′-3 5/8"	2′-0"	8"				
EA6204	6	35	12′-1 1/4"	25A	3′-4 5/8"	2′-0"	8"				
EA9201	9	15	11′-2 1/2"	STR							
SS	1 1/4"	27	5′-5"	STR							SMOOTH DOWEL (9)
DOWEL-1											
SS	1 1/4"	45	3′-0"	STR							SMOOTH DOWEL (9)
DOWEL-2											



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 5 & 6.
8. "SS" IN BAR MARK INDICATES STAINLESS STEEL REINFORCEMENT.
9. PROVIDE STAINLESS STEEL AS PER PUB 408 SECTION 709.1(f).

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

ABUTMENT 2 REBAR SCHEDULE

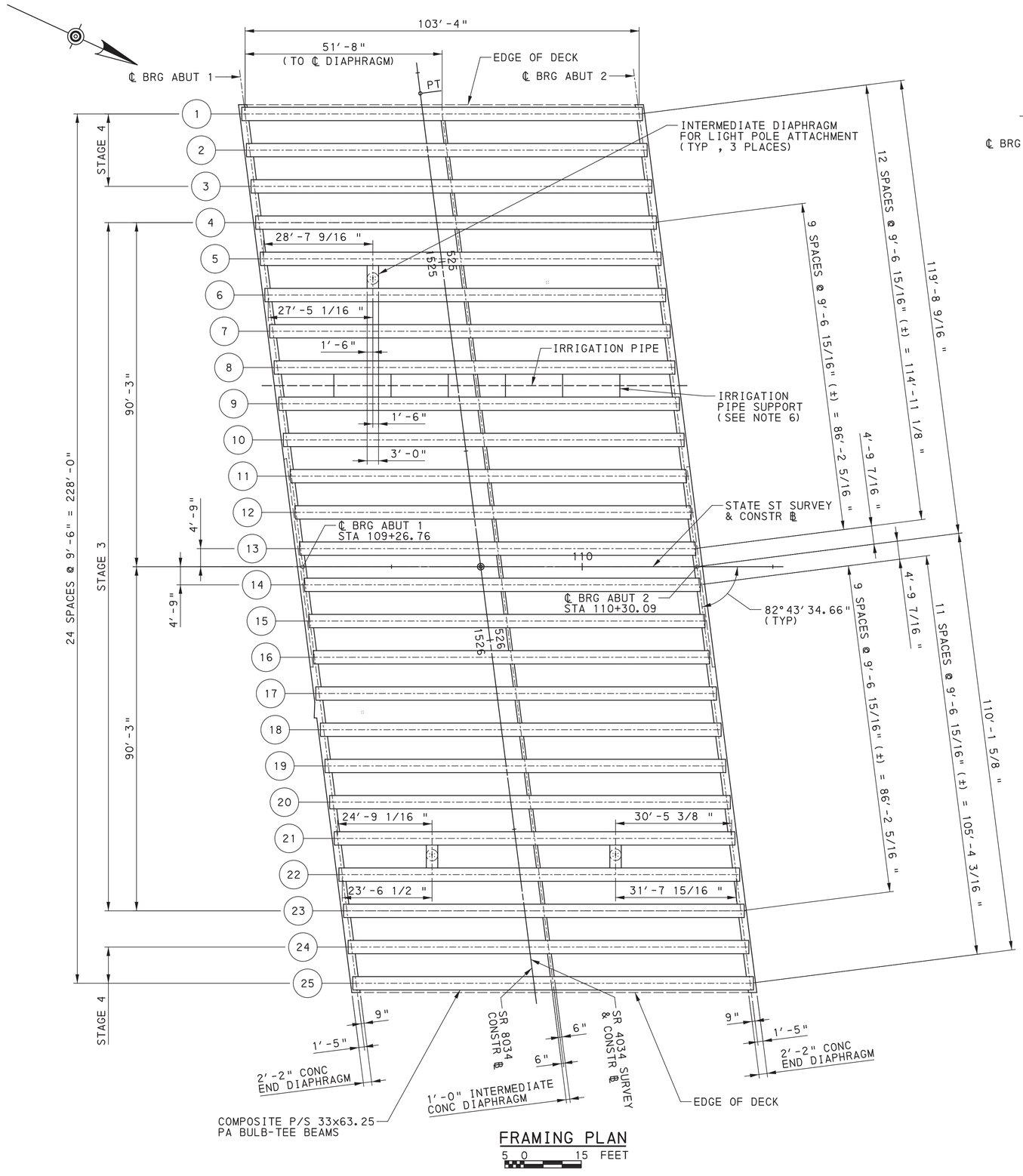
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 21 OF 64

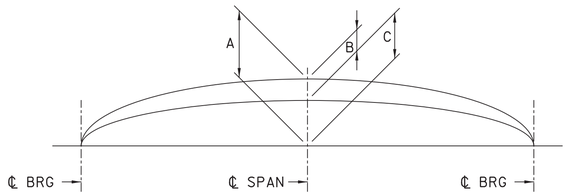
S-41005

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mnsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTss001.dgn



FRAMING PLAN

5 0 15 FEET



BEAM CAMBER DIAGRAM

BEAM CAMBER TABLE (INCHES)			
BEAM GROUP	A	B	C
B1 & B25	4.02	1.20	2.82
B2 & B24	4.02	1.60	2.42
B3 TO B4 & B23	4.02	1.55	2.47
B5	4.02	1.65	2.37
B6	4.02	1.60	2.42
B7 & B20	4.02	1.52	2.50
B8 & B19	4.02	1.49	2.53
B9 & B18	4.02	1.41	2.61
B10 & B17	4.02	1.23	2.79
B11 & B16	4.02	1.19	2.83
B12 TO B15	4.02	1.14	2.88
B21	4.02	1.68	2.34
B22	4.02	1.72	2.30

A = ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR. (CHECK IN FIELD)

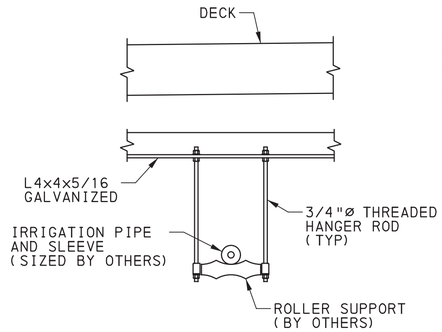
B = DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.

C = A - B = NET FINAL CAMBER.

VARY THE THICKNESS OF THE CONCRETE HAUNCH TO COMPENSATE FOR ANY INACCURACIES IN BEAM CAMBER.

A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIOUS PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSSES.

USE A CREEP FACTOR EQUAL TO 1.60 AND P/S LOSS EQUAL TO 10%.



FOR SUPPORT L4x4 CONNECTION TO BEAM FLANGE, SEE LIGHTING CONDUIT BANK SUPPORT (SHEET 37)

IRRIGATION PIPE SUPPORT

NOT TO SCALE

NOTES:

1. SHOW DESIGN LENGTH AND CASTING LENGTH ON SHOP DRAWINGS.
2. SHOW PLAN, ELEVATION, SECTIONS AND ALL REINFORCEMENT DETAILS ON SHOP DRAWINGS.
3. SHOW ANY MODIFICATIONS TO REINFORCEMENT SPLICE AND BENDING DETAILS ON SHOP DRAWINGS.
4. SHOW THE FOLLOWING DATA ON THE SHOP DRAWINGS:
   A) THE SIZE AND LOCATION OF THE TEMPORARY STORAGE SUPPORTS
   B) THE TYPE AND LOCATION OF THE BRACING AND TEMPORARY SUPPORTS USED FOR THE TRANSPORTATION AND ERECTION OF THE BEAMS.
5. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.
6. IRRIGATION PIPE IS TO BE DESIGNED BY OTHERS. SPACING OF SUPPORT SYSTEM SHALL BE SET TO MEET THE MINIMUM REQUIREMENTS PER THE PIPE MANUFACTURER'S SPECIFICATIONS.

REFERENCES:

FOR GENERAL NOTES, SEE SHEET 5 & 6

FOR BEAM DETAILS, SEE SHEET 23 THRU 25

FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SHEET 47

FOR END DIAPHRAGM DETAILS, SEE SHEET 46 THRU 44

FOR LOCATIONS OF CONDUITS CARRIED BY THE BEAMS, SEE SHEET 37

FOR ADDITIONAL INFORMATION ON THE CONSTRUCTION STAGES, SEE TRAFFIC CONTROL PLANS

FOR ADDITIONAL INFORMATION ON THE IRRIGATION SYSTEM, SEE ROADSIDE DEVELOPMENT PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
FRAMING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

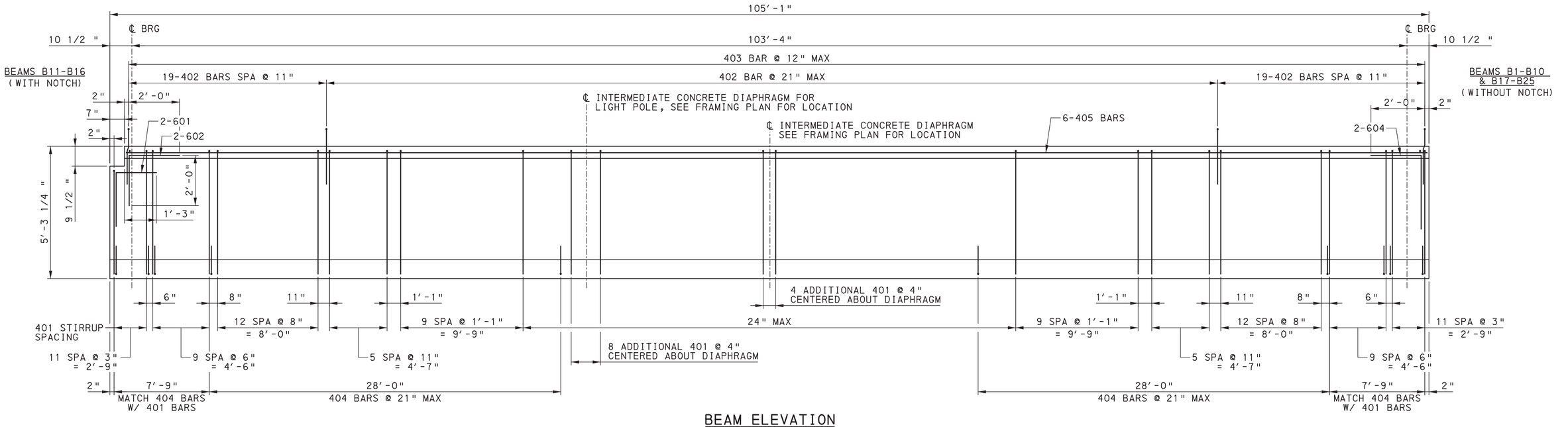
RECOMMENDED AUGUST 22, 2022

SHEET 22 OF 64

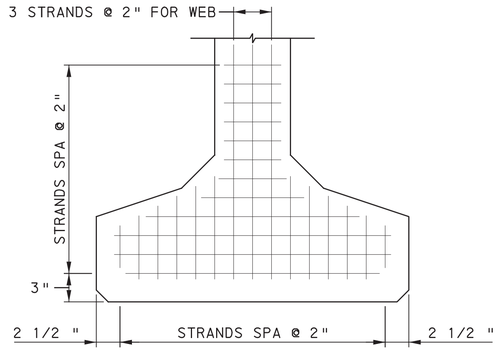
S-41005

DES: KCL	CKD: SRM	DWG: JP	CKD: KCL

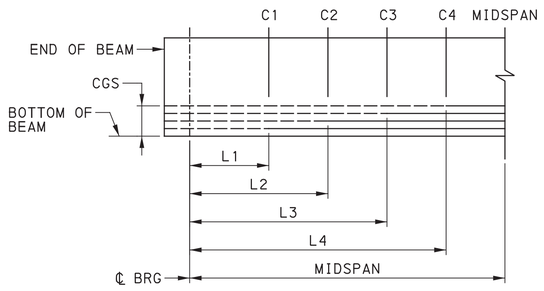
PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mesconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTss002.dgn



BEAM ELEVATION
NOT TO SCALE



TYPICAL STRAND LOCATIONS
NOT TO SCALE



DEBONDING DETAIL
NOT TO SCALE

___ DEBONDED SECTION OF STRAND

____ FULLY BONDED SECTION OF STRAND

NOTE:
THIS IS A REPRESENTATION OF THE DEBONDED LENGTHS. IT DOES NOT REPRESENT A SPECIFIC LOCATION, OR SPECIFIC ROW OF DEBONDED STRANDS.

NOTES:

1. MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMMODATE NOTCHED FLANGE AND WEB.
2. EPOXY COAT ALL REBAR FOR A DISTANCE OF 9′-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO THE BRIDGE DECK FROM THE TOP OF BEAMS.
4. USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF INSERT IS 3"
5. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
6. MIN COVER: STIRRUPS - 1" MIN
   ALL OTHERS - 1 1/2" MIN

REFERENCES:

FOR FRAMING PLAN AND ADDITIONAL NOTES, SEE SHEET 22

FOR END DIAPHRAGM BEAM INSERT LOCATIONS, SEE SHEET 46

FOR INTERMEDIATE DIAPHRAGM BEAM INSERT LOCATIONS, SEE SHEET 47

FOR DECK DRAINAGE DOWNSPOUT SUPPORT BEAM INSERT LOCATIONS, SEE SHEET 51

DEBONDED STRAND INFORMATION				
DEBONDED STRAND CUTOFF LOCATION	DISTANCE 'L' TO CUTOFF LOCATION ALONG ℄ OF BEAM (FEET)	NUMBER OF DEBONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	NUMBER OF BONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	CGS PRIOR TO CUTOFF LOCATION (INCHES)
C1	2′-0"	19	57	11.14
C2	7′-6"	13	63	10.75
C3	23′-6"	7	69	10.30
C4	34′-6"	2	74	9.89
MIDSPAN	———	———	76	9.71

NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

BEAM DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

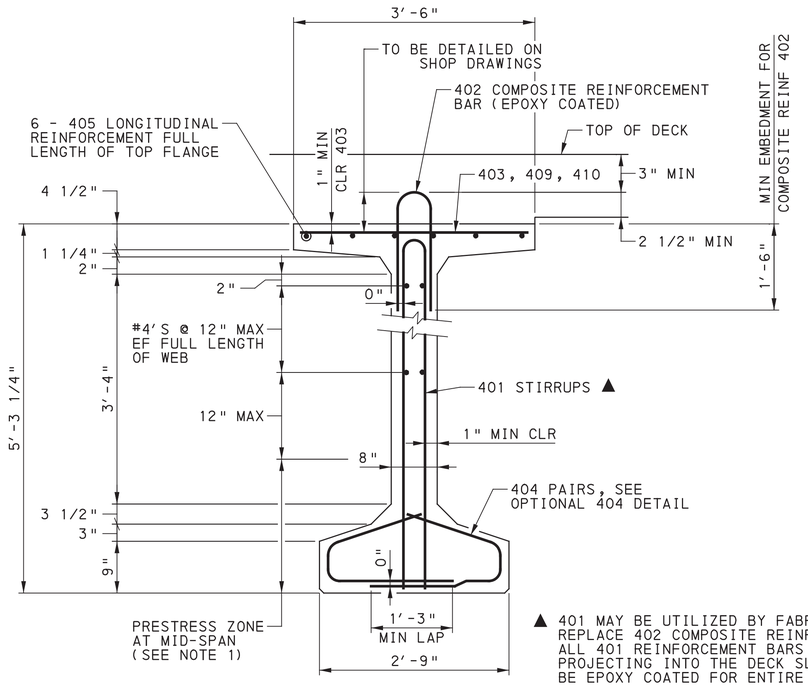
RECOMMENDED AUGUST 22, 2022

SHEET 23 OF 64

S-41005

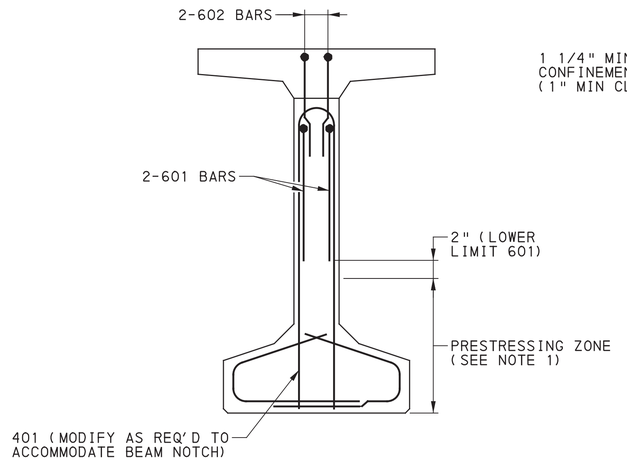
DES: KCL | CKD: SRM | DWG: KCL | CKD: JP/SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTss003.dgn

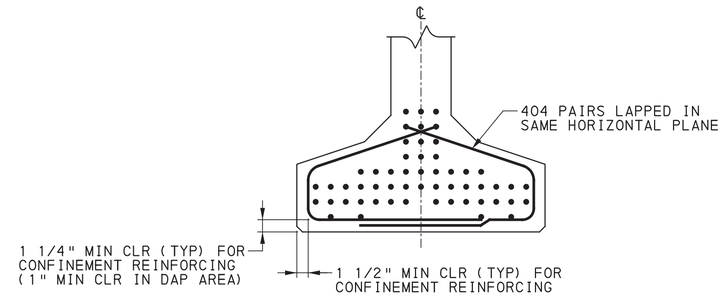


▲ 401 MAY BE UTILIZED BY FABRICATOR TO REPLACE 402 COMPOSITE REINFORCEMENT. ALL 401 REINFORCEMENT BARS PROJECTING INTO THE DECK SLAB MUST BE EPOXY COATED FOR ENTIRE LENGTH.

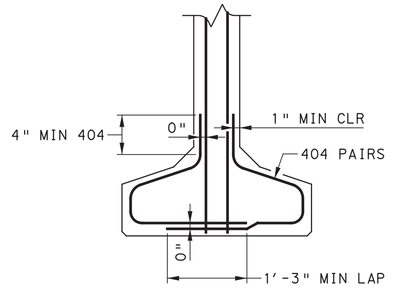
PA BULB-TEE 33/63.25 TYPICAL SECTION
NOT TO SCALE



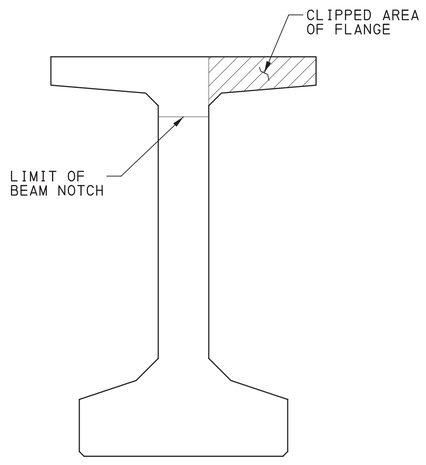
PA BULB-TEE ADDITIONAL NOTCH REINFORCING END VIEW
NOT TO SCALE



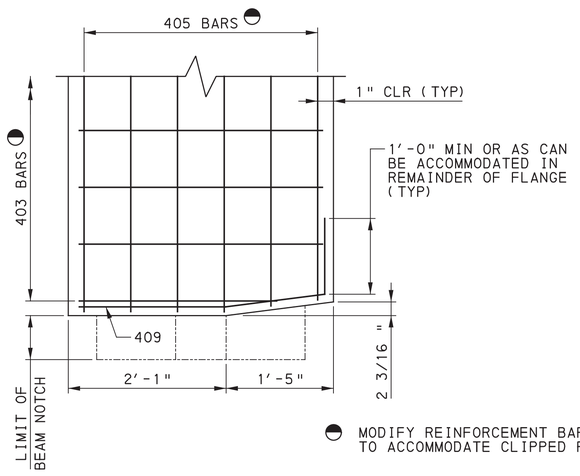
PA BULB-TEE TYP STRAND CONFINEMENT
NOT TO SCALE



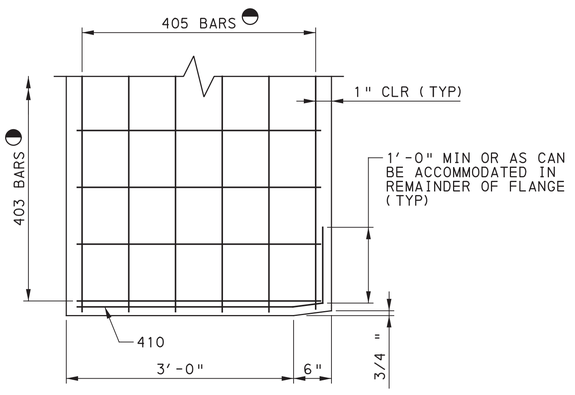
OPTIONAL 404 DETAIL
NOT TO SCALE



BEAM END VIEW
BEAMS B11-B16 (SHOWN)
BEAMS B1-B10 & B17-B25 (SIMILAR)



PLAN - TOP FLANGE
BEAMS B11-B16



PLAN - TOP FLANGE
BEAMS B1-B10 & B17-B25

● MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMMODATE CLIPPED FLANGE.

TYPICAL CLIPPED FLANGE REINFORCEMENT DETAILS
NOT TO SCALE

NOTES:
1. PRESTRESS ZONE IS DEFINED AS THE DISTANCE FROM THE BOTTOM OF BEAM TO THE TOP ROW OF STRANDS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
BEAM DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

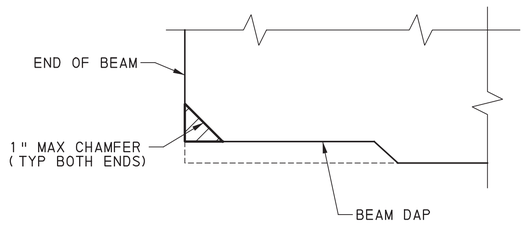
RECOMMENDED AUGUST 22, 2022

SHEET 24 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP/SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTss004.dgn

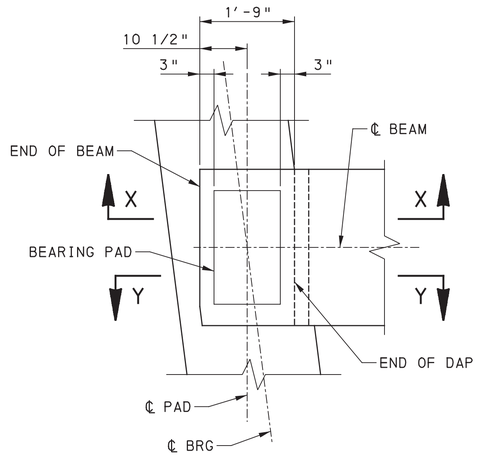


BEAM CHAMFER
NOT TO SCALE

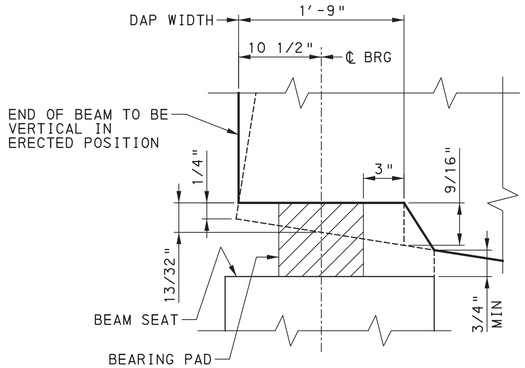
PRESTRESSING DATA	
BEAM SIZE	PA BULB-TEE 33/63.25
JACKING PRESTRESS FORCE PER BEAM (Pi) (LOW RELAXATION STRANDS)	2570.1 KIPS
NO OF STRANDS	76
CONCRETE STRENGTH AT STRAND RELEASE (f'ci)	6800 PSI
CONCRETE STRENGTH AT 28 DAYS (f'c)	8000 PSI
STRAND DIAMETER	1/2" DIAMETER (0.52 IN) (0.167 IN2 STRAND AREA) 270 KSI LOW RELAXATION
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ MID-SPAN OF BEAM (INCHES)	9.71
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ BEARING CENTERLINE (INCHES)	11.14

PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - NON-COMPOSITE			
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 25	AREA OF BASIC BEAM (IN2)	972.00	-----
	MOMENT OF INERTIA (IN4)	509,017	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	33.81	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	29.44	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	15,053	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	17,293	-----
INTERIOR BEAMS 2 TO 24	AREA OF BASIC BEAM (IN2)	972.00	-----
	MOMENT OF INERTIA (IN4)	509,017	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	33.81	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	29.44	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	15,053	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	17,293	-----

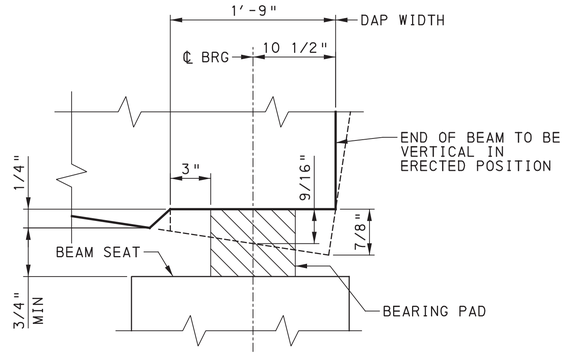
PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - COMPOSITE DEAD LOAD			
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 25	MOMENT OF INERTIA (IN4)	946,307	995,390
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	29.40	30.49
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	21.90	22.99
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	41.35	40.26
	SECTION MODULUS AT TOP OF SLAB (IN3)	32,191	32,651
	SECTION MODULUS AT TOP OF BEAM (IN3)	43,218	43,305
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	22,883	24,721
INTERIOR BEAMS 2 TO 24	MOMENT OF INERTIA (IN4)	1,034,519	1,091,504
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	27.00	28.07
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	19.50	20.57
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	43.75	42.68
	SECTION MODULUS AT TOP OF SLAB (IN3)	38,317	38,892
	SECTION MODULUS AT TOP OF BEAM (IN3)	53,055	53,076
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	23,646	25,571



PLAN
NOT TO SCALE



SECTION X-X AT HIGH END OF BEAM
ABUTMENT 1
NOT TO SCALE



SECTION Y-Y AT LOW END OF BEAM
ABUTMENT 2
NOT TO SCALE

BEAM DAP DETAILS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
BEAM DETAILS - 3

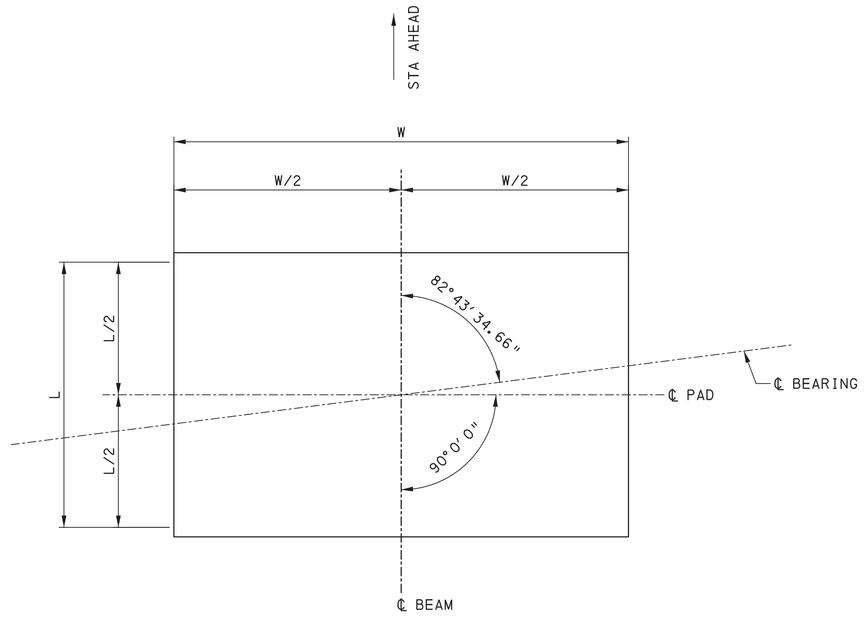
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

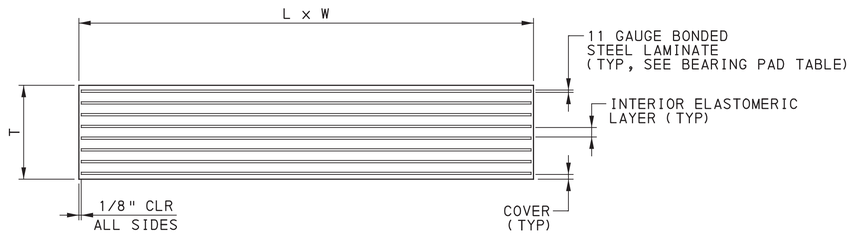
SHEET 25 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP/SRM



PLAN
NOT TO SCALE



ELEVATION
NOT TO SCALE

FUTURE BEARING REPLACEMENT NOTES

1. DO NOT DAMAGE THE SUPERSTRUCTURE OR SUBSTRUCTURE WHEN JACKING AND REPLACING THE BEARINGS.
2. THE MAXIMUM ALLOWABLE JACKING DISPLACEMENT IS 1/4".
3. SUBMIT THE PROPOSED JACKING AND REPLACEMENT PROCEDURE FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY JACKING OPERATIONS.
4. AT EACH SUBSTRUCTURE UNIT, JACK ALL BEAMS SIMULTANEOUSLY WITH THE SAME DISPLACEMENT AND RATE OF DISPLACEMENT. PROVIDE HYDRAULIC REGULATING DEVICES.
5. PROVIDE BEVELED LOAD PLATES TO MAINTAIN A LEVEL JACKING SURFACE.
6. INSTALL BLOCKING TO SUPPORT THE SUPERSTRUCTURE DURING THE BEARING REPLACEMENT. LEAVE JACKS IN PLACE AT ALL TIMES.
7. TRAFFIC IS NOT PERMITTED ON THE BRIDGE OR APPROACH SLABS WHILE JACKING IS OCCURRING. THE JACKING LOAD SHALL CONSIST OF THE DEAD LOAD ONLY.
8. THE JACKING CONTRACTOR IS RESPONSIBLE TO SIZE THE JACKS, JACK TOWERS AND DESIGN THE JACKING PROCEDURE, INCLUDING BUT NOT LIMITED TO, CHECKING CONCRETE BEARING STRESSES AND STABILITY. PROVIDE A JACK WITH A MINIMUM SAFE JACKING CAPACITY OF 150% OF THE LOAD TO BE JACKED AT THAT JACKING POINT.
9. PROVIDE JACKS WITH LOCKING CAPABILITY.
10. ACCOUNT FOR ANY THERMAL MOVEMENTS AND ALL HORIZONTAL FORCES THAT MAY BE ENCOUNTERED DURING THE PERIOD THAT THE SUPERSTRUCTURE IS BEING JACKED OR IS RESTING ON TEMPORARY SUPPORTS.

ELASTOMERIC BEARING PAD DIMENSIONS AND PROPERTIES

					COVER LAYER		INTERIOR LAYER				LAMINATED PAD TOTALS				
BEARING LOCATION	BRG TYPE	BRG WIDTH (W)	BRG LENGTH (L)	AREA OF COMPRESSION	LAYER THICK	SHAPE FACTOR	LAYER THICK	NO OF LAYERS	NO SHIM PL 11 GA	SHAPE FACTOR	ELASTOMER THICK	BEARING THICK (T)	NUMBER REQUIRED	TEST BEARING	TOTAL REQUIRED
ABUT 1	EXP	24"	15"	360 (IN°2)	0.250"	18.462	0.500"	7	8	9.231	4.000"	4.9568"	25	1	26
ABUT 2	FIX	24"	15"	360 (IN°2)	0.250"	18.462	0.500"	7	8	9.231	4.000"	4.9568"	25	0	25

REFERENCES:
FOR ADDITIONAL DETAILS AND NOTES, SEE BC-755M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
BEARING DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 26 OF 64

S-41005

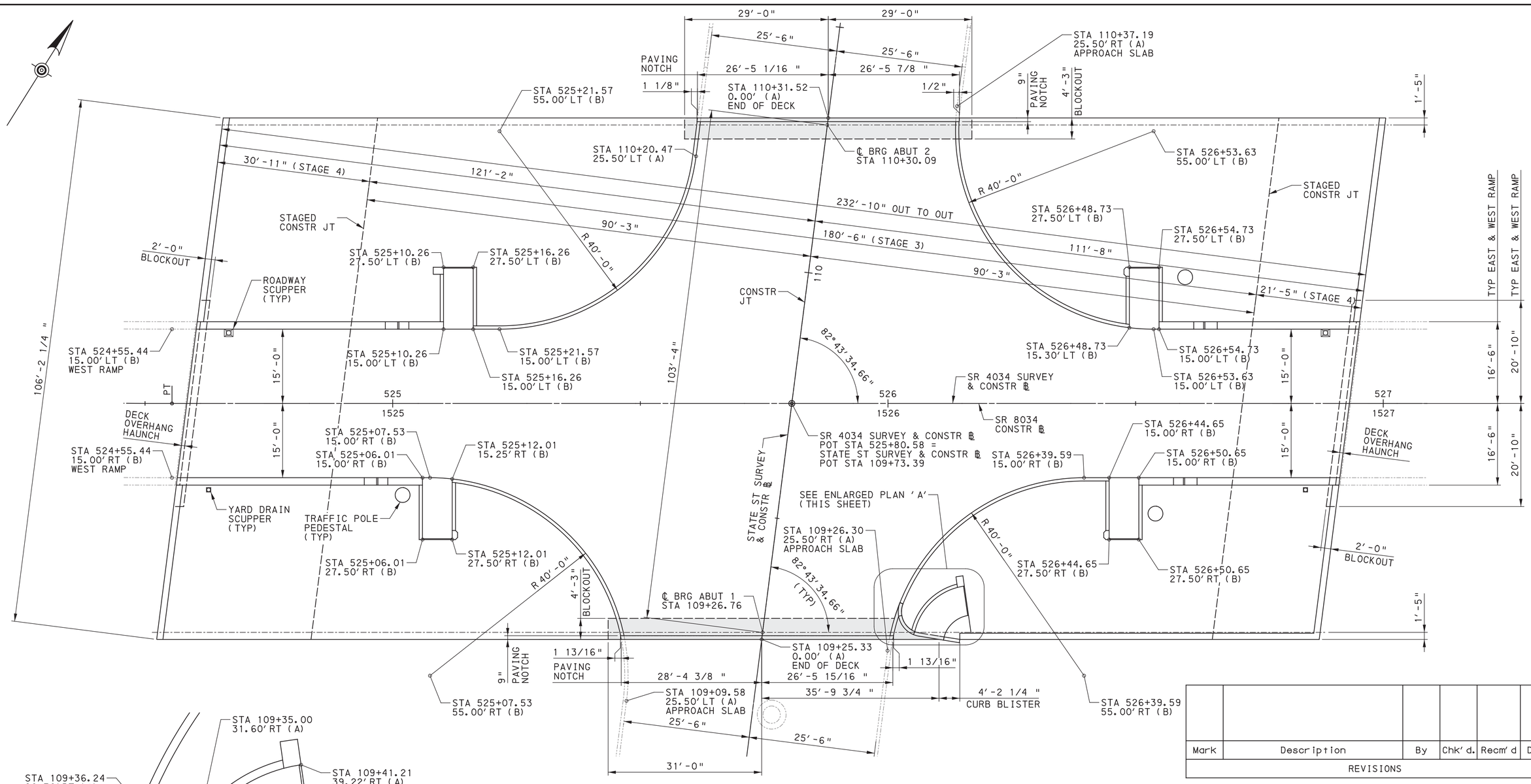
DES: KCL | CKD: SRM | DWG: KCL | CKD: SRM

PLOTTED: 8/20/2022

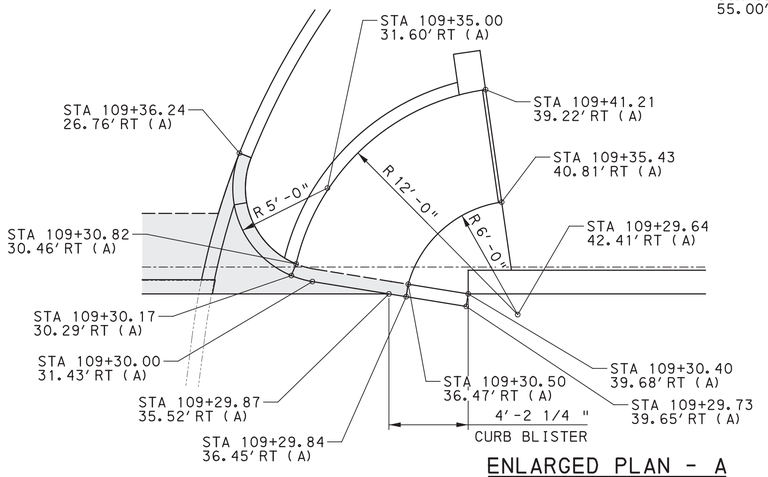
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTbg001.dgn

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT02.dgn



PLAN
5 0 5 10 FEET



ENLARGED PLAN - A
2 0 2 4 FEET

- DENOTES LIMITS OF DECK BLOCKOUT FOR PRECAST APPROACH SLAB CLOSURE POUR

LEGEND:

(A) - STATE ST SURVEY & CONSTR ℄

(B) - SR 4034 SURVEY & CONSTR ℄

REFERENCES:

FOR TRAFFIC AND LIGHT POLE PEDESTAL LOCATIONS, SEE SHEET 37

FOR ROADWAY AND YARD DRAIN SCUPPER LOCATIONS, SEE SHEET 50

FOR ADDITIONAL CURB RAMP AND BARRIER DIMENSIONS, SEE SHEET 32 THRU 36

FOR DECK ELEVATIONS, SEE SHEET 39 THRU 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK GEOMETRY PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

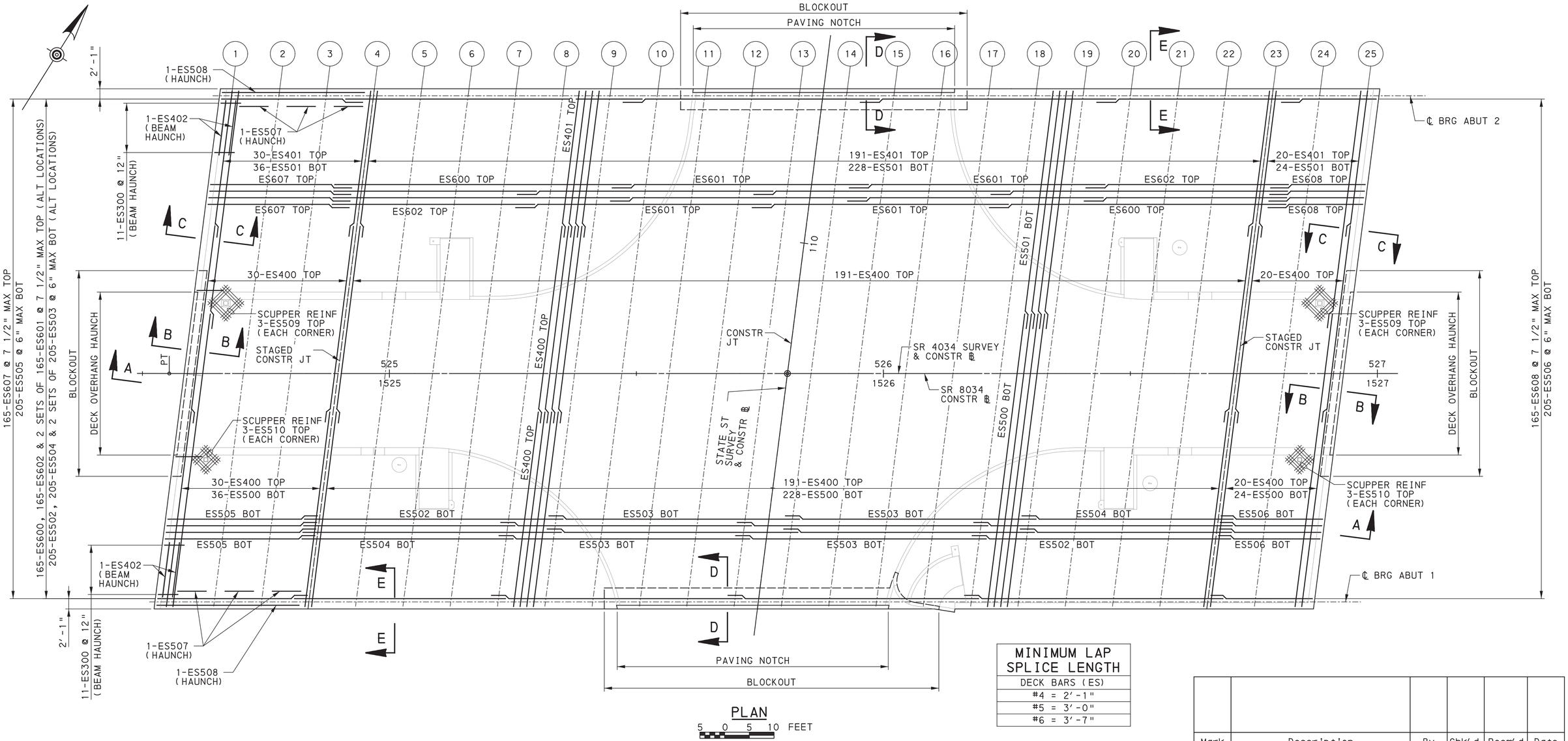
RECOMMENDED AUGUST 22, 2022

SHEET 27 OF 64

S-41005

DES: SRM | CKD: KCL | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\FINAL\bridge_SSSTdkT04.dgn



PLAN
5 0 5 10 FEET

MINIMUM LAP SPLICE LENGTH
DECK BARS (ES)
#4 = 2'-1"
#5 = 3'-0"
#6 = 3'-7"

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES:

1. CUT AND/OR REPOSITION DECK REINFORCING TO ACCOMODATE SCUPPERS OR DRAINS. REPAIR EPOXY COATING ON CUT ENDS OF BARS AS REQUIRED.

HAUNCH REINFORCEMENT NOTE:

THE HAUNCH REINFORCEMENT QUANTITY SHOWN ON THE REINFORCEMENT BAR SCHEDULE PROVIDES THE AMOUNT NECESSARY TO COVER THE LIMITS SHOWN ON THIS SHEET. PROVIDE ADDITIONAL HAUNCH REINFORCEMENT IN OTHER REGIONS ALONG THE LENGTH OF THE BEAM WHERE ACTUAL HAUNCHES EXCEED THE THICKNESSES SPECIFIED IN BC-752M.

REFERENCES:

FOR DECK GEOMETRY PLAN, SEE SHEET 27
FOR PARTIAL PLANS @ DECK ENDS AND OVERHANGS, SEE SHEET 29
FOR SECTION A-A, SEE SHEET 30
FOR SECTION B-B THRU E-E AND BEAM HAUNCH DETAIL, SEE SHEET 31
FOR CURBS AND BARRIERS PLANS, SEE SHEETS 32 & 33
FOR CONCRETE END DIAPHRAGM DETAILS, SEE SHEET 44 THRU 46
FOR TRAFFIC AND LIGHT POLE LOCATIONS AND DETAILS, SEE SHEET 37
FOR SCUPPER LOCATIONS AND DETAILS, SEE SHEET 50
FOR DECK ELEVATION TABLES, SEE SHEET 39 & 40
FOR DECK REINFORCEMENT AT SCUPPERS, SEE BC-751M
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

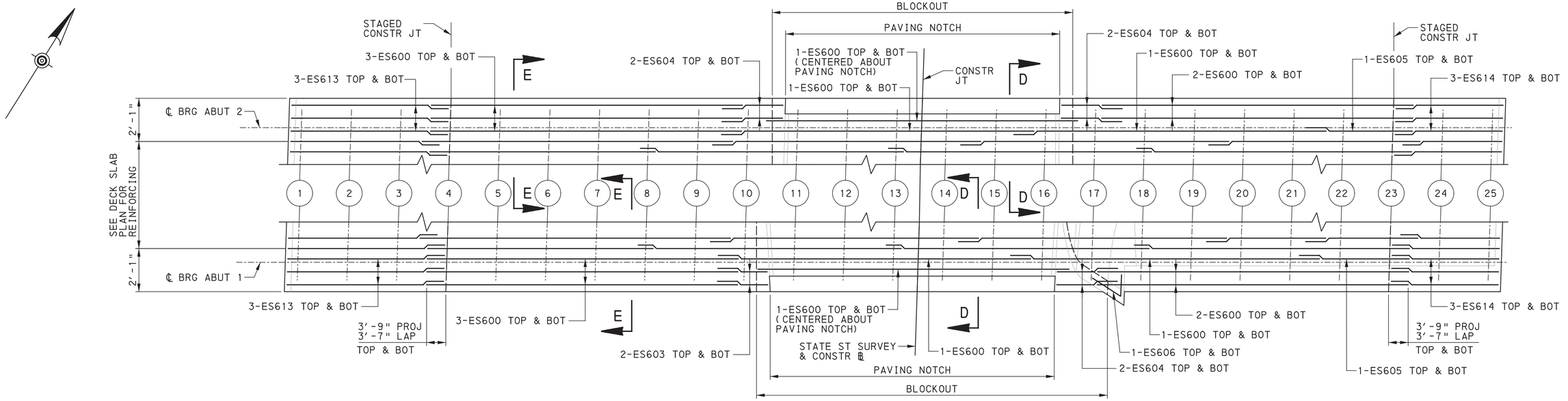
RECOMMENDED AUGUST 22, 2022

SHEET 28 OF 64

S-41005

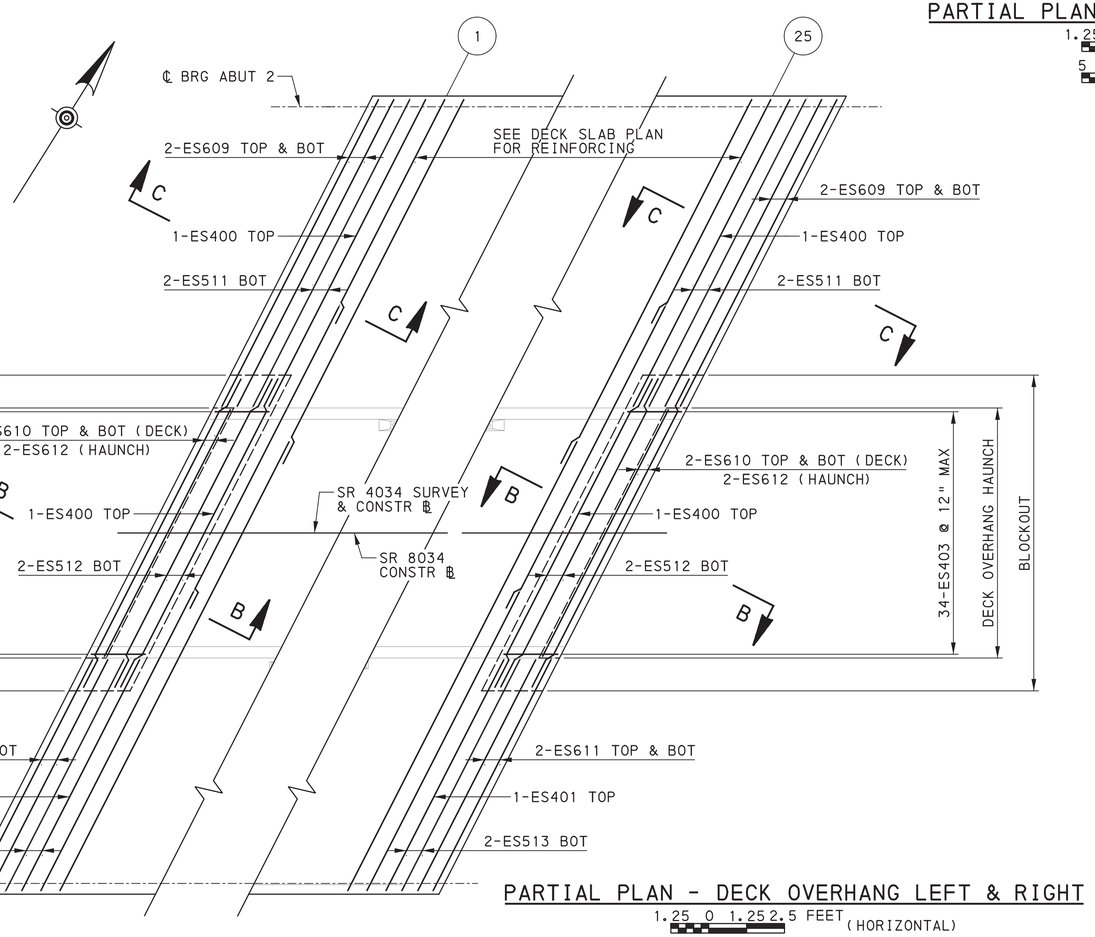
DES:	SRM	CKD:	KCL	DWG:	JP	CKD:	KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT06.dgn



PARTIAL PLAN - DECK END ABUTMENT 1 & 2

1.25 0 1.25 2.5 FEET (VERTICAL)
5 0 5 10 FEET (HORIZONTAL)



PARTIAL PLAN - DECK OVERHANG LEFT & RIGHT

1.25 0 1.25 2.5 FEET (HORIZONTAL)
5 0 5 10 FEET (VERTICAL)

REFERENCES:

FOR DECK GEOMETRY PLAN, SEE SHEET 27
FOR DECK SLAB PLAN, SEE SHEET 28
FOR SECTION B-B THRU E-E, SEE SHEET 31
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43

MINIMUM LAP SPLICE LENGTH	
DECK BARS (ES)	
#4	2'-1"
#5	3'-0"
#6	3'-7"

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB - PARTIAL PLANS

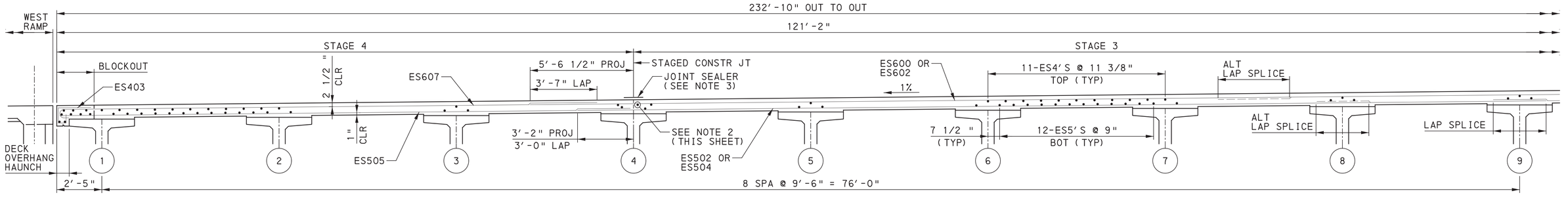
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

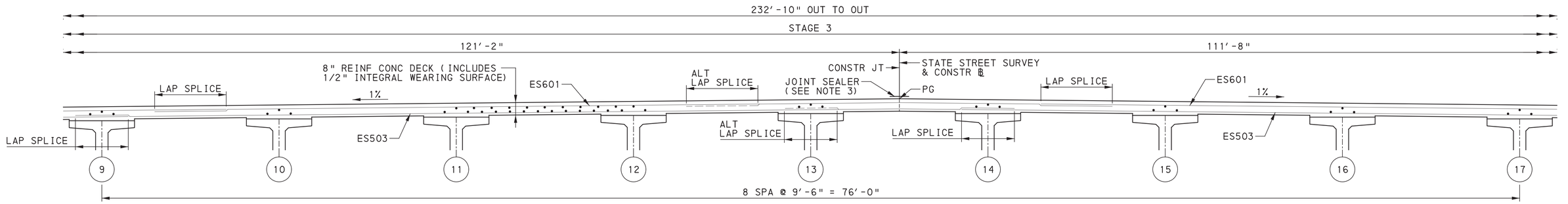
SHEET 29 OF 64
S-41005

DES: SRM | CKD: KCL | DWG: JP | CKD: KCL

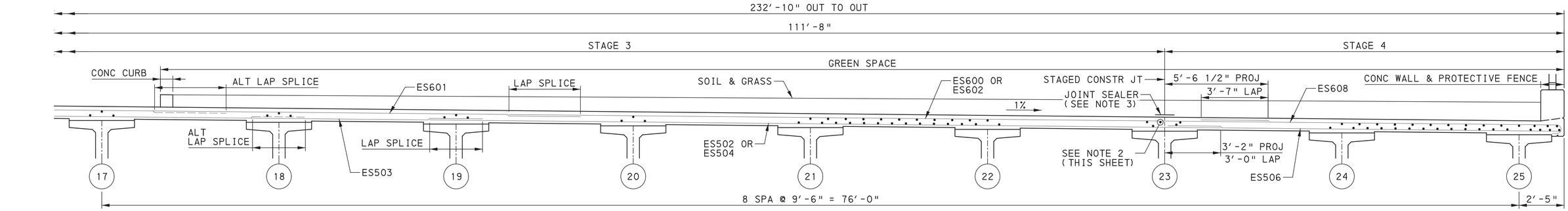
PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT01.dgn



SECTION A-A



SECTION A-A (CONTINUED)



SECTION A-A (CONTINUED)

1 0 1 2 3 FEET

MINIMUM LAP SPLICE LENGTH
DECK BARS (ES)
#4 = 2'-1"
#5 = 3'-0"
#6 = 3'-7"

NOTES:

1. DIMENSIONS PROVIDED ARE MEASURED PERPENDICULAR TO THE STATE STREET SURVEY & CONSTR ℄.
2. MOVED LONGITUDINAL BAR TO BE 2" CLEAR FROM STAGED CONSTRUCTION JOINT.
3. PLACE 3" WIDE STRIP OF HIGH MOLECULAR WEIGHT METHACRYLATE DECK JOINT SEALER ALONG EACH OF THE LONGITUDUNAL DECK CONSTRUCTION JOINTS IN ACCORDANCE TO THE SPECIAL PROVISION.

REFERENCES:

FOR DECK SLAB PLAN, SEE SHEET 28

FOR PARTIAL PLANS @ DECK ENDS AND OVERHANGS, SEE SHEET 29

FOR DECK SLAB TYPICAL SECTIONS - 2, SEE SHEET 31

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB - TYPICAL SECTIONS - 1

REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023
COMMONWEALTH OF PENNSYLVANIA

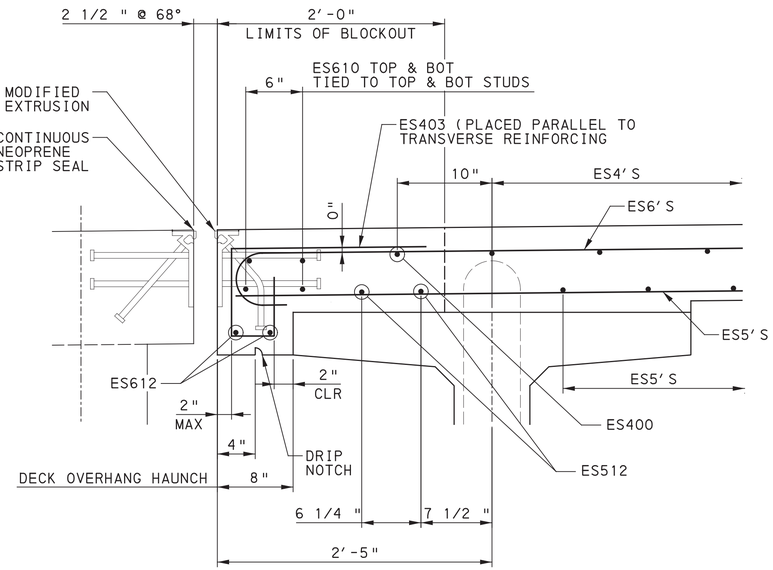
RECOMMENDED AUGUST 22, 2022

SHEET 30 OF 64

S-41005

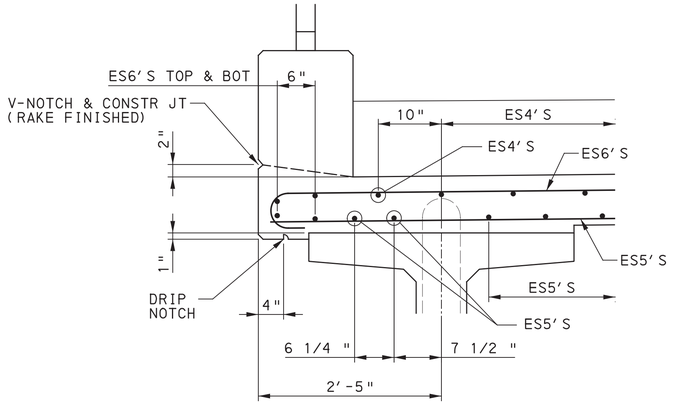
DES:	SRM	CKD:	KCL	DWG:	JP	CKD:	KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT03.dgn



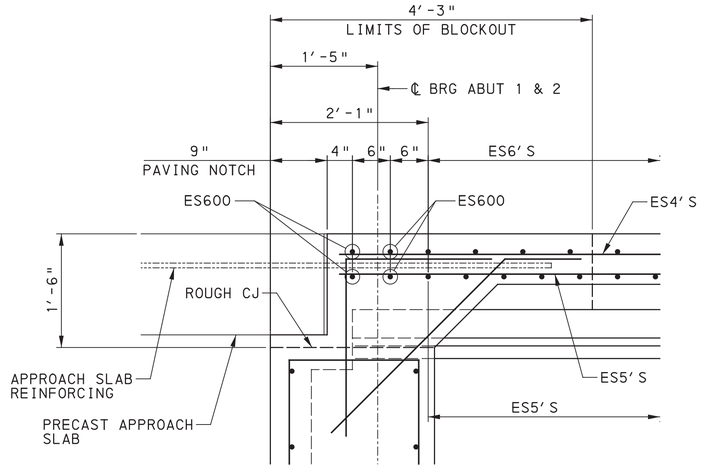
SECTION B-B

6 0 6 INCHES



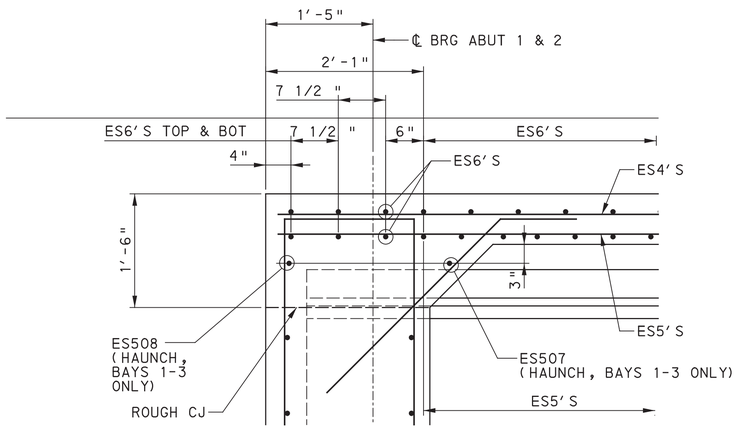
SECTION C-C

6 0 6 12 INCHES



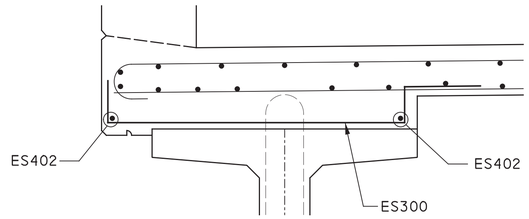
SECTION D-D

6 0 6 12 INCHES



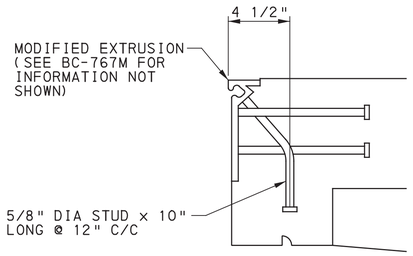
SECTION E-E

6 0 6 12 INCHES



BEAM HAUNCH DETAIL

(BEAM 1 ONLY)
6 0 6 12 INCHES



MODIFIED EXTRUSION DETAIL

3 0 3 6 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB - TYPICAL SECTIONS - 2

RECOMMENDED AUGUST 22, 2022

SHEET 31 OF 64

S-41005

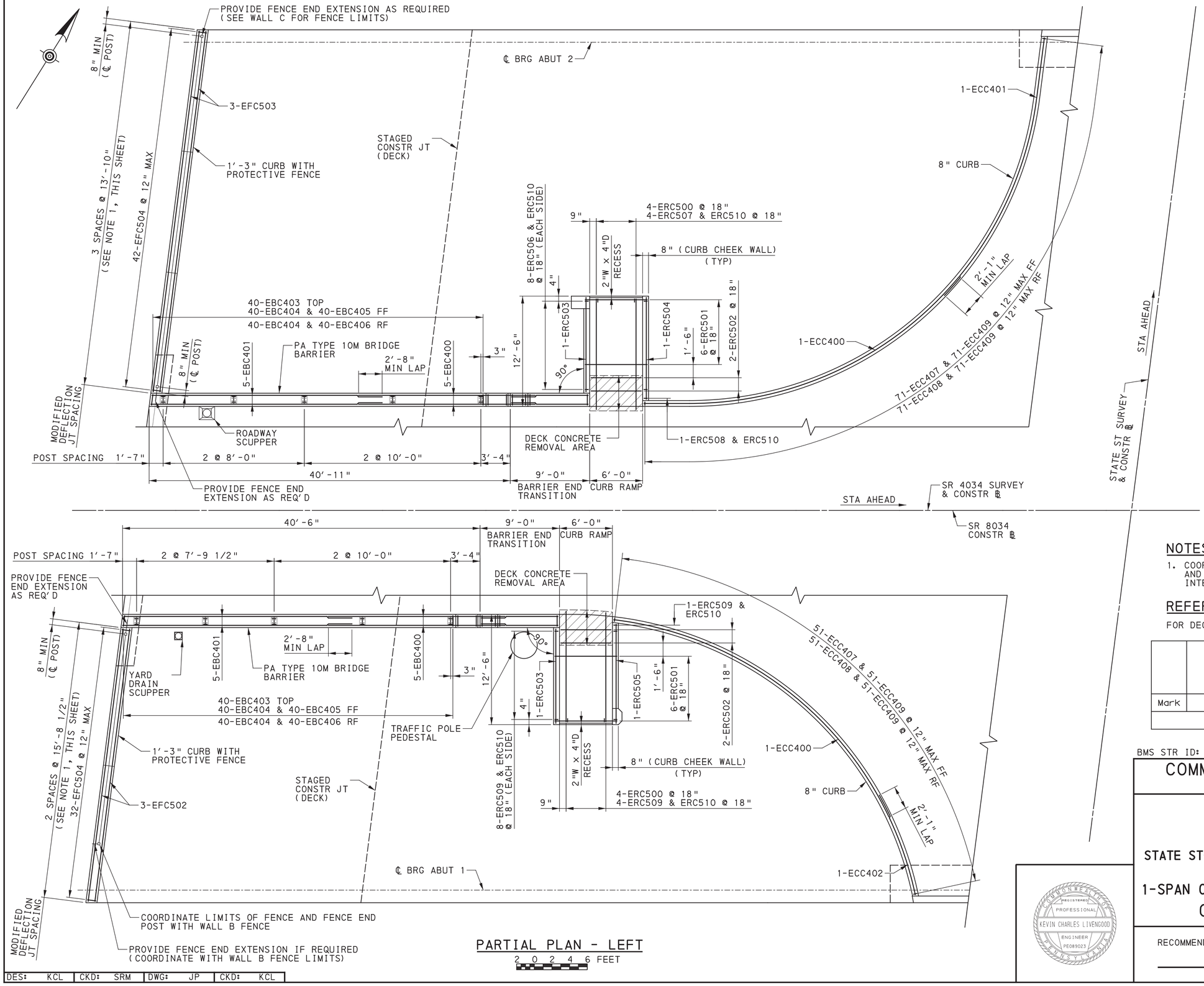
REFERENCES:

FOR DECK SLAB PLAN, SEE SHEET 28
FOR PARTIAL PLANS @ DECK ENDS AND OVERHANGS, SEE SHEET 29
FOR DECK SLAB TYPICAL SECTIONS - 1, SEE SHEET 30
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

DES: SRM | CKD: KCL | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT05.dgn



PARTIAL PLAN - LEFT

2 0 2 4 6 FEET

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

NOTES:

1. COORDINATE MODIFIED DEFLECTION JOINT LOCATIONS AND FENCE POST LOCATIONS TO AVOID POST ANCHOR INTERFERENCE.

REFERENCES:

FOR DECK GEOMETRY PLAN, SEE SHEET 27

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
CURBS AND BARRIERS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

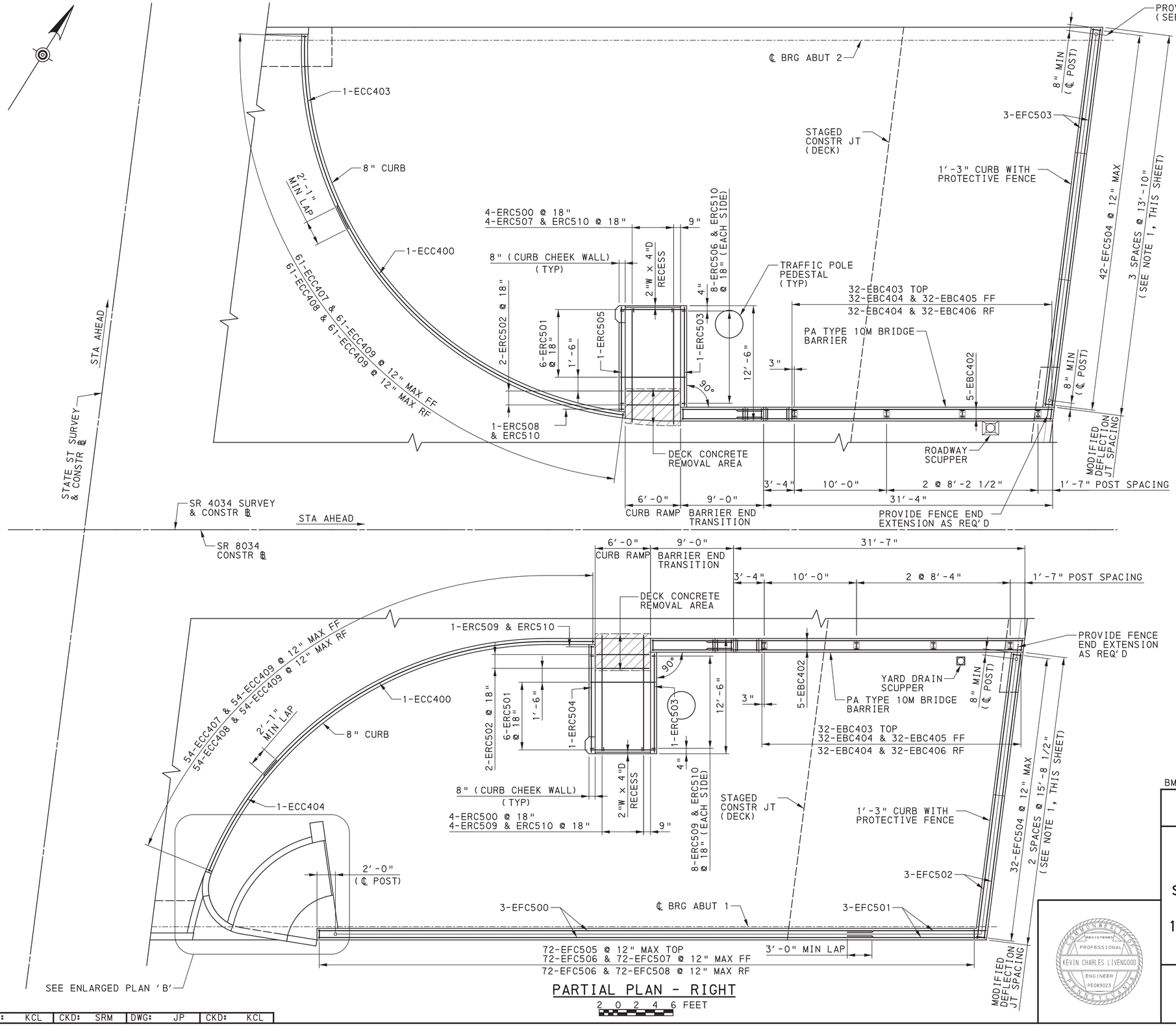
RECOMMENDED AUGUST 22, 2022

SHEET 32 OF 64

S-41005

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT05A.dgn



PARTIAL PLAN - RIGHT

NOTES:

1. COORDINATE MODIFIED DEFLECTION JOINT LOCATIONS AND FENCE POST LOCATIONS TO AVOID POST ANCHOR INTERFERENCE.

REFERENCES:

FOR ENLARGED PLAN B, SEE SHEET 34

FOR DECK GEOMETRY PLAN, SEE SHEET 27

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
CURBS AND BARRIERS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

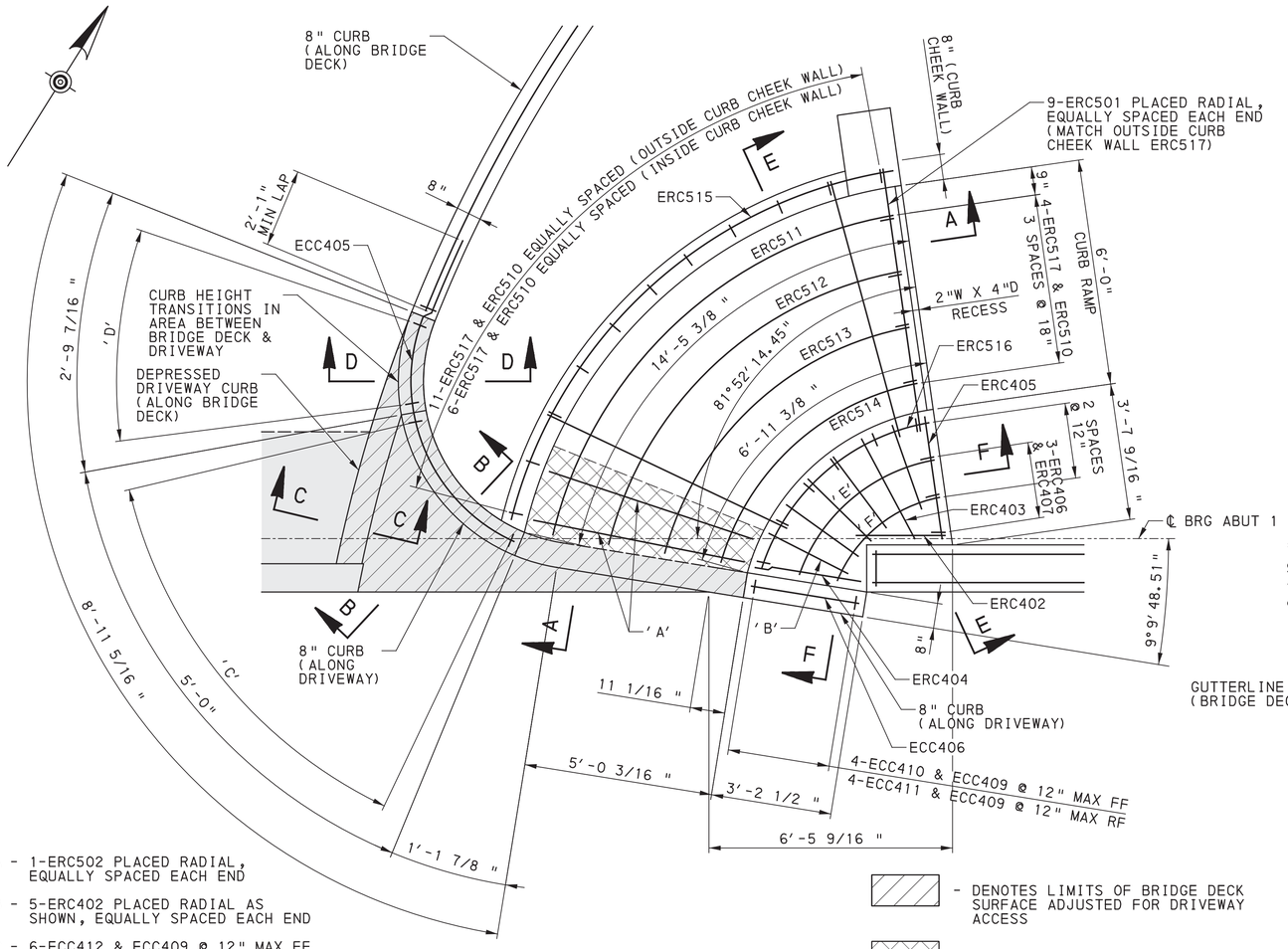
RECOMMENDED AUGUST 22, 2022

SHEET 33 OF 64

S-41005

DES:	KCL	CKD:	SRM	DWG:	JP	CKD:	KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT05B.dgn



A - 1-ERC502 PLACED RADIAL, EQUALLY SPACED EACH END

B - 5-ERC402 PLACED RADIAL AS SHOWN, EQUALLY SPACED EACH END

C - 6-ECC412 & ECC409 @ 12" MAX FF
6-ECC413 & ECC409 @ 12" MAX RF

D - 4-ECC414 & ECC409 @ 12" MAX FF
4-ECC415 & ECC409 @ 12" MAX RF

E - 1-ERC400

F - 1-ERC401

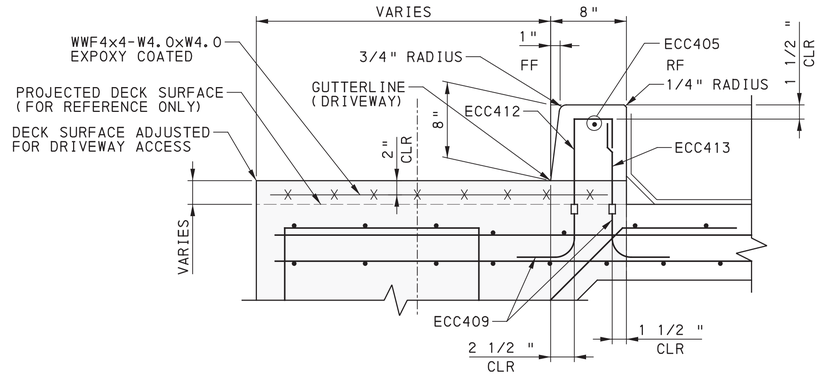
ENLARGED PLAN - B

1 0 1 2 FEET

- DENOTES LIMITS OF BRIDGE DECK SURFACE ADJUSTED FOR DRIVEWAY ACCESS

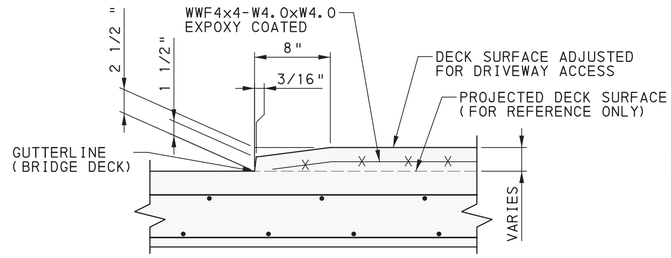
- DENOTES LIMITS OF DECK CONCRETE REMOVAL

- DENOTES LIMITS OF DECK BLOCKOUT FOR PRECAST APPROACH SLAB CLOSURE POUR



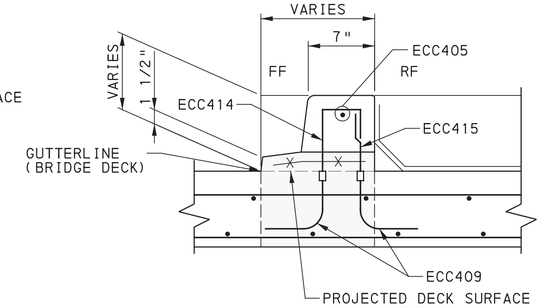
SECTION B-B

6 0 6 INCHES



SECTION C-C

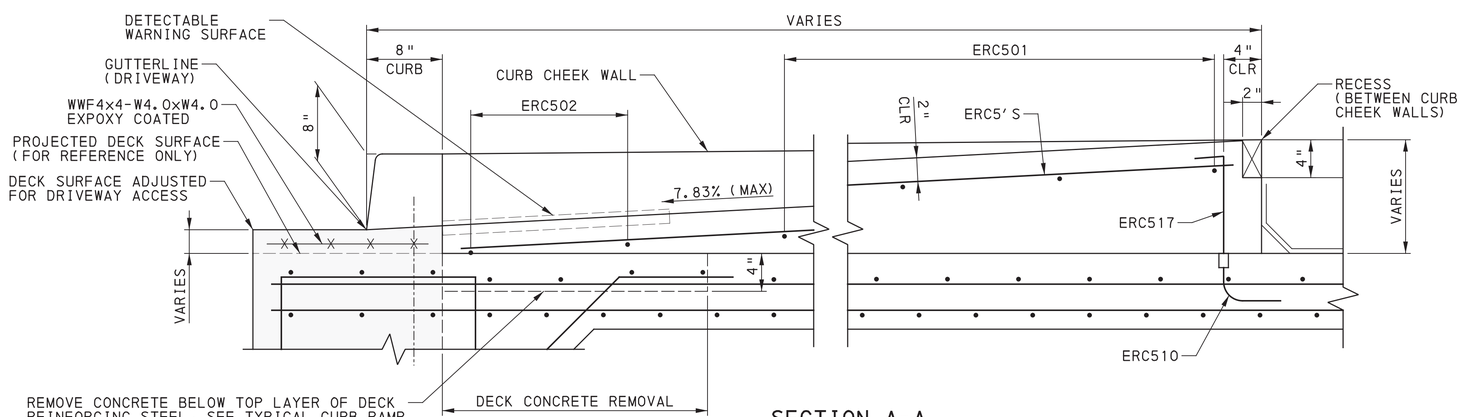
6 0 6 INCHES



FOR 8" CURB INFORMATION NOT SHOWN, SEE SECTION B-B (THIS SHEET)

SECTION D-D

6 0 6 INCHES



SECTION A-A

6 0 6 INCHES

REFERENCES:

FOR CURB AND BARRIER PLANS, SEE SHEET 32 & 33

FOR SECTION E-E & F-F, SEE SHEET 35

FOR TYPICAL CURB RAMP, SEE SHEET 35

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43

FOR DECK GEOMETRY PLAN, SEE SHEET 27

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
CURBS AND BARRIERS - 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

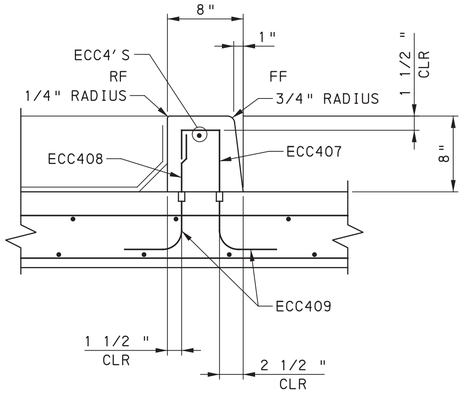
RECOMMENDED AUGUST 22, 2022

SHEET 34 OF 64

S-41005

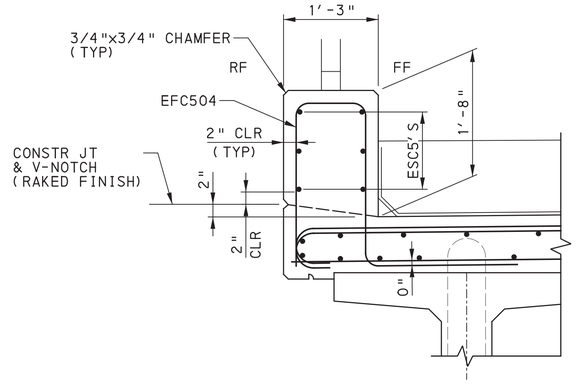
DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT09.dgn



TYPICAL 8" CURB

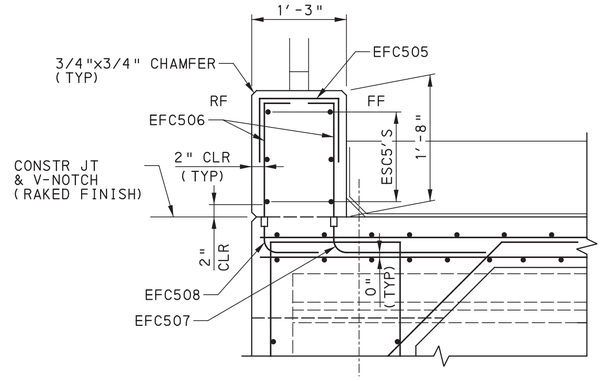
6 0 6 INCHES



TYPICAL CURB WITH PROTECTIVE FENCE

(DECK OVERHANG)

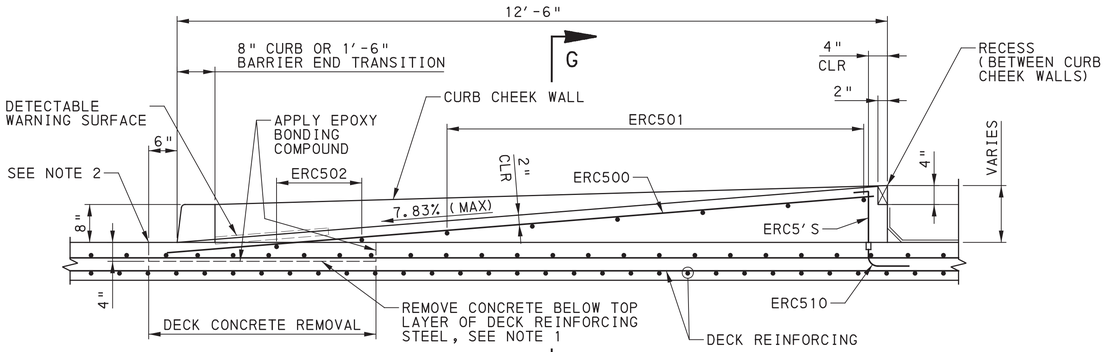
6 0 6 12 INCHES



TYPICAL CURB WITH PROTECTIVE FENCE

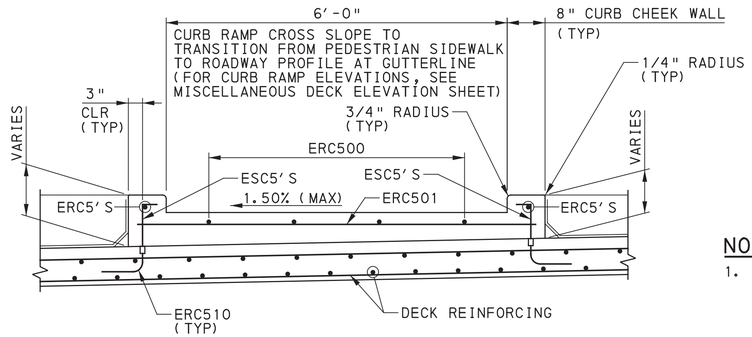
(DECK END)

6 0 6 12 INCHES



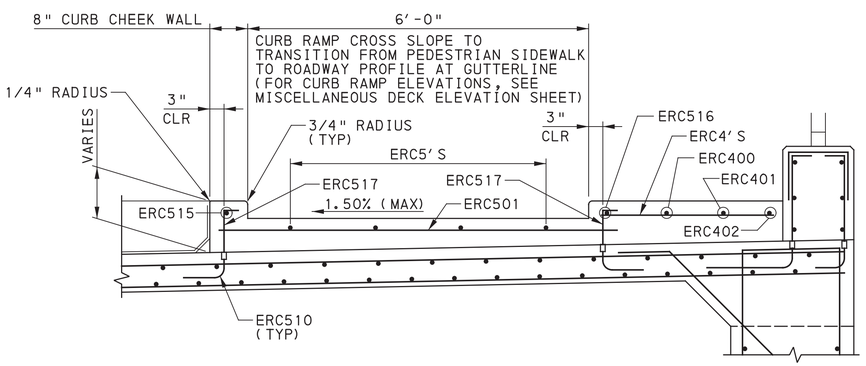
TYPICAL CURB RAMP

12 0 12 INCHES



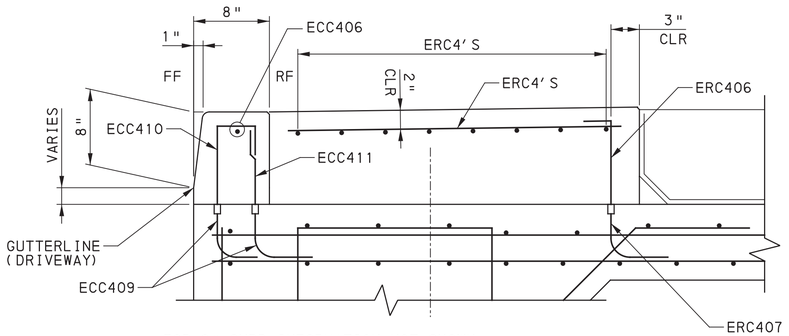
SECTION G-G

12 0 12 INCHES



SECTION E-E

12 0 12 INCHES



FOR 8" CURB INFORMATION NOT SHOWN, SEE TYPICAL 8" CURB, (THIS SHEET)

SECTION F-F

6 0 6 INCHES

NOTES:

1. DECK CONCRETE REMOVAL: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. DECK SLAB CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED HAND-OPERATED HAMMERS EMPLOYING POINTED OR BLUNT CHISEL TYPE TOOLS. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS. CONCRETE SHALL BE REMOVED TO A DEPTH OF 4" (TO EXPOSE THE TOP LAYER OF DECK REINFORCING STEEL). PNEUMATIC HAMMER SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE TOP LAYER OF DECK REINFORCING STEEL.
2. SEAL EXPOSED SAWCUT JOINT WITH HMWM RESIN.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
CURBS AND BARRIERS - 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

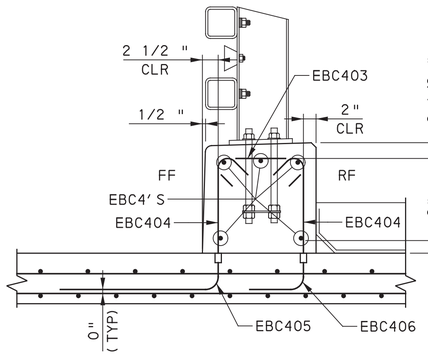
RECOMMENDED AUGUST 22, 2022

SHEET 35 OF 64

S-41005

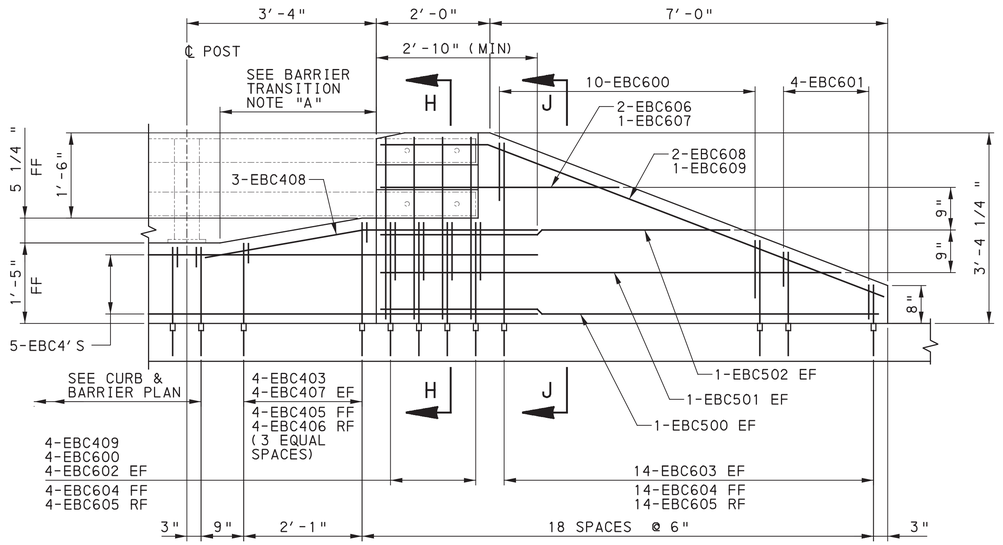
DES: SRM | CKD: KCL | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022



TYPICAL PA TYPE 10M BRIDGE BARRIER

6 0 6 12 INCHES

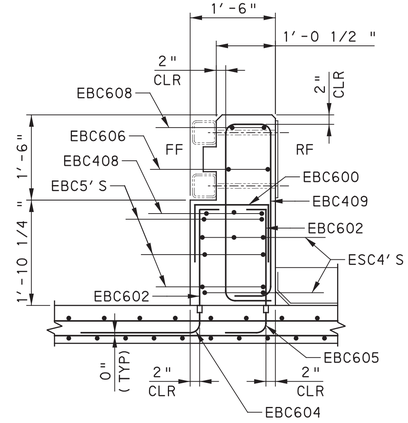


BARRIER END TRANSITION

12 0 12 INCHES

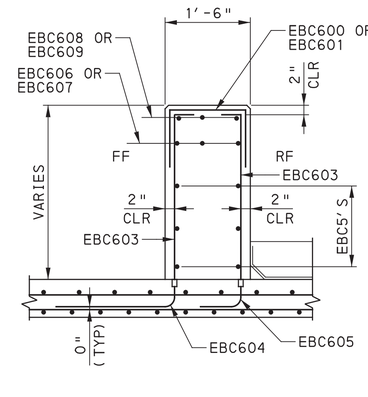
BARRIER TRANSITION NOTE "A"

TRANSITION BARRIER FF 1/2" REVEAL AND TOP SURFACE 1/2" SLOPE FLUSH WITH BARRIER END TRANSITION IN THIS AREA



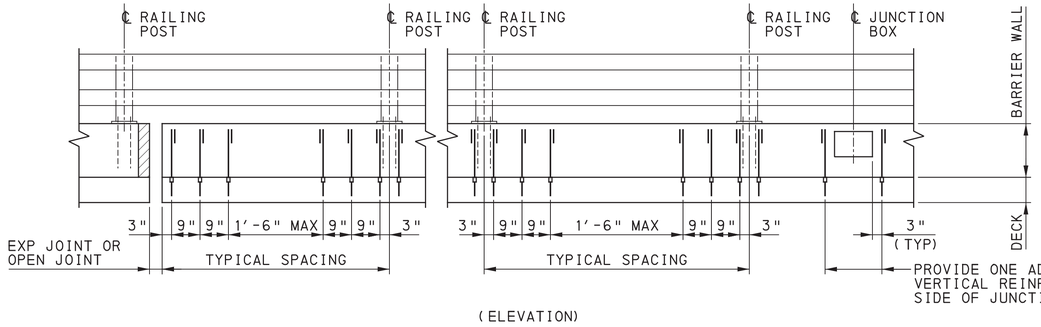
SECTION H-H

12 0 12 INCHES



SECTION J-J

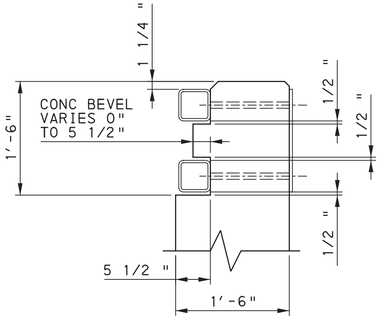
12 0 12 INCHES



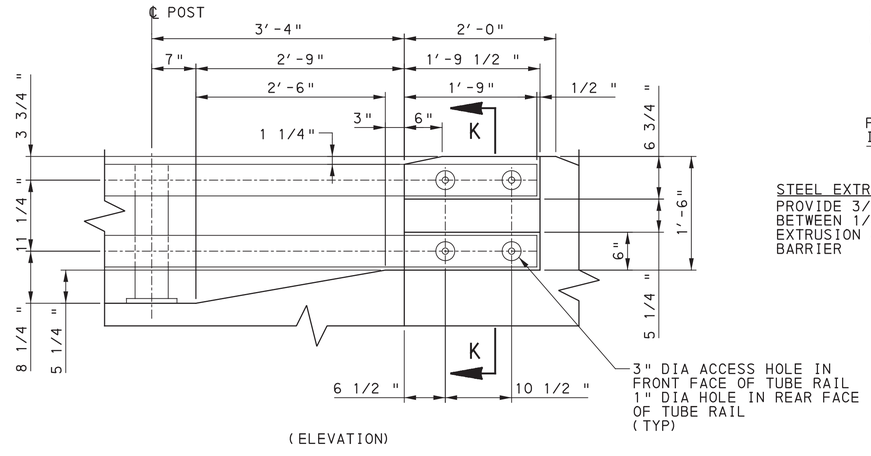
(ELEVATION)

PA TYPE 10M BRIDGE BARRIER - VERTICAL REINFORCEMENT SPACING

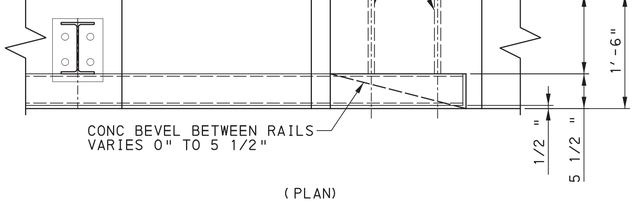
NOT TO SCALE



SECTION K-K



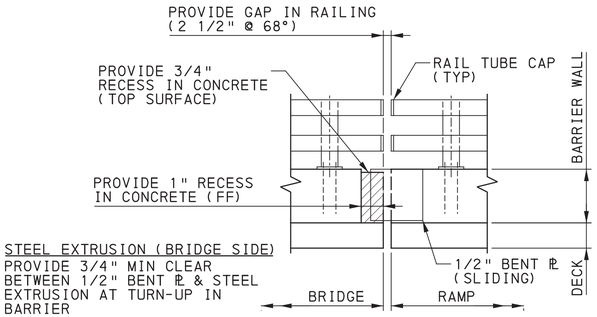
(ELEVATION)



(PLAN)

PA TYPE 10M BRIDGE BARRIER - RAIL CONNECTION DETAIL

6 0 6 12 INCHES



STEEL EXTRUSION (BRIDGE SIDE)

PROVIDE 3/4" MIN CLEAR BETWEEN 1/2" BENT ℄ & STEEL EXTRUSION AT TURN-UP IN BARRIER

PA TYPE 10M BRIDGE BARRIER DETAIL AT NEOPRENE STRIP SEAL DAM

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
CURBS AND BARRIERS - 5

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

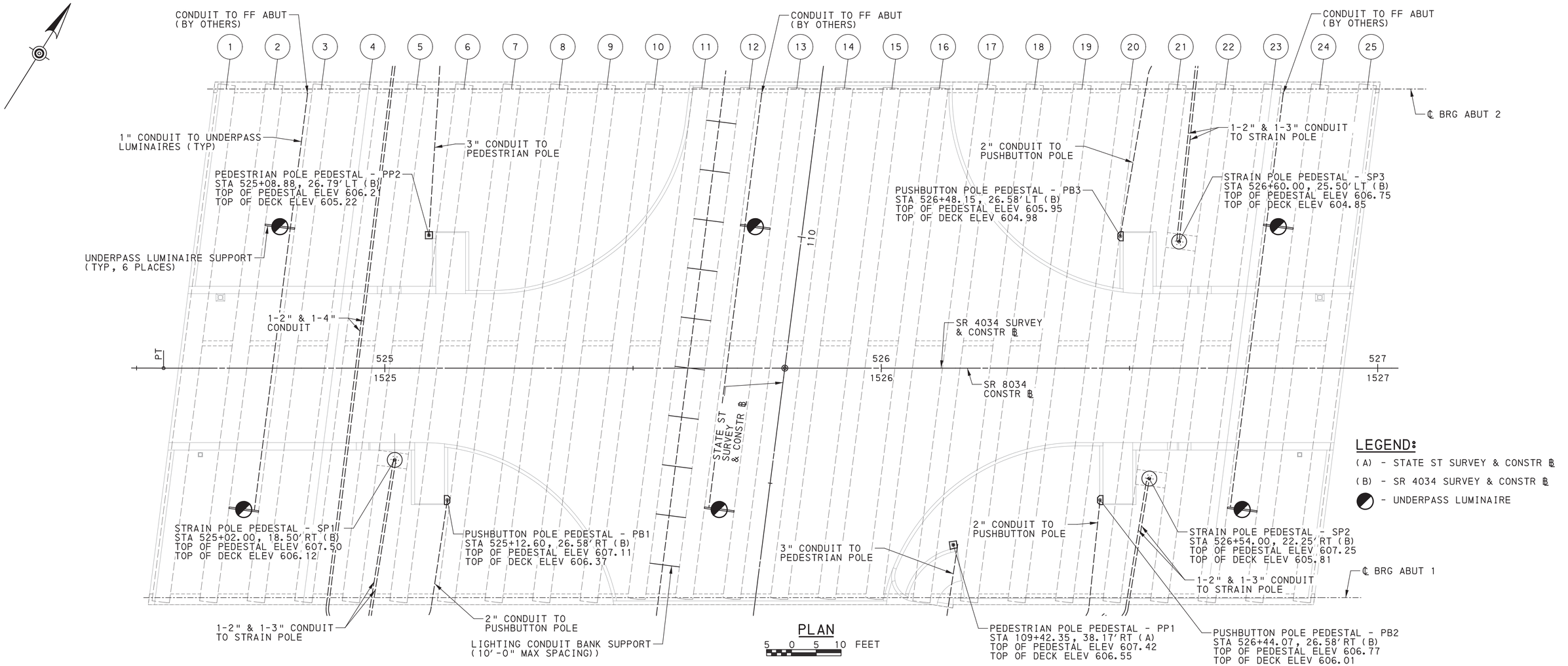
RECOMMENDED AUGUST 22, 2022

SHEET 36 OF 64

S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT08.dgn



PLAN

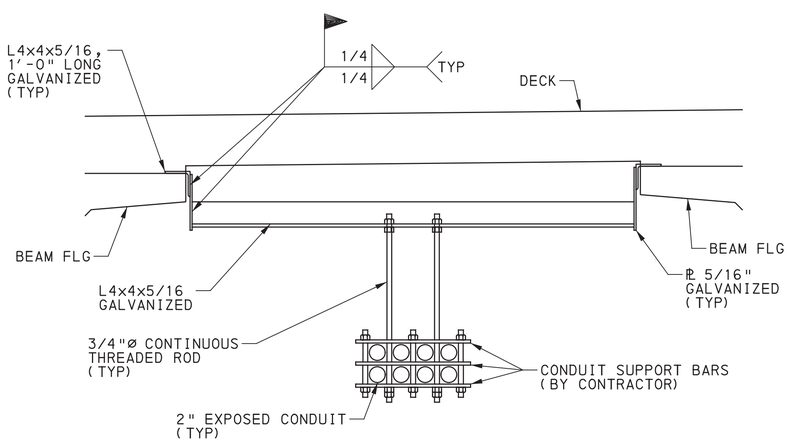
5 0 5 10 FEET

LEGEND:

(A) - STATE ST SURVEY & CONSTR ℄

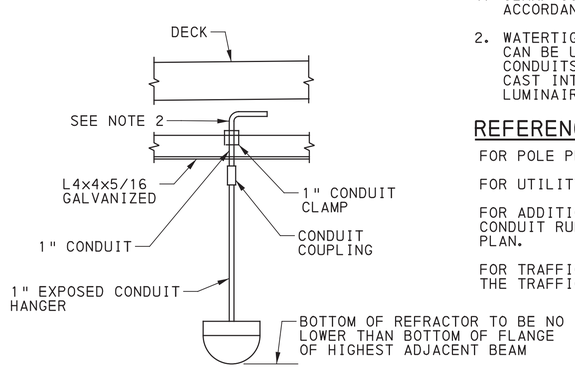
(B) - SR 4034 SURVEY & CONSTR ℄

◐ - UNDERPASS LUMINAIRE



LIGHTING CONDUIT BANK SUPPORT

NOT TO SCALE



FOR SUPPORT L4x4 CONNECTION TO BEAM FLANGE, SEE LIGHTING CONDUIT SUPPORT DETAIL (THIS SHEET)

UNDERPASS LUMINAIRE SUPPORT

NOT TO SCALE

NOTES:

1. CLAMP CONDUITS TO THE WEBS OF ADJACENT BEAMS IN ACCORDANCE TO BC-721M, UNLESS NOTED OTHERWISE.
2. WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT CAN BE UTILIZED, IF NECESSARY, TO CONNECT THE CONDUITS CLAMPED TO THE BEAMS TO THE CONDUITS CAST INTO THE STRUCTURE AND THE UNDERPASS LUMINAIRES.

REFERENCES:

FOR POLE PEDESTAL DETAILS, SEE SHEET 38

FOR UTILITY THROUGH DIAPHRAGM DETAILS, SEE SHEET 48

FOR ADDITIONAL UNDERPASS LUMINAIRE AND LIGHTING CONDUIT RUN DETAILS, SEE THE HIGHWAY LIGHTING PLAN.

FOR TRAFFIC SIGNAL AND CONDUIT RUN DETAILS, SEE THE TRAFFIC SIGNAL PLANS.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39

STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034

1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

TRAFFIC & LIGHTING UTILITY PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 37 OF 64

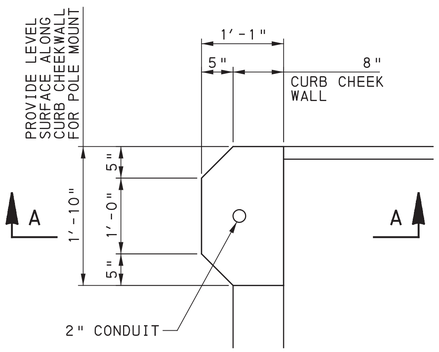
S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022

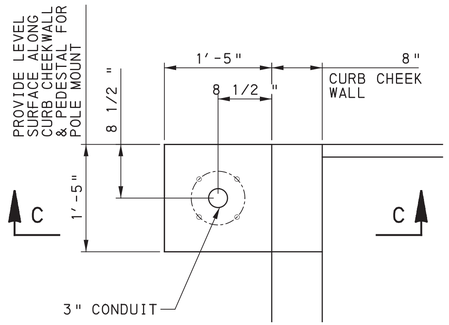
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT12.dgn

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT13.dgn



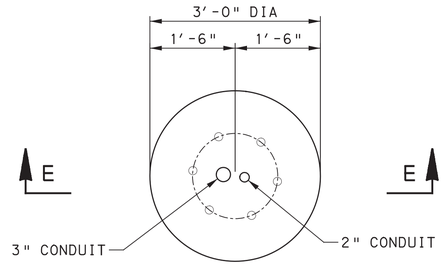
PUSHBUTTON POLE PEDESTAL
PB1, PB2 & PB3

6 0 6 12 INCHES



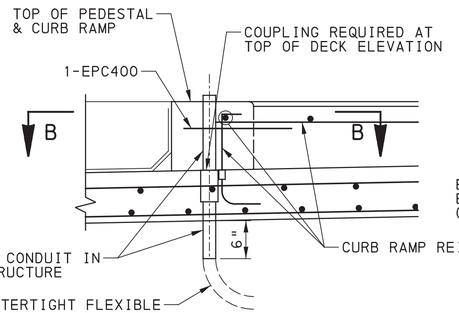
PEDESTRIAN PEDESTAL
PP1 & PP2

6 0 6 12 INCHES



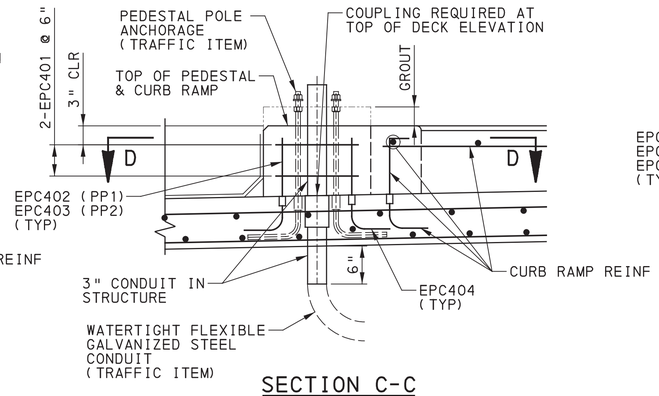
STRAIN POLE PEDESTAL
SP1, SP2 & SP3

12 0 12 INCHES



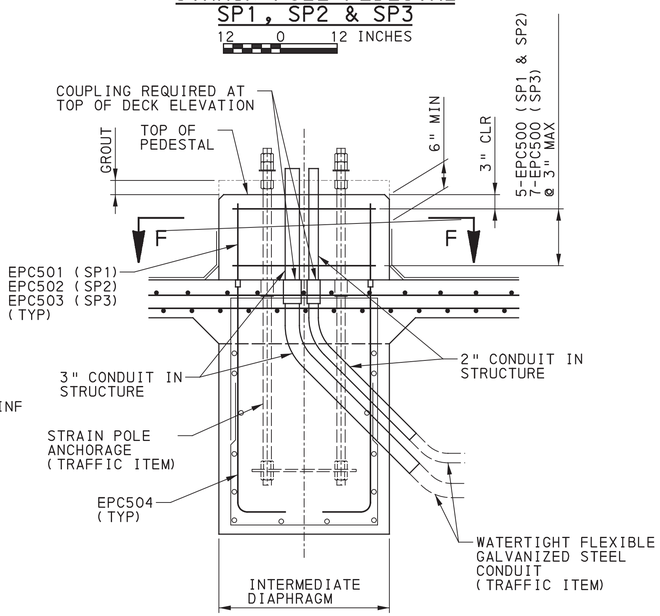
SECTION A-A

6 0 6 12 INCHES



SECTION C-C

6 0 6 12 INCHES



SECTION E-E

12 0 12 INCHES

CUTTING OF DECK AND DIAPHRAGM REINFORCING IS NOT PERMITTED. CONTRACTOR IS TO SHIFT CONDUIT AND/OR REINFORCING TO PREVENT ANY CONFLICTS

NOTES:

1. TRAFFIC POLE ANCHORAGE SHALL BE DESIGNED ACCORDING TO TC-8801 AND MANUFACTURER SPECIFICATIONS.
2. THE COST OF ANCHOR BOLTS, PLATES, AND TRAFFIC POLE ANCHORAGE APPURTENANCES IS INCIDENTAL TO THE TRAFFIC SIGNAL SUPPORTS.

REFERENCES:

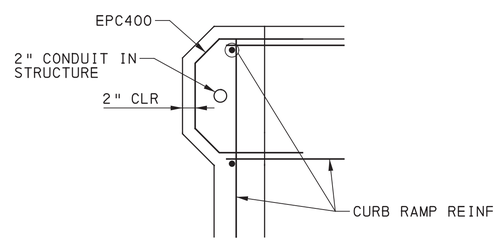
FOR TRAFFIC AND LIGHT POLE PEDESTAL LOCATIONS, SEE SHEET 37

FOR ADDITIONAL TRAFFIC POLE AND CONDUIT NOTES AND DETAILS, SEE TRAFFIC SIGNAL PLANS

FOR ANCHORAGE DETAILS NOT SHOWN, SEE TC-8801 & TC-8803

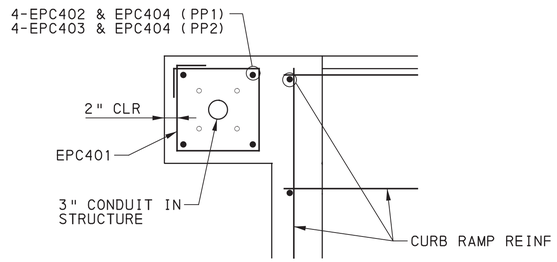
FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SHEET 47

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42 & 43



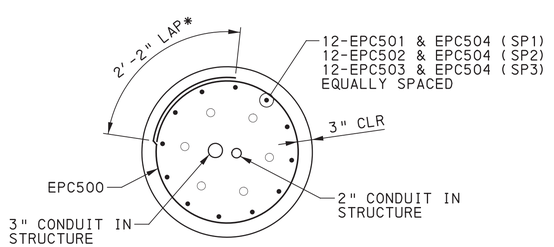
SECTION B-B

6 0 6 12 INCHES



SECTION D-D

6 0 6 12 INCHES



* - ALTERNATE SPLICE LOCATIONS

SECTION F-F

12 0 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

POLE PEDESTAL DETAILS

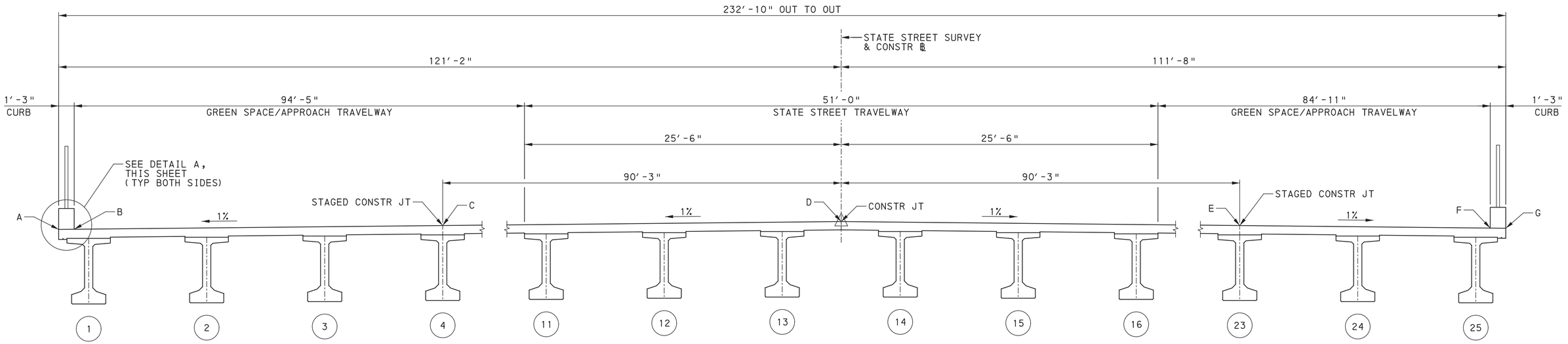
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 38 OF 64

S-41005

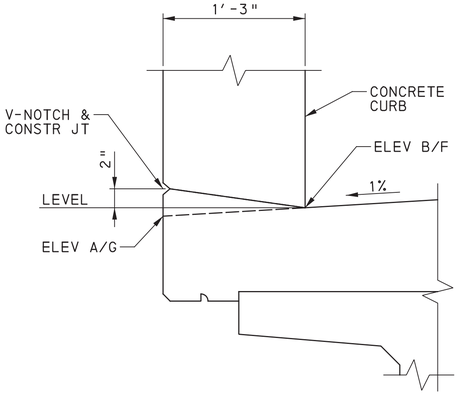
DES: KCL | CKD: REB | DWG: JP | CKD: KCL



DECK SECTION

2 0 2 4 FEET

FINISHED DECK ELEVATIONS AT BREAK POINTS								
LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)	ELEV (F)	ELEV (G)
ABUT 1 CL BRG	109+11.29	606.53	-	-	-	-	-	-
ABUT 1 CL BRG	109+11.45	606.52	606.53	-	-	-	-	-
ABUT 1 CL BRG	109+15.24	606.40	606.42	606.71	-	-	-	-
	109+20.00	606.26	606.28	606.57	-	-	-	-
ABUT 1 CL BRG	109+26.76	606.08	606.09	606.39	607.29	-	-	-
	109+30.00	606.00	606.01	606.31	607.21	-	-	-
ABUT 1 CL BRG	109+38.28	605.80	605.82	606.11	607.02	606.11	-	-
	109+40.00	605.77	605.78	606.08	606.98	606.08	-	-
ABUT 1 CL BRG	109+40.85	605.75	605.76	606.06	606.96	606.06	605.86	-
ABUT 1 CL BRG	109+41.01	605.75	605.76	606.06	606.96	606.06	605.85	605.84
	109+50.00	605.57	605.58	605.88	606.78	605.88	605.67	605.66
	109+60.00	605.37	605.38	605.68	606.58	605.68	605.47	605.46
	109+70.00	605.17	605.18	605.48	606.38	605.48	605.27	605.26
	109+80.00	604.97	604.98	605.28	606.18	605.28	605.07	605.06
	109+90.00	604.77	604.78	605.08	605.98	605.08	604.88	604.86
	110+00.00	604.57	604.58	604.88	605.78	604.88	604.68	604.66
	110+10.00	604.37	604.38	604.68	605.58	604.68	604.48	604.46
ABUT 2 CL BRG	110+14.63	604.28	604.29	604.58	605.49	604.58	604.38	604.37
ABUT 2 CL BRG	110+14.79	-	604.28	604.58	605.48	604.58	604.38	604.37
ABUT 2 CL BRG	110+18.57	-	-	604.51	605.41	604.51	604.30	604.29
	110+20.00	-	-	-	605.38	604.48	604.28	604.26
	110+30.00	-	-	-	605.18	604.28	604.07	604.06
ABUT 2 CL BRG	110+30.09	-	-	-	605.18	604.27	604.07	604.06
	110+40.00	-	-	-	-	604.03	603.82	603.81
ABUT 2 CL BRG	110+41.61	-	-	-	-	603.98	603.78	603.76
ABUT 2 CL BRG	110+44.18	-	-	-	-	-	603.70	603.69
ABUT 2 CL BRG	110+44.34	-	-	-	-	-	-	603.68



DETAIL A

NOT TO SCALE

NOTES:

1. DECK SECTION WAS CUT WITHIN THE GREEN SPACE AREA TO DEFINE ELEVATION POINTS B AND F. SECTION WITHIN THE LIMITS OF THE RAMP STRUCTURES IS SIMILAR.

REFERENCES:

FOR DECK ELEVATIONS ALONG CL BEAMS, SEE SHEET 40

FOR ADDITIONAL DECK ELEVATIONS, SEE SHEET 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
FINISHED DECK ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 39 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT10.dgn

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SS\sheets\FINAL\bridge_SSSTdkT11.dgn

TABLE OF DECK ELEVATIONS ALONG CL BEAMS

LOCATION	BEAM B1		BEAM B2		BEAM B3		BEAM B4		BEAM B5		BEAM B6		BEAM B7		BEAM B8		BEAM B9		BEAM B10	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
0.00 L	109+11.60	606.54	109+12.82	606.60	109+14.03	606.65	109+15.24	606.71	109+16.45	606.77	109+17.67	606.83	109+18.88	606.89	109+20.09	606.95	109+21.30	607.01	109+22.52	607.07
0.10 L	109+21.94	606.23	109+23.15	606.29	109+24.36	606.36	109+25.57	606.42	109+26.79	606.48	109+28.00	606.55	109+29.21	606.61	109+30.42	606.68	109+31.64	606.74	109+32.85	606.81
0.20 L	109+32.27	605.97	109+33.48	606.03	109+34.69	606.10	109+35.91	606.17	109+37.12	606.23	109+38.33	606.30	109+39.54	606.37	109+40.76	606.44	109+41.97	606.51	109+43.18	606.58
0.30 L	109+42.60	605.74	109+43.82	605.81	109+45.03	605.88	109+46.24	605.95	109+47.45	606.02	109+48.67	606.09	109+49.88	606.16	109+51.09	606.23	109+52.30	606.31	109+53.52	606.38
0.40 L	109+52.94	605.53	109+54.15	605.60	109+55.36	605.67	109+56.57	605.74	109+57.79	605.82	109+59.00	605.89	109+60.21	605.96	109+61.42	606.03	109+62.64	606.10	109+63.85	606.17
0.50 L	109+63.27	605.33	109+64.48	605.40	109+65.69	605.47	109+66.91	605.54	109+68.12	605.61	109+69.33	605.68	109+70.54	605.75	109+71.76	605.82	109+72.97	605.89	109+74.18	605.96
0.60 L	109+73.60	605.12	109+74.81	605.19	109+76.03	605.26	109+77.24	605.33	109+78.45	605.40	109+79.66	605.47	109+80.88	605.54	109+82.09	605.61	109+83.30	605.69	109+84.51	605.76
0.70 L	109+83.94	604.91	109+85.15	604.98	109+86.36	605.05	109+87.57	605.13	109+88.79	605.20	109+90.00	605.27	109+91.21	605.34	109+92.42	605.41	109+93.64	605.48	109+94.85	605.55
0.80 L	109+94.27	604.71	109+95.48	604.78	109+96.69	604.85	109+97.91	604.92	109+99.12	604.99	110+00.33	605.06	110+01.54	605.13	110+02.76	605.20	110+03.97	605.27	110+05.18	605.34
0.90 L	110+04.60	604.50	110+05.81	604.57	110+07.03	604.64	110+08.24	604.71	110+09.45	604.78	110+10.66	604.85	110+11.88	604.92	110+13.09	605.00	110+14.30	605.07	110+15.51	605.14
1.00 L	110+14.93	604.29	110+16.15	604.36	110+17.36	604.43	110+18.57	604.51	110+19.78	604.58	110+21.00	604.65	110+22.21	604.72	110+23.42	604.79	110+24.64	604.86	110+25.85	604.93

TABLE OF DECK ELEVATIONS ALONG CL BEAMS

LOCATION	BEAM B11		BEAM B12		BEAM B13		BEAM B14		BEAM B15		BEAM B16		BEAM B17		BEAM B18		BEAM B19		BEAM B20	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
0.00 L	109+23.73	607.13	109+24.94	607.20	109+26.15	607.26	109+27.37	607.23	109+28.58	607.10	109+29.79	606.98	109+31.00	606.85	109+32.22	606.73	109+33.43	606.60	109+34.64	606.48
0.10 L	109+34.06	606.87	109+35.27	606.94	109+36.49	607.01	109+37.70	606.98	109+38.91	606.86	109+40.12	606.74	109+41.34	606.62	109+42.55	606.50	109+43.76	606.38	109+44.97	606.26
0.20 L	109+44.39	606.65	109+45.61	606.72	109+46.82	606.79	109+48.03	606.77	109+49.25	606.65	109+50.46	606.53	109+51.67	606.41	109+52.88	606.29	109+54.10	606.17	109+55.31	606.06
0.30 L	109+54.73	606.45	109+55.94	606.52	109+57.15	606.59	109+58.37	606.56	109+59.58	606.44	109+60.79	606.33	109+62.00	606.21	109+63.22	606.09	109+64.43	605.97	109+65.64	605.85
0.40 L	109+65.06	606.24	109+66.27	606.31	109+67.49	606.38	109+68.70	606.36	109+69.91	606.24	109+71.12	606.12	109+72.34	606.00	109+73.55	605.88	109+74.76	605.76	109+75.97	605.64
0.50 L	109+75.39	606.03	109+76.61	606.10	109+77.82	606.18	109+79.03	606.15	109+80.24	606.03	109+81.46	605.91	109+82.67	605.79	109+83.88	605.67	109+85.09	605.55	109+86.31	605.44
0.60 L	109+85.73	605.83	109+86.94	605.90	109+88.15	605.97	109+89.37	605.94	109+90.58	605.83	109+91.79	605.71	109+93.00	605.59	109+94.22	605.47	109+95.43	605.35	109+96.64	605.23
0.70 L	109+96.06	605.62	109+97.27	605.69	109+98.49	605.76	109+99.70	605.74	110+00.91	605.62	110+02.12	605.50	110+03.34	605.38	110+04.55	605.26	110+05.76	605.14	110+06.97	605.02
0.80 L	110+06.39	605.41	110+07.61	605.48	110+08.82	605.56	110+10.03	605.53	110+11.24	605.41	110+12.46	605.29	110+13.67	605.17	110+14.88	605.05	110+16.09	604.94	110+17.31	604.82
0.90 L	110+16.73	605.21	110+17.94	605.28	110+19.15	605.35	110+20.36	605.32	110+21.58	605.21	110+22.79	605.09	110+24.00	604.97	110+25.21	604.85	110+26.43	604.73	110+27.64	604.61
1.00 L	110+27.06	605.00	110+28.27	605.07	110+29.49	605.14	110+30.70	605.11	110+31.91	604.99	110+33.12	604.87	110+34.34	604.74	110+35.55	604.62	110+36.76	604.49	110+37.97	604.37

TABLE OF DECK ELEVATIONS ALONG CL BEAMS

LOCATION	BEAM B21		BEAM B22		BEAM B23		BEAM B24		BEAM B25	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
0.00 L	109+35.85	606.36	109+37.07	606.24	109+38.28	606.11	109+39.49	605.99	109+40.70	605.87
0.10 L	109+46.19	606.14	109+47.40	606.02	109+48.61	605.90	109+49.82	605.78	109+51.04	605.67
0.20 L	109+56.52	605.94	109+57.73	605.82	109+58.95	605.70	109+60.16	605.58	109+61.37	605.46
0.30 L	109+66.85	605.73	109+68.07	605.61	109+69.28	605.49	109+70.49	605.37	109+71.70	605.25
0.40 L	109+77.19	605.52	109+78.40	605.40	109+79.61	605.28	109+80.82	605.17	109+82.04	605.05
0.50 L	109+87.52	605.32	109+88.73	605.20	109+89.94	605.08	109+91.16	604.96	109+92.37	604.84
0.60 L	109+97.85	605.11	109+99.07	604.99	110+00.28	604.87	110+01.49	604.75	110+02.70	604.63
0.70 L	110+08.19	604.90	110+09.40	604.78	110+10.61	604.66	110+11.82	604.55	110+13.04	604.43
0.80 L	110+18.52	604.70	110+19.73	604.58	110+20.94	604.46	110+22.16	604.34	110+23.37	604.22
0.90 L	110+28.85	604.49	110+30.07	604.37	110+31.28	604.25	110+32.49	604.12	110+33.70	604.00
1.00 L	110+39.19	604.24	110+40.40	604.11	110+41.61	603.98	110+42.82	603.85	110+44.04	603.72

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK ELEVATIONS ALONG CL BEAMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

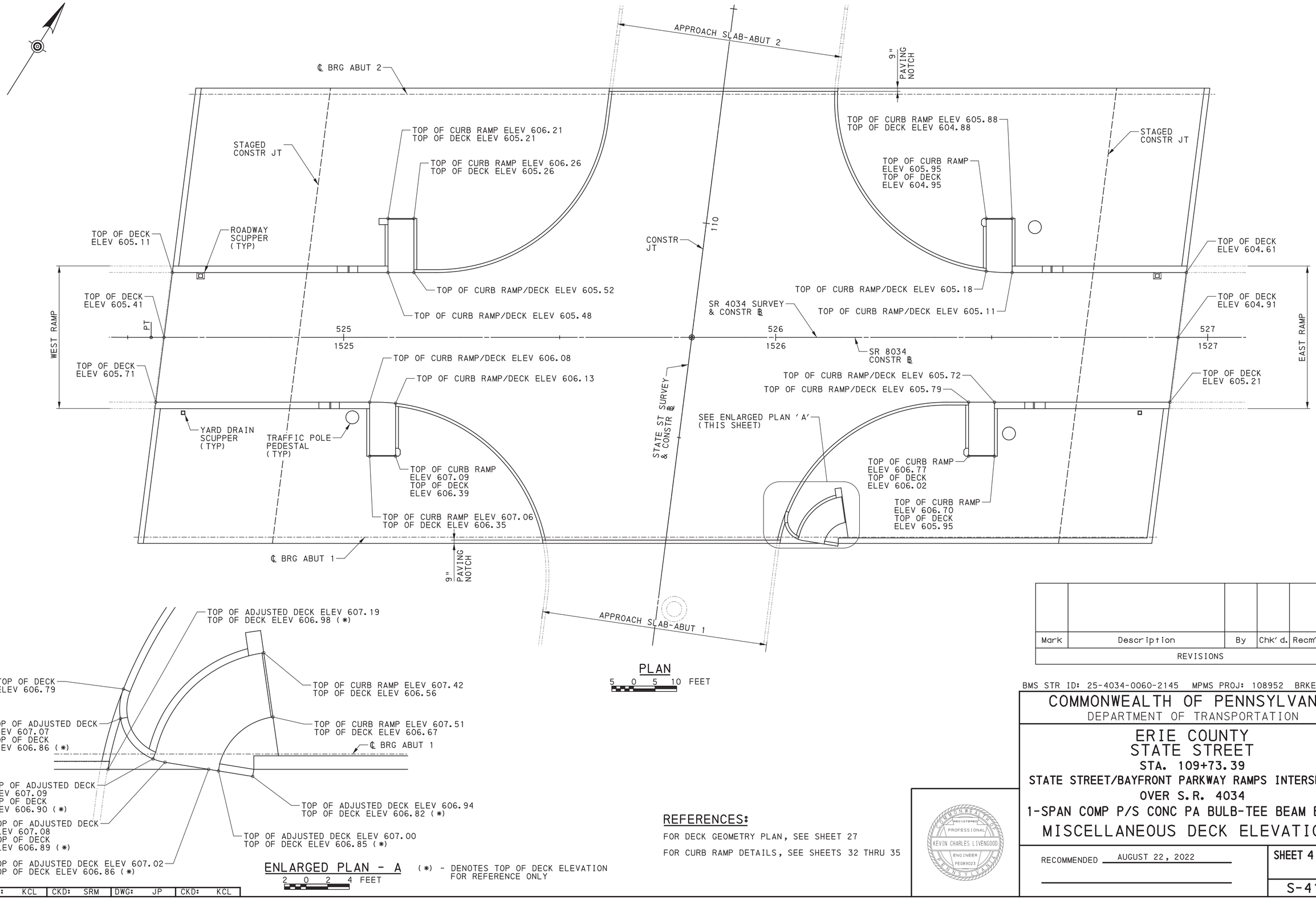
RECOMMENDED AUGUST 22, 2022

SHEET 40 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: KCL | CKD: JP

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT07.dgn



PLAN
5 0 5 10 FEET

ENLARGED PLAN - A
2 0 2 4 FEET

(*) - DENOTES TOP OF DECK ELEVATION FOR REFERENCE ONLY

REFERENCES:

FOR DECK GEOMETRY PLAN, SEE SHEET 27

FOR CURB RAMP DETAILS, SEE SHEETS 32 THRU 35

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
MISCELLANEOUS DECK ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 41 OF 64

S-41005

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022

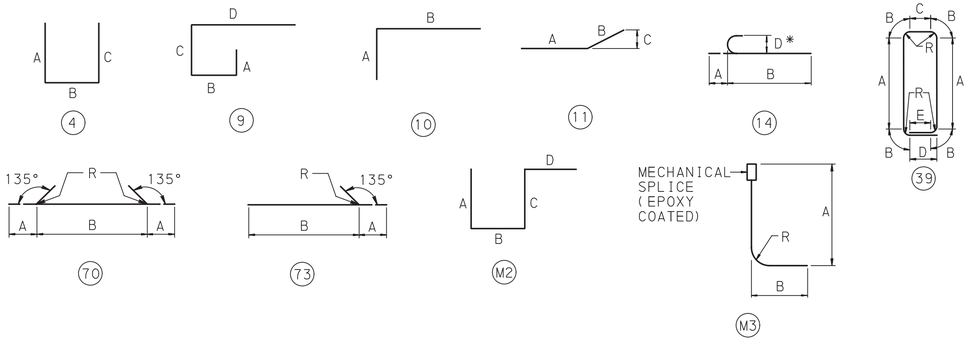
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkrb01.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
DECK (STAGE 3)											
ES400	4	382	40′-0"	ST							
ES401	4	191	30′-6"	ST							
ES500	5	228	60′-0"	ST							
ES501	5	228	49′-4"	ST							
ES502	5	205	52′-9"	ST							
ES503	5	410	51′-0"	ST							
ES504	5	205	43′-0"	ST							
ES600	6	197	60′-0"	ST							
ES601	6	330	51′-9"	ST							
ES602	6	165	41′-0"	ST							
ES603	6	4	10′-0"	ST							
ES604	6	12	12′-0"	ST							
ES605	6	4	20′-9"	ST							
ES606	6	2	6′-0"	10	1′-3"	4′-9"					
DECK (STAGE 4)											
ES300	3	22	5′-9"	M2	6"	3′-10"	5"	1′-0"			
ES400	4	104	40′-0"	ST							
ES401	4	52	30′-6"	ST							
ES402	4	4	10′-6"	ST							
ES403	4	68	3′-3"	9	6"	4"	9"	1′-8"			
ES500	5	60	60′-0"	ST							
ES501	5	60	49′-4"	ST							
ES505	5	205	30′-10"	ST							
ES506	5	205	21′-3"	ST							
ES507	5	6	5′-9"	ST							
ES508	5	2	29′-2"	ST							
ES509	5	24	5′-9"	ST							
ES510	5	24	4′-9"	ST							
ES511	5	4	41′-2"	ST							
ES512	5	4	38′-3"	ST							
ES513	5	4	31′-1"	ST							
ES607	6	165	29′-11"	14	8"	29′-3"					
ES608	6	165	20′-4"	14	8"	19′-8"					
ES609	6	8	41′-2"	ST							
ES610	6	8	40′-3"	ST							
ES611	6	8	31′-1"	ST							
ES612	6	4	32′-11"	ST							
ES613	6	12	30′-10"	ST							
ES614	6	12	21′-3"	ST							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PA TYPE 10M BRIDGE BARRIER											
EBC400	4	10	20′-0"	ST							
EBC401	4	10	26′-3"	ST							
EBC402	4	10	34′-6"	ST							
EBC403	4	160	1′-10 1/2"	70	4 1/2"	1′-1 1/2"				1"	
EBC404	4	288	1′-7 1/2"	73	4 1/2"	1′-3"				1"	THREAD ONE END ("B") **
EBC405	4	160	2′-7 1/4"	M3	6 1/4"	2′-1"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
EBC406	4	160	1′-2 3/4"	M3	6 1/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
EBC407	4	32	1′-7 1/2" TO 2′-0 1/2"	73	4 1/2"	1′-3" / 1′-8"				1"	8 SETS OF 4 - VA EACH "B" BY 1 11/16" THREAD ONE END ("B") **
EBC408	4	12	6′-2"	11	3′-1"	3′-1"	6 3/8"				
EBC409	4	16	7′-8 1/2"	39	2′-7 3/4"	4"	3 1/2"	6"	3 1/2"	2"	
EBC500	5	8	8′-8"	ST							
EBC501	5	8	7′-10 1/2"	ST							
EBC502	5	8	5′-11"	ST							
EBC600	6	56	3′-2"	4	1′-0"	1′-2"	1′-0"				
EBC601	6	16	2′-2"	4	6"	1′-2"	6"				
EBC602	6	32	2′-0"	10	1′-8"	4"					THREAD ONE END ("A") **
EBC603	6	112	11" TO 3′-5"	10	7" / 3′-1"	4"					8 SETS OF 14 - VA EACH "A" BY 2 5/16" THREAD ONE END ("A") **
EBC604	6	72	3′-1 1/4"	M3	6 1/4"	2′-7"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
EBC605	6	72	1′-2 3/4"	M3	6 1/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
EBC606	6	8	3′-11 1/2"	ST							
EBC607	6	4	2′-2"	ST							
EBC608	6	8	9′-2"	11	7′-4 1/2"	1′-9 1/2"	7 3/4"				
EBC609	6	4	7′-4 1/2"	ST							



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 5 & 6

** - ADJUST BAR LENGTH FOR THREADED END AS PER MECHANICAL SPLICE MANUFACTURER'S STANDARD. BARS LENGTHS SHOWN ARE DETAILED FLUSH WITH TOP OF DECK.

DECK SLAB INSERTS TO BE INSTALLED IN APPROPRIATE DECK PLACEMENT SEQUENCE

BAR LOCATION LEGEND:
S = SUPERSTRUCTURE
BC = PA TYPE 10M BRIDGE BARRIER

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK REBAR SCHEDULE - 1

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 42 OF 64

S-41005

PLOTTED: 8/20/2022

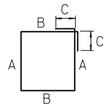
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkrb02.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
8" CURB											
ECC400	4	4	40′-0"	ST							
ECC401	4	1	31′-9"	ST							
ECC402	4	1	11′-9"	ST							
ECC403	4	1	21′-6"	ST							
ECC404	4	1	14′-6"	ST							
ECC405	4	1	9′-4 1/2"	M4	2′-3"	7′-1 1/2"	4′-8 3/16"	4′-5 1/2"		4′-7 3/4"	
ECC406	4	1	2′-10 1/2"	ST							
ECC407	4	237	1′-1 1/2"	4	6 1/2"	4"	3"				THREAD ONE END ("A") **
ECC408	4	237	6 1/2"	ST							THREAD ONE END **
ECC409	4	502	1′-2 1/4"	M3	5 3/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
ECC410	4	4	1′-3"	4	8"	4"	3"				THREAD ONE END ("A") **
ECC411	4	4	8"	ST							THREAD ONE END **
ECC412	4	6	1′-3 3/4"	4	8 3/4"	4"	3"				THREAD ONE END ("A") **
ECC413	4	6	8 3/4"	ST							THREAD ONE END **
ECC414	4	4	1′-1 1/2" TO 1′-3 3/4"	4	6 1/2" /	4"	3"				VA EACH "A" BY 3/4"
					8 3/4"						THREAD ONE END ("A") **
ECC415	4	4	6 1/2" TO 8 3/4"	ST							VA EACH "A" BY 3/4"
											THREAD ONE END ("A") **
1′-3" CURB WITH FENCE											
EFC500	5	6	60′-0"	ST							
EFC501	5	6	15′-9"	ST							
EFC502	5	12	31′-1"	ST							
EFC503	5	12	41′-2"	ST							
EFC504	5	148	6′-10 1/4"	42A	1′-10 3/8"	4 1/8"	5 3/4"	1′-7 3/4"	1′-10"	2"	
EFC505	5	72	2′-7"	4	10"	11"	10"				
EFC506	5	144	1′-10"	10	1′-6"	4"					THREAD ONE END ("A") **
EFC507	5	72	2′-7 1/4"	M3	6 1/4"	2′-1"					DECK INSERT-MECHANICAL SPLICE,ONE END**
EFC508	5	72	1′-2 3/4"	M3	6 1/4"	8 1/2"					MECHANICAL SPLICE, ONE END **
TRAFFIC POLE PEDESTAL											
EPC400	4	3	3′-11 1/4"	M7	10 1/4"	5 1/2"	3 7/8"	1′-1"			
EPC401	4	4	5′-1"	2	1′-1"	1;-1"	4 1/2"				
EPC402	4	4	8 1/2"	ST							THREAD ONE END **
EPC403	4	4	9 3/4"	ST							THREAD ONE END **
EPC404	4	8	1′-2 1/4"	M3	5 3/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
EPC500	5	17	10′-0 1/4"	19	2′-6"	2′-2"				1′-2 3/8"	
EPC501	5	12	1′-2 1/2"	ST							THREAD ONE END **
EPC502	5	12	1′-3 1/4"	ST							THREAD ONE END **
EPC503	5	12	1′-8 3/4"	ST							THREAD ONE END **
EPC504	5	36	4′-11"	M3	4′-1"	10"					DECK INSERT-MECHANICAL SPLICE,ONE END**

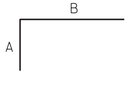
REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
CURB RAMP											
ERC400	4	1	4′-11"	M5						4′-7 3/4"	
ERC401	4	1	3′-8"	M5						3′-7 3/4"	
ERC402	4	6	2′-4"	ST							
ERC403	4	1	2′-11 1/2"	ST							
ERC404	4	1	2′-9 1/2"	ST							
ERC405	4	1	3′-3"	ST							
ERC406	4	3	11"	10	8"	3"					THREAD ONE END ("A") **
ERC407	4	3	1′-2 1/4"	M3	5 3/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
ERC500	5	16	12′-4"	ST							
ERC501	5	33	7′-0"	ST							
ERC502	5	10	5′-8"	ST							
ERC503	5	4	10′-8"	ST							
ERC504	5	2	11′-6"	ST							
ERC505	5	2	11′-2"	ST							
ERC506	5	32	9" TO 1′-1"	10	6" /	3"					4 SETS OF 8 - VA EACH "A" BY 9/16"
					10"						THREAD ONE END ("A") **
ERC507	5	8	1′-1"	10	10"	3"					THREAD ONE END ("A") **
ERC508	5	2	9"	10	6"	3"					THREAD ONE END ("A") **
ERC509	5	42	9 1/2"	10	6 1/2"	3"					THREAD ONE END ("A") **
ERC510	5	105	1′-2 1/4"	M3	5 3/4"	8 1/2"				2"	DECK INSERT-MECHANICAL SPLICE,ONE END**
ERC511	5	1	13′-1 1/2"	M5						11′-2 3/4"	
ERC512	5	1	11′-3"	M5						9′-8 3/4"	
ERC513	5	1	9′-4"	M5						8′-2 3/4"	
ERC514	5	1	7′-5"	M5						6′-8 3/4"	
ERC515	5	1	14′-5 1/2"	M5						12′-3 3/4"	
ERC516	5	1	6′-2 1/2"	M5						5′-7 3/4"	
ERC517	5	21	11"	10	8"	3"					THREAD ONE END ("A") **

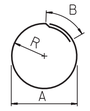


(2)

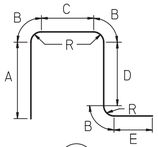
(4)



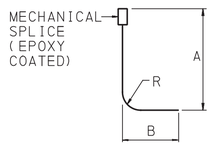
(10)



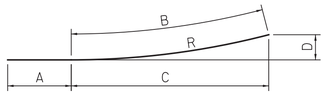
(19)



(42A)

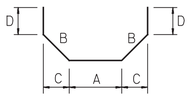


(M3)



(M4)

(M5)



(M7)

NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 5 & 6

** - ADJUST BAR LENGTH FOR THREADED END AS PER MECHANICAL SPLICE MANUFACTURER'S STANDARD. BARS LENGTHS SHOWN ARE DETAILED FLUSH WITH TOP OF DECK.

DECK SLAB INSERTS TO BE INSTALLED IN APPROPRIATE DECK PLACEMENT SEQUENCE

BAR LOCATION LEGEND:
CC = 8" CURB
FC = 1′-3" CURB WITH FENCE
RC = CURB RAMP
PC = TRAFFIC POLE PEDESTAL

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES:	KCL	CKD:	SRM	DWG:	JP	CKD:	KCL

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

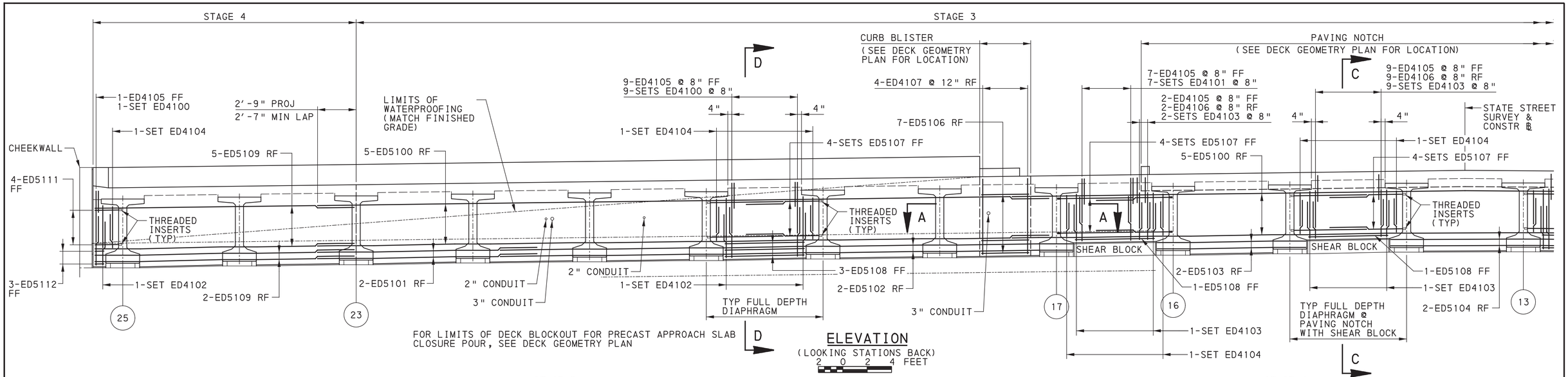
DECK REBAR SCHEDULE - 2

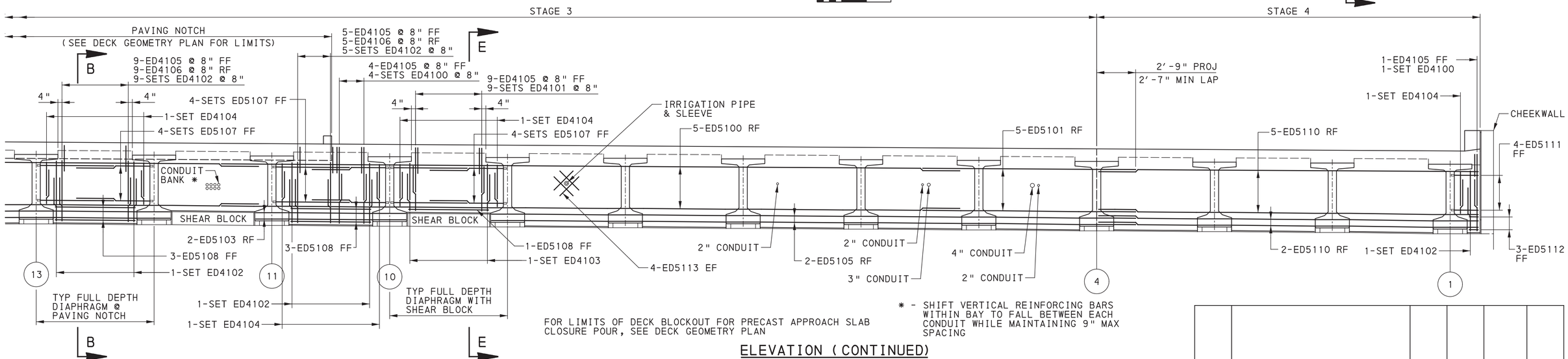
RECOMMENDED AUGUST 22, 2022

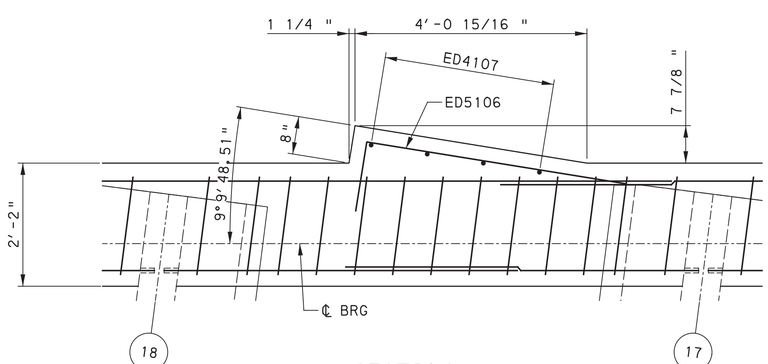
SHEET 43 OF 64

S-41005

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08160\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT14.dgn







MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 1'-0"
#5 = 2'-7"

REFERENCES:

FOR APPROACH SLAB DETAILS, SEE SHEET 54 & 55
FOR SECTION B-B, C-C, D-D & E-E, SEE SHEET 46
FOR WATERPROOFING DETAILS, SEE BC-788M
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 49
FOR UTILITY THROUGH DIAPHRAGM DETAIL, SEE SHEET 48

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
END DIAPHRAGM - ABUTMENT 1

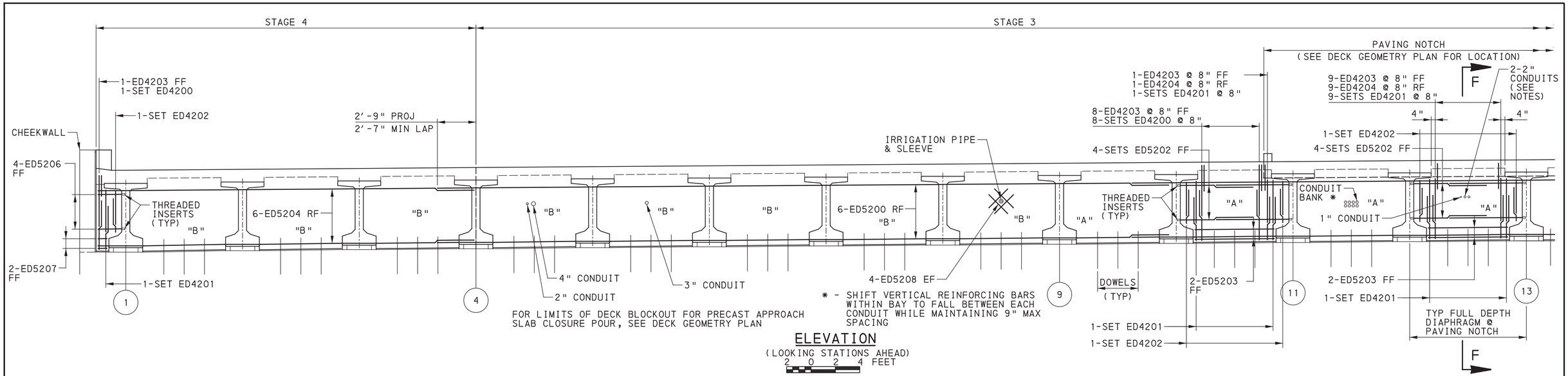
RECOMMENDED AUGUST 22, 2022

SHEET 44 OF 64

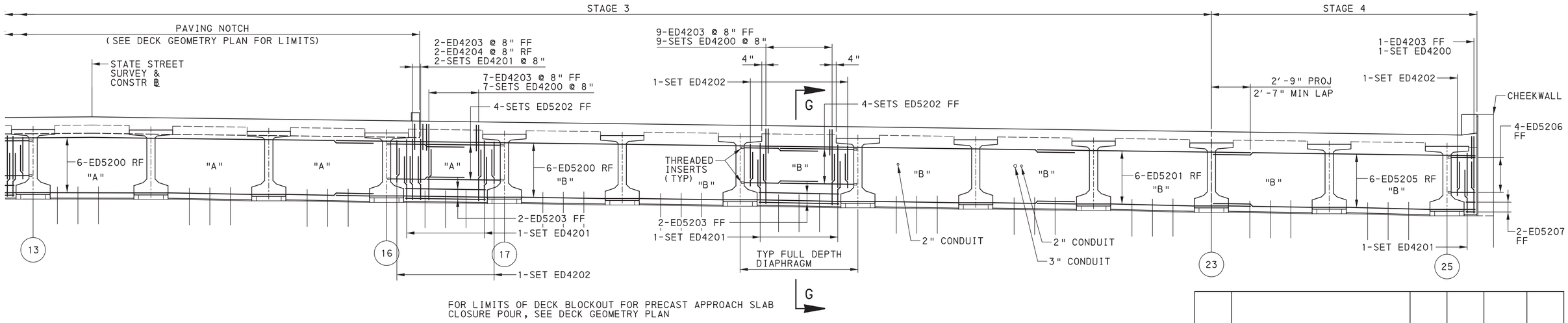
S-41005

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT16.dgn



ELEVATION
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



ELEVATION (CONTINUED)
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

DOWEL SLEEVE TYPE:
"A" - DOWEL DETAIL TYPE A, STANDARD SLEEVE PER BC-775M
"B" - DOWEL DETAIL TYPE B, EXPANSION SLEEVE

NOTES:
1. JUNCTION BOX TO BE MOUNTED TO THE FF OF DIAPHRAGM AS REQUIRED BY THE HIGHWAY LIGHTING PLAN.

REFERENCES:
FOR APPROACH SLAB DETAILS, SEE SHEET 54 & 55
FOR SECTION F-F & G-G, SEE SHEET 46
FOR DOWEL INFORMATION, SEE ABUTMENT 2 DETAILS & BC-775M
FOR WATERPROOFING DETAILS, SEE BC-788M
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 49
FOR DOWEL DETAIL TYPE B, SEE SHEET 48
FOR UTILITY THROUGH DIAPHRAGM DETAIL, SEE SHEET 48

MINIMUM LAP SPLICE LENGTH	
DIAPHRAGM BARS (ED)	
#4 = 1'-0"	
#5 = 2'-7"	

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

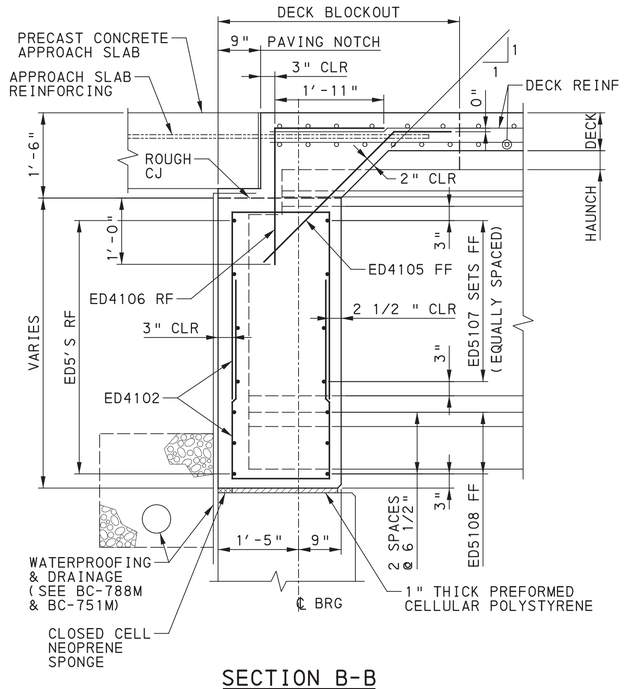
ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
END DIAPHRAGM - ABUTMENT 2

RECOMMENDED AUGUST 22, 2022

SHEET 45 OF 64

S-41005

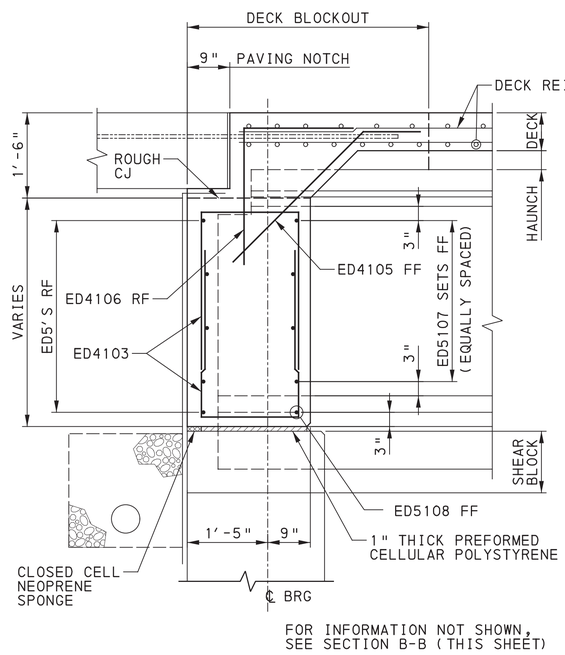
DES: KCL | CKD: SRM | DWG: JP | CKD: KCL



SECTION B-B

(ABUTMENT 1)

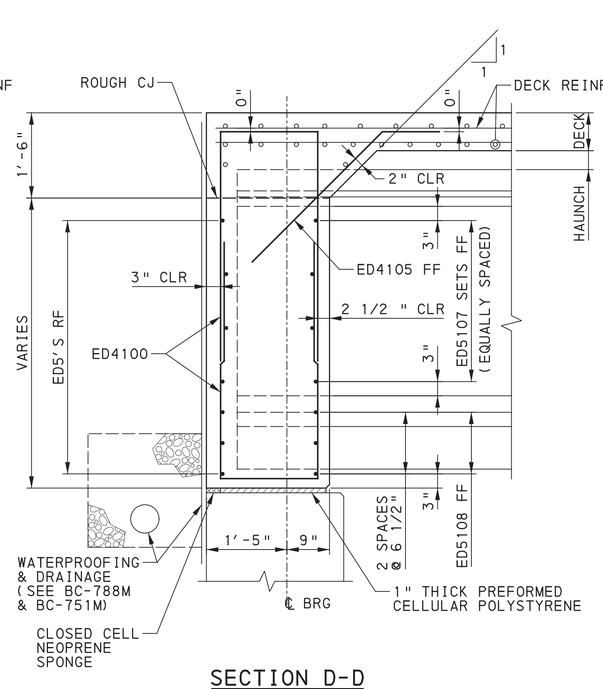
12 0 12 INCHES



SECTION C-C

(ABUTMENT 1)

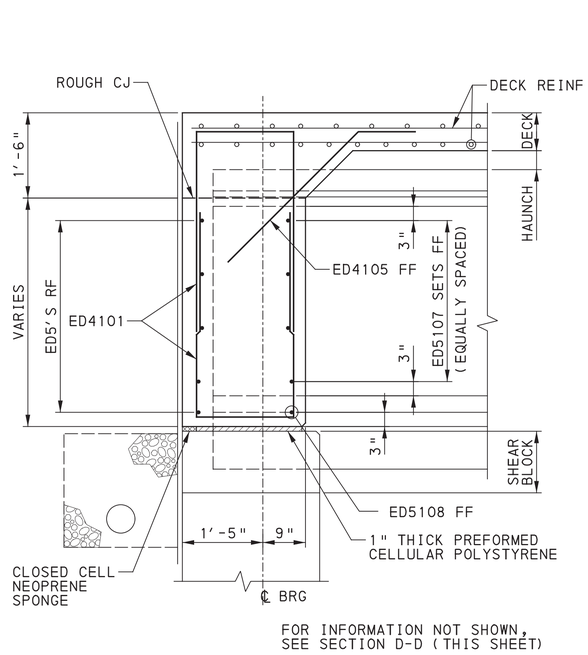
12 0 12 INCHES



SECTION D-D

(ABUTMENT 1)

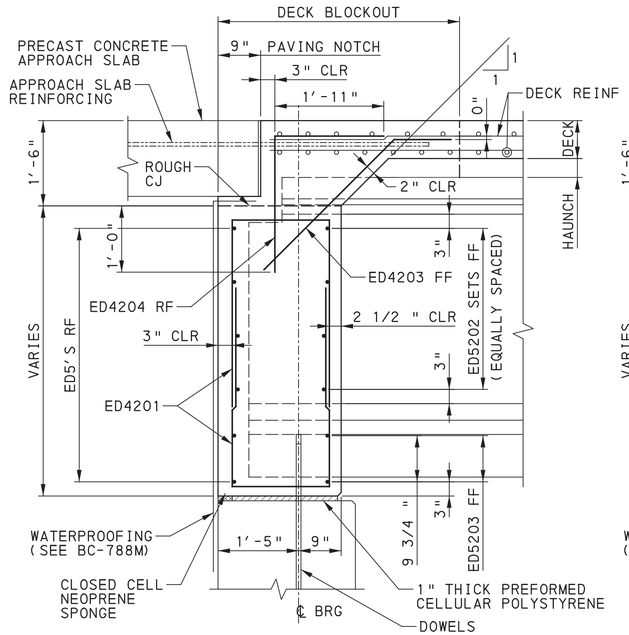
12 0 12 INCHES



SECTION E-E

(ABUTMENT 1)

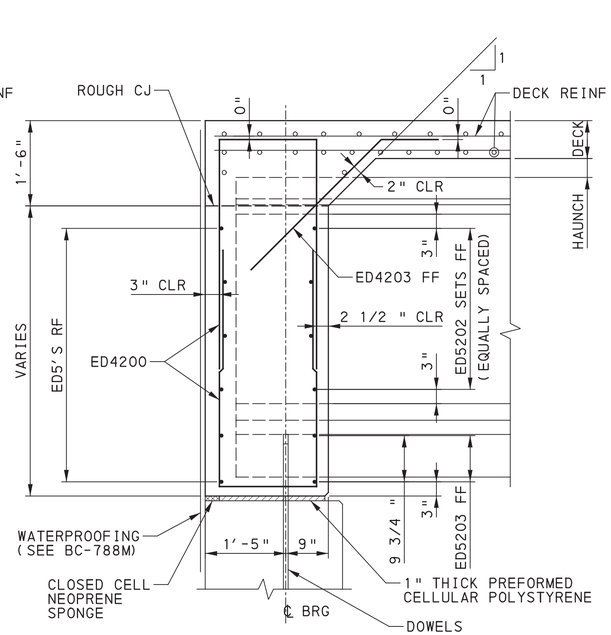
12 0 12 INCHES



SECTION F-F

(ABUTMENT 2)

12 0 12 INCHES



SECTION G-G

(ABUTMENT 2)

12 0 12 INCHES

REFERENCES:

FOR APPROACH SLAB DETAILS, SEE SHEET 54 & 55

FOR ABUTMENT 1 END DIAPHRAGM ELEVATION, SEE SHEET 44

FOR ABUTMENT 2 END DIAPHRAGM ELEVATION, SEE SHEET 45

FOR SHEAR BLOCK AND DOWELS INFORMATION, SEE ABUTMENT DETAILS & BC-775M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 49

NOTES:

1. DIMENSIONS ARE MEASURED PERPENDICULAR TO THE ℄ BEARING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

END DIAPHRAGM - SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 46 OF 64

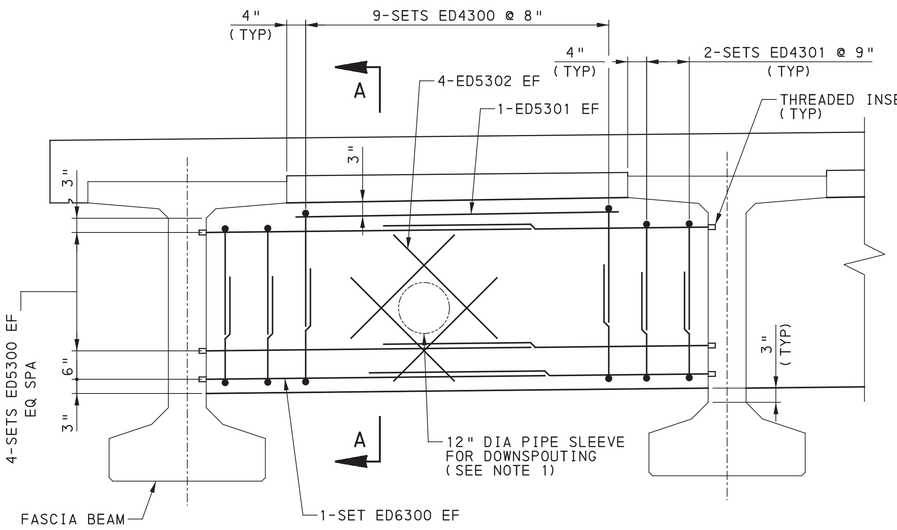
S-41005

DES:	KCL	CKD:	SRM	DWG:	JP	CKD:	KCL

PLOTTED: 8/20/2022

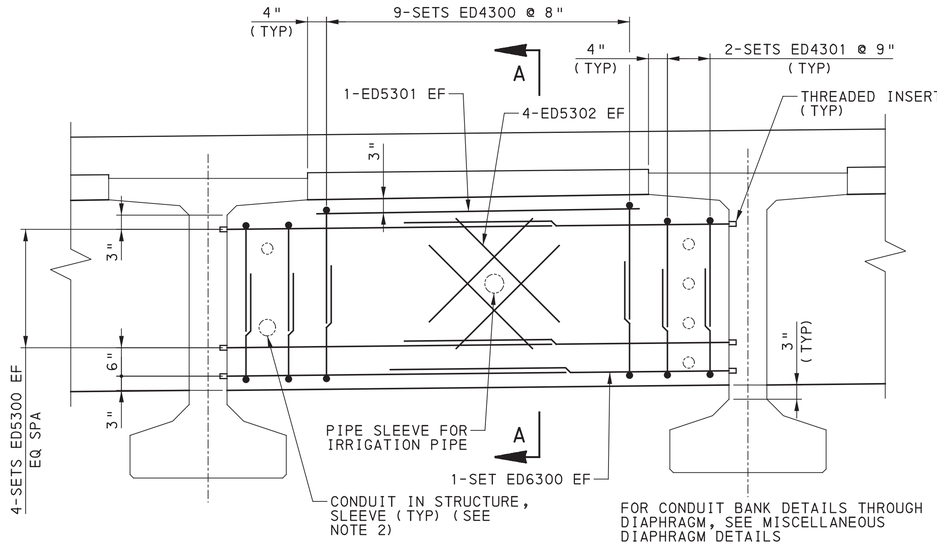
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT15.dgn

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT18.dgn



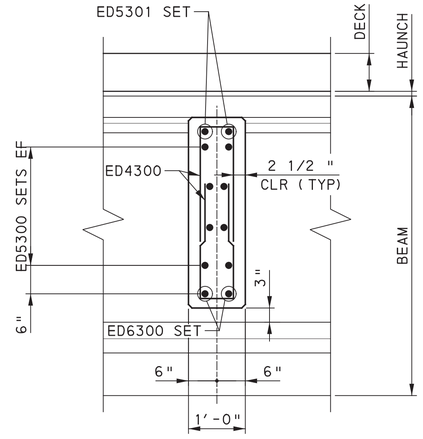
INTERMEDIATE DIAPHRAGM - EXTERIOR BAYS

12 0 12 INCHES



INTERMEDIATE DIAPHRAGM - INTERIOR BAYS

12 0 12 INCHES



SECTION A-A

12 0 12 INCHES

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 1'-0"
#5 = 2'-7"
#6 = 3'-1"

NOTES:

1. FIELD ADJUST AND CUT REINFORCING AS REQUIRED TO INSTALL SLEEVE. CONTRACTOR TO COORDINATE SLEEVE LOCATION WITH FINAL DOWNSPOUTING LAYOUT.
2. POSITION CONDUIT RUNS THROUGH DIAPHRAGM AS SHOWN TO MINIMIZE INTERFERENCE AND RELOCATING REINFORCING. CUTTING REINFORCING IS NOT ALLOWED.
3. ADJUST DIAPHRAGM VERTICAL REINFORCING AS REQUIRED TO CLEAR POLE ANCHORAGE. POSITION CONDUITS TO CLEAR REINFORCING AND POLE ANCHORAGE. CUTTING REINFORCING IS NOT ALLOWED

REFERENCES:

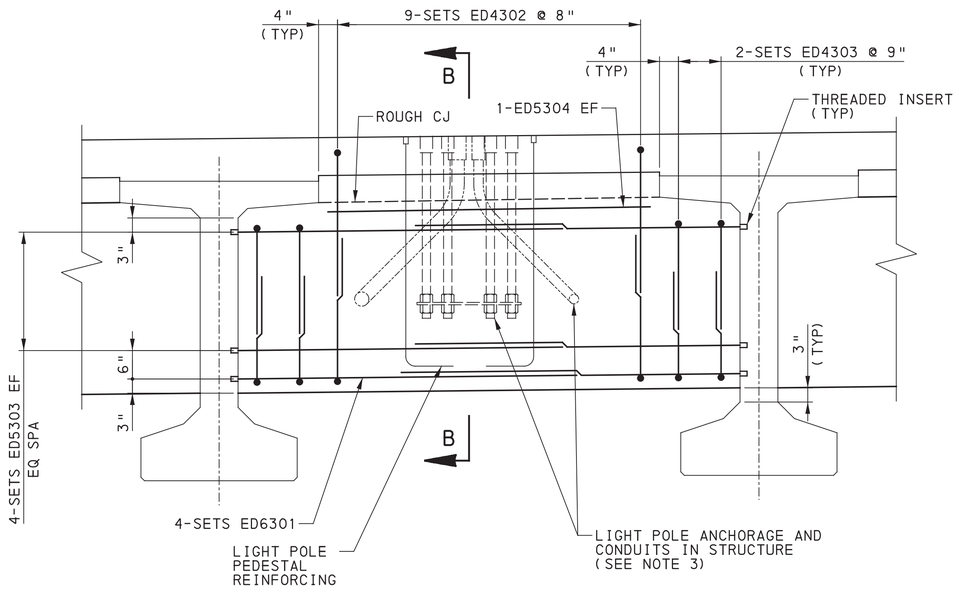
FOR INTERMEDIATE DIAPHRAGM LOCATIONS, SEE SHEET 22

FOR LIGHT POLE LOCATIONS, SEE SHEET 37

FOR LIGHT POLE PEDESTAL, ANCHORAGE & CONDUIT DETAILS, SEE SHEET 38

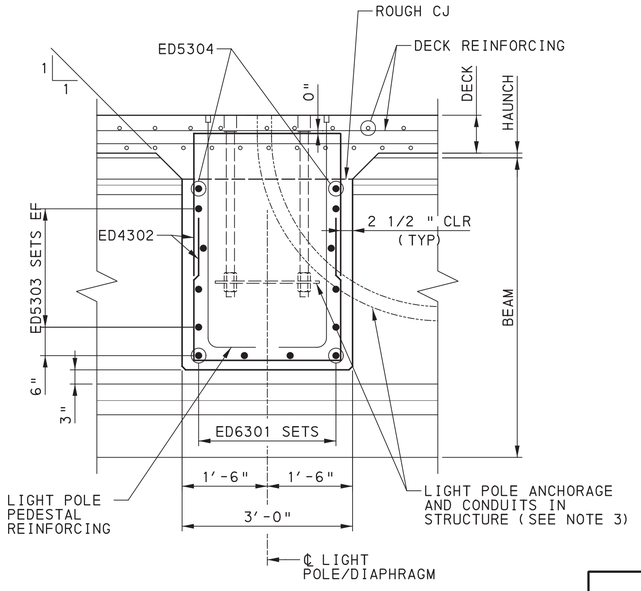
FOR DRAINAGE PLAN, SEE SHEET 50

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEETS 49



INTERMEDIATE DIAPHRAGM - LIGHT POLE ATTACHMENT

12 0 12 INCHES



SECTION B-B

12 0 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
INTERMEDIATE DIAPHRAGMS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

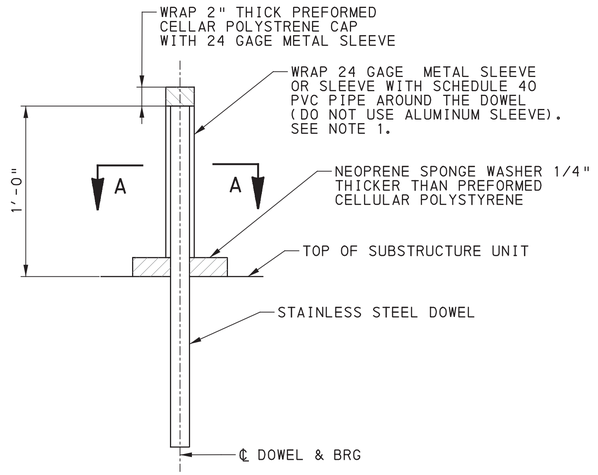
RECOMMENDED AUGUST 22, 2022

SHEET 47 OF 64

S-41005

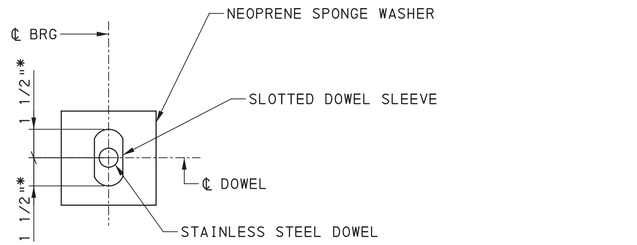
DES: KCL | CKD: REB | DWG: KCL | CKD: JP

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkT17.dgn



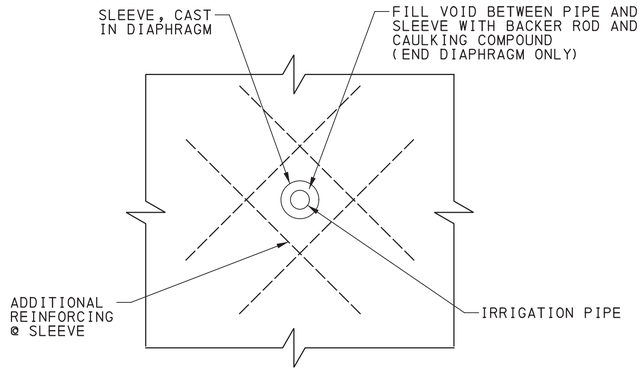
DOWEL DETAIL - TYPE B

(FOR DOWEL DETAIL TYPE B LOCATIONS, SEE ABUTMENT 2 END DIAPHRAGM ELEVATION)



* - MEASURED TO THE INSIDE FACE OF THE SLEEVE

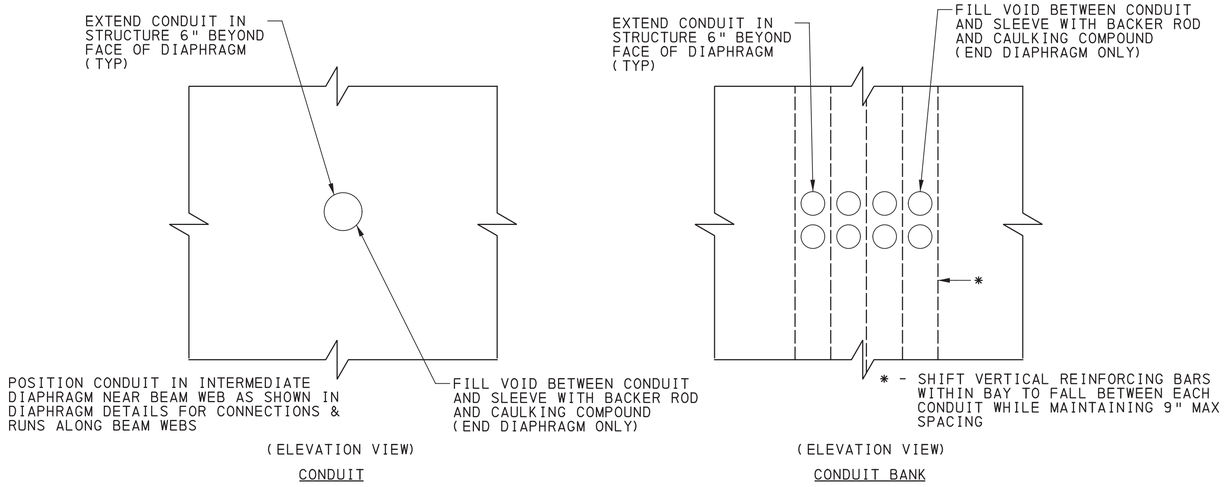
SECTION A-A



(ELEVATION VIEW)

IRRIGATION PIPE THROUGH STRUCTURE

(END DIAPHRAGM & INTERMEDIATE DIAPHRAGM)
NOT TO SCALE



(ELEVATION VIEW)
CONDUIT

(ELEVATION VIEW)
CONDUIT BANK

CONDUITS THROUGH STRUCTURE

(END DIAPHRAGM & INTERMEDIATE DIAPHRAGM)
NOT TO SCALE

NOTES:

1. BITUMINOUS TAR PAPER OR SCHEDULE 40 PVC PIPE ARE PERMITTED TO BE USED AS ALTERNATE BOND BREAKER MATERIALS IN LIEU OF THE METAL SLEEVE. OTHER BOND BREAKER MATERIALS MAY BE USED AROUND THE DOWEL ONLY WITH THE APPROVAL OF THE DISTRICT STRUCTURE CONTROL ENGINEER.
2. USE PREFORMED CELLULAR POLYSTYRENE CONFORMING TO ASTM C578, TYPE 1, EXCEPT LIMIT THE WATER ABSORPTION TO 2% BY VOLUME.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
MISCELLANEOUS DIAPHRAGM DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 48 OF 64

S-41005

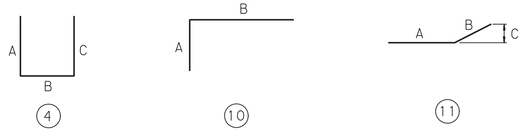
DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
END DIAPHRAGM - ABUTMENT 1 (STAGE 3)											
ED4100	4	206	9′-0 3/4"	4	3′-8"	1′-8 3/4"	3′-8"				
ED4101	4	32	8′-0 3/4"	4	3′-2"	1′-8 3/4"	3′-2"				
ED4102	4	124	7′-5 3/4"	4	2′-10 1/2"	1′-8 3/4"	2′-10 1/2"				
ED4103	4	56	6′-5 3/4"	4	2′-4 1/2"	1′-8 3/4"	2′-4 1/2"				
ED4104	4	76	5′-10 3/4"	4	2′-1"	1′-8 3/4"	2′-1"				
ED4105	4	171	4′-3"	11	3′-3"	1′-0"	8 1/2"				
ED4106	4	52	4′-2"	10	2′-3"	1′-11"					
ED4107	4	4	6′-1"	ST							
ED5100	5	15	60′-0"	ST							
ED5101	5	7	15′-9"	ST							
ED5102	5	2	48′-6"	ST							
ED5103	5	4	12′-0"	ST							
ED5104	5	2	21′-7"	ST							
ED5105	5	2	51′-10"	ST							
ED5106	5	7	6′-0"	10	1′-3"	4′-9"					
ED5107	5	152	5′-10"	ST							THREAD ONE END **
ED5108	5	49	6′-5 1/2"	ST							
ED5113	5	8	2′-10"	ST							
END DIAPHRAGM - ABUTMENT 1 (STAGE 4)											
ED4100	4	94	9′-0 3/4"	4	3′-8"	1′-8 3/4"	3′-8"				
ED4102	4	24	7′-5 3/4"	4	2′-10 1/2"	1′-8 3/4"	2′-10 1/2"				
ED4104	4	24	5′-10 3/4"	4	2′-1"	1′-8 3/4"	2′-1"				
ED4105	4	47	4′-3"	11	3′-3"	1′-0"	8 1/2"				
ED5107	5	40	5′-10"	ST							THREAD ONE END **
ED5108	5	15	6′-5 1/2"	ST							
ED5109	5	7	21′-3"	ST							
ED5110	5	7	30′-10"	ST							
ED5111	5	8	1′-11"	ST							THREAD ONE END **
ED5112	5	6	8 1/2"	ST							
INTERMEDIATE DIAPHRAGMS (STAGE 3)											
ED4300	4	342	4′-9"	4	2′-1"	7"	2′-1"				
ED4301	4	152	4′-6"	4	1′-11 1/2"	7"	1′-11 1/2"				
ED4302	4	54	7′-11"	4	2′-8"	2′-7"	2′-8"				
ED4303	4	24	6′-6"	4	1′-11 1/2"	2′-7"	1′-11 1/2"				
ED5300	5	304	5′-10"	ST							THREAD ONE END **
ED5301	5	38	5′-8 1/2"	ST							
ED5302	5	8	2′-10"	ST							
ED5303	5	48	5′-9"	ST							THREAD ONE END **
ED5304	5	6	5′-8"	ST							
ED6300	6	76	6′-1"	ST							THREAD ONE END **
ED6301	6	24	6′-0"	ST							THREAD ONE END **

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
END DIAPHRAGM - ABUTMENT 2 (STAGE 3)											
ED4200	4	246	9′-0 3/4"	4	3′-8"	1′-8 3/4"	3′-8"				
ED4201	4	172	7′-5 3/4"	4	2′-10 1/2"	1′-8 3/4"	2′-10 1/2"				
ED4202	4	76	5′-10 3/4"	4	2′-1"	1′-8 3/4"	2′-1"				
ED4203	4	171	4′-3"	11	3′-3"	1′-0"	8 1/2"				
ED4204	4	48	4′-2"	10	2′-3"	1′-11"					
ED5200	5	18	60′-0"	ST							
ED5201	5	6	15′-9"	ST							
ED5202	5	152	5′-10"	ST							THREAD ONE END **
ED5203	5	38	6′-5 1/2"	ST							
ED5208	5	8	2′-10"	ST							
END DIAPHRAGM - ABUTMENT 2 (STAGE 4)											
ED4200	4	94	9′-0 3/4"	4	3′-8"	1′-8 3/4"	3′-8"				
ED4201	4	24	7′-5 3/4"	4	2′-10 1/2"	1′-8 3/4"	2′-10 1/2"				
ED4202	4	24	5′-10 3/4"	4	2′-1"	1′-8 3/4"	2′-1"				
ED4203	4	47	4′-3"	11	3′-3"	1′-0"	8 1/2"				
ED5202	5	40	5′-10"	ST							THREAD ONE END **
ED5203	5	10	6′-5 1/2"	ST							
ED5204	5	6	30′-10"	ST							
ED5205	5	6	21′-3"	ST							
ED5206	5	8	1′-11"	ST							THREAD ONE END **
ED5207	5	4	8 1/2"	ST							
INTERMEDIATE DIAPHRAGMS (STAGE 4)											
ED4300	4	90	4′-9"	4	2′-1"	7"	2′-1"				
ED4301	4	40	4′-6"	4	1′-11 1/2"	7"	1′-11 1/2"				
ED5300	5	80	5′-10"	ST							THREAD ONE END **
ED5301	5	10	5′-8 1/2"	ST							
ED5302	5	16	2′-10"	ST							
ED6300	6	20	6′-1"	ST							THREAD ONE END **



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 5 & 6

** - ADJUST BAR LENGTH FOR THREADED END AS PER THREADED INSERT MANUFACTURER'S STANDARD. BARS LENGTHS SHOWN ARE DETAILED FLUSH WITH FACE OF BEAM WEB.

Mark	Description	By	Chk'd.	Recm'd	Date

REVISIONS

DES: KCL | CKD: SRM | DWG: JP | CKD: KCL

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DIAPHRAGM REBAR SCHEDULE

RECOMMENDED AUGUST 22, 2022

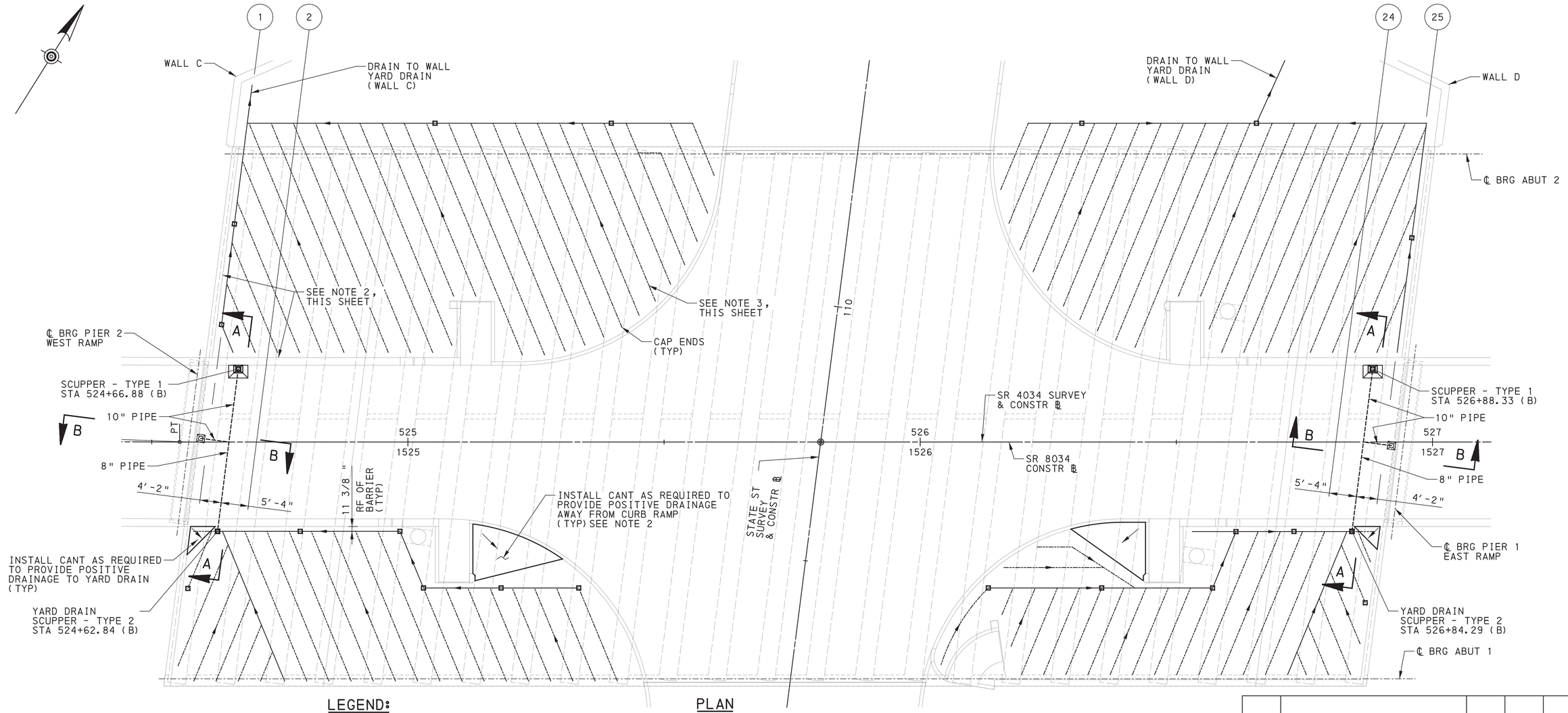
SHEET 49 OF 64

S-41005

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdkrb03.dgn

PLOTTED: 8/21/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SS\sheets\FINAL\bridge_SSSTdrT01.dgn



PLAN
5 0 5 10 FEET

LEGEND:

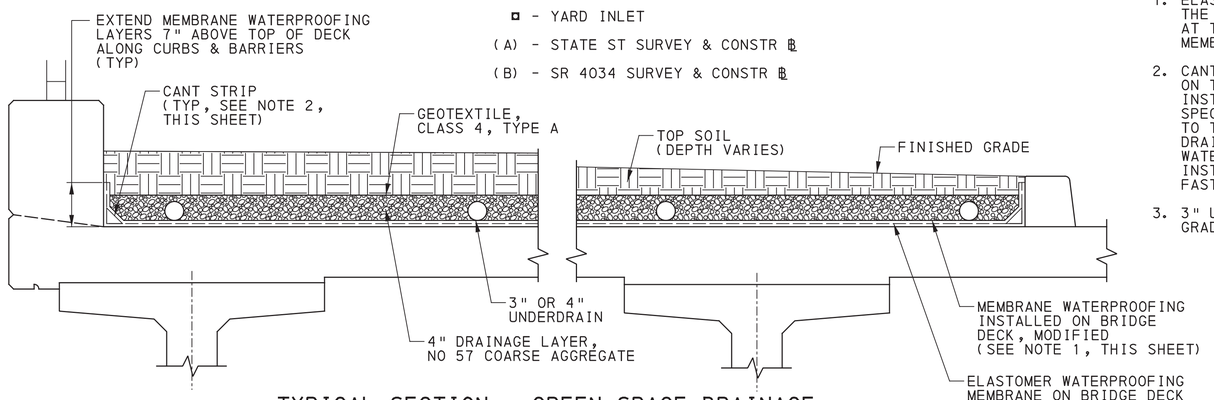
---------- - 3" DIA PVC UNDERDRAIN PIPE, PERFORATED (SPACED 4'-0" ON CENTER)

———— - 4" DIA PVC UNDERDRAIN PIPE, SOLID

▫ - YARD INLET

(A) - STATE ST SURVEY & CONSTR ℄

(B) - SR 4034 SURVEY & CONSTR ℄



TYPICAL SECTION - GREEN SPACE DRAINAGE
NOT TO SCALE

NOTES:

1. ELASTOMER WATERPROOFING MEMBRANE SHALL BE PLACED FIRST, THEN THE CANTS SHALL BE INSTALLED ALONG THE CURBS, BARRIERS, AND AT THE LOCATIONS IDENTIFIED ON THE PLAN, AND THEN THE MEMBRANE WATERPROOFING, MODIFIED SHALL BE PLACED.
2. CANT STRIPS ALONG THE CURBS AND BARRIERS AND THE CANTS SHOWN ON THE PLAN ARE INCIDENTAL TO THE MEMBRANE WATERPROOFING INSTALLED ON BRIDGE DECK, MODIFIED COMPONENT ITEM. SEE SPECIAL PROVISION FOR MATERIAL SPECIFICATIONS. CANTS ADJACENT TO THE CURB RAMPS TO BE SIZED ON ORDER TO PROVIDE POSITIVE DRAINAGE INTO THE WEEPING SYSTEM AND PREVENT ANY PONDING OF WATER. ANY MATERIAL USED FOR THE CONSTRUCTION OF THE CANT INSTALLED AFTER THE LIQUID WATERPROOFING MUST NOT HAVE ANY FASTENERS PENETRATING THRU THE LIQUID MEMBRANE INTO THE DECK.
3. 3" UNDERDRAIN TO BE PLACED ON DECK SURFACE. THE DECK SURFACE GRADE TO PROVIDE THE POSITIVE DRAINAGE TO OUTLET LOCATIONS.

REFERENCES:

FOR SECTION A-A & B-B, SEE SHEET 51

FOR FRAMING PLAN, SEE SHEET 22

FOR ADDITIONAL GREEN SPACE DETAILS, SEE ROADSIDE DEVELOPMENT PLAN

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DECK DRAINAGE PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

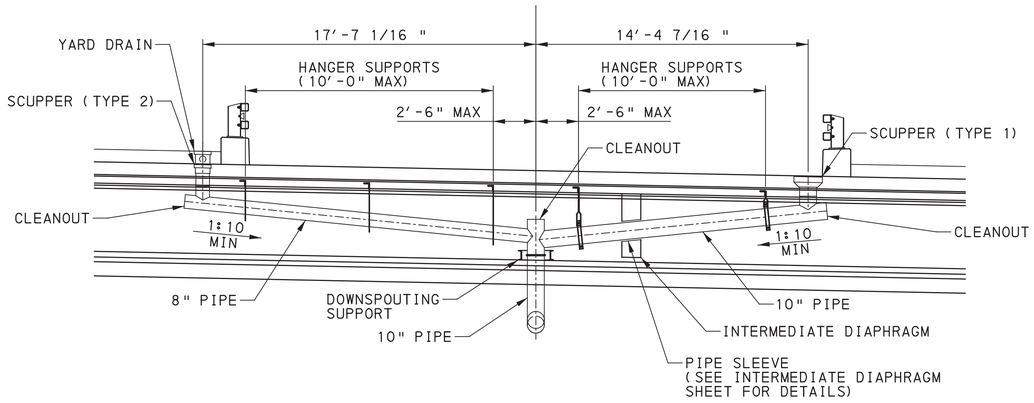
RECOMMENDED AUGUST 22, 2022

SHEET 50 OF 64

S-41005

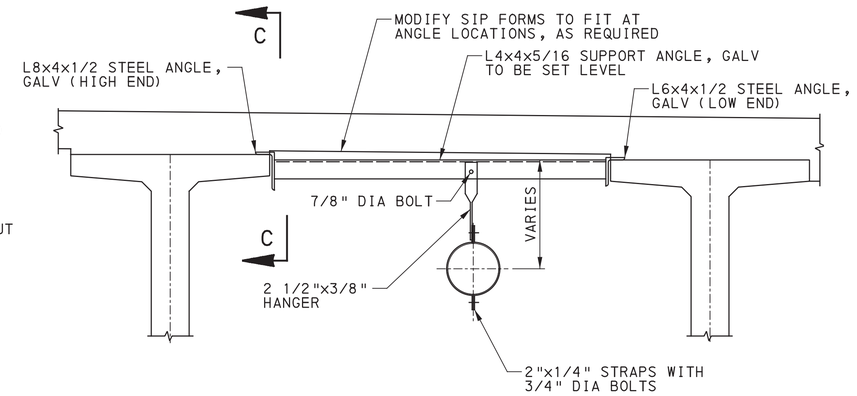
DES: JPO | CKD: KCL | DWG: JP | CKD: KCL

PLOTTED: 8/21/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTdrT02.dgn



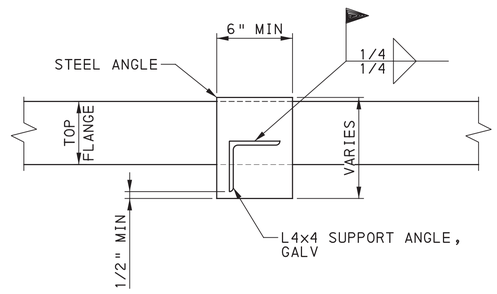
SECTION A-A

2 0 2 4 FEET



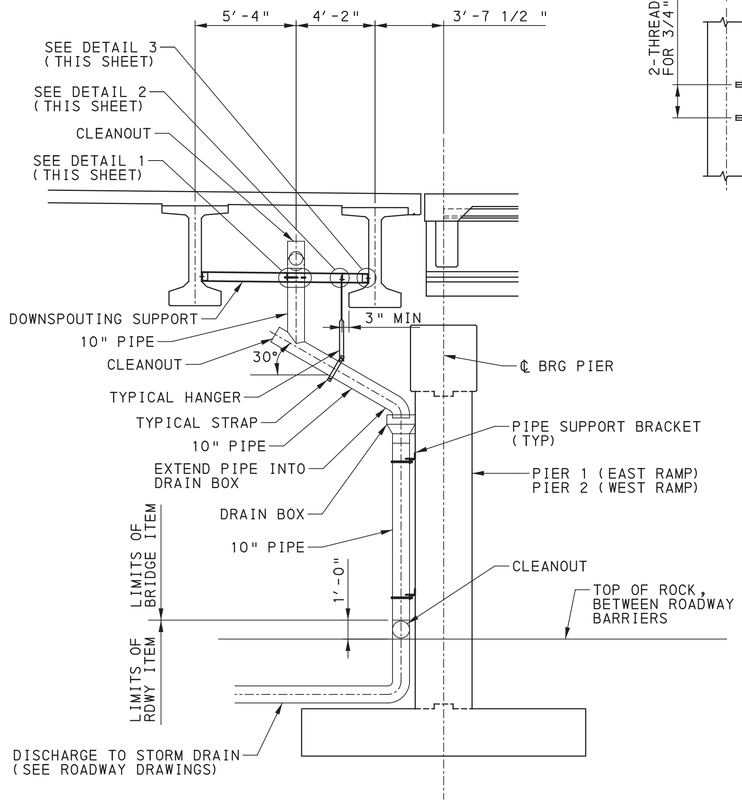
HANGER SUPPORT DETAIL

12 0 12 INCHES



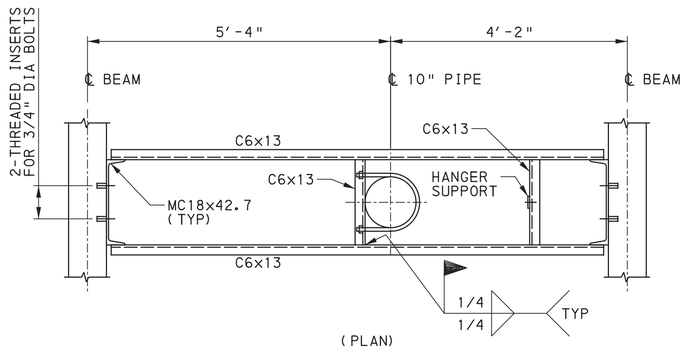
SECTION C-C

12 0 12 24 INCHES



SECTION B-B

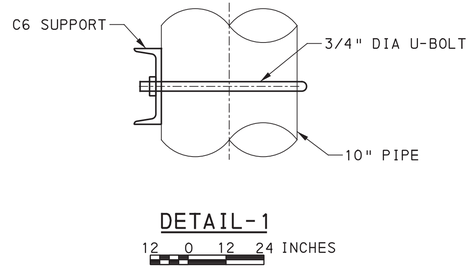
2 0 2 4 FEET



(PLAN)

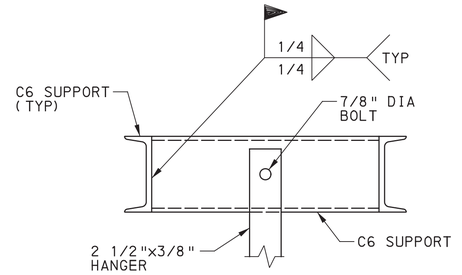
DOWNSPOUTING SUPPORT

12 0 12 INCHES



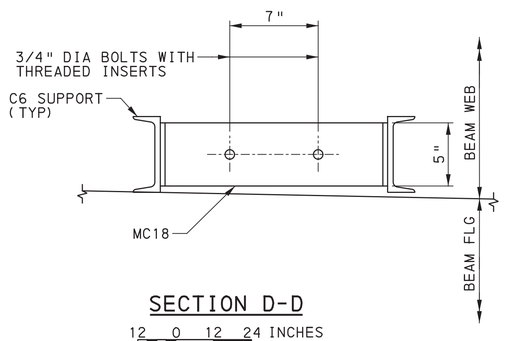
DETAIL-1

12 0 12 24 INCHES



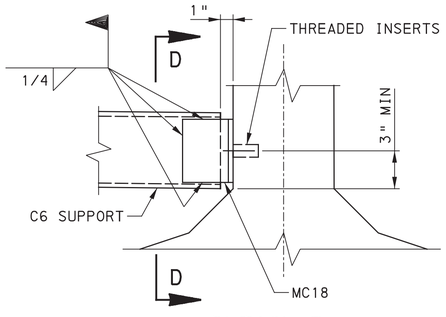
DETAIL-2

12 0 12 24 INCHES



SECTION D-D

12 0 12 24 INCHES



DETAIL-3

12 0 12 24 INCHES

NOTES:

1. ALL PIPE SUPPORT BRACKETS & HANGERS TO BE GALVANIZED AND PAINTED. ALL DOWNSPOUTING PIPE TO MATCH THE PIER AESTHETIC CONCRETE COATING COLOR.

REFERENCES:

FOR DRAINAGE PLAN, SEE SHEET 50

FOR INTERMEDIATE DIAPHRAGMS, SEE SHEET 47

FOR ADDITIONAL DRAINAGE INFORMATION AND DETAILS, SEE BC-751M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
DRAINAGE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

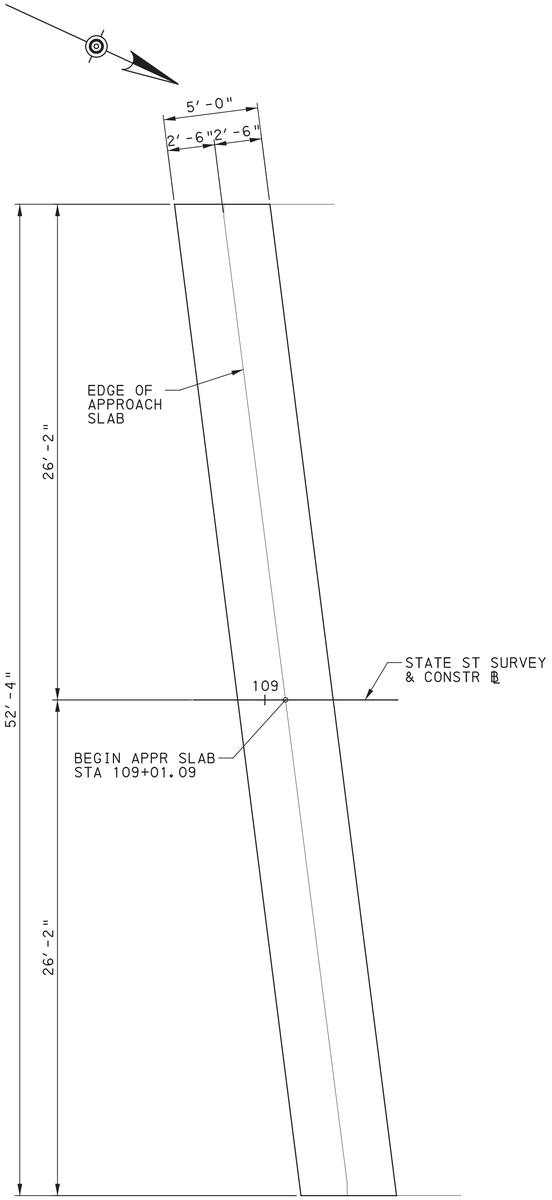
RECOMMENDED AUGUST 22, 2022

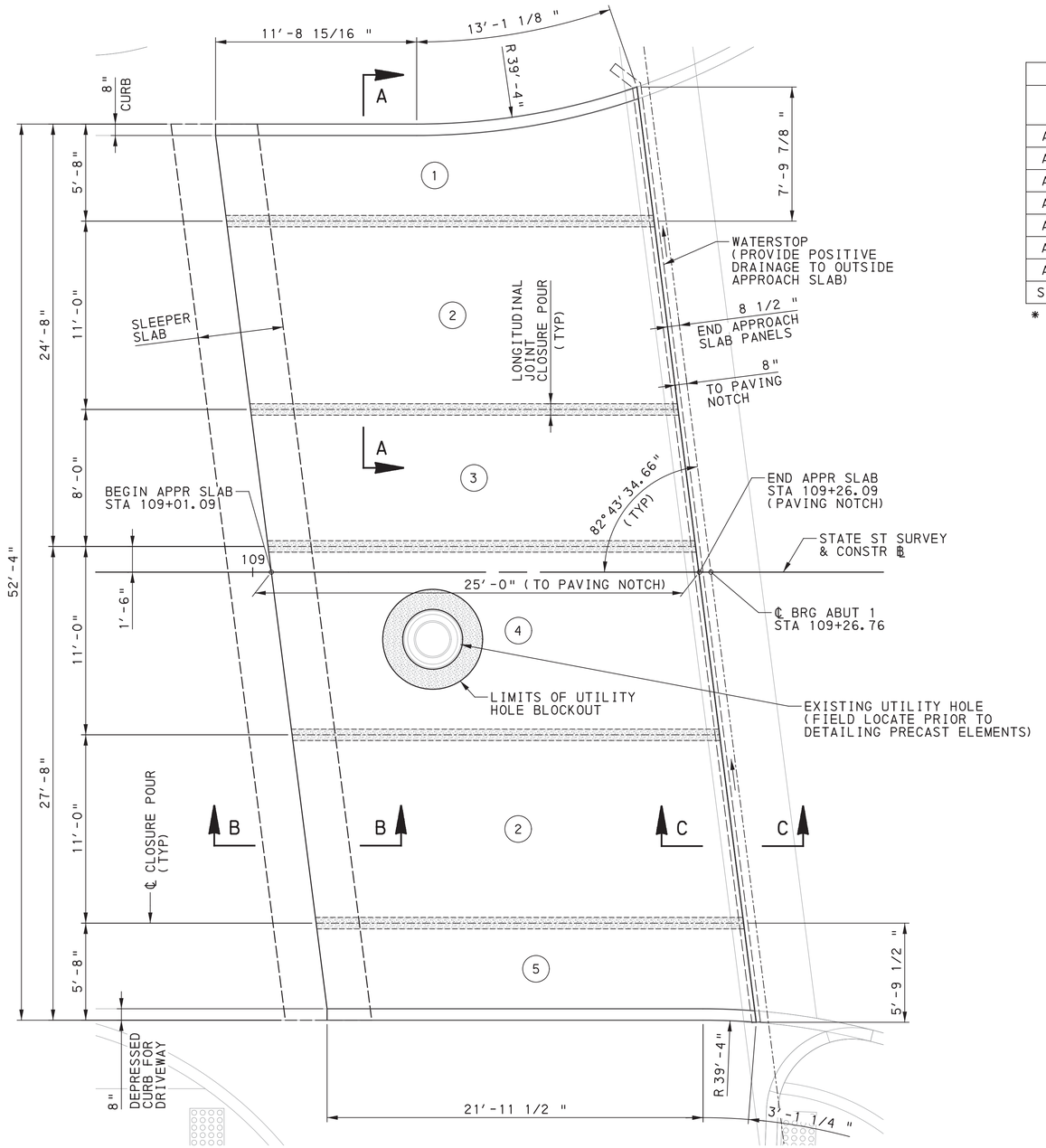
SHEET 51 OF 64

S-41005

DES: SRM | CKD: KCL | DWG: JP | CKD: SRM

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas001.dgn





ESTIMATED SHIPPING WEIGHTS			
SEGMENT	QUANTITY	MAX WIDTH	WEIGHT (KIPS)
APPR SLAB-1	1	7'-5 7/8"	31
APPR SLAB-2	2	10'-4"	52
APPR SLAB-3	1	7'-4"	37
APPR SLAB-4	1	10'-4"	50
APPR SLAB-5	1	5'-5 1/2"	28
APPR SLAB-6*	-	-	-
APPR SLAB-7*	-	-	-
SLEEPER SLAB	1	5'-0"	40

* SEGMENTS LOCATED AT ABUTMENT 2 APPROACH SLAB

ULTRA HIGH PERFORMANCE CONCRETE

REFERENCES:

FOR GENERAL APPROACH SLAB NOTES, SEE SHEET 5

FOR SECTION A-A, B-B & C-C, SEE SHEET 54

FOR TOP OF APPROACH SLAB ELEVATIONS, SEE SHEET 56

FOR UTILITY HOLE BLOCKOUT DETAIL, SEE SHEET 55

FOR PRECAST ELEMENT TOLERANCES & LEVELING DEVICE DETAILS, SEE SHEET 58

Mark	Description	By	Chk'd.	Rec'm'd	Date
REVISIONS					

SLEEPER SLAB PLAN
2 0 2 4 FEET

APPROACH SLAB PLAN
2 0 2 4 FEET

DES: KCL | CKD: REB | DWG: KCL | CKD: JP

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

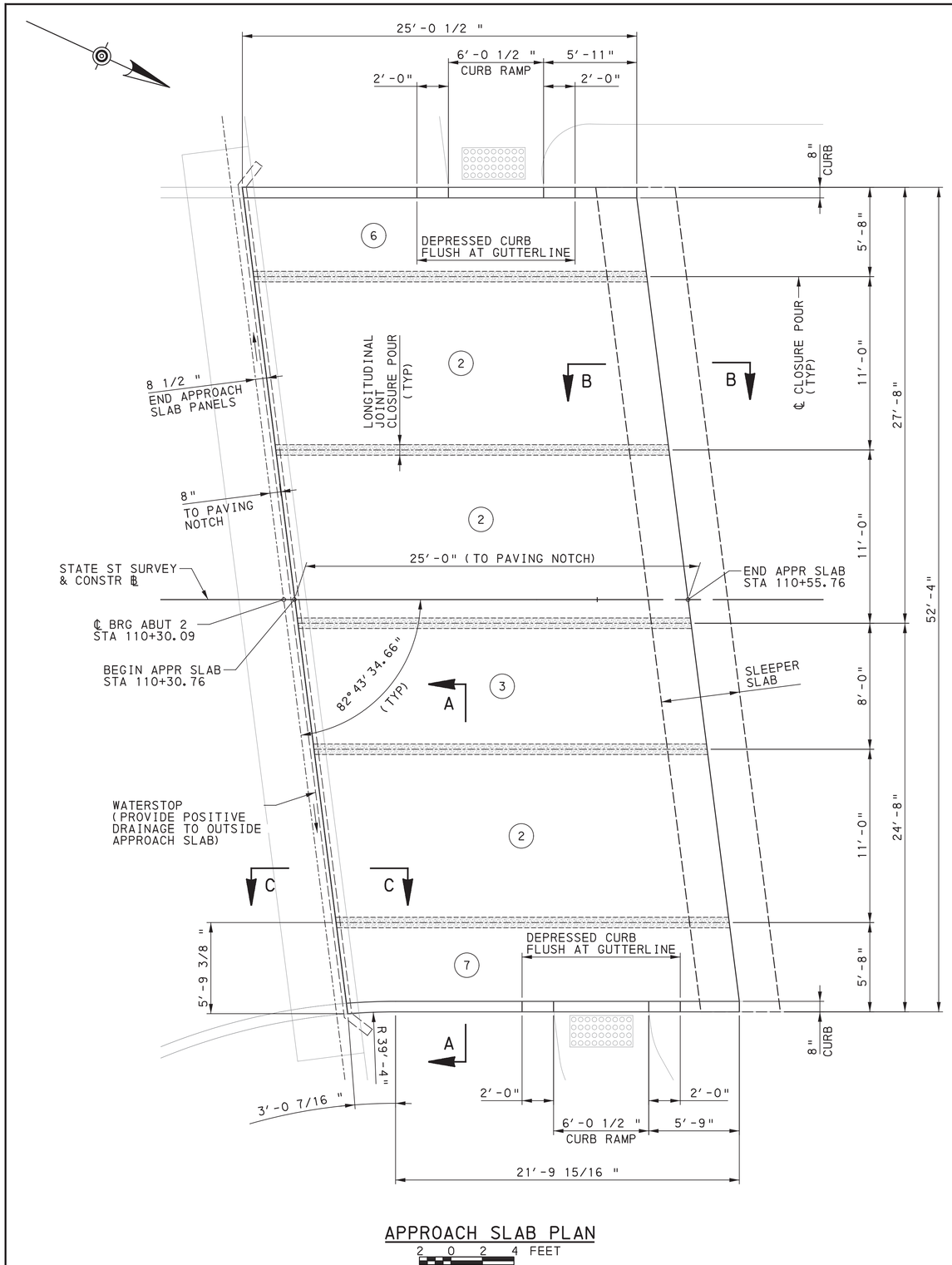
ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB - ABUTMENT 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

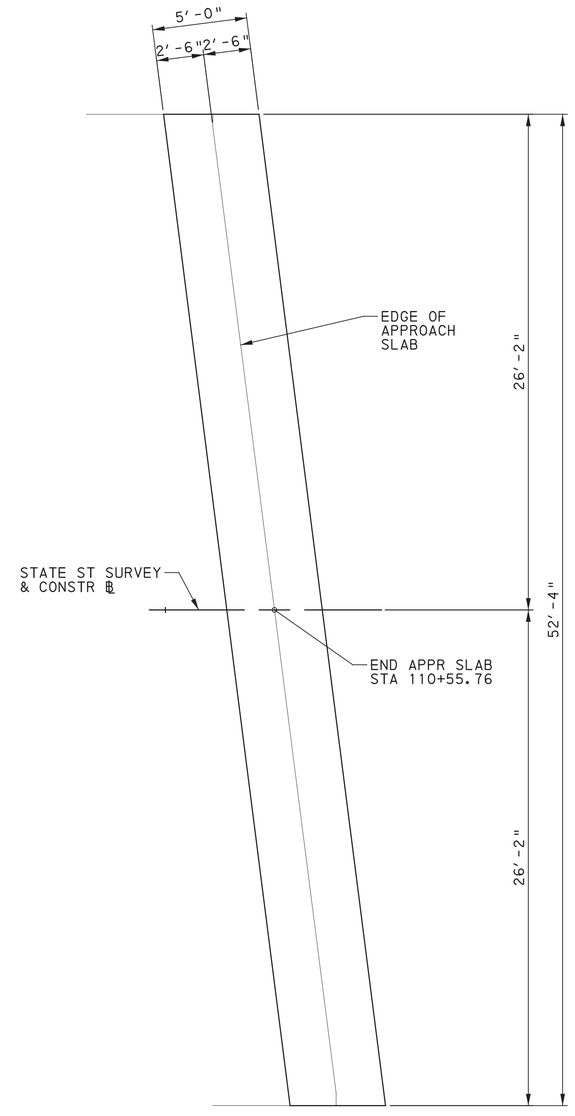
SHEET 52 OF 64

S-41005



APPROACH SLAB PLAN

2 0 2 4 FEET



SLEEPER SLAB PLAN

2 0 2 4 FEET

ESTIMATED SHIPPING WEIGHTS			
SEGMENT	QUANTITY	MAX WIDTH	WEIGHT (KIPS)
APPR SLAB-1*	-	-	-
APPR SLAB-2	3	10′-4"	52
APPR SLAB-3	1	7′-4"	37
APPR SLAB-4*	-	-	-
APPR SLAB-5*	-	-	-
APPR SLAB-6	1	5′-4"	29
APPR SLAB-7	1	5′-5 3/8"	29
SLEEPER SLAB	1	5′-0"	40

* SEGMENTS LOCATED AT ABUTMENT 1 APPROACH SLAB

ULTRA HIGH PERFORMANCE CONCRETE

REFERENCES:

FOR GENERAL APPROACH SLAB NOTES, SEE SHEET 5

FOR SECTION A-A, B-B & C-C, SEE SHEET 54

FOR TOP OF APPROACH SLAB ELEVATIONS, SEE SHEET 57

FOR PRECAST ELEMENT TOLERANCES & LEVELING DEVICE DETAILS, SEE SHEET 58

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

APPROACH SLAB - ABUTMENT 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 53 OF 64

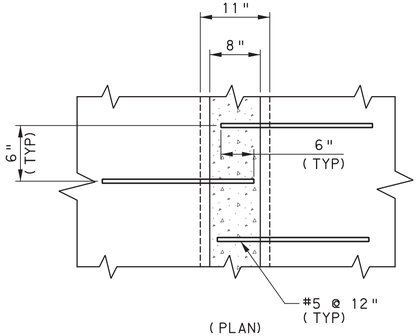
S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: JP

PLOTTED: 8/20/2022

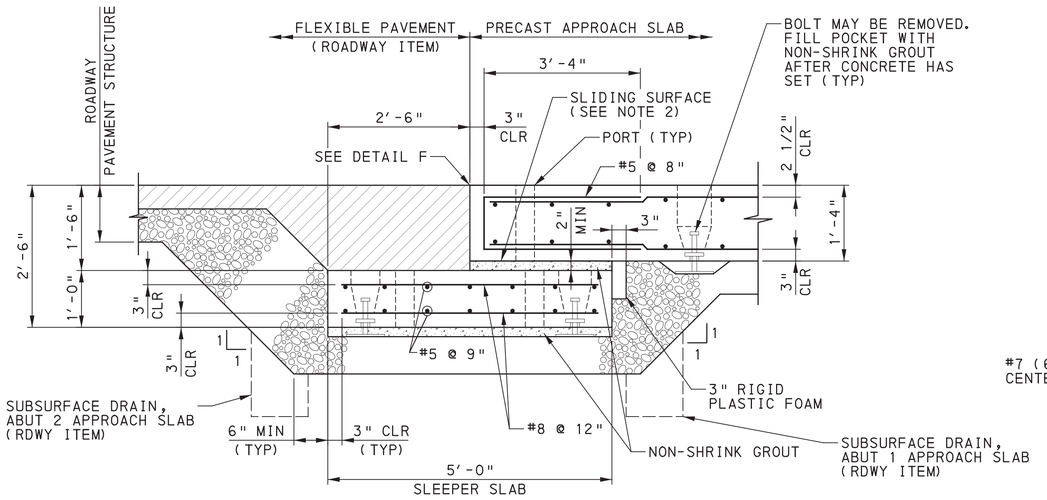
OPERATOR:
FILE NAME: \\mscconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas002.dgn

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas003.dgn



LONGITUDINAL JOINT DETAIL

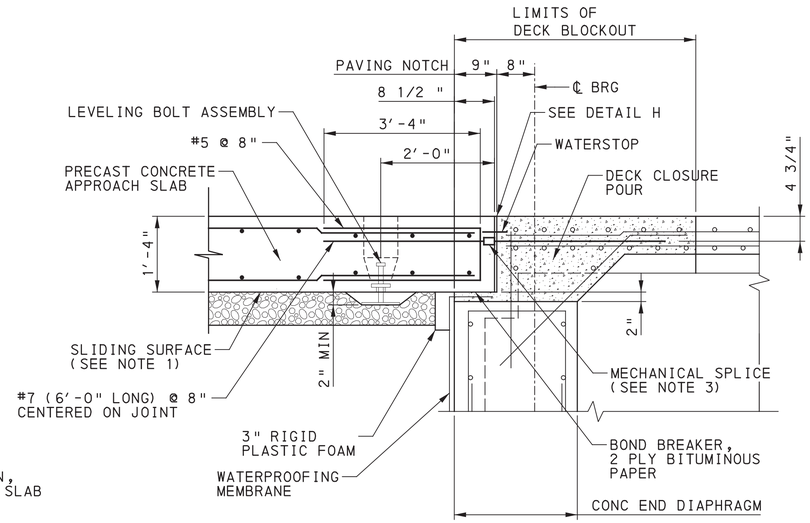
6 0 6 12 INCHES



SECTION B-B

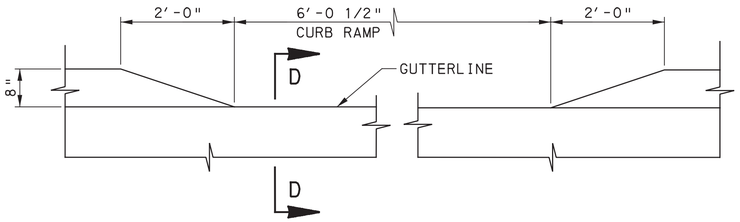
12 0 12 INCHES

NOTE: ADDITIONAL DEPTH OF SUBBASE AND PAVEMENT IS INCIDENTAL TO APPLICABLE ROADWAY ITEMS.



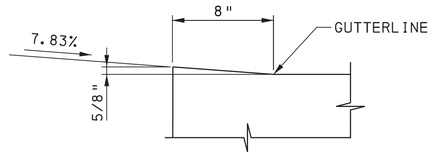
SECTION C-C

12 0 12 INCHES



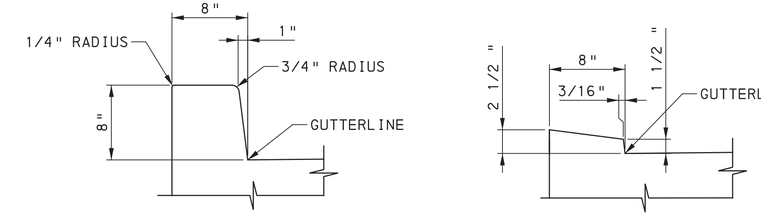
ELEVATION - DEPRESSED CURB @ CURB RAMP

12 0 12 INCHES



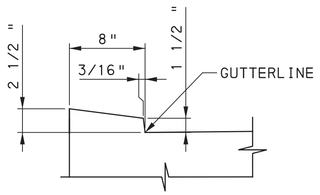
SECTION D-D

3 0 3 6 INCHES



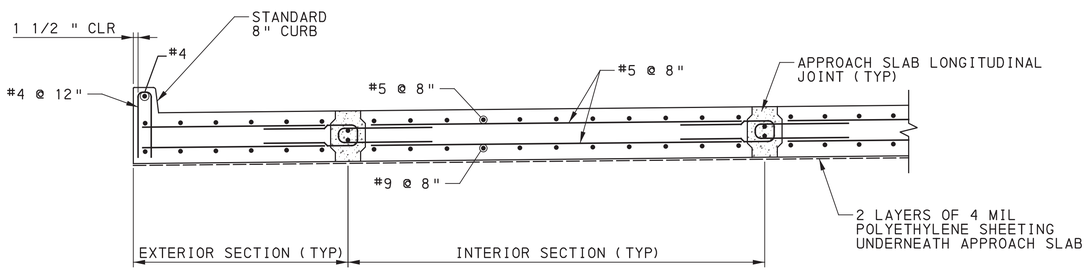
STANDARD 8" CURB

6 0 6 INCHES



DEPRESSED CURB FOR DRIVEWAY

6 0 6 INCHES



SECTION A-A

1 0 1 2 FEET

NOTES:

1. 2 LAYERS OF 4 MIL POLYETHYLENE. PROVIDE 2'-0" GAP IN POLYETHYLENE SHEETING ALONG CONC END DIAPHRAGM TO ALLOW FOR DRAINAGE.
2. TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING AS BOND BREAKER.
3. MECHANICAL SPLICE IS OPTIONAL AND CAN BE UTILIZED BY THE CONTRACTOR TO SIMPLIFY THE INSTALLATION OF THE APPROACH SLAB PANELS.

REFERENCES:

FOR DETAIL H & F, SEE SHEET 55

FOR PAVING NOTCH DETAIL, SEE SHEET 55

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE

APPROACH SLAB DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

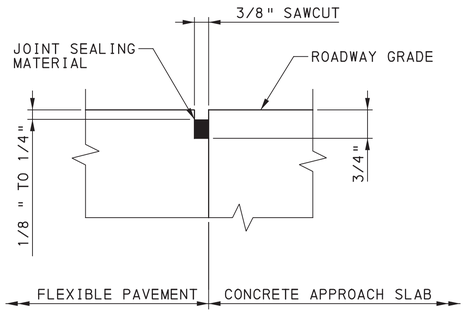
RECOMMENDED AUGUST 22, 2022

SHEET 54 OF 64

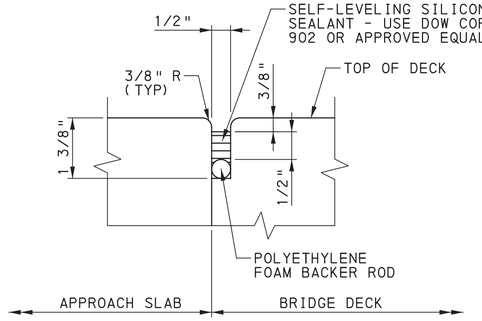
S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

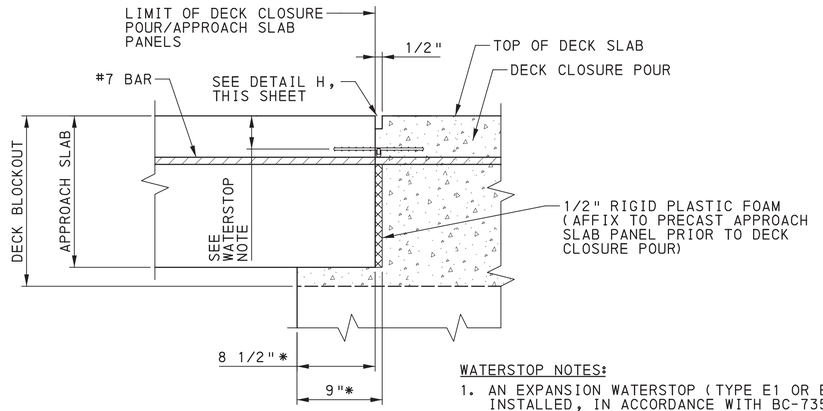
PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas004.dgn



DETAIL F
NTS



DETAIL H
NTS

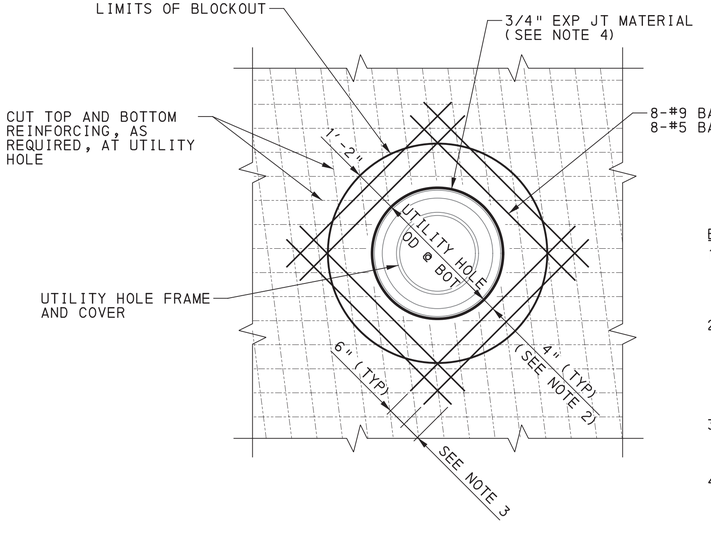


* - MEASURED NORMAL TO ABUTMENT

PAVING NOTCH DETAIL
NTS

WATERSTOP NOTES:

1. AN EXPANSION WATERSTOP (TYPE E1 OR E2) MUST BE INSTALLED, IN ACCORDANCE WITH BC-735M, JUST ABOVE THE #7 BAR, AND PLACED TO PROVIDE POSITIVE DRAINAGE TO OUTSIDE OF THE STRUCTURE. EXTEND WATERSTOP BEYOND SLAB SEGMENT TO PROVIDE 6" LAP (MIN).
2. EXTEND WATERSTOP FROM PRECAST PANELS INTO THE CLOSURE POUR AND JOIN PRIOR TO THE CONCRETE PLACEMENT.



UTILITY HOLE BLOCKOUT DETAIL
NTS

BLOCKOUT NOTES:

1. THE BLOCKOUT DIAMETER SHALL BE DETERMINED BY THE LARGEST UTILITY HOLE DIAMETER WITHIN THE APPROACH SLAB THICKNESS.
2. THE BLOCKOUT REINFORCEMENT IS SHOWN FOR THE UTILITY HOLE DIAMETER AT THE BOTTOM OF THE APPROACH SLAB. REINFORCEMENT SHALL BE SHIFTED FOR THE TOP MAT BASED ON THE UTILITY HOLE DIAMETER AT THAT LOCATION.
3. EXTEND BLOCKOUT REINFORCEMENT FAR ENOUGH TO MEET THE DEVELOPMENT LENGTH REQUIREMENTS PER BC-736M.
4. EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE ENTIRE UTILITY HOLE WITHIN THE LIMITS OF THE APPROACH SLAB THICKNESS.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

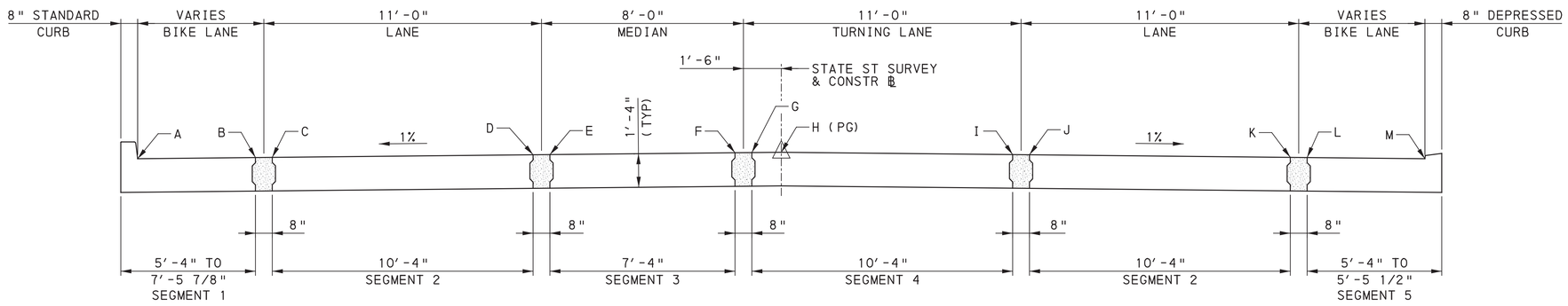
RECOMMENDED AUGUST 22, 2022

SHEET 55 OF 64

S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas005.dgn



ELEVATION

1 0 1 2 3 FEET

TOP OF APPROACH SLAB ELEVATIONS

LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)	ELEV (F)	ELEV (G)	ELEV (H)	ELEV (I)	ELEV (J)	ELEV (K)	ELEV (L)	ELEV (M)
BEGIN APPR SLAB	108+97.83	607.95	-	-	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	108+98.43	607.93	607.97	-	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	108+98.51	607.92	607.97	607.98	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	108+99.83	607.87	607.92	607.93	608.03	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	108+99.92	607.87	607.92	607.92	608.03	608.03	-	-	-	-	-	-	-	-
	109+00.00	607.87	607.92	607.92	608.03	608.03	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	109+00.85	607.84	607.88	607.89	607.99	608.00	608.07	-	-	-	-	-	-	-
BEGIN APPR SLAB	109+00.94	607.83	607.88	607.89	607.99	608.00	608.07	608.08	-	-	-	-	-	-
BEGIN APPR SLAB	109+01.09	607.83	607.88	607.88	607.99	607.99	608.07	608.07	608.08	-	-	-	-	-
BEGIN APPR SLAB	109+02.26	607.79	607.83	607.84	607.94	607.95	608.02	608.03	608.04	607.95	-	-	-	-
BEGIN APPR SLAB	109+02.34	607.78	607.83	607.84	607.94	607.95	608.02	608.03	608.04	607.95	607.94	-	-	-
BEGIN APPR SLAB	109+03.66	607.74	607.79	607.79	607.90	607.90	607.98	607.98	607.99	607.90	607.90	607.79	-	-
BEGIN APPR SLAB	109+03.75	607.74	607.78	607.79	607.89	607.90	607.97	607.98	607.99	607.90	607.89	607.79	607.78	-
BEGIN APPR SLAB	109+04.34	607.71	607.76	607.77	607.87	607.88	607.95	607.96	607.97	607.88	607.87	607.77	607.76	607.71
	109+10.00	607.52	607.57	607.58	607.68	607.69	607.76	607.77	607.78	607.69	607.68	607.58	607.57	607.53
	109+20.00	607.21	607.27	607.27	607.38	607.38	607.46	607.46	607.47	607.38	607.38	607.27	607.27	607.22
END APPR SLAB	109+22.56	607.13	607.19	607.20	607.30	607.31	607.38	607.39	607.40	607.31	607.30	607.20	607.19	607.15
END APPR SLAB	109+23.43	-	607.17	607.18	607.28	607.29	607.36	607.37	607.38	607.29	607.28	607.18	607.17	607.12
END APPR SLAB	109+23.51	-	-	607.18	607.28	607.29	607.36	607.37	607.38	607.29	607.28	607.18	607.17	607.12
END APPR SLAB	109+24.83	-	-	-	607.24	607.25	607.32	607.33	607.34	607.25	607.24	607.14	607.13	607.09
END APPR SLAB	109+24.92	-	-	-	-	607.25	607.32	607.33	607.34	607.25	607.24	607.14	607.13	607.08
END APPR SLAB	109+25.85	-	-	-	-	-	607.30	607.30	607.31	607.22	607.22	607.11	607.11	607.06
END APPR SLAB	109+25.94	-	-	-	-	-	-	607.30	607.31	607.22	607.21	607.11	607.10	607.06
END APPR SLAB	109+26.09	-	-	-	-	-	-	-	607.31	607.22	607.21	607.11	607.10	607.05
END APPR SLAB	109+27.26	-	-	-	-	-	-	-	-	607.19	607.18	607.08	607.07	607.02
END APPR SLAB	109+27.34	-	-	-	-	-	-	-	-	-	607.18	607.07	607.07	607.02
END APPR SLAB	109+28.66	-	-	-	-	-	-	-	-	-	-	607.04	607.03	606.99
END APPR SLAB	109+28.75	-	-	-	-	-	-	-	-	-	-	-	607.03	606.98
END APPR SLAB	109+29.36	-	-	-	-	-	-	-	-	-	-	-	-	606.97

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB - ABUTMENT 1 ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

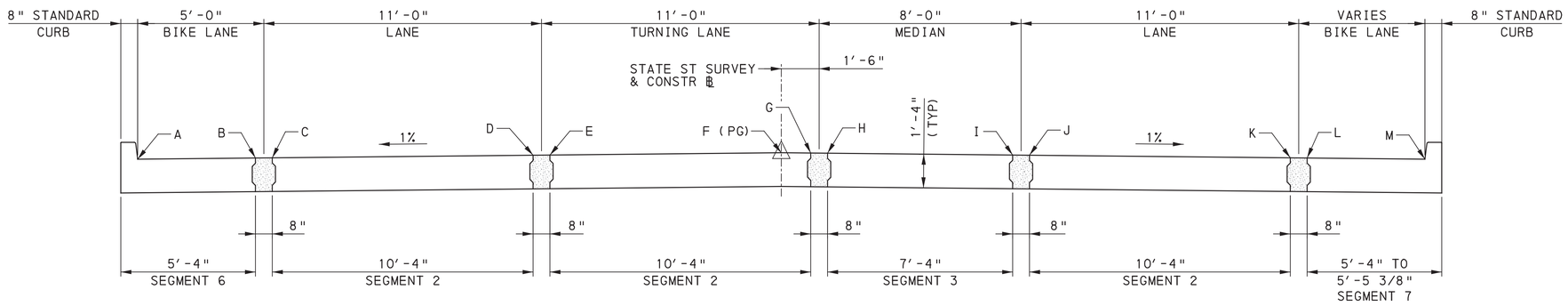
RECOMMENDED AUGUST 22, 2022

SHEET 56 OF 64

S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: JP

PLOTTED: 8/20/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\bridge_SS\sheets\FINAL\bridge_SSSTas006.dgn



ELEVATION

1 0 1 2 3 FEET

TOP OF APPROACH SLAB ELEVATIONS

LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)	ELEV (F)	ELEV (G)	ELEV (H)	ELEV (I)	ELEV (J)	ELEV (K)	ELEV (L)	ELEV (M)
BEGIN APPR SLAB	110+27.51	604.97	-	-	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+28.10	604.96	605.01	-	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+28.19	604.96	605.01	605.01	-	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+29.51	604.93	604.98	604.99	605.09	-	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+29.59	604.93	604.98	604.98	605.09	605.09	-	-	-	-	-	-	-	-
	110+30.00	604.92	604.97	604.98	605.08	605.09	-	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+30.76	604.91	604.95	604.96	605.06	605.07	605.16	-	-	-	-	-	-	-
BEGIN APPR SLAB	110+30.91	604.90	604.95	604.96	605.06	605.07	605.16	605.15	-	-	-	-	-	-
BEGIN APPR SLAB	110+31.00	604.90	604.95	604.95	605.06	605.06	605.16	605.14	605.14	-	-	-	-	-
BEGIN APPR SLAB	110+31.93	604.88	604.93	604.93	605.04	605.04	605.13	605.12	605.12	605.04	-	-	-	-
BEGIN APPR SLAB	110+32.02	604.88	604.92	604.93	605.03	605.04	605.13	605.12	605.11	605.04	605.03	-	-	-
BEGIN APPR SLAB	110+33.34	604.85	604.89	604.90	605.00	605.01	605.10	605.09	605.08	605.01	605.00	604.90	-	-
BEGIN APPR SLAB	110+33.42	604.84	604.89	604.90	605.00	605.01	605.10	605.09	605.08	605.01	605.00	604.90	604.89	-
BEGIN APPR SLAB	110+34.03	604.83	604.88	604.88	604.99	604.99	605.08	605.07	605.07	604.99	604.99	604.88	604.88	604.83
	110+40.00	604.67	604.72	604.73	604.83	604.84	604.93	604.92	604.91	604.84	604.83	604.73	604.72	604.67
	110+50.00	604.36	604.40	604.41	604.51	604.52	604.61	604.60	604.59	604.52	604.51	604.41	604.40	604.36
END APPR SLAB	110+52.51	604.27	604.31	604.32	604.42	604.43	604.52	604.51	604.50	604.43	604.42	604.32	604.31	604.27
END APPR SLAB	110+53.10	-	604.29	604.30	604.40	604.41	604.50	604.49	604.48	604.41	604.40	604.30	604.29	604.24
END APPR SLAB	110+53.19	-	-	604.29	604.40	604.40	604.50	604.48	604.48	604.40	604.40	604.29	604.29	604.24
END APPR SLAB	110+54.51	-	-	-	604.35	604.35	604.45	604.43	604.43	604.35	604.35	604.24	604.24	604.19
END APPR SLAB	110+54.59	-	-	-	-	604.35	604.44	604.43	604.42	604.35	604.34	604.24	604.23	604.19
END APPR SLAB	110+55.76	-	-	-	-	-	604.40	604.39	604.38	604.31	604.30	604.20	604.19	604.14
END APPR SLAB	110+55.91	-	-	-	-	-	-	604.38	604.37	604.30	604.29	604.19	604.18	604.14
END APPR SLAB	110+56.00	-	-	-	-	-	-	-	604.37	604.30	604.29	604.19	604.18	604.13
END APPR SLAB	110+56.93	-	-	-	-	-	-	-	-	604.26	604.25	604.15	604.14	604.10
END APPR SLAB	110+57.02	-	-	-	-	-	-	-	-	-	604.25	604.15	604.14	604.09
END APPR SLAB	110+58.34	-	-	-	-	-	-	-	-	-	-	604.09	604.09	604.04
END APPR SLAB	110+58.42	-	-	-	-	-	-	-	-	-	-	-	604.08	604.04
END APPR SLAB	110+59.02	-	-	-	-	-	-	-	-	-	-	-	-	604.01

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB - ABUTMENT 2 ELEVATIONS

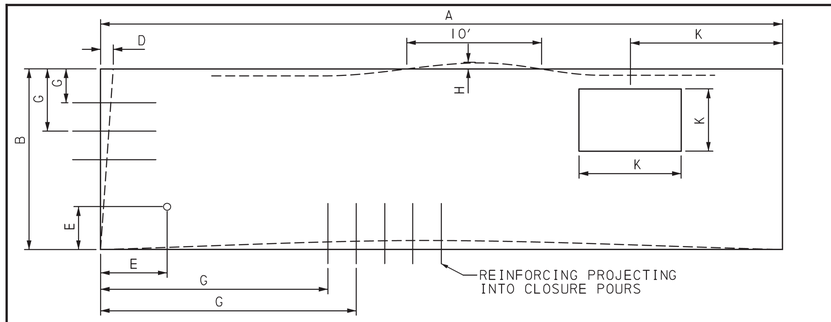
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

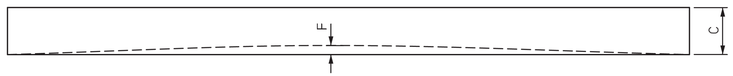
SHEET 57 OF 64

S-41005

DES: KCL | CKD: REB | DWG: KCL | CKD: JP



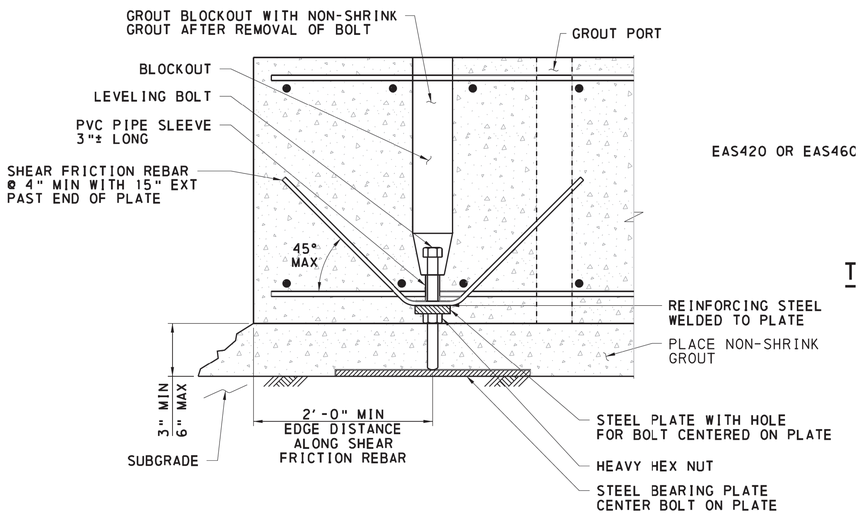
PLAN



ELEVATION

APPROACH SLAB TOLERANCES

A	LENGTH	± 1/4 "
B	WIDTH (OVERALL)	± 1/4 "
C	DEPTH (OVERALL)	± 1/4 "
D	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	± 1/2 "
E	LOCATION OF LEVELING BOLTS	± 1 "
F	SWEEP OVER MEMBER LENGTH:	± 3/8 "
G	LOCATION OF PROJECTING REINFORCING MEASURED FROM A COMMON REFERENCE POINT	± 1/2 "
H	LOCAL SMOOTHNESS OF ANY SURFACE	± 1/4 " IN 10 FEET
K	LOCATION AND SIZE OF BLOCKOUT FOR BASINS	± 1/2 "

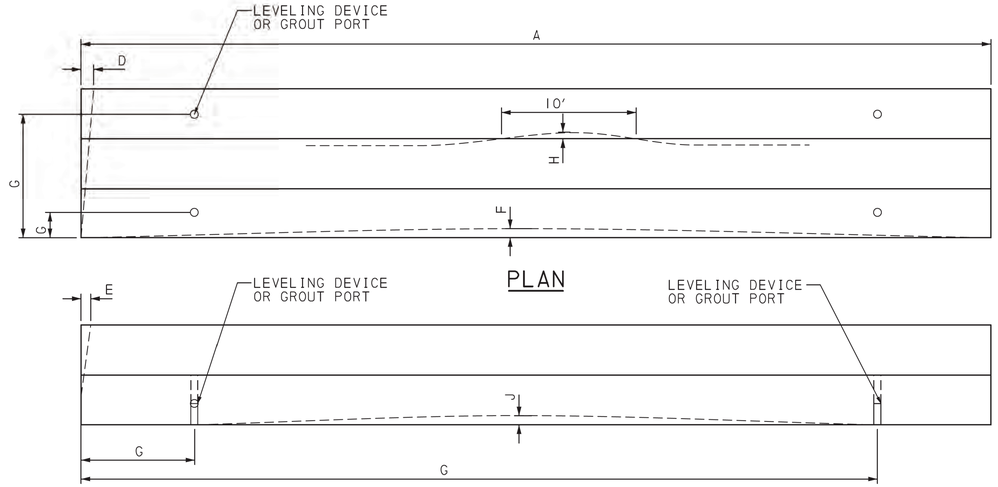


EAS420 OR EAS460

T

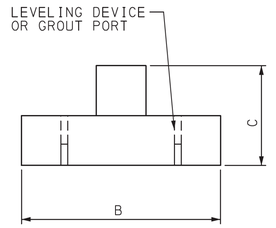
CAPACITY	LEVELING BOLT	PVC PIPE SLEEVE	SHEAR FRICTION REBAR	STEEL PLATE	STEEL BEARING PLATE
20,000 POUND SERVICE LOAD	1 1/4 "Ø	1 1/4 "Ø	(2) #4 BAR	4"x4"x 7/8 " WITH 1 5/16 "Ø HOLE	1'-10"x1'-10"x 3/4 "
30,000 POUND SERVICE LOAD	1 1/2 "Ø	1 1/2 "Ø	(2) #5 BAR	5"x5"x1 " WITH 1 9/16 "Ø HOLE	2'-3"x2'-3"x1 "

LEVELING DEVICE INSTALLATION DETAIL



PLAN

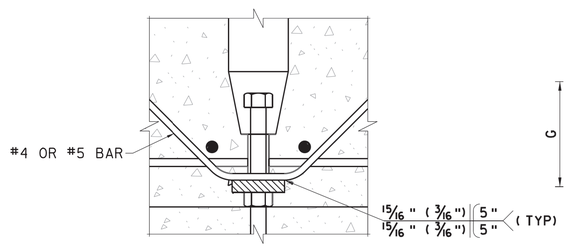
ELEVATION



SECTION

SLEEPER SLAB FABRICATION TOLERANCES

A	LENGTH	± 1/2 "
B	WIDTH (OVERALL)	± 1/4 "
C	DEPTH (OVERALL)	± 1/4 "
D	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	± 1/8 " PER 12 INCH WIDTH ± 1/2 " MAXIMUM
E	VARIATION FROM SPECIFIED ELEVATION END SQUARENESS OR SKEW	± 1/8 " PER 12 INCH WIDTH ± 1/2 " MAXIMUM
F	SWEEP OVER MEMBER LENGTH:	± 1/2 "
G	LOCATION OF LEVELING DEVICE OR GROUT PORT MEASURED FROM A COMMON REFERENCE POINT	± 2"
H	LOCAL SMOOTHNESS OF ANY SURFACE	± 1/4 " IN 10 FEET
J	VARIATION FROM SPECIFIED CAMBER	± 1/8 " PER 10 FEET ± 1/2 " MAXIMUM



TYPICAL WELD DETAIL

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2145 MPMS PROJ: 108952 BRKEY: 69234

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034
1-SPAN COMP P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB CONSTRUCTION DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

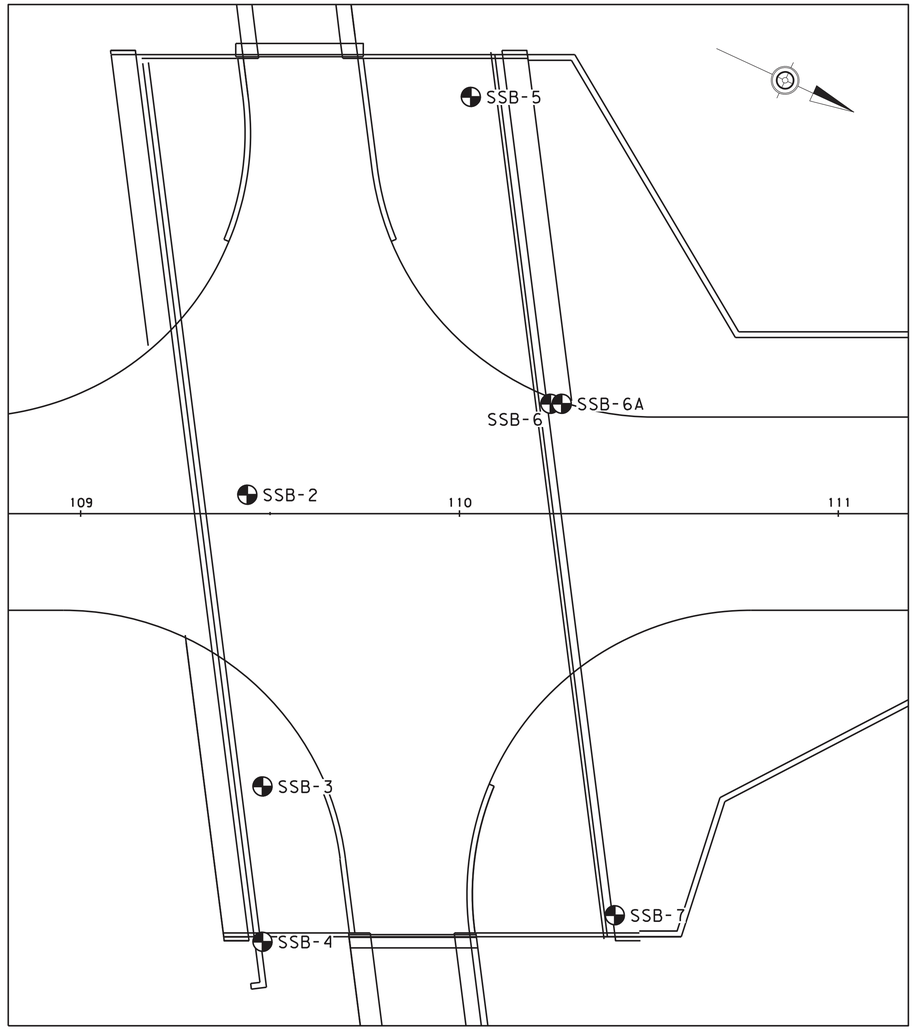
SHEET 58 OF 64

S-41005

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/20/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\FINAL\bridge_SSSTaa007.dgn



BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler — 5/28/2021

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK A. STYLER — ENGINEER — No. PE091700

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 1 OF 6)

Christopher T. Fox, P.E. — Digitally signed by Christopher T. Fox, P.E. Date: 2022.08.23 07:14:14 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 59 OF 64

M:_2019\095\exhibits\structure\19095_strb_SSB.dgn
7/29/2022

PLT: RJS | CKD: GWR | QA/QC: MAS

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/03/2020 11:00 AM	HAMMER: AUTOMATIC
SSB-4	STATION: 109+48.0 OFFSET: 113.0 FT. RT.	FINISH: 11/03/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	578.3 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 574.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 574.5 ft. - 21.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590											
585											
BPC 594.50 NTS											
580											
		SAND, little Gravel, little Silt, medium dense, damp, heterogeneous, poorly graded, angular to sub-angular, brown, fill. 2.5'/El. 575.8	a-1-b / sp	1.5	S-1	3-4-4		11	1.0	67	
			a-1-a / gp	2.8	S-2	5-7-50/.3'		76	1.3	100	
TOR 575.20				3.0	S-3	50/.1'		>67	0.1	100	
TRS 574.30		**GRAVEL**, some Sand, very dense, damp, homogeneous, poorly graded, angular to flat, gray, residuum. *Boring dry prior to coring.* 3.1'/El. 575.2		3.1	R-1			0%	0.2	8	
570		**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, slightly weathered, laminated to narrow bedding with flat to shallow dip, *no apparent jointing, (RQD=65%).*		5.5							
BPD 569.30				7.5	R-2			15%	2.0	100	
				10.5	R-3			67%	2.8	93	
565				15.5	R-4			78%	5.0	100	
				20.5	R-5			49%	4.9	98	
560					R-6			88%	5.0	100	
555		25.5'/El. 552.8									

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 1:00 PM	HAMMER: AUTOMATIC
SSB-3	STATION: 109+48.0 OFFSET: 72.0 FT. RT.	FINISH: 10/29/2020 4:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	579.0 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 577.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 576.7 ft. - 16.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590											
585											
BPC 594.50 NTS											
580											
		GRAVEL, some Sand, little Clay, loose, moist to damp, heterogeneous, poorly graded, angular, brown, fill. 2.5'/El. 576.5	a-1-a / gp	1.5	S-1	3-3-4		9	0.8	53	
			a-1-a / gw	3.0	S-2	4-3-3		8	1.1	73	
		GRAVEL, some Sand, very dense, dry, homogeneous, well graded, angular to flat, gray, residuum. *Auger refusal @ 4.1'.* 4.1'/El. 574.9		3.1	S-3	50/.1'		>67	0.1	100	
TOR 574.90				4.1	R-1			0%	0.8	67	
TRS 574.30		**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, fresh, laminated to moderate bedding with flat to shallow dip, *no apparent jointing, (RQD=61%).* *Slightly weathered shale, 3.1-5.6'.*		5.3	R-2			0%	2.0	100	
570				7.3							
BPD 569.30					R-3			57%	3.0	100	
				10.3							
565				15.3	R-4			64%	4.9	98	
				20.3	R-5			62%	5.0	100	
560					R-6			10%	5.0	100	
555		25.3'/El. 553.7									

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SLIFER ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 2 OF 6)

SHEET 60 OF 64

PLT: RJS | CKD: GWR | QA/QC: MAS

PENNDOT STRUCTURE BORING LOGS - PENNDOT.GINT - JEFFERSON_12.2.9-8-24-2016.GDT - 10/5/21 15:08 - L:\PROJECTS\2019\19095\19095 - ERIE CO SSS.GPJ

M:\.2019\095\exhibits\structure\19095_strb_SSB.dgn
7/29/2022

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 1:00 PM	HAMMER: AUTOMATIC
SSB-3	STATION: 109+48.0 OFFSET: 72.0 FT. RT.	FINISH: 10/29/2020 4:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	579.0 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 577.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 576.7 ft. - 16.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590											
585											
BPC 594.50 NTS											
580		**GRAVEL**, some Sand, little Clay, loose, moist to damp, heterogeneous, poorly graded, angular, brown, fill. 2.5'/El. 576.5	a-1-a / gp	1.5	S-1	3-3-4		9	0.8	53	
		GRAVEL, some Sand, very dense, dry, homogeneous, well graded, angular to flat, gray, residuum. *Auger refusal @ 4.1'.* 4.1'/El. 574.9	a-1-a / gw	3.0	S-2	4-3-3		8	1.1	73	
575				3.1	S-3	50/.1'		>67	0.1	100	
TOR 574.90 TRS 574.30		**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, fresh, laminated to moderate bedding with flat to shallow dip, *no apparent jointing, (RQD=61%). Slightly weathered shale, 3.1-5.6'.*		4.1 5.3	R-1			0%	0.8	67	
				7.3	R-2			0%	2.0	100	
570					R-3			57%	3.0	100	
BPD 569.30				10.3							
565					R-4			64%	4.9	98	
				15.3							
560					R-5			62%	5.0	100	
				20.3							
555		25.3'/El. 553.7			R-6			10%	5.0	100	

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/09/2020 9:30 AM	HAMMER: AUTOMATIC
SSB-2	STATION: 109+44.0 OFFSET: 5.0 FT. LT.	FINISH: 11/09/2020 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	579.0 FT.

DRILLING INSPECTOR: KATHERINE NEFF
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 575.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 575.0 ft. - 20.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590											
585											
BPC 594.50 NTS											
580		**GRAVEL** and **SAND**, medium dense to very dense, dry, heterogeneous, poorly graded, sub-angular, gray and brown, fill. *S-1, likely pushing large gravel by railroad tracks. S-2, large gravel stuck in tip.* 4.0'/El. 575.0	a-1-a / gp	1.5	S-1	12-23-25		64	0.0	0	
		GRAVEL, little Sand, very dense, dry, laminated, poorly graded, flat to elongated, gray, residuum. *Boring dry prior to coring.* 4.7'/El. 574.3	a-1-a / gp	3.0	S-2	15-14-6		27	0.2	13	
575				4.5	S-3	9-9-50		79	1.0	67	
TRS & TOR 574.30		**SHALE interbedded with SILTSTONE**, gray to dark gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=47%).*		4.7	S-4	50/.2'		>67	0.2	100	
				6.7	R-1			45%	1.6	80	
570				8.7	R-2			25%	2.0	100	
BPD 569.30					R-3			60%	3.0	100	
565				11.7							
					R-4			30%	4.9	98	
560				16.7	R-5			50%	5.0	100	
				21.7							
555		26.7'/El. 552.3			R-6			62%	5.0	100	

All PID readings=0.0 ppm, no visual signs of contamination or odors.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIVEK ENGINEER No. PE091796

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034

STRUCTURE BORINGS (SHEET 3 OF 6)

SHEET 61 OF 64

PLT: RJS | CKD: GWR | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_SSB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION_1223 - 8.24.2015.GDT - 10/5/21 15:08 - L:\PROJECTS\2019\19095\0004 - ERIE CO SAS.GPJ

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/30/2020 9:00 AM	HAMMER: AUTOMATIC
SSB-5	STATION: 110+03.0 OFFSET: 110.0 FT. LT.	FINISH: 11/02/2020 1:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	605.3 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 571.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------ PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605		**REINFORCED CONCRETE.** 1.3'/El. 604.0		1.5						
		GRAVEL and **SAND**, medium dense to very dense, damp, heterogeneous, well graded, rounded to sub-angular, brown, fill.		3.0	S-1	9-6-5	15	0.8	53	
				4.5	S-2	4-6-8	19	1.2	80	
				6.0	S-3	10-8-7	20	1.3	87	
				7.5	S-4	8-7-4	15	0.1	7	
		S-5, contains some fabric/membrane.		9.0	S-5	28-4-5	12	0.4	27	
				10.5	S-6	8-11-12	31	1.1	73	
				12.0	S-7	15-14-15	39	1.5	100	
				13.5	S-8	20-25-22	63	1.5	100	
595				15.0	S-9	13-19-15	45	1.2	80	
			a-1-a / gw	16.5	S-10	14-12-21	44	0.5	33	
				18.0	S-11	15-20-22	56	0.7	47	
				19.5	S-12	20-20-13	44	1.2	80	
				21.0	S-13	18-14-14	37	1.5	100	
				22.5	S-14	12-15-16	41	1.5	100	
				24.0	S-15	11-14-17	41	1.3	87	
585				25.5	S-16	10-10-10	27	1.5	100	
				27.0	S-17	5-11-11	29	1.1	73	
				28.5	S-18	13-9-10	25	0.8	53	
				29.8	S-19	10-10-50/.3'	80	1.3	100	
580		*Boring dry prior to coring.* 29.8'/El. 575.5		31.8	R-1		0%	2.0	100	
		SHALE interbedded with SANDSTONE, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=30%).*		34.8	R-2		30%	2.8	93	
575					R-3		42%	5.0	100	
570		39.8'/El. 565.5								

BPC 592.50
TOR 575.50
TRS 570.20
BPD 565.20 NTS

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion.

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/02/2020 8:30 AM	HAMMER: AUTOMATIC
SSB-6A	STATION: 110+27.0 OFFSET: 29.0 FT. LT.	FINISH: 11/03/2020 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	604.0 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PIERCE 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 592.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------ PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605		**BITUMINOUS CONCRETE.** 0.4'/El. 603.6		1.5						
		GRAVEL and **SAND.** 1.5'/El. 602.5	a-1-a / gp	3.0	S-1	6-5-4	12	0.7	47	
		GRAVEL, some Sand, little Silt, contains concrete, wood, trace slag, loose to dense, moist to damp, heterogeneous, poorly graded, angular to sub-rounded, brown, fill.		4.5	S-2	3-3-2	7	0.4	27	
		S-2, contains wood fragments.		6.0	S-3	5-7-7	19	0.8	53	
		S-3, contains concrete fragments.		7.5	S-4	12-16-15	41	1.2	80	
		S-4, contains piece of slag. 7.5'/El. 596.5	a-2-4 / gm	9.0	S-5	12-14-15	39	1.5	100	
		GRAVEL, some Silt, little Sand, contains shale fragments, dense, damp, homogeneous, poorly graded, flat to angular, gray, fill (reworked glacial till). 12.0'/El. 592.0		10.5	S-6	19-16-17	44	1.3	87	
		SAND, some Gravel, some Silt, loose to medium dense, moist to damp, heterogeneous, poorly graded, rounded to sub-rounded, brown, fill.		12.0	S-7	8-10-18	37	1.5	100	
				13.5	S-8	10-10-10	27	1.5	100	
595				15.0	S-9	4-4-3	9	1.1	73	
				16.5	S-10	5-3-3	8	0.5	33	
				18.0	S-11	2-2-2	5	0.4	27	
				19.5	S-12	3-2-3	7	0.5	33	
				21.0	S-13	2-3-3	8	1.2	80	
				22.5	S-14	3-3-3	8	1.3	87	
				24.0	S-15	3-5-4	12	1.4	93	
585		*S-13, contains small piece of brick.* 24.0'/El. 580.0	a-2-4 / sm	25.5	S-16	3-3-4 / **0.75**	9	1.5	100	
		SILT, little Sand, little Clay, trace Gravel, very soft to very stiff, wet to moist, homogeneous, low plastic fines, gray, alluvium.		27.0	S-17	4-2-3 / **2.00**	7	1.5	100	
		S-16, contains wood and organic odor.		28.5	S-18	3-4-4 / **0.50**	11	1.5	100	
		S-18, contains wood.		30.0	S-19	WOH-WOH-WOH / **1.00**	0	0.6	40	
		Class. on S-17 to S-20 N.M.C.=20.0%`.	A-4 / CL-ML	31.5	S-20	3-3-4 / **2.50**	9	1.5	100	
		32.0'/El. 572.0		33.0	S-21	2-3-4 / 27-50/.3'	9	1.5	100	
575		**SAND**, little Gravel, loose to very dense, wet, homogeneous, poorly graded, rounded, gray, alluvium.	a-1-b / sp	33.8	S-22		>67	0.8	100	
		S-22, shale in tip of spoon.		35.8	R-1		0%	1.8	90	
		Boring dry prior to coring. 33.8'/El. 570.2			R-2		13%	2.8	93	
570		**SHALE**, gray, interbedded with fine grained sandstone, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=33%).*		38.8	R-3		58%	5.0	100	
565		43.8'/El. 560.2								

BPC 592.50
TOR & TRS 570.20
BPD 565.20

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE091780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034

STRUCTURE BORINGS (SHEET 4 OF 6)

SHEET 62 OF 64

PLT: RJS | CKD: GWR | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_SSB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT <GNT VERSION: 1.2.2> 6-24-2019 (GDT - 10/5/21 15:09 - I:\PROJECTS\2019\19095\MISC (ERIE CO SSS).GPJ

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/02/2020 8:30 AM	HAMMER: AUTOMATIC
SSB-6A	STATION: 110+27.0 OFFSET: 29.0 FT. LT.	FINISH: 11/03/2020 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	604.0 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 592.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605				1.5	S-1	6-5-4	12	0.7	47	
		BITUMINOUS CONCRETE. 0.4'/El. 603.6		3.0	S-2	3-3-2	7	0.4	27	
		GRAVEL and **SAND.** 1.5'/El. 602.5	a-1-a / gp	4.5	S-3	5-7-7	19	0.8	53	
600		**GRAVEL**, some Sand, little Silt, contains concrete, wood, trace slag, loose to dense, moist to damp, heterogeneous, poorly graded, angular to sub-rounded, brown, fill. *S-2, contains wood fragments.* *S-3, contains concrete fragments.* 7.5'/El. 596.5		6.0	S-4	12-16-15	41	1.2	80	
		S-4, contains piece of slag.	a-2-4 / gm	7.5	S-5	12-14-15	39	1.5	100	
595		**GRAVEL**, some Silt, little Sand, contains shale fragments, dense, damp, homogeneous, poorly graded, flat to angular, gray, fill (reworked glacial till). 12.0'/El. 592.0		9.0	S-6	19-16-17	44	1.3	87	
		BPC 592.50		10.5	S-7	8-10-18	37	1.5	100	
		SAND, some Gravel, some Silt, loose to medium dense, moist to damp, heterogeneous, poorly graded, rounded to sub-rounded, brown, fill.		12.0	S-8	10-10-10	27	1.5	100	
590				13.5	S-9	4-4-3	9	1.1	73	
			a-2-4 / sm	15.0	S-10	5-3-3	8	0.5	33	
				16.5	S-11	2-2-2	5	0.4	27	
585				18.0	S-12	3-2-3	7	0.5	33	
		S-13, contains small piece of brick. 24.0'/El. 580.0		19.5	S-13	2-3-3	8	1.2	80	
		SILT, little Sand, little Clay, trace Gravel, very soft to very stiff, wet to moist, homogeneous, low plastic fines, gray, alluvium.		21.0	S-14	3-3-3	8	1.3	87	
580		*S-16, contains wood and organic odor.*		22.5	S-15	3-5-4	12	1.4	93	
				24.0	S-16	3-3-4 **0.75**	9	1.5	100	
		S-18, contains wood.	A-4 / CL-ML	25.5	S-17	4-2-3 **2.00**	7	1.5	100	
		Class. on S-17 to S-20 N.M.C.=20.0%`.		27.0	S-18	3-4-4 **0.50**	11	1.5	100	
575		32.0'/El. 572.0		28.5	S-19	WOH-WOH-WOH	0	0.6	40	
		SAND, little Gravel, loose to very dense, wet, homogeneous, poorly graded, rounded, gray, alluvium.	a-1-b / sp	30.0	S-20	**1.00**	9	1.5	100	
		S-22, shale in tip of spoon. *Boring dry prior to coring.* 33.8'/El. 570.2		31.5	S-21	3-3-4 **2.50**	9	1.5	100	
570		**TOR & TRS 570.20**		33.0	S-22	2-3-4 27-50/.3"	>67	0.8	100	
				33.8	R-1		0%	1.8	90	
		SHALE, gray, interbedded with fine grained sandstone, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=33%).*		35.8	R-2		13%	2.8	93	
565		**BPD 565.20**		38.8	R-3		58%	5.0	100	
		43.8'/El. 560.2								

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion.

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/08/2020 10:15 AM	HAMMER: AUTOMATIC
SSB-7	STATION: 110+41.0 OFFSET: 106.0 FT. RT.	FINISH: 10/08/2020 2:15 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. [redacted] 5 FT.	602.9 FT.

DRILLING INSPECTOR: MIKE ROMEO
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 586.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 586.3 ft. - 19.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605				1.5	S-1	2-3-3	8	1.0	67	
		GRAVEL and **SAND**, little Clay, little Silt, contains slag and brick fragments, loose to very dense, moist to dry, heterogeneous, well graded, sub-angular, dark gray to brown, fill.		3.0	S-2	14-20-16	48	1.0	67	
		S-1, topsoil. *S-2, contains slag fragments.* *S-3, contains brick fragments.*	a-1-a / gw	4.5	S-3	17-16-13	39	1.5	100	
600		*S-5 and S-6, contain more silt.*		6.0	S-4	15-32-27	79	1.5	100	
		10.5'/El. 592.4		7.5	S-5	6-9-20	39	1.4	93	
		SILT and **SAND**, some Gravel, very stiff to hard, moist to damp, heterogeneous, well graded, sub-angular, low plastic fines, dark gray to brown, alluvium.	a-4 / ml	9.0	S-6	6-10-14	32	1.5	100	
595		14.5'/El. 588.4		10.5	S-7	8-9-8	23	1.3	87	
		BPC 592.50		12.0	S-8	7-7-9	21	0.9	60	
		S-10, very gravelly at bottom.		13.5	S-9	15-16-8	32	1.1	73	
590		**SILT**, little Sand, trace Clay, trace Gravel, soft to hard, moist to damp, homogeneous, non-plastic, gray to orange brown, alluvium. *S-12, sandy.*		15.0	S-10	8-7-26	44	1.1	73	
				16.5	S-11	17-24-23	63	1.5	100	
		S-14 and S-15, lensed silt and sand. *S-14, PID=1.05 ppm.*		18.0	S-12	44-14-17	41	1.2	80	
585				19.5	S-13	10-13-11	32	1.4	93	
		S-16, PID=4.6 ppm.		21.0	S-14	1-2-2	5	1.3	87	
		Class. on S-17 to S-20 N.M.C.=20.1%. *S-17, PID=30.1 ppm.* *S-18 through S-19, strong gasoline odor.* *S-18, PID=7.07 ppm.*	A-4 / ML	22.5	S-15	3-8-9	23	1.3	87	
580				24.0	S-16	6-8-4	16	0.8	53	
				25.5	S-17	1-2-7	12	0.7	47	
		S-20, PID=1.9 ppm.		27.0	S-18	2-2-7	12	1.5	100	
		31.6'/El. 571.3		28.5	S-19	7-10-5	20	1.1	73	
575		*S-21, 51.0 ppm.*		30.0	S-20	1-1-1	3	1.3	87	
		SHALE, light gray to dark gray, soft, fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=20%).* *Calcareous, 31.6-31.8', 33.9-34.2'.*		31.5	S-21	1-1-2	4	0.8	53	
				31.6	S-22	50/.1"	>67	0.1	100	
		TOR 571.30 **TRS 570.20**		33.6	R-1		0%	0.7	35	
570					R-2		27%	3.0	100	
		Clay seams, 35.7-35.8', 36.5'.		36.6						
		BPD 565.20			R-3		62%	4.7	94	
565		41.6'/El. 561.3								

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIPPER ENGINEER 080 PE081796

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION OVER S.R. 4034

STRUCTURE BORINGS (SHEET 5 OF 6)

SHEET 63 OF 64

PLT: RJS | CKD: GWR | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_srb_SSB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT (3NT VERSION 1.2.2 8-24-2016.GDT - 10/5/21 15:09 - V:\PROJECTS\2019\19095\095 - ERIE CO SSES.GPJ

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BPC	BOTTOM OF PILE CAP ELEVATION
BPD	BOTTOM OF PRE-DRILL ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			MOISTURE DENSITY		
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	MAX. DRY DENSITY (PCF)	OPTIMUM MOISTURE %	CBR
SSB-6A	110+27.0 29 ft. LT.	S-17 to 20	25.5 to 31.5	20.0	3.9	14.2			81.9	70.1	11.8	A-4	CL-ML		24	20	4			
SSB-7	110+41.0 106 ft. RT.	S-17 to 20	24.0 to 30.0	20.1	6.7	15.6			77.7	68.7	9.0	A-4	ML		NP	NP	NP			

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
SSB-3	109+48.0 72 ft. RT.	R-4	10.7 to 11.1	UNCONFINED COMPRESSIVE TEST	10443.0 PSI / 751.9 TSF	NO		98	64	SHALE	NORTHEAST SHALE
SSB-5	110+03.0 110 ft. LT.	R-3	35.2 to 35.8	UNCONFINED COMPRESSIVE TEST	15771.0 PSI / 1,135.5 TSF	NO		100	42	SHALE	NORTHEAST SHALE

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
SSB-7	110+41.0 106 ft. RT.	S-3 to 7	3.0 to 10.5	SOIL	7.5	5,695	400	150	No	No	No

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MARK A. SIVER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 109+73.39
STATE STREET/BAYFRONT PARKWAY RAMPS INTERSECTION
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 6 OF 6)

SHEET 64 OF 64

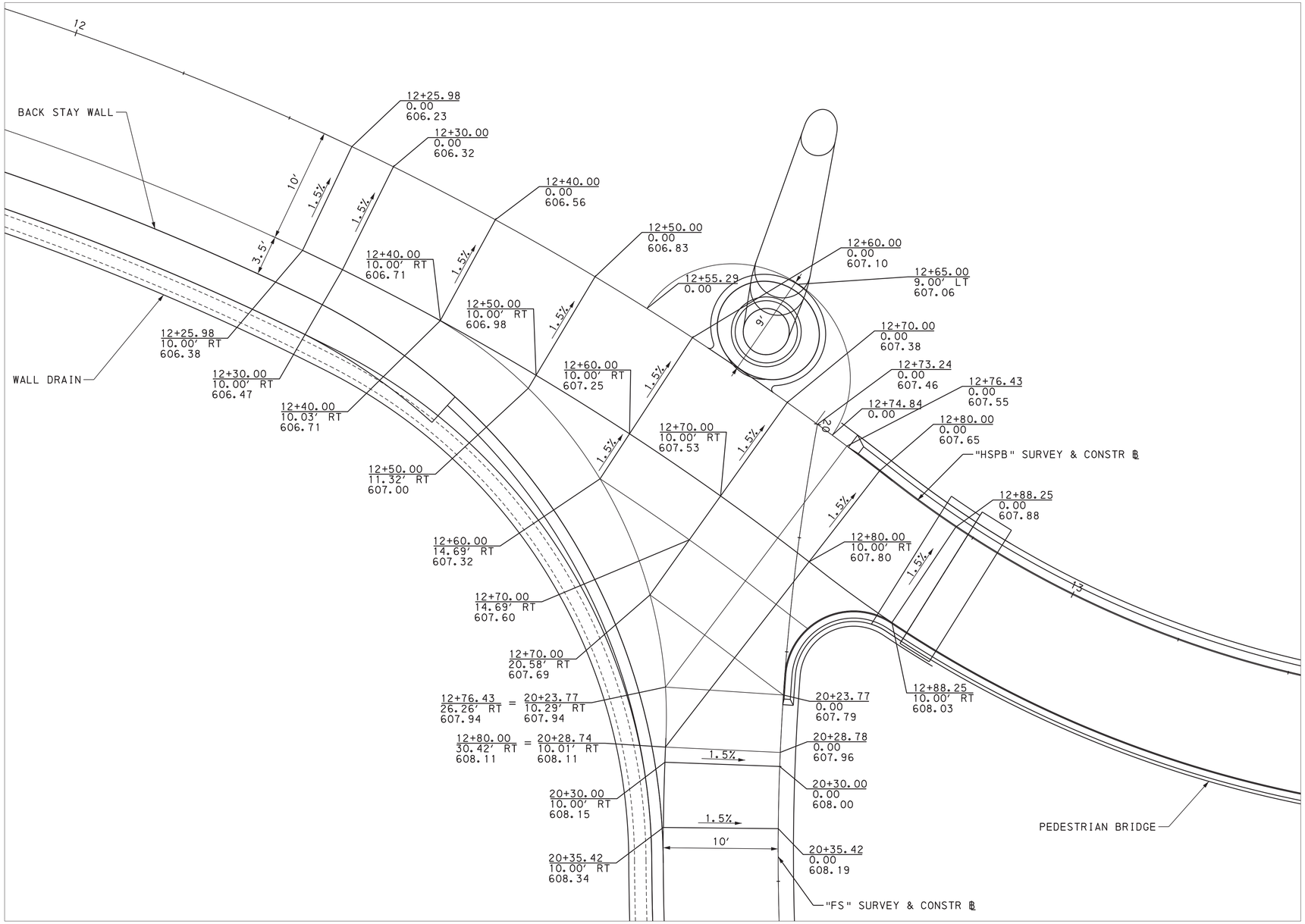
M:_2019\095\exhibits\structure\19095_srb_SSB.dgn
7/29/2022

PLT: RJS | CKD: GWR | QA/QC: MAS

PLOTTED: 8/22/2022 7:18:58 PM
FILENAME: SL43000010F0137.dgn
OPERATOR: tyllpw11cs01$

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	1 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



INDEX OF DRAWINGS

NO.	DESCRIPTION
1	CONSTRUCTION DETAILS
2	CONSTRUCTION DETAILS
3	CONSTRUCTION DETAILS
4	GEOMETRIC DATA
5	GRADING AND DRAINAGE PLAN
6	GRADING AND DRAINAGE PLAN
7	CONSTRUCTION PLAN
8	CONSTRUCTION PLAN
9	PROFILES
10	PROFILES
11	TABULATION OF QUANTITIES
12	TYPICAL SECTIONS
13	TYPICAL SECTIONS
14	TYPICAL SECTIONS
15	TYPICAL SECTIONS
16	TYPICAL SECTIONS

NOTE:

FOR STRUCTURAL INDEX OF DRAWINGS, SEE "GENERAL NOTES 3" SHEET.

SCALE IN FEET
0 5 10

CONSTRUCTION DETAILS

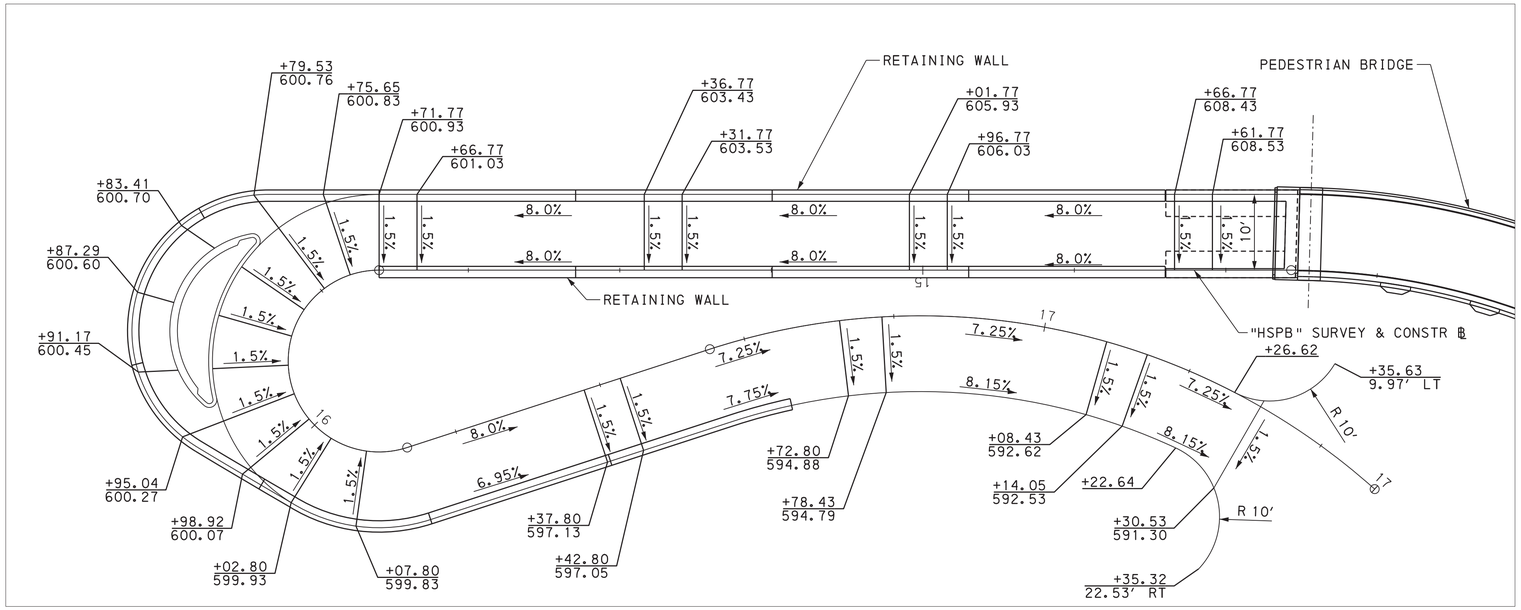
SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642
8/22/2022

PLOTTED: 8/22/2022 7:18:40 PM

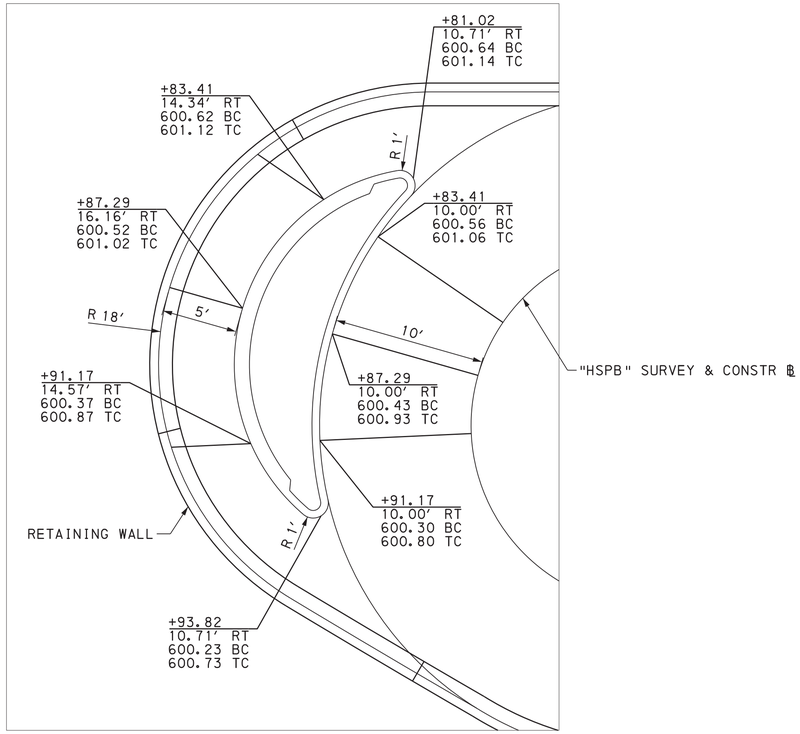
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	2 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE IN FEET

0 10 20



SCALE IN FEET

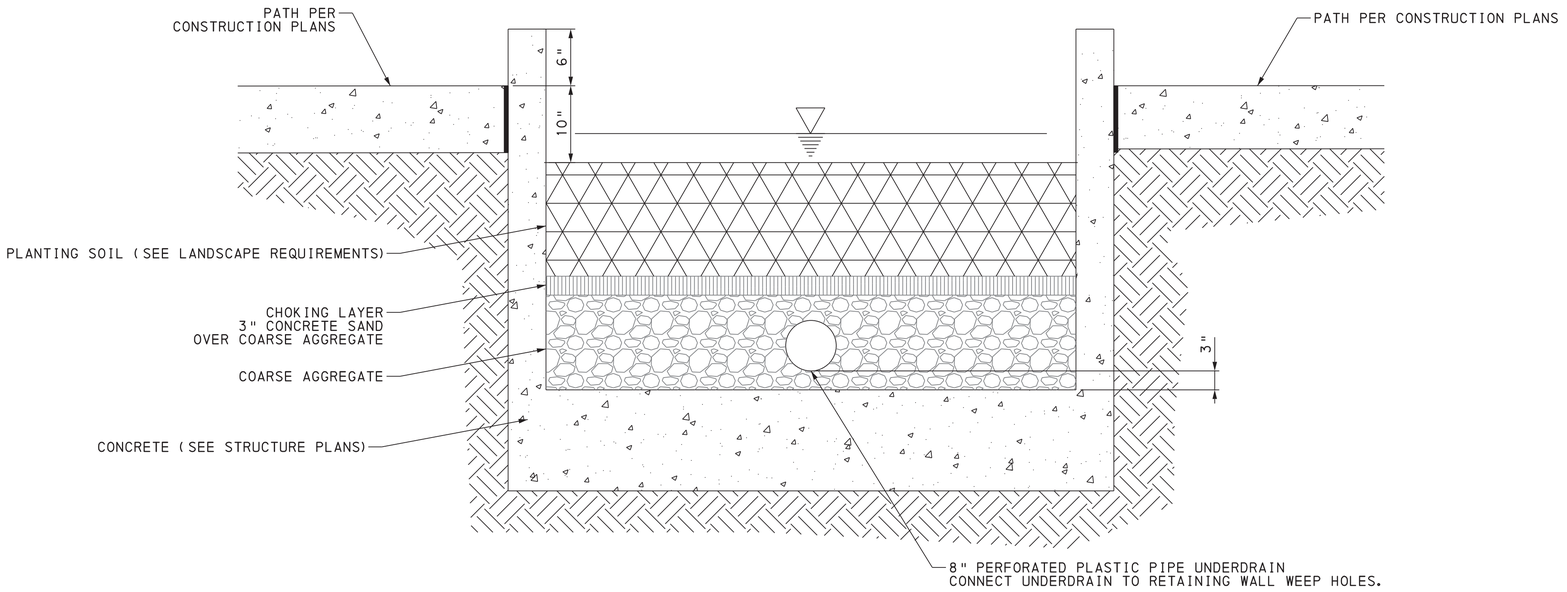
0 5 10

CONSTRUCTION DETAILS

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

OPERATOR: tyl1pw111cs01$ FILENAME: SL43000020F0137.dgn



PLANTER BOX DRAINAGE AND FILL DETAILS: SECTION VIEW

NOT TO SCALE

NOTE: SEE "NORTH WALL OVERLOOK PLANTER DETAILS 1" FOR BOX DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DANIEL J FITZWILLIAM
PE093642

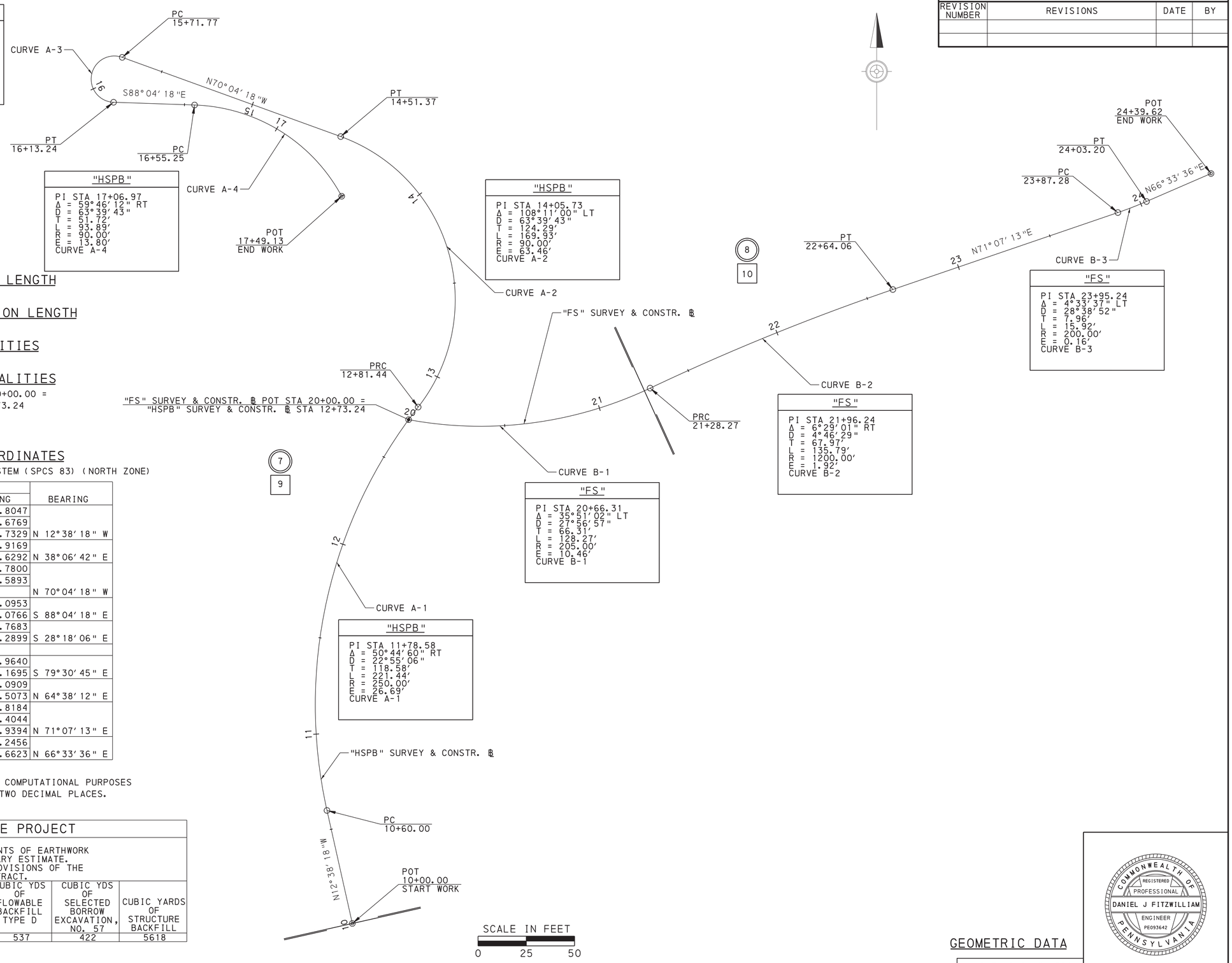
CONSTRUCTION DETAILS

SURVEY BOOK #20550

PLOTTED: 8/22/2022 7:18:51 PM
FILENAME: SL43000030F0137.dgn
OPERATOR: tyllpwllicsO1$

REVISION NUMBER	REVISIONS	DATE	BY

PLOTTED: 8/22/2022 7:17:46 PM



TABULATION OF OVERALL LENGTH

NONE

TABULATION OF CONSTRUCTION LENGTH

NONE

TABULATION OF EQUALITIES

NONE

LIST OF ALIGNMENT EQUALITIES

FS SURVEY & CONSTR ℄ POT STA 20+00.00 =
HSPB SURVEY & CONSTR ℄ STA 12+73.24

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83) (NORTH ZONE)

RTE.	STATION	POINT	COORDINATES NORTHING	COORDINATES EASTING	BEARING
"HSPB" SURVEY & CONSTR ℄	10+00.00	POT	725848.6884	1335353.8047	
	10+60.00	PC	725907.2346	1335340.6769	
	11+78.58	PI	726022.9366	1335314.7329	N 12°38'18" W
	12+81.44	PRC	726116.2327	1335387.9169	
	14+05.73	PI	726214.0268	1335464.6292	N 38°06'42" E
	14+51.37	PT	726256.3910	1335347.7800	
	15+71.77	PC	726297.4288	1335234.5893	
	-	PI	-	-	N 70°04'18" W
	16+13.24	PT	726274.1542	1335230.0953	
	16+55.25	PC	726272.7408	1335272.0766	S 88°04'18" E
	17+06.97	PI	726271.0004	1335323.7683	
	17+49.13	PT	726225.4620	1335348.2899	S 28°18'06" E
"FS" SURVEY & CONSTR ℄					
	20+00.00	POT/PC	726109.7009	1335382.9640	
	20+66.31	PI	726097.6306	1335448.1695	S 79°30'45" E
	21+28.27	PRC	726126.0363	1335508.0909	
	21+96.24	PI	726155.1508	1335569.5073	N 64°38'12" E
	22+64.06	PT	726177.1441	1335633.8184	
	23+87.28	PC	726217.0144	1335750.4044	
	23+95.24	PI	726219.5912	1335757.9394	N 71°07'13" E
	24+03.19	PT	726222.7590	1335765.2456	
	24+39.62	POT	726237.2474	1335798.6623	N 66°33'36" E

NOTE: FOUR PLACE COORDINATES ARE INTENDED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY PRECISION BEYOND TWO DECIMAL PLACES.

EARTHWORK SUMMARY ENTIRE PROJECT

THE INFORMATION ON ESTIMATED AMOUNTS OF EARTHWORK HAS BEEN USED IN THE PRELIMINARY ESTIMATE. DO NOT USE AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACT.

CUBIC YARDS OF EXCAVATION						CUBIC YDS OF COMPLETED EMBANKMENT *	CUBIC YDS OF FLOWABLE BACKFILL TYPE D	CUBIC YDS OF SELECTED BORROW EXCAVATION, NO. 57	CUBIC YARDS OF STRUCTURE BACKFILL
CLASS 1	CLASS 1A	CLASS 1B	CLASS 2	CLASS 3	CLASS 4				
1900				1734		5262	537	422	5618

* INCLUDES ALL BORROW ITEMS

GEOMETRIC DATA

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

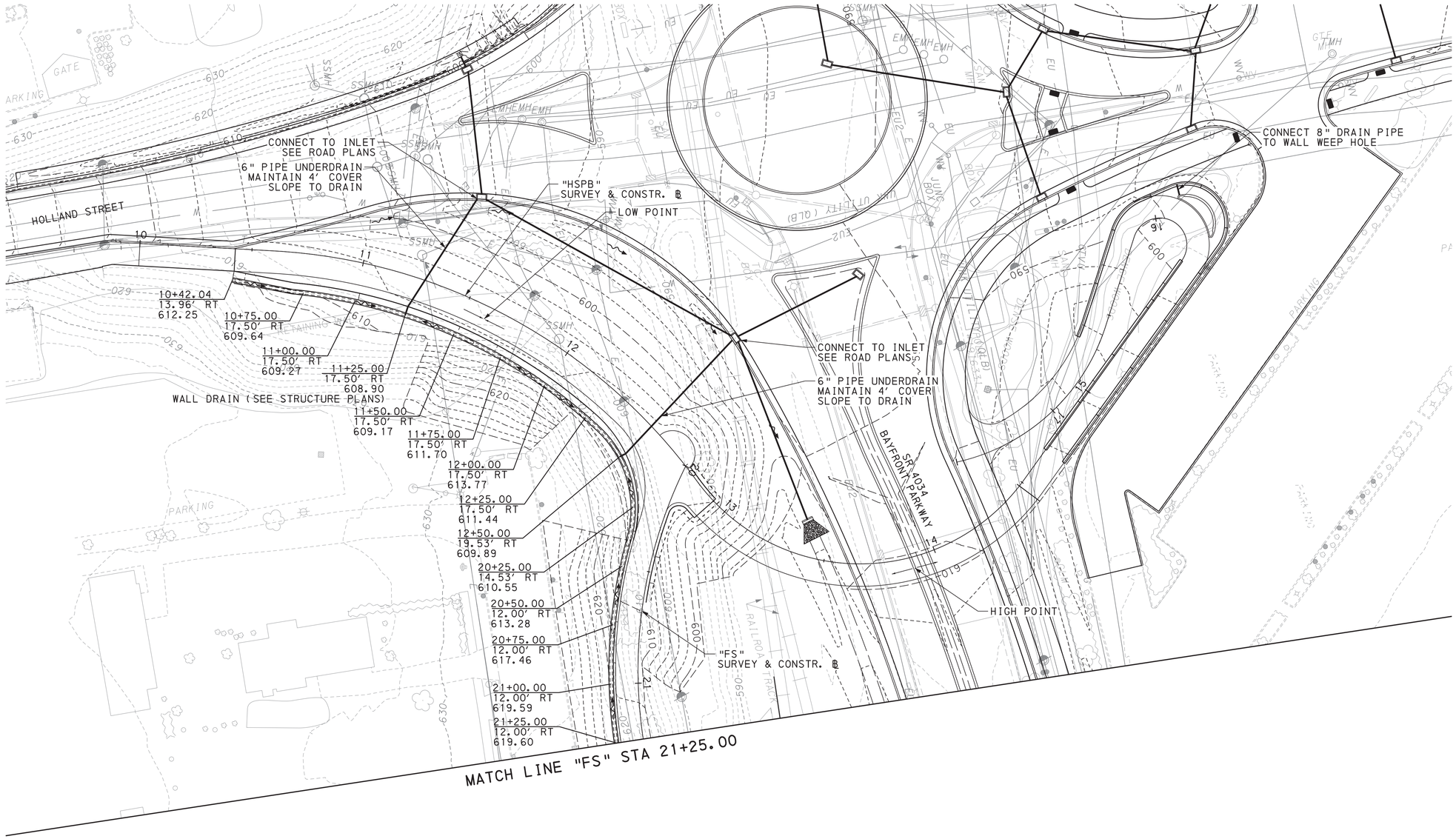
OPERATOR: tylipwllics01$ FILENAME: SL4300004OF0137.dgn

PLOTTED: 8/23/2022 3:41:01 AM
FILENAME: SL43000050F0137.dgn
OPERATOR: tylpwllcs01$

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	5 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND
INDICATES DRAINAGE DITCH FLOW LINE



SCALE IN FEET
0 25 50

SEE SHEET 6

GRADING AND DRAINAGE PLAN

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

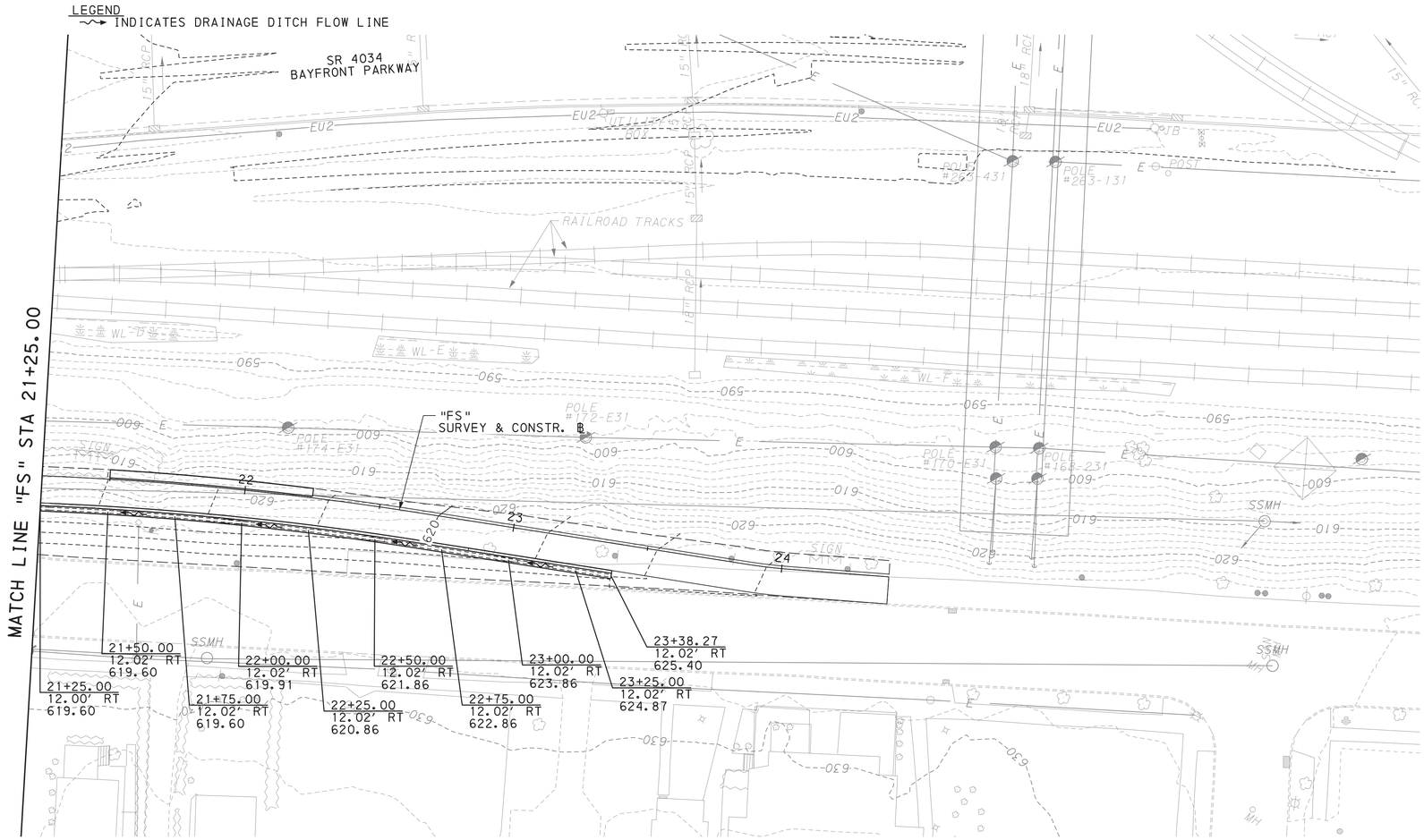
PLOTTED: 8/23/2022 3:41:02 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	6 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 5

LEGEND
INDICATES DRAINAGE DITCH FLOW LINE



SCALE IN FEET
0 25 50

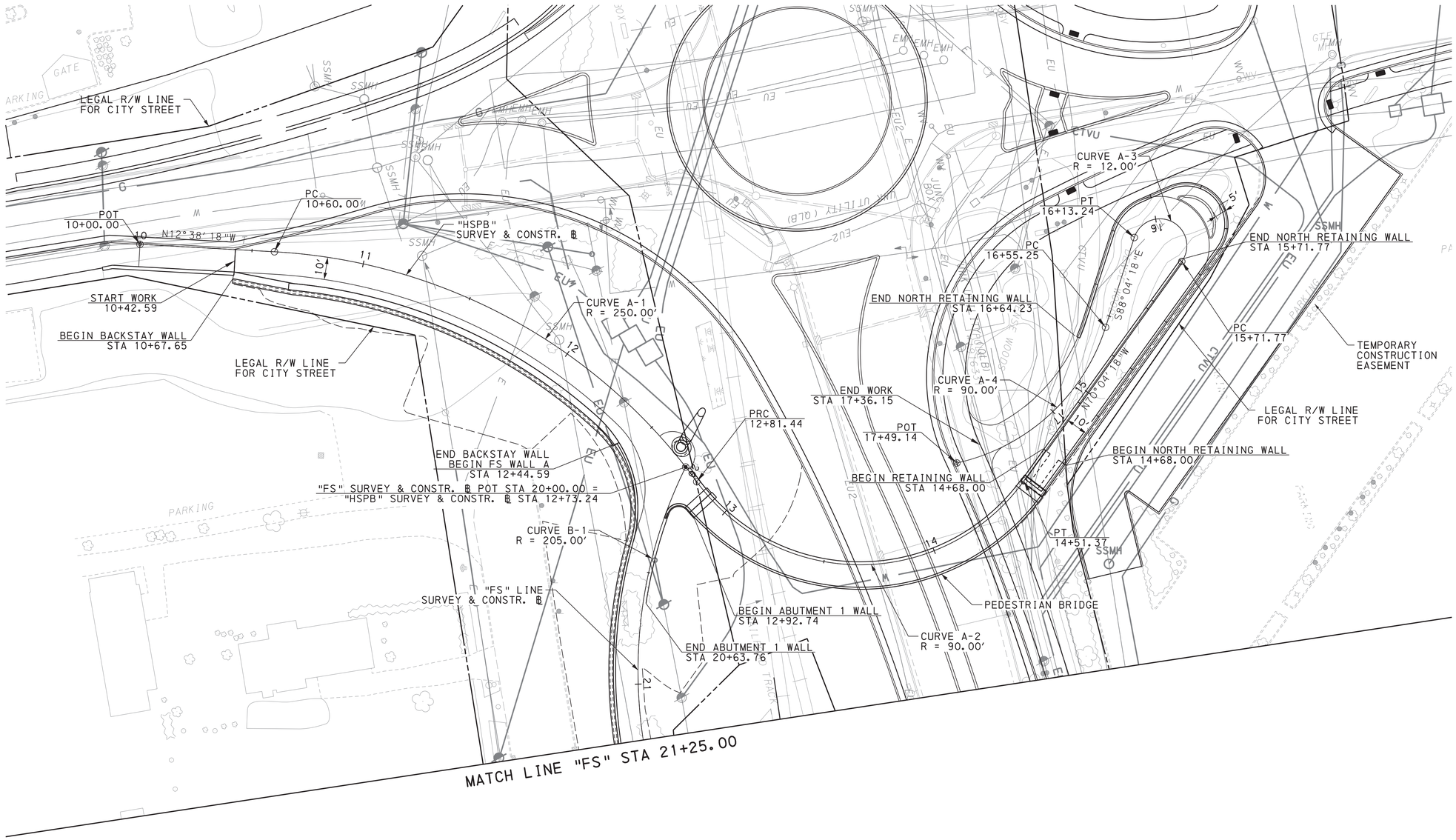
GRADING AND DRAINAGE PLAN

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DANIEL J FITZWILLIAM
PE093642

OPERATOR: tyllpwlllcs01$ FILENAME: SL4300006OF0137.dgn

NOTE: SEE STRUCTURAL DRAWINGS FOR PAVEMENT ARCHITECTURAL TREATMENTS



SCALE IN FEET
0 25 50

SEE SHEET 8

CONSTRUCTION PLAN

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

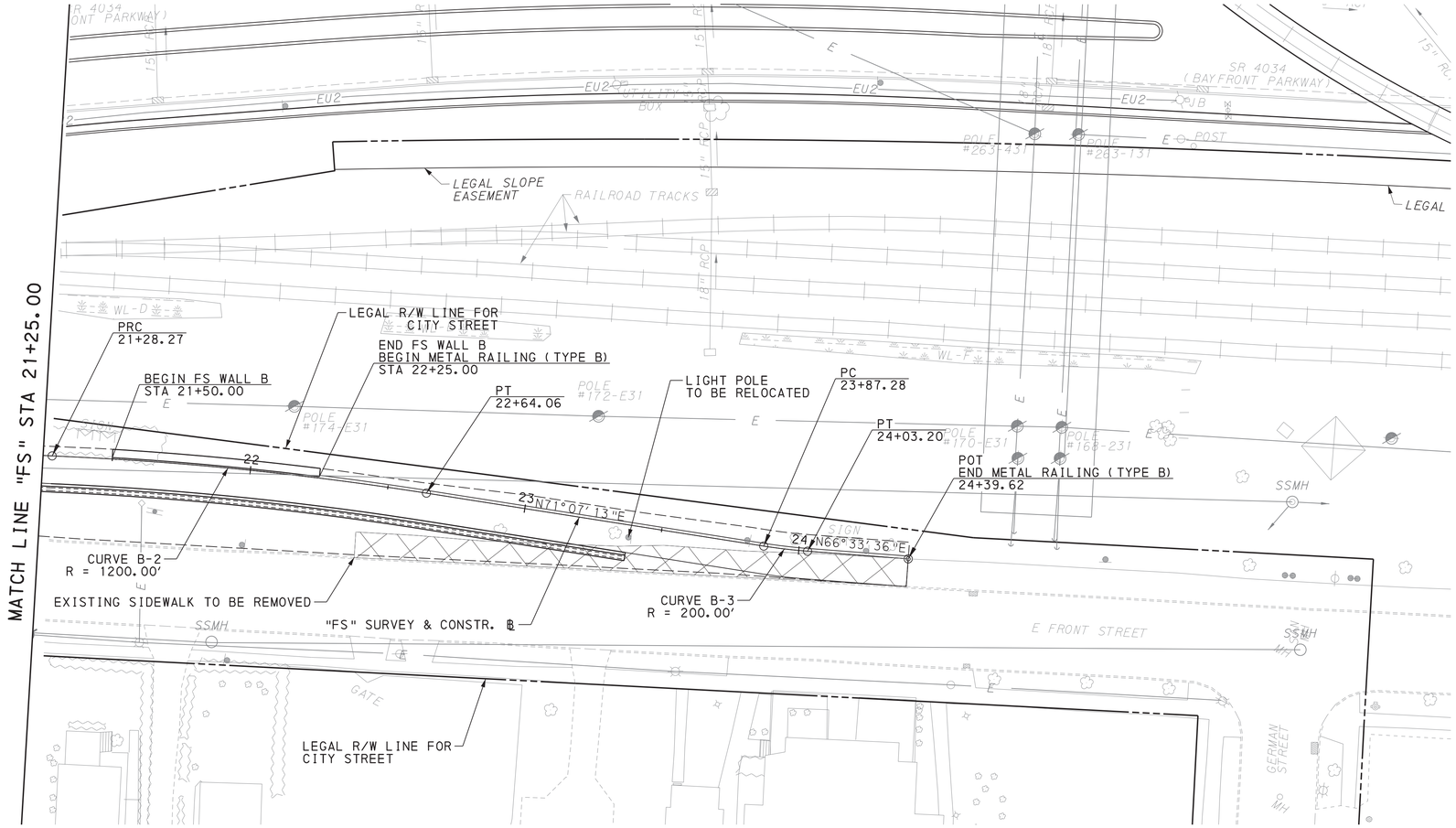
PLOTTED: 8/22/2022 7:18:50 PM
FILENAME: SL43000070F0137.dgn
OPERATOR: tyl1pw111csO1$

PLOTTED: 8/22/2022 7:18:41 PM

NOTE: SEE STRUCTURAL DRAWINGS FOR PAVEMENT ARCHITECTURAL TREATMENTS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	8 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



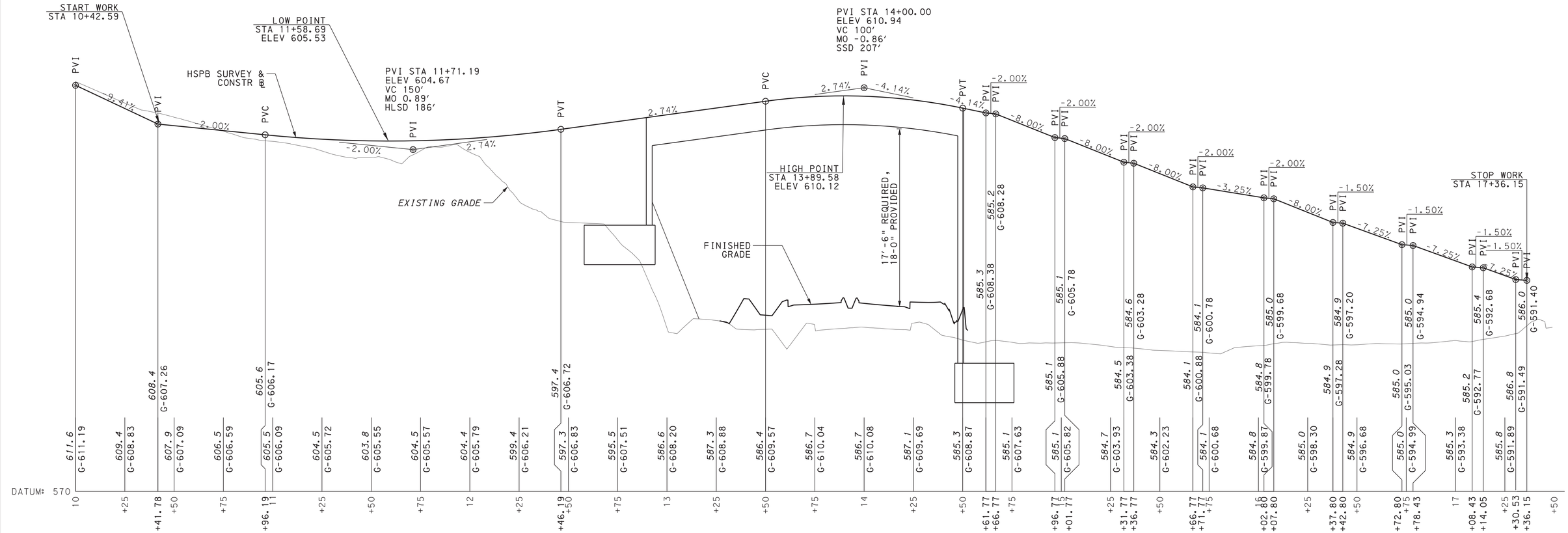
SCALE IN FEET
0 25 50

CONSTRUCTION PLAN

SURVEY BOOK #20550

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

OPERATOR: tyl!pw11!cs01$ FILENAME: SL43000080F0137.dgn



PROFILE HSPB
(PEDESTRIAN BRIDGE)

SCALE IN FEET

HORIZONTAL = 0 25 50

VERTICAL = 0 5 10

REFERENCE DRAWINGS	SHEET
PLAN - PEDESTRIAN PATH	7

PROFILES

SURVEY BOOK #20550

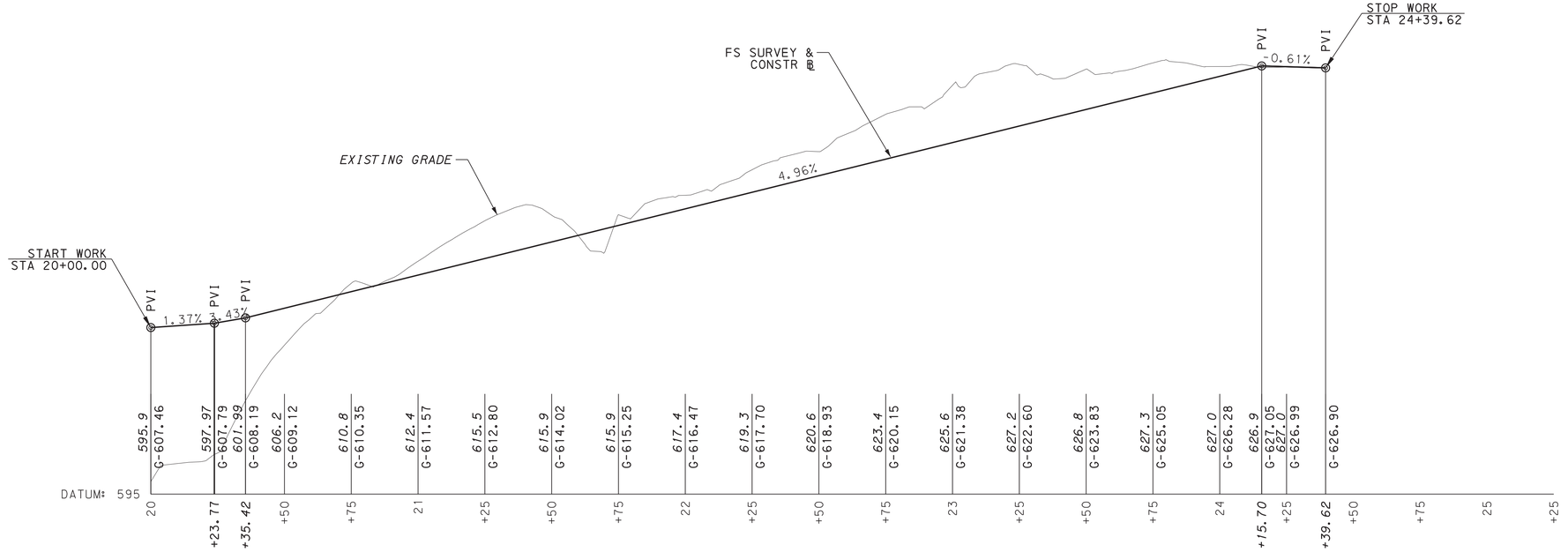
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

PLOTTED: 8/22/2022 7:18:21 PM
FILENAME: SL4300090F0137.dgn
OPERATOR: tyllpwlllcs01$

PLOTTED: 8/22/2022 7:18:35 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	10 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



PROFILE FS
(PEDESTRIAN PATH)

SCALE IN FEET

HORIZONTAL = 0 25 50

VERTICAL = 0 5 10

REFERENCE DRAWINGS	SHEET
PLAN - PEDESTRIAN PATH	7-8

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

PROFILES

SURVEY BOOK #20550

OPERATOR: rylipw11lcs01$ FILENAME: SL43000100F0137.dgn

TABULATION OF QUANTITIES

REVISION NUMBER	REVISIONS	DATE	BY

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	11 OF 137
CITY OF ERIE				

NO.	ITEM NO. UNIT	REMARKS	SIDE	STATIONS	METAL RAILING (TYPE B) 1022 0001 LF	CEMENT CONCRETE SIDEWALKS 0676 0001 SY	CRUSHED AGGREGATE BASE COURSE 0703 0022 CY	CLASS 1 EXCAVATION 0203 0001 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	6" PIPE UNDERDRAIN TYPE I BACKFILL 0610 0002 LF	RAILING (TYPE A) 9000 0401 LF	RAILING (TYPE B) 9000 0402 LF
		HOLLAND ST AND FRONT STREET PEDESTRIAN PATHS		HSPB 10+42.59 TO 17+36.15 FS 20+00.00 TO 24+39.62	215	1193	199	1918	5262	130	55	55
		TOTALS			215	1193	199	1918	5262	130	55	55

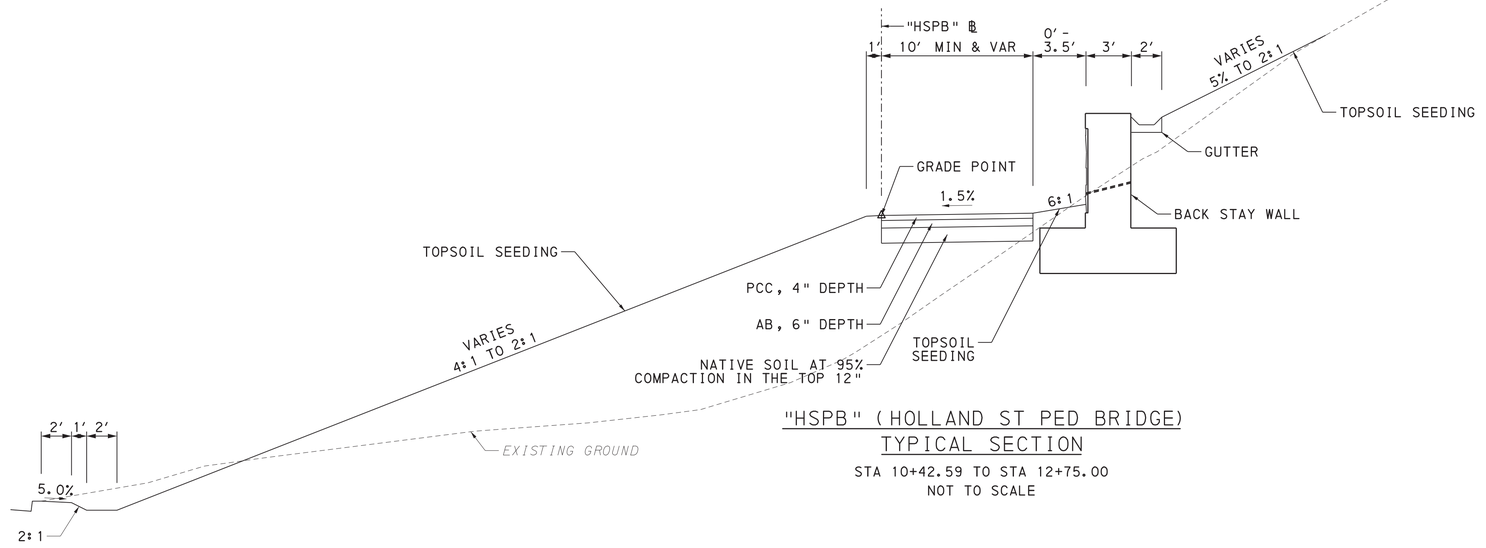
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

PLOTTED: 8/22/2022 7:19:14 PM
FILENAME: SL43000110F0137.dgn
OPERATOR: tyl1pwl1cs01$

PLOTTED: 8/22/2022 7:19:01 PM

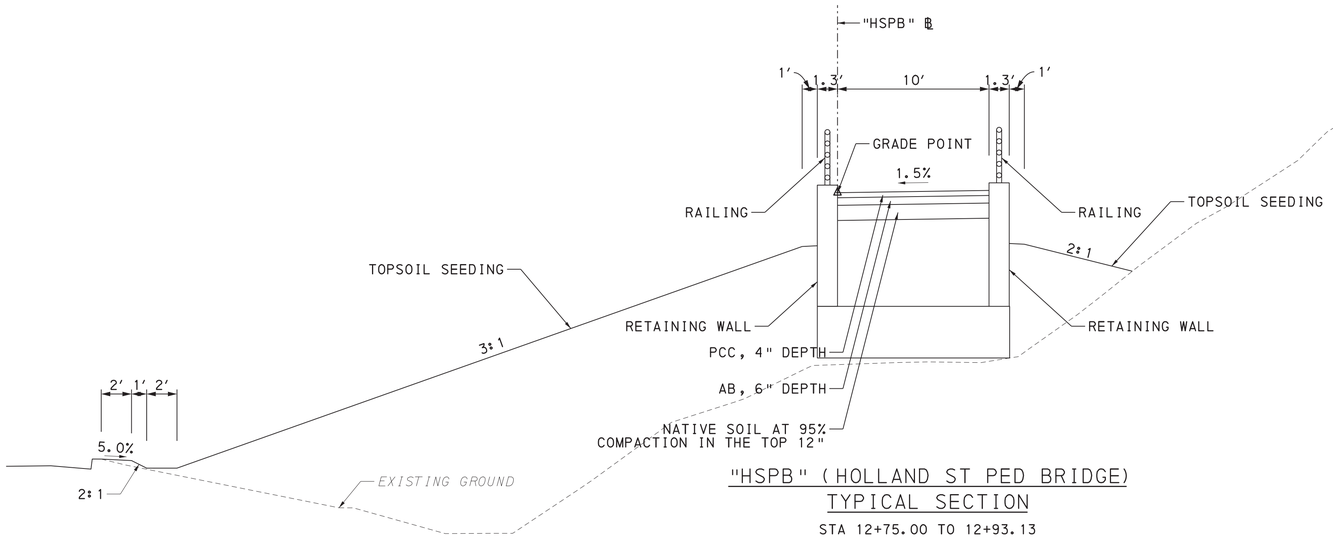
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	12 OF 137
	CITY OF ERIE			

REVISION NUMBER	REVISIONS	DATE	BY



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 10+42.59 TO STA 12+75.00
NOT TO SCALE



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 12+75.00 TO 12+93.13
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

TYPICAL SECTIONS

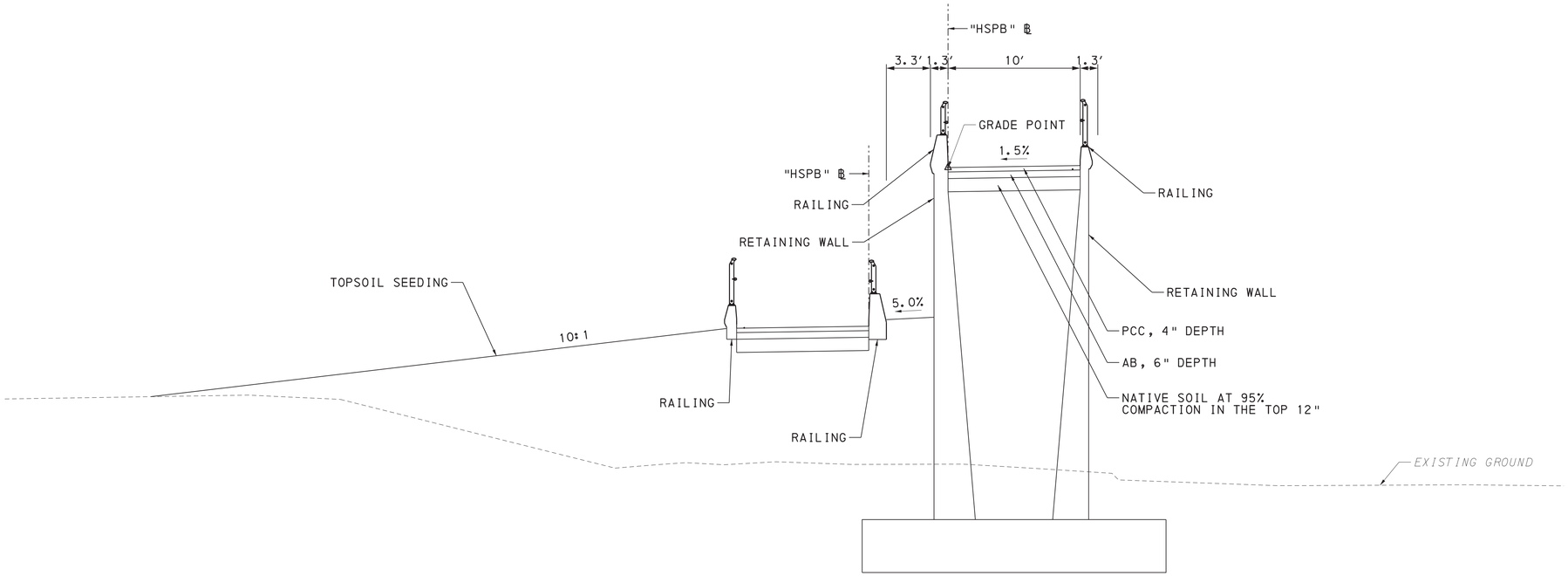
SURVEY BOOK #20550

OPERATOR: tyl1pw11cs01$ FILENAME: SL43000120F0137.dgn

PLOTTED: 8/22/2022 7:18:05 PM

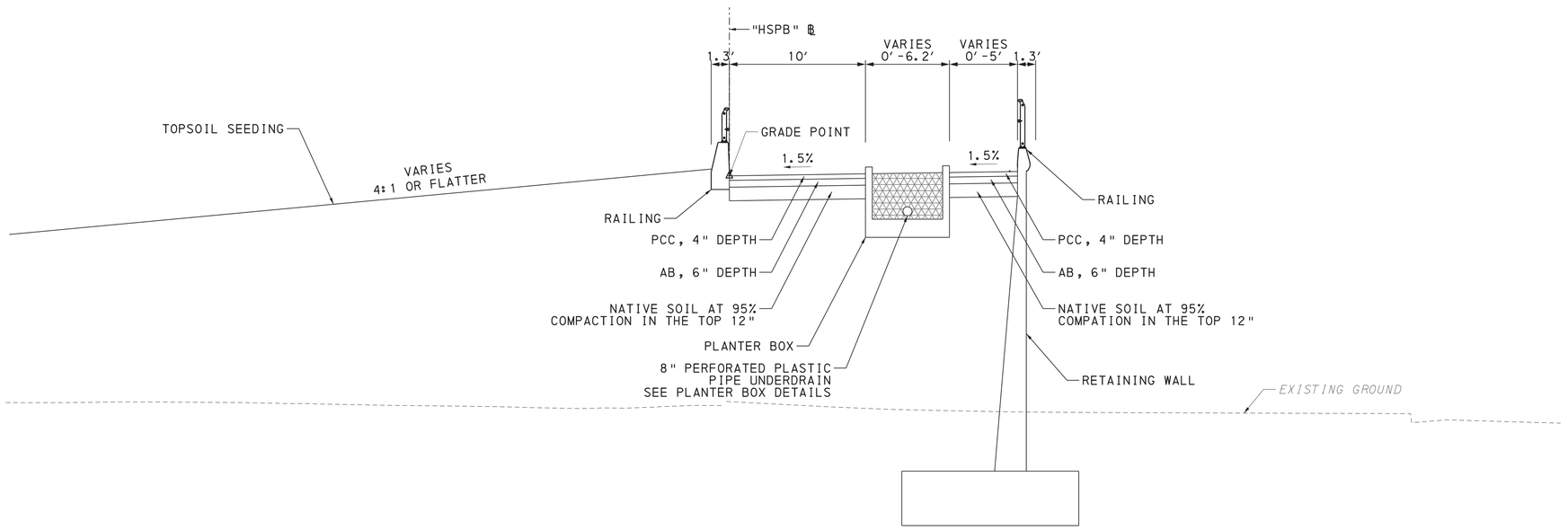
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	13 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 14+47.97 TO STA 15+71.77
NOT TO SCALE



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 15+71.77 TO STA 16+02.80
NOT TO SCALE

TYPICAL SECTIONS

SURVEY BOOK #20550

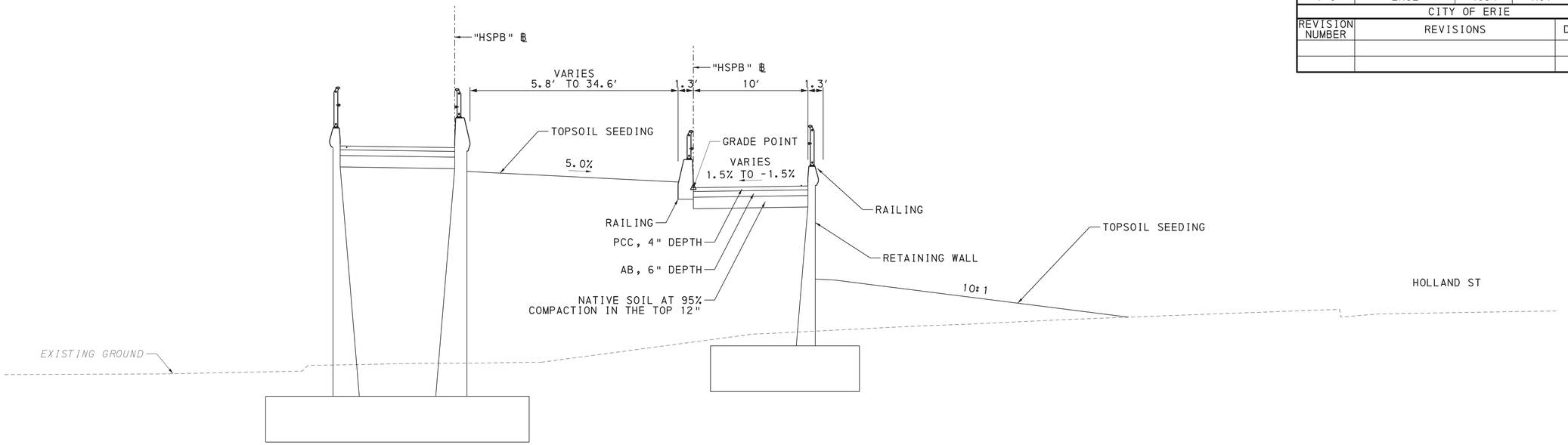
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

OPERATOR: tyl1pw11cs01$ FILENAME: SL43000130F0137.dgn

PLOTTED: 8/22/2022 7:18:12 PM
FILENAME: SL43000140F0137.dgn
OPERATOR: tyllpwlllcs01$

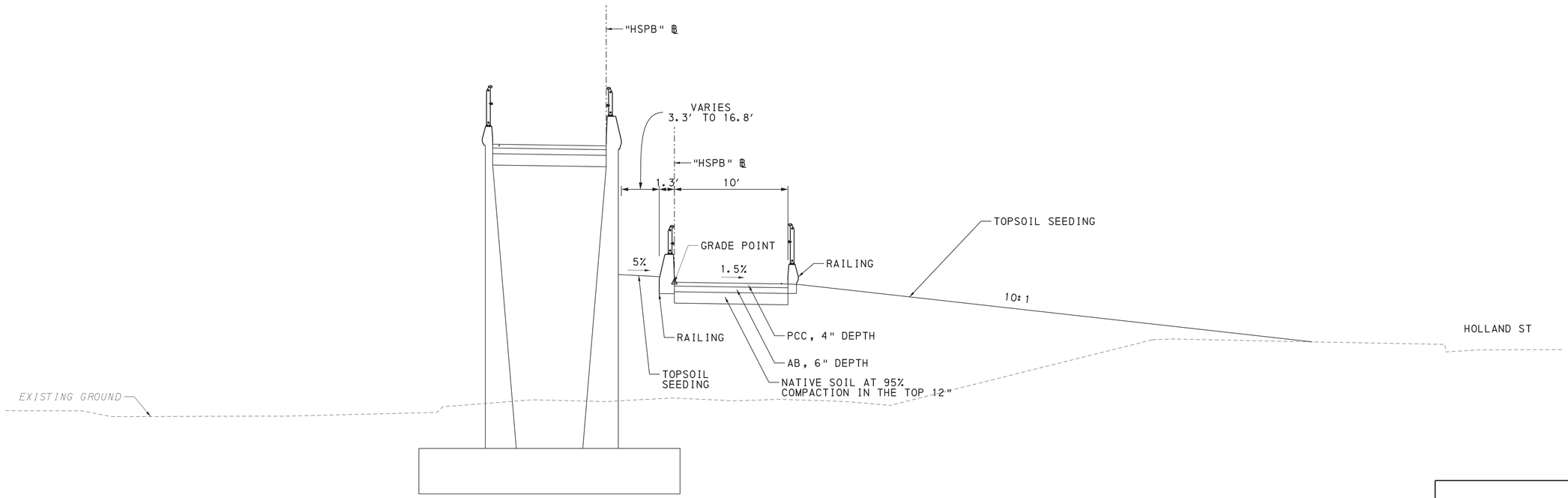
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	14 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 16+02.80 TO STA 16+63.25
NOT TO SCALE



"HSPB" (HOLLAND ST PED BRIDGE)
TYPICAL SECTION

STA 16+63.25 TO STA 17+36.15
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

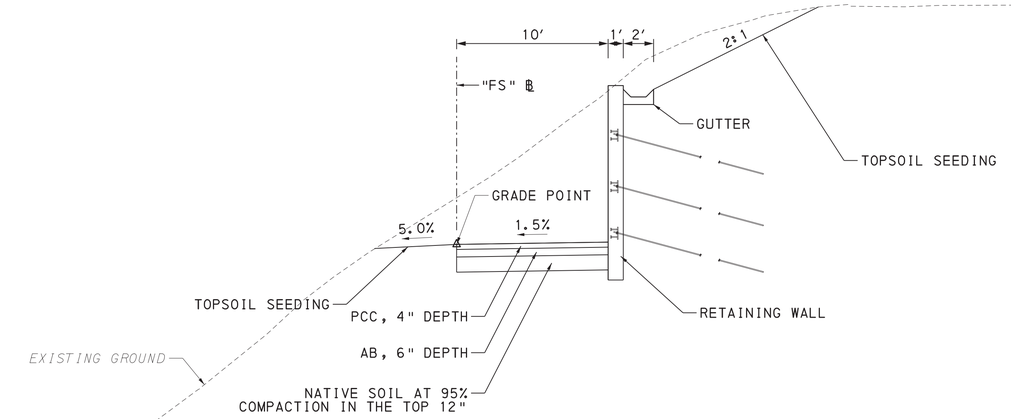
TYPICAL SECTIONS

SURVEY BOOK #20550

PLOTTED: 8/22/2022 7:19:05 PM
FILENAME: SL43000150F0137.dgn
OPERATOR: tyllpw11cs01$

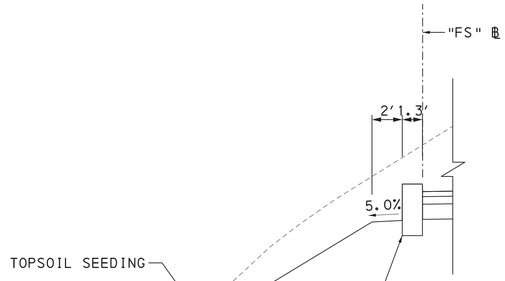
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	15 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



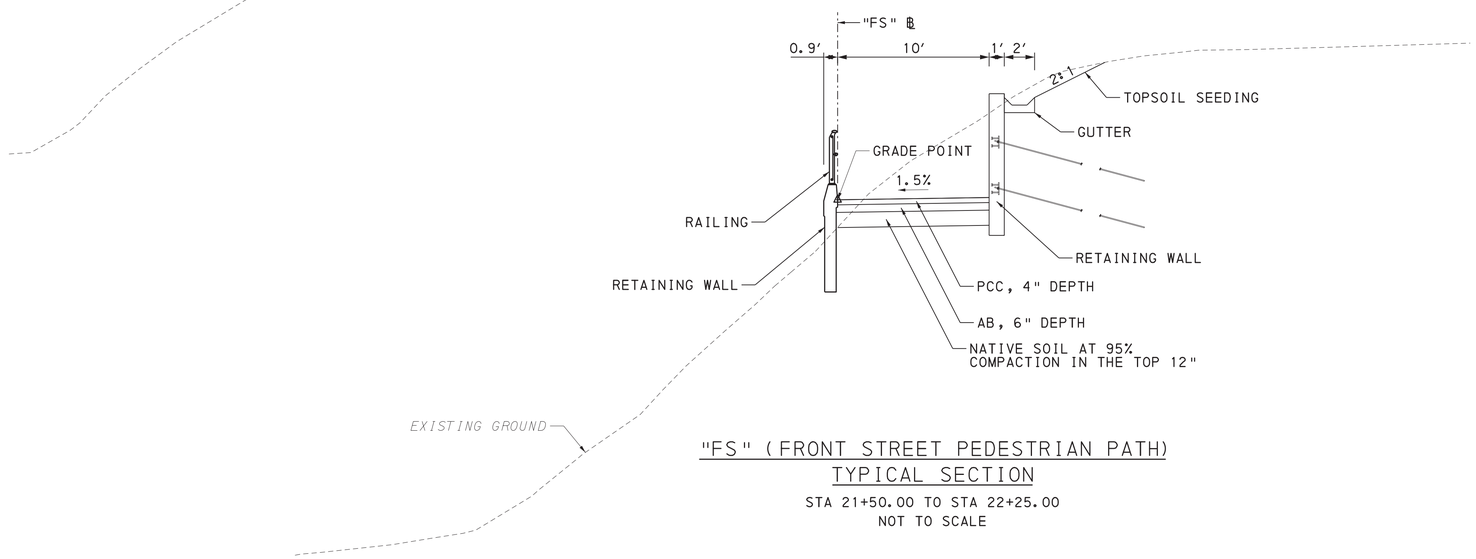
"FS" (FRONT STREET PEDESTRIAN PATH) TYPICAL SECTION

STA 20+00.00 TO STA 21+50.00
NOT TO SCALE



PARTIAL SECTION - RETAINING WALL

STA 20+00.00 TO STA 20+63.76
NOT TO SCALE



"FS" (FRONT STREET PEDESTRIAN PATH) TYPICAL SECTION

STA 21+50.00 TO STA 22+25.00
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DANIEL J FITZWILLIAM
PE093642

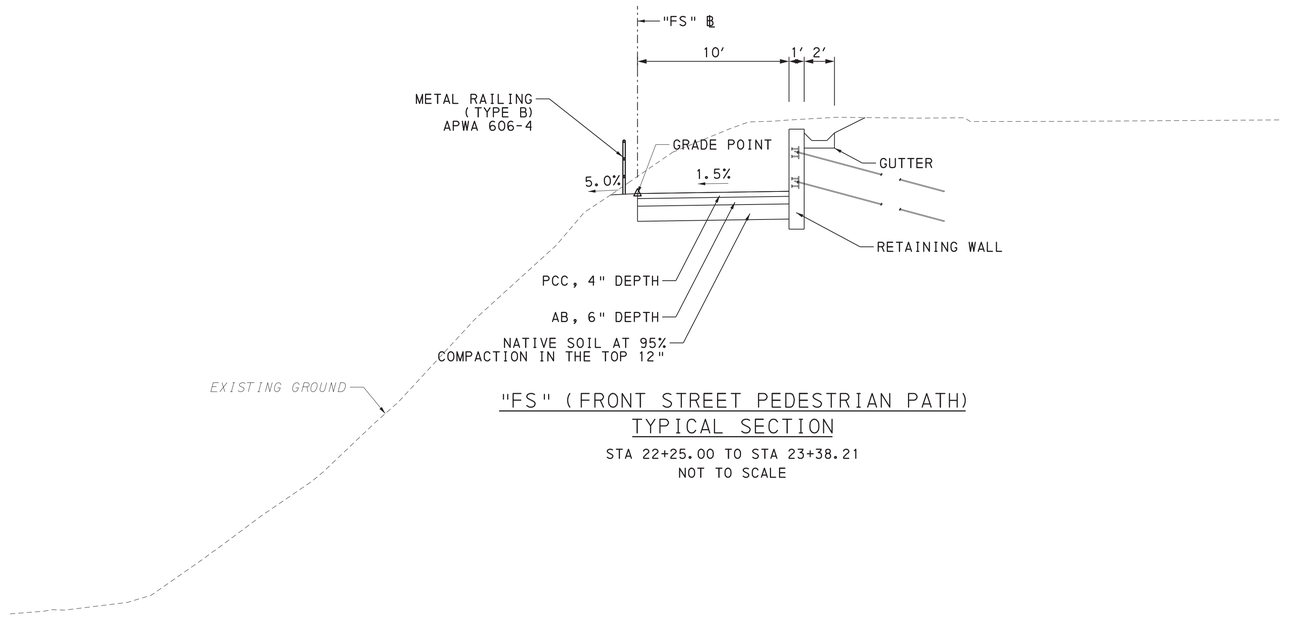
TYPICAL SECTIONS

SURVEY BOOK #20550

PLOTTED: 8/22/2022 7:18:58 PM

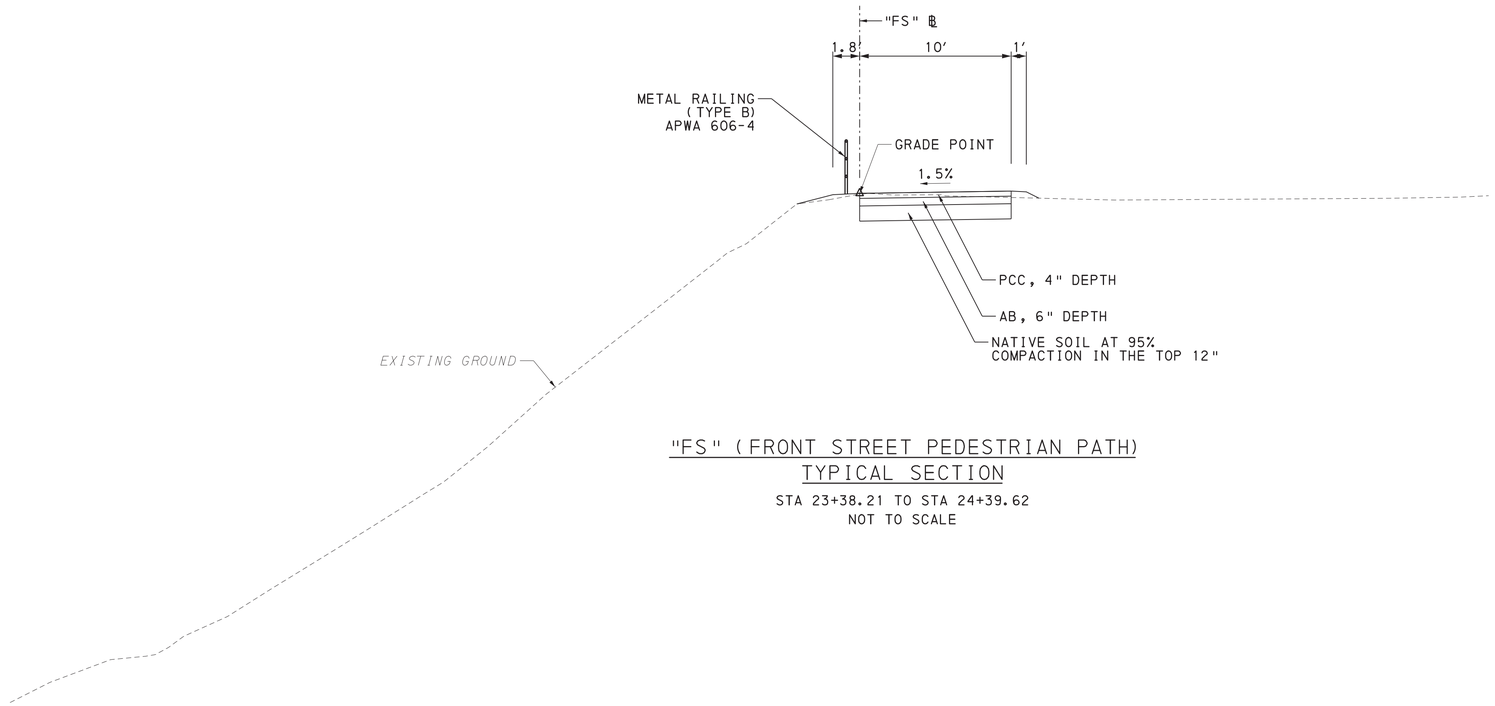
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	16 OF 137
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



"FS" (FRONT STREET PEDESTRIAN PATH)
TYPICAL SECTION

STA 22+25.00 TO STA 23+38.21
NOT TO SCALE



"FS" (FRONT STREET PEDESTRIAN PATH)
TYPICAL SECTION

STA 23+38.21 TO STA 24+39.62
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DANIEL J FITZWILLIAM
PE093642

TYPICAL SECTIONS

SURVEY BOOK #20550

OPERATOR: tyl1pw111cs01$ FILENAME: SL430001601F0137.dgn

PLOTTED: 8/22/2022 7:12:31 PM

PLAN

20 0 20 FEET

LEGEND:

- AS-DRILLED BORING
- WORK POINT
- DIRECTION OF TRAFFIC
- 600 PROPOSED CONTOURS
- TBD TO BE DETERMINED
- BFE BOTTOM OF FOOTING ELEVATION

BORING LOCATIONS

NO.	STATION	OFFSET
PB-1	12+67	1.6' LT
PB-2	14+70	4.4' LT
PB-3	15+55	5.3' LT
PB-4	13+08	109.4' RT
PB-5	13+35	203.8' RT
PB-6	13+23	71.0' RT
PB-7	12+74	10.9' RT
PB-8	11+24	19.0' RT
RWF-2	10+48	16.8' RT

NOTES:

1. FOR GENERAL NOTES, SEE "GENERAL NOTES 1" THROUGH "GENERAL NOTES 3" SHEETS.
2. FOR INDEX OF DRAWINGS AND LIST OF SUPPLEMENTAL DRAWINGS, SEE "GENERAL NOTES 3" SHEET.
3. FOR BRIDGE TYPICAL SECTION, SEE "TYPICAL SECTION" SHEET.
4. FOR DRILLED SHAFT AND ROCK SOCKET ELEVATIONS, SEE "FOUNDATION DETAILS 2" AND "FOUNDATION DETAILS 5" SHEETS.
5. AVIATION LIGHT NOT REQUIRED ON TOP OF PYLON.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

GENERAL PLAN AND ELEVATION 1

RECOMMENDED _____

SHEET 17 OF 137

L-430

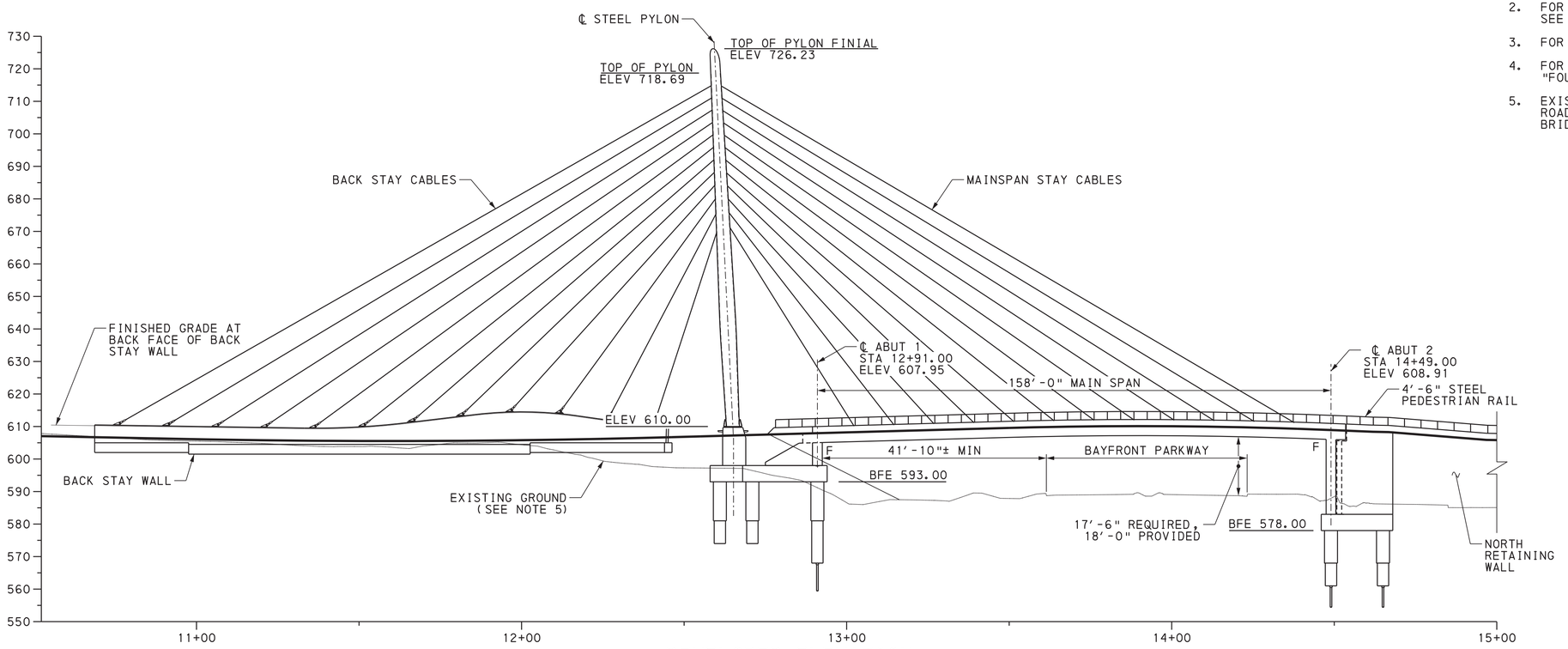
DES: JL | DWN: RJS | CKD: GB

OPERATOR: tylipw11cs01$ FILENAME: SL43000170F0137.dgn

PLOTTED: 8/23/2022 3:40:36 AM

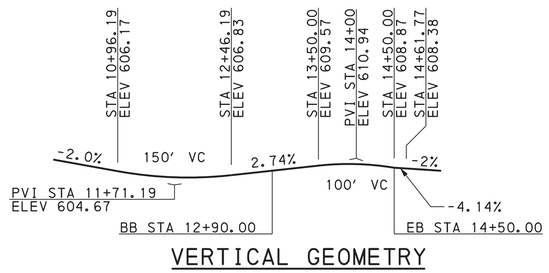
NOTES:

1. FOR GENERAL NOTES, SEE "GENERAL NOTES 1" THROUGH "GENERAL NOTES 3" SHEETS.
2. FOR INDEX OF DRAWINGS AND LIST OF SUPPLEMENTAL DRAWINGS, SEE "GENERAL NOTES 3" SHEET.
3. FOR TYPICAL SECTION, SEE "TYPICAL SECTION" SHEET.
4. FOR DRILLED SHAFT AND ROCK SOCKET ELEVATIONS, SEE "FOUNDATION DETAILS 2" AND "FOUNDATION DETAILS 4" SHEETS.
5. EXISTING GROUND SHOWN BASED ON BAYFRONT PARKWAY ROADWORK COMPLETION PRIOR TO BEGINNING PEDESTRIAN BRIDGE CONSTRUCTION.



DEVELOPED ELEVATION

20 0 20 FEET



VERTICAL GEOMETRY

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

GENERAL PLAN AND ELEVATION 2

RECOMMENDED _____

SHEET 18 OF 137

L-430

DES: JL | DWN: RJS | CKD: GB

OPERATOR: tylipw11cs01$ FILENAME: SL43000180F0137.dgn

PLOTTED: 8/22/2022 7:13:48 PM

GENERAL NOTES:

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020-CHANGE 2, AASHTO/AWS/D1.5/D1.5M-2008 BRIDGE WELDING CODE (USE AASHTO/AWS/D1.1/D1.1M-2008 FOR WELDING NOT COVERED IN AASHTO/AWS/D1.5/D1.5M-2020, AND THE CONTRACT SPECIAL PROVISIONS.

2. DIMENSIONS AND ELEVATIONS:

2.1. FOR HORIZONTAL AND VERTICAL CONTROL AND DATUM INFORMATION, SEE THE CONSTRUCTION PLANS.

2.2. ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL, EXCEPT AS NOTED.

2.3. STATIONS, ELEVATIONS AND GEOMETRY DATA ARE IN FEET.

2.4. SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL MEAN TEMPERATURE OF 68°F.

2.5. VERIFY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURES IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION. DETAILS AND DIMENSIONS SHOWN ON THESE DRAWINGS TO DESCRIBE EXISTING STRUCTURES, UTILITIES, MANHOLES, ETC.) MAY NOT REFLECT PRESENT CONDITIONS.

2.6. ALL WORKPOINTS SHOWN OUTSIDE OF THE STAKE-OUT PLAN ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE VERIFIED WITH THE STAKE-OUT PLAN PRIOR TO CONSTRUCTION.

3. DESIGN SPECIFICATIONS:

3.1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.

3.2. AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, DECEMBER 2009 WITH 2015 INTERIM REVISIONS.

3.3. AASHTO GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS, SECOND EDITION (2017).

4. DESIGN LOADS:

4.1 PERMANENT LOADS:

REINFORCED CONCRETE DENSITY: 155 PCF.

POST-TENSIONED CONCRETE DENSITY: 155 PCF.

STRUCTURAL STEEL DENSITY: 490 PCF.

2" ARCHITECTURAL OVERLAY ON DECK SLAB: 25 PSF

50 POUNDS PER FOOT ALLOWANCE FOR EACH RAILING.

4.2. LIVE LOADS:

H-5 TRUCK (MAINTENANCE VEHICLE - 10,000 LBS (SINGLE TRUCK) OR PEDESTRIAN - 90 PSF

FATIGUE DUE TO WIND - YEARLY MEAN WIND VELOCITY OF 12.0 MPH. FATIGUE DUE TO LIVE LOADS IS NOT CONSIDERED (PEDESTRIAN BRIDGES).

BRAKING AND VEHICULAR COLLISION FORCE IS NOT CONSIDERED.

4.3 WIND LOADS:

WIND ON THE PERMANENT PORTIONS OF THE MAIN STRUCTURE IN ACCORDANCE WITH PROJECT SPECIFIC WIND STUDY FOR THE FOLLOWING CONDITIONS:

WIND LOADS			
WIND SPEED APPLICABLE FOR	RETURN PERIOD (YEARS)	MEAN SPEED (MPH) AT DECK LEVEL AND AVERAGING TIME	CORRESPONDING 3-SECOND GUST SPEED (MPH) AT 33 FT OPEN TERRAIN
DESIGN OF COMPLETED BRIDGE	STR III - 700	STR III - 75.7 - 1 HOUR SER I - 46 - 1 HOUR SER IV - 56.8 - 1 HOUR	STR III - 115 SER 1 - 70.0 SER IV - 86.3
STABILITY OF COMPLETED BRIDGE	10,000	87.5 - 1 HOUR	133

DRAG COEFFICIENT FOR THE BRIDGE PER PROJECT SPECIFIC WIND STUDY		
BRIDGE COMPONENT	CD (DRAG COEFFICIENT) FOR WIND DIRECTION	
	TRANSVERSE (PERPENDICULAR) TO BRIDGE AXIS	LONGITUDINAL (PARALLEL) TO BRIDGE ACCESS
SUPERSTRUCTURE	0.76	N/A
TOWER	0.45	0.45
STAY CABLES	1.0	1.0

4.4 THERMAL LOADS:

COEFFICIENT OF THERMAL EXPANSION:

CONCRETE: 6.0 X 10-6 PER DEGREES F

STEEL: 6.5 X 10-6 PER DEGREES F

MEAN TEMPERATURE: 68 DEGREES F

TEMPERATURE RISE AND FALL:

CONCRETE:
TEMPERATURE RISE = 32 DEGREES F
TEMPERATURE FALL = 58 DEGREES F

STEEL:
TEMPERATURE RISE = 42 DEGREES F
TEMPERATURE FALL = 78 DEGREES F

ADDITIONAL SERVICE III DESIGN LOAD CASE:

SER III (MOD):
TEMPERATURE RISE = 80 DEGREES F WITH NO LL
TEMPERATURE FALL = 80 DEGREES F WITH NO LL

4.5. CREEP AND SHRINKAGE LOADS:

STRAINS ARE CALCULATED IN ACCORDANCE WITH CEB/FIP MODEL CODE FOR CONCRETE STRUCTURES, 1990 ASSUMING A RELATIVE HUMIDITY OF 70%. THE AGE OF CONCRETE AT THE BEGINNING OF SHRINKAGE IS 3 DAYS UNLESS NOTED OTHERWISE.

4.6. SEISMIC LOADS:

SEISMIC DESIGN PARAMETERS:

LATITUDE = 48°08'10", LONGITUDE = -80°05'06"

SEISMIC SITE CLASSIFICATION = D

SEISMIC ZONE = 1

PEAK GROUND ACCELERATION (PGA) = 0.045 G

ACCELERATION COEFFICIENT:

AS = 0.072 G

SDS = 0.144 G

SD1 = 0.072 G

Ts = 0.5 S

4.7. STAY CABLE EXCHANGE OR LOSS:

ALLOW FOR REPLACEMENT OF ANY ONE CABLE AT A TIME WITH THE BRIDGE CLOSED TO THE PUBLIC AS FOLLOWS:

1.20 DC + 1.40DW + 1.5(LL*) = 1.0CEF

LL* = 10 PSF CONSTRUCTION LIVE LOAD OR 10,000 LBS H-5 TRUCK (MAINTENANCE VEHICLE)

CEF = CABLE EXCHANGE FORCES

ALLOW FOR LOSS OF ANY ONE CABLE WITHOUT THE OCCURRENCE OF STRUCTURAL INSTABILITY AS FOLLOWS:

1.10DC + 1.35DW + 0.75(LL**) = 1.10CLDF

LL** = 90 PSF PEDESTRIAN OR 10,000 LBS H-5 TRUCK (MAINTENANCE VEHICLE)

CLDF = CABLE LOSS DYNAMIC FORCE RESULTING FROM THE SUDDEN RUPTURE OF A CABLE. FORCE SHALL BE 2.0 TIMES THE STATIC FORCE IN THE CABLE APPLIED AT BOTH THE TOP AND BOTTOM ANCHORAGE LOCATIONS.

4.8. CONSTRUCTION LOADS:

APPLY LOAD FACTOR OF AT LEAST 1.25 FOR ANY APPLICABLE CONSTRUCTION DEAD LOADS AND A LOAD FACTOR OF AT LEAST 1.5 FOR CONSTRUCTION LIVE LOADS (INCLUDING IMPACT) FOR STRENGTH LIMIT STATE.

4.9. LOAD COMBINATIONS SHALL BE IN ACCORDANCE WITH AASHTO LRFD TABLES 3.4.1-1, 3.4.1-2, 3.4.1-3, AND SECTION 3.4.1 OF PENNDOT DM-4.

5. MATERIALS:

5.1 CONCRETE:

5.1.1. USE LISTED CLASS AND 28-DAY COMPRESSIVE STRENGTH UNLESS NOTED OTHERWISE.

CLASS AND 28-DAY COMPRESSIVE STRENGTH OF CEMENT CONCRETE			
LOCATION	CLASS	f'c (KSI)	f'ci (KSI)
CAST-IN-PLACE POST-TENSIONED SUPERSTRUCTURE	AAAP, MODIFIED	6.0	4.5
FOUNDATION 1 PYLON PEDESTAL	A, MODIFIED	4.5	N/A
FOUNDATION 2	A, MODIFIED	4.5	N/A
DRILLED SHAFTS	A, MODIFIED	4.5	N/A
ABUTMENTS	A, MODIFIED	4.5	N/A
BACK STAY WALL	A, MODIFIED	4.5	4.0
NORTH WALL, CORBELS, PLANTER	A, MODIFIED	4.5	N/A
PCC SLAB ON GRADE	A	3.0	N/A

5.1.2. CHAMFER EXPOSED CONCRETE EDGES 3/4" X 3/4" EXCEPT AS NOTED.

5.1.3. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

5.1.4. CONCRETE PLACEMENTS WITH LEAST DIMENSION GREATER THAN 6 FT SHALL BE CONSIDERED MASS CONCRETE.

5.1.5. PROVIDE A MINIMUM OF 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

CONCRETE COVER ON REINFORCEMENT BARS	
LOCATION	COVER (INCH)
CONCRETE CAST AGAINST EARTH	4
CONCRETE EXPOSED TO EARTH	3
DRILLED SHAFT	3
DRILLED SHAFT (ROCK SOCKET)	4

5.1.6 USE CORROSION INHIBITING ADMIXTURE FOR THE DECK SLAB.

5.1.7 USE POLYMER CONCRETE WITH CORROSION INHIBITING ADMIXTURE FOR 2" ARCHITECTURAL CONCRETE OVERLAY.

5.1.8 A HIGHER CLASS OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

GENERAL NOTES 1

RECOMMENDED

DES: JL | DWN: RJS | CKD: GB

FILENAME: SL4300019F0137.dgn
OPERATOR: tyllpwilliams01$

PLOTTED: 8/22/2022 7:13:42 PM

GENERAL NOTES CONTINUED:

5.2. REINFORCING STEEL

5.2.1. PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615/A615M, A996/A996M OR A706/A706M. DO NOT FIELD WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A996/A996M REINFORCEMENT BARS IN BRIDGE ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS ARE INDICATED.

5.2.2. USE ASTM A767 GALVANIZED REINFORCEMENT BARS FOR ENTIRE CAST-IN-PLACE DECK BOX GIRDER, INCLUDING DECK SLAB, WEBS, BOTTOM SLAB, CURBS AND STAY BLOCKS. ALL BARS THAT EXTEND INTO THE INTEGRAL DECK BOX DIAPHRAGMS AT ABUTMENTS 1 AND 2 SHALL BE GALVANIZED. ABUTMENT 1 AND 2 WALL BARS THAT DO NOT EXTEND INTO THE DECK DIAPHRAGM SHALL EITHER BE GALVANIZED OR EPOXY-COATED (NO MIXING OF BLACK BAR WITH GALVANIZED NEAR TOP OF DECK IS PERMITTED). EPOXY-COAT J-BAR REINFORCMENT IN SUBSTRUCTURE UNITS AND EPOXY-COAT OTHER SUBSTRUCTURE REINFORCMENT BARS AS INDICATED.

5.2.3. GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

5.2.4. WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

5.2.5. PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

5.3. PRESTRESSING STEEL STRAND

5.3.1. PROVIDE 0.6 INCH DIAMETER PRESTRESSING STEEL STRAND CONFORMING TO ASTM A 416, GRADE 270 FOR LOW RELAXATION STRANDS.

5.3.2. MATERIAL PROPERTIES

TENSILE STRENGTH (fpu): 270 KSI

YIELD STRENGTH (fpy): 243 KSI

MODULUS OF ELASTICITY: 28,500 KSI

ANCHOR SET: 3/8 INCH

5.3.3. FRICTION COEFFICIENT (U):

TENDONS IN POLYMER DUCTS: 0.23

TENDONS IN METAL DUCTS: 0.15

5.3.4. WOBBLE COEFFICIENT (k):

INTERNAL TENDONS: 0.0002/ft

5.3.5. ALLOWABLE STRESSING

MAXIMUM JACKING STRESS AT ANCHORAGE: 0.81 fpu

MAXIMUM STRESS AT ANCHORAGE

IMMEDIATELY AFTER ANCHOR SET: 0.70 fpu

MAXIMUM STRESS AT INTERNAL LOCATIONS

IMMEDIATELY AFTER ANCHOR SET: 0.74 fpu

5.4. PRESTRESSING ROD

5.4.1. PROVIDE PRESTRESSING ROD CONFORMING TO ASTM A722.

5.4.2. TENSILE STRENGTH (fpu): 150 KSI
MODULUS OF ELASTICITY: 29,700 KSI
ANCHOR SET 1/16"

5.4.3. ALLOWABLE STRESSING
MAXIMUM JACKING STRESS (TEMPORARY): 0.80 fpu
MAXIMUM TRANSFER STRESS (LOCKOFF): 0.70 fpu

5.5. STRUCTURAL STEEL

5.5.1. PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M 270 (ASTM A 709), GRADE 50 DESIGNATION, EXCEPT WHEN NOTED OTHERWISE.

5.5.2. MEMBERS OR MEMBER COMPONENTS DESIGNATED AS FRACTURE-CRITICAL MEMBERS (FCM) SHALL BE FABRICATED TO CONFORM TO THE REQUIREMENTS OF DESIGN MANUAL, PART 4, SECTION 6, ARTICLE D6.6.2 AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 6.6.2, PUBLICATION 408, SECTIONS 1105.02(a)5 AND 1105.03(m)9, AND SECTION 12 OF THE AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE BUT ARE NOT CONSIDERED FCM FOR INSPECTION OR CLASSIFICATION PURPOSES. NON FCM MEMBERS AND COMPONENTS SHALL MEET THE BASE METAL CHARPY V-NOTCH (CVN) REQUIREMENTS FOR ZONE 2.

5.5.3. PYLON STEEL SHALL HAVE THROUGH-THICKNESS QUALITY IN ACCORDANCE WITH ASTM A770.

5.6. CABLES

5.6.1. FURNISH AND INSTALL CABLES ACCORDING TO THE PROJECT SPECIAL PROVISIONS.

6. PRESTRESSED CONCRETE ALLOWABLE STRESSES

6.1. COMPRESSION STRESSES

TEMPORARY STRESSES BEFORE LOSSES	0.6 f'ci
CONSTRUCTION LOAD STRESSES	0.6 f'ci
COMPRESSION STRESSES AFTER LOSSES	0.4 f'ci

* SER III DOES NOT APPLY

6.2. TENSION STRESSES

TEMPORARY TENSION STRESSES	
AREAS WITH BONDED REINFORCEMENT	$0.0948\sqrt{f'ci\ (KSI)}$
PRINCIPAL TENSILE STRESS	$0.11\sqrt{f'ci\ (KSI)}$

PERMANENT TENSION STRESSES	
AREAS WITH BONDED REINFORCEMENT	$0.0948\sqrt{f'c\ (KSI)}$
PRINCIPAL TENSILE STRESS	$0.11\sqrt{f'c\ (KSI)}$

7. CONSTRUCTION NOTES

7.1. SET ANCHOR WITH TEMPLATE OR IN PREFORMED HOLES. FILL THE CLEARANCE BETWEEN ANCHOR BOLTS/RODS AND HOLES IN BASE PLATES WITH APPROVED NON-HARDENING CAULKING COMPOUND CONFORMING TO PUBLICATION 408, SECTION 705.5.

7.2. SEE PUBLICATION 408, SECTION 105.17 - ACCEPTANCE OF CONSTRUCTION LOADINGS AND MATERIAL STOCKPILING ON BRIDGES.

7.3. SUBMIT SHOP DRAWINGS TO THE ENGINEER OR HIS DESIGNEE FOR APPROVAL PRIOR TO FABRICATION OF NEW MATERIALS.

7.4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFE ERECTION OF ALL STRUCTURES AND IS TO PROVIDE ALL NECESSARY BRACING AND SUPPORTS.

8. UTILITY NOTES

8.1. COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

8.2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL NEW AND EXISTING UTILITIES DURING CONSTRUCTION. SUBMIT TO THE ENGINEER FOR APPROVAL A SCHEME FOR PROTECTION OF THE UTILITIES.

8.3. VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

9. FOUNDATION NOTES

9.1. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF TEMPORARY EXCAVATION SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

9.2. DRILL TEST HOLES AT EACH CAISSON LOCATION TO 10 FT BELOW THE PROPOSED BOTTOM OF ROCK SOCKET (BORS) IN ACCORDANCE WITH PUBLICATION 408, SECTION 1006. OBTAIN WRITTEN APPROVAL FROM THE REPRESENTATIVE FOR THE BOTTOM OF ROCK SOCKET ELEVATION FOR EACH CAISSON. PROBE HOLES ARE NOT REQUIRED.

9.3. FOR FOUNDATION 1, CONSTRUCT A MINIMUM DRILLED CAISSON ROCK SOCKET LENGTH OF 7.0 FEET. FOR FOUNDATION 2, CONSTRUCT A MINIMUM DRILLED CAISSON ROCK SOCKET LENGTH OF 7.0 FEET. PROVIDE A MINIMUM DIAMETER 3'-6" FOR THE ROCK SOCKET.

9.4. USE TEMPORARY CASING TO MAINTAIN AN OPEN HOLE ABOVE THE ROCK SOCKET.

9.5. USE A SUBMERSIBLE DRILLED SHAFT INSPECTION DEVICE (SID) AND DOWNHOLE CAMERA AT EACH DRILLED CAISSON. OBTAIN WRITTEN APPROVAL FROM THE REPRESENTATIVE FOR THE ROCK SOCKET PRIOR TO PLACEMENT OF THE REINFORCEMENT.

9.6. INSTALL FOUR (4) TUBES IN EACH DRILLED CAISSON IN ORDER TO ALLOW CROSSHOLE SONIC LOGGING (CSL) TESTING IF REQUIRED BY THE REPRESENTATIVE.

9.7 THE FIRST PRODUCTION CAISSON SHALL BE A METHOD SHAFT AND INCLUDE BOTH TIP AND CSL TESTING. WITH WRITTEN APPROVAL FROM THE REPRESENTITIVE, SUBSEQUENT CAISSONS MAY OMIT CSL TESTING UPON ACCEPTANCE OF THE TIP TEST RESULTS BY THE REPRESENTATIVE.

9. FOUNDATION NOTES (CONTINUED)

9.8 USE THERMAL INTEGRITY PROFILING (TIP) METHOD TO VERIFY THE INTEGRITY OF EACH CAISSON. IF THE TIP RESULTS ARE INCONCLUSIVE OR UNACCEPTABLE TO THE REPRESENTATIVE, PERFORM CSL TESTING AT NO ADDITIONAL COST TO THE DISTRICT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1006.

9.9 INSTALL ROCK ANCHORS THROUGH SHAFT A1 AT FOUNDATION 1 AND SHAFTS B2 AND B4 AT FOUNDATION 2.

9.10 FOR ROCK ANCHOR INSTALLATION AT FOUNDATIONS 1 AND 2, BEGIN DRILLING THROUGH THE CONCRETE OF A DRILLED SHAFT ONLY AFTER ACCEPTANCE OF THE TIP TEST RESULTS OR CSL TEST RESULTS BY THE REPRESENTATIVE.

9.11 OVEREXCAVATE 3 FEET BELOW THE BFE FOR THE PEDESTRIAN RAMP WALL AND REPLACE WITH AASHTO NO. 57 COARSE AGGREGATE. PLACE A CLASS 4, TYPE A (PUB 408, SECTION 735) GEOTEXTILE OVER THE BOTTOM OF THE EXCAVATION FOR THE PEDESTRIAN RAMP WALL FOUNDATION.

9.12. THE FOUNDATION MATERIALS SHALL BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.

9.13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH TO BE INSPECTED.

9.14. DESIGN AND CONSTRUCT A LOAD TRANSFER PLATFORM AND RIGID INCLUSIONS BELOW THE BFE FOR THE BACKSTAY WALL IN ACCORDANCE WITH THE SPECIAL PROVISION "RIGID INCLUSIONS" AND FOLLOWING LIMITING PARAMETERS:

EFFECTIVE SOIL COHESION = 0 PSF
EFFECTIVE SOIL FRICTION ANGLE = 30°
MOIST UNIT WEIGHT OF SOIL = 115 PCF
SATURATED UNIT WEIGHT OF SOIL = 120 PCF
MODULUS OF ELASTICITY OF SOIL = 1 KSI
COMPOSITE MODULUS OF ELASTICITY OF SOIL AND RIGID INCLUSION > 2.0 KSI
MAXIMUM ALLOWABLE SETTLEMENT = 0.5 INCHES
RIGID INCLUSIONS SHALL HAVE A MINIMUM DIAMETER OF 12". GROUT MIX USED IN RIGID INCLUSIONS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
MINIMUM RIGID INCLUSION LENGTH OF 16 FEET OR TO TOP-OF-ROCK, WHICHEVER IS LESS.

9.15. DESIGN THE LOAD TRANSFER PLATFORM USING A CLASS 4, TYPE A (PENNDOT PUB 408, SECTION 735) SEPERATION GEOTEXTILE AND AASHTO NO. 57 COARSE AGGREGATE.

9.16. SETTLEMENT UNDER THE PEDESTRIAN RAMP IS ANTICIPATED. CONSTRUCT TO FULL HEIGHT AND ALLOW A ONE (1) MONTH QUARANTINE PERIOD PRIOR TO PLACING ANY ARCHITECTURAL FACING OR PAVING OF THE PEDESTRIAN PATH TO ALLOW SETTLEMENT TO OCCUR IN ACCORDANCE WITH THE SPECIAL PROVISION, "QUARANTINE PERIOD".

9.17. BACKFILL THE BACKSTAY WALL AND ALLOW ONE (1) MONTH QUARANTINE PERIOD PRIOR TO INSTALLATION OF ROCK ANCHORS.

9.18. CONSTRUCT ROCK ANCHORS WITH TEMPORARY CASING THROUGH THE BACKSTAY WALL AND TO TOP-OF-ROCK. CONSTRUCT ROCK ANCHORS WITH PERMANENT CASING WHEN ADJACENT TO BURIED UTILITIES, AS INDICATED ON THE ANCHOR LOCATIONS.

9.19. CONSTRUCT ROCK ANCHORS IN ACCORDANCE WITH THE SPECIAL PROVISION "PERMANENT ROCK ANCHORS".

9.20. PROOF AND CREEP TEST EVERY ROCK ANCHOR TO THE DESIGN TEST LOADS INDICATED ON THE PLANS AND IN THE SPECIAL PROVISION "PERMANENT ROCK ANCHORS".

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

GENERAL NOTES 2

RECOMMENDED _____

SHEET 20 OF 137

L-430

DES: JL	DWN: RJS	CKD: GB

OPERATOR: tylipw11cs01$ FILENAME: SL43000200F0137.dgn

PLOTTED: 8/22/2022 7:17:23 PM

INDEX OF DRAWINGS

NO.	DESCRIPTION	NO.	DESCRIPTION
17	GENERAL PLAN AND ELEVATION 1	81	NORTH WALL DEVELOPED ELEVATIONS
18	GENERAL PLAN AND ELEVATION 2	82	NORTH WALL STAKE-OUT PLAN
19	GENERAL NOTES 1	83	NORTH WALL PANEL LAYOUT
20	GENERAL NOTES 2	84	NORTH WALL FOOTING PLAN
21	GENERAL NOTES 3	85	NORTH WALL TYPICAL SECTION & ELEVATION 1
22	TABULATION OF STRUCTURE ITEMS	86	NORTH WALL TYPICAL SECTION & ELEVATION 2
23	BRIDGE STAKE-OUT PLAN	87	NORTH WALL TYPICAL SECTION & ELEVATION 3
24	TYPICAL SECTION	88	NORTH WALL DETAILS
25	FOUNDATION DETAILS 1	89	NORTH WALL OVERLOOK PLANTER DETAILS 1
26	FOUNDATION DETAILS 2	90	NORTH WALL OVERLOOK PLANTER DETAILS 2
27	FOUNDATION DETAILS 3	91	NORTH WALL OVERLOOK PLANTER DETAILS 3
28	FOUNDATION DETAILS 4	92	NORTH WALL REINFORCEMENT SCHEDULE 1
29	FOUNDATION DETAILS 5	93	NORTH WALL REINFORCEMENT SCHEDULE 2
30	FOUNDATION DETAILS 6	94	NORTH WALL REINFORCEMENT SCHEDULE 3
31	FOUNDATION DETAILS 7	95	NORTH WALL REINFORCEMENT SCHEDULE 4
32	ABUTMENT 1 LAYOUT	96	NORTH WALL REINFORCEMENT SCHEDULE 5
33	ABUTMENT 1 DETAILS 1	97	ABUT 1 SOUTHEAST WALL PLAN
34	ABUTMENT 1 DETAILS 2	98	ABUT 1 SOUTHEAST WALL DEVELOPED ELEVATION
35	ABUTMENT 1 DETAILS 3	99	ABUT 1 SOUTHEAST WALL FOOTING PLAN
36	ABUTMENT 2 LAYOUT	100	ABUT 1 SOUTHEAST WALL TYPICAL SECTION & ELEVATION
37	ABUTMENT 2 DETAILS 1	101	ABUT 1 SOUTHEAST WALL REINFORCEMENT SCHEDULE
38	ABUTMENT 2 DETAILS 2	102	FRONT STREET WALL A PLAN AND ELEVATION 1
39	ABUTMENT 2 DETAILS 3	103	FRONT STREET WALL A PLAN AND ELEVATION 2
40	ABUTMENT 2 DETAILS 4	104	FRONT STREET WALL A PLAN AND ELEVATION 3
41	PYLON GEOMETRY	105	FRONT STREET WALL B PLAN AND ELEVATION
42	PYLON DETAILS	106	FRONT STREET WALLS GENERAL NOTES
43	PYLON PEDESTAL DETAILS	107	FRONT STREET WALLS STAKE-OUT PLAN
44	BACK STAY WALL PLAN AND ELEVATION 1	108	FRONT STREET WALLS TYPICAL SECTIONS
45	BACK STAY WALL PLAN AND ELEVATION 2	109	FRONT STREET WALL A SOIL NAIL DETAILS
46	BACK STAY WALL DETAILS 1	110	DRAWING NOT USED
47	BACK STAY WALL DETAILS 2	111	FRONT STREET WALL A DRAINAGE DETAILS
48	BACK STAY WALL DETAILS 3	112	ARCHITECTURAL CONCRETE PAVING PLAN 1
49	BACK STAY WALL DETAILS 4	113	ARCHITECTURAL CONCRETE PAVING PLAN 2
50	SUBSTRUCTURE REINFORCING SCHEDULE 1	114	ARCHITECTURAL CONCRETE PAVING PLAN 3
51	SUBSTRUCTURE REINFORCING SCHEDULE 2	115	ARCHITECTURAL CONCRETE PAVING PLAN 4
52	SUBSTRUCTURE REINFORCING SCHEDULE 3	116	STRUCTURE BORINGS (SHEET 1 OF 7)
53	FRAMING PLAN	117	STRUCTURE BORINGS (SHEET 2 OF 7)
54	SUPERSTRUCTURE CAMBER	118	STRUCTURE BORINGS (SHEET 3 OF 7)
55	DECK REINFORCEMENT PLAN	119	STRUCTURE BORINGS (SHEET 4 OF 7)
56	SOFFIT REINFORCEMENT PLAN	120	STRUCTURE BORINGS (SHEET 5 OF 7)
57	SUPERSTRUCTURE ELEVATION REINFORCEMENT	121	STRUCTURE BORINGS (SHEET 6 OF 7)
58	LONGITUDINAL POST-TENSIONING LAYOUT	122	STRUCTURE BORINGS (SHEET 7 OF 7)
59	POST TENSIONING ABUTMENT END DIAPHRAGM DETAILS	123	ELECTRICAL GENERAL NOTES
60	TYPICAL SECTION DETAILS 1	124	CONTROL CABINET DETAILS
61	TYPICAL SECTION DETAILS 2	125	PEDESTRIAN BRIDGE AND SITE POWER PLAN
62	SUPERSTRUCTURE REINFORCING SCHEDULE	126	NORTH SPAN DRIVER MAP
63	CABLE ANCHOR DETAILS 1	127	NORTH SPAN DRIVERS
64	CABLE ANCHOR DETAILS 2	128	DRIVER FEED DETAILS
65	CABLE ANCHOR DETAILS 3	129	ELECTRICAL DETAILS
66	CABLE FORCE SCHEDULE	130	ELECTRICAL SCHEDULES
67	ARCHITECTURAL DETAILS	131	LIGHTING COVER SHEET
68	PEDESTRIAN RAIL LAYOUT 1	132	OVERALL BRIDGE AND SITE LIGHTING PLAN
69	PEDESTRIAN RAIL LAYOUT 2	133	OVERALL BRIDGE LIGHTING ELEVATION
70	PEDESTRIAN RAIL LAYOUT 3	134	BACKSTAY WALL LIGHTING ELEVATION
71	PEDESTRIAN RAIL DETAILS 1	135	LIGHTING DETAILS 1 SECTION THROUGH BRIDGE
72	PEDESTRIAN RAIL DETAILS 2	136	LIGHTING DETAILS 2
73	PEDESTRIAN RAIL DETAILS 3	137	DRAWING NOT USED
74	PEDESTRIAN RAIL DETAILS 4		
75	LIGHTING VALENCE DETAILS 1		
76	LIGHTING VALENCE DETAILS 2		
77	CONSTRUCTION STAGING DETAILS 1		
78	CONSTRUCTION STAGING DETAILS 2		
79	CONSTRUCTION STAGING DETAILS 3		
80	NORTH WALL PLAN		

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO.	APPROVAL DATE
ELECTRICAL DETAILS	BC-721M	FEB 19, 2021
ANCHOR SYSTEMS	BC-734M	FEB 19, 2021
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	JAN 31, 2019
STANDARD BRIDGE DRAINAGE MISCELLANEOUS DETAILS	BC-751M	JAN 31, 2019
CONCRETE DECK SLAB DETAILS	BC-752M	FEB 19, 2021
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	SEPT 30, 2016
POST-TENSIONING OF CONCRETE GIRDERS GROUT SPECIFICATIONS	BC-790M	JAN 31, 2019
GEOSYNTHETIC REINFORCED SOIL SLOPE	RC-14M	SEPT 15, 2016

ABBREVIATIONS:

AB	AGGREGATE BASE
ABUT	ABUTMENT
ALT	ALTERNATE
℄	BASELINE
BB	BEGIN BRIDGE
BCE	BOTTOM OF DRILLED SHAFT ELEVATION
BF	BACK FACE
BFE	BOTTOM OF FOOTING ELEVATION
BOT	BOTTOM
BPCE	BOTTOM OF PILE CAP ELEVATION
BRG	BEARING
℄	CENTERLINE
C/C	CENTER TO CENTER
CIP	CAST-IN-PLACE
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
⌀	DIAMETER
DIA	DIAMETER
DL	DEAD LOAD
DWG	DRAWING
DWGS	DRAWINGS
EA	EACH
EB	END BRIDGE
EF	EACH FACE
EL	ELEVATION
ELEV	ELEVATION
EQ	EQUAL
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FIXED
FF	FRONT FACE
FG	FINISHED GRADE
FT	FEET
FS	FRONT STREET
GA	GAUGE
GALV	GALVANIZED
GR	GRADE
HSPB	HOLLAND STREET PEDESTRIAN BRIDGE
ID	INSIDE DIAMETER
IN	INCHES
INT	INTERIOR
JT	JOINT
K	KIPS
LL	LIVE LOAD
LOL	LAYOUT LINE
LONGIT	LONGITUDINAL
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
NO.	NUMBER
NOM	NOMINAL
OD	OUTSIDE DIAMETER
ℙ	PLATE
PCC	PORTLAND CEMENT CONCRETE
P/S	PRESTRESSED
PG	PROFILE GRADE
PGL	PROFILE GRADE LINE
PJP	PARTIAL JOINT PENETRATION
PT	POST-TENSIONED
QTY	QUANTITY
R/W	RIGHT-OF-WAY
R	RADIUS
RDWY	ROADWAY
REINF	REINFORCEMENT
RF	REAR FACE
RQD	REQUIRED
RT	RIGHT
SPA	SPACED
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRAIGHT
SYM	SYMMETRICAL
TFE	TOP OF FOOTING ELEVATION
TEMP	TEMPORARY
THRU	THROUGH
TOR	TOP OF ROCK ELEVATION
TOT	TOTAL
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAR	VARIABLE
VC	VERTICAL CURVE
VERT	VERTICAL
W/	WITH
WP	WORK POINT
WW	WINGWALL

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

GENERAL NOTES 3

RECOMMENDED _____

L-430

DES: JL | DWN: RJS | CKD: GB

OPERATOR: tylipw11ics01$ FILENAME: SL4300021OF0137.dgn

PLOTTED: 8/23/2022 12:00:54 AM

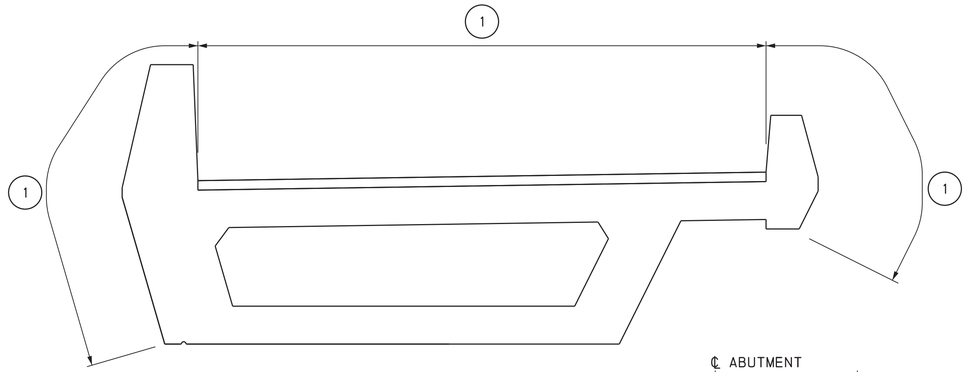
APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
8030-0004	BRIDGE SUPERSTRUCTURE, AS DESIGNED, L-430 *	LS	
(1)	CLASS 3 EXCAVATION	CY	512
(1)	STRUCTURE BACKFILL	CY	1,803
(1)	REINFORCEMENT BARS	LB	37,111
(1)	REINFORCEMENT BARS, EPOXY COATED	LB	42,477
(1)	REINFORCEMENT BARS, GALVANIZED	LB	75,700
(1)	48" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN SOIL	LF	127
(1)	42" DIAMETER DRILLED CAISSONS, ROCK SOCKET	LF	116
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	379
	(PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)		
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	279
	(PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)		
(1)	FABRICATED STRUCTURAL STEEL	LB	88,843
(1)	NO. 57 COARSE AGGREGATE	CY	50
(1)	ARCHITECTURAL TREATMENT (RETAINING WALL)	SF	648
(1)	CLASS AAAP CEMENT CONCRETE, MODIFIED * (2)	CY	137
(1)	CLASS A CEMENT CONCRETE, MODIFIED *	CY	816
(1)	REINFORCEMENT BARS, GALVANIZED *	LF	189
(1)	PEDESTRIAN RAILING, TYPE A *	LF	189
(1)	PEDESTRIAN RAILING, TYPE B *	LF	235
(1)	PPC OVERLAY *	SY	207
(1)	LITHOCRETE *	SF	4,680
(1)	ARCHITECTURAL SURFACE TREATMENT, CAST-IN-PLACE CONCRETE *	SF	2,219
(1)	STAY CABLES *	LS	
(1)	POST TENSIONING *	LB	12,083
(1)	TUNED MASS DAMPER *	LS	
(1)	CABLE DAMPING SYSTEM *	LS	
(1)	POST TENSIONING BAR (DIA = 1.25") *	LB	461
(1)	INTEGRATED SHOP DRAWINGS *	LS	
(1)	POST TENSIONING BAR (DIA = 1.375") *	LB	667
(1)	PERMANENT ROCK ANCHORS *	LF	711
(1)	ARCHITECTURAL LIGHTING *	LS	
(1)	JUNCTION BOXES J.B.-2	EA	4
(1)	JUNCTION BOXES J.B.-12	EA	1
(1)	AWG 6 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	1,902
(1)	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	7,326
(1)	AWG 10 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	4,494
(1)	1" DIRECT BURIAL CONDUIT	LF	360
(1)	2" SCHEDULE 80 PVC CONDUIT	LF	827
(1)	2" LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT	LF	340
(1)	TESTING OF ENGIRE LIGHTING SYSTEM	LS	
(1)	LIGHTING STANDARD *	EA	8
(1)	LUMINAIRES *	EA	8
(1)	DMX CABLE *	LF	455
(1)	RIGID INCLUSIONS *	LS	
9000-0207	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM *	LS	

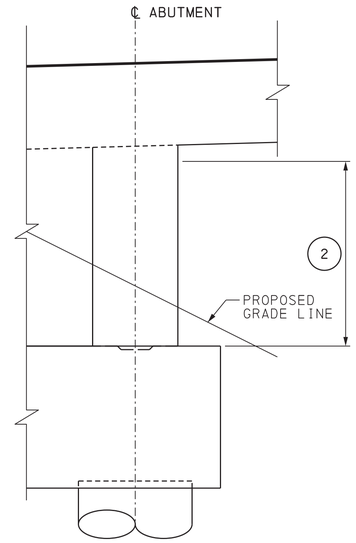
* SEE SPECIAL PROVISIONS

(1) ITEMS IN CONSTRUCTION OF BRIDGE STRUCTURE, AS DESIGNED, L-430 ITEM 8030-0004 ARE GIVEN FOR INFORMATION ONLY.

(2) FALSEWORK IS INCIDENTAL TO CLASS AAAP CEMENT CONCRETE, MODIFIED.



DECK



ABUTMENT 1
(ABUTMENT 2 SIMILAR)

COATING LEGEND:

(1) PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, SUPERSTRUCTURE)

(2) PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)

COATING LIMITS

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

TABULATION OF STRUCTURE ITEMS

RECOMMENDED _____

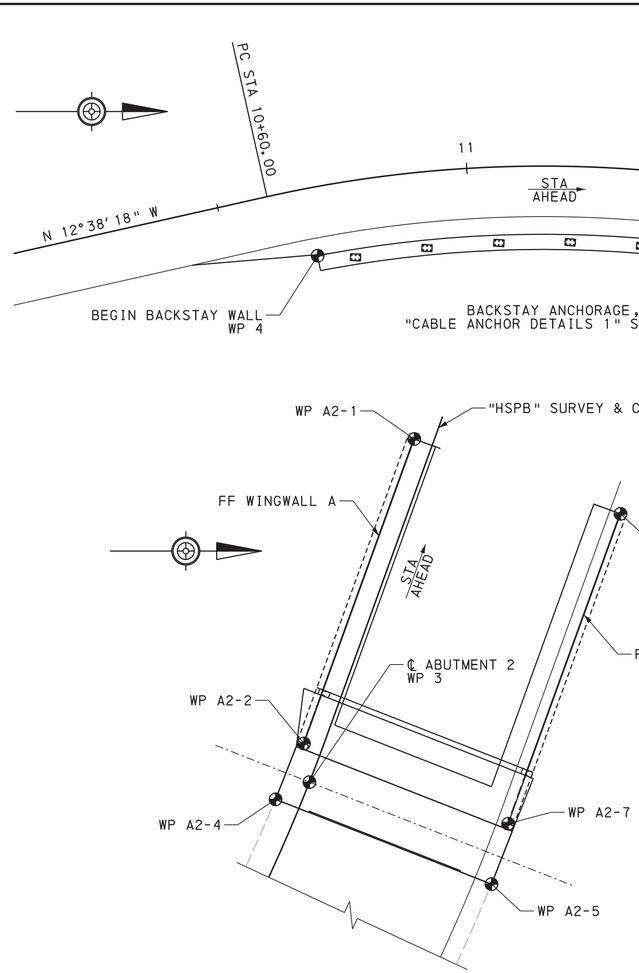
SHEET 22 OF 137

L-430

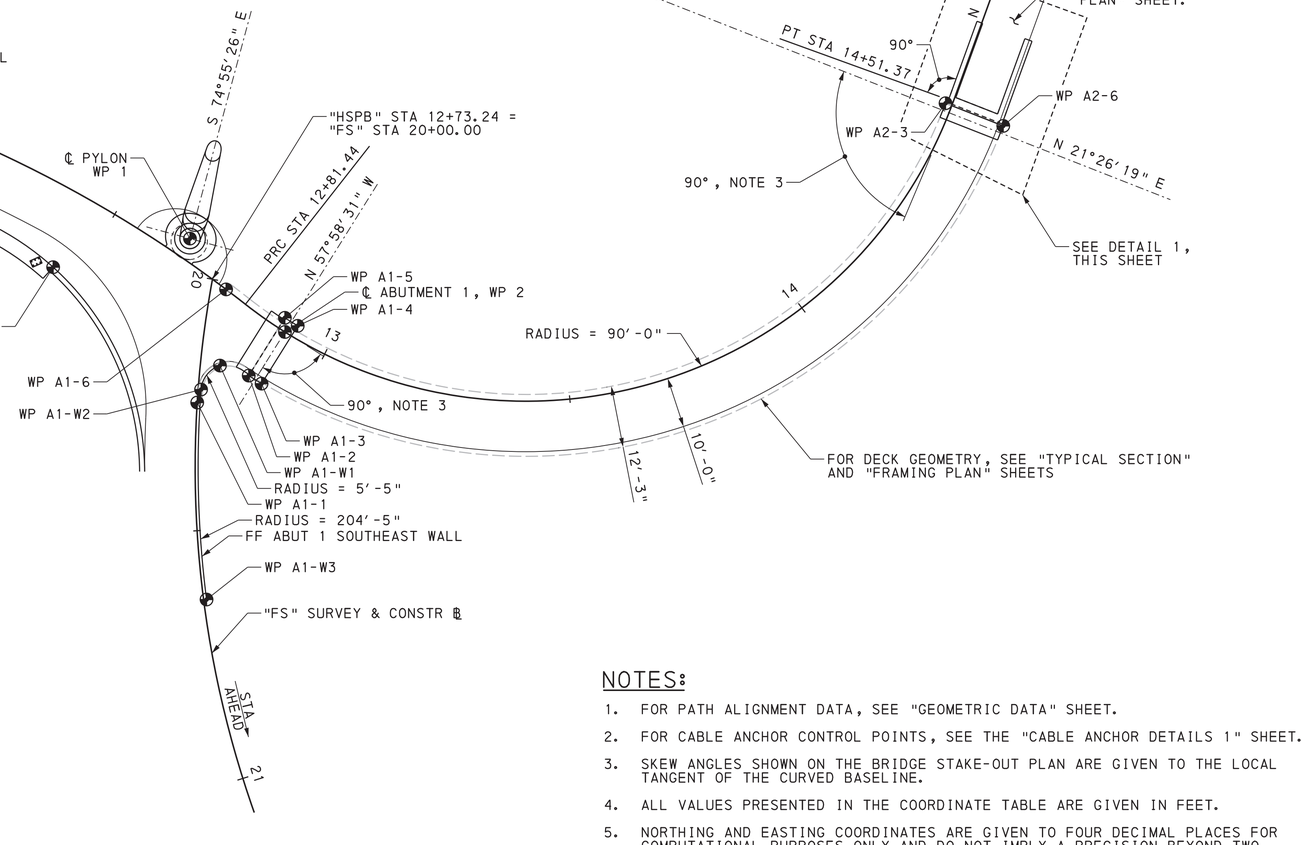
DES: JL | DWN: RJS | CKD: GB

OPERATOR: tylipw11ics01$ FILENAME: SL4300022F0137.dgn

PLOTTED: 8/23/2022 3:40:33 AM



DETAIL 1
NOT TO SCALE



STAKE-OUT PLAN
NOT TO SCALE

NOTES:

1. FOR PATH ALIGNMENT DATA, SEE "GEOMETRIC DATA" SHEET.
2. FOR CABLE ANCHOR CONTROL POINTS, SEE THE "CABLE ANCHOR DETAILS 1" SHEET.
3. SKEW ANGLES SHOWN ON THE BRIDGE STAKE-OUT PLAN ARE GIVEN TO THE LOCAL TANGENT OF THE CURVED BASELINE.
4. ALL VALUES PRESENTED IN THE COORDINATE TABLE ARE GIVEN IN FEET.
5. NORTHING AND EASTING COORDINATES ARE GIVEN TO FOUR DECIMAL PLACES FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.

COORDINATE TABLE

WORK POINT	SURVEY & CONSTR ℄ STATION	SURVEY & CONSTR ℄ OFFSET	NORTHING ORDINATE	EASTING ORDINATE	WORK POINT DESCRIPTION
1	12+65.02	4.00' LT	726105.2467	1335374.9120	CENTERLINE PYLON
2	12+91.00	0.00'	726124.0547	1335393.4078	CENTERLINE ABUTMENT 1 AT "HSPB" LINE
3	14+49.00	0.00'	726255.5531	1335349.9995	CENTERLINE ABUTMENT 2 AT "HSPB" LINE
4	10+67.65	13.50' RT	725917.2730	1335352.3746	BEGIN BACKSTAY WALL
5	12+44.59	15.18' RT	726078.1562	1335380.5764	END BACKSTAY WALL
A1-1	12+85.08	21.30' RT	726106.6828	1335407.3758	BEGIN RIGHT CURB
A1-2	12+89.67	11.14' RT	726116.8834	1335402.0446	ABUTMENT 1 REAR-FACE CORNER
A1-3	12+92.33	11.14' RT	726119.4269	1335403.6354	ABUTMENT 1 FRONT-FACE CORNER
A1-4	12+92.54	2.36' LT	726126.5857	1335392.1898	ABUTMENT 1 FRONT-FACE CORNER
A1-5	12+89.46	2.36' LT	726124.0423	1335390.5990	ABUTMENT 1 REAR-FACE CORNER
A1-6	12+76.61	0.00'	726112.4012	1335384.9720	BEGIN LEFT CURB
A1-W1	12+84.53	12.72' RT	726111.1884	1335400.0552	BEGIN ABUTMENT 1 SOUTHEAST WALL
A1-W2	12+84.34	18.76' RT	726107.4464	1335404.8014	ABUTMENT 1 SOUTHEAST WALL POC
A1-W3	13+00.35	53.91' RT	726108.5320	1335446.3723	END ABUTMENT 1 SOUTHEAST WALL
A2-1	14+67.92	1.00' LT	726261.0900	1335331.8854	END WINGWALL A
A2-2	14+50.81	1.00' LT	726255.2622	1335347.9595	BEGIN WINGWALL A
A2-3	14+50.52	1.32' LT	726254.8362	1335348.1440	ABUTMENT 2 REAR-FACE CORNER
A2-4	14+47.48	1.32' LT	726253.7637	1335350.9083	ABUTMENT 2 FRONT-FACE CORNER
A2-5	14+47.66	10.93' RT	726265.1661	1335355.3858	ABUTMENT 2 FRONT-FACE CORNER
A2-6	14+50.34	10.93' RT	726266.2627	1335352.5934	ABUTMENT 2 REAR-FACE CORNER
A2-7	14+50.60	10.58' RT	726266.0476	1335352.1955	BEGIN WINGWALL B
A2-8	14+67.92	10.58' RT	726271.9797	1335335.8335	END WINGWALL B

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BRIDGE STAKE-OUT PLAN

RECOMMENDED _____

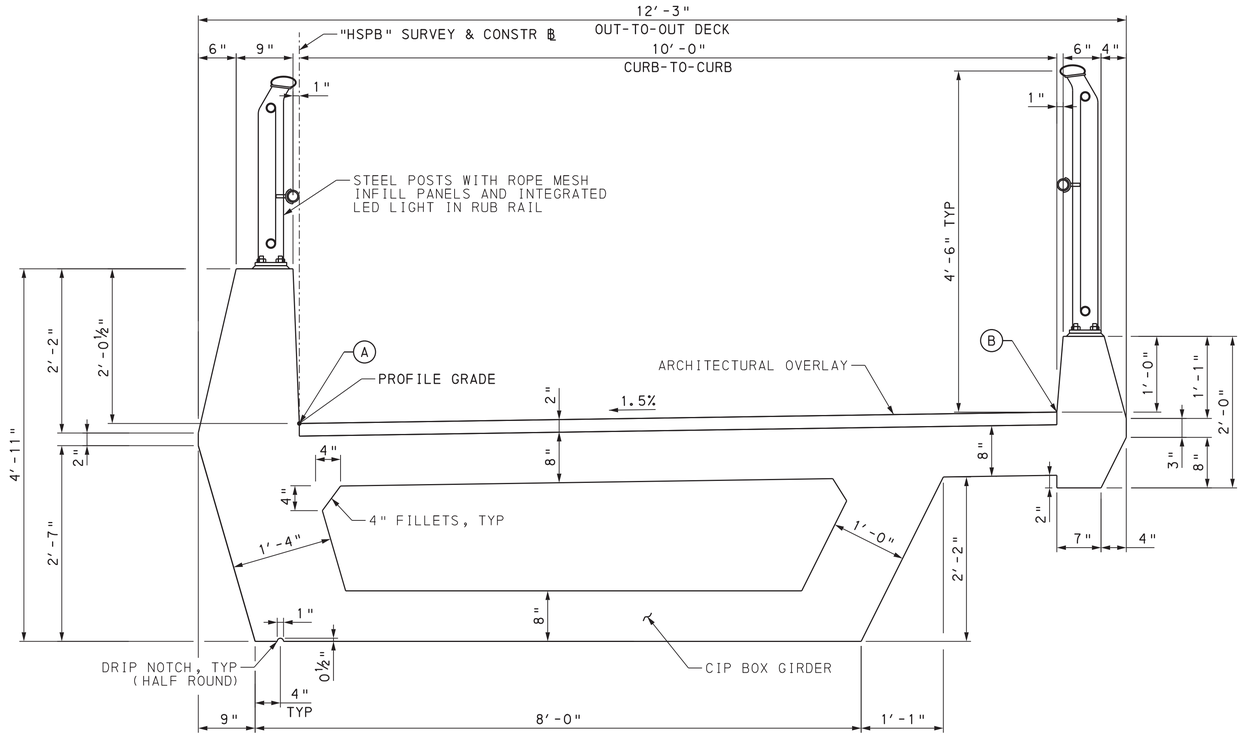
SHEET 23 OF 137

L-430

DES: JL | DWN: RJS | CKD: GB

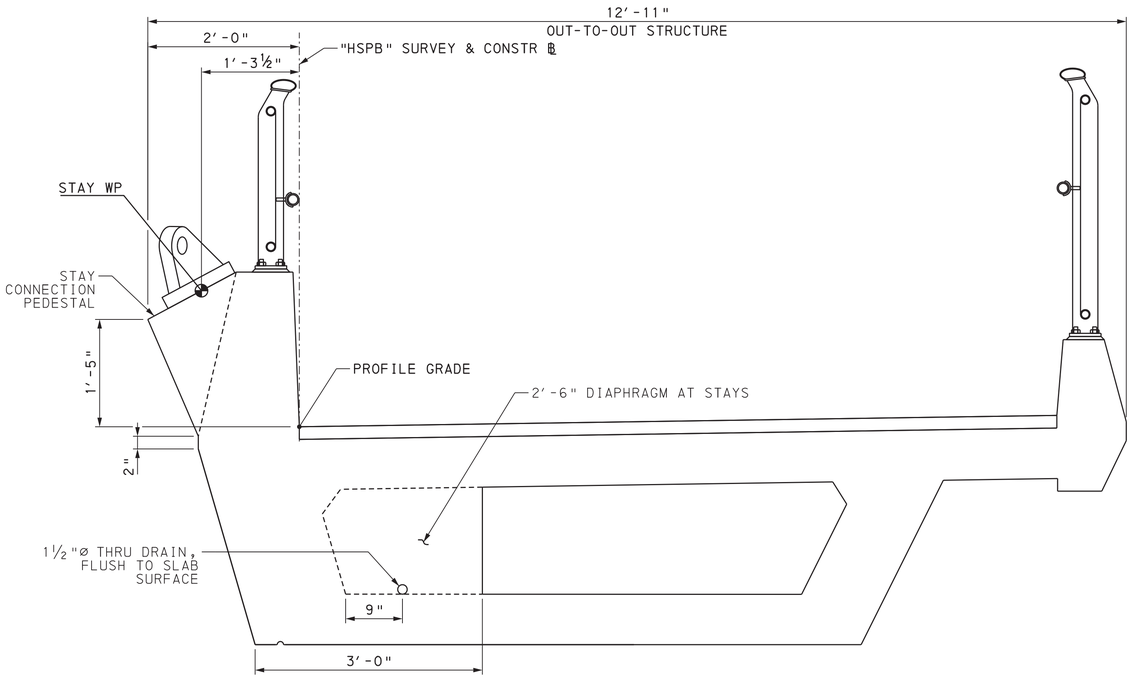
FILENAME: SL4300023OF0137.dgn
OPERATOR: tylipwilliccs01$

PLOTTED: 8/22/2022 7:17:15 PM



TYPICAL SECTION

6 0 6 12 INCHES



TYPICAL SECTION AT STAYS

6 0 6 12 INCHES

NOTE:
REFERENCE TYPICAL SECTION FOR DIMENSIONS NOT SHOWN.

HOLLAND STREET PEDESTRIAN BRIDGE FINISHED DECK ELEVATIONS

	LOCATION	OFFSET	STATION ALONG SURVEY AND CONSTRUCTION ℄								
			12+90	13+00	13+10	13+20	13+30	13+40	13+50	13+60	13+70
A	LEFT CURB LINE / PROFILE GRADE LINE	0.00	607.92	608.20	608.47	608.75	609.02	609.29	609.57	609.81	609.98
B	RIGHT CURB LINE	10.00 RT	608.07	608.35	608.62	608.90	609.17	609.44	609.72	609.96	610.13

	LOCATION	OFFSET	STATION ALONG SURVEY AND CONSTRUCTION ℄							
			13+80	13+90	14+00	14+10	14+20	14+30	14+40	14+50
A	LEFT CURB LINE / PROFILE GRADE LINE	0.00	610.08	610.12	610.08	609.98	609.80	609.56	609.25	608.87
B	RIGHT CURB LINE	10.00 RT	310.23	610.27	610.23	610.13	609.95	609.71	609.40	609.02

* - DISTANCE MEASURED FROM THE BEGINNING OF THE BRIDGE.

NOTES:

1. ALL HORIZONTAL DIMENSIONS ARE RADIAL TO SURVEY AND CONSTRUCTION BASELINES.
2. FOR DRIP NOTCH DETAILS, REFER TO BC-775M.
3. FOR SUPERSTRUCTURE TYPICAL SECTION DETAILS, SEE "TYPICAL SECTION DETAILS 1" AND "TYPICAL SECTION DETAILS 2" SHEETS.
4. FOR STAY LOCATIONS, SEE "CABLE ANCHOR DETAILS 1" SHEET.
5. FOR HOLLAND STREET PEDESTRIAN BRIDGE VERTICAL PROFILE INFORMATION, SEE "GENERAL PLAN AND ELEVATION 2" SHEET.
6. FOR VERTICAL CONTROL INFORMATION, SEE THE CONSTRUCTION PLANS.
7. ALL VALUES FOR STATION, OFFSET AND ELEVATION ARE GIVEN IN FEET.
8. ARCHITECTURAL OVERLAY IS COMPRISED OF 2" POLYESTER POLYMER CONCRETE CONFORMING TO PUBLICATION 408, SECTION 1047 AND TREATED WITH LITHOCRETE.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

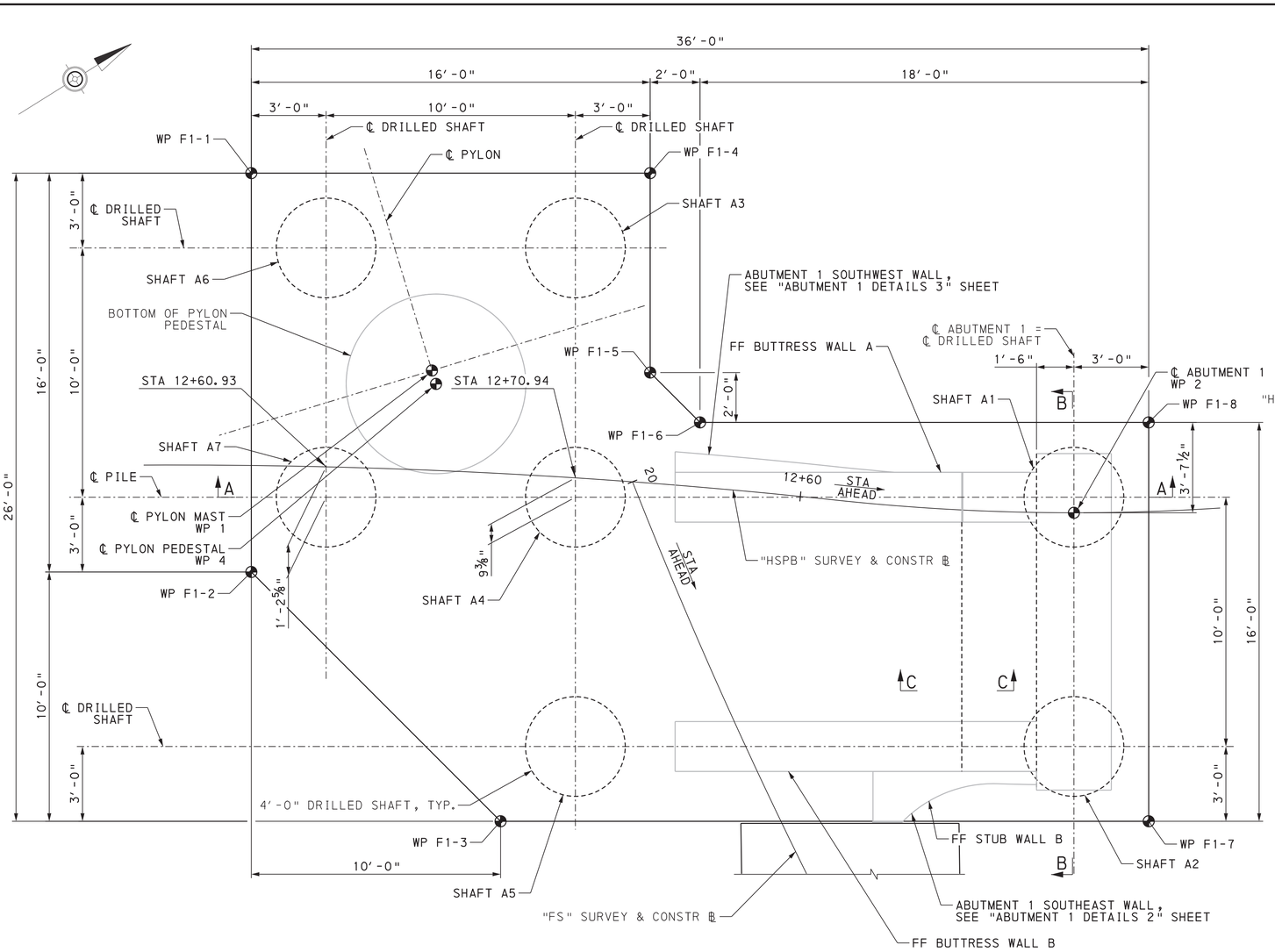
TYPICAL SECTION

RECOMMENDED _____

DES: JL | DWN: RJS | CKD: GB

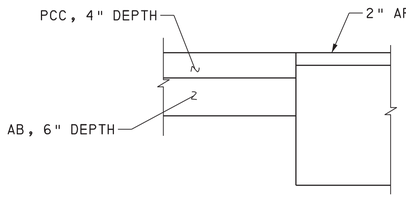
OPERATOR: tylipw11cs01$ FILENAME: SL43000240F0137.dgn

PLOTTED: 8/22/2022 7:15:20 PM



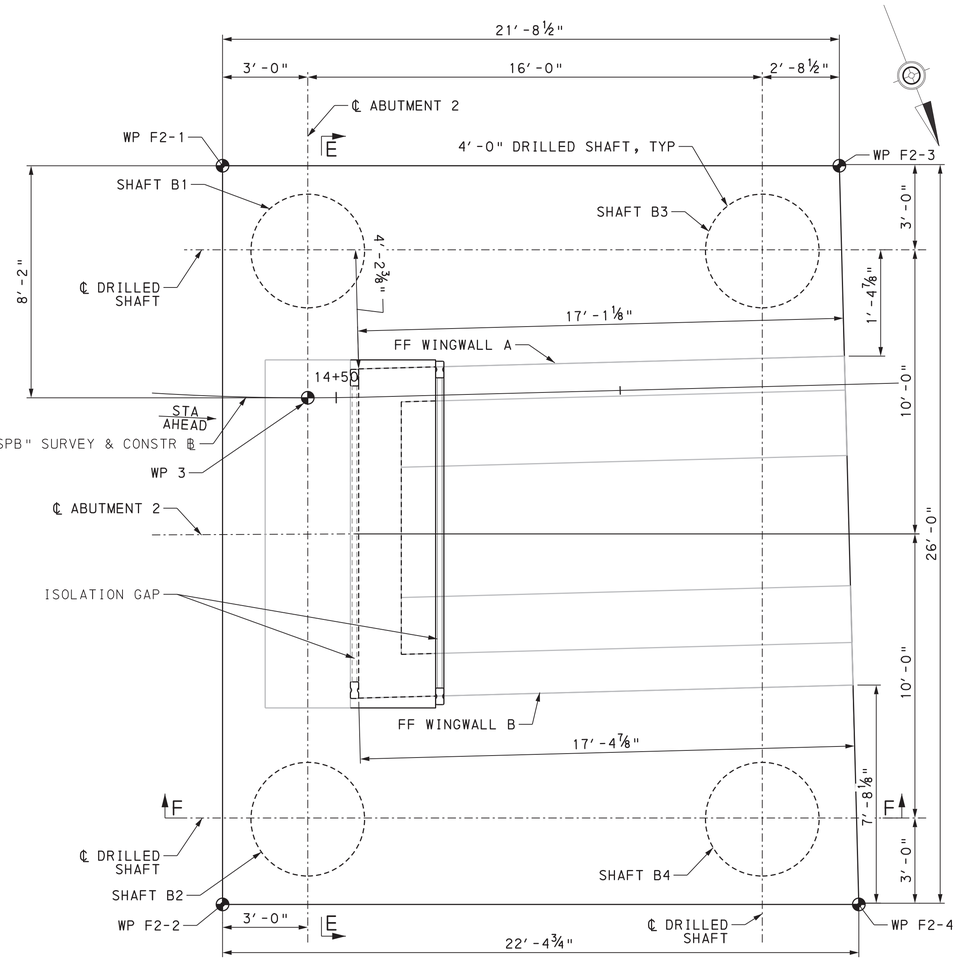
FOUNDATION 1 FOOTING PLAN

1 0 1 2 3 FEET



SECTION C-C

NOT TO SCALE



FOUNDATION 2 FOOTING PLAN

1 0 1 2 3 FEET

NOTES:

1. FOR "SECTION A-A" AND "SECTION B-B", SEE "FOUNDATION DETAILS 3" SHEET.
2. FOR "SECTION E-E" AND "SECTION F-F", SEE "FOUNDATION DETAILS 5" SHEET.

COORDINATE TABLE

WORK POINT	SURVEY & CONSTR ℄ STATION	SURVEY & CONSTR ℄ OFFSET	NORTHING ORDINATE	EASTING ORDINATE	WORK POINT DESCRIPTION
F1-1	12+57.80	11.73' LT	726103.3016	1335364.3571	FOUNDATION 1 SOUTHWEST CORNER
F1-2	12+57.99	4.27' RT	726094.8171	1335377.9222	FOUNDATION 1 SOUTH-CENTER CORNER
F1-3	12+68.71	13.93' RT	726097.9924	1335391.7032	FOUNDATION 1 SOUTHEAST CORNER
F1-4	12+73.05	12.40' LT	726116.8667	1335372.8416	FOUNDATION 1 WEST CORNER
F1-5	12+73.62	4.42' LT	726112.6245	1335379.6242	FOUNDATION 1 SOUTHWEST CHAMFER
F1-6	12+75.74	2.59' LT	726113.2595	1335382.3804	FOUNDATION 1 WEST CHAMFER
F1-7	12+93.64	12.42' RT	726120.0358	1335405.4906	FOUNDATION 1 NORTHEAST CORNER
F1-8	12+94.12	3.57' LT	726128.5203	1335391.9255	FOUNDATION 1 NORTHWEST CORNER
F2-1	14+45.70	8.11' LT	726246.8550	1335349.8070	FOUNDATION 2 SOUTHEAST CORNER
F2-2	14+46.50	17.88' RT	726271.0561	1335359.3101	FOUNDATION 2 NORTHEAST CORNER
F2-3	14+67.92	7.70' LT	726254.7913	1335329.5962	FOUNDATION 2 SOUTHWEST CORNER
F2-4	14+67.92	18.31' RT	726279.2429	1335338.4612	FOUNDATION 2 NORTHWEST CORNER

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FOUNDATION DETAILS 1

RECOMMENDED _____

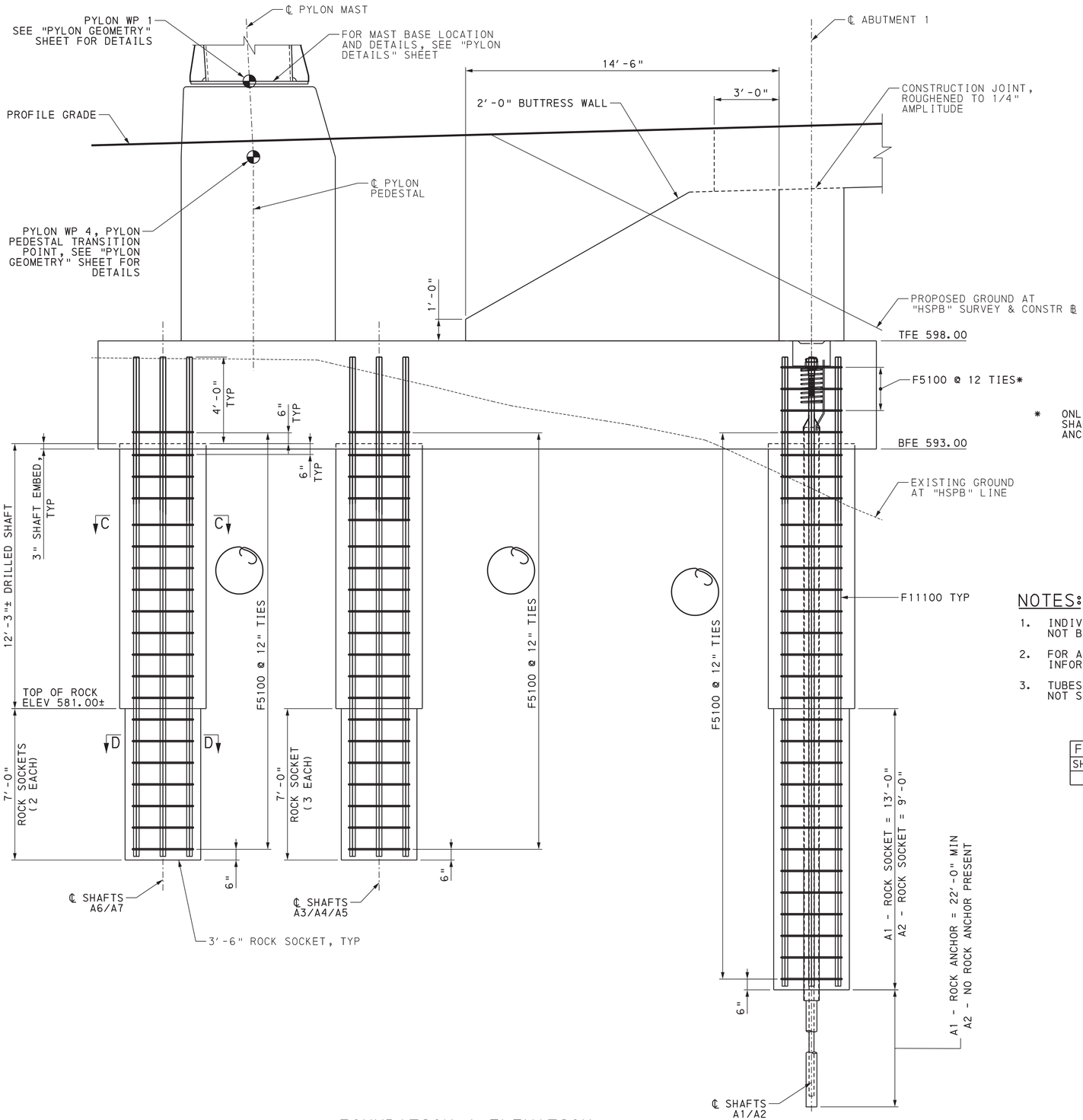
SHEET 25 OF 137

L-430

DES: JL | DWN: RJS | CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL4300025F0137.dgn

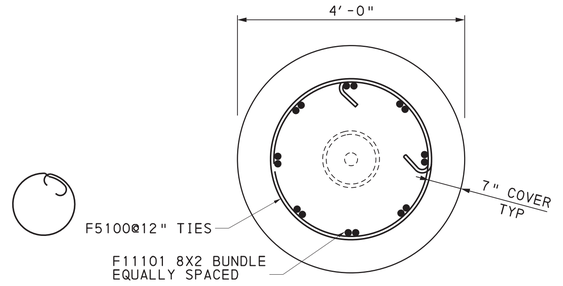
PLOTTED: 8/22/2022 7:13:18 PM



FOUNDATION 1 ELEVATION

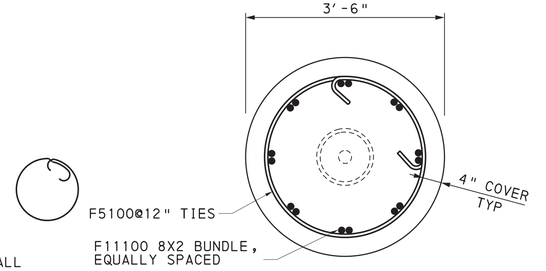
1 0 1 2 3 FEET

* ONLY AT DRILLED SHAFTS WITH ROCK ANCHORS



SECTION C-C

12 0 12 INCHES



SECTION D-D

12 0 12 INCHES

NOTES:

1. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT BE OVERLAPPED.
2. FOR ADDITIONAL SHAFT AND ROCK SOCKET INFORMATION, SEE THE SPECIAL PROVISIONS.
3. TUBES FOR CROSS-HOLE SONIC INTEGRITY TESTING NOT SHOWN. SEE THE SPECIAL PROVISIONS.

FOUNDATION 1 ROCK ANCHOR DESIGN DATA	
SHAFT	REQUIRED ROCK ANCHOR DESIGN FORCE (KIP)
A1	161

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

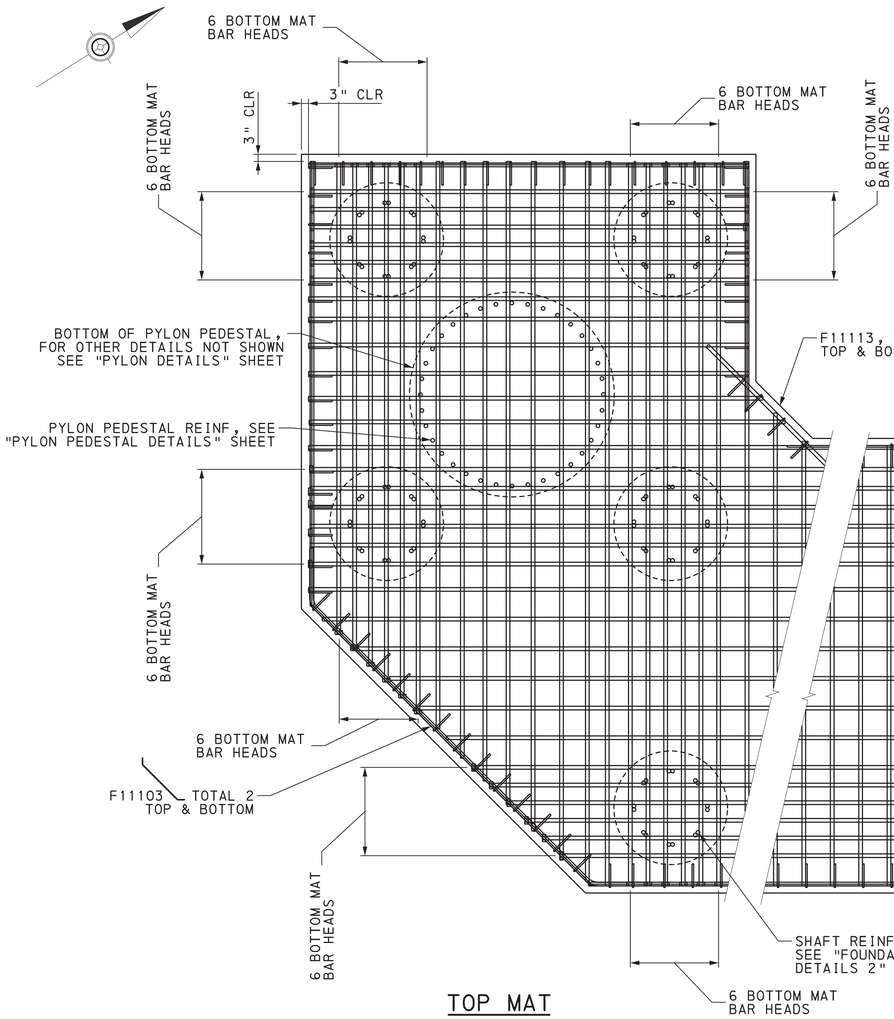
FOUNDATION DETAILS 2

RECOMMENDED _____

DES: JL | DWN: RJS | CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL43000260F0137.dgn

PLOTTED: 8/22/2022 7:15:05 PM

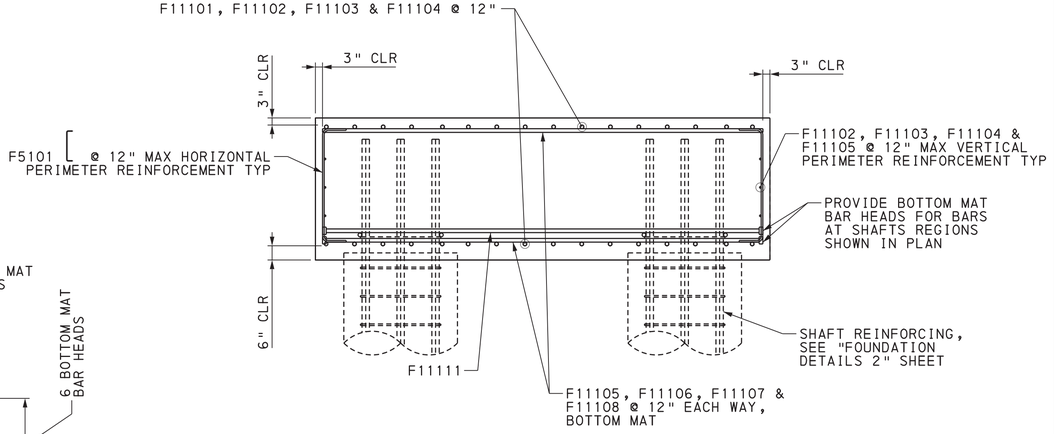


TOP MAT

BOTTOM MAT

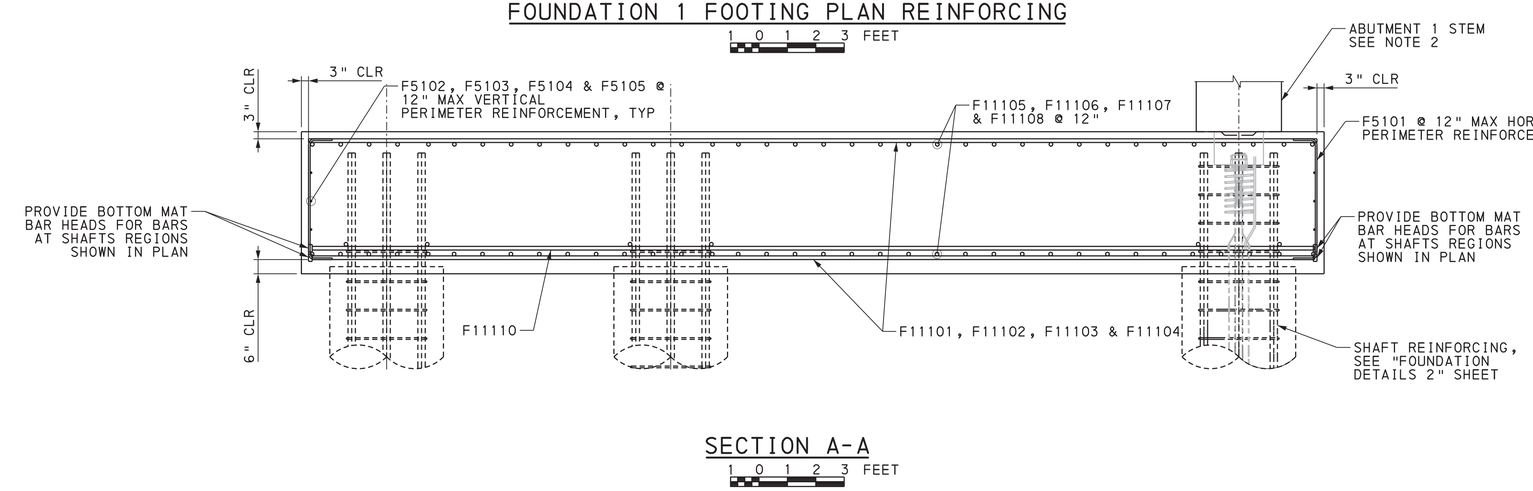
FOUNDATION 1 FOOTING PLAN REINFORCING

1 0 1 2 3 FEET



SECTION B-B

1 0 1 2 3 FEET



SECTION A-A

1 0 1 2 3 FEET

NOTES:

1. FOR "SECTION A-A" AND "SECTION B-B" LOCATION, SEE "FOUNDATION DETAILS 1" SHEET.
2. FOR ABUTMENT DETAILS NOT SHOWN, SEE "ABUTMENT 1 DETAILS 1" SHEET
3. FOOTING REINFORCMENT MAY BE ADJUSTED TO ACCOMODATE MAT BASE REINFORCEMENT.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

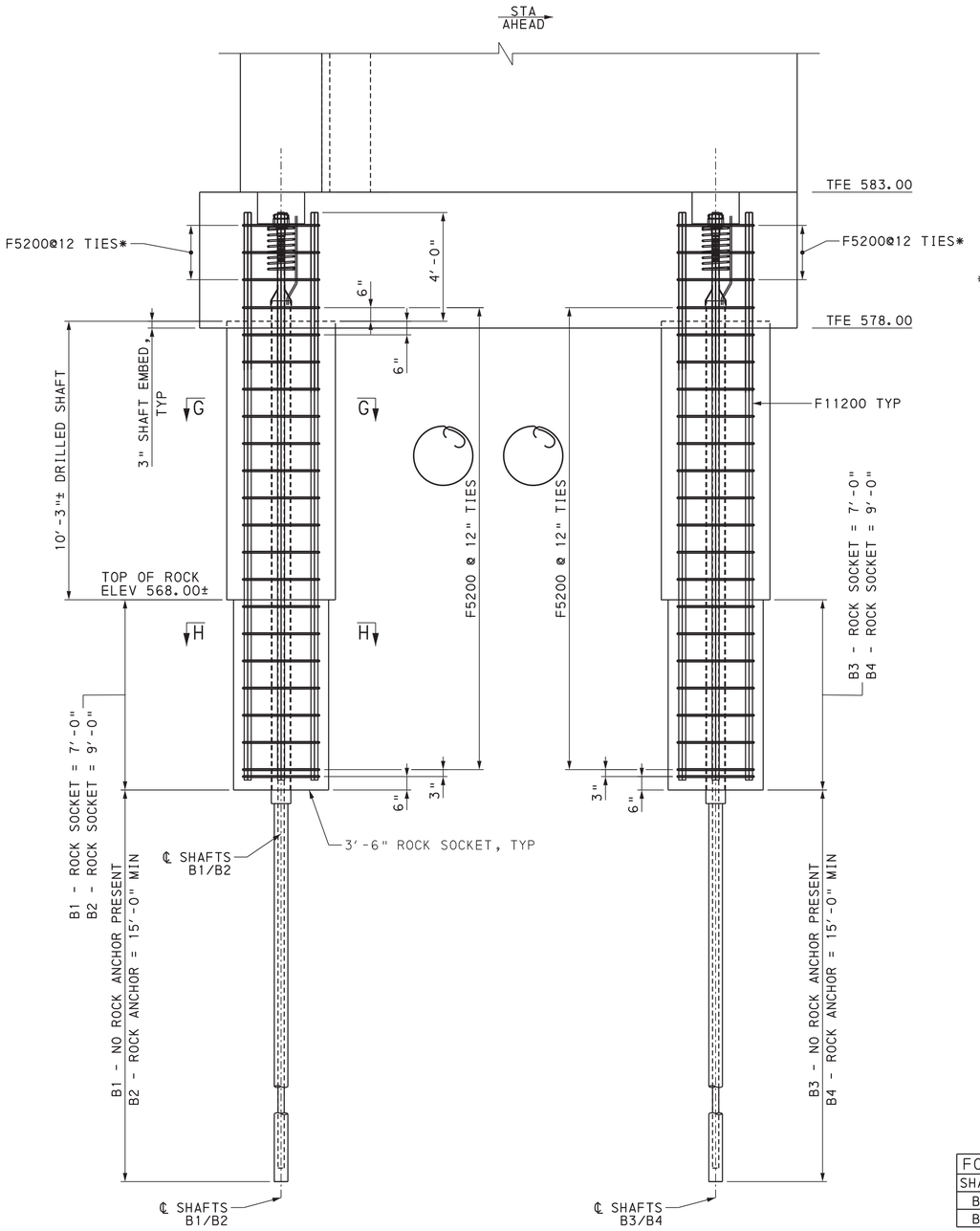
FOUNDATION DETAILS 3

RECOMMENDED

DES: JL	DWN: OMC	CKD: JL

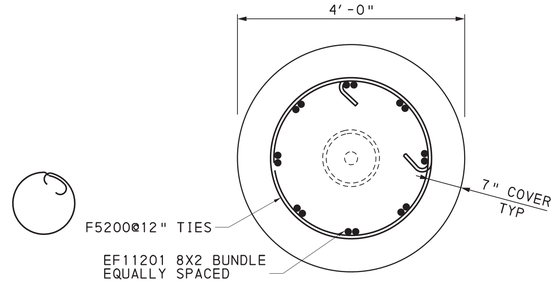
FILENAME: SL43000270F0137.dgn
OPERATOR: tylipw111cs01$

PLOTTED: 8/22/2022 7:10:50 PM



FOUNDATION 2 ELEVATION

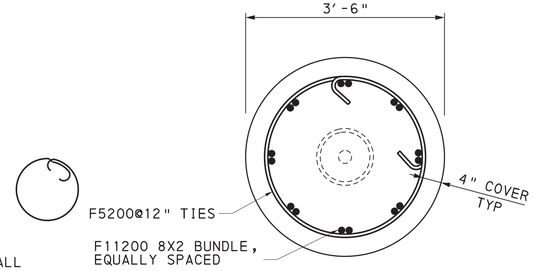
1 0 1 2 3 FEET



SECTION G-G

12 0 12 INCHES

(ROCK ANCHOR NOT SHOWN FOR CLARITY)



SECTION H-H

12 0 12 INCHES

(ROCK ANCHOR NOT SHOWN FOR CLARITY)

NOTES:

1. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT BE OVERLAPPED.
2. FOR ADDITIONAL SHAFT AND ROCK SOCKET INFORMATION, SEE THE SPECIAL PROVISIONS.
3. TUBES FOR CROSS-HOLE SONIC INTEGRITY TESTING NOT SHOWN. SEE THE SPECIAL PROVISIONS.

FOUNDATION 1 ROCK ANCHOR DESIGN DATA	
SHAFT	REQUIRED ROCK ANCHOR DESIGN FORCE (KIP)
B2	116
B4	116

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FOUNDATION DETAILS 4

RECOMMENDED _____

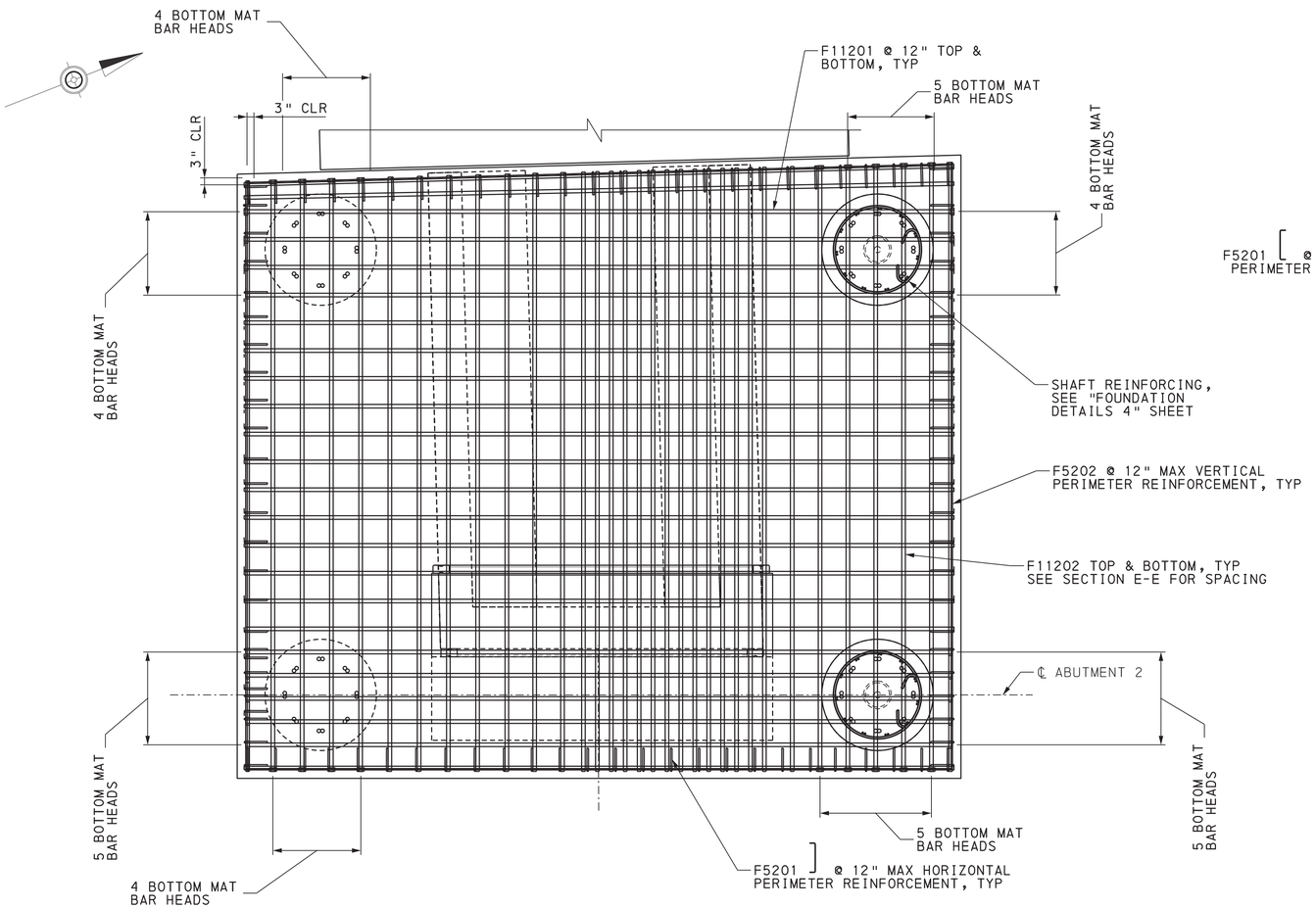
SHEET 28 OF 137

L-430

DES: GOR | DWN: AS | CKD: JL

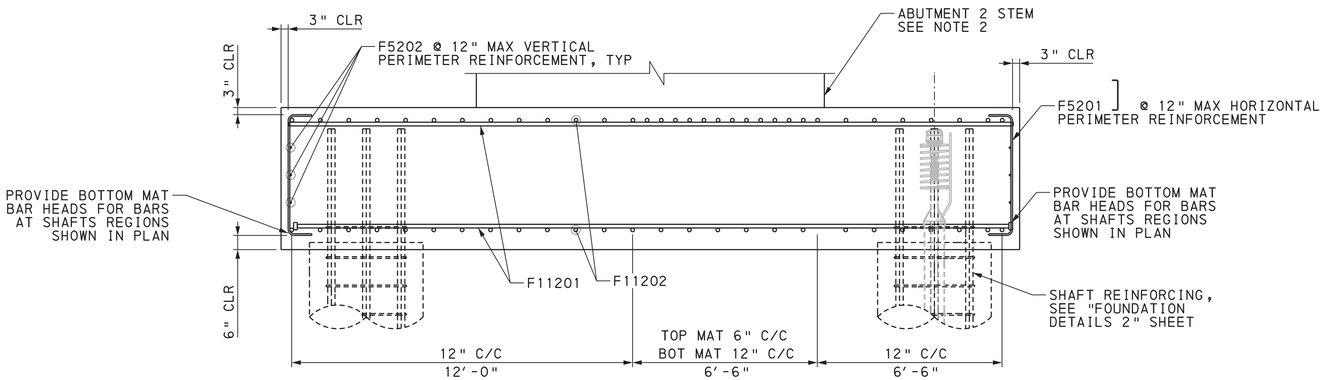
OPERATOR: tylipw11ics01$ FILENAME: SL43000280F0137.dgn

PLOTTED: 8/22/2022 7:16:42 PM



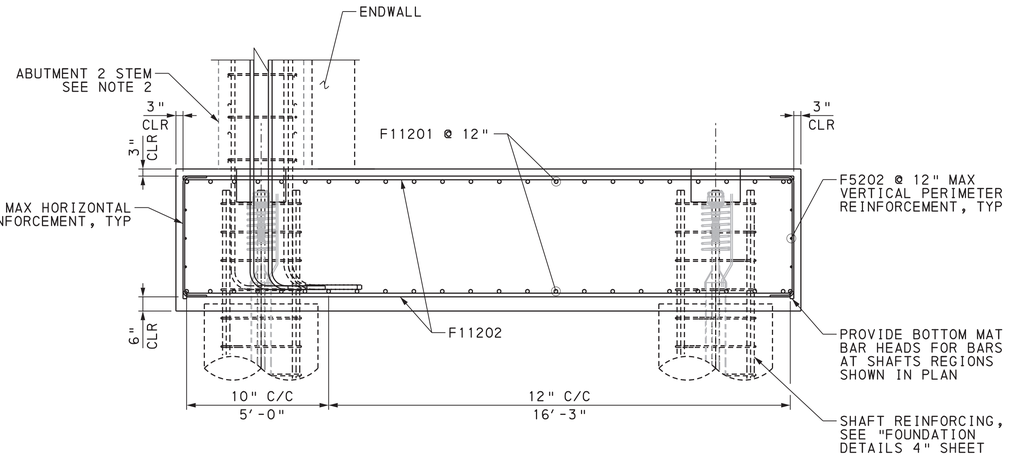
FOUNDATION 2 FOOTING PLAN REINFORCING

1 0 1 2 3 FEET



SECTION E-E

1 0 1 2 3 FEET



SECTION F-F

1 0 1 2 3 FEET

NOTES:

1. FOR "SECTION E-E" AND "SECTION F-F" LOCATION, SEE "FOUNDATION DETAILS 1" SHEET.
2. FOR ABUTMENT DETAILS NOT SHOWN, SEE "ABUTMENT 2 DETAILS 1" SHEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

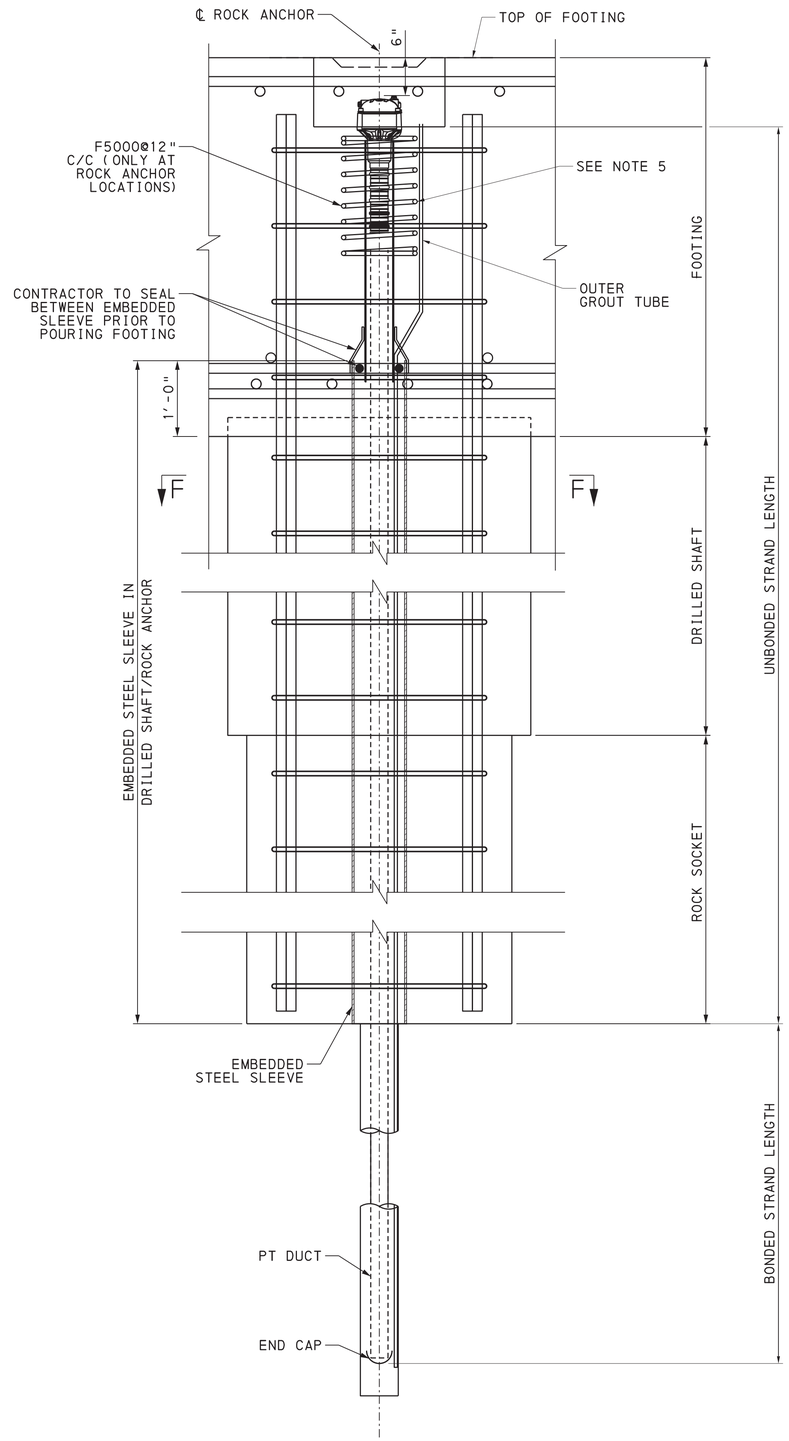
FOUNDATION DETAILS 5

RECOMMENDED

DES: JL | DWN: OMC | CKD: JL

FILENAME: SL4300029F0137.dgn
OPERATOR: tyllpwillics01$

PLOTTED: 8/22/2022 7:16:28 PM

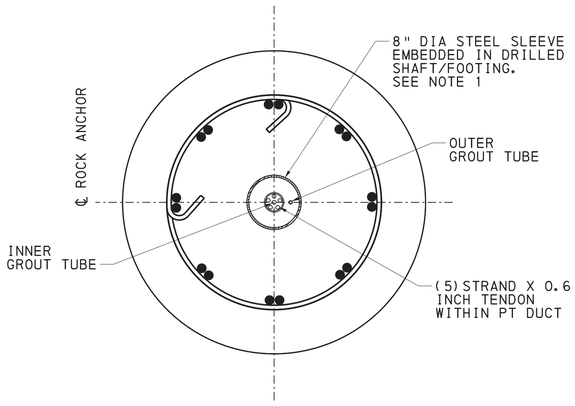


ROCK ANCHOR DETAIL

6 0 6 12 INCHES

ROCK ANCHOR CONSTRUCTION STAGING:

1. POUR SHAFT/ROCK SOCKET.
2. DRILL OUT ROCK ANCHOR THROUGH EMBEDDED SLEEVE.
3. PLACE ROCK ANCHOR AND VERIFY FOOTING REINFORCEMENT DOES NOT INTERFERE WITH STRAND JACKING PRIOR TO POURING THE FOOTING.
4. POUR THE GROUT IN THE VOID BETWEEN THE ENCAPSULATED ROCK ANCHOR AND THE SURROUNDING ROCK/EMBEDDED SLEEVE.
5. POUR LOWER PORTION OF INTERIOR GROUT WITHIN ENCAPSULATED ROCK ANCHOR FOR THE BONDED LENGTH.
6. VERIFY ROCK ANCHOR TENSION.
7. POUR REMAINDER OF INTERIOR GROUT WITHING ENCAPSULATED ROCK ANCHOR.
8. AT FOUNDATION 1, BACKFILL BLOCKOUT WITH CLASS A CEMENT CONCRETE, MODIFIED, WITH ABUTMENT STEM POUR. AT FOUNDATION 2, BACKFILL BLOCKOUT WITH NONSHRINK GROUT.



SECTION F-F

6 0 6 12 INCHES

PRESTRESSING NOTES:

1. PROVIDE 0.6 INCH DIAMETER PRESTRESSING STEEL STRAND CONFORMING TO ASTM A 416, GRADE 270 FOR LOW RELAXATION STRANDS.
2. PROVIDE (5) 0.6" DIAMETER STRANDS PER TENDON.
3. STRANDS SHALL CONFORM TO SAME REQUIREMENTS AS PROVIDED ON "GENERAL NOTES 2" SHEET, SECTION 5.3.
4. ANCHOR SET = 3/8".
5. REQUIRED MINIMUM ROCK ANCHOR DESIGN FORCE (T) AND MINIMUM ROCK ANCHOR BONDED LENGTH PER FOUNDATION SHEETS 02 & 04.
6. T=ROCK ANCHOR DESIGN FORCE (STRENGTH LIMIT STATE).
7. PTI CLASS I CORROSION PROTECTION SHALL BE PROVIDED.

NOTES:

1. CONTRACTOR TO FIELD VERIFY UNDERGROUND UTILITY LOCATIONS PRIOR TO PLACING ROCK ANCHOR AND ASSOCIATED REINFORCEMENT.
2. PROVIDE BLOCKOUTS AT TOP OF FOOTING PER SUPPLIER REQUIREMENTS "BACKFILL BLOCKOUT AT FOUNDATION 1 CLASS A, 6 KSI CONCRETE DURING ABUTMENT 1 STEM POUR. BACKFILL BLOCKOUT AT FOUNDATION 2 WITH NONSHRINK GROUT".
3. LOCK-OFF FORCE FOR ROCK ANCHOR = 100% OF T
4. PRESTRESSING SYSTEM SHOWN IS DESCRIPTIVE ONLY. IT IS INTENDED TO DESCRIBE THE MINIMUM LEVEL OF CORROSION PROTECTION IN THE BONDED AND UNBONDED PORTIONS OF THE ANCHOR. THE ENGINEER WILL APPROVE THE ACTUAL SYSTEM BASED ON ITS ABILITY TO PROVIDE THE SAME LEVEL OR EXCEED THE LEVEL OF PROTECTION SHOWN ON THIS SHEET.
5. LOCAL ZONE REINFORCEMENT STEEL PER SUPPLIER.
6. SECONDARY STAGE GROUT SHALL NOT BE PLACED UNTIL ALL OF THE ROCK ANCHORS HAVE BEEN ACCEPTED BY THE ENGINEER.
7. THE ROCK ANCHORS SHALL BE STRESSED AND TESTED PRIOR TO POURING OF ABUTMENT STEM.
8. TRANSVERSE BARS WITHIN BLOCKOUT MAY BE SHIFTED TO CLEAR TO ALLOW FOR JACKING OF STRANDS. VERIFY ADEQUATE CLEARANCE BEFORE POURING FOOTING.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FOUNDATION DETAILS 6

RECOMMENDED _____

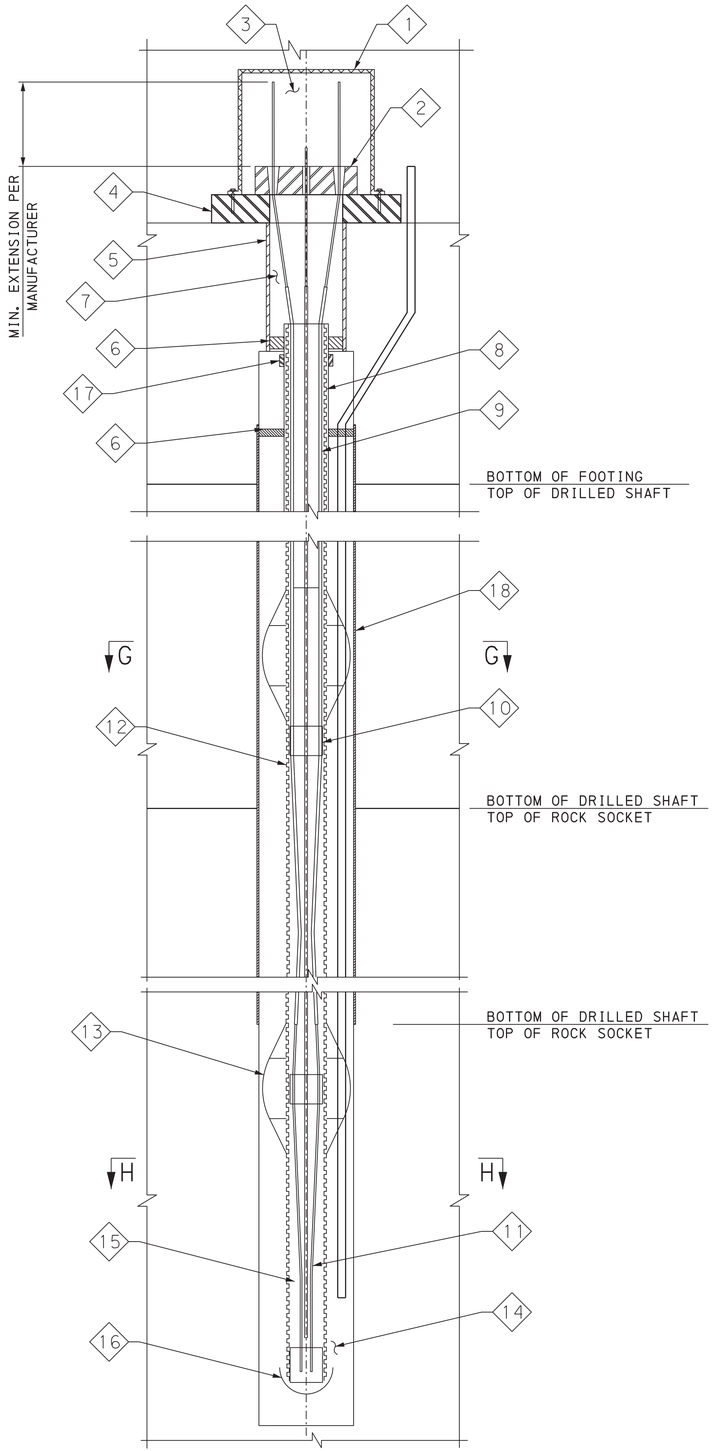
SHEET 30 OF 137

L-430

DES: GOR | DWN: AS | CKD: JL

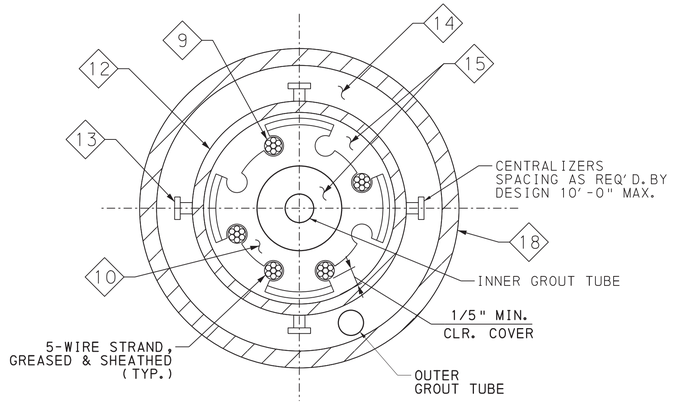
OPERATOR: tylipwilliccs01$ FILENAME: SL43000300F0137.dgn

PLOTTED: 8/22/2022 7:11:11 PM



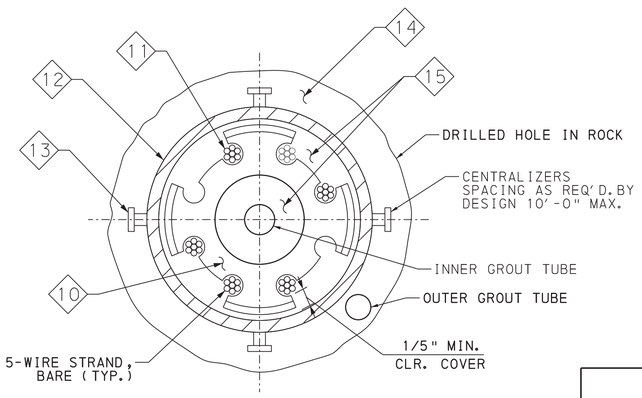
ROCK ANCHOR DETAILS

6 0 6 12 INCHES



SECTION G-G
NOT TO SCALE

STRAND TENDON
UNBONDED STRESSING LENGTH
WITH EMBEDDED STEEL SLEEVE
INSIDE DRILLED SHAFT/ROCK ANCHOR



SECTION H-H
NOT TO SCALE

STRAND TENDON
BONDED LENGTH
WITHIN ROCK LAYER

ENCAPSULATED STRAND

1. ANCHORAGE COVER
2. ANCHOR HEAD AND WEDGES
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. SEAL
7. ANTICORROSION GREASE
8. TENSION RING TO RESIST SPLITTING FORCE OF DEFLECTED STRANDS
9. INDIVIDUALLY GREASED AND SHEATHED STRAND
10. SPACER
11. STRAND TENDON
12. CORRUGATED PVC
13. CENTRALIZER
14. ANCHOR GROUT
15. ENCAPSULATION GROUT
16. END CAP
18. EMBEDDED STEEL SLEEVE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

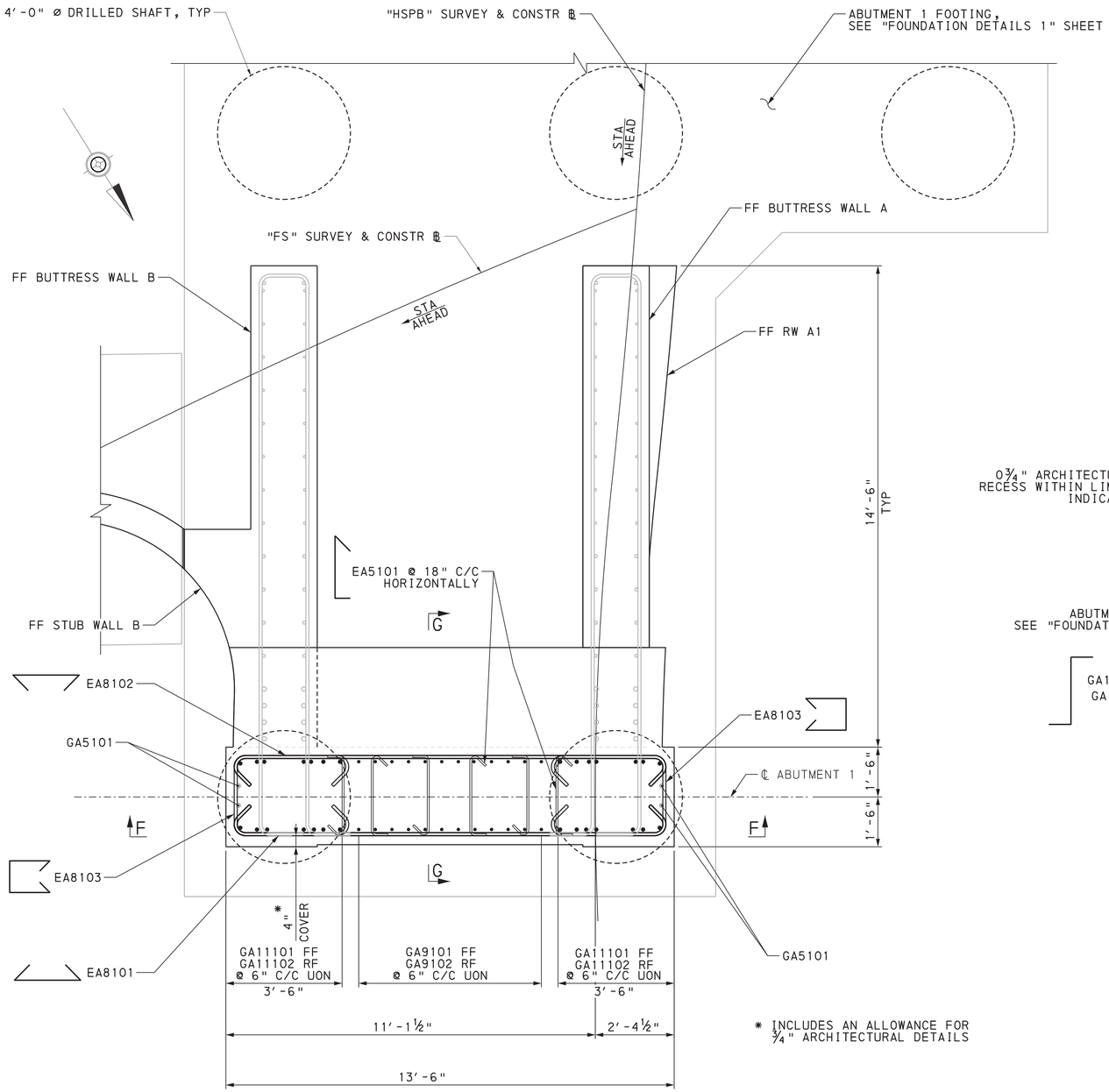
FOUNDATION DETAILS 7

RECOMMENDED

DES: GOR | DWN: YW | CKD: JL

OPERATOR: tylpw111cs01$ FILENAME: SL430003 10F0137.dgn

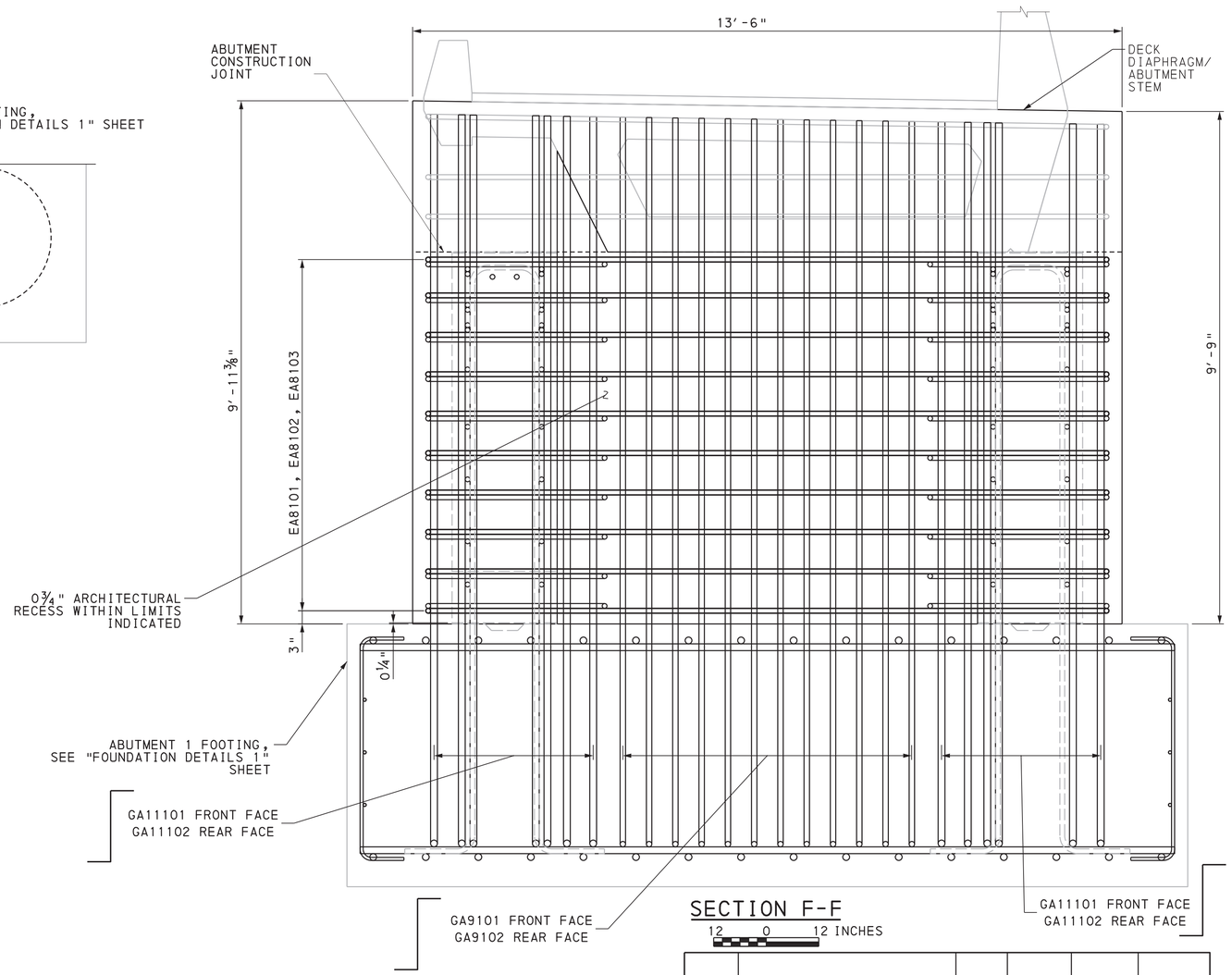
PLOTTED: 8/22/2022 7:15:27 PM



* INCLUDES AN ALLOWANCE FOR ¾" ARCHITECTURAL DETAILS

FOUNDATION 1 ABUTMENT 1 PLAN

1 0 1 2 FEET



SECTION F-F

12 0 12 INCHES

NOTES:

1. FOR SECTION G-G, SEE "ABUTMENT 1 DETAILS 1" SHEET.
2. PROVIDE 3" CLEAR COVER UNLESS OTHERWISE NOTED.
3. DRILLED SHAFT NOT SHOWN FOR CLARITY.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 1 LAYOUT

RECOMMENDED _____

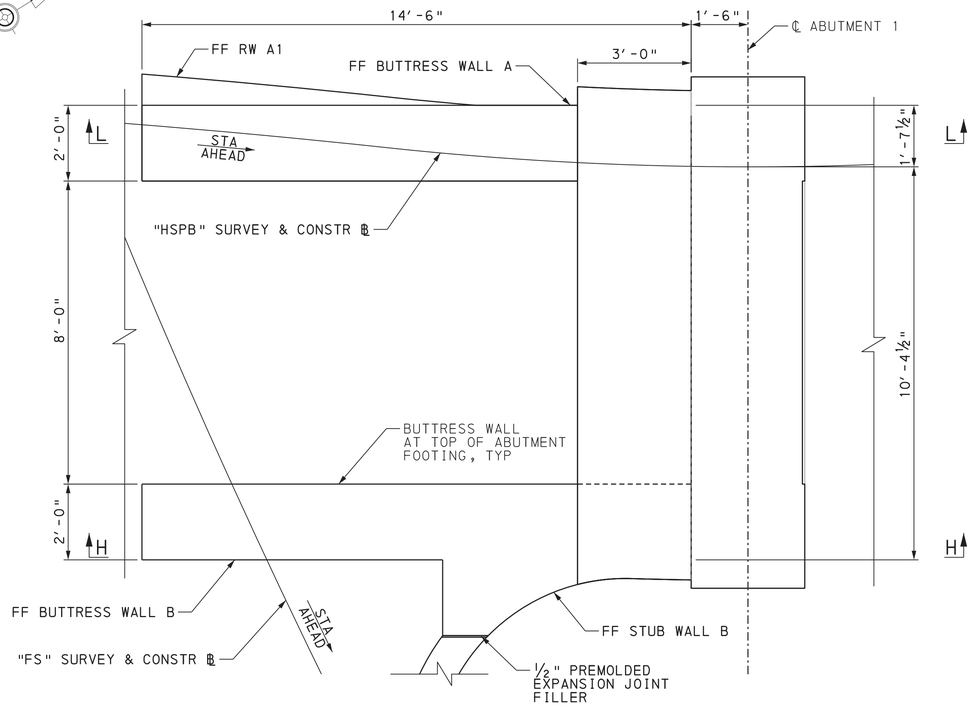
SHEET 32 OF 137

L-430

DES: JL | DWN: RJS | CKD: JL

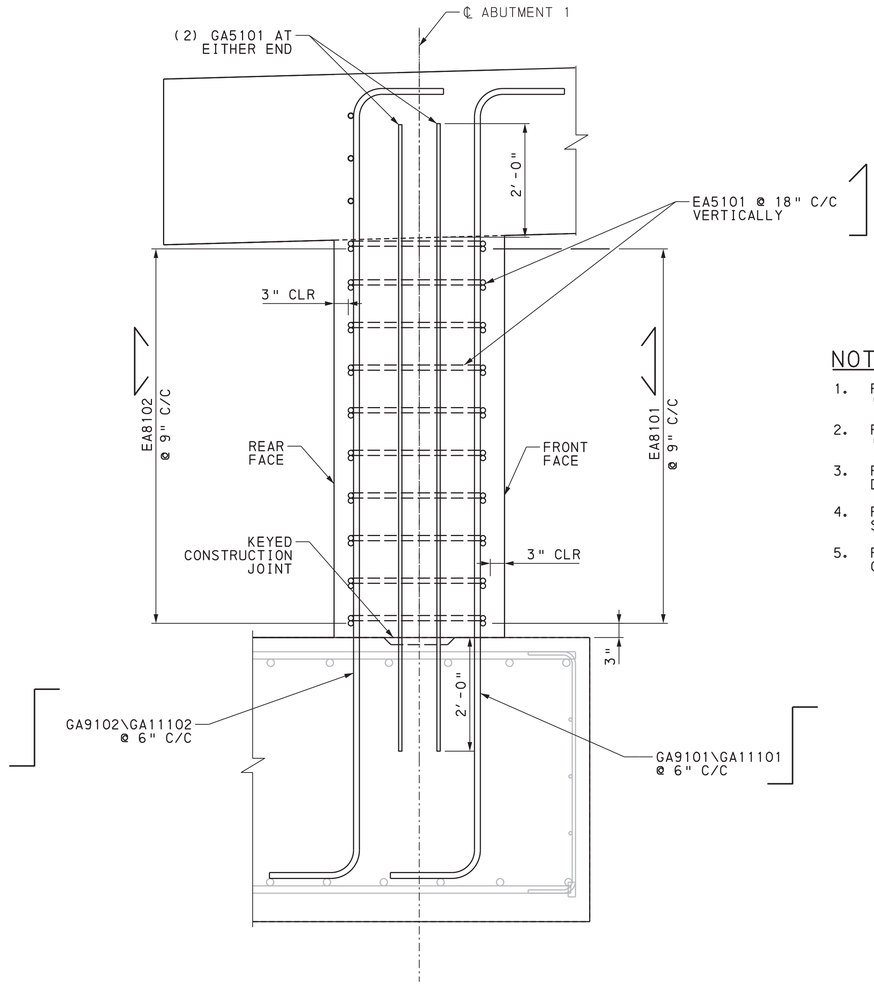
OPERATOR: tylipw11ics01$ FILENAME: SL43000320F0137.dgn

PLOTTED: 8/22/2022 7:13:21 PM



FOUNDATION 1 BUTTRESS WALL PLAN

1 0 1 2 FEET



SECTION G-G

12 0 12 INCHES

NOTES:

1. FOR SECTION G-G LOCATION, SEE "ABUTMENT 1 LAYOUT" SHEET.
2. FOR SECTION H-H, SEE "ABUTMENT 1 DETAILS 2" SHEET.
3. FOR SECTION L-L, SEE "ABUTMENT 1 DETAILS 3" SHEET.
4. FOR ABUTMENT 1 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 1" SHEET.
5. PROVIDE 3" CLEAR COVER UNLESS OTHERWISE NOTED.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 1 DETAILS 1

RECOMMENDED _____

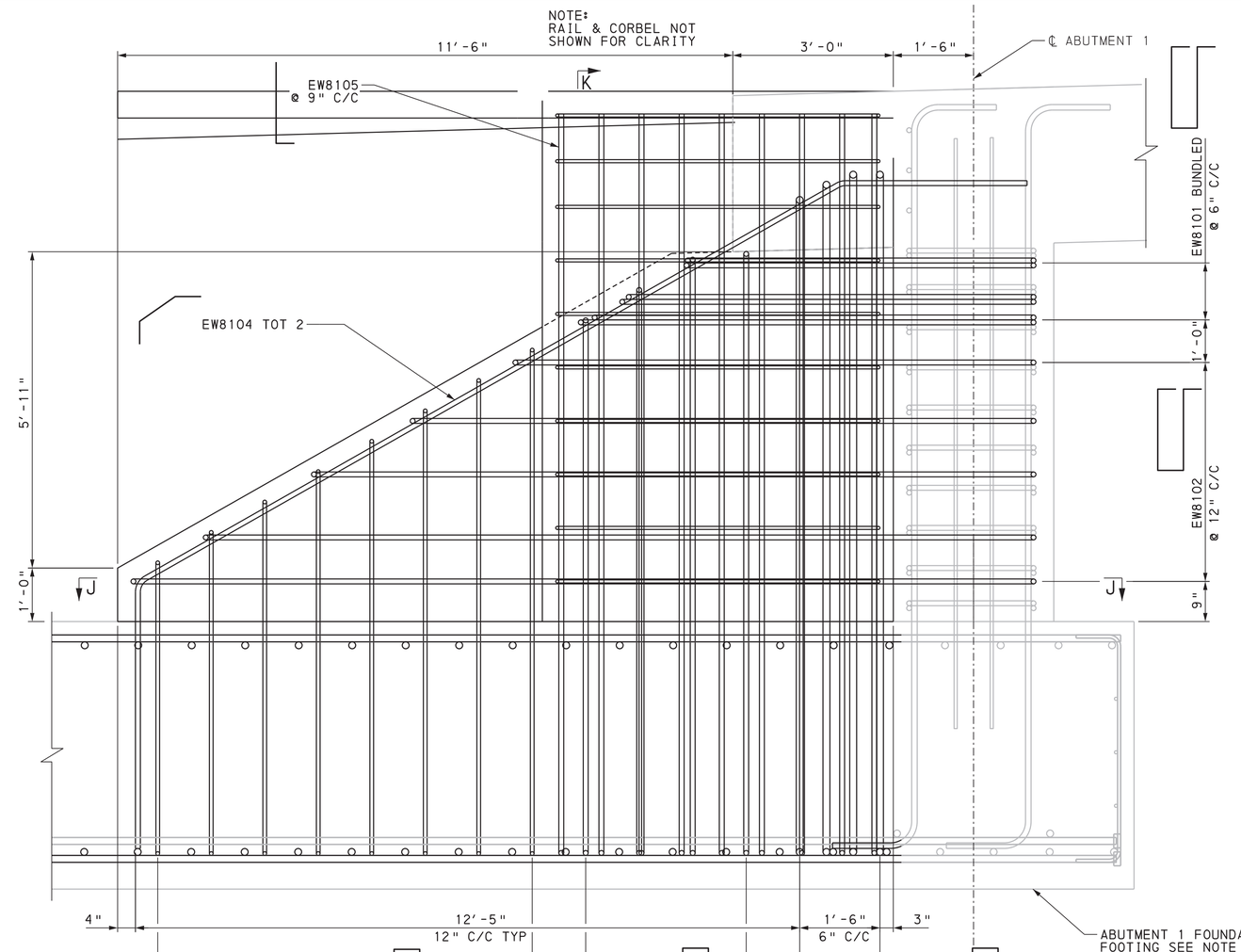
SHEET 33 OF 137

L-430

DES: JL | DWN: RJS | CKD: JL

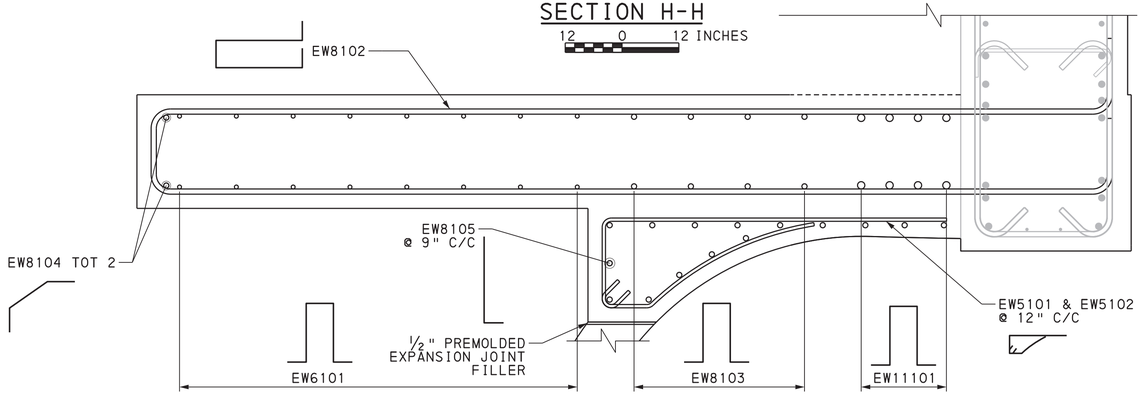
OPERATOR: tyllpw111cs01$ FILENAME: SL43000330F0137.dgn

PLOTTED: 8/22/2022 7:08:58 PM



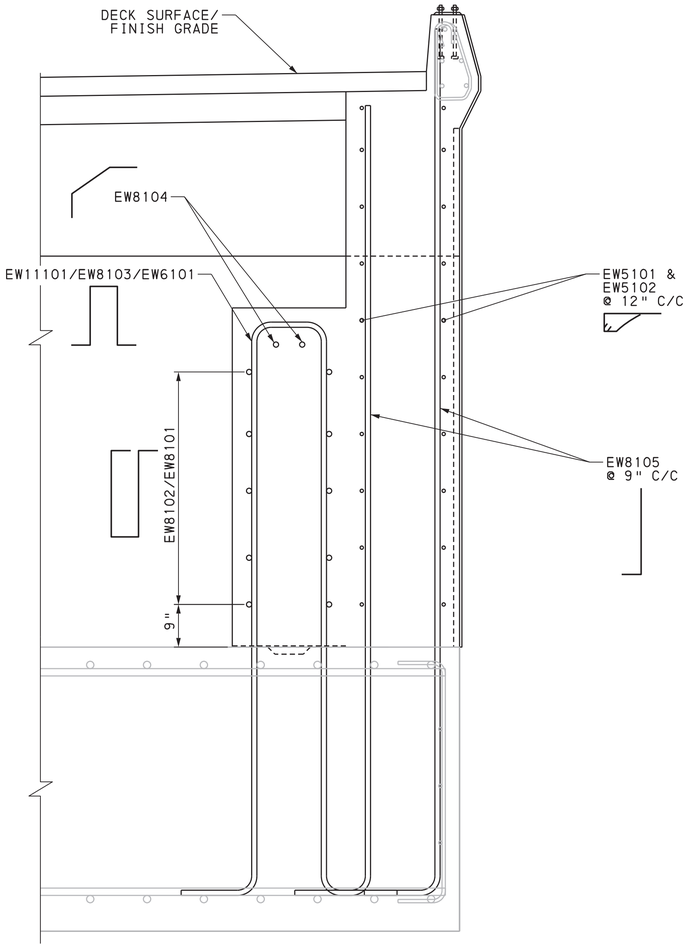
SECTION H-H

12 0 12 INCHES



SECTION J-J

12 0 12 INCHES



SECTION K-K

12 0 12 INCHES

NOTES:

1. FOR SECTION H-H LOCATION, SEE "ABUTMENT 1 DETAILS 1" SHEET.
2. FOR ABUTMENT 1 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 1" SHEET.
3. PROVIDE 3" CLEAR COVER UNLESS NOTED OTHERWISE.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 1 DETAILS 2

RECOMMENDED

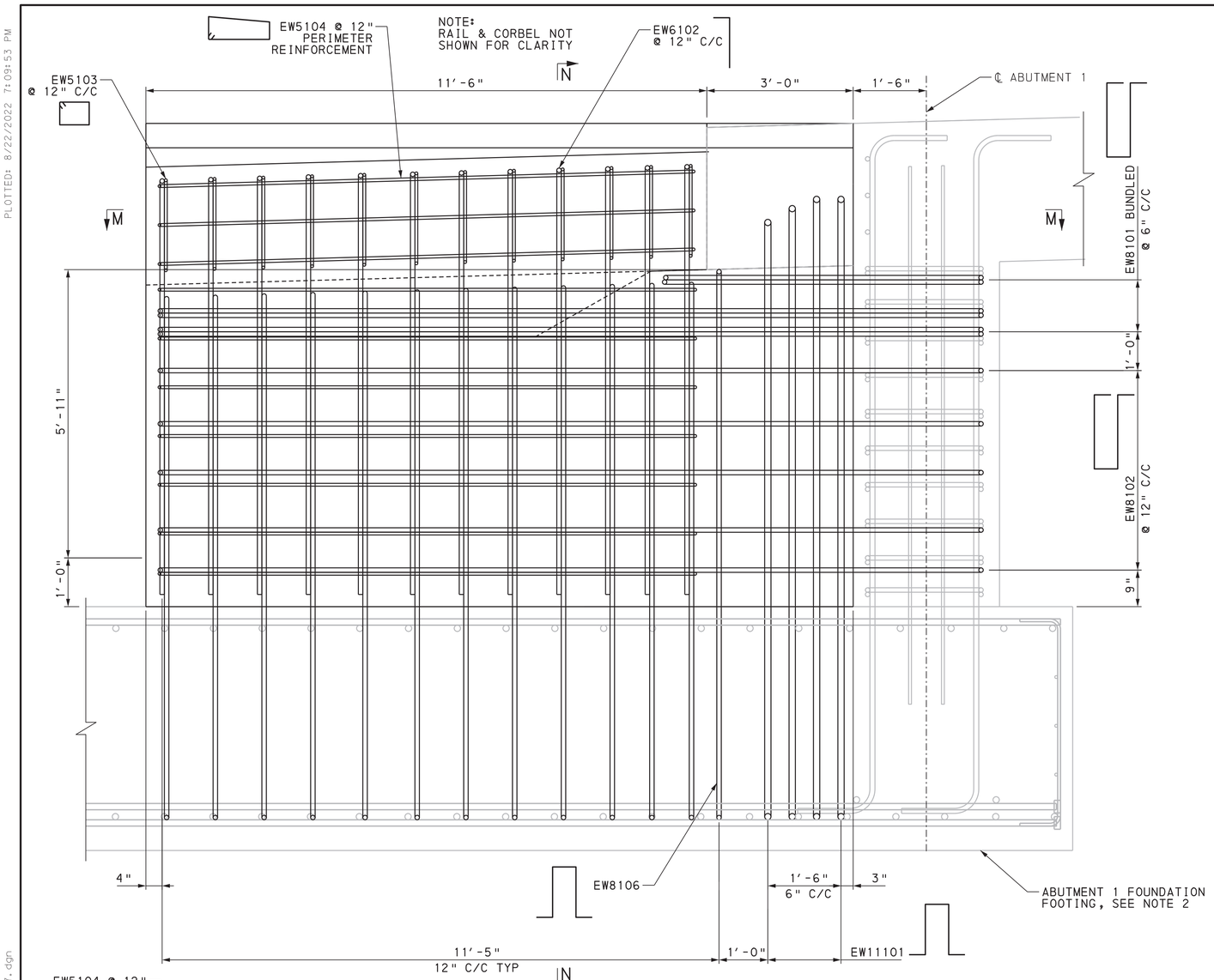
SHEET 34 OF 137

L-430

DES: JL | DWN: OMC | CKD: JL

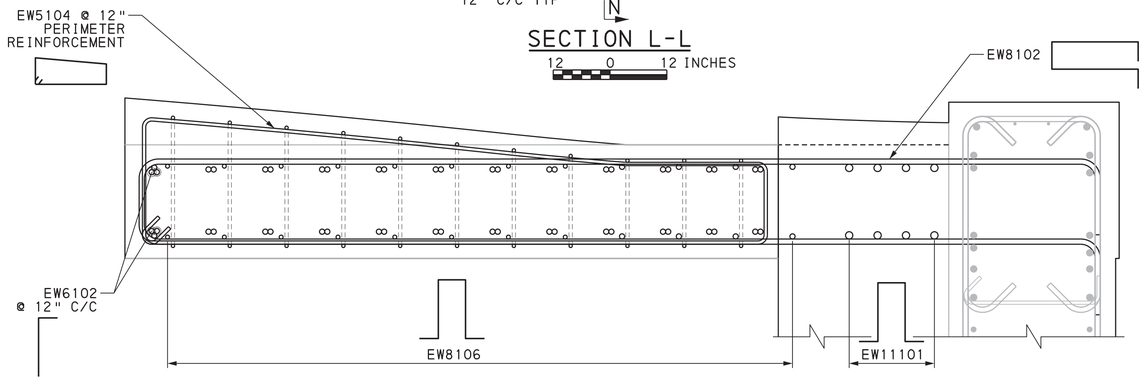
OPERATOR: tylipw111cs01$ FILENAME: SL430003340F0137.dgn

PLOTTED: 8/22/2022 7:09:53 PM



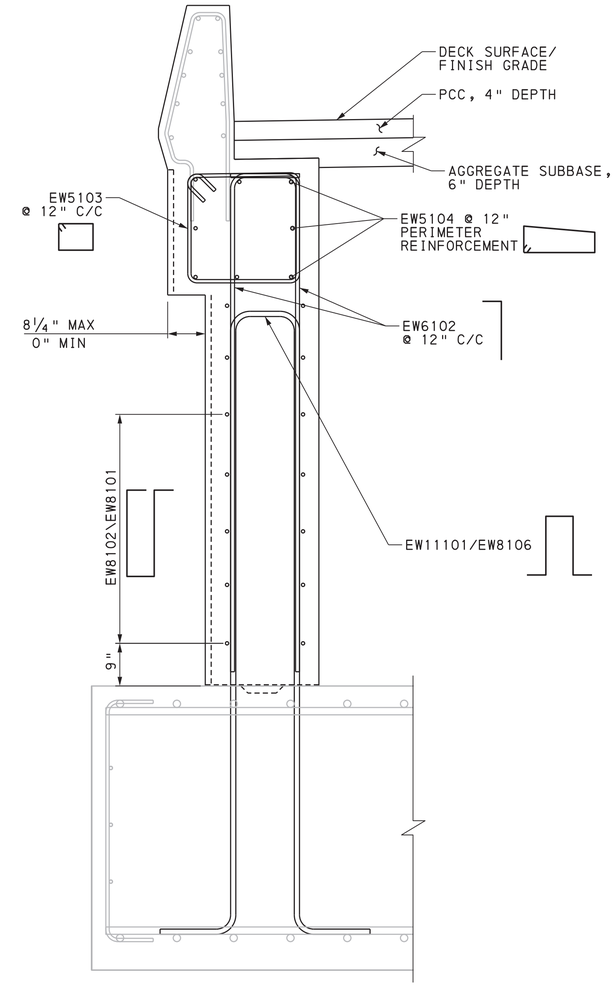
SECTION L-L

12 0 12 INCHES



SECTION M-M

12 0 12 INCHES



SECTION N-N

12 0 12 INCHES

NOTES:

1. FOR SECTION L-L LOCATION, SEE "ABUTMENT 1 DETAILS 1" SHEET.
2. FOR ABUTMENT 1 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 1" SHEET.
3. PROVIDE 3" CLEAR COVER UNLESS NOTED OTHERWISE.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 1 DETAILS 3

RECOMMENDED _____

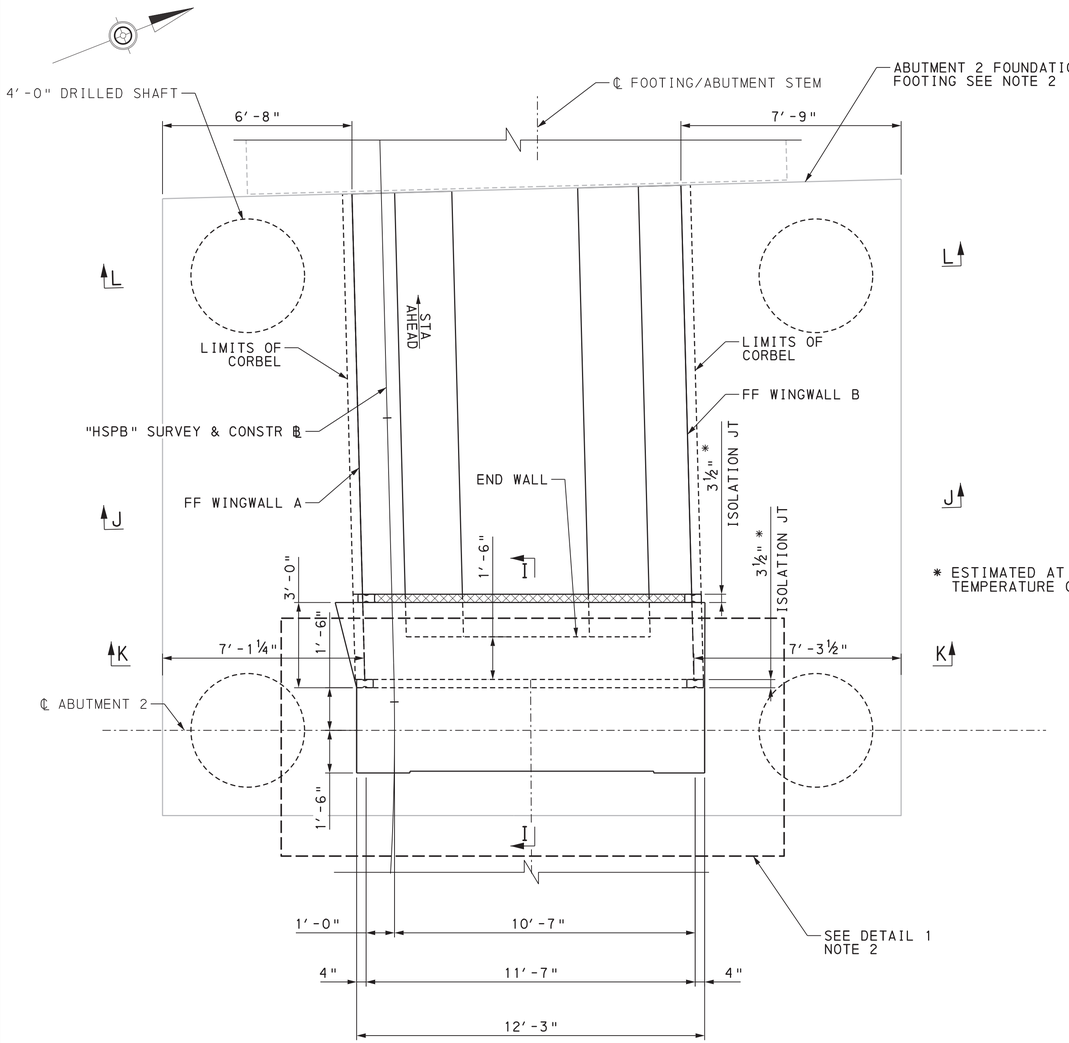
SHEET 35 OF 137

L-430

DES: JL | DWN: OMC | CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL43000350F0137.dgn

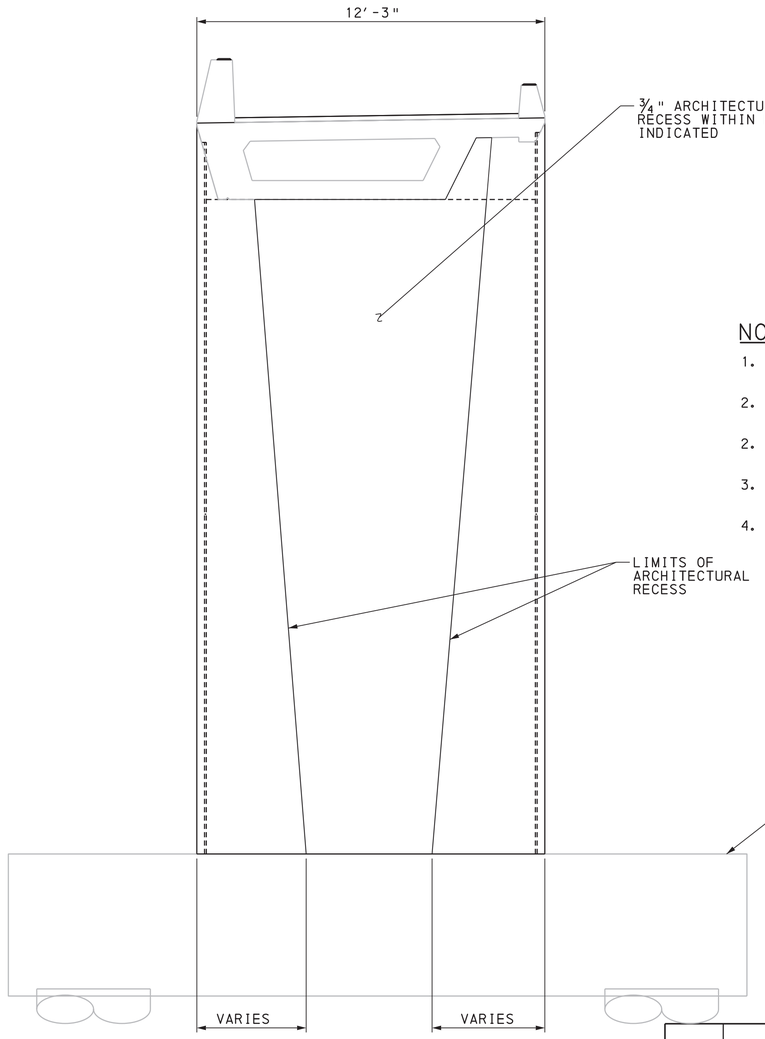
PLOTTED: 8/22/2022 7:14:35 PM



* ESTIMATED AT NEUTRAL TEMPERATURE OF 68°F.

FOUNDATION 2 ABUTMENT 2 PLAN

1 0 1 2 3 FEET



FOUNDATION 2 ABUTMENT 2 ELEVATION

1 0 1 2 3 FEET

NOTES:

1. FOR SECTION I-I AND SECTION J-J, SEE "ABUTMENT 2 DETAILS 1" SHEET.
2. FOR DETAIL 1, SEE "ABUTMENT 2 DETAILS 2" SHEET.
2. FOR SECTION L-L, SEE "ABUTMENT 2 DETAILS 3" SHEET.
3. FOR SECTION K-K, SEE "ABUTMENT 2 DETAILS 4" SHEET.
4. FOR ABUTMENT 2 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 2" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 2 LAYOUT

RECOMMENDED _____

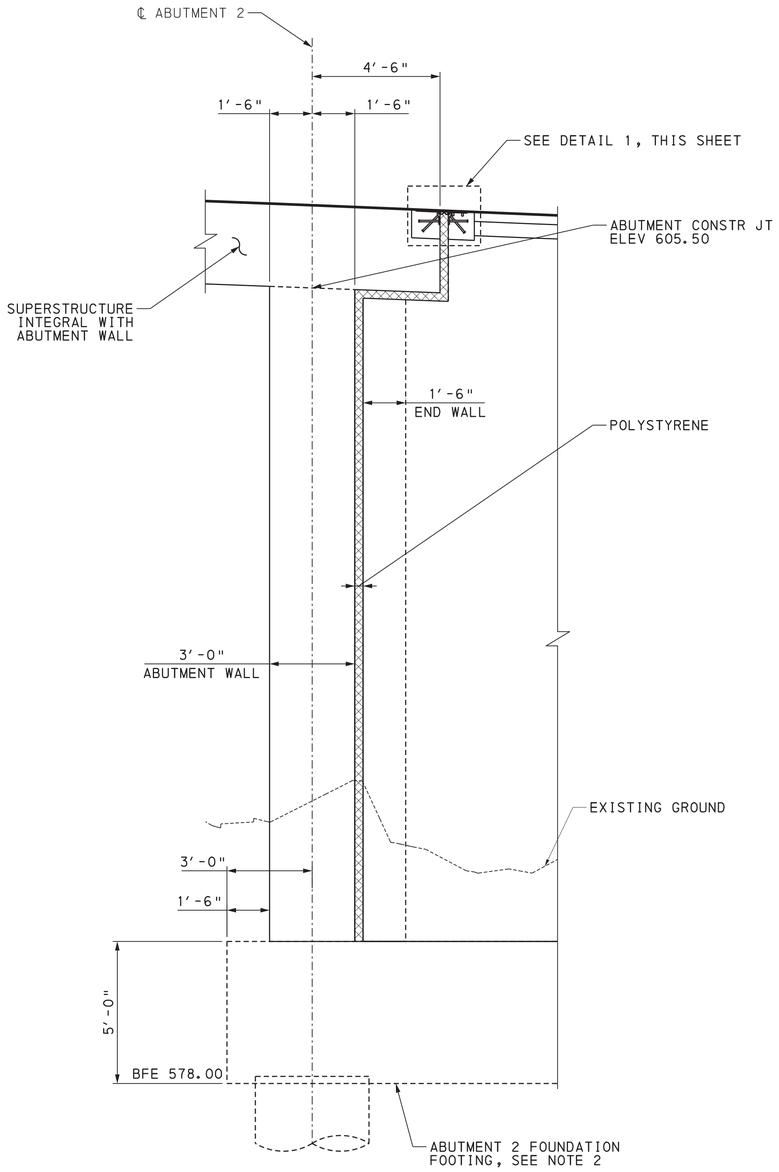
SHEET 36 OF 137

L-430

DES: JL	DWN: RJS	CKD: JL

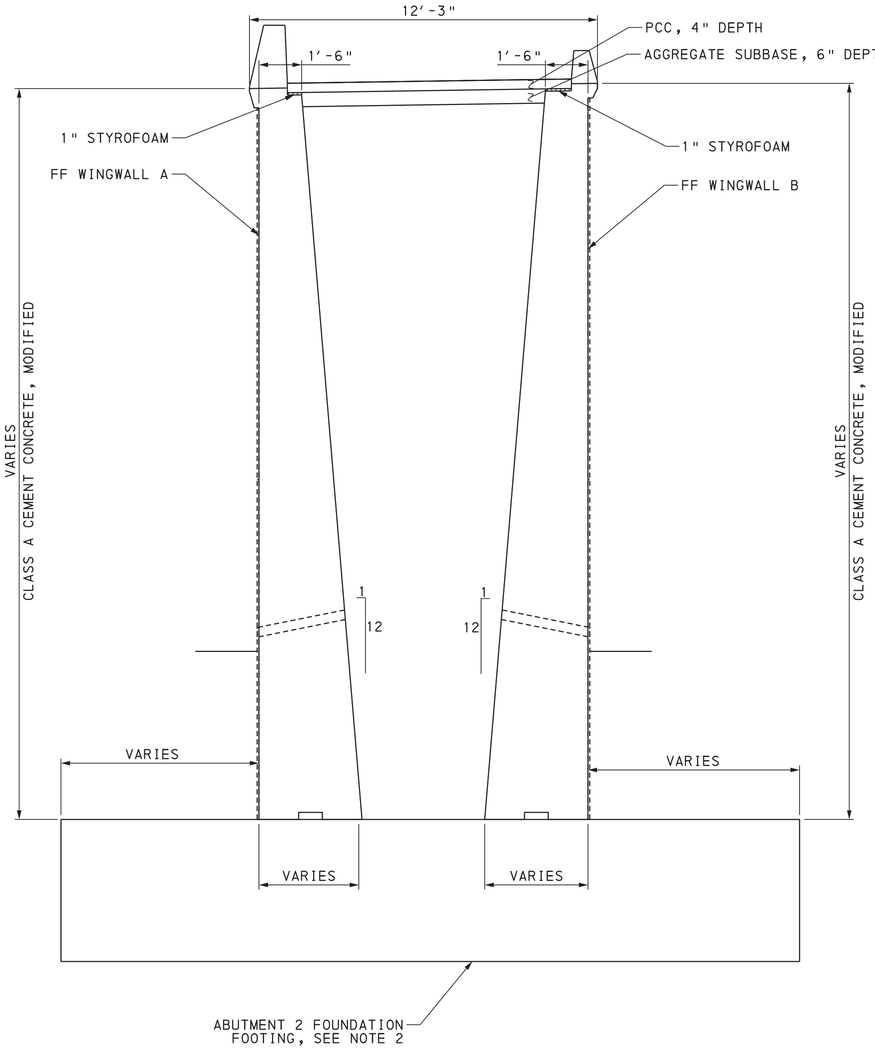
OPERATOR: tylipw11cs01$ FILENAME: SL4300036F0137.dgn

PLOTTED: 8/22/2022 7:12:33 PM



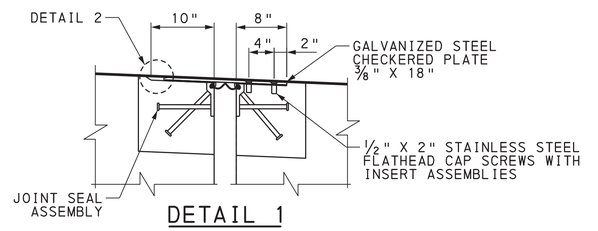
SECTION I-I

1 0 1 2 3 FEET



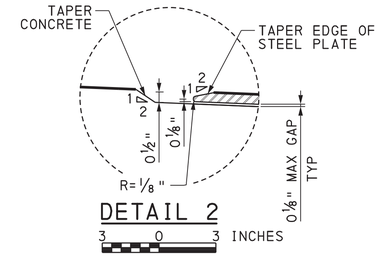
SECTION J-J

1 0 1 2 3 FEET



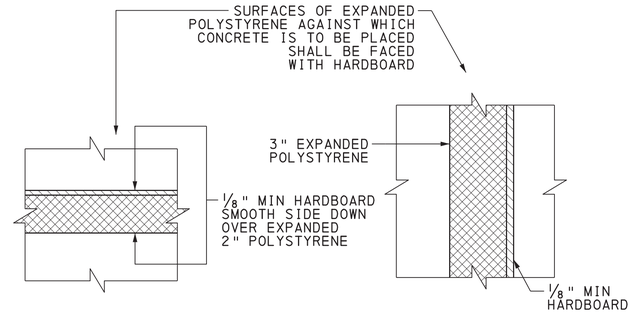
DETAIL 1

6 0 6 12 INCHES



DETAIL 2

3 0 3 INCHES



PROTECTION OF HORIZONTAL POLYSTYRENE

3 0 3 INCHES

PROTECTION OF VERTICAL POLYSTYRENE

3 0 3 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

NOTES:

1. FOR SECTION I-I & SECTION J-J LOCATION, SEE "ABUTMENT 2 LAYOUT" SHEET.
2. FOR ABUTMENT 2 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 2" SHEET .

DES: JL | DWN: RJS | CKD: JL

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 2 DETAILS 1

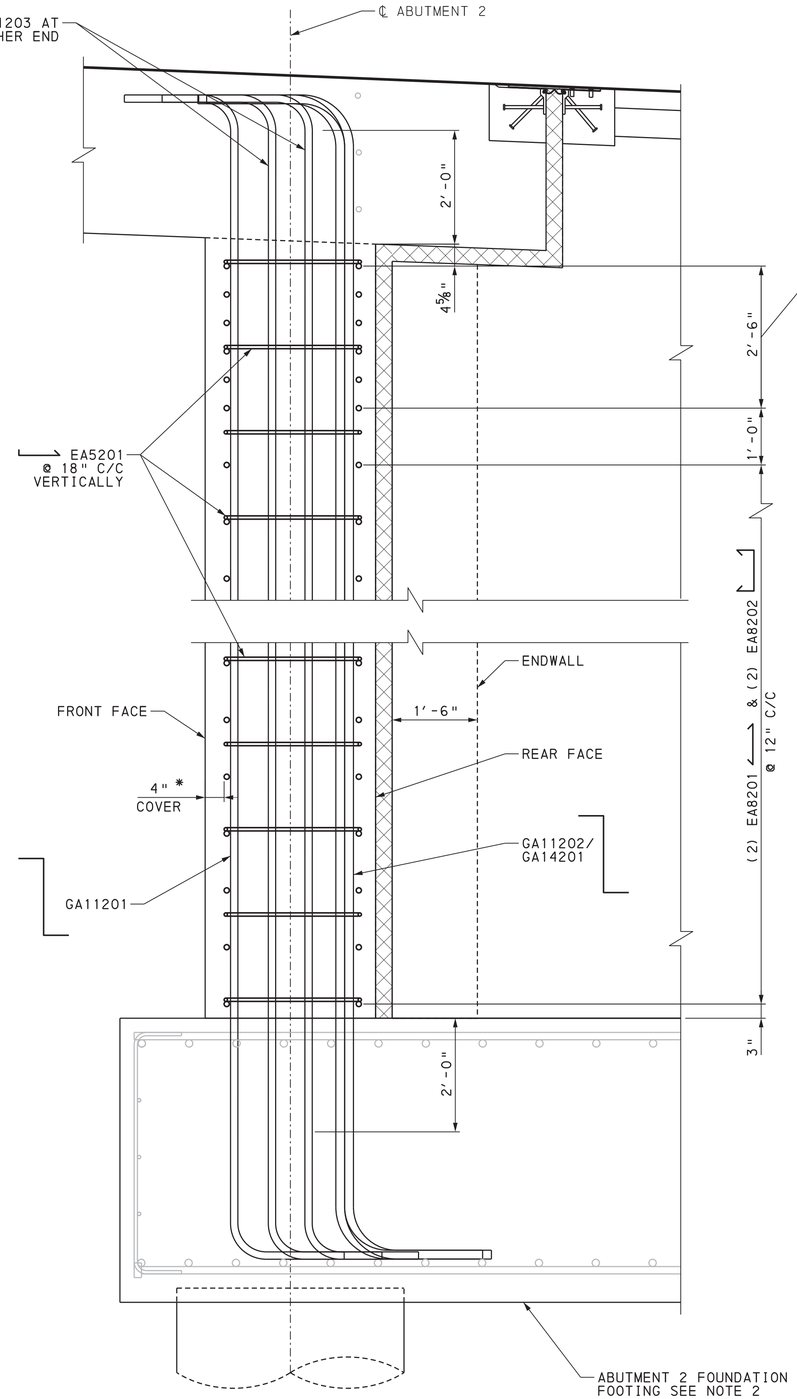
RECOMMENDED _____

SHEET 37 OF 137

L-430

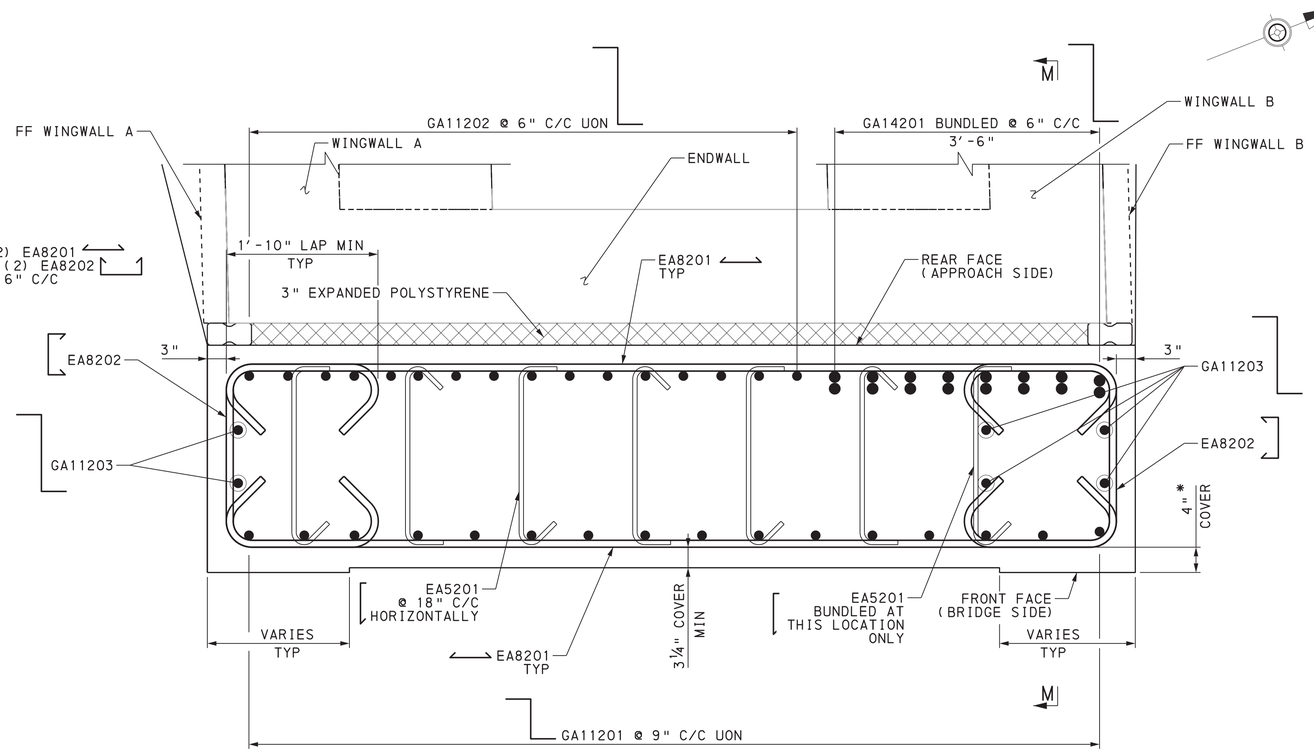
FILENAME: SL43000370F0137.dgn
OPERATOR: tylipwllics01$

PLOTTED: 8/22/2022 7:09:18 PM



SECTION M-M

6 0 6 12 INCHES



DETAIL 1

6 0 6 12 INCHES

NOTE:

1. MIDHEIGHT OF ABUTMENT WALL SHOWN.

* INCLUDES AN ALLOWANCE FOR ¾" ARCHITECTURAL DETAILS

NOTES:

1. FOR DETAIL 1 LOCATION, SEE "ABUTMENT 2 LAYOUT" SHEET.
2. FOR ABUTMENT 2 FOUNDATION FOOTING SEE "FOUNDATION DETAILS 2" SHEET.
3. PROVIDE 3" CLEAR COVER UNLESS NOTED OTHERWISE.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

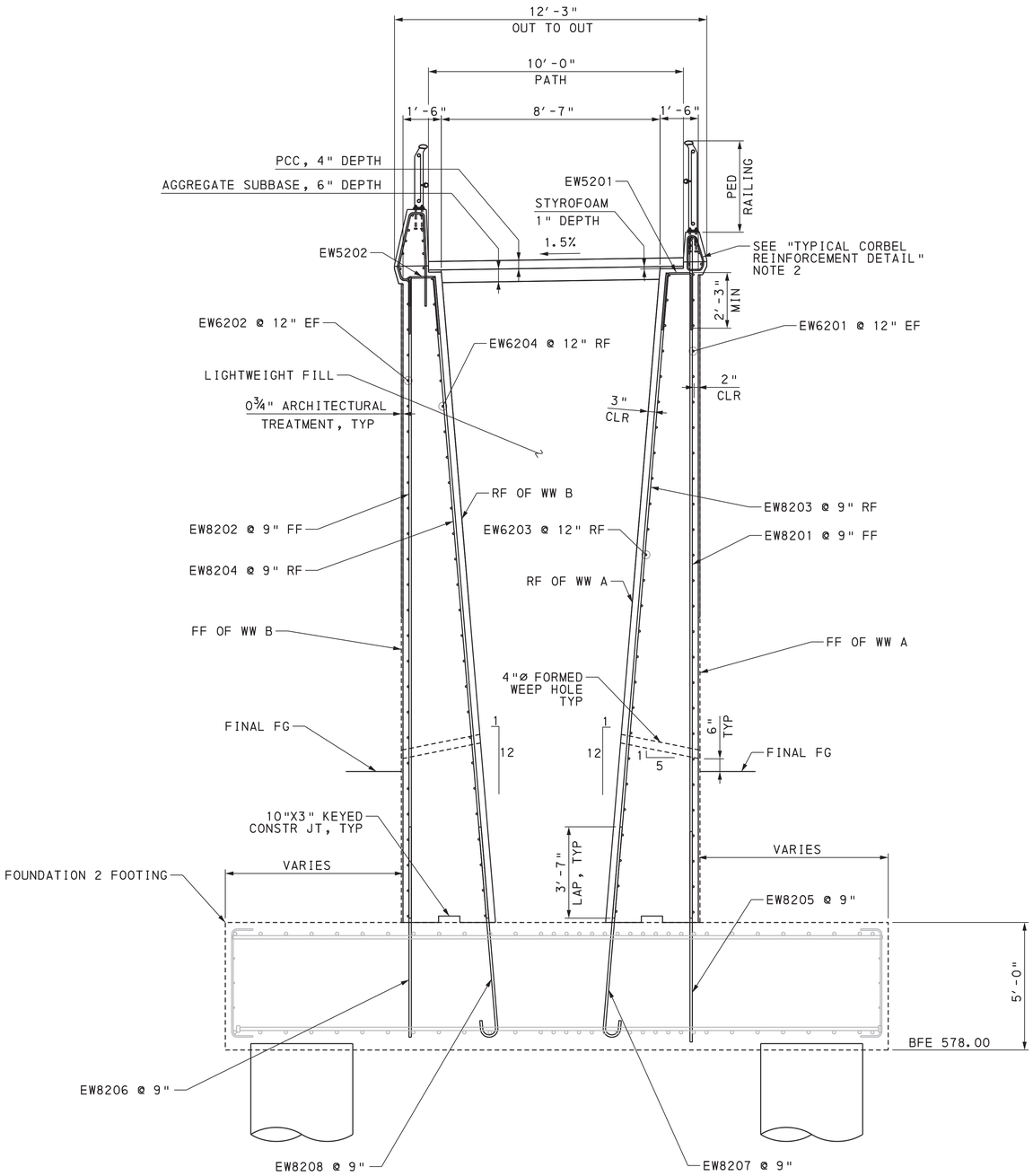
ABUTMENT 2 DETAILS 2

RECOMMENDED _____

DES: JL | DWN: OMC | CKD: JL

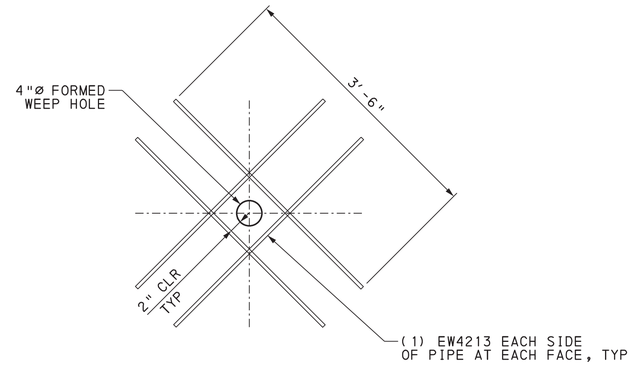
OPERATOR: tyllpwillics01$ FILENAME: SL43000380F0137.dgn

PLOTTED: 8/22/2022 7:10:39 PM
FILENAME: SL43000390F0137.dgn
OPERATOR: tyllpw111cs01$



SECTION L-L

1 0 1 2 3 FEET



WEEP HOLE REINFORCEMENT DETAIL

6 0 6 12 INCHES

NOTES:

1. PROVIDE WEEP HOLES AT BOTH WALLS AT THE FOLLOWING "HSPB" STA: 14+54.75 & 14+63.83
2. FOR TYPICAL CORBEL REINFORCEMENT DETAILS, SEE "NORTH WALL TYPICAL SECTION & ELEVATION 1" SHEET.
3. 4" PCC SLAB ON GRADE WITH #4 @ 12" ON BOTH DIRECTIONS, TYPICAL UNLESS NOTED OTHERWISE.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 2 DETAILS 3

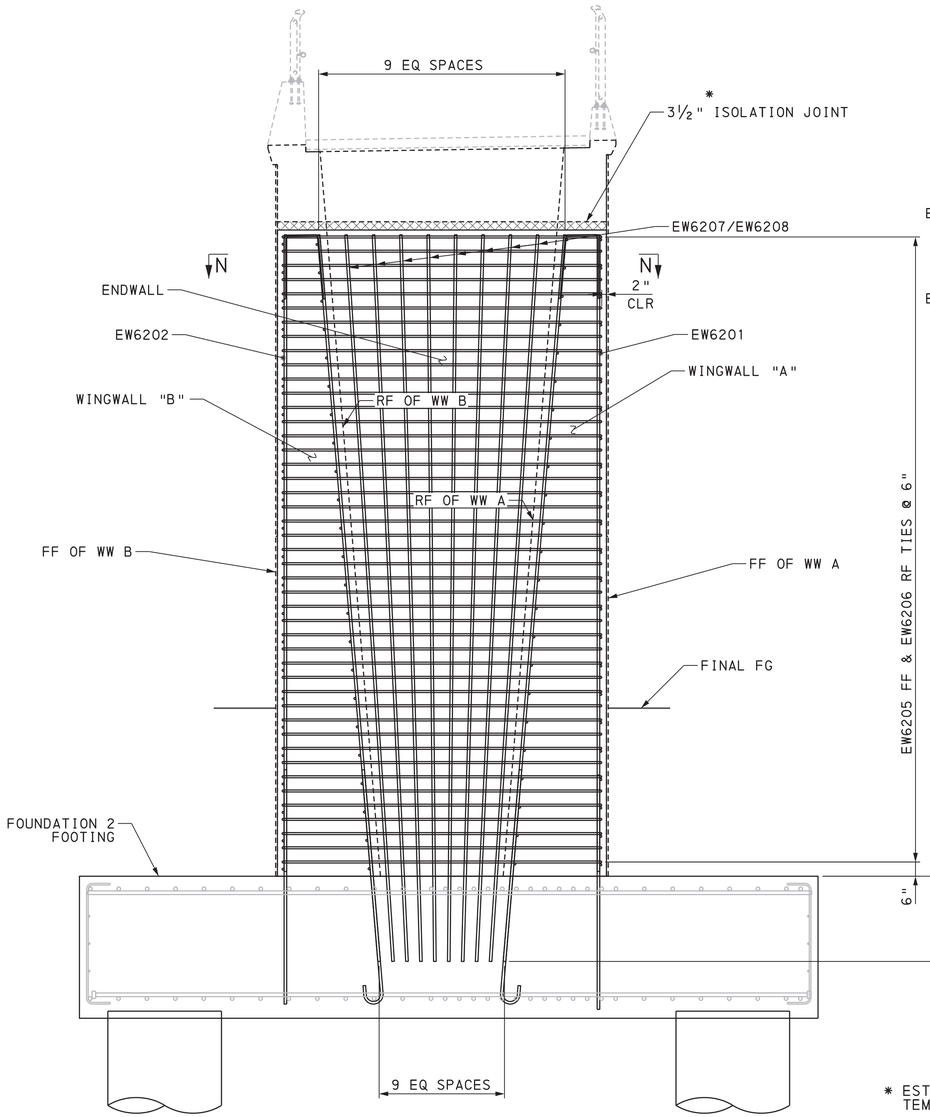
RECOMMENDED

SHEET 39 OF 137

L-430

DES: GO | DWN: OMC | CKD: JL

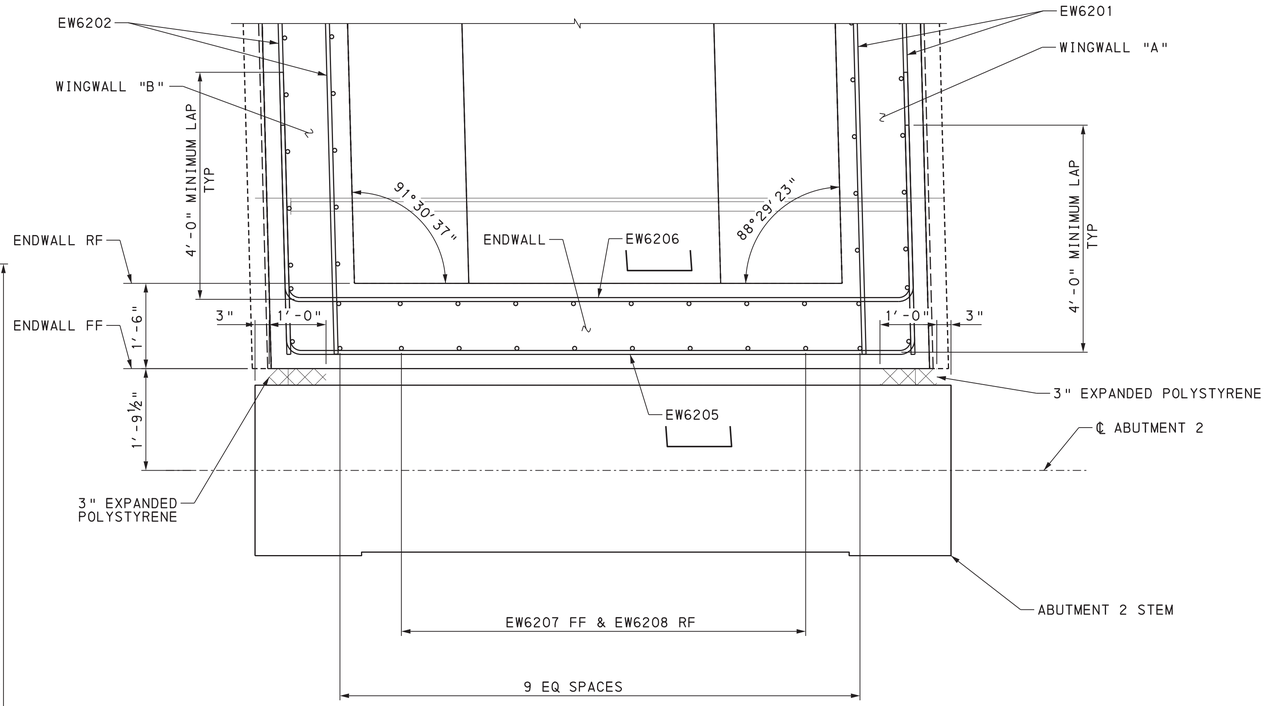
PLOTTED: 8/22/2022 7:10:47 PM



* ESTIMATED AT NEUTRAL TEMPERATURE OF 68°F.

SECTION K-K

1 0 1 2 3 FEET



SECTION N-N

12 0 12 INCHES

NOTES:

1. FOR ABUTMENT 2 WINGWALL REINFORCING NOT SHOWN, SEE "ABUTMENT 2 DETAILS 3" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUTMENT 2 DETAILS 4

RECOMMENDED _____

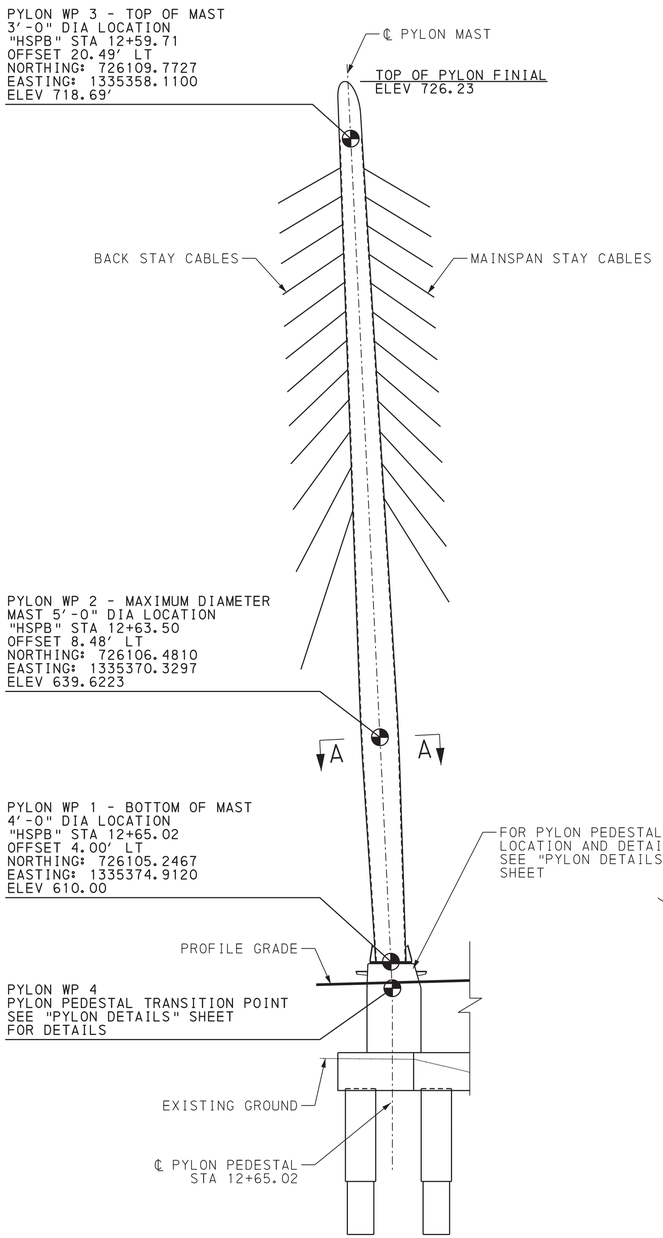
SHEET 40 OF 137

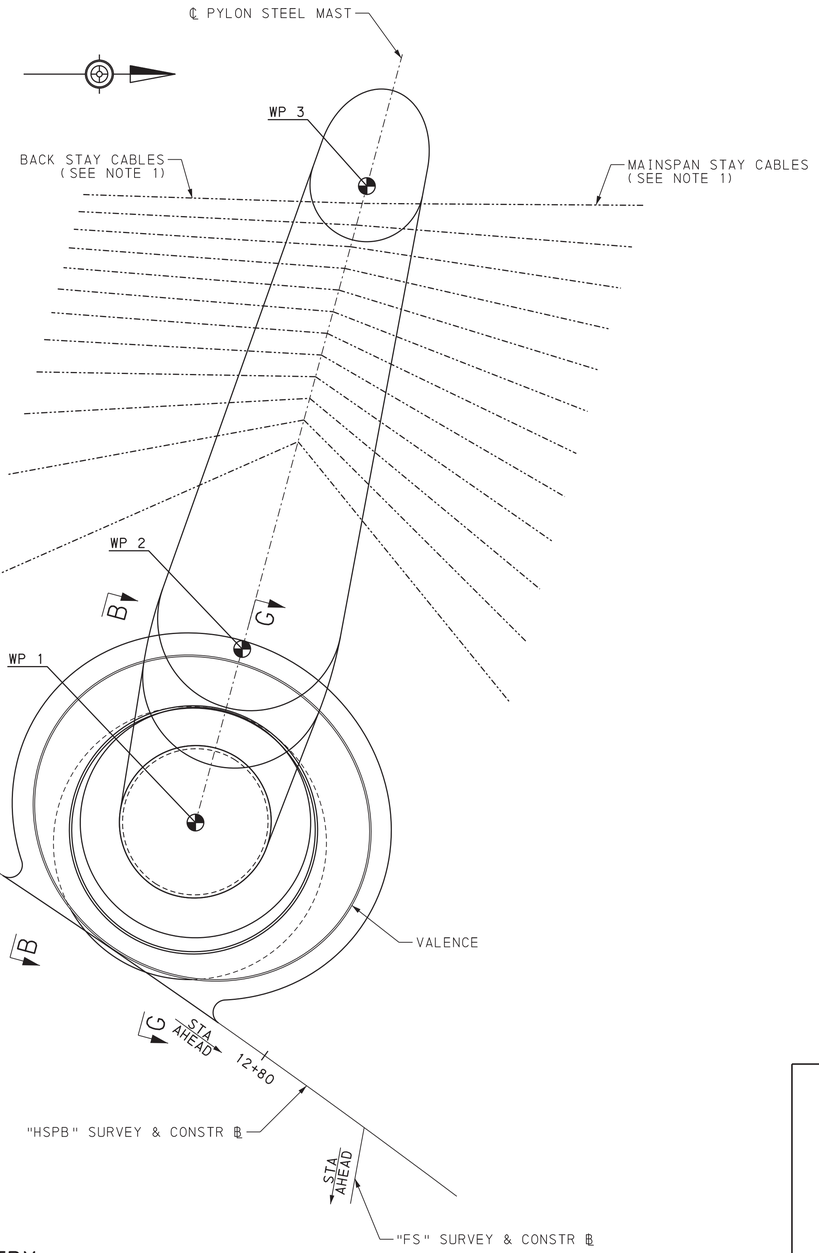
L-430

DES: GO | DWN: OMC | CKD: JL

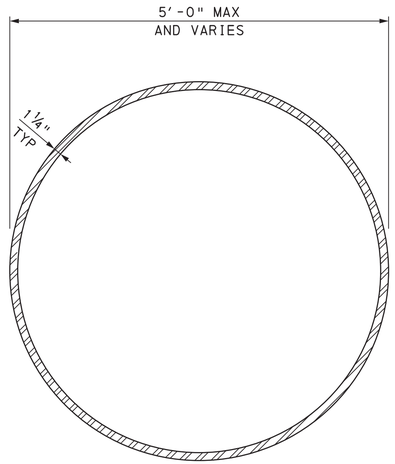
OPERATOR: tylpw11cs01$ FILENAME: SL43000400F0137.dgn

PLOTTED: 8/22/2022 7:14:22 PM





PYLON GEOMETRY
NOT TO SCALE



SECTION A-A
6 0 6 12 INCHES

NOTES:

1. FOR STAY CABLE WORKING POINTS, SEE "CABLE ANCHOR DETAILS 1" SHEET.
2. FOR PYLON VALENCE DETAILS, SEE "LIGHTING VALENCE DETAILS 1" AND "LIGHTING VALENCE DETAILS 2" SHEETS.
3. PYLON MAST TO BE FABRICATED FROM STRUCTURAL STEEL CONFORMING TO ASTM A709.
4. CVN TESTING REQUIRED FOR STEEL MAST AND BASEPLATE.
5. AFFIX CLIPS, EYES, OR REMOVABLE BRACKETS TO MAST AS NECESSARY TO SECURE THE MAST DURING SHIPPING AND FOR LIFTING AND MOVING DURING ERECTION. THESE SHALL BE REMOVED AFTER ERECTION. INCLUDE DETAILS OF SUCH DEVICES ON THE SHOP DRAWINGS.
6. NON-DESTRUCTIVELY TEST ALL CIRCUMFERENTIAL AND STIFFENER WELDS USING THE METHODS AND PROCEDURES IN ACCORDANCE WITH PUBLICATION 408 SECTION 1105. THE ACCEPTANCE CRITERIA ARE STATED IN TABLE 6.1 OF ANSI/AWS D1.1/D1.1M.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PYLON GEOMETRY

RECOMMENDED

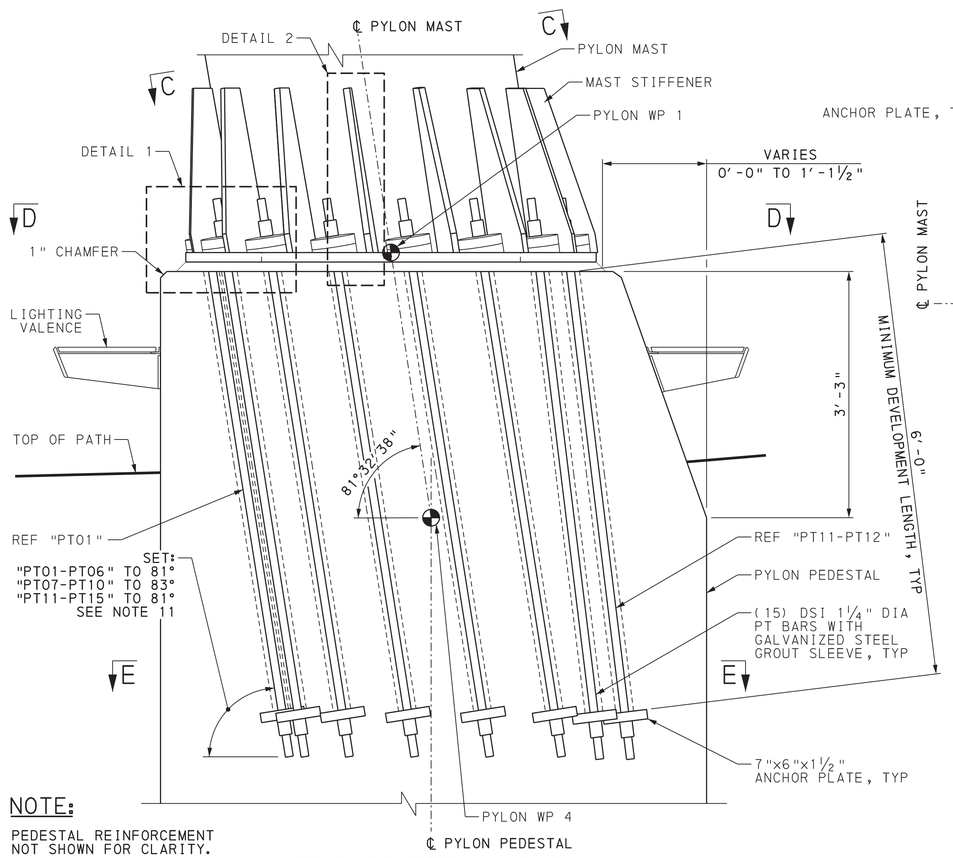
SHEET 41 OF 137

L-430

DES: JL | DWN: RJS | CKD: DT

OPERATOR: tyllpw11icsO1$ FILENAME: SL4300041OF0137.dgn

PLOTTED: 8/22/2022 7:12:10 PM

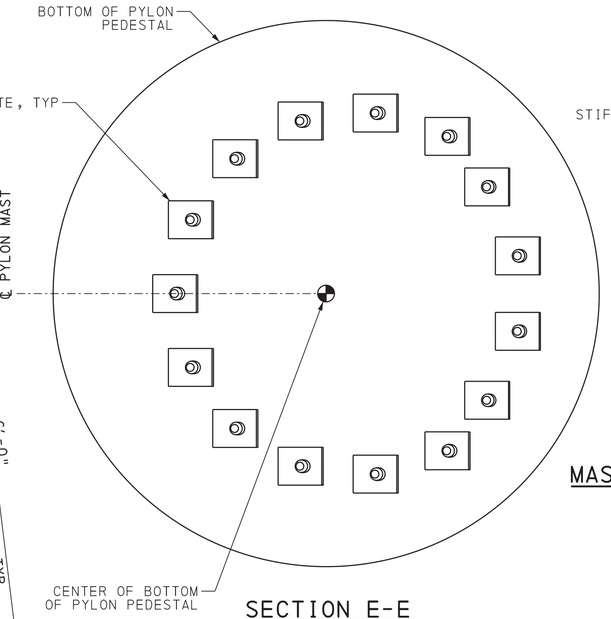


NOTE:

PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY.

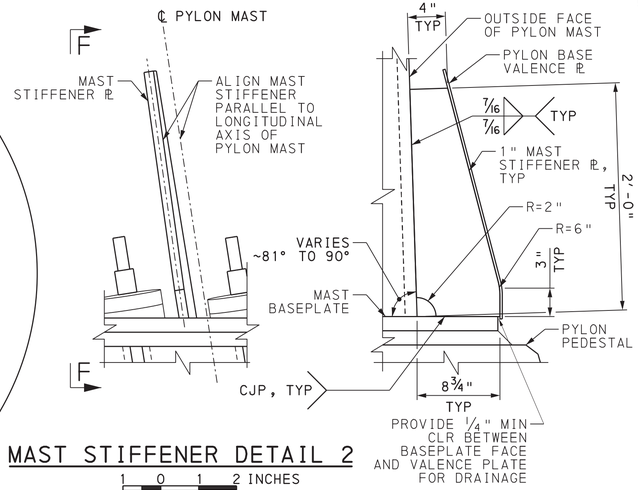
MAST BASE DETAIL B-B

6 0 6 12 INCHES



SECTION E-E

6 0 6 12 INCHES



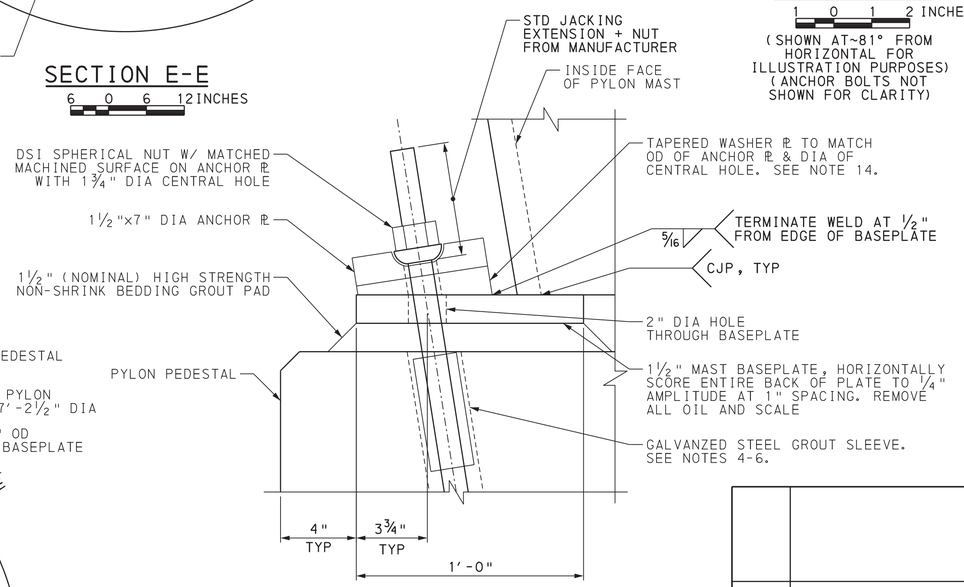
MAST STIFFENER DETAIL 2

1 0 1 2 INCHES

SECTION F-F

1 0 1 2 INCHES

(SHOWN AT~81° FROM HORIZONTAL FOR ILLUSTRATION PURPOSES)
(ANCHOR BOLTS NOT SHOWN FOR CLARITY)



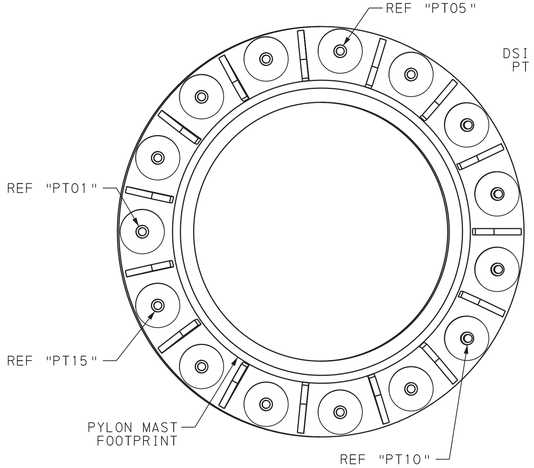
DETAIL 1

3 0 3 INCHES

(STIFFENER NOT SHOWN FOR CLARITY)

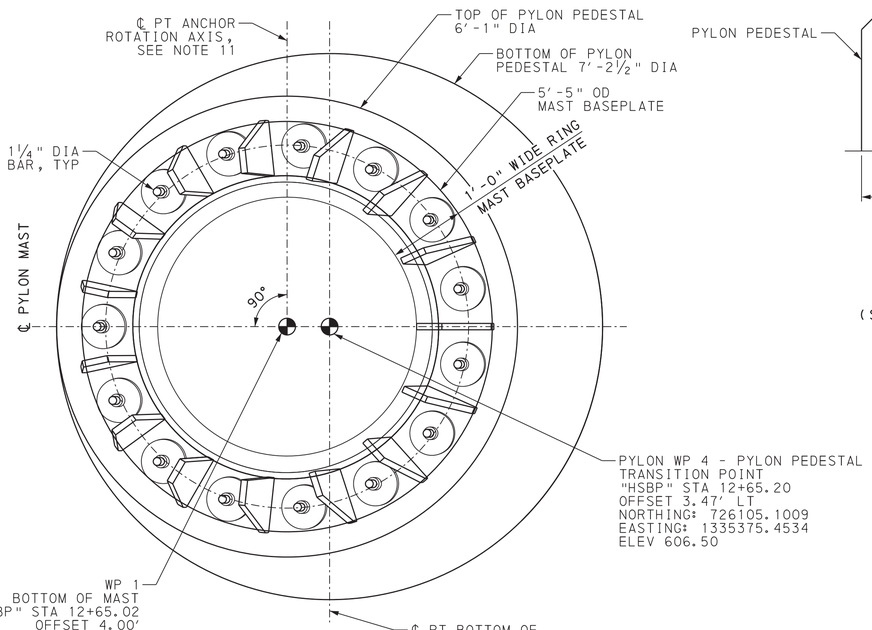
NOTES:

1. PT BARS TO CONFORM TO ASTM A722 (150 KSI).
2. ASSUMED ANCHOR SET = 0.0625".
3. JACKING FORCE SHALL BE 145 KIPS. BARS SHALL BE SEATED AT 114 KIPS. TO BE VERIFIED WITH LIFTOFF.
4. PROVIDE CORROSION PROTECTION FOR PT BARS BETWEEN INSTALLATION AND GROUTING OPERATIONS. SUBMIT PRODUCT AND METHODS FOR APPROVAL BY THE ENGINEER.
5. RECOMMEND PLACING GROUT TUBE NEAR EMBEDDED END OF ANCHOR, TO ALLOW FOR REMOVAL OF ANY POTENTIAL WATER INTRUSION BETWEEN TIME OF INSTALLATION AND GROUTING.
6. GROUT BARS AFTER STRESSING. SEAL VENTS.
7. GROUT PADS SHALL BE SAND/CEMENT GROUT WITH 6000 PSI MINIMUM STRENGTH.
8. CONTRACTOR TO SUBMIT PT BAR STRESSING SEQUENCE TO ENGINEER FOR APPROVAL.
9. PROVIDE THE RECOMMENDED COUPLER PER PT BAR MANUFACTURER. PLUG OPEN END OF COUPLER TO PROTECT THREADS PRIOR TO INSTALLATION OF MAST.
10. FOR LIGHTING VALENCE DETAILS, SEE "LIGHTING VALENCE DETAILS 1" AND "LIGHTING FALENCE DETAILS 2" SHEETS.
11. ROTATE PT ANCHOR BARS PER VALUES ON DETAIL B-B AND ROTATION AXIS SHOWN ON SECTION D-D.
12. SHIM AS REQUIRED FOR LEVELING DURING MAST INSTALLATION. CONTRACTOR TO SUBMIT MAST INSTALLATION PROCEDURE TO ENGINEER FOR APPROVAL.
13. FOR SECTION B-B LOCATION, SEE "PYLON GEOMETRY" SHEET.
14. PROVIDE TAPERED WASHER WITH MINIMUM THICKNESS PER PT BAR MANUFACTURER REQUIREMENT.



SECTION C-C

6 0 6 12 INCHES



SECTION D-D

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

DES: JL	DWN: RJS	CKD: DT

PREPARED BY:

TYLin

100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

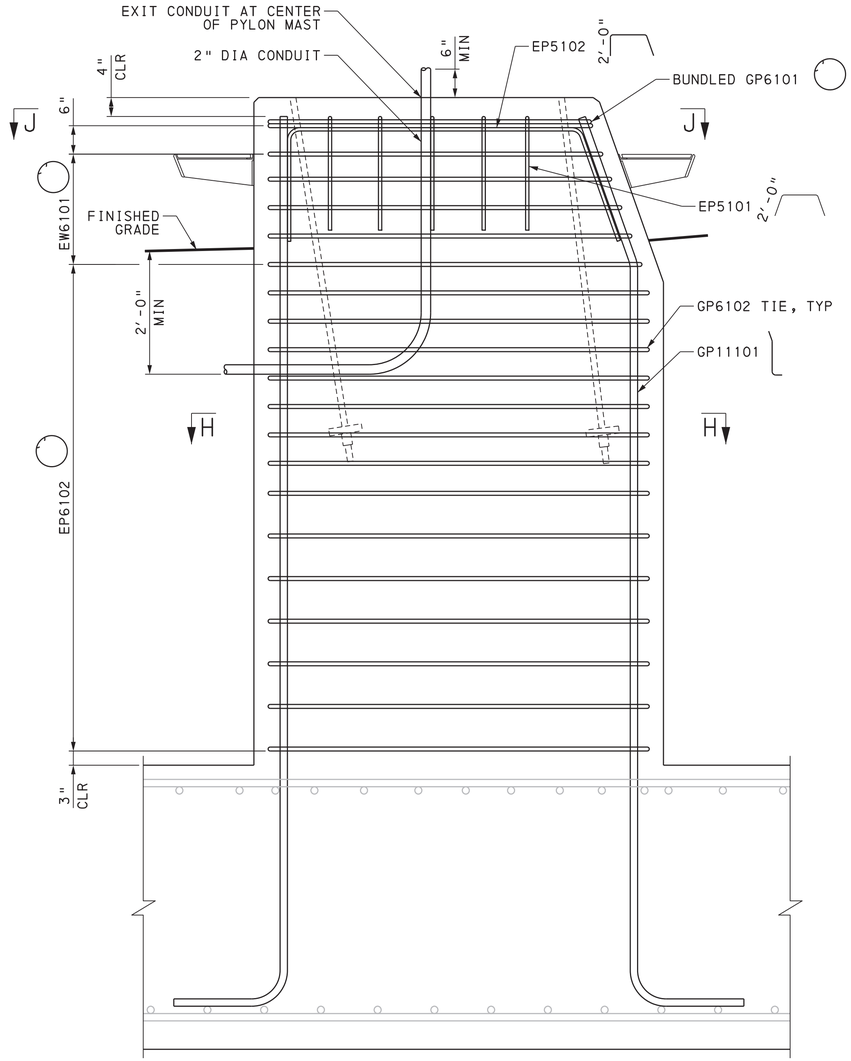
PYLON DETAILS

RECOMMENDED _____

SHEET 42 OF 137

L-430

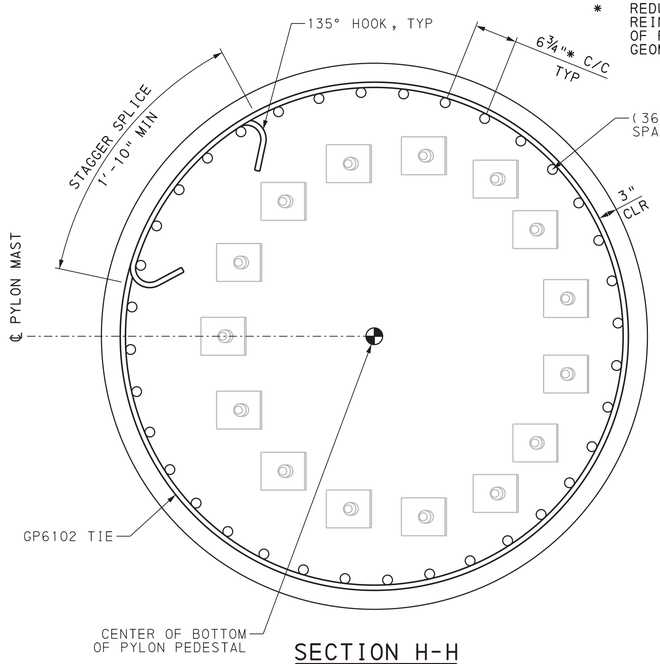
FILENAME: SL4300042F0137.dgn
OPERATOR: tylpwilliacs01$



PYLON PEDESTAL DETAIL G-G

12 0 12 INCHES

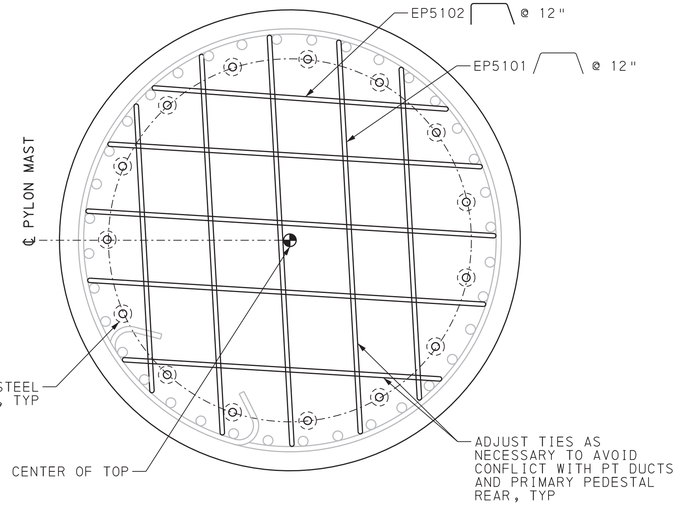
FOOTING REINFORCEMENT ORIENTATION CONCEPTUALLY SHOWN.
FOR CORRECT ORIENTATION, SEE "FOUNDATION DETAILS 3" SHEET



* REDUCED SPACING OF VERTICAL REINFORCEMENT AT UPPER PORTION OF PEDESTAL DUE TO TRANSITION GEOMETRY OF PEDESTAL

SECTION H-H

6 0 6 12 INCHES



SECTION J-J

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PYLON PEDESTAL DETAILS

RECOMMENDED _____

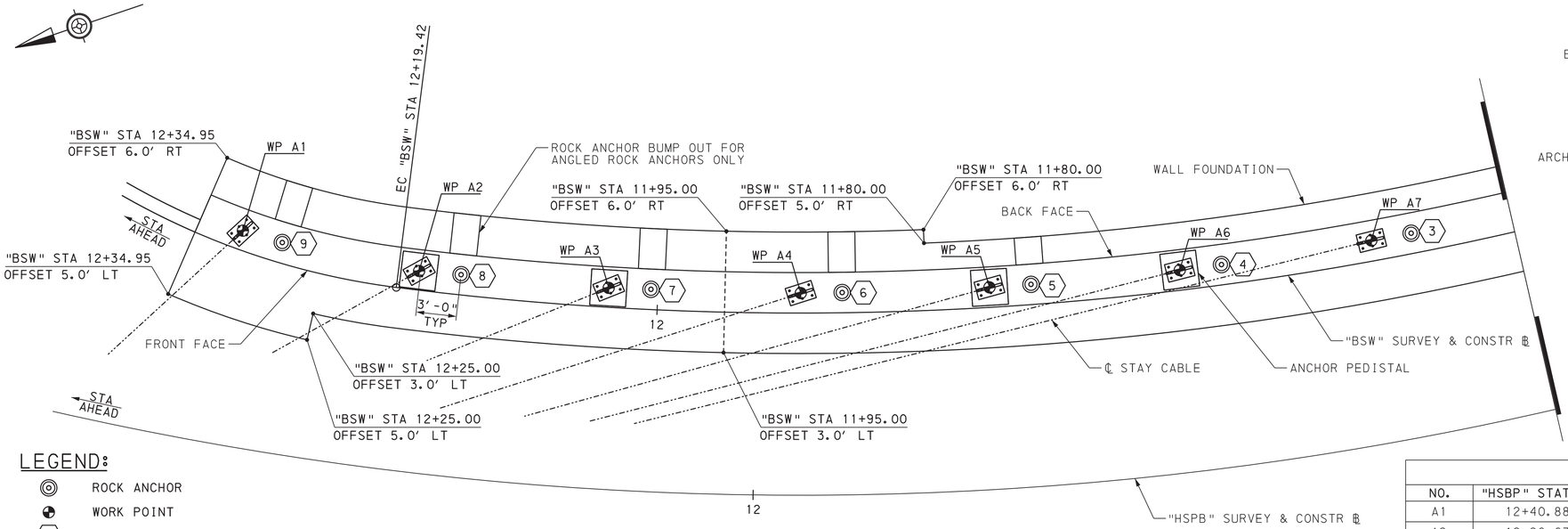
SHEET 43 OF 137

L-430

DES: GO | DWN: RJS | CKD: DT

PLOTTED: 8/22/2022 7:16:21 PM
FILENAME: SL43000430F0137.dgn
OPERATOR: rylipw11ics01$

PLOTTED: 8/22/2022 7:15:42 PM



LEGEND:

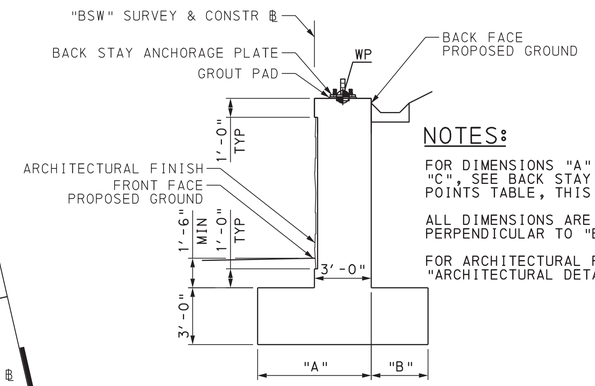
- ROCK ANCHOR
- WORK POINT
- (X) ROCK ANCHOR IDENTIFICATION

NOTE:

FOR ROCK ANCHOR DETAILS, SEE "BACK STAY WALL DETAILS 3" SHEET.

BACK STAY WALL PLAN

2.5 0 2.5 5 FEET



NOTES:

FOR DIMENSIONS "A", "B", AND "C", SEE BACK STAY CONTROL POINTS TABLE, THIS SHEET.

ALL DIMENSIONS ARE PERPENDICULAR TO "BSW" LINE.

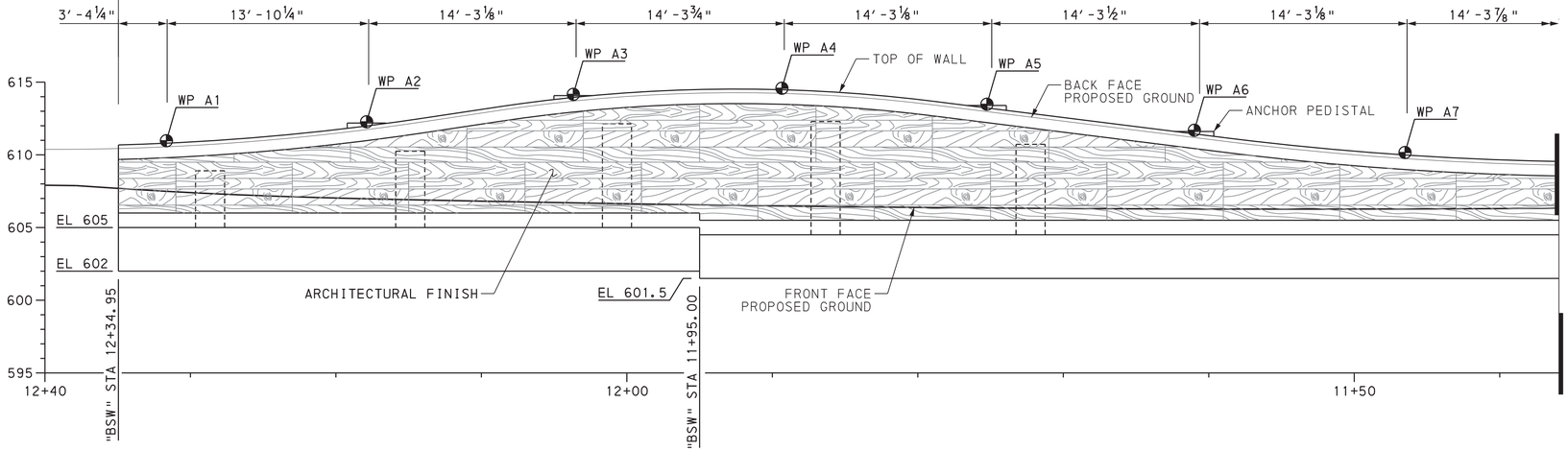
FOR ARCHITECTURAL FINISH, SEE "ARCHITECTURAL DETAILS" SHEET

BACK STAY WALL GEOMETRY

NOT TO SCALE

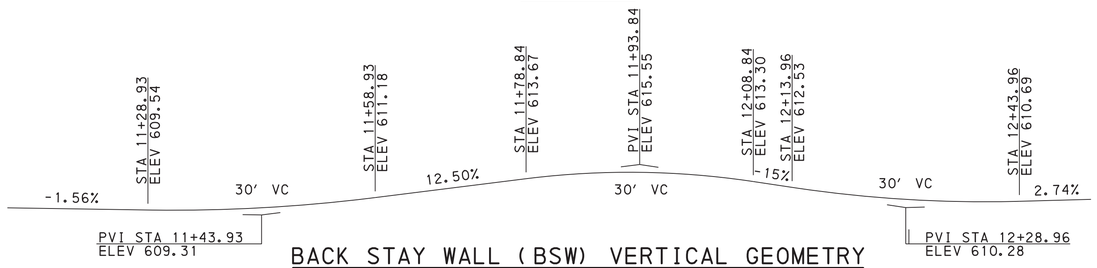
BACK STAY CONTROL POINTS TABLE

NO.	"HSBP" STATION	"HSBP" OFFSET	"BSW" STATION	"BSW" OFFSET	WP ELEV	"A"	"B"
A1	12+40.88	15.93' RT	12+31.65	1.41' RT	610.97	8.0'	3.0'
A2	12+26.63	14.91' RT	12+17.89	1.41' RT	612.27	6.0'	3.0'
A3	12+11.62	14.94' RT	12+03.68	1.44' RT	614.16	6.0'	3.0'
A4	11+96.46	14.98' RT	11+89.34	1.48' RT	614.58	6.0'	3.0'
A5	11+81.56	14.98' RT	11+75.25	1.48' RT	613.48	6.0'	2.0'
A6	11+66.48	14.98' RT	11+60.99	1.48' RT	611.69	6.0'	2.0'
A7	11+51.18	15.02' RT	11+46.51	1.52' RT	610.16	6.0'	2.0'



BACK STAY WALL DEVELOPED ELEVATION

2.5 0 2.5 5 FEET



BACK STAY WALL (BSW) VERTICAL GEOMETRY

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BACK STAY WALL PLAN AND ELEVATION 1

RECOMMENDED _____

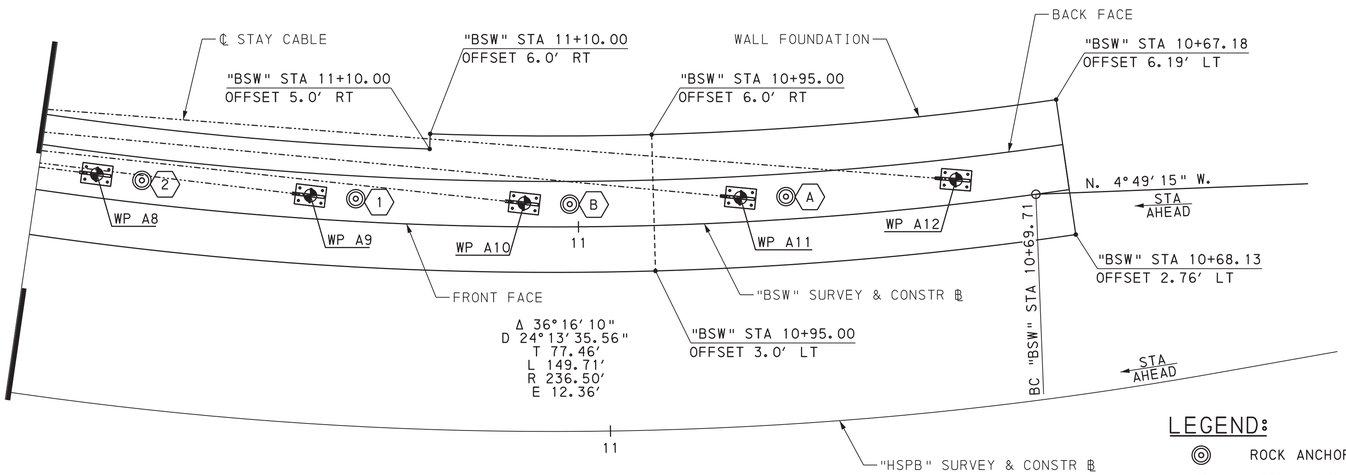
SHEET 44 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

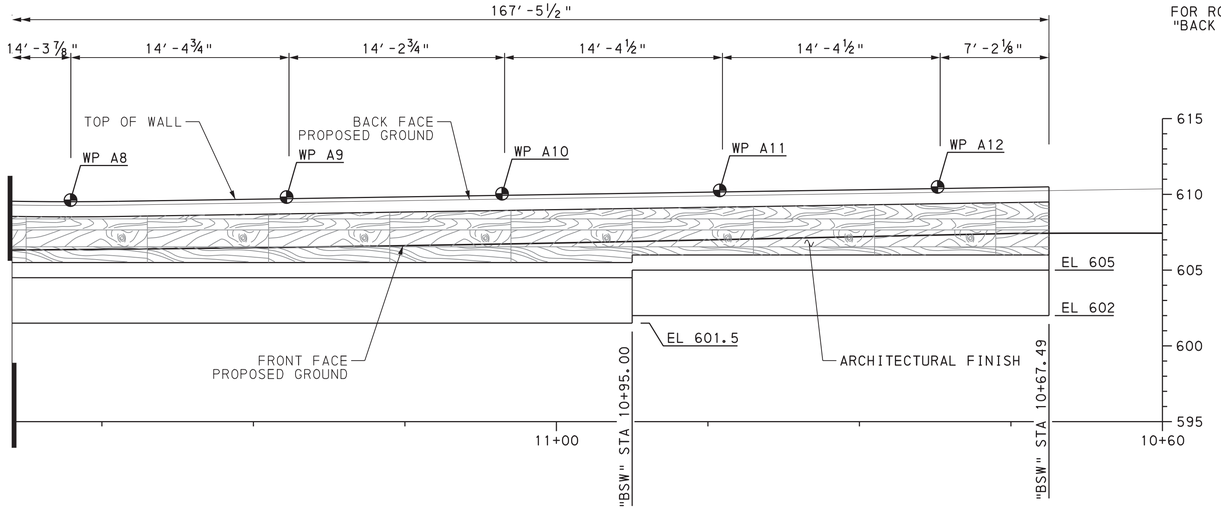
FILENAME: SL43000440F0137.dgn
OPERATOR: tyllpw11icsO1$

PLOTTED: 8/22/2022 7:12:58 PM



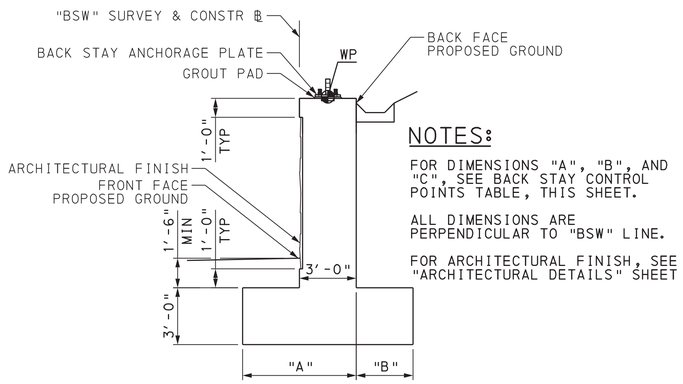
BACK STAY WALL PLAN

2.5 0 2.5 5 FEET



BACK STAY WALL DEVELOPED ELEVATION

2.5 0 2.5 5 FEET



BACK STAY WALL GEOMETRY

NOT TO SCALE

NOTES:

FOR DIMENSIONS "A", "B", AND "C", SEE BACK STAY CONTROL POINTS TABLE, THIS SHEET.

ALL DIMENSIONS ARE PERPENDICULAR TO "BSW" LINE.

FOR ARCHITECTURAL FINISH, SEE "ARCHITECTURAL DETAILS" SHEET

LEGEND:

- ROCK ANCHOR
- WORK POINT
- (X) ROCK ANCHOR IDENTIFICATION

NOTE:

FOR ROCK ANCHOR DETAILS, SEE "BACK STAY WALL DETAILS 3" SHEET.

BACK STAY CONTROL POINTS TABLE

NO.	"HSBP" STATION	"HSBP" OFFSET	"BSW" STATION	"BSW" OFFSET	WP ELEV	"A"	"B"
A8	11+35.92	15.03′ RT	11+32.07	1.53′ RT	609.62	6.0′	2.0′
A9	11+20.84	15.02′ RT	11+17.81	1.52′ RT	609.82	6.0′	2.0′
A10	11+05.81	15.06′ RT	11+03.59	1.56′ RT	610.04	6.0′	3.0′
A11	10+90.62	15.09′ RT	10+89.22	1.59′ RT	610.26	6.0′	3.0′
A12	10+75.42	15.11′ RT	10+74.84	1.61′ RT	610.49	6.0′	3.0′

Mark	Description	By	Chk′d.	Recm′d.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BACK STAY WALL
PLAN AND ELEVATION 2

RECOMMENDED _____

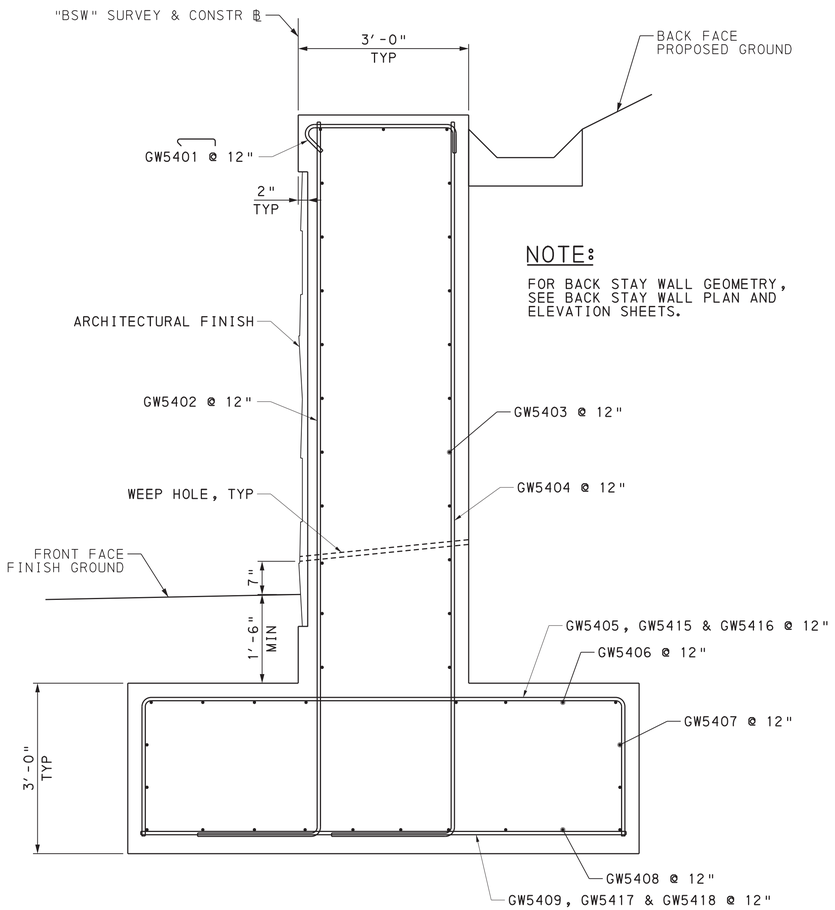
SHEET 45 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

FILENAME: SL43000450F0137.dgn
OPERATOR: tyllpw11ics01$

PLOTTED: 8/22/2022 7:16:01 PM

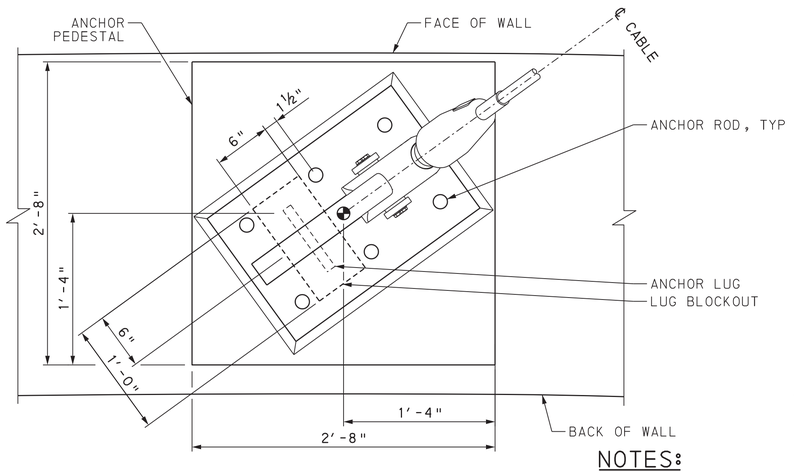


NOTE:

FOR BACK STAY WALL GEOMETRY, SEE BACK STAY WALL PLAN AND ELEVATION SHEETS.

BACK STAY WALL TYPICAL SECTION

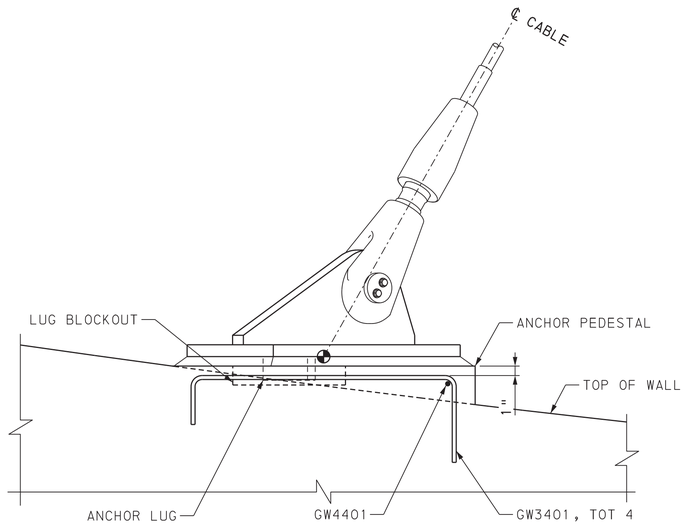
12 0 12 INCHES



ANCHOR PEDESTAL PLAN

1 0 1 2 INCHES

WHERE TOP OF WALL GRADE EXCEEDS 10%



ANCHOR PEDESTAL ELEVATION

1 0 1 2 INCHES

NOTES:

1. PEDESTAL REINFORCEMENT ALIGNED WITH WALL FACE.
2. ADJUST PEDESTAL REINFORCEMENT FOR ANCHOR RODS AND SHEAR LUG AS NEEDED.

BACK STAY WALL CONSTRUCTION SEQUENCE:

1. CONSTRUCT FOOTING AND STEM.
2. BACKFILL AND COMPACT WALL TO BOTTOM OF GUTTER ELEVATION.
3. INSTALL AND STRESS ROCK ANCHORS.
4. CONSTRUCT GUTTER AND COMPLETE GRADING BEHIND WALL.
5. INSTALL BACKSTAY ANCHOR BARS AND STRESS.
6. COMPLETE GRADING AND COMPACTION IN FRONT OF WALL.
7. INSTALL BRIDGE CABLES.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

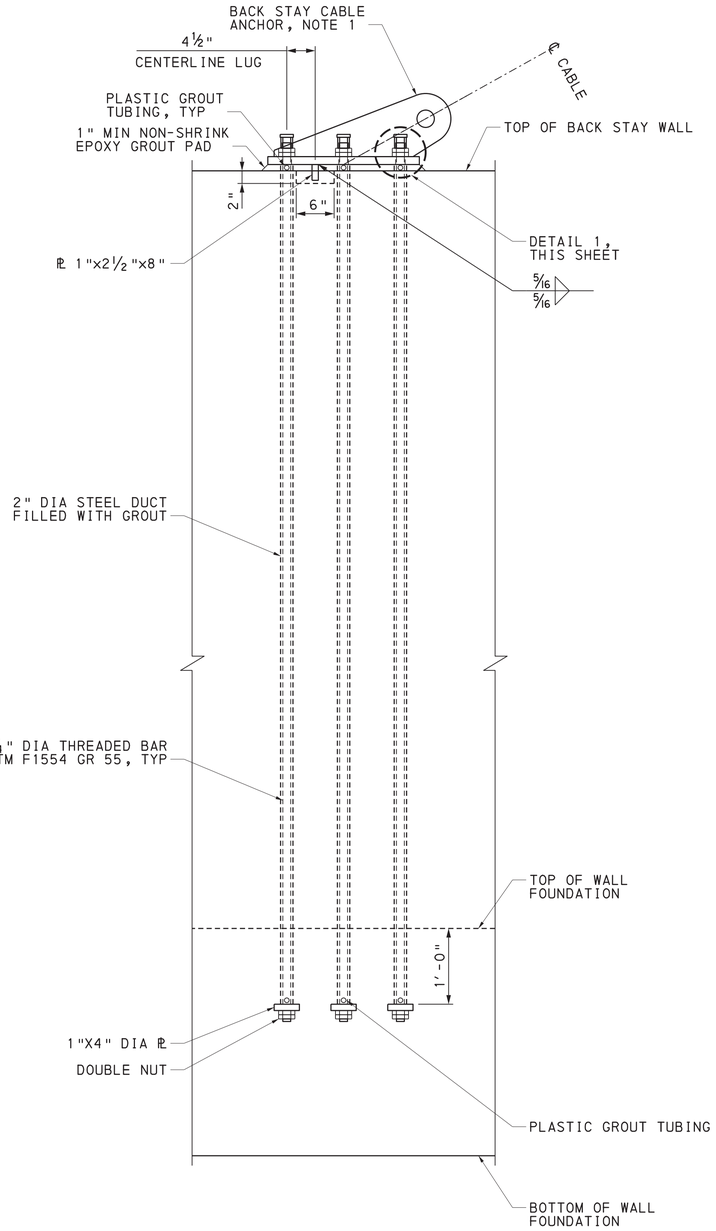
BACK STAY WALL
DETAILS 1

RECOMMENDED

DES: JL | DWN: RJS | CKD: SS

OPERATOR: tylpw11cs01$ FILENAME: SL4300046F0137.dgn

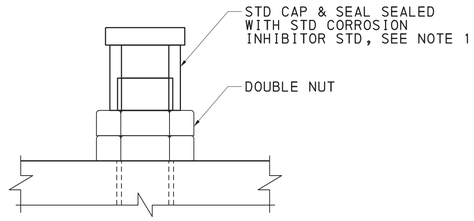
PLOTTED: 8/22/2022 7:13:29 PM



BACK STAY WALL WALL ANCHORS

6 0 6 12 INCHES

ANCHOR 12 SHOWN, OTHERS SIMILAR



DETAIL 1

NOT TO SCALE

NOTES:

1. FOR CABLE ANCHOR DETAILS, SEE "CABLE ANCHOR DETAILS 1" THROUGH "CABLE ANCHOR DETAILS 3" SHEETS.
2. FOR TYPICAL BACK STAY WALL REINFORCEMENT, SEE "BACK STAY WALL DETAILS 1" SHEET.
3. FOR ROCK ANCHOR DETAILS, SEE "BACK STAY WALL DETAILS 3" SHEET.
4. CONTRACTOR SHALL SEAL THE DUCT IN A MANNER THAT WILL NOT ALLOW COMPRESSION OF THE DUCT DURING ROD TENSIONING. CONTRACTOR SHALL KEEP ROD OPENINGS AND DUCTS FREE OF GROUT DURING INSTALLATION OF GROUT PAD.
5. ALTERNATIVE DUCT MATERIALS MAY BE UTILIZED UPON APPROVAL BY THE ENGINEER.
6. ADDITIONAL GROUT VENTS MAY BE INSTALLED IN THE WALL TO ENSURE COMPLETE GROUTING OF LUG BLOCKOUT.
7. VENT/GROUT HOLES MAY BE PLACED IN BASE PLATE UPON APPROVAL BY THE ENGINEER.
8. THE CONTRACTOR SHALL DEVELOP FOR THE ENGINEER'S APPROVAL A WRITTEN GROUTING PLAN THAT WILL ASSURE GROUT COMPLETELY FILLS ALL VOIDS UNDER THE BASE PLATE AND IN AND AROUND THE SHEAR LUGS. THE CONTRACTOR TO PROVIDE AIR VENTING TO UNDERSIDE OF BASE PLATE AS PART OF GROUTING PLAN TO PREVENT AIRPOCKETING DURING GROUTING. VENTS SHALL ALSO BE PROVIDED AT THE TOP OF SHEAR LUGS TO PREVENT AIR POCKETS WITHIN THE PIPES.
9. LEVELING SCREWS MAY BE USED TO PREVENT DISPLACEMENT OF ANCHOR PLATE DURING GROUT INSTALLATION AND CURING.
10. USE FLOWABLE NON-SHRINK EPOXY GROUT, f'c = 12,000 PSI.
11. RODS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329. S5 CHARPY V-NOTCH TESTING REQUIRED.
12. ANCHOR RODS SHALL HAVE A MINIMUM Fu = 80 KSI

STRESSING NOTES:

13. VERIFY GROUT VENTS ARE FREE OF CLOGS AFTER PLACEMENT OF GROUT PAD AND PRIOR TO STRESSING.
14. STRESSING SHALL BE PERFORMED FROM THE CENTER OUTWARDS.
15. ANCHOR RODS SHALL BE INSTALLED WITH A TENSILE FORCE EQUAL TO 55 KIPS PER ANCHOR AFTER SEATING.
16. GROUT DUCTS WHEN STRESSING IS COMPLETE.
17. ALTERNATIVE GROUT PORT/VENT LOCATIONS MAY BE UTILIZED UPON APPROVAL BY THE ENGINEER.
18. ADJUST ANCHOR GUSSET GEOMETRY AS NEEDED TO AVOID CONFLICT WITH ANCHOR BOLTS. SUBMIT CHANGES TO ENGINEER FOR APPROVAL.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BACK STAY WALL
DETAILS 2

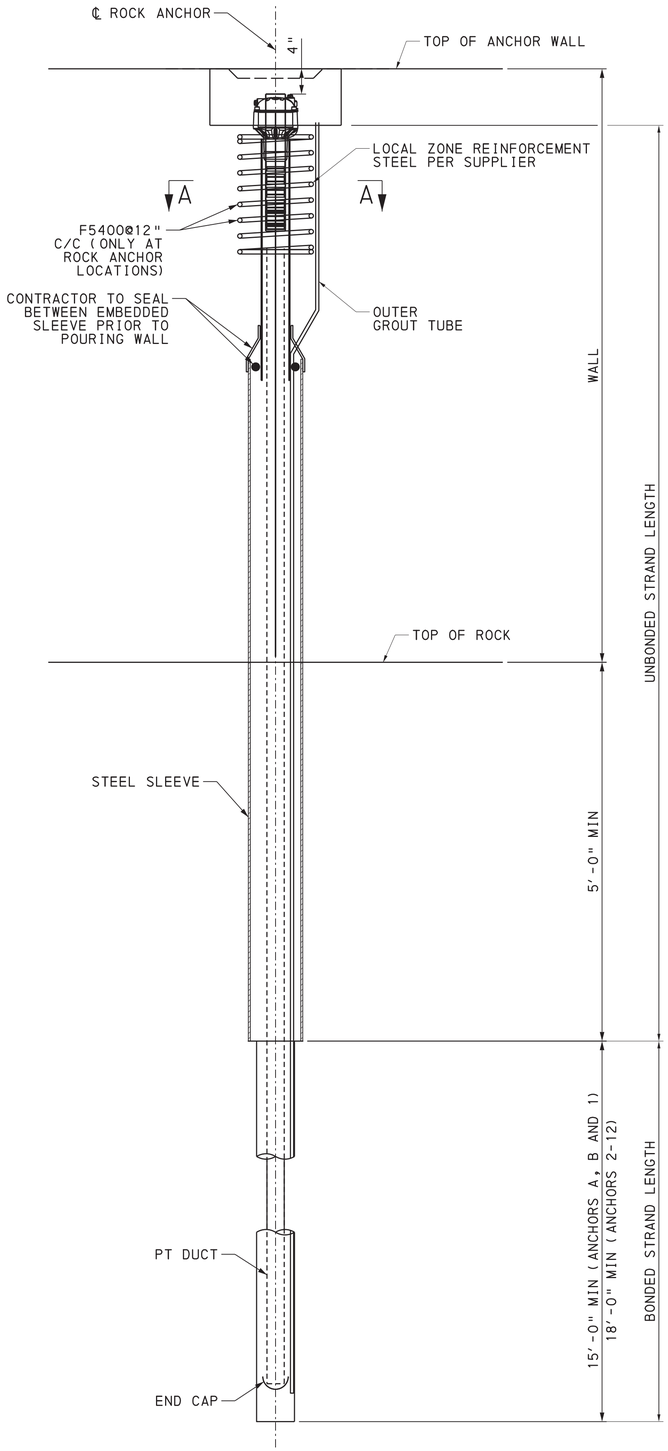
RECOMMENDED _____

L-430

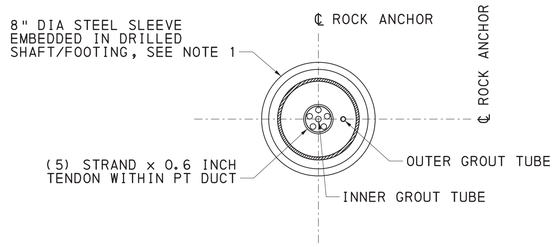
DES: JL | DWN: RJS | CKD: SS

OPERATOR: tylipw11cs01$ FILENAME: SL4300047OF0137.dgn

PLOTTED: 8/22/2022 7:11:59 PM

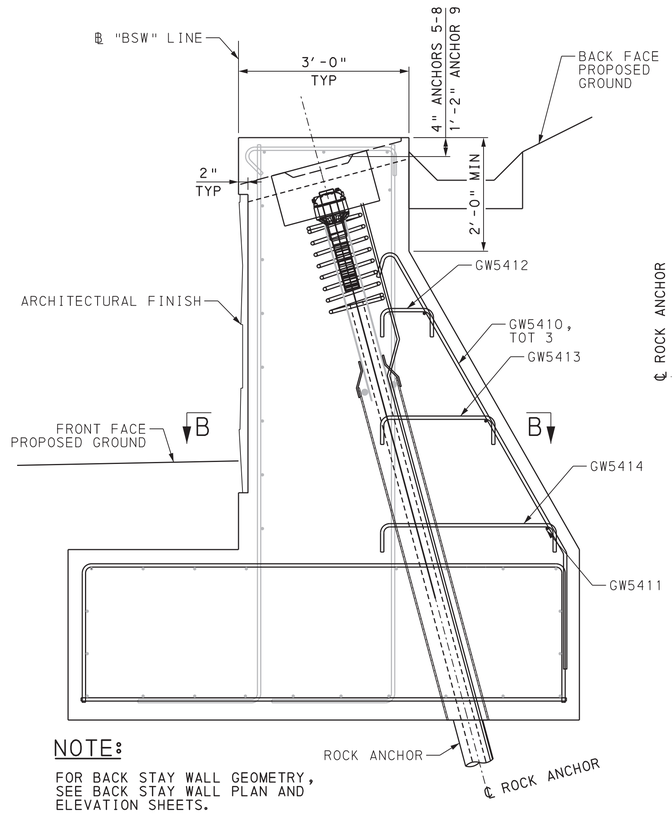


ROCK ANCHOR DETAIL



SECTION A-A

(SEE "FOUNDATION DETAILS 7" FOR DETAILS NOT SHOWN)



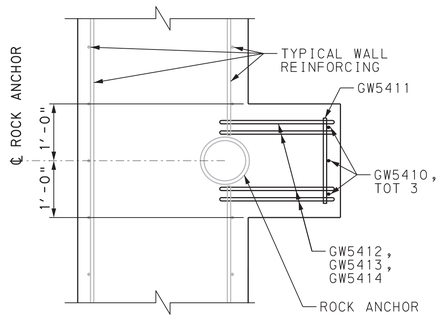
ROCK ANCHOR BUMP OUT

12 0 12 INCHES

ANCHOR 8 SHOWN, ANCHORS 5, 6, 7, & 9 SIMILAR

NOTE:

FOR BACK STAY WALL GEOMETRY, SEE BACK STAY WALL PLAN AND ELEVATION SHEETS.



SECTION B-B

PRESTRESSING NOTES:

PROVIDE 0.6 INCH DIAMETER PRESTRESSING STEEL STRAND CONFORMING TO ASTM A 416, GRADE 270 FRO LOW RELAXATION STRANDS.

PROVIDE (5) 0.6" DIAMETER STRANDS PER TENDON.

STRANDS SHALL CONFROM TO SAME REQUIREMENTS AS PROVIDED ON GENERAL NOTES 2 SHEET SECTION 5.3.

ANCHOR SET = 3/8".

T=ROCK ANCHOR DESIGN FORCE (STRENGTH LIMIT STATE).

PTI CLASS I CORROSION PROTECTION SHALL BE PROVIDED.

BONDED LENGTH SHALL BE DETERMINED BY THE CONTRACTOR

ANCHOR WALL CONCRETE:
F'c = 4000 PSI @ STRESSING

NOTES:

1. CONTRACTOR TO FIELD VERIFY UNDERGROUND UTILITY LOCATIONS PRIOR TO PLACING ROCK ANCHOR AND ASSOCIATED REINFORCEMENT.
2. PROVIDE BLOCKOUTS IN ANCHOR WALL FOR ROCK ANCHORS PER MANUFACTURER DETAILS.
3. LOCK-OFF FORCE FOR ROCK ANCHOR = 100% OF T
4. PRESTRESSING SYSTEM SHOWN IS DESCRIPTIVE ONLY. IT IS INTENDED TO DESCRIBE THE MINIMUM LEVEL OF CORROSION PROTECTION IN THE BONDED AND UNBONDED PORTIONS OF THE ANCHOR. THE ENGINEER WILL APPROVE THE ACTUAL SYSTEM BASED ON ITS ABILITY TO PROVIDE THE SAME LEVEL OR EXCEED THE LEVEL OF PROTECTION SHOWN ON THIS SHEET.
5. LOCAL ZONE REINFORCEMENT STEEL PER SUPPLIER.
6. SECONDARY STAGE GROUT SHALL NOT BE PLACED UNTIL ALL OF THE ROCK ANCHORS HAVE BEEN ACCEPTED BY THE ENGINEER.
7. THE ROCK ANCHORS SHALL BE STRESSED AND TESTED PRIOR TO INSTALLATION OF CABLE ANCHORAGES.
8. FOR ANCHOR WALL CONSTRUCTION SEQUENCE, SEE "BACK STAY WALL PLAN AND ELEVATION 2" SHEET.
9. BEARING PLATE TO BE DESIGNED BY CONTRACTOR.
10. TRANSVERSE BARS WITHIN BLOCKOUT AND BELOW CONSTRUCTION JOINT MAY BE SHIFTED TO CLEAR.
11. ROCK ANCHORS A AND B SLOPED ALONG WALL FACE.
12. ROCK ANCHORS 1-9 SLOPED PERPENDICULAR TO WALL FACE.

ROCK ANCHOR DESIGN FORCE TABLE

NO.	T	"HSBP" STATION	"HSBP" OFFSET	ROCK ANCHOR ANGLE (DEGREES)
A	100	10+87.62	15.00' RT	30
B	100	11+02.81	15.00' RT	30
1	100	11+17.65	15.00' RT	0
2	150	11+32.72	15.00' RT	0
3	150	11+47.99	15.00' RT	0
4	150	11+63.16	15.00' RT	0
5	150	11+78.28	15.00' RT	10
6	150	11+93.19	15.00' RT	10
7	150	12+08.28	15.00' RT	15
8	150	12+23.31	15.00' RT	15
9	150	12+37.65	15.56' RT	30

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

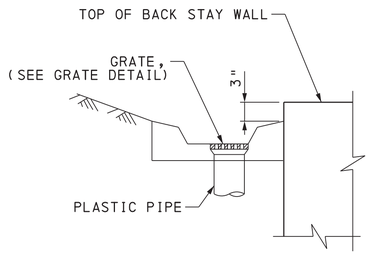
BACK STAY WALL
DETAILS 3

RECOMMENDED _____

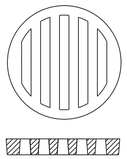
DES: JL | DWN: RJS | CKD: SS

OPERATOR: tylipw11ics01$ FILENAME: SL43000480F0137.dgn

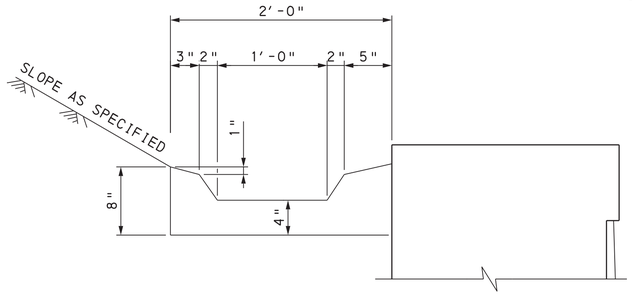
PLOTTED: 8/22/2022 7:12:35 PM



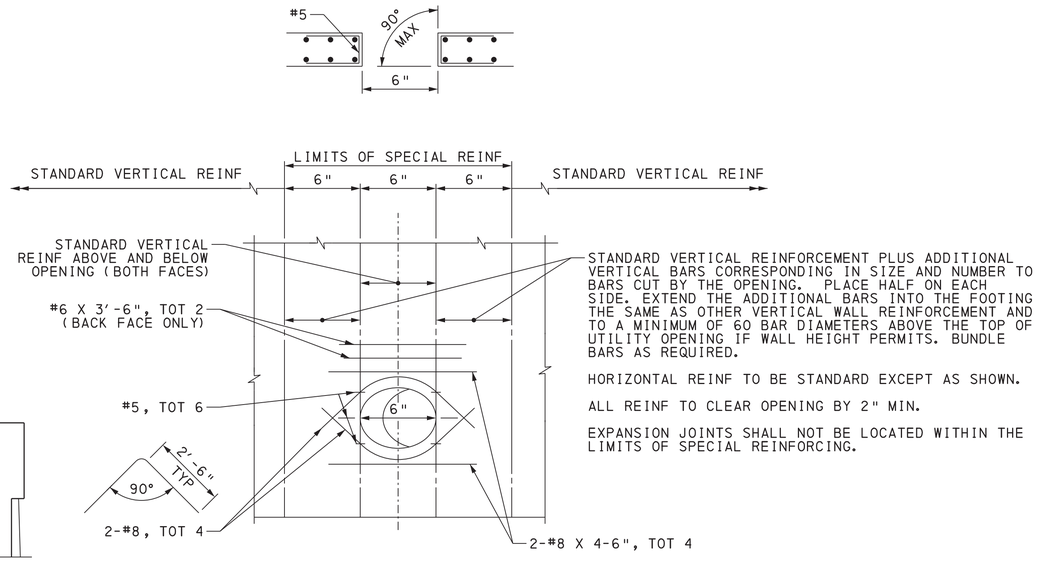
WALL DRAIN DETAIL
NOT TO SCALE
SEE GRADING AND DRAINAGE PLAN FOR DRAIN LOCATIONS



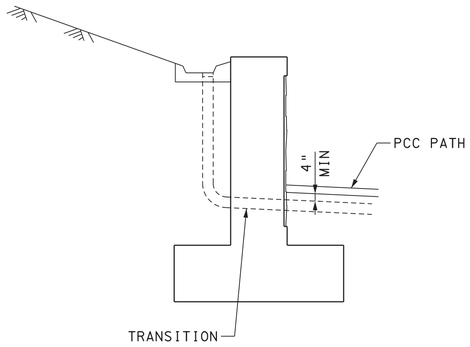
GRATE DETAIL
NOT TO SCALE
(SIZES TO FIT STANDARD HUBS)



TYPICAL GUTTER DETAIL
NOT TO SCALE



RETAINING WALL UTILITY OPENING
NOT TO SCALE



RETAINING WALL GUTTER OUTLET
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BACK STAY WALL DETAILS 4

RECOMMENDED _____

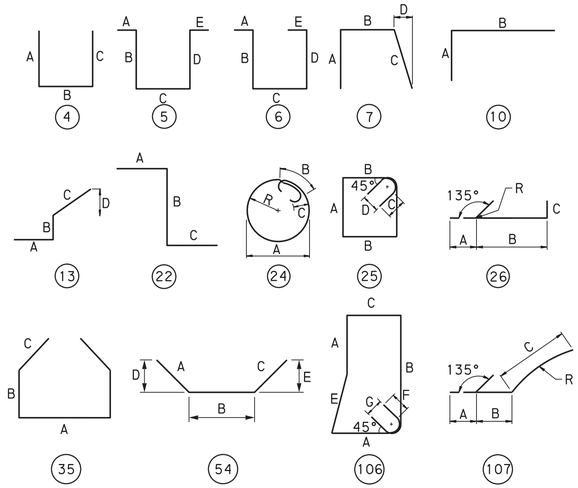
DES: JL | DWN: RJS | CKD: SS

OPERATOR: tylipwl1lcs01$ FILENAME: SL43000490F0137.dgn

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	R	REMARKS
ABUTMENT 1														
DRILLED CAISSONS														
F5100	5	147	12′-1 4/5"	24	2′-10"	2′-3"	0′-6"						1′-5"	
F11100	11	112	22′-11"	STR	22′-11"									
FOOTING														
F11101	11	20	15′-7 7/8"	STR	15′-7 7/8"									BAR LENGTHS VARY FROM 15′-6" TO 16′-9"
F11102	11	12	35′-6"	STR	35′-6"									
F11103	11	22	30′-3 5/8"	STR	30′-3 5/8"									BAR LENGTHS VARY FROM 25′-9" TO 35′-3"
F11104	11	2	13′-2"	STR	13′-2"									
F11105	11	20	20′-3"	STR	20′-3"									BAR LENGTHS VARY FROM 15′-9" TO 24′-9"
F11106	11	12	25′-6"	STR	25′-6"									
F11107	11	4	16′-9"	STR	16′-9"									BAR LENGTHS VARY FROM 16′-3" TO 17′-3"
F11108	11	38	15′-6"	STR	15′-6"									
F5101	5	117	5′-11"	4	0′-10"	4′-3"	0′-10"							
F5102	5	15	15′-6 3/8"	STR	15′-6 3/8"									BAR LENGTHS VARY FROM 13′-7 7/8" TO 17′-6"
F5103	5	3	25′-6"	STR	25′-6"									
F5104	5	3	7′-6"	STR	7′-6"									
F5105	5	3	2′-4"	STR	2′-4"									
F11109	11	2	24′-5 3/4"	54	5′-5"	13′-7 3/4"	5′-5"	3′-6"	3′-6"					
F11111	11	18	19′-8"	STR	19′-8"									BAR LENGTHS VARY FROM 15′-6" TO 25′-6"
F11110	11	18	24′-4 7/8"	STR	24′-4 7/8"									BAR LENGTHS VARY FROM 9′-6" TO 35′-6"
STEM														
EA5101	5	36	4′-2"	26	0′-10"	2′-6"	0′-10"						0′-1 7/8"	
EA8101	8	10	15′-8"	35	13′-0"	0′-0"	1′-4"							
EA8102	8	10	15′-8"	35	13′-0"	0′-0"	1′-4"							
EA8103	8	20	10′-10"	S2	2′-6"	0′-0"	0′-0"	3′-3"	3′-3"		0′-11"			
GA5101	5	4	11′-0"	STR	11′-0"									
GA11101	11	16	18′-2 3/8"	22	2′-0"	14′-2 3/8"	2′-0"							
GA11102	11	16	18′-2 3/8"	22	2′-0"	14′-2 3/8"	2′-0"							
GA9101	9	12	18′-2 3/8"	22	2′-0"	14′-2 3/8"	2′-0"							
GA9102	9	12	18′-2 3/8"	22	2′-0"	14′-2 3/8"	2′-0"							
BUTTRESS WALLS														
EW8101	8	12	19′-3 1/2"	6	1′-4"	7′-6 3/4"	1′-6"	7′-6 3/4"	1′-4"					B & D LENGTHS VARY FROM 6′-6 3/4" TO 8′-6 1/2"
EW8102	8	10	30′-10"	6	1′-4"	13′-4"	1′-6"	13′-4"	1′-4"					B & D LENGTHS VARY FROM 9′-9 1/4" TO 16′-10 3/4"
EW6101	6	8	19′-2"	5	1′-0"	7′-11"	1′-4"	7′-11"	1′-0"					B & D LENGTHS VARY FROM 5′-11 1/4" TO 9′-11"
EW8103	8	4	26′-7 3/4"	5	1′-4"	11′-3 7/8"	1′-4"	11′-3 7/8"	1′-4"					B & D LENGTHS VARY FROM 10′-5 3/4" TO 12′-2 1/4"
EW11101	11	8	36′-11 3/4"	5	2′-0"	15′-9 7/8"	1′-4"	15′-9 7/8"	2′-0"					B & D LENGTHS VARY FROM 12′-9" TO 18′-9"
EW8104	8	2	23′-4"	54	3′-6"	14′-10"	5′-0"	1′-7"	4′-3"					
EW8105	8	15	17′-11"	10	3′-7"	14′-4"								
EW5101	5	10	8′-4"	26	0′-10"	1′-6"	6′-0"							
EW5102	5	10	4′-11"	107	0′-10"	0′-10"	3′-3"						5′-0"	
EW5103	5	12	9′-3"	25	1′-10 1/2"	1′-11"	0′-10"	0′-3 1/4"						
EW5104	5	3	26′-9 1/2"	106	2′-0"	10′-11"	1′-3 1/2"	2′-5"	8′-6"	0′-10"	0′-3 1/4"			
EW6102	6	24	9′-11"	10	1′-2"	8′-9"								
EW8106	8	13	26′-3/4"	5	1′-4"	11′-3/8"	1′-4"	11′-3/8"	1′-4"					B & D LENGTHS VARY FROM 11′-0 1/4" TO 11′-3 1/2"
PYLON PEDESTAL														
GP6101	6	7	22′-4 1/2"	24	6′-2"	1′-10"	0′-7"						3′-1"	BAR DIA. VARY FROM 5′-8 7/8" TO 6′-7 1/4"
GP6102	6	15	24′-8/9"	24	6′-8 1/2"	1′-10"	0′-7"						3′-4 1/4"	
GP11101	11	36	17′-9"	13	2′-0"	13′-0"	2′-9"	2′-7 3/4"						
EP5101	5	5	8′-6 7/8"	54	2′-0"	4′-6 7/8"	2′-0"	1′-11"	1′-11"					B LENGTHS VARY FROM 3′-9" TO 5′-4 1/2"
EP5102	5	5	8′-8 1/4"	7	2′-0"	4′-6 7/8"	2′-1 3/8"	0′-8 3/4"						B LENGTHS VARY FROM 3′-9" TO 5′-4 1/2"

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

DES: JL | DWN: RS | CKD: SS

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUBSTRUCTURE
REINFORCING SCHEDULE 1

RECOMMENDED _____

SHEET 50 OF 137

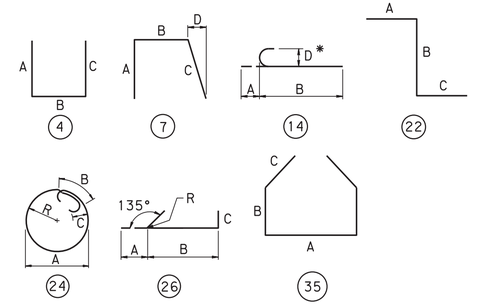
L-430

PLOTTED: 8/22/2022 7:13:11 PM
FILENAME: SL4300050F0137.dgn
OPERATOR: tylipw11icsO1$

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	R	REMARKS
END DIAPHRAGM														
GS6100	6	4	4′-2"	4	1′-2"	1′-10"	1′-2"							
GS6101	6	4	4′-6"	101	0′-0"	1′-2"	2′-2"	1′-4"	1′-2"					V = -22.5°
GS4100	4	28	4′-6"	STR	4′-6"									
GS4101	4	28	4′-5 1/4"	STR	4′-5 1/4"									BAR LENGTHS VARY FROM 3′-5 1/2" TO 5′-5"
GS4105	4	3	6′-11 1/2"	4	3′-1"	0′-9 1/2"	3′-1"							
GS4106	4	3	8′-1"	4	3′-1"	1′-11"	3′-1"							
GS4107	4	3	2′-5 3/4"	101	0′-0"	0′-0"	1′-1/4"	1′-2"	1′-5 1/2"					V = 67.5°
GS4108	4	3	3′-3"	4	1′-0"	0′-11"	1′-4"							
GS4109	4	22	3′-11"	10	1′-9"	2′-2"								
GS4110	4	18	1′-6 3/8"	STR	1′-6 3/8"									BAR LENGTHS VARY FROM 1′-2 1/4" TO 2′-2 1/2"
GS4112	4	4	1′-2 1/4"	STR	1′-2 1/4"									
GS4113	4	4	3′-3"	10	1′-1"	2′-2"								
GS5120	5	10	13′-11"	25	4′-2 1/4"	2′-3 1/2"	0′-5 3/4"	0′-3 1/4"						
GS5121	5	16	4′-5 1/4"	STR	4′-5 1/4"									BAR LENGTHS VARY FROM 3′-5 1/2" TO 5′-5"
ABUTMENT 2														
DRILLED CAISSONS														
F5200	5	76	12′-1 4/5"	24	2′-10"	2′-3"	0′-6"						1′-5"	
F11200	11	64	20′-11"	STR	20′-11"									
FOOTING														
F11201	11	48	25′-6"	STR	25′-6"									
F11202	11	68	22′-7/8"	STR	22′-7/8"									BAR LENGTHS VARY FROM 21′-8 3/4" TO 22′-4 3/4"
F5201	5	96	5′-11"	4	0′-10"	4′-3"	0′-10"							
F5202	5	12	23′-6 3/8"	STR	23′-6 3/8"									BAR LENGTHS VARY FROM 21′-2 5/8" TO 25′-6 1/8"
STEM														
EA5201	5	128	4′-2"	26	0′-10"	2′-6"	0′-10"						0′-1 7/8"	
EA8201	8	52	14′-5"	35	11′-9"	0′-0"	1′-4"							
EA8202	8	52	8′-0"	S2	2′-6"	0′-0"	0′-0"	1′-10"	1′-10"		0′-11"			
GA11201	11	17	33′-10 1/2"	22	2′-0"	29′-10 1/2"	2′-0"							
GA11202	11	16	33′-10 1/2"	22	2′-0"	29′-10 1/2"	2′-0"							
GA11203	11	6	33′-10 1/2"	22	2′-0"	29′-10 1/2"	2′-0"							
GA14201	14	16	35′-1/2"	22	2′-7"	29′-10 1/2"	2′-7"							
WING WALLS														
EC4201	4	35	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"		
EC5201	5	35	8′-3 5/8"	104	1′-2"	0′-3 1/4"	0′-1 1/2"	0′-5 1/2"	0′-1 1/2"	2′-7/8"	0′-5 5/8"	0′-5 1/2"	0′-1"	
EC6201	6	18	16′-9 1/4"	STR	16′-9 1/4"									
EC6202	6	18	17′-7/8"	STR	17′-7/8"									
EW6201	6	27	16′-9 1/4"	STR	16′-9 1/4"									
EW6202	6	27	17′-7/8"	STR	17′-7/8"									
EW6203	6	27	16′-9 1/4"	STR	16′-9 1/4"									
EW6204	6	27	17′-7/8"	STR	17′-7/8"									
EW5201	5	24	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"						
EW5202	5	24	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"						
EW8201	8	24	25′-6"	STR	25′-6"									
EW8202	8	24	25′-6"	STR	25′-6"									
EW8203	8	24	25′-7 1/8"	STR	25′-7 1/8"									
EW8204	8	24	25′-7 1/8"	STR	25′-7 1/8"									
EW8205	8	24	8′-1"	STR	8′-1"									
EW8206	8	24	8′-1"	STR	8′-1"									
EW8207	8	24	9′-0"	14	0′-11"	8′-1"		0′-6"						
EW8208	8	24	9′-0"	14	0′-11"	8′-1"		0′-6"						

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUBSTRUCTURE
REINFORCING SCHEDULE 2

RECOMMENDED

SHEET 51 OF 137

L-430

DES: JL | DWN: RS | CKD: SS

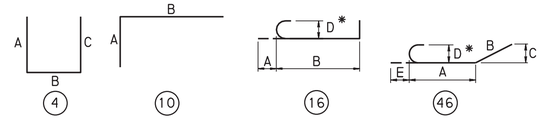
PLOTTED: 8/22/2022 7:11:33 PM
FILENAME: SL4300051OF0137.dgn
OPERATOR: tylipw11ics01$

PLOTTED: 8/22/2022 7:11:52 PM

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	R	REMARKS
END WALL														
EW6205	6	52	19′-3"	4	4′-0"	11′-3"	4′-0"							BAR LEGS TO BE BENT AS SHOWN "ABUTMENT 2 DETAILS 4"
EW6206	6	52	19′-3"	4	4′-0"	11′-3"	4′-0"							BAR LEGS TO BE BENT AS SHOWN "ABUTMENT 2 DETAILS 4"
EW6207	6	8	28′-9 1/8"	STR	28′-9 1/8"									
EW6208	6	8	28′-9 1/8"	STR	28′-9 1/8"									
END DIAPHRAGM														
GS6200	6	4	4′-2"	4	1′-2"	1′-10"	1′-2"							
GS6201	6	4	4′-6"	101	0′-0"	1′-2"	2′-2"	1′-4"	1′-2"					V = -22.5°
GS4200	4	28	4′-6"	STR	4′-6"									
GS4201	4	28	4′-5 1/4"	STR	4′-5 1/4"									BAR LENGTHS VARY FROM 3′-5 1/2" TO 5′-5"
GS4205	4	3	6′-11 1/2"	4	3′-1"	0′-9 1/2"	3′-1"							
GS4206	4	3	8′-1"	4	3′-1"	1′-11"	3′-1"							
GS4207	4	3	2′-5 3/4"	101	0′-0"	0′-0"	1′-1/4"	1′-2"	1′-5 1/2"					V = 67.5°
GS4208	4	3	3′-3"	4	1′-0"	0′-11"	1′-4"							
GS4209	4	22	3′-11"	10	1′-9"	2′-2"								
GS4210	4	18	1′-6 3/8"	STR	1′-6 3/8"									BAR LENGTHS VARY FROM 1′-2 1/4" TO 2′-2 1/2"
GS4212	4	4	1′-2 1/4"	STR	1′-2 1/4"									
GS4213	4	4	3′-3"	10	1′-1"	2′-2"								
GS5220	5	10	13′-11"	25	4′-2 1/4"	2′-3 1/2"	0′-5 3/4"	0′-3 1/4"						
GS5221	5	16	4′-5 1/4"	STR	4′-5 1/4"									BAR LENGTHS VARY FROM 3′-5 1/2" TO 5′-5"
BACK STAY WALL														
FOOTING														
GW5405	5	11	15′-6"	4	2′-6"	10′-6"	2′-6"							
GW5415	5	88	13′-6"	4	2′-6"	8′-6"	2′-6"							
GW5416	5	70	12′-6"	4	2′-6"	7′-6"	2′-6"							
GW5409	5	11	10′-6"	STR	10′-6"									
GW5417	5	88	8′-6"	STR	8′-6"									
GW5418	5	70	7′-6"	STR	7′-6"									
GW5406	5	41	38′-6 1/8"	STR	38′-6 1/8"									BAR LENGTHS VARY FROM 9′-5 1/2" TO 40′-0"
GW5407	5	12	37′-5 1/2"	STR	37′-5 1/2"									BAR LENGTHS VARY FROM 9′-5 1/2" TO 40′-0"
GW5408	5	56	38′-11"	STR	38′-11"									BAR LENGTHS VARY FROM 9′-5 1/2" TO 40′-0"
STEM														
GW5403	5	80	0′-0"	STR										
GW5401	5	169	4′-1"	16	0′-10"	2′-5"	0′-10"	0′-3 3/4"						
GW5402	5	169	8′-7 1/8"	10	2′-3"	6′-4 1/8"								B BAR LENGTH VARIES FROM 7′-8 1/2" TO 12′-7 7/8"
GW5404	5	169	8′-7 1/8"	10	2′-3"	6′-4 1/8"								B BAR LENGTH VARIES FROM 7′-8 1/2" TO 12′-7 7/8"
ANCHOR PEDESTAL														
GW3401	3	48	3′-4"	4	0′-4"	2′-4"	0′-8"							
GW4401	4	12	2′-4"	STR	2′-4"									
ROCK ANCHOR BUMP OUT														
GW5410	5	27	8′-7"	46	6′-0"	2′-0"	1′-9"	0′-3 3/4"	0′-7"					
GW5411	5	27	1′-6"	STR	1′-6"									
GW5412	5	36	2′-7"	4	0′-10"	0′-11"	0′-10"							
GW5413	5	36	3′-8"	4	0′-10"	2′-0"	0′-10"							
GW5414	5	36	4′-9"	4	0′-10"	3′-1"	0′-10"							

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS
A = ABUTMENT
F = FOUNDATION
S = SLAB
P = PYLON
C = CURB AND PARAPET
D = DIAPHRAGM
W = WALL

LOCATION
0 = GENERAL
1 = ABUTMENT 1
2 = ABUTMENT 2
3 = NORTH WALL
4 = BACK STAY WALL
5 = "FS" WALL

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUBSTRUCTURE
REINFORCING SCHEDULE 3

RECOMMENDED

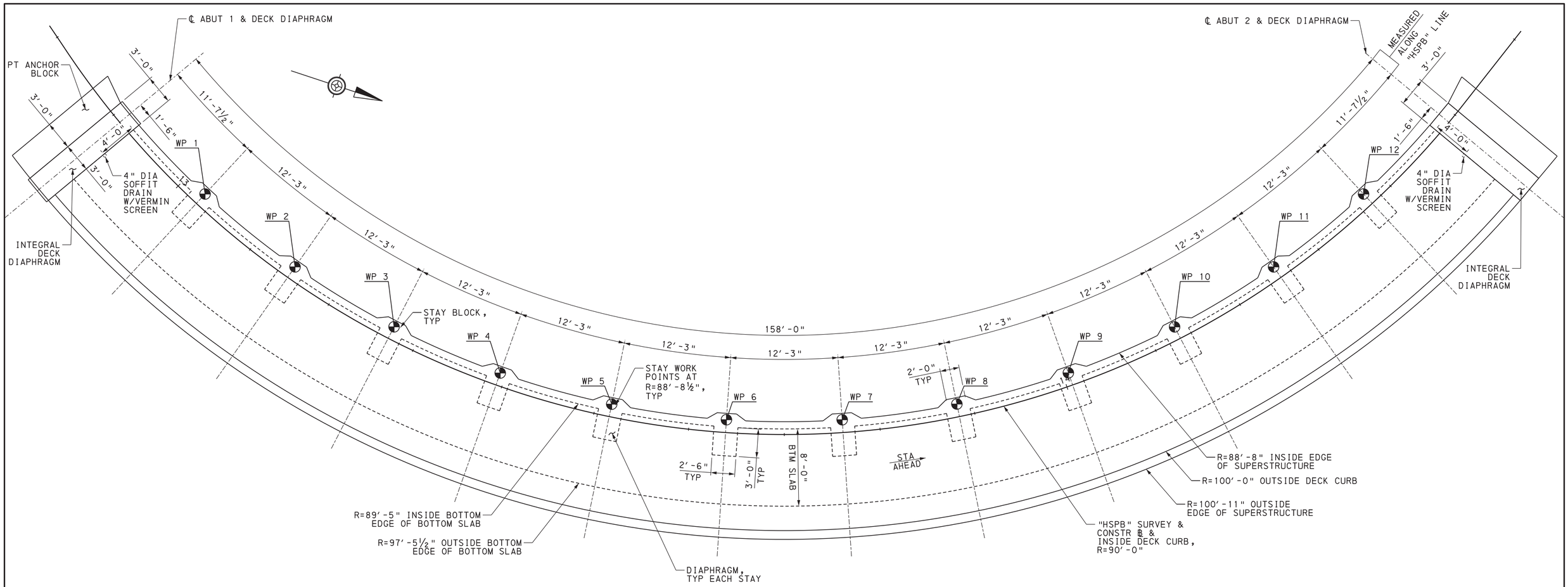
SHEET 52 OF 137

L-430

DES: JL | DWN: RS | CKD: SS

FILENAME: SL4300052OF0137.dgn
OPERATOR: tylipw11ics01$

PLOTTED: 8/22/2022 7:15:48 PM



FRAMING PLAN

2.5 0 2.5 5 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRAMING PLAN

RECOMMENDED _____

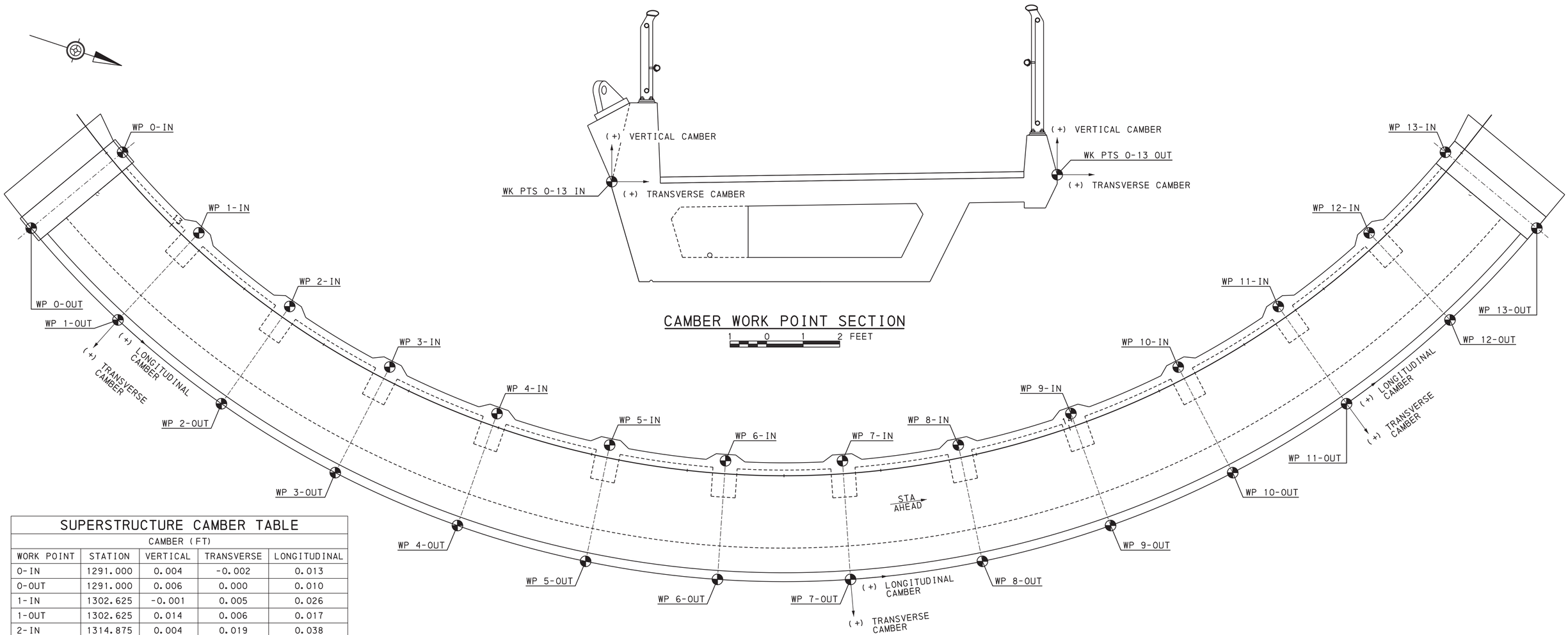
SHEET 53 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

FILENAME: SL4300053OF0137.dgn
OPERATOR: tylipwilliccs01$

PLOTTED: 8/22/2022 7:12:13 PM



CAMBER WORK POINT SECTION

1 0 1 2 FEET

CAMBER WORK POINT PLAN

2.5 0 2.5 5 FEET

SUPERSTRUCTURE CAMBER TABLE

CAMBER (FT)				
WORK POINT	STATION	VERTICAL	TRANSVERSE	LONGITUDINAL
0-IN	1291.000	0.004	-0.002	0.013
0-OUT	1291.000	0.006	0.000	0.010
1-IN	1302.625	-0.001	0.005	0.026
1-OUT	1302.625	0.014	0.006	0.017
2-IN	1314.875	0.004	0.019	0.038
2-OUT	1314.875	0.032	0.020	0.024
3-IN	1327.125	0.016	0.039	0.047
3-OUT	1327.125	0.055	0.040	0.030
4-IN	1339.375	0.031	0.062	0.052
4-OUT	1339.375	0.079	0.062	0.034
5-IN	1351.625	0.047	0.085	0.052
5-OUT	1351.625	0.100	0.084	0.037
6-IN	1363.875	0.060	0.103	0.049
6-OUT	1363.875	0.115	0.103	0.039
7-IN	1376.125	0.069	0.116	0.042
7-OUT	1376.125	0.123	0.115	0.040
8-IN	1388.375	0.073	0.119	0.034
8-OUT	1388.375	0.122	0.118	0.041
9-IN	1400.625	0.069	0.112	0.027
9-OUT	1400.625	0.112	0.112	0.042
10-IN	1412.875	0.060	0.097	0.021
10-OUT	1412.875	0.094	0.097	0.045
11-IN	1425.125	0.047	0.073	0.019
11-OUT	1425.125	0.068	0.074	0.048
12-IN	1437.375	0.030	0.045	0.021
12-OUT	1437.375	0.038	0.047	0.052
13-IN	1449.000	0.014	0.020	0.028
13-OUT	1449.000	0.007	0.023	0.056

NOTES:

1. CAMBER VALUES ARE IN FEET FROM FINAL PROFILE GRADE AND HORIZONTAL ALIGNMENT.
2. POSITIVE VERTICAL CAMBERS DENOTE THAT SUPERSTRUCTURE IS SET HIGHER THAN FINAL PROFILE GRADE.
3. LARGER VERTICAL CAMBER AT OUTSIDE OF SUPERSTRUCTURE REQUIRED TO MEET FINAL DECK X-SLOPE.
4. POSITIVE TRANSVERSE CAMBER DENOTES AN INCREASE IN RADIAL OFFSET TOWARDS OUTSIDE OF CURVE.
5. POSITIVE LONGITUDINAL CAMBER DENOTES AN INCREASE IN LENGTH ALONG STATION.
6. CONTRACTOR'S ENGINEER TO PROVIDE FALSEWORK GRADE TARGETS THAT INCORPORATES CAMBER, AND RESULTS IN THE FINAL PLAN PROFILE GRADE AT DAY 10,000.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUPERSTRUCTURE CAMBER

RECOMMENDED _____

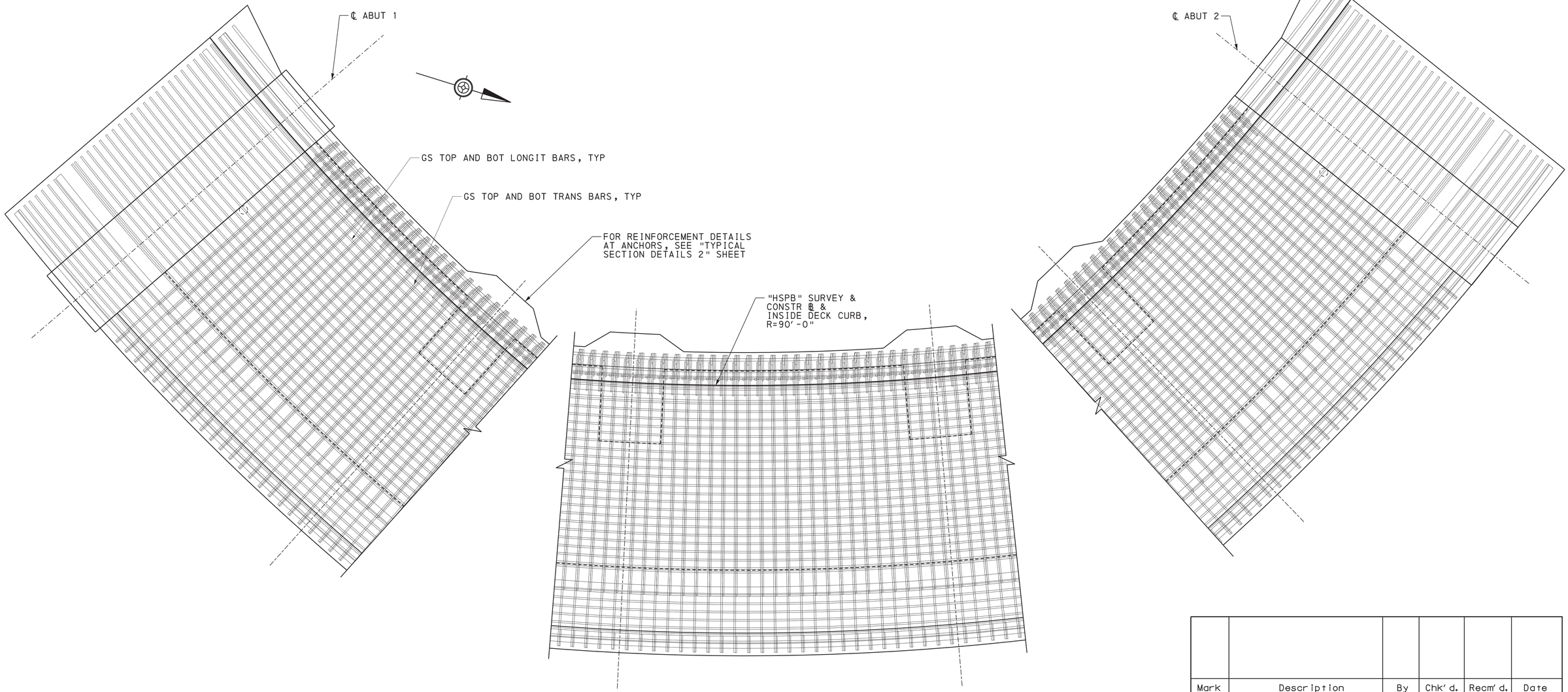
SHEET 54 OF 137

L-430

DES: BT | DWN: NMT | CKD: SS

OPERATOR: tylipw11ics01$ FILENAME: SL43000540F0137.dgn

PLOTTED: 8/22/2022 7:10:57 PM



DECK PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

DECK REINFORCEMENT PLAN

RECOMMENDED _____

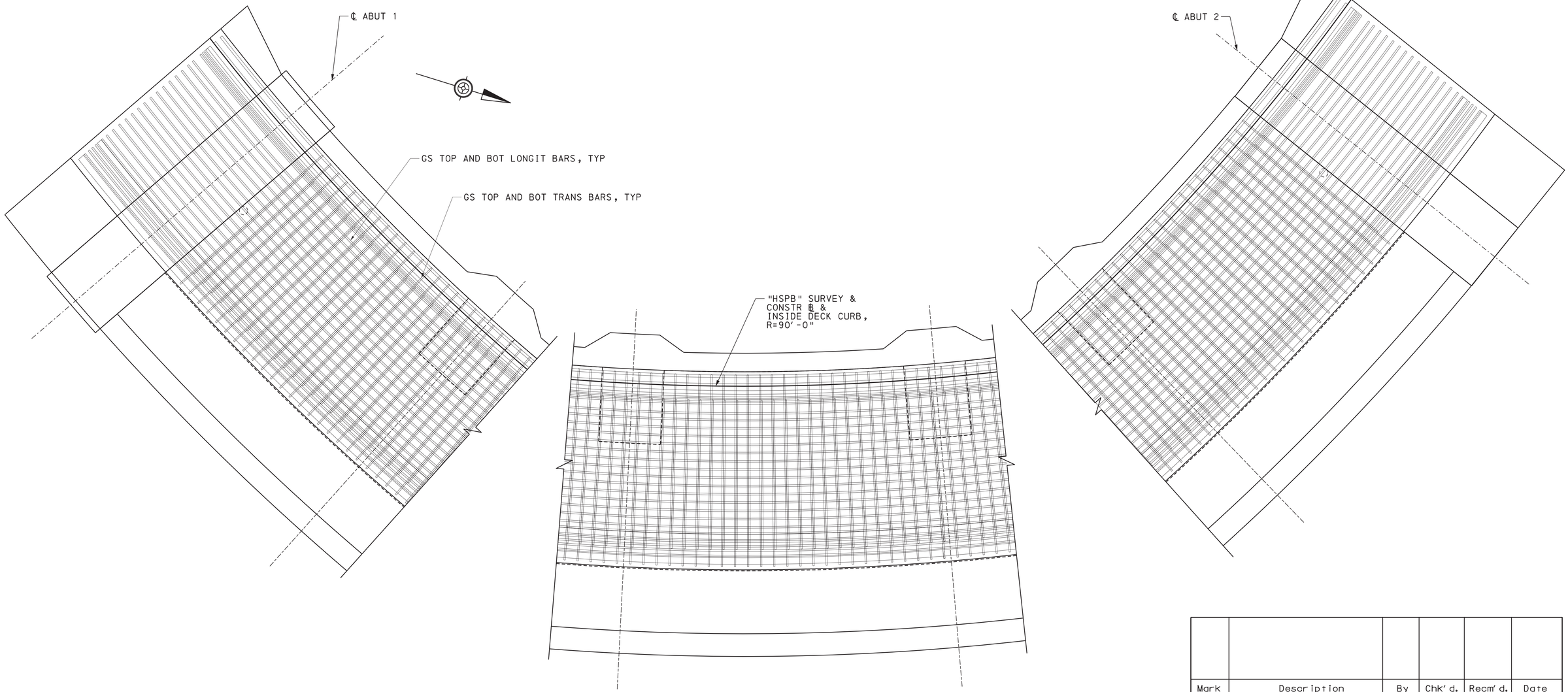
SHEET 55 OF 137

L-430

DES: BT	DWN: YW	CKD: SS

OPERATOR: tylipw11cs01$ FILENAME: SL43000550F0137.dgn

PLOTTED: 8/22/2022 7:12:06 PM



SOFFIT PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SOFFIT REINFORCEMENT PLAN

RECOMMENDED _____

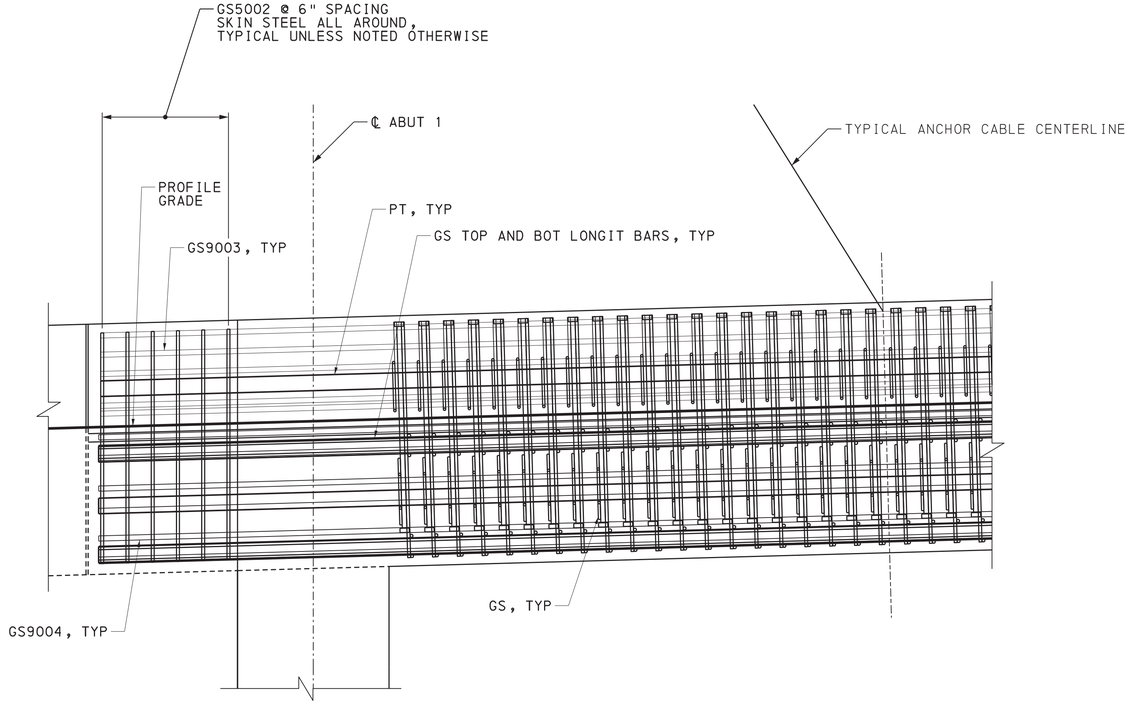
SHEET 56 OF 137

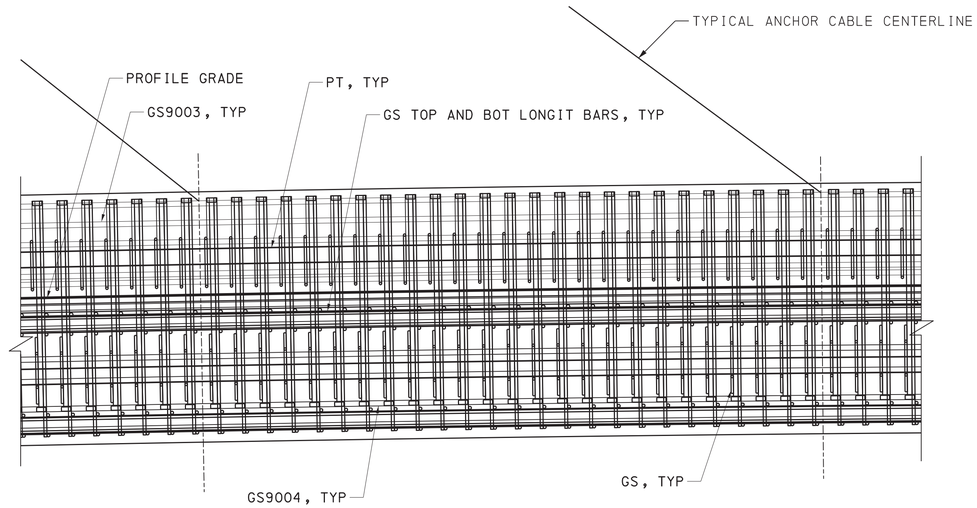
L-430

DES: BT	DWN: YW	CKD: SS

OPERATOR: tylipwllicsO1$ FILENAME: SL4300560F0137.dgn

PLOTTED: 8/22/2022 7:11:31 PM





ELEVATION REINFORCEMENT

1½ 0 1½ INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUPERSTRUCTURE
ELEVATION REINFORCEMENT

RECOMMENDED

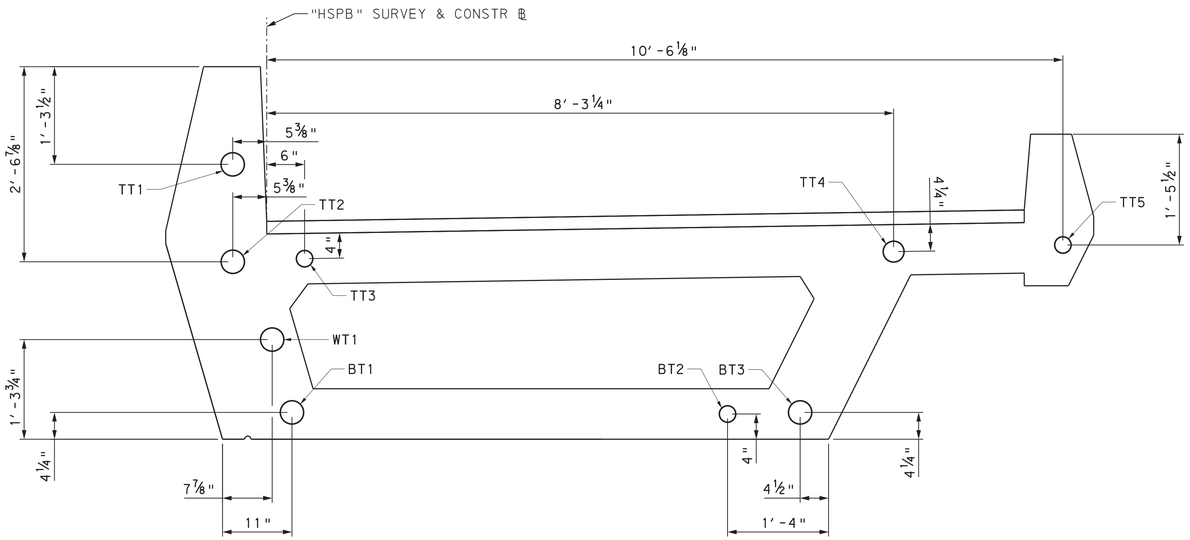
SHEET 57 OF 137

L-430

DES: BT | DWN: YW | CKD: SS

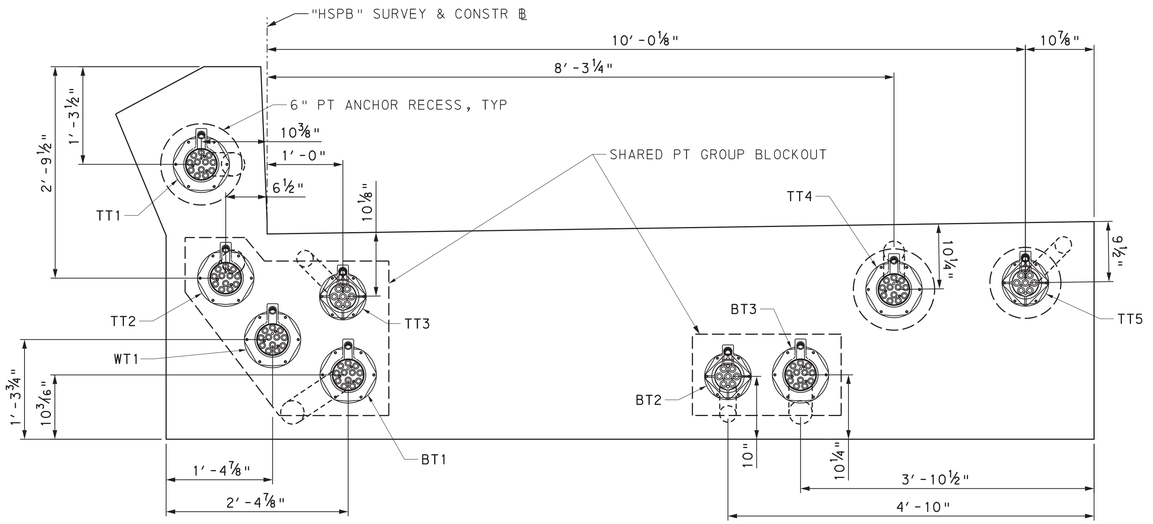
OPERATOR: tylipw11cs01$ FILENAME: SL43000570F0137.dgn

PLOTTED: 8/22/2022 7:16:07 PM



TYPICAL PT OFFSETS FROM FACE ABUT 1 TO FACE ABUT 2

6 0 6 12 INCHES



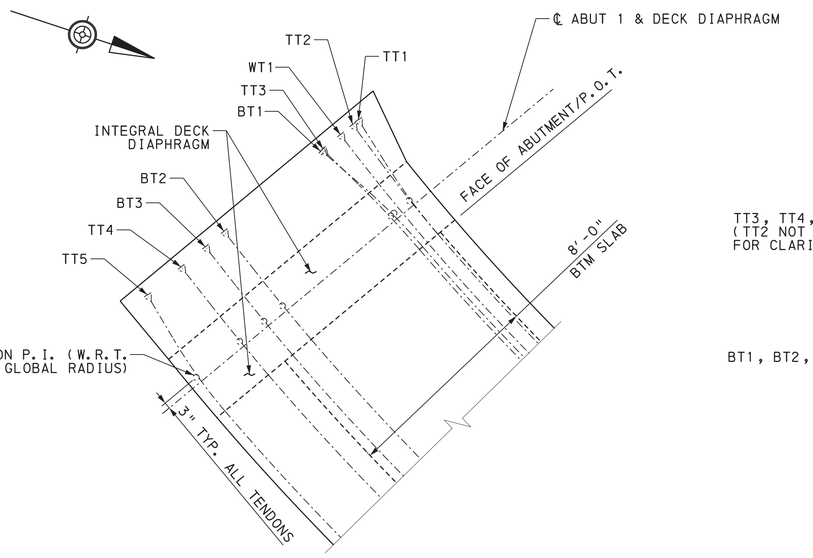
PT OFFSETS AT ANCHOR BLOCK

6 0 6 12 INCHES

POST-TENSIONING TABLE

TENDON	TENDON SIZE	TENDON LENGTH (FT)	STRESSING FORCE (KIPS)	STRESSING END	STRESSING SEQUENCE
TT1	12x0.6"	165.2	560	DOUBLE END	9
TT2	12x0.6"	165.2	560	DOUBLE END	6
TT3	7x0.6"	166.9	330	DOUBLE END	1
TT4	9x0.6"	180.5	420	DOUBLE END	2
TT5	7x0.6"	184.5	330	DOUBLE END	4
WT1	12x0.6"	166.1	560	DOUBLE END	3
BT1	12x0.6"	166.6	560	DOUBLE END	8
BT2	7x0.6"	176.7	330	DOUBLE END	5
BT3	12x0.6"	178.4	560	DOUBLE END	7

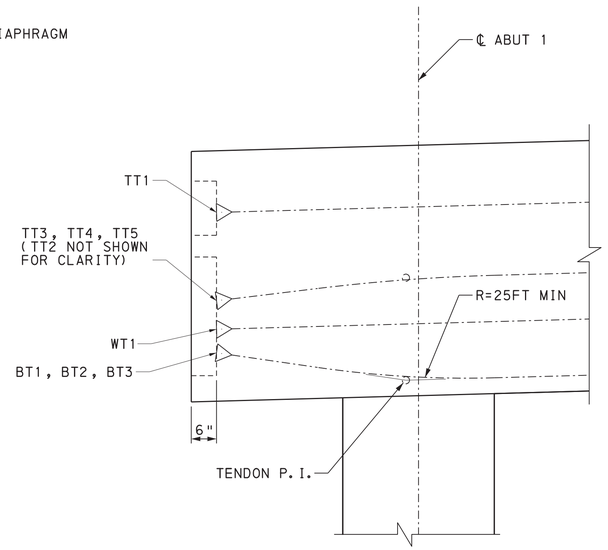
PT NOTES:
1. ALL TENDONS DOUBLE END STRESSED. APPLY NO MORE THAN ½ OF JACKING FORCE TO ONE SIDE PRIOR TO STRESSING THE OTHER END.
2. DSI HARDWARE WITH GALVANIZED DUCTS ASSUMED FOR DESIGN.
3. MIN BEND RADIUS OF DUCTS = 25FT.
4. GROUT TUBE VENTS REQUIRED AT ANCHORAGES, VERTICAL P.I.'S AT END DIAPHRAGMS, AND VERTICAL PGL P.I.'S IN MAINSPAN.
5. FILL ANCHOR RECESSES WITH CONCRETE OF MATCHING COLOR AND TYPE AS THE ABUTMENT ANCHORAGE AFTER TENDON GROUTING IS COMPLETED.



POST-TENSONING PARTIAL PLAN

2 0 2 4 FEET

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



POST-TENSONING ELEVATION

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LONGITUDINAL POST-TENSIONING LAYOUT

RECOMMENDED _____

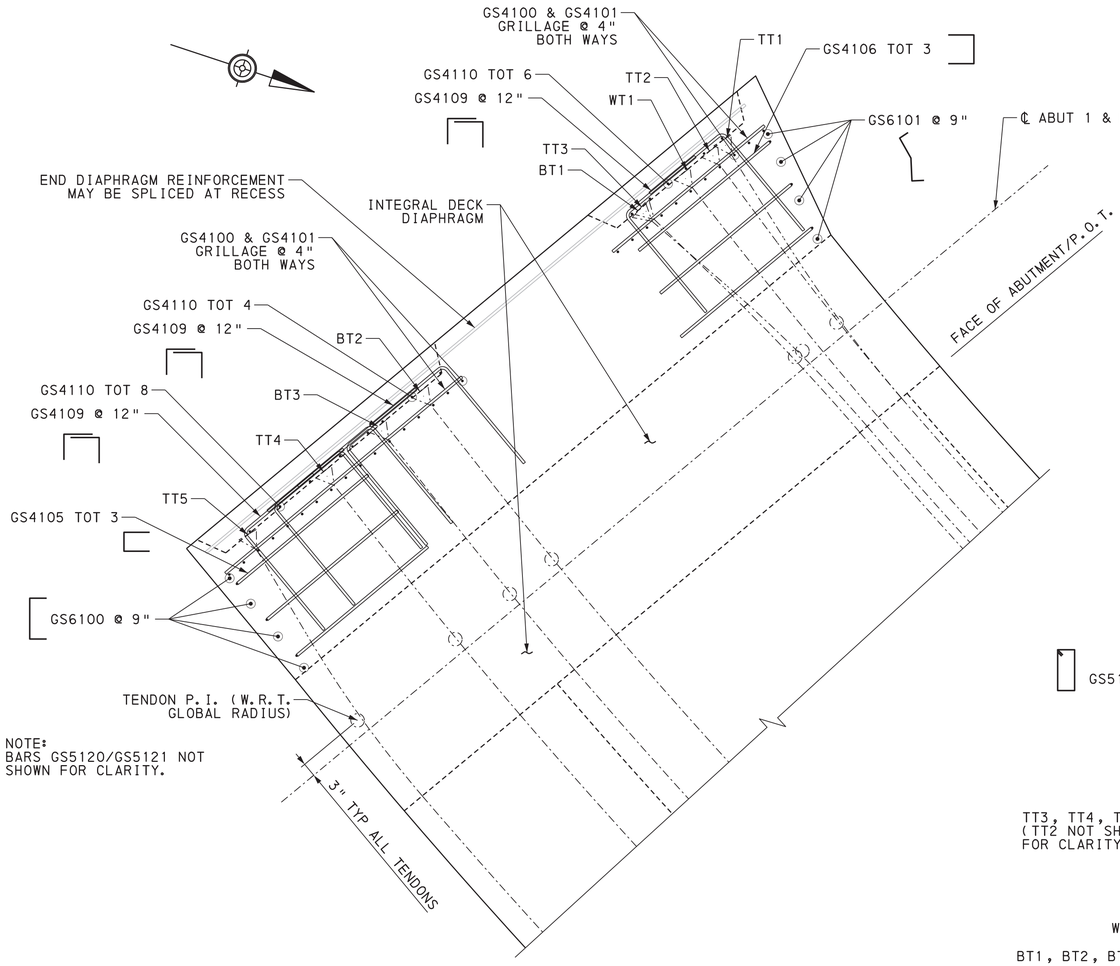
SHEET 58 OF 137

L-430

DES: JL | DWN: YW | CKD: SS

OPERATOR: tylipwillics01$ FILENAME: SL43000580F0137.dgn

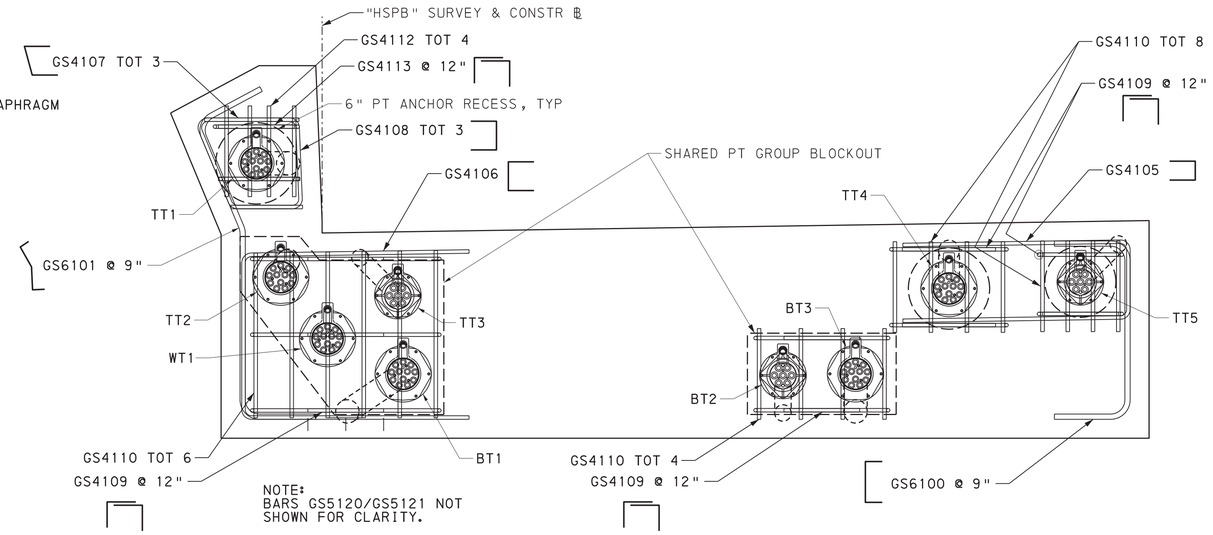
PLOTTED: 8/22/2022 7:12:53 PM



PRESTRESS ANCHORAGE DETAILS AT END DIAPHRAGM

12 0 12 INCHES

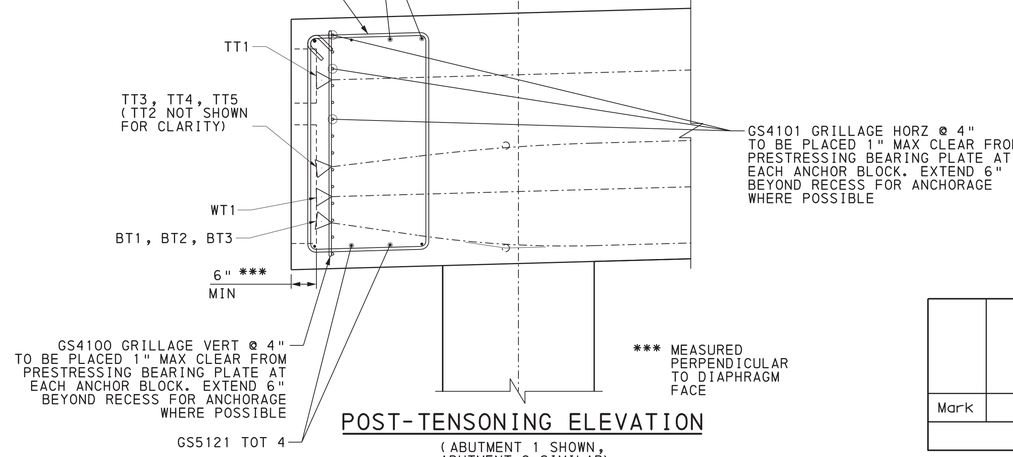
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



TYPICAL REINFORCING AT ANCHOR BLOCKOUT END DIAPHRAGM

6 0 6 12 INCHES

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



POST-TENSONING ELEVATION

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)

NOTES:

1. CONTRACTOR TO PREPARE AND SUBMIT FOR APPROVAL 3D INTEGRATED SHOP DRAWING OF ABUTMENT DIAPHRAGM. DRAWING TO INCLUDE POST-TENSIONING, REINFORCEMENT, CONDUITS, ANCHORS AND OTHER EMBEDDED HARDWARE SHOWING PROPOSED CONFLICT RESOLUTIONS.
2. LOCAL ZONE, BURSTING, AND BLOCK-OUT REINFORCEMENT TO BE ADDED CONSIST WITH THE PT SUPPLIER TYPICAL DETAILS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

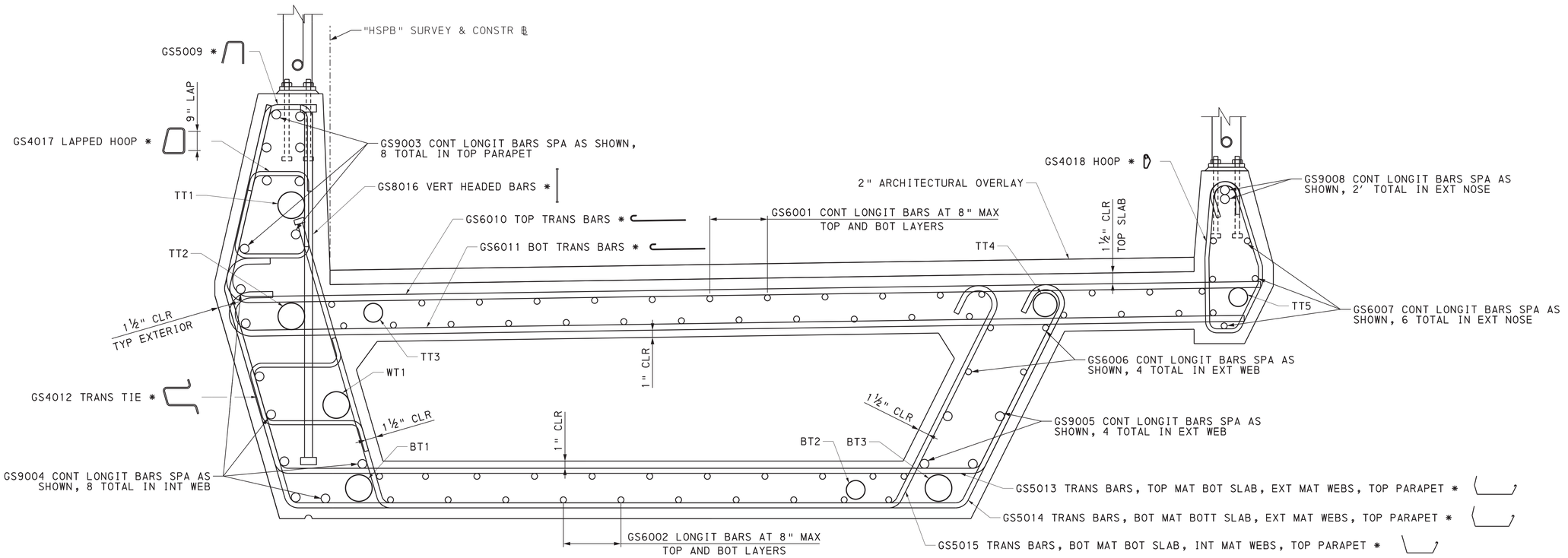
POST TENSIONING
ABUTMENT END DIAPHRAGM DETAILS

RECOMMENDED _____

DES: JL | DWN: | CKD:

OPERATOR: tylpw11cs01$ FILENAME: SL430059OF0137.dgn

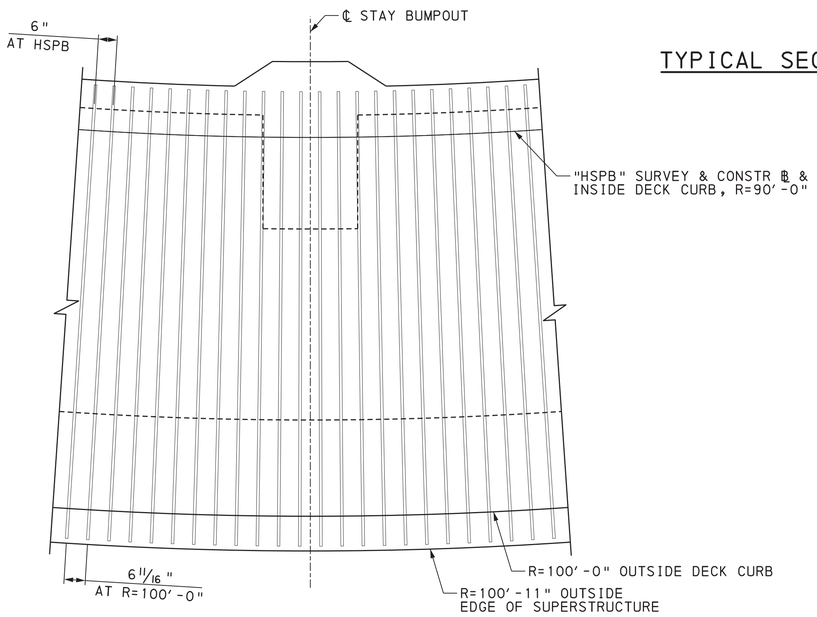
PLOTTED: 8/22/2022 7:17:55 PM



TYPICAL SECTION REINFORCEMENT DETAILS

6 0 6 INCHES

* ALL TRANSVERSE BARS PLACED RADIALLY WITH RESPECT TO HSPB CURVE AT 6" MAX UNO. SEE "TRANSVERSE BAR PLACEMENT SCHEMATIC" THIS SHEET.



TRANSVERSE BAR PLACEMENT SCHEMATIC

1 0 1 2 FEET

SS

NOTES:

1. ALL HORIZONTAL DIMENSIONS ARE RADIAL TO SURVEY AND CONSTRUCTION BASELINES.
2. FOR POST-TENSINING DUCT INFORMATION, SEE "LONGITUDINAL POST-TENSIONING LAYOUT" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

TYPICAL SECTION DETAILS 1

RECOMMENDED

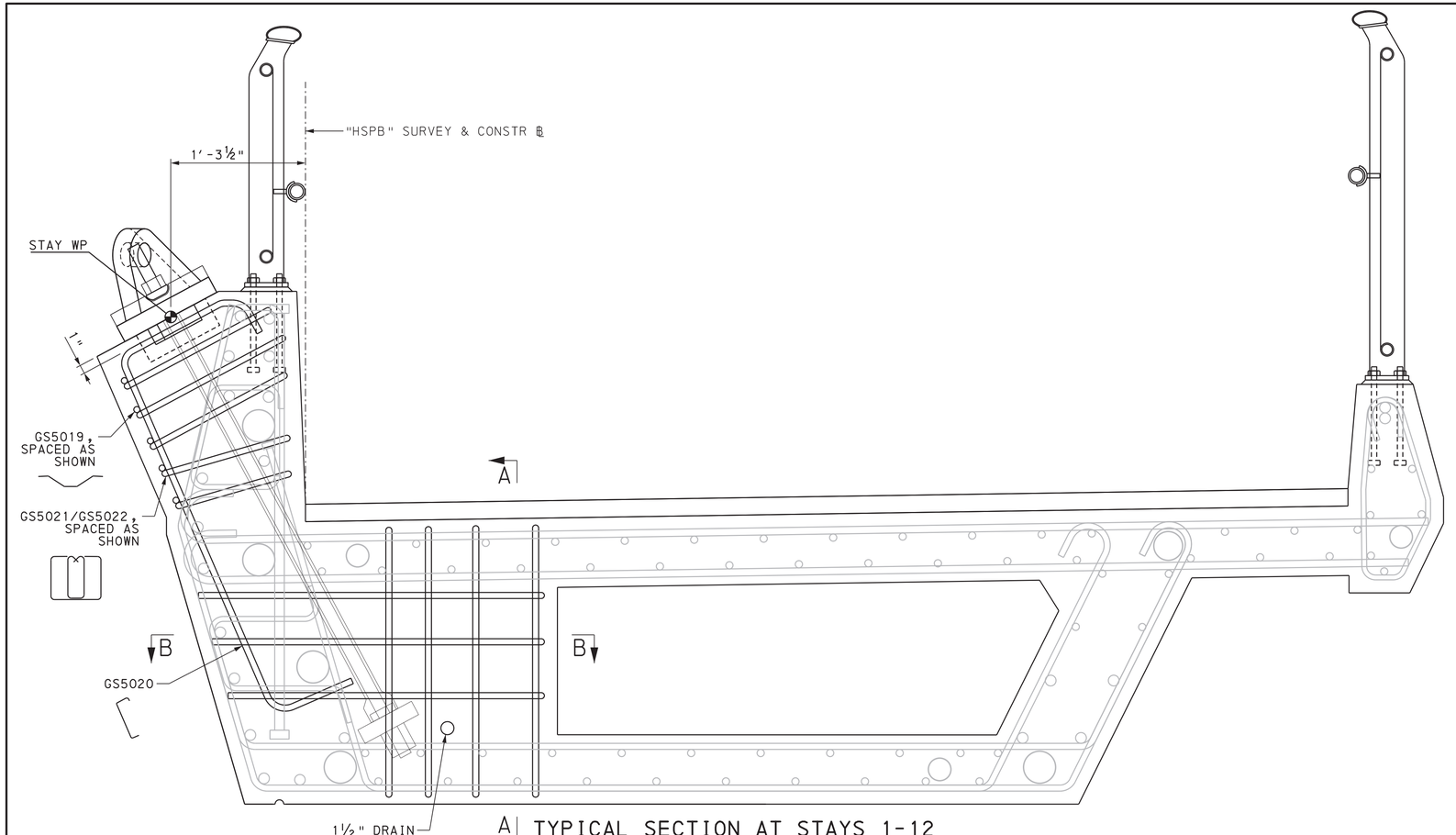
SHEET 60 OF 137

L-430

DES: JL | DWN: RJS | CKD:

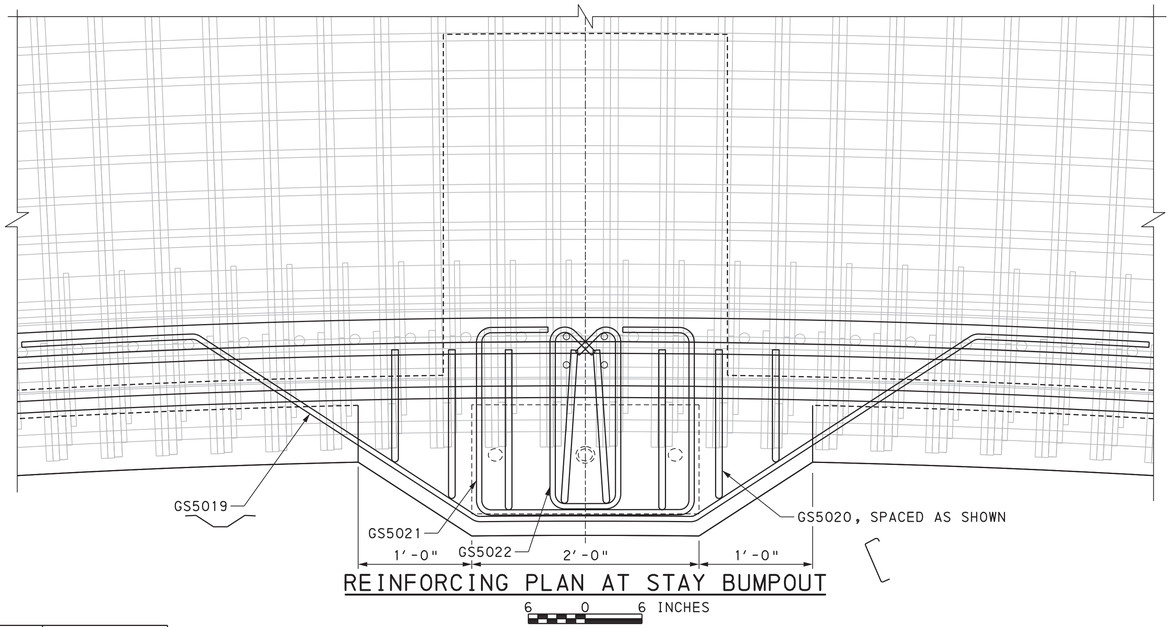
OPERATOR: tylipw11cs01$ FILENAME: SL4300600F0137.dgn

PLOTTED: 8/22/2022 7:13:27 PM
FILENAME: SL4300061OF0137.dgn
OPERATOR: tylipw11cs01$



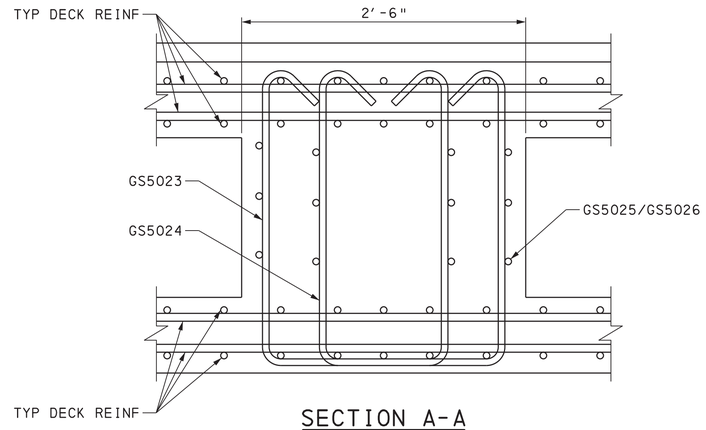
A TYPICAL SECTION AT STAYS 1-12

6 0 6 INCHES



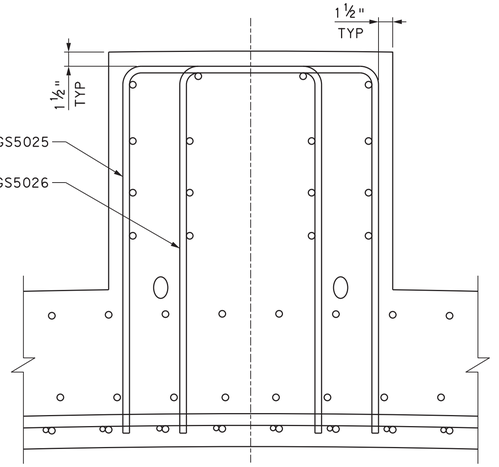
REINFORCING PLAN AT STAY BUMPOUT

6 0 6 INCHES



SECTION A-A

6 0 6 INCHES



SECTION B-B

6 0 6 INCHES

NOTES:

1. ALL HORIZONTAL DIMENSIONS ARE RADIAL TO SURVEY AND CONSTRUCTION BASELINES.
2. FOR POST-TENSINING DUCT INFORMATION, SEE "LONGITUDINAL POST-TENSIONING LAYOUT" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

TYPICAL SECTION DETAILS 2

RECOMMENDED

SHEET 61 OF 137

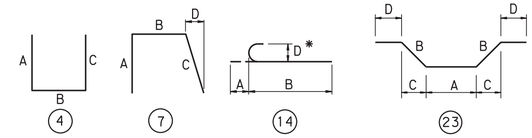
L-430

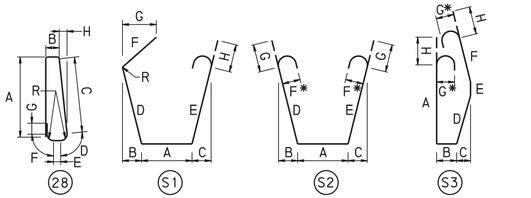
DES: JL	DWN: YW	CKD: SS

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	R	REMARKS
MAIN SPAN														
GS6001	6	150	35′-9 1/2"	STR	35′-9 1/2"									BAR LENGTHS VARY FROM 15′-11" TO 40′-0"
GS6002	6	105	35′-9 1/2"	STR	35′-9 1/2"									BAR LENGTHS VARY FROM 15′-11" TO 40′-0"
GS6006	6	20	35′-9 1/2"	STR	35′-9 1/2"									BAR LENGTHS VARY FROM 15′-11" TO 40′-0"
GS6007	6	30	35′-9 1/2"	STR	35′-9 1/2"									BAR LENGTHS VARY FROM 15′-11" TO 40′-0"
GS9003	9	40	37′-2 1/4"	STR	37′-2 1/4"									BAR LENGTHS VARY FROM 25′-11" TO 40′-0"
GS9004	9	40	37′-2 1/4"	STR	37′-2 1/4"									BAR LENGTHS VARY FROM 25′-11" TO 40′-0"
GS9005	9	20	37′-2 1/4"	STR	37′-2 1/4"									BAR LENGTHS VARY FROM 25′-11" TO 40′-0"
GS9008	9	10	37′-2 1/4"	STR	37′-2 1/4"									BAR LENGTHS VARY FROM 25′-11" TO 40′-0"
GS4012	4	337	3′-2"	23	0′-8"	1′-0"	0′-1"	0′-3"						BAR TO BE BENT AS SHOWN ON "TYPICAL SECTION DETAILS 1"
GS4017	4	337	4′-3 1/4"	28	0′-10"	0′-7"	0′-10 1/2"	0′-2 1/4"	0′-9 1/2"	0′-2"	0′-10"	0′-3"		
GS4018	4	337	5′-2"	S3	1′-7"	0′-4"	0′-3 1/2"	0′-7"	0′-3"	0′-11"	0′-3 1/2"	0′-9"		
GS5009	5	337	5′-5 7/8"	7	2′-3"	0′-11 7/8"	2′-3"	0′-2 1/2"						
GS6011	6	337	12′-5"	14	0′-11"	11′-6"								
GS5013	5	337	15′-4"	S1	8′-1"	0′-9"	1′-1/2"							
GS5014	5	337	15′-11"	S1	7′-9"	0′-10"	1′-2 1/2"	2′-7"	2′-7"	2′-2"	0′-6"	0′-10"		
GS5015	5	337	12′-10"	S2	5′-11"	0′-11 1/2"	1′-2"	3′-5"	2′-6"		0′-6"			
GS6010	6	337	12′-8"	14	0′-11"	11′-9"								
GS8016	8	337	4′-2"	STR	4′-2"									
STAY BUMPOUT														
GS5019	5	60	10′-10"	23	1′-10"	3′-0"	2′-6"	1′-6"						
GS5020	5	96	6′-1 1/4"	55	0′-9"	3′-8 1/2"	1′-2 3/4"	0′-5"	0′-0"					C LENGTH VARIES FROM 11 1/2" TO 1′-4 1/2"
GS5021	5	60	4′-8 3/8"	101	0′-8"	1′-4 3/8"	2′-0"	1′-4 3/8"	0′-8"					B & D LENGTH VARY FROM 1′-11" TO 1′-6 3/4". V = 90°
GS5022	5	60	4′-5 3/4"	S2	0′-9"	0′-0"	0′-0"	1′-4 3/8"	1′-4 3/8"		0′-6"			D & E LENGTH VARY FROM 1′-11" TO 1′-6 3/4"
GS5023	5	48	8′-2"	S2	2′-4"	0′-0"	0′-0"	2′-3"	2′-3"		0′-8"			
GS5024	5	48	7′-2"	S2	1′-4"	0′-0"	0′-0"	2′-3"	2′-3"		0′-8"			
GS5025	5	36	8′-8 1/2"	4	3′-1 3/4"	2′-5"	3′-1 3/4"							A & C LENGTH VARY FROM 3′-0" TO 3′-3 1/2"
GS5026	5	36	7′-8 1/2"	4	3′-1 3/4"	1′-5"	3′-1 3/4"							A & C LENGTH VARY FROM 3′-0" TO 3′-3 1/2"

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:





Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS
A = ABUTMENT
F = FOUNDATION
S = SLAB
P = PYLON
C = CURB AND PARAPET
D = DIAPHRAGM
W = WALL

LOCATION
0 = GENERAL
1 = ABUTMENT 1
2 = ABUTMENT 2
3 = NORTH WALL
4 = BACK STAY WALL
5 = "FS" WALL

DES: JL | DWN: RS | CKD: SS

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

SUPERSTRUCTURE
REINFORCING SCHEDULE

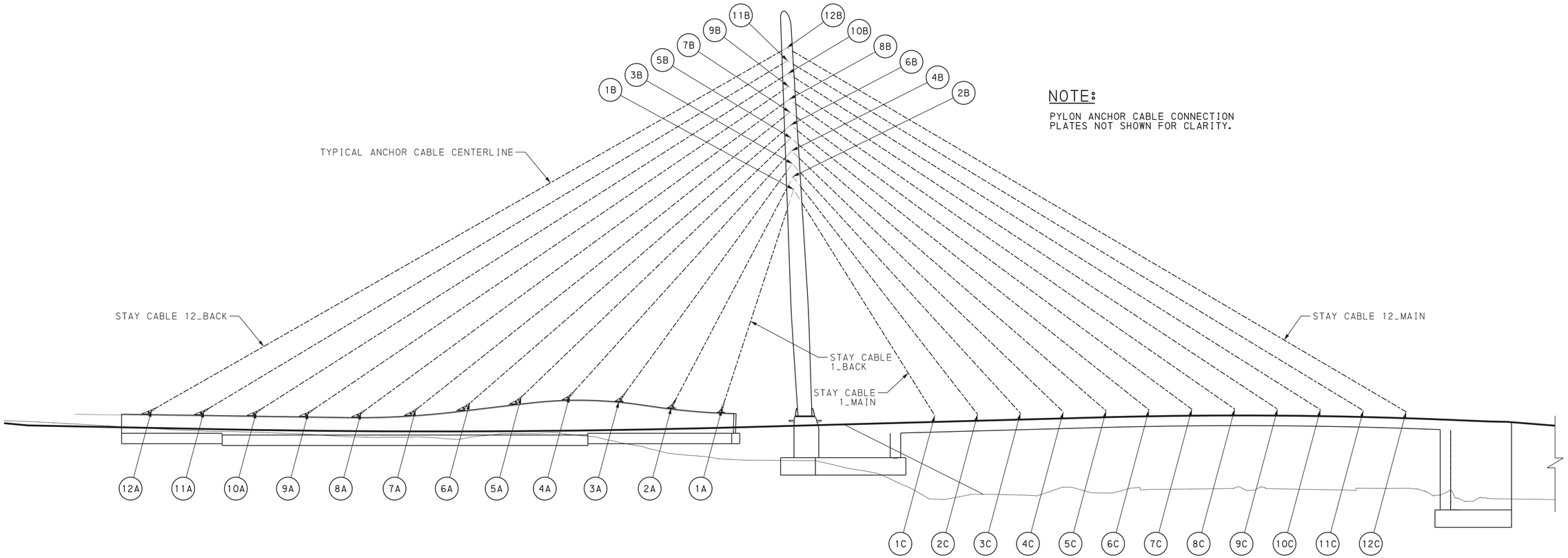
RECOMMENDED _____

SHEET 62 OF 137

L-430

PLOTTED: 8/22/2022 7:11:56 PM
FILENAME: SL4300620F0137.dgn
OPERATOR: tylipw11icS01$

PLOTTED: 8/22/2022 7:17:49 PM



NOTE:

PYLON ANCHOR CABLE CONNECTION PLATES NOT SHOWN FOR CLARITY.

CABLE ANCHOR CONTROL POINTS

NOT TO SCALE

CABLE ANCHOR CONTROL TABLE			
NO.	"HSBP" STATION	"HSBP" OFFSET	ELEV
1A	12+41.11	15.66' RT	611.58
2A	12+26.99	14.67' RT	612.88
3A	12+12.11	14.72' RT	614.76
4A	11+97.07	14.79' RT	615.19
5A	11+82.26	14.84' RT	614.08
A	11+67.26	14.89' RT	612.30
7A	11+52.02	14.97' RT	610.76
8A	11+36.82	15.03' RT	610.22
9A	11+21.81	15.07' RT	610.43
10A	11+06.83	15.15' RT	610.65
11A	10+91.69	15.24' RT	610.87
12A	10+76.54	15.30' RT	611.09
1B	12+61.75	13.85 LT	675.00
2B	12+61.56	14.41 LT	678.70
3B	12+61.37	14.98 LT	682.39
4B	12+61.19	15.54 LT	686.09
5B	12+61.00	16.10 LT	689.78
6B	12+60.88	16.66 LT	693.48
7B	12+60.69	17.22 LT	697.17
8B	12+60.51	17.79 LT	700.87
9B	12+60.32	18.35 LT	704.57
10B	12+60.14	18.91 LT	708.26
11B	12+60.00	19.47 LT	711.96
12B	12+59.85	20.04 LT	715.65
1C	13+02.29	1.11 LT	610.12
2C	13+14.59	1.11 LT	610.46
3C	13+26.90	1.11 LT	610.79
4C	13+39.21	1.11 LT	611.13
5C	13+51.52	1.11 LT	611.47
6C	13+63.83	1.11 LT	611.74
7C	13+76.15	1.11 LT	611.91
8C	13+88.46	1.11 LT	611.97
9C	14+00.78	1.11 LT	611.93
10C	14+13.09	1.11 LT	611.78
11C	14+25.40	1.11 LT	611.53
12C	14+37.72	1.11 LT	611.18

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CABLE ANCHOR DETAILS 1

RECOMMENDED

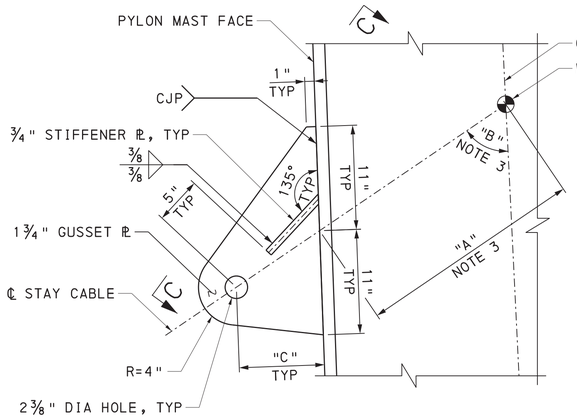
SHEET 63 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

FILENAME: SL43000630F0137.dgn
OPERATOR: tylipwilliccs01$

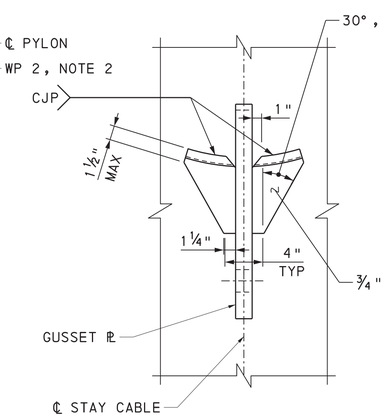
PLOTTED: 8/22/2022 7:15:12 PM



PYLON ANCHOR CABLE CONNECTION PLATE

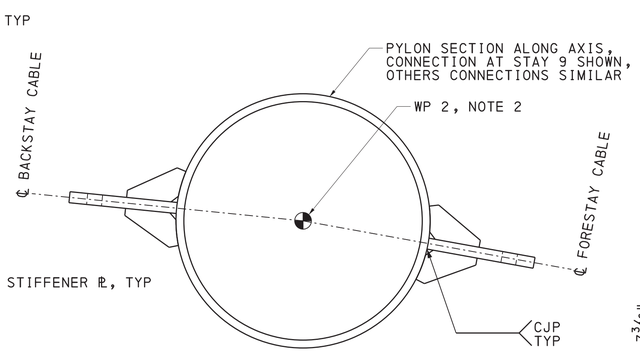
6 0 6 INCHES

FOR DIMENSIONS "A", "B" AND "C", SEE "PYLON CONNECTION TABLE", THIS SHEET.



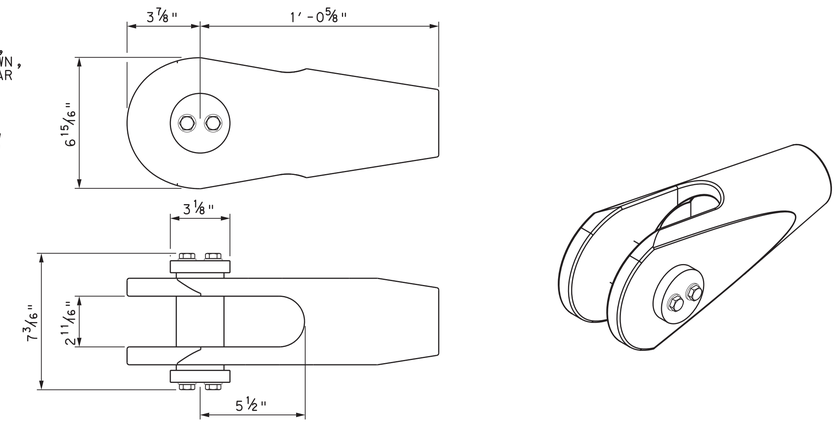
SECTION C-C

6 0 6 INCHES



PYLON ANCHOR CABLE CONNECTION PLAN

SEE 'CABLE ANCHOR CONTROL TABLE' ON 'CABLE ANCHOR DETAILS 1' SHEET FOR BACKSTAY AND FORESTAY ALIGNMENT



HANGER CABLE TOP ANCHOR

NOT TO SCALE

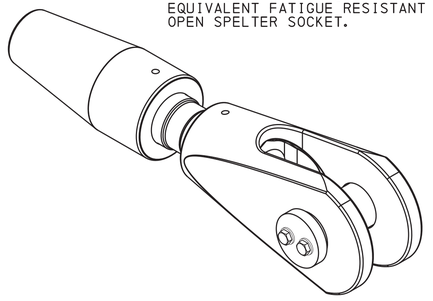
PYLON CONNECTION TABLE							
LOCATION	"A" (FT)	"B" (DEG)	"C"	LOCATION	"A" (FT)	"B" (DEG)	"C"
12_BACK	1.9041	58.6977	9"	12_MAIN	1.9776	55.8082	9"
11_BACK	2.0643	57.7149	9"	11_MAIN	2.138	55.0706	9"
10_BACK	2.231	56.5282	9"	10_MAIN	2.2983	54.1287	9"
9_BACK	2.3937	55.1148	9"	9_MAIN	2.4607	52.9621	9"
8_BACK	2.5647	53.3861	7.5"	8_MAIN	2.6305	51.5349	7.5"
7_BACK	2.7435	51.4589	7.5"	7_MAIN	2.8117	49.8067	7.5"
6_BACK	2.9324	49.3748	7.5"	6_MAIN	3.0115	47.7223	7.5"
5_BACK	3.1486	46.8752	7.5"	5_MAIN	3.2432	45.1954	7.5"
4_BACK	3.4369	43.4504	6"	4_MAIN	3.5276	42.1368	6"
3_BACK	3.9089	38.3166	6"	3_MAIN	3.9022	38.4277	6"
2_BACK	4.7485	31.4666	6"	2_MAIN	4.445	33.8585	6"
1_BACK	6.0328	24.769	6"	1_MAIN	5.3407	28.1648	6"

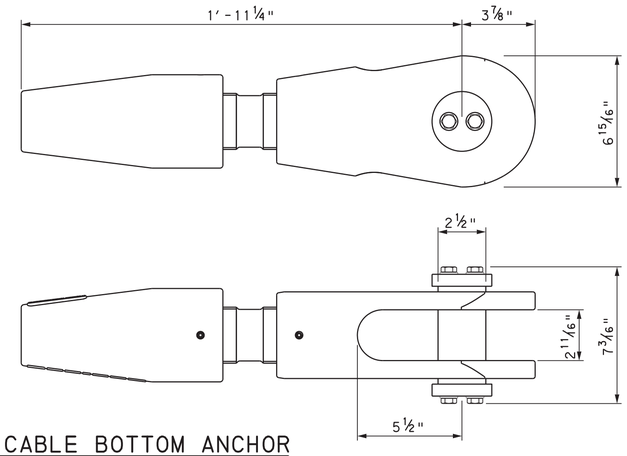
NOTES:

1. FOR WP 1 LOCATION, SEE BACK STAY CONTROL POINTS TABLE ON "BACK STAY WALL PLAN AND ELEVATION 1" AND "BACK STAY WALL PLAN AND ELEVATION 2" SHEETS.
2. FOR WP 2 LOCATION, SEE NOS. 1B-12B IN THE 'CABLE ANCHOR CONTROL TABLE' ON "CABLE ANCHOR DETAILS 1" SHEET.
3. DIMENSIONS "A" AND "B" ARE MEASURED IN THE DESIGN PLANE DEFINED BY THE PARALLEL OF THE AXIS OF THE ℄ STAY CABLE AND PARALLEL TO THE AXIS OF THE ℄ PYLON.

NOTE:

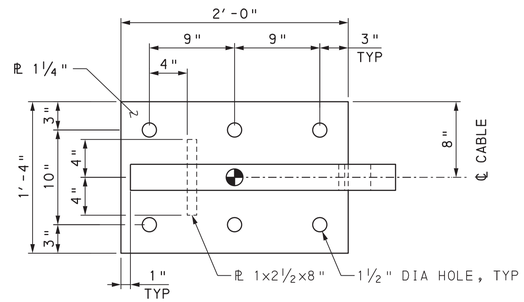
DIMENSIONS ARE REPRESENTATIVE OF PFEIFER TYPE 710 PV150 OR EQUIVALENT FATIGUE RESISTANT OPEN SPELTER SOCKET.





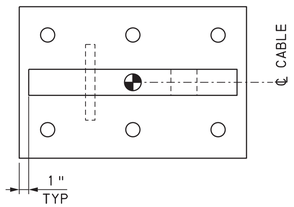
HANGER CABLE BOTTOM ANCHOR

NOT TO SCALE



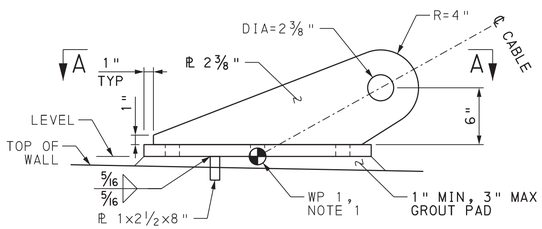
SECTION A-A

6 0 6 INCHES



SECTION B-B

6 0 6 INCHES



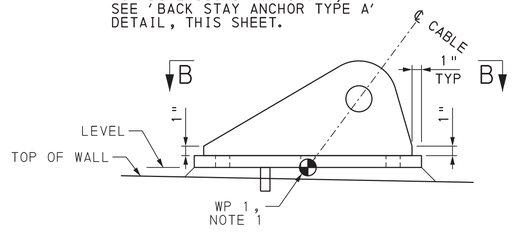
BACK STAY ANCHOR TYPE A

6 0 6 INCHES

(AT LOCATIONS 1C THROUGH 8C)

NOTE:

FOR DIMENSIONS NOT SHOWN, SEE 'BACK STAY ANCHOR TYPE A' DETAIL, THIS SHEET.



BACK STAY ANCHOR TYPE B

6 0 6 INCHES

(AT LOCATIONS 9C THROUGH 12C)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

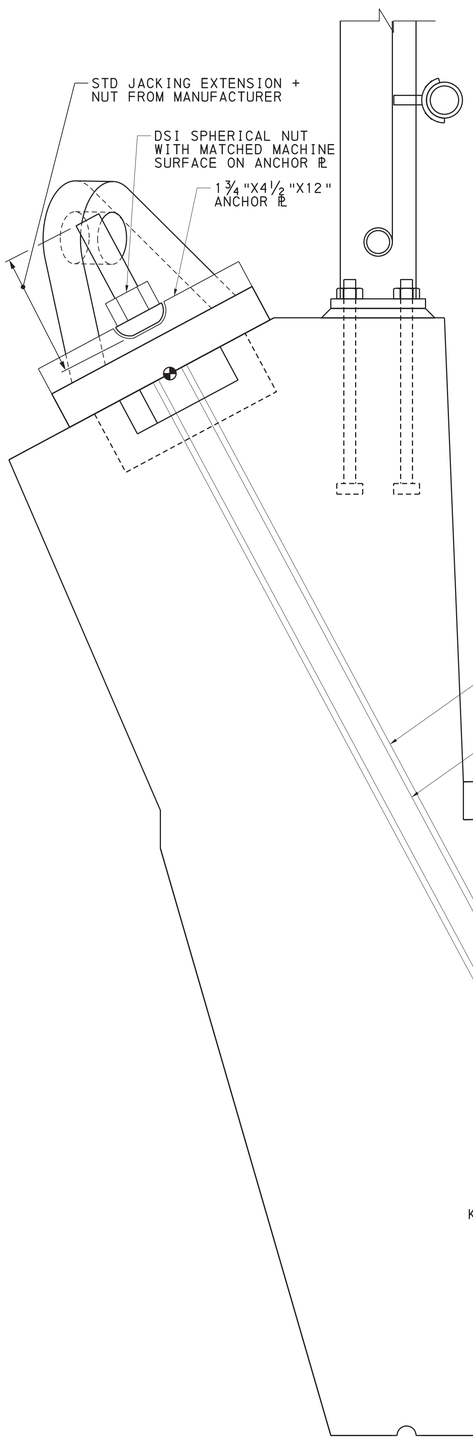
CABLE ANCHOR DETAILS 2

RECOMMENDED _____

DES: JL | DWN: RJS | CKD: SS

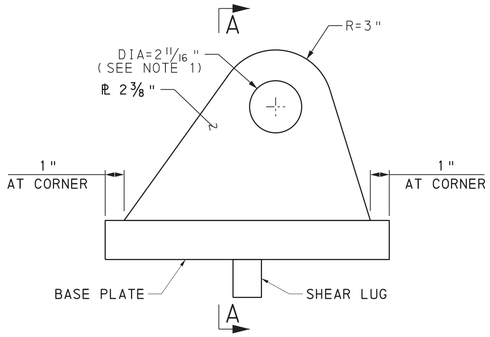
OPERATOR: tylipw11ics01$ FILENAME: SL4300064F0137.dgn

PLOTTED: 8/22/2022 7:14:53 PM



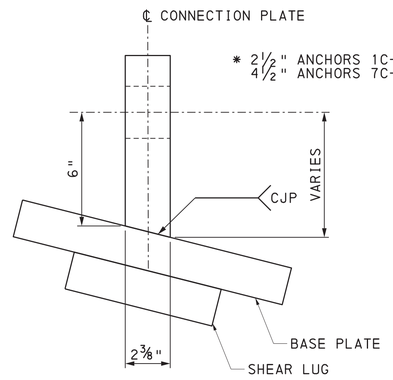
MAIN STAY DECK ANCHORAGE

3 0 3 INCHES



CONNECTION PLATE ELEVATION

3 0 3 INCHES

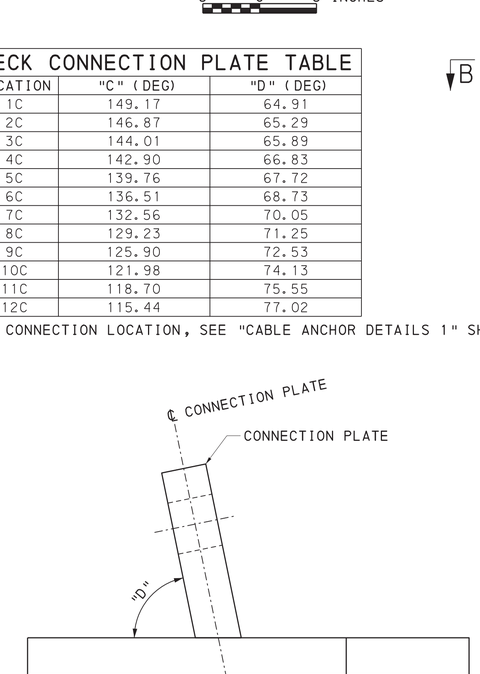


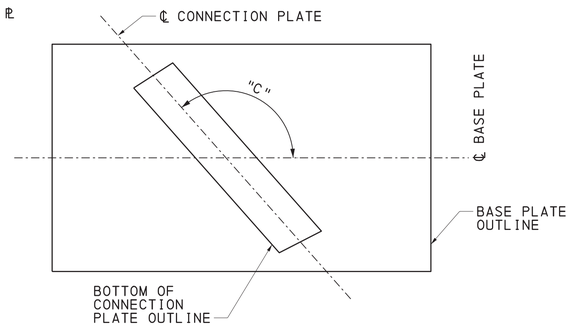
SECTION A-A

3 0 3 INCHES

DECK CONNECTION PLATE TABLE		
LOCATION	"C" (DEG)	"D" (DEG)
1C	149.17	64.91
2C	146.87	65.29
3C	144.01	65.89
4C	142.90	66.83
5C	139.76	67.72
6C	136.51	68.73
7C	132.56	70.05
8C	129.23	71.25
9C	125.90	72.53
10C	121.98	74.13
11C	118.70	75.55
12C	115.44	77.02

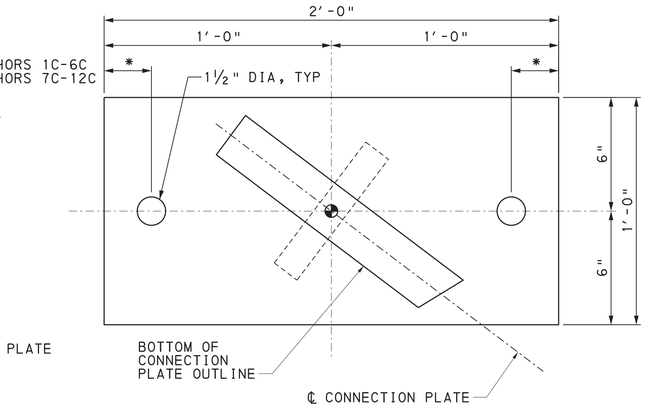
FOR CONNECTION LOCATION, SEE "CABLE ANCHOR DETAILS 1" SHEET

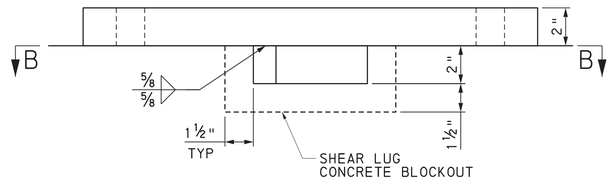




MAIN STAY CONNECTION PLATE ORIENTATION

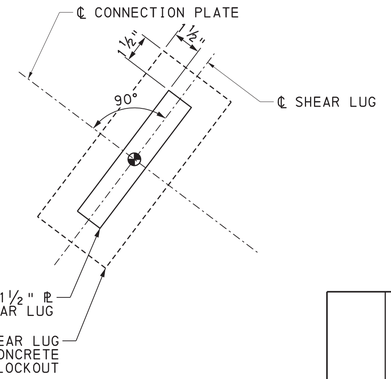
NOT TO SCALE





BASE PLATE

3 0 3 INCHES



SECTION B-B

3 0 3 INCHES

NOTES:

1. COORDINATE PIN HOLE DIAMETER WITH CABLE MANUFACTURER. DIAMETERS GREATER THAN DIMENSION SHOWN REQUIRE APPROVAL BY THE ENGINEER.
2. CABLE ANCHOR ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED.
3. THE CONTRACTOR SHALL DEVELOP AND DEMONSTRATE WITH A MOCK UP TEST FOR THE ENGINEER'S APPROVAL A WRITTEN GROUTING PLAN THAT WILL ASSURE GROUT COMPLETELY FILLS IN AND AROUND THE SHEAR LUGS. THE CONTRACTOR TO PROVIDE AIR VENTS AND GROUT PORTS TO BASE PLATE AS PART OF GROUTING PLAN TO PREVENT AIRPOCKETING DURING GROUTING OF SHEAR LUGS.
4. LEVELING SCREWS MAY BE USED TO PREVENT DISPLACEMENT OF ANCHOR PLATE DURING GROUT INSTALLATION AND CURING.
5. USE FLOWABLE NON-SHRINK EPOXY GROUT, f'c = 8,000 PSI MIN.
6. CONTRACTOR SHALL SEAL ANCHOR DUCT IN A MANNER THAT WILL NOT ALLOW COMPRESSION OF THE DUCT DURING ROD TENSIONING.
7. PT BARS TO CONFORM TO ASTM A722 (150 KSI).
8. ASSUMED ANCHOR SET = 0.0625".
9. JACKING FORCE SHALL BE 166 KIPS. BARS SHALL BE LEFT WITH 132 KIPS AFTER SEATING. TO BE VERIFIED WITH LIFTOFF.
10. PROVIDE CORROSION PROTECTION FOR PT BARS BETWEEN INSTALLATION AND GROUTING OPERATIONS. SUBMIT PRODUCT AND METHODS FOR APPROVAL BY THE ENGINEER.
11. RECOMMEND PLACING GROUT TUBE NEAR EMBEDDED END OF ANCHOR TO ALLOW FOR REMOVAL OF ANY POTENTIAL WATER INTRUSION BETWEEN TIME OF INSTALLATION AND GROUTING.
12. GROUT BARS AFTER STRESSING. SEAL VENTS.
13. GROUT SHEAR LUG BLOCKOUT AFTER STRESSING.
14. CONTRACTOR TO SUBMIT PT BAR STRESSING SEQUENCE TO ENGINEER FOR APPROVAL.
15. PT BARS, NUTS, AND WASHERS SHALL BE GALVANIZED.
16. ADJUST ANCHOR CONNECTION GEOMETRY AS NEEDED TO AVOID CONFLICT WITH ANCHOR BOLTS. SUBMIT CHANGES TO ENGINEER FOR APPROVAL.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CABLE ANCHOR DETAILS 3

RECOMMENDED

SHEET 65 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

OPERATOR: tyllipwillicsO1$ FILENAME: SL43000650F0137.dgn

PLOTTED: 8/22/2022 7:14:40 PM

CABLE FORCE SCHEDULE

STAY CABLE	STEEL AREA (IN SQ)	PERMANENT LOADS			THERMAL LOADS		LIVE LOADS	
		END OF CONSTRUCTION DEAD LOAD (KIPS)	LONG TERM LOSSES (KIPS)	FINAL DEAD LOAD (KIPS)	MAXIMUM (KIPS)	MINIMUM (KIPS)	PEDESTRIAN MAXIMUM (KIPS)	PEDESTRIAN MINIMUM (KIPS)
1_BACK	1.30	57.3	-4.7	52.6	1.1	-1.1	1.1	0.0
2_BACK	1.30	65.2	-4.2	61.0	1.2	-1.2	3.7	0.0
3_BACK	1.30	65.2	-3.8	61.5	2.0	-2.0	5.4	0.0
4_BACK	1.30	66.1	-3.4	62.7	3.1	-3.1	6.3	0.0
5_BACK	1.30	68.2	-3.1	65.2	4.2	-4.2	6.5	0.0
6_BACK	1.30	70.2	-2.8	67.4	5.2	-5.2	6.4	0.0
7_BACK	1.30	71.5	-2.6	68.9	6.1	-6.1	6.1	0.0
8_BACK	1.30	72.2	-2.4	69.8	6.8	-6.8	5.8	0.0
9_BACK	1.30	72.3	-2.3	70.0	7.5	-7.5	5.4	0.0
10_BACK	1.30	71.8	-2.2	69.6	8.2	-8.2	5.0	0.0
11_BACK	1.30	71.1	-2.0	69.0	8.8	-8.8	4.5	0.0
12_BACK	1.30	63.9	-1.9	62.0	9.3	-9.3	4.1	0.0
1_MAIN	1.30	51.3	-4.1	47.1	3.7	-3.7	0.1	-3.2
2_MAIN	1.30	59.6	-4.6	55.0	2.8	-2.8	1.8	-0.1
3_MAIN	1.30	63.3	-4.6	58.7	2.2	-2.2	6.0	0.0
4_MAIN	1.30	66.7	-4.5	62.1	2.1	-2.1	9.0	0.0
5_MAIN	1.30	70.0	-4.3	65.7	2.5	-2.5	10.6	0.0
6_MAIN	1.30	72.7	-4.1	68.6	3.4	-3.4	11.0	0.0
7_MAIN	1.30	74.7	-3.6	71.1	4.5	-4.5	10.2	0.0
8_MAIN	1.30	76.0	-3.1	73.0	5.9	-5.9	8.7	0.0
9_MAIN	1.30	76.9	-2.4	74.5	7.5	-7.5	6.5	0.0
10_MAIN	1.30	76.9	-1.7	75.1	9.0	-9.0	4.0	0.0
11_MAIN	1.30	76.7	-1.1	75.6	10.2	-10.2	1.6	0.0
12_MAIN	1.30	69.4	-0.7	68.7	10.9	-10.9	0.3	-0.8

NOTES:

1. FOR STAY CABLE NUMBERING, SEE "CABLE ANCHOR DETAILS 1" SHEET.
2. LOADS UNFACTORED UNLESS OTHERWISE NOTED.

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CABLE FORCE SCHEDULE

RECOMMENDED _____

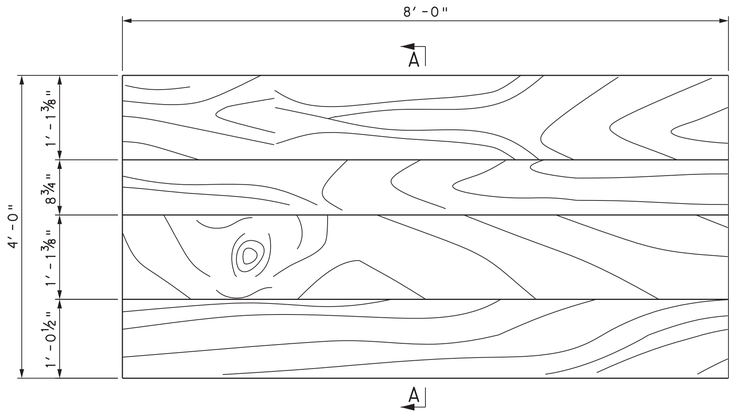
SHEET 66 OF 137

L-430

DES: JL | DWN: RJS | CKD: SS

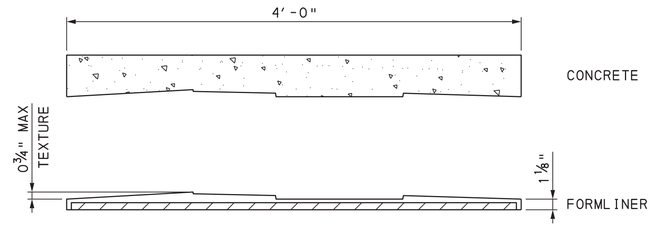
OPERATOR: tylipw111cs01$ FILENAME: SL43000660F0137.dgn

PLOTTED: 8/22/2022 7:11:15 PM



FORMLINER CONCRETE FACE

6 0 6 12 INCHES

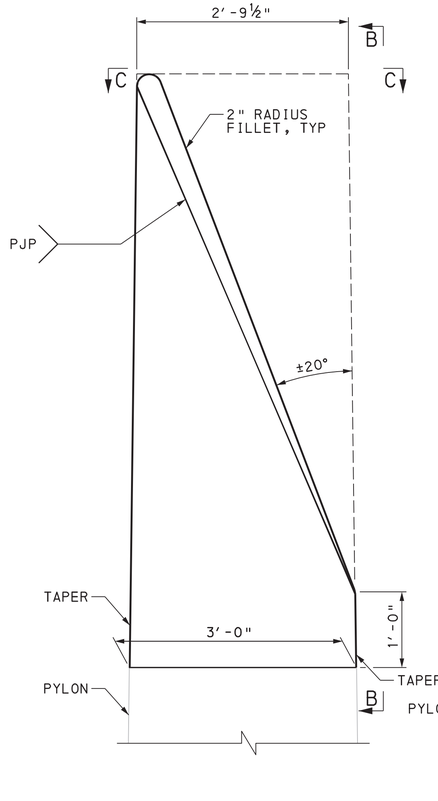


SECTION A-A

1 0 1 2 INCHES

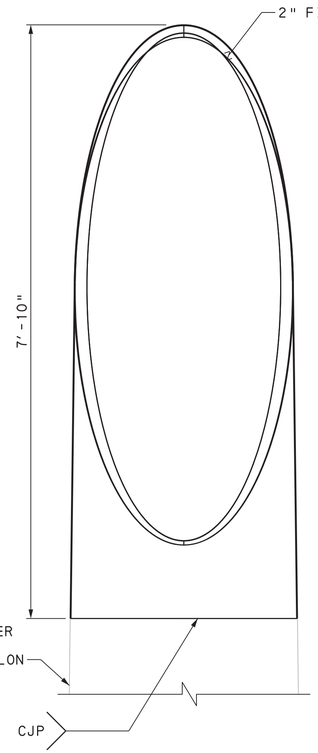
NOTES:

1. FORMLINER BASED UPON FITZGERALD FORMLINERS PATTERN 16936 LARGE RUSTIC PLANK. EQUIVALENT PART MAY BE USED UPON APPROVAL OF DESIGN ENGINEER.
2. ALIGN FORMLINERS HORIZONTALLY AND STAGGER THEM VERTICALLY.



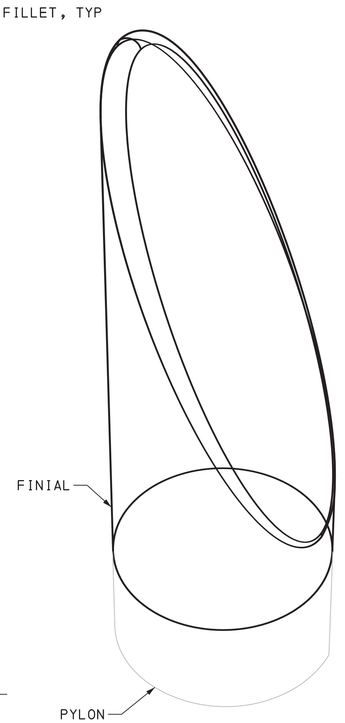
FINIAL ELEVATION

6 0 6 12 INCHES



VIEW B-B

6 0 6 12 INCHES



FINIAL ISOMETRIC

6 0 6 12 INCHES

NOTES:

3. ALL FINIAL STEEL 1" THICK.
4. CJP WELD FINIAL TO PYLON.
5. PJP WELD FINAL COMPONENTS.
6. ALL WELDS GROUND FLUSH.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ARCHITECTURAL DETAILS

RECOMMENDED _____

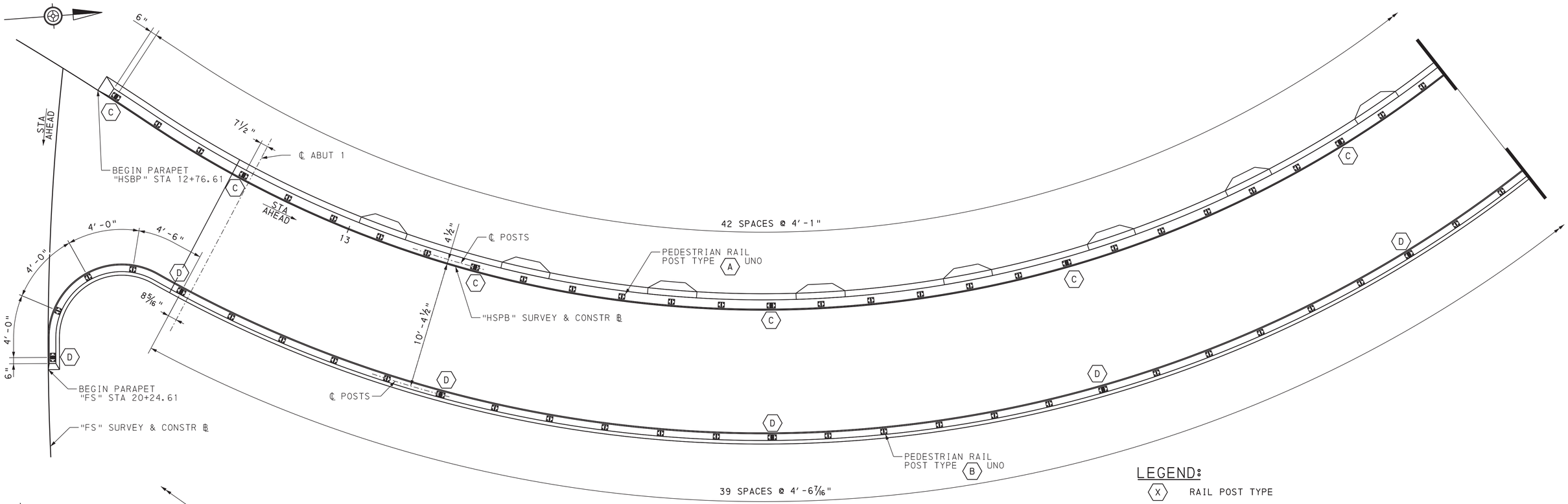
SHEET 67 OF 137

L-430

DES: HR	DWN: RJS	CKD: JL

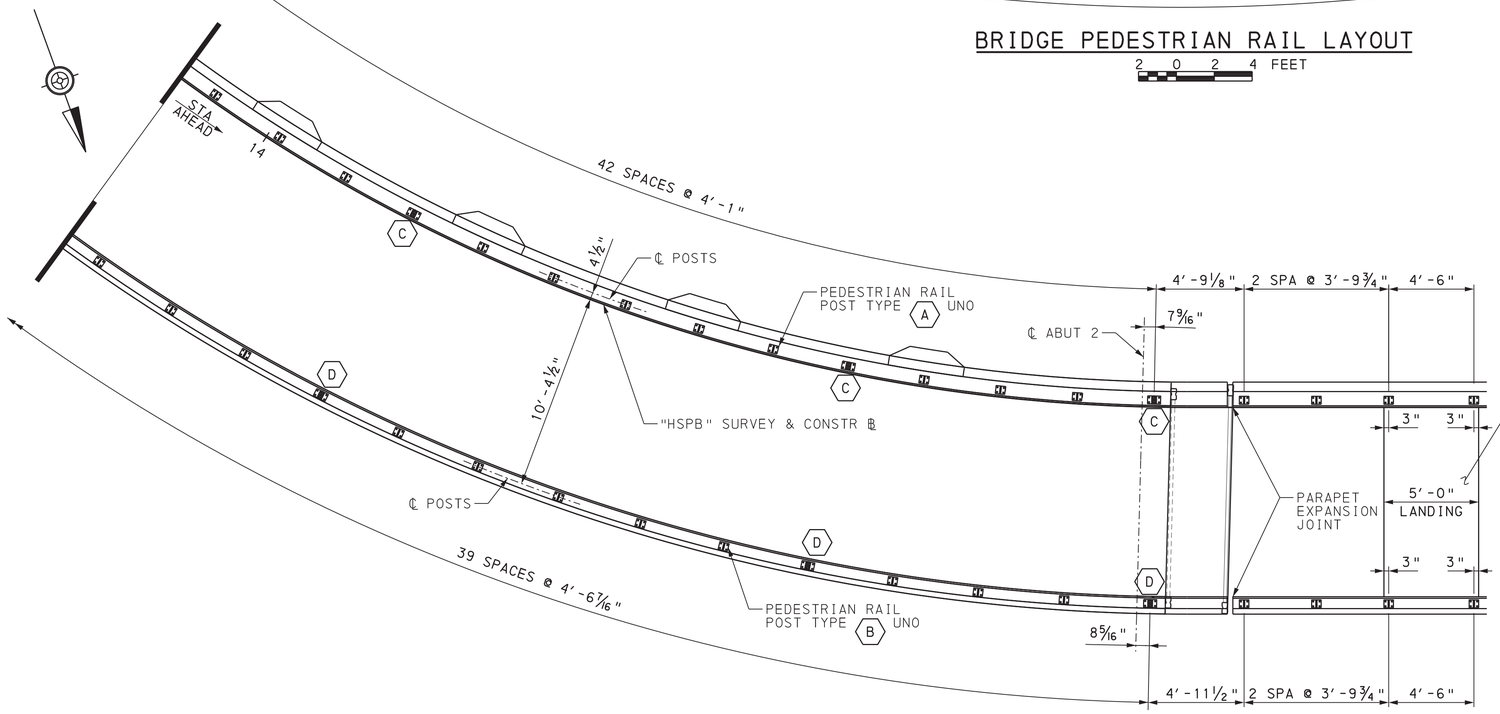
OPERATOR: tylipw11ics01$ FILENAME: SL4300067F0137.dgn

PLOTTED: 8/22/2022 7:12:56 PM



BRIDGE PEDESTRIAN RAIL LAYOUT

2 0 2 4 FEET



FOR CONTINUATION OF PEDESTRIAN RAIL LAYOUT, SEE "PEDESTRIAN RAIL LAYOUT 2" SHEET

BRIDGE PEDESTRIAN RAIL LAYOUT (CONTINUED)

2 0 2 4 FEET

LEGEND:

(X) RAIL POST TYPE

NOTES:

1. ALL DIMENSIONS MEASURED ALONG ADJACENT DECK GUTTER LINE.
2. FOR PEDESTRIAN RAIL DETAILS, SEE "PEDESTRIAN RAIL DETAILS" SHEETS.
3. FOR PEDESTRIAN RAIL LAYOUT ALONG NORTH RETAINING WALL, SEE "PEDESTRIAN RAIL LAYOUT 2" AND "PEDESTRIAN RAIL LAYOUT 3" SHEETS.
4. FOR RAIL POST TYPE "A" AND "B", SEE "PEDESTRIAN RAIL DETAILS 2" SHEET.
5. FOR RAIL POST TYPE "C" AND "D", SEE "PEDESTRIAN RAIL DETAILS 3" AND "PEDESTRIAN RAIL DETAILS 4" SHEETS.

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642 PENNSYLVANIA

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL LAYOUT 1

RECOMMENDED _____

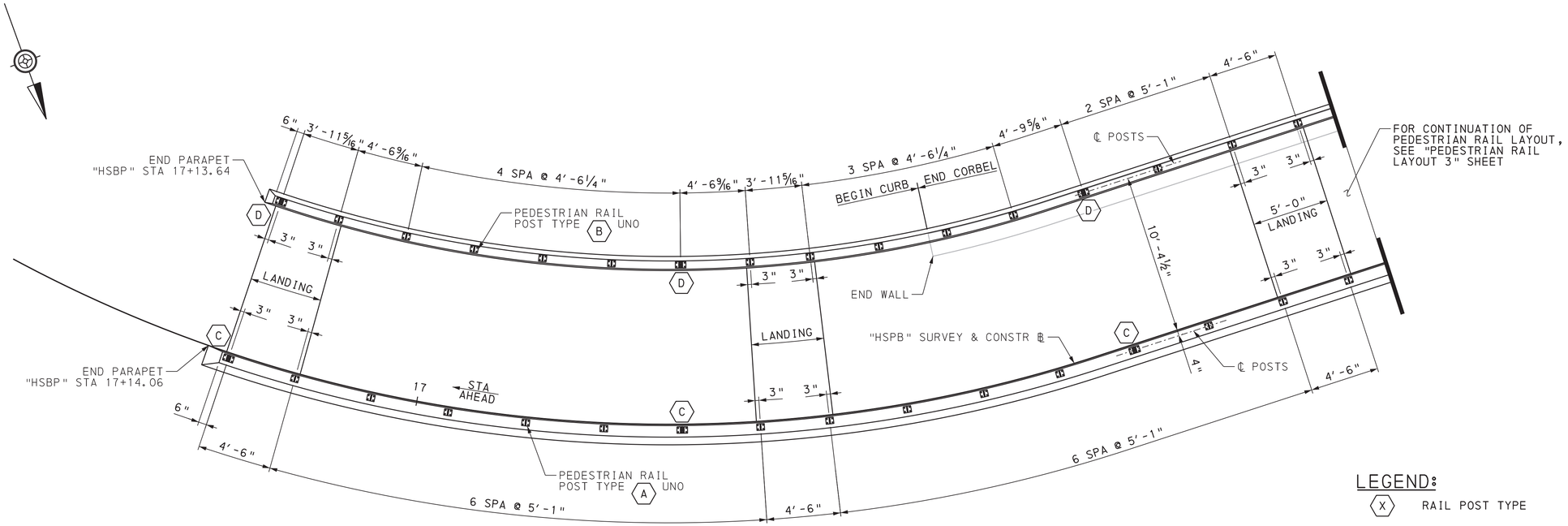
SHEET 68 OF 137

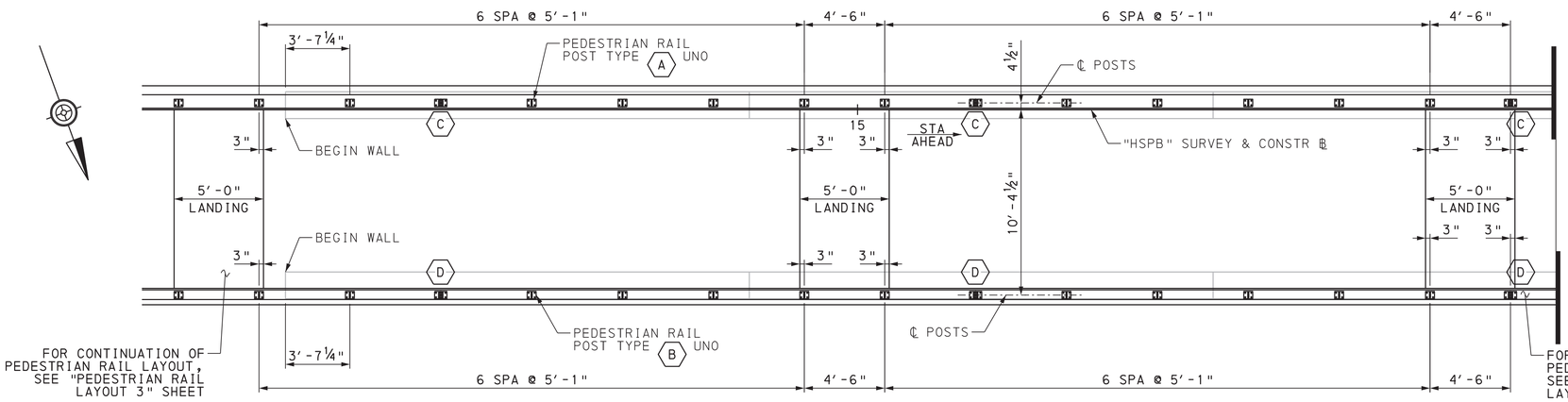
L-430

DES: JL | DWN: RJS | CKD: JL

OPERATOR: tylipw11ics01$ FILENAME: SL4300068F0137.dgn

PLOTTED: 8/22/2022 7:11:21 PM





LEGEND:

(X) RAIL POST TYPE

NOTES:

1. ALL DIMENSIONS MEASURED ALONG ADJACENT DECK GUTTER LINE.
2. FOR PEDESTRIAN RAIL DETAILS, SEE "PEDESTRIAN RAIL DETAILS" SHEETS.
3. FOR PEDESTRIAN RAIL LAYOUT ALONG PEDESTRIAN BRIDGE, SEE "PEDESTRIAN RAIL LAYOUT 1" SHEET.
4. FOR RAIL POST TYPE "A" AND "B", SEE "PEDESTRIAN RAIL DETAILS 2" SHEET.
5. FOR RAIL POST TYPE "C" AND "D", SEE "PEDESTRIAN RAIL DETAILS 3" AND "PEDESTRIAN RAIL DETAILS 4" SHEETS.
6. FOR CORBEL DETAILS, SEE "NORTH WALL TYPICAL SECTION & ELEVATION 1" SHEET.
7. FOR CURB DETAILS, SEE PEDESTRIAN RAIL DETAILS 4" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

NORTH RAMP PEDESTRIAN RAIL LAYOUT

2 0 2 4 FEET

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL LAYOUT 2

RECOMMENDED _____

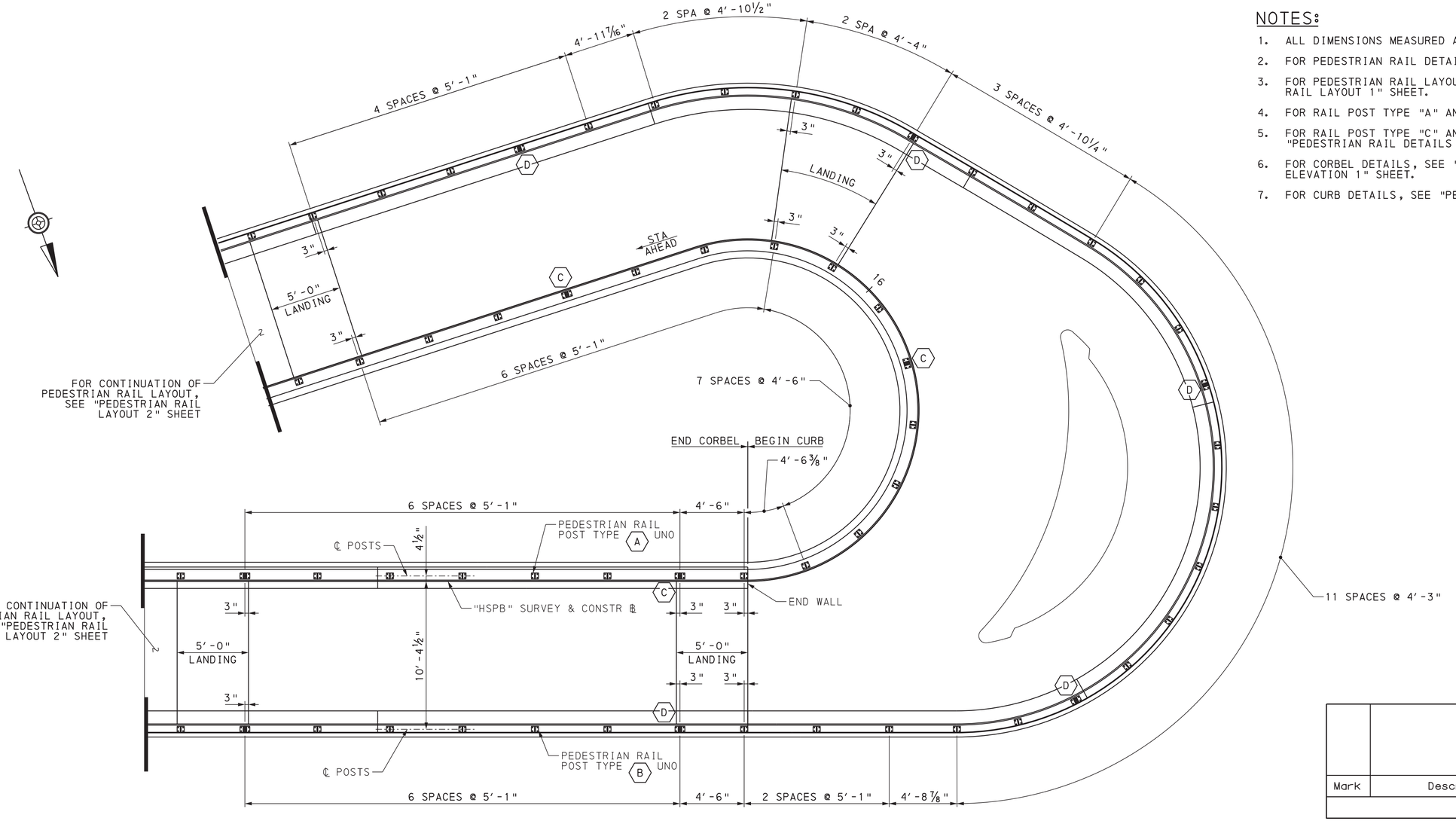
SHEET 69 OF 137

L-430

DES: JL	DWN: RJS	CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL4300069F0137.dgn

PLOTTED: 8/22/2022 7:10:24 PM



LEGEND:

(X) RAIL POST TYPE

NOTES:

1. ALL DIMENSIONS MEASURED ALONG ADJACENT DECK GUTTER LINE.
2. FOR PEDESTRIAN RAIL DETAILS, SEE "PEDESTRIAN RAIL DETAILS" SHEETS.
3. FOR PEDESTRIAN RAIL LAYOUT ALONG PEDESTRIAN BRIDGE, SEE "PEDESTRIAN RAIL LAYOUT 1" SHEET.
4. FOR RAIL POST TYPE "A" AND "B", SEE "PEDESTRIAN RAIL DETAILS 2" SHEET.
5. FOR RAIL POST TYPE "C" AND "D", SEE "PEDESTRIAN RAIL DETAILS 3" AND "PEDESTRIAN RAIL DETAILS 4" SHEETS.
6. FOR CORBEL DETAILS, SEE "NORTH WALL TYPICAL SECTION & ELEVATION 1" SHEET.
7. FOR CURB DETAILS, SEE "PEDESTRIAN RAIL DETAILS 4" SHEET.

NORTH RAMP PEDESTRIAN RAIL LAYOUT

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL LAYOUT 3

RECOMMENDED _____

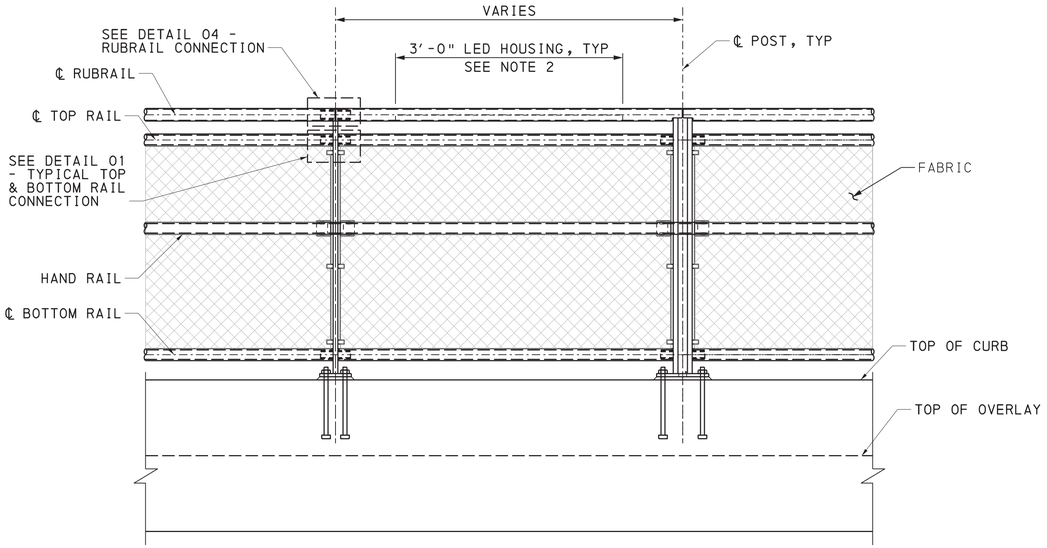
SHEET 70 OF 137

L-430

DES: JL | DWN: RJS | CKD: JL

OPERATOR: tylpw11cs01$ FILENAME: SL43000700F0137.dgn

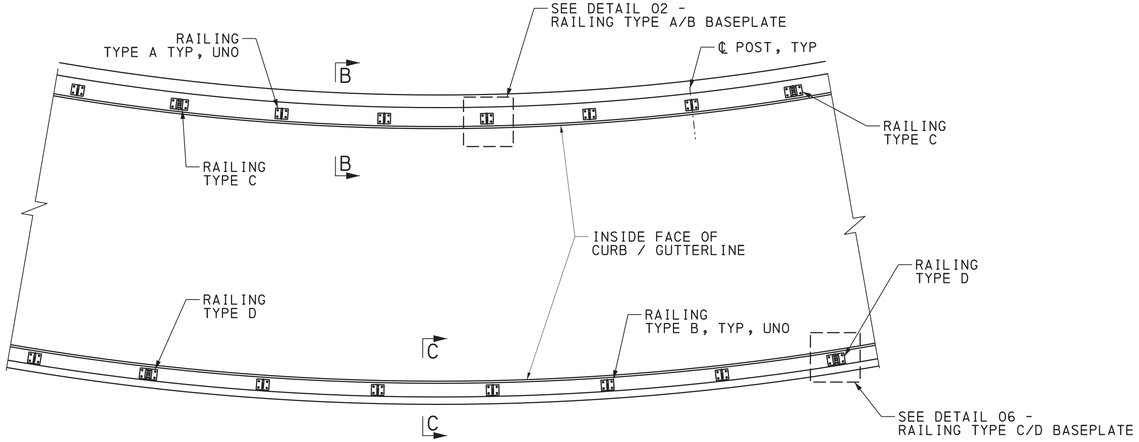
PLOTTED: 8/22/2022 7:18:19 PM



TYPICAL BRIDGE PEDESTRIAN RAILING - ELEVATION

NOT TO SCALE

(RAILING TYPE B SHOWN, RAILING TYPE A SIMILAR)
(RAILING TYPE C/D SIMILAR WITH MODIFIED POST)



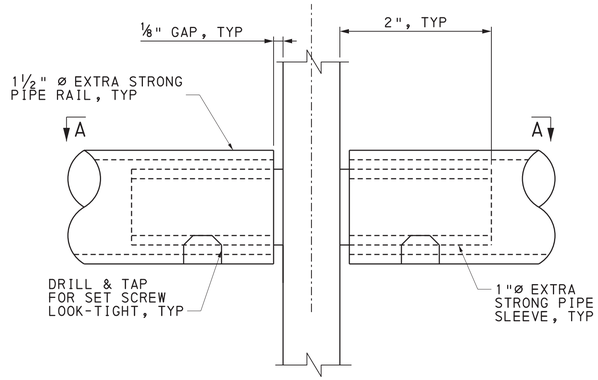
TYPICAL BRIDGE PEDESTRIAN RAILING - PLAN

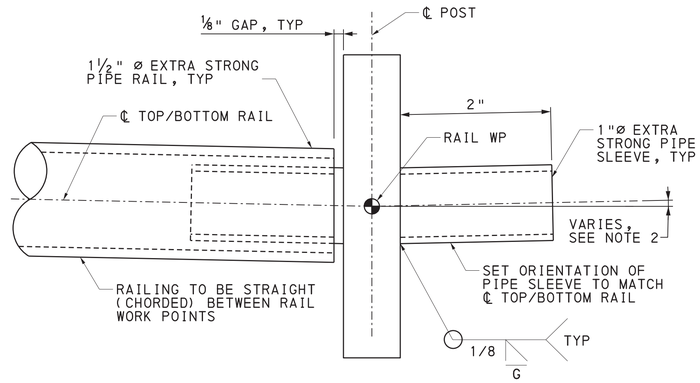
NOT TO SCALE

(FOR SECTION VIEW, SEE "PEDESTRIAN RAIL DETAILS 2" SHEET)
(RAILS NOT SHOWN FOR CLARITY)

PEDESTRIAN RAILING NOTES:

1. ALL STRUCTURAL PLATES/PIPE SHALL BE 2205 DUPLEX STAINLESS STEEL PER ASTM A240.
2. LED HOUSING CENTERED BETWEEN EVERY POST ALONG BRIDGE LENGTH.
3. FILLER ELECTRODE FOR WELDING DUPLEX STAINLESS STEEL TO BE ER2209 OR APPROVED EQUIVALENT.
4. CHORD RAILS BETWEEN WORK POINTS.





SECTION A-A

NOT TO SCALE

(TOP RAIL AT R/H/S OF VIEW NOT SHOWN FOR CLARITY)

DETAIL 01 - TYPICAL TOP & BOTTOM RAIL CONNECTION

NOT TO SCALE

(RAILING TYPE A/B SHOWN, RAILING TYPE C/D SIMILAR)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL DETAILS 1

RECOMMENDED _____

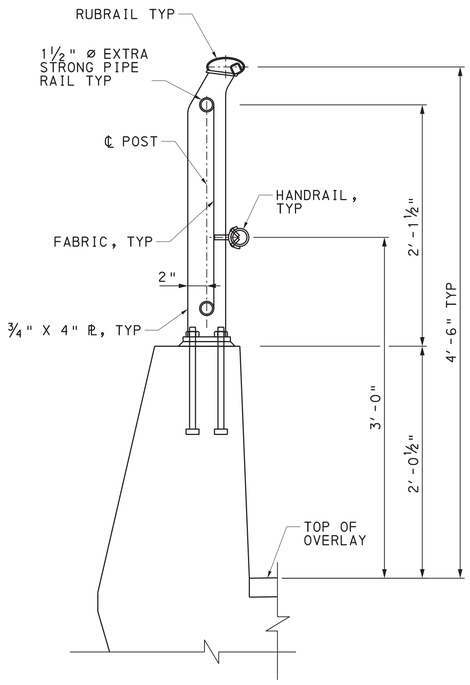
SHEET 71 OF 137

L-430

DES: JL | DWN: YHW | CKD: JL

FILENAME: SL4300071OF0137.dgn
OPERATOR: tyllpw11icsO1$

PLOTTED: 8/22/2022 7:14:47 PM

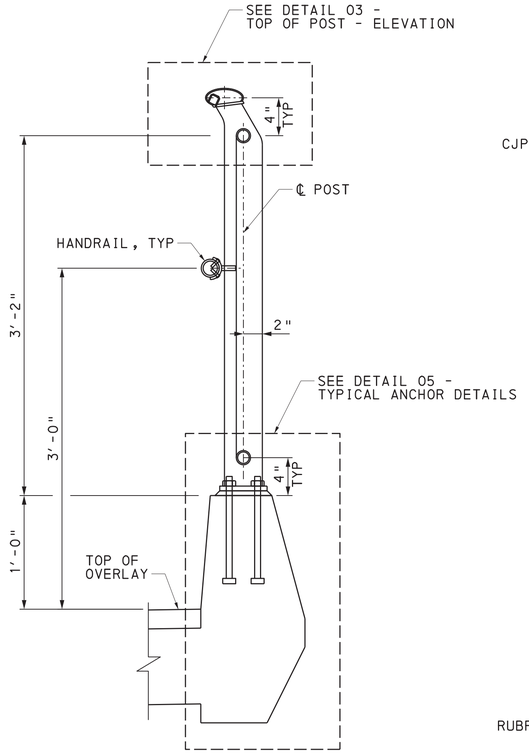


RAILING TYPE A

SECTION B-B

NOT TO SCALE

(FOR SECTION CALL-OUT SEE "PEDESTRIAN RAIL DETAILS 1" SHEET) (RAILING TYPE A SHOWN, RAILING TYPE C SIMILAR)

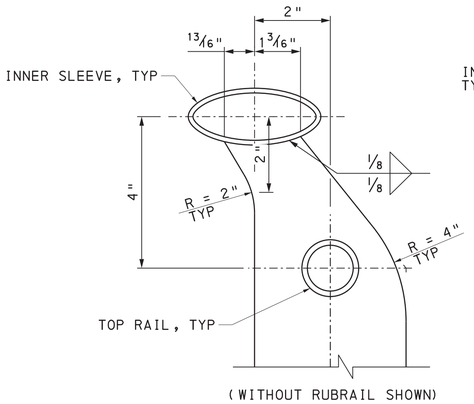


RAILING TYPE B

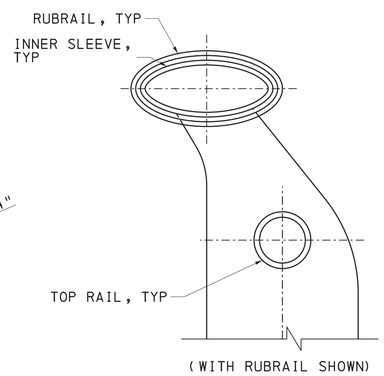
SECTION C-C

NOT TO SCALE

(FOR SECTION CALL-OUT SEE "PEDESTRIAN RAIL DETAILS 1" SHEET) (RAILING TYPE B SHOWN, RAILING TYPE D SIMILAR)



(WITHOUT RUBRAIL SHOWN)



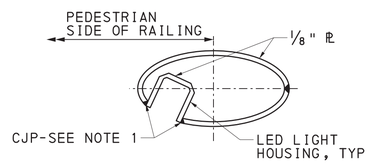
(WITH RUBRAIL SHOWN)

DETAIL 03 - TOP OF POST - ELEVATION

NOT TO SCALE (TYPICAL)

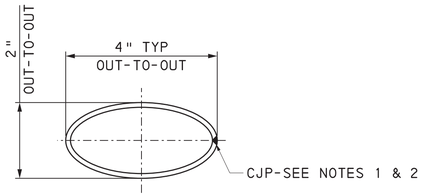
NOTES:

1. FOR COMPLETE JOINT PENETRATION (CJP) WELD, GRIND FLUSH ON OUTSIDE FACE.
2. FABRICATE SLEEVE WELD LOCATED OPPOSITE TO PEDESTRIAN SIDE OF RAIL TYP.
3. CHORD RAILS BETWEEN RAIL WORK POINTS.



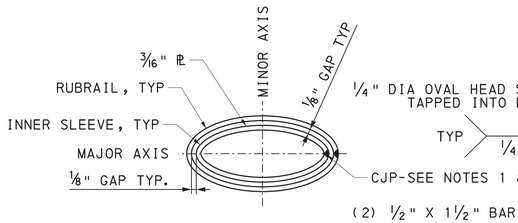
SECTION D-D

NOT TO SCALE



SECTION E-E

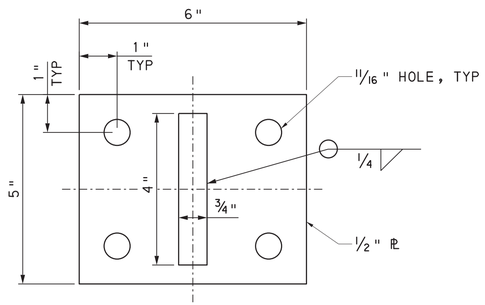
NOT TO SCALE



SECTION F-F

NOT TO SCALE

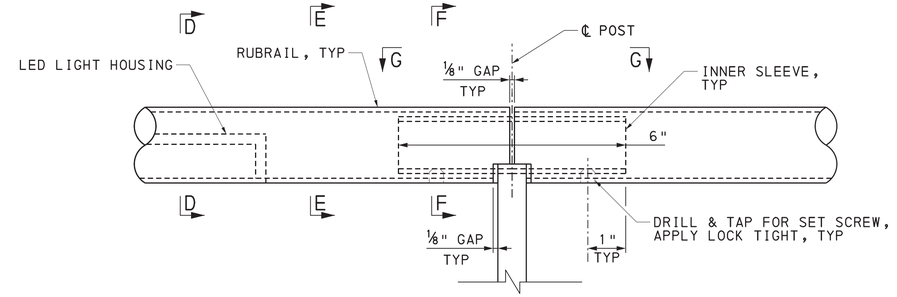
THE DIFFERENCE BETWEEN THE OUTSIDE DIAMETERS OF THE SLEEVE SPLICE AND THE INSIDE DIAMETERS OF THE MAIN RAIL NOT TO EXCEED 0.125 INCHES ALONG THE MAJOR AND MINOR AXIS. GAPS EXCEEDING THIS AMOUNT UP TO 1/4" ARE PERMISSIBLE ALONG THE 45 DEG AXES OF THE SLEEVE SPLICE RAIL.



DETAIL 02 - RAILING TYPE A/B BASEPLATE

NOT TO SCALE

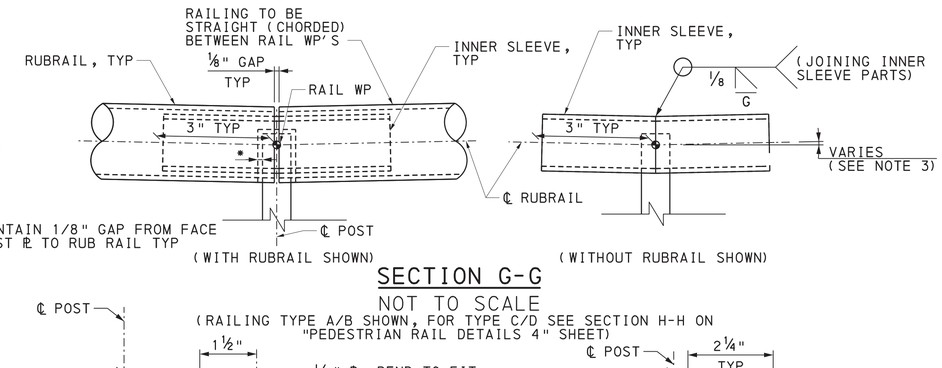
(FOR SECTION CALL-OUT SEE "PEDESTRIAN RAIL DETAILS 1" SHEET) (RAILING TYPE C/D BASEPLATE, SEE DETAIL 06 ON "PEDESTRIAN RAILING DETAILS 3" SHEET)



DETAIL 04 - RUBRAIL CONNECTION

NOT TO SCALE

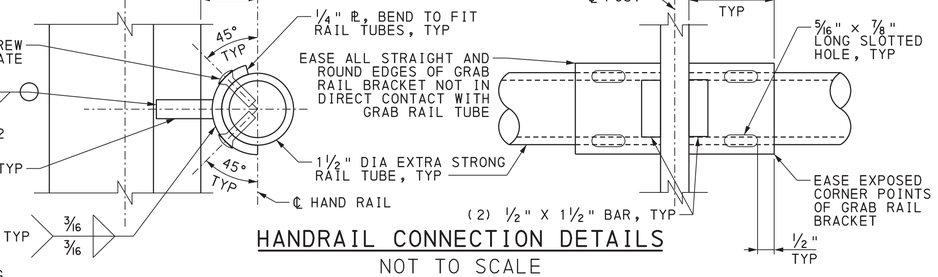
(RAILING TYPE A/B SHOWN, FOR TYPE C/D SEE DETAIL 07 ON "PEDESTRIAN RAIL DETAILS 4" SHEET)



SECTION G-G

NOT TO SCALE

(RAILING TYPE A/B SHOWN, FOR TYPE C/D SEE SECTION H-H ON "PEDESTRIAN RAIL DETAILS 4" SHEET)



HANDRAIL CONNECTION DETAILS

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL DETAILS 2

RECOMMENDED _____

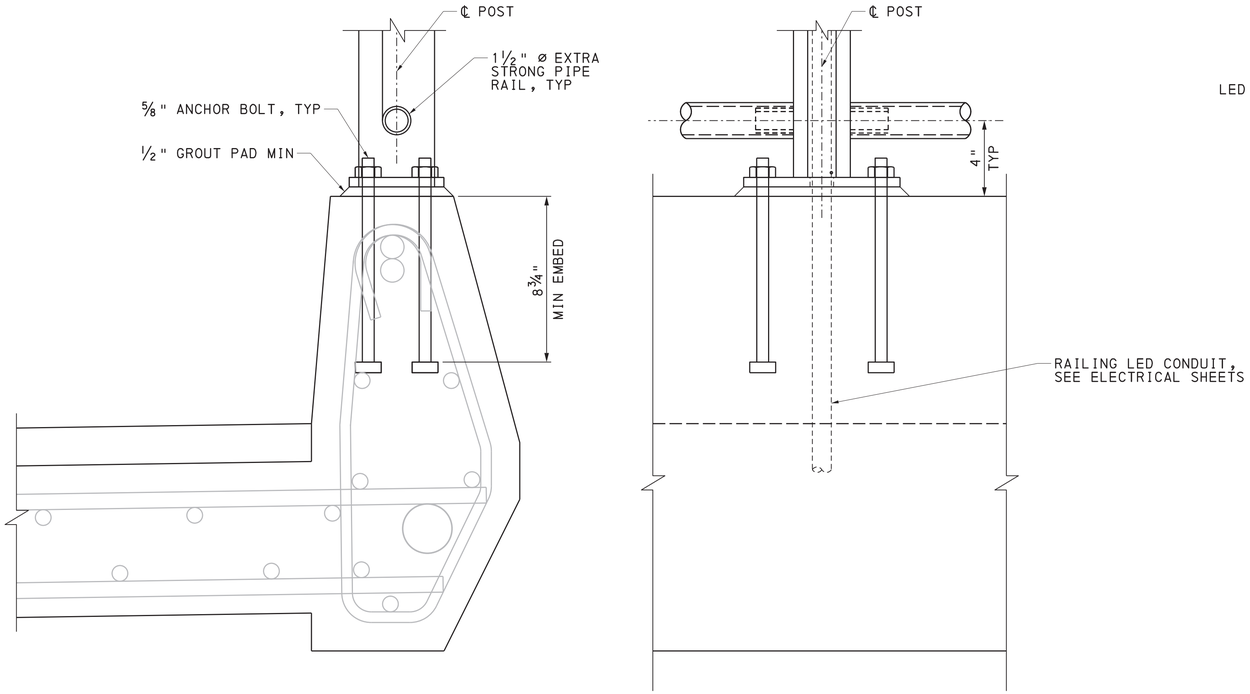
SHEET 72 OF 137

L-430

DES: JL | DWN: YHW | CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL43000720F0137.dgn

PLOTTED: 8/22/2022 7:14:52 PM

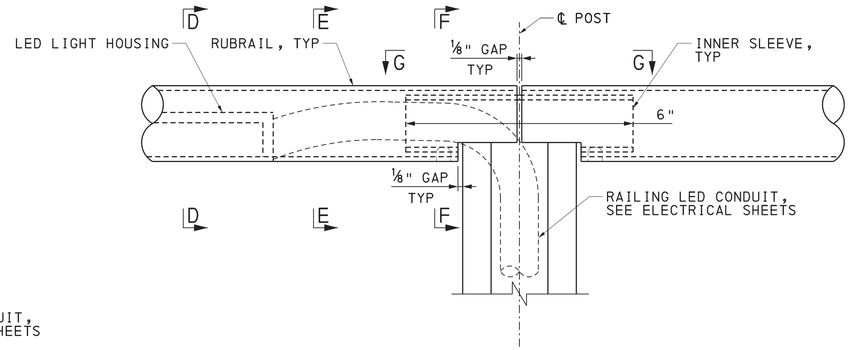


(TYPE C & D RAIL POST SHOWN, TYPE A & B SIMILAR)

DETAIL 05 - TYPICAL ANCHOR DETAILS

NOT TO SCALE

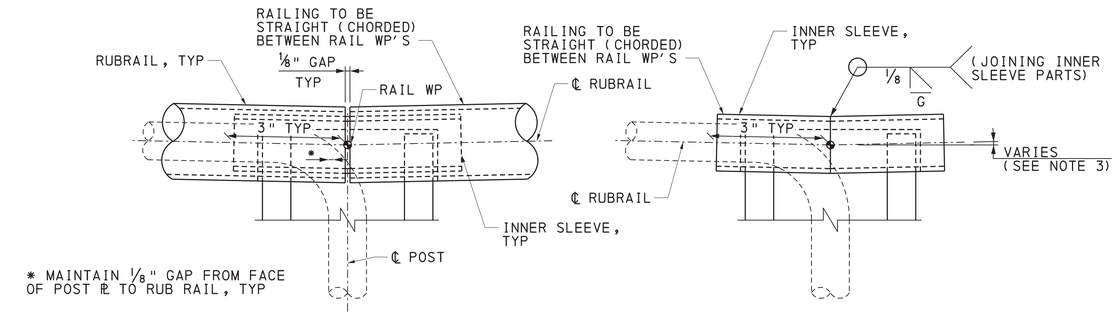
(FOR DETAIL LOCATION, SEE "PEDESTRIAN RAIL DETAILS 2" SHEET)



DETAIL 07 - RAILING TYPE C/D RUBRAIL CONNECTION

NOT TO SCALE

(FOR SECTIONS D, E, AND F, SEE "PEDESTRIAN RAIL DETAILS 2" SHEET)



(WITH RUBRAIL SHOWN)

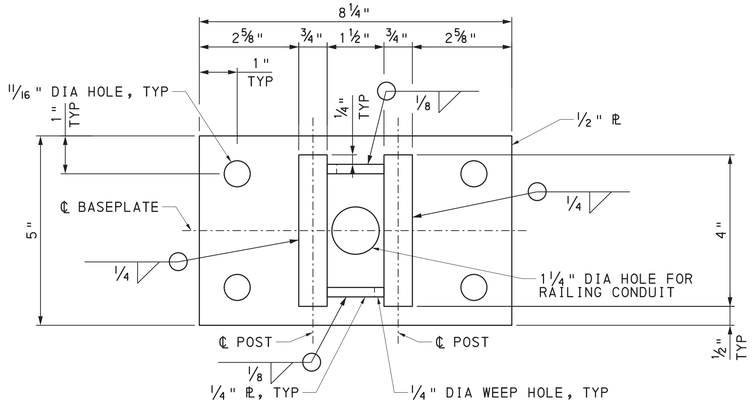
(WITHOUT RUBRAIL SHOWN)

SECTION H-H

NOT TO SCALE

NOTES:

1. ALL BOLTS, WASHERS & HEAVY HEX NUTS SHALL BE 2205 DUPLEX STAINLESS STEEL PER ASTM A1082.
2. ALL STRUCTURAL PLATES/PIPE SHALL BE 2205 DUPLEX STAINLESS STEEL PER ASTM A240.



DETAIL 06 - RAILING TYPE C & D BASEPLATE

NOT TO SCALE

(FOR DETAIL CALL-OUT, SEE "PEDESTRIAN RAIL DETAILS 1" SHEET)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL DETAILS 3

RECOMMENDED _____

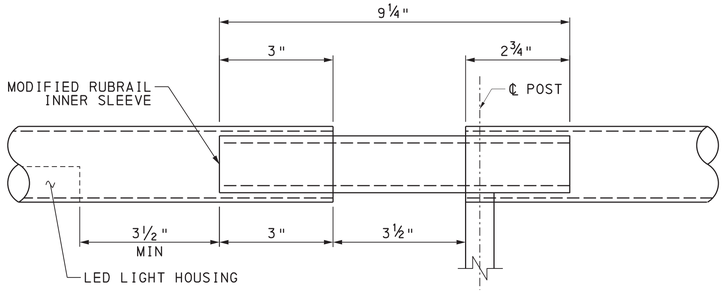
SHEET 73 OF 137

L-430

DES: JL | DWN: YHW | CKD: JL

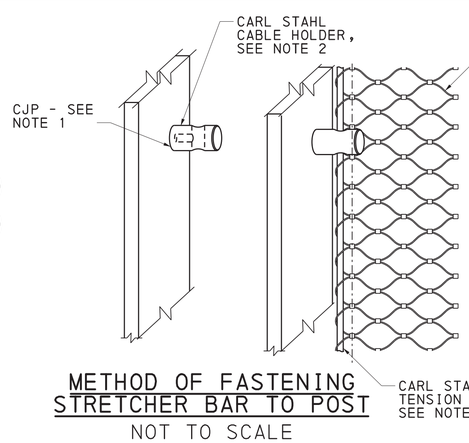
OPERATOR: tyllpw11cs01$ FILENAME: SL43000730F0137.dgn

PLOTTED: 8/22/2022 7:17:43 PM



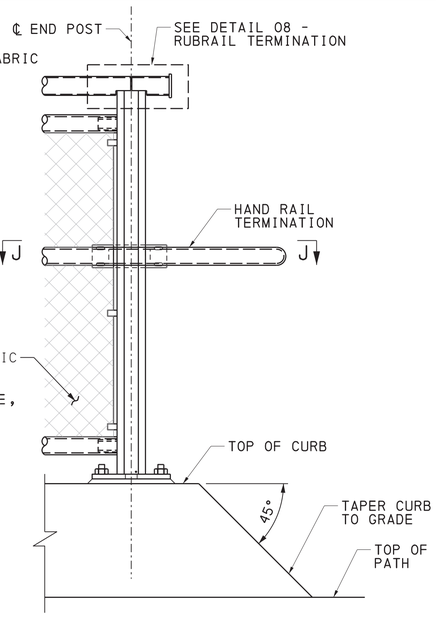
RAIL SPLICE SLEEVE AT RUBRAIL EXPANSION JOINT

6 0 6 INCHES



METHOD OF FASTENING STRETCHER BAR TO POST

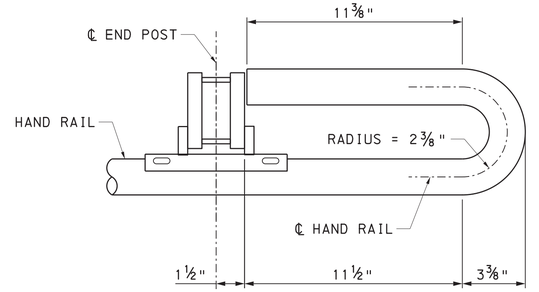
NOT TO SCALE



RAIL TERMINATION DETAIL

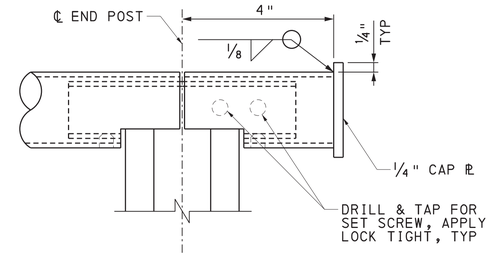
NOT TO SCALE

(RAIL TYPE B SHOWN, RAIL TYPE A SIMILAR)



SECTION J-J

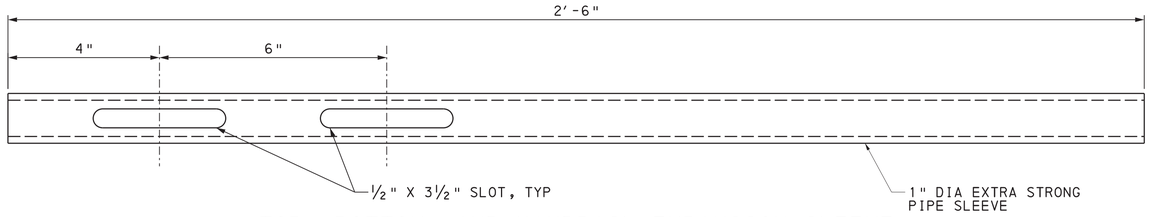
NOT TO SCALE



DETAIL 08 - RAIL TERMINATION DETAIL

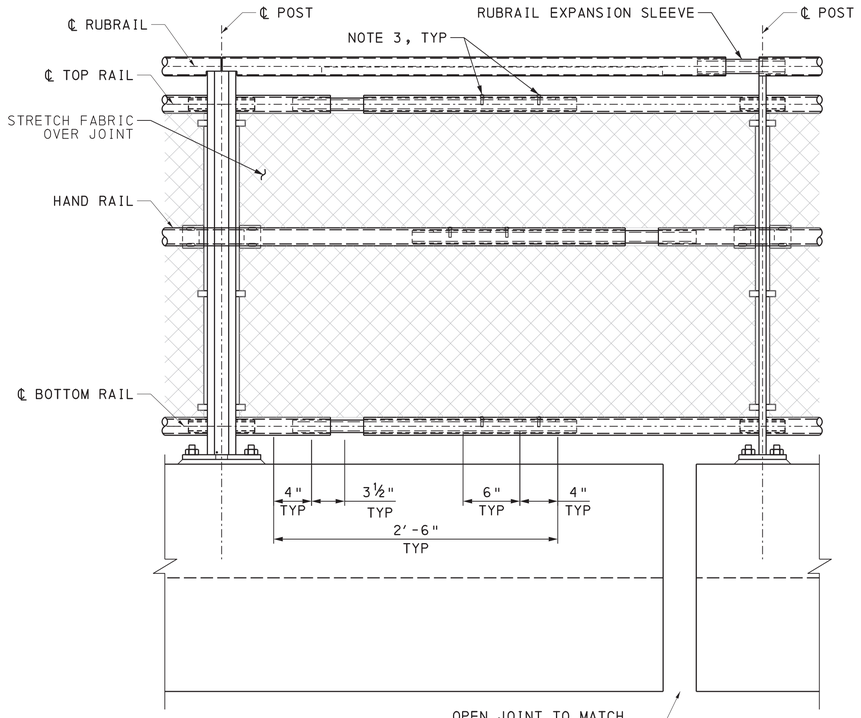
NOT TO SCALE

(FOR DETAIL LOCATION, SEE "PEDESTRIAN RAIL DETAILS 2" SHEET)



TOP, BOTTOM, AND HANDRAIL EXPANSION SLEEVE

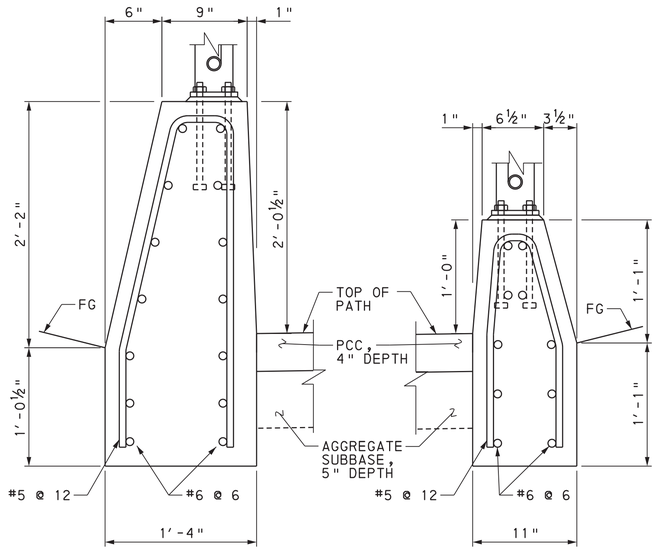
6 0 6 INCHES



RAIL SPLICE AT EXPANSION JOINT

NOT TO SCALE

(RAIL TYPE B SHOWN, RAIL TYPE A SIMILAR)



CURB DETAIL

6 0 6 INCHES

(SEE NOTE 5)

NOTES:

1. FOR COMPLETE JOINT PENETRATION (CJP) WELD. GRIND FLUSH ON OUTSIDE FACE.
2. INSTALL PER MANUFACTURER RECOMMENDATIONS. CONTRACTOR MAY SUBMIT AN ALTERNATIVE DETAIL TO ENGINEER FOR APPROVAL.
3. USE ¼" DIA OVAL HEADED BOLTS (TOP, BOTTOM, AND HAND RAILS). USE ¾" DIA OVAL HEADED BOLTS (RUBRAIL).
4. HS BOLTS WITH NUT AND WASHERS, SNUG TIGHTENED, AND THREAD LOCKING SYSTEM.
5. FOR CURB DIMENSIONS NOT SHOWN, SEE 'TYPICAL CORBEL REINFORCEMENT DETAIL' ON "NORTH WALL TYPICAL SECTION & ELEVATION 1" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN RAIL DETAILS 4

RECOMMENDED _____

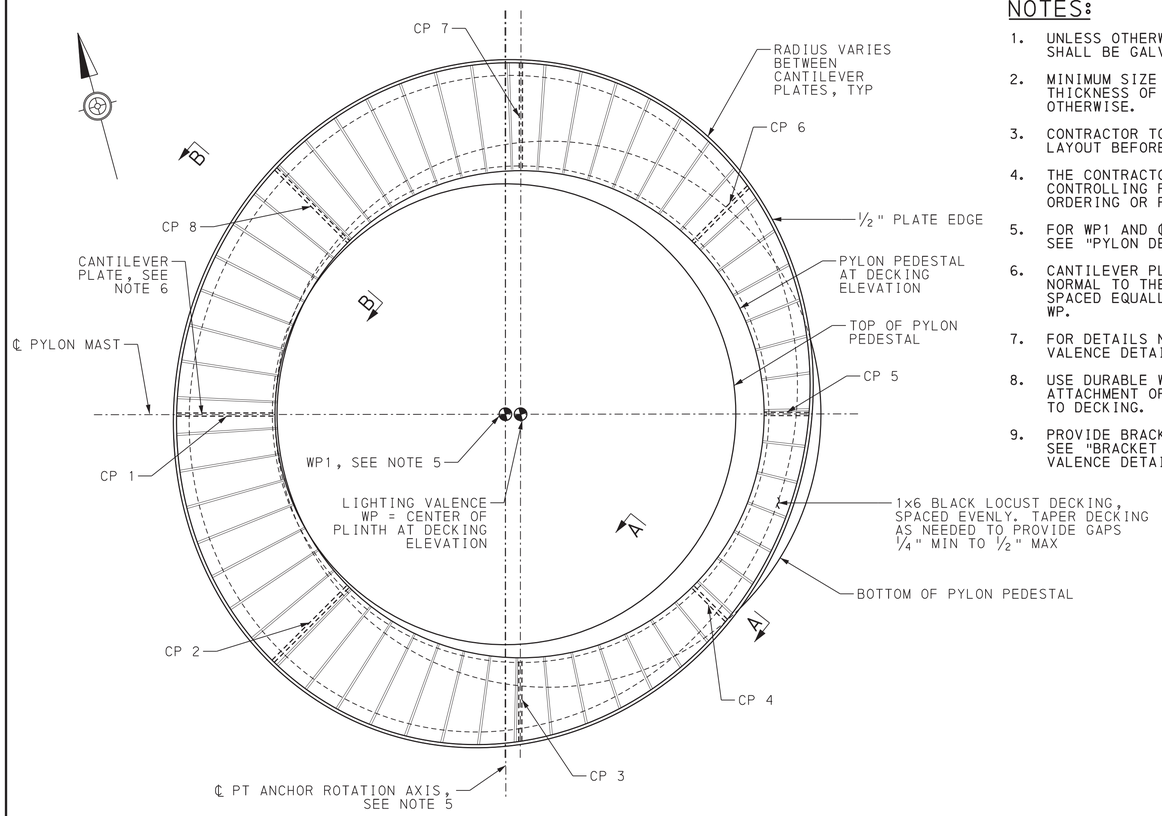
SHEET 74 OF 137

L-430

DES: JL | DWN: YHW | CKD: JL

OPERATOR: tylipw11cs01$ FILENAME: SL43000740F0137.dgn

PLOTTED: 8/22/2022 7:12:46 PM

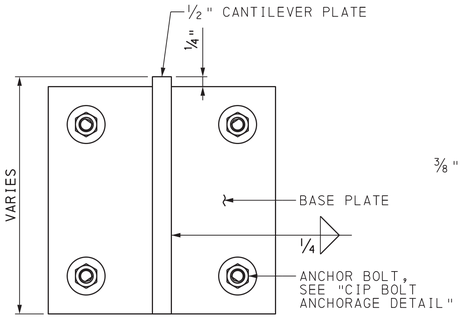


PLAN

6 0 6 12 INCHES

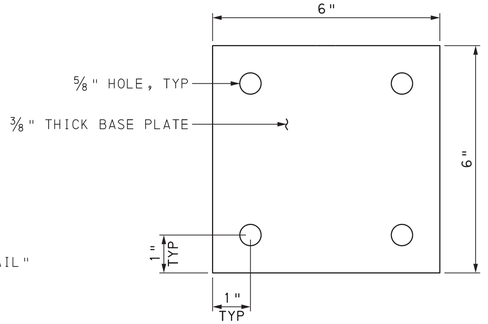
NOTES:

1. UNLESS OTHERWISE SHOWN, ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
2. MINIMUM SIZE FILLET WELD IS ¼" OR THICKNESS OF THINNER PART UNLESS NOTED OTHERWISE.
3. CONTRACTOR TO PROVIDE ANCHOR BOLT LAYOUT BEFORE ANCHOR BOLTS ARE PLACED.
4. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
5. FOR WP1 AND ℄ PT ANCHOR ROTATION AXIS SEE "PYLON DETAILS 1" SHEET.
6. CANTILEVER PLATES SHALL BE SPACED NORMAL TO THE CONCRETE PLINTH AND SPACED EQUALLY ABOUT LIGHTING VALENCE WP.
7. FOR DETAILS NOT SHOWN SEE "LIGHTING VALENCE DETAILS 2" SHEET.
8. USE DURABLE WEATHERPROOF ADHESIVE FOR ATTACHMENT OF ALL ANGLES AND BRACKETS TO DECKING.
9. PROVIDE BRACKET AT EVERY 1X6 DECKING, SEE "BRACKET DETAIL" ON "LIGHTING VALENCE DETAILS 2" SHEET.



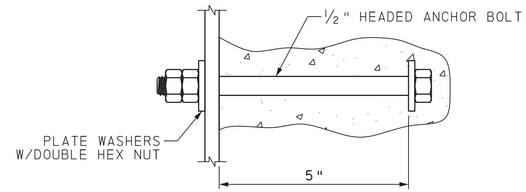
SECTION D-D

1½ 0 1½ INCHES



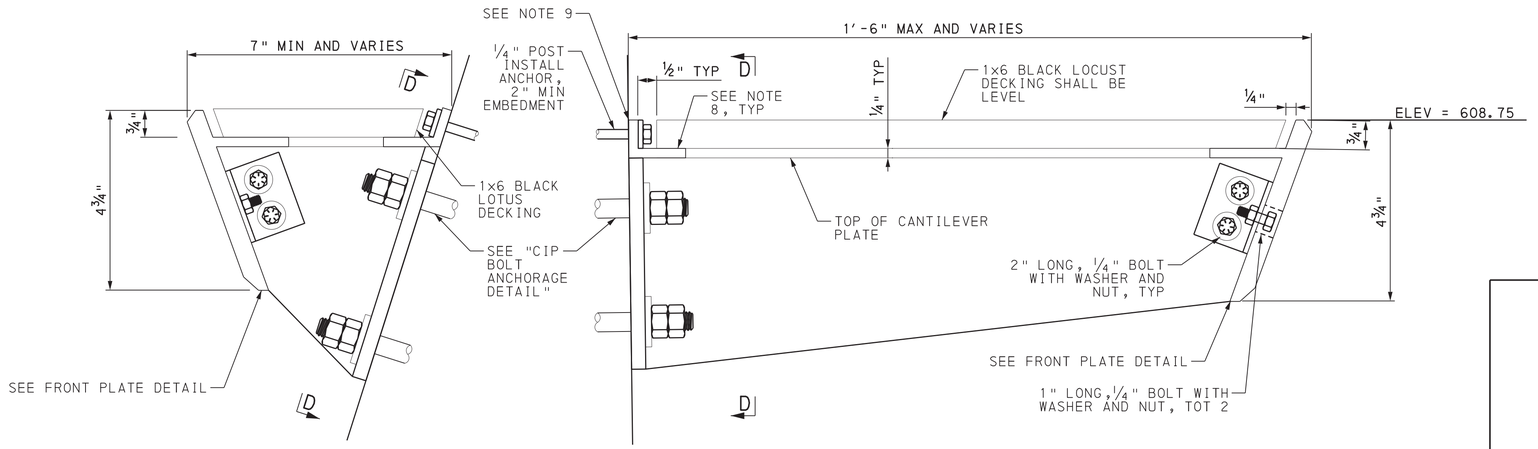
BASE PLATE DETAIL

1½ 0 1½ INCHES



CIP ANCHORAGE DETAIL

1½ 0 1½ INCHES



SECTION A-A

1½ 0 1½ INCHES

FOR DETAILS NOT SHOWN, SEE SECTION B-B

SECTION B-B

1½ 0 1½ INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:

TYLin

100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LIGHTING VALENCE DETAILS 1

RECOMMENDED _____

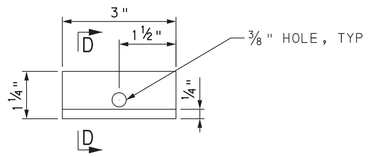
SHEET 75 OF 137

L-430

DES: BW | DWN: NMT | CKD: HR

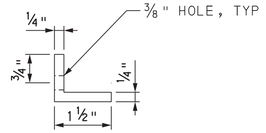
OPERATOR: tylipw11cs01$ FILENAME: SL4300075OF0137.dgn

PLOTTED: 8/23/2022 3:40:34 AM



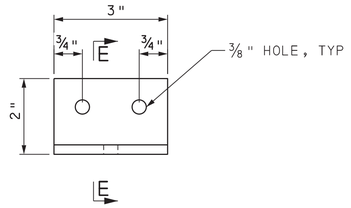
BRACKET DETAIL

6 0 6 INCHES



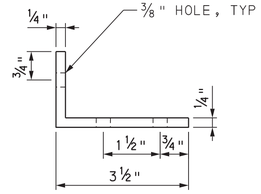
SECTION D-D

6 0 6 INCHES



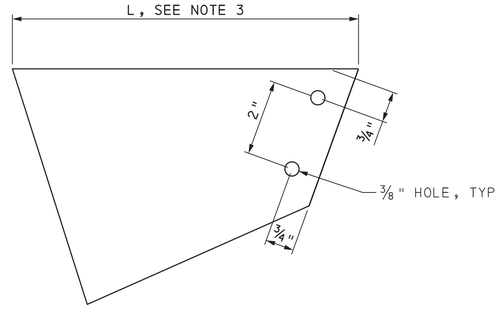
SIDE PLATE DETAIL

6 0 6 INCHES



SECTION E-E

6 0 6 INCHES



ELEVATION - CANTILEVER PLATE DETAIL

6 0 6 INCHES

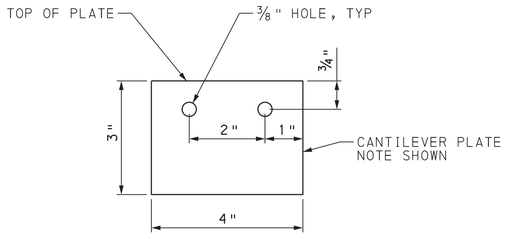
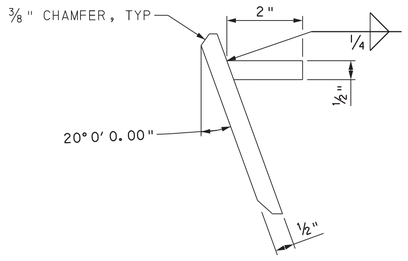


PLATE DETAIL

6 0 6 INCHES



FRONT PLATE DETAIL

6 0 6 INCHES

CANTILEVER PLATE DIMENSION TABLE	
MEMBER	L
CP1	1′-2⅜"
CP2	1′-3⅜"
CP3	11¾"
CP4	6⅛"
CP5	5⅝"
CP6	10⅞"
CP7	1′-3½"
CP8	1′-2⅞"

NOTES:

1. UNLESS OTHERWISE SHOWN, ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
2. MINIMUM SIZE FILLET WELD IS ¼" OR THICKNESS OF THINNER PART UNLESS NOTED OTHERWISE.
3. SEE "CANTILEVER PLATE DIMENSION TABLE" FOR "L".
4. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DES: BW	DWN: NMT	CKD: HR

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

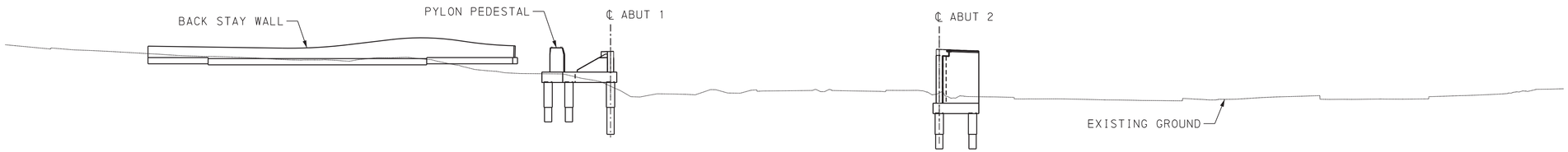
ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LIGHTING VALENCE DETAILS 2

RECOMMENDED _____

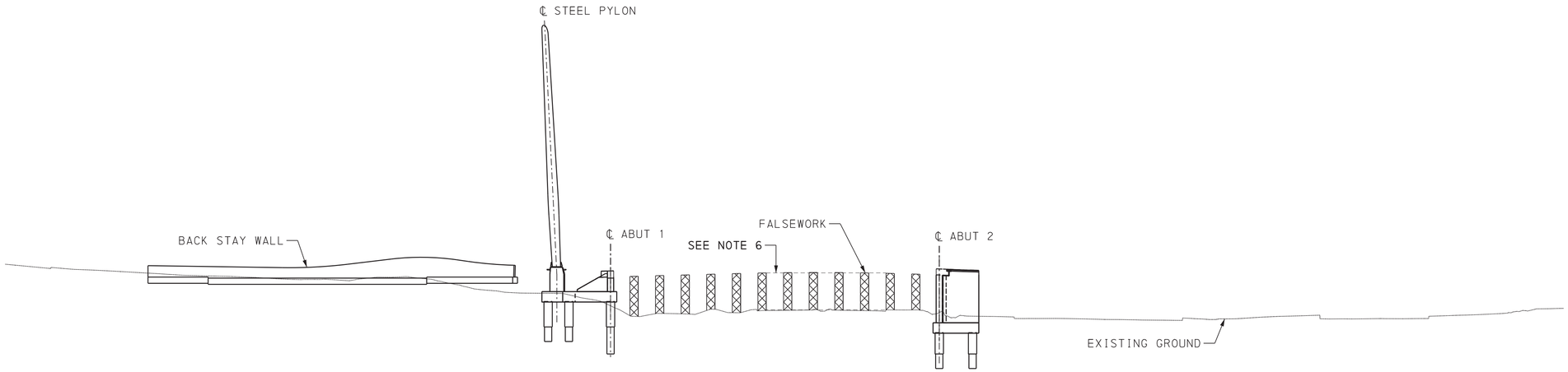
FILENAME: SL43000760F0137.dgn
OPERATOR: tylipw11cs01$

PLOTTED: 8/22/2022 7:16:47 PM



DEVELOPED ELEVATION

(SEE CONSTRUCTION SEQUENCE NOTES 1-4)
NOT TO SCALE



DEVELOPED ELEVATION

(SEE CONSTRUCTION SEQUENCE NOTES 5 & 6)
NOT TO SCALE

MAINSPAN BRIDGE CONSTRUCTION SEQUENCE:

1. CONSTRUCT FOUNDATION 1 AND FOUNDATION 2.
2. CONSTRUCT ABUTMENT 1 AND ABUTMENT 2.
3. CONSTRUCT BACKSTAY WALL AND ROCK ANCHORS ACCORDING TO BACKSTAY WALL CONSTRUCTION SEQUENCE.
4. INSTALL PYLON PEDESTAL.
5. INSTALL PYLON AND STRESS ANCHOR RODS.
6. CONSTRUCT SUPERSTRUCTURE FALSEWORK. PROVIDE TRAFFIC OPENINGS AS NEEDED IN COORDINATION WITH BAYFRONT PARKWAY CONSTRUCTION PHASING.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CONSTRUCTION STAGING DETAILS 1

RECOMMENDED

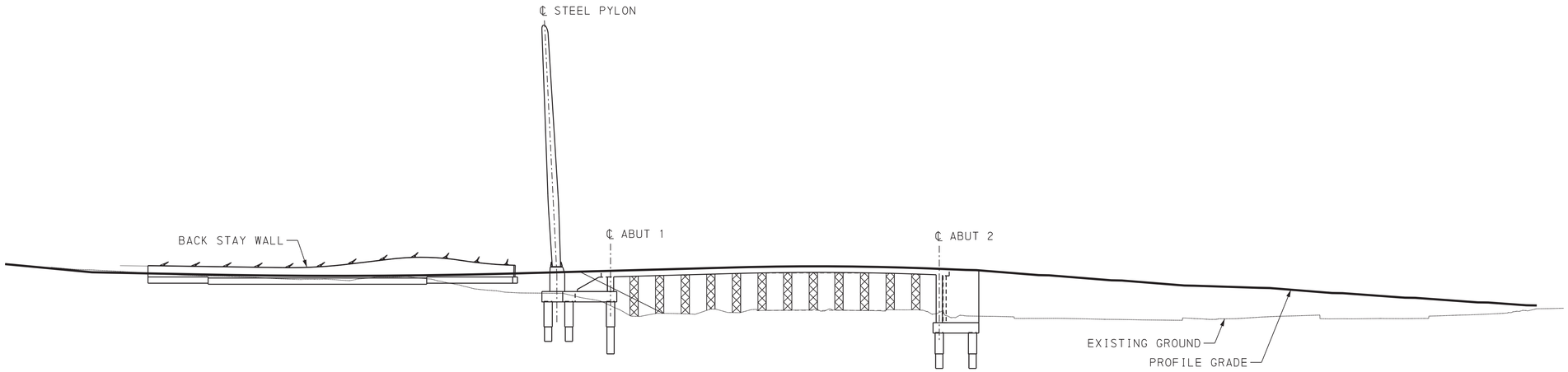
SHEET 77 OF 137

L-430

DES: JL | DWN: NMT | CKD: DF

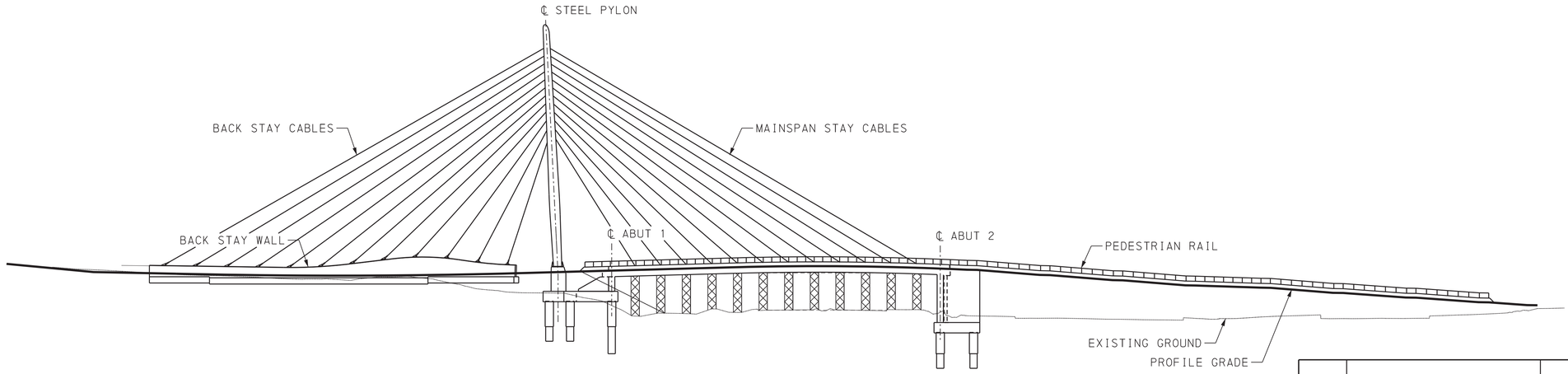
OPERATOR: tylipwilliegs01$ FILENAME: SL430007T0F0137.dgn

PLOTTED: 8/22/2022 7:13:35 PM



DEVELOPED ELEVATION

(SEE CONSTRUCTION SEQUENCE NOTES 7 & 8)
NOT TO SCALE



DEVELOPED ELEVATION

(SEE CONSTRUCTION SEQUENCE NOTE 9)
NOT TO SCALE

CONSTRUCTION SEQUENCE:

7. POUR SUPERSTRUCTURE.
8. POST TENSION SUPERSTRUCTURE ACCORDING TO SUPERSTRUCTURE STRESSING SEQUENCE.
9. INSTALL AND STRESS STAY CABLES.

DES: JL	DWN: NMT	CKD: DF

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CONSTRUCTION STAGING DETAILS 2

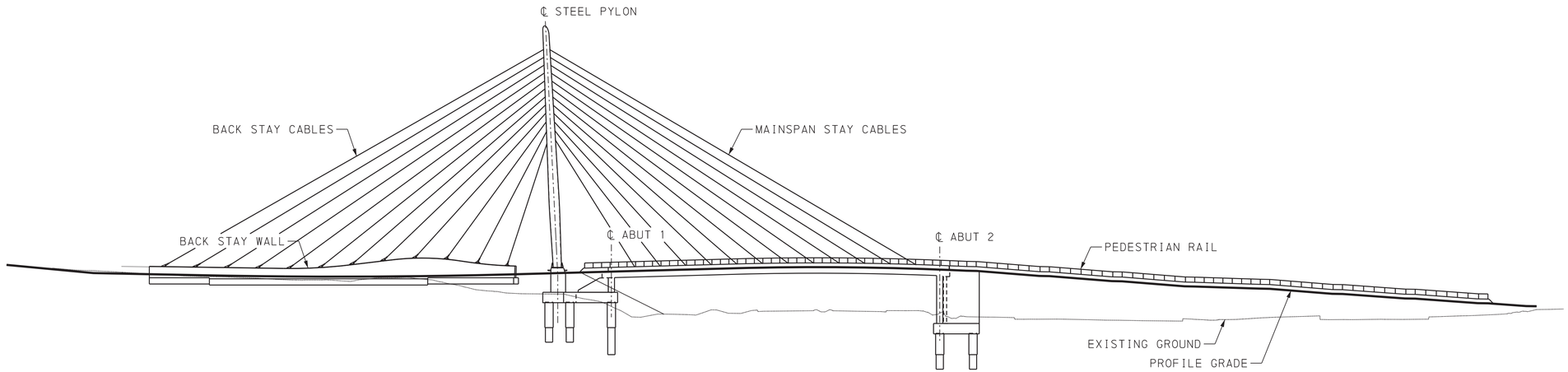
RECOMMENDED _____

SHEET 78 OF 137

L-430

OPERATOR: rylipw11cs01$ FILENAME: SL43000780F0137.dgn

PLOTTED: 8/22/2022 7:17:34 PM



DEVELOPED ELEVATION

(SEE CONSTRUCTION SEQUENCE NOTES 10-12)
NOT TO SCALE

CONSTRUCTION SEQUENCE:

10. REMOVE FALSEWORK. POUR ARCHITECTURAL DECK CONCRETE.
11. MEASURE AND ADJUST HANGER CABLE FORCES TO WITHIN 5% TOLERANCE OF FINAL VALUES.
12. INSTALL LIGHTING AND RAILINGS AND MISCELLANEOUS ITEMS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CONSTRUCTION STAGING DETAILS 3

RECOMMENDED _____

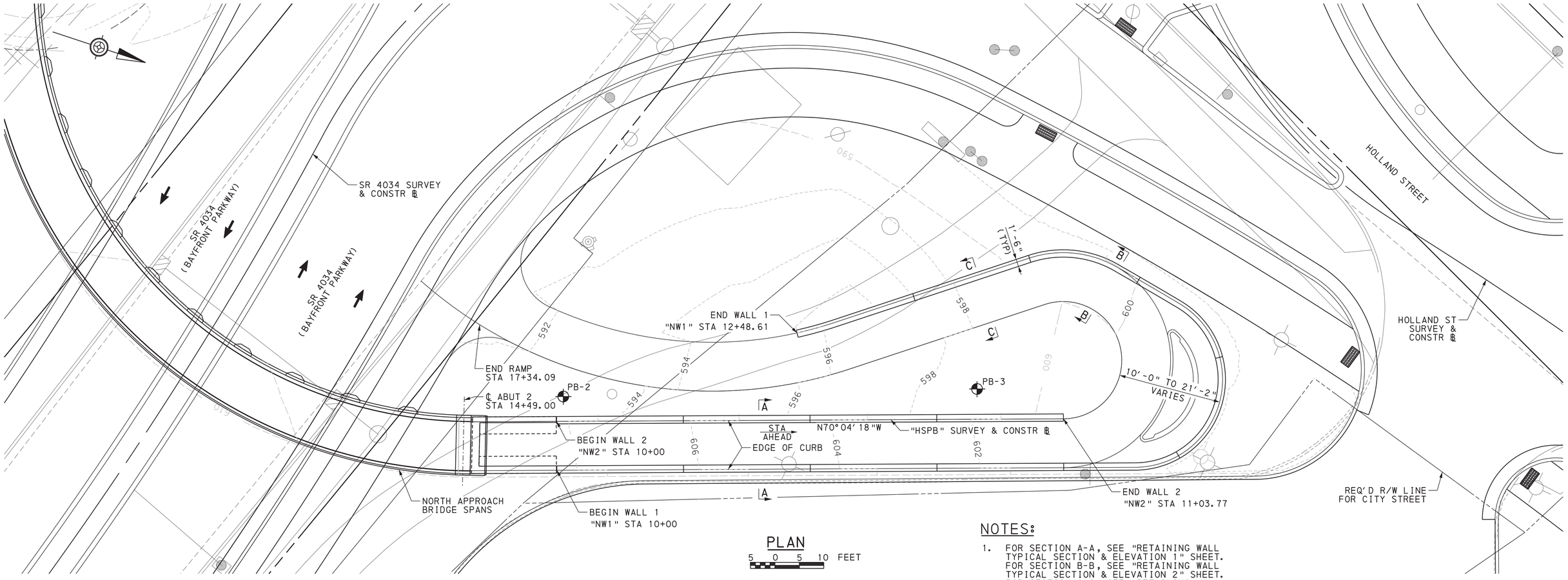
SHEET 79 OF 137

L-430

DES: JL | DWN: NMT | CKD: DF

OPERATOR: tylipw111cs01$ FILENAME: SL430000790F0137.dgn

PLOTTED: 8/22/2022 7:17:29 PM



PLAN

5 0 5 10 FEET

NOTES:

1. FOR SECTION A-A, SEE "RETAINING WALL TYPICAL SECTION & ELEVATION 1" SHEET. FOR SECTION B-B, SEE "RETAINING WALL TYPICAL SECTION & ELEVATION 2" SHEET. FOR SECTION C-C, SEE "RETAINING WALL TYPICAL SECTION & ELEVATION 3" SHEET.
2. FOR PEDESTRIAN RAIL LAYOUT, SEE "PEDESTRIAN RAIL LAYOUT 2 & 3" SHEET.
3. FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE "NORTH WALL DEVELOPED ELEVATIONS" SHEET.

LEGEND:

- AS-DRILLED BORING
- --200-- EXISTING CONTOURS
- —200— PROPOSED CONTOURS
- DIRECTION OF TRAFFIC

AS DRILLED BORINGS		
NO.	STATION	OFFSET
PB-2	14+70	4.4' LT
PB-3	15+55	5.3' LT

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SUPPLEMENTAL DRAWINGS		
DESCRIPTION	DWG. NO.	APP. DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06-01-10
BACKFILL AT STRUCTURES	RC-12M	02-08-19
CURBS AND GUTTERS	RC-64M	02-19-21
CURBS RAMPS AND SIDEWALKS NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 1 CURB RAMPS AND TYPICAL SECTIONS	RC-67M	02-19-21
ELECTRICAL DETAILS	BC-721M	02-19-21
STANDARD LIGHTING POLE ANCHORAGE	BC-722M	02-19-21
WALL CONSTRUCTION & EXPANSION JOINT DETAILS	BC-735M	09-30-16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	01-31-19
STANDARD BRIDGE DRAINAGE	BC-751M	01-31-19
CONCRETE DECK SLAB DETAILS	BC-752M	02-19-21
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	01-31-19

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL PLAN

RECOMMENDED _____

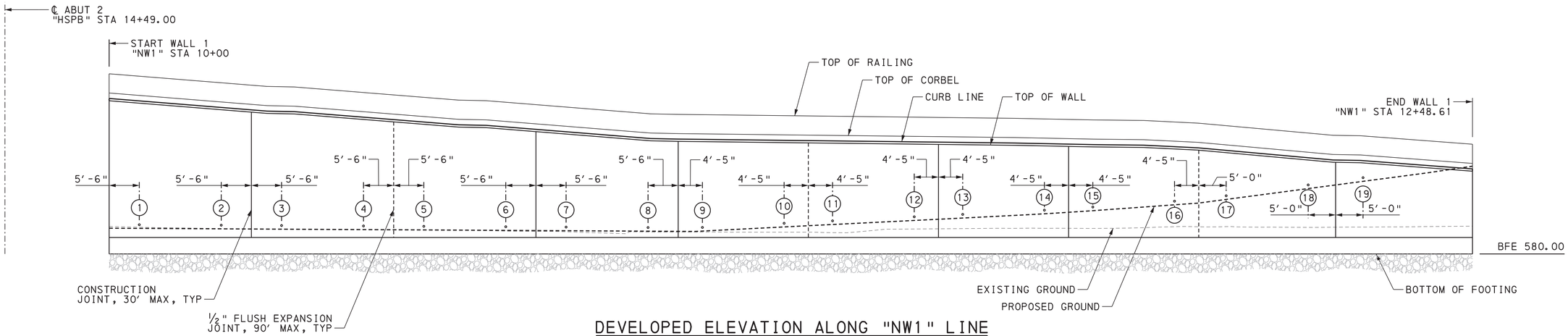
SHEET 80 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

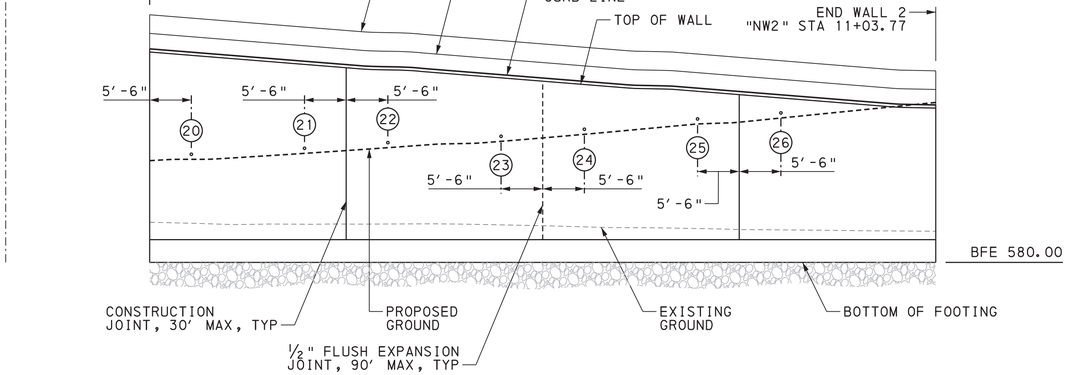
OPERATOR: tylipw11ics01$ FILENAME: SL43000800F0137.dgn

PLOTTED: 8/22/2022 7:15:14 PM



DEVELOPED ELEVATION ALONG "NW1" LINE

2 0 4 8 12 FEET



DEVELOPED ELEVATION ALONG "NW2" LINE

2 0 4 8 12 FEET

TOP OF RAMP WALL ELEVATIONS

WALL 1			WALL 2		
"NW1" STATION	ELEV "A"	ELEV "B"	"NW2" STATION	ELEV "C"	ELEV "D"
10+00.00	608.34	607.92	10+00.00	608.19	607.77
10+25.94	606.26	605.84	10+25.94	606.11	605.69
10+51.89	604.49	604.07	10+51.89	604.34	603.92
10+77.83	602.71	602.29	10+77.83	602.56	602.14
11+03.77	600.93	600.52	11+03.77	600.78	600.36
11+27.50	600.66	600.24	-	-	-
11+51.23	600.38	599.96	-	-	-
11+74.96	600.02	599.60	-	-	-
11+98.68	599.33	598.91	-	-	-
12+23.65	597.12	596.70	-	-	-
12+48.61	595.50	595.08	-	-	-

(STATIONS SHOWN CORRESPOND WITH START/END OF EACH WALL SEGMENT)

WEEP HOLE ELEVATIONS

WEEP HOLE DESIGNATION	INVERT ELEVATION
1	585.16
2	585.08
3	585.01
4	584.93
5	584.87
6	584.79
7	584.73
8	584.65
9	584.66
10	585.42
11	585.87
12	586.60
13	587.04
14	587.82
15	588.39
16	589.50
17	590.44
18	592.42
19	593.74
20	594.10
21	594.89
22	595.64
23	596.48
24	597.41
25	598.77
26	599.56

LEGEND:

(X) WEEP HOLE DESIGNATION

NOTE:

1. FOR ELEVATION LOCATIONS REFERENCED IN THE "TOP OF RAMP WALL ELEVATIONS" TABLE, SEE "NORTH WALL TYPICAL SECTION & ELEVATION 1-3" SHEETS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
DEVELOPED ELEVATIONS

RECOMMENDED

SHEET 81 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw11cs01$ FILENAME: SL4300081OF0137.dgn

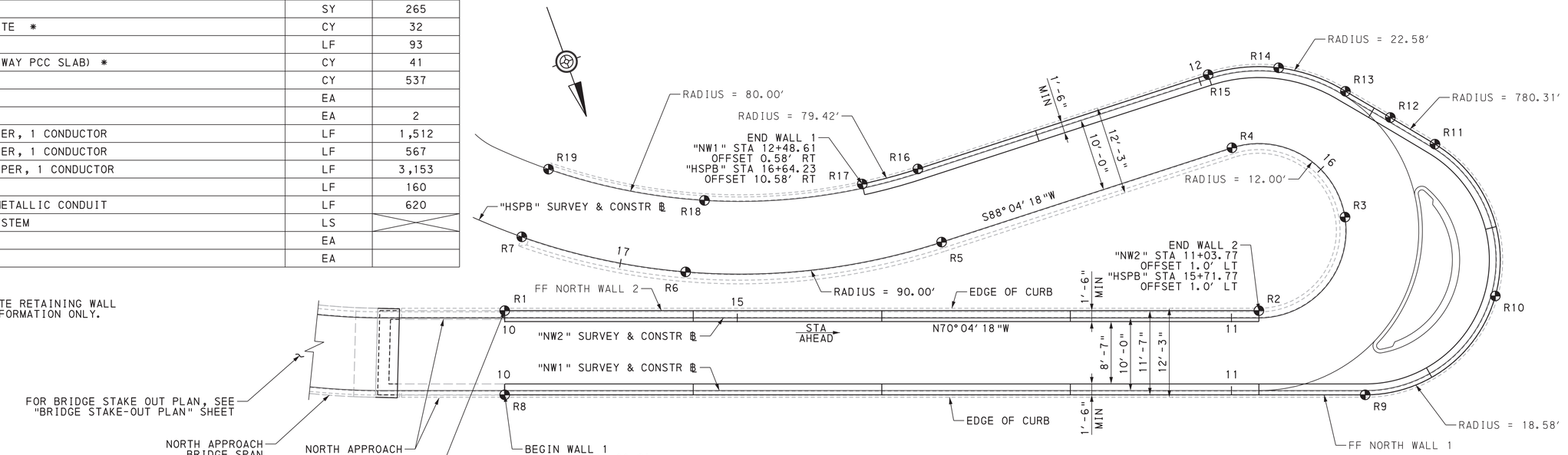
PLOTTED: 8/23/2022 12:00:57 AM

APPROXIMATE QUANTITIES - NORTH RETAINING WALL, AS DESIGNED

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
8610-0003	CONCRETE RETAINING WALL, AS DESIGNED, L-430 *	LS	
(1)	CLASS 3 EXCAVATION	CY	1,222
(1)	STRUCTURAL BACKFILL	CY	3,815
(1)	NO. 57 COARSE AGGREGATE (UNDER WALL FOUNDATIONS)	CY	442
(1)	REINFORCEMENT BARS, PLAIN	LB	7,321
(1)	REINFORCEMENT BARS, EPOXY COATED	LB	101,276
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)	SY	1,677
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)	SY	357
(1)	CLASS A CEMENT CONCRETE, MODIFIED 4.5 KSI *	CY	1,058
(1)	ARCHITECTURAL TREATMENT (RETAINING WALL) *	SF	6,557
(1)	PEDESTRIAN RAILING, TYPE A *	LF	262
(1)	PEDESTRIAN RAILING, TYPE B *	LF	309
(1)	LITHOCRETE *	SY	265
(1)	CLASS A (3 KSI) CEMENT CONCRETE *	CY	32
(1)	WALKWAY CURB *	LF	93
(1)	AGGREGATE SUBBASE (UNDER WALKWAY PCC SLAB) *	CY	41
(1)	FLOWABLE BACKFILL, TYPE D *	CY	537
(1)	JUNCTION BOXES J.B-2	EA	
(1)	JUNCTION BOXES J.B-12	EA	2
(1)	AWG 6 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	1,512
(1)	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	567
(1)	AWG 10 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	LF	3,153
(1)	2" CONDUIT IN STRUCTURE	LF	160
(1)	2" LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT	LF	620
(1)	TESTING OF ENTIRE LIGHTING SYSTEM	LS	
(1)	LIGHTING STANDARD *	EA	
(1)	LUMINAIRES *	EA	

* SEE SPECIAL PROVISIONS

(1) ITEMS IN CONSTRUCTION OF CONCRETE RETAINING WALL ITEM 8610-0003 ARE GIVEN FOR INFORMATION ONLY.



STAKE-OUT PLAN
NOT TO SCALE

NOTES:

1. FOR PATH ALIGNMENT DATA, SEE "GEOMETRIC DATA" SHEET.
2. ALL VALUES PRESENTED IN THE COORDINATE TABLE ARE GIVEN IN FEET.
3. NORTHING AND EASTING COORDINATES ARE GIVEN TO FOUR DECIMAL PLACES FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.

COORDINATE TABLE

WORK POINT	"HSPB" SURVEY & CONSTR ℄ STATION	"HSPB" SURVEY & CONSTR ℄ OFFSET	WALL SURVEY & CONSTR ℄ STATION	WALL SURVEY & CONSTR ℄ OFFSET	NORTHING ORDINATE	EASTING ORDINATE	WORK POINT DESCRIPTION
R1	14+68.00	1.00' LT	"NW2" 10+00.00	1.00' LT	726261.1184	1335331.8070	BEGIN WALL 2
R2	15+71.77	1.00' LT	"NW2" 11+03.77	1.00' LT	726296.4887	1335234.2484	END WALL 2
R3	15+92.51	0.00	-	-	726288.4224	1335218.7167	BEGIN CURVE
R4	16+13.24	0.00	-	-	726274.1542	1335230.0953	MIDPOINT ON CURVE
R5	16+55.25	0.00	-	-	726272.7408	1335272.0766	END CURVE - BEGIN TANGENT
R6	16+90.93	0.00	-	-	726264.5922	1335306.5807	BEGIN CURVE
R7	17+14.06	0.00	-	-	726252.3710	1335326.1335	END OF CURB
R8	14+68.00	10.58' RT	"NW1" 10+00.00	0.58' RT	726272.0081	1335335.7551	BEGIN WALL 1
R9	15+78.67	14.91' RT	"NW1" 11+18.40	0.58' RT	726312.3645	1335224.4439	BEGIN CURVE
R10	15+87.39	21.75' RT	"NW1" 11+41.79	0.58' RT	726305.6787	1335202.9761	MIDPOINT ON CURVE
R11	15+96.11	15.00' RT	"NW1" 11+65.18	0.58' RT	726283.2044	1335203.6636	END CURVE - BEGIN CURVE
R12	15+99.16	11.87' RT	"NW1" 11+72.33	0.58' RT	726277.6655	1335208.1877	MIDPOINT ON CURVE
R13	16+02.81	10.58' RT	"NW1" 11+79.47	0.58' RT	726272.1682	1335212.7625	END CURVE - BEGIN CURVE
R14	16+08.02	10.58' RT	"NW1" 11+89.06	0.58' RT	726265.9974	1335220.3019	MIDPOINT ON CURVE
R15	16+13.24	10.58' RT	"NW1" 11+98.63	0.58' RT	726263.5769	1335229.7392	END CURVE - BEGIN TANGENT
R16	16+55.25	10.58' RT	"NW1" 12+40.63	0.58' RT	726262.1634	1335271.7205	BEGIN CURVE
R17	16+64.23	10.58' RT	"NW1" 12+48.61	0.58' RT	726261.5023	1335279.6152	END WALL 1
R18	16+88.94	10.00' RT	-	-	726256.2236	1335300.7935	MIDPOINT ON CURVE
R19	17+13.64	10.00' RT	-	-	726244.8705	1335319.5084	END OF CURB

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
STAKE-OUT PLAN

RECOMMENDED _____

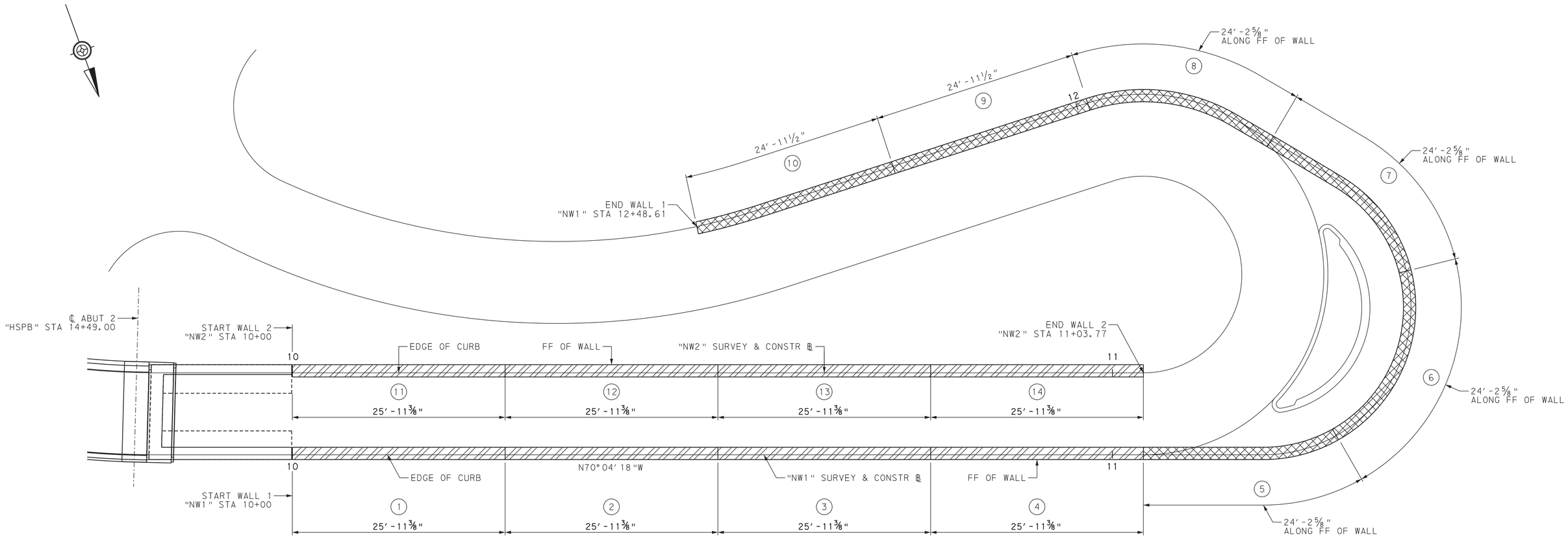
SHEET 82 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw11lcs01$ FILENAME: SL4300082OF0137.dgn

PLOTTED: 8/22/2022 7:11:02 PM



LEGEND:

- DOUBLE WALL
- SINGLE WALL
- (X) PANEL DESIGNATION

CAST-IN-PLACE PANEL LAYOUT

2 0 2 4 6 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
PANEL LAYOUT

RECOMMENDED _____

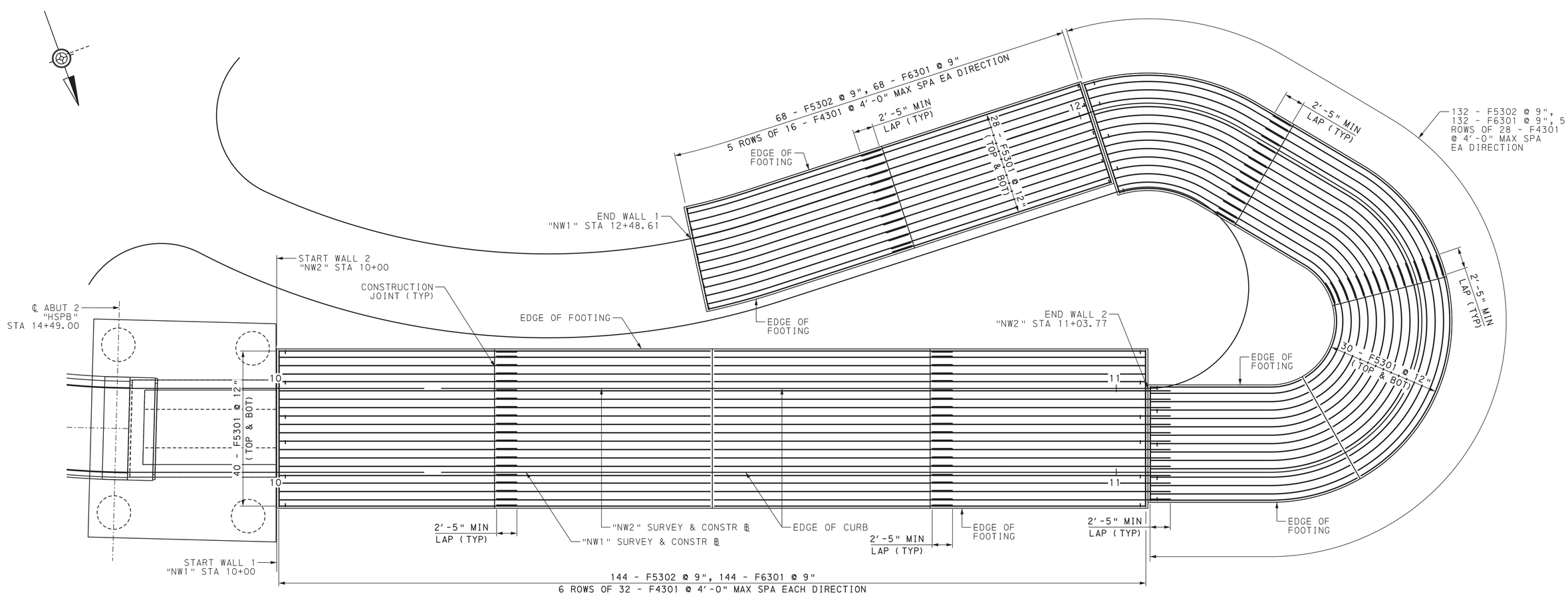
SHEET 83 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw11cs01$ FILENAME: SL4300083OF0137.dgn

PLOTTED: 8/22/2022 7:17:04 PM



FOOTING PLAN

2 0 2 4 6 FEET

(ONLY BARS COMPLETELY CONTAINED WITHIN FOOTING ARE SHOWN. FOR BARS NOT SHOWN, SEE "NORTH WALL TYPICAL SECTION & ELEVATION 1-3" SHEETS)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

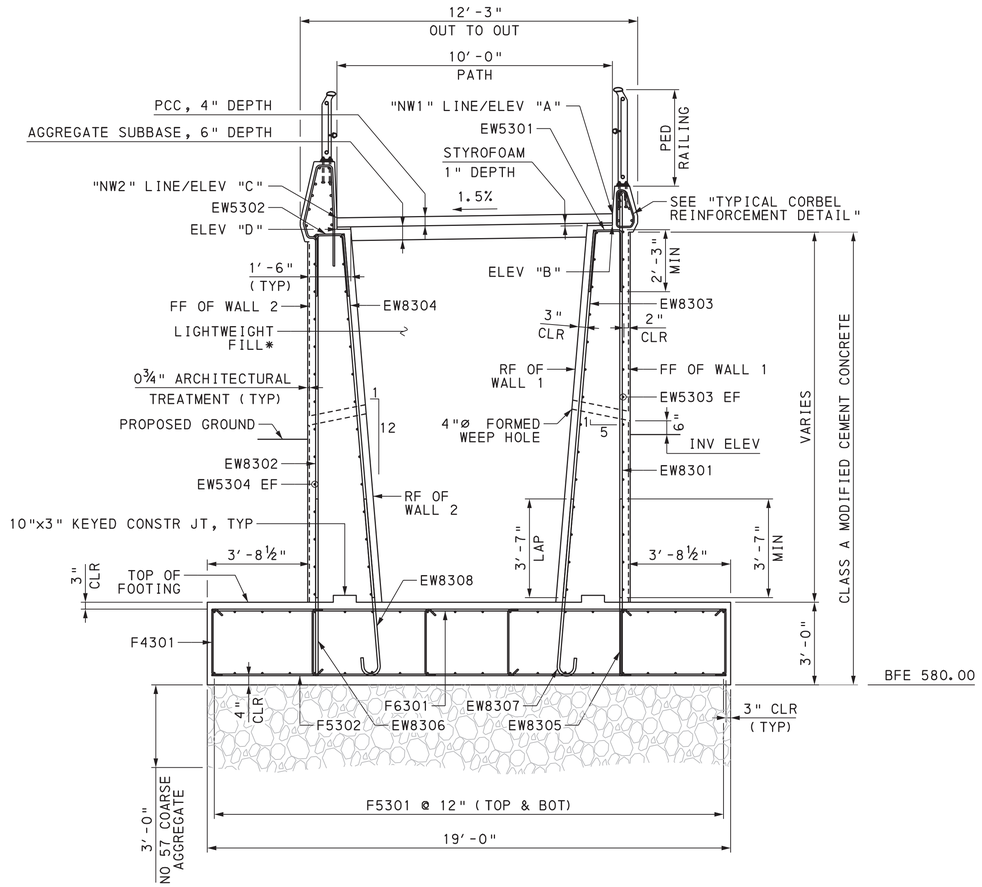
NORTH WALL
FOOTING PLAN

RECOMMENDED

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tyllpwilliccs01$ FILENAME: SL43000840F0137.dgn

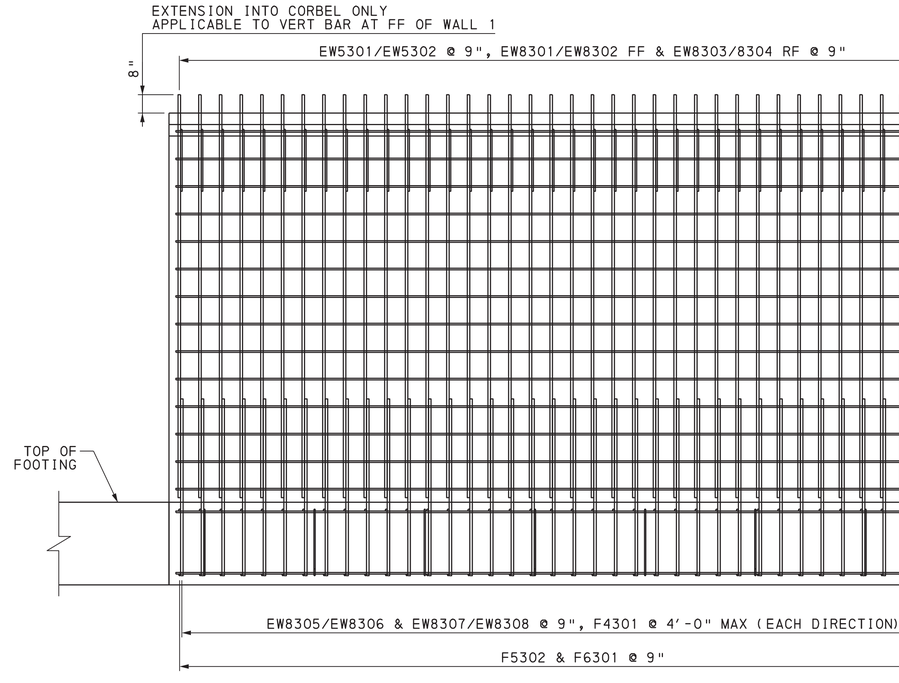
PLOTTED: 8/22/2022 7:13:38 PM



*LIFTS NOT TO EXCEED 4′-0"

SECTION A-A

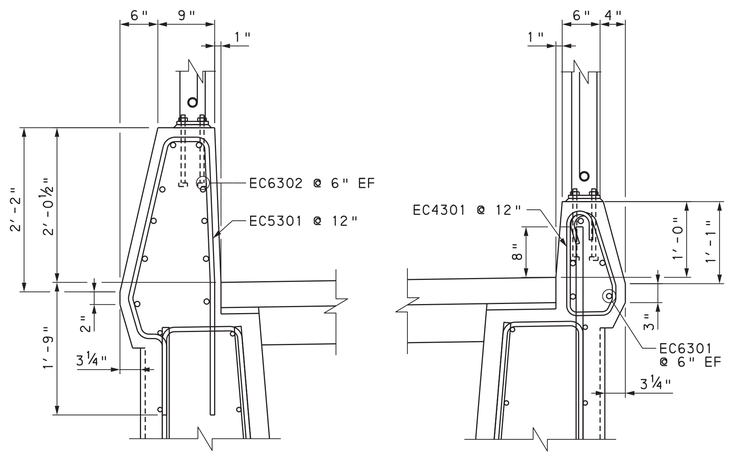
1 0 1 2 3 FEET



TYPICAL ELEVATION REINFORCEMENT

1 0 1 2 3 FEET

(CORBEL/CORBEL REINFORCEMENT AND RAILING OMITTED FROM ELEVATION FOR CLARITY)



TYPICAL CORBEL REINFORCEMENT DETAIL

6 0 6 12 INCHES

(FOR CORBEL DETAILS NOT SHOWN, SEE "TYPICAL SECTION DETAILS 1" SHEET)

NOTES:

1. FOR DRAINAGE THROUGH WALL STEM AND WEEP HOLE REINFORCEMENT DETAILS REFER TO "NORTH WALL DETAILS" SHEET.
2. FOR LOCATIONS OF WEEP HOLES REFER TO "NORTH WALL DEVELOPED ELEVATIONS" SHEET.

DES: SLL	DWN: NMT	CKD: AH

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
TYPICAL SECTION & ELEVATION 1

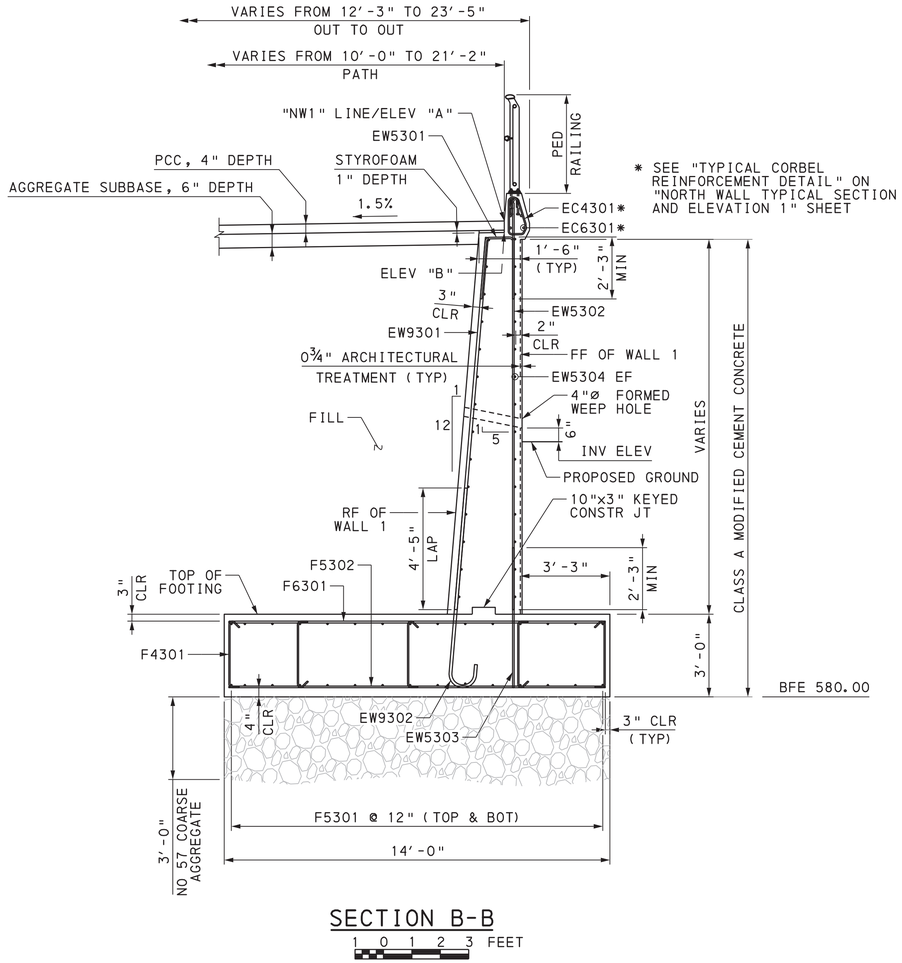
RECOMMENDED _____

SHEET 85 OF 137

L-430

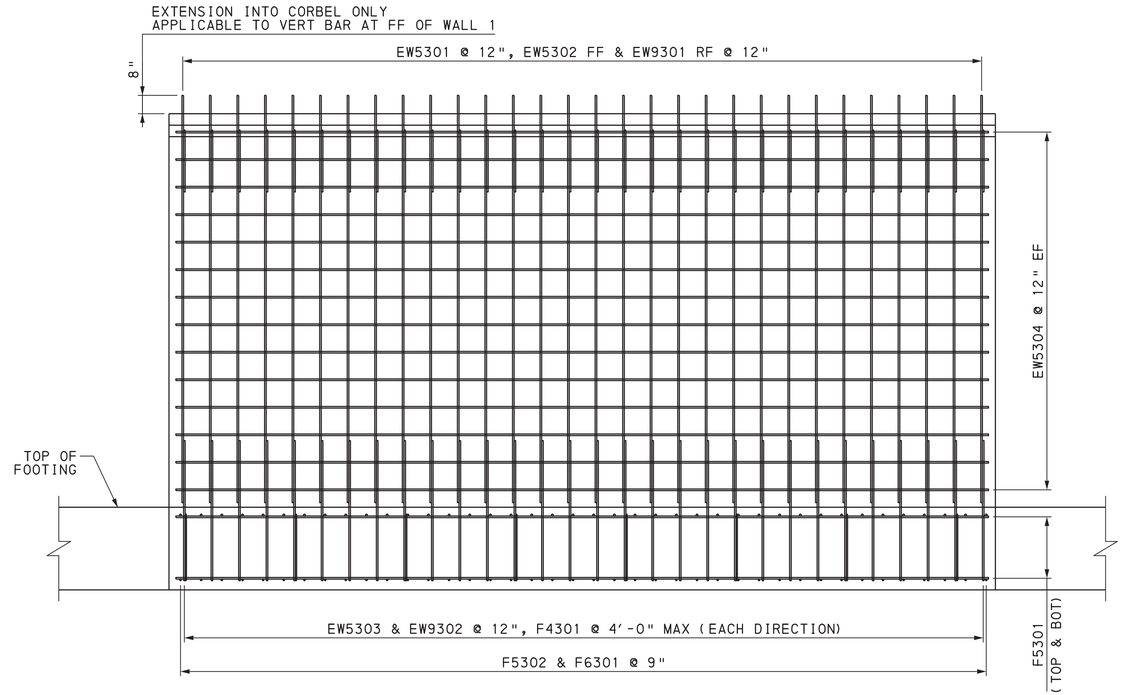
OPERATOR: tylpw11cs01$ FILENAME: SL4300085OF0137.dgn

PLOTTED: 8/22/2022 7:09:58 PM



SECTION B-B

1 0 1 2 3 FEET



TYPICAL ELEVATION REINFORCEMENT

1 0 1 2 3 FEET

(CORBEL/CORBEL REINFORCEMENT AND RAILING OMITTED FROM ELEVATION FOR CLARITY)

NOTES:

1. FOR DRAINAGE THROUGH WALL STEM AND WEEP HOLE REINFORCEMENT DETAILS REFER TO "NORTH WALL DETAILS" SHEET.
2. FOR LOCATIONS OF WEEP HOLES REFER TO "NORTH WALL DEVELOPED ELEVATIONS" SHEET.

DES: SLL	DWN: NMT	CKD: AH

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
TYPICAL SECTION & ELEVATION 2

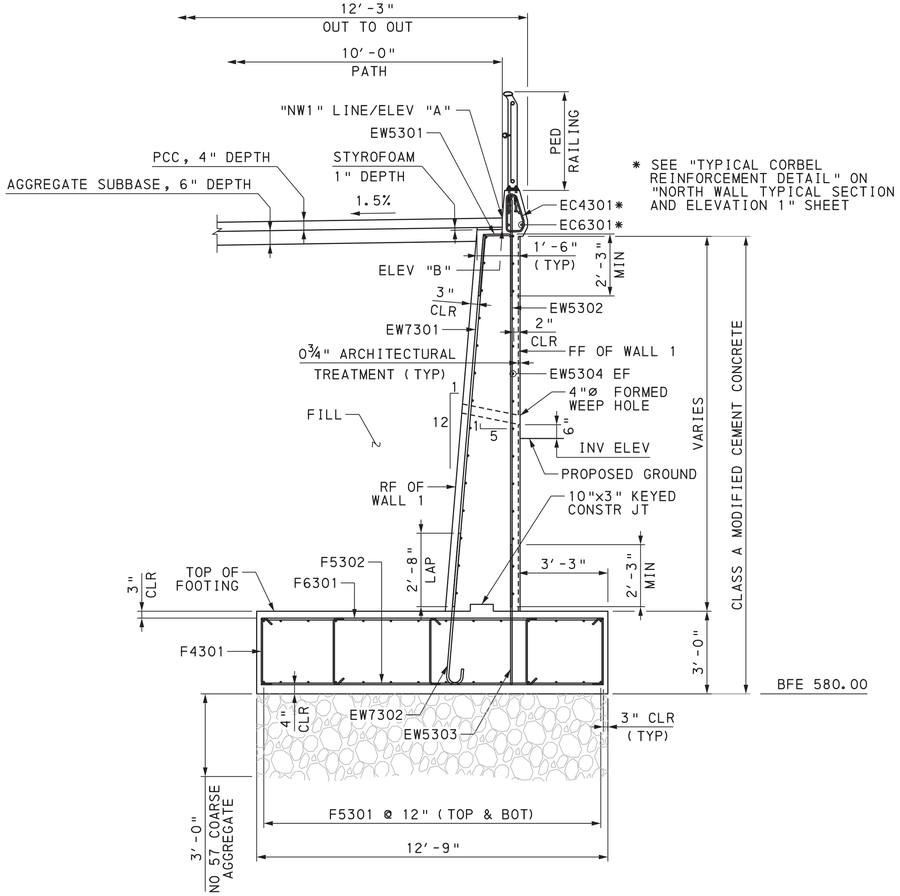
RECOMMENDED _____

SHEET 86 OF 137

L-430

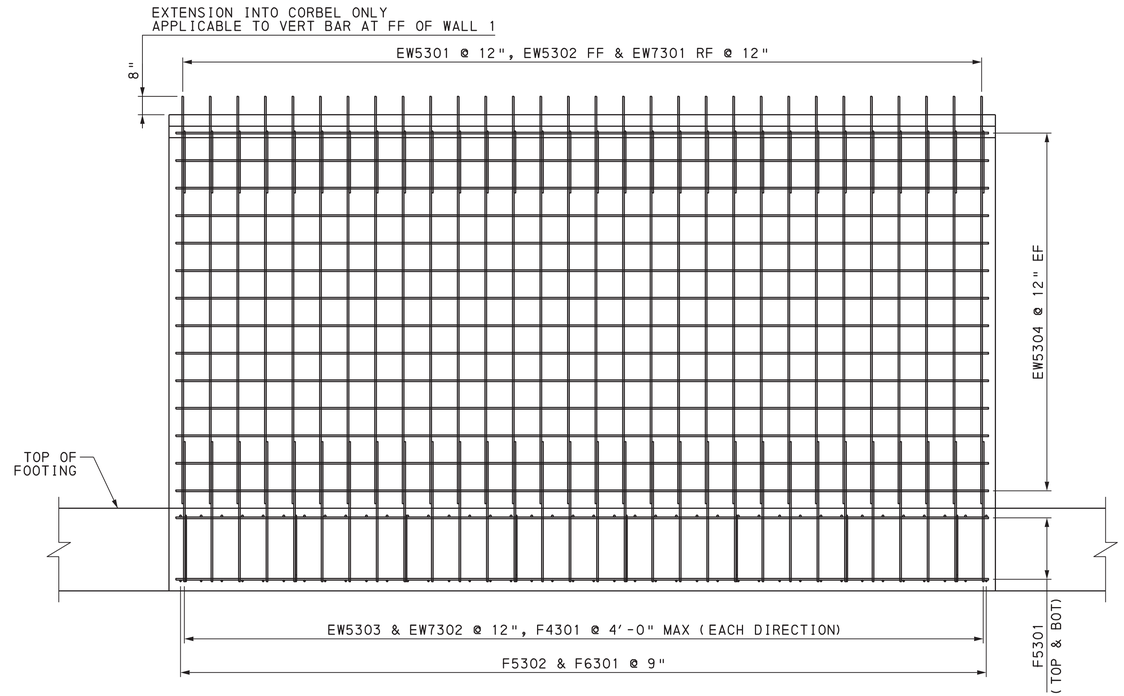
OPERATOR: tylpw11cs01$ FILENAME: SL43000860F0137.dgn

PLOTTED: 8/22/2022 7:12:02 PM



SECTION C-C

1 0 1 2 3 FEET



TYPICAL ELEVATION REINFORCEMENT

1 0 1 2 3 FEET

(CORBEL/CORBEL REINFORCEMENT AND RAILING OMITTED FROM ELEVATION FOR CLARITY)

NOTES:

1. FOR DRAINAGE THROUGH WALL STEM AND WEEP HOLE REINFORCEMENT DETAILS REFER TO "NORTH WALL DETAILS" SHEET.
2. FOR LOCATIONS OF WEEP HOLES REFER TO "NORTH WALL DEVELOPED ELEVATIONS" SHEET.

DES: SLL	DWN: NMT	CKD: AH

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
TYPICAL SECTION & ELEVATION 3

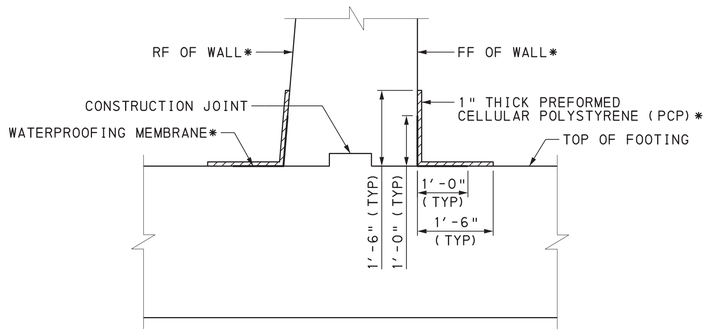
RECOMMENDED

SHEET 87 OF 137

L-430

OPERATOR: tylpw11cs01$ FILENAME: SL4300870F0137.dgn

PLOTTED: 8/22/2022 7:16:29 PM

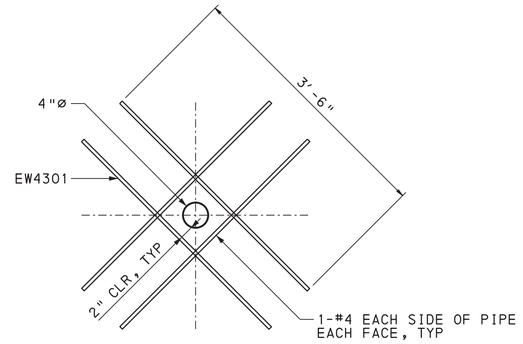


WATERPROOFING DETAIL

1 0 1 2 FEET

* WATERPROOFING MEMBRANE AND 1" THICK PREFORMED CELLULAR POLYSTYRENE TO BE USED ON FRONT FACE OF WALL STEM ONLY WHERE THE DISTANCE FROM EDGE OF PAVING TO THE FRONT FACE OF THE RESPECTIVE STEM IS $\leq$ 5'-0".

INSTALLATION NOTE:
INSTALL 2'-0" WIDE WATERPROOFING MEMBRANE TO FIT APPLICABLE FACE(S) OF WALL STEM AND TOP OF FOOTING AS SHOWN. RUN MEMBRANE CONTINUOUS FOR ENTIRE LENGTH OF RESPECTIVE WALL OR STEM. USE AN ADHESIVE BACKED, PREFORMED WATERPROOFING MEMBRANE PER PUB 408, SECTION 680.2 (b). PROVIDE 1'-6" MINIMUM PREFORMED CELLULAR POLYSTYRENE IN EACH DIRECTION OVER WATERPROOFING MEMBRANE AS PROTECTION.



WEEP HOLE REINFORCEMENT DETAIL

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
DETAILS

RECOMMENDED _____

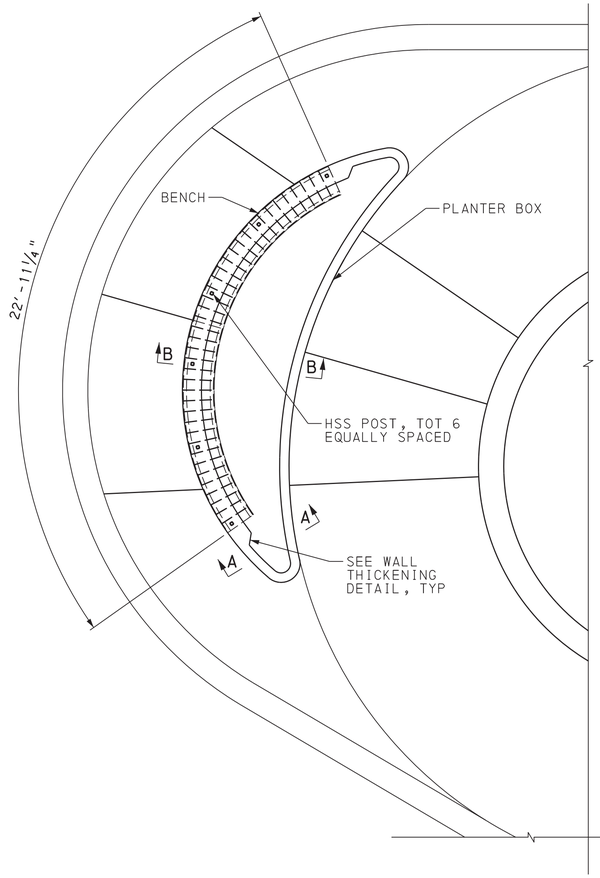
SHEET 88 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

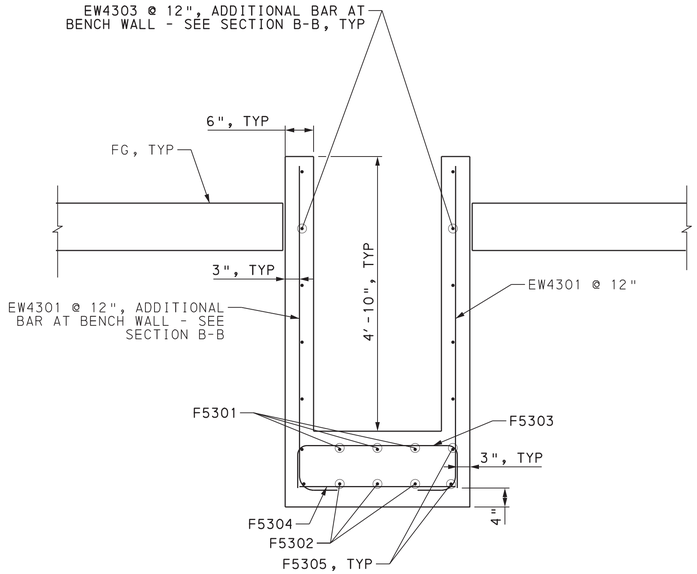
OPERATOR: tylipw11cs01$ FILENAME: SL4300088F0137.dgn

PLOTTED: 8/22/2022 7:10:22 PM



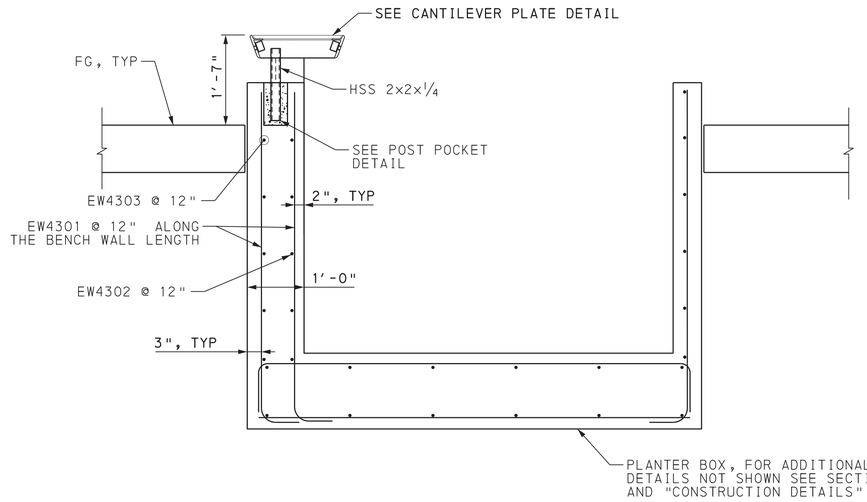
PLAN

2 0 2 4 FEET



SECTION A-A (NOT THROUGH BENCH)

12 0 12 INCHES

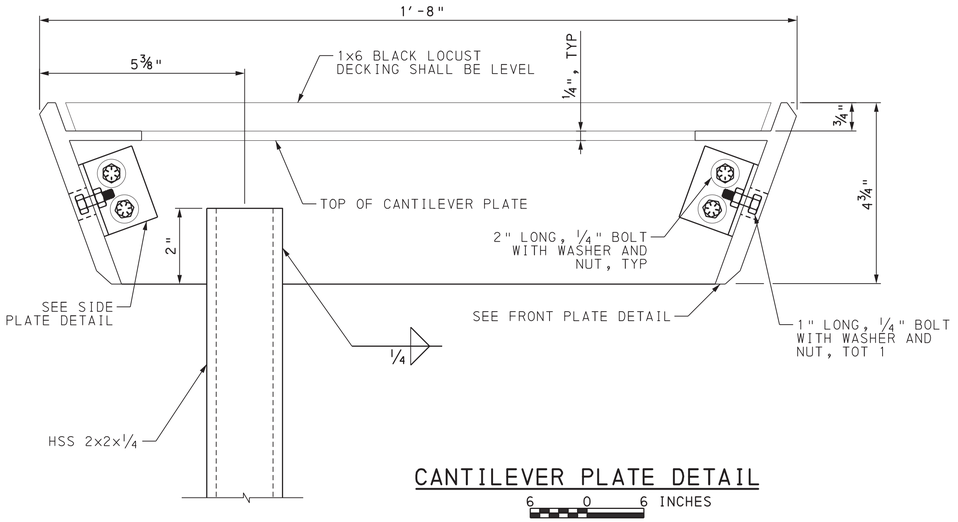


SECTION B-B (THROUGH BENCH)

12 0 12 INCHES

NOTES:

1. UNLESS OTHERWISE SHOWN, ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
2. MINIMUM SIZE FILLET WELD IS ¼" OR THICKNESS OF THINNER PART UNLESS NOTED OTHERWISE.
3. CONTRACTOR TO PROVIDE ANCHOR BOLT LAYOUT BEFORE ANCHOR BOLTS ARE PLACED.
4. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
5. FOR DETAILS NOT SHOWN, SEE "NORTH WALL OVERLOOK PLANTER DETAILS 2" AND "NORTH WALL OVERLOOK PLANTER DETAILS 3" SHEETS.
6. USE DURABLE WEATHERPROOF ADHESIVE FOR ATTACHMENT OF ALL ANGLES AND BRACKETS TO DECKING.



CANTILEVER PLATE DETAIL

6 0 6 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL OVERLOOK PLANTER DETAILS 1

RECOMMENDED _____

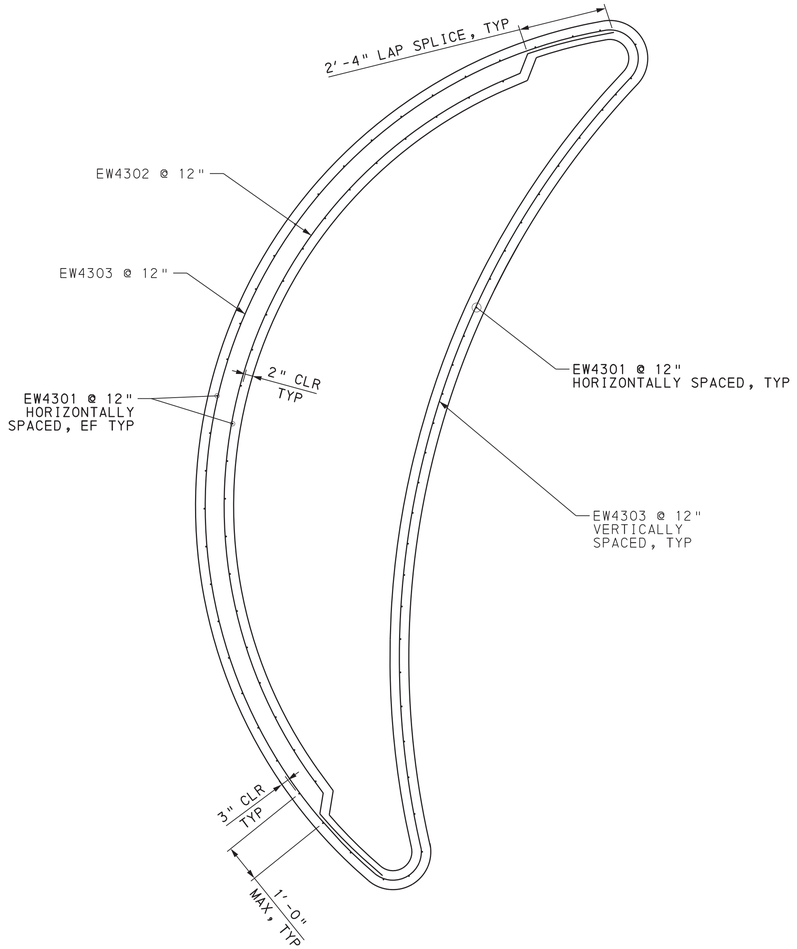
SHEET 89 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

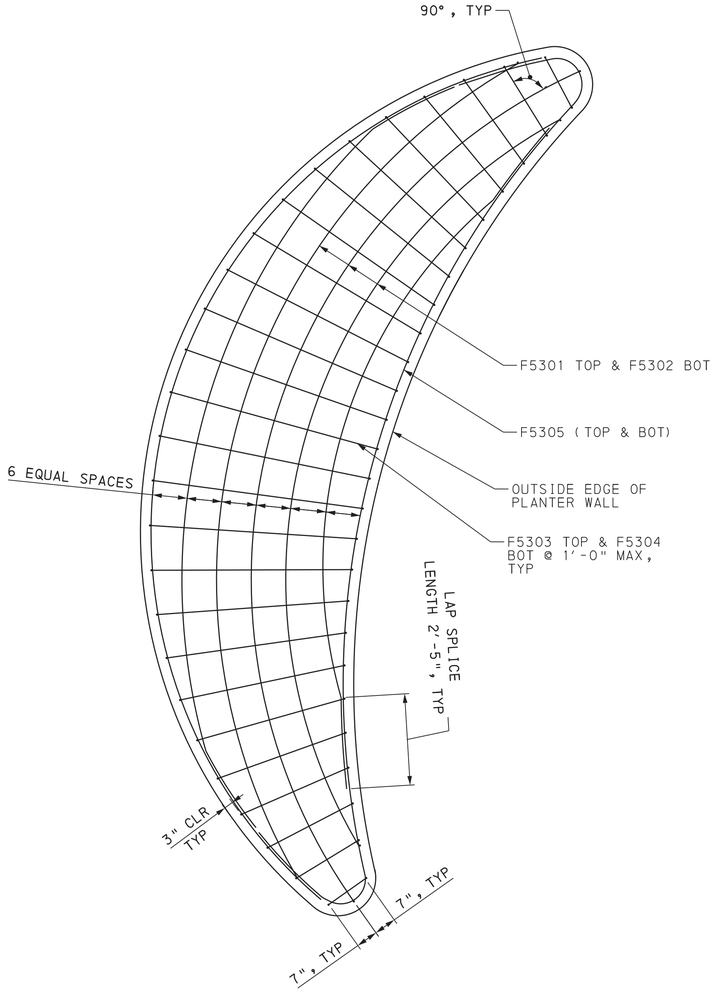
FILENAME: SL4300089F0137.dgn
OPERATOR: tylpw11cs01$

PLOTTED: 8/22/2022 7:11:06 PM



HORIZONTAL SECTION THROUGH PLANTER WALLS

2 0 2 4 FEET



PLAN VIEW OF PLANTER FOUNDATION

2 0 2 4 FEET

NOTE:

1. ANY SPACING IN ANY DIRECTION SHALL NOT EXCEED 1'-0".
2. FOR DETAILS NOT SHOWN, SEE "NORTH WALL OVERLOOK PEDESTAL DETAILS 1" AND "NORTH WALL OVERLOOK PEDESTAL DETAILS 3" SHEETS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
OVERLOOK PLANTER DETAILS 2

RECOMMENDED _____

DES: BW | DWN: AM | CKD: AH

OPERATOR: tylipw11ics01$ FILENAME: SL43000900F0137.dgn

PLOTTED: 8/22/2022 7:09:13 PM

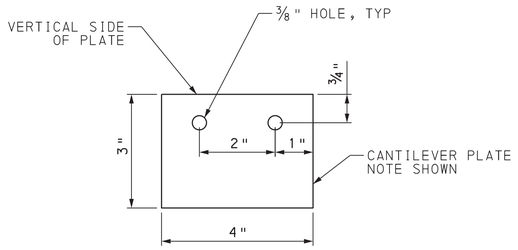
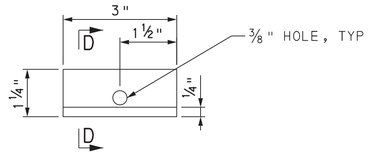


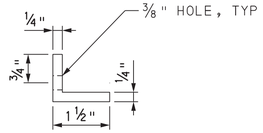
PLATE DETAIL

6 0 6 INCHES



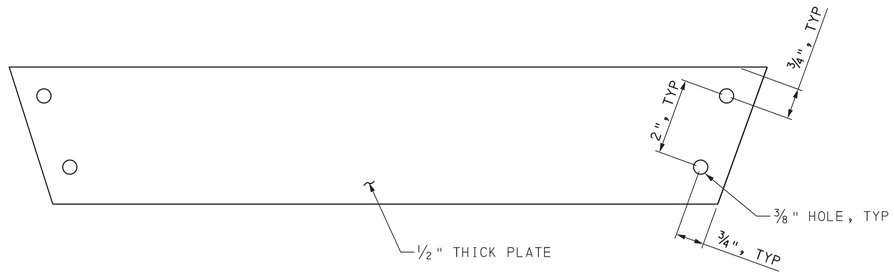
BRACKET DETAIL

6 0 6 INCHES



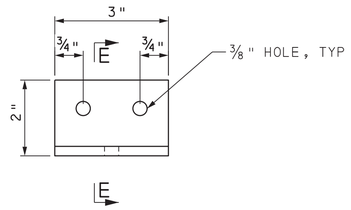
SECTION D-D

6 0 6 INCHES



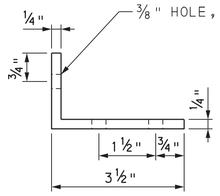
ELEVATION - CANTILEVER PLATE DETAIL

6 0 6 INCHES



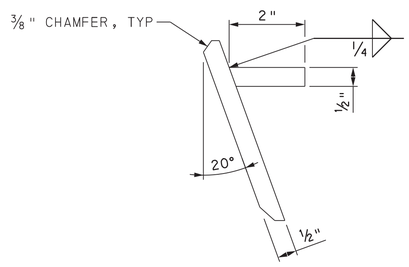
SIDE PLATE DETAIL

6 0 6 INCHES



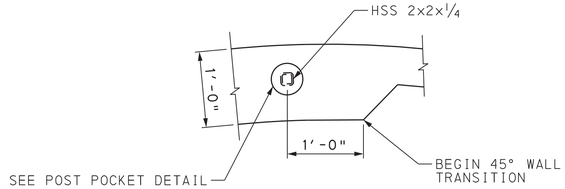
SECTION E-E

6 0 6 INCHES



FRONT PLATE DETAIL

6 0 6 INCHES

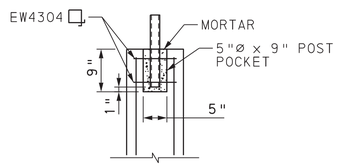


PLAN - WALL THICKENING DETAIL

12 0 12 INCHES

NOTES:

1. UNLESS OTHERWISE SHOWN, ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
2. MINIMUM SIZE FILLET WELD IS 1/4" OR THICKNESS OF THINNER PART UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
4. FOR DETAILS NOT SHOWN, SEE "NORTH WALL OVERLOOK PEDESTAL DETAILS 1" AND "NORTH WALL OVERLOOK PEDESTAL DETAILS 2" SHEETS.



POST POCKET DETAIL

12 0 12 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01

SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
OVERLOOK PLANTER DETAILS 3

RECOMMENDED _____

SHEET 91 OF 137

L-430

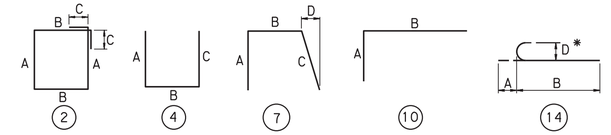
DES: BW | DWN: AM | CKD: AH

OPERATOR: tylipw11ics01$ FILENAME: SL4300091OF0137.dgn

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
SECTION A-A																
PANEL 1 & 11																
F4301	4	48	3′-9"	26		2′-5"										
F5301	5	40	28′-2 1/8"	STR	28′-2 1/8"											
F5302	5	36	18′-6"	STR	18′-6"											
F6301	6	36	18′-6"	STR	18′-6"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5303	5	52	28′-2 1/8"	STR	28′-2 1/8"											
EW5304	5	52	28′-2 1/8"	STR	28′-2 1/8"											
EW8301	8	36	25′-10 1/8"	STR	25′-10 1/8"											VARY FROM 25′-10 1/8" TO 23′-9 1/8"
EW8302	8	36	24′-4 1/4"	STR	24′-4 1/4"											VARY FROM 24′-4 1/4" TO 22′-3 3/8"
EW8303	8	36	24′-7 1/8"	STR	24′-7 1/8"											VARY FROM 24′-7 1/8" TO 22′-6 1/8"
EW8304	8	36	24′-5 3/8"	STR	24′-5 3/8"											VARY FROM 24′-5 3/8" TO 23′-4 1/4"
EW8305	8	36	6′-5"	STR	6′-5"											
EW8306	8	36	6′-5"	STR	6′-5"											
EW8307	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EW8308	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EC4301	4	27	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC5301	5	27	8′-3 5/8"	104	1′-2"	0′-3 1/4"	0′-1 1/2"	0′-5 1/2"	0′-1 1/2"	2′-7/8"	0′-5 5/8"	0′-5 1/2"	1′-10 1/2"	1′-10 1/2"	0′-1"	
EC6301	6	5	28′-3 1/8"	STR	28′-3 1/8"											
EC6302	6	10	28′-3 1/8"	STR	28′-3 1/8"											
PANEL 2 & 12																
F4301	4	48	3′-9"	26		2′-5"										
F5301	5	40	25′-7"	STR	25′-7"											
F5302	5	36	18′-6"	STR	18′-6"											
F6301	6	36	18′-6"	STR	18′-6"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5303	5	48	25′-7"	STR	25′-7"											
EW5304	5	48	25′-7"	STR	25′-7"											
EW8301	8	36	23′-9 1/8"	STR	23′-9 1/8"											VARY FROM 23′-9 1/8" TO 21′-11 7/8"
EW8302	8	36	22′-3 3/8"	STR	22′-3 3/8"											VARY FROM 22′-3 3/8" TO 20′-6 1/8"
EW8303	8	36	22′-6 1/8"	STR	22′-6 1/8"											VARY FROM 22′-6 1/8" TO 20′-8 3/4"
EW8304	8	36	22′-4 1/4"	STR	22′-4 1/4"											VARY FROM 22′-4 1/4" TO 20′-7 "
EW8305	8	36	6′-5"	STR	6′-5"											
EW8306	8	36	6′-5"	STR	6′-5"											
EW8307	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EW8308	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EC4301	4	27	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC5301	5	27	8′-3 5/8"	104	1′-2"	0′-3 1/4"	0′-1 1/2"	0′-5 1/2"	0′-1 1/2"	2′-7/8"	0′-5 5/8"	0′-5 1/2"	1′-10 1/2"	1′-10 1/2"	0′-1"	

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000
- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

DES: SLL | DWN: NMT | CKD: AH

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
REINFORCEMENT SCHEDULE 1

RECOMMENDED _____

SHEET 92 OF 137

L-430

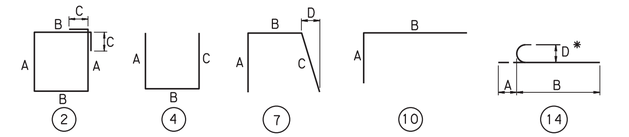
PLOTTED: 8/22/2022 7:17:12 PM
FILENAME: SL4300092OF0137.dgn
OPERATOR: tylipw11ics01$

PLOTTED: 8/22/2022 7:09:26 PM

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
EC6301	6	5	25′-7 5/8"	STR	25′-7 5/8"											
EC6302	6	10	25′-7 5/8"	STR	25′-7 5/8"											
PANEL 3 & 13																
F4301	4	48	3′-9"	26		2′-5"										
F5301	5	40	28′-2 1/8"	STR	28′-2 1/8"											
F5302	5	36	18′-6"	STR	18′-6"											
F6301	6	36	18′-6"	STR	18′-6"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5303	5	44	28′-2 1/8"	STR	28′-2 1/8"											
EW5304	5	44	28′-2 1/8"	STR	28′-2 1/8"											
EW8301	8	36	21′-11 7/8"	STR	21′-11 7/8"											VARIES FROM 21′-11 7/8" TO 20′-2 1/2"
EW8302	8	36	20′-6 1/8"	STR	20′-6 1/8"											VARIES FROM 20′-6 1/8" TO 18′-8 3/4"
EW8303	8	36	20′-8 3/4"	STR	20′-8 3/4"											VARIES FROM 20′-8 3/4" TO 18′-11 3/8"
EW8304	8	36	20′-7"	STR	20′-7"											VARIES FROM 20′-7" TO 18′-9 1/2"
EW8305	8	36	6′-5"	STR	6′-5"											
EW8306	8	36	6′-5"	STR	6′-5"											
EW8307	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EW8308	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EC4301	4	27	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC5301	5	27	8′-3 5/8"	104	1′-2"	0′-3 1/4"	0′-1 1/2"	0′-5 1/2"	0′-1 1/2"	2′-7/8"	0′-5 5/8"	0′-5 1/2"	1′-10 1/2"	1′-10 1/2"	0′-1"	
EC6301	6	5	28′-2 7/8"	STR	28′-2 7/8"											
EC6302	6	10	28′-2 7/8"	STR	28′-2 7/8"											
PANEL 4 & 14																
F4301	4	48	3′-9"	26		2′-5"										
F5301	5	40	25′-6 7/8"	STR	25′-6 7/8"											
F5302	5	36	18′-6"	STR	18′-6"											
F6301	6	36	18′-6"	STR	18′-6"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	36	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5303	5	40	25′-6 7/8"	STR	25′-6 7/8"											
EW5304	5	40	25′-6 7/8"	STR	25′-6 7/8"											
EW8301	8	36	20′-2 1/2"	STR	20′-2 1/2"											VARIES FROM 20′-2 1/2" TO 18′-5 1/4"
EW8302	8	36	18′-8 3/4"	STR	18′-8 3/4"											VARIES FROM 18′-8 3/4" TO 16′-11 1/2"
EW8303	8	36	18′-11 3/8"	STR	18′-11 3/8"											VARIES FROM 18′-11 3/8" TO 17′-2"
EW8304	8	36	18′-9 1/2"	STR	18′-9 1/2"											VARIES FROM 18′-9 1/2" TO 17′-0 1/4"
EW8305	8	36	6′-5"	STR	6′-5"											
EW8306	8	36	6′-5"	STR	6′-5"											
EW8307	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								
EW8308	8	36	7′-4 3/8"	14	0′-11"	6′-5 3/8"		0′-6"								

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

GALVANIZED OR EPOXY — GD6000
CODE LETTER — GD6000
NUMBERING — GD6000
LOCATION — GD6000
SIZE — GD6000

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

DES: SLL | DWN: NMT | CKD: AH

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
REINFORCEMENT SCHEDULE 2

RECOMMENDED _____

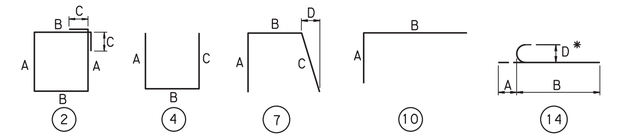
OPERATOR: tylipw11ics01$ FILENAME: SL43000930F0137.dgn

PLOTTED: 8/22/2022 7:09:36 PM

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
EC4301	4	27	4'-2 5/8"	103	0'-6"	0'-10 1/8"	0'-5 7/8"	0'-5 3/4"	0'-2 3/4"	0'-2 1/4"	0'-1"	0'-11 7/8"	0'-6"	0'-2 3/4"		
EC5301	5	27	8'-3 5/8"	104	1'-2"	0'-3 1/4"	0'-1 1/2"	0'-5 1/2"	0'-1 1/2"	2'-7/8"	0'-5 5/8"	0'-5 1/2"	1'-10 1/2"	1'-10 1/2"	0'-1"	
EC6301	6	5	25'-7 1/2"	STR	25'-7 1/2"											
EC6302	6	10	25'-7 1/2"	STR	25'-7 1/2"											
SECTION B-B																
PANEL 5																
F4301	4	35	3'-10"	26		2'-6"										
F5301	5	30	26'-5"	STR	26'-5"											
F5302	5	33	13'-6"	STR	13'-6"											
F6301	6	33	13'-6"	STR	13'-6"											
EW4301	4	16	3'-6"	STR	3'-6"											
EW5301	5	25	5'-7"	7	2'-3"	1'-1"	2'-3"	0'-2 1/4"								
EW5302	5	25	18'-7 1/4"	STR	18'-7 1/4"											VARY FROM 18'-7 1/4" TO 18'-4 1/8"
EW5303	5	25	4'-11"	STR	4'-11"											
EW5304	5	38	26'-5"	STR	26'-5"											
EW9301	9	25	17'-4"	STR	17'-4"											VARY FROM 17'-4" TO 17'-0 7/8"
EW9302	9	25	8'-5"	14	1'-3"	7'-2"										
EC4301	4	25	4'-2 5/8"	103	0'-6"	0'-10 1/8"	0'-5 7/8"	0'-5 3/4"	0'-2 3/4"	0'-2 1/4"	0'-1"	0'-11 7/8"	0'-6"	0'-2 3/4"		
EC6301	6	5	26'-5"	STR	26'-5"											
SECTION B-B																
PANEL 6																
F4301	4	35	3'-10"	26		2'-6"										
F5301	5	30	26'-5"	STR	26'-5"											
F5302	5	33	13'-6"	STR	13'-6"											
F6301	6	33	13'-6"	STR	13'-6"											
EW4301	4	16	3'-6"	STR	3'-6"											
EW5301	5	25	5'-7"	7	2'-3"	1'-1"	2'-3"	0'-2 1/4"								
EW5302	5	25	18'-4 1/8"	STR	18'-4 1/8"											VARY FROM 18'-4 1/8" TO 18'-0 3/4"
EW5303	5	25	4'-11"	STR	4'-11"											
EW5304	5	38	26'-5"	STR	26'-5"											
EW9301	9	25	17'-7/8"	STR	17'-7/8"											VARY FROM 17'-0 7/8" TO 16'-9 1/2"
EW9302	9	25	8'-5"	14	1'-3"	7'-2"										
EC4301	4	25	4'-2 5/8"	103	0'-6"	0'-10 1/8"	0'-5 7/8"	0'-5 3/4"	0'-2 3/4"	0'-2 1/4"	0'-1"	0'-11 7/8"	0'-6"	0'-2 3/4"		
EC6301	6	5	26'-5"	STR	26'-5"											

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

DES: SLL | DWN: NMT | CKD: AH

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
REINFORCEMENT SCHEDULE 3

RECOMMENDED

SHEET 94 OF 137

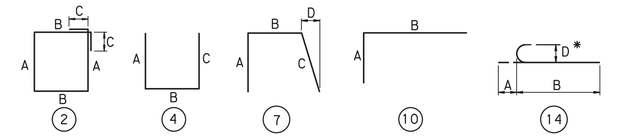
L-430

FILENAME: SL43000940F0137.dgn
OPERATOR: tylipw11ics01$

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
SECTION B-B																
PANEL 7																
F4301	4	35	3′-10"	26		2′-6"										
F5301	5	30	26′-5"	STR	26′-5"											
F5302	5	33	13′-6"	STR	13′-6"											
F6301	6	33	13′-6"	STR	13′-6"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	25	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	25	18′-3/4"	STR	18′-3/4"											VARY FROM 18′-0 3/4" TO 17′-9"
EW5303	5	25	4′-11"	STR	4′-11"											
EW5304	5	36	26′-5"	STR	26′-5"											
EW9301	9	25	16′-9 1/2"	STR	16′-9 1/2"											VARY FROM 16′-9 1/2" TO 16′-5 5/8"
EW9302	9	25	8′-5"	14	1′-3"	7′-2"										
EC4301	4	25	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC6301	6	5	26′-5"	STR	26′-5"											
SECTION B-B																
PANEL 8																
F4301	4	35	3′-10"	26		2′-6"										
F5301	5	30	26′-5"	STR	26′-5"											
F5302	5	33	17′-9"	STR	17′-9"											VARY FROM 17′-9" TO 17′-0 3/8"
F6301	6	33	13′-6"	STR	13′-6"											
EW4301	4	16	16′-5 5/8"	STR	16′-5 5/8"											VARY FROM 16′-5 5/8" TO 15′-9 1/8"
EW5301	5	25	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	25	18′-7 1/4"	STR	18′-7 1/4"											
EW5303	5	25	4′-11"	STR	4′-11"											
EW5304	5	36	26′-5"	STR	26′-5"											
EW9301	9	25	17′-4"	STR	17′-4"											
EW9302	9	25	8′-5"	14	1′-3"	7′-2"										
EC4301	4	25	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC6301	6	5	26′-5"	STR	26′-5"											
SECTION B-B																
PLANTER																
F5301			26′-7"	4		25′-3"										"DIM. B VARIES 23′-9"" TO 26′-4""
F5302			21′-1"	STR	21′-1"											BEND ON SITE"
F5303			4′-9"	4		3′-5"										"VARY 19′-8"" TO 28′-5""
F5304			3′-5"	STR	3′-5"											BEND ON SITE"
F5305			30′-2"	105	21′-0"	2′-5"	2′-7"	1′-2"	2′-10"	21′-8"						DIM. B VARIES FROM 5′-8" TO 1′-2"
																DIM. A VARIES FROM 5′-8" TO 1′-2"
EW4301			5′-10"	10		5′-2"										
EW4302			26′-4"	STR	26′-4"											
EW4303			30′-2"	105	21′-0"	2′-5"	2′-7"	1′-2"	2′-10"	21′-8"						
EW4304			3′-8"	2												BEND ON SITE
																BEND ON SITE

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000

- GALVANIZED OR EPOXY
- CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS	LOCATION
A = ABUTMENT	0 = GENERAL
F = FOUNDATION	1 = ABUTMENT 1
S = SLAB	2 = ABUTMENT 2
P = PYLON	3 = NORTH WALL
C = CURB AND PARAPET	4 = BACK STAY WALL
D = DIAPHRAGM	5 = "FS" WALL
W = WALL	

DES: SLL | DWN: NMT | CKD: AH

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
REINFORCEMENT SCHEDULE 4

RECOMMENDED _____

SHEET 95 OF 137

L-430

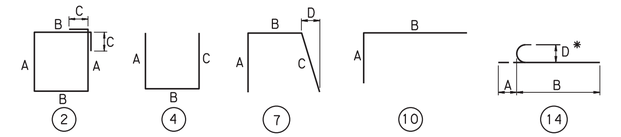
PLOTTED: 8/22/2022 7:10:09 PM
FILENAME: SL43000950F0137.dgn
OPERATOR: tylipwilliccs01$

PLOTTED: 8/22/2022 7:09:15 PM

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
SECTION C-C																
PANEL 9																
F4301	4	40	3′-9"	26		2′-5"										
F5301	5	28	27′-2 3/8"	STR	27′-2 3/8"											
F5302	5	34	12′-3"	STR	12′-3"											
F6301	6	34	12′-3"	STR	12′-3"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	26	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	26	15′-6 1/2"	STR	15′-6 1/2"											VARY FROM 15′-6 1/2" TO 13′-7 3/8"
EW5303	5	26	6′-5"	STR	6′-5"											
EW5304	5	34	27′-2 3/8"	STR	27′-2 3/8"											
EW7301	7	26	15′-7 1/8"	STR	15′-7 1/8"											VARY FROM 15′-7 1/8" TO 13′-8"
EW7302	7	26	7′-1 3/8"	STR	7′-1 3/8"											
EC4301	4	26	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC6301	6	5	27′-3 1/4"	STR	27′-3 1/4"											
PANEL 10																
F4301	4	40	3′-9"	26		2′-5"										
F5301	5	28	24′-7 1/8"	STR	24′-7 1/8"											
F5302	5	34	12′-3"	STR	12′-3"											
F6301	6	34	12′-3"	STR	12′-3"											
EW4301	4	16	3′-6"	STR	3′-6"											
EW5301	5	26	5′-7"	7	2′-3"	1′-1"	2′-3"	0′-2 1/4"								
EW5302	5	26	13′-7 3/8"	STR	13′-7 3/8"											VARY FROM 13′-7 3/8" TO 12′-0 1/4"
EW5303	5	26	6′-5"	STR	6′-5"											
EW5304	5	30	24′-7 1/8"	STR	24′-7 1/8"											
EW7301	7	26	13′-8"	STR	13′-8"											VARY FROM 13′-8" TO 12′-0 3/4"
EW7302	7	26	7′-1 3/8"	STR	7′-1 3/8"											
EC4301	4	26	4′-2 5/8"	103	0′-6"	0′-10 1/8"	0′-5 7/8"	0′-5 3/4"	0′-2 3/4"	0′-2 1/4"	0′-1"	0′-11 7/8"	0′-6"	0′-2 3/4"		
EC6301	6	5	24′-7 3/4"	STR	24′-7 3/4"											

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000
- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS
- A = ABUTMENT
- F = FOUNDATION
- S = SLAB
- P = PYLON
- C = CURB AND PARAPET
- D = DIAPHRAGM
- W = WALL

LOCATION
- 0 = GENERAL
- 1 = ABUTMENT 1
- 2 = ABUTMENT 2
- 3 = NORTH WALL
- 4 = BACK STAY WALL
- 5 = "FS" WALL

DES: SLL | DWN: NMT | CKD: AH

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH WALL
REINFORCEMENT SCHEDULE 5

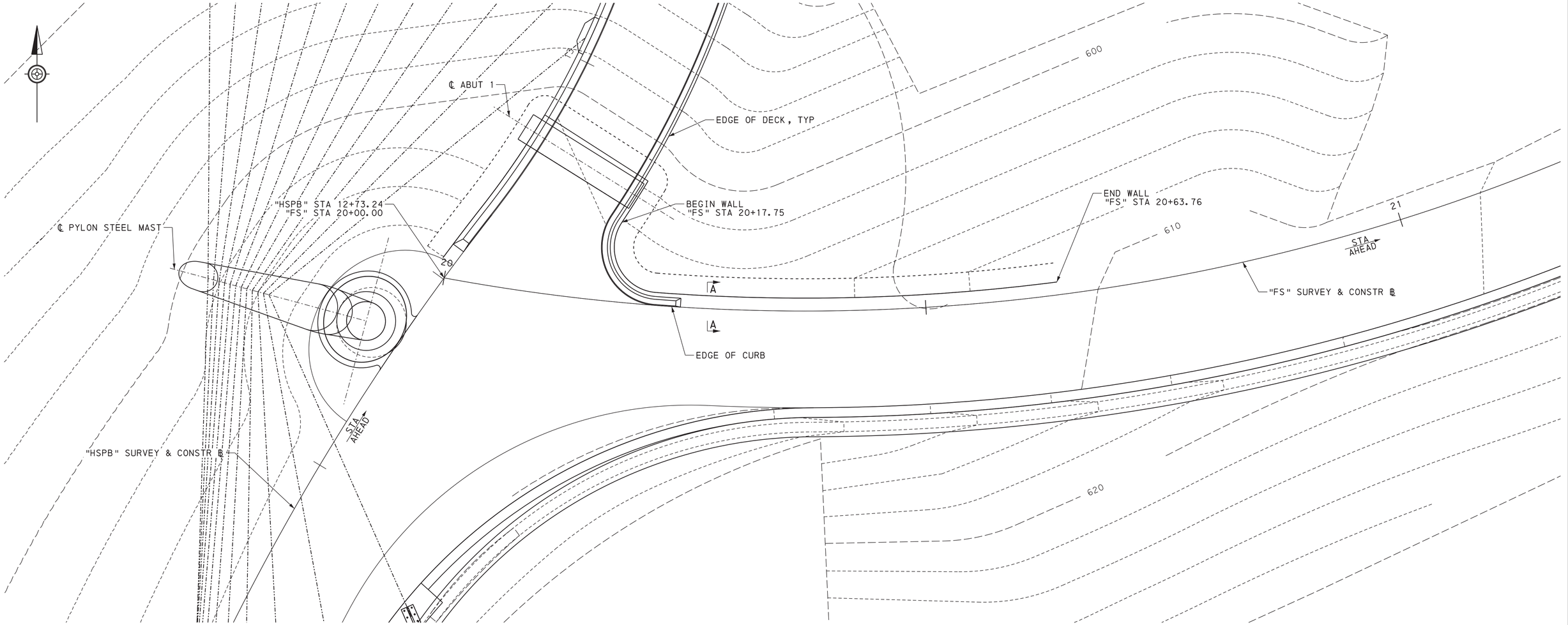
RECOMMENDED _____

SHEET 96 OF 137

L-430

FILENAME: SL4300096OF0137.dgn
OPERATOR: tylipw11ics01$

PLOTTED: 8/22/2022 7:12:17 PM



PLAN

5 0 5 FEET

NOTES:

1. FOR SECTION A-A, SEE "ABUT 1 SOUTHEAST WALL TYPICAL SECTION & ELEVATION" SHEET.
2. FOR PEDESTRIAN RAIL LAYOUT, SEE "PEDESTRIAN RAIL LAYOUT 1" SHEET.
3. FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE "GEOMETRIC DATA" SHEETS.
4. FOR SOUTHEAST WALL QUANTITIES, SEE "TABULATION OF STRUCTURE ITEMS" SHEET.

LEGEND:

- AS-DRILLED BORING
- -—200-— EXISTING CONTOURS
- —200— PROPOSED CONTOURS
- DIRECTION OF TRAFFIC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

DESCRIPTION	DWG. NO.	APP. DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06-01-10
BACKFILL AT STRUCTURES	RC-12M	02-08-19
ELECTRICAL DETAILS	BC-721M	02-19-21
STANDARD LIGHTING POLE ANCHORAGE	BC-722M	02-19-21
WALL CONSTRUCTION & EXPANSION JOINT DETAILS	BC-735M	09-30-16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	01-31-19
CONCRETE DECK SLAB DETAILS	BC-752M	02-19-21
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	01-31-19
CURBS AND GUTTERS	RC-64M	02-19-21
CURBS RAMPS AND SIDEWALKS NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 1 CURB RAMPS AND TYPICAL SECTIONS	RC-67M	02-19-21

SUPPLEMENTAL DRAWINGS

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUT 1 SOUTHEAST WALL PLAN

RECOMMENDED _____

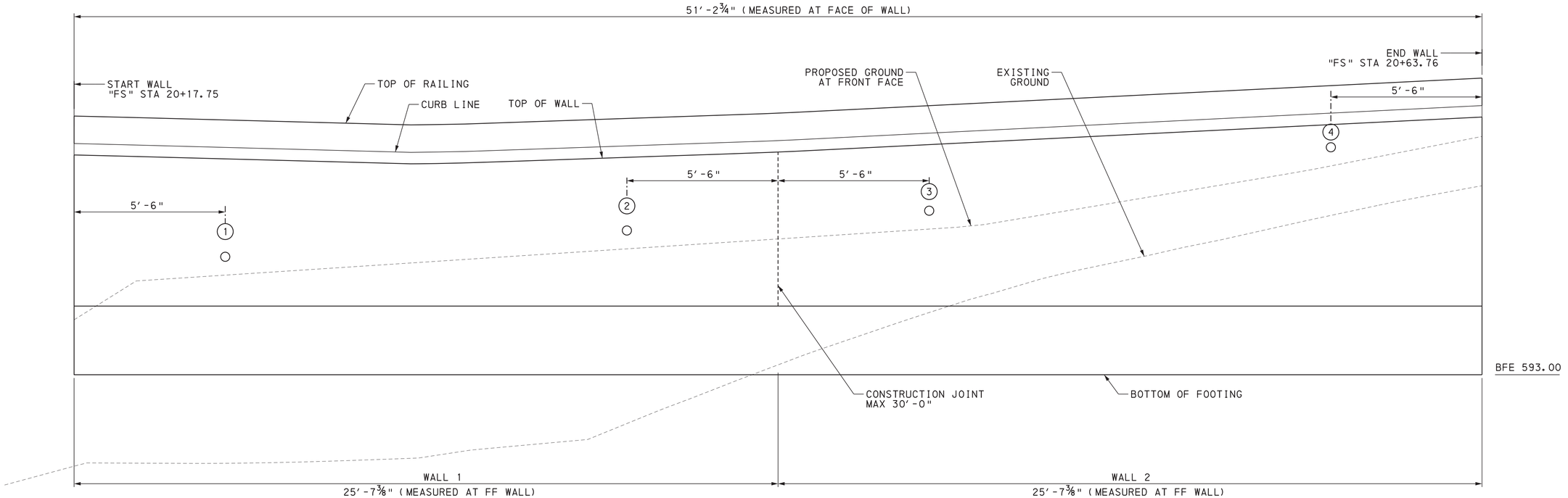
SHEET 97 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw11cs01$ FILENAME: SL43000970F0137.dgn

PLOTTED: 8/22/2022 7:11:17 PM



DEVELOPED ELEVATION ALONG "FS" LINE

1 0 1 2 FEET

WEEP HOLE ELEVATIONS	
WEEP HOLE DESIGNATION	INVERT ELEVATION
1	604.88
2	605.84
3	606.65
4	609.19

TOP OF SOUTHEAST WALL ELEVATIONS		
"FS" STATION	ELEV "A"	ELEV "B"
20+17.75	608.02	607.61
20+38.14	608.32	607.90
20+63.76	609.60	609.18

(STATIONS SHOWN CORRESPOND WITH START/END OF EACH WALL SEGMENT)

LEGEND:

(X) WEEP HOLE DESIGNATION

NOTES:

1. FOR ELEVATION LOCATIONS REFERENCED IN THE "TOP OF SOUTHEAST WALL ELEVATIONS" TABLE, SEE "ABUTMENT 1 SOUTHEAST WALL TYPICAL SECTION & ELEVATION" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

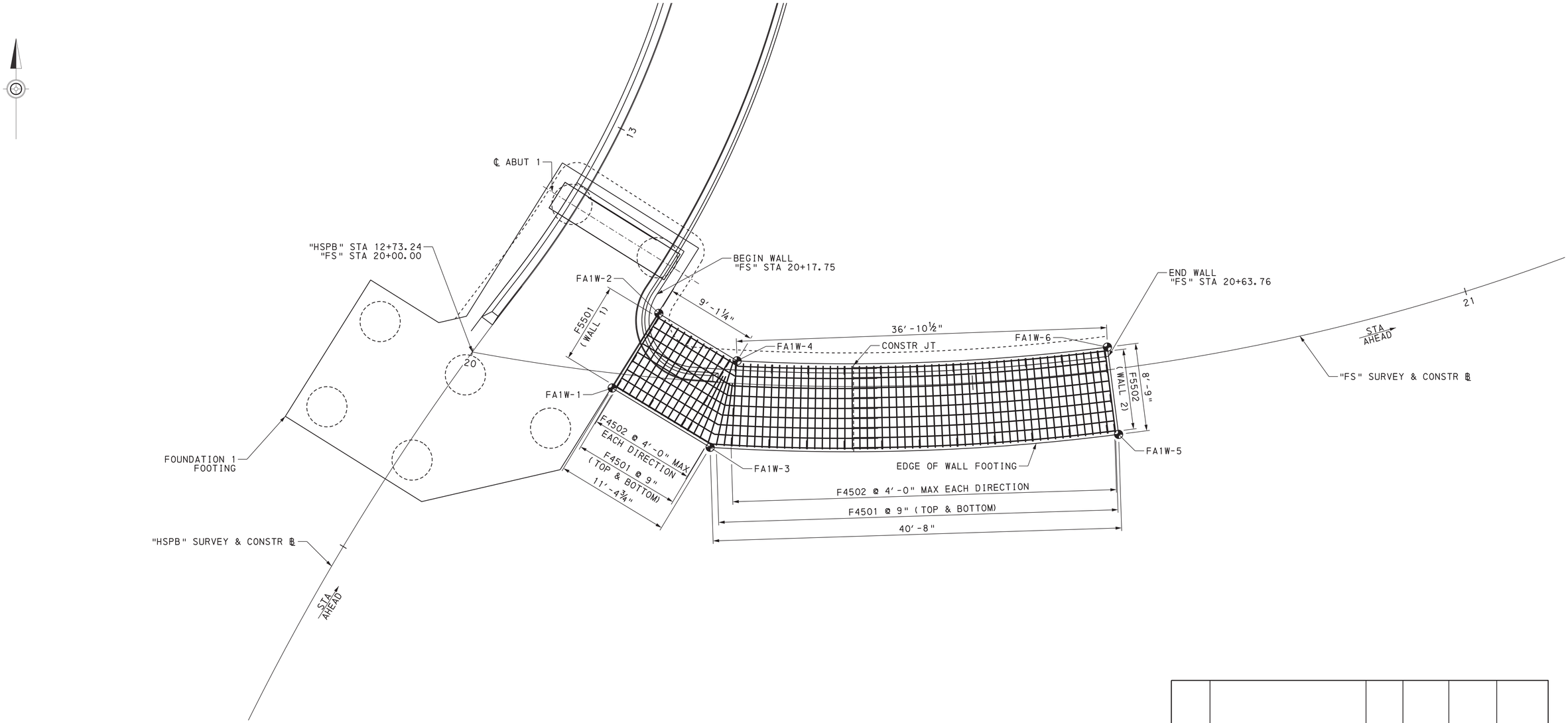
ABUT 1 SOUTHEAST WALL
DEVELOPED ELEVATION

RECOMMENDED

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw11fcs01$ FILENAME: SL4300098OF0137.dgn

PLOTTED: 8/22/2022 7:10:53 PM



PLAN

5 0 5 FEET

NOTE:

1. FOR FOUNDATION 1 FOOTING DETAILS, SEE "FOUNDATION DETAILS 1" THROUGH "FOUNDATION DETAILS 7" SHEETS.

COORDINATE TABLE

WORK POINT	SURVEY & CONSTR ℄ STATION	SURVEY & CONSTR ℄ OFFSET	NORTHING ORDINATE	EASTING ORDINATE	WORK POINT DESCRIPTION
FA1W-1	20+14.25	1.48' RT	726106.1207	1335396.8855	ABUT 1 WALL FOUNDATION NORTHWEST CORNER
FA1W-2	20+18.14	6.38' LT	726113.5399	1335401.5260	ABUT 1 WALL FOUNDATION SOUTHWEST CORNER
FA1W-3	20+24.28	6.50' RT	726100.2172	1335406.6293	ABUT 1 WALL FOUNDATION SOUTH BEGIN CURVE
FA1W-4	20+26.43	2.25' LT	726108.8232	1335409.3109	ABUT 1 WALL FOUNDATION NORTH BEGIN CURVE
FA1W-5	20+63.76	2.25' LT	726110.1851	1335446.1595	ABUT 1 WALL FOUNDATION NORTHEAST CORNER
FA1W-6	20+63.76	6.50' RT	726101.5067	1335447.2765	ABUT 1 WALL FOUNDATION SOUTHEAST CORNER

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

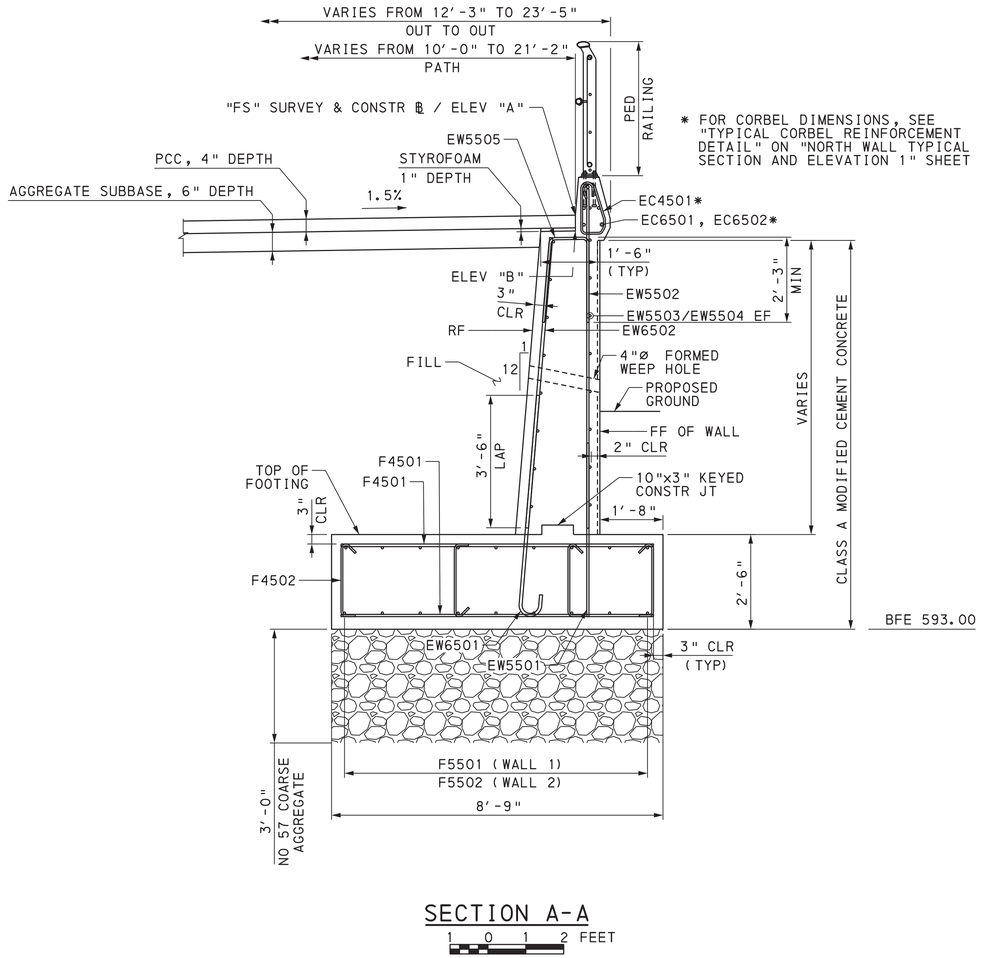
ABUT 1 SOUTHEAST WALL FOOTING PLAN

RECOMMENDED _____

DES: SLL | DWN: NMT | CKD: AH

OPERATOR: tylipw1ics01$ FILENAME: SL43000990F0137.dgn

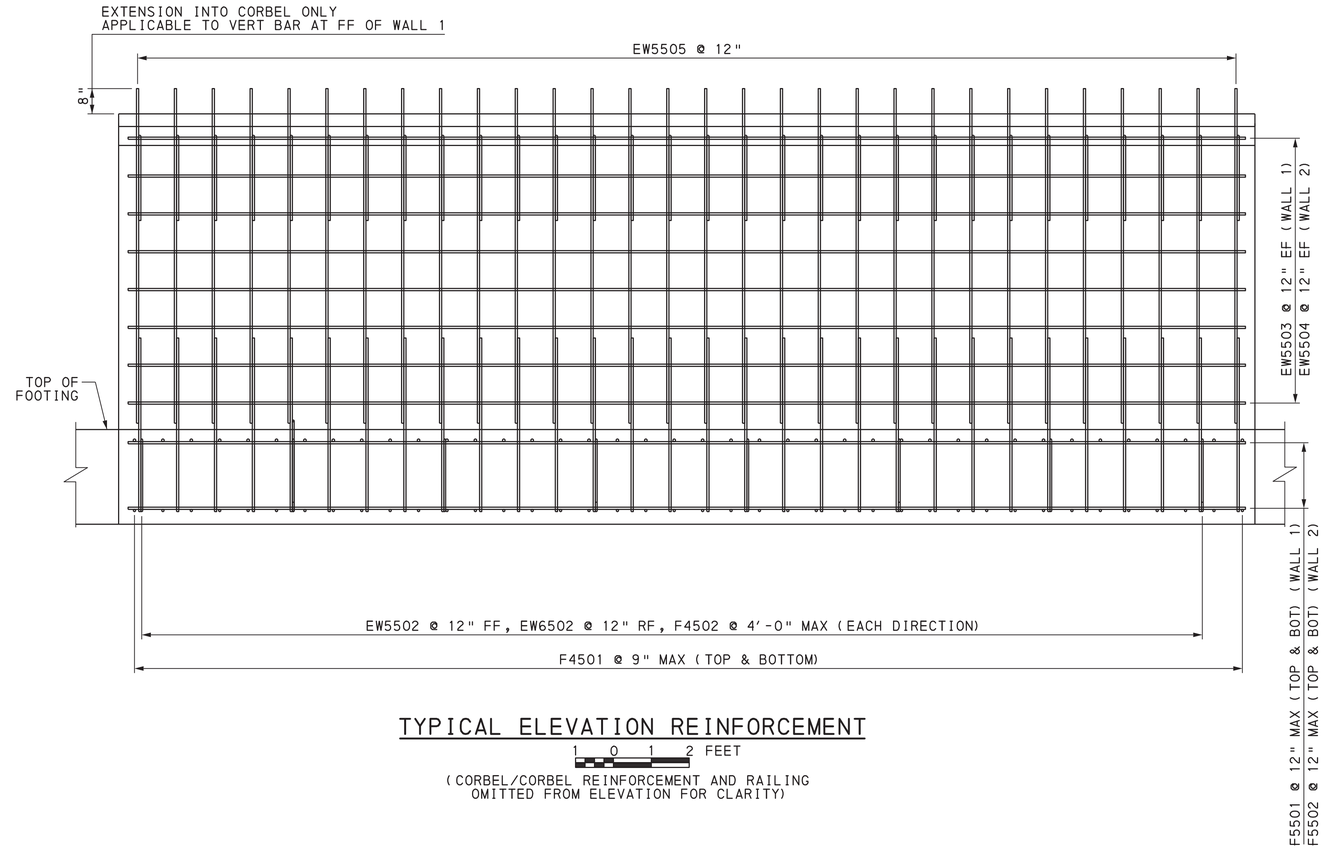
PLOTTED: 8/22/2022 7:09:39 PM



SECTION A-A

1 0 1 2 FEET

* FOR CORBEL DIMENSIONS, SEE "TYPICAL CORBEL REINFORCEMENT DETAIL" ON "NORTH WALL TYPICAL SECTION AND ELEVATION 1" SHEET



TYPICAL ELEVATION REINFORCEMENT

1 0 1 2 FEET

(CORBEL/CORBEL REINFORCEMENT AND RAILING OMITTED FROM ELEVATION FOR CLARITY)

NOTES:

1. FOR DRAINAGE THROUGH WALL STEM AND WEEP HOLE REINFORCEMENT DETAILS REFER TO "NORTH WALL DETAILS" SHEET.
2. FOR LOCATIONS OF WEEP HOLES REFER TO "ABUTMENT 1 SOUTHEAST WALL DEVELOPED ELEVATION" SHEET.

DES: SLL	DWN: NMT	CKD: AH

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUT 1 SOUTHEAST WALL
TYPICAL SECTION & ELEVATION

RECOMMENDED

SHEET 100 OF 137

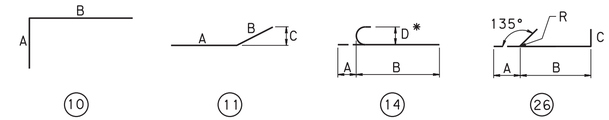
L-430

OPERATOR: tylpw111cs01$ FILENAME: SL430010000F0137.dgn

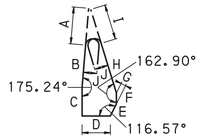
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	I	J	R	REMARKS
FRONT ST WALL																
WALL																
EW6501	6	52	6'-4 1/4"	14	0'-8"	5'-8 1/4"										
EW5501	5	52	4'-5"	STR	4'-5"											
EW6502	6	52	13'-2 3/4"	STR	13'-2 3/4"											
EW5502	5	52	14'-6 1/8"	STR	14'-6 1/8"											
EW5503	5	31	28'-5 3/8"	11	17'-5/8"	11'-4 3/4"										
EW5504	5	31	25'-3/8"	STR	25'-3/8"											
EW5505	5	52	3'-3"	10	1'-0"	2'-3"	0'-2 1/4"									
FOOTING																
F5501	5	18	27'-9 3/8"	11	16'-4 5/8"	11'-4 3/4"	0'-2 1/4"									
F5502	5	18	25'-4 3/8"	STR	25'-4 3/8"											
F4501	4	138	8'-3"	STR	8'-3"											
F4502	4	52	2'-10 1/2"	26	0'-5 1/2"	1'-11"	0'-6"									
CORBEL																
EC4501	4	52		103	0'-8"	0'-9"	0'-4 1/2"	0'-3 3/4"	0'-1 5/8"	0'-3"	0'-1 3/4"	0'-7/8"	0'-5/8"			
EC6501	6	5	29'-3/8"	11	17'-7 5/8"	11'-4 3/4"										
EC6502	6	5	25'-4 3/8"	STR	25'-4 3/8"											

REINFORCEMENT BAR TYPES:

BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:



(10) (11) (14) (26)



(103)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

NOTES:

1. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FIGURES IN CIRCLES SHOW TYPES.
3. "E" - INDICATES EPOXY COATED REBARS.
4. "G" - INDICATES GALVANIZED REBARS.
5. FOR ALL BAR TYPES SHOWN, DIMENSION "A"-"H" AND LENGTH ARE MEASURED ALONG OUTSIDE FO BAR, "R" IS MEASURED ALONG INSIDE OF BAR.

BAR MARK LEGEND

GD6000
- GALVANIZED OR EPOXY CODE LETTER
- NUMBERING
- LOCATION
- SIZE

CODE LETTERS
- A = ABUTMENT
- F = FOUNDATION
- S = SLAB
- P = PYLON
- C = CURB AND PARAPET
- D = DIAPHRAGM
- W = WALL

LOCATION
- 0 = GENERAL
- 1 = ABUTMENT 1
- 2 = ABUTMENT 2
- 3 = NORTH WALL
- 4 = BACK STAY WALL
- 5 = "FS" WALL

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ABUT 1 SOUTHEAST WALL
REINFORCEMENT SCHEDULE

RECOMMENDED _____

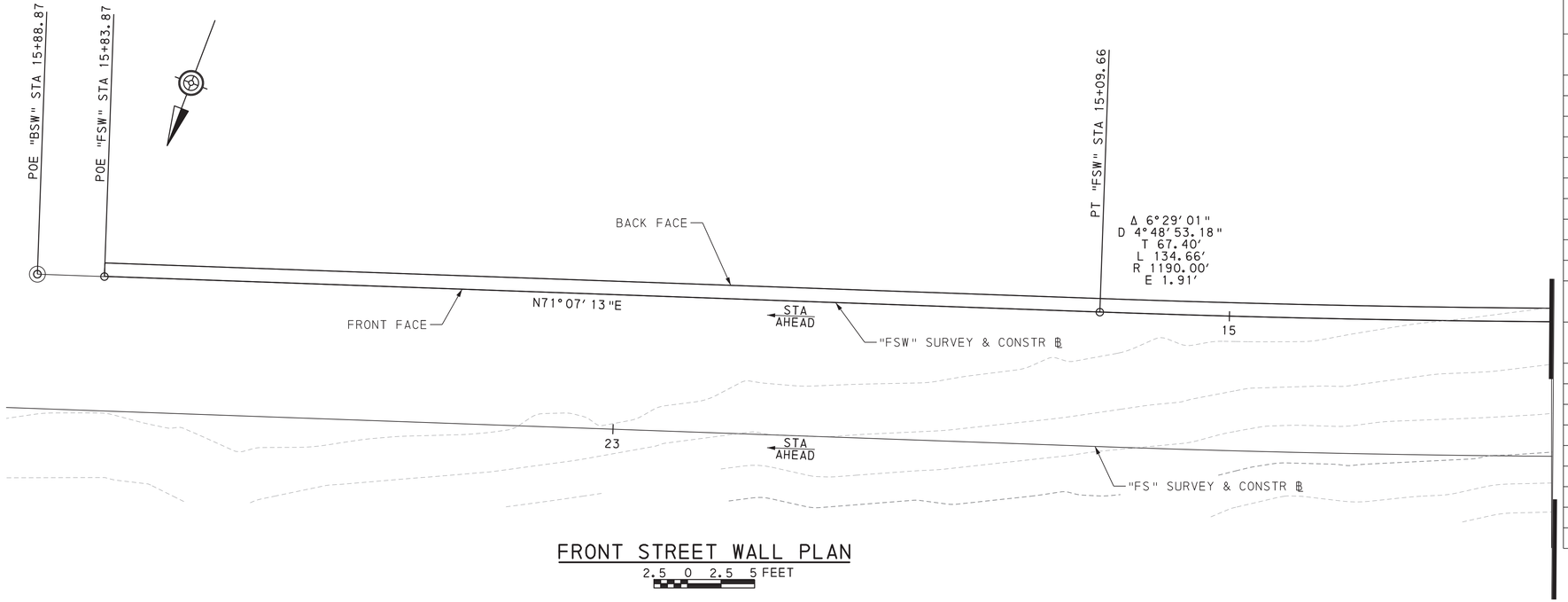
SHEET 101 OF 137

L-430

DES: SLL | DWN: NMT | CKD: AH

PLOTTED: 8/22/2022 10:40:51 PM
FILENAME: SL4300101OF0137.dgn
OPERATOR: tylipw11icg01$

PLOTTED: 8/23/2022 12:00:57 AM



FRONT STREET WALL PLAN

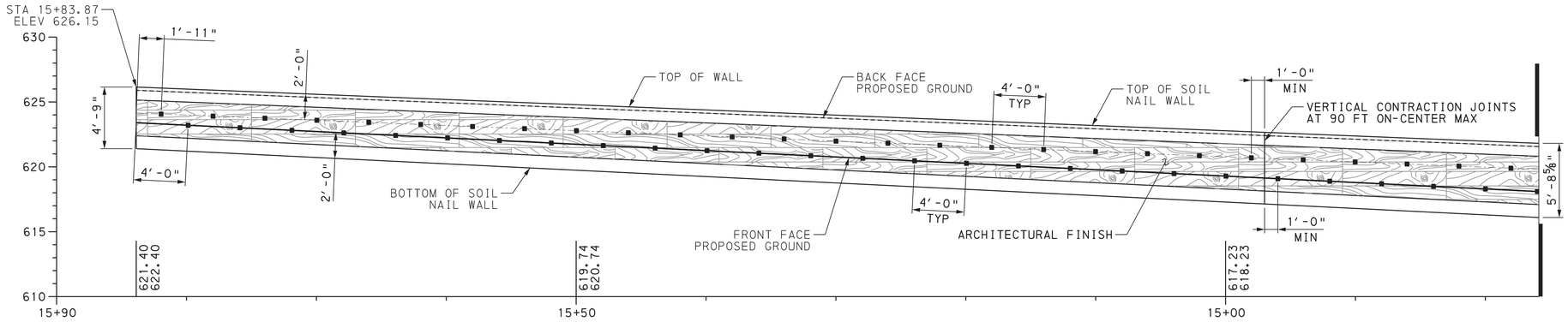
2.5 0 2.5 5 FEET

APPROXIMATE QUANTITIES
FRONT STREET WALL A, AS DESIGNED

ITEM NO.	DESCRIPTION	UNIT	QTY
8643-0001	SOIL NAIL RETAINING WALL, AS DESIGNED, L-430 *	LS	
(1)	CLASS 3 EXCAVATION	EA	110
(1)	INITIAL SHOTCRETE FACING	EA	2,400
(1)	CLASS AA CEMENT CONCRETE	LF	66
(1)	SOIL NAIL ANCHORS *	LF	203
(1)	GALVANIZED STEEL BEARING PLATE *	LF	203
(1)	GEOCOMPOSITE DRAIN STRIP *	LF	600
(1)	3" DIAMETER WEEP HOLES *	LS	110
(1)	6x6 EPOXY COATED STEEL WWF W1.4xW1.4	EA	500
(1)	REINFORCEMENT BARS, EPOXY COATED	EA	6,600
(1)	ARCHITECTURAL SURFACE TREATMENT, CAST-IN-PLACE CONCRETE		2,400
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES OF BRIDGE SUBSTRUCTURES		70
(1)	JUNCTION BOXES J.B.-2		5
(1)	JUNCTION BOXES J.B.-12		
(1)	AWG 6 UNDERGROUND, COPPER, 1 CONDUCTOR		
(1)	AWG 8 UNDERGROUND, COPPER, 1 CONDUCTOR		
(1)	AWG 10 UNDERGROUND, COPPER, 1 CONDUCTOR		3,276
(1)	2" CONDUIT IN STRUCTURE		548
(1)	TESTING OF ENTIRE LIGHTING SYSTEM		
(1)	LIGHTING STANDARD *		10
(1)	LUMINAIRES *		10

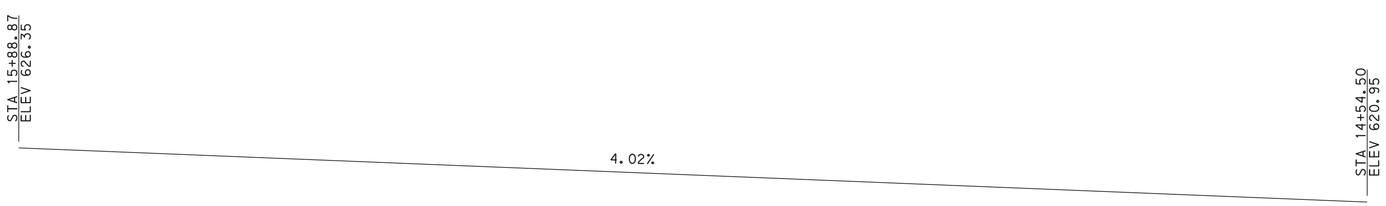
* SEE SPECIAL PROVISIONS

(1) ITEMS IN SOIL NAIL RETAINING WALL ITEM 8643-0001 ARE GIVEN FOR INFORMATION ONLY.



FRONT STREET WALL DEVELOPED ELEVATION

2.5 0 2.5 5 FEET



FRONT STREET WALL (FSW) VERTICAL GEOMETRY

NOT TO SCALE

LEGEND:

■ SOIL NAIL BAR

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL A
PLAN AND ELEVATION 1

RECOMMENDED

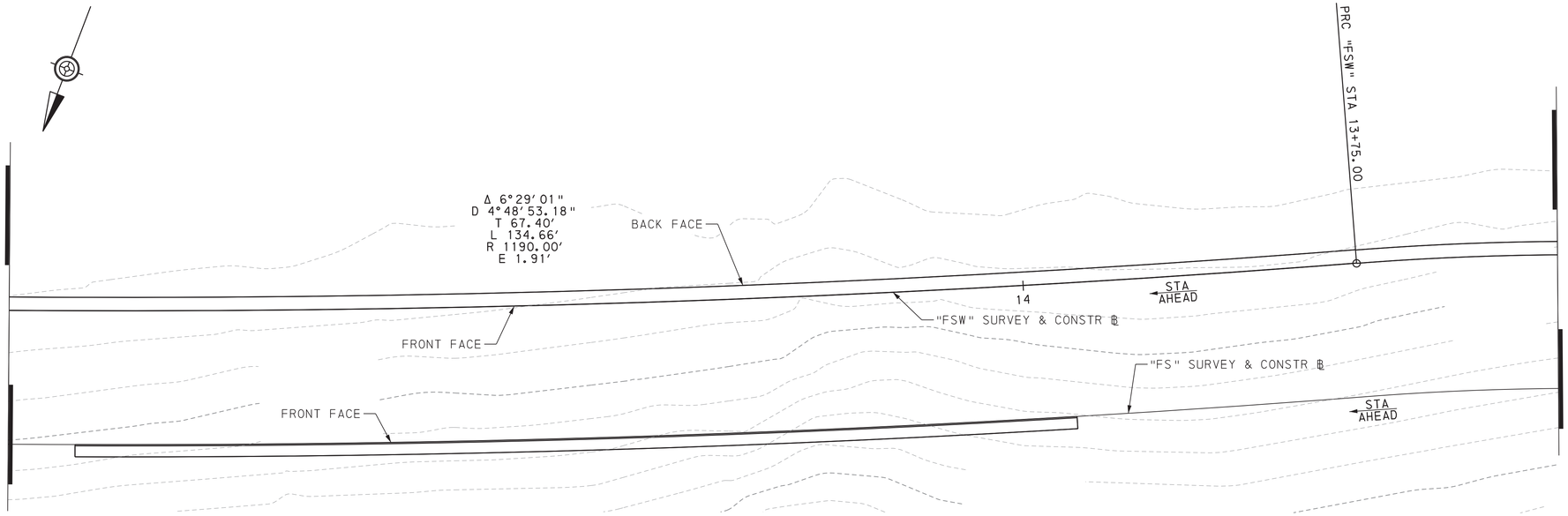
SHEET 102 OF 137

L-430

DES: AH | DWN: IM | CKD: SLL

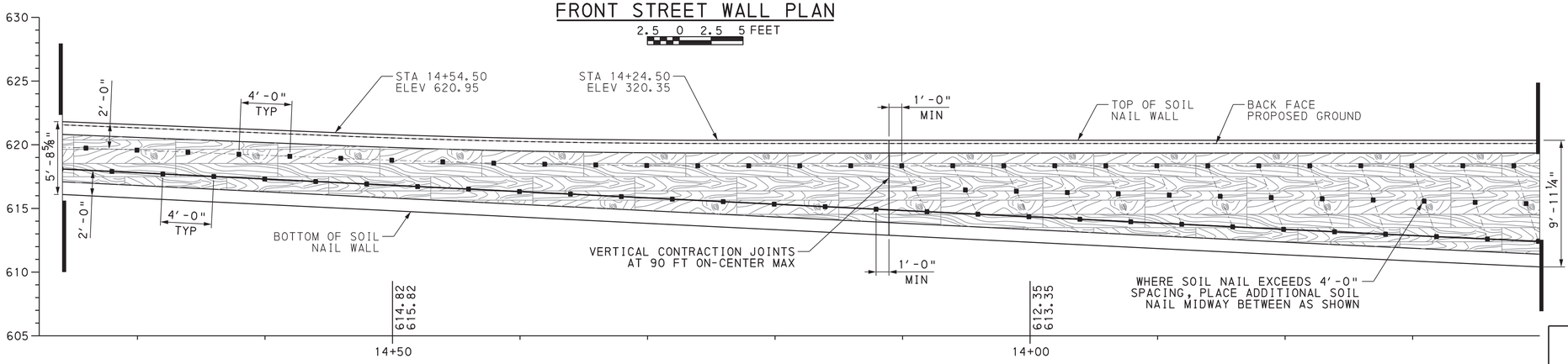
OPERATOR: tyllpwilicsO1$ FILENAME: SL43001020F0137.dgn

PLOTTED: 8/22/2022 7:10:04 PM



FRONT STREET WALL PLAN

2.5 0 2.5 5 FEET



FRONT STREET WALL DEVELOPED ELEVATION

2.5 0 2.5 5 FEET

LEGEND:

■ SOIL NAIL BAR

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

FRONT STREET (FSW) VERTICAL GEOMETRY

NOT TO SCALE

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL A
PLAN AND ELEVATION 2

RECOMMENDED _____

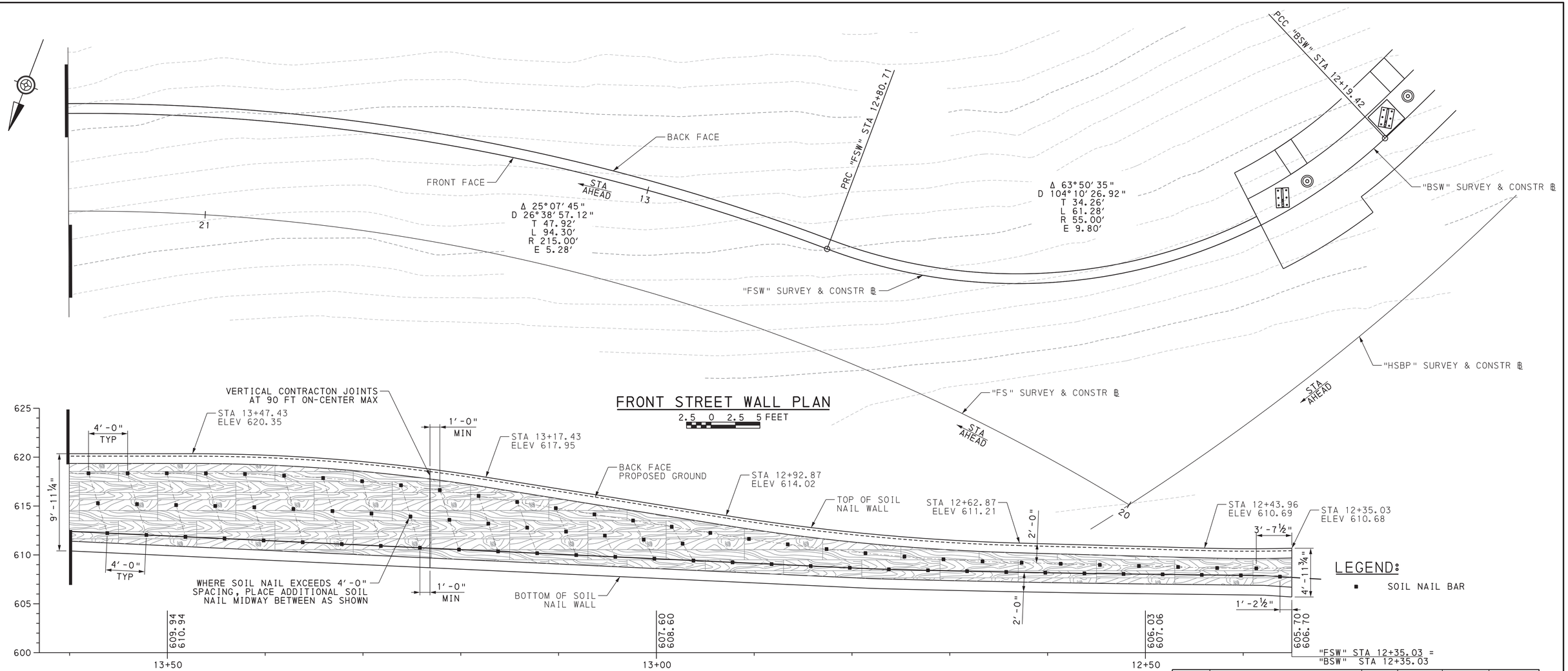
SHEET 103 OF 137

L-430

DES: AH	DWN: IM	CKD: SLL

OPERATOR: tylipwillcs01$ FILENAME: SL43001030F0137.dgn

PLOTTED: 8/22/2022 7:10:33 PM

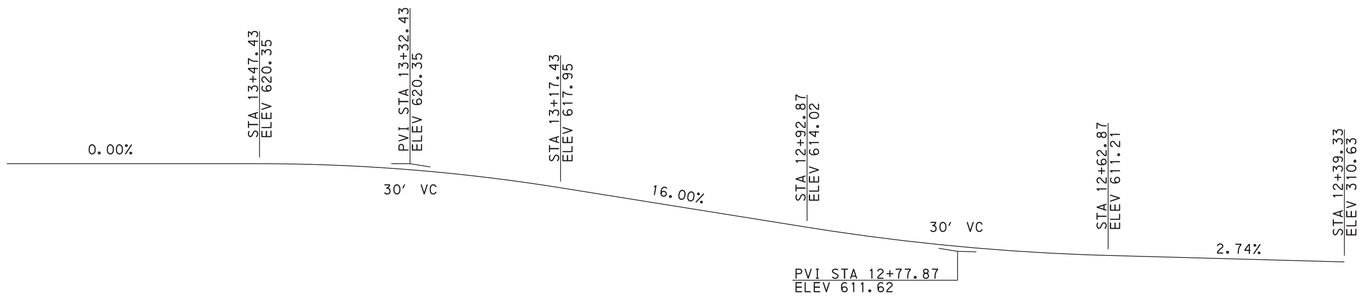


FRONT STREET WALL PLAN

2.5 0 2.5 5 FEET

FRONT STREET WALL DEVELOPED ELEVATION

2.5 0 2.5 5 FEET



FRONT STREET (FSW) VERTICAL GEOMETRY

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

DES: AH | DWN: IM | CKD: SLL

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL A
PLAN AND ELEVATION 3

RECOMMENDED

SHEET 104 OF 137

L-430

FILENAME: SL430010040F0137.dgn
OPERATOR: tyllpw111cs01$

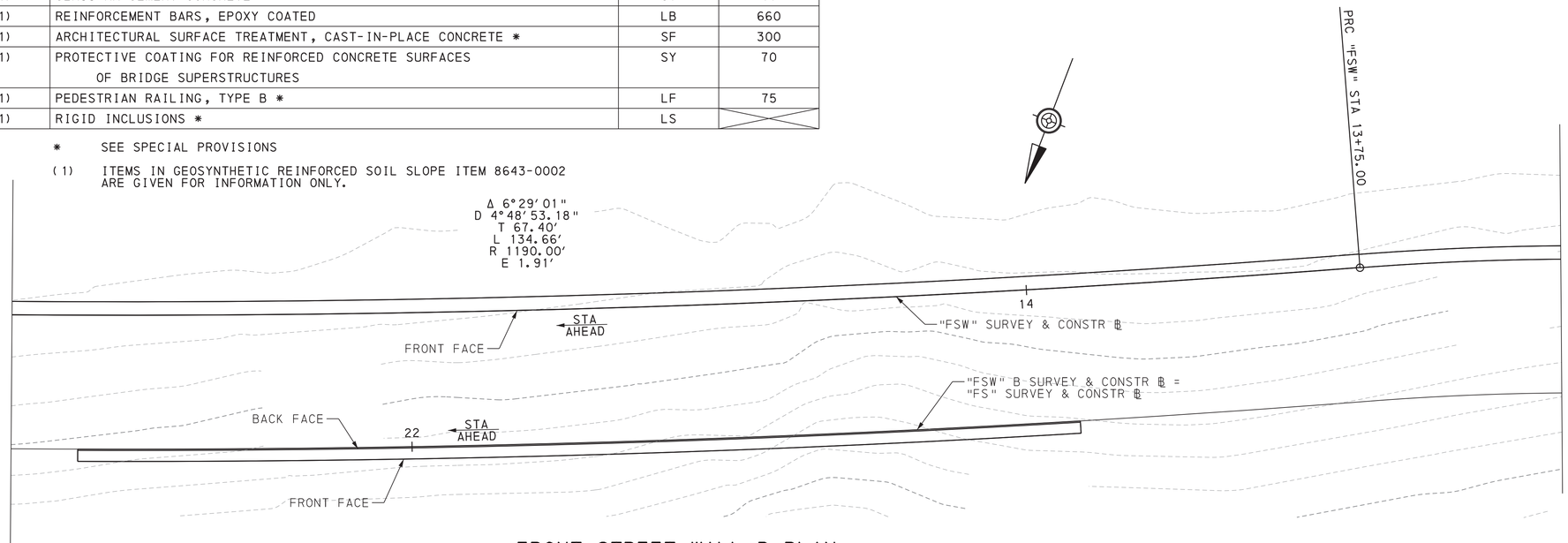
PLOTTED: 8/23/2022 12:01:20 AM

APPROXIMATE QUANTITIES - FRONT STREET WALL B, AS DESIGNED

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
8643-0002	GEOSYNTHETIC REINFORCED SOIL SLOPE, AS DESIGNED, L-430 *	LS	
(1)	GEOSYNTHETIC REINFORCED SOIL SLOPE, TYPE D	SF	270
(1)	CLASS AA CEMENT CONCRETE	CY	17
(1)	REINFORCEMENT BARS, EPOXY COATED	LB	660
(1)	ARCHITECTURAL SURFACE TREATMENT, CAST-IN-PLACE CONCRETE *	SF	300
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES OF BRIDGE SUPERSTRUCTURES	SY	70
(1)	PEDESTRIAN RAILING, TYPE B *	LF	75
(1)	RIGID INCLUSIONS *	LS	

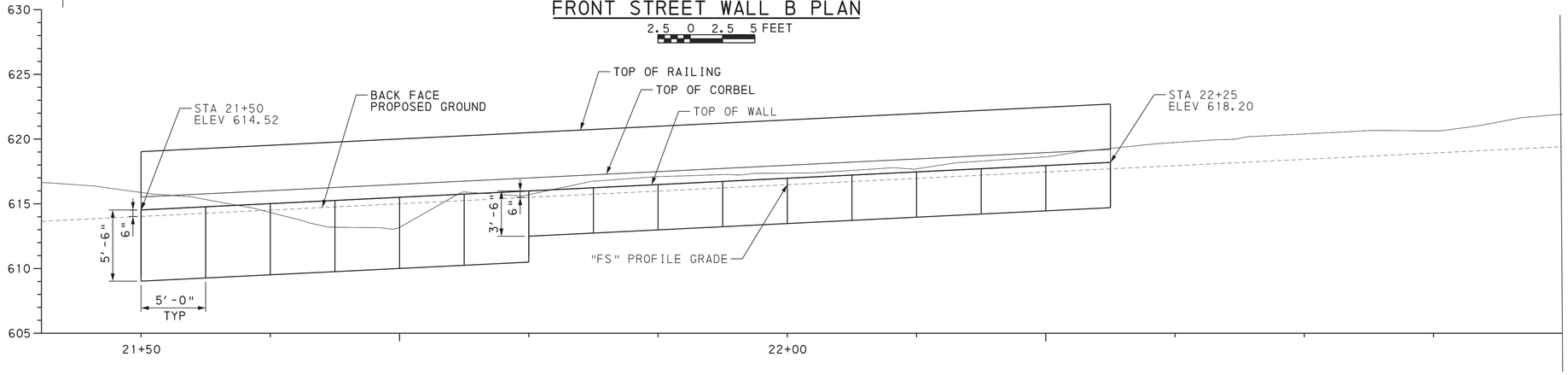
* SEE SPECIAL PROVISIONS

(1) ITEMS IN GEOSYNTHETIC REINFORCED SOIL SLOPE ITEM 8643-0002 ARE GIVEN FOR INFORMATION ONLY.



FRONT STREET WALL B PLAN

2.5 0 2.5 5 FEET



FRONT STREET WALL B DEVELOPED ELEVATION

2.5 0 2.5 5 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL B
PLAN AND ELEVATION

RECOMMENDED _____

L-430

DES: AH | DWN: IM | CKD: SLL

FILENAME: SL430010S0F0137.dgn
OPERATOR: tylipw111cs01$

PLOTTED: 8/22/2022 7:09:00 PM

SOIL NAIL GENERAL NOTES:

DESIGN SPECIFICATIONS

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL PART 4, DECEMBER 2019 EDITION.
- SOIL NAIL DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES AND CONFORMANCE WITH FHWA GEOTECHNICAL ENGINEERING CIRCULAR #7 SOIL NAIL WALLS (FEBRUARY 2015), AND AS SUPPLEMENTED BY DESIGN MANUAL PART 4 (DECEMBER 2019).

GENERAL

- PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270 (ASTM A709) GRADE 50, EXCEPT WHEN NOTED OTHERWISE.
- PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO ASTM A108.
- PROVIDE CLASS A CONCRETE FOR FINAL FACING.
- USE CEMENT CONCRETE WITH A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN THE INITIAL SHOTCRETE FACING.
- A HIGHER CLASS SHOTCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS AT NO ADDITIONAL COST TO THE DEPARTMENT.
- PROVIDE A NEAT TYPE II CEMENT GROUT TO BE USED IN SOIL NAIL ANCHORAGE CONSISTING OF A PUMPABLE MIXTURE CAPABLE OF REACHING A MINIMUM CUBE STRENGTH OF 1,700 PSI AT 3-DAYS AND 3,000 PSI AT 28-DAYS IN ACCORDANCE WITH AASHTO T106. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI PRIOR TO TESTING THE NAILS. CHEMICAL ADDITIVES THAT CAN CONTROL, BLEED, OR RETARD SET IN THE GROUT ARE TO BE USED ONLY WHEN APPROVED BY THE ENGINEER.
- PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615/A615M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. EPOXY-COAT ALL REINFORCING STEEL BARS, UNLESS NOTED OTHERWISE.
- PROVIDE STEEL WELDED WIRE FABRIC IN ACCORDANCE WITH SECTION 709.3 AND EPOXY COAT IN ACCORDANCE WITH SECTION 709.3(A) OF PUBLICATION 408.
- PROVIDE No. 7 STEEL BARS WITH A YIELD STRENGTH OF 75 KSI IN ACCORDANCE WITH PUBLICATION 408, SECTION 709.1 FOR SOIL NAILS. EPOXY-COAT BARS WITH A MINIMUM THICKNESS OF 12 MILS. EPOXY-COATING TO BE IN ACCORDANCE WITH AASHTO M284/M284M. USE NAIL ENCAPSULATION CONFORMING TO THE PROJECT SPECIAL PROVISIONS.
- CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.
- ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
- PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS FOR REINFORCING STEEL BARS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIVERT ALL SURFACE RUNOFF AWAY FROM THE SLOPES.
- DESIGN SOIL PARAMETERS:

TYPE OF SOIL/ROCK	MOIST UNIT WEIGHT (PCF)	SATURATED UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	ULTIMATE BOND STRESS (PSI)
GRANULAR MEDIUM DENSE FILL	115	120	30	0	9
GRANULAR VERY LOOSE FILL	100	105	28	0	7
GRANULAR VERY DENSE FILL	115	120	35.5	0	9

- NO GENERAL EXCAVATION OPEN CUTS STEEPER THAN 1.5H: 1V TO BE MADE WITHIN 16 FT IN FRONT OF SOIL NAIL WALL WITHOUT APPROVAL OF THE ENGINEER.
- AT THE CONTRACTOR'S OPTION, SOIL NAILS MAY BE DRILLED AND INSTALLED THROUGH A TEMPORARY STABILIZING BERM.
- EXCAVATION IN THE VICINITY OF THE WALL FACE REQUIRES SPECIAL CARE AND EFFORT COMPARED TO GENERAL ROADWAY EXCAVATION. SEE SPECIAL PROVISIONS.
- COMPLETE CONSTRUCTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020 AND PENNDOT PUBLICATION DM-4 APPENDIX O.
- BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.
- DO NOT LEAVE AN EXCAVATED CUT-FACE EXPOSED FOR OVER 24 HOURS.
- CONSTRUCT THE SOIL NAIL WALL IN ACCORDANCE WITH SPECIAL PROVISION SOIL NAILS, PLANS AND DETAILS.
- MEASURE NAIL SPACING VERTICALLY.
- ALL NAILS ARE No. 7, 75 KSI STEEL.
- TEMPORARY CASING MAY BE NECESSARY TO MAINTAIN A CLEAN OPEN HOLE DRILLED TO THE REQUIRED DIMENSIONS AND INCLINATION.
- FOR PROOF TEST NAILS, DRILL THE ENTIRE LENGTH OF NAIL. GROUT AND TEST THE ENTIRE LENGTH OF THE NAIL TO ENSURE FULL TRANSFER OF TEST LOAD TO THE DESIGN BOND ZONE DURING TESTING.

SOIL NAIL TESTING

- DTL = 16.0 KIPS
- DO NOT EXCEED 32 KIPS IN VERIFICATION OR PROOF TESTING.
- BONDED LENGTH = 19'-0"

UTILITIES

- COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

SOIL NAIL TYPICAL CONSTRUCTION SEQUENCE

1. CONSTRUCT THE WALL FROM THE TOP DOWN IN STAGED EXCAVATION LIFTS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
2. THE FOLLOWING WALL CONSTRUCTION SEQUENCE FOR EACH EXCAVATION LIFT IS TO BE COMPLETE PRIOR TO INITIATING WORK ON THE NEXT EXCAVATION LIFT UNLESS OTHERWISE APPROVED BY THE ENGINEER.

2.1. INSTALL COMPLETED TEST NAILS.

2.2. EXCAVATE TO FIRST STAGE ROUGH GRADE.

2.3. TRIM TO FINAL WALL FACE EXCAVATION LINE OR TO STABILIZING BERM (IF USED).

2.4. DRILL, INSTALL AND GROUT SOIL NAILS. TRIM STABILIZATION BERM (IF USED) TO FINAL WALL FACE EXCAVATION LINE.

2.5. INSTALL GEOCOMPOSITE DRAIN STRIP.

2.6. PLACE REINFORCING AND APPLY TEMPORARY SHOTCRETE FACING. DO NOT LEAVE EXCAVATION WHICH HAS EXPOSED WALL FACE UNSTABILIZED BY SHOTCRETE AT THE END OF THE WORK DAY UNLESS THE ENGINEER APPROVES OTHERWISE.

2.7. PERFORM NAIL PULLOUT TESTS PER SPECIFICATIONS AFTER TEMPORARY SHOTCRETE AND NAIL GROUT HAVE ATTAINED THEIR SPECIFIED STRENGTHS.

3. INSTALL PVC CONNECTOR PIPES DURING CONSTRUCTION OF THE FINAL SHOTCRETE LIFT TO PROVIDE DRAINAGE OF THE GEOCOMPOSITE DRAIN STRIPS AS SHOWN ON THE DETAILS.
4. PLACE REINFORCING AND APPLY FINAL CAST-IN-PLACE CONCRETE FACING AND ARCHITECTURAL TREATMENT.

GEOSYNTHETIC REINFORCED SOIL SLOPE (GRS) GENERAL NOTES:

DESIGN SPECIFICATIONS

- DESIGN AND CONSTRUCT RIGID INCLUSIONS TO A DEPTH 10 FEET BELOW THE BASE OF THE GRS AND NOT BELOW ELEVATION 600 FEET. CONSTRUCT 18 INCH DIAMETER RIGID INCLUSIONS SPACED 4.5 FEET ON-CENTER. DESIGN AND CONSTRUCT IN ACCORDANCE WITH RIGID INCLUSION SPECIAL PROVISION.
- CONSTRUCT GRS IN ACCORDANCE WITH SECTION 223.
- UTILIZE TYPE D SLOPE WITH GABION FACING TO A MAXIMUM HEIGHT OF 5 FEET.
- UTILIZE AASHTO NO. 57 COARSE AGGREGATE FOR REINFORCED FILL WITHIN THE GRS.
- UTILIZE THE FOLLOWING PROJECT SPECIFIC DETAILS FOR SECTION 223:

  T10 = 5,900 PSF (CLASS 1, TYPE A GEOGRID, PET POLYMER)

- ATTACH PRECAST ARCHITECTURAL FACING TO GRS SLOPE FACE.

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALLS
GENERAL NOTES

RECOMMENDED _____

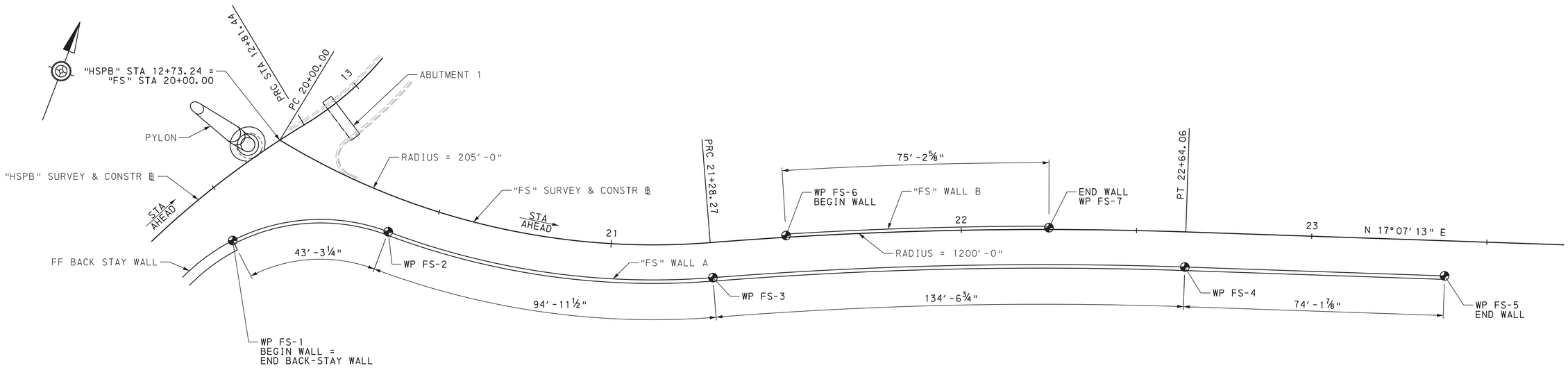
SHEET 106 OF 137

L-430

DES: AH | DWN: AS | CKD: SLL

OPERATOR: tylpw11cs01$ FILENAME: SL43001060F0137.dgn

PLOTTED: 8/22/2022 7:09:08 PM



STAKE-OUT PLAN
NOT TO SCALE

COORDINATE TABLE

WORK POINT	SURVEY & CONSTR ℄ STATION	SURVEY & CONSTR ℄ OFFSET	NORTHING ORDINATE	EASTING ORDINATE	WORK POINT DESCRIPTION
FS-1	20+02.94	31.48 RT	726078.1562	1335380.5764	BEGIN WALL, END BACKSTAY WALL
FS-2	20+38.36	10.00 RT	726096.2782	1335421.1566	POINT OF COMPOUND CURVE
FS-3	21+28.27	10.00 RT	726116.9808	1335512.3844	POINT OF REVERSE CURVE
FS-4	22+64.11	10.02 RT	726167.6834	1335637.1079	POINT OF COMPOUND CURVE
FS-5	23+38.27	10.02 RT	726191.6798	1335707.2764	END WALL
FS-6	21+50.00	0.50 RT	726135.6214	1335527.6025	BEGIN WALL
FS-7	22+25.00	0.50 RT	726164.3727	1335596.8935	END WALL

NOTES:
1. FOR PATH ALIGNMENT DATA, SEE "GEOMETRIC DATA" SHEET.
2. ALL VALUES PRESENTED IN THE COORDINATE TABLE ARE GIVEN IN FEET.
3. NORTHING AND EASTING COORDINATES ARE GIVEN TO FOUR DECIMAL PLACES FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALLS
STAKE-OUT PLAN

RECOMMENDED _____

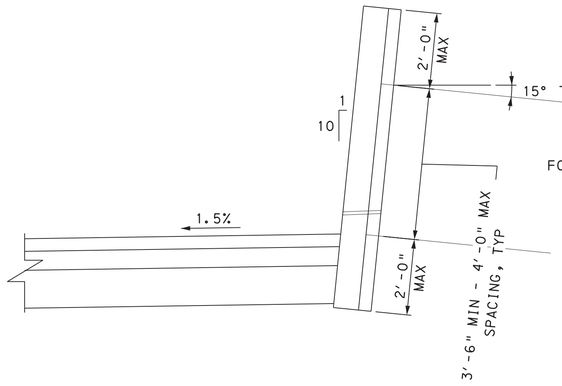
SHEET 107 OF 137

L-430

DES: AH | DWN: IM | CKD: SLL

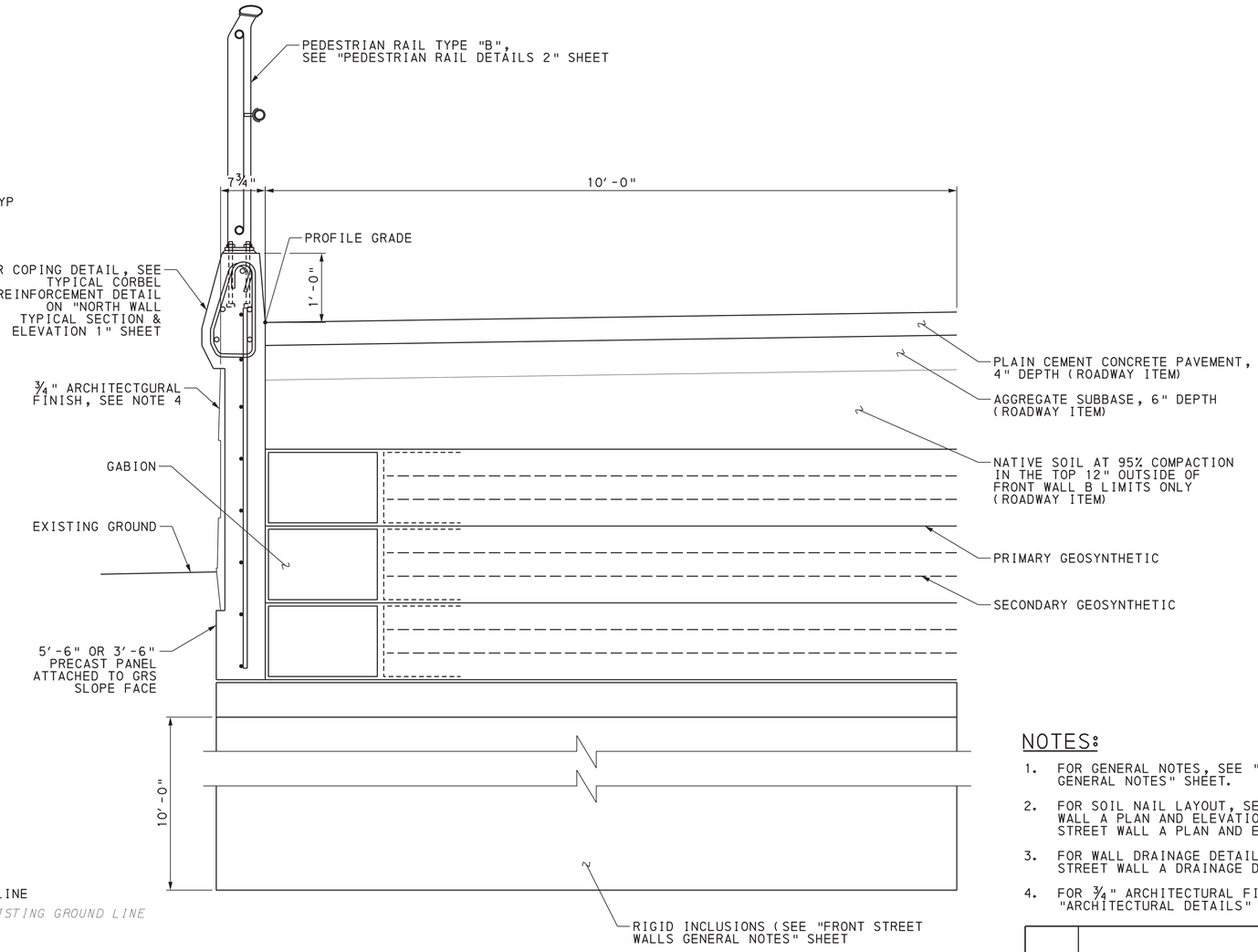
OPERATOR: rylipwillics01$ FILENAME: SL4300107OF0137.dgn

PLOTTED: 8/22/2022 7:10:15 PM



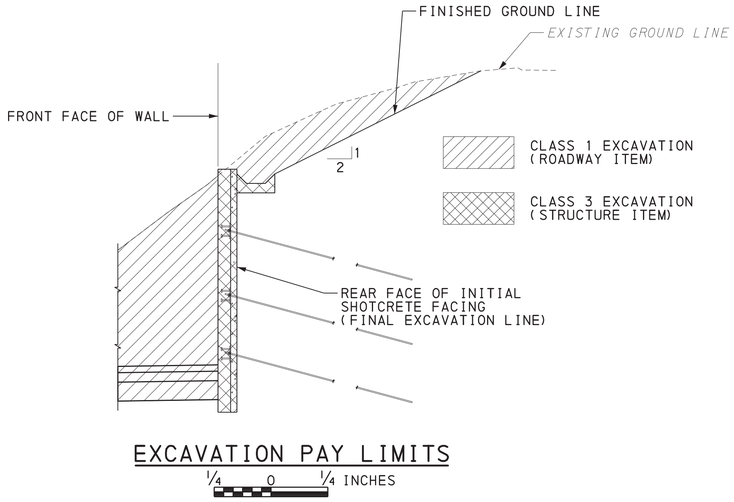
TYPICAL SOIL NAIL WALL SECTION

1 0 1 2 FEET



TYPICAL GABION WALL SECTION

¼ 0 ¼ INCHES



EXCAVATION PAY LIMITS

¼ 0 ¼ INCHES

NOTES:

1. FOR GENERAL NOTES, SEE "FRONT STREET WALLS GENERAL NOTES" SHEET.
2. FOR SOIL NAIL LAYOUT, SEE "FRONT STREET WALL A PLAN AND ELEVATION 1" THROUGH "FRONT STREET WALL A PLAN AND ELEVATION 3" SHEETS.
3. FOR WALL DRAINAGE DETAILS, SEE SHEET "FRONT STREET WALL A DRAINAGE DETAILS" SHEET.
4. FOR ¾" ARCHITECTURAL FINISH FORMLINER, SEE "ARCHITECTURAL DETAILS" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

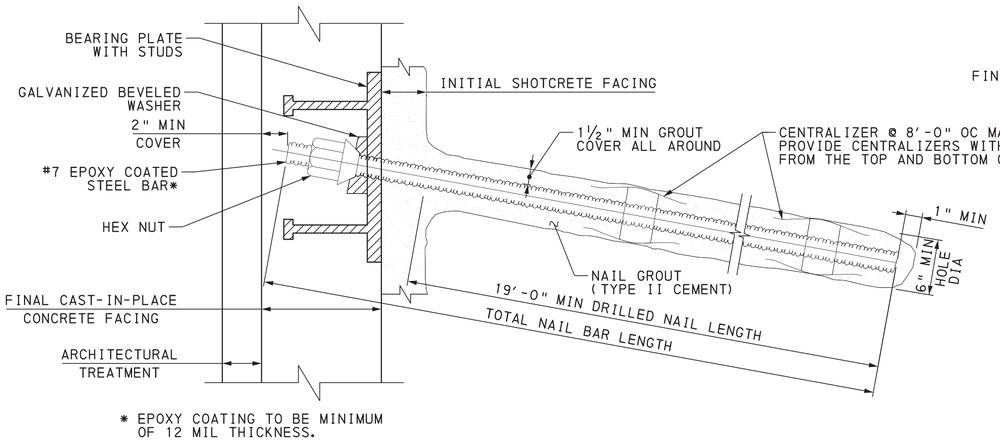
FRONT STREET WALLS
TYPICAL SECTIONS

RECOMMENDED _____

DES: AH | DWN: AS | CKD: SLL

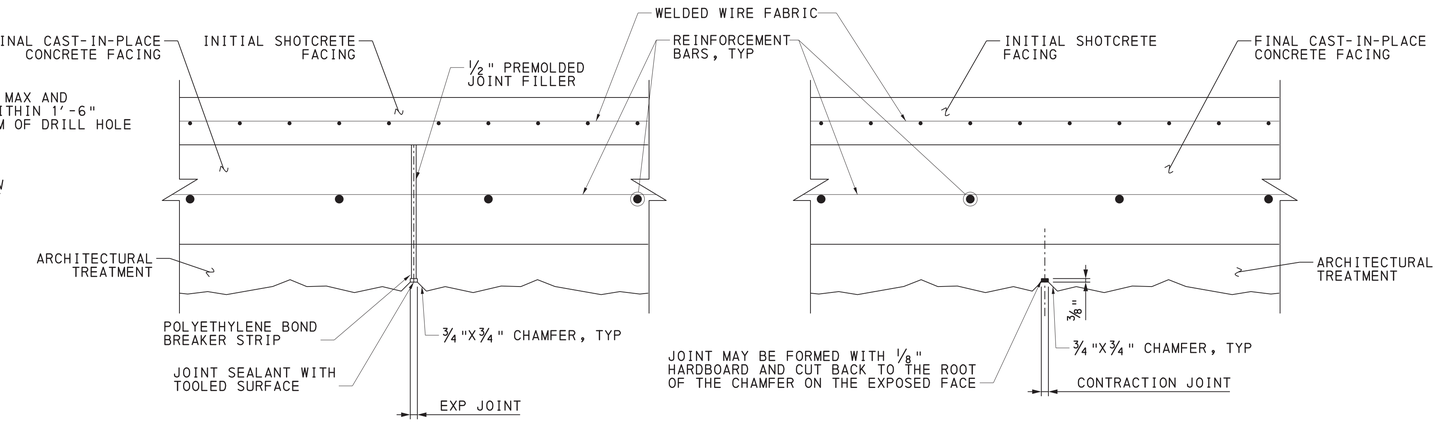
OPERATOR: tylipw11ics01$ FILENAME: SL43001080F0137.dgn

PLOTTED: 8/22/2022 7:08:59 PM

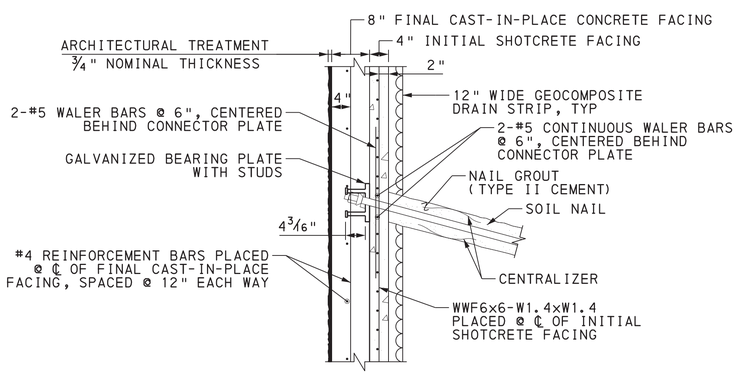


* EPOXY COATING TO BE MINIMUM OF 12 MIL THICKNESS.

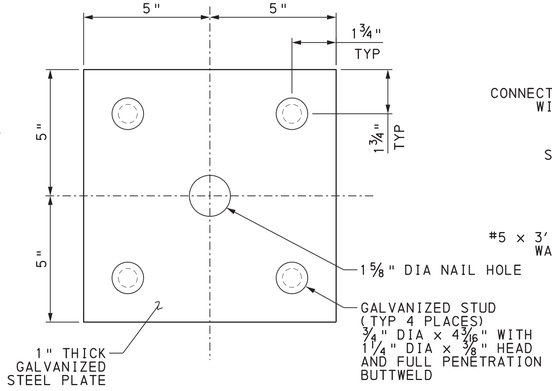
TYPICAL SOIL NAIL DETAIL
NOT TO SCALE



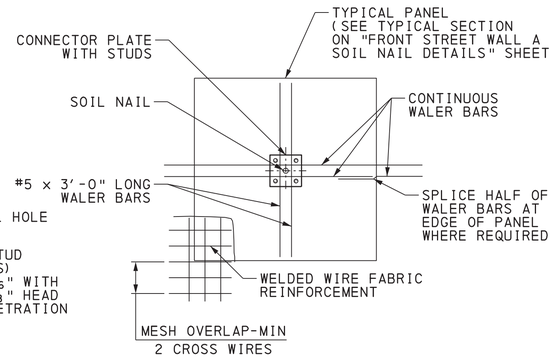
TYPICAL EXPANSION AND CONTRACTION JOINTS
1½ 0 1½ INCHES



FINISHED WALL SECTION AT SOIL NAIL LOCATION
NOT TO SCALE



BEARING PLATE WITH STUDS DETAIL
NOT TO SCALE



TYPICAL INITIAL SHOTCRETE PANEL STEEL
NOT TO SCALE

REINFORCEMENT BAR LAP SPLICE LENGTHS	
BAR SIZE	MINIMUM LAP SPLICE LENGTH
#4	2'-1"

NOTES:

1. FOR GENERAL NOTES, SEE "FRONT STREET WALLS GENERAL NOTES" SHEET.
2. FOR SOIL NAIL LAYOUT, SEE "FRONT STREET WALL A PLAN AND ELEVATION 1" THROUGH "FRONT STREET WALL A PLAN AND ELEVATION 3" SHEETS.
3. FOR WALL DRAINAGE DETAILS, SEE SHEET "FRONT STREET WALL A DRAINAGE DETAILS" SHEET.
4. EXPANSION JOINTS IN FINAL CAST-IN-PLACE CONCRETE FACING TO BE LOCATED AT A MAXIMUM SPACING OF 90' CENTER TO CENTER. CONTRACTION JOINTS IN FINAL CAST-IN-PLACE CONCRETE FACING TO BE LOCATED AT A MAXIMUM SPACING OF 30' CENTER TO CENTER. EXPANSION AND CONTRACTION JOINTS NOT REQUIRED THROUGH INITIAL SHOTCRETE FACING.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DANIEL J FITZWILLIAM ENGINEER PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL A
SOIL NAIL DETAILS

RECOMMENDED _____

SHEET 109 OF 137

L-430

DES: AH | DWN: AS | CKD: SLL

OPERATOR: tylpw11cs01$ FILENAME: SL43001090F0137.dgn

PLOTTED: 8/22/2022 7:12:48 PM

DRAWING INTENTIONALLY LEFT BLANK

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

DRAWING NOT USED

RECOMMENDED _____

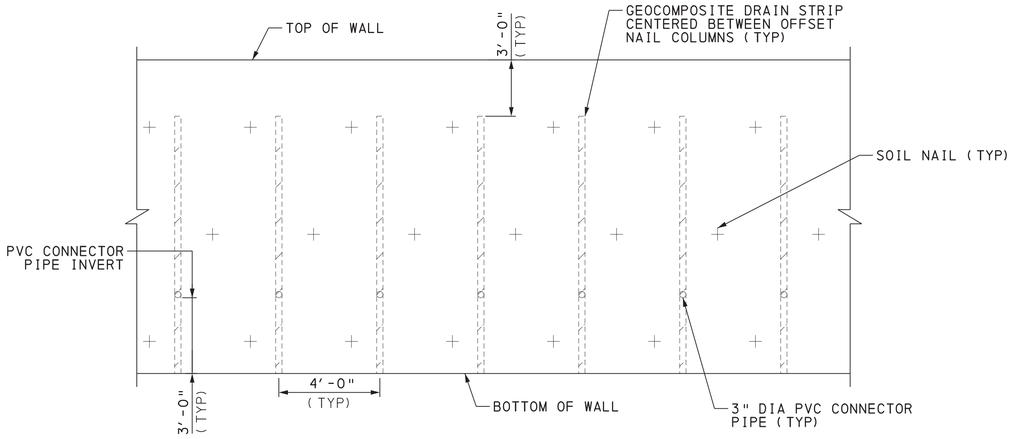
SHEET 110 OF 137

L-430

DES: | DWN: | CKD:

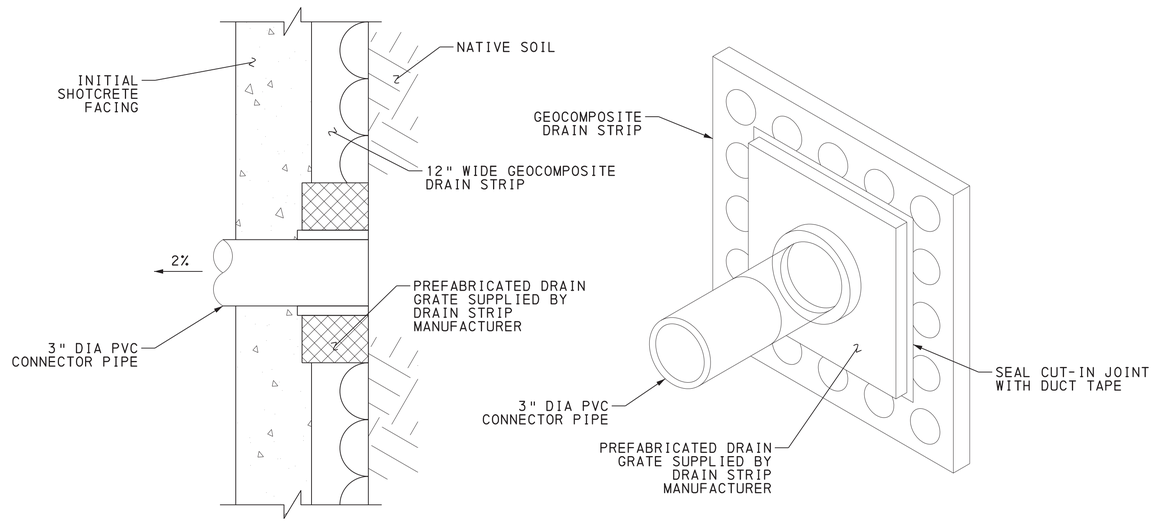
OPERATOR: tylipwillcs01$ FILENAME: SL430011100F0137.dgn

PLOTTED: 8/22/2022 7:11:26 PM



GEOCOMPOSITE DRAIN STRIP DETAIL

NOT TO SCALE

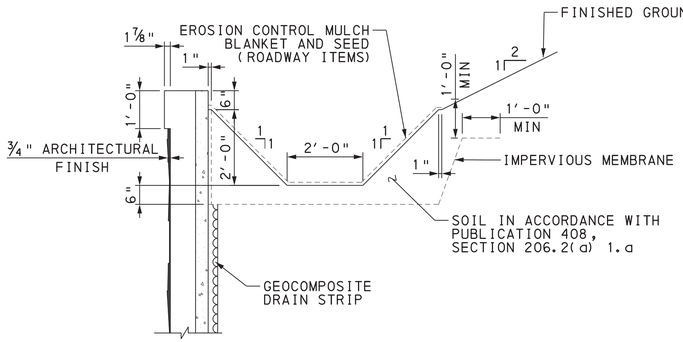


SECTION VIEW

ISOMETRIC VIEW

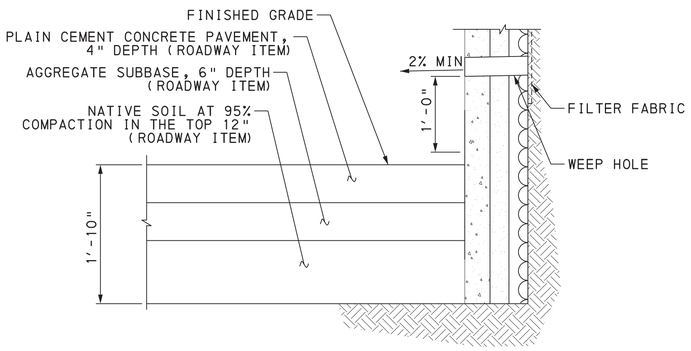
DRAIN GRATE DETAILS

NOT TO SCALE



DRAINAGE DITCH DETAIL

1/2 0 1/2 INCHES



BOTTOM OF WALL DRAIN DETAIL

6 0 6 12 INCHES

NOTES:

1. FOR GENERAL NOTES, SEE "FRONT STREET WALLS GENERAL NOTES" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

FRONT STREET WALL A
DRAINAGE DETAILS

RECOMMENDED _____

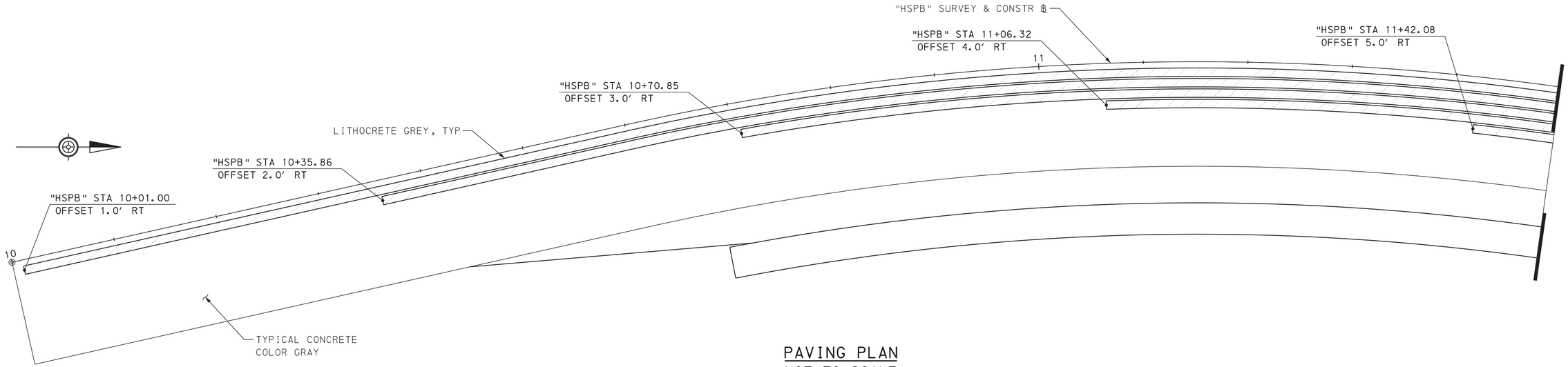
SHEET 111 OF 137

L-430

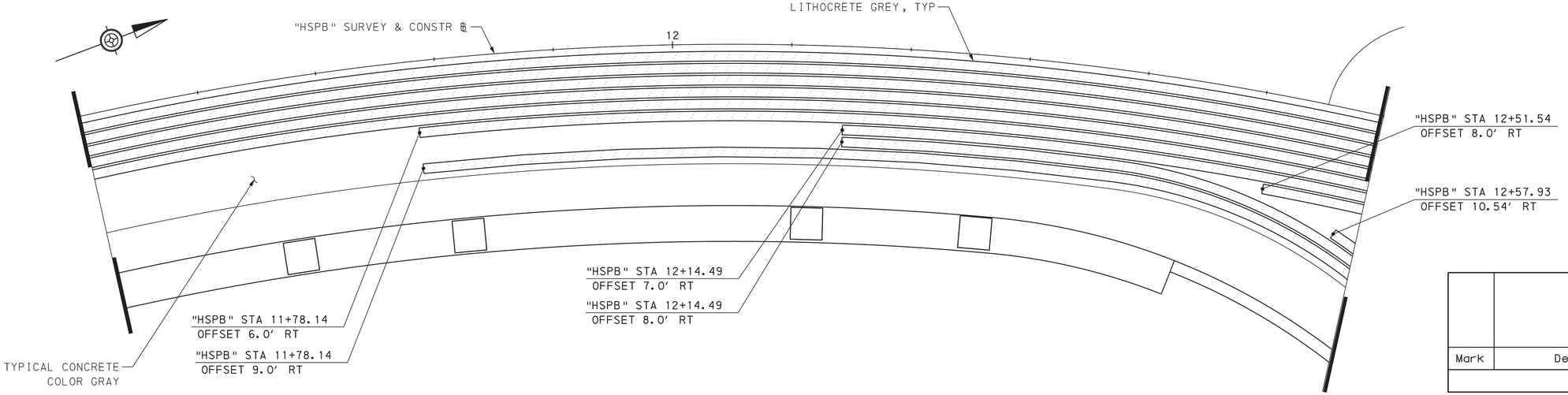
DES: AH | DWN: AS | CKD: SLL

OPERATOR: tylipw11ics01$ FILENAME: SL4300111OF0137.dgn

PLOTTED: 8/22/2022 7:13:36 PM



PAVING PLAN
NOT TO SCALE



PAVING PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ARCHITECTURAL CONCRETE
PAVING PLAN 1

RECOMMENDED _____

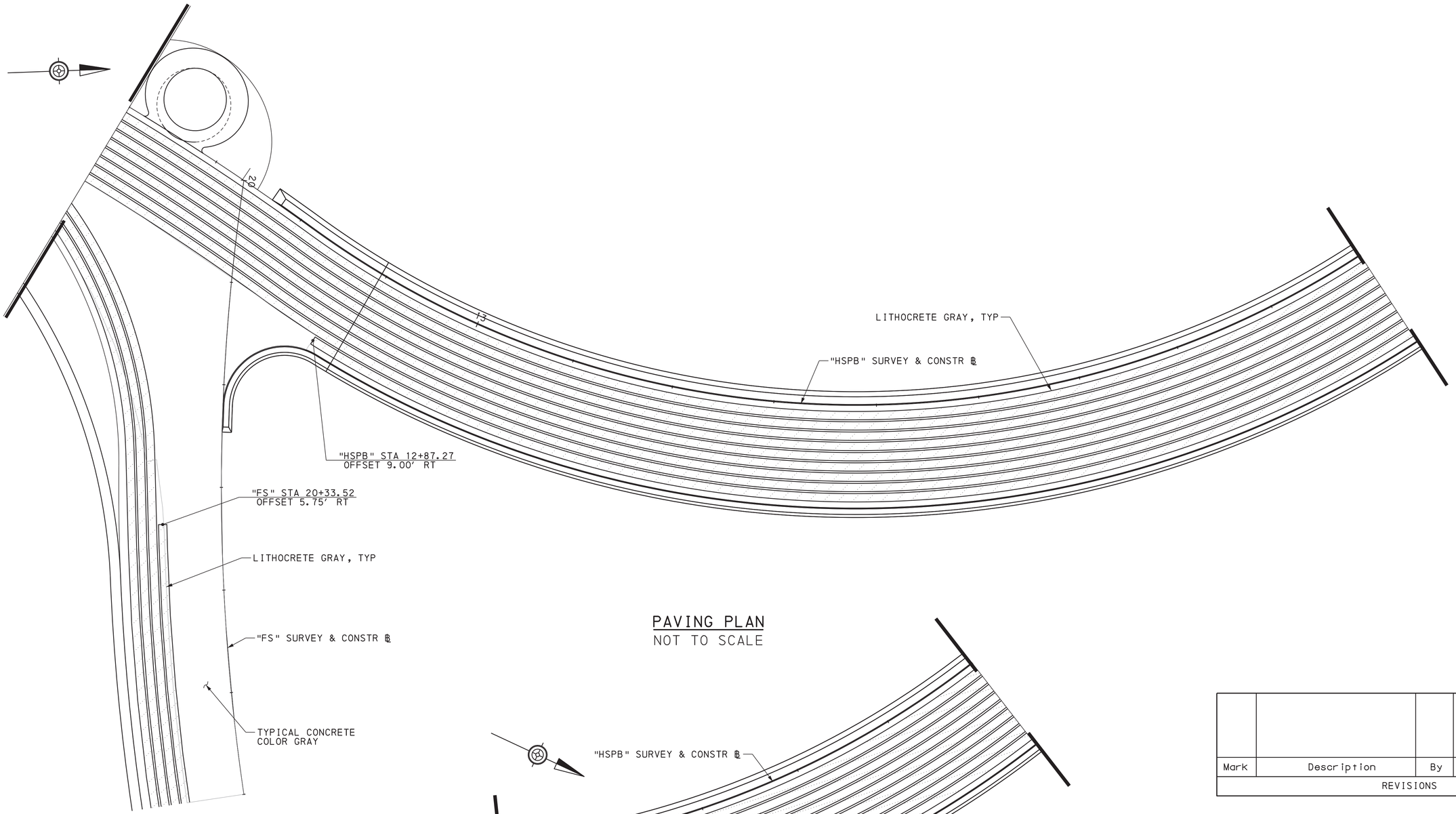
SHEET 112 OF 137

L-430

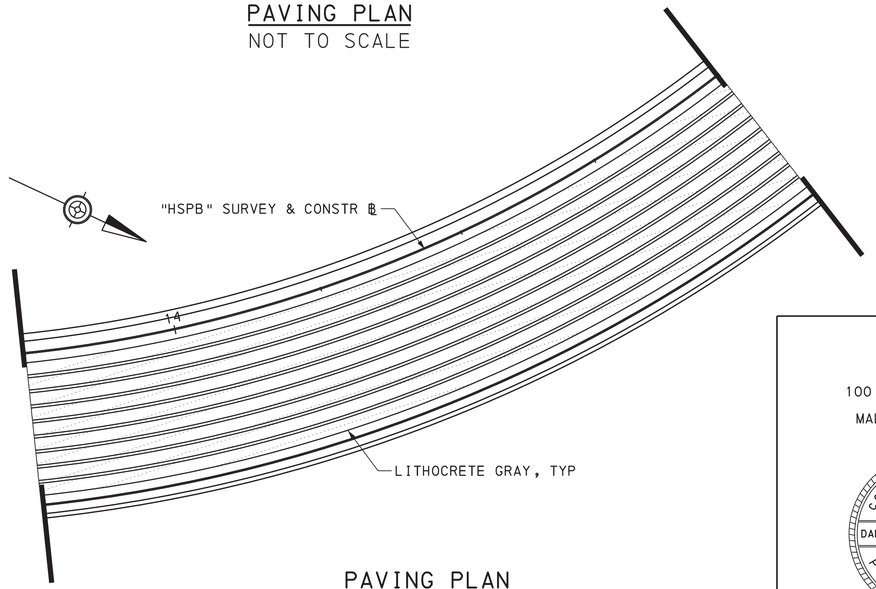
DES: JL | DWN: RJS | CKD: JB

OPERATOR: tylpw11cs01$ FILENAME: SL430011120F0137.dgn

PLOTTED: 8/22/2022 7:13:56 PM



PAVING PLAN
NOT TO SCALE



PAVING PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ARCHITECTURAL CONCRETE
PAVING PLAN 2

RECOMMENDED _____

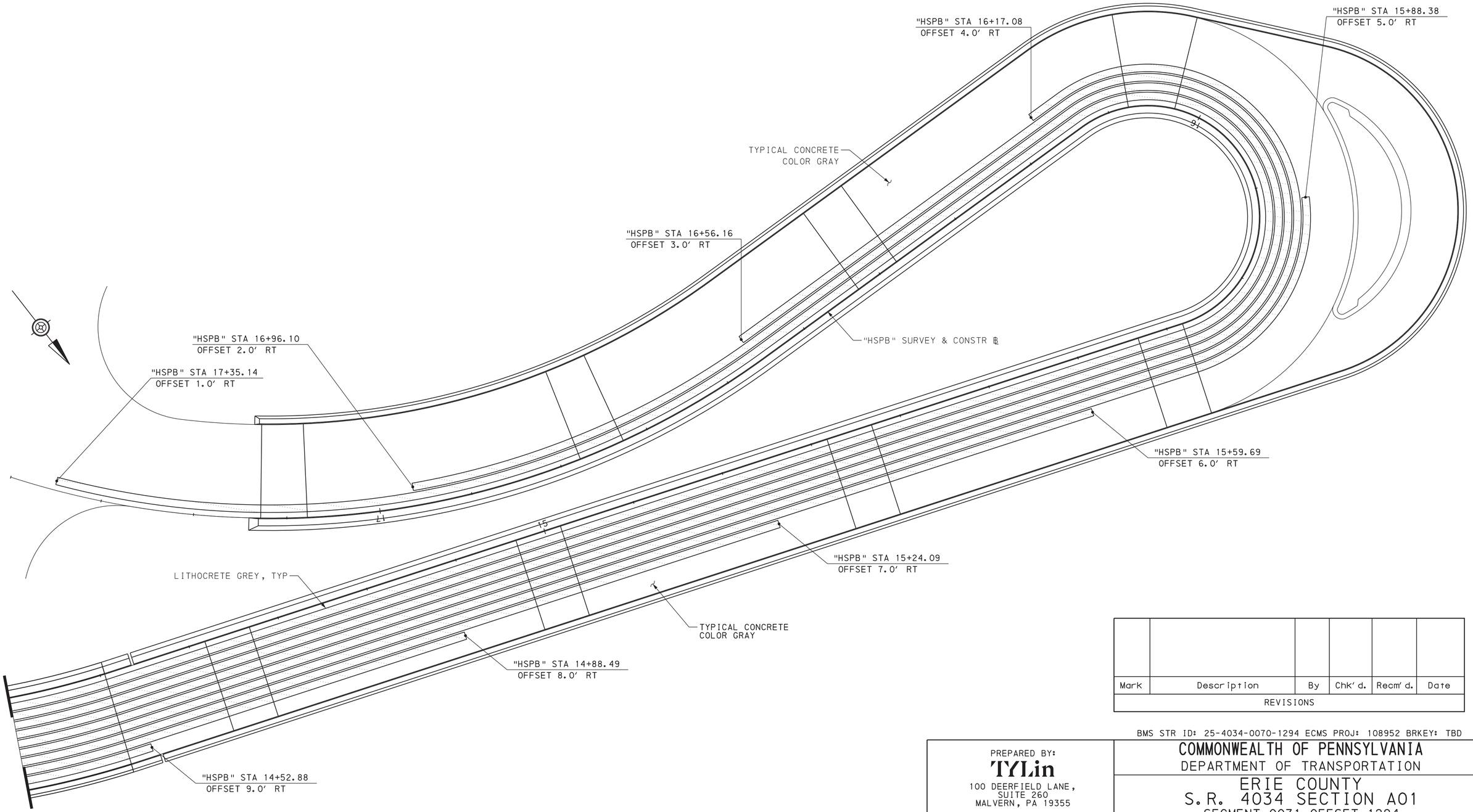
SHEET 113 OF 137

L-430

DES: JL | DWN: RJS | CKD: JB

OPERATOR: tylipw11cs01$ FILENAME: SL43001130F0137.dgn

PLOTTED: 8/22/2022 7:15:46 PM



PAVING PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

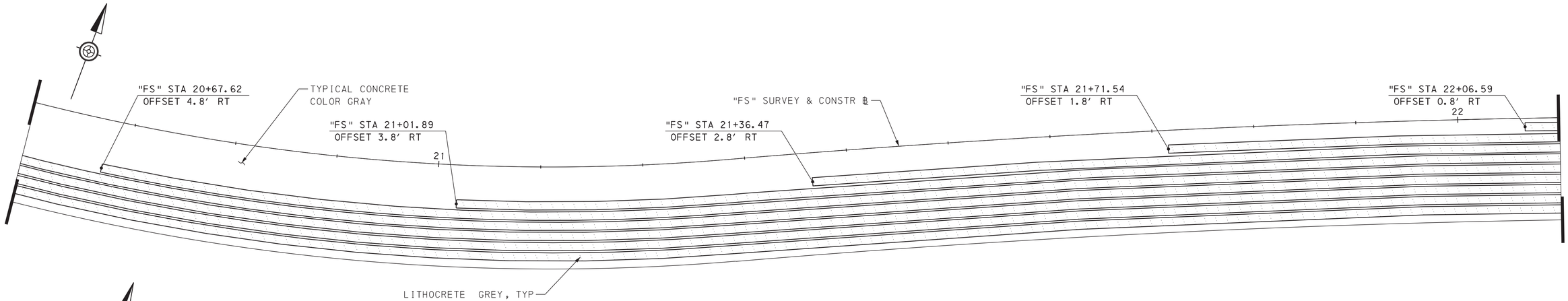
ARCHITECTURAL CONCRETE
PAVING PLAN 3

RECOMMENDED _____

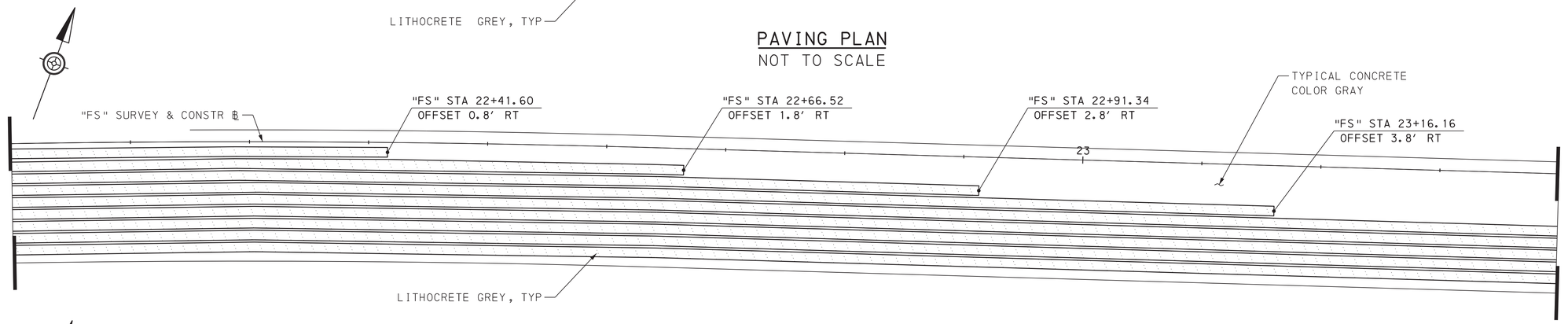
DES: JL | DWN: RJS | CKD: JB

OPERATOR: tyllpw11ics01$ FILENAME: SL43001140F0137.dgn

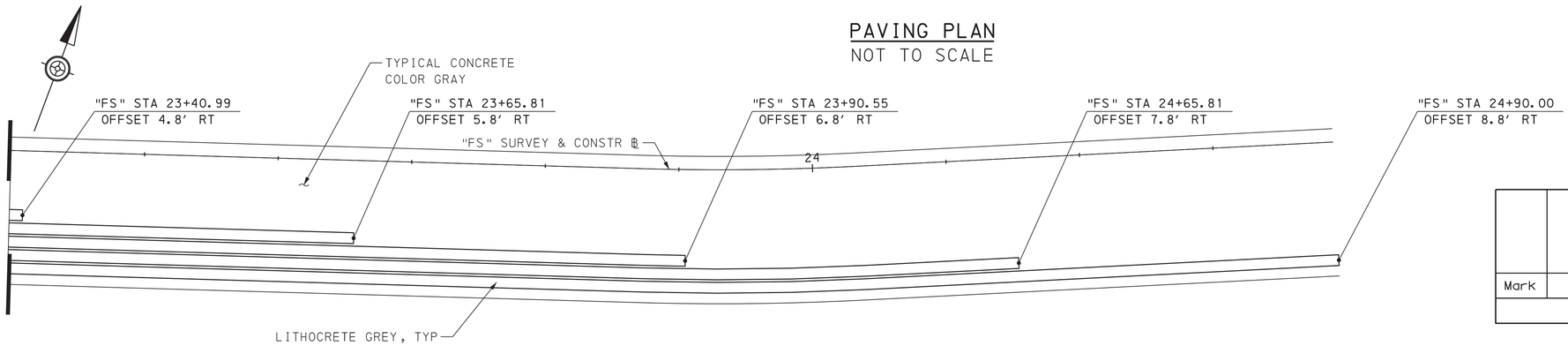
PLOTTED: 8/22/2022 7:17:01 PM



PAVING PLAN
NOT TO SCALE



PAVING PLAN
NOT TO SCALE



PAVING PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ARCHITECTURAL CONCRETE
PAVING PLAN 4

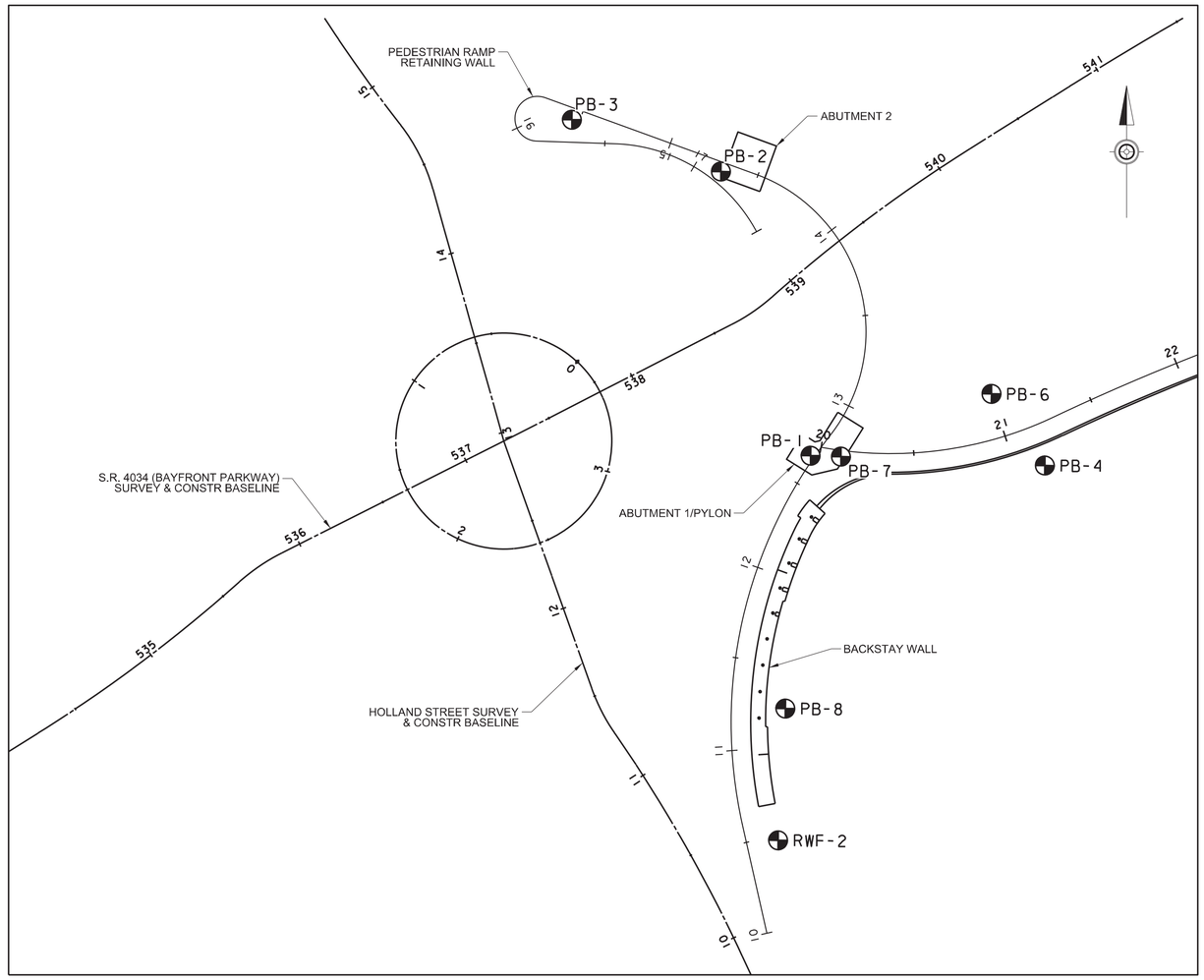
RECOMMENDED

SHEET 115 OF 137

L-430

DES: JL | DWN: RJS | CKD: JB

FILENAME: SL4300115OF0137.dgn
OPERATOR: tyllpw111cs01$



BORING LOCATION LAYOUT

SCALE

40 FEET 0 40 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark D. Styler — 4/15/2022

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK D. STYLER ENGINEER No. PE091796

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 1 OF 7)

Christopher T. Fox, P.E. — Digitally signed by Christopher T. Fox, P.E. Date: 2022.08.23 09:07:58 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 1 16 OF 137

L-430

M:\2019\095\exhibits\structure\19095_strb_HSPB.dgn
5/20/2022

PLT: RJS	CKD: GKW	QA/QC: MAS

SUBSTRUCTURE UNIT:

ABUTMENT 1 / PYLON FOUNDATION

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/22/2021 8:00 AM	HAMMER: SAFETY
PB-7	STATION: 538+70.0 OFFSET: 91.0 FT. RT.	FINISH: 11/22/2021 3:00 PM	EFFICIENCY: 0.6 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, SAFETY, CME 45 TRACK RIG	1.874 IN.	0 FT. [redacted] 5 FT.	597.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. RINDFUSS
R. RINDFUSS DRILLING, L.P.

▽ 0 HR. READING - ELAPSED TIME:El. 590.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO. **	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
595		**SILT**, some Gravel, little Sand, contains organics, medium to stiff, damp, heterogeneous, poorly graded, low plastic fines, brown, fill. *Class. on S-1 through S-4, N.M.C.=19.7%.*	A-4 / ML	1.5	S-1	4-4-6		10	0.6	40
BFE 593.00		6.0'/El. 591.4		3.0	S-2	6-5-6		11	0.6	40
				4.5	S-3	2-3-2		5	1.1	73
				6.0	S-4	2-2-4		6	0.6	40
590		**SAND**, some Silt, little Gravel, medium dense to dense, moist to damp, heterogeneous, poorly graded, light brown, fill.	a-1-b / sp	7.5	S-5	3-3-7		10	1.1	73
		9.0'/El. 588.4		9.0	S-6	1.50 8-14-22		36	1.2	80
		GRAVEL, some Silt, little Sand, very dense, damp, homogeneous, poorly graded, rounded to angular, gray, glacial till.	a-2-4 / gm	10.5	S-7	22-24-26		50	1.2	80
		13.3'/El. 584.1		12.0	S-8	13-21-23		44	1.1	73
585				13.3	S-9	7-19-50/.3'		69	1.0	77
		GRAVEL, some Sand, contains shale, very dense, dry, homogeneous, well graded, flat, gray, residuum.	a-1-a / gw	13.5	S-10	50/.0'		>50	0.0	0
TOR 582.30		15.1'/El. 582.3		13.5	S-11	50/.1'		>50	0.1	100
TORS 581.00		**SHALE**, light gray to dark gray, banded, soft to medum hard, slightly weathered to fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=20%).*		15.0 15.1	R-1			0%	0.5	50
580		21.1'/El. 576.3		16.1	R-2			24%	4.7	94
575 BORS 575.00		**SHALE interbedded with SANDSTONE**, light gray to dark gray, banded, soft to medium hard, slightly weathered to fresh, laminated to thin bedding with flat dip, bedding joints, narrow to moderate spacing, flat to shallow dip, narrow joint opening, *(RQD=59%).*		21.1	R-3			88%	4.8	96
570		*Clay seam, 29.0-29.1'.*		26.1	R-4			84%	5.0	100
565		*Clay seam, 36.7-36.8'.* *Clay seam @ 37.5'.*		31.1	R-5			66%	4.9	98
560		*Broken and weathered, 38.1-38.2', 39.9-40.0', 40.7-40.8'.*		36.1	R-6			40%	5.0	100
555				41.1	R-7			14%	4.9	98
550		*Broken and weathered, 46.5-46.6', 47.2-47.3'.*		46.1	R-8			50%	4.7	94
545		56.1'/El. 541.3		51.1	R-9			74%	4.9	98

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:

ABUTMENT 1 / PYLON FOUNDATION

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/30/2020 2:00 PM	HAMMER: AUTOMATIC
PB-1	STATION: 538+66.0 OFFSET: 82.0 FT. RT.	FINISH: 09/30/2020 5:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. [redacted] 5 FT.	596.4 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 590.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 591.3 ft. - 15.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
595		**GRAVEL**, some Sand, little Silt, contains traces of brick, medium dense to dense, moist, heterogeneous, poorly graded, angular, brown to dark brown, fill. *Bag sample, 1.0-9.0'.*	a-2-4 / gm	1.5	S-1	4-6-19		33	1.4	93
BFE 593.00		9.0'/El. 587.4		3.0	S-2	15-19-14		44	0.6	40
				4.5	S-3	22-11-8		25	0.8	53
				6.0	S-4	6-5-3		11	0.7	47
590				7.5	S-5	3-4-4		11	1.2	80
				9.0	S-6	6-9-10		25	1.5	100
		GRAVEL, some Silt, little Sand, dense to very dense, damp, homogeneous, poorly graded, rounded to angular, gray, glacial till. *Gravel was smooth and polished not residual.*	a-2-4 / gm	10.5	S-7	6-9-22		41	1.5	100
		13.3'/El. 583.1		12.0	S-8	11-13-23		48	1.5	100
585				13.3	S-9	16-18-50/.3'		91	1.3	100
TOR 583.10		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, jointed, massive spacing, sheer dip, narrow joint opening, *(RQD=47%).*		15.3	R-1			35%	1.6	80
TORS 581.00		*Joint (RD=90), 18.0-18.3'.*		18.3	R-2			30%	2.6	87
580										
575 BORS 575.00		23.3'/El. 573.1			R-3			62%	5.0	100

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SLIKER ENGINEER No. PE091790

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 2 OF 7)

SHEET 117 OF 137

L-430

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\9095_strb_HSPB.dgn
5/20/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.sbm - VERSION 1.2.3 - 5-21-2018.LIDT - 4/11/22 17:28 - I:\PROJECTS\2019\095\19095_ERIE CO SR4034.GPJ

SUBSTRUCTURE UNIT:

ABUTMENT 2 / PEDESTRIAN RAMP RETAINING WALL

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/16/2020 9:30 AM	HAMMER: AUTOMATIC
PB-2	STATION: 539+09.0 OFFSET: 69.0 FT. LT.	FINISH: 09/16/2020 4:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 45C TRAILER	3.000 IN.	0 FT. 5 FT.	585.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. WILLS
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 582.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
585		**SAND**, some Gravel, little Silt, contains coal fragments, loose to medium dense, damp to dry, heterogeneous, poorly graded, sub-angular to rounded, brown to tan, fill.	a-1-b / sp	1.5	S-1	5-7-8		20	1.2	80
				3.0	S-2	4-5-5		13	0.6	40
				4.5	S-3	4-4-4		11	1.2	80
		Auger chatter while advancing to 4.5'.			S-4	3-3-3		8	0.3	20
		6.0'/El. 579.4		6.0	S-5	3-4-4		11	1.3	87
BFE 579.00		**SILT**, some Sand, little Gravel, trace Clay, medium to stiff, moist to damp, homogeneous, non-plastic, gray to cark gray, alluvium.	A-4 / ML	7.5	S-6	2-2-3		7	1.0	67
		S-4, PID=1.2 ppm.		9.0	S-7	7-8-3		15	1.5	100
		S-5, PID=3.1 ppm.		10.5	S-8	5-4-3		9	1.3	87
		Bag sample taken from auger cuttings, 0.0-9.0'.		12.0	S-9	1-3-8		15	1.3	87
		S-6, PID=0.0 ppm.		13.5	S-10	3-48-50		131	1.0	67
		S-8, shale fragments.		15.0	S-11	50/.2'		>67	0.2	100
		S-7, rotten wood piece, PID=1.3 ppm.			R-1			0%	3.1	94
		Class. on S-5 to S-8		18.5						
		N.M.C.=18.4%.			R-2			64%	4.7	94
		14.0'/El. 571.4	a-1-a / gw	23.5						
TOR 570.20		**GRAVEL**, some Sand, contains shale fragments, very dense, dry, homogeneous, well graded, flat, gray, residuum.			R-3			20%	1.8	90
		15.2'/El. 570.2								
TORS (ABUT2) 568.00		*Dry prior to coring.*								
		S-10, PID=0.5 ppm.								
		Auger chatter while advancing to 15.0'.								
		SHALE, gray, soft, weathered, laminated bedding with flat dip, *no apparent jointing, (RQD=0%).*								
		15.9'/El. 569.5								
		SILTSTONE, gray, medium hard, slightly weathered, moderate bedding with flat dip, jointed, sheer dip, narrow joint opening, *(RQD=0%).*								
		18.6'/El. 568.8								
		Vertical joint (RD=90), 15.9-16.6'.								
		SHALE, light gray to gray, very soft to soft, slightly weathered, laminated bedding with flat dip, jointed, close spacing, flat dip, *narrow to tight joints, (RQD=0%).*								
		19.0'/El. 566.4								
BORS (ABUT2) 558.00 NTS		**SHALE**, gray to dark gray, soft to medium hard, slightly weathered, narrow bedding with flat dip, jointed, moderate spacing, flat dip, narrow joint opening, *(RQD=55%).*								
		25.5'/El. 559.9								

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

[1] 24-hr. Water: Boring grouted upon completion

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:

PEDESTRIAN RAMP RETAINING WALL

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/15/2020 2:30 PM	HAMMER: AUTOMATIC
PB-3	STATION: 538+34.0 OFFSET: 137.0 FT. LT.	FINISH: 09/15/2020 6:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 45C TRAILER	1.874 IN.	0 FT. 5 FT.	584.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. WILLS
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 575.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 574.0 ft. - 14.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
585		**SAND**, some Gravel, little Clay, contains coal and brick fragments, medium dense, damp, heterogeneous, poorly graded, brown to black, fill.	a-1-b / sp	1.5	S-1	8-10-10		27	1.5	100
		Topsoil, 0.0-0.5'.		3.0	S-2	7-9-8		23	1.5	100
		6.0'/El. 578.4		4.5	S-3	7-7-7		19	1.5	100
BFE 579.00		**SILT**, little Clay, trace Sand, trace Gravel, very soft to very stiff, wet to moist, homogeneous, low plastic fines, gray, alluvium.	A-4 / CL-ML	6.0	S-4	5-3-5		11	1.5	100
				7.5	S-5	6-6-6		16	1.5	100
				9.0	S-6	3-5-5		13	1.5	100
				10.5	S-7	5-4-4	2.75	11	1.5	100
				12.0	S-8	3-3-3	2.00	8	1.5	100
		Class. on S-10 to S-11		13.5	S-9	2-3-3	1.25	8	1.5	100
		N.M.C.=24.8%.		15.0	S-10	WOH-WOH-1		1	1.5	100
		16.5'/El. 567.9		16.5	S-11	0.50		0	1.5	100
		GRAVEL, some Sand, contains shale fragments, very dense, dry, homogeneous, well graded, flat, gray, residuum.	a-1-a / gw	17.2	S-12	WOH-WOH-WOH		>67	0.7	100
		Boring dry prior to coring.		18.0	S-13	3-50/.2'		>67	0.2	100
		18.2'/El. 566.2		18.2	R-1	50/.2'		0%	1.0	100
TOR 566.20		**SHALE**, light gray to gray, very soft to medium hard, slightly weathered, laminated bedding with flat to shallow dip, jointed, medium spacing, flat dip, narrow joint opening, *(RQD=18%).*		19.2	R-2			0%	1.0	100
		Clay seam, 18.3-18.6'.		20.2						
		Clay seam, 18.9-19.0'.			R-3			44%	4.9	98
				25.2						
		30.2'/El. 554.2			R-4			0%	4.8	96

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

PID for all samples=0.0 ppm, no visual signs of contamination or odors.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIEGER ENGINEER No. PE081780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 3 OF 7)

SHEET 118 OF 137

L-430

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_srb_HSPB.dgn
5/20/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION: 123.4.21.2015.GDT - 4/15/22 10:04 - \\PROJECTS\2019\19095\999\ERIE CO S&B.GPJ

SUBSTRUCTURE UNIT:
BACKSTAY WALL

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/01/2020 11:30 AM	HAMMER: AUTOMATIC
RWF-2	STATION: 10+35.0 OFFSET: 45.0 FT. RT.	FINISH: 10/01/2020 1:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	611.8 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:Dry - 811.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
610		**GRAVEL**, some Sand, little Silt, trace Clay, contains brick and concrete fragments, very loose to very dense, moist to damp, heterogeneous, well graded, rounded to angular, brown to tan, fill.		1.5	S-1	1-3-2		7	1.2	80	
		S-2, all brick.		3.0	S-2	8-6-2		11	0.5	33	
		Class. on S-3 to S-8 N.M.C.=13.3%.		4.5	S-3	4-4-1		7	1.5	100	
		S-5, brick and concrete, PID=2.3 ppm.	A-1-a / GM	6.0	S-4	3-4-4		11	0.3	20	
				7.5	S-5	7-19-14		44	0.6	40	
BFE 602.00		*S-7 & S-8, concrete.*		9.0	S-6	WOH-WOH-1		1	0.2	13	
		S-8, PID=6.0 ppm.		10.5	S-7	1-13-15		37	1.0	67	
		S-9, PID=0.8 ppm.		12.0	S-8	1-3-1		5	0.6	40	
		16.5'/El. 595.3		13.5	S-9	1-1-1		3	1.0	67	
		S-10, PID=5.4 ppm.		15.0	S-10	4-2-2		5	0.9	60	
595		*S-11, contains steel fragments.*		15.6	S-11	7-50/.1"		>67	0.6	100	
		SILT, little fine Sand, very stiff to hard, moist to damp, homogeneous, medium plastic fines, gray, glacial till.		16.5	S-12	7-13-14	2.00	36	1.5	100	
			a-4 / ml	18.0	S-13	13-18-25	3.50	57	1.5	100	
		S-15, contains little gravel.		19.5	S-14	16-21-21	3.50	56	1.5	100	
				21.0	S-15	21-27-32	4.00	79	1.5	100	
590		24.1'/El. 587.7		22.5	S-16	50/.4"		>67	0.4	100	
		S-17, shale in tip.		22.9							
TOBZ 577.00 NTS		*All PID readings, other than indicated, at 0.0 ppm.*		24.0	S-17	50/.1"		>67	0.1	100	

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
BACKSTAY WALL

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/19/2021 8:00 AM	HAMMER: SAFETY
PB-8	STATION: 10+90.0 OFFSET: 75.0 FT. RT.	FINISH: 11/19/2021 3:30 PM	EFFICIENCY: 0.6 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, SAFETY, CME 45 TRACK RIG	1.874 IN.	0 FT. [redacted] 5 FT.	607.5 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. RINDFUSS
R. RINDFUSS DRILLING, L.P.

▽ 0 HR. READING - ELAPSED TIME:El. 601.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
610		**SAND**, some Silt, loose to very dense, damp to dry, heterogeneous, poorly graded, light brown to dark brown, fill.	a-1-b / sp	1.5	S-1	1-2-3		5	0.8	53	
		S-1 to S-4, root and leaf fragments.		3.0	S-2	5-5-9		14	1.1	73	
		6.0'/El. 601.5		4.5	S-3	7-7-9		16	0.3	20	
BFE 601.50		*S-4, trace coal fragments.*		6.0	S-4	7-19-20		39	1.1	73	
		SILT, trace Sand, trace Gravel, very stiff to hard, damp, homogeneous, poorly graded, gray, alluvium, medium to low plastic.		7.5	S-5	16-22-29		51	1.2	80	
		Class. on S-5 through S-7, N.M.C.=17.4%.		9.0	S-6	10-17-21		38	1.0	67	
		Silt is laminated in its structure; trace gravel is rounded to sub-angular; sample breakes open under pocket penetrometer, 6.0-21.0'.		10.5	S-7	11-16-16		32	1.0	67	
				12.0	S-8	16-18-21		39	1.2	80	
595			A-4 / ML	13.5	S-9	10-11-12		23	1.1	73	
				15.0	S-10	5-7-10		17	1.2	80	
				16.5	S-11	5-11-12		23	1.0	67	
				18.0	S-12	7-9-14		23	1.2	80	
				19.5	S-13	20-21-29		50	1.2	80	
		21.0'/El. 586.5		21.0	S-14	15-19-22		41	1.2	80	
		SILT and **SAND**, little Gravel, very dense, damp, homogeneous, poorly graded, non-plastic, gray, residuum.	a-1-b / sp	22.5	S-15	14-18-25		43	1.1	73	
		Sub-angular gravel, 21.0-25.5'.		24.0	S-16	15-17-35		52	1.1	73	
		25.5'/El. 582.0		24.4	S-17	50/.4"		>50	0.4	100	
TOR 582.00		**SHALE interbedded with SILTSTONE**, light gray to dark gray, banded, soft to medium hard, slightly weathered to fresh, thin to laminated bedding with flat dip, jointed, moderate spacing, flat to sheer dip, *narrow to tight joint openings, (RQD=26%).*		25.5	S-18 R-1	50/.0"		>50 0%	0.0 2.0	0 100	
		Joint (RD=90), 26.8-26.9'.		27.5	R-2			22%	2.5	83	
TOBZ 577.00				30.5	R-3			38%	5.0	100	
		35.5'/El. 572.0									

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SIEVER ENGINEER No. PE091796

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 4 OF 7)

SHEET 119 OF 137

L-430

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_HSPB.dgn
5/20/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT - VERSION 1223 • 4-21-2016.GDT - 4/26/22 10:18 - L:\PROJECTS\2019\A\095\0068_ERIE CO.SAS.GPJ

SUBSTRUCTURE UNIT: LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/29/2020 4:00 PM	HAMMER: AUTOMATIC
PB-6	STATION: 539+50.0 OFFSET: 115.0 FT. RT.	FINISH: 09/30/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	598.9 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 597.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 596.0 ft. - 21.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ 20 40 60 80 ▲ SPT (N_{60}) ▲ 10 20 30 40
625											
620											
615											
610											
605											
600											
595		**GRAVEL** and **SAND**, contains brick and coal fragments, medium dense, moist, heterogeneous, well graded, angular to sub-angular, brown to black, fill. 4.5'/El. 594.4	a-1-a / gw	1.5	S-1	10-7-6		17	1.0	67	
				3.0	S-2	6-10-4		19	0.8	53	
				4.5	S-3	9-10-4		19	0.6	40	
		SAND, some Silt, little Gravel, contains brick and coal, medium dense, moist, heterogeneous, poorly graded, angular to sub-angular, brown, fill. 7.5'/El. 591.4	a-2-4 / sm	6.0	S-4	3-5-5		13	1.5	100	
				7.5	S-5	4-4-4		11	1.3	87	
		SILT, some fine Sand, trace Gravel, medium to very stiff, moist to damp, homogeneous, non-plastic, brown, alluvium. 10.5'/El. 588.4	a-4 / ml	9.0	S-6	2-2-3 **2.25**		7	1.5	100	
590				10.5	S-7	2-4-7 **2.00**		15	1.5	100	
		GRAVEL and **SILT**, little Sand, dense to very dense, damp to dry, homogeneous, poorly graded, rounded, gray, glacial till. *Gravel was smooth, rounded and polished, not residual.* 14.7'/El. 584.2	a-4 / gm	12.0	S-8	10-17-20		49	1.5	100	
				13.5	S-9	20-24-21		60	1.5	100	
585				14.7	S-10	14-20-50/.2'		93	1.2	100	
TOR 584.20		*Dry prior to coring.*		16.7	R-1			40%	2.0	100	
		SANDSTONE, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=66%).*			R-2			60%	3.0	100	
				19.7	R-3			80%	5.0	100	
580											
575		24.7'/El. 574.2									

All PID readings 0.0 ppm, no signs of visual contamination or odors.

SUBSTRUCTURE UNIT: LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/01/2020 2:30 PM	HAMMER: AUTOMATIC
PB-4	STATION: 539+50.0 OFFSET: 163.0 FT. RT.	FINISH: 10/05/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. 5 FT.	625.5 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 585.6 ft. - 22.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ 20 40 60 80 ▲ SPT (N_{60}) ▲ 10 20 30 40
625											
620		**GRAVEL** and **SAND**, little Silt, contains brick, concrete, and glass fragments, very loose to very dense, moist to damp, heterogeneous, poorly graded, rounded to angular, brown to black, fill. *S-4, coal and some pavement fragments. S-4, PID=2.8 ppm.* *S-6, contains glass and concrete fragments.* 10.5'/El. 615.0	a-1-a / gp	1.5	S-1	2-5-7		16	1.5	100	
				3.0	S-2	6-7-7		19	1.5	100	
				4.5	S-3	6-5-6		15	1.5	100	
				6.0	S-4	7-8-8		21	1.5	100	
				7.5	S-5	14-32-6		51	0.8	53	
				9.0	S-6	3-1-1		3	1.5	100	
				10.5	S-7	2-4-1		7	1.2	80	
		SAND, some Gravel, little Silt, contains glass fragments, very loose, wet, heterogeneous, poorly graded, angular to sub-rounded, brown, fill. 13.5'/El. 612.0	a-2-4 / sm	12.0	S-8	1-WOH-WOH		0	1.5	100	
		S-9, contains glass fragments.		13.5	S-9	2-2-1		4	1.1	73	
		GRAVEL and **SAND**, little Silt, loose to dense, wet to moist, homogeneous, poorly graded, rounded to angular, black to brown, fill. *S-11, contains soot.* *S-13, contains soot or a foundry gravel.* 22.5'/El. 603.0	a-1-a / gp	15.0	S-10	2-3-3		8	1.0	67	
610				16.5	S-11	5-6-7		17	1.5	100	
				18.0	S-12	7-6-4		13	1.2	80	
				19.5	S-13	13-20-8		37	1.5	100	
				21.0	S-14	2-2-2		5	1.0	67	
				22.5	S-15	1-2-3		7	0.9	60	
		SILT, some fine Sand, stiff to hard, moist to damp, lensed, gray, alluvium, *low to non plastic fines.* 37.5'/El. 588.0	a-4 / ml	24.0	S-16	4-7-7		19	1.5	100	
				25.5	S-17	3-5-6 **2.50**		15	1.2	80	
				27.0	S-18	4-6-8 **4.00**		19	1.5	100	
				28.5	S-19	3-7-11 **3.50**		24	1.3	87	
				30.0	S-20	3-5-5 **3.50**		13	1.5	100	
				31.5	S-21	WOH-3-4 **2.00**		9	1.5	100	
				33.0	S-22	3-5-6 **1.50**		15	1.5	100	
				34.5	S-23	3-4-6 **3.00**		13	1.5	100	
590				36.0	S-24	5-7-8 **4.25**		20	1.5	100	
				37.5	S-25	6-7-8 **3.75**		20	1.5	100	
		SILT, little fine Sand, trace Gravel, hard, damp, homogeneous, non-plastic, gray, glacial outwash. 40.5'/El. 585.0	a-4 / ml	39.0	S-26	7-14-18 **>4.5**		43	1.5	100	
585					S-27	8-17-47 **>4.5**		85	1.5	100	

PGE 619.59
BFE 606.00

All PID readings, other than indicated, are 0.0 ppm. No signs of visual contamination or odor.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SLEGER ENGINEER No. PE091700

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 5 OF 7)

SHEET 120 OF 137

L-430

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\9095-strb_HSPB.dgn
5/20/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT • GINT • VERSION 10.2.3 • 5/21/2019 10:07:07 • 5/20/22 10:24 • L:\PROJECTS\2019\095\9095_ERIE CO SSS.GPJ
PENNDOT STRUCTURE BORING LOG - PENNDOT • GINT • VERSION 10.2.3 • 5/21/2019 10:07:07 • 5/20/22 10:24 • L:\PROJECTS\2019\095\9095_ERIE CO SSS.GPJ

SUBSTRUCTURE UNIT:
BACKSTAY WALL

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/19/2021 8:00 AM	HAMMER: SAFETY
PB-8	STATION: 10+90.0 OFFSET: 75.0 FT. RT.	FINISH: 11/19/2021 3:30 PM	EFFICIENCY: 0.6 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, SAFETY, CME 45 TRACK RIG	1.874 IN.	0 FT. [redacted] 5 FT.	607.5 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. RINDFUSS
R. RINDFUSS DRILLING, L.P.

▽ 0 HR. READING - ELAPSED TIME:El. 601.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605		**SAND**, some Silt, loose to very dense, damp to dry, heterogeneous, poorly graded, light brown to dark brown, fill.	a-1-b / sp	1.5	S-1	1-2-3		5	0.8	53	
		S-1 to S-4, root and leaf fragments.		3.0	S-2	5-5-9		14	1.1	73	
		8.0'/El. 601.5		4.5	S-3	7-7-9		16	0.3	20	
BFE 601.50		*S-4, trace coal fragments.*		6.0	S-4	7-19-20		39	1.1	73	
600		**SILT**, trace Sand, trace Gravel, very stiff to hard, damp, homogeneous, poorly graded, gray, alluvium, medium to low plastic.	A-4 / ML	7.5	S-5	16-22-29		51	1.2	80	
		Class. on S-5 through S-7, N.M.C.=17.4%.		9.0	S-6	10-17-21		38	1.0	67	
		Silt is laminated in its structure; trace gravel is rounded to sub-angular; sample breakes open under pocket penetrometer, 6.0-21.0'.		10.5	S-7	11-16-16		32	1.0	67	
595				12.0	S-8	16-18-21		39	1.2	80	
				13.5	S-9	10-11-12		23	1.1	73	
				15.0	S-10	5-7-10		17	1.2	80	
				16.5	S-11	5-11-12		23	1.0	67	
590				18.0	S-12	7-9-14		23	1.2	80	
				19.5	S-13	20-21-29		50	1.2	80	
		21.0'/El. 586.5		21.0	S-14	15-19-22		41	1.2	80	
585		**SILT** and **SAND**, little Gravel, very dense, damp, homogeneous, poorly graded, non-plastic, gray, residuum.	a-1-b / sp	22.5	S-15	14-18-25		43	1.1	73	
		Sub-angular gravel, 21.0-25.5'.		24.0	S-16	15-17-35		52	1.1	73	
		25.5'/El. 582.0		24.4	S-17	50/.4"		>50	0.4	100	
TOR 582.00		**SHALE interbedded with SILTSTONE**, light gray to dark gray, banded, soft to medium hard, slightly weathered to fresh, thin to laminated bedding with flat dip, jointed, moderate spacing, flat to sheer dip, *narrow to tight joint openings, (RQD=26%).*		25.5	S-18 R-1	50/.0'		>50 0%	0.0 2.0	0 100	
580		*Joint (RD=90), 26.8-26.9'.*		27.5	R-2			22%	2.5	83	
TOBZ 577.00				30.5	R-3			38%	5.0	100	
575		35.5'/El. 572.0									

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
BACKSTAY WALL

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 11/22/2021 8:00 AM	HAMMER: SAFETY
PB-7	STATION: 538+70.0 OFFSET: 91.0 FT. RT.	FINISH: 11/22/2021 3:00 PM	EFFICIENCY: 0.6 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, SAFETY, CME 45 TRACK RIG	1.874 IN.	0 FT. [redacted] 5 FT.	597.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. RINDFUSS
R. RINDFUSS DRILLING, L.P.

▽ 0 HR. READING - ELAPSED TIME:El. 590.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605				1.5	S-1	4-4-6		10	0.6	40	
				3.0	S-2	6-5-6		11	0.6	40	
				4.5	S-3	2-3-2		5	1.1	73	
BFE 602.00 NTS				6.0	S-4	2-2-4		6	0.6	40	
600		**SILT**, some Gravel, little Sand, contains organics, medium to stiff, damp, heterogeneous, poorly graded, low plastic fines, brown, fill.	A-4 / ML	7.5	S-5	3-3-7 **1.50**		10	1.1	73	
		Class. on S-1 through S-4, N.M.C.=19.7%.		9.0	S-6	8-14-22		36	1.2	80	
		6.0'/El. 591.4		10.5	S-7	22-24-26		50	1.2	80	
595		**SAND**, some Silt, little Gravel, medium dense to dense, moist to damp, heterogeneous, poorly graded, light brown, fill.	a-1-b / sp	12.0	S-8	13-21-23		44	1.1	73	
		9.0'/El. 588.4		13.3	S-9	7-19-50/.3'		69	1.0	77	
		GRAVEL, some Silt, little Sand, very dense, damp, homogeneous, poorly graded, rounded to angular, gray, glacial till.	a-2-4 / gm	13.5	S-10	50/.0'		>50	0.0	0	
		13.3'/El. 584.1		15.0	S-11 R-1	50/.1'		>50 0%	0.1 0.5	100 50	
590		**GRAVEL**, some Sand, contains shale, very dense, dry, homogeneous, well graded, flat, gray, residuum.	a-1-a / gw	16.1	R-2			24%	4.7	94	
		15.1'/El. 582.3		21.1	R-3			88%	4.8	96	
TOR 582.30		**SHALE**, light gray to dark gray, banded, soft to medium hard, slightly weathered to fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=20%).*		26.1	R-4			84%	5.0	100	
585		21.1'/El. 576.3		31.1	R-5			66%	4.9	98	
TOBZ 577.00		**SHALE interbedded with SANDSTONE**, light gray to dark gray, banded, soft to medium hard, slightly weathered to fresh, laminated to thin bedding with flat dip, bedding joints, narrow to moderate spacing, flat to shallow dip, narrow joint opening, *(RQD=59%).*		36.1	R-6			40%	5.0	100	
580		*Clay seam, 29.0-29.1'.*		41.1	R-7			14%	4.9	98	
		Clay seam, 36.7-36.8'.		46.1	R-8			50%	4.7	94	
575		*Clay seam @ 37.5'.*		51.1	R-9			74%	4.9	98	
		Broken and weathered, 38.1-38.2', 39.9-40.0', 40.7-40.8'.									
		Broken and weathered, 46.5-46.6', 47.2-47.3'.									
		56.1'/El. 541.3									

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MARK A. SIVER No. PE091795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 6 OF 7)

SHEET 121 OF 137

L-430

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_HSPB.dgn
5/20/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_1.2.3 • 2.1.2010.GDT - 4/26/22 10:17 - \\PROJECTS\2019\19095\1909 - ERIE CO S&S.GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMB.	STATION & OFFSET	SAMP. #	TEST DEPTH (FT.)	NAT. MOIST. %	GRAV. %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
PB-2	539+09.0 69 ft. LT.	S-5 to 8	6.0 to 12.0	18.4	12.6	25.1			62.3	55.4	6.9	A-4	ML									
PB-3	538+34.0 137 ft. LT.	S-10 to 11	13.5 to 16.5	24.8	2.7	7.3			90.0	75.3	14.7	A-4	CL-ML		25	20	5					
PB-7	538+70.0 91 ft. RT.	S-1 to 4	0.0 to 6.0	19.7	27.2	19.5			53.3	44.7	8.6	A-4	ML									
PB-8	10+90.0 75 ft. RT.	S-5 to 7	6.0 to 10.5	17.4	1.8	8.4			89.8	76.5	13.3	A-4	ML									
RWF-2	10+35.0 45 ft. RT.	S-3 to 8	3.0 to 12.0	13.3	64.2	22.6			13.2	11.1	2.1	A-1-a	GM									

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
PB-1	538+66.0 82 ft. RT.	R-2	15.3 to 18.3	POINT LOAD TEST	3962.0 PSI / 285.3 TSF	NO		87	30	SHALE	
PB-3	538+34.0 137 ft. LT.	R-3	20.6 to 20.9	UNCONFINED COMPRESSIVE TEST	17551.0 PSI / 1,263.7 TSF	NO		98	44	SHALE	
PB-7	538+70.0 91 ft. RT.	R-3	22.0 to 22.5	UNCONFINED COMPRESSIVE TEST	19209.0 PSI / 1,383.0 TSF	NO		96	88	SHALE	
PB-8	10+90.0 75 ft. RT.	R-3	30.6 to 31.0	UNCONFINED COMPRESSIVE TEST	4644.0 PSI / 334.4 TSF	NO		100	38	SHALE	

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
PB-1	538+66.0 82 ft. RT.	S-2 to 6	1.0 to 9.0	SOIL	7.4	9,246	110	66	No	No	No

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
PGE	PROPOSED GRADE ELEVATION
TOR	TOP OF ROCK ELEVATION
TRS	TOP OF ROCK SOCKET ELEVATION
TOBZ	TOP OF BOND ZONE ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK S. LEVER ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER S.R. 4034 (BAYFRONT PARKWAY)

STRUCTURE BORINGS (SHEET 7 OF 7)

SHEET 122 OF 137

L-430

M:_2019\095\exhibits\structure\19095_srb_HSPB.dgn
5/20/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

PLOTTED: 8/22/2022 7:09:24 PM

GENERAL NOTES:

1. CONSTRUCTION DETAILS NOT SHOWN ON THE DRAWINGS ARE TO CONFORM TO THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION'S STANDARD DRAWINGS:

   RC-81M, DATED 6-1-10
   RC-82M, DATED 6-1-10
   RC-84M, DATED 6-1-10
   BC-721M DATED 2-19-21
   BC-722M DATED 2-19-21

2. THE STANDARD SPECIFICATIONS FOR THIS PROJECT ARE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATONS PUBLICATION 408 / 2020 AND ALL OF ITS SUPPLEMENTS AND SPECIAL PROVISIONS.

3. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION.

4. CONTRACTOR SHALL COORDINATE WORK ACTIVITY WITH ALL OTHER CONSTRUCTION DISCIPLINES & THE GENERAL CONSTRUCTION PLANS.

5. PER ACT 187, MAINTAIN A MINIMUM 1'-6" CLEARANCE FROM ALL UNDERGROUND UTILITIES.

6. EXTREME CARE IS TO BE EXERCISED DURING CONSTRUCTION BECAUSE OF EXISTING OVERHEAD AND UNDERGROUND FACILITIES. ANY DAMAGES TO EXISTING FACILITIES EITHER ABOVE OR UNDERGROUND, WILL BE REPAIRED BY THE CONTRACTOR WITHOUT EXPENSE TO THE DEPARTMENT AND DONE IN A MANNER COMPLETELY SATISFACTORY TO THE ENGINEER AND THE FACILITY OWNER.

7. ALL AASHTO SPECIFICATIONS APPLY AS APPLICABLE ON THIS PROJECT.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDUIT SIZES, CONDUCTOR SIZES, ANCHOR BOLT SIZES, BOLT CIRCLE, CIRCUITRY, AND ALL OTHER AS-BUILT CONDITIONS.

9. CONSTRUCT ALL WORK ITEMS IN ACCORDANCE WITH THE REQUIREMENTS LISTED IN THE PROJECT ENVIRONMENTAL COMMITMENTS AND MITIGATION TRACKING SYSTEM (ECMTS) FORM. SUBMIT ALL REVISIONS FOR APPROVAL TO THE DESIGN ENGINEER AND DISTRICT ENVIRONMENTAL MANAGER FOR ECMTS COMPLIANCE.

UNDERGROUND CONDUIT:

1. SEAL CONDUITS/CONDULETS AT ENCLOSURE TO PREVENT RODENT ENTRY.

2. DO NOT PLACE CONDUIT IN THE LOW POINT OF SWALE AREAS.

3. THREE WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC.

   ONE CALL TELEPHONE NUMBER: 1-800-242-1776
   ONE CALL SERIAL NUMBERS: 20222081433
   20222081434

4. PROVIDE MARKING TAPE ENTIRE LENGTH OF TRENCH.

ELECTRICAL/LIGHTING NOTES:

1. COORDINATE WITH ROADWAY LIGHTING DRAWINGS FOR CONNECTION TO ROADWAY LIGHTING CONTROLLER PANEL.

2. COORDINATE WITH STRUCTURAL DRAWINGS FOR LOCATION OF DRIVERS FOR BRIDGE MOUNTED LIGHTING.

3. COORDINATE WITH LIGHTING DESIGN DRAWINGS FOR DETAILS AND LOCATIONS OF ALL LIGHTING.

4. COORDINATE WITH LANDSCAPE DRAWINGS FOR LOCATING UNDERGROUND CONDUIT RUNS.

WIRING, FUSING, AND GROUNDING:

1. PROVIDE WATERTIGHT, SUBMERSIBLE, NON-FUSIBLE, PREMOLDED, DISCONNECTABLE CONNECTOR KITS FOR ALL SPLICES.

2. PROVIDE INDIVIDUAL FUSING FOR ALL CONVENTIONAL LIGHTING.

3. PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR WITH ALL CIRCUITS. DO NOT CONNECT THE NEUTRAL TO GROUND EXCEPT AT THE CONTROL CABINET. CONNECT THE EQUIPMENT GROUNDING CONDUCTOR TO GROUND AT EACH POLE. PROVIDE WITH THE SAME INSULATION AND SIZE AS THE CIRCUIT CONDUCTORS.

4. EFFECTIVELY GROUND ALL TRANSFORMER BASES. REFER TO DWG RC-84M AND PUBLICATION 408, SECTION 1101.11.

LEGEND:

BL1c	ORNAMENTAL LUMINAIRE, COORDINATE WITH LIGHTING DRAWINGS. DESIGNATION INDICATES LIGHT FIXTURE TYPE AND CIRCUIT.
	LED STRIPLIGHT, COORDINATE WITH LIGHTING DRAWINGS
AS1e	STAY LIGHT, COORDINATE WITH LIGHTING DRAWINGS. DESIGNATION INDICATES LIGHT FIXTURE TYPE AND CIRCUIT.
	SMALL SCALE FLOOD LIGHT, COORDINATE WITH LIGHTING DRAWINGS
JB 2	JUNCTION BOX, NUMBER INDICATES TYPE. REFER TO GENERAL NOTE 1, THIS SHEET.
PB 25	PULL BOX, NUMBER INDICATES TYPE. REFER TO GENERAL NOTE 1, THIS SHEET.
-----	2" CONDUIT IN STRUCTURE/BARRIER WALL, SHOWN FOR INFORMATION ONLY. SEE PLANS FOR CABLE SIZE
-·-·-	2" DIRECT BURIAL CONDUIT UNLESS OTHERWISE NOTED
(1)	KEYNOTE DESIGNATION
(2)	WIRE & CONDUIT SCHEDULE DESIGNATION. REFER TO ELECTRICAL SCHEDULES SHEET

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ELECTRICAL GENERAL NOTES

RECOMMENDED

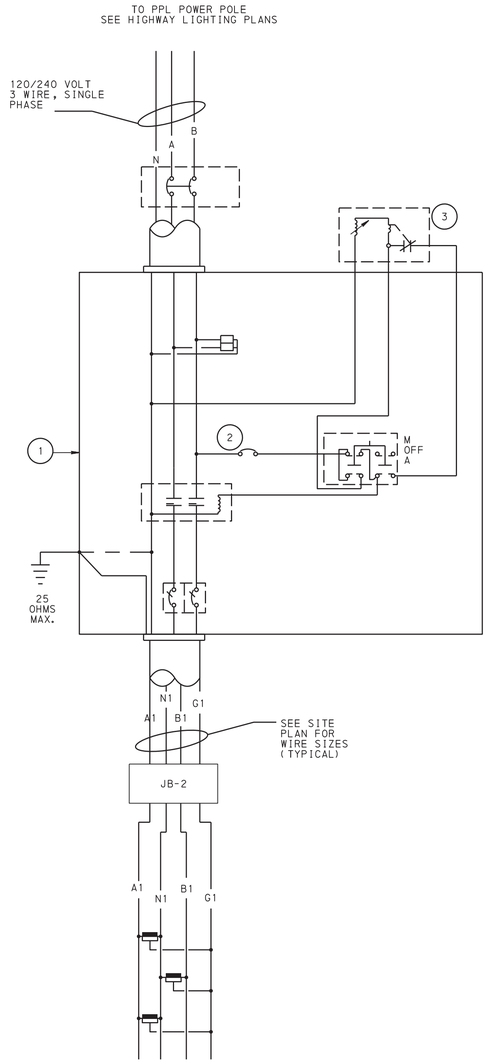
SHEET 123 OF 137

L-430

DES: AG | DWN: BNS | CKD: SF

OPERATOR: tylipwilliags01$ FILENAME: SL43001230F0137.dgn

PLOTTED: 8/22/2022 7:10:28 PM



CONTROL CABINET SPECIFIED ON ROADWAY LIGHTING PLAN SET

CONTROL CABINET 'A' WIRING SCHEMATIC

NOT TO SCALE

	CONTROL CABINET COMPONENTS
①	CONTROL CABINET
②	SINGLE POLE CIRCUIT BREAKER, 15 AMP.
③	PHOTOELECTRIC CELL. CADMIUM-SULPHIDE TYPE WITH FAIL-SAFE IN THE "ON" POSITION.

	NOTES
A	REFER TO STANDARD DRAWING RC-84M FOR ADDITIONAL ELECTRICAL DETAILS.
B	LABEL ALL CONTROL CABINET DISTRIBUTION BREAKERS USING HARD PLASTIC LABELS WITH 1/4" WHITE ENGRAVED LETTERING. LABEL THE CONTROL CABINET DOORS IN A SIMILAR FASHION USING 1/2" WHITE ENGRAVED LETTERING AS SHOWN IN THE FOLLOWING EXAMPLE "HIGHWAY LIGHTING - CONTROL CABINET A".
C	REFER TO HIGHWAY LIGHTING PLANS FOR LOCATION OF CONTROL CABINETS.
D	COORDINATE CONNECTIONS FOR PEDESTRIAN BRIDGE AND SITE LIGHTING WITH HIGHWAY LIGHTING PLANS CONTROL CABINET DETAILS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

CONTROL CABINET DETAILS

RECOMMENDED _____

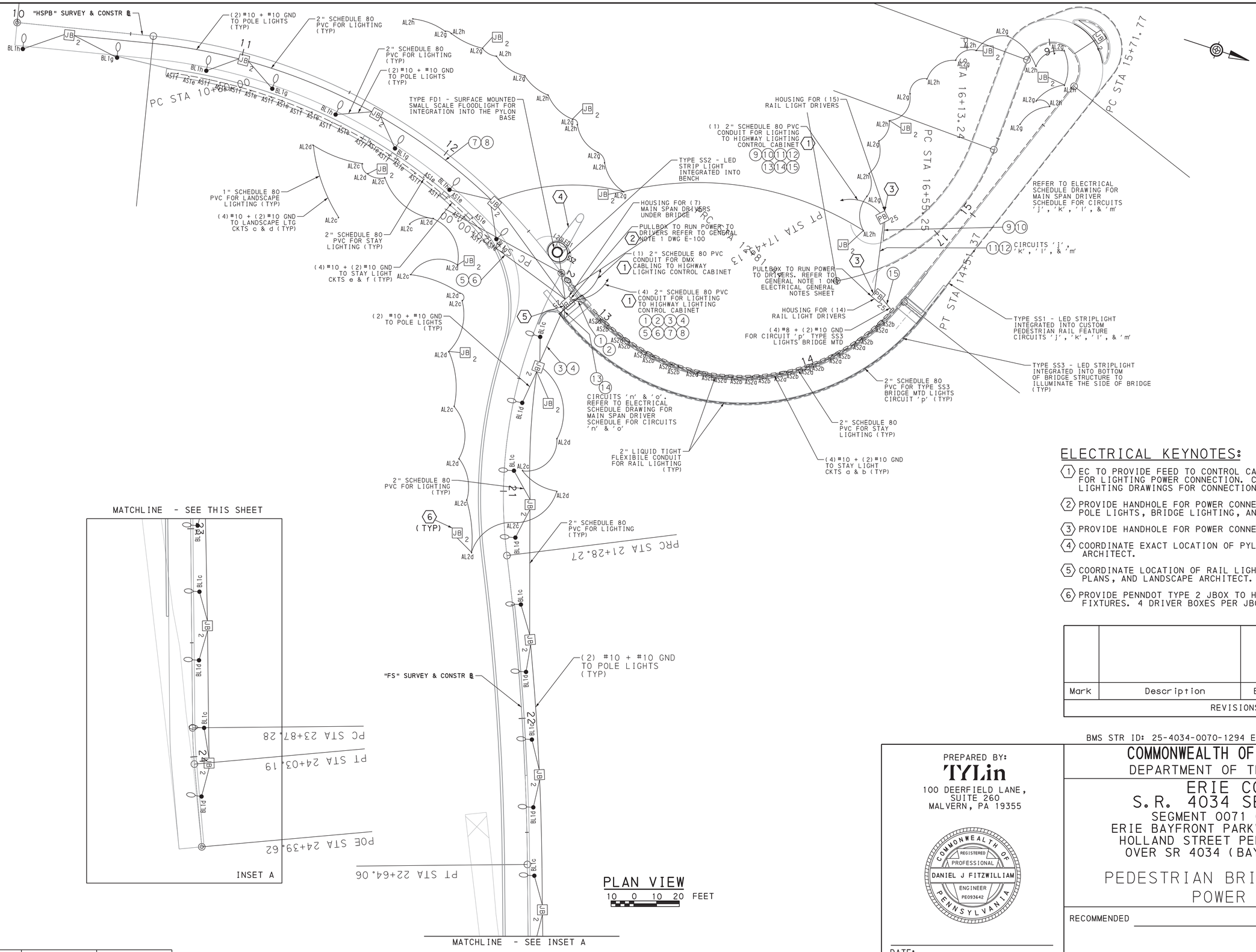
SHEET 124 OF 137

L-430

DES: AG | DWN: BNS | CKD: SF

OPERATOR: tylipw11cs01$ FILENAME: SL430012400F0137.dgn

PLOTTED: 8/22/2022 7:09:32 PM



ELECTRICAL KEYNOTES:

1. EC TO PROVIDE FEED TO CONTROL CABINET CC3-A FOR LIGHTING POWER CONNECTION. COORDINATE WITH JMT ROADWAY LIGHTING DRAWINGS FOR CONNECTION INFORMATION.
2. PROVIDE HANDHOLE FOR POWER CONNECTION TO RAIL LIGHT DRIVERS, POLE LIGHTS, BRIDGE LIGHTING, AND STAY SPOTLIGHTS.
3. PROVIDE HANDHOLE FOR POWER CONNECTION TO RAIL LIGHT DRIVERS.
4. COORDINATE EXACT LOCATION OF PYLON LIGHTING WITH LANDSCAPE ARCHITECT.
5. COORDINATE LOCATION OF RAIL LIGHT DRIVERS WITH DRIVER LOCATION PLANS, AND LANDSCAPE ARCHITECT.
6. PROVIDE PENNDOT TYPE 2 JBOX TO HOUSE LED DRIVERS FOR TYPE AL1 FIXTURES. 4 DRIVER BOXES PER JBOX.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

PEDESTRIAN BRIDGE AND SITE POWER PLAN

RECOMMENDED

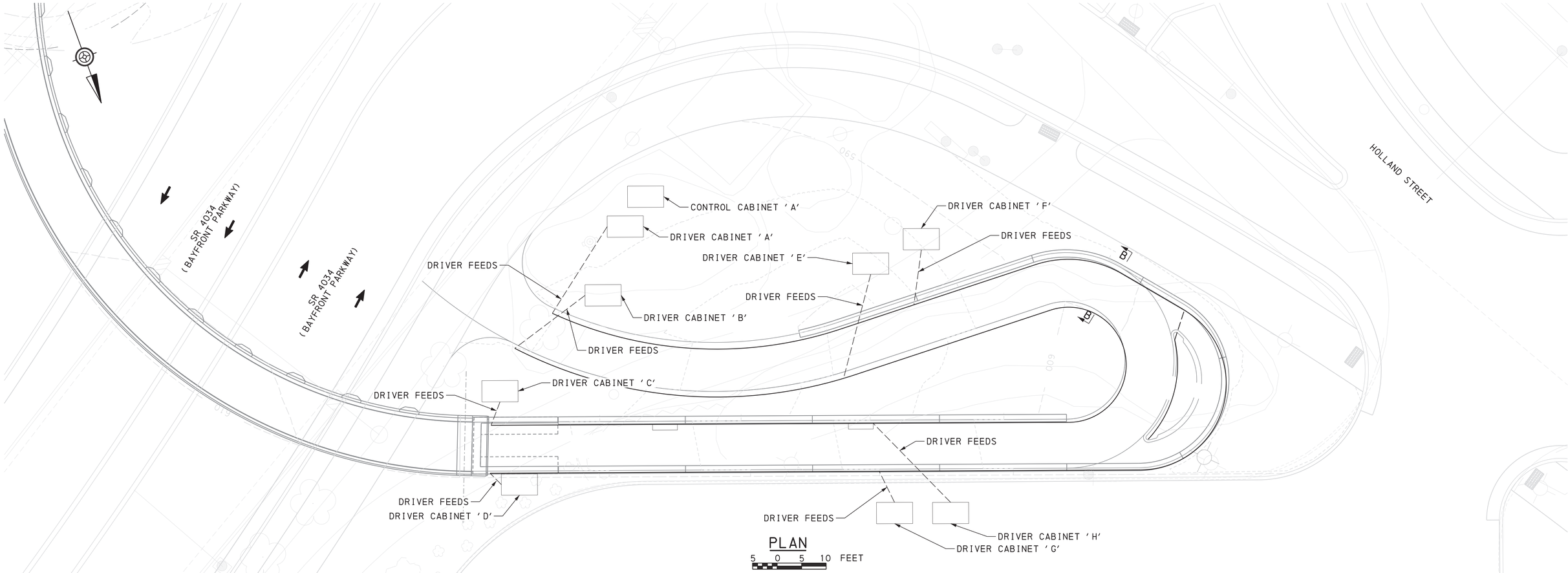
SHEET 125 OF 137

L-430

DES: AG | DWN: BNS | CKD: SF

OPERATOR: tylpw11cs01$ FILENAME: SL430012S0F0137.dgn

PLOTTED: 8/22/2022 7:12:31 PM



PLAN

5 0 5 10 FEET

NOTES:

1. FOR SECTIONS AND DETAILS SEE "DRIVER FEED DETAILS" SHEET.

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH SPAN DRIVER MAP

RECOMMENDED

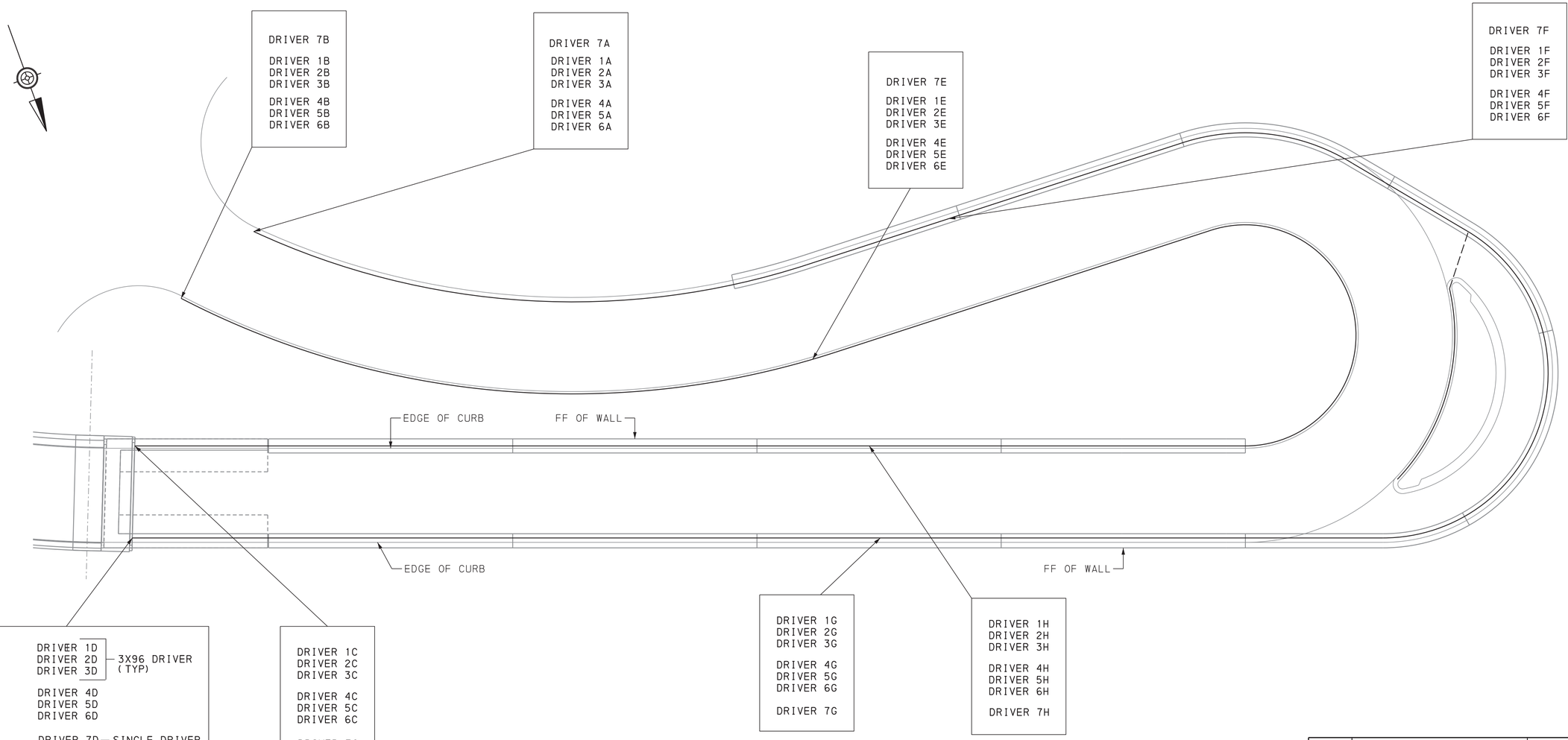
SHEET 126 OF 137

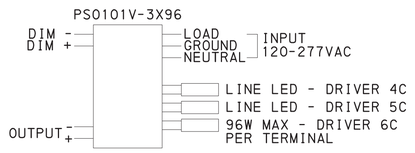
L-430

DES: AG | DWN: BNS | CKD: SF

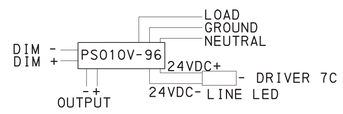
OPERATOR: tyllpw111cs01$ FILENAME: SL43001260F0137.dgn

PLOTTED: 8/22/2022 7:11:40 PM





TYPICAL 3X96 DRIVER DETAIL
NO SCALE



TYPICAL SINGLE DRIVER DETAIL
NO SCALE

NORTH SPAN DRIVERS
2 0 2 4 6 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

NORTH SPAN DRIVERS

RECOMMENDED

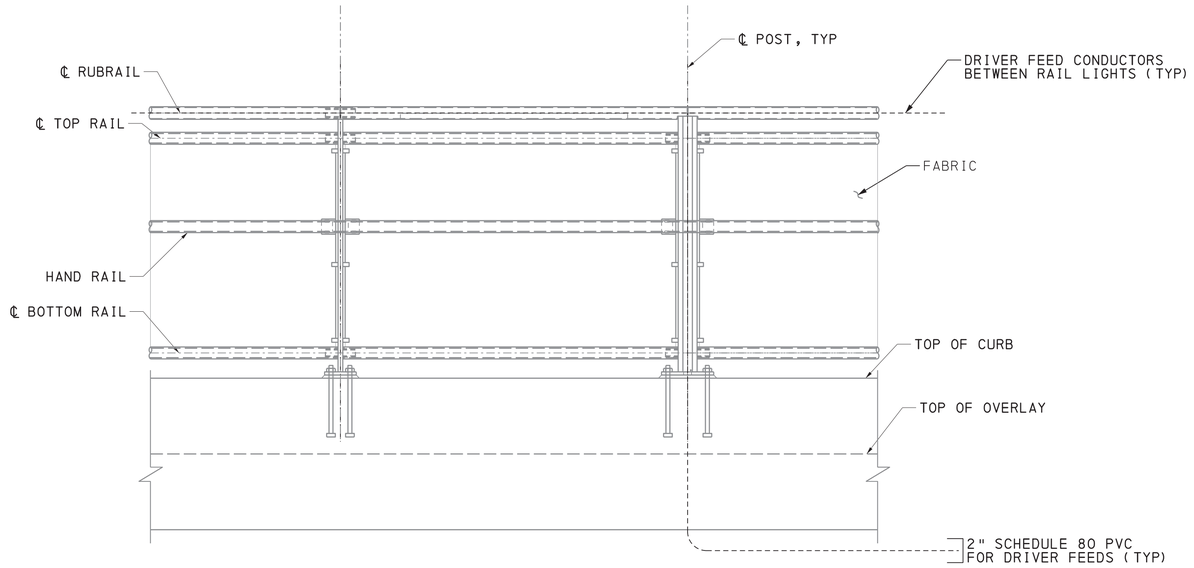
SHEET 127 OF 137

L-430

DES: AG | DWN: BNS | CKD: SF

FILENAME: SL4300127OF0137.dgn
OPERATOR: tylpwlllcs01$

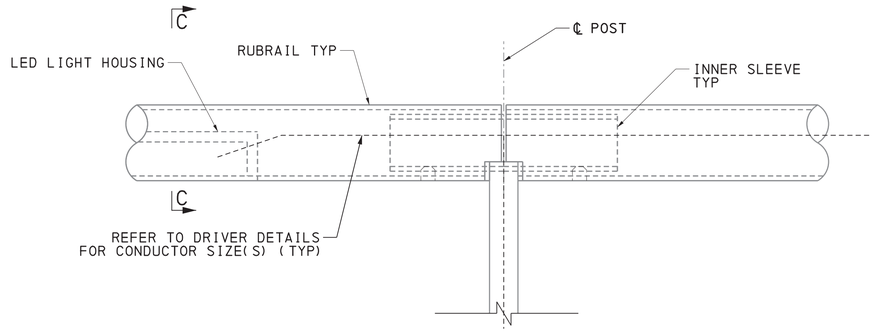
PLOTTED: 8/22/2022 7:12:25 PM



TYPICAL BRIDGE PEDESTRIAN RAILING - ELEVATION

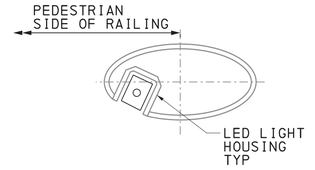
NOT TO SCALE

(RAILING TYPE B SHOWN, RAILING TYPE A SIMILAR)
(RAILING TYPE C/D SIMILAR WITH MODIFIED POST)



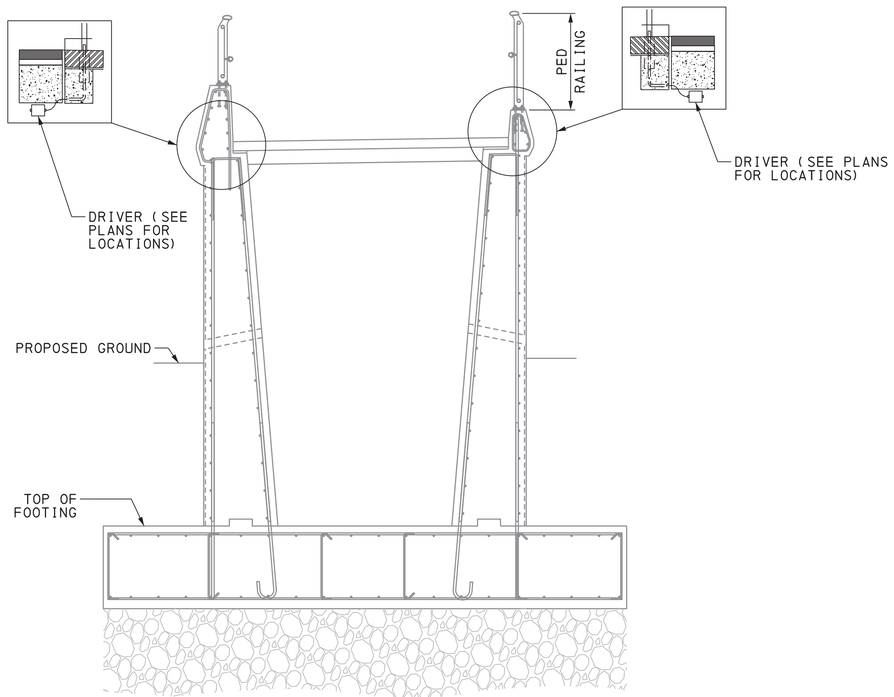
RUBRAIL CONNECTION

NOT TO SCALE



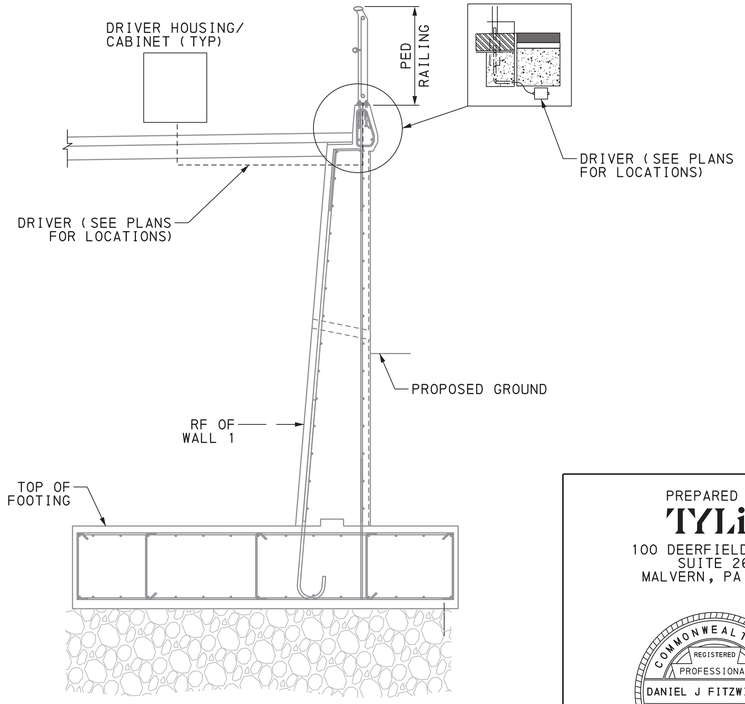
SECTION C-C

SEE ABOVE
NOT TO SCALE



SECTION A-A

1 0 1 2 3 FEET



SECTION B-B

1 0 1 2 3 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

DRIVER FEED DETAILS

RECOMMENDED _____

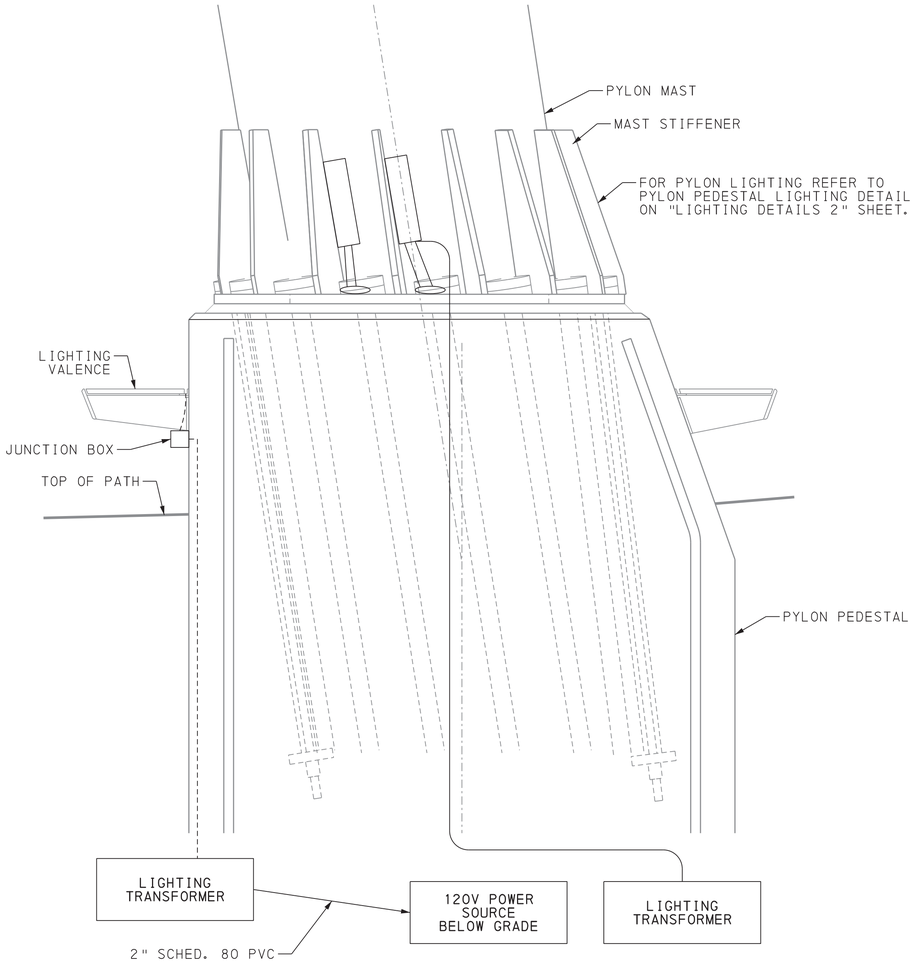
SHEET 128 OF 137

L-430

DES: AG | DWN: BNS | CKD: SF

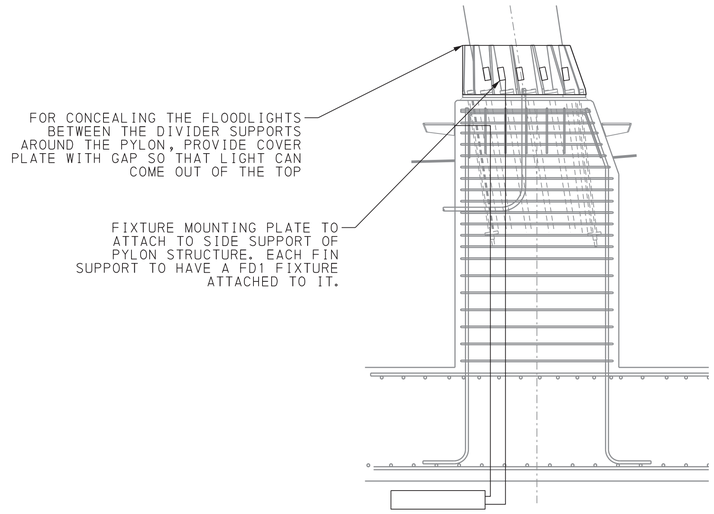
FILENAME: SL43001280F0137.dgn
OPERATOR: tylpwllcs01$

PLOTTED: 8/22/2022 7:11:45 PM



MAST BASE ELECTRICAL DETAIL

6 0 6 12 INCHES



PYLON PEDESTAL LIGHTING DETAIL

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:

TYLin

100 DEERFIELD LANE, SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DANIEL J FITZWILLIAM — ENGINEER — PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ELECTRICAL DETAILS

RECOMMENDED _____

SHEET 129 OF 137

L-430

DES: AG	DWN: BNS	CKD: SF

OPERATOR: tylpw11cs01$ FILENAME: SL43001290F0137.dgn

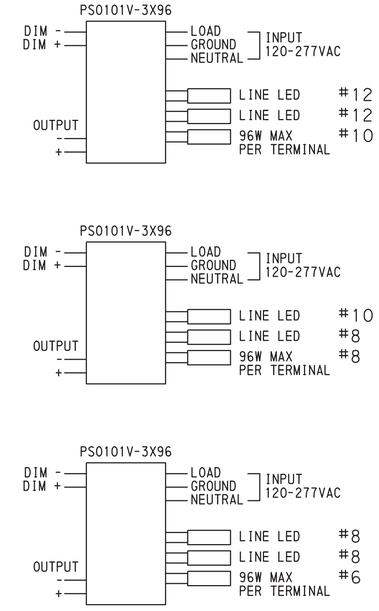
PLOTTED: 8/22/2022 7:09:41 PM
FILENAME: SL43001300F0137.dgn
OPERATOR: tylipw111cs01$

ELECTRICAL PANEL

MAIN CIRCUIT BREAKER: PER PENNDOT
MAIN BUS:
VOLTAGE: 120/240v-1P-3W
PROJECT NAME: HOLLAND STREET PEDESTRIAN LIGHTING BRIDGE
LOCATION: PER JMT ROADWAY LIGHTING DESIGN

DESCRIPTION	PHASE WATTAGE *A	PHASE WATTAGE *B	BREAKER POLE	BREAKER AMP	CKT	BUS	CKT	BREAKER AMP	BREAKER POLE	PHASE WATTAGE *A	PHASE WATTAGE *B	DESCRIPTION
CIRCUIT a AS2	600		1	20	1		2	20	1	600		CIRCUIT b AS2
CIRCUIT c BL1		428	1	20	3		4	20	1		428	CIRCUIT d BL1
CIRCUIT e AS1	600		1	20	5		6	"	1	600		CIRCUIT f AS1
CIRCUIT g BL1		238	1	20	7		8	20	1		238	CIRCUIT h BL1
CIRCUIT j SS1	1365		2	30	9		10	20	2	1365		CIRCUIT k SS1
I		1365	2	"	11		12	"	"		1365	I
CIRCUIT l SS1	943		1	20	13		14	20	1	910		CIRCUIT m SS1
CIRCUIT n SS1		1170	1	20	15		16	20	1		1040	CIRCUIT o SS1
CIRCUIT p SS3	2880		2	20	17		18					
I		2880	"	"	19		20					
	6388	6081								3475	3071	

	*A	*B	CALCULATED LOAD VALUES	
PANEL PHASE TOTALS	9863	9152	TOTAL CONNECTED Kw	19.02Kw
			TOTAL CONNECTED A	79A



DRIVER SCHEDULE FOR MAIN SPAN NORTH AND SOUTH SIDE

WIRE AND CONDUIT SCHEDULE

CALLOUT	CONDUIT AND CONDUCTORS	GOING TO	WIRE TYPE
1	(2) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX FOR AS2 MAIN SPAN N CKT a	THHN/THWN
2	(2) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX FOR AS2 MAIN SPAN N CKT b	THHN/THWN
3	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR BL1 FRONT ST CKT c	THHN/THWN
4	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR BL1 FRONT ST CKT d	THHN/THWN
5	(2) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR AS1 MAIN SPAN S CKT e	THHN/THWN
6	(2) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR AS1 MAIN SPAN S CKT f	THHN/THWN
7	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR BL1 MAIN SPAN S CKT g	THHN/THWN
8	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR BL1 MAIN SPAN S CKT h	THHN/THWN
9	(3) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 RAMP WALL CKT j	THHN/THWN
10	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 RAMP WALL CKT k	THHN/THWN
11	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 RAMP WALL CKT l	THHN/THWN
12	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 RAMP WALL CKT m	THHN/THWN
13	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 MAIN SPAN N CKT n	THHN/THWN
14	(2) #10 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS1 MAIN SPAN N CKT o	THHN/THWN
15	(3) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FOR SS3 MAIN SPAN N CKT p	THHN/THWN
16	(3) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FROM BL1 FRONT ST CKT c	THHN/THWN
17	(3) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FROM BL1 FRONT ST CKT d	THHN/THWN
18	(3) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FROM BL1 MAIN SPAN S CKT g	THHN/THWN
19	(3) #8 + (1) #10 GND IN 2" SCHED. 80 PVC	CONTROL CABINET TO PULLBOX TO JBOX FROM BL1 MAIN SPAN S CKT h	THHN/THWN

NOTE: REFER TO NORTH WALL DRIVER MAP FOR LOCATIONS AND DETAILS

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

ELECTRICAL SCHEDULES

RECOMMENDED _____

DES: AG | DWN: BNS | CKD: SF

PLOTTED: $DATE$ $TIME$

FILENAME: $FILE$

OPERATOR: $USER$

GENERAL LIGHTING NOTES

GENERAL PROVISIONS

1. PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS, SPECIFICATIONS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL PERMITS AND INSPECTION FEES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE ALL ELECTRICAL INSPECTIONS REQUIRED BY THE BUILDING DEPARTMENT AND SERVING UTILITIES.
3. CONTRACTOR SHALL PERFORM ALL WORK IN STRICT ACCORDANCE WITH ALL LOCAL AND NATIONAL GOVERNING CODES, INCLUDING SEISMIC, IF APPLICABLE. WORK NOT IN CONFORMANCE WITH APPLICABLE CODES SHALL BE BROUGHT INTO COMPLIANCE AT THE CONTRACTOR'S EXPENSE.
4. ALL ELECTRICAL MATERIAL AND EQUIPMENT SHALL BE IN NEW CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED, LABELED OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY. IMMEDIATELY NOTIFY LIGHTING DESIGNER IF ANY SPECIFIED LIGHTING EQUIPMENT IS NOT APPROPRIATELY LISTED, OR ARRIVES WITHOUT APPROPRIATE LABELING.
5. ALL EQUIPMENT SHALL BE FACTORY TESTED TO ENSURE PROPER OPERATION PRIOR TO SHIPMENT TO JOB SITE.
6. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP RELATED TO THE ELECTRICAL INSTALLATION FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF OWNERSHIP TURNOVER. ANY DEFECTS IN MATERIALS OR WORKMANSHIP DURING THIS GUARANTEE PERIOD SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
7. CONTRACTOR SHALL VISIT SITE PRIOR TO BID DATE, TO VERIFY ALL EXISTING CONDITIONS TO BE ENCOUNTERED IN THE INSTALLATION OF ALL NEW EQUIPMENT, FIXTURES, DEVICES, FEEDERS, ETC. EXACT INSTALLATION METHOD AND REQUIREMENTS SHALL BE VERIFIED AND DETERMINED PRIOR TO BID DATE. CONTRACTOR SHALL IMMEDIATELY NOTIFY LIGHTING DESIGNER OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED.
8. ALL EQUIPMENT, ELECTRICAL CHARACTERISTICS, LOCATIONS, AND CONNECTION REQUIREMENTS SHALL BE VERIFIED PRIOR TO ANY ROUGH-IN WORK.
9. THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS.
10. ELECTRICAL CONTRACTOR SHALL BE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, AND CAPABLE OF EMPLOYING THE PROPER LABOR FORCE NECESSARY TO COMPLETE THE INSTALLATION AS INSTRUCTED BY OWNER.
11. PROVIDE SHIPMENT OF ALL LIGHTING AND RELATED EQUIPMENT TO BE DELIVERED TO THE JOB SITE.
12. DELIVERY OF EQUIPMENT TO THE JOB SITE SHALL BE IN CLEARLY IDENTIFIED CRATES, CARTONS, OR APPROPRIATE SHIPPING CONTAINERS AS TO ITEM, QUANTITY, AND INSTALLATION LOCATION. ONCE RECEIVED, LIGHTING EQUIPMENT SHALL BE SECURED AND PROTECTED FROM THE ELEMENTS.
13. CONTRACTOR SHALL BE CAPABLE OF MAKING EMERGENCY WARRANTY REPAIRS WITHIN TWENTY-FOUR (24) HOURS OF NOTIFICATION WHEN A SYSTEM OR COMPONENT MALFUNCTIONS DURING USE.
14. ALL MEASUREMENTS FOUND IN LIGHTING PLANS ARE APPROXIMATE. CONTRACTOR SHALL MAKE FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND SPECIFICATIONS.
15. EMERGENCY EGRESS LIGHTING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER IN CONSULTATION WITH THE OWNER'S REPRESENTATIVE.
16. CONTRACTOR SHALL PROPERLY VERIFY ALL CIRCUITRY, DIMMING AND CONTROL PRIOR TO TEST AND ADJUST PHASE COMMENCING.
17. CONTRACTOR TO REFER TO ARCHITECTURAL (A) AND LIGHTING DRAWINGS (EL) AND SPECIFICATION PACKAGES FOR ALL MOUNTING HEIGHTS AND DETAILS FOR SPECIAL MOUNTING REQUIREMENTS.
18. CONTRACTOR SERVICES SHALL INCLUDE NECESSARY SYSTEMS INTEGRATION AND ENGINEERING, PROJECT MANAGEMENT AND INTERFACE WITH OWNER, CONSULTANTS, ARCHITECTS, CONTRACTORS AND ALL OTHER PARTIES NECESSARY TO PROVIDE A COMPLETE AND WORKING LIGHTING SYSTEM.
19. CONTRACTOR SERVICES SHALL INCLUDE A SYSTEMS INTEGRATOR (SI) TO PROPERLY COORDINATE THE INSTALLATION AND SET UP OF THE SPECIALTY FIXTURES AND CONTROL EQUIPMENT (E.G. DMX, ETHERNET, RS232, SMPTE ETC.) ON THE JOB SITE REGARDLESS OF THE MANUFACTURER OF THE FIXTURES OR CONTROL EQUIPMENT.

INSTALLATION

1. ALL FIXTURE VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE RELEASE OF FIXTURE ORDER
2. FIXTURES SHALL HAVE APPROPRIATE UL OR OTHER RECOGNIZED TESTING AGENCY LABEL, AS WELL AS DAMP OR WET LISTING AS REQUIRED BY LOCAL CODES.
3. FIXTURES SHALL INCLUDE ACCESSORIES FOR INSTALLATION ACCORDING TO LOCAL AND NATIONAL CODES.
4. PRIOR TO ORDERING LIGHTING EQUIPMENT, THE CONTRACTOR SHALL VERIFY:
    a. FIXTURE LOCATIONS
    b. FIXTURE MOUNTING CONDITIONS
    c. CEILING TRIM COMPATIBILITY
    d. RECESS DEPTHS
    e. EXISTENCE OF IC OR OTHER RESTRICTIVE CONDITIONS
    f. FIRE RATED CEILING OR LOCATIONS
    g. FIXTURE VOLTAGE
6. CONTRACTOR TO PROVIDE AND COORDINATE APPROVED FIRE-RATED ENCLOSURES FOR LIGHTING FIXTURES LOCATED IN A FIRE-RATED CEILING.
7. CONTRACTOR TO COORDINATE IC HOUSING REQUIREMENTS, IF ANY, AS REQUIRED.
8. LAMPS AND ACCESSORIES (E.G. COLOR FILTERS, LOUVERS, ETC.) SHALL BE INSTALLED IN FIXTURES IN ACCORDANCE WITH THE PROVIDED FIXTURE SCHEDULE.
9. CEILING THICKNESS IN EXCESS OF ¾" SHALL BE IDENTIFIED IN WRITING BY THE CONTRACTOR OR ARCHITECT.
10. FIXTURES SHALL BE ORDERED WITH THE APPROPRIATE BALLASTS COMPLETE UL , CBM OR OTHER RECOGNIZED TESTING LAB LABELS. WHERE REQUIRED, BALLASTS SHALL CONFORM TO TITLE 24 OR OTHER ENERGY CODE REQUIREMENTS FOR PERFORMANCE, SWITCHING, AND WIRING (E.G. TANDEM WIRED, BI-LEVEL SWITCHING, ETC.).
11. WALLS DIRECTLY ILLUMINATED BY UPLIGHT OR DOWNLIGHT WALL WASH SHALL BE INSTALLED AND FINISHED IN A MANNER TO ELIMINATE SHADOWS OR BLEMISHES (E.G. HANG DRY WALL VERTICALLY, AND LEVEL 5 DRYWALL FINISH).
12. THE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED TO. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES, ETC., AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
13. ALL CUSTOM LENGTH FIXTURES (E.G. CONTINUOUS WALL SLOT FIXTURES) SHALL BE FIELD MEASURED PRIOR TO ORDERING, AND MANUFACTURER SHOP DRAWINGS ISSUED TO THE LIGHTING DESIGNER FOR REVIEW PRIOR TO RELEASE FOR MANUFACTURE.
14. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE WORK AND MAKE FIXTURE AND LIGHTING SYSTEMS FULLY OPERATIONAL.
15. LIGHTING FIXTURES, SHOWN IN THESE DRAWINGS, SHALL NOT BE USED AS WORKLIGHTS DURING CONSTRUCTION AND SHALL BE FULLY OPERATIONAL AT THE TIME OF OPENING TO THE PUBLIC.
16. CONTRACTOR SHALL PROVIDE OWNER AND LIGHTING DESIGNER WITH ONE SET EACH OF ELECTRICAL "AS-BUILTS" AT THE COMPLETION OF JOB.
17. LIGHTING DESIGN ALLIANCE SPECIFICALLY RESERVES THE RIGHT TO RELOCATE ANY EQUIPMENT OR OUTLET AT NO INCREASE IN CONTRACT COST PRIOR TO ITS INSTALLATION (IN CASE OF STANDARD PRODUCT) OR RELEASE FOR MANUFACTURE (IN THE CASE OF CUSTOM PRODUCT), REGARDLESS OF PRIOR SHOP OR DESIGN DRAWING REVIEW.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ROUGH AND FINAL AIMING AND FOCUS OF ALL LIGHTING FIXTURES AS DIRECTED BY LIGHTING DESIGNER DURING TEST AND ADJUST PHASE.

EXECUTION

1. ALL CONDUIT RUNS SHALL BE CONCEALED UNLESS SHOWN OTHERWISE, OR APPROVED.
2. EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE.
3. CONTRACTOR TO SUPPLY A MINIMUM OF TWO ELECTRICIANS FOR EACH LIGHTING DESIGNER DIRECTING FOCUS DURING THE TEST AND ADJUST PHASE (AKA FOCUS AND PROGRAMMING). ELECTRICIANS TO BE MINIMUM JOURNEYMAN LEVEL EXPERIENCE. CONTRACTOR MUST SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS FIXTURES AT THE TIME FOR FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE CONFLICT OR DAYLIGHT IMPACT.
4. CONTRACTOR TO HAVE ALL NECESSARY EQUIPMENT AVAILABLE THROUGHOUT TEST AND ADJUST PHASE INCLUDING, BUT NOT LIMITED TO:
    - STANDARD CONTRACTOR ELECTRICIAN HAND TOOLS.
    - SOCKET SET
    - CLEAN LINT-FREE TOWELS OR WIPES TO CLEAN LENSES AND REFLECTORS
    - SPARE LAMPS FOR FIXTURES BEING FOCUSED
    - LADDERS, FULLY-CHARGED LIFTS OR OTHER MEANS OF ACCESS TO AREAS BEING FOCUSED.
    - SAFETY HARNESSES OR OTHER DEVICES AS REQUIRED.

DES:	DWN:	CKD:

SUBMITTALS

1. CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS HE INTENDS TO FURNISH WITHIN (7) DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
2. REQUESTS FOR APPROVAL OF NON-SPECIFIED PRODUCTS MUST BE ACCOMPANIED BY THE FOLLOWING AT LEAST FIVE (5) BUSINESS DAYS IN ADVANCE OF THE BID SUBMITTAL DATE:
    a. SPECIFICATION DATA SHEET COMPLETE WITH MANUFACTURER NAME AND SPECIFIED MODEL NUMBER, AS WELL AS MANUFACTURER'S PUBLISHED PHOTOMETRICS
    b. A LIST OF COMPARABLE PROJECTS WHERE THE PRODUCT HAS BEEN USED IN THE LAST (2) YEARS
    c. FUNCTIONING SAMPLE OF PRODUCT, COMPLETE WITH CORD AND PLUG AND SPECIFIED LAMP
3. MANUFACTURERS OF SUBMITTED PRODUCTS MUST HAVE BEEN IN BUSINESS FOR FIVE YEARS AND IN NO INSTANCE WILL THIS PROJECT BE THE OCCASION OF THE FIRST INSTALLATION OF THIS PRODUCT IF IT IS NOT LISTED ON THE SPECIFICATION.
4. CONTRACTOR SHALL ALLOW PROPER ORDERING TIME FOR PROCUREMENT OF FIXTURES. LIGHTING DESIGN ALLIANCE SHALL BE NOTIFIED IMMEDIATELY OF ANY PRODUCT SUBSTITUTIONS AS A RESULT OF DELIVERY, PRIOR TO ORDERING ALTERNATE PRODUCT. FAILURE TO ORDER FIXTURES WITH ADEQUATE LEAD-TIME TO MEET THE INSTALLATION SCHEDULE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PROVIDE AND INSTALL THE SPECIFIED PRODUCT, EVEN AFTER SUBSTANTIAL COMPLETION, WITH ALL LABOR AND MATERIAL CHARGES FOR OTHER TRADES AT THE CONTRACTOR'S EXPENSE.
5. SHOULD A MANUFACTURER FAIL TO DELIVER A PRODUCT THAT HAS BEEN ORDERED WITHIN REASONABLE LEAD-TIME, CONTRACTOR SHALL NOTIFY LIGHTING DESIGN ALLIANCE WITH A PROPOSED ALTERNATE FIXTURE. LIGHTING DESIGN ALLIANCE SHALL MAINTAIN FINAL AUTHORITY FOR AUTHORIZATION OF ANY SUBSTITUTION.
6. LAMPS AND ANY ACCESSORIES SPECIFIED SHALL BE INCLUDED IN THE SUBMITTAL PACKAGE FOR ALL FIXTURES. IF NO SUBMITTAL IS MADE ON LAMPS, LAMPS MUST BE PROVIDED AS SPECIFIED, OR FROM APPROVED MANUFACTURERS: PHILIPS, OSRAM SYLVANIA, GENERAL ELECTRIC, USHIO, AND VENTURE.
7. CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE MANUALS INCLUDING, BUT NOT LIMITED TO:
    a. REQUIRED SCHEDULED MAINTENANCE.
    b. ORIGINAL MANUFACTURER'S EQUIPMENT (OME) TECHNICAL DATA SHEETS.
    c. DETAILED OPERATING PROCEDURES.
    d. A LIST OF RECOMMENDED SPARE PARTS AND LAMPS.
    e. INSTALLATION WIRING DIAGRAMS.
    f. SHOP DRAWINGS
    g. INSTALLATION AND/OR CONSTRUCTION AS-BUILT DRAWINGS.

FIXTURE SPECIFICATIONS

1. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND SUPPORTED IN ACCORDANCE WITH APPLICABLE SAFETY STANDARDS AND ALL NATIONAL AND LOCAL ELECTRICAL CODES.
2. ALL EXTERIOR EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL EQUIPMENT SHALL CONFORM TO THE CONDITIONS IN WHICH THE FIXTURE IS MOUNTED.
3. CONTRACTOR SHALL PROVIDE FIXTURE-MOUNTING KITS AS REQUIRED TO SUIT THE EXACT TYPE OF CEILING OR CONDITION TO WHICH THEY ARE MOUNTED.
4. ALL FIXTURES SHALL BE SUPPLIED WITH ACCESSORIES AS LISTED.
5. ALL REMOTE TRANSFORMERS AND /OR BALLASTS ARE TO BE LOCATED AS CLOSE TO THE FIXTURE AS POSSIBLE, HIDDEN FROM GUEST VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED TO PROVIDE HEAT DISSIPATION.
6. ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
7. CONTRACTOR TO SUPPLY LAMPS ONLY FROM APPROVED LAMP MANUFACTURERS. APPROVED MANUFACTURERS: PHILIPS, OSRAM SYLVANIA, GENERAL ELECTRIC, USHIO, VENTURE
8. COLOR FILTERS SHALL BE GLASS OR DICHROIC UNLESS OTHERWISE INDICATED IN DRAWINGS OR SPECIFICATIONS.
    a. WHERE A SPECIFIC COLOR HAS NOT BEEN CALLED FOR IN SPECIFICATIONS, CONTRACTOR SHALL CONFIRM COLOR WITH LIGHTING DESIGNER PRIOR TO ORDERING.
    b. CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
9. CONTRACTOR TO PERMANENTLY LABEL ALL COLOR MEDIA IN A MANNER THAT DOES NOT INTERFERE WITH LIGHT OUTPUT.
10. CONTRACTOR TO VERIFY ALL FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER. THIS INCLUDES FRAMES, SNAP RINGS, ATTACHMENT HARDWARE AND/OR FILTER STANDOFF. ALL ATTACHMENT HARDWARE MUST BE SUBMITTED BY SUPPLIER FOR REVIEW PRIOR TO ORDERING OF FIXTURE. REVIEW AND APPROVAL SHALL BE BY LIGHTING DESIGNER.
11. CONTRACTOR TO VERIFY ALL FIXTURES SPECIFIED WITH A TEMPLATE (PATTERN OR "GOBO") ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE PATTERN. THIS INCLUDES PATTERN HOLDERS, SNAP RINGS, AND/OR INSTALLATION HARDWARE. CONTRACTOR TO VERIFY SIZE AND TYPE OF TEMPLATE MATERIAL IN CONJUNCTION WITH FIXTURE SPECIFICATIONS AND LIGHTING INSTRUMENT SCHEDULE. ALL ATTACHMENT HARDWARE MUST BE SUBMITTED BY SUPPLIER FOR REVIEW PRIOR TO ORDERING OF FIXTURE. REVIEW AND APPROVAL SHALL BE BY LIGHTING DESIGNER.
12. CONTRACTOR TO PROVIDE LAMPS FOR ALL FIXTURES IN FULL CASES TO EXCEED THE NUMBER REQUIRED BY NO LESS THAN 10%.
13. CONTRACTOR TO REPLACE ALL BURNED OUT OR INOPERATIVE LAMPS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO TEST AND ADJUST (ALSO KNOWN AS "AIMING" OF "FOCUSING") PHASE AND ONCE AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.

SYSTEM INTEGRATOR

1. LIGHTING "SYSTEM INTEGRATOR" (SI) SHALL MEAN THE CONTRACTOR RESPONSIBLE TO PROVIDE, FURNISH AND/OR INSTALL, AS NOTED, THE SPECIALTY LIGHTING EQUIPMENT, DIMMING AND CONTROL SYSTEMS.
2. THE SI SHALL TERMINATE ALL LIGHTING CONTROL DATA CONNECTIONS INCLUDING, BUT NOT LIMITED TO, REMOTE CONSOLE DATA STATIONS, LIGHTING DIMMER CABINETS, LIGHTING RELAY CABINETS, ARCHITECTURAL LIGHTING CONTROL STATIONS, LIGHTING CONTROL RACK, AND ALL OTHER LOW VOLTAGE LIGHTING CONTROLS REQUIRED TO PROVIDE A FUNCTIONING AND COMPLETE LIGHTING CONTROL NETWORK.
3. THE SI SHALL SET ALL NECESSARY DMX NETWORK ADDRESSES FOR EACH FIXTURE OR DEVICE REQUIRING OR RECEIVING CONTROL SIGNAL ACCORDING TO LIGHTING DESIGN PAPERWORK/INSTRUMENT SCHEDULE.
4. THE SI SHALL CERTIFY THAT ALL LIGHTING DATA CABLES ARE TERMINATED CORRECTLY AND FUNCTIONING.
5. SERVICES SHALL INCLUDE NECESSARY SYSTEMS INTEGRATION AND ENGINEERING, PROJECT MANAGEMENT AND INTERFACE WITH OWNER, CONSULTANTS, ARCHITECTS, CONTRACTORS AND ALL OTHER PARTIES NECESSARY TO PROVIDE A COMPLETE AND WORKING LIGHTING SYSTEM.
6. SERVICES MAY INCLUDE SITE VISITS AND OR ATTENDANCE AT COORDINATION MEETINGS WITH INSTALLATION PERSONNEL. A MINIMUM OF TWO (2) SITE VISITS AND TWO (2) COORDINATION MEETINGS ARE REQUIRED DURING PROJECT DURATION AND SHALL BE INCLUDED IN BASE BID. ADDITIONAL MEETINGS AND ONSITE TIME, AS REQUIRED, WILL BE NEGOTIABLE.
7. TERMINATION OF ETHERNET LIGHTING NETWORK WIRING MAY BE COMPLETED BY A QUALIFIED SUBCONTRACTOR UNDER THE DIRECTION OF THE SI. SI REMAINS RESPONSIBLE FOR CERTIFYING OR ACCEPTING CERTIFICATION THAT ETHERNET SYSTEM MEETS ALL ETHERNET STANDARDS.
8. ALL EQUIPMENT SHALL BE THOROUGHLY TESTED, ADDRESSED, CONFIGURED AND "BURNED IN" BY THE SI PRIOR TO SHIPMENT TO THE SITE TO ENSURE MECHANICAL AND ELECTRICAL INTEGRITY.
9. THE SI SHALL HAVE BEEN IN THE SPECIALTY LIGHTING DISTRIBUTION AND INSTALLATION BUSINESS FOR A MINIMUM OF (5) YEARS AND SHALL HAVE PROVIDED COMPLETE ENGINEERING AND INSTALLATION SERVICES ON A MINIMUM OF FIVE JOBS OF SIMILAR SIZE AND SCOPE IN THE PAST FIVE YEARS.
10. THE SI SHALL INCLUDE THE SERVICES OF A FACTORY ENGINEER, WHO SHALL BE AVAILABLE TO REPORT TO THE JOB SITE WITHIN FOURTEEN (14) DAYS OF RECEIPT OF REQUEST FROM THE OWNER, CONTRACTOR, OR LIGHTING DESIGN ALLIANCE, AND SHALL REMAIN AT THE JOB SITE UNTIL THE SYSTEM IS FULLY OPERATIONAL TO THE SATISFACTION OF THE LIGHTING DESIGNER AND/OR OWNER'S REPRESENTATIVE.
11. SPECIALTY LIGHTING EQUIPMENT, SUCH AS AUTOMATED LUMINAIRES AND ANY DEVICE TRANSMITTING OR RECEIVING LIGHTING CONTROL DATA SHALL BE PROVIDED BY SI.
12. SYSTEMS INTEGRATORS ARE SUBJECT TO APPROVAL BY LIGHTING DESIGN ALLIANCE AND OWNER.

FIXTURE TYPE LABELING NOMENCLATURE

	LETTER #1 - FIXTURE TYPE		LETTER #2 - MOUNTING	
DECORATIVE	D	Decorative	E	Retrofit / Relamp
			F	Floor (Decorative)
			P	Pendant (Decorative)
			R	Recessed (Decorative)
			S	Surface (Decorative)
			T	Table (Decorative)
			W	Wall (Decorative)
ARCHITECTURAL	LETTER #1 - FIXTURE TYPE		LETTER #2 - MOUNTING	
	A	Adjustable Accent / Flood	C	Catenary
	B	Bollard	E	Retrofit / Relamp
	C	Light Column	H	Hardscape
	D	----------	L	Landscape (softscape / spike)
	E	Entertainment / Ellipsoidal	P	Pendant
	F	Fixed Accent / Flood / Cylinder	R	Recessed
	G	In-Grade Uplight	S	Surface
	H	----------	T	Track
	I	----------	Z	Specialty (C-Clamp, Truss, etc)
	J	----------		
	K	Keypad / Touchscreen (No 2nd Letter)		
	L	Linear (Line Voltage)		
	M	Millwork / Puck		
	N	Panel / Light Pad		
	O	----------		
	P	Pole		
	Q	Controls Device / Sensor (No 2nd Letter)		
	R	Recessed Downlight	LETTER #2 - DOWNLIGHT TYPE	
			A	Adjustable
			D	Fixed
			E	Retrofit / Relamp
			W	Wallwash
	S	Strip (Low Voltage)		
	T	Track (No 2nd Letter)		
	T	Trackhead		
	U	Underwater		
	V	----------		
	W	Wall Sconce / Steplight		
	X	General - 1x4, 2x4, 2x2, 1x1		
	Y	Existing Fixture (to remain)		
	Z	Specialty (Fiber, Mirror, Etc.)		

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

GENERIC LIGHTING SYMBOLS

AL	ALS	BOL	PH	REVNUM	SWITCH	TF	SECTION CALLOUT
(SURFACE MOUNTED LIGHT)	(SURFACE MOUNTED LIGHT)	(BOLLARD)	(POLE LIGHT)	(REVISION NUMBER)	(DIMMER)	(TRANSFORMER)	(DETAIL SECTION)

LINEWEIGHTS

LINE TYPE: HIDDEN2 — 85 100% — 240 100% — 250 45% — 253 30%
LINE TYPE: LED — 80 100% — 50 100% — 251 40% — 254 25%
LINE TYPE: LDA-HIDDEN — 150 100% — 185 100% — 252 35% — 255 0%
OTHER 55%

SHEET INDEX

Sheet List Table	
Sheet Number	Sheet Title
LD0-01	LIGHTING COVER SHEET
LD1-00	OVERALL BRIDGE AND SITE LIGHTING PLAN
LD3-01	OVERALL BRIDGE LIGHTING ELEVATION
LD3-02	BACKSTAY WALL LIGHTING ELEVATION
LD5-01	LIGHTING DETAILS 1 - SECTION THROUGH BRIDGE
LD5-02	LIGHTING DETAILS 2

LIGHTING CONSULTANT

LIGHTING DESIGN ALLIANCE
2830 TEMPLE AVE. LONG BEACH, CA 90806-2213, USA
T: 562.989.3843 F: 562.989.3847
www.LightingDesignAlliance.com

PREPARED BY:

T·Y LIN INTERNATIONAL
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LIGHTING COVER SHEET

RECOMMENDED _____

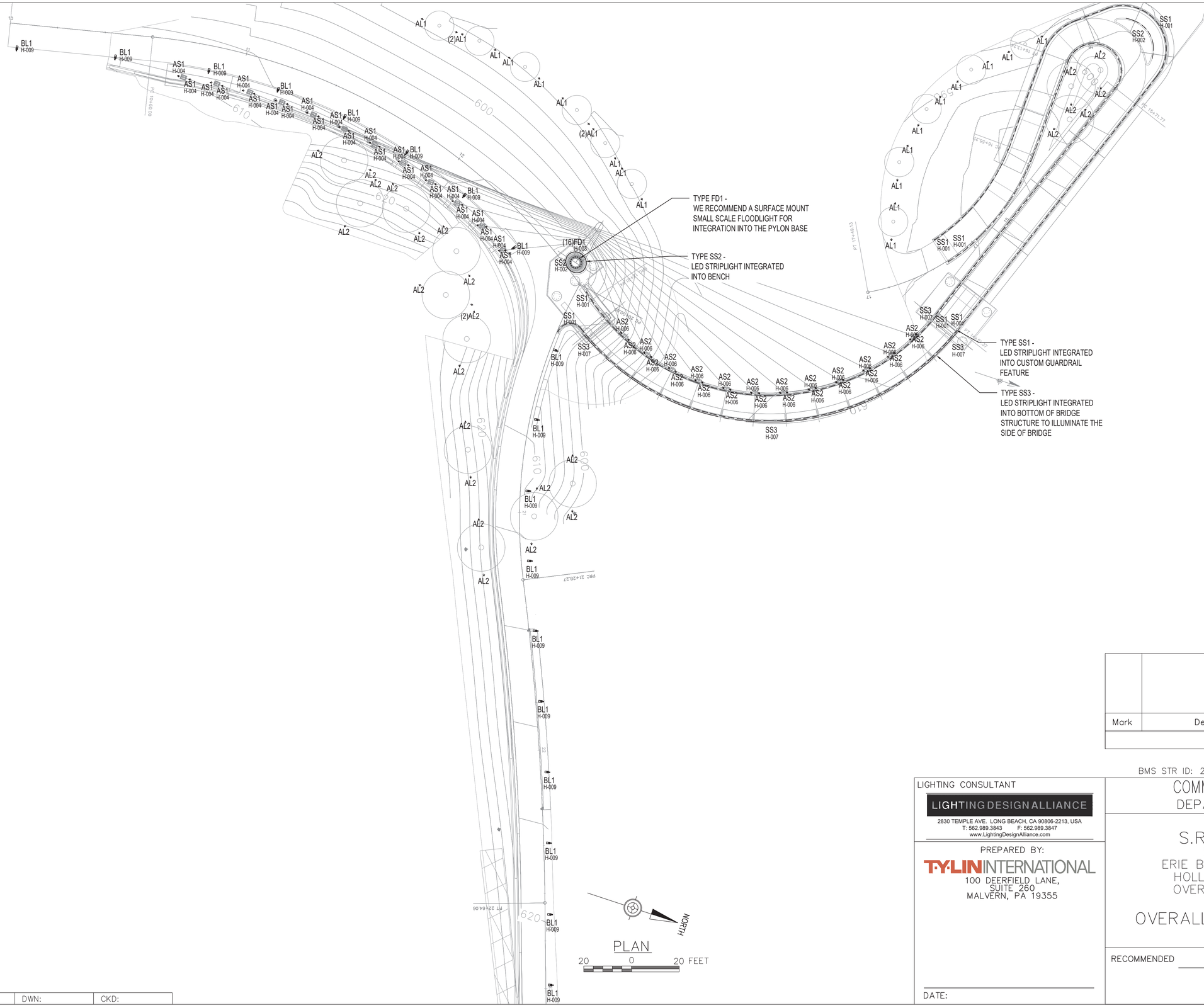
SHEET 131 OF 137
LD0-01

L-430

PLOTTED: $DATE$ $TIME$

FILENAME: $FILE$

OPERATOR: $USER$



DES:	DWN:	CKD:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

LIGHTING CONSULTANT

LIGHTING DESIGN ALLIANCE

2830 TEMPLE AVE. LONG BEACH, CA 90806-2213, USA
T: 562.989.3843 F: 562.989.3847
www.LightingDesignAlliance.com

PREPARED BY:

T·Y LIN INTERNATIONAL

100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

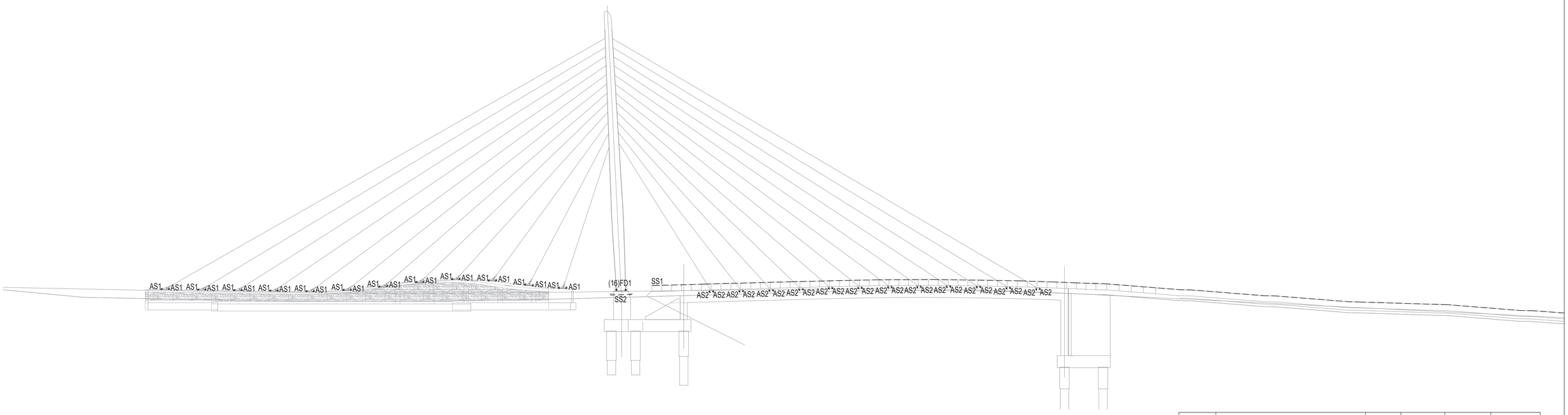
OVERALL BRIDGE AND SITE LIGHTING PLAN

RECOMMENDED

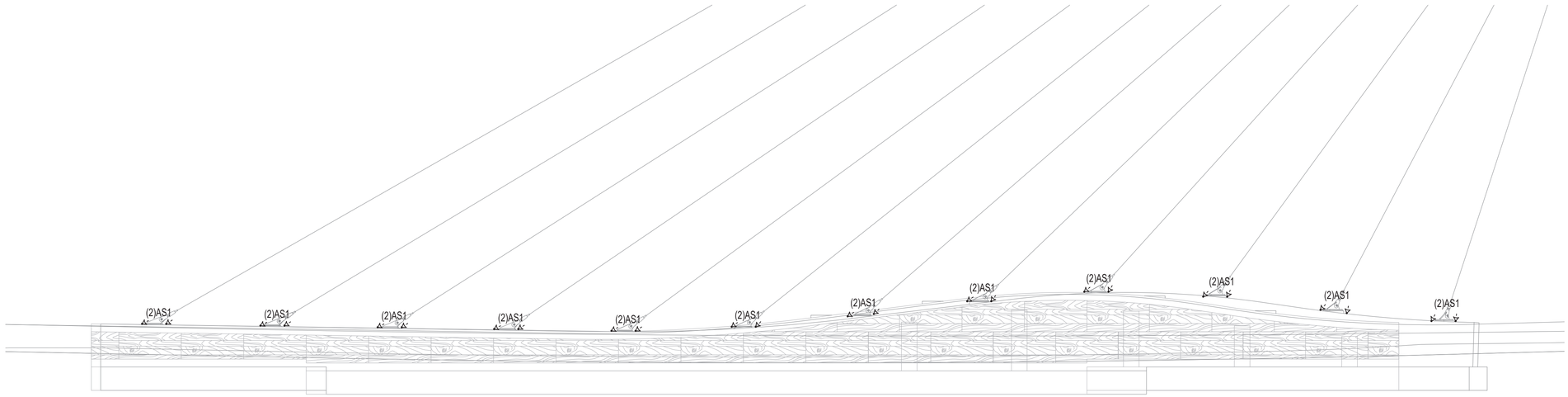
SHEET 132 OF 137
LD1-00

L-430

PLOTTED: $DATE$ $TIME$


AS1 AS1 AS1

PLOTTED: $DATE$ $TIME$



BACKSTAY WALL LIGHTING ELEVATION

8 0 8 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

LIGHTING CONSULTANT

LIGHTING DESIGN ALLIANCE

2830 TEMPLE AVE. LONG BEACH, CA 90806-2213, USA
T: 562.989.3843 F: 562.989.3847
www.LightingDesignAlliance.com

PREPARED BY:

TY LIN INTERNATIONAL

100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

BACKSTAY WALL LIGHTING ELEVATION

RECOMMENDED _____

DATE: _____

SHEET 134 OF 137
LD3-02

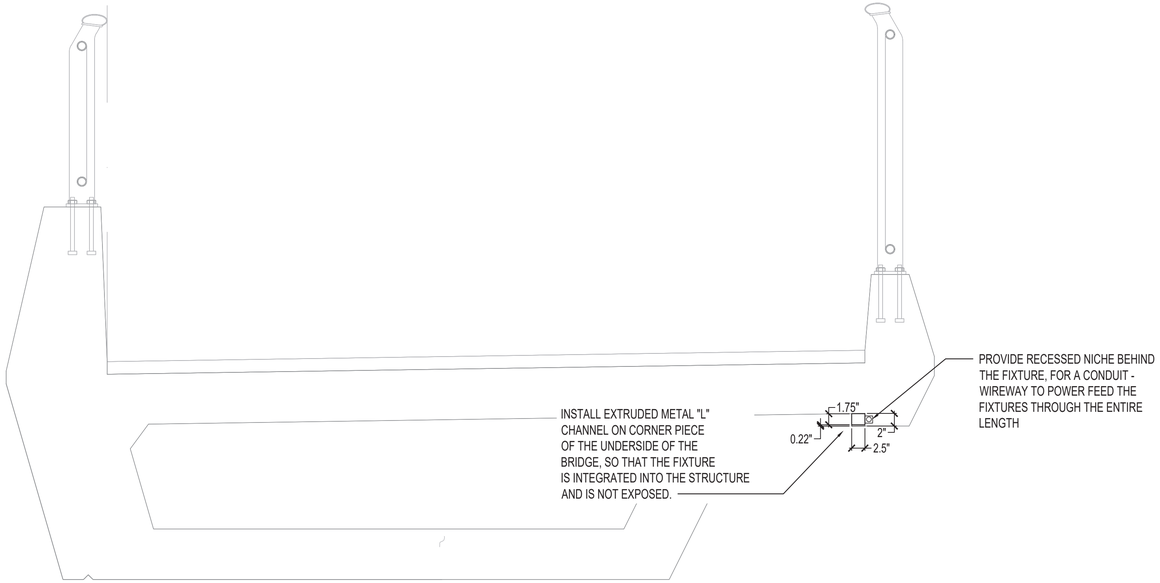
L-430

DES:	DWN:	CKD:

FILENAME: $FILE$

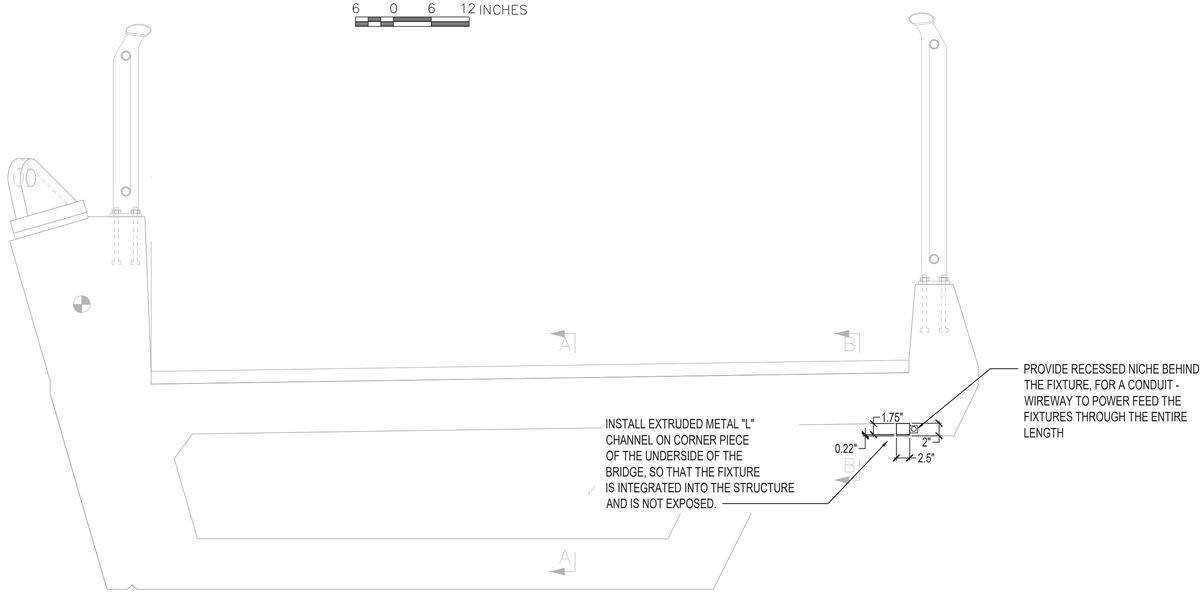
OPERATOR: $USER$

PLOTTED: $DATE$ $TIME$



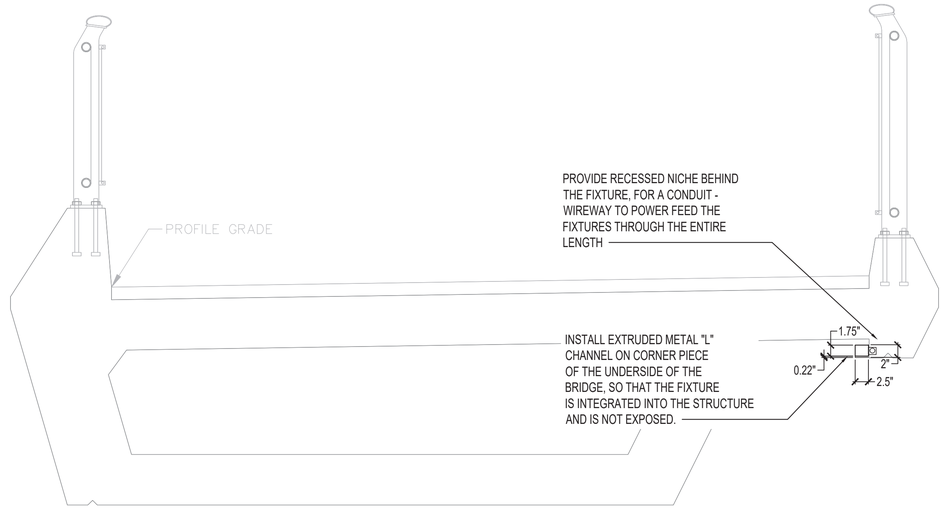
TYPICAL SECTION 13+14.88 TO 14+25.13

6 0 6 12 INCHES



TYPICAL SECTION AT STAYS 2–11

6 0 6 12 INCHES



SECTION AT FACE OF ABUTMENT 1 (12+92.5) AND ABUTMENT 2 (14+47.5)

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

BMS STR ID: 25–4034–0070–1294 ECMS PROJ: 108952 BRKEY: TBD

LIGHTING CONSULTANT

LIGHTING DESIGN ALLIANCE

2830 TEMPLE AVE. LONG BEACH, CA 90806-2213, USA
T: 562.989.3843 F: 562.989.3847
www.LightingDesignAlliance.com

PREPARED BY:

T·Y·LIN INTERNATIONAL

100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LIGHTING DETAILS 1 – SECTION THROUGH BRIDGE

RECOMMENDED

SHEET 135 OF 137

LD5–01

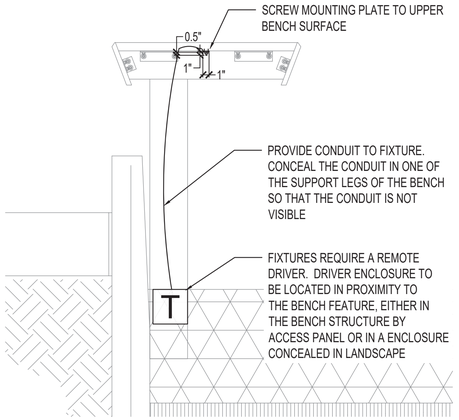
L–430

DES: DWN: CKD:

FILENAME: $FILE$

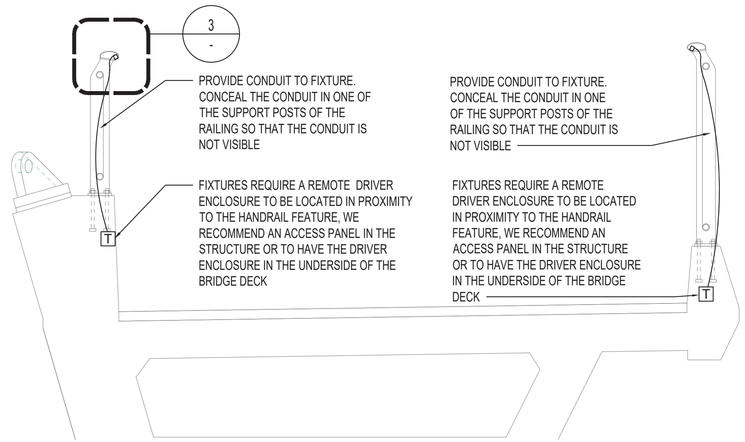
OPERATOR: $USER$

PLOTTED: $DATE$ $TIME$



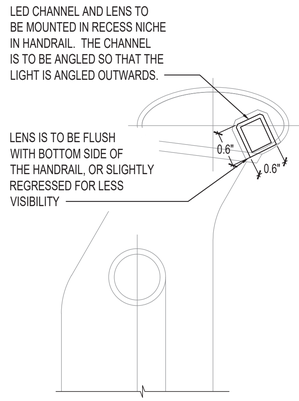
OVERLOOK BENCH LIGHTING DETAIL

SCALE	1
1" = 1'-0"	LD5-02



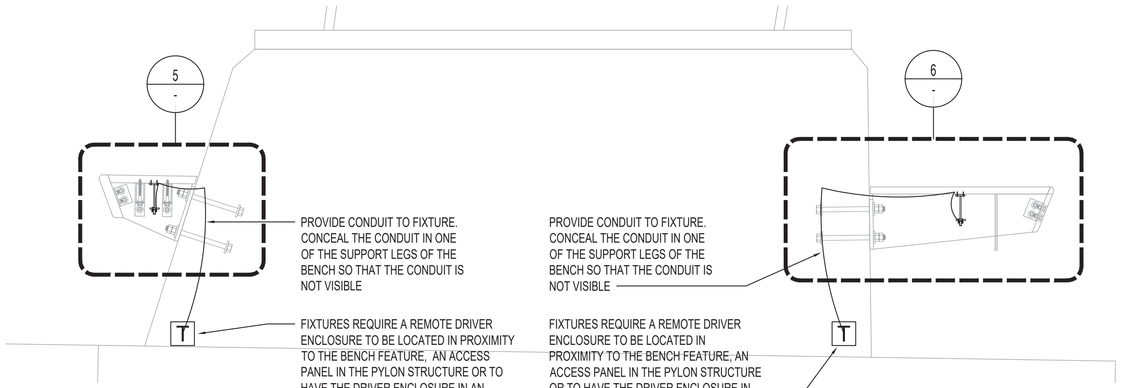
PED RAIL LIGHTING SECTION

SCALE	2
3/4" = 1'-0"	LD5-02



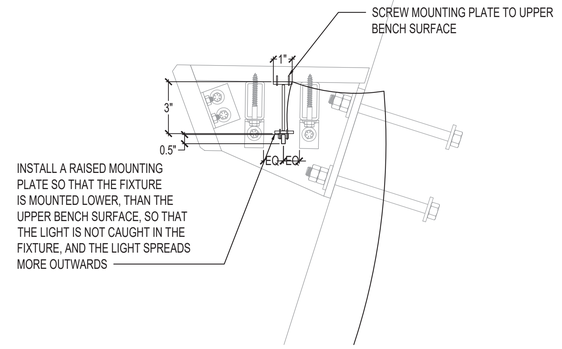
PED RAIL LIGHTING DETAIL

SCALE	3
6" = 1'-0"	LD5-02



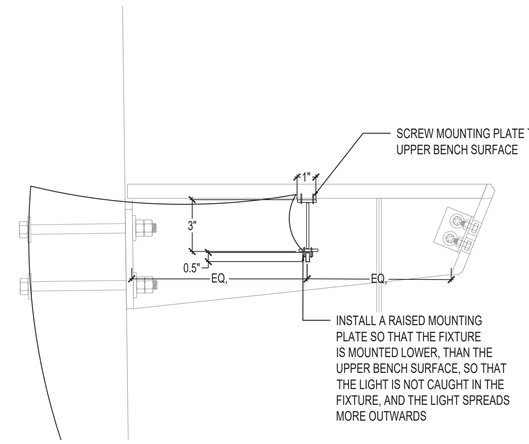
PYLON BENCH LIGHTING SECTION

SCALE	4
1 1/2" = 1'-0"	LD5-02



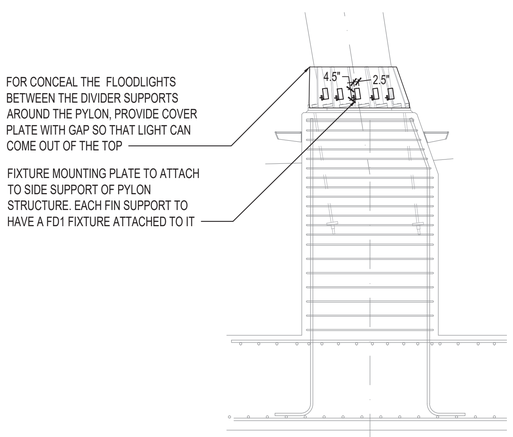
PYLON BENCH LIGHTING DETAIL

SCALE	5
3" = 1'-0"	LD5-02



PYLON BENCH LIGHTING DETAIL

SCALE	6
3" = 1'-0"	LD5-02



PYLON PEDESTAL LIGHTING DETAIL

SCALE	7
3" = 1'-0"	LD5-02

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

LIGHTING CONSULTANT
LIGHTING DESIGN ALLIANCE
2830 TEMPLE AVE. LONG BEACH, CA 90806-2213, USA
T: 562.989.3843 F: 562.989.3847
www.LightingDesignAlliance.com

PREPARED BY:
T.Y. LIN INTERNATIONAL
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

LIGHTING DETAILS 2

RECOMMENDED

DES: DWN: CKD:

FILENAME: $FILE$
OPERATOR: $USER$

PLOTTED: 8/22/2022 7:11:36 PM

DRAWING INTENTIONALLY LEFT BLANK

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1294 ECMS PROJ: 108952 BRKEY: TBD

PREPARED BY:
TYLin
100 DEERFIELD LANE,
SUITE 260
MALVERN, PA 19355

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DANIEL J FITZWILLIAM
ENGINEER
PE093642

DATE:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0071 OFFSET 1294
ERIE BAYFRONT PARKWAY IMPROVEMENTS
HOLLAND STREET PEDESTRIAN BRIDGE
OVER SR 4034 (BAYFRONT PARKWAY)

DRAWING NOT USED

RECOMMENDED _____

SHEET 137 OF 137

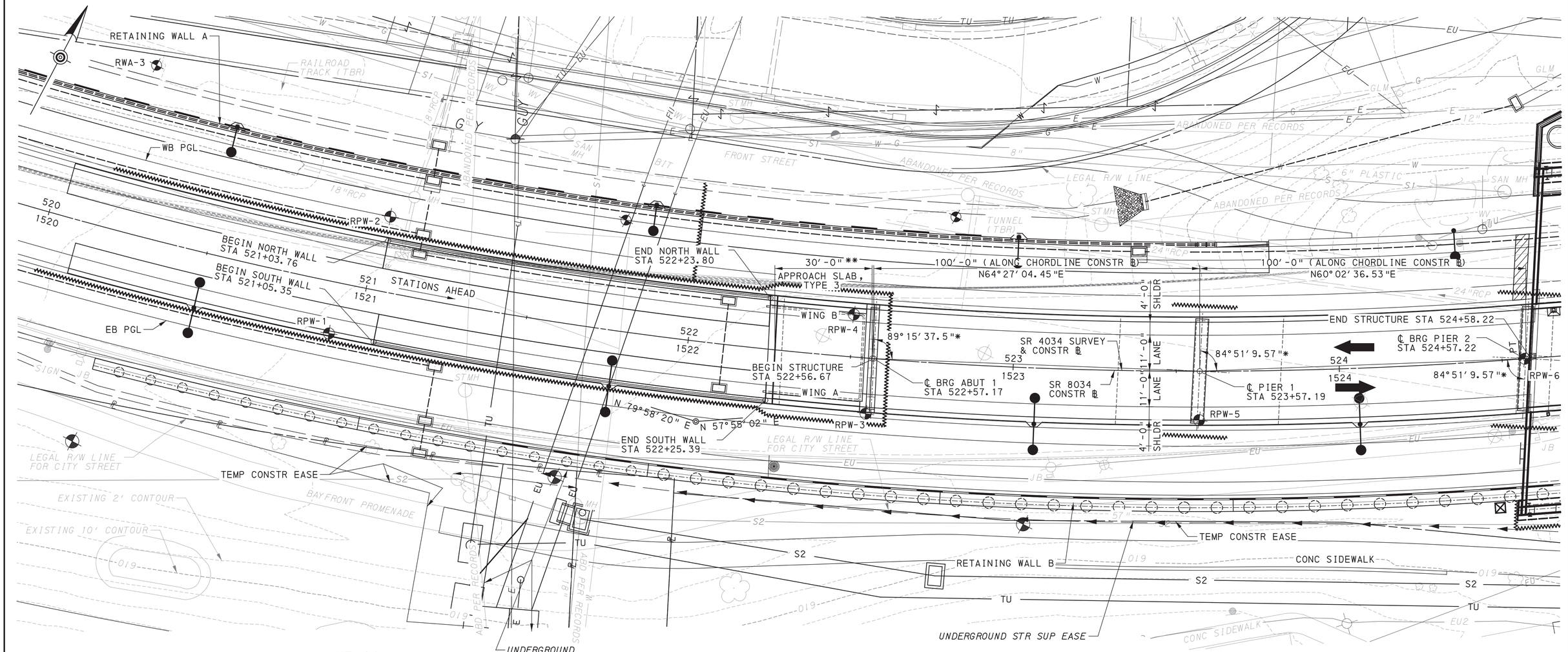
L-430

DES: | DWN: | CKD:

OPERATOR: tylipwi11cs01$ FILENAME: SL430013T0F0137.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTgp001.dgn



VERTICAL ALIGNMENT DATA

SR 4034 EASTBOUND
(PG EB)

PVI STA 520+66.47
ELEV 602.42
VC 245.00'
MO = -2.37'
SSD = 251'

+2.86% -5.54%

PVT STA 521+88.97 ELEV 595.64 — -5.54% — PVC STA 523+20.34 ELEV 588.36

PVI STA 524+90.34
ELEV 578.95
VC 340.00'
MO = 2.76'
HLSD = 261'

-5.54% +1.00%

SR 4034 & SR 8034
SURVEY & CONSTR ℄

PVT STA 523+28.88 ELEV 604.45 — +0.74% — PVI STA 525+80.58 ELEV 606.31 — -1.24% — PVC STA 527+12.06 ELEV 604.68

SR 4034 WESTBOUND
(PG WB)

PVI STA 520+74.83
ELEV 602.42
VC 220.00'
MO = -2.11'
SSD = 250'

+2.16% -5.54%

PVT STA 521+84.83 ELEV 595.32 — -5.54% — PVC STA 523+16.71 ELEV 588.02

PVI STA 524+81.71
ELEV 578.87
VC 330.00'
MO = 2.68'
HLSD = 255'

-5.54% +1.00%

PLAN

5 0 15 FEET

HORIZONTAL ALIGNMENT DATA

SR 4034
SURVEY & CONSTR ℄

PI STA 522+08.36
Δ 22° 03' 18" (LT)
D 4° 24' 27"
T 253.34'
L 500.41'
R 1,300.00'
PC STA 519+55.02
PT STA 524+55.44
SUPERELEVATE = 2.4% (INSIDE LANES)
SUPERELEVATE = 3.8% (OUTSIDE LANES)

NOTES:

FOR ELEVATION VIEW, SEE SHEET 2

FOR TYPICAL SECTION, SEE SHEET 6

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

LEGEND

* - REFERENCED TO CHORDLINE CONSTR ℄

** - MEASURED ALONG CONSTRUCTION ℄

- AS DRILLED STRUCTURE BORING

- DIRECTION OF TRAFFIC FLOW

- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)

- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)

- LIGHTING POLES & POST LIGHTS

- POST MOUNTED SIGNS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

PENNSYLVANIA PE NO. PE-

DATE: 8/22/2022

PREPARED BY:

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED
Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 16:22:11 -04'00'
DISTRICT BRIDGE ENGINEER

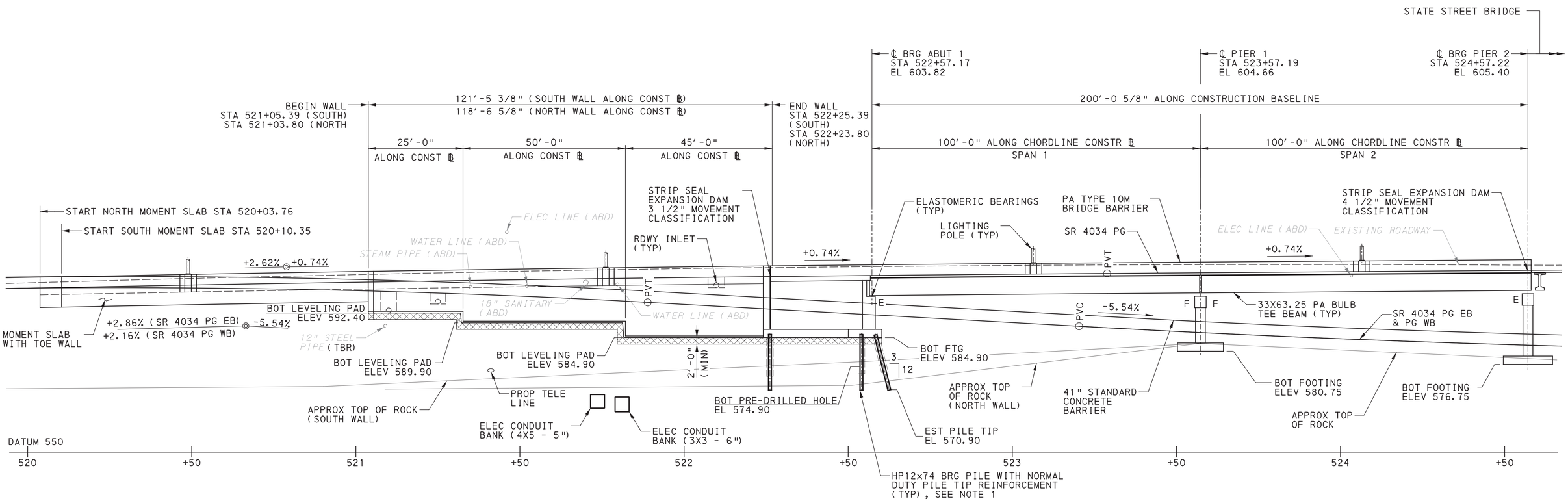
SHEET 1 OF 56

S-41006

DES: DFK	CKD: REB	DWG: DFK	CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTe1001.dgn



WEST RAMP ELEVATION

5 0 15 FEET

ORIGINAL AND NEW DATUM:
BASED ON THE CURRENT SURVEY, THE ELEVATIONS ARE APPROXIMATELY 0.50FT LOWER THAN THE ELEVATIONS SHOWN ON THE ORIGINAL DESIGN DRAWINGS (FIELD VERIFY)

NOTES:
1. STEEL PILES TO BE MANDATORY PRE-DRILLED WITH 24 INCH MINIMUM DIAMETER HOLES AT ABUTMENT AND WINGS A AND B.

LEGEND

LIMIT OF OVEREXCAVATION AND BACKFILL, SELECT BORROW EXCAVATION, COARSEAGGREGATE NO. 57

REFERENCES:

FOR GENERAL PLAN, SEE SHEET 1

FOR TYPICAL SECTION, SEE SHEET 6

FOR GENERAL NOTES, SEE SHEETS 3 & 4

INDEX OF DRAWINGS

SHEET NO	TITLE	SHEET NO	TITLE
1	GENERAL PLAN	29	BEARING DETAILS
2	ELEVATION	30	DECK SLAB PLAN
3	GENERAL NOTES - 1	31	DECK SLAB - TYPICAL SECTION
4	GENERAL NOTES - 2	32	DECK OVERHANG PLAN 1
5	SUMMARY OF QUANTITES	33	DECK OVERHANG PLAN 2
6	TYPICAL SECTION	34	DECK BARRIER AND RAILING PLAN
7	STAKE-OUT PLAN	35	DECK & APPROACH SLAB ELEVATIONS
8	ABUTMENT 1 FOOTING PLAN - 1	36	ABUTMENT 1 END DIAPHRAGMS
9	ABUTMENT 1 FOOTING PLAN - 2	37	PIER AND INTERMEDIATE DIAPHRAGMS
10	ABUTMENT 1 PLAN	38	PIER 2 END DIAPHRAGMS
11	ABUTMENT 1 ELEVATION	39	DECK LIGHT POLE DETAILS
12	ABUTMENT 1 TYPICAL SECTION	40	DECK POURING SEQUENCE
13	WINGWALL A ELEVATIONS AND SECTIONS	41	DECK REBAR SCHEDULE - 1
14	WINGWALL B ELEVATIONS AND SECTIONS	42	DECK REBAR SCHEDULE - 2
15	ABUTMENT REBAR SCHEDULE	43	APPROACH SLAB - ABUTMENT 1
16	PIER 1 PLAN & ELEVATION	44	APPROACH SLAB DETAILS - 1
17	PIER 1 FOOTING PLAN & DETAILS	45	APPROACH SLAB DETAILS - 2
18	PIER 2 PLAN & ELEVATION	46	APPROACH SLAB REBAR SCHEDULE
19	PIER 2 FOOTING PLAN & DETAILS	47	MSE RETAINING WALL PLAN & ELEV - 1
20	PIER REBAR SCHEDULE	48	MSE RETAINING WALL PLAN & ELEV - 2
21	FRAMING PLAN	49	MOMENT SLAB DETAILS
22	P/S CONCRETE BEAM DETAILS - 1	50	MSE RETAINING WALL DETAILS
23	P/S CONCRETE BEAM DETAILS - 2	51	MSE WALL DRAINAGE PLAN
24	P/S CONCRETE BEAM DETAILS - 3	52	STRUCTURE BORINGS - 1
25	P/S CONCRETE BEAM DETAILS - 4	53	STRUCTURE BORINGS - 2
26	P/S CONCRETE BEAM MOMENT TABLE	54	STRUCTURE BORINGS - 3
27	P/S CONCRETE BEAM SHEAR TABLE	55	STRUCTURE BORINGS - 4
28	LIGHT POLE SUPPORT DETAILS	56	STRUCTURE BORINGS - 5

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 56

S-41006

DES: DFK | CKD: REB | DWG: DFK | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTgn001.dgn

GENERAL NOTES:

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019.

LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4 DISTRIBUTION FACTORS.

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LIVE LOADS

PHL-93, P-82 (204K PERMIT LOAD) AND P2016-13 (330K PERMIT LOAD).

FATIGUE DESIGN IS BASED ON THE FOLLOWING (PRESTRESSED CONCRETE):
ADTT = 444
(ONE DIRECTIONAL)

MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE: $0.0948\sqrt{f'c}$

DEAD LOADS:

INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS THAT TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE STAY-IN-PLACE FORMS.

GENERAL CONSTRUCTION:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5:2015 (USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015) BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

DECK SLAB THICKNESS INCLUDES A ½ INCH INTEGRAL WEARING SURFACE.

USE EITHER PERMANENT METAL DECK FORMS OR REMOVABLE FORMS TO CONSTRUCT THE DECK SLAB. USE REMOVABLE FORMS TO CONSTRUCT THE OVERHANGS OUTSIDE THE EXTERIOR BEAMS.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEG F.

PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE.

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT THE INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.

PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(K)9.

PROVIDE A MINIMUM WIDTH OF 2 1/2" AT 68°F FOR STRIP SEAL INSTALLATIONS UNLESS OTHERWISE INDICATED.

DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.

DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.

SITE CLASS IS NOT CLASS E.

PROVIDE CAST-IN-PLACE BARRIERS. SLIP FORMING OR PRECAST BARRIERS ARE NOT PERMITTED ON THE DECK OR WINGWALLS.

SPREAD FOOTING MAY BE ORDERED BY THE ENGINEER TO BE AT ANY ELEVATION OR OF ANY DIMENSIONS NECESSARY TO PROVIDE A PROPER FOUNDATION.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND THE DESIGN OF ANY TEMPORARY SHORING AND BRACING THAT MAY BE USED. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

DIRECT ALL SURFACE RUNOFF AWAY FROM EXCAVATIONS.

UTILITY NOTES:

COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY, TYPE, SIZE, AND LOCATION OF UTILITIES.

CONCRETE:

USE CLASS AAAP CEMENT CONCRETE IN THE DECK SLAB AND HAUNCHES AND TYPE 3 APPROACH SLAB.

USE CLASS AA CEMENT CONCRETE IN THE BARRIERS, DIAPHRAGMS, SHEAR BLOCKS, CHEEKWALLS, U-WINGS ABOVE BRIDGE SEAT CONSTRUCTION JOINT, SLEEPER SLAB, MOMENT SLABS AND TOE WALLS.

IF CONCRETE DIAPHRAGMS ARE POURED MONOLITHICALLY WITH THE DECK, USE CLASS AAAP CEMENT CONCRETE FOR THE DIAPHRAGMS AT NO ADDITIONAL COST TO THE DEPARTMENT.

USE CLASS A CEMENT CONCRETE IN THE PIERS, ABUTMENTS BELOW BRIDGE SEAT, WINGWALLS BELOW BRIDGE SEAT AND FOOTINGS.

USE CLASS C CEMENT CONCRETE BELOW THE BOTTOM OF FOOTINGS WHEN SPECIFIED.

A HIGHER CLASS OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS OF CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT ENGINEER.

PROVIDE 2-INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

PLACE CHEEKWALL AND SHEAR BLOCK CONCRETE AFTER BEAMS ARE SET IN POSITION.

USE RETARDER ADMIXTURE CONFORMING TO PUBLICATION 40/2020 IN THE CONCRETE DECK SLAB.

USE AIR ENTRAINMENT AND A MAXIMUM WATER/CEMENT RATIO OF 0.45 (BY WEIGHT). CONCRETE ADDITIVES CONTAINING CHLORIDE ARE PROHIBITED.

USE SULFATE RESISTANT CEMENT, TYPE II IN ALL CONCRETE CLASSES IN CONTACT WITH EXISTING SOILS AND GROUND WATER.

USE CORROSION INHIBITING ADMIXTURE IN THE CONCRETE DECK SLAB.

APPLY PENETRATING SEALER TO ABUTMENT SEATS (EXCEPT BEARING AREAS), SHEAR BLOCKS AND TO THE INSIDE FACE OF CHEEKWALLS.

REINFORCEMENT STEEL:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, BARRIERS, OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED, UNLESS SPECIFIED.

PRESTRESSED CONCRETE BEAM NOTES:

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

STABILITY OF PARTIAL BEAMS AND COMPLETE BEAMS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION, UNTIL BEAMS AND DIAPHRAGMS ARE IN PLACE. ERECTION LOADS, INCLUDING SELF WEIGHT OF THE CONCRETE MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS, ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE BRIDGE MEMBERS DURING ANY STAGE OF ERECTION.

BRACE PRESTRESSED CONCRETE MEMBERS IN LONGITUDINAL AND LATERAL DIRECTIONS UNTIL MEMBERS ARE IN STABLE (FINAL BRACED) CONDITION.

PRIOR TO ERECTING THE BEAMS, AND IN ACCORDANCE WITH SECTION 1050(c) 2.d, SUBMIT AN ERECTION PLAN SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR REVIEW AND APPROVAL.

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
CONCRETE PAVEMENT JOINTS	RC-20M	9/30/2021
PA TYPE 10M BRIDGE BARRIER	BC-709M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
BRIDGE DRAINAGE	BC-751M	1/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	9/30/2016
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	9/30/2016
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	1/31/2019
PRESTRESSED CONCRETE BEAM BRACING	BC-772M	9/30/2016
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	9/30/2016
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	2/19/2021

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL NOTES - 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 56

S-41006

DES: DFK | CKD: REB | DWG: DFK | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTgn002.dgn

FOUNDATION:

OVEREXCAVATE ANY PART OF THE EXISTING RETAINING WALL THAT INTERFERES WITH THE PROPOSED STRUCTURE FOUNDATIONS FOR THE ABUTMENT, WINGWALLS, AND MSE RETAINING WALLS A MINIMUM 2.0 FEET BELOW THE BOTTOM OF THE PROPOSED STRUCTURES. THE BOTTOM OF THE OVEREXCAVATION FOR THE WALL SHALL BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER.

OVEREXCAVATE AND BACKFILL IN ACCORDANCE WITH THE SPECIAL PROVISIONS, OVEREXCAVATION AND BACKFILLING UNDER MSE FOOTPRINT AND OVEREXCAVATION AND BACKFILLING UNDER FOUNDATIONS PIER 1 AND PIER 2.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

PROVIDE A MINIMUM 8-FOOT STRAP LENGTH AND MINIMUM STRAP LENGTH-TO-HEIGHT RATIO OF 0.8 FOR THE ENTIRE LENGTH OF THE WALL.

BACKFILL THE AREA EXCAVATED UNDER THE MSE WALL AND ABUTMENT AND WINGWALLS WITH AASHTO NO. 57. WITHIN THE LIMITS OF THE MSE WALL, THE GRANULAR MATERIAL SHOULD BE UNDERLAIN WITH GEOTEXTILE CLASS 4, TYPE C.

PLACE THE BOTTOM OF THE LEVELING PAD A MINIMUM OF 4.0 FEET BELOW THE GROUND SURFACE TO SATISY FROST DEPTH REQUIREMENTS.

THE CONTRACTOR IS TO COORDINATE THE DRAINAGE SYSTEM WITH WALL MANUFACTURER.

THE CONTRACTOR AND WALL MANUFACTURER ARE TO DEVELOP A SPECIFIC PLAN FOR AVOIDING ALL EXISTING AND PROPOSED UTILITIES WITHIN THE REINFORCED ZONE THAT AFFECT THE PLACEMENT OF THE REINFORCING STRIPS.

DESIGN AND CONSTRUCT THE MSE WALLS IN ACCORDANCE WITH PENNDOT STANDARD BC-799M AND THE ATTACHED STANDARD SPECIAL PROVISION.

IN ACCORDANCE WITH PENNDOT STANDARD BC-799M, THE UNIT WEIGHT OF THE SPECIFIC BACKFILL FOR THE MSE WALLS SHALL BE BETWEEN 90 AND 120 PCF. THE UNIT WEIGHT OF THE MSE SHALL NOT EXCEED 120 PCF.

PROVIDE HP 12x74 PILES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTION 1005.2(C).

OVEREXCAVATE AND COMPACT BACKFILL MATERIAL UNDER THE FOOTPRINT OF ABUTMENT 1 PRIOR TO PILE INSTALLATION.

SUPPORT ABUTMENT 1 ON HP 12x74 (GRADE 50) PILES DRIVEN TO CASE 2 END BEARING IN ACCORDANCE WITH BC-757M AND PUBLICATION 408/2020, SECTION 1005.

MANDATORY PREDRILLING IS REQUIRED AT ALL PILE LOCATIONS TO AN ELEVATION 10 FEET BELOW THE BOTTOM OF THE PILE CAP.

PREDRILLED HOLES SHALL BE A MINIMUM OF 2.0 FEET IN DIAMETER. THE SOIL PORTION OF THE PRE-DRILLED HOLE MAY BE SUPPORTED BY TEMPORARY CASING, AS NEEDED.

PLACE THE H-PILES INTO THE PREDRILLED HOLES THROUGH THE TEMPORARY CASING AND BACKFILL THE ANNULUS OF THE HOLE WITH PEA GRAVEL.

DRIVE PILES IN ACCORDANCE WITH DM-4, PART A, SECTION 1.7.5.1 (a), METHOD A.

PLACE STRUCTURE BACKFILL IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, RC-12M BACKFILL AT STRUCTURES.

PROVIDE NORMAL DUTY PILE TIP REINFORCEMENT IN ACCORDANCE WITH STANDARD DRAWING BC-757M AND PUBLICATION 408/2020, SECTION 1005.2(b).

DRIVE A TOTAL OF TWO (2) TEST PILES FOR THE ABUTMENT AND ASSOCIATED WINGWALLS IN ACCORDANCE WITH PUBLICATION 408/2020.

THE REPRESENTATIVE IS TO INSPECT AND APPROVE THE PILE INSTALLATION METHOD. PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE REPRESENTATIVE FOR INSPECTION.

ORDER PILE LENGTHS A MINIMUM OF FIVE (5) FEET BEYOND THE ESTIMATED PILE TIP ELEVATION TO AVOID SPLICING.

ESTIMATED PILE TIP ELEVATIONS ARE PROVIDED FOR INFORMATION ONLY.

MAXIMUM DRIVING STRESS IN THE PILE SHALL NOT EXCEED 45 KSI.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

PROTECTIVE/AESTHETIC COATINGS:

APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUPERSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE EXPOSED SURFACES OF THE DECK WITHIN THE TRAVELWAY, TO THE APPROACH SLABS, TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE FASCIA BARRIERS (INCLUDING DOWN TO THE UNDERSIDE OF DECK TO THE DRIP NOTCH), TO 5'-0" BEYOND THE BEAM ENDS AT PIER 2, TO THE EXPOSED FACES OF THE DIAPHRAGM AT PIER 2, AND TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE TYPE 10M BARRIERS.

APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUBSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE ABUTMENT SEATS (EXCEPT BEARING AREAS), SHEAR BLOCKS, EXPOSED OUTSIDE FACES OF THE CHEEKWALLS AND PIER 2 CAP.

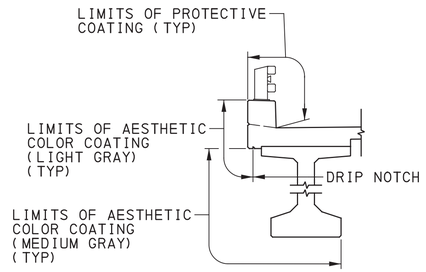
APPLY ARCHITECTURAL SURFACE TREATMENT TO THE MSE RETAINING WALLS, ABUTMENT, WINGWALLS AND PIERS. THE LIMITS ARE SHOWN ON THE PLANS.

APPLY AESTHETIC COLOR COATING TO THE OUTSIDE FACE AND UNDERSIDE OF THE FASCIA BARRIERS, TO THE OUTSIDE OF THE END BARRIERS, AND ON THE EXPOSED FACE OF THE CHEEKWALLS (EXTENDING 2'-0" BELOW FINISHED GROUND WHERE APPLICABLE).

COLORS SHALL MATCH FEDERAL COLOR ID 36650 (LIGHT GRAY) AND 36492 (MEDIUM GRAY). SUBMIT COLOR CHIPS FOR APPROVAL.

DES:	DFK	CKD:	REB	DWG:	DFK	CKD:	REB

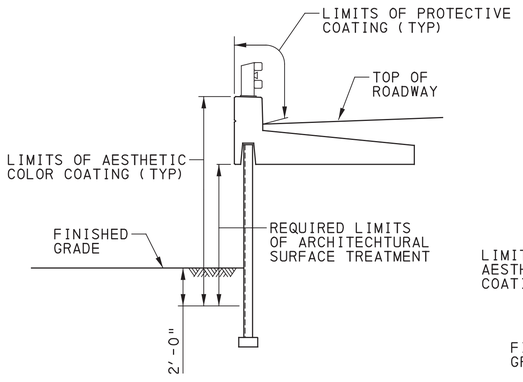
COMPLETE TABLE WITH INFORMATION FOR TEST PILES AFTER PILE INSTALLATION FOR THE AS BUILT OR RECORD SET OF PLANS SEE DM-4 SECTION 1.7.5.2 FOR ADDITONAL INFORMATION						
SUBSTRUCTURE UNIT	PILE TYPE	PILE TIP (NONE/ NORMAL/ HEAVY DUTY)	PILE TIP ELEVATION	FACTORED DESIGN LOAD (KIPS)	ULTIMATE PILE CAPACITY AT END OF DRIVING (KIPS)	WEAP OR PDA
ABUTMENT 1	HP12 x 74	NORMAL		270.74		



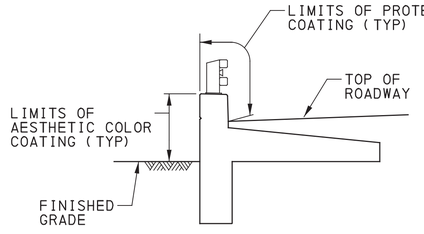
FASCIA BARRIERS

SUPERSTRUCTURE COATING LIMITS

NOT TO SCALE



MSE RETAINING WALL



MOMENT SLAB

COATING LIMITS

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL NOTES - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 56

S-41006

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTqu001.dgn

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION		UNIT	PIER 1	PIER 2	ABUT 1	APRROACH SLAB	SUPER-STRUCTURE	TOTAL
8030-0003	BRIDGE STRUCTURE, AS DESIGNED, S-41006	(3)	LS	-	-	-	-	-	
(1)	CLASS 3 EXCAVATION		CY	125	135	375	-	-	635
(1)	MEMBRANE WATERPROOFING		SY	-	-	30	-	-	30
(1)	CLASS AAAP CEMENT CONCRETE	(4)	CY	-	-	-	60	215	275
(1)	CLASS AA CEMENT CONCRETE	(5)	CY	1	2	4	6	75	88
(1)	CLASS A CEMENT CONCRETE		CY	110	120	145	-	-	375
(1)	STRUCTURE BACKFILL		CY	-	-	650	-	-	650
(1)	6" STRUCTURE FOUNDATION DRAIN		LF	-	-	100	-	-	100
(1)	NO 57 COARSE AGGREGATE	(6)	CY	-	-	15	-	-	15
(1)	PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 63.25"		LF	-	-	-	-	805	805
(1)	LAMINATED NEOPRENE BEARING PAD	(7)	EACH	-	-	-	-	17	17
(1)	STEEL HP12x74 TEST PILE	(8)	EACH	-	-	2	-	-	2
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE), MODIFIED	(3)	SY	-	-	-	115	850	965
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUBSTRUCTURE SURFACES)		SY	-	15	5	-	-	20
(1)	ARCHITECTURAL SURFACE TREATMENT	(3)	SF	500	800	785	-	-	2085
(1)	NEOPRENE STRIP SEAL DAM, (3.5" MOVEMENT)		LF	-	-	-	-	33	33
(1)	NEOPRENE STRIP SEAL DAM, (4.5" MOVEMENT)		LF	-	-	-	-	33	33
(1)	AESTHETIC COLOR COATING (LIGHT GRAY)	(3)	SY	100	125	120	25	115	485
(1)	AESTHETIC COLOR COATING (MEDIUM GRAY)	(3)	SY	-	-	-	-	440	440
(1)	PA TYPE 10M BRIDGE BARRIER, MODIFIED	(10)	LF	-	-	4	60	400	464
(1)	MANDATORY PREDRILLING FOR DRIVEN PILES		LF	-	-	330	-	-	330
(1)	MECHANICAL TEXTURING WITH LONGITUDINAL SAWED GROOVES		SY	-	-	-	100	685	785
AND									
1002-0190	REINFORCEMENT BARS, EPOXY COATED	(16)	LB	8950	9650	18375	15575	62750	115300
1005-1925	STEEL HP12x74 PILE TIP REINFORCEMENT (NORMAL DUTY)		EACH	-	-	27	-	-	27
1005-2825	STEEL HP12x74 PRODUCTION PILE, GALVANIZED	(11)	LF	-	-	330	-	-	330
9000-0206	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	(2)	LS	-	-	-	-	-	
8621-0004	MECHANICALLY STABILIZED RETAINING WALL	(3)	LS	NORTH WALL	SOUTH WALL				
(2)	CLASS 3 EXCAVATION		CY	550	550	-	-	-	1100
(2)	CLASS AA CEMENT CONCRETE	(12)	CY	155	160	-	-	-	315
(2)	CLASS A CEMENT CONCRETE, SULFATE RESISTANT		CY	3	4	-	-	-	7
(2)	SELECTED BORROW EXCAVATION, NO 57 COARSE AGGREGATE		CY	175	175	-	-	-	350
(2)	SPECIFIED BACKFILL	(13)	CY	650	680	-	-	-	1330
(2)	GEOTEXTILE, CLASS 4, TYPE C		SY	205	205	-	-	-	410
(2)	PRECAST CONCRETE FACING PANELS	(13) (14)	SF	1525	1575	-	-	-	3100
(2)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE), MODIFIED	(9)	SY	70	70	-	-	-	140
(2)	AESTHETIC COLOR COATING (LIGHT GRAY)	(3)	SY	250	250	-	-	-	500
(2)	IMPERVIOUS MEMBRANE		SY	205	205	-	-	-	410
(2)	6" STRUCTURE FOUNDATION DRAIN		LF	120	120	-	-	-	240
(2)	PA TYPE 10M BRIDGE BARRIER, MODIFIED	(10) (15)	LF	220	220	-	-	-	440

ALTERNATE STRUCTURE ITEMS (3)

ITEM NO	DESCRIPTION	UNIT	TOTAL
8030-0003	BRIDGE STRUCTURE, AS DESIGNED, S-41006	LS	LUMP SUM
8000-0003	PRESTRESSED CONCRETE BRIDGE STRUCTURE	LS	LUMP SUM
8100-0003	STEEL BRIDGE STRUCTURE	LS	LUMP SUM

QUANTITIES TABLE NOTES:

(1) ITEMS INCLUDED IN THE BRIDGE STRUCTURE, AS DESIGNED ITEM 8030-0003 ARE FOR INFORMATION ONLY.

(2) ITEMS INCLUDED IN THE MECHANICALLY STABILIZED EARTH WALL, ITEM 8621-0004 ARE FOR INFORMATION ONLY.

(3) SEE SPECIAL PROVISION

(4) INCLUDES APPROXIMATELY 16 CUBIC YARDS TO ACCOUNT FOR STAY-IN-PLACE FORMS.

(5) INCLUDES CLASS AA CEMENT CONCRETE IN THE CONCRETE DIAPHRAGMS, CHEEKWALLS, SHEAR BLOCKS AND PEDESTALS

(6) GEOTEXTILE FABRIC, CLASS 1, IS INCIDENTAL TO THIS ITEM.

(7) INCLUDES 1 TEST BEARING AT ABUTMENT 1. COST OF BEARINGS ARE INCIDENTAL TO PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 63.25"

(8) INCLUDES 2 TEST PILES @ APPROX. 12 LF AT ABUTMENT 1.

(9) APPLY PROTECTIVE COATING TO MOMENT SLAB BARRIER AS SHOWN ON THE PLANS.

(10) ATTACHMENT TO CONCRETE BARRIER IS INCIDENTAL TO THIS ITEM.

(11) STUDS WELDED TO THE STEEL H-PILE ARE INCIDENTAL TO THIS ITEM. NO 57 COARSE AGGREGATE AND CLASS A CEMENT CONCRETE USED TO BACKFILL THE PREDRILLED HOLES ARE ALSO INCIDENTAL TO THIS ITEM.

(12) CLASS AA CEMENT CONCRETE INCLUDES MOMENT SLAB WITH TOE WALL AND ATTACHED BARRIER. ALSO INCLUDES APPROXIMATELY 25000 LB OF EPOXY COATED REINFORCEMENT BARS.

(13) SEE SPECIAL PROVISION FOR ITEM 8261-0004 MECHANICALLY STABILIZED RETAINING WALL FOR MATERIAL SPECIFICATIONS.

(14) PRECAST CONCRETE FACING PANELS INCLUDES THE COST FOR THE ARCHITECTURAL SURFACE TREATMENT.

(15) INCLUDES PA TYPE 10M BARRIER, MODIFIED REQUIRED FOR MOMENT SLABS WITH TOE WALL.

(16) INCLUDES 210 LBS OF STAINLESS STEEL DOWELS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
SUMMARY OF QUANTITIES

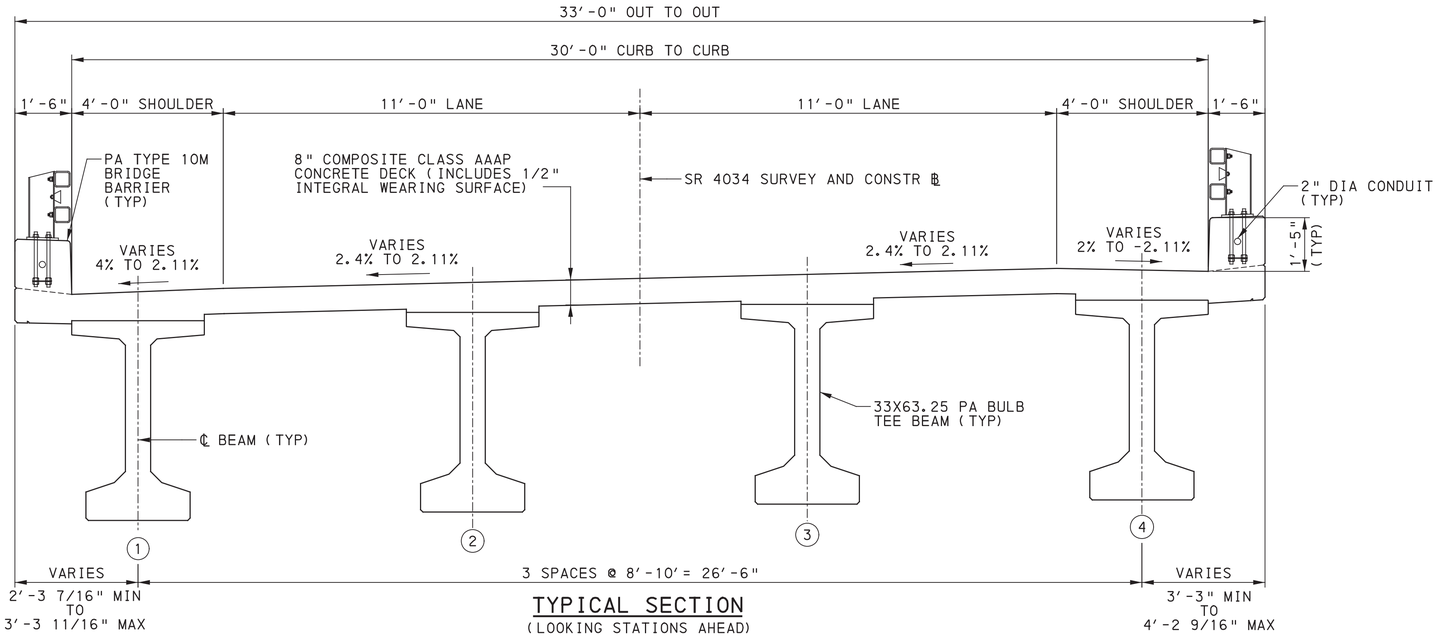
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 56

S-41006

DES:	DFK	CKD:	REB	DWG:	DFK	CKD:	REB



TYPICAL SECTION

(LOOKING STATIONS AHEAD)

1 0 1 2 FEET

BRIDGE LOAD RATINGS TABLE (WITH FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 444 (2021)								
ADTT: 514 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
	33/63.25 P/S CONCRETE PA BULB-TEE BEAMS							
		H-20	HS-20	ML-80	PHL-93	P-82	TK-527	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B4	B4	B4	B4	----	B4	----
	DISTRIBUTION FACTOR	0.887	0.887	0.887	0.887	----	0.887	----
	LOCATION (DISTANCE)	50.00 FT (1)	49.50 FT (1)	49.50 FT (1)	49.50 FT (1)	----	49.50 FT (1)	----
	LIMIT STATE	SERV-III	SERV-III	SERV-III	SERV-III	----	SERV-III	----
	RATING FACTOR	1.73 M	1.42 M	1.26 M	1.02 M	----	1.25 M	----
OPERATING RATING (OR)	CRITICAL MEMBER	B4	B4	B4	B4	B4	B4	B4
	DISTRIBUTION FACTOR	0.887	0.858	0.858	0.887	0.849	0.858	0.858
	LOCATION (DISTANCE)	100.00 FT (1)	60.00 FT (1)	60.00 FT (1)	100.00 FT (1)	30.00 FT (1)	60.00 FT (1)	60.00 FT (1)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II	STR-II
	RATING FACTOR	2.51 M	2.24 V	2.02 V	1.49 M	1.10 V	1.97 V	1.02 V
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KIP-FT): 10890.45 (B4) LOCATION: 20.00 FT (1)								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 663.78 (B4) LOCATION: 6.29 FT (1)								

BRIDGE LOAD RATINGS TABLE (WITHOUT FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 444 (2021)								
ADTT: 514 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
	33/63.25 P/S CONCRETE PA BULB-TEE BEAMS							
		H-20	HS-20	ML-80	PHL-93	P-82	TK-527	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B4	B4	B4	B4	----	B4	----
	DISTRIBUTION FACTOR	0.887	0.887	0.887	0.887	----	0.887	----
	LOCATION (DISTANCE)	50.00 FT (1)	50.50 FT (1)	50.50 FT (1)	50.50 FT (1)	----	50.50 FT (1)	----
	LIMIT STATE	SERV-III	SERV-III	SERV-III	SERV-III	----	SERV-III	----
	RATING FACTOR	1.93 M	1.59 M	1.41 M	1.14 M	----	1.40 M	----
OPERATING RATING (OR)	CRITICAL MEMBER	B4	B4	B4	B4	B4	B4	B4
	DISTRIBUTION FACTOR	0.887	0.858	0.858	0.887	0.849	0.858	0.849
	LOCATION (DISTANCE)	0.00 FT (1)	70.00 FT (1)	70.00 FT (1)	0.00 FT (1)	25.00 FT (1)	70.00 FT (1)	25.00 FT (1)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II	STR-II
	RATING FACTOR	2.74 M	2.37 V	2.16 V	1.62 M	1.16 V	2.08 V	1.08 V
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KIP-FT): 10890.45 (B4) LOCATION: 20.00 FT (1)								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 675.48 (B4) LOCATION: 93.61 FT (1)								

NOTES:

1. "M" DENOTES MOMENT (FLEXURE) GOVERNS THE RATING FACTOR, "S" DENOTES SHEAR GOVERNS THE RATING FACTOR
2. THE GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING
3. (1) DENOTES SPAN 1 LENGTH OF 100.0 FEET AND (2) DENOTES SPAN 2 LENGTH OF 100.0 FEET
4. RATINGS ARE OBTAINED FROM PENNDOT'S PSLRFD PROGRAM, VERSION 2.14.0.0

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

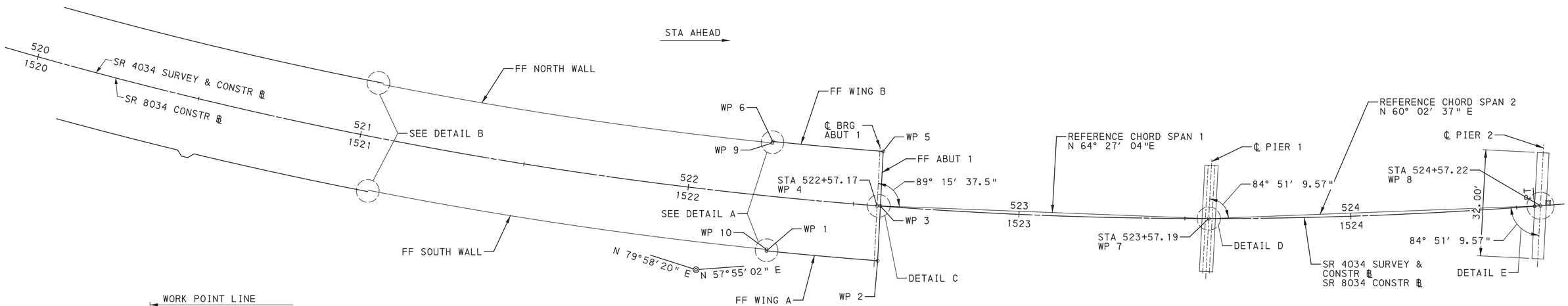
SHEET 6 OF 56

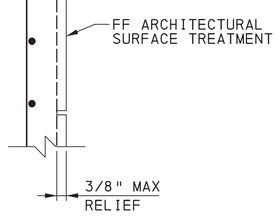
S-41006

DES: DFK | CKD: REB | DWG: DFK | CKD: REB

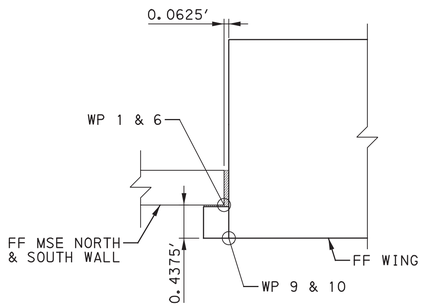
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTts001.dgn

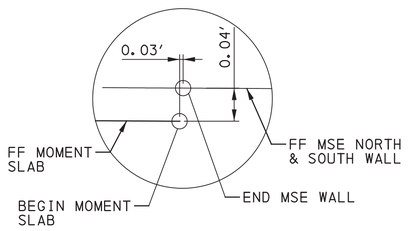




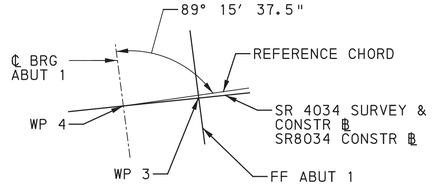
WORK POINT LOCATION DETAIL
NTS



DETAIL A
NTS

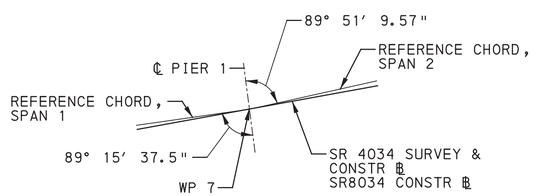


DETAIL B
NTS

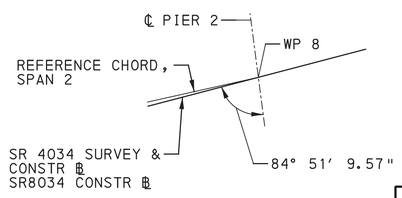


DETAIL C
NTS

WORK POINT COORDINATES				
WORK POINT (WP)	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	522+25.46	16.50′ RT	725320.8906	1333941.3021
WP 2	522+58.53	16.51′ RT	725333.8385	1333972.2813
WP 3	522+58.13	0.00′	725348.8177	1333965.3594
WP 4	522+57.17	0.00′	725348.4219	1333964.4375
WP 5	522+57.74	16.50′ LT	725363.8021	1333958.4323
WP 6	522+23.90	16.50′ LT	725350.9427	1333927.5781
WP 7	523+57.19	0.00′	725391.5469	1334054.6615
WP 8	524+57.22	0.00′	725441.4844	1334141.3021
WP 9	522+23.88	16.06′ LT	725350.5104	1333927.6875
WP 10	522+25.41	16.06′ RT	725321.2760	1333941.0833



DETAIL D
NTS



DETAIL E
NTS

FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 56

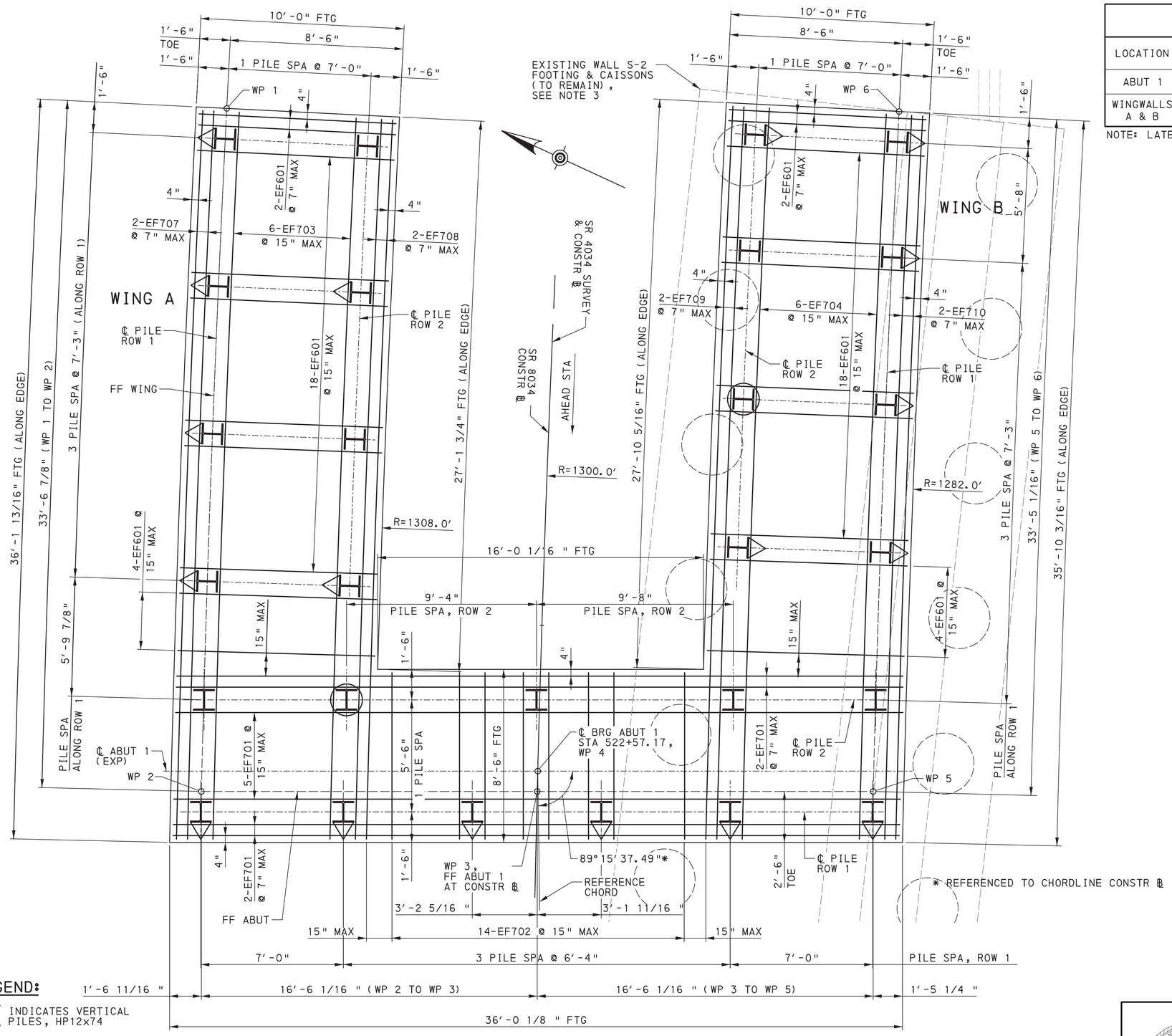
S-41006

DES: SRM | CKD: DFK | DWG: JF | CKD: DFK

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_WS\sheets\FINAL\ramp_SS_WSTsp001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_WSTa1001.dgn



LEGEND:

- INDICATES VERTICAL PILES, HP12x74
- INDICATES BATTERED PILES, HP12x74 AND DIRECTION OF 3H:12V BATTER
- INDICATES TEST PILES

ABUTMENT 1 FOOTING PLAN - BOTTOM REINFORCEMENT MAT

1 0 1 2 3 FEET

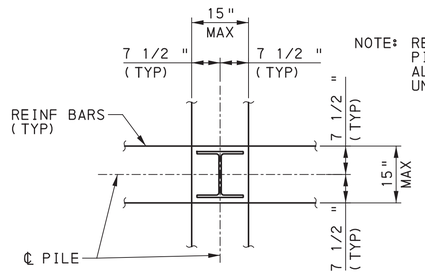
* REFERENCED TO CHORDLINE CONSTR ℄

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

ABUTMENT PILE LOADS

LOCATION	CONTROLLING LIMIT STATE		AXIAL (KIPS)		LATERAL (KIPS)	
			FACTORED LOAD	RESISTANCE	FACTORED LOAD	RESISTANCE
ABUT 1	STRENGTH	STR-I	270.74	360.00	11.56	12.47
WINGWALLS A & B	STRENGTH	STR-I	192.78	360.00	12.71	15.05
	EXTR EVENT	EXT-III	208.38	360.00	12.24	15.05

NOTE: LATERAL RESISTANCE IS BASED ON BATTERED PILES ONLY



NOTE: REINF BAR LAYOUT AT PILES ARE TYPICAL FOR ALL PILE LOCATIONS UNLESS NOTED

REINFORCEMENT DETAIL @ PILE

NOT TO SCALE

NOTES:

1. PLACE BOTTOM MAT REINFORCEMENT AT EQUAL SPACES BETWEEN PILES AS SHOWN, WITH 1" MINIMUM CLEAR SPACE AT PILE.
2. ESTIMATED PILE TIP ELEVATION 566.90
3. EXISTING FOOTING SIZE AND REINFORCED CONCRETE CAISSON LAYOUT BASED ON PENNDOT PLANS, S-17717A DATED FEBRUARY 28, 1990

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7
FOR PILE DRIVING NOTES, SEE GENERAL NOTES, SEE SHEET 4
FOR TOP MAT REINFORCEMENT, SEE SHEET 9
FOR TYPICAL ABUTMENT SECTION, SEE SHEET 12
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15
FOR KEYED CONSTRUCTION JOINT DETAIL, SEE BC-735M
FOR PILE TIP REINFORCEMENT DETAIL, SEE BC-757M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN-1

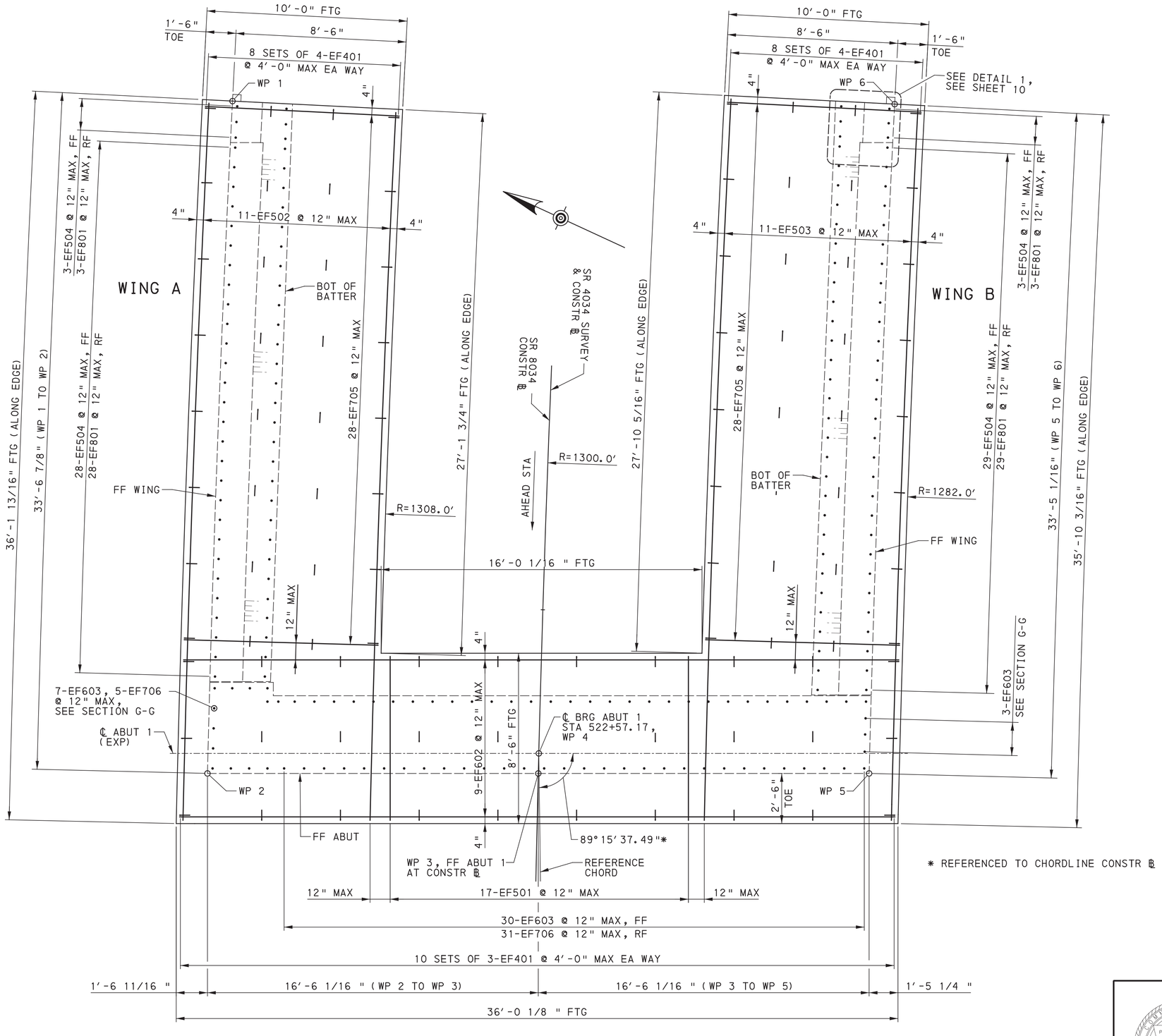
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 56

S-41006

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WST01002.dgn



ABUTMENT 1 FOOTING PLAN - TOP REINFORCEMENT MAT

1 0 1 2 3 FEET

* REFERENCED TO CHORDLINE CONSTR ℄

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

WORK THIS SHEET WITH TYPICAL ABUTMENT SECTION & SECTION G-G, SEE SHEET 12

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15

FOR KEYED CONSTRUCTION JOINT DETAIL, SEE BC-735M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN-2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

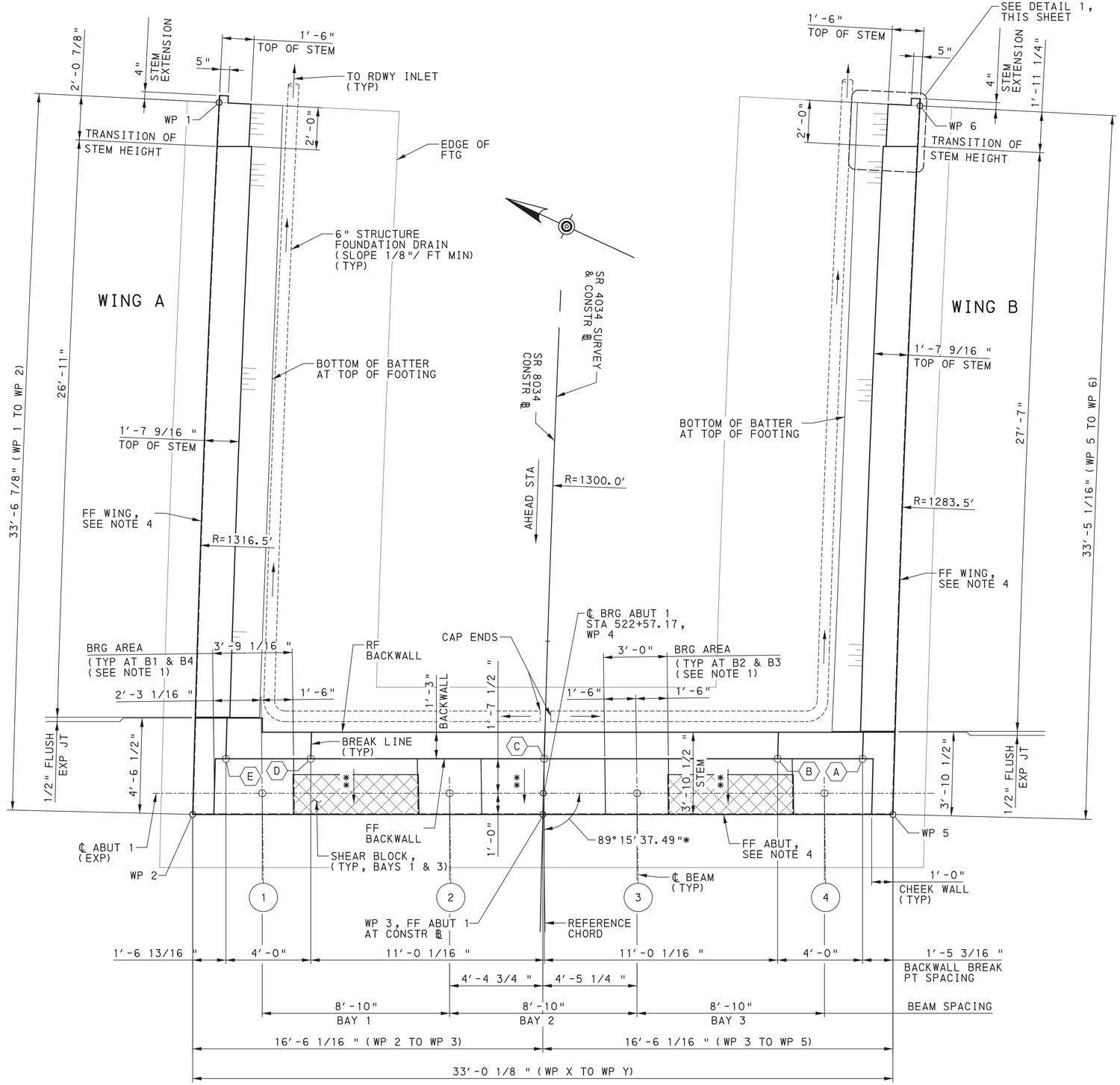
RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTa1003.dgn

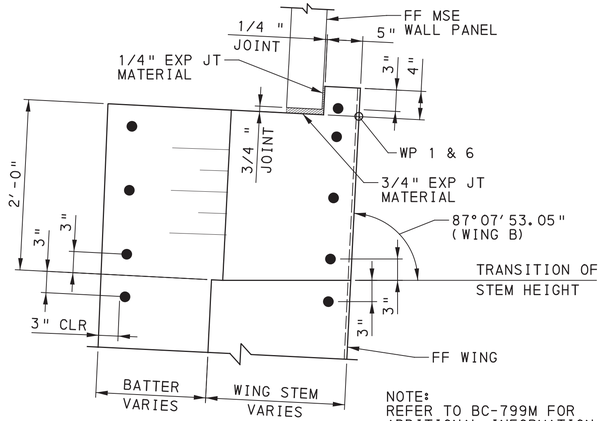


ABUTMENT 1 PLAN

1 0 1 2 3 FEET

* REFERENCED TO CHORDLINE CONSTR ℄

** SLOPE TOP OF ABUTMENT 1V:12H BETWEEN BEARING AREAS



NOTE: REFER TO BC-799M FOR ADDITIONAL INFORMATION

DETAIL 1

(END OF WING B SHOWN, WING A SIMILAR)
NOT TO SCALE

LEGEND:

(X) DENOTES ELEVATIONS ALONG TOP OF BACKWALL AT FRONT FACE

(#) DENOTES BEAM NUMBER

NOTES:

1. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
2. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
3. 1" CLOSED CELL NEOPRENE SPONGE AND RUBBERIZED JOINT MATERIAL PLACED BETWEEN BOTTOM OF DECK AND TOP OF CHEEK WALL
4. APPLY 3/8" ARCHITECTURAL SURFACE TREATMENT TO ABUTMENT AND WINGWALLS

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7
FOR ABUTMENT ELEVATION, SEE SHEET 11
FOR WINGWALL A ELEVATION & SECTIONS, SEE SHEET 13
FOR WINGWALL B ELEVATION & SECTIONS, SEE SHEET 14
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 PLAN

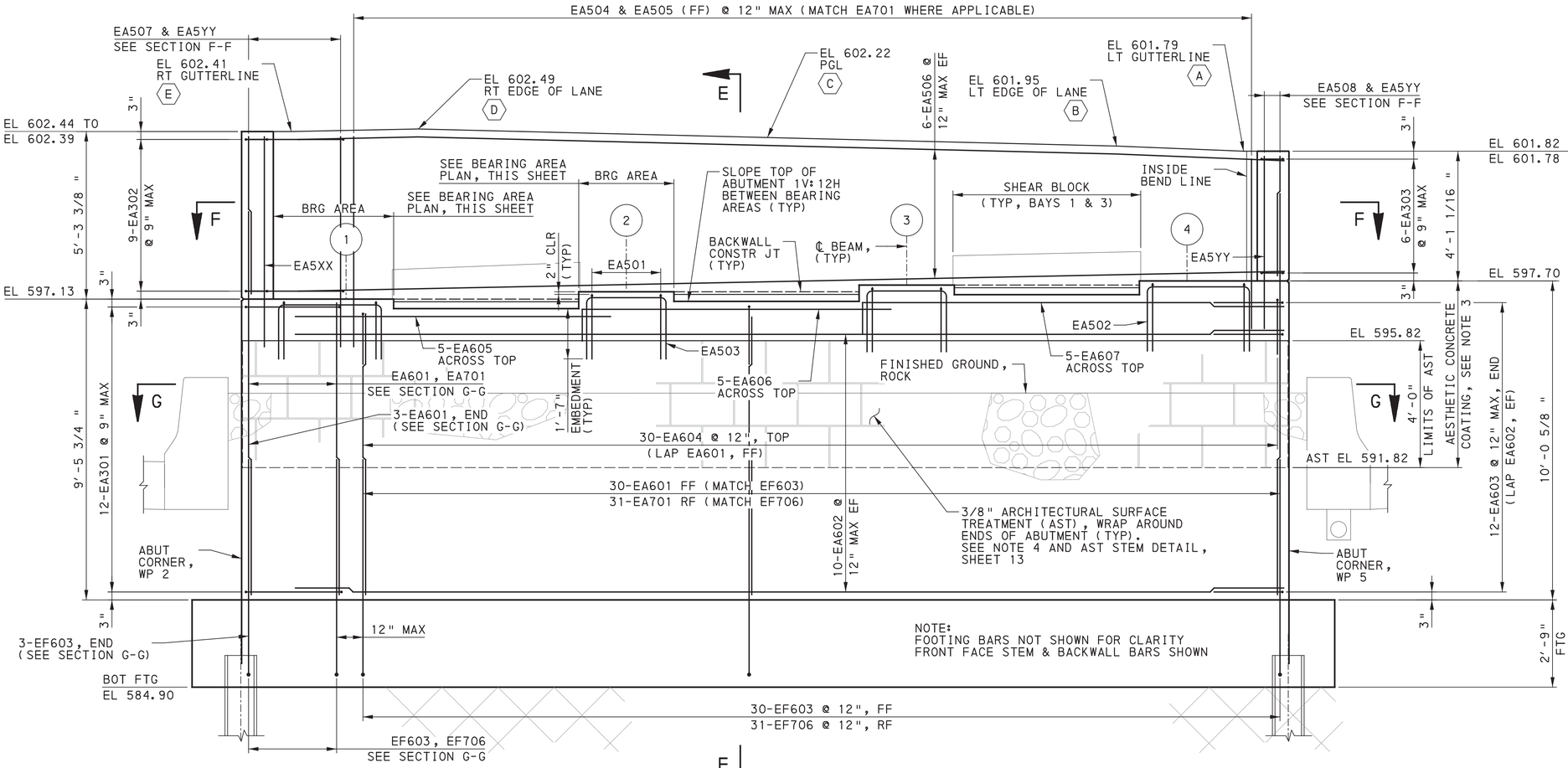
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 10 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB



ABUTMENT ELEVATION

(LOOKING BACK STATION)

1 0 1 2 FEET

BEAM SEAT ELEVATIONS	
BEAM NO	CL BEARING
B1	597.11
B2	597.36
B3	597.58
B4	597.71

LEGEND

- OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57
- SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)
- (X) DENOTES ELEVATIONS ALONG TOP OF BACKWALL AT FRONT FACE
- (#) DENOTES BEAM NUMBER

NOTES:

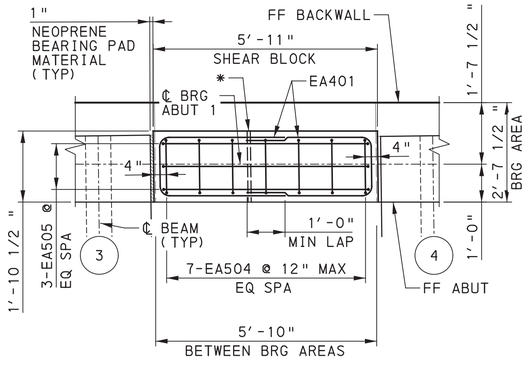
1. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
2. 1" CLOSED CELL NEOPRENE SPONGE AND RUBBERIZED JOINT MATERIAL PLACED BETWEEN BOTTOM OF DECK AND TOP OF CHEEK WALL
3. ABUT CAP, PEDESTALS AND ARCHITECTURAL SURFACE TREATMENT AREAS TO HAVE AESTHETIC CONCRETE COATING APPLIED TO SURFACES. COATING TO BE APPLIED TO ALL EXPOSED AREAS OF CHEEK WALLS. ALSO APPLY AT BEAM SEATS (OMIT AT BEARING AREAS), SHEAR BLOCKS AND END DIAPHRAGMS (EXPOSED FACES ONLY).
4. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

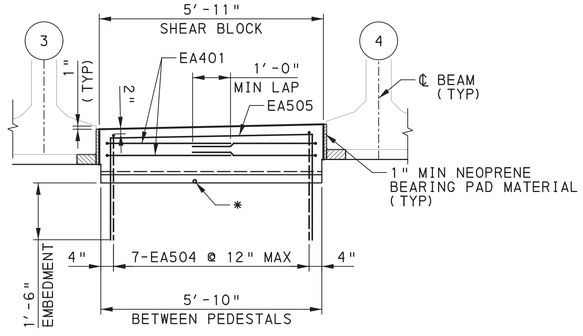
FOR SECTIONS E-E, F-F & G-G, SEE SHEET 12

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15



PLAN

* 1" NOMINAL DIA POLYVINYL CHLORIDE (PVC) SCHEDULE 40 WEEP HOLE SLOPED TO DRAIN (TYP)

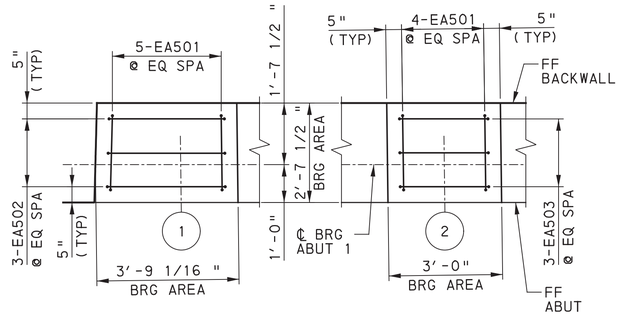


ELEVATION

SHEAR BLOCK DETAILS

(BAY 3 SHOWN, BAY 1 SIMILAR)

1 0 1 2 FEET



BEARING AREA REINFORCEMENT PLAN

(BEARING AREAS 1 & 2 SHOWN, BEARING AREAS 3 & 4 SIMILAR)

1 0 1 2 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE

ABUTMENT 1 ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

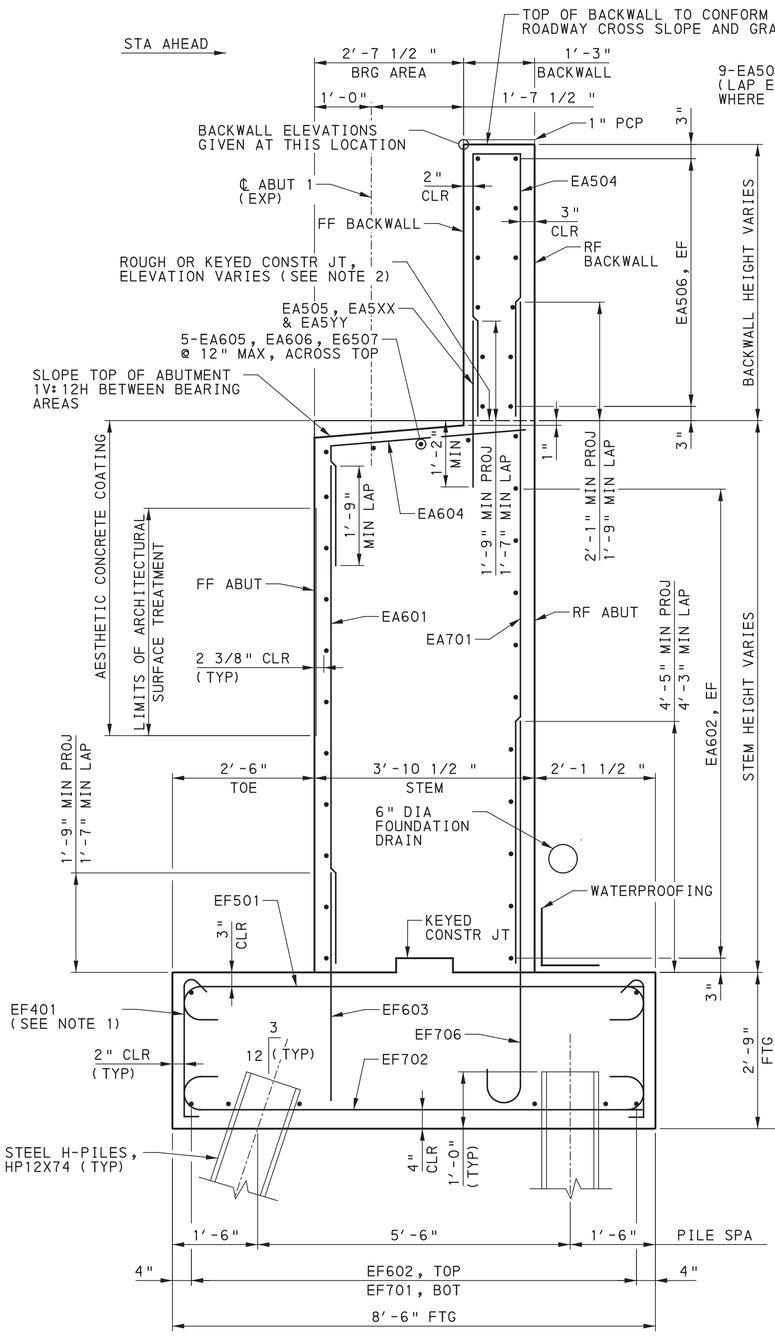
SHEET 11 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

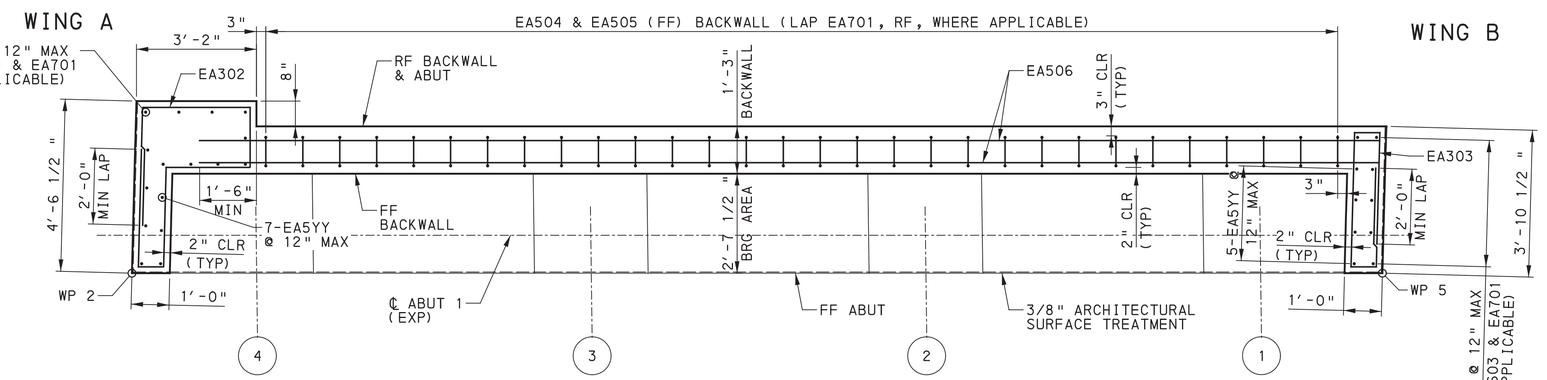
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WST01004.dgn



NOTE:
BEARING AREA REINFORCEMENT BARS NOT SHOWN FOR CLARITY

ABUTMENT SECTION E-E

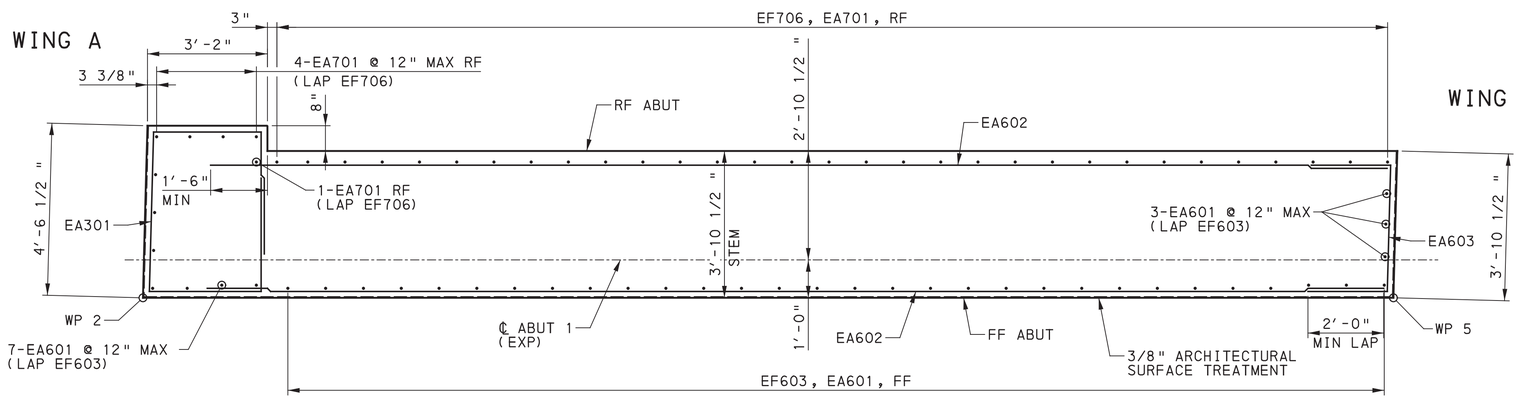
1 0 1 2 FEET



SECTION F-F

(BACKWALL)

1 0 1 2 3 FEET



SECTION G-G

(ABUTMENT STEM)

1 0 1 2 3 FEET

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR BEARING AREA REINFORCEMENT, SEE SHEET 11

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

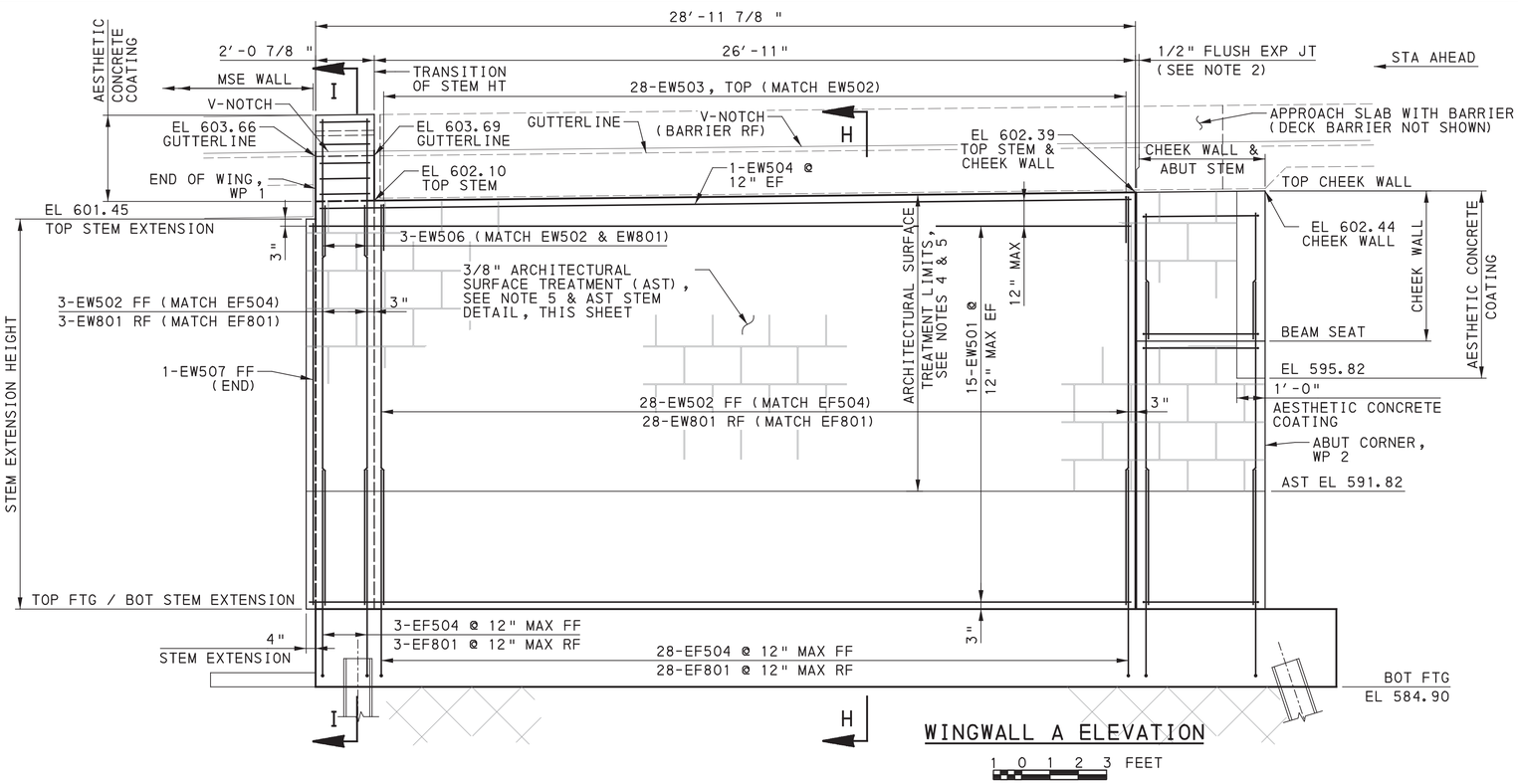
SHEET 12 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

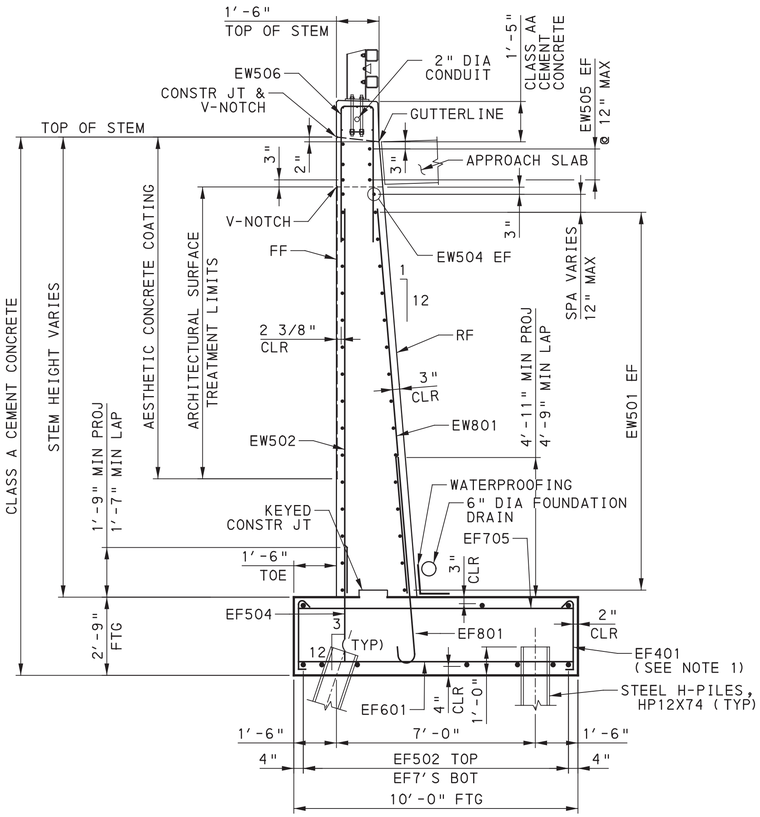
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WST01005.dgn



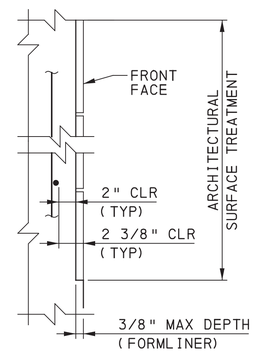
WINGWALL A ELEVATION

1 0 1 2 3 FEET



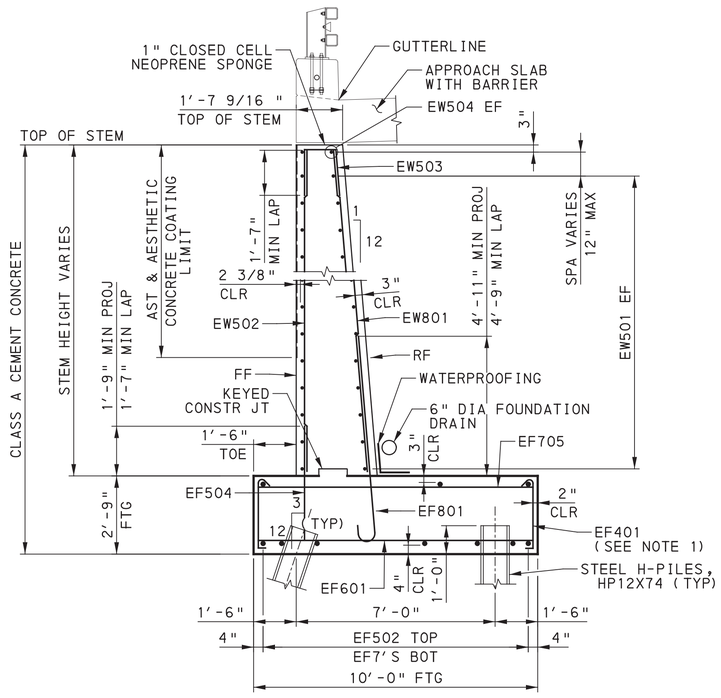
SECTION I-I

(WINGWALL SECTION BEYOND APPROACH SLAB)
FEET 3 2 1 0 1



AST STEM DETAIL

NOT TO SCALE



SECTION H-H

(WINGWALL SECTION BELOW APPROACH SLAB)
FEET 3 2 1 0 1

LEGEND

OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. APPLY MEMBRANE WATERPROOFING OVER EXPANSION JOINT ALONG VERTICAL REAR FACE, SEE BC-788M.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
4. AESTHETIC CONCRETE COATING APPLIED BELOW BEAM SEAT ON SIDE OF ABUTMENT AS SHOWN. ALSO, APPLY COATING ALONG HEIGHT OF CHEEK WALLS AT FRONT FACE AS SHOWN AND ALL ARCHITECTURAL SURFACE TREATMENT AREAS.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR PILE LOADS, SEE SHEET 8

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
WINGWALL A ELEVATION & SECTIONS

RECOMMENDED AUGUST 22, 2022

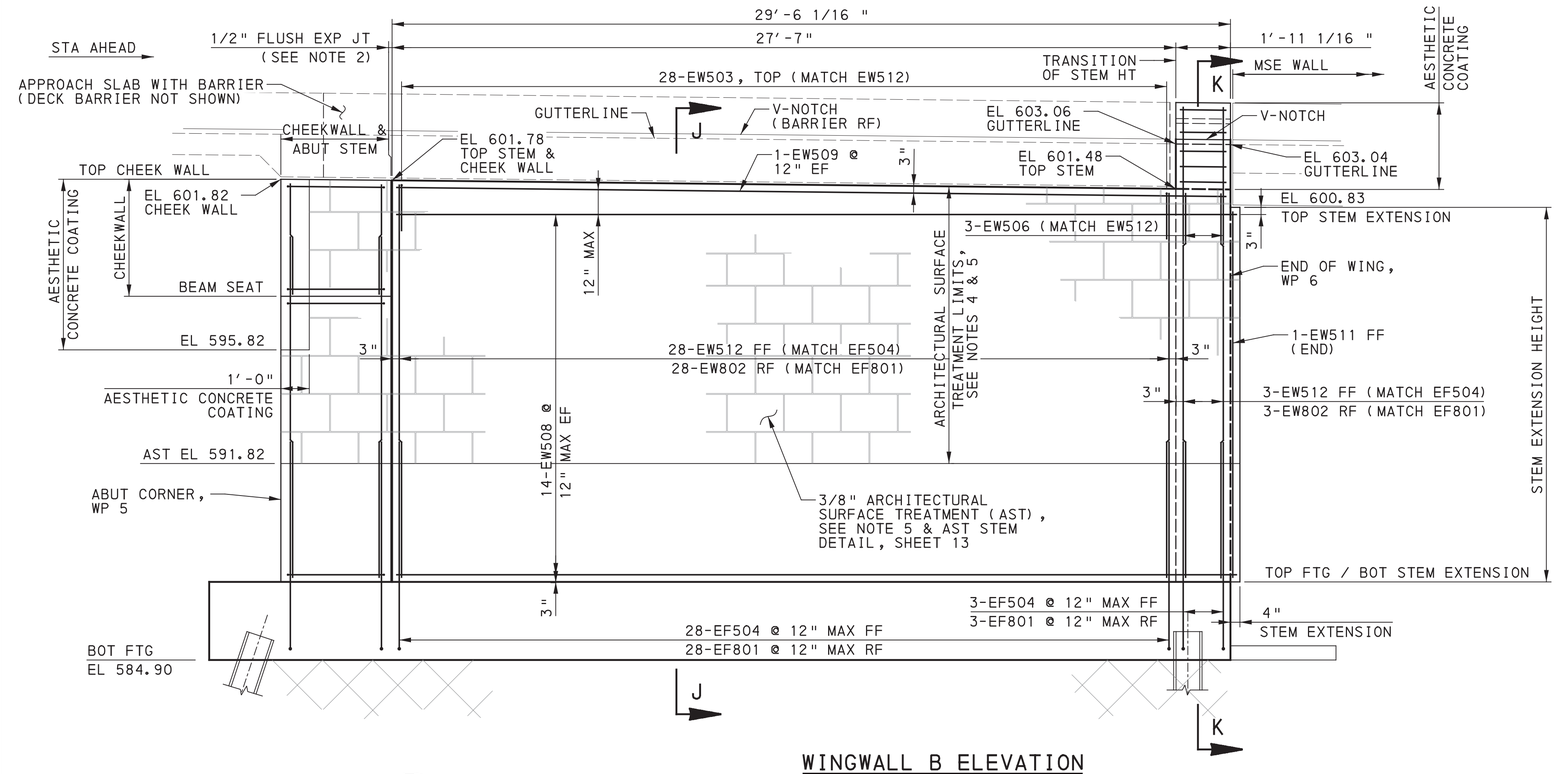
SHEET 13 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

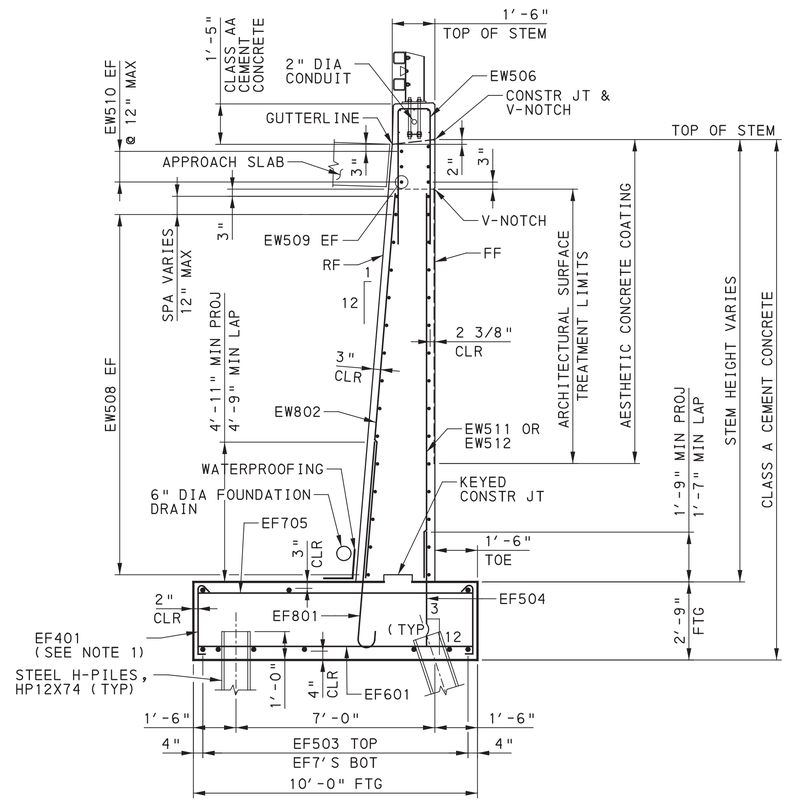
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WST01006.dgn



WINGWALL B ELEVATION

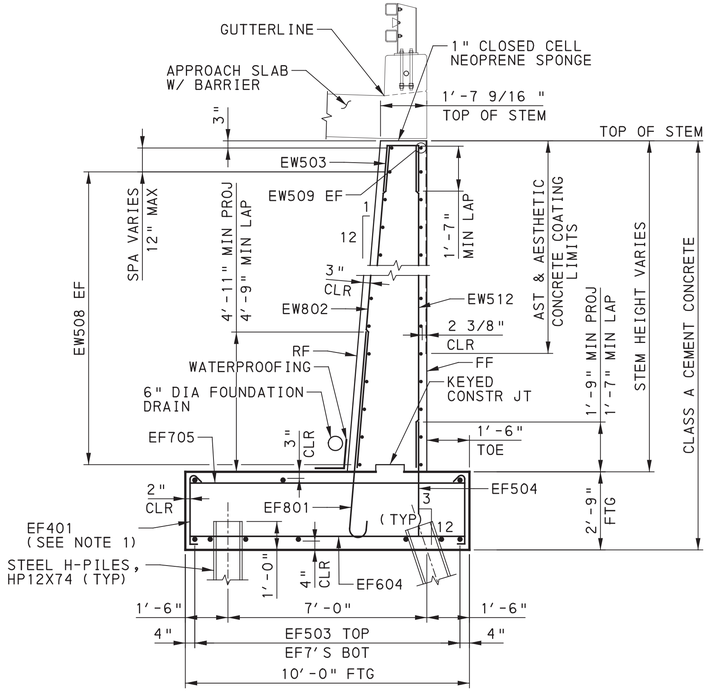
1 0 1 2 3 FEET



SECTION K-K

(WINGWALL SECTION BEYOND APPROACH SLAB)

1 0 1 2 3 FEET



SECTION J-J

(WINGWALL SECTION BELOW APPROACH SLAB)

1 0 1 2 3 FEET

LEGEND

OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. APPLY MEMBRANE WATERPROOFING OVER EXPANSION JOINT ALONG VERTICAL REAR FACE, SEE BC-788M.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
4. AESTHETIC CONCRETE COATING APPLIED BELOW BEAM SEAT ON SIDE OF ABUTMENT AS SHOWN. ALSO, APPLY COATING ALONG HEIGHT OF CHEEK WALLS AT FRONT FACE AS SHOWN AND ALL ARCHITECTURAL SURFACE TREATMENT AREAS.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR PILE LOADS, SEE SHEET 8

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 15

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
WINGWALL B ELEVATION & SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 14 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

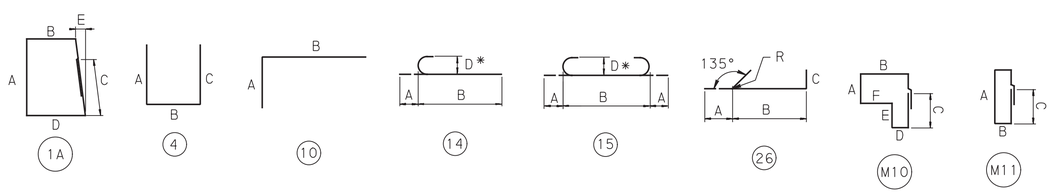
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTa1007.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT STEM & BACKWALL											
EA301	3	12	13′-0"	1A	4′-2 1/2"	2′-10"	2′-11 1/4"	3′-0"	1 1/4"		
EA302	3	9	13′-0"	M10	1′-7"	2′-10"	3′-1 1/4"	8"	2′-7 1/2"		F= 2′-2 1/2"
EA303	3	6	10′-11"	M11	3′-7"	8"	3′-0"				
EA401	4	8	7′-2"	4	3′-1"	1′-0"	3′-1"				
EA501	5	18	5′-5 1/2"	4	1′-10"	1′-9 1/2"	1′-10"				
EA502	5	6	6′-7"	4	1′-10"	2′-11"	1′-10"				
EA503	5	6	5′-10"	4	1′-10"	2′-2"	1′-10"				
EA504	5	31	10′-6"	4	4′-10"	10"	4′-10"				
EA505	5	30	3′-2"	ST							
EA506	5	12	31′-2"	ST							
EA507	5	16	4′-11"	ST							
EA508	5	10	3′-9"	ST							
EA509	5	14	6′-10 1/2"	4	2′-9"	1′-4 1/2"	2′-9"				
EA510	5	6	10′-10"	4	2′-9"	5′-4"	2′-9"				
EA601	6	43	9′-2"	ST							
EA602	6	20	31′-2"	ST							
EA603	6	12	7′-8"	4	2′-2"	3′-4"	2′-2"				
EA604	6	30	5′-5"	10							
EA605	6	5	10′-0"	ST							
EA606	6	5	10′-9"	10	1′-0"	9′-9"					
EA607	6	5	14′-2"	10	1′-0"	13′-2"					
EA701	7	35	11′-10"	ST							
WINGWALL A & B STEMS											
EW501	5	30	29′-1"	ST							
EW502	5	31	14′-2"	ST							
EW503	5	56	4′-9"	4	1′-10"	1′-1"	1′-10"				
EW504	5	2	28′-8"	ST							
EW505	5	5	1′-9"	ST							
EW506	5	6	10′-4"	4	4′-9"	10"	4′-9"				
EW507	5	1	13′-5"	ST							
EW508	5	28	29′-6"	ST							
EW509	5	2	27′-7"	ST							
EW510	5	6	1′-7"	ST							
EW511	5	1	12′-10"	ST							
EW512	5	31	13′-6"	ST							
EW801	8	31	13′-10"	ST							
EW802	8	31	13′-6"	ST							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT FOOTING											
EF401	4	108	2′-11"	26	6"	2′-2"					
EF501	5	17	9′-10"	15	10"	8′-2"					
EF502	5	11	35′-9 1/2"	ST			1′-10"				
EF503	5	11	36′-0"	ST							
EF504	5	62	4′-5"	ST							
							4′-9"				
EF601	6	48	9′-8"	ST							
EF602	6	9	35′-8"	ST							
EF603	6	43	4′-5"	ST							
EF701	7	9	35′-8"	ST							
EF702	7	14	9′-10"	15	10"	8′-2"					
EF703	7	6	35′-5" TO 35′-8"	ST							
EF704	7	6	35′-7" TO 35′-11"	ST							
EF705	7	56	9′-8"	ST							
EF706	7	35	7′-11"	14	10"	7′-1"					
EF707	7	2	35′-9"	ST							
EF708	7	2	35′-4"	ST			3"				
EF709	7	2	36′-0"	ST							
EF710	7	2	35′-7"	ST							
EF801	8	62	8′-6"	14	11"	7′-7"					



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: SRM | CKD: REB | DWG: DFK | CKD: SRM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT REBAR SCHEDULE

RECOMMENDED AUGUST 22, 2022

SHEET 15 OF 56

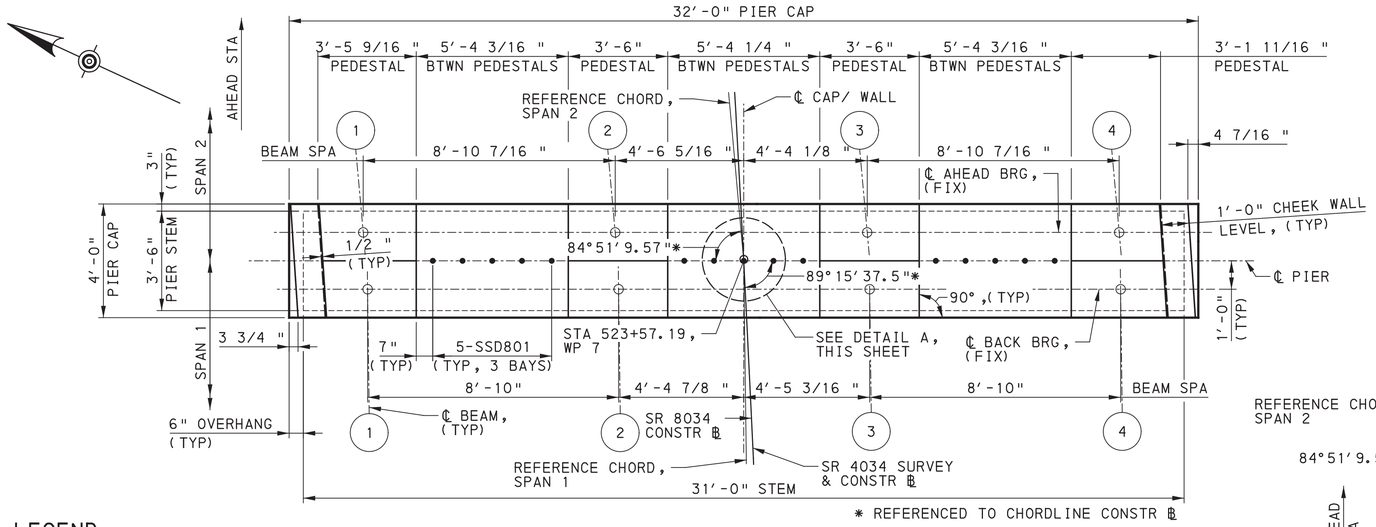
S-41006

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTairb001.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTp1001.dgn



* REFERENCED TO CHORDLINE CONSTR ℄

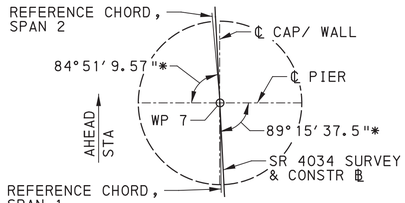
PIER CAP PLAN

(TOP SURFACE)
1 0 1 2 3 FEET

LEGEND

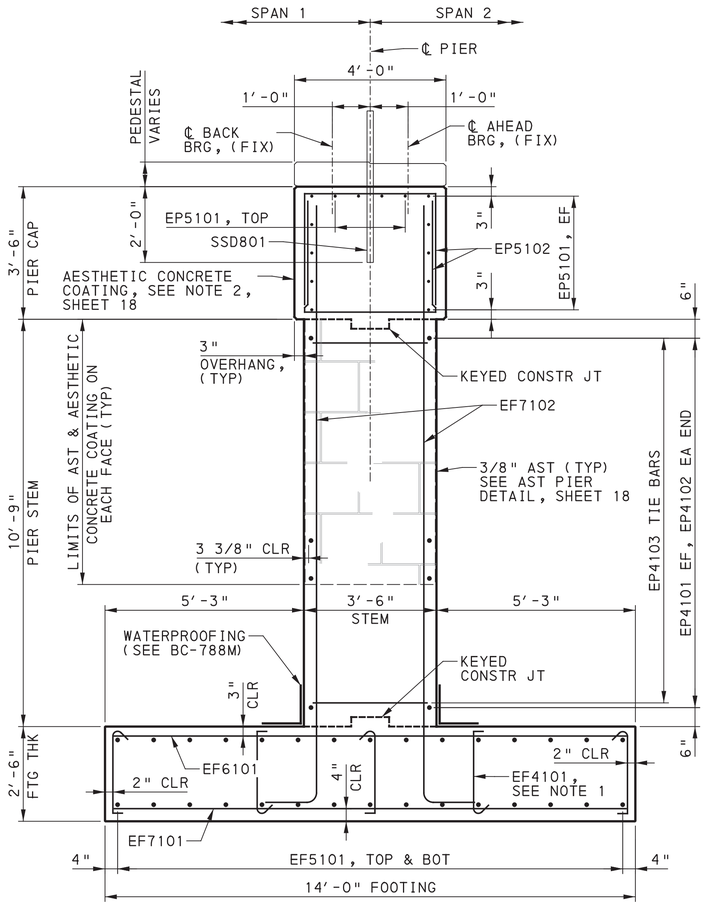
SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)

TOP PEDESTAL ELEVATIONS		
BEAM NO	BACK BEARING	AHEAD BEARING
B1	597.91	597.87
B2	598.16	598.14
B3	598.37	598.37
B4	598.50	598.50



DETAIL A

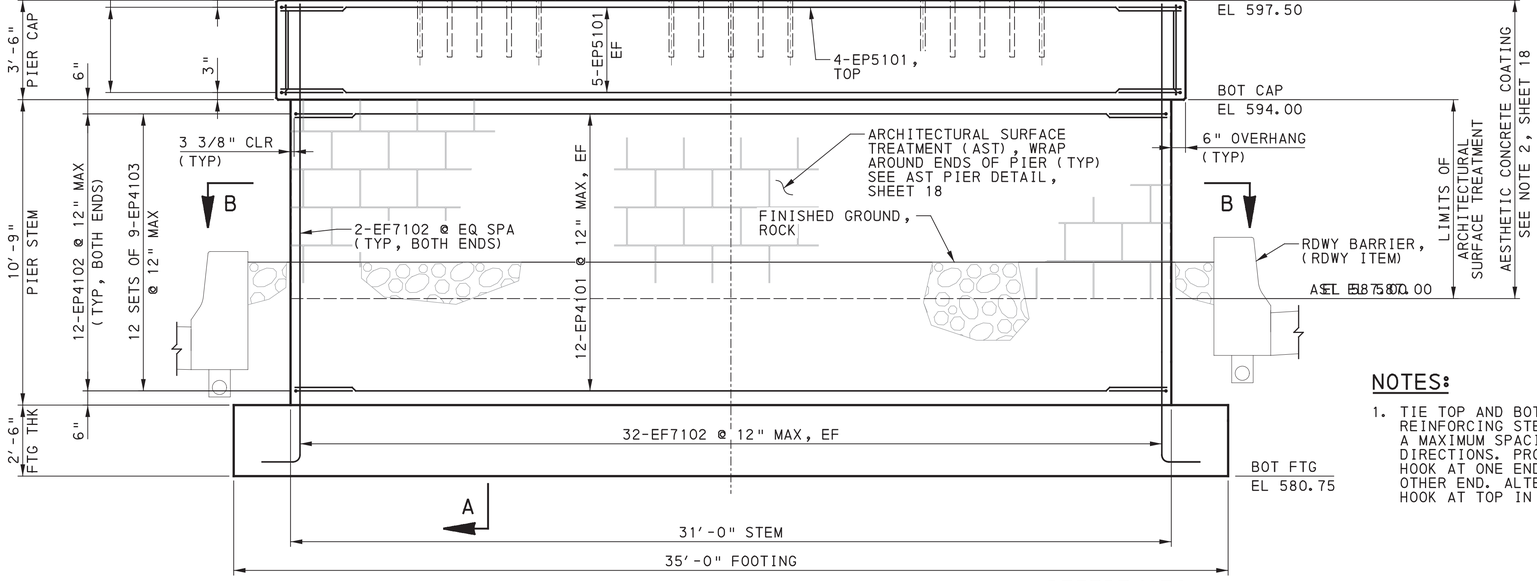
NOT TO SCALE



NOTE: PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY

PIER SECTION A-A

1 0 1 2 FEET



PIER ELEVATION

(LOOKING AHEAD STATION)
1 0 1 2 3 FEET

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

REFERENCES:

FOR PEDESTAL & CHEEKWALL DETAILS, SEE SHEET 17

FOR SECTION B-B & FOOTING PLAN, SEE SHEET 17

FOR DOWEL DETAILS, SEE BC-775M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 PLAN & ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

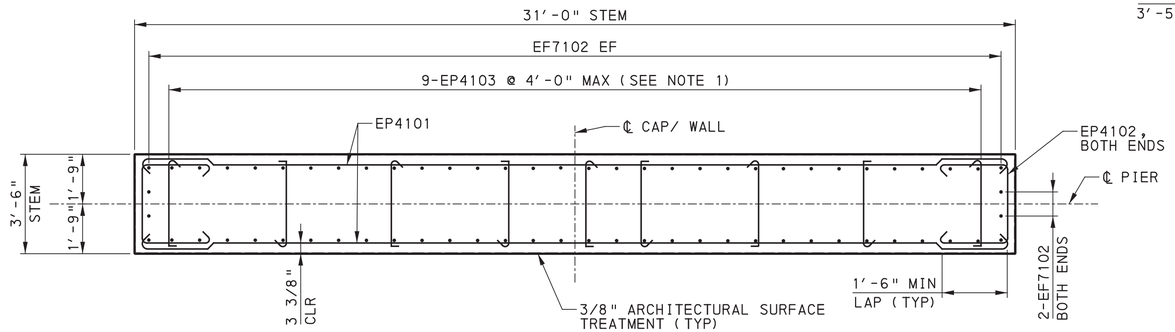
RECOMMENDED AUGUST 22, 2022

SHEET 16 OF 56

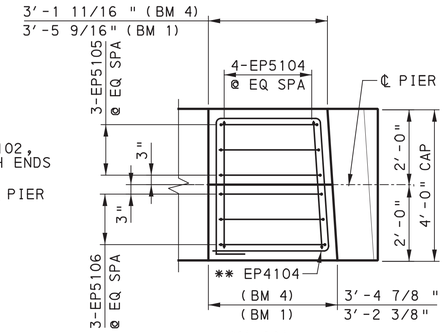
S-41006

DES: SRM	CKD: REB	DWG: SRM	CKD: REB

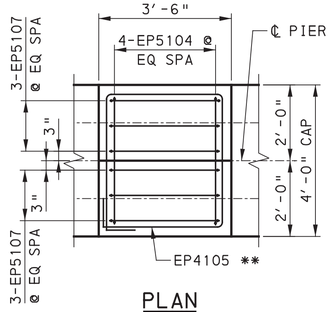
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_WS\p1002.dgn



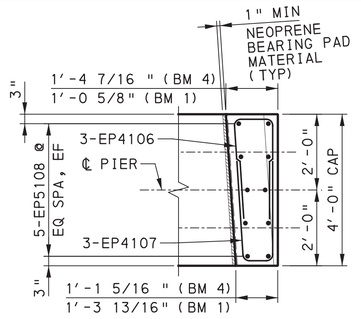
SECTION B-B
(PIER STEM)
1 0 1 2 3 FEET



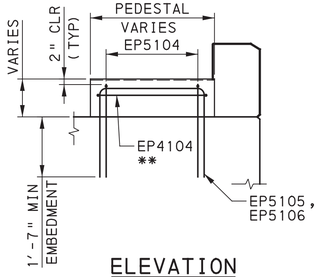
PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



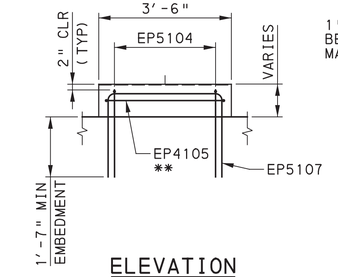
PLAN
(BEAMS 2 & 3 SHOWN)



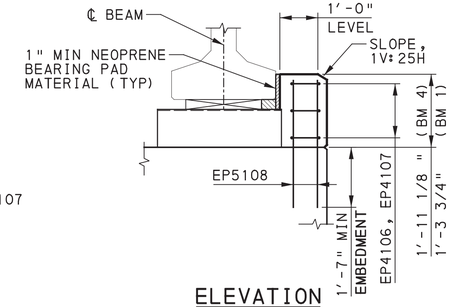
PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



ELEVATION
(BEAMS 2 & 3 SHOWN)

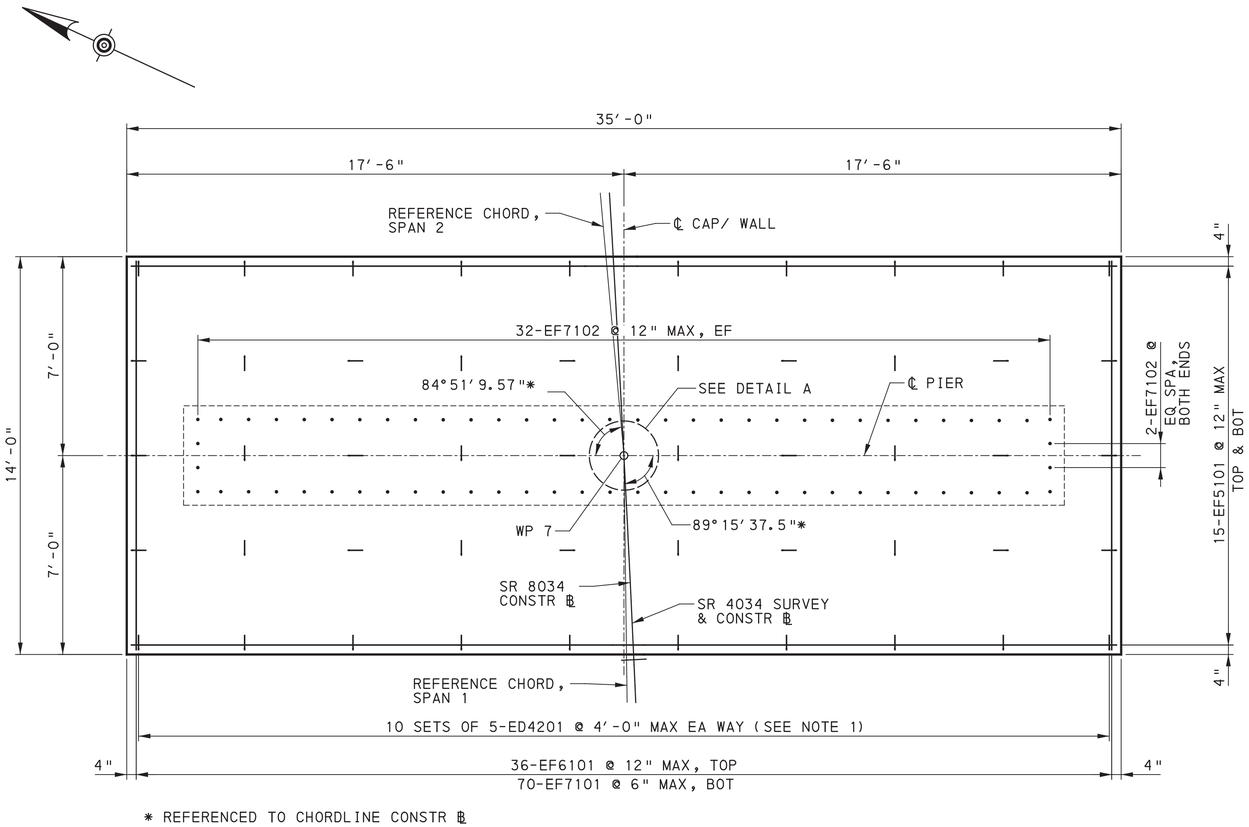


ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)

PEDESTAL DETAILS
1 0 1 2 FEET

CHEEKWALL DETAILS
1 0 1 2 FEET

** PLACE #4 TIE WHEN PEDESTAL HEIGHT EXCEEDS 8 INCHES. PLACE AT HALF PEDESTAL HEIGHT OR 9 INCH SPACING



* REFERENCED TO CHORDLINE CONSTR ℄

FOOTING PLAN
1 0 1 2 3 FEET

REFERENCES:
FOR FOOTING SECTION & ELEVATION, SEE SHEET 16
FOR DETAIL A, SEE SHEET 16
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

PIER BEARING CAPACITY						
LOCATION	LIMIT STATE	LOAD CASE	MAXIMUM FACTORED BEARING PRESSURE (KSF)	FACTORED BEARING RESISTANCE (KSF)	PERFORMANCE RATIO	EMPIRICAL BEARING RESISTANCE (KSF)
PIER 1	STR-I	MAX	10.05	10.15	1.01	20.30

NOTES:
1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL IN FOOTING AND BETWEEN STEM VERTICAL BARS WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 FOOTING PLAN & DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

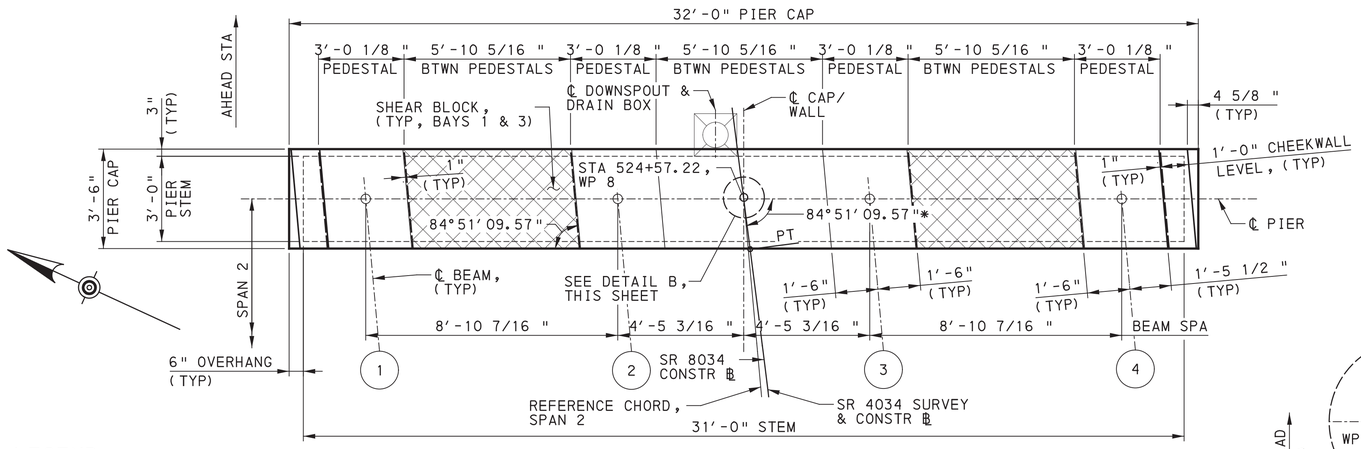
SHEET 17 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTp2001.dgn



* REFERENCED TO CHORDLINE CONSTR ℄

TOP PEDESTAL ELEVATIONS

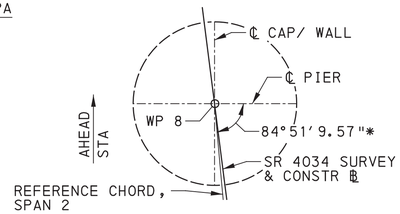
BEAM NO	CL BEARING
B1	598.66
B2	598.86
B3	599.06
B4	599.26

LEGEND

SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)

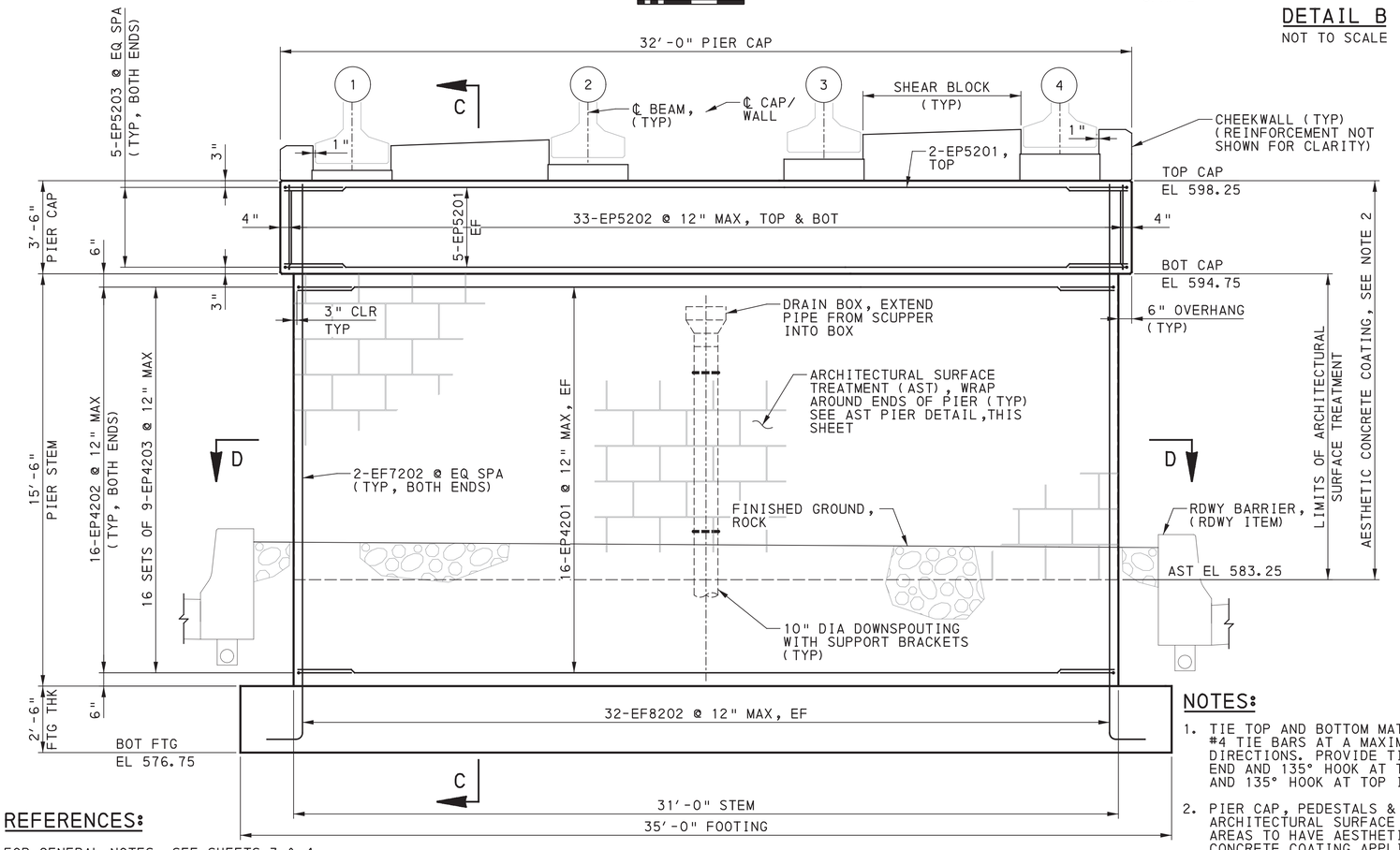
PIER CAP PLAN

(TOP SURFACE)
1 0 1 2 3 FEET



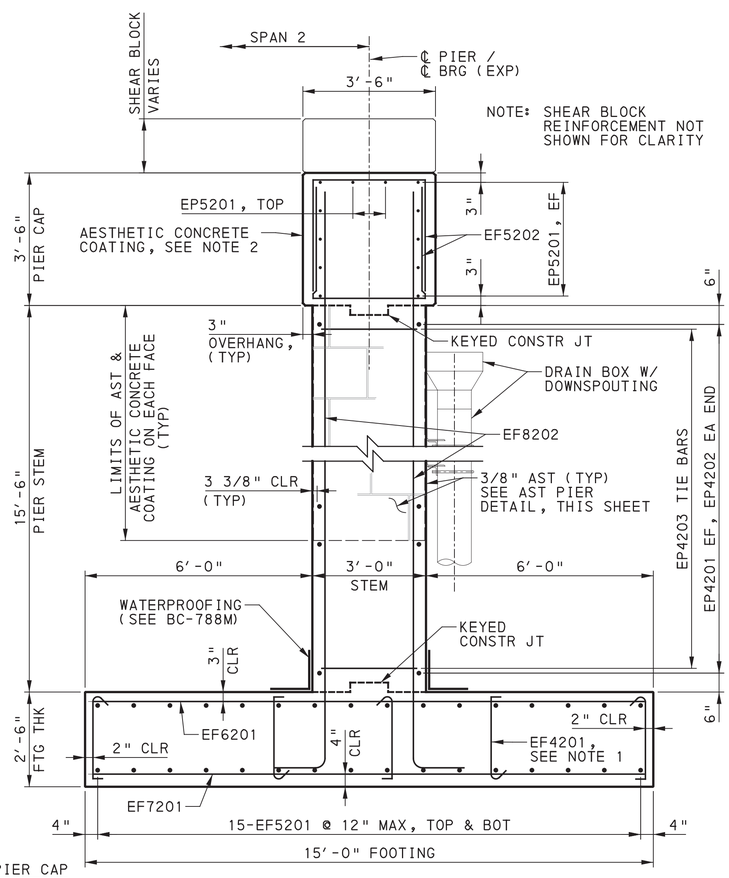
DETAIL B

NOT TO SCALE



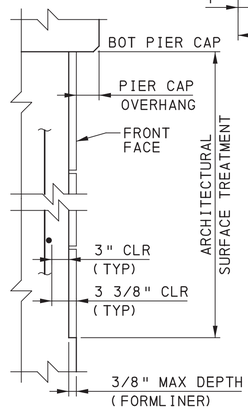
PIER ELEVATION

(LOOKING AHEAD STATION)
1 0 1 2 3 FEET



PIER SECTION C-C

1 0 1 2 FEET



AST PIER DETAIL

NOT TO SCALE

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. PIER CAP, PEDESTALS & ALL ARCHITECTURAL SURFACE TREATMENT AREAS TO HAVE AESTHETIC CONCRETE COATING APPLIED TO SURFACES. COATING TO BE APPLIED TO UNDERSIDE OF PIER CAP AND ALL EXPOSED AREAS OF CHEEK WALLS. ALSO APPLY AT BEAM SEATS (OMIT AT BEARING AREAS), SHEAR BLOCKS AND DIAPHRAGMS (EXPOSED FACES ONLY).

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR PEDESTAL, SHEAR BLOCK & CHEEKWALL DETAILS, SEE SHEET 19

FOR SECTION D-D & FOOTING PLAN, SEE SHEET 19

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

FOR DRAINAGE DETAILS SEE STATE STREET BRIDGE, S-41005, & BC-751M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 PLAN & ELEVATION

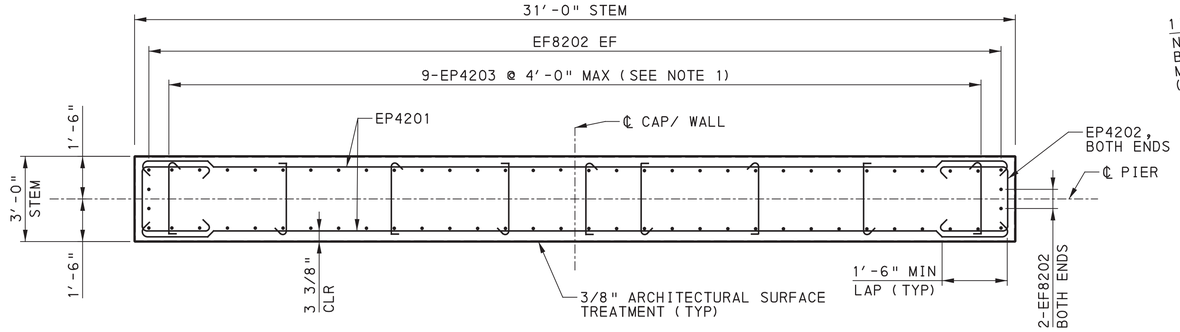
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

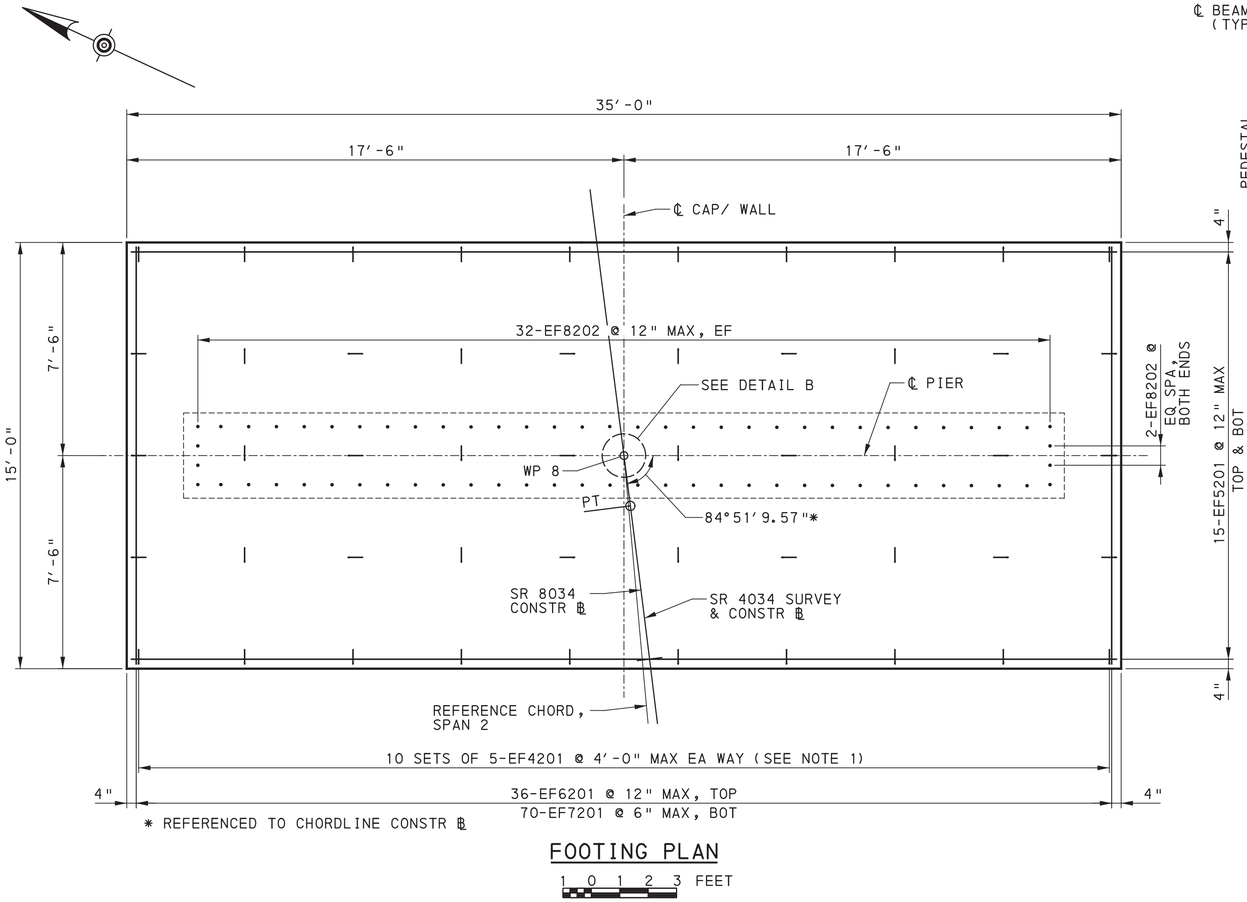
SHEET 18 OF 56

S-41006

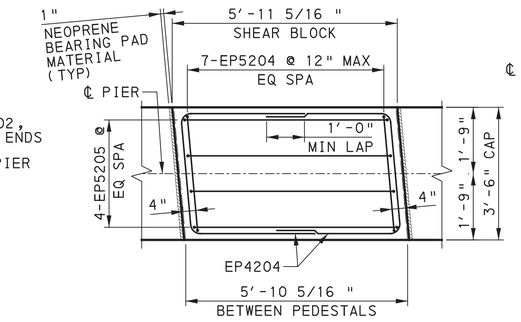
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08160\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTp2002.dgn



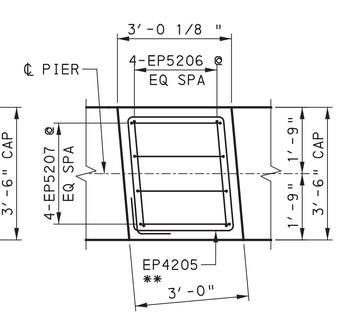
SECTION D-D
(PIER STEM)
1 0 1 2 3 FEET



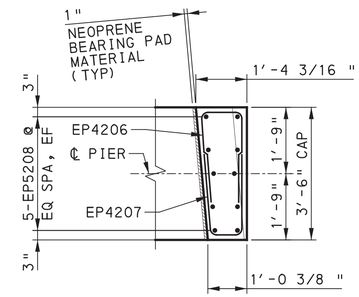
FOOTING PLAN
1 0 1 2 3 FEET



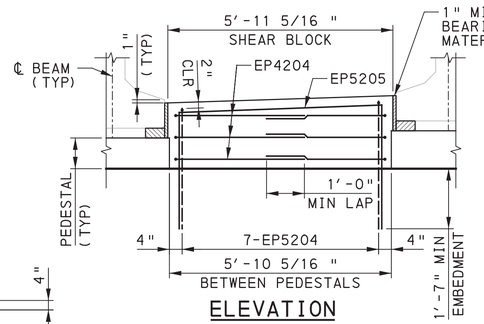
PLAN
(BAYS 1 & 3)



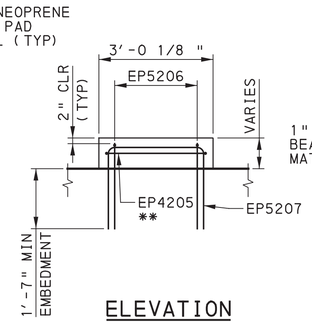
PLAN
(ALL PEDESTALS)



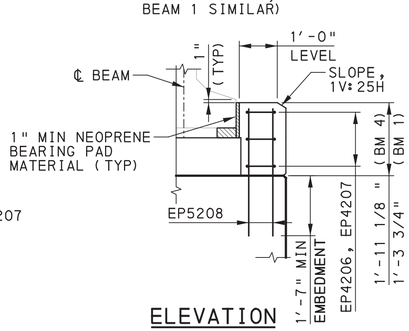
PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



ELEVATION
(ALL PEDESTALS)



ELEVATION
(ALL PEDESTALS)



ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)

SHEAR BLOCK DETAILS
1 0 1 2 FEET

PEDESTAL DETAILS
1 0 1 2 FEET

CHEEKWALL DETAILS
1 0 1 2 FEET

** PLACE #4 TIE WHEN PEDESTAL HEIGHT EXCEEDS 8 INCHES. PLACE AT HALF PEDESTAL HEIGHT OR 9 INCH SPACING

REFERENCES:
FOR FOOTING SECTION & ELEVATION, SEE SHEET 18

FOR DETAIL B, SEE SHEET 18

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEE 20

PIER BEARING CAPACITY						
LOCATION	LIMIT STATE	LOAD CASE	MAXIMUM FACTORED BEARING PRESSURE (KSF)	FACTORED BEARING RESISTANCE (KSF)	PERFORMANCE RATIO	EMPIRICAL BEARING RESISTANCE (KSF)
PIER 2	STR-I	MAX	4.93	13.65	2.77	27.30

NOTES:
1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL IN FOOTING AND BETWEEN STEM VERTICAL BARS WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 FOOTING PLAN & DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

RECOMMENDED AUGUST 22, 2022

SHEET 19 OF 56

S-41006

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

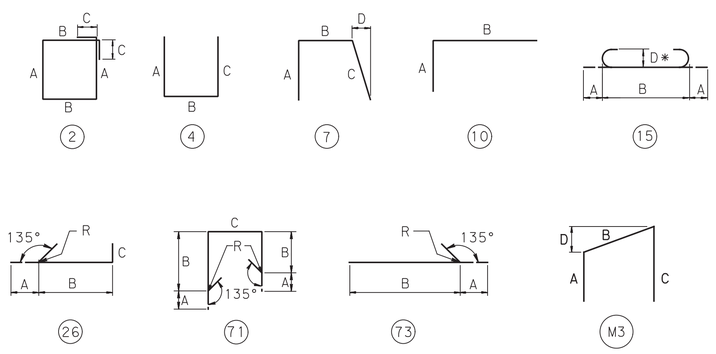
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTprb001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PIER 1 CAP & STEM											
EP4101	4	24	31′-5"	15	6"	30′-5"					
EP4102	4	24	7′-7"	71	6"	1′-6"	2′-11"	1′-6"			
EP4103	4	108	3′-5 1/2"	26	4 1/2"	2′-11"	4 1/2"			1"	
EP5101	5	14	31′-8"	ST							
EP5102	5	66	9′-0"	4	2′-9"	3′-6"	2′-9"				
EP5103	5	10	6′-6"	4	1′-6"	3′-6"	1′-6"				
SSD801	8	15	4′-4"	ST							STAINLESS STEEL
PIER 1 PEDESTALS & CHEEK WALLS											
EP4104	4	1	13′-9 1/2"	M12	3′-6"	2′-9"	3′-6 1/2"	3′-0"	3"		F = 6"
EP4105	4	2	14′-0"	2	3′-6"	3′-0"	6"				
EP4106	4	6	6′-4"	7	2′-8"	1′-0"	2′-8"	3"			
EP4107	4	6	6′-1 1/2"	7	2′-8"	9 1/2"	2′-8"	3"			
EP5104	5	16	8′-2"	4	2′-5"	3′-4"	2′-5"				
EP5105	5	6	7′-4"	4	2′-5"	2′-6"	2′-5"				
EP5106	5	6	7′-8"	4	2′-5"	2′-8"	2′-5"				
EP5107	5	12	7′-6"	4	2′-5"	2′-10"	2′-5"				
EP5108	5	20	3′-5"	ST							
PIER 1 FOOTING											
EF4101	4	50	2′-8"	26	4 1/2"	1′-11′′	4 1/2"			1"	
EF5101	5	30	34′-8′	ST							
EF6101	6	36	13′-8"	ST							
EF7101	7	70	13′-8"	ST							
EF7102	7	68	17′-5"	10	1′-2"	16′-3"					

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PIER 2 CAP & STEM											
EP4201	4	32	31′-5"	15	6"	30′-5"					
EP4202	4	32	6′-5"	71	6"	1′-6"	2′-5"	1′-6"			
EP4203	4	144	3′-2"	26	4 1/2"	2′-5′′	4 1/2"			1"	
EP5201	5	12	31′-8"	ST							
EP5202	5	66	8′-6"	4	2′-9"	3′-0"	2′-9"				
EP5203	5	10	6′-0"	4	1′-6"	3′-0"	1′-6"				
PIER 2 PEDESTALS, SHEAR BLOCKS & CHEEK WALLS											
EP4204	4	10	9′-8"	4	3′-3"	3′-2"	3′-3"				
EP4205	4	2	12′-0"	2	3′-0"	2′-6"	6"				
EP4206	4	6	5′-10"	7	2′-5"	1′-0"	2′-5"	3"			
EP4207	4	6	5′-1 1/2"	7	2′-2"	9 1/2"	2′-2"	3"			
EP5204	5	14	9′-8"	4	3′-4"	3′-0"	3′-4"				
EP5205	5	8	11′-9"	M3	3′-1"	5′-4"	3′-4"				
EP5206	5	16	7′-7"	4	2′-5"	2′-9"	2′-5"				
EP5207	5	16	7′-0"	4	2′-4"	2′-4"	2′-4"				
EP5208	5	20	3′-5"	ST							
PIER 2 FOOTING											
EF4101	4	50	2′-8"	26	4 1/2"	1′-11′′	4 1/2"			1"	
EF5201	5	30	34′-8′	ST							
EF6201	6	36	14′-8"	ST							
EF7201	7	70	14′-8"	ST							
EF7202	7	68	22′-2"	10	1′-2"	21′-0"					



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: SRM | CKD: REB | DWG: DFK | CKD: SRM

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

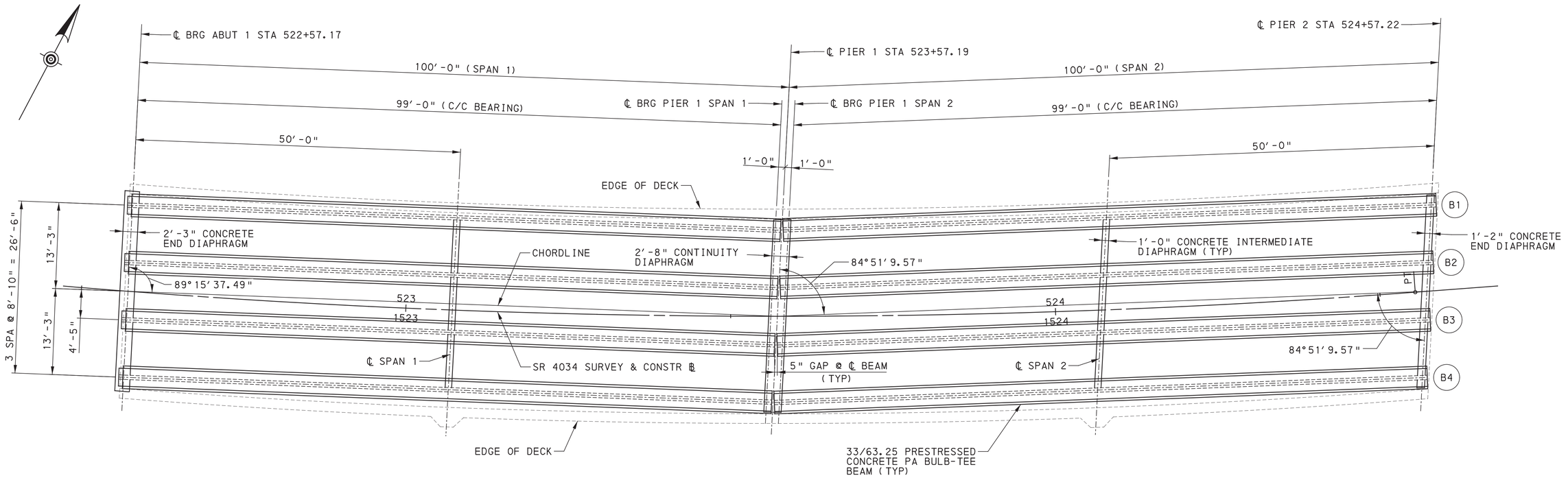
ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER REBAR SCHEDULE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

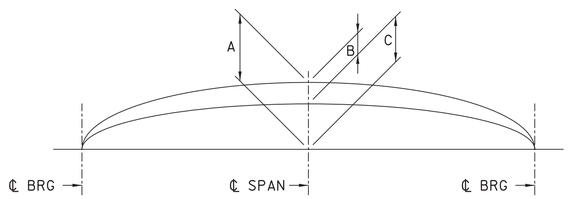
SHEET 20 OF 56

S-41006



FRAMING PLAN

2 0 4 8 FEET



BEAM CAMBER DIAGRAM

BEAM CAMBER TABLE								
	SPAN 1				SPAN 2			
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 1	BEAM 2	BEAM 3	BEAM 4
A	2.41′′	2.41′′	2.41′′	2.41′′	2.41′′	2.41′′	2.41′′	2.41′′
B	0.79′′	0.98′′	1.02′′	1.00′′	0.79′′	0.99′′	1.02′′	1.00′′
C	1.62′′	1.43′′	1.39′′	1.41′′	1.62′′	1.42′′	1.39′′	1.41′′

A = ESTIMATED PRESTRESSED CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR. (CHECK IN FIELD)

B = DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.

C = A-B= NET CAMBER.
VARY THE THICKNESS OF THE CONCRETE HAUNCH TO COMPENSATE FOR ANY INACCURACIES IN BEAM CAMBER.

A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIOUS PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSS.

USE A CREEP FACTOR EQUAL TO 1.6 AND P/S LOSS EQUAL TO 10%

NOTES:

1. SHOW DESIGN LENGTH AND CASTING LENGTH ON SHOP DRAWINGS.
2. SHOW PLAN, ELEVATION, SECTIONS AND ALL REINFORCEMENT DETAILS ON SHOP DRAWINGS.
3. SHOW ANY MODIFICATIONS TO REINFORCEMENT SPLICE AND BENDING DETAILS ON SHOP DRAWINGS.
4. SHOW THE FOLLOWING DATA ON THE SHOP DRAWINGS:
   A) THE SIZE AND LOCATION OF THE TEMPORARY SUPPORTS
   B) THE TYPE AND LOCATION OF THE BRACING AND TEMPORARY SUPPORTS USED FOR THE TRANSPORTATION AND ERECTION OF THE BEAMS.
5. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.

REFERENCES:

1. FOR BEAM DETAILS, SEE SHEETS 22, 23, 24 & 25
2. FOR END DIAPHRAGM DETAILS, SEE SHEETS 36 & 38
3. FOR PIER CONTINUITY DIAPHRAGM DETAILS. SEE SHEET 37

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
FRAMING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

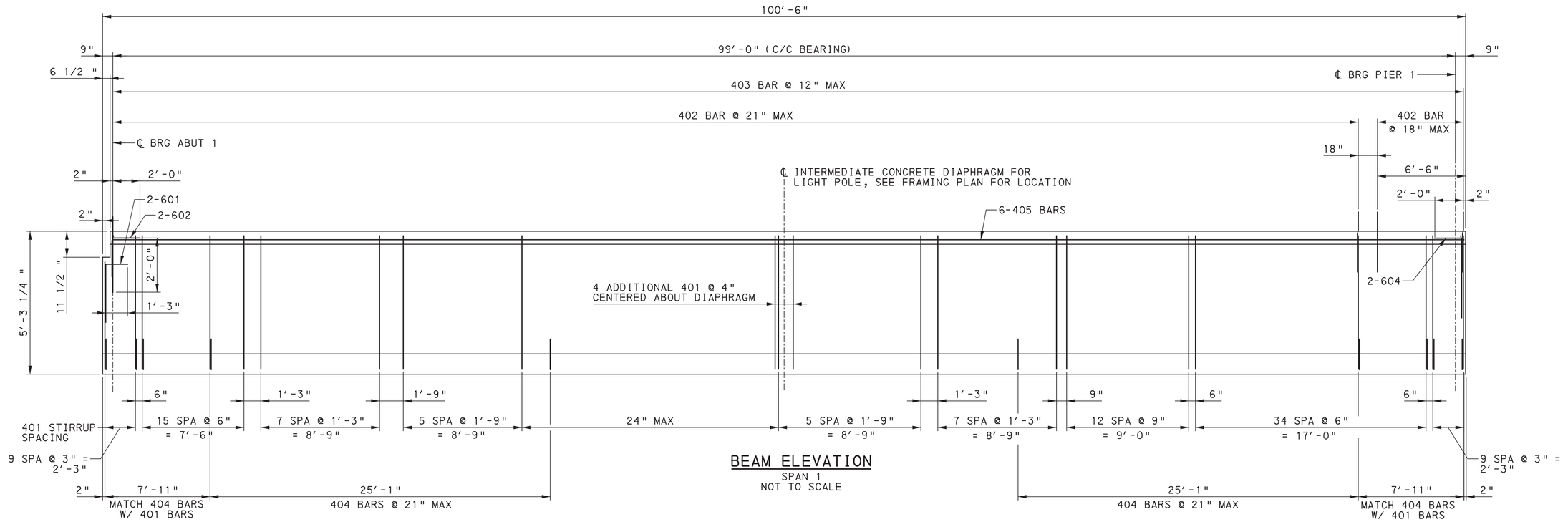
SHEET 21 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

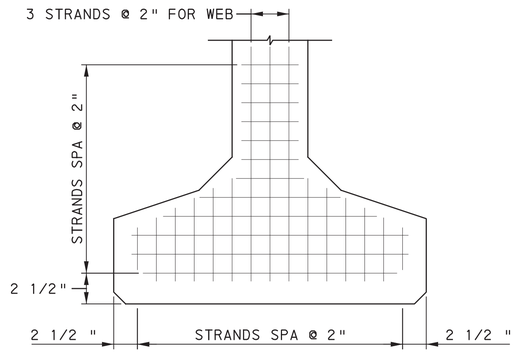
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss001.dgn



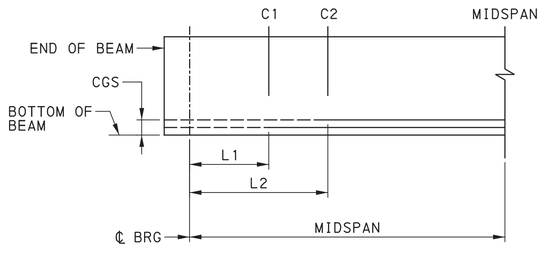
BEAM ELEVATION

SPAN 1
NOT TO SCALE



TYPICAL STRAND LOCATIONS

NOT TO SCALE



DEBONDING DETAIL

NOT TO SCALE

___ DEBONDED SECTION OF STRAND

____ FULLY BONDED SECTION OF STRAND

NOTE:
THIS IS A REPRESENTATION OF THE DEBONDED LENGTHS. IT DOES NOT REPRESENT A SPECIFIC LOCATION, OR SPECIFIC ROW OF DEBONDED STRANDS.

NOTES:

1. MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMODATE NOTCHED FLANGE AND WEB.
2. EPOXY COAT ALL REBAR FOR A DISTANCE OF 9′-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO THE BRIDGE DECK FROM THE TOP OF BEAMS.
4. USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF INSERT IS 3"
5. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
6. MIN COVER: STIRRUPS - 1" MIN
   ALL OTHERS - 1 1/2" MIN

REFERENCES:

FOR FRAMING PLAN AND ADDITIONAL NOTES, SEE SHEET 21

FOR BEAM INSERT LOCATIONS, SEE SHEETS 28 & 36-38

DEBONDED STRAND INFORMATION				
DEBONDED STRAND CUTOFF LOCATION	DISTANCE 'L' TO CUTOFF LOCATION ALONG ℄ OF BEAM (FEET)	NUMBER OF DEBONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	NUMBER OF BONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	CGS PRIOR TO CUTOFF LOCATION (INCHES)
C1	2.00	6	42	9.11
C2	5.00	5	48	8.79
MIDSPAN	———	———	55	8.27

NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 1

REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E COMMONWEALTH OF PENNSYLVANIA

RECOMMENDED AUGUST 22, 2022

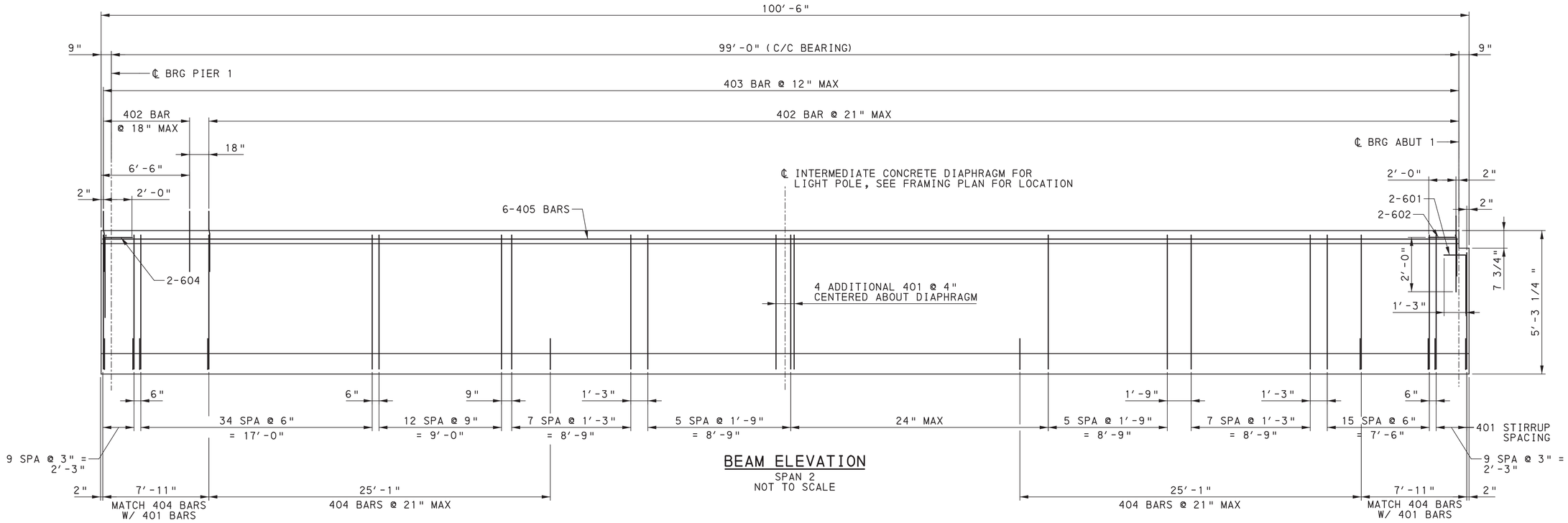
SHEET 22 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

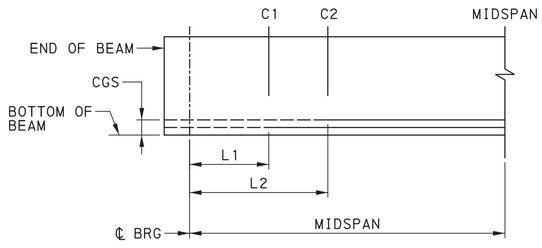
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss002.dgn



BEAM ELEVATION

SPAN 2
NOT TO SCALE

PRESTRESSING DATA		
	SPAN 1	SPAN 2
BEAM SIZE	PA BULB-TEE 33/63.25	PA BULB-TEE 33/63.25
JACKING PRESTRESS FORCE PER BEAM (Pi) (LOW RELAXATION STRANDS)	1724.7	1724.7
NO. OF STRANDS	51	51
CONCRETE STRENGTH AT STRAND RELEASE (f′ci)	6800 PSI	6800 PSI
CONCRETE STRENGTH AT 28 DAYS (f′c)	8000 PSI	8000 PSI
STRAND DIAMETER (270 KSI)	1/2" DIA (0.52 IN) SPECIAL LOW RELAXATION	1/2" DIA (0.52 IN) SPECIAL LOW RELAXATION
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ MID-SPAN OF BEAM (INCHES)	8.62	8.62
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ BEARING CENTERLINE (INCHES)	9.83	9.83



DEBONDING DETAIL

NOT TO SCALE

— — DEBONDED SECTION OF STRAND

——— FULLY BONDED SECTION OF STRAND

NOTE:
THIS IS A REPRESENTATION OF THE DEBONDED LENGTHS. IT DOES NOT REPRESENT A SPECIFIC LOCATION, OR SPECIFIC ROW OF DEBONDED STRANDS.

NOTES:

1. MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMODATE NOTCHED FLANGE AND WEB.
2. EPOXY COAT ALL REBAR FOR A DISTANCE OF 9′-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO THE BRIDGE DECK FROM THE TOP OF BEAMS.
4. USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF INSERT IS 3"
5. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
6. MIN COVER: STIRRUPS - 1" MIN
   ALL OTHERS - 1 1/2" MIN

REFERENCES:

FOR FRAMING PLAN AND ADDITIONAL NOTES, SEE SHEET 21

FOR BEAM INSERT LOCATIONS, SEE SHEETS 28 & 36-38

DEBONDED STRAND INFORMATION				
DEBONDED STRAND CUTOFF LOCATION	DISTANCE 'L' TO CUTOFF LOCATION ALONG ℄ OF BEAM (FEET)	NUMBER OF DEBONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	NUMBER OF BONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	CGS PRIOR TO CUTOFF LOCATION (INCHES)
C1	2.00	6	42	9.11
C2	5.00	5	48	8.79
MIDSPAN	———	———	55	8.27

NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

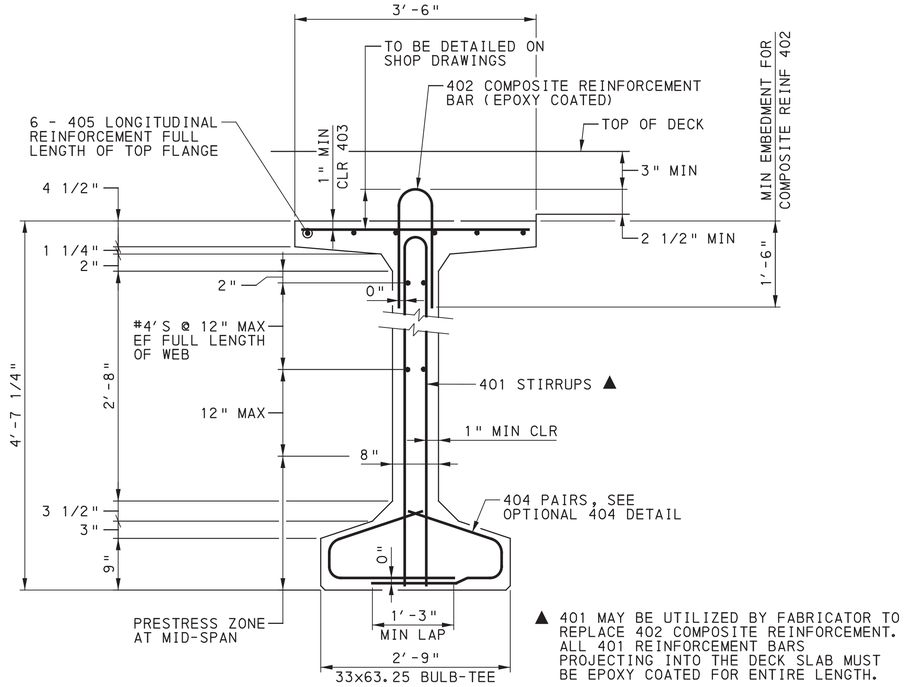
SHEET 23 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

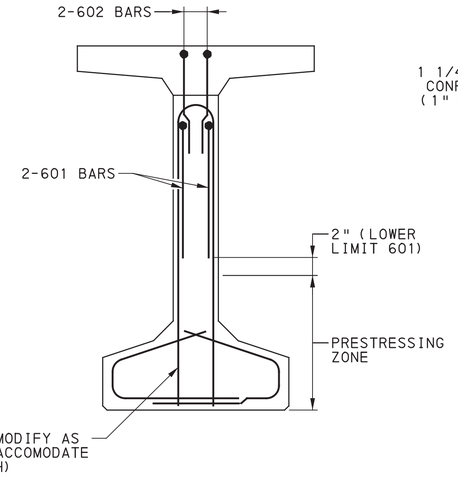
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss003.dgn

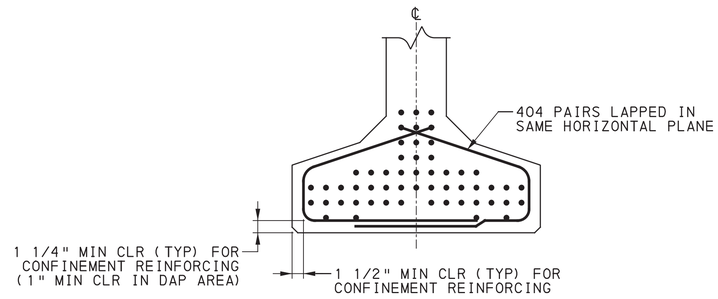


▲ 401 MAY BE UTILIZED BY FABRICATOR TO REPLACE 402 COMPOSITE REINFORCEMENT. ALL 401 REINFORCEMENT BARS PROJECTING INTO THE DECK SLAB MUST BE EPOXY COATED FOR ENTIRE LENGTH.

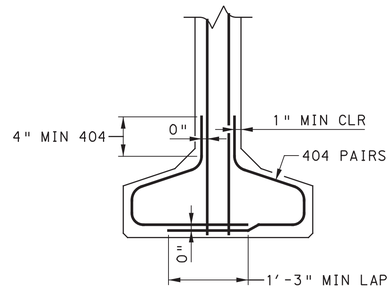
PA BULB-TEE TYPICAL SECTION
NOT TO SCALE



PA BULB-TEE ADDITIONAL NOTCH REINFORCING END VIEW
NOT TO SCALE



PA BULB-TEE TYP. STRAND CONFINEMENT
NOT TO SCALE



OPTIONAL 404 DETAIL
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 24 OF 56

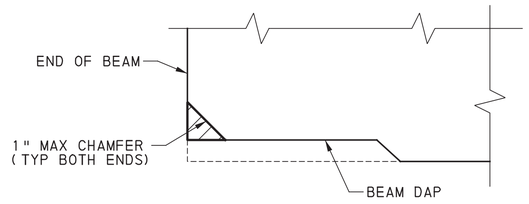
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss004.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss007.dgn



BEAM CHAMFER
NOT TO SCALE

BEAM DAP SCHEDULE

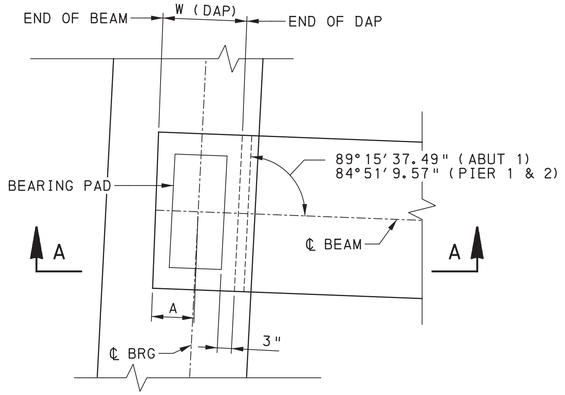
SPAN	BEAM	NEAR END					FAR END				
		W (in)	A (in)	T1 (in)	T2 (in)	T3 (in)	W (in)	A (in)	T1 (in)	T2 (in)	T3 (in)
1	1	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----
	2	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----
	3	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----
	4	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----
2	1	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----
	2	17.5	9.0	0.25	0.3411	0.44	----	----	----	----	----
	3	17.5	9.0	0.25	0.3411	0.44	----	----	----	----	----
	4	17.5	9.0	0.25	0.3714	0.50	----	----	----	----	----

PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - NON-COMPOSITE

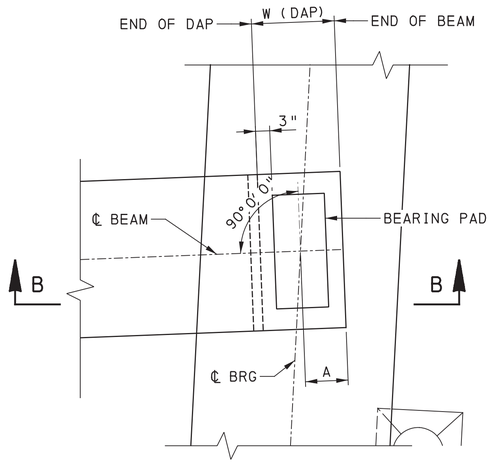
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 4	AREA OF BASIC BEAM (IN2)	972.00	-----
	MOMENT OF INERTIA (IN4)	509,017	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	33.81	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	29.44	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	15,053	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	17,293	-----
INTERIOR BEAMS 2 & 3	AREA OF BASIC BEAM (IN2)	972.00	-----
	MOMENT OF INERTIA (IN4)	509,017	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	33.81	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	29.44	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	15,053	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	17,293	-----

PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - COMPOSITE DEAD LOAD

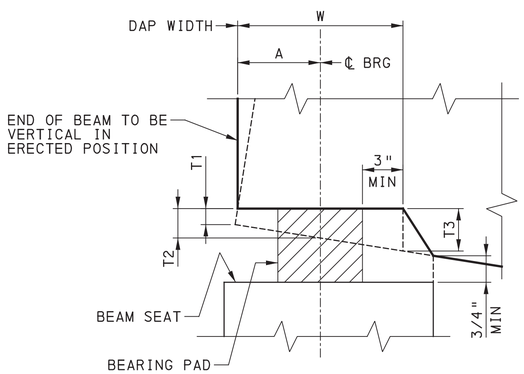
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 4	MOMENT OF INERTIA (IN4)	992,496	1,030,983
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	28.14	28.90
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	20.64	21.40
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	42.61	41.85
	SECTION MODULUS AT TOP OF SLAB (IN3)	35,269	35,678
	SECTION MODULUS AT TOP OF BEAM (IN3)	48,085	48,184
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	23,293	24,633
INTERIOR BEAMS 2 & 3	MOMENT OF INERTIA (IN4)	1,010,995	1,050,647
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	27.64	28.39
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	20.44	20.89
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	43.11	42.36
	SECTION MODULUS AT TOP OF SLAB (IN3)	36,580	37,008
	SECTION MODULUS AT TOP OF BEAM (IN3)	50,203	30,294
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	23,450	24,803



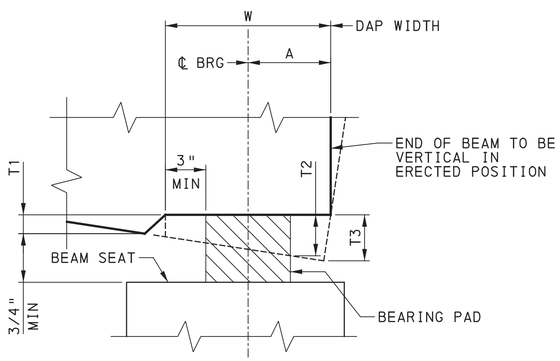
PLAN - DAP AT HIGH END OF BEAM
(ABUT 1 AND PIER 1, SPAN 2)
NOT TO SCALE



PLAN - DAP LOW END OF BEAM
(PIER 1, SPAN 1 AND PIER 2)
NOT TO SCALE



SECTION A-A AT HIGH END OF BEAM
NOT TO SCALE



SECTION B-B AT LOW END OF BEAM
NOT TO SCALE

BEAM DAP DETAILS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 25 OF 56

S-41006

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

PLOTTED: 8/22/2022

		MOMENT TABLE (KIP-FT)																				
		PIER 1	SPAN 1									PIER 2		SPAN 2								ABUT 1
MOMENT DUE TO		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
BEAM NO 1	DC1	0.0	833.7	1474.2	1928.0	2199.3	2289.0	2179.0	1888.6	1416.2	757.5	0.0	0.0	759.5	1421.3	1896.3	2187.9	2298.1	2207.4	1934.3	1478.0	835.1	0.0
	DC2	0.0	134.2	227.1	278.8	289.3	258.5	186.4	73.1	-81.5	-277.3	-488.8	-488.8	-277.3	-81.5	73.1	186.4	258.5	289.3	278.8	227.1	134.2	0.0
	DC1 + DC2	0.0	967.9	1701.3	2206.8	2488.6	2547.5	2365.4	1961.7	1334.7	480.2	-488.8	-488.8	482.2	1339.8	1969.4	2374.3	2556.6	2496.7	2213.1	1705.1	969.3	0.0
	PHL-93 (+)	0.0	807.5	1420.4	1838.7	2085.2	2148.4	2085.2	1838.7	1420.4	807.5	89.5	89.5	807.5	1420.4	1838.7	2085.2	2148.4	2085.2	1838.7	1420.4	807.5	0.0
	PHL-93 (-)	0.0	-97.6	-195.2	-292.8	-390.4	-487.9	-585.5	-683.1	-940.7	-1205.7	-1869.6	-1869.6	-1205.7	-940.7	-683.1	-585.5	-487.9	-390.4	-292.8	-195.2	-97.6	0.0
	P82 (+)	0.0	1246.9	2171.5	2773.8	3053.6	3033.1	3053.6	2773.8	2171.5	1246.9	141.5	141.5	1246.9	2171.5	2773.8	3053.6	3033.1	3053.6	2773.8	2171.5	1246.9	0.0
	P82 (-)	0.0	-151.4	-302.8	-454.2	-605.7	-757.1	-908.5	-1059.9	-1211.3	-1362.7	-1499.0	-1499.0	-1362.7	-1211.3	-1059.9	-908.5	-757.1	-605.6	-454.2	-302.8	-151.4	0.0
	P2016-13 (+)	0.0	1411.1	2401.8	3025.4	3356.8	3349.7	3356.8	3025.4	2401.8	1411.1	164.6	164.6	1411.1	2401.8	3025.4	3356.8	3349.7	3356.8	3025.4	2401.8	1411.1	0.0
	P2016-13 (-)	0.0	-163.5	-327.0	-490.5	-654.1	-817.6	-981.1	-1144.6	-1308.1	-1600.5	-2557.7	-2557.7	-1600.5	-1308.1	-1144.6	-981.1	-817.6	-654.1	-490.5	-327.0	-163.5	0.0
BEAM NO 2	DC1	0.0	930.2	1654.3	2174.0	2490.0	2600.6	2467.0	2130.2	1590.1	845.8	0.0	0.0	853.0	1602.8	2146.2	2484.7	2618.6	2507.1	2189.1	1666.2	937.3	0.0
	DC2	0.0	134.2	227.1	278.8	289.3	258.5	186.4	73.1	-81.5	-277.3	-488.8	-488.8	-277.3	-81.5	73.1	186.4	258.5	289.3	278.8	227.1	134.2	0.0
	DC1 + DC2	0.0	1064.4	1881.4	2452.8	2779.3	2859.1	2653.4	2203.3	1508.6	568.5	-488.8	-488.8	575.7	1521.3	2219.3	2671.1	2877.1	2796.4	2467.9	1893.3	1071.5	0.0
	PHL-93 (+)	0.0	908.2	1597.6	2068.2	2345.4	2416.6	2345.4	2068.2	1597.6	908.2	100.7	100.7	908.2	1597.6	2068.2	2345.4	2416.6	2345.4	2068.2	1597.6	908.2	0.0
	PHL-93 (-)	0.0	-109.8	-219.5	-329.3	-439.1	-548.8	-658.6	-768.4	-1058.1	-1356.2	-2102.9	-2102.9	-1356.2	-1058.1	-768.4	-658.6	-548.8	-439.1	-329.3	-219.5	-109.8	0.0
	P82 (+)	0.0	1402.6	2442.5	3119.9	3434.7	3411.6	3434.7	3119.9	2442.5	1402.6	159.1	159.1	1402.6	2442.5	3119.9	3434.7	3411.6	3434.7	3119.9	2442.5	1402.6	0.0
	P82 (-)	0.0	-170.3	-340.6	-510.9	-681.2	-851.5	-1021.9	-1192.2	-1362.5	-1532.8	-1686.1	-1686.1	-1532.8	-1362.5	-1192.2	-1021.9	-851.5	-681.2	-510.9	-340.6	-170.3	0.0
	P2016-13 (+)	0.0	1587.2	2701.5	3403.0	3775.7	3767.7	3775.7	3403.0	2701.5	1587.2	185.2	185.2	1587.2	2701.5	3403.0	3775.7	3767.7	3775.7	3403.0	2701.5	1587.2	0.0
	P2016-13 (-)	0.0	-183.9	-367.8	-551.8	-735.7	-919.6	-1103.5	-1287.5	-1471.4	-1800.3	-2877.0	-2877.0	-1800.3	-1471.4	-1287.5	-1103.5	-919.6	-735.7	-551.8	-367.8	-183.9	0.0
BEAM NO 3	DC1	0.0	941.1	1676.3	2207.0	2534.0	2655.5	2510.7	2162.7	1611.4	855.9	0.0	0.0	859.9	1618.3	2171.1	2519.7	2664.7	2543.1	2215.6	1683.5	945.6	0.0
	DC2	0.0	139.2	237.1	293.8	309.2	283.4	200.4	76.1	-89.4	-296.2	-517.6	-517.6	-296.2	-89.4	76.1	200.4	283.4	309.2	293.8	237.1	139.2	0.0
	DC1 + DC2	0.0	1080.3	1913.4	2500.8	2843.2	2938.9	2711.1	2238.8	1522.0	559.7	-517.6	-517.6	563.7	1528.9	2247.2	2720.1	2948.1	2852.3	2509.4	1920.6	1084.8	0.0
	PHL-93 (+)	0.0	908.2	1597.6	2068.2	2345.4	2416.6	2345.4	2068.2	1597.6	908.2	100.7	100.7	908.2	1597.6	2068.2	2345.4	2416.6	2345.4	2068.2	1597.6	908.2	0.0
	PHL-93 (-)	0.0	-109.8	-219.5	-329.3	-439.1	-548.8	-658.6	-768.4	-1058.1	-1356.2	-2102.9	-2102.9	-1356.2	-1058.1	-768.4	-658.6	-548.8	-439.1	-329.3	-219.5	-109.8	0.0
	P82 (+)	0.0	1402.6	2442.5	3119.9	3434.7	3411.6	3434.7	3119.9	2442.5	1402.6	159.1	159.1	1402.6	2442.5	3119.9	3434.7	3411.6	3434.7	3119.9	2442.5	1406.6	0.0
	P82 (-)	0.0	-170.3	-340.6	-510.9	-681.2	-851.5	-1021.9	-1192.2	-1362.5	-1532.8	-1686.1	-1686.1	-1532.8	-1362.5	-1192.2	-1021.9	-851.5	-681.2	-510.9	-340.6	-170.3	0.0
	P2016-13 (+)	0.0	1587.2	2701.5	3403.0	3775.7	3767.7	3775.7	3403.0	2701.5	1587.2	185.2	185.2	1587.2	2701.5	3403.0	3775.7	3767.7	3775.7	3403.0	2701.5	1587.2	0.0
	P2016-13 (-)	0.0	-183.9	-367.8	-551.8	-735.7	-919.6	-1103.5	-1287.5	-1471.4	-1800.3	-2877.0	-2877.0	-1800.3	-1471.4	-1287.5	-1103.5	-919.6	-735.7	-551.8	-367.8	-183.9	0.0
BEAM NO 4	DC1	0.0	930.9	1661.0	2188.0	2509.9	2624.3	2488.8	2146.7	1566.3	848.2	0.0	0.0	847.7	1597.1	2142.8	2483.8	2619.7	2507.1	2187.8	1663.0	933.2	0.0
	DC2	0.0	139.2	237.1	293.8	309.2	283.4	200.4	76.1	-89.4	-296.2	-517.6	-517.6	-296.2	-89.4	76.1	200.4	283.4	309.2	293.8	237.1	139.2	0.0
	DC1 + DC2	0.0	1070.1	1898.1	2481.8	2819.1	2907.7	2689.2	2222.8	1476.9	552.0	-517.6	-517.6	551.5	1507.7	2218.9	2684.2	2903.1	2816.3	2481.6	1900.1	1072.4	0.0
	PHL-93 (+)	0.0	940.5	1654.5	2141.8	2428.9	2502.5	2428.9	2141.8	1654.5	940.5	104.3	104.3	940.5	1654.5	2141.8	2428.9	2502.5	2428.9	2141.8	1654.5	940.5	0.0
	PHL-93 (-)	0.0	-113.7	-227.3	-341.0	-454.7	-568.4	-682.0	-795.7	-1095.8	-1404.4	-2177.7	-2177.7	-1404.4	-1095.8	-795.7	-682.0	-568.4	-454.7	-341.0	-227.3	-113.7	0.0
	P82 (+)	0.0	1452.5	2529.4	3230.9	3556.9	3533.0	3556.9	3230.9	2529.4	1452.5	164.8	164.8	1452.5	2529.4	3230.9	3556.9	3533.0	3556.9	3230.9	2529.4	1452.5	0.0
	P82 (-)	0.0	-176.4	-352.7	-529.1	-705.5	-881.8	-1058.2	-1234.6	-1410.9	-1587.3	-1746.0	-1746.0	-1587.3	-1410.9	-1234.6	-1058.2	-881.8	-705.5	-529.1	-352.7	-176.4	0.0
	P2016-13 (+)	0.0	1643.7	2797.6	3524.0	3910.0	3901.7	3910.0	3524.0	2797.6	1643.7	191.8	191.8	1643.7	2797.6	3524.0	3910.0	3901.7	3910.0	3524.0	2797.6	1643.7	0.0
	P2016-13 (-)	0.0	-190.5	-380.9	-571.4	-761.9	-952.3	-1142.8	-1333.3	-1523.7	-1864.3	-2979.3	-2979.3	-1864.3	-1523.7	-1333.3	-1142.8	-952.3	-761.9	-571.4	-380.9	-190.5	0.0

NOTES :
ALL MOMENTS ARE UNFACTORED
DC2 VALUES INCLUDE FUTURE WEARING SURFACE
PHL-93 AND P-82 LOADS INCLUDE IMPACT

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM MOMENT TABLE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 26 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss005.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss006.dgn

		SHEAR TABLE (KIP)																					
		PIER 1	SPAN 1									PIER 2		SPAN 2									ABUT 1
SHEAR DUE TO		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
BEAM NO 1	DC1	93.3	73.3	54.6	36.2	18.1	-2.0	-20.0	-38.1	-56.5	-75.4	-93.0	93.2	75.7	56.8	38.3	20.1	2.0	-18.2	-36.4	-54.9	-73.8	-93.3
	DC2	15.5	11.4	7.2	3.1	-1.0	-5.1	-9.3	-13.4	-17.5	-21.6	-25.4	25.4	21.6	17.5	13.4	9.3	5.1	1.0	-3.1	-7.2	-11.4	-15.5
	DC1 + DC2	108.7	84.6	61.8	39.3	17.1	-7.2	-29.3	-51.5	-74.0	-97.0	-118.4	118.5	97.3	74.3	51.7	29.3	7.1	-17.2	-39.6	-62.1	-85.2	-108.8
	PHL-93 (+)	80.2	69.7	59.5	49.8	40.5	32.3	24.5	17.5	10.9	4.7	0.3	87.0	79.2	70.0	60.4	50.7	41.4	32.5	24.2	16.1	8.8	8.6
	PHL-93 (-)	-8.7	-8.9	-16.3	-24.4	-32.8	-41.3	-50.2	-59.8	-69.2	-78.3	-86.1	-0.3	-4.7	-11.0	-17.7	-24.8	-32.3	-40.1	-49.3	-58.9	-68.9	-79.4
	P82 (+)	127.1	110.6	94.0	77.5	61.0	45.1	30.3	20.8	12.1	3.9	0.2	135.4	122.9	107.5	90.6	72.6	54.4	37.0	25.6	15.1	13.3	13.3
	P82 (-)	-13.4	-13.4	-15.2	-25.2	-37.4	-54.4	-71.8	-89.6	-106.3	-121.6	-133.9	-0.2	-3.9	-12.3	-21.0	-30.6	-45.1	-60.3	-76.7	-93.0	-109.4	-125.7
	P2016-13 (+)	148.5	123.2	100.8	81.8	63.3	48.7	35.6	23.1	11.3	3.4	0.2	159.6	137.7	115.2	97.6	83.5	67.1	47.7	28.6	14.3	14.3	14.3
	P2016-13 (-)	-14.5	-14.5	-14.5	-28.9	-48.3	-67.1	-82.6	-96.6	-114.0	-136.2	-157.8	-0.2	-3.5	-11.4	-23.4	-36.0	-48.7	-62.6	-81.0	-99.7	-121.9	-146.9
BEAM NO 2	DC1	103.4	82.7	62.2	41.8	21.4	-3.2	-23.5	-43.8	-64.2	-84.7	-103.3	104.2	85.4	64.6	44.1	23.1	3.2	-21.6	-42.0	-62.6	-83.3	-104.2
	DC2	15.5	11.4	7.2	3.1	-1.0	-5.1	-9.3	-13.4	-17.5	-21.6	-25.4	25.4	21.6	17.5	13.4	9.3	5.1	1.0	-3.1	-7.2	-11.4	-15.5
	DC1 + DC2	118.8	94.1	69.4	44.9	20.4	-8.4	-32.8	-57.2	-81.7	-106.3	-128.6	129.6	107.0	82.2	57.5	32.4	8.3	-20.6	-45.2	-69.8	-94.6	-119.7
	PHL-93 (+)	103.7	90.0	76.9	64.4	52.4	41.8	32.0	22.8	14.2	6.1	0.4	112.4	102.3	90.4	78.1	65.5	53.5	42.4	31.6	21.1	11.5	11.2
	PHL-93 (-)	-11.2	-11.5	-21.1	-31.6	-42.4	-53.5	-65.5	-78.1	-90.4	-102.3	-112.4	-0.4	-6.1	-14.2	-22.8	-32.0	-41.8	-52.4	-64.4	-76.9	-90.0	-103.7
	P82 (+)	164.2	142.9	121.5	100.2	78.8	58.2	39.6	27.1	15.8	5.1	0.3	175.0	158.8	138.8	117.1	93.8	70.3	48.3	33.5	19.7	17.4	17.4
	P82 (-)	-17.4	-17.4	-19.7	-33.5	-48.3	-70.3	-93.8	-117.1	-138.8	-158.8	-175.0	-0.3	-5.1	-15.8	-27.1	-39.6	-58.2	-78.8	-100.2	-121.5	-142.9	-164.2
	P2016-13 (+)	191.9	159.2	130.2	105.8	81.8	62.9	46.5	30.2	14.7	4.5	0.3	206.2	177.9	148.9	126.1	108.0	86.7	62.4	37.4	18.7	18.7	18.7
	P2016-13 (-)	-18.7	-18.7	-18.7	-37.4	-62.4	-86.7	-108.0	-126.1	-148.9	-177.9	-206.2	-0.3	-4.5	-14.7	-30.2	-46.5	-62.9	-81.8	-105.8	-130.2	-159.2	-191.9
BEAM NO 3	DC1	104.5	83.8	63.3	42.9	22.5	-4.3	-24.6	-45.0	-65.3	-85.8	-104.4	104.9	86.2	65.5	45.1	24.7	4.3	-22.6	-43.0	-63.5	-84.1	-105.0
	DC2	16.0	11.9	7.7	3.6	-0.5	-6.2	-10.4	-14.5	-18.6	-22.7	-26.5	26.5	22.7	18.6	14.5	10.4	6.2	0.5	-3.6	-7.7	-11.9	-16.0
	DC1 + DC2	120.4	95.7	71.0	46.5	22.0	-10.6	-35.0	-59.5	-83.9	-108.6	-130.9	131.4	108.9	84.2	59.6	35.0	10.6	-22.0	-46.6	-71.2	-96.0	-121.0
	PHL-93 (+)	103.7	90.0	76.9	64.4	52.4	41.8	32.0	22.8	14.2	6.1	0.4	112.4	102.3	90.4	78.1	65.5	53.5	42.4	31.6	21.1	11.5	11.2
	PHL-93 (-)	-11.2	-11.5	-21.1	-31.6	-42.4	-53.5	-65.5	-78.1	-90.4	-102.3	-112.4	-0.4	-6.1	-14.2	-22.8	-32.0	-41.8	-52.4	-64.4	-76.9	-90.0	-103.7
	P82 (+)	164.2	142.9	121.5	100.2	78.8	58.2	39.6	27.1	15.8	5.1	0.3	175.0	158.8	138.8	117.1	93.8	70.3	48.3	33.5	19.7	17.4	17.4
	P82 (-)	-17.4	-17.4	-19.7	-33.5	-48.3	-70.3	-93.8	-117.1	-138.8	-158.8	-175.0	-0.3	-5.1	-15.8	-27.1	-39.6	-58.2	-78.8	-100.2	-121.5	-142.9	-164.2
	P2016-13 (+)	191.9	159.2	130.2	105.8	81.8	62.9	46.5	30.2	14.7	4.5	0.3	206.2	177.9	148.9	126.1	108.0	86.7	62.4	37.4	18.7	18.7	18.7
	P2016-13 (-)	-18.7	-18.7	-18.7	-37.4	-62.4	-86.7	-108.0	-126.1	-148.9	-177.9	-206.2	-0.3	-4.5	-14.7	-30.2	-46.5	-62.9	-81.8	-105.8	-130.2	-159.2	-191.9
BEAM NO 4	DC1	103.0	83.1	62.9	42.5	21.9	-3.2	-23.9	-44.5	-65.0	-85.2	-103.2	103.3	85.1	64.8	44.4	23.9	3.3	-21.7	-42.2	-62.8	-83.2	-103.5
	DC2	16.0	11.9	7.7	3.6	-0.5	-6.2	-10.4	-14.5	-18.6	-22.7	-26.5	26.5	22.7	18.6	14.5	10.4	6.2	0.5	-3.6	-7.7	-11.9	-16.0
	DC1 + DC2	119.0	95.0	70.6	46.1	21.4	-9.4	-34.3	-59.0	-83.6	-108.0	-129.7	129.7	107.8	83.4	58.8	34.2	9.6	-21.1	-45.8	-70.5	-95.0	-119.4
	PHL-93 (+)	100.9	87.6	74.8	62.6	51.0	40.7	31.5	22.5	13.9	6.0	0.4	109.4	99.6	88.0	76.0	63.8	52.0	41.7	31.1	20.7	11.3	11.0
	PHL-93 (-)	-10.9	-11.2	-20.5	-30.7	-41.3	-52.0	-64.5	-76.8	-89.0	-100.6	-110.6	-0.4	-5.9	-13.8	-22.2	-31.2	-40.7	-51.5	-63.3	-75.7	-88.6	-102.0
	P82 (+)	159.8	139.1	118.3	97.5	76.7	56.7	38.9	26.7	15.6	5.0	0.3	170.3	154.6	135.1	113.9	91.2	68.4	47.5	32.9	19.4	17.1	17.1
	P82 (-)	-16.9	-16.9	-19.2	-32.6	-47.0	-68.4	-92.2	-115.2	-136.6	-156.2	-172.1	-0.3	-5.0	-15.4	-26.4	-38.5	-56.7	-77.5	-98.5	-119.6	-140.6	-161.6
	P2016-13 (+)	186.8	155.0	126.8	102.9	79.6	61.2	45.8	29.7	14.5	4.4	0.3	200.6	173.2	144.9	122.8	105.1	84.4	61.4	36.8	18.4	18.4	18.4
	P2016-13 (-)	-18.2	-18.2	-18.2	-36.4	-60.7	-84.4	-106.2	-124.1	-146.5	-175.0	-202.8	-0.3	-4.4	-14.3	-29.4	-45.3	-61.2	-80.5	-104.0	-128.1	-156.7	-188.8

NOTES :
ALL MOMENTS ARE UNFACTORED
DC2 VALUES INCLUDE FUTURE WEARING SURFACE
PHL-93 AND P-82 LOADS INCLUDE IMPACT

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM SHEAR TABLE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

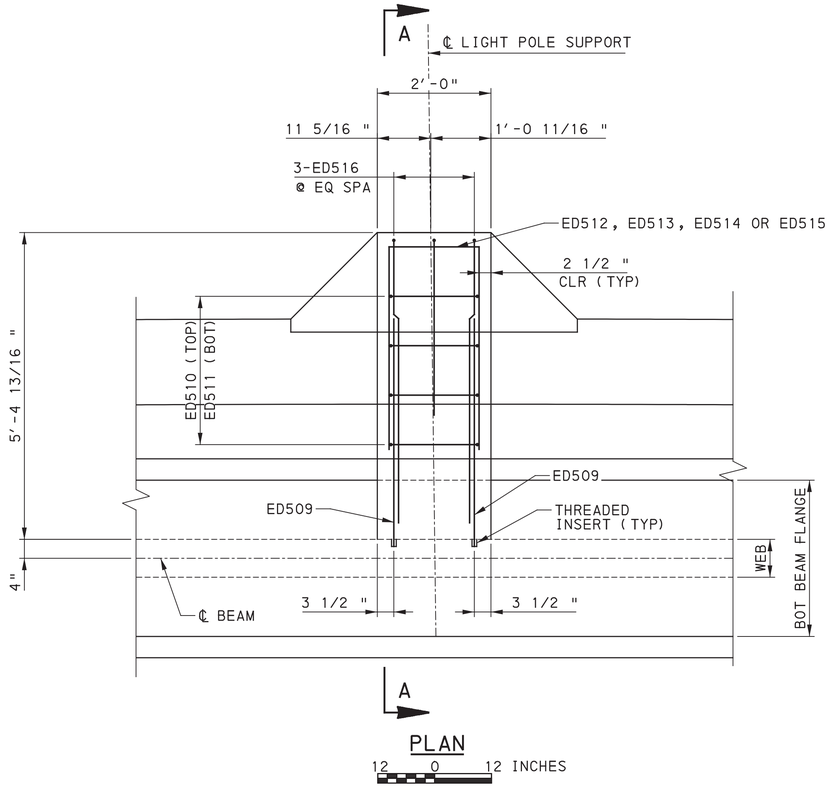
RECOMMENDED AUGUST 22, 2022

SHEET 27 OF 56

S-41006

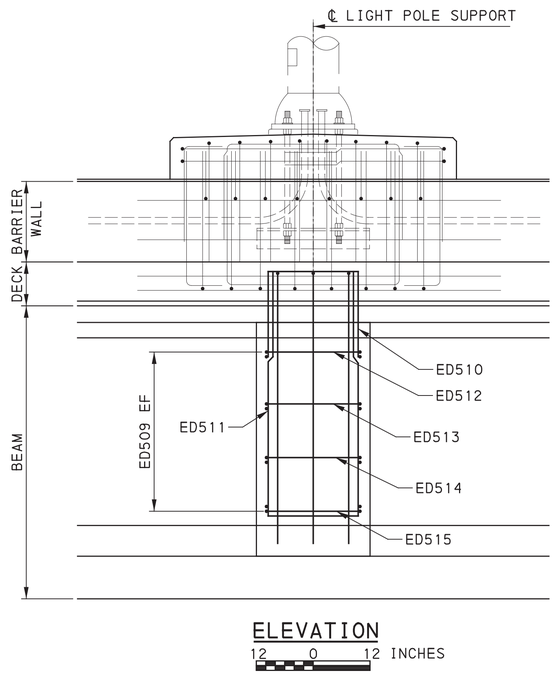
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTss008.dgn



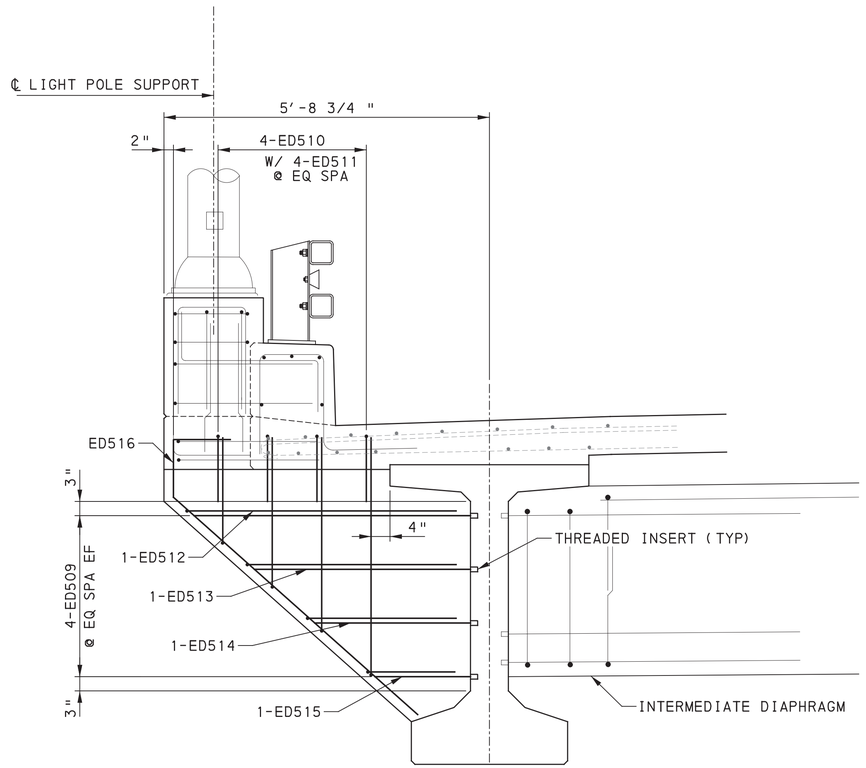
PLAN

12 0 12 INCHES



ELEVATION

12 0 12 INCHES



SECTION A-A

12 0 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

REFERENCES:

1. FOR LOCATION OF LIGHT POLE SUPPORTS, SEE RAILING PLAN SHEET 34
2. FOR LIGHT POLE ANCHORAGE DETAILS, SEE SHEET 39
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE

LIGHT POLE SUPPORT DETAILS

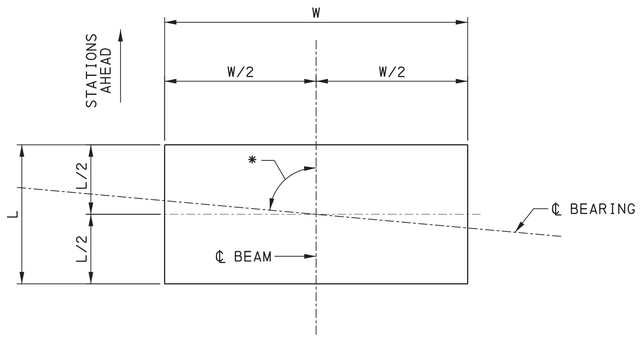
RECOMMENDED AUGUST 22, 2022

SHEET 28 OF 56

S-41006

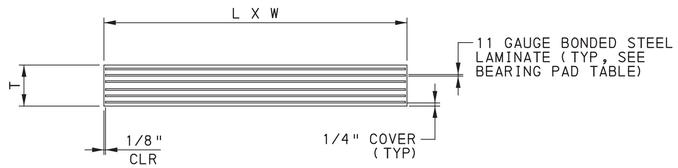
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022



PLAN
NTS

* - 89°15'37.5" (ABUT 1)
84°51'9.57" (PIER 1 & 2)



ELEVATION
NTS

FUTURE BEARING REPLACEMENT NOTES:

1. DO NOT DAMAGE THE SUPERSTRUCTURE OR SUBSTRUCTURE WHEN JACKING AND REPLACING THE BEARINGS.
2. THE MAXIMUM ALLOWABLE JACKING DISPLACEMENT IS 1/4".
3. SUBMIT THE PROPOSED JACKING AND REPLACEMENT PROCEDURE FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY JACKING OPERATIONS.
4. AT EACH SUBSTRUCTURE UNIT, JACK ALL BEAMS SIMULTANEOUSLY WITH THE SAME DISPLACEMENT AND RATE OF DISPLACEMENT. PROVIDE HYDRAULIC REGULATING DEVICES.
5. PROVIDE BEVELED LOAD PLATES TO MAINTAIN A LEVEL JACKING SURFACE.
6. INSTALL BLOCKING TO SUPPORT THE SUPERSTRUCTURE DURING THE BEARING REPLACEMENT. LEAVE JACKS IN PLACE AT ALL TIMES.
7. TRAFFIC IS NOT PERMITTED ON THE BRIDGE OR APPROACH SLAB WHILE JACKING IS OCCURRING. THE JACKING LOAD SHALL CONSIST OF THE DEAD LOAD ONLY.
8. THE JACKING CONTRACTOR IS RESPONSIBLE TO SIZE THE JACKS, JACK TOWERS AND DESIGN THE JACKING PROCEDURE, INCLUDING BUT NOT LIMITED TO, CHECKING CONCRETE BEARING STRESSES AND STABILITY. PROVIDE A JACK WITH A MINIMUM SAFE JACKING CAPACITY OF 150% OF THE LOAD TO BE JACKED AT THE JACKING POINT.
9. PROVIDE JACKS WITH LOCKING CAPABILITY.
10. ACCOUNT FOR ANY THERMAL MOVEMENTS AND ALL HORIZONTAL FORCED THAT MAY BE ENCOUNTERED DURING THE PERIOD THAT THE SUPERSTRUCTURE IS BEING JACKED OR IS RESTING ON TEMPORARY SUPPORTS.

ELASTOMERIC BEARING PAD DIMENSIONS AND PROPERTIES

					COVER LAYER		INTERIOR LAYER				LAMINATED PAD TOTALS				
BEARING LOCATION	BRG. TYPE	BRG. WIDTH (W)	BRG. LENGTH (L)	AREA OF COMPRESSION	LAYER THICK.	SHAPE FACTOR	LAYER THICK.	NO. OF LAYERS	NO. SHIM PL 11 GA.	SHAPE FACTOR	ELASTOMER THICK.	BEARING THICK. (T)	NUMBER REQUIRED	TEST BEARING	TOTAL REQUIRED
ABUT 1	EXP	25"	11"	275 (IN²)	0.250"	15.278	0.375"	5	6	10.185	2.375"	3.125"	4	1	5
PIER 1 (S1)	FIX	25"	11"	275 (IN²)	0.250"	15.278	0.375"	5	6	10.185	2.375"	3.125"	4		4
PIER 1 (S2)	FIX	25"	11"	275 (IN²)	0.250"	15.278	0.375"	5	6	10.185	2.375"	3.125"	4		4
PIER 2	EXP	25"	11"	275 (IN²)	0.250"	15.278	0.375"	5	6	10.185	2.375"	3.125"	4		4

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
BEARING DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

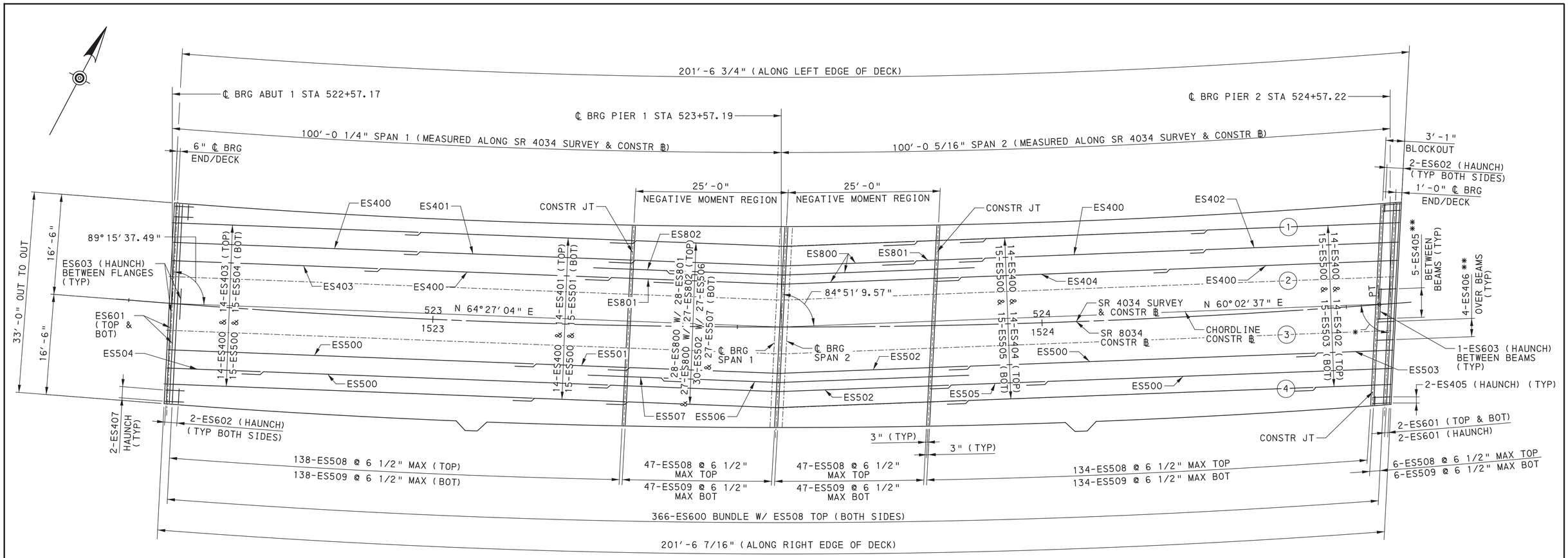
SHEET 29 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTbg001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk001.dgn

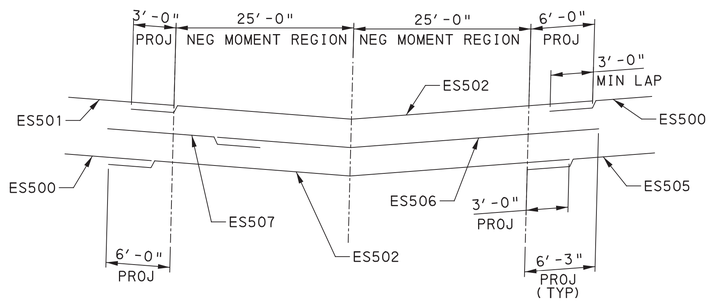


PLAN
2 0 4 8 FEET

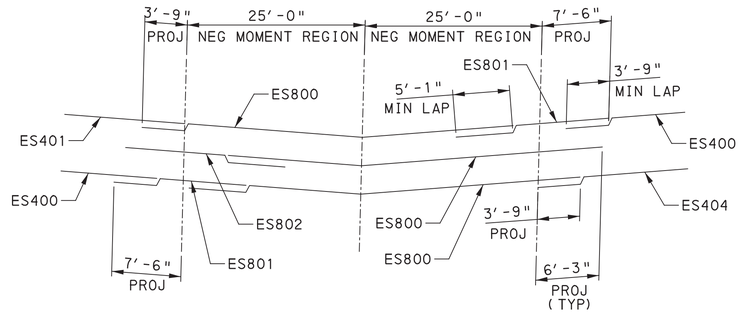
* - 84°51'9.57"

** -TYPICAL BETWEEN BEAMS. PLACE PARALLEL TO AND CENTERED BETWEEN LONGITUDINAL TOP REINFORCEMENT

MINIMUM LAP SPLICE LENGTH
DECK BARS (ES)
#4 = 2'-1"
#5 = 3'-0"
#8 = 5'-1"



BOTTOM NEGATIVE MOMENT REINF STAGGER DETAIL
NTS



TOP NEGATIVE MOMENT REINF STAGGER DETAIL
NTS

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 6
FOR BARRIER PLAN, SEE SHEET 34
FOR DECK OVERHANG PLANS, SEE SHEETS 32 & 33
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41
FOR END DIAPHRAGMS, SEE SHEETS 36 & 38
FOR PIER DIAPHRAGMS, SEE SHEET 37
FOR DECK PLACEMENT SEQUENCE, SEE SHEET 40

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
DEPARTMENT OF TRANSPORTATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB PLAN

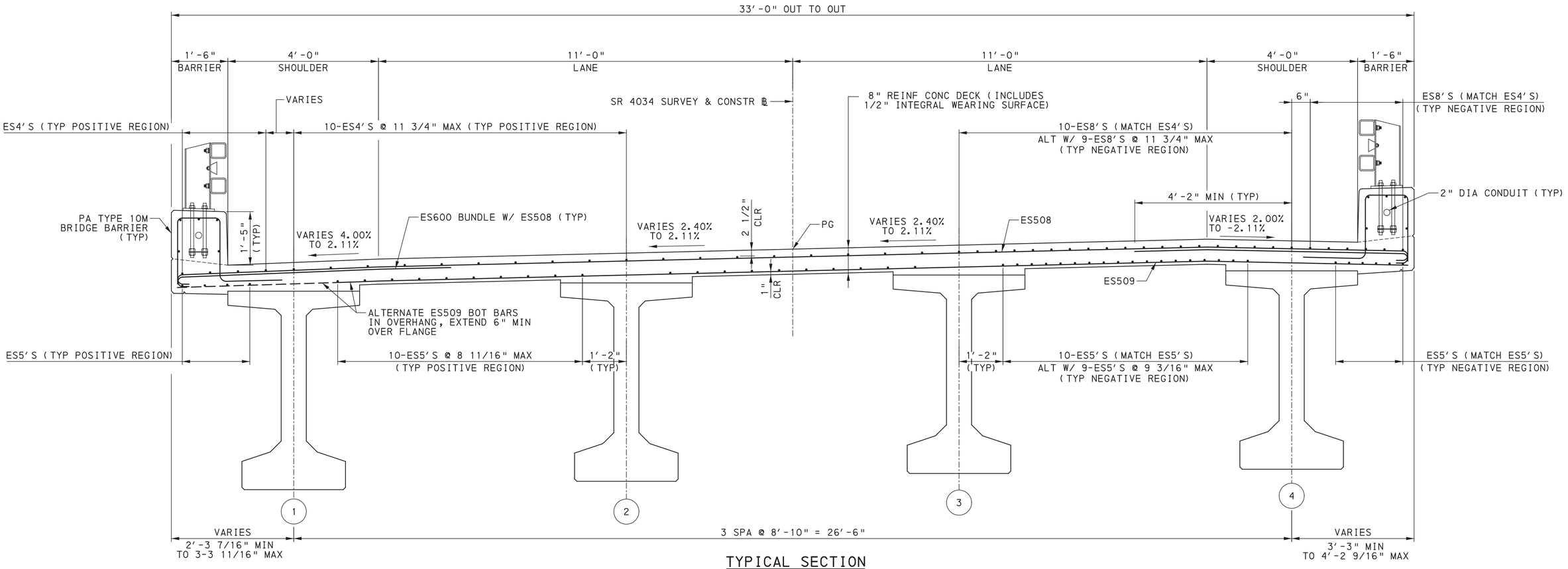
RECOMMENDED AUGUST 22, 2022

SHEET 30 OF 56

S-41006

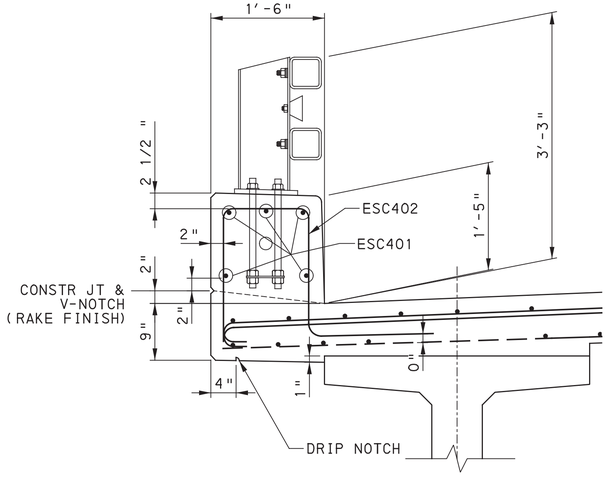
DES: DFK	CKD: CMS	DWG: DFK	CKD: JP

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk002.dgn



TYPICAL SECTION

12 0 12 INCHES



TYPICAL BARRIER SECTION

6 0 6 12 INCHES

REFERENCES:

1. FOR DECK PLAN, SEE SHEET 30
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41
3. FOR DECK OVERHANG PLANS, SEE SHEETS 32 & 33

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB - TYPICAL SECTION

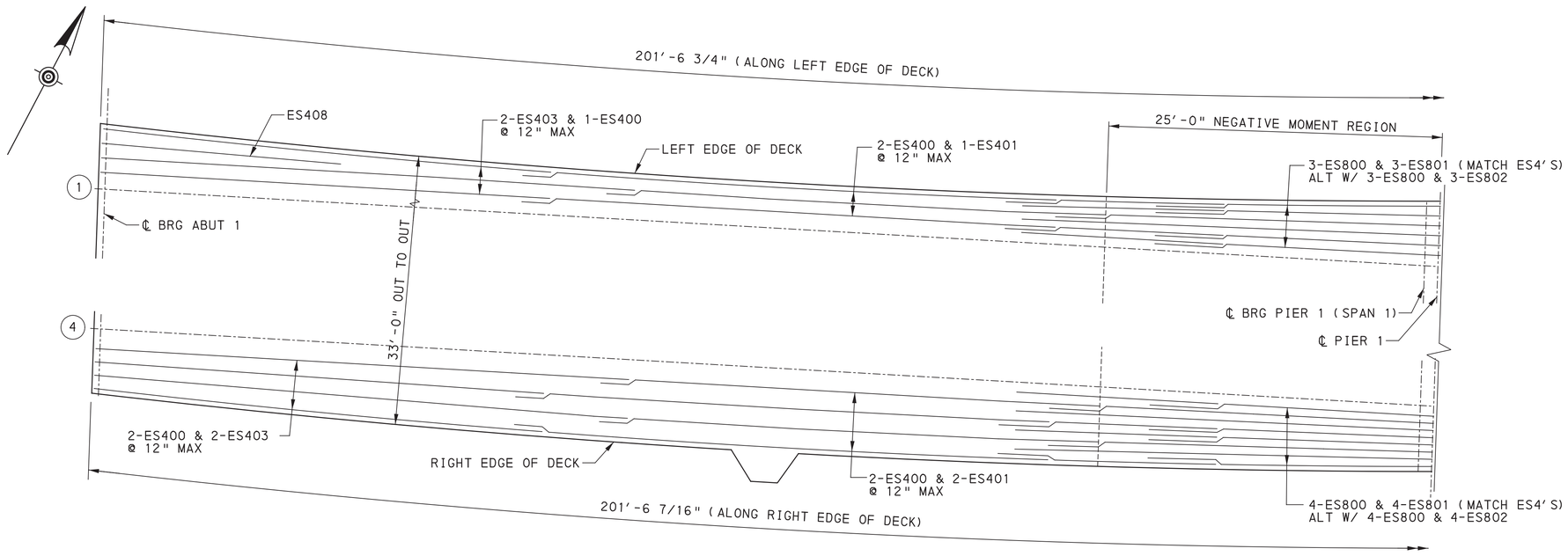
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 31 OF 56

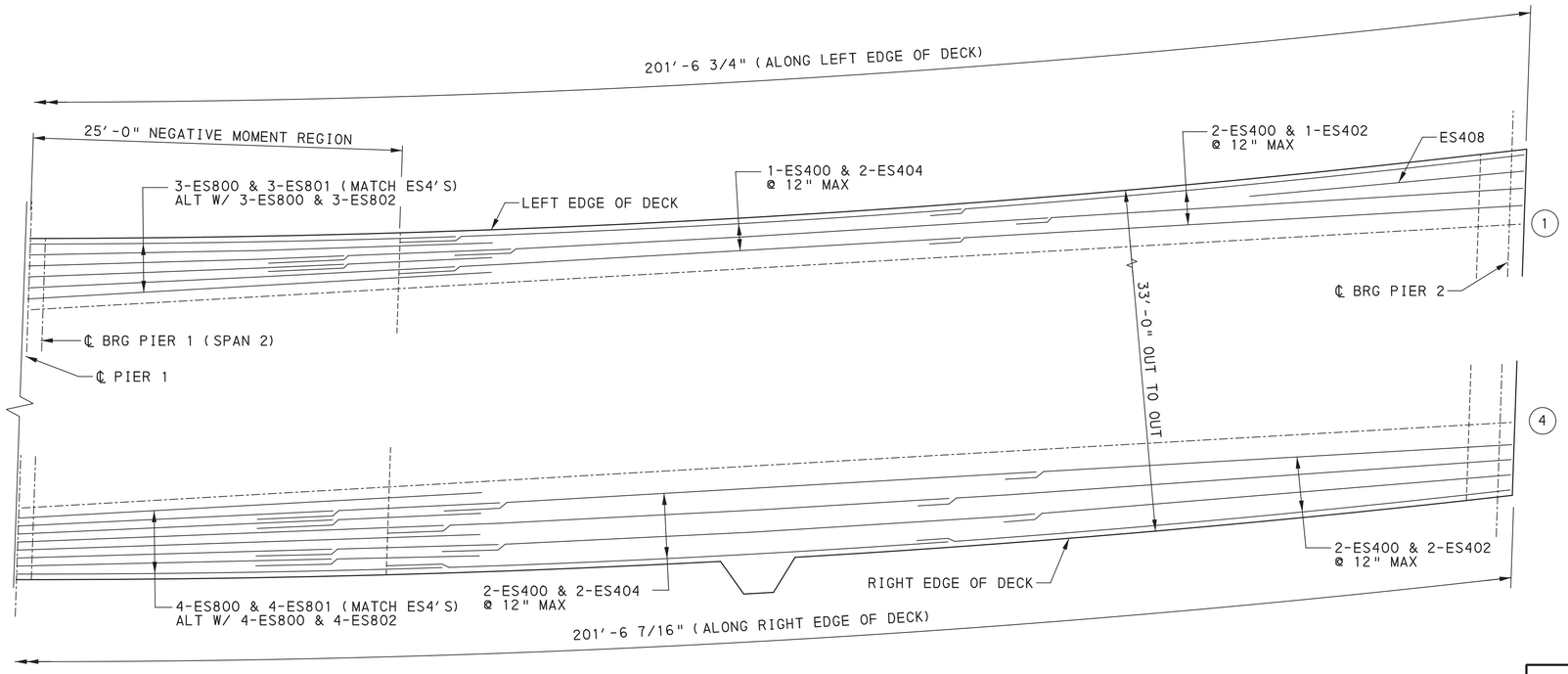
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP



PLAN - DECK OVERHANG TOP MAT

(SPAN 1) NTS



PLAN - DECK OVERHANG TOP MAT

(SPAN 2) NTS

MINIMUM LAP SPLICE LENGTH	
DECK BARS (ES)	
#4	2′-1"
#5	3′-0"
#8	5′-1"

NOTES:

1. SEE DECK PLAN FOR ADDITIONAL INFORMATION ON LONGITUDINAL REINFORCEMENT STAGGER IN NEGATIVE MOMENT REGION.

REFERENCES:

FOR DECK DLAB PLAN, SEE SHEET 30

FOR TYPICAL SECTION, SEE SHEET 31

FOR BARRIER PLAN, SEE SHEET 34

FOR DECK OVERHANG BOTTOM MAT PLAN, SEE SHEET 33

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK OVERHANG PLAN - 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

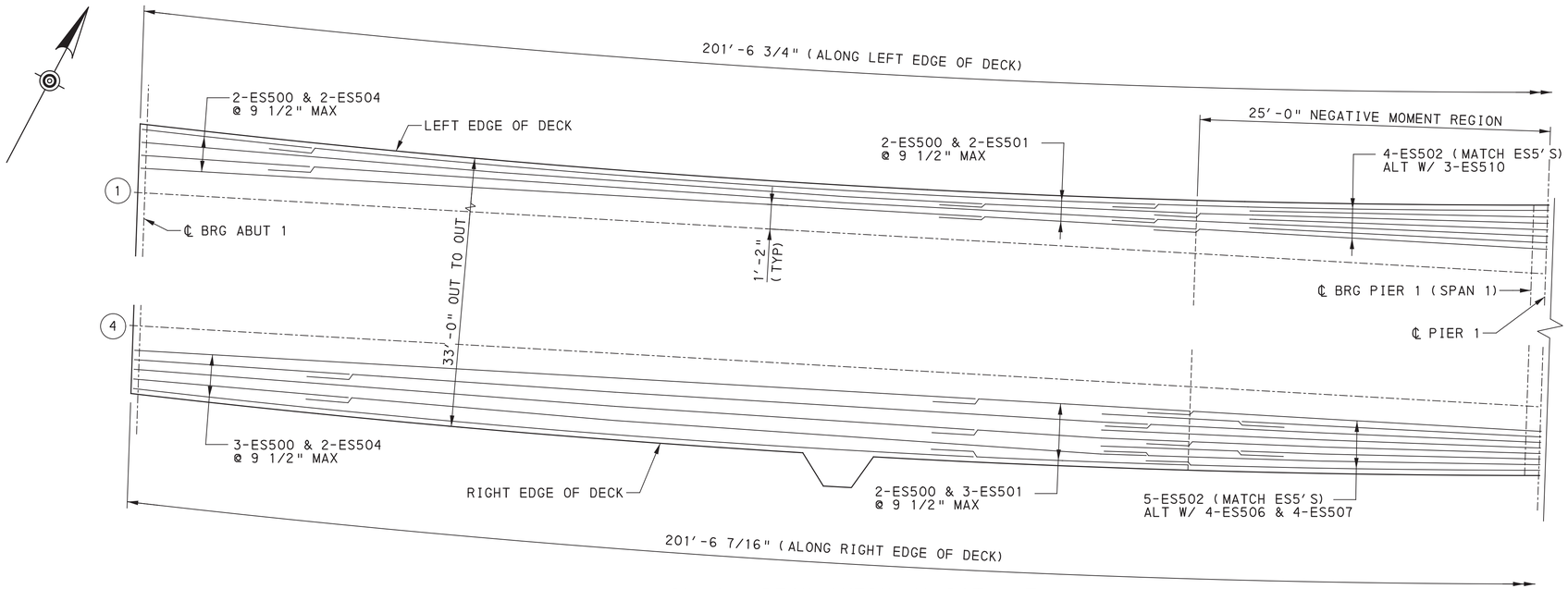
SHEET 32 OF 56

S-41006

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	JP

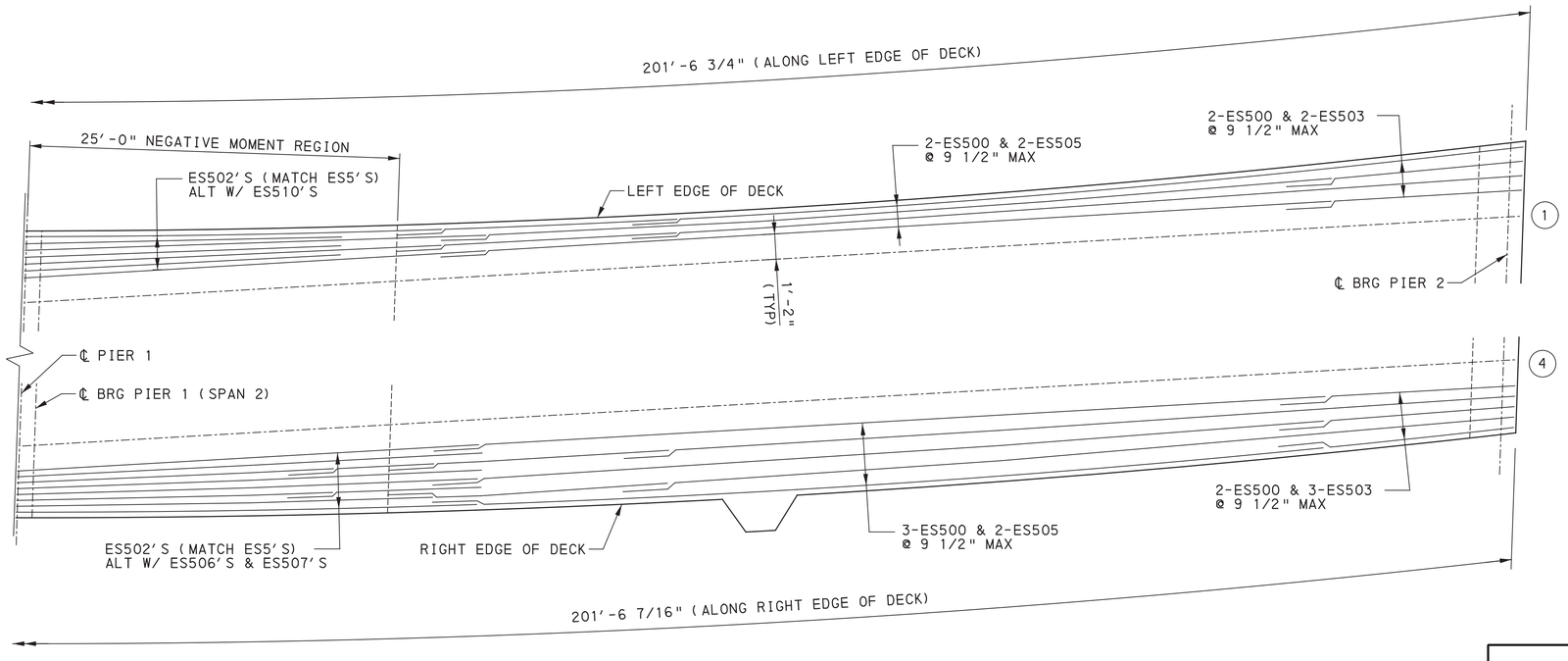
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk003.dgn



PLAN - DECK OVERHANG BOT MAT

(SPAN 1) NTS



PLAN - DECK OVERHANG BOT MAT

(SPAN 2) NTS

MINIMUM LAP SPLICE LENGTH
DECK BARS (ES)
#4 = 2'-1"
#5 = 3'-0"
#8 = 5'-1"

NOTES:

1. SEE DECK PLAN FOR ADDITIONAL INFORMATION ON LONGITUDINAL REINFORCEMENT STAGGER IN NEGATIVE MOMENT REGION.

REFERENCES:

FOR DECK SLAB PLAN, SEE SHEET 30

FOR TYPICAL SECTION, SEE SHEET 31

FOR BARRIER PLAN, SEE SHEET 34

FOR DECK OVERHANG TOP MAT PLAN, SEE SHEET 32

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK OVERHANG PLAN - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 33 OF 56

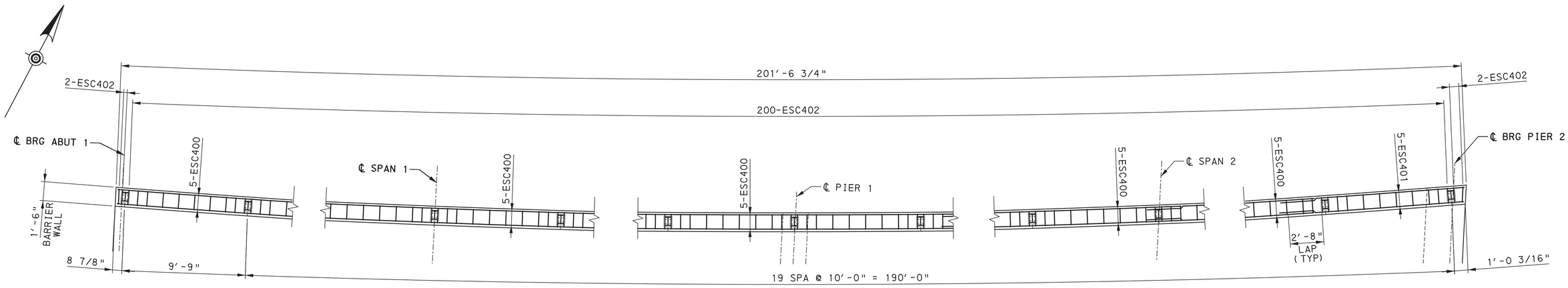
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022

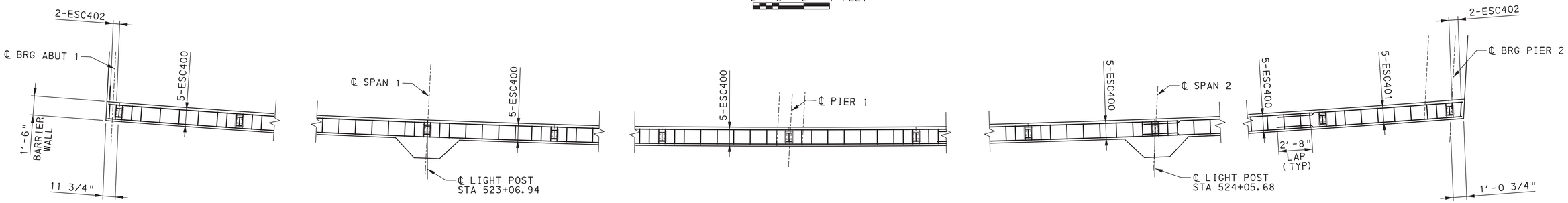
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk004.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk005.dgn



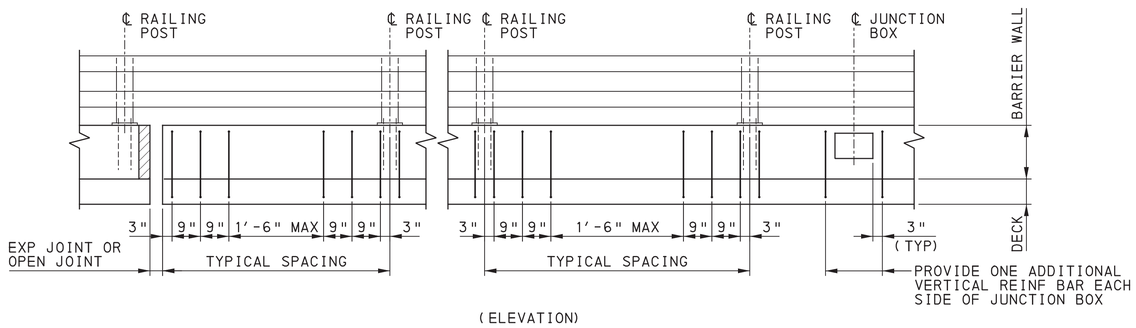
PLAN - LEFT DECK BARRIER

2 0 2 4 FEET



PLAN - RIGHT DECK BARRIER

2 0 2 4 FEET



(ELEVATION)

PA TYPE 10M BRIDGE BARRIER - VERTICAL REINFORCEMENT SPACING

NOT TO SCALE

REFERENCES:

1. FOR TYPICAL DECK AND BARRIER SECTIONS, SEE SHEET 31
2. FOR LIGHT POLE DETAILS, SEE SHEET 39
3. FOR LIGHT POLE SUPPORT DETAILS, SEE SHEET 28
4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41

NOTES:

1. LIGHT POLES TO BE CENTERED BEHIND A BARRIER POST. COORDINATE WITH BARRIER/RAIL CONTRACTOR AND ADJUST POLE LOCATIONS AS REQUIRED.
2. A BARRIER POST IS REQUIRED TO BE PLACED IN FRONT OF EACH LIGHT POLE. COORDINATE BARRIER POST/POLE LOCATIONS WITH LIGHTING CONTRACTOR. ADJUST POST LOCATIONS AS REQUIRED.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK BARRIER AND RAILING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 34 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

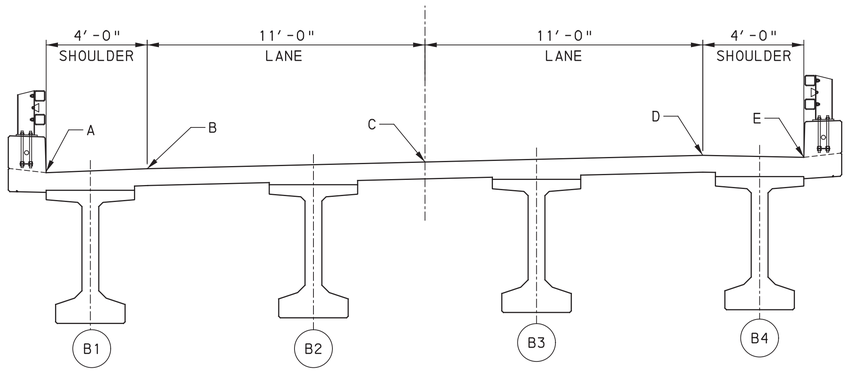
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\FINAL\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk006.dgn

TABLE OF DECK ELEVATIONS ALONG CL BEAMS

LOCATION	BEAM B1		BEAM B2		BEAM B3		BEAM B4	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
ABUT 1 CL BRG	522+56.83	603.46	522+57.06	603.71	522+57.28	603.93	522+57.50	604.04
0.10 L	522+66.82	603.55	522+66.98	603.80	522+67.14	604.02	522+67.30	604.15
0.20 L	522+76.83	603.63	522+76.92	603.89	522+77.01	604.10	522+77.10	604.25
0.30 L	522+86.83	603.72	522+86.86	603.98	522+86.88	604.19	522+86.90	604.34
0.40 L	522+96.84	603.80	522+96.80	604.06	522+96.75	604.27	522+96.71	604.43
0.50 L	523+06.85	603.88	523+06.74	604.15	523+06.63	604.36	523+06.52	604.51
0.60 L	523+16.86	603.96	523+16.68	604.23	523+16.50	604.44	523+16.32	604.59
0.70 L	523+26.86	604.05	523+26.62	604.31	523+26.37	604.52	523+26.13	604.66
0.80 L	523+36.87	604.13	523+36.55	604.38	523+36.24	604.59	523+35.93	604.73
0.90 L	523+46.87	604.21	523+46.49	604.46	523+46.11	604.67	523+45.73	604.80
PIER 1, LT BRG	523+56.87	604.30	523+56.42	604.54	523+55.97	604.75	523+55.53	604.86
PIER 1, RT BRG	523+58.90	604.31	523+58.43	604.56	523+57.96	604.77	523+57.51	604.88
1.10 L	523+68.89	604.37	523+68.36	604.62	523+67.83	604.83	523+67.30	604.96
1.20 L	523+78.90	604.44	523+78.29	604.69	523+77.69	604.90	523+77.10	605.04
1.30 L	523+88.90	604.50	523+88.23	604.76	523+87.56	604.97	523+86.91	605.11
1.40 L	523+98.91	604.57	523+98.17	604.83	523+97.44	605.04	523+96.71	605.20
1.50 L	524+08.92	604.65	524+08.11	604.90	524+07.31	605.11	524+06.52	605.28
1.60 L	524+18.93	604.72	524+18.05	604.98	524+17.18	605.18	524+16.33	605.36
1.70 L	524+28.94	604.82	524+27.99	605.06	524+27.05	605.26	524+26.13	605.44
1.80 L	524+38.94	604.92	524+37.93	605.13	524+36.92	605.34	524+35.94	605.52
1.90 L	524+48.94	605.03	524+47.86	605.22	524+46.79	605.41	524+45.74	605.60
PIER 2 CL BRG	524+58.90	605.13	524+57.78	605.31	524+56.66	605.49	524+55.53	605.66

FINISHED APPROACH SLAB ELEVATIONS AT BREAK POINTS

LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)
BEGIN APPR SLAB 1	522+26.14	603.06	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB 1	522+26.34	- - - -	603.23	- - - -	- - - -	- - - -
BEGIN APPR SLAB 1	522+26.88	- - - -	- - - -	603.50	- - - -	- - - -
BEGIN APPR SLAB 1	522+27.41	- - - -	- - - -	- - - -	603.77	- - - -
BEGIN APPR SLAB 1	522+27.60	- - - -	- - - -	- - - -	- - - -	603.69
	522+30.00	603.11	603.27	603.53	603.80	603.72
	522+40.00	603.22	603.38	603.64	603.91	603.83
	522+50.00	603.32	603.48	603.75	604.01	603.93
END APPR SLAB 1	522+56.28	603.39	- - - -	- - - -	- - - -	- - - -
END APPR SLAB 1	522+56.38	- - - -	603.55	- - - -	- - - -	- - - -
END APPR SLAB 1	522+56.67	- - - -	- - - -	603.82	- - - -	- - - -
END APPR SLAB 1	522+56.95	- - - -	- - - -	- - - -	604.08	- - - -
END APPR SLAB 1	522+57.05	- - - -	- - - -	- - - -	- - - -	604.00



DECK SECTION
NTS

FINISHED DECK ELEVATIONS AT BREAK POINTS

LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)
END APPR SLAB 1	522+56.28	603.39	- - - -	- - - -	- - - -	- - - -
END APPR SLAB 1	522+56.38	- - - -	603.55	- - - -	- - - -	- - - -
END APPR SLAB 1	522+56.67	- - - -	- - - -	603.82	- - - -	- - - -
ABUT 1 CL BRG	522+56.78	603.39	- - - -	- - - -	- - - -	- - - -
ABUT 1 CL BRG	522+56.89	- - - -	603.55	- - - -	- - - -	- - - -
END APPR SLAB 1	522+56.95	- - - -	- - - -	- - - -	604.08	- - - -
END APPR SLAB 1	522+57.05	- - - -	- - - -	- - - -	- - - -	604.00
ABUT 1 CL BRG	522+57.17	- - - -	- - - -	603.82	- - - -	- - - -
ABUT 1 CL BRG	522+57.45	- - - -	- - - -	- - - -	604.09	- - - -
ABUT 1 CL BRG	522+57.55	- - - -	- - - -	- - - -	- - - -	604.01
	522+60.00	603.42	603.58	603.85	604.11	604.03
	522+70.00	603.52	603.68	603.95	604.21	604.13
	522+80.00	603.62	603.78	604.04	604.30	604.23
	522+90.00	603.71	603.87	604.13	604.40	604.32
	523+00.00	603.79	603.95	604.22	604.48	604.40
	523+10.00	603.88	604.04	604.30	604.57	604.49
	523+20.00	603.96	604.12	604.38	604.64	604.56
	523+30.00	604.03	604.19	604.46	604.72	604.64
	523+40.00	604.11	604.27	604.53	604.79	604.71
	523+50.00	604.18	604.34	604.60	604.87	604.79
PIER 1 CL BRG	523+56.43	- - - -	- - - -	- - - -	- - - -	604.84
PIER 1 CL BRG	523+56.63	- - - -	- - - -	- - - -	604.92	- - - -
PIER 1 CL BRG	523+57.19	- - - -	- - - -	604.66	- - - -	- - - -
PIER 1 CL BRG	523+57.76	- - - -	604.40	- - - -	- - - -	- - - -
PIER 1 CL BRG	523+57.97	604.24	- - - -	- - - -	- - - -	- - - -
	523+60.00	604.25	604.41	604.68	604.94	604.86
	523+70.00	604.33	604.49	604.75	605.02	604.94
	523+80.00	604.40	604.56	604.83	605.09	605.01
	523+90.00	604.48	604.64	604.90	605.16	605.10
	524+00.00	604.55	604.71	604.97	605.24	605.19
	524+10.00	604.62	604.78	605.05	605.31	605.29
	524+20.00	604.70	604.86	605.12	605.39	605.39
	524+30.00	604.80	604.93	605.20	605.46	605.49
	524+40.00	604.90	605.01	605.27	605.53	605.58
	524+50.00	605.01	605.10	605.34	605.59	605.66
PIER 2 CL BRG	524+55.31	- - - -	- - - -	- - - -	- - - -	605.70
PIER 2 CL BRG	524+55.81	- - - -	- - - -	- - - -	605.62	- - - -
END OF DECK	524+56.30	- - - -	- - - -	- - - -	- - - -	605.71
END OF DECK	524+56.81	- - - -	- - - -	- - - -	605.63	- - - -
PIER 2 CL BRG	524+57.22	- - - -	- - - -	605.40	- - - -	- - - -
END OF DECK	524+58.22	- - - -	- - - -	605.40	- - - -	- - - -
PIER 2 CL BRG	524+58.62	- - - -	605.18	- - - -	- - - -	- - - -
PIER 2 CL BRG	524+59.13	605.09	- - - -	- - - -	- - - -	- - - -
END OF DECK	524+59.62	- - - -	605.18	- - - -	- - - -	- - - -
	524+60.00	605.10	- - - -	- - - -	- - - -	- - - -
END OF DECK	524+60.13	605.10	- - - -	- - - -	- - - -	- - - -

REFERENCES:

1. FOR APPROACH SLAB SECTION, SEE SHEET 45

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK & APRROACH SLAB ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

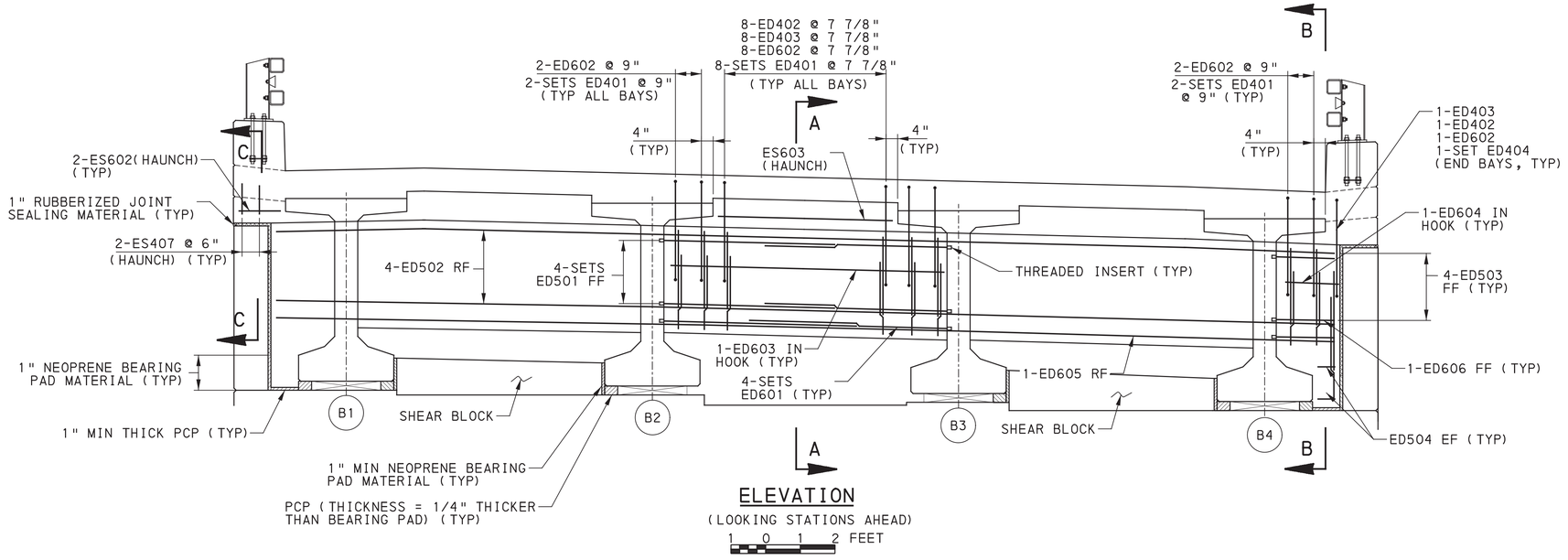
SHEET 35 OF 56

S-41006

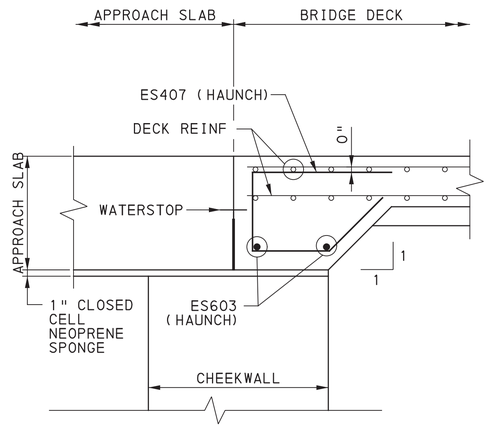
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

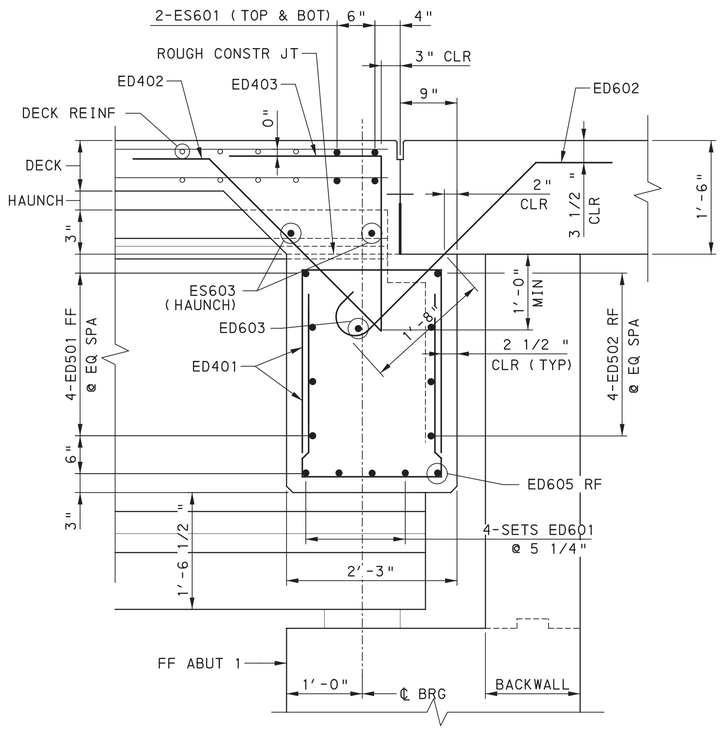
OPERATOR:
FILE NAME: \\mesconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk007.dgn



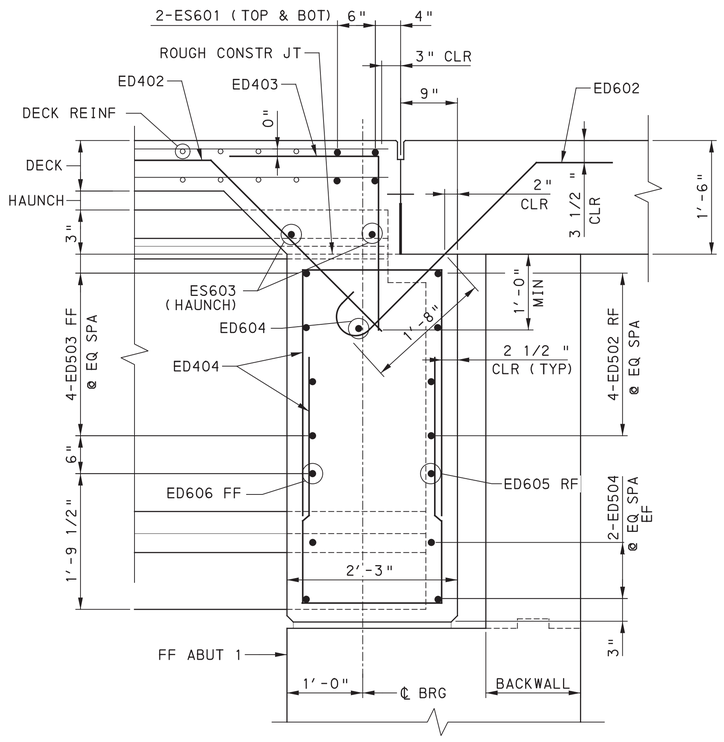
ELEVATION
(LOOKING STATIONS AHEAD)
1 0 1 2 FEET



SECTION C-C
6 0 6 12 INCHES



SECTION A-A
6 0 6 12 INCHES



SECTION B-B
6 0 6 12 INCHES

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2'-1"
#5 = 2'-7"
#6 = 3'-1"

REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 42

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 END DIAPHRAM

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ROBERT E. BRESSLER — ENGINEER — PE-070825-E

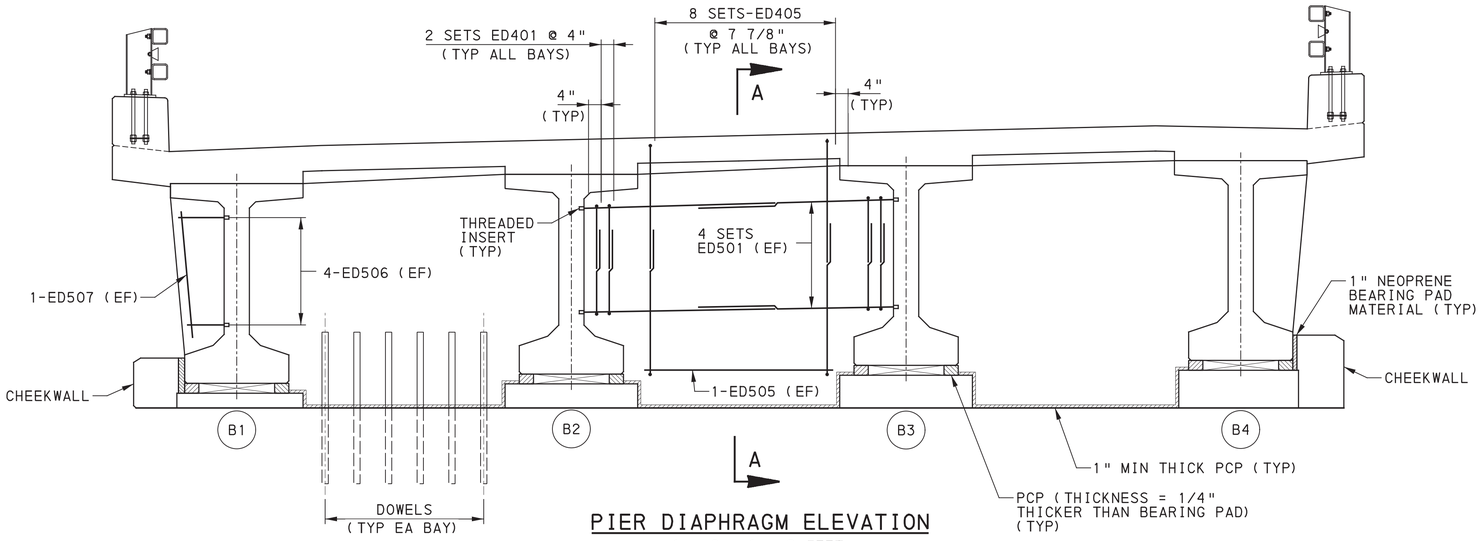
RECOMMENDED AUGUST 22, 2022

SHEET 36 OF 56

S-41006

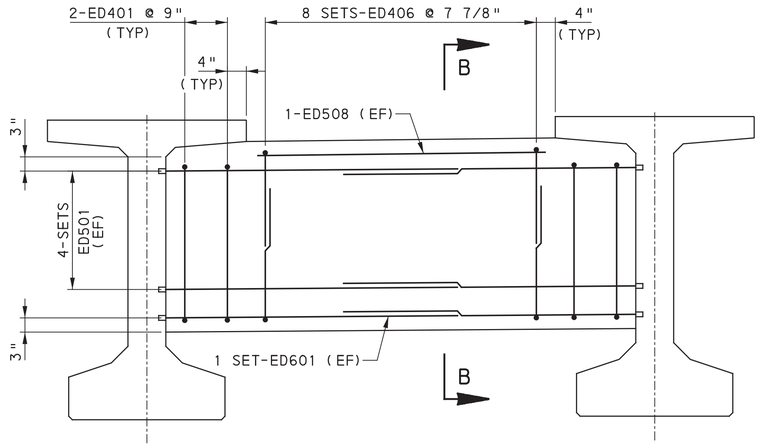
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk008.dgn



PIER DIAPHRAGM ELEVATION

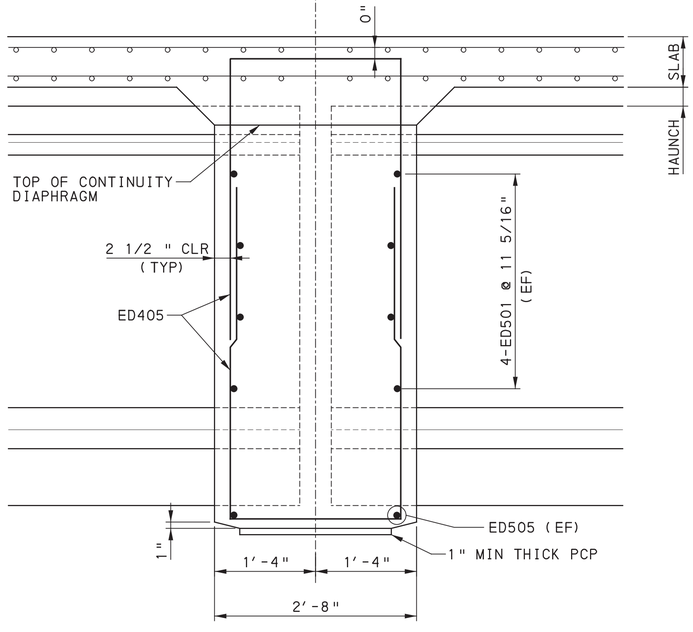
1 0 1 2 FEET



INTERMEDIATE DIAPHRAGM ELEVATION

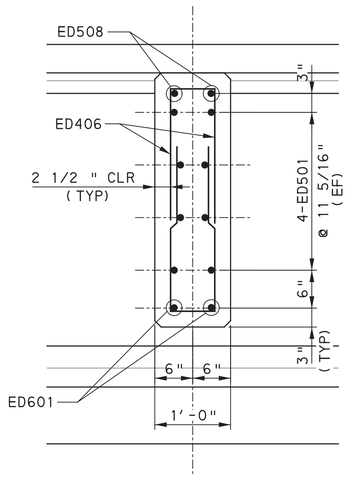
12 0 12 INCHES

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2′-1"
#5 = 2′-7"
#6 = 3′-1"



SECTION A-A

6 0 6 12 INCHES



SECTION B-B

6 0 6 12 INCHES

REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41
3. FOR PIER CAP DETAILS, SEE SHEET 16

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 & INTERMEDIATE DIAPHRAGMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

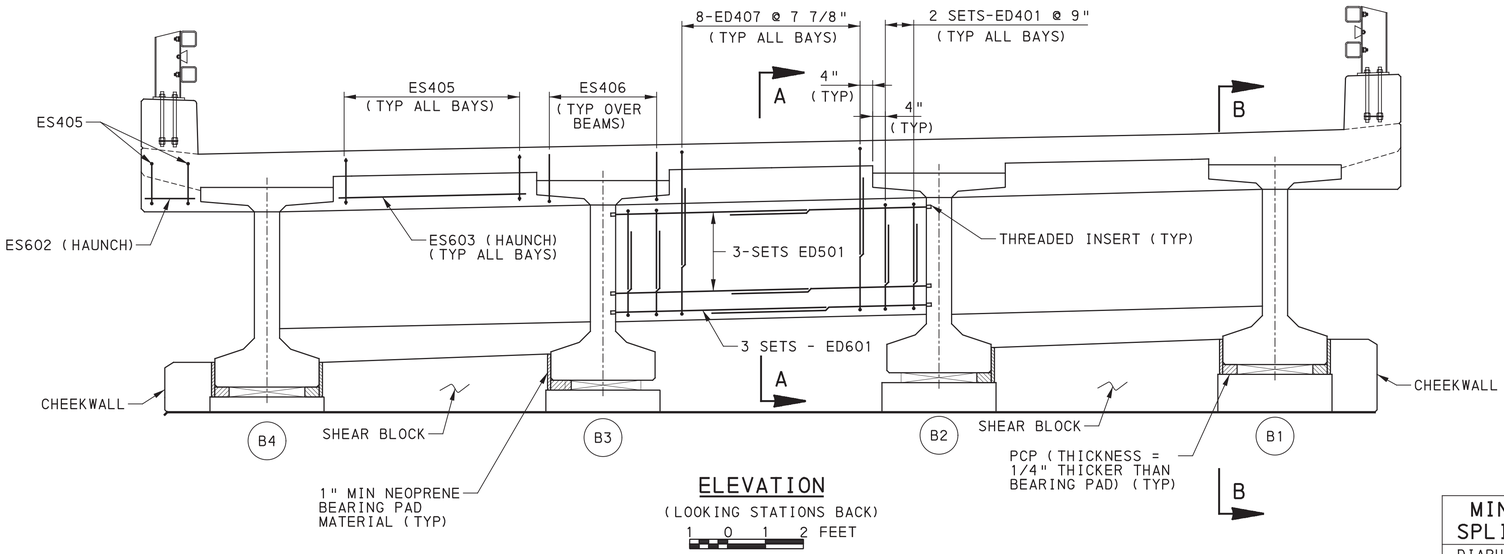
RECOMMENDED AUGUST 22, 2022

SHEET 37 OF 56

S-41006

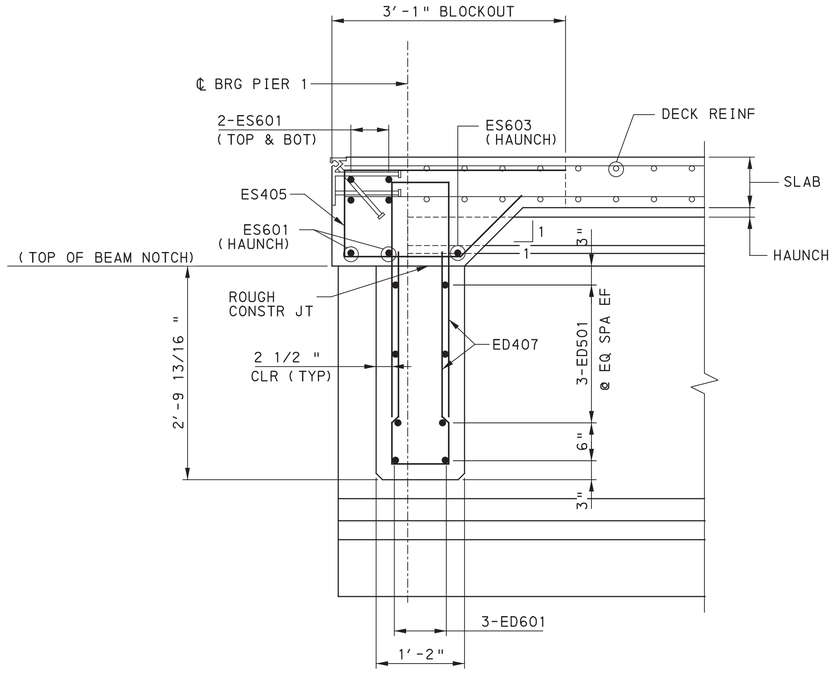
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk009.dgn

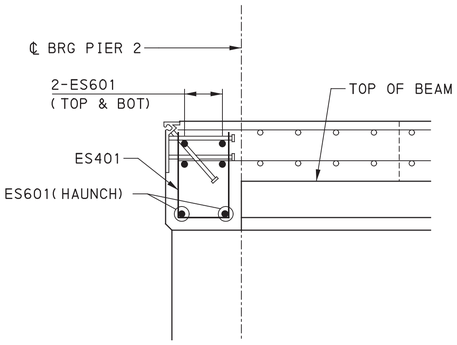


ELEVATION
(LOOKING STATIONS BACK)
1 0 1 2 FEET

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2'-1"
#5 = 2'-7"
#6 = 3'-1"



SECTION A-A
6 0 6 12 INCHES



SECTION B-B
6 0 6 12 INCHES

REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 END DIAPHRAGM

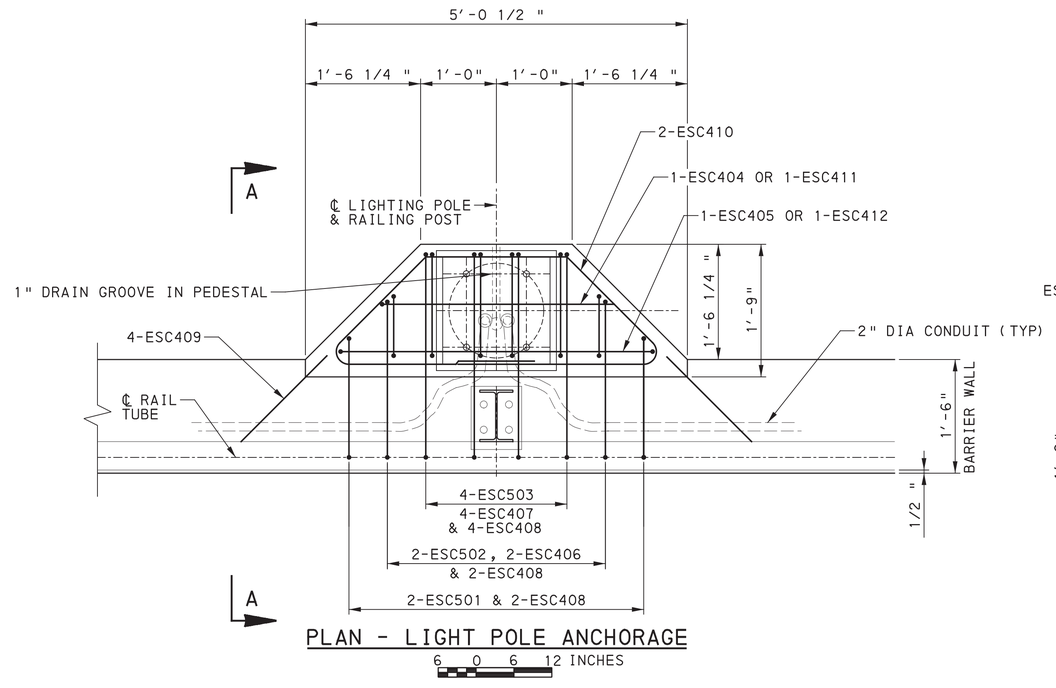
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 38 OF 56

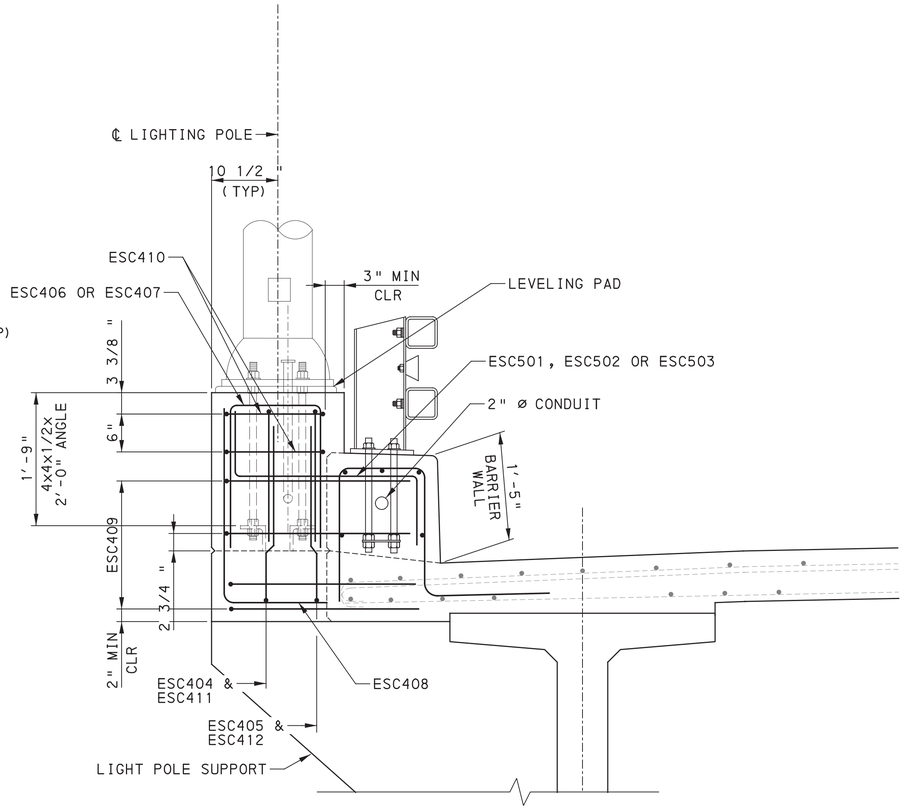
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS



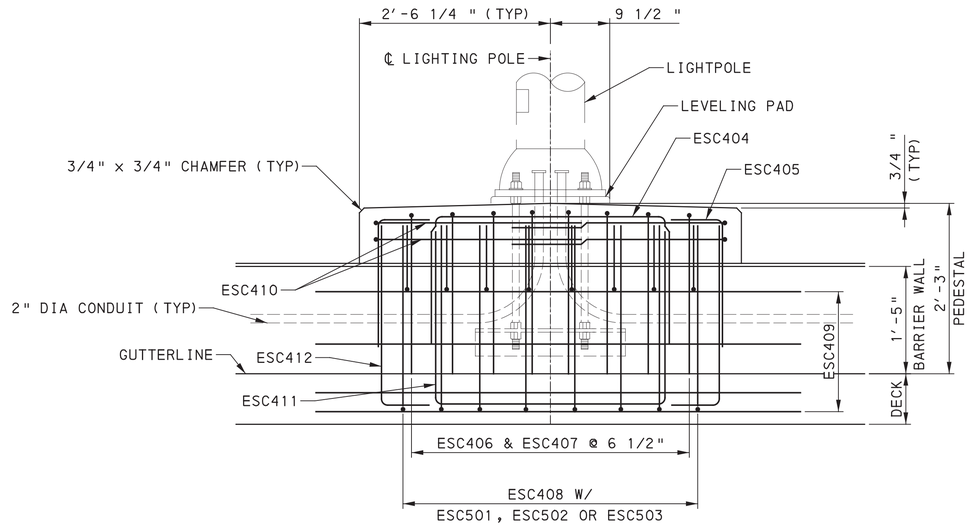
PLAN - LIGHT POLE ANCHORAGE

6 0 6 12 INCHES



SECTION A-A

6 0 6 12 INCHES



ELEVATION - LIGHT POLE ANCHORAGE

6 0 6 12 INCHES

REFERENCES

1. FOR DECK BARRIER PLAN, SEE SHEET 34
2. FOR LIGHT POLE SUPPORT DETAILS, SEE SHEET 39
3. FOR REINFORCEMENT BAR SCHEDULE. SEE SHEET 41

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK LIGHT POLE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

RECOMMENDED AUGUST 22, 2022

SHEET 39 OF 56

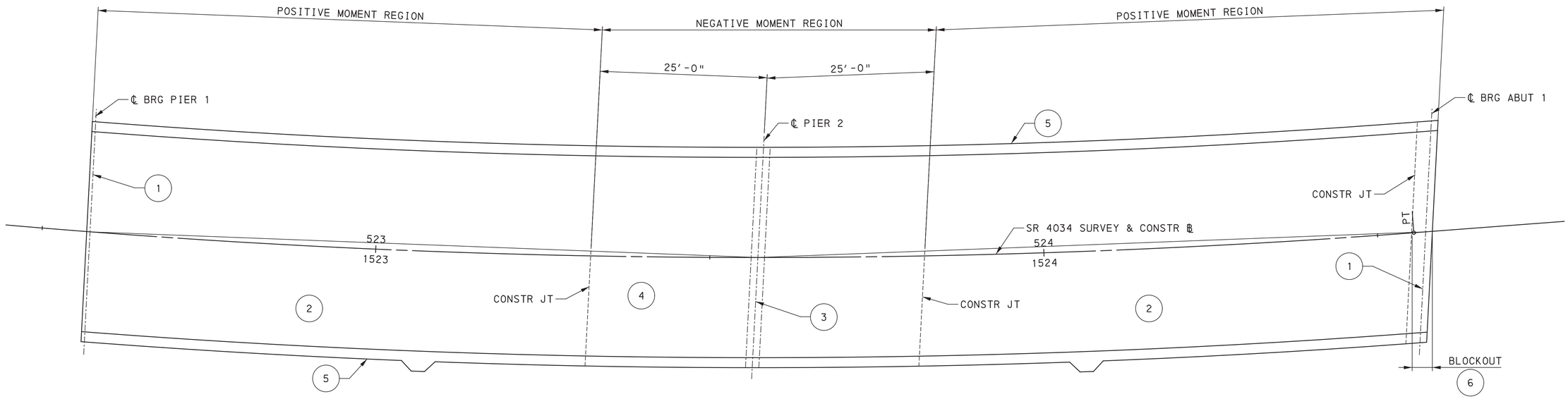
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk010.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdk011.dgn



DECK PLACING SEQUENCE

NTS

DECK PLACING SEQUENCE

(1) PLACE INTERMEDIATE DIAPHRAGMS, SHEAR BLOCKS BETWEEN BEAMS AND END DIAPHRAGMS AT ABUTMENT.

(2) PLACE SLAB IN POSITIVE MOMENT AREAS.

(3) PLACE CONTINUITY DIAPHRAGM AT PIER.

(4) PLACE SLAB IN NEGATIVE MOMENT AREAS.
PLACE A MINIMUM 2 HOURS AFTER THE CONTINUITY DIAPHRAGMS ARE PLACED.

(5) PLACE BARRIERS IN POSITIVE MOMENT REGION. THEN NEGATIVE REGION, UNLESS CONTINUOUS PLACEMENT CAN BE MADE.

(6) PLACE CONCRETE IN BLOCKOUT AREAS AFTER STRIP SEAL IS SET.

NOTE:
AN ALTERNATE DECK POURING SEQUENCE MAY BE EMPLOYED BY THE CONTRACTOR UPON APPROVAL BY THE REPRESENTATIVE.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK PLACING SEQUENCE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 40 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

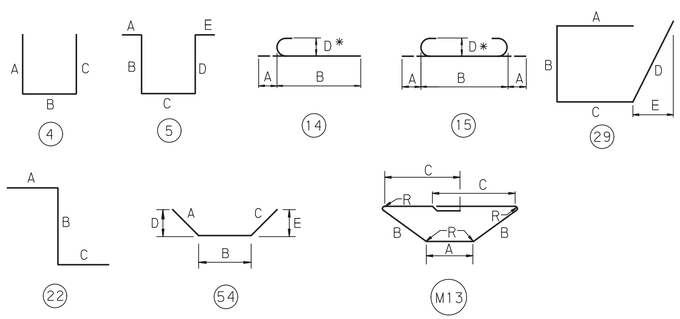
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdkrb001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
DECK											
ES400	4	56	40′-0"	ST							
ES401	4	14	37′-8"	ST							
ES402	4	14	34′-5"	ST							
ES403	4	14	33′-9"	ST							
ES404	4	14	38′-2"	ST							
ES405	4	19	6′-5"	29	2′-9"	1′-0 3/4"	1′-5 3/4"	1′-1 1/2"	9 1/2"		
ES406	4	16	2′-6"	4	1′-0 1/2"	5"	1′-0 1/2"				
ES407	4	4	4′-11 1/2"	29	1′-10"	1′-0 1/2"	1′-0 1/4"	1′-0 1/2"	5 1/2"		
ES408	4	2	18′-6"	ST							
ES500	5	60	60′-0"	ST							
ES501	5	15	18′-6"	ST							
ES502	5	30	59′-0"	ST							
ES503	5	15	16′-0"	ST							
ES504	5	15	15′-6"	ST							
ES505	5	15	19′-0"	ST							
ES506	5	27	50′-0"	ST							
ES507	5	27	15′-9"	ST							
ES508	5	372	33′-9"	15	7"	32′-9"					
ES509	5	372	28′-6"	ST							
ES600	6	732	8′-9 1/2"	14	8"	8′-1 1/2"					
ES601	6	10	32′-11"	ST							
ES602	6	8	1′-2 1/2"	ST							
ES603	6	9	5′-0"	ST							
ES800	8	55	50′-0"	ST							
ES801	8	28	16′-6"	ST							
ES802	8	27	17′-9"	ST							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PA TYPE 10M BARRIER											
ESC400	4	40	40′-0"	ST							
ESC401	4	10	14′-9"	ST							
ESC403	4	408	6′-0"	42A	1′-7 1/2"	3"	10 1/2"	1′-7 1/2"	1′-6"		
LIGHT POLE BLISTER											
ESC404	4	2	6′-6"	4	2′-7"	1′-7 1/2"	2′-7"				
ESC405	4	2	7′-5"	4	3′-6"	1′-7 1/2"	3′-6"				
ESC406	4	4	4′-5"	4	5"	1′-8"	5"				
ESC407	4	8	4′-11"	4	11"	1′-8"	11"				
ESC408	4	16	5′-2 1/2"	22	2′-7 1/2"	2′-3"	0"				
ESC409	4	8	9′-1 1/2"	54	3′-6"	1′-9 1/2"	3′-6"	2′-6"			
ESC410	4	4	10′-11"	M13	1′-9 1/2"	1′-3 3/4"	2′-7"				
ESC411	4	2	7′-9"	4	2′-7"	2′-3"	2′-7"				
ESC412	4	2	8′-8"	4	3′-6"	2′-3"	3′-6"				
ESC501	5	4	3′-6 1/2"	22	1′-0"	9"	10 1/2"				
ESC502	5	4	4′-0 1/2"	22	1′-6"	9"	10 1/2"				
ESC503	5	8	4′-6"	22	1′-11 1/2"	9"	10 1/2"				



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E COMMONWEALTH OF PENNSYLVANIA

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK REBAR SCHEDULE - 1

RECOMMENDED AUGUST 22, 2022

SHEET 41 OF 56

S-41006

PLOTTED: 8/22/2022

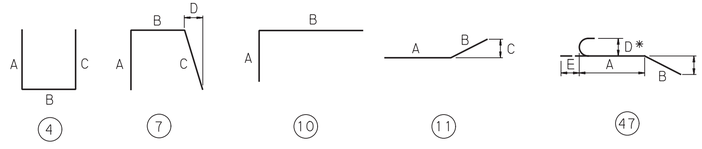
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTdkrb002.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
DIAPHRAGMS											
ED401	4	144	6′-8"	4	2′-5"	1′-10"	2′-5"				
ED402	4	26	4′-5"	11	1′-0"	3′-5"	6"				
ED403	4	26	4′-6"	10	2′-0"	2′-6"					
ED404	4	4	8′-4"	4	3′-3"	1′-10"	3′-3"				
ED405	4	48	11′-3"	4	4′-6"	2′-3"	4′-6"				
ED406	4	96	4′-1"	4	1′-9"	7"	1′-9"				
ED407	4	48	6′-9"	4	3′-0"	9"	3′-0"				
ED501	5	120	5′-7 1/2"	ST							THREAD ONE END **
ED502	5	12	30′-6"	ST							
ED503	5	8	1′-11"	ST							THREAD ONE END **
ED504	5	8	6"	ST							
ED505	5	6	5′-0"	ST							
ED506	5	16	1′-4"	ST							THREAD ONE END **
ED507	5	16	3′-4"	ST							
ED508	5	16	1′-9" TO 5′-0"	ST							
ED509	5	8	3′-11"	4	1′-2"	1′-7"	1′-2"				THREAD ONE END **
ED510	5	8	5′-3" TO 9′-11"	4	1′-10"/4′-2"	1′-7"	1′-10"/4′-2"				
ED511	5	2	11′-1"	4	4′-9"	1′-7"	4′-9"				
ED512	5	2	8′-11"	4	3′-8"	1′-7"	3′-8"				
ED513	5	2	6′-9"	4	2′-7"	1′-7"	2′-7"				
ED514	5	2	4′-7"	4	1′-6"	1′-7"	1′-6"				
ED515	5	6	8′-3 1/2"	7	1′-6"	1′-0 1/2"	5′-9"	3′-10"			
ED601	6	34	5′-10 1/2"	ST							THREAD ONE END **
E6D02	6	42	5′-2"	47	3′-4 3/4"	1′-0"	8 1/2"		8"		
ED603	6	3	7′-10"	ST							
ED604	6	2	1′-6"	ST							
ED605	6	1	30′-6"	ST							
ED606	6	2	1′-11"	ST							THREAD ONE END **

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date

REVISIONS

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

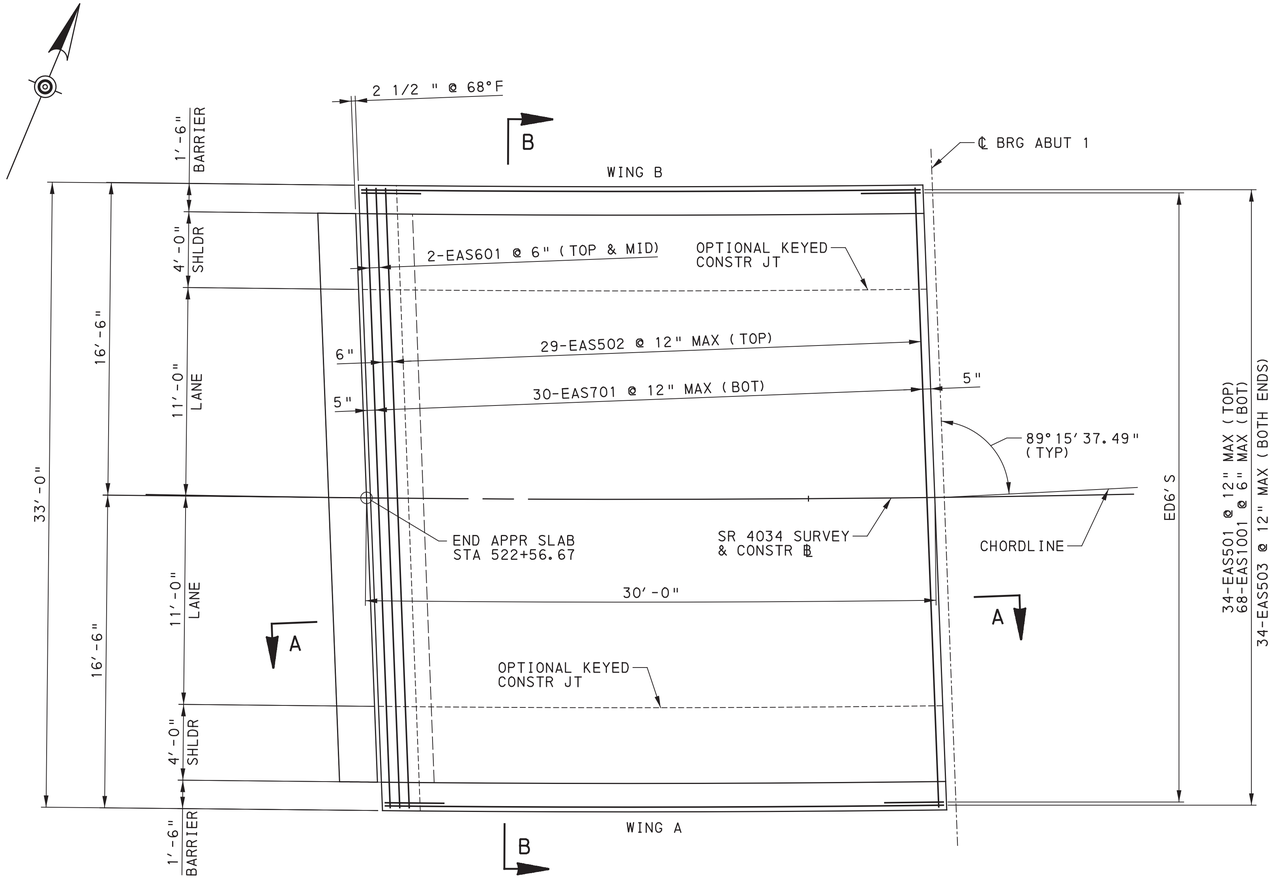
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK REBAR SCHEDULE - 2

RECOMMENDED AUGUST 22, 2022

SHEET 42 OF 56

S-41006



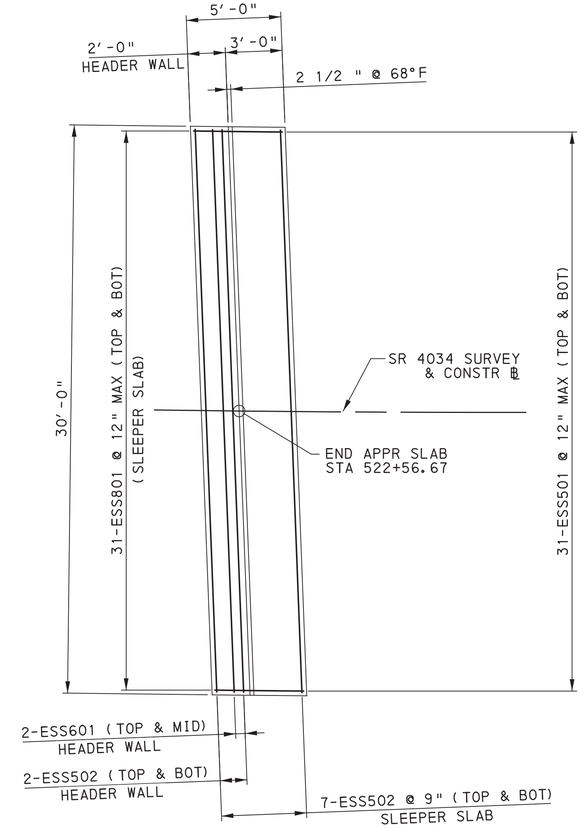
APPROACH SLAB PLAN

2 0 2 4 FEET

APPROACH SLAB RAILING PLAN

(WING A SHOWN, WING B SIMILAR UNLESS NOTED)

2 0 2 4 FEET



SLEEPER SLAB PLAN

FEET 4 2 0 2

NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER BRIDGE DECK CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE DIRECTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE DIRECTED.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEET 3
2. FOR SECTION A-A, SEE SHEET 44
3. FOR SECTION B-B, SEE SHEET 45
4. FOR FINAL SURFACE ELEVATIONS, SEE SHEET 35
5. FOR BARRIER REINFORCEMENT SPACING DETAIL, SEE SHEET 34
6. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 46

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB - ABUTMENT 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

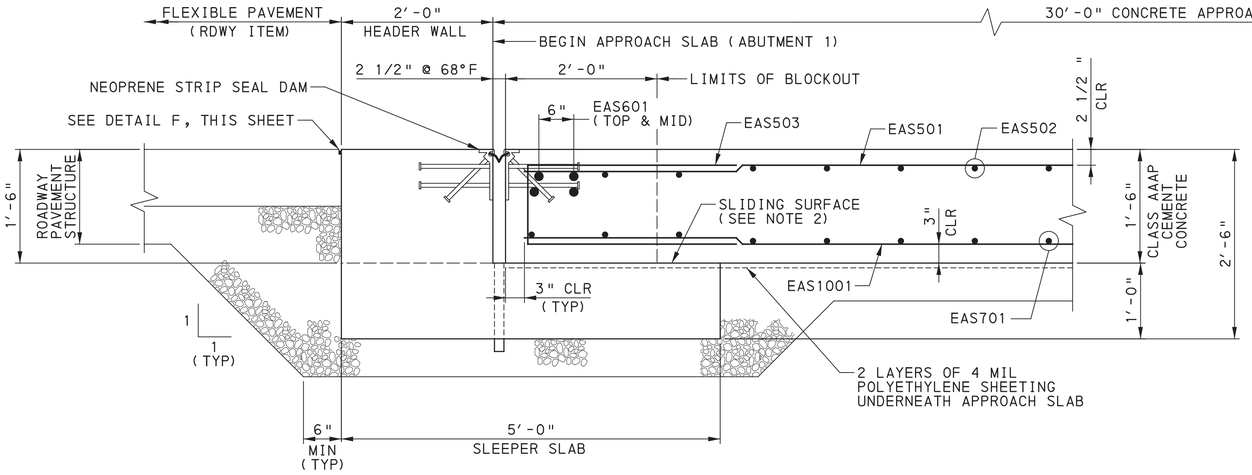
SHEET 43 OF 56

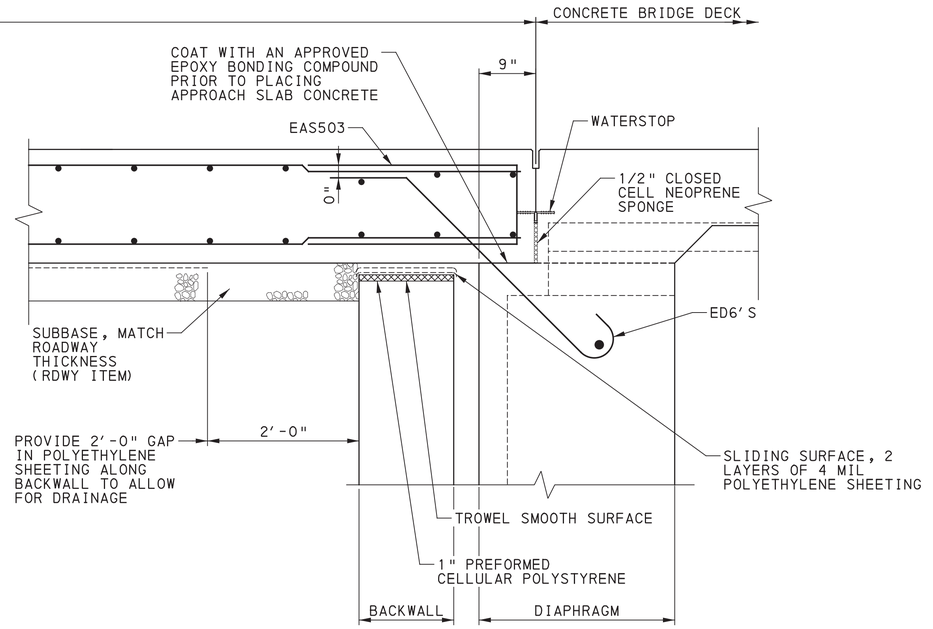
S-41006

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

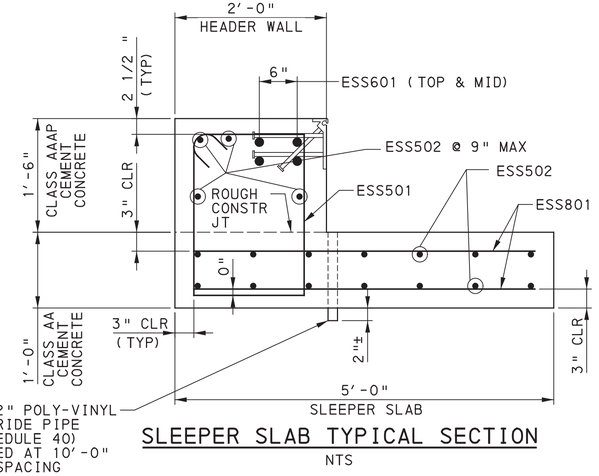
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTas001.dgn

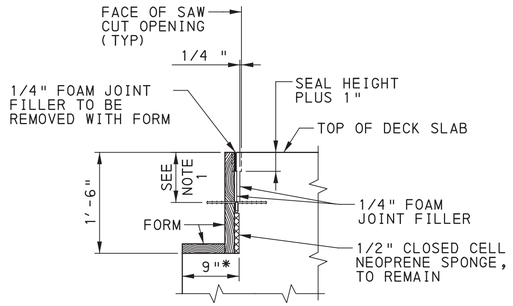




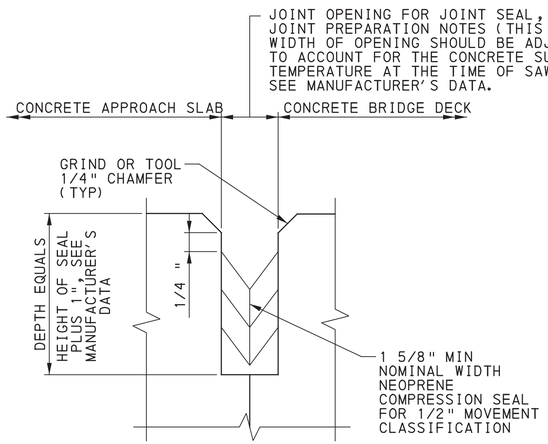
SECTION A-A
NTS



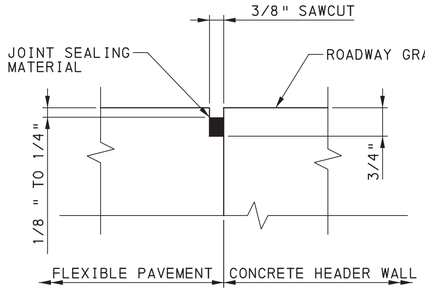
SLEEPER SLAB TYPICAL SECTION
NTS



PAVING NOTCH FORMING DETAIL
NTS



DETAIL H
NTS



DETAIL F
NTS

JOINT PREPARATION NOTES:

1. THE JOINT OPENING IS TO BE FORMED BY A TWO-STAGE SAWING OPERATION WHERE ACCESSIBLE. WHERE ACCESSIBILITY IS LIMITED, THE JOINT OPENING SHALL BE FORMED. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING, THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED, WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF 1/16" TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL.
2. WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
3. THE DEPTH OF THE JOINT OPENING EQUALS THE HEIGHT OF THE SEAL PLUS 1". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING, SEE MANUFACTURER′S PRODUCT INFORMATION.
4. BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
5. PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER′S RECOMMENDATIONS.
6. DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.

NOTES:

1. AN EXPANSION WATERSTOP (TYPE E1 OR E2), IN ACCORDANCE WITH BC-735M, MUST BE INSTALLED AT MID-DEPTH OF APPROACH SLAB. PLACE WATERSTOP TO PROVIDE POSITIVE DRAINAGE TO THE OUTSIDE OF THE STRUCTURE.
2. TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING AS BOND BREAKER.

REFERENCES:

1. FOR APPROACH AND SLEEPER SLAB PLAN, SEE SHEET 43
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 46

Mark	Description	By	Chk′d.	Recm′d	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 44 OF 56

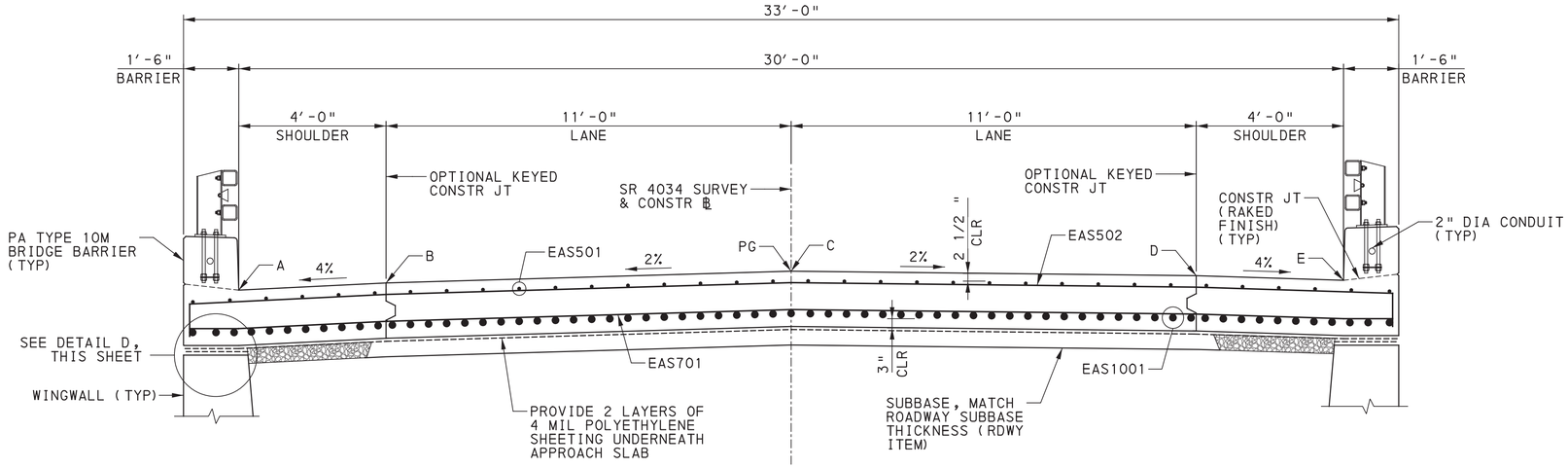
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

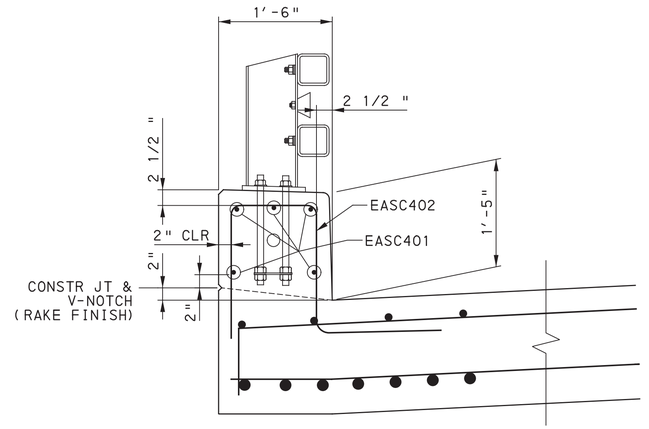
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTas002.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTas003.dgn



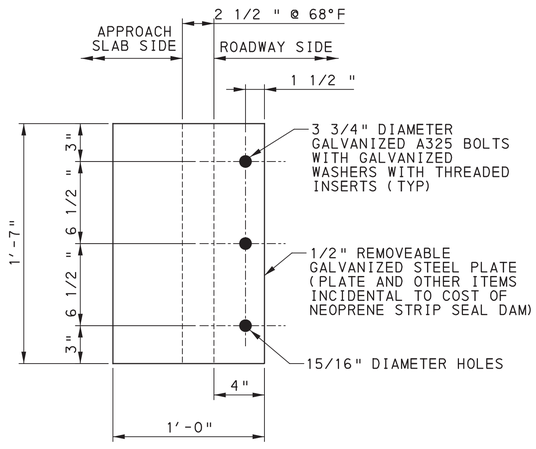
SECTION B-B

1 0 1 2 FEET



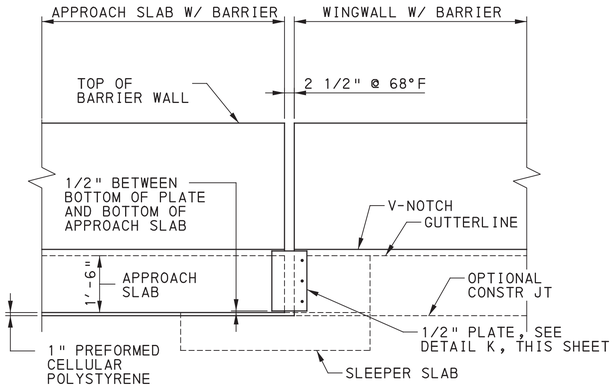
TYPICAL APPROACH SLAB BARRIER DETAIL

6 0 6 12 INCHES



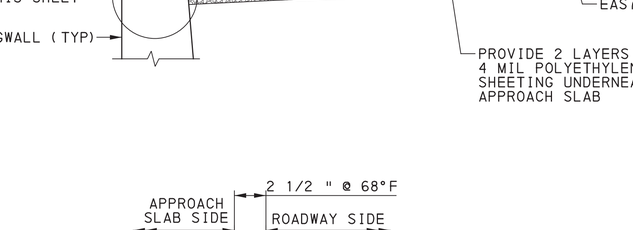
DETAIL K

NTS



SECTION K-K

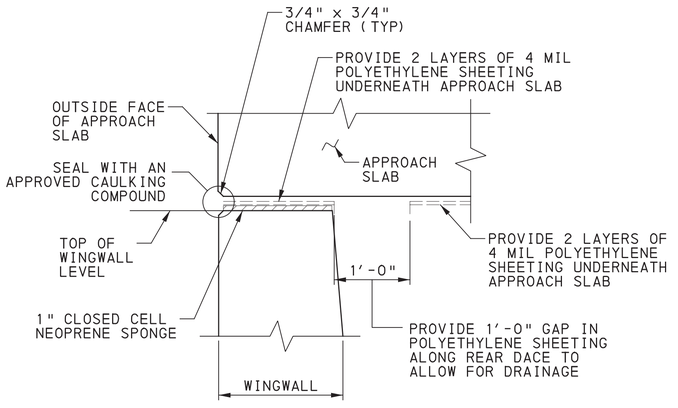
NTS



NOTE A: PROVIDE CONTINUOUS REINFORCEMENT THRU JOINT. MECHANICAL SPLICES ARE PERMITTED AS AN OPTION.

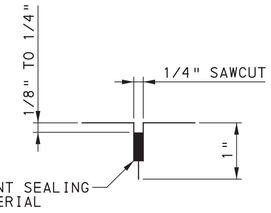
OPTIONAL KEYED CONSTRUCTION JOINT AT SHOULDER DETAIL

NTS



DETAIL D

NTS



DETAIL A

NTS

REFERENCES:

1. FOR APPROACH SLAB PLAN, SEE SHEET 43
2. FOR FINISHED APPROACH SLAB ELEVATIONS, SEE SHEET 35
3. FOR GENERAL NOTES, SEE SHEET 3
4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 46

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 45 OF 56

S-41006

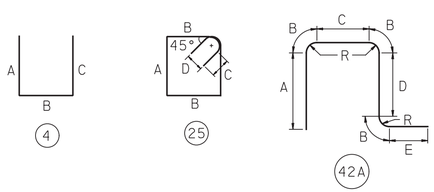
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
APPROACH SLAB											
EAS501	5	34	29′-5 1/2"	ST							
EAS502	5	29	32′-8 1/2"	ST							
EAS503	5	68	7′-3 1/2"	4	3′-1"	1′-0 1/2"	3′-1"				
EAS601	6	4	32′-8 1/2"	ST							
EAS701	7	30	32′-8 1/2"	ST							
EAS1001	10	68	29′-5 1/2"	ST							
SLEEPER SLAB											
ESS501	5	31	8′-0"	25	2′-0"	1′-6"	6"	6"			
ESS502	5	18	29′-8 1/2"	ST							
ESS601	6	4	29′-8 1/2"	ST							
ESS801	8	62	4′-6"	ST							
BARRIER											
EASC401	4	10	29′-5 1/2"	ST							
EASC402	4	62	6′-0"	42A	1′-7 1/2"	3"	10 1/2"	1′-7 1/2"	1′-6"		

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB REBAR SCHEDULE

RECOMMENDED AUGUST 22, 2022

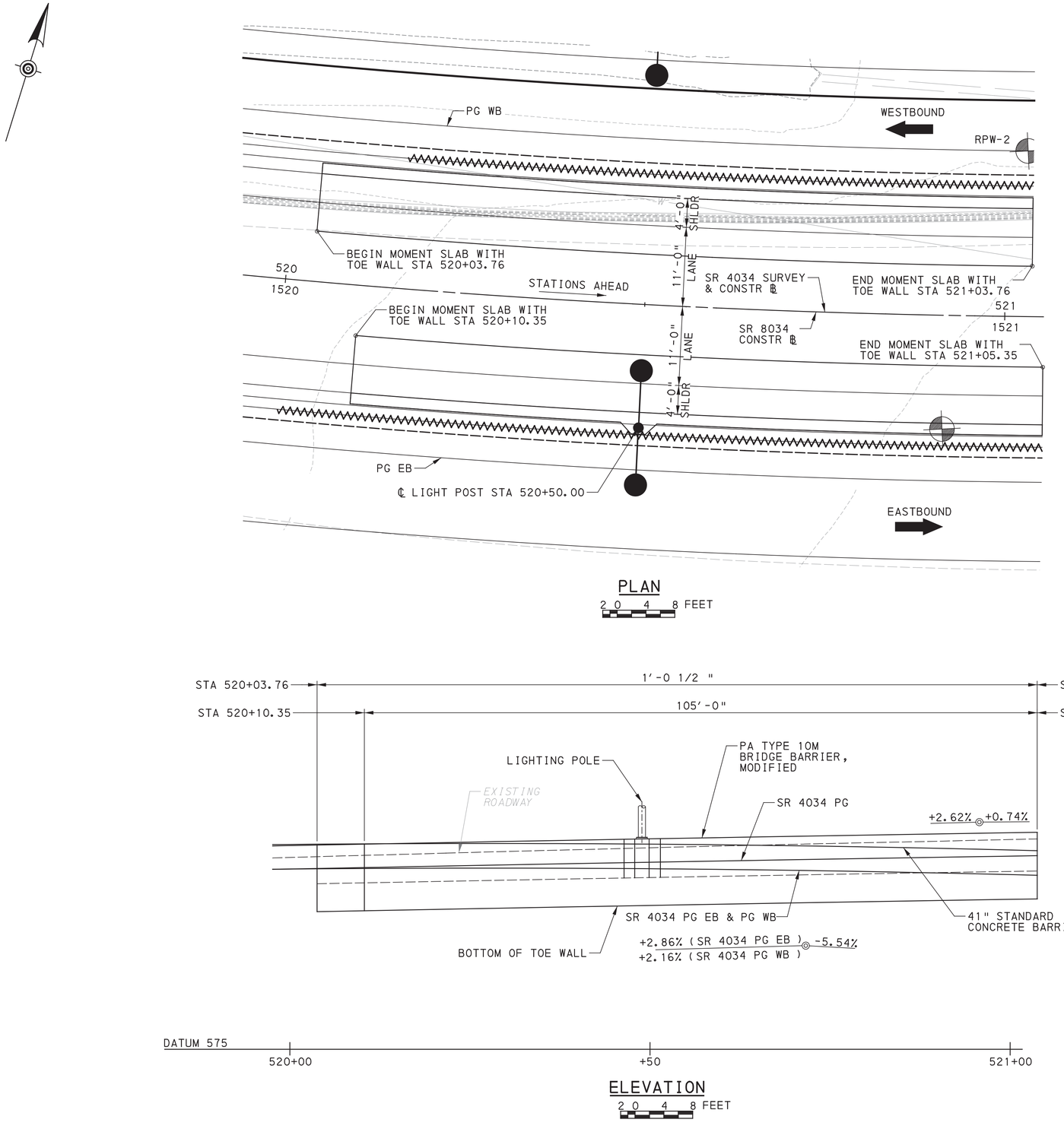
SHEET 46 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

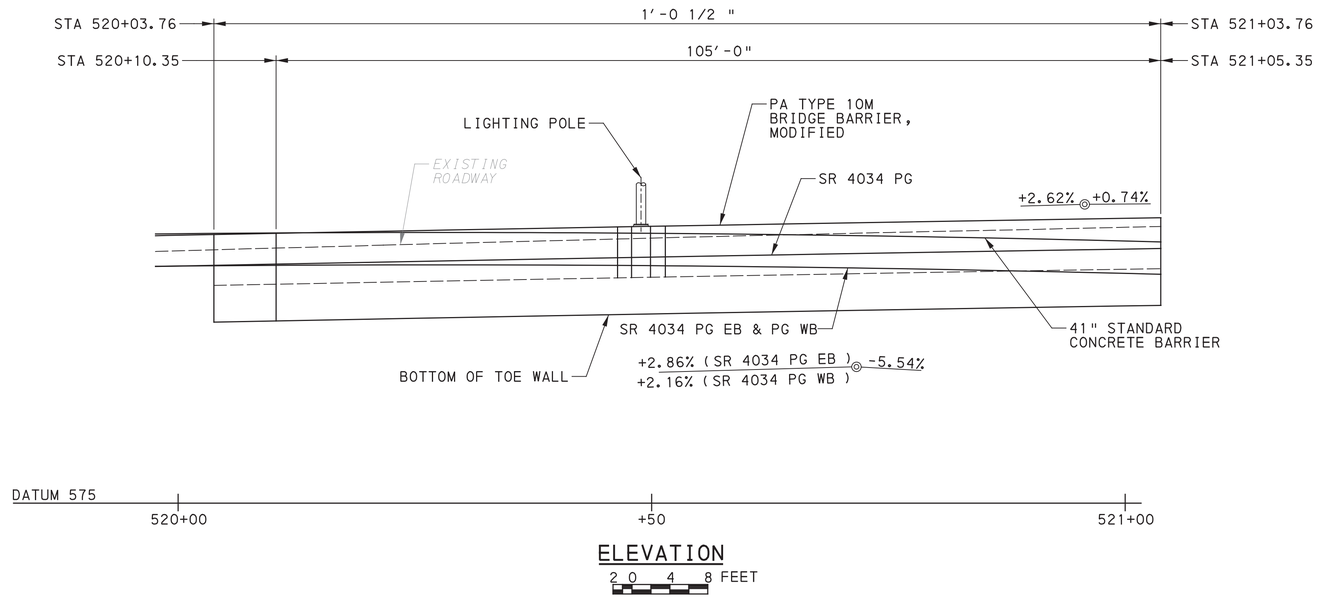
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTasrb001.dgn



PLAN

2 0 4 8 FEET



ELEVATION

2 0 4 8 FEET

LEGEND

- AS DRILLED STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- POST MOUNTED SIGNS

NOTES:

1. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE INDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEETS 3 & 4
2. FOR MSE RETAINING WALL DETAILS, SEE SHEET 50
3. FOR MOMENT SLAB DETAILS, SEE SHEET 49
4. FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALL PLAN & ELEV-1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 47 OF 56

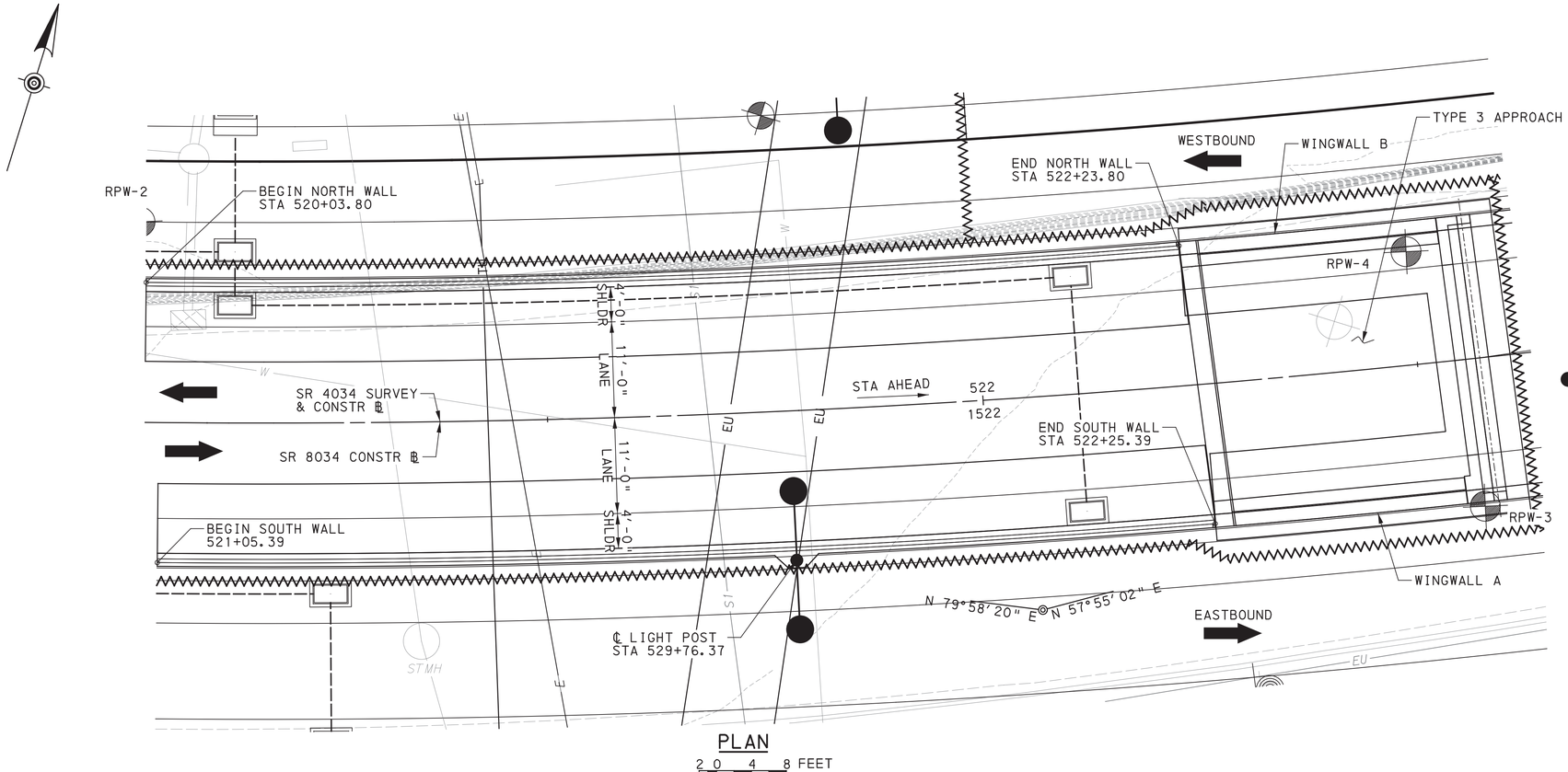
S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022

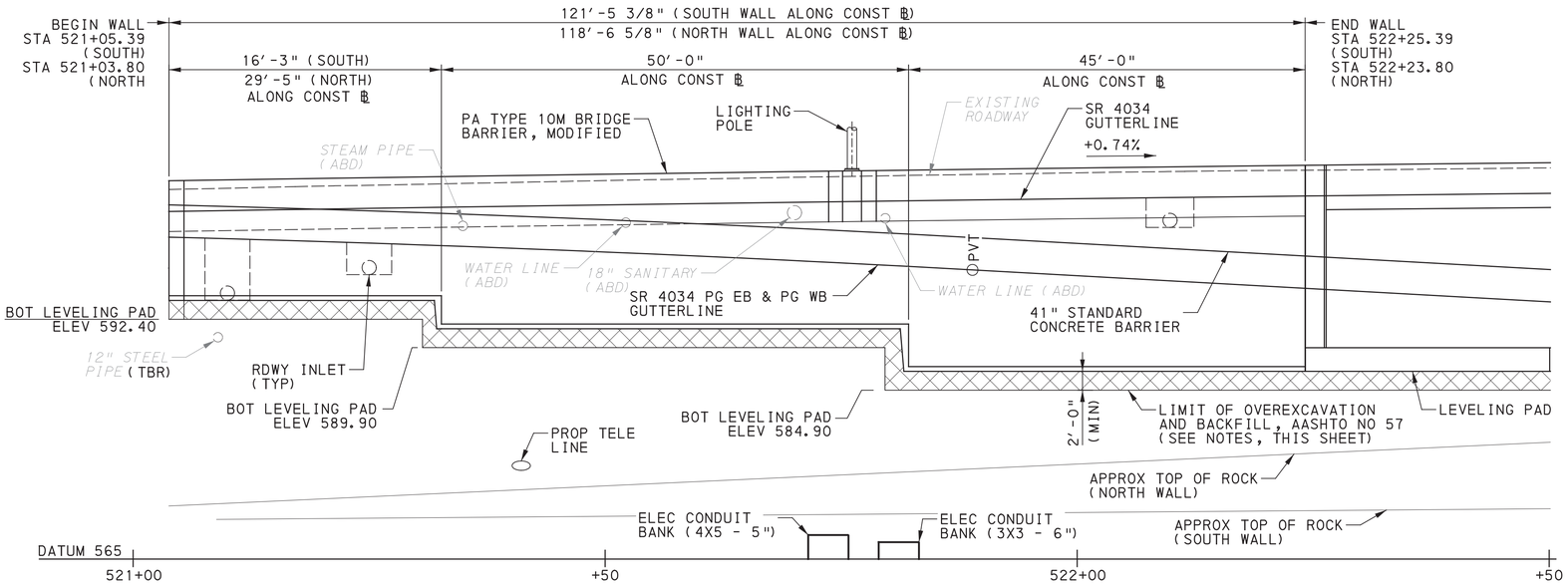
OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTw1001.dgn

PLOTTED: 8/22/2022



PLAN

2 0 4 8 FEET



ELEVATION

2 0 4 8 FEET

LEGEND

- AS DRILLED STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- POST MOUNTED SIGNS

NOTES:

1. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE INDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEETS 3 & 4
2. FOR MSE RETAINING WALL DETAILS, SEE SHEET 50
3. FOR MOMENT SLAB DETAILS, SEE SHEET 49
4. FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALL PLAN & ELEV-2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

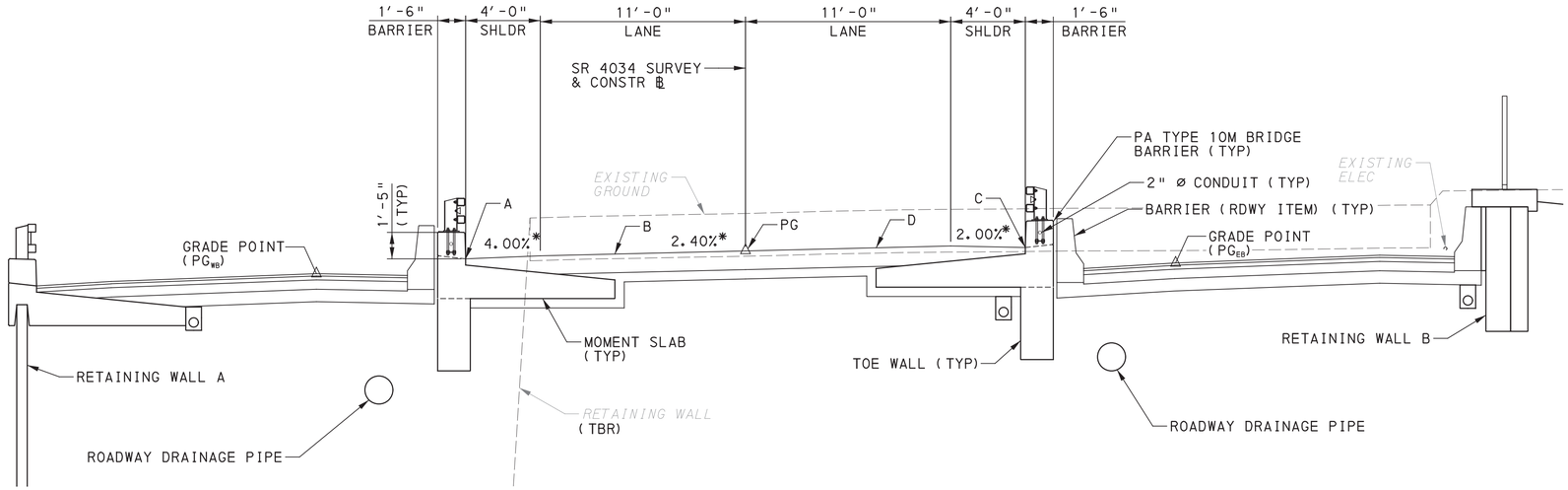
SHEET 48 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTw1002.dgn

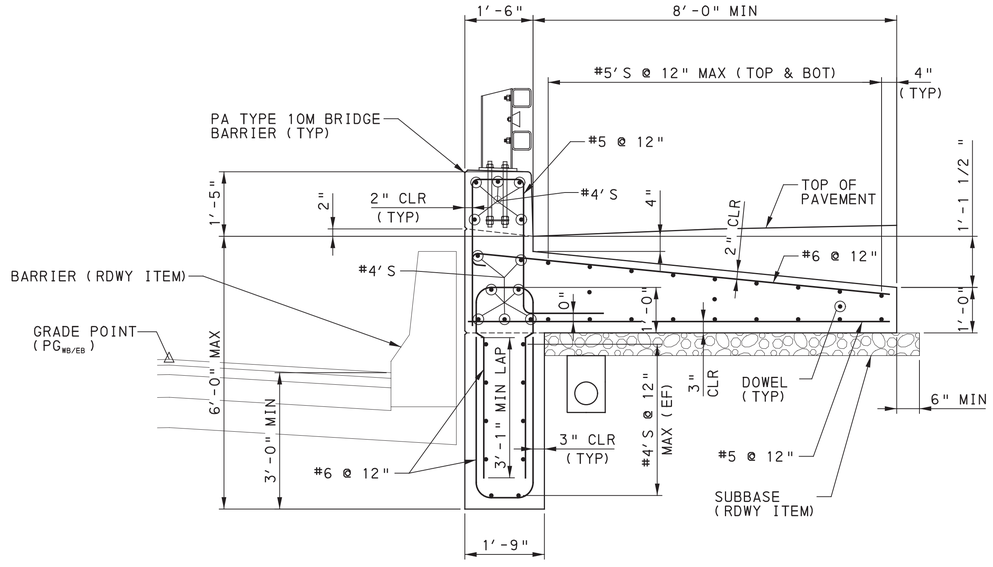
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mnconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTw1003.dgn



TYPICAL SECTION

SECTION SHOWN AT STA 520+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

* - CROSS SLOPE GIVEN @ STA 520+50



TYPICAL MOMENT SLAB SECTION

NTS

FINISHED MOMENT SLAB ELEVATIONS AT BREAK POINTS					
LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)
START NORTH MSLAB	520+03.76	599.63	599.89	- - - -	- - - -
	520+10.00	599.75	600.01	- - - -	- - - -
START SOUTH MSLAB	520+10.35	- - - -	- - - -	600.37	600.35
	520+20.00	599.94	600.20	600.55	600.54
	520+30.00	600.13	600.39	600.74	600.72
	520+40.00	600.32	600.57	600.93	600.91
	520+50.00	600.50	600.75	601.11	601.09
	520+60.00	600.67	600.93	601.28	601.27
	520+70.00	600.85	601.10	601.46	601.44
	520+80.00	601.02	601.27	601.63	601.61
	520+90.00	601.18	601.44	601.79	601.78
	521+00.00	601.35	601.60	601.95	601.94
END NORTH MSLAB	521+03.76	601.40	601.66	- - - -	- - - -
END SOUTH MSLAB	521+05.35	- - - -	- - - -	602.04	602.02

NOTES:

1. PROVIDE DOWELS AT EXPANSION JOINTS. USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MOMENT SLAB DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

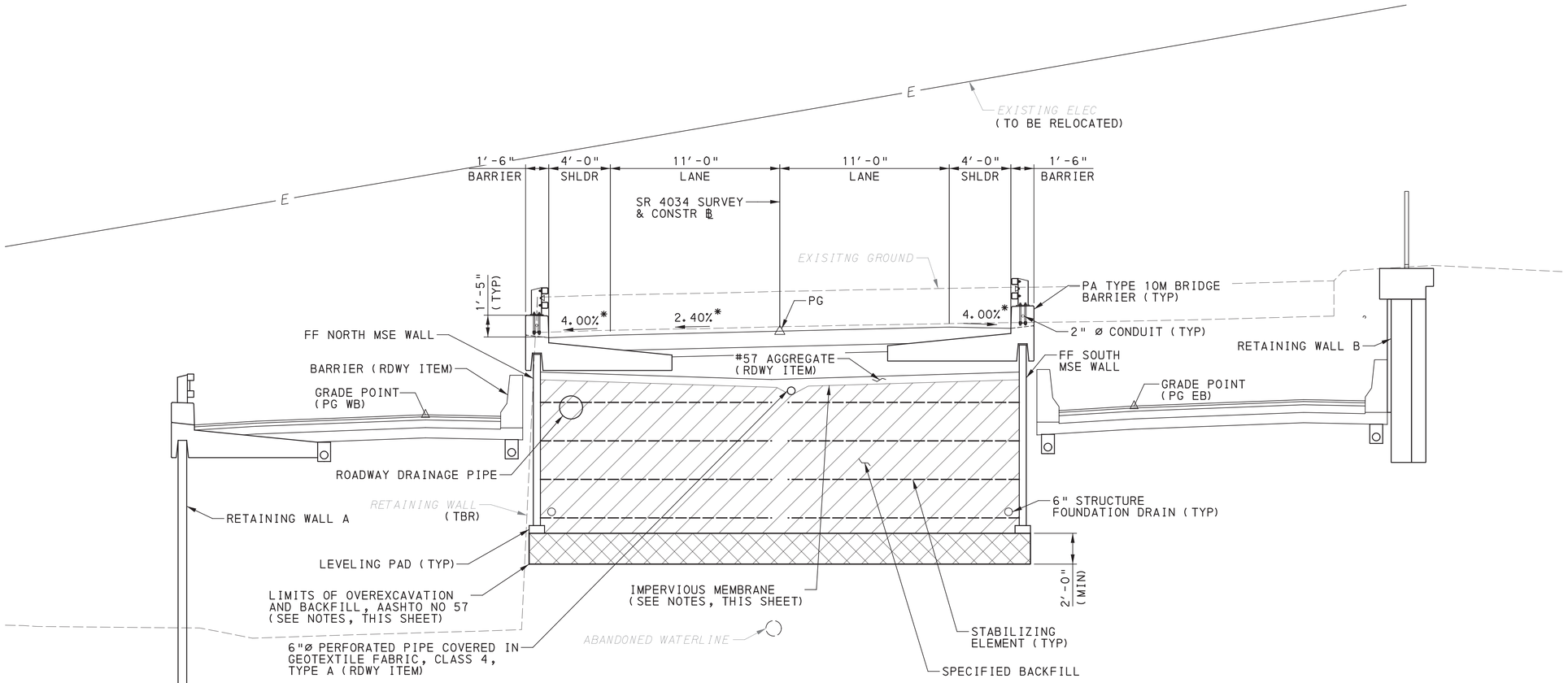
RECOMMENDED AUGUST 22, 2022

SHEET 49 OF 56

S-41006

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	JP

PLOTTED: 8/22/2022



TYPICAL SECTION

SECTION SHOWN AT STA 521+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

* - CROSS SLOPE GIVEN @ STA 521+50

NOTES:

1. REINFORCING STRAP LENGTHS PROVIDED HEREWITHIN ARE MINIMUM STANDARDS FOR THE CONTRACTORS DESIGN AND WERE USED FOR COST ESTIMATING PURPOSES.
2. IMPERVIOUS MEMBRANE SHALL BE PROVIDED WITHIN THE ENTIRE ROADWAY AREA WHERE THE REINFORCING STRAPS POTENTIALLY INTERSECT.
3. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEW. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, AND THE SPECIAL PROVISION SPECIAL ROLLING (MODIFIED), OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
4. TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM SHALL BE PROVIDED AT LOCATIONS WHERE THE EXCAVATION LIMITS CONFLICT WITH THE BAYFRONT EAST AND WEST BYPASS RECONSTRUCTION LIMITS.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALL DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

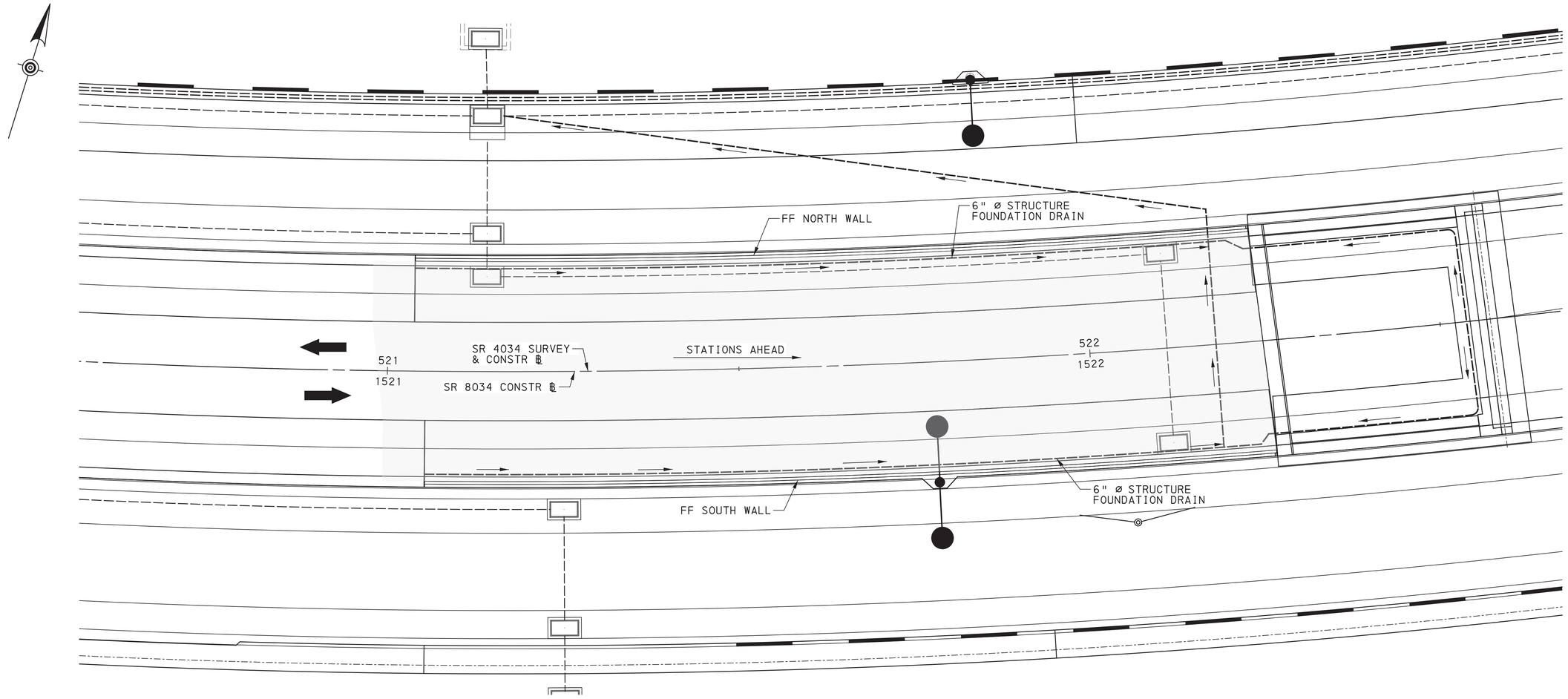
RECOMMENDED AUGUST 22, 2022

SHEET 50 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTw1004.dgn



PLAN - MSE WALL DRAINAGE

2 0 4 8 FEET

NOTES:

1. LIMITS OF IMPERVIOUS MEMBRANE AND 6" DIA. PERFORATED PIPE ARE CONCEPTUAL AND FOR BIDDING PURPOSES. CONTRACTOR SHALL MODIFY IN ACCORDANCE WITH THE MSE WALL DESIGN, TO THE REQUIREMENTS SHOWN HERE, AND TO BC-799M.

REFERENCES:

1. FOR PLAN INFORMATION NOT SHOWN, SEE GENERAL PLAN SHEETS 47 & 48
2. FOR MSE WALL ELEVATION, SEE SHEETS 47 & 48
3. FOR MSE RETAINING WALL DETAILS, SEE SHEET 50

LEGEND

- DIRECTION OF TRAFFIC FLOW
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- DENOTES APPROXIMATE LIMITS OF IMPERVIOUS MEMBRANE. EXTEND MEMBRANE 6'-0" MINIMUM BEYOND END OF MSE WALL STABILIZING ELEMENTS. (SEE NOTES, THIS SHEET)

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1943 MPMS PROJ: 108952 BRKEY: 69240

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE WALL DRAINAGE PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 51 OF 56

S-41006

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022

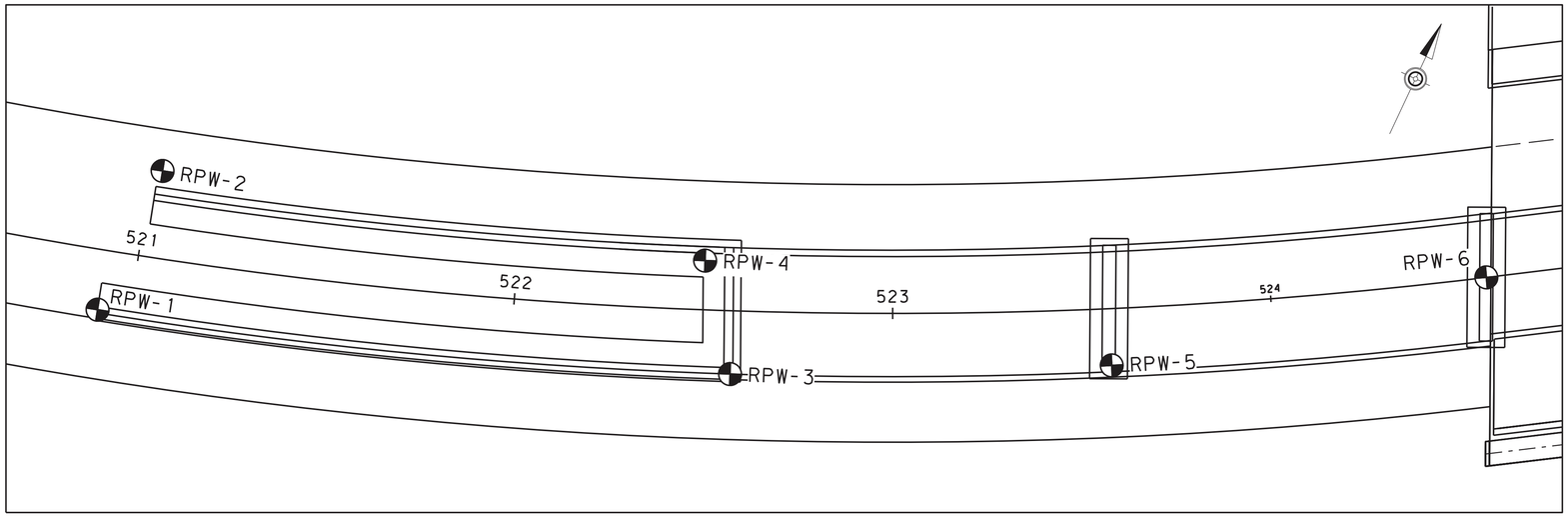
OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_W\sheets\FINAL\ramp_SS_WSTw1005.dgn

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.



BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler — 3/15/2021

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

Mark A. Styler

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK A. STYLER — ENGINEER — No. PE061786

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 1 OF 5)

Christopher T. Fox, P.E.

Digitally signed by Christopher T Fox, P.E.
Date: 2022.08.23 07:19:48 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 52 OF 56

M:_2019\095\exhibits\structure\19095_srb.RPW.dgn
8/18/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

SUBSTRUCTURE UNIT:
SOUTH WALL / WING A

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/13/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-1	STATION: 520+91.6 OFFSET: 15.8 FT. RT.	FINISH: 10/15/2020 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. 5 FT.	604.1 FT.

DRILLING INSPECTOR: JAKE DIDION
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 583.3 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		CONCRETE. 1.0'/El. 603.1		1.0						
		GRAVEL and **SAND**, trace Clay, medium dense to very dense, moist to dry, heterogeneous, well graded, sub-angular to angular, brown to light brown, fill. *S-1, PID=0.1 ppm.* *S-2, PID=17.4 ppm.* *S-3, PID=13.3 ppm.* *S-4, PID=16.3 ppm.*		2.5 4.0	S-1 S-2	7-15-14 12-11-19		39 40	0.8 0.5	53 33
		S-5, more clay. *S-5, PID=4.2 ppm.* *S-6, PID=0.9 ppm.*		5.5 7.0 8.5	S-3 S-4 S-5	13-14-22 24-23-20 11-14-18		48 57 43	1.1 1.0 0.6	73 67 40
		S-7, PID=1.2 ppm.		10.0	S-6	15-16-20		48	1.0	67
		S-8, PID=6.3 ppm. *S-9, PID=11.9 ppm.* *S-9, low recovery due to layer of large gravel chunks.*		11.5 13.0 14.5	S-7 S-8 S-9	16-16-20 10-15-13 9-10-8		48 37 24	0.6 0.6 0.2	40 40 13
		S-10, PID=2.1 ppm.	a-1-a / gw	16.0	S-10	7-8-9		23	1.0	67
		S-11 through S-21, PID=0.0 ppm. *S-12, more clay.*		17.5 19.0	S-11 S-12	10-15-17 8-11-11		43 29	1.3 0.5	87 33
		S-15, more clay. *Clay layer, 22.0-22.3'.*		20.5 22.0 23.5	S-13 S-14 S-15	16-22-15 12-15-10 6-7-11		49 33 24	1.3 0.8 1.2	87 53 80
				25.0	S-16	16-34-25	3.00	79	1.2	80
				26.5 28.0	S-17 S-18	33-24-15 16-23-16		52 52	1.0 0.8	67 53
		S-19, low recovery due to large gravel blocking spoon opening.		29.5	S-19	9-15-10		33	0.2	13
		S-20, more clay, contains broken up shale fragments (no structure to shale). *S-21, more sand (fine sand with silt, "foundry sand").* *Water level @ 32.0' prior to coring.*		31.0	S-20	14-7-4		15	0.5	33
		32.5'/El. 571.6	a-2-6 / gc	32.5	S-21	5-4-16		27	0.7	47
		GRAVEL, little Clay, contains shale fragments, very dense, moist to damp, laminated, well graded, angular to flat, gray to light gray, residuum.		33.4 34.0	S-22 S-23	42-50/.4' 50/.1'		>67 >67	0.9 0.1	100 100
		34.1'/El. 570.0	a-2-6 / gc	34.1	R-1			0%	1.8	95
		SHALE, gray, soft to medium hard, weathered, laminated bedding with flat dip, *no apparent jointing, (RQD=0%).* 36.0'/El. 568.1		36.0 36.2	S-24 R-2	50/.2'		>67 15%	0.2 2.0	100 59
		Shale, slightly sandy, 34.3-34.9'.		39.6						
		GRAVEL and **CLAY**, contains shale fragments, very dense, moist, laminated, well graded, angular to flat, gray, residuum. 36.2'/El. 567.9			R-3			38%	5.0	100
		SHALE, gray, soft to medium hard, weathered, laminated bedding with flat dip, *no apparent jointing, (RQD=29%).* *Core barrel continuously plugging off when attempting to core.* *Driller decided to take spoon sample to advance past highly weathered shale zone.* *Sandstone, 42.5-43.2'.* 44.6'/El. 559.5								

BOL 592.40
BOE 590.40
TOR 570.00

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
NORTH WALL / WING B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/28/2020 10:30 AM	HAMMER: AUTOMATIC
RPW-2	STATION: 521+03.0 OFFSET: 23.0 FT. LT.	FINISH: 10/28/2020 1:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	584.1 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 574.6 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 575.7 ft. - 19.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		SAND, little Silt, little Gravel, loose to medium dense, damp, homogeneous, poorly graded, fill. *PID=0.0 ppm for all samples.* *Bag sample, B-1, collected from, 0.0-6.0'.*	a-1-b / sp	1.5 3.0 4.5	S-1 S-2 S-3	4-2-2 3-4-5 5-4-4		5 12 11	1.0 1.0 0.2	67 67 13
		9.0'/El. 575.1		6.0	S-4	5-4-3		9	0.8	53
		SILT, soft to very stiff, moist, homogeneous, low plastic fines, gray to dark gray, alluvium. *S-8, wood fragments.* 12.0'/El. 572.1	a-4 / ml	7.5 9.0	S-5 S-6 S-7	3-5-9 7-4-3 2-1-1		19 9 3	0.8 0.2 1.2	53 13 80
		SAND, little Silt, trace Gravel, medium dense, moist, homogeneous, poorly graded, alluvium. 13.5'/El. 570.6	a-1-b / sp a-1-a / gw	10.5 12.0 13.5	S-8 S-9 S-10	2.50 5-3-7 2.50 1-2-7 7-40-50/.4'		13 12 120	1.3 1.0 1.4	87 67 100
		GRAVEL, some Sand, very dense, damp, homogeneous, well graded, flat to angular, gray, residuum. 14.9'/El. 569.2		14.9	R-1			0%	1.5	75
		SHALE interbedded with SANDSTONE, gray to dark gray, soft to medium hard, slightly weathered to fresh, laminated to narrow bedding with flat dip, *no apparent jointing, (RQD=25%).* *Fine grained sandstone, 21.0-22.0'.*		16.9	R-2			20%	2.5	83
		24.9'/El. 559.2		19.9	R-3			38%	5.0	100

BOL 592.40
BOE 590.40
TOR 569.20

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK A. SIEGER
ENGINEER
No. PE061795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 2 OF 5)

SHEET 53 OF 56

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RPW.dgn
8/18/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_1.2.2 - 2.4.2.2010.GDT - 7/21/21 12:29 - L:_CONT\PROJECTS\2019\1909_ERIE CO S&S.GPJ

SUBSTRUCTURE UNIT:
ABUTMENT 1 / WING A

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/13/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-3	STATION: 522+58.0 OFFSET: 17.0 FT. RT.	FINISH: 10/14/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	606.8 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 572.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
605		**REINFORCED CONCRETE.** 1.4'/El. 605.4		1.5						
		GRAVEL, SUBBASE. 1.5'/El. 605.3								
		GRAVEL and **SAND**, little Silt, loose to very dense, damp, heterogeneous, well graded, angular to rounded, brown, fill. *S-2, PID=8.0 ppm. S-3, PID=6.1 ppm.*	a-1-a / gw	3.0	S-1	10-23-14		49	1.5	100
				4.5	S-2	18-22-15		49	1.0	67
				6.0	S-3	31-14-15		39	1.2	80
				7.5	S-4	12-16-17		44	1.0	67
		S-5, PID=1.5 ppm.		9.0	S-5	14-15-16		41	0.5	33
600				10.5	S-6	16-17-17		45	1.1	73
		S-7, PID=5.8 ppm.		12.0	S-7	13-14-11		33	1.3	87
		S-8, PID=1.5 ppm.		13.5	S-8	8-7-7		19	1.0	67
		S-9, PID=2.1 ppm.		15.0	S-9	8-6-5		15	1.4	93
595				16.5	S-10	3-2-1		4	0.8	53
		19.5'/El. 587.3		18.0	S-11	24-11-13		32	0.9	60
		Boring dry, 10-14-20, 0900.		19.5	S-12	12-34-22		75	0.7	47
590		**GRAVEL**, some Silt, little Sand, medium dense to very dense, moist to damp, homogeneous, poorly graded, rounded to flat, gray, reworked residual fill. *S-15, contains piece of slag. S-15, PID=3.9 ppm.*	a-2-4 / gm	21.0	S-13	21-43-48		121	1.3	87
585		**BFE/BPCE 584.90**		22.5	S-14	18-16-16		43	1.5	100
				24.0	S-15	13-13-10		31	1.5	100
		BOE 580.90		25.5	S-16	9-8-6		19	1.2	80
580		27.0'/El. 579.8		27.0	S-17	4-5-4		12	1.5	100
		S-17, brick fragments.		27.8	S-18	47-50/.3'		>67	0.8	100
		GRAVEL, some Silt, little Sand, very dense, damp, homogeneous, poorly graded, flat, gray, residuum. 29.2'/El. 577.6	a-2-4 / gm	28.5	S-19	15-50/.2'		>67	0.7	100
		TOR 577.60		29.2	R-1			0%	1.6	80
		Boring dry prior to coring.		31.2	R-2			83%	3.0	100
575		**PDE 574.90**		34.2	R-3			70%	4.9	98
		SHALE interbedded with SANDSTONE, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=60%).*								
		EPTE 570.90								
570		39.2'/El. 567.6								

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
ABUTMENT 1 / WING B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 9:00 AM	HAMMER: AUTOMATIC
RPW-4	STATION: 522+50.0 OFFSET: 13.0 FT. LT.	FINISH: 10/29/2020 3:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	606.2 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 568.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
605		**REINFORCED CONCRETE.** 1.4'/El. 604.8		1.5						
		GRAVEL and **SAND, SUBBASE.** 1.5'/El. 604.7								
		GRAVEL and **SAND**, loose to dense, damp, homogeneous, well graded, rounded to sub-angular, brown, fill.	a-1-a / gw	3.0	S-1	5-6-4	13	0.9	60	
				4.5	S-2	4-3-2	7	1.1	73	
				6.0	S-3	4-3-4	9	0.9	60	
				7.5	S-4	5-4-5	12	1.0	67	
				9.0	S-5	7-6-5	15	0.7	47	
600				10.5	S-6	7-10-10	27	0.2	13	
				12.0	S-7	3-7-7	19	0.4	27	
				13.5	S-8	6-6-5	15	0.7	47	
				15.0	S-9	9-6-6	16	1.1	73	
595				16.5	S-10	5-6-5	15	0.6	40	
				18.0	S-11	13-15-15	40	1.2	80	
				19.5	S-12	12-8-8	21	1.5	100	
590				21.0	S-13	8-11-13	32	1.0	67	
585		**BFE/BPCE 584.90**		22.5	S-14	12-17-13	40	1.5	100	
				24.0	S-15	14-15-18	44	1.3	87	
		BOE 580.90		25.5	S-16	13-13-9	29	1.0	67	
580		28.5'/El. 577.7		27.0	S-17	7-9-7	21	1.1	73	
		Boring dry prior to coring.		28.5	S-18	7-8-12	27	0.9	60	
		REINFORCED CONCRETE FOOTING. *Drilling became soft at end of footing, driller stopped rotation to switch back to SPT.* 32.8'/El. 573.4		28.5	S-19	50/.0'	>67	0.0	0	
				29.5	R-1		0%	1.0	100	
				31.5	R-2		0%	2.0	100	
		GRAVEL, some Sand, little Silt, dense, wet, homogeneous, poorly graded, rounded, gray, alluvium. 35.8'/El. 570.4	a-1-a / gp	33.7	R-3		0%	1.3	59	
575		**PDE 572.90**		35.2	S-20	8-11-20	41	1.5	100	
		TOR 570.40		35.8	S-21	35-50/.1'	>67	0.6	100	
570		**EPTE 568.90**		37.8	R-4		0%	1.7	85	
		SHALE interbedded with SANDSTONE, gray, fine grained, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=33%).*		40.8	R-5		20%	2.7	90	
					R-6		54%	4.9	98	
565		45.8'/El. 560.4								

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings = 0.0 ppm.
No visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SLYKER ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 3 OF 5)

SHEET 54 OF 56

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_RPW.dgn
8/19/2022

PENNDOT STRUCTURE BORING LOG, PENNDOT.GINT, VERSION 1.23.0, 2/1/2017, 8/19/22 12:55, L:\PRO_JECTS\2019\19095\MISC\RPW\19095_STRB_RPW.GPJ
PENNDOT STRUCTURE BORING LOG, PENNDOT.GINT, VERSION 1.23.0, 2/1/2017, 8/19/22 12:55, L:\PRO_JECTS\2019\19095\MISC\RPW\19095_STRB_RPW.GPJ

SUBSTRUCTURE UNIT:
PIER 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/28/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-5	STATION: 523+57.0 OFFSET: 15.0 FT. RT.	FINISH: 10/28/2020 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. 5 FT.	607.1 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 585.5 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		REINFORCED CONCRETE. 1.5'/El. 605.6								
		GRAVEL and **SAND**, medium dense to dense, damp, homogeneous, well graded, rounded to sub-angular, brown, fill.	a-1-a / gw	1.5 3.0 4.5 6.0 7.5 9.0 10.5 12.0	S-1 S-2 S-3 S-4 S-5 S-6	10-16-13 19-19-14 11-14-15 24-20-18 11-13-14 14-11-9	39 44 39 51 36 27	1.5 1.3 1.5 1.0 1.5 1.2	100 87 100 67 100 80
		13.5'/El. 593.6								
		GRAVEL, some Silt, little Sand, contains shale fragments, medium dense, damp, homogeneous, poorly graded, flat to rounded, gray, reworked glacial till fill.	a-2-4 / gm	13.5 15.0 16.5 18.0	S-7 S-8 S-9 S-10	11-11-9 7-4-4 6-9-8 4-5-5	27 11 23 13	1.5 0.5 1.3 1.5	100 33 87 100
		18.0'/El. 589.1								
		GRAVEL, some Silt, little Sand, contains brick fragments, loose to medium dense, moist to damp, heterogeneous, poorly graded, rounded to angular, brown, fill. *S-12, more silt.* *S-14, contains a brick fragments.*	a-2-4 / gm	18.0 19.5 21.0 22.5	S-11 S-12 S-13 S-14	7-10-10 7-8-10 5-4-3 2-3-5	27 24 9 11	1.1 1.5 0.8 1.0	73 100 53 67
		24.0'/El. 583.1								
TOR 583.10		*Boring dry prior to coring.*		24.0	S-15	3-2-3	7	0.8	53
BFE 580.75		**SHALE**, gray, fine grained, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=42%).*		24.0 26.0 29.0	S-16 R-1 R-2 R-3	50/.0'	>67 60% 47% 32%	0.0 2.0 3.0 5.0	0 100 100 100
		34.0'/El. 573.1								

All PID readings = 0.0 ppm.
No visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
PIER 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 9:00 AM	HAMMER: AUTOMATIC
RPW-6	STATION: 524+57.0 OFFSET: 0.0 FT. CL	FINISH: 10/29/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	580.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 580.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 578.0 ft. - 21.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
TOR 578.50	UNS	**SAND**, some Gravel, loose, dry, heterogeneous, poorly graded, brown to gray, fill. 1.5'/El. 578.9	a-1-b / sp	1.5	S-1	3-1-3	5	0.4	27
BFE 576.75	UNS	**GRAVEL**, some Sand, very dense, dry, homogeneous, well graded, flat to angular, residuum. 1.9'/El. 578.5	a-1-a / gw	1.9	S-2	50/.4'	>67	0.4	100
		S-2, contains weathered shale fragments. *Boring dry prior to coring.*		4.0 6.0	R-1 R-2		0% 30%	1.5 5.0	75 100
		UNSAMPLED, *Driller augered to 4.0' in order to seat augers to hold casing and leave room for casing clamp on the rig to clear the seated aguer.* 4.0'/El. 576.4		11.0	R-3		80%	5.0	100
		SHALE, gray to dark gray, soft to medium hard, fresh, laminated to narrow bedding with flat dip, *no apparent jointing, (RQD=56%).*		16.0	R-4		80%	5.0	100
		21.0'/El. 559.4							

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIEGER ENGINEER No. PE081786

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 4 OF 5)

SHEET 55 OF 56

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RPW.dgn
8/18/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 4.2.3.4 - 2.4.1 2016.GDT - 8/17/22 15:58 - \\PROJECTS\2019\19095\999\999 - ERIE CO S.R.4034.GPJ

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
RPW-3	522+58.0 17 ft. RT.	R-1	29.2 to 34.2	POINT LOAD TEST	5246.0 PSI / 377.7 TSF	NO		80	0	SHALE	NORTHEAST SHALE

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SIEVER ENGINEER No. PE081795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0060 OFFSET 1943
WEST BAYFRONT PARKWAY RAMP STA. 523+57.19
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 5 OF 5)

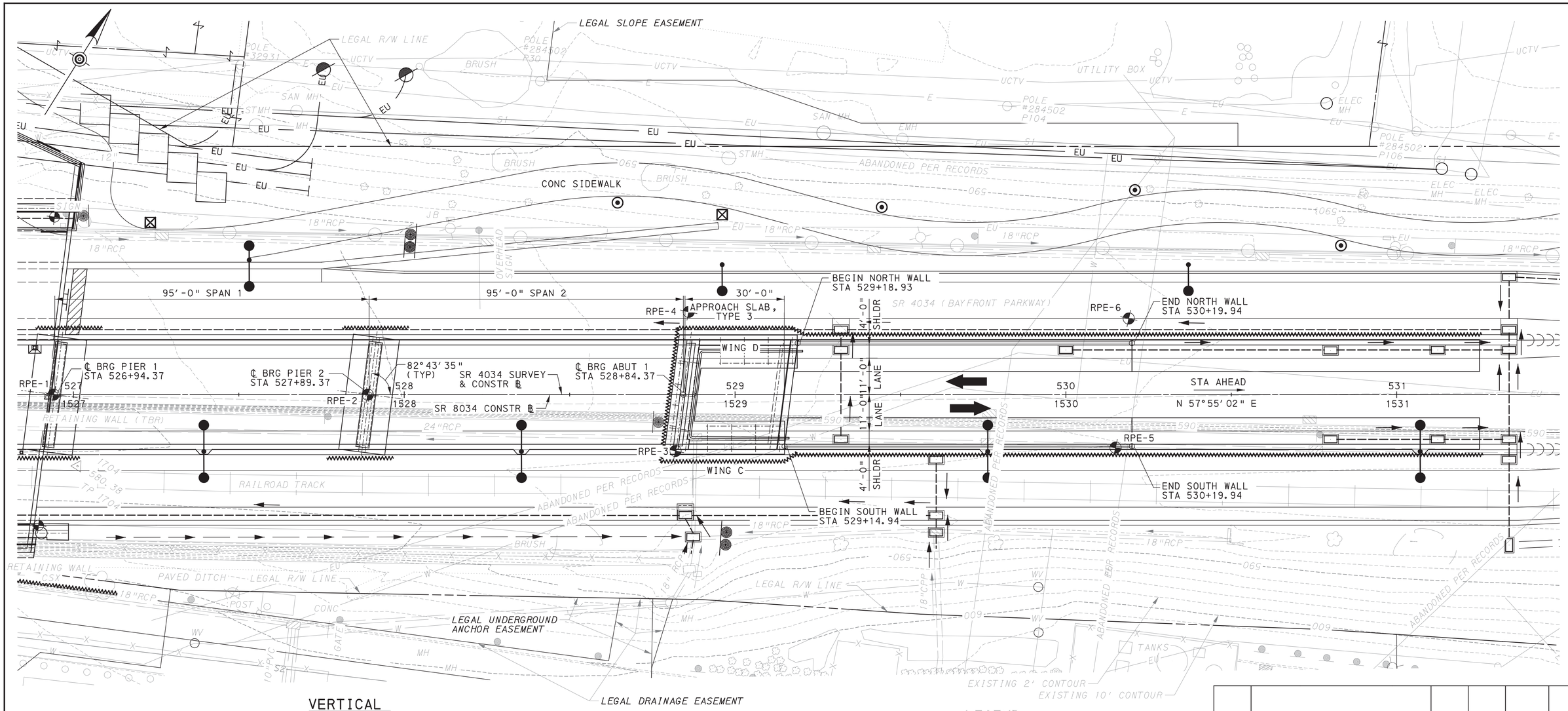
SHEET 56 OF 56

M:_2019\095\exhibits\structure\19095_srb_RPW.dgn
8/18/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\vramp_SS_E\sheets\FINAL\vramp_SS_ESTgp001.dgn



VERTICAL ALIGNMENT DATA

SR 4034 & SR 8034
SURVEY & CONSTR ℄

PVT STA 523+28.88 ELEV 604.45
+0.74% to PVI STA 525+80.58 ELEV 606.31
-1.24% to PVC STA 527+12.06 ELEV 604.68

-1.24% to -7.00%
PVI STA 527+57.06
ELEV 604.12
VC 90.00'
MO = -0.63'
SSD = 232'

PVT STA 528+02.06 ELEV 600.97
-7.00% to PVC STA 529+33.03 ELEV 591.80

-7.00% to +1.00%
PVI STA 530+35.53
ELEV 584.63
VC 205.00'
MO = -0.63'
HLSD = 155'

SR 4034 EASTBOUND (PG EB)

PVT STA 526+60.34 ELEV 580.65
+1.00% to STA 533+00.00 ELEV 587.05

SR 4034 WESTBOUND (PG WB)

PVT STA 526+46.71 ELEV 580.52
+1.00% to STA 533+00.00 ELEV 587.05

HORIZONTAL ALIGNMENT DATA

SR 4034
SURVEY & CONSTR ℄

TANGENT

PLAN

5 0 15 FEET

LEGEND

- AS DRILLED STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- POST MOUNTED SIGNS

REFERENCES:

1. FOR ELEVATION VIEW, SEE SHEET 2
2. FOR TYPICAL SECTION, SEE SHEET 6
3. FOR GENERAL NOTES, SEE SHEETS 3 & 4
4. FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

DES: DFK	CKD: REB	DWG: DFK	CKD: REB

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL PLAN

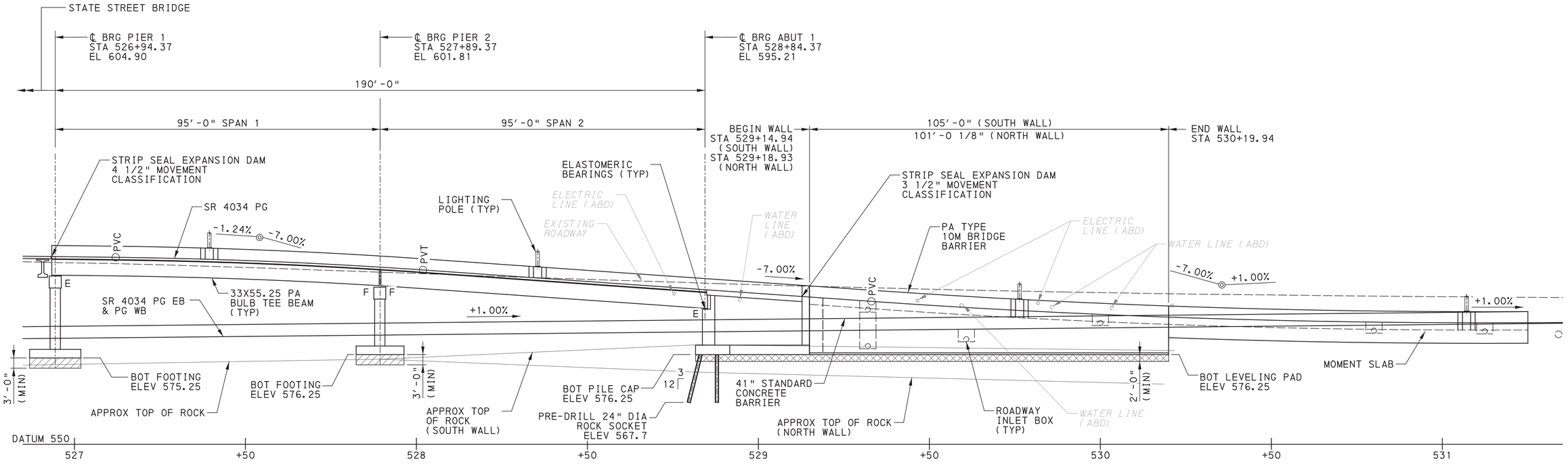
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E
PENNSYLVANIA PE NO. PE-
DATE: 8/22/2022

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED
Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 16:21:29 -04'00'
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 54
S-41007

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTe1001.dgn



ORIGINAL AND NEW DATUM:
BASED ON THE CURRENT SURVEY, THE ELEVATIONS ARE APPROXIMATELY 0.50FT LOWER THAN THE ELEVATIONS SHOWN ON THE ORIGINAL DESIGN DRAWINGS (FIELD VERIFY)

EAST RAMP ELEVATION

5 0 15 FEET

LEGEND

LIMIT OF OVEREXCAVATION AND BACKFILL, AASHTO NO 57

LIMIT OF OVEREXCAVATION AND BACKFILL, CONCRETE CLASS C

REFERENCES:

1. FOR GENERAL PLAN, SEE SHEET 1
2. FOR TYPICAL SECTION, SEE SHEET 6
3. FOR GENERAL NOTES, SEE SHEET 3 & 4

INDEX OF DRAWINGS

SHEET NO	TITLE	SHEET NO	TITLE
1	GENERAL PLANS	28	LIGHT POLE SUPPORT DETAILS
2	ELEVATION	29	BEARING DETAILS
3	GENERAL NOTES - 1	30	DECK SLAB PLAN
4	GENERAL NOTES - 2	31	DECK SLAB - TYPICAL SECTION
5	SUMMARY OF QUANTITES	32	DECK BARRIER AND RAILING PLAN
6	TYPICAL SECTION	33	DECK & APPROACH SLAB ELEVATIONS
7	STAKE-OUT PLAN	34	PIER 1 END DIAPHRAGMS
8	PIER 1 PLAN & ELEVATION	35	PIER 2 AND INTERMEDIATE DIAPHRAGMS
9	PIER 1 FOOTING PLAN & DETAILS	36	ABUTMENT 1 END DIAPHRAGMS
10	PIER 2 PLAN & ELEVATION	37	DECK LIGHT POLE DETAILS
11	PIER 2 FOOTING PLAN & DETAILS	38	DECK PLACING SEQUENCE
12	PIER REINFORCEMENT SCHEDULE	39	DECK REBAR SCHEDULE - 1
13	ABUTMENT 1 FOOTING PLAN - 1	40	DECK REBAR SCHEDULE - 2
14	ABUTMENT 1 FOOTING PLAN - 2	41	APPROACH SLAB - ABUTMENT 1
15	ABUTMENT 1 PLAN	42	APPROACH SLAB DETAILS - 1
16	ABUTMENT 1 ELEVATION	43	APPROACH SLAB DETAILS - 2
17	ABUTMENT 1 TYPICAL SECTION	44	APPROACH SLAB REINFORCEMENT
18	WINGWALL C ELEVATIONS & SECTIONS	45	MSE RETAINING WALLS PLAN & ELEV - 1
19	WINGWALL D ELEVATIONS & SECTIONS	46	MSE RETAINING WALLS PLAN & ELEV - 2
20	ABUTMENT REINFORCEMENT SCHEDULE	47	MSE RETAINING WALL DETAILS
21	FRAMING PLAN	48	MOMENT SLAB DETAILS
22	P/S CONCRETE BEAM DETAILS - 1	49	MSE WALL DRAINAGE PLAN
23	P/S CONCRETE BEAM DETAILS - 2	50	STRUCTURE BORINGS - 1
24	P/S CONCRETE BEAM DETAILS - 3	51	STRUCTURE BORINGS - 2
25	P/S CONCRETE BEAM DETAILS - 4	52	STRUCTURE BORINGS - 3
26	P/S CONCRETE BEAM MOMENT TABLE	53	STRUCTURE BORINGS - 4
27	P/S CONCRETE BEAM SHEAR TABLE	54	STRUCTURE BORINGS - 5

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 54

S-41007

DES: DFK | CKD: REB | DWG: DFK | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mscnsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTgn001.dgn

GENERAL NOTES:

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019.

LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4 DISTRIBUTION FACTORS.

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LIVE LOADS

PHL-93, P-82 (204K PERMIT LOAD) AND P2016-13 (330K PERMIT LOAD).

FATIGUE DESIGN IS BASED ON THE FOLLOWING (PRESTRESSED CONCRETE):
ADTT = 444
(ONE DIRECTIONAL)

MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE: $0.0948\sqrt{f'c}$

DEAD LOADS:

INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS THAT TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE STAY-IN-PLACE FORMS.

GENERAL CONSTRUCTION:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5:2015 (USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015) BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

DECK SLAB THICKNESS INCLUDES A ½ INCH INTEGRAL WEARING SURFACE.

USE EITHER PERMANENT METAL DECK FORMS OR REMOVABLE FORMS TO CONSTRUCT THE DECK SLAB. USE REMOVABLE FORMS TO CONSTRUCT THE OVERHANGS OUTSIDE THE EXTERIOR BEAMS.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEG F.

PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE.

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT THE INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.

PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(K)9.

PROVIDE A MINIMUM WIDTH OF 2 1/2" AT 68°F FOR STRIP SEAL INSTALLATIONS UNLESS OTHERWISE INDICATED.

DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.

DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.

SITE CLASS IS NOT CLASS E.

PROVIDE CAST-IN-PLACE BARRIERS. SLIP FORMING OR PRECAST BARRIERS ARE NOT PERMITTED ON THE DECK OR WINGWALLS.

SPREAD FOOTING MAY BE ORDERED BY THE ENGINEER TO BE AT ANY ELEVATION OR OF ANY DIMENSIONS NECESSARY TO PROVIDE A PROPER FOUNDATION.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND THE DESIGN OF ANY TEMPORARY SHORING AND BRACING THAT MAY BE USED. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

DIRECT ALL SURFACE RUNOFF AWAY FROM EXCAVATIONS.

UTILITY NOTES:

COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY, TYPE, SIZE, AND LOCATION OF UTILITIES.

CONCRETE:

USE CLASS AAAP CEMENT CONCRETE IN THE DECK SLAB AND HAUNCHES AND TYPE 3 APPROACH SLAB.

USE CLASS AA CEMENT CONCRETE IN THE BARRIERS, DIAPHRAGMS, SHEAR BLOCKS, CHEEKWALLS, U-WINGS ABOVE BRIDGE SEAT CONSTRUCTION JOINT, SLEEPER SLAB, MOMENT SLABS AND TOE WALLS.

IF CONCRETE DIAPHRAGMS ARE POURED MONOLITHICALLY WITH THE DECK, USE CLASS AAAP CEMENT CONCRETE FOR THE DIAPHRAGMS AT NO ADDITIONAL COST TO THE DEPARTMENT.

USE CLASS A CEMENT CONCRETE IN THE PIERS, ABUTMENTS BELOW BRIDGE SEAT, WINGWALLS BELOW BRIDGE SEAT AND FOOTINGS.

USE CLASS C CEMENT CONCRETE BELOW THE BOTTOM OF FOOTINGS WHEN SPECIFIED.

A HIGHER CLASS OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS OF CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT ENGINEER.

PROVIDE 2-INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

PLACE CHEEKWALL AND SHEAR BLOCK CONCRETE AFTER BEAMS ARE SET IN POSITION.

USE RETARDER ADMIXTURE CONFORMING TO PUBLICATION 40/2020 IN THE CONCRETE DECK SLAB.

USE AIR ENTRAINMENT AND A MAXIMUM WATER/CEMENT RATIO OF 0.45 (BY WEIGHT). CONCRETE ADDITIVES CONTAINING CHLORIDE ARE PROHIBITED.

USE SULFATE RESISTANT CEMENT, TYPE II IN ALL CONCRETE CLASSES IN CONTACT WITH EXISTING SOILS AND GROUND WATER.

USE CORROSION INHIBITING ADMIXTURE IN THE CONCRETE DECK SLAB.

REINFORCEMENT STEEL:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, BARRIERS, OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED, UNLESS SPECIFIED.

PRESTRESSED CONCRETE BEAM NOTES:

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

STABILITY OF PARTIAL BEAMS AND COMPLETE BEAMS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION, UNTIL BEAMS AND DIAPHRAGMS ARE IN PLACE. ERECTION LOADS, INCLUDING SELF WEIGHT OF THE CONCRETE MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS, ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE BRIDGE MEMBERS DURING ANY STAGE OF ERECTION.

BRACE PRESTRESSED CONCRETE MEMBERS IN LONGITUDINAL AND LATERAL DIRECTIONS UNTIL MEMBERS ARE IN STABLE (FINAL BRACED) CONDITION.

PRIOR TO ERECTING THE BEAMS, AND IN ACCORDANCE WITH SECTION 1050(c) 2.d, SUBMIT AN ERECTION PLAN SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR REVIEW AND APPROVAL.

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
CONCRETE PAVEMENT JOINTS	RC-20M	9/30/2021
PA TYPE 10M BRIDGE BARRIER	BC-709M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
BRIDGE DRAINAGE	BC-751M	1/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	9/30/2016
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	9/30/2016
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	1/31/2019
PRESTRESSED CONCRETE BEAM BRACING	BC-772M	9/30/2016
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	9/30/2016
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	2/19/2021

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL NOTES - 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 54

S-41007

DES: DFK | CKD: REB | DWG: DFK | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTgn002.dgn

FOUNDATION:

OVEREXCAVATE ANY PART OF THE EXISTING RETAINING WALL THAT INTERFERES WITH THE PROPOSED STRUCTURE FOUNDATIONS FOR THE ABUTMENT, WINGWALLS, AND MSE RETAINING WALLS A MINIMUM 2.0 FEET BELOW THE BOTTOM OF THE PROPOSED STRUCTURES. THE BOTTOM OF THE OVEREXCAVATION FOR THE WALL SHALL BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER.

OVEREXCAVATE AND BACKFILL IN ACCORDANCE WITH THE SPECIAL PROVISIONS, OVEREXCAVATION AND BACKFILLING UNDER MSE FOOTPRINT AND OVEREXCAVATION AND BACKFILLING UNDER FOUNDATIONS PIER 1 AND PIER 2.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

PROVIDE A MINIMUM 8-FOOT STRAP LENGTH AND MINIMUM STRAP LENGTH-TO-HEIGHT RATIO OF 0.8 FOR THE ENTIRE LENGTH OF THE WALL.

BACKFILL THE AREA EXCAVATED UNDER THE MSE WALL AND ABUTMENT AND WINGWALLS WITH AASHTO NO. 57. WITHIN THE LIMITS OF THE MSE WALL, THE GRANULAR MATERIAL SHOULD BE UNDERLAIN WITH GEOTEXTILE CLASS 4, TYPE C.

PLACE THE BOTTOM OF THE LEVELING PAD A MINIMUM OF 4.0 FEET BELOW THE GROUND SURFACE TO SATISY FROST DEPTH REQUIREMENTS.

THE CONTRACTOR IS TO COORDINATE THE DRAINAGE SYSTEM WITH WALL MANUFACTURER.

THE CONTRACTOR AND WALL MANUFACTURER ARE TO DEVELOP A SPECIFIC PLAN FOR AVOIDING ALL EXISTING AND PROPOSED UTILITIES WITHIN THE REINFORCED ZONE THAT AFFECT THE PLACEMENT OF THE REINFORCING STRIPS.

DESIGN AND CONSTRUCT THE MSE WALLS IN ACCORDANCE WITH PENNDOT STANDARD BC-799M AND THE ATTACHED STANDARD SPECIAL PROVISION.

IN ACCORDANCE WITH PENNDOT STANDARD BC-799M, THE UNIT WEIGHT OF THE SPECIFIC BACKFILL FOR THE MSE WALLS SHALL BE BETWEEN 90 AND 120 PCF. THE UNIT WEIGHT OF THE MSE SHALL NOT EXCEED 120 PCF.

PROVIDE HP 12x74 PILES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTION 1005.2(C).

OVEREXCAVATE AND COMPACT BACKFILL MATERIAL UNDER THE FOOTPRINT OF ABUTMENT 1 PRIOR TO PILE INSTALLATION.

SUPPORT ABUTMENT 1 ON HP 12x74 (GRADE 50) PILES DRIVEN TO CASE 2 END BEARING IN ACCORDANCE WITH BC-757M AND PUBLICATION 408/2020, SECTION 1005.

MANDATORY PREDRILLING IS REQUIRED AT ALL PILE LOCATIONS TO AN ELEVATION 10 FEET BELOW THE BOTTOM OF THE PILE CAP.

PREDRILLED HOLES SHALL BE A MINIMUM OF 2.0 FEET IN DIAMETER. THE SOIL PORTION OF THE PRE-DRILLED HOLE MAY BE SUPPORTED BY TEMPORARY CASING, AS NEEDED.

PLACE THE H-PILES INTO THE PREDRILLED HOLES THROUGH THE TEMPORARY CASING AND BACKFILL THE ANNULUS OF THE HOLE WITH PEA GRAVEL.

DRIVE PILES IN ACCORDANCE WITH DM-4, PART A, SECTION 1.7.5.1 (a), METHOD A.

PLACE STRUCTURE BACKFILL IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, RC-12M BACKFILL AT STRUCTURES.

PROVIDE NORMAL DUTY PILE TIP REINFORCEMENT IN ACCORDANCE WITH STANDARD DRAWING BC-757M AND PUBLICATION 408/2020, SECTION 1005.2(b).

DRIVE A TOTAL OF TWO (2) TEST PILES FOR THE ABUTMENT AND ASSOCIATED WINGWALLS IN ACCORDANCE WITH PUBLICATION 408/2020.

THE REPRESENTATIVE IS TO INSPECT AND APPROVE THE PILE INSTALLATION METHOD. PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE REPRESENTATIVE FOR INSPECTION.

ORDER PILE LENGTHS A MINIMUM OF FIVE (5) FEET BEYOND THE ESTIMATED PILE TIP ELEVATION TO AVOID SPLICING.

ESTIMATED PILE TIP ELEVATIONS ARE PROVIDED FOR INFORMATION ONLY.

MAXIMUM DRIVING STRESS IN THE PILE SHALL NOT EXCEED 45 KSI.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

BACKFILL THE AREA EXCAVATED UNDER THE PIERS TO THE BOTTOM OF THE FOOTING ELEVATION WITH CLASS C CEMENT CONCRETE.

CLASS C CEMENT CONCRETE SHALL BE POURED AT THE BOTTOM OF THE EXCAVATION ON THE SAME DAY OF THE EXCAVATION.

PROTECTIVE/AESTHETIC COATINGS:

APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUPERSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE EXPOSED SURFACES OF THE DECK WITHIN THE TRAVELWAY, TO THE APPROACH SLABS, TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE FASCIA BARRIERS (INCLUDING DOWN TO THE UNDERSIDE OF DECK TO THE DRIP NOTCH), TO 5'-0" BEYOND THE BEAM ENDS AT PIER 1, TO THE EXPOSED FACES OF THE DIAPHRAGM AT PIER 1, AND TO THE TOP, INSIDE, AND OUTSIDE FACES OF THE TYPE 10M BARRIERS.

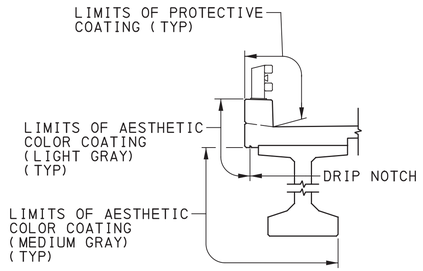
APPLY A PROTECTIVE COATING (PENETRATING SEALER FOR SUBSTRUCTURE SURFACES) IN ACCORDANCE WITH SECTION 1019 AND THE PROJECT SPECIAL PROVISIONS TO THE ABUTMENT SEATS (EXCEPT BEARING AREAS), SHEAR BLOCKS AND EXPOSED OUTSIDE FACES OF THE CHEEKWALLS.

APPLY ARCHITECTURAL SURFACE TREATMENT TO THE MSE RETAINING WALLS, ABUTMENT, WINGWALLS AND PIERS. THE LIMITS ARE SHOWN ON THE PLANS.

APPLY AESTHETIC COLOR COATING TO THE OUTSIDE FACE AND UNDERSIDE OF THE FASCIA BARRIERS, TO THE OUTSIDE OF THE END BARRIERS, AND ON THE EXPOSED FACE OF THE CHEEKWALLS (EXTENDING 2'-0" BELOW FINISHED GROUND WHERE APPLICABLE).

COLORS SHALL MATCH FEDERAL COLOR ID 36650 (LIGHT GRAY) AND 36492 (MEDIUM GRAY). SUBMIT COLOR CHIPS FOR APPROVAL.

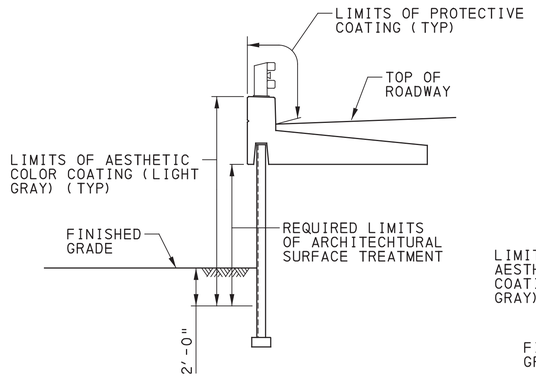
COMPLETE TABLE WITH INFORMATION FOR TEST PILES AFTER PILE INSTALLATION FOR THE AS BUILT OR RECORD SET OF PLANS SEE DM-4 SECTION 1.7.5.2 FOR ADDITONAL INFORMATION						
SUBSTRUCTURE UNIT	PILE TYPE	PILE TIP (NONE/ NORMAL/ HEAVY DUTY)	PILE TIP ELEVATION	FACTORED DESIGN LOAD (KIPS)	ULTIMATE PILE CAPACITY AT END OF DRIVING (KIPS)	WEAP OR PDA
ABUTMENT 1	HP12 x 74	NORMAL		263.15		



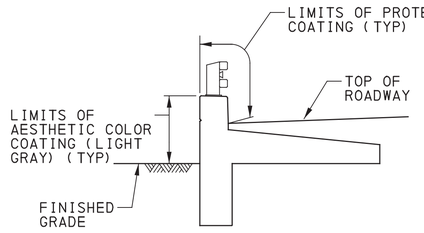
FASCIA BARRIERS

SUPERSTRUCTURE COATING LIMITS

NOT TO SCALE



MSE RETAINING WALL



MOMENT SLAB

COATING LIMITS

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
GENERAL NOTES - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 54

S-41007

DES:	DFK	CKD:	REB	DWG:	DFK	CKD:	REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTqu001.dgn

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION	UNIT	PIER 1	PIER 2	ABUT 1	APRROACH SLAB	SUPER-STRUCTURE	TOTAL
8030-0002	BRIDGE STRUCTURE, AS DESIGNED, S-41007 (3)	LS	-	-	-	-	-	
(1)	CLASS 3 EXCAVATION	CY	130	125	315	-	-	570
(1)	MEMBRANE WATERPROOFING	SY	-	-	135	-	-	135
(1)	CLASS AAAP CEMENT CONCRETE (4)	CY	-	-	-	60	210	270
(1)	CLASS AA CEMENT CONCRETE (5)	CY	1	2	4	6	70	83
(1)	CLASS A CEMENT CONCRETE	CY	123	120	205	-	-	448
(1)	STRUCTURE BACKFILL	CY	-	-	635	-	-	635
(1)	6" STRUCTURE FOUNDATION DRAIN	LF	-	-	100	-	-	100
(1)	NO 57 COARSE AGGREGATE (6)	CY	-	-	15	-	-	15
(1)	PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 55.25"	LF	-	-	-	-	764	764
(1)	LAMINATED NEOPRENE BEARING PAD (7)	EACH	-	-	-	-	17	17
(1)	STEEL HP12x74 TEST PILE (8)	EACH	-	-	2	-	-	2
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE), MODIFIED (3)	SY	-	-	-	130	825	955
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUBSTRUCTURE SURFACES)	SY	15	-	5	-	-	20
(1)	ARCHITECTURAL SURFACE TREATMENT (3)	SF	100	70	95	-	-	265
(1)	NEOPRENE STRIP SEAL DAM, (3.5" MOVEMENT)	LF	-	-	-	-	33	33
(1)	NEOPRENE STRIP SEAL DAM, (4.5" MOVEMENT)	LF	-	-	-	-	33	33
(1)	AESTHETIC COLOR COATING (LIGHT GRAY) (3)	SY	145	125	120	20	110	520
(1)	AESTHETIC COLOR COATING (MEDIUM GRAY) (3)	SY	-	-	-	-	195	195
(1)	PA TYPE 10M BRIDGE BARRIER, MODIFIED (10)	LF	-	-	4	60	384	448
(1)	MANDATORY PREDRILLING FOR DRIVEN PILES	LF	-	-	270	-	-	270
(1)	CLASS C CEMENT CONCRETE	CY	60	55	-	-	-	115
(1)	MECHANICAL TEXTURING WITH LONGITUDINAL SAWED GROOVES	SY	-	-	-	100	655	755
AND								
1002-0190	REINFORCEMENT BARS, EPOXY COATED (16)	LB	10075	9180	17825	15550	64100	116730
1005-1925	STEEL HP12x74 PILE TIP REINFORCEMENT (NORMAL DUTY)	EACH	-	-	27	-	-	27
1005-2825	STEEL HP12x74 PRODUCTION PILE, GALVANIZED (11)	LF	-	-	275	-	-	275
9000-0205	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (2)	LS	-	-	-	-	-	
8621-0003	MECHANICALLY STABILIZED RETAINING WALL (3)	LS	NORTH WALL	SOUTH WALL				
(2)	CLASS 3 EXCAVATION	CY	450	450	-	-	-	900
(2)	CLASS AA CEMENT CONCRETE (12)	CY	145	145	-	-	-	290
(2)	CLASS A CEMENT CONCRETE, SULFATE RESISTANT	CY	3	3	-	-	-	6
(2)	SELECTED BORROW EXCAVATION, NO 57 COARSE AGGREGATE	CY	165	165	-	-	-	330
(2)	SPECIFIED BACKFILL (13)	CY	325	360	-	-	-	685
(2)	GEOTEXTILE, CLASS 4, TYPE C	SY	175	175	-	-	-	350
(2)	PRECAST CONCRETE FACING PANELS (13) (14)	SF	1020	1075	-	-	-	2095
(2)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE), MODIFIED (9)	SY	70	70	-	-	-	140
(2)	AESTHETIC COLOR COATING (LIGHT GRAY) (3)	SY	380	380	-	-	-	760
(2)	IMPERVIOUS MEMBRANE	SY	175	175	-	-	-	350
(2)	6" STRUCTURE FOUNDATION DRAIN	LF	105	105	-	-	-	210
(2)	PA TYPE 10M BRIDGE BARRIER, MODIFIED (10) (15)	LF	210	210	-	-	-	420

ALTERNATE STRUCTURE ITEMS (3)

ITEM NO	DESCRIPTION	UNIT	TOTAL
8030-0002	BRIDGE STRUCTURE, AS DESIGNED, S-41007	LS	LUMP SUM
8000-0002	PRESTRESSED CONCRETE BRIDGE STRUCTURE	LS	LUMP SUM
8100-0002	STEEL BRIDGE STRUCTURE	LS	LUMP SUM

QUANTITIES TABLE NOTES:

(1) ITEMS INCLUDED IN THE BRIDGE STRUCTURE, AS DESIGNED ITEM 8030-0002 ARE FOR INFORMATION ONLY.

(2) ITEMS INCLUDED IN THE MECHANICALLY STABILIZED EARTH WALL, ITEM 8621-0003 ARE FOR INFORMATION ONLY.

(3) SEE SPECIAL PROVISION

(4) INCLUDES APPROXIMATELY 16 CUBIC YARDS TO ACCOUNT FOR STAY-IN-PLACE FORMS.

(5) INCLUDES CLASS AA CEMENT CONCRETE IN THE CONCRETE DIAPHRAGMS, CHEEKWALLS, SHEAR BLOCKS AND PEDESTALS.

(6) GEOTEXTILE FABRIC, CLASS 1, IS INCIDENTAL TO THIS ITEM.

(7) INCLUDES 1 TEST BEARING AT ABUTMENT 1. COST OF BEARINGS ARE INCIDENTAL TO PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 55.25".

(8) INCLUDES 2 TEST PILES @ APPROX. 11 LF AT ABUTMENT 1.

(9) APPLY PROTECTIVE COATING TO MOMENT SLAB BARRIER AS SHOWN ON THE PLANS.

(10) ATTACHMENT TO CONCRETE BARRIER IS INCIDENTAL TO THIS ITEM.

(11) STUDS WELDED TO THE STEEL H-PILE ARE INCIDENTAL TO THIS ITEM. NO 57 COARSE AGGREGATE AND CLASS A CEMENT CONCRETE USED TO BACKFILL THE PREDRILLED HOLES ARE ALSO INCIDENTAL TO THIS ITEM.

(12) CLASS AA CEMENT CONCRETE INCLUDES MOMENT SLAB WITH TOE WALL AND ATTACHED BARRIER. ALSO INCLUDES APPROXIMATELY 25000 LB OF EPOXY COATED REINFORCEMENT BARS.

(13) SEE SPECIAL PROVISION FOR ITEM 8261-0003 MECHANICALLY STABILIZED RETAINING WALL FOR MATERIAL SPECIFICATIONS.

(14) PRECAST CONCRETE FACING PANELS INCLUDES THE COST FOR THE ARCHITECTURAL SURFACE TREATMENT.

(15) INCLUDES PA TYPE 10M BARRIER, MODIFIED REQUIRED FOR MOMENT SLABS WITH TOE WALL.

(16) INCLUDES 210 LBS OF STAINLESS STEEL DOWELS.

Mark	Description	By	Chk'd.	Rec'm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
SUMMARY OF QUANTITIES

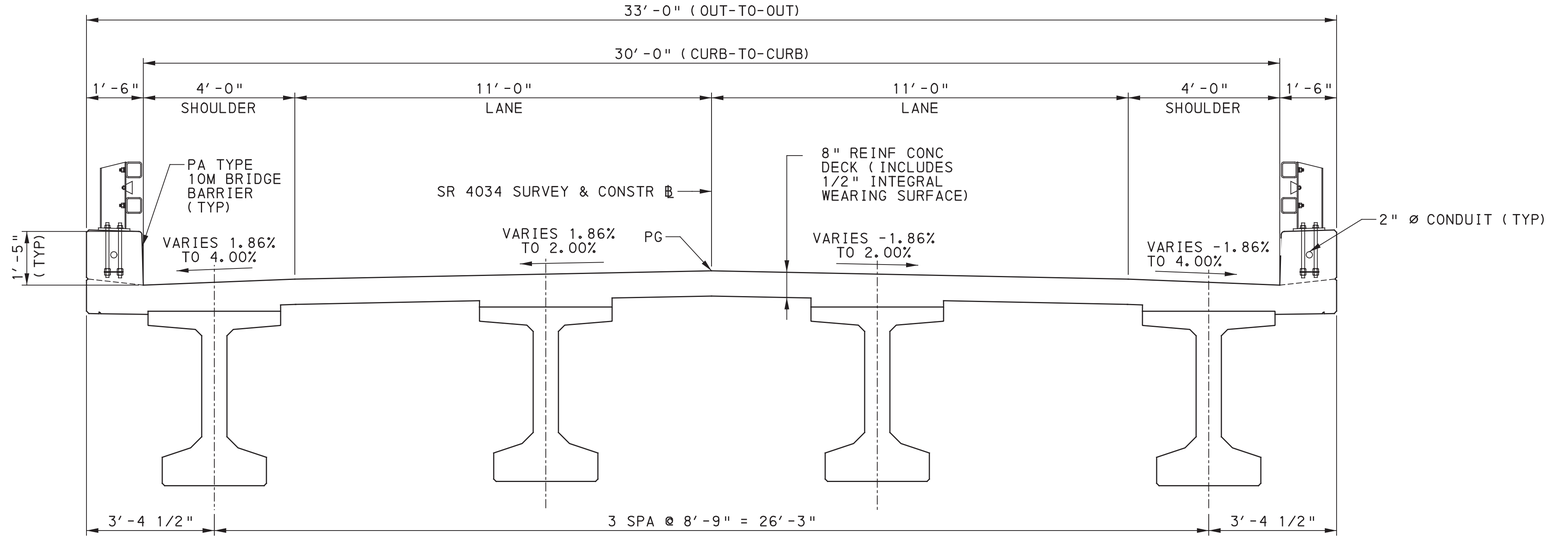
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 54

S-41007

DES: DFK | CKD: REB | DWG: DFK | CKD: REB



TYPICAL SECTION

1 0 1 2 FEET

BRIDGE LOAD RATINGS TABLE (WITH FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 444 (2021)								
ADTT: 514 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
	33/55.25 P/S CONCRETE PA BULB-TEE BEAMS							
		H-20	HS-20	ML-80	PHL-93	P-82	TK-527	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B3	B3	B3	B3	- - - -	B3	- - - -
	DISTRIBUTION FACTOR	0.831	0.831	0.831	0.831	- - - -	0.831	- - - -
	LOCATION (DISTANCE)	47.0 FT (1)	47.0 FT (1)	47.0 FT (1)	47.0 FT (1)	- - - -	47.0 FT (1)	- - - -
	LIMIT STATE	SERV-III	SERV-III	SERV-III	SERV-III	- - - -	SERV-III	- - - -
	RATING FACTOR	1.77 M	1.42 M	1.26 M	1.03 M	- - - -	1.25 M	- - - -
OPERATING RATING (OR)	CRITICAL MEMBER	B3	B3	B3	B3	B3	B3	B3
	DISTRIBUTION FACTOR	0.867	0.867	0.867	0.867	0.867	0.867	0.867
	LOCATION (DISTANCE)	6.0 FT (2)	28.50 FT (1)	28.50 FT (1)	28.50 FT (1)	28.50 FT (1)	28.50 FT (1)	28.167 FT (1)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II	STR-II
	RATING FACTOR	2.66 S	2.16 S	1.96 S	1.64 S	1.08 S	1.90 S	1.01 S
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KIP-FT): 10144.40 (B3) LOCATION: 47.0 FT (1)								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 205.8 (B3) LOCATION: 28.50 FT (1)								

BRIDGE LOAD RATINGS TABLE (WITHOUT FUTURE WEARING SURFACE)								
ADTT (AT THE TIME OF DESIGN): 444 (2021)								
ADTT: 514 (2043)								
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)								
	33/55.25 P/S CONCRETE PA BULB-TEE BEAMS							
		H-20	HS-20	ML-80	PHL-93	P-82	TK-527	P2016-13
INVENTORY RATING (IR)	CRITICAL MEMBER	B3	B3	B3	B3	- - - -	B3	- - - -
	DISTRIBUTION FACTOR	0.831	0.831	0.831	0.831	- - - -	0.831	- - - -
	LOCATION (DISTANCE)	47.0 FT (1)	47.0 FT (1)	47.0 FT (1)	47.0 FT (1)	- - - -	47.0 FT (1)	- - - -
	LIMIT STATE	SERV-III	SERV-III	SERV-III	SERV-III	- - - -	SERV-III	- - - -
	RATING FACTOR	1.98 M	1.59 M	1.41 M	1.15 M	- - - -	1.40 M	- - - -
OPERATING RATING (OR)	CRITICAL MEMBER	B3	B3	B3	B3	B3	B3	B3
	DISTRIBUTION FACTOR	0.867	0.867	0.867	0.867	0.867	0.867	0.867
	LOCATION (DISTANCE)	6.0 FT (2)	28.50 FT (1)	33.25 FT (1)	28.50 FT (1)	28.50 FT (1)	28.50 FT (1)	28.167 FT (1)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II	STR-II
	RATING FACTOR	2.87 S	2.31 S	2.08 S	1.74 S	1.15 S	2.02 S	1.07 S
FACTORED FLEXURAL RESISTANCE @ CRITICAL SECTION (KIP-FT): 10144.40 (B3) LOCATION: 47.0 FT (1)								
FACTORED SHEAR RESISTANCE @ CRITICAL SECTION (KIPS): 205.8 (B3) LOCATION: 28.50 FT (1)								

NOTES:
1. "M" DENOTES MOMENT (FLEXURE) GOVERNS THE RATING FACTOR, "S" DENOTES SHEAR GOVERNS THE RATING FACTOR
2. THE GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING
3. (1) DENOTES SPAN 1 LENGTH OF 95.0 FEET AND (2) DENOTES SPAN 2 LENGTH OF 95.0 FEET

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

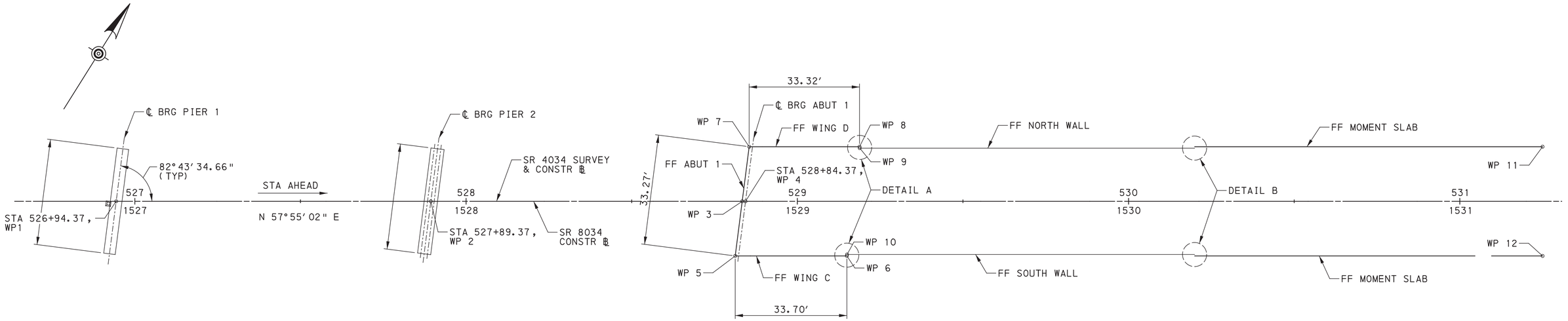
RECOMMENDED AUGUST 22, 2022

SHEET 6 OF 54

S-41007

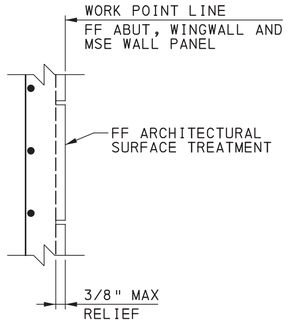
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mesconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTts001.dgn



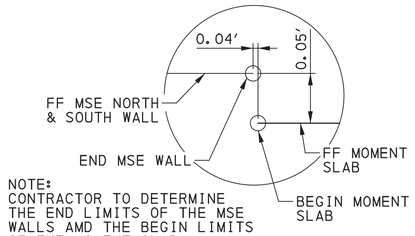
STAKE-OUT PLAN

5 0 15 FEET



WORK POINT LOCATION DETAIL

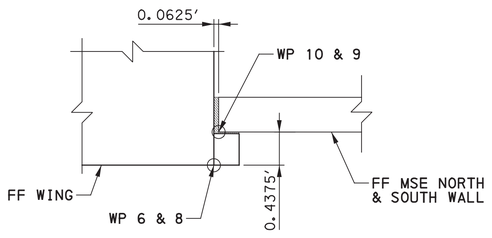
NTS



NOTE:
CONTRACTOR TO DETERMINE THE END LIMITS OF THE MSE WALLS AMD THE BEGIN LIMITS OF THE MOMENT SLAB

DETAIL B

NTS



DETAIL A

NTS

WORK POINT COORDINATES				
WORK POINT (WP)	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	526+94.37	0.00′	725567.4447	1334342.2338
WP 2	527+89.37	0.00′	725617.9034	1334422.7254
WP 3	528+83.36	0.00′	725667.8268	1334502.3629
WP 4	528+84.37	0.00′	725668.3623	1334503.2170
WP 5	528+81.26	16.50′ RT	725652.7281	1334509.3424
WP 6	529+14.96	16.50′ RT	725670.6396	1334537.8988
WP 7	528+85.46	16.50′ LT	725682.9255	1334495.3834
WP 8	529+18.79	16.50′ LT	725700.6237	1334523.6153
WP 9	529+18.85	16.06′ LT	725700.2865	1334523.9013
WP 10	529+15.02	16.06′ RT	725671.0338	1334537.7200
WP 11	531+24.99	16.50′ LT	725810.1459	1334698.3246
WP 12	531+24.99	16.50′ RT	725782.1856	1334715.8524

FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 54

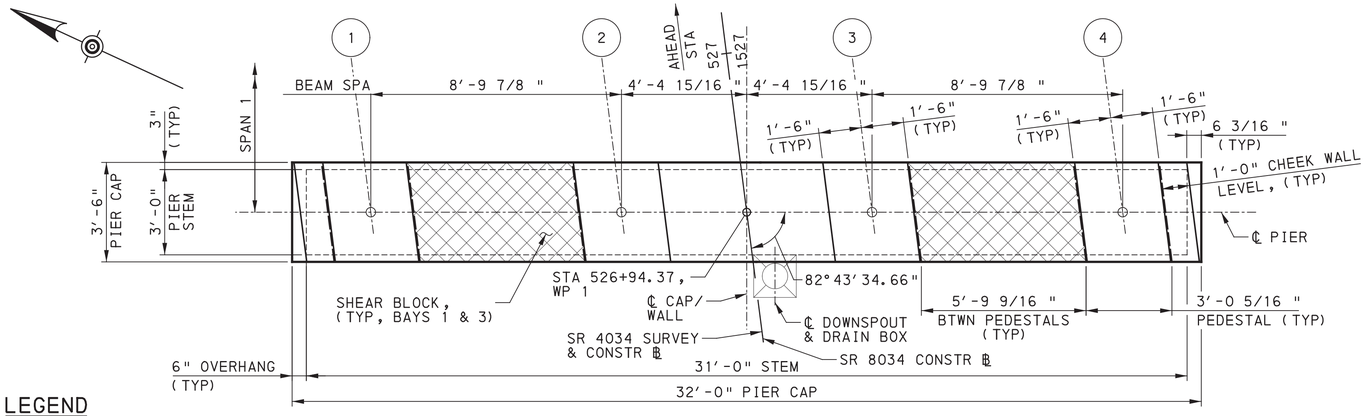
S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTsp001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTp1001.dgn

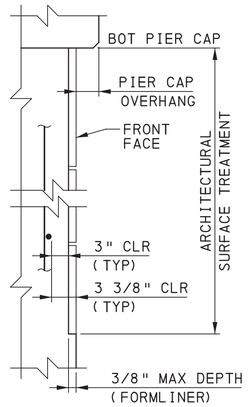


LEGEND

SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)

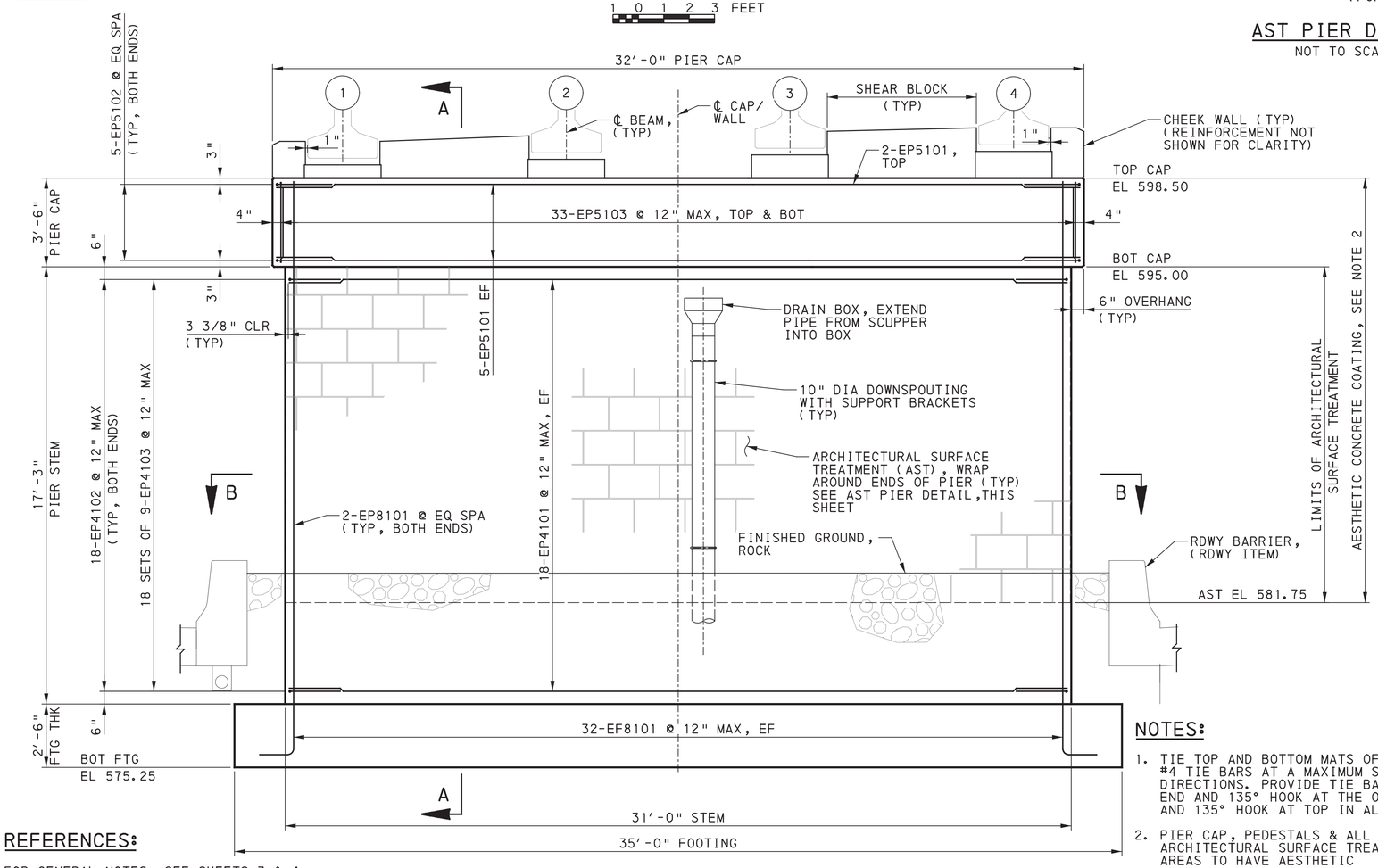
PIER CAP PLAN

(TOP SURFACE)
1 0 1 2 3 FEET



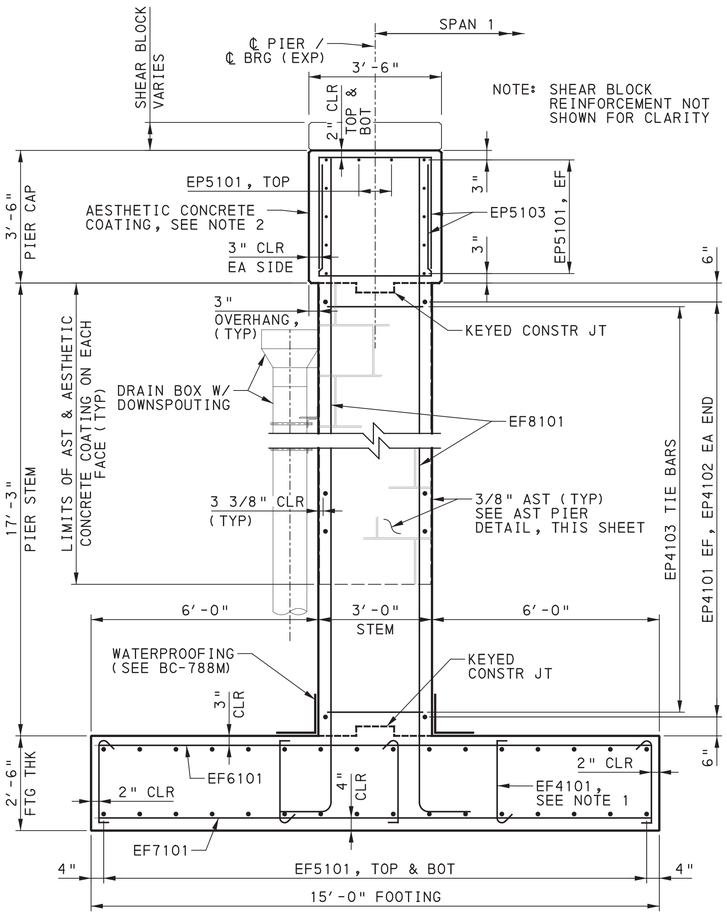
AST PIER DETAIL

NOT TO SCALE



PIER ELEVATION

(LOOKING AHEAD STATION)
1 0 1 2 3 FEET



PIER SECTION A-A

1 0 1 2 FEET

TOP PEDESTAL ELEVATIONS

BEAM NO	CL BEARING
B1	599.02
B2	599.24
B3	599.41
B4	599.55

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4
FOR PEDESTAL, SHEAR BLOCK & CHEEK WALL DETAILS, SEE SHEET 9
FOR SECTION B-B & FOOTING PLAN, SEE SHEET 9
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 12
FOR DRAINAGE DETAILS SEE STATE STREET BRIDGE, S-41005, & BC-751M

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. PIER CAP, PEDESTALS & ALL ARCHITECTURAL SURFACE TREATMENT AREAS TO HAVE AESTHETIC CONCRETE COATING APPLIED TO SURFACES. COATING TO BE APPLIED TO UNDERSIDE OF PIER CAP AND ALL EXPOSED AREAS OF CHEEK WALLS. ALSO APPLY AT BEAM SEATS (OMIT AT BEARING AREAS), SHEAR BLOCKS AND DIAPHRAGMS (EXPOSED FACES ONLY).

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 PLAN & ELEVATION

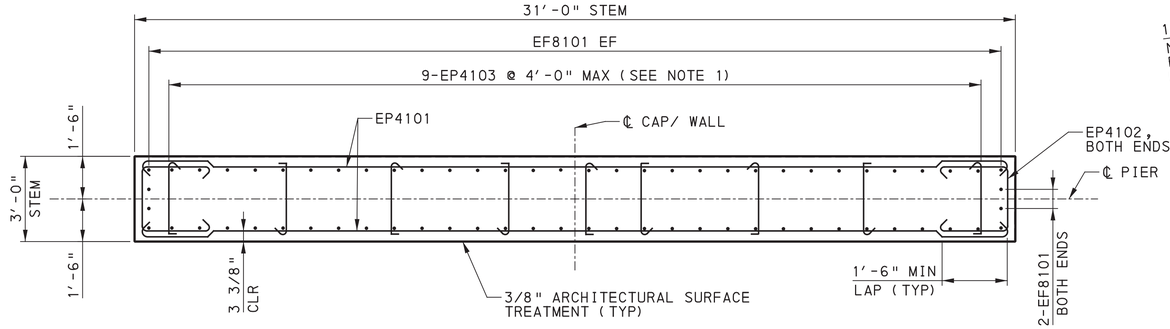
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 54

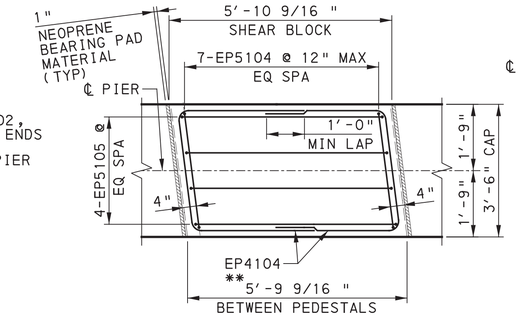
S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

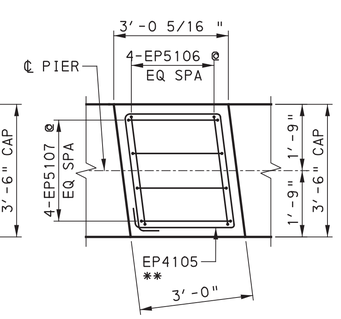


SECTION B-B
(PIER STEM)

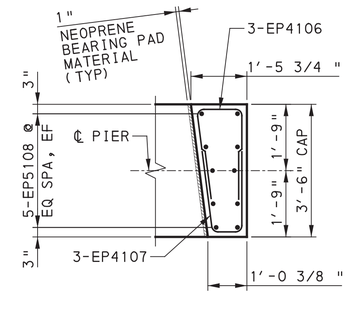
1 0 1 2 3 FEET



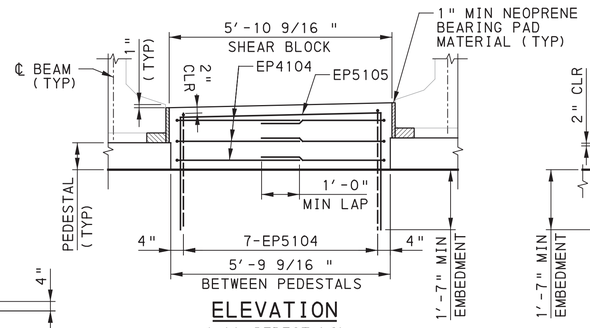
PLAN
(BAYS 1 & 3)



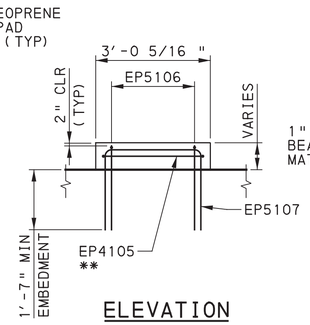
PLAN
(ALL PEDESTALS)



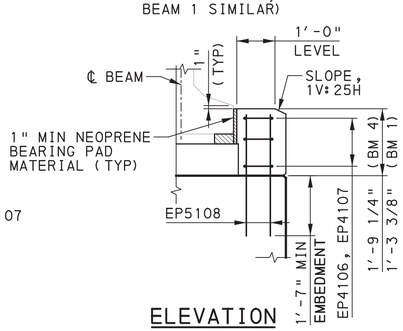
PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



ELEVATION
(ALL PEDESTALS)



ELEVATION
(ALL PEDESTALS)

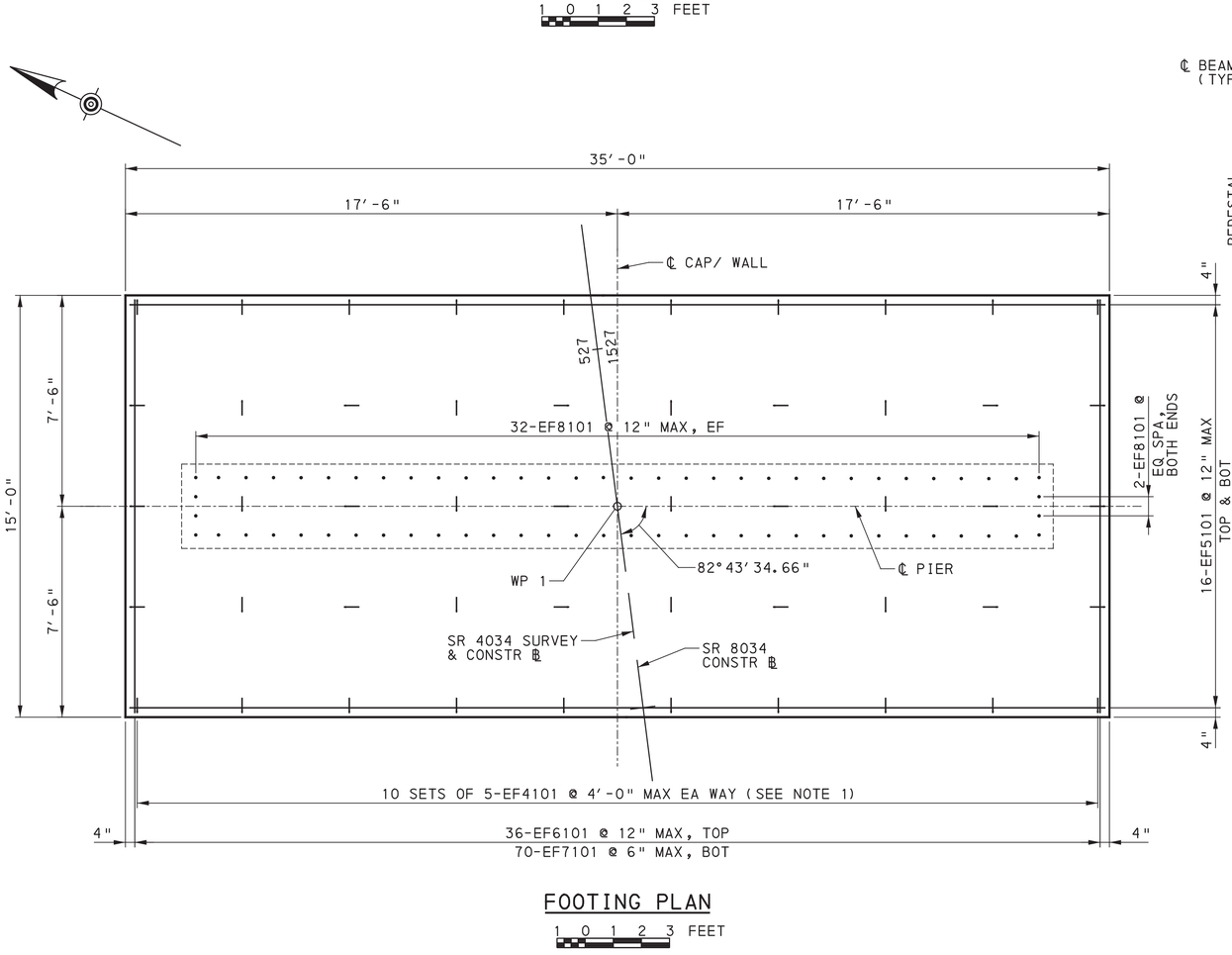


ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)

SHEAR BLOCK DETAILS
1 0 1 2 FEET

PEDESTAL DETAILS
1 0 1 2 FEET

CHEEK WALL DETAILS
1 0 1 2 FEET



FOOTING PLAN
1 0 1 2 3 FEET

** PLACE #4 TIE WHEN PEDESTAL HEIGHT EXCEEDS 8 INCHES. PLACE AT HALF PEDESTAL HEIGHT OR 9 INCH SPACING

REFERENCES:
FOR FOOTING SECTION & ELEVATION, SEE SHEET 8

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 12

PIER BEARING CAPACITY						
LOCATION	LIMIT STATE	LOAD CASE	MAXIMUM FACTORED BEARING PRESSURE (KSF)	FACTORED BEARING RESISTANCE (KSF)	PERFORMANCE RATIO	EMPIRICAL BEARING RESISTANCE (KSF)
PIER 1	STR-I	MAX	4.93	14.85	3.01	29.70

NOTES:
1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL IN FOOTING AND BETWEEN STEM VERTICAL BARS WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 FOOTING PLAN & DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 54

S-41007

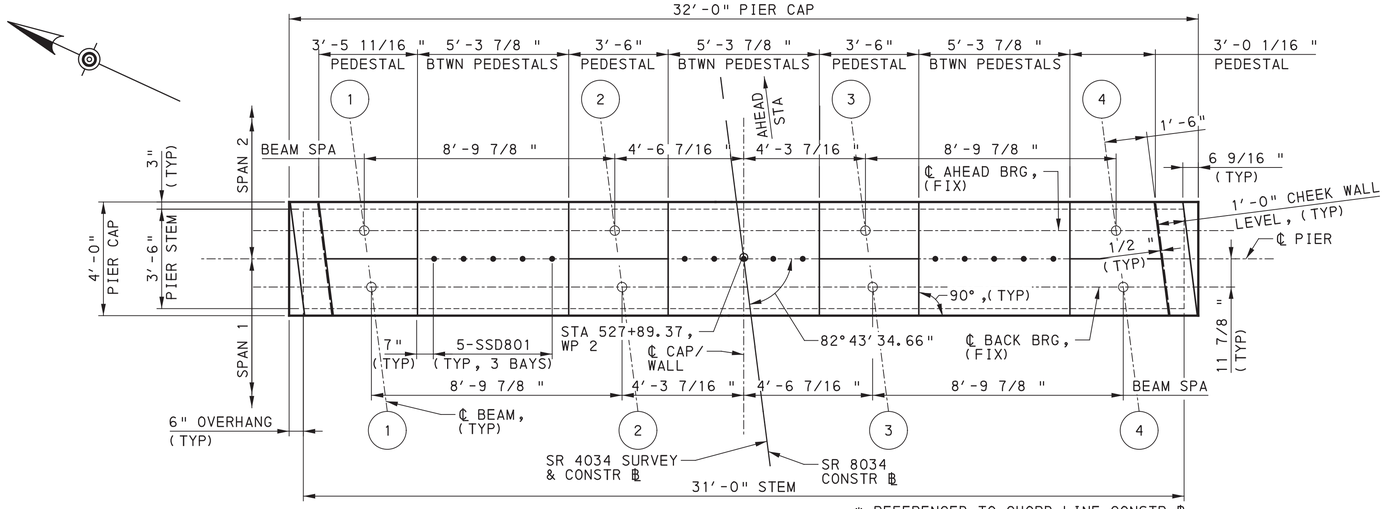
DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTp1002.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST_p2001.dgn



TOP PEDESTAL ELEVATIONS

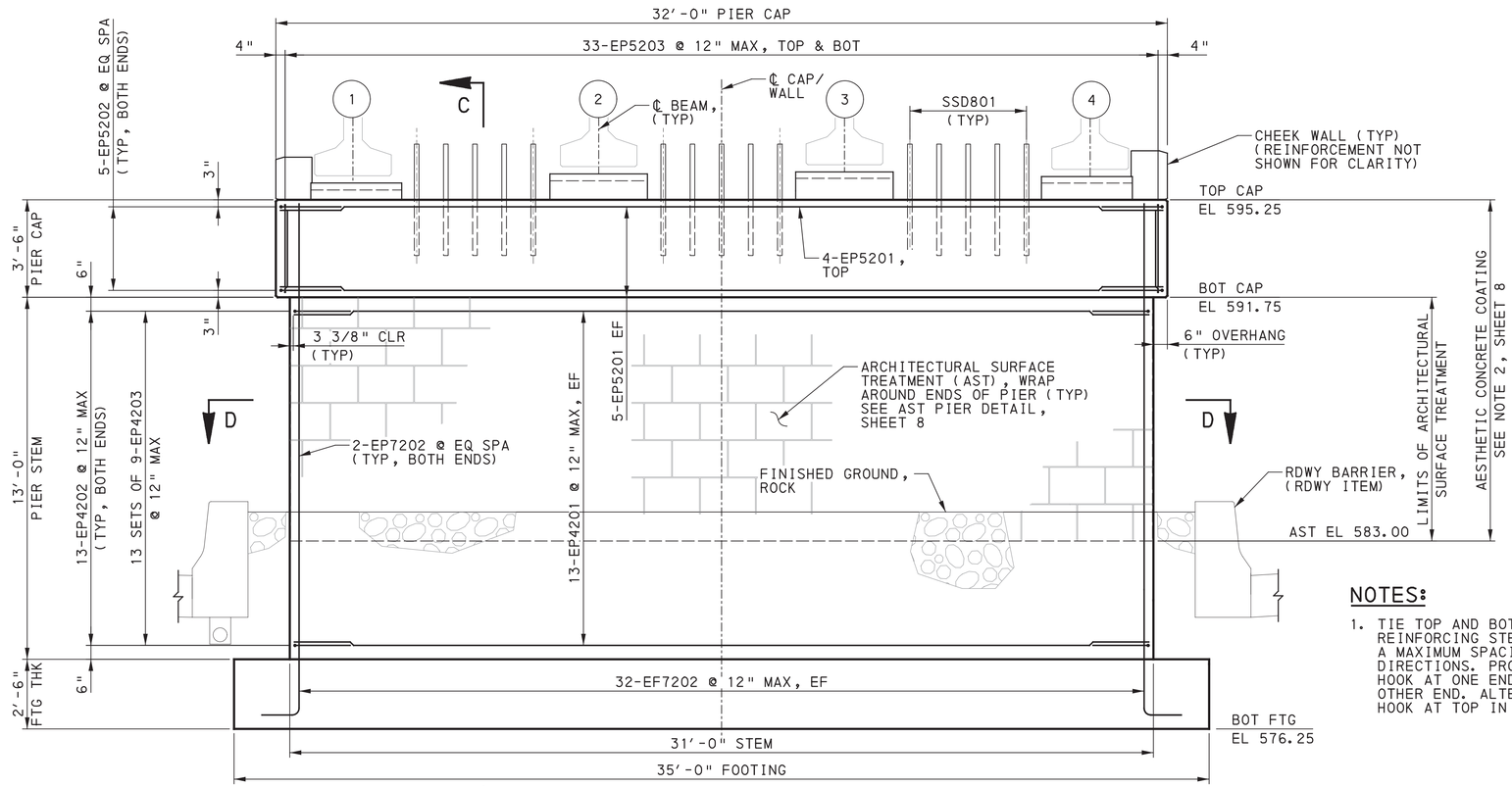
BEAM NO	BACK BEARING	AHEAD BEARING
B1	595.85	595.60
B2	596.18	595.93
B3	596.25	596.02
B4	596.08	595.85

LEGEND

SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)

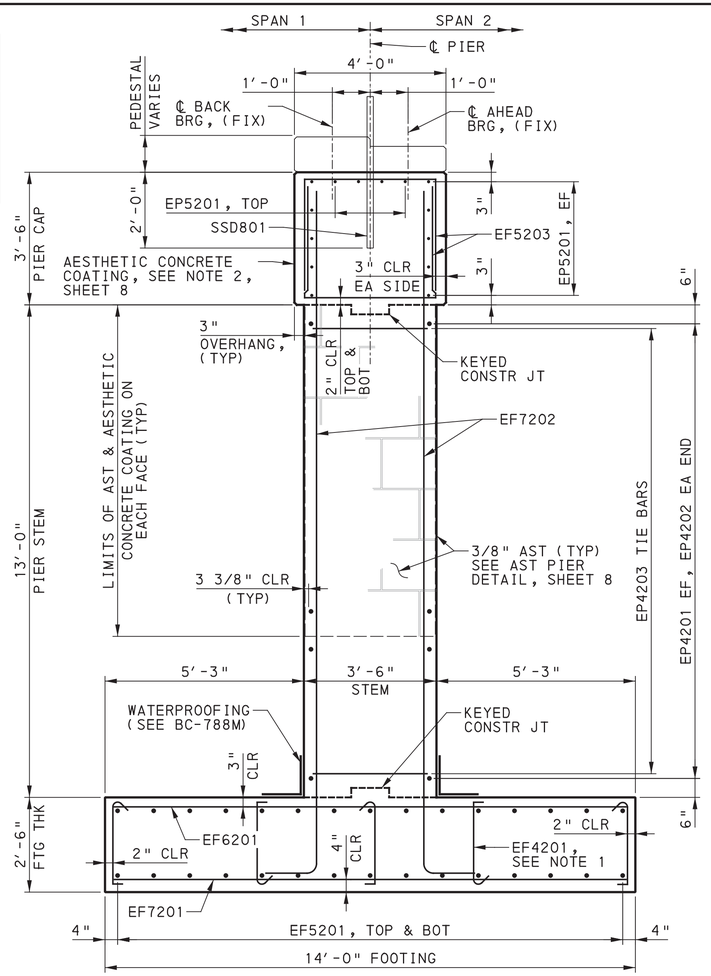
PIER CAP PLAN

(TOP SURFACE)
1 0 1 2 3 FEET



PIER ELEVATION

(LOOKING AHEAD STATION)
1 0 1 2 3 FEET



NOTE: PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY

PIER SECTION C-C

1 0 1 2 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

REFERENCES:

FOR PEDESTAL & CHEEK WALL DETAILS, SEE SHEET 11

FOR SECTION D-D & FOOTING PLAN, SEE SHEET 11

FOR DOWEL DETAILS, SEE BC-775M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 12

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 PLAN & ELEVATION

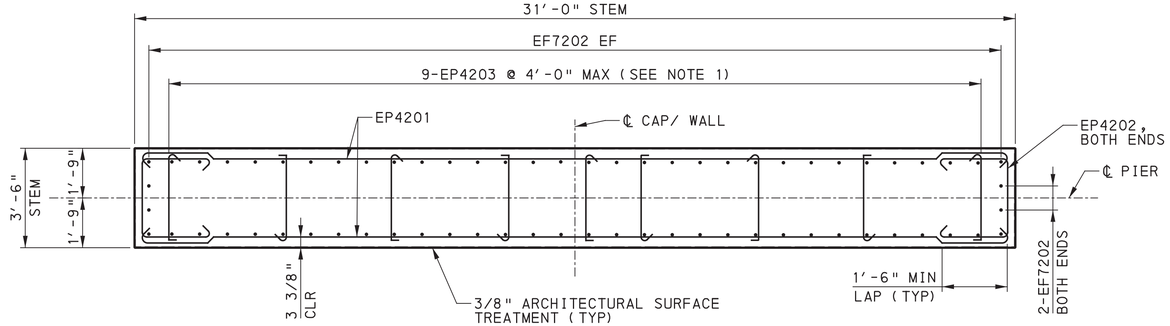
RECOMMENDED AUGUST 22, 2022

SHEET 10 OF 54

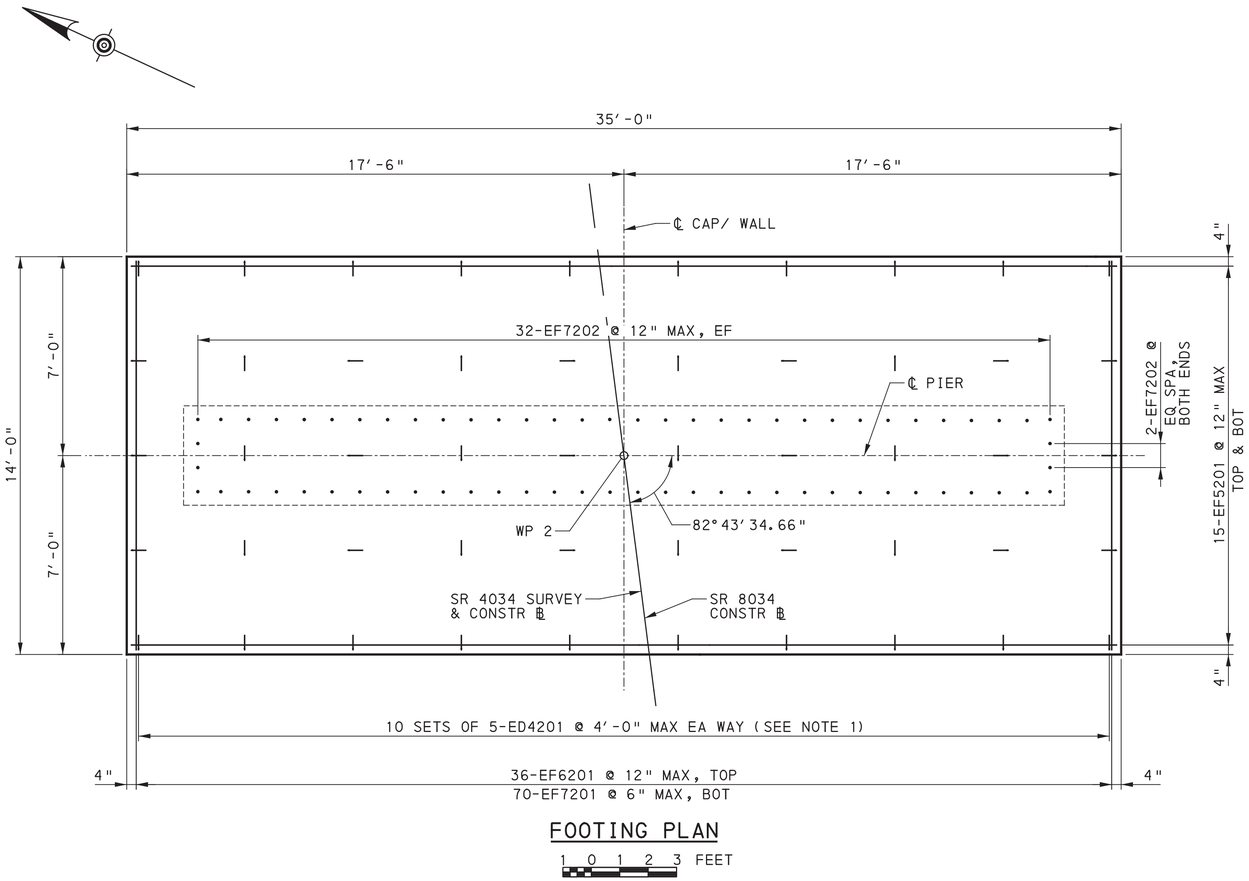
S-41007

DES:	SRM	CKD:	REB	DWG:	SRM	CKD:	REB

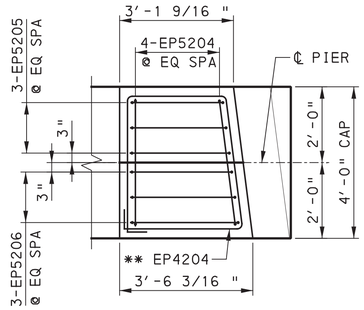
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\FINAL\ramp_SS_ESTp2002.dgn



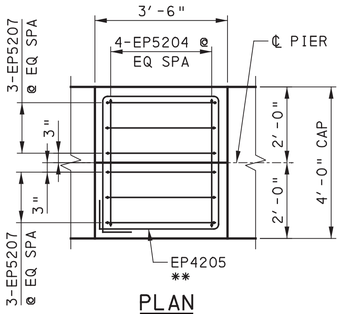
SECTION D-D
(PIER STEM)
1 0 1 2 3 FEET



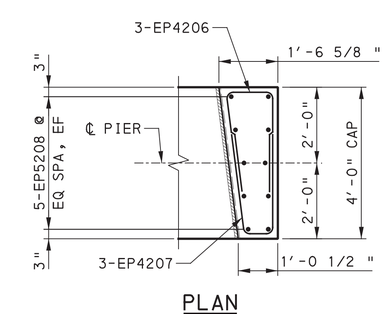
FOOTING PLAN
1 0 1 2 3 FEET



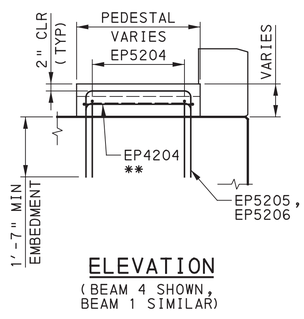
PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



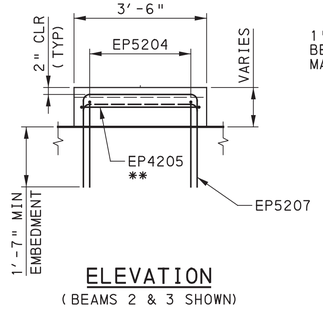
PLAN
(BEAMS 2 & 3 SHOWN)



PLAN
(BEAM 4 SHOWN, BEAM 1 SIMILAR)

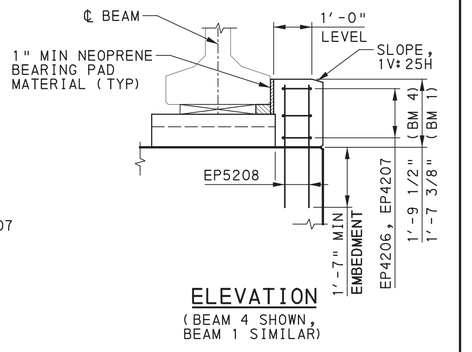


ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)



ELEVATION
(BEAMS 2 & 3 SHOWN)

PEDESTAL DETAILS
1 0 1 2 FEET



ELEVATION
(BEAM 4 SHOWN, BEAM 1 SIMILAR)

CHEEK WALL DETAILS
1 0 1 2 FEET

** PLACE #4 TIE WHEN PEDESTAL HEIGHT EXCEEDS 8 INCHES. PLACE AT HALF PEDESTAL HEIGHT OR 9 INCH SPACING

REFERENCES:
FOR FOOTING SECTION & ELEVATION, SEE SHEET 10

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 12

PIER BEARING CAPACITY

LOCATION	LIMIT STATE	LOAD CASE	MAXIMUM FACTORED BEARING PRESSURE (KSF)	FACTORED BEARING RESISTANCE (KSF)	PERFORMANCE RATIO	EMPIRICAL BEARING RESISTANCE (KSF)
PIER 2	STR-I	MAX	10.05	12.60	1.25	25.20

NOTES:
1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL IN FOOTING AND BETWEEN STEM VERTICAL BARS WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 FOOTING PLAN & DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 11 OF 54

S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

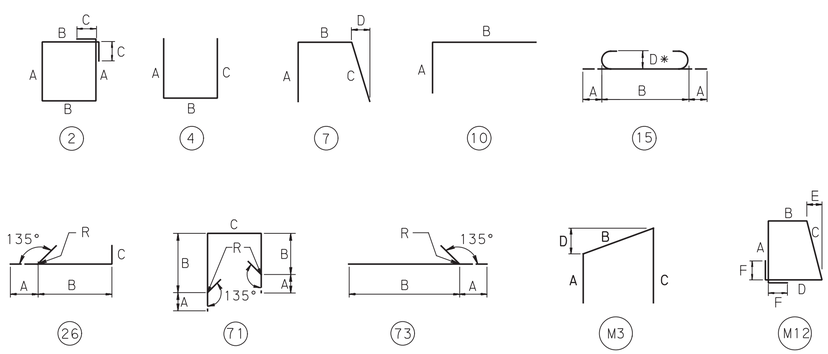
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTprb001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PIER 1 CAP & STEM											
EP4101	4	36	31′-5"	15	6"	30′-5"					
EP4102	4	36	6′-5"	71	6"	1′-6"	2′-5"	1′-6"			
EP4103	4	162	3′-2"	26	4 1/2"	2′-5′′	4 1/2"			1"	
EP5101	5	12	31′-8"	ST							
EP5102	5	10	6′-0"	4	1′-6"	3′-0"	1′-6"				
EP5103	5	66	8′-6"	4	2′-9"	3′-0"	2′-9"				
PIER 1 PEDESTALS, SHEAR BLOCKS & CHEEK WALLS											
EP4104	4	12	9′-8"	4	3′-3"	3′-2"	3′-3"				
EP4105	4	2	12′-0"	2	3′-0"	2′-6"	6"				
EP4106	4	6	6′-0"	7	2′-5"	1′-2"	2′-5"	3 1/2"			
EP4107	4	6	5′-1 1/2"	7	2′-2"	9 1/2"	2′-2"	3 1/2"			
EP5104	5	14	9′-4"	4	3′-2"	3′-0"	3′-2"				
EP5105	5	8	11′-3"	M3	2′-11"	5′-3"	3′-1"				
EP5106	5	16	7′-6"	4	2′-4"	2′-10"	2′-4"				
EP5107	5	16	6′-10"	4	2′-3"	2′-4"	2′-3"				
EP5108	5	20	3′-3"	ST							
PIER 1 FOOTING											
EF4101	4	50	2′-8"	26	4 1/2"	1′-11′′	4 1/2"			1"	
EF5101	5	32	34′-8′	ST							
EF6101	6	36	14′-8"	ST							
EF7101	7	70	14′-8"	ST							
EF8101	8	68	24′-1"	10	1′-4"	22′-9"					

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PIER 2 CAP & STEM											
EP4201	4	26	31′-5"	15	6"	30′-5"					
EP4202	4	26	6′-11"	71	6"	1′-6"	2′-11"	1′-6"			
EP4203	4	117	3′-8"	26	4 1/2"	2′-11"	4 1/2"			1"	
EP5201	5	14	31′-8"	ST							
EP5202	5	10	6′-6"	4	1′-6"	3′-6"	1′-6"				
EP5203	5	66	9′-0"	4	2′-9"	3′-6"	2′-9"				
SSD801	8	15	4′-4"	ST							STAINLESS STEEL
PIER 2 PEDESTALS & CHEEK WALLS											
EP4204	4	2	13′-6 1/2"	M12	3′-6"	2′-6"	3′-6 1/2"	3′-0"	5"		F = 6"
EP4205	4	4	14′-0"	2	3′-6"	3′-0"	6"				
EP4206	4	6	6′-6"	7	2′-8"	1′-2"	2′-8"	4"			
EP4207	4	6	6′-1 1/2"	7	2′-8"	9 1/2"	2′-8"	4"			
EP5204	5	16	7′-9"	4	2′-3"	3′-3"	2′-3"				
EP5205	5	6	7′-4"	4	2′-4"	2′-8"	2′-4"				
EP5206	5	6	7′-2"	4	2′-4"	2′-6"	2′-4"				
EP5207	5	12	8′-3"	4	2′-6"	3′-3"	2′-6"				
EP5208	5	20	3′-3"	ST							
PIER 2 FOOTING											
EF4201	4	50	2′-8"	26	4 1/2"	1′-11′′	4 1/2"			1"	
EF5201	5	30	34′-8′	ST							
EF6201	6	36	13′-8"	ST							
EF7201	7	70	13′-8"	ST							
EF7202	7	68	19′-8"	10	1′-2"	18′-6"					



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

DES: SRM | CKD: REB | DWG: DFK | CKD: SRM

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

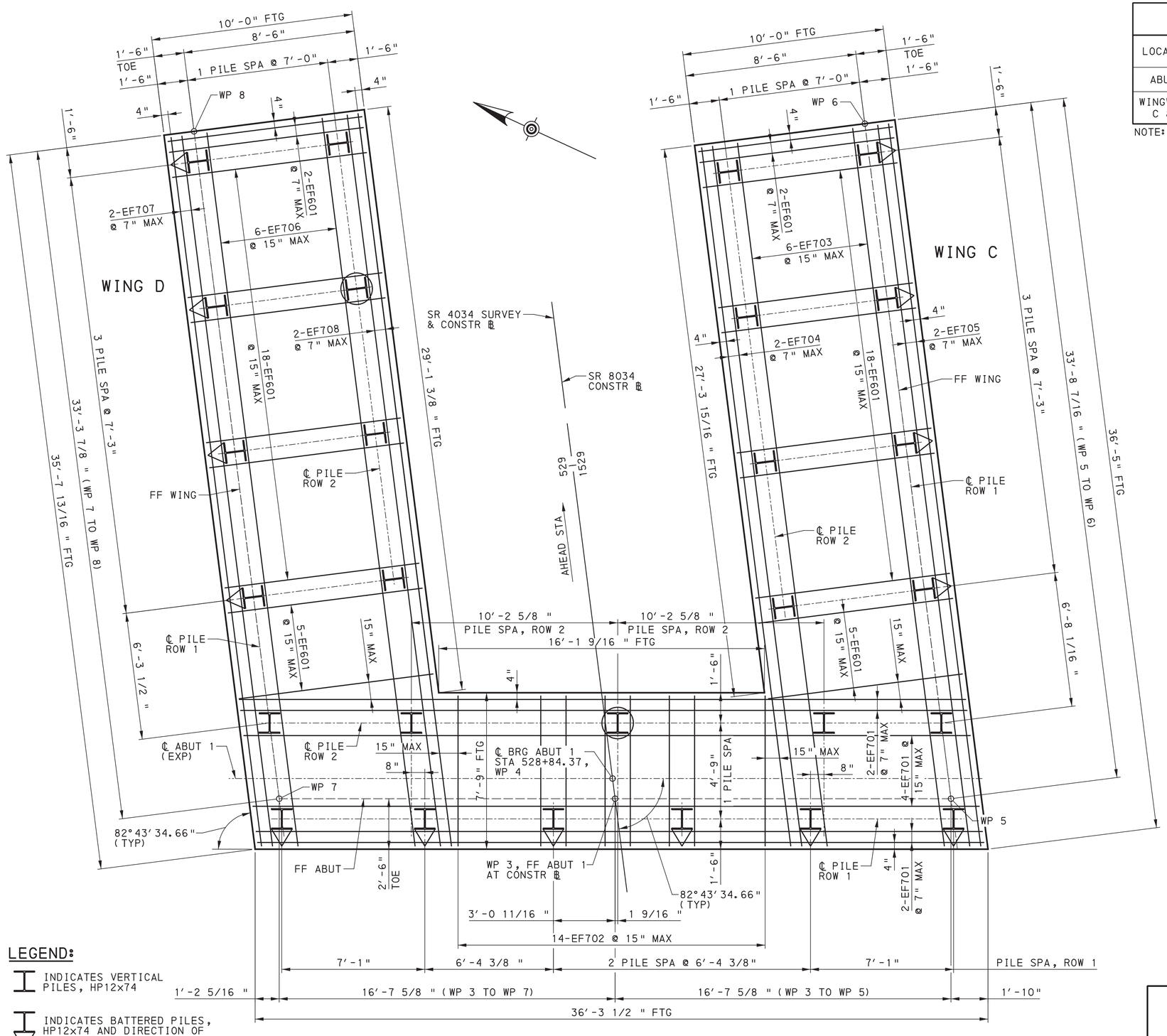
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER REINFORCEMENT SCHEDULE

RECOMMENDED AUGUST 22, 2022

SHEET 12 OF 54

S-41007



LEGEND:

- INDICATES VERTICAL PILES, HP12x74
- INDICATES BATTERED PILES, HP12x74 AND DIRECTION OF 3H:12V BATTER
- INDICATES TEST PILES

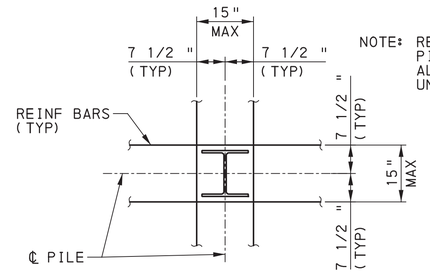
ABUTMENT 1 FOOTING PLAN - BOTTOM REINFORCEMENT MAT

1 0 1 2 3 FEET

ABUTMENT PILE LOADS

LOCATION	CONTROLLING LIMIT STATE		AXIAL (KIPS)		LATERAL (KIPS)	
			FACTORED LOAD	RESISTANCE	FACTORED LOAD	RESISTANCE
ABUT 1	STRENGTH	STR-I	262.65	360.00	11.49	12.33
WINGWALLS C & D	STRENGTH	STR-I	156.74	360.00	10.22	12.04
	EXTR EVENT	EXT-III	173.10	360.00	10.05	12.04

NOTE: LATERAL RESISTANCE IS BASED ON BATTERED PILES ONLY



NOTE: REINF BAR LAYOUT AT PILES ARE TYPICAL FOR ALL PILE LOCATIONS UNLESS NOTED

REINFORCEMENT DETAIL @ PILE

NOT TO SCALE

NOTES:

1. PLACE BOTTOM MAT REINFORCEMENT AT EQUAL SPACES BETWEEN PILES AS SHOWN, WITH 1" MINIMUM CLEAR SPACE AT PILE.
2. ESTIMATED PILE TIP ELEVATION 562.25

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7
FOR PILE DRIVING NOTES, SEE GENERAL NOTES, SEE SHEETS 3 & 4
FOR TOP MAT REINFORCEMENT, SEE SHEET 14
FOR TYPICAL ABUTMENT SECTION, SEE SHEET 17
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20
FOR KEYED CONSTRUCTION JOINT DETAIL, SEE BC-735M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN-1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 13 OF 54

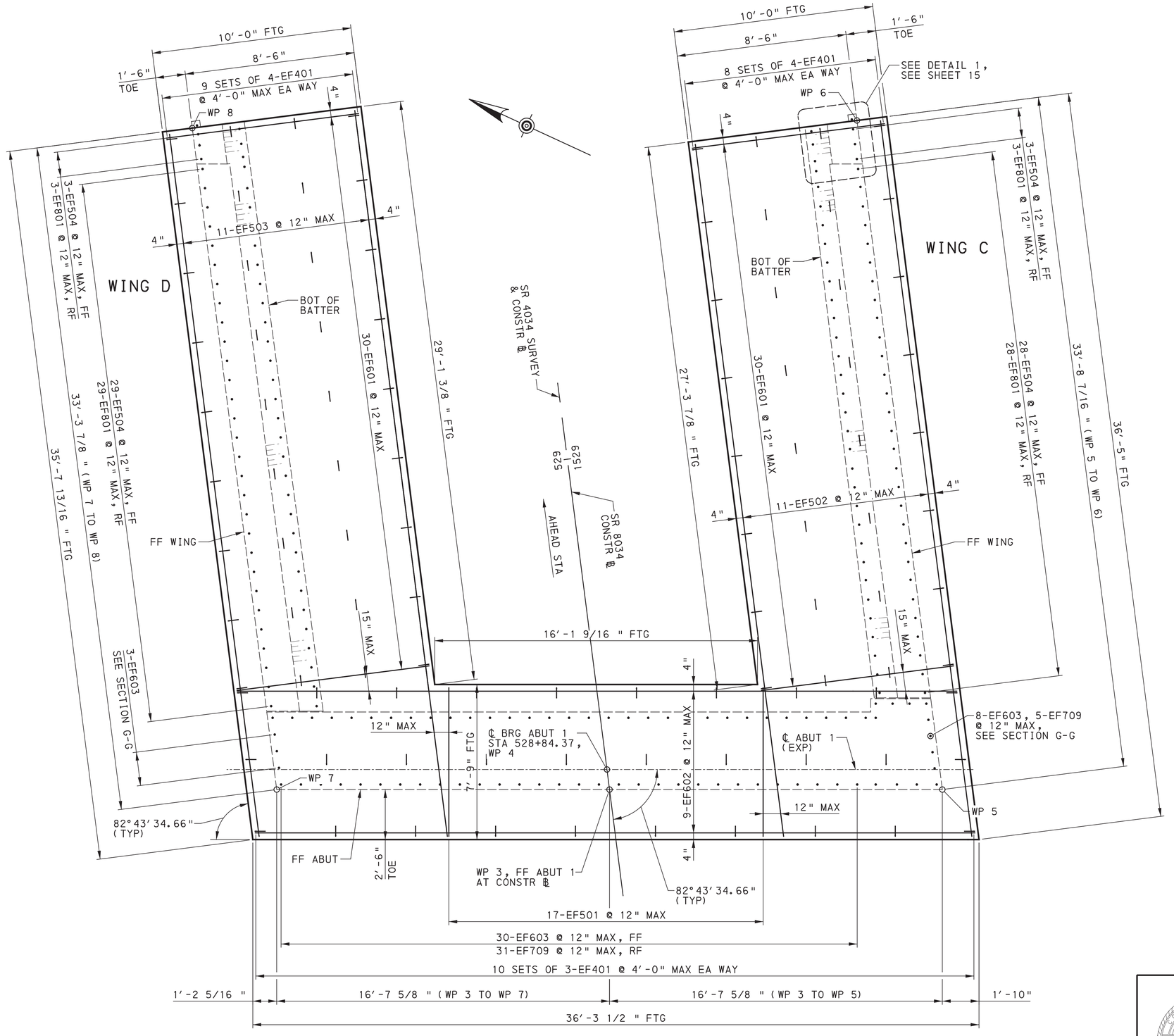
S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST01001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST01002.dgn



ABUTMENT 1 FOOTING PLAN - TOP REINFORCEMENT MAT

1 0 1 2 3 FEET

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

WORK THIS SHEET WITH TYPICAL ABUTMENT SECTION & SECTION G-G, SEE SHEET 17

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

FOR KEYED CONSTRUCTION JOINT DETAIL, SEE BC-735M

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN-2

REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E COMMONWEALTH OF PENNSYLVANIA

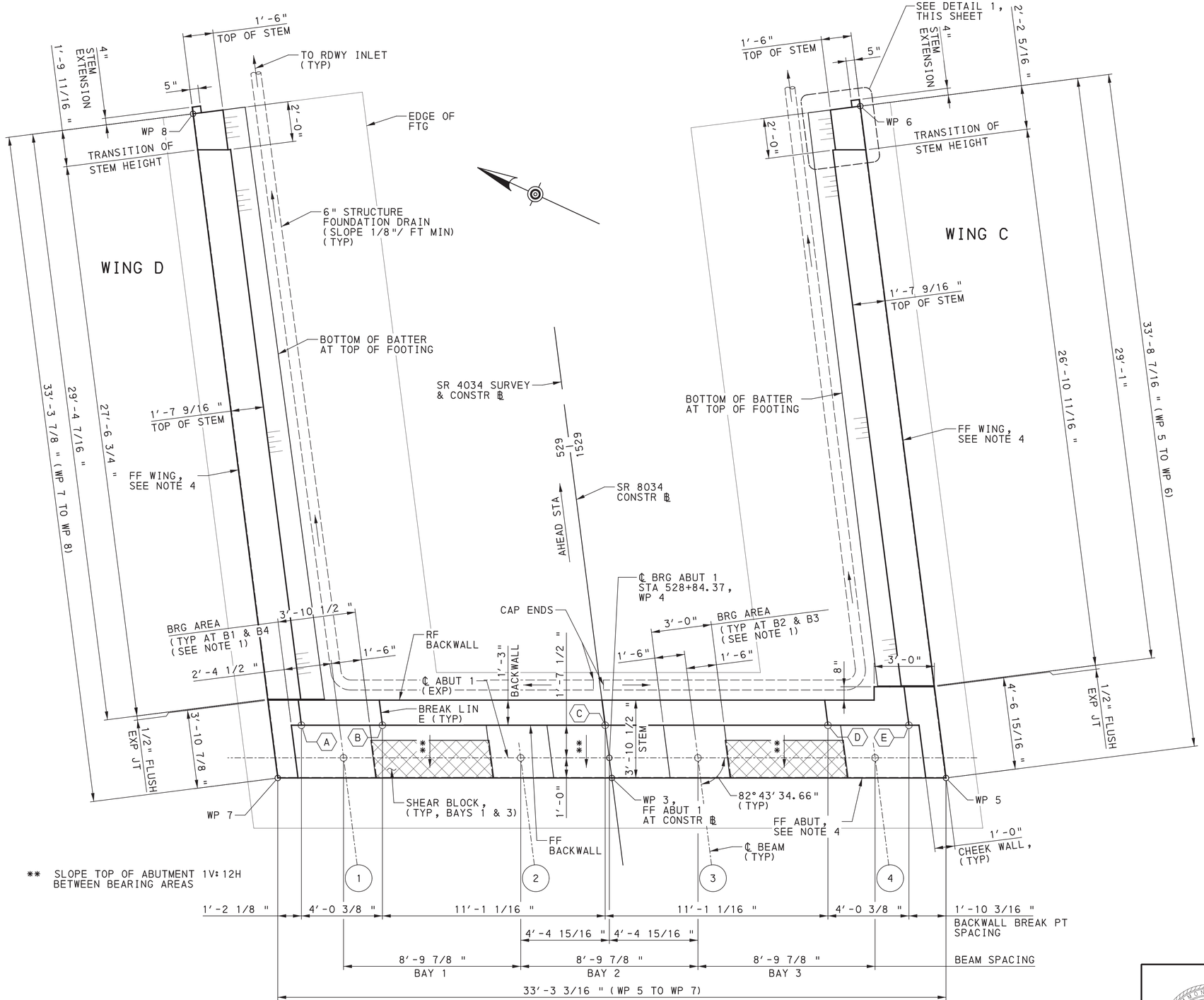
RECOMMENDED AUGUST 22, 2022

SHEET 14 OF 54

S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

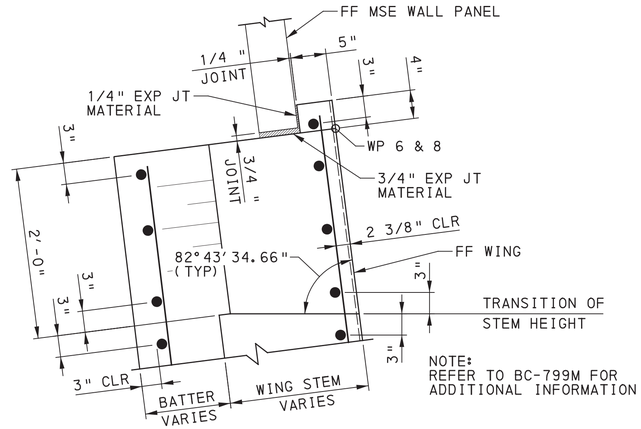
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST01003.dgn



** SLOPE TOP OF ABUTMENT 1V:12H BETWEEN BEARING AREAS

ABUTMENT 1 PLAN

1 0 1 2 3 FEET



NOTE:
REFER TO BC-799M FOR ADDITIONAL INFORMATION

DETAIL 1

(END OF WING C SHOWN, WING D SIMILAR)
NOT TO SCALE

LEGEND:

(X) DENOTES ELEVATIONS ALONG TOP OF BACKWALL AT FRONT FACE

(#) DENOTES BEAM NUMBER

NOTES:

1. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
2. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
3. 1" CLOSED CELL NEOPRENE SPONGE AND RUBBERIZED JOINT MATERIAL PLACED BETWEEN BOTTOM OF DECK AND TOP OF CHEEK WALL
4. APPLY 3/8" ARCHITECTURAL SURFACE TREATMENT TO ABUTMENT AND WINGWALLS

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR ABUTMENT ELEVATION, SEE SHEET 16

FOR WINGWALL C ELEVATION & SECTIONS, SEE SHEET 18

FOR WINGWALL D ELEVATION & SECTIONS, SEE SHEET 19

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

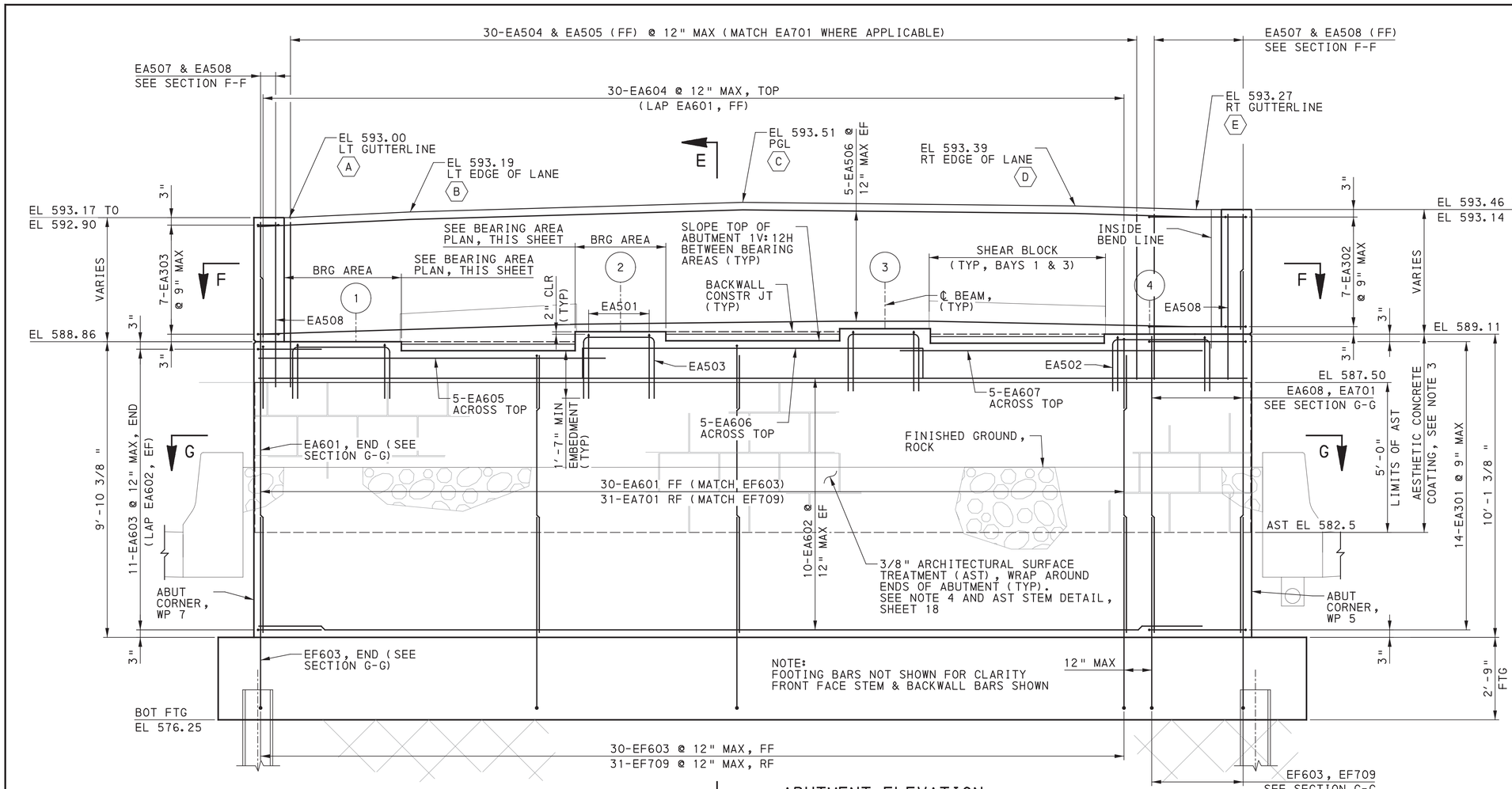
RECOMMENDED AUGUST 22, 2022

SHEET 15 OF 54

S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\FINAL\ramp_SS_ES\sheets\ramp_SS_EST01004.dgn



ABUTMENT ELEVATION
(LOOKING AHEAD STATION)
1 0 1 2 FEET

BEAM SEAT ELEVATIONS	
BEAM NO	CL BEARING
B1	588.86
B2	589.19
B3	589.30
B4	589.11

LEGEND

- OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57
- SELECTED BORROW EXCAVATION ROCK, CLASS R-3 (RDWY ITEM)
- (X) DENOTES ELEVATIONS ALONG TOP OF BACKWALL AT FRONT FACE
- (#) DENOTES BEAM NUMBER

NOTES:

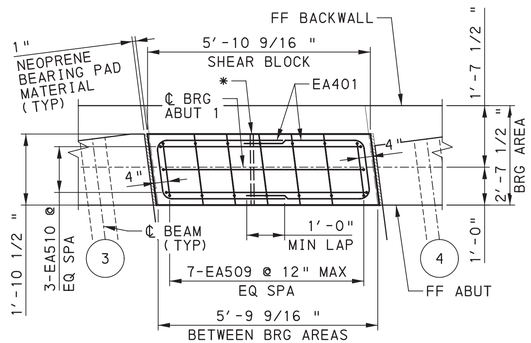
1. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
2. 1" CLOSED CELL NEOPRENE SPONGE AND RUBBERIZED JOINT MATERIAL PLACED BETWEEN BOTTOM OF DECK AND TOP OF CHEEK WALL
3. ABUT CAP, PEDESTALS AND ARCHITECTURAL SURFACE TREATMENT AREAS TO HAVE AESTHETIC CONCRETE COATING APPLIED TO SURFACES. COATING TO BE APPLIED TO ALL EXPOSED AREAS OF CHEEK WALLS. ALSO APPLY AT BEAM SEATS (OMIT AT BEARING AREAS), SHEAR BLOCKS AND END DIAPHRAGMS (EXPOSED FACES ONLY).
4. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

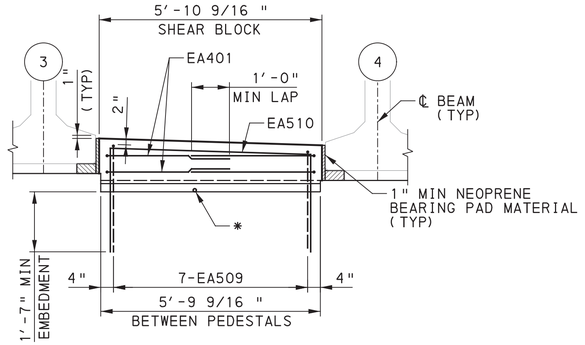
FOR STAKE-OUT PLAN, SEE SHEET 7

FOR SECTIONS E-E, F-F & G-G, SEE SHEET 17

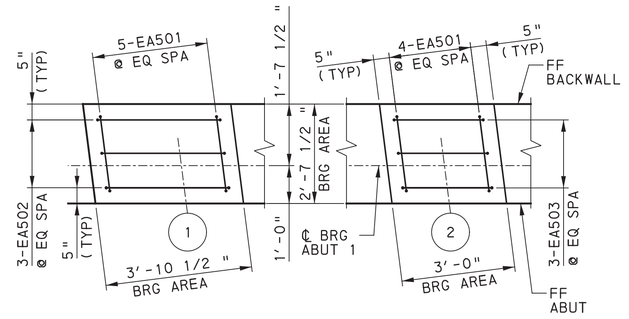
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20



PLAN



ELEVATION



BEARING AREA REINFORCEMENT PLAN
(BEARING AREAS 1 & 2 SHOWN, BEARING AREAS 3 & 4 SIMILAR)
1 0 1 2 FEET

* 1" NOMINAL DIA POLYVINYL CHLORIDE (PVC) SCHEDULE 40 WEEP HOLE SLOPED TO DRAIN (TYP)

SHEAR BLOCK DETAILS
(BAY 3 SHOWN, BAY 1 SIMILAR)
1 0 1 2 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 ELEVATION

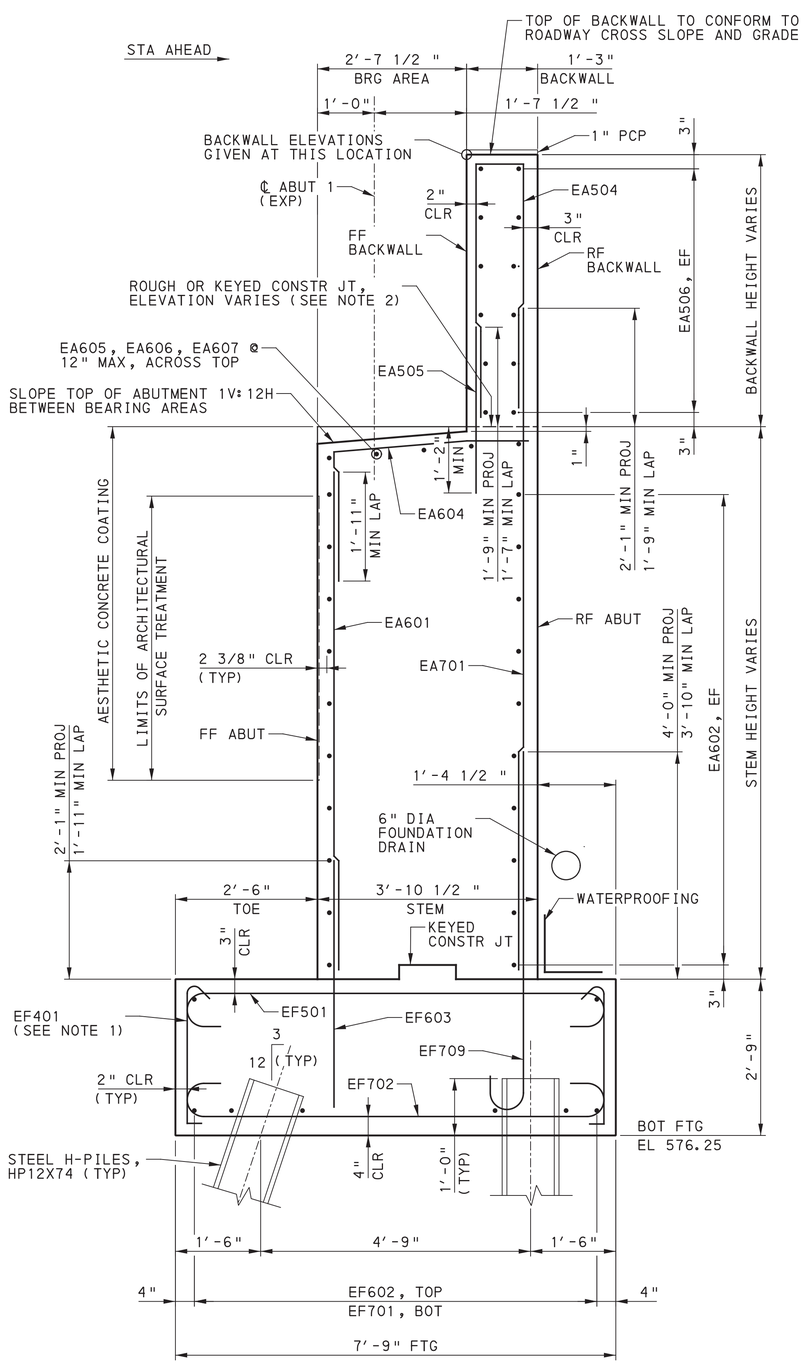
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 16 OF 54

S-41007

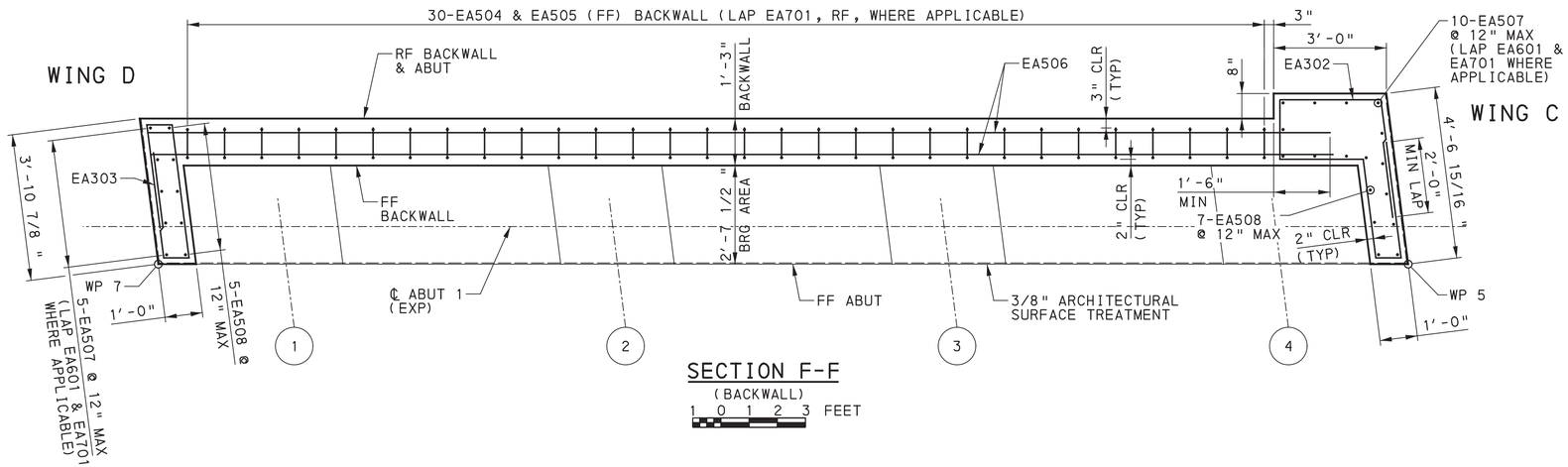
DES: SRM | CKD: REB | DWG: SRM | CKD: REB



NOTE:
BEARING AREA REINFORCEMENT BARS NOT SHOWN FOR CLARITY

ABUTMENT SECTION E-E

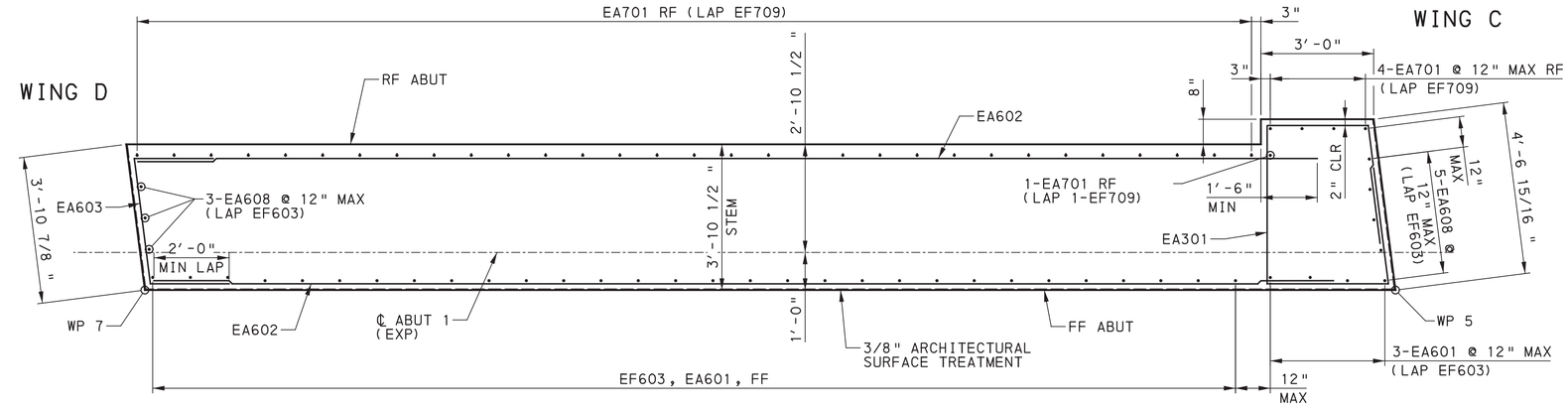
1 0 1 2 FEET



SECTION F-F

(BACKWALL)

1 0 1 2 3 FEET



SECTION G-G

(ABUTMENT STEM)

1 0 1 2 3 FEET

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. BEARING AREA AND AREA ALONG BACKWALL CONSTRUCTION JOINT ARE LEVEL IN ALL DIRECTIONS.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M

REFERENCES:

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR BEARING AREA REINFORCEMENT, SEE SHEET 16

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 17 OF 54

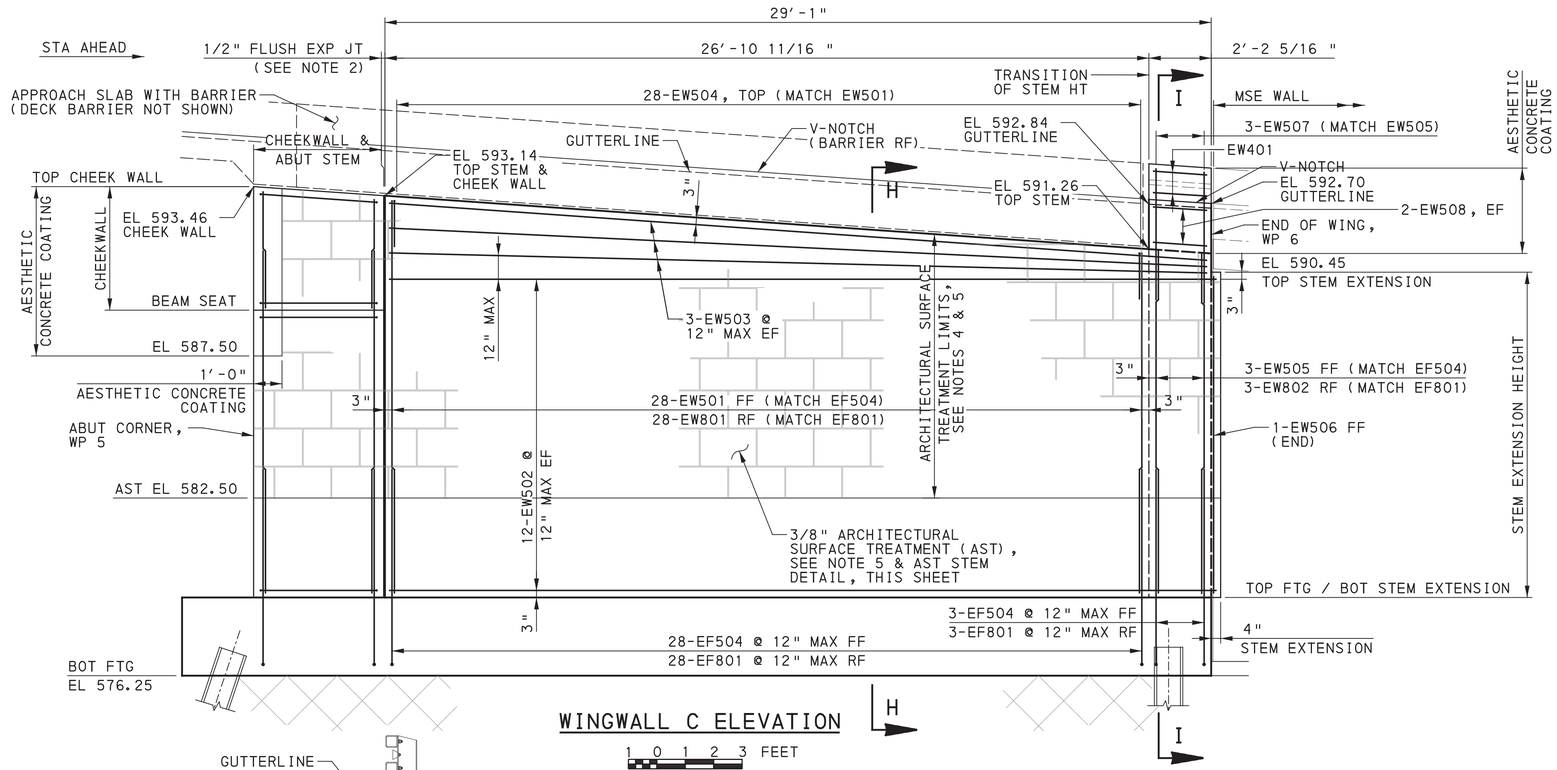
S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

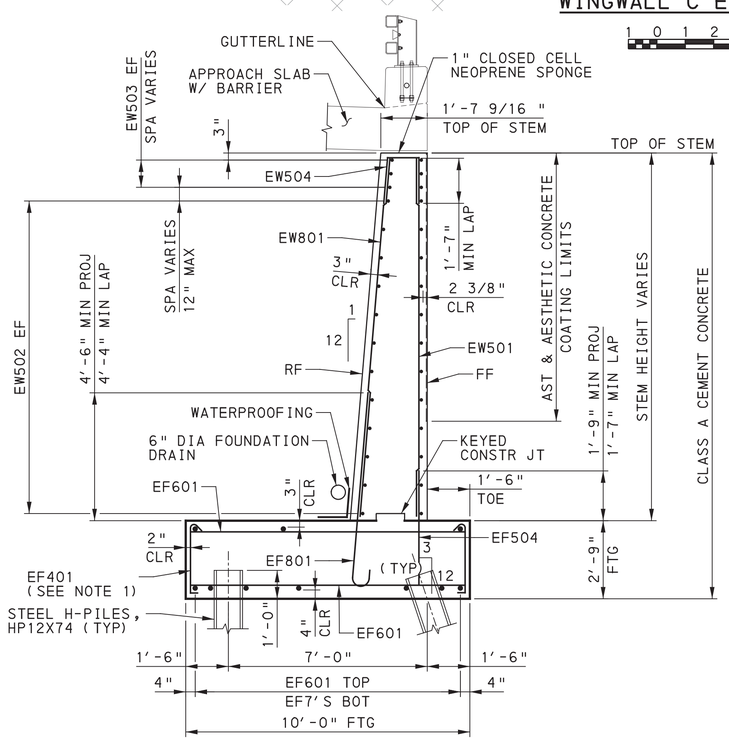
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST01005.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST01006.dgn



WINGWALL C ELEVATION

1 0 1 2 3 FEET



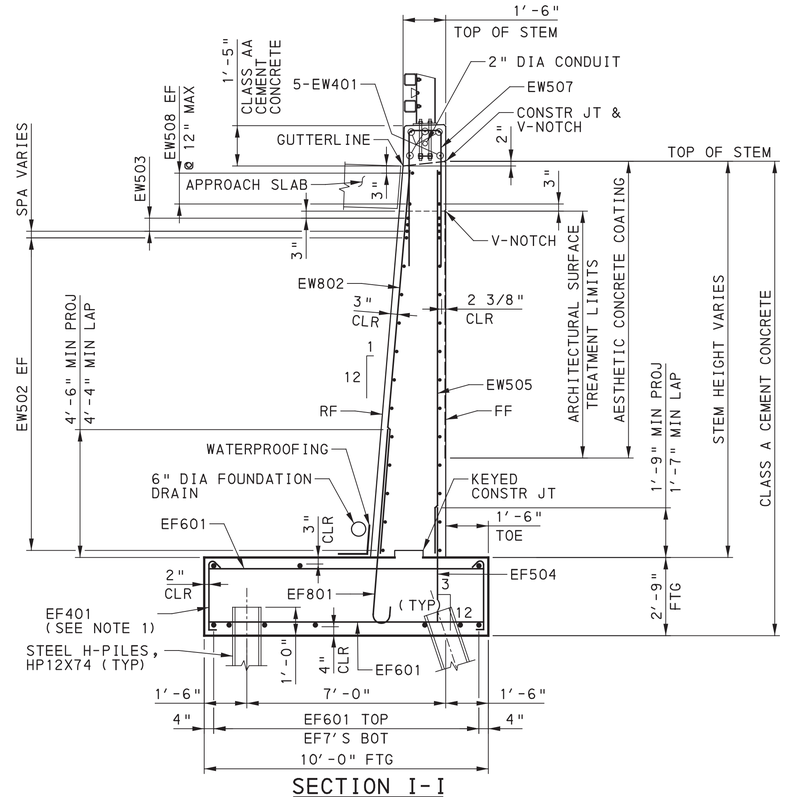
SECTION H-H

(WINGWALL SECTION BELOW APPROACH SLAB)

1 0 1 2 3 FEET

AST STEM DETAIL

NOT TO SCALE



SECTION I-I

(WINGWALL SECTION BEYOND APPROACH SLAB)

1 0 1 2 3 FEET

LEGEND

OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4′-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. APPLY MEMBRANE WATERPROOFING OVER EXPANSION JOINT ALONG VERTICAL REAR FACE, SEE BC-788M.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
4. AESTHETIC CONCRETE COATING APPLIED BELOW BEAM SEAT ON SIDE OF ABUTMENT AS SHOWN. ALSO, APPLY COATING ALONG HEIGHT OF CHEEK WALLS AT FRONT FACE AS SHOWN AND ALL ARCHITECTURAL SURFACE TREATMENT AREAS.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR PILE LOADS, SEE SHEET 13

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

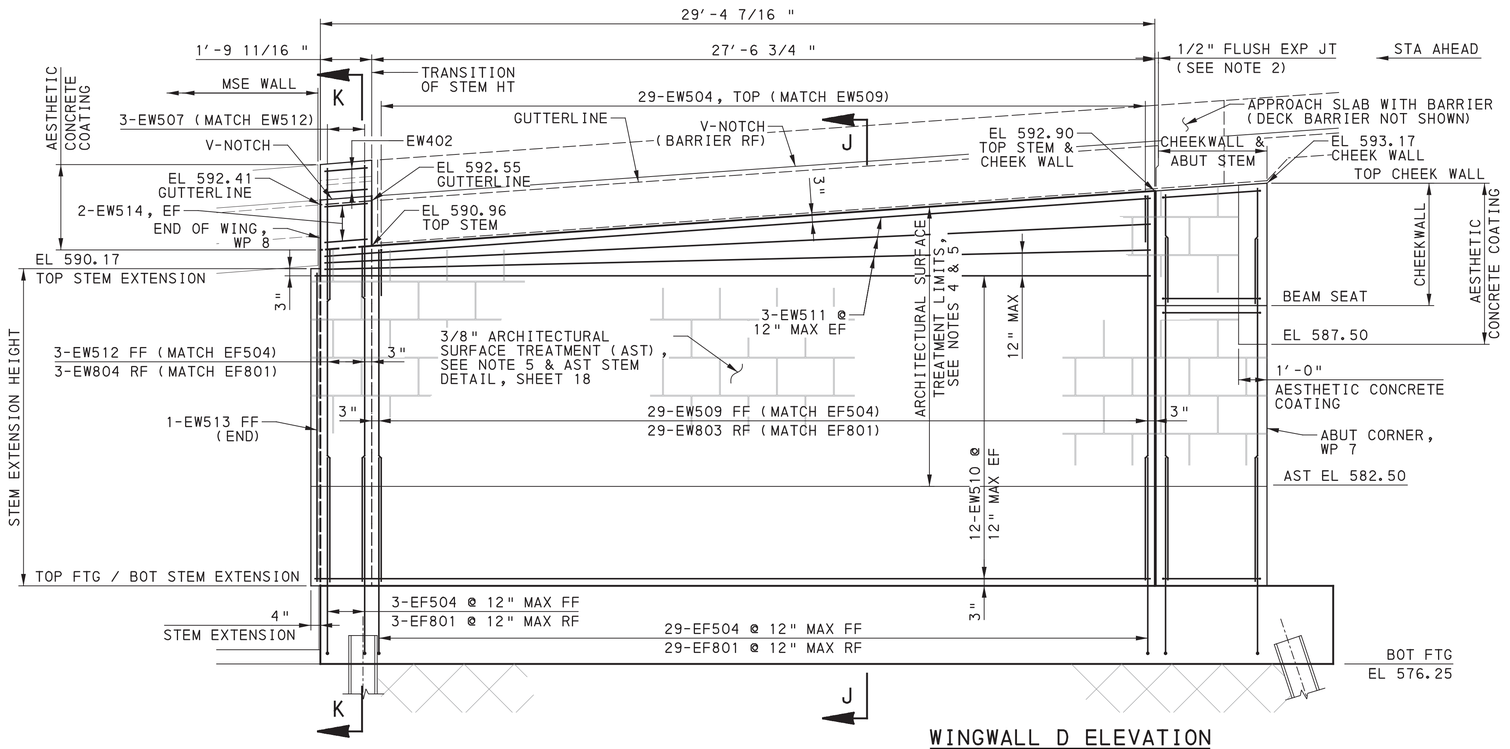
ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
WINGWALL C ELEVATION & SECTIONS

RECOMMENDED AUGUST 22, 2022

SHEET 18 OF 54

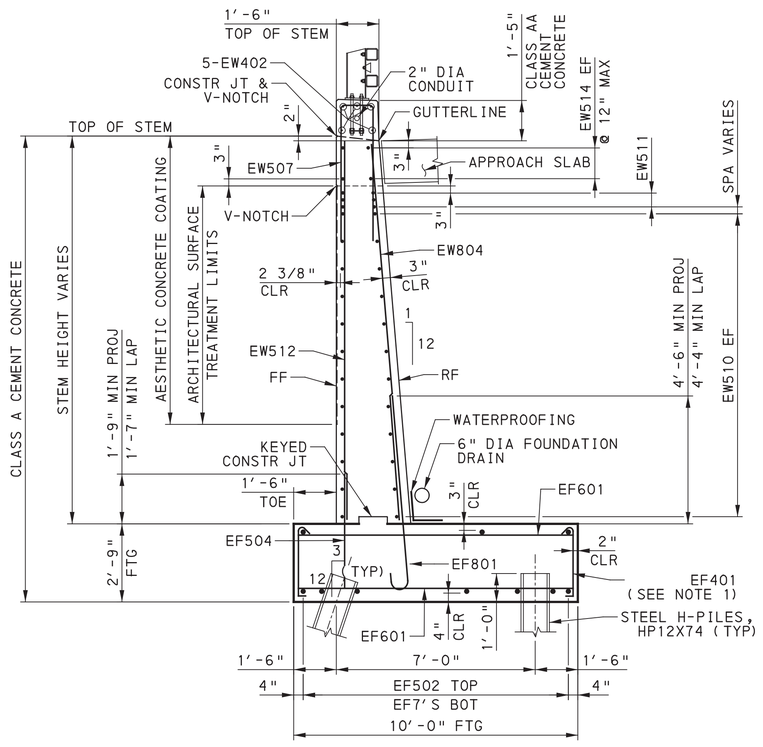
S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB



WINGWALL D ELEVATION

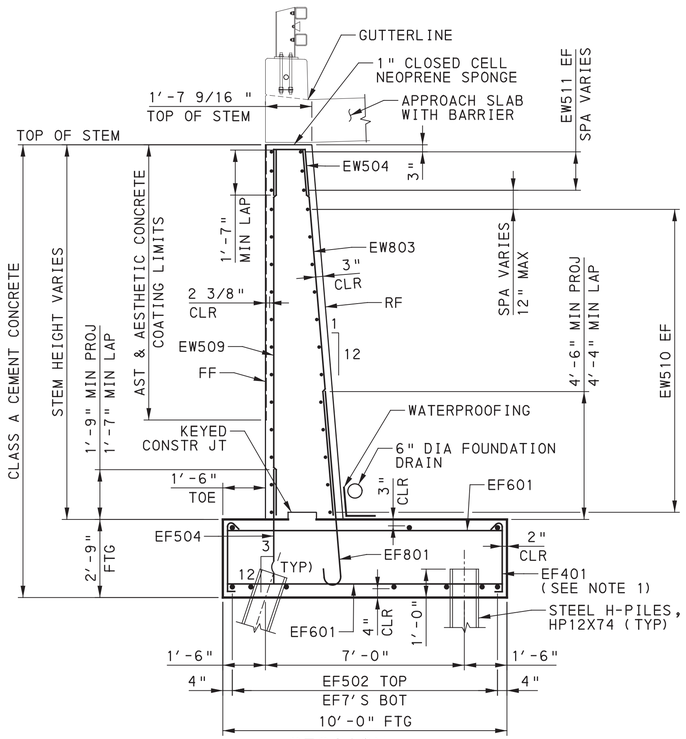
1 0 1 2 3 FEET



SECTION K-K

(WINGWALL SECTION BEYOND APPROACH SLAB)

1 0 1 2 3 FEET



SECTION J-J

(WINGWALL SECTION BELOW APPROACH SLAB)

1 0 1 2 3 FEET

LEGEND

OVEREXCAVATION AND BACKFILL, SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO 57

NOTES:

1. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATING TIES.
2. APPLY MEMBRANE WATERPROOFING OVER EXPANSION JOINT ALONG VERTICAL REAR FACE, SEE BC-788M.
3. FOR FLUSH EXPANSION JOINT DETAILS AND KEYED CONSTRUCTION JOINT DETAILS, SEE BC-735M
4. AESTHETIC CONCRETE COATING APPLIED BELOW BEAM SEAT ON SIDE OF ABUTMENT AS SHOWN. ALSO, APPLY COATING ALONG HEIGHT OF CHEEK WALLS AT FRONT FACE AS SHOWN AND ALL ARCHITECTURAL SURFACE TREATMENT AREAS.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO THE LIMITS SHOWN. JOINTS TRUELY HORIZONTAL AND VERTICAL (TYP).

REFERENCES:

FOR GENERAL NOTES, SEE SHEETS 3 & 4

FOR STAKE-OUT PLAN, SEE SHEET 7

FOR PILE LOADS, SEE SHEET 13

FOR WATERPROOFING DETAILS, SEE BC-788M

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 20

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
WINGWALL D ELEVATION & SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 19 OF 54

S-41007

DES: SRM | CKD: REB | DWG: SRM | CKD: REB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\FINAL\ramp_SS_E\sheets\FINAL\ramp_SS_EST01007.dgn

PLOTTED: 8/22/2022

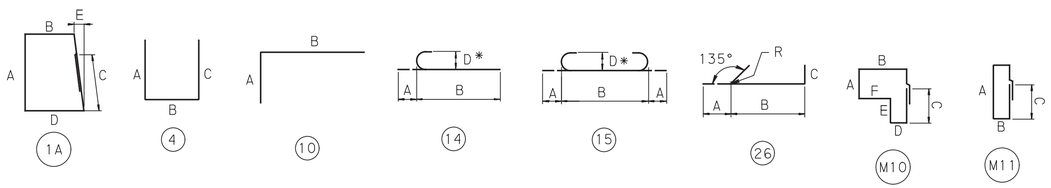
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTarb001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT STEM, BACKWALL & CHEEK WALLS											
EA301	3	14	16′-6"	1A	4′-3"	2′-8"	3′-2"	3′-3"	6 1/2"		
EA302	3	7	16′-2"	M10	1′-7"	2′-8"	3′-2"	8"	2′-8"		F= 2′-3"
EA303	3	7	10′-5"	M11	3′-7"	8"	2′-9"				
EA401	4	8	8′-0"	4	3′-3"	1′-6"	3′-3"				
EA501	5	18	6′-4"	4	2′-2"	2′-0"	2′-2"				
EA502	5	6	6′-9"	4	1′-9"	3′-3"	1′-9"				
EA503	5	6	6′-6"	4	2′-1"	2′-4"	2′-1"				
EA504	5	30	8′-6"	4	3′-10"	10"	3′-10"				
EA505	5	30	3′-3"	ST							
EA506	5	10	31′-7"	ST							
EA507	5	10	3′-10"	ST							
EA508	5	12	6′-0"	ST							
EA509	5	14	7′-4 1/2"	4	3′-0"	1′-4 1/2"	3′-0"				
EA510	5	6	11′-1"		2′-11"	5′-3"	2′-7"	4"			
EA601	6	33	9′-5"	ST							
EA602	6	20	31′-7"	ST							
EA603	6	11	7′-8"	4	2′-2"	3′-4"	2′-2"				
EA604	6	30	5′-8"	72	2′-3′	2′-4"	1′-1"	2 1/2"			
EA605	6	5	11′-9"	ST							
EA606	6	5	13′-4"	4	1′-0"	11′-4"	1′-0"				
EA607	6	5	10′-2"	ST							
EA608	6	5	12′-4"	ST							
EA701	7	36	12′-4"	ST							
WINGWALL C STEM											
EW401	4	5	1′-10"	ST							
EW501	5	28	13′-10" TO 12′-0"	ST							VARY EACH BY 13/16"
EW502	5	24	29′-1"	ST							
EW503	5	6	28′-9"	ST							
EW504	5	57	4′-7"	4	1′-9"	1′-1"	1′-9"				
EW505	5	3	11′-10"	ST							
EW506	5	1	11′-1"	ST							
EW507	5	6	10′-8"	4	4′-9"	1′-2"	4′-9"				
EW508	5	4	1′-10"	ST							
EW801	8	28	13′-10′ TO 12′-0"	ST							VARY EACH BY 13/16"
EW802	8	3	11′-10"	ST							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WINGWALL D STEM											
EW402	4	5	1′-5"	ST							
EW509	5	29	13′-8" TO 11′-9"	ST							VARY EACH BY 13/16"
EW510	5	24	29′-4"	ST							
EW511	5	6	29′-1"	ST							
EW512	5	3	11′-8"	ST							
EW513	5	1	10′-10"	ST							
EW514	5	4	1′-5"	ST							
EW803	8	29	13′-8" TO 11′-9"	ST							
EW804	8	3	11′-8"	ST							VARY EACH BY 13/16"
ABUTMENT FOOTING											
EF401	4	98	2′-11"	26	4 1/2"	2′-2′′	4 1/2"			1"	
EF501	5	17	8′-7"	15	7"	7′-5"					
EF502	5	11	35′-5" TO 36′-7"	14	7"	34′-10" /					VARY EACH BY 1 5/16"
						36′-0"					
EF503	5	11	35′-11" TO 37′-1"	14	7"	35′-4" /					VARY EACH BY 1 5/16"
						36′-6"					
EF504	5	63	4′-2"	ST							
EF601	6	110	9′-8"	ST							
EF602	6	9	35′-11"	ST							
EF603	6	41	4′-6"	ST							
EF701	7	8	35′-11"	ST							
EF702	7	14	9′-1"	15	10"	7′-5"					
EF703	7	6	35′-11" TO 36′-8"	14	10"	35′-1" /					VARY EACH BY 1 3/4"
						35′-10"					
EF704	7	2	35′-9"	14	10"	34′-11"					
EF705	7	2	36′-10"	14	10"	36′-0"					
EF706	7	6	36′-5" TO 37′-2"	14	10"	35′-7" /					VARY EACH BY 1 3/4"
						36′-4"					
EF707	7	2	36′-3"	14	10"	35′-5"					
EF708	7	2	37′-4"	14	10"	36′-6"					
EF709	7	36	7′-3"	14	10"	6′-5"					
EF801	8	63	7′-10"	14	11"	6′-11"					



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: SRM | CKD: REB | DWG: DFK | CKD: SRM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070625-E

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

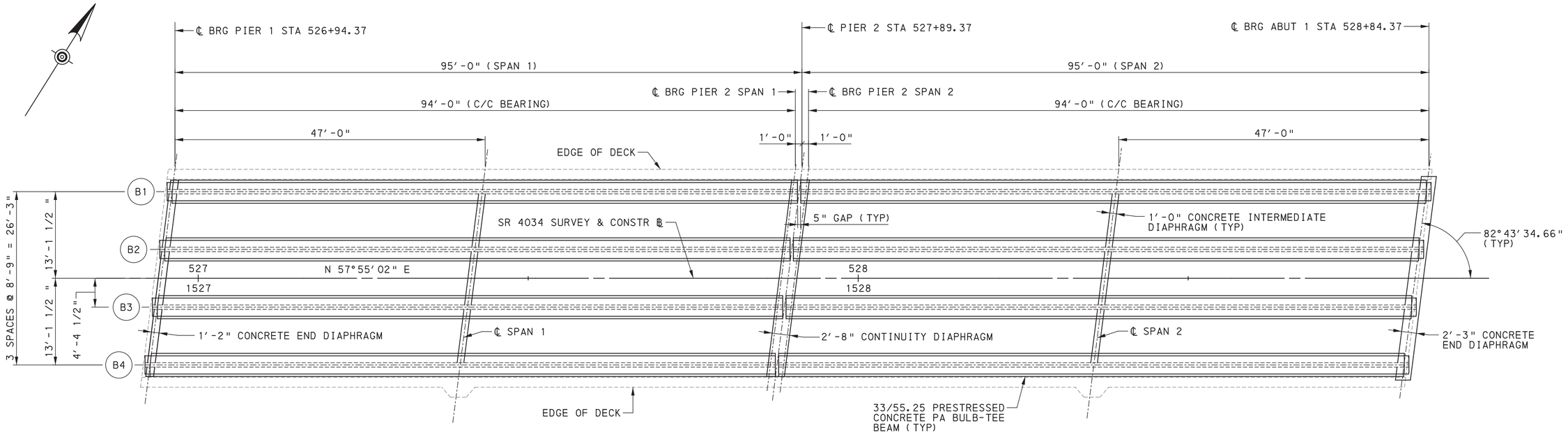
ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT REINFORCEMENT SCHEDULE

RECOMMENDED AUGUST 22, 2022

SHEET 20 OF 54

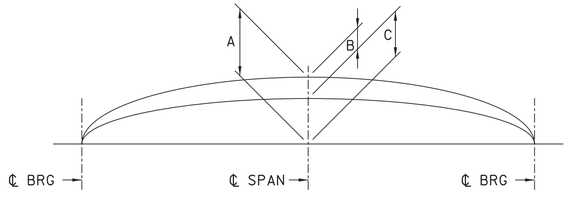
S-41007

PLOTTED: 8/22/2022



FRAMING PLAN

2 0 4 8 FEET



BEAM CAMBER DIAGRAM

BEAM CAMBER TABLE								
	SPAN 1				SPAN 2			
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 1	BEAM 2	BEAM 3	BEAM 4
A	2.89"	2.89"	2.89"	2.89"	2.89"	2.89"	2.89"	2.89"
B	1.28"	1.27"	1.31"	1.30"	1.05"	1.11"	1.15"	1.08"
C	1.61"	1.62"	1.58"	1.59"	1.84"	1.78"	1.74"	1.81"

A = ESTIMATED PRESTRESSED CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR. (CHECK IN FIELD)

B = DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.

C = A-B= NET CAMBER.
VARY THE THICKNESS OF THE CONCRETE HAUNCH TO COMPENSATE FOR ANY INACCURACIES IN BEAM CAMBER.

A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIOUS PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSS.

USE A CREEP FACTOR EQUAL TO 1.6 AND P/S LOSS EQUAL TO 10%

NOTES:

1. SHOW DESIGN LENGTH AND CASTING LENGTH ON SHOP DRAWINGS.
2. SHOW PLAN, ELEVATION, SECTIONS AND ALL REINFORCEMENT DETAILS ON SHOP DRAWINGS.
3. SHOW ANY MODIFICATIONS TO REINFORCEMENT SPLICE AND BENDING DETAILS ON SHOP DRAWINGS.
4. SHOW THE FOLLOWING DATA ON THE SHOP DRAWINGS:
   A) THE SIZE AND LOCATION OF THE TEMPORARY SUPPORTS
   B) THE TYPE AND LOCATION OF THE BRACING AND TEMPORARY SUPPORTS USED FOR THE TRANSPORTATION AND ERECTION OF THE BEAMS.
5. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.

REFERENCES:

1. FOR BEAM DETAILS, SEE SHEETS 22, 23, 24, & 25
2. FOR END DIAPHRAGM DETAILS, SEE SHEETS 34 & 36
3. FOR PIER CONTINUITY DIAPHRAGM DETAILS. SEE SHEE 35

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
FRAMING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

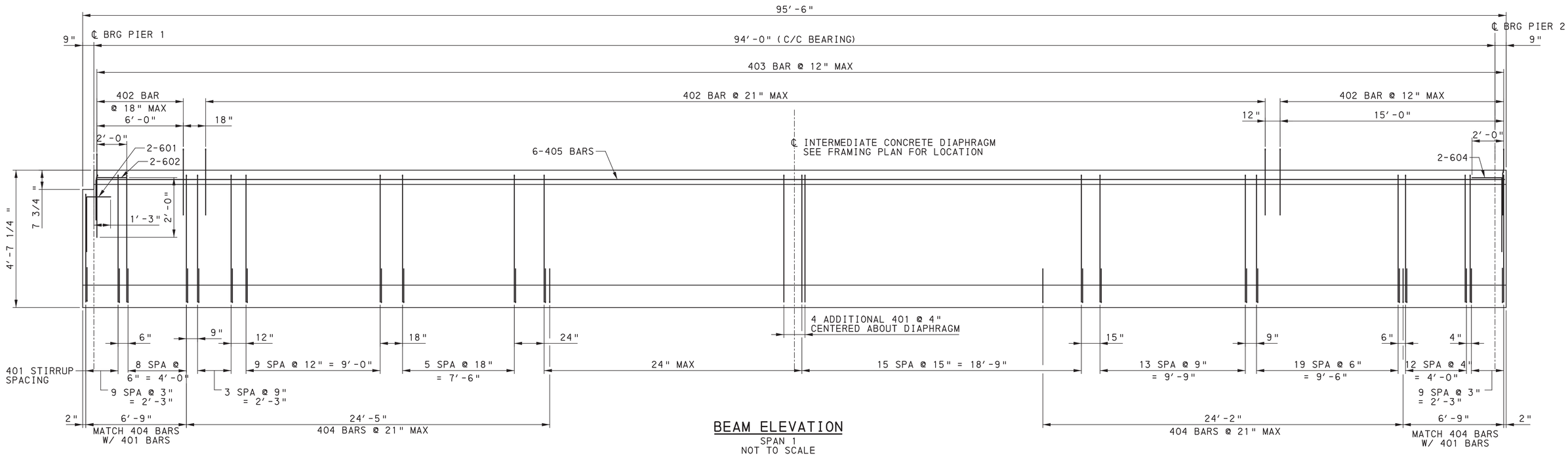
SHEET 21 OF 54

S-41007

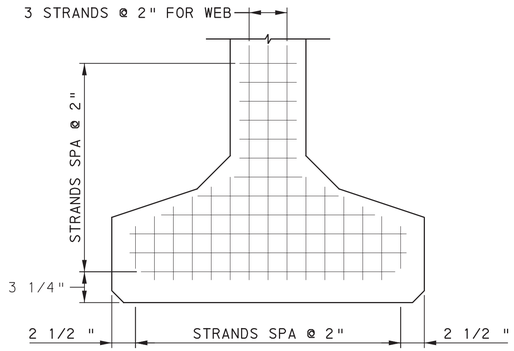
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss001.dgn

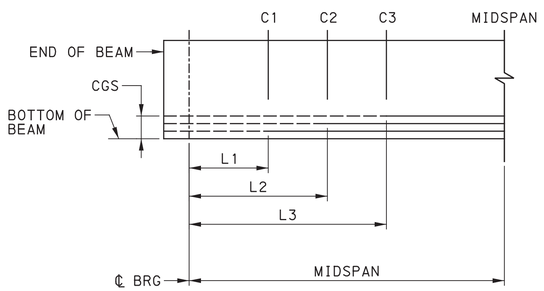
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss002.dgn



BEAM ELEVATION
SPAN 1
NOT TO SCALE



TYPICAL STRAND LOCATIONS
NOT TO SCALE



DEBONDING DETAIL
NOT TO SCALE

—— DEBONDED SECTION OF STRAND
—— FULLY BONDED SECTION OF STRAND

NOTE:
THIS IS A REPRESENTATION OF THE DEBONDED LENGTHS. IT DOES NOT REPRESENT A SPECIFIC LOCATION, OR SPECIFIC ROW OF DEBONDED STRANDS.

NOTES:
1. MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMODATE NOTCHED FLANGE AND WEB.
2. EPOXY COAT ALL REBAR FOR A DISTANCE OF 9'-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO THE BRIDGE DECK FROM THE TOP OF BEAMS.
4. USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF INSERT IS 3"
5. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
6. MIN COVER: STIRRUPS - 1" MIN
   ALL OTHERS - 1 1/2" MIN

REFERENCES:
FOR FRAMING PLAN AND ADDITIONAL NOTES, SEE SHEET 21

FOR BEAM INSERT LOCATIONS, SEE SHEETS 28 & 34-36

DEBONDED STRAND INFORMATION				
DEBONDED STRAND CUTOFF LOCATION	DISTANCE 'L' TO CUTOFF LOCATION ALONG ℄ OF BEAM (FEET)	NUMBER OF DEBONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	NUMBER OF BONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	CGS PRIOR TO CUTOFF LOCATION (INCHES)
C1	2.00	6	42	9.11
C2	5.00	5	48	8.79
C3	6.00	2	53	8.46
MIDSPAN	———	———	55	8.27

NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 1

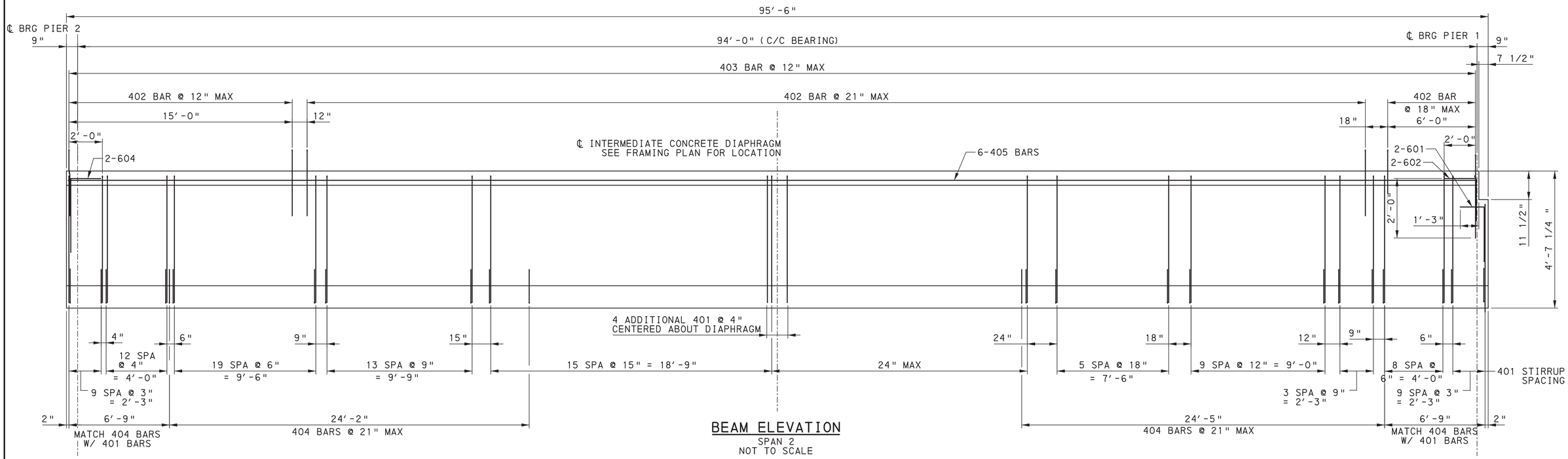
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

RECOMMENDED AUGUST 22, 2022

SHEET 22 OF 54

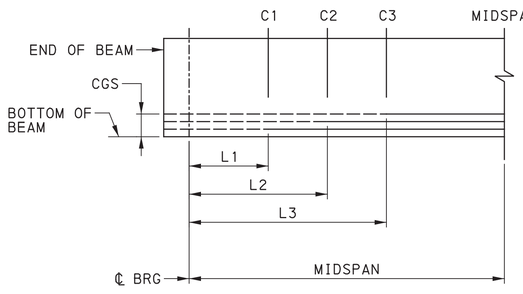
S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS



BEAM ELEVATION
SPAN 2
NOT TO SCALE

PRESTRESSING DATA		
	SPAN 1	SPAN 2
BEAM SIZE	PA BULB-TEE 33/55.25	PA BULB-TEE 33/55.25
JACKING PRESTRESS FORCE PER BEAM (Pi) (LOW RELAXATION STRANDS)	1860	1860
NO. OF STRANDS	55	55
CONCRETE STRENGTH AT STRAND RELEASE (f'ci)	6800 PSI	6800 PSI
CONCRETE STRENGTH AT 28 DAYS (f'c)	8000 PSI	8000 PSI
STRAND DIAMETER (270 KSI)	1/2" DIA (0.52 IN) SPECIAL LOW RELAXATION	1/2" DIA (0.52 IN) SPECIAL LOW RELAXATION
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ MID-SPAN OF BEAM (INCHES)	8.27	8.27
CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM @ BEARING CENTERLINE (INCHES)	9.11	9.11



DEBONDING DETAIL
NOT TO SCALE

— — DEBONDED SECTION OF STRAND

——— FULLY BONDED SECTION OF STRAND

NOTE:
THIS IS A REPRESENTATION OF THE DEBONDED LENGTHS. IT DOES NOT REPRESENT A SPECIFIC LOCATION, OR SPECIFIC ROW OF DEBONDED STRANDS.

DEBONDED STRAND INFORMATION				
DEBONDED STRAND CUTOFF LOCATION	DISTANCE 'L' TO CUTOFF LOCATION ALONG ℄ OF BEAM (FEET)	NUMBER OF DEBONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	NUMBER OF BONDED STRANDS PRIOR TO CUTOFF LOCATION (EACH)	CGS PRIOR TO CUTOFF LOCATION (INCHES)
C1	2.00	6	42	9.11
C2	5.00	5	48	8.79
C3	6.00	2	53	8.46
MIDSPAN	———	———	55	8.27

NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING.

NOTES:
1. MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMODATE NOTCHED FLANGE AND WEB.
2. EPOXY COAT ALL REBAR FOR A DISTANCE OF 9'-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO THE BRIDGE DECK FROM THE TOP OF BEAMS.
4. USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF INSERT IS 3"
5. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
6. MIN COVER: STIRRUPS - 1" MIN
   ALL OTHERS - 1 1/2" MIN

REFERENCES:
FOR FRAMING PLAN AND ADDITIONAL NOTES, SEE SHEET 21

FOR BEAM INSERT LOCATIONS, SEE SHEETS 28 & 34-36

FOR STRAND LOCATION DETAIL, SEE SHEET 22

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

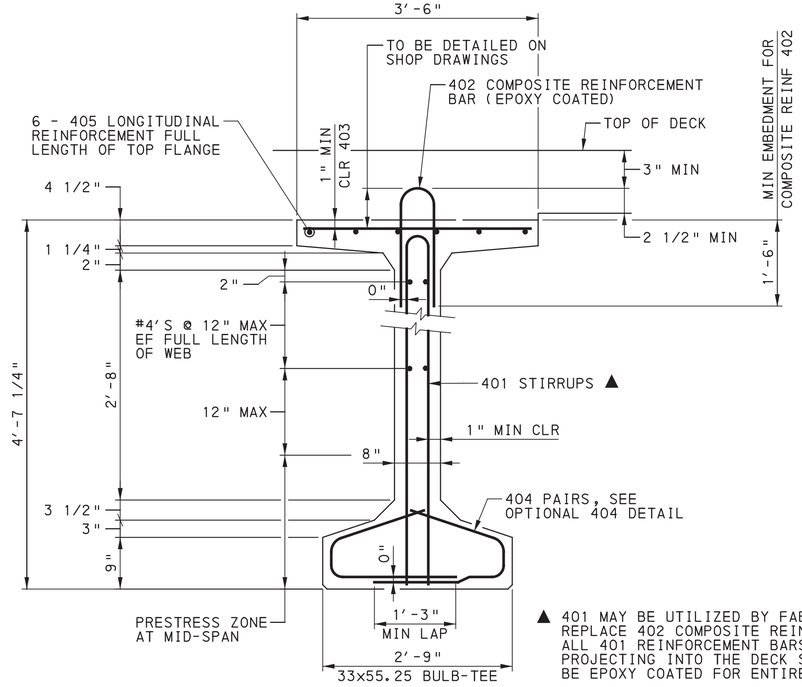
SHEET 23 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

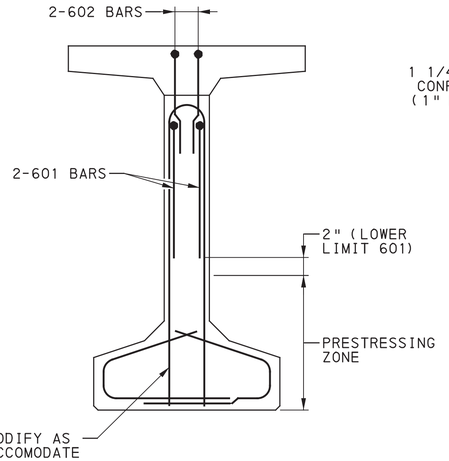
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss003.dgn

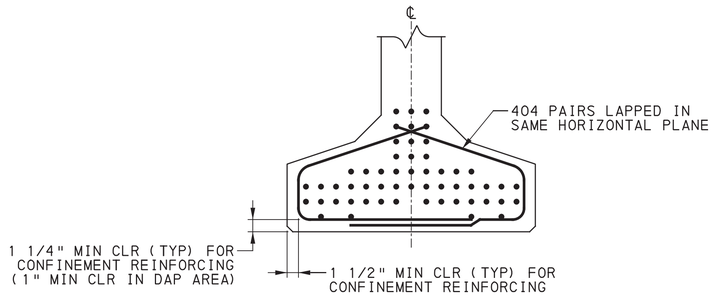


▲ 401 MAY BE UTILIZED BY FABRICATOR TO REPLACE 402 COMPOSITE REINFORCEMENT. ALL 401 REINFORCEMENT BARS PROJECTING INTO THE DECK SLAB MUST BE EPOXY COATED FOR ENTIRE LENGTH.

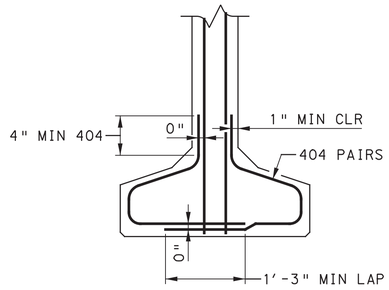
PA BULB-TEE TYPICAL SECTION
NOT TO SCALE



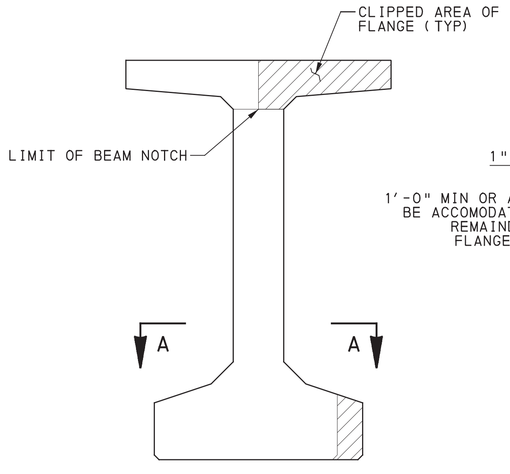
PA BULB-TEE ADDITIONAL NOTCH REINFORCING END VIEW
NOT TO SCALE



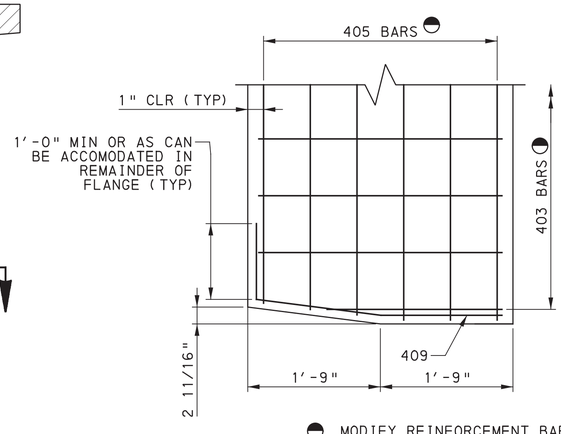
PA BULB-TEE TYP. STRAND CONFINEMENT
NOT TO SCALE



OPTIONAL 404 DETAIL
NOT TO SCALE

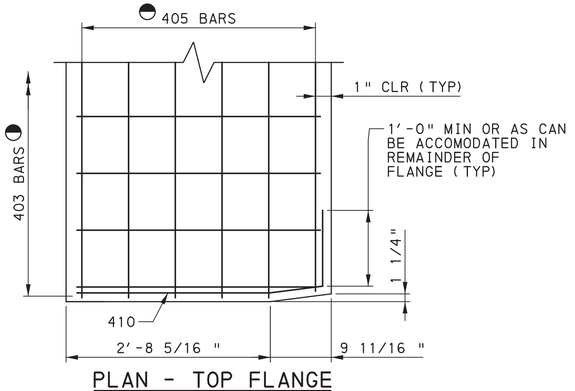


BEAM END VIEW
SPAN 1 NEAR END (SIMILAR)
SPAN 2 FAR END (SHOWN)

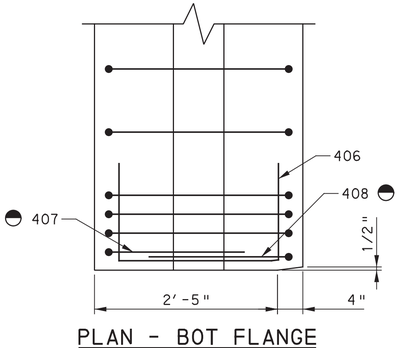


● MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMODATE CLIPPED FLANGE.

PLAN - TOP FLANGE
(SPAN 1 - NEAR END)



PLAN - TOP FLANGE
(SPAN 2 - FAR END)



PLAN - BOT FLANGE
(SPAN 2 - FAR END)

TYPICAL CLIPPED FLANGE REINFORCEMENT DETAILS
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 24 OF 54

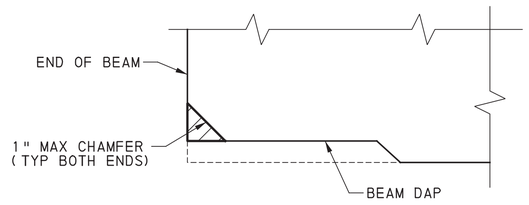
S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss004.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME= \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss005.dgn

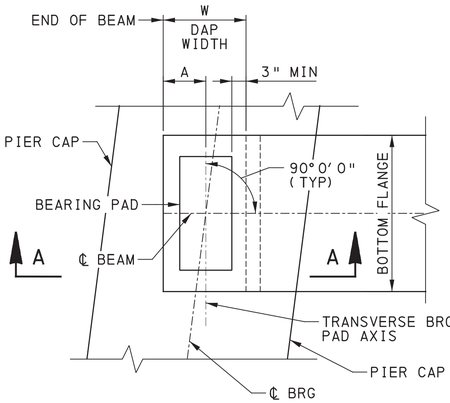


BEAM CHAMFER
NOT TO SCALE

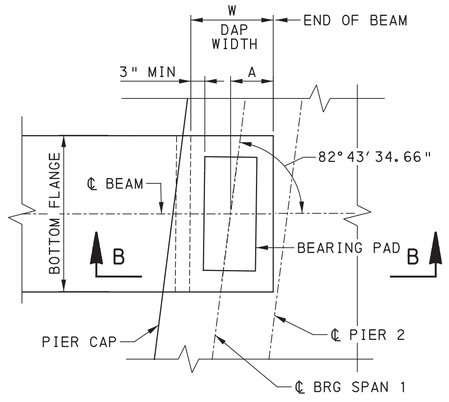
BEAM DAP SCHEDULE											
SPAN	BEAM	NEAR END					FAR END				
		W (in)	A (in)	T1 (in)	T2 (in)	T3 (in)	W (in)	A (in)	T1 (in)	T2 (in)	T3 (in)
1	1	17.50	9.00	0.25	0.5071	0.75	17.5	9.00	0.25	0.5839	0.9375
	2	17.50	9.00	0.25	0.5071	0.75	17.5	9.00	0.25	0.5839	0.9375
	3	17.50	9.00	0.25	0.5071	0.75	17.5	9.00	0.25	0.5839	0.9375
	4	17.50	9.00	0.25	0.5393	0.8125	17.5	9.00	0.25	0.6143	1.0000
2	1	17.50	9.00	0.25	0.8286	1.375	-	-	-	-	-
	2	17.50	9.00	0.25	0.8286	1.375	-	-	-	-	-
	3	17.50	9.00	0.25	0.8286	1.375	-	-	-	-	-
	4	17.50	9.00	0.25	0.8286	1.375	-	-	-	-	-

PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - NON-COMPOSITE			
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 4	AREA OF BASIC BEAM (IN2)	908.00	-----
	MOMENT OF INERTIA (IN4)	360,976	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	29.51	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	25.74	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	12,233	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	14,023	-----
INTERIOR BEAMS 2 & 3	AREA OF BASIC BEAM (IN2)	908.00	-----
	MOMENT OF INERTIA (IN4)	360,976	-----
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	29.51	-----
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	25.74	-----
	SECTION MODULUS AT TOP OF BEAM (IN3)	12,233	-----
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	14,023	-----

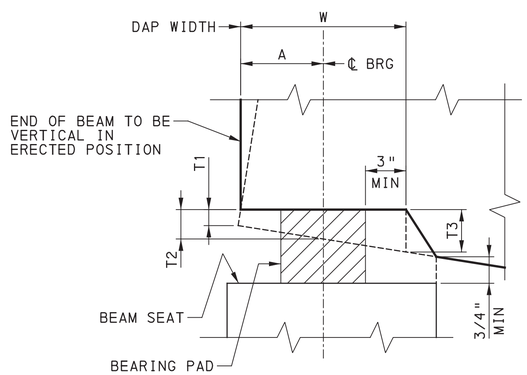
PRESTRESSED CONCRETE PA BULB-TEE SECTION PROPERTIES - COMPOSITE DEAD LOAD			
BEAM NO	PROPERTIES	GROSS SECTION	TRANSFORMED SECTION
EXTERIOR BEAMS 1 & 4	MOMENT OF INERTIA (IN4)	714,478	744,799
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	25.38	26.12
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	17.88	18.62
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	37.37	36.63
	SECTION MODULUS AT TOP OF SLAB (IN3)	28,153	28,509
	SECTION MODULUS AT TOP OF BEAM (IN3)	39,963	39,990
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	19,118	20,336
INTERIOR BEAMS 2 & 3	MOMENT OF INERTIA (IN4)	742,972	775,306
	NEUTRAL AXIS TO TOP OF SLAB (INCHES)	24.44	25.18
	NEUTRAL AXIS TO TOP OF BEAM (INCHES)	16.94	17.68
	NEUTRAL AXIS TO BOTTOM OF BEAM (INCHES)	38.31	37.57
	SECTION MODULUS AT TOP OF SLAB (IN3)	30,394	30,788
	SECTION MODULUS AT TOP OF BEAM (IN3)	43,847	43,846
	SECTION MODULUS AT BOTTOM OF BEAM (IN3)	19,396	20,638



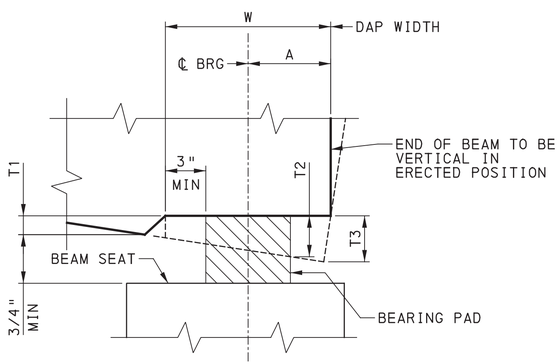
PLAN - DAP AT PIER 1
(SPAN 1)
NOT TO SCALE



PLAN - DAP AT PIER 2
(SPAN 1 SHOWN, SPAN 2 SIMILAR)
NOT TO SCALE



SECTION A-A AT HIGH END OF BEAM
(PIER 1 SHOWN, PIER 2 SPAN 2 SIMILAR)
NOT TO SCALE



SECTION B-B AT LOW END OF BEAM
(PIER 2 SPAN 1)
NOT TO SCALE

BEAM DAP DETAILS

DES: DFK	CKD: CMS	DWG: DFK	CKD: CMS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM DETAILS - 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 25 OF 54

S-41007

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mesconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss006.dgn

		MOMENT TABLE (KIP-FT)																					
		PIER1	SPAN 1									PIER 2		SPAN 2									ABUT 1
MOMENT DUE TO		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
BEAM NO 1	DC1	0.0	870.6	1560.7	2061.0	2364.6	2466.0	2347.2	2025.9	1505.3	792.3	0.0	0.0	717.6	1349.6	1804.0	2082.4	2186.5	2101.8	1842.1	1406.3	792.9	0.0
	DC2	0.0	121.3	205.2	251.9	261.4	233.5	168.4	66.0	-73.6	-250.5	-440.4	-440.4	-250.5	-73.6	66.0	168.4	233.5	261.4	251.9	205.2	121.3	0.0
	DC1 + DC2	0.0	991.9	1765.9	2312.9	2626.0	2699.5	2515.6	2091.9	1431.7	541.8	-440.4	-440.4	467.1	1276.0	1870.0	2250.8	2420.0	2363.2	2094.0	1611.5	914.2	0.0
	PHL-93 (+)	0.0	802.5	1410.5	1824.1	2067.4	2128.4	2067.4	1824.1	1410.5	802.5	93.6	93.6	802.5	1410.5	1824.1	2067.4	2128.4	2067.4	1824.1	1410.5	802.5	0.0
	PHL-93 (-)	0.0	-96.9	-193.9	-290.8	-387.8	-484.7	-581.7	-678.6	-931.3	-1197.8	-1853.3	-1853.3	-1197.8	-931.3	-678.6	-581.7	-484.7	-387.8	-290.8	-193.9	-96.9	0.0
	P82 (+)	0.0	1239.0	2154.5	2746.4	3014.8	2983.0	3014.8	2746.4	2154.5	1239.0	148.2	148.2	1239.0	2154.5	2746.4	3014.8	2983.0	3014.8	2746.4	2154.5	1239.0	0.0
	P82 (-)	0.0	-150.5	-301.0	-451.6	-602.1	-752.6	-903.1	-1053.6	-1204.1	-1354.7	-1489.3	-1489.3	-1354.6	-1204.1	-1053.6	-903.1	-752.6	-602.1	-451.5	-301.0	-150.5	0.0
	P2016-13 (+)	0.0	1366.6	2336.0	2983.8	3302.7	3283.8	3302.7	2983.8	2336.0	1366.6	168.6	168.6	1366.6	2336.0	2983.8	3302.7	3283.8	3302.7	2983.8	2336.0	1366.6	0.0
	P2016-13 (-)	0.0	-160.3	-320.6	-480.9	-641.3	-801.6	-961.9	-1122.2	-1282.5	-1634.5	-2572.9	-2572.9	-1634.5	-1282.5	-1122.2	-961.9	-801.6	-641.3	-480.9	-320.6	-160.3	0.0
BEAM NO 2	DC1	0.0	870.3	1558.4	2057.8	2363.1	2469.1	2343.8	2020.0	1500.6	790.6	0.0	0.0	735.7	1386.5	1857.3	2149.3	2263.7	2169.9	1896.7	1444.8	813.0	0.0
	DC2	0.0	121.3	205.2	251.9	261.4	233.5	168.4	66.0	-73.6	-250.5	-440.4	-440.4	-250.5	-73.6	66.0	168.4	233.5	261.4	251.9	205.2	121.3	0.0
	DC1 + DC2	0.0	991.6	1763.6	2309.7	2624.5	2702.6	2512.2	2086.0	1427.0	540.1	-440.4	-440.4	485.2	1312.9	1923.3	2317.7	2497.2	2431.3	2148.6	1650.0	934.3	0.0
	PHL-93 (+)	0.0	822.2	1445.1	1868.9	2118.2	2180.7	2118.2	1868.9	1445.1	822.2	95.9	95.9	822.2	1445.1	1868.9	2118.2	2180.7	2118.2	1868.9	1445.1	822.2	0.0
	PHL-93 (-)	0.0	-99.3	-198.7	-298.0	-397.3	-496.6	-596.0	-695.3	-954.2	-1227.2	-1898.8	-1898.8	-1227.2	-954.2	-695.3	-596.0	-496.6	-397.3	-298.0	-198.7	-99.3	0.0
	P82 (+)	0.0	1269.4	2207.4	2813.8	3088.8	3056.2	3088.8	2813.8	2207.4	1269.4	151.8	151.8	1269.4	2207.4	2813.8	3088.8	3056.2	3088.8	2813.8	2207.4	1269.4	0.0
	P82 (-)	0.0	-154.2	-308.4	-462.6	-616.8	-771.1	-925.3	-1079.5	-1233.7	-1387.9	-1525.9	-1525.9	-1387.9	-1233.7	-1079.5	-925.3	-771.1	-616.8	-462.6	-308.4	-154.2	0.0
	P2016-13 (+)	0.0	1400.2	2393.3	3057.1	3383.8	3364.3	3383.8	3057.1	2393.3	1400.2	172.8	172.8	1400.2	2393.3	3057.1	3383.8	3364.3	3383.8	3057.1	2393.3	1400.2	0.0
	P2016-13 (-)	0.0	-164.2	-328.5	-492.7	-657.0	-821.2	-985.5	-1149.7	-1314.0	-1674.6	-2636.1	-2636.1	-1674.6	-1314.0	-1149.7	-985.5	-821.2	-657.0	-492.7	-328.5	-164.2	0.0
BEAM NO 3	DC1	0.0	874.7	1567.6	2072.2	2383.6	2495.8	2362.9	2032.7	1508.1	793.9	0.0	0.0	740.9	1398.2	1876.1	2175.7	2297.2	2195.8	1915.4	1456.6	818.4	0.0
	DC2	0.0	127.6	218.0	271.1	286.9	264.5	186.1	70.6	-82.3	-272.4	-474.2	-474.2	-273.1	-83.6	68.6	183.5	260.2	282.7	268.0	215.9	126.6	0.0
	DC1 + DC2	0.0	1002.3	1785.6	2343.3	2670.5	2760.3	2549.0	2103.3	1425.8	521.5	-474.2	-474.2	467.8	1314.6	1944.7	2359.2	2557.4	2478.5	2183.4	1672.5	945.0	0.0
	PHL-93 (+)	0.0	822.2	1445.1	1868.9	2118.2	2180.7	2118.2	1868.9	1445.1	822.2	95.9	95.9	822.2	1445.1	1868.9	2118.2	2180.7	2118.2	1868.9	1445.1	822.2	0.0
	PHL-93 (-)	0.0	-99.3	-198.7	-298.0	-397.3	-496.6	-596.0	-695.3	-954.2	-1227.2	-1898.8	-1898.8	-1227.2	-954.2	-695.3	-596.0	-496.6	-397.3	-298.0	-198.7	-99.3	0.0
	P82 (+)	0.0	1269.4	2207.4	2813.8	3088.8	3056.2	3088.8	2813.8	2207.4	1269.4	151.8	151.8	1269.4	2207.4	2813.8	3088.8	3056.2	3088.8	2813.8	2207.4	1269.4	0.0
	P82 (-)	0.0	-154.2	-308.4	-462.6	-616.8	-771.1	-925.3	-1079.5	-1233.7	-1387.9	-1525.9	-1525.9	-1387.9	-1233.7	-1079.5	-925.3	-771.1	-616.8	-462.6	-308.4	-154.4	0.0
	P2016-13 (+)	0.0	1400.2	2393.3	3057.1	3383.8	3364.3	3383.8	3057.1	2393.3	1400.2	172.8	172.8	1400.2	2393.3	3057.1	3383.8	3364.3	3383.8	3057.1	2393.3	1400.2	0.0
	P2016-13 (-)	0.0	-164.2	-328.5	-492.7	-657.0	-821.2	-985.5	-1149.7	-1314.0	-1674.6	-2636.1	-2636.1	-1674.6	-1314.0	-1149.7	-985.5	-821.2	-657.0	-492.7	-328.5	-164.2	0.0
BEAM NO 4	DC1	0.0	872.0	1563.9	2067.0	2374.5	2480.4	2353.1	2025.8	1502.6	790.3	0.0	0.0	718.8	1353.6	1812.2	2096.2	2206.6	2115.0	1849.8	1410.0	794.0	0.0
	DC2	0.0	127.5	217.8	270.8	286.6	264.2	185.9	70.5	-82.2	-272.1	-473.6	-473.7	-272.8	-83.5	68.5	183.3	259.9	282.4	267.7	215.7	126.4	0.0
	DC1 + DC2	0.0	999.5	1781.7	2337.8	2661.1	2744.6	2539.0	2096.3	1420.4	518.2	-473.6	-473.7	446.0	1270.1	1880.7	2279.5	2466.5	2397.4	2117.5	1625.7	920.4	0.0
	PHL-93 (+)	0.0	802.5	1410.5	1824.1	2067.4	2128.4	2067.4	1824.1	1410.5	802.5	93.6	93.6	802.5	1410.5	1824.1	2067.4	2128.4	2067.4	1824.1	1410.5	802.5	0.0
	PHL-93 (-)	0.0	-96.9	-193.9	-290.8	-387.8	-484.7	-581.7	-678.6	-931.3	-1197.8	-1853.3	-1853.3	-1197.8	-931.3	-678.6	-581.7	-484.7	-387.8	-290.8	-193.9	-96.9	0.0
	P82 (+)	0.0	1239.0	2154.5	2746.4	3014.8	2983.0	3014.8	2746.4	2154.5	1239.0	148.2	148.2	1239.0	2154.5	2746.4	3014.8	2983.0	3014.8	2746.4	2154.5	1239.0	0.0
	P82 (-)	0.0	-150.5	-301.0	-451.6	-602.1	-752.6	-903.1	-1053.6	-1204.1	-1354.7	-1489.3	-1489.3	-1354.6	-1204.1	-1053.6	-903.1	-752.6	-602.1	-451.5	-301.0	-150.5	0.0
	P2016-13 (+)	0.0	1366.6	2336.0	2983.8	3302.7	3283.8	3302.7	2983.8	2336.0	1366.6	168.6	168.6	1366.6	2336.0	2983.8	3302.7	3283.8	3302.7	2983.8	2336.0	1366.6	0.0
	P2016-13 (-)	0.0	-160.3	-320.6	-480.9	-641.3	-801.6	-961.9	-1122.2	-1282.5	-1634.5	-2572.9	-2572.9	-1634.5	-1282.5	-1122.2	-961.9	-801.6	-641.3	-480.9	-320.6	-160.3	0.0

NOTES :
ALL MOMENTS ARE UNFACTORED
DC2 VALUES INCLUDE FUTURE WEARING SURFACE
PHL-93 AND P-82 LOADS INCLUDE IMPACT

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM MOMENT TABLE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 26 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

		SHEAR TABLE (KIP)																						
		PIER 1	SPAN 1									PIER 2		SPAN 2										ABUT 1
SHEAR DUE TO		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
BEAM NO 1	DC1	100.8	82.3	62.8	42.4	21.4	-1.7	-23.2	-44.4	-65.1	-84.8	-101.5	92.9	76.0	57.2	38.5	20.1	1.9	-18.1	-36.6	-55.2	-74.0	-93.0
	DC2	14.7	10.8	6.9	3.0	-1.0	-4.9	-8.8	-12.7	-16.7	-20.6	-24.1	24.1	20.6	16.7	12.7	8.8	4.9	1.0	-3.0	-6.9	-11.8	-14.7
	DC1 + DC2	115.5	93.1	69.7	45.3	20.5	-6.6	-32.0	-57.1	-81.8	-105.4	-125.6	117.0	96.5	73.8	51.3	28.9	6.7	-17.2	-39.5	-62.1	-85.8	-107.7
	PHL-93 (+)	91.6	79.5	68.0	56.9	46.3	37.2	28.1	20.0	12.4	5.3	0.4	99.2	90.3	79.8	68.9	57.8	47.5	37.0	27.5	18.3	9.9	9.7
	PHL-93 (-)	-9.9	-10.2	-18.7	-28.0	-37.7	-47.5	-56.8	-67.8	-78.5	-88.8	-97.5	-0.4	-5.4	-12.6	-20.3	-28.5	-37.2	-45.6	-55.9	-66.9	-78.2	-90.1
	P82 (+)	145.3	126.1	106.9	87.7	68.5	50.4	34.2	23.7	13.7	4.3	0.3	154.9	140.3	122.2	102.5	81.5	60.8	41.7	29.2	17.0	15.1	15.1
	P82 (-)	-15.3	-15.3	-17.3	-29.7	-42.4	-60.8	-80.1	-100.8	-120.2	-138.0	-152.4	-0.3	-4.4	-13.9	-24.1	-34.8	-50.4	-67.4	-86.3	-105.2	-128.7	-142.9
	P2016-13 (+)	166.2	137.7	114.0	92.0	71.4	55.6	40.3	25.8	12.4	3.8	0.3	178.0	153.7	130.3	112.4	96.5	77.9	55.8	32.4	16.1	16.1	16.1
	P2016-13 (-)	-16.3	-16.3	-16.3	-32.9	-56.7	-77.9	-94.9	-110.5	-128.2	-151.1	-175.1	-0.3	-3.9	-12.6	-26.3	-41.0	-55.6	-70.2	-90.5	-112.1	-135.4	-163.4
BEAM NO 2	DC1	101.0	82.1	62.6	42.4	21.8	-2.7	-23.7	-44.4	-64.8	-84.5	-101.4	95.1	78.0	59.0	40.1	21.4	2.7	-19.4	-38.1	-57.0	-76.0	-95.2
	DC2	14.7	10.8	6.9	3.0	-1.0	-4.9	-8.8	-12.7	-16.7	-20.6	-24.1	24.1	20.6	16.7	12.7	8.8	4.9	1.0	-3.0	-6.9	-10.8	-14.7
	DC1 + DC2	115.7	92.9	69.5	45.4	20.8	-7.6	-32.5	-57.2	-81.5	-105.1	-125.5	119.2	98.6	75.7	52.9	30.2	7.6	-18.4	-41.1	-63.9	-86.8	-109.9
	PHL-93 (+)	101.2	87.9	75.1	62.9	51.2	41.1	31.5	22.5	14.0	6.0	0.4	109.6	99.8	88.2	76.2	63.9	52.5	41.6	30.9	20.6	11.2	10.9
	PHL-93 (-)	-10.9	-11.2	-20.6	-30.9	-41.6	-52.5	-63.9	-76.2	-88.2	-99.8	-109.6	-0.4	-6.0	-14.0	-22.5	-31.5	-41.1	-51.2	-62.9	-75.1	-87.9	-101.2
	P82 (+)	160.6	139.4	118.1	96.9	75.7	55.7	38.4	26.6	15.4	4.9	0.3	171.2	155.1	135.0	113.3	90.0	67.2	46.9	32.8	19.1	16.9	16.9
	P82 (-)	-16.9	-16.9	-19.1	-32.8	-46.9	-67.2	-90.0	-113.3	-135.0	-155.1	-171.2	-0.3	-4.9	-15.4	-26.6	-38.4	-55.7	-75.7	-96.9	-118.1	-139.4	-160.6
	P2016-13 (+)	183.6	152.1	126.0	101.6	78.8	61.5	45.3	29.0	14.0	4.3	0.3	196.7	169.8	144.0	124.2	106.6	86.1	62.7	36.4	18.0	18.0	18.0
	P2016-13 (-)	-18.0	-18.0	-18.0	-36.4	-62.7	-86.1	-106.6	-124.2	-144.0	-169.8	-196.7	-0.3	-4.3	-14.0	-29.0	-45.3	-61.5	-78.8	-101.6	-126.0	-152.1	-183.6
BEAM NO 3	DC1	101.4	82.6	63.1	43.0	22.5	-3.5	-24.4	-45.0	-65.3	-84.9	-101.8	95.7	78.7	59.7	40.9	22.2	1.9	-20.2	-38.9	-57.7	-76.6	-95.7
	DC2	15.4	11.5	7.6	3.6	-0.3	-6.3	-10.2	-14.1	-18.1	-22.0	-25.5	25.4	21.9	18.0	14.1	10.1	4.3	0.4	-3.5	-7.4	-11.4	-15.3
	DC1 + DC2	116.8	94.1	70.7	46.6	22.2	-9.8	-34.6	-59.2	-83.4	-106.9	-127.3	121.1	100.6	77.7	55.0	32.3	6.3	-19.8	-42.4	-65.2	-88.0	-111.0
	PHL-93 (+)	101.2	87.9	75.1	62.9	51.2	41.1	31.5	22.5	14.0	6.0	0.4	109.6	99.8	88.2	76.2	63.9	52.5	41.6	30.9	20.6	11.2	10.9
	PHL-93 (-)	-10.9	-11.2	-20.6	-30.9	-41.6	-52.5	-63.9	-76.2	-88.2	-99.8	-109.6	-0.4	-6.0	-14.0	-22.5	-31.5	-41.1	-51.2	-62.9	-75.1	-87.9	-101.2
	P82 (+)	160.6	139.4	118.1	96.9	75.7	55.7	38.4	26.6	15.4	4.9	0.3	171.2	155.1	135.0	113.3	90.0	67.2	46.9	32.8	19.1	16.9	16.9
	P82 (-)	-16.9	-16.9	-19.1	-32.8	-46.9	-67.2	-90.0	-113.3	-135.0	-155.1	-171.2	-0.3	-4.9	-15.4	-26.6	-38.4	-55.7	-75.7	-96.9	-118.1	-139.4	-160.6
	P2016-13 (+)	183.6	152.1	126.0	101.6	78.8	61.5	45.3	29.0	14.0	4.3	0.3	196.7	167.8	144.0	124.2	106.6	86.1	62.7	36.4	18.0	18.0	18.0
	P2016-13 (-)	-18.0	-18.0	-18.0	-36.4	-62.7	-86.1	-106.6	-124.2	-144.0	-169.8	-196.7	-0.3	-4.3	-14.0	-29.0	-45.3	-61.5	-78.8	-101.6	-126.0	-152.1	-183.6
BEAM NO 4	DC1	101.0	82.5	63.1	42.7	21.9	-2.7	-24.0	-44.8	-65.2	-84.6	-101.2	93.0	76.2	57.5	39.1	20.8	1.1	-18.8	-37.1	-55.5	-74.2	-93.0
	DC2	15.4	11.5	7.5	3.6	-0.3	-6.3	-10.2	-14.1	-18.0	-22.0	-25.5	25.4	21.9	18.0	14.0	10.1	4.3	0.4	-3.5	-7.4	-11.4	-15.3
	DC1 + DC2	116.3	93.9	70.6	46.4	21.6	-9.0	-34.2	-59.0	-83.2	-106.6	-126.7	118.4	98.0	75.5	53.1	30.9	5.4	-18.4	-40.6	-63.0	-85.5	-108.3
	PHL-93 (+)	90.1	78.2	66.9	55.9	45.6	36.6	28.5	20.3	12.6	5.4	0.4	97.5	88.8	78.5	67.8	56.8	46.7	37.7	28.0	18.7	10.2	9.9
	PHL-93 (-)	-9.7	-10.0	-18.3	-27.5	-37.0	-46.7	-57.8	-68.9	-79.8	-90.3	-99.2	-0.4	-5.3	-12.4	-20.0	-28.1	-36.6	-46.3	-56.9	-68.0	-79.5	-91.6
	P82 (+)	142.9	124.0	105.2	86.3	67.4	49.6	34.8	24.1	13.9	4.4	0.3	152.4	138.0	120.2	100.8	80.1	59.8	42.4	29.7	17.3	15.3	15.3
	P82 (-)	-15.1	-15.1	-17.0	-29.2	-41.7	-59.8	-81.5	-102.5	-122.2	-140.3	-154.9	-0.3	-4.3	-13.7	-23.7	-34.2	-49.6	-68.5	-87.7	-106.9	-126.1	-145.3
	P2016-13 (+)	163.4	135.4	112.1	90.5	70.2	54.7	41.0	26.3	12.6	3.9	0.3	175.1	151.1	128.2	110.5	94.9	76.7	56.7	32.9	16.3	16.3	16.3
	P2016-13 (-)	-16.1	-16.1	-16.1	-32.4	-55.8	-76.7	-96.5	-112.4	-130.3	-153.7	-178.0	-0.3	-3.8	-12.4	-25.8	-40.3	-54.7	-71.4	-92.0	-114.0	-137.7	-166.2

NOTES :
ALL SHEARS ARE UNFACTORED
DC2 VALUES INCLUDE FUTURE WEARING SURFACE
PHL-93 AND P-82 LOADS INCLUDE IMPACT

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
P/S CONCRETE BEAM SHEAR TABLE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 27 OF 54

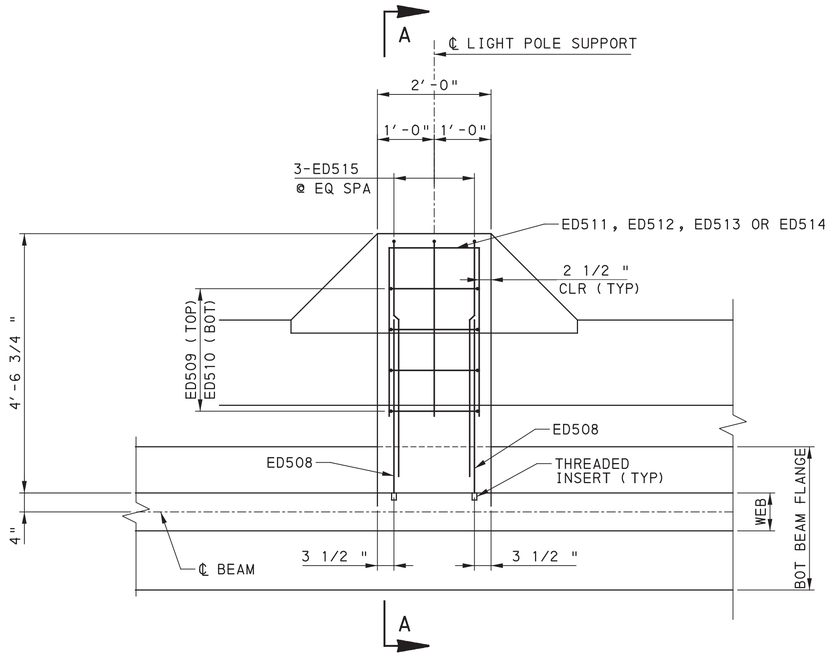
S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

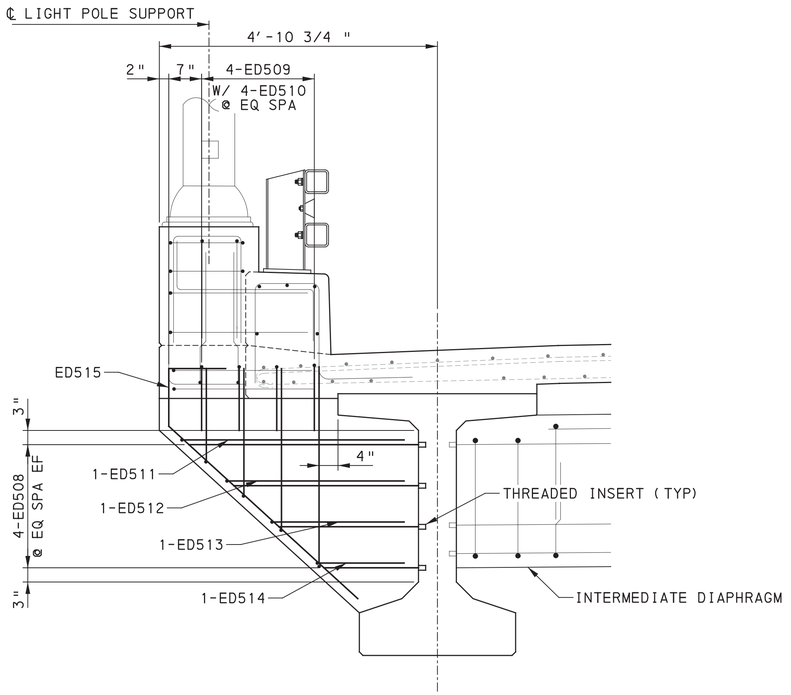
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss007.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTss008.dgn



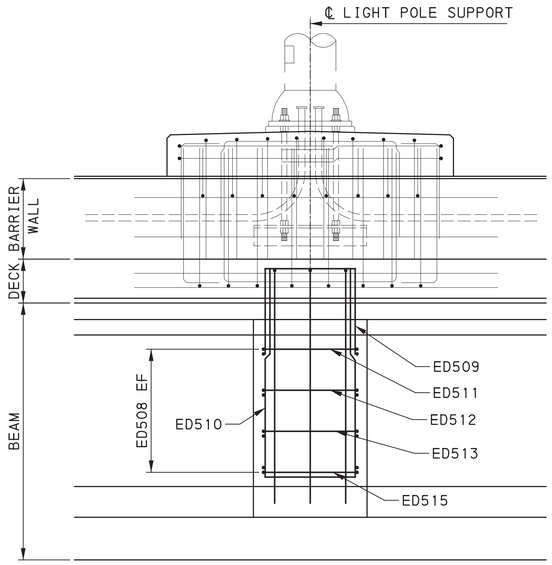
PLAN

12 0 12 INCHES



SECTION A-A

12 0 12 INCHES



ELEVATION

12 0 12 INCHES

REFERENCES:

1. FOR LOCATION OF LIGHT POLE SUPPORTS, SEE RAILING PLAN SHEET 32
2. FOR LIGHT POLE ANCHORAGE DETAILS, SEE SHEET 37
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 40

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE

LIGHT POLE SUPPORT DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

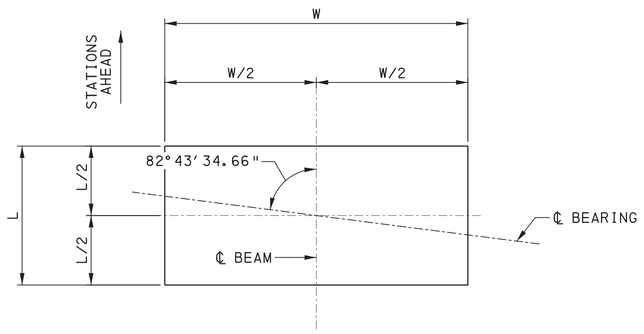
RECOMMENDED AUGUST 22, 2022

SHEET 28 OF 54

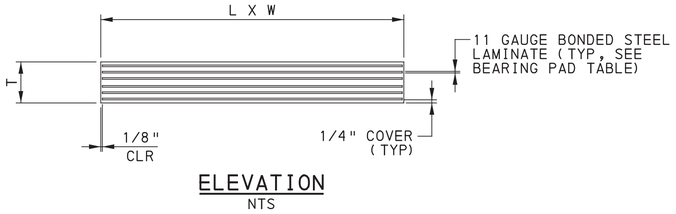
S-41007

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

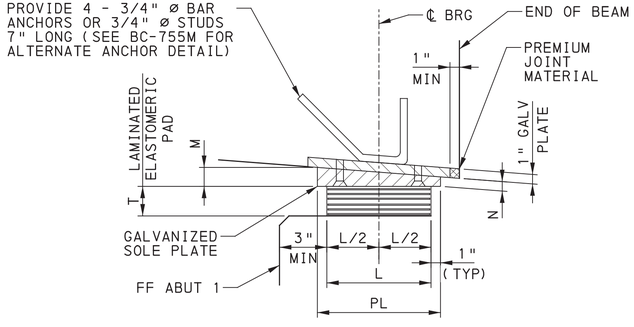
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTbg001.dgn



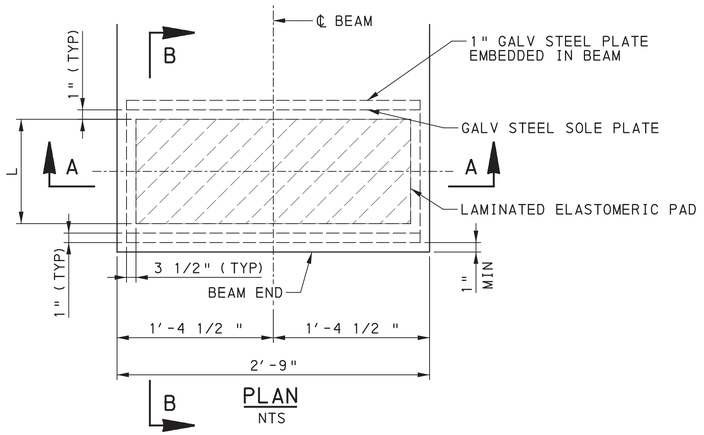
PLAN
NTS



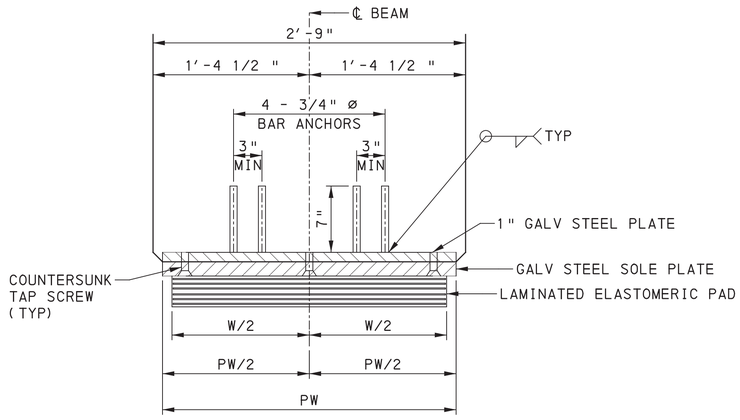
ELEVATION
NTS



SECTION B-B
NTS



PLAN
NTS



SECTION A-A
NTS

FUTURE BEARING REPLACEMENT NOTES:

1. DO NOT DAMAGE THE SUPERSTRUCTURE OR SUBSTRUCTURE WHEN JACKING AND REPLACING THE BEARINGS.
2. THE MAXIMUM ALLOWABLE JACKING DISPLACEMENT IS 1/4".
3. SUBMIT THE PROPOSED JACKING AND REPLACEMENT PROCEDURE FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY JACKING OPERATIONS.
4. AT EACH SUBSTRUCTURE UNIT, JACK ALL BEAMS SIMULTANEOUSLY WITH THE SAME DISPLACEMENT AND RATE OF DISPLACEMENT. PROVIDE HYDRAULIC REGULATING DEVICES.
5. PROVIDE BEVELED LOAD PLATES TO MAINTAIN A LEVEL JACKING SURFACE.
6. INSTALL BLOCKING TO SUPPORT THE SUPERSTRUCTURE DURING THE BEARING REPLACEMENT. LEAVE JACKS IN PLACE AT ALL TIMES.
7. TRAFFIC IS NOT PERMITTED ON THE BRIDGE OR APPROACH SLAB WHILE JACKING IS OCCURRING. THE JACKING LOAD SHALL CONSIST OF THE DEAD LOAD ONLY.
8. THE JACKING CONTRACTOR IS RESPONSIBLE TO SIZE THE JACKS, JACK TOWERS AND DESIGN THE JACKING PROCEDURE, INCLUDING BUT NOT LIMITED TO, CHECKING CONCRETE BEARING STRESSES AND STABILITY. PROVIDE A JACK WITH A MINIMUM SAFE JACKING CAPACITY OF 150% OF THE LOAD TO BE JACKED AT THE JACKING POINT.
9. PROVIDE JACKS WITH LOCKING CAPABILITY.
10. ACCOUNT FOR ANY THERMAL MOVEMENTS AND ALL HORIZONTAL FORCED THAT MAY BE ENCOUNTERED DURING THE PERIOD THAT THE SUPERSTRUCTURE IS BEING JACKED OR IS RESTING ON TEMPORARY SUPPORTS.

ELASTOMERIC BEARING PAD DIMENSIONS AND PROPERTIES

					COVER LAYER		INTERIOR LAYER				LAMINATED PAD TOTALS				
BEARING LOCATION	BRG. TYPE	BRG. WIDTH (W)	BRG. LENGTH (L)	AREA OF COMPRESSION	LAYER THICK.	SHAPE FACTOR	LAYER THICK.	NO. OF LAYERS	NO. SHIM PL 11 GA.	SHAPE FACTOR	ELASTOMER THICK.	BEARING THICK. (T)	NUMBER REQUIRED	TEST BEARING	TOTAL REQUIRED
PIER 1	EXP	24"	11"	264 (IN²)	0.25"	15.086	0.375"	5	6	10.057	2.375"	3.125"	4	0	4
PIER 2 (S1)	FIX	24"	11"	264 (IN²)	0.25"	15.086	0.375"	5	6	10.057	2.375"	3.125"	4	0	4
PIER 2 (S2)	FIX	24"	11"	264 (IN²)	0.25"	15.086	0.375"	5	6	10.057	2.375"	3.125"	4	0	4
ABUT 1	EXP	24"	11"	264 (IN²)	0.25"	15.086	0.375"	5	6	10.057	2.375"	3.125"	4	1	5

SOLE PLATE TABLE

BEAM	SPAN 2 FAR END ONLY SOLE PLATE			
	M (in)	N (in)	PL (in)	PW (in)
1	2.00	1.00	13.00	31.00
2	2.00	1.00	13.00	31.00
3	2.00	1.00	13.00	31.00
4	2.00	1.00	13.00	31.00

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
BEARING DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

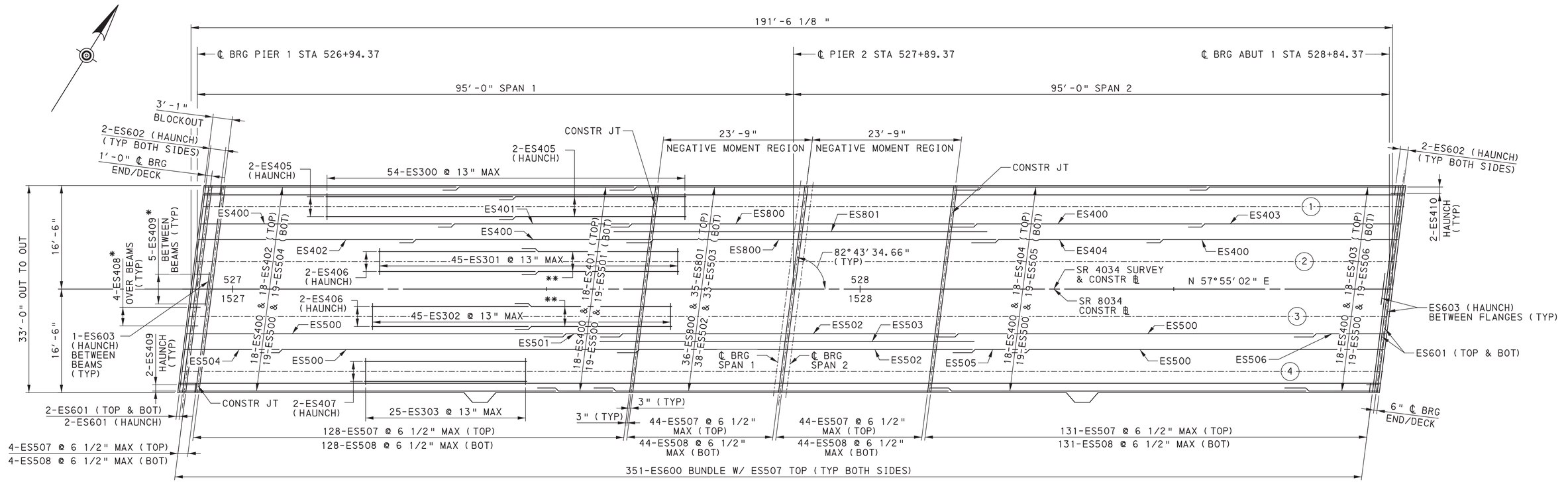
RECOMMENDED AUGUST 22, 2022

SHEET 29 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk001.dgn



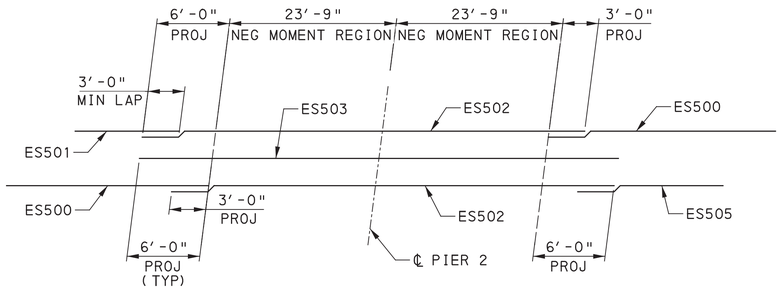
PLAN
2 0 4 8 FEET

* - PLACE PARALLEL TO AND CENTERED BETWEEN LONGITUDINAL TOP REINFORCEMENT

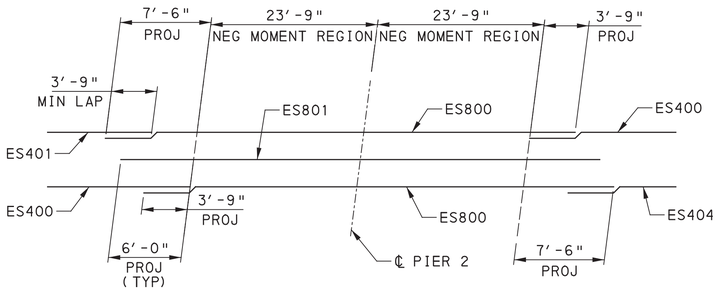
** - 2-ES406 (HAUNCH)

MINIMUM LAP SPLICE LENGTH
DECK BARS (ES)
#4 = 2'-1"
#5 = 3'-0"

HAUNCH REINFORCEMENT	
BEAM	REQUIRED RANGE - STA TO STA
1	527+15.04 TO 527+72.04
2	527+23.43 TO 527+70.93
3	527+22.31 TO 527+69.81
4	527+21.19 TO 527+46.69



BOTTOM NEGATIVE MOMENT REINF STAGGER DETAIL
NTS



TOP NEGATIVE MOMENT REINF STAGGER DETAIL
NTS

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 31
FOR BARRIER PLAN, SEE SHEET 32
FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 39
FOR END DIAPHRAGMS, SEE SHEETS 34 & 36
FOR PIER 2 DIAPHRAGMS, SEE SHEET 35
FOR DECK POURING SEQUENCE, SEE SHEET 38

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

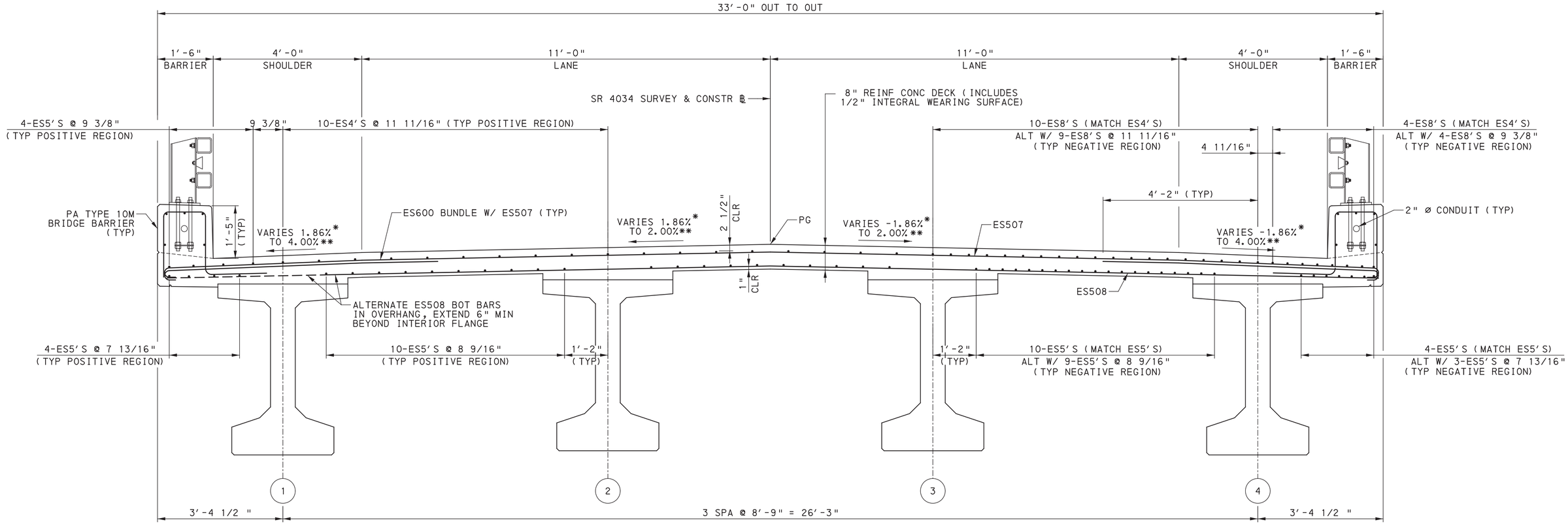
RECOMMENDED AUGUST 22, 2022

SHEET 30 OF 54

S-41007

DES: DFK	CKD: CMS	DWG: DFK	CKD: JP

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk002.dgn

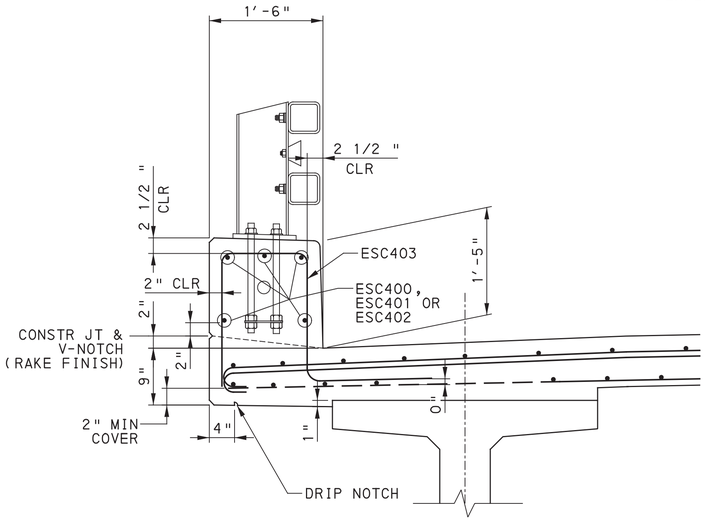


* - ALONG STATE STREET BRIDGE DECK OVERHANG

** - PERPENDICULAR TO SR 4034 SURVEY & CONSTR ℄

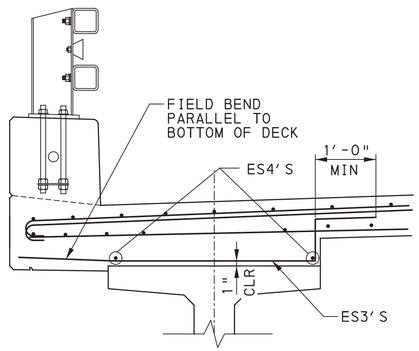
TYPICAL SECTION

12 0 12 INCHES



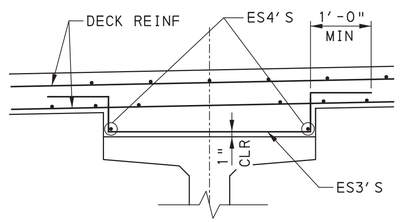
TYPICAL BARRIER SECTION

6 0 6 12 INCHES



HAUNCH DETAIL 1

NTS
(BEAMS 1 & 4)



HAUNCH DETAIL 2

NTS
(BEAMS 2 & 3)

HAUNCH REINFORCEMENT REQUIREMENTS:

THE HAUNCH REINFORCEMENT QUANTITY SHOWN ON THE REINFORCEMENT BAR SCHEDULE PROVIDES THE AMOUNT NECESSARY TO COVER THE LIMITS SHOWN ON SHEET 30. PROVIDE ADDITIONAL HAUNCH REINFORCEMENT IN OTHER REGIONS ALONG THE LENGTH OF THE BEAM WHERE ACTUAL HAUNCHES EXCEED THE THICKNESS SPECIFIED IN BC-752M.

REFERENCES:

FOR DECK PLAN, SEE SHEET 30

FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 39

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK SLAB - TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

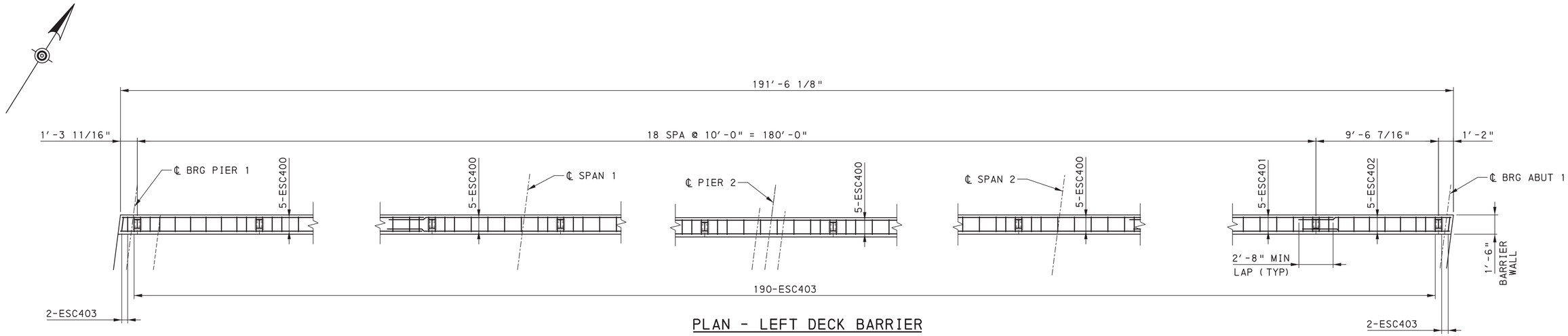
RECOMMENDED AUGUST 22, 2022

SHEET 31 OF 54

S-41007

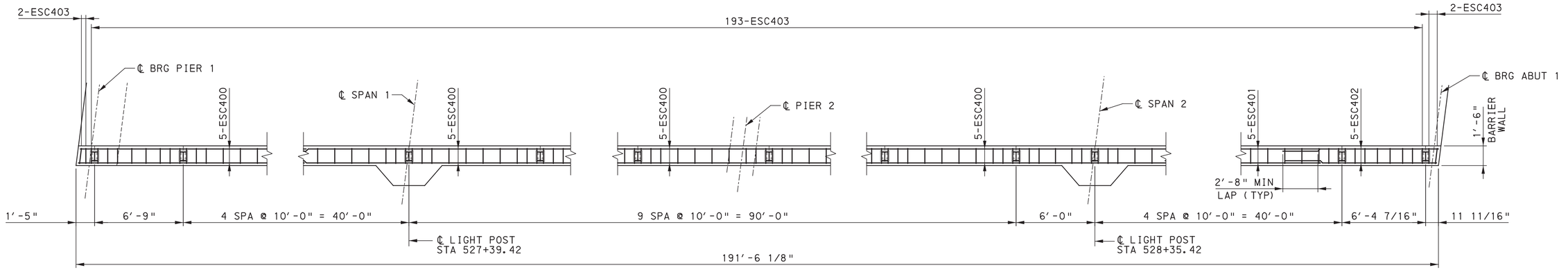
DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	JP

PLOTTED: 8/22/2022



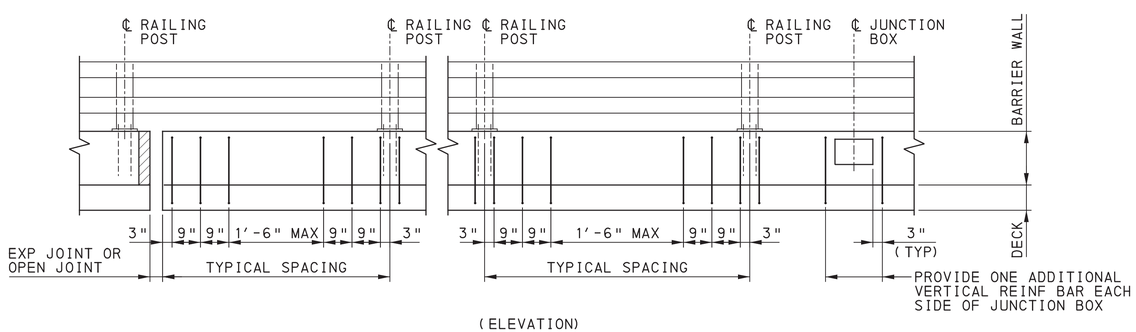
PLAN - LEFT DECK BARRIER

2 0 2 4 FEET



PLAN - RIGHT DECK BARRIER

2 0 2 4 FEET



(ELEVATION)

PA TYPE 10M BRIDGE BARRIER - VERTICAL REINFORCEMENT SPACING

NOT TO SCALE

REFERENCES:

1. FOR TYPICAL DECK AND BARRIER SECTIONS, SEE SHEET 31
2. FOR LIGHT POLE DETAILS, SEE SHEET 37
3. FOR LIGHT POLE SUPPORT DETAILS, SEE SHEET 28
4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 39

NOTES:

1. LIGHT POLES TO BE CENTERED BEHIND A BARRIER POST. COORDINATE WITH BARRIER/RAIL CONTRACTOR AND ADJUST POLE LOCATIONS AS REQUIRED.
2. A BARRIER POST IS REQUIRED TO BE PLACED IN FRONT OF EACH LIGHT POLE. COORDINATE BARRIER POST/POLE LOCATIONS WITH LIGHTING CONTRACTOR. ADJUST POST LOCATIONS AS REQUIRED.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK BARRIER AND RAILING PLAN

REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

RECOMMENDED AUGUST 22, 2022

SHEET 32 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_Exsheets\FINAL\ramp_SS_ESTdk003.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\FINAL\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk004.dgn

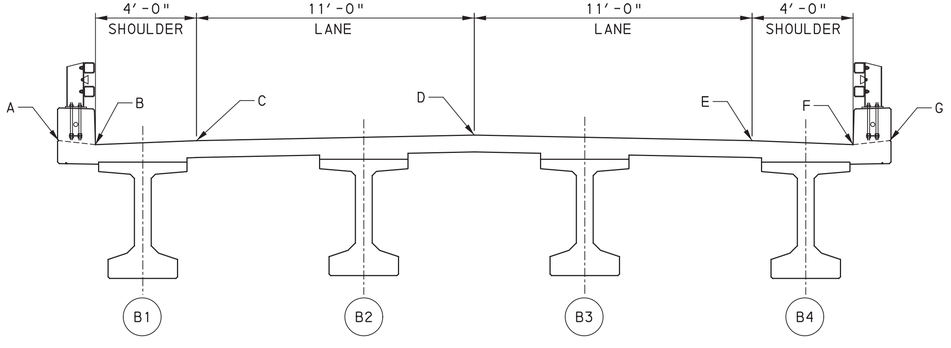
TABLE OF DECK ELEVATIONS ALONG CL BEAMS								
LOCATION	BEAM B1		BEAM B2		BEAM B3		BEAM B4	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
PIER 1 CL BRG	526+96.04	604.63	526+94.93	604.81	526+93.81	604.99	526+92.69	605.16
0.10 L	527+05.44	604.50	527+04.33	604.69	527+03.21	604.85	527+02.09	605.01
0.20 L	527+14.84	604.37	527+13.73	604.57	527+12.61	604.72	527+11.49	604.83
0.30 L	527+24.24	604.19	527+23.13	604.42	527+22.01	604.55	527+20.89	604.62
0.40 L	527+33.64	603.96	527+32.53	604.21	527+31.41	604.32	527+30.29	604.36
0.50 L	527+43.04	603.68	527+41.93	603.94	527+40.81	604.04	527+39.69	604.04
0.60 L	527+52.44	603.35	527+51.33	603.61	527+50.21	603.70	527+49.09	603.67
0.70 L	527+61.84	602.96	527+60.73	603.23	527+59.61	603.30	527+58.49	603.23
0.80 L	527+71.24	602.52	527+70.13	602.79	527+69.01	602.85	527+67.89	602.75
0.90 L	527+80.64	602.02	527+79.53	602.30	527+78.41	602.36	527+77.29	602.24
PIER 2, LT BRG	527+90.04	601.46	527+88.93	601.75	527+87.81	601.82	527+86.69	601.69
PIER 2, RT BRG	527+92.04	601.34	527+90.93	601.62	527+89.81	601.69	527+88.69	601.56
1.10 L	528+01.44	600.71	528+00.33	601.00	527+99.21	601.08	527+98.09	600.95
1.20 L	528+10.84	600.05	528+09.73	600.35	528+08.61	600.43	528+07.49	600.29
1.30 L	528+20.24	599.39	528+19.13	599.69	528+18.01	599.77	528+16.89	599.63
1.40 L	528+29.64	598.74	528+28.53	599.03	528+27.41	599.11	528+26.29	598.97
1.50 L	528+39.04	598.08	528+37.93	598.37	528+36.81	598.45	528+35.69	598.31
1.60 L	528+48.44	597.42	528+47.33	597.72	528+46.21	597.79	528+45.09	597.65
1.70 L	528+57.84	596.76	528+56.73	597.06	528+55.61	597.14	528+54.49	597.00
1.80 L	528+67.24	596.10	528+66.13	596.40	528+65.01	596.48	528+63.89	596.34
1.90 L	528+76.64	595.45	528+75.53	595.74	528+74.41	595.82	528+73.29	595.68
ABUT 1 CL BRG	528+86.04	594.79	528+84.93	595.08	528+83.81	595.16	528+82.69	595.02

FINISHED APPROACH SLAB ELEVATIONS AT BREAK POINTS								
LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)	ELEV (F)	ELEV (G)
BEGIN APPR SLAB	528+82.77	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	595.11
BEGIN APPR SLAB	528+82.96	- - - -	- - - -	- - - -	- - - -	- - - -	594.93	- - - -
BEGIN APPR SLAB	528+83.47	- - - -	- - - -	- - - -	- - - -	595.05	- - - -	- - - -
BEGIN APPR SLAB	528+84.87	- - - -	- - - -	- - - -	595.17	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.28	- - - -	- - - -	594.86	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.79	- - - -	594.66	- - - -	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.98	594.81	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -
	528+90.00	594.60	594.44	594.60	594.82	594.60	594.44	594.60
	529+00.00	593.90	593.74	593.90	594.12	593.90	593.74	593.90
	529+10.00	593.20	593.04	593.20	593.42	593.20	593.04	593.20
END APPR SLAB	529+12.56	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	593.02
END APPR SLAB	529+12.75	- - - -	- - - -	- - - -	- - - -	- - - -	592.84	- - - -
END APPR SLAB	529+13.26	- - - -	- - - -	- - - -	- - - -	592.97	- - - -	- - - -
END APPR SLAB	529+14.66	- - - -	- - - -	- - - -	593.09	- - - -	- - - -	- - - -
END APPR SLAB	529+16.07	- - - -	- - - -	592.77	- - - -	- - - -	- - - -	- - - -
END APPR SLAB	529+16.58	- - - -	592.58	- - - -	- - - -	- - - -	- - - -	- - - -
END APPR SLAB	529+16.77	592.73	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -

FINISHED DECK ELEVATIONS AT BREAK POINTS								
LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ELEV (E)	ELEV (F)	ELEV (G)
BEGIN DECK	526+91.25	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	605.38
BEGIN DECK	526+91.45	- - - -	- - - -	- - - -	- - - -	- - - -	605.21	- - - -
BEGIN DECK	526+91.96	- - - -	- - - -	- - - -	- - - -	605.13	- - - -	- - - -
PIER 1 CL BRG	526+92.26	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	605.37
PIER 1 CL BRG	526+92.45	- - - -	- - - -	- - - -	- - - -	- - - -	605.20	- - - -
PIER 1 CL BRG	526+92.96	- - - -	- - - -	- - - -	- - - -	605.12	- - - -	- - - -
BEGIN DECK	526+93.36	- - - -	- - - -	- - - -	604.91	- - - -	- - - -	- - - -
PIER 1 CL BRG	526+94.37	- - - -	- - - -	- - - -	604.90	- - - -	- - - -	- - - -
BEGIN DECK	526+94.76	- - - -	- - - -	604.69	- - - -	- - - -	- - - -	- - - -
BEGIN DECK	526+95.27	- - - -	604.61	- - - -	- - - -	- - - -	- - - -	- - - -
BEGIN DECK	526+95.47	604.77	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -
PIER 1 CL BRG	526+95.77	- - - -	- - - -	604.68	- - - -	- - - -	- - - -	- - - -
PIER 1 CL BRG	526+96.28	- - - -	604.60	- - - -	- - - -	- - - -	- - - -	- - - -
PIER 1 CL BRG	526+96.47	604.76	- - -	- - - -	- - - -	- - - -	- - - -	- - - -
	527+00.00	604.71	604.54	604.62	604.83	605.01	605.08	605.24
	527+10.00	604.56	604.39	604.50	604.71	604.83	604.88	605.04
	527+20.00	604.39	604.22	604.35	604.56	604.63	604.65	604.82
	527+30.00	604.16	603.99	604.14	604.35	604.37	604.37	604.54
	527+40.00	603.87	603.70	603.86	604.08	604.04	604.02	604.19
	527+50.00	603.54	603.37	603.53	603.75	603.65	603.61	603.77
	527+60.00	603.14	602.97	603.13	603.35	603.19	603.13	603.30
	527+70.00	602.67	602.51	602.67	602.89	602.67	602.59	602.76
	527+80.00	602.15	601.98	602.14	602.36	602.14	602.04	602.20
PIER 2 CL BRG	527+87.26	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	601.76
PIER 2 CL BRG	527+87.45	- - - -	- - - -	- - - -	- - - -	- - - -	601.59	- - - -
PIER 2 CL BRG	527+87.96	- - - -	- - - -	- - - -	- - - -	601.67	- - - -	- - - -
PIER 2 CL BRG	527+89.37	- - - -	- - - -	- - - -	601.81	- - - -	- - - -	- - - -
	527+90.00	601.56	601.39	601.55	601.77	601.55	601.42	601.59
PIER 2 CL BRG	527+90.77	- - - -	- - - -	601.50	- - - -	- - - -	- - - -	- - - -
PIER 2 CL BRG	527+91.28	- - - -	601.31	- - - -	- - - -	- - - -	- - - -	- - - -
PIER 2 CL BRG	527+91.47	601.46	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -
	528+00.00	600.90	600.73	600.89	601.11	600.89	600.75	600.91
	528+10.00	600.20	600.04	600.20	600.42	600.20	600.04	600.20
	528+20.00	599.50	599.34	599.50	599.72	599.50	599.34	599.50
	528+30.00	598.80	598.64	598.80	599.02	598.80	598.64	598.80
	528+40.00	598.10	597.94	598.10	598.32	598.10	597.94	598.10
	528+50.00	597.40	597.24	597.40	597.62	597.40	597.24	597.40
	528+60.00	596.70	596.54	596.70	596.92	596.70	596.54	596.70
	528+70.00	596.00	595.84	596.00	596.22	596.00	595.84	596.00
	528+80.00	595.30	595.14	595.30	595.52	595.30	595.14	595.30
ABUT 1 CL BRG	528+82.26	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	595.14
ABUT 1 CL BRG	528+82.45	- - - -	- - - -	- - - -	- - - -	- - - -	594.96	- - - -
BEGIN APPR SLAB	528+82.77	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	595.11
BEGIN APPR SLAB	528+82.96	- - - -	- - - -	- - - -	- - - -	- - - -	594.93	- - - -
ABUT 1 CL BRG	528+82.96	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	595.11
ABUT 1 CL BRG	528+83.47	- - - -	- - - -	- - - -	- - - -	595.05	- - - -	- - - -
ABUT 1 CL BRG	528+84.37	- - - -	- - - -	- - - -	595.21	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+84.87	- - - -	- - - -	- - - -	595.17	- - - -	- - - -	- - - -
ABUT 1 CL BRG	528+85.77	- - - -	- - - -	594.89	- - - -	- - - -	- - - -	- - - -
ABUT 1 CL BRG	528+86.28	- - - -	594.70	- - - -	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.28	- - - -	- - - -	594.86	- - - -	- - - -	- - - -	- - - -
ABUT 1 CL BRG	528+86.47	594.85	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.79	- - - -	594.66	- - - -	- - - -	- - - -	- - - -	- - - -
BEGIN APPR SLAB	528+86.98	594.81	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -

REFERENCES:

1. FOR APPROACH SLAB SECTION, SEE SHEET 43



DECK SECTION
NTS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK & APPROACH SLAB ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

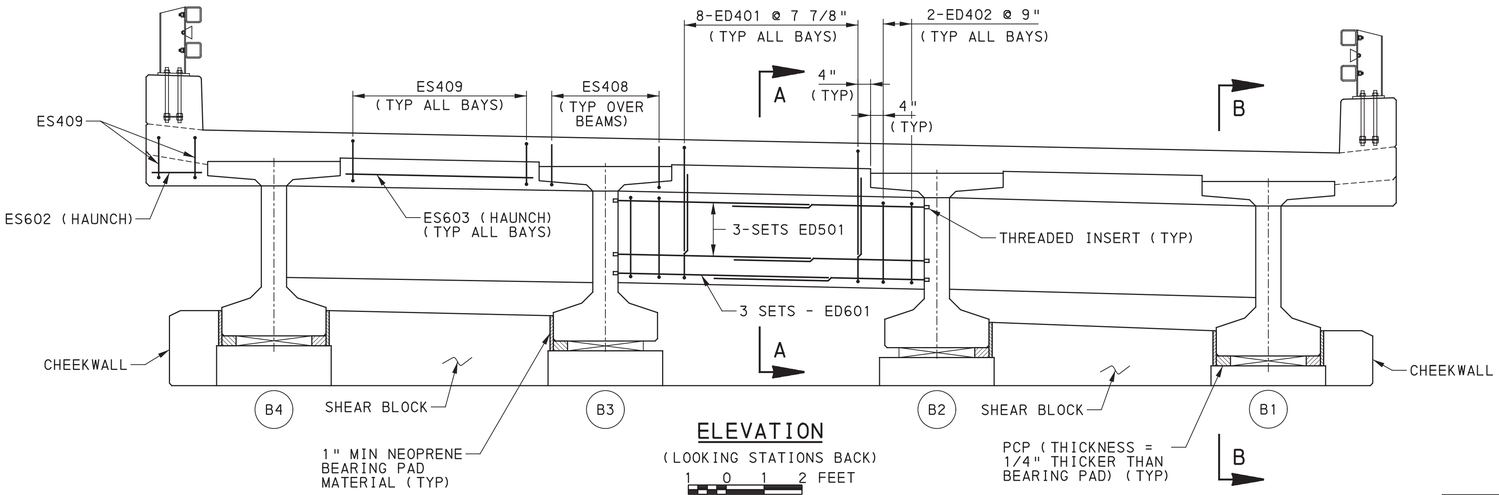
RECOMMENDED AUGUST 22, 2022

SHEET 33 OF 54

S-41007

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk005.dgn



ELEVATION

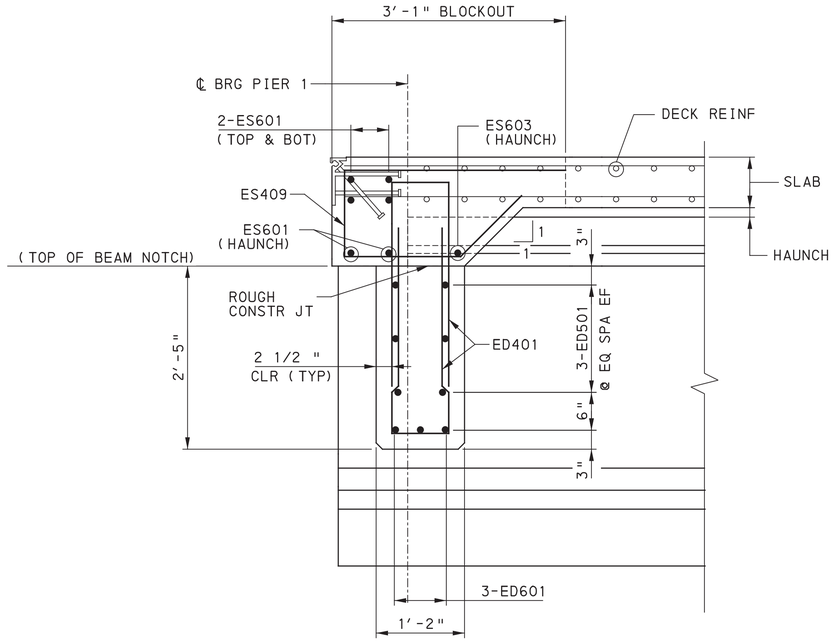
(LOOKING STATIONS BACK)

1 0 1 2 FEET

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2'-1"
#5 = 2'-7"
#6 = 3'-1"

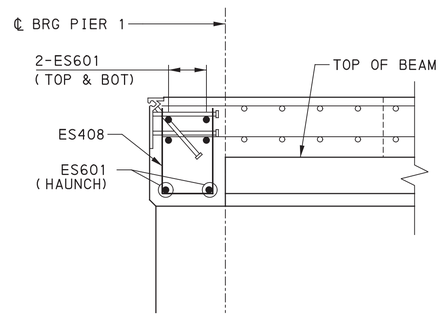
REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 40



SECTION A-A

6 0 6 12 INCHES



SECTION B-B

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 1 END DIAPHRAGMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

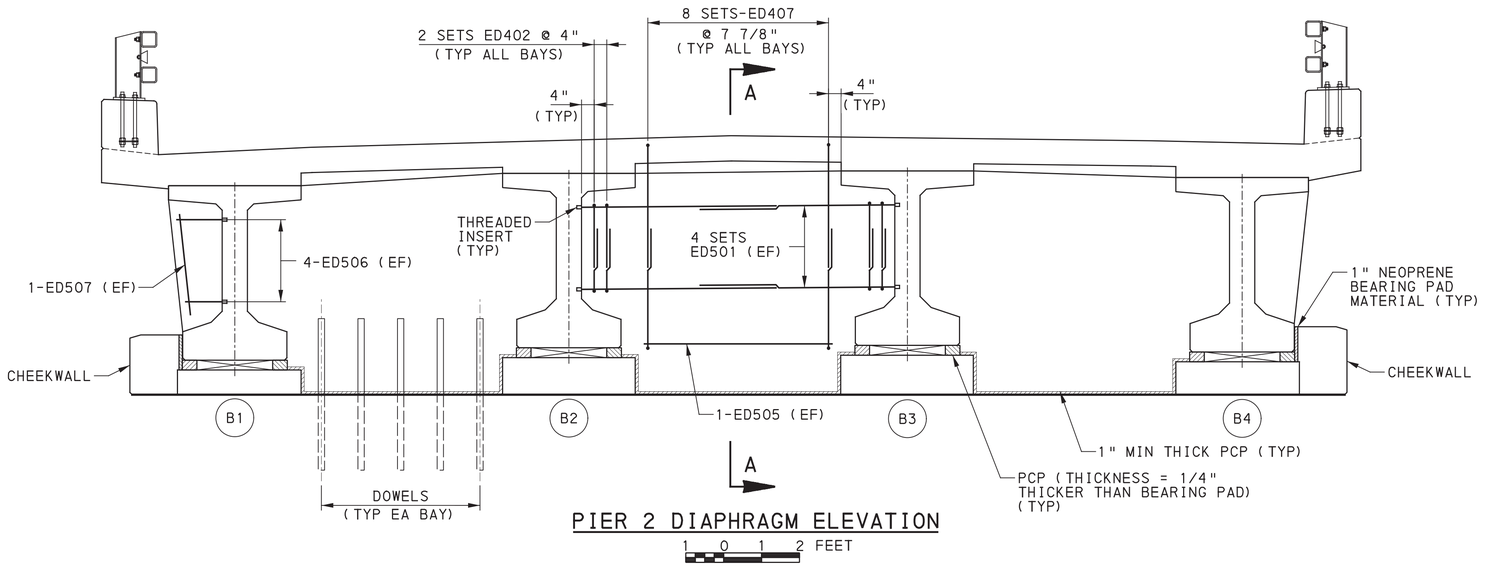
RECOMMENDED AUGUST 22, 2022

SHEET 34 OF 54

S-41007

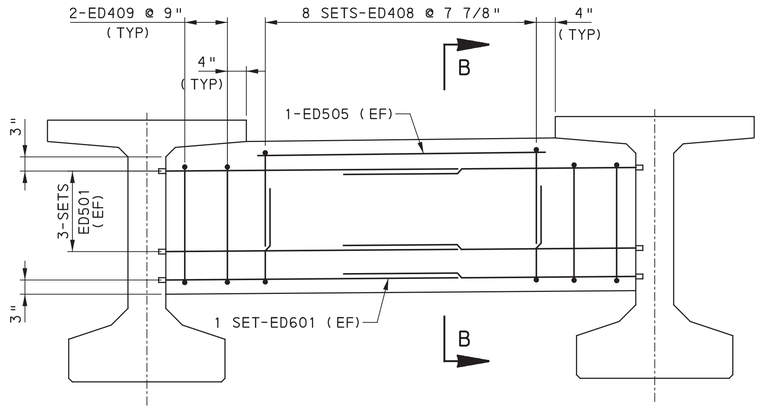
DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk007.dgn



PIER 2 DIAPHRAGM ELEVATION

1 0 1 2 FEET



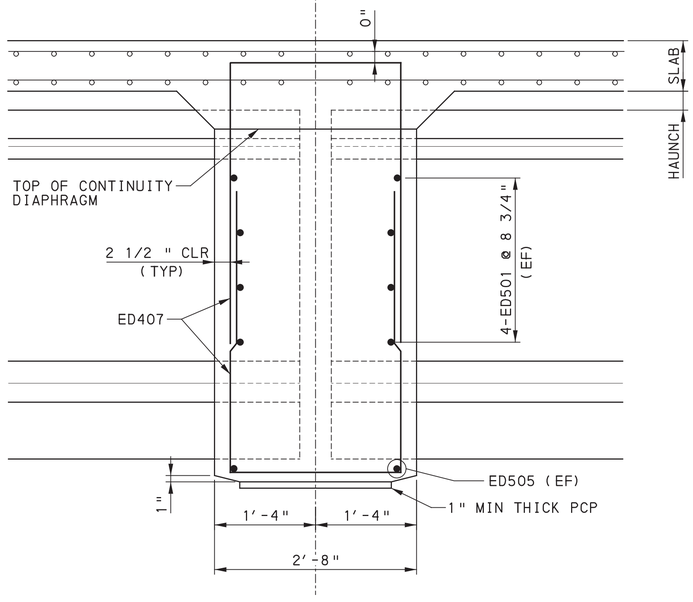
INTERMEDIATE DIAPHRAGM ELEVATION

12 0 12 INCHES

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2′-1"
#5 = 2′-7"
#6 = 3′-1"

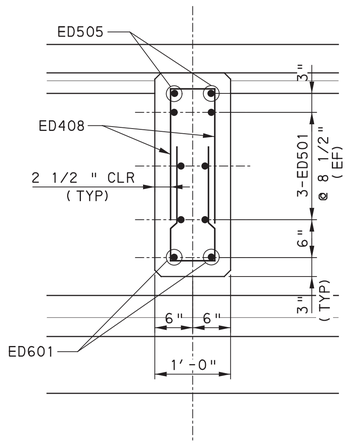
REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 40
3. FOR PIER CAP DETAILS, SEE SHEET 10



SECTION A-A

6 0 6 12 INCHES



SECTION B-B

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
PIER 2 & INTERMEDIATE DIAPHRAGMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

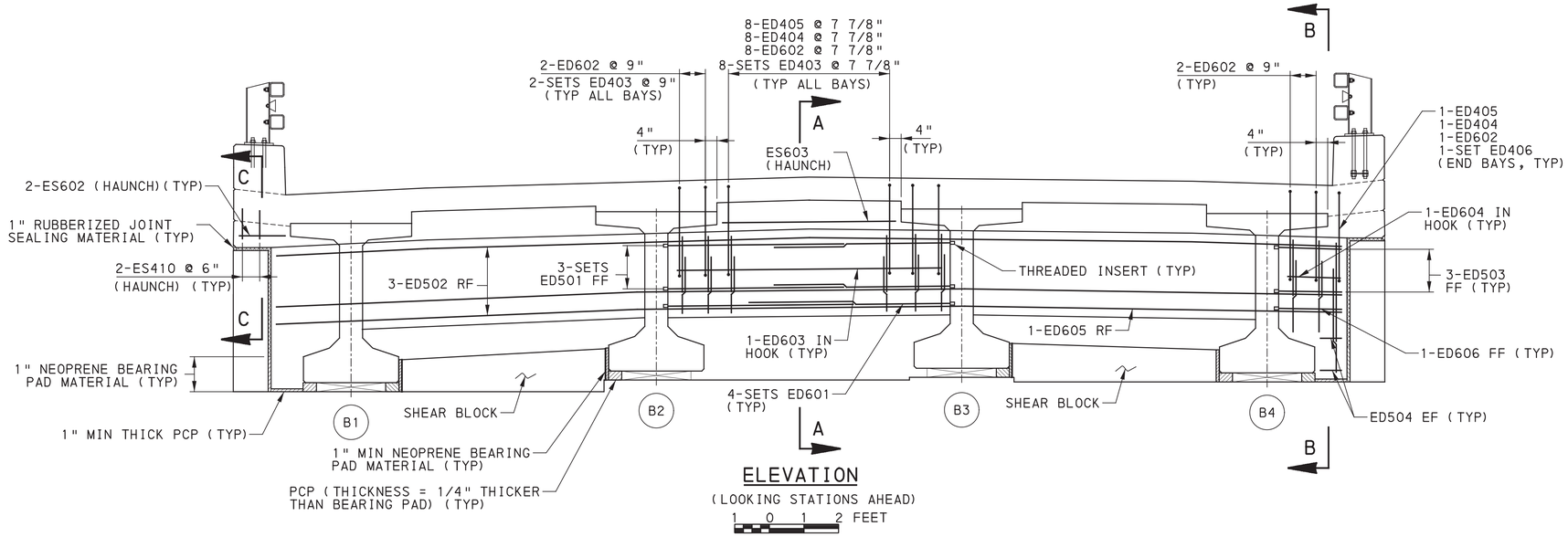
SHEET 36 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

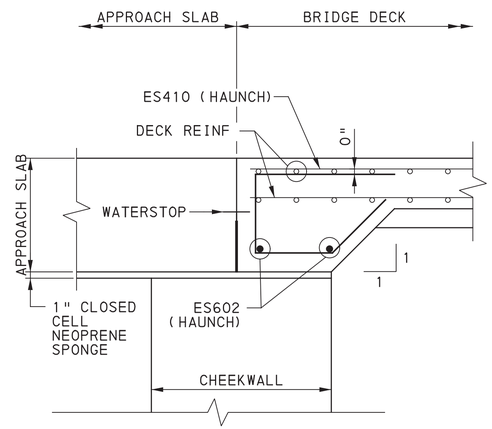
OPERATOR:
FILE NAME: \\mseconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk006.dgn



ELEVATION

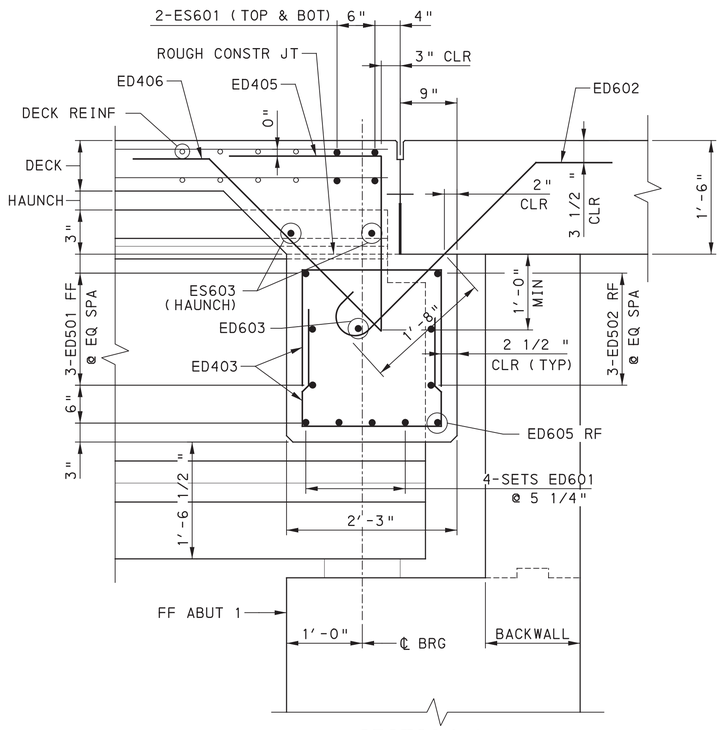
(LOOKING STATIONS AHEAD)

1 0 1 2 FEET



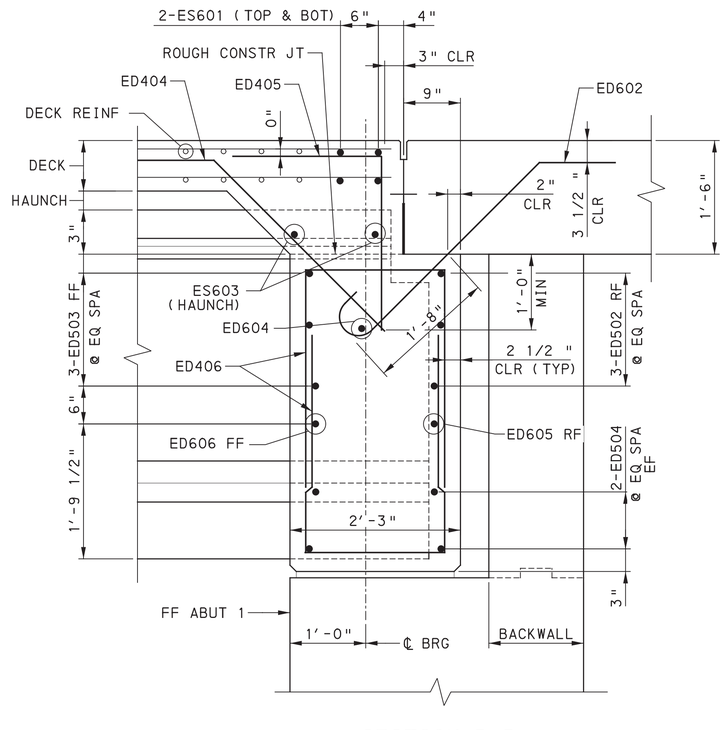
SECTION C-C

6 0 6 12 INCHES



SECTION A-A

6 0 6 12 INCHES



SECTION B-B

6 0 6 12 INCHES

MINIMUM LAP SPLICE LENGTH
DIAPHRAGM BARS (ED)
#4 = 2'-1"
#5 = 2'-7"
#6 = 3'-1"

REFERENCES:

1. FOR ADDITIONAL WATERPROOFING INFORMATION, SEE BC-788M.
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 40

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 END DIAPHRAGM

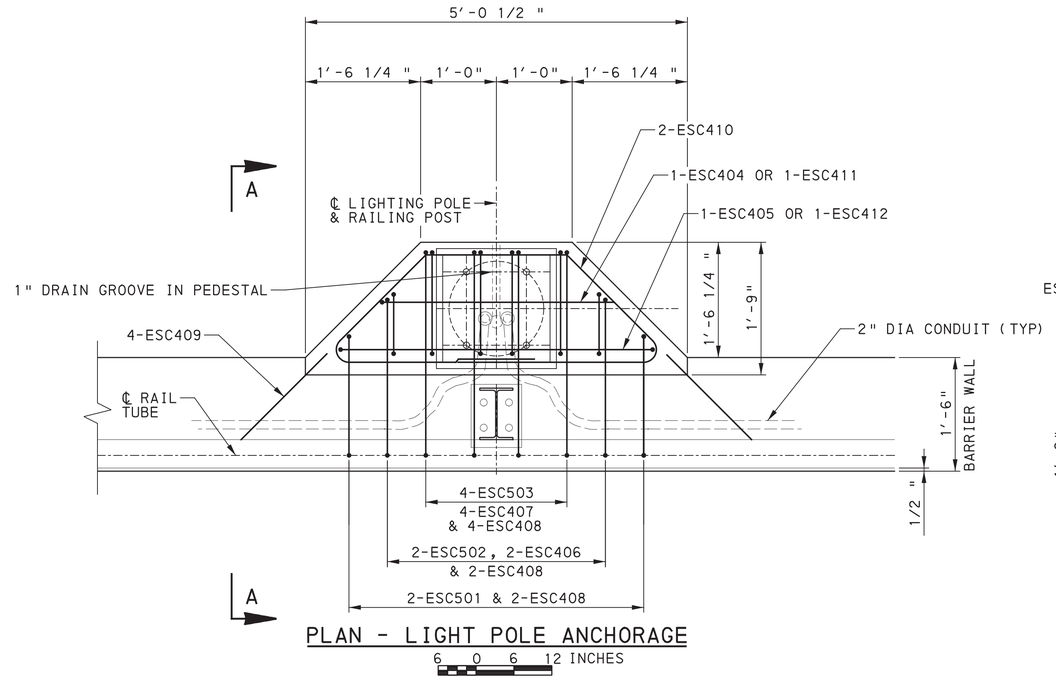
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 35 OF 54

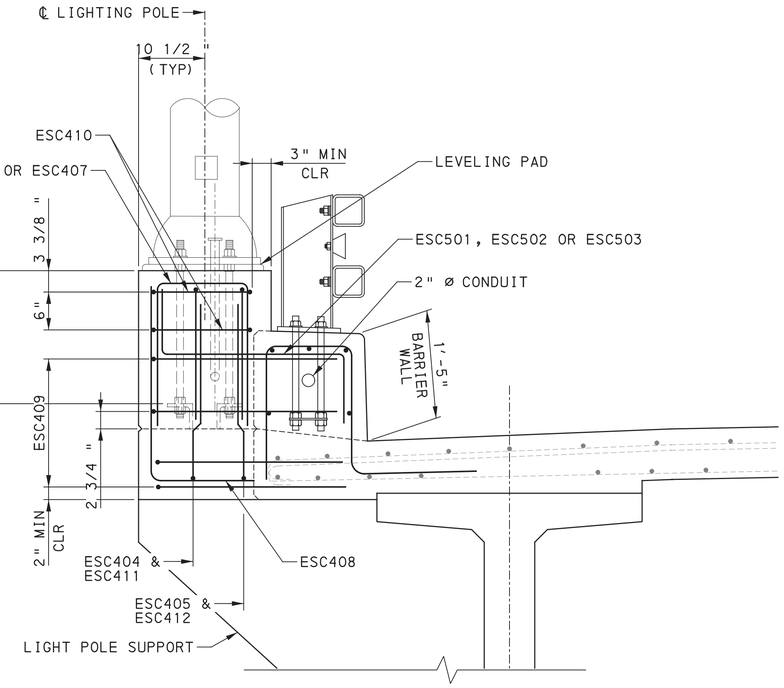
S-41007

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS



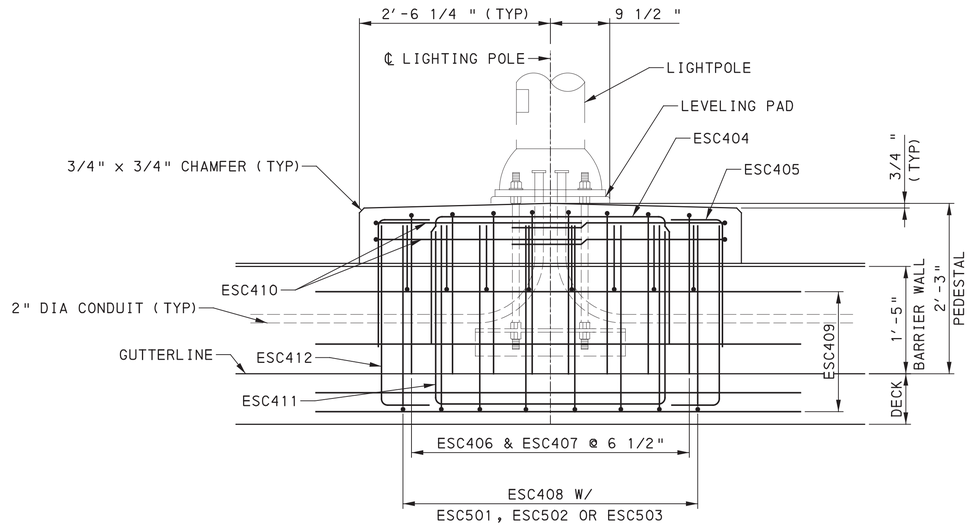
PLAN - LIGHT POLE ANCHORAGE

6 0 6 12 INCHES



SECTION A-A

6 0 6 12 INCHES



ELEVATION - LIGHT POLE ANCHORAGE

6 0 6 12 INCHES

REFERENCES

1. FOR DECK BARRIER PLAN, SEE SHEET 32
2. FOR LIGHT POLE SUPPORT DETAILS, SEE SHEET 37
3. FOR REINFORCEMENT BAR SCHEDULE. SEE SHEET 39

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK LIGHT POLE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

RECOMMENDED AUGUST 22, 2022

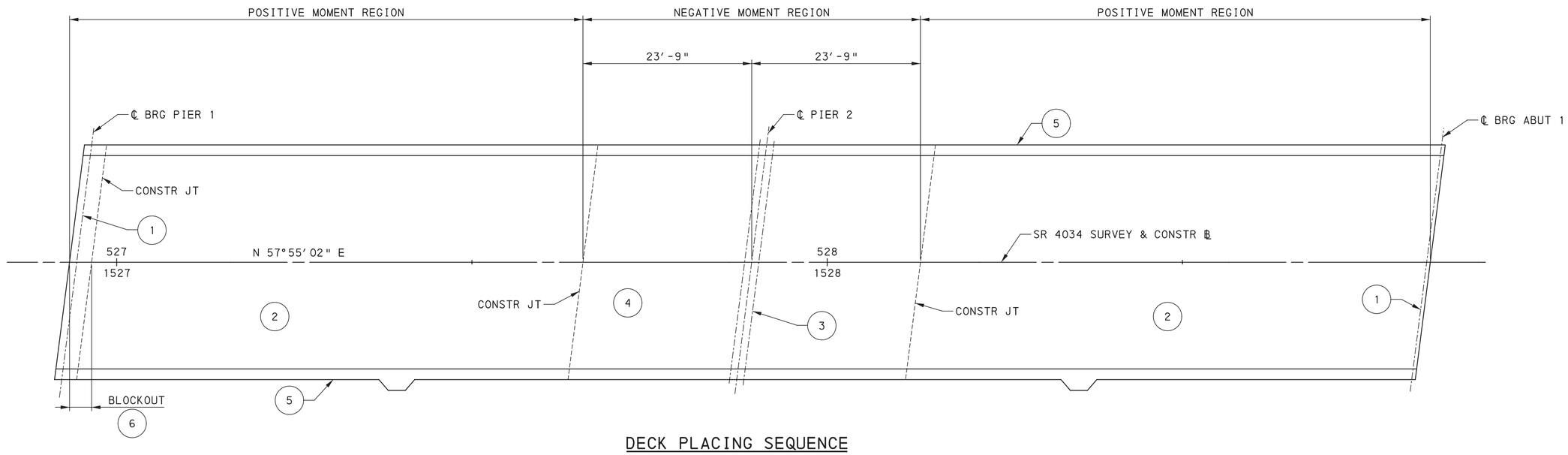
SHEET 37 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk008.dgn



DECK PLACING SEQUENCE

NTS

DECK PLACING SEQUENCE

(1) PLACE INTERMEDIATE DIAPHRAGMS, SHEAR BLOCKS BETWEEN BEAMS AND END DIAPHRAGMS AT ABUTMENT.

(2) PLACE SLAB IN POSITIVE MOMENT AREAS.

(3) PLACE CONTINUITY DIAPHRAGM AT PIER.

(4) PLACE SLAB IN NEGATIVE MOMENT AREAS.
PLACE A MINIMUM 2 HOURS AFTER THE CONTINUITY DIAPHRAGMS ARE PLACED.

(5) PLACE BARRIERS IN POSITIVE MOMENT REGION. THEN NEGATIVE REGION, UNLESS CONTINUOUS PLACEMENT CAN BE MADE.

(6) PLACE CONCRETE IN BLOCKOUT AREAS AFTER STRIP SEAL IS SET.

NOTE:
AN ALTERNATE DECK POURING SEQUENCE MAY BE EMPLOYED BY THE CONTRACTOR UPON APPROVAL BY THE REPRESENTATIVE.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK PLACING SEQUENCE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 38 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdk009.dgn

PLOTTED: 8/22/2022

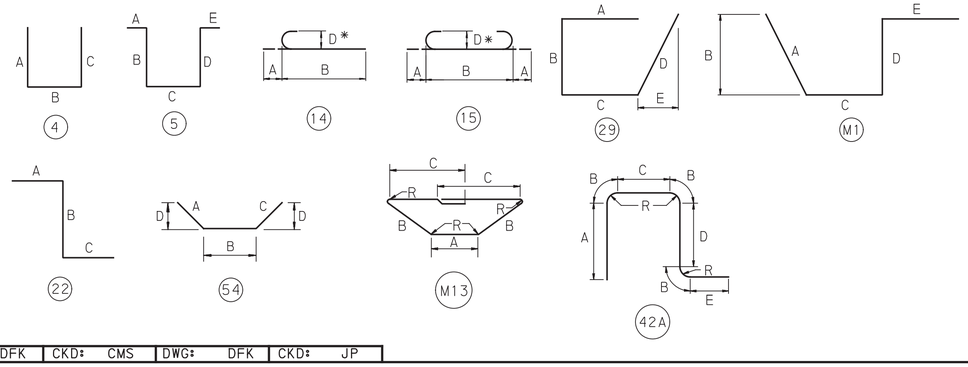
OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdkrb001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
DECK											
ES300	3	54	6′-6 1/2"	M1	1′-7 1/2"	9"	3′-2"	9"	1′-0"		
ES301	3	45	6′-6 1/2"	5	1′-0"	8 1/4"	3′-2"	8 1/4"	1′-0"		
ES302	3	45	6′-5 1/2"	5	1′-0"	7 3/4"	3′-2"	7 3/4"	1′-0"		
ES303	3	25	6′-4 1/2"	M1	1′-7 1/2"	7"	3′-2"	7"	1′-0"		
ES400	4	72	40′-0"	ST							
ES401	4	18	30′-8"	ST							
ES402	4	18	34′-6"	ST							
ES403	4	18	33′-11"	ST							
ES404	4	18	30′-2"	ST							
ES405	4	4	31′-0"	ST							
ES406	4	8	26′-0"	ST							
ES407	4	2	28′-0"	ST							
ES408	4	16	2′-6"	4	1′-0 1/2"	5"	1′-0 1/2"				
ES409	4	19	6′-5"	29	2′-9"	1′-0 3/4"	1′-5 3/4"	1′-1 1/2"	9 1/2"		
ES410	4	4	4′-11 1/2"	29	1′-10"	1′-0 1/2"	1′-0 1/4"	1′-0 1/2"	8 /12"		
ES500	5	76	60′-0"	ST							
ES501	5	19	12′-4"	ST							
ES502	5	38	56′-8"	ST							
ES503	5	33	59′-6"	ST							
ES504	5	19	15′-4"	ST							
ES505	5	19	11′-10"	ST							
ES506	5	19	14′-10"	ST							
ES507	5	351	34′-1"	15	7"	32′-11"					
ES508	5	351	28′-6"	ST							
ES600	6	702	8′-2"	14	8"	7′-6"					
ES601	6	10	32′-11"	ST							
ES602	6	8	1′-3"	ST							
ES603	6	9	5′-0"	ST							
ES800	8	36	58′-11"	ST							
ES801	8	35	59′-6"	ST							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PA TYPE 10M BARRIER											
ESC400	4	40	40′-0"	ST							
ESC401	4	10	33′-0"	ST							
ESC402	4	10	12′-0"	ST							
ESC403	4	394	6′-4 1/2′	42A	1′-7 1/2"	3"	10 1/2"	1′-7 1/2"	1′-6"	1"	
LIGHT POLE BLISTER											
ESC404	4	2	6′-6"	4	2′-7"	1′-7 1/2"	2′-7"				
ESC405	4	2	7′-5"	4	3′-6"	1′-7 1/2"	3′-6"				
ESC406	4	4	4′-5"	4	5"	1′-8"	5"				
ESC407	4	8	4′-11"	4	11"	1′-8"	11"				
ESC408	4	16	5′-2 1/2"	22	2′-7 1/2"	2′-3"	0"				
ESC409	4	8	9′-1 1/2"	54	3′-6"	1′-9 1/2"	3′-6"	2′-6"			
ESC410	4	4	10′-11"	M13	1′-9 1/2"	1′-3 3/4"	2′-7"				
ESC411	4	2	7′-9"	4	2′-7"	2′-3"	2′-7"				
ESC412	4	2	8′-8"	4	3′-6"	2′-3"	3′-6"				
ESC501	5	4	3′-6 1/2"	22	1′-0"	9"	10 1/2"				
ESC502	5	4	4′-0 1/2"	22	1′-6"	9"	10 1/2"				
ESC503	5	8	4′-6"	22	1′-11 1/2"	9"	10 1/2"				



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK REBAR SCHEDULE - 1

RECOMMENDED AUGUST 22, 2022

SHEET 39 OF 54

S-41007

PLOTTED: 8/22/2022

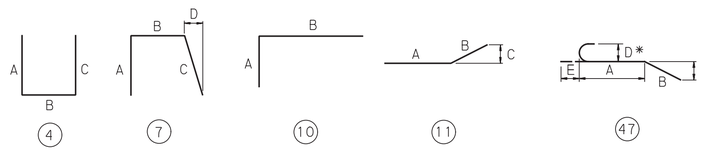
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTdkrb002.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
DIAPHRAGMS											
ED401	4	48	6′-5"	4	2′-10"	9"	2′-10"				
ED402	4	56	2′-4"	ST							
ED403	4	48	6′-0"	4	2′-1"	1′-10"	2′-1"				
ED404	4	26	4′-5"	11	1′-0"	3′-5"	6"				
ED405	4	26	4′-5"	10	2′-0"	2′-5"					
ED406	4	4	7′-7"	4	2′-10 1/2"	1′-10"	2′-10 1/2"				
ED407	4	48	10′-11"	4	4′-4"	2′-3"	4′-4"				
ED408	4	48	4′-9"	4	2′-1"	7"	2′-1"				
ED409	4	24	4′-5"	4	1′-11"	7"	1′-11"				
ED501	5	111	5′-9"	ST							THREAD ONE END **
ED502	5	3	30′-7"	ST							
ED503	5	6	2′-5"	ST							THREAD ONE END **
ED504	5	4	8"	ST							
ED505	5	12	4′-8"	ST							
ED506	5	16	1′-6"	ST							THREAD ONE END **
ED507	5	4	2′-8"	ST							
ED508	5	16	1′-11" TO 4′-3"	ST							THREAD ONE END **
ED509	5	8	4′-11"	4	1′-8"	1′-7"	1′-8"				
ED510	5	8	3′-11"	4	1′-2"	1′-7"	1′-2"				
ED511	5	2	9′-5"	4	3′-11"	1′-7"	3′-11"				
ED512	5	2	7′-9"	4	3′-1"	1′-7"	3′-1"				
ED513	5	2	6′-1"	4	2′-3"	1′-7"	2′-3"				
ED514	5	2	4′-7"	4	1′-6"	1′-7"	1′-6"				
ED515	5	6	6′-6"	7	1′-0"	1′-0"	4′-6"				
ED601	6	34	6′-0"	ST							THREAD ONE END **
E6D02	6	42	5′-2"	47	3′-4 3/4"	1′-0"	8 1/2"		8"		
ED603	6	3	7′-9"	ST							
ED604	6	2	1′-7"	ST							
ED605	6	1	30′-7"	ST							
ED606	6	2	2′-0"	ST							THREAD ONE END **

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS



NOTES:
1. VA = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. FOR GENERAL NOTES, SEE SHEET 3

** ADJUST BAR LENGTH FOR THREADED END AS PER INSERT OR COUPLER MANUFACTURERS' STANDARD. BAR LENGTH SHOWN ARE DETAILED FLUSH WITH CONSTRUCTION JOINT.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

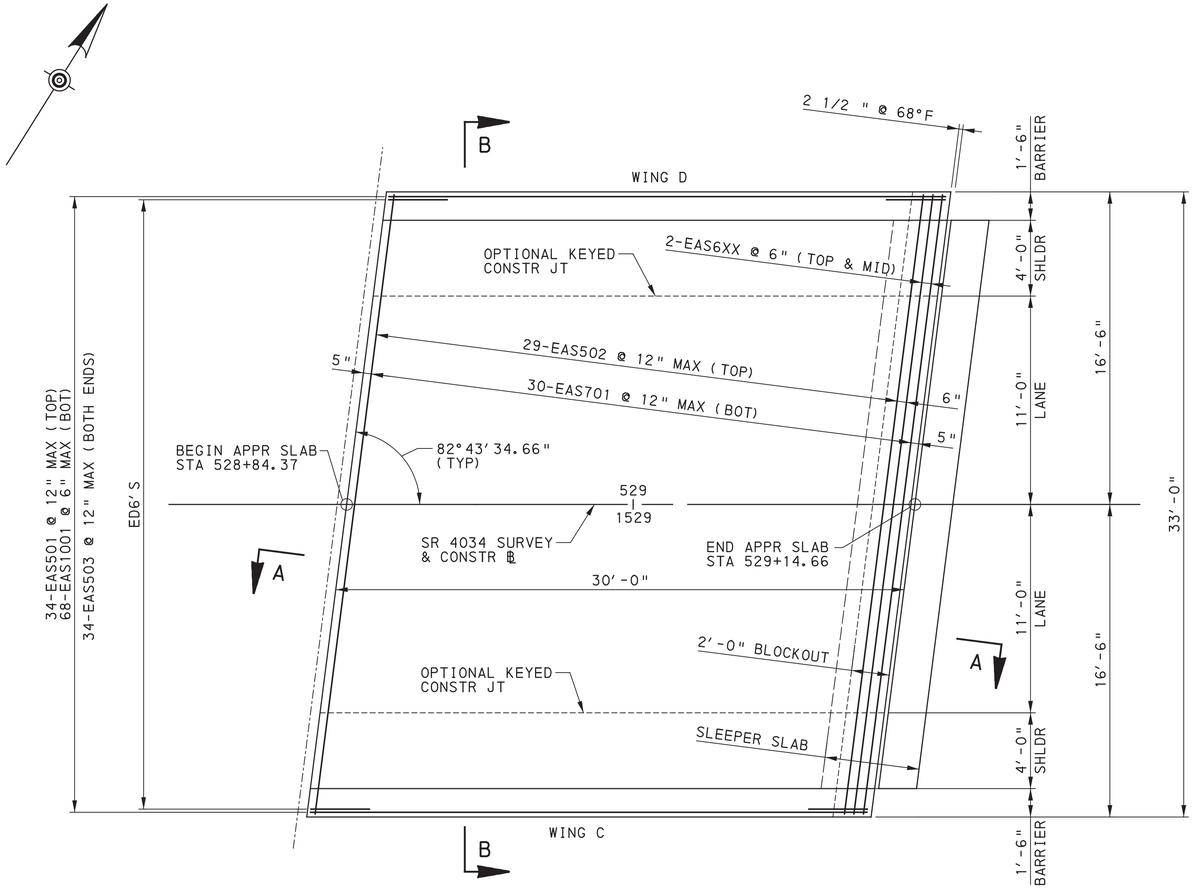
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
DECK REBAR SCHEDULE - 2

RECOMMENDED AUGUST 22, 2022

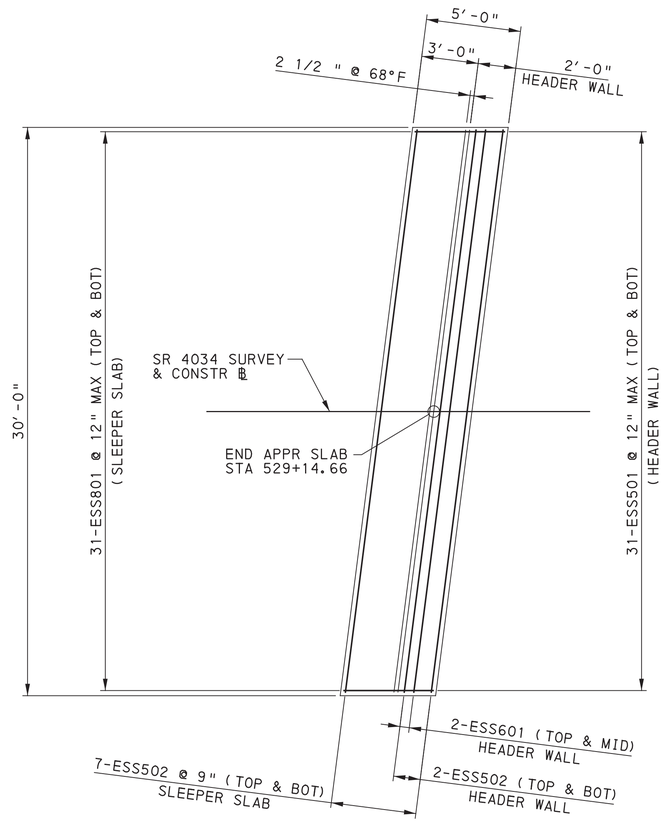
SHEET 40 OF 54

S-41007



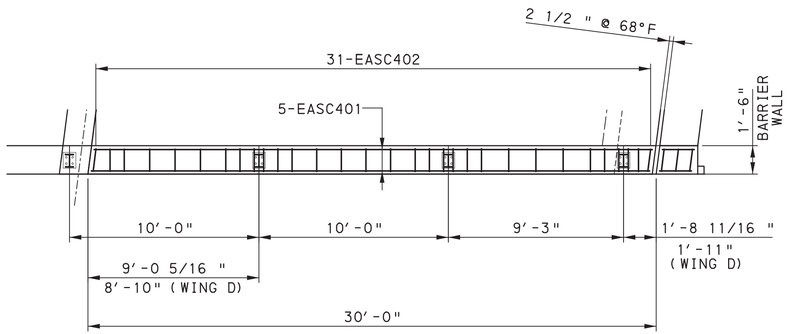
APPROACH SLAB PLAN

2 0 2 4 FEET



SLEEPER SLAB PLAN

2 0 2 4 FEET



APPROACH SLAB RAILING PLAN

(WING C SHOWN, WING D SIMILAR UNLESS NOTED)

2 0 2 4 FEET

NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER BRIDGE DECK CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE DIRECTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE DIRECTED.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEET 3
2. FOR SECTION A-A, SEE SHEET 42
3. FOR SECTION B-B, SEE SHEET 43
4. FOR FINAL SURFACE ELEVATIONS, SEE SHEET 33
5. FOR BARRIER REINFORCEMENT SPACING DETAIL, SEE SHEET 32
6. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 44

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB - ABUTMENT 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 41 OF 54

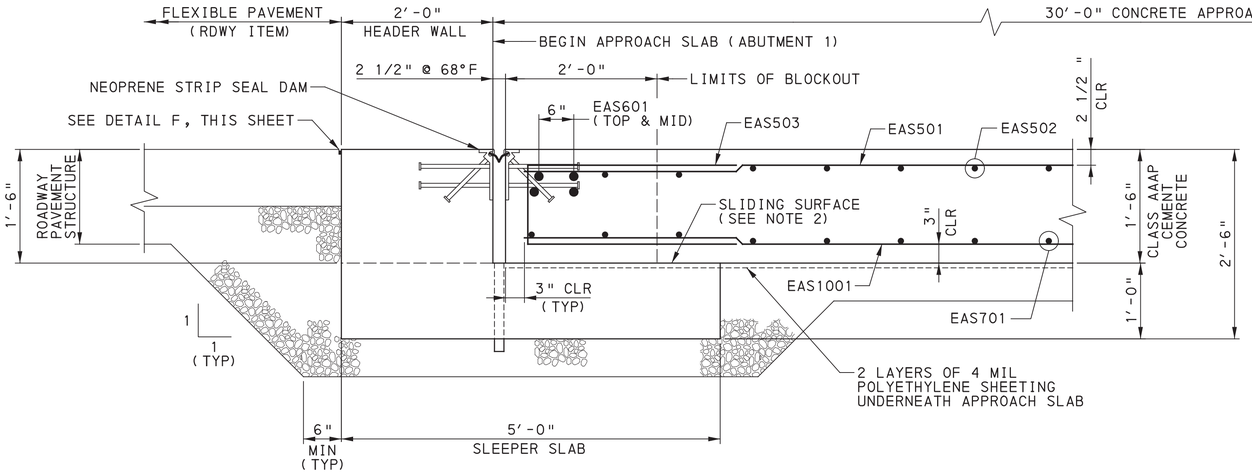
S-41007

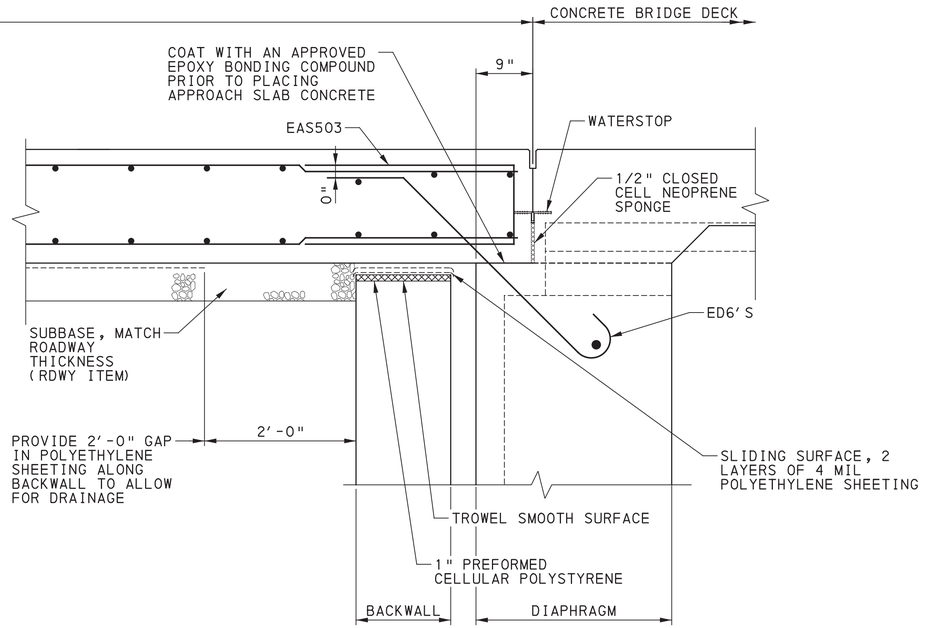
DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

PLOTTED: 8/22/2022

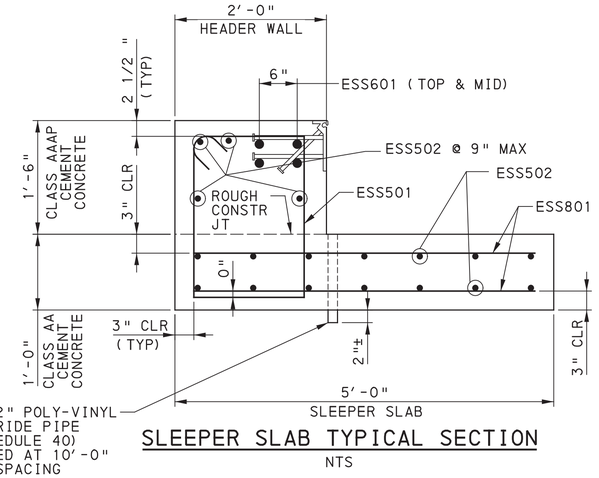
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTas001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTaa002.dgn

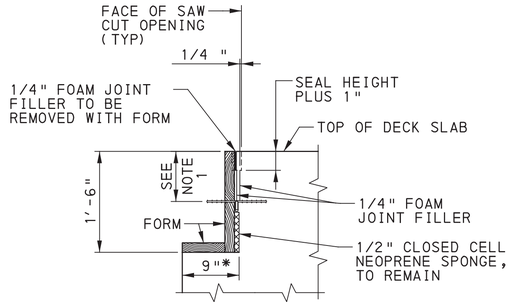




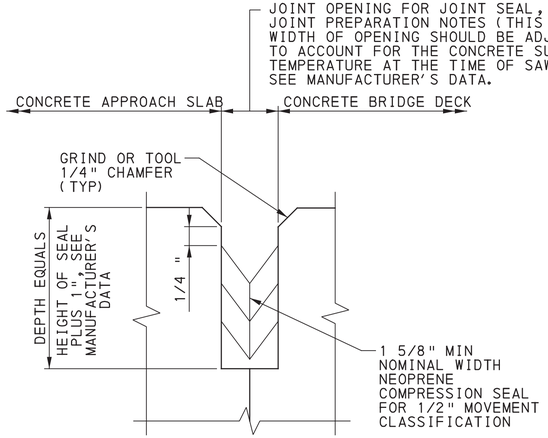
SECTION A-A
NTS



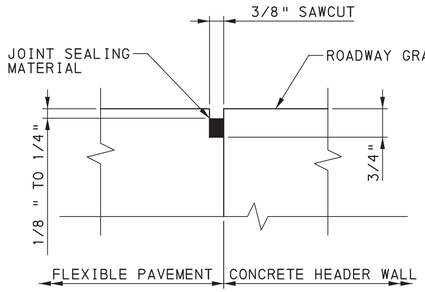
SLEEPER SLAB TYPICAL SECTION
NTS



PAVING NOTCH FORMING DETAIL
NTS



DETAIL H
NTS



DETAIL F
NTS

JOINT PREPARATION NOTES:

1. THE JOINT OPENING IS TO BE FORMED BY A TWO-STAGE SAWING OPERATION WHERE ACCESSIBLE. WHERE ACCESSIBILITY IS LIMITED, THE JOINT OPENING SHALL BE FORMED. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING, THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED, WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF 1/16" TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL.
2. WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
3. THE DEPTH OF THE JOINT OPENING EQUALS THE HEIGHT OF THE SEAL PLUS 1". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING, SEE MANUFACTURER′S PRODUCT INFORMATION.
4. BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
5. PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER′S RECOMMENDATIONS.
6. DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.

NOTES:

1. AN EXPANSION WATERSTOP (TYPE E1 OR E2), IN ACCORDANCE WITH BC-735M, MUST BE INSTALLED AT MID-DEPTH OF APPROACH SLAB. PLACE WATERSTOP TO PROVIDE POSITIVE DRAINAGE TO THE OUTSIDE OF THE STRUCTURE.
2. TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING AS BOND BREAKER.

REFERENCES:

1. FOR APPROACH AND SLEEPER SLAB PLAN, SEE SHEET 41
2. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 44

DES:	DFK	CKD:	CMS	DWG:	DFK	CKD:	CMS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS - 1

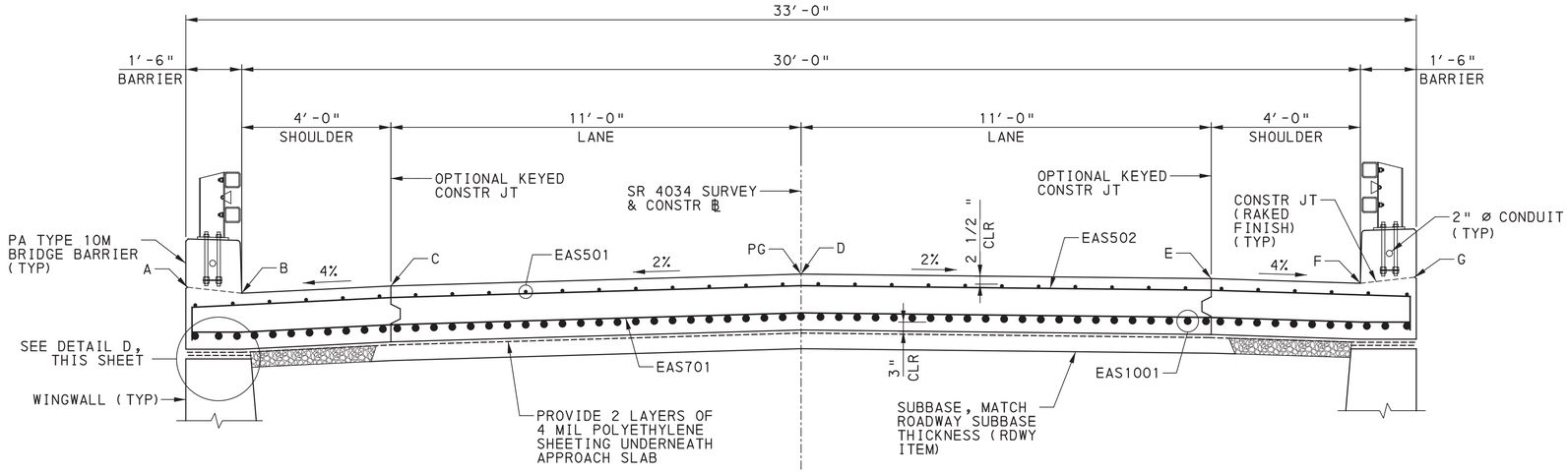
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 42 OF 54

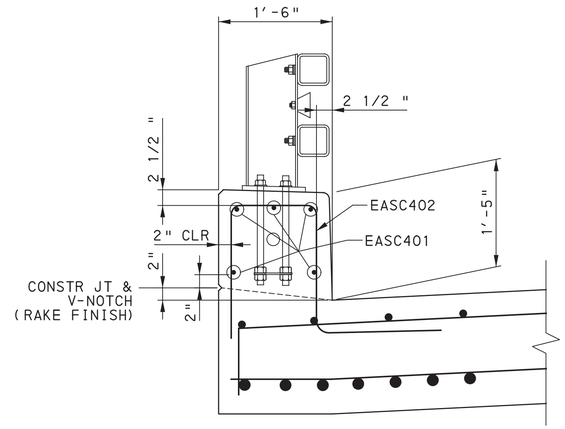
S-41007

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmconsultants.com\Files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTas003.dgn



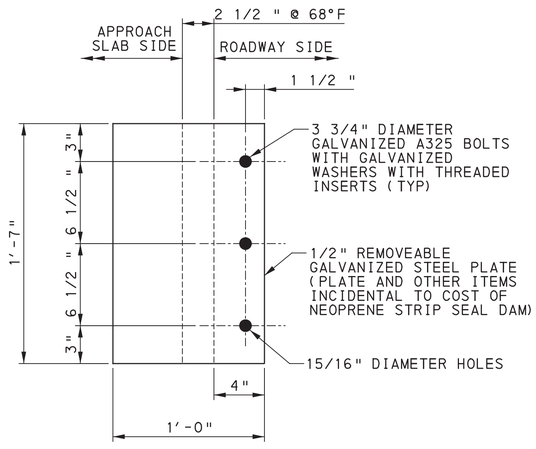
SECTION B-B

1 0 1 2 FEET



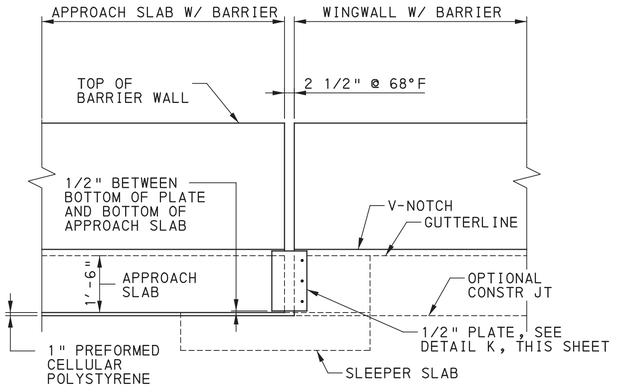
TYPICAL APPROACH SLAB BARRIER DETAIL

6 0 6 12 INCHES



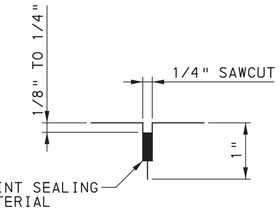
DETAIL K

NTS



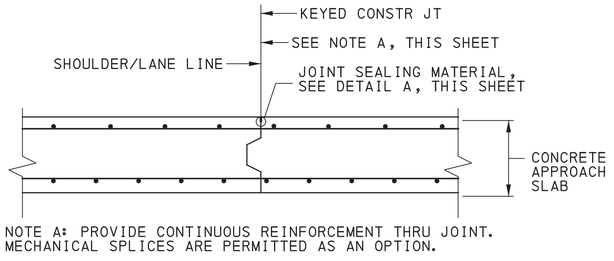
SECTION K-K

NTS



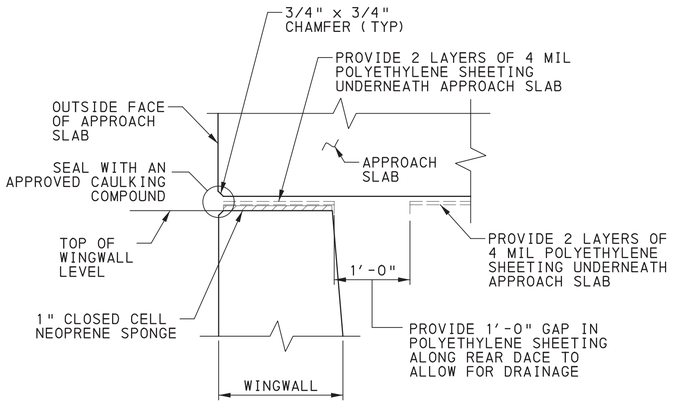
DETAIL A

NTS



OPTIONAL KEYED CONSTRUCTION JOINT AT SHOULDER DETAIL

NTS



DETAIL D

NTS

REFERENCES:

1. FOR APPROACH SLAB PLAN, SEE SHEET 41
2. FOR FINISHED APPROACH SLAB ELEVATIONS, SEE SHEET 33
3. FOR GENERAL NOTES, SEE SHEET 3
4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 44

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

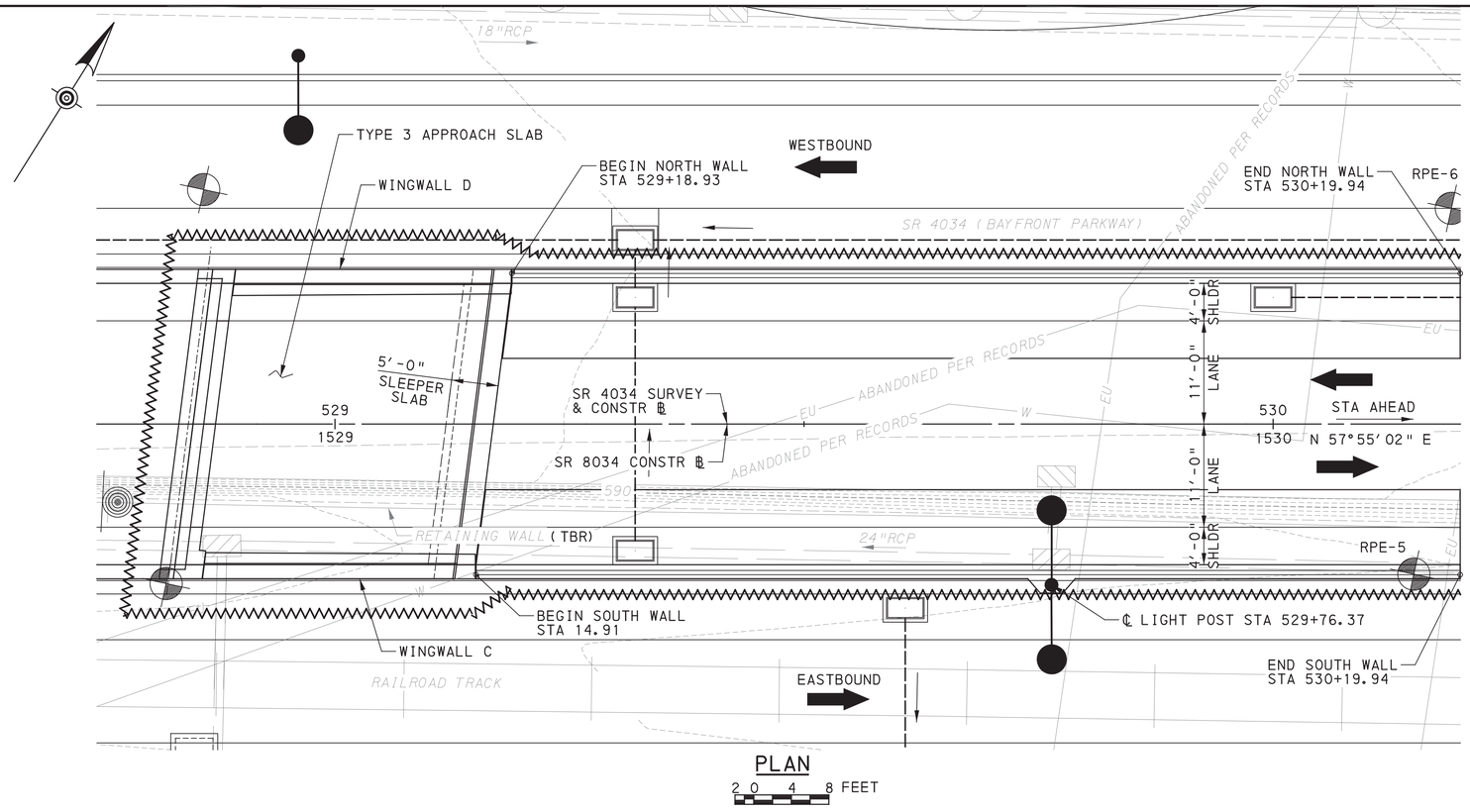
SHEET 43 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: CMS

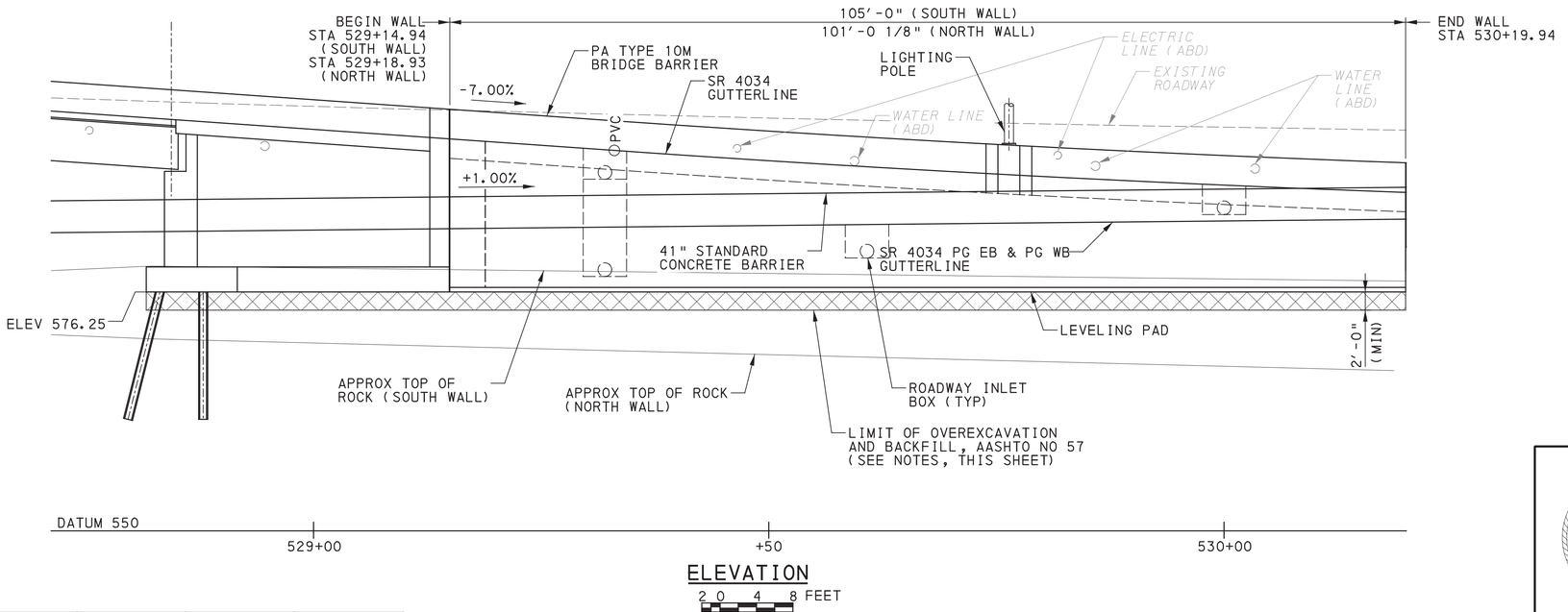
REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
APPROACH SLAB											
EAS500	5	34	29′-3 1/2"	ST							
EAS501	5	29	32′-11"	ST							
EAS502	5	68	7′-3 1/2"	4	3′-1"	1′-0 1/2"	3′-1"				
EAS601	6	4	32′-11"	ST							
EAS701	7	30	32′-11"	ST							
EAS1001	10	68	29′-3 1/2"	ST							
SLEEPER SLAB											
ESS501	5	31	8′-0"	25	2′-0"	1′-6"	6"	6"			
ESS502	5	18	29′-11"	ST							
ESS601	6	4	29′-11"	ST							
ESS801	8	62	4′-6"	ST							
BARRIER											
EASC401	4	10	29′-6"	ST							
EASC402	4	62	6′-0"	42A	1′-7 1/2"	3"	10 1/2"	1′-7 1/2"	1′-6"		



PLAN

2 0 4 8 FEET



ELEVATION

2 0 4 8 FEET

LEGEND

- AS DRILLED STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- POST MOUNTED SIGNS

NOTES:

1. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE INDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEETS 3 & 4
2. FOR MSE RETAINING WALL DETAILS, SEE SHEET 47
3. FOR MOMENT SLAB DETAILS, SEE SHEET 48
4. FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALLS PLAN & ELEV-1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

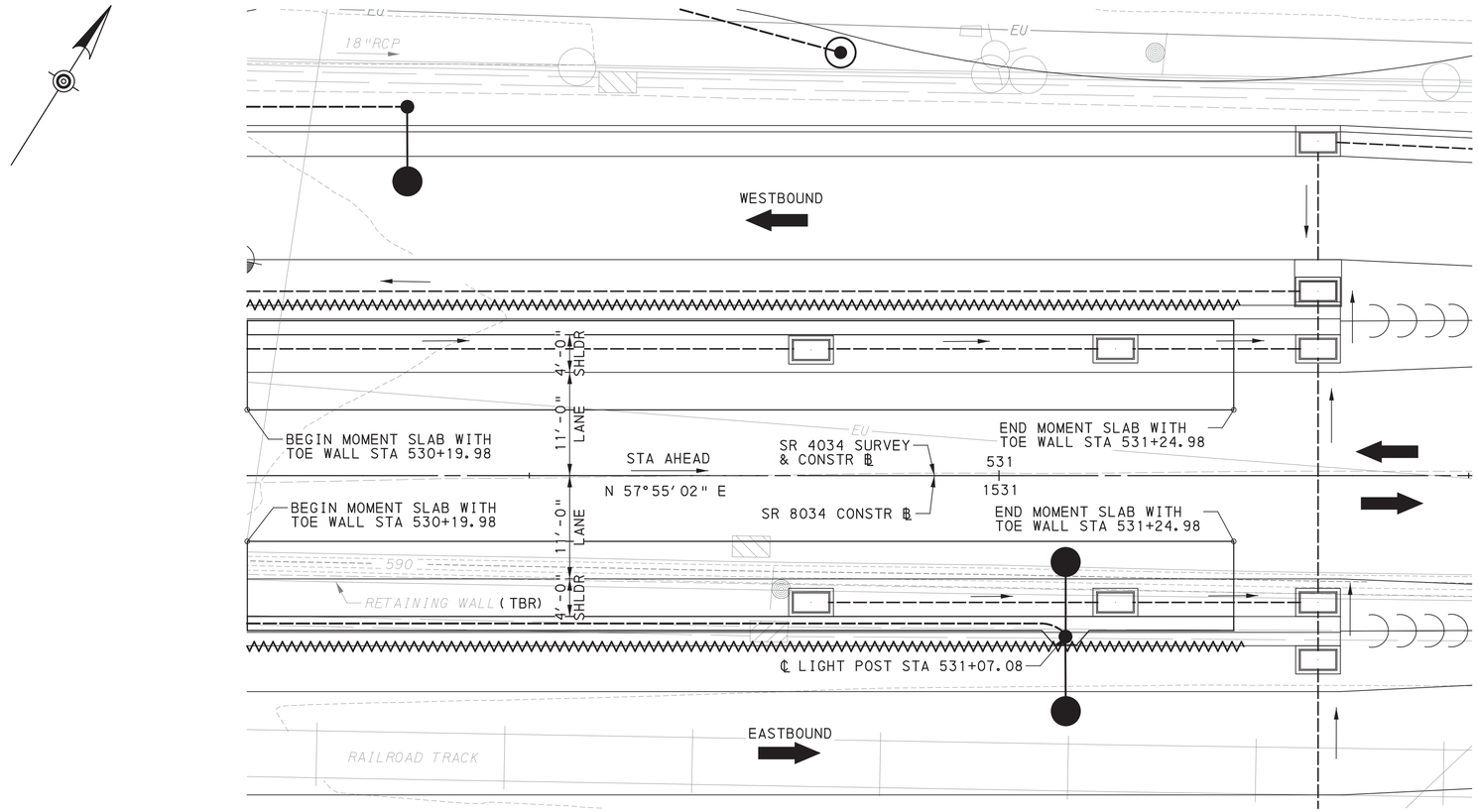
SHEET 45 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

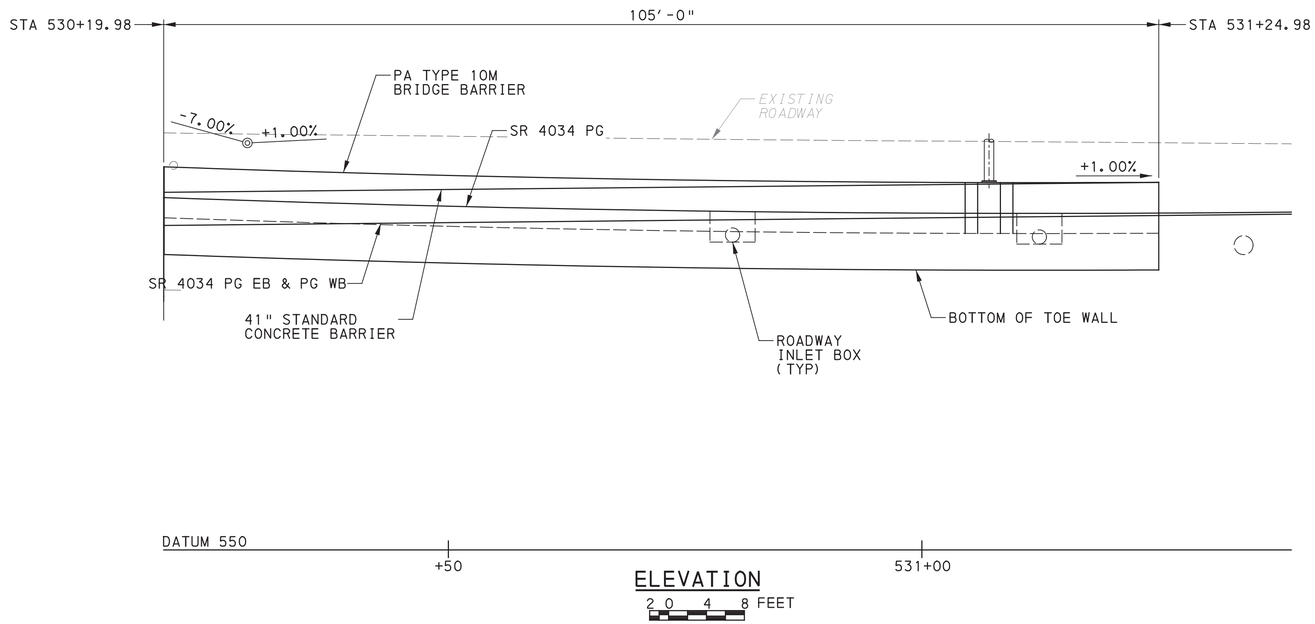
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_ESTw1001.dgn



PLAN

2 0 4 8 FEET



ELEVATION

2 0 4 8 FEET

LEGEND

- AS DRILLED STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY EXCAVATION AND SUPPORT SYSTEM (APPROXIMATE LOCATION)
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- POST MOUNTED SIGNS

NOTES:

1. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE INDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

REFERENCES:

1. FOR GENERAL NOTES, SEE SHEETS 3 & 4
2. FOR MSE RETAINING WALL DETAILS, SEE SHEET 47
3. FOR MOMENT SLAB DETAILS, SEE SHEET 48
4. FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALLS PLAN & ELEV-2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

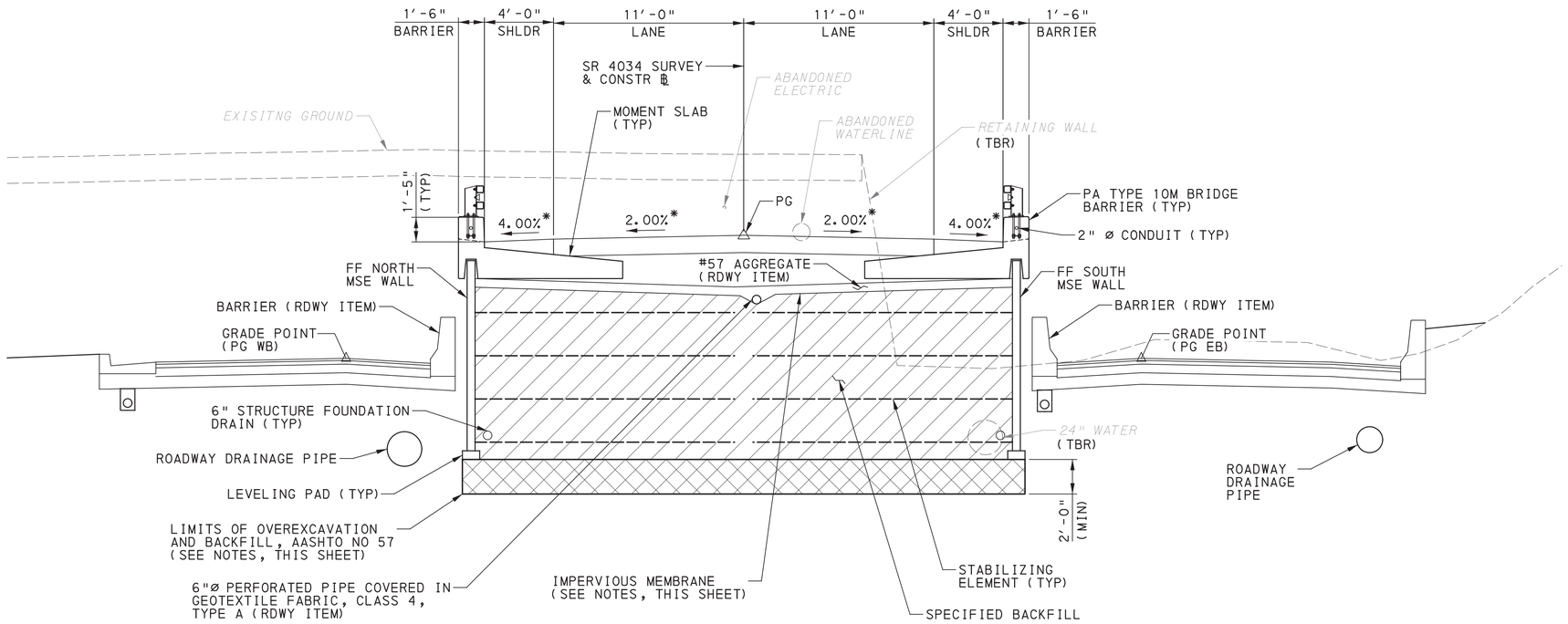
SHEET 46 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST_w1002.dgn



TYPICAL SECTION

SECTION SHOWN AT STA 529+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

* - CROSS SLOPE GIVEN @ STA 529+50

NOTES:

1. REINFORCING STRAP LENGTHS PROVIDED HEREIN ARE MINIMUM STANDARDS FOR THE CONTRACTOR'S DESIGN AND WERE USED FOR COST ESTIMATING PURPOSES.
2. IMPERVIOUS MEMBRANE SHALL BE PROVIDED WITHIN THE ENTIRE ROADWAY AREA WHERE THE REINFORCING STRAPS POTENTIALLY INTERSECT.
3. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEW. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, AND THE SPECIAL PROVISION SPECIAL ROLLING (MODIFIED), OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
4. TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM SHALL BE PROVIDED AT LOCATIONS WHERE THE EXCAVATION LIMITS CONFLICT WITH THE BAYFRONT EAST AND WEST BYPASS RECONSTRUCTION LIMITS.

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE RETAINING WALL DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 47 OF 54

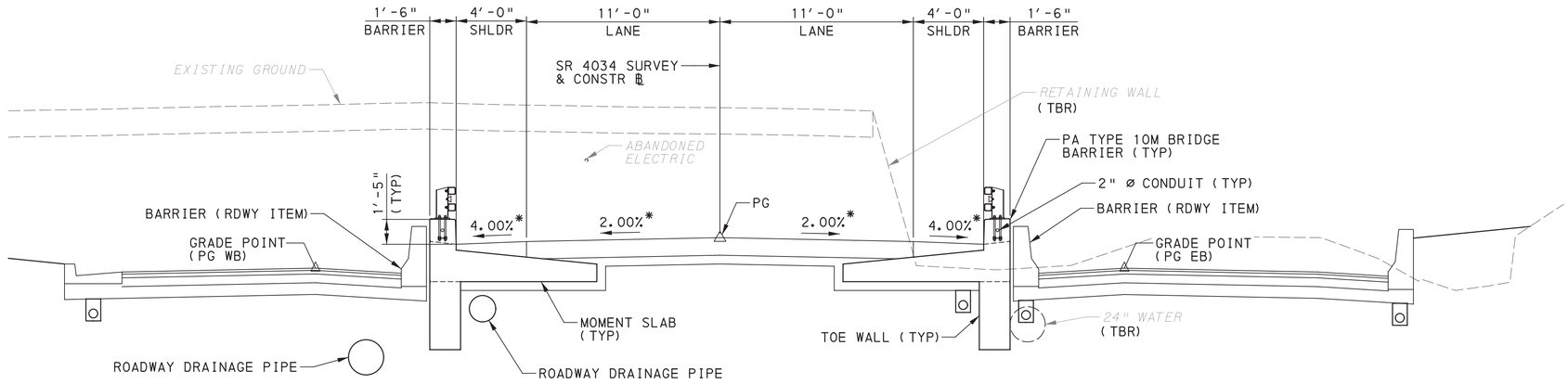
S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST_w1003.dgn

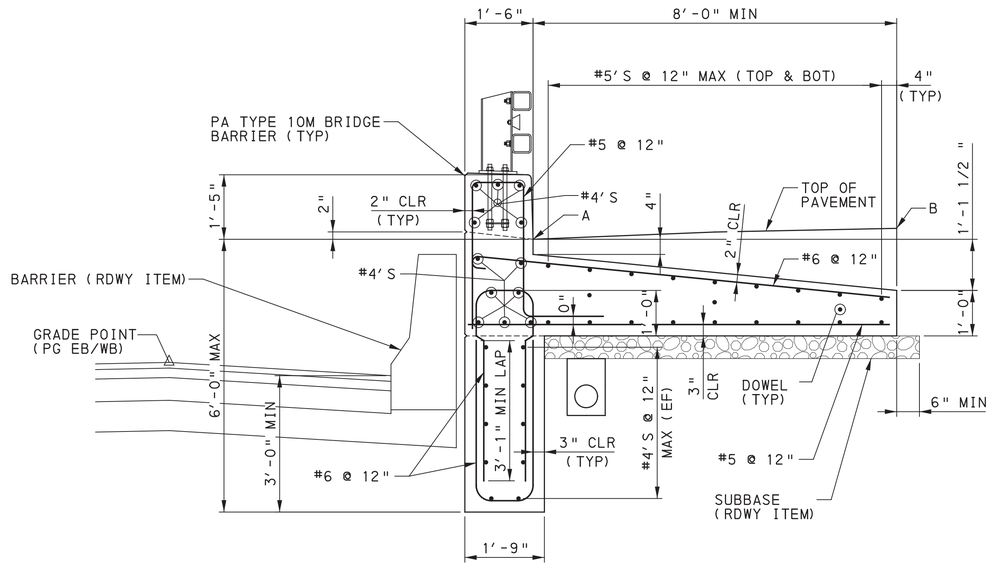
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST1004.dgn



TYPICAL SECTION

SECTION SHOWN AT STA 530+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

* - CROSS SLOPE GIVEN @ STA 530+50



TYPICAL MOMENT SLAB SECTION

NTS

FINISHED MOMENT SLAB ELEVATIONS AT BREAK POINTS			
LOCATION	STATION (FEET)	ELEV (A)	ELEV (B)
START MOMENT SLAB	530+19.98	586.81	587.05
	530+20.00	586.81	587.05
	530+25.00	586.64	586.88
	530+30.00	586.47	586.71
	530+35.00	586.31	586.55
	530+40.00	586.17	586.41
	530+45.00	586.03	586.27
	530+50.00	585.91	586.15
	530+55.00	585.79	586.03
	530+60.00	585.68	585.92
	530+65.00	585.58	585.82
	530+70.00	585.50	585.74
	530+75.00	585.42	585.66
	530+80.00	585.35	585.59
	530+85.00	585.29	585.53
	530+90.00	585.24	585.48
	530+95.00	585.20	585.44
	531+00.00	585.18	585.42
	531+05.00	585.16	585.40
	531+10.00	585.15	585.39
	531+15.00	585.15	585.39
	531+20.00	585.16	585.40
END MOMENT SLAB	531+24.98	585.18	585.42

NOTES:

1. PROVIDE DOWELS AT EXPANSION JOINTS. USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MOMENT SLAB DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

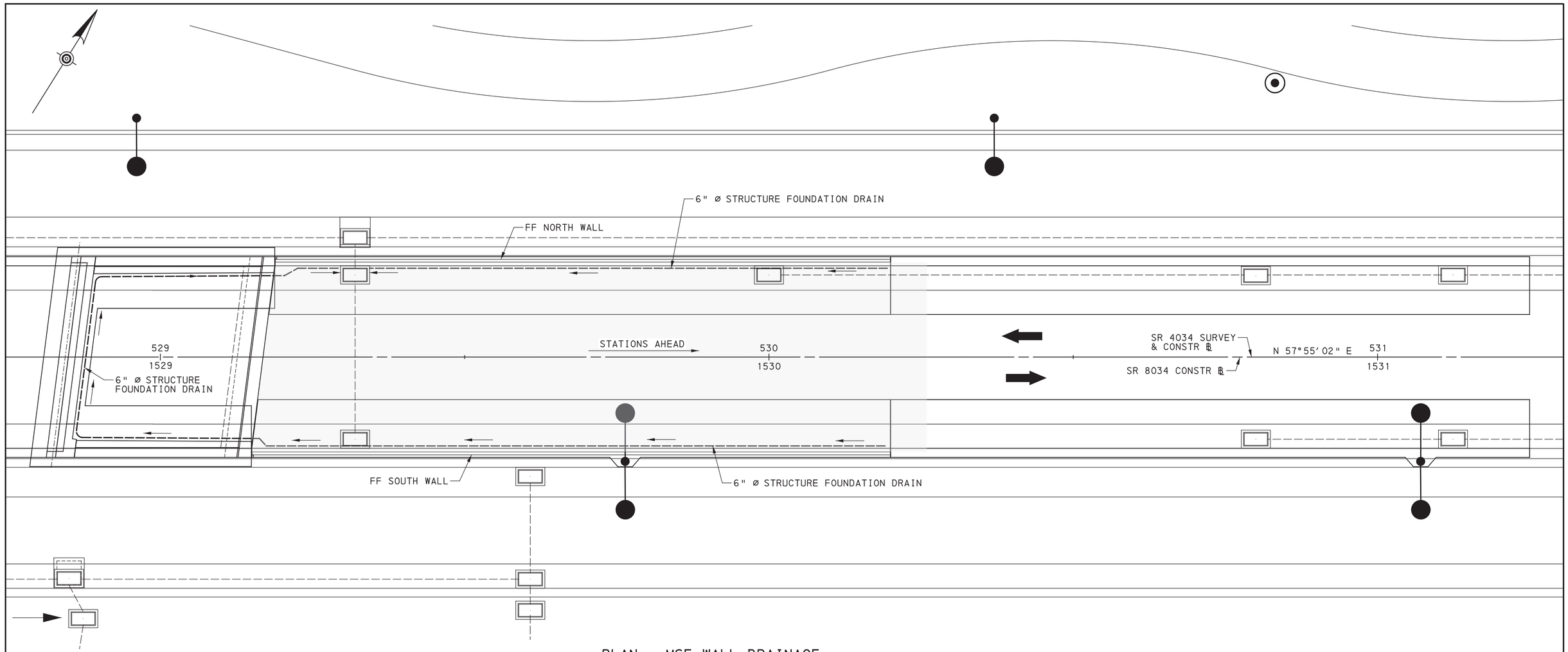
RECOMMENDED AUGUST 22, 2022

SHEET 48 OF 54

S-41007

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

PLOTTED: 8/22/2022



PLAN - MSE WALL DRAINAGE

2 0 4 8 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-0113 MPMS PROJ: 108952 BRKEY: 69232

NOTES:

1. LIMITS OF IMPERVIOUS MEMBRANE AND 6" DIA. PERFORATED PIPE ARE CONCEPTUAL AND FOR BIDDING PURPOSES. CONTRACTOR SHALL MODIFY IN ACCORDANCE WITH THE MSE WALL DESIGN, TO THE REQUIREMENTS SHOWN HERE, AND TO BC-799M.

REFERENCES:

1. FOR PLAN INFORMATION NOT SHOWN, SEE GENERAL PLAN SHEETS 45 & 46
2. FOR MSE RETAINING WALL DETAILS, SEE SHEET 47
3. FOR ABUTMENT PLAN, SEE SHEET 15

LEGEND

- DIRECTION OF TRAFFIC FLOW
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- LIGHTING POLES & POST LIGHTS
- DENOTES APPROXIMATE LIMITS OF IMPERVIOUS MEMBRANE. EXTEND MEMBRANE 6'-0" MINIMUM BEYOND END OF MSE WALL STABILIZING ELEMENTS. (SEE NOTES, THIS SHEET)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

DES: DFK | CKD: CMS | DWG: DFK | CKD: JP

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

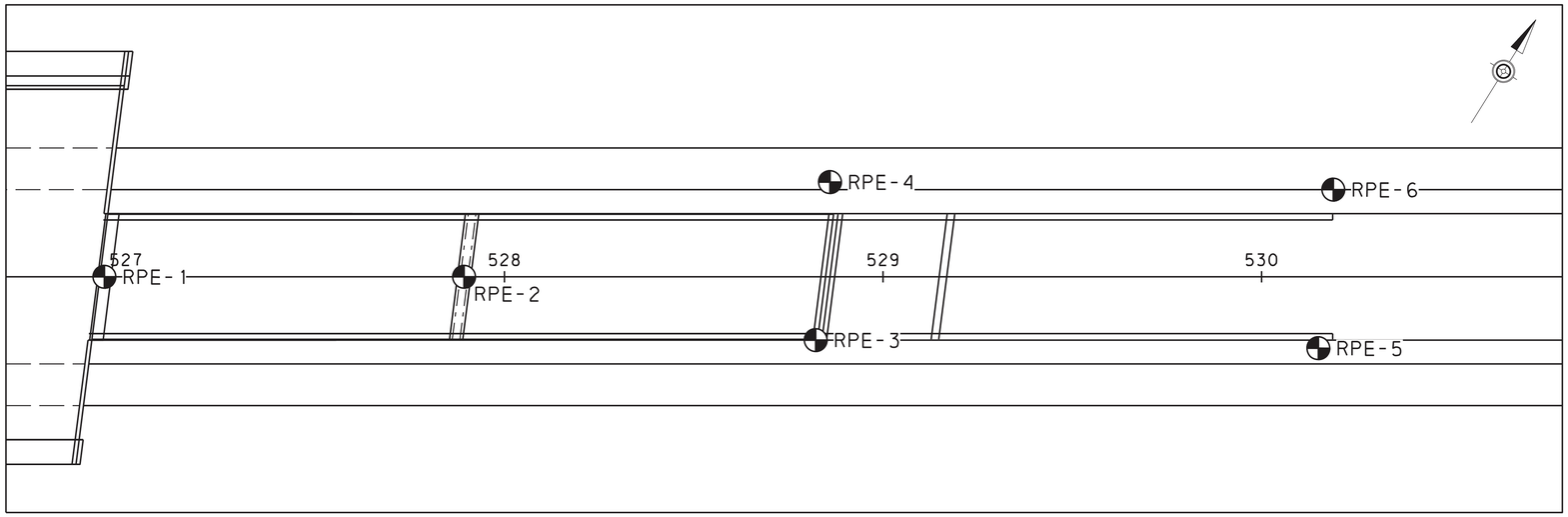
ERIE COUNTY
SR 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034
2-SPAN P/S CONC PA BULB-TEE BEAM BRIDGE
MSE WALL DRAINAGE PLAN

RECOMMENDED AUGUST 22, 2022

SHEET 49 OF 54

S-41007

OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\structures\ramp_SS_E\sheets\FINAL\ramp_SS_EST_w1005.dgn



BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler — 3/15/2021

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK A. STYLER — ENGINEER — No. PE061706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 1 OF 5)

Christopher T. Fox, P.E.

Digitally signed by Christopher T. Fox, P.E.
Date: 2022.08.23 07:18:33 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 50 OF 54

M:_2019\095\exhibits\structure\19095_strb_RPE.dgn
8/18/2022

PLT: RJS	CKD: GKW	QA/QC: MAS

SUBSTRUCTURE UNIT:
PIER 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/07/2020 11:30 AM	HAMMER: AUTOMATIC
RPE-1	STATION: 526+94.0 OFFSET: 0.0 FT. CL	FINISH: 10/07/2020 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	603.1 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 586.1 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR[1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		CONCRETE. 0.9'/El. 602.2		1.5						
		GRAVEL, subbase. 1.5'/El. 601.6		3.0	S-1	3-5-2		9	0.8	53
		GRAVEL and **SAND**, loose to medium dense, moist to damp, homogeneous, well graded, rounded to angular, brown, fill.		4.5	S-2	4-2-2		5	1.0	67
				6.0	S-3	4-5-3		11	1.2	80
		Retaining wall backfill.		7.5	S-4	10-4-3		9	1.3	87
				9.0	S-5	3-2-3		7	0.5	33
				10.5	S-6	6-5-5		13	1.5	100
				12.0	S-7	5-5-5		13	1.5	100
				13.5	S-8	5-4-4		11	1.0	67
			a-1-a / gw	15.0	S-9	4-5-4		12	0.8	53
				16.5	S-10	7-5-7		16	1.2	80
				18.0	S-11	9-6-8		19	1.5	100
				19.5	S-12	11-8-8		21	1.5	100
				21.0	S-13	10-9-9		24	1.5	100
				22.5	S-14	12-10-9		25	1.3	87
				24.0	S-15	9-8-5		17	1.2	80
				25.5	S-16	8-7-6		17	1.2	80
		27.0'/El. 576.1		27.0	S-17	7-10-11		28	1.5	100
BFE 575.25		*Boring dry prior to coring.*		27.0	S-18	50/.0'		>67	0.0	0
TOR 573.30		**CONCRETE.** *Existing retaining wall footer.* 29.8'/El. 573.3		29.5	R-1			0%	2.5	100
BOE 573.00		**SHALE interbedded with SANDSTONE**, gray, fine grained, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=79%).*		34.5	R-2			68%	4.7	94
					R-3			86%	4.9	98
		39.5'/El. 563.6								

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings = 0.0 ppm.
No visible signs of contamination or odors.

[1]24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
PIER 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/08/2020 8:30 AM	HAMMER: AUTOMATIC
RPE-2	STATION: 527+89.0 OFFSET: 0.0 FT. CL	FINISH: 10/08/2020 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	600.3 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. WILLIS
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 593.6 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR[1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		CONCRETE. 0.9'/El. 599.4		1.5						
		GRAVEL, subbase. 1.5'/El. 598.8		3.0	S-1	5-7-10		23	1.2	80
		SAND, little Gravel, medium dense to very dense, damp to dry, poorly graded, rounded, brown, fill.		4.5	S-2	13-13-16		39	1.5	100
				6.0	S-3	28-12-14		35	1.0	67
		Retaining wall backfill.		7.5	S-4	19-17-21		51	1.5	100
				9.0	S-5	11-16-22		51	1.5	100
				10.5	S-6	19-24-23		63	1.5	100
				12.0	S-7	15-9-14		31	1.5	100
				13.5	S-8	12-20-26		61	1.5	100
			a-1-b / sp	15.0	S-9	24-25-27		69	1.5	100
				16.5	S-10	30-28-20		64	1.5	100
				18.0	S-11	22-26-24		67	1.5	100
				19.5	S-12	28-28-27		73	1.5	100
				21.0	S-13	24-28-34		83	1.5	100
				22.5	S-14	19-22-27		65	1.5	100
				24.0	S-15	28-39-48		116	1.5	100
		24.1'/El. 576.2		24.1	S-16	50/.1'		>67	0.1	100
		Boring dry prior to coring.		25.4	R-1			0%	0.0	0
		NO RECOVERY. 25.4'/El. 574.9		27.4	R-2			0%	2.0	100
		Possible material behind footer.		30.4	R-3			50%	3.0	100
		SHALE interbedded with SANDSTONE, gray, fine grained, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=53%).*			R-4			76%	4.8	96
BFE 576.25										
TOR 574.90										
BOE 574.70		35.4'/El. 564.9								

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings = 0.0 ppm.
No visible signs of contamination or odors.

[1]24-hr. Water: Boring grouted upon completion

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE091705

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 2 OF 5)

SHEET 51 OF 54

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RPE.dgn
8/18/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_1223_8-27-2015.GDT - 8/17/22 15:13 - L:\PROJECTS\2019\A\095\0006_RPE_CO.565.GPJ

SUBSTRUCTURE UNIT:

ABUTMENT 1 / WING C

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/02/2020 9:00 AM	HAMMER: AUTOMATIC
RPE-3	STATION: 528+82.0 OFFSET: 17.0 FT. RT.	FINISH: 11/02/2020 12:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRAILER	3.000 IN.	0 FT. [redacted] 5 FT.	581.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 579.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 578.6 ft. - 20.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590											
585											
580		**GRAVEL**, some Sand, medium dense, dry, homogeneous, poorly graded, angular to sub-angular, brown, fill. 1.5'/El. 579.9	a-1-a / gp	1.5	S-1	5-6-5		15	0.6	40	
		S-1, PID=4.0 ppm.	a-1-a / gw	2.3	S-2	13-50/.3'		>67	0.8	100	
TOR 579.10		**GRAVEL**, some Sand, very dense, dry, homogeneous, well graded, angular to flat, gray, residuum. 2.3'/El. 579.1		4.3	R-1			0%	1.1	55	
BPCE 576.25		*Boring dry prior to coring.*									
575 BOE 575.70		**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, slightly weathered to fresh, laminated to narrow bedding with flat to shallow dip, *no apparent jointing, (RQD=53%).*		7.3	R-2			10%	3.0	100	
570					R-3			62%	4.7	94	
PDE 566.25				12.3	R-4			98%	5.0	100	
565 EPTE 562.25		20.0'/El. 561.4		17.3	R-5			30%	2.6	96	

SUBSTRUCTURE UNIT:

ABUTMENT 1 / WING D

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/06/2020 10:00 AM	HAMMER: AUTOMATIC
RPE-4	STATION: 528+86.0 OFFSET: 25.0 FT. LT.	FINISH: 10/06/2020 3:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATB	3.000 IN.	0 FT. [redacted] 5 FT.	597.0 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 587.3 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
595											20 40 60 80 / 10 20 30 40
590		**CONCRETE**. 0.7'/El. 596.3		1.5							
585		**GRAVEL, subbase**. 1.5'/El. 595.5		3.0	S-1	9-11-11		29	1.0	67	
		GRAVEL and **SAND**, little Silt, contains wood, metal and pavement fragments, medium dense to very dense, damp, heterogeneous, poorly graded, rounded to angular, brown to black, fill.		3.4	S-2	50/.4'		>67	0.4	100	
		S-1, PID=4.6 ppm.		4.5	S-3	10-5-10		20	1.3	87	
		S-2, PID=1.0 ppm.		6.0	S-4	8-9-8		23	0.8	53	
		S-4, traces of wood.		7.5	S-5	10-6-8		19	1.0	67	
			a-2-4 / gm	9.0	S-6	8-7-7		19	1.0	67	
				10.5	S-7	5-7-7		19	1.5	100	
				12.0	S-8	10-37-50		116	1.2	80	
		S-8, pavement in tip of spoon.		13.5	S-9	18-13-13		35	1.5	100	
				15.0	S-10	15-9-9		24	1.1	73	
				16.5	S-11	9-27-50/.2'		103	1.2	100	
		S-11, contains wood fragments. Wood came out of the auger cuttings from 16.5-18.0'. Creosote smell, possible railroad tie, piece of metal also came up.		18.0	S-12	28-33-22		73	1.5	100	
		S-12, contains wood fragments. 19.5'/El. 577.5	a-4 / ml	19.5	S-13	7-4-4 **4.00**		11	1.0	67	
		S-12, PID=4.9 ppm.		21.0	S-14	3-3-3 **2.50**		8	1.5	100	
BPCE 576.25		**SILT**, some Clay, little fine Sand, medium to stiff, damp, homogeneous, low plastic fines, olive gray, alluvium. 22.5'/El. 574.5	a-1-a / gp	22.5	S-15	4-8-8		21	1.5	100	
BOE 575.70				24.0	S-16	5-12-24		48	1.1	73	
575				25.5	S-17	50/.4'		>67	0.4	100	
TOR 571.10		**GRAVEL**, some Sand, medium dense to dense, wet to moist, homogeneous, poorly graded, rounded, gray, alluvium. 25.9'/El. 571.1		25.9	R-1			45%	3.2	97	
570		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=63%).*		29.2	R-2			72%	4.8	96	
PDE 566.25				34.2	R-3			80%	2.0	100	
565 EPTE 562.25		36.2'/El. 560.8									

All PID readings, other than indicated, are 0.0 ppm.

[1] 24-hr. Water: Boring grouted upon completion

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE061706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 3 OF 5)

SHEET 52 OF 54

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb.RPE.dgn
8/19/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION: 123.0.22.2015.GDT - 8/19/22 15:28 - U:\PROJECTS\2019\19095\099 - ERIE CO S&S.GPJ

SUBSTRUCTURE UNIT:
SOUTH WALL / WING C

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/02/2020 11:30 AM	HAMMER: AUTOMATIC
RPE-5	STATION: 530+15.0 OFFSET: 16.0 FT. RT.	FINISH: 11/02/2020 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. [redacted] 5 FT.	584.1 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 580.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 579.6 ft. - 17.0 hr.

ELEV.	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
590									
585									
582.1	**GRAVEL**, some Sand, medium dense, damp, heterogeneous, poorly graded, angular to sub-angular, brown, fill. 2.0'/El. 582.1 *PID=0.0 ppm for all samples.*	a-1-a / gp	1.5	S-1	9-9-7		21	0.5	33
			3.0	S-2	6-7-22		39	0.8	53
			3.8	S-3	39-50/.3'		>67	0.8	100
580	**GRAVEL**, some Sand, dense to very dense, damp to dry, homogeneous, well graded, angular to flat, gray, residuum. 6.6'/El. 577.5 *Boring dry prior to coring.*	a-1-a / gw	4.5	S-4	29-27-50/.4'		103	1.4	100
			5.9	S-5	40-50/.1'		>67	0.5	83
TOR 577.50			6.0						
BOL 576.25			6.6	R-1			25%	1.9	95
BOE 575.70			8.6						
575	**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, slightly weathered to fresh, laminated to narrow bedding with flat to shallow dip, jointed, wide to massive spacing, sheer dip, tight joints, *(RQD=49%).*		10.5	R-2			0%	1.1	58
	Vertical joint, 11.9-12.1'.								
570			15.5	R-3			52%	5.0	100
				R-4			74%	4.9	98
565	20.5'/El. 563.6								

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙
20 40 60 80
▲ SPT (N_{60}) ▲
10 20 30 40

SUBSTRUCTURE UNIT:
NORTH WALL / WING D

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/04/2020 9:00 AM	HAMMER: AUTOMATIC
RPE-6	STATION: 530+19.0 OFFSET: 23.0 FT. LT.	FINISH: 10/04/2020 2:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 550 ATV	1.874 IN.	0 FT. [redacted] 5 FT.	594.3 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 590.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
590									
585									
	CONCRETE PAVEMENT. 0.8'/El. 593.5		1.0						
	AGGREGATE. 1.0'/El. 593.3	a-2-4 / sm	2.5	S-1	7-8-10		24	1.2	80
	SAND, some Silt, little Gravel, medium dense, damp, heterogeneous, poorly graded, brown to gray black, fill. *S-1, S-2, S-3, PID=0.0 PPM.* *S-4, rotten tree root.* *S-4, PID=0.8 ppm.* 7.0'/El. 587.3		4.0	S-2	10-9-9		24	1.3	87
			5.5	S-3	18-9-10		25	1.5	100
			7.0	S-4	8-9-7		21	1.5	100
			8.5	S-5	13-7-9		21	1.5	100
	SAND, some Gravel, medium dense to dense, damp, heterogeneous, poorly graded, brown to gray, fill. *S-5, asphalt chunk.* *S-6, PID=3.0 ppm.* *S-7, PID=3.0 ppm.* 13.0'/El. 581.3 *S-8, PID=31.0 ppm.*	a-1-b / sp	10.0	S-6	34-13-17		40	1.5	100
			11.5	S-7	14-9-12		28	1.5	100
			13.0	S-8	13-11-10		28	1.5	100
			14.5	S-9	8-6-5		15	1.5	100
	SILT, little Sand, trace Gravel, medium to very stiff, moist to damp, heterogeneous, low plastic fines, gray to brown black, alluvium. *S-9, PID=7.5 ppm.* *S-10, PID=4.7 ppm.* *S-11, PID=5.3 ppm.* *S-12, PID=0.0 ppm.* *S-13, PID=3.8 ppm.* 22.0'/El. 572.3	a-4 / ml	16.0	S-10	4-4-3		9	0.9	60
			17.5	S-11	2-3-2	1.50	7	1.5	100
			19.0	S-12	3-4-8	1.50	16	1.5	100
			20.5	S-13	4-3-2	3.00	7	1.5	100
			22.0	S-14	3-3-4	2.50	9	1.5	100
	SAND, little Gravel, little Silt, medium dense to very dense, wet, heterogeneous, poorly graded, gray brown, alluvium. *WL @ 23.9' prior to coring.* *S-15, wet spoon.* *S-15 to S-17, PID=0.0 ppm.* 25.0'/El. 569.3	a-1-b / sp	23.5	S-15	3-8-10	1.50	24	1.5	100
			25.0	S-16	5-14-23		49	1.5	100
			26.4	S-17	14-28-50/.4'		104	1.4	100
	GRAVEL, some Silt, little Sand, very dense, dry, homogeneous, poorly graded, gray, residuum. 26.6'/El. 567.7		26.6	R-1			0%	1.0	100
BOL 576.25			27.6						
BOE 575.70				R-2			76%	5.0	100
TOR 567.70			32.6						
	SHALE interbedded with SILTSTONE, light gray to gray, cross bedded, soft to medium hard, laminated to thin bedding with flat dip, jointed, moderate spacing, flat dip, *tight to narrow joint openings, (RQD=65%).* *R-2, methane odor while coring.*			R-3			68%	4.7	94
	37.6'/El. 556.7								

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙
20 40 60 80
▲ SPT (N_{60}) ▲
10 20 30 40

[1] 24-hr. Water: Boring grouted upon completion

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK A. SIPPER
ENGINEER
No. PE091700

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 4 OF 5)

SHEET 53 OF 54

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RPE.dgn
8/18/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 4.2.3, 4-21-2016.GDT - 8/17/22 15:14 - \\PROJECTS\2019\19095\M95 - RPE-CO 583.GPJ

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
TOR	TOP OF ROCK ELEVATION
BOE	BOTTOM OF OVEREXCAVATION ELEVATION
PDE	PRE-DRILL ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
RPE-4	528+86.0 25 ft. LT.	R-2	29.2 to 34.2	POINT LOAD TEST	4483.0 PSI / 322.8 TSF	NO		96	72	SHALE	

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
RPE-4	528+86.0 25 ft. LT.	S-6 to 12	9.0 to 19.5	GROUNDWATER SOIL	7.3	6,131	80	165	No	No	No

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIEVER ENGINEER No. PE061795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
SEGMENT 0070 OFFSET 0113
EAST BAYFRONT PARKWAY RAMP STA. 527+89.38
OVER S.R. 4034

STRUCTURE BORINGS (SHEET 5 OF 5)

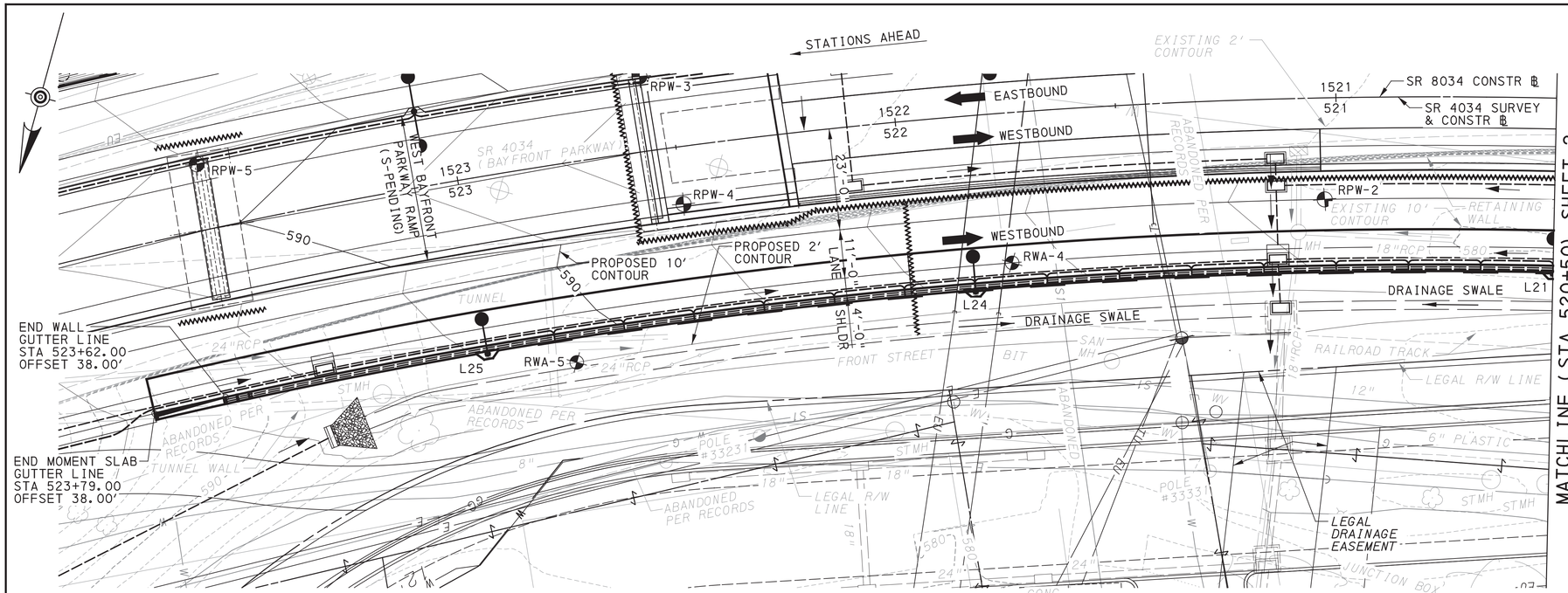
SHEET 54 OF 54

M:_2019\095\exhibits\structure\19095_srb_RPE.dgn
8/18/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

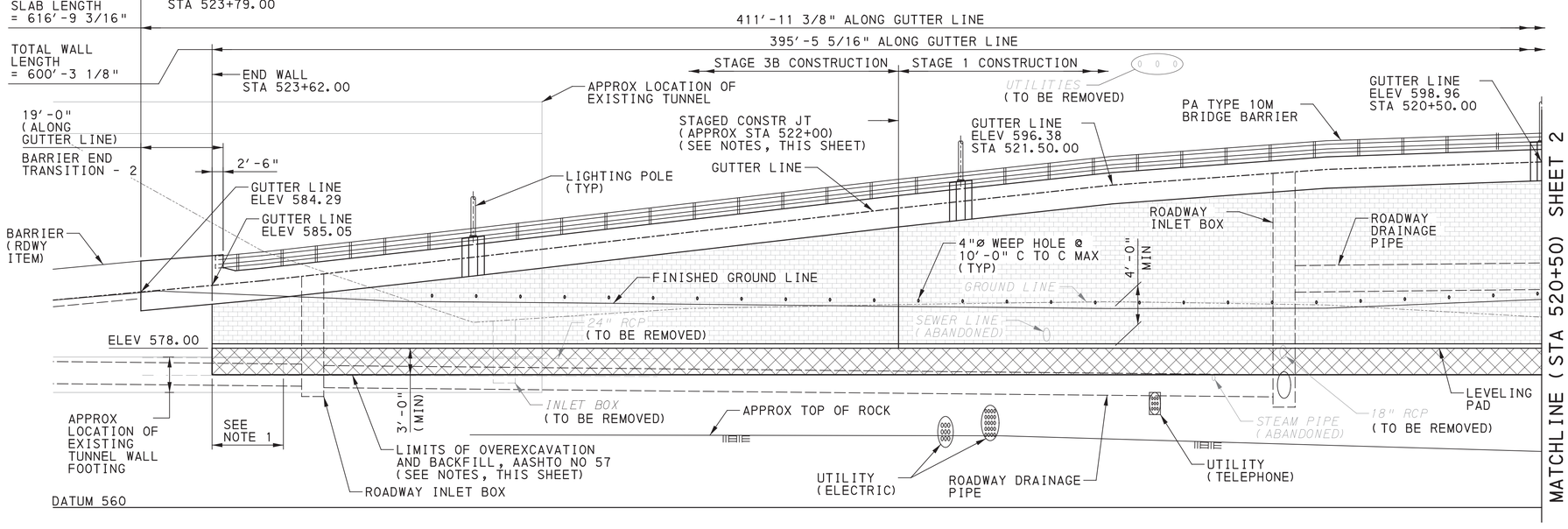
PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTgp001.dgn



PLAN

5 0 15 FEET



ELEVATION

5 0 15 FEET (HORIZONTAL)

2.5 0 7.5 FEET (VERTICAL)

LEGENDS:

- STRUCTURE BORING
- EXISTING BORING
- DIRECTION OF TRAFFIC FLOW
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (APPROXIMATE LOCATION)
- LIGHTING POLES & POST LIGHTS
- LED LINEAR LIGHT

LIGHTING POLE LOCATIONS

POLE NUMBER	STATION
L21	520+50, LT
L24	521+85, LT
L25	523+00, LT

NOTES:

1. REMOVE PORTION OF EXISTING TUNNEL WALL FOOTING AS REQUIRED FOR OVEREXCAVATION AND BACKFILL. REMOVAL OF THE TUNNEL WALL IS INCLUDED IN ITEM 1018-0001.
2. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE IDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
3. THE LOCATION OF THE STAGED CONSTRUCTION JOINT IS APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO COMPLY WITH THE TRAFFIC CONTROL PLAN.

REFERENCES:

FOR TYPICAL SECTIONS, SEE SHEET 5 & 6

FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE SHEET 3

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

MSE RETAINING WALL
GENERAL PLAN & ELEVATION - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

PENNSYLVANIA PE
NO. PE-089023
DATE: 08-19-2022

PREPARED BY:

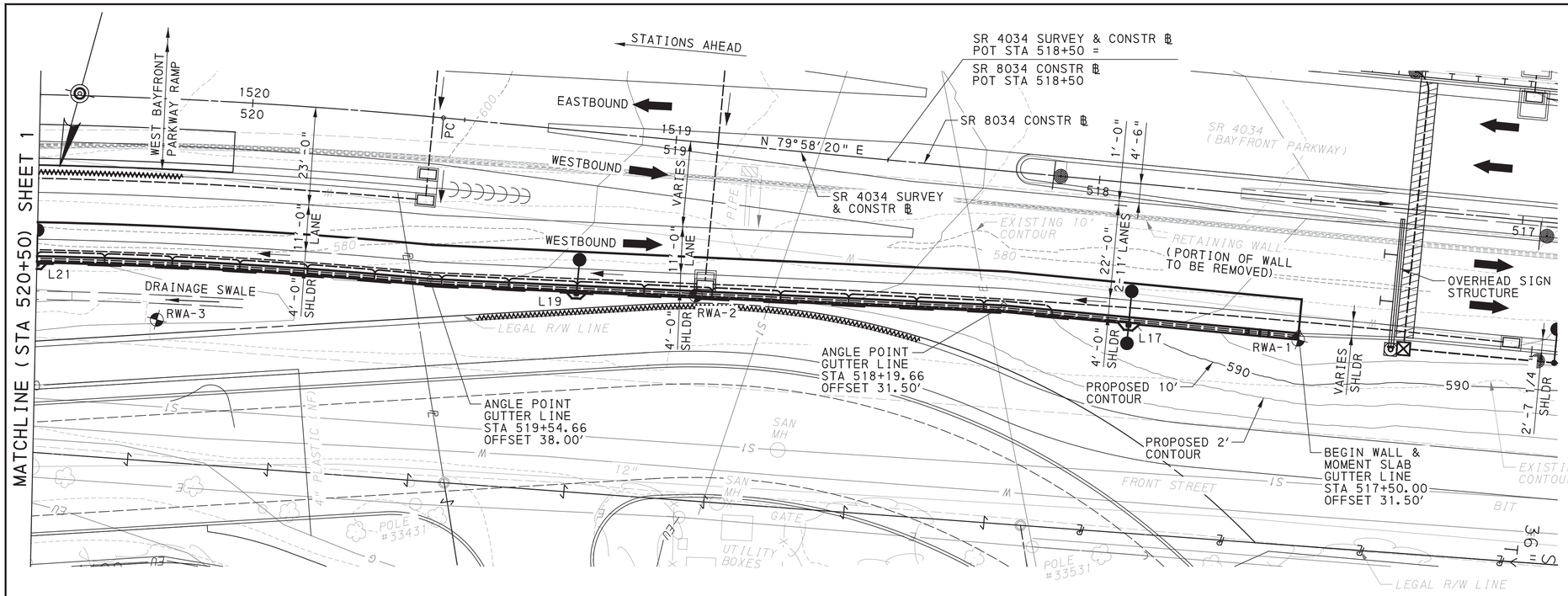
PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED
Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 15:05:26 -04'00'
DISTRICT BRIDGE ENGINEER

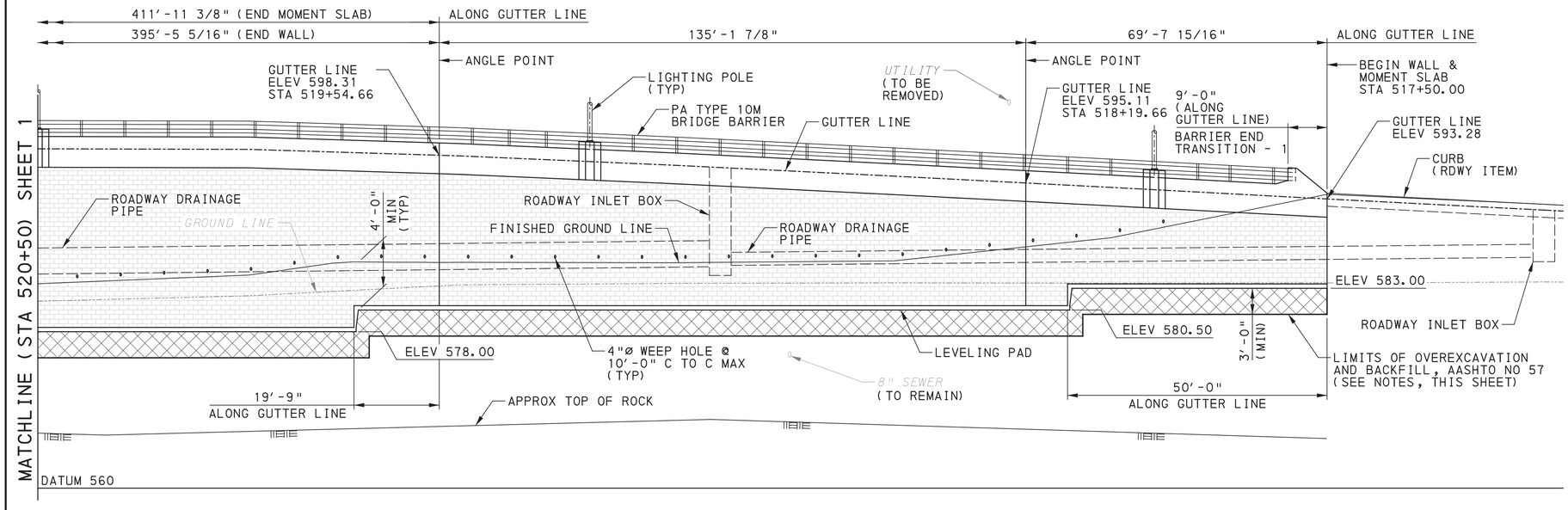
SHEET 1 OF 14
+ SUPPLEMENTAL DRAWINGS
S-40690P

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTgp002.dgn



PLAN
5 0 15 FEET



ELEVATION
5 0 15 FEET (HORIZONTAL)
2.5 0 7.5 FEET (VERTICAL)

LEGENDS:

- ⊕ - STRUCTURE BORING
- ⊕ - EXISTING BORING
- ➡ - DIRECTION OF TRAFFIC FLOW
- ▭ - ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- ∿∿∿ - TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (APPROXIMATE LOCATION)
- ●—● - LIGHTING POLES & POST LIGHTS
- —— - LED LINEAR LIGHT

LIGHTING POLE LOCATIONS

POLE NUMBER	STATION
L17	517+90, LT
L19	519+20, LT
L21	520+50, LT

NOTES:

1. STEPPED FOOTING SHOWN IS A POSSIBLE CONCEPT AND FOR BIDDING PURPOSES. MODIFICATIONS TO THE LOCATIONS AND HEIGHTS PER THE CONTRACTOR'S DESIGN AND REQUIREMENTS OF THE MANUFACTURER CAN BE MADE AS LONG AS THE MINIMUM REQUIREMENTS PROVIDED ARE MET.
2. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE IDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.

REFERENCES:

FOR TYPICAL SECTIONS, SEE SHEET 5 & 6

FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE SHEET 3

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

FOR GENERAL NOTES, SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
GENERAL PLAN & ELEVATION - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 14

S-40690P

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTgn001.dgn

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

GENERAL:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/ D1.5: 2015 BRIDGE WELDING CODE (USE AASHTO/ AWS D1.1/ D1.1M: 2015 FOR WELDING NOT COVERED IN AASHTO/ AWS D1.5M/ D1.5: 2015), AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

PANELS ARE TO BE RECTANGULAR IN SHAPE AND SIZED APPROPRIATELY TO DISCRETELY ALIGN PANEL JOINTS WITH THE ARCHITECHTURAL SURFACE TREATMENT PATTERN.

UTILITIES:

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTIONS 105.06 AND 107.12.

CONCRETE:

PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AA CEMENT CONCRETE IN CAST-IN-PLACE BARRIERS AND MOMENT SLAB.

USE CLASS A CEMENT CONCRETE, SULFATE RESISTANT, IN MSE RETAINING WALL FOOTING.

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

REINFORCEMENT:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/ A 615M, A 996/ A996 M OR A 706/ A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/ A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

ALL REINFORCEMENT BARS ARE TO BE EPOXY-COATED.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROTECTIVE/AESTHETIC COATINGS:

APPLY A PROTECTIVE COATING (PENETRATING SEALER) IN ACCORDANCE WITH PUBLICATION 408/2020 SECTION 1019, TO THE EXPOSED CONCRETE SURFACES OF THE BARRIERS NOT COVERED BY THE AESTHETIC COLOR COATING.

APPLY AESTHETIC COLOR COATING TO THE OUTSIDE FACE OF THE MOMENT SLAB BARRIERS, AND ON THE EXPOSED FACE OF THE PRECAST CONCRETE PANELS (EXTENDING 2'-0" BELOW FINISHED GROUND).

COLOR SHALL MATCH FEDERAL COLOR ID 36650. SUBMIT COLOR CHIP FOR APPROVAL.

FOUNDATIONS:

COMPLETE CONSTRUCTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

PLACE THE BOTTOM OF THE LEVELING PAD A MINIMUM OF 4.0 FEET BELOW THE GROUND SURFACE TO SATISFY FROST DEPTH REQUIREMENTS.

OVEREXCAVATE ANY PART OF THE TUNNEL THAT INTERFERES WITH THE PROPOSED MSE RETAINING WALLS A MINIMUM 2.0 FEET BELOW THE BOTTOM OF THE PROPOSED BOTTOM OF LEVELING PAD ELEVATION. THE BOTTOM OF THE OVEREXCAVATION SHALL BE INSPECTED AND CONFIRMED BY THE DISTRICT GEOTECHNICAL ENGINEER.

THE BOTTOM OF THE WALL EXCAVATION SHALL BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SUFFICIENT DEWATERING SO THE EXCAVATION IS DRY ENOUGH TO BE INSPECTED.

PROVIDE AASHTO NO. 57 COARSE AGGREGATE AS SPECIFIED BACKFILL.

PROVIDE EMBANKMENT BACKFILL WITH A MINIMUM FRICTION ANGLE OF 30 DEGREES BEHIND THE MECHANICALLY STABILIZED SOIL MASS. PROVIDE LAB TEST RESULTS FOR THE BACKFILL MATERIAL TO CONFIRM THE FRICTION ANGLE OF 30 DEGREES OR HIGHER.

PERFORM SPECIAL ROLLING, IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 208, OVER THE BOTTOM OF THE EXCAVATION FOR THE MSE WALLS THAT DO NOT REQUIRE MANDATORY OVEREXCAVATION.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

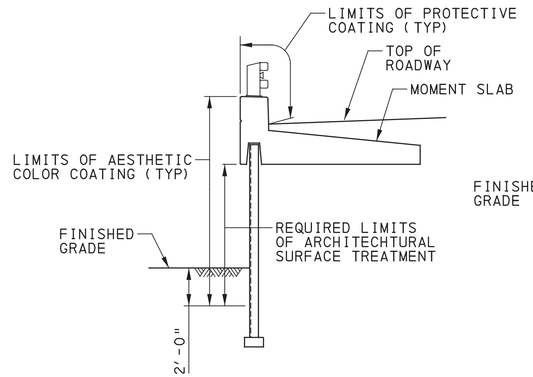
PROVIDE A MINIMUM 8-FOOT STRAP LENGTH AND MINIMUM STRAP LENGTH-TO-HEIGHT RATIO OF 1.0 WHERE THE WALL HEIGHT IS 11 FEET OR LESS AND 0.90 WHERE THE WALL HEIGHT IS GREATER THAN 11 FEET.

CONSTRUCT THE MSE WALLS IN ACCORDANCE WITH PENNDOT STANDARD BC-799M AND THE ATTACHED STANDARD SPECIAL PROVISION MECHANICALLY STABILIZED RETAINING WALL SYSTEMS (AS DESIGNED).

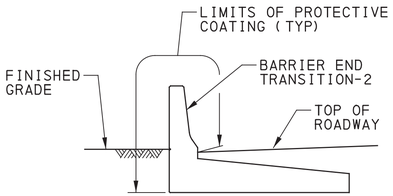
IN ACCORDANCE WITH PENNDOT STANDARD BC-799M, THE UNIT WEIGHT OF THE SPECIFIED BACKFILL FOR THE MSE WALLS SHOULD BE BETWEEN 90 AND 120 PCF. THE UNIT WEIGHT OF THE MSE SHALL NOT EXCEED 120 PCF.

THE CONTRACTOR IS TO COORDINATE THE DRAINAGE SYSTEM WITH THE WALL MANUFACTURER.

THE CONTRACTOR AND WALL MANUFACTURER ARE TO DEVELOP A SPECIFIC PLAN TO ACCOMMODATE ALL EXISTING AND PROPOSED UTILITIES WITHIN THE REINFORCED ZONE THAT AFFECT THE PLACEMENT OF THE REINFORCING STRIPS.



MSE RETAINING WALL



MOMENT SLAB

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN & ELEVATION - 1
2	GENERAL PLAN & ELEVATION - 2
3	GENERAL NOTES
4	QUANTITIES & STAKE-OUT PLAN
5	TYPICAL SECTIONS - 1
6	TYPICAL SECTIONS - 2
7	BARRIER END TRANSITIONS - 1
8	BARRIER END TRANSITIONS - 2
9	MSE WALL DRAINAGE
10	STRUCTURE BORINGS (SHEET 1 OF 5)
11	STRUCTURE BORINGS (SHEET 2 OF 5)
12	STRUCTURE BORINGS (SHEET 3 OF 5)
13	STRUCTURE BORINGS (SHEET 4 OF 5)
14	STRUCTURE BORINGS (SHEET 5 OF 5)

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
CONCRETE PAVEMENT JOINTS	RC-20M	11/30/2021
PA TYPE 10M BRIDGE BARRIER	BC-709M	2/19/2021
ELECTRIC DETAILS	BC-721M	2/19/2021
LIGHTING POLE ANCHORAGE	BC-722M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	2/19/2021
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	2/19/2021

HORIZONTAL ALIGNMENT DATA

SR 4034
SURVEY & CONSTR ℄

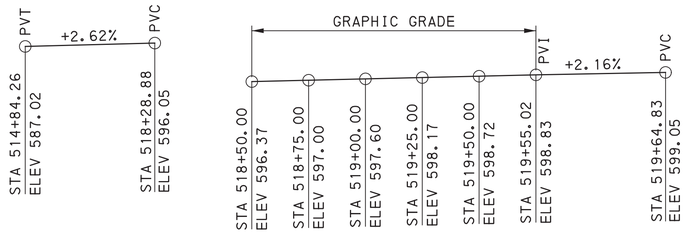
TANGENT
N 79°58'20" E

PI STA 522+08.36
Δ 22° 03' 18" (LT)
D 4° 24' 27"
T 253.34'
L 500.41'
R 1,300.00'
PC STA 519+55.02
PT STA 524+55.44
SUPERELEVATE = 2.4% (INSIDE LANES)
SUPERELEVATE = 3.8% (OUTSIDE LANES)

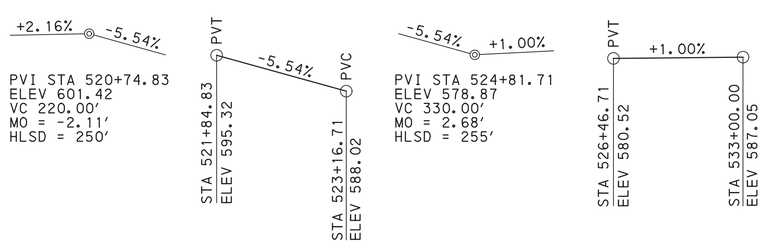
Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

VERTICAL ALIGNMENT DATA

SR 4034 & SR 8034
SURVEY & CONSTR ℄



SR 4034 WESTBOUND (PG WB)



COATING LIMITS

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
GENERAL NOTES

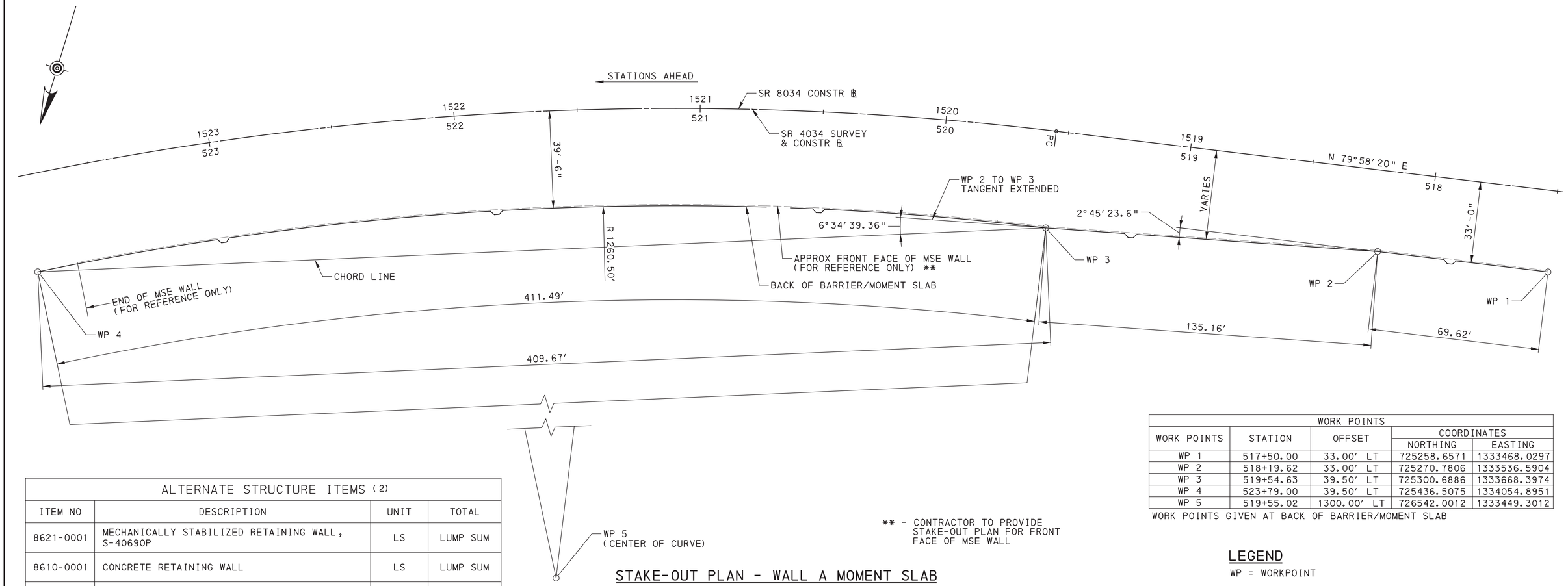
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 14

S-40690P

DES: KCL	CKD: REB	DWG: JP	CKD: KCL



** - CONTRACTOR TO PROVIDE STAKE-OUT PLAN FOR FRONT FACE OF MSE WALL

STAKE-OUT PLAN - WALL A MOMENT SLAB

10 0 10 20 FEET

WORK POINTS				
WORK POINTS	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	517+50.00	33.00′ LT	725258.6571	1333468.0297
WP 2	518+19.62	33.00′ LT	725270.7806	1333536.5904
WP 3	519+54.63	39.50′ LT	725300.6886	1333668.3974
WP 4	523+79.00	39.50′ LT	725436.5075	1334054.8951
WP 5	519+55.02	1300.00′ LT	726542.0012	1333449.3012

WORK POINTS GIVEN AT BACK OF BARRIER/MOMENT SLAB

LEGEND

WP = WORKPOINT

NOTES:

1. FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

ALTERNATE STRUCTURE ITEMS (2)			
ITEM NO	DESCRIPTION	UNIT	TOTAL
8621-0001	MECHANICALLY STABILIZED RETAINING WALL, S-40690P	LS	LUMP SUM
8610-0001	CONCRETE RETAINING WALL	LS	LUMP SUM
8620-0001	PREFABRICATED WALL	LS	LUMP SUM

APPROXIMATE QUANTITIES - MECHANICALLY STABILIZED RETAINING WALL				
ITEM NO	DESCRIPTION		UNIT	TOTAL
8621-0001	MECHANICALLY STABILIZED RETAINING WALL	(2)	LS	
(1)	CLASS 3 EXCAVATION	(3)	CY	2400
(1)	NO 57 COARSE AGGREGATE	(4)	CY	705
(1)	CLASS AA CEMENT CONCRETE	(5)	CY	375
(1)	CLASS A CEMENT CONCRETE, SULFATE RESISTANT		SY	12
(1)	SPECIFIED BACKFILL	(6)	CY	5205
(1)	GEOTEXTILE, CLASS 4, TYPE C		CY	620
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, MOMENT SLAB BARRIER), MODIFIED	(2)(7)	SY	215
(1)	AESTHETIC COLOR COATING (LIGHT GRAY)	(2)	SY	1015
(1)	PRECAST CONCRETE FACING PANELS	(6)(8)	SF	8555
(1)	IMPERVIOUS MEMBRANE	(6)	SY	1500
(1)	PA TYPE 10M BRIDGE BARRIER, MODIFIED	(2)(9)	LF	593
9000-0203	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	(2)(10)	LS	

(1) COMPONENT ITEMS IN MECHANICALLY STABILIZED RETAINING WALL LUMP SUM ITEM 8621-0001 GIVEN FOR INFORMATION ONLY.

(2) SEE SPECIAL PROVISIONS.

(3) CLASS 3 EXCAVATION INCLUDES APPROXIMATELY 620 CY TO ACCOUNT FOR THE OVEREXCAVATION AND BACKFILLING. COST TO PERFORM SPECIAL ROLLING IS INCIDENTAL TO THIS ITEM.

(4) NO 57 COARSE AGGREGATE INCLUDES APPROXIMATELY 26 CY TO ACCOUNT FOR THE MATERIAL BEHIND EACH WEEP HOLE. GEOTEXTILE FABRIC, CLASS 4, TYPE A AROUND THE MATERIAL IS INCIDENTAL TO THIS ITEM.

(5) CLASS AA CEMENT CONCRETE IS TO BE USED FOR THE MOMENT SLABS AND THE COST INCLUDES APPROXIMATELY 45,000 LB OF EPOXY COATED REINFORCEMENT BARS TO BE DETAILED BY THE CONTRACTOR.

(6) SEE SPECIAL PROVISION FOR ITEM 8621-0001 MECHANICALLY STABILIZED RETAINING WALL FOR MATERIAL SPECIFICATIONS.

(7) ONLY APPLY PROTECTIVE COATING IF CONCRETE IS POURED BETWEEN SEPTEMBER 1 AND MARCH 1, PER PUBLICATION 408, SECTION 1001.3(k)6.

(8) PRECAST CONCRETE FACING PANELS INCLUDE THE COST FOR THE ARCHITECTURAL SURFACE TREATMENT.

(9) ATTACHMENTS TO BARRIER END TRANSITIONS ARE INCIDENTAL TO THIS ITEM.

(10) TEMPORARY SHORING ALONG FRONT STREET AND STAGED CONSTRUCTION LIMIT.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5′LT TO STA. 523+62, 38.0′LT
RETAINING WALL A

MSE RETAINING WALL
QUANTITIES & STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 14

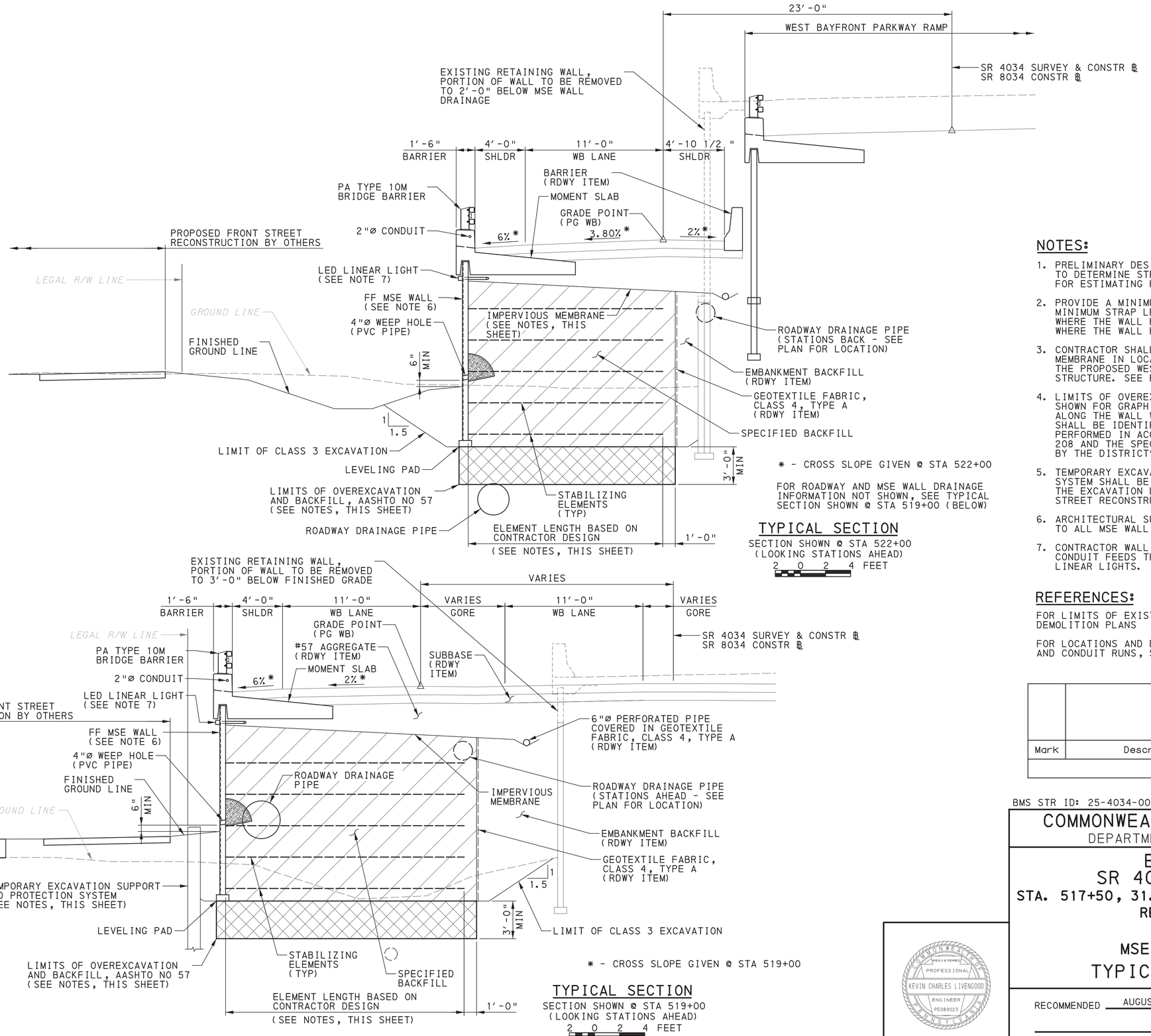
S-40690P

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTsp001.dgn

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTts001.dgn

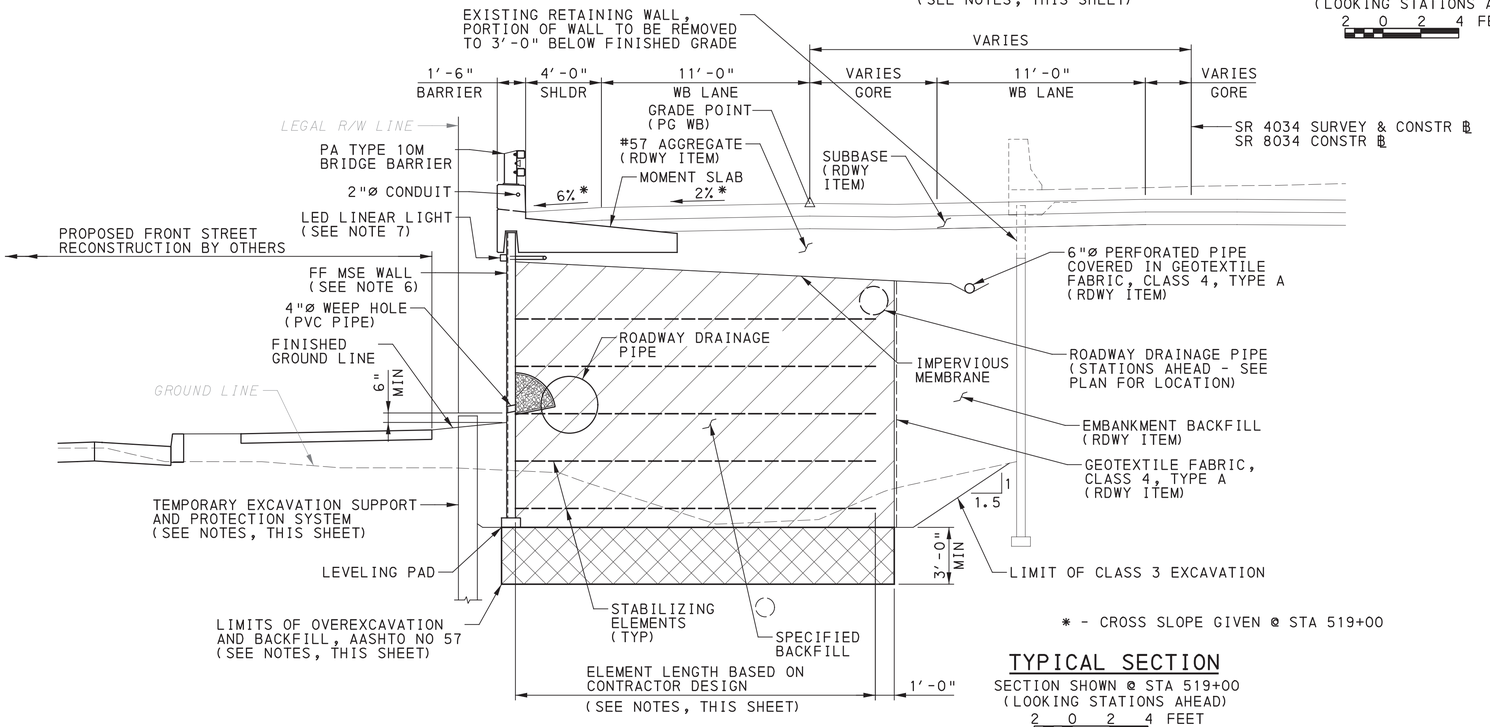


* - CROSS SLOPE GIVEN @ STA 522+00

FOR ROADWAY AND MSE WALL DRAINAGE INFORMATION NOT SHOWN, SEE TYPICAL SECTION SHOWN @ STA 519+00 (BELOW)

TYPICAL SECTION

SECTION SHOWN @ STA 522+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



* - CROSS SLOPE GIVEN @ STA 519+00

TYPICAL SECTION

SECTION SHOWN @ STA 519+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

NOTES:

1. PRELIMINARY DESIGN CALCULATIONS WERE PERFORMED TO DETERMINE STRAP LENGTHS THAT ARE TO BE USED FOR ESTIMATING PURPOSES ONLY.
2. PROVIDE A MINIMUM STRAP LENGTH OF 8'-0" AND A MINIMUM STRAP LENGTH-TO-HEIGHT RATIO OF 1.0 WHERE THE WALL HEIGHT IS 11-FT OR LESS AND 0.9 WHERE THE WALL HEIGHT IS GREATER THAN 11-FT.
3. CONTRACTOR SHALL ADJUST LIMITS OF IMPERVIOUS MEMBRANE IN LOCATIONS WHERE IT CONFLICTS WITH THE PROPOSED WEST BAYFRONT PARKWAY RAMP STRUCTURE. SEE PLAN SET FOR STRUCTURE LAYOUT.
4. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE IDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
5. TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM SHALL BE PROVIDED AT LOCATIONS WHERE THE EXCAVATION LIMITS CONFLICT WITH THE FRONT STREET RECONSTRUCTION LIMITS.
6. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO ALL MSE WALL PANELS.
7. CONTRACTOR WALL DESIGN SHALL ACCOMODATE CONDUIT FEEDS THROUGH THE PANELS TO THE LED LINEAR LIGHTS.

REFERENCES:

FOR LIMITS OF EXISTING WALL REMOVAL, SEE CSXT DEMOLITION PLANS

FOR LOCATIONS AND DETAILS OF LED LINEAR LIGHTS AND CONDUIT RUNS, SEE HIGHWAY LIGHTING PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
TYPICAL SECTIONS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

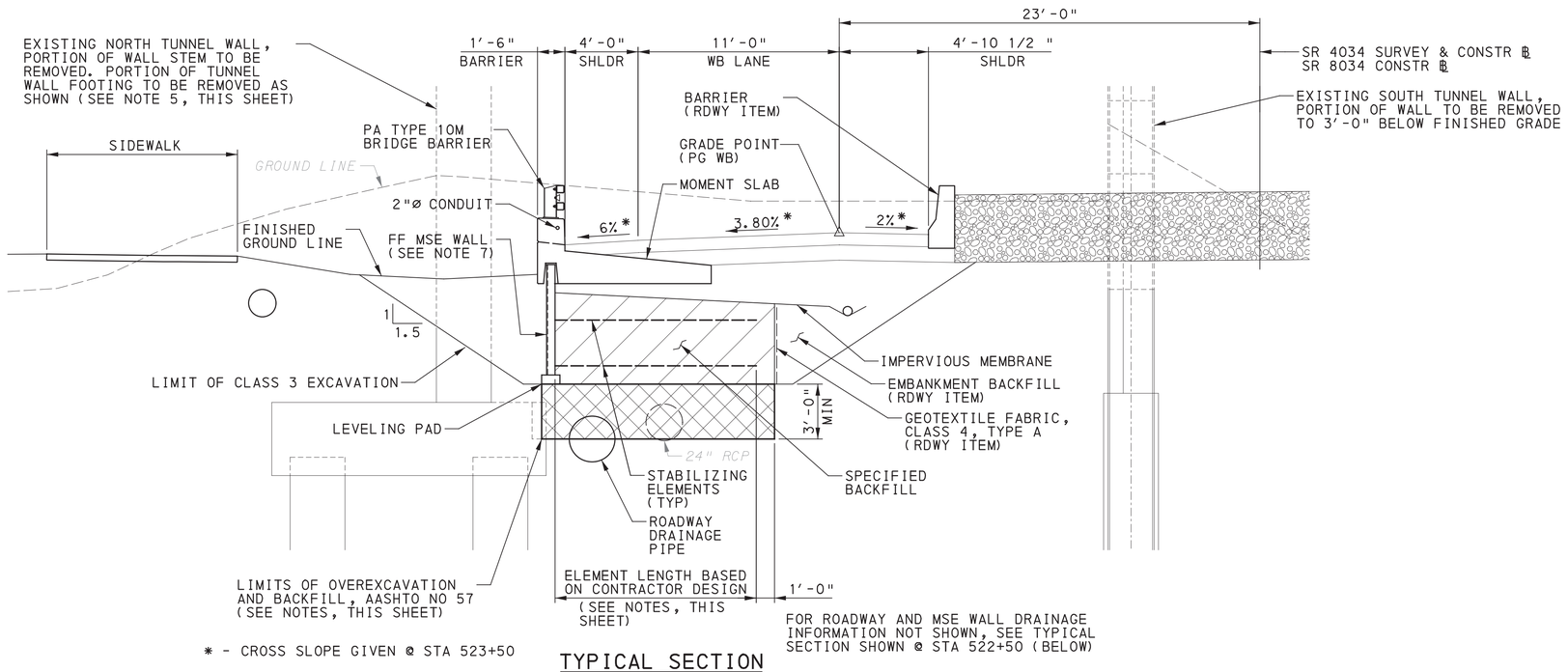
RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 14

S-40690P

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

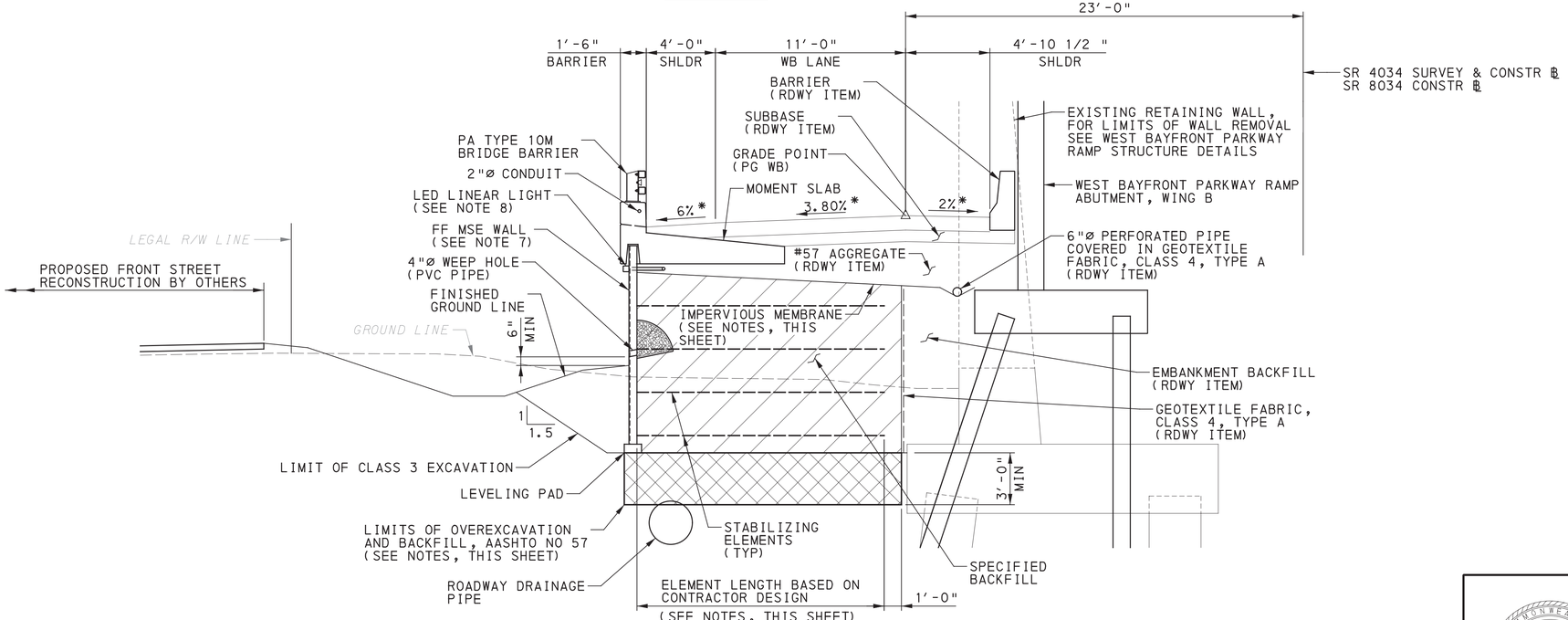
PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTts002.dgn



* - CROSS SLOPE GIVEN @ STA 523+50

TYPICAL SECTION

SECTION SHOWN @ STA 523+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



* - CROSS SLOPE GIVEN @ STA 522+50

TYPICAL SECTION

SECTION SHOWN @ STA 522+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

NOTES:

1. PRELIMINARY DESIGN CALCULATIONS WERE PERFORMED TO DETERMINE STRAP LENGTHS THAT ARE TO BE USED FOR ESTIMATING PURPOSES ONLY.
2. PROVIDE A MINIMUM STRAP LENGTH OF 8'-0" AND A MINIMUM STRAP LENGTH-TO-HEIGHT RATIO OF 1.0 WHERE THE WALL HEIGHT IS 11-FT OR LESS AND 0.9 WHERE THE WALL HEIGHT IS GREATER THAN 11-FT.
3. CONTRACTOR SHALL ADJUST LIMITS OF IMPERVIOUS MEMBRANE IN LOCATIONS WHERE IT CONFLICTS WITH THE PROPOSED WEST BAYFRONT PARKWAY RAMP STRUCTURE. SEE PLAN SET FOR STRUCTURE LAYOUT.
4. LIMITS OF OVEREXCAVATION AND BACKFILL ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. LOCATIONS ALONG THE WALL WHERE THIS WORK IS REQUIRED SHALL BE IDENTIFIED BY SPECIAL ROLLING PERFORMED IN ACCORDANCE WITH PUB 408, SECTION 208 AND THE SPECIAL PROVISION, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
5. REMOVE PORTION OF EXISTING TUNNEL WALL FOOTING AS REQUIRED FOR OVEREXCAVATION AND BACKFILL.
6. TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM SHALL BE PROVIDED AT LOCATIONS WHERE THE EXCAVATION LIMITS CONFLICT WITH THE FRONT STREET RECONSTRUCTION LIMITS.
7. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO ALL MSE WALL PANELS.
8. CONTRACTOR WALL DESIGN SHALL ACCOMODATE CONDUIT FEEDS THROUGH THE PANELS TO THE LED LINEAR LIGHTS.

REFERENCES:

FOR LIMITS OF EXISTING WALL REMOVAL, SEE CSXT DEMOLITION PLANS

FOR LOCATIONS AND DETAILS OF LED LINEAR LIGHTS AND CONDUIT RUNS, SEE HIGHWAY LIGHTING PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
TYPICAL SECTIONS - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

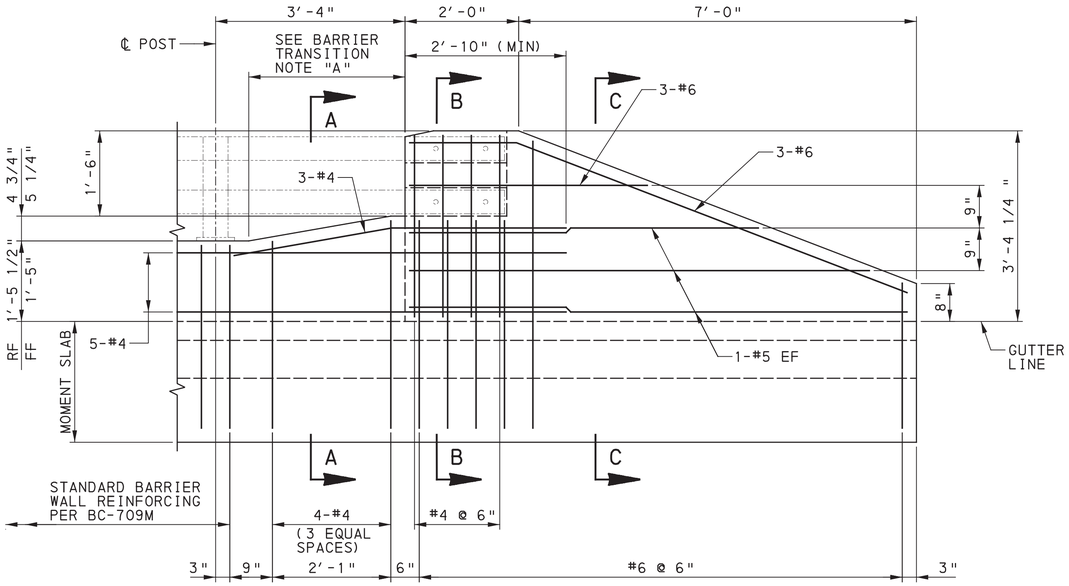
RECOMMENDED AUGUST 22, 2022

SHEET 6 OF 14

S-40690P

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

OPERATOR:
FILE NAME: \\mesconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTmd001.dgn
PLOTTED: 8/19/2022



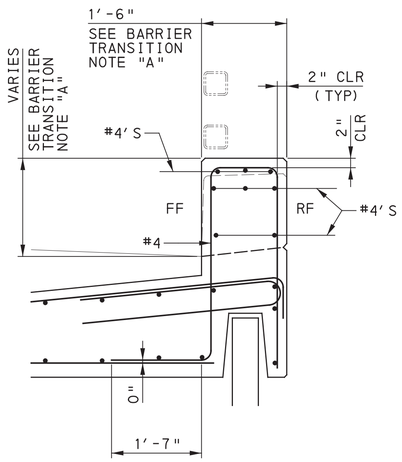
BARRIER END TRANSITION - 1

(LOOKING @ BACK OF BARRIER)

12 0 12 INCHES

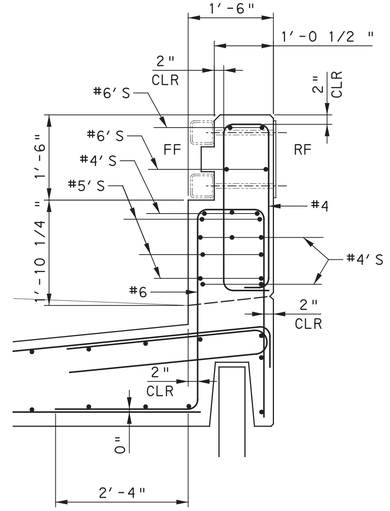
BARRIER TRANSITION NOTE "A"

TRANSITION BARRIER FF 1/2" REVEAL AND TOP SURFACE 1/2" SLOPE FLUSH WITH BARRIER END TRANSITION IN THIS AREA



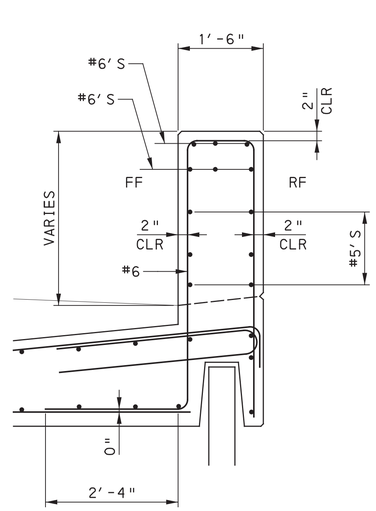
SECTION A-A

12 0 12 INCHES



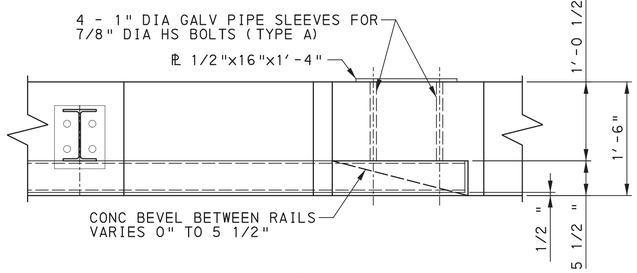
SECTION B-B

12 0 12 INCHES

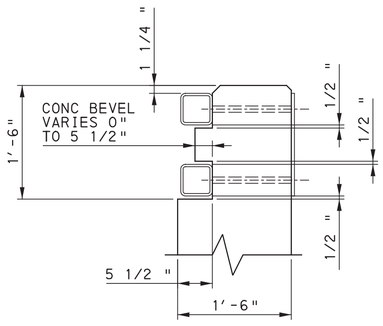


SECTION C-C

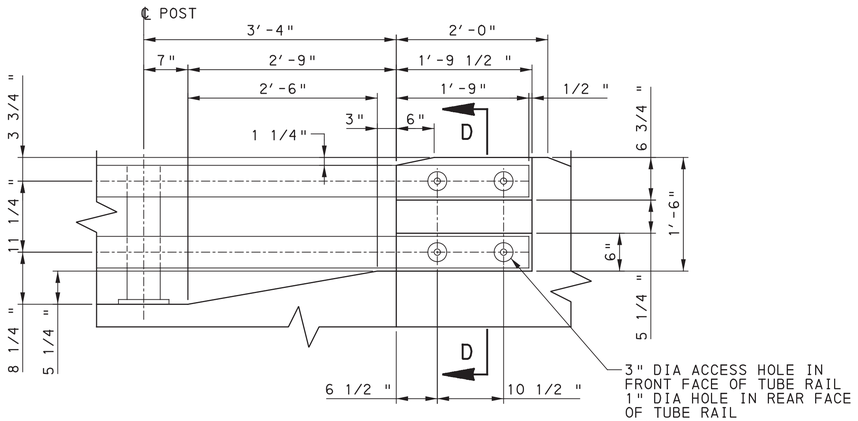
12 0 12 INCHES



(PLAN)



SECTION D-D



(ELEVATION)

PA TYPE 10M BRIDGE BARRIER - RAIL CONNECTION DETAIL

6 0 6 12 INCHES

DES:	KCL	CKD:	REB	DWG:	JP	CKD:	REB

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
BARRIER END TRANSITIONS - 1

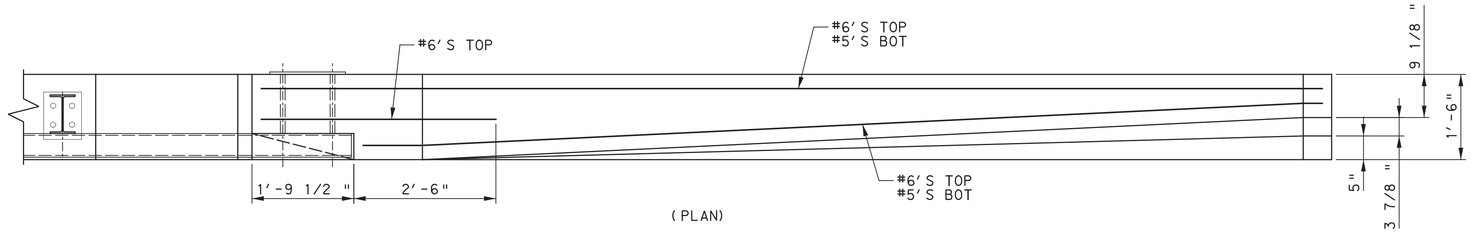
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

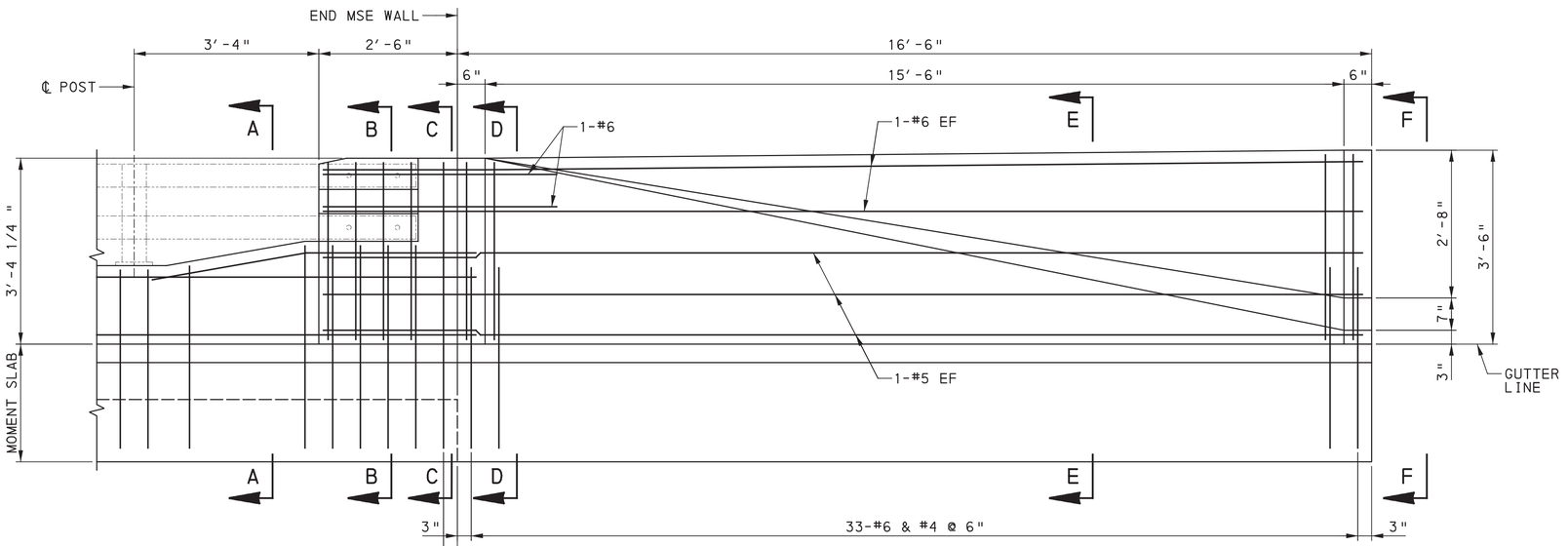
SHEET 7 OF 14

S-40690P

PLOTTED: 8/19/2022



(PLAN)



SEE BARRIER END TRANSITION -1
FOR BARRIER REINFORCING

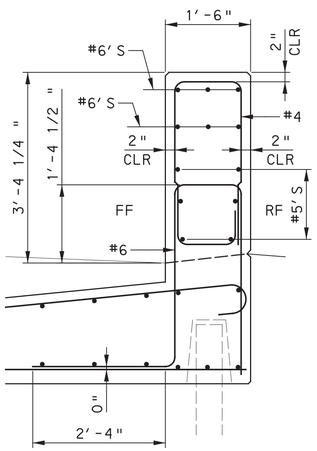
SEE BC-709M FOR MSE WALL
MOMENT SLAB REINFORCING

(ELEVATION)

BARRIER END TRANSITION - 2

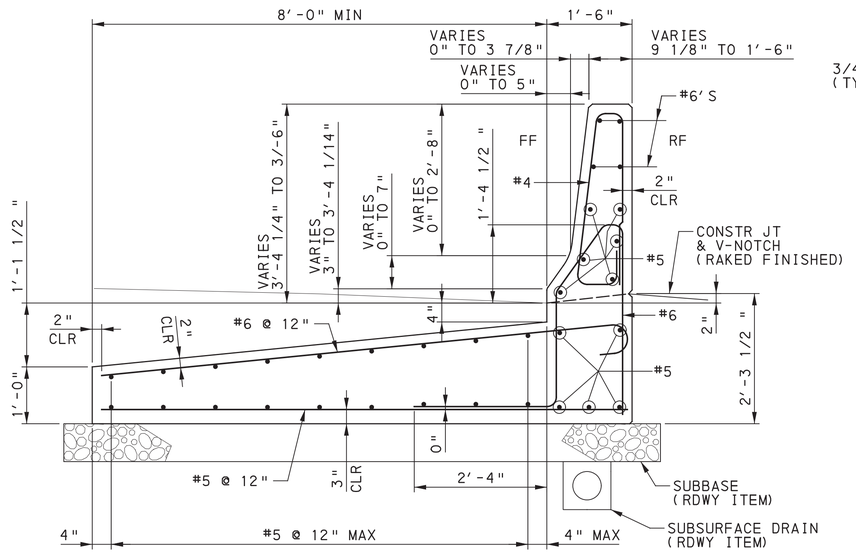
(LOOKING @ FRONT OF BARRIER)

12 0 12 INCHES



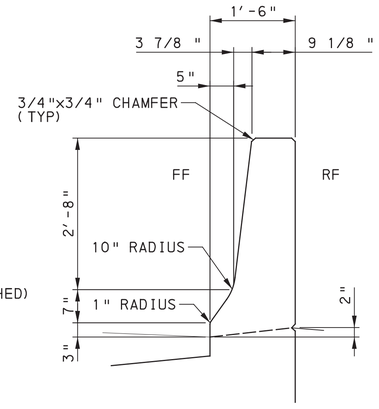
SECTION D-D

12 0 12 INCHES



SECTION E-E

12 0 12 INCHES



SECTION F-F

12 0 12 INCHES

REFERENCES:

FOR BARRIER END TRANSITION 1, SEE SHEET 7

FOR SECTIONS A-A, B-B & C-C, SEE SHEET 7

FOR RAIL CONNECTION DETAIL, SEE SHEET 7

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
BARRIER END TRANSITIONS - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

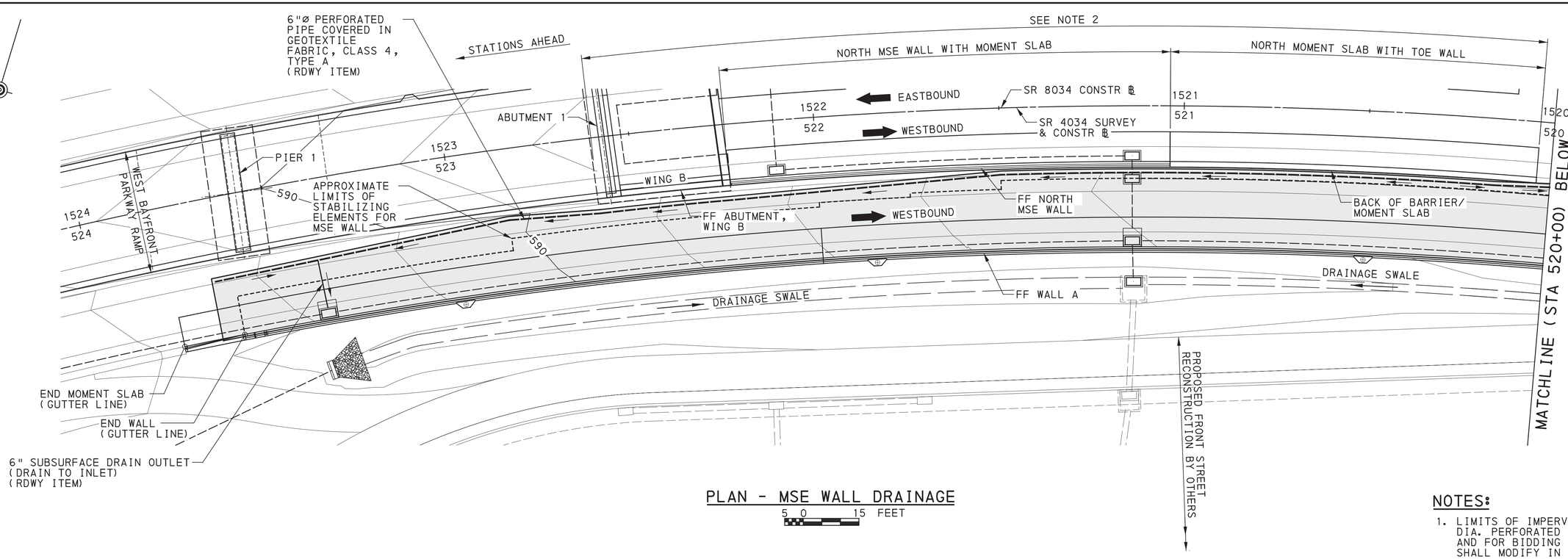
SHEET 8 OF 14

S-40690P

DES: KCL | CKD: REB | DWG: JP | CKD: REB

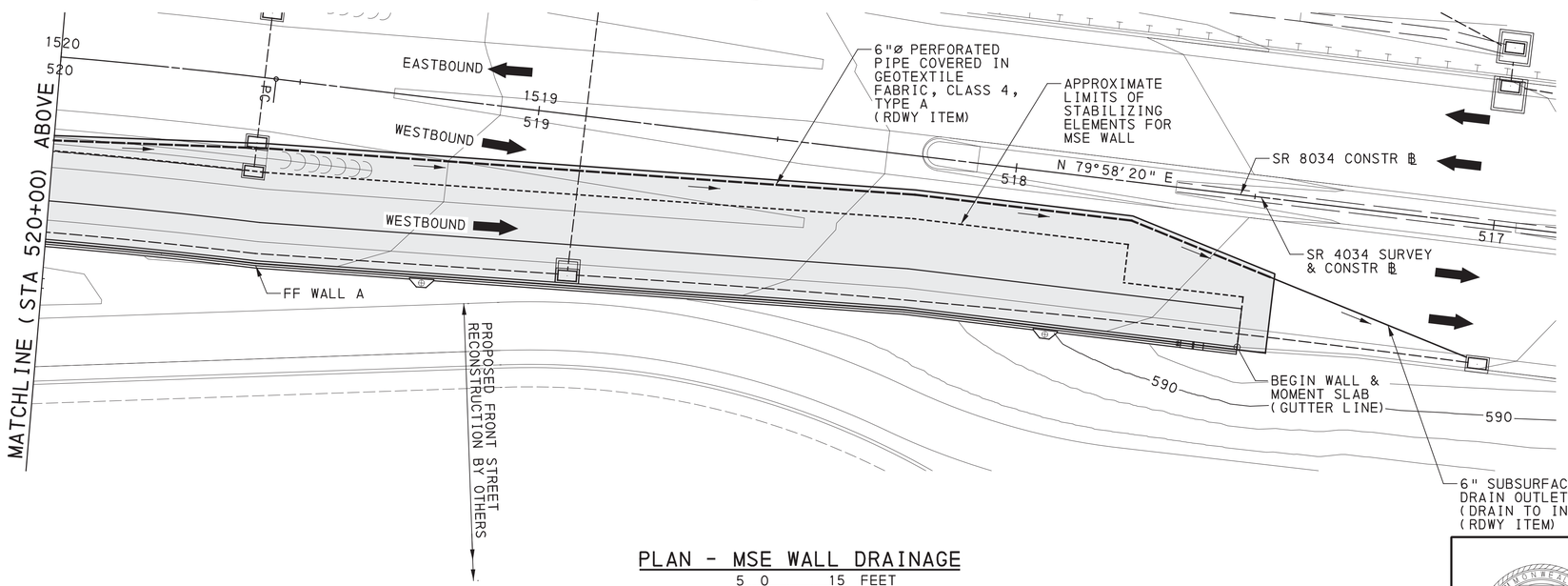
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTmd002.dgn

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_AF\sheets\FINAL\wall_BP_AFSTdr001.dgn



PLAN - MSE WALL DRAINAGE

5 0 15 FEET



PLAN - MSE WALL DRAINAGE

5 0 15 FEET

- DENOTES APPROXIMATE LIMITS OF IMPERVIOUS MEMBRANE. EXTEND MEMBRANE 6'-0" MINIMUM BEYOND END OF MSE WALL STABILIZING ELEMENTS. (SEE NOTES, THIS SHEET)

NOTES:

1. LIMITS OF IMPERVIOUS MEMBRANE AND 6" DIA. PERFORATED PIPE ARE CONCEPTUAL AND FOR BIDDING PURPOSES. CONTRACTOR SHALL MODIFY IN ACCORDANCE WITH THE MSE WALL DESIGN, TO THE REQUIREMENTS SHOWN HERE, AND TO BC-799M.
2. ADJUST LIMITS OF IMPERVIOUS MEMBRANE AND 6" DIA PERFORATED PIPE AS REQUIRED ALONG PROPOSED WEST RAMP STRUCTURE.

REFERENCES:

FOR PLAN INFORMATION NOT SHOWN, SEE GENERAL PLAN SHEET 1 & 2

FOR MSE WALL ELEVATION, SEE SHEETS 1 & 2

FOR TYPICAL SECTIONS, SEE SHEET 5 & 6

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-1436 MPMS PROJ: 108952 BRKEY: 69235

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 517+50, 31.5'LT TO STA. 523+62, 38.0'LT
RETAINING WALL A

MSE RETAINING WALL
MSE WALL DRAINAGE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 14

S-40690P

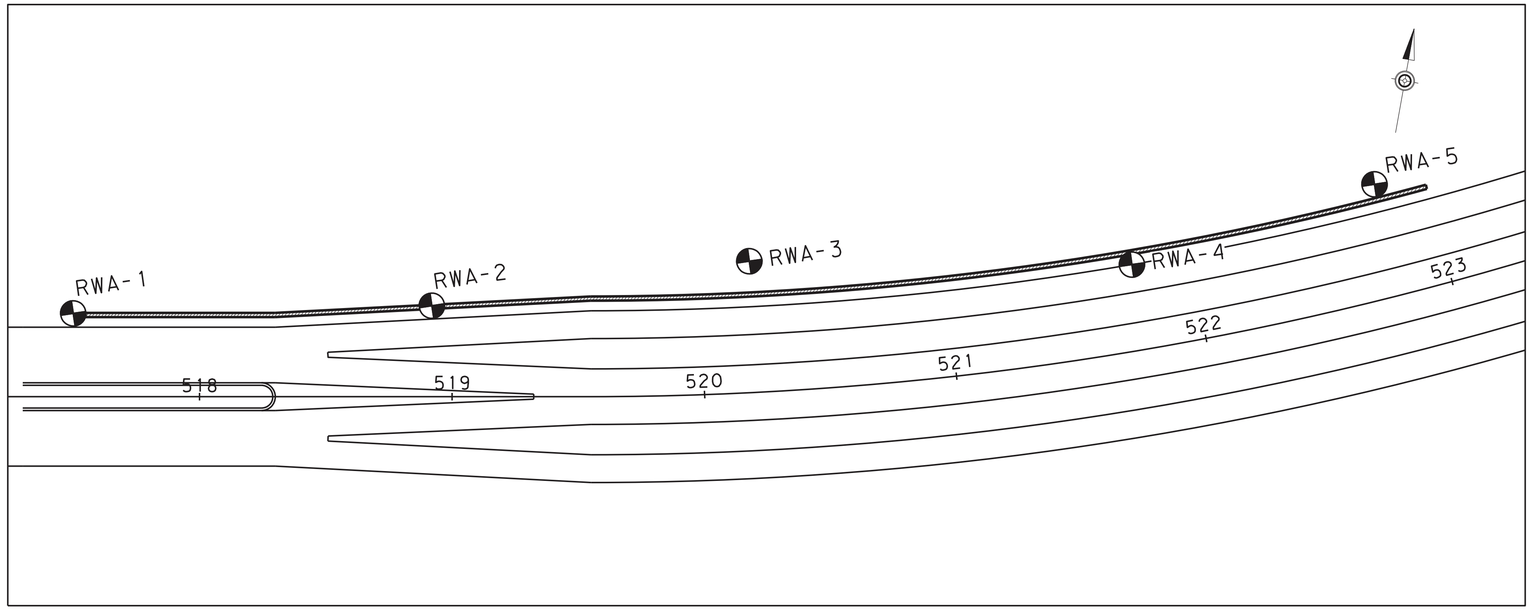
DES: KCL | CKD: REB | DWG: JP | CKD: KCL

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.



BORING LOCATION LAYOUT

SCALE

30 FEET 0 30 FEET

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler — 2/16/2021

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. STYLER ENGINEER No. PE081790

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

STRUCTURE BORINGS (SHEET 1 OF 5)

Christopher T. Fox, P.E.

Digitally signed by Christopher T. Fox, P.E.
Date: 2022.08.23 07:19:05 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 10 OF 14

S-40690P

M:_2019\095\exhibits\structure\19095_srb_RWA.dgn
7/26/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

SUBSTRUCTURE UNIT:

RETAINING WALL A

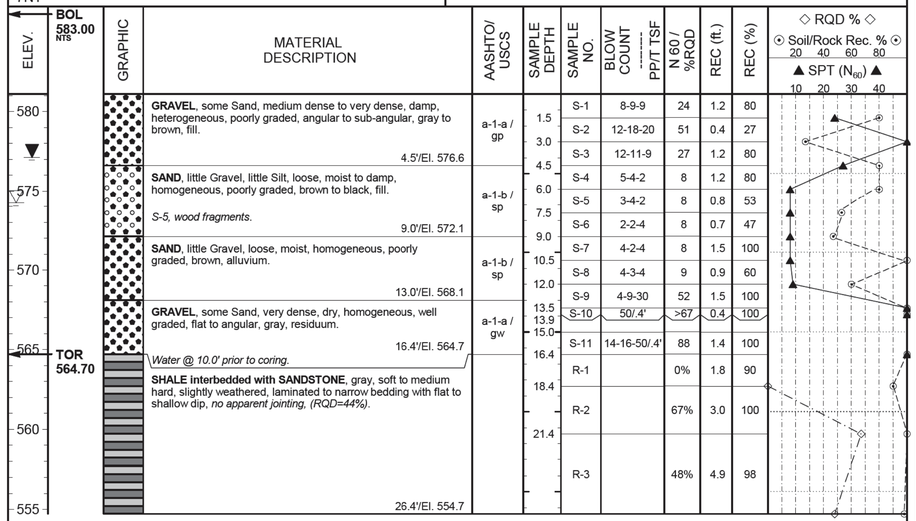
LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/27/2020 8:30 AM	HAMMER: AUTOMATIC
RWA-1	STATION: 517+50.0 OFFSET: 33.0 FT. LT.	FINISH: 10/27/2020 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	581.1 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 574.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 577.1 ft. - 21.0 hr.



All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

SUBSTRUCTURE UNIT:

RETAINING WALL A

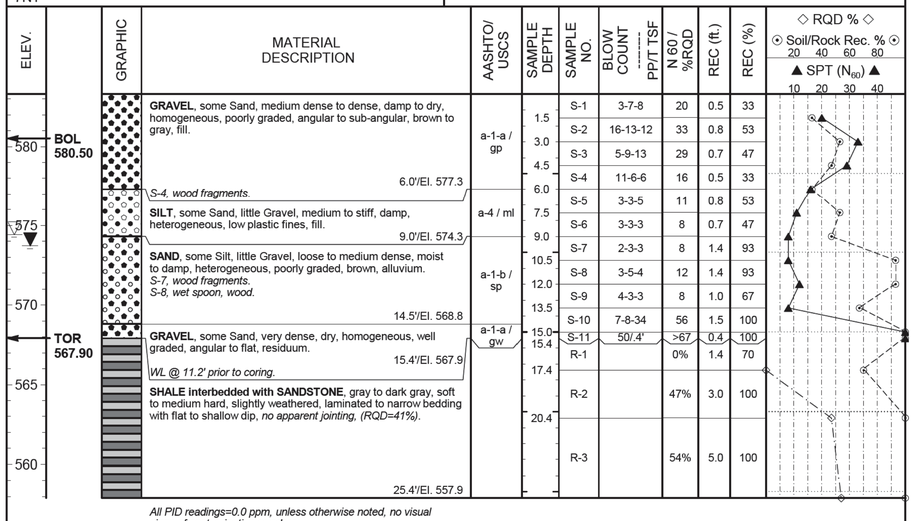
LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/27/2020 11:30 AM	HAMMER: AUTOMATIC
RWA-2	STATION: 518+92.0 OFFSET: 36.0 FT. LT.	FINISH: 10/27/2020 2:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	583.3 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 574.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 573.7 ft. - 17.5 hr.



All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIVER ENGINEER No. PE081706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

STRUCTURE BORINGS (SHEET 2 OF 5)

SHEET 11 OF 14

S-40690P

PLT: RJS | CKD: GKW | QA/QC: MAS

PENNDOT STRUCTURE BORING LOGS - PENNDOT GINT VERSION 4.23.3.421.2016.GDT 2/18/22 08:42 - L:\PROJECTS\2019\19095\19095 - ERIE CO SSS.GPJ

M:_2019\095\exhibits\structure\19095_strb_RWA.dgn
7/26/2022

SUBSTRUCTURE UNIT:
RETAINING WALL A

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/27/2020 2:30 PM	HAMMER: AUTOMATIC
RWA-3	STATION: 520+20.0 OFFSET: 52.0 FT. LT.	FINISH: 10/27/2020 4:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	583.8 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE 7NT

▽ 0 HR. READING - ELAPSED TIME:EI. 581.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:EI. 580.3 ft. - 16.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
580		**SAND**, little Silt, contains coal fragments, loose to medium dense, damp, heterogeneous, poorly graded, black to brown, fill.	a-1-b / sp	1.5	S-1	4-3-4		9	1.2	80
				3.0	S-2	4-5-5		13	1.2	80
				4.5	S-3	3-3-3		8	1.4	93
				6.0	S-4	3-3-4		9	1.5	100
		Bag sample, B-1, collected from 0.0-6.0'.		7.5	S-5	3-4-4	**2.00**	11	1.5	100
		6.0'/El. 577.8		9.0	S-6	5-3-3		8	1.5	100
BOL 578.00		**SILT**, some Sand, little Gravel, trace Clay, medium to very stiff, moist to damp, homogeneous, non-plastic, brown to gray, alluvium.	A-4 / ML	10.5	S-7	2-4-5		12	1.2	80
		Class. on S-5 to S-7 *N.M.C.=17.8%.*		12.0	S-8	4-5-40		60	1.5	100
		10.5'/El. 573.3		13.5	S-9	5-7-12		25	0.2	13
570		**GRAVEL**, some Sand, medium dense to very dense, wet to damp, heterogeneous, well graded, angular to flat, residuum.	a-1-b / gw	14.7	S-10	15-18-50/.2'		91	1.2	100
		14.7'/El. 569.1		16.7	R-1			0%	1.9	95
TOR 569.10		**SHALE interbedded with SANDSTONE**, gray to dark gray, soft to medium hard, slightly weathered, laminated to narrow bedding with flat dip, *no apparent jointing, (RQD=24%).*			R-2			17%	3.0	100
565				19.7	R-3			38%	4.8	96
		24.7'/El. 559.1								
560										

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
RETAINING WALL A

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/28/2020 2:30 PM	HAMMER: AUTOMATIC
RWA-4	STATION: 521+76.0 OFFSET: 34.0 FT. LT.	FINISH: 10/28/2020 4:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	582.5 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE 7NT

▽ 0 HR. READING - ELAPSED TIME:EI. 579.5 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:EI. 579.6 ft. - 15.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		GRAVEL, some Sand, medium dense to very dense, damp, heterogeneous, poorly graded, angular to sub-angular, brown to gray, fill.	a-1-a / gp	1.5	S-1	2-12-15		36	1.0	67
				3.0	S-2	31-21-21		56	0.2	13
				4.5	S-3	8-10-8		24	1.3	87
		S-2, spoon pushed gravel.		6.0	S-4	4-4-5	**1.75**	12	1.5	100
		4.5'/El. 578.0		7.5	S-5	3-3-4		9	0.5	33
BOL 578.00		**SILT**, little Sand, trace Clay, trace Gravel, soft to hard, wet to damp, homogeneous, non-plastic, brown to gray, alluvium.	A-4 / ML	9.0	S-6	6-7-6		17	1.2	80
		Class. on S-6 to S-9 *N.M.C.=20.3%.*		10.5	S-7	2-1-2	**0.75**	4	1.4	93
		13.5'/El. 569.0		12.0	S-8	4-8-10	**1.50**	24	1.5	100
570		**GRAVEL**, some Sand, very dense, damp, heterogeneous, poorly graded, angular to flat, gray, residuum.	a-1-a / gp	13.5	S-9	6-8-16	**2.50**	32	1.4	93
		14.4'/El. 568.1		14.4	S-10	21-50/.4'		>67	0.9	100
TOR 568.10		*WL @ 13.6' prior to coring.*		16.4	R-1			0%	1.8	90
		SHALE interbedded with SANDSTONE, gray to dark gray, soft to medium hard, slightly weathered, laminated to narrow bedding with flat to shallow dip, *no apparent jointing, (RQD=32%).*			R-2			27%	2.8	93
565				19.4	R-3			48%	4.9	98
		Sandstone, 20.8-21.7'.								
		24.4'/El. 558.1								
560										

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR TOP OF ROCK ELEVATION
BOL BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SAYLER ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

STRUCTURE BORINGS (SHEET 3 OF 5)

SHEET 12 OF 14

S-40690P

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_RWA.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION 1.23.5 8-21-2018.GDT - 2/10/22 09:42 - L:\PROJECTS\2019\095\DRE CO SAS.GPJ
PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION 1.22.5 11-15-2017.GDT - 2/10/22 09:42 - L:\PROJECTS\2019\095\DRE CO SAS.GPJ

SUBSTRUCTURE UNIT:

RETAINING WALL A

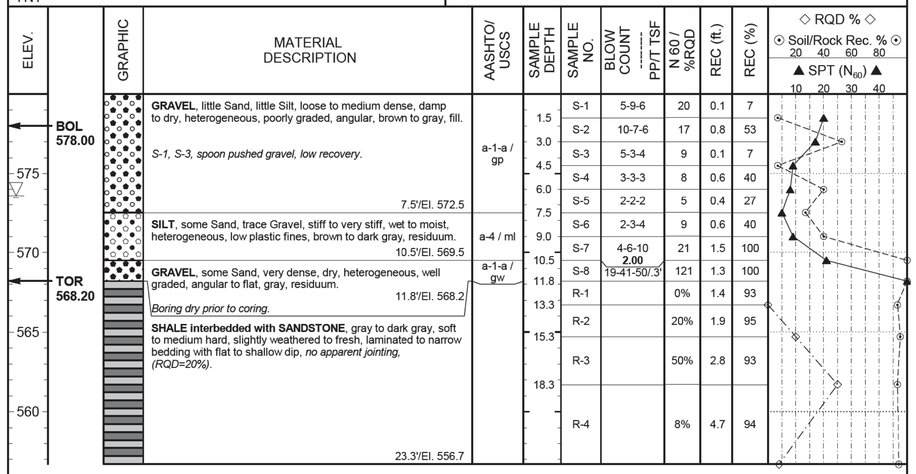
LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/30/2020 9:00 AM	HAMMER: AUTOMATIC
RWA-5	STATION: 522+80.0 OFFSET: 45.0 FT. LT.	FINISH: 10/30/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	580.0 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 573.6 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]



[1] 24-hr. Water: Boring grouted upon completion

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SITLER ENGINEER No. PE081706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

STRUCTURE BORINGS (SHEET 4 OF 5)

SHEET 13 OF 14

S-40690P

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RWA.dgn
7/26/2022
PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_1.23.0.21.GDT - 2/16/22 10:18 - I:\PROJECTS\2019\19095\000 - ERIE CO S&B\GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			MOISTURE DENSITY		
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	MAX. DRY DENSITY (PCF)	OPTIMUM MOISTURE %	CBR
RWA-3	520+20.0 52 ft. LT.	S-5 to 7	6.0 to 10.5	17.8	19.7	27.7			52.6	46.2	6.4	A-4	ML		NP	NP	NP			
RWA-4	521+76.0 34 ft. LT.	S-6 to 9	7.5 to 13.5	20.3	6.4	18.6			75.0	68.0	7.0	A-4	ML		NP	NP	NP			

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
RWA-3	520+20.0 52 ft. LT.	S-1 to 4	0.0 to 6.0	SOIL	7.2	21,541	50	99	No	No	No

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR TOP OF ROCK ELEVATION
BOL BOTTOM OF LEVELING PAD ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK S. SITLER ENGINEER No. PE081706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
S.R. 4034 SECTION A01
STA. 517+50, 31.5' LT TO STA. 523+62, 38.0' LT
RETAINING WALL A

STRUCTURE BORINGS (SHEET 5 OF 5)

SHEET 14 OF 14

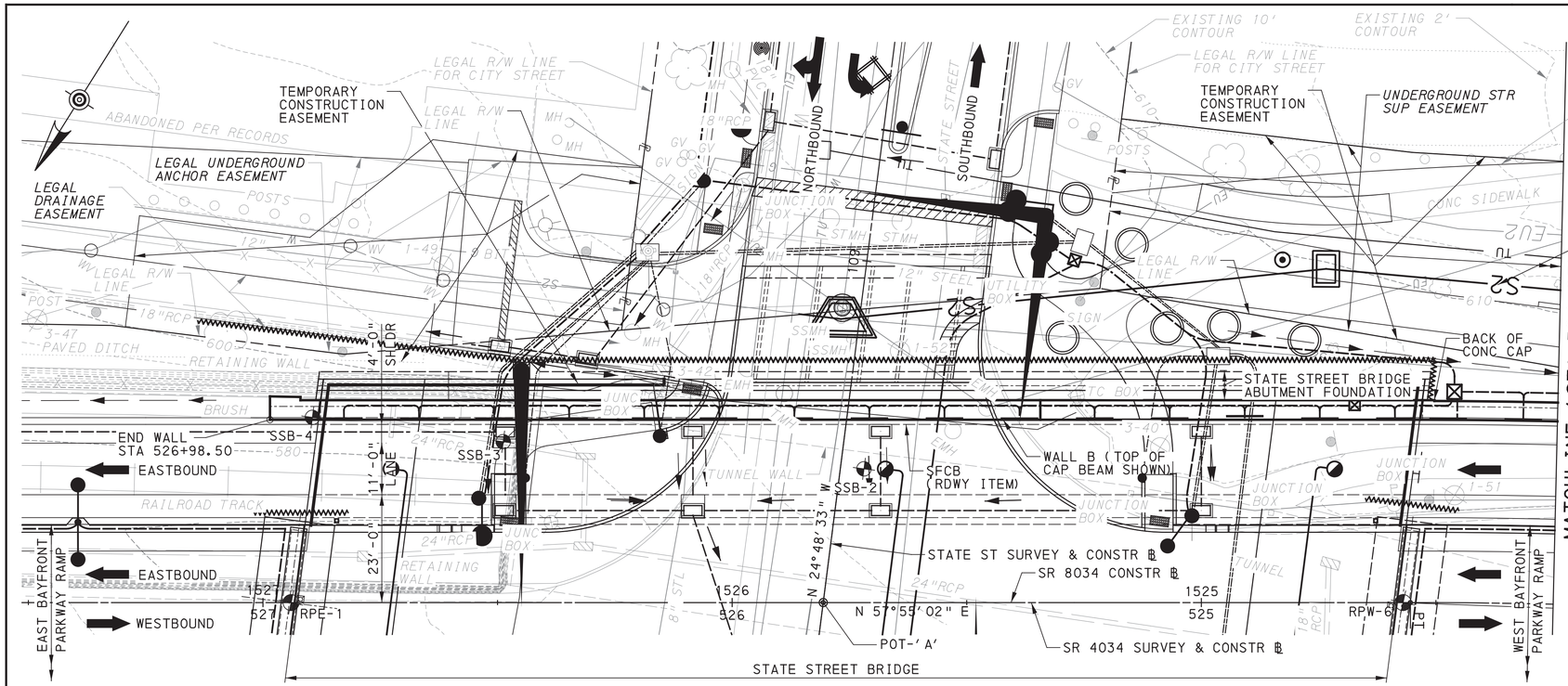
S-40690P

M:_2019\095\exhibits\structure\19095_srb_RWA.dgn
7/26/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

PLOTTED: 8/22/2022

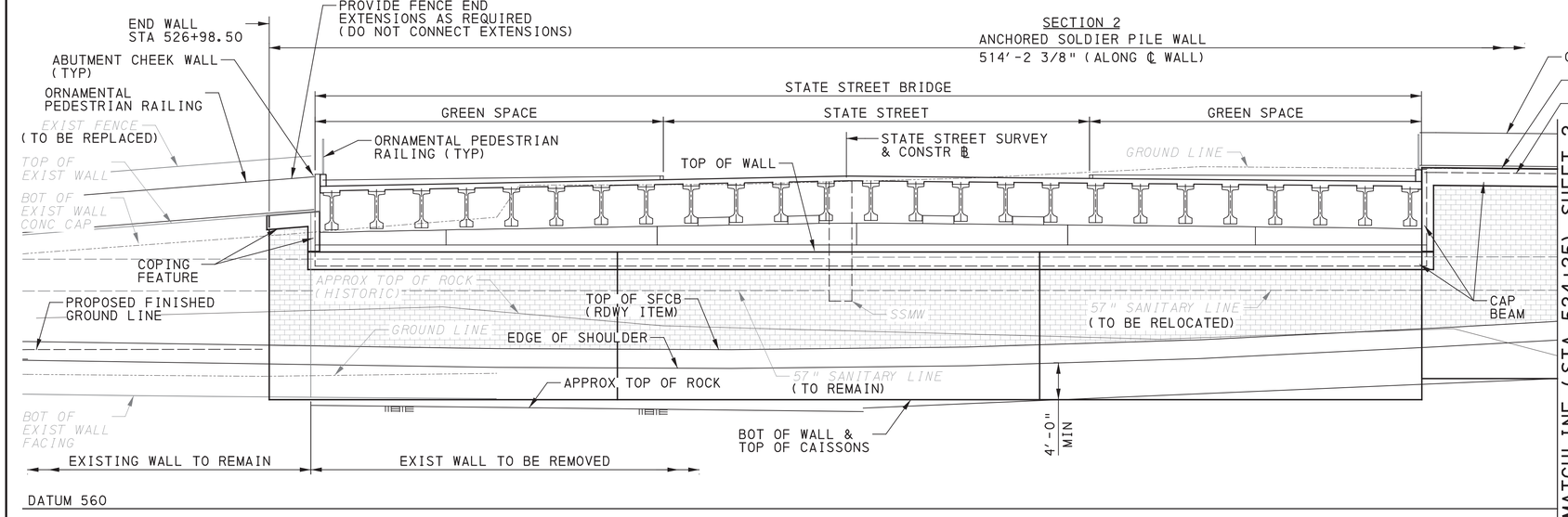
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_WS\sheets\FINAL\wall_BP_WSTgp001.dgn



LEGEND:

- STRUCTURE BORING
- EXISTING BORING
- DIRECTION OF TRAFFIC FLOW
- PEDESTRIAN PUSH BUTTON
- TRAFFIC SIGNAL POLE WITH MAST ARM & LIGHTING LUMINAIRE
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- BRIDGE SCUPPER, TYPE 1
- TRAFFIC JUNCTION BOX
- TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (APPROXIMATE LOCATION)
- LIGHTING POLES
- POST LIGHTS
- LED LINEAR FLOOD LIGHT
- LIGHTING CONDUIT
- JUNCTION BOX
- PLANTER TREE BOX - STATE STREET

POT 'A'
SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39



EXISTING UTILITIES NOT SHOWN (TO BE REMOVED OR RELOCATED)

ELEVATION
5 0 15 FEET (HORIZONTAL)
5 0 5 10 FEET (VERTICAL)

REFERENCES:

FOR TYPICAL SECTIONS, SEE SHEETS 7 & 8
FOR VERTICAL ALIGNMENT DATA, SEE SHEET 2
FOR HORIZONTAL ALIGNMENT DATA, SEE SHEET 3
FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3
FOR INDEX OF DRAWINGS SEE SHEET 3

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
GENERAL PLAN & ELEVATION - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT E. CARR, JR. PE-070825-E

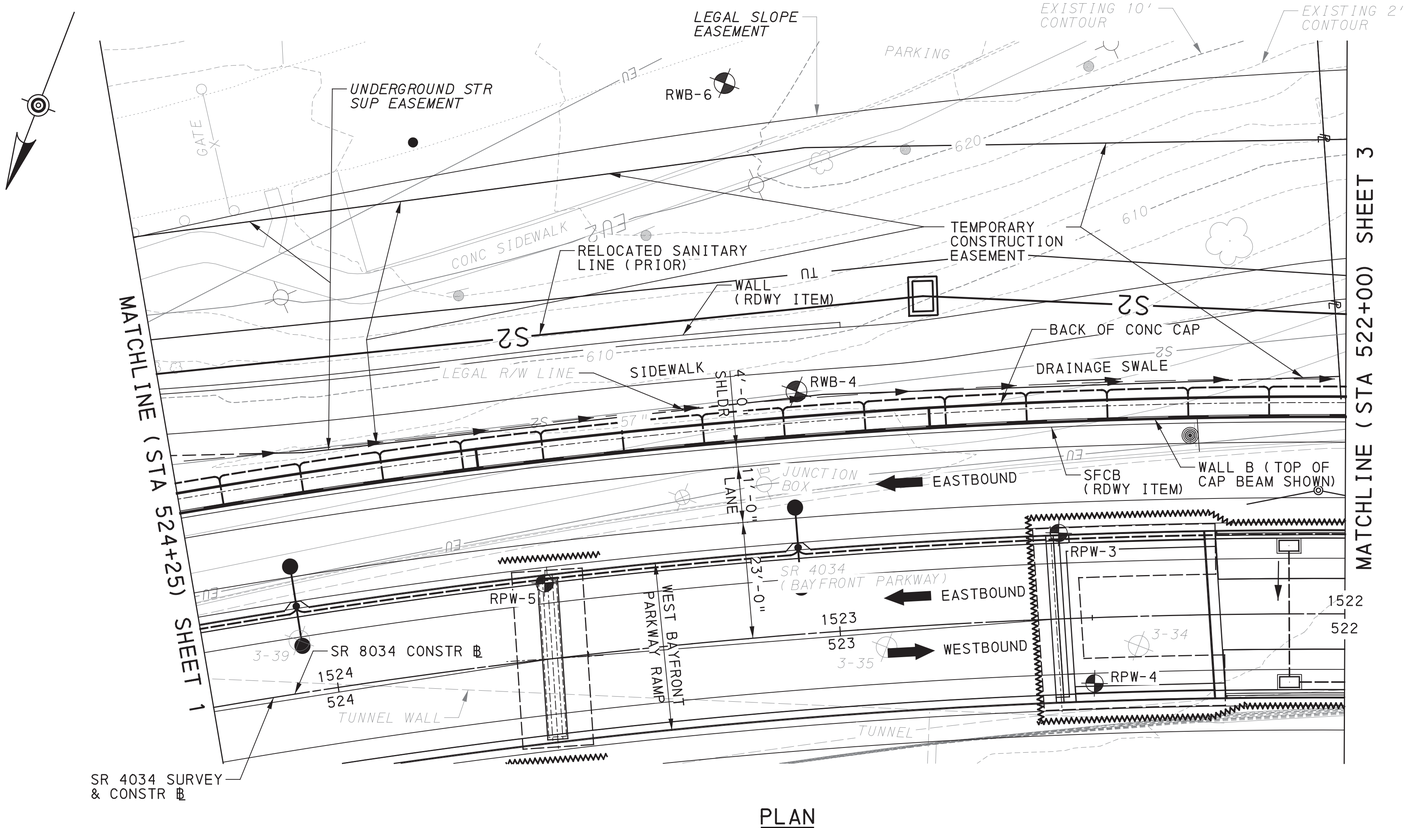
PENNSYLVANIA PE NO. PE-
DATE: 8-22-2022

PREPARED BY:
ms
PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED AUGUST 22, 2022
DISTRICT BRIDGE ENGINEER

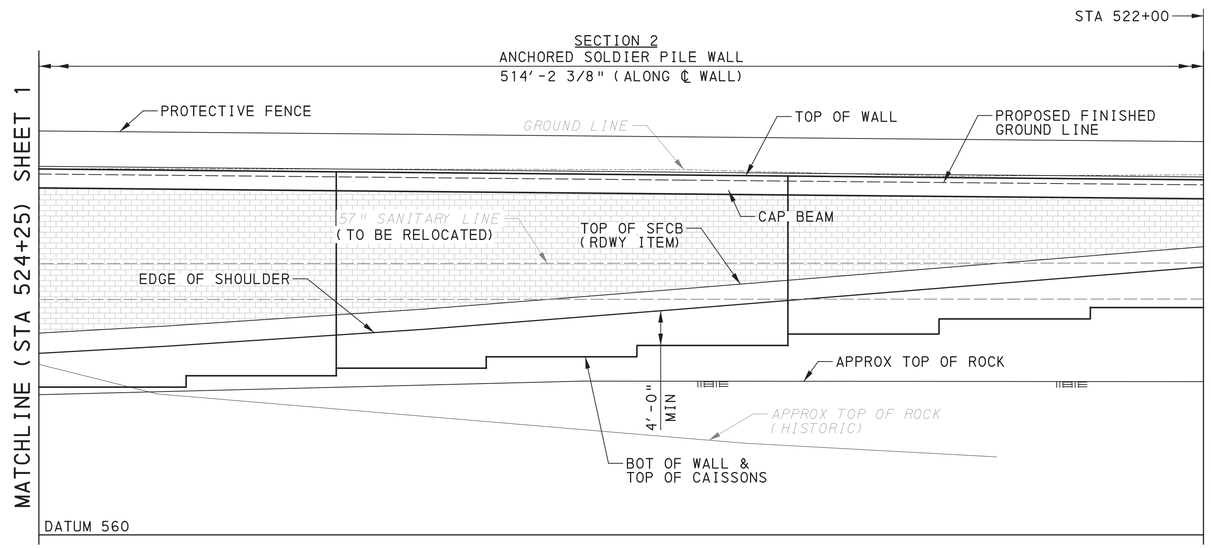
SHEET 1 OF 34
S-41019

DES:	JRB	CKD:	BDL	DWG:	JP	CKD:	JRB



PLAN

5 0 15 FEET



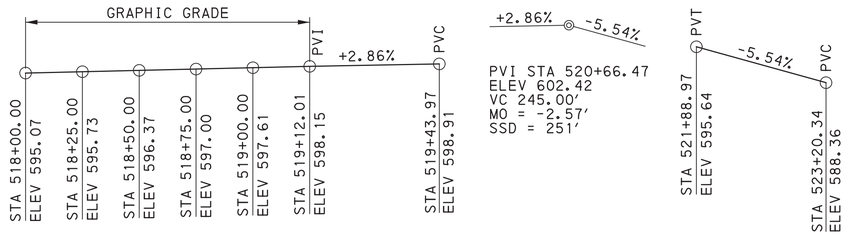
ELEVATION

5 0 15 FEET (HORIZONTAL)

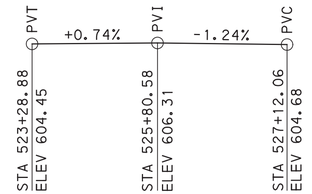
5 0 5 10 FEET (VERTICAL)

VERTICAL ALIGNMENT DATA

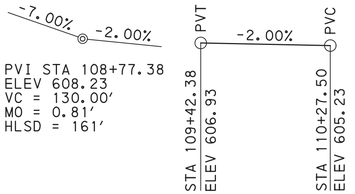
SR 4034 EASTBOUND (PG)



SR 4034 & SR 8034 SURVEY & CONSTR ℄



STATE STREET SURVEY & CONSTR ℄



Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

REFERENCES:

FOR TYPICAL SECTIONS, SEE SHEETS 7 & 8

FOR LEGEND, SEE SHEET 1

FOR HORIZONTAL ALIGNMENT DATA, SEE SHEET 3

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
GENERAL PLAN & ELEVATION - 2

REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E COMMONWEALTH OF PENNSYLVANIA

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 34

S-41019

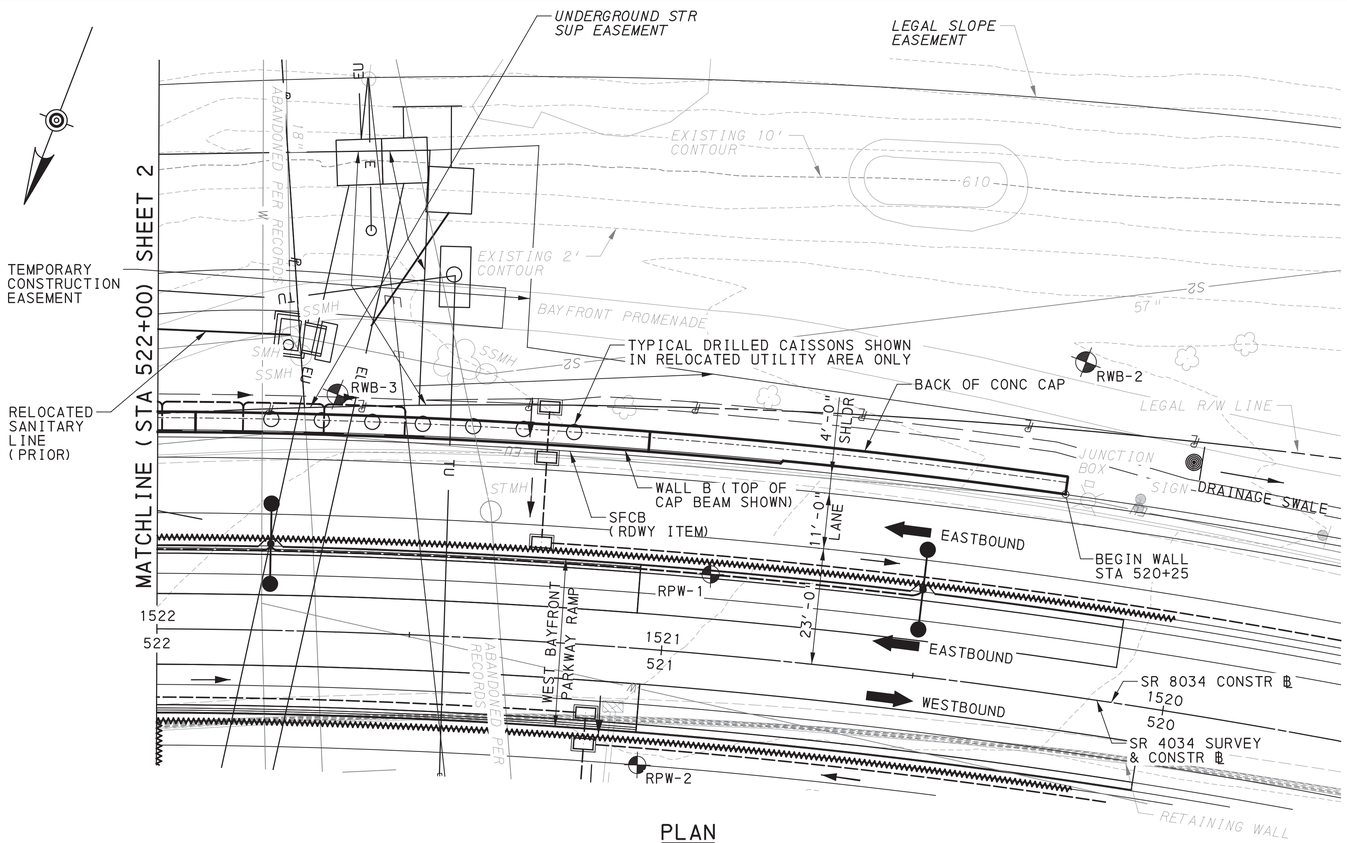
DES: JRB | CKD: BDL | DWG: JP | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTgp002.dgn

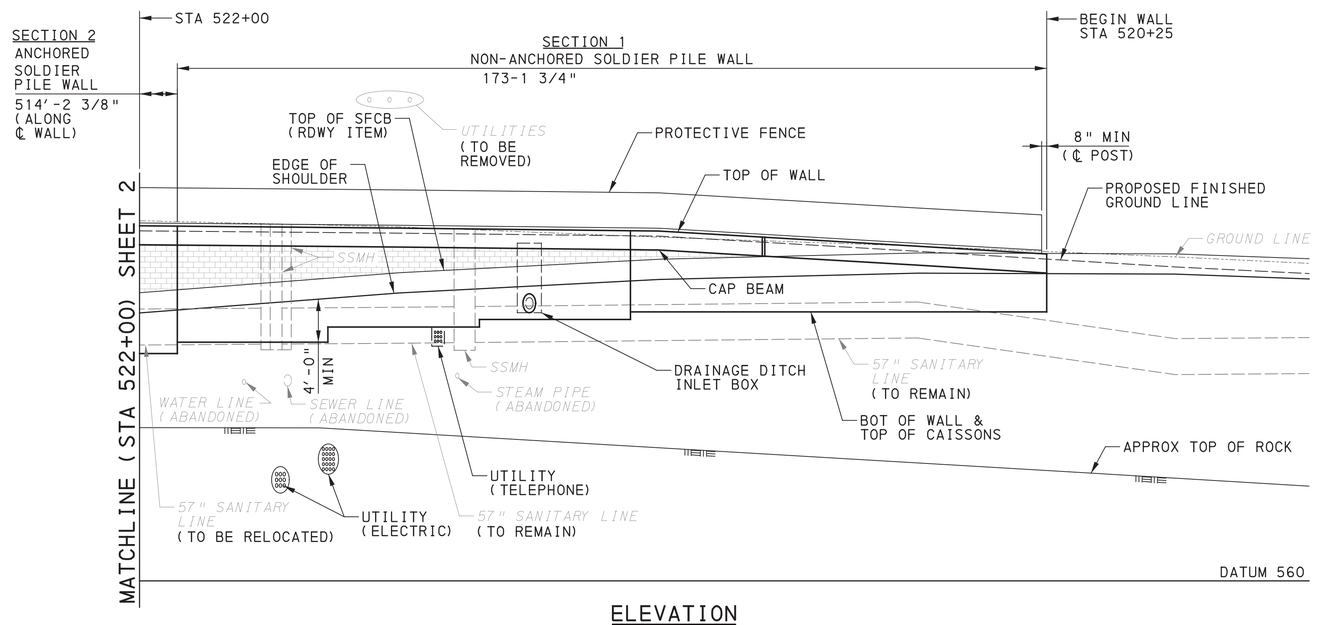
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTgp003.dgn



PLAN

5 0 15 FEET



ELEVATION

5 0 15 FEET (HORIZONTAL)

5 0 5 10 FEET (VERTICAL)

DES: JRB	CKD: BDL	DWG: JP	CKD: JRB

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN & ELEVATION - 1
2	GENERAL PLAN & ELEVATION - 2
3	GENERAL PLAN & ELEVATION - 3
4	GENERAL NOTES - 1
5	GENERAL NOTES - 2
6	TABULATION OF QUANTITIES
7	TYPICAL SECTIONS - 1
8	TYPICAL SECTIONS - 2
9	STAKE OUT PLAN
10	WALL ELEVATION DATA TABLE
11	WALL LAYOUT - 1
12	WALL LAYOUT - 2
13	WALL LAYOUT - 3
14	ANCHOR DETAILS - 1
15	WALL REINFORCEMENT - 1
16	WALL REINFORCEMENT - 2
17	WALL REINFORCEMENT - 3
18	WALL REINFORCEMENT - 4
19	WALL REINFORCEMENT - 5
20	WALL REINFORCEMENT - 6
21	WALL REINFORCEMENT - 7
22	WALL REINFORCEMENT - 8
23	WALL REINFORCEMENT DETAILS
24	DRAINAGE DETAILS
25	WALL REINFORCEMENT SCHEDULE - 1
26	WALL REINFORCEMENT SCHEDULE - 2
27	STRUCTURE BORINGS (SHEET 1 OF 8)
28	STRUCTURE BORINGS (SHEET 2 OF 8)
29	STRUCTURE BORINGS (SHEET 3 OF 8)
30	STRUCTURE BORINGS (SHEET 4 OF 8)
31	STRUCTURE BORINGS (SHEET 5 OF 8)
32	STRUCTURE BORINGS (SHEET 6 OF 8)
33	STRUCTURE BORINGS (SHEET 7 OF 8)
34	STRUCTURE BORINGS (SHEET 8 OF 8)

HORIZONTAL ALIGNMENT DATA

SR 4034
SURVEY & CONSTR ℄

TANGENT
N 79°58'20" E

PI STA 522+08.36
Δ 22° 03' 18" (LT)
D 4° 24' 27"
T 253.34'
L 500.41'
R 1,300.00'
PC STA 519+55.02
PT STA 524+55.44
SUPERELEVATE = 2.4% (INSIDE LANES)
SUPERELEVATE = 3.8% (OUTSIDE LANES)

TANGENT
N 57°55'02" E

STATE STREET
SURVEY & CONSTR ℄

TANGENT
N 24°48'33" W

UTILITY NOTE:

THE CONTRACTOR IS TO RELOCATE UTILITY CONDUIT DUCT BANKS FOR ELECTRIC AND TELEPHONE FACILITIES AND IT IS ANTICIPATED THESE FACILITIES WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF WALL B. THESE RELOCATED UTILITIES WILL PASS UNDER THE NEW BAYFRONT PARKWAY AND CONTINUE UNDER WALL B. THE AS-DESIGNED DRILLED CAISSONS SHOWN ON THESE PLANS FOR WALL B HAVE BEEN DETERMINED BASED ON THE AS-DESIGNED RELOCATION PLANS OF THE ELECTRIC AND TELEPHONE UTILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ACCURATELY DETERMINING THE PRECISE LOCATION AND SIZE OF THESE UTILITIES AND ASSOCIATED CONCRETE ENCASEMENT PRIOR TO DRILLING FOR THE CAISSONS AND SHALL UTILIZE EXTREME CAUTION WHEN PERFORMING DRILLING OPERATIONS AND WALL CONSTRUCTION. ANY DAMAGE TO THE RELOCATED UTILITY DUCT BANKS IS THE RESPONSIBILITY OF THE CONTRACTOR.

REFERENCES:

FOR TYPICAL SECTIONS, SEE SHEETS 7 & 8

FOR LEGEND, SEE SHEET 1

FOR VERTICAL ALIGNMENT DATA, SEE SHEET 2

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
GENERAL PLAN & ELEVATION - 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 34

S-41019

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTgn001.dgn

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4 (DM-4), DECEMBER 2019

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

GENERAL:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5:2015 (USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015) BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

UTILITIES:

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2022, SECTIONS 105.06 AND 107.12.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY, TYPE, SIZE, AND LOCATION OF UTILITIES.

CONCRETE:

PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AA CEMENT CONCRETE IN CONCRETE WALL AND CAP BEAMS.

USE CLASS A CEMENT CONCRETE, SULFATE RESISTANT, IN THE DRILLED CAISSONS.

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

ARCHITECTURAL TREATMENT / PROTECTIVE COATINGS:

APPLY ARCHITECTURAL SURFACE TREATMENT TO THE CAST-IN-PLACE WALL PANELS TO THE LIMITS SHOWN ON THE PLANS.

APPLY AESTHETIC COLOR COATING (LIGHT GRAY), ALONG THE EXPOSED FACE OF THE CONCRETE WALL AND CAP BEAMS TO THE LIMITS SHOWN ON THE PLANS.

REINFORCEMENT:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/ A 615M, A 996/ A996 M OR A 706/ A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/ A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

ALL REINFORCEMENT BARS ARE TO BE EPOXY-COATED.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT/ COMMISSION/ COUNTY.

FOUNDATIONS:

COMPLETE CONSTRUCTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

PLACE THE BOTTOM OF THE CONCRETE WALL A MINIMUM OF 4.0 FEET BELOW THE GROUND SURFACE TO SATISFY FROST DEPTH REQUIREMENTS.

PROVIDE AASHTO NO. 57 COARSE AGGREGATE AS SPECIFIED BACKFILL.

INSTALL THE CAISSONS TO THE DEPTH SPECIFIED AND AT THE LOCATIONS INDICATED ON THE FINAL PLANS. CAISSONS MAY BE ORDERED BY THE REPRESENTATIVE TO BE OF ANY DIMENSION AND LENGTH NECESSARY TO PROVIDE PROPER FOUNDATION.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AN OPEN HOLE DURING CONSTRUCTION OF THE CAISSONS AND ANCHORS. TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN AN OPEN HOLE.

TEMPORARY LAGGING IS TO BE INSTALLED TO THE TOP OF THE CAISSONS.
CAST-IN-PLACE CONCRETE WALL IS TO BE PLACED AFTER APPLYING THE FINAL LOCK-OFF LOADING TO THE ANCHORS.

INSTALL THE ANCHOR BOND ZONE AS SHOWN ON THE FINAL PLANS TO PROVIDE THE REQUIRED FACTORED ANCHOR CAPACITY. PLACE GROUT UNDER PRESSURE IN SOIL OR BEDROCK. MINIMUM ANTICIPATED BOND LENGTHS ARE PROVIDED ON THE FINAL PLANS. THE ANCHOR BOND LENGTH MAY BE ORDERED BY THE REPRESENTATIVE TO BE OF ANY LENGTH AND DIMENSION NECESSARY TO PROVIDE ADEQUATE CAPACITY.

PERFORM LOAD TESTING OF INSTALLED ANCHORS IN ACCORDANCE WITH THE ANCHORED WALLS SPECIAL PROVISION.

DRILLED CAISSONS:

CONSTRUCT DRILLED CAISSONS IN ACCORDANCE WITH SECTION 1006. DURING CONSTRUCTION, IF SUBSURFACE CONDITIONS ARE ENCOUNTERED THAT DIFFER SIGNIFICANTLY FROM THOSE REPORTED ON THE TEST BORING LOGS AND INDICATED ON THE DRAWINGS, THE DEPARTMENT SHALL BE NOTIFIED IMMEDIATELY SO THAT THE PROPOSED FOUNDATIONS CAN BE REVIEWED AND/OR REVISED ACCORDINGLY.

DRILLED CAISSON FOUNDATIONS ARE TO BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER. PROVIDE A MINIMUM OF THREE (3) WORKING DAYS NOTICE TO THE DISTRICT GEOTECHNICAL ENGINEER TO SCHEDULE INSPECTION OF THE FOUNDATIONS. DEWATER DRILLED CAISSON EXCAVATIONS AS NECESSARY TO ALLOW INSPECTION BY THE DEPARTMENT IN THE DRY BEFORE PLACING CONCRETE.

AS A MINIMUM, EXTEND ALL DRILLED CAISSONS TO THE ELEVATIONS AND ROCK EMBEDMENT DEPTHS INDICATED. IF INTACT ROCK IS NOT ENCOUNTERED AT THE BOTTOM OF THE PROPOSED CAISSON ELEVATION, CONTINUE DRILLING UNTIL COMPETENT ROCK IS ENCOUNTERED.

PROVIDE A TEMPORARY STEEL CASING AND/OR OTHER APPROVED DEWATERING METHODS IF GROUND WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE DRILLED CAISSONS.

TIEBACK ANCHORS:

TIEBACK ANCHORS SHALL CONSIST OF 0.6 INCH DIAMETER, 7-WIRE MULTI-STRAND TENDONS. PROVIDE ANCHOR TENDONS CONSISTING OF 7-WIRE UNCOATED STRANDS CONFORMING TO AASHTO M203 (ASTM A416), WITH LOW-RELAXATION WIRE CONFORMING TO ASTM A421, GRADE 270 (270 KSI), GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS). SOLID BARS ARE NOT PERMITTED.

STRAND ANCHORS SHALL MEET THE REQUIREMENTS OF CLASS I CORROSION PROTECTION PER FHWA GEOTECHNICAL ENGINEERING CIRCULAR NO. 4. PROVIDE A MINIMUM OF 2 LAYERS OF PROTECTION.

THE UNBONDED LENGTH OF THE STRANDS SHALL BE GREASED WITH CORROSION INHIBITING GREASE AND POLYPROPYLENE SHEATHED. ALL ANCHORS ARE TO BE FULLY ENCAPSULATED FOR THEIR ENTIRE LENGTH.

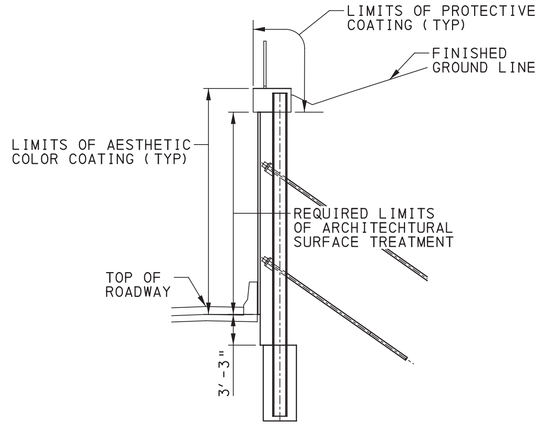
DO NOT GROUT THE UNBONDED LENGTH OF THE ANCHOR WITHIN THE PERMANENT STEEL CASING. FILL THE ANNULUS BETWEEN THE PERMANENT CASING AND ANCHOR WITH GREASE OR OTHER APPROVED MATERIAL THROUGHOUT THE UNBONDED ANCHOR LENGTH.

TIEBACK ANCHORS SHALL EXTEND TO COMPETENT ROCK BEYOND THE POTENTIAL FAILURE ZONE AND HAVE A MINIMUM BOND LENGTH OF 15 FEET IN ROCK.

USE NEAT CEMENT OR SAND CEMENT GROUT WITH TYPE II PORTLAND CEMENT CONFORMING TO AASHTO M85 FOR GROUTING TIEBACK ANCHORS. APPROVED NONSHRINK OR EXPANSIVE ADDITIVES LISTED IN BULLETIN 15 MAY BE USED.

STRESSING OF ANY ANCHOR LEVEL SHALL NOT PROCEED UNTIL STRUCTURE BACKFILL HAS BEEN PLACED AND COMPACTED TO THE MINIMUM LIMITS INDICATED.

PROVIDE PERFORMANCE, PROOF, AND CREEP TESTS FOR TIEBACK ANCHORS. INDICATE TESTING REQUIREMENTS AND RESULTS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. FOR ANCHORS THAT FAIL THE TEST REQUIREMENTS, REPLACE ANCHORS OR MODIFY THE STRUCTURE TO MEET ALL DESIGN CODES AND REQUIREMENTS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.



COATING LIMITS

SUPPLEMENTAL DRAWINGS		
DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
CURBS AND GUTTERS	RC-64M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	2/19/2021

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ:108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
GENERAL NOTES - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 34

S-41019

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

MISCELLANEOUS REQUIREMENTS FOR WALL B:

PLACE PILES TO WITHIN 1-INCH IN 10-FT OF PLUMB VERTICAL, BUT DO NOT ALLOW AN OUT-OF-PLANE OFFSET OF MORE THAN 1-INCH IN 10-FT WITH RESPECT TO ADJACENT PILES. PLACE EACH PILE WITHIN 2 INCHES HORIZONTALLY OF THE INDICATED LOCATION AT FINISHED GROUND LINE. PROVIDE MINIMUM BEARING CONTACT DISTANCE FOR PRECAST LAGGING PANELS AT EDGE OF PILE FLANGE AS INDICATED IN PRECAST LAGGING DETAILS. IF DESIRED, FABRICATE PRECAST LAGGING PANELS AFTER PLACING PILES TO ENSURE PROPER FIT AND BEARING DISTANCE.

AN OPTIONAL AUXILIARY PVC OR STEEL CASING MAY BE USED TO FACILITATE THE PLACEMENT OF THE PERMANENT STEEL CASING, AND THE INSTALLATION OF THE ANCHOR ASSEMBLY WITHIN THE STRUCTURE BACKFILL MATERIAL BEHIND THE WALL. AS A MINIMUM, THE AUXILIARY CASING MUST EXTEND FROM THE BACK FACE OF THE WALL, THROUGH THE STRUCTURE BACKFILL, AND A MINIMUM DISTANCE OF 2-FT INTO THE UNEXCAVATED IN-SITU SOILS.

THE PERMANENT STEEL CASING SHALL BE OF ADEQUATE DIAMETER TO PRECLUDE THE POTENTIAL FOR THE INSIDE TOP SURFACE OF THE CASING FROM COMING IN DIRECT CONTACT WITH THE TIEBACK ANCHOR ASSEMBLY AS A RESULT OF SETTLEMENT OF THE BACKFILL AND/OR SUBGRADE MATERIAL. EXTEND THE PERMANENT STEEL CASING FROM THE BACK FACE OF THE WALL, THROUGH THE BACKFILL MATERIAL, AND INTO COMPETENT ROCK.

THE AUXILIARY CASING (IF USED) OR THE PERMANENT CASING SHALL BE PLACED DIRECTLY ON TOP OF THE COMPACTED BACKFILL MATERIAL SO THAT THE CASING IS IN FULL BOTTOM CONTACT WITH THE BACKFILL.

IF THE AUXILIARY CASING IS USED, GROUT THE ANNULUS BETWEEN THE AUXILIARY AND PERMANENT CASINGS (SEE SPECIAL PROVISIONS). FILL THE ANNULUS BETWEEN THE PERMANENT CASINGS AND ANCHOR ASSEMBLIES WITH GREASE OR OTHER APPROVED MATERIAL.

PROVIDE NO. 57 COARSE AGGREGATE FOR STRUCTURE BACKFILL. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH SECTION 1001.3(q)2b.

PLACE AND COMPACT STRUCTURE BACKFILL TO THE MINIMUM LIMITS INDICATED PRIOR TO STRESSING THE TIEBACK ANCHORS.

DO NOT USE HEAVY STATIC OR VIBRATORY COMPACTORS TO COMPACT THE STRUCTURAL BACKFILL MATERIAL BEHIND THE WALL IN ORDER TO PRECLUDE THE DEVELOPMENT OF HIGH LATERAL PRESSURES. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE PERMITTED WHEN THE LEVEL OF BACKFILL IS LESS THAN 1-FT ABOVE THE TOP OF THE AUXILIARY OR PERMANENT STEEL CASING, OR WITHIN 4-FT OF THE BACK FACE OF THE PRECAST LAGGING PANELS.

CONTRACTOR REQUIREMENTS FOR WALL B

THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL DESIGN AND DETAILS OF THE WALL COMPONENTS LISTED BELOW (SUBMIT FINAL DESIGN CALCULATIONS AND DESIGN DETAILS IN ACCORDANCE WITH THE SPECIAL PROVISIONS):

- ANCHOR STRAND DESIGN
- TRUMPET DESIGN
- ANCHOR BEARING ASSEMBLY
- UNBONDED STRESSING LENGTH
- ROCK BOND LENGTH DESIGN
- AUXILIARY (IF APPLICABLE) AND PERMANENT CASING SIZE (DIAMETER)
- AUXILIARY CASING EMBEDMENT LENGTH IN SOIL
- PERMANENT STEEL CASING EMBEDMENT LENGTH IN ROCK
- ANCHOR HEADS
- CENTRALIZERS
- ANCHOR CORROSION PROTECTION SYSTEM (CLASS I)
- GROUTING PROCEDURES
- JACKING ASSEMBLY-HYDRAULIC JACK AND PUMP, STRESSING ANCHORAGE, PRESSURE GAUGES/LOAD CELLS, DIALS TO MEASURE MOVEMENT AND JACK CHAIR
- TIE-PLATE DETAILS
- STRUT REQUIRED FOR STRESSING OF TOP ANCHOR ADJACENT TO STATE STREET ABUTMENT

CONSTRUCTION REQUIREMENTS

WHERE THE LOCATION OF NEW WALL B INTERFERES WITH THE EXISTING BRIDGE WALL AT THE NEW STATE STREET BRIDGE ABUTMENT, COMPLETELY REMOVE THE EXISTING BRIDGE WALL DOWN TO THE FOUNDATION (BOTTOM OF EXISTING CAISSONS) PRIOR TO CONSTRUCTING WALL B.

WHERE THE DRILLED CAISSONS OF NEW WALL B CAN BE CONSTRUCTED WITHOUT INTERFERING WITH THE DRILLED CAISSONS OF THE EXISTING BRIDGE WALL, REMOVAL OF THE EXISTING DRILLED CAISSONS IS ONLY REQUIRED TO A MINIMUM OF 3 FEET BELOW FINISHED GRADE.

PARTIAL DEMOLITION OF THE EXISTING BRIDGE WALL MAY BE REQUIRED PRIOR TO CONSTRUCTING WALL B BASED ON CONTRACTOR CONSTRUCTABILITY REQUIREMENTS. TEMPORARY SHORING SHOWN ON SHEET 1 IS REQUIRED TO BE FULLY IN PLACE PRIOR TO ANY DEMOLITION OF THE EXISTING BRIDGE WALL TAKING PLACE.

WALL B MAY BE CONSTRUCTED BEHIND THE EXISTING BRIDGE WALL WHERE THERE IS SUFFICIENT AREA FOR CONSTRUCTION. STRUCTURAL INTEGRITY OF THE EXISTING BRIDGE WALL MUST BE MAINTAINED UNTIL THE NEW WALL B IS CONSTRUCTED.

WHERE COMPLETE AND PARTIAL DEMOLITION OF THE EXISTING BRIDGE WALL OCCURS, THE CONSTRUCTION OF THE NEW WALL B WILL BE CONSIDERED BOTTOM-UP CONSTRUCTION.

WHERE THE NEW WALL B CAN BE CONSTRUCTED BEHIND THE EXISTING BRIDGE WALL, THAT CONSTRUCTION WILL BE CONSIDERED TOP-DOWN CONSTRUCTION.

THE NEW DRILLED CAISSONS FOR THE ANCHORED PILES ARE TO BE LOCATED TO THE ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS OR A MINIMUM OF 3 FEET INTO UNDISTURBED ROCK. WHERE COMPLETE DEMOLITION OF THE EXISTING BRIDGE WALL WILL DISTURB THE EXSISTING ROCK, THE DRILLED CAISSON OF THE ANCHORED PILES ARE TO EXTEND TO A MINIMUM OF 3 FEET BELOW THE DEMOLITION INTO UNDISTURBED ROCK.

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTgn002.dgn

DES:	JRB	CKD:	REB	DWG:	BDL	CKD:	JRB

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
GENERAL NOTES - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 34

S-41019

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTqu001.dgn

APPROXIMATE STRUCTURE QUANTITIES

ITEM NO	DESCRIPTION		UNIT	TOTAL
8700-0001	ANCHORED SOLDIER PILE RETAINING WALL, S-41019	(8)	LS	
(1)	STRUCTURE BACKFILL, NO 57 COARSE AGGREGATE	(2)	CY	1505
(1)	6" DIAMETER STRUCTURE FOUNDATION DRAIN LATERALS	(3)	LF	240
(1)	12" DIAMETER STRUCTURE FOUNDATION DRAIN	(3)	LF	690
(1)	PREFABRICATED STRIP DRAIN		LF	1350
(1)	CLASS AA CEMENT CONCRETE, SULFATE RESISTANT	(4)	CY	920
(1)	42" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN SOIL	(5)	LF	1120
(1)	42" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN ROCK	(6)	LF	340
(1)	36" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN SOIL	(5)	LF	470
(1)	36" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN ROCK	(6)	LF	50
(1)	AESTHETIC COLOR COATING (LIGHT GRAY)	(8)	SY	1300
(1)	PROTECTECTIVE COATING FOR REINFORCED CONCRETE SURFACES		SY	500
(1)	ANCHOR TENDONS, 2-STRAND TENDON		LF	550
(1)	ANCHOR TENDONS, 4-STRAND TENDON		LF	360
(1)	ANCHOR TENDONS, 6-STRAND TENDON		LF	2490
(1)	ANCHOR CASING		LF	510
(1)	ANCHOR HEAD AND TRUMPET ASSEMBLY, 2 STRAND TENDON		EA	24
(1)	ANCHOR HEAD AND TRUMPET ASSEMBLY, 4 STRAND TENDON		EA	12
(1)	ANCHOR HEAD AND TRUMPET ASSEMBLY, 6 STRAND TENDON		EA	51
(1)	CREEP TEST		EA	4
(1)	PERFORMANCE TEST		EA	4
(1)	PROOF TEST		EA	87
(1)	FABRICATED STRUCTURAL STEEL, GRADE 50, GALVANIZED		LB	305000
(1)	ARCHITECTURAL SURFACE TREATMENT	(8)	SF	9600
(1)	ORNAMENTAL PEDESTRIAN RAILING	(8) (9)	LF	690
1002-0193	REINFORCEMENT BARS, EPOXY COATED	(7)	LB	150200
9000-0200	AESTHETIC COLOR COATING (EXISTING WALLS)	(9)	SY	380
9000-0201	VIBRATION MONITORING AND CONTROL	(8)	LS	
9000-0204	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	(10)	LS	

1. ITEMS SHOWN FOR SOLDIER PILE RETAINING WALL LUMP SUM ITEM 8700-0001 ARE GIVEN FOR INFORMATION ONLY.
2. THE QUANTITY OF NO. 57 COARSE AGGREGATE INCLUDES BACKFILL BEHIND THE CONCRETE WALL UP TO THE UNDERSIDE OF THE STATE STREET ABUTMENT 1 FOOTING.
3. PIPE SECTIONS SHALL BE NON-PERFORATED SCHEDULE PVC. PAYMENT FOR 12" DRAINS INCLUDE THE CONCRETE ENCASEMENT.
4. CLASS AA CEMENT CONCRETE IS THE CONCRETE OF THE CAP BEAM AND CONCRETE WALL.
5. LENGTH OF CAISSON SHAFT IN SOIL IS MEASURED FROM TOP OF EXISTING GROUND TO TOP OF ROCK. FOR QUANTITY PURPOSES, TOP OF ROCK IS CONSIDERED AS ELEV 580.0.
6. LENGTH OF CAISSON SHAFT IN ROCK IS MEASURED FROM TOP OF EXISTING ROCK TO BOTTOM OF CAISSON. FOR QUANTITY PURPOSES TOP OF ROCK IS CONSIDERED AS ELEV 580.0.
7. REINFORCEMENT BARS INCLUDE THE REINFORCING ASSOCIATED WITH THE CAP BEAM AND CONCRETE WALL.
8. SEE SPECIAL PROVISIONS.
9. INCLUDES 235 LF FOR THE EXISTING RETAINING WALL
10. INCLUDES APPROXIMATELY 5200 SF OF EXPOSED SHORING

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
TABULATION OF QUANTITIES

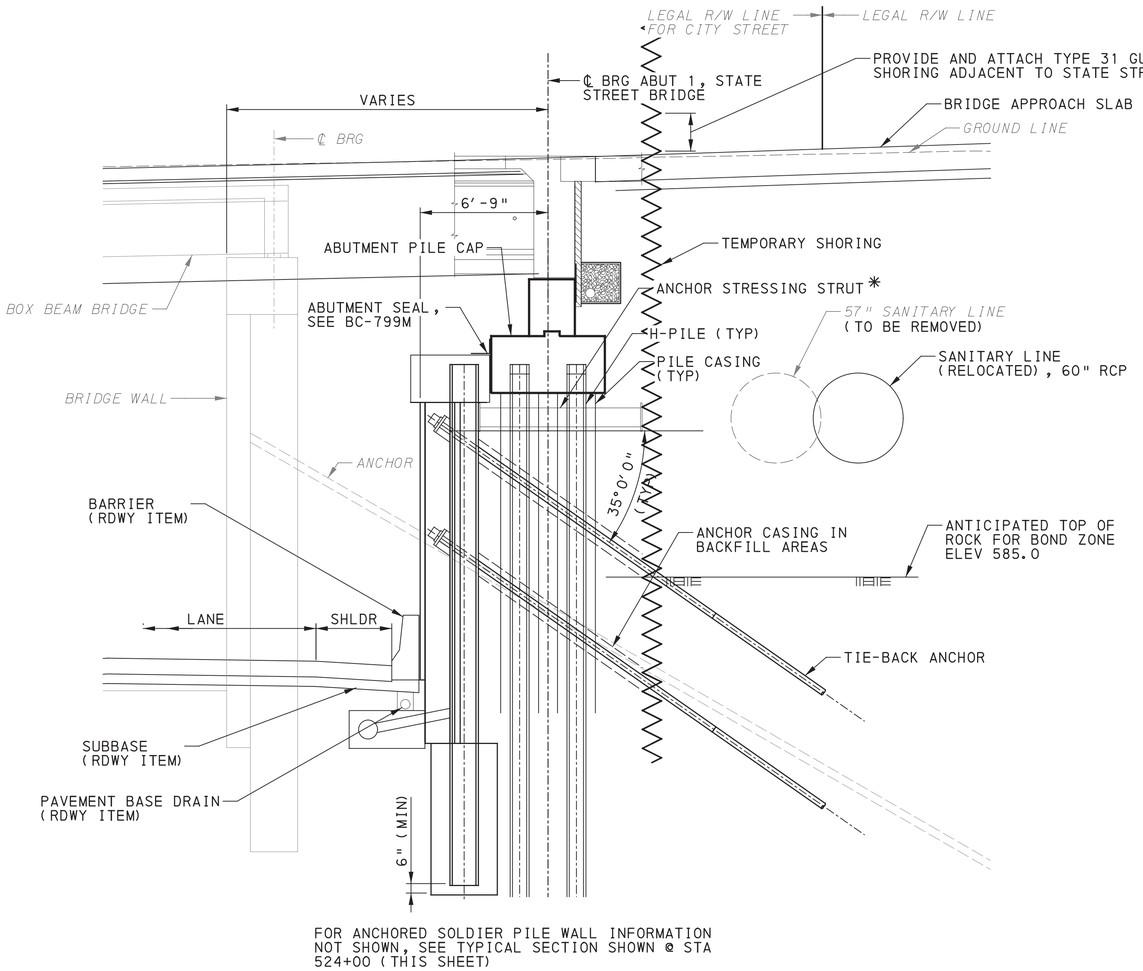
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 6 OF 34

S-41019

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTs001.dgn

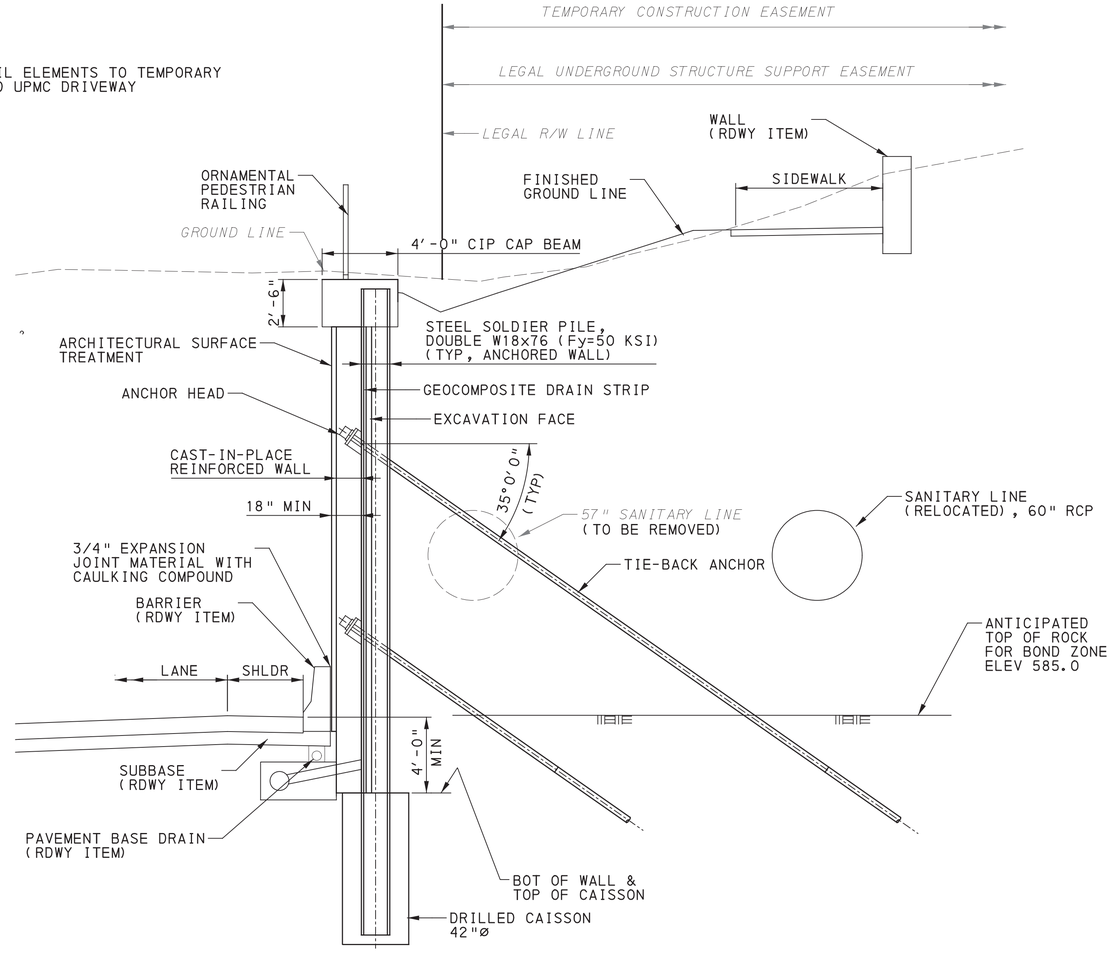


FOR ANCHORED SOLDIER PILE WALL INFORMATION NOT SHOWN, SEE TYPICAL SECTION SHOWN @ STA 524+00 (THIS SHEET)

TYPICAL SECTION - ANCHORED SOLDIER PILE WALL

SECTION SHOWN @ STA 525+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

* CONTRACTOR TO DESIGN AND PROVIDE A STRUT CAPABLE OF RESISTING THE TEST LOAD FOR THE UPPER ANCHORS ADJACENT TO THE NEW STATE STREET BRIDGE ABUTMENT.



TYPICAL SECTION - ANCHORED SOLDIER PILE WALL

SECTION SHOWN @ STA 524+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
TYPICAL SECTIONS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

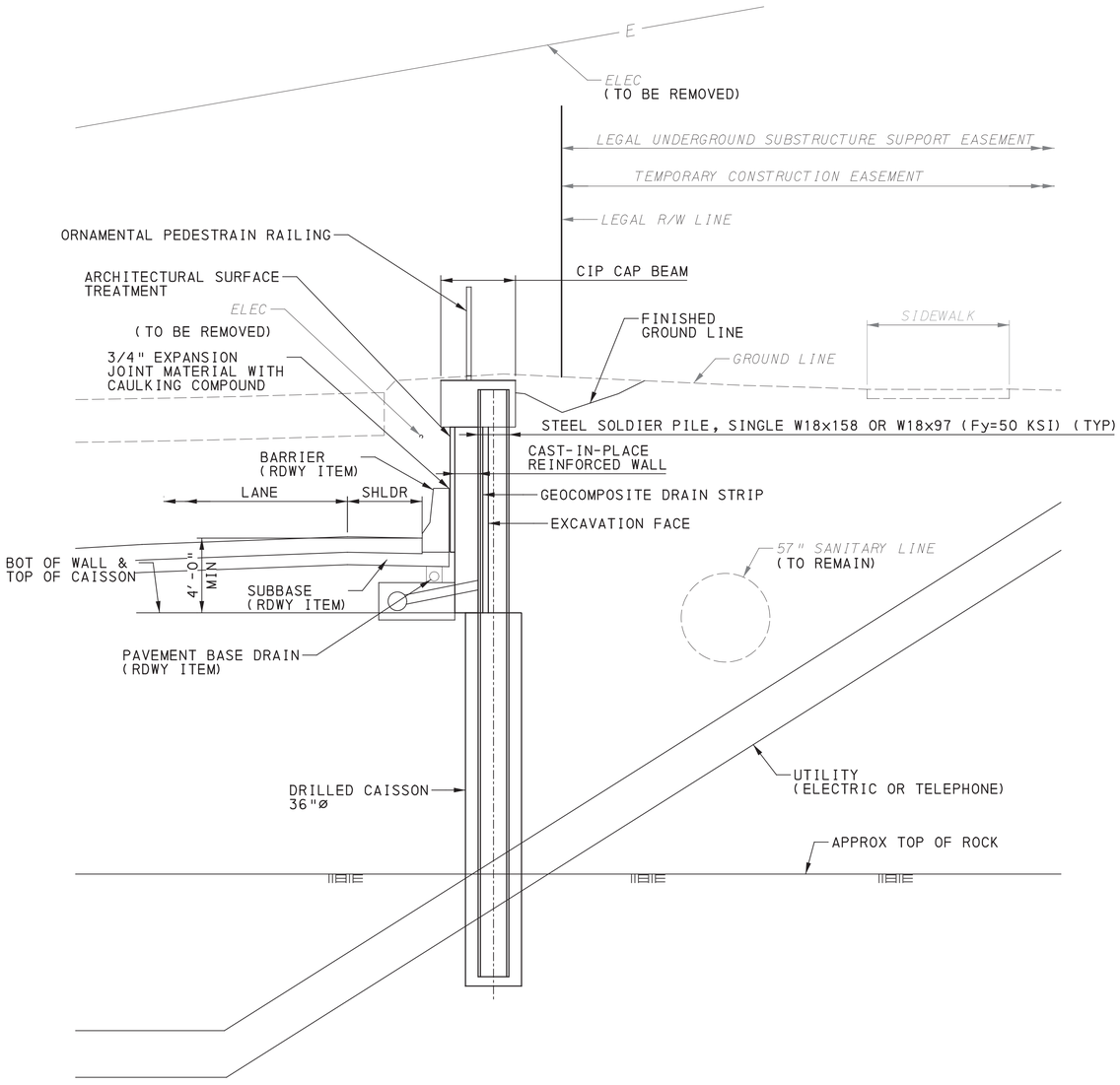
RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 34

S-41019

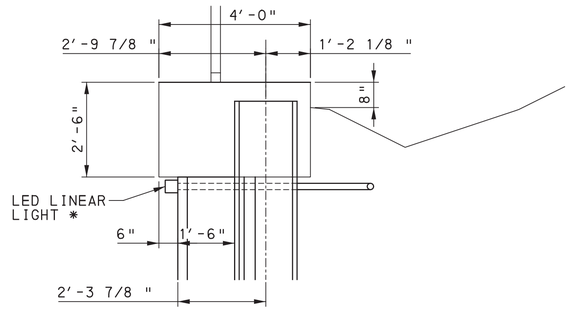
DES: JRB | CKD: BDL | DWG: JP | CKD: JRB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTs002.dgn



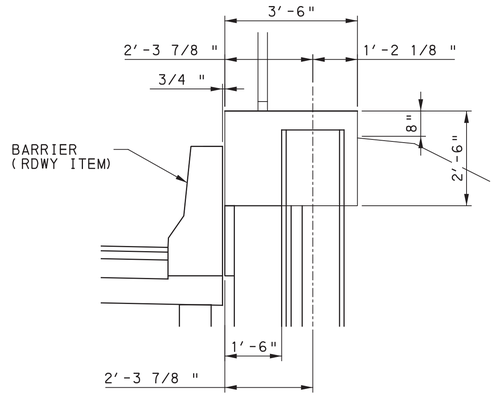
TYPICAL SECTION - NON-ANCHORED SOLDIER PILE WALL

SECTION SHOWN @ STA 521+50
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



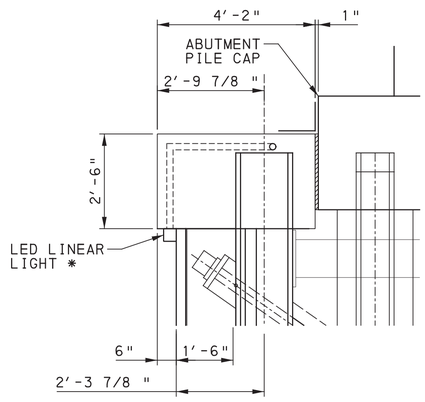
TYPICAL CAP BEAM SECTION

1 0 1 2 FEET



CAP BEAM SECTION @ ROADWAY BARRIER

1 0 1 2 FEET



CAP BEAM SECTION @ ABUTMENT

1 0 1 2 FEET

* - COORDINATE LIGHTING & CONDUIT DETAILS WITH CONTRACT LIGHTING PLANS

UTILITY NOTE:

THE CONTRACTOR IS TO RELOCATE UTILITY CONDUIT DUCT BANKS FOR ELECTRIC AND TELEPHONE FACILITIES AND IT IS ANTICIPATED THESE FACILITIES WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF WALL B. THESE RELOCATED UTILITIES WILL PASS UNDER THE NEW BAYFRONT PARKWAY AND CONTINUE UNDER WALL B. THE AS-DESIGNED DRILLED CAISSONS SHOWN ON THESE PLANS FOR WALL B HAVE BEEN DETERMINED BASED ON THE AS-DESIGNED RELOCATION PLANS OF THE ELECTRIC AND TELEPHONE UTILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ACCURATELY DETERMINING THE PRECISE LOCATION AND SIZE OF THESE UTILITIES AND ASSOCIATED CONCRETE ENCASEMENT PRIOR TO DRILLING FOR THE CAISSONS AND SHALL UTILIZE EXTREME CAUTION WHEN PERFORMING DRILLING OPERATIONS AND WALL CONSTRUCTION. ANY DAMAGE TO THE RELOCATED UTILITY DUCT BANKS IS THE RESPONSIBILITY OF THE CONTRACTOR.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
TYPICAL SECTIONS - 2

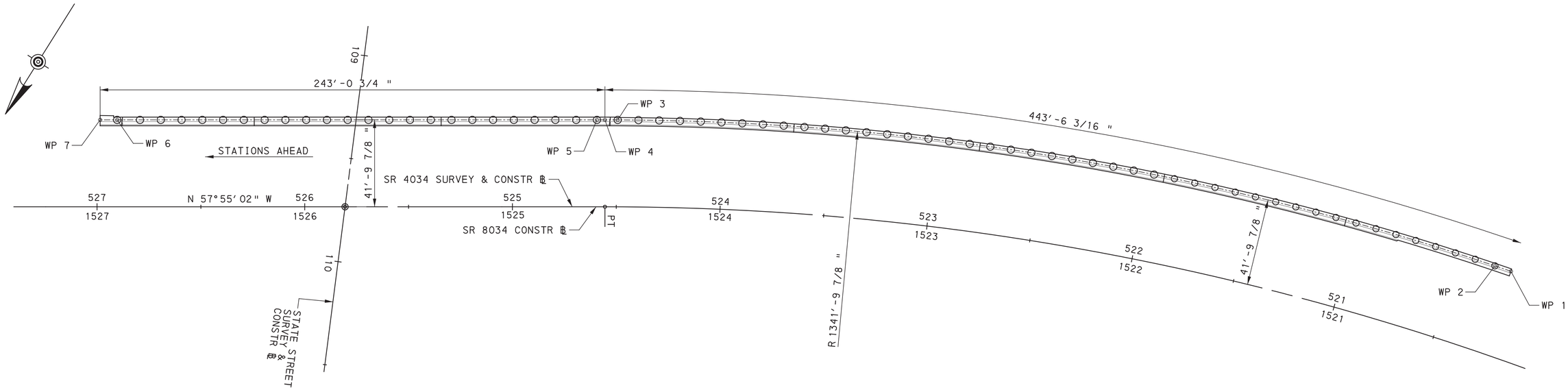
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 34

S-41019

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB



STAKE-OUT PLAN

25 0 25 FEET

WORK POINTS					
WORK POINTS	STATION	OFFSET	COORDINATES		LOCATION
			NORTHING	EASTING	
WP 1	520+25.00	41.82′ RT	725235.1618	1333753.7014	BEGIN WALL
WP 2	520+32.89	41.82′ RT	725237.0339	1333761.6295	℄ CAISSON NO 1
WP 3	524+49.49	41.82′ RT	725401.8530	1334156.7974	℄ CAISSON NO 44
WP 4	524+55.44	41.82′ RT	725405.1006	1334162.0043	END CURVE / BEGIN TANGENT
WP 5	524+59.30	41.82′ RT	725407.1532	1334165.2786	℄ CAISSON NO 45
WP 6	526+90.30	41.82′ RT	725529.8478	1334361.0005	℄ CAISSON NO 68
WP 7	526+98.50	41.82′ RT	725534.2034	1334367.9485	END WALL

WORK POINTS GIVEN AT BACK OF BARRIER/MOMENT SLAB

LEGEND

WP = WORKPOINT

Mark	Description	By	Chk′d.	Recm′d	Date
	REVISIONS				

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
STAKE OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 34

S-41019

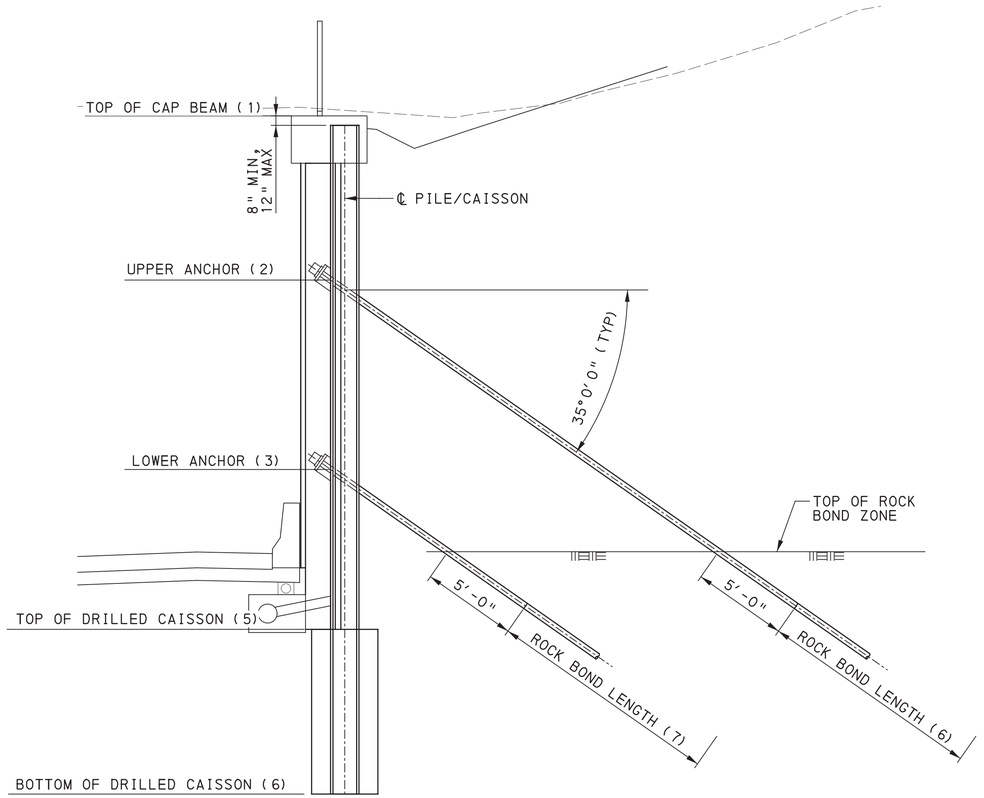
DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTsp001.dgn

PILE, PANEL & CAISSON ELEVATION DATA TABLE

PILE NUMBER	STATION	TOP OF CAP BEAM EL. (1)	UPPER ANCHOR EL. (2)	LOWER ANCHOR EL. (3)	UPPER ANCHOR DESIGN LOAD (KIP)	LOWER ANCHOR DESIGN LOAD (KIP)	TOP OF CAISSON EL. (4)	BOTTOM OF CAISSON EL. (5)	UPPER ANCHOR MIN. ROCK BOND LENGTH (FT) (6)	LOWER ANCHOR MIN. ROCK BOND LENGTH (FT) (7)
1	520+32.89	603.45	-	-	-	-	595.50	580.50	-	-
2	520+42.58	603.86	-	-	-	-	595.50	580.50	-	-
3	520+52.27	604.26	-	-	-	-	595.50	580.50	-	-
4	520+61.96	604.64	-	-	-	-	595.50	580.50	-	-
5	520+71.65	605.03	-	-	-	-	595.50	580.50	-	-
6	520+81.33	605.42	-	-	-	-	595.50	580.50	-	-
7	520+91.02	605.81	-	-	-	-	595.50	580.50	-	-
8	521+00.71	606.17	-	-	-	-	595.50	580.50	-	-
9	521+10.40	606.25	-	-	-	-	594.50	576.00	-	-
10	521+20.09	606.32	-	-	-	-	594.50	576.00	-	-
11	521+29.78	606.40	-	-	-	-	594.50	576.00	-	-
12	521+39.46	606.47	-	-	-	-	593.50	575.00	-	-
13	521+49.15	606.54	-	-	-	-	593.50	575.00	-	-
14	521+58.84	606.61	-	-	-	-	593.50	575.00	-	-
15	521+68.53	606.67	-	-	-	-	591.50	573.00	-	-
16	521+78.22	606.73	-	-	-	-	591.50	573.00	-	-
17	521+87.91	606.79	-	-	-	-	591.50	573.00	-	-
18	521+97.59	606.85	598.18	-	178.50	-	590.00	577.00	26.00	-
19	522+07.28	606.91	598.24	-	178.50	-	590.00	577.00	26.00	-
20	522+16.97	606.96	598.30	-	178.50	-	590.00	577.00	26.00	-
21	522+26.66	607.03	598.36	-	178.50	-	588.50	577.00	26.00	-
22	522+36.35	607.09	598.42	-	178.50	-	588.50	577.00	26.00	-
23	522+46.04	607.15	598.48	-	178.50	-	588.50	577.00	26.00	-
24	522+55.72	607.21	598.54	-	178.50	-	586.50	577.00	26.00	-
25	522+65.41	607.27	598.60	-	178.50	-	586.50	577.00	26.00	-
26	522+75.10	607.33	598.67	-	178.50	-	586.50	577.00	26.00	-
27	522+84.79	607.39	598.72	-	178.50	-	585.00	577.00	26.00	-
28	522+94.48	607.45	598.78	-	178.50	-	585.00	577.00	26.00	-
29	523+04.16	607.51	598.85	-	178.50	-	585.00	577.00	26.00	-
30	523+13.85	607.57	598.90	-	178.50	-	583.50	574.50	26.00	-
31	523+23.54	607.64	598.97	-	178.50	-	583.50	574.50	26.00	-
32	523+33.23	607.69	599.02	-	178.50	-	583.50	574.50	26.00	-
33	523+42.92	607.76	599.09	589.09	164.30	115.20	582.00	574.00	24.00	17.00
34	523+52.61	607.83	599.16	589.16	164.30	115.20	582.00	574.00	24.00	17.00
35	523+62.29	607.89	599.22	589.22	164.30	115.20	582.00	574.00	24.00	17.00
36	523+71.98	607.92	599.25	589.25	164.30	115.20	581.00	573.00	24.00	17.00
37	523+81.67	607.95	599.28	589.28	164.30	115.20	581.00	573.00	24.00	17.00
38	523+91.36	607.97	599.30	589.30	164.30	115.20	581.00	573.00	24.00	17.00
39	524+01.05	607.98	599.31	589.31	164.30	115.20	579.50	571.50	24.00	17.00
40	524+10.74	608.98	600.31	590.31	164.30	115.20	579.50	571.50	24.00	17.00
41	524+20.42	607.99	599.32	589.32	164.30	115.20	579.50	571.50	24.00	17.00
42	524+30.11	608.00	599.33	589.33	164.30	115.20	578.50	570.50	24.00	17.00
43	524+39.80	608.03	599.36	589.36	164.30	115.20	578.50	570.50	24.00	17.00
44	524+49.49	608.04	599.37	589.37	164.30	115.20	578.50	570.50	24.00	17.00
45	524+59.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
46	524+69.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
47	524+79.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
48	524+89.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
49	524+99.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
50	525+09.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
51	525+19.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
52	525+29.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
53	525+39.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
54	525+49.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
55	525+59.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
56	525+69.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
57	525+79.30	596.50	592.50	586.50	154.40	47.50	575.50	567.50	24.00	15.00
58	525+89.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
59	525+99.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
60	526+09.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
61	526+19.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
62	526+29.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
63	526+39.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
64	526+49.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
65	526+59.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
66	526+69.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
67	526+79.30	596.50	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00
68	526+90.99	602.13	592.50	586.50	154.40	47.50	575.50	566.00	24.00	15.00



ELEVATION KEY

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

NOTES:

CAISSONS 1-17 ARE 36" IN DIAMETER
CAISSONS 18-68 ARE 42" IN DIAMETER

THE PILES FOR CAISSONS 1-8 ARE SINGLE W18X97 PILES
THE PILES FOR CAISSONS 9-17 ARE SINGLE W18X158 PILES
THE PILES FOR CAISSONS 18-68 ARE DOUBLE W18X76 PILES

ALL UPPER ANCHOR STRANDS ARE 6-STRAND ANCHORS
LOWER ANCHORS FOR PILES 33 TO 44 ARE 4-STRAND ANCHORS
LOWER ANCHORS FOR PILES 45 TO 68 ARE 2-STRAND ANCHORS

1. THE ANCHOR DESIGN LOAD IS THE DESIGN LOAD AT SERVICE LIMIT STATE SER-I.
2. THE PERFORMANCE TEST LOAD IS THE ANCHOR DESIGN LOAD MULTIPLIED BY 1.33.
3. ANCHOR DESIGN LOAD TO NOT EXCEED 0.6 GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS). ANCHOR TEST LOAD TO NOT EXCEED 0.8 GUTS.
4. THE ROCK BOND LENGTHS SHOWN IN THE TABLE ABOVE ARE PROVIDED FOR INFORMATION ONLY. THESE LENGTHS WERE DETERMINED ASSUMING A 6" DIAMETER DRILLED HOLE AND USING AN ULTIMATE UNIT BOND STRESS OF 14 KSF WITH A RESISTANCE FACTOR OF 0.45. AS PART OF THE SHOP DRAWING SUBMISSION, THE ANCHOR TENDON MANUFACTURER SHALL SPECIFY THE MINIMUM REQUIRED DRILL HOLE DIAMETER, DETERMINE AND DETAIL THE REQUIREMENTS OF HIS ANCHORS, AND COORDINATE THE CONTRACTOR'S PROPOSED METHOD OF ANCHOR INSTALLATION.

REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL ELEVATION DATA TABLE

RECOMMENDED AUGUST 22, 2022

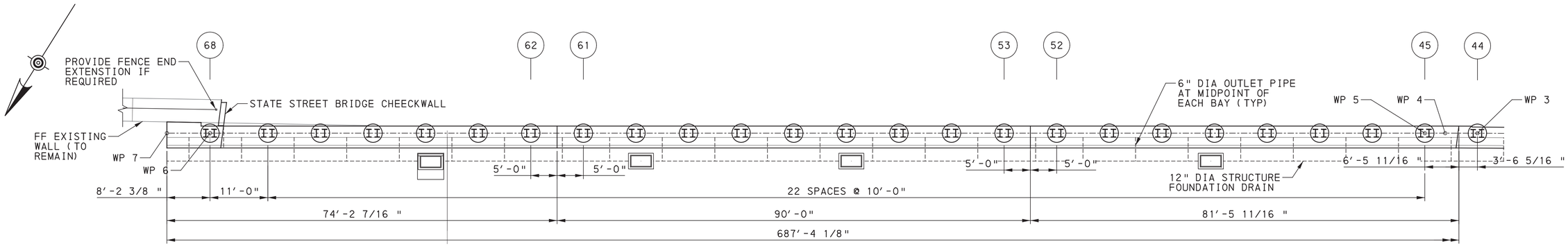
SHEET 10 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

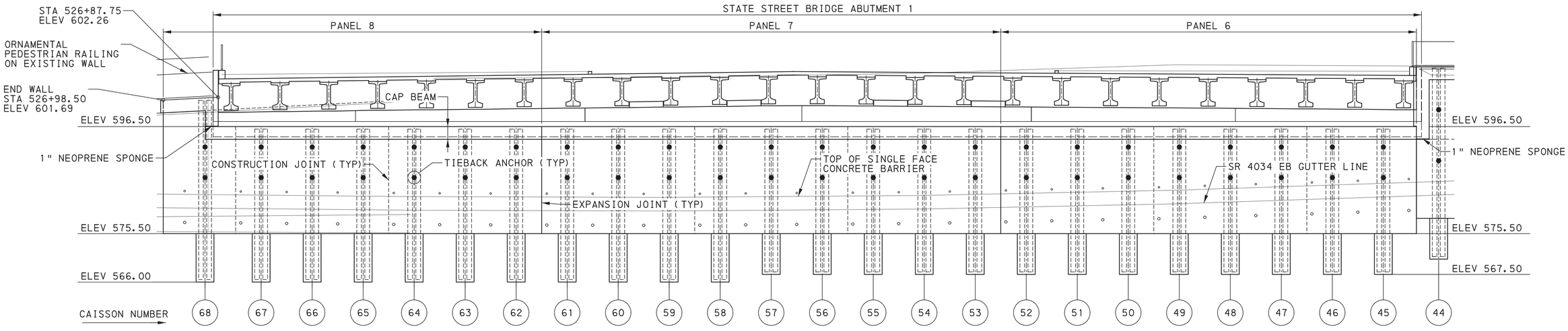
OPERATOR:
FILE NAME: \\mcsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwd001.dgn



PLAN

5 0 5 10 FEET

ALL DIMENSIONS TAKEN ALONG ℄ CAISSONS



ELEVATION

5 0 5 10 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL LAYOUT - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

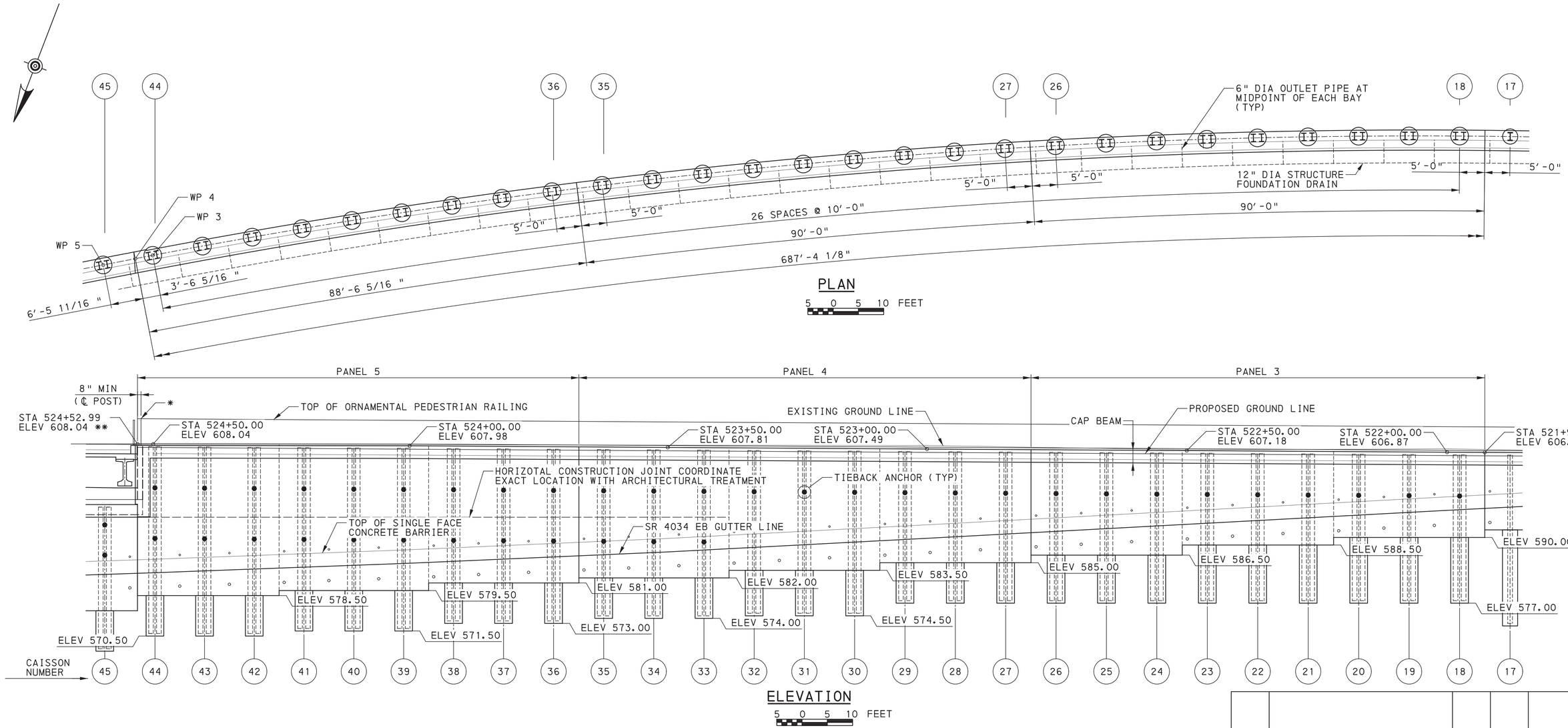
SHEET 11 OF 34

S-41019

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTw1001.dgn



* - COORDINATE LIMITS OF FENCE AND FENCE END POST WITH STATE STREET BRIDGE FENCE. PROVIDE FENCE END EXTENSION IF REQUIRED. DO NOT CONNECT EXTENSION TO BRIDGE FENCE.

** - TOP OF CAP BEAM TO MATCH TOP OF BRIDGE DECK OVERHANG CURB.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL LAYOUT - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

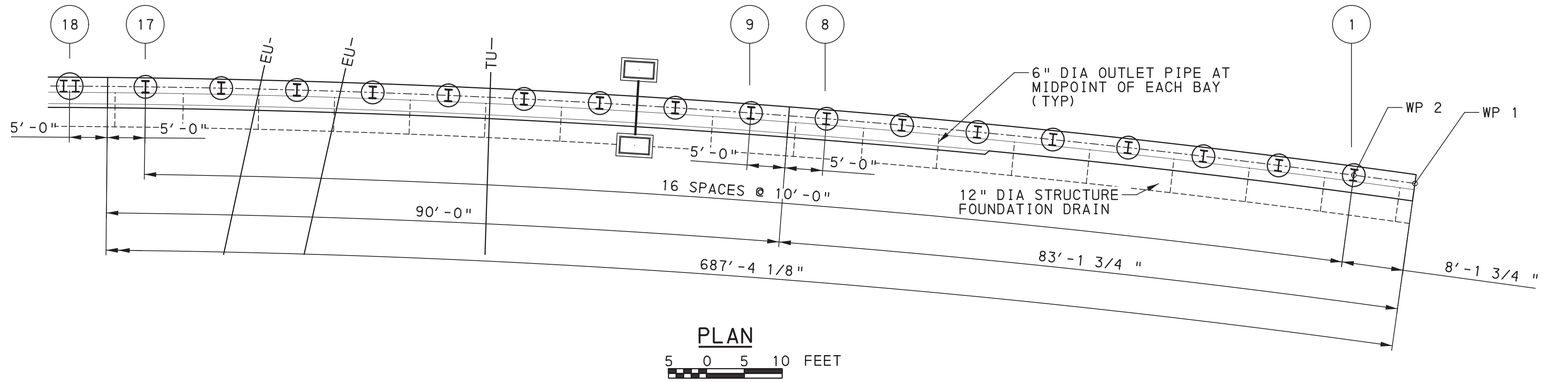
SHEET 12 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

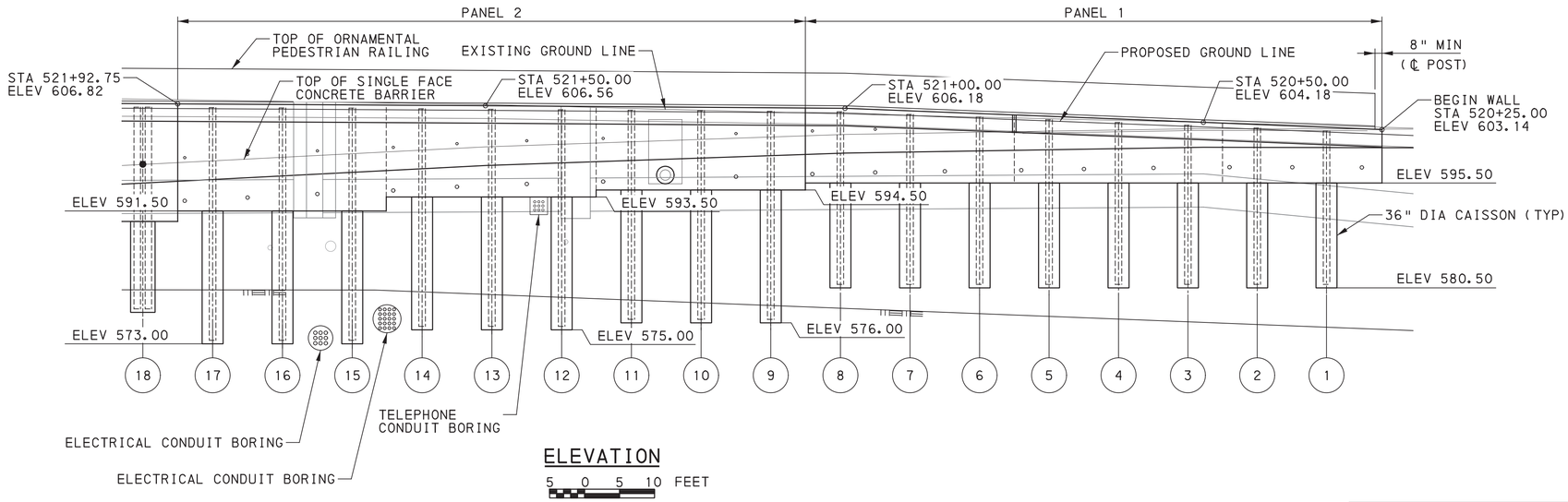
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_WSTw1002.dgn



PLAN

5 0 5 10 FEET



ELEVATION

5 0 5 10 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL LAYOUT - 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 13 OF 34

S-41019

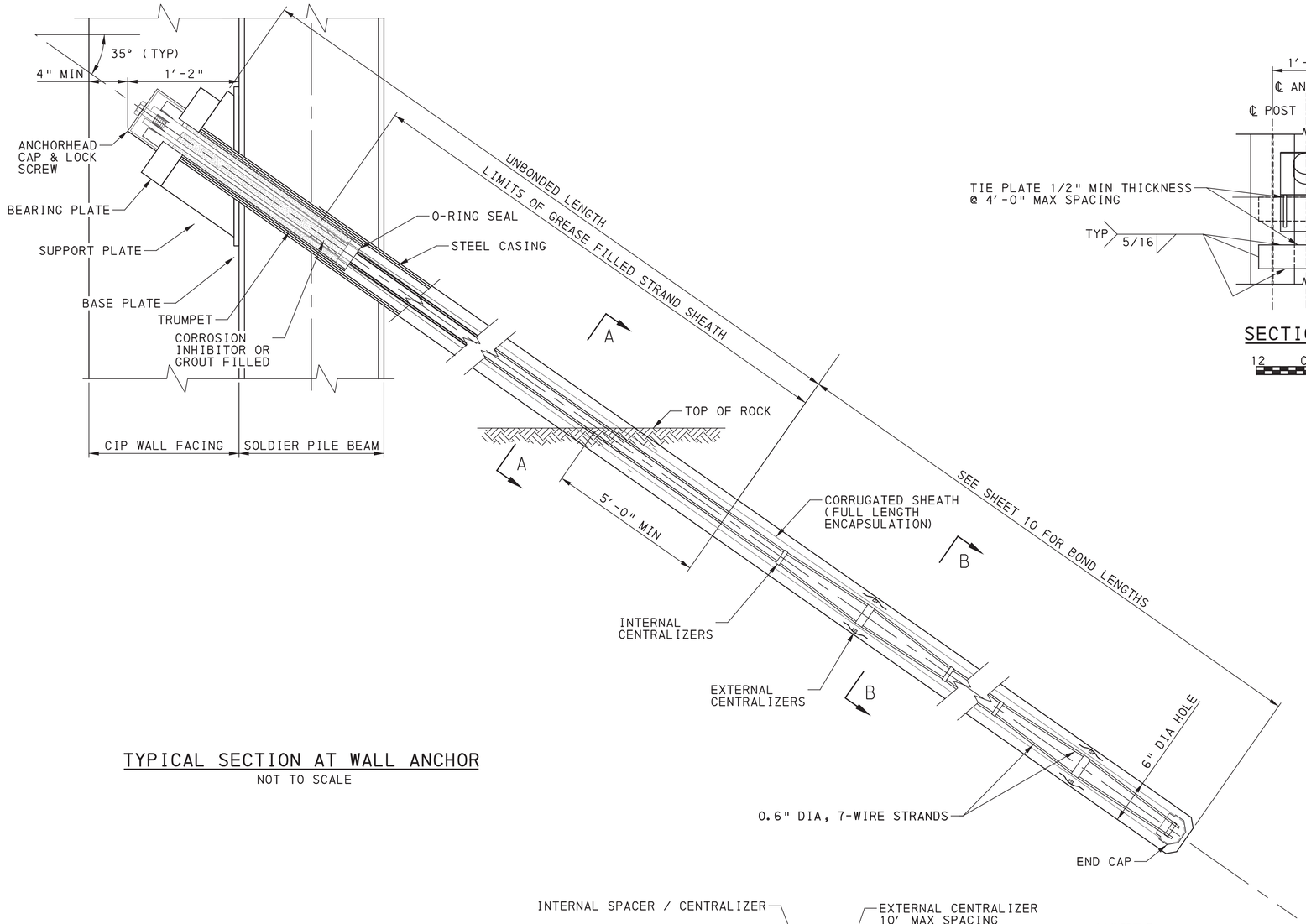
DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTw1003.dgn

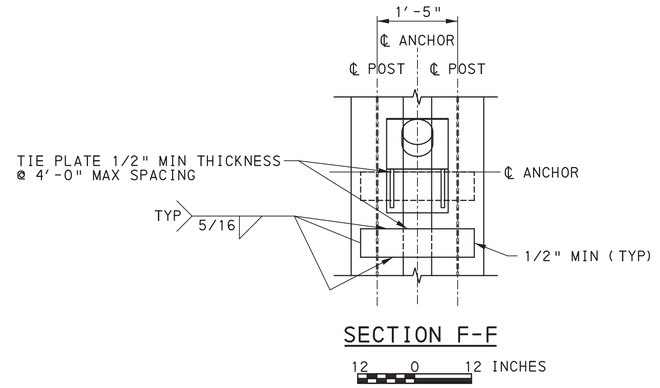
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTan001.dgn



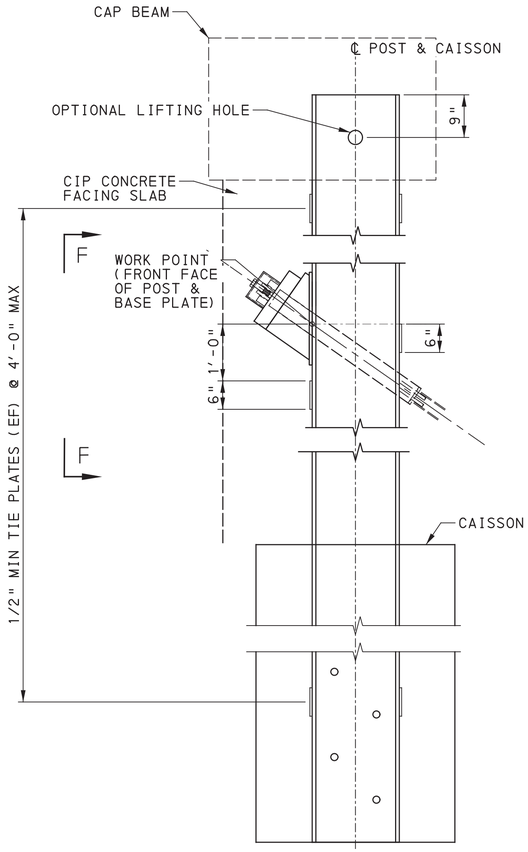
TYPICAL SECTION AT WALL ANCHOR

NOT TO SCALE



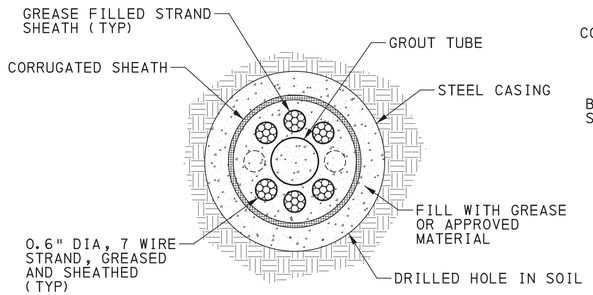
SECTION F-F

12 0 12 INCHES

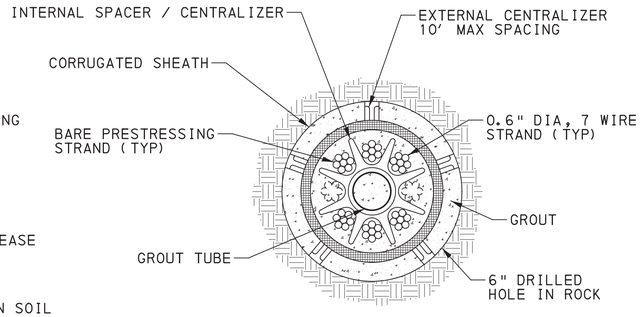


SOLDIER BEAM TIE PLATE DETAIL

12 0 12 INCHES



SECTION A-A



SECTION B-B

6-STRAND DETAILS

4 STRAND, AND 2 STRAND SIMILAR
NOT TO SCALE

NOTES:

1. USE PERMANENT CASING FOR DRILLED ANCHOR HOLES WHERE REQUIRED IN SOILS OR BACKFILL SUBJECT TO CAVING. (STANDARD ANCHOR ONLY)
2. DETAILS WITH PERMANENT STEEL CASING ARE SHOWN. DETAILS ARE SIMILAR WHERE PERMANENT CASING IS NOT REQUIRED AND SHEATHING EXTENDS INTO TRUMPET.
3. LOCATE UPPER CENTRALIZER A MAXIMUM OF 5' FROM THE TOP OF THE TENDON BOND LENGTH. LOCATE LOWER CENTRALIZER 1' FROM THE BOTTOM OF THE TENDON BOND LENGTH.
4. PROVIDE A WATERTIGHT SEAL BETWEEN TRUMPET AND STEEL CASING FOR ANCHOR DESIGNS WITH PERMANENT STEEL CASINGS. PROVED A WATERTIGHT SEAL BETWEEN TRUMPET AND PLASTIC SHEATH FOR ANCHOR DESIGNS WITHOUT PERMANENT STEEL CASINGS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
ANCHOR DETAILS - 1

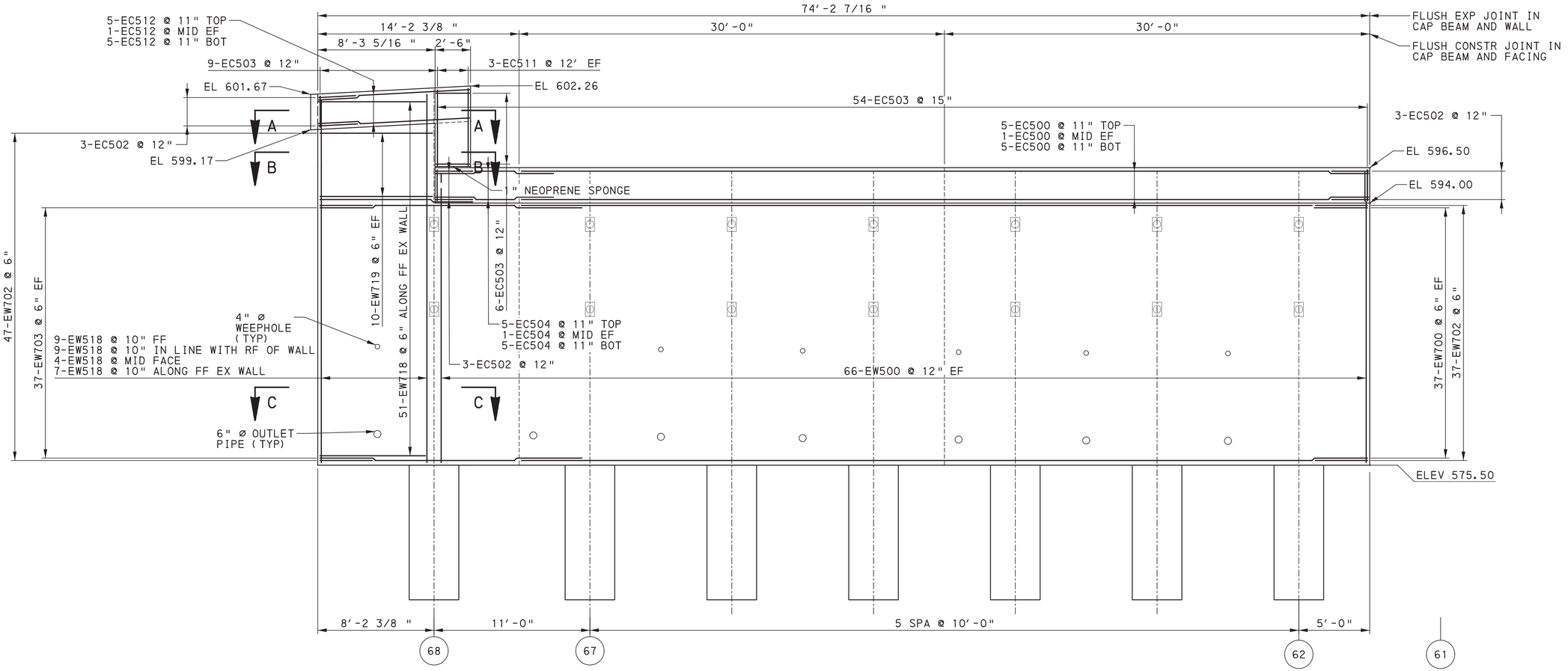
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 14 OF 34

S-41019

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB



ELEVATION (PANEL 8)

2 0 2 4 FEET

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAP

USE 4′-7" #7 LAP

FOR SECTIONS A-A, B-B, AND C-C SEE SHEET 23

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E

RECOMMENDED AUGUST 22, 2022

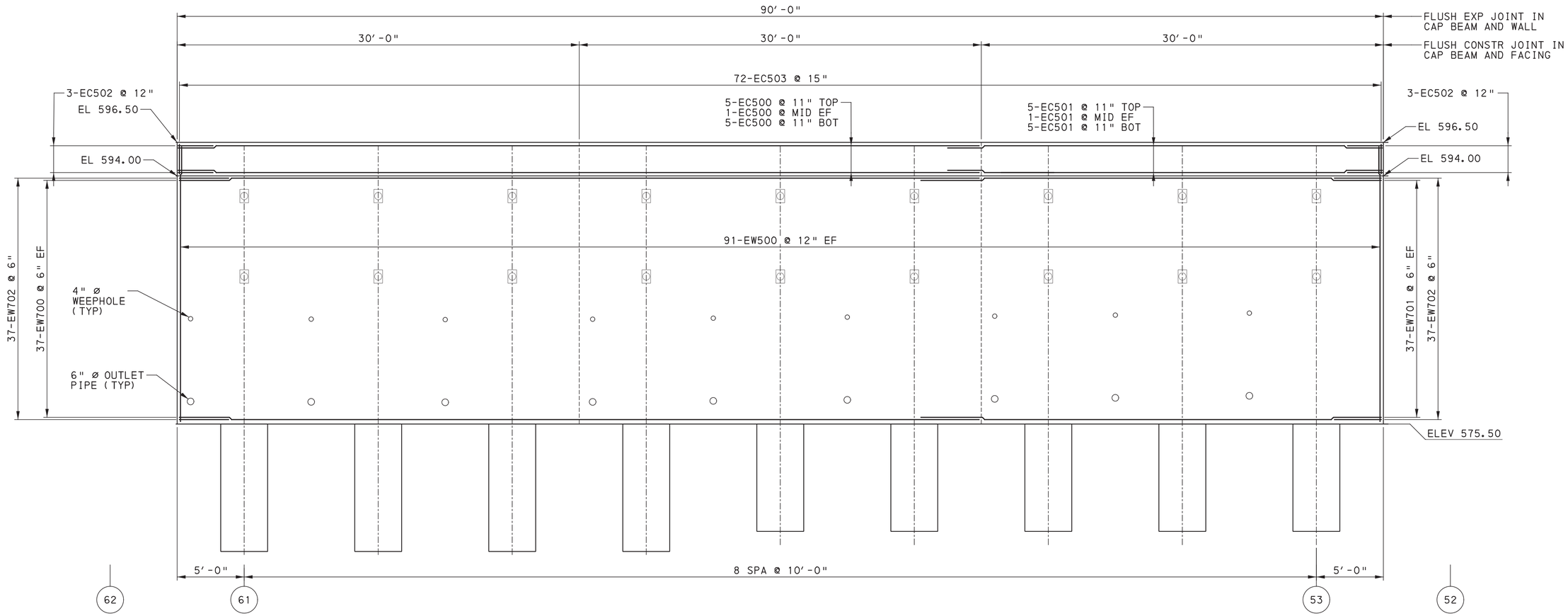
SHEET 15 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr001.dgn



ELEVATION (PANEL 7)

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E PENNSYLVANIA

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 2

RECOMMENDED AUGUST 22, 2022

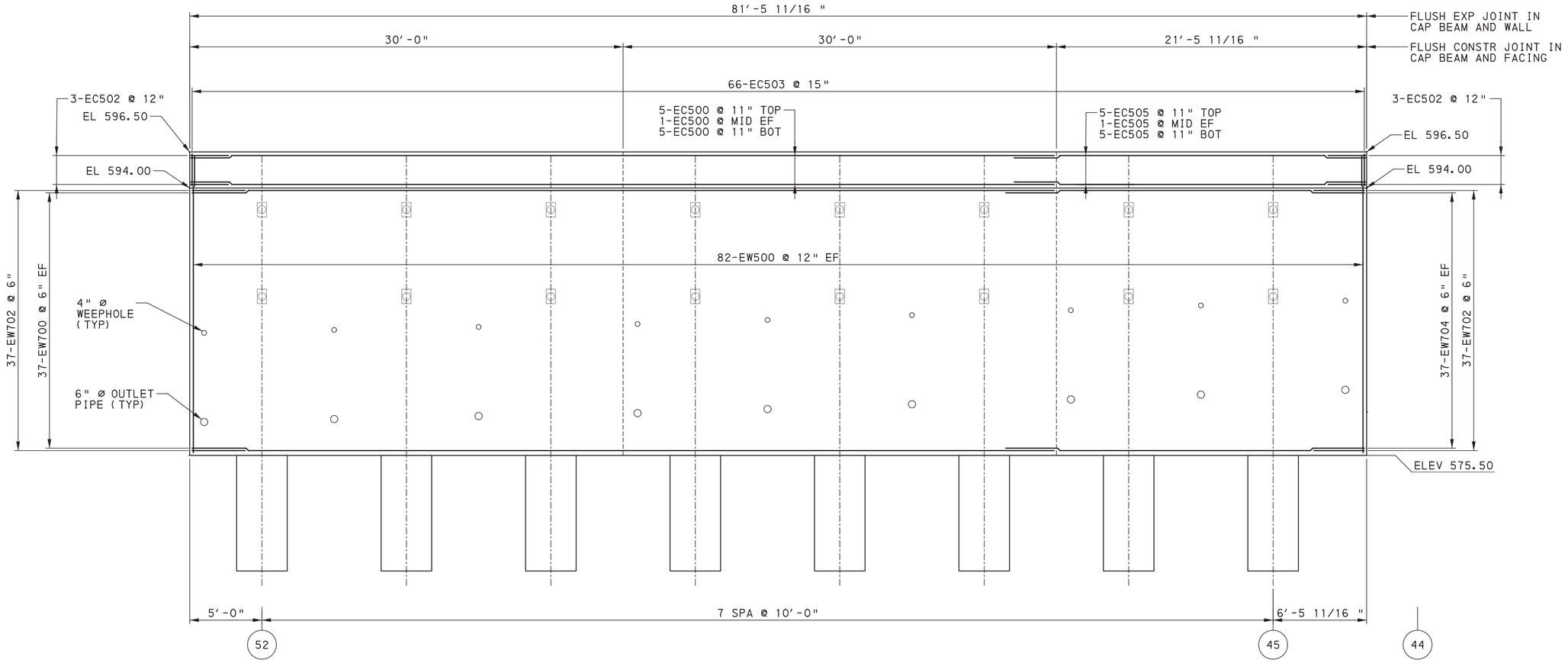
SHEET 16 OF 34

S-41019

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr002.dgn



ELEVATION (PANEL 6)

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 3

RECOMMENDED AUGUST 22, 2022

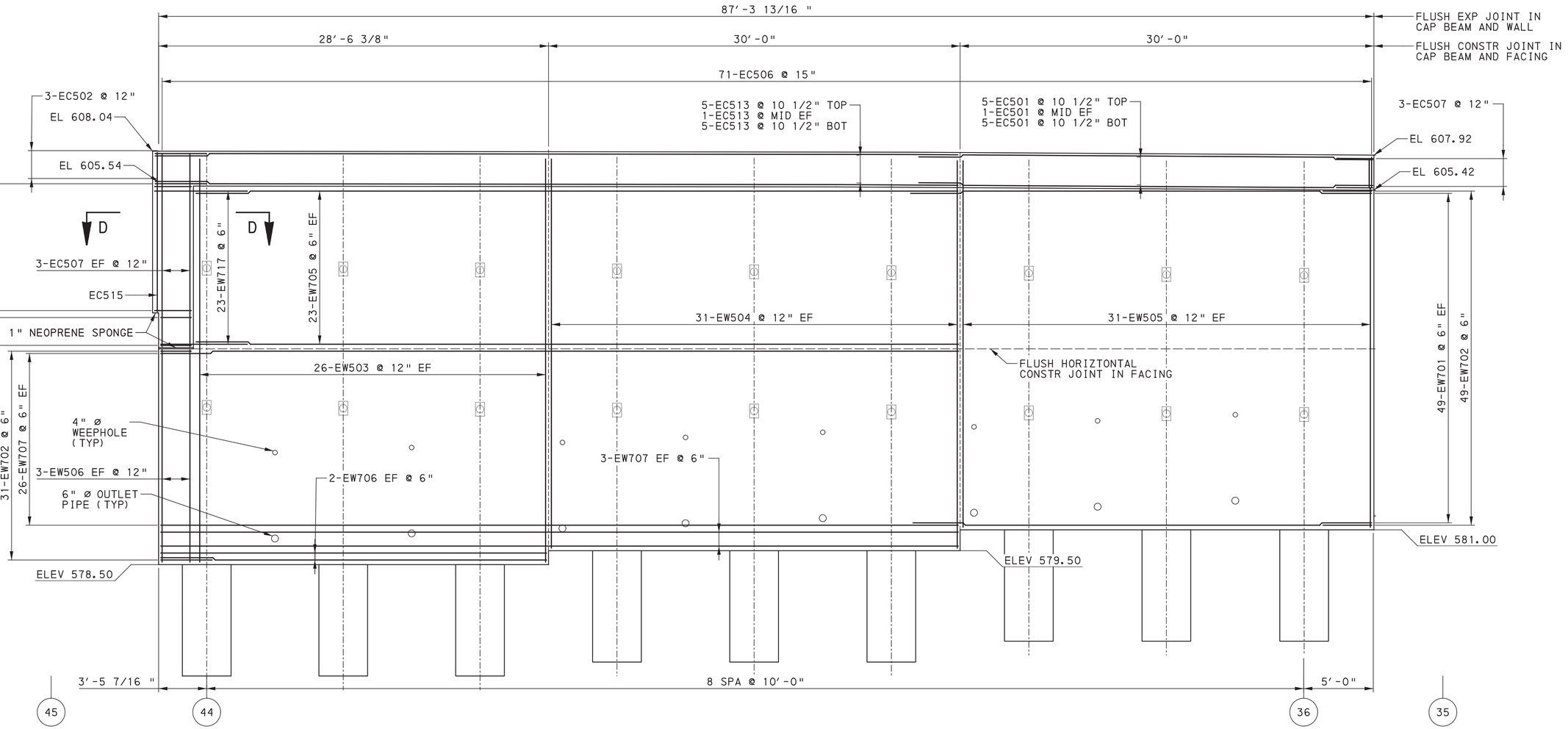
SHEET 17 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mscons ultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr003.dgn



ELEVATION (PANEL 5)

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

SEE SHEET 23 FOR SECTION D-D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 4

RECOMMENDED AUGUST 22, 2022

SHEET 18 OF 34

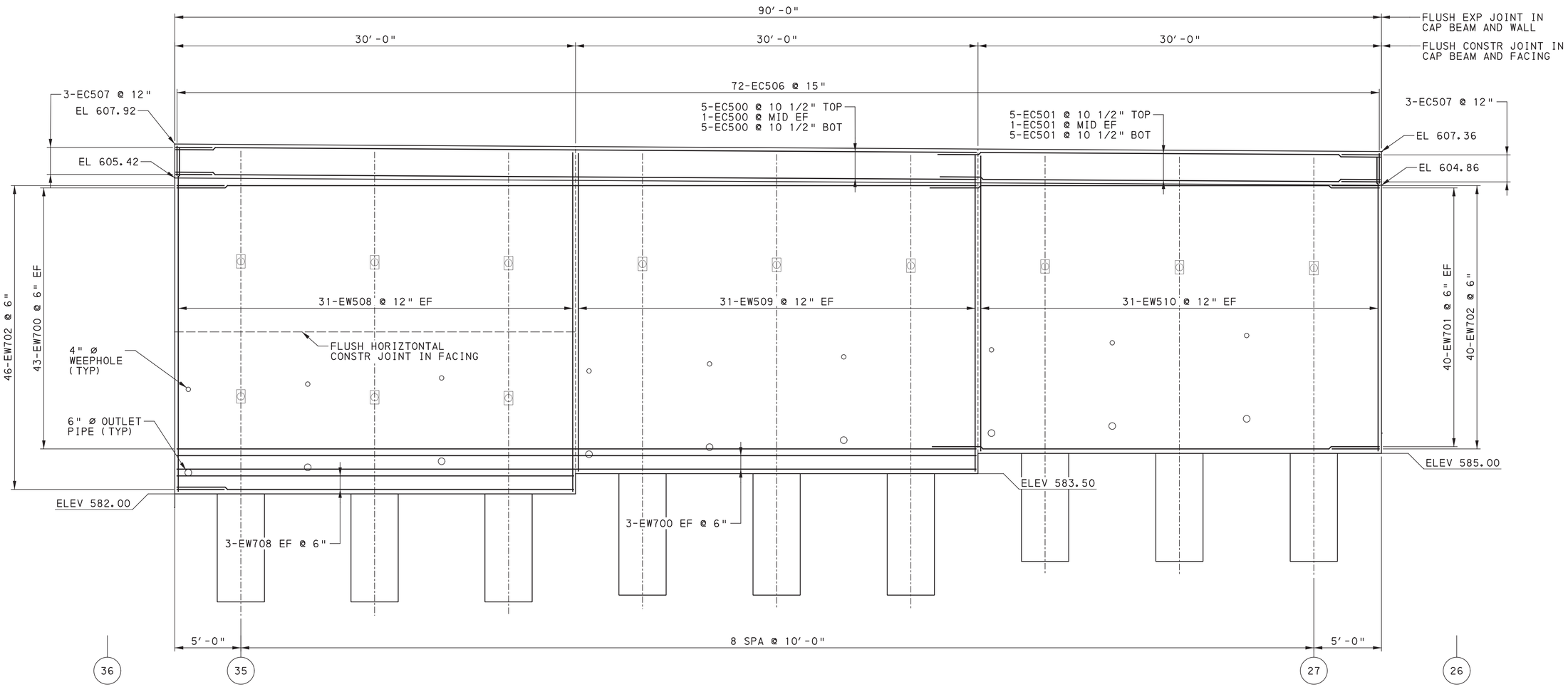
S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr004.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr005.dgn



ELEVATION (PANEL 4)

2 0 2 4 FEET

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 5

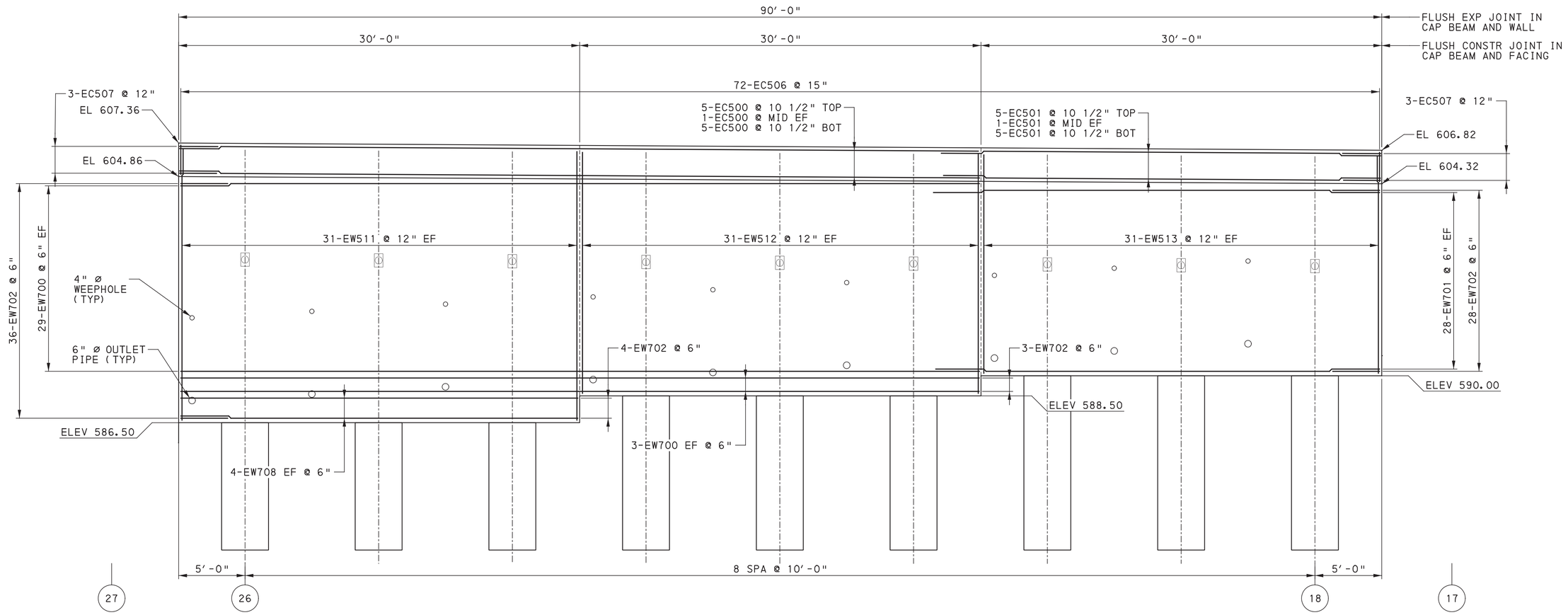
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

RECOMMENDED AUGUST 22, 2022

SHEET 19 OF 34

S-41019

DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB



ELEVATION (PANEL 3)

2 0 2 4 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

NOTES

SPACE VERTICAL WALL REINFORCEMENT TO AVOID ANCHOR BEARING ASSEMBLY

CUT REAR FACE HORIZONTAL REINFORCEMENT AT INTERFERE LOCATIONS WITH ANCHOR BEARING ASSEMBLY

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 6

RECOMMENDED AUGUST 22, 2022

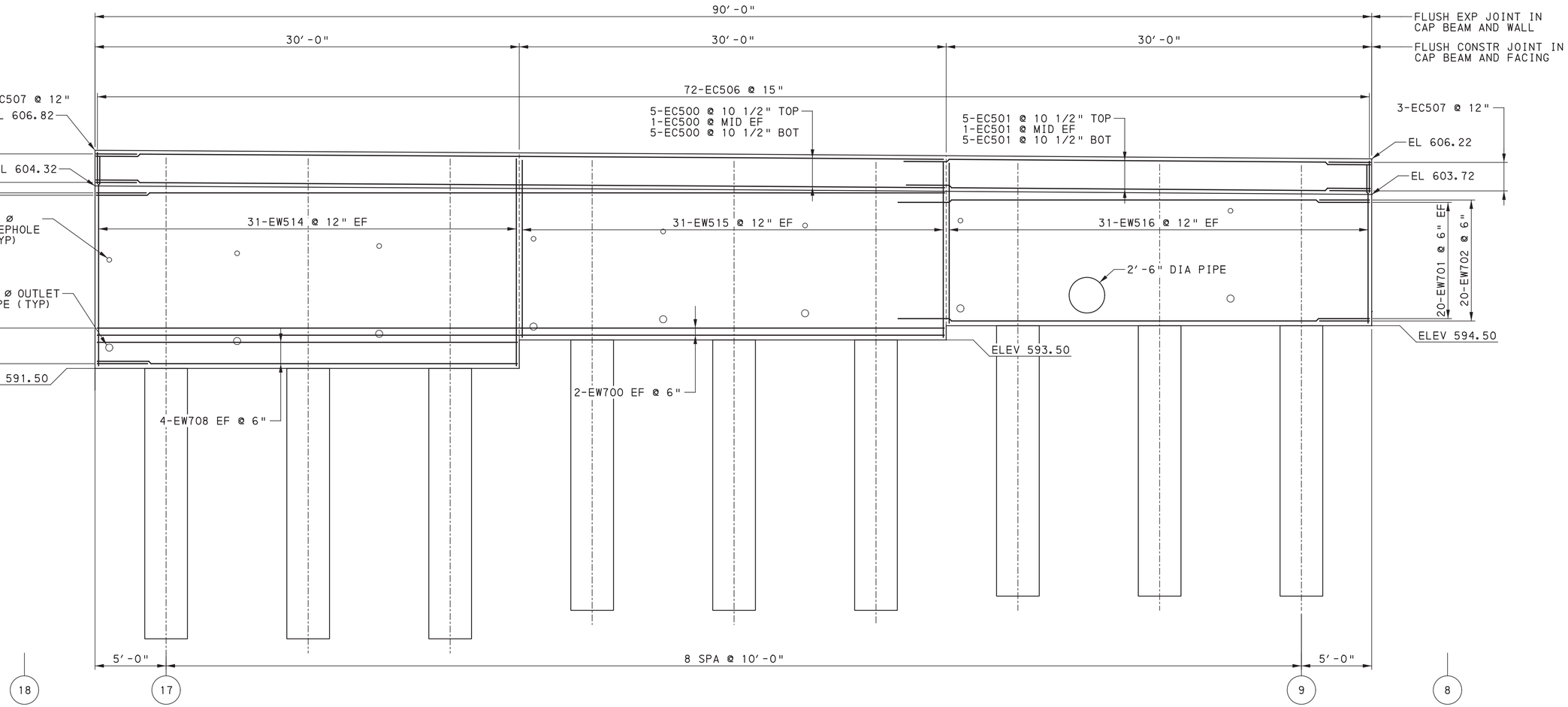
SHEET 20 OF 34

S-41019

DES: JRB	CKD: BDL	DWG: BDL	CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr006.dgn



ELEVATION (PANEL 2)

2 0 2 4 FEET

NOTES

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 7

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

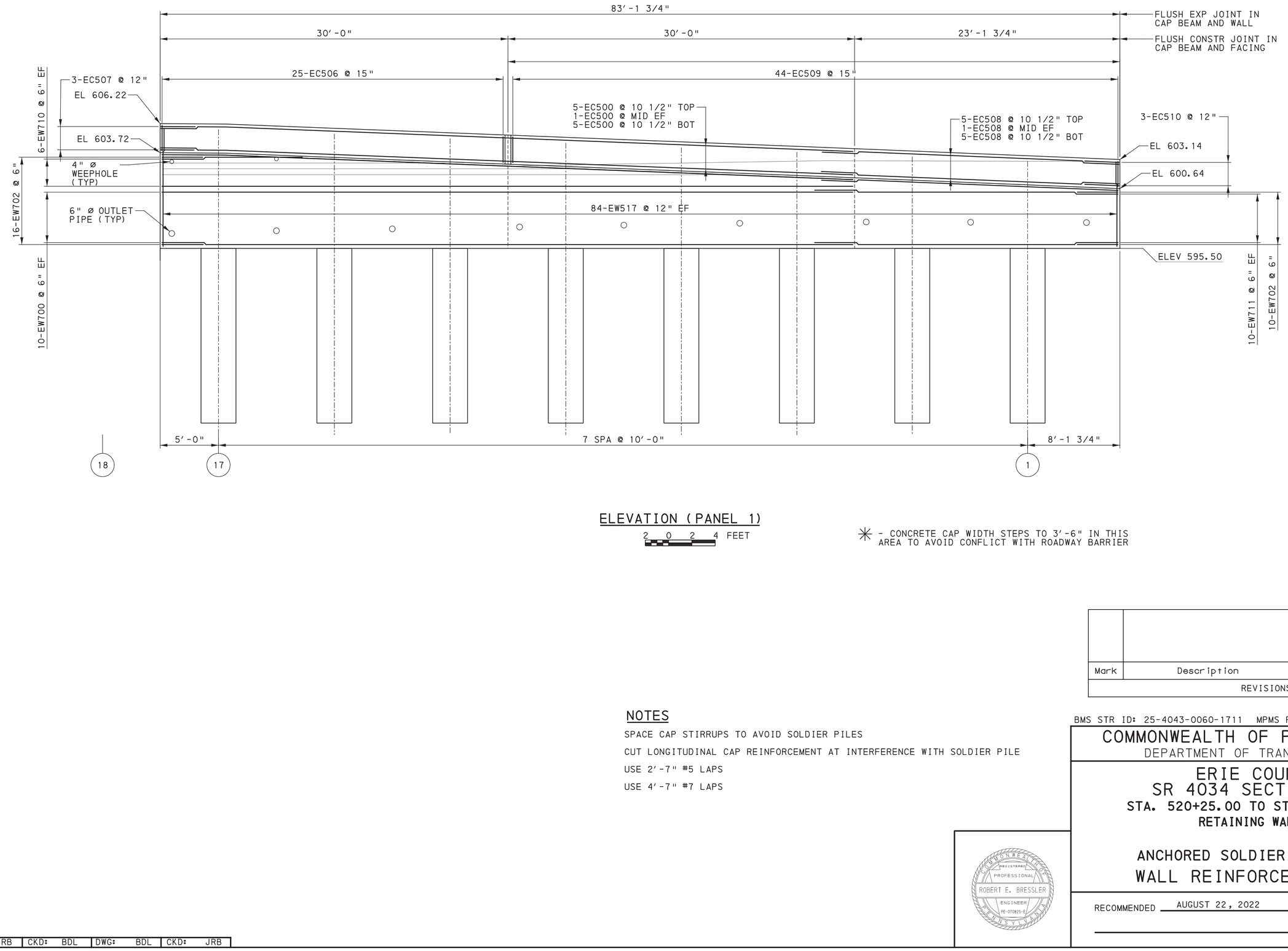
SHEET 21 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr007.dgn



ELEVATION (PANEL 1)

2 0 2 4 FEET

✳ - CONCRETE CAP WIDTH STEPS TO 3′-6" IN THIS AREA TO AVOID CONFLICT WITH ROADWAY BARRIER

NOTES

SPACE CAP STIRRUPS TO AVOID SOLDIER PILES

CUT LONGITUDINAL CAP REINFORCEMENT AT INTERFERENCE WITH SOLDIER PILE

USE 2′-7" #5 LAPS

USE 4′-7" #7 LAPS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT - 8

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 22 OF 34

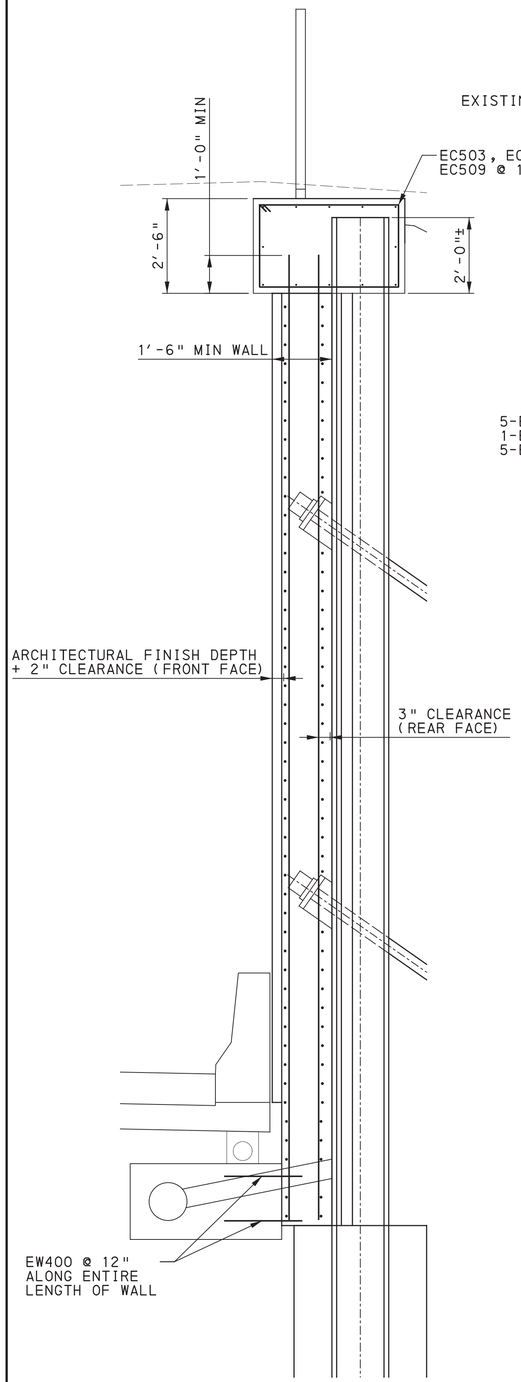
S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

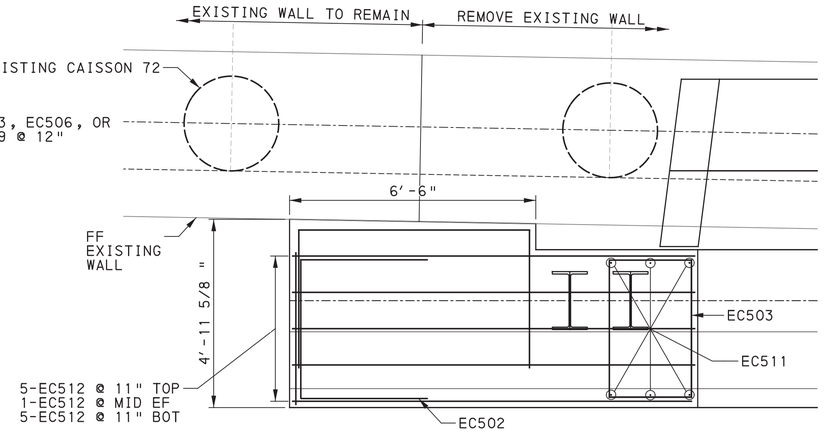
OPERATOR:
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwr008.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTrd001.dgn



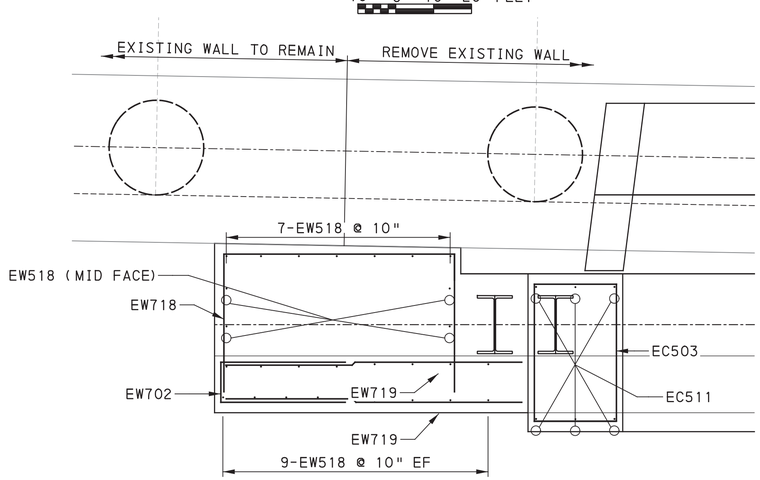
CAP BEAM AND CIP WALL TYPICAL SECTION

10 0 10 20 FEET



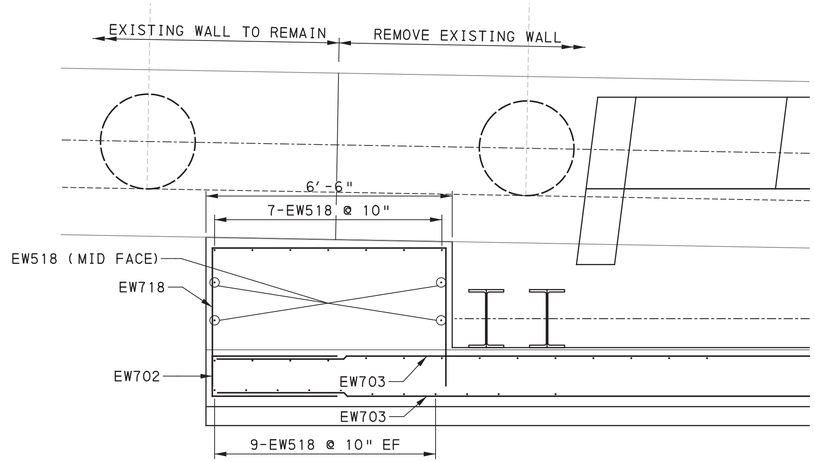
SECTION A-A

10 0 10 20 FEET



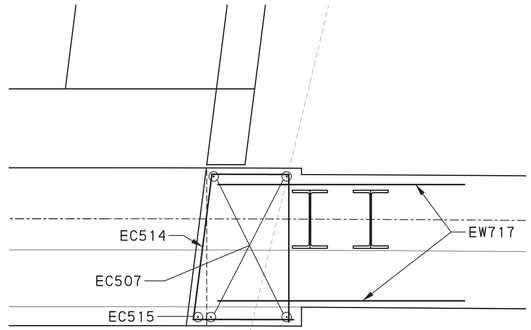
SECTION B-B

10 0 10 20 FEET



SECTION C-C

10 0 10 20 FEET



SECTION D-D

10 0 10 20 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT DETAILS

REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E
COMMONWEALTH OF PENNSYLVANIA

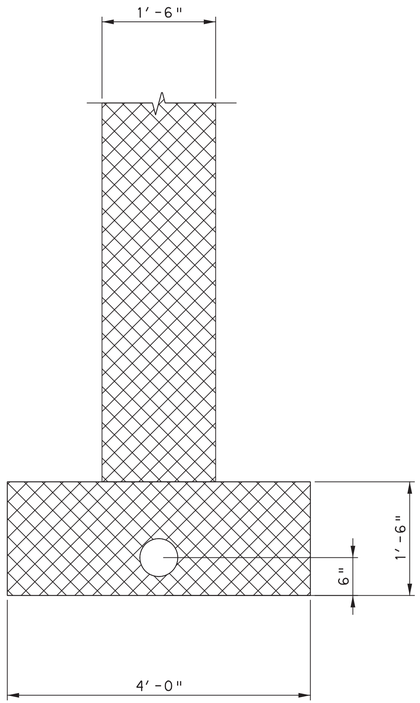
RECOMMENDED AUGUST 22, 2022

SHEET 23 OF 34

S-41019

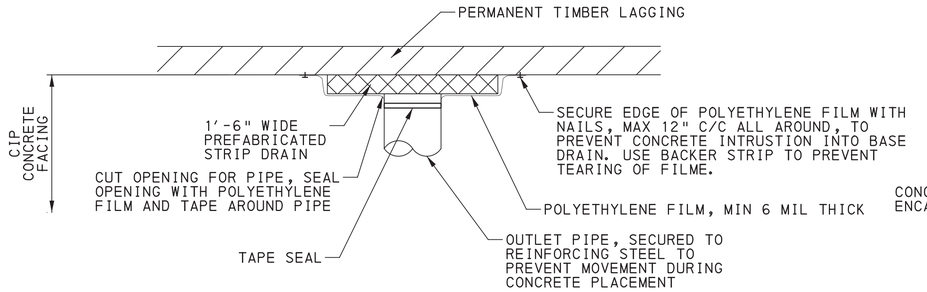
DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTdr001.dgn



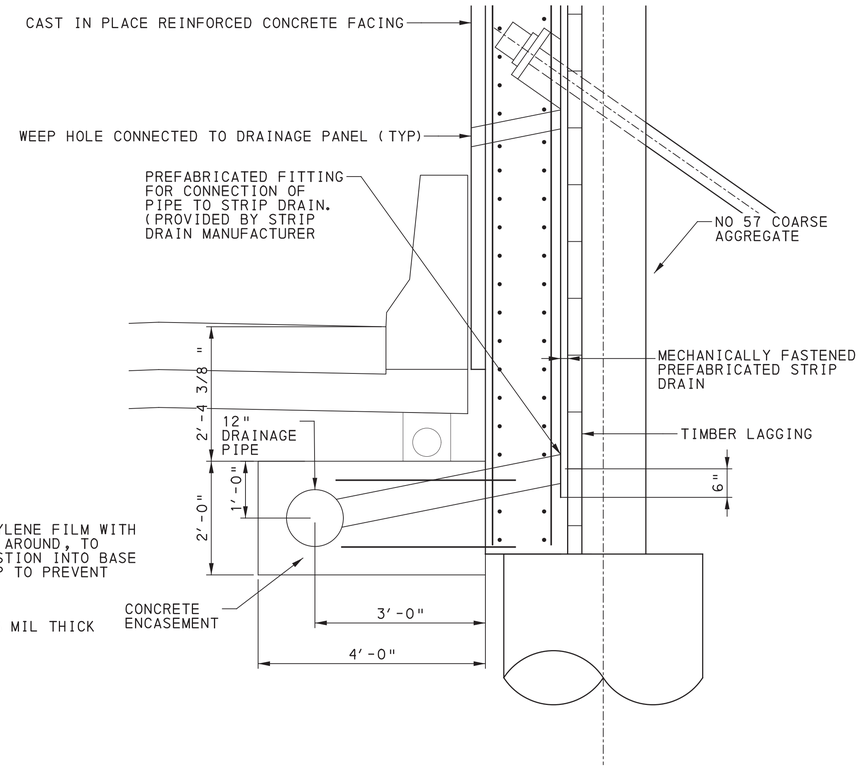
ELEVATION AT DRAINAGE PANEL

6 0 6 12 INCHES



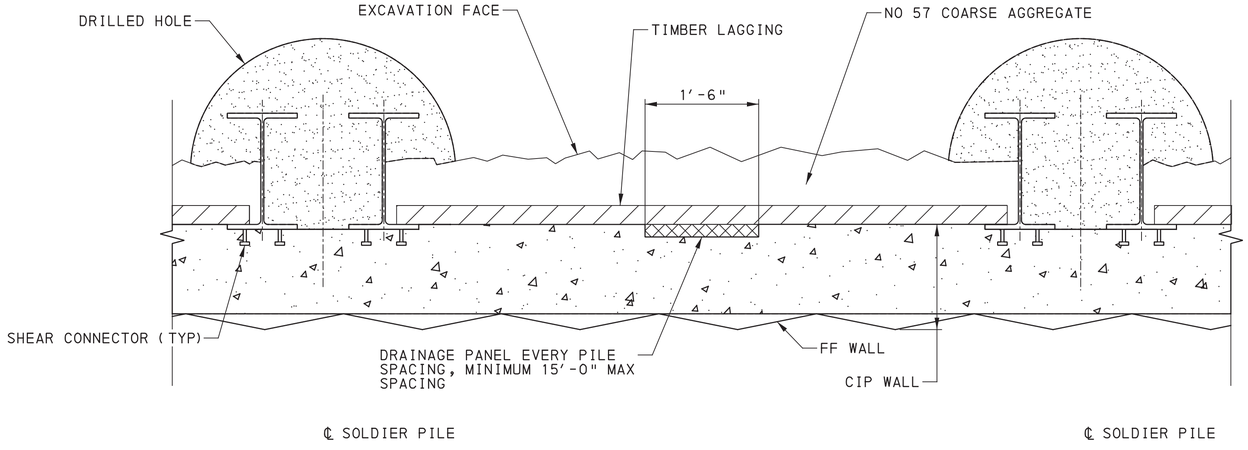
ALTERNATE FITTING FOR CONNECTION OF PIPE TO STRIP DRAIN

6 0 6 INCHES



SECTION AT DRAINAGE PANEL

12 0 12 INCHES



TYPICAL SECTION AT CIP WALL (TOP DOWN INSTALLATION)

6 0 6 12 INCHES

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
DRAINAGE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

RECOMMENDED AUGUST 22, 2022

SHEET 24 OF 34

S-41019

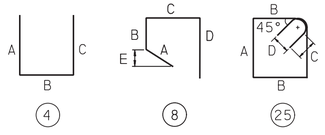
DES:	JRB	CKD:	BDL	DWG:	BDL	CKD:	JRB

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PANEL 8 WALL SLAB											
EW500	5	132	19′-3"	STR							
EW518	5	20	25′-6"	STR							
EW700	7	74	59′-8"	STR							
EW702	7	84	10′-2"	4	4′-7"	1′-0"	4-7"				
EW703	7	74	18′-10"	STR							
EW712	7	20	8′-1"	STR							
EW718	7	20	7′-10"	STR							
EW719	7	51	13′-6"	4	3′-8"	6′-2"	3′-8"				
PANEL 8 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC502	5	9	9′-0"	4	2′-7"	3′-10"	2-7"				
EC503	5	69	12′-10"	25	2′-2"	3′-10"	5"	1"			
EC504	5	12	8′-6"	STR							
EC511	5	6	5′-6"	STR							
EC512	5	12	10′-7"	STR							
PANEL 7 WALL SLAB											
EW500	5	182	19′-3"	STR							
EW700	7	74	59′-8"	STR							
EW701	7	74	34′-7"	STR							
EW702	7	74	10′-2"	4	4′-7"	1′-0"	4-7"				
PANEL 7 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC501	5	12	34′-7"	STR							
EC502	5	9	9′-0"	4	2′-7"	3′-10"	2′-7"				
EC503	5	72	12′-10"	25	2′-2"	3′-10"	5"	1"			
PANEL 6 WALL SLAB											
EW500	5	164	19′-3"	STR							
EW700	7	74	59′-8"	STR							
EW702	7	74	9′-0"	4	4′-7"	1′-0"	4-7"				
EW704	7	74	26′-1"	STR							
PANEL 6 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC502	5	6	10′-6"	4	2′-7"	3′-10"	2′-7"				
EC503	5	66	12′-10"	25	2′-2"	3′-10"	5"	1"			
EC505	5	12	24′-1"	STR							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PANEL 5 WALL SLAB											
EW503	5	52	28′-6"	STR							
EW504	5	62	27′-6"	STR							
EW505	5	62	25′-9"	STR							
EW506	5	6	15′-2"	STR							
EW701	7	98	34′-7"	STR							
EW702	7	80	10′-2"	4	4′-7"	1′-0"	4-7"				
EW705	7	46	56′-4"	STR							
EW706	7	4	28′-2"	STR							
EW707	7	58	58′-2"	STR							
EW717	7	46	6′-6"	STR							
PANEL 5 CAP BEAM											
EC501	5	12	34′-7"	STR							
EC502	5	9	9′-0"	4	2′-7"	3′-8"	2′-7"				
EC503	5	2	12′-10"	25	2′-2"	3′-10"	5"	1"			
EC507	5	3	10′-4"	4	3′-4"	3′-8"	3-4"				
EC506	5	75	12′-6"	25	2′-2"	3′-8"	5"	1"			
EC513	5	12	58′-2"	STR							
EC514	5	10	12′-4"	8	3′-10"	2′-0"	3′-10"	2′-8"	6"		
EC515	5	1	11-3"	STR							
PANEL 4 WALL SLAB											
EW508	5	62	25′-0"	STR							
EW509	5	62	23′-3"	STR							
EW510	5	62	21′-6"	STR							
EW700	7	92	59′-8"	STR							
EW701	7	80	34′-7"	STR							
EW702	7	86	10′-2"	4	4′-7"	1′-0"	4-7"				
EW708	7	6	29′-8"	STR							
PANEL 4 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC501	5	12	34′-7"	STR							
EC506	5	72	12′-6"	25	2′-2"	3′-8"	5"	1"			
EC507	5	6	8′-10"	4	2′-7"	3′-8"	2′-7"				



NOTES:

1. VA. = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. DO NOT USE RAIL STEEL (A616/A616M) FOR FOOTINGS AND WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.
8. FOR GENERAL NOTES, SEE SHEETS 4 AND 5.

Mark	Description	By	Chk'd.	Recm'd	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070625-E PENNSYLVANIA

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT SCHEDULE - 1

RECOMMENDED AUGUST 22, 2022

SHEET 25 OF 34

S-41019

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_WSTwlrb001.dgn

PLOTTED: 8/22/2022

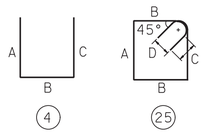
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_BP_W\sheets\FINAL\wall_BP_WSTwlrb002.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PANEL 3 WALL SLAB											
EW511	5	62	20′-0"	STR							
EW512	5	62	17′-9"	STR							
EW513	5	62	16′-1"	STR							
EW700	7	64	59′-8"	STR							
EW701	7	58	34′-7"	STR							
EW702	7	64	10′-2"	4	4′-7"	1′-0"	4-7"				
EW708	7	8	29′-8"	STR							
PANEL 3 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC501	5	12	34′-7"	STR							
EC506	5	72	12′-6"	25	2′-2"	3′-8"	5"	1"			
EC507	5	6	8′-10"	4	2′-7"	3′-8"	2-7"				
PANEL 2 WALL SLAB											
EW514	5	62	14′-5"	STR							
EW515	5	62	12′-2"	STR							
EW516	5	62	11′-0"	STR							
EW700	7	46	59′-8"	STR							
EW701	7	40	34′-7"	STR							
EW702	7	47	10′-2"	4	4′-7"	1′-0"	4-7"				
EW708	7	8	29′-8"	STR							
PANEL 2 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC501	5	12	34′-7"	STR							
EC506	5	72	12′-6"	25	2′-2"	3′-8"	5"	1"			
EC507	5	6	8′-10"	4	2′-7"	3′-8"	2′-7"				
PANEL 1 WALL SLAB											
EW517	5	168	9′-11" TO 6′-9"	STR						2	SETS, VARY EACH BAR SET BY 5 1/2"
EW700	7	20	59′-8"	STR							
EW702	7	26	10′-2"	4	4′-7"	1′-0"	4-7"				
EW710	7	12	5′-8" TO 59′-8"	STR						2	SETS, VARY EACH BAR SET BY 12′-6"
EW711	7	20	27′-3"	STR							
PANEL 1 CAP BEAM											
EC500	5	12	59′-8"	STR							
EC506	5	25	12′-6"	25	2′-2"	3′-8"	5"	1"			
EC507	5	3	8′-10"	4	2′-7"	3′-8"	2′-7"				
EC508	5	12	27′-3"	STR							
EC509	5	44	11′-6"	25	2′-2"	3′-2"	5"	1"			
EC510	5	3	8′-4"	4	2′-7"	3′-2"	2′-7"				
WALL DRAINAGE											
EW400	4	1370	2′-0"	STR							

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS



NOTES:
1. VA. = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. DO NOT USE RAIL STEEL (A616/A616M) FOR FOOTINGS AND WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.
8. FOR GENERAL NOTES, SEE SHEETS 4 AND 5.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

DES: JRB | CKD: BDL | DWG: BDL | CKD: JRB

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

BMS STR ID: 25-4043-0060-1711 MPMS PROJ: 108952 BRKEY: 69236

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

ANCHORED SOLDIER PILE WALL
WALL REINFORCEMENT SCHEDULE - 2

RECOMMENDED AUGUST 22, 2022

SHEET 26 OF 34

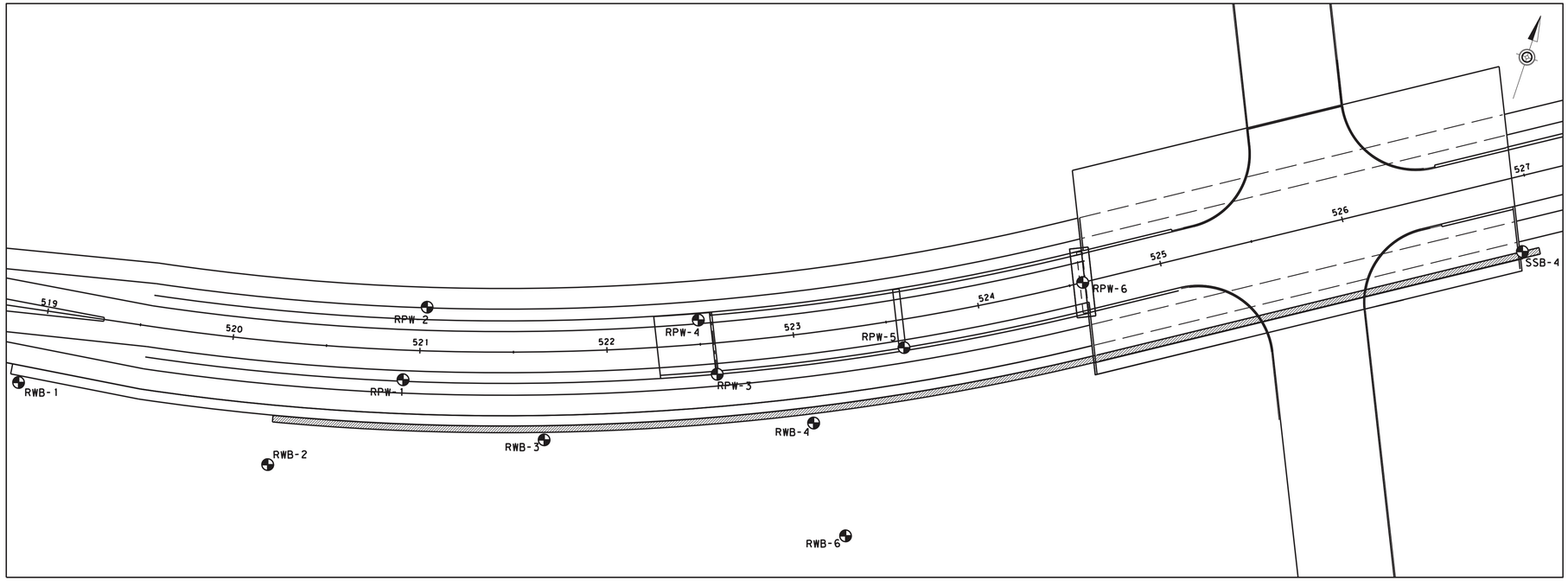
S-41019

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.



BORING LOCATION LAYOUT

SCALE

35 FEET 0 35 FEET

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark D. Styler — 1/20/2022

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK D. STYLER ENGINEER No. PE091709

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 1 OF 8)

Christopher T. Fox, P.E.

Digitally signed by Christopher T. Fox, P.E.
Date: 2022.08.23 07:12:24 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 27 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_WallB.dgn
7/29/2022

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/14/2020 2:00 PM	HAMMER: AUTOMATIC
RWB-1	STATION: 518+90.0 OFFSET: 40.0 FT. RT.	FINISH: 10/15/2020 10:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	598.7 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 566.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 566.8 ft. - 23.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40 / 20 40 60 80
605										
600										
595		**GRAVEL**, some Sand, little Silt, medium dense to dense, moist to dry, heterogeneous, poorly graded, rounded to angular, brown to gray, fill.	a-2-4 / gm	1.5	S-1	4-6-15	28	0.9	60	
				3.0	S-2	11-18-20	51	1.5	100	
				4.5	S-3	24-14-14	37	1.2	80	
				6.0	S-4	9-19-15	45	1.5	100	
				7.5	S-5	13-14-20	45	0.8	53	
590		*S-5, contains wood.*		9.0	S-6	10-16-15	41	1.0	67	
		S-6, contains brick fragments.		10.5	S-7	6-9-8	23	1.3	87	
		S-7, contains slag.		12.0	S-8	4-6-7	17	1.5	100	
				13.5	S-9	4-5-6	15	1.3	87	
585				15.0	S-10	4-6-4	13	1.0	67	
				16.5	S-11	6-6-7	17	1.5	100	
		S-11, clayey.		18.0	S-12	8-8-8	21	1.5	100	
		18.0'/El. 580.7								
580		**GRAVEL** and **CLAY**, medium dense to dense, moist, heterogeneous, poorly graded, rounded to flat, gray to olive, fill. *S-13, contains wood.*	a-2-6 / gc	19.5	S-13	4-3-6	12	1.5	100	
				21.0	S-14	4-8-8	21	1.5	100	
		24.0'/El. 574.7								
575		**SAND**, some Gravel, medium dense, wet to moist, homogeneous, poorly graded, sub-rounded, gray, alluvium.	a-1-b / sp	22.5	S-15	5-5-8	17	1.2	80	
				24.0	S-16	3-8-21	39	1.1	73	
				25.5	S-17	10-11-9	27	1.5	100	
		28.0'/El. 570.7		27.0	S-18	6-7-15	29	1.5	100	
570		**GRAVEL**, some Silt, little Sand, contains shale fragments, very dense, moist, homogeneous, poorly graded, flat. gray, residuum. *Refusal @ 29.5'.* *Boring dry prior to coring.* 29.5'/El. 569.2	a-2-4 / gm	28.4	S-19	32-22-50/.4'	96	1.4	100	
				28.5	S-20	50/.3"	>67	0.0	0	
				28.8	R-1		0%	0.5	100	
				29.5	R-2		0%	2.0	100	
				30.0						
565				32.0	R-3		17%	3.0	100	
				35.0						
560		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=39%).*			R-4		72%	4.8	96	
		40.0'/El. 558.7								

TOR 569.20

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/06/2020 8:30 AM	HAMMER: AUTOMATIC
RWB-2	STATION: 520+25.0 OFFSET: 66.0 FT. RT.	FINISH: 11/06/2020 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	602.4 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 587.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 586.8 ft. - 76.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40 / 20 40 60 80
605										
600		**GRAVEL**, some Silt, little Sand, medium dense, moist to damp, heterogeneous, poorly graded, angular, brown to black, fill.	a-2-4 / gm	1.5	S-1	2-2-9	15	0.7	47	
		6.0'/El. 596.4		3.0	S-2	10-9-10	25	1.0	67	
		S-4, contains brick fragments.		4.5	S-3	7-5-5	13	1.1	73	
				6.0	S-4	4-4-6	13	0.8	53	
				7.5	S-5	3-2-2 **2.50**	5	1.5	100	
595		**GRAVEL**, some Silt, some Sand, trace Clay, loose to medium dense, moist to damp, homogeneous, well graded, low plastic fines, brown, alluvium.	A-2-4 / SC	9.0	S-6	3-4-5 **1.00**	12	1.2	80	
				10.5	S-7	3-5-3 **2.00**	11	1.5	100	
				12.0	S-8	3-4-3 **1.50**	9	1.3	87	
				13.5	S-9	2-2-2 **1.75**	5	1.5	100	
				15.0	S-10	4-3-4 **1.50**	9	1.5	100	
				16.5	S-11	6-4-6 **1.50**	13	1.5	100	
				18.0	S-12	4-3-3 **1.00**	8	1.5	100	
		RWB-2A Shelby Tube 17.0 ft to 19.0 ft; Classification Clayey Sand with Gravel (SC)/A-2-4(0).		19.5	S-13	WOH-2-3 **1.00**	7	1.5	100	
		21.0'/El. 581.4								
580		**GRAVEL**, little Sand, little Silt, contains shale fragments, dense to very dense, damp, residuum.	a-2-4 / gm	21.0	S-14	4-3-5	11	0.6	40	
				22.5	S-15	2-9-25	45	1.5	100	
				24.0	S-16	25-19-27	61	1.5	100	
				25.5	S-17	20-25-36	81	1.5	100	
		28.0'/El. 574.4		27.0	S-18	25-19-19	51	1.2	80	
		Boring dry prior to coring.		28.0	S-19	9-48-50/.0'	131	1.0	100	
575		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=32%).*		30.0	R-1		0%	1.9	95	
				33.0	R-2		17%	3.0	100	
					R-3		56%	4.8	96	
		38.0'/El. 564.4								

BOW 591.50
BORS 576.50
TOR 574.40

All PID readings = 0.0 ppm.
No visual signs of contamination or odors.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIVER ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 2 OF 8)

SHEET 28 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_srb_WallB.dgn
7/29/2022

PENNDOT STRUCTURE BORINGS LOG - PENNDOT_GINT_VERSION_v2.3.9.2-2015.GDT - 2/10/22 12:12 - I:\PROJECTS\2019\19095\0999 ERIE CO S&B\GPJ
PENNDOT STRUCTURE BORINGS LOG - PENNDOT_GINT_VERSION_v2.3.9.2-2015.GDT - 2/10/22 09:09 - I:\PROJECTS\2019\19095\0999 ERIE CO S&B\GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/13/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-3	STATION: 522+58.0 OFFSET: 17.0 FT. RT.	FINISH: 10/14/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	606.8 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 572.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605		**REINFORCED CONCRETE**. 1.4'/El. 605.4		1.5							20 40 60 80 / 10 20 30 40
		GRAVEL, SUBBASE. 1.5'/El. 605.3		3.0	S-1	10-23-14	49	1.5	100		
		GRAVEL and **SAND**, little Silt, loose to very dense, damp, heterogeneous, well graded, angular to rounded, brown, fill.		4.5	S-2	18-22-15	49	1.0	67		
		S-2, PID=8.0 ppm.		6.0	S-3	31-14-15	39	1.2	80		
		S-3, PID=6.1 ppm.		7.5	S-4	12-16-17	44	1.0	67		
		S-5, PID=1.5 ppm.		9.0	S-5	14-15-16	41	0.5	33		
			a-1-a / gw	10.5	S-6	16-17-17	45	1.1	73		
595		*S-7, PID=5.8 ppm.*		12.0	S-7	13-14-11	33	1.3	87		
		S-8, PID=1.5 ppm.		13.5	S-8	8-7-7	19	1.0	67		
		S-9, PID=2.1 ppm.		15.0	S-9	8-6-5	15	1.4	93		
590				16.5	S-10	3-2-1	4	0.8	53		
		19.5'/El. 587.3		18.0	S-11	24-11-13	32	0.9	60		
		Boring dry, 10-14-20, 0900.		19.5	S-12	12-34-22	75	0.7	47		
585		**GRAVEL**, some Silt, little Sand, medium dense to very dense, moist to damp, homogeneous, poorly graded, rounded to flat, gray, reworked residual fill.		21.0	S-13	21-43-48	121	1.3	87		
BOW 585.50		*S-15, contains piece of slag.*		22.5	S-14	18-16-16	43	1.5	100		
		S-15, PID=3.9 ppm.		24.0	S-15	13-13-10	31	1.5	100		
			a-2-4 / gm	25.5	S-16	9-8-6	19	1.2	80		
		27.0'/El. 579.8		27.0	S-17	4-5-4	12	1.5	100		
580		*S-17, brick fragments.*		27.8	S-18	47-50/.3'	>67	0.8	100		
		GRAVEL, some Silt, little Sand, very dense, damp, homogeneous, poorly graded, flat, gray, residuum. 29.2'/El. 577.6	a-2-4 / gm	28.5	S-19	15-50/.2'	>67	0.7	100		
TOR 577.60		*Boring dry prior to coring.*		29.2	R-1		0%	1.6	80		
575		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=60%).*		31.2	R-2		83%	3.0	100		
BORS 574.50				34.2	R-3		70%	4.9	98		
570		39.2'/El. 567.6									

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/16/2020 12:00 PM	HAMMER: AUTOMATIC
RWB-4	STATION: 523+05.0 OFFSET: 48.0 FT. RT.	FINISH: 11/16/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 550 ATV	"NO RECORD"	0 FT. 5 FT.	607.9 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME: NR - NR [1]
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605		**SAND**, some Gravel, little Silt, contains brick fragments, medium dense, damp, heterogeneous, poorly graded, angular to sub-angular, dark brown to gray, fill.	a-1-b / sp	1.5	S-1	1-2-9		15	1.1	73	20 40 60 80 / 10 20 30 40
		S-3, wood, brick and concrete fragments. 6.0'/El. 601.9		3.0	S-2	9-10-11		28	1.0	67	
		SILT, some Gravel, trace Gravel, very soft to soft, damp to wet, homogeneous, low plastic fines, tan, fill.		4.5	S-3	7-13-8		28	1.5	100	
				6.0	S-4	6-6-6		16	0.5	33	
			a-4 / ml	7.5	S-5	WOH-WOH-WOH		0	0.5	33	
		12.0'/El. 595.9		9.0	S-6	3-1-2		4	1.5	100	
595	VOID	**VOID**, *likely sewer pipe.* *Rods fell from 12.0 to approximately 14.5'; where the rods stopped falling due to the hammer resting on the auger stickup.* 14.5'/El. 593.4		10.5	S-7	WOH-WOH-WOH		0	0.5	33	
BOW 588.00 NTS				11.1	S-8	1-50/.1'		>67	0.6	100	
BORS 573.50 NTS				12.0							

[1] 0-hr. Water: No water level readings or grouting. City of Erie fixed sewer and backfilled

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SLIPKER ENGINEER No. PE091780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 3 OF 8)

SHEET 29 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RetWallB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT <GINT VERSION> 4.2.3 6-21-2016.GDT - 1/19/22 14:00 - \PROJECTS\2019\19095\95S - ERIE CO SAS.GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/16/2020 12:00 PM	HAMMER: AUTOMATIC
RWB-4	STATION: 523+05.0 OFFSET: 48.0 FT. RT.	FINISH: 11/16/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 550 ATV	"NO RECORD"	0 FT. 5 FT.	607.9 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:NR - NR [1]
▼ 24 HR. READING - ELAPSED TIME:NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605		**SAND**, some Gravel, little Silt, contains brick fragments, medium dense, damp, heterogeneous, poorly graded, angular to sub-angular, dark brown to gray, fill.	a-1-b / sp	1.5	S-1	1-2-9	15	1.1	73	
				3.0	S-2	9-10-11	28	1.0	67	
				4.5	S-3	7-13-8	28	1.5	100	
		S-3, wood, brick and concrete fragments.								
		6.0'/El. 601.9		6.0	S-4	6-6-6	16	0.5	33	
600		**SILT**, some Gravel, trace Gravel, very soft to soft, damp to wet, homogeneous, low plastic fines, tan, fill.	a-4 / ml	7.5	S-5	WOH-WOH-WOH	0	0.5	33	
				9.0	S-6	3-1-2	4	1.5	100	
		12.0'/El. 595.9		10.5	S-7	WOH-WOH-WOH	0	0.5	33	
595	VOID	**VOID**, *likely sewer pipe.* *Rods fell from 12.0 to approximately 14.5'; where the rods stopped falling due to the hammer resting on the auger stickup.*		11.1	S-8	1-50/.1"	>67	0.6	100	
		14.5'/El. 593.4		12.0						

BOW 588.00 NTS
BORS 573.50 NTS

[1] 0-hr. Water: No water level readings or grouting. City of Erie fixed sewer and backfilled

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/03/2020 11:00 AM	HAMMER: AUTOMATIC
SSB-4	STATION: 109+48.0 OFFSET: 113.0 FT. RT.	FINISH: 11/03/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	578.3 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 574.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 574.5 ft. - 21.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605										
600										
595										
590										
585										
580										
		SAND, little Gravel, little Silt, medium dense, damp, heterogeneous, poorly graded, angular to sub-angular, brown, fill.	a-1-b / sp	1.5	S-1	3-4-4	11	1.0	67	
		2.5'/El. 575.8		2.8	S-2	5-7-50/.3'	76	1.3	100	
		GRAVEL, some Sand, very dense, damp, homogeneous, poorly graded, angular to flat, gray, residuum.	a-1-a / gp	3.0	S-3	50/.1'	>67	0.1	100	
		Boring dry prior to coring.		3.1	R-1		0%	0.2	8	
		3.1'/El. 575.2		5.5	R-2		15%	2.0	100	
		SHALE interbedded with SANDSTONE, gray to dark gray, soft to medium hard, slightly weathered, laminated to narrow bedding with flat to shallow dip, *no apparent jointing, (RQD=65%).*		7.5	R-3		67%	2.8	93	
				10.5	R-4		78%	5.0	100	
				15.5	R-5		49%	4.9	98	
				20.5	R-6		88%	5.0	100	
570										
565										
560										
555		25.5'/El. 552.8								

BOW 575.50
TOR 575.20
BORS 569.50

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MARK A. SIVER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 4 OF 8)

SHEET 30 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_srb_Wall8.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT .GINT - VERSION 1.2.3 9.2.1-2016.GDT - 1/19/22 14:03 - \\PROJECTS\2019\19095\999 - ERIE CO\S&S\GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/28/2020 10:30 AM	HAMMER: AUTOMATIC
RPW-2	STATION: 521+03.0 OFFSET: 23.0 FT. LT.	FINISH: 10/28/2020 1:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. [redacted] 5 FT.	584.1 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 574.6 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 575.7 ft. - 19.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 20 40 60 80 / 10 20 30 40
605										
600										
595										
590		BOW 589.50 NTS								
585		**SAND**, little Silt, little Gravel, loose to medium dense, damp, homogeneous, poorly graded, fill.		1.5	S-1	4-2-2	5	1.0	67	
				3.0	S-2	3-4-5	12	1.0	67	
				4.5	S-3	5-4-4	11	0.2	13	
580		*PID=0.0 ppm for all samples.*		6.0	S-4	5-4-3	9	0.8	53	
		Bag sample, B-1, collected from, 0.0-6.0'.	a-1-b / sp	7.5	S-5	3-5-9	19	0.8	53	
				9.0	S-6	7-4-3	9	0.2	13	
		9.0'/El. 575.1		10.5	S-7	2-1-1 **2.50**	3	1.2	80	
		BORS 576.50		12.0	S-8	5-3-7 **2.50**	13	1.3	87	
575		**SILT**, soft to very stiff, moist, homogeneous, low plastic fines, gray to dark gray, alluvium.	a-4 / ml	13.5	S-9	1-2-7	12	1.0	67	
		S-8, wood fragments.		14.9	S-10	7-40-50/.4'	120	1.4	100	
		12.0'/El. 572.1	a-1-b / sp							
		SAND, little Silt, trace Gravel, medium dense, moist, homogeneous, poorly graded, alluvium.	a-1-a / gw		R-1		0%	1.5	75	
570		13.5'/El. 570.6		16.9						
		TOR 569.20			R-2		20%	2.5	83	
		GRAVEL, some Sand, very dense, damp, homogeneous, well graded, flat to angular, gray, residuum.		19.9						
565		14.9'/El. 569.2			R-3		38%	5.0	100	
		SHALE interbedded with SANDSTONE, gray to dark gray, soft to medium hard, slightly weathered to fresh, laminated to narrow bedding with flat dip, *no apparent jointing, (RQD=25%).*								
		Fine grained sandstone, 21.0-22.0'.								
560		24.9'/El. 559.2								

RPW-1 LOCATED 18FT IN FRONT OF WALL B AND RPW-2 LOCATED 57FT IN FRONT OF WALL B. PROVIDED FOR INFORMATION PURPOSES ON ROCK TYPES.

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/13/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-1	STATION: 520+91.6 OFFSET: 15.8 FT. RT.	FINISH: 10/15/2020 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	604.1 FT.

DRILLING INSPECTOR: JAKE DIDION
DRILLER & DRILLING COMPANY: C. PRITCHETT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 583.3 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 20 40 60 80 / 10 20 30 40
605										
600										
595										
590		BOW 589.50								
585		**CONCRETE.**		1.0	S-1	7-15-14	39	0.8	53	
		1.0'/El. 603.1		2.5	S-2	12-11-19	40	0.5	33	
		GRAVEL and **SAND**, trace Clay, medium dense to very dense, moist to dry, heterogeneous, well graded, sub-angular to angular, brown to light brown, fill.		4.0	S-3	13-14-22	48	1.1	73	
		S-1, PID=0.1 ppm.		5.5	S-4	24-23-20	57	1.0	67	
		S-2, PID=17.4 ppm.		7.0	S-5	11-14-18	43	0.6	40	
		S-3, PID=13.3 ppm.		8.5	S-6	15-16-20	48	1.0	67	
		S-4, PID=16.3 ppm.		10.0	S-7	16-16-20	48	0.6	40	
		S-5, more clay.		11.5	S-8	10-15-13	37	0.6	40	
		S-5, PID=4.2 ppm.		13.0	S-9	9-10-8	24	0.2	13	
		S-6, PID=0.9 ppm.		14.5	S-10	7-8-9	23	1.0	67	
		S-7, PID=1.2 ppm.		16.0	S-11	10-15-17	43	1.3	87	
		S-8, PID=6.3 ppm.		17.5	S-12	8-11-11	29	0.5	33	
		S-9, PID=11.9 ppm.		19.0	S-13	16-22-15	49	1.3	87	
		S-9, low recovery due to layer of large gravel chunks.		20.5	S-14	12-15-10	33	0.8	53	
		S-10, PID=2.1 ppm.	a-1-a / gw	22.0	S-15	6-7-11 **3.00**	24	1.2	80	
		S-11 through S-21, PID=0.0 ppm.		23.5	S-16	16-34-25	79	1.2	80	
		S-12, more clay.		25.0	S-17	33-24-15	52	1.0	67	
		S-15, more clay.		26.5	S-18	16-23-16	52	0.8	53	
		Clay layer, 22.0-22.3'.		28.0	S-19	9-15-10	33	0.2	13	
580				29.5	S-20	14-7-4	15	0.5	33	
		S-19, low recovery due to large gravel blocking spoon opening.		31.0	S-21	5-4-16	27	0.7	47	
		S-20, more clay, contains broken up shale fragments (no structure to shale).		32.5	S-22	42-50/.4'	>67	0.9	100	
		S-21, more sand (fine sand with silt, "foundry sand").		33.4	S-23	50/.1'	>67	0.1	100	
		Water level @ 32.0' prior to coring.		34.0	R-1		0%	1.8	95	
		32.5'/El. 571.6	a-2-6 / gc	34.1	S-24	50/.2'	>67	0.2	100	
		BORS 576.50		36.0	R-2		15%	2.0	59	
575		**GRAVEL**, little Clay, contains shale fragments, very dense, moist to damp, laminated, well graded, angular to flat, gray to light gray, residuum.		36.2						
		34.1'/El. 570.0	a-2-6 / gc	39.6	R-3		38%	5.0	100	
		TOR 570.00								
		SHALE, gray, soft to medium hard, weathered, laminated bedding with flat dip, *no apparent jointing, (RQD=0%).*								
		36.0'/El. 568.1								
570		*Shale, slightly sandy, 34.3-34.9'.*								
		GRAVEL and **CLAY**, contains shale fragments, very dense, moist, laminated, well graded, angular to flat, gray, residuum.								
		36.2'/El. 567.9								
		SHALE, gray, soft to medium hard, weathered, laminated bedding with flat dip, *no apparent jointing, (RQD=29%).*								
		Core barrel continuously plugging off when attempting to core.								
		Driller decided to take spoon sample to advance past highly weathered shale zone.								
		Sandstone, 42.5-43.2'.								
565		44.6'/El. 559.5								
560										

[1] 24-hr. Water: Boring grouted upon completion

RPW-1 LOCATED 18FT IN FRONT OF WALL B AND RPW-2 LOCATED 57FT IN FRONT OF WALL B. PROVIDED FOR INFORMATION PURPOSES ON ROCK TYPES.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK SLIVER — ENGINEER — No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 5 OF 8)

SHEET 31 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_srb_WallB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT -GINT_VERSION_1.2.3.9-21-2016.GDT - 1/19/22 14:04 - L:\PROJECTS\2019\19095\9000_ERIE CO SR 4034.GPJ

SUBSTRUCTURE UNIT:

ABUTMENT 1 / WING B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 9:00 AM	HAMMER: AUTOMATIC
RPW-4	STATION: 522+50.0 OFFSET: 13.0 FT. LT.	FINISH: 10/29/2020 3:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. 5 FT.	606.2 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 568.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605		**REINFORCED CONCRETE.** 1.4'/El. 604.8		1.5						
		GRAVEL and **SAND**, **SUBBASE.** 1.5'/El. 604.7		3.0	S-1	5-6-4	13	0.9	60	
		GRAVEL and **SAND**, loose to dense, damp, homogeneous, well graded, rounded to sub-angular, brown, fill.		4.5	S-2	4-3-2	7	1.1	73	
				6.0	S-3	4-3-4	9	0.9	60	
				7.5	S-4	5-4-5	12	1.0	67	
				9.0	S-5	7-6-5	15	0.7	47	
600				10.5	S-6	7-10-10	27	0.2	13	
				12.0	S-7	3-7-7	19	0.4	27	
				13.5	S-8	6-6-5	15	0.7	47	
				15.0	S-9	9-6-6	16	1.1	73	
			a-1-a / gw	16.5	S-10	5-6-5	15	0.6	40	
595				18.0	S-11	13-15-15	40	1.2	80	
				19.5	S-12	12-8-8	21	1.5	100	
				21.0	S-13	8-11-13	32	1.0	67	
				22.5	S-14	12-17-13	40	1.5	100	
				24.0	S-15	14-15-18	44	1.3	87	
590				25.5	S-16	13-13-9	29	1.0	67	
				27.0	S-17	7-9-7	21	1.1	73	
				28.5	S-18	7-8-12	27	0.9	60	
BFE 584.90				28.5	S-19	50/.0'	>67	0.0	0	
BPCE 582.90				28.5	R-1		0%	1.0	100	
BOE 580.90				29.5	R-2		0%	2.0	100	
585		28.5'/El. 577.7 *Boring dry prior to coring.*		31.5	R-3		0%	1.3	59	
		REINFORCED CONCRETE FOOTING. *Drilling became soft at end of footing, driller stopped rotation to switch back to SPT.* 32.8'/El. 573.4		33.7	S-20	8-11-20	41	1.5	100	
		GRAVEL, some Sand, little Silt, dense, wet, homogeneous, poorly graded, rounded, gray, alluvium. 35.8'/El. 570.4	a-1-a / gp	35.2	S-21	35-50/.1'	>67	0.6	100	
PDE 572.90				35.8	R-4		0%	1.7	85	
TOR 570.40		**SHALE interbedded with SANDSTONE**, gray, fine grained, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=33%).*		37.8	R-5		20%	2.7	90	
EPTE 568.90				40.8	R-6		54%	4.9	98	
570		45.8'/El. 560.4								
565										

Alll PID readings = 0.0 ppm.
No visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:

RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/13/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-3	STATION: 522+58.0 OFFSET: 17.0 FT. RT.	FINISH: 10/14/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	606.8 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PRITCHETT 7NT

▽ 0 HR. READING - ELAPSED TIME: El. 572.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
605		**REINFORCED CONCRETE.** 1.4'/El. 605.4		1.5						
		GRAVEL, SUBBASE. 1.5'/El. 605.3		3.0	S-1	10-23-14	49	1.5	100	
		GRAVEL and **SAND**, little Silt, loose to very dense, damp, heterogeneous, well graded, angular to rounded, brown, fill.		4.5	S-2	18-22-15	49	1.0	67	
		S-2, PID=8.0 ppm.		6.0	S-3	31-14-15	39	1.2	80	
		S-3, PID=6.1 ppm.		7.5	S-4	12-16-17	44	1.0	67	
		S-5, PID=1.5 ppm.		9.0	S-5	14-15-16	41	0.5	33	
600				10.5	S-6	16-17-17	45	1.1	73	
		S-7, PID=5.8 ppm.		12.0	S-7	13-14-11	33	1.3	87	
		S-8, PID=1.5 ppm.		13.5	S-8	8-7-7	19	1.0	67	
		S-9, PID=2.1 ppm.		15.0	S-9	8-6-5	15	1.4	93	
			a-1-a / gw	16.5	S-10	3-2-1	4	0.8	53	
595		19.5'/El. 587.3 *Boring dry, 10-14-20, 0900.*		18.0	S-11	24-11-13	32	0.9	60	
		GRAVEL, some Silt, little Sand, medium dense to very dense, moist to damp, homogeneous, poorly graded, rounded to flat, gray, reworked residual fill.		19.5	S-12	12-34-22	75	0.7	47	
		S-15, contains piece of slag.		21.0	S-13	21-43-48	121	1.3	87	
		S-15, PID=3.9 ppm.		22.5	S-14	18-16-16	43	1.5	100	
				24.0	S-15	13-13-10	31	1.5	100	
590				25.5	S-16	9-8-6	19	1.2	80	
		27.0'/El. 579.8 *S-17, brick fragments.*	a-2-4 / gm	27.0	S-17	4-5-4	12	1.5	100	
		GRAVEL, some Silt, little Sand, very dense, damp, homogeneous, poorly graded, flat, gray, residuum. 29.2'/El. 577.6 *Boring dry prior to coring.*	a-2-4 / gm	27.8	S-18	47-50/.3'	>67	0.8	100	
BOW 585.50				28.5	S-19	15-50/.2'	>67	0.7	100	
585				29.2	R-1		0%	1.6	80	
TOR 577.60				31.2	R-2		83%	3.0	100	
580				34.2	R-3		70%	4.9	98	
BORS 574.50		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=60%).*								
575		39.2'/El. 567.6								
570										

[1] 24-hr. Water: Boring grouted upon completion

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIVER ENGINEER No. PE091700

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 6 OF 8)

SHEET 32 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_srb_WallB.dgn
7/29/2022

#ENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_223.9.21-2015.GDT - 1/18/22 14:00 - I:\PROJECTS\2019\19095\19095 (ERIE CR 4034).GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL B

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/28/2020 9:30 AM	HAMMER: AUTOMATIC
RPW-5	STATION: 523+57.0 OFFSET: 15.0 FT. RT.	FINISH: 10/28/2020 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. 5 FT.	607.1 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 585.5 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------ PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
		REINFORCED CONCRETE. 1.5'/El. 605.6		1.5						
605		**GRAVEL** and **SAND**, medium dense to dense, damp, homogeneous, well graded, rounded to sub-angular, brown, fill.	a-1-a / gw	3.0	S-1	10-16-13	39	1.5	100	
				4.5	S-2	19-19-14	44	1.3	87	
				6.0	S-3	11-14-15	39	1.5	100	
				7.5	S-4	24-20-18	51	1.0	67	
600				9.0	S-5	11-13-14	36	1.5	100	
				10.5	S-6	14-11-9	27	1.2	80	
		13.5'/El. 593.6		12.0	S-7	11-11-9	27	1.5	100	
		GRAVEL, some Silt, little Sand, contains shale fragments, medium dense, damp, homogeneous, poorly graded, flat to rounded, gray, reworked glacial till fill.	a-2-4 / gm	13.5	S-8	7-4-4	11	0.5	33	
595				15.0	S-9	6-9-8	23	1.3	87	
		18.0'/El. 589.1		16.5	S-10	4-5-5	13	1.5	100	
		GRAVEL, some Silt, little Sand, contains brick fragments, loose to medium dense, moist to damp, heterogeneous, poorly graded, rounded to angular, brown, fill. *S-12, more silt.* *S-14, contains a brick fragments.*	a-2-4 / gm	18.0	S-11	7-10-10	27	1.1	73	
				19.5	S-12	7-8-10	24	1.5	100	
590				21.0	S-13	5-4-3	9	0.8	53	
				22.5	S-14	2-3-5	11	1.0	67	
		24.0'/El. 583.1		24.0	S-15	3-2-3	7	0.8	53	
585		*Boring dry prior to coring.*		24.0	S-16	50/.0'	>67	0.0	0	
		BOW 585.00								
		TOR 583.10		24.0	R-1		60%	2.0	100	
		BFE 581.38		26.0	R-2		47%	3.0	100	
580		**SHALE**, gray, fine grained, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=42%).*		29.0	R-3		32%	5.0	100	
		34.0'/El. 573.1								
575										

All PID readings = 0.0 ppm.
No visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
PIER 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/29/2020 9:00 AM	HAMMER: AUTOMATIC
RPW-6	STATION: 524+57.0 OFFSET: 0.0 FT. CL	FINISH: 10/29/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	580.4 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 580.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 578.0 ft. - 21.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------ PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
605										
600										
595										
590										
585										
580		**SAND**, some Gravel, loose, dry, heterogeneous, poorly graded, brown to gray, fill. 1.5'/El. 578.9	a-1-b / sp	1.5	S-1	3-1-3	5	0.4	27	
			a-1-a / gw	1.9	S-2	50/.4'	>67	0.4	100	
		GRAVEL, some Sand, very dense, dry, homogeneous, well graded, flat to angular, residuum. 1.9'/El. 578.5		4.0	R-1		0%	1.5	75	
		S-2, contains weathered shale fragments. *Boring dry prior to coring.*		6.0	R-2		30%	5.0	100	
		UNSAMPLED. *Driller augered to 4.0' in order to seat augers to hold casing and leave room for casing clamp on the rig to clear the seated aguer.* 4.0'/El. 576.4		11.0	R-3		80%	5.0	100	
		SHALE, gray to dark gray, soft to medium hard, fresh, laminated to narrow bedding with flat dip, *no apparent jointing, (RQD=56%).*		16.0	R-4		80%	5.0	100	
575										
570										
565										
560		21.0'/El. 559.4								

TOR 578.50
BFE 577.38
BOW 576.50
EPTE 570.50

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE091780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 7 OF 8)

SHEET 33 OF 34

PLT: RJS | CKD: KDA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_WallB.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT <GNT VERSION: 4.2.3> 6-21-2016.GDT - I:\PROJECTS\2019\19095\095_ERIE CO SR0.GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
RWB-2A	520+25.0 66 ft. RT.	ST-1	17.0 to 19.0	21.1	46.1	22.6			31.3	23.2	8.1	A-2-4	SC		32	23	9					

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
RPW-3	522+58.0 17 ft. RT.	R-1	29.2 to 34.2	POINT LOAD TEST	5246.0 PSI / 377.7 TSF	NO		80	0	SHALE	NORTHEAST SHALE
RWB-3	521+66.0 47 ft. RT.	R-2	27.8 to 30.8	UNCONFINED COMPRESSIVE TEST	12439.0 PSI / 895.6 TSF	NO		100	63	SHALE	NORTHEAST SHALE

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MARK A. SIVER No. PE091790

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SECTION A01
STA. 520+25.00 TO STA. 526+98.50
RETAINING WALL B

STRUCTURE BORINGS (SHEET 8 OF 8)

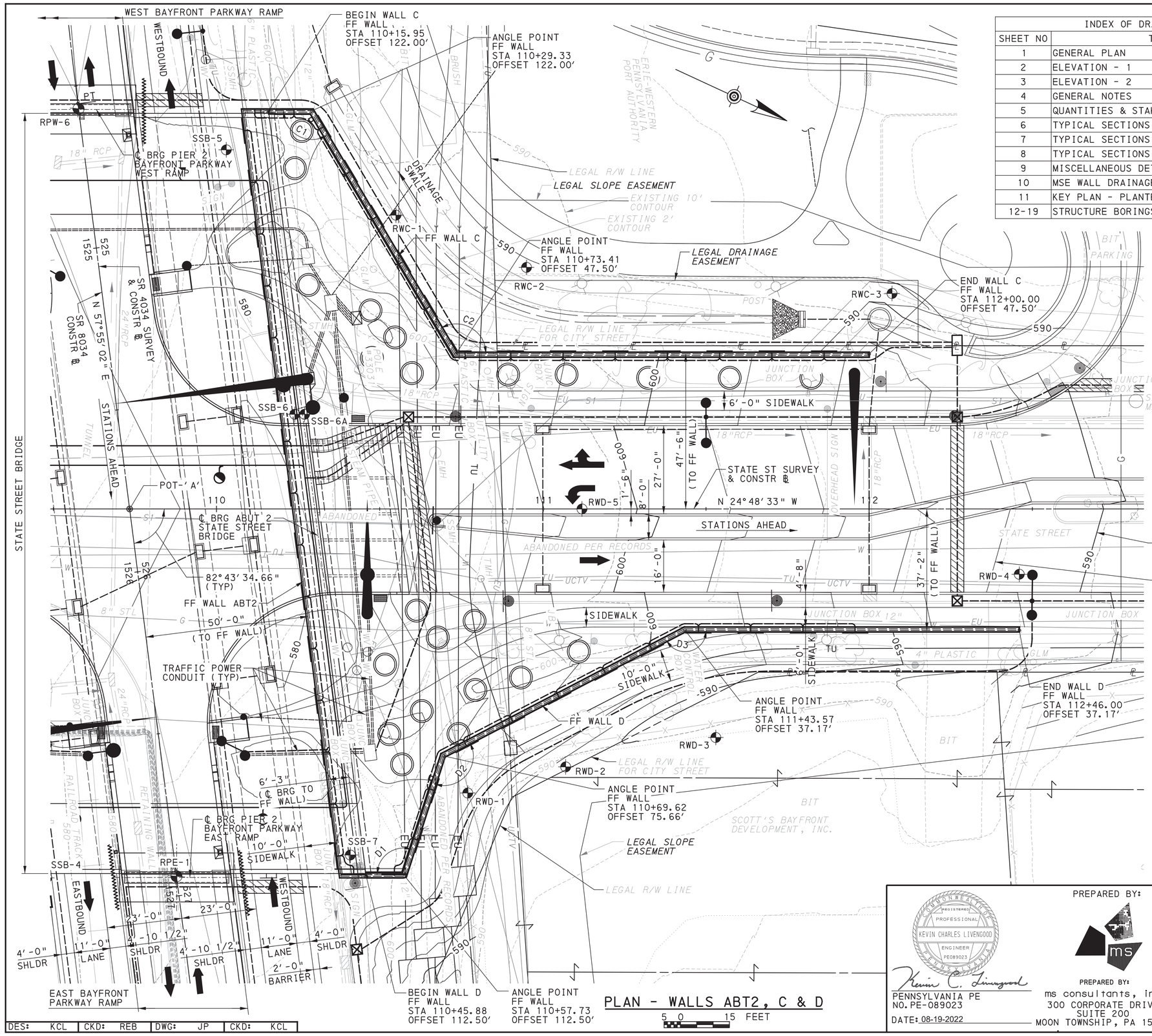
SHEET 34 OF 34

M:_2019\095\exhibits\structure\19095_srb_Wall8.dgn
7/29/2022

PLT: RJS | CKD: KDA | QA/QC: MAS

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTgp001.dgn



PLAN - WALLS ABT2, C & D

5 0 15 FEET

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN
2	ELEVATION - 1
3	ELEVATION - 2
4	GENERAL NOTES
5	QUANTITIES & STAKE-OUT PLAN
6	TYPICAL SECTIONS - 1
7	TYPICAL SECTIONS - 2
8	TYPICAL SECTIONS - 3
9	MISCELLANEOUS DETAILS
10	MSE WALL DRAINAGE
11	KEY PLAN - PLANTER BOXES
12-19	STRUCTURE BORINGS

LEGENDS:

- STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- PEDESTRIAN PUSH BUTTON
- TRAFFIC POLE WITH MAST ARM
- TRAFFIC POLE WITH MAST ARM & LIGHTING LUMINAIRE
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- TRAFFIC POWER JUNCTION BOX
- TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM (APPROXIMATE LOCATION)
- LIGHTING POLES & POST LIGHTS
- SIGN STRUCTURES
- UNDERPASS LIGHT
- LED LINEAR LIGHT
- PLANTER BOX
- CONCRETE ENCASED CONDUIT
- LIGHTING JUNCTION BOX
- YARD DRAIN

POT 'A'
SR 4034 SURVEY & CONSTR ℄
POT STA 525+80.58 =
SR 8034 SURVEY & CONSTR ℄
POT STA 1525+80.58 =
STATE ST SURVEY & CONSTR ℄
POT STA 109+73.39

WALL ANGLE:
C1 = 120°36'31.29"
C2 = 120°36'31.29"
D1 = 107°52'59.73"
D2 = 135°22'41.22"
D3 = 152°30'18.51"

NOTES:

1. STRUCTURAL BORING INFORMATION FOR THE STATE STREET BRIDGE AND BAYFRONT PARKWAY RAMP STRUCTURES WILL BE PROVIDED WITHIN THE APPLICABLE PLAN SET.
2. MSE WALL DRAINAGE NOT SHOWN FOR CLARITY.

REFERENCES:

FOR ELEVATION VIEW, SEE SHEETS 2 & 3

FOR TYPICAL SECTIONS, SEE SHEETS 6 TO 8

FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE SHEET 2

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 2

FOR GENERAL NOTES, SEE SHEET 4

FOR MSE WALL DRAINAGE, SEE SHEET 10

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
GENERAL PLAN

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

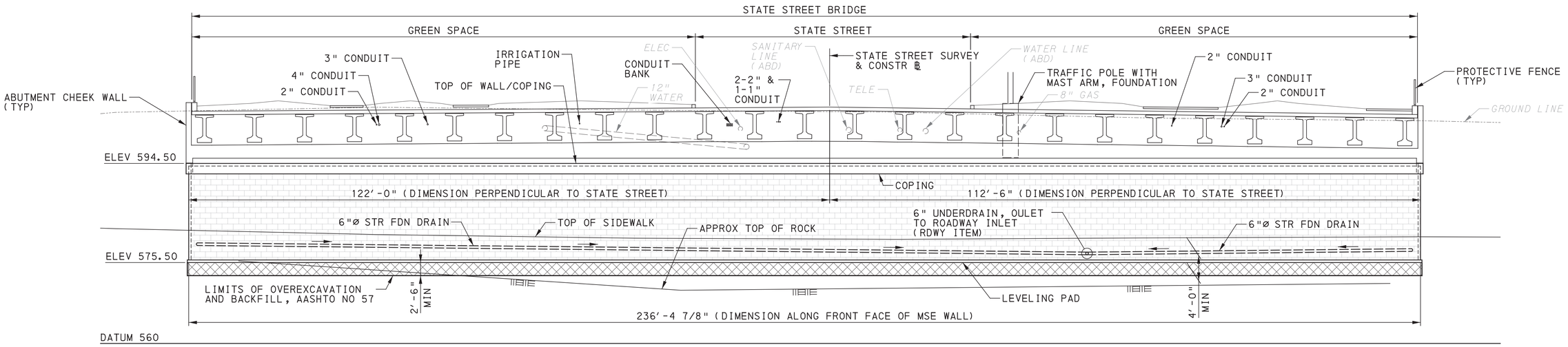
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

PENNSYLVANIA PE
NO. PE-089023
DATE: 08-19-2022

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED
Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 15:09:24 -04'00'
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 19
+ SUPPLEMENTAL DRAWINGS
S-41009D



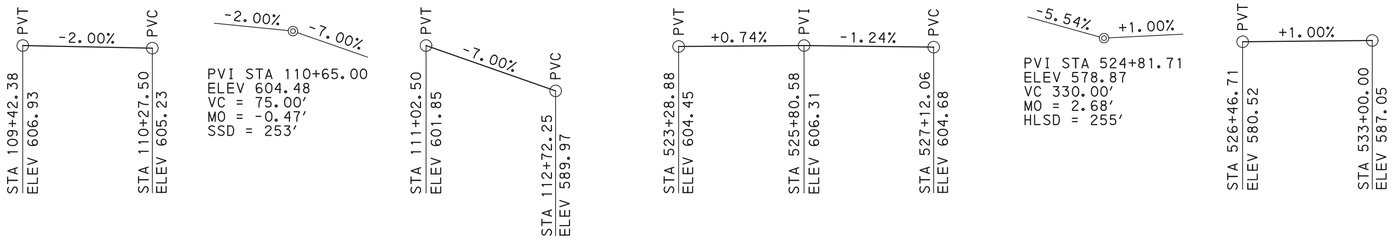
ELEVATION - WALL ABT2

(LOOKING NORTH)

5 0 5 10 FEET

EXISTING UTILITIES (TO BE REMOVED OR RELOCATED)

VERTICAL ALIGNMENT DATA



HORIZONTAL ALIGNMENT DATA

STATE STREET SURVEY & CONSTR ℄	SR 4034 SURVEY & CONSTR ℄	
TANGENT N 24°48′33" W	PI STA 522+08.36 Δ 22° 03′ 18" (LT) D 4° 24′ 27" T 253.34′ L 500.41′ R 1,300.00′ PC STA 519+55.02 PT STA 524+55.44 SUPERELEVATE = 2.4% (INSIDE LANES) SUPERELEVATE = 3.8% (OUTSIDE LANES)	TANGENT N 57°55′02" E

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	2/8/2019
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
BRIDGE DRAINAGE	BC-751M	1/31/2019
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1/31/2019
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	2/19/2021

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

REFERENCES:

FOR GENERAL PLAN, SEE SHEET 1

FOR TYPICAL SECTIONS, SEE SHEETS 6 TO 8

FOR GENERAL NOTES, SEE SHEET 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
ELEVATION - 1

RECOMMENDED AUGUST 22, 2022

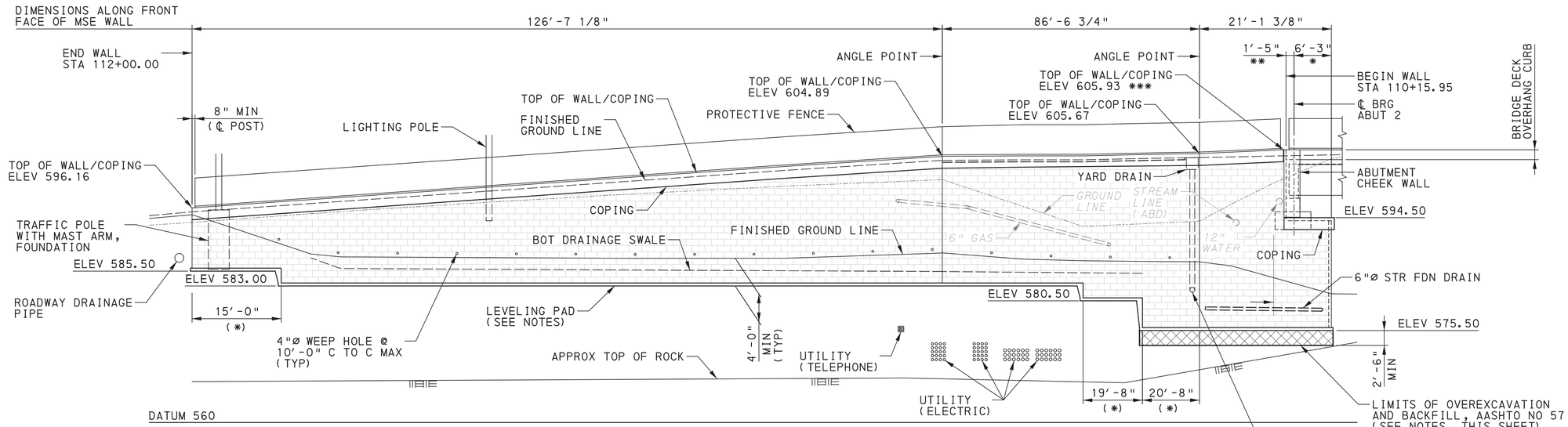
SHEET 2 OF 19

S-41009D

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mmconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTgp002.dgn



* - DIMENSION PERPENDICULAR TO ABUTMENT (℄ BRG TO FF MSE WALL)

** - DIMENSION PERPENDICULAR TO ABUTMENT (℄ BRG TO END BRIDGE DECK/CONC END DIAPHRAGM)

*** - TOP OF WALL/COPING TO MATCH TOP OF BRIDGE DECK OVERHANG CURB

(*) - DIMENSION ALONG FRONT FACE OF MSE WALL

ELEVATION - WALL C

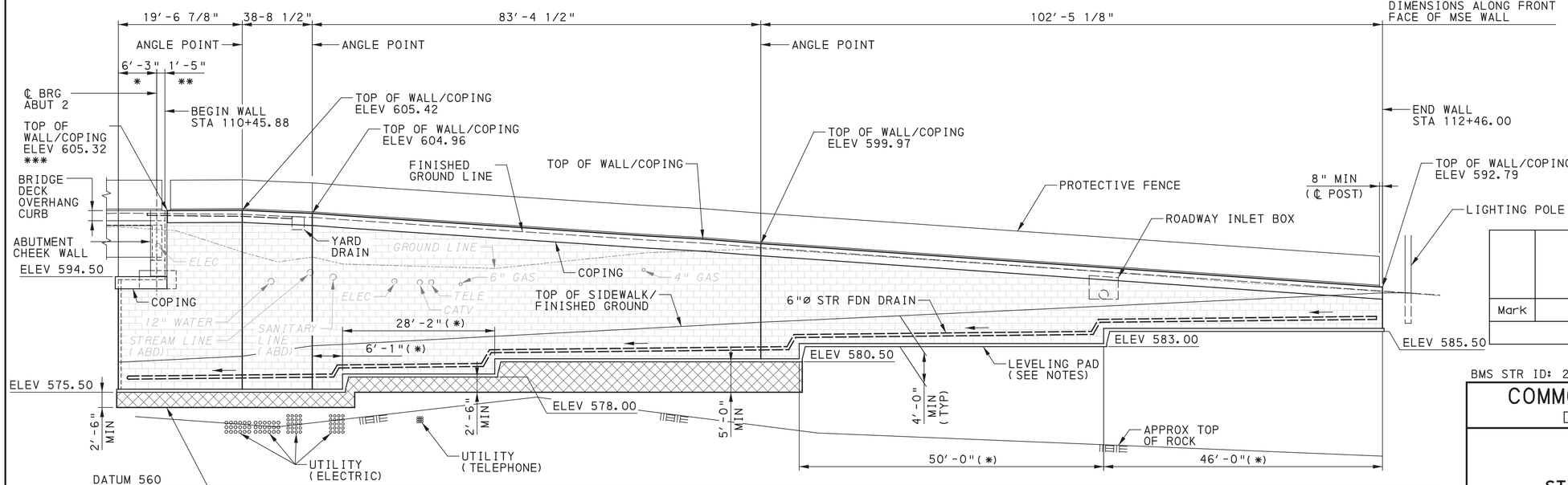
(LOOKING EAST)

5 0 5 10 FEET

EXISTING UTILITIES (TO BE REMOVED OR RELOCATED)

NOTES:

1. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEWS. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
2. STEPPED FOOTING SHOWN IS A POSSIBLE CONCEPT AND FOR BIDDING PURPOSES. MODIFICATIONS TO THE LOCATIONS AND HEIGHTS PER THE CONTRACTOR'S DESIGN AND REQUIREMENTS OF THE MANUFACTURER CAN BE MADE AS LONG AS THE MINIMUM REQUIREMENTS PROVIDED ARE MET.



* - DIMENSION PERPENDICULAR TO ABUTMENT (℄ BRG TO FF MSE WALL)

** - DIMENSION PERPENDICULAR TO ABUTMENT (℄ BRG TO END BRIDGE DECK/CONC END DIAPHRAGM)

*** - TOP OF WALL/COPING TO MATCH TOP OF BRIDGE DECK OVERHANG CURB

(*) - DIMENSION ALONG FRONT FACE OF MSE WALL

ELEVATION - WALL D

(LOOKING WEST)

5 0 5 10 FEET

EXISTING UTILITIES (TO BE REMOVED OR RELOCATED)

REFERENCES:

FOR GENERAL PLAN, SEE SHEET 1

FOR TYPICAL SECTIONS, SEE SHEET 6 TO 8

FOR GENERAL NOTES, SEE SHEET 4

FOR MSE WALL DRAINAGE PLAN, SEE SHEET 10

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
ELEVATION - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 19

S-41009D

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTgp003.dgn

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTgn001.dgn

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4 (DM-4), DECEMBER 2019

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

GENERAL:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/ D1.5: 2015 BRIDGE WELDING CODE (USE AASHTO/ AWS D1.1/ D1.1M: 2015 FOR WELDING NOT COVERED IN AASHTO/ AWS D1.5M/ D1.5: 2015), AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

PANELS ARE TO BE RECTANGULAR IN SHAPE AND SIZED APPROPRIATELY TO DISCRETLY ALIGN PANEL JOINTS WITH THE ARCHITECHTURAL SURFACE TREATMENT PATTERN.

UTILITIES:

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTIONS 105.06 AND 107.12.

CONCRETE:

PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AA CEMENT CONCRETE IN CONCRETE COPING.

USE CLASS A CEMENT CONCRETE, SULFATE RESISTANT, IN MSE RETAINING WALL FOOTING.

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

REINFORCEMENT:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/ A 615M, A 996/ A996 M OR A 706/ A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/ A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

ALL REINFORCEMENT BARS ARE TO BE EPOXY-COATED.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROTECTIVE/AESTHETIC COATINGS:

APPLY AESTHETIC COLOR COATING TO THE OUTSIDE FACE OF THE COPING, AND ON THE EXPOSED FACE OF THE PRECAST CONCRETE PANELS (EXTENDING 2'-0" BELOW FINISHED GROUND).

COLOR SHALL MATCH FEDERAL COLOR ID 36650. SUBMIT COLOR CHIP FOR APPROVAL.

FOUNDATIONS:

COMPLETE CONSTRUCTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

PLACE THE BOTTOM OF THE LEVELING PAD A MINIMUM OF 4.0 FEET BELOW THE GROUND SURFACE TO SATISFY FROST DEPTH REQUIREMENTS.

THE BOTTOM OF THE WALL EXCAVATION SHALL BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SUFFICIENT DEWATERING SO THE EXCAVATION IS DRY ENOUGH TO BE INSPECTED.

MANDATORY OVEREXCAVATION IS REQUIRED AT LOCATIONS AND DEPTHS GIVEN BELOW. THE BOTTOM OF THE OVEREXCAVATION SHALL BE INSPECTED AND CONFIRMED BY THE DISTRICT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.

ALL WALLS - BOTTOM OF LEVELING PAD ELEVATION = 575.5 FEET: 2.5 FEET

WALL D - BOTTOM OF LEVELING PAD ELEVATION = 578.0 FEET: 2.5 FEET

WALL D - BOTTOM OF LEVELING PAD ELEVATION = 580.5 FEET: 5.0 FEET

THE CONTRACTOR IS TO DEVELOP A SPECIFIC PLAN TO ACCOMMODATE PROPOSED ELECTRIC AND TELEPHONE UTILITIES BENEATH THE LEVELING PAD WHERE BOTTOM OF LEVELING PAD ELEVATION IS 578.0.

BACKFILL ANY OVEREXCAVATION WITH AASHTO NO. 57 IN ACCORDANCE WITH THE SPECIAL PROVISION, OVEREXCAVATION AND BACKFILLING UNDER FOUNDATIONS.

PROVIDE AASHTO NO. 57 COARSE AGGREGATE AS SPECIFIED BACKFILL.

PROVIDE EMBANKMENT BACKFILL WITH A MINIMUM FRICTION ANGLE OF 30 DEGREES, BEHIND THE MECHANICALLY STABILIZED SOIL MASS. PROVIDE LAB TEST RESULTS FOR THE BACKFILL MATERIAL TO CONFIRM THE FRICTION ANGLE OF 30 DEGREES OR HIGHER.

PERFORM SPECIAL ROLLING, IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 208, AND THE SPECIAL PROVISION, SPECIAL ROLLING (MODIFIED), INCLUDED IN APPENDIX G, OVER THE BOTTOM OF THE EXCAVATION IN AREAS THAT DO NOT REQUIRE MANDATORY OVEREXCAVATION.

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION OR REMOVAL OF FOUNDATIONS FOR THE EXISTING RETAINING WALL.

PROVIDE A MINIMUM 18-FOOT STRAP LENGTH WHERE THE MSE WALL HEIGHT IS LESS THAN 23 FEET AND A MINIMUM 24-FOOT STRAP LENGTH WHERE THE MSE WALL HEIGHT IS BETWEEN 23 FEET AND 30 FEET.

CONSTRUCT THE MSE WALLS IN ACCORDANCE WITH PENNDOT STANDARD BC-799M AND THE ATTACHED STANDARD SPECIAL PROVISION.

IN ACCORDANCE WITH PENNDOT STANDARD BC-799M, THE UNIT WEIGHT OF THE SPECIFIED BACKFILL FOR THE MSE WALLS SHOULD BE BETWEEN 90 AND 120 PCF. THE UNIT WEIGHT OF THE MSE SHALL NOT EXCEED 120 PCF.

IN ACCORDANCE WITH PENNDOT STANDARD BC-799M, PROVIDE TYPE A, CLASS 4 GEOTEXTILE FABRIC BEHIND THE SPECIFIED BACKFILL TO PROVIDE ADEQUATE SEPARATION BETWEEN THE REINFORCED ZONE AND EMBANKMENT BACKFILL.

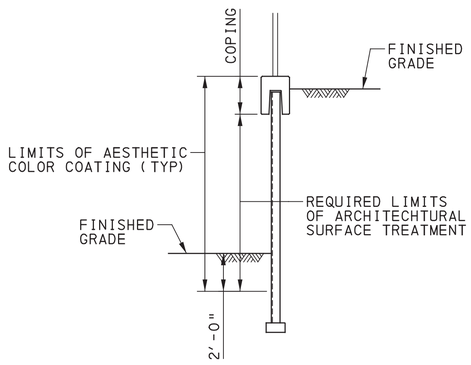
THE CONTRACTOR IS TO COORDINATE THE DRAINAGE SYSTEM WITH WALL MANUFACTURER.

THE CONTRACTOR AND WALL MANUFACTURER ARE TO DEVELOP A SPECIFIC PLAN TO ACCOMMODATE ALL EXISTING AND PROPOSED UTILITIES WITHIN THE REINFORCED ZONE THAT AFFECT THE PLACEMENT OF THE REINFORCING STRIPS.

ABUTMENT LOADING FOR MSE WALL DESIGN		
HORIZONTAL SERVICE LOADS	LATERAL EARTH PRESSURE, EH	3.46 K/FT
	EARTH SURCHARGE, ES	0.98 K/FT
	LL SURCHARGE, LS	1.48 K/FT
	WIND ON LIVE LOAD, WL	0.02 K/FT
	WIND ON SUPERSTRUCTURE, WS	0.11 K/FT
	THERMAL EXPANSION & CONTRACTION	0.53 K/FT

NOTES :

1. A 2-FOOT EARTH SURCHARGE WAS USED TO ACCOUNT FOR POTENTIAL FUTURE FILL.
2. A 3-FOOT EQUIVALENT HEIGHT OF SOIL FOR THE VEHICULAR LOAD WAS USED TO CALCULATE THE LIVE LOAD SURCHARGE.



COATING LIMITS

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
GENERAL NOTES

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 19

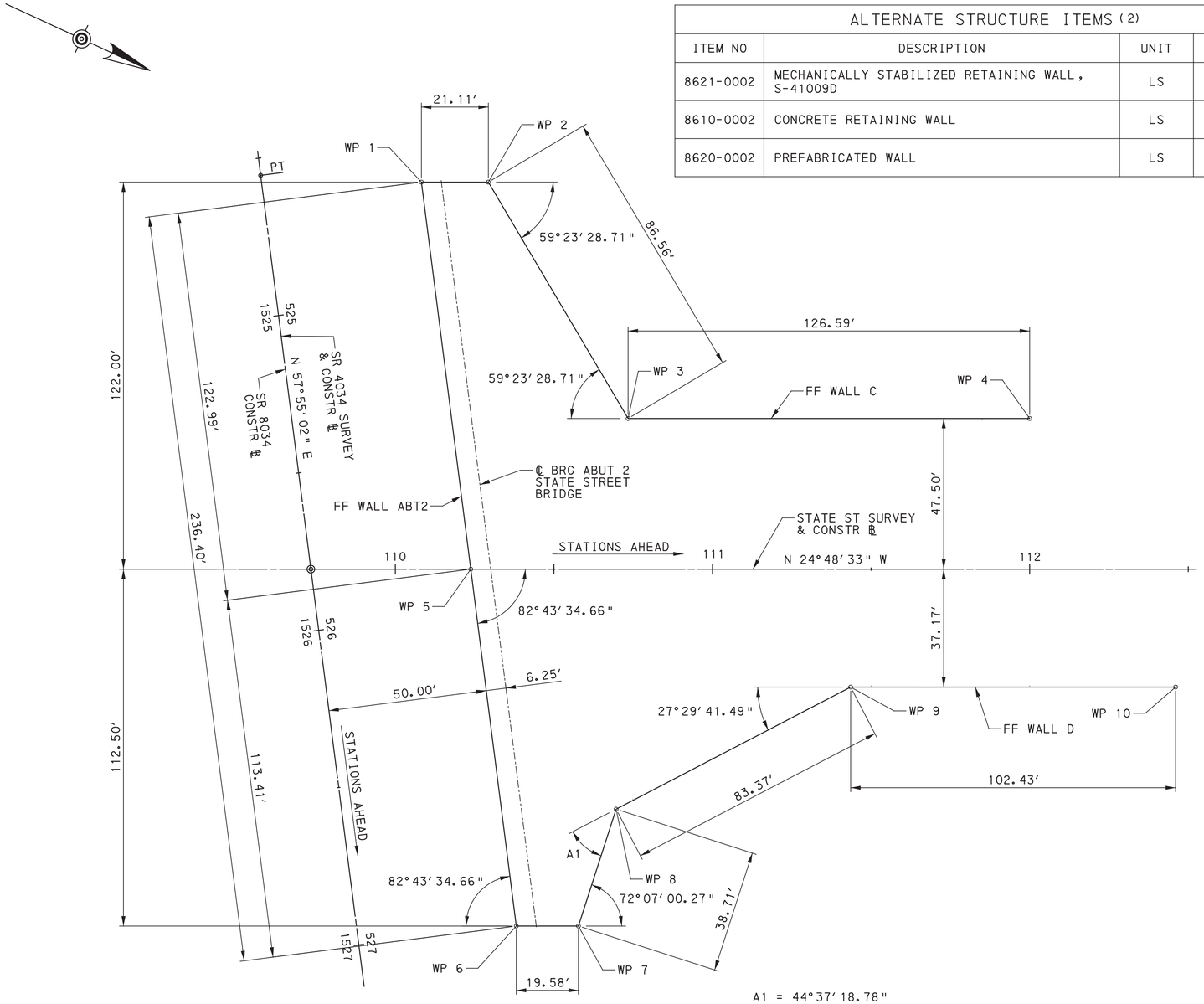
S-41009D

DES:	KCL	CKD:	REB	DWG:	JP	CKD:	KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTsp001.dgn

ALTERNATE STRUCTURE ITEMS (2)			
ITEM NO	DESCRIPTION	UNIT	TOTAL
8621-0002	MECHANICALLY STABILIZED RETAINING WALL, S-41009D	LS	LUMP SUM
8610-0002	CONCRETE RETAINING WALL	LS	LUMP SUM
8620-0002	PREFABRICATED WALL	LS	LUMP SUM



STAKE-OUT PLAN

10 0 10 20 FEET

APPROXIMATE QUANTITIES - MECHANICALLY STABILIZED RETAINING WALL			
ITEM NO	DESCRIPTION	UNIT	TOTAL
8621-0002	MECHANICALLY STABILIZED RETAINING WALL (2)(7)	LS	
(1)	CLASS 3 EXCAVATION (3)	CY	15300
(1)	GEOTEXTILE, CLASS 4, TYPE C	SY	1530
(1)	CLASS AA CEMENT CONCRETE	CY	50
(1)	CLASS A CEMENT CONCRETE, SULFATE RESISTANT	CY	15
(1)	NO 57 COARSE AGGREGATE (4)	CY	1145
(1)	SPECIFIED BACKFILL (5)	CY	9490
(1)	PRECAST CONCRETE FACING PANELS (5)(6)	SF	13300
(1)	AESTHETIC COLOR COATING (LIGHT GRAY) (2)	SY	1280
(1)	IMPERVIOUS MEMBRANE (5)	SY	1690
(1)	6" STRUCTURE FOUNDATION DRAIN	LF	490
(1)	YARD DRAIN (2)	EACH	2
(1)	4" TRENCH DRAIN (2)	LF	120
(1)	ORNAMENTAL PEDESTRIAN RAILING (2)	LF	460

(1) COMPONENT ITEMS IN MECHANICALLY STABILIZED RETAINING WALL LUMP SUM ITEM 8621-0002 GIVEN FOR INFORMATION ONLY.

(2) SEE SPECIAL PROVISIONS.

(3) CLASS 3 EXCAVATION INCLUDES APPROXIMATELY 1,135 CY TO ACCOUNT FOR THE OVEREXCAVATION AND BACKFILLING. COST TO PERFORM SPECIAL ROLLING IS INCIDENTAL TO THIS ITEM.

(4) NO 57 COARSE AGGREGATE INCLUDES APPROXIMATELY 8 CY TO ACCOUNT FOR THE MATERIAL BEHIND EACH WEEP HOLE. GEOTEXTILE FABRIC, CLASS 4, TYPE A AROUND THE MATERIAL IS INCIDENTAL TO THIS ITEM.

(5) SEE SPECIAL PROVISION FOR ITEM 8621-0002 MECHANICALLY STABILIZED RETAINING WALL FOR MATERIAL SPECIFICATIONS.

(6) PRECAST CONCRETE FACING PANELS INCLUDES THE COST FOR THE ARCHITECTURAL SURFACE TREATMENT.

(7) GALVANIZED PIPE OVER EACH PILE AT ABUTMENT 2 IS INCIDENTAL TO THIS ITEM.

WORK POINTS				
WORK POINTS	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	110+15.95	122.00' LT	725487.4335	1334120.4643
WP 2	110+29.33	122.00' LT	725506.5972	1334111.6057
WP 3	110+73.41	47.50' LT	725577.8640	1334160.7366
WP 4	112+00.00	47.50' LT	725692.7750	1334107.6179
WP 5	110+23.79	0.00'	725552.7590	1334224.6711
WP 6	110+45.88	112.50' RT	725612.9976	1334320.7634
WP 7	110+57.73	112.50' RT	725630.7680	1334312.5489
WP 8	110+69.61	75.66' RT	725626.0998	1334274.1189
WP 9	111+43.57	37.17' RT	725677.0806	1334208.1477
WP 10	112+46.00	37.17' RT	725770.0556	1334165.1692

LEGEND

WP = WORKPOINT

NOTES:

1. FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
QUANTITIES & STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

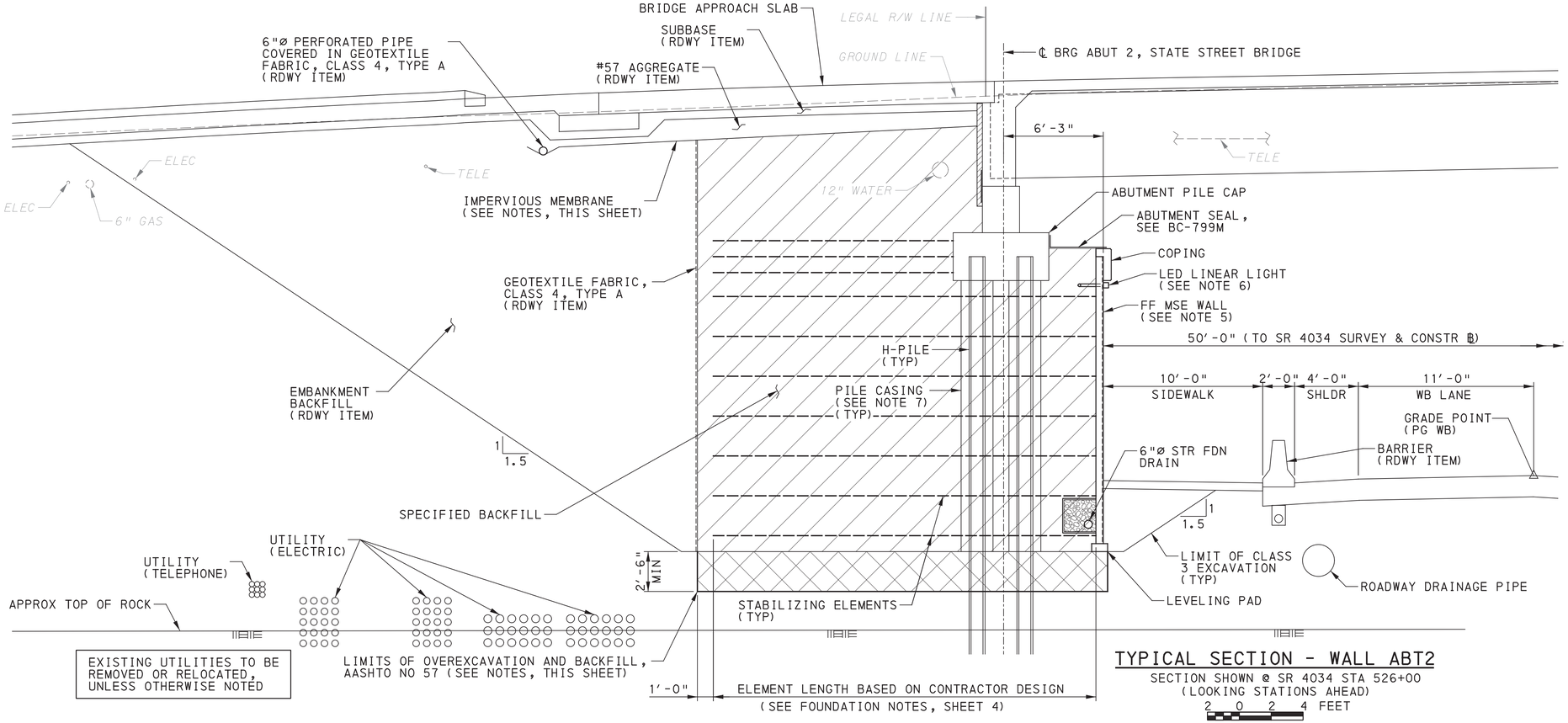
RECOMMENDED AUGUST 22, 2022

SHEET 5 OF 19

S-41009D

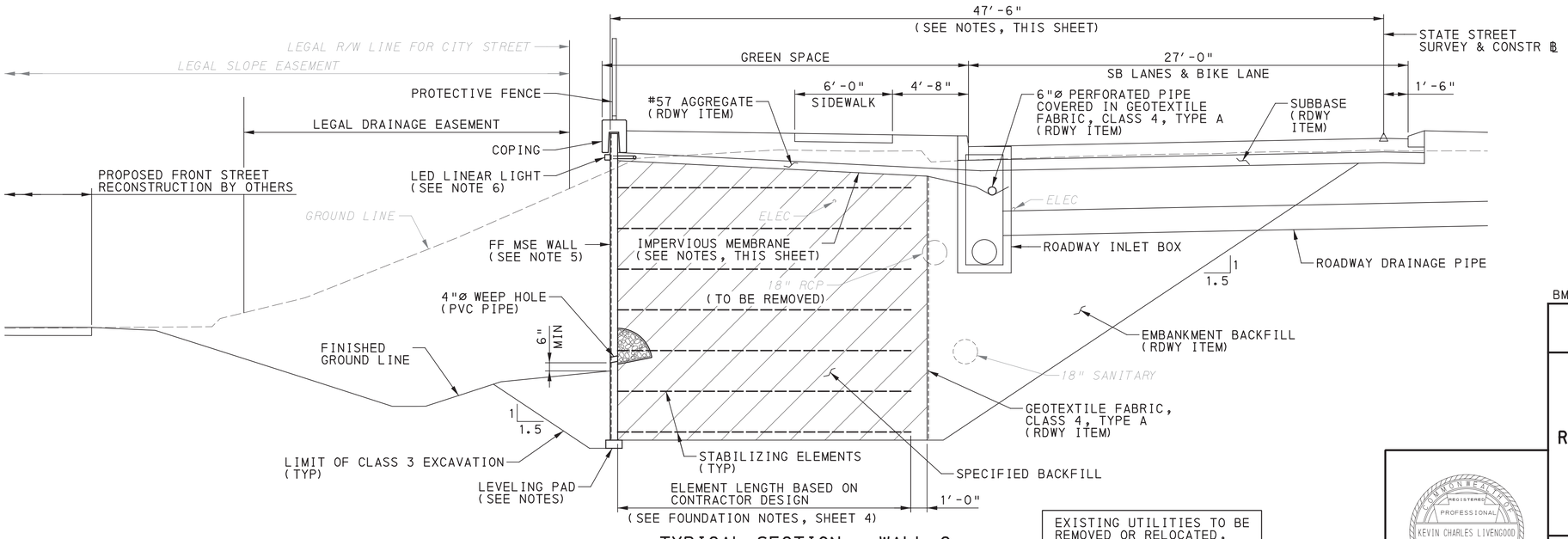
DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTs001.dgn



TYPICAL SECTION - WALL ABT2

SECTION SHOWN @ SR 4034 STA 526+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



TYPICAL SECTION - WALL C

SECTION SHOWN @ STATE STREET STA 111+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

EXISTING UTILITIES TO BE REMOVED OR RELOCATED, UNLESS OTHERWISE NOTED

NOTES:

1. DIMENSIONS IN REFERENCE TO THE SURVEY AND CONSTRUCTION BASELINE ARE PROVIDED FOR THE STATION WHERE THE SECTION IS CUT; HOWEVER, THEY VARY ALONG THE REMAINING WALL LENGTH. STATION AND OFFSETS FOR THE PROPOSED WALL ARE PROVIDED ON THE GENERAL PLAN.
2. REINFORCING STRAP LENGTHS PROVIDED HEREIN ARE MINIMUM STANDARDS FOR THE CONTRACTOR'S DESIGN AND WERE USED FOR COST ESTIMATING PURPOSES.
3. CONTRACTOR SHALL ADJUST LIMITS OF IMPERVIOUS MEMBRANE TO ACCOMMODATE THE APPROACH AND SLEEPER SLAB, AND TO ALLOW FOR THE PERFORATED PIPE TO BE UTILIZED AS THE STATE STREET ROADWAY BASE DRAIN.
4. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEWS. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, AND THE SPECIAL PROVISION SPECIAL ROLLING (MODIFIED), OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO ALL MSE WALL PANELS.
6. CONTRACTOR WALL DESIGN SHALL ACCOMODATE CONDUIT FEEDS THROUGH THE PANELS TO THE LED LINEAR LIGHTS.
7. PROVIDE GALVANIZED PROTECTIVE CASING FROM THE BOTTOM OF EXCAVATION TO THE BOTTOM OF FOOTING IN ACCORDANCE WITH BC-799M.

REFERENCES:

SEE THE STATE STREET BRIDGE PLAN SET FOR ADDITIONAL DETAILS AND DIMENSIONS OF THE BRIDGE COMPONENTS.

FOR LOCATIONS AND DETAILS OF LED LINEAR LIGHTS AND CONDUIT RUNS, SEE HIGHWAY LIGHTING PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
TYPICAL SECTION - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

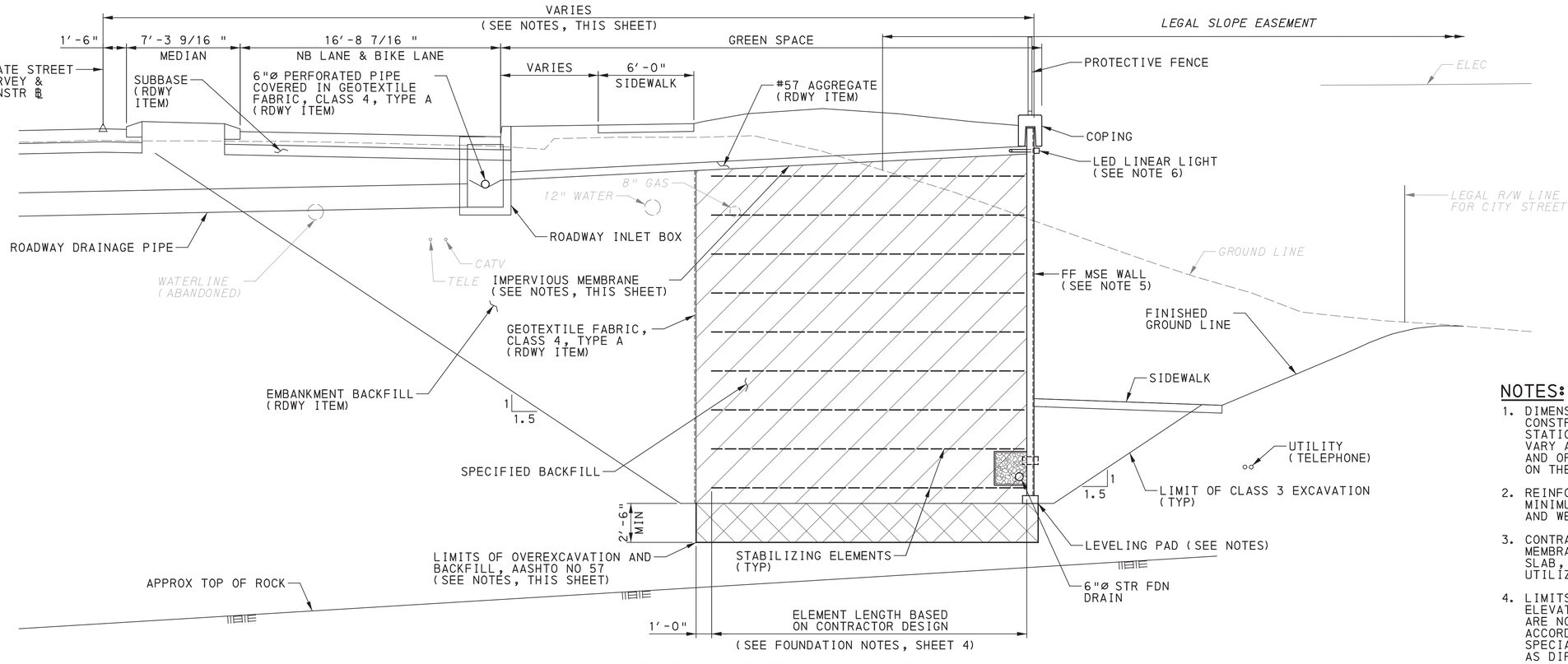
RECOMMENDED AUGUST 22, 2022

SHEET 6 OF 19

S-41009D

DES:	KCL	CKD:	REB	DWG:	JP	CKD:	KCL

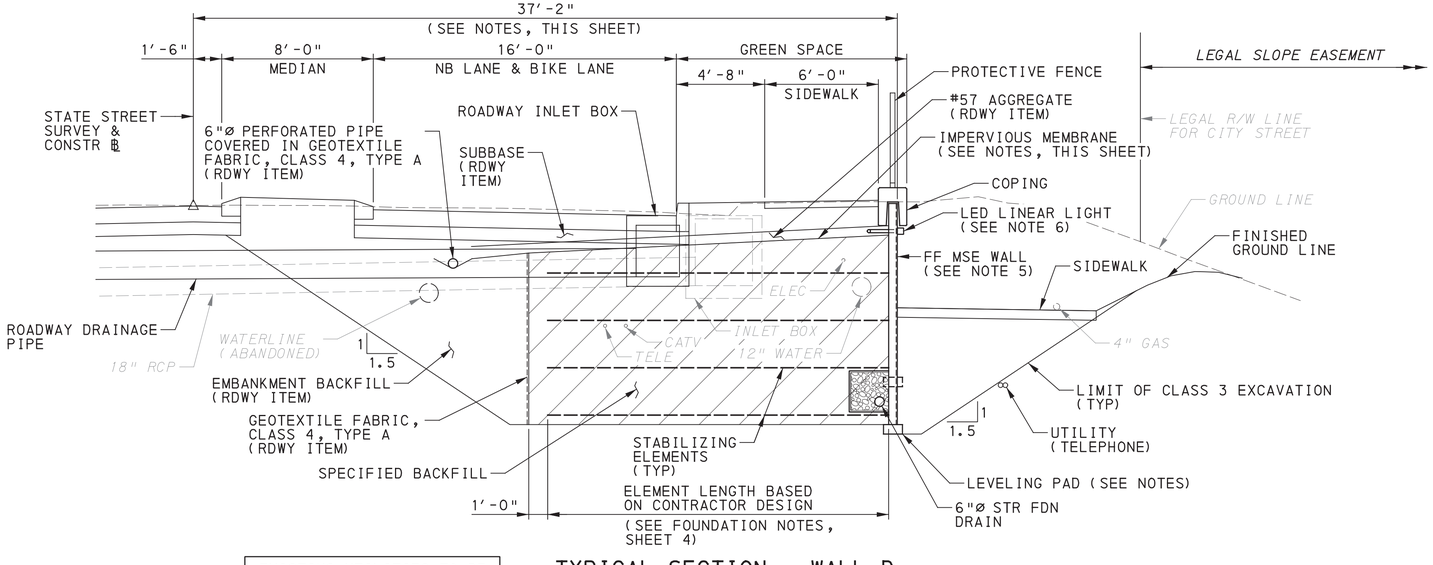
PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\mnsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTts002.dgn



EXISTING UTILITIES TO BE REMOVED OR RELOCATED, UNLESS OTHERWISE NOTED

TYPICAL SECTION - WALL D

SECTION SHOWN @ STATE STREET STA 111+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET



EXISTING UTILITIES TO BE REMOVED OR RELOCATED, UNLESS OTHERWISE NOTED

TYPICAL SECTION - WALL D

SECTION SHOWN @ STATE STREET STA 112+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

NOTES:

1. DIMENSIONS IN REFERENCE TO THE SURVEY AND CONSTRUCTION BASELINE ARE PROVIDED FOR THE STATION WHERE THE SECTION IS CUT; HOWEVER, THEY VARY ALONG THE REMAINING WALL LENGTH. STATION AND OFFSETS FOR THE PROPOSED WALL ARE PROVIDED ON THE GENERAL PLAN.
2. REINFORCING STRAP LENGTHS PROVIDED HEREIN ARE MINIMUM STANDARDS FOR THE CONTRACTOR'S DESIGN AND WERE USED FOR COST ESTIMATING PURPOSES.
3. CONTRACTOR SHALL ADJUST LIMITS OF IMPERVIOUS MEMBRANE TO ACCOMMODATE THE APPROACH AND SLEEPER SLAB, AND TO ALLOW FOR THE PERFORATED PIPE TO BE UTILIZED AS THE STATE STREET ROADWAY BASE DRAIN.
4. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEWS. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, AND THE SPECIAL PROVISION SPECIAL ROLLING (MODIFIED), OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO ALL MSE WALL PANELS.
6. CONTRACTOR WALL DESIGN SHALL ACCOMODATE CONDUIT FEEDS THROUGH THE PANELS TO THE LED LINEAR LIGHTS.

REFERENCES:

FOR LOCATIONS AND DETAILS OF LED LINEAR LIGHTS AND CONDUIT RUNS, SEE HIGHWAY LIGHTING PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
TYPICAL SECTION - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN CHARLES LIVENGOOD ENGINEER PE089023

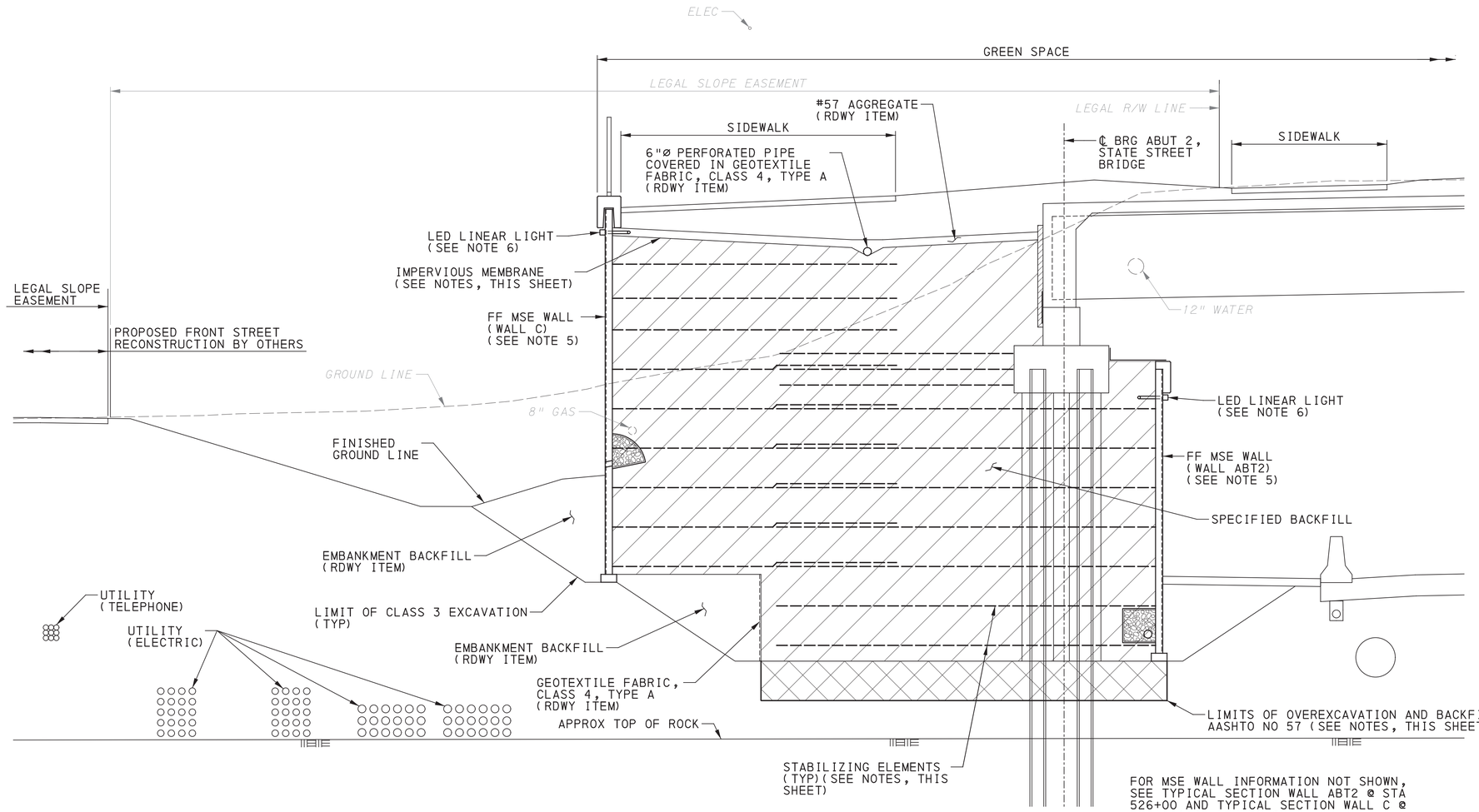
RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 19

S-41009D

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTts003.dgn



FOR MSE WALL INFORMATION NOT SHOWN, SEE TYPICAL SECTION WALL ABT2 @ STA 526+00 AND TYPICAL SECTION WALL C @ STA 111+00 (SHEET 6)

TYPICAL SECTION - WALL ABT2

SECTION SHOWN @ SR 4034 STA 525+00
(LOOKING STATIONS AHEAD)
2 0 2 4 FEET

NOTES:

1. REINFORCING STRAP LENGTHS PROVIDED HEREIN ARE MINIMUM STANDARDS FOR THE CONTRACTOR'S DESIGN AND WERE USED FOR COST ESTIMATING PURPOSES.
2. AT LOCATIONS WHERE THE SOIL STABILIZING ELEMENTS FROM THE ABUTMENT INTERSECT WITH THE RETAINING WALL PANELS, OR VISA VERSA, THE REINFORCING STRAPS SHALL NOT BE DESIGNED/DETAILED AS SUCH TO CONNECT THE WALL AND THE ABUTMENT TOGETHER.
3. IMPERVIOUS MEMBRANE SHALL BE PROVIDED WITHIN THE ENTIRE GREEN SPACE WHERE THE REINFORCING STRAPS INTERSECT.
4. LIMITS OF OVEREXCAVATION ARE SHOWN ON THE ELEVATION VIEWS. WHERE LIMITS OF OVEREXCAVATION ARE NOT DEFINED, PERFORM SPECIAL ROLLING IN ACCORDANCE WITH PUB 408, SECTION 208, AND THE SPECIAL PROVISION SPECIAL ROLLING (MODIFIED), OR AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE.
5. ARCHITECTURAL SURFACE TREATMENT TO BE APPLIED TO ALL MSE WALL PANELS.
6. CONTRACTOR WALL DESIGN SHALL ACCOMODATE CONDUIT FEEDS THROUGH THE PANELS TO THE LED LINEAR LIGHTS.

REFERENCES:

SEE THE STATE STREET BRIDGE PLAN SET FOR ADDITIONAL DETAILS AND DIMENSIONS OF THE BRIDGE COMPONENTS.

FOR LOCATIONS AND DETAILS OF LED LINEAR LIGHTS AND CONDUIT RUNS, SEE HIGHWAY LIGHTING PLANS

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
TYPICAL SECTION - 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

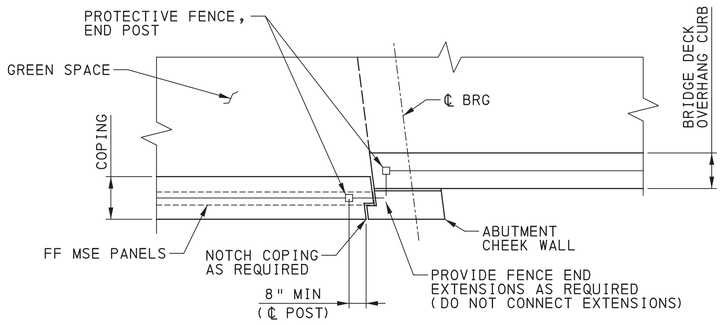
RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 19

S-41009D

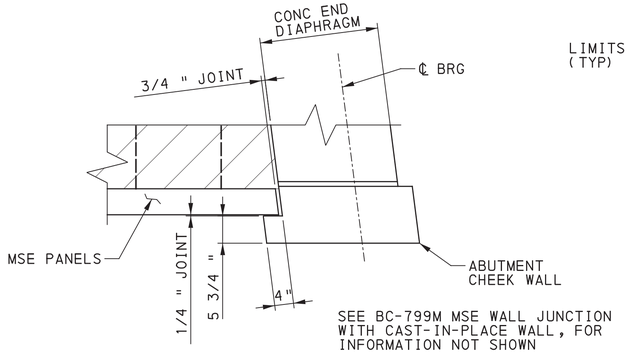
DES:	KCL	CKD:	REB	DWG:	JP	CKD:	KCL

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTmd001.dgn



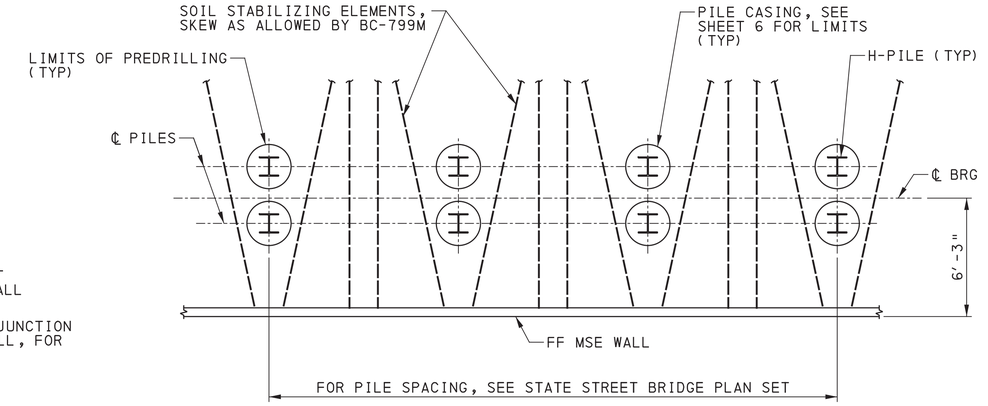
SECTION B-B

1 0 1 2 3 FEET



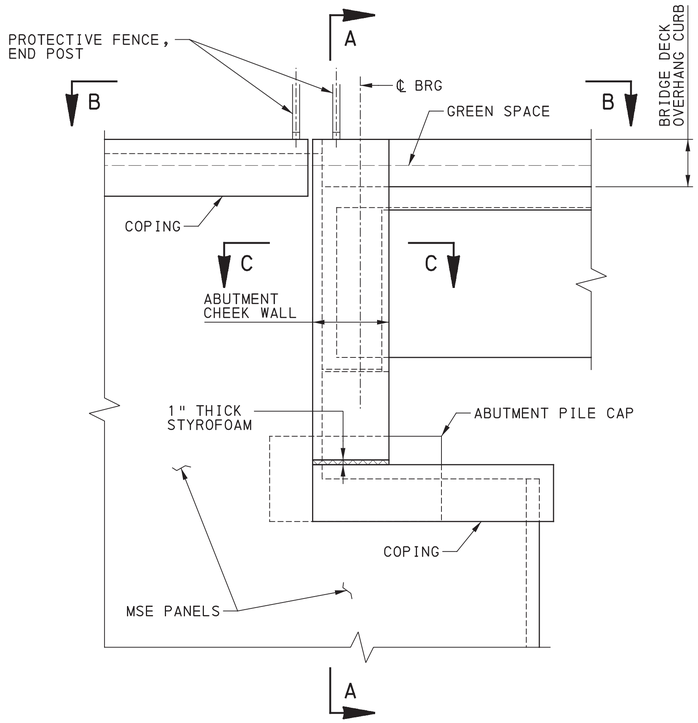
SECTION C-C

12 0 12 INCHES



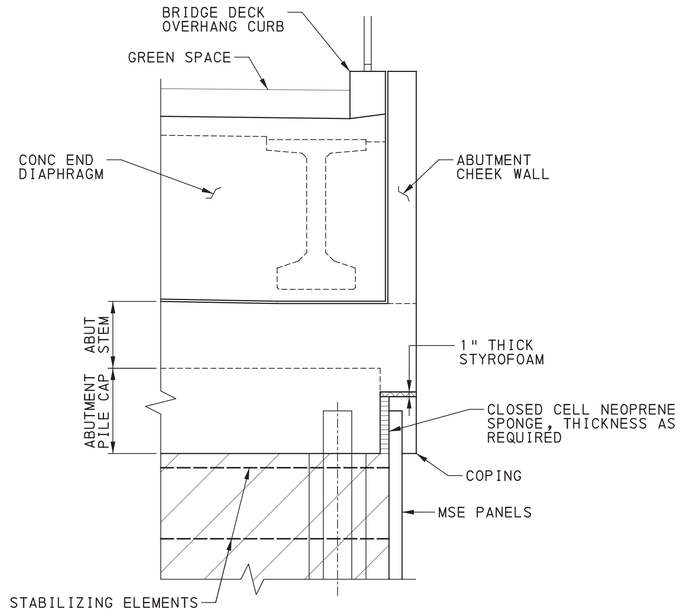
PARTIAL PLAN - MSE WALL AT ABUTMENT

2 0 2 4 FEET



ABUTMENT END VIEW

1 0 1 2 3 FEET



SECTION A-A

1 0 1 2 3 FEET

REFERENCES:

SEE THE STATE STREET BRIDGE PLAN SET FOR ADDITIONAL DETAILS AND DIMENSIONS OF THE BRIDGE COMPONENTS.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
MISCELLANEOUS DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 9 OF 19

S-41009D

DES: KCL | CKD: REB | DWG: JP | CKD: KCL

PLOTTED: 8/19/2022
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTdr001.dgn

4" UNDERDRAIN
(DRAIN TO ROADWAY INLET)
(RDWY ITEM)

4" UNDERDRAIN
(STATE STREET
BRIDGE ITEM)

PT

YARD DRAIN INLET
STA 110+29.00, 119.26' LT
(SEE NOTES)

4" TRENCH DRAIN

PROPOSED FRONT STREET
RECONSTRUCTION BY OTHERS

6"ø STR FDN DRAIN

DRAINAGE
SWALE

6"ø PERFORATED PIPE COVERED IN
GEOTEXTILE FABRIC, CLASS 4, TYPE A
(DRAIN TO ROADWAY INLETS)
(RDWY ITEM)

4" UNDERDRAIN
(DRAIN TO ROADWAY INLET)
(RDWY ITEM)

6"ø PERFORATED PIPE COVERED IN
GEOTEXTILE FABRIC, CLASS 4, TYPE A
(DRAIN TO ROADWAY INLETS)
(RDWY ITEM)

525
1525

SR 4034 SURVEY
& CONSTR ℄

SR 8034
CONSTR ℄

N 51°55'02" E

STATIONS AHEAD

FF WALL C

590

SLEEPER
SLAB

APPROACH
SLAB

600

STATIONS AHEAD

STATE ST SURVEY
& CONSTR ℄

N 24°48'33" W

110

111

112

113

ABUT PILE
CAP

APPROXIMATE LIMITS OF
STABILIZING ELEMENTS
FOR MSE WALL

6" SUBSURFACE DRAIN OUTLET
(DRAIN TO ROADWAY INLET)
(RDWY ITEM)

1524
525

580

FF WALL ABT2

580

585

590

6"ø STR FDN DRAIN

FF WALL D

4" UNDERDRAIN
(DRAIN TO ROADWAY INLET)
(RDWY ITEM)

6" UNDERDRAIN, OUTLET
TO ROADWAY INLET
(RDWY ITEM)

4" UNDERDRAIN
(STATE STREET
BRIDGE ITEM)

6"ø STR FDN DRAIN

YARD DRAIN INLET
STA 110+65.68, 82.40' RT
(SEE NOTES)

4" TRENCH DRAIN

EASTBOUND

1527
527

WESTBOUND

590

PLAN - MSE WALL DRAINAGE

5 0 15 FEET

- DENOTES APPROXIMATE LIMITS OF IMPERVIOUS MEMBRANE. EXTEND MEMBRANE 6'-0" MINIMUM BEYOND END OF MSE WALL STABILIZING ELEMENTS. (SEE NOTES, THIS SHEET)

REFERENCES:

FOR PLAN INFORMATION NOT SHOWN, SEE GENERAL PLAN SHEET 1

FOR MSE WALL ELEVATIONS, SEE SHEETS 2 & 3

FOR TYPICAL SECTIONS, SEE SHEETS 6 TO 8

NOTES:

1. LIMITS OF IMPERVIOUS MEMBRANE AND 6" DIA. PERFORATED PIPE ARE CONCEPTUAL AND FOR BIDDING PURPOSES. CONTRACTOR SHALL MODIFY IN ACCORDANCE WITH THE MSE WALL DESIGN, TO THE REQUIREMENTS SHOWN HERE, AND TO BC-799M.
2. THE PERFORATED PIPE SHALL BE UTILIZED AS THE STATE STREET ROADWAY BASE DRAIN WITHIN THE LIMITS OF THE WALLS.
3. YARD DRAIN INLET AND UNDERDRAIN LOCATIONS ARE APPROXIMATE AND SHALL BE ADJUSTED, AS REQUIRED, TO ACCOMODATE THE CONTRACTOR DESIGNED WALL.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
MSE WALL DRAINAGE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

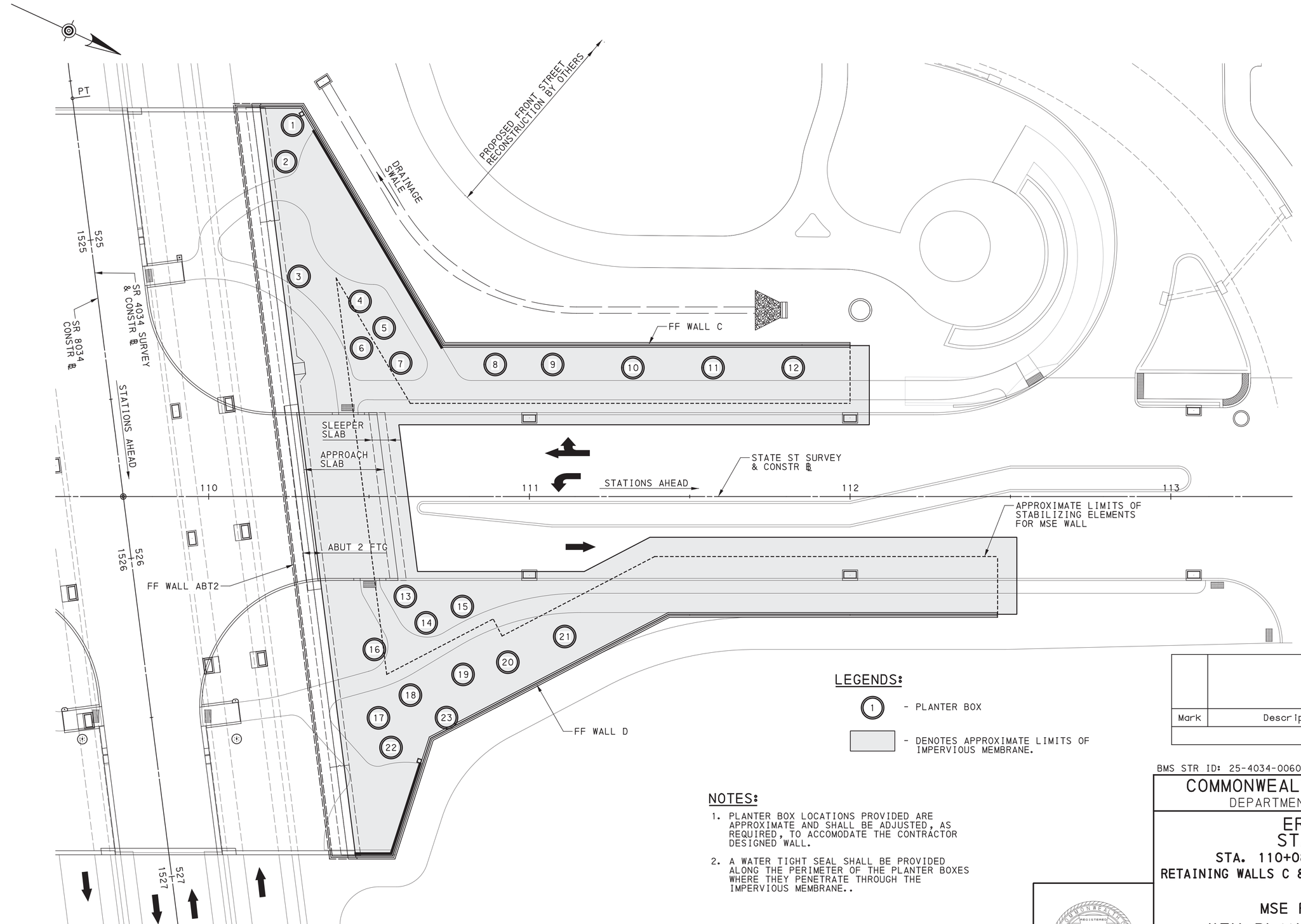
SHEET 10 OF 19

S-41009D

DES: KCL	CKD: REB	DWG: JP	CKD: KCL

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_SS_E\sheets\FINAL\wall_SS_ESTmd002.dgn



PLANTER BOX LOCATIONS		
NUMBER	STATION	OFFEST
1	110+26.15	115.78 LT
2	110+24.01	104.38 LT
3	110+28.20	68.62 LT
4	110+47.21	60.80 LT
5	110+54.73	52.54 LT
6	110+47.66	46.28 LT
7	110+59.88	41.63 LT
8	110+89.36	41.17 LT
9	111+07.28	41.17 LT
10	111+32.28	40.17 LT
11	111+57.28	40.17 LT
12	111+82.28	40.17 LT
13	110+61.32	31.14 RT
14	110+67.82	39.38 RT
15	110+79.09	34.29 RT
16	110+51.66	47.66 RT
17	110+52.95	68.98 RT
18	110+62.91	61.91 RT
19	110+79.33	55.45 RT
20	110+93.29	51.63 RT
21	111+11.02	43.63 RT
22	110+56.87	78.23 RT
23	110+74.16	68.91 RT

REFERENCES:

FOR PLAN INFORMATION NOT SHOWN, SEE GENERAL PLAN SHEET 1

FOR MSE WALL DRAINAGE, SEE SHEET 10

FOR MSE WALL ELEVATIONS, SEE SHEETS 2 & 3

FOR TYPICAL SECTIONS, SEE SHEET 6 TO 8

FOR PLANTER BOX AND ADDITIONAL LANDSCAPING DETAILS, SEE ROADWAY DEVELOPMENT PLAN SET.

LEGENDS:

(1) - PLANTER BOX

▭ - DENOTES APPROXIMATE LIMITS OF IMPERVIOUS MEMBRANE.

NOTES:

1. PLANTER BOX LOCATIONS PROVIDED ARE APPROXIMATE AND SHALL BE ADJUSTED, AS REQUIRED, TO ACCOMODATE THE CONTRACTOR DESIGNED WALL.
2. A WATER TIGHT SEAL SHALL BE PROVIDED ALONG THE PERIMETER OF THE PLANTER BOXES WHERE THEY PENETRATE THROUGH THE IMPERVIOUS MEMBRANE..

KEY PLAN - PLANTER BOXES
5 0 15 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0060-2150 MPMS PROJ: 108952 BRKEY: 69237

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

MSE RETAINING WALL
KEY PLAN - PLANTER BOXES

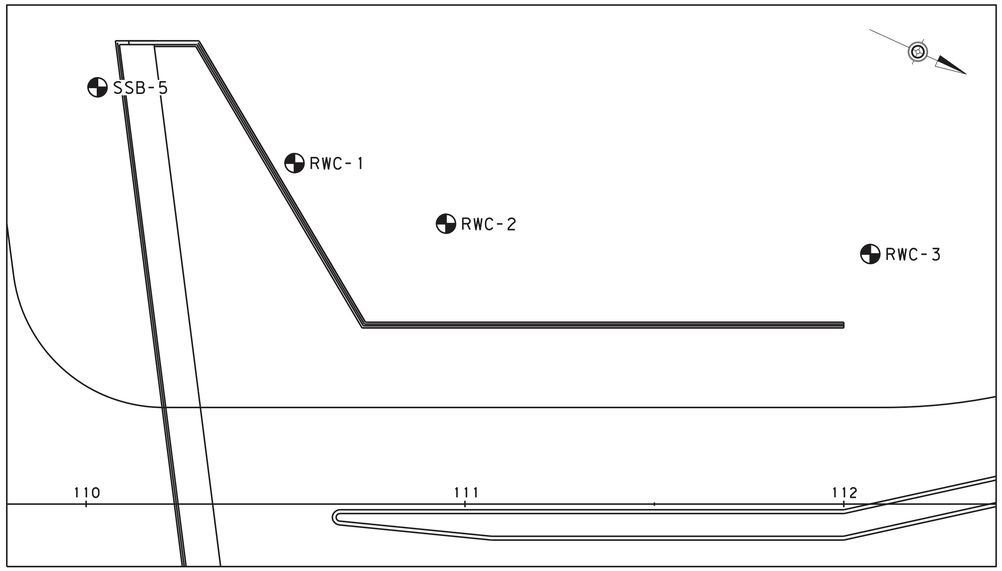
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KEVIN CHARLES LIVENGOOD
ENGINEER
PE089023

RECOMMENDED AUGUST 22, 2022

SHEET 11 OF 19

S-41009D

DES: KCL	CKD: REB	DWG: JP	CKD: KCL

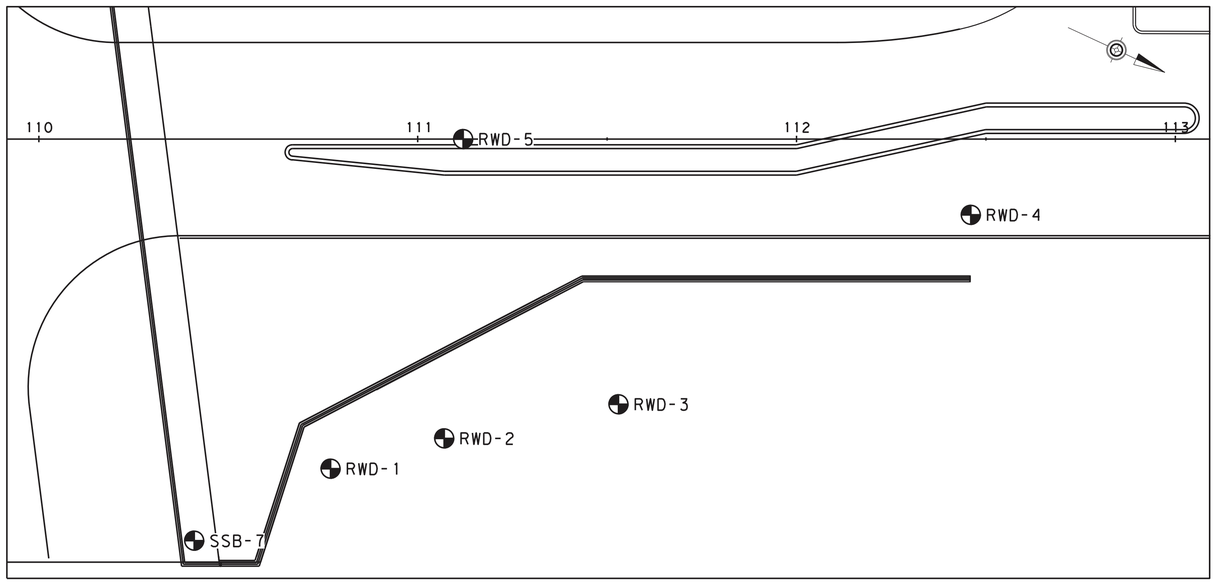


WALL C

BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET



WALL D

BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler — 4/26/2021

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK A. STYLER — ENGINEER — No. PE061795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 1 OF 8)

Christopher T. Fox, P.E. — Digitally signed by Christopher T. Fox, P.E. Date: 2022.08.23 07:13:07 -04'00'

DISTRICT GEOTECHNICAL ENGINEER — DATE

SHEET 12 OF 19

S-41009D

M:_2019\095\exhibits\structure\19095_strb_WC&WD.dgn
7/26/2022

PLT: RJS | CKD: KA | QA/QC: MAS

SUBSTRUCTURE UNIT: LOG 1 OF 1

RETAINING WALL C

BORING NUMBER:	BORING LOCATION	START: 09/22/2020 1:30 PM	HAMMER: AUTOMATIC
RWC-1	STATION: 110+55.0 OFFSET: 90.0 FT. LT.	FINISH: 09/22/2020 4:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	591.7 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY:C. WILLIS
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 575.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 569.7 ft. - 16.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------ PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
590		**GRAVEL**, some Sand, contains brick fragments, loose to very dense, damp to dry, heterogeneous, poorly graded, angular, orange to gray, fill.		1.5	S-1	3-6-6	16	0.4	27	
				3.0	S-2	8-7-4	15	0.0	0	
				4.5	S-3	3-3-3	8	1.0	67	
				6.0	S-4	3-3-2	7	0.3	20	
				7.5	S-5	2-4-3	9	0.3	20	
585		*S-5, contains glass.*	a-1-a / gp	9.0	S-6	7-27-28	73	0.5	33	
				10.5	S-7	15-6-4	13	1.3	87	
				12.0	S-8	4-5-2	9	0.6	40	
		S-8, all brick.		13.5	S-9	3-4-6	13	0.6	40	
BOL 578.00		*S-10, silty with some coal fragments some soot.*		15.0	S-10	13-2-2	5	1.5	100	
		15.5'/El. 576.2								
580		Medium and coarse **SAND**, little Gravel, little Silt, loose to very dense, moist to wet, homogeneous, poorly graded, rounded, gray, alluvium.		16.5	S-11	4-6-8	19	1.5	100	
		S-12, some silt.		18.0	S-12	4-6-3	12	1.1	73	
			a-1-b / sp	19.5	S-13	6-6-8	19	1.0	67	
				21.0	S-14	2-2-6	11	1.5	100	
				22.5	S-15	13-6-6	16	1.5	100	
		S-17, last 0.4' shale contains wood above shale.		24.0	S-16	4-3-3	8	1.0	67	
		Water at 21.6' prior to coring.		25.0	S-17	11-50-50/.0'	133	1.0	100	
TOR 566.70		25.0'/El. 566.7		27.0	R-1		20%	1.5	75	
565		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, slightly weathered, laminated to moderate bedding with flat dip, jointed, wide spacing, sheer dip, narrow joint opening, *(RQD=46%).*		30.0	R-2		37%	3.0	100	
		Joint (RD=80-90), 27.3-27.8'.			R-3		62%	5.0	100	
		Broken clayey, 28.5-28.7'.								
560		35.0'/El. 556.7								

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

SUBSTRUCTURE UNIT: LOG 1 OF 1

RETAINING WALL C

BORING NUMBER:	BORING LOCATION	START: 09/22/2020 8:00 AM	HAMMER: AUTOMATIC
RWC-2	STATION: 110+95.0 OFFSET: 74.0 FT. LT.	FINISH: 09/22/2020 12:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	591.0 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY:C. WILLIS
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 572.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 576.5 ft. - 20.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------ PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
590		**BITUMINOUS CONCRETE.**		1.5						
		0.5'/El. 590.5								
		GRAVEL AND BRICK.		3.0	S-1	5-5-6	15	1.5	100	
		1.5'/El. 589.5		4.5	S-2	4-5-3	11	1.5	100	
		Ziplock bag sample, 1.0-10.5'.		6.0	S-3	7-5-7	16	0.6	40	
		GRAVEL, some Sand, contains brick fragments, loose to medium dense, damp to dry, heterogeneous, poorly graded, angular, orange, fill.		7.5	S-4	4-4-2	8	0.5	33	
585			a-1-a / gp	9.0	S-5	4-3-3	8	0.4	27	
				10.5	S-6	4-2-2	5	0.2	13	
BOL 583.00		*S-5 to S-7, brick jammed in tip of spoon, low recovery.*		12.0	S-7	2-2-2	5	0.1	7	
		S-7, PID=7.6 ppm.		13.5	S-8	1-2-3	7	0.6	40	
		13.0'/El. 578.0								
580		Fine and medium **SAND**, little Gravel, little Silt, medium dense to very dense, wet to moist, homogeneous, poorly graded, sub-rounded to rounded, gray, alluvium.		15.0	S-9	5-4-4	11	1.5	100	
				16.5	S-10	2-4-5	12	1.5	100	
		S-10, PID=3.0 ppm.		18.0	S-11	3-2-WOH	3	1.5	100	
			a-1-b / sp	19.5	S-12	4-3-4	9	1.5	100	
		S-13, contains wood fragments.		21.0	S-13	5-3-12	20	1.5	100	
		23.5'/El. 567.5		22.5	S-14	3-4-7	15	1.5	100	
		Water @ 22.6' prior to coring.		23.1	S-15	5-50/.1'	>67	0.0	0	
TOR 567.50		*Refusal @ 23.5'.*		23.5	R-1		0%	0.8	80	
		S-15, residual shale.		24.5	R-2		50%	2.0	100	
565		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=55%).*		26.5	R-3		57%	2.9	97	
				29.5	R-4		68%	5.0	100	
560		34.5'/El. 556.5								

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR TOP OF ROCK ELEVATION
BOL BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SILVER ENGINEER No. PE061780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 2 OF 8)

SHEET 13 OF 19

S-41009D

PLT: RJS | CKD: KA | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_WC&WD.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG, PENNDOT GINT VERSION 12.2.2 8.24.2016 (GDT 427/21 10:50) - L:\GINTPROJECTS\2019\19095 - ERIE CO\SBS.GPJ

SUBSTRUCTURE UNIT: LOG 1 OF 1

RETAINING WALL C

BORING NUMBER:	BORING LOCATION	START: 09/21/2020 9:30 AM	HAMMER: AUTOMATIC
RWC-3	STATION: 112+07.0 OFFSET: 66.0 FT. LT.	FINISH: 09/21/2020 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. 5 FT.	588.0 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY:C. WILLIS
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 569.2 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
	UNS	**UNSAMPLED.** *Hand dug to verify no private electric line, conduit exposed along curb.* 1.5'/El. 586.5		1.5					
585		**BOL 585.50**		3.0	S-1	4-9-9	24	1.3	87
		GRAVEL and **SAND**, contains brick and rock fragments, loose to dense, damp to dry, heterogeneous, poorly graded, angular to rounded, brown, fill *S-1, PID=5.2 ppm.*	a-1-a / gp	4.5	S-2	10-11-8	25	1.4	93
				6.0	S-3	7-9-14	31	0.9	60
				7.5	S-4	5-9-18	36	1.1	73
				9.0	S-5	14-5-6	15	1.0	67
				10.5	S-6	5-3-3	8	0.8	53
		12.0'/El. 576.0		12.0	S-7	3-5-2	9	0.8	53
580		**SILT**, some Gravel, some Sand, contains coal fragments and wood, stiff, moist, homogeneous, low plastic fines, brown to gray, fill. *Layer contains some soot.* 16.5'/El. 571.5	a-4 / ml	13.5	S-8	12-6-4	13	1.5	100
				15.0	S-9	8-4-3	9	1.5	100
				16.5	S-10	5-5-5	13	1.5	100
575		**SILT**, little Clay, trace Sand, trace Gravel, very soft to soft, wet to dry, homogeneous, non-plastic, gray, alluvium. *Class. on S-11 to S-13 N.M.C.=38.9%. S-14, contains shale chips. Dry prior to coring.* 21.1'/El. 566.9	A-4 / ML	18.0	S-11	2-1-WOH **0.25**	1	0.4	27
				19.5	S-12	2-1-1 **0.25**	3	1.5	100
				20.5	S-13	2-1-50/.0'	68	1.0	100
				21.0	S-14	50/.1'	>67	0.1	100
		TOR 566.90		21.1	R-1		0%	2.9	72
570		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=32%).*		25.1					
					R-2		56%	4.9	98
565				30.1	R-3		40%	1.0	100
		31.1'/El. 556.9							
560									

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

[1] 24-hr. Water: Grouted upon completion

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT: LOG 1 OF 1

RETAINING WALL C

BORING NUMBER:	BORING LOCATION	START: 10/30/2020 9:00 AM	HAMMER: AUTOMATIC
SSB-5	STATION: 110+03.0 OFFSET: 110.0 FT. LT.	FINISH: 11/02/2020 1:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 750 ATV	3.000 IN.	0 FT. 5 FT.	605.3 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY:J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME: El. 571.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		REINFORCED CONCRETE. 1.3'/El. 604.0		1.5					
600		**GRAVEL** and **SAND**, medium dense to very dense, damp, heterogeneous, well graded, rounded to sub-angular, brown, fill.		3.0	S-1	9-6-5	15	0.8	53
				4.5	S-2	4-6-8	19	1.2	80
				6.0	S-3	10-8-7	20	1.3	87
				7.5	S-4	8-7-4	15	0.1	7
				9.0	S-5	28-4-5	12	0.4	27
				10.5	S-6	8-11-12	31	1.1	73
595		*S-5, contains some fabric/membrane.*	a-1-a / gw	12.0	S-7	15-14-15	39	1.5	100
				13.5	S-8	20-25-22	63	1.5	100
				15.0	S-9	13-19-15	45	1.2	80
				16.5	S-10	14-12-21	44	0.5	33
				18.0	S-11	15-20-22	56	0.7	47
				19.5	S-12	20-20-13	44	1.2	80
590				21.0	S-13	18-14-14	37	1.5	100
				22.5	S-14	12-15-16	41	1.5	100
				24.0	S-15	11-14-17	41	1.3	87
				25.5	S-16	10-10-10	27	1.5	100
				27.0	S-17	5-11-11	29	1.1	73
585				28.5	S-18	13-9-10	25	0.8	53
				29.8	S-19	10-10-50/.3'	80	1.3	100
					R-1		0%	2.0	100
				31.8	R-2		30%	2.8	93
580				34.8	R-3		42%	5.0	100
		29.8'/El. 575.5							
		Boring dry prior to coring.							
575		**TOR & BOL 575.50**							
		SHALE interbedded with SANDSTONE, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=30%).*							
570		39.8'/El. 565.5							

◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1] 24-hr. Water: Boring grouted upon completion.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR TOP OF ROCK ELEVATION
BOL BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIEGER ENGINEER No. PE069795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 3 OF 8)

SHEET 14 OF 19

S-41009D

PLT: RJS | CKD: KA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_WC&WD.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 1.2.2 • 24-2016.GDT - 4/27/21 10:50 - L:\GINTPROJECTS\2019\19066 - ERIE CO.S&S.GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			MOISTURE DENSITY		
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	MAX. DRY DENSITY (PCF)	OPTIMUM MOISTURE %	CBR
RWC-3	112+07.0 66 ft. LT.	S-11 to 13	16.5 to 20.5	38.9	1.4	4.5			94.1	81.2	12.9	A-4	ML		NP	NP	NP			

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
SSB-5	110+03.0 110 ft. LT.	R-3	35.2 to 35.8	UNCONFINED COMPRESSIVE TEST	15771.0 PSI / 1,135.5 TSF	NO		100	42	SHALE	

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SIEVER ENGINEER No. PE061795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 4 OF 8)

SHEET 15 OF 19

S-41009D

M:_2019\095\exhibits\structure\19095_srb_WC&WD.dgn
7/26/2022

PLT: RJS | CKD: KA | QA/QC: MAS

SUBSTRUCTURE UNIT:
RETAINING WALL D

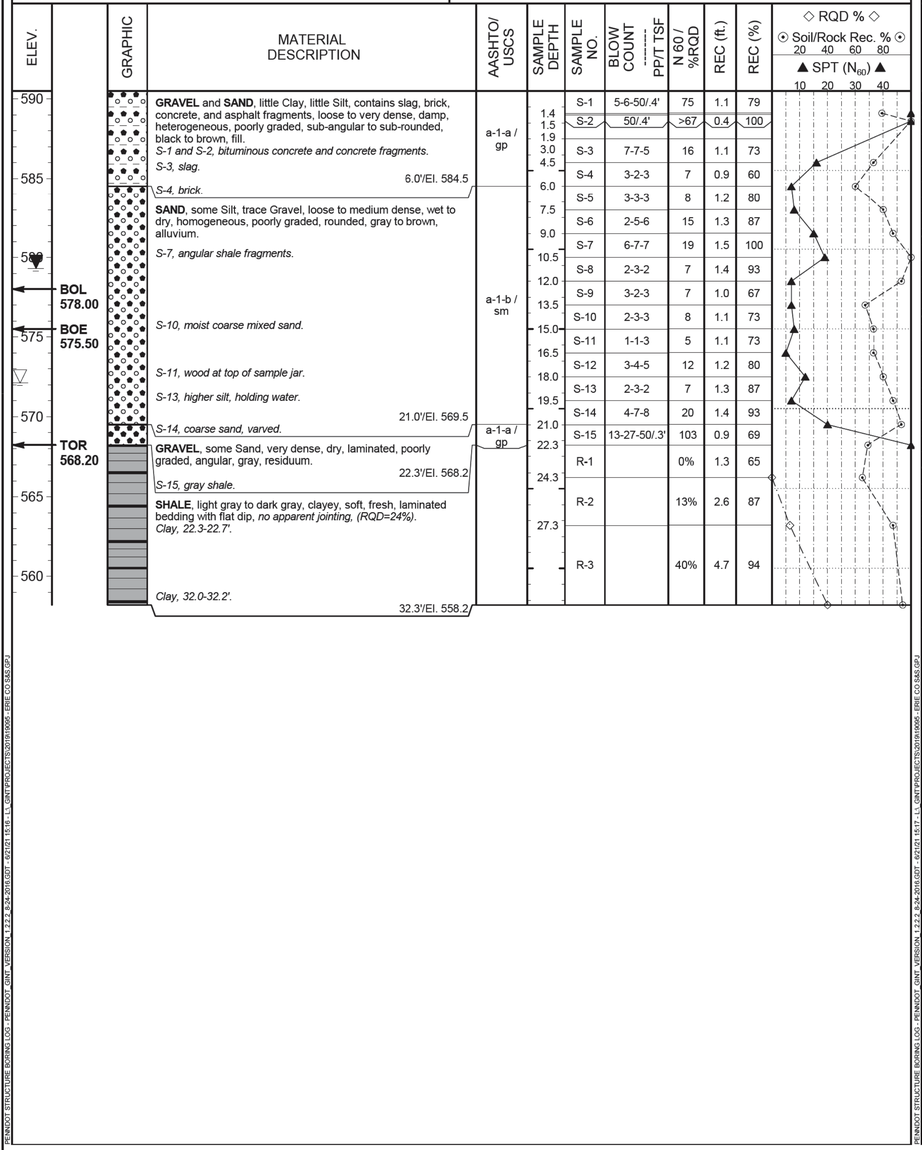
LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/06/2020 3:00 PM	HAMMER: AUTOMATIC
RWD-1	STATION: 110+77.0 OFFSET: 87.0 FT. RT.	FINISH: 10/07/2020 10:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	590.5 FT.

DRILLING INSPECTOR: K. NEFF / M. ROMEO
DRILLER & DRILLING COMPANY: J. GILBERT 7NT

▽ 0 HR. READING - ELAPSED TIME:El. 572.1 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 579.3 ft. - 22.0 hr.



SUBSTRUCTURE UNIT:
RETAINING WALL D

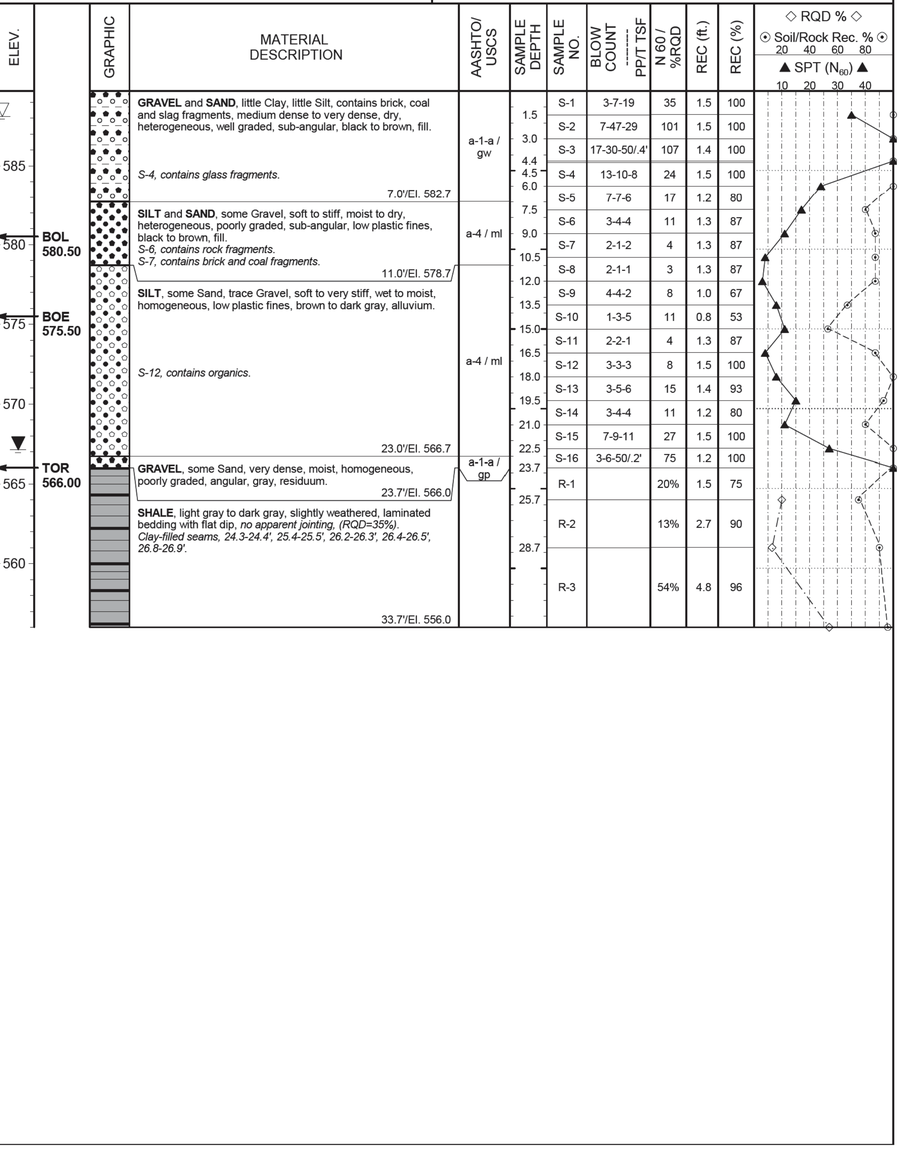
LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/07/2020 12:00 PM	HAMMER: AUTOMATIC
RWD-2	STATION: 111+07.0 OFFSET: 79.0 FT. RT.	FINISH: 10/07/2020 3:15 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	589.7 FT.

DRILLING INSPECTOR: MIKE ROMEO
DRILLER & DRILLING COMPANY: J. GILBERT 7NT

▽ 0 HR. READING - ELAPSED TIME:El. 588.1 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 567.1 ft. - 17.3 hr.



GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIVER ENGINEER No. PE081796

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 5 OF 8)

SHEET 16 OF 19

S-41009D

PLT: RJS	CKD: KA	QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_WC&RD.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION 1.22.2.24.2015.GDT - 6/1/21 15:16 - L:\CNT\PROJECTS\2019\19095 - ERIE CO\SUS.GPJ

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION 1.22.2.24.2015.GDT - 6/1/21 15:17 - L:\CNT\PROJECTS\2019\19095 - ERIE CO\SUS.GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL D

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/24/2020 9:00 AM	HAMMER: AUTOMATIC
RWD-3	STATION: 111+53.0 OFFSET: 70.0 FT. RT.	FINISH: 09/24/2020 1:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 550 ATV	3.000 IN.	0 FT. [redacted] 5 FT.	591.2 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 569.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 570.3 ft. - 19.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
590		**GRAVEL**, some Sand, little Silt, contains brick, wood and slag, very loose to medium dense, damp to dry, heterogeneous, poorly graded, angular to rounded, brown to black, fill. *S-1 and S-2, PID=0.0 ppm.*	a-2-4 / gm	1.5	S-1	9-10-6		21	0.1	7	10 20 30 40
				3.0	S-2	9-7-7		19	1.1	73	
				4.5	S-3	8-8-7		20	1.5	100	
585		*S-3, PID=6.5 ppm.*		6.0	S-4	4-6-6		16	0.9	60	
		S-4, PID=3.6 ppm.		7.5	S-5	8-7-5		16	1.1	73	
BOL 583.00		*S-5, PID=6.1 ppm.*		9.0	S-6	6-4-5		12	1.2	80	
		S-6, PID=7.9 ppm.		10.5	S-7	6-8-4		16	1.2	80	
580		12.0'/El. 579.2 *S-7 to S-15, PID=0.0 ppm.*		12.0	S-8	2-2-1		4	0.3	20	
		Fine and medium **SAND**, some Silt, very loose to medium dense, wet to moist, lensed, poorly graded, rounded, gray, alluvium.	a-2-4 / sm	13.5	S-9	1-1-1		3	0.3	20	
				15.0	S-10	2-2-3		7	1.5	100	
				16.5	S-11	3-4-4		11	1.5	100	
575		*S-10, more silt.*		18.0	S-12	3-4-6		13	1.5	100	
				19.5	S-13	6-5-4		12	1.5	100	
▽ 570		*S-15, shale in tip.* 22.3'/El. 568.9		21.0	S-14	4-4-3		9	1.5	100	
TOR 568.80		*Dry prior to coring.*		22.3	S-15	4-8-50/.3'		77	1.3	100	
		SHALE interbedded with SANDSTONE, soft to medium hard, slightly weathered, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=32%).*		24.6	R-1			0%	1.5	65	
565				26.6	R-2			45%	2.0	100	
				29.6	R-3			37%	2.8	93	
560		32.3'/El. 558.9			R-4			44%	2.4	89	

All PID readings=0.0 ppm unless otherwise noted, no visual signs of contamination or odors.

SUBSTRUCTURE UNIT:
RETAINING WALL D

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/28/2020 11:30 AM	HAMMER: AUTOMATIC
RWD-4	STATION: 112+46.0 OFFSET: 20.0 FT. RT.	FINISH: 09/29/2020 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK	3.000 IN.	0 FT. [redacted] 5 FT.	591.4 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 572.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
590		**BITUMINOUS CONCRETE.** 1.5'/El. 589.9		1.5							10 20 30 40
		GRAVEL and **SAND**, little Silt, contains traces of melted glass slag and coal, medium dense to very dense, moist to damp, heterogeneous, well graded, brown to black, fill. *Bag sample, 1.5-10.5'.*	a-1-a / gw	3.0	S-1	9-11-11		29	1.5	100	
				4.5	S-2	21-19-28		63	1.5	100	
				6.0	S-3	40-14-18		43	1.5	100	
585				7.5	S-4	14-11-15		35	1.5	100	
BOL 585.50				9.0	S-5	9-17-9		35	1.5	100	
		10.5'/El. 580.9 *S-6, PID=1.4 ppm.*		10.5	S-6	4-5-3		11	1.5	100	
580		**SAND**, some Silt, trace Gravel, very loose to loose, moist, homogeneous, poorly graded, rounded to sub-rounded, brown, fill. 15.0'/El. 576.4	a-2-4 / sm	12.0	S-7	2-1-1		3	1.3	87	
				13.5	S-8	2-1-2		4	1.2	80	
				15.0	S-9	4-3-2		7	1.4	93	
		SILT, some Sand, trace Clay, trace Gravel, very soft to soft, wet to moist, homogeneous, non-plastic, gray to olive, alluvium.		16.5	S-10	1-1-1	0.25	3	1.0	67	
575				18.0	S-11	1-1-2	0.25	4	1.5	100	
		Class. on ST-1 RWD-4A, 17.0-19.0' N.M.C.=23.1%.	A-4 / ML	19.5	S-12	WOH-WOH-1	0.25	1	1.5	100	
		22.5'/El. 568.9		21.0	S-13	WOH-WOH-1	0.25	1	1.5	100	
▽ 570		**SAND**, some Silt, trace Gravel, very loose, wet, homogeneous, poorly graded, rounded, brown gray, alluvium.		22.5	S-14	WOH-WOH-1	0.25	0	1.5	100	
		S-17, shale in tip of spoon. Boring dry at end of day, 9-28-20 Water @ 15.4' prior to coring, 9-29-20.	a-2-4 / sm	24.0	S-15	WOH-WOH-WOH	0.25	0	1.5	100	
		26.4'/El. 565.0		25.5	S-16	WOH-WOH-WOH	0.25	0	1.5	100	
TOR 565.00		**SHALE interbedded with SANDSTONE**, gray, soft to medium hard, fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=47%).*		26.4	S-17	WOH-WOH-WOH		>67	0.9	100	
560				28.4	R-1	WOH-WOH-WOH		35%	1.7	85	
				31.4	R-2	WOH-50/.4		30%	3.0	100	
555		36.4'/El. 555.0			R-3			62%	4.9	98	

All PID readings, other than indicated,=0.0 ppm; no signs of visual contamination and odors.

[1] 24-hr. Water: Boring grouted upon completion

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SIPPER ENGINEER No. PE091799

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 6 OF 8)

SHEET 17 OF 19

S-41009D

PLT: RJS | CKD: KA | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_WC&WD.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT dgn - VERSION 1.2.3.2 - 4/24/2018 0:07 - 4/21/21 15:17 - L:\DMT\PROJECTS\2019\095 - ERIE CO SSS.GPJ

SUBSTRUCTURE UNIT:
RETAINING WALL D

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/03/2020 1:30 PM	HAMMER: AUTOMATIC
RWD-5	STATION: 111+12.0 OFFSET: 0.0 FT. CL	FINISH: 11/03/2020 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 550 ATV	"NO RECORD"	0 FT. 5 FT.	601.2 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
600		**BITUMINOUS CONCRETE.** 0.6'/El. 600.6		1.5							20 40 60 80 / 10 20 30 40
		GRAVEL, SUBBASE. 1.5'/El. 599.7		3.0	S-1	5-7-6		17	0.5	33	
		GRAVEL, some Sand, some Silt, medium dense to very dense, damp, heterogeneous, poorly graded, angular to sub-rounded, brown to black, fill.	a-2-4 / gm	4.5	S-2	7-5-6		15	0.4	27	
595		9.4'/El. 591.8		6.0	S-3	3-5-7		16	0.6	40	
				7.5	S-4	11-11-11		29	0.3	20	
				9.0	S-5	21-17-12		39	1.5	100	
					S-6	50/.4'		>67	0.3	75	

BOL 580.50 NTS
BOE 575.50 NTS

All PID readings=0.0 ppm.
No visual signs of contamination or odors.
Boring terminated due to hard spoon refusal utility locations underlain USIC locator came unsure of some of the utilities.

[1] 24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 10/08/2020 10:15 AM	HAMMER: AUTOMATIC
SSB-7	STATION: 110+41.0 OFFSET: 106.0 FT. RT.	FINISH: 10/08/2020 2:15 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	602.9 FT.

DRILLING INSPECTOR: MIKE ROMEO
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 586.8 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 586.3 ft. - 19.5 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
600		**GRAVEL** and **SAND**, little Clay, little Silt, contains slag and brick fragments, loose to very dense, moist to dry, heterogeneous, well graded, sub-angular, dark gray to brown, fill.		1.5	S-1	2-3-3		8	1.0	67	20 40 60 80 / 10 20 30 40
		S-1, topsoil.		3.0	S-2	14-20-16		48	1.0	67	
		S-2, contains slag fragments.		4.5	S-3	17-16-13		39	1.5	100	
		S-3, contains brick fragments.		6.0	S-4	15-32-27		79	1.5	100	
		S-5 and S-6, contain more silt.	a-1-a / gw	7.5	S-5	6-9-20		39	1.4	93	
		10.5'/El. 592.4		9.0	S-6	6-10-14		32	1.5	100	
				10.5	S-7	8-9-8		23	1.3	87	
595				12.0	S-8	7-7-9		21	0.9	60	
		SILT and **SAND**, some Gravel, very stiff to hard, moist to damp, heterogeneous, well graded, sub-angular, low plastic fines, dark gray to brown, alluvium.	a-4 / ml	13.5	S-9	15-16-8		32	1.1	73	
		14.5'/El. 588.4		15.0	S-10	8-7-26		44	1.1	73	
		S-10, very gravelly at bottom.		16.5	S-11	17-24-23		63	1.5	100	
		SILT, little Sand, trace Clay, trace Gravel, soft to hard, moist to damp, homogeneous, non-plastic, gray to orange brown, alluvium.		18.0	S-12	44-14-17		41	1.2	80	
		S-12, sandy.		19.5	S-13	10-13-11		32	1.4	93	
		S-14 and S-15, lensed silt and sand.		21.0	S-14	1-2-2		5	1.3	87	
		S-14, PID=1.05 ppm.		22.5	S-15	3-8-9		23	1.3	87	
590		*S-16, PID=4.6 ppm.*		24.0	S-16	6-8-4		16	0.8	53	
		Class, on S-17 to S-20		25.5	S-17	1-2-7		12	0.7	47	
		N.M.C.=20.1%.		27.0	S-18	2-2-7		12	1.5	100	
		S-17, PID=30.1 ppm.		28.5	S-19	7-10-5		20	1.1	73	
		S-18 through S-19, strong gasoline odor.		30.0	S-20	1-1-1		3	1.3	87	
		S-18, PID=7.07 ppm.	A-4 / ML	31.5	S-21	1-1-2		4	0.8	53	
585		*S-20, PID=1.9 ppm.*		31.6	S-22	50/.1'		>67	0.1	100	
		31.6'/El. 571.3		33.6	R-1			0%	0.7	35	
		S-21, 51.0 ppm.		36.6	R-2			27%	3.0	100	
580		**SHALE**, light gray to dark gray, soft, fresh, laminated bedding with flat dip, *no apparent jointing, (RQD=20%).* *Calcareous, 31.6-31.8', 33.9-34.2'.*			R-3			62%	4.7	94	
575		*Clay seams, 35.7-35.8', 36.5'.*									
570		41.6'/El. 561.3									
565											

BPC 593.60
TOR 571.30
TRS 570.20
BPD 565.20

All PID readings=0.0 ppm, unless otherwise noted, no visual signs of contamination or odors.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SLEEK ENGINEER No. PE091706

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 7 OF 8)

SHEET 18 OF 19

S-41009D

PLT: RJS | CKD: KA | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_WC&WD.dgn
7/26/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - VERSION 1.2.2.4 - 2014.GDT - 4/21/21 15:17 - L:\GINTPROJECTS\2019\1905 - ERIE CO.SAS.GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
RWD-4A	112+44.0 77 ft. RT.	ST-1	17.0 to 19.0	23.1	4.9	30.9			64.2	56.9	7.3	A-4	ML		NP	NP	NP	0.184	35.1	0.184	34.8	
SSB-7	110+41.0 106 ft. RT.	S-17 to 20	24.0 to 30.0	20.1	6.7	15.6			77.7	68.7	9.0	A-4	ML		NP	NP	NP					

LABORATORY TEST SUMMARY - SHEAR AND CONSOLIDATION

				SHEAR STRENGTH PARAMETERS					CONSOLIDATION PARAMETERS						
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	C (TSF.)	ϕ (DEG.)	C ' (TSF.)	ϕ' (DEG.)	TEST METHOD	INITIAL MOIST DENSITY (PCF)	e_0	PRECONSOLID. PRESSURE Pp (TSF)	COMPRESSION INDEX (Cc)	RECOMPRESSION INDEX (Cr)	COEFF. OF CONSOLID. (cv FT2/YR)	PERMEABILITY k (CM/SEC)
RWD-4A	112+44.0 77 ft. RT.	ST-1	17.0 to 19.0	0.184	35.1	0.184	34.8		119.9	0.73	1.20	0.100	0.030	307.330	

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
SSB-7	110+41.0 106 ft. RT.	S-3 to 7	3.0 to 10.5	SOIL	7.5	5,695	400	150	No	No	No

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOL	BOTTOM OF LEVELING PAD ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK S. SWEET ENGINEER No. PE091780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
STATE STREET
STA. 110+08.25 TO STA. 112+46.00
RETAINING WALLS C & D / ABUTMENT 2 RETAINING WALL

STRUCTURE BORINGS (SHEET 8 OF 8)

SHEET 19 OF 19

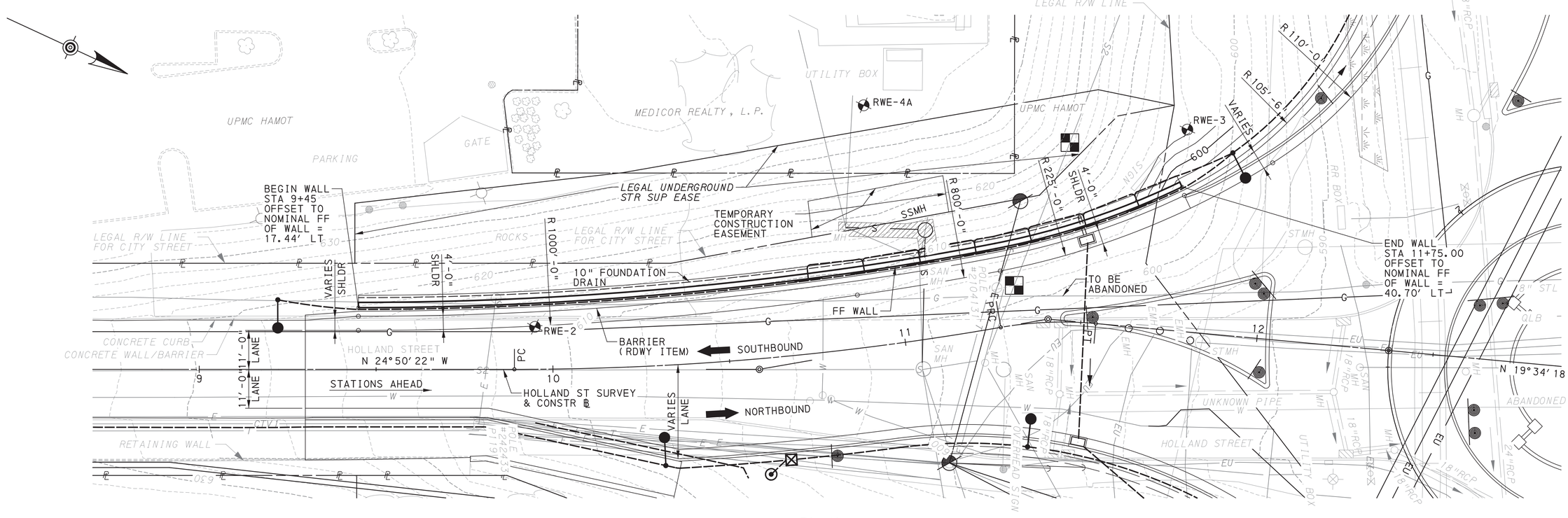
S-41009D

M:_2019\095\exhibits\structure\19095_strb_WC&MD.dgn
7/26/2022

PLT: RJS | CKD: KA | QA/QC: MAS

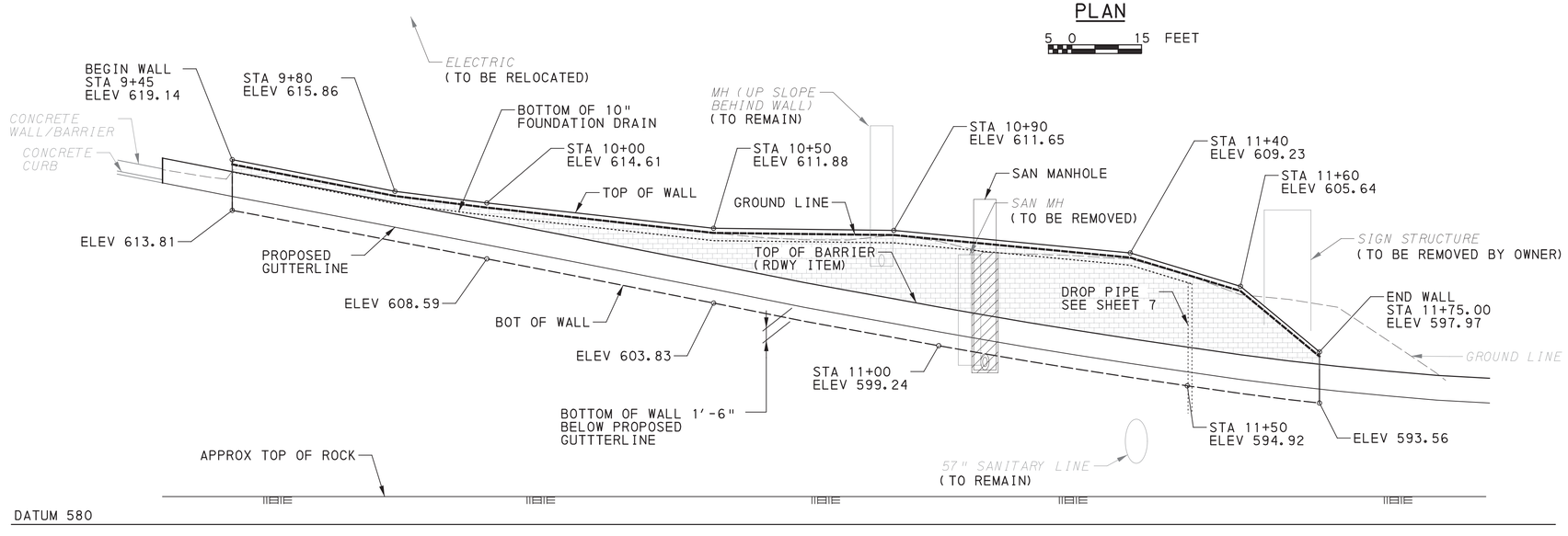
PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTgp001.dgn



PLAN

5 0 15 FEET



ELEVATION

5 0 15 FEET (HORIZONTAL)

2.5 0 7.5 FEET (VERTICAL)

REFERENCES:

FOR TYPICAL SECTION, SEE SHEET 3

FOR VERTICAL AND HORIZONTAL ALIGNMENT DATA, SEE SHEET 2

FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 2

FOR GENERAL NOTES, SEE SHEET 2

LEGEND:

- STRUCTURE BORING
- DIRECTION OF TRAFFIC FLOW
- ROADWAY INLET (SEE ROADWAY DRAWINGS FOR TYPE)
- FLOWABLE FILL, SEE UTILITY RELOCATION PLAN
- UTILITY TEST HOLE
- LIGHTING POLE
- POST LIGHT
- LED LINEAR FLOOD LIGHT
- LIGHTING CONDUIT
- JUNCTION BOX; JB-25 ENCASED IN PLAIN CEMENT CONCRETE PAVEMENT (SEE LIGHTING PLAN)

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

GENERAL PLAN AND ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE056071-E

PENNSYLVANIA PE NO. PE-

DATE: 8-22-2022

PREPARED BY:

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

RECOMMENDED AUGUST 22, 2022

Mark A. Nicholson Digitally signed by Mark A. Nicholson Date: 2022.08.22 14:59:56 -04'00'

DISTRICT BRIDGE ENGINEER

SHEET 1 OF 12 + SUPPLEMENTAL DRAWINGS

S-41008

DES: KCL	CKD: REB	DWG: JP	CKD: KMH

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mnsconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTgn001.dgn

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4 (DM-4), DECEMBER 2019

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

SOIL NAIL DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES AND CONFORMANCE WITH FHWA GEOTECHNICAL ENGINEERING CIRCULAR #7 SOIL NAIL WALLS (FEB. 2015)

GENERAL:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/ D1.5: 2015 BRIDGE WELDING CODE (USE AASHTO/ AWS D1.1/ D1.1M: 2015 FOR WELDING NOT COVERED IN AASHTO/ AWS D1.5M/ D1.5: 2008), AND CONTRACT SPECIAL PROVISIONS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE INDICATED.

ARCHITECTURAL TREATMENT:

APPLY ARCHITECTURAL SURFACE TREATMENT TO TH FRONT FACE OF WALL TO THE LIMITS INDICATED ON THE PLANS.

APPLY AESTHETIC COLOR COATING (LIGHT GREY) TO FRONT FACE OF WALL AND WALL CAP AS INDICATED ON PLANS.

UTILITIES:

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTIONS 105.06 AND 107.12.

CONCRETE:

SHOTCRETE FACING: SECTION 1043
USE CLASS A CEMENT CONCRETE IN WALL AND WALL CAP.

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

REINFORCEMENT:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/ A 615M, A 996/ A996 M OR A 706/ A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/ A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

ALL REINFORCEMENT BARS ARE TO BE EPOXY-COATED.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

REPAIR EPOXY COATING ON ALL FIELD CUT ENDS OF REINFORCEMENT BARS AS REQUIRED.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

FOUNDATIONS:

BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATION.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

DO NOT LEAVE AN EXCAVATED CUT-FACE EXPOSED FOR OVER 24-HOURS.

CONSTRUCT THE SOIL NAIL WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS, PLANS, AND DETAILS.

MEASURE NAIL SPACING ALONG THE FACE OF EXCAVATION.

ALL NAILS ARE NO. 10, 75 KSI STEEL.

USE NAIL GROUT WITH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1,700 PSI AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.

TEMPORARY CASING MAY BE NECESSARY TO MAINTAIN A CLEAN OPEN HOLE DRILLED TO THE REQUIRED DIMENSIONS AND INCLINATION.

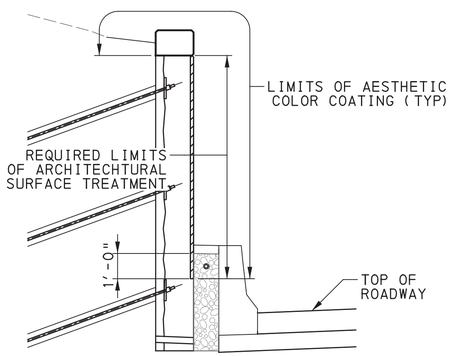
FOR PROOF TEST NAILS, DRILL THE ENTIRE LENGTH OF NAIL. PRIOR TO GROUTING, INSTALL A FREE STRESSING SLEEVE TO ENSURE FULL TRANSFER OF TEST LOAD TO THE DESIGN BOND ZONE DURING TESTING. REMOVE THE FREE STRESSING SLEEVE AFTER TESTING IS COMPLETED ON THE TEST NAIL.

FOR PROOF TEST NAILS, USE A BOND LENGTH OF 13.0 FEET, MINIMUM UNBONDED LENGTH OF 11.0 FEET, AND HOLE DIAMETER OF 8.0 INCHES.

USE A DESIGN TEST LOAD (DTL) OF 19.6 KIPS.

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN & ELEVATION
2	GENERAL NOTES
3	TYPICAL SECTIONS & SUMMARY OF QUANTITIES
4	STAKE-OUT PLAN
5	SOIL NAIL LAYOUT
6	MISCELANEOUS DETAILS
7	DRAINAGE DETAILS & REINFORCING BAR SCHEDULE
8	WALL REINFORCEMENT SCHEDULE
9	STRUCTURAL BORINGS (SHEET 1 OF 4)
10	STRUCTURAL BORINGS (SHEET 2 OF 4)
11	STRUCTURAL BORINGS (SHEET 3 OF 4)
12	STRUCTURAL BORINGS (SHEET 4 OF 4)

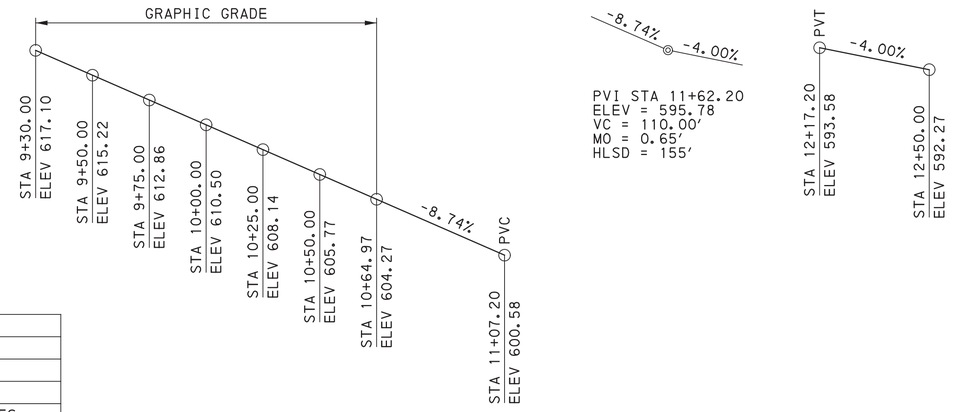
SUPPLEMENTAL DRAWINGS		
DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
SUBSURFACE DRAINS	RC-30M	11/30/2021
ELECTRICAL DETAILS	BC-721M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1/31/2019
BRIDGE DRAINAGE	BC-751M	1/31/2019



COATING LIMITS

VERTICAL ALIGNMENT DATA

HOLLAND ST
SURVEY & CONSTR ℄



HORIZONTAL ALIGNMENT DATA

HOLLAND ST
SURVEY & CONSTR ℄

TANGENT	PI STA 10+58.38	PI STA 11+40.86	TANGENT
N 24°50'22" W	Δ 9° 52' 22" (LT)	Δ 15° 08' 26" (RT)	N 19°34'18" W
	D 7° 08' 39"	D 56° 10' 20"	
	T 69.27'	T 13.56'	
	L 138.19'	L 26.95'	
	R 802.00'	R 102.00'	
	PC STA 9+89.11	PRC STA 11+27.30	
	PRC STA 11+27.30	PT STA 11+54.26	
	SUPERELEVATE = N/A	SUPERELEVATE = N/A	

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

GENERAL NOTES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN M. HARTNETT
ENGINEER
PE056077-E

RECOMMENDED AUGUST 22, 2022

SHEET 2 OF 12

S-41008

DES: KCL | CKD: REB | DWG: JP | CKD: KMH

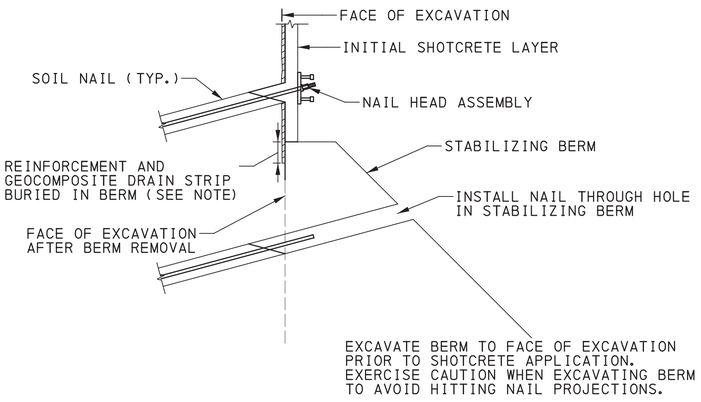
PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\mpsconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTts001.dgn

ALTERNATE STRUCTURE ITEMS (2)			
ITEM NO	DESCRIPTION	UNIT	TOTAL
8710-0001	SOIL NAIL RETAINING WALL, S-41008	LS	LUMP SUM
8620-0003	PREFABRICATED WALL	LS	LUMP SUM

TABULATION OF STRUCTURE ITEMS				
ITEM NO	DESCRIPTION		UNIT	TOTAL
8710-0001	SOIL NAIL RETAINING WALL	(2)	LS	
(1)	SOIL NAILS	(2)	LF	3420
(1)	INITIAL SHOTCRETE LAYER	(2)	SF	1875
(1)	GEOCOMPOSITE DRAINAGE MATERIAL	(2)	LF	475
(1)	UTILITY TEST HOLE	(2)	EA	2
(1)	CLASS 1 EXCAVATION	(3)	CY	11
(1)	CLASS 3 EXCAVATION		CY	180
(1)	10" FOUNDATION DRAIN	(4)	LF	230
(1)	NO 57 COARSE AGGREGATE	(3)(5)	CY	10
(1)	CLASS A CEMENT CONCRETE		CY	95
(1)	AESTHETIC COLOR COATING (LIGHT GRAY)	(2)	SY	275
AND				
1002-0192	REINFORCEMENT BARS, EPOXY COATED	(6)	LB	7110

1. COMPONENT ITEMS IN SOIL NAIL RETAINING WALL, S-41008 ARE GIVEN FOR INFORMATION ONLY.
2. SEE SPECIAL PROVISIONS
3. FOR TOP OF WALL DRAINAGE
4. SEE PUBLICATION 408 SECTIONS 1001.3(d) AND SECTION 610. PVC DROP PIPE AND REQUIRED COUPLINGS, CLEANOUTS, ETC. ARE INCIDENTAL
5. CLASS 1 GEOTEXTILE FABRIC IS INCIDENTAL
6. FOR AS-DESIGNED STRUCTURE, INCLUDED IN BRIDGE BID ITEMS. FOR ALTERNATE DESIGNS, INCLUDE IN STRUCTURE LUMP SUM BID ITEM.

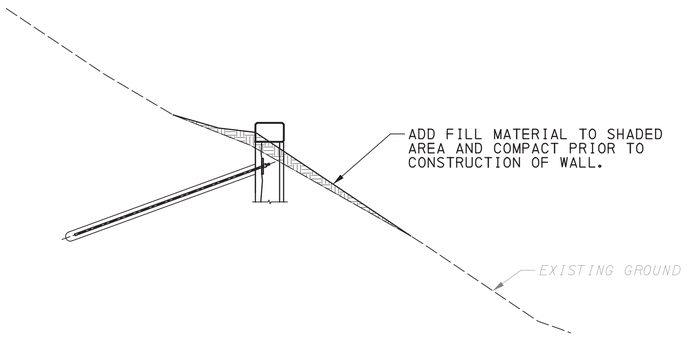


TEMPORARY STABILIZING BERM DETAIL

(INCIDENTAL TO LUMP SUM SOIL NAIL RETAINING WALL)

NOT TO SCALE

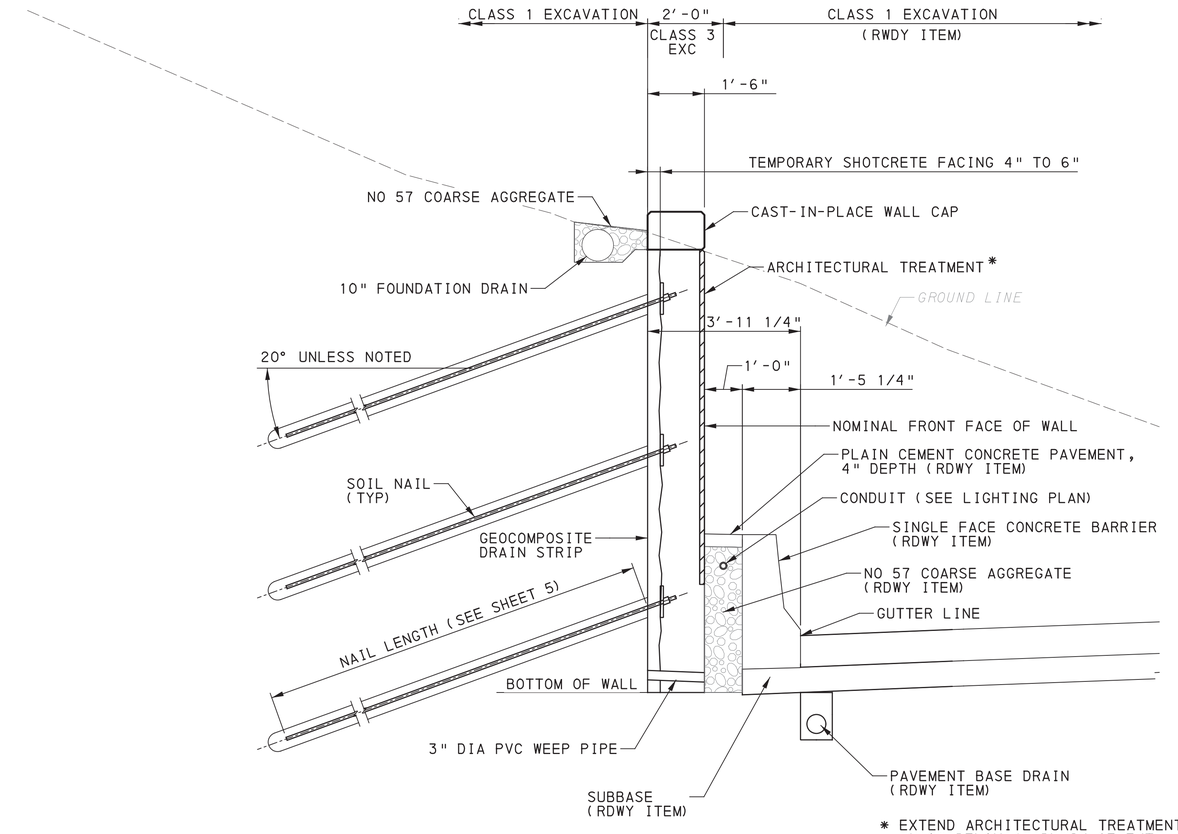
NOTE: OVER-EXCAVATE TO PROVIDE SUFFICIENT LAP LENGTHS FOR REINFORCEMENT AND DRAIN STRIP. BACKFILL WITH SOIL PRIOR TO APPLYING SHOTCRETE



DETAIL AT FILL AREAS

(INCIDENTAL TO LUMP SUM SOIL NAIL RETAINING WALL)

2 0 2 4 FEET



TYPICAL SECTION

(LOOKING STATIONS AHEAD)

1 0 1 2 FEET

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

TYPICAL SECTION & SUMMARY OF QUANTITIES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN M. HARTNETT
ENGINEER
PE056077-E

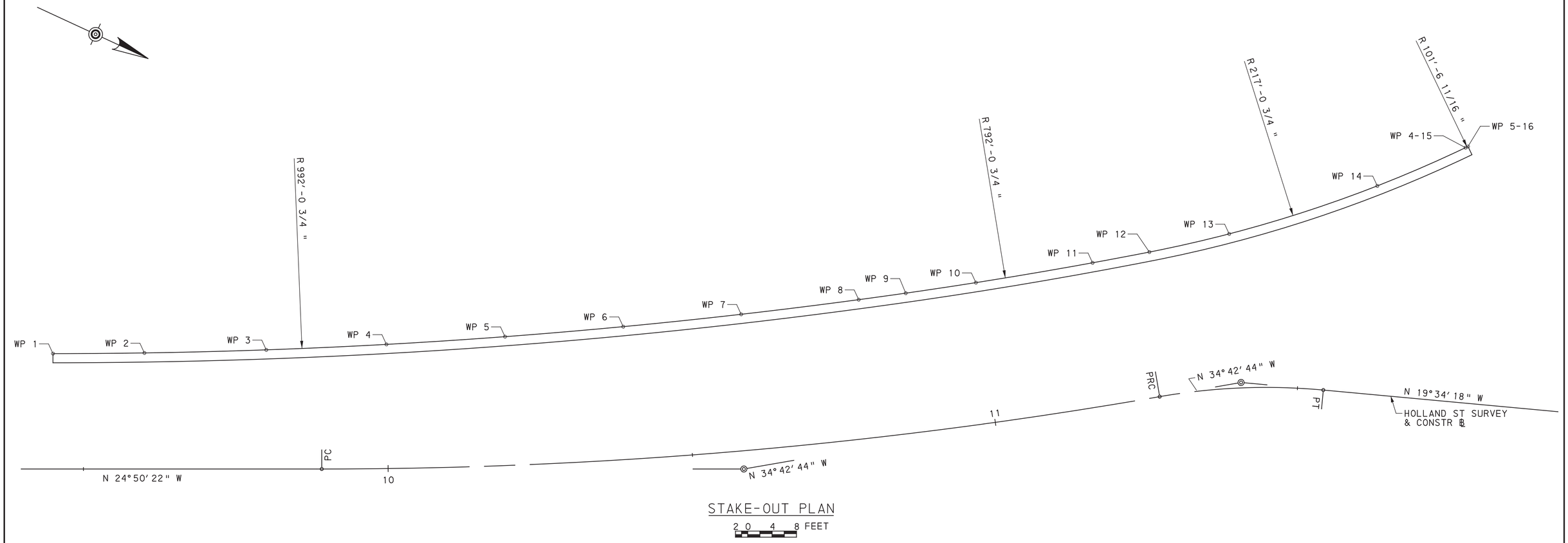
RECOMMENDED AUGUST 22, 2022

SHEET 3 OF 12

S-41008

DES: KCL | CKD: REB | DWG: JP | CKD: KMH

PLOTTED: 8/19/2022



STAKE-OUT PLAN

2 0 4 8 FEET

WORK POINTS				
WORK POINTS	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
WP 1	9+45.00	18.94' LT	725788.3633	1335341.9784
WP 2	9+60.00	19.05' LT	725801.9279	1335335.5743
WP 3	9+80.00	19.56' LT	725819.8659	1335326.7152
WP 4	10+00.00	20.38' LT	725837.3892	1335317.6197
WP 5	10+20.00	21.14' LT	725854.5127	1335308.2974
WP 6	10+40.00	21.79' LT	725871.4312	1335298.6511
WP 7	10+60.00	22.34' LT	725888.1415	1335288.6841
WP 8	10+80.00	22.79' LT	725904.6404	1335278.3994
WP 9	10+88.02	22.94' LT	725911.1949	1335274.1876
WP 10	11+00.00	23.15' LT	725920.9152	1335267.7855
WP 11	11+20.00	23.50' LT	725936.9217	1335256.7872
WP 12	11+29.25	23.69' LT	725944.6439	1335251.2711
WP 13	11+40.00	25.34' LT	725955.2749	1335243.0679
WP 14	11+60.00	34.18' LT	725974.0254	1335225.7033
WP 15	11+73.84	41.75' LT	725984.5296	1335213.9303
WP 16	11+74.23	41.98' LT	725984.8158	1335213.5835

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN M. HARTNETT
ENGINEER
PE056077-E

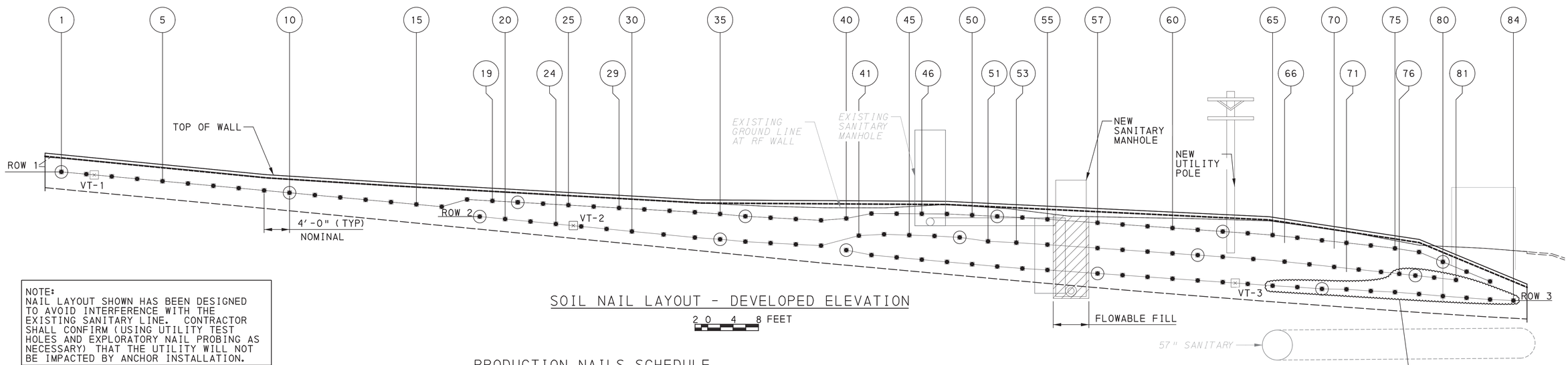
RECOMMENDED AUGUST 22, 2022

SHEET 4 OF 12

S-41008

DES: BDL | CKD: JP | DWG: BDL | CKD: KCL

OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTsp001.dgn



NOTE:
NAIL LAYOUT SHOWN HAS BEEN DESIGNED TO AVOID INTERFERENCE WITH THE EXISTING SANITARY LINE. CONTRACTOR SHALL CONFIRM (USING UTILITY TEST HOLES AND EXPLORATORY NAIL PROBING AS NECESSARY) THAT THE UTILITY WILL NOT BE IMPACTED BY ANCHOR INSTALLATION.

SOIL NAIL LAYOUT - DEVELOPED ELEVATION

2 0 4 8 FEET

PRODUCTION NAILS SCHEDULE

ROW 1			
NAIL	STATION	ELEVATION	NAIL LENGTH
(1-1)	9+47.57	616.30	24 FT
1-2	9+51.49	615.94	24 FT
1-3	9+55.48	615.57	24 FT
1-4	9+59.48	615.21	24 FT
1-5	9+63.47	614.84	24 FT
1-6	9+67.46	614.47	24 FT
1-7	9+71.46	614.11	24 FT
1-8	9+75.45	613.74	24 FT
1-9	9+79.44	613.37	24 FT
(1-10)	9+83.43	613.01	24 FT
1-11	9+87.42	612.64	24 FT
1-12	9+91.47	612.27	24 FT
1-13	9+95.56	611.91	24 FT
1-14	9+99.66	611.54	24 FT
1-15	10+03.75	611.17	24 FT
1-16	10+07.85	610.81	24 FT
1-17	10+11.95	611.95	24 FT
1-19	10+16.04	611.72	24 FT
(1-21)	10+20.14	611.50	24 FT
1-23	10+24.24	611.28	24 FT
1-25	10+28.34	611.05	24 FT
1-27	10+32.45	610.83	24 FT
1-29	10+36.55	610.61	24 FT
1-31	10+40.65	610.38	24 FT
1-33	10+44.76	610.16	24 FT
1-34	10+48.86	609.94	24 FT
1-35	10+52.97	609.66	24 FT
(1-36)	10+57.07	609.28	24 FT
1-37	10+61.18	609.07	24 FT

ROW 1 (CONTINUED)			
NAIL	STATION	ELEVATION	NAIL LENGTH
1-38	10+65.29	608.86	24 FT
1-39	10+69.39	608.65	24 FT
1-40	10+73.50	608.95	30 FT
1-42	10+77.61	609.73	30 FT
1-44	10+81.72	609.71	30 FT
1-46	10+85.83	609.68	30 FT
1-48	10+89.94	609.66	30 FT
1-50	10+94.05	609.47	30 FT
(1-52)	10+98.16	609.28	30 FT
1-54	11+02.27	609.09	30 FT
1-55	11+06.38	608.82	30 FT
1-56	NO ANCHOR	-	-
1-57	11+14.61	608.26	30 FT
1-58	11+18.72	607.99	30 FT
1-59	11+22.83	607.71	30 FT
1-60	11+26.94	607.44	30 FT
1-61	11+30.24	607.16	30 FT
(1-62)	11+33.45	606.89	30 FT
1-63	11+36.63	606.61	30 FT
1-65	11+39.77	606.32	30 FT
1-67	11+42.87	605.91	30 FT
1-69	11+45.90	605.50	30 FT
1-71	11+48.85	605.09	30 FT
1-73	11+51.73	604.68	30 FT
1-75	11+54.60	604.23	30 FT
1-78	11+58.26	603.65	30 FT
(1-80)	11+61.74	602.09	30 FT
1-82	11+65.26	600.54	24 FT
1-83	11+68.75	599.00	24 FT

ROW 2			
NAIL	STATION	ELEVATION	NAIL LENGTH
(2-18)	10+14.00	609.25	24 FT
2-20	10+18.10	608.86	24 FT
2-22	10+22.21	608.46	24 FT
2-24	10+26.32	608.07	24 FT
2-26	10+30.42	607.68	24 FT
2-28	10+34.53	607.29	24 FT
2-30	10+38.64	606.90	24 FT
2-32	10+43.78	606.42	24 FT
2-34	10+48.86	605.94	24 FT
(2-35)	10+52.97	605.66	24 FT
2-36	10+57.07	605.28	24 FT
2-37	10+61.18	605.07	24 FT
2-38	10+65.29	604.86	24 FT
2-39	10+69.39	604.65	24 FT
2-41	10+75.56	606.23	30 FT
2-43	10+79.67	606.45	30 FT
2-45	10+83.79	606.31	30 FT
2-47	10+87.90	606.18	30 FT
(2-49)	10+92.02	605.96	30 FT
2-51	10+96.65	605.34	30 FT
2-53	11+01.29	605.13	30 FT
2-55	11+06.38	604.82	30 FT
2-56	NO ANCHOR	-	-
2-57	11+14.61	604.26	30 FT
2-58	11+18.72	603.99	30 FT
2-59	11+22.83	603.71	30 FT
2-60	11+26.94	603.44	30 FT
(2-61)	11+30.24	603.16	30 FT
2-62	11+33.45	602.89	30 FT
2-64	11+37.34	602.55	30 FT
2-66	11+41.27	602.12	30 FT
2-68	11+44.36	601.71	30 FT
2-70	11+47.37	601.29	30 FT
2-72	11+50.31	600.88	30 FT
*2-74	11+52.92	600.51	30 FT
*2-76	11+55.24	600.20	30 FT
*(2-77)	11+57.68	599.93	30 FT
*2-79	11+60.43	599.61	30 FT
*2-81	11+63.61	599.24	24 FT

ROW 3			
NAIL	STATION	ELEVATION	NAIL LENGTH
(3-40)	10+73.50	603.95	30 FT
3-42	10+77.61	603.17	30 FT
3-44	10+81.72	602.81	30 FT
3-46	10+85.83	602.45	30 FT
3-48	10+89.94	602.09	30 FT
3-50	10+94.05	601.72	30 FT
3-52	10+98.16	601.36	30 FT
3-54	11+02.27	601.05	30 FT
3-55	11+06.38	600.82	30 FT
3-56	NO ANCHOR	-	-
(3-57)	11+14.61	600.26	30 FT
3-58	11+18.72	599.99	30 FT
3-59	11+22.83	599.71	30 FT
3-60	11+26.94	599.44	30 FT
3-61	11+30.24	599.16	30 FT
3-62	11+33.45	598.89	30 FT
3-63	11+36.63	598.61	30 FT
*3-65	11+39.77	598.32	30 FT
*3-67	11+42.87	598.10	30 FT
*(3-69)	11+45.90	597.83	30 FT
*3-71	11+48.85	597.76	30 FT
*3-73	11+51.73	597.49	30 FT
*3-75	11+54.60	597.32	30 FT
*3-78	11+58.26	597.01	24 FT
*3-80	11+61.74	596.68	24 FT
*3-82	11+65.26	596.42	24 FT
*3-83	11+68.75	596.15	24 FT
*3-84	11+72.20	595.98	24 FT

NAILS MARKED WITH AN "*" HAVE AN INCLINATION OF 10°

VERIFICATION SACRIFICIAL NAIL SCHEDULE

NAIL	STATION	ELEVATION	NAIL LENGTH
VT-1	9+52.74	615.82	24 FT
VT-2	10+29.14	607.82	24 FT
VT-3	11+34.45	598.81	30 FT

LEGEND

- SOIL NAIL BAR AND PLATE
- PROOF TEST NAIL
- VERIFICATION TEST (SACRIFICIAL NAIL)
- (1-1) PROOF TEST NAIL
- 1-1 (ROW NO. — COLUMN NO.)

REFERENCES

FOR SOIL NAIL DETAILS SEE SHEET 6

FOR WALL TYPICAL SECTION & DETAILS SEET SHEETS 3 & 6

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

SOIL NAIL LAYOUT

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN M. HARTNETT ENGINEER PE056077-E

RECOMMENDED AUGUST 22, 2022

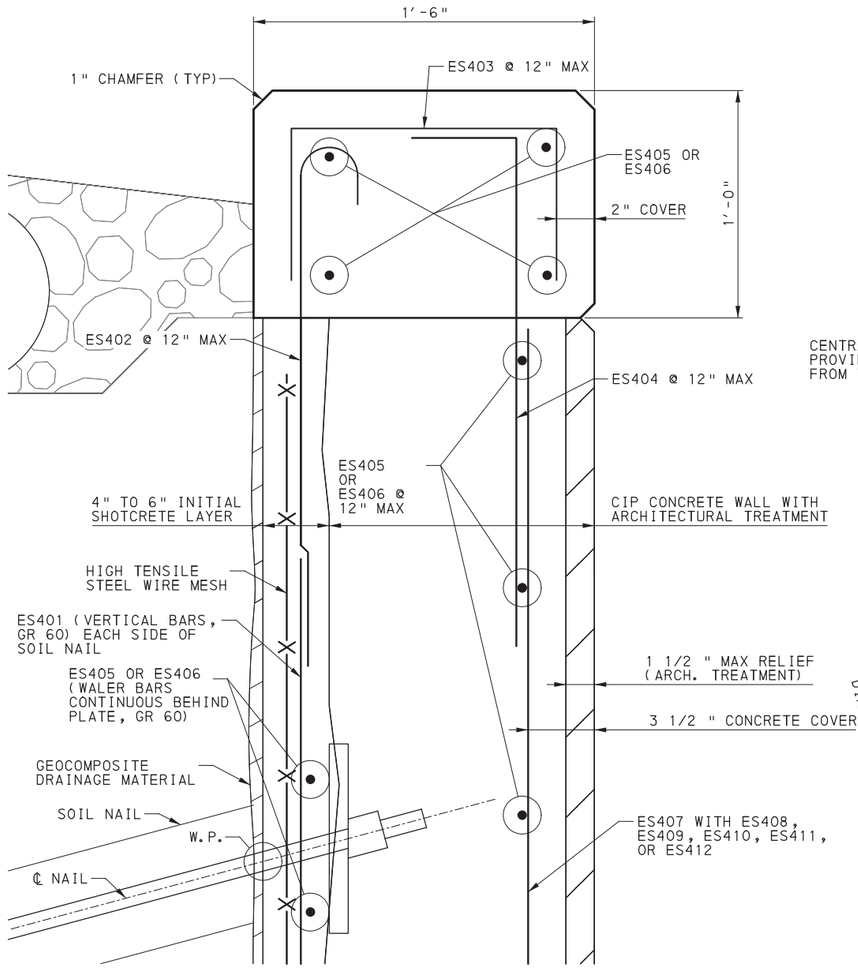
SHEET 5 OF 12

S-41008

DES: KMH | CKD: BDL | DWG: BDL | CKD: KMH

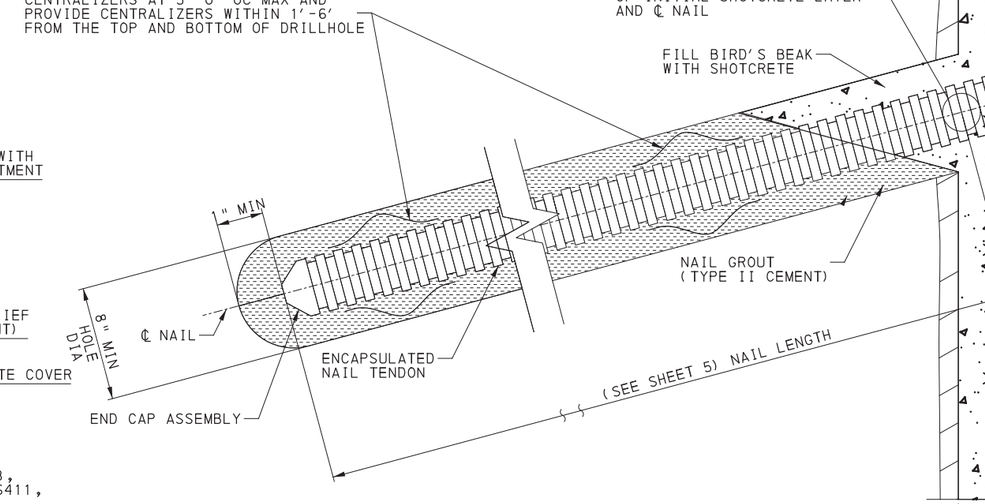
PLOTTED: 8/19/2022

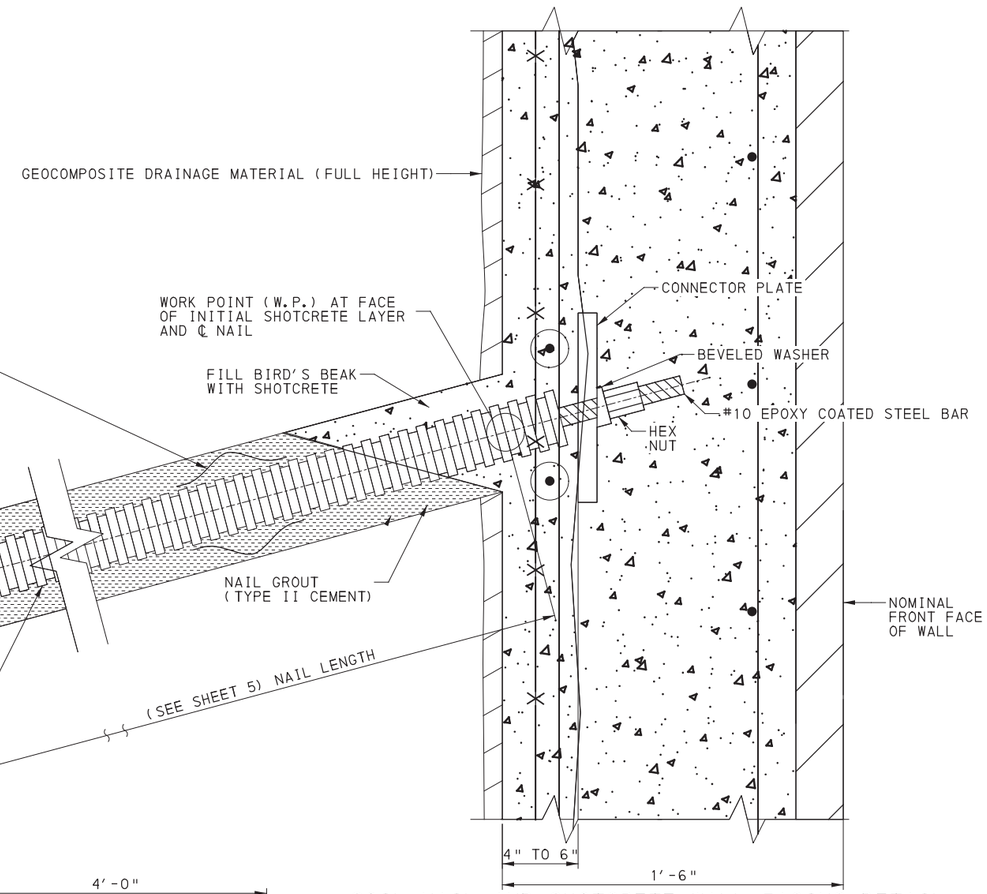
OPERATOR:
FILE NAME: \\mnsconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTn1001.dgn



WALL & COPING REINFORCEMENT DETAIL

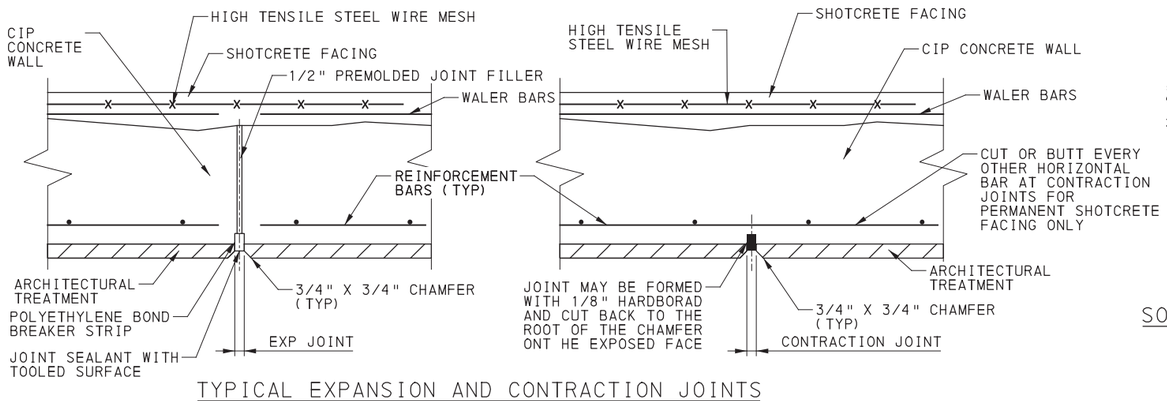
NOT TO SCALE





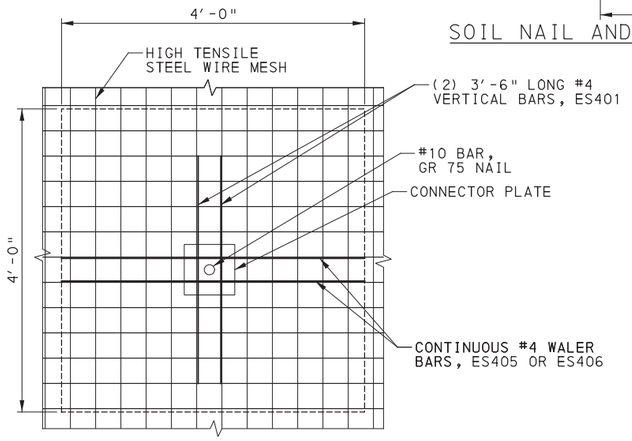
SOIL NAIL AND SHOTCRETE WALL FACING DETAIL

NOT TO SCALE



TYPICAL EXPANSION AND CONTRACTION JOINTS

NOT TO SCALE



SOIL NAIL REINFORCEMENT ELEVATION

NOT TO SCALE

NOTE:
EXPANSION JOINTS IN CIP CONCRETE WALL TO BE SPACED EVENLY, LOCATED AT A MAXIMUM SPACING OF 75' (± 2') CENTER TO CENTER, CENTERED BETWEEN NAILS. CONTRACTION JOINTS IN CIP CONCRETE WALL TO BE SPACED EVENLY, LOCATED AT A MAXIMUM SPACING OF 25'(± 2') CENTER TO CENTER. DO NOT INSTALL EXPANSION AND CONTRACTION JOINTS THROUGH TEMPORARY SHOTCRETE FACING.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

MISCELLANEOUS DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN M. HARTNETT ENGINEER PE056077-E

RECOMMENDED AUGUST 22, 2022

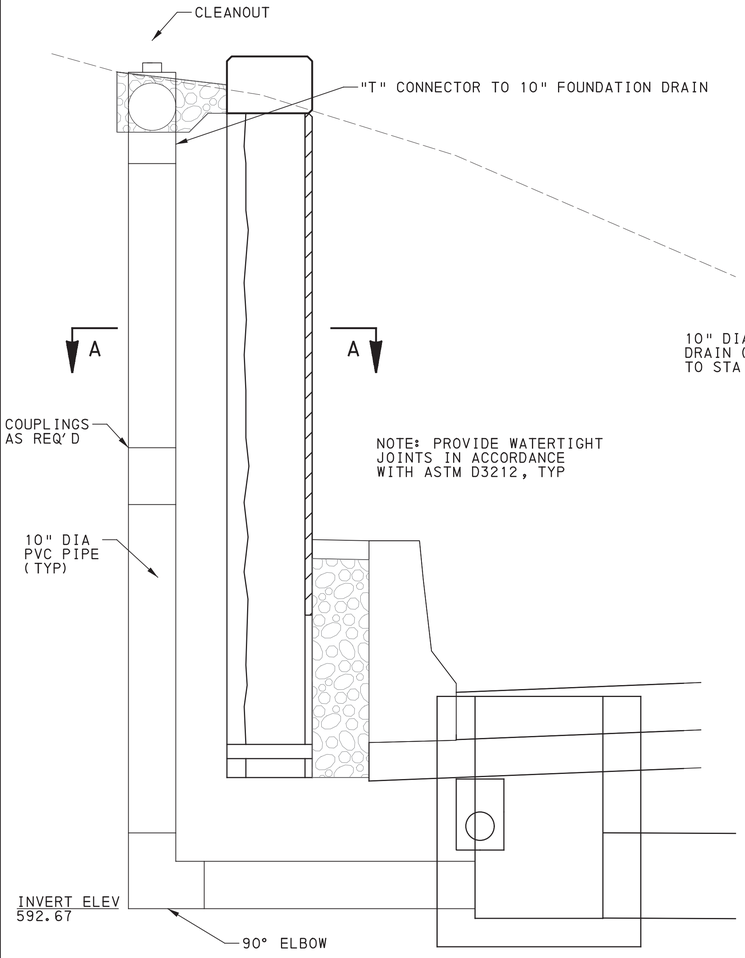
SHEET 6 OF 12

S-41008

DES: KMH | CKD: BDL | DWG: BDL | CKD: KMH

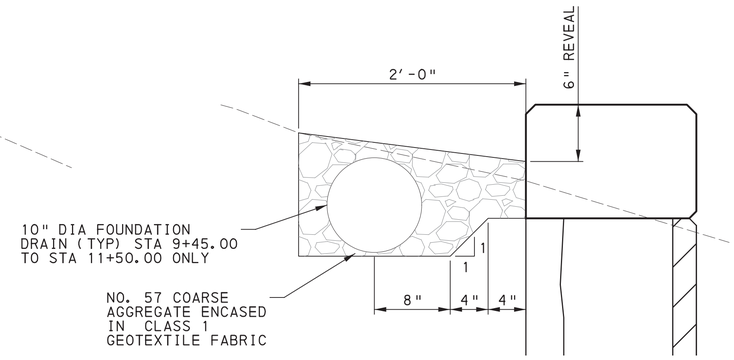
PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTmd001.dgn



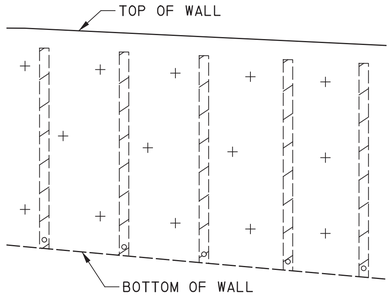
DROP PIPE DETAIL AT STA 11+50.00

NOT TO SCALE



TOP OF WALL DRAINAGE SECTION STA 9+45.00 TO 11+75.00 U.N.

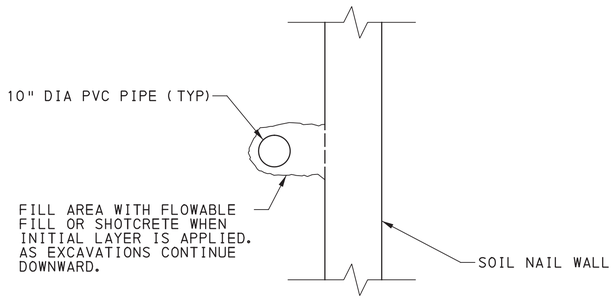
NOT TO SCALE



GEOCOMPOSTIE DRAIN STRIP DETAIL

NOT TO SCALE

PLACE BETWEEN ANCHORS AT NOMINAL 4' SPACING (5' MAX)



SECTION A-A

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

DRAINAGE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN M. HARTNETT ENGINEER PE056077-E

RECOMMENDED AUGUST 22, 2022

SHEET 7 OF 12

S-41008

DES: KMH | CKD: BDL | DWG: BDL | CKD: KMH

PLOTTED: 8/19/2022

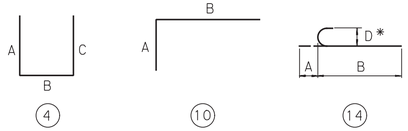
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTdd001.dgn

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
Wall Slab											
ES401	4	250	3'-6"	STR							
ES402	4	240	4'-4"	14	6	3'-10"					
ES403	4	240	2'-6"	4	9"	1'-2"	9"				
ES404	4	240	4'-5"	10	8"	3'-10"					
ES405	4	123	30'-0"	STR							BEND HORZIONTAL RADIUS IN FIELD
ES406	4	41	0	STR							BEND HORZIONTAL RADIUS IN FIELD
ES407	4	240	4'-3"	STR							VERTICAL BARS AT BASE OF WALL
ES408	4	69	3'-3" TO 5'-10"	STR							VERTICAL BARS STA. 9+80 TO STA. 10+50
											LAPS WITH ES407
ES409	4	40	5'-11" TO 9'-4"	STR							VERTICAL BARS STA. 10+50 TO STA. 10+90
											LAPS WITH ES407
ES410	4	52	9'-5" TO 11'-3"	STR							VERTICAL BARS STA. 10+90 TO STA. 11+40
											LAPS WITH ES407
ES411	4	25	9'-5" TO 11'-2"	STR							VERTICAL BARS STA. 11+40 TO STA. 11+60
											LAPS WITH ES407
ES412	4	18	3'-6" TO 9'-1"	STR							VERTICAL BARS STA. 11+60 TO STA. 11+75
											LAPS WITH ES407

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS



NOTES:
1. VA. = VARY
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO BC-736M.
3. FIGURES IN CIRCLES SHOW TYPES.
4. "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
5. PREFIX "E" DENOTES EPOXY COATED REINFORCEMENT BARS.
6. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
7. DO NOT USE RAIL STEEL (A616/A616M) FOR FOOTINGS AND WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.
8. FOR GENERAL NOTES, SEE SHEET 2.

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL KEVIN M. HARTNETT ENGINEER PE056077-E

BMS STR ID: 25-4034-0070-1086 MPMS PROJ: 108952 BRKEY: 69238

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET
STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E
SOIL NAIL RETAINING WALL

WALL REINFORCEMENT SCHEDULE

RECOMMENDED AUGUST 22, 2022

SHEET 8 OF 12

S-41008

DES: KMH | CKD: LAW | DWG: BDL | CKD: LAW

PLOTTED: 8/19/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\wall_HS_W\sheets\FINAL\wall_HS_WSTrb001.dgn

GENERAL NOTES

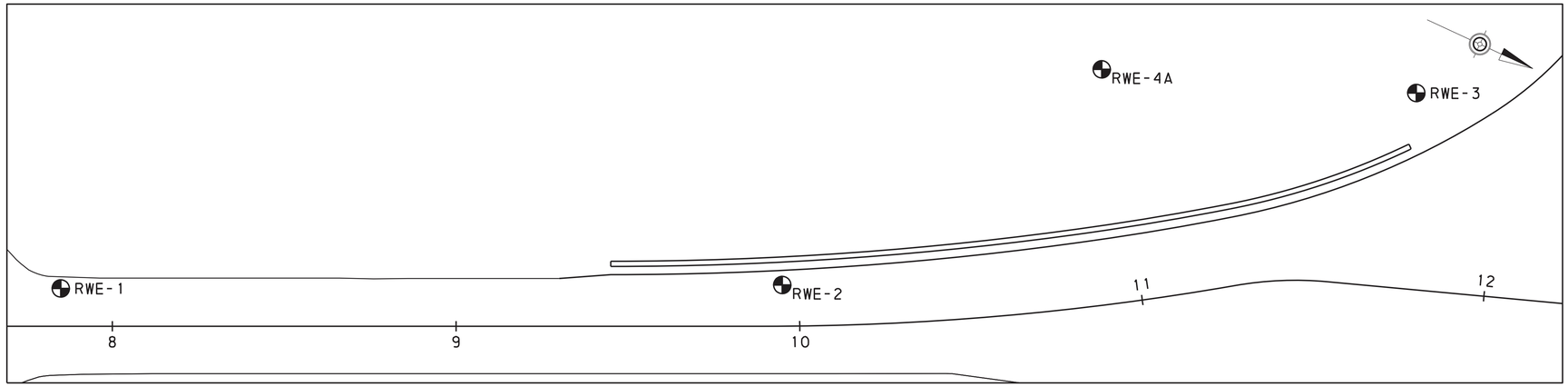
THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION



BORING LOCATION LAYOUT

SCALE

20 FEET 0 20 FEET

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Mark A. Styler

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST

10/19/2021

DATE:

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. STYLER ENGINEER No. PE061780

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET

STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E

STRUCTURE BORINGS (SHEET 1 OF 4)

Christopher T. Fox, P.E.

Digitally signed by Christopher T. Fox, P.E.
Date: 2022.08.23 07:13:42 -04'00'

DISTRICT GEOTECHNICAL ENGINEER DATE

SHEET 9 OF 12

M:\2019\095\exhibits\structure\19095_strb_RWE.dgn
7/29/2022

PLT: RJS | CKD: GKW | QA/QC: MAS

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/05/2020 11:00 PM	HAMMER: AUTOMATIC
RWE-1	STATION: 7+85.0 OFFSET: 11.0 FT. LT.	FINISH: 11/05/2020 12:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. 5 FT.	631.0 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
630	UNS	**UNSAMPLED.** *Vacuum truck used to remove material, 0.0-10.5'; to avoid hitting utilities while drilling.*									
		10.5'/El. 620.5		10.5							
625		**SILT**, little Sand, very soft to hard, moist to damp, homogeneous, low plastic fines, gray, alluvium.		12.0	S-1	WOH-WOH-1 **1.00**	1	1.5	100		
				13.5	S-2	1-1-2 **0.50**	4	1.5	100		
				15.0	S-3	WOH-WOH-2 **1.00**	3	1.5	100		
620				16.5	S-4	5-8-14 **4.50**	29	1.5	100		
			a-4 / ml	18.0	S-5	9-14-12 **4.50**	35	1.5	100		
		S-6, more sand.		19.5	S-6	5-10-12 **1.50**	29	1.5	100		
615				21.0	S-7	5-7-12 **3.00**	25	1.5	100		
				22.5	S-8	9-12-13 **2.50**	33	1.5	100		
				24.0	S-9	6-6-7 **3.50**	17	1.5	100		
610		25.5'/El. 605.5			S-10	4-6-7	17	1.5	100		

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1]24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/05/2020 10:30 AM	HAMMER: AUTOMATIC
RWE-2	STATION: 9+95.0 OFFSET: 12.0 FT. LT.	FINISH: 11/05/2020 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 550 ATV	"NO RECORD"	0 FT. 5 FT.	610.8 FT.

DRILLING INSPECTOR: STEVEN FRANK
DRILLER & DRILLING COMPANY: C. PIERCE
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT	PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
630											
625											
620											
615											
610	UNS	**UNSAMPLED.** *Visual classification:* *0.0-0.5', Bituminous Concrete* *0.0-2.5': Bricks and sandstone blocks, clay tiles, fill.* *Vacuum truck used to check for utilities, 0.0-10.5'.* *Silt, 2.5-10.5'.*									
		10.5'/El. 600.3		10.5	S-1	5-5-6 **4.00**	15	1.5	100		
		SILT, little Clay, trace Sand, trace Gravel, stiff to hard, damp, homogeneous, low plastic fines, gray, alluvium.		12.0	S-2	7-11-15 **3.75**	35	1.5	100		
				13.5	S-3	11-6-9 **3.50**	20	1.5	100		
		Class. on S-2 to S-5		15.0	S-4	10-10-12 **4.50**	29	1.5	100		
		N.M.C.=16.9%.	A-4 / CL-ML	16.5	S-5	7-12-13 **4.50**	33	1.5	100		
				18.0	S-6	11-14-18 **4.50**	43	1.5	100		
				19.5	S-7	10-12-15 **4.50**	36	1.5	100		
				21.0	S-8	15-15-19 **4.50**	45	1.5	100		
				22.5	S-9	21-25-29 **4.50**	72	1.5	100		
		24.5'/El. 586.3		24.0	S-10	22-50/.0'	>67	0.5	100		
605		*S-10, shale in tip of spoon.*									
		All PID readings=0.0 ppm.									
600		*No visual signs of contamination or odors.*									
595											
590											

BOW 605.50

[1]24-hr. Water: Boring grouted upon completion

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE091795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET

STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E

STRUCTURE BORINGS (SHEET 2 OF 4)

SHEET 10 OF 12

PLT: RJS | CKD: GKW | QA/QC: MAS

M:\2019\095\exhibits\structure\19095_strb_RWE.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT - AJERSON 12.22.4 - 2-24-2015.GDT - 10/19/21 14:49 - L:\PROJECTS\2018\19095-19995 - ERIE CO SAS.GPJ

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/05/2020 2:00 PM	HAMMER: AUTOMATIC
RWE-4A	STATION: 10+97.0 OFFSET: 68.0 FT. LT.	FINISH: 11/05/2020 4:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, CME 55 TRACK RIG	"NO RECORD"	0 FT. 5 FT.	632.5 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:Dry - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:NR - NR [1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
630		**SAND**, some Gravel, contains brick and concrete fragments, loose to very dense, damp to dry, heterogeneous, poorly graded, angular to sub-angular, fill.	a-1-b / sp	1.5	S-1	2-3-5	11	1.0	67	
				3.0	S-2	5-7-6	17	0.5	33	
				4.5	S-3	5-5-8	17	0.8	53	
				4.9	S-4	50/.4'	>67	0.4	100	
625		*Auger chattering while advancing to 6.0', concrete fragments coming up auger flights.*		6.0	S-5	6-6-3	12	0.8	53	
		S-6, concrete fragments.		7.5	S-6	3-4-33	49	0.7	47	
				9.0	S-7	7-2-2	5	0.4	27	
620				10.5	S-8	2-7-8	20	0.6	40	
				12.0	S-9	22-6-9	20	0.5	33	
		Auger chattering while advancing to 13.5', rebar came up augers.		13.5	S-10	4-2-50/.3'	69	0.4	31	
				14.8	S-11	10-9-50/.4'	79	0.2	14	
615		*S-10 to S-14, brick fragments.* *S-11, glass fragmens.* *Auger chatter while advancing to 16.5'.*		16.4						
				16.5	S-12	4-10-9	25	0.4	27	
				18.0	S-13	6-6-5	15	0.7	47	
		21.0'/El. 611.5		19.5	S-14	12-3-3	8	1.0	67	
610		**SILT**, little Sand, trace Gravel, very stiff to hard, damp, homogeneous, low plastic fines, brown gray to gray, alluvium.		21.0	S-15	4-5-7 **4.50**	16	1.2	80	
				22.5	S-16	4-6-8 **4.50**	19	1.5	100	
				24.0	S-17	6-7-8 **3.00**	20	1.5	100	
				25.5	S-18	4-7-9 **4.00**	21	1.5	100	
605				27.0	S-19	9-10-12 **4.50**	29	1.5	100	
				28.5	S-20	9-11-15 **3.50**	35	1.5	100	
			a-4 / ml	30.0	S-21	7-7-9	21	1.5	100	
600		**BOW 600.00**		31.5	S-22	8-9-12	28	0.5	33	
				33.0	S-23	6-7-10 **2.50**	23	1.5	100	
				34.5	S-24	6-10-10	27	1.5	100	
595				36.0	S-25	8-10-11 **3.50**	28	1.5	100	
				37.5	S-26	10-14-27 **4.50**	55	1.5	100	
		40.5'/El. 592.0		39.0	S-27	12-23-33 **4.00**	75	1.5	100	

All PID readings=0.0 ppm, no visual signs of contamination or odors.

[1]24-hr. Water: Boring grouted upon completion

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 11/02/2020 3:30 PM	HAMMER: AUTOMATIC
RWE-3	STATION: 11+75.0 OFFSET: 57.0 FT. LT.	FINISH: 11/02/2020 5:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
TRIPLE TUBE WIRE LINE-NQ3, AUTOMATIC, CME 55 TRACK RIG	3.000 IN.	0 FT. 5 FT.	604.0 FT.

DRILLING INSPECTOR: GEOFFREY WELLS
DRILLER & DRILLING COMPANY: J. GILBERT
7NT

▽ 0 HR. READING - ELAPSED TIME:El. 600.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME:El. 596.1 ft. - 15.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT ------- PP/T TSF	N 60 / %ROD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
630										
625										
620										
615										
610										
605										
600				1.5	S-1	2-3-4	9	0.8	53	
				3.0	S-2	2-2-3	7	0.9	60	
				4.5	S-3	2-4-10	19	1.1	73	
				6.0	S-4	1-2-3	7	1.5	100	
				7.5	S-5	3-3-4	9	1.5	100	
				9.0	S-6	2-4-4	11	1.4	93	
				10.5	S-7	2-3-3	8	1.5	100	
				12.0	S-8	2-2-3	7	1.5	100	
				13.5	S-9	2-3-2	7	1.5	100	
				15.0	S-10	2-4-7	15	1.5	100	
				16.5	S-11	13-20-20	53	1.5	100	
				18.0	S-12	13-27-29	75	0.9	60	
				18.9	S-13	29-50/.4'	>67	0.9	100	
				19.5	S-14	39-50/.2'	>67	0.7	100	
				20.2	R-1		46%	4.8	96	
595		**BOW 595.00**								
		SAND, some Gravel, loose to medium dense, damp, heterogeneous, poorly graded, brown to gray, fill.	a-1-b / sp							
		6.0'/El. 598.0								
		SILT, little Gravel, medium to stiff, damp, homogeneous, low plastic fines, brown, fill.	a-4 / ml							
		10.5'/El. 593.5								
590		**SILT**, trace Gravel, medium to stiff, moist to damp, homogeneous, low plastic fines, gray to dark gray, alluvium.	a-4 / ml							
		15.0'/El. 589.0								
		GRAVEL, some Sand, very dense, damp to dry, homogeneous, well graded, angular to flat, residuum.	a-1-a / gw							
585		20.2'/El. 583.8								
		Boring dry prior to coring.								
		TOR 583.80								
		SHALE interbedded with SANDSTONE, gray to dark gray, soft to medium hard, slightly weathered to fresh, laminated to moderate bedding with flat dip, *no apparent jointing, (RQD=46%).*								
580		25.2'/El. 578.8								

All PID readings=0.0 ppm, no visual signs of contamination or odors.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION

THE DESCRIPTION OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MAS

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK A. SWEER ENGINEER No. PE091705

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET

STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E

STRUCTURE BORINGS (SHEET 3 OF 4)

SHEET 11 OF 12

PLT: RJS | CKD: GKW | QA/QC: MAS

M:_2019\095\exhibits\structure\19095_strb_RWE.dgn
7/29/2022

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_1223_8-24-2015.GDT - 10/19/21 14:11 - L:\PROJECTS\2019\19095\ERIE CO SSS.GPJ

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
RWE-2	9+95.0 12 ft. LT.	S-2 to 5	12.0 to 18.0	16.9	2.1	6.9			91.0	77.7	13.3	A-4	CL-ML		24	20	4					

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
RWE-3	11+75.0 57 ft. LT.	R-1	24.6 to 25.0	UNCONFINED COMPRESSIVE TEST	12247.0 PSI / 881.8 TSF	NO		96	46	SHALE	NORTHEAST SHALE

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

TOR	TOP OF ROCK ELEVATION
BOW	BOTTOM OF WALL ELEVATION

Prepared By:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK SIEVER ENGINEER No. PE081795

AMERICAN GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
HOLLAND STREET

STA. 9+45.00 TO STA. 11+75.00
RETAINING WALL E

STRUCTURE BORINGS (SHEET 4 OF 4)

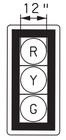
SHEET 12 OF 12

M:_2019\095\exhibits\structure\19095_strb_RWE.dgn
7/29/2022

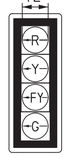
PLT: RJS | CKD: GKW | QA/QC: MAS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	1 OF 7
CITY OF ERIE				
REVISION NUMBER	REVISIONS		DATE	BY

SIGNALS



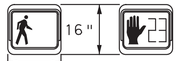
SIGNALS
2,3,4,6,7,8,9,10,
11,12,13,14,15,16



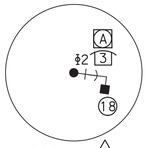
SIGNALS
1, 5

CONFIRMATION
LIGHTS
A, B, C, D

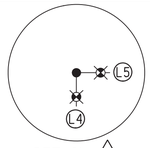
TYPE A PEDESTRIAN COUNTDOWN



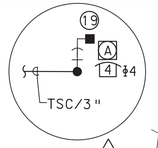
SIGNALS
17,18,19,20,21,
22,23,24,25,26



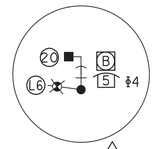
DETAIL 3
14' PEDESTAL
W/ PUSH BUTTON
EXTENDER



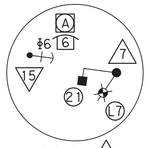
DETAIL 4
60' MAST ARM



DETAIL 5
14' PEDESTAL
W/ PUSH BUTTON
EXTENDER



DETAIL 6
35' MAST ARM
W/ PUSH BUTTON
EXTENDER



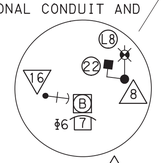
DETAIL 7
1,000 POUNDS
STRAIN POLE

SIGNAL NOTES

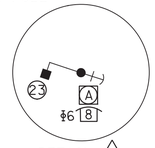
1. ALL VEHICULAR SIGNALS SHALL HAVE NON-REFLECTIVE, METAL, LOUVERED BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
2. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
3. ALL SIGNALS SHALL HAVE ALUMINUM HOUSING WITH CUTAWAY VISORS.
4. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'
5. MIN/MAX HEIGHT FOR PEDESTRIAN SIGNALS 10'/12'
6. MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS 8'.
7. UTILIZE AIRCRAFT TYPE STANDARD CABLE FOR MOUNTING SIGNAL ASSEMBLIES AND OVERHEAD SIGNS TO MAST ARMS. BANDING NOT PERMITTED.

CONSTRUCTION NOTES

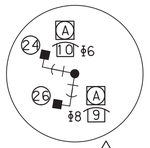
1. ALL JUNCTION BOXES ARE TYPE JB-27 GALVANIZED STEEL. EXCEPT JB#4, WHICH IS TYPE JB-2.
2. CAMERA EQUIPMENT AND ZONES TO BE FIELD VERIFIED BY MANUFACTURER FOR OPTIMAL LOCATIONS.
3. SEE SIGNING PLAN FOR ADDITIONAL SIGNS NOT ASSOCIATED WITH THE TRAFFIC SIGNAL.
4. SEE PAVEMENT MARKING PLAN FOR CROSSWALKS AND OTHER PAVEMENT MARKING DETAILS.
5. CROSSWALKS ARE TO BE TYPE C HIGH VISIBILITY, WITH 8" TRANSVERSE CROSSWALK LINES AND 24" LONGITUDINAL CROSSWALK LINES WITH 24" SPACING. LONGITUDINAL CROSSWALK LINES ARE NOT SHOWN ON THIS SHEET FOR CLARITY.
6. SEE STRUCTURE PLAN FOR ADDITIONAL CONDUIT AND FOUNDATION DETAILS.



DETAIL 8
1,000 POUNDS
STRAIN POLE

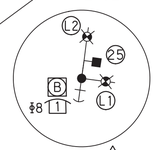


DETAIL 10
14' PEDESTAL



DETAIL 11
14' PEDESTAL
W/ PUSH BUTTON
EXTENDERS

DETAIL 2
1,000 POUNDS
STRAIN POLE



DETAIL 1
45' MAST ARM DUAL
40' MAST ARM

SR 8034 SURVEY & CONSTR ℄ STA 1525+80.58
(SEG 0070 OFF 0000) =
STATE STREET SURVEY & CONSTR ℄ STA 109+73.39

SIGNS

SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	QTY
A	R10-3E (L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL PERSON WITH COUNTDOWN TIMER ←	9"X15"	7
B	R10-3E (R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL PERSON WITH COUNTDOWN TIMER →	9"X15"	3
C*	D3-4	Bayfront Pkwy	96"X16"	2
D*	D3-4	State St	60"X16"	3
E	R3-5L	LEFT TURN	30"X36"	2
F	R3-6SR	OPTIONAL RIGHT	30"X36"	2
G	R10-11	NO TURN ON RED ●	30"X36"	5
H	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	2
I	R4-7	KEEP RIGHT	24"X30"	2
J	OM1-3	OBJECT MARKER	18"X18"	2
K	R3-7L	LEFT LANE MUST TURN LEFT	30"X30"	1
L	R10-6AL	STOP HERE ON RED	24"X30"	2

* WHITE REFLECTORIZED LEGEND AND BORDER ON GREEN REFLECTORIZED BACKGROUND.

LEGEND

- 1 - MAST ARM
- 2 - PEDESTAL
- V - PEDESTRIAN STUB POLE
- 1 - VEHICULAR SIGNAL HEAD
- 1 - PEDESTRIAN SIGNAL HEAD
- L1 - LED ROADWAY LUMINAIRE 30' MOUNTING HEIGHT (12' ARM)
- 1 - PEDESTRIAN PUSH BUTTON/SIGN
- A - OVERHEAD SIGN
- B - POST MOUNTED SIGN
- - CONTROLLER ASSEMBLY TYPE I MOUNTING
- 2 - CAMERA DETECTION SYSTEM
- 2 - CAMERA DETECTION ZONE
- D - PREEMPTION CONFIRMATION SIGNAL
- - RELCO PREEMPTION RECEIVER
- - JUNCTION BOX
- W/4" - SOLID WHITE PAVEMENT MARKINGS/WIDTH
- DY/4" - SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
- DEW/4" - DOTTED WHITE EXTENSION PAVEMENT MARKINGS/WIDTH
- —TSC/2"— - TRAFFIC SIGNAL CONDUIT/SIZE
- —PSC/2"— - POWER SUPPLY CONDUIT/SIZE
- —SLC/2"— - STREET LIGHT CONDUIT/SIZE
- - TRAFFIC FLOW ARROW

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION OF: SR 8034 (BAYFRONT PARKWAY RAMPS) AND STATE STREET

APPROVED AND ACCEPTED: LeAnn Parmenter — Digitally signed by LeAnn Parmenter DN: cn=LeAnn Parmenter, o=City of Erie, ou, email=lparmenter@erie.pa.us, c=US Date: 2022.08.12 13:28:48 -04'00'

MUNICIPAL OFFICIAL — DATE

RECOMMENDED: Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2022.08.23 10:11:57 -04'00'

DISTRICT TRAFFIC ENGINEER — DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

08/05/2022

SCALE: 0 25 50 75

SEE MATCH LINE "B" SHEET 3 OF 6

SEE MATCH LINE "B" SHEET 3 OF 6

PLOTTED: 8/5/2022

OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\signals\sheets\TSp1 01_State Street.dgn

MOVEMENT, PHASING, AND SEQUENCE CHART

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	2 OF 7
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

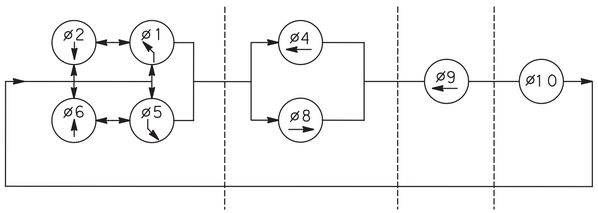
MEMORY INCLUDES:
MN - MIN. RECALL
NL - NON-LOCKING

PHASE	NORMAL OPERATION 2 + 6				1 + 6				2 + 5				1 + 5			4 + 8				9			10			RAMP QUEUE PREEMPTION P 4 + 8				EMERGENCY PREEMPTION 2				6				4				8				EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	1	2	3	4	1	2	3	1	2	3	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	-FY-	-FY-	-Y-①	-R-①	-FY-	-FY-	-Y-	-R-	-G-	-G-	-Y-	-R-	-G-	-Y-	-R-	R	R	R	R	R	R	R	R	R	R		R	R	R	-FY-	-Y-①	-R-①		R	R	R		R	R	R		R	R	R	-R-	
2, 3, 4	G	G	Y②	R②	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R	R	R	G	Y②	R②		R	R	R		R	R	R		R	R	R	R	
5	-FY-	-FY-	-Y-③	-R-③	-G-	-G-	-Y-	-R-	-FY-	-FY-	-Y-	-R-	-G-	-Y-	-R-	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R		-FY-	-Y-③	-R-③		R	R	R		R	R	R	-R-	
6, 7, 8	G	G	Y④	R④	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R		G	Y④	R④		R	R	R		R	R	R	R	
9, 10,11	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R		R	R	R	R	R	R		R	R	R		G	Y	R		R	R	R	R	
12, 13, 14	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R		R	R	R	R	R	R		R	R	R		R	R	R		G	Y	R	R	
15, 16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R		R	R	R	R	R	R		R	R	R		R	R	R		R	R	R	R	
17, 18*	W	FD	DW	DW	DW	DW	DW	DW	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW		DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	OFF	
19, 20*	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW	DW	DW	DW	DW	W	FD	DW		DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	OFF	
21, 22*	W	FD	DW	DW	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW		DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	OFF	
23, 24*	W	FD	DW	DW	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW		DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	OFF	
25, 26*	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW	DW	DW	DW	DW	W	FD	DW		DW	DW	DW	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	OFF	
A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	FL	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF	
B	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	ON	OFF	OFF		FL	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	OFF	
C	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	ON	OFF	OFF		ON	OFF	OFF		FL	OFF	OFF		ON	OFF	OFF	OFF	
D	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FL	OFF	OFF	OFF	
FIXED	X		4	4	X		4	4	X		3	4	X	4	4	X		3	4	X	3	4	X																						
MIN. INITIAL	15				7				7				7			7				5						25				25				25				25				25				
PASSAGE	5				3				3				3			3				3																									
MAXIMUM 1	26				17				17				17			52				10			25																						
MAXIMUM 2	23				25				14				14			14							28																						
PEDESTRIAN*	7	10																					7	16																						
MEMORY	MN				NL				NL				NL			NL				NL			NL																						

* UPON PEDESTRIAN ACTUATION, OTHERWISE DON'T WALK AT ALL TIMES.
** DURATION OF EMERGENCY VEHICLE ACTUATION.

① - -FY- IF FOLLOWED BY 1 + 5 OR 2 + 5
② - G IF FOLLOWED BY 2 + 5
③ - -FY- IF FOLLOWED BY 1 + 5 OR 1 + 6
④ - G IF FOLLOWED BY 1 + 6
⑤ - PROVIDE A 3-SECOND PEDESTRIAN LEADING INTERVAL FOR PHASE 2+6
⑥ - PROVIDE A 2-SECOND DELAY TO THE START OF FYA

PHASING DIAGRAM



CAMERA DETECTION CHART

DETECTOR	DETECTOR ZONE	DETECTOR TYPE	ZONE SIZE	LOCATION	PHASE	SWITCH PHASE
①	①	STOP BAR	7'X 150'	1	ø6	
①	②	STOP BAR	7'X 150'	1	ø1	ø6
②	③	STOP BAR	9'X 35'	9	ø9	
③	④	STOP BAR	7'X 150'	4	ø8	
④	⑤	STOP BAR	7'X 140'	4	ø2	
④	⑥	STOP BAR	7'X 140'	4	ø5	ø2
⑤	⑦	STOP BAR	7'X 150'	6	ø4	
⑥	⑧	STOP BAR	7'X 40'	9	ø1	
⑦	⑨	STOP BAR	7'X 40'	4	ø5	
⑧	⑩	QUEUE PREEMPTION	7'X 10'	4	ø8	
⑨	⑪	QUEUE PREEMPTION	7'X 10'	9	ø4	

EMERGENCY VEHICLE PREEMPTION NOTES

EMERGENCY PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE EMERGENCY PREEMPT PHASES SHALL BE DISPLAYED. THE SYSTEM SHALL PROVIDE SERVICE ON A FIRST-COME, FIRST-SERVED BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, OTHER PREEMPTIVE VEHICLES SHALL BE PREVENTED FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A NON-PREEMPTIVE PHASE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS PROCEEDING TO THE PREEMPTION PHASE.
2. IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF A PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.
3. IF THE CONTROLLER OPERATION IS IN THE YELLOW OR ALL RED INTERVAL OF ANY PHASE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY BEFORE PROCEEDING TO THE PREEMPTION PHASES.
4. PROVIDE A FAIL SAFE INDICATION CONSISTING OF A FLASHING WHITE LIGHT FOR THE DIRECTION ON WHICH THE EMERGENCY VEHICLE IS APPROACHING. WHEN A CALL IS RECEIVING, THE FAIL SAFE INDICATION SHALL BE ACTIVATED. FLASH AT A RATE NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. UPON TERMINATION OF THE PREEMPTION PHASES, THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO NORMAL "PHASE NEXT" OPERATION.
6. ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY, FOLLOWED BY A FLASHING DON'T WALK INDICATION FOR THE NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.
7. DISPLAY ANY FLASHING DON'T WALK INDICATION FOR NORMAL PEDESTRIAN CLEARANCE INTERVAL BEFORE PROCEEDING TO THE EMERGENCY PREEMPTION ROUTINE IN NOTES 1 AND 2.

RAMP QUEUE PREEMPTION OPERATION:

QUEUE PREEMPTION EQUIPMENT IS LOCATED IN THE CONTROLLER CABINET. QUEUE PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. RAMP QUEUE PREEMPTION PHASE P4+8 WILL BE INITIATED BY QUEUE DETECTORS #10 AND #11 LOCATED ON THE SR 8034 EASTBOUND AND WESTBOUND RAMPS. UPON ACTIVATION OF RAMP QUEUE PREEMPTION, GO TO PHASE P4+8 AFTER COMPLETING THE APPLICABLE CLEARANCE INTERVAL(S) IN ACCORDANCE WITH THE FOLLOWING:

PROVIDE THE FOLLOWING SEQUENCE IF A CONFLICTING PHASE IS IN GREEN:

- A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION
- THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
- A YELLOW CLEARANCE INTERVAL REPLACES ALL CONFLICTING GREEN INDICATIONS.
- UPON COMPLETION OF THE YELLOW CLEARANCE INTERVAL, THE ALL RED INTERVAL IS COMPLETED FOLLOWED BY THE GREEN INDICATION FOR THE SELECTED RAMP QUEUE PHASE.

UPON PREEMPTION, THE CONTROLLER'S INTERNAL PREEMPTION PROGRAM PROVIDES THE FOLLOWING SEQUENCE IF THE SELECTED RAMP QUEUE PREEMPTION PHASE IS IN GREEN:

- A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION.
- THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
- THE GREEN INDICATION REMAINS ON THE SELECTED RAMP QUEUE PREEMPTION PHASE.

UTILIZE CONTROLLER TIMINGS FOR INTERVALS BEING CLEARED.

FOR THE DURATION OF THE PREEMPTION, A GREEN INDICATION REMAINS ON THE SELECTED PREEMPTED RAMP WITH A RED INDICATION GIVEN TO ALL OTHERS AND A STEADY "DON'T WALK" INDICATION ON ALL PEDESTRIAN SIGNALS.

IF THE CONTROLLER OPERATION IS IN A GREEN INTERVAL OF AN EMERGENCY VEHICLE PREEMPTION PHASE, THE CONTROLLER SHALL REMAIN IN THAT PHASE. IT SHALL PREVENT THE RAMP QUEUE PREEMPTION FROM ENTERING CALLS.

SIGNALS IN EMERGENCY FLASH WHEN PREEMPTED SHALL REMAIN IN FLASH.

HOLD RAMP QUEUE PREEMPTION CALLS FOR A MINIMUM OF 20 SECONDS TO A MAXIMUM OF 60 SECONDS. IF PREEMPTION PHASE P4+8 HOLDS TO 60 SECONDS, GO TO PHASE 2+6, INTERVAL 1 AND CYCLE THROUGH SEQUENCE BEFORE RETURNING TO PREEMPTION PHASE.

UPON TERMINATION OF ALL PREEMPTIONS, THE SIGNAL RETURNS TO NORMAL OPERATION AT THE BEGINNING OF PHASE 2+6, INTERVAL 1.

CONSTRUCTION NOTES

INSTALL, OPERATE, AND MAINTAIN THESE SIGNALS IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, NSTALLATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PER PUB. 408.

NO MODIFICATIONS OF THESE SIGNALS ARE PERMITTED UNLESS THE SECRETARY OF TRANSPORTATION OR THEIR REPRESENTATIVE GRANTS PRIOR APPROVAL, IN WRITING.

PROVIDE MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES.

INSTALL SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS A MINIMUM CLEARANCE OF 2 FEET BEHIND THE FACE OF THE CURB OR 12 FEET FROM THE EDGE OF THE TRAVELED ROADWAY TO EDGE OF SUPPORT POLE.

PROVIDE VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, PROVIDE POST MOUNTED VEHICULAR SIGNALS A CLEARANCE OF NOT LESS THAN 8 FEET OR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, PROVIDE PEDESTRIAN SIGNALS A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, PROVIDE POST MOUNTED SIGNS A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, PROVIDE THE TOP OF THE POST MOUNTED SIGNS A MINIMUM 9 FEET ABOVE GROUND LINE.

PROVIDE A MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS, MEASURED AT RIGHT ANGLES TO THE APPROACH, OF 8 FEET.

INSTALL CONDUIT INTO JUNCTION BOXES THROUGH PREFORMED KNOCKOUTS OR THROUGH FIELD DRILLED HOLES TO PROVIDE MAXIMUM DRAINAGE FOR CONDUIT. DO NOT BRING CONDUITS INTO THE OPEN BOTTOMS OF JUNCTION BOXES BY UTILIZING CONDUIT ELLS OR OTHER MEANS THAT MAY IMPEDE CONDUIT DRAINAGE.

PROVIDE AND INSTALL RIGID STEEL CONDUIT AT ALL EXPOSED LOCATIONS.

PRIOR TO ANY EXCAVATION FOR PLACEMENT OF TRAFFIC SIGNAL OR SIGN SUPPORT POLES, MARK THE PROPOSED POLE LOCATIONS IN THE FIELD. FIELD REVIEW POLE LOCATIONS WITH DISTRICT TRAFFIC ENGINEER OR THEIR REPRESENTATIVE. ADJUST POLE LOCATIONS AS DIRECTED.

THIS DRAWING CANNOT BE USED BY THE CONSTRUCTOR UNLESS THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE LATEST ACT PREVENTING DAMAGE TO UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS THAT MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

CONSTRUCTION DETAILS OTHER THAN THOSE SHOWN ON THESE DRAWINGS TO CONFORM TO THE FOLLOWING STANDARD DRAWINGS:

TC-8700C	(12 SHEETS)	JUNE 13, 2013
TC-8701S	(4 SHEETS)	JUNE 13, 2013
TC-8702B	(9 SHEETS)	JUNE 13, 2013
TC-8801	(10 SHEETS)	DEC. 12, 2011
TC-8802	(1 SHEET)	DEC. 12, 2011
TC-8803	(4 SHEETS)	DEC. 12, 2011
TC-8804	(2 SHEETS)	DEC. 12, 2011
TC-8805	(1 SHEET)	DEC. 12, 2011
RC-81M	(1 SHEET)	JUNE 01, 2010

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

08/05/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION OF: SR 8034 (BAYFRONT PARKWAY RAMPS) AND STATE STREET

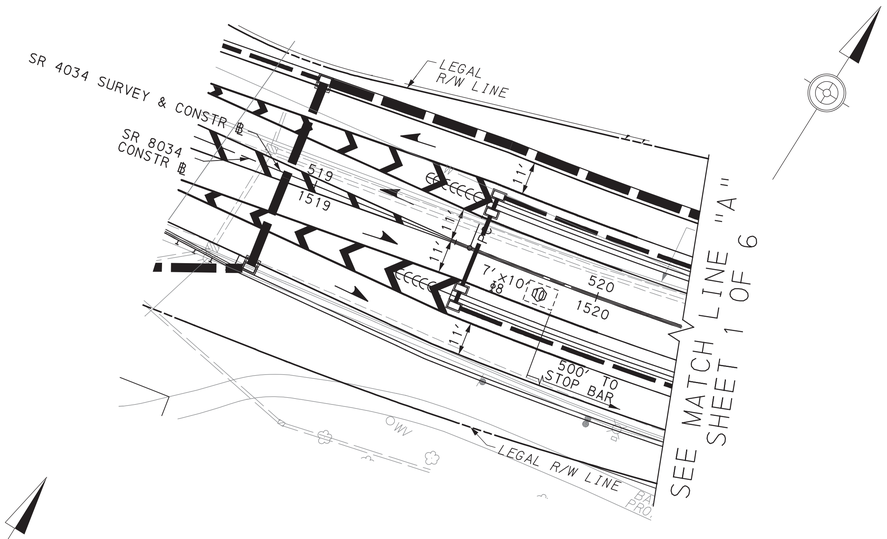
APPROVED AND ACCEPTED: LeAnn Parmenter — Digitally signed by LeAnn Parmenter DN: cn=LeAnn Parmenter, o=City of Erie, ou, email=lparmenter@erie.pa.us, c=US Date: 2022.08.12 13:29:14 -04'00'
MUNICIPAL OFFICIAL — DATE

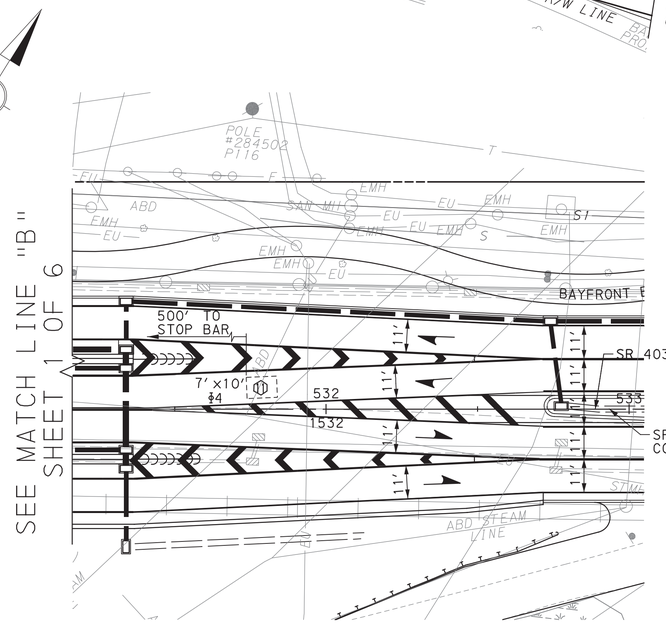
RECOMMENDED: Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2022.08.23 10:12:40 -04'00'
DISTRICT TRAFFIC ENGINEER — DATE

PLOTTED: 8/5/2022
OPERATOR:
FILE NAME: \\mcsonsultants.com\files\Production\08\60\06808\signals\sheets\TSp1 02_State Street.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	3 OF 7
CITY OF ERIE				

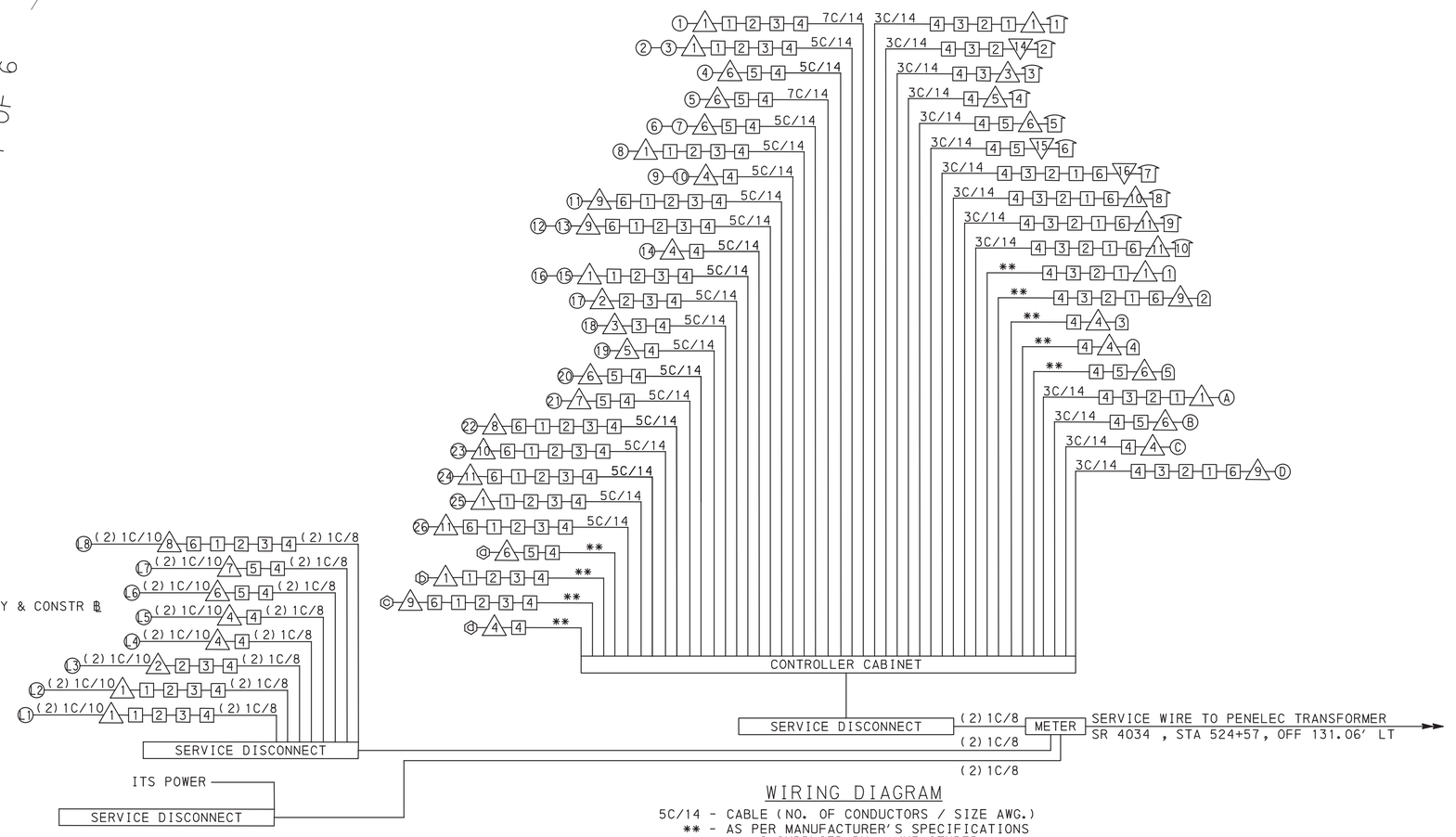
REVISION NUMBER	REVISIONS	DATE	BY





LEGEND

- MAST ARM
- PEDESTAL
- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- LED ROADWAY LUMINAIRE 30' MOUNTING HEIGHT (12' ARM)
- PEDESTRIAN PUSH BUTTON/SIGN
- OVERHEAD SIGN
- POST MOUNTED SIGN
- CONTROLLER ASSEMBLY TYPE I MOUNTING
- CAMERA DETECTION SYSTEM
- CAMERA DETECTION ZONE
- PREEMPTION CONFIRMATION SIGNAL
- RELCO PREEMPTION RECEIVER
- JUNCTION BOX
- W/4" - SOLID WHITE PAVEMENT MARKINGS/WIDTH
- DY/4" - SOLID DOUBLE YELLOW PAVEMENT MARKINGS/WIDTH
- DEW/4" - DOTTED WHITE EXTENSION PAVEMENT MARKINGS/WIDTH
- —TSC/2"— - TRAFFIC SIGNAL CONDUIT/SIZE
- —PSC/2"— - POWER SUPPLY CONDUIT/SIZE
- —SLC/2"— - STREET LIGHT CONDUIT/SIZE
- TRAFFIC FLOW ARROW



WIRING DIAGRAM

5C/14 - CABLE (NO. OF CONDUCTORS / SIZE AWG.)
** - AS PER MANUFACTURER'S SPECIFICATIONS
* AS SUPPLIED BY MANUFACTURER

- MAST ARM/PEDESTAL/STRAIN POLE
- PEDESTRIAN STUB POLE
- JUNCTION BOX
- LUMINAIRE
- VEHICULAR/PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- RADAR DETECTOR
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
INTERSECTION OF:	SR 8034 (BAYFRONT PARKWAY RAMPS) AND STATE STREET
APPROVED AND ACCEPTED:	LeAnn Parmenter — MUNICIPAL OFFICIAL — DATE
RECOMMENDED:	Brian M. Smith, P.E. — DISTRICT TRAFFIC ENGINEER — DATE
SCALE:	0 25 50 75

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

08/05/2022

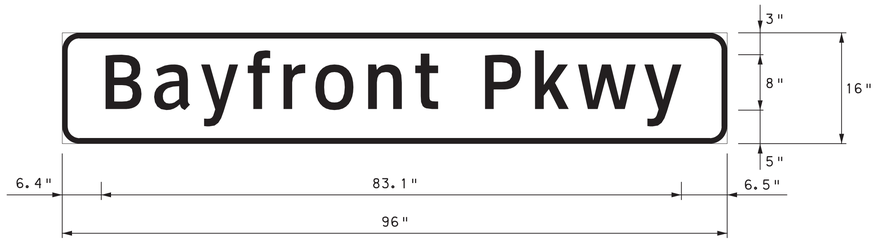
Digitally signed by Brian M. Smith, P.E.
Date: 2022.08.23 10:13:18 -04'00'

PLOTTED: 8/5/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\signals\sheets\TSp1 03_State Street.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	4 OF 7
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

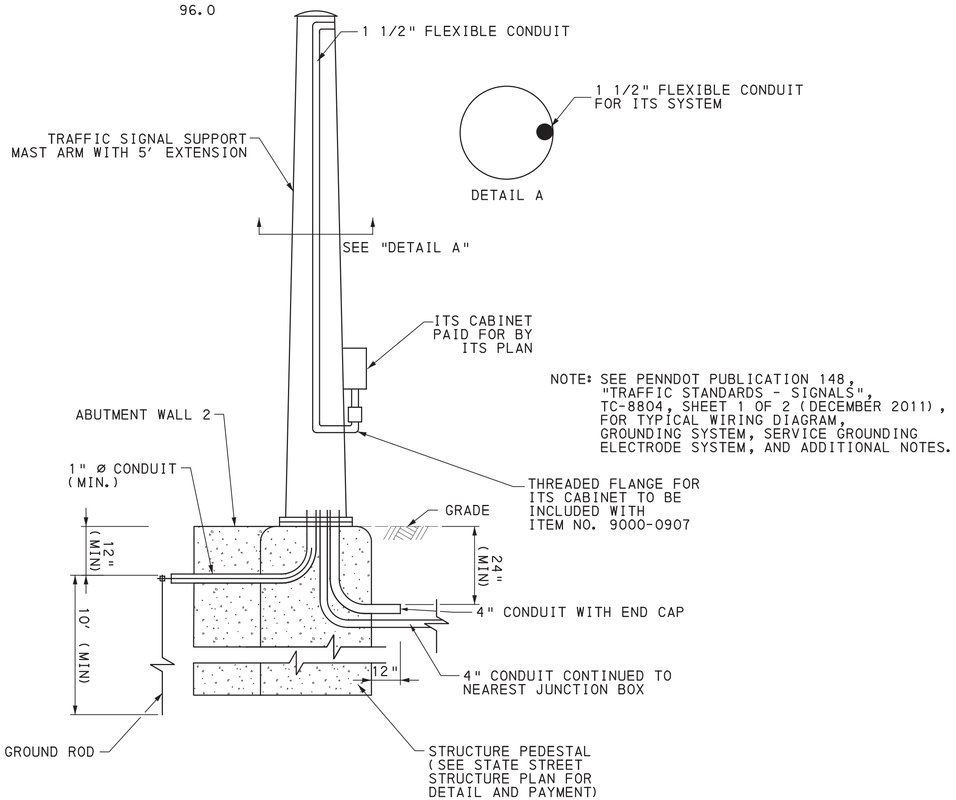


0.8" BORDER WITH 2.5" RADIUS ON CORNERS

WHITE REFLECTORIZED LEGEND AND BORDER ON
GREEN REFLECTORIZED BACKGROUND

8" U.C. LET.
6" L.C. LET.
LET. SERIES CLEARVIEW 3W

6.4	
6.9	- B
6.8	- a
6.6	- y
5.2	- f
4.7	- r
7.7	- o
6.6	- n
3.5	- t
6.8	
7.2	- P
6.0	- K
9.7	- w
5.4	- y
6.5	
96.0	

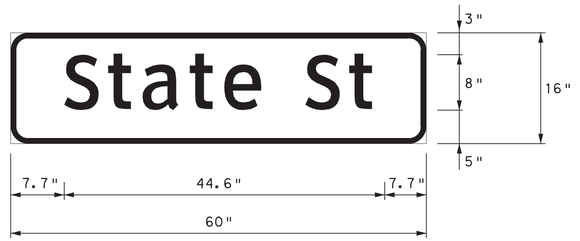


NOTE: SEE PENNDOT PUBLICATION 148,
"TRAFFIC STANDARDS - SIGNALS",
TC-8804, SHEET 1 OF 2 (DECEMBER 2011),
FOR TYPICAL WIRING DIAGRAM,
GROUNDING SYSTEM, SERVICE GROUNDING
ELECTRODE SYSTEM, AND ADDITIONAL NOTES.

TRAFFIC SIGNAL SUPPORT POLE (4)

ITEM NO. 9000-0907

NOT TO SCALE

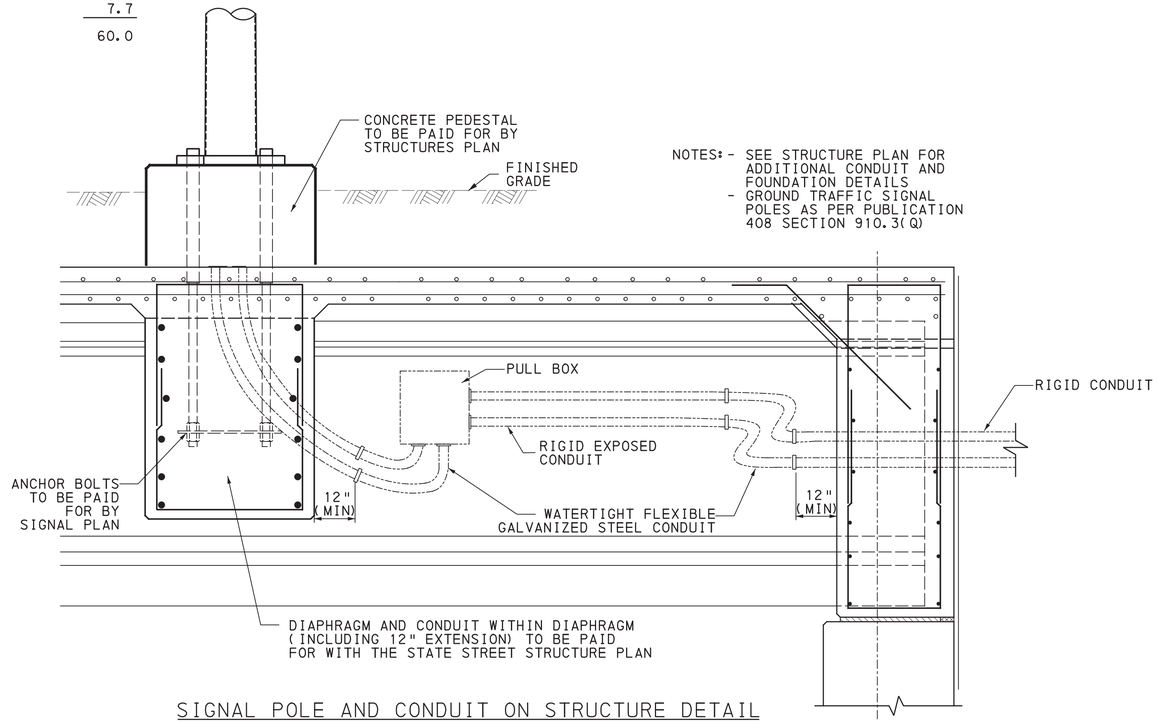


0.8" BORDER WITH 2.5" RADIUS ON CORNERS

WHITE REFLECTORIZED LEGEND AND BORDER ON
GREEN REFLECTORIZED BACKGROUND

8" U.C. LET.
6" L.C. LET.
LET. SERIES CLEARVIEW 3W

7.7	
6.4	- S
5.0	- t
6.8	- a
5.0	- t
5.4	- e
6.2	
6.4	- S
3.4	- t
7.7	
60.0	



NOTES:
- SEE STRUCTURE PLAN FOR ADDITIONAL CONDUIT AND FOUNDATION DETAILS
- GROUND TRAFFIC SIGNAL POLES AS PER PUBLICATION 408 SECTION 910.3(Q)

SIGNAL POLE AND CONDUIT ON STRUCTURE DETAIL

NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAMIAN JOSEPH GEORGE
ENGINEER
PE075334

08/05/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION OF: SR 8034 (BAYFRONT PARKWAY RAMPS)
AND STATE STREET

APPROVED AND ACCEPTED:
LeAnn Parmenter
Digitally signed by LeAnn Parmenter
DN: cn=LeAnn Parmenter, o=City of Erie, ou,
email=lparmenter@erie.pa.us, c=US
Date: 2022.08.23 11:13:53 -04'00'

MUNICIPAL OFFICIAL — DATE

RECOMMENDED:
Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2022.08.23 10:13:53 -04'00'

DISTRICT TRAFFIC ENGINEER — DATE

PLOTTED: 8/5/2022

OPERATOR:
FILE NAME: \\mcconsultants.com\files\Production\08\60\06808\signals\sheets\TSp1 04_State Street.dgn

TRAFFIC SIGNAL TABULATION

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	5 OF 7
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TRENCH, CONDUIT, JUNCTION BOX, & ELECTRICAL ITEMS

DESCRIPTION			JUNCTION BOXES J.B.-2	AWG 10 ABOVE GROUND CABLE, COPPER, 1 CONDUCTOR	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	2" EXPOSED CONDUIT, WITH PULL BOX	3" EXPOSED CONDUIT, WITH PULL BOX	4" EXPOSED CONDUIT, WITH PULL BOX	2" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT	3" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT	4" WATERTIGHT FLEXIBLE GALVANIZED STEEL CONDUIT	1 1/2" LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT	2 INCH CONDUIT	3 INCH CONDUIT	4 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG 7 CONDUCTOR	JUNCTION BOX, JB-27 GALVANIZED STEEL	ELECTRICAL SERVICE, TYPE C, WITH SEPARATE BREAKER
LOCATION	ITEM NUMBER	UNIT	0910 0002	0910 4067	0910 4116	4910 5175	4910 5179	9000 0901	0910 5305	9000 0902	9000 0903	0910 5313	0954 0012	0954 0013	0954 0014	0954 0151	0954 0154	0954 0201	0954 0202	0954 0203	0954 0304	4954 0403
			LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
CCI																						1
TRANSFORMER TO [4]													123			123						
CCI TO [4]			1										18		18	9						
[1] TO [2]													38		38	38					2	
[2] TO [3]						106		106	20		20		24		24	24					1	
[3] TO [4]													17		17	17						
[4] TO [5]													139		139	139					1	
[1] TO [6]													93		93	31	62				1	
△1 TO [1]													10		10	10						
△2 TO [2]						30	30		20	20			5	5		5						
△3 TO [3]							31			20				6		6						
△4 TO [4]													25		25	25						
△5 TO [4]														30		30						
△6 TO [5]													43		43	43						
△7 TO [5]						33	33		20	20			6	6		6						
△8 TO [6]						26	26		20	20			42	42		9	33					
△9 TO [6]													37		37	3	34					
△10 TO [6]							12			20				28		3	25					
△11 TO [6]														20		20						
▽12 TO [2]						21			20				16			16						
▽13 TO [5]						32			20				14			14						
▽14 TO [6]						21			20				37			8	29					
(L1)				94																		
(L2)				94																		
(L3)				94																		
(L4)				94																		
(L5)				94																		
(L6)				94																		
(L7)				94																		
(L8)				94																		
IN △4												35										
AS PER COMPLETE INTERSECTION					3228													3636	5206	561		
TOTALS			1	752	3228	269	132	106	140	100	20	35	687	137	444	579	183	3636	5206	561	5	1

SIGNS

PLAN SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE	SQ FT EA	QUANTITY	POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST 0931 0003 SF	POST MOUNTED SIGNS, TYPE F 0935 0001 SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS 4936 0010 SF
[A]	R10-3E (L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL PERSON WITH COUNTDOWN TIMER ←	9"X15"	0.94	7		✳✳	
[B]	R10-3E (R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL PERSON WITH COUNTDOWN TIMER →	9"X15"	0.94	3		✳✳	
[C]*	D3-4	Bayfront Pkwy	96"X16"	10.7	2			21.4
[D]*	D3-4	State St	60"X16"	6.7	3			20.1
[E]	R3-5L	LEFT TURN	30"X36"	7.5	2			15
[F]	R3-6SR	OPTIONAL RIGHT	30"X36"	7.5	2			15
[G]	R10-11	NO TURN ON RED ●	30"X36"	7.5	5			37.5
[H]	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"X36"	7.5	2			15
[I]	R4-7	KEEP RIGHT	24"X30"	5	2	10		
[J]	OM1-3	OBJECT MARKER	18"X18"	2.3	2		4.6	
[K]	R3-7L	LEFT LANE MUST TURN LEFT	30"X30"	6.3	1	6.3		
[L]	R10-6AL	STOP HERE ON RED	24"X30"	5	2	10		
TOTALS					33	26.3	4.6	124

✳ - ALL STREET NAME SIGNS SHALL HAVE WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND.

✳✳ - INCIDENTAL TO ITEM NO. 4956-0790

ITEM NUMBER / UNIT	DESCRIPTION	QUAN.	REMARKS
0964 0008 LF	8"WHITE EPOXY PAVEMENT MARKINGS	394	TRANSVERSE CROSSWALK LINES
0964 0021 LF	24" WHITE EPOXY PAVEMENT MARKINGS	526	STOP BARS AND LONGITUDINAL CROSSWALK LINES
0964 0224 EACH	WHITE EPOXY LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	4	
0964 0226 EACH	WHITE EPOXY LEGEND, "THRU AND RIGHT ARROW", 20' - 0" X 3' - 7"	4	

SIGNAL PAVEMENT MARKINGS

LEGEND

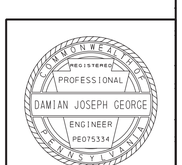
△6 TRAFFIC SIGNAL SUPPORT

[A] SIGN

▽17 PEDESTRIAN STUB POLE

(L1) LUMINAIRE

[6] JUNCTION BOX



PLOTTED: 8/5/2022
OPERATOR:
FILE NAME: \\mkconsultants.com\files\Production\08\60\06808\signals\sheets\TSp1 05_State Street.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	6 OF 7
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TRAFFIC SIGNAL TABULATION

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	ITEM NUMBER / UNIT	DESCRIPTION	QUAN.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																										PEDESTAL			REMARKS
										ARM "A"												ARM "B"										ARM "C"			ARM "D"						
											SIGNAL LOCATION					SIGN LOCATION							SIGNAL LOCATION					SIGN LOCATION												
								H	K	L	M	N	O	P	Q	R	S	T	U	Y	W	L	M	N	O	P	Q	R	S	T	U	Y	Y	G	X	Z	V	X	Z	SHAFT H	SIGNALS M	SIGNALS N	
1	4951 7401 EACH	TRAFFIC SIGNAL SUPPORT, 40′ & 45′ MAST ARMS WITH LUMINAIRE ARM (30′ MOUNTING HEIGHT), POWDER COATED, 4" STUB	1	STATE ST	108+86	LT	36.5	17	10	50	41.5	33.5				29				19	90°	40	34	28	25	21	17	30	14			7	270°	12	30	0°	12	30	0°				FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
2	4951 3901 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30′ MOUNTING HT) 1,000 LBS DESIGN TENSION, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	525+02	RT	18.5		10																								12	30	324°							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
3	4951 4106 EACH	TRAFFIC SIGNAL SUPPORT, 14′ PEDESTAL, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	525+09	LT	27.0																															14		10	FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
4	9000 0907 EACH	TRAFFIC SIGNAL SUPPORT, 60′ MAST ARM WITH LUMINAIRE ARM (30′ MOUNTING HEIGHT) AND EXTENSION, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	525+48	LT	59.5	17		60	56	52	52	48		45				36.5														12	30	0°	12	30	90°				FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
5	0951 4106 EACH	TRAFFIC SIGNAL SUPPORT, 14′ PEDESTAL, POWDER COATED	1	STATE ST	110+39	LT	34.0																															14		10	FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
6	4951 2235 EACH	TRAFFIC SIGNAL SUPPORT, 35′ MAST ARM WITH LUMINAIRE ARM (30′ MOUNTING HEIGHT), POWDER COATED, 4" STUB	1	STATE ST	110+46	RT	32.0	17	10	35	29.5	22.5	20	16	12	25.5	8			2.5														12	30	0°							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
7	4951 3901 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30′ MOUNTING HT) 1,000 LBS DESIGN TENSION, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	526+60	LT	25.5		10																								12	30	327°							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
8	4951 3901 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30′ MOUNTING HT) 1,000 LBS DESIGN TENSION, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	526+54	RT	22.5		10																								12	30	0°							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
9	4951 0250 EACH	TRAFFIC SIGNAL SUPPORT, 50′ MAST ARM, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	526+45	RT	49.5	17		50	46	42	42	38		35				22.5																					FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
10	4951 4106 EACH	TRAFFIC SIGNAL SUPPORT, 14′ PEDESTAL, POWDER COATED, STRUCTURE MOUNTED	1	BAYFRONT PARKWAY RAMPS	526+15	RT	35.5																															14		10	FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
11	0951 4106 EACH	TRAFFIC SIGNAL SUPPORT, 14′ PEDESTAL, POWDER COATED	1	STATE ST	108+87	RT	36.5																															14		10	FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
12	0951 0240 EACH	TRAFFIC SIGNAL SUPPORT, 40′ MAST ARM, POWDER COATED	1	STATE ST	111+95	LT	41.5									37	26																							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038
13	0951 0240 EACH	TRAFFIC SIGNAL SUPPORT, 40′ MAST ARM, POWDER COATED	1	STATE ST	107+32	RT	38.5									34	23																							FINISH COLOR TO BE SEMI-GLOSS BLACK, FEDERAL STANDARD 27038

✳ REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8801, FOR LETTER DESIGNATION

✳✳ ALL MAST ARMS MUST HAVE HARMONIC DAMPENING MITIGATION DEVICE

ITEM NUMBER / UNIT	MISCELLANEOUS DESCRIPTION	QUAN.	LOCATION	REMARKS
0953 0802 LS	UNIFIED COMMAND AND CONTROL INTEGRATION	1		
0954 0600 EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS)	1	CCI	
4955 2082 EACH	VEHICULAR SIGNAL HEAD ONE 8" SECTION WITH ALUMINUM HOUSING	4	(A) (B) (C) (D)	CUT-AWAY VISORS, NON-REFLECTIVE METAL LOUVERED BACKPLATES WITH RETROREFLECTIVE FLUORESCENT YELLOW BORDER
4955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS WITH ALUMINUM HOUSING	14	(2) (3) (4) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16)	CUT-AWAY VISORS, NON-REFLECTIVE METAL LOUVERED BACKPLATES WITH RETROREFLECTIVE FLUORESCENT YELLOW BORDER
4955 3209 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS WITH ALUMINUM HOUSING	2	(1) (5)	CUT-AWAY VISORS, NON-REFLECTIVE METAL LOUVERED BACKPLATES WITH RETROREFLECTIVE FLUORESCENT YELLOW BORDER
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	10	(17) (18) (19) (20) (21) (22) (23) (24) (25) (26)	CUT-AWAY VISORS
0956 0712 EACH	OMNI-VIEW VIDEO DETECTION SYSTEM	1	(1) (2) (3) (4) (5) (6) (7) (8) (9)	REFER TO DETECTION CHART FOR DETECTION TYPE, LOCATION, AND DETECTION ZONES

ITEM NUMBER / UNIT	MISCELLANEOUS CONTINUED DESCRIPTION	QUAN.	LOCATION	REMARKS
4956 0790 EACH	ACCESSIBLE PEDESTRIAN SIGNAL 2 WIRE SYSTEM	10	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)	2" ADA COMPLIANT
1204 0100 LF	STANDARD FIBER OPTIC CABLE	88		
9000 0900 EACH	90-WATT LED LUMINAIRE, ARM MOUNT	8	(L1) (L2) (L3) (L4) (L5) (L6) (L7) (L8)	MOUNTED TO (1), (2), (4), (6), (7) AND (8)
9000 0904 EACH	NEMA TS-2 TYPE 1 CONTROLLER ASSEMBLY (ECONOLITE), TYPE 1 MOUNTING	1	CCI	
9000 0905 EACH	PEDESTRIAN STUB POLE, TYPE B OR TYPE E POWDER COATED, STRUCTURE MOUNTED	3	(14) (15) (16)	
9000 0906 EACH	RELCO PREEMPTION SYSTEM	1	(1) (4) (6) (9)	(a) (b) (c) (d)
9000 0908 EACH	5 PORT MANAGED ETHERNET SWITCH	1	CCI	

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAMIAN JOSEPH GEORGE ENGINEER PE075334

PLOTTED: 8/5/2022

OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\signals\sheets\TSpl 06_State Street.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	7 OF 7
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

CONSTRUCTION NOTES

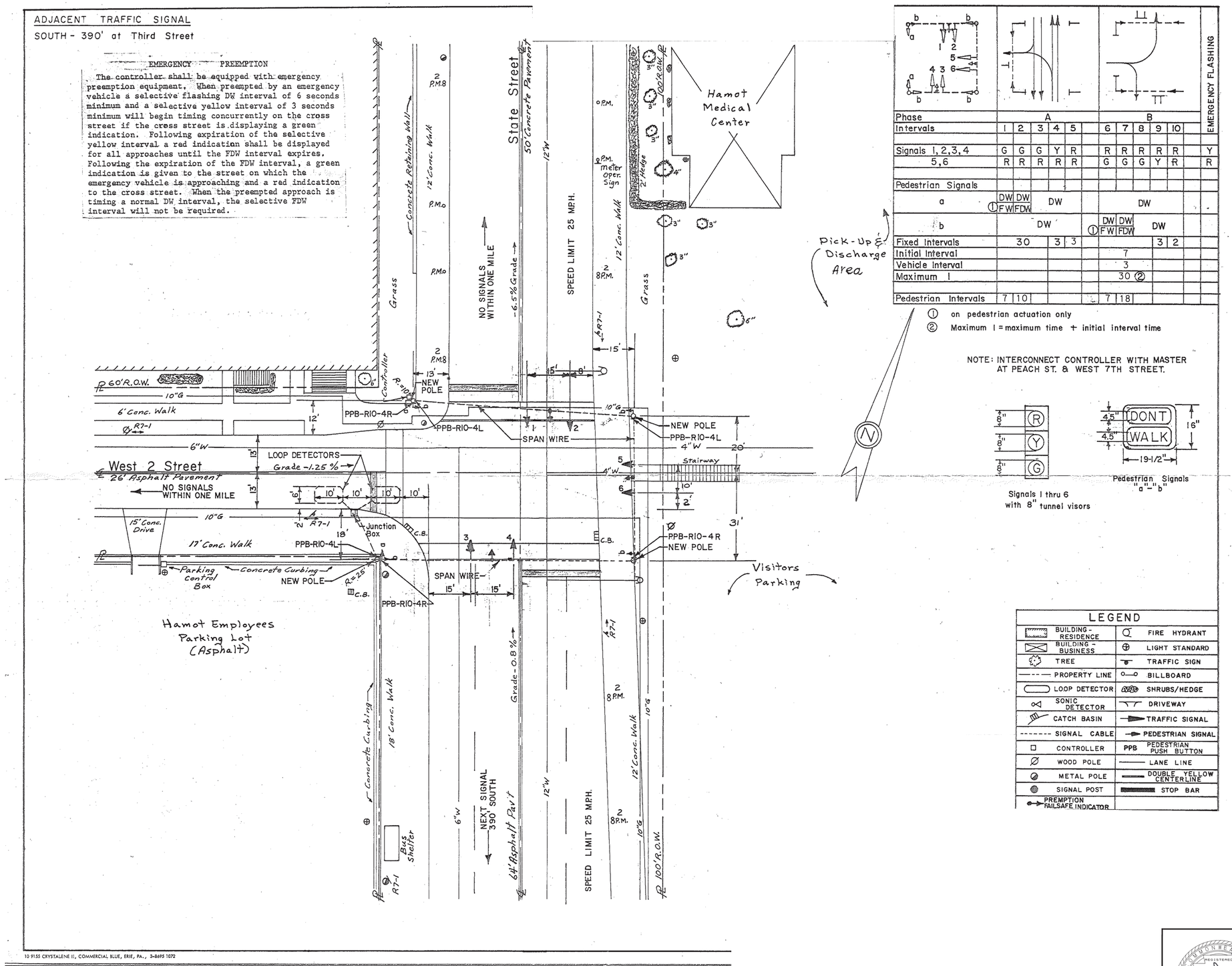
1. CONSTRUCTION ACTIVITY IS LIMITED TO CONTROLLER RETIMINGS.

ADJACENT TRAFFIC SIGNAL

SOUTH - 390' at Third Street

EMERGENCY PREEMPTION

The controller shall be equipped with emergency preemption equipment. When preempted by an emergency vehicle a selective flashing DW interval of 6 seconds minimum and a selective yellow interval of 3 seconds minimum will begin timing concurrently on the cross street if the cross street is displaying a green indication. Following expiration of the selective yellow interval a red indication shall be displayed for all approaches until the FDW interval expires. Following the expiration of the FDW interval, a green indication is given to the street on which the emergency vehicle is approaching and a red indication to the cross street. When the preempted approach is timing a normal DW interval, the selective FDW interval will not be required.



Phase	A					B					EMERGENCY FLASHING
Intervals	1	2	3	4	5	6	7	8	9	10	
Signals 1,2,3,4	G	G	G	Y	R	R	R	R	R	R	Y
5,6	R	R	R	R	R	G	G	G	Y	R	R
Pedestrian Signals											
a	① DW FW	DW FDW	DW			DW					-
b	DW					① DW FW	DW FDW	DW			
Fixed Intervals	30		3	3					3	2	
Initial Interval						7					
Vehicle Interval						3					
Maximum 1						30 ②					
Pedestrian Intervals	7	10				7	18				

① on pedestrian actuation only

② Maximum 1 = maximum time + initial interval time

NOTE: INTERCONNECT CONTROLLER WITH MASTER AT PEACH ST. & WEST 7TH STREET.

Signals 1 thru 6 with 8" tunnel visors

Pedestrian Signals "a" "b"

LEGEND

BUILDING - RESIDENCE	FIRE HYDRANT
BUILDING - BUSINESS	LIGHT STANDARD
TREE	TRAFFIC SIGN
PROPERTY LINE	BILLBOARD
LOOP DETECTOR	SHRUBS/HEDGE
SONIC DETECTOR	DRIVEWAY
CATCH BASIN	TRAFFIC SIGNAL
SIGNAL CABLE	PEDESTRIAN SIGNAL
CONTROLLER	PPB PEDESTRIAN PUSH BUTTON
WOOD POLE	LANE LINE
METAL POLE	DOUBLE YELLOW CENTERLINE
SIGNAL POST	STOP BAR
PREMPTION FAILSAFE INDICATOR	

10 9155 CRYSTALENE II, COMMERCIAL BLUE, ERIE, PA., 3-8693 1072

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION OF: STATE STREET

AND W 2ND STREET

APPROVED AND ACCEPTED:

LeAnn Parmenter — Digitally signed by LeAnn Parmenter, Municipal Maintenance Supervisor, City of Erie, ou, email=lparmenter@erie-pa.us, c=US. Date: 2022.08.17 13:59:46 -04'00'

MUNICIPAL OFFICIAL — DATE

RECOMMENDED:

Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2022.08.23 10:14:27 -04'00'

DISTRICT TRAFFIC ENGINEER — DATE

DAMIAN JOSEPH GEORGE — REGISTERED PROFESSIONAL ENGINEER — PE075334 — COMMONWEALTH OF PENNSYLVANIA

08/05/2022

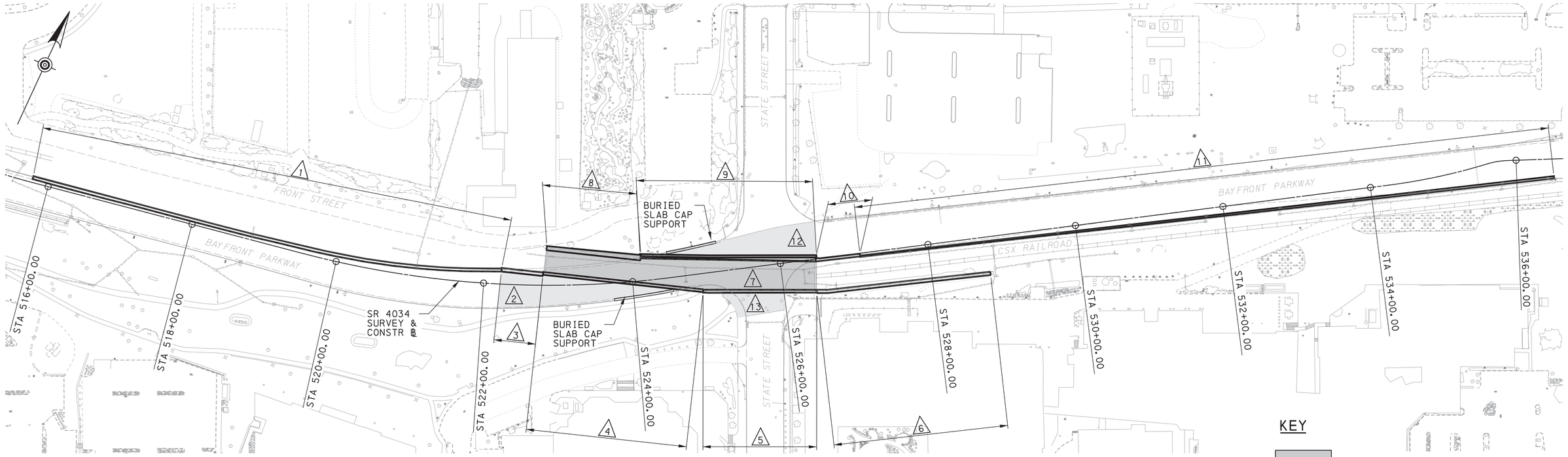
SCALE: 0 20 40 60

PLOTTED: 8/5/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\signals\sheets\TSpl 07_State and 2nd Street.dgn

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSTkp001.dgn



KEY

EXISTING BRIDGE SUPERSTRUCTURE

KEY PLAN - EXISTING STRUCTURE

NTS

EXISTING STRUCTURE SECTION NO.:

EXISTING STRUCTURE SECTION DESCRIPTION:

1. WALL S-1: MSE WALL, STA 515+77± TO 522+24±
2. APPROACH SLAB S-1, INCLUDES BURIED CAP SUPPORT
3. WALL S-2: CANTILEVER WALL ON CONCRETE CAISSONS, STA 522+24± TO 522+81±
4. WALL S-3: ANCHORED SOLDIER PILE WALL, STA 522+81± TO 524+93±
5. WALL S-4: ANCHORED CONCRETE PILE WALL, STA 524+93± TO 526+45±
6. WALL S-5: ANCHORED CONCRETE PILE WALL, STA 526+45± TO 528+80±
7. CSXT BRIDGE SUPERSTRUCTURE, 8" DECK SLAB WITH 33" PRESTRESSED CONCRETE SPREAD BOX BEAMS
8. WALL N-1: CANTILEVER WALL, STA 522+86± TO 524+14±
9. WALL N-2: MSE WALL WITH H-PILE SUPPORTED ABUTMENT CAP, STA 524+14± TO 526+50±
10. WALL N-3: CANTILEVER WALL, STA 526+50± TO 527+09±
11. WALL N-4: MSE WALL (S-20185, STA 527+09± TO 536+51±
12. APPROACH SLAB N, INCLUDES BURIED CAP SUPPORT
13. APPROACH SLAB S-2

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	OVERVIEW PLAN - EXISTING STRUCTURES
2	MPT STAGE 1 - OVERVIEW PLAN
3	MPT STAGE 2 - OVERVIEW PLAN
4	MPT STAGE 2 - STATE STREET DETAIL PLAN 1
5	MPT STAGE 2 - TYPICAL SECTIONS - 1
6	MPT STAGE 2 - TYPICAL SECTIONS - 2
7	MPT STAGE 3A - OVERVIEW PLAN
8	MPT STAGE 3B - OVERVIEW PLAN
9	MPT STAGE 3B - STATE STREET DETAIL PLAN 2
10	MPT STAGE 3B - TYPICAL SECTIONS - 1
11	MPT STAGE 3B - TYPICAL SECTIONS - 2
12	MPT STAGE 4 - OVERVIEW PLAN

NOTES:

FOR EXISTING STRUCTURE PLANS, SEE STRUCTURE NO. S-17717A, DATED 2/28/1990 AND STRUCTURE NO. S-20185 DATED 2/18/1993. WALL & APPROACH SLAB NUMBERING IS REFERENCED FROM THE EXISTING DRAWINGS

STATIONS SHOWN ARE REFERENCED TO THE SR 4034 SURVEY & CONSTR ℄

IF A STAGE IS NOT SHOWN IN THESE DEMOLITION PLANS, IT IS ASSUMED THERE IS NO DEMOLITION TAKING PLACE DURING THAT STAGE

DEMOLITION LIMITS SHOWN ARE APPROXIMATE & SHOULD BE MODIFIED AS NECESSARY BY THE CONTRACTOR TO ACCOUNT FOR MPT DEVICES, UTILITIES, ETC.

APPROXIMATE STRUCTURE QUANTITIES				
ITEM NO	DESCRIPTION		UNIT	TOTAL
1018-0001	REMOVAL OF EXISTING BRIDGE	(1) (2)	LS	
9000-0202	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	(1)	LS	

1. SEE SPECIAL PROVISIONS.
2. 5,170 CY OF FLOWABLE BACKFILL INCIDENTAL TO COST

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

DEMOLITION OF EXISTING CSXT STRUCTURE

OVERVIEW PLAN - EXISTING STRUCTURES

SHEET 1 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

REGISTERED PROFESSIONAL ENGINEER — PE-070825-E — JOSEPH E. BRADLEY

PENNSYLVANIA PE NO. PE-

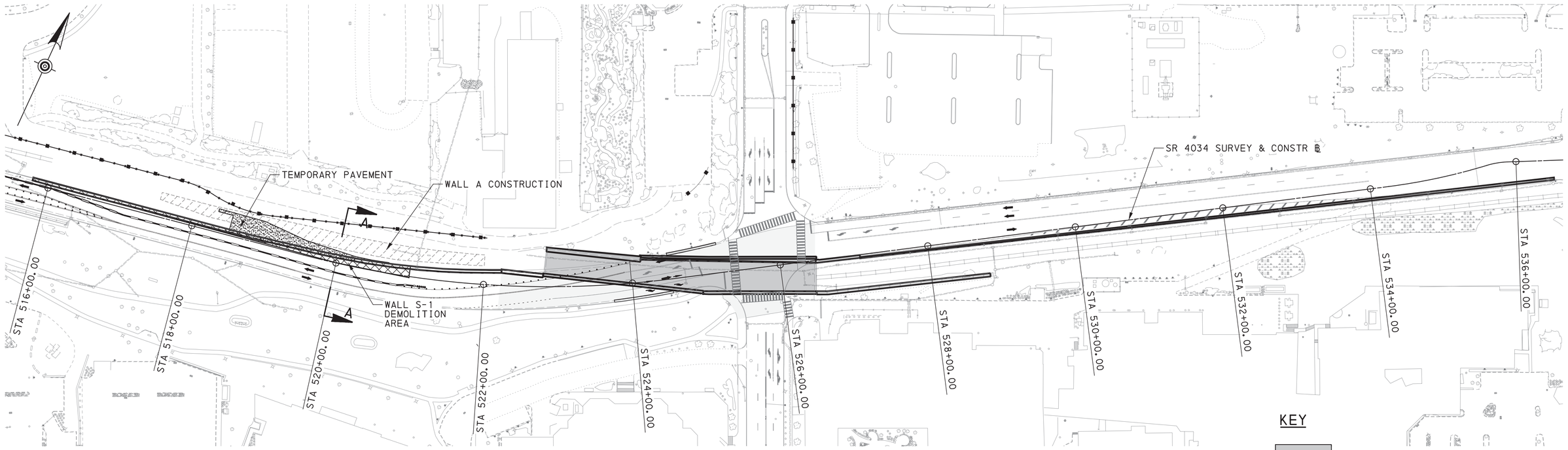
DATE: 8-22-2022

PREPARED BY:

PREPARED BY:
ms consultants, inc.
300 CORPORATE DRIVE
SUITE 200
MOON TOWNSHIP, PA 15108

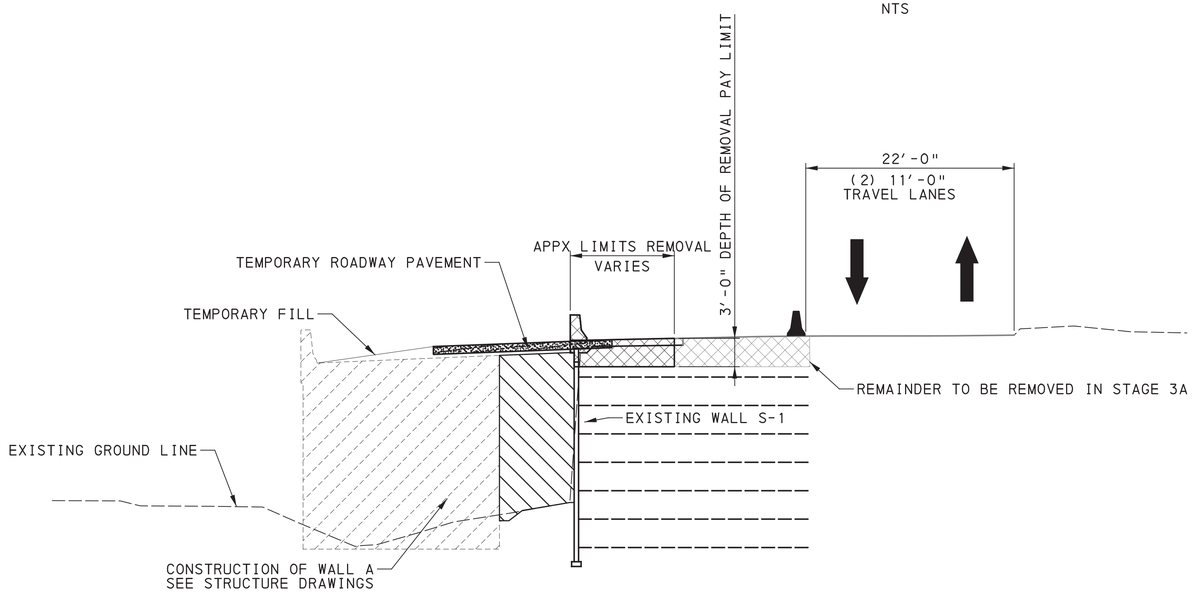
PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mscnsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTStg1kp001.dgn



OVERVIEW PLAN - STAGE 1

NTS



SECTION A-A

SECTION SHOWN STA 520+00.00
(DEMO SHOWN TYPICAL FROM STA 515+77± TO STA 521+00±)

2 0 4 8 FEET

KEY

- EXISTING SUPERSTRUCTURE
- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- TEMPORARY ROADWAY PAVEMENT CONSTRUCTION ON EXISTING STRUCTURE
- ROADWAY BACKFILL

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

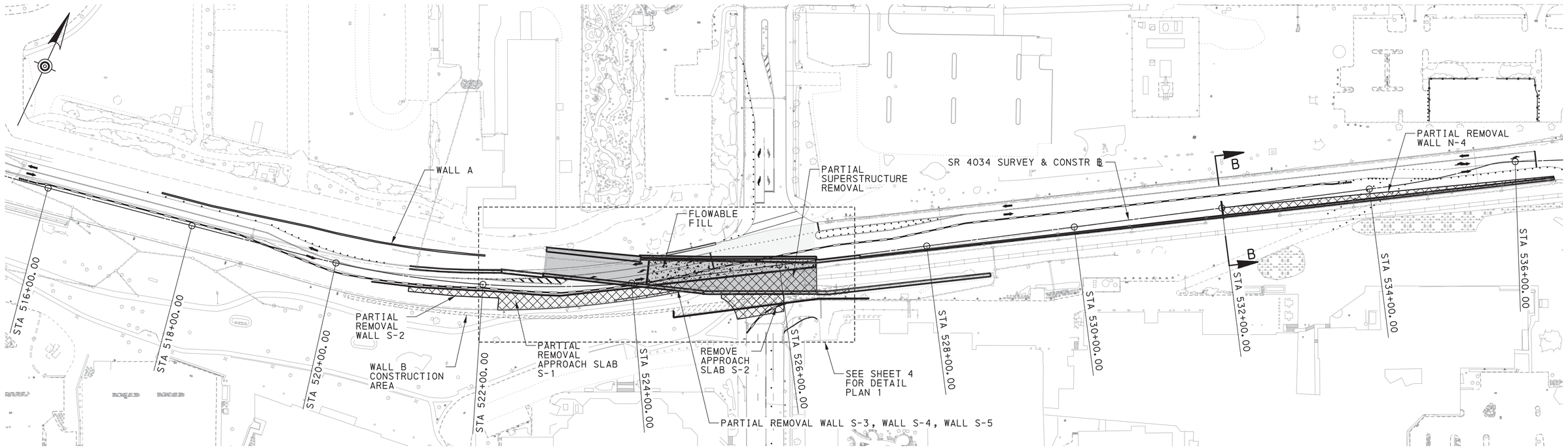
DEMOLITION OF EXISTING CSXT STRUCTURE

MPT STAGE 1 - OVERVIEW PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 2 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

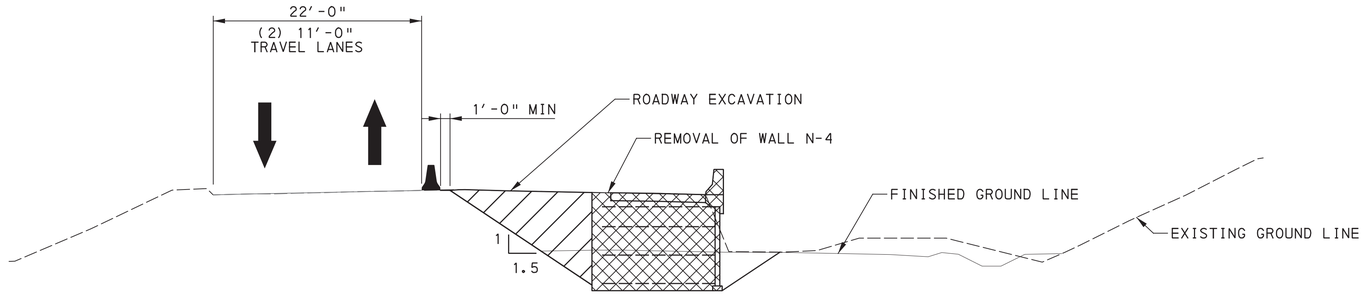


PLAN - STAGE 2

NTS

NOTE:

5,170 CY OF FLOWABLE BACKFILL IS INCEDENTAL TO BRIDGE REMOVAL COST



SECTION B-B

SECTION SHOWN STA 532+00.00
(DEMO SHOWN TYPICAL FROM STA 532+00± TO STA 536+51±)

2 0 4 8 FEET

KEY

- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR
DEMOLITION OF EXISTING CSXT STRUCTURE

MPT STAGE 2 - OVERVIEW PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

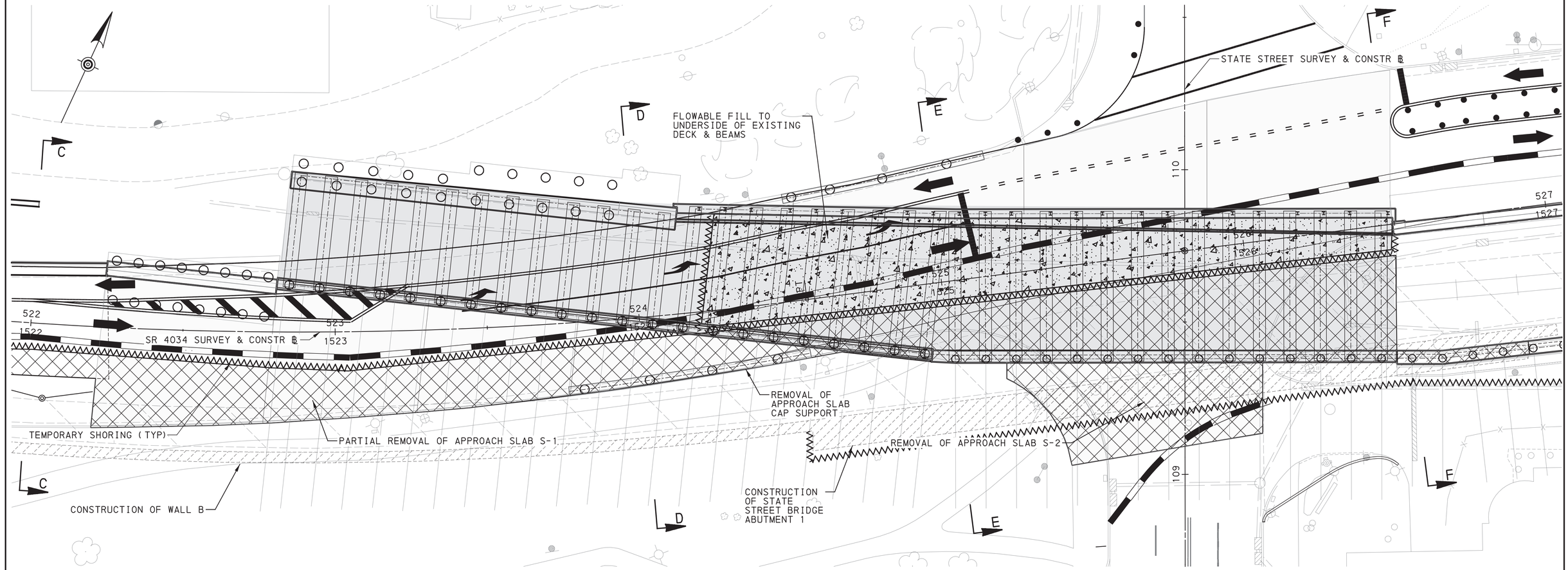
SHEET 3 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTStg2kp001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTST stg2p001.dgn



STATE STREET DETAIL PLAN - STAGE 2

4 0 8 16 FEET

FOR SECTIONS C-C AND D-D REFER TO SHEET 5
FOR SECTIONS E-E AND F-F REFER TO SHEET 6

KEY

- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- NEW ROADWAY CONSTRUCTION
- TEMPORARY SHORING

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

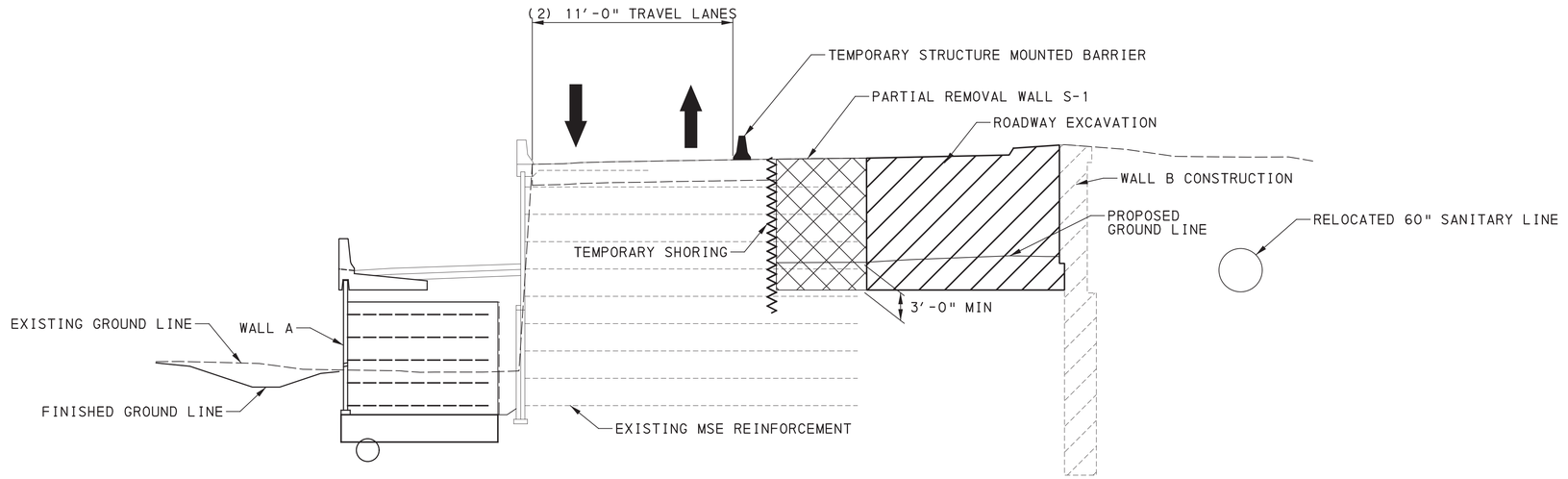
REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR
DEMOLITION OF EXISTING CSXT STRUCTURE
MPT STAGE 2 - STATE STREET
DETAIL PLAN - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 4 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

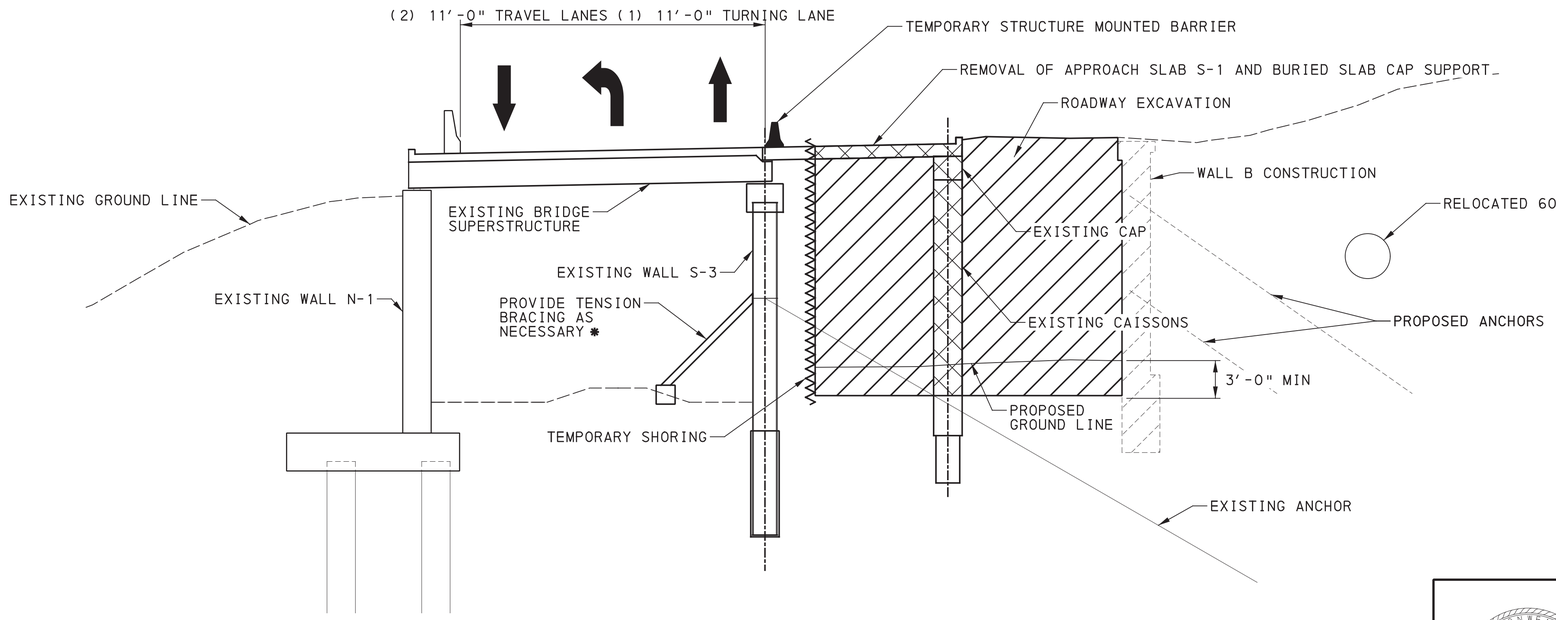
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSTstg2rs001.dgn



SECTION C-C

SECTION SHOWN STA 522+00.00
(DEMO SHOWN TYPICAL FROM STA 521+00± TO STA 522+81±)

2 0 4 8 FEET



SECTION D-D

SECTION SHOWN STA 524+00.00
(DEMO SHOWN TYPICAL FROM STA 522+81± TO STA 524+67±)

2 0 4 8 FEET

*MINIMIZE MOVEMENT AT TOP OF CAP UNDER EXISTING BEAMS DURING EXCAVATION BEHIND EXISTING WALL S-3

KEY

- TEMPORARY SHORING
- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

DEMOLITION OF EXISTING CSXT STRUCTURE
MPT STAGE 2 - TYPICAL SECTIONS - 1

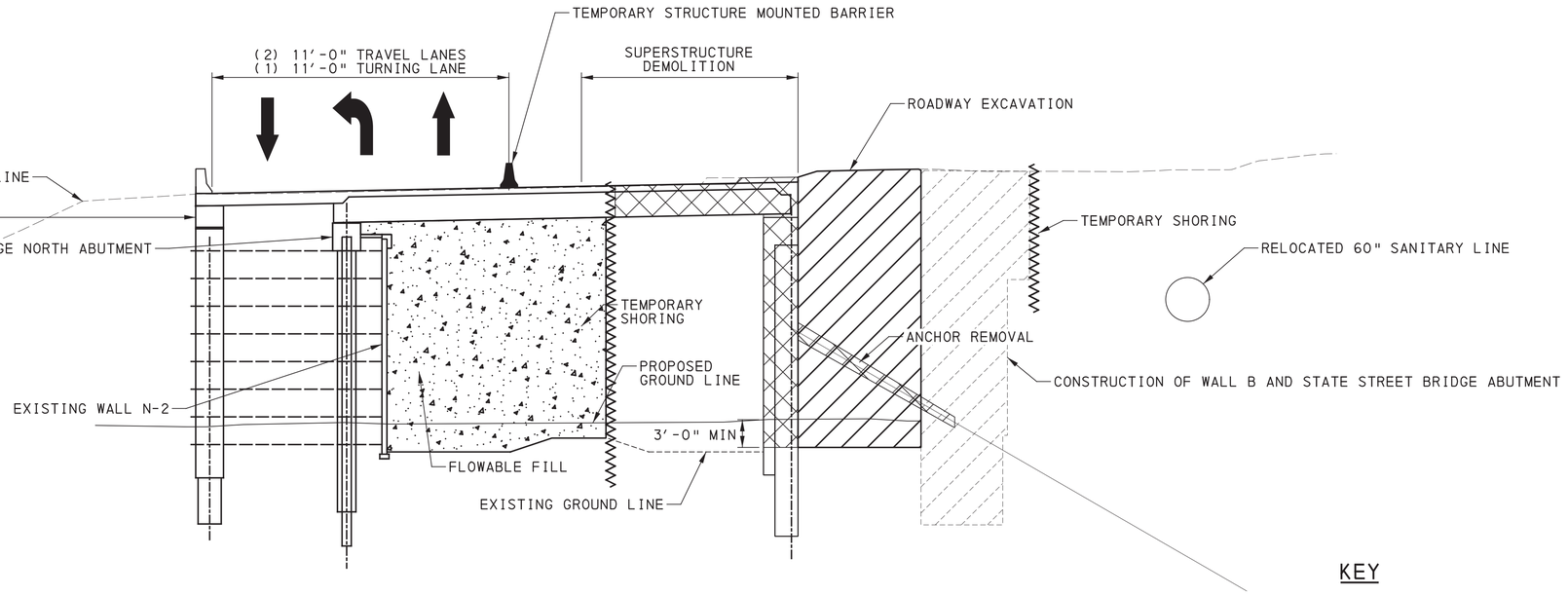
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 5 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mnconsultants.com\Files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSTstg2rs002.dgn



SECTION E - E NOTES

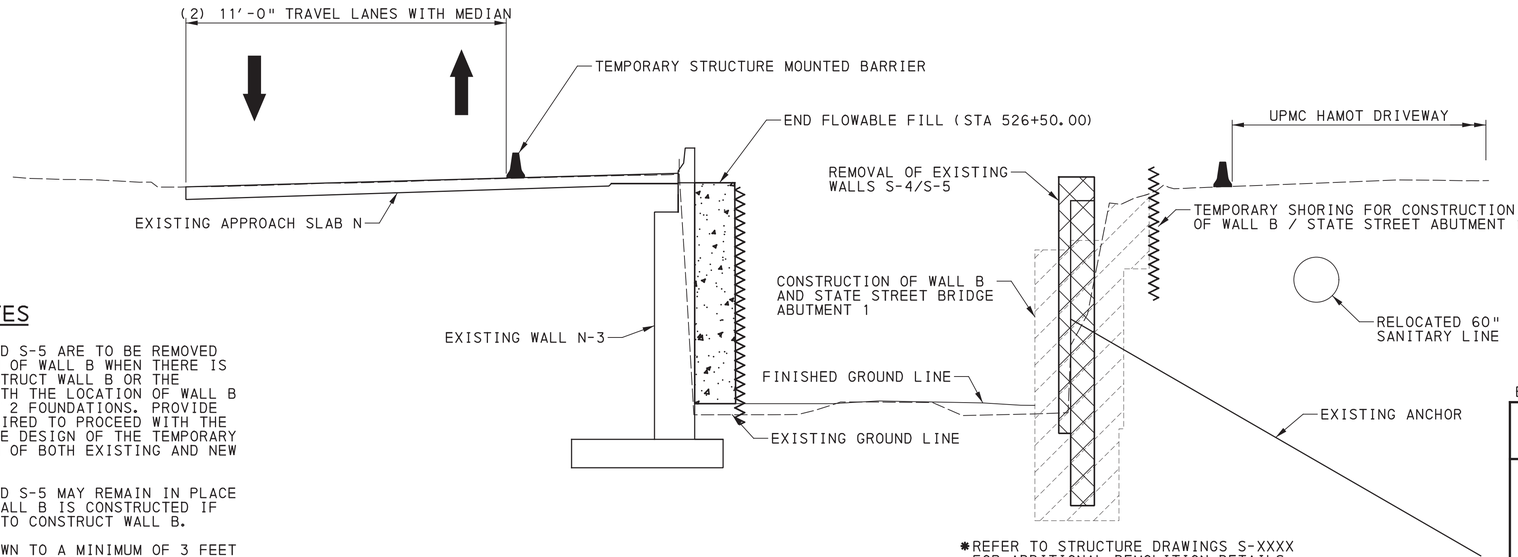
PRIOR TO DEMOLITION OF SUPERSTRUCTURE, PLACE FLOWABLE BACKFILL FROM THE EXISTING LOWER GRADE TO THE UNDERSIDE OF THE EXISTING CONCRETE BEAMS AND DECK. PLACE THE FLOWABLE FILL TO THE PLAN LIMITS SHOWN ON THE CONTRACT DRAWINGS. SUBMIT A PROCEDURE FOR PLACEMENT OF THE FLOWABLE FILL INCLUDING THE MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED. SUBMIT A TESTING PROCEDURE TO ENSURE THE FLOWABLE FILL HAS BEEN PLACED IN CONTACT WITH THE UNDERSIDE OF THE DECK.

AFTER THE FLOWABLE FILL HAS OBTAINED ITS STRENGTH, CUT THE EXISTING BEAMS AND DECK TO THE LIMITS SHOWN AND REMOVE THAT PORTION OF THE SUPERSTRUCTURE. THE REMAINING SECTION OF THE BEAMS WILL REMAIN AND BE SUPPORTED BY THE FLOWABLE FILL. PROCEED WITH THE DEMOLITION OF THE SOUTH ANCHORED SOLDIER PILE WALL (S-3). REMOVE WALL COMPONENTS INCLUDING ROCK ANCHORS AS INDICATED.

SECTION E-E

SECTION SHOWN STA 525+00.00
(DEMO SHOWN TYPICAL FROM STA 524.67± TO STA 526+50±)

2 0 4 8 FEET



*REFER TO STRUCTURE DRAWINGS S-XXXX FOR ADDITIONAL DEMOLITION DETAILS

SECTION F - F NOTES

THE EXISTING WALLS S-4 AND S-5 ARE TO BE REMOVED PRIOR TO THE CONSTRUCTION OF WALL B WHEN THERE IS INSUFFICIENT AREA TO CONSTRUCT WALL B OR THE EXISTING WALLS OVERLAP WITH THE LOCATION OF WALL B AND STATE STREET ABUTMENT 2 FOUNDATIONS. PROVIDE TEMPORARY SHORING AS REQUIRED TO PROCEED WITH THE DEMOLITION. COORDINATE THE DESIGN OF THE TEMPORARY SHORING WITH THE LOCATION OF BOTH EXISTING AND NEW ROCK ANCHORS.

THE EXISTING WALLS S-4 AND S-5 MAY REMAIN IN PLACE AND BE DEMOLISHED AFTER WALL B IS CONSTRUCTED IF THERE IS SUFFICIENT AREA TO CONSTRUCT WALL B.

REMOVE WALL COMPONENTS DOWN TO A MINIMUM OF 3 FEET BELOW FINISHED GRADE EXCEPT WHERE THE WALL COMPONENTS INTERFERE WITH WALL B AND STATE STREET ABUTMENT 2 FOUNDATIONS. AT THOSE LOCATIONS REMOVE ENTIRELY TO THE BOTTOM OF THE CAISSONS.

SECTION F-F *

SECTION SHOWN STA 526+50.00
(DEMO SHOWN TYPICAL FROM STA 524+49.62± TO STA 527+09.27±)

2 0 4 8 FEET

KEY

- TEMPORARY SHORING
- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

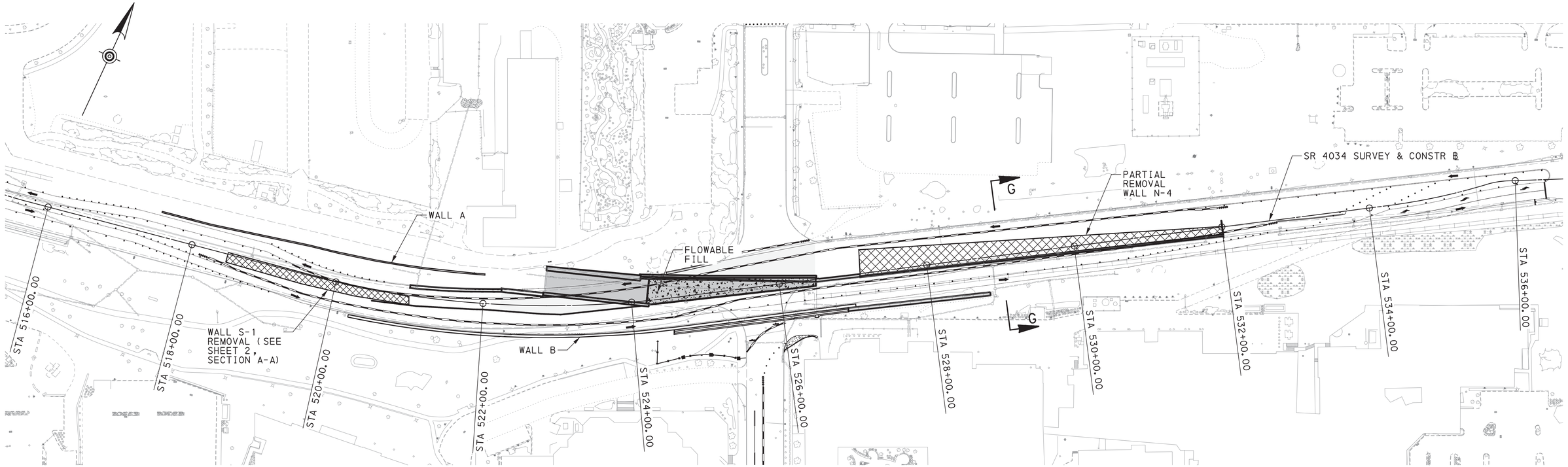
DEMOLITION OF EXISTING CSXT STRUCTURE
MPT STAGE 2 - TYPICAL SECTIONS - 2

SHEET 6 OF 12

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

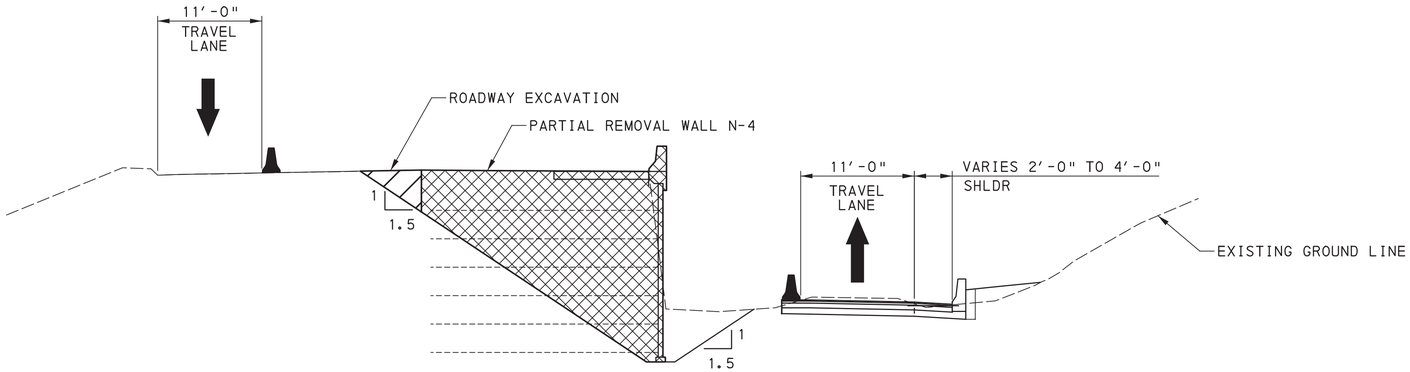
DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mmsconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSTstg3Akp001.dgn



PLAN - STAGE 3A

NTS



SECTION G-G

SECTION SHOWN STA 529+00.00
(DEMO SHOWN TYPICAL FROM STA 527+09± TO STA 532+00±)

2 0 4 8 FEET

KEY

- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

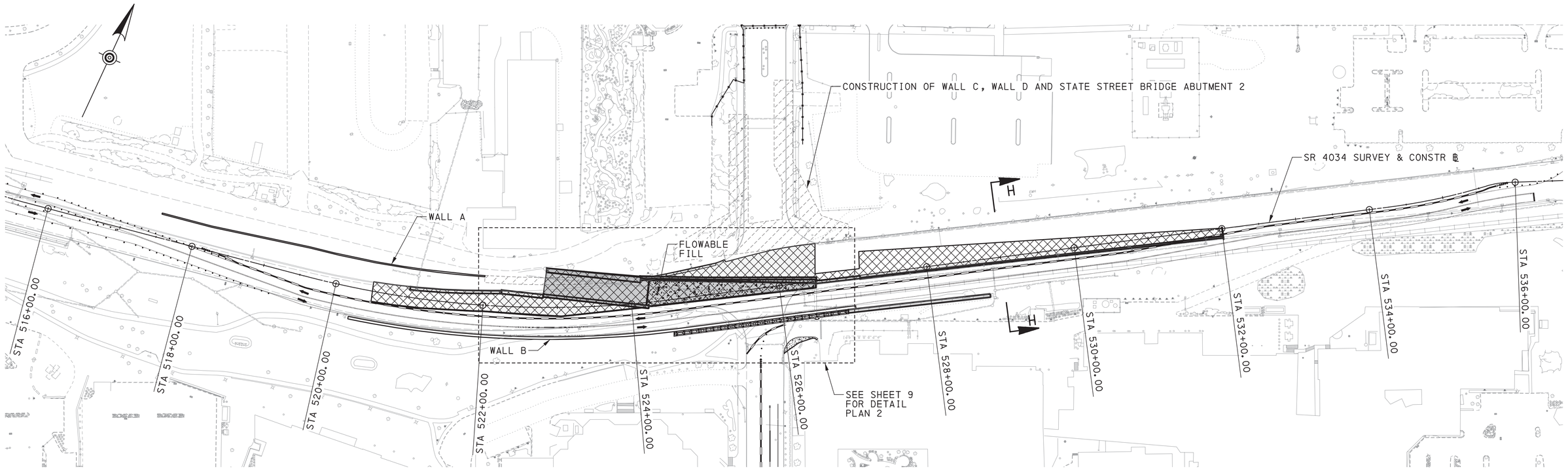
REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR
DEMOLITION OF EXISTING CSXT STRUCTURE

MPT STAGE 3A - OVERVIEW PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

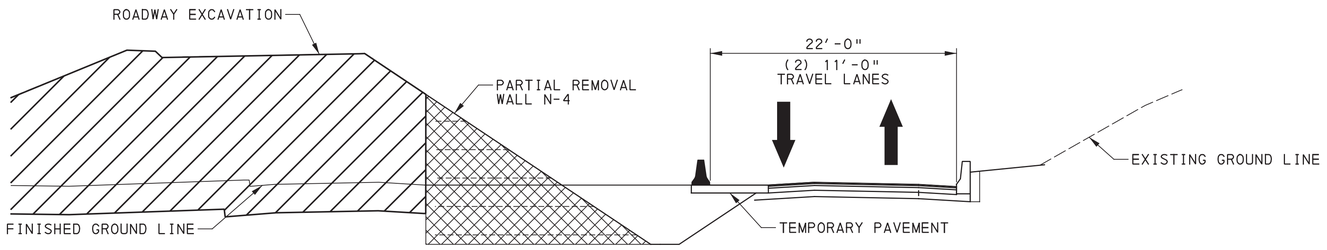
SHEET 7 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB



OVERVIEW PLAN - STAGE 3B

NTS



SECTION H-H

SECTION SHOWN STA 529+00.00
(DEMO SHOWN TYPICAL FROM STA 527+09± TO STA 532+00±)

2 0 4 8 FEET

KEY

- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR
DEMOLITION OF EXISTING CSXT STRUCTURE

MPT STAGE 3B - OVERVIEW PLAN

SHEET 8 OF 12

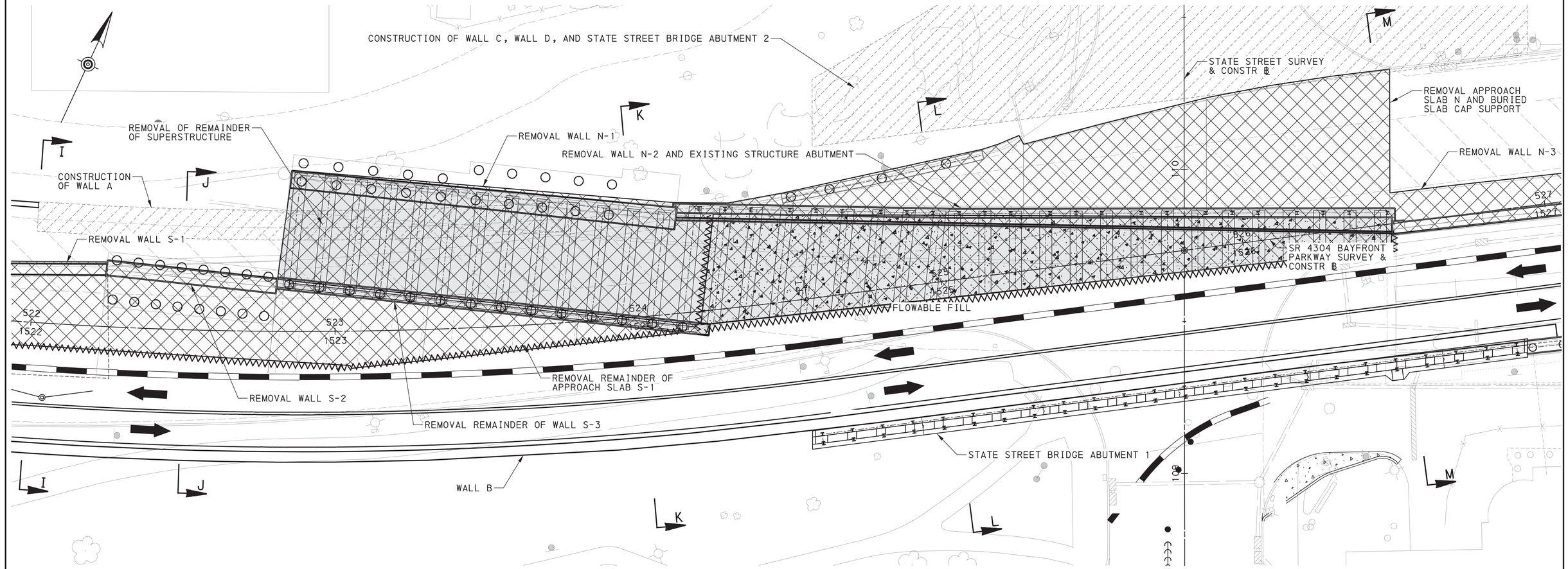
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

OPERATOR:
FILE NAME: \\mscconsultants.com\files\Production\08160\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTStg3Bkp001.dgn

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\msconsultants.com\files\Production\08\60\06808\structures\FINAL\demo_CSXTSTstg3Bp001.dgn



STATE STREET DETAIL PLAN - STAGE 3B

4 0 8 16 FEET

FOR SECTIONS I-I, J-J, AND K-K REFER TO SHEET 10

FOR SECTIONS L-L AND M-M REFER TO SHEET 11

KEY

- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- NEW ROADWAY CONSTRUCTION
- TEMPORARY SHORING

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

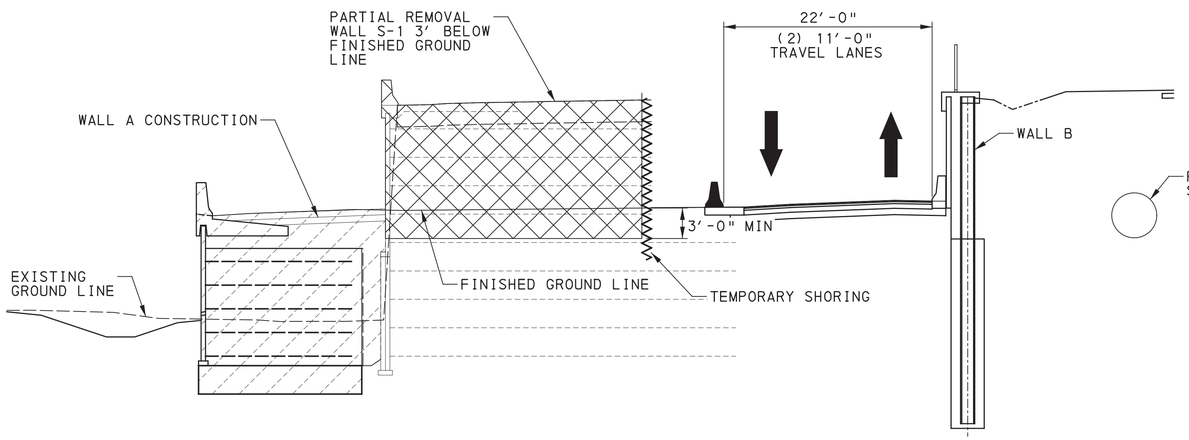
DEMOLITION OF EXISTING CSXT STRUCTURE
MPT STAGE 3B - STATE STREET DETAIL PLAN - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 9 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

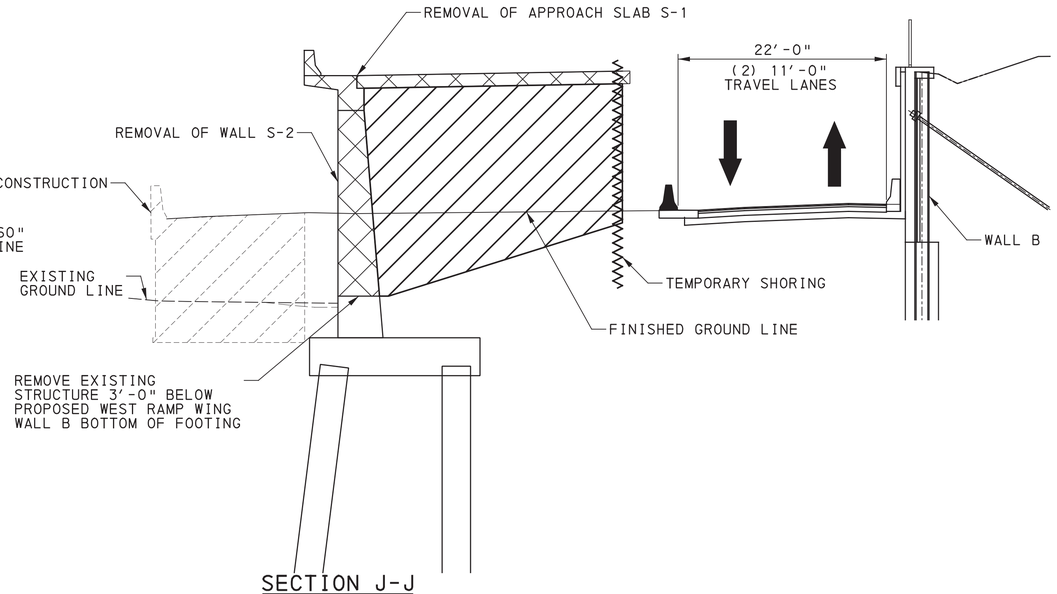
PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\mnconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSt1g3Bts001.dgn



SECTION I-I

SECTION SHOWN STA 522+00.00
(DEMO SHOWN TYPICAL FROM STA 521+00± TO STA 522+24±)

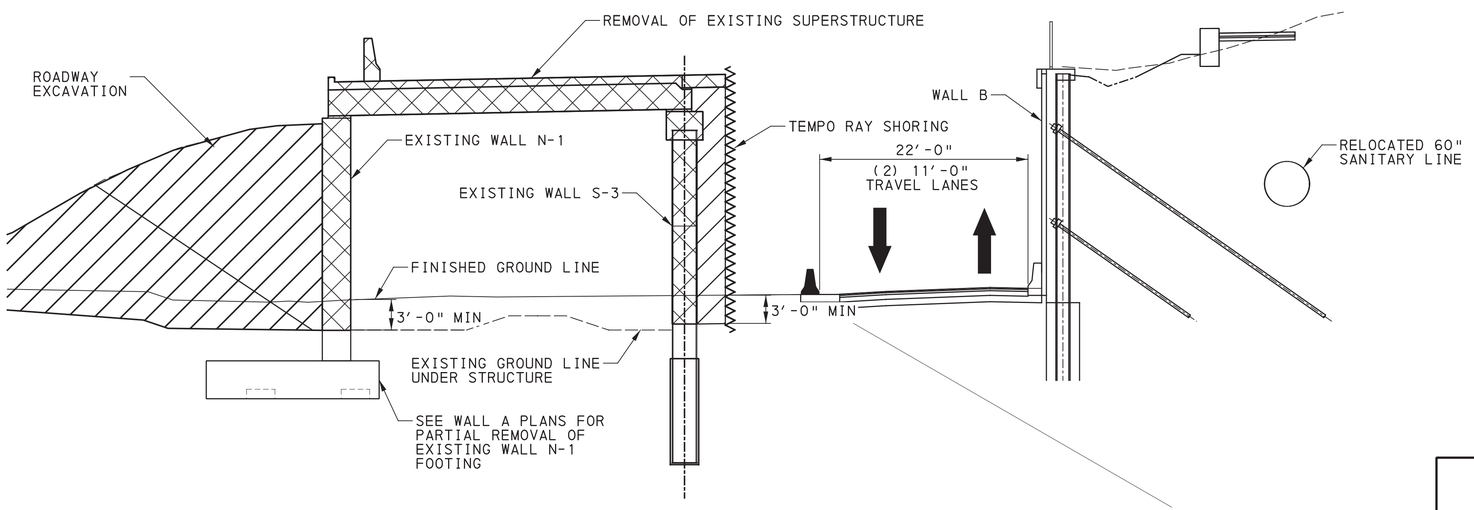
2 0 4 8 FEET



SECTION J-J

SECTION SHOWN STA 522+50.00
(DEMO SHOWN TYPICAL FROM STA 522+24± TO STA 522+81±)

2 0 4 8 FEET



SECTION K-K

SECTION SHOWN STA 524+00.00
(DEMO SHOWN TYPICAL FROM STA 522+81± TO STA 524+67±)

2 0 4 8 FEET

KEY

- TEMPORARY SHORING
- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR
DEMOLITION OF EXISTING CSXT STRUCTURE
MPT STAGE 3B - TYPICAL SECTIONS - 1

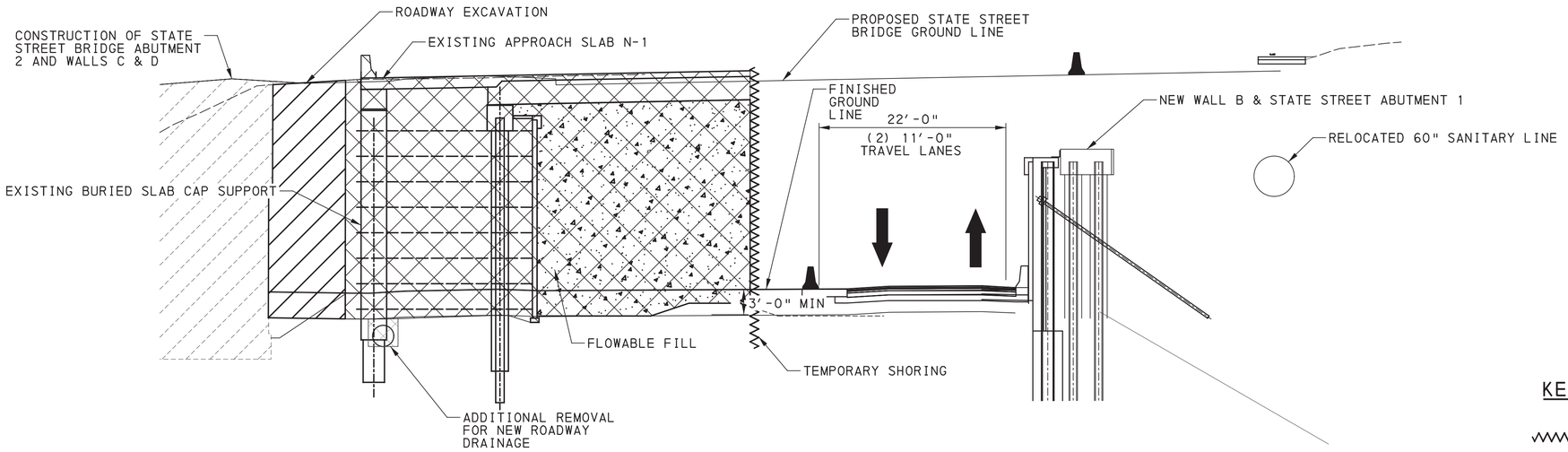
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BRESSLER
ENGINEER
PE-070825-E

SHEET 10 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022

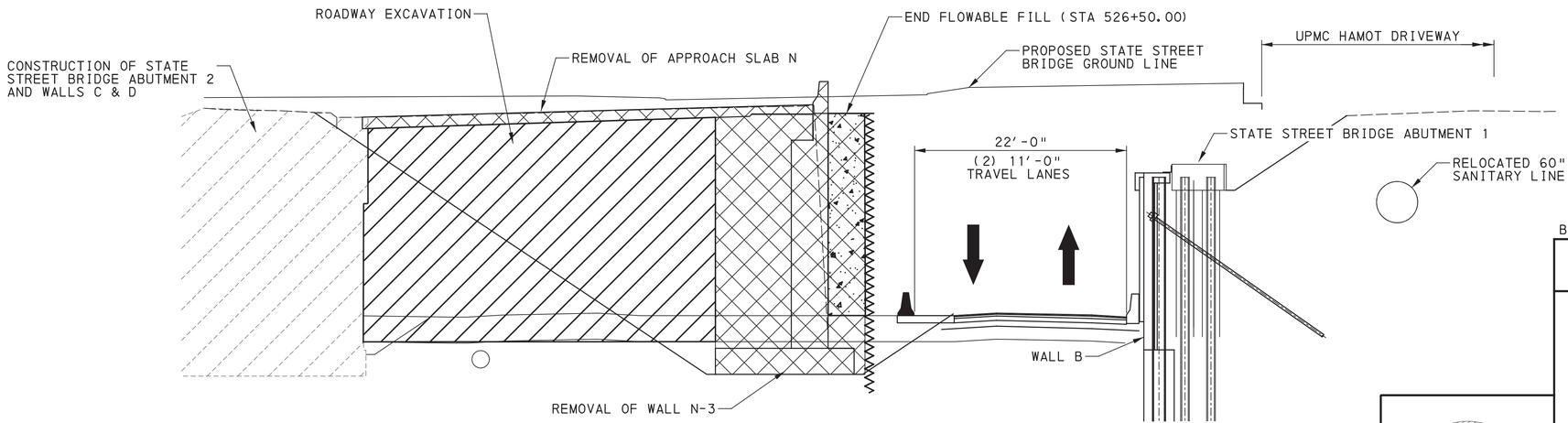
OPERATOR:
FILE NAME: \\vmsconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSt3Bts002.dgn



SECTION L-L

SECTION SHOWN STA 525+00.00
(DEMO SHOWN TYPICAL FROM STA 524.67± TO STA 526+50±)

2 0 4 8 FEET



SECTION M-M

SECTION SHOWN STA 526+50.00
(DEMO SHOWN TYPICAL FROM STA 524+50± TO STA 527+09±)

2 0 4 8 FEET

KEY

- TEMPORARY SHORING
- PROPOSED STRUCTURE CONSTRUCTION
- EXISTING STRUCTURE REMOVAL
- FLOWABLE FILL
- ROADWAY EXCAVATION

Mark	Description	By	Chk'd.	Recm'd	Date
REVISIONS					

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

DEMOLITION OF EXISTING CSXT STRUCTURE

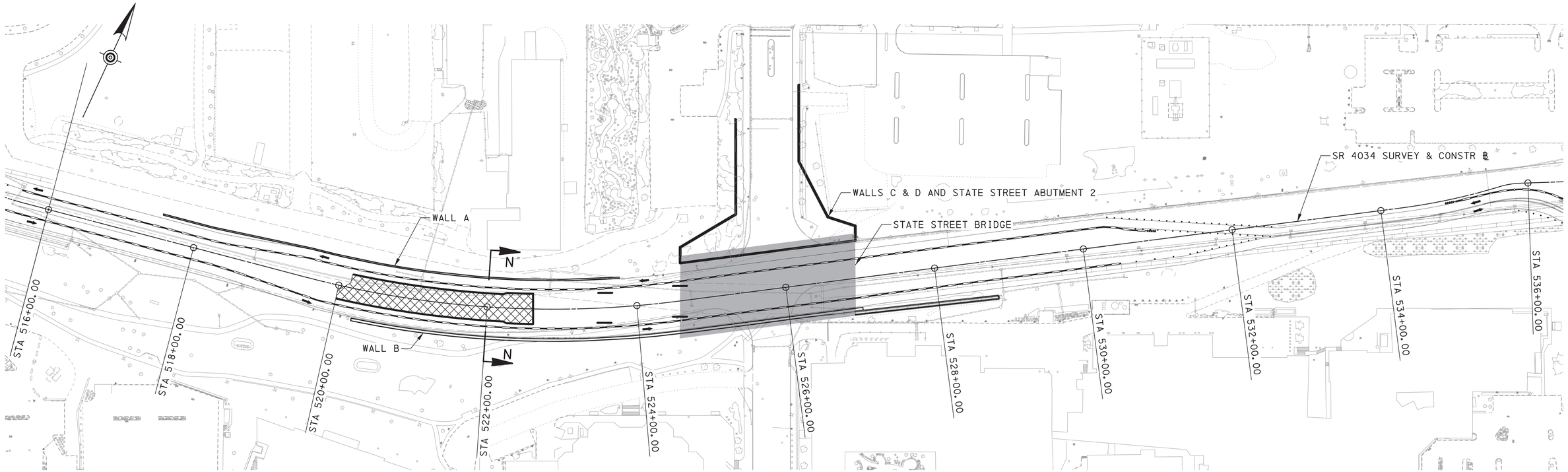
MPT STAGE 3B - TYPICAL SECTIONS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 11 OF 12

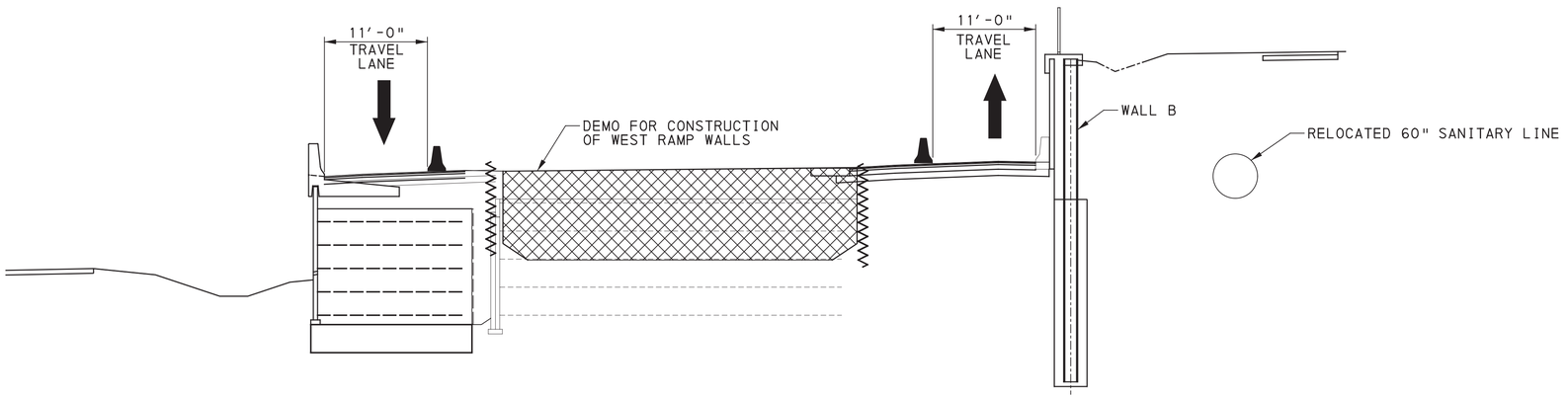
DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLOTTED: 8/22/2022
OPERATOR:
FILE NAME: \\vmconsultants.com\files\Production\08\60\06808\structures\demo_CSXT\sheets\FINAL\demo_CSXTSTstg5kp001.dgn



OVERVIEW PLAN - STAGE 4

NTS



SECTION N-N

SECTION SHOWN STA 522+00.00
(DEMO SHOWN TYPICAL FROM STA 520+00± TO STA 522+50±)

2 0 4 8 FEET

KEY

EXISTING STRUCTURE REMOVAL

TEMPORARY SHORING

Mark	Description	By	Chk'd.	Recm'd	Date
	REVISIONS				

BMS STR ID: N/A MPMS PROJ: 108952 BRKEY: N/A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ERIE COUNTY
SR 4034 SEC. A20

REMOVAL OF STATE STREET/BAYFRONT PARKWAY BRIDGE OVER CSXRR

DEMOLITION OF EXISTING CSXT STRUCTURE

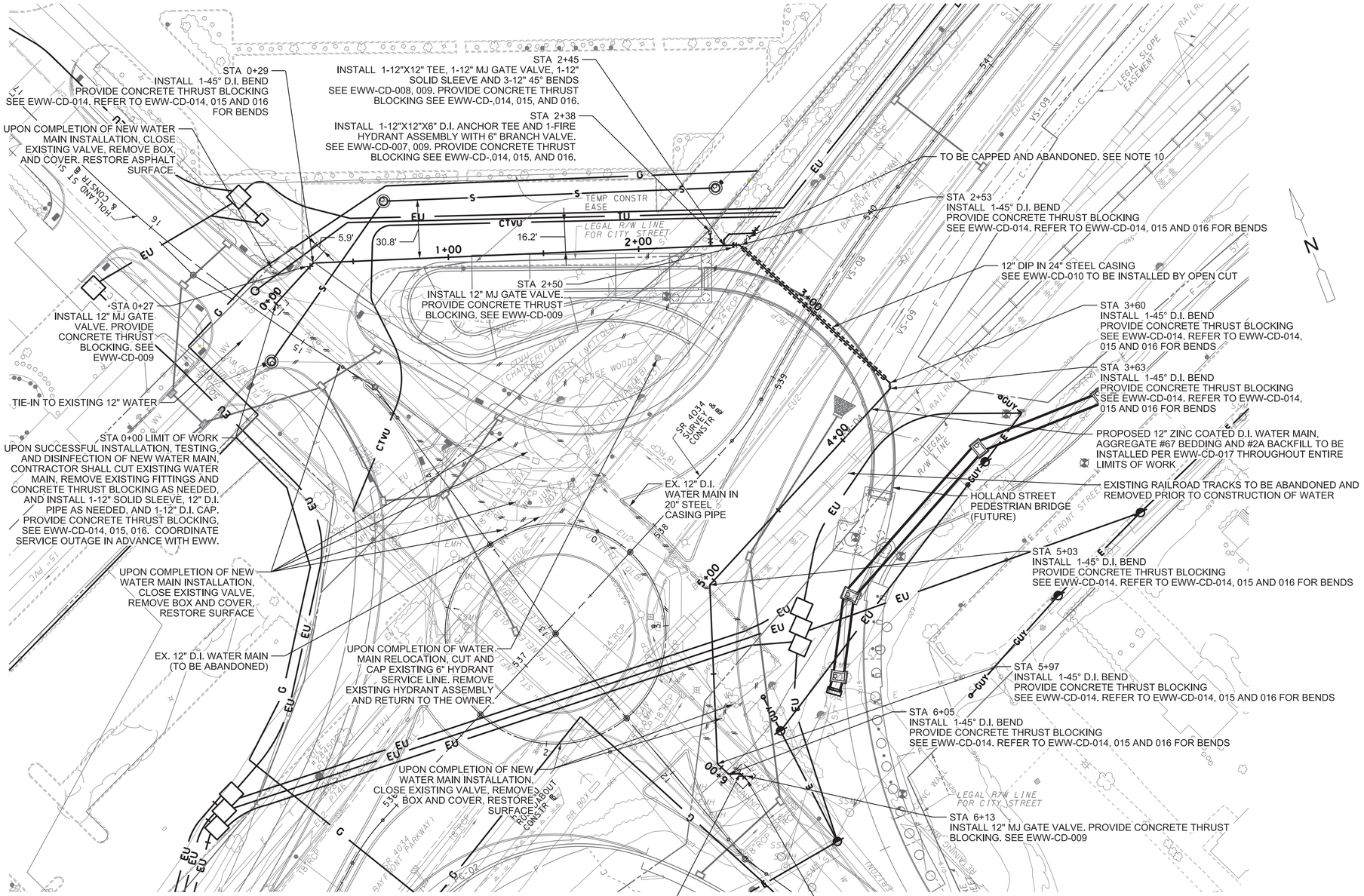
MPT STAGE 4 - OVERVIEW PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BRESSLER ENGINEER PE-070825-E

SHEET 12 OF 12

DES: JRB | CKD: REB | DWG: BDL | CKD: JRB

PLAN
SCALE: 1"=30'



SEE PAY ITEM 9000-1101 - HOLLAND WATERLINE RELOCATION FOR DETAILS

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING STRUCTURES, RAILROADS, AND CLEARING FOR THE SITE PRIOR TO INSTALLATION OF WATER MAIN.
2. EROSION AND SEDIMENT POLLUTION CONTROLS SHALL FOLLOW WEST BAYFRONT CONSTRUCTION DRAWINGS.
3. CONTRACTOR SHALL COORDINATE WITH INSTALLATION OF STORM, GAS, AND ELECTRIC AS NEEDED.
4. PRIOR TO ALL OTHER WORK, CONTRACTOR SHALL VACUUM EXCAVATE BOTH TIE-IN LOCATIONS TO THE EXISTING 12-INCH WATER TO CONFIRM ELEVATIONS.
5. LOCK TYPE GASKETS SHALL BE INSTALLED FOR 40 FT TO BOTH SIDES OF FITTINGS, OR AS SHOWN ON THE CONSTRUCTION DRAWINGS.
6. STATIONING SHOWN ON THE CONSTRUCTION DRAWINGS ARE LEVEL MEASUREMENTS FOR LAYOUT PURPOSES ONLY AND DO NOT REPRESENT PROJECT QUANTITIES.
7. CONTRACTOR TO COORDINATE TIE-INS AND SERVICE OUTAGES FOR CONNECTIONS WITH EWW.
8. WHERE PIPE DEFLECTION IS GREATER THAN 4 DEGREES CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED BENDS.
9. AFTER THE NEW MAIN IS PLACED INTO SERVICE AND THE EXISTING WATER MAIN IS ABANDONED, ALL VALVES ON EXISTING WATER MAIN SHALL BE CLOSED, AND ALL ABANDONED VALVE BOXES, COVERS, AND CURB BOXES SHALL BE REMOVED AND ALL DISTURBED AREAS PROPERLY RESTORED.
10. CONTRACTOR SHALL BE PREPARED TO COMPLETE TIE-INS AT STA 0+00 , STA 2+54, AND STA 6+16 SIMULTANEOUSLY AND IN ONE WORKING SHIFT. EVENING OR NIGHT SHIFT HOURS MAY BE NECESSARY TO MINIMIZE DISRUPTIONS TO EXISTING CUSTOMERS.
11. INSTALL FLOWABLE FILL CONCRETE ENCASEMENT ON WATER MAIN WHERE UTILITY CROSSINGS ARE LESS THAN 18" MINIMUM CLEARANCE.
12. WATER MAINS SHALL NOT BE INSTALLED UNTIL PROPOSED GRADE HAS BEEN ROUGH GRADED TO WITHIN SIX INCHES OF FINISHED GRADE.

LEGEND

- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SANITARY SEWER (S.I)
- EXISTING SANITARY MANHOLE (SSMH)
- EXISTING STORM SEWER
- EXISTING STORM INLETS
- EXISTING WATERLINE (W)
- EXISTING HYDRANT
- EXISTING WATER VALVE (WV)
- PROPOSED WATERLINE
- PROPOSED WATER VALVE
- PROPOSED AIR RELEASE
- PROPOSED HYDRANT
- EXISTING SIGN
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING ASPHALT / CONCRETE PAVING
- EXISTING DECIDUOUS TREE
- EXISTING BUILDING
- ABANDONED WATER (W)

UTILITIES LIST

CENTURYLINK
200 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219
ATTN: STEVE PUTT
EMAIL: STEPHEN.PUTT@LEVEL3.COM

CHARTER COMMUNICATIONS
3315 N. RIDGE RD, STE #100
ASHTABULA, OH 44004
ATTN: JASON SPRAGUE
EMAIL:
JASON.SPRAGUE@CHARTER.COM

CITY OF ERIE (SEWER)
626 STATE STREET, ROOM 400
ERIE, PA 16501
ATTN: JASON SAYERS
EMAIL: JSAYERS@ERIE.PA.US

ERIE SEWER AUTHORITY
120 WEST 10TH STREET
ERIE, PA 16501
ATTN: TIMOTHY SENNETT
EMAIL: TSENNETT@KMGSLAW.COM

VERIZON NORTH, LLC
20 EAST 10TH STREET
ERIE, PA 16501
ATTN: ERIC RODRIGUES
EMAIL:
ERIC.RODRIGUES@VERIZON.COM

ERIE WATER WORKS
240 W 12TH ST
ERIE, PA 16501
ATTN: CRAIG PALMER
EMAIL: CPALMER@ERIEWATERWORKS.ORG

NATIONAL FUEL GAS DISTRIBUTION CO
1100 STATE STREET, PO BOX 2081
ERIE, PA 16512
ATTN: MATT HOVIS
EMAIL: HOVISM@NATFUEL.COM

PENNSYLVANIA ELECTRIC COMPANY
5404 EVANS ROAD, PO BOX 1101
ERIE, PA 16558
ATTN: CHRIS BREYER
EMAIL: CBREYER@FIRSTENERGYCORP.COM

VELOCITY NET COMMUNICATIONS, INC.
PO BOX 9008
ERIE, PA 16505
ATTN: MAT KACPROWICZ
EMAIL: MATKACPROWICZ@VELOCITYNETWORK.NET

ZITO MEDIA
102 SOUTH MAIN STREET
COUDERSPORT, PA 16915
ATTN: LARRY DENEF
EMAIL: LARRY.DENEF@ZITOMEDIA.COM

NOTE: IN ACCORDANCE WITH THE PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION FOR FIELD LOCATION AND SIZE CONFIRMATION. AT LEAST THREE (3) DAYS NOTIFICATION PRIOR TO THE ACTUAL START OF EXCAVATION IS REQUIRED. UTILITIES CAN BE NOTIFIED THROUGH THE PENNSYLVANIA ONE CALL SYSTEM, INC. BY CALLING 1-800-242-1776. THE PENNSYLVANIA ONE CALL DESIGN SERIAL NUMBERS FOR THIS PROJECT AREA 20202692676.

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MALLORY L. GRIFFIN
PE086607

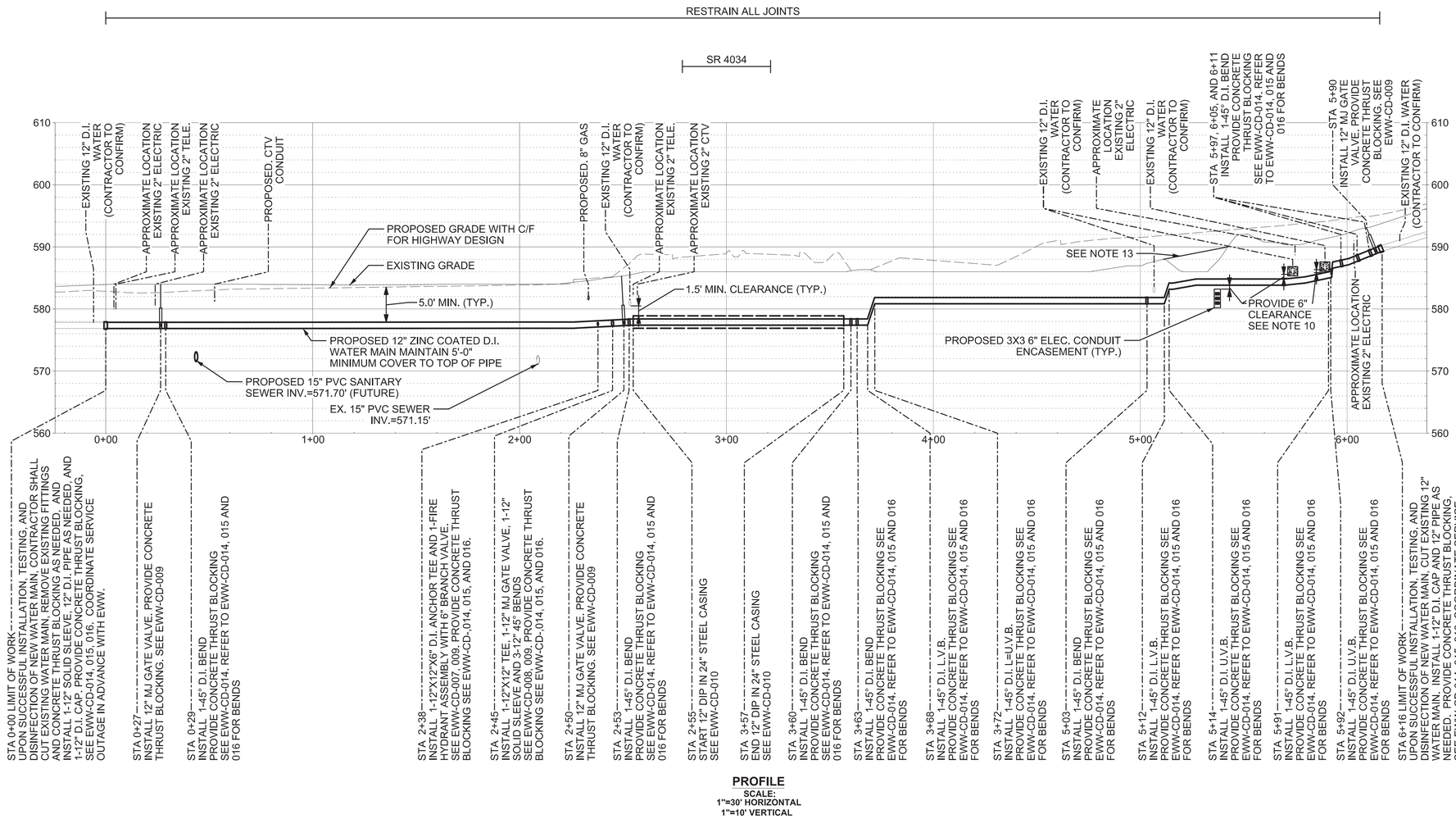
DATE	REVISIONS	

SCALE: AS SHOWN
DATE: JULY 2022
DRAWN BY: NJK (JMT)
CHECKED BY: MLG (JMT)
APPROVED BY: EWW

HOLLAND STREET - 12" WATER MAIN
(PLAN)

ERIE WATER WORKS
ERIE COUNTY, PA

ERIE WATER WORKS



STA 0+00 LIMIT OF WORK----------
UPON SUCCESSFUL INSTALLATION, TESTING, AND DISINFECTION OF NEW WATER MAIN, CONTRACTOR SHALL CUT EXISTING WATER MAIN, REMOVE EXISTING FITTINGS AND CONCRETE THRUST BLOCKING AS NEEDED, AND INSTALL 1-12" SOLID SLEEVE, 12" D.I. PIPE AS NEEDED, AND 1-12" D.I. CAP. PROVIDE CONCRETE THRUST BLOCKING, SEE EWW-CD-014, 015, 016. COORDINATE SERVICE OUTAGE IN ADVANCE WITH EWW.

STA 0+27----------
INSTALL 12" MJ GATE VALVE. PROVIDE CONCRETE THRUST BLOCKING. SEE EWW-CD-009

STA 0+29----------
INSTALL 1-45° D.I. BEND
PROVIDE CONCRETE THRUST BLOCKING
SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 2+38----------
INSTALL 1-12"X12"X6" D.I. ANCHOR TEE AND 1-FIRE HYDRANT ASSEMBLY WITH 6" BRANCH VALVE.
SEE EWW-CD-007, 009. PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014, 015, AND 016.

STA 2+45----------
INSTALL 1-12"X12" TEE, 1-12" MJ GATE VALVE, 1-12" SOLID SLEEVE AND 3-12" 45° BENDS
SEE EWW-CD-008, 009. PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014, 015, AND 016.

STA 2+50----------
INSTALL 12" MJ GATE VALVE. PROVIDE CONCRETE THRUST BLOCKING. SEE EWW-CD-009

STA 2+53----------
INSTALL 1-45° D.I. BEND
PROVIDE CONCRETE THRUST BLOCKING
SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 2+55----------
START 12" DIP IN 24" STEEL CASING
SEE EWW-CD-010

STA 3+57----------
END 12" DIP IN 24" STEEL CASING
SEE EWW-CD-010

STA 3+60----------
INSTALL 1-45° D.I. BEND
PROVIDE CONCRETE THRUST BLOCKING
SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 3+63----------
INSTALL 1-45° D.I. BEND
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 3+68----------
INSTALL 1-45° D.I. L.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 3+72----------
INSTALL 1-45° D.I. L=U.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 5+03----------
INSTALL 1-45° D.I. BEND
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 5+12----------
INSTALL 1-45° D.I. L.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 5+14----------
INSTALL 1-45° D.I. U.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 5+91----------
INSTALL 1-45° D.I. L.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 5+92----------
INSTALL 1-45° D.I. U.V.B.
PROVIDE CONCRETE THRUST BLOCKING SEE EWW-CD-014. REFER TO EWW-CD-014, 015 AND 016 FOR BENDS

STA 6+16 LIMIT OF WORK----------
UPON SUCCESSFUL INSTALLATION, TESTING, AND DISINFECTION OF NEW WATER MAIN, CUT EXISTING 12" WATER MAIN, INSTALL 1-12" D.I. CAP AND 12" PIPE AS NEEDED. PROVIDE CONCRETE THRUST BLOCKING, SEE EWW-CD-014, 015, 016. COORDINATE SERVICE OUTAGE IN ADVANCE WITH EWW.

PROFILE
SCALE:
1"=30' HORIZONTAL
1"=10' VERTICAL

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING STRUCTURES, RAILROADS, AND CLEARING FOR THE SITE PRIOR TO INSTALLATION OF WATER MAIN.
2. EROSION AND SEDIMENT POLLUTION CONTROLS SHALL FOLLOW WEST BAYFRONT CONSTRUCTION DRAWINGS.
3. CONTRACTOR SHALL COORDINATE WITH INSTALLATION OF STORM, GAS, AND ELECTRIC AS NEEDED.
4. PRIOR TO ALL OTHER WORK, CONTRACTOR SHALL VACUUM EXCAVATE BOTH TIE-IN LOCATIONS TO THE EXISTING 12-INCH WATER TO CONFIRM ELEVATIONS.
5. LOCK TYPE GASKETS SHALL BE INSTALLED FOR 40 FT TO BOTH SIDES OF FITTINGS, OR AS SHOWN ON THE CONSTRUCTION DRAWINGS.
6. STATIONING SHOWN ON THE CONSTRUCTION DRAWINGS ARE LEVEL MEASUREMENTS FOR LAYOUT PURPOSES ONLY AND DO NOT REPRESENT PROJECT QUANTITIES.
7. CONTRACTOR TO COORDINATE TIE-INS AND SERVICE OUTAGES FOR CONNECTIONS WITH EWW.
8. WHERE PIPE DEFLECTION GREATER THAN 4 DEGREES CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED BENDS.
9. AFTER THE NEW MAIN IS PLACED INTO SERVICE AND THE EXISTING WATER MAIN IS ABANDONED, ALL VALVES ON EXISTING WATER MAIN SHALL BE CLOSED, AND ALL ABANDONED VALVE BOXES, COVERS, AND CURB BOXES SHALL BE REMOVED AND ALL DISTURBED AREAS PROPERLY RESTORED.
10. CONTRACTOR SHALL BE PREPARED TO COMPLETE TIE-INS AT STA 0+00 , STA 2+54, AND STA 6+16 SIMULTANEOUSLY AND IN ONE WORKING SHIFT. EVENING OR NIGHT SHIFT HOURS MAY BE NECESSARY TO MINIMIZE DISRUPTIONS TO EXISTING CUSTOMERS.
11. INSTALL FLOWABLE FILL CONCRETE ENCASEMENT ON WATER MAIN WHERE UTILITY CROSSINGS ARE LESS THAN 18" MINIMUM CLEARANCE.
12. WATER MAINS SHALL NOT BE INSTALLED UNTIL PROPOSED GRADE HAS BEEN ROUGH GRADED TO WITHIN SIX INCHES OF FINISHED GRADE.
13. PROVIDE TEMPORARY FILL TO PROVIDE A MINIMUM 4 FT COVER DEPTH TO CROWN OF WATER MAIN.

LEGEND

- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SANITARY SEWER (S.I)
- EXISTING SANITARY MANHOLE (SSMH)
- EXISTING STORM SEWER
- EXISTING STORM INLETS
- EXISTING WATERLINE (W)
- EXISTING HYDRANT
- EXISTING WATER VALVE (WV)
- PROPOSED WATERLINE
- PROPOSED WATER VALVE
- PROPOSED AIR RELEASE
- PROPOSED HYDRANT
- EXISTING SIGN
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING ASPHALT / CONCRETE PAVING
- EXISTING DECIDUOUS TREE
- EXISTING BUILDING
- ABANDONED WATER (W)

UTILITIES LIST

CENTURYLINK
200 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219
ATTN: STEVE PUTT
EMAIL: STEPHEN.PUTT@LEVEL3.COM

CHARTER COMMUNICATIONS
3315 N. RIDGE RD, STE #100
ASHTABULA, OH 44004
ATTN: JASON SPRAGUE
EMAIL:
JASON.SPRAGUE@CHARTER.COM

CITY OF ERIE (SEWER)
626 STATE STREET, ROOM 400
ERIE, PA 16501
ATTN: JASON SAYERS
EMAIL: JSAYERS@ERIE.PA.US

ERIE SEWER AUTHORITY
120 WEST 10TH STREET
ERIE, PA 16501
ATTN: TIMOTHY SENNETT
EMAIL: TSENNETT@KMGSLAW.COM

VERIZON NORTH, LLC
20 EAST 10TH STREET
ERIE, PA 16501
ATTN: ERIC RODRIGUES
EMAIL:
ERIC.RODRIGUES@VERIZON.COM

ERIE WATER WORKS
240 W 12TH ST
ERIE, PA 16501
ATTN: CRAIG PALMER
EMAIL: CPALMER@ERIEWATERWORKS.ORG

NATIONAL FUEL GAS DISTRIBUTION CO
1100 STATE STREET, PO BOX 2081
ERIE, PA 16512
ATTN: MATT HOVIS
EMAIL: HOVISM@NATFUEL.COM

PENNSYLVANIA ELECTRIC COMPANY
5404 EVANS ROAD, PO BOX 1101
ERIE, PA 16558
ATTN: CHRIS BREYER
EMAIL: CBREYER@FIRSTENERGYCORP.COM

VELOCITY NET COMMUNICATIONS, INC.
PO BOX 9008
ERIE, PA 16505
ATTN: MAT KACPROWICZ
EMAIL: MATKACPROWICZ@VELOCITYNETWORK.NET

ZITO MEDIA
102 SOUTH MAIN STREET
COUDERSPORT, PA 16915
ATTN: LARRY DENEF
EMAIL: LARRY.DENEF@ZITOMEDIA.COM

NOTE: IN ACCORDANCE WITH THE PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION FOR FIELD LOCATION AND SIZE CONFIRMATION. AT LEAST THREE (3) DAYS NOTIFICATION PRIOR TO THE ACTUAL START OF EXCAVATION IS REQUIRED. UTILITIES CAN BE NOTIFIED THROUGH THE PENNSYLVANIA ONE CALL SYSTEM, INC. BY CALLING 1-800-242-1776. THE PENNSYLVANIA ONE CALL DESIGN SERIAL NUMBERS FOR THIS PROJECT AREA 20202692676.

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MALLORY L. GRIFFIN
ENGINEER
PE086607

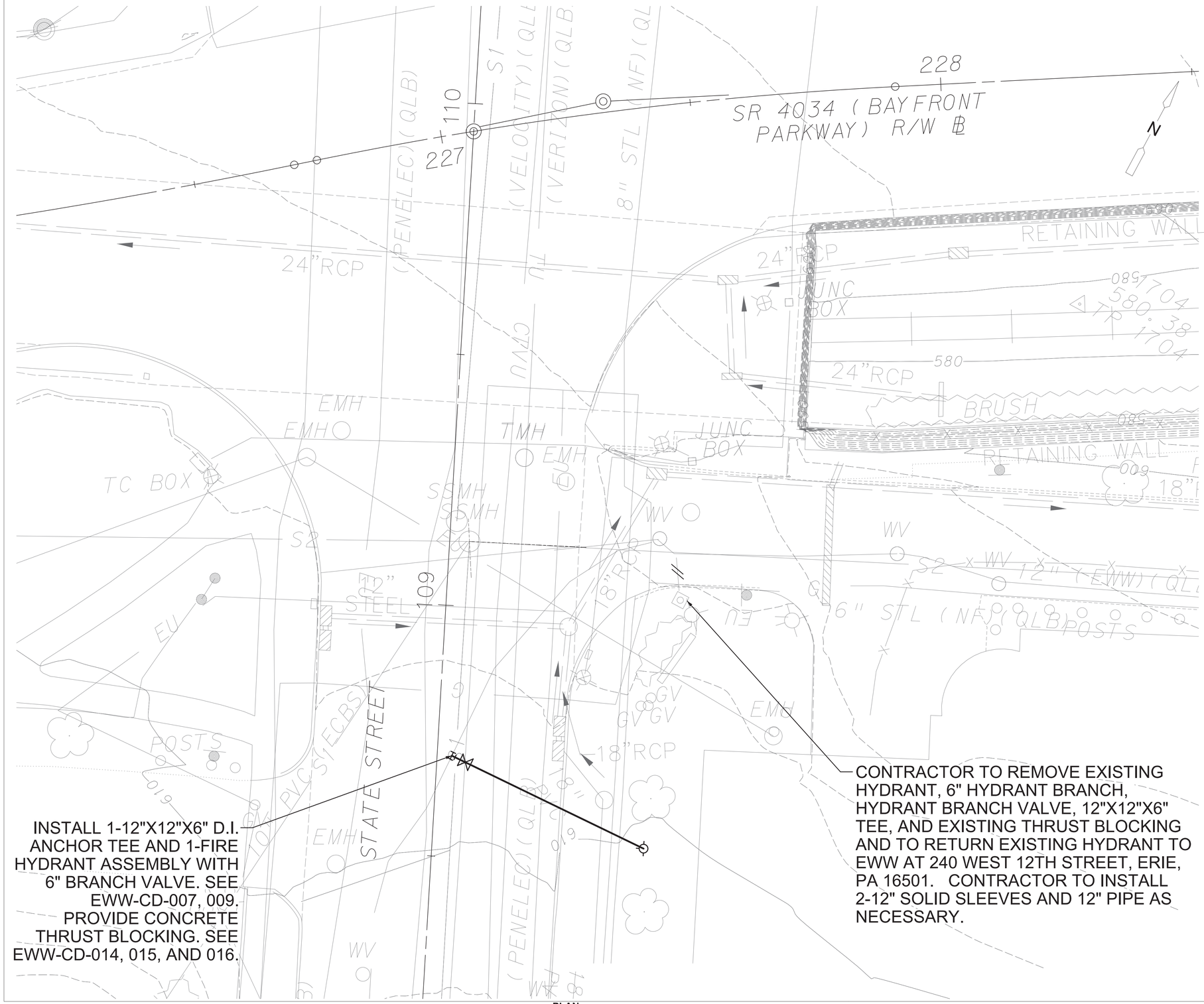
DATE	REVISIONS	

SCALE:	AS SHOWN
DATE:	JULY 2022
DRAWN BY:	NJK (JMT)
CHECKED BY:	MLG (JMT)
APPROVED BY:	EWW

HOLLAND STREET - 12" WATER MAIN
(PROFILE)

ERIE WATER WORKS
ERIE COUNTY, PA

ERIE WATER WORKS



INSTALL 1-12"X12"X6" D.I. ANCHOR TEE AND 1-FIRE HYDRANT ASSEMBLY WITH 6" BRANCH VALVE. SEE EWW-CD-007, 009. PROVIDE CONCRETE THRUST BLOCKING. SEE EWW-CD-014, 015, AND 016.

CONTRACTOR TO REMOVE EXISTING HYDRANT, 6" HYDRANT BRANCH, HYDRANT BRANCH VALVE, 12"X12"X6" TEE, AND EXISTING THRUST BLOCKING AND TO RETURN EXISTING HYDRANT TO EWW AT 240 WEST 12TH STREET, ERIE, PA 16501. CONTRACTOR TO INSTALL 2-12" SOLID SLEEVES AND 12" PIPE AS NECESSARY.

PLAN
SCALE: 1"=10'
0 10 20 FEET
1"=10'-HORZ.

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING STRUCTURES AND CLEARING FOR THE SITE PRIOR TO INSTALLATION OF WATER MAIN.
2. EROSION AND SEDIMENT POLLUTION CONTROLS SHALL FOLLOW WEST BAYFRONT CONSTRUCTION DRAWINGS.
3. CONTRACTOR SHALL COORDINATE WITH INSTALLATION OF STORM, GAS, AND ELECTRIC AS NEEDED.
4. LOCK TYPE GASKETS SHALL BE INSTALLED FOR 40 FT TO BOTH SIDES OF FITTINGS, OR AS SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STATIONING SHOWN ON THE CONSTRUCTION DRAWINGS ARE LEVEL MEASUREMENTS FOR LAYOUT PURPOSES ONLY AND DO NOT REPRESENT PROJECT QUANTITIES.
6. CONTRACTOR TO COORDINATE TIE-INS AND SERVICE OUTAGES FOR CONNECTIONS WITH EWW.
7. WHERE PIPE DEFLECTION GREATER THAN 4 DEGREES ARE USED, CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED BENDS.
8. AFTER THE NEW MAIN IS PLACED INTO SERVICE AND THE EXISTING WATER MAIN IS ABANDONED, ALL VALVES ON THE EXISTING WATER MAIN SHALL BE CLOSED, ALL ABANDONED VALVE BOXES, COVERS, AND CURB BOXES SHALL BE REMOVED, AND ALL DISTURBED AREAS PROPERLY RESTORED.
9. CONTRACTOR SHALL BE PREPARED TO COMPLETE BOTH TIE-INS SIMULTANEOUSLY AND IN ONE WORKING SHIFT. EVENING OR NIGHT SHIFT HOURS MAY BE NECESSARY TO MINIMIZE DISRUPTIONS TO EXISTING CUSTOMERS.
10. INSTALL CONCRETE ENCASEMENT ON UTILITIES WHERE UTILITY CROSSINGS ARE LESS THAN 18" MINIMUM CLEARANCE. SEE EWW-CD-006.

LEGEND

- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SANITARY SEWER (S1)
- EXISTING SANITARY MANHOLE (SSMH)
- EXISTING STORM SEWER
- EXISTING STORM INLETS
- EXISTING WATERLINE
- EXISTING HYDRANT
- EXISTING WATER VALVE (WV)
- PROPOSED WATERLINE
- PROPOSED WATER VALVE
- PROPOSED HYDRANT
- EXISTING SIGN
- EXISTING LIGHT POLE
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING ASPHALT / CONCRETE PAVING
- EXISTING DECIDUOUS TREE
- EXISTING BUILDING
- ABANDONED WATER

UTILITIES LIST

CENTURYLINK
200 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219
ATTN: STEVE PUTT
EMAIL: STEPHEN.PUTT@LEVEL3.COM

CHARTER COMMUNICATIONS
3315 N. RIDGE RD. STE #100
ASHTABULA, OH 44004
ATTN: JASON SPRAGUE
EMAIL:
JASON.SPRAGUE@CHARTER.COM

CITY OF ERIE (SEWER)
626 STATE STREET, ROOM 400
ERIE, PA 16501
ATTN: JASON SAYERS
EMAIL: JSAYERS@ERIE.PA.US

ERIE SEWER AUTHORITY
120 WEST 10TH STREET
ERIE, PA 16501
ATTN: TIMOTHY SENNETT
EMAIL: TSENNETT@KMGSLAW.COM

VERIZON NORTH, LLC
20 EAST 10TH STREET
ERIE, PA 16501
ATTN: ERIC RODRIGUES
EMAIL:
ERIC.RODRIGUES@VERIZON.COM

ERIE WATER WORKS
240 W 12TH ST
ERIE, PA 16501
ATTN: CRAIG PALMER
EMAIL: CPALMER@ERIEWATERWORKS.ORG

NATIONAL FUEL GAS DISTRIBUTION CO
1100 STATE STREET, PO BOX 2081
ERIE, PA 16512
ATTN: MATT HOVIS
EMAIL: HOVISM@NATFUEL.COM

PENNSYLVANIA ELECTRIC COMPANY
5404 EVANS ROAD, PO BOX 1101
ERIE, PA 16558
ATTN: CHRIS BREYER
EMAIL: CBREYER@FIRSTENERGYCORP.COM

VELOCITY NET COMMUNICATIONS, INC.
PO BOX 9008
ERIE, PA 16505
ATTN: MAT KACPROWICZ
EMAIL: MATKACPROWICZ@VELOCITYNETWORK.NET

ZITO MEDIA
102 SOUTH MAIN STREET
COUDERSPORT, PA 16915
ATTN: LARRY DENEF
EMAIL: LARRY.DENEF@ZITOMEDIA.COM

NOTE: IN ACCORDANCE WITH THE PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION FOR FIELD LOCATION AND SIZE CONFIRMATION. AT LEAST THREE (3) DAYS NOTIFICATION PRIOR TO THE ACTUAL START OF EXCAVATION IS REQUIRED. UTILITIES CAN BE NOTIFIED THROUGH THE PENNSYLVANIA ONE CALL SYSTEM, INC. BY CALLING 1-800-242-1776. THE PENNSYLVANIA ONE CALL DESIGN SERIAL NUMBERS FOR THIS PROJECT AREA 20202692676.

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MALLORY L. GRIFFIN
ENGINEER
PE086607

DATE	REVISIONS	

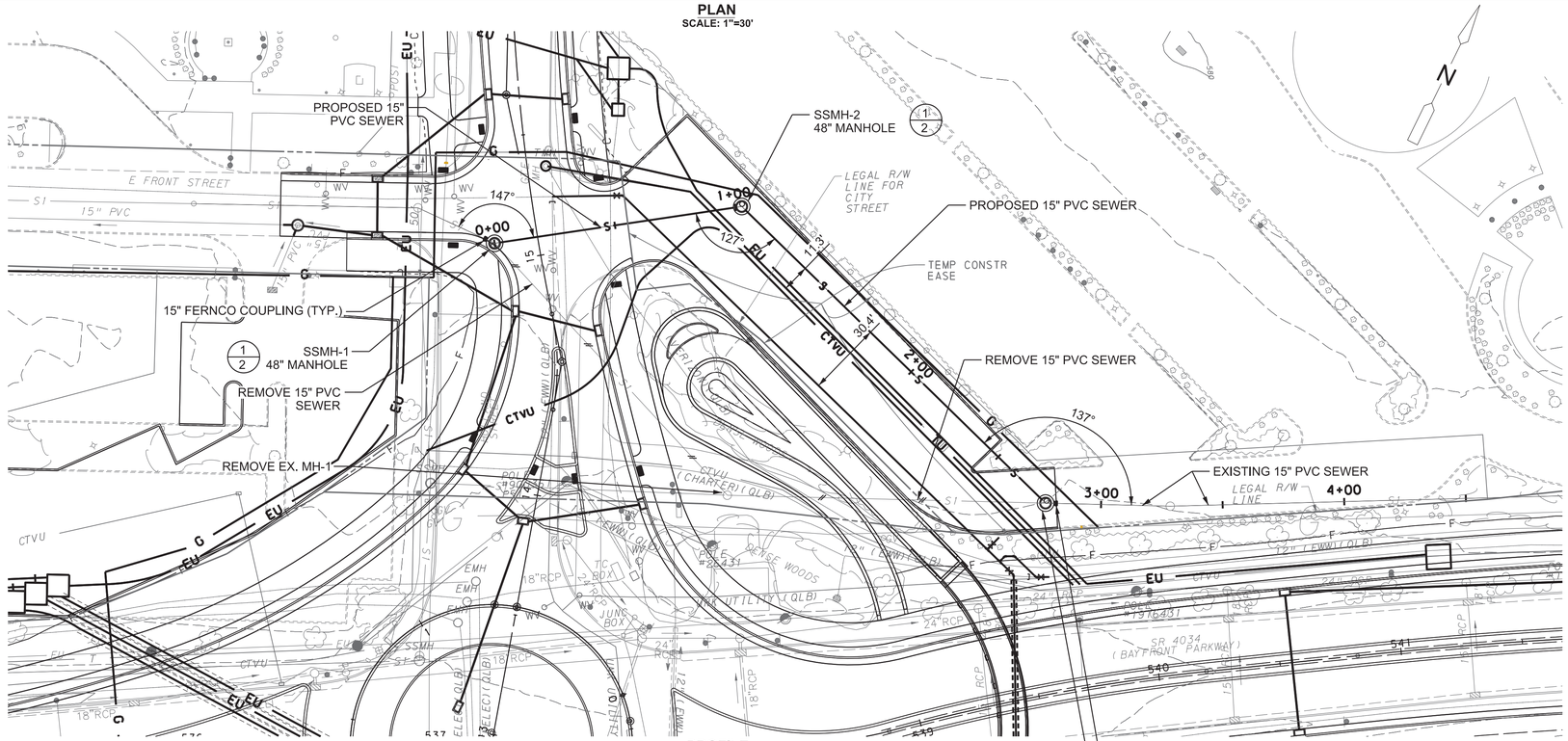
SCALE: AS SHOWN
DATE: JULY 2022
DRAWN BY: NJK (JMT)
CHECKED BY: MLG (JMT)
APPROVED BY: EWW

STATE STREET - HYDRANT RELOCATION
(PLAN)

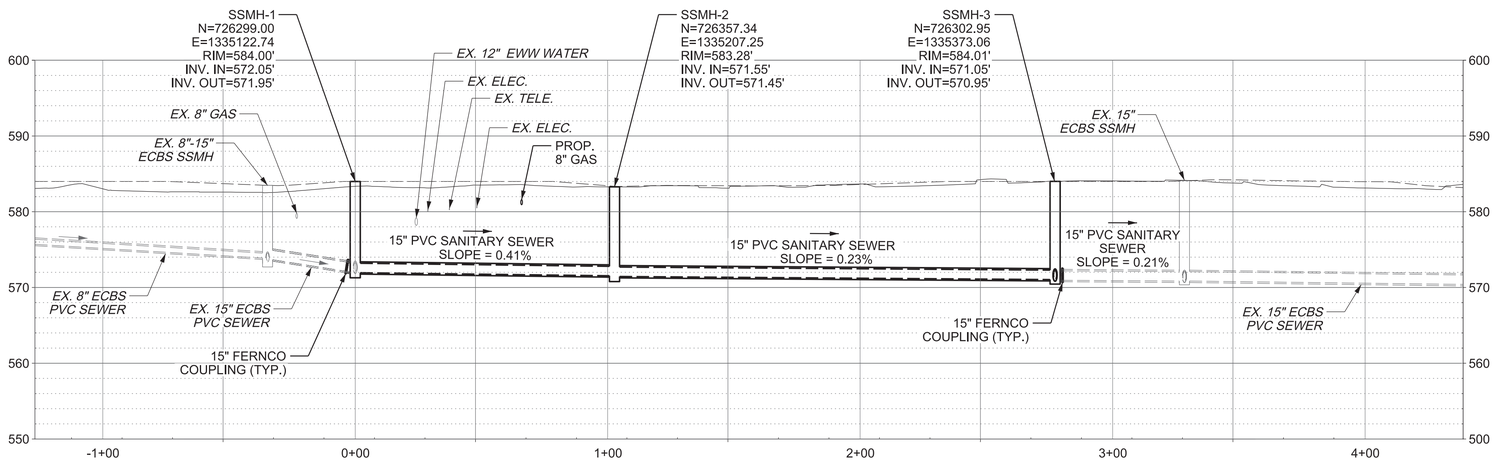
ERIE WATER WORKS
ERIE COUNTY, PA

ERIE WATER WORKS

PLAN
SCALE: 1"=30'



PROFILE
SCALE:
1"=30' HORIZONTAL
1"=10' VERTICAL



GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING STRUCTURES AND CLEARING FOR THE SITE PRIOR TO INSTALLATION OF SEWER MAIN.
2. EROSION AND SEDIMENT POLLUTION CONTROLS SHALL FOLLOW WEST BAYFRONT CONSTRUCTION DRAWINGS.
3. CONTRACTOR SHALL COORDINATE WITH INSTALLATION OF STORM, GAS, AND ELECTRIC AS NEEDED.
4. PRIOR TO ALL OTHER WORK, CONTRACTOR SHALL VACUUM EXCAVATE BOTH TIE-IN LOCATIONS TO THE EXISTING 15-INCH SEWER TO CONFIRM ELEVATIONS.
5. STATIONING SHOWN ON THE CONSTRUCTION DRAWINGS ARE LEVEL MEASUREMENTS FOR LAYOUT PURPOSES ONLY AND DO NOT REPRESENT PROJECT QUANTITIES.
6. CONTRACTOR TO COORDINATE BYPASS PUMPING FOR SEWER AND NEW MANHOLE INSTALLATIONS WITH ECBS.
7. MANHOLES REQUIRED AT ALL CHANGES IN DIRECTION OF 15" PROPOSED SEWER MAIN.
8. REMOVE EXISTING MH-1 AFTER NEW MANHOLES ARE INSTALLED AND APPROVED BY THE CONSTRUCTION MANAGER.
10. INSTALL CONCRETE ENCASEMENT ON UTILITIES WHERE UTILITY CROSSINGS ARE LESS THAN 18" MINIMUM CLEARANCE.
11. PAID UNDER ITEM 9000-0013 -

LEGEND

- *EXISTING UTILITY POLE*
- *EXISTING GUY WIRE*
- *EXISTING SANITARY SEWER* — S
- *EXISTING SANITARY MANHOLE* — SSMH
- *EXISTING STORM SEWER*
- *EXISTING STORM INLETS*
- *EXISTING WATERLINE* — W
- *EXISTING HYDRANT*
- *EXISTING WATER VALVE* — WV
- *PROPOSED 15" SEWER PIPE* — S
- *PROPOSED SANITARY SEWER MANHOLE*
- *EXISTING SIGN*
- *EXISTING LIGHT POLE*
- *EXISTING PROPERTY LINE*
- *EXISTING RIGHT-OF-WAY LINE*
- *EXISTING ASPHALT / CONCRETE PAVING*
- *EXISTING DECIDUOUS TREE*
- *EXISTING BUILDING*
- *ABANDONED SEWER* — S

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MALLORY L. GRIFFIN
PE086607

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

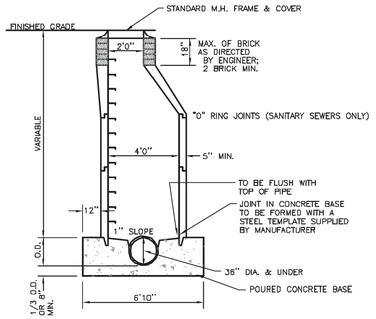
HOLLAND STREET
15" SEWER RELOCATION

DATE	10/19/2021	DESIGN BY	N. KLEYA
DRAWN BY	N. KLEYA	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	H: 1"=30' V: 1"=10'	SHEET	1 OF 3

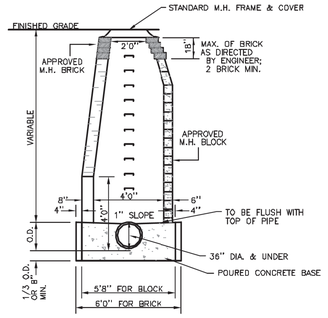
APPROVED BY:

PRECAST CONCRETE CONSTRUCTION

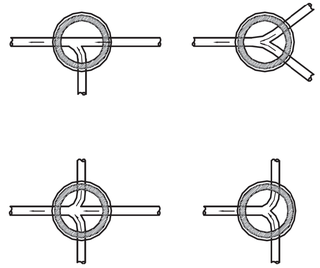
MANHOLE TO MEET OR EXCEED ASTM C-478



BLOCK CONSTRUCTION

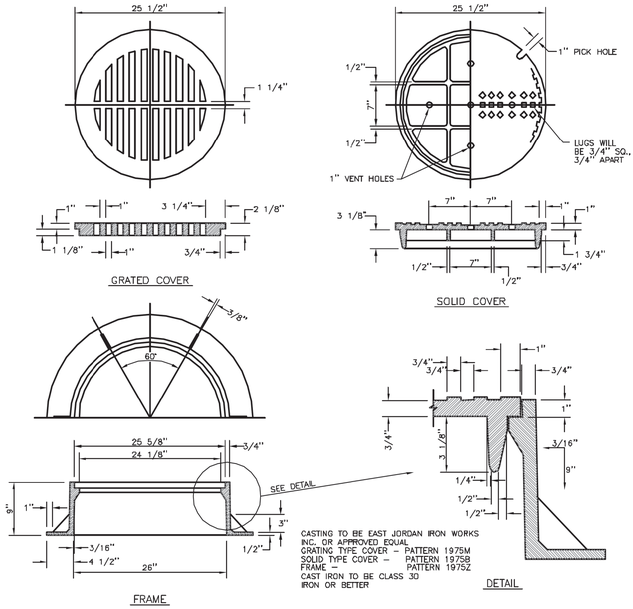


TYPICAL INVERTS



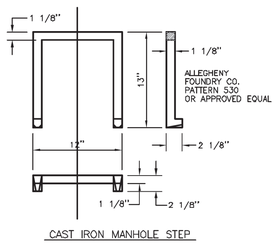
STANDARD MANHOLE FOR 8" TO 36" DIAMETER PIPE

1/2

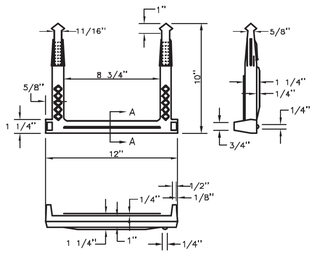


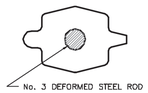
STANDARD MANHOLE CASTINGS

2/2



CAST IRON MANHOLE STEP





SECTION A – A

POLYPROPYLENE PLASTIC MANHOLE STEP

MANHOLE STEPS

3/2

NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" AS SPECIFIED IN SECTION 704, PENNA. DEPT. OF TRANSPORTATION PUB 408, LATEST REVISION.
2. CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.C.I. STANDARDS 318 (LATEST VERSION) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
3. REINFORCING SHALL BE DEFORMED BARS OF NEW BILLET STEEL GRADE 40 CONFORMING TO A.S.T.M. DESIGNATION A 615.
4. REINFORCING BAR SPLICES SHALL BE A MINIMUM OF 24 BAR DIAMETERS.
5. ALL STEEL SHALL HAVE A 2" COVER EXCEPT WHERE NOTED.
6. CONCRETE FILLETS ARE TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER TO PROVIDE A SMOOTH TRANSITION OF FLOW.
7. MANHOLE CONSTRUCTED FROM BLOCK SHALL BE COVERED WITH 1/2" MORTAR ON THE INSIDE FOR STORM MANHOLES AND 1" ON THE OUTSIDE FOR SANITARY MANHOLES.
8. MANHOLE STEPS SHALL BE ALIGNED AND EQUALLY SPACED, MAXIMUM DISTANCE 16" MINIMUM DISTANCE 12".

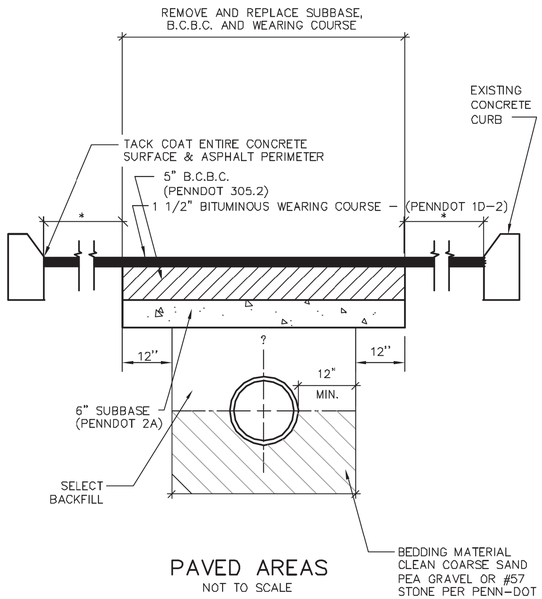
JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

ECBS STANDARD DETAILS

DATE	10/19/2021	DESIGN BY	N. KLEYA
DRAWN BY	N. KLEYA	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	N.T.S.	SHEET	2 OF 3

APPROVED BY:

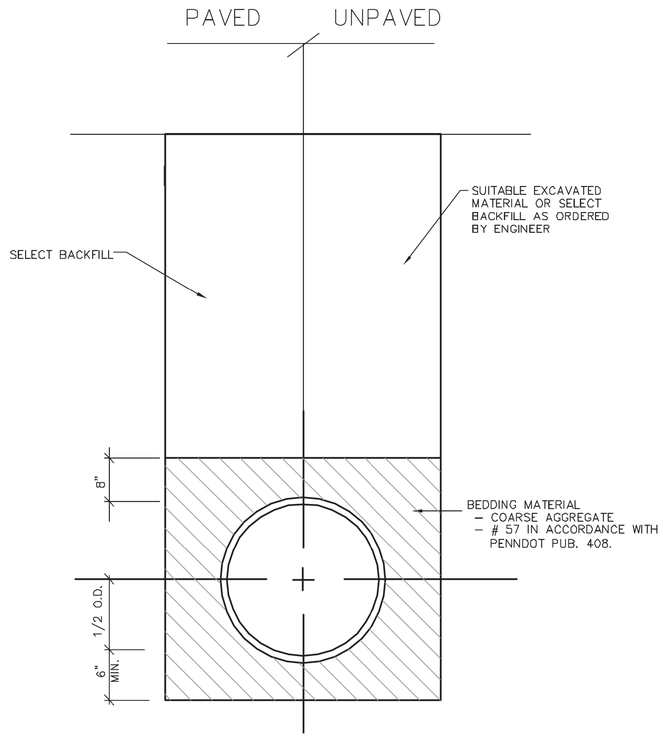


PAVED AREAS

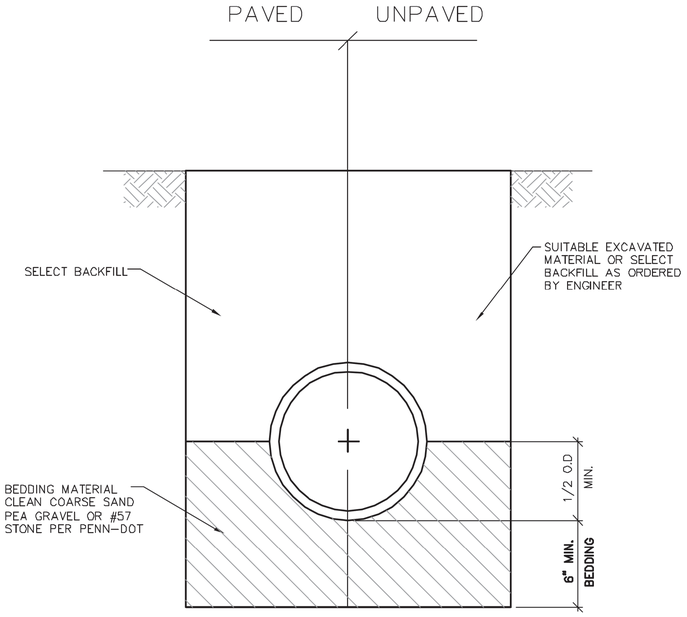
NOT TO SCALE

* EXISTING PAVEMENT SURFACE TO BE MILLED 1 1/2 INCHES.

TYPICAL TRENCH IN PAVED AREAS DETAIL (4/3)



TYPICAL PVC TRENCH DETAIL (5/3)



TYPICAL RCP TRENCH DETAIL (6/3)

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

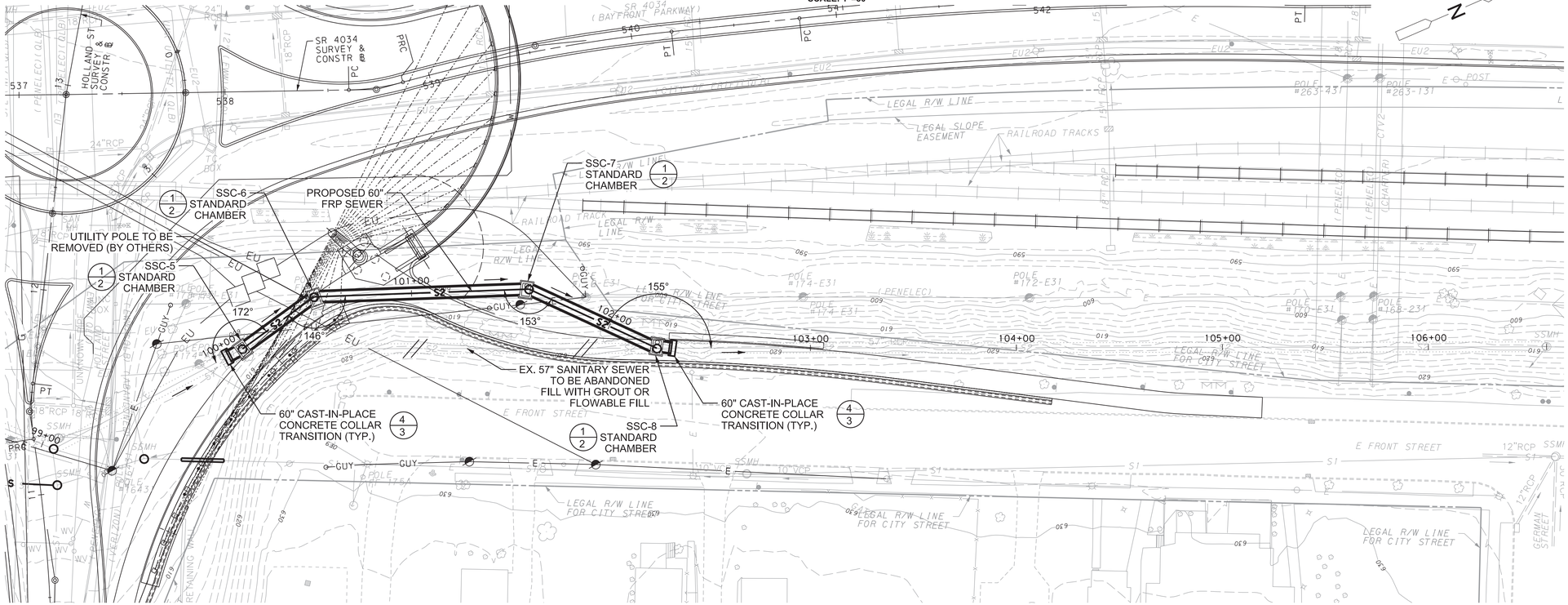
ECBS STANDARD DETAILS

DATE	10/19/2021	DESIGN BY	N. KLEYA
DRAWN BY	N. KLEYA	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	N.T.S.	SHEET	3 OF 3

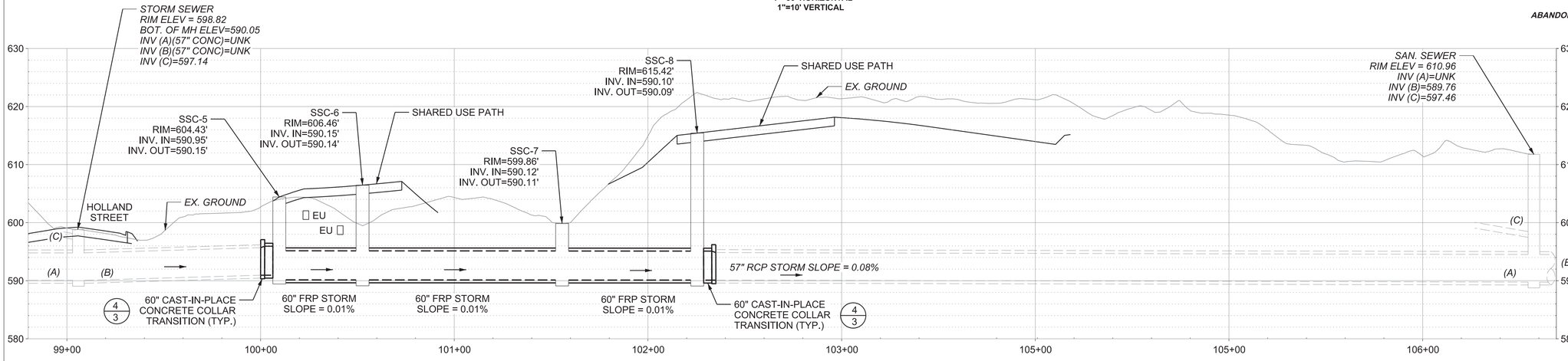
APPROVED BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MALLORY L. GRIFFIN
ENGINEER
PE086607

PLAN
SCALE: 1"=30'



PROFILE
SCALE:
1"=30' HORIZONTAL
1"=10' VERTICAL



GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING STRUCTURES AND CLEARING FOR THE SITE PRIOR TO INSTALLATION OF SEWER MAIN.
2. EROSION AND SEDIMENT POLLUTION CONTROLS SHALL FOLLOW WEST BAYFRONT CONSTRUCTION DRAWINGS.
3. CONTRACTOR SHALL COORDINATE WITH INSTALLATION OF STORM, GAS, AND ELECTRIC AS NEEDED.
4. PRIOR TO ALL OTHER WORK, CONTRACTOR SHALL VACUUM EXCAVATE BOTH TIE-IN LOCATIONS TO THE EXISTING 57-INCH SEWER TO CONFIRM ELEVATIONS.
5. STATIONING SHOWN ON THE CONSTRUCTION DRAWINGS ARE LEVEL MEASUREMENTS FOR LAYOUT PURPOSES ONLY AND DO NOT REPRESENT PROJECT QUANTITIES.
6. CONTRACTOR TO COORDINATE BYPASS PUMPING FOR SEWER AND NEW MANHOLE INSTALLATIONS WITH ECBS.
7. MANHOLES REQUIRED AT ALL CHANGES IN DIRECTION OF 60" PROPOSED SEWER MAIN.
8. ABANDON EXISTING MH-1 AFTER NEW MANHOLES ARE INSTALLED AND APPROVED BY THE CONSTRUCTION MANAGER.
10. INSTALL CONCRETE ENCASEMENT ON UTILITIES WHERE UTILITY CROSSINGS ARE LESS THAN 18" MINIMUM CLEARANCE.
11. PAID UNDER ITEM 9000-1107 HOLLAND STREET WATER 60" SEWER RELOCATION.

LEGEND

- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SANITARY SEWER (S2)
- EXISTING SANITARY MANHOLE (SSMH)
- EXISTING STORM SEWER
- EXISTING STORM INLETS
- EXISTING WATERLINE (W)
- EXISTING HYDRANT
- EXISTING WATER VALVE (WV)
- PROPOSED 60" SEWER PIPE (S2)
- PROPOSED SANITARY SEWER CHAMBER — ALIGNMENT ANGLE 180° TO 170° / ALIGNMENT ANGLE 169° TO 120°
- EXISTING SIGN
- EXISTING LIGHT POLE
- EXISTING PROPERTY LINE (P)
- EXISTING RIGHT-OF-WAY LINE
- EXISTING ASPHALT / CONCRETE PAVING
- EXISTING DECIDUOUS TREE
- EXISTING BUILDING
- ABANDONED SEWER (S2)

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

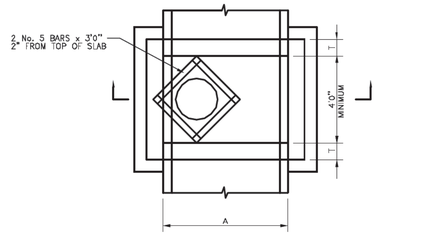
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — MALLORY L. GRIFFIN — PE086607

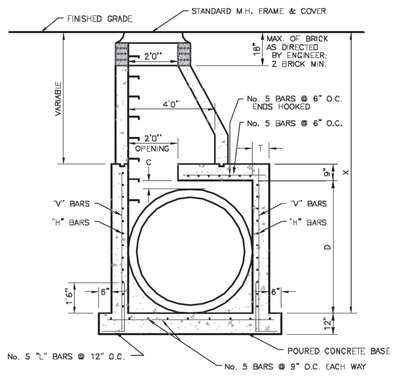
HOLLAND STREET 60" SEWER RELOCATION

DATE	7/13/2022	DESIGN BY	N. KOMAN
DRAWN BY	N. KOMAN	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	H: 1"=30' V: 1"=10'	SHEET	1 OF 3

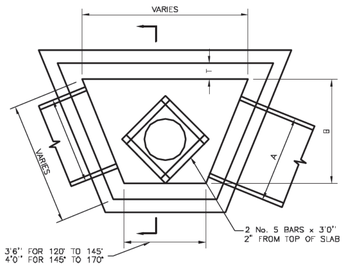
APPROVED BY:

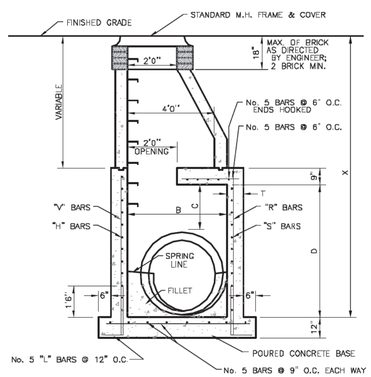
ALIGNMENT ANGLE 180° TO 170°



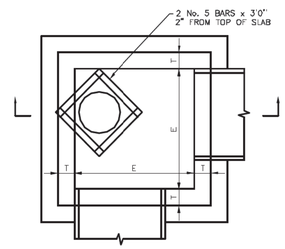


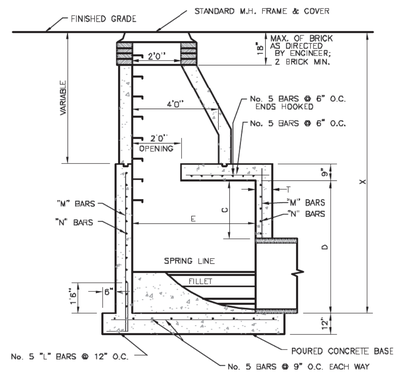
ALIGNMENT ANGLE 169° TO 120°





ALIGNMENT ANGLE 119° TO 90°





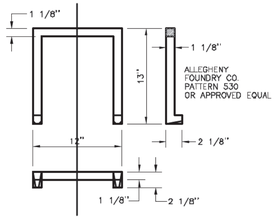
CHAMBER REINFORCING SCHEDULE

ITEM	FOR 'X' GREATER THAN 15 FEET	FOR 'X' LESS THAN 15 FEET
DIMENSION 'T'	10"	8"
BARS 'H'	No. 5 @ 6" HOOKED	No. 5 @ 9" HOOKED
BARS 'V'	No. 5 @ 6"	No. 5 @ 9"
BARS 'R'	No. 5 @ 4"	No. 5 @ 4 1/2"
BARS 'S'	No. 5 @ 6" HOOKED	No. 5 @ 8" HOOKED
BARS 'M'	No. 5 @ 5"	No. 5 @ 6"
BARS 'N'	No. 5 @ 8" HOOKED	No. 5 @ 8" HOOKED

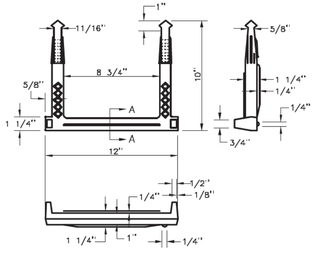
DIMENSIONS FOR STANDARD CHAMBERS

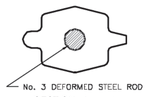
A = OUTSIDE DIAMETER AT LARGEST PIPE
B = A+0'-9" (MINIMUM 4'0")
C = NOT LESS THAN 6" ABOVE HIGHEST ENTERING PIPE
D = MINIMUM 5'0"
E = A+1'-4" (MINIMUM 4'0")

STANDARD CHAMBER FOR 42" TO 84" DIAMETER PIPE (1/2)



CAST IRON MANHOLE STEP

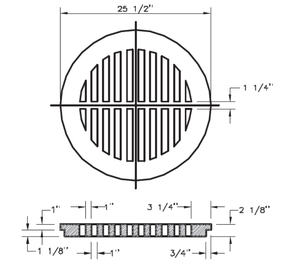




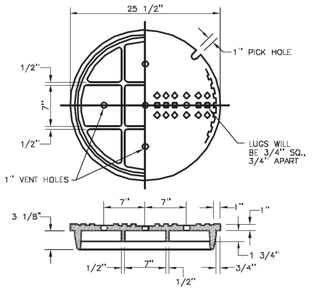
SECTION A – A

POLYPROPYLENE PLASTIC MANHOLE STEP

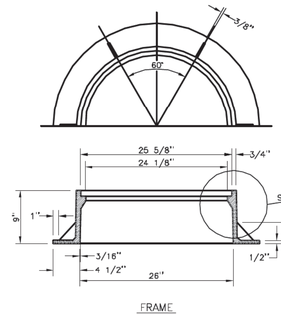
MANHOLE STEPS (3/2)



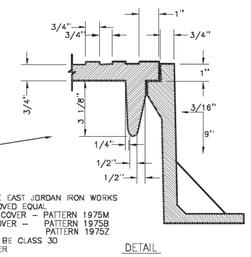
GRATED COVER



SOLID COVER



FRAME



CASTING TO BE EAST JORDAN IRON WORKS INC. OR APPROVED EQUAL
GRATING TYPE COVER – PATTERN 1975M
SOLID TYPE COVER – PATTERN 1975B
FRAME – PATTERN 1975Z
CAST IRON TO BE CLASS 30 IRON OR BETTER

DETAIL

STANDARD MANHOLE CASTINGS (2/2)

NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" AS SPECIFIED IN SECTION 704, PENNA. DEPT. OF TRANSPORTATION PUB 408, LATEST REVISION.
2. CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.C.I. STANDARDS 318 (LATEST VERSION) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
3. REINFORCING SHALL BE DEFORMED BARS OF NEW BILLET STEEL GRADE 40 CONFORMING TO A.S.T.M. DESIGNATION A 615.
4. REINFORCING BAR SPLICES SHALL BE A MINIMUM OF 24 BAR DIAMETERS.
5. ALL STEEL SHALL HAVE A 2" COVER EXCEPT WHERE NOTED.
6. CONCRETE FILLETS ARE TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER TO PROVIDE A SMOOTH TRANSITION OF FLOW.
7. MANHOLE CONSTRUCTED FROM BLOCK SHALL BE COVERED WITH 1/2" MORTAR ON THE INSIDE FOR STORM MANHOLES AND 1" ON THE OUTSIDE FOR SANITARY MANHOLES.
8. MANHOLE STEPS SHALL BE ALIGNED AND EQUALLY SPACED, MAXIMUM DISTANCE 16" MINIMUM DISTANCE 12".

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MALLORY L GRIFFIN
ENGINEER
PE089607

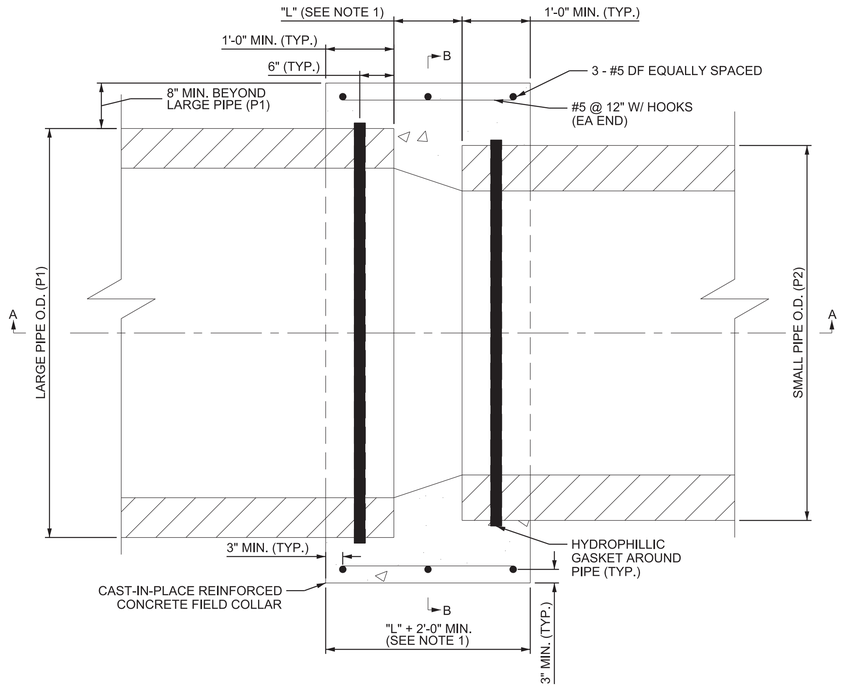
JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

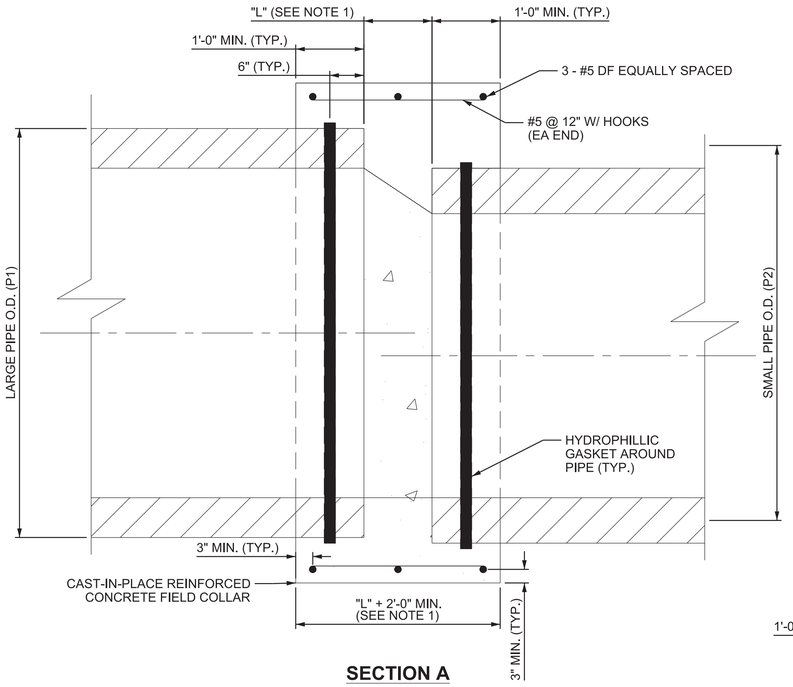
ECBS STANDARD DETAILS

DATE	7/13/2022	DESIGN BY	N. KOMAN
DRAWN BY	N. KOMAN	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	N.T.S.	SHEET	2 OF 3

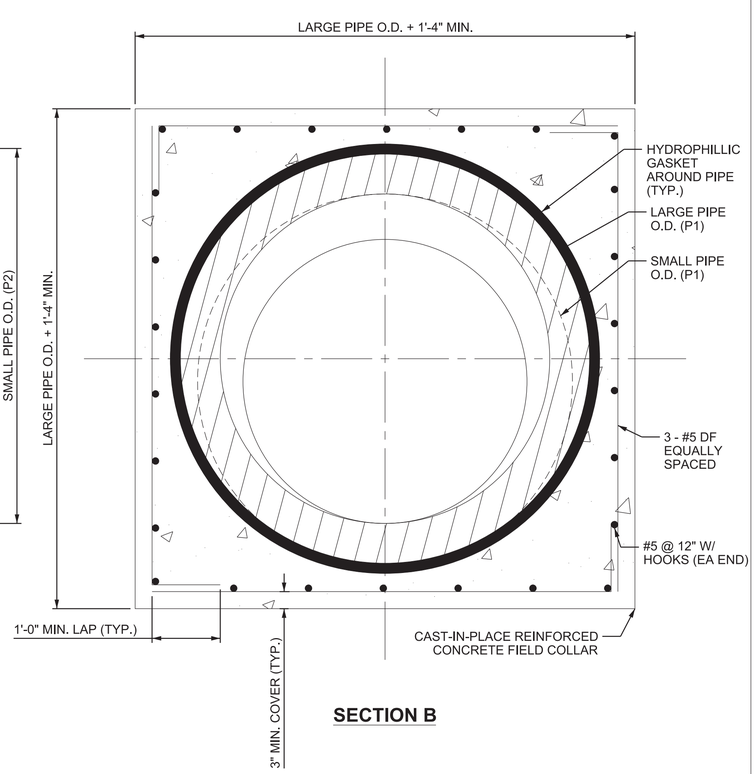
APPROVED BY:



PLAN VIEW



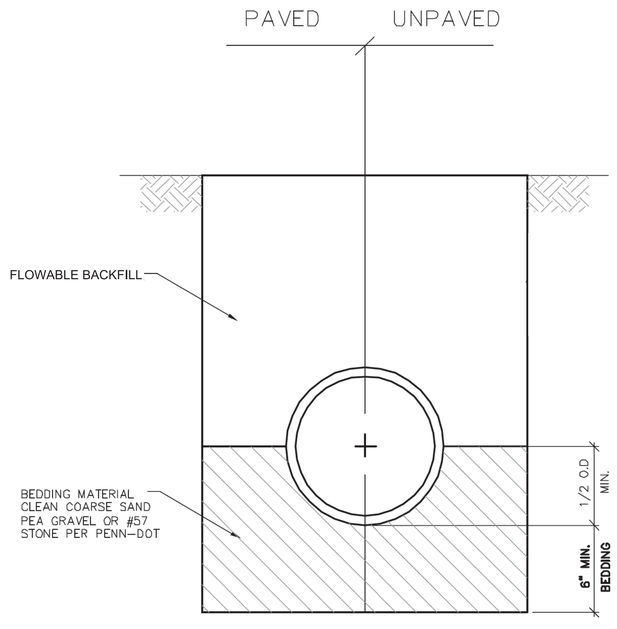
SECTION A



SECTION B

CAST-IN-PLACE CONCRETE FIELD COLLAR

4/3



TYPICAL RCP TRENCH DETAIL

5/3

JOHNSON, MIRMIRAN & THOMPSON, INC.
MARQUIS CORPORATE CENTER TWO
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

BUREAU OF ENGINEERING
DEPT. OF PUBLIC WORKS
CITY OF ERIE

ECBS STANDARD DETAILS

DATE	7/13/2022	DESIGN BY	N. KOMAN
DRAWN BY	N. KOMAN	DRAWER NO.	
RE-DRAWN BY		DRAWING NO.	
SCALE	N.T.S.	SHEET	3 OF 3

APPROVED BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MALLORY L. GRIFFIN
PE086607

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	1 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

1. UTILITIES. THE CONTRACTOR IS HEREBY INFORMED THAT THE LOCATION OF UTILITIES AS SHOWN ON THE CONTRACT DRAWINGS IS BASED UPON AVAILABLE INFORMATION ONLY. NO GUARANTEE OR ASSURANCE IS GIVEN BY THE OWNER OR DEPARTMENT REPRESENTATIVE AS TO THEIR ACCURACY, COMPLETENESS, OR VALIDITY. THE CONTRACTOR IS REQUIRED TO VERIFY THE EXISTENCE AND LOCATION OF UTILITIES IN THE WORK AREA BY CONTACTING BOTH THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 AND THE BELOW LISTED UTILITY COMPANIES KNOWN TO HAVE FACILITIES LOCATED WITHIN THE PROJECT WORK AREA.

   PA ACT 287 REQUIRES TEN (10) BUSINESS DAYS NOTICE TO UTILITY COMPANIES PRIOR TO EXCAVATION. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND PREVENT DAMAGE TO UTILITIES. INCLUDE IN THE UNIT PRICE BID THE VARIOUS ITEMS OF WORK AND ALL COSTS ASSOCIATED WITH RESEARCHING UTILITY INFORMATION, SCHEDULING, AND COORDINATION WITH UTILITY COMPANIES AND PROTECTING UTILITIES ENCOUNTERED DURING COMPLETION OF THE CONTRACT WORK.

   THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING LIST OF UTILITY COMPANIES THAT MAY HAVE UNDERGROUND AND/OR SURFACE FACILITIES IN THE AREA:

   CENTURYLINK
   CHARTER COMMUNICATIONS
   CITY OF ERIE
   ERIE CITY BUREAU OF SEWERS
   ERIE SEWER AUTHORITY
   ERIE WATER WORKS
   NATIONAL FUEL GAS
   PENNSYLVANIA ELECTRIC COMPANY
   VELOCITY NET COMMUNICATION, INC.
   VERIZON NORTH, LLC

2. ESTIMATED QUANTITIES. THE ESTIMATED PLAN QUANTITIES ARE SHOWN FOR BIDDING PURPOSES ONLY AND ARE NOT NECESSARILY THE FINAL PAY QUANTITIES. FIELD MEASUREMENTS, MATERIAL DELIVERY SLIPS, CALCULATIONS, AND OTHER DOCUMENTATION WILL DETERMINE THE FINAL QUANTITY TO BE PAID UNLESS OTHERWISE SPECIFIED.

3. VERTICAL DATUM. ALL ELEVATIONS SHOWN ON THESE DRAWINGS ARE BASED ON THE PROJECT VERTICAL DATUM ESTABLISHED DURING SURVEYING AND MAPPING.

4. EXISTING FACILITIES. THE DETAILS, DIMENSIONS, AND ELEVATIONS SHOWN REGARDING EXISTING FACILITIES ARE BASED ON DRAWINGS AND RECORDS PROVIDED BY THE UTILITIES. THE CONTRACTOR MAY, AT HIS OPTION, REVIEW THE DRAWINGS AND RECORDS FROM WHICH THE EXISTING CONDITIONS PLAN INFORMATION HAS BEEN COMPILED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO THOROUGHLY REVIEW THE CONTRACT DRAWINGS AND VERIFY ALL RELEVANT DIMENSIONS IN THE FIELD PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. THE OWNER AND DEPARTMENT REPRESENTATIVE SHOULD IMMEDIATELY BE NOTIFIED OF ANY VARIATIONS FOUND WHICH MAY RESULT IN CHANGES OR ADJUSTMENTS TO THE DESIGN AS PRESENTED IN THE ORIGINAL CONTRACT DRAWINGS AND/OR SPECIFICATIONS. SUBMIT, FOR THE OWNER AND DEPARTMENT REPRESENTATIVE'S APPROVAL, A DETAILED PLAN OF ANY ADJUSTMENTS WHICH MAY BE REQUIRED.

5. WORK BY OTHERS. THE CONTRACTOR IS ALERTED TO THE FACT THAT THE UTILITY COMPANIES OR THEIR CONTRACTORS WILL BE PERFORMING RELOCATION WORK ON THEIR FACILITIES WITHIN THE PROJECT AREA IN CONJUNCTION WITH THIS PROJECT. THE CONTRACTOR SHALL COORDINATE ACTIVITIES WITH OTHERS AS NECESSARY FOR THE PERFORMANCE OF THEIR WORK.

6. ABANDONED. CONTRACTOR MAY REMOVE EXISTING PIPE AND MANHOLES THAT ARE DESIGNATED TO BE ABANDONED IF PROPOSED UTILITIES OR ROADWAY IMPROVEMENTS WARRANT REMOVAL AND AS DIRECTED BY THE OWNER. ANY PORTION OF THE ABANDONED GAS LINE REMOVED DURING CONSTRUCTION TO BE SET ASIDE FOR NATIONAL FUEL GAS DISPOSAL.

INDEX OF DRAWINGS

DESCRIPTION	SHEET
GENERAL NOTES	1
TABULTION OF QUANTITIES	2
SPECIAL DETAILS	3 - 6
SUMMARY OF PROJECT COORDINATES	7
UTILITY RELOCATION PLANS	8 - 18
PROFILES	20 - 25

SYMBOL	PUBLIC UTILITIES	REP./PHONE NO.
—FOU— —CTV1— —CTV1—	CENTURYLINK 200 TECHNOLOGY DRIVE PITTSBURGH, PA 15219	ATTN: SCOTT MAGILL PHONE: (412) 770-9260 (OFFICE) PHONE: (610) 804-2409 (CELL) SCOTT.MAGILL@CENTURYLINK.COM
—CTV2— —CTVU— —CTVU—	CHARTER COMMUNICATIONS 2904 STATE ROAD ASHTABULA, OH 44004	ATTN: DANIEL BANISTER PHONE: (216) 575-8016 (OFFICE) PHONE: (440) 384-9903 (CELL) DANIEL.BANISTER@CHARTER.COM
—EU2—	CITY OF ERIE 626 STATE ROAD ERIE, PA 16501	ATTN: LEANN PARMENTER, P.E. PHONE: (814) 870-1379 LPARMENTER@ERIE.PA.US
—S1— —S1—	ERIE CITY BUREAU OF SEWERS 626 STATE STREET, ROOM 400 ERIE, PA 16501	ATTN: JASON SAYERS PHONE: (814) 870-1397 JSAYERS@ERIE.PA.US
—S2— —S2—	ERIE SEWER AUTHORITY 120 WEST 10TH STREET ERIE, PA 16501	ATTN: TIMOTHY SENNETT PHONE: (814) 459-2800 TSENNETT@KMGSLAW.COM
—W— —W—	ERIE WATER WORKS 240 WEST 12TH STREET ERIE, PA 16501	ATTN: CRAIG PALMER, P.E. PHONE: (814) 870-8000 EXT 208 CPALMER@ERIEWATERWORKS.ORG
—G— —G—	NATIONAL FUEL GAS 1100 STATE STREET PO BOX 2081 ERIE, PA 16512	ATTN: JASON FLEEK PHONE: (814) 871-8633 FLEEKJ@NATFUEL.COM
—E— —EU— —E— —EU—	PENNSYLVANIA ELECTRIC COMPANY 5404 EVANS ROAD PO BOX 1101 ERIE, PA 16558	ATTN: CHRIS BEYER PHONE: (814) 868-8737 CBEYER@FIRSTENERGYCORP.COM
—CTV3—	VELOCITY NET COMMUNICATION, INC PO BOX 9008 ERIE, PA 16505	ATTN: MAT KACPROWICZ PHONE: (814) 835-2736 MAT.KACPROWICZ@VELOCITYNETWORK.NET
—T— —TU— —T— —TU—	VERIZON NORTH, LLC 20 EAST 10TH STREET ERIE, PA 16501	ATTN: ERIC RODRIGUES PHONE: (814) 871-2317 ERIC.RODRIGUES@VERIZON.COM

GENERAL NOTES

UTILITY RELOCATION PLAN

JOHNSON, MIRMIRAN & THOMPSON, INC.
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLGEN_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	2 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNITS
9000-1104	INSTALLATION OF UNDERGROUND TELEPHONE FACILITIES	1	LS
(1)	CLASS 1B EXCAVATION	970	CY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	258	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	258	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	258	SY
(1)	SUBBASE 8" DEPTH (NO. 2A)	258	SY
(1)	ASPHALT TACK COAT (NTT/CNTT)	516	SY
(1)	3" CONDUIT	370	LF
(1)	4" CONDUIT	11400	LF
(1)	6' X 12' MANHOLE	3	EACH
(1)	FLOWABLE BACKFILL, TYPE B	275	CY
(1)	DIRECTIONAL BORING	92	LF
9000-1105	INSTALLATION OF UNDERGROUND ELECTRIC FACILITIES	1	LS
(1)	CLASS 1B EXCAVATION	2600	CY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	543	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	543	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	543	SY
(1)	SUBBASE 8" DEPTH (NO. 2A)	543	SY
(1)	ASPHALT TACK COAT (NTT/CNTT)	1086	SY
(1)	3" CONDUIT	420	LF
(1)	5" CONDUIT	16640	LF
(1)	6" CONDUIT	11460	LF
(1)	8' X 8' MANHOLE	16	EACH
(1)	FLOWABLE BACKFILL, TYPE B	785	CY
(1)	DIRECTIONAL BORING	243	LF
9000-1106	HOLLAND STREET PRIVATE SEWER RELOCATION	1	LS
(1)	CLASS 1B EXCAVATION	80	CY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	27	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	27	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	27	SY
(1)	SUBBASE 8" DEPTH (NO. 2A)	27	SY
(1)	ASPHALT TACK COAT (NTT/CNTT)	53	SY
(1)	REUSE EXISTING MANHOLE FRAME AND COVER	1	SET
(1)	TYPE 4 MANHOLE, SANITARY SEWER, HEIGHT >20' AND </=30'	1	EACH
(1)	12" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	62	LF
(1)	FLOWABLE BACKFILL, TYPE B	30	CY
9000-1107	SASSAFRAS STREET PRIVATE SEWER RELOCATION	1	LS
(1)	CLASS 1B EXCAVATION	20	CY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	895	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	895	SY
(1)	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	895	SY
(1)	SUBBASE 8" DEPTH (NO. 2A)	895	SY
(1)	ASPHALT TACK COAT (NTT/CNTT)	1790	SY
(1)	MANHOLE FRAME AND COVER	4	SET
(1)	TYPE 4 MANHOLE, SANITARY SEWER, HEIGHT >20' AND </=30'	4	EACH
(1)	12" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	379	LF
(1)	FLOWABLE BACKFILL, TYPE B	10	CY
(1)	REMOVE EXISTING MANHOLE	3	EACH
9000-1109	GRADE ADJUST MAINTENANCE COMPARTMENT, ECBS	13	EACH
9000-1110	GRADE ADJUST MAINTENANCE COMPARTMENT, ESA	2	EACH
9000-1111	GRADE ADJUST MAINTENANCE COMPARTMENT, VERIZON	3	EACH
9000-1112	GRADE ADJUST WATER VALVE BOX	4	EACH
9000-1113	REMOVE EXISTING FIRE HYDRANT	4	EACH
9000-1114	GRADE ADJUST EXISTING FIRE HYDRANT	3	EACH
9000-1115	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM - UTILITY POLE	4	EACH
9000-1116	GRADE ADJUST ELECTRIC APPURTUANCES, PENELEC	4	EACH
9000-1117	UNFORESEEN UTILITY COORDINATION	20,000	DOLLA
9000-1118	SEWER PIPE ENCASEMENT	20	LF

(1) ITEMS INCLUDED FOR INFORMATION ONLY

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

UTILITY RELOCATION PLAN

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLGEN02_4034.dgn

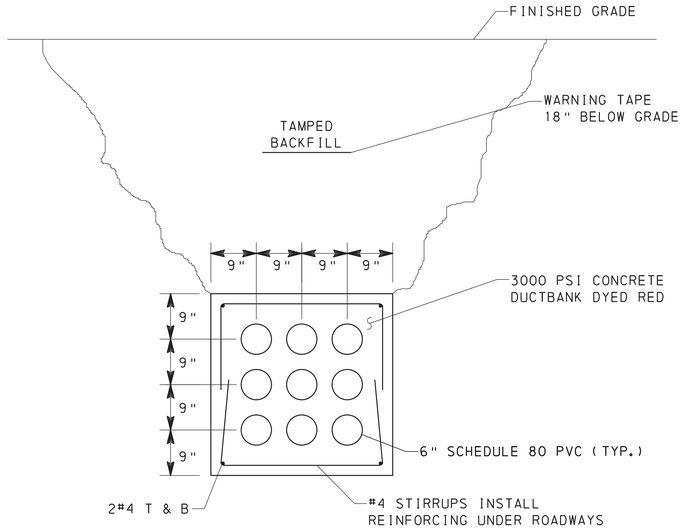
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

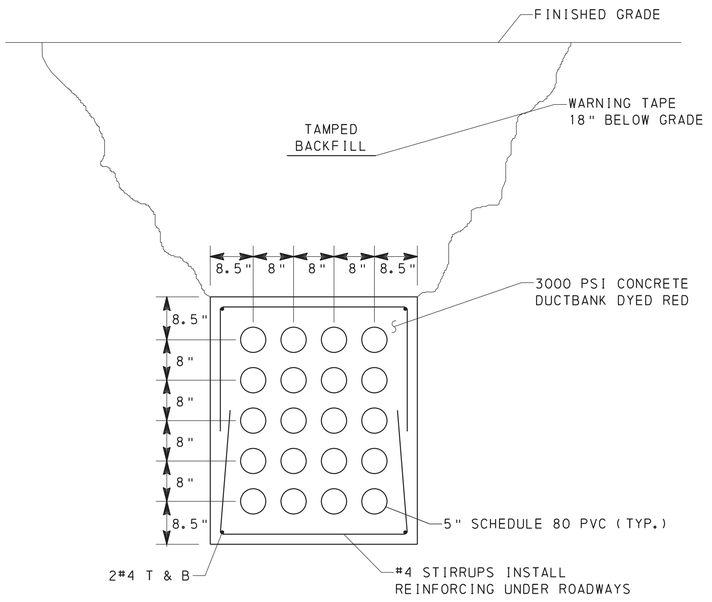
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	3 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



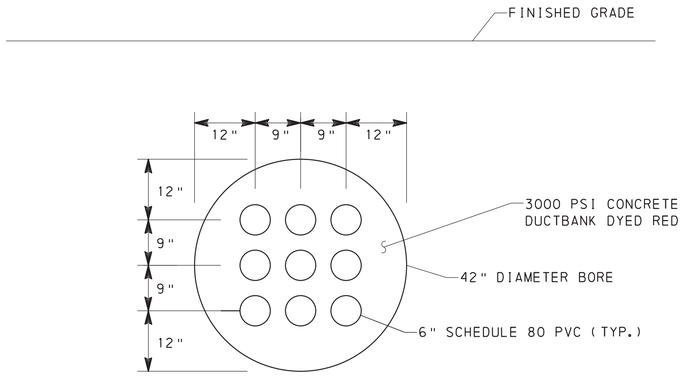
ELECTRIC CONDUIT DETAIL FOR 35-KV
3X3-6" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
HOLLAND STREET CROSSING AND PENELEC CONDUIT 2 ℄
20+00 TO 20+74
20+85 TO 23+94
NOT TO SCALE



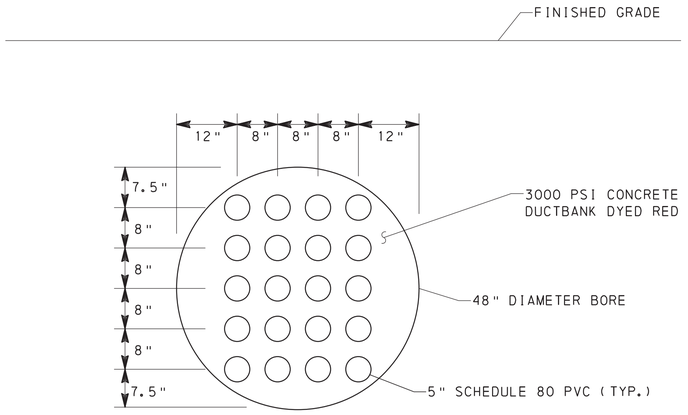
ELECTRIC CONDUIT DETAIL FOR 12-KV
4X5-5" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
STATE STREET CROSSING PENELEC CONDUIT ℄
21+78 TO 23+83
23+93 TO 27+86
NOT TO SCALE



ELECTRIC CONDUIT BORING DETAIL FOR 35-KV
3X3-6" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
PEACH STREET CROSSING PENELEC 35KV CONDUIT ℄
0+79 TO 2+14
NOT TO SCALE



ELECTRIC CONDUIT BORING DETAIL FOR 12-KV
4x5-5" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
PEACH STREET CROSSING PENELEC 12KV CONDUIT ℄
10+77 TO 11+85
NOT TO SCALE

SPECIAL DETAILS
UTILITY RELOCATION PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLDET_4034.dgn

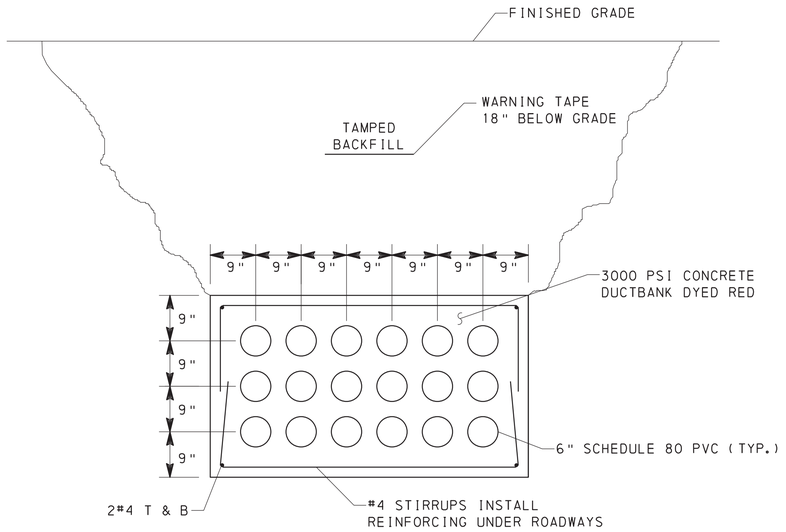
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	4 OF 25
CITY OF ERIE				

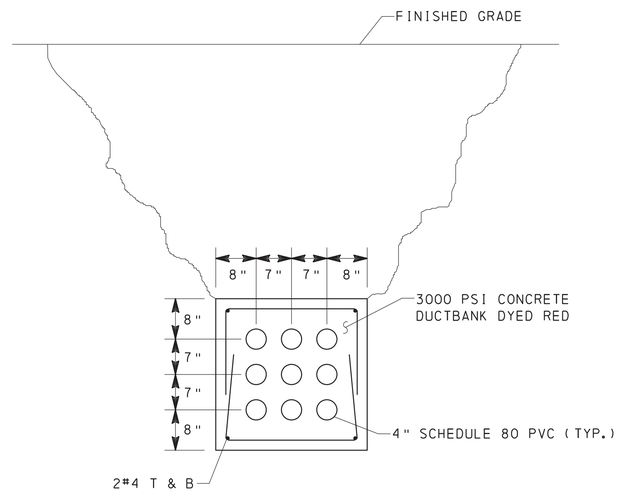
REVISION NUMBER	REVISIONS	DATE	BY



ELECTRIC CONDUIT DETAIL FOR 35-KV

6X3-6" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
STATE STREET CROSSING PENELEC CONDUIT ℄
21+78 TO 23+83
NOT TO SCALE



TELEPHONE CONDUIT DETAIL

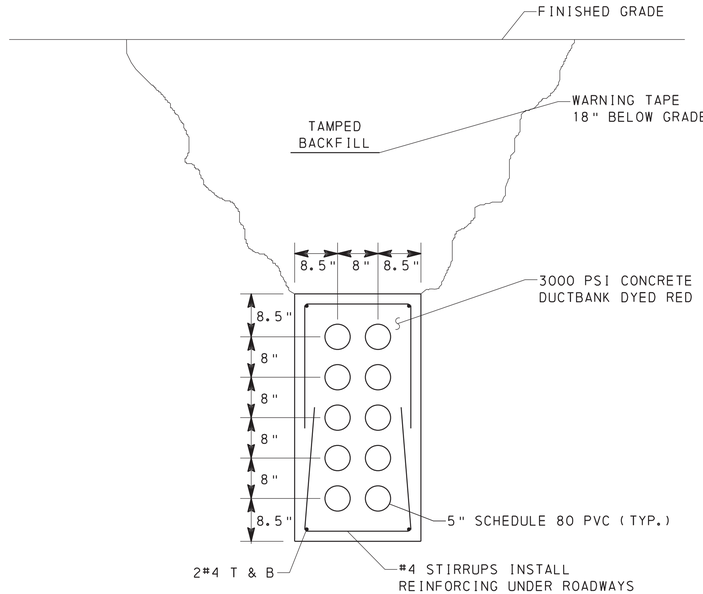
3X3-4" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1104
STATE STREET CROSSING VERIZON CONDUIT 1 ℄
1+49 TO 3+08

STATE STREET CROSSING VERIZON CONDUIT 2 ℄
21+28 TO 25+76

STATE STREET CROSSING VERIZON CONDUIT 3 ℄
30+00 TO 32+81

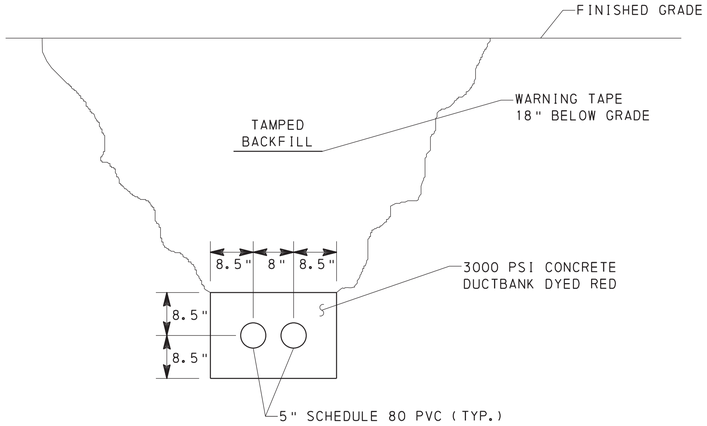
HOLLAND STREET VERIZON CONDUIT ℄
0+00 TO 2+85
NOT TO SCALE



ELECTRIC CONDUIT DETAIL FOR 12-KV

2X5-5" CONDUIT

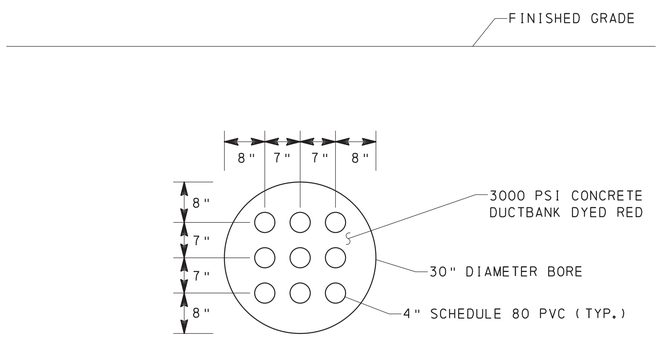
INCIDENTAL TO ITEM NO. 9000-1105
PEACH STREET CROSSING PENELEC 12KV CONDUIT ℄
11+85 TO 12+13
NOT TO SCALE



ELECTRIC CONDUIT DETAIL

2x1-5" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
HOLLAND STREET PENELEC CONDUIT 6 ℄
60+00 TO 63+46
NOT TO SCALE



TELEPHONE CONDUIT BORING DETAIL

3x3-4" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1104
STATE STREET CROSSING VERIZON CONDUIT 2 ℄
20+26 TO 21+19
NOT TO SCALE

SPECIAL DETAILS

UTILITY RELOCATION PLAN

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLDET_4034.dgn

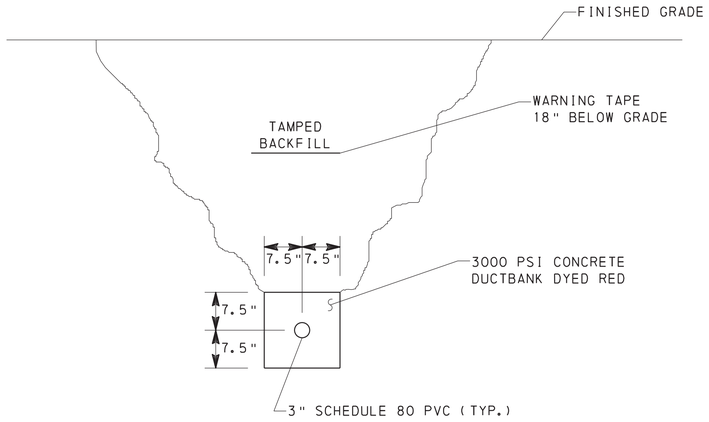
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

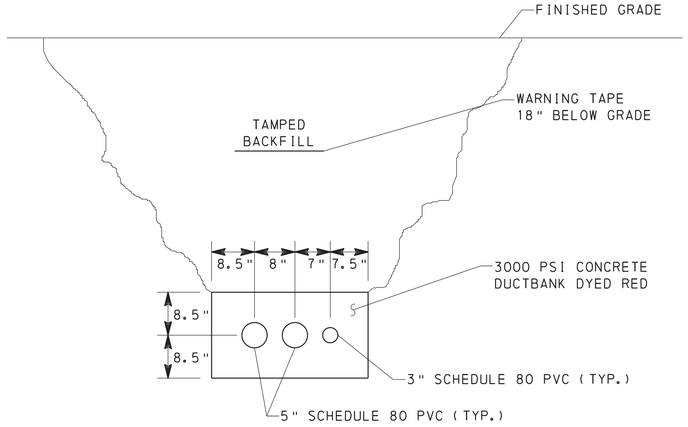
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	5 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



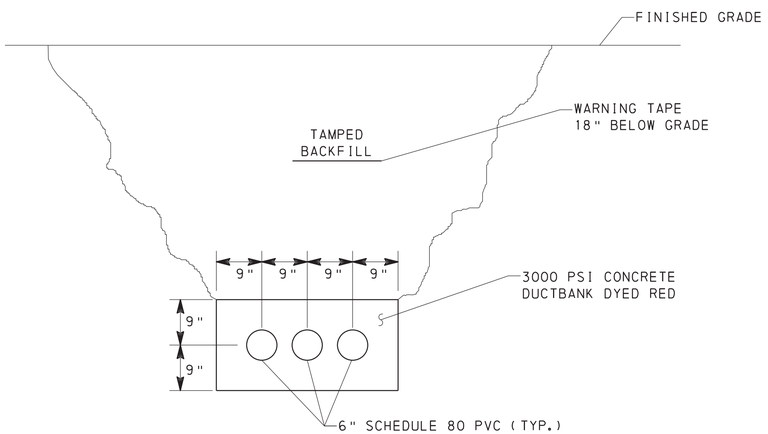
CTV CONDUIT DETAIL
HOLLAND STREET
1-3" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1104
NOT TO SCALE



ELECTRIC CONDUIT DETAIL
2-5" & 1-3" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
HOLLAND STREET PENELEC CONDUIT 4 ℄
40+05 TO 43+21
43+32 TO 44+13
NOT TO SCALE

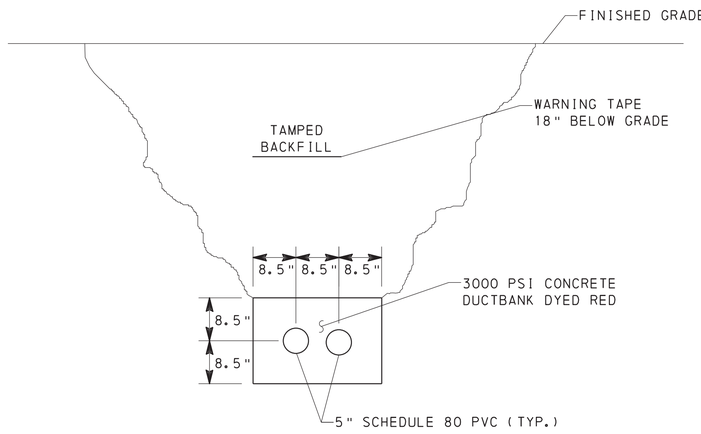


ELECTRIC CONDUIT DETAIL FOR 35-KV
3x1-6" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
HOLLAND STREET PENELEC CONDUIT 1 ℄
10+05 TO 11+76

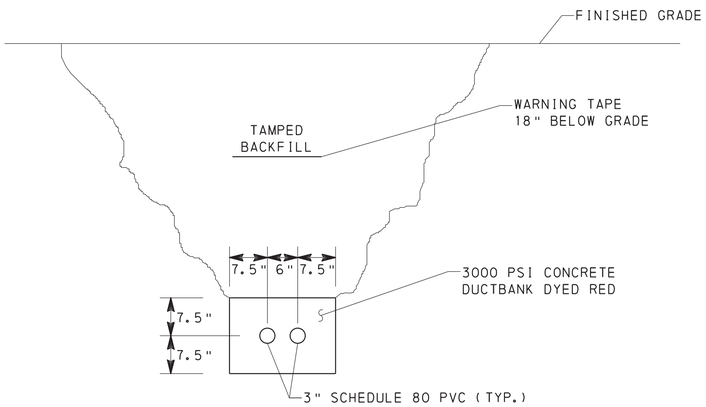
HOLLAND STREET PENELEC CONDUIT 2 ℄
24+03 TO 25+88

HOLLAND STREET PENELEC CONDUIT 3 ℄
30+05 TO 31+07
NOT TO SCALE



ELECTRIC CONDUIT DETAIL
2-5" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
HOLLAND STREET PENELEC CONDUIT 5 ℄
50+05 TO 54+34
NOT TO SCALE



ELECTRIC CONDUIT DETAIL
HOLLAND STREET
2x1-3" CONDUIT

INCIDENTAL TO ITEM NO. 9000-1105
NOT TO SCALE

SPECIAL DETAILS
UTILITY RELOCATION PLAN

FILE NAME: Q:\2017\170467.001_SR_4034_Boyfront_Por\CADD\15-Utilities\PUTL _PLANS\PUTLDET_4034.dgn

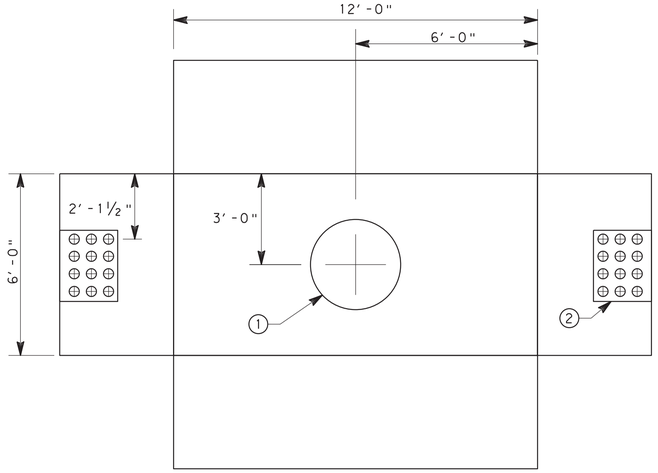
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

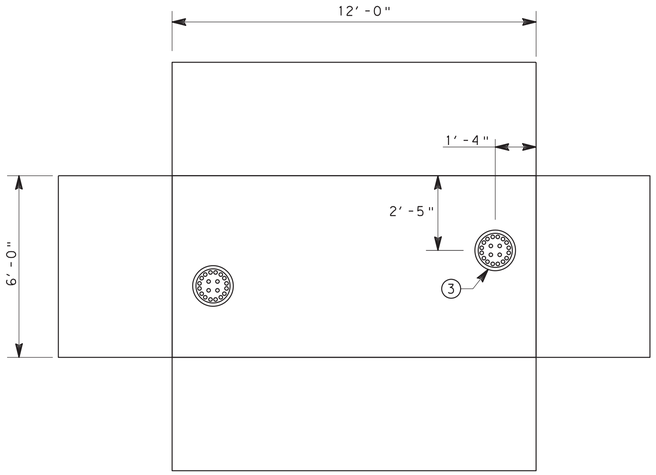
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	6 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



VERIZON TYPE A MANHOLE FOLD-OUT VIEW TOP

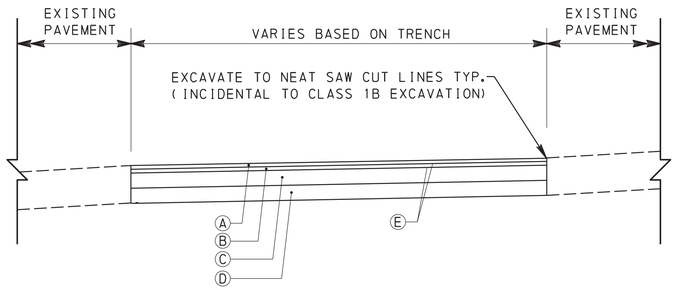
INCIDENTAL TO ITEM NO. 9000-1104
NOT TO SCALE



VERIZON TYPE A MANHOLE FOLD-OUT VIEW BOTTOM

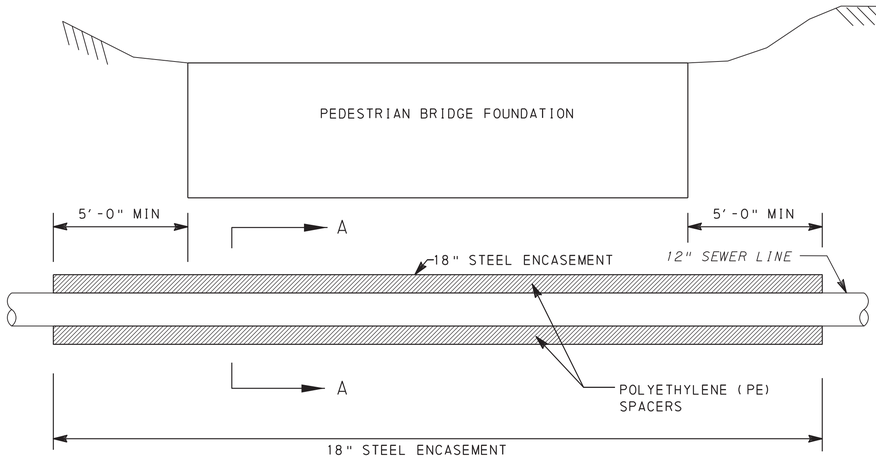
INCIDENTAL TO ITEM NO. 9000-1104
NOT TO SCALE

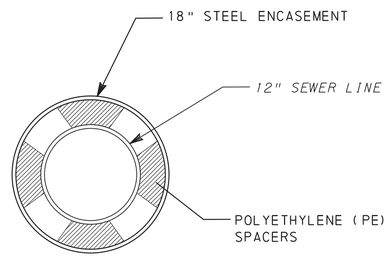
①	36"ø ACCESS OPENING W/ (4) 3/4"ø THREADED INSERTS ON 43 1/2" B.C.
②	4"ø "PAI" TERMINATOR
③	12"ø 4" "PAI" PLASTIC SUMP AND LID INSTALL LID PRIOR TO SHIPMENT



TYPICAL TEMPORARY PAVEMENT PATCHING DETAIL

INCIDENTAL TO ITEM NO. 9000-1100
INCIDENTAL TO ITEM NO. 9000-1101
INCIDENTAL TO ITEM NO. 9000-1102
INCIDENTAL TO ITEM NO. 9000-1103
INCIDENTAL TO ITEM NO. 9000-1104
INCIDENTAL TO ITEM NO. 9000-1105
INCIDENTAL TO ITEM NO. 9000-1106
INCIDENTAL TO ITEM NO. 9000-1107
NOT TO SCALE





SECTION A-A

18" STEEL ENCASEMENT AT HOLLAND STREET

INCIDENTAL TO ITEM NO. 9000-1108
NOT TO SCALE

LEGEND

Ⓐ SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H

Ⓑ SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH

Ⓒ SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH

Ⓓ SUBBASE 8" DEPTH (NO. 2A)

Ⓔ ASPHALT TACK COAT (NTT/CNTT)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

SPECIAL DETAILS

UTILITY RELOCATION PLAN

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLDET_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	7 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM NORTH ZONE (SPCS83) COMBINED SCALE FACTOR = 1.00001252

GEOMETRY	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
PEACH STREET CROSSING PENELEC 35KV CONDUIT ℄					
	0+00.00	POB	725443.1834	1333877.4073	S 07°01'25" E
	0+79.18	PI	725364.5954	1333887.0897	S 08°43'17" E
	2+14.02	PI	725231.3122	1333907.5358	S 03°06'23" W
	2+19.10	POE	725226.2432	1333907.2607	
PEACH STREET CROSSING PENELEC 12KV CONDUIT ℄					
	10+00.00	POB	725438.2331	1333867.4734	S 07°26'30" E
	10+76.53	PI	725362.3489	1333877.3853	S 08°27'49" E
	12+13.30	PI	725227.0639	1333897.5157	S 18°32'56" W
	12+17.82	POE	725222.7849	1333898.9515	
STATE STREET CROSSING PENELEC CONDUIT ℄					
	20+00.00	POB	725489.5750	1333964.3917	N 31°27'48" E
	20+05.49	PI	725494.2579	1333967.2573	N 67°54'18" E
	20+65.87	PI	725516.9677	1334023.1988	N 69°32'16" E
	21+77.65	PI	725556.0458	1334127.9282	N 65°17'17" E
	23+83.38	PI	725642.0548	1334314.8222	N 35°28'34" E
	23+93.30	PI	725650.1301	1334320.5771	N 59°53'23" E
	27+85.71	POE	725846.9886	1334660.0351	
STATE STREET CROSSING VERIZON CONDUIT 1 ℄					
	0+00.00	POB	725509.4551	1333985.2037	N 67°07'54" E
	0+17.61	PI	725516.3003	1334001.4336	N 65°59'34" E
	1+49.47	PI	725569.9446	1334121.8797	N 67°56'23" E
	2+50.37	PC	725607.8406	1334215.3923	
	2+68.99	PI	725614.8337	1334232.6486	N 46°50'42" E
	2+87.18	PT	725627.5689	1334246.2316	
	3+10.79	PI	725643.7187	1334263.4564	N 55°18'01" E
	3+35.79	POE	725657.9505	1334284.0101	
STATE STREET CROSSING VERIZON CONDUIT 2 ℄					
	20+00.00	POB	725356.9200	1333836.9253	S 27°17'03" E
	20+26.28	PI	725333.5613	1333848.9734	S 19°14'45" E
	21+24.89	PI	725240.4668	1333881.4760	N 61°23'00" E
	21+59.17	PI	725256.8853	1333911.5688	N 72°35'10" E
	22+52.08	PI	725284.6915	1334000.2238	N 63°10'25" E
	24+82.95	PI	725388.8803	1334206.2473	N 68°03'30" E
	25+81.41	PI	725425.6706	1334297.5748	N 67°56'54" E
	26+06.41	POE	725435.0567	1334320.7460	
STATE STREET CROSSING VERIZON CONDUIT 3 ℄					
	30+00.00	POB	725645.3056	1334262.2947	N 52°00'12" W
	30+41.77	PC	725671.0214	1334229.3762	
	30+65.77	PI	725685.7919	1334210.4686	N 25°01'09" W
	30+88.87	PT	725707.5337	1334200.3213	
	32+19.53	PC	725825.9331	1334145.0624	N 69°10'02" W
	32+31.69	PI	725836.9574	1334139.9172	
	32+42.64	PT	725841.2841	1334128.5467	N 24°42'12" W
	32+43.30	PC	725841.5164	1334127.9363	
	32+55.56	PI	725845.8773	1334116.4758	
	32+66.58	PT	725857.0174	1334111.3511	
	32+81.19	POE	725870.2922	1334105.2445	
HOLLAND STREET VERIZON CONDUIT ℄					
	0+00.00	POB	726336.7815	1335127.5982	N 73°57'36" E
	0+60.38	PI	726353.4654	1335185.6290	S 70°55'30" E
	2+87.74	POE	726279.1630	1335400.5049	

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM NORTH ZONE (SPCS83) COMBINED SCALE FACTOR = 1.00001252

GEOMETRY	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
HOLLAND STREET PENELEC CONDUIT 1 ℄					
	10+00.00	POB	726080.1725	1335338.1319	N 39°00'49" E
	10+04.52	PI	726083.6826	1335340.9757	
	10+29.95	PC	726105.4034	1335354.2017	N 31°20'16" E
	10+40.46	PI	726114.3853	1335339.6709	
	10+50.68	PT	726120.4031	1335368.2949	N 55°05'33" E
	10+90.34	PC	726143.0986	1335400.8190	
	11+16.38	PI	726158.0035	1335422.1788	
	11+38.36	PT	726149.0421	1335446.6347	S 69°52'32" E
	11+76.38	POE	726135.9609	1335482.3335	
HOLLAND STREET CROSSING AND PENELEC CONDUIT 2 ℄					
	20+00.00	PC	726031.7841	1334964.0308	N 58°04'11" E
	20+06.16	PI	726035.0440	1334969.2620	
	20+12.16	PT	726040.1024	1334972.7841	N 34°50'56" E
	20+56.05	PC	726076.1212	1334997.8635	
	20+63.35	PI	726082.1173	1335002.0385	
	20+70.38	PT	726085.5222	1335008.5031	N 62°13'28" E
	20+74.12	PI	726087.2627	1335011.8076	N 83°15'04" E
	20+79.41	PI	726086.6405	1335017.0650	N 87°45'32" E
	23+93.69	PI	726074.3505	1335331.1075	S 46°22'54" E
	24+02.69	PI	726068.1417	1335337.6233	S 89°05'56" E
	25+95.78	POE	726065.1049	1335530.6875	
HOLLAND STREET PENELEC CONDUIT 3 ℄					
	30+00.00	POB	726062.3692	1335330.6672	S 42°33'58" W
	30+04.52	PI	726059.0431	1335327.6123	
	30+22.39	PC	726042.7303	1335320.3022	S 24°08'18" W
	30+31.90	PI	726034.0513	1335316.4130	
	30+41.19	PT	726024.5506	1335315.9817	S 2°35'56" W
	30+06.74	POE	725959.0670	1335313.0093	
HOLLAND STREET PENELEC CONDUIT 4 ℄					
	40+00.00	POB	726093.6206	1335023.7380	N 64°57'44" E
	40+04.50	PI	726095.5250	1335027.8151	
	40+20.77	PC	726103.3304	1335042.0886	N 61°19'41" E
	40+41.08	PI	726113.0759	1335059.9097	
	40+60.55	PT	726130.1424	1335070.9234	N 32°50'08" E
	41+29.55	PC	726188.1138	1335108.3345	
	41+57.08	PI	726211.2457	1335123.2623	
	41+79.88	PT	726236.2292	1335111.6974	N 24°50'22" W
	42+67.73	PI	726315.9579	1335074.7910	N 26°53'17" W
	43+16.44	PI	726359.4031	1335052.7614	N 24°50'22" W
	43+27.13	PI	726369.1005	1335048.2725	N 79°55'27" E
	44+12.94	PI	726384.1124	1335132.7553	N 65°09'38" E
	44+17.44	POE	726386.0028	1335136.8390	
HOLLAND STREET PENELEC CONDUIT 5 ℄					
	50+00.00	POB	726386.0028	1335136.8390	N 65°09'38" E
	50+04.50	PI	726387.8931	1335140.9227	
	50+07.96	PC	726389.3468	1335144.0631	N 65°09'38" E
	50+15.44	PI	726392.4898	1335150.8529	
	50+19.99	PT	726385.9252	1335154.4427	S 28°40'19" E
	50+20.56	PI	726385.4255	1335154.7160	
	50+23.27	PC	726383.0466	1335156.0169	S 28°40'19" E
	50+35.56	PI	726372.2648	1335161.9129	
	50+47.37	PT	726365.4444	1335172.1350	S 56°17'16" E
	50+66.15	PI	726355.0219	1335187.7558	
	52+93.84	PI	726280.6104	1335402.9469	S 70°55'30" E
	54+68.83	POE	726370.9772	1335552.7927	N 58°54'26" E
HOLLAND STREET PENELEC CONDUIT 6 ℄					
	60+00.00	POB	726390.0724	1335134.9183	N 62°18'32" W
	60+09.57	PC	726394.5203	1335126.4432	
	60+26.43	PI	726402.3526	1335111.5191	
	60+42.08	PT	726417.6215	1335104.3822	N 25°03'07" W
	61+21.58	PC	726489.6172	1335070.6653	
	61+27.87	PI	726495.3113	1335067.9986	
	61+34.09	PT	726500.1679	1335064.0052	N 39°25'46" W
	61+74.41	PC	726531.3079	1335038.3998	
	61+80.86	PI	726536.2900	1335034.3031	
	61+87.24	PT	726542.1486	1335031.6050	N 24°43'41" W
	63+46.17	POE	726686.5083	1334965.1212	

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM NORTH ZONE (SPCS83) COMBINED SCALE FACTOR = IS 1.00001252

GEOMETRY	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
HOLLAND STREET PRIVATE SANITARY SEWER ℄					
	0+00.00	POB	725881.4058	1335274.6254	N 22°55'45" W
	0+47.55	PI	725925.2001	1335256.0996	N 66°16'50" E
	0+86.99	PI	725941.0640	1335292.2050	N 55°45'43" E
	1+12.03	POE	725955.1544	1335312.9088	
SASSAFRAS STREET PRIVATE SANITARY SEWER ℄					
	10+00.00	POB	725215.7835	1332859.4283	N 65°10'16" E
	12+67.90	PI	725328.2792	1333102.5685	S 24°58'57" E
	13+32.69	PI	725269.5551	1333129.9300	S 47°10'16" E
	13+81.02	POE	725236.6996	1333165.3749	

FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLCOOR_4034.dgn

COORDINATE TABLES

UTILITY RELOCATION PLAN

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	8 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 15 OF 25

SEE SHEET 9 OF 25

2

ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITIC

PARKING

GATE

SHED

CHAIN LINK FENCE

BIT

PARKING

LEGAL R/W LINE

TEMPORARY CONSTRUCTION EASEMENT

SEE SASSAFRAS STREET 12" WATER MAIN PLANS

12" WATER LINE (EWW)

LEGAL R/W LINE

SSMH

SR 4034 (BAYFRONT PARKWAY)

18" RCP

(CITY OF ERIE) (QLB)

508

509

510

511

512

513

514

PRC

PT

PC

SR 4034 SURVEY & CONSTR ℄

RAIN GARDEN

SASSAFRAS STREET

LEGAL UNDERGROUND ANCHOR EASEMENT

LEGAL R/W LINE

FRONT STREET

BAYFRONT PROMENADE

LEGAL R/W LINE FOR CITY STREET

GRADE ADJUSTMENT

TO BE REMOVED (BY OTHERS)

SASSAFRAS ST EXT SURVEY & CONSTR ℄

GRADE ADJUST WITH FINAL PAVING

SASSAFRAS ROUNDABOUT CONSTR ℄

PRIVATE SEWER RELOCATION

TO BE REMOVED

TEMPORARY CONSTRUCTION EASEMENT

POLE #284504 PTS. 04

POLE #284504 PTS. 02

POLE #13647

SSMH POLE #284504 PT35

15" CPP

15" RCP

12" VCP

10" VCP

8" RCP

12" (EWW) (QLB)

ROCK PILE

SCALE

0 25 50 FEET

LEGEND

- 8′ X 8′ ELECTRIC MANHOLE
- 6′ X 12′ TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

UTILITY RELOCATION PLAN

FOR SASSAFRAS PRIVATE SEWER RELOCATION PROFILE SEE SHEET 25

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE078966

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN001_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	9 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 8 OF 25

SEE SHEET10 OF 25

TO BE REMOVED (BY OTHERS)
LEGAL R/W LINE FOR CITY STREET
GRADE ADJUSTMENT
GRADE ADJUST WITH FINAL PAVING
TO BE REMOVED (BY OTHERS)
SASSAFRASS PRIVATE SEWER RELOCATION
TO BE REMOVED
LEGAL R/W LINE FOR CITY STREET
TO BE REMOVED (BY OTHERS)
GRADE ADJUSTMENT
TO BE REMOVED
TO BE REMOVED
TO BE REMOVED (BY OTHERS)
TO BE REMOVED
GRADE ADJUSTMENT
LEGAL R/W LINE
TO BE REMOVED
TO REMAIN
BY OTHERS
GRADE ADJUSTMENT
TO BE REMOVED (BY OTHERS)
TO BE REMOVED
TO BE REMOVED (BY OTHERS)
GRADE ADJUST WITH FINAL PAVING
TO REMAIN
LEGAL UNDERGROUND ANCHOR EASEMENT
LEGAL SLOPE EASEMENT
TO REMAIN
SR 4034 SURVEY & CONSTR ℄
WEST FRONT ST. RELOCATION (BY OTHERS)
BY OTHERS
LEGAL R/W FOR CITY STREET
LEGAL R/W LINE
LEGAL R/W FOR CITY STREET
LEGAL SLOPE EASEMENT
1519 SR 8034 CONSTR ℄

2 ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITC

6 ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

SASSAFRAS PIER
PARKING GRAVEL (PENELEC)
STOCK PILE
BURIED CONC GUTTER
CHAIN LINK FENCE
RETAINING WALL
W FRONT STREET
BAYFRONT PROMENADE
RAILROAD TRACK
SR 4034 (BAYFRONT PARKWAY)
BAYFRONT PROMENADE

SCALE
0 25 50 FEET

LEGEND
- 8′ X 8′ ELECTRIC MANHOLE
- 6′ X 12′ TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JORGE E BUBALO THOMAS CPM, BCR, QA PE070866

UTILITY RELOCATION PLAN

FOR SASSAFRAS PRIVATE SEWER RELOCATION PROFILE SEE SHEET 25

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPLN002_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN003_4034.dgn

SEE SHEET 17 OF 25

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	10 OF 25

CITY OF ERIE

REVISION NUMBER	REVISIONS	DATE	BY

WEST FRONT ST. RELOCATION (BY OTHERS)

6 ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

8" WATERLINE (EWW) (BY OTHERS)

3x3-4" CONDUITS

NFG TO CAP AND ABANDON LINE

STATE STREET CROSSING VERIZON CONDUIT 3 ℄

8 ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITC

LEGAL R/W LINE FOR CITY STREET

LEGAL DRAINAGE EASEMENT

PEACH STREET CROSSING PENELEC 12KV CONDUIT ℄

NFG LINE FOR FRONT STREET PROJECT

BY OTHERS

STATE STREET CROSSING VERIZON CONDUIT 1 ℄

3x3-4" CONDUITS

LEGAL SLOPE EASEMENT

12KV 4x5-5" CONDUITS TO BE REMOVED

35KV 6x3-6" CONDUITS

35KV 3x3-6" CONDUITS CAP FOR FUTURE TIE-IN

STATE STREET CROSSING PENELEC CONDUIT ℄

TO REMAIN

TO BE REMOVED (BY OTHERS)

TIE-IN TO CAPPED LOCATION

TO BE REMOVED

4x5-5" CONDUITS

3x3-6" CONDUITS

STATE STREET CROSSING VERIZON CONDUIT 2 ℄

TEMP CONSTR EASE

LEGAL R/W LINE

SEE STATE STREET 60" SEWER RELOCATION PLAN

REQUIRED UNDERGROUND STRUCTURE SUPPORT EASEMENT

GRADE ADJUST WITH FINAL PAVING

NFG TO CAP AND ABANDON LINE

GRADE ADJUST WITH FINAL PAVING

TEMPORARY CONSTRUCTION EASEMENT

LEGAL UNDERGROUND ANCHOR EASEMENT

GRADE ADJUSTMENT

TO BE REMOVED

12KV 2x5-5" CONDUITS

SR 8034 CONSTR ℄

SR 4034 SURVEY & CONSTR ℄

LEGAL DRAINAGE EASEMENT

6 ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

BY OTHERS

CAPPED FOR FUTURE TIE-IN (BY OTHERS)

BY OTHERS

3x1-6" CONDUITS (BY OTHERS)

2x1-5" CONDUITS (BY OTHERS)

BY OTHERS

PEACH STREET CROSSING PENELEC 35KV CONDUIT ℄

34 MacDONALD, ILLIG, JONES & BRITTON LLP ("MIJB"), A 27.86% INTEREST AND DANIEL J. PRISCHAK, DENNIS J. PRISCHAK, DAVID J. PRISCHAK, A 72.14% INTEREST, AS TENANTS-IN-COMMON

13 UPMC HAMOT, A NONPROFIT CORPORATION

SCALE 0 25 50 FEET

LEGEND

- 8' X 8' ELECTRIC MANHOLE
- 6' X 12' TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

FOR PEACH STREET CROSSING PENELEC 35KV CONDUIT PROFILE SEE SHEET 19
FOR PEACH STREET CROSSING PENELEC 12KV CONDUIT PROFILE SEE SHEET 19
FOR STATE STREET CROSSING PENELEC CONDUIT PROFILE SEE SHEET 20
FOR STATE STREET CROSSING VERIZON CONDUIT 1 PROFILE SEE SHEET 21
FOR STATE STREET CROSSING VERIZON CONDUIT 2 PROFILE SEE SHEET 21
FOR STATE STREET CROSSING VERIZON CONDUIT 3 PROFILE SEE SHEET 21

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JUDGE E BUDALT HOMICZ ORS.B.O.R.J.A.R. ENGINEER PE078066

UTILITY RELOCATION PLAN

SEE SHEET 9 OF 25

SEE SHEET 11 OF 25

SEE SHEET 16 OF 25

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	11 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 10 OF 25

SEE SHEET 12 OF 25

8
ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITC

6
ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

13
UPMC HAMOT, A NONPROFIT CORPORATION

35KV 3x3-6" CONDUITS CAP FOR FUTURE TIE-IN

BY OTHERS

12KV 2x5-5" CONDUITS

STATE STREET CROSSING PENELEC CONDUIT ℄

TO BE ABANDONED

TO REMAIN

GRADE ADJUSTMENT (BY OTHERS)

HOLLAND STREET CROSSING PENELEC CONDUIT 2 ℄

3x1-6" CONDUITS (BY OTHERS)

35KV 3x3-6" CONDUITS - CAPPED

TEMPORARY CONSTRUCTION EASEMENT

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE

LEGAL SLOPE EASE

LEGAL SLOPE EASEMENT

LEGAL DRAINAGE EASEMENT

LEGAL UNDERGROUND ANCHOR EASEMENT

SR 4034 SURVEY & CONSTR ℄

SR 8034 CONSTR ℄

SR 4034 (BAYFRONT PARKWAY)

LEGEND

- 8' X 8' ELECTRIC MANHOLE
- 6' X 12' TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

SCALE

0 25 50 FEET

UTILITY RELOCATION PLAN

FOR STATE STREET CROSSING PENELEC CONDUIT PROFILE SEE SHEET 20

FOR HOLLAND STREET CROSSING PENELEC CONDUIT 2 PROFILE SEE SHEET 22

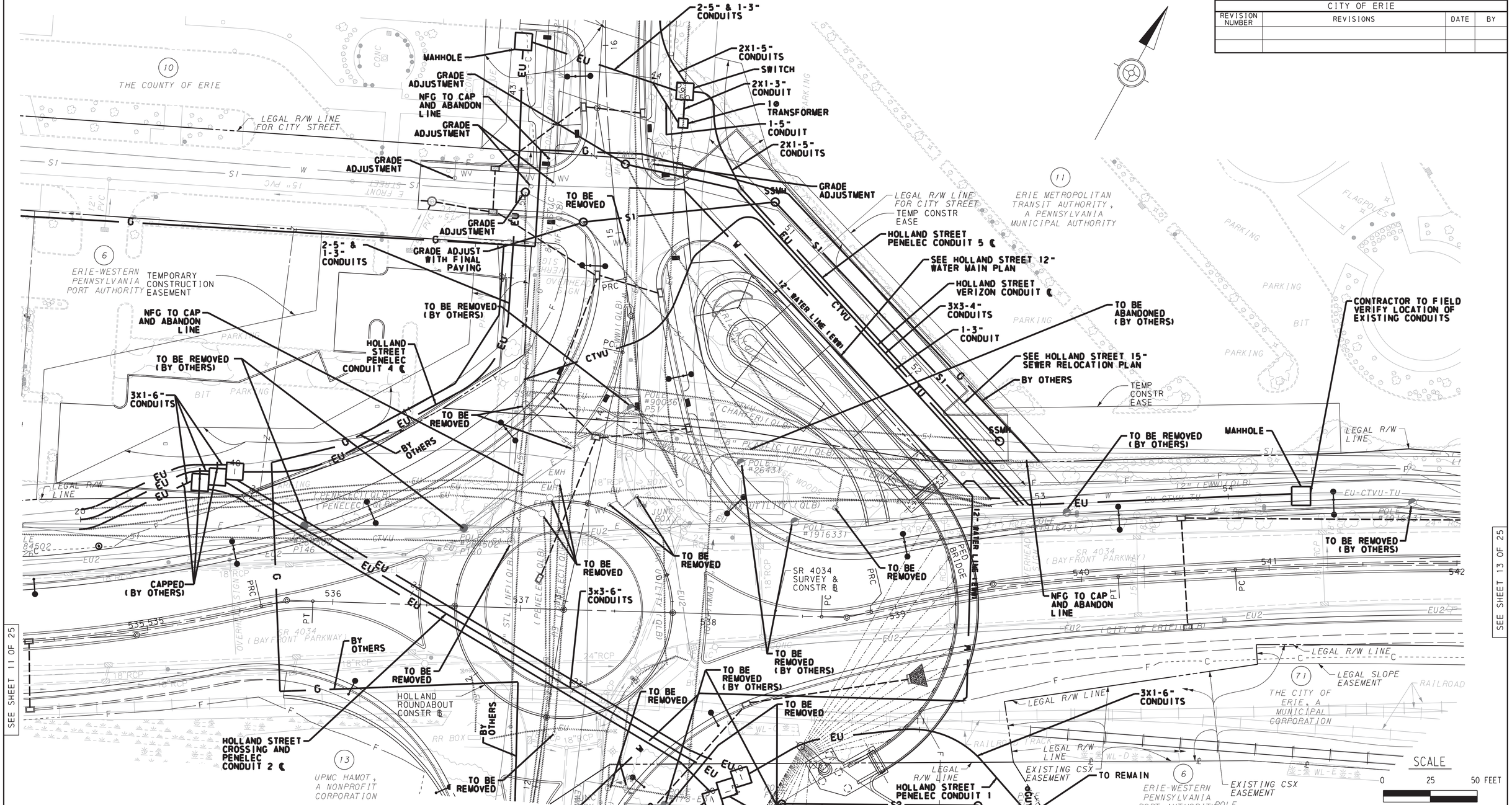
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JOSEPH E BUBALO, JR. THOMAS CRAIG ORLAR PE070804

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPLN003b_4034.dgn

SEE SHEET 18 OF 25

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	12 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 11 OF 25

SEE SHEET 13 OF 25

LEGEND

- 8' X 8' ELECTRIC MANHOLE
- 6' X 12' TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

UTILITY RELOCATION PLAN

FOR HOLLAND STREET CROSSING PENELEC CONDUIT 2 PROFILE SEE SHEET 22
FOR HOLLAND STREET PENELEC CONDUIT 1 PROFILE SEE SHEET 23
FOR HOLLAND STREET PENELEC CONDUIT 3 PROFILE SEE SHEET 23
FOR HOLLAND STREET PENELEC CONDUIT 4 PROFILE SEE SHEET 24
FOR HOLLAND STREET PENELEC CONDUIT 5 PROFILE SEE SHEET 24
FOR HOLLAND STREET PENELEC CONDUIT 6 PROFILE SEE SHEET 25

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOSEPH E. BUCHANICH — ENGINEER — PE078066

SEE SHEET 14 OF 25

PLOTTED: 7/27/2022
FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN004_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	13 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 12 OF 25

SEE SHEET14 OF 25

CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING CONDUITS

TEMPORARY CONSTRUCTION EASEMENT

TO BE REMOVED (BY OTHERS)

TO REMAIN PROTECT DURING DRAINAGE PLACEMENT

TEMP CONSTR EASE

LEGAL R/W LINE

LEGAL SLOPE EASEMENT

LEGAL DRAINAGE EASEMENT

40' R/W FOR BIKE PATH

TO BE PARTIALLY REMOVED (BY OTHERS)

TO REMAIN

EXISTING CSX EASEMENT

LEGAL R/W LINE FOR CITY STREET

ERIE METROPOLITAN TRANSIT AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY (11)

ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY (6)

THE CITY OF ERIE, A MUNICIPAL CORPORATION (71)

SR 4034 SURVEY & CONSTR B

SR 4034 (BAYFRONT PARKWAY)

E FRONT STREET

RAILROAD TRACKS

SCALE 0 25 50 FEET

LEGEND

- 8' X 8' ELECTRIC MANHOLE
- 6' X 12' TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

UTILITY RELOCATION PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE078066

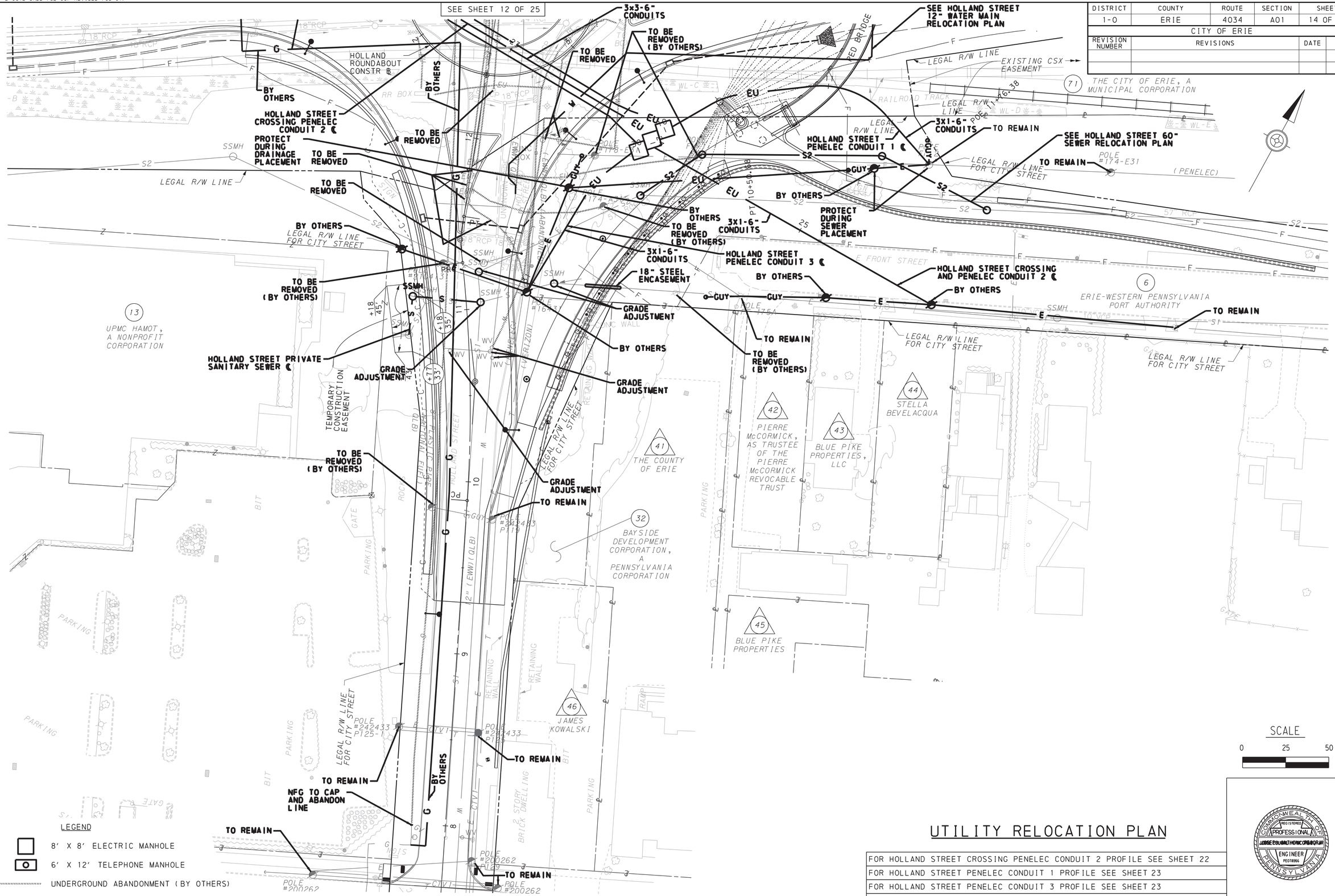
FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN005_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

SEE SHEET 12 OF 25

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	14 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 13 OF 25

SCALE

0 25 50 FEET

UTILITY RELOCATION PLAN

FOR HOLLAND STREET CROSSING PENELEC CONDUIT 2 PROFILE SEE SHEET 22
FOR HOLLAND STREET PENELEC CONDUIT 1 PROFILE SEE SHEET 23
FOR HOLLAND STREET PENELEC CONDUIT 3 PROFILE SEE SHEET 23
FOR HOLLAND STREET PRIVATE SEWER PROFILE SEE SHEET 25

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE070866 JESSE E BUHALTHOMICZ 8/30/2022

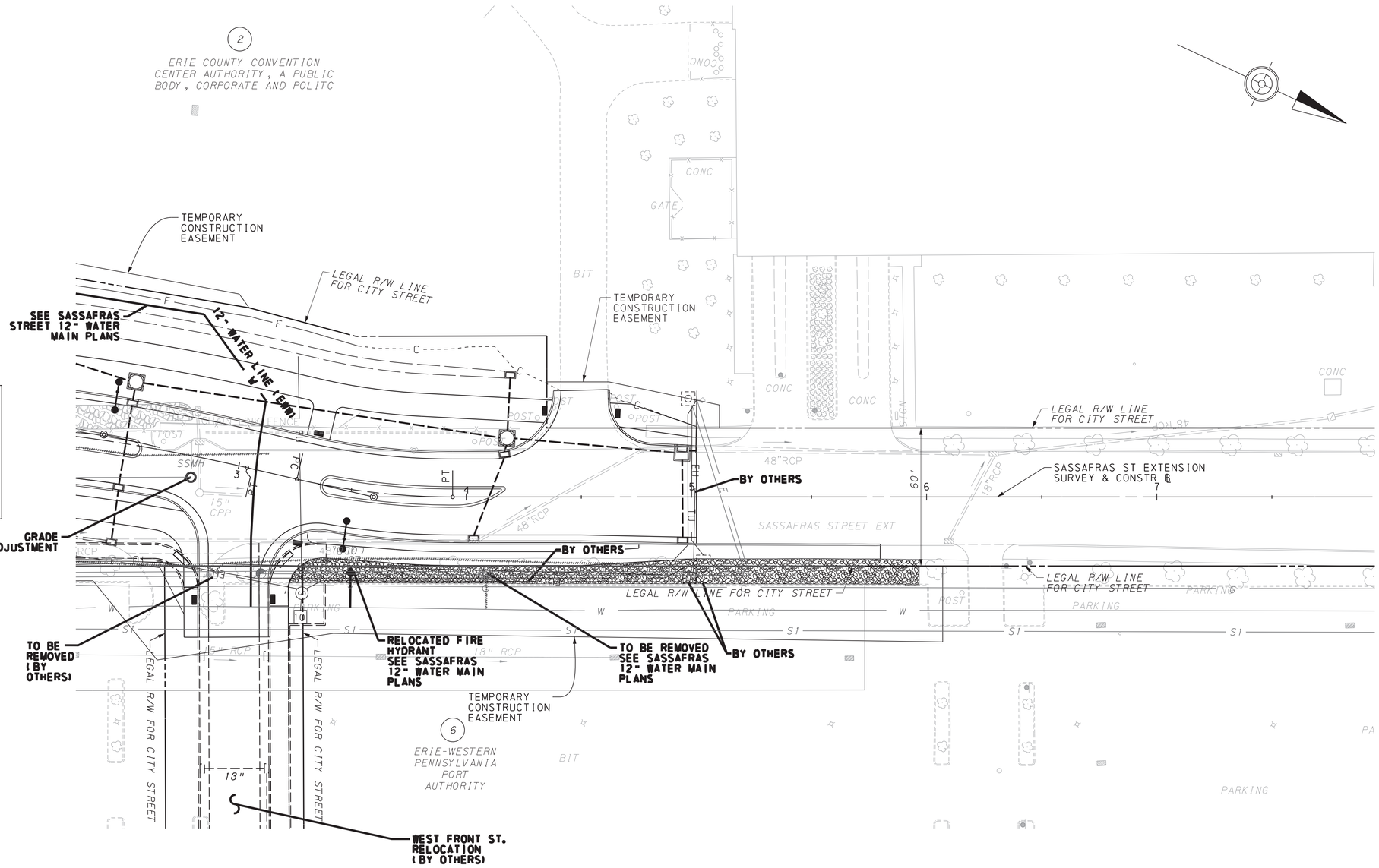
PLOTTED: 7/27/2022
FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront-Par\CADD\15-Utilities\PUTL _PLANS\PUTLPLN006_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	15 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- 8′ X 8′ ELECTRIC MANHOLE
- 6′ X 12′ TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

SCALE

0 25 50 FEET

UTILITY RELOCATION PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JORGE EBUBALTHONIC ORBIGOR JR PE070866

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront-Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN001a_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	16 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET10 OF 25

SEE SHEET10 OF 25

4x5-5" CONDUITS

BY OTHERS

PEACH STREET CROSSING PENELEC 12KV CONDUIT ℄

CAPPED FOR FUTURE TIE-IN (BY OTHERS)

BY OTHERS

BY OTHERS

3x3-6" CONDUITS

BY OTHERS

PEACH STREET CROSSING PENELEC 35KV CONDUIT ℄

3x1-6" CONDUITS (BY OTHERS)

2x1-5" CONDUITS (BY OTHERS)

STATE STREET CROSSING VERIZON CONDUIT 2 ℄

TEMPORARY CONSTRUCTION EASEMENT

UNDERGROUND STR SUP EASE

LEGAL SLOPE EASEMENT

3x3-4" CONDUITS

SEE SR 4034 60" SEWER RELOCATION PLAN

TO BE REMOVED

GRADE ADJUSTMENT

TEMPORARY CONSTRUCTION EASEMENT

TO BE REMOVED

NFG TO CAP AND ABANDON LINE

GRADE ADJUSTMENT

GRADE ADJUST WITH FINAL PAVING

GRADE ADJUST WITH FINAL PAVING

GRADE ADJUSTMENT

GRADE ADJUSTMENT

TO BE REMOVED

GRADE ADJUSTMENT

GRADE ADJUSTMENT

6 ERIE-WESTERN PENNSYLVANIA PORT AUTHORITY

75 BAYSIDE DEVELOPMENT CORPORATION, A PENNSYLVANIA CORPORATION

34 MacDONALD, ILLIG, JONES & BRITTON LLP ("MIJB"), A 27.86% INTEREST AND DANIEL J. PRISCHAK, DENNIS J. PRISCHAK, DAVID J. PRISCHAK, A 72.14% INTEREST, AS TENANTS-IN-COMMON

13 UPMC HAMOT, A NONPROFIT CORPORATION

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE

STATE ST SURVEY & CONSTR ℄

W 2ND STREET

PARKING

CONC SIDEWALK

CONC SIDEWALK AND AWNING

BENCHES

ROCKS

SCALE

0 25 50 FEET

LEGEND

8' X 8' ELECTRIC MANHOLE

6' X 12' TELEPHONE MANHOLE

UNDERGROUND ABANDONMENT (BY OTHERS)

UTILITY RELOCATION PLAN

FOR PEACH STREET CROSSING PENELEC 35KV CONDUIT PROFILE SEE SHEET 19
FOR PEACH STREET CROSSING PENELEC 12KV CONDUIT PROFILE SEE SHEET 19
FOR STATE STREET CROSSING VERIZON CONDUIT 2 PROFILE SEE SHEET 21

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER PE070064 JORGE EBUBALTHONIC ORTIZ

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN003a_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	17 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET10 OF 25

WEST FRONT ST. RELOCATION (BY OTHERS)

BY OTHERS

TO BE REMOVED

TO BE REMOVED

TO BE ABANDONED

TO BE ABANDONED

3X3-4" CONDUITS

GRADE ADJUSTMENT

GRADE ADJUSTMENT

NFG TO CAP AND ABANDON LINE

EW TO CAP AND ABANDON LINE (BY OTHERS)

STATE STREET CROSSING VERIZON CONDUIT 3 ℄

LEGAL SLOPE EASEMENT

LEGAL SLOPE EASEMENT

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE FOR CITY STREET

STATE ST SURVEY & CONSTR ℄

ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITC

E FRONT STREET

STATE STREET

LEGEND

8' X 8' ELECTRIC MANHOLE

6' X 12' TELEPHONE MANHOLE

UNDERGROUND ABANDONMENT (BY OTHERS)

SCALE

0 25 50 FEET

UTILITY RELOCATION PLAN

FOR STATE STREET CROSSING VERIZON CONDUIT 3 PROFILE SEE SHEET 22

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER

PLOTTED: 7/27/2022

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPLN003c_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	18 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 12 OF 25

10
THE COUNTY OF ERIE

FLAGPOLES
CONC
STAIRS
BIT
PARKING
SIDEWALK
CONC SIDEWALK
CONC S'WALK
HOLLAND STREET
60' PRIVATE STREET
FRONT STREET
ROCKS
ROCK PILE
RAMP
GATE
POST
SIGN
12" PVC
12" (EWW)(QLB)
(PENELEC)(QLB)
HOLLAND ST SURVEY & CONSTR
45' PRIVATE EASEMENT

2-5" & 1-3" CONDUITS
HOLLAND STREET PENELEC CONDUIT 6 C
MANHOLE
TEMPORARY CONSTRUCTION EASEMENT
43
EU
16
17
18
19
20
21
22
62
63
61
1-5" CONDUIT
SWITCH
2X1-5" CONDUITS
2X1-3" CONDUIT
1 TRANSFORMER

11
ERIE COUNTY CONVENTION CENTER AUTHORITY, A PUBLIC BODY, CORPORATE AND POLITC

LEGEND

- 8' X 8' ELECTRIC MANHOLE
- 6' X 12' TELEPHONE MANHOLE
- UNDERGROUND ABANDONMENT (BY OTHERS)

SCALE

0 25 50 FEET

UTILITY RELOCATION PLAN

FOR HOLLAND STREET PENELEC CONDUIT 4 PROFILE SEE SHEET 24
FOR HOLLAND STREET PENELEC CONDUIT 6 PROFILE SEE SHEET 25

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JORGE E BUSHATHONIC CPB&D QP/AR
ENGINEER
PE078066

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL_PLANS\PUTLPLN004a_4034.dgn

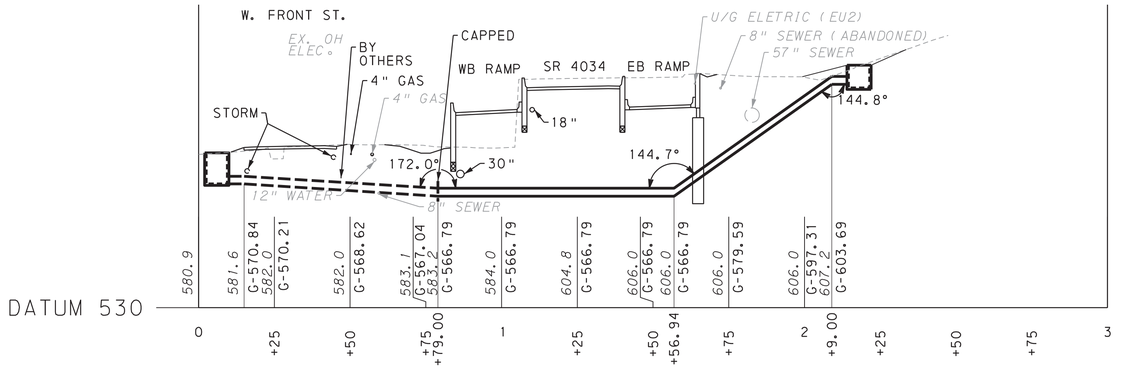
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

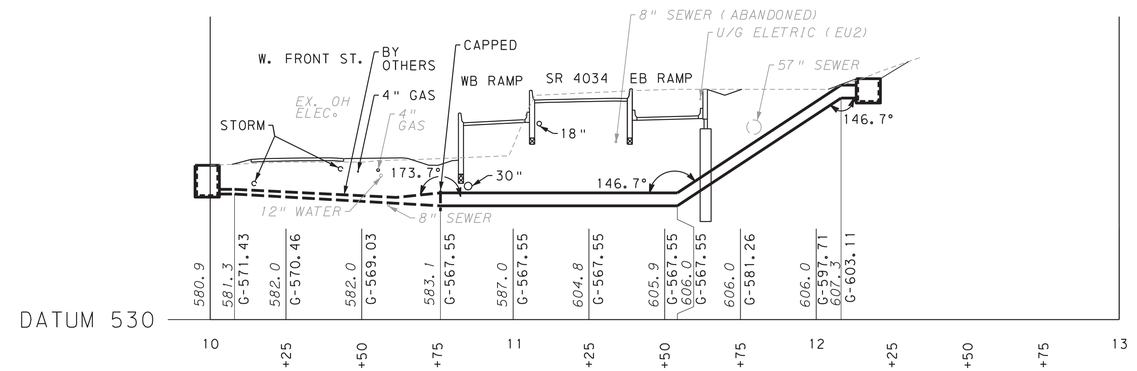
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	19 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



PEACH STREET CROSSING
PENELEC 35KV CONDUIT ℄



PEACH STREET CROSSING
PENELEC 12KV CONDUIT ℄

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH BUCHANAN THOMAS CPG/GP/AIP
ENGINEER
PE078966

UTILITY RELOCATION PLAN

FOR PLAN SEE SHEET 10

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPROF00_4034.dgn

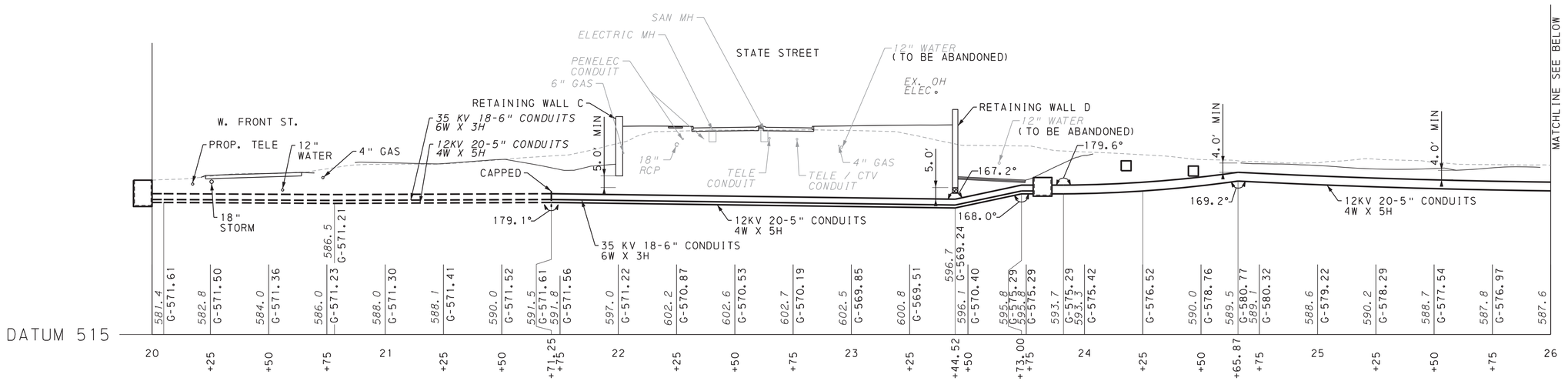
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

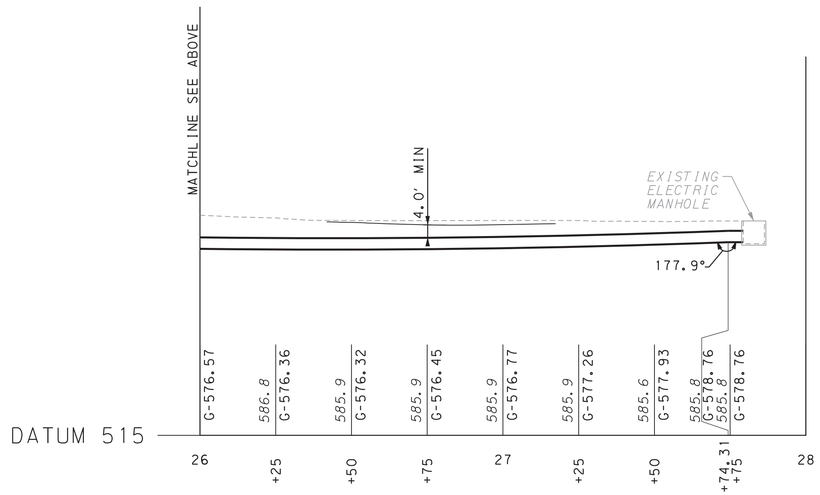
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	20 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



STATE STREET CROSSING
PENELEC CONDUIT ℄



STATE STREET CROSSING
PENELEC CONDUIT ℄

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

UTILITY RELOCATION PLAN

FOR PLAN SEE SHEET 10

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPROF01_4034.dgn

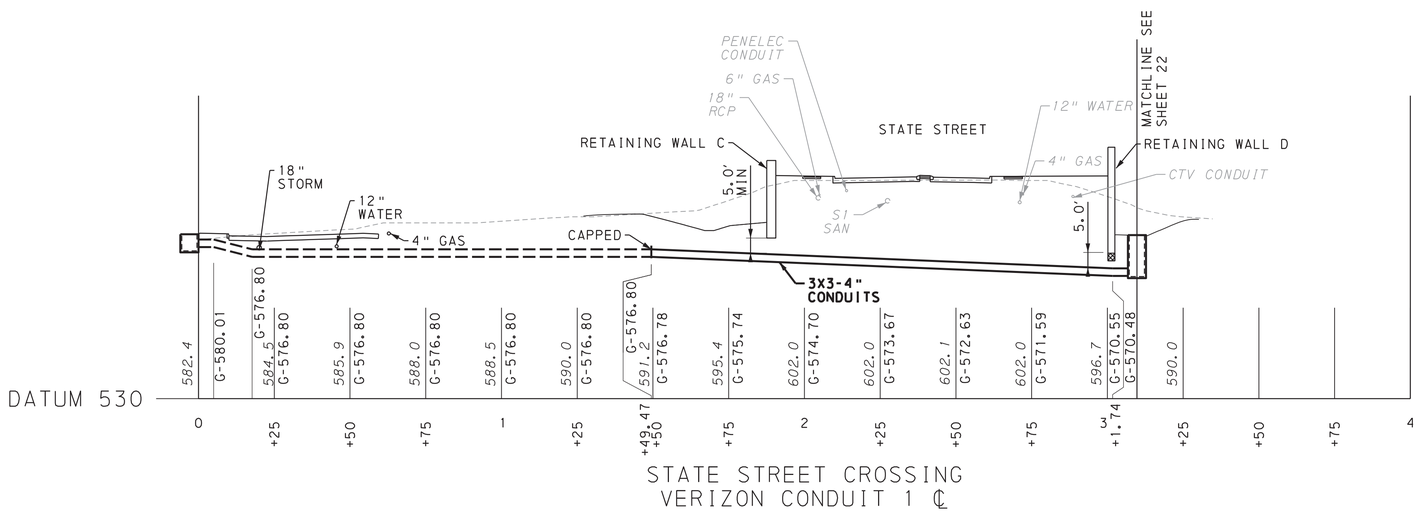
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

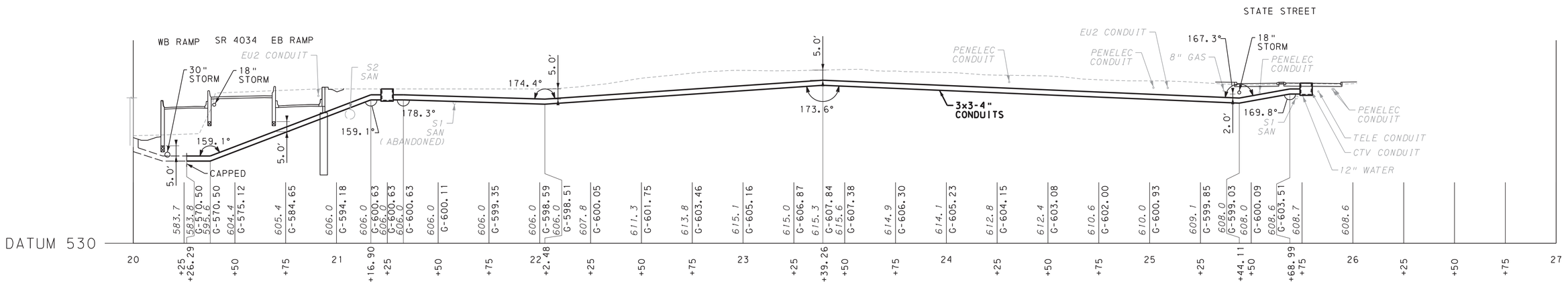
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	21 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



STATE STREET CROSSING
VERIZON CONDUIT 1 ℄



STATE STREET CROSSING
VERIZON CONDUIT 2 ℄

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

UTILITY RELOCATION PLAN

FOR PLAN SEE SHEET 10

FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Por\CADD\15-Utilities\PUTL _PLANS\PUTLPROF02_4034.dgn

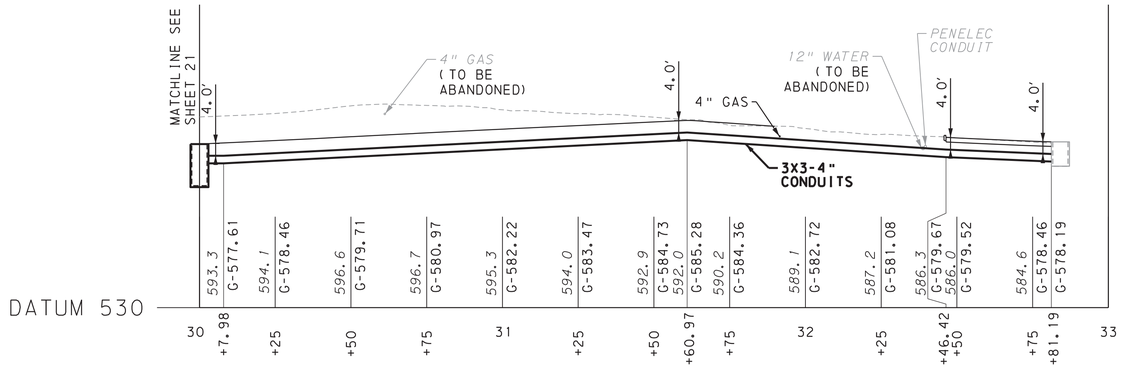
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

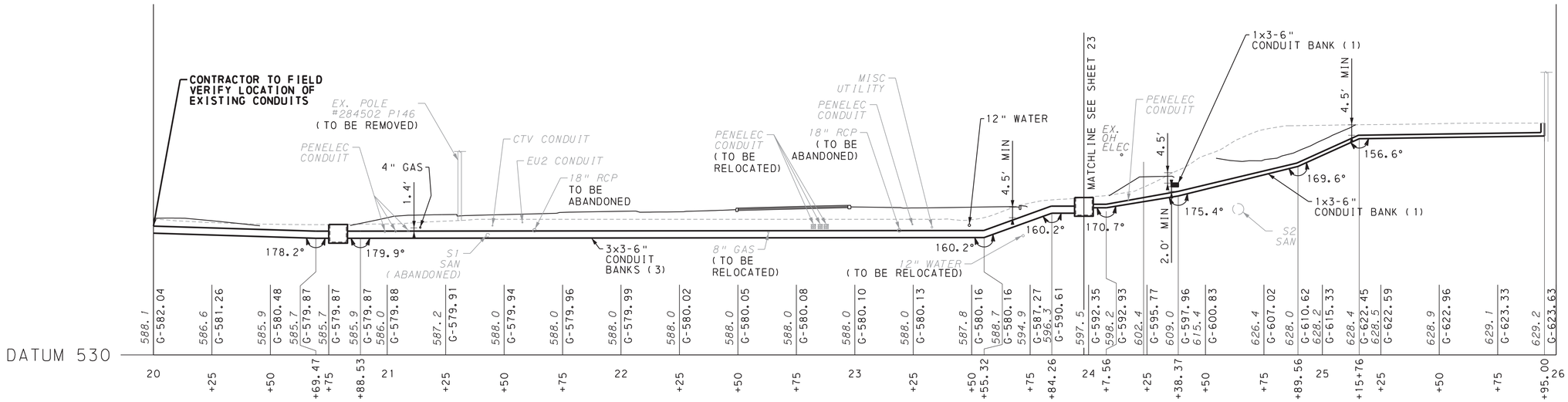
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	22 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



STATE STREET CROSSING
VERIZON CONDUIT 3 ℄



HOLLAND STREET CROSSING
AND PENELEC CONDUIT 2 ℄

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

UTILITY RELOCATION PLAN

FOR PLAN SEE SHEET 10, 12, AND 14

FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPROF03_4034.dgn

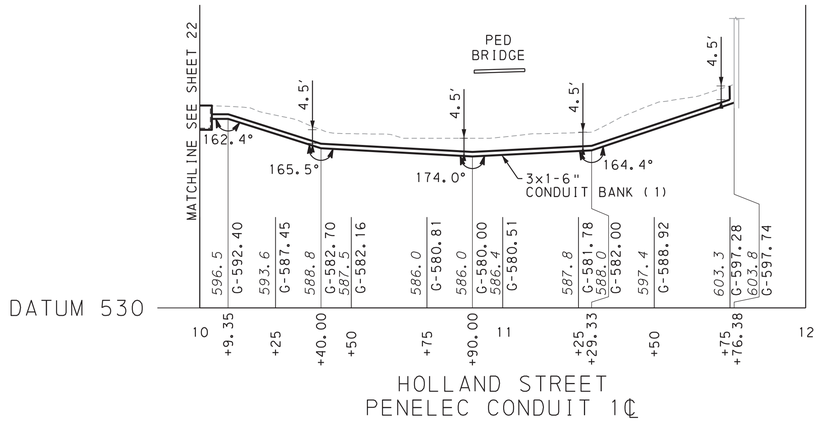
D-9012 CADD (02-90) REVISED (05-97)

D-9012 CADD (02-90) REVISED (05-97)

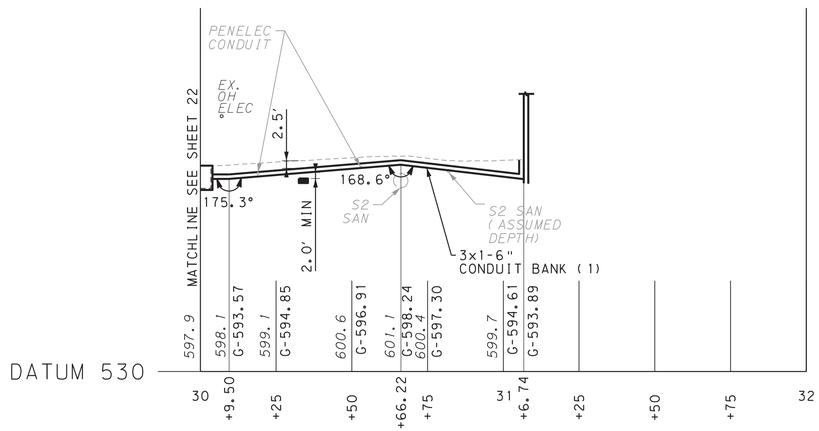
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	23 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET
PENELEC CONDUIT 1℄



HOLLAND STREET
PENELEC CONDUIT 3 ℄

SCALE

HORIZONTAL: 0 — 25 — 50 FEET

VERTICAL: 0 — 5 — 10 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOSEPH ANTHONY PECORA
PE078056

UTILITY RELOCATION PLAN

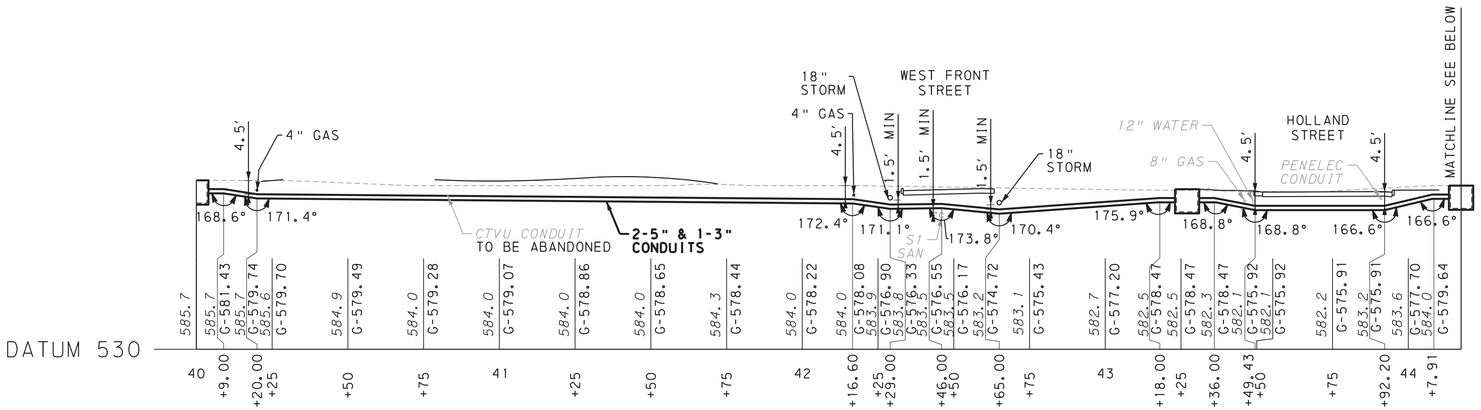
FOR PLAN SEE SHEET 12 AND 14

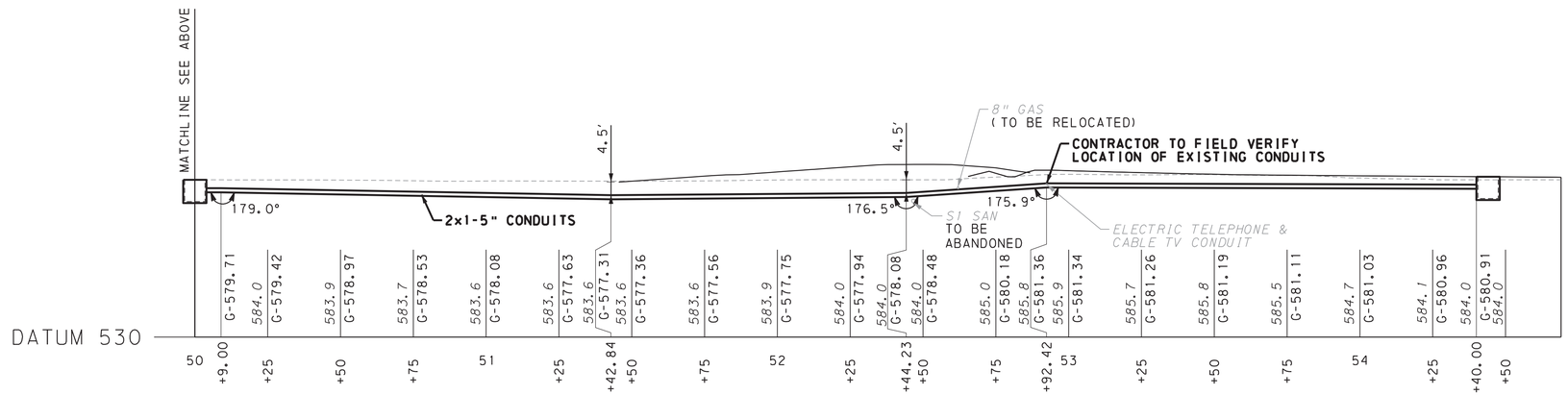
FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Por\CADD\15-Utilities\PUTL _PLANS\PUTLPROF04_4034.dgn

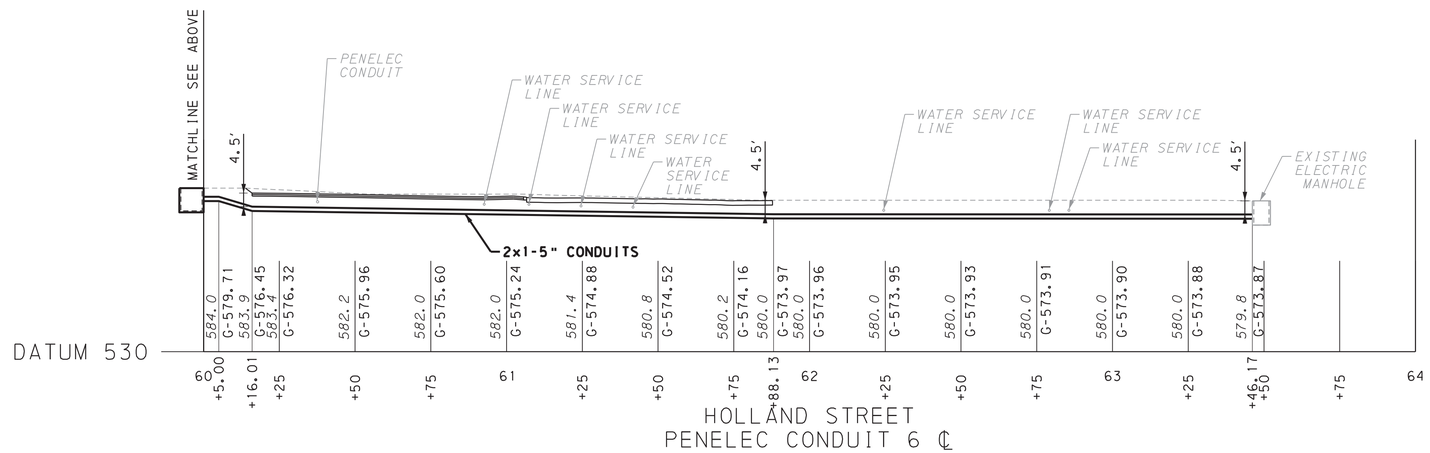
D-9012 CADD (02-90) REVISED (05-97)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	24 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY







SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH ANTHONY PECORA ENGINEER PE070156

UTILITY RELOCATION PLAN FOR PLAN SEE SHEET 12

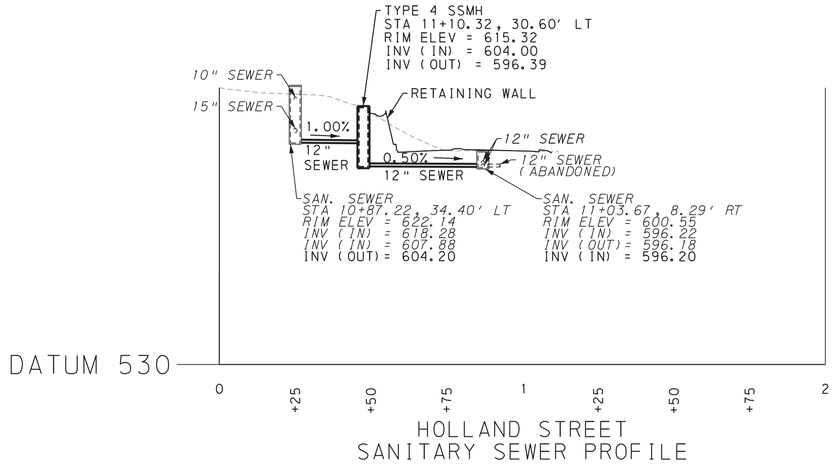
PLOTTED: 7/27/2022
FILE NAME: Q:\2017\170467_001_SR_4034_Bayfront_Par\CADD\15-Utilities\PUTL _PLANS\PUTLPROF05_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)

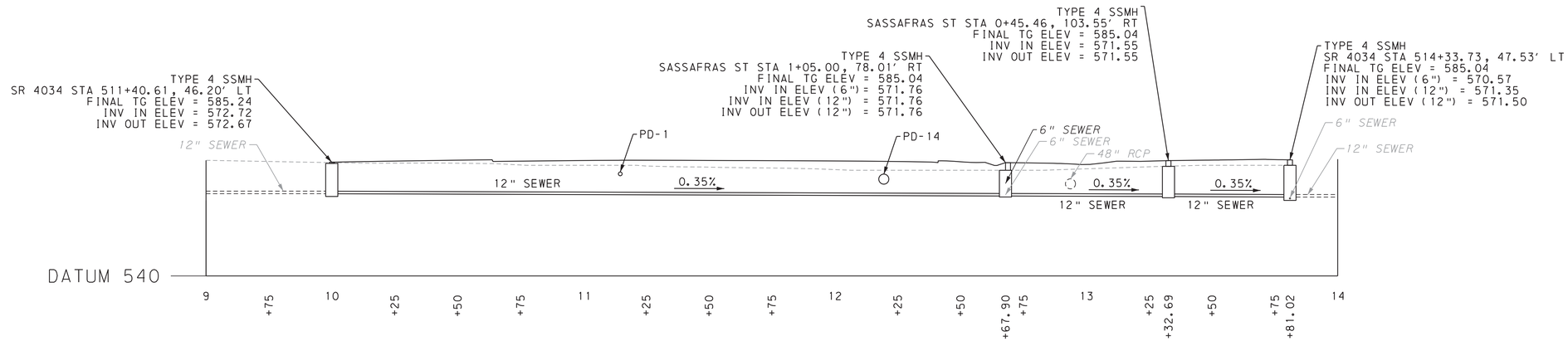
PLOTTED: 7/27/2022

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	A01	25 OF 25
CITY OF ERIE				

REVISION NUMBER	REVISIONS	DATE	BY



HOLLAND STREET
SANITARY SEWER PROFILE



SASSAFRAS STREET PRIVATE
SANITARY SEWER LINE

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

UTILITY RELOCATION PLAN

FOR HOLLAND STREET SEWER PLAN SEE SHEET 14
FOR SASSAFRAS STREET SEWER PLAN SEE SHEET 8

FILE NAME: Q:\2017\170467.001_SR_4034_Bayfront_Por\CADD\15-Utilities\PUTL _PLANS\PUTLPROF06_4034.dgn

D-9012 CADD (02-90) REVISED (05-97)