OS-2 (2-22)

pennsylvania
DEPARTMENT OF TRANSPORTATION

February 27, 2023

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Erie County
City of Erie
SR 4034, Section S00
DOT # s 918 324 S, 524 337 C, and 524 335 N
PUC No. A-2022-3036626
ECMS # 110836

Dear Secretary Chiavetta:

In accordance with ordering paragraph numbers 3 and 4 of the PUC Secretarial Letter at Docket No. A-2022-3036626 dated February 24, 2023, please find attached for your approval a copy of the final signed Drawings for Construction of State Route 4034, Section S00 in Erie County, consisting of sheets 1 through 27 of 27. Also attached to the set of construction drawings are the following half-size "Also" plans.

1. Traffic Signal Plan consisting of sheets 1 through 20 of 20.
2. Traffic Control Plan consisting of sheets 1 through 39 of 39.

The Department of Transportation hereby avers that a complete set of the aforesaid final Drawings for Construction and "Also" plans are being sent to the following parties of record in accordance with the attached Certificate of Service.

We respectfully request the approval of these plans and the subsequent issuance of a PUC Order. Should you have any questions or concerns, please feel free to contact Jeanette Uhl at (814) 678 -7084.

Sincerely,

Jeanette C. Uhl

Digitally signed by Jeanette C. Uhl
Date: 2023.02.27 06:58:12 -05'00'

Jeanette C. Uhl, Highway Design Manager
Engineering District 1-0
Department of Transportation

cc: Parties of Record
Mark J. Chappell, P.E., Chief, Right-of-Way and Utilities Section, 7th Floor, CKB
Karen L. Cummings, Senior Assistant Counsel, Office of Chief Counsel, 9th Floor, CKB
William M. Sinick, P.E., Supervisor, Rail Safety Engineering Section PUC, 3rd Floor, CKB

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to alter one (1) public at-grade crossing (DOT 918 324 S) by the installation of Z Gates at the multi-use trail along East Bayfront Parkway (State Route 4034) and alter two (2) public at-grade crossings (DOT's 524 337 C, and 524 335 N) by installing pedestrian crossing improvements and altering the pre-emption and timing where East 8th Street and East 10th Street cross the track of CSX Transportation Inc., in the City of Erie, Erie County, and the allocation of costs incident thereto.	Application Docket No. A-2022-3036626 **Electronically Filed**

VERIFICATION

I, Jeanette Uhl, hereby state that the facts above set forth are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. §4904 (relating to unsworn falsification to authorities).

Date: 02/27/2023

Jeanette C. Uhl

Digitally signed by Jeanette C. Uhl
Date: 2023.02.27 06:58:33 -05'00'

Jeanette Uhl
Highway Design Manager
Engineering District 1-0
Department of Transportation

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to alter one (1) public at-grade crossing by the installation of Z Gates at the multi-use trail along State Route 4034 and two (2) public at-grade crossings by altering the pre-emption and timing where 8th Street and 10th Street cross the track of CSX Transportation Inc. (DOT Numbers 918 324 S, 524 337 C, and 524 335N) in the City of Erie, Erie County, and the allocation of costs incident thereto.	Application Docket No. A-2022-3036626 **Electronically Filed**

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below by electronic email, in accordance with Emergency Order at M-2020-3019262.

Derek Mihaly, Project Manager II
CSC Transportation
4 Neshaminy Interplex
Suite 205
Trevose, PA 190053
derek_mihaly@csx.com

Brian Shank, Chairperson
Erie County, County Commissioners
Erie County Courthouse, Room 114
140 West 6th Street
Erie, PA 16501
bshank@eriecountypa.gov

Chuck Nelson
Erie City Council President / Chairperson
104 Municipal Building
626 State Street
Erie, PA 16501
cnelson@erie.pa.us

Daniel Banister
Charter Communications Cable Television
2904 State Road
Ashtabula, OH 44004
Daniel.Banister@charter.com

LeAnn Parmenter, City Engineer
Erie City Bureau of Sewer
626 State Street. Room 400
Erie, PA 16501
lparmenter@erie.pa.us

Craig Palmer, P.E
Erie Water Works
240 West 12th Street
Erie, PA 16501
cpalmer@eriewaterworks.org

Mat Kacprowicz
Velocity Net Communications, Inc.
PO Box 9008
Erie, PA 16505
Mat.kacprowicz@velocitynetwork.net

Jason Fleek
National Fuel Gas Distribution Corp
1100 State Street
P.O. Box 2081
Erie, PA 16512
fleekj@natfuel.com

Eric Rodrigues
Verizon North LLC
20 East 10th Street
Erie, PA 16501
Eric.rodrigues@verizon.com

Timothy Sennett
Erie Sewer Authority
120 West 10th Street
Erie, PA 16501
tsennett@kmgslaw.com

Chris Beyer
Pennsylvania Electric Company
5404 Evans Rd
P.O. Box 1101
Erie, Pa 16508
cbeyer@firstenergycorp.com

Dated this 27th Day of February 2023

Jeanette C. Uhl Digitally signed by Jeanette C. Uhl
Date: 2023.02.27 06:58:52 -05'00'

Jeanette Uhl
Highway Design Manager
814.678.7084

PLOTTED: 2/7/2023 8:26:21 AM

PLAN PREPARATION

DESIGNER: JOHNSON, MIRMIRAN & THOMPSON, INC.

PROJECT MANAGER: JEANETTE UHL

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
1-0	ERIE	CITY OF ERIE		4034	S00	27

ECMS NO. 110836

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS

FOR

CONSTRUCTION

OF

STATE ROUTE 4034 SECTION S00

IN ERIE COUNTY

FROM STA 376+00.00 TO STA 423+44.98 LENGTH 4744.98 FT 0.899 MI.

FROM SEG 0090 OFFSET 2484 TO SEG 0084 OFFSET 0091

FROM SEG 0091 OFFSET 2482 TO SEG 0085 OFFSET 0104

ALSO INCLUDED:

TRAFFIC CONTROL PLAN	39 SHEETS
SIGNING PLAN	10 SHEETS
PAVEMENT MARKING PLAN	12 SHEETS
TRAFFIC SIGNAL PLAN	20 SHEETS

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DESIGN DESIGNATION

HIGHWAY CLASSIFICATION	- URBAN PRINCIPLE ARTERIAL
DESIGN SPEED	- 35 MPH
PAVEMENT WIDTH	- 44' (4-11' LANES), 6' MEDIAN
SHOULDER WIDTH	- 2' (CURB AND GUTTER)

TRAFFIC DATA

CURRENT A.D.T.	- 6,568 (2021) (EB), 6,490 (2021) (WB)
DESIGN YEAR A.D.T.	- 6,568 (2041) (EB), 6,490 (2041) (WB)
D.H.V.	- 531 (EB), 537 (WB)
D	- 58% (EB), 58% (WB)
T	- 4% (EB), 3% (WB)

JOHNSON, MIRMIRAN & THOMPSON, INC.
5313 CAMPBELLS RUN ROAD
SUITE 100
PITTSBURGH, PA 15205

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
No. PE070554

PROJECT MANAGER

DATE: 02/07/2023

RECOMMENDED DATE: 2023.02.23 11:12:59 -05'00'

DISTRICT EXECUTIVE

RECOMMENDED DATE:

DEPUTY SECRETARY

APPROVED DATE:

SECRETARY OF TRANSPORTATION

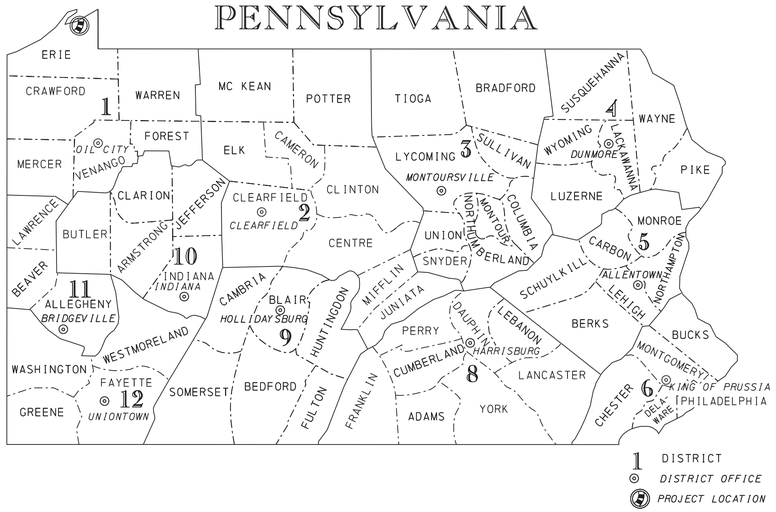
(ON BEHALF OF THE GOVERNOR
AS WELL AS THE ACTING SECRETARY)

OPERATOR: JPecora
FILE NAME: c:\pwworking\jmtjint_jpecora\d0173029\HWTTL_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	2 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



INDEX OF DRAWINGS

DESCRIPTION	SHEET
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TABULATION OF QUANTITIES	16 - 19
PLAN	21 - 27

TABULATION OF SEGMENT EQUALITIES

SR 0290 SEG 0010 OFFSET 0199 = SR 0290 SEG 0011 OFFSET 0201 = STA 374+00.00
SR 0290 SEG 0010 OFFSET 0000 = SR 0290 SEG 0011 OFFSET 0000 = STA 376+00.00
SR 4034 SEG 0090 OFFSET 2482 = SR 4034 SEG 0091 OFFSET 2484 = STA 376+00.00
SR 4034 SEG 0090 OFFSET 0000 = SR 4034 SEG 0091 OFFSET 0000 = STA 400+83.00
SR 4034 SEG 0084 OFFSET 0091 = SR 4034 SEG 0085 OFFSET 0104 = STA 423+44.98

TABULATION OF PROPERTY OWNERS

SEE SHEET 3 OF 27

STRAIGHT LINE DIAGRAM DATA			
STATE ROUTE	LIMITS OF CONSTRUCTION		PROPOSED CONSTRUCTION
	CONSTR STA	SEGMENT / OFFSET	
SR 0290	374+66 TO 376+00	10/0000 TO 10/0199 11/0000 TO 11/0201	54' OF ULTRA-THIN BONDED WEARING COURSE

RECORD OF EXISTING ROAD TYPES

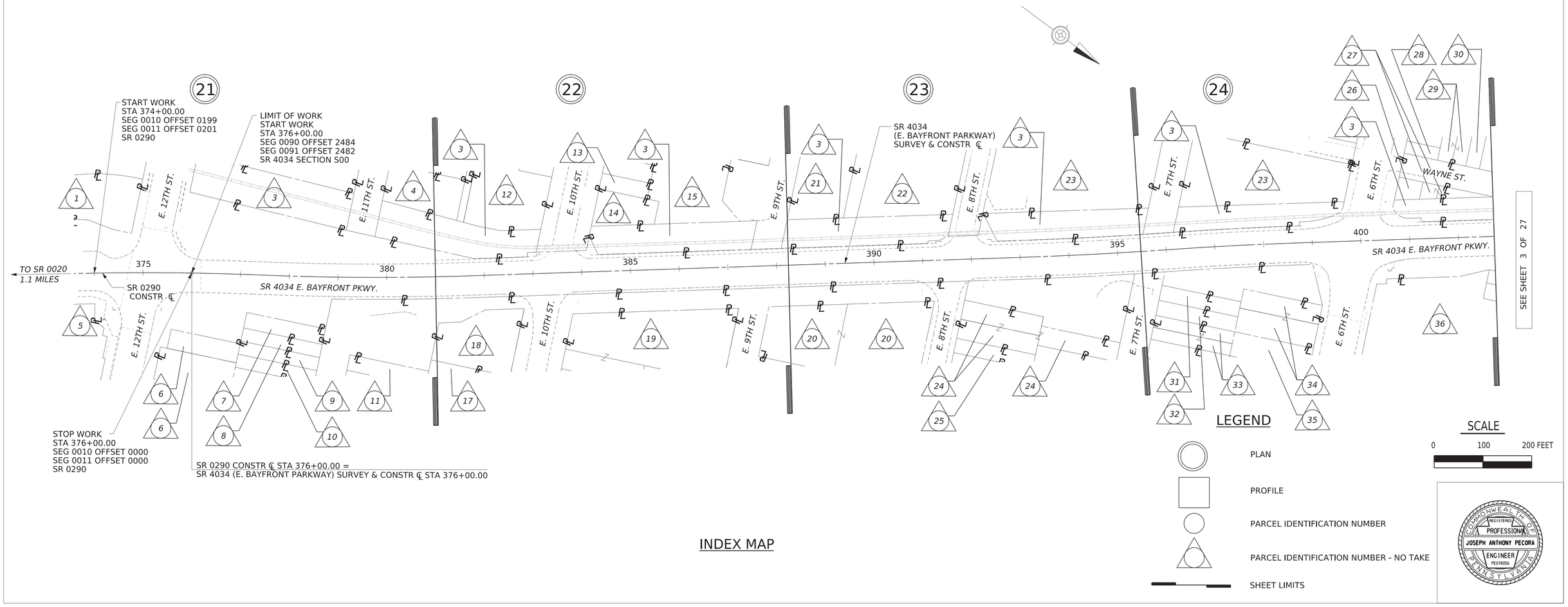
LIMIT OF WORK
ADJACENT TO
SEG 0010 OFFSET 0199
SEG 0011 OFFSET 0201:

(2007) LANE	*20'*	*1.50"*	*SUPERPAVE, HMA WEARING COURSE , PG 64-22, 9.5 MM, SRL-G*
(2007) LANE	*20'*	*2.50"*	*SUPERPAVE HMA BINDER COURSE, PG 64-22, 19 MM*
(2007) LANE	*20'*	*4.00"*	*SUPERPAVE, HMA BASE COURSE, PG 64-22, 25 MM*
(1990) LANE	*20'*	*10.00"*	*PCCP*
(1990) LANE	*20'*	*4.00"*	*CEMENT TREATED PERMEABLE BASE COURSE*
(1990) LANE	*20'*	*4.00"*	*2A SUBBASE*

LIMIT OF WORK
ADJACENT TO
SEG 0084 OFFSET 0091
SEG 0085 OFFSET 0104:

(1990) LANE	*20'*	*10.00"*	*PCCP*
(1990) LANE	*20'*	*4.00"*	*CEMENT TREATED PERMEABLE BASE COURSE*
(1990) LANE	*20'*	*4.00"*	*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.



INDEX MAP

LEGEND

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

SCALE
0 100 200 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

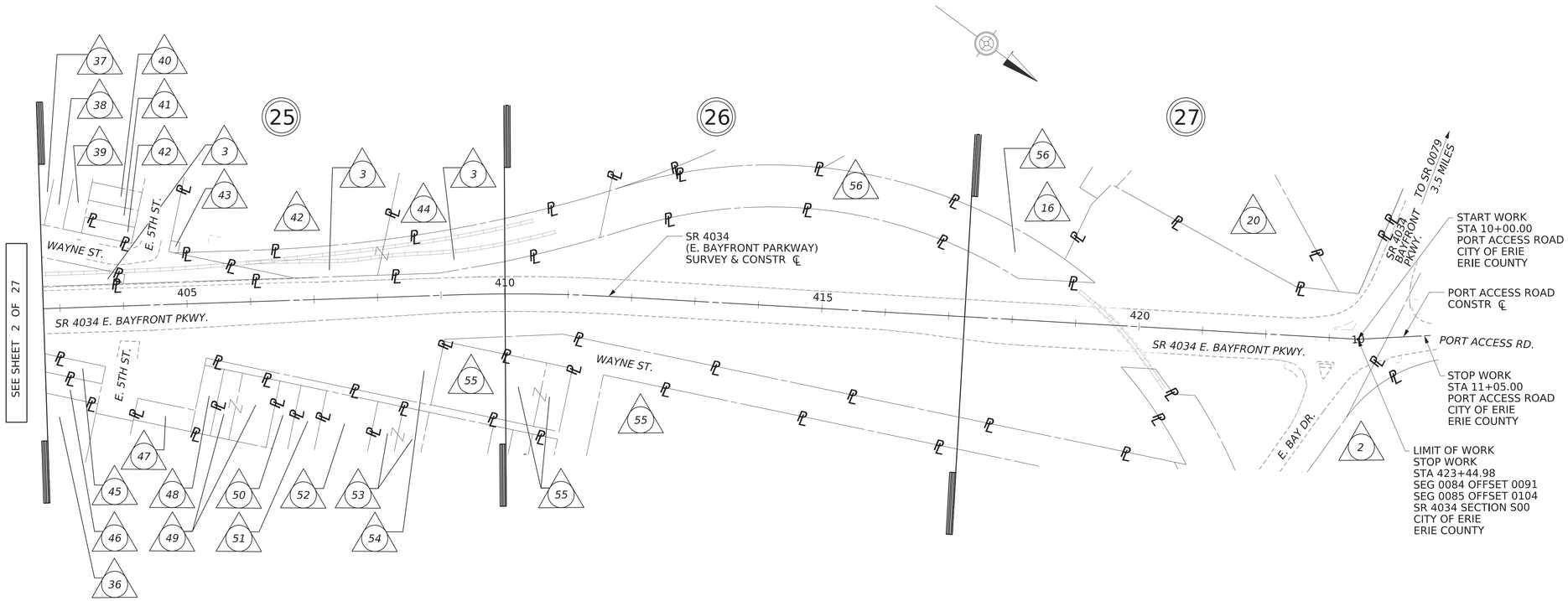
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	3 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

TABULATION OF PROPERTY OWNERS

1 CITY OF ERIE
2 ERIE COKE CORPORATION
3 CONRAIL
4 COMMONWEALTH OF PENNSYLVANIA
5 ERIE M AND P COMPANY, INC
6 ROBERT A BABLACK AND ROSALIE BABLAK
7 JA MOON
8 CHRISTOPHER B. KUCH
9 MLK REALTY, LLC
10 MARK NAPIERKOWSKI AND JULIE NAPIERKOWSKI
11 JUSTIN REED AND KAITLIN CORORAN
12 PAUL A. GNACINSKI AND KATHLEEN M. GNACINSKI
13 ROGER W. WETTEKIN
14 MR PROPERTIES
15 R.A.D. BORST, LLC
16 STATE OF PENNSYLVANIA
17 SHELLY A. GAVIN
18 COMMONWEALTH OF PENNSYLVANIA
19 COMMONWEALTH OF PENNSYLVANIA
20 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
21 STANLEY A. KOWALSKI AND HELEN R. KOWALSKI
22 823 EAST 8TH STREET ASSOCIATES, LP
23 SWANSON-ERIE CORPORATION
24 EDWARD E. JOHNSON, JR.
25 DEVERE F. DUNN AND MARY ALICE DUNN
26 LAWRENCE A. RILEY
27 ROBERT R. CURRIE
28 ANDREW SEIFERT
29 RACHEL B. BURTON
30 TINA MARIE YOUNG AND ANGEL LUIS VERA, SR.
31 JAMES R. THOMAS AND JACOB J. THOMAS
32 WILLIAM L. ANGELOTTI AND CHERYL MCSHANE
33 ROBERT M. PASKY AND CHRISTINA R. PASKY
34 JESSIE M. FORD
35 GARY E. LUKE
36 SALEM INVESTMENTS, INC.
37 BO NGO AND DAO NGO
38 TINA YOUNG
39 MARY ANN COLON
40 J.P. MAGEE
41 BOBBY A. JOHNSON
42 FRONTIER LUMBER, INC.
43 NATIONAL FUEL GAS
44 PENNSYLVANIA ELECTRIC CO.
45 MICHELE ANTHONY
46 EUGENE M. GOLDSBY AND MICHELE M. WODARSKI
47 EQUITY TRUST CO.
48 SAM COPELAND
49 TRUSTY JONES LLC
50 KELVIN NORTON, SR.
51 GORDON M. MITCHELL
52 TIMOTHY G. NORTON
53 THE HOUSING AUTHORITY OF THE CITY OF ERIE
54 WILLIAM MITCHELL AND MATTIE MITCHELL
55 NATIONAL FUEL GAS DIST CORP
56 GENERAL STATE AUTHORITY



INDEX MAP

LEGEND

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

SCALE

0 100 200 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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TABULATION OF OVERALL AND CONSTRUCTION LENGTH

SR 4034 OVERALL

STA 376+00.00 TO STA 423+44.98 = 4744.98 FT = 0.899 MI

SR 4034 CONSTRUCTION

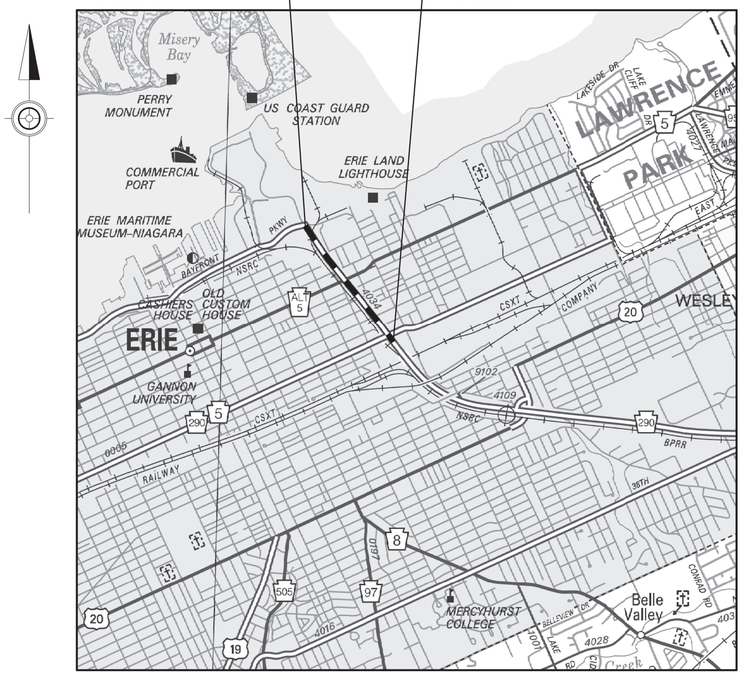
STA 376+00.00 TO STA 423+44.98 = 4744.98 FT = 0.899 MI

LIST OF EQUALITIES

SR 0290 CONSTR ℄ STA 376+00.00 =
SR 4034 SURVEY & CONSTR ℄ STA 376+00.00

LIMIT OF WORK
STA 423+44.98
SEG 0084 OFFSET 0091
SEG 0085 OFFSET 0104
SR 4034 SEC S00
CITY OF ERIE
ERIE COUNTY

LIMIT OF WORK
STA 376+00.00
SEG 0090 OFFSET 2484
SEG 0091 OFFSET 2482
SR 4034 SEC S00
CITY OF ERIE
ERIE COUNTY



LOCATION MAP

LEGEND

- STATE ROUTE
- MUNICIPAL ROAD
- PROJECT
- MUNICIPAL BOUNDARY
- STREAM
- NO DETOUR

SCALE

0 1/2 1 MILE

LIST OF PUBLIC UTILITIES

CHARTER COMMUNICATIONS — CTV
DANIEL BANISTER
2904 STATE ROAD
ASHTABULA, OH 44004
TELEPHONE: 330-369-7138
EMAIL: DANIEL.BANISTER@CHARTER.COM

CITY OF ERIE (SEWER) — S
JASON SAYERS
626 STATE STREET, SUITE 305
ERIE, PA 16501
TELEPHONE: 814-870-1397
EMAIL: JSAYERS@ERIE.PA.US

ERIE WATER WORKS — W
CRAIG PALMER
240 WEST 12TH STREET
ERIE, PA 16501
TELEPHONE: 814-870-8000 EXT 208
EMAIL: CPALMER@ERIEWATERWORKS.ORG

NATIONAL FUEL GAS DISTRIBUTION CORP — G
JASON FLEEK
1100 STATE STREET
PO BOX 2081
ERIE, PA 16512
TELEPHONE: 814-871-8662
EMAIL: FLEEKJ@NATFUEL.COM

PENNSYLVANIA ELECTRIC COMPANY — E
JEANNIE BEELER
5404 EVANS ROAD
PO BOX 1101
ERIE PA, 16558
TELEPHONE: 814-868-8709
EMAIL: JBEELER@FIRSTENERGYCORP.COM

VELOCITY NET COMMUNICATIONS, INC. — T / FO
MAT KACPROWICZ
PO BOX 9008
ERIE, PA 16505
TELEPHONE: 814-835-2736
EMAIL: MAT.KACPROWICZ@VELOCITYNETWORK.NET

VERIZON NORTH LLC — T / TU
ERIC RODRIGUES
20 EAST 10TH STREET
ERIE, PA 16501
TELEPHONE: 814-871-2317
EMAIL: ERIC.RODRIGUES@VERIZON.COM

PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776, SERIAL NO. 20212233300 AND NO. 20212233301.

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE
COORDINATE SYSTEM (SPCS 83) (NORTH ZONE)
AVERAGE COMBINED SCALE FACTOR = 1.0000098512

ROUTE	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
SR 0290 CONSTR ℄					
	373+60.74	PC	723937.0213	1341699.5407	N 38°03'21" W
	375+51.19	PI	724086.9799	1341582.1448	N 34°14'55" W
	376+00.00	POC	724128.4390	1341556.0311	
SR 4034 SURVEY & CONSTR ℄	376+00.00	POC	724128.4390	1341556.0311	N 34°14'55" W
	377+41.49	PRC	724244.4025	1341474.9651	
	379+56.11	PI	724421.8049	1341354.1824	N 38°32'19" W
	381+70.52	PT	724589.6751	1341220.4676	
	393+06.96	PC	725478.5854	1340512.4179	N 40°40'08" W
	394+48.99	PI	725589.6769	1340423.9294	
	395+90.98	PRC	725697.4023	1340331.3727	N 38°32'19" W
	397+33.01	PI	725805.1264	1340238.8171	
	409+19.75	PC	726733.4053	1339499.4080	N 33°19'57" W
	410+49.99	PI	726835.2798	1339418.2612	
	411+80.06	PT	726944.0972	1339346.6931	
	423+44.98	POT	727917.3870	1338706.5704	
PORT ACCESS ROAD CONSTR ℄					
	10+00.00	POT	727917.3870	1338706.5704	N 39°37'54" W
	12+00.00	POT	728071.4190	1338579.0002	

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

CUBIC YARDS OF EXCAVATION							CUBIC YARDS OF COMPLETED EMBANKMENT*	CUBIC YARDS OF COMMON BORROW EXCAVATION	CUBIC YARDS OF SELECTED BORROW EXCAVATION, COARSE AGGREGATE NO. 1	CUBIC YARDS OF WASTE
CLASS 1	CLASS 1A	CLASS 1B	CLASS 1C	CLASS 2	CLASS 3	CLASS 4				
-	-	1125	-	-	-	-	-	-	-	1125

*INCLUDES ALL BORROW ITEMS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	4 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY) / SR 0290 FROM STATION 374+00.00 TO STATION 374+38.00 IS VARIABLE, BASED ON PLAN OF SR 4034 SEC A60 R\W ERIE COUNTY, SIGNED BY THE GOVERNOR AUGUST 28, 2001, AND RECORDED IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE ON SEPTEMBER 13, 2001, IN RIGHT-OF-WAY BOOK 16 PAGE 187. AND SUBSEQUENTLY REVISED ON DECEMBER 12, 2002 AND RE-RECORDER ON JANUARY 16, 2003 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE, IN RIGHT-OF-WAY BOOK 17 PAGE 7

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY) / SR 0290 FROM STATION 374+38.00 TO STATION 381+80.00 IS VARIABLE, STATION 381+80.00 TO STATION 399+20.00 IS 80 FEET BASED ON PLAN OF SR 4034 SEC A51 R\W ERIE COUNTY, SIGNED BY THE GOVERNOR DECEMBER 08,1999, AND RECORDED IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE ON DECEMBER 29,1999, IN RIGHT-OF-WAY BOOK 16 PAGE 164. AND SUBSEQUENTLY REVISED ON MARCH 21, 2000 AND RE-RECORDER ON APRIL 27, 2000 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE, IN RIGHT-OF-WAY BOOK 16 PAGE 170, AND SUBSEQUENTLY REVISED ON JULY 10, 2000 AND RE-RECORDER ON JULY 18, 2000 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE, IN RIGHT-OF-WAY BOOK 16 PAGE 172, AND SUBSEQUENTLY RE-AUTHORIZED ON MARCH 21, 2002 AND RE-RECORDER ON APRIL 23, 2002 IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE, IN RIGHT-OF-WAY BOOK 16 PAGE 200,

THE LEGAL RIGHT-OF-WAY ON SR 4034 (BAYFRONT PARKWAY) FROM STATION 399+20.00 TO STATION 423+44.98 IS VARIABLE, BASED ON PLAN OF SR 4034 SEC A50 R/W ERIE COUNTY, SIGNED BY THE GOVERNOR APRIL 18, 1997, AND RECORDED IN THE ERIE COUNTY RECORDER OF DEEDS OFFICE ON AUGUST 8, 1997, IN RIGHT-OF-WAY BOOK 16 PAGE 147.

CONSTRUCT PROJECT IN ACCORDANCE WITH PUBLICATION 408 SPECIFICATIONS, DATED 2020.

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.

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

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).

THREE TO TEN WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776, SERIAL NO. FOR THE CITY OF ERIE. ADDITIONAL INFORMATION IS AVAILABLE AT https://www.pa1call.org/PA811/Public/.

HORIZONTAL CONTROL IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPCS 83) (NORTH ZONE).

THE AVERAGE COMBINED SCALE FACTOR = 1.0000098512

VERTICAL CONTROL IS BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).

ALL CURVE DATA IS BASED ON THE ARC DEFINITION UNLESS OTHERWISE NOTED.

THERE ARE NO NAVIGABLE STREAMS WITHIN THIS PROJECT.

THE DEPARTMENT OF TRANSPORTATION DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS OF THE EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES THE DEPARTMENT GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN.

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

RC-10M JUNE 1, 2010
RC-13M JUNE 1, 2010
RC-22M FEB 8, 2019
RC-27M NOV 30, 2021
RC-28M FEB 8, 2019
RC-30M NOV 30, 2021
RC-32M JUNE 1, 2010
RC-39M NOV 30, 2021
RC-45M FEB 19, 2021
RC-46M FEB 19, 2021
RC-64M FEB 19, 2021
RC-67M FEB 19, 2021
RC-72M FEB 8, 2019

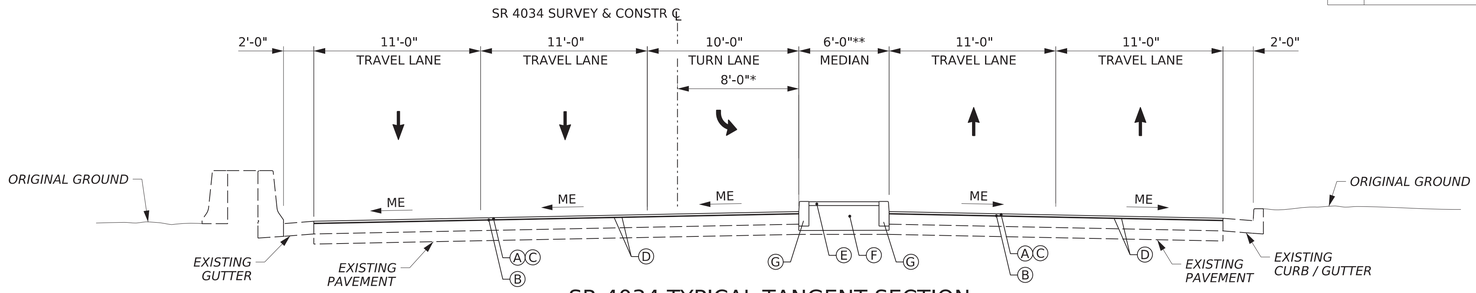
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TC-8602 JUNE 13, 2013
TC-8604 AUGUST 17, 2021
TC-8700C JUNE 13, 2013
TC-8702B JUNE 13, 2013
TC-8716 JUNE 13, 2013
TC-8717 JUNE 13, 2013
TC-8803 DEC 12, 2011
TC-8804 DEC 12, 2011
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TC-8806 DEC 12, 2011

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	5 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

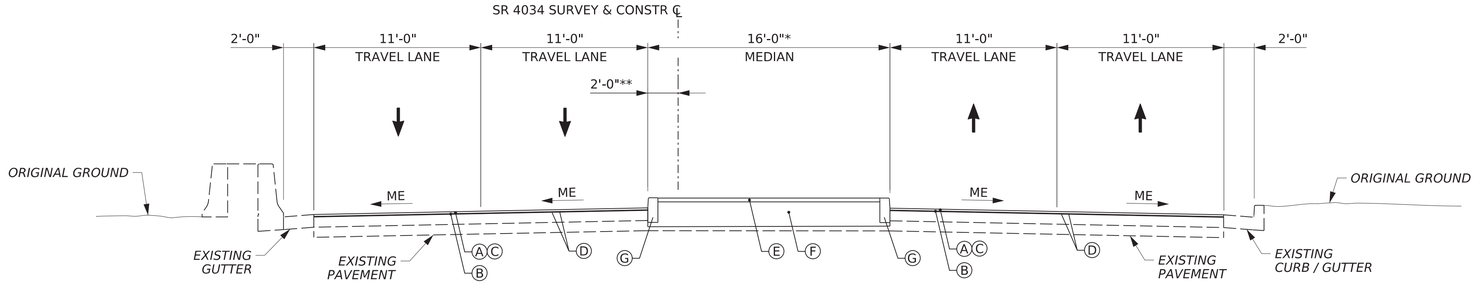


SR 4034 TYPICAL TANGENT SECTION

STA 376+18.90 TO STA 378+24.17
STA 383+76.64 TO STA 386+23.15
STA 392+06.12 TO STA 393+93.96

* VARIES 0'-0" TO 8'-0"
STA 377+27.79 TO STA 378+24.17
STA 385+26.76 TO STA 386+23.15
STA 392+96.59 TO STA 393+93.96

** VARIES 6'-0" TO 14'-0"
STA 377+27.79 TO STA 378+24.17
STA 385+26.76 TO STA 386+23.15
STA 392+96.59 TO STA 393+93.96

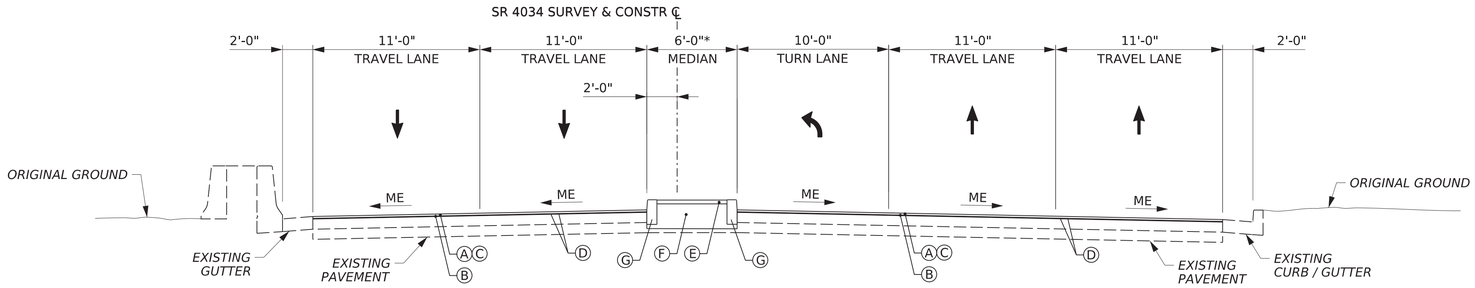


SR 4034 TYPICAL TANGENT SECTION

STA 378+24.17 TO STA 380+77.92
STA 386+23.15 TO STA 389+07.43
STA 393+93.96 TO STA 396+89.49

* VARIES 14'-0" TO 16'-0"
STA 378+24.17 TO STA 378+67.02
STA 386+23.15 TO STA 386+67.83
STA 393+93.96 TO STA 394+37.24

** VARIES 0'-0" TO 2'-0"
STA 378+24.17 TO STA 378+67.02
STA 386+23.15 TO STA 386+67.83
STA 393+93.96 TO STA 394+37.24



SR 4034 TYPICAL TANGENT SECTION

STA 380+77.92 TO STA 383+10.83
STA 389+07.43 TO STA 391+38.12
STA 396+89.49 TO STA 398+75.00

* VARIES 6'-0" TO 16'-0"
STA 380+77.92 TO STA 382+21.95
STA 389+07.43 TO STA 390+48.50
STA 396+89.49 TO STA 398+31.02

LEGEND

Ⓐ	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H
Ⓑ	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (SCRATCH), PG 64S-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, SRL-L
Ⓒ	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR
Ⓓ	ASPHALT TACK COAT (NTT/CNTT)
Ⓔ	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
Ⓕ	SUBBASE 14" DEPTH (NO. 2A)
Ⓖ	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
Ⓗ	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS (5/8" DEPTH)
ME	MATCH EXISTING CROSS SLOPE

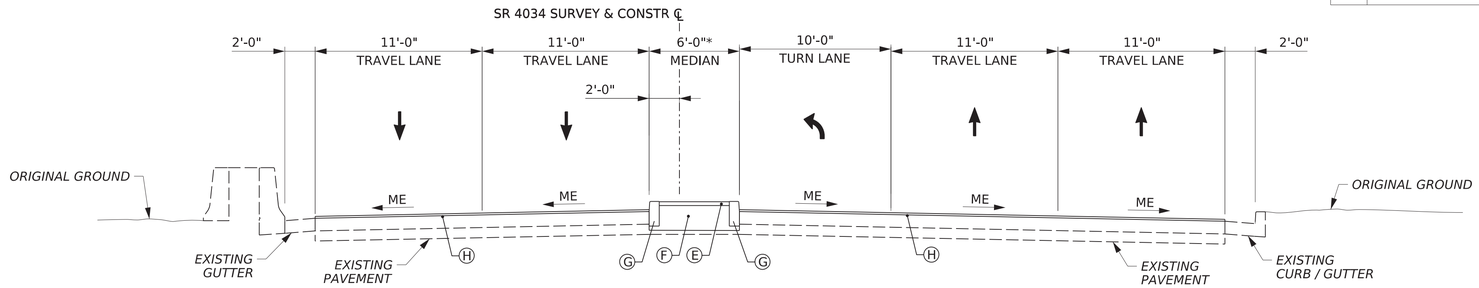
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE079506

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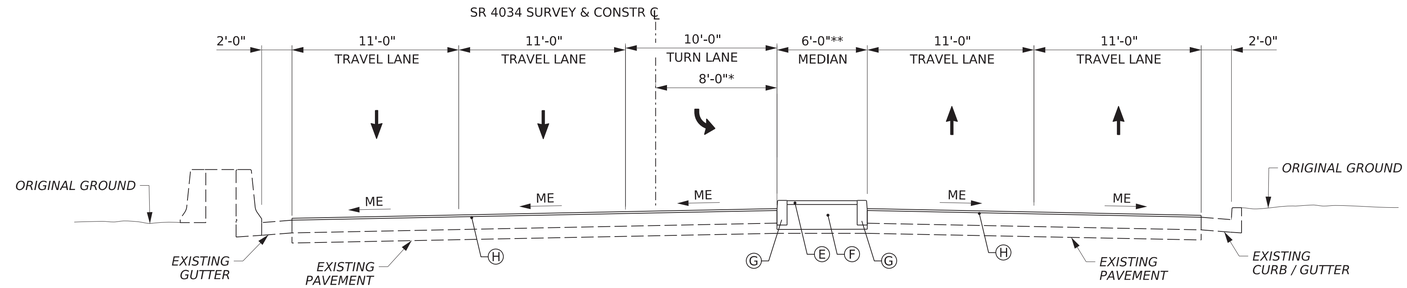
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	6 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



SR 4034 TYPICAL TANGENT SECTION

STA 398+75.00 TO STA 399+48.84

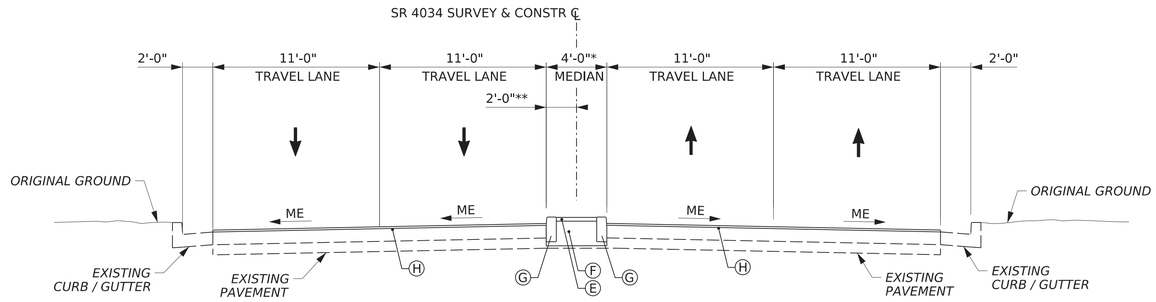


SR 4034 TYPICAL TANGENT SECTION

STA 400+48.20 TO STA 405+39.59

** VARIES 4'-2" TO 6'-0"
STA 403+65.47 TO STA 404+55.78

VARIES 4'-2" TO 9'-4"
STA 404+55.78 TO STA 405+39.59



SR 4034 TYPICAL TANGENT SECTION

STA 405+39.59 TO STA 409+10.00

* VARIES 9'-4" TO 11'-0"
STA 405+39.59 TO STA 405+71.68

VARIES 4'-0" TO 11'-0"
STA 405+71.68 TO STA 408+67.28

** VARIES 0'-0" TO 2'-0"
STA 405+39.59 TO STA 405+84.27

LEGEND

Ⓐ	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H
Ⓑ	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (SCRATCH), PG 64S-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, SRL-L
Ⓒ	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR
Ⓓ	ASPHALT TACK COAT (NTT/CNTT)
Ⓔ	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
Ⓕ	SUBBASE 14" DEPTH (NO. 2A)
Ⓖ	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
Ⓗ	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS (5/8" DEPTH)
ME	MATCH EXISTING CROSS SLOPE

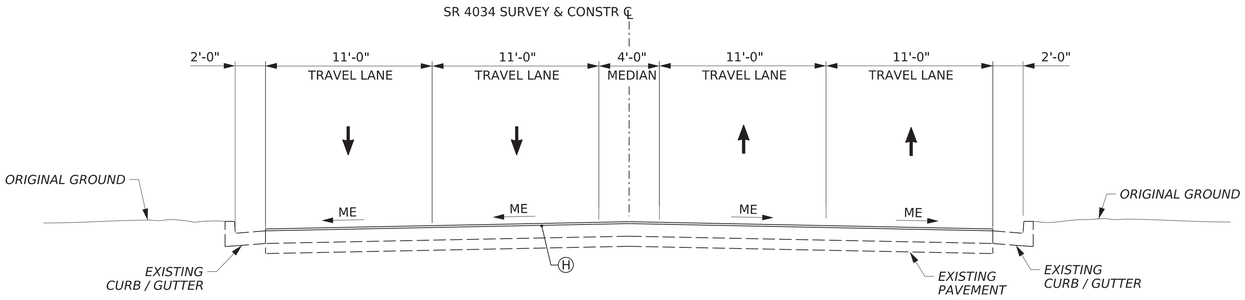
NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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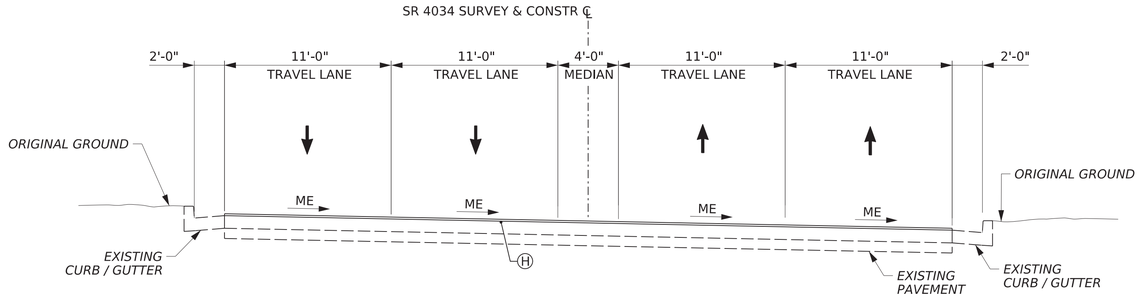
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	7 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



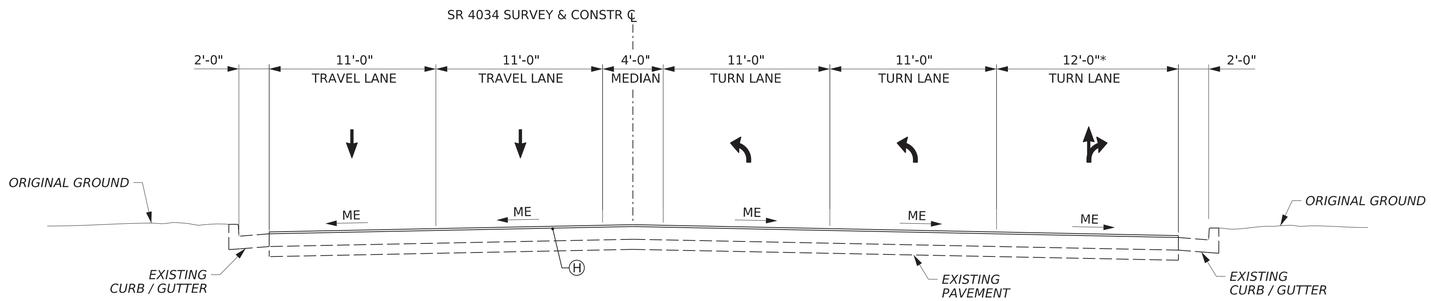
SR 4034 TYPICAL TANGENT SECTION

STA 409+10.00 TO STA 409+19.75
STA 411+80.06 TO STA 416+00.00



SR 4034 TYPICAL SUPERELEVATED SECTION

STA 409+19.75 TO STA 411+80.06



SR 4034 TYPICAL TANGENT SECTION

STA 416+00.00 TO STA 423+19.40

* VARIES 0'-0" TO 12'-0"
STA 416+00.00 TO STA 418+00.00

LEGEND

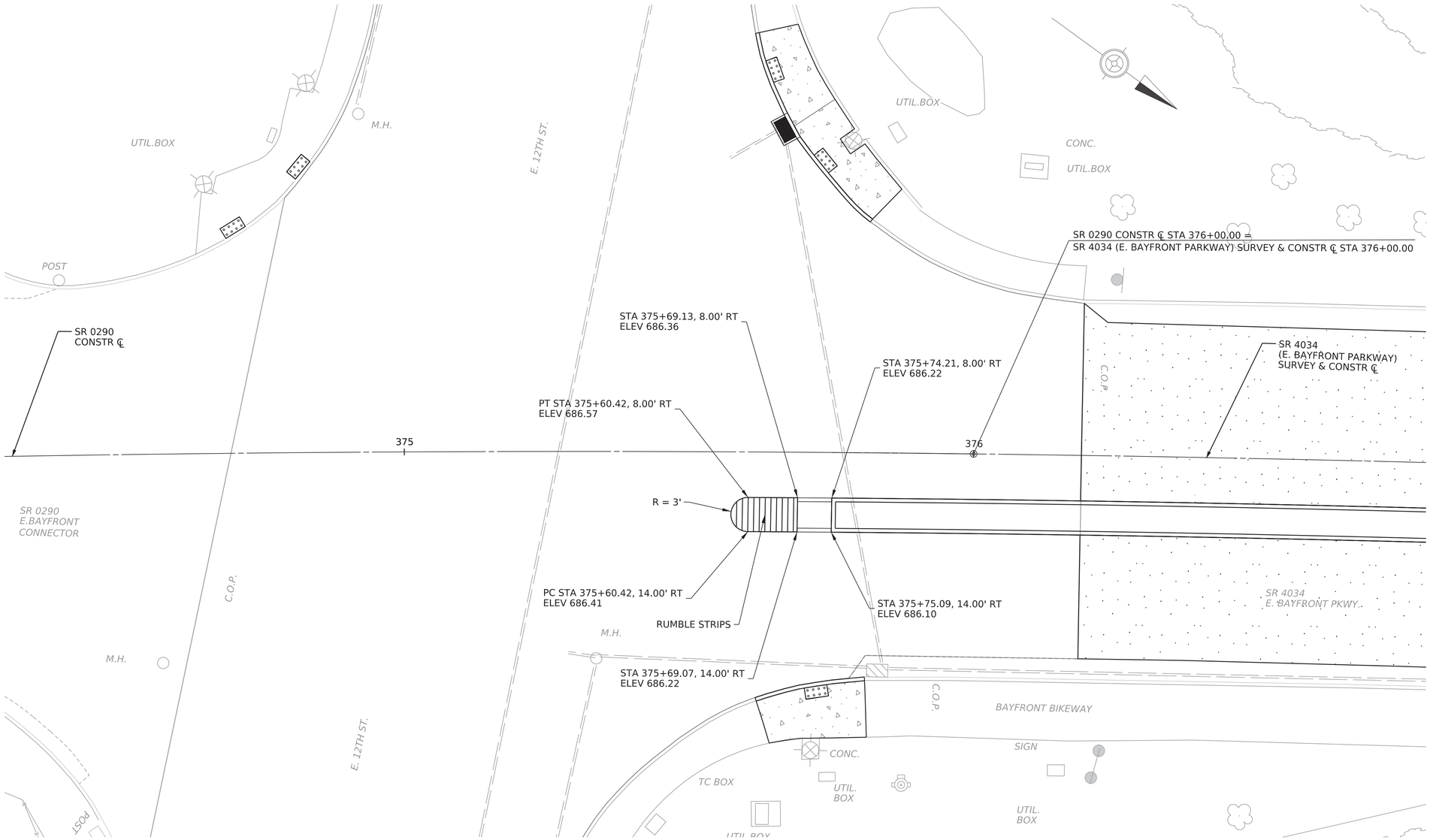
- Ⓐ SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H
- Ⓑ SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (SCRATCH), PG 64S-22, 0.3 TO < 3.0 MILLION ESALS, 9.5 MM MIX, SRL-L
- Ⓒ MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR
- Ⓓ ASPHALT TACK COAT (NTT/CNTT)
- Ⓔ PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH
- Ⓕ SUBBASE 14" DEPTH (NO. 2A)
- Ⓖ PLAIN CEMENT CONCRETE CURB, 8" HEIGHT
- Ⓗ ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS (5/8" DEPTH)
- ME MATCH EXISTING CROSS SLOPE

NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	8 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



SCALE

0 10 20 FEET

LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

INTERSECTION DETAILS

SR 4034 AND E. 12TH STREET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

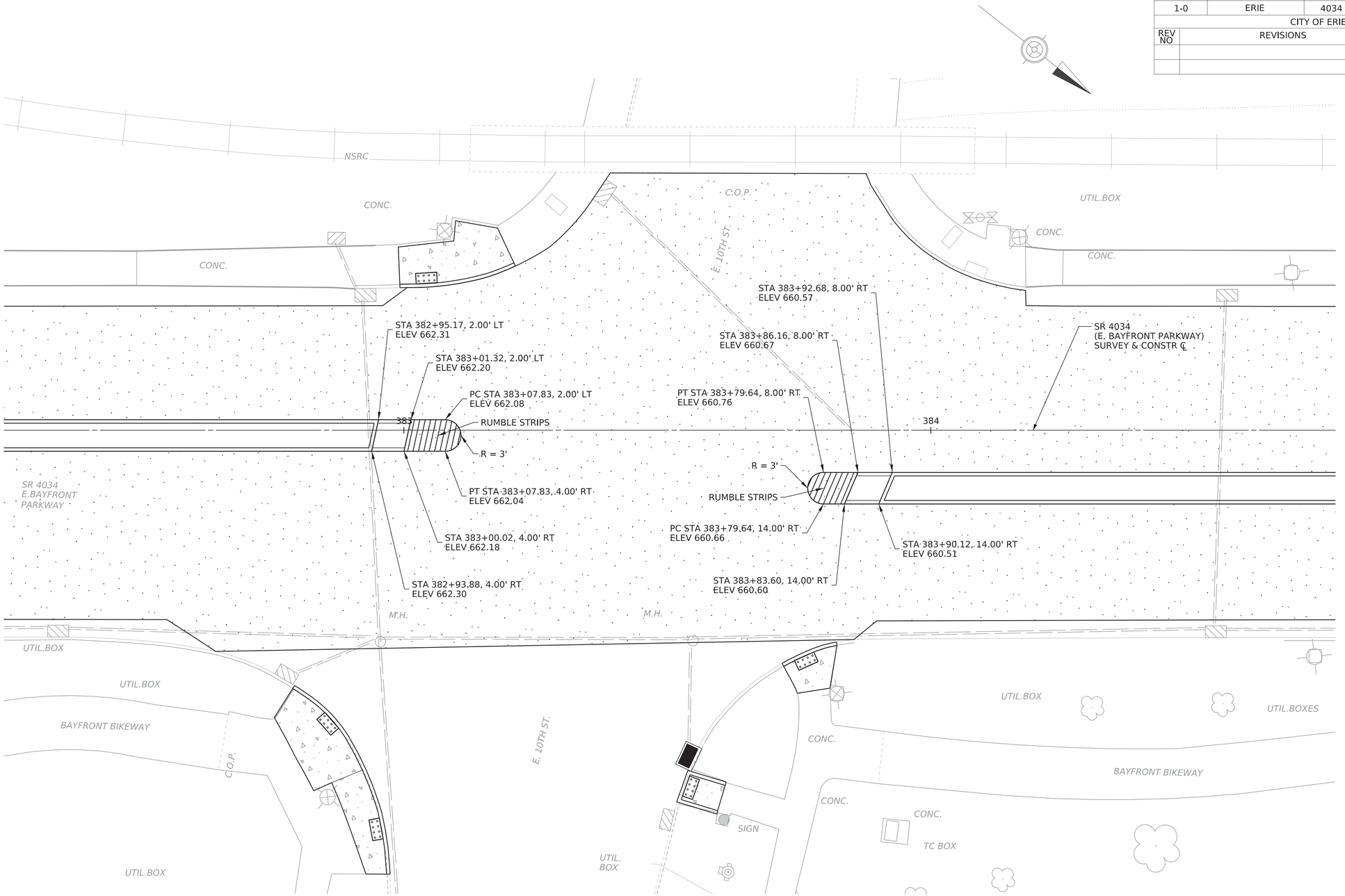
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	9 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE

0 10 20 FEET

INTERSECTION DETAILS

SR 4034 AND E. 10TH STREET

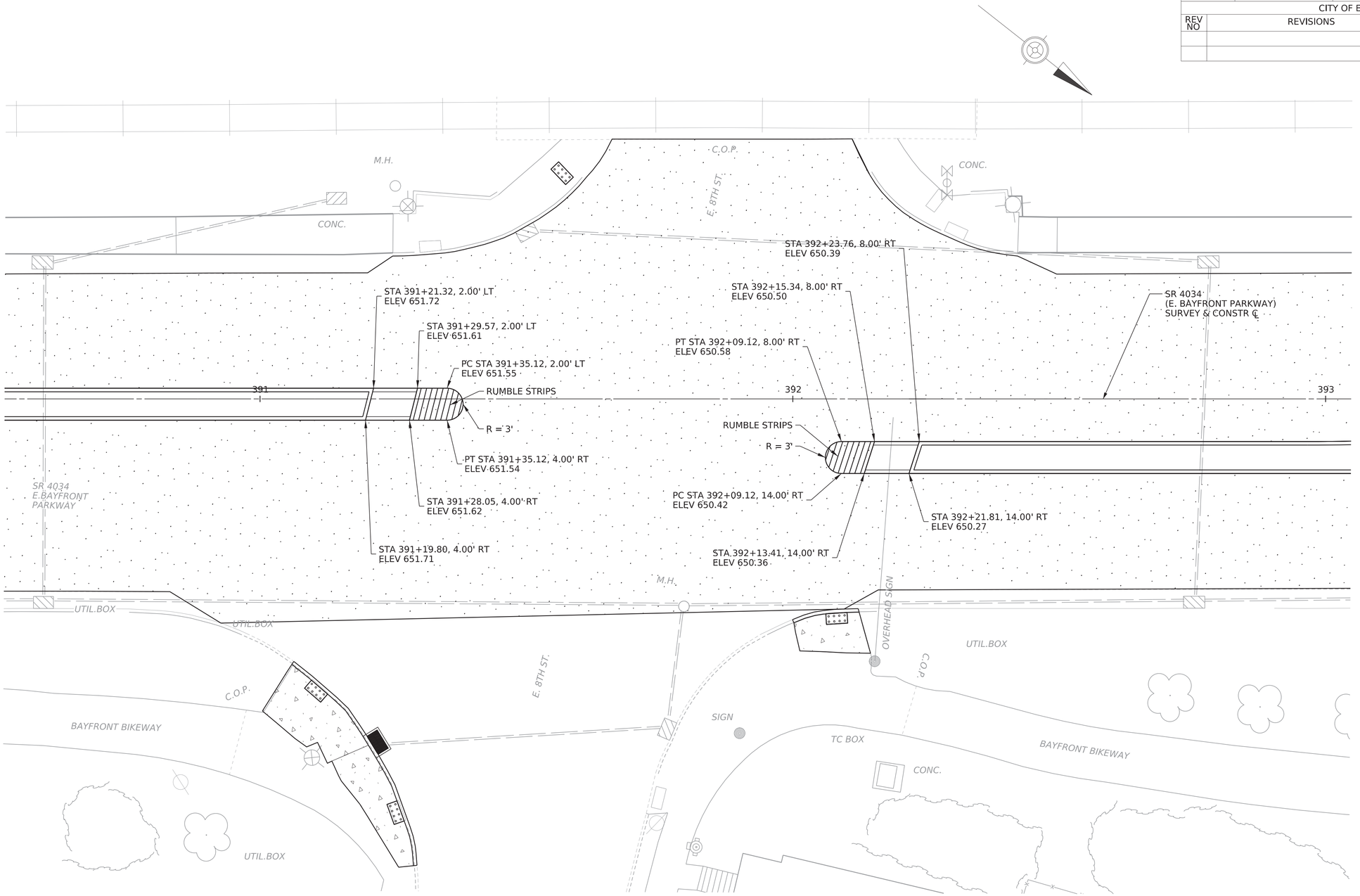
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	10 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE

0 10 20 FEET

INTERSECTION DETAILS

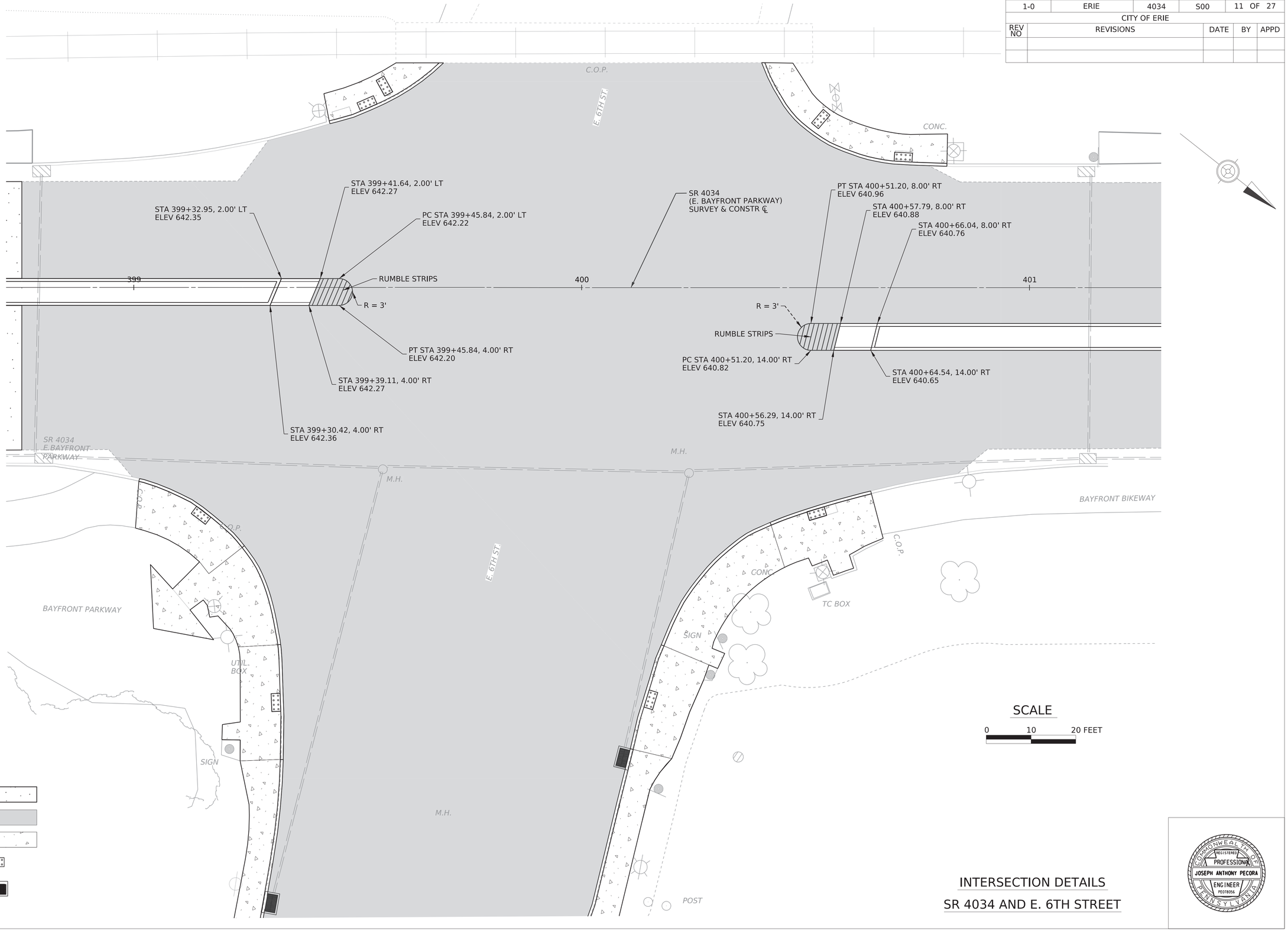
SR 4034 AND E. 8TH STREET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	11 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE

0 10 20 FEET

INTERSECTION DETAILS

SR 4034 AND E. 6TH STREET

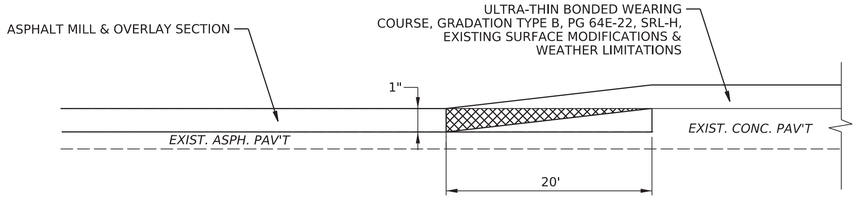
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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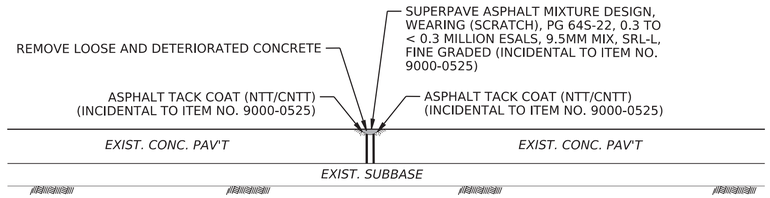
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1-0	ERIE	4034	S00	12 OF 27
CITY OF ERIE				

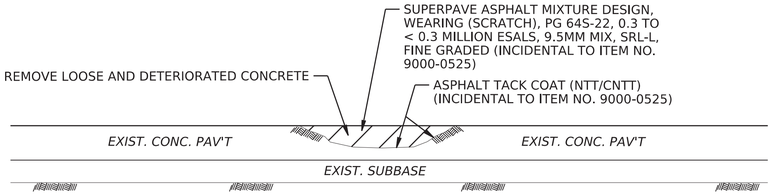
REV NO	REVISIONS	DATE	BY	APPD



OVERLAY TRANSITION TO ASPHALT SECTIONS

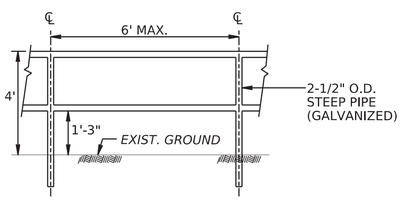
OVERLAY TRANSITION INCIDENTAL TO ITEM NO. 4489-1001

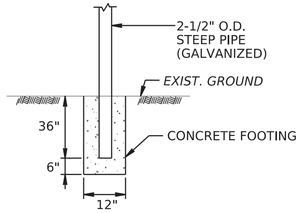




CONCRETE PAVEMENT SPALL REPAIR DETAIL

ITEM #9000-0525
AS DIRECTED

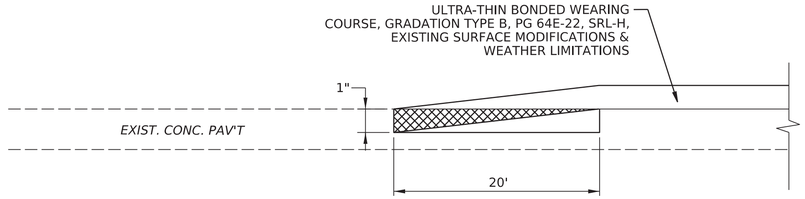




NOTE: VERTICAL POSTS SHALL BE PLUMB

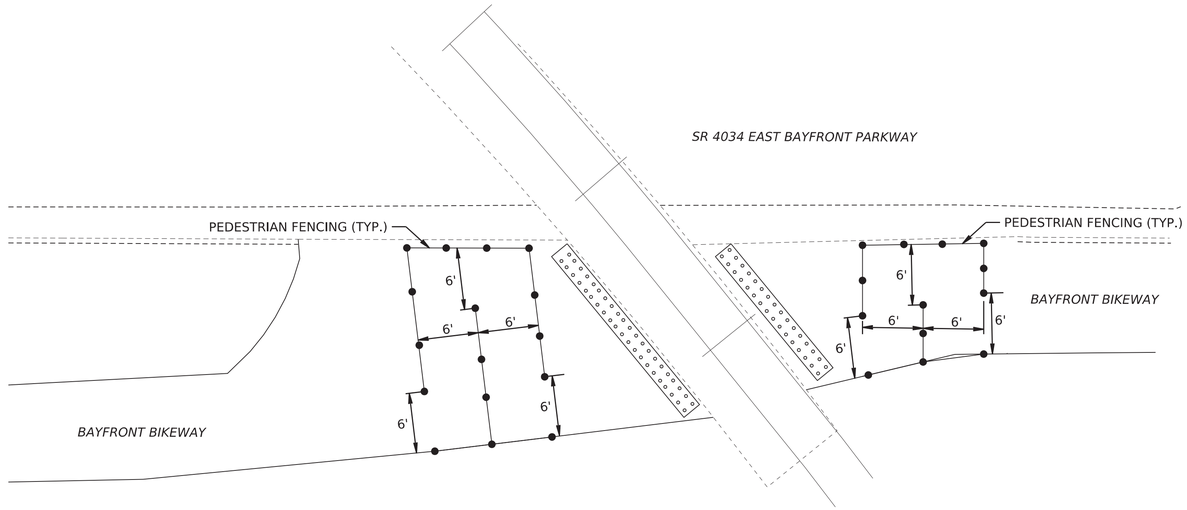
PEDESTRIAN FENCING DETAIL

ITEM #9000-0010



OVERLAY TRANSITION ON CONCRETE PAVEMENTS

OVERLAY TRANSITION INCIDENTAL TO ITEM NO. 4489-1001



PEDESTRIAN FENCING LAYOUT

ITEM #9000-0010

NOT TO SCALE

SPECIAL DETAILS

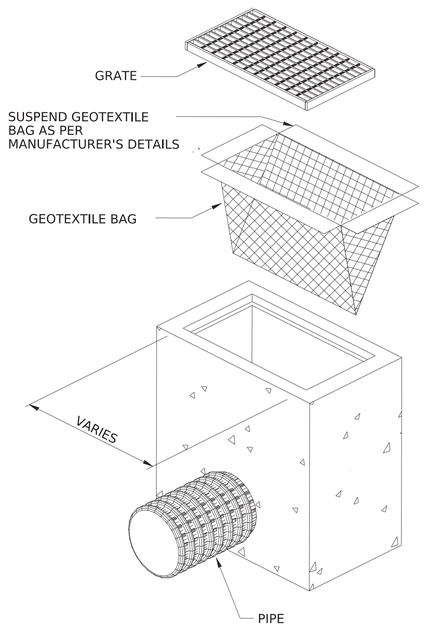
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: JPecora
FILE NAME: c:\pwworking\jmt\jmt_jpecora\d0173029\HWYDET2_4034.dgn

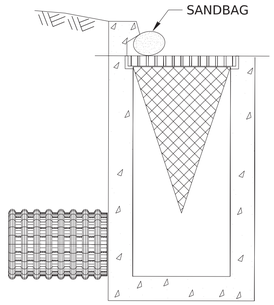
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	13 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



ISOMETRIC VIEW



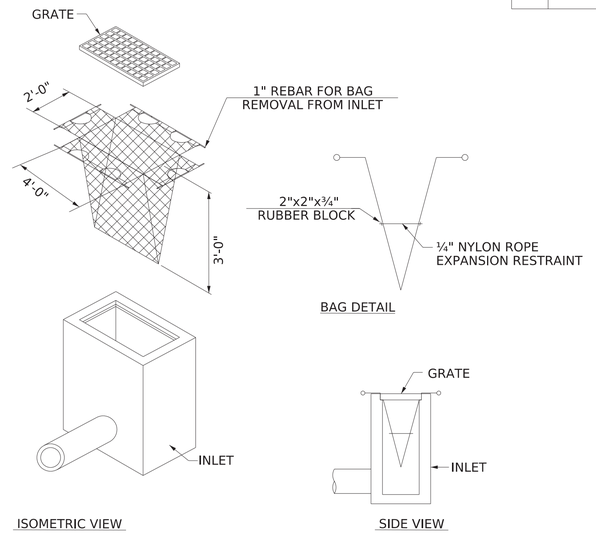
SIDE VIEW

FILTER BAG INLET PROTECTION - TYPE C

NOT TO SCALE

NOTES:

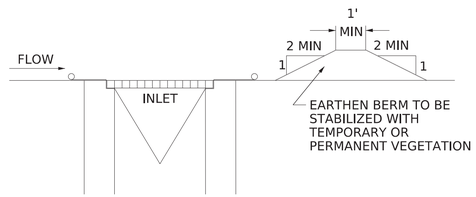
1. INSPECT INLET FILTER BAG AFTER EACH RUNOFF EVENT. MAINTAIN AS REQUIRED TO ENSURE PROPER FUNCTIONING OF THE BAG.
2. REMOVE ACCUMULATED SEDIMENT/DEBRIS WHEN THE INLET FILTER REACHES ONE-HALF MAXIMUM CAPACITY.
3. REPLACE FILTER BAG IF RIPPED OR TORN.
4. PROVIDE DOWN GRADIENT BERM AS REQUIRED. DO NOT USE IN SAG/SUMP CONDITIONS.
5. USE SANDBAGS AT TYPE C, 1, 11 OR 12 INLET CURB OPENINGS TO PREVENT BYPASS FLOW.
6. REMOVE AND PROPERLY DISPOSE OF INLET FILTER BAG WHEN NO LONGER NEEDED.



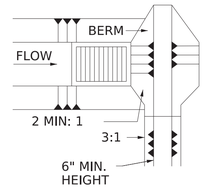
ISOMETRIC VIEW

BAG DETAIL

SIDE VIEW



SIDE VIEW



PLAN VIEW

FILTER BAG INLET PROTECTION - TYPE M

NOT TO SCALE

NOTES:

1. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.
2. INLET FILTER BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN BAG IS ½ FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET.
3. DAMAGED OR CLOGGED FILTER BAGS SHALL BE REPLACED IMMEDIATELY. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS.
4. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
5. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

EROSION CONTROL DETAIL

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmt\jmt_gbarclay\d0299195\HWYDET_4034.dgn

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

SUMMARY

TSP - TRAFFIC SIGNAL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	14 OF 27
				CITY OF ERIE				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
X	0201 0001 / LS	CLEARING AND GRUBBING		NO TAB
1125	0203 0004 / CY	CLASS 1B EXCAVATION		16-18
7639	0203 0006 / LF	SAW CUTTING		16-18
2893	0350 0114 / SY	SUBBASE 14" DEPTH (NO. 2A)		16-18
12760	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		16-18
718	0413 1024 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (SCRATCH), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L		16-18
30000	0413 9999 / DOLLA	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE		NO TAB
25520	0460 0003 / SY	ASPHALT TACK COAT (NTT/CNTT)		16-18
15957	4489 1001 / SY	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS ♦		16-18
12760	0491 0013 / SY	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		16-18
2893	0501 0020 / SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		16-18
15302	0512 0001 / LF	LONGITUDINAL JOINT CLEANING AND SEALING		16-18
10033	0515 0001 / LF	SAWING AND SEALING OF ASPHALT OVERLAYS		16-18
418	0516 1010 / SY	ACCELERATED CONCRETE PAVEMENT PATCHING, PERPENDICULAR JOINTS, TYPE A, 10" DEPTH		16-18
586	0516 2007 / LF	PATCHING JOINT		16-18
293	0516 2008 / LF	NEW PAVEMENT JOINT		16-18
3547	0516 2021 / CY	SUBBASE MATERIAL FOR CONCRETE PAVEMENT PATCHING		16-18
8688	0521 0001 / LF	TRANSVERSE JOINT CLEANING AND SEALING		16-18
57	0525 0032 / SF	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 1, RAPID-SET		16-18
24	0525 0035 / SF	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 2, RAPID-SET		16-18
EITHER 76	0601 0353 / LF	18" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL	1	19-20
OR 76	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	1	19-20
1	0605 2401 / SET	MANHOLE FRAME AND COVER		19-20
1	0605 2731 / SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		19-20
6	0605 2850 / EACH	STANDARD INLET BOX, HEIGHT < /= 10'		19-20
1	0605 3011 / EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		19-20
10	0605 5720 / SET	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND GRATE		19-20
2	0606 0050 / SET	GRADE ADJUSTMENT OF EXISTING INLETS		19-20
4	0606 0150 / SET	GRADE ADJUSTMENT OF EXISTING MANHOLES		19-20
X	0608 0001 / LS	MOBILIZATION		NO TAB
X	0609 0003 / LS	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE B		NO TAB
X	0609 0009 / LS	EQUIPMENT PACKAGE ♦		NO TAB
6749	0630 0041 / LF	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		16-18
246	4660 0002 / LF	MILLED ASPHALT PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE ♦		16-18
64	4660 0007 / LF	MILLED CONCRETE PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE ♦		16-18
586	4676 0001 / SY	CEMENT CONCRETE SIDEWALK, FOR ADA RAMPS ♦		16-18
X	0686 0020 / LS	CONSTRUCTION SURVEYING, TYPE B		NO TAB
X	0689 0003 / LS	CPM SCHEDULE		NO TAB
1000	0690 0001 / DOLLA	INTERNAL FACILITATION		NO TAB
298	4695 0004 / SF	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE ♦		16-18
18	0860 0000 / EACH	INLET FILTER BAG FOR TYPE M INLET		19-20
58	0860 0002 / EACH	INLET FILTER BAG FOR TYPE C INLET		19-20
X	0901 0001 / LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION ♦		TCP
2	0901 0203 / EACH	ARROW PANEL		TCP
20	0901 0231 / DAY	ADDITIONAL WARNING LIGHTS, TYPE B		TCP
100	0901 0240 / SF	ADDITIONAL TRAFFIC CONTROL SIGNS		TCP
45	0901 0270 / EACH	SEQUENTIAL WARNING LIGHTS		TCP
26058	0901 0320 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		TCP
4814	0901 0331 / LF	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
611	0901 0334 / LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
3	0901 0450 / EACH	3-LINE CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS		TCP
254	0931 0001 / SF	POST MOUNTED SIGNS, TYPE B		SP, TSP
109	0935 0001 / SF	POST MOUNTED SIGNS, TYPE F		SP
83	4936 0010 / SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS, WITH AIRCRAFT WIRE ROPE ♦		TSP
58	0937 0301 / EACH	FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING		PMP
2	0941 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE B		SP
25000	0950 0002 / DOLLA	UNFORESEEN TRAFFIC SIGNAL WORK		NO TAB
13	4951 4020 / EACH	PEDESTRIAN STUB POLE, TYPE B OR E ♦		TSP
X	0953 0802 / LS	UNIFIED COMMAND AND CONTROL (UCC) SYSTEM INTEGRATION		NO TAB
256	0954 0012 / LF	2 INCH CONDUIT		TSP
116	0954 0151 / LF	TRENCH AND BACKFILL, TYPE I		TSP
63	0954 0152 / LF	TRENCH AND BACKFILL, TYPE II		TSP
2318	0954 0201 / LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR		TSP
704	0954 0202 / LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR		TSP
60	4954 0202 / LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR, TEMPORARY ♦		TCP
80	4954 0203 / LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY ♦		TCP
6	0955 1503 / EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, THREE 12" SECTIONS		TSP
1	0955 1504 / EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, FOUR 12" SECTIONS		TSP
42	0955 3208 / EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS		TSP
12	0955 3209 / EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS		TSP
36	0955 3722 / EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A		TSP
36	4956 0790 / EACH	ACCESSIBLE PEDESTRIAN SIGNALS, 2 WIRE SYSTEM ♦		TSP
1	0958 0321 / EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)		TCP
1	0958 0322 / EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)		TCP
1	0958 0323 / EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)		TCP
1	0958 0324 / EACH	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)		TCP
12	0962 1062 / EACH	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"		TCP
10929	0963 0001 / SF	PAVEMENT MARKING REMOVAL		TCP
8681	0964 0001 / LF	4" WHITE EPOXY PAVEMENT MARKINGS		PMP
11391	0964 0002 / LF	4" YELLOW EPOXY PAVEMENT MARKINGS		PMP
4028	4964 0005 / LF	6" WHITE EPOXY PAVEMENT MARKINGS, RECESSED ♦		PMP
2653	0964 0008 / LF	8" WHITE EPOXY PAVEMENT MARKINGS		PMP
3263	0964 0021 / LF	24" WHITE EPOXY PAVEMENT MARKINGS		PMP
4	0964 0151 / EACH	WHITE EPOXY LEGEND, "RR CROSSING", 6' - 6", 11' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS)		PMP
1	0964 0152 / EACH	WHITE EPOXY LEGEND, "RR CROSSING", 6' - 6", 12' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS)		PMP
17	0964 0224 / EACH	WHITE EPOXY LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"		PMP
3	0964 0226 / EACH	WHITE EPOXY LEGEND, "THRU AND RIGHT ARROW", 20' - 0" X 3' - 7"		PMP
214	0966 0017 / EACH	SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)		PMP
60	9000 0001 / SF	TEMPORARY SIGN COVER ♦		TCP
53	9000 0003 / SF	CLOTH OVERLAY SIGN, REFLECTORIZED ♦		TCP
5	9000 0007 / EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM ♦		TSP
X	9000 0008 / LS	REMOVAL OF EXISTING SIGNAL INTERCONNECT ♦		NO TAB
110	9000 0010 / LF	PEDESTRIAN FENCING ♦		16-18

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

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

SUMMARY

TSP - TRAFFIC SIGNAL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	15 OF 27
				CITY OF ERIE				

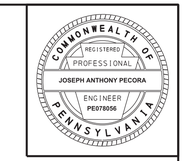
QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
6	9000 0525 / TON	CONCRETE PAVEMENT SPALL REPAIR ♦		16-18
5	9000 0700 / EACH	VIDEO DETECTOR, GRIDSMART ♦		TSP
23	9000 0795 / EACH	MAST ARM MITIGATION DEVICE INSTALLATION ♦		TSP
X	9000 1010 / LS	ELECTRONIC DELIVERY MANAGEMENT SYSTEM FOR ASPHALT MATERIAL ♦		NO TAB
5	9000 1030 / EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE) ♦		TSP
21	9000 5001 / EACH	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS ♦		16-18

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOSEPH ANTHONY PECORA
PE078056

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	16 OF 27



CLASS 1B EXCAVATION	SAW CUTTING	SUBBASE 14" 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 (SCRATCH), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L	ASPHALT TACK COAT (NTT/CNTT)	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	LONGITUDINAL JOINT CLEANING AND SEALING	SAWING AND SEALING OF ASPHALT OVERLAYS	ACCELERATED CONCRETE PAVEMENT PATCHING, PERPENDICULAR JOINTS, TYPE A, 10" DEPTH	PATCHING JOINT	NEW PAVEMENT JOINT	SUBBASE MATERIAL FOR CONCRETE PAVEMENT PATCHING	TRANSVERSE JOINT CLEANING AND SEALING	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 1, RAPID-SET	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 2, RAPID-SET	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	MILLED ASPHALT PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	MILLED CONCRETE PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	CEMENT CONCRETE SIDEWALK, FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	PEDESTRIAN FENCING	CONCRETE PAVEMENT SPALL REPAIR	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		ITEM NUMBER / UNIT	REMARKS	SIDE	STATIONS
0203 0004 CY	0203 0006 LF	0350 0114 SY	0413 0383 SY	0413 1024 TON	0460 0003 SY	4489 1001 SY	0491 0013 SY	0501 0020 SY	0512 0001 LF	0515 0001 LF	0516 1010 SY	0516 2007 LF	0516 2008 LF	0516 2021 CY	0521 0001 LF	0525 0032 SF	0525 0035 SF	0630 0041 LF	4660 0002 LF	4660 0007 LF	4676 0001 SY	4695 0004 SF	9000 0010 LF	9000 0525 TON	9000 5001 EACH					
																											SR 4034 / SR 0290		
970																											ENTIRE PROJECT		374+40.00 to 423+44.98
											418	586	293	3547		57	24							6			AS DIRECTED		374+40.00 to 423+44.98
																						8						LT	374+70.00
																						8						LT	374+83.00
	1445	774						774										1445										LT / RT	375+57.42 to 383+10.83
			12760	718	25520		12760																				1/2" SCRATCH COURSE	LT / RT	375+60.00 to 398+75.00
4	96																	18			14	8			1		CURB RAMP	LT	375+61.00 to 375+75.00
5	56																	20			19	8			1		CURB RAMP	RT	375+62.00 to 375+82.00
5																		22			19	8			1		CURB RAMP	LT	375+67.00 to 375+87.00
																		12			4							RT	375+69.00 to 375+75.00
5	116																	21			19	8			1		CURB RAMP	RT	382+75.00 to 382+93.00
3																		21			12	8			1		CURB RAMP	RT	382+86.00 to 382+97.00
																		12			4							LT / RT	382+94.00 to 383+01.00
5	73																	22			19	8			1		CURB RAMP	LT	382+99.00 to 383+21.00
																				64								LT / RT	383+00.02 to 383+10.83
																						8						RT	383+25.00
1	29																	21			4	8			1		CURB RAMP	RT	383+52.00 to 383+62.00
2	33																	11			7	8			1		CURB RAMP	RT	383+72.00 to 383+82.00
																			57									LT / RT	383+76.64 to 383+79.64
		808						808																				LT / RT	383+76.64 to 391+38.12
																		13			4							RT	383+84.00 to 383+93.00
	1464																	1464										LT / RT	383+90.12 to 391+21.32
6	126																	19			20	8			1		CURB RAMP	RT	391+00.00 to 391+20.00
4																		24			16	8			1		CURB RAMP	RT	391+13.00 to 931+30.00
																		17			5							LT / RT	391+20.00 to 391+30.00
																			51									LT / RT	391+28.05 to 391+38.12
																						8						LT	391+50.00

PROJECT ID: 4288 MPMS: 110836 ECMS: 110836 2/23/2023 1:36:15 PM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	17 OF 27

CLASS 1B EXCAVATION	SAW CUTTING	SUBBASE 14" 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 (SCRATCH), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L	ASPHALT TACK COAT (NTT/CNTT)	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	LONGITUDINAL JOINT CLEANING AND SEALING	SAWING AND SEALING OF ASPHALT OVERLAYS	ACCELERATED CONCRETE PAVEMENT PATCHING, PERPENDICULAR JOINTS, TYPE A, 10" DEPTH	PATCHING JOINT	NEW PAVEMENT JOINT	SUBBASE MATERIAL FOR CONCRETE PAVEMENT PATCHING	TRANSVERSE JOINT CLEANING AND SEALING	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 1, RAPID-SET	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 2, RAPID-SET	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	MILLED ASPHALT PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	MILLED CONCRETE PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	CEMENT CONCRETE SIDEWALK, FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	PEDESTRIAN FENCING	CONCRETE PAVEMENT SPALL REPAIR	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0004 CY	0203 0006 LF	0350 0114 SY	0413 0383 SY	0413 1024 TON	0460 0003 SY	4489 1001 SY	0491 0013 SY	0501 0020 SY	0512 0001 LF	0515 0001 LF	0516 1010 SY	0516 2007 LF	0516 2008 LF	0516 2021 CY	0521 0001 LF	0525 0032 SF	0525 0035 SF	0630 0041 LF	4660 0002 LF	4660 0007 LF	4676 0001 SY	4695 0004 SF	9000 0010 LF	9000 0525 TON	9000 5001 EACH		ITEM NUMBER UNIT			
3	40																	13			10	8			1		CURB RAMP	RT	392+00.00 to 392+15.00
																			45									LT / RT	392+06.12 to 392+15.34
		808						808																				LT / RT	392+06.12 to 399+48.84
																		17			5							RT	392+13.00 to 392+24.00
	1425																	1425										LT / RT	392+21.81 to 399+32.11
						15957			15302	10033					8688													LT / RT	398+75.00 to 423+37.00
7	331																	28			26	8			1		CURB RAMP	RT	399+01.00 to 399+25.00
12																		24			42						SIDEWALK	RT	399+04.00 to 399+33.00
8																		26			27	8			1		CURB RAMP	RT	399+20.00 to 399+33.00
9																		40			33						SIDEWALK	RT	399+24.00 to 399+33.00
																		17			5							LT / RT	399+30.00 to 399+42.00
																			46									LT / RT	399+39.11 to 399+48.84
4	64																	29			16	8			1		CURB RAMP	LT	399+43.00 to 399+69.00
																						8						LT	399+50.00
5																		27			19						DRIVEWAY	RT	399+95.00 to 400+08.00
7																		34			26						SIDEWALK	RT	400+01.00 to 400+20.00
8	325																	24			27	8			1		CURB RAMP	RT	400+11.00 to 400+28.00
11																		37			38						SIDEWALK	RT	400+18.00 to 400+45.00
9	107																	51			32	8			1		CURB RAMP	LT	400+40.00 to 400+82.00
9																		23			31	8			1		CURB RAMP	RT	400+42.00 to 400+64.00
																			47									LT / RT	400+48.20 to 400+57.88
		503						503																				LT / RT	400+48.20 to 409+10.00
																						8						LT	400+55.00
																		17			5							RT	400+56.00 to 400+66.00
	1682																	1682										LT / RT	400+64.58 to 409+10.00
																							65				RAILROAD Z-GATE	RT	419+80.00 to 419+94.00
																						42						RT	420+00.00
																						32						RT	420+16.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOSEPH ANTHONY PECORA
PE076056

PROJECT ID: 4288 MPMS: 110836 ECMS: 110836 2/23/2023 1:36:15 PM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	18 OF 27

CLASS 1B EXCAVATION	SAW CUTTING	SUBBASE 14" 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 (SCRATCH), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L	ASPHALT TACK COAT (NTT/CNTT)	ULTRA-THIN BONDED WEARING COURSE, GRADATION TYPE B, PG 64E-22, SRL-H, EXISTING SURFACE MODIFICATIONS & WEATHER LIMITATIONS	MILLING OF ASPHALT PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	LONGITUDINAL JOINT CLEANING AND SEALING	SAWING AND SEALING OF ASPHALT OVERLAYS	ACCELERATED CONCRETE PAVEMENT PATCHING, PERPENDICULAR JOINTS, TYPE A, 10" DEPTH	PATCHING JOINT	NEW PAVEMENT JOINT	SUBBASE MATERIAL FOR CONCRETE PAVEMENT PATCHING	TRANSVERSE JOINT CLEANING AND SEALING	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 1, RAPID-SET	CONCRETE PAVEMENT PARTIAL-DEPTH REPAIR, TYPE 2, RAPID-SET	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	MILLED ASPHALT PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	MILLED CONCRETE PAVEMENT CENTERLINE RUMBLE STRIPS TYPE 2, MEDIAN NOSE	CEMENT CONCRETE SIDEWALK, FOR ADA RAMPS	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE, CITY OF ERIE	PEDESTRIAN FENCING	CONCRETE PAVEMENT SPALL REPAIR	PREPARATION OF WORKING DRAWINGS FOR CONCRETE CURB RAMPS		REMARKS	SIDE	STATIONS
0203 0004 CY	0203 0006 LF	0350 0114 SY	0413 0383 SY	0413 1024 TON	0460 0003 SY	4489 1001 SY	0491 0013 SY	0501 0020 SY	0512 0001 LF	0515 0001 LF	0516 1010 SY	0516 2007 LF	0516 2008 LF	0516 2021 CY	0521 0001 LF	0525 0032 SF	0525 0035 SF	0630 0041 LF	4660 0002 LF	4660 0007 LF	4676 0001 SY	4695 0004 SF	9000 0010 LF	9000 0525 TON	9000 5001 EACH		ITEM NUMBER / UNIT		
																							45				RAILROAD Z-GATE	RT	420+25.00 to 420+38.00
11	83																	36			38	8			1		CURB RAMP	RT	422+32.00 to 422+64.00
3	41																				9	8			1		CURB RAMP	RT	422+81.00 to 422+95.00
																											PORT ACCESS RD		
4	43																	12			13	8			1		CURB RAMP	RT	10+00.00 to 10+08.00
																						8						RT	10+40.00
5	60																	25			18	8			1		CURB RAMP	LT	10+84.00 to 10+97.00
1125	7639	2893	12760	718	25520	15957	12760	2893	15302	10033	418	586	293	3547	8688	57	24	6749	246	64	586	298	110	6	21		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOSEPH ANTHONY PECORA
PE078056

PROJECT ID: 4288 MPMS: 110836 ECMS: 110836 2/23/2023 1:36:15 PM

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	19 OF 27

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

DESIGN NO. 1	MANHOLE FRAME AND COVER	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND GRATE	GRADE ADJUSTMENT OF EXISTING INLETS	GRADE ADJUSTMENT OF EXISTING MANHOLES	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET				REMARKS	SIDE	STATIONS
0601 (+) LF	0605 2401 SET	0605 2731 SET	0605 2850 EACH	0605 3011 EACH	0605 5720 SET	0606 0050 SET	0606 0150 SET	0860 0000 EACH	0860 0002 EACH				ITEM NUMBER UNIT		
													SR 4034 / SR 0290		
							1						SSMH, OFFSET 36.0'	RT	375+34.00
		1						1					I-11, OFFSET 57.2'	LT	375+67.00
									1					RT	375+83.00
									1					LT	377+49.00
									1					RT	377+49.00
			1		1				1				I-1, OFFSET 7.5'	RT	377+49.00
									1					LT	379+48.00
									1					RT	379+50.00
									1					RT	380+69.00
									1					RT	381+49.00
								1						LT	381+50.00
									1					RT	382+34.00
									1					RT	382+77.00
								1						LT	382+93.00
								1						LT	383+37.00
									1					RT	383+51.00
					1				1				I-7, OFFSET 62.6'	RT	383+55.00
									1					RT	384+54.00
								1						LT	384+56.00
									1					RT	385+98.00
			1		1				1				I-2, OFFSET 2.8'	RT	385+99.00
								1						LT	386+00.00
									1					RT	387+49.00
								1						LT	387+50.00
									1					RT	388+99.00
								1						LT	389+00.00
								1						LT	390+59.00

DESIGN NO. 1	MANHOLE FRAME AND COVER	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND GRATE	GRADE ADJUSTMENT OF EXISTING INLETS	GRADE ADJUSTMENT OF EXISTING MANHOLES	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET				REMARKS	SIDE	STATIONS
0601 (+) LF	0605 2401 SET	0605 2731 SET	0605 2850 EACH	0605 3011 EACH	0605 5720 SET	0606 0050 SET	0606 0150 SET	0860 0000 EACH	0860 0002 EACH				ITEM NUMBER UNIT		
									1					RT	390+59.00
					1				1				I-10, OFFSET 65.0'	RT	391+21.00
									1					LT	391+49.00
									1					RT	392+75.00
								1						LT	392+78.00
			1		1				1				I-3, OFFSET 2.6'	RT	393+72.00
76													I-3 TO MH-1	RT	393+72.00 to 394+50.00
									1					RT	394+48.00
								1						LT	394+50.00
	1			1									MH-1, OFFSET 2.7'	RT	394+50.00
									1					RT	394+98.00
									1					RT	395+99.00
								1						LT	396+01.00
									1					RT	397+48.00
								1						LT	397+49.00
									1					LT	398+79.00
									1					RT	398+80.00
					1	1			1				I-8, OFFSET 137.3'	RT	399+30.00
							1						MH, OFFSET 40.6'	RT	399+56.00
							1						SSMH, OFFSET 114.7'	RT	399+72.00
					1	1			1				I-9, OFFSET 105.3'	RT	400+10.00
							1						MH, OFFSET 41.4'	RT	400+24.00
									1					LT	401+13.00
									1					RT	401+13.00
								1						LT	402+97.00
									1					RT	402+97.00
			1		1				1				I-4, OFFSET 8.0'	RT	402+97.00
									1					RT	404+38.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	20 OF 27

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

DESIGN NO. 1	MANHOLE FRAME AND COVER	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND GRATE	GRADE ADJUSTMENT OF EXISTING INLETS	GRADE ADJUSTMENT OF EXISTING MANHOLES	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET				REMARKS	SIDE	STATIONS
0601 (+) LF	0605 2401 SET	0605 2731 SET	0605 2850 EACH	0605 3011 /= 10' EACH	0605 5720 SET	0606 0050 SET	0606 0150 SET	0860 0000 EACH	0860 0002 EACH				ITEM NUMBER UNIT		
			1		1				1			I-5, OFFSET 8.0'	RT	404+50.00
								1					LT	404+63.00
								1					LT	406+00.00
									1				RT	406+00.00
									1				LT	407+50.00
									1				RT	407+51.00
									1				LT	409+00.00
			1		1				1			I-6, OFFSET 2.0'	LT	409+00.00
									1				RT	409+00.00
									1				LT	410+50.00
									1				RT	410+50.00
									1				LT	412+00.00
									1				RT	412+00.00
									1				RT	413+50.00
									1				LT	413+59.00
									1				LT	415+01.00
									1				RT	415+01.00
									1				RT	416+50.00
									1				LT	416+52.00
									1				LT	418+97.00
									1				RT	419+63.00
									1				RT	422+10.00
									1				LT	422+33.00
								1					RT	422+63.00
									1				RT	422+69.00
									1				RT	423+02.00
								1					LT	423+40.00
76	1	1	6	1	10	2	4	18	58			TOTALS		

DESIGN NO. 1	MANHOLE FRAME AND COVER	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	STANDARD INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE C CONCRETE TOP UNIT, 8" CURB HEIGHT AND GRATE	GRADE ADJUSTMENT OF EXISTING INLETS	GRADE ADJUSTMENT OF EXISTING MANHOLES	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET				REMARKS	SIDE	
0601 (+) LF	0605 2401 SET	0605 2731 SET	0605 2850 EACH	0605 3011 /= 10' EACH	0605 5720 SET	0606 0050 SET	0606 0150 SET	0860 0000 EACH	0860 0002 EACH				ITEM NUMBER UNIT		

PLOTTED: 4/13/2022 12:00:43 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	21 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

BM 1 ELEV 680.38
SR 4034 SURVEY & CONSTR ℄
39' RT STA 377+52
SQ CUT IN NORTH CURB OF INLET

PI 379+56.11
37.50'
90°00'00"
180°00'00"
270°00'00"
DRILL HOLE
100.00'
99.99'

SR 4034 SURVEY & CONSTR ℄
PRC STA 377+41.49

1 CITY OF ERIE
3 CONRAIL
4 COMMONWEALTH OF PENNSYLVANIA
5 ERIE M AND P COMPANY, INC
6 ROBERT A BABLAK AND ROSALIE BABLAK
7 JA MOON
8 CHRISTOPHER B. KUCH
9 MLK REALTY, LLC
10 MARK NAPIERKOWSKI AND JULIE NAPIERKOWSKI
11 JUSTIN REED AND KAITLIN CORORAN

LEGAL R/W LINE
LEGAL R/W LINE FOR CITY STREET
E. 12TH ST.
E. 11TH ST.
OVERHEAD SIGN
POST
SIGN
M.H.
UTIL.BOX
UTIL.BOXES
C.O.P.
CONC.
BRUSH
NSRC
WV
W (QLD)
T (VERIZON)
EU (QLB)
EU (QLD)
EU (QLC)
EU (QLE)
18"
36"
6" (EWW)
16" (EWW)

START WORK
STA 374+00.00
SEG 0010 OFFSET 0199
SEG 0011 OFFSET 0201
SR 0290

SR 0290 CONSTR ℄

LIMIT OF WORK
START WORK
STA 376+00.00
SEG 0090 OFFSET 2484
SEG 0091 OFFSET 2482
SR 4034 SECTION S00

STA 376+18.90
BEGIN MILL & OVERLAY

SR 4034
(E. BAYFRONT PARKWAY)
SURVEY & CONSTR ℄

PI STA 379+56.11
Δ = 04°17'24" LT
D = 01°00'00"
T = 214.62'
L = 429.03'
R = 5730.00'
E = 4.02'
PRC STA 377+41.49
PT STA 381+70.52
SE = MATCH EXISTING

PWR POLE L-201652/P863
PWR POLE L-201802/P920

TO SR 0020
1.1 MILES

374 375 376 377 378 379 380 381
N38°03'21"W
N34°14'55"W
N38°32'19"W

PC STA 377+27.79, 8.00' RT
PRC STA 378+02.24, 2.58' RT
PT STA 378+67.02, 2.00' LT
PC STA 380+77.92, 14.00' RT
R 500'
I-1

SR 0290
E.BAYFRONT
CONNECTOR

RUMBLE STRIPS

SR 4034
E. BAYFRONT PKWY.

BM 1

SR 0290 CONSTR ℄ STA 376+00.00 =
SR 4034 (E. BAYFRONT PARKWAY) SURVEY & CONSTR ℄ STA 376+00.00

STOP WORK
STA 376+00.00
SEG 0010 OFFSET 0000
SEG 0011 OFFSET 0000
SR 0290

PI STA 375+51.19
Δ = 03°48'26" RT
D = 01°00'00"
T = 190.45'
L = 380.75'
R = 5730.00'
E = 3.16'
PC STA 373+60.74
PRC STA 377+41.49
SE = MATCH EXISTING

EVERGREEN
PATIO
BAYFRONT BIKEWAY

LEGAL R/W LINE
LEGAL R/W LINE FOR CITY STREET

LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

SEE SHEET 22 OF 27

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmt\jmt_gbarclay\d0173029\MWYPLN1_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	22 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

BM 2 ELEV 663.65
SR 4034 SURVEY & CONSTR ℄
39' RT STA 382+32
SQ CUT IN SOUTH CURB OF INLET

PI STA 379+56.11
Δ = 04°17'24" LT
D = 01°00'00"
T = 214.62'
L = 429.03'
R = 5730.00'
E = 4.02'
PRC STA 377+41.49
PT STA 381+70.52
SE = MATCH EXISTING

POT 390+00.00
90°00'00"
180°00'00"
37.50'
DRILL HOLE
270°00'00"
102.05'
97.95'
DRILL HOLE
DRILL HOLE

SR 4034 SURVEY & CONSTR ℄
POT STA 385+00.00

4 COMMONWEALTH OF PENNSYLVANIA
12 PAUL A. GNACINSKI AND KATHLEEN M. GNACINSKI
13 ROGER W. WETTEKIN
14 MR PROPERTIES
15 R.A.D. BORST, LLC
3 CONRAIL
17 SHELLY A. GAVIN
18 COMMONWEALTH OF PENNSYLVANIA
19 COMMONWEALTH OF PENNSYLVANIA
20 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

LEGAL R/W LINE FOR CITY STREET
LEGAL R/W LINE
BRUSH
GATE
POST
NSRC
CONC.
EU (QLB)
EU (QLD)
UTIL.BOX
UTIL.BOXES
UTIL. BOX
PWR POLE L-201542/P847
PWR POLE L-201542/P864
PWR POLE L-201542/P906
PWR POLE L-201402/P828
E. 10TH ST.
E. 9TH ST.
BAYFRONT BIKEWAY
WV
W (QLD)
S (QLC)
E
TMH
M.H.
SIGN
TC BOX
OVERHEAD SIGN
C.O.P.
30" (EWW)
16" (EWW)
8" PLASTIC (NF)
6" (EWW)
18"
36"

PRC STA 381+53.89, 8.68' RT
PT
PT STA 382+21.95, 4.00' RT
RUMBLE STRIPS
PC STA 385+26.76, 8.00' RT
PRC STA 385+97.29, 3.00' RT
PT STA 386+67.83, 2.00' LT
SR 4034
(E. BAYFRONT PARKWAY)
SURVEY & CONSTR ℄
N38°32'19"W
SR 4034
E. BAYFRONT PKWY.
R 500'
2'
4'
8'
9'
16'
381
382
383
384
385
386
387
388
BM 2
I-2
I-7

SEE SHEET 21 OF 27

SEE SHEET 23 OF 27

LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmt\jmt_gbarclay\d0173029\MXPLN2_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	23 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

BM 3 ELEV 649.45
SR 4034 SURVEY & CONSTR ℄
39' RT STA 392+73
SQ CUT IN CURB OF INLET

POT
385+00.00
37.50'
90°00'00"
DRILL HOLE
75.00'
75.00'
DRILL HOLE
DRILL HOLE
180°00'00"
DRILL HOLE
270°00'00"

SR 4034 SURVEY & CONSTR ℄
POT STA 390+00.00

PI STA 394+48.99
Δ = 02°07'49" LT
D = 00°45'00"
T = 142.03'
L = 284.02'
R = 7639.00'
E = 1.32'
PC STA 393+06.96
PRC STA 395+90.98
SE = MATCH EXISTING

21 STANLEY A. KOWALSKI AND HELEN R. KOWALSKI
22 823 EAST 8TH STREET ASSOCIATES, LP
23 SWANSON-ERIE CORPORATION
3 CONRAIL
20 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
24 EDWARD E. JOHNSON, JR.
25 DEVERE F. DUNN AND MARY ALICE DUNN

W 6" (EWW) (QLD) E. 9TH ST.
PWR POLE L-201402/P828
VZ POLE L-201252/P829
VZ POLE L-201252/P833
VZ POLE L-201252/P837
LEGAL R/W LINE FOR CITY STREET
POST
NSRC
CONC.
LEGAL R/W LINE
SIGN
EU (QLD)
EU (QLB)
M.H.
C.O.P.
18"
SR 4034 (E. BAYFRONT PARKWAY) SURVEY & CONSTR ℄
RUMBLE STRIPS
PRC STA 389+77.96, 9.00' RT
PC STA 389+07.43, 14.00' RT
PT STA 390+48.50, 4.00' RT
PC STA 392+96.59, 8.00' RT
PRC STA 393+71.14, 2.68' RT
PT STA 394+37.24, 2.00' LT
R 500'
OVERHEAD SIGN
PARKING
I-3
I-10
MH-1
N38°32'19"W
N40°40'08"W
BM 3
SR 4034 E. BAYFRONT PKWY.
BAYFRONT BIKEWAY
E.7TH ST.
E. 8TH ST.
UTIL.BOXES
UTIL. BOX
TC BOX
CONC.
36"
42"
WV
S (QLC)
T
N
Z

SEE SHEET 22 OF 27
SEE SHEET 24 OF 27

LEGEND
- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmt\jmt_gbarclay\d0173029\HWYPLN3_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	24 OF 27

CITY OF ERIE

REV NO	REVISIONS	DATE	BY	APPD

BM 4 ELEV 639.82
SR 4034 SURVEY & CONSTR ℄
39' RT STA 401+15
SQ CUT IN CURB OF INLET

PI
397+33.01
37.50'
90°00'00"
180°00'00"
DRILL HOLE
100.09'
99.89'
DRILL HOLE
270°00'00"
DRILL HOLE
SR 4034 SURVEY & CONSTR ℄
PT STA 398+75.00

PI STA 394+48.99
Δ = 02°07'49" LT
D = 00°45'00"
T = 142.03'
L = 284.02'
R = 7639.00'
E = 1.32'
PC STA 393+06.96
PRC STA 395+90.98
SE = MATCH EXISTING

PI STA 397+33.01
Δ = 02°07'49" RT
D = 00°45'00.15"
T = 142.02'
L = 284.02'
R = 7639.00'
E = 1.32'
PRC STA 395+90.98
PT STA 398+75.00
SE = MATCH EXISTING

STA 398+75.00
STOP MILL

PC STA 396+89.49, 14.00' RT
PRC STA 397+55.67, 9.33' RT
PT STA 398+31.02, 4.00' RT

SR 4034
(E. BAYFRONT PARKWAY)
SURVEY & CONSTR ℄

N40°40'08"W
N38°32'19"W

LEGAL R/W LINE FOR CITY STREET
LEGAL R/W LINE
WAYNE ST.
E. 7TH ST.
E. 6TH ST.
SR 4034 E. BAYFRONT PKWY.
BAYFRONT BIKEWAY
EVERGREEN
PARKING
NSRC
CONRAIL
SWANSON-ERIE CORPORATION
ANDREW SEIFERT
RACHEL B. BURTON
LAWRENCE A. RILEY
ROBERT R. CURRIE
JAMES R. THOMAS AND JACOB J. THOMAS
WILLIAM L. ANGELOTTI AND CHERYL MCSHANE
ROBERT M. PASKY AND CHRISTINA R. PASKY
JESSIE M. FORD
GARY E. LUKE
SALEM INVESTMENTS, INC.
C.O.P.
RUMBLE STRIPS
OVERHEAD SIGN
TC BOX
RR BOX
UTIL. BOX
M.H.
POST
SIGN
CONC.
VZ POLE L-201092/P811
PWR POLE L-201092/P804
PWR POLE L-201092/P834
PWR POLE L-201092/P844
PWR POLE L-279932/P803
VZ POLE L-279932/P825
I-8
I-9
10" IRON (NF)
12" (EWW)
6" (EWW)
8" (EWW)
18" (EWW)
42"
48"
T (VERIZON)
WV
W (QLD)
E (QLB)
EU (QLB)
EU (QLD)

SEE SHEET 23 OF 27
SEE SHEET 25 OF 27

LEGEND

- MILL AND INLAY
- OVERLAY
- CEMENT CONCRETE
- DETECTABLE WARNING SURFACE
- PROPOSED DRAINAGE INLET

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmtjmt_gbarclay\d0173029\HWYPLN4_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	25 OF 27

CITY OF ERIE

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 24 OF 27

SEE SHEET 26 OF 27

37 BO NGO AND DAO NGO
38 TINA YOUNG
39 MARY ANN COLON
40 J.P. MAGEE
41 BOBBY A. JOHNSON
42 FRONTIER LUMBER, INC.
43 NATIONAL FUEL GAS
44 PENNSYLVANIA ELECTRIC CO.
45 MICHELE ANTHONY
46 EUGENE M. GOLDSBY AND MICHELE M. WODARSKI
47 EQUITY TRUST CO.
48 SAM COPELAND
49 TRUSTY JONES LLC
50 KELVIN NORTON, SR.
51 GORDON M. MITCHELL
52 TIMOTHY G. NORTON
53 THE HOUSING AUTHORITY OF THE CITY OF ERIE
54 WILLIAM MITCHELL I AND MATTIE MITCHELL
55 NATIONAL FUEL GAS DIST CORP
3 CONRAIL
36 SALEM INVESTMENTS, INC.

LEGAL R/W LINE FOR CITY STREET
LEGAL R/W LINE
SAN MH
RIM =633.67
INV IN =623.67 (A)
INV IN =620.87 (B)
INV IN =621.57 (C)
INV OUT =620.77
VZ POLE L-270473/P510
VZ POLE L-200702/P762
SIGN
PARKING
C.O.P.
E 5TH ST.
8" PLASTIC (NF)
6" PLASTIC (NF)
4" PLASTIC (NF)
8" (EWW)
18" (EWW)
20" (EWW)
6" (EWW)
24" PVC (ECBS)
SAN MH
RIM =633.87
(NO INVERTS OBTAINED
COULD NOT OPEN)
SAN MH
RIM =632.74
INV IN =619.19
INV OUT =619.14
POST
OVERHEAD SIGN
UTIL. BOX
CONC
BRUSH
NSRC
BAYFRONT BIKEWAY
SR 4034 E. BAYFRONT PKWY.
SR 4034 (E. BAYFRONT PARKWAY) SURVEY & CONSTR ℄
I-4
I-5
I-6
403
404
405
406
407
408
409
410
N38°32'19"W
PRC STA 405+13.73, 3.00' RT
PT STA 405+84.27, 2.00' LT
PC STA 404+43.20, 8.00' LT
PC STA 403+65.47, 14.00' RT
PT STA 403+90.64, 1 .68' RT
PC STA 408+42.11, 2.32' RT
PT STA 408+67.28, 2.00' RT
PC STA 409+08.01, 2.00' LT
PT STA 409+08.01, 2.00' RT
R 500'
R 1000'
R 2'
PC
PI STA 410+49.99
Δ = 05°12'22" RT
D = 02°00'00"
T = 130.24'
L = 260.31'
R = 2864.79'
E = 2.96'
PC STA 409+19.75
PT STA 411+80.06
SE = MATCH EXISTING

LEGEND

OVERLAY

CEMENT CONCRETE

DETECTABLE WARNING SURFACE

PROPOSED DRAINAGE INLET

SCALE

0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
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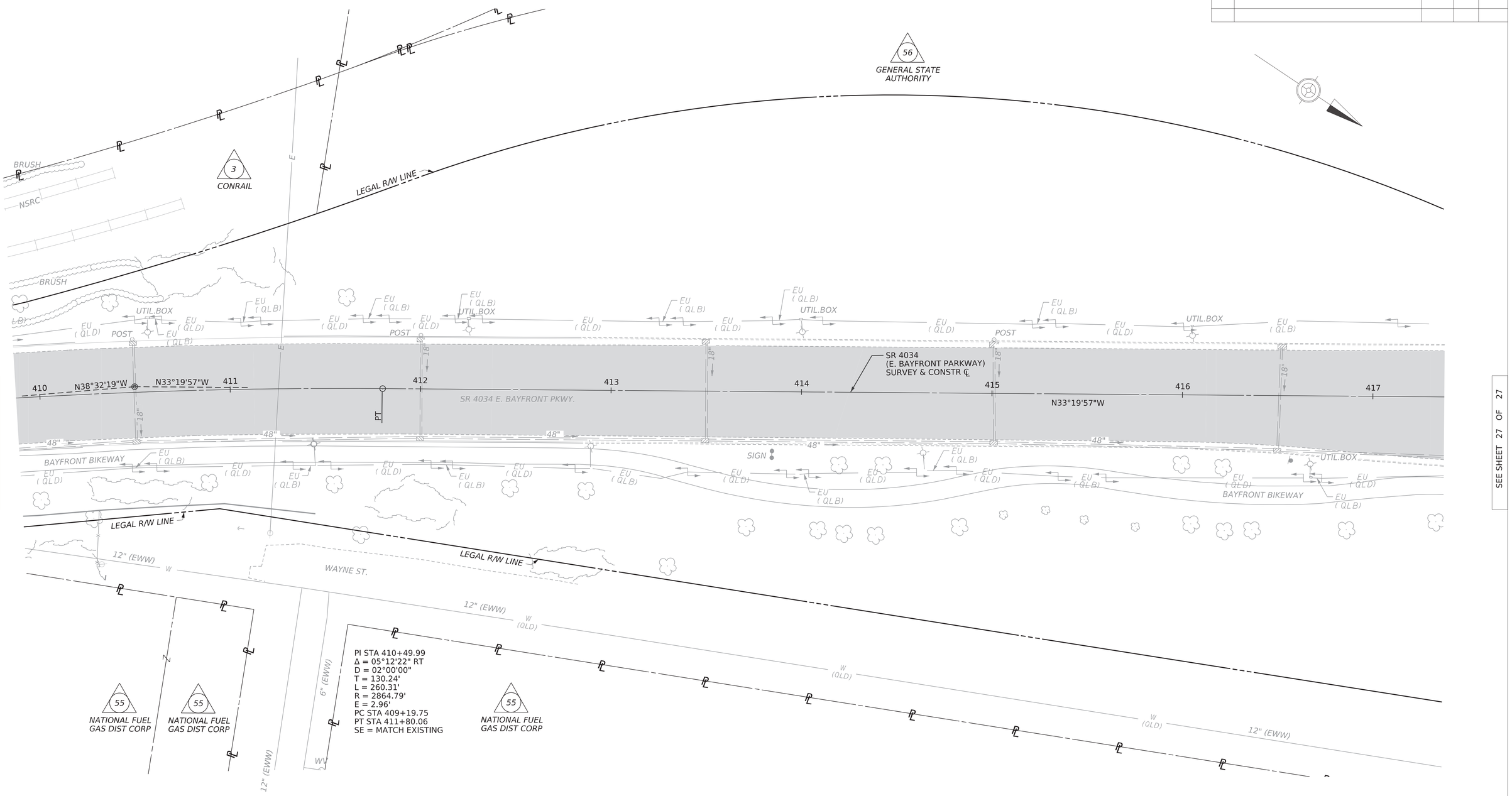
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	26 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 25 OF 27

SEE SHEET 27 OF 27



LEGEND

OVERLAY

CEMENT CONCRETE

DETECTABLE WARNING SURFACE

PROPOSED DRAINAGE INLET

SCALE

0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

OPERATOR: GBarclay
FILE NAME: c:\pwworking\jmtnkoman@jmt.com\d0173029\HWYPLN6_4034.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	27 OF 27
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

POT 423+00.00
90°00'00"
37.40'
180°00'00"
DRILL HOLE
90.00'
109.98'
DRILL HOLE
270°00'00"
DRILL HOLE

SR 4034 SURVEY & CONSTR ℄
POT STA 419+00.00

POT 419+00.00
90°00'00"
37.50'
DRILL HOLE
100.00'
100.00'
DRILL HOLE
180°00'00"
DRILL HOLE
270°00'00"

SR 4034 SURVEY & CONSTR ℄
POT STA 423+00.00

BM 5 ELEV 605.76
SR 4034 SURVEY & CONSTR ℄
39' RT STA 422+13
SQ CUT IN CURB OF INLET

16 STATE OF PENNSYLVANIA

56 GENERAL STATE AUTHORITY

20 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

2 ERIE COKE CORPORATION

LEGAL R/W LINE

PORT ACCESS ROAD CONSTR ℄ STA 10+00.00
= SR 4034 SURVEY & CONSTR ℄ STA 423+44.98

RAILROAD CROSSING TO REMAIN AND NOT BE IMPACTED

SR 4034 (E. BAYFRONT PARKWAY) SURVEY & CONSTR ℄

SR 4034 E. BAYFRONT PKWY.

BAYFRONT BIKEWAY

E. BAY DR.

PORT ACCESS RD.

418 419 420 421 422 423 10 11

N33°19'57"W

174°

N39°37'54"W

LIMIT OF WORK
STOP WORK
STA 423+44.98
SEG 0084 OFFSET 0091
SEG 0085 OFFSET 0104
SR 4034 SECTION S00
CITY OF ERIE
ERIE COUNTY

STOP WORK
STA 11+05.00
PORT ACCESS ROAD
CITY OF ERIE
ERIE COUNTY

PORT ACCESS ROAD CONSTR ℄

START WORK
STA 10+00.00
PORT ACCESS ROAD
CITY OF ERIE
ERIE COUNTY

STATION 423+37
END OVERLAY

BM 5

PEDESTRIAN FENCING

RR BOX

RIPRAP

TO SR 0079
3.5 MILES

LEGAL R/W LINE FOR CITY STREET

SEE SHEET 26 OF 27

LEGEND

OVERLAY

CEMENT CONCRETE

DETECTABLE WARNING SURFACE

PROPOSED DRAINAGE INLET

SCALE
0 25 50 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH ANTHONY PECORA
ENGINEER
PE078056

PLOTTED: 2/23/2023 1:58:28 PM

OPERATOR: JPecora
FILE NAME: c:\pwworking\jmt\jmt_jpecora\d0173029\HWYPLN7_4034.dgn

PLOTTED: 5/23/2022 2:53:18 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	1 OF 20
CITY OF ERIE				

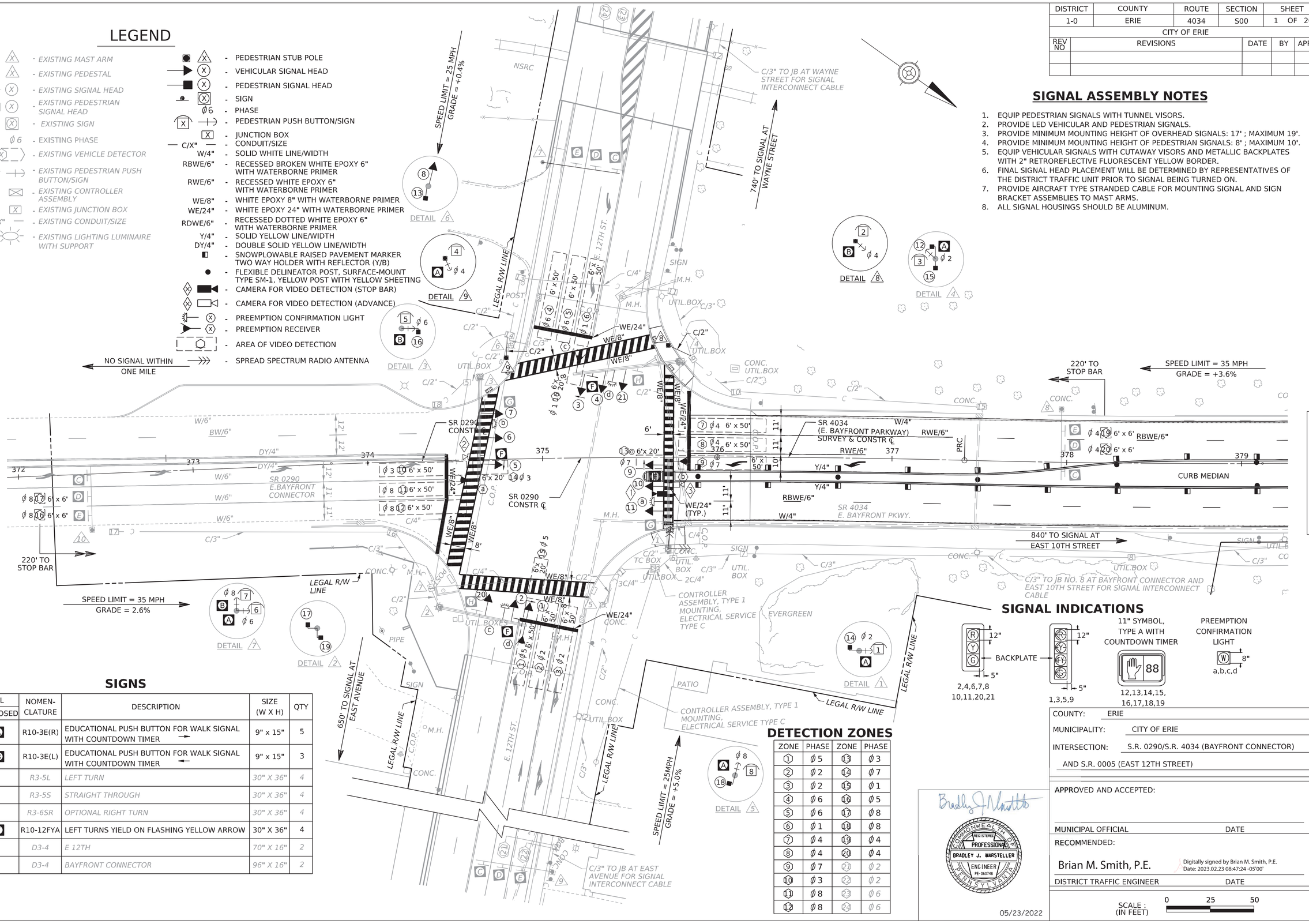
REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- EXISTING MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISTING PHASE
- EXISTING VEHICLE DETECTOR
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- EXISTING LIGHTING LUMINAIRE WITH SUPPORT

- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- ϕ6 - PHASE
- PEDESTRIAN PUSH BUTTON/SIGN
- JUNCTION BOX
- C/X" - CONDUIT/SIZE
- W/4" - SOLID WHITE LINE/WIDTH
- RBWE/6" - RECESSED BROKEN WHITE EPOXY 6" WITH WATERBORNE PRIMER
- RWE/6" - RECESSED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- WE/8" - WHITE EPOXY 8" WITH WATERBORNE PRIMER
- WE/24" - WHITE EPOXY 24" WITH WATERBORNE PRIMER
- RDWE/6" - RECESSED DOTTED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- Y/4" - SOLID YELLOW LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)
- FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING
- CAMERA FOR VIDEO DETECTION (STOP BAR)
- CAMERA FOR VIDEO DETECTION (ADVANCE)
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER
- AREA OF VIDEO DETECTION
- SPREAD SPECTRUM RADIO ANTENNA

NO SIGNAL WITHIN ONE MILE



SEE SHEET 5 OF 20

SIGNAL ASSEMBLY NOTES

1. EQUIP PEDESTRIAN SIGNALS WITH TUNNEL VISORS.
2. PROVIDE LED VEHICULAR AND PEDESTRIAN SIGNALS.
3. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
4. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
5. EQUIP VEHICULAR SIGNALS WITH CUTAWAY VISORS AND METALLIC BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
6. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
7. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. ALL SIGNAL HOUSINGS SHOULD BE ALUMINUM.

SIGNAL INDICATIONS

SIGNS

PLAN SYMBOL EXISTING	PLAN SYMBOL PROPOSED	NOMENCLATURE	DESCRIPTION	SIZE (W X H)	QTY
	A	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" x 15"	5
	B	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" x 15"	3
C		R3-5L	LEFT TURN	30" X 36"	4
D		R3-5S	STRAIGHT THROUGH	30" X 36"	4
E		R3-6SR	OPTIONAL RIGHT TURN	30" X 36"	4
	F	R10-12FYA	LEFT TURNS YIELD ON FLASHING YELLOW ARROW	30" X 36"	4
G		D3-4	E 12TH	70" X 16"	2
H		D3-4	BAYFRONT CONNECTOR	96" X 16"	2

DETECTION ZONES

ZONE	PHASE	ZONE	PHASE
1	ϕ5	13	ϕ3
2	ϕ2	14	ϕ7
3	ϕ2	15	ϕ1
4	ϕ6	16	ϕ5
5	ϕ6	17	ϕ8
6	ϕ1	18	ϕ8
7	ϕ4	19	ϕ4
8	ϕ4	20	ϕ4
9	ϕ7	21	ϕ2
10	ϕ3	22	ϕ2
11	ϕ8	23	ϕ6
12	ϕ8	24	ϕ6

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 0290/S.R. 4034 (BAYFRONT CONNECTOR) AND S.R. 0005 (EAST 12TH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E.

Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 08:47:24 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

05/23/2022

SCALE : (IN FEET) 0 25 50

PLOTTED: 5/23/2022 2:53:19 PM

MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1+5					PHASE 1+6					PHASE 2+5					PHASE 2+6					PHASE 3+7					PHASE 3+8					PHASE 4+7					PHASE 4+8					EMERGENCY FLASHING
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
1	∈G-	∈Y- ①	∈R- ①			∈G-	∈G-	∈G-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈R-	∈R-	∈R-			∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈FR-
2,8,20	R	R	R			G	G	G	Y ④	R ④	R	R	R	R	R	G	G	G	Y	R	R	R	R			R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
3	∈G-	∈Y- ②	∈R- ②			∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈G-	∈G-	∈G-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈R-	∈R-	∈R-			∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈FR-
4,21	R	R	R			R	R	R	R	R	G	G	G	Y ④	R ④	G	G	G	Y	R	R	R	R			R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
5	∈R-	∈R-	∈R-			∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈G-	∈Y- ⑥	∈R- ⑥			∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈G-	∈G-	∈G-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈FR-
6,7	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	G	G	Y ⑧	R ⑧	G	G	G	Y	R	FR
9	∈R-	∈R-	∈R-			∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈R-	∈G-	∈Y- ⑦	∈R- ⑦			∈G-	∈G-	∈G-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈FR-
10,11	R	R	R			R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			G	G	G	Y ⑧	R ⑧	R	R	R	R	R	G	G	G	Y	R	FR
12,13	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	W	W	FD	DW	DW	W	W	FD	DW	DW	OFF
14,15	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	DW	DW	DW	DW	DW	OFF
16,17	DW	DW	DW			W	W	FD	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW			DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
18,19	DW	DW	DW			DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW			W	W	FD	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
FIXED	X	4	3			2	X		4	3	2	X		4	3	2	X		4	3	X	4	3			2	X		4	3	2	X		4	3	2	X		4	3	
MINIMUM	7					7					7					10					7					7					7					10					
ADDED INITIAL																																									
MAX. INITIAL																																									
PASSAGE	3					3					3					5					3					3					3					5					
TO REDUCE																																									
BEFORE RED																																									
MIN. GAP																																									
MAX I*																																									
MAX II*																																									
***PEDESTRIAN						⑩					⑩					7	31									⑨					⑨					7	24				
MEMORY	NL					NL					NL					MN					NL					NL					NL					MN					

*** UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

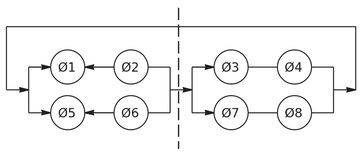
① ∈G- IF FOLLOWED BY PHASE 1+6
② ∈G- IF FOLLOWED BY PHASE 2+5
③ ∈Y- IF FOLLOWED BY PHASE 2+6
④ ∈G- IF FOLLOWED BY PHASE 2+6
⑤ ∈Y- IF FOLLOWED BY PHASE 4+8
⑥ ∈G- IF FOLLOWED BY PHASE 4+7
⑦ ∈G- IF FOLLOWED BY PHASE 3+8
⑧ ∈G- IF FOLLOWED BY PHASE 4+8

⑨ TIMING WILL BE AS SHOWN IN PHASE 4+8. INTERVALS 22,23,24,27,28&29 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 4+8.

⑩ TIMING WILL BE AS SHOWN IN PHASE 2+6. INTERVALS 4,5,6,9,10&11 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 2+6.

MAX I* : 10PM TO 10AM **
MAX II** : 10AM T0 10PM **
** IN CASE OF COORDINATION FAILURE

PHASING DIAGRAM



NORMAL OPERATION ————
PHASE SEQUENCE BARRIER — — — —

DETECTOR NOTES:

DETECTION ZONES 13, 14, 15, AND 16 WILL HAVE A DELAY OF 4 SEC.

EMERGENCY PREEMPTION NOTES:

1. CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES EAST 12TH ST, THE NORTHBOUND APPROACH OF S.R. 290 (BAYFRONT CONNECTOR), AND THE SOUTHBOUND APPROACH OF S.R. 4034 (BAYFRONT PARKWAY) WITH A FLASHING FAIL-SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
2. THIS FAIL-SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
3. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTION PHASE SHALL FOLLOW. ONLY THE PHASES NOT POSING A YELLOW TRAP REMAIN GREEN (1+6, 2+5, 3+8, 4+7) WHEN GOVERN BY APPROACHING EMERGENCY VEHICLE.
4. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE ACTUATION OF APPROACHING EMERGENCY VEHICLE.
5. IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
6. IF ADDITIONAL PREEMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
7. UPON COMPLETION OF PREEMPTION PHASE 2, 4, 6, OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 4+8 INTERVAL 32 SHALL FOLLOW.
8. IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
9. IF THE PEDESTRIAN SIGNALS ARE ACTIVE UPON EMERGENCY VEHICLE DETECTION, THE WALK TIMES SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE FLASHING DW AND DW CLEARANCE INTERVALS, ACCORDINGLY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	2 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

EMERGENCY PREEMPTION PHASING MOVEMENT, PHASING, AND SEQUENCE CHART

		PHASE 2				PHASE 6				PHASE 4				PHASE 8			
		INTERVAL				INTERVAL				INTERVAL				INTERVAL			
SIGNAL		37	38	39		40	41	42		43	44	45		46	47	48	
1	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	∈G-	∈Y-	∈R-	SELECTIVE CLEARANCE	∈R-	∈R-	∈R-	SELECTIVE CLEARANCE	∈R-	∈R-	∈R-	
2,8,20		R	R	R		G	Y	R		R	R	R		R	R	R	
3		∈G-	∈Y-	∈R-		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-	
4,21		G	Y	R		R	R	R		R	R	R		R	R	R	
5		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-		∈G-	∈Y-	∈R-		∈R-	∈R-	∈R-	
6,7		R	R	R		R	R	R		G	Y	R		R	R	R	
9		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-		∈G-	∈Y-	∈R-	
10,11		R	R	R		R	R	R		R	R	R		G	Y	R	
12,13		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
14,15		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
16,17		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
18,19		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
a		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	
b		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	
c		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
d		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
FIXED		**	4	4		**	4	4		**	4	4		**	4	4	

** FOR DURATION OF PREEMPTION OR A MAX OF 60 SECONDS.

NOTE:
IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

05/23/2022

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 0290/S.R. 4034 (BAYFRONT CONNECTOR)
AND S.R. 0005 (EAST 12TH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:47:47 -05'00'

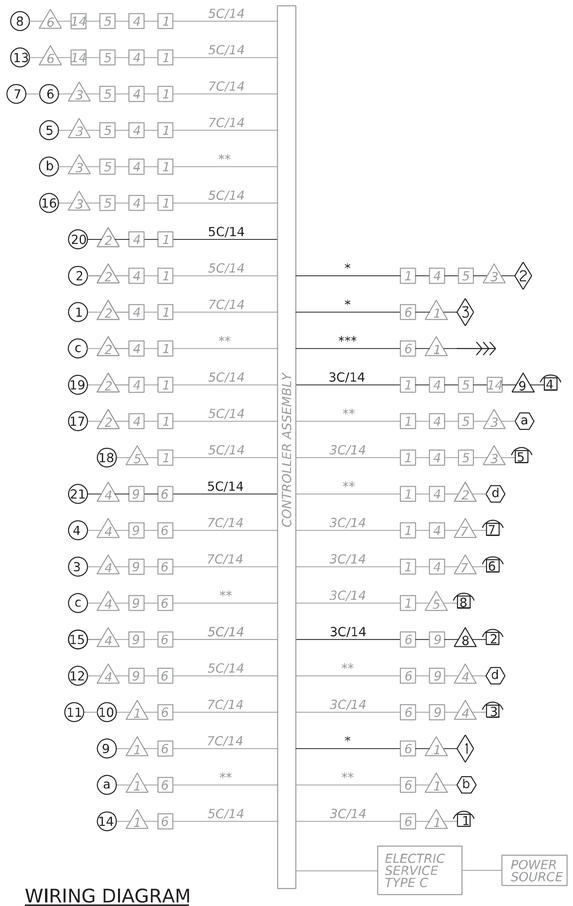
DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

PLOTTED: 5/23/2022 2:53:19 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	3 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



WIRING DIAGRAM

1 — EXISTING JUNCTION BOX

1 — EXISTING SIGNAL SUPPORT

3C/14 — EXISTING CABLE (NO. OF CONDUCTORS/SIZE AWG.)

* - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #9000-0700

** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

*** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

1 — SIGNAL SUPPORT

1 — SIGNAL HEAD

1 — PEDESTRIAN PUSH BUTTON

a — EMERGENCY PREEMPTION RECEIVER

a — EMERGENCY PREEMPTION CONFIRMATION LIGHT

4 — VIDEO DETECTOR

——»» — SPREAD SPECTRUM RADIO ATTENNA

3C/14 — CABLE (NO. OF CONDUCTORS/SIZE AWG.)

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLIT							
	S	M	T	W	T	F	S				∅1	∅2	∅3	∅4	∅5	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	0	14	19	13	24	14	19	13	24
1		X	X	X	X	X		6:30 AM TO 9:30 AM	80	0	14	26	15	25	14	26	13	27
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	0	14	19	13	24	14	19	13	24
2		X	X	X	X	X		3:00 PM TO 6:00 PM	80	0	14	27	13	26	14	27	13	26
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	0	14	19	13	24	14	19	13	24
3	X						X	12:00 AM TO 12:00 PM	70	0	14	19	13	24	14	19	13	24

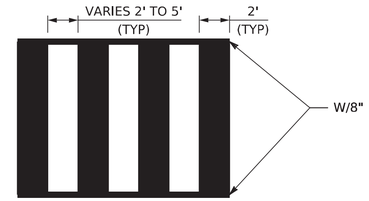
COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 6TH STREET (S.R. 4018) BAYFRONT CONNECTOR (S.R. 4034).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.



VARY SPACING OF CROSSWALK LINES AS REQUIRED TO AVOID WHEEL PATHS

CROSSWALK DETAIL

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

05/23/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 0290/S.R. 4034 (BAYFRONT CONNECTOR)

AND S.R. 0005 (EAST 12TH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:48:11 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

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SIGNS

PLAN SYMBOL	STANDARD	DESCRIPTION	SIZE	SQ FT EACH	QUANTITY	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS WITH AIRCRAFT WIRE ROPE 4936 0010 SF
A	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 15"	0.9	5 ▲	
B	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 15"	0.9	3 ▲	
F	R10-12FYA	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30" X 36"	7.5	4	30
		TOTAL				30

▲ INCIDENTAL TO ITEM 4956-0790, AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM

NOTE: FOR TABULATION OF PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLAN

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4951 4020 EACH	PEDESTRIAN STUB POLE, TYPE B OR E	2	375+72 (8) 374+80 (9)	
0955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	9	(2) (4) (6) (7) (8) (10) (11) (20) (21)	SEE SIGNAL NOTES
0955 3209 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	4	(1) (3) (5) (9)	SEE SIGNAL NOTES
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	(12) (13) (14) (15) (16) (17) (18) (19)	SEE SIGNAL NOTES
4956 0790 EACH	AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM	8	[1] [2] [3] [4] [5] [6] [7] [9]	
9000 0007 EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM	1	1 2 3 4	
9000 0700 EACH	VIDEO DETECTOR, GRIDSMART	1	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20)	COMPLETE INTERSECTION STOP BAR AND SR 4034 ADVANCE
9000 0795 EACH	MAST ARM MITIGATION DEVICE INSTALLATION	4	1 2 3 4	
9000 1030 EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE)	1	CC1	

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT		TRENCH AND BACKFILL, TYPE I		TRENCH AND BACKFILL, TYPE II		SIGNAL CABLE, 14 AWG, 3 CONDUCTOR		SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	
LOCATION	0954 0012	LF	0954 0151	LF	0954 0152	LF	0954 0201	LF	0954 0202	LF
[9] TO 8	20		10		4					
[14] TO 9	18		6		6					
TOTAL INTERSECTION							506		456	
TOTAL	38		16		10		506		456	

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	4 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	DESCRIPTION	ROUTE	STATION	SIDE	OFFSET	MAST ARM										LUMINAIRE ARM			PEDESTAL		
								ARM "A"								ARM "C"			SHAFT	SIGNALS	
						H	K	L	SIGNAL LOCATION M	N	O	P	SIGN LOCATION R	S	T	Y	W	G	X	Z	H	M	N
1	*TRAFFIC SIGNAL SUPPORT, 50' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	*SR 4034*	*375+72*	*RT*	*52*	*17*	*8*	*50*	47	35	20		41	*13*			*0*	*15*		*0*			
2	*TRAFFIC SIGNAL SUPPORT, 50' MAST ARM*	*SR 4034*	*374+39*	*RT*	*84*	*17*	*8*	*50*	48	40	25		44	*20*			*2*						
3	*TRAFFIC SIGNAL SUPPORT, 60' MAST ARM*	*SR 4034*	*374+65*	*LT*	*47*	*17*	*8*	*60*	49	33	20		44	*15*			*90*						
4	*TRAFFIC SIGNAL SUPPORT, 60' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	*SR 4034*	*375+78*	*LT*	*55*	*17*	*8*	*60*	53	41	29		48	*22*				*15*		*83*			
5	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	*SR 4034*	*375+34*	*RT*	*84*																*14*		*10*
6	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	*SR 4034*	*374+83*	*LT*	*65*																*14*		*10*

* REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, FOR LETTER DESIGNATIONS

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

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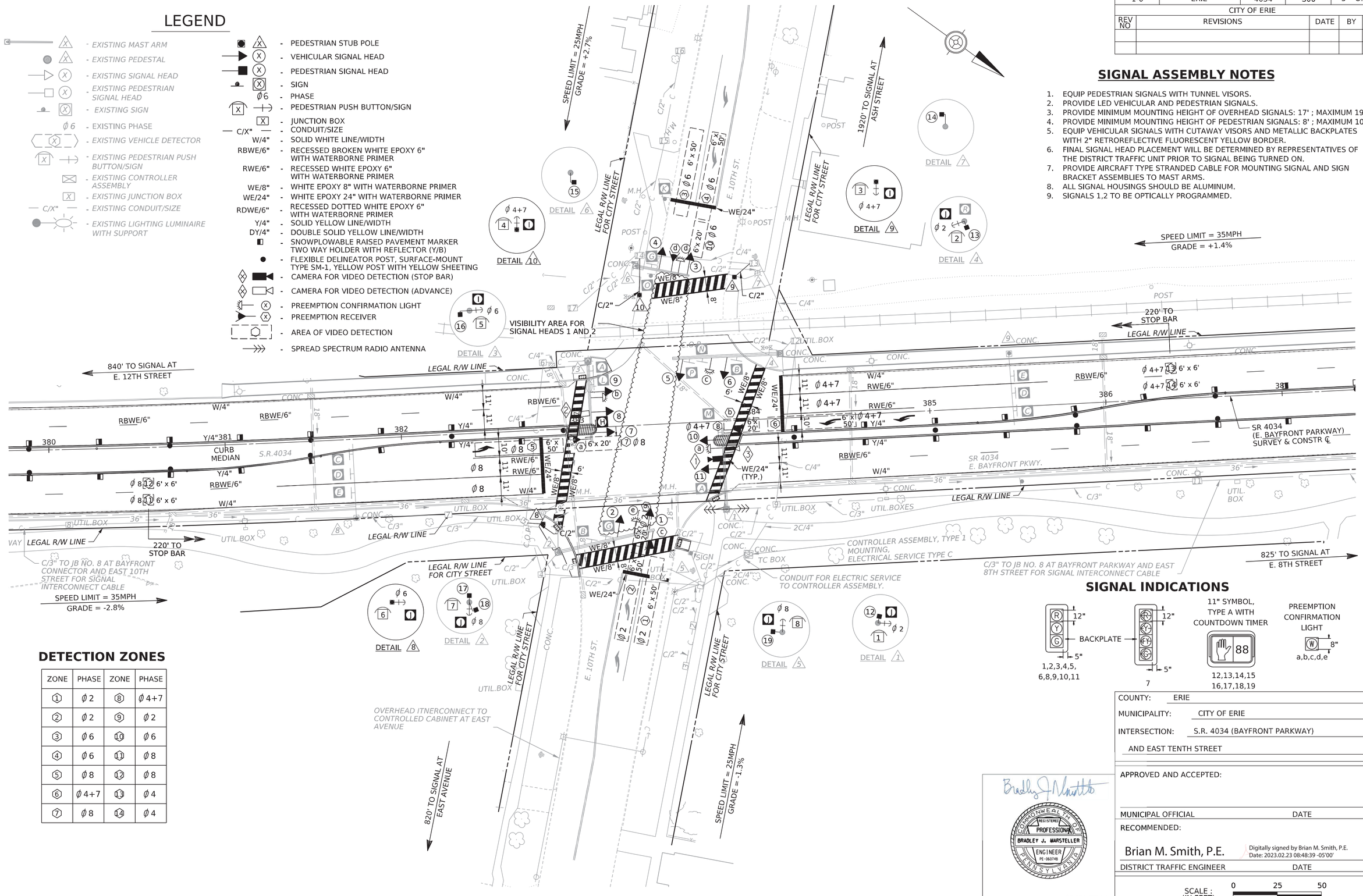
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	5 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- EXISTING MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISTING PHASE
- EXISTING VEHICLE DETECTOR
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- EXISTING LIGHTING LUMINAIRE WITH SUPPORT

- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- ϕ6 - PHASE
- PEDESTRIAN PUSH BUTTON/SIGN
- JUNCTION BOX
- C/X" - CONDUIT/SIZE
- W/4" - SOLID WHITE LINE/WIDTH
- RBWE/6" - RECESSED BROKEN WHITE EPOXY 6" WITH WATERBORNE PRIMER
- RWE/6" - RECESSED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- WE/8" - WHITE EPOXY 8" WITH WATERBORNE PRIMER
- WE/24" - WHITE EPOXY 24" WITH WATERBORNE PRIMER
- RDWE/6" - RECESSED DOTTED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- Y/4" - SOLID YELLOW LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)
- FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING
- CAMERA FOR VIDEO DETECTION (STOP BAR)
- CAMERA FOR VIDEO DETECTION (ADVANCE)
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER
- AREA OF VIDEO DETECTION
- SPREAD SPECTRUM RADIO ANTENNA



SIGNAL ASSEMBLY NOTES

1. EQUIP PEDESTRIAN SIGNALS WITH TUNNEL VISORS.
2. PROVIDE LED VEHICULAR AND PEDESTRIAN SIGNALS.
3. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
4. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
5. EQUIP VEHICULAR SIGNALS WITH CUTAWAY VISORS AND METALLIC BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
6. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
7. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. ALL SIGNAL HOUSINGS SHOULD BE ALUMINUM.
9. SIGNALS 1,2 TO BE OPTICALLY PROGRAMMED.

DETECTION ZONES

ZONE	PHASE	ZONE	PHASE
1	ϕ2	8	ϕ4+7
2	ϕ2	9	ϕ2
3	ϕ6	10	ϕ6
4	ϕ6	11	ϕ8
5	ϕ8	12	ϕ8
6	ϕ4+7	13	ϕ4
7	ϕ8	14	ϕ4

SIGNAL INDICATIONS

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST TENTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 08:48:39 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

05/23/2022

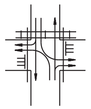
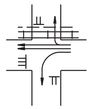
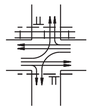
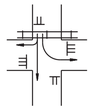
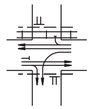
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SEE SHEET 1 OF 20

SEE SHEET 9 OF 20

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+7					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																										
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17			18	19	20	21		
1,2	G	G	G	Y	R	R	R	R	R		R	R	R	R	R	G	Y	R			R	R	R	R		FR
3,4	G	G	Y	R	R	R	R	R	R		R	R	R	R	R	R	R	R			R	R	R	R		FR
5,6	G	G	Y	R	R	R	R	R	R		R	R	R	R	R	R	R	R			R	R	R	R		FR
7	∈R-	∈R-	∈R-	∈R-	∈R-	∈G-	∈G-	∈Y-	∈R-		∈R-	∈FY-	∈FY-	∈Y-	∈R-	∈R-	∈R-	∈Y-			∈FY-	∈FY-	∈Y-	∈R-		∈FR-
8,9	R	R	R	R	R	G	G	Y ①	R ①		G	G	G	Y	R	R	R	Y			G	G	Y	R		FR
10,11	R	R	R	R	R	R	R	R	R		G	G	G	Y	R	G	G	Y			G	G	Y	R		FR
*12,13	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW			DW	DW	DW	DW		OFF
*16,17	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW			DW	DW	DW	DW		OFF
*14,15	DW	DW	DW	DW	DW	W	FD	DW	DW		W	W	FD	DW	DW	DW	DW	DW			W	FD	DW	DW		OFF
*18,19	DW	DW	DW	DW	DW	DW	DW	DW	DW		W	W	FD	DW	DW	DW	DW	DW			W	FD	DW	DW		OFF
SIGNS		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	ON	ON	ON			ON	ON	ON	ON		OFF
FIXED			4	3	3			4	3		2			4	3		4	3					4	3		
MINIMUM	7					7					12															
SEC./ACT.																										
MAX. INITIAL																										
PASSAGE	5					3					5															
TIME TO REDUCE																										
BEFORE REDUCTION																										
MIN. GAP																										
MAX I																										
MAX II																										
*PEDESTRIAN	7	24				④					7	24									7	24				
MEMORY	MN					NL					MN															

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① G IF FOLLOWED BY PHASE 4+8

② ∈Y- IF FOLLOWED BY PHASE 4+8

③ G IF FOLLOWED BY PHASE 4+8

④ TIMING WILL BE AS SHOWN IN PHASE 4+8. INTERVALS 6 & 7 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 4+8.

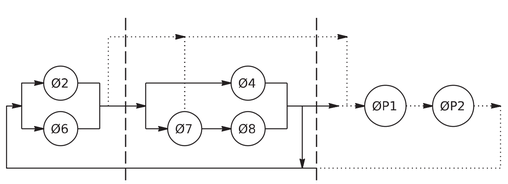
⑤ DWELL UNTIL PREEMPTION TERMINATES.

⑥ RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

DETECTOR NOTES:

DETECTION ZONES 7, 8, 9, AND 10 WILL HAVE A DELAY OF 4 SEC.

PHASING DIAGRAM



NORMAL OPERATION ————
RAILROAD PREEMPTION .....
PHASE SEQUENCE BARRIER — — — —

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 4+8-INTERVAL 10, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 11,12,13&14 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 13&14 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+8-INTERVAL 11, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 12,13&14 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+8-INTERVAL 12, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 13&14 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+8-INTERVAL 13, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 14 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+8-INTERVAL 14, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+7-INTERVAL 6, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+7-INTERVALS 7,8&9 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 8&9 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+7-INTERVAL 7, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 8&9 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+7-INTERVAL 8, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 9 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 4+7-INTERVAL 9, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 14.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 15.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 15.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 18, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 19,20&21 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 19, IT TIMES OUT FOLLOWED BY TRAIN PHASE P2-INTERVALS 20&21 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 20, IT TIMES OUT FOLLOWED BY TRAIN PHASE P2-INTERVALS 21 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 21, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF VIDEO DETECTORS ON EASTBOUND APPROACH E. 10TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISTING AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

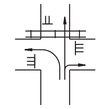
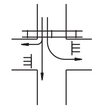
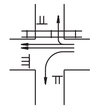
EMERGENCY PREEMPTION NOTES:

1. CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES EAST 10TH ST, THE NORTHBOUND AND SOUTHBOUND APPROACHES OF S.R. 4034 (BAYFRONT PARKWAY) WITH A FLASHING FAIL-SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
2. THIS FAIL-SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
3. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTION PHASE SHALL FOLLOW. ONLY THE PHASES NOT POSING A YELLOW TRAP REMAIN GREEN (1+6, 2+5, 3+8, 4+7) WHEN GOVERN BY APPROACHING EMERGENCY VEHICLE.
4. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE ACTUATION OF APPROACHING EMERGENCY VEHICLE.
5. IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
6. IF ADDITIONAL PREEMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
7. UPON COMPLETION OF PREEMPTION PHASE 2, 4, 6, OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 4+8 INTERVAL 10 SHALL FOLLOW.
8. IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
9. IF THE PEDESTRIAN SIGNALS ARE ACTIVE UPON EMERGENCY VEHICLE DETECTION, THE WALK TIMES SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE FLASHING DW AND DW CLEARANCE INTERVALS, ACCORDINGLY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	6 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

EMERGENCY PREEMPTION PHASING MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2				PHASE 6				PHASE 4				PHASE 8			
																
	INTERVAL				INTERVAL				INTERVAL				INTERVAL			
SIGNAL		22	23	24		25	26	27		28	29	30		31	32	33
1,2	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R
3,4		R	R	R		G	Y	R		R	R	R		R	R	R
5,6		G	Y	R		R	R	R		R	R	R		R	R	R
7		∈R-	∈R-	∈R-		∈R-	∈R-	∈R-		∈G-	∈Y-	∈R-		R	R	R
8,9		R	R	R		R	R	R		G	Y	R		R	R	R
10,11		R	R	R		R	R	R		R	R	R		G	Y	R
*12,13		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*16,17		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*14,15		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*18,19		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
SIGNS		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF
a		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF
b		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF
c		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF
d		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF
e		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF
FIXED		**	4	4		**	4	4		**	4	4		**	4	4

** FOR DURATION OF PREEMPTION OR A MAX OF 60 SECONDS.

NOTE:
IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST TENTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:49:01 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

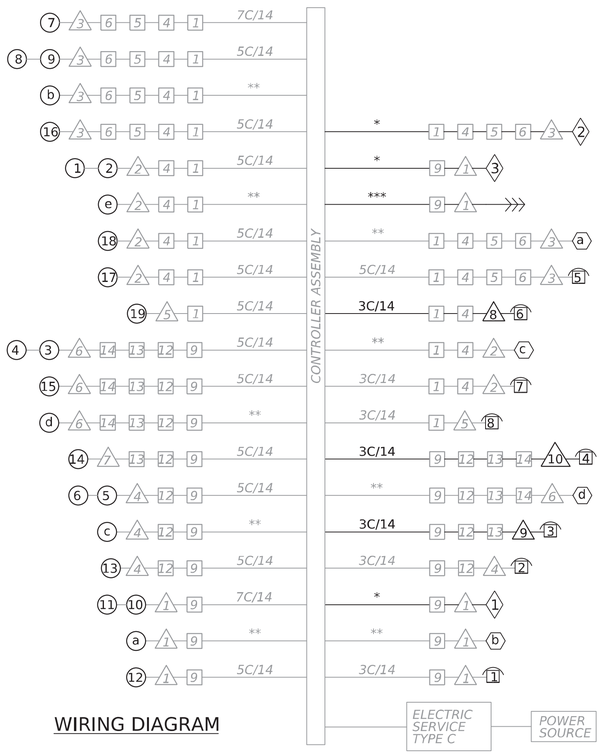
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SIGNS

PLAN SYMBOL EXISTING	PLAN SYMBOL PROPOSED	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)	QTY
A		D3-4	E 10TH ST	70" X 16"	2
B		D3-4	BAYFRONT PARKWAY	96" X 16"	2
C		R3-5L	LEFT TURN	30" X 36"	2
D		R3-5S	STRAIGHT-THROUGH	30" X 36"	2
E		R3-6SR	OPTIONAL RIGHT TURN	30" X 36"	2
F		R3-7L	LEFT LANE MUST TURN LEFT	30" X 30"	2
G		R10-11	NO TURN ON RED	30" X 36"	2
	H	R10-12FYA	LEFT TURNS YIELD ON FLASHING YELLOW ARROW	30" X 36"	1
	I	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN ←	9" X 12"	3
	J	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN →	9" X 12	5
K		R10-6L	STOP HERE ON RED	24" X 30"	1
L		R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"	1
M		R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"	2
N		R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	36" X 36"	1
O		R8-8	DO NOT STOP ON TRACKS	24" X 30"	1
P		R10-20	OPPOSING TRAFFIC HAS EXTENDED GREEN	30" X 36"	1
Q		R7-7A	NO PARKING ANYTIME	12" X 18"	4
R		SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"	1



WIRING DIAGRAM

[1] EXISTING JUNCTION BOX

1 EXISTING SIGNAL SUPPORT

3C/14 — EXISTING CABLE (NO. OF CONDUCTORS/SIZE AWG.)

* - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #9000-0700

** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

*** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

1 SIGNAL SUPPORT

1 SIGNAL HEAD

1 PEDESTRIAN PUSH BUTTON

a EMERGENCY PREEMPTION RECEIVER

a EMERGENCY PREEMPTION CONFIRMATION LIGHT

4 VIDEO DETECTOR

SPREAD SPECTRUM RADIO ATTENNA

3C/14 — CABLE (NO. OF CONDUCTORS/SIZE AWG.)

COORDINATION PLAN

PLAN	DAY OF WEEK S	M	T	W	T	F	S	TIME	CYCLE LENGTH	OFFSET	SPLIT ∅2	∅4	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	16	36	34	36	13	21
1		X	X	X	X	X		6:30 AM TO 9:30 AM	80	20	36	44	36	13	31
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	16	36	34	36	13	21
2		X	X	X	X	X		3:00 PM TO 6:00 PM	80	10	39	41	39	13	28
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	16	36	34	36	13	21
3	X						X	12:00 AM TO 12:00 PM	70	16	36	34	36	13	21

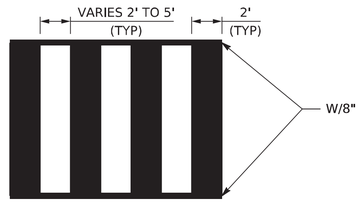
COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 6TH STREET (S.R. 4018) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.



VARY SPACING OF CROSSWALK LINES AS REQUIRED TO AVOID WHEEL PATHS

CROSSWALK DETAIL

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	7 OF 20

CITY OF ERIE

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BRADLEY J. MARSTELLER — ENGINEER — PE-060748

05/23/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND EAST TENTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:49:23 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

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SIGNS

PLAN SYMBOL	STANDARD	DESCRIPTION	SIZE	SQ FT EACH	QUANTITY	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS WITH AIRCRAFT WIRE ROPE 4936 0010 SF
R	R10-12FYA	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30" X 36"	7.5	1	7.5
	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 15"	0.9	3 ▲	
	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 15"	0.9	5 ▲	
		TOTAL				7.5

▲ INCIDENTAL TO ITEM 4956-0790, AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM

NOTE: FOR TABULATION OF PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLAN

ITEM NUMBER / UNIT	MISCELLANEOUS DESCRIPTION	QTY	LOCATION	REMARKS
4951 4020 EACH	PEDESTRIAN STUB POLE, TYPE B OR E	3	382+78 △8, 383+93 △9, 383+39 △10	
0955 1503 EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, THREE 12" SECTIONS	2	① ②	
0955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	8	③ ④ ⑤ ⑥ ⑧ ⑨ ⑩ ⑪	SEE SIGNAL NOTES
0955 3209 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	1	⑦	SEE SIGNAL NOTES
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲	SEE SIGNAL NOTES
4956 0790 EACH	AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM	8	[1] [2] [3] [4] [5] [6] [7] [8]	
9000 0007 EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM	1	△1 △2 △3 △4	
9000 0700 EACH	VIDEO DETECTOR, GRIDSMART	1	⬡1 ⬡2 ⬡3 ⬡4 ⬡5 ⬡6 ⬡7 ⬡8 ⬡9 ⬡10 ⬡11 ⬡12 ⬡13 ⬡14	COMPLETE INTERSECTION STOP BAR AND SR 4034 ADVANCE
9000 0795 EACH	MAST ARM MITIGATION DEVICE INSTALLATION	5	△1 △2 △3 △4 △6	
9000 1030 EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE)	1	CC1	

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION / LOCATION	2 INCH CONDUIT 0954 0012 LF	TRENCH AND BACKFILL, TYPE I 0954 0151 LF	TRENCH AND BACKFILL, TYPE II 0954 0152 LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR 0954 0201 LF
[4] TO △8	15	10		
[13] TO △9	18	12		
[17] TO △10	28	7	15	
TOTAL INTERSECTION				717
TOTAL	61	29	15	717

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	DESCRIPTION	ROUTE	STATION	SIDE	OFFSET	MAST ARM ARM "A" H	K	L	SIGNAL LOCATION M	N	O	P	SIGN LOCATION R	S	T	Y	W	LUMINAIRE ARM ARM "C" G	X	Z	PEDESTAL SHAFT H	SIGNALS M	N
△1	*TRAFFIC SIGNAL SUPPORT, 45' MAST ARM*	SR 4034	383+82	RT	50	17	8	45	39	22			43	16			0						
△2	*TRAFFIC SIGNAL SUPPORT, 55' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	SR 4034	382+86	RT	70	17	8	55	49	32			26	18			2	15		45			
△3	*TRAFFIC SIGNAL SUPPORT, 45' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	SR 4034	383+08	LT	38	17	8	45	39	28	17		36	13	5		90	15		77			
△4	*TRAFFIC SIGNAL SUPPORT, 60' MAST ARM*	SR 4034	384+17	LT	37	17	8	60	54	29			50	43	23								
△5	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	SR 4034	383+61	RT	74																14		10
△6	*TRAFFIC SIGNAL SUPPORT, 30' MAST ARM*	SR 4034	383+38	LT	90																		
△7	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	SR 4034	384+06	LT	83																14		10

* REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, FOR LETTER DESIGNATIONS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	8 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER BRADLEY J. MARSTELLER PE-060748

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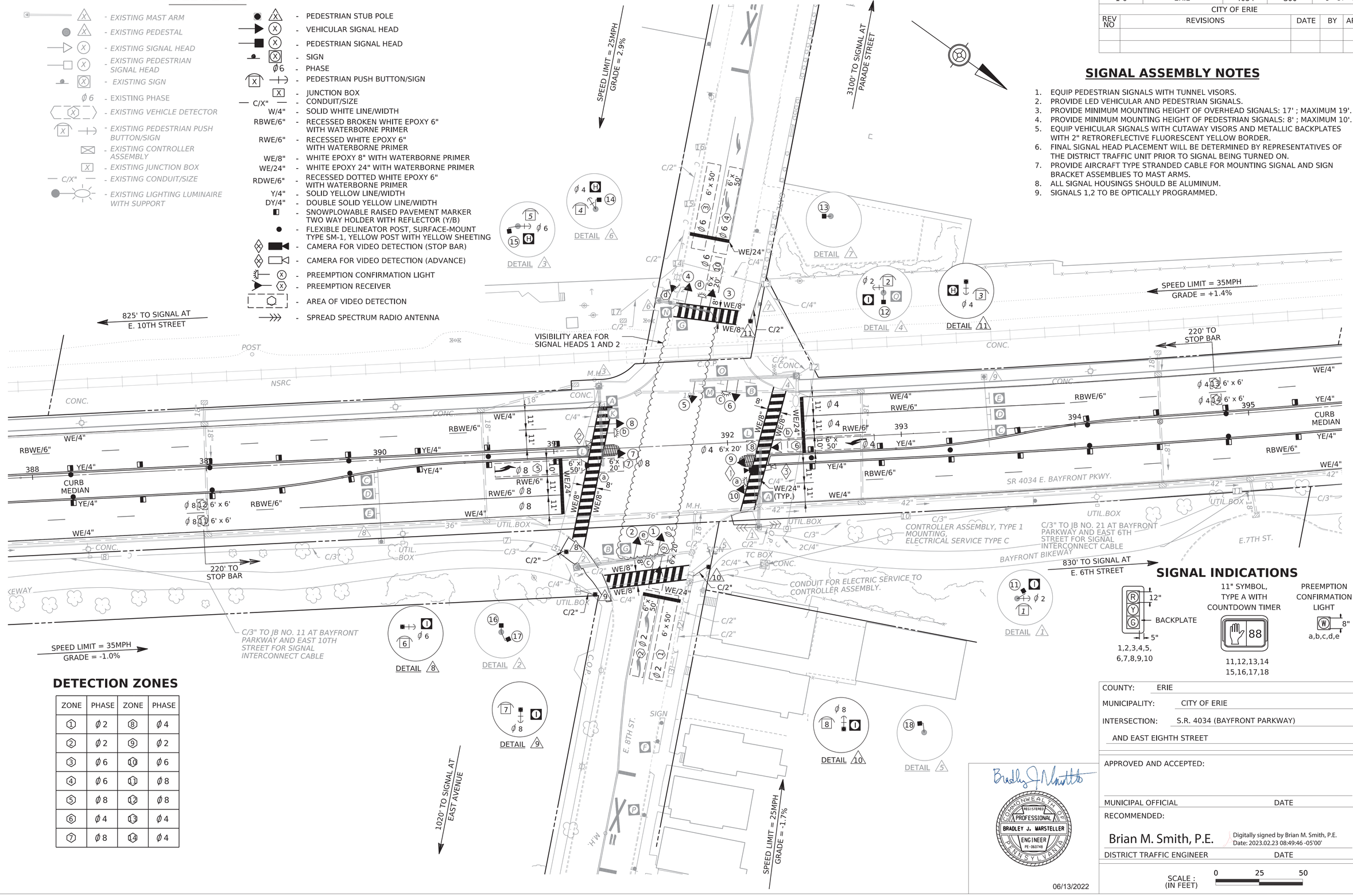
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	9 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- EXISTING MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISTING PHASE
- EXISTING VEHICLE DETECTOR
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- EXISTING LIGHTING LUMINAIRE WITH SUPPORT

- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- ϕ6 - PHASE
- PEDESTRIAN PUSH BUTTON/SIGN
- JUNCTION BOX
- C/X" - CONDUIT/SIZE
- W/4" - SOLID WHITE LINE/WIDTH
- RBWE/6" - RECESSED BROKEN WHITE EPOXY 6" WITH WATERBORNE PRIMER
- RWE/6" - RECESSED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- WE/8" - WHITE EPOXY 8" WITH WATERBORNE PRIMER
- WE/24" - WHITE EPOXY 24" WITH WATERBORNE PRIMER
- RDWE/6" - RECESSED DOTTED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- Y/4" - SOLID YELLOW LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)
- FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING
- CAMERA FOR VIDEO DETECTION (STOP BAR)
- CAMERA FOR VIDEO DETECTION (ADVANCE)
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER
- AREA OF VIDEO DETECTION
- SPREAD SPECTRUM RADIO ANTENNA



SIGNAL ASSEMBLY NOTES

1. EQUIP PEDESTRIAN SIGNALS WITH TUNNEL VISORS.
2. PROVIDE LED VEHICULAR AND PEDESTRIAN SIGNALS.
3. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
4. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
5. EQUIP VEHICULAR SIGNALS WITH CUTAWAY VISORS AND METALLIC BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
6. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
7. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. ALL SIGNAL HOUSINGS SHOULD BE ALUMINUM.
9. SIGNALS 1,2 TO BE OPTICALLY PROGRAMMED.

DETECTION ZONES

ZONE	PHASE	ZONE	PHASE
1	ϕ2	8	ϕ4
2	ϕ2	9	ϕ2
3	ϕ6	10	ϕ6
4	ϕ6	11	ϕ8
5	ϕ8	12	ϕ8
6	ϕ4	13	ϕ4
7	ϕ8	14	ϕ4

SIGNAL INDICATIONS

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST EIGHTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:49:46 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

06/13/2022

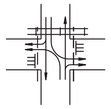
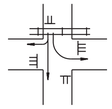
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SEE SHEET 5 OF 20

SEE SHEET 13 OF 20

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																					
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4	5	6	7	8	9		10	11	12			13	14	15	16		
1,2	G	G	G	Y	R	R	R	R	R		G	Y	R			R	R	R	R		FR
3,4	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		FR
5,6	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		FR
7,8	R	R	R	R	R	G	G	Y	R		R	R	R			G	G	Y	R		FR
9,10	R	R	R	R	R	G	G	Y	R		R	R	R			G	G	Y	R		FR
*11,12	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW			DW	DW	DW	DW		OFF
*15,16	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW			DW	DW	DW	DW		OFF
*13,14	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW			W	FD	DW	DW		OFF
*17,18	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW			W	FD	DW	DW		OFF
SIGNS	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	ON	ON			ON	ON	ON	ON		OFF
FIXED			4	3	3			4	3			4	3					4	3		
MINIMUM	7					12															
SEC./ACT.																					
MAX. INITIAL																					
PASSAGE	3					5															
TIME TO REDUCE																					
BEFORE REDUCTION																					
MIN. GAP																					
MAX I																①					
MAX II																①					
*PEDESTRIAN	7	24				7	13.5									②					
MEMORY	NL					MN					MN										

MEMORY:

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

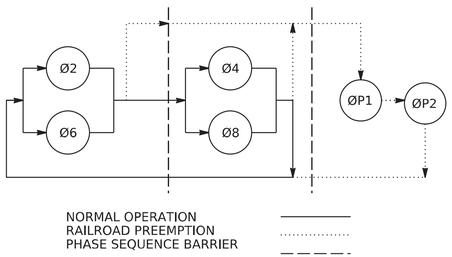
① DWELL UNTIL PREEMPTION TERMINATES.

② RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

DETECTOR NOTES:

DETECTION ZONES 7, 8, 9, AND 10 WILL HAVE A DELAY OF 4 SEC.

PHASING DIAGRAMS



NORMAL OPERATION
RAILROAD PREEMPTION
PHASE SEQUENCE BARRIER

RAILROAD PREEMPTION NOTES

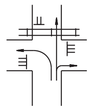
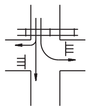
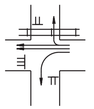
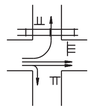
NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 4+8-INTERVAL 6, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 7,8&9 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 8&9 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 4+8-INTERVAL 7, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 8&9 AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 4+8-INTERVAL 8, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 9 AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 4+8-INTERVAL 9, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 10.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 10.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 13, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 14,15&16 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 15, IT TIMES OUT FOLLOWED BY TRAIN PHASE P2-INTERVALS 16 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 16, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF VIDEO DETECTORS ON EASTBOUND APPROACH E. 8TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISTING AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

EMERGENCY PREEMPTION PHASING MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2				PHASE 6				PHASE 4				PHASE 8			
																
	INTERVAL				INTERVAL				INTERVAL				INTERVAL			
SIGNAL	17	18	19		20	21	22		23	24	25		26	27	28	
1,2	R	R	R		G	Y	R		R	R	R		R	R	R	
3,4	R	R	R		G	Y	R		R	R	R		R	R	R	
5,6	G	Y	R		R	R	R		R	R	R		R	R	R	
7,8	R	R	R		R	R	R		G	Y	R		R	R	R	
9,10	R	R	R		R	R	R		R	R	R		G	Y	R	
*11,12	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
*15,16	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
*13,14	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
*17,18	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
SIGNS	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	
a	ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	
b	ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	
c	FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
d	ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
e	ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
FIXED	**	4	4		**	4	4		**	4	4		**	4	4	

SELECTIVE CLEARANCE

** FOR DURATION OF PREEMPTION OR A MAX OF 60 SECONDS.

NOTE:
IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION

EMERGENCY PREEMPTION NOTES:

1. CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES EAST 8TH ST, THE NORTHBOUND AND SOUTHBOUND APPROACHES OF S.R. 4034 (BAYFRONT PARKWAY) WITH A FLASHING FAIL-SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
2. THIS FAIL-SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
3. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTION PHASE SHALL FOLLOW. ONLY THE PHASES NOT POSING A YELLOW TRAP REMAIN GREEN (1+6, 2+5, 3+8, 4+7) WHEN GOVERN BY APPROACHING EMERGENCY VEHICLE.
4. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE ACTUATION OF APPROACHING EMERGENCY VEHICLE.
5. IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
6. IF ADDITIONAL PREEMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
7. UPON COMPLETION OF PREEMPTION PHASE 2, 4, 6, OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 4+8 INTERVAL 6 SHALL FOLLOW.
8. IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
9. IF THE PEDESTRIAN SIGNALS ARE ACTIVE UPON EMERGENCY VEHICLE DETECTION, THE WALK TIMES SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE FLASHING DW AND DW CLEARANCE INTERVALS, ACCORDINGLY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	10 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND EAST EIGHTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:50:12 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

05/23/2022

SCALE : (IN FEET) 0 25 50

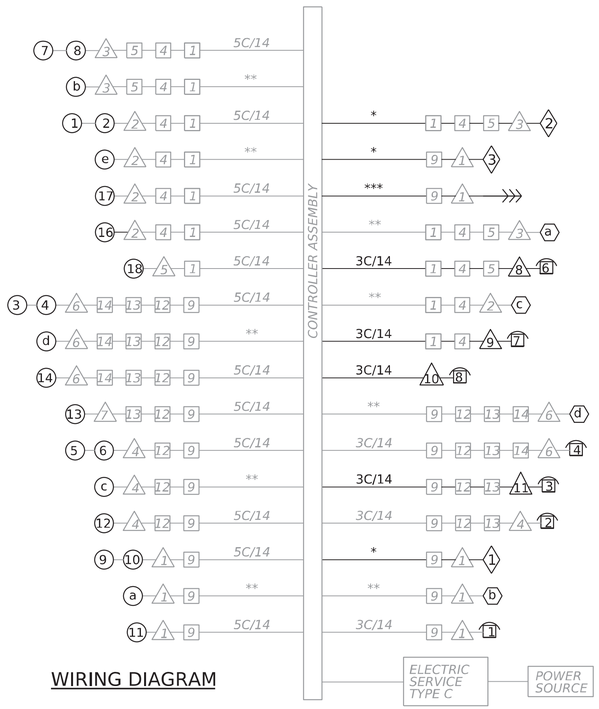
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	11 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

PLAN SYMBOL EXISTING	PLAN SYMBOL PROPOSED	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)	QTY
A		*D3-4*	*E 8TH ST*	*60" X 16"*	*2*
B		*D3-4*	*BAYFRONT PARKWAY*	*96" X 16"*	*2*
C		*R3-5L*	*LEFT TURN*	*30" X 36"*	*2*
D		*R3-5S*	*STRAIGHT-THROUGH*	*30" X 36"*	*2*
E		*R3-6SR*	*OPTIONAL RIGHT TURN*	*30" X 36"*	*2*
F		*R3-7L*	*LEFT LANE MUST TURN LEFT*	*30" X 30"*	*2*
G		*R10-11*	*NO TURN ON RED*	*30" X 36"*	*2*
	H	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN ←	9" X 12"	3
	I	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN →	9" X 12"	5
J		*R10-6L*	*STOP HERE ON RED*	*24" X 30"*	*1*
K		*R3-1*	*NO RIGHT TURN (INTERNALLY ILLUMINATED)*	*36" X 36"*	*1*
L		*R3-2*	*NO LEFT TURN (INTERNALLY ILLUMINATED)*	*36" X 36"*	*2*
M		*R5-1*	*DO NOT ENTER (INTERNALLY ILLUMINATED)*	*36" X 36"*	*1*
N		*R8-8*	*DO NOT STOP ON TRACKS*	*24" X 30"*	*1*
O		*R10-20*	*OPPOSING TRAFFIC HAS EXTENDED GREEN*	*30" X 36"*	*1*
P		*R7-7A*	*NO PARKING ANYTIME*	*12" X 18"*	*4*
Q		*SPECIAL*	*NO TURN ON RED WHEN OVERHEAD SIGN IS LIT*	*36" X 36"*	*1*



WIRING DIAGRAM

1 EXISTING JUNCTION BOX

1 EXISTING SIGNAL SUPPORT

3C/14 — EXISTING CABLE (NO. OF CONDUCTORS/SIZE AWG.)

* - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #9000-0700

** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

*** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

1 SIGNAL SUPPORT

1 SIGNAL HEAD

1 PEDESTRIAN PUSH BUTTON

a EMERGENCY PREEMPTION RECEIVER

a EMERGENCY PREEMPTION CONFIRMATION LIGHT

4 VIDEO DETECTOR

SPREAD SPECTRUM RADIO ATTENNA

3C/14 — CABLE (NO. OF CONDUCTORS/SIZE AWG.)

COORDINATION PLAN

PLAN	DAY OF WEEK S	M	T	W	T	F	S	TIME	CYCLE LENGTH	OFFSET	SPLIT ∅2	∅4	∅6	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	60	24	20	40	20	40
1		X	X	X	X	X		6:30 AM TO 9:30 AM	80	4	20	60	20	60
3		X	X	X	X	X		9:30 AM TO 3:00 PM	60	24	20	40	20	40
2		X	X	X	X	X		3:00 PM TO 6:00 PM	80	62	38	42	38	42
3		X	X	X	X	X		6:00 PM TO 12:00 AM	60	24	20	40	20	40
3	X						X	12:00 AM TO 12:00 PM	60	24	20	40	20	40

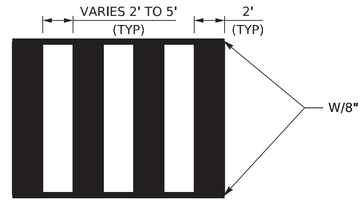
COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 6TH STREET (S.R. 4018) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.



VARY SPACING OF CROSSWALK LINES AS REQUIRED TO AVOID WHEEL PATHS

CROSSWALK DETAIL

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

05/23/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND EAST EIGHTH STREET

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:50:35 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

PLOTTED: 5/23/2022 2:53:47 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	12 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

PLAN SYMBOL	STANDARD	DESCRIPTION	SIZE	SQ FT EACH	QUANTITY
(H)	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 15"	0.9	3 ▲
(H)	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 15"	0.9	5 ▲
		TOTAL			

▲ INCIDENTAL TO ITEM 4956-0790, AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM

NOTE: FOR TABULATION OF PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLAN

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4951 4020 EACH	PEDESTRIAN STUB POLE, TYPE B OR E	4	391+04 (8); 391+20 (9); 391+86 (10); 392+17 (11)	
0955 1503 EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, THREE 12" SECTIONS	2	(1) (2)	SEE SIGNAL NOTES
0955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	8	(3) (4) (5) (6) (7) (8) (9) (10)	SEE SIGNAL NOTES
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	(11) (12) (13) (14) (15) (16) (17) (18)	SEE SIGNAL NOTES
4956 0790 EACH	AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM	8	[1] [2] [3] [4] [5] [6] [7] [8]	
9000 0007 EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM	1	△1 △2 △3 △4	
9000 0700 EACH	VIDEO DETECTOR, GRIDSMART	1	⬡1 ⬡2 ⬡3 ⬡4 ⬡5 ⬡6 ⬡7 ⬡8 ⬡9 ⬡10 ⬡11 ⬡12 ⬡13 ⬡14	COMPLETE INTERSECTION STOP BAR AND SR 4034 ADVANCE
9000 0795 EACH	MAST ARM MITIGATION DEVICE INSTALLATION	5	△1 △2 △3 △4 △6	
9000 1030 EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE)	1	CC1	

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT		TRENCH AND BACKFILL, TYPE I		TRENCH AND BACKFILL, TYPE II		SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	
LOCATION	0954 0012	LF	0954 0151	LF	0954 0152	LF	0954 0201	LF
[5] TO △8	11				5			
[4] TO △9	14		6		2			
[1] TO △10	15				9			
[13] TO △11	30		10		14			
TOTAL INTERSECTION							593	
TOTAL	70		16		30		593	

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	DESCRIPTION	ROUTE	STATION	SIDE	OFFSET	MAST ARM											LUMINAIRE ARM			PEDESTAL		
								ARM "A"									ARM "C"			SHAFT	SIGNALS	
						H	K	L	SIGNAL LOCATION M	N	O	P	SIGN LOCATION R	S	T	Y	W	G	X	Z	H	M	N
△1	*TRAFFIC SIGNAL SUPPORT, 45' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	*SR 4034*	*392+15*	*RT*	*49*	*17*	*8*	*45*	37	21			*41*	*18*			*0*	*15*		*0*			
△2	*TRAFFIC SIGNAL SUPPORT, 50' MAST ARM*	*SR 4034*	*391+10*	*RT*	*67*	*17*	*8*	*50*	45	32			*25*	*17*			*2*						
△3	*TRAFFIC SIGNAL SUPPORT, 45' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	*SR 4034*	*391+28*	*LT*	*36*	*17*	*8*	*45*	38	21			*41*	*17*	*11*		*90*	*15*		*0*			
△4	*TRAFFIC SIGNAL SUPPORT, 60' MAST ARM WITH LUMINAIRE ARM (30'MOUNTING HEIGHT)*	*SR 4034*	*392+41*	*LT*	*36*	*17*	*8*	*60*	57	32			*52*	*42*	*25*			*15*		*87*			
△5	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	*SR 4034*	*391+90*	*RT*	*63*																*14*		*10*
△6	*TRAFFIC SIGNAL SUPPORT, 30' MAST ARM*	*SR 4034*	*391+64*	*LT*	*84*	*17*	*8*	*30*															
△7	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	*SR 4034*	*392+23*	*LT*	*79*																*14*		*10*

* REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, FOR LETTER DESIGNATIONS

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

PLOTTED: 6/13/2022 9:37:39 AM

SEE SHEET 9 OF 20

SEE SHEET 17 OF 20

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	13 OF 20

CITY OF ERIE

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- EXISTING MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 EXISTING PHASE
- EXISTING VEHICLE DETECTOR
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- C/X" EXISTING CONDUIT/SIZE
- EXISTING LIGHTING LUMINAIRE WITH SUPPORT

- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- ϕ6 PHASE
- PEDESTRIAN PUSH BUTTON/SIGN
- JUNCTION BOX
- C/X" CONDUIT/SIZE
- W/4" SOLID WHITE LINE/WIDTH
- RBWE/6" RECESSED BROKEN WHITE EPOXY 6" WITH WATERBORNE PRIMER
- RWE/6" RECESSED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- WE/8" WHITE EPOXY 8" WITH WATERBORNE PRIMER
- WE/24" WHITE EPOXY 24" WITH WATERBORNE PRIMER
- RDWE/6" RECESSED DOTTED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- Y/4" SOLID YELLOW LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)
- FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING
- CAMERA FOR VIDEO DETECTION (STOP BAR)
- CAMERA FOR VIDEO DETECTION (ADVANCE)
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER
- AREA OF VIDEO DETECTION
- SPREAD SPECTRUM RADIO ANTENNA

DETECTION ZONES

ZONE	PHASE	ZONE	PHASE
1	ϕ5	12	ϕ5
2	ϕ2	13	ϕ1
3	ϕ2	14	ϕ8
4	ϕ2	15	ϕ8
5	ϕ1	16	ϕ4
6	ϕ6	17	ϕ4
7	ϕ6	18	ϕ2
8	ϕ3	19	ϕ2
9	ϕ7	20	ϕ2
10	ϕ3	21	ϕ6
11	ϕ7	22	ϕ6

SPEED LIMIT = 25MPH
GRADE = +0.3%

1500' TO SIGNAL AT ASH STREET

SPEED LIMIT = 35MPH
GRADE = +2.5%

830' TO SIGNAL AT E. 8TH STREET

SPEED LIMIT = 35MPH
GRADE = -1.0%

1250' TO SIGNAL AT EAST AVENUE

SPEED LIMIT = 25MPH
GRADE = -1.8%

2400' TO SIGNAL AT EAST BAY DRIVE

220' TO STOP BAR

220' TO STOP BAR

VISIBILITY AREA FOR SIGNAL HEADS 1, 2, AND 3.

SR 4034 (E. BAYFRONT PARKWAY) SURVEY ℄ CONSTR ℄

SR 4034 E. BAYFRONT PKWY.

WAYNE ST.

E. 6TH ST.

LEGAL R/W LINE FOR CITY STREET

LEGAL R/W LINE

CURB MEDIAN

BAYFRONT BIKEWAY

NSRC

CONC.

UTIL. BOX

RR BOX

POST

EVERGREEN

C.O.P.

M.H.

SIGN

C/3" TO JB NO. 11 AT BAYFRONT PARKWAY AND EAST 8TH STREET FOR SIGNAL INTERCONNECT CABLE

OVERHEAD INTERCONNECT TO CONTROLLED CABINET AT EAST AVENUE

CONDUIT FOR ELECTRIC SERVICE TO ⌀ CONTROLLER ASSEMBLY.

CONTROLLER ASSEMBLY, TYPE 1 MOUNTING, ELECTRICAL SERVICE TYPE C

TC BOX- 2C/4"

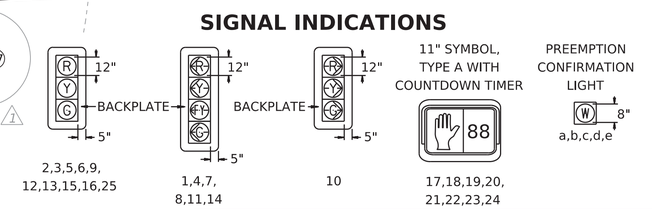
2 POSTS

DETAIL 1 · DETAIL 2 · DETAIL 3 · DETAIL 4 · DETAIL 5 · DETAIL 6 · DETAIL 7 · DETAIL 8 · DETAIL 9 · DETAIL 12 · DETAIL 13 · DETAIL 14

SIGNAL ASSEMBLY NOTES

1. EQUIP PEDESTRIAN SIGNALS WITH TUNNEL VISORS.
2. PROVIDE LED VEHICULAR AND PEDESTRIAN SIGNALS.
3. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
4. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
5. EQUIP VEHICULAR SIGNALS WITH CUTAWAY VISORS AND METALLIC BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
6. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
7. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. ALL SIGNAL HOUSINGS SHOULD BE ALUMINUM.
9. SIGNALS 1,2,3 TO BE OPTICALLY PROGRAMMED.

SIGNAL INDICATIONS



COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)

AND S.R. 4018 (EAST SIXTH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E.

Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 08:51:01 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

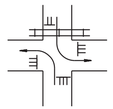
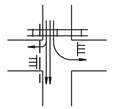
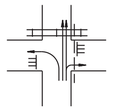
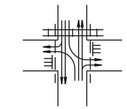
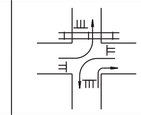
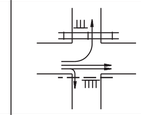
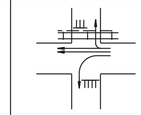
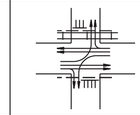
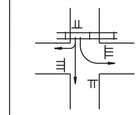
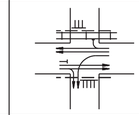
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

06/13/2022

SCALE : (IN FEET) 0 25 50

PLOTTED: 5/23/2022 2:54:00 PM

MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1+5	PHASE 1+6	PHASE 2+5	PHASE 2+6	PHASE 3+7	PHASE 3+8	PHASE 4+7	PHASE 4+8	RAILROAD PREEMPTION P1	RAILROAD PREEMPTION P2	EMERGENCY FLASHING
											
	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	INTERVAL	

SIGNAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
1	‹G–	‹G–	③ ‹Y–	③ ‹R–	‹G–	‹G–	‹G–	③ ‹Y–	③ ‹R–	‹R–	‹FY–	‹FY–	‹FY–	‹Y–	‹R–	‹FY–	‹FY–	‹FY–	‹Y–	‹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–	‹FR–
2,3	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	G	G	G	G	Y	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	FR
4	‹G–	‹Y–	③ ‹R–	③ ‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹FY–	‹FY–	‹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–	‹R–	‹FR–
5,6	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	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	FR
7,8	‹G–	‹Y–	‹R–	‹R–	–R›	–FY›	–FY›	–Y›	–R›	‹G–	‹G–	‹Y–	‹R–	‹R–	‹R–	‹FY–	‹FY–	‹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–	‹R–	‹FR–
9,25	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	G	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	FR
10	–R›	–R›	–R›	–R›	–R›	–R›	–R›	–R›	–R›	–G›	–G›	–G›	–Y›	–R›	–R›	–FY›	–FY›	–Y›	–R›	–R›	–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›	–FR›
11	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	R	‹G–	④ ‹Y–	④ ‹R–	‹R–	‹FY–	‹FY–	‹Y–	‹R–	‹G–	‹G–	‹G–	④ ‹Y–	④ ‹R–	‹R–	‹FY–	‹FY–	‹Y–	‹R–	R	R	R	‹FY–	‹FY–	‹Y–	‹R–	‹FR–
12,13	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	R	G	G	G	Y	R	G	G	G	Y	R	R	R	R	G	G	Y	R	FR
14	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹R–	‹G–	④ ‹Y–	④ ‹R–	‹G–	‹G–	‹G–	④ ‹Y–	④ ‹R–	‹R–	‹FY–	‹FY–	‹Y–	‹R–	‹R–	‹FY–	‹FY–	‹Y–	‹R–	R	R	R	‹R–	‹R–	‹R–	‹R–	‹FR–
15,16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	G	G	Y	R	FR
*17,18	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	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
*21,22	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW	DW	DW	W	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	OFF
*19,20	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	W	W	FD	DW	DW	W	W	FD	DW	DW	DW	DW	DW	W	FD	DW	DW	OFF
*23,24	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW	W	FD	DW	DW	OFF
SIGN	OFF	OFF	OFF	OFF	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF
SIGN	ON	ON	ON	ON	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	ON	ON	ON	ON	ON	ON	ON	ON	ON	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
FIXED	X	4	3	3	2	X	4	3	2	X	4	3	2	X	4	3	3	X	4	3	2	X	4	3	2	X	4	3	2	X	4	3	2	X	4	3	X	4	3	X	4	3				
MINIMUM	7				7				7				10					7			7			7			7			7			12												
SEC./ACT.																																														
MAX. INITIAL																																														
PASSAGE	3				3				3				3					3			3			3			3			3			5												
TIME TO REDUCE																																														
BEFORE REDUCTION																																														
MIN. GAP																																														
MAX I																																												①			
MAX II																																												①			
* PEDESTRIAN					7	28			7	22.5			7	28										7	23.5		7	17.5			7	23.5											②			
MEMORY	NL				NL				NL				MN					NL						NL			NL				MN														

MEMORY:
MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① DWELL UNTIL PREEMPTION TERMINATES.

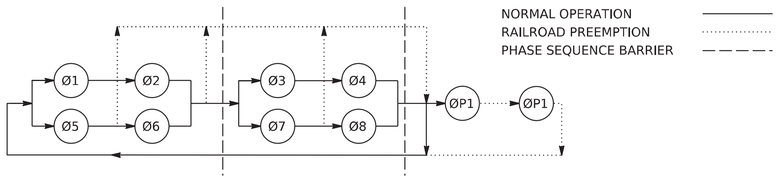
② RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

③ ‹FY– IF FOLLOWED BY PHASE 4+8

④ ‹FY– IF FOLLOWED BY PHASE 4+8

DETECTOR NOTES:
DETECTION ZONES 10, 11, 12, AND 13 WILL A HAVE DELAY OF 4 SEC.

PHASING DIAGRAM



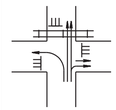
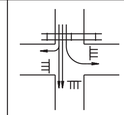
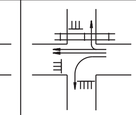
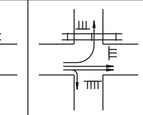
EMERGENCY PREEMPTION NOTES:

1. CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES EAST 6TH ST, THE NORTHBOUND AND SOUTHBOUND APPROACHES OF S.R. 4034 (BAYFRONT PARKWAY) WITH A FLASHING FAIL-SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
2. THIS FAIL-SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
3. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTION PHASE SHALL FOLLOW. ONLY THE PHASES NOT POSING A YELLOW TRAP REMAIN GREEN (1+6, 2+5, 3+8, 4+7) WHEN GOVERN BY APPROACHING EMERGENCY VEHICLE.
4. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE ACTUATION OF APPROACHING EMERGENCY VEHICLE.
5. IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
6. IF ADDITIONAL PREEMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
7. UPON COMPLETION OF PREEMPTION PHASE 2, 4, 6, OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 4+8 INTERVAL 34 SHALL FOLLOW.
8. IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
9. IF THE PEDESTRIAN SIGNALS ARE ACTIVE UPON EMERGENCY VEHICLE DETECTION, THE WALK TIMES SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE FLASHING DW AND DW CLEARANCE INTERVALS, ACCORDINGLY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	14 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

EMERGENCY PREEMPTION PHASING MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2	PHASE 6	PHASE 4	PHASE 8
				
	INTERVAL	INTERVAL	INTERVAL	INTERVAL

SIGNAL		46	47	48		49	50	51		52	53	54		55	56	57
1	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	‹G–	‹Y–	‹R–	SELECTIVE CLEARANCE	‹R–	‹R–	‹R–	SELECTIVE CLEARANCE	‹R–	‹R–	‹R–
2,3		R	R	R		G	Y	R		R	R	R		R	R	R
4		R	R	R		‹G–	‹Y–	‹R–		‹R–	‹R–	‹R–		‹R–	‹R–	‹R–
5,6		R	R	R		G	Y	R		R	R	R		R	R	R
7,8		‹G–	‹Y–	‹R–		‹R–	‹R–	‹R–		‹R–	‹R–	‹R–		‹R–	‹R–	‹R–
9,25		G	Y	R		R	R	R		R	R	R		R	R	R
10		–G›	–Y›	–R›		–R›	–R›	–R›		–R›	–R›	–R›		–R›	–R›	–R›
11		‹R–	‹R–	‹R–		‹G–	‹Y–	‹R–		‹G–	‹Y–	‹R–		‹R–	‹R–	‹R–
12,13		R	R	R		R	R	R		R	R	R		G	Y	R
14		‹R–	‹R–	‹R–		‹R–	‹R–	‹R–		‹R–	‹R–	‹R–		‹G–	‹Y–	‹R–
15,16		R	R	R		R	R	R		R	R	R		R	R	R
*17,18		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*21,22		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*19,20		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
*23,24		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW
SIGN		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF
SIGN		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF
a		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF
b		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF
c		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF
d,e		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF
FIXED		**	4	4		**	4	4		**	4	4		**	4	4

** FOR DURATION OF PREEMPTION OR A MAX OF 60 SECONDS.

NOTE:
IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND S.R. 4018 (EAST SIXTH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 08:51:24 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

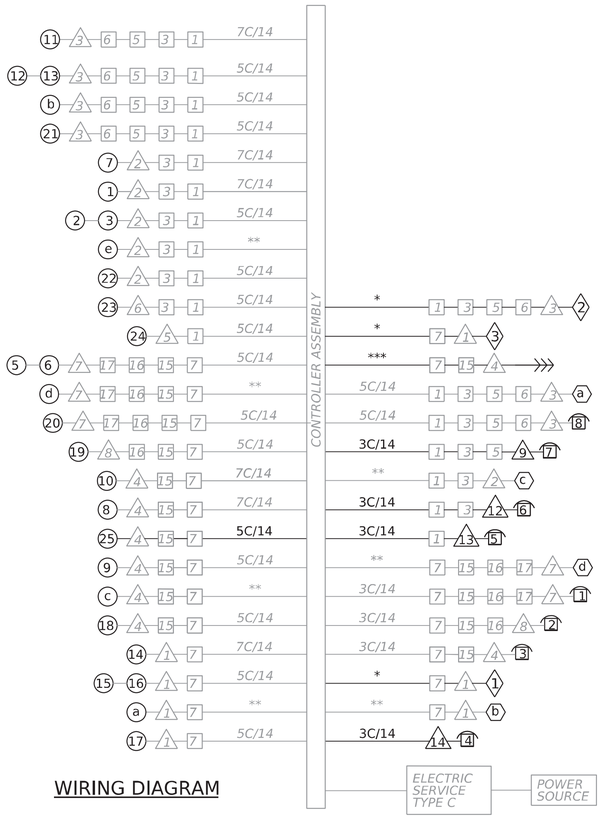
05/23/2022

SCALE : (IN FEET) 0 25 50

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SIGNS

PLAN SYMBOL EXISTING	PLAN SYMBOL PROPOSED	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)	QTY
A		*D3-4*	*E 6TH ST*	*60" X 16"*	*2*
B		*D3-4*	*BAYFRONT PARKWAY*	*96" X 16"*	*2*
C		*R3-5L*	*LEFT TURN*	*30" X 36"*	*4*
D		*R3-5S*	*STRAIGHT-THROUGH*	*30" X 36"*	*5*
E		*R3-6SR*	*OPTIONAL RIGHT TURN*	*30" X 36"*	*3*
F		*R3-5R*	*RIGHT TURN*	*30" X 36"*	*1*
G		*R10-11*	*NO TURN ON RED*	*30" X 36"*	*2*
	H	R10-12FYA	LEFT TURNS YIELD ON FLASHING YELLOW ARROW	30" X 36"	6
	I	R10-3BL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN ←	9" X 12"	4
	J	R10-3BR	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER SIGN →	9" X 12	4
K		*R10-6L*	*STOP HERE ON RED*	*24" X 30"*	*2*
L		*R10-10R*	*RIGHT TURN SIGNAL*	*30" X 36"*	*1*
M		*R3-1*	*NO RIGHT TURN (INTERNALLY ILLUMINATED)*	*36" X 36"*	*1*
N		*R3-2*	*NO LEFT TURN (INTERNALLY ILLUMINATED)*	*36" X 36"*	*2*
O		*R5-1*	*DO NOT ENTER (INTERNALLY ILLUMINATED)*	*30" X 36"*	*1*
P		*W11-2A*	*PEDESTRIAN CROSSING*	*30" X 30"*	*1*
Q		*R7-7A*	*YIELD TO PEDS IN CROSSWALKS*	*24" X 18"*	*1*
R		*SPECIAL*	*NO TURN ON RED WHEN OVERHEAD SIGN IS LIT*	*36" X 36"*	*1*



WIRING DIAGRAM

1 EXISTING JUNCTION BOX

1 EXISTING SIGNAL SUPPORT

3C/14 — EXISTING CABLE (NO. OF CONDUCTORS/SIZE AWG.)

* - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #9000-0700

** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

*** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

1 SIGNAL SUPPORT

1 SIGNAL HEAD

1 PEDESTRIAN PUSH BUTTON

a EMERGENCY PREEMPTION RECEIVER

a EMERGENCY PREEMPTION CONFIRMATION LIGHT

4 VIDEO DETECTOR

SPREAD SPECTRUM RADIO ATTENNA

3C/14 — CABLE (NO. OF CONDUCTORS/SIZE AWG.)

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION PLAN

PLAN	DAY OF WEEK S	M	T	W	T	F	S	TIME	CYCLE LENGTH	OFFSET	SPLIT ∅1	∅2	∅3	∅4	∅5	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	60	56	12	15	12	21	12	15	15	18
1		X	X	X	X	X		6:30 AM TO 9:30 AM	80	48	12	20	17	31	12	20	21	27
3		X	X	X	X	X		9:30 AM TO 3:00 PM	60	56	12	15	12	21	12	15	15	18
2		X	X	X	X	X		3:00 PM TO 6:00 PM	80	48	13	24	12	31	12	25	24	19
3		X	X	X	X	X		6:00 PM TO 12:00 AM	60	56	12	15	12	21	12	15	15	18
3	X						X	12:00 AM TO 12:00 PM	60	56	12	15	12	21	12	15	15	18

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THIS INTERSECTION.

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

CONTROLLER TO OPERATE IN FREE MODE (INDEPENDENTLY) IN THE EVENT OF FAILURE OF THE COORDINATION SYSTEM.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	15 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 3+7-INTERVAL 21, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 3+7-INTERVALS 22&23 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 3+7-INTERVAL 22, IT TIMES OUT FOLLOWED BY PHASE 3+7-INTERVAL 23 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 3+7-INTERVAL 23, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 39.
-PHASE 4+8-INTERVAL 34, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 35,36,37&38 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 37&38 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 4+8-INTERVAL 35, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 36,37&38 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 4+8-INTERVAL 36, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 37&38 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 4+8-INTERVAL 37, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 38 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 4+8-INTERVAL 38, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 39.
-PHASE 1+5-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 1+5-INTERVALS 2,3&4 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 1+5-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 1+5-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 4 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 1+5-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 15, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 16,17,18,19&20 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 19,20 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 16, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 17,18,19&20 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 17, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 18,19&20 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 18, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 19&20 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 19, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 20 AND TRAIN PHASE P1-INTERVAL 39.
-PHASE 2+6-INTERVAL 20, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 39.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 42, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 43,44&45 BEFORE RETURNING TO PHASE 2+6-INTERVAL 15 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 43, IT TIMES OUT FOLLOWED BY TRAIN PHASE P2-INTERVALS 44&45 BEFORE RETURNING TO PHASE 2+6-INTERVAL 15 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 44, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 45 BEFORE RETURNING TO PHASE 2+6-INTERVAL 15 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 45, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 15 AND NORMAL OPERATION.

OPERATION OF VIDEO DETECTORS ON EASTBOUND APPROACH E. 6TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISTING AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

05/23/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)

AND S.R. 4018 (EAST SIXTH STREET)

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:51:44 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

PLOTTED: 5/23/2022 2:54:02 PM

SIGNS

PLAN SYMBOL	STANDARD	DESCRIPTION	SIZE	SQ FT EACH	QUANTITY	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS WITH AIRCRAFT WIRE ROPE 4936 0010 SF
H	R10-12FYA	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30" X 36"	7.5	6	45
	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 15"	0.9	4 ▲	▲
	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 15"	0.9	4 ▲	▲
		TOTAL				45

▲ INCIDENTAL TO ITEM 4956-0790, AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM
NOTE: FOR TABULATION OF PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLAN

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

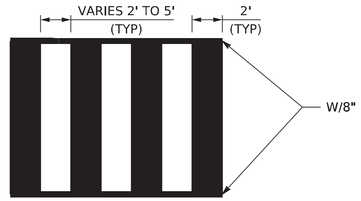
DESCRIPTION	2 INCH CONDUIT		TRENCH AND BACKFILL, TYPE I		TRENCH AND BACKFILL, TYPE II		SIGNAL CABLE, 14 AWG, 3 CONDUCTOR		SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	
LOCATION	0954 0012	LF	0954 0151	LF	0954 0152	LF	0954 0201	LF	0954 0202	LF
5 TO 9	11		3		2					
3 TO 12	22		15		1					
1 TO 13	36		30							
1 TO 14	18		7		5					
TOTAL INTERSECTION							502		248	
TOTAL	87		55		8		502		248	

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	16 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

MISCELLANEOUS

ITEM NUMBER / UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4951 4020 EACH	PEDESTRIAN STUB POLE, TYPE B OR E	4	399+10 9; 399+25 12; 400+23 13; 400+50 14	
0955 1503 EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, THREE 12" SECTIONS	2	(2) (3)	
0955 1504 EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, FOUR 12" SECTIONS	1	(1)	
0955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	8	(5) (6) (9) (10) (12) (13) (15) (16) (25)	SEE SIGNAL NOTES
0955 3209 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	6	(4) (7) (8) (11) (14)	SEE SIGNAL NOTES
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	(17) (18) (19) (20) (21) (22) (23) (24)	SEE SIGNAL NOTES
4956 0790 EACH	AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM	8	(1) (2) (3) (4) (5) (6) (7) (8)	
9000 0007 EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM	1	1 2 3 4	
9000 0700 EACH	VIDEO DETECTOR, GRIDSMART	1	(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11)(12)(13)(14)(15)(16)(17)	COMPLETE INTERSECTION STOP BAR AND SR 4034 ADVANCE
9000 0795 EACH	MAST ARM MITIGATION DEVICE INSTALLATION	5	1 2 3 4 7	
9000 1030 EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE)	1	CC1	



VARY SPACING OF CROSSWALK LINES AS REQUIRED TO AVOID WHEEL PATHS

CROSSWALK DETAIL

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	DESCRIPTION	ROUTE	STATION	SIDE	OFFSET	MAST ARM ARM "A" H	K	L	SIGNAL LOCATION M	N	O	P	SIGN LOCATION R	S	T	Y	W	LUMINAIRE ARM ARM "C" G	X	Z	PEDESTAL SHAFT H	SIGNALS M	N
1	*TRAFFIC SIGNAL SUPPORT, 60' MAST ARM*	SR 4034	400+54	RT	64	17	8	60	55	37	26		58	46	21		0						
2	*TRAFFIC SIGNAL SUPPORT, 75' MAST ARM*	SR 4034	399+18	RT	71	17	8	75	71	57	44	61	65	62	39	32	2						
3	*TRAFFIC SIGNAL SUPPORT, 50' MAST ARM*	SR 4034	399+41	LT	40	17	8	50	42	33	16		45	38	12	5	90						
4	*TRAFFIC SIGNAL SUPPORT, 75' MAST ARM*	SR 4034	400+83	LT	31			75	73	58	43	36	68	48	32	24							
5	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	SR 4034	400+29	RT	86																14		10
6	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	SR 4034	399+21	RT	103																14		10
7	*TRAFFIC SIGNAL SUPPORT, 45' MAST ARM*	SR 4034	399+73	LT	79	17	8	45															
8	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	SR 4034	400+52	LT	82																14		10

* REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, FOR LETTER DESIGNATIONS

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

PLOTTED: 5/23/2022 2:54:13 PM

SEE SHEET 13 OF 20

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	17 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

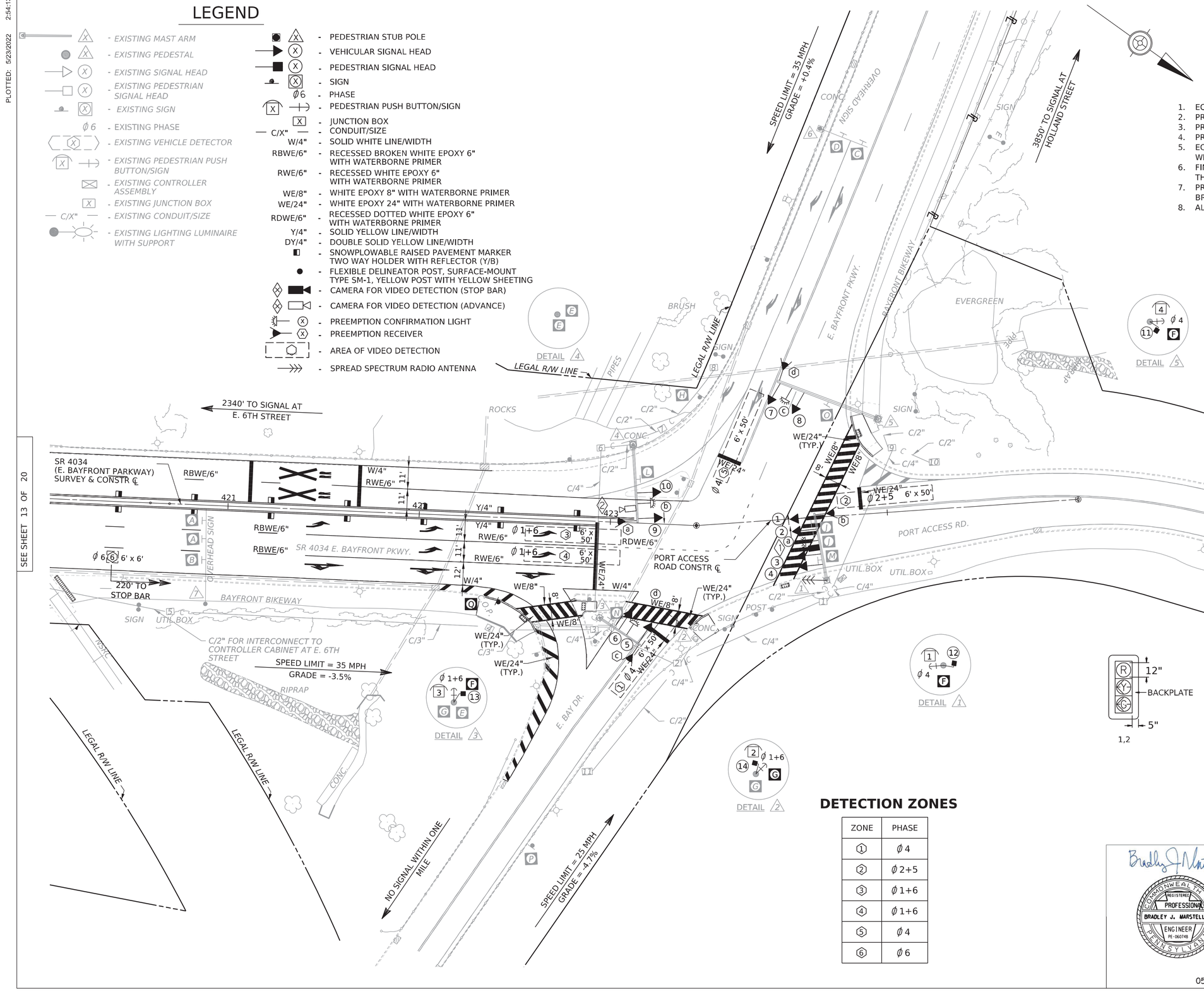
LEGEND

- EXISTING MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISTING PHASE
- EXISTING VEHICLE DETECTOR
- EXISTING PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- EXISTING LIGHTING LUMINAIRE WITH SUPPORT

- PEDESTRIAN STUB POLE
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- ϕ6 - PHASE
- PEDESTRIAN PUSH BUTTON/SIGN
- JUNCTION BOX
- C/X" - CONDUIT/SIZE
- W/4" - SOLID WHITE LINE/WIDTH
- RBWE/6" - RECESSED BROKEN WHITE EPOXY 6" WITH WATERBORNE PRIMER
- RWE/6" - RECESSED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- WE/8" - WHITE EPOXY 8" WITH WATERBORNE PRIMER
- WE/24" - WHITE EPOXY 24" WITH WATERBORNE PRIMER
- RDWE/6" - RECESSED DOTTED WHITE EPOXY 6" WITH WATERBORNE PRIMER
- Y/4" - SOLID YELLOW LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)
- FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-1, YELLOW POST WITH YELLOW SHEETING
- CAMERA FOR VIDEO DETECTION (STOP BAR)
- CAMERA FOR VIDEO DETECTION (ADVANCE)
- PREEMPTION CONFIRMATION LIGHT
- PREEMPTION RECEIVER
- AREA OF VIDEO DETECTION
- SPREAD SPECTRUM RADIO ANTENNA

SIGNAL ASSEMBLY NOTES

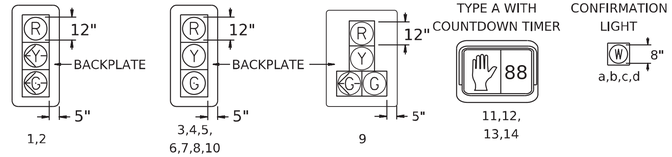
1. EQUIP PEDESTRIAN SIGNALS WITH TUNNEL VISORS.
2. PROVIDE LED VEHICULAR AND PEDESTRIAN SIGNALS.
3. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
4. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
5. EQUIP VEHICULAR SIGNALS WITH CUTAWAY VISORS AND METALLIC BACKPLATES WITH 2" RETROREFLECTIVE FLUORESCENT YELLOW BORDER.
6. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
7. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. ALL SIGNAL HOUSINGS SHOULD BE ALUMINUM.



DETECTION ZONES

ZONE	PHASE
1	ϕ4
2	ϕ2+5
3	ϕ1+6
4	ϕ1+6
5	ϕ4
6	ϕ6

SIGNAL INDICATIONS



COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND PORT ACCESS ROAD AND EAST BAY DRIVE

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:52:05 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

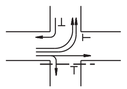
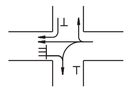
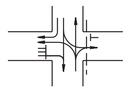
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRADLEY J. MARSTELLER ENGINEER PE-060748

05/23/2022

SCALE : (IN FEET) 0 25 50

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MOVEMENT, PHASING, AND SEQUENCE CHART

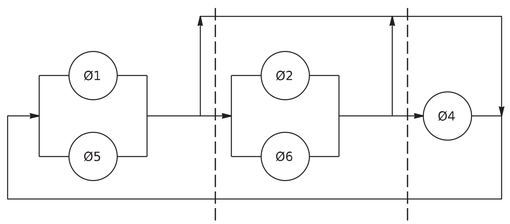
	PHASE 1+6					PHASE 2+5					PHASE 4					EMERGENCY FLASHING
																
	INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4		5	6	7			8	9	10	11		
1,2	↚G-	↚G-	↚Y-	R		R	R	R			R	R	R	R		FR
3,4	G	G	Y	R		R	R	R			R	R	R	R		FR
5,6	R	R	R	R		R	R	R			G	G	Y	R		FR
7,8	R	R	R	R		R	R	R			G	G	Y	R		FR
9	R	R	R	R		↚G/G	Y	R			R	R	R	R		FR
10	R	R	R	R		G	Y	R			R	R	R	R		FR
11,12	DW	DW	DW	DW		DW	DW	DW			DW W*	DW FD*	DW	DW		OFF
13,14	DW W*	DW FD*	DW	DW		DW	DW	DW			DW	DW	DW	DW		OFF
FIXED	X					X					X					
MINIMUM	12					7					7					
SEC./ACT.																
MAX. INITIAL																
PASSAGE	5					3					3					
TO REDUCE																
BEFORE RED.																
MIN. GAP																
MAX I																
MAX II																
MAX III																
*PEDESTRIAN	7	26									7	24.5				
MEMORY	MN					NL					NL					

MEMORY:

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

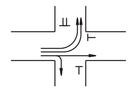
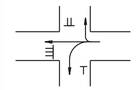
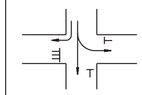
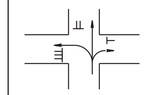
* UPON PEDESTRIAN ACTIVATION ONLY.

PHASING DIAGRAM



NORMAL OPERATION ————
PHASE SEQUENCE BARRIER — — — —

EMERGENCY PREEMPTION PHASING MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1				PHASE 2				PHASE 3				PHASE 4			
																
	INTERVAL				INTERVAL				INTERVAL				INTERVAL			
SIGNAL		12	13	14		15	16	17		18	19	20		21	22	23	
1,2	SELECTIVE CLEARANCE	↚G-	↚Y-	↚R-	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	
3,4		G	G	Y		R	R	R		R	R	R		R	R	R	
5,6		R	R	R		R	R	R		G	G	Y		R	R	R	
7,8		R	R	R		R	R	R		R	R	R		G	Y	R	
9		R	R	R		↚G-	↚Y-	↚R-		R	R	R		R	R	R	
10		R	R	R		G	Y	R		R	R	R		R	R	R	
11,12		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
13,14		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW	
a		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
b		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF	
c		ON	OFF	OFF		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF	
d		ON	OFF	OFF		ON	OFF	OFF		FLA	OFF	OFF		ON	OFF	OFF	
FIXED																	

** FOR DURATION OF PREEMPTION OR A MAX OF 60 SECONDS.

NOTE:
IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION

EMERGENCY PREEMPTION NOTES:

1. CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE EASTBOUND APPROACH OF EAST BAYFRONT PARKWAY, WESTBOUND APPROACH EAST BAY DRIVE, THE NORTHBOUND APPROACH OF PORT ACCES ROAD AND SOUTHBOUND APPROACHES OF S.R. 4034 (BAYFRONT PARKWAY) WITH A FLASHING FAIL-SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
2. THIS FAIL-SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
3. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTION PHASE SHALL FOLLOW. ONLY THE PHASES NOT POSING A YELLOW TRAP REMAIN GREEN (1+6, 2+5, 3+8, 4+7) WHEN GOVERN BY APPROACHING EMERGENCY VEHICLE.
4. THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE ACTUATION OF APPROACHING EMERGENCY VEHICLE.
5. IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
6. IF ADDITIONAL PREEMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
7. UPON COMPLETION OF PREEMPTION PHASE 2, 4, 6, OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 4 INTERVAL 8 SHALL FOLLOW.
8. IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
9. IF THE PEDESTRIAN SIGNALS ARE ACTIVE UPON EMERGENCY VEHICLE DETECTION, THE WALK TIMES SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE FLASHING DW AND DW CLEARANCE INTERVALS, ACCORDINGLY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	18 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLIT				
	S	M	T	W	T	F	S				∅1	∅2	∅4	∅5	∅6
3		X	X	X	X	X		12:00 AM TO 6:30 AM	60	40	25	13	22	13	25
1		X	X	X	X	X		6:30 AM TO 9:30 AM	80	26	39	13	28	13	39
3		X	X	X	X	X		9:30 AM TO 3:00 PM	60	40	25	13	22	13	25
2		X	X	X	X	X		3:00 PM TO 6:00 PM	80	42	35	16	29	16	35
3		X	X	X	X	X		6:00 PM TO 12:00 AM	60	40	25	13	22	13	25
3	X						X	12:00 AM TO 12:00 PM	60	40	25	13	22	13	25

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 6TH STREET (S.R. 4018) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

Bradley J. Marsteller

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

05/23/2022

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND PORT ACCESS ROAD AND EAST BAY DRIVE

APPROVED AND ACCEPTED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:52:27 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

SCALE : (IN FEET) 0 25 50

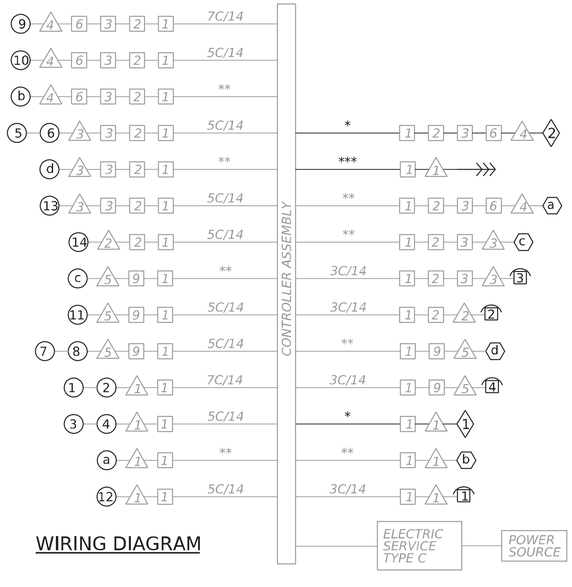
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	19 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

PLAN SYMBOL		NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)	QTY
EXISTING	PROPOSED				
A		*R3-5L*	*LEFT TURN*	*30" X 36"*	*2*
B		*R3-6SR*	*OPTIONAL RIGHT TURN*	*30" X 36"*	*1*
C		*R3-6SL*	*OPTIONAL LEFT TURN*	*30" X 36"*	*1*
D		*R3-5R*	*RIGHT TURN*	*30" X 36"*	*1*
E		*R9-3*	*NO PEDESTRIAN CROSSING*	*18" X 18"*	*4*
	F	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 12"	3
	G	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 12"	1
H		*R1-1A*	*RIGHT LANE KEEP MOVING*	*24" X 30"*	*1*
I		*W4-3R*	*RIGHT ADDED LANE*	*48" X 48"*	*1*
J		*R10-10L*	*LEFT TURN SIGNAL*	*30" X 36"*	*2*
K		*R1-2*	*YIELD*	*36" X 36"*	*1*
L		*D3-5*	*← E BAY DR/BAYFRONT PKWY →*	*96" X 28"*	*1*
M		*D3-5*	*← BAYFRONT PKWY/E BAY DR →*	*96" X 28"*	*1*
N		*D3-5*	*← PORT ACCESS RD/BAYFRONT PKWY →*	*96" X 28"*	*1*
O		*D3-5*	*← BAYFRONT PKWY/PORT ACCESS RD →*	*96" X 28"*	*1*
P		*W3-3*	*SIGNAL AHEAD*	*36" X 36"*	*3*
	Q	R1-5L	YIELD HERE TO PEDESTRIAN WITH LEFT ARROW	36" X 36"	1



WIRING DIAGRAM

1 EXISTING JUNCTION BOX

1 EXISTING SIGNAL SUPPORT

3C/14 — EXISTING CABLE (NO. OF CONDUCTORS/SIZE AWG.)

* - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #9000-0700

** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

*** - AS PER MANUFACTURER'S SPECIFICATIONS CABLE INCIDENTAL TO #0956-0802

1 SIGNAL SUPPORT

1 SIGNAL HEAD

F PEDESTRIAN PUSH BUTTON

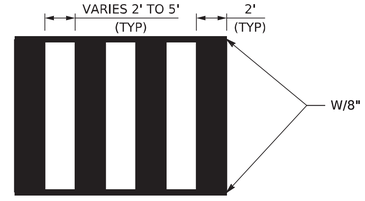
a EMERGENCY PREEMPTION RECEIVER

a EMERGENCY PREEMPTION CONFIRMATION LIGHT

4 VIDEO DETECTOR

SPREAD SPECTRUM RADIO ATTENNA

3C/14 — CABLE (NO. OF CONDUCTORS/SIZE AWG.)



VARY SPACING OF CROSSWALK LINES AS REQUIRED TO AVOID WHEEL PATHS

CROSSWALK DETAIL

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

PLOTTED: 5/23/2022 2:54:15 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	20 OF 20
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

PLAN SYMBOL	STANDARD	DESCRIPTION	SIZE	SQ FT EACH	QUANTITY	POST MOUNTED SIGNS, TYPE B 0931 0001 SF
F	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" X 15"	0.9	3 ▲	
G	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" X 15"	0.9	1 ▲	
O	R1-5L	YIELD HERE TO PEDESTRIAN WITH LEFT ARROW	36" X 36"	9	1	9
		TOTAL				9

▲ INCIDENTAL TO ITEM 4956-0790, AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM

NOTE: FOR TABULATION OF PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLAN

ITEM NUMBER / UNIT	MISCELLANEOUS DESCRIPTION	QTY	LOCATION	REMARKS
0955 3208 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	9	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑩	SEE SIGNAL NOTES
0955 3209 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	1	⑨	SEE SIGNAL NOTES
0955 3722 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	4	⑪ ⑫ ⑬ ⑭	SEE SIGNAL NOTES
4956 0790 EACH	AUDIBLE PEDESTRIAN SIGNALS 2 WIRE SYSTEM	4	① ② ③ ④	
9000 0007 EACH	RADIO TRAFFIC SYSTEMS PREEMPTION SYSTEM	1	△1 △3 △4 △5	
9000 0700 EACH	VIDEO DETECTOR, GRIDSMART	1	① ② ③ ④ ⑤ ⑥	COMPLETE INTERSECTION STOP BAR
9000 0795 EACH	MAST ARM MITIGATION DEVICE INSTALLATION	4	△1 △3 △4 △5	
9000 1030 EACH	NEMA TS-2 TYPE 1 CONTROLLER (ECONOLITE)	1	CC1	

TRAFFIC SIGNAL SUPPORTS*

STRUCTURE NUMBER	DESCRIPTION	ROUTE	STATION	SIDE	OFFSET	MAST ARM ARM "A" H	K	L	SIGNAL LOCATION M	N	O	P	SIGN LOCATION R	S	T	Y	W	LUMINAIRE ARM ARM "C" G	X	Z	PEDESTAL SHAFT H	SIGNALS M	N
△1	*TRAFFIC SIGNAL SUPPORT, 35' MAST ARM*	*PORT ACCESS*	*10+66*	*RT*	*33*	*17*	*8*	*35*	32	25	12	7	*29*	*22*	*9*		*0*						
△2	*TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL*	*SR 4034*	*423+45*	*RT*	*59*												*2*				*14*		*10*
△3	*TRAFFIC SIGNAL SUPPORT, 25' MAST ARM*	*SR 4034*	*422+96*	*LT*	*50*	*17*	*8*	*25*	19	9			*3*				*90*						
△4	*TRAFFIC SIGNAL SUPPORT, 40' MAST ARM*	*SR 4034*	*423+10*	*LT*	*41*	*17*	*8*	*40*	37	24			*17*										
△5	*TRAFFIC SIGNAL SUPPORT, 55' MAST ARM*	*PORT ACCESS*	*10+98*	*RT*	*49*	*17*	*8*	*55*	54	40			*24*				*0*						

* REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES, FOR LETTER DESIGNATIONS

TRAFFIC SIGNAL TABULATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADLEY J. MARSTELLER
ENGINEER
PE-060748

PLOTTED: 2/23/2023 7:59:06 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	1 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

GENERAL NOTES

1. THIS WORK CONSISTS OF MAINTENANCE OF TRAFFIC AND THE PROTECTION OF THE TRAVELING PUBLIC APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION AND ON APPROVED DETOURS.
2. 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:
   A. SPECIAL PROVISIONS OF THE CONTRACT.
   B. PENNDOT PUBLICATION 213, "TEMPORARY TRAFFIC CONTROL GUIDELINES", APRIL 2022 EDITION.
   C. PENNDOT PUBLICATION 212, "OFFICIAL TRAFFIC CONTROL DEVICES", MARCH 2006.
   D. PENNDOT PUBLICATION NO. 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15), (LATEST).
   E. PENNDOT PUBLICATION 46, TRAFFIC ENGINEERING MANUAL
   F. PENNDOT PUBLICATION NO. 408, SPECIFICATIONS AND CURRENT REVISIONS.
   G. PENNDOT PUBLICATION NO. 236, "HANDBOOK OF APPROVED SIGNS", (NOVEMBER 2013).
   H. PENNDOT PUBLICATION NO. 111, "TRAFFIC CONTROL - PAVEMENT MARKING AND SIGNING STANDARDS" TC-8600 AND TC-8700 SERIES, AUGUST 2021).
   I. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), 2009 EDITION INCLUDING ALL REVISIONS AND SUPPLEMENTS.
   J. PENNDOT PUBLICATION 148, TC-8800 SERIES, "TRAFFIC STANDARDS - SIGNALS", DECEMBER 2011 EDITION AND CURRENT REVISIONS.
   K. PENNDOT PUBLICATION 149, "TRAFFIC SIGNAL DESIGN HANDBOOK", OCTOBER 14, 2010 (MAY 2013 UPDATE).
3. 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. PA ONE-CALL SHOULD BE CONTACTED BEFORE ANY SIGN POST ANCHOR IS DRIVEN INTO THE GROUND FOR ANY TEMPORARY AND/OR PERMANENT SIGNING.
4. ALL SIGNS AND DEVICES ON THIS PROJECT MUST COMPLY WITH CURRENT N.C.H.R.P. 350 OR MASH CRITERIA.
5. 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.
6. INSPECTOR-IN-CHARGE SHALL REPORT ALL TRAFFIC INCIDENTS TO THE DISTRICT TRAFFIC ENGINEER BY COPY OF THE TRAFFIC ACCIDENT REPORT FROM THE PENNSYLVANIA STATE POLICE.
7. 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.
8. ERADICATE ALL CONFLICTING PAVEMENT MARKINGS. REPLACE ALL PAVEMENT MARKINGS UPON PROJECT COMPLETION IN ACCORDANCE WITH PAVEMENT MARKING PLANS.
9. THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES AS SPECIFIED IN SECTION 901.3 OF PUBLICATION NO. 408.
10. 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.
11. ANY SPECIAL SIGNS ARE TO BE FABRICATED IN ACCORDANCE WITH THE MOST CURRENT TC-8700 STANDARDS.
12. PROVIDE NEW REFLECTIVE SHEETING FOR ALL SIGNS AND DEVICES, I.E. SUPPORTS, SIGN BLANKS, DRUMS, VERTICAL PANELS, ETC. SHALL BE CLEAN AND FREE FROM ALL DEFECTS.
13. PROVIDE ADEQUATE NUMBER OF TYPE III BARRICADES AT ROAD CLOSURE LOCATIONS TO COMPLETELY CLOSE THE ROADWAY.
14. CONTRACTOR SHALL DOCUMENT NOTIFICATION TO 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 FOURTEEN DAYS PRIOR TO ANY SIGNIFICANT TRAFFIC IMPACTS (E.G. LATERAL WIDTH RESTRICTIONS LESS THAN 12 FEET, DETOURS).
15. ALL SHORT-TERM OPERATIONS LEAD-IN SIGNS SHOULD BE MOUNTED ON PORTABLE SIGN STANDS ONLY AS STATED IN BULLETIN 15.
16. ALL CHANGES TO THIS TRAFFIC CONTROL PLAN MUST BE APPROVED AND SIGNED BY THE DISTRICT TRAFFIC UNIT.
17. CONTRACTOR SHALL ENSURE PROPER TEMPORARY BARRIER DEFLECTION DISTANCES TO DROPOFFS AND OBSTRUCTIONS ARE MAINTAINED IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SECTION 901.

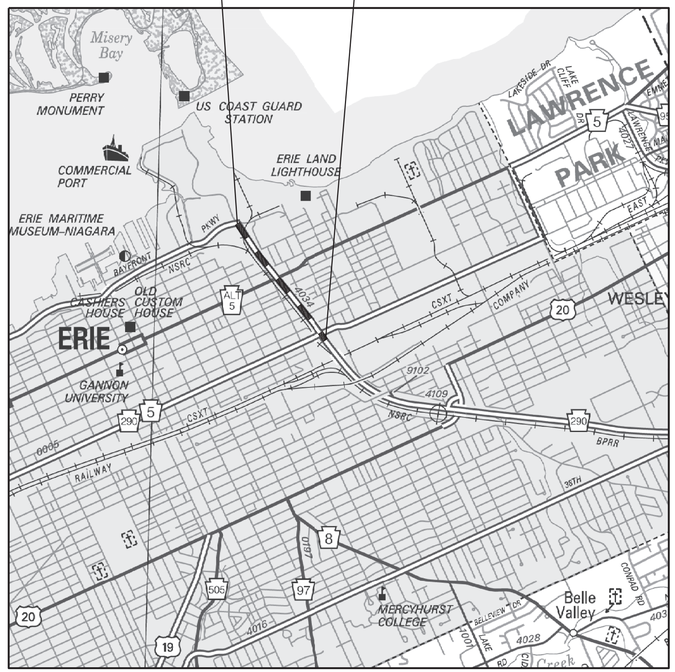
GENERAL NOTES (CONTINUED)

18. NOTE THAT THIS APPROVAL DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE PROTECTION OF THE PUBLIC AND THE CONSTRUCTION PERSONNEL. THE STANDARDS PRESCRIBED ARE MINIMUM AND ADDITIONAL PROTECTION MAY BE NECESSARY IF PROBLEMS ARE ENCOUNTERED DURING THE TERM OF THE CONTRACT. CONSTANTLY REVIEW THIS PLAN FOR ADEQUACY AND RECOMMEND CHANGES FOR THE DEPARTMENT APPROVAL WHEN INADEQUACIES ARE DISCOVERED.
19. THE CONTRACTOR HAS THE OPTION TO SUBMIT ALTERNATE TRAFFIC CONTROL PLANS FOR CONSIDERATION. THESE PLANS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA, AND SHALL BE CONSISTENT WITH STANDARD DESIGN PRACTICES. THE DEPARTMENT WILL ALLOW NO CONSTRUCTION ACTIVITY UNTIL THE CONTRACTOR'S ALTERNATE PLANS ARE APPROVED IN WRITING BY THE DISTRICT TRAFFIC ENGINEER. MODIFICATIONS TO THE APPROVED MPT PLAN SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER OR AUTHORIZED REPRESENTATIVE.
20. THE CONTRACTOR SHALL HAVE A SUFFICIENT AMOUNT OF THE FOLLOWING SIGNS AVAILABLE IN CASE THEIR USE BECOMES NECESSARY: W3-4 "BE PREPARED TO STOP" AND W20-7 "FLAGGER SYMBOL". THESE SIGNS ARE NOT INTENDED TO BE PART OF THE REQUIRED NORMAL TRAFFIC CONTROL OR A SUPPLEMENT THERETO.
21. MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES UTILIZING EXISTING DRIVEWAYS OR TEMPORARY ACCESS MEASURES AS NECESSARY. PROVIDE WIDTH ADEQUATE TO ACCOMODATE COMMERCIAL OR TWO-WAY TRAFFIC WHERE APPLICABLE. INSTALL DRUM-MOUNTED "ENTER HERE" SIGNS AT BUSINESS DRIVES WHEN DIRECTED BY THE INSPECTOR-IN-CHARGE.
22. THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS ABILITIES TO LOCAL ROADS AND DRIVEWAYS SITUATED ADJACENT TO CONSTRUCTION AREAS AT ALL TIMES UNLESS OTHERWISE NOTED.
23. PROVIDE TWO (2) WEEKS NOTICE TO THE INSPECTOR-IN-CHARGE PRIOR TO ERECTING ANY TRAFFIC CONTROL DEVICES AND BETWEEN SETUP OF THE TRAFFIC CONTROL PHASES.
24. THE INSPECTOR-IN-CHARGE WILL INSPECT ALL TRAFFIC CONTROL DEVICES PRIOR TO THE START OF WORK.
25. THE TRAFFIC CONTROL DEVICES SHOWN DO NOT NECESSARILY DEPICT THE ACTUAL NUMBER OF DEVICES REQUIRED.
26. PROVIDE 24 HOURS A DAY, 7 DAYS A WEEK ON CALL PERSONNEL TO RESET ANY DAMAGED OR OVERTURNED WORK ZONE TRAFFIC CONTROL DEVICES OR SIGNS.
27. ALL CHANNELIZING DEVICES MUST BE LONG TERM DEVICES. SEQUENTIAL FLASHING WARNING LIGHTS ARE REQUIRED ON CHANNELIZING DEVICES USED TO FORM MERGING TAPERS.

SHEET INDEX	
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PHASE 1	8 - 11
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TEMPORARY TRAFFIC SIGNAL PLANS	25 - 39

LIMIT OF WORK
STA 423+44.98
SEG 0084 OFFSET 0091
SEG 0085 OFFSET 0104
SR 4034 SEC S00
CITY OF ERIE
ERIE COUNTY

LIMIT OF WORK
STA 376+00.00
SEG 0090 OFFSET 2484
SEG 0091 OFFSET 2482
SR 4034 SEC S00
CITY OF ERIE
ERIE COUNTY



LOCATION MAP

LEGEND
- STATE ROUTE
- MUNICIPAL ROAD
- PROJECT
- MUNICIPAL BOUNDARY
- STREAM
- NO DETOUR

SCALE
0 1/2 1 MILE

TRAFFIC CONTROL PLAN

GENERAL NOTES AND LOCATION MAP

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 08:36:25 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN COUGHLIN MCGRAW, JR ENGINEER PE077566

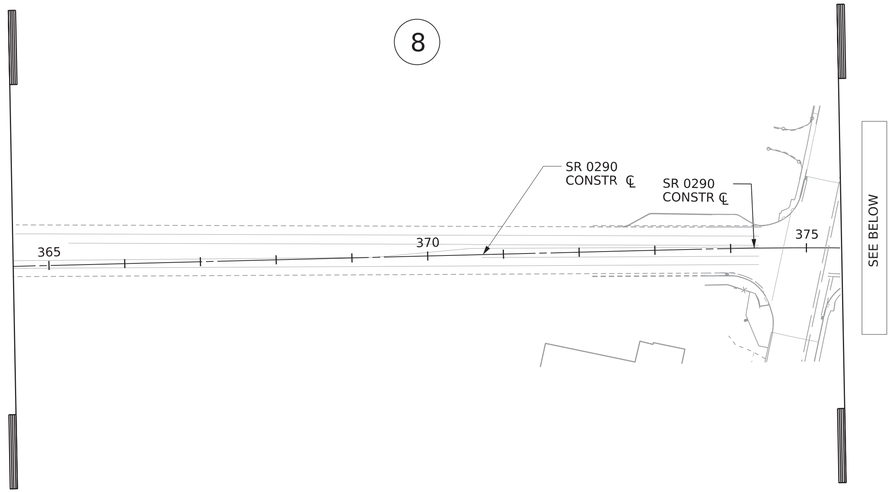
2/22/2023

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	2 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

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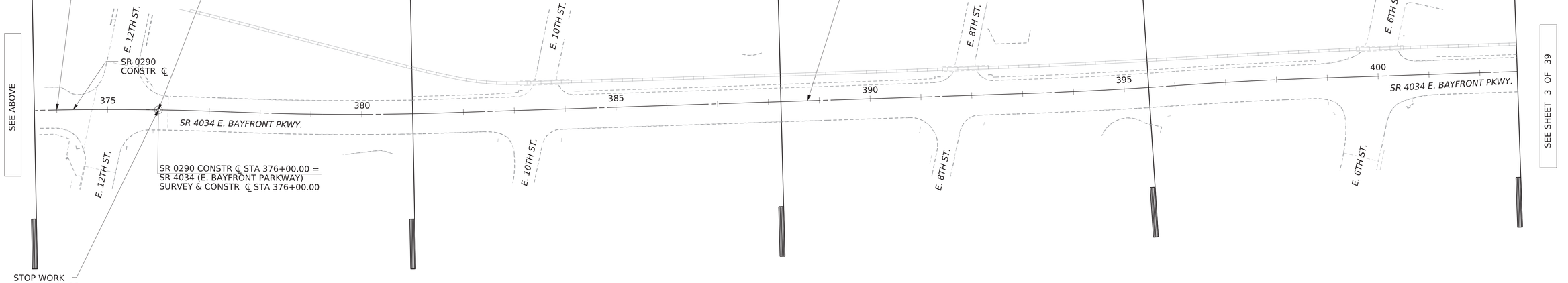


9 12 10 13 16 11 14 17 21 15 22 18

START WORK
STA 374+00.00
SEG 0010 OFFSET 0199
SEG 0011 OFFSET 0201
SR 0290

LIMIT OF WORK
START WORK
STA 376+00.00
SEG 0090 OFFSET 2484
SEG 0091 OFFSET 2482
SR 4034 SECTION S00

SR 4034
(E. BAYFRONT PARKWAY)
SURVEY & CONSTR ℄



SR 0290 CONSTR ℄ STA 376+00.00 =
SR 4034 (E. BAYFRONT PARKWAY)
SURVEY & CONSTR ℄ STA 376+00.00

STOP WORK
STA 376+00.00
SEG 0010 OFFSET 0000
SEG 0011 OFFSET 0000
SR 0290

INDEX MAP

LEGEND

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- SHEET LIMITS

SCALE

0 100 200 FEET

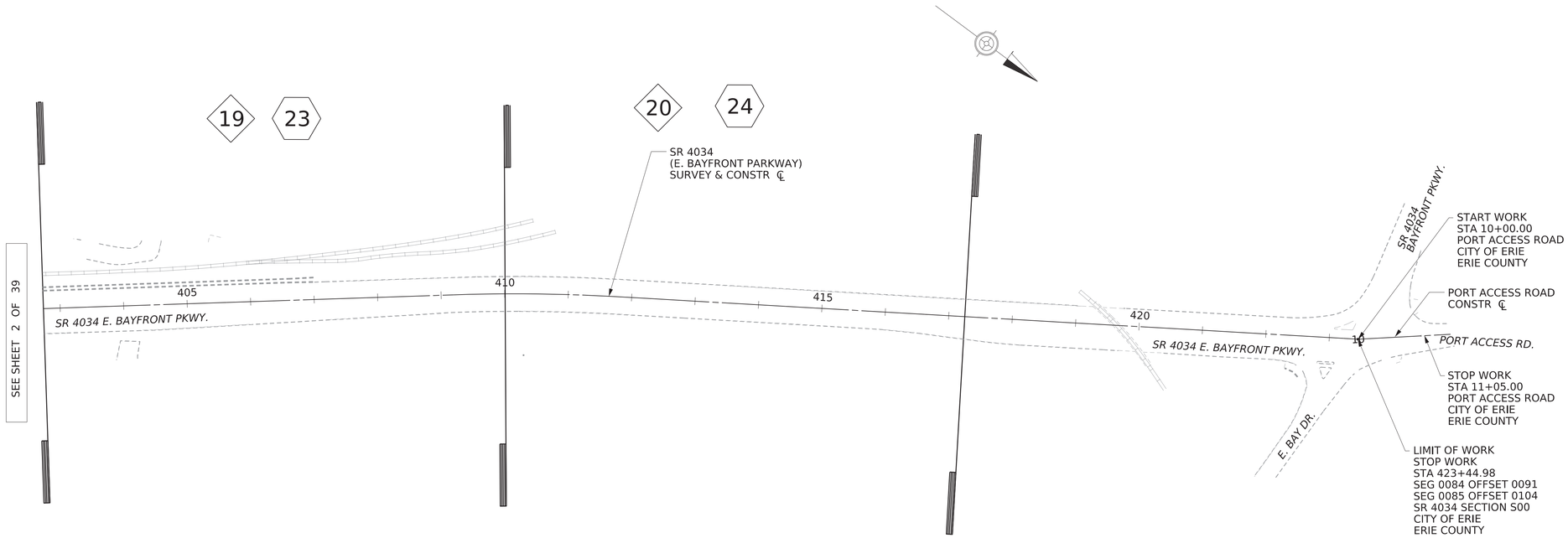
TRAFFIC CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	3 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- SHEET LIMITS

INDEX MAP

SCALE

0 100 200 FEET

TRAFFIC CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	4 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

CONSTRUCTION SEQUENCE

PHASE 1

PLACE LONG-TERM SIGNING SHOWN IN PHASE 1 OF THE TRAFFIC CONTROL PLAN.

REVISE EXISTING TRAFFIC SIGNAL TIMINGS AT THE FOUR INTERSECTIONS ALONG SR 4034 AS DIRECTED IN THE TEMPORARY SIGNAL COORDINATION PLAN AND CONTRACT DOCUMENTS.

ADJUST SIGNAL HEAD LOCATIONS AND INSTALL TEMPORARY OVERHEAD DETECTION IN ACCORDANCE WITH PHASE 1 TEMPORARY TRAFFIC SIGNAL PLAN.

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO INSTALL LANE CLOSURES, TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES AND SIGN OVERLAYS/COVERS.

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION AND TURN LANES AS SHOWN IN PHASE 1 OF THE TRAFFIC CONTROL PLAN.

CONSTRUCT THE RAISED MEDIAN AND DRAINAGE FEATURES AS SHOWN ON THE ROADWAY PLANS. BACKFILL AND RESTORE OR PLATE ALL OPEN EXCAVATIONS FOR DRAINAGE FEATURES AT THE END OF EACH WORK DAY.

ONCE COMPLETED WITH PHASE 1, UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO RETURN RELOCATED SIGNAL HEADS NOT USED IN PHASE 2 TO PRIOR LOCATIONS.

PHASE 2

UTILIZE SHORT TERM OPERATIONS PER PUBLICATION 213 TO INSTALL INTERIM PAVEMENT MARKINGS, WITH THE EXCEPTION OF THE W/4" EDGELINE AND CROSSWALKS, ON SOUTHBOUND SR 4034 BETWEEN EAST 12TH STREET AND EAST 10TH STREET CONSISTENT WITH THE MARKINGS SHOWN ON THE PERMANENT PAVEMENT MARKING PLAN.

PLACE LONG-TERM SIGNING SHOWN IN PHASE 2 OF THE TRAFFIC CONTROL PLAN.

ADJUST SIGNAL HEAD LOCATIONS AND INSTALL/ RESET TEMPORARY OVERHEAD DETECTION IN ACCORDANCE WITH PHASE 2 TEMPORARY TRAFFIC SIGNAL PLAN.

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO INSTALL LANE CLOSURES, TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES, AND SIGN OVERLAYS/COVERS.

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION AND TURN LANES AS SHOWN IN PHASE 2 OF THE TRAFFIC CONTROL PLAN.

CONSTRUCT THE RAISED MEDIAN AND DRAINAGE FEATURES AS SHOWN ON THE ROADWAY PLANS. BACKFILL AND RESTORE OR PLATE ALL OPEN EXCAVATIONS FOR DRAINAGE FEATURES AT THE END OF EACH WORK DAY.

ONCE COMPLETED WITH PHASE 2, UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO RETURN RELOCATED SIGNAL HEADS NOT USED IN PHASE 3 TO PRIOR LOCATIONS.

PHASE 3

UTILIZE SHORT TERM OPERATIONS PER PUBLICATION 213 TO INSTALL INTERIM PAVEMENT MARKINGS, WITH THE EXCEPTION OF THE W/4" EDGELINE AND CROSSWALKS, ON SOUTHBOUND SR 4034 BETWEEN EAST 10TH STREET AND EAST 8TH STREET AND NORTHBOUND SR 4034 BETWEEN EAST 12TH STREET AND EAST 10TH STREET CONSISTENT WITH THE MARKINGS SHOWN ON THE PERMANENT PAVEMENT MARKING PLAN.

PLACE LONG-TERM SIGNING SHOWN IN PHASE 3 OF THE TRAFFIC CONTROL PLAN.

ADJUST SIGNAL HEAD LOCATIONS AND RESET TEMPORARY VIDEO DETECTION IN ACCORDANCE WITH PHASE 3 TEMPORARY TRAFFIC SIGNAL PLAN.

ADJUST SIGNAL HEAD LOCATIONS AND RESET TEMPORARY VIDEO DETECTION IN ACCORDANCE WITH PHASE 3 TEMPORARY TRAFFIC SIGNAL PLAN.

UTILIZE SHORT TERM OPERATIONS PER PUBLICATION 213 TO INSTALL LANE CLOSURES, TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES, AND SIGN OVERLAYS/COVERS.

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION AND TURN LANES AS SHOWN IN PHASE 3 OF THE TRAFFIC CONTROL PLAN.

CONSTRUCT THE RAISED MEDIAN AND DRAINAGE FEATURES AS SHOWN ON THE ROADWAY PLANS. BACKFILL AND RESTORE OR PLATE ALL OPEN EXCAVATIONS FOR DRAINAGE FEATURES AT THE END OF EACH WORK DAY.

ONCE COMPLETED WITH PHASE 3, UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO RETURN RELOCATED SIGNAL HEADS NOT USED IN PHASE 4 TO PRIOR LOCATIONS.

CONSTRUCTION SEQUENCE (CONTINUED)

PHASE 4

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO INSTALL TEMPORARY PAVEMENT MARKINGS, WITH THE EXCEPTION OF THE W/4" EDGELINE AND CROSSWALKS, ON SOUTHBOUND SR 4034 BETWEEN EAST 8TH STREET AND EAST 6TH STREET AND ON NORTHBOUND SR 4034 BETWEEN EAST 10TH STREET AND EAST 8TH STREET CONSISTENT WITH THE MARKING SHOWN ONT HE PERMANENT PAVEMENT MARKING PLAN.

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO INSTALL LANE CLOSURES, TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES, AND SIGN OVERLAYS/COVERS.

PLACE LONG-TERM SIGNING SHOWN IN PHASE 4 OF THE TRAFFIC CONTROL PLAN.

SIGNAL HEAD LOCATIONS AND TEMPORARY OVERHEAD DETECTORS TO REMAIN IN PLACE FROM PHASE 3 IN ACCORDANCE WITH PHASE 4 TEMPORARY TRAFFIC SIGNAL PLAN.

DO NOT PLACE ANY TRAFFIC CONTROL DEVICES ON EXISTING RAILROAD TRACKS. DO NOT REMOVE EXISTING STOP BARS FOR RAILROAD CROSSING.

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION AND TURN LANES AS SHOWN IN PHASE 4 OF THE TRAFFIC CONTROL PLAN.

CONSTRUCT THE RAISED MEDIAN AND DRAINAGE FEATURES AS SHOWN ON THE ROADWAY PLANS. BACKFILL AND RESTORE OR PLATE ALL OPEN EXCAVATIONS FOR DRAINAGE FEATURES AT THE END OF EACH WORK DAY.

WHEN WORK IS COMPLETE AND ALL TRAFFIC CONTROL IS REMOVED, UTILIZE SHORT TERM OPERATIONS PER PUBLICATION 213 TO INSTALL INTERIM PAVEMENT MARKINGS, WITH THE EXCEPTION OF THE W/4" EDGELINE AND CROSSWALKS, ON SR 4034 NORTHBOUND BETWEEN EAST 8TH STREET AND EAST 6TH STREET AND SR 4034 NORTHBOUND AND SOUTHBOUND BETWEEN EAST 6TH STREET AND THE LIMITS OF THE TRAFFIC CONTROL CONSISTENT WITH THE MARKINGS SHOWN ON THE PERMANENT PAVEMENT MARKING PLAN. EXTEND YELLOW EDGELINE ADJACENT TO RAISED MEDIAN TO MATCH EXISTING DOUBLE YELLOW AT STA 409+69. MATCH ALL OTHER MARKINGS TO EXISTING MARKINGS AT THE END OF THE TRAFFIC CONTROL LIMITS.

ONCE COMPLETED WITH PHASE 4, UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO RETURN RELOCATED SIGNAL HEADS TO PRIOR LOCATIONS AND RESTORE EXISTING TIMINGS TO ALL INTERSECTIONS.

PHASE 5

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO COMPLETE THE CURB RAMP REPLACEMENT, DRAINAGE FEATURES ALONG EAST 12TH STREET, EAST 10TH STREET, EAST 8TH STREET, AND EAST 6TH STREET, PAVEMENT PATCHING, MILLING, AND PAVEMENT OVERLAY OF SR 0290 AND SR 4034, AS SHOWN IN THE ROADWAY PLANS. INSTALL FINAL SIGNING AND PAVEMENT MARKINGS.

MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.

PHASE 6

UTILIZE SHORT-TERM OPERATIONS PER PUBLICATION 213 TO COMPLETE THE SIGNAL UPGRADES OF EACH INTERSECTION ALONG THE PROJECT LIMITS AS SHOWN IN THE SIGNAL PLANS.

MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.

TRAFFIC CONTROL PLAN

CONSTRUCTION SEQUENCE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

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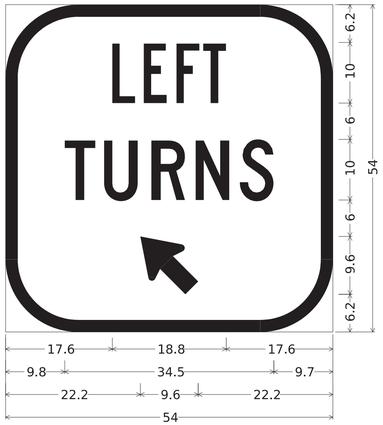
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	5 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

TABULATION OF TRAFFIC CONTROL DEVICES

INCLUDED IN THE LUMP SUM ITEM 0901-0001
(FOR INFORMATION ONLY)

TRAFFIC CONTROL DEVICE	SIGN SIZE	DESCRIPTION	PHASE 1	PHASE 2	PHASE 3	PHASE 4
G20-2	60" X 24"	END ROAD WORK	2	2	2	2
R3-5L	30" X 36"	LEFT TURN	3	4	4	2
R9-3BL	18" X 12"	USE CROSSWALK LEFT	2	2	2	1
R9-3BR	18" X 12"	USE CROSSWALK RIGHT	2	2	2	1
R9-11A	24" X 12"	SIDEWALK CLOSED CROSS HERE	4	4	4	2
R11-2 (MOD)	48" X 30"	LANE CLOSED	5	5	6	4
R22-1	48" X 36"	WORK ZONE-TURN ON HEADLIGHTS	2	2	2	2
W4-2L	48" X 48"	PAVEMENT WIDTH TRANSITION - LEFT LANE ENDS	2	2	2	2
W20-1	48" X 48"	ROAD WORK	14	18	14	10
W20-5L	48" X 48"	LEFT LANE CLOSED	2	2	2	2
W21-19	48" X 48"	ACTIVE WORK ZONE WHEN FLASHING	2	2	2	2
W21-20	48" X 48"	END ACTIVE WORK ZONE	2	2	2	2
W30-1-6	30" X 10"	DISTANCE (AHEAD)	16	20	16	12
SP-1	54" X 54"	LEFT TURNS	1			



Sign # : SS-1;
12.0" Radius, 2.0" Border, Black on, Orange;
"LEFT", B 2K; "TURNS", C 2K;
Arrow K - 12.0" 135';
Table of distances between letter and object lefts

17.6	L 5.2	E 5.4	F 4.4	T 3.8	17.6

9.8	T 6.4	U 7.9	R 7.2	N 7.4	S 5.6	9.7

22.2	↖ 9.6	22.2

SP-1

TRAFFIC CONTROL PLAN

TABLULATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOHN COUGHLIN MCGRAW, JR
PE077566

TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				01	ERIE	4034	S00	6 OF 39

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JOHN COUGHLIN MCGRAW, JR — PE077566

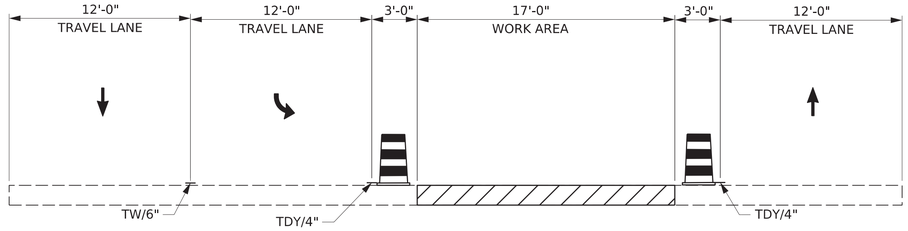
MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	ARROW PANEL	ADDITIONAL WARNING LIGHTS, TYPE B	ADDITIONAL TRAFFIC CONTROL SIGNS	SEQUENTIAL WARNING LIGHTS	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	6" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	3-LINE CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR, TEMPORARY	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)	TEMPORARY MODIFICATIONS TO EXISTING PERMANENT TRAFFIC SIGNAL (2 APPROACHES)	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	PAVEMENT MARKING REMOVAL	TEMPORARY SIGN COVER	CLOTH OVERLAY SIGN, REFLECTORIZED									REMARKS	SIDE	STATIONS
0901 0001 LS	0901 0203 EACH	0901 0231 DAY	0901 0240 SF	0901 0270 EACH	0901 0320 LF	0901 0331 LF	0901 0334 LF	0901 0450 EACH	4954 0202 LF	4954 0203 LF	0958 0321 EACH	0958 0322 EACH	0958 0323 EACH	0958 0324 EACH	0962 1062 EACH	0963 0001 SF	9000 0001 SF	9000 0003 SF									ITEM NUMBER UNIT		
																											SR 4034 / SR 0290		
X	2	20	100	45				3																			ENTIRE PROJECT	LT / RT	374+50.00 to 423+44.98
																											PHASE 1		
					4434	365	68									702	30	22.5											LT / RT	365+19.00 to 390+82.00
										20	1																SR 4034 & E 12TH STREET		375+00.00
									20	20		1															SR 4034 & E 10TH STREET		383+50.00
																											PHASE 2		
					737	389	45								2													INTERIM PAVEMENT MARKINGS	LT	375+83.00 to 382+92.00
					4635	418	135									2350	15	15											LT / RT	377+33.00 to 397+54.00
									40				1														SR 4034 & E 8TH STREET		391+75.00
																											PHASE 3		
					736	325	31								1													INTERIM PAVEMENT MARKINGS	RT	375+60.00 to 383+08.00
					743	365	32								2													INTERIM PAVEMENT MARKINGS	LT / RT	383+80.00 to 391+35.00
					5134	668	114									2690	15	15											LT / RT	385+62.00 to 408+83.00
										40				1													SR 4034 & E 6TH STREET		400+00.00
																											PHASE 4		
					741	325	32								1													INTERIM PAVEMENET MARKINGS	RT	383+80.00 to 391+15.00
					720	323	32								1													INTERIM PAVEMENT MARKINGS	LT / RT	392+42.00 to 399+19.00
					5636	470	58									5187													LT / RT	393+44.00 to 414+14.00
																											INTERIM PAVEMENT MARKINGS; TO BE INSTALLED AT CONCLUSION OF PHASE 4		
					1631	541	32								2														RT	392+09.00 to 409+69.00
					911	625	32								3														LT / RT	400+51.00 to 411+70.00
---	2	20	100	45	26058	4814	611	3	60	80	1	1	1	1	12	10929	60	52.5										TOTALS		

PROJECT ID: 4288 MPMS: 110836 ECMS: 110836 2/15/2023 8:51:53 AM

PLOTTED: 2/21/2023 9:38:10 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	7 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



PHASE 1

PHASE 1 - SR 4034
SURVEY & CONSTR ℄
375+50 TO 377+28

PHASE 2

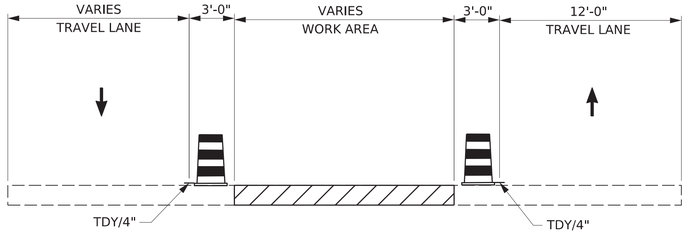
PHASE 2 - SR 4034
SURVEY & CONSTR ℄
383+75 TO 385+26

PHASE 3

PHASE 3 - SR 4034
SURVEY & CONSTR ℄
392+05 - 393+57

PHASE 4

PHASE 4 - SR 4034
SURVEY & CONSTR ℄
400+48 - 403+13



PHASE 1

PHASE 1 - SR 4034
SURVEY & CONSTR ℄
377+28 - 378+77

PHASE 2

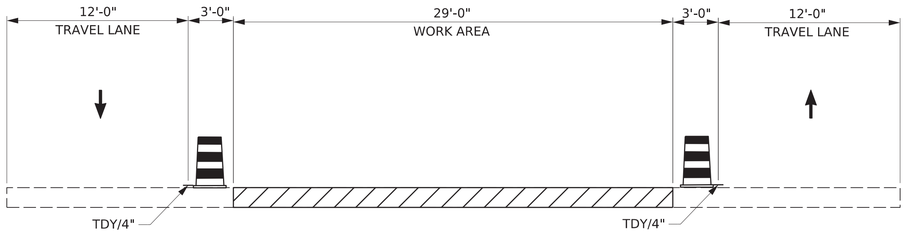
PHASE 2 - SR 4034
SURVEY & CONSTR ℄
385+26 - 386+68

PHASE 3

PHASE 3 - SR 4034
SURVEY & CONSTR ℄
393+57 - 394+38

PHASE 4

PHASE 4 - SR 4034
SURVEY & CONSTR ℄
403+13 - 403+88



PHASE 1

PHASE 1 - SR 4034
SURVEY & CONSTR ℄
378+77 - 380+78

PHASE 2

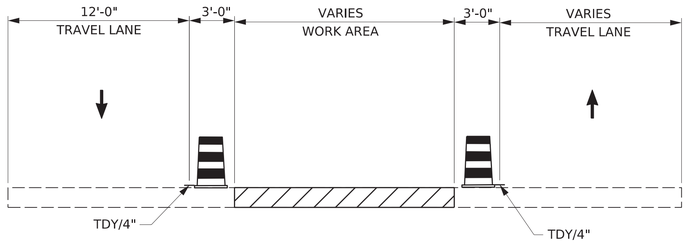
PHASE 2 - SR 4034
SURVEY & CONSTR ℄
386+68 - 389+08

PHASE 3

PHASE 3 - SR 4034
SURVEY & CONSTR ℄
394+38 - 396+89

PHASE 4

PHASE 4 - SR 4034
SURVEY & CONSTR ℄
403+88 - 405+00



PHASE 1

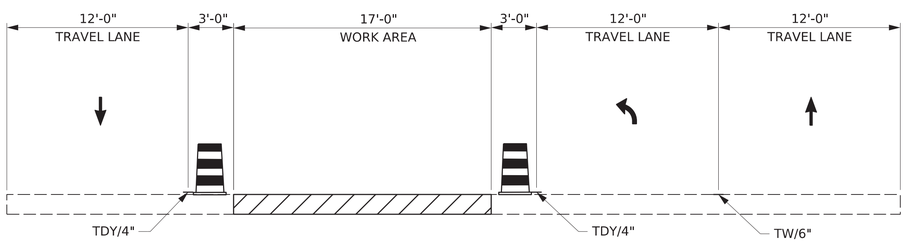
PHASE 1 - SR 4034
SURVEY & CONSTR ℄
380+78 - 381+78

PHASE 2

PHASE 2 - SR 4034
SURVEY &CONSTR ℄
389+08 - 390+08

PHASE 3

PHASE 3 - SR 4034
SURVEY & CONSTR ℄
396+89 - 397+70



PHASE 1

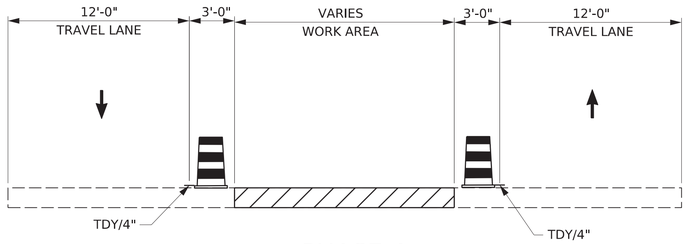
PHASE 1 - SR 4034
SURVEY & CONSTR ℄
381+78 - 382+98

PHASE 2

PHASE 2 - SR 4034
SURVEY & CONSTR ℄
390+08 - 391+40

PHASE 3

PHASE 3 - SR 4034
SURVEY & CONSTR ℄
397+70 - 399+48



PHASE 4

PHASE 4 - SR 4034
SURVEY & CONSTR ℄
405+00 - 409+20

TRAFFIC CONTROL PLAN

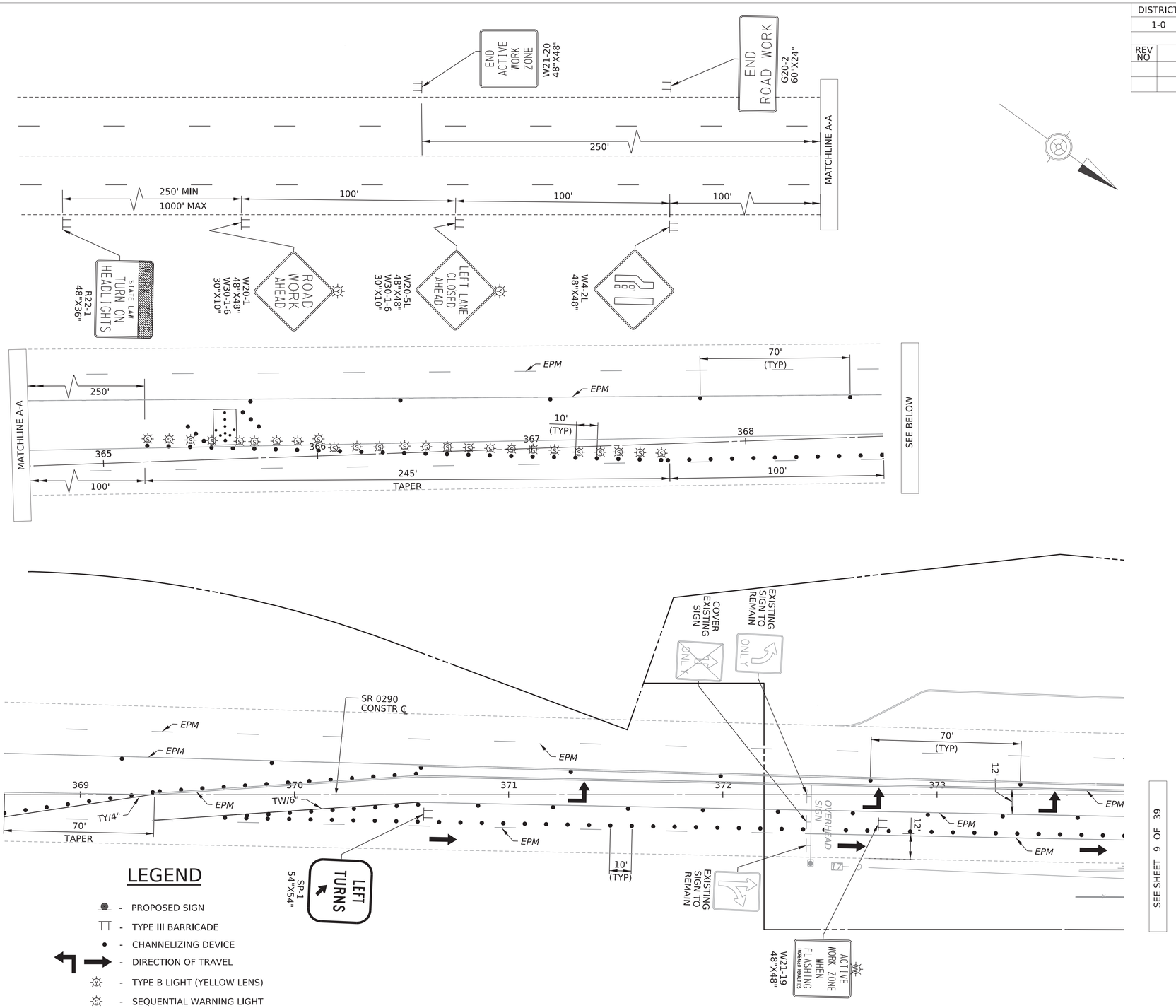
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

PLOTTED: 2/21/2023 9:39:37 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	8 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 1
(SHEET 1 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: eligda
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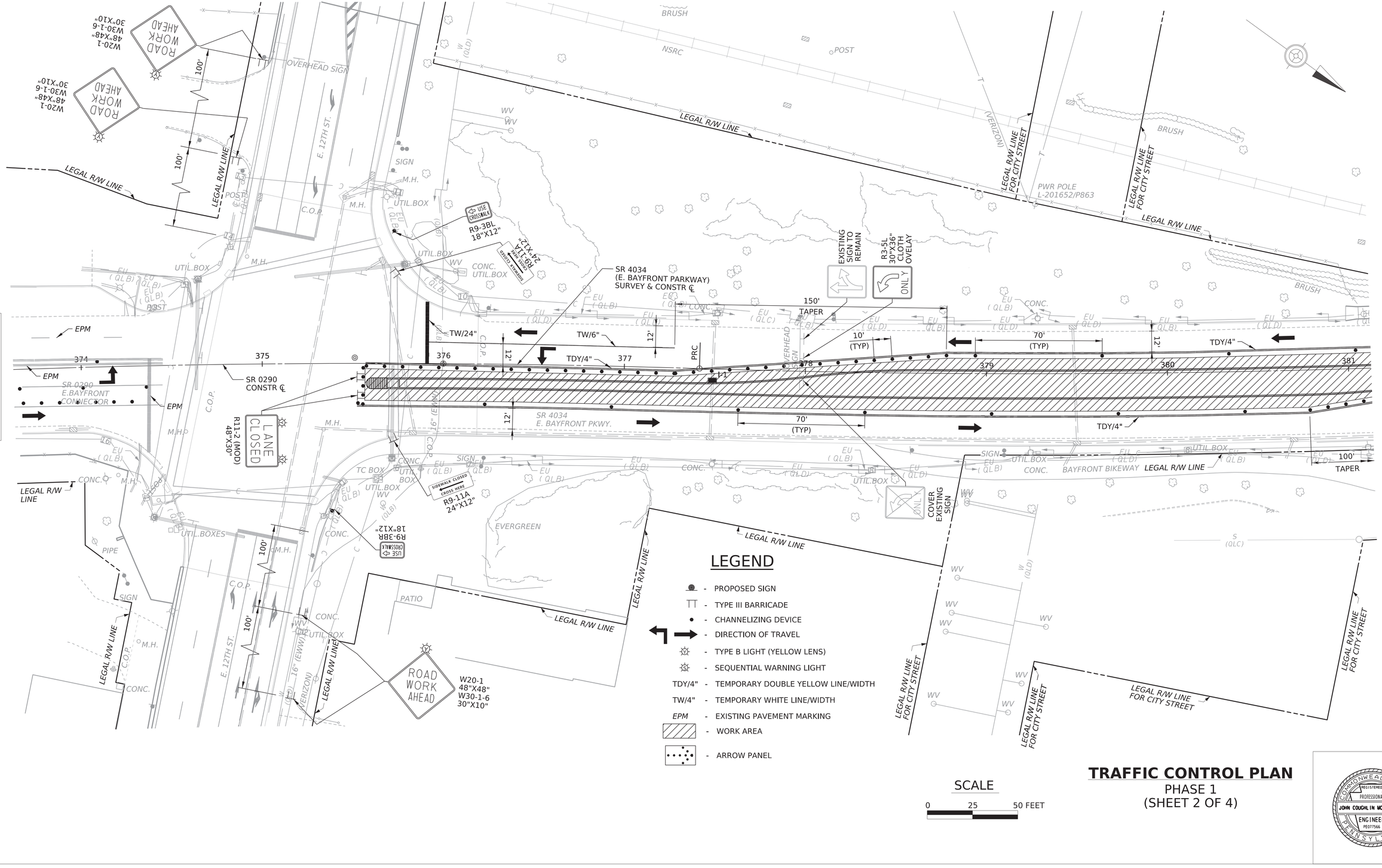
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	9 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES:
1. SEE SHEET 26 - 27 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

SEE SHEET 8 OF 39

SEE SHEET 10OF 39



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN
PHASE 1
(SHEET 2 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

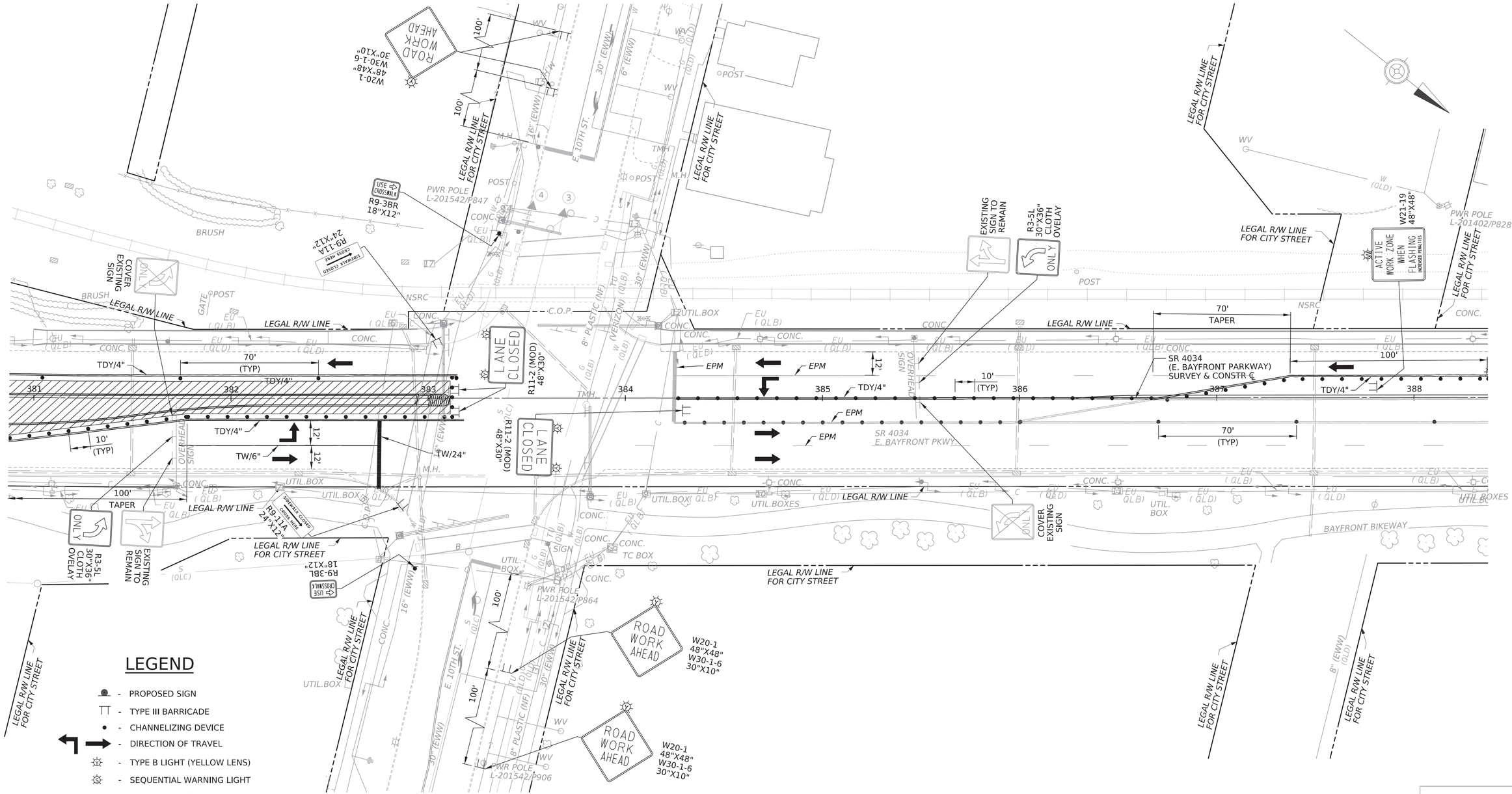
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PLOTTED: 2/22/2023 1:41:26 PM

NOTES:
1. SEE SHEET 28 - 29 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	10 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN
PHASE 1
(SHEET 3 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOHN COUGHLIN MCGRAW, JR
PE077566

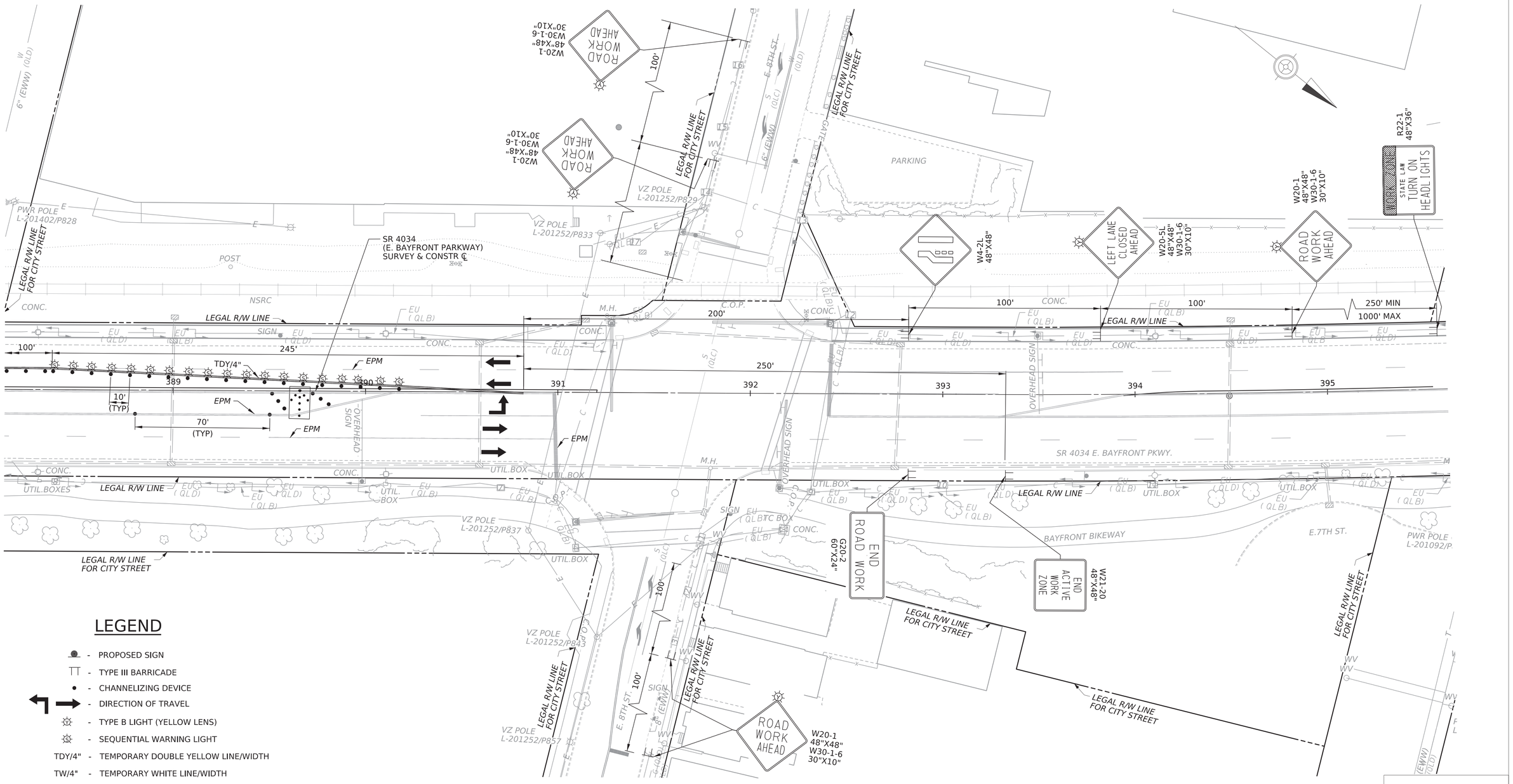
SEE SHEET 9 OF 39
SEE SHEET 11 OF 39

OPERATOR: eligda
FILE NAME: c:\pwworking\jmtelligda@jmt.com\d0256462\MPTPH1PLN03_4034.dgn

PLOTTED: 2/22/2023 2:08:04 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	11 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



SEE SHEET 10OF 39

LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 1
(SHEET 4 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: elligda
FILE NAME: c:\pwworking\jmt\elligda@jmt.com\d0256462\MPTPH1PLN04_4034.dgn

PLOTTED: 2/22/2023 2:08:20 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	12 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 13 OF 39

SEE ABOVE

SEE BELOW

SR 0290 NB E.BAYFRONT CONNECTOR

SR 0290 E.BAYFRONT CONNECTOR

SR 0290 CONSTR ℄

SR 4034 (E. BAYFRONT PARKWAY) SURVEY & CONSTR ℄

SR 4034 E. BAYFRONT PKWY.

E. 12TH ST.

LEGAL R/W LINE

LEGAL R/W LINE FOR CITY STREET

BAYFRONT BIKEWAY

BRUSH

PWR POLE L-201652/P863

OVERHEAD SIGN

STATE LAW TURN ON HEADLIGHTS

R22-1 48"X36"

250' MIN 1000' MAX

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

W20-1 48"X48" W30-1-6 30"X10"

100'

END ACTIVE WORK ZONE W21-20 48"X48"

END ROAD WORK G20-2 60"X24"

LEFT LANE CLOSED AHEAD W20-5L 48"X48" W30-1-6 30"X10"

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

ROAD WORK AHEAD W20-1 48"X48" W30-1-6 30"X10"

W4-2L 48"X48"

ACTIVE WORK ZONE WHEN FLASHING W21-19 48"X48"

INSTALL INTERIM PAVEMENT MARKINGS FOLLOWING PERMANENT PAVEMENT MARKING PLAN WITH THE EXCEPTION OF THE W/4" EDGELINE.

245' TAPER

10' (TYP)

TY/4"

TBW/6"

75' TAPER

12'

I-1

PRC

374 375 376 377 378 379 380 381

LEGEND

- PROPOSED SIGN
- TT - TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 2
(SHEET 1 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: eligda
FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256536\MPTPH2PLN01_4034.dgn

PLOTTED: 2/21/2023 9:41:02 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	13 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

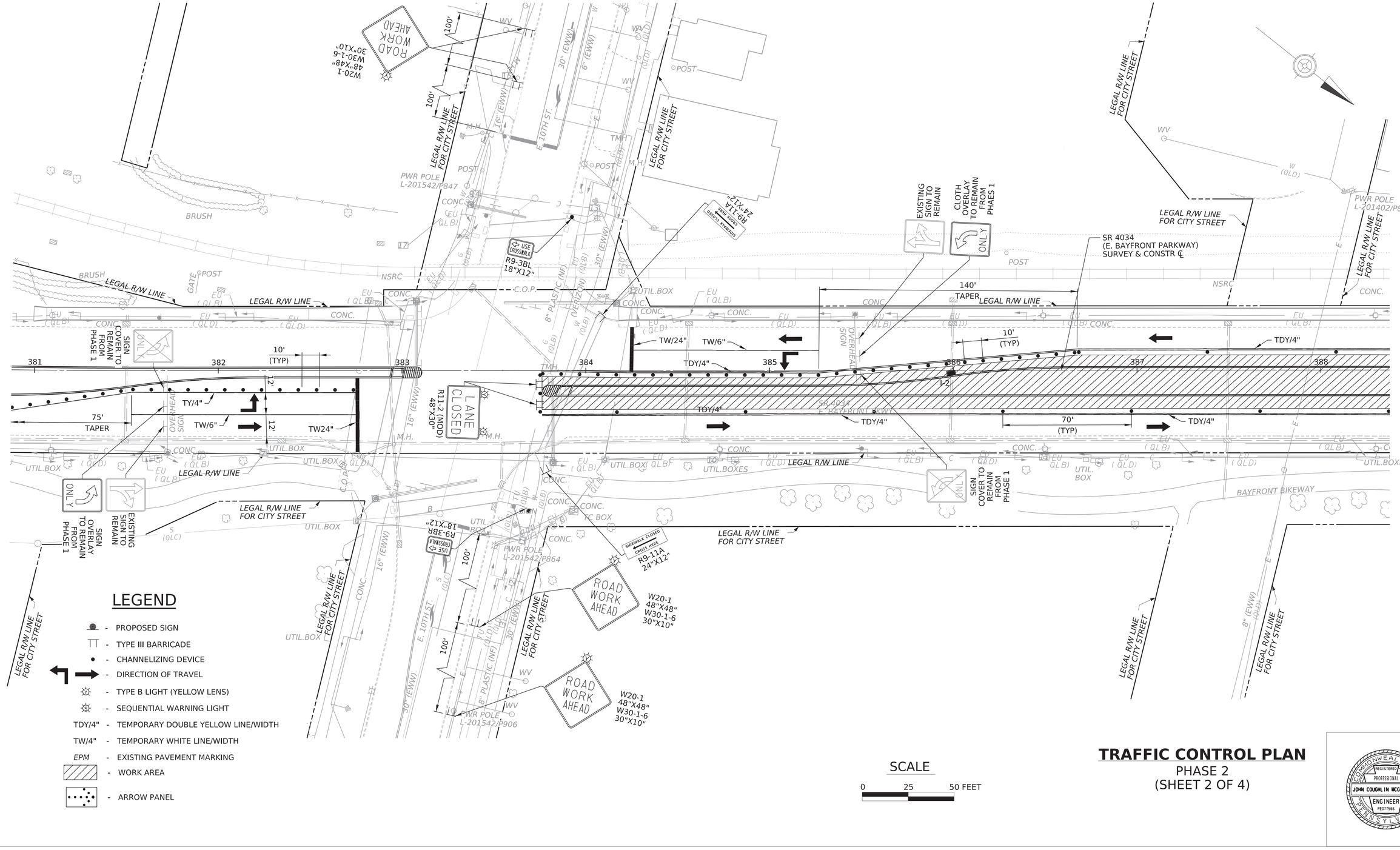
NOTES:

1. SEE SHEET 30 - 31 FOR TEMPORARY SIGNAL PLAN.

2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

SEE SHEET 12OF 39

SEE SHEET 14OF 39



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 2
(SHEET 2 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: GBarclay
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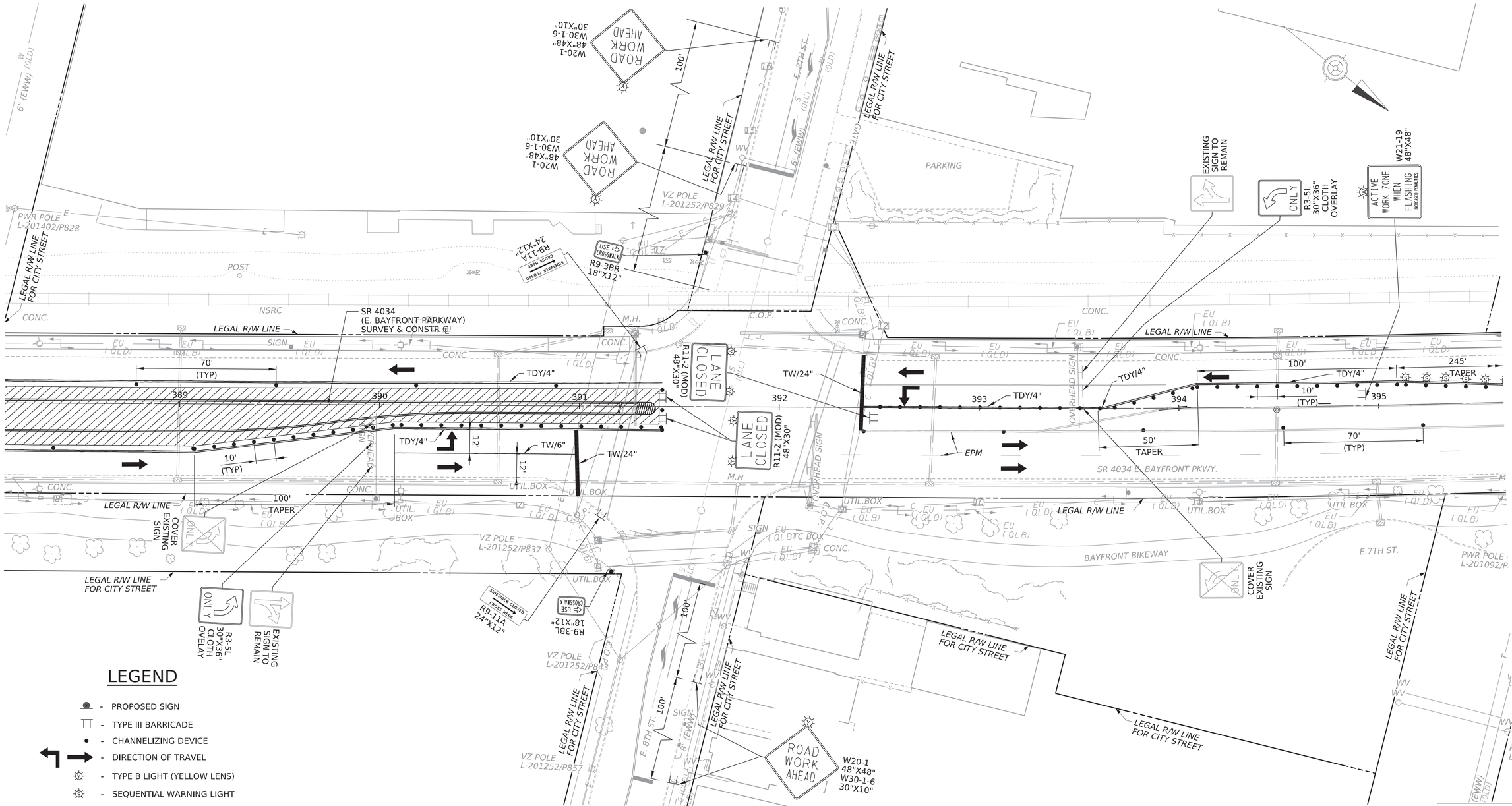
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	14 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES:
1. SEE SHEET 32 - 33 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

SEE SHEET 13OF 39

SEE SHEET 15OF 39



LEGEND

- PROPOSED SIGN
- TT - TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 2
(SHEET 3 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

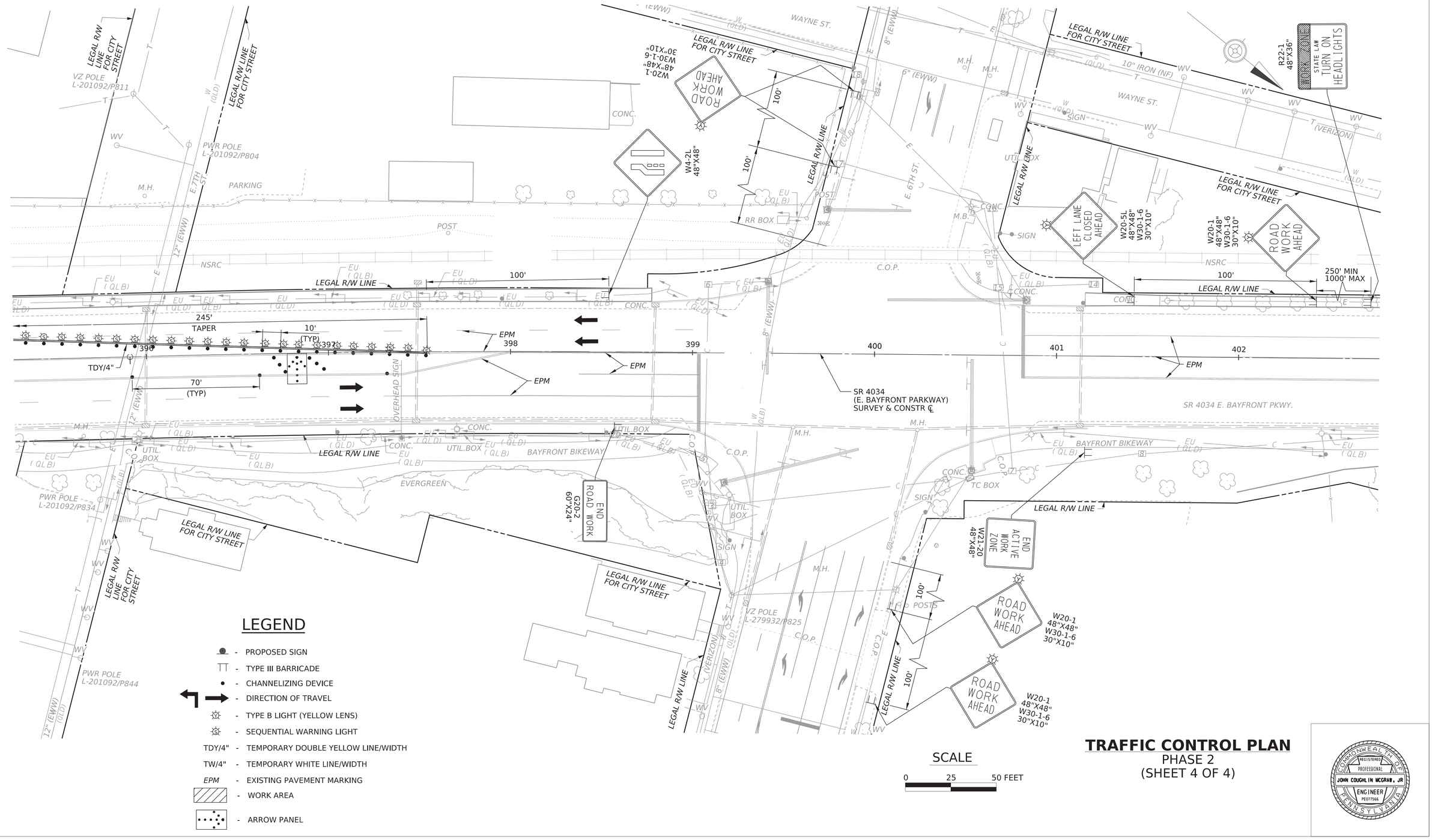
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D-9012 CADD (02-90) REVISED (04-17)

PLOTTED: 2/22/2023 2:08:36 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	15 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



SEE SHEET 14 OF 39

LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 2

(SHEET 4 OF 4)

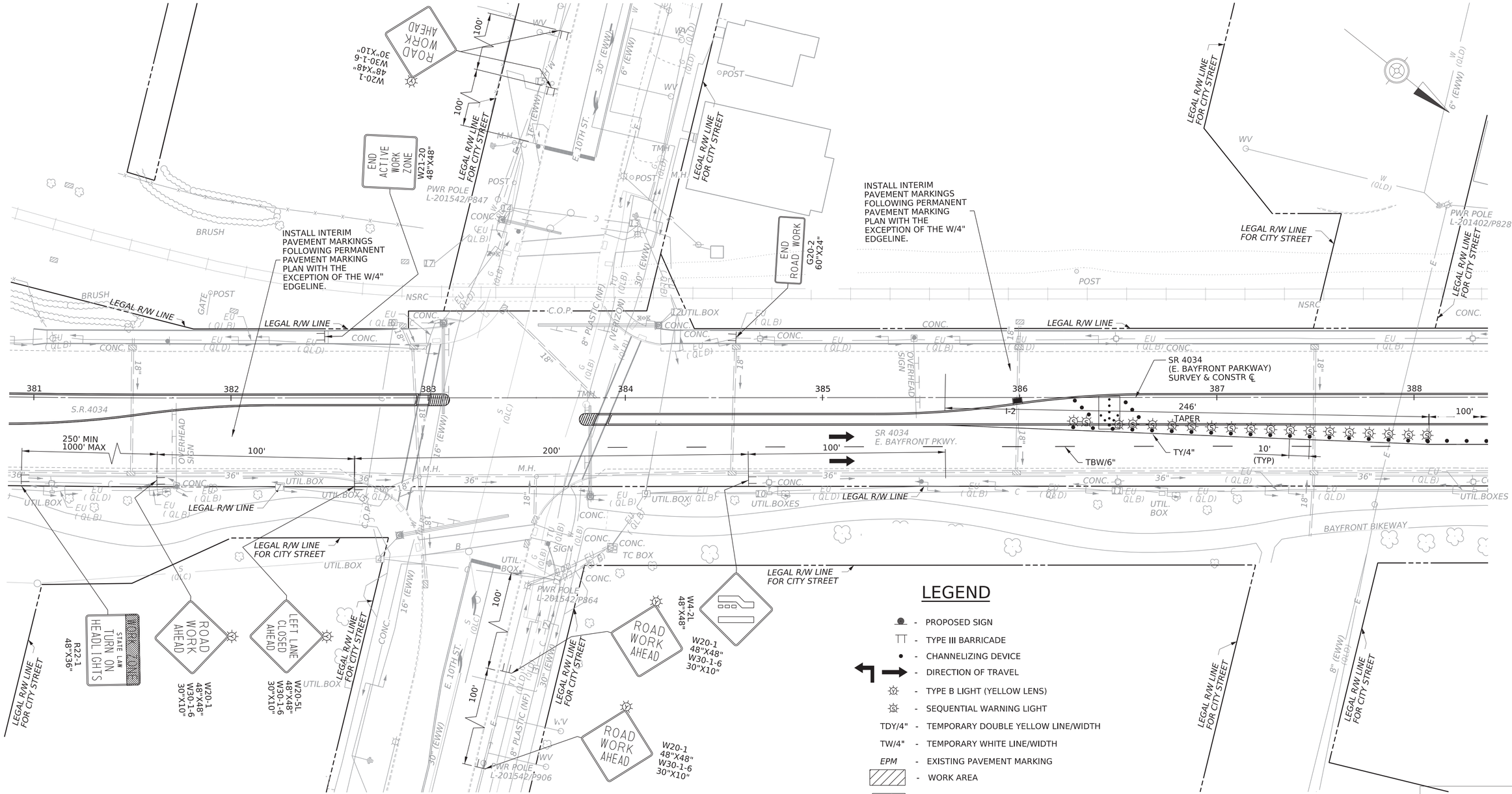
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: eligda
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PLOTTED: 2/22/2023 2:32:14 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	16 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 3
(SHEET 1 OF 5)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

SEE SHEET 17OF 39

OPERATOR: eligda
FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256537\MPTPH3PLN01_4034.dgn

PLOTTED: 2/21/2023 9:42:08 AM

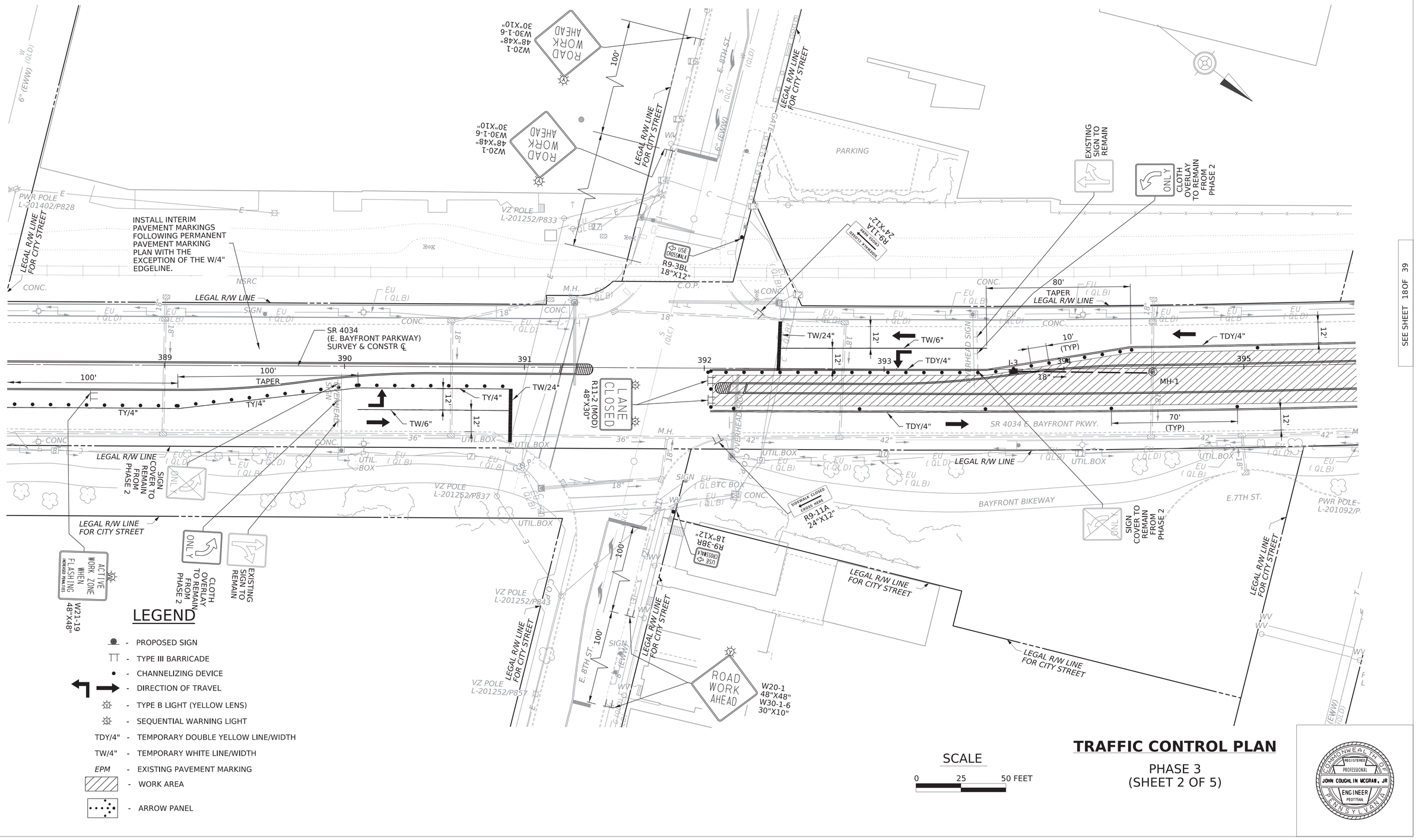
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	17 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES:
1. SEE SHEET 34 - 35 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

SEE SHEET 16OF 39

SEE SHEET 18OF 39



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 3
(SHEET 2 OF 5)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

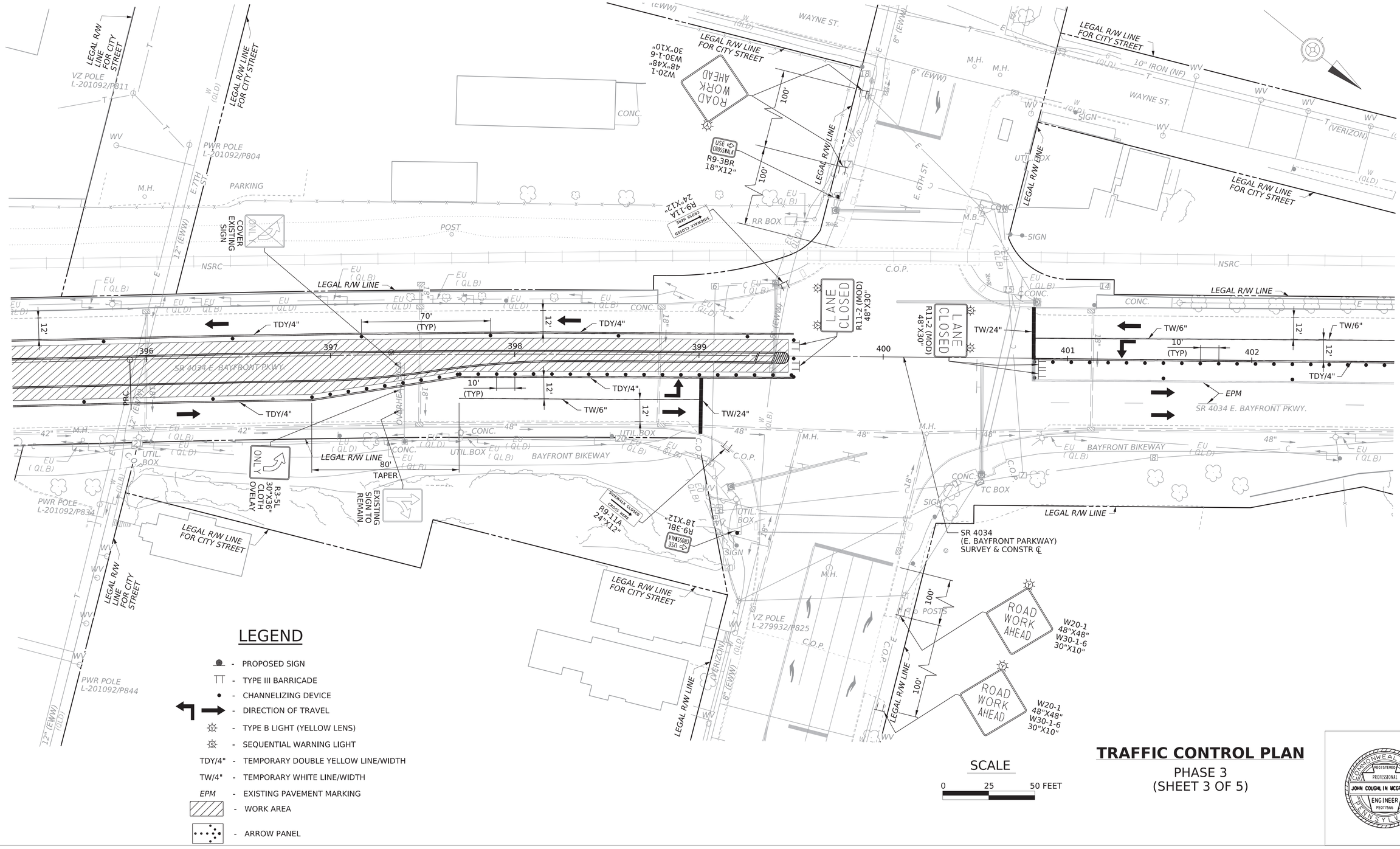
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	18 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES:
1. SEE SHEET 36 - 37 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 3
(SHEET 3 OF 5)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

SEE SHEET 18 OF 39
SEE SHEET 19 OF 39

OPERATOR: eligda
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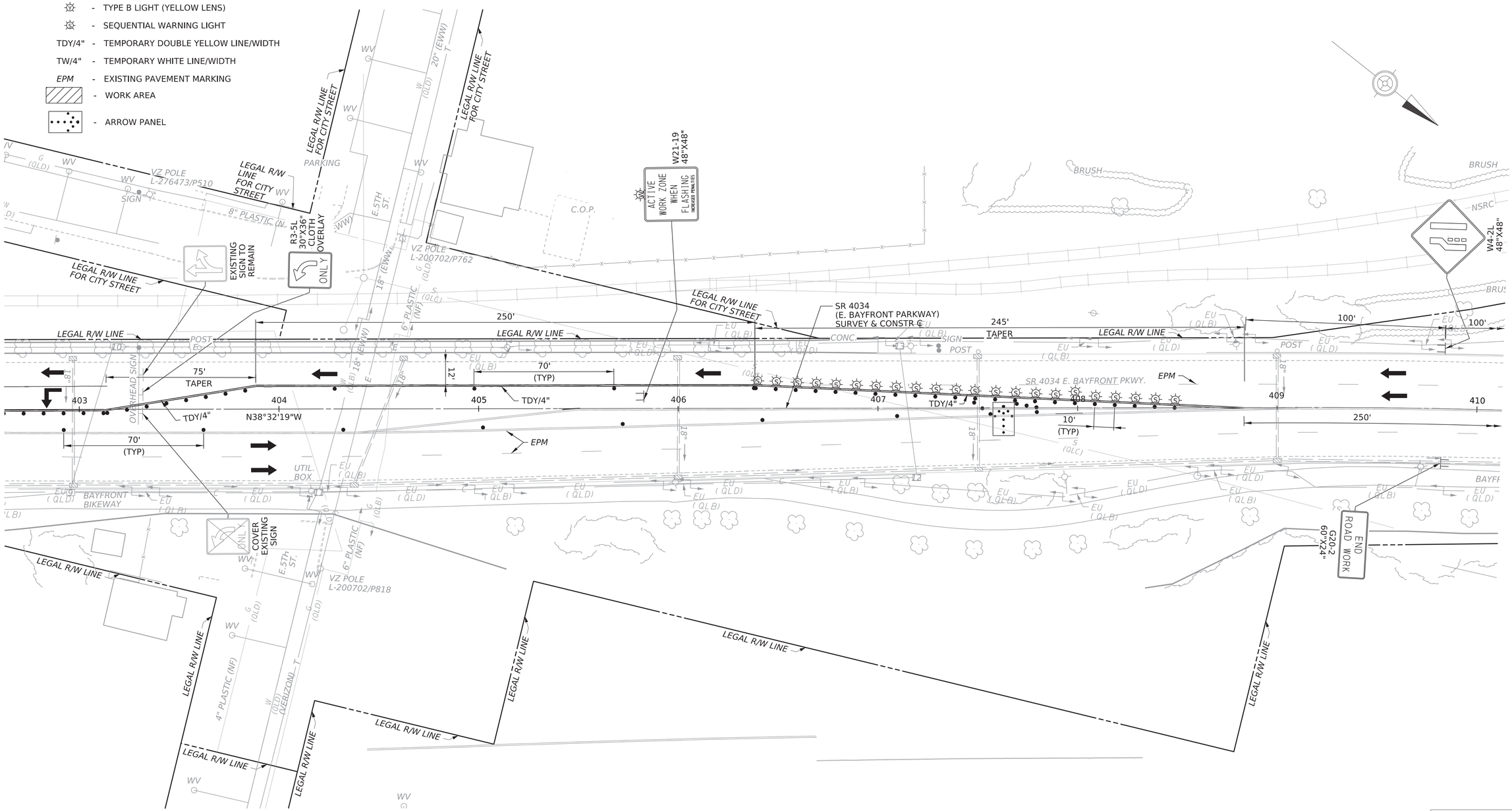
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	19 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL



SEE SHEET 18 OF 39

SEE SHEET 20 OF 39

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 3
(SHEET 4 OF 5)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

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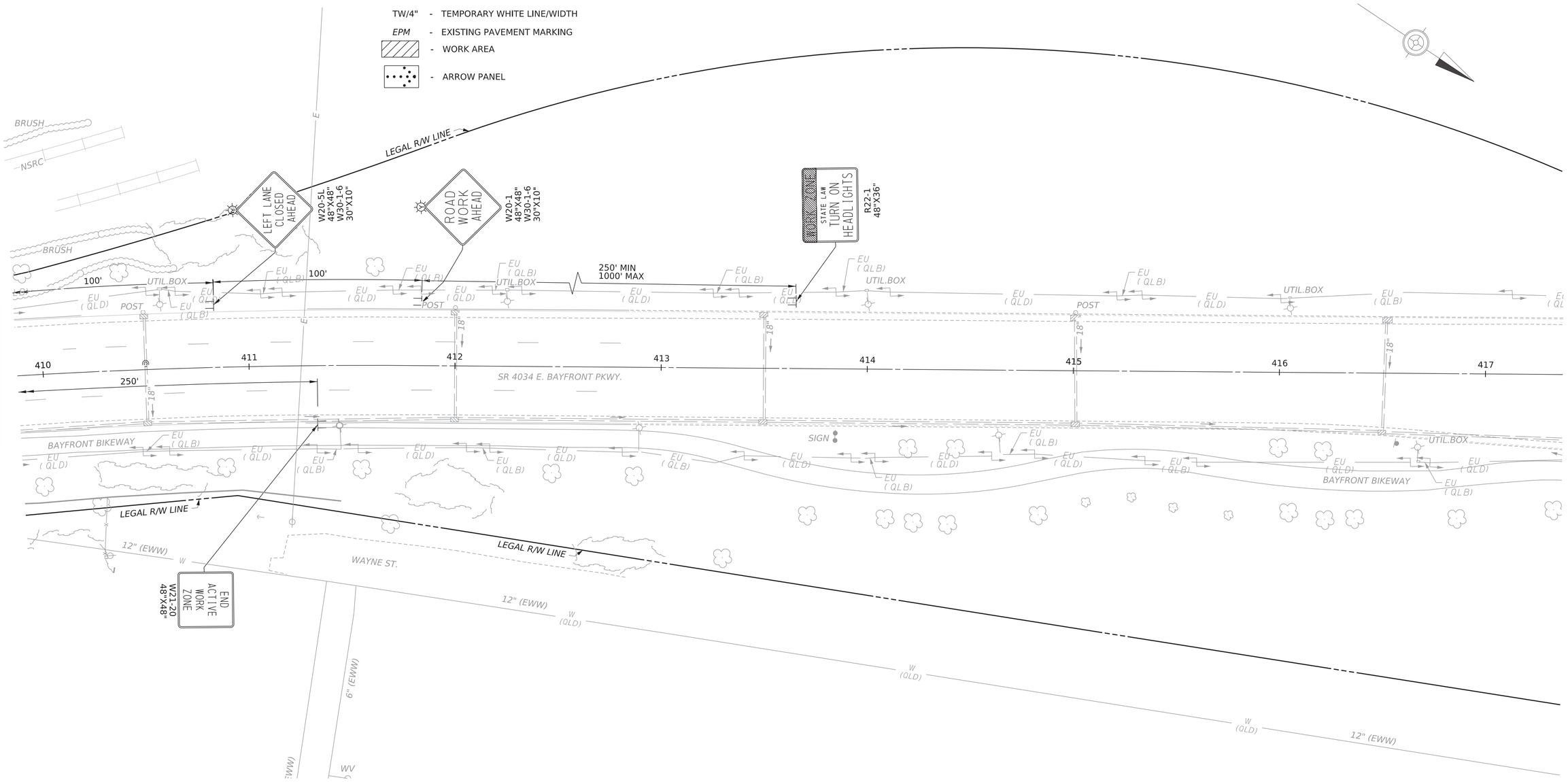
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	20 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL



SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 3
(SHEET 5 OF 5)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOHN COUGHLIN MCGRAW, JR
PE077566

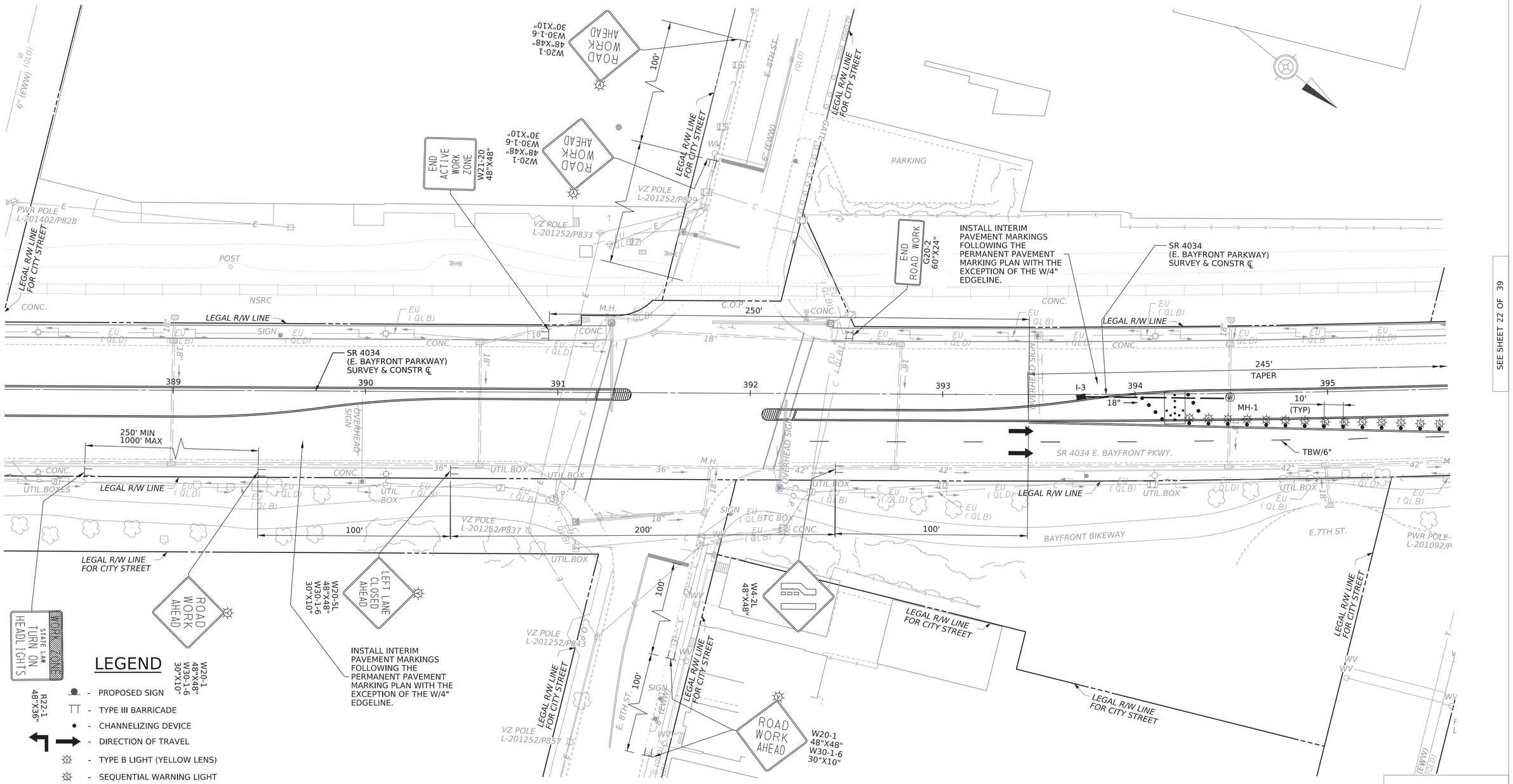
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	21 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 22 OF 39



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 4
(SHEET 1 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR.
ENGINEER
PE077566

OPERATOR: eligda
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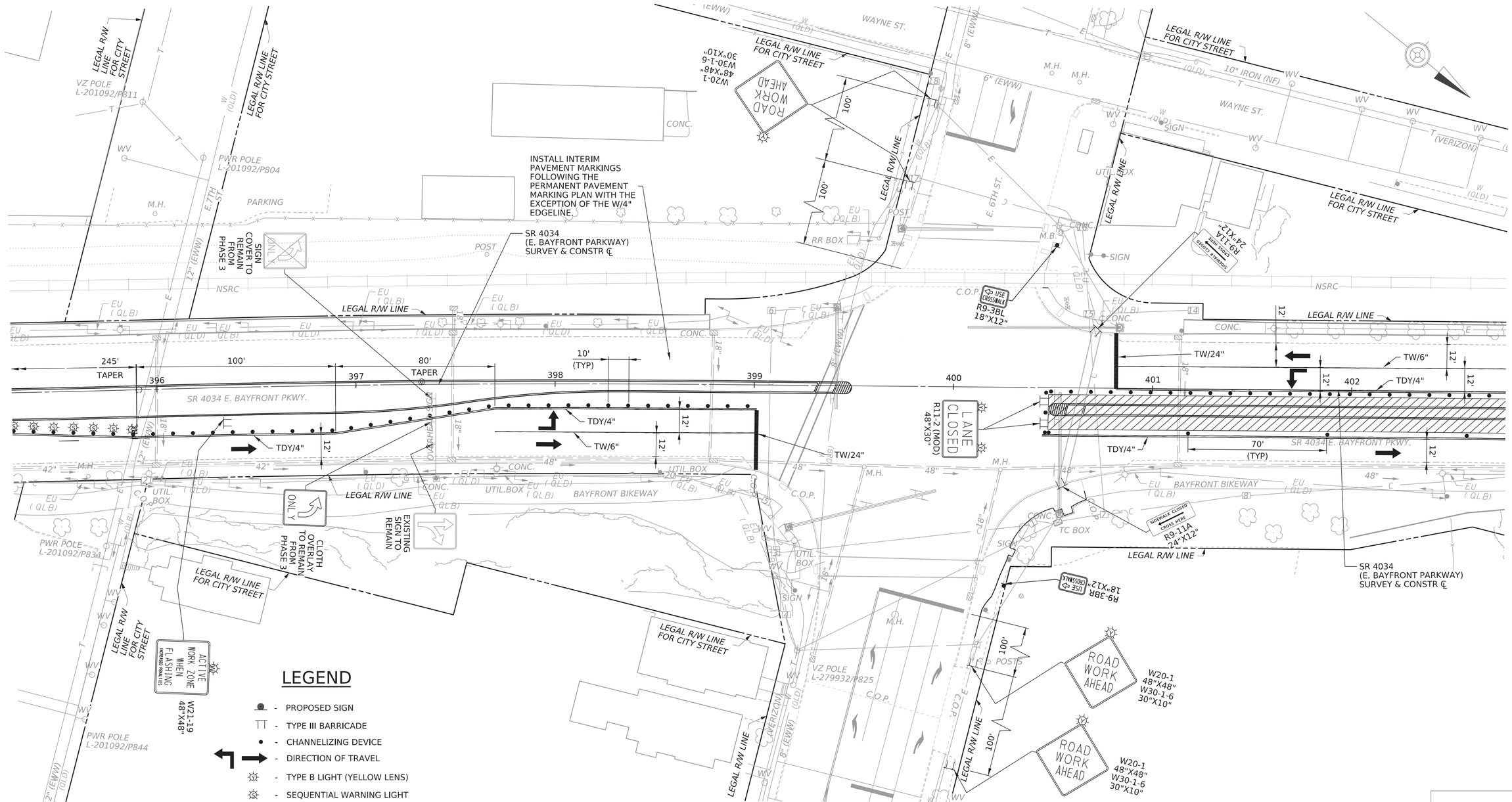
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	22 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES:
1. SEE SHEET 38 - 39 FOR TEMPORARY SIGNAL PLAN.
2. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.

SEE SHEET 21 OF 39

SEE SHEET 23 OF 39



LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- EPM - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN
PHASE 4
(SHEET 2 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

OPERATOR: eligda
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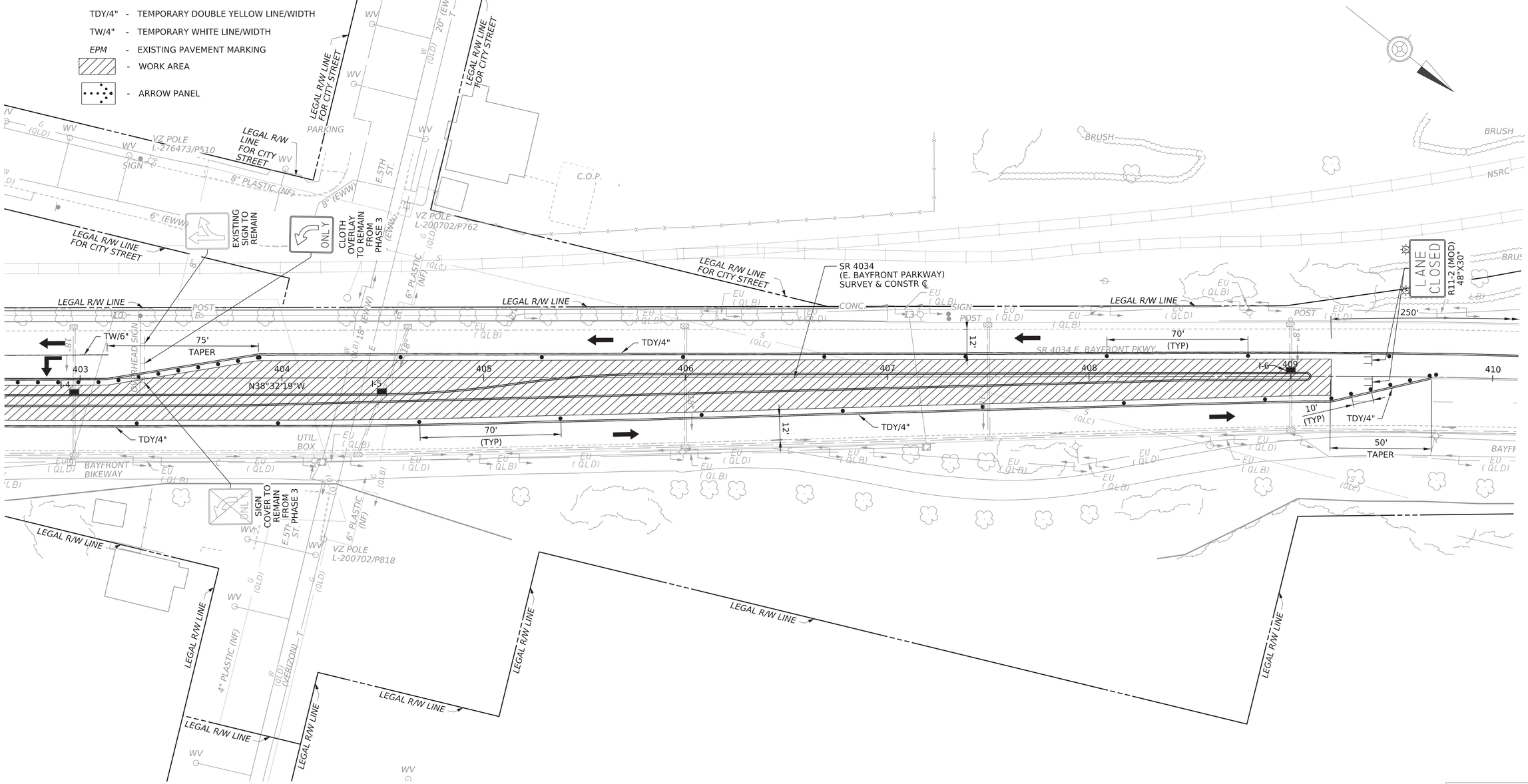
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	23 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- PROPOSED SIGN
- TT - TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL

NOTE:
1. UTILIZE FLAGGING PER PENNDOT PUB. 213 WHILE ENTERING/EXISTING ACTIVE WORK AREA.



SCALE
0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 4
(SHEET 3 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

SEE SHEET 22 OF 39

SEE SHEET 24 OF 39

OPERATOR: eligda
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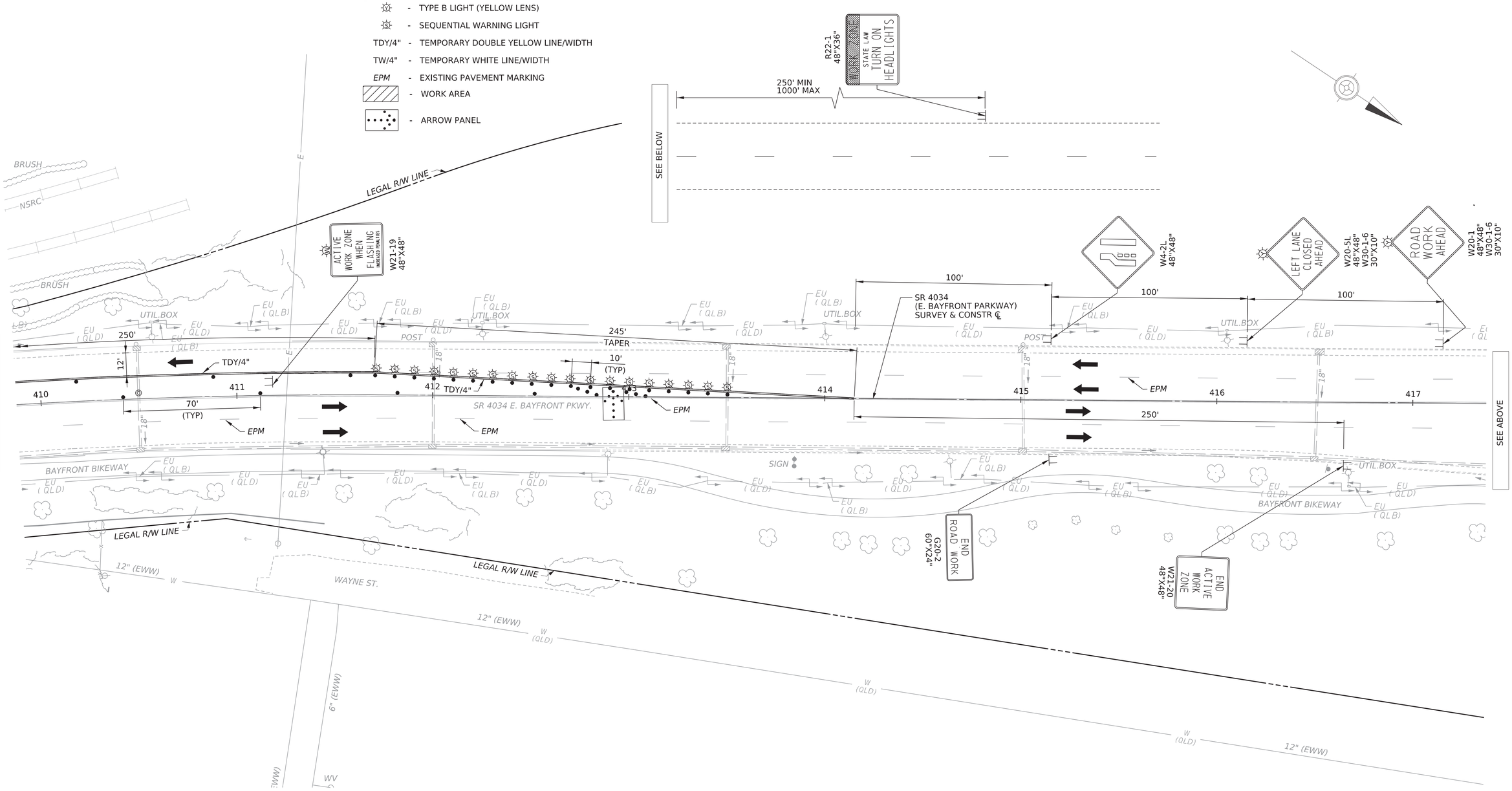
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	24 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

LEGEND

- PROPOSED SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE B LIGHT (YELLOW LENS)
- SEQUENTIAL WARNING LIGHT
- TDY/4" - TEMPORARY DOUBLE YELLOW LINE/WIDTH
- TW/4" - TEMPORARY WHITE LINE/WIDTH
- *EPM* - EXISTING PAVEMENT MARKING
- WORK AREA
- ARROW PANEL



SCALE

0 25 50 FEET

TRAFFIC CONTROL PLAN

PHASE 4
(SHEET 4 OF 4)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	25 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SR 0290/SR 4034 (BAYFRONT CONNECTOR) AND SR 0005 (EAST 12TH STREET)

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLITS							
	S	M	T	W	T	F	S				∅1	∅2	∅3	∅4	∅5	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	0	14	19	13	24	14	19	13	24
1		X	X	X	X	X		6:30 AM TO 9:30 AM	110	0	14	31	26	39	14	31	13	52
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	0	14	19	13	24	14	19	13	24
2		X	X	X	X	X		3:00 PM TO 6:00 PM	110	0	14	32	13	51	14	32	13	51
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	0	14	19	13	24	14	19	13	24
3	X						X	12:00 AM TO 12:00 PM	70	0	14	19	13	24	14	19	13	24

SR 4034 (BAYFRONT PARKWAY) AND EAST TENTH STREET

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLITS				
	S	M	T	W	T	F	S				∅2	∅4	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	16	35.5	34.5	35.5	13	21.5
1		X	X	X	X	X		6:30 AM TO 9:30 AM	110	26	36	74	36	13	61
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	16	35.5	34.5	35.5	13	21.5
2		X	X	X	X	X		3:00 PM TO 6:00 PM	110	16	41	69	41	13	56
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	16	35.5	34.5	35.5	13	21.5
3	X						X	12:00 AM TO 12:00 PM	70	16	35.5	34.5	35.5	13	21.5

SR 4034 (BAYFRONT PARKWAY) AND EAST EIGHTH STREET

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLITS			
	S	M	T	W	T	F	S				∅2	∅4	∅6	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	22	18	52	18	52
1		X	X	X	X	X		6:30 AM TO 9:30 AM	110	100	18	92	18	92
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	22	18	52	18	52
2		X	X	X	X	X		3:00 PM TO 6:00 PM	110	68	36	74	36	74
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	22	18	52	18	52
3	X						X	12:00 AM TO 12:00 PM	70	22	18	52	18	52

SR 4034 (BAYFRONT PARKWAY) AND EAST SIXTH STREET

COORDINATION PLAN

PLAN	DAY OF WEEK							TIME	CYCLE LENGTH	OFFSET	SPLITS							
	S	M	T	W	T	F	S				∅1	∅2	∅3	∅4	∅5	∅6	∅7	∅8
3		X	X	X	X	X		12:00 AM TO 6:30 AM	70	62	12	17	11	30	12	17	15	26
1		X	X	X	X	X		6:30 AM TO 9:30 AM	110	58	12	23	15	60	12	23	22	53
3		X	X	X	X	X		9:30 AM TO 3:00 PM	70	62	12	17	11	30	12	17	15	26
2		X	X	X	X	X		3:00 PM TO 6:00 PM	110	26	15	30	11	54	12	33	30	35
3		X	X	X	X	X		6:00 PM TO 12:00 AM	70	62	12	17	11	30	12	17	15	26
3	X						X	12:00 AM TO 12:00 PM	70	62	12	17	11	30	12	17	15	26

TRAFFIC CONTROL PLAN

TEMPORARY SIGNAL
COORDINATION PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

PLOTTED: 2/23/2023 1:57:40 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	26 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

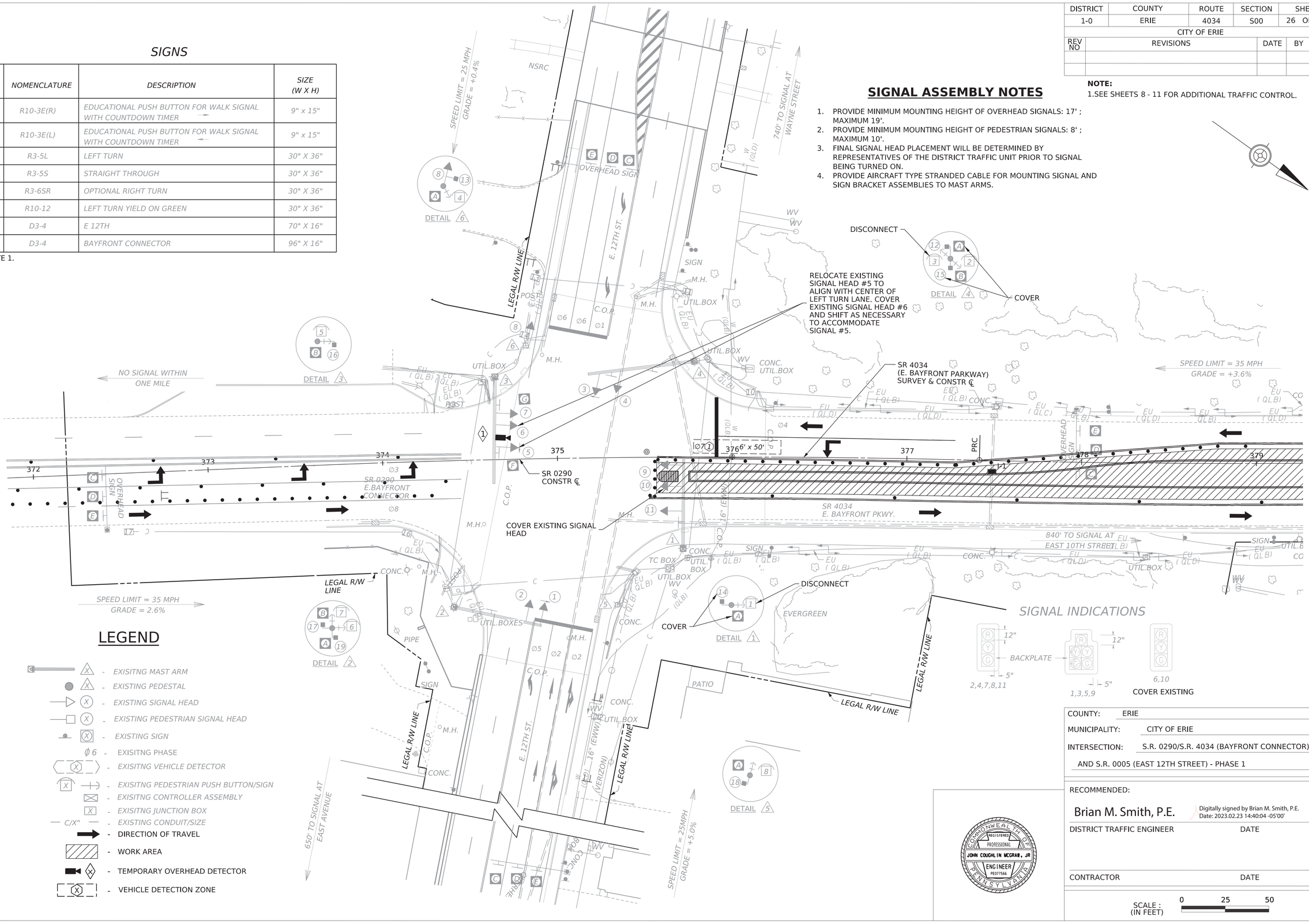
PLAN SYMBOL	NOMENCLATURE	DESCRIPTION	SIZE (W X H)
A	R10-3E(R)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	9" x 15"
B	R10-3E(L)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	9" x 15"
C ●	R3-5L	LEFT TURN	30" X 36"
D ●	R3-5S	STRAIGHT THROUGH	30" X 36"
E ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
F	R10-12	LEFT TURN YIELD ON GREEN	30" X 36"
G	D3-4	E 12TH	70" X 16"
H	D3-4	BAYFRONT CONNECTOR	96" X 16"

● SEE NOTE 1.

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.

NOTE:
1.SEE SHEETS 8 - 11 FOR ADDITIONAL TRAFFIC CONTROL.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ 6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

SIGNAL INDICATIONS

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 0290/S.R. 4034 (BAYFRONT CONNECTOR)
AND S.R. 0005 (EAST 12TH STREET) - PHASE 1

RECOMMENDED:

Brian M. Smith, P.E.

Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:40:04 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

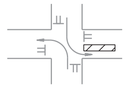
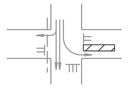
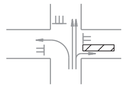
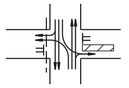
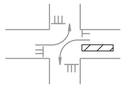
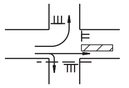
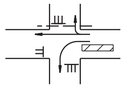
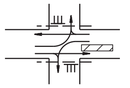
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SEE SHEET 28 OF 39

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1+5					PHASE 1+6					PHASE 2+5					PHASE 2+6					PHASE 3+7					PHASE 3+8					PHASE 4+7					PHASE 4+8					EMERGENCY FLASHING
																																									
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3			1	2	3	4		1	2	3	4		1	2	3	4		1	2	3			1	2	3	4		1	2	3	4		1	2	3	4		
1	R ←G–	R ① ←Y–	① R			G ←G–	G ←G–	③ Y	④ 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
2,8	R	R	R			G	G	④ Y	④ 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
3	R ←G–	R ② ←Y–	② R			R	R	R	R		G ←G–	G ←G–	③ Y	④ R		G	G	Y	R		R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
4	R	R	R			R	R	R	R		G	G	④ Y	④ R		G	G	Y	R		R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
5	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R ←G–	R ⑥ ←Y–	⑥ R			R	R	R	R		G ←G–	G ←G–	⑤ Y	⑧ R		G	G	Y	R		Y
7	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R	R	R			R	R	R	R		G	G	⑧ Y	⑧ R		G	G	Y	R		Y
9	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R ←G–	R ⑦ ←Y–	⑦ R			G ←G–	G ←G–	⑤ Y	⑧ R		R	R	R	R		G	G	Y	R		Y
11	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R	R	R			G	G	⑧ Y	⑧ R		R	R	R	R		G	G	Y	R		Y
12,13	DW	DW	DW			DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW			DW	DW	DW	DW		W	FD	DW	DW		W	FD	DW	DW		OFF
14,15	COVER EXISTING PEDESTRIAN SIGNAL HEADS																																								
16,17	DW	DW	DW			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		DW	DW	DW			DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		OFF
18,19	DW	DW	DW			DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
FIXED		4	3					4	3				4	3				4	3			3.5	2.5					3.5	2.5				3.5	2.5				3.5	2.5		
MINIMUM	7					7					7					10					7					7					7					7					
ADDED INITIAL																21																								
MAX. INITIAL																17																								
PASSAGE	3					3					3					7					3					3					3					4					
TO REDUCE																4																								
BEFORE RED																25																								
MIN. GAP																3																								
MAX I*	12					12					12					46					12					12					12					32					
MAX II*	12					12					12					46					12					12					12					32					
*** PEDESTRIAN						⑩					⑩					19	25									⑨					⑨					14	18				
MEMORY	NL					NL					NL					MN					NL					NL					NL					NL					

*** UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

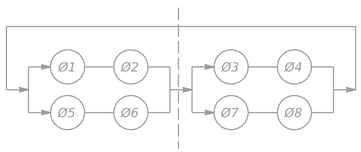
① R ←G– IF FOLLOWED BY | 1+6
② R ←G– IF FOLLOWED BY | 2+5
③ G ←Y– IF FOLLOWED BY | 2+6
④ G IF FOLLOWED BY | 2+6
⑤ G ←Y– IF FOLLOWED BY | 4+8
⑥ R ←G– IF FOLLOWED BY | 4+7
⑦ R ←G– IF FOLLOWED BY | 3+8
⑧ G IF FOLLOWED BY | 4+8

⑨ TIMING WILL BE AS SHOWN IN PHASE 4+8. INTERVALS 1 & 2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 4+8.

⑩ TIMING WILL BE AS SHOWN IN PHASE 2+6. INTERVALS 1 & 2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 2+6.

MAX I* : 10PM TO 10AM **
MAX II** : 10AM TO 10PM **
** IN CASE OF COORDINATION FAILURE

PHASING DIAGRAM



NORMAL OPERATION
PHASE SEQUENCE BARRIER

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4954 0203 LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY	20	374+65	EXISTING SIGNAL HEAD 5

ITEM 0958-0321
(FOR INFORMATION ONLY)

DESCRIPTION	QTY	LOCATION	REMARKS
TEMPORARY OVERHEAD DETECTION SYSTEM	1	◇1◇	

NOTES:
1. SIGNAL HEADS 6 AND 10 COVERED DURING THIS PHASE.
2. MAINTAIN ALL EXISTING PREEMPTION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	27 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT BABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290), EAST 6TH STREET (S.R. 4018), EAST LAKE ROAD (S.R. 4018), EAST 10TH STREET, AND EAST 12TH STREET (S.R. 0005).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 6TH STREET (S.R. 4018) BAYFRONT CONNECTOR (S.R. 4034).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JOHN COUGHLIN MCGRAW, JR — PE077566

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 0290/S.R. 4034 (BAYFRONT CONNECTOR)
AND S.R. 0005 (EAST 12TH STREET) - PHASE 1

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:40:28 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256462\MPTS\GPH1PLN01_4034.dgn

PLOTTED: 2/23/2023 1:58:02 PM

SIGNS

PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
A	D3-4	E 10TH ST	70" X 16"
B	D3-4	BAYFRONT PARKWAY	96" X 16"
C ●	R3-5L	LEFT TURN	30" X 36"
D ●	R3-5S	STRAIGHT-THROUGH	30" X 36"
E ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
F	R3-7L	LEFT LANE MUST TURN LEFT	30" X 30"
G	R10-11	NO TURN ON RED	30" X 36"
H	R10-12	LEFT TURN YIELD ON GREEN	30" X 36"
I	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
J	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12
K	R10-6L	STOP HERE ON RED	24" X 30"
L	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
M	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"
N	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	36" X 36"
O	R8-8	DO NOT STOP ON TRACKS	24" X 30"
P	R10-20	OPPOSING TRAFFIC HAS EXTENDED GREEN	30" X 36"
Q	R7-7A	NO PARKING ANYTIME	12" X 18"
R	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

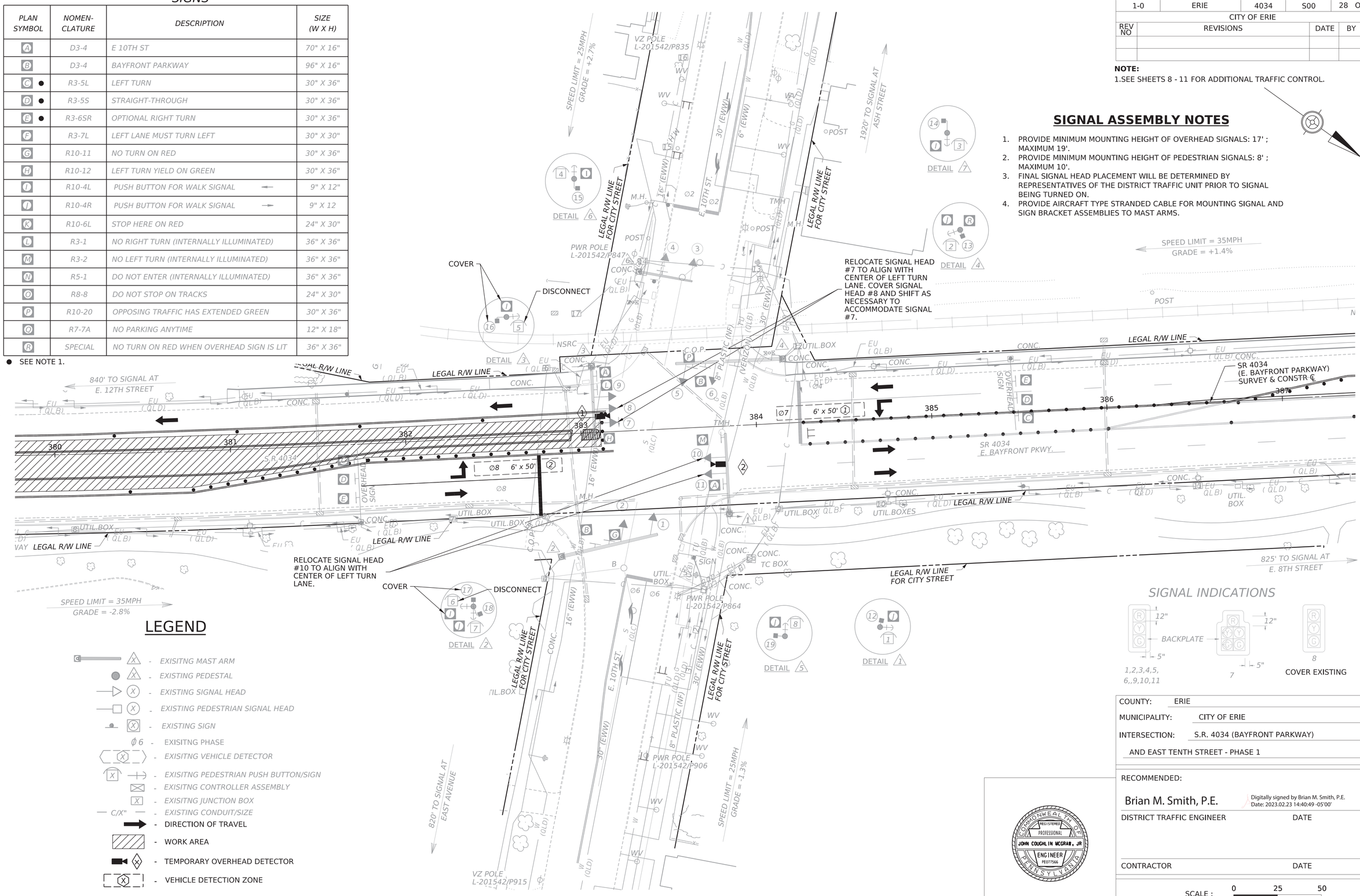
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	28 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTE:
1.SEE SHEETS 8 - 11 FOR ADDITIONAL TRAFFIC CONTROL.

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

SIGNAL INDICATIONS

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
INTERSECTION:	S.R. 4034 (BAYFRONT PARKWAY)
	AND EAST TENTH STREET - PHASE 1

RECOMMENDED:

Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:40:49 -05'00'

DISTRICT TRAFFIC ENGINEER — DATE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOHN COUGHLIN MCGRAW, JR — ENGINEER — PE037566

CONTRACTOR — DATE

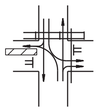
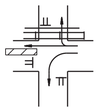
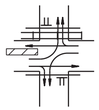
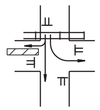
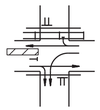
SCALE : (IN FEET) 0 25 50

SEE SHEET 26 OF 39

FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256462\MPTSIGPH1PLN02_4034.dgn

PLOTTED: 2/23/2023 1:58:03 PM

MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+7					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																										
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4	5	1	2	3	4		1	2	3	4		1	2	3			1	2	3	4		
1,2	G	G	G	Y	R	R	R	R	R		R	R	R	R		G	Y	R			R	R	R	R		R
3,4	G	G	Y	R	R	R	R	R	R		R	R	R	R		R	R	R			R	R	R	R		R
5,6	G	G	Y	R	R	R	R	R	R		R	R	R	R		R	R	R			R	R	R	R		R
7	R	R	R	R	R	G ←G−	G ←G−	Y ②	R ③		G	G	Y	R		R	R	Y			G	G	Y	R		Y
9	R	R	R	R	R	G	G	Y ①	R ①		G	G	Y	R		R	R	Y			G	G	Y	R		Y
10,11	R	R	R	R	R	R	R	R	R		G	G	Y	R		G	G	Y			G	G	Y	R		Y
*12,13	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		OFF
*16,17	COVER EXISTING PEDESTRIAN SIGNAL HEADS																									
*14,15	DW	DW	DW	DW	DW	W	FD	DW	DW		W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
*18,19	DW	DW	DW	DW	DW	DW	DW	DW	DW		W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
SIGNS L M N	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	ON	ON	ON		ON	ON	ON	ON		
FIXED			3.0	3.0	2.0			3.0	3.0				3.0	3.0		6.0	3.0	3.0					3.0	3.0		
MINIMUM	7					7					12															
SEC./ACT.											2.1															
MAX. INITIAL											25															
PASSAGE	4					4					6															
TIME TO REDUCE											3															
BEFORE REDUCTION											27															
MIN. GAP											3															
MAX I	40					7					23					6					⑤					
MAX II	45					7					18					6					⑤					
*PEDESTRIAN	13.0	17.5				④					10.0	13.0									10.0	⑥ 13.0				
MEMORY	MN					NL					MN															

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① G IF FOLLOWED BY PHASE 4+8

② G/Y IF FOLLOWED BY PHASE 4+8

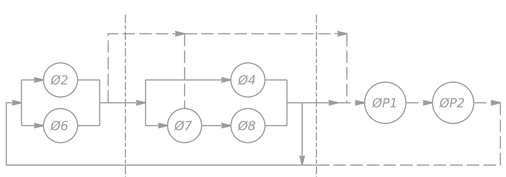
③ G IF FOLLOWED BY PHASE 4+8

④ TIMING WILL BE AS SHOWN IN PHASE 4+8. INTERVALS 1 & 2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 4+8.

⑤ DWELL UNTIL PREEMPTION TERMINATES.

⑥ RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

PHASING DIAGRAM



NORMAL OPERATION
RAILROAD PREEMPTION
PHASE SEQUENCE BARRIER

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 4+8-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+7-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 1, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 2,3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 2, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 10TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISITNG AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4954 0202 LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR, TEMPORARY	20	383+75	EXISTING SIGNAL HEAD 10
4954 0203 LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY	20	383+08	EXISTING SIGNAL HEAD 7

ITEM 0958-0322
(FOR INFORMATION ONLY)

DESCRIPTION	QTY	LOCATION	REMARKS
TEMPORARY OVERHEAD DETECTION SYSTEM	1	◇1 ◇2	

NOTES:
1. SIGNAL HEAD 8 COVERED DURING THIS PHASE
2. MAINTAIN ALL EXISTING PREEMPTION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	29 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT CABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290), EAST 6TH STREET (S.R. 4018), EAST LAKE ROAD (S.R. 4018), EAST 10TH STREET, AND EAST 12TH STREET (S.R. 0005).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST TENTH STREET - PHASE 1

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:41:15 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

FILE NAME: c:\pwworking\jmtvellgda@jmt.com\d0256462\MPTSIGPH1PLN02_4034.dgn

PLOTTED: 2/23/2023 1:58:22 PM

SIGNS

PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
A	D3-4	E 10TH ST	70" X 16"
B	D3-4	BAYFRONT PARKWAY	96" X 16"
C ●	R3-5L	LEFT TURN	30" X 36"
D ●	R3-5S	STRAIGHT-THROUGH	30" X 36"
E ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
F	R3-7L	LEFT LANE MUST TURN LEFT	30" X 30"
G	R10-11	NO TURN ON RED	30" X 36"
H	R10-12	LEFT TURN YIELD ON GREEN	30" X 36"
I	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
J	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12
K	R10-6L	STOP HERE ON RED	24" X 30"
L	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
M	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"
N	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	36" X 36"
O	R8-8	DO NOT STOP ON TRACKS	24" X 30"
P	R10-20	OPPOSING TRAFFIC HAS EXTENDED GREEN	30" X 36"
Q	R7-7A	NO PARKING ANYTIME	12" X 18"
R	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

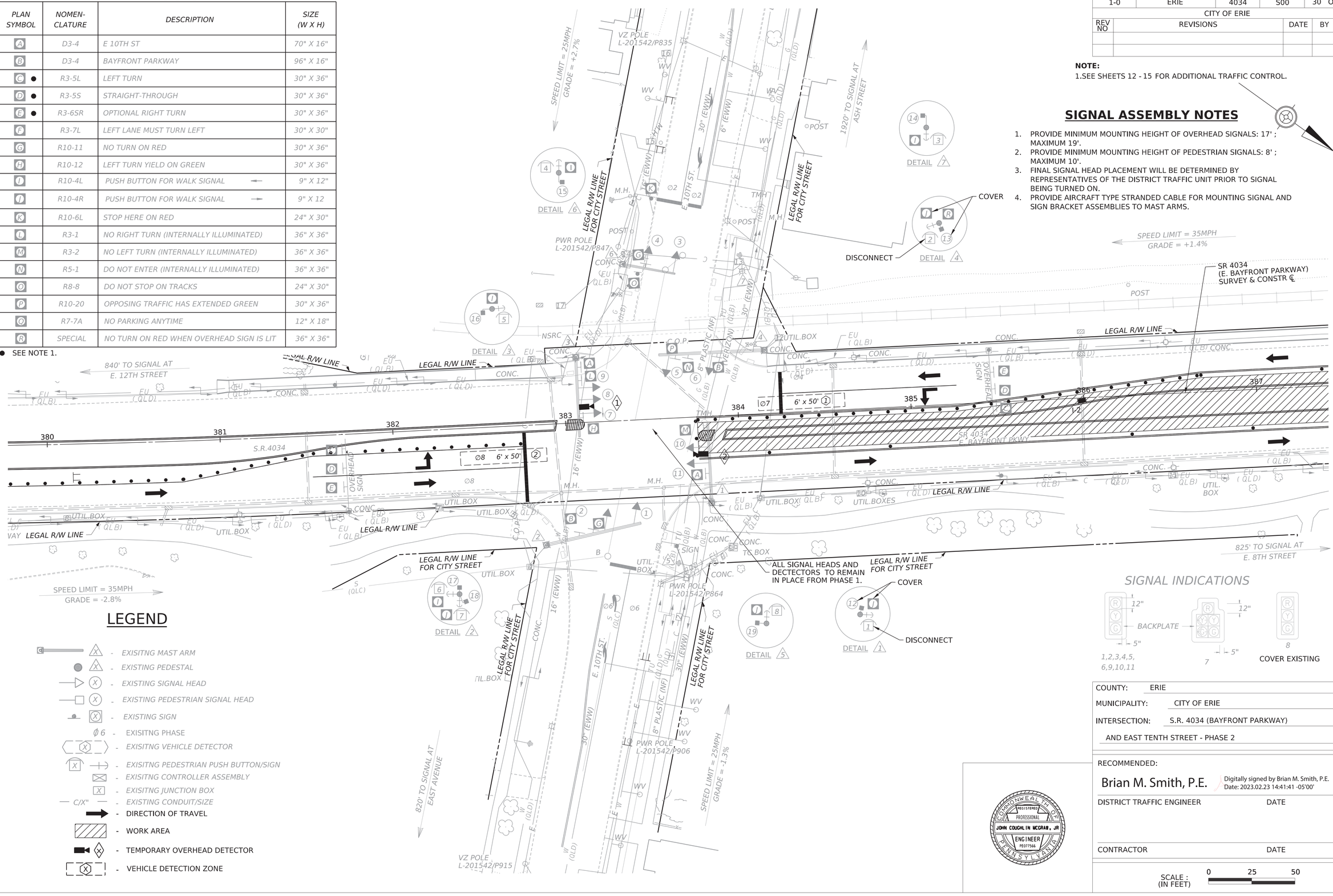
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	30 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTE:
1.SEE SHEETS 12 - 15 FOR ADDITIONAL TRAFFIC CONTROL.

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.



LEGEND

- X - EXISITNG MAST ARM
- X - EXISTING PEDESTAL
- X - EXISTING SIGNAL HEAD
- X - EXISTING PEDESTRIAN SIGNAL HEAD
- X - EXISTING SIGN
- ϕ 6 - EXISITNG PHASE
- X - EXISITNG VEHICLE DETECTOR
- X - EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- X - EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- X - TEMPORARY OVERHEAD DETECTOR
- X - VEHICLE DETECTION ZONE

SIGNAL INDICATIONS

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND EAST TENTH STREET - PHASE 2

RECOMMENDED:

Brian M. Smith, P.E.

Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:41:41 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN COUGHLIN MCGRAW, JR ENGINEER PE077566

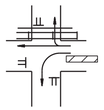
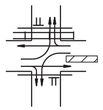
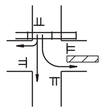
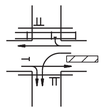
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SEE SHEET 32 OF 39

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+7					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																										
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4	5	1	2	3	4		1	2	3	4		1	2	3			1	2	3	4		
1,2	G	G	G	Y	R	R	R	R	R		R	R	R	R		G	Y	R			R	R	R	R		R
3,4	G	G	Y	R	R	R	R	R	R		R	R	R	R		R	R	R			R	R	R	R		R
5,6	G	G	Y	R	R	R	R	R	R		R	R	R	R		R	R	R			R	R	R	R		R
7	R	R	R	R	R	G ←G–	G ←G–	Y ②	R ③		G	G	Y	R		R	R	Y			G	G	Y	R		Y
9	R	R	R	R	R	G	G	Y ①	R ①		G	G	Y	R		R	R	Y			G	G	Y	R		Y
10,11	R	R	R	R	R	R	R	R	R		G	G	Y	R		G	G	Y			G	G	Y	R		Y
*12,13	COVER EXISTING PEDESTRIAN SIGNAL HEADS																									
*16,17	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		OFF
*14,15	DW	DW	DW	DW	DW	W	FD	DW	DW		W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
*18,19	DW	DW	DW	DW	DW	DW	DW	DW	DW		W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
SIGNS L M N	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF		ON	ON	ON	ON		ON	ON	ON	ON		
FIXED			3.0	3.0	2.0			3.0	3.0				3.0	3.0		6.0	3.0	3.0					3.0	3.0		
MINIMUM	7					7					12															
SEC./ACT.											2.1															
MAX. INITIAL											25															
PASSAGE	4					4					6															
TIME TO REDUCE											3															
BEFORE REDUCTION											27															
MIN. GAP											3															
MAX I	40					7					23					6					⑤					
MAX II	45					7					18					6					⑤					
* PEDESTRIAN	13.0	17.5				④					10.0	13.0									10.0	⑥ 13.0				
MEMORY	MN					NL					MN															

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① G IF FOLLOWED BY PHASE 4+8

② G/Y IF FOLLOWED BY PHASE 4+8

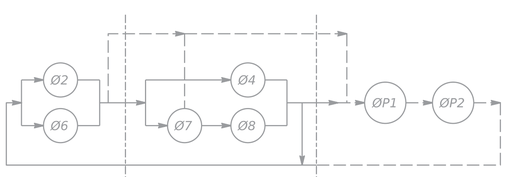
③ G IF FOLLOWED BY PHASE 4+8

④ TIMING WILL BE AS SHOWN IN PHASE 4+8. INTERVALS 1 & 2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 4+8.

⑤ DWELL UNTIL PREEMPTION TERMINATES.

⑥ RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

PHASING DIAGRAM



NORMAL OPERATION ———
RAILROAD PREEMPTION — — — —
PHASE SEQUENCE BARRIER -·-·-·-·-

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 4+8-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+7-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+7-INTERVALS 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+7-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 1, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 2,3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 2, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 10TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISITNG AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

NOTES:
1. SIGNAL HEAD 8 COVERED DURING THIS PHASE
2. MAINTAIN ALL EXISTING PREEMPTION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	31 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
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8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOHN COUGHLIN MCGRAW, JR — ENGINEER — PE077566

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST TENTH STREET - PHASE 2

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:42:10 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

FILE NAME: c:\pwworking\jmtvellgda@jmt.com\d0256536\MPTSIGPH2PLN01_4034.dgn

PLOTTED: 2/23/2023 1:58:41 PM

SIGNS

PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
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B	D3-4	BAYFRONT PARKWAY	96" X 16"
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F	R3-7L	LEFT LANE MUST TURN LEFT	30" X 30"
G	R10-11	NO TURN ON RED	30" X 36"
H	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
I	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12"
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K	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
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M	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	36" X 36"
N	R8-8	DO NOT STOP ON TRACKS	24" X 30"
O	R10-20	OPPOSING TRAFFIC HAS EXTENDED GREEN	30" X 36"
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Q	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

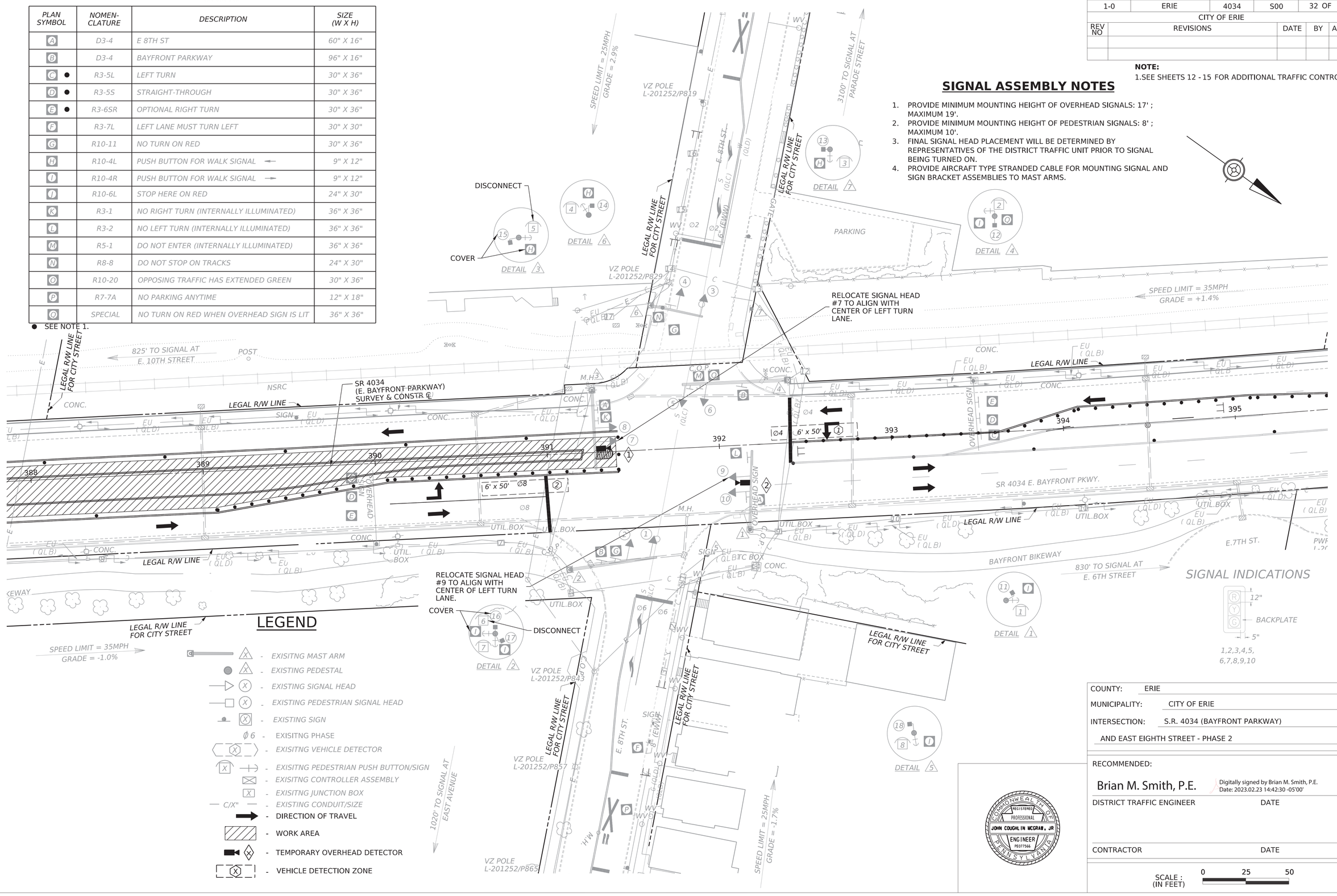
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	32 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTE:
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1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
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4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ 6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST EIGHTH STREET - PHASE 2

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:42:30 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE077566

CONTRACTOR DATE

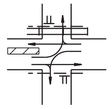
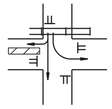
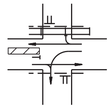
SCALE : (IN FEET) 0 25 50

SEE SHEET 30 OF 39

FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256536\MPTSIGPH2PLN02_4034.dgn

PLOTTED: 2/23/2023 1:58:43 PM

MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																					
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4	5	1	2	3	4		1	2	3			1	2	3	4		
1,2	G	G	G	Y	R	R	R	R	R		G	Y	R			R	R	R	R		R
3,4	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		R
5,6	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		R
7,8	R	R	R	R	R	G	G	Y	R		R	R	R			G	G	Y	R		Y
9,10	R	R	R	R	R	G	G	Y	R		R	R	R			G	G	Y	R		Y
*11,12	W	FD	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW			DW	DW	DW	DW		OFF
*15,16	COVER EXISTING PEDESTRIAN SIGNAL HEADS																				
*13,14	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW			W	FD	DW	DW		OFF
*17,18	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW			W	FD	DW	DW		OFF
SIGNS K L M	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	ON	ON			ON	ON	ON	ON		OFF
FIXED			3.0	3.0	2.0			3.0	3.0			3.0	2.0					3.0	3.0		
MINIMUM	7					12					7										
SEC./ACT.						2.5															
MAX. INITIAL						25															
PASSAGE	4					6															
TIME TO REDUCE						3															
BEFORE REDUCTION						27															
MIN. GAP						3															
MAX I	21					55					7					①					
MAX II	29					47					7					①					
* PEDESTRIAN	13.0	18				9.0	12									9.0	② 12				
MEMORY	NL					MN					MN										

MEMORY:

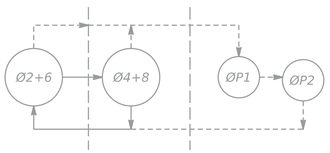
MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① DWELL UNTIL PREEMPTION TERMINATES.

② RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

PHASING DIAGRAMS



NORMAL OPERATION
RAILROAD PREEMPTION
PHASE SEQUENCE BARRIER

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 4+8-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
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-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 1, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 2,3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 8TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISITNG AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY	LOCATION	REMARKS
4954 0202 LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR, TEMPORARY	20	391+28	EXISTING SIGNAL HEAD 7
4954 0202 LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR, TEMPORARY	20	392+16	EXISTING SIGNAL HEAD 9

ITEM 0958-0323
(FOR INFORMATION ONLY)

DESCRIPTION	QTY	LOCATION	REMARKS
TEMPORARY OVERHEAD DETECTION SYSTEM	1	◇1◇ ◇2◇	

NOTES:
1. MAINTAIN ALL EXISTING PREEMPTION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	33 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT CABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290), EAST 6TH STREET (S.R. 4018), EAST LAKE ROAD (S.R. 4018), EAST 10TH STREET, AND EAST 12TH STREET (S.R. 0005).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JOHN COUGHLIN MCGRAW, JR PE077566

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND EAST EIGHTH STREET - PHASE 2

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:42:54 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

FILE NAME: c:\pwworking\jmt\eligda@jmt.com\d0256536\MPTSIGPH2PLN02_4034.dgn

PLOTTED: 2/23/2023 1:59:01 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	34 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

SIGNS

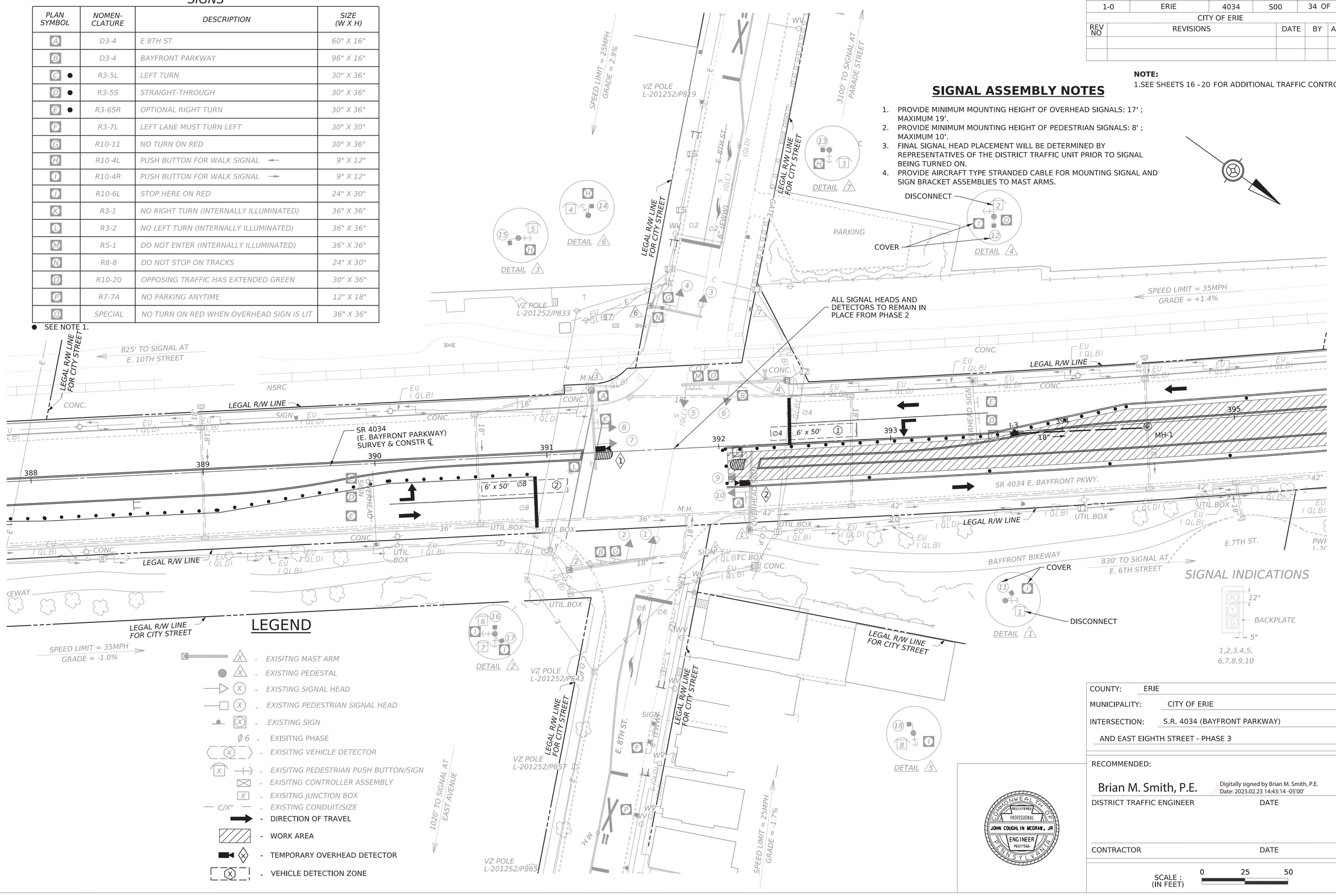
PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
A	D3-4	E 8TH ST	60" X 16"
B	D3-4	BAYFRONT PARKWAY	96" X 16"
C ●	R3-5L	LEFT TURN	30" X 36"
D ●	R3-5S	STRAIGHT-THROUGH	30" X 36"
E ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
F	R3-7L	LEFT LANE MUST TURN LEFT	30" X 30"
G	R10-11	NO TURN ON RED	30" X 36"
H	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
I	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12"
J	R10-6L	STOP HERE ON RED	24" X 30"
K	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
L	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"
M	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	36" X 36"
N	R8-8	DO NOT STOP ON TRACKS	24" X 30"
O	R10-20	OPPOSING TRAFFIC HAS EXTENDED GREEN	30" X 36"
P	R7-7A	NO PARKING ANYTIME	12" X 18"
Q	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

NOTE:
1.SEE SHEETS 16 - 20 FOR ADDITIONAL TRAFFIC CONTROL.

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ 6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY) AND EAST EIGHTH STREET - PHASE 3

RECOMMENDED:

Brian M. Smith, P.E. — Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:43:14 -05'00'

DISTRICT TRAFFIC ENGINEER — DATE

CONTRACTOR — DATE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOHN COUGHLIN MCGRAW, JR — ENGINEER — PE077566

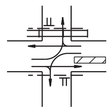
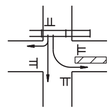
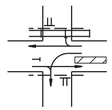
SCALE : (IN FEET) 0 25 50

SEE SHEET 36 OF 39

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PLOTTED: 2/23/2023 1:59:03 PM

MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 2+6					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																					
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SIGNAL	1	2	3	4	5	1	2	3	4		1	2	3			1	2	3	4		
1,2	G	G	G	Y	R	R	R	R	R		G	Y	R			R	R	R	R		R
3,4	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		R
5,6	G	G	Y	R	R	R	R	R	R		R	R	R			R	R	R	R		R
7,8	R	R	R	R	R	G	G	Y	R		R	R	R			G	G	Y	R		Y
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*17,18	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW			W	FD	DW	DW		OFF
SIGNS (K) (L) (M)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	ON	ON			ON	ON	ON	ON		OFF
FIXED			3.0	3.0	2.0			3.0	3.0			3.0	2.0					3.0	3.0		
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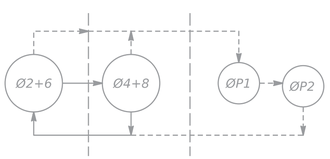
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PHASING DIAGRAMS



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RAILROAD PREEMPTION
PHASE SEQUENCE BARRIER

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-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
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OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 8TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
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NOTES:
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	35 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

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3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT CABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290), EAST 6TH STREET (S.R. 4018), EAST LAKE ROAD (S.R. 4018), EAST 10TH STREET, AND EAST 12TH STREET (S.R. 0005).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290).

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THE INTERSECTION OF EAST 12TH STREET (S.R. 0005) AT BAYFRONT CONNECTOR/PARKWAY (S.R. 4034/S.R. 0290). OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOHN COUGHLIN MCGRAW, JR — ENGINEER — PE077566

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)

AND EAST EIGHTH STREET - PHASE 3

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:43:35 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

FILE NAME: c:\pwworking\jmteligda@jmt.com\d0256537\MPTSIGPH3PLN01_4034.dgn

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	36 OF 39
CITY OF ERIE				

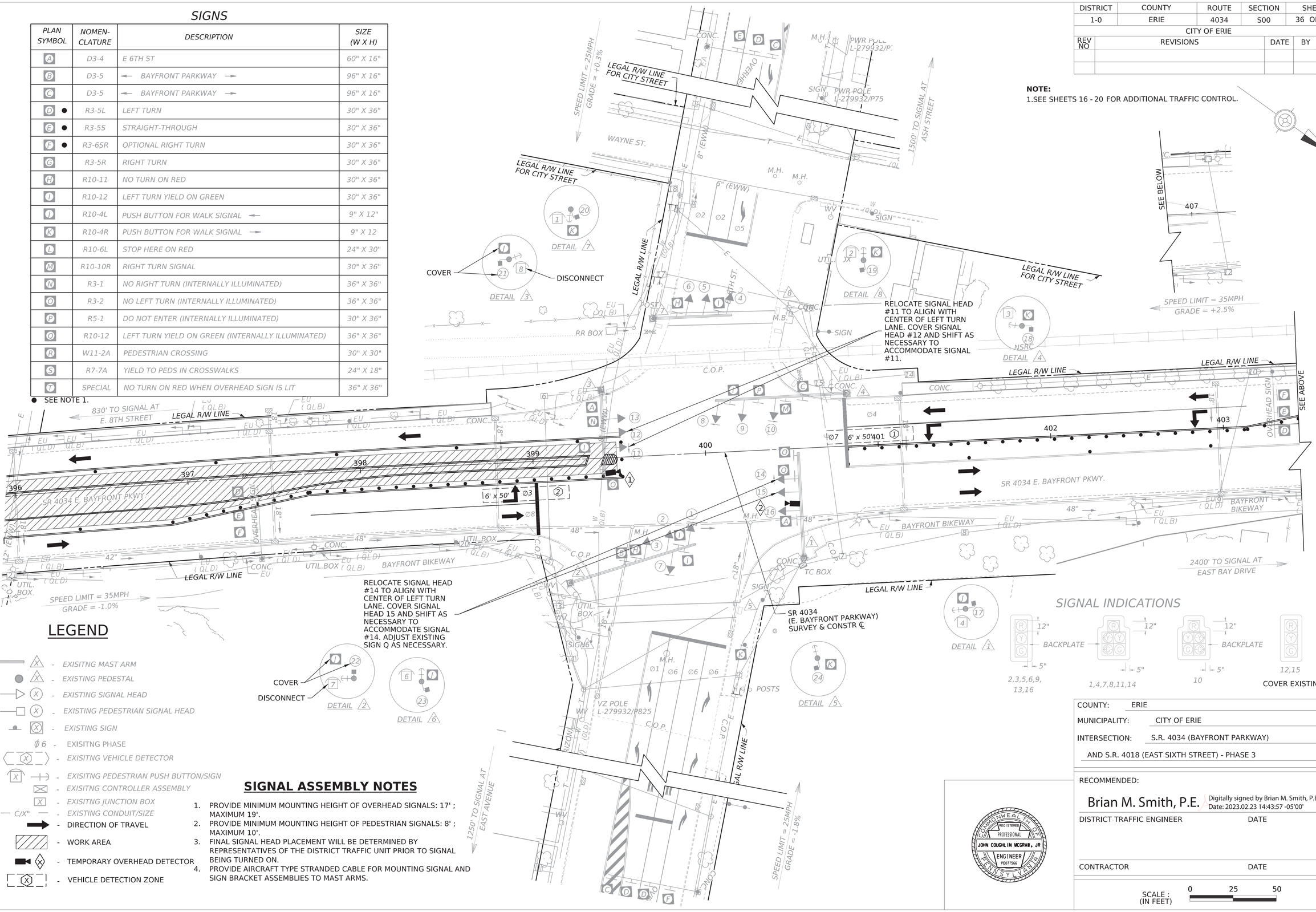
REV NO	REVISIONS	DATE	BY	APPD

SIGNS

PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
A	D3-4	E 6TH ST	60" X 16"
B	D3-5	← BAYFRONT PARKWAY →	96" X 16"
C	D3-5	← BAYFRONT PARKWAY →	96" X 16"
D ●	R3-5L	LEFT TURN	30" X 36"
E ●	R3-5S	STRAIGHT-THROUGH	30" X 36"
F ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
G	R3-5R	RIGHT TURN	30" X 36"
H	R10-11	NO TURN ON RED	30" X 36"
I	R10-12	LEFT TURN YIELD ON GREEN	30" X 36"
J	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
K	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12
L	R10-6L	STOP HERE ON RED	24" X 30"
M	R10-10R	RIGHT TURN SIGNAL	30" X 36"
N	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
O	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"
P	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	30" X 36"
Q	R10-12	LEFT TURN YIELD ON GREEN (INTERNALLY ILLUMINATED)	36" X 36"
R	W11-2A	PEDESTRIAN CROSSING	30" X 30"
S	R7-7A	YIELD TO PEDS IN CROSSWALKS	24" X 18"
T	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

NOTE:
1.SEE SHEETS 16 - 20 FOR ADDITIONAL TRAFFIC CONTROL.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.

SIGNAL INDICATIONS

COUNTY:	ERIE
MUNICIPALITY:	CITY OF ERIE
INTERSECTION:	S.R. 4034 (BAYFRONT PARKWAY)
	AND S.R. 4018 (EAST SIXTH STREET) - PHASE 3

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:43:57 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN COUGHLIN MCGRAW, JR ENGINEER PE077566

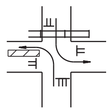
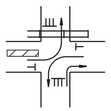
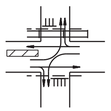
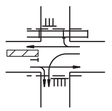
SCALE : (IN FEET) 0 25 50

SEE SHEET 34 OF 39

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1+5					PHASE 2+6					PHASE 3+7					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																															
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4		1	2	3	4	5	1	2	3			1	2	3	4		1	2	3	4		1	2	3	4		
1	R (G)	R (Y)	R (G)	R		G	G	G	Y	R	R	R	R			R	R	R	R		G	G	G	Y		R	R	R	R		R
2,3	R	R	R	R		G	G	G	Y	R	R	R	R			R	R	R	R		G	G	G	Y		R	R	R	R		R
4	R (G)	R (Y)	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
5,6	R	R	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		G	G	Y	R		R	R	R	R		R
7,8	R (G)	R (Y)	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
9	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
10	R	R	R	R		G	G	Y	R	R	R (G)	R (Y)	R			R	R	R	R		R	R	R	R		R	R	R	R		R
11	R	R	R	R		R	R	R	R	R	R (G)	R (Y)	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
13	R	R	R	R		R	R	R	R	R	R	R	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
14	R	R	R	R		R	R	R	R	R	R (G)	R (Y)	R			G	G	Y	R		R	R	R	R		R	R	R	R		R
16	R	R	R	R		R	R	R	R	R	R	R	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
*17,18	DW	DW	DW	DW		W	FD	DW	DW	DW	DW	DW	DW			DW	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		OFF
*21,22	COVER EXISTING PEDESTRIAN SIGNAL HEADS																														
*19,20	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
*23,24	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
SIGN (N O P)	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF			OFF	OFF	OFF	OFF		ON	ON	ON	ON		ON	ON	ON	ON		OFF
SIGN (O)	ON	ON	ON	ON		ON	ON	ON	ON	ON	ON	ON	ON			ON	ON	ON	ON		OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF		OFF
FIXED	X	3.0	3.0	2.0		X	3.0	3.0	2.0		X	3.0	2.0			X	3.0	3.0			X	3.0	3.0			X	3.0	3.0			
MINIMUM	7					10										12															
SEC./ACT.						2.1										2.1															
MAX. INITIAL						19										22															
PASSAGE	2					5										7															
TIME TO REDUCE																4															
BEFORE REDUCTION																22															
MIN. GAP																															
MAX I	10					16					10					26										①					
MAX II	10					26					7					19										①					
*PEDESTRIAN						14	20									13.0	19									13.0	② 19				
MEMORY	NL					MN					NL					MN															

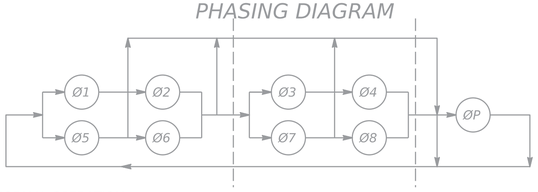
MEMORY:
MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① DWELL UNTIL PREEMPTION TERMINATES.

② RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

PHASING DIAGRAM



NORMAL OPERATION ———————
RAILROAD PREEMPTION - - - - - - - - -
PHASE SEQUENCE BARRIER — — — — -

MISCELLANEOUS

ITEM NUMBER	DESCRIPTION	QTY	LOCATION	REMARKS
UNIT				
4954 0203 EACH	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY	20	399+42	EXISTING SIGNAL HEAD 11
4954 0203 EACH	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR, TEMPORARY	20	400+53	EXISTING SIGNAL HEAD 14

ITEM 0958-0324 (FOR INFORMATION ONLY)

DESCRIPTION	QTY	LOCATION	REMARKS
TEMPORARY OVERHEAD DETECTION SYSTEM	1	① ②	

NOTES:
1. SIGNAL HEADS 12 AND 15 COVERED DURING THIS PHASE.
2. MAINTAIN ALL EXISTING PREEMPTION.

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 3+7-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 3+7-INTERVALS 2&3 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 3+7-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 3+7-INTERVAL 3 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 3+7-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 1+5-INTERVALS 2,3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 1, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 2,3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 2, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 6TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISITNG AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

EMERGENCY PREEMPTION NOTES

EMERGENCY PREEMPTION EQUIPMENT IS LOCATED IN THE CONTROLLER CABINET. UPON PREEMPTION, THE CONTROLLER'S INTERNAL PREEMPTION PROGRAM PROVIDES THE FOLLOW SEQUENCE IF THE CONFLICTING PHASE IS IN GREEN:

A. A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION.
B. THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
C. A YELLOW CLEARANCE INTERVAL REPLACES ALL CONFLICTING GREEN INDICATIONS.
D. UPON COMPLETION OF THE YELLOW CLEARANCE INTERVAL, THE ALL RED INTERVAL IS COMPLETED FOLLOWED BY THE GREEN INDICATIONS FOR THE SELECTED STREET.

UPON PREEMPTION, THE CONTROLLER'S INTERNAL PREEMPTION PROGRAM PROVIDES THE FOLLOWING SEQUENCE IF THE SELECTED STREET IS IN GREEN:

A. A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION.
B. THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
C. THE GREEN INDICATION REMAINS ON THE SELECTED STREET.

UTILIZE CONTROLLER TIMINGS FOR INTERVAL BEING CLEARED.

FOR THE DURING OF THE PREEMPTION, A GREEN INDICATION REMAINS ONT HE SELECTED STREET WITH A RED INDICATION GIVEN TO ALL OTHER STREETS AND A STEADY "DON'T WALK" INDICATION ON ALL PEDESTRIAN SIGNALS.

UPON TERMINATION OF THE PREEMPTION, THE SIGNAL RETURNS TO NORMAL OPERATION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	37 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT BABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR (S.R. 4034), BAYFRONT PARKWAY (S.R. 4034), AND EAST 6TH STREET (S.R. 4018).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THIS INTERSECTION.

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THIS INTERSECTION. OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

CONTROLLER TO OPERATE IN FREE MODE (INDEPENDENTLY) IN THE EVENT OF FAILURE OF THE COORDINATION SYSTEM.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE071566

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND S.R. 4018 (EAST SIXTH STREET) - PHASE 3

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:44:15 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

SCALE : (IN FEET) 0 25 50

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SIGNS

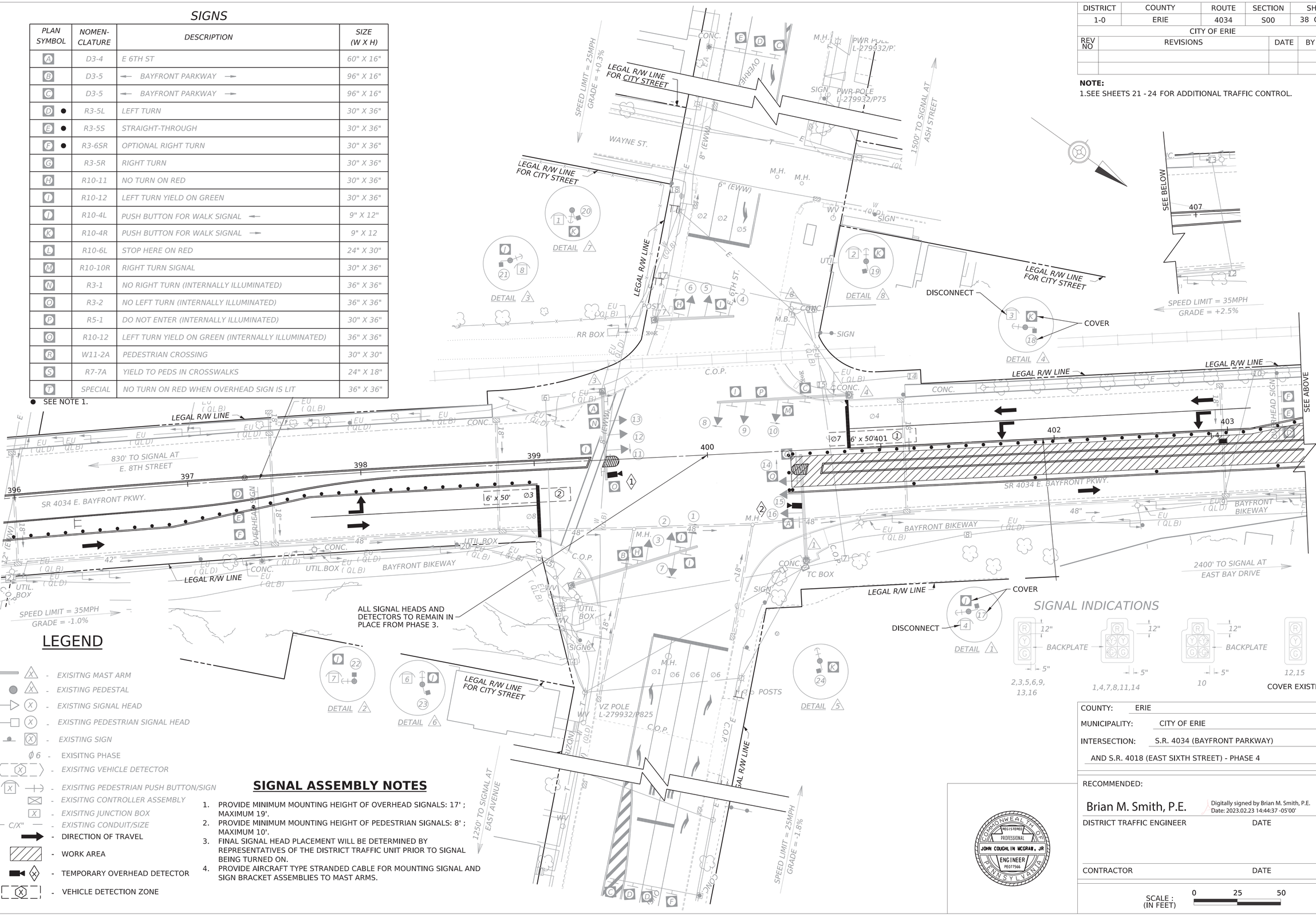
PLAN SYMBOL	NOMEN-CLATURE	DESCRIPTION	SIZE (W X H)
A	D3-4	E 6TH ST	60" X 16"
B	D3-5	← BAYFRONT PARKWAY →	96" X 16"
C	D3-5	← BAYFRONT PARKWAY →	96" X 16"
D ●	R3-5L	LEFT TURN	30" X 36"
E ●	R3-5S	STRAIGHT-THROUGH	30" X 36"
F ●	R3-6SR	OPTIONAL RIGHT TURN	30" X 36"
G	R3-5R	RIGHT TURN	30" X 36"
H	R10-11	NO TURN ON RED	30" X 36"
I	R10-12	LEFT TURN YIELD ON GREEN	30" X 36"
J	R10-4L	PUSH BUTTON FOR WALK SIGNAL ←	9" X 12"
K	R10-4R	PUSH BUTTON FOR WALK SIGNAL →	9" X 12
L	R10-6L	STOP HERE ON RED	24" X 30"
M	R10-10R	RIGHT TURN SIGNAL	30" X 36"
N	R3-1	NO RIGHT TURN (INTERNALLY ILLUMINATED)	36" X 36"
O	R3-2	NO LEFT TURN (INTERNALLY ILLUMINATED)	36" X 36"
P	R5-1	DO NOT ENTER (INTERNALLY ILLUMINATED)	30" X 36"
Q	R10-12	LEFT TURN YIELD ON GREEN (INTERNALLY ILLUMINATED)	36" X 36"
R	W11-2A	PEDESTRIAN CROSSING	30" X 30"
S	R7-7A	YIELD TO PEDS IN CROSSWALKS	24" X 18"
T	SPECIAL	NO TURN ON RED WHEN OVERHEAD SIGN IS LIT	36" X 36"

● SEE NOTE 1.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	38 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTE:
1.SEE SHEETS 21 - 24 FOR ADDITIONAL TRAFFIC CONTROL.



LEGEND

- EXISITNG MAST ARM
- EXISTING PEDESTAL
- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SIGN
- ϕ6 - EXISITNG PHASE
- EXISITNG VEHICLE DETECTOR
- EXISITNG PEDESTRIAN PUSH BUTTON/SIGN
- EXISITNG CONTROLLER ASSEMBLY
- EXISITNG JUNCTION BOX
- C/X" - EXISTING CONDUIT/SIZE
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY OVERHEAD DETECTOR
- VEHICLE DETECTION ZONE

SIGNAL ASSEMBLY NOTES

1. PROVIDE MINIMUM MOUNTING HEIGHT OF OVERHEAD SIGNALS: 17' ; MAXIMUM 19'.
2. PROVIDE MINIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS: 8' ; MAXIMUM 10'.
3. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
4. PROVIDE AIRCRAFT TYPE STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.

SIGNAL INDICATIONS

COUNTY: ERIE

MUNICIPALITY: CITY OF ERIE

INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)

AND S.R. 4018 (EAST SIXTH STREET) - PHASE 4

RECOMMENDED:

Brian M. Smith, P.E. Digitally signed by Brian M. Smith, P.E. Date: 2023.02.23 14:44:37 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

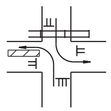
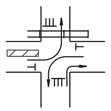
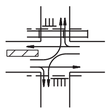
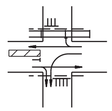
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN COUGHLIN MCGRAW, JR ENGINEER PE077566

SCALE : (IN FEET) 0 25 50

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MOVEMENT, PHASING, AND SEQUENCE CHART

	PHASE 1+5					PHASE 2+6					PHASE 3+7					PHASE 4+8					RAILROAD PREEMPTION P1					RAILROAD PREEMPTION P2					EMERGENCY FLASHING
																															
	INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					INTERVAL					
SIGNAL	1	2	3	4		1	2	3	4	5	1	2	3			1	2	3	4		1	2	3	4		1	2	3	4		
1	R ←G–	R ←Y–	R ←G–	R		G	G	G	Y	R	R	R	R			R	R	R	R		G	G	G	Y		R	R	R	R		R
2,3	R	R	R	R		G	G	G	Y	R	R	R	R			R	R	R	R		G	G	G	Y		R	R	R	R		R
4	R ←G–	R ←Y–	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
5,6	R	R	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		G	G	Y	R		R	R	R	R		R
7,8	R ←G–	R ←Y–	R	R		G	G	Y	R	R	R	R	R			R	R	R	R		R	R	R	R		R	R	R	R		R
9	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
10	R	R	R	R		G	G	Y	R	R	R –G→	R –Y→	R			R	R	R	R		R	R	R	R		R	R	R	R		R
11	R	R	R	R		R	R	R	R	R	R ←G–	R ←Y–	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
13	R	R	R	R		R	R	R	R	R	R	R	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
14	R	R	R	R		R	R	R	R	R	R ←G–	R ←Y–	R			G	G	Y	R		R	R	R	R		R	R	R	R		R
16	R	R	R	R		R	R	R	R	R	R	R	R			G	G	Y	R		R	R	R	R		G	G	Y	R		R
*17,18	COVER EXISTING PEDESTRIAN SIGNAL HEADS																														
*21,22	DW	DW	DW	DW		W	FD	DW	DW	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			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
*23,24	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW			W	FD	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
SIGN (N)(O)(P)	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF			OFF	OFF	OFF	OFF		ON	ON	ON	ON		ON	ON	ON	ON		OFF
SIGN (O)	ON	ON	ON	ON		ON	ON	ON	ON	ON	ON	ON	ON			ON	ON	ON	ON		OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF		OFF
FIXED		3.0	3.0	2.0				3.0	3.0	2.0		3.0	2.0					3.0	3.0				3.0	3.0				3.0	3.0		
MINIMUM																															
SEC./ACT.						2.1										2.1															
MAX. INITIAL						19										22															
PASSAGE	2					5										7															
TIME TO REDUCE																4															
BEFORE REDUCTION																22															
MIN. GAP																															
MAX I	10					16					10					26										①					
MAX II	10					26					7					19										①					
* PEDESTRIAN						14	20									13.0	19									13.0	② 19				
MEMORY	NL					MN					NL					MN															

MEMORY:
MN - MINIMUM RECALL
MX - MAXIMUM RECALL
L - LOCKING
NL - NON-LOCKING

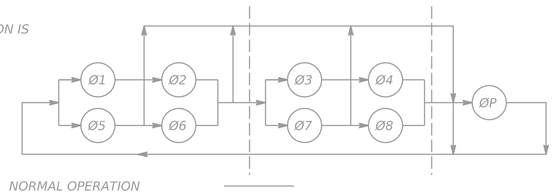
* UPON PEDESTRIAN ACTIVATION, OTHERWISE DON'T WALK AT ALL TIMES.

① DWELL UNTIL PREEMPTION TERMINATES.

② RETURN TO DW UNTIL PEDESTRIAN ACTUATION IS CALLED.

NOTES:
1. SIGNAL HEADS 12 AND 15 COVERED IN THIS PHASE.
2. MAINTAIN ALL EXISTING PREEMPTION.

PHASING DIAGRAM



NORMAL OPERATION
RAILROAD PREEMPTION
PHASE SEQUENCE BARRIER

RAILROAD PREEMPTION NOTES

NORMAL OPERATION WILL BE PREEMPTED BY THE TRAIN APPROACH SIGNALS WHEN ACTIVATED BY A TRAIN ENTERING THE RAILROAD CIRCUIT. IF TRAIN PREEMPTION OCCURS IN:
-PHASE 3+7-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 3+7-INTERVALS 2&3 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 3+7-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 3+7-INTERVAL 3 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 3+7-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 4+8-INTERVALS 2,3&4 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3&4 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 4+8-INTERVAL 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 4+8-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 1+5-INTERVALS 2,3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 3&4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 1+5-INTERVALS 4 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 1+5-INTERVAL 4, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 1, IT TERMINATES IMMEDIATELY FOLLOWED BY PHASE 2+6-INTERVALS 2,3,4&5 IF PEDESTRIAN TIMINGS ARE ACTUATED, OR INTERVALS 3,4&5 IF PEDESTRIAN TIMINGS ARE NOT ACTUATED, AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 2, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 3,4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 3, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 4&5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVALS 5 AND TRAIN PHASE P1-INTERVAL 1.
-PHASE 2+6-INTERVAL 5, IT TIMES OUT FOLLOWED BY TRAIN PHASE P1-INTERVAL 1.

IN RETURNING FROM TRAIN OPERATION TO NORMAL OPERATION, IF TRAIN PREEMPTION TERMINATES IN:
-TRAIN PHASE P2-INTERVAL 1, A TIMING DEVICE WILL BE ACTIVATED WHICH WILL HOLD THIS INTERVAL FOR TEN SECONDS FOLLOWED BY THE TRAIN PHASE P2-INTERVALS 2,3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 2, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 3&4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 3, IT TIMES OUT FOLLOWED BY TRAIN PHASE P-INTERVALS 4 BEFORE RETURNING TO PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.
-TRAIN PHASE P2-INTERVAL 4, IT TIMES OUT FOLLOWED BY PHASE 2+6-INTERVAL 1 AND NORMAL OPERATION.

OPERATION OF LOOP DETECTORS ON EASTBOUND APPROACH E. 6TH ST. AS AFFECTED BY THE RAILROAD PREEMPTION IS AS FOLLOWS:
ANY CALL ON THIS DETECTOR EXISITNG AT THE TIME OF PREEMPTION OR OCCURING DURING PREEMPTION SHALL BE HELD BY THE PREEMPTION EQUIPMENT TO BE PLACED IN THE CONTROLLER MEMORY UPON RETURN TO NORMAL OPERATION.

RAILROAD PREEMPTION TAKES PRECEDENCE OVER EMERGENCY PREEMPTION.

EMERGENCY PREEMPTION NOTES

EMERGENCY PREEMPTION EQUIPMENT IS LOCATED IN THE CONTROLLER CABINET. UPON PREEMPTION, THE CONTROLLER'S INTERNAL PREEMPTION PROGRAM PROVIDES THE FOLLOW SEQUENCE IF THE CONFLICTING PHASE IS IN GREEN:

A. A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION.
B. THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
C. A YELLOW CLEARANCE INTERVAL REPLACES ALL CONFLICTING GREEN INDICATIONS.
D. UPON COMPLETION OF THE YELLOW CLEARANCE INTERVAL, THE ALL RED INTERVAL IS COMPLETED FOLLOWED BY THE GREEN INDICATIONS FOR THE SELECTED STREET.

UPON PREEMPTION, THE CONTROLLER'S INTERNAL PREEMPTION PROGRAM PROVIDES THE FOLLOWING SEQUENCE IF THE SELECTED STREET IS IN GREEN:

A. A FLASHING "DON'T WALK" REPLACES ANY "WALK" INDICATION.
B. THE FLASHING "DON'T WALK" INTERVAL IS COMPLETED.
C. THE GREEN INDICATION REMAINS ON THE SELECTED STREET.

UTILIZE CONTROLLER TIMINGS FOR INTERVAL BEING CLEARED.

FOR THE DURING OF THE PREEMPTION, A GREEN INDICATION REMAINS ONT HE SELECTED STREET WITH A RED INDICATION GIVEN TO ALL OTHER STREETS AND A STEADY "DON'T WALK" INDICATION ON ALL PEDESTRIAN SIGNALS.

UPON TERMINATION OF THE PREEMPTION, THE SIGNAL RETURNS TO NORMAL OPERATION.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1-0	ERIE	4034	S00	39 OF 39
CITY OF ERIE				

REV NO	REVISIONS	DATE	BY	APPD

NOTES

1. INSTALLATION, OPERATION, AND MAINTENANCE OF THESE SIGNALS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS GOVERNING THE DESIGN, LOCATION, AND OPERATION OF SIGNS, SIGNALS, AND PAVEMENT MARKINGS.
2. NO MODIFICATIONS OF THIS INSTALLATION ARE PREMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE SECRETARY OF TRANSPORTATION OR HIS REPRESENTATIVE.
3. MAINTENANCE WORK ON ALL APPROACHES TO THE SIGNALIZED INTERSECTION NECESSARY FOR PROPER VISIBILITY OF THE SIGNS AND SIGNALS, INCLUDING TRIMMING OF TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.
4. UNLESS OTHERWISE NOTED, THE PERMITTEE SHALL MAINTAIN CURBING AND OTHER DRAINAGE FACILITIES IN ACCORDANCE WITH DEPARTMENT STANDARDS AND CRITERIA, EXCEPT FOR INLET GRATES THAT WILL BE MAINTAINED BY THE DEPARTMENT AS A PART OF THE ROADWAY SURFACE.
5. ALL SIGNS, CURBS, CURB RAMPS, SIDEWALKS, AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 68, OFFICAL TRAFFIC CONTROL DEVICES. EXCEPTIONS ARE LONGITUDINAL PAVEMENT MARKINGS IN STATE HIGHWAYS, WHICH ARE MAINTAINED BY THE DEPARTMENT.
6. SUPPORT POLES FOR OVERHEAD SIGNALS AND SIGNS SHALL HAVE 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.
7. VEHICULAR SIGNALS OR SIGNS ERECTED OVER THE ROADWAY SHALL HAVE A CLEARANCE OF 17 FEET ABOVE THE ROADWAY. UNLESS OTHERWISE NOTED, POST MOUNTED VEHICULAR SIGNALS SHALL HAVE A CLEARANCE OF NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK LEVEL OR PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALK EXISITS. UNLESS OTHERWISE NOTED, PEDESTRIAN SIGNALS SHALL HAVE A CLEARANCE OF 8 FEET ABOVE THE SIDEWALK LEVEL. UNLESS OTHERWISE NOTED, POST MOUNTED SIGNS SHALL HAVE A CLEARANCE OF 7 FEET ABOVE THE SIDEWALK LEVEL OR ABOVE THE EDGE OF ROADWAY GRADE, IF NO SIDEWALK EXISTS. UNLESS OTHERWISE NOTED, THE TOP OF THE POST MOUNTED SIGNS SHALL BE A MINIMUM 9 FEET ABOVE GROUND LINE.
8. THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.
9. THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE 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.

COORDINATION NOTES

CONTROLLER TO BE COORDINATED WITH ADJACENT CONTROLLERS THROUGH THE USE OF THE INTERCONNECT BABLE TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG THE BAYFRONT CONNECTOR (S.R. 4034), BAYFRONT PARKWAY (S.R. 4034), AND EAST 6TH STREET (S.R. 4018).

MASTER COMPUTER IS LOCATED AT THE CITY OF ERIE ENGINEERING OFFICES.

MASTER CONTROLLER IS LOCATED AT THIS INTERSECTION.

MASTER LOCATION FOR REFERENCING OFFSETS IS AT THIS INTERSECTION. OFFSETS ARE REFERENCED TO THE END OF GREEN OF PHASE 4+8.

CONTROLLER TO OPERATE IN FREE MODE (INDEPENDENTLY) IN THE EVENT OF FAILURE OF THE COORDINATION SYSTEM.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN COUGHLIN MCGRAW, JR
ENGINEER
PE071566

COUNTY: ERIE
MUNICIPALITY: CITY OF ERIE
INTERSECTION: S.R. 4034 (BAYFRONT PARKWAY)
AND S.R. 4018 (EAST SIXTH STREET) - PHASE 4

RECOMMENDED:

Brian M. Smith, P.E.
Digitally signed by Brian M. Smith, P.E.
Date: 2023.02.23 14:45:00 -05'00'

DISTRICT TRAFFIC ENGINEER DATE

CONTRACTOR DATE

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