OS-2C (2-22)

pennsylvania
DEPARTMENT OF TRANSPORTATION

January 23, 2024

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17105-3265

RE: PUC No. A-2020-3022688

Dear Secretary Rosemary Chiavetta:

In accordance with ordering paragraph number 3 of the PUC Secretarial Letter/Order at Docket No. A-2020-3022688 dated March 12, 2021, please find attached for your approval one copy of the final signed Drawings for Construction of State Route 68, Section 253 in Butler County, consisting of sheets 1 through 76 of 76. Also attached to the set of construction drawings are the following plans:

- Final signed Structure Plan (S- 39526) consisting of sheets 1 through 121 of 121.

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

PennDOT 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 Jeffrey Matko, P.E., Grade Crossing Engineer, at 724.357.2526.

Sincerely,

Alice M. Hammond

for: Brian N. Allen, P.E.
District Executive
Engineering District 10-0

Attachments

1000/JMatko/sms

J:\Design\DL Shared\PUC Letters\SR 68 Karns Bridge Project\A-2020-3022688 Multiple Plans Final Construction Submission to PUC.docx

cc: Parties of Record
Barry J. Basom, P.E. Acting Chief, Right-of-Way, Utilities & Grade Crossing Section, 7th Floor, CKB
Daniel D. Leonard, P.E., Grade Crossing Engineer, Right-of-Way, Utilities & Grade Crossing Section, 7th Floor, CKB
Karen Cummings, Senior Council in Charge, Office of Chief Counsel, 9th Floor, CKB
William Sinick, P.E., C.B.S.I., Rail Safety Engineering Section, PUC, 3rd Floor, CKB
Brian N. Allen, P.E., District Executive, Engineering District 10
Route: AMH/CAM/JEL/JM-file

PROJECT MANAGER: JASON LAYMAN, P.E.

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
10-0	BUTLER	BUTLER	———	0068	253	76
	BUTLER	SUMMIT	———	0068	253	

SR 0068 PREVIOUSLY KNOWN AS LR 214 ECMS/MPMS NO 86105

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS
FOR
CONSTRUCTION

STATE ROUTE 0068 SECTION 253

IN BUTLER COUNTY

FROM STA 95+50.00 TO STA 128+00.00 LENGTH 3,150.00 FT 0.597 MI
FROM SEGMENT 0490 OFFSET 2582 TO SEGMENT 0520 OFFSET 0669

PUC APPLICATION DOCKET NUMBER A-2020-3022688

ALSO INCLUDED:

TRAFFIC CONTROL PLAN	96 SHEETS
SIGNING, PAVEMENT MARKING, AND DELINEATION PLAN	7 SHEETS
WEST PENN POWER UTILITY POLE RELOCATION PLAN	3 SHEETS
BASA SEWER RELOCATION PLAN	10 SHEETS
G&W/B&P RAILROAD UTILITY RELOCATION PLAN	6 SHEETS
PENNSYLVANIA AMERICAN WATER COMPANY RELOCATION PLAN	12 SHEETS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	43 SHEETS
STREAM MITIGATION PLAN	11 SHEETS
TRAFFIC SIGNAL PLAN	4 SHEETS
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	16 SHEETS
STRUCTURE PLAN	
S-39526 (KARNS CROSSING BRIDGE)	121 SHEETS
S-39527 (BRIDGE OVER CONNOQUENESSING CREEK)	51 SHEETS
S-40431 (RETAINING WALL)	23 SHEETS
CROSS SECTIONS	52 SHEETS

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DESIGN DESIGNATION

HIGHWAY CLASSIFICATION	- PRINCIPAL ARTERIAL
HIGHWAY TYPOLOGY	- REGIONAL ARTERIAL, SUBURBAN CORRIDOR
DESIGN SPEED	- 45 MPH
PAVEMENT WIDTH	- 11' LANES
SHOULDER WIDTH	- 8'-0"
MEDIAN WIDTH	- VARIES

TRAFFIC DATA

CURRENT YEAR ADT	- 10,800 (2023)
DESIGN YEAR ADT	- 11,300 (2045)
DHV	- 1,350
D	- 65%
T	- 6%

Michael Baker
INTERNATIONAL
AIRSIDE BUSINESS PARK
100 AIRSIDE DRIVE
MOON TOWNSHIP, PA 15108
Phone: (412) 269-6300

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BRANDON K. LANKEY — ENGINEER — PE086381

Brandon K. Lankey 5/25/2023
ROADWAY ENGINEER DATE
REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL MARK BORRELLI — ENGINEER PE071352

J. M. Borrelli 5/25/2023
ROADWAY ENGINEER DATE
REGISTERED PROFESSIONAL ENGINEER

RECOMMENDED DATE: 5/31 2023
DISTRICT EXECUTIVE

RECOMMENDED DATE: 20
DEPUTY SECRETARY

APPROVED DATE: 20
SECRETARY OF TRANSPORTATION

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

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	2 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

PROPERTY OWNERS

(1) BUTLER COUNTY MEMORIAL HOSPITAL

(2) JEANEAN FRANCESE

(3) BRENT C. BENOIT, A SINGLE MAN

(4) JOHN D. WHITTINGTON, SR. AND LORNA M. WHITTINGTON, HUSBAND AND WIFE, AS TENANTS BY THE ENTIRETY

(5) MARTIN MEDIA, A CALIFORNIA LIMITED PARTNERSHIP, A CALIFORNIA PARTNERSHIP

(6) WILLIAM A. KLINE AND LUCY M. KLINE, HIS WIFE

(7) KEVIN J. KRIEBEL, A SINGLE MAN

(8) KATIE J. ROBERTS, AN UNMARRIED WOMEN

(9) JACOB A. PFAB AND HEATHER L. PFAB, HUSBAND AND WIFE

(10) WILLIAM G. KAMERER, III AND JESSICA M. KAMERER, HUSBAND AND WIFE

(11) FLOYD W. OSBORNE AND JOAN G. OSBORNE, HIS WIFE

(12) THE BUTLER WATER COMPANY, A CORPORATION CREATED BY AND EXISTING UNDER THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA

(13) NIXSAR CORPORATION, A PENNSYLVANIA NOT-FOR-PROFIT CORPORATION

(14) WEINEL ENTERPRISES, LLC

(15) THE BALTIMORE AND OHIO RAILROAD COMPANY, A MARYLAND CORPORATION; AND MANUFACTURERS HANOVER TRUST COMPANY, A NEW YORK CORPORATION; AND D.B. HERTERICH, AS TRUSTEES UNDER B&O'S REFUNDING AND GENERAL MORTGAGE DATED DECEMBER 1, 1915, AS SUPPLEMENTED AND AMENDED & ALLEGHENY & WESTERN RAILROAD COMPANY, A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF PENNSYLVANIA

(16) JEROME P. OLIVER

(18) KENNETH C. HESPENHEIDE

(19) KENNETH C. HESPENHEIDE

(21) BACHER HOLDINGS, LLC, A PENNSYLVANIA LIMITED LIABILITY COMPANY

(22) KENNETH C. HESPENHEIDE

(23) PITTSBURGH BESSEMER & LAKE ERIE RAILROAD COMPANY

(24) UNKNOWN OWNER

(25) KRIS T. KENNEDY AND KATHY J. KENNEDY, HIS WIFE

TABULATION OF SEGMENT EQUALITIES

SEGMENT 0490, OFFSET 2694 =
SEGMENT 0500, OFFSET 0000 =
STA 96+62.00

SEGMENT 0500, OFFSET 1331 =
SEGMENT 0510, OFFSET 0000 =
STA 109+93.00

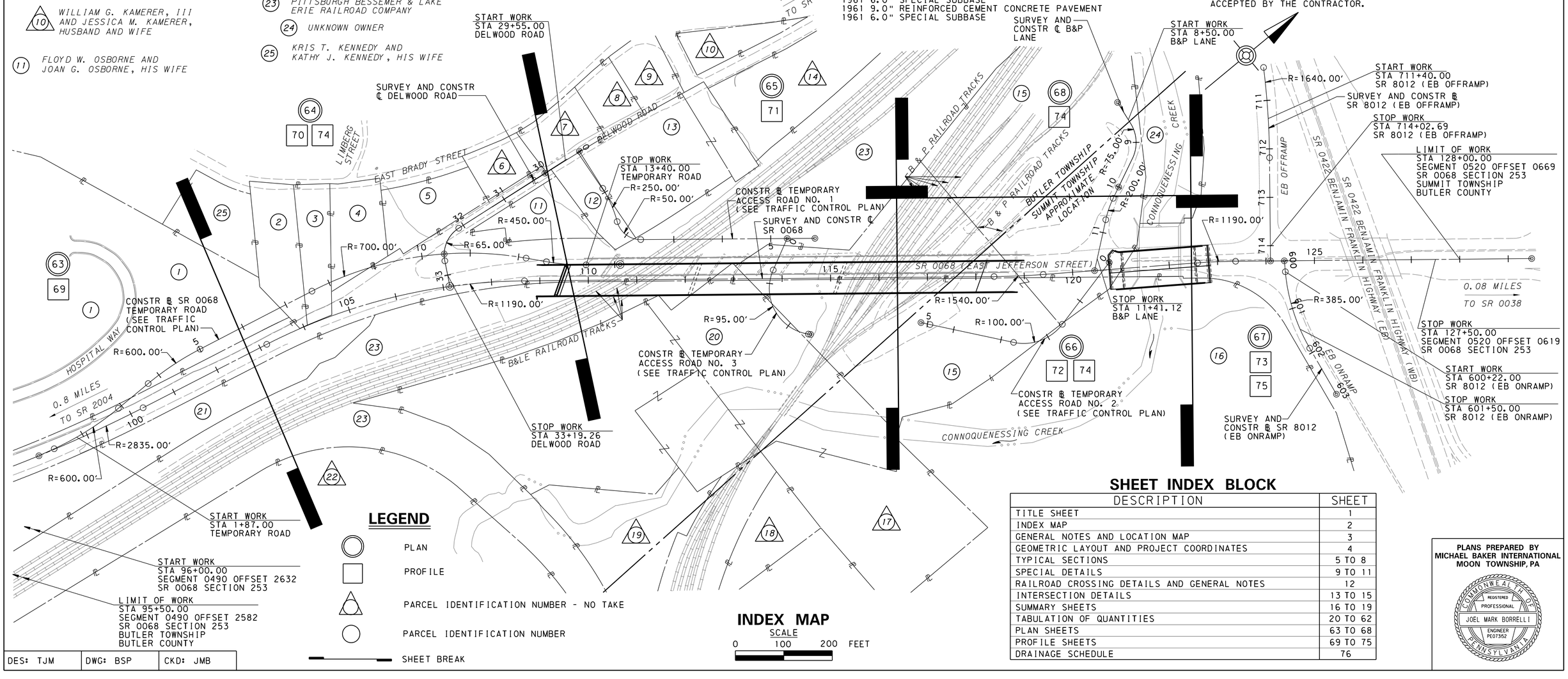
SEGMENT 0510, OFFSET 1138 =
SEGMENT 0520, OFFSET 0000 =
STA 121+31.00

RECORD OF EXISTING ROAD TYPES

SR 0068

SEGMENT 0490 OFFSET 2582 TO OFFSET 2694	1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 0.5" SCRATCH BITUMINOUS WEARING COURSE, ID-2 1991 1.5" BITUMINOUS WEARING COURSE, ID-2 1962 1.0" BITUMINOUS WEARING COURSE, FJ-1 1962 2.5" BITUMINOUS WEARING COURSE, ID-2 0937 8.0" PARABOLIC RCCP
SEGMENT 0500 OFFSET 0000 TO OFFSET 0970	1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 0.5" SCRATCH BITUMINOUS WEARING COURSE, ID-2 1991 1.5" BITUMINOUS WEARING COURSE, ID-2 1962 1.0" BITUMINOUS WEARING COURSE, FJ-1 1962 2.5" BITUMINOUS WEARING COURSE, ID-2 0937 8.0" PARABOLIC RCCP
SEGMENT 0500 OFFSET 0970 TO OFFSET 1331	1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 0.5" SCRATCH BITUMINOUS WEARING COURSE, ID-2 1991 1.5" BITUMINOUS WEARING COURSE, ID-2 1983 1.5" BITUMINOUS WEARING COURSE, ID-2 1983 3.0" ID-2 BINDER COURSE 1962 1.0" BITUMINOUS WEARING COURSE, FJ-1 1962 2.5" BITUMINOUS WEARING COURSE, ID-2 0937 8.0" PARABOLIC RCCP
SEGMENT 0510 OFFSET 0000 TO OFFSET 0868	EXISTING SR 0068 STRUCTURE
SEGMENT 0510 OFFSET 0868 TO OFFSET 0983	2002 9.0" PLAIN CEMENT CONCRETE PAVEMENT 2002 4.0" CEMENT TREATED PERMEABLE BASE COURSE 2002 4.0" 2A SUBBASE 1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 0.5" SCRATCH BITUMINOUS WEARING COURSE, ID-2 1991 1.5" BITUMINOUS WEARING COURSE, ID-2 1983 3.0" ID-2 BINDER COURSE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL SUBBASE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL SUBBASE
SEGMENT 0510 OFFSET 0983 TO OFFSET 1138	2002 9.0" PLAIN CEMENT CONCRETE PAVEMENT 2002 4.0" CEMENT TREATED PERMEABLE BASE COURSE 2002 4.0" 2A SUBBASE 1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 3.0" ID-2 BINDER COURSE 1983 1.0" BITUMINOUS WEARING COURSE, ID-2 1983 3.0" ID-2 BINDER COURSE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL SUBBASE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL SUBBASE
SEGMENT 0520 OFFSET 0000 TO OFFSET 0669	2002 9.0" PLAIN CEMENT CONCRETE PAVEMENT 2002 4.0" CEMENT TREATED PERMEABLE BASE COURSE 2002 4.0" 2A SUBBASE 1999 1.0" BITUMINOUS WEARING COURSE, ID-2 1999 3.0" ID-2 BINDER COURSE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL SUBBASE 1961 9.0" REINFORCED CEMENT CONCRETE PAVEMENT 1961 6.0" SPECIAL 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.



LEGEND

PLAN

PROFILE

PARCEL IDENTIFICATION NUMBER - NO TAKE

PARCEL IDENTIFICATION NUMBER

SHEET BREAK

INDEX MAP

SCALE
0 100 200 FEET

SHEET INDEX BLOCK

DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2
GENERAL NOTES AND LOCATION MAP	3
GEOMETRIC LAYOUT AND PROJECT COORDINATES	4
TYPICAL SECTIONS	5 TO 8
SPECIAL DETAILS	9 TO 11
RAILROAD CROSSING DETAILS AND GENERAL NOTES	12
INTERSECTION DETAILS	13 TO 15
SUMMARY SHEETS	16 TO 19
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PLAN SHEETS	63 TO 68
PROFILE SHEETS	69 TO 75
DRAINAGE SCHEDULE	76

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE073152

DES: TJM	DWG: BSP	CKD: JMB

5/25/2023 10:52:14 AM

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	3 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

LIST OF PUBLIC UTILITIES

—CTV— ARMSTRONG CABLE
660 SOUTH BENBROOK ROAD
BUTLER, PA 16001
ATTN: ROB WOLTHERS
PHONE: (724) 482-4885
EMAIL: rwolthers@agoc.com

— T — BRIGHTSPEED (DBA THE UNITED TELEPHONE CO. OF PENNSYLVANIA)
— TU — 218 SOUTH WASHINGTON STREET
BUTLER, PA 16001
ATTN: MICHAEL MONTAG
PHONE: (724) 284-7235
EMAIL: Michael.C.Montag@Brightspeed.com

—E—
—EU— WEST PENN POWER
501 HANSEN AVENUE
—E— BUTLER, PA 16001
ATTN: SCOTT CURZI
PHONE: (724) 284-3531
EMAIL: scurzi@firstenergycorp.com

—G— PEOPLES GAS COMPANY LLC
—G— 4536 ROUTE 136, SUITE 1
GREENSBURG, PA 15601
ATTN: GARY BAIRD
PHONE: (724) 837-1057
EMAIL: gbaird@lsse.com

— S — BUTLER AREA SEWER AUTHORITY
100 LITMAN ROAD
—S— BUTLER, PA 16001
ATTN: EVAN OSWALD
PHONE: (724) 282-1978
EMAIL: eoswald@basapa.org

—W— PENNSYLVANIA AMERICAN WATER COMPANY
—W— 203 ONEIDA VALLEY ROAD
BUTLER, PA 16001
ATTN: DAVID DROZD
PHONE: (412) 780-6693
EMAIL: david.drozd@amwater.com

PENNSYLVANIA ONE CALL SYSTEM, INC 1-800-242-1776
PRELIMINARY DESIGN SERIAL NO. 20201411337 BUTLER TOWNSHIP, BUTLER COUNTY
PRELIMINARY DESIGN SERIAL NO. 20201411338 SUMMIT TOWNSHIP, BUTLER COUNTY
FINAL DESIGN SERIAL NO. 20223061304 BUTLER TOWNSHIP, BUTLER COUNTY
FINAL DESIGN SERIAL NO. 20223061306 SUMMIT TOWNSHIP, BUTLER COUNTY

TABULATION OF OVERALL LENGTH

SR 0068 STA 95+50.00 TO STA 128+00.00 = 3,250.00 FT = 0.616 MI

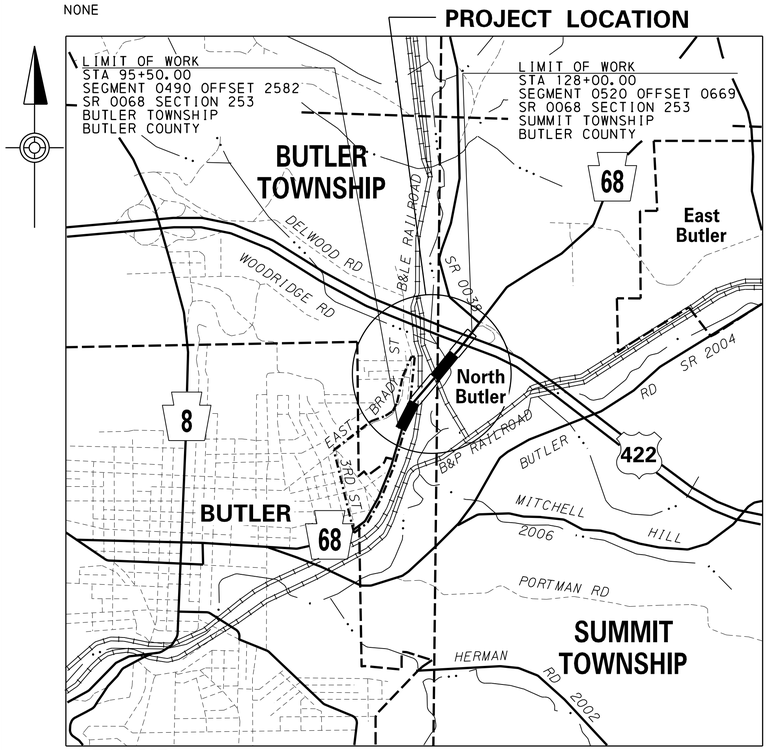
TABULATION OF CONSTRUCTION LENGTH

SR 0068 STA 96+00.00 TO STA 127+50.00 = 3,150.00 FT = 0.597 MI

LIST OF STATION EQUALITIES

NONE

PROJECT LOCATION



LEGEND

- TOWNSHIP/BOROUGH LINE
- STATE HIGHWAY
- TOWNSHIP ROAD
- PROJECT
- STREAM
- RAILROAD
- DETOUR FOR DELWOOD ROAD

LOCATION MAP

SCALE
0 0.5 1.0 MILE

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 0068 FROM STATION 95+50.00 TO STATION 98+00.00 IS VARIABLE WIDTH, BASED ON PLAN OF ROUTE 214, SECTION R-1, SIGNED ON JULY 26, 1936.

THE LEGAL RIGHT-OF-WAY ON SR 0068 FROM STATION 98+00.00 TO STATION 123+55.00 IS VARIABLE WIDTH, BASED ON THE PLAN OF SR 0068 SECTION 253 R/W SIGNED BY THE SECRETARY OF TRANSPORTATION ON _____ AND RECORDED IN THE BUTLER COUNTY RECORDERS OFFICE ON ------ IN ---------.

THE LEGAL RIGHT-OF-WAY ON SR 0068 FROM STATION 123+55.00 TO STATION 128+00.00 IS VARIABLE WIDTH, BASED ON PLAN OF STATE ROUTE 0422, 291 R/W, SIGNED ON JANUARY 14, 2002 AND RECORDED ON FEBRUARY 28, 2002 IN THE BUTLER COUNTY RECORDERS OFFICE IN HWY PLAN BOOK 65, PAGE 48.

THE LEGAL RIGHT-OF-WAY ON SR 8012 (EB ONRAMP) FROM STATION 600+22.00 TO STATION 601+50.0 IS VARIABLE WIDTH, BASED ON PLAN OF STATE ROUTE 0422, 291 R/W, SIGNED ON JANUARY 14, 2002 AND RECORDED ON FEBRUARY 28, 2002 IN THE BUTLER COUNTY RECORDERS OFFICE IN HWY PLAN BOOK 65, PAGE 48.

THE LEGAL RIGHT-OF-WAY ON SR 8012 (EB OFFRAMP) FROM STATION 711+40.00 TO STATION 714+02.69 IS VARIABLE WIDTH, BASED ON PLAN OF STATE ROUTE 0422, 291 R/W, SIGNED ON JANUARY 14, 2002 AND RECORDED ON FEBRUARY 28, 2002 IN THE BUTLER COUNTY RECORDERS OFFICE IN HWY PLAN BOOK 65, PAGE 48.

THE LEGAL RIGHT-OF-WAY ON DELWOOD ROAD FROM STATION 5+00.00 TO STATION 8+36.95 VARIES IN WIDTH, BASED ON PLAN OF ROUTE 214, SECTION R-1, SIGNED ON JULY 26, 1936.

SR 0068 PREVIOUSLY KNOWN AS LR 214.

THE HORIZONTAL CONTROL IS BASED ON NORTH AMERICAN DATUM-1983 (NAD83)(2011) PENNSYLVANIA COORDINATE SYSTEM SOUTH ZONE

THE VERTICAL CONTROL IS BASED ON NORTH AMERICAN VERICAL DATUM-1988 (NAVD88)

ALL CURVE DATA IS BASED ON THE ARC DEFINITION.

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

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

THREE TO TEN WORKING DAYS PRIOR TO EXCAVATION BASED ON THE COMPLEXITY OF THE PROJECT, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776,
SERIAL NO. _____ FOR (BUTLER TOWNSHIP)
SERIAL NO. _____ FOR (SUMMIT TOWNSHIP)
ADDITIONAL INFORMATION IS AVAILABLE AT https://www.palcall.org/PA811/Public/.

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).

SLOPES 3:1 OR FLATTER SHALL BE SEEDED WITH FORMULA B SEED MIXTURE. SLOPES STEEPER THAN 3:1 SHALL BE SEEDED WITH FORMULA D SEED MIXTURE. SEED ALL TEMPORARY SLOPES WITH FORMULA E SEED MIXTURE. SEED ALL SLOPES WITHIN 50' OF THE CHANNEL AND AREAS WITHIN THE 100-YEAR FLOOD BOUNDARY WITH FORMULA N SEED MIXTURE. SEED ALL DISTURBED WETLAND AREAS WITH FORMULA W SEED MIXTURE.

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEY AND SEARCHES OF AVAILABLE RECORDS. THE DEPARTMENT OF TRANSPORTATION DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. VERIFY THEIR LOCATION IN THE FIELD PRIOR TO EXCAVATION.

MAINTAIN ACCESS TO AND FROM ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.

DO NOT INTERFERE WITH THE OPERATIONS OF A FIRE HYDRANT, FIRE CALL BOX OR POLICE CALL BOX.

ANY MAIL BOXES THAT ARE DISTURBED ARE TO BE RESET AND KEPT OPERATIONAL AT ALL TIMES DURING CONSTRUCTION.

SR 0068 IS AN NHS ROUTE.

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

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

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

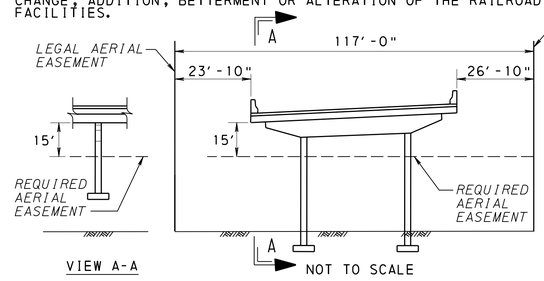
SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND THE PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUROF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH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

WETLANDS

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

AERIAL EASEMENT NOTES

1. WHERE AN AERIAL EASEMENT IS ACQUIRED, IT SHALL INCLUDE AN EASEMENT IN THE AIR FOR THE ACCOMMODATION OF THE ELEVATED HIGHWAY STRUCTURE UNLIMITED IN VERTICAL DIMENSION ABOVE THE STRUCTURE, A SURFACE EASEMENT UNLIMITED IN VERTICAL DIMENSION FOR THE ACCOMMODATION OF PIERS AND OTHER APPURTENANCES AND A TEMPORARY EASEMENT FOR CONSTRUCTION PURPOSES INCLUDING THE STORAGE OF MATERIALS DURING CONSTRUCTION FOR THE ENTIRE AREA. THE FOLLOWING LIMITATIONS SHALL BE IMPOSED ON THE PROPERTY BENEATH THE AREA AFFECTED BY THE AERIAL EASEMENT.
2. NO USE SHALL BE MADE OF THE PROPERTY WHICH SHALL ENDANGER THE STRUCTURE OR THE HEALTH, SAFETY OR WELFARE OF THE TRAVELING PUBLIC.
3. NO FLAMMABLE, EXPLOSIVE, DIESEL FUEL TANKS, DANGEROUS OR HAZARDOUS MATERIAL SHALL BE USED, PLACED OR STORED ON THE PROPERTY.
4. NO BUILDING OR OTHER FACILITY SHALL BE CONSTRUCTED ON THE PROPERTY WITHOUT PRIOR AUTHORITY OF THE DEPARTMENT OF TRANSPORTATION. IF AND WHEN SUCH AUTHORITY IS GRANTED, THE PLANS FOR THE BUILDING OR FACILITY AND CONSTRUCTION METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION.
5. NO INTERFERENCE SHALL BE MADE WITH THE RIGHT OF THE DEPARTMENT OF TRANSPORTATION TO ENTER UPON THE PROPERTY FOR THE PURPOSES OF INSPECTION, MAINTENANCE, REPAIR, PAINTING, RECONSTRUCTION OR ALTERATION OF THE STRUCTURE OR APPURTENANCES. MOVEABLE ITEMS MAY HAVE TO BE REMOVED BY THE OWNER DURING SOME OR ALL OF THE ABOVE OPERATIONS.
6. ANY SUBSTANTIAL CHANGE IN PROPERTY USE TO BE MADE SUBSEQUENT TO THE ACQUISITION OF THE EASEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION.
7. THE NOTES ON THIS DRAWING SHALL NOT BE CONSTRUED AS LIMITING OR INTERFERING IN ANY WAY WITH THE PRESENT AND FUTURE OPERATION, USE, MAINTENANCE, REPAIR, RENEWAL, CHANGE, ADDITION, BETTERMENT OR ALTERATION OF THE RAILROAD AND ITS SUPPORTING FACILITIES.



SKETCH SHOWING ESTATE TO BE ACQUIRED FOR A LIMITED AERIAL EASEMENT
FROM STA 109+00.00 TO STA 118+30.00

USE OF AIRSPACE BENEATH THE ESTABLISHED GRADE LINE OF THE HIGHWAY SHALL PROVIDE SUFFICIENT VERTICAL AND HORIZONTAL CLEARANCES FOR THE CONSTRUCTION, OPERATION, MAINTENANCE, VENTILATION AND SAFETY OF THE HIGHWAY FACILITY. THE ESTATE ACQUIRED ABOVE THE AERIAL EASEMENT LINE MAY BE ENTERED ON BY MOVING VEHICLES SUCH AS TRUCKS OR RAILROAD ROLLING STOCK.

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

RC-10M	(1 SHEET)	JUN 1, 2010	RC-73M	(4 SHEETS)	FEB 8, 2019		
RC-11M	(2 SHEETS)	JUN 1, 2010	RC-75M	(1 SHEET)	JUN 1, 2010		
RC-12M	(2 SHEETS)	NOV 1, 2022	RC-77M	(1 SHEET)	DEC 17, 2019		
RC-13M	(1 SHEET)	JUN 1, 2010	RC-92M	(1 SHEET)	JUN 1, 2010		
RC-22M	(6 SHEETS)	FEB 8, 2019					
RC-25M	(4 SHEETS)	NOV. 30, 2021	TC-8600	JUNE 13, 2013	BC-752M	NOV 23, 2022	
RC-28M	(2 SHEETS)	NOV 1, 2022	TC-8700C	JUNE 13, 2013	BC-753M	JAN 31, 2019	
RC-30M	(5 SHEETS)	NOV. 30, 2021	TC-8702B	JUNE 13, 2013	BC-754M	NOV 23, 2022	
RC-31M	(2 SHEETS)	NOV. 30, 2021	TC-8801	DEC. 12, 2011	BC-755M	JAN 31, 2019	
RC-32M	(1 SHEET)	JUN 1, 2010	TC-8802	DEC. 12, 2011	BC-757M	SEPT 30, 2016	
RC-33M	(2 SHEETS)	JUN 1, 2010	TC-8804	DEC. 12, 2011	BC-762M	JAN 31, 2019	
RC-50M	(12 SHEETS)	FEB 19, 2021	TC-8805	DEC. 12, 2011	BC-766M	NOV 23, 2022	
RC-51M	(16 SHEETS)	NOV. 30, 2021			BC-767M	NOV 23, 2022	
RC-54M	(12 SHEETS)	NOV. 30, 2021	BC-701M	NOV 23, 2022	BC-775M	NOV 23, 2022	
RC-58M	(4 SHEETS)	AUG 4, 2017	BC-719M	NOV 23, 2022	BC-788M	NOV 23, 2022	
RC-64M	(2 SHEETS)	FEB 19, 2021	BC-732M	NOV 23, 2022			
RC-65M	(1 SHEETS)	DEC 17, 2019	BC-734M	FEB 19, 2021			
RC-70M	(3 SHEETS)	FEB 8, 2019	BC-735M	SEPT 30, 2016			
RC-72M	(7 SHEETS)	FEB 8, 2019	BC-736M	NOV 23, 2022			
			BC-751M	JAN 31, 2019			

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 SELECTED BORROW EXCAVATION, STRUCTURAL BACKFILL	CUBIC YARDS OF SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1	CUBIC YARDS OF SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A	CUBIC YARDS OF SELECTED BORROW EXCAVATION, 206 ROCK	TONS OF SELECTED BORROW EXCAVATION, CLASS R-3	TONS OF SELECTED BORROW EXCAVATION, CLASS R-3	TONS OF SELECTED BORROW EXCAVATION, CLASS R-6	TONS OF SELECTED BORROW EXCAVATION, CLASS R-8	CUBIC YARDS OF FOREIGN BORROW EXCAVATION	CUBIC YARDS OF WASTE
CLASS 1 EXC	CLASS 2 EXC	CLASS 3 EXC											
** 94,788	3,092	19,592	73,526	*13,021	340	95	5,723	32,894	1304	869	1,807	24,220	▲ 33,453

* PART OF LUMP SUM STRUCTURE ITEMS
** 20,558 CY FROM REMOVAL OF ACCESS ROAD AT END OF PROJECT
▲ TAKES INTO ACCOUNT EARTHWORK PHASING OF THE PROJECT

GENERAL NOTES AND LOCATION MAP

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

DES: TJM	DWG: BSP	CKD: JMB

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	4 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, SPSC 83

ROUTE	CURVE NUMBER	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
SURVEY AND CONSTR ℄ SR 0068		93+49.37	POT	565372.3356	1379662.6374	N 21°04′02"E
	SR-1	96+02.21	PC	565608.2793	1379753.5256	
		98+15.73	PI	565807.5202	1379830.2755	N 12°27′12"E
		100+28.43	PT	566016.0089	1379876.3180	
	SR-2	103+15.36	PC	566296.1857	1379938.1920	
		105+96.86	PI	566571.0577	1379998.8946	N 39°04′14"E
		108+68.19	PT	566789.6016	1380176.3148	
	SR-3	118+37.56	PC	567542.1940	1380787.2910	
		118+88.36	PI	567581.6332	1380819.3089	N 35°17′31"E
		119+39.13	PT	567623.0968	1380848.6582	
	SR-4	122+58.77	PC	567883.9975	1381033.3318	
		122+98.03	PI	567916.0376	1381056.0108	N 39°04′14"E
		123+37.25	PT	567946.5134	1381080.7519	
		129+48.57	POT	568421.0960	1381466.0317	
SURVEY AND CONSTR ℄ DELWOOD ROAD		29+50.00	POT	567013.4868	1380037.8833	S 7°01′06"W
	D-1	32+11.09	PC	566754.3515	1380005.9818	
		32+55.52	PI	566710.2520	1380000.5528	S 61°41′34"E
		32+89.04	PT	566689.1823	1380039.6719	
		33+42.79	POT	566663.6933	1380086.9960	
SURVEY AND CONSTR ℄ B&P LANE		10+00.00	POT	567858.1406	1380808.8278	S 24°36′08"E
	BP-1	10+25.78	PC	567834.7006	1380819.5605	
		10+49.31	PI	567813.3111	1380829.3544	S 38°01′10"E
		10+72.62	PT	567794.7779	1380843.8442	
		11+80.27	POT	567709.9701	1380910.1498	
CONSTR ℞ SR 0068 TEMPORARY ROAD		1+00.00	POT	565787.1043	1379815.6380	N 14°52′54"E
	T-1	1+34.72	PC	565820.6584	1379824.5546	
		2+13.62	PI	565896.9173	1379844.8196	N 0°06′08"W
		2+91.63	PT	565975.8228	1379844.6790	
	T-2	3+71.76	PC	566055.9569	1379844.5362	
		4+36.41	PI	566120.6021	1379844.4210	N 12°11′48"E
		5+00.56	PT	566183.7882	1379858.0787	
	T-3	7+60.64	PC	566438.0033	1379913.0271	
		9+96.66	PI	566668.6962	1379962.8912	N 49°27′44"E
		12+15.93	PT	566822.0978	1380142.2612	
	T-4	12+58.57	PC	566849.8171	1380174.6730	
		12.99.77	PI	566876.5958	1380205.9848	N 38°59′58"E
		13+40.75	PT	566908.6152	1380231.9132	
		14+11.13	POT	566963.3104	1380276.2038	
CONSTR ℞ TEMPORARY ACCESS ROAD NO. 1		0+00.00	POT	567047.5085	1380042.1878	S 82°32′50"E
	A1-1	0+90.61	PC	567035.7551	1380132.0367	
		1+28.48	PI	567030.8439	1380169.5797	S 65°19′23"E
		1+65.77	PRC	567015.0361	1380203.9848	
	A1-2	2+04.47	PI	566998.8781	1380239.1521	N 39°11′41"E
		2+31.64	PT	567028.8720	1380263.6099	
		5+91.19	POT	567307.5278	1380490.8339	

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

ROUTE	CURVE NUMBER	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
CONSTR ℞ TEMPORARY ACCESS ROAD NO. 2	A2-1	0+00.00	POT	567743.9719	1380916.3228	S 13°14′26"E
		1+60.24	PC	567587.9899	1380953.0248	
		2+23.84	PI	567526.0786	1380967.5923	S 51°40′26"W
		2+73.54	PT	567486.6365	1380917.6969	
		4+68.99	POT	567365.4292	1380764.3660	
SURVEY & CONSTR ℞ SR 8012 (EB OFFRAMP)	EB-1	710+31.39	POC	568246.0654	1380809.2379	N 57°27′21 W
		711+24.90	PI	568195.7643	1380888.0604	
		712+18.20	PT	568136.8301	1380960.6548	N 50°55′46" W
		714+31.39	POT	568002.4596	1381126.1706	
SURVEY & CONSTR ℞ SR 8012 (EB ONRAMP)	EB-2	600+00.00	POT	568024.6416	1381144.1786	N 55°39′58" W
		600+22.63	PC	568011.8764	1381162.8679	
		601+07.47	PI	567964.0274	1381232.9231	
		601+89.64	PT	567950.0542	1381316.6011	N 80°31′11" W
		602+99.50	POT	567931.9591	1381424.9630	

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

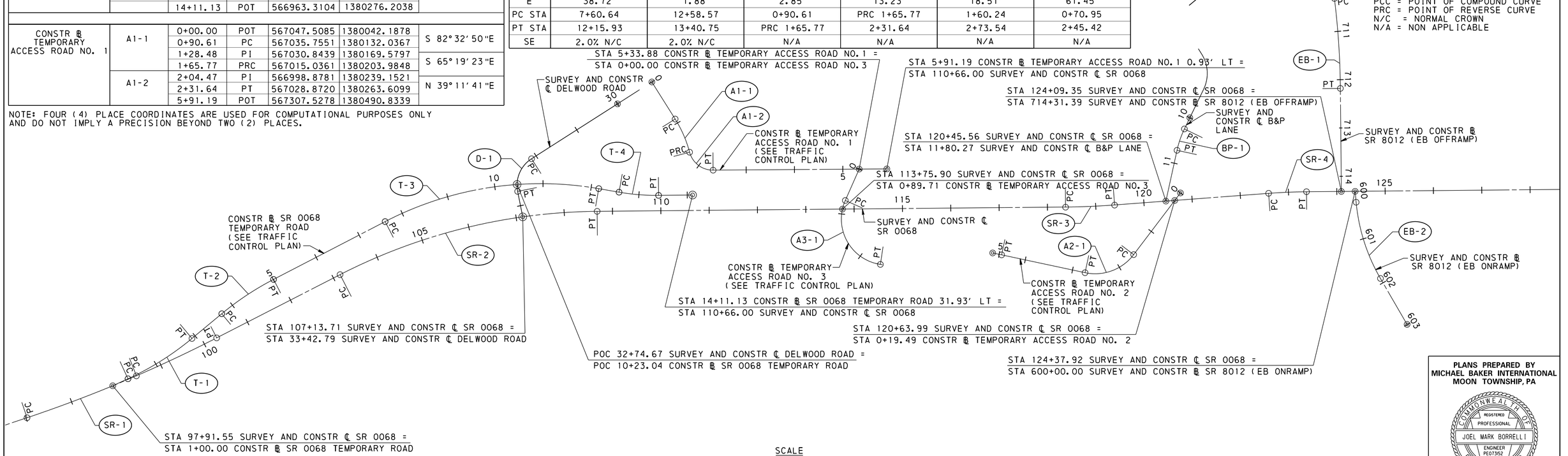
ROUTE	CURVE NUMBER	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
CONSTR ℞ TEMPORARY ACCESS ROAD NO. 3		0+00.00	POB	567263.1065	1380454.6116	
	A3-1	0+70.95	PC	567199.6359	1380486.3181	S 26°32′39" E
		1+95.26	PI	567088.4322	1380541.8694	
		2+45.42	PT	567171.2340	1380634.5844	N 48°13′57" E
	A3-2	3+42.50	PC	567235.9016	1380706.9940	
		3+77.48	PI	567259.2058	1380733.0882	
		4+09.81	PT	567293.6946	1380738.9632	N 9°40′02" E
	A3-3	4+31.97	PC	567315.5385	1380742.6841	
		4+70.36	PI	567353.3863	1380749.1313	
		5+05.28	PT	567377.1952	1380779.2504	N 51°40′26" E

CURVE	SR-1	SR-2	SR-3	SR-4	D-1	BP-1	T-1	T-2	EB-1	EB-2
PI STA	98+15.73	105+96.86	118+88.36	122+98.03	32+55.52	10+49.31	2+13.62	4+36.41	711+24.90	601+07.47
△	8°36′50" LT	26°37′03" RT	3°46′43"LT	3°46′43"RT	68°42′40"LT	13°25′02"LT	14°59′02"LT	12°17′56"RT	6°31′35" RT	24°51′13" LT
D	2°01′16"	4°48′53"	3°43′14"	4°48′53"	88°08′50"	28°38′52"	9°32′57"	9°32′57"	3°29′37"	14°52′55"
T	213.51′	281.49′	50.80′	39.25′	44.43′	23.53′	78.91′	64.65′	93.51′	84.84′
L	426.22′	552.83′	101.56′	78.48	77.95′	46.84′	156.91′	128.79′	186.81′	167.00′
R	2835.00′	1190.00′	1540.00′	1190.00′	65.00′	200.00′	600.00′	600.00′	1640.00′	385.00′
E	8.03′	32.84′	0.84′	0.65′	13.74′	1.38′	5.17′	3.47′	2.66′	9.24′
PC STA	96+02.21	103+15.36	118+37.56	122+58.77	32+11.09	10+25.78	1+34.72	3+71.76	710+31.39	600+322.6
PT STA	100+28.43	108+68.19	119+39.13	123+37.25	32+89.04	10+72.62	2+91.63	5+00.56	712+18.20	601+89.64
SE	MATCH EXISTING	5.0%	4.4%	5.0%	2.0%	N/A	2.0% N/C	2.0% N/C	EXISTING	EXISTING

CURVE	T-3	T-4	A1-1	A1-2	A2-1	A3-1
PI STA	9+96.66	12+99.77	1+28.48	2+04.47	2+23.84	1+95.26
△	37°15′55"RT	10°27′45"LT	17°13′27"RT	75°28′56"LT	64°54′52"RT	105°13′23" LT
D	8°11′06"	12°43′57"	22°55′06"	114°35′30"	57°17′45"	60°18′41"
T	236.02′	41.20′	37.86′	38.70′	63.60′	124.31′
L	455.28′	82.17′	75.15′	65.87′	113.30′	174.47′
R	700.00′	450.00′	250.00′	50.00′	100.00′	95.00′
E	38.72′	1.88′	2.85′	13.23′	18.51′	61.45′
PC STA	7+60.64	12+58.57	0+90.61	PRC 1+65.77	1+60.24	0+70.95
PT STA	12+15.93	13+40.75	PRC 1+65.77	2+31.64	2+73.54	2+45.42
SE	2.0% N/C	2.0% N/C	N/A	N/A	N/A	N/A

LEGEND

PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
PT = POINT OF TANGENT
POT = POINT ON TANGENT
POC = POINT ON CURVE
PCC = POINT OF COMPOUND CURVE
PRC = POINT OF REVERSE CURVE
N/C = NORMAL CROWN
N/A = NON APPLICABLE



DES: TJM	DWG: BSP	CKD: JMB

GEOMETRIC LAYOUT AND PROJECT COORDINATES

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE071352

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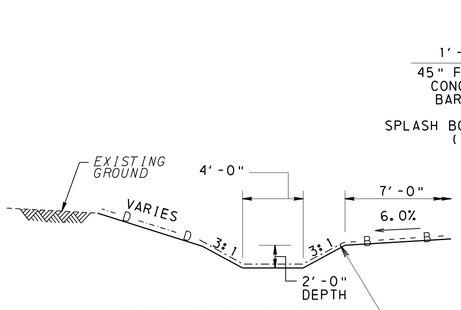
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	5 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

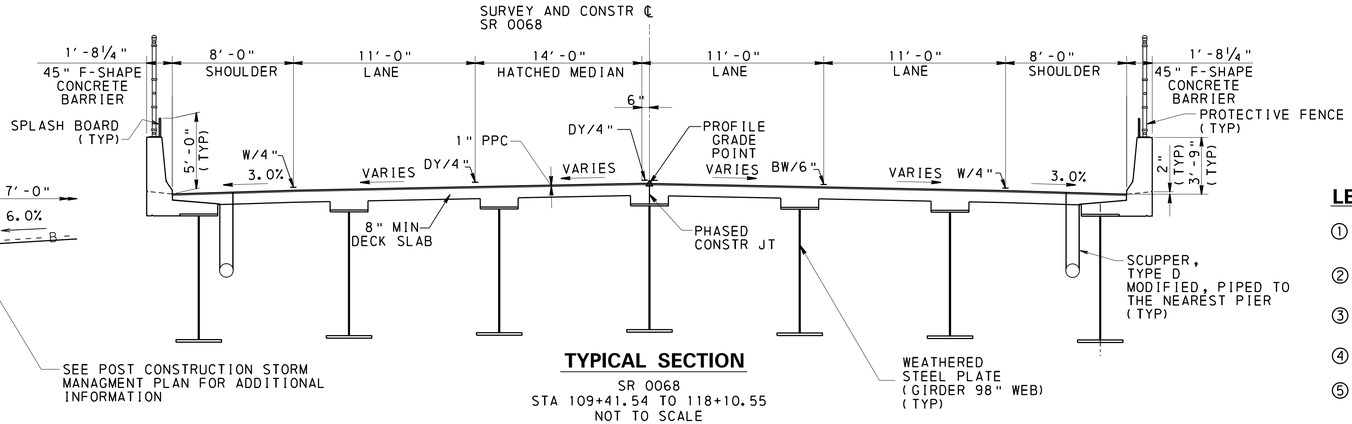
REVISION NUMBER	REVISIONS	DATE	BY



PARTIAL SECTION "B"

SR 0068
STA 105+00.00 LT TO STA 106+00.00 LT

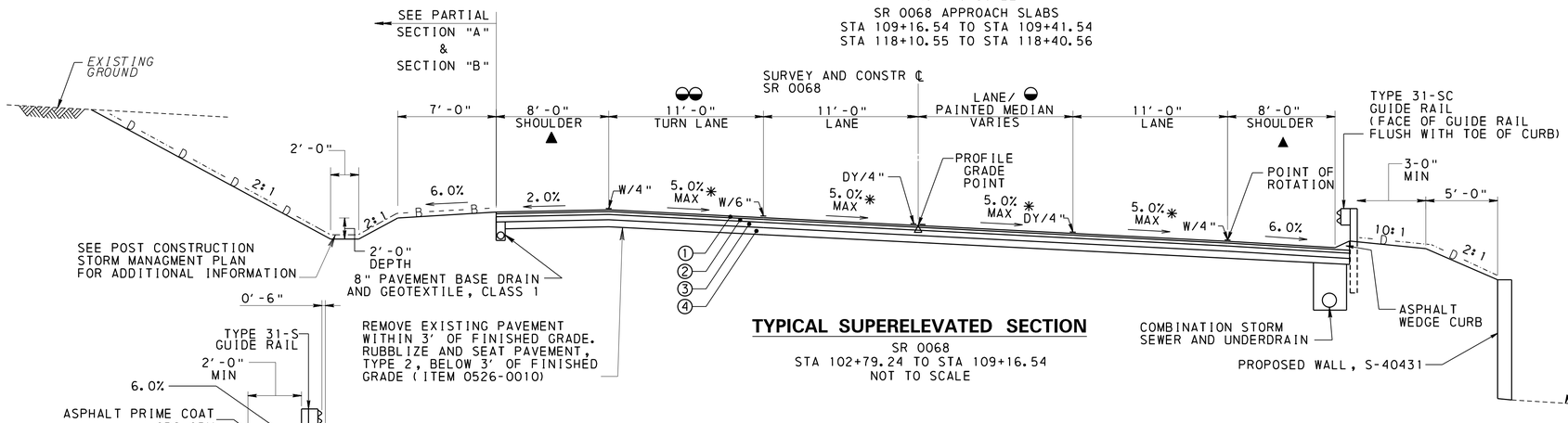
SEE POST CONSTRUCTION STORM MANAGMENT PLAN FOR ADDITIONAL INFORMATION



TYPICAL SECTION

SR 0068
STA 109+41.54 TO 118+10.55
NOT TO SCALE

SR 0068 APPROACH SLABS
STA 109+16.54 TO STA 109+41.54
STA 118+10.55 TO STA 118+40.56

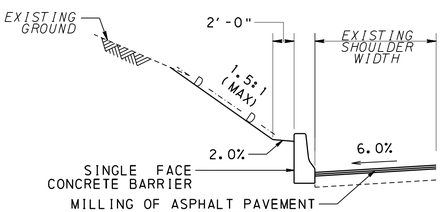


TYPICAL SUPERELEVATED SECTION

SR 0068
STA 102+79.24 TO STA 109+16.54
NOT TO SCALE

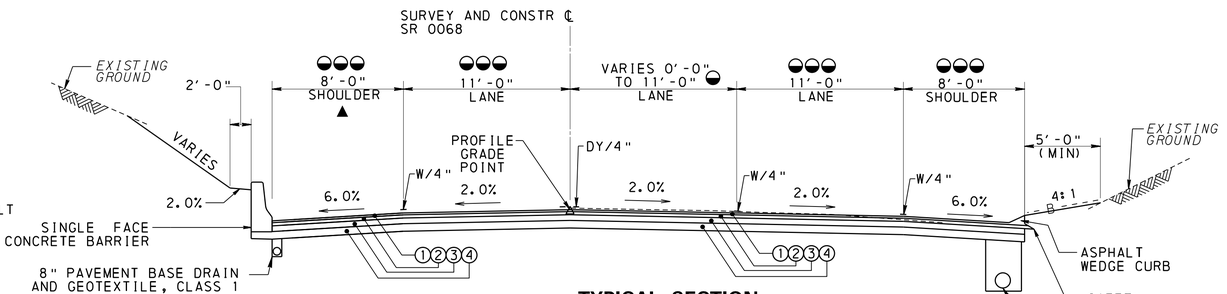
PARTIAL SECTION "A"

SR 0068
STA 106+00.00 LT TO STA 109+16.54 LT



PARTIAL SECTION "C"

SR 0068
STA 99+15.00 LT TO STA 101+00.00 LT



TYPICAL SECTION

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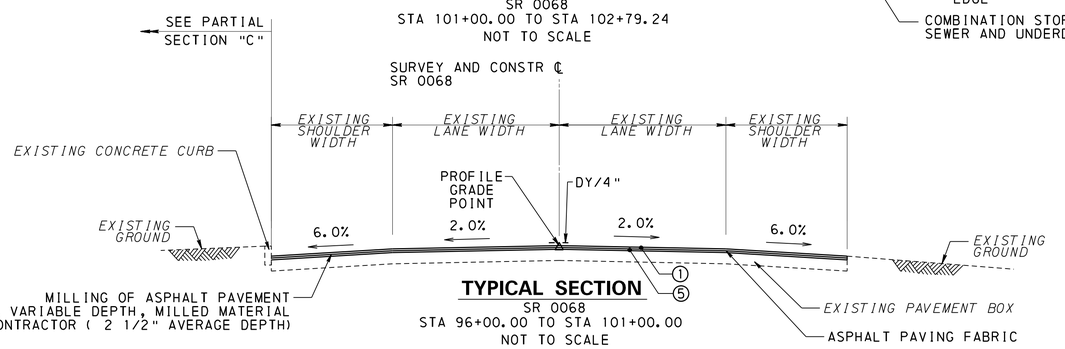
STA 101+00.00 TO STA 102+79.24
NOT TO SCALE



TYPICAL SECTION

SR 0068
STA 96+00.00 TO STA 101+00.00
NOT TO SCALE

LEGEND:

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

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

③ SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, <0.3 MILLION ESALS, 25.0 MM MIX, 7½" DEPTH

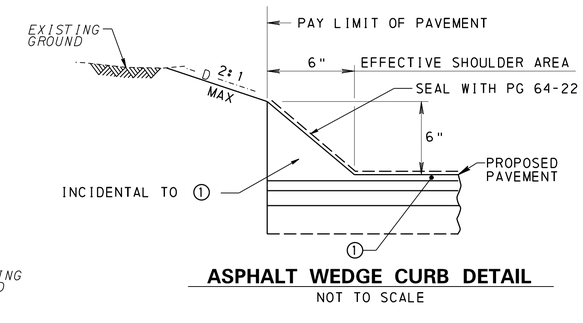
④ SUBBASE 8" DEPTH (NO. 2A)

⑤ SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, 0.3 TO <3 MILLION ESALS, 9.5" MM MIX, SRL-L (1" AVERAGE DEPTH)

SEEDING LEGEND:

-B----B- SEEDING & SOIL SUPPLEMENTS - FORMULA B SEED MIXTURE AND MULCHING-STRAW ON 4" OF TOPSOIL (3:1 AND FLATTER)

-D----D- SEEDING & SOIL SUPPLEMENTS - FORMULA D SEED MIXTURE (STEEPER THAN 3:1)



ASPHALT WEDGE CURB DETAIL

NOT TO SCALE

NOTES:

◒ STA 101+00.00 TO STA 105+00.00 - 0"-0" TO 11-0" TRAVEL LANE
STA 105+00.00 TO STA 106+50.00 - 11'-0" TRAVEL LANE
STA 107+50.00 TO 120+00.00 - 14'-0" PAINTED MEDIAN

◒◒ STA 107+50.00 TO 109+41.54 - 11'-0"

◒◒◒ EXISTING WIDTH AT STA 101+00.00:
LT SHLD - 5.5'
LT TRAVEL LANE - 11.5'
RT TRAVEL LANE - 11.5'
RT SHLD - 5.9'

▲ STA 101+60.00 TO STA 105+50.00 - 8'-0" TO 20'-6" WIDENED SHOULDER

SEE PAVEMENT CROSS SLOPE TRANSITION DETAIL FOR STRUCTURE CROSS SLOPES

APPLY SEPARATE LAYER OF ASPHALT TACK COAT (NTT/CNTT) FOR EACH PAVING COURSE, INCLUDING MULTIPLE LIFTS OF THE SAME MATERIAL, ON BOTH EXISTING AND NEW SURFACES

APPLY ALL ROADWAY JOINT SEALING IN ACCORDANCE WITH PUBLICATION 408 SECTION 469 (INCIDENTAL TO THE COURSE BEING PLACED).

OUTLET PAVEMENT BASE DRAINS AS DIRECTED.

REFER TO RC-10M FOR CUT SLOPE ROUNDING.

SUPERELEVATION ROTATION IS ABOUT THE INSIDE EDGE OF TRAVEL LANE

-DY/4" - DOUBLE YELLOW LINE / WIDTH

-W/4" - WHITE LINE / WIDTH

* SLOPES VARY FROM NORMAL CROWN, UP TO 5.0% SUPERELEVATION

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE071352

TYPICAL SECTIONS

DES: TJM	DWG: BSP	CKD: JMB

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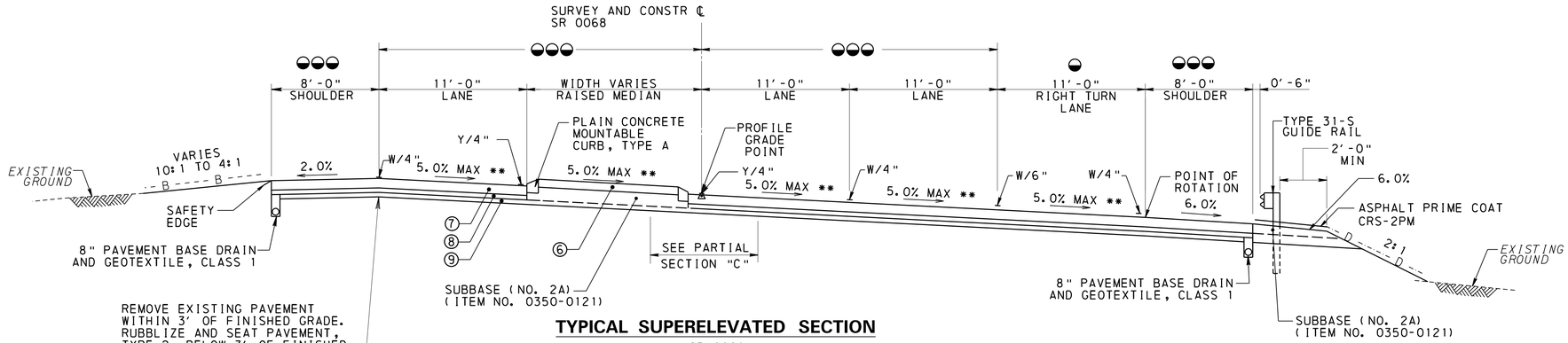
0068 Karns Typicals.dgn

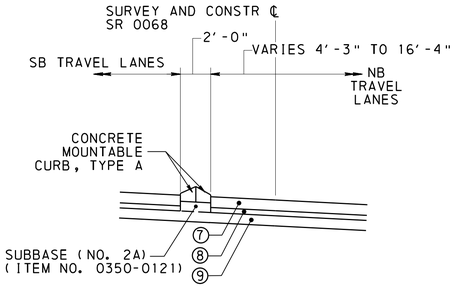
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	6 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



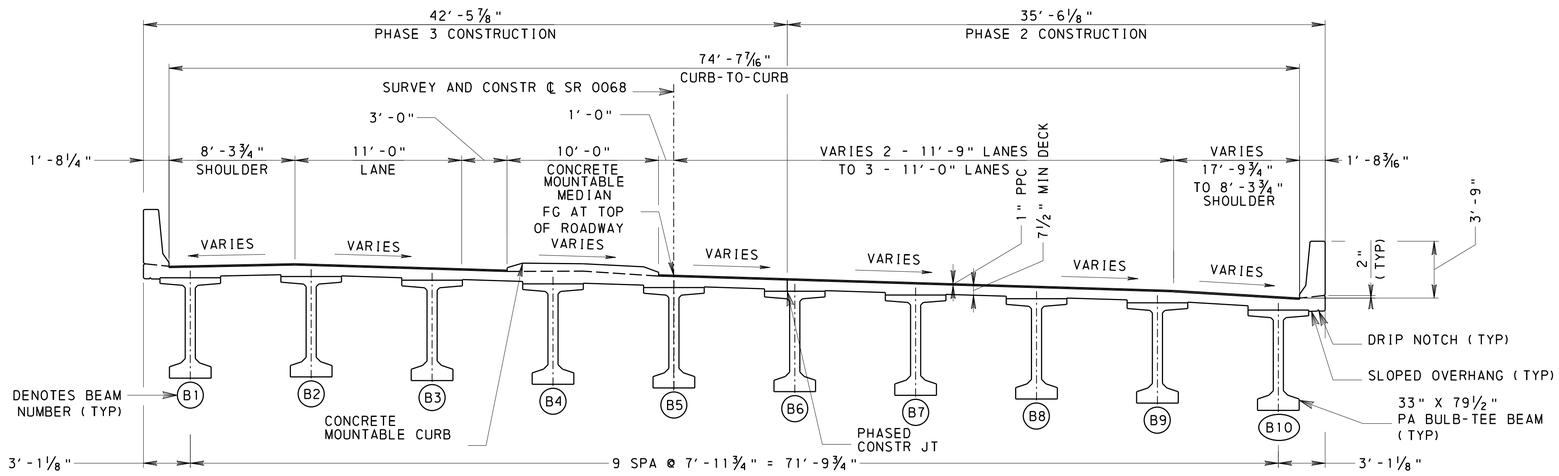
TYPICAL SUPERELEVATED SECTION

SR 0068
STA 122+80.50 TO STA 125+51.25
NOT TO SCALE



PARTIAL SECTION "C"

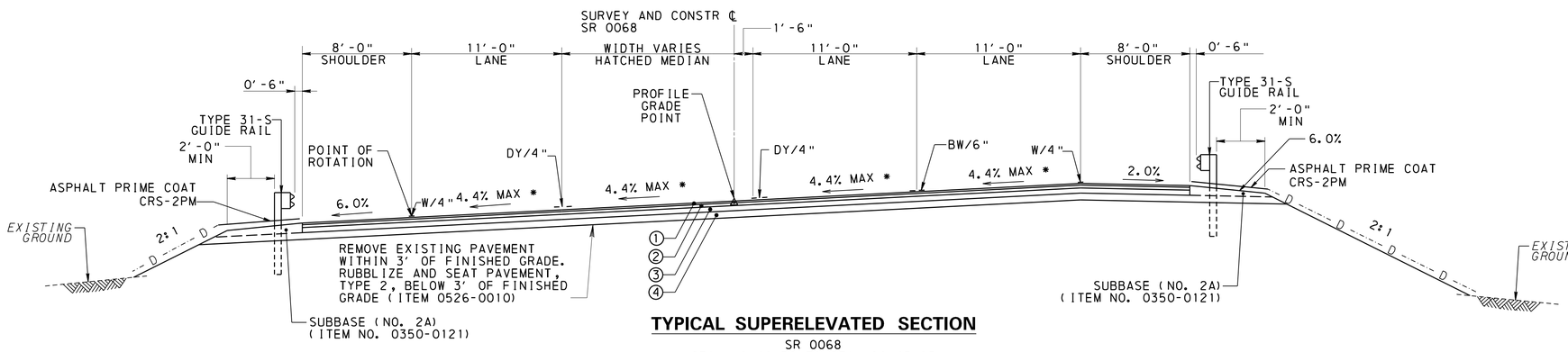
SR 0068
STA 125+00.00 TO 125+51.25
(CONCRETE MEDIAN AND PAVEMENT REPLACEMENT)
STA 125+51.25 TO 127+20.00
(CONCRETE MEDIAN REPLACEMENT ONLY)
NOT TO SCALE



TYPICAL SECTION

SR 0068
STA 121+02.50 TO 122+55.50
NOT TO SCALE

SR 0068 APPROACH SLABS
STA 120+77.50 TO STA 121+02.50
STA 122+55.50 TO STA 122+80.50



TYPICAL SUPERELEVATED SECTION

SR 0068
STA 118+40.56 TO STA 120+43.95
NOT TO SCALE

LEGEND:

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

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

③ SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, <0.3 MILLION ESALS, 25.0 MM MIX, 7½" DEPTH

④ SUBBASE 8" DEPTH (NO. 2A)

⑥ PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH

⑦ PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH

⑧ ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH

⑨ SUBBASE 4" DEPTH (NO. 2A)

SEEDING LEGEND:

-B----B- SEEDING & SOIL SUPPLEMENTS - FORMULA B SEED MIXTURE AND MULCHING-STRAW ON 4" OF TOPSOIL (3:1 AND FLATTER)

-D-·-·-D- SEEDING & SOIL SUPPLEMENTS - FORMULA D SEED MIXTURE (STEEPER THAN 3:1)

NOTES:

◒ STA 121+00.97 TO STA 121+75.00 - 0"-0" TO 11-0" RIGHT TURN LANE
STA 121+75.00 TO STA 124+08.69 - 11'-0" RIGHT TURN LANE

APPLY ALL ROADWAY JOINT SEALING IN ACCORDANCE WITH PUBLICATION 408 SECTION 469 (INCIDENTAL TO THE COURSE BEING PLACED).

APPLY SEPARATE LAYER OF ASPHALT TACK COAT (NTT/CNTT) FOR EACH PAVING COURSE, INCLUDING MULTIPLE LIFTS OF THE SAME MATERIAL, ON BOTH EXISTING AND NEW SURFACES

SEE PAVEMENT CROSS SLOPE TRANSITION DETAIL FOR STRUCTURE CROSS SLOPES

OUTLET PAVEMENT BASE DRAINS AS DIRECTED.

◒◒◒ EXISTING WIDTH AT STA 125+64.00 (TRANSITION TO STA 125+00.00):
LT SHLDR - 10.3'
LT OF CENTERLINE - 31.3'
RT OF CENTERLINE - 20.0
RT SHLDR - 9.1'

REFER TO RC-10M FOR CUT SLOPE ROUNDING.

SUPERELEVATION ROTATION IS ABOUT THE INSIDE EDGE OF TRAVEL LANE

-DY/4" - DOUBLE YELLOW LINE / WIDTH

-W/4" - WHITE LINE / WIDTH

-DW/4" - DASHED WHITE LINE / WIDTH

* SLOPES VARY FROM NORMAL CROWN TO 4.4% SUPERELEVATION

** SLOPES VARY FROM NORMAL CROWN TO 5.0% SUPERELEVATION

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

TYPICAL SECTIONS

DES: TJM	DWG: BSP	CKD: JMB

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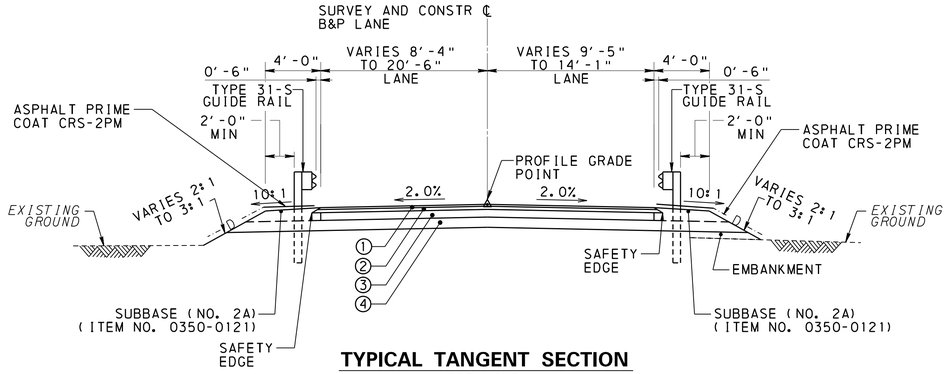
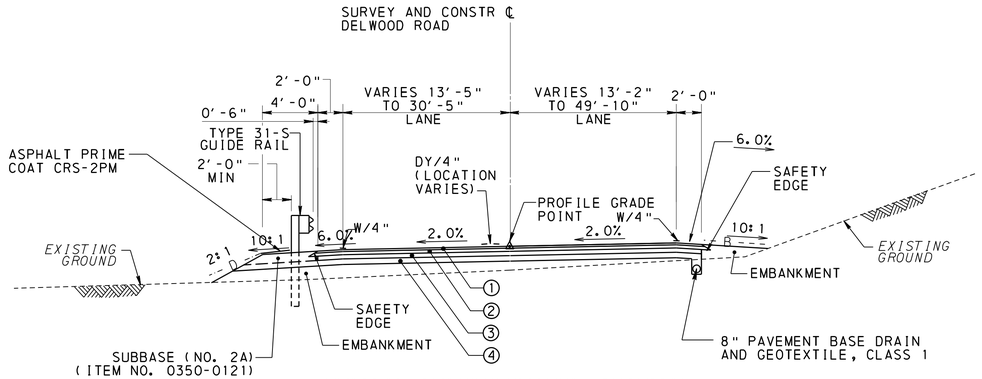
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	7 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



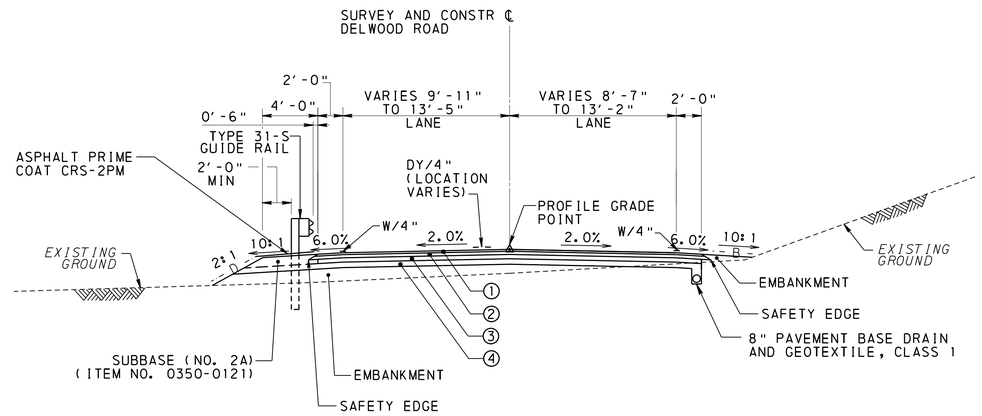
TYPICAL TANGENT SECTION

B&P LANE
STA 10+19.80 TO STA 11+41.12
NOT TO SCALE



TYPICAL SUPERELEVATED SECTION

DELWOOD ROAD
STA 31+35.09 TO STA 33+19.26
NOT TO SCALE



TYPICAL SECTION

DELWOOD ROAD
STA 30+40.00 TO STA 31+35.09
NOT TO SCALE

LEGEND:

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

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

③ SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, <0.3 MILLION ESALS, 25.0 MM MIX, 7½" DEPTH

④ SUBBASE 8" DEPTH (NO. 2A)

SEEDING LEGEND:

-B----B- SEEDING & SOIL SUPPLEMENTS - FORMULA B SEED MIXTURE AND MULCHING-STRAW ON 4" OF TOPSOIL (3:1 AND FLATTER)

-D-----D- SEEDING & SOIL SUPPLEMENTS - FORMULA D SEED MIXTURE (STEEPER THAN 3:1)

NOTES:

APPLY ALL ROADWAY JOINT SEALING IN ACCORDANCE WITH PUBLICATION 408 SECTION 469 (INCIDENTAL TO THE COURSE BEING PLACED).

APPLY SEPARATE LAYER OF ASPHALT TACK COAT (NTT/CNTT) FOR EACH PAVING COURSE, INCLUDING MULTIPLE LIFTS OF THE SAME MATERIAL, ON BOTH EXISTING AND NEW SURFACES

OUTLET PAVEMENT BASE DRAINS AS DIRECTED.

REFER TO RC-10M FOR CUT SLOPE ROUNDING.

SUPERELEVATION ROTATION IS ABOUT THE INSIDE EDGE OF TRAVEL LANE

-DY/4" - DOUBLE YELLOW LINE / WIDTH

-W/4" - WHITE LINE / WIDTH

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REGISTERED PROFESSIONAL
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TYPICAL SECTIONS

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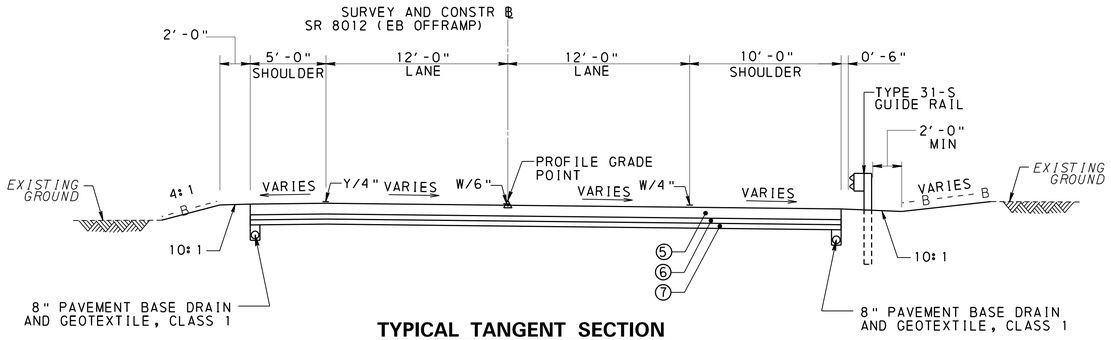
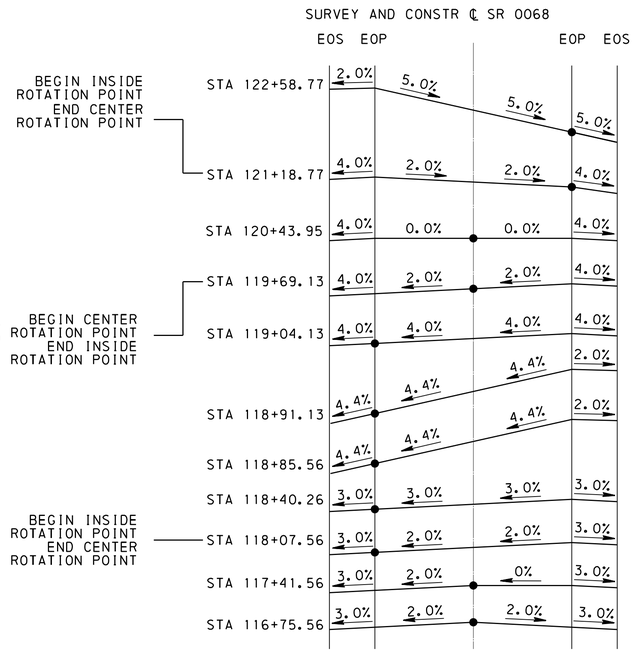
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	8 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL TANGENT SECTION

SR 8012 (EB OFFRAMP)
STA 713+00.00 TO STA 714+02.69
NOT TO SCALE



PAVEMENT CROSS SLOPE TRANSITION DETAIL

● SUPERELEVATION ROTATION POINT
NOT TO SCALE

LEGEND:

⑤ PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH

⑥ ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH

⑦ SUBBASE 4" DEPTH (NO. 2A)

SEEDING LEGEND:

- - B - - - - B - - SEEDING & SOIL SUPPLEMENTS - FORMULA B SEED MIXTURE AND MULCHING-STRAW ON 4" OF TOPSOIL (3:1 AND FLATTER)

- - D - - - - D - SEEDING & SOIL SUPPLEMENTS - FORMULA D SEED MIXTURE (STEEPER THAN 3:1)

NOTES:

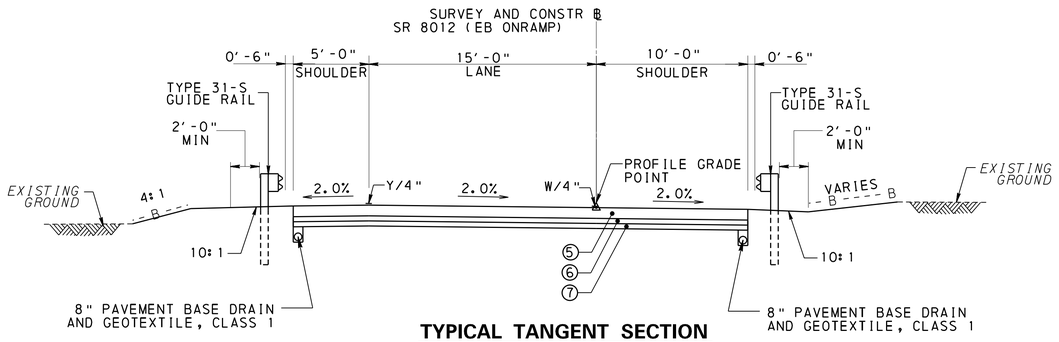
APPLY ALL ROADWAY JOINT SEALING IN ACCORDANCE WITH PUBLICATION 408 SECTION 469 (INCIDENTAL TO THE COURSE BEING PLACED).

OUTLET PAVEMENT BASE DRAINS AS DIRECTED.

REFER TO RC-10M FOR CUT SLOPE ROUNDING.

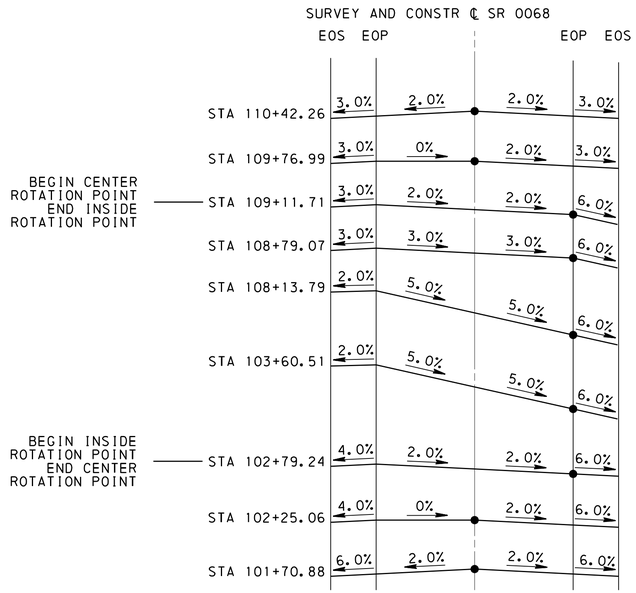
-DY/4" - DOUBLE YELLOW LINE / WIDTH

-W/4" - WHITE LINE / WIDTH



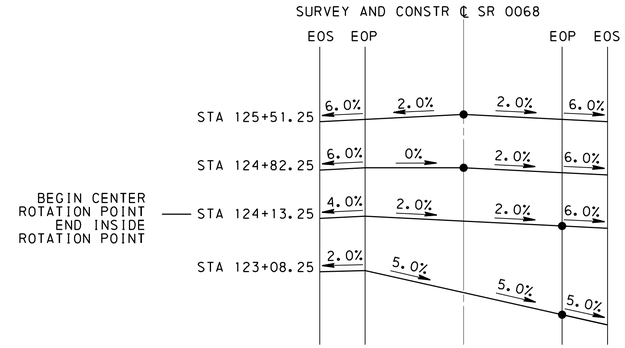
TYPICAL TANGENT SECTION

SR 8012 (EB ONRAMP)
STA 600+22.00 TO STA 601+50.00
NOT TO SCALE



PAVEMENT CROSS SLOPE TRANSITION DETAIL

● SUPERELEVATION ROTATION POINT
NOT TO SCALE



PAVEMENT CROSS SLOPE TRANSITION DETAIL

● SUPERELEVATION ROTATION POINT
NOT TO SCALE

TYPICAL SECTIONS

PLANS PREPARED BY
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REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073552

DES: TJM	DWG: BSP	CKD: JMB

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	9 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

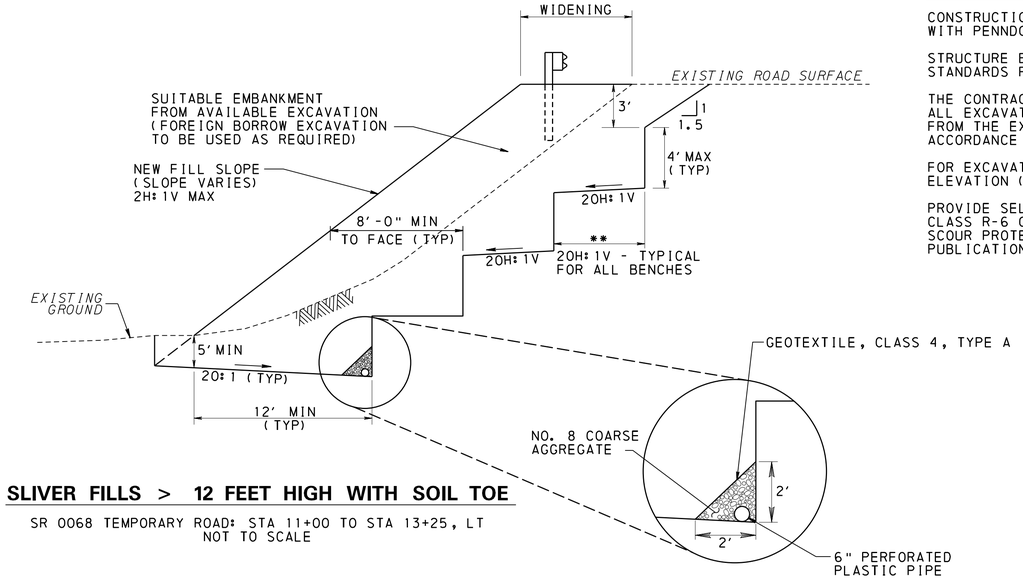
CONSTRUCTION SHOULD BE COMPLETED IN ACCORDANCE WITH PENNDOT SPECIFICATION PUBLICATION 408/2020.

STRUCTURE BACKFILL SHOULD BE CONSTRUCTED USING PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION RC-12M BACKFILL AT STRUCTURES.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

FOR EXCAVATIONS EXTENDING BELOW THE STREAMBED ELEVATION (ELEVATION 1003), DEWATERING WILL BE REQUIRED.

PROVIDE SELECTED BORROW EXCAVATION ROCK (SBER), CLASS R-6 CHOKED WITH SBER, CLASS R-3 ROCK LINING FOR SCOUR PROTECTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020 - SECTION 850.2(A)2, AND THE FOUNDATION PLANS.



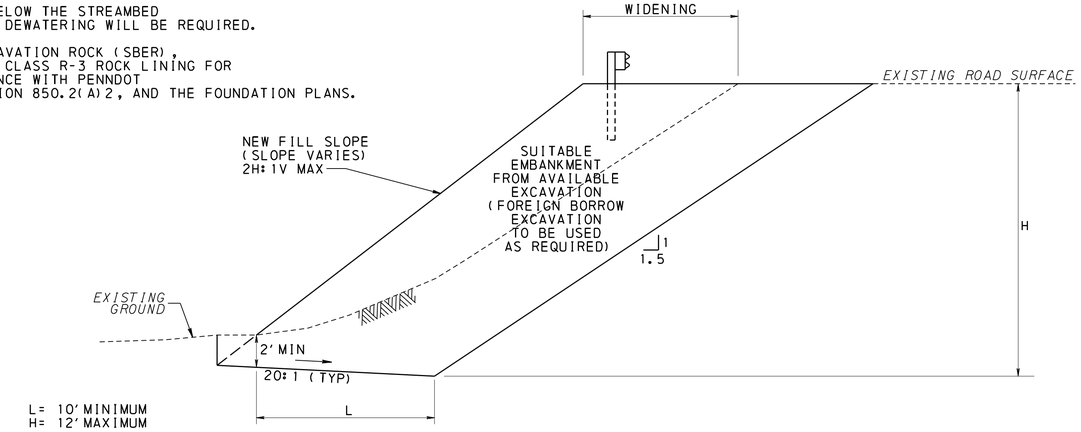
SLIVER FILLS > 12 FEET HIGH WITH SOIL TOE

SR 0068 TEMPORARY ROAD: STA 11+00 TO STA 13+25, LT
NOT TO SCALE

1. DETAIL FOR FILLS > 12' HIGH.
2. ** IF SLOPE PRIOR TO BENCHING IS 1.5H:1V, BENCH 4.5' HORIZONTALLY. IF SLOPE PRIOR TO BENCHING IS 2H:1V, BENCH 6.0' HORIZONTALLY.
3. OUTLET DRAIN TO APPROPRIATE WATERWAY OR STORMWATER DRAINAGE SYSTEM.

ITEM 9610-7002
6" FILL BENCH DRAIN

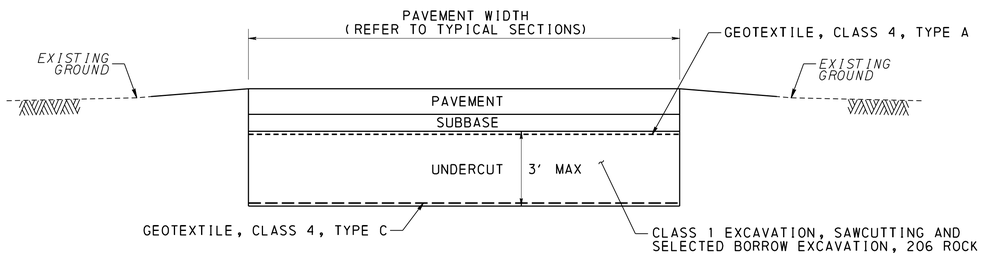
STA 107+75 TO STA 109+15, LT
NOT TO SCALE



SLIVER FILLS < 12 FEET HIGH

SR 0068 TEMPORARY ROAD: STA 106+25 TO STA 106+75, LT
DELWOOD ROAD: STA 31+00 TO STA 31+75, LT
NOT TO SCALE

1. FOR FILLS < 12' HIGH, BENCHING IS NOT REQUIRED.
2. FOR PAVEMENT STRUCTURE AND ASPHALT PRIME COAT ON GUIDE RAIL BACK UP MATERIAL, SEE ROADWAY TYPICAL SECTION.

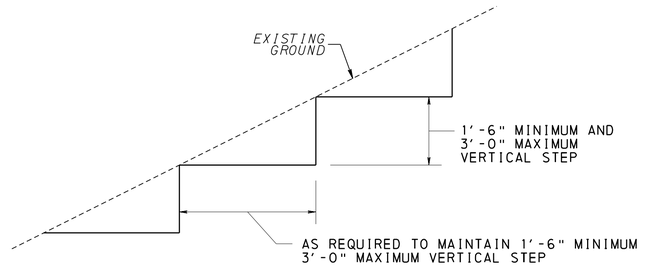


UNDERCUT IN SOFT SOIL DETAIL

NOT TO SCALE
SPECIFIC LOCATIONS - AS DIRECTED

UNDERCUT NOTES:

1. PLACE UNDERCUT IN SOFT SOILS, AS DIRECTED BY THE DISTRICT GEOTECHNICAL ENGINEER.
2. ALL UNDERCUT DEPTH MAY BE MODIFIED BY THE DISTRICT GEOTECHNICAL ENGINEER TO SUIT FIELD CONDITIONS.
3. EXCAVATION PAID AS CLASS 1 EXCAVATION.
4. BACK FILL UNDERCUT WITH SELECTED BORROW EXCAVATION, 206 ROCK, COMPACT ACCORDING TO PUBLICATION 408, SECTION 206.
5. PROVIDE POSITIVE DRAINAGE AS DIRECTED. OUTLET TO APPROPRIATE WATERWAY.



TYPICAL BENCHING FOR EXISTING SLOPE

SEE CROSS SECTIONS FOR APPLICABLE LOCATIONS
NOT TO SCALE

NOTES:

1. EXCAVATE A MINIMUM OF 3 FEET. WASTE ANY UNSUITABLE MATERIAL AS DIRECTED BY THE DISTRICT GEOTECHNICAL ENGINEER.
2. PLACE TOE KEY IN ACCORDANCE WITH APPLICABLE EMBANKMENT TOE KEY DETAIL.
3. PREPARE SUBGRADE IN ACCORDANCE WITH PUBLICATION 408, SECTION 210.
4. PLACE FILL IN ACCORDANCE WITH PUBLICATION 408, SECTION 206.
5. USE BONDING BENCHES FOR EXISTING SLOPES STEEPER THAN 6H:1V.

PLANS PREPARED BY
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SPECIAL DETAILS

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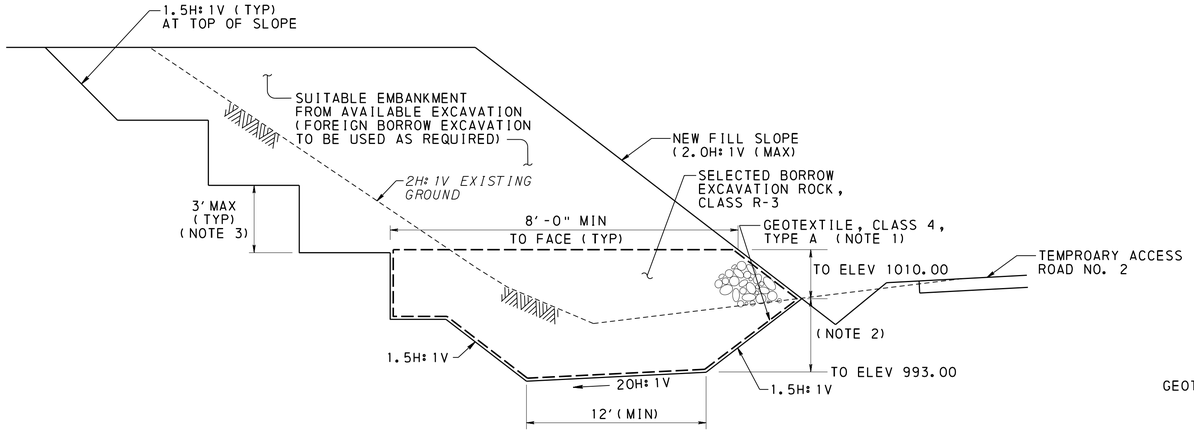
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	10 OF 76
	BUTLER TOWNSHIP AND SUMMIT TOWNSHIP			

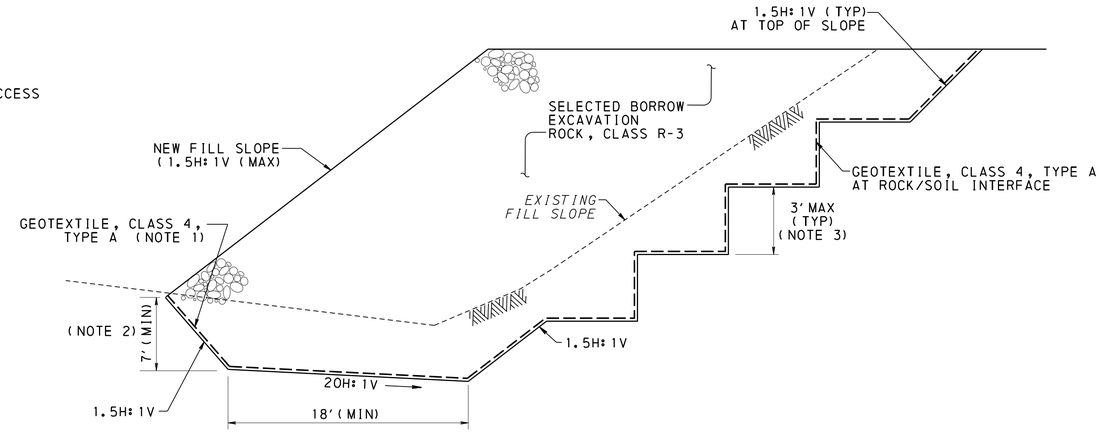
REVISION NUMBER	REVISIONS	DATE	BY



SLIVER FILLS > 12 FEET HIGH WITH ROCK TOE

TEMPORARY ACCESS ROAD NO. 2: STA 0+50 TO STA 3+50 LT
SR 0068: STA 118+50 TO STA 121+25 RT
NOT TO SCALE

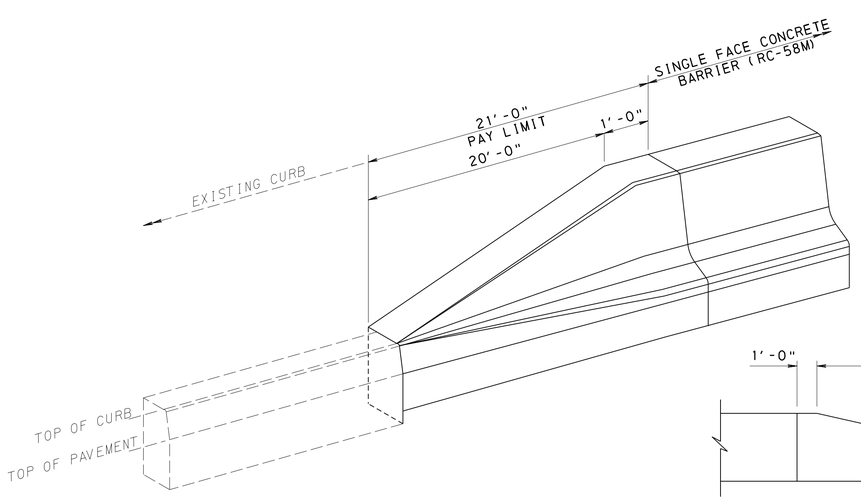
1. WRAP TOE BENCH AS PER SECTION 212 GEOTEXTILE, CLASS 4, TYPE A. OVERLAP GEOTEXTILE IN THE ROLL DIRECTION (OLD ROLL TO NEW ROLL) A MINIMUM OF 1 FOOT.
2. EXTEND TOE BENCH EXCAVATION TO A ELEVATION 993.00. EXTEND EXCAVATION AS NEEDED TO REACH FIRM BEARING MATERIAL ACCEPTABLE TO THE DISTRICT GEOTECHNICAL ENGINEER OR DESIGNATED REPRESENTATIVE. CONSULT DISTRICT GEOTECHNICAL ENGINEER IF FIRM BEARING MATERIAL IS NOT ENCOUNTERED.
3. SEE CROSS SECTIONS FOR BENCHING DIMENSIONS.



1.5H:1V CLASS R-3 SELECTED BORROW EXCAVATION ROCK SLOPE

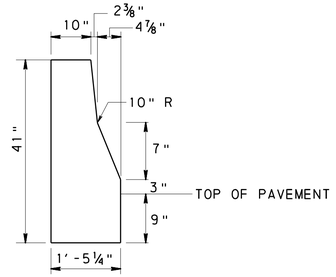
SR 0068: STA 118+20 TO STA 120+20 LT
NOT TO SCALE

1. WRAP TOE BENCH AS PER SECTION 212 GEOTEXTILE, CLASS 4, TYPE A. OVERLAP GEOTEXTILE IN THE ROLL DIRECTION (OLD ROLL TO NEW ROLL) A MINIMUM OF 1 FOOT.
2. EXTEND TOE BENCH EXCAVATION TO A ELEVATION 993.00. EXTEND EXCAVATION AS NEEDED TO REACH FIRM BEARING MATERIAL ACCEPTABLE TO THE DISTRICT GEOTECHNICAL ENGINEER OR DESIGNATED REPRESENTATIVE. CONSULT DISTRICT GEOTECHNICAL ENGINEER IF FIRM BEARING MATERIAL IS NOT ENCOUNTERED.
3. SEE CROSS SECTIONS FOR BENCHING DIMENSIONS.



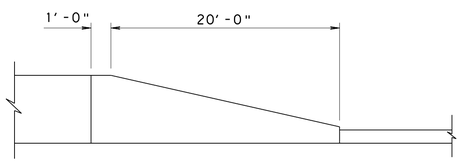
END TRANSITION, SINGLE FACE CONCRETE BARRIER, 1'-5 1/4" WIDTH 21'-0" LENGTH

NOT TO SCALE



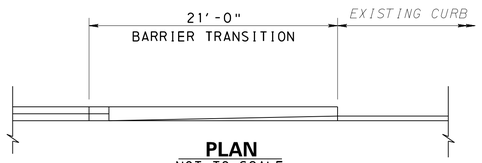
CROSS SECTION

NOT TO SCALE



PROFILE

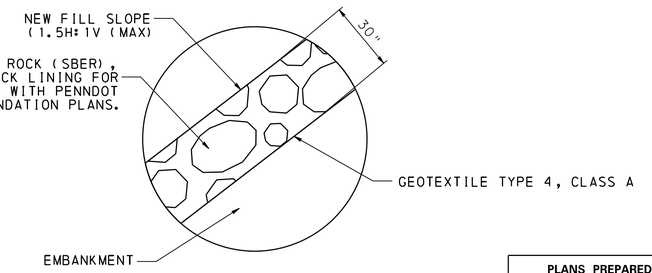
NOT TO SCALE



PLAN

NOT TO SCALE

PROVIDE SELECTED BORROW EXCAVATION ROCK (SBER), CLASS R-6 CHOKED WITH SBER, CLASS R-3 ROCK LINING FOR SCOUR PROTECTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020 - SECTION 850.2(A)2, AND THE FOUNDATION PLANS.



B&P LANE CLASS R-3 SELECTED BORROW EXCAVATION ROCK SLOPE

B&P LANE: STA 10+60 TO STA 11+00 LT

PLANS PREPARED BY
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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SPECIAL DETAILS

DES: TJM	DWG: BSP	CKD: JMB

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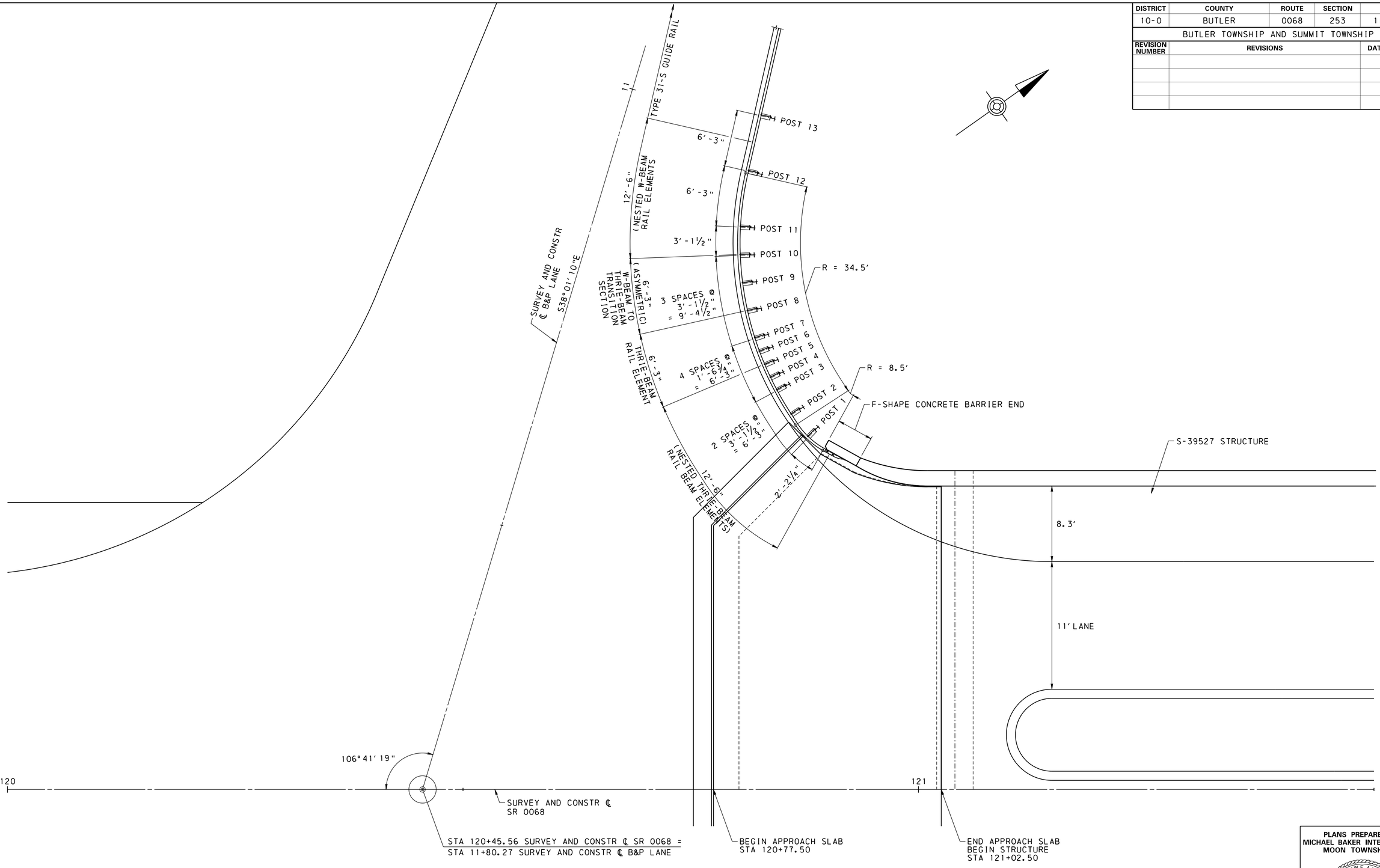
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	11 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



GUIDE RAIL TO BRIDGE BARRIER TRANSTION

S-39527 AT B&P LANE
NOT TO SCALE

DES: TJM	DWG: BSP	CKD: JMB

SPECIAL DETAILS

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
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PE073152

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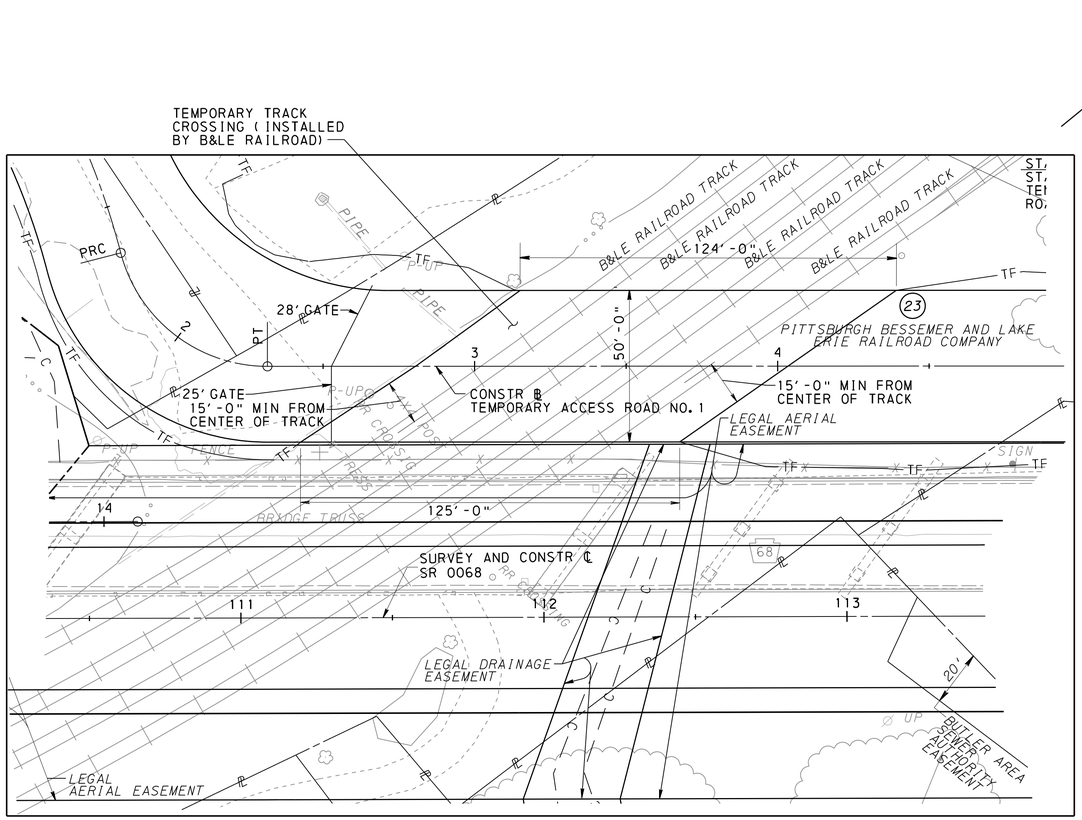
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	12 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

NOTES:

1. CONTRACTOR TO NOTIFY G&W PUBLIC PROJECTS DEPARTMENT 30 DAYS PRIOR TO STARTING CONSTRUCTION.
2. G&W FLAGGING SERVICES WILL BE REQUIRED FOR ALL WORK WITHIN G&W RIGHT-OF-WAY OR ANY WORK THAT HAS A POTENTIAL TO FOUL.
3. THE CONTRACTOR MUST NOT USE THE RAILROAD RIGHT OF WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE RAILROAD RIGHT OF WAY MUST REMAIN CLEAR AT ALL TIMES. THE CONTRACTOR MUST PLAN AND PERFORM THE WORK IN A MANNER SUCH THAT THE RAILROAD TRACKS AT THE PROJECT LOCATION REMAIN FULLY CAPABLE OF OPERATING RAIL TRAFFIC THROUGHOUT THE WORK PERIOD AND RAIL TRAFFIC IS NOT DELAYED OR OTHERWISE IMPACTED DUE TO THE WORK BEING PERFORMED.
4. ALL WORK PERFORMED ON, ABOVE OR ADJACENT TO RAILROAD PROPERTY SHALL BE IN ACCORDANCE WITH TO THE PUBLIC PROJECT MANUAL, CURRENT EDITION. WORK PLANS SHALL BE SUBMITTED FOR REVIEW TO THE RAILROAD FOR ACCESS, SOIL AND WATER MANAGEMENT, BALLAST PROTECTION, EXCAVATION, DEMOLITION, HOISTING, BEAM ERECTION, AND ALL OTHER WORK THAT PRESENTS THE POTENTIAL TO AFFECT RAILROAD PROPERTY OR OPERATIONS. ALL WORK PLANS SHALL BE PREPARED AND SUBMITTED TO THE RAILROAD IN ADHERENCE WITH THE PUBLIC PROJECT MANUAL, SECTION 1.11 CONSTRUCTION SUBMISSION CRITERIA.



RAILROAD CROSSING DETAIL – PARCEL 23

SCALE
0 25 50 FEET

RAILROAD CROSSING DETAIL AND GENERAL NOTES

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE073152

DES: TJM	DWG: BSP	CKD: JMB

5/25/2023 10:53:29 AM

SR_0068_RR_Crossing_Detail.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	13 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

5/25/2023 10:53:39 AM

CURVE DATA SR 0068
PI STA 105+96.86
Δ=26°37'03" RT
D=4°48'53"
T=281.49'
L=552.83'
R=1190.00'
E=32.84'
SE=5.0%
PC STA 103+15.36
PT STA 108+68.19

CURVE DATA
DELWOOD ROAD
PI STA 32+55.52
Δ=68°42'40" LT
D=88°08'50"
T=44.43'
L=77.95'
R=65.00'
E=13.74'
SE=2.0%
PC STA 32+11.09
PT STA 32+89.04

PCC, +64.71
18.32' RT
ELEV 1045.41

POT, +50.00
15.54' RT
ELEV 1044.15

PCC, +39.38
37.96' RT
ELEV 1052.27

PCC, +72.00
14.81' LT
ELEV 1045.83

POT, +50.00
14.01' LT
ELEV 1044.08

PT, +80.04
49.83' RT
ELEV 1055.31

PC, +89.10
48.98' RT
ELEV 1055.66

PCC, +77.20
29.50' LT
ELEV 1053.61

PT, +43.52
23.49' LT
ELEV 1056.02

PT, +66.35
23.50' LT
ELEV 1055.17

S07°01'06"W

S61°41'34"E

86°40'27"

SURVEY AND CONSTR ℄ DELWOOD ROAD

SURVEY AND CONSTR ℄ SR 0068

SR 0068
(EAST JEFFERSON ST)

TYPE 31-S GUIDE RAIL

TYPE 31-SC GUIDE RAIL

ASPHALT WEDGE CURB

8' SHOULDER

8' SHOULDER

8'

23.5'

23.5'

22.0'

8'

R=500'

R=60'

R=15'

R=30'

R=96'

R=100'

R=17'

R=15'

R=30'

R=1160'

R=1222'

1.35%
+50.00

2.00%
+50.00

2.00%
+50.00

2.00%
+50.00

5.00%
+75.00

5.00%
+75.00

5.00%
+75.00

5.00%
+90.00

5.00%
+90.00

5.00%
+90.00

1046

1048

1050

1052

1054

1056

32

33

PC

PT

106

107

108

SCALE
0 10 20 FEET

DES: TJM | DWG: BSP | CKD: JMB

DELWOOD ROAD INTERSECTION DETAIL

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

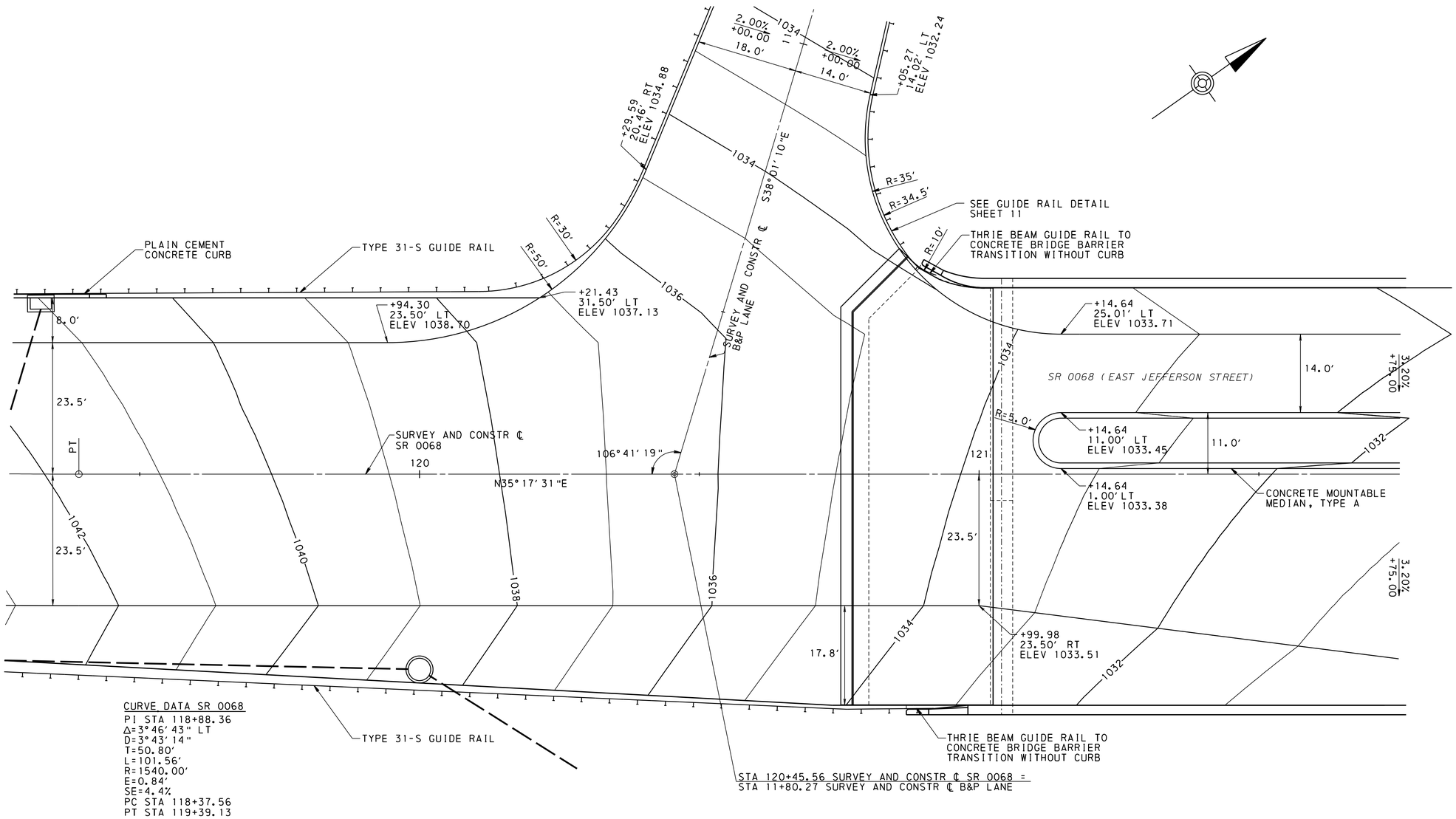
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073521

Karns_Crossing_Int_01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	14 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



CURVE DATA SR 0068
PI STA 118+88.36
Δ=3° 46' 43" LT
D=3° 43' 14"
T=50.80'
L=101.56'
R=1540.00'
E=0.84'
SE=4.4%
PC STA 118+37.56
PT STA 119+39.13

STA 120+45.56 SURVEY AND CONSTR ℄ SR 0068 =
STA 11+80.27 SURVEY AND CONSTR ℄ B&P LANE

SCALE
0 10 20 FEET

DES: TJM | DWG: BSP | CKD: JMB

B&P DRIVEWAY INTERSECTION DETAIL

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

5/25/2023 10:53:49 AM

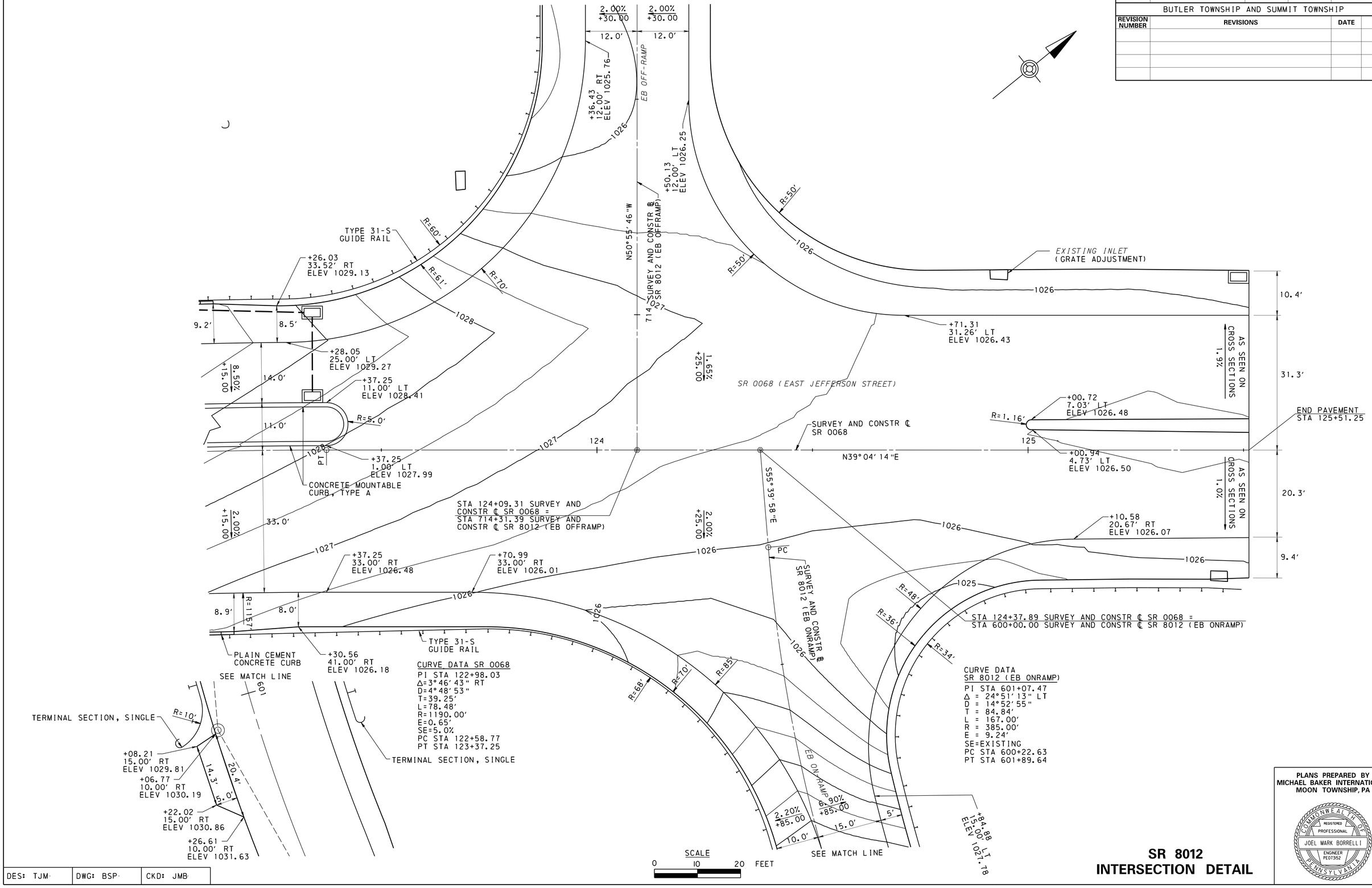
Karns_Crossing_Int_02.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	15 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

5/25/2023 10:53:58 AM



SR 8012
INTERSECTION DETAIL

DES: TJM | DWG: BSP | CKD: JMB

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

Karns_Crossing_Int_03.dgn

TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING, PAVEMENT MARKINGPLAN
TSP - TRAFFIC SIGNAL PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - STRUCTURE PLAN, S-39526
STR2 - STRUCTURE PLAN, S-40431
STR3 - STRUCTURE PLAN, S-39527

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	16 OF 76

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
X	0201 0001 / LS	CLEARING AND GRUBBING		NO TAB
X	0202 0001 / LS	DEMOLITION		20-28
X	0202 0002 / LS	DEMOLITION		20-28
94788	0203 0001 / CY	CLASS 1 EXCAVATION		20-28, 47-60, 61
3092	0204 0001 / CY	CLASS 2 EXCAVATION		31-44, 47-60, 61, 62
24220	0205 0100 / CY	FOREIGN BORROW EXCAVATION		20-28
5723	4205 0200 / CY	SELECTED BORROW EXCAVATION, 206 ROCK ♦		20-28
32894	0205 0263 / CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-3		20-28
340	0205 0281 / CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1		47-60, STR2, STR1
95	0205 0290 / CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A		31-44
1304	0205 0363 / TON	SELECTED BORROW EXCAVATION ROCK, CLASS R-3		STR2, STR1
869	0205 0366 / TON	SELECTED BORROW EXCAVATION ROCK, CLASS R-6		STR1
1807	0205 0368 / TON	SELECTED BORROW EXCAVATION ROCK, CLASS R-8		STR2
60	0208 0001 / HOUR	SPECIAL ROLLING		20-28
2183	0212 0001 / LF	GEOTEXTILE, CLASS 1		20-28, 45-46
17668	0212 0014 / SY	GEOTEXTILE, CLASS 4, TYPE A		20-28, 47-60, 61
4579	0212 0016 / SY	GEOTEXTILE, CLASS 4, TYPE C		20-28
25000	0213 0002 / DOLLA	TEMPORARY PROJECT AIR POLLUTION CONTROL		NO TAB
63	0220 0020 / CY	FLOWABLE BACKFILL, TYPE C		31-44, STR2
8686	0313 0329 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 7 1/2" DEPTH		20-28
6619	0313 0424 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 5" DEPTH		20-28
3210	0350 0104 / SY	SUBBASE 4" DEPTH (NO. 2A)		20-28
15623	0350 0108 / SY	SUBBASE 8" DEPTH (NO. 2A)		20-28
458	0350 0121 / TON	SUBBASE (NO. 2A)		20-28
3210	0360 0001 / SY	ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH		20-28
7500	0405 0001 / DOLLA	ASPHALT PAVEMENT LONGITUDINAL JOINT DENSITY INCENTIVE/DISINCENTIVE		20-28
17378	0413 0245 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H		20-28
119	0413 2074 / TON	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L		20-28
8686	0413 6045 / SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		20-28
30000	0413 9999 / DOLLA	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE		20-28
2594	0460 0004 / GAL	ASPHALT TACK COAT (NTT/CNTT)		20-28
736	4461 0001 / SY	ASPHALT PRIME COAT, CRS-2PM ♦		20-28
2073	0466 0001 / SY	ASPHALT PAVING FABRIC		20-28
2073	0491 0019 / SY	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		20-28
52	0501 0020 / SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		20-28
3210	0501 0030 / SY	PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH		20-28
1991	0526 0010 / SY	RUBBLIZE AND SEAT CONCRETE PAVEMENT, TYPE 2		20-28
75	0601 0313 / LF	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		61
37	0601 0313 / LF	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	1	31-44
37	0601 7313 / LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	1	31-44
37	0601 9363 / LF	18" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	1	31-44
25	0601 0315 / LF	24" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	2	31-44
25	0601 7326 / LF	24" REINFORCED CONCRETE PIPE, TYPE B, 10' - 2' FILL	2	31-44
25	0601 9365 / LF	24" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE	2	31-44
197	0601 0415 / LF	24" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL, SHORE/TRENCH BOX	3	31-44
AND 2	0616 1254 / EACH	THERMOPLASTIC END SECTION FOR 24" PIPE	3	31-44
197	0601 4365 / LF	24" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 16 GAGE, SHORE/TRENCH BOX	3	31-44
AND 2	0616 0011 / EACH	STEEL END SECTION, METALLIC COATED, 16 GAGE FOR 24" PIPE	3	31-44
OR 197	4601 7327 / LF	24" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL, INCLUDES SHORE/TRENCH BOX ♦	3	31-44
AND 2	0616 1204 / EACH	CONCRETE END SECTIONS FOR 24" PIPE	3	31-44
EITHER 243	0601 0419 / LF	36" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL, SHORE/TRENCH BOX	4	31-44
OR 243	4601 7357 / LF	36" REINFORCED CONCRETE PIPE, TYPE B, 25' - 1.5' FILL, INCLUDES SHORE/TRENCH BOX ♦	4	31-44
EITHER 43	0601 0420 / LF	42" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL, SHORE/TRENCH BOX	5	31-44
OR 43	0601 7742 / LF	42" REINFORCED CONCRETE PIPE, TYPE B, 15' - 2' FILL, SHORE/TRENCH BOX	5	31-44
EITHER 1686	0601 0550 / LF	18" THERMOPLASTIC PIPE, GROUP VII, 12'-2' FILL, 100 YEAR DESIGN LIFE	6	31-44
OR 1686	0601 0773 / LF	18" DUCTILE IRON PIPE, 100 YEAR DESIGN LIFE	6	31-44
OR 1686	0601 7014 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	6	31-44
EITHER 71	0601 0551 / LF	24" THERMOPLASTIC PIPE, GROUP VII, 12'-2' FILL, 100 YEAR DESIGN LIFE	7	31-44
OR 71	0601 7028 / LF	24" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	7	31-44
OR 71	0601 9445 / LF	24" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 12 GAGE, 100 YEAR DESIGN LIFE	7	31-44
42	0601 0760 / LF	12" DUCTILE IRON PIPE		31-44
302	4601 0763 / LF	18" DUCTILE IRON PIPE, INCLUDES REMOVAL ♦		31-44
192	4601 0765 / LF	24" DUCTILE IRON PIPE, INCLUDES REMOVAL ♦		31-44
EITHER 10	0601 0779 / LF	48" DUCTILE IRON PIPE, 100 YEAR DESIGN LIFE	8	31-44
OR 10	0601 7072 / LF	48" REINFORCED CONCRETE PIPE, TYPE A, 10' - 2' FILL, 100 YEAR DESIGN LIFE	8	31-44
EITHER 51	0601 2843 / LF	18" CORRUGATED ALUMINUM ALLOY PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 14 GAGE	9	31-44
OR 51	0601 9393 / LF	18" CORRUGATED ALUMINIZED STEEL PIPE, TYPE I, (2 2/3" X 1/2" CORRUGATIONS), 14 GAGE	9	31-44
856	0601 5901 / LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"		31-44
118	0601 5902 / LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36"		31-44
60	4601 7325 / LF	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL ♦		31-44
8	0601 7508 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE		31-44
EITHER 763	0604 4014 / LF	18" PERFORATED REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	10	31-44
OR 763	0604 7014 / LF	18" REINFORCED CONCRETE PIPE, TYPE A, (OPEN JOINT), 15' - 2' FILL, 100 YEAR DESIGN LIFE	10	31-44
15	0605 1300 / EACH	CLEANING DRAINAGE STRUCTURES		31-44
10	0605 2401 / SET	MANHOLE FRAME AND COVER		31-44
1	4605 2670 / EACH	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX ♦		31-44
1	0605 2678 / EACH	TYPE D-W ENDWALL FOR 48" PIPE		31-44
1	4605 2678 / EACH	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK ♦		31-44
17	0605 2731 / SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		31-44
5	0605 2741 / SET	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		31-44
26	0605 2850 / EACH	STANDARD INLET BOX, HEIGHT < /= 10'		31-44
1	0605 2851 / EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20'		31-44
1	0605 2854 / EACH	TYPE 4 INLET BOX, HEIGHT < /= 10'		31-44
3	0605 3011 / EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		31-44
3	0605 3012 / EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'		31-44
1	0605 3041 / EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		31-44
2	0605 3042 / EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'		31-44
1	0605 3052 / EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'		31-44
6	0605 5701 / SET	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE		31-44
2	0606 0050 / SET	GRADE ADJUSTMENT OF EXISTING INLETS		31-44
1	0606 0150 / SET	GRADE ADJUSTMENT OF EXISTING MANHOLES		31-44
3	0607 0013 / VF	REBUILT INLET BOX		31-44
1	0607 0200 / VF	REBUILT MANHOLE		31-44

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JOEL MARK BORRELLI
PE073102

PROJECT ID: 4712
MPMS: 86105
ECMS: 86105
5/24/2023 8:37:55 PM

TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING, PAVEMENT MARKINGPLAN
TSP - TRAFFIC SIGNAL PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - STRUCTURE PLAN, S-39526
STR2 - STRUCTURE PLAN, S-40431
STR3 - STRUCTURE PLAN, S-39527

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	17 OF 76

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
3	4607 0200 / VF	REBUILT MANHOLE, FOR PIPE REMOVAL ♦		31-44
	0608 0001 / LS	MOBILIZATION		NO TAB
	0609 0002 / LS	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE A		NO TAB
	0609 0009 / LS	EQUIPMENT PACKAGE ♦		NO TAB
113	0610 0002 / LF	6" PIPE UNDERDRAIN TYPE I BACKFILL		61
2183	0610 7003 / LF	8" PAVEMENT BASE DRAIN		45-46
197	0615 0023 / LF	8" SUBSURFACE DRAIN OUTLETS		45-46, 61
4	0615 0040 / EACH	SUBSURFACE DRAIN OUTLET ENDWALL		45-46
4	0615 0066 / EACH	66" RED SUBSURFACE DRAIN OUTLET MARKER		45-46
1	0619 0459 / EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)		29-30
5	0620 0400 / EACH	TERMINAL SECTION, SINGLE		29-30
2994	0620 0503 / LF	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)		29-30
1	0620 0872 / EACH	BURIED-IN-BACKSLOPE TERMINAL, SINGLE PANEL		29-30
1525	0620 1600 / LF	TYPE 31-S GUIDE RAIL		29-30
675	0620 1625 / LF	TYPE 31-SC GUIDE RAIL		29-30
1	0620 1650 / EACH	TYPE 31-STRONG POST END TREATMENT		29-30
1	0620 1660 / EACH	TYPE 31-STRONG POST ANCHOR TERMINAL		29-30
12	0620 1670 / EACH	TYPE 31-STRONG POST IN-LINE ANCHOR		29-30
4	0620 2010 / EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB		29-30
5	0620 2011 / EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET		29-30
400	0623 0052 / LF	SINGLE FACE CONCRETE BARRIER		29-30
1	0623 0122 / EACH	END TRANSITION, SINGLE FACE CONCRETE BARRIER		29-30
2375	0627 3020 / LF	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'		TCP
1612	0628 3020 / LF	RESET TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'		TCP
83	0630 0041 / LF	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		20-28
126	0633 0200 / LF	PLAIN CONCRETE MOUNTABLE CURB, TYPE A		20-28
445	0633 0225 / LF	PLAIN CONCRETE MOUNTABLE CURB, TYPE B		20-28
1113	0643 0001 / LF	TEMPORARY CONCRETE BARRIER, STRUCTURE MOUNTED		TCP
1096	0644 0001 / LF	TEMPORARY CONCRETE BARRIER, STRUCTURE MOUNTED, RESET		TCP
	0686 0010 / LS	CONSTRUCTION SURVEYING, TYPE A		NO TAB
	0686 0050 / LS	CONSTRUCTION SURVEYING, TYPE D		NO TAB
	0689 0005 / LS	CPM SCHEDULE, WITH UPDATES		NO TAB
10000	0690 0001 / DOLLA	INTERNAL FACILITATION		NO TAB
7	0696 0610 / EACH	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 3		TCP
11	0697 0610 / EACH	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 3		TCP
2346	0703 0020 / CY	NO. 1 COARSE AGGREGATE		20-28
7	0703 0025 / CY	NO. 57 COARSE AGGREGATE		47-60, 61
84	0703 0026 / CY	NO. 3 COARSE AGGREGATE		61
1451	0802 0001 / CY	TOPSOIL FURNISHED AND PLACED		47-60, 62
527	0804 0001 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH		47-60
1929	0804 0003 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH		47-60, 61
483	0804 0004 / LB	SEEDING - FORMULA E, INCLUDING MULCH		47-60
635	0804 0005 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH		47-60
50	0804 0007 / LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH		47-60
1	0805 0022 / TON	MULCHING - STRAW		62
841	4806 0113 / SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D ♦		61, 62
34914	4806 0121 / SY	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING ♦		47-60, 61
1066	0806 0140 / SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A		47-60
3	4808 0100 / EACH	TREE, SWAMP WHITE OAK (1 1/2" CAL., B&B) ♦		62
36	4808 0120 / EACH	SHRUB, HAZEL ALDER (2' HT, #3 CONT.) ♦		62
36	4808 0121 / EACH	SHRUB, SILKY DOGWOOD (2' HT, #3 CONT.) ♦		62
213	4808 0140 / EACH	LIVE STAKES (SILKY DOGWOOD) ♦		62
213	4808 0141 / EACH	LIVE STAKES (BLACK WILLOW) ♦		62
290	0808 7131 / EACH	TUSSOCK SEDGE (PLUG)		61
290	0808 7170 / EACH	SOFT RUSH (PLUG)		61
290	0808 7210 / EACH	SOFT STEM BULRUSH (PLUG)		61
6	0810 0052 / EACH	SELECTIVE TREE REMOVAL		20-28
1112	0811 0003 / LF	TEMPORARY PROTECTIVE FENCE		47-60
25000	0845 0001 / DOLLA	UNFORESEEN WATER POLLUTION CONTROL		NO TAB
11	0849 0020 / EACH	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		47-60
130	0850 0021 / SY	ROCK, CLASS R-3		20-28
259	0850 0024 / SY	ROCK, CLASS R-6		20-28
9	0850 0031 / CY	ROCK, CLASS R-3		47-60
2204	0850 0032 / CY	ROCK, CLASS R-4		47-60, 61
41	0850 0033 / CY	ROCK, CLASS R-5		47-60
200	4850 0033 / CY	ROCK, CLASS R-5, GROUTED ♦		47-60
307	0851 0003 / SY	ROCK APRON		47-60
2	0851 0005 / EACH	TEMPORARY INSTALLATIONS		47-60
1	4854 0002 / EACH	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 ♦		31-44
11	0855 0003 / EACH	PUMPED WATER FILTER BAG		47-60
11	0855 0004 / EACH	REPLACEMENT PUMPED WATER FILTER BAG		47-60
8	0856 0001 / EACH	REMOVAL SEDIMENT AND ROCK BARRIER		47-60
26	0860 0000 / EACH	INLET FILTER BAG FOR TYPE M INLET		47-60
6	0860 0001 / EACH	INLET FILTER BAG FOR TYPE S INLET		47-60
5	0860 0002 / EACH	INLET FILTER BAG FOR TYPE C INLET		47-60
1469	0867 0012 / LF	COMPOST FILTER SOCK, 12" DIAMETER		47-60
4583	0867 0018 / LF	COMPOST FILTER SOCK, 18" DIAMETER		47-60
869	0867 0022 / LF	COMPOST FILTER SOCK, 24" DIAMETER		47-60
1352	0867 0032 / LF	COMPOST FILTER SOCK, 32" DIAMETER		47-60
	0901 0001 / LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION ♦		TCP
2	0901 0120 / EACH	SPEED DISPLAY SIGN		TCP
430	0901 0231 / DAY	ADDITIONAL WARNING LIGHTS, TYPE B		TCP
5624	0901 0232 / DAY	ADDITIONAL WARNING LIGHTS, TYPE C		TCP
100	0901 0240 / SF	ADDITIONAL TRAFFIC CONTROL SIGNS		TCP
10973	0901 0320 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		TCP
9779	0901 0330 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
220	0901 0334 / LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
4	0901 0460 / EACH	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS		TCP
1	0910 0002 / EACH	JUNCTION BOXES J.B.-2		TSP
230	0931 0003 / SF	POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST		S & PMP, TSP
3	0933 0001 / SF	POST MOUNTED SIGNS, TYPE D		S & PMP
92	0935 0001 / SF	POST MOUNTED SIGNS, TYPE F		S & PMP, TSP
46	0936 0200 / SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS		TSP

COMMONWEALTH OF PENNSYLVANIA
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PE073102

TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING, PAVEMENT MARKINGPLAN
TSP - TRAFFIC SIGNAL PLAN
♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - STRUCTURE PLAN, S-39526
STR2 - STRUCTURE PLAN, S-40431
STR3 - STRUCTURE PLAN, S-39527

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	18 OF 76

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
23	0937 0105 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (Y/Y)		S & PMP
36	0937 0107 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/W)		S & PMP
8	0937 0202 / EACH	BARRIER MOUNTED DELINEATOR, SIDE-MOUNT TYPE O, (Y/B)		S & PMP
8	0937 0212 / EACH	BARRIER MOUNTED DELINEATOR, TOP-MOUNT TYPE S, (Y/Y)		S & PMP
26	0937 0219 / EACH	BARRIER MOUNTED DELINEATOR, SIDE-MOUNT TYPE O, (W/W)		S & PMP
26	0937 0232 / EACH	BARRIER MOUNTED DELINEATOR, TOP-MOUNT TYPE S, (W/W)		S & PMP
24	0937 0323 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-1, RED POST WITH WHITE SHEETING		S & PMP
7	0937 0332 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-2, WHITE POST WITH WHITE/WHITE SHEETING		S & PMP
1	0937 0334 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-2, YELLOW POST WITH YELLOW/YELLOW SHEETING		S & PMP
10	4937 0334 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-2, YELLOW POST WITH YELLOW/YELLOW SHEETING, 8" STEEL ANCHOR ♦		S & PMP
3	0937 0335 / EACH	FLEXIBLE DELINEATOR POST, GROUND-MOUNT TYPE GM-2, YELLOW POST WITH YELLOW/RED SHEETING		S & PMP
1	0940 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE A		S & PMP
2	0941 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE B		S & PMP , TCP
1	0945 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE F		S & PMP
1	0951 0135 / EACH	TRAFFIC SIGNAL SUPPORT, 35' MAST ARM		TSP
1	0951 0140 / EACH	TRAFFIC SIGNAL SUPPORT, 40' MAST ARM		TSP
1	0951 0145 / EACH	TRAFFIC SIGNAL SUPPORT, 45' MAST ARM		TSP
1	0952 1040 / EACH	NEMA TS-2; TYPE 2 CONTROLLER ASSEMBLY, TYPE 1 MOUNTING		TSP
101	0954 0012 / LF	2 INCH CONDUIT		TSP
600	0954 0013 / LF	3 INCH CONDUIT		TSP
136	0954 0151 / LF	TRENCH AND BACKFILL, TYPE I		TSP
236	0954 0153 / LF	TRENCH AND BACKFILL, TYPE III		TSP
1948	0954 0202 / LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR		TSP
242	0954 0203 / LF	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR		TSP
5	0954 0302 / EACH	JUNCTION BOX, JB-27		TSP
1	4954 0402 / EACH	ELECTRICAL SERVICE, TYPE B, REROUTE ♦		TSP
1	0954 0600 / EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS)		TSP
7	0955 3208 / EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS		TSP
1	0955 3209 / EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS		TSP
11	4955 5000 / EACH	BACKPLATE RETROFIT, REMOVE EXISTING BACKPLATE ♦		TCP
2	4956 0771 / EACH	RADAR DETECTION SYSTEM, EXTENDED RANGE, TEMPORARY OR FINAL ♦		TCP , TSP
1	0956 0802 / EACH	ACOUSTIC PREEMPTION SYSTEM		TSP
1	0958 0021 / EACH	TEMPORARY TRAFFIC CONTROL SIGNALS ON FIXED SUPPORTS (3 APPROACHES)		TCP
1	0958 0201 / EACH	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (3 APPROACHES)		TCP
1	0958 0202 / EACH	TEMPORARY TRAFFIC CONTROL SIGNAL ON FIXED SUPPORTS, RESET (3 APPROACHES)		TCP
5	0960 0222 / EACH	WHITE HOT THERMOPLASTIC LEGEND, "RIGHT ARROW", 12' - 0" X 3' - 0"		S & PMP
8	0960 0224 / EACH	WHITE HOT THERMOPLASTIC LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"		S & PMP
12120	0962 1000 / LF	4" WHITE WATERBORNE PAVEMENT MARKINGS		S & PMP
1966	0962 1001 / LF	6" WHITE WATERBORNE PAVEMENT MARKINGS		S & PMP
336	0962 1004 / LF	24" WHITE WATERBORNE PAVEMENT MARKINGS		S & PMP
19458	0962 1005 / LF	4" YELLOW WATERBORNE PAVEMENT MARKINGS		S & PMP
860	0962 1009 / LF	24" YELLOW WATERBORNE PAVEMENT MARKINGS		S & PMP
1769	0963 0001 / SF	PAVEMENT MARKING REMOVAL		TCP
218	0964 0001 / LF	4" WHITE EPOXY PAVEMENT MARKINGS		S & PMP
765	0964 0002 / LF	4" YELLOW EPOXY PAVEMENT MARKINGS		S & PMP
17	0964 0021 / LF	24" WHITE EPOXY PAVEMENT MARKINGS		S & PMP
133	0964 0022 / LF	24" YELLOW EPOXY PAVEMENT MARKINGS		S & PMP
104	0966 0011 / EACH	SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/Y)		TCP
44	0966 0014 / EACH	SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/R)		S & PMP
21	0966 0018 / EACH	SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (W/B)		S & PMP
7	1001 1120 / CY	CLASS A CEMENT CONCRETE		31-44
1821	1006 1010 / LF	42" DIAMETER DRILLED CAISSONS, SHAFT SECTION IN SOIL		STR3
820	1006 1095 / LF	36" DIAMETER DRILLED CAISSONS, ROCK SOCKET		STR3
	5018 0048 / LS	REMOVAL OF PORTION OF EXISTING BRIDGE, S-39526 ♦		STR1
	5018 0070 / LS	REMOVAL OF PORTION OF EXISTING CULVERT, S-39527 ♦		STR2
8000	1999 9999 / HOUR	TRAINEES		NO TAB
EITHER	8030 0001 / LS	BRIDGE STRUCTURE, AS DESIGN, S-39527 ♦	11	STR2
AND 184258	1002 0052 / LB	REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 8	1002 0138 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 4 REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 510	1002 0140 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 52	1002 0146 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 7 REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 22	1002 0147 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 8 REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 28	1002 0156 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 9 REINFORCEMENT BARS, EPOXY COATED	11	STR2
AND 1044	5005 2850 / LF	STEEL HP14X117 PRODUCTION PILE, GALVANIZED ♦	11	STR2
AND 929	5005 1410 / LF	MANDATORY PREDRILLING FOR DRIVEN PILES ADD NO. 8 COARSE AGGREGATE ♦	11	STR2
AND 24	1005 1950 / EACH	STEEL HP14X117 PILE TIP REINFORCEMENT (NORMAL DUTY)	11	STR2
OR	8000 0002 / LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	11	STR2
OR	8100 0002 / LS	STEEL BRIDGE STRUCTURE ♦	11	STR2
EITHER	8120 0001 / LS	BRIDGE STRUCTURE, AS DESIGNED, S-39526 ♦	5	STR1
AND 1207256	1002 0052 / LB	REINFORCEMENT BARS, EPOXY COATED	5	STR1
AND 76	1002 0151 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 4 REINFORCEMENT BARS, EPOXY COATED	5	STR1
AND 54	1002 0152 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEMENT BARS, EPOXY COATED	5	STR1
AND 59	1002 0153 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 6 REINFORCEMENT BARS, EPOXY COATED	5	STR1
AND 496	1002 0154 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 7 REINFORCEMENT BARS, EPOXY COATED	5	STR1
AND 7802	1005 1410 / LF	MANDATORY PREDRILLING FOR DRIVEN PILES ADD NO. 8 COARSE AGGREGATE ♦	5	STR1
AND 275	1005 1950 / EACH	STEEL HP14X117 PILE TIP REINFORCEMENT (NORMAL DUTY)	5	STR1
AND 10961	1005 2850 / LF	STEEL HP14X117 PRODUCTION PILE, GALVANIZED	5	STR1
AND 2	9005 1950 / EACH	INSPECT SPLICED STEEL BEAM TEST PILES, HP14X117 ♦	5	STR1
AND 45000	9000 3001 / DOLLA	EXISTING PILE EXTRACTION ♦	5	STR1
OR	8000 0001 / LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	5	STR1
OR	8100 0001 / LS	STEEL BRIDGE STRUCTURE ♦	5	STR1
EITHER	8600 0001 / LS	SOLDIER PILE RETAINING WALL, AS DESIGNED, S-40431 ♦	10	STR3
AND 29053	1002 0052 / LB	REINFORCEMENT BARS, EPOXY COATED	10	STR3
5000	9000 0001 / DOLLA	OFF-DUTY UNIFORMED POLICE OFFICER ♦		TCP
50000	9000 0003 / DOLLA	REPAIR OF DETOUR ROUTES ♦		TCP
2	9000 0005 / EACH	TEMPORARY INLET CAP ♦		TCP
4	9000 0024 / EACH	VEHICULAR SWING GATE ♦		20-28
	9000 0025 / LS	REMOVE AND RESET WOOD FENCE ♦		20-28
16	9000 0026 / LF	REMOVE AND RESET IRON FENCE ♦		20-28
	9000 0027 / LS	RECLAMATION OF SR 0068 TEMPORARY ROAD ♦		20-28
	9000 0100 / LS	60 INCH STEEL JACK AND BORE PIPE ♦		31-44
	9000 0107 / LS	VIBRATION MONITORING AND CONTROL ♦		STR2
1500	9000 0108 / CY	DISPOSAL OF EXCAVATED BEDROCK MATERIAL ♦		20-28

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TCP - TRAFFIC CONTROL PLAN
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SUMMARY

STR1 - STRUCTURE PLAN, S-39526
STR2 - STRUCTURE PLAN, S-40431
STR3 - STRUCTURE PLAN, S-39527

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
458	9000 0200 / SY	TEMPORARY WETLAND PROTECTION MATTING ♦		47-60
	9000 0201 / LS	TEMPORARY PIPE BYPASS SYSTEM ♦		47-60
	9000 0202 / LS	TEMPORARY CHANNEL DIVERSION ♦		47-60
	9000 0204 / LS	TEMPORARY PUMP BYPASS SYSTEM ♦		47-60
190	9000 0206 / LF	COMPOST SOCK SEDIMENT TRAP ♦		47-60
4	9000 0207 / CY	COMPOST (NETTED OR OTHERWISE SECURED) ♦		47-60
	9000 0300 / LS	WASTE MANAGEMENT MOBILIZATION AND DEMOBILIZATION ♦		20-28
16	9000 0301 / EACH	SOLIDS SAMPLING FOR CHARACTERIZATION ♦		20-28
5	9000 0302 / EACH	SOLIDS SAMPLING FOR WASTE DISPOSAL ♦		20-28
100	9000 0303 / EACH	LIQUIDS SAMPLING ♦		20-28
1000	9000 0304 / TON	DISPOSAL OF NON-HAZARDOUS WASTE ♦		20-28
12419614	9000 0306 / GAL	MANAGEMENT OF CONTAMINATED DEWATERING LIQUIDS ♦		20-28
2	9000 0307 / EACH	MONITORING WELL ABANDONMENT ♦		20-28
3	9000 0308 / LB	SEEDING AND SOIL SUPPLEMENTS - RIPARIAN BUFFER SEED MIXTURE ♦		62
53	9000 0309 / CY	FURNISHED AND PLACED STREAMBED MATERIAL ♦		62
157	9000 0310 / CY	CHANNEL BED MATERIAL ♦		62
800	9000 0311 / LF	VEGETATED ROCK ♦		62
208	9000 0312 / CY	IMPERVIOUS LINER ♦		61, 62
418	9000 0313 / LF	8" PERFORATED PIPE WITH TYPE 2 BACKFILL ♦		61
370	9000 0314 / CY	BASIN SOIL MIX ♦		61
2	9000 0315 / EACH	OUTLET STRUCTURE ♦		61
49	9000 0316 / CY	RECOVER AND STOCKPILE EXISTING CHANNEL BED SUBSTRATE ♦		62
300	9000 0317 / LF	24" TEMPORARY PIPE ♦		31-44
65	9000 0318 / LF	12" DIAMETER PIPE ♦		31-44
458	9000 0319 / EACH	TEMPORARY PIPE CAP ♦		31-44
2	9000 0320 / EACH	INFILTRATION TESTING ♦		61
	9000 0400 / LS	BASA SEWER RELOCATION ♦		20-28
	9000 0401 / LS	PENNSYLVANIA AMERICAN WATER RELOCATION ♦		20-28
	9000 0402 / LS	INCIDENT MANAGEMENT PLAN IMPLEMENTATION ♦		20-28
50	9000 0403 / CY	TEST PIT FOR UNDERGROUND UTILITIES ♦		20-28
	9000 0406 / LS	G&W - B&P RR RAILROAD WATER SERVICE RELOCATION ♦		20-28
- - -	9000 0407 / PDA	G&W - B&P RAILROAD ELECTRICAL RELOCATION ♦		20-28
	9000 5100 / LS	ELECTRONIC TICKETING SYSTEM ♦		NO TAB
	9203 0101 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 ABUTMENT 1 ♦		STR1
	9203 0102 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 PIER 1 ♦		STR1
	9203 0103 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 PIER 2 ♦		STR1
	9203 0104 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 ABUTMENT 2 ♦		STR1
	9203 0105 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39527 ♦		STR2
	9203 0106 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S39527 ABUTMENT 1 ♦		STR2
	9203 0107 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE ♦		31-44
	9203 0108 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR SLOPE ♦		20-28
	9203 0109 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR PHASING ♦		20-28
	9203 0110 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39527 ABUTMENT 2 ♦		STR2
	9203 0111 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, EXISTING PIER ♦		STR1
1	9206 0002 / SET	SETTLEMENT MONITORING ♦		20-28
8	9206 0003 / EACH	SETTLEMENT PLATES ♦		20-28
140	9610 7002 / LF	6" FILL BENCH DRAIN ♦		20-28
	9696 0610 / LS	REPAIR TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 3 ♦		TCP
221	9901 0403 / LF	TEMPORARY LANE SEPARATOR CURB ♦		TCP

COMMONWEALTH OF PENNSYLVANIA
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TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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DEMOLITION 0202 0001 LS	DEMOLITION 0202 0002 LS	CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	SELECTED BORROW EXCAVATION, 206 ROCK 4205 0200 CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-3 0205 0263 CY	SPECIAL ROLLING 0208 0001 HOUR	GEOTEXTILE, CLASS 1 0212 0001 LF	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE C 0212 0016 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 7 1/2" DEPTH 0313 0329 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 5" DEPTH 0313 0424 SY	SUBBASE 4" DEPTH (NO. 2A) 0350 0104 SY	SUBBASE 8" DEPTH (NO. 2A) 0350 0108 SY	SUBBASE (NO. 2A) 0350 0121 TON	ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH 0360 0001 SY	ASPHALT PAVEMENT LONGITUDINAL JOINT DENSITY INCENTIVE/DISINCENTIVE 0405 0001 DOLLA	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H 0413 0245 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L 0413 2074 TON	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH 0413 6045 SY	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE 0413 9999 DOLLA	ASPHALT TACK COAT (NTT/CNTT) 0460 0004 GAL	ASPHALT PRIME COAT, CRS-2PM 4461 0001 SY	ASPHALT PAVING FABRIC 0466 0001 SY	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR 0491 0019 SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH 0501 0020 SY	PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH 0501 0030 SY	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
																											SR 0068		
						60				67						7500	67		67	30000							ENTIRE PROJECT		96+00.00 to 125+15.00
																	2073	119				291		2073	2073			MILL AND OVERYLAY (ASSUME 3" DEPTH)		96+00.00 to 101+00.00
																												RECLAMATION OF SR 0068 TEMPORARY ROAD	LT	99+00.00 to 106+50.00
		4231								5100				5100			5100		5100			1071						ASPHALT FULL DEPTH RECONSTRUCTION		101+00.00 to 109+16.54
		2507		2507				2006	2006																			SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	101+00.00 to 125+51.25
																												TREE REMOVAL	LT	103+82.00
																												TREE REMOVAL - 12" PINE	LT	104+96.00
X																												D1 - PLANTER	LT	105+03.10
																												TREE REMOVAL - 24" OAK	LT	105+12.00
																												PARCEL 4 IRON FENCE	LT	105+31.00 to 105+40.00
																												TREE REMOVAL - 19" OAK	LT	105+32.00
																												PARCEL 4 WOODEN FENCE	LT	105+40.00 to 105+82.00
																												TREE REMOVAL - BUSH	LT	105+46.00
																												TREE REMOVAL - 5" PEAR	LT	105+59.00
	X																											D2 - BILLBOARD SIGN	LT	105+90.00 to 106+08.00
																												RUBBLIZING OF EXISTING PAVEMENT	LT / RT	106+00.00 to 110+06.63
																												TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM FOR PHASING	CL	106+66.11 to 119+82.00
														119								189						DAYLIGHTING FILL SECTION		107+50.00 to 109+41.54
																												BENCHING	LT	107+75.00 to 109+15.00
																												CONCRETE CURB EXTENDING FROM STRUCTURES	RT	108+85.00 to 108+93.00
																												CONCRETE CURB EXTENDING FROM STRUCTURES		108+86.00 to 108+94.00
													175															APPROACH SLAB		109+16.54 to 109+41.54
		614																										S-01 TO CONNOQUENESSING CREEK EXCAVATION	RT	111+15.00 to 112+50.00
																													RT	111+97.30 to 115+97.50
																												MONITORING WELL REMOVAL	LT	115+46.00
																												MONITORING WELL REMOVAL	RT	116+20.00
																												BASA UTILITY RELOCATION	RT	117+35.00 to 122+05.00

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ENGINEER
PE073152

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:27 PM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	21 OF 76

RUBBLIZE AND SEAT CONCRETE PAVEMENT, TYPE 2	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, TYPE B	NO. 1 COARSE AGGREGATE	SELECTIVE TREE REMOVAL	ROCK, CLASS R-3	ROCK, CLASS R-6	VEHICULAR SWING GATE	REMOVE AND RESET WOOD FENCE	REMOVE AND RESET IRON FENCE	RECLAMATION OF SR 0068 TEMPORARY ROAD	DISPOSAL OF EXCAVATED BEDROCK MATERIAL	WASTE MANAGEMENT MOBILIZATION AND DEMOBILIZATION	SOLIDS SAMPLING FOR CHARACTERIZATION	SOLIDS SAMPLING FOR WASTE DISPOSAL	LIQUIDS SAMPLING	DISPOSAL OF NON-HAZARDOUS WASTE	MANAGEMENT OF CONTAMINATED DEWATERING LIQUIDS	MONITORING WELL ABANDONMENT	BASA SEWER RELOCATION	PENNSYLVANIA AMERICAN WATER RELOCATION	INCIDENT MANAGEMENT PLAN IMPLEMENTATION	TEST PIT FOR UNDERGROUND UTILITIES	G&W - B&P RR RAILROAD WATER SERVICE RELOCATION	G&W - B&P RAILROAD ELECTRICAL RELOCATION	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR SLOPE	REMARKS	SIDE	STATIONS
0526 0010 SY	0630 0041 LF	0633 0200 LF	0633 0225 LF	0703 0020 CY	0810 0052 EACH	0850 0021 SY	0850 0024 SY	9000 0024 EACH	9000 0025 LS	9000 0026 LF	9000 0027 LS	9000 0108 CY	9000 0300 LS	9000 0301 EACH	9000 0302 EACH	9000 0303 EACH	9000 0304 TON	9000 0306 GAL	9000 0307 EACH	9000 0400 LS	9000 0401 LS	9000 0402 LS	9000 0403 CY	9000 0406 LS	9000 0407 PDA	9203 0108 LS	ITEM NUMBER UNIT			
																												SR 0068		
													X	16	5	100	1000	1241961 4			X	X	50		1		ENTIRE PROJECT		96+00.00 to 125+15.00
																												MILL AND OVERYLAY (ASSUME 3" DEPTH)		96+00.00 to 101+00.00
											X																	RECLAMATION OF SR 0068 TEMPORARY ROAD	LT	99+00.00 to 106+50.00
																												ASPHALT FULL DEPTH RECONSTRUCTION		101+00.00 to 109+16.54
																												SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	101+00.00 to 125+51.25
					1																							TREE REMOVAL	LT	103+82.00
					1																							TREE REMOVAL - 12" PINE	LT	104+96.00
																												D1 - PLANTER	LT	105+03.10
					1																							TREE REMOVAL - 24" OAK	LT	105+12.00
										16																		PARCEL 4 IRON FENCE	LT	105+31.00 to 105+40.00
					1																							TREE REMOVAL - 19" OAK	LT	105+32.00
									X																			PARCEL 4 WOODEN FENCE	LT	105+40.00 to 105+82.00
					1																							TREE REMOVAL - BUSH	LT	105+46.00
					1																							TREE REMOVAL - 5" PEAR	LT	105+59.00
																												D2 - BILLBOARD SIGN	LT	105+90.00 to 106+08.00
1323																												RUBBLIZING OF EXISTING PAVEMENT	LT / RT	106+00.00 to 110+06.63
																												TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM FOR PHASING	CL	106+66.11 to 119+82.00
																												DAYLIGHTING FILL SECTION		107+50.00 to 109+41.54
																												BENCHING	LT	107+75.00 to 109+15.00
	8																											CONCRETE CURB EXTENDING FROM STRUCTURES	RT	108+85.00 to 108+93.00
	8																											CONCRETE CURB EXTENDING FROM STRUCTURES		108+86.00 to 108+94.00
																												APPROACH SLAB		109+16.54 to 109+41.54
																												S-01 TO CONNOQUENESSING CREEK EXCAVATION	RT	111+15.00 to 112+50.00
																								X					RT	111+97.30 to 115+97.50
																			1									MONITORING WELL REMOVAL	LT	115+46.00
																			1									MONITORING WELL REMOVAL	RT	116+20.00
																				X								BASA UTILITY RELOCATION	RT	117+35.00 to 122+05.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE073152

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:27 PM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	22 OF 76

TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR PHASING	SETTLEMENT MONITORING	SETTLEMENT PLATES	6" FILL BENCH DRAIN	EMBANKMENT (FOR INFORMATION ONLY)	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
9203 0109 LS	9206 0002 SET	9206 0003 EACH	9610 7002 LF	CY				
						SR 0068		
	1	8				ENTIRE PROJECT		96+00.00 to 125+15.00
						MILL AND OVERYLAY (ASSUME 3" DEPTH)		96+00.00 to 101+00.00
						RECLAMATION OF SR 0068 TEMPORARY ROAD	LT	99+00.00 to 106+50.00
				18617		ASPHALT FULL DEPTH RECONSTRUCTION		101+00.00 to 109+16.54
						SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	101+00.00 to 125+51.25
						TREE REMOVAL	LT	103+82.00
						TREE REMOVAL - 12" PINE	LT	104+96.00
						D1 - PLANTER	LT	105+03.10
						TREE REMOVAL - 24" OAK	LT	105+12.00
						PARCEL 4 IRON FENCE	LT	105+31.00 to 105+40.00
						TREE REMOVAL - 19" OAK	LT	105+32.00
						PARCEL 4 WOODEN FENCE	LT	105+40.00 to 105+82.00
						TREE REMOVAL - BUSH	LT	105+46.00
						TREE REMOVAL - 5" PEAR	LT	105+59.00
						D2 - BILLBOARD SIGN	LT	105+90.00 to 106+08.00
						RUBBLIZING OF EXISTING PAVEMENT	LT / RT	106+00.00 to 110+06.63
X						TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM FOR PHASING	CL	106+66.11 to 119+82.00
						DAYLIGHTING FILL SECTION		107+50.00 to 109+41.54
			140			BENCHING	LT	107+75.00 to 109+15.00
						CONCRETE CURB EXTENDING FROM STRUCTURES	RT	108+85.00 to 108+93.00
						CONCRETE CURB EXTENDING FROM STRUCTURES		108+86.00 to 108+94.00
						APPROACH SLAB		109+16.54 to 109+41.54
						S-01 TO CONNOQUENESSING CREEK EXCAVATION	RT	111+15.00 to 112+50.00
							RT	111+97.30 to 115+97.50
						MONITORING WELL REMOVAL	LT	115+46.00
						MONITORING WELL REMOVAL	RT	116+20.00
						BASA UTILITY RELOCATION	RT	117+35.00 to 122+05.00

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REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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DEMOLITION 0202 0001 LS	DEMOLITION 0202 0002 LS	CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	SELECTED BORROW EXCAVATION, 206 ROCK 4205 0200 CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-3 0205 0263 CY	SPECIAL ROLLING 0208 0001 HOUR	GEOTEXTILE, CLASS 1 0212 0001 LF	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE C 0212 0016 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 7 1/2" DEPTH 0313 0329 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 5" DEPTH 0313 0424 SY	SUBBASE 4" DEPTH (NO. 2A) 0350 0104 SY	SUBBASE 8" DEPTH (NO. 2A) 0350 0108 SY	SUBBASE (NO. 2A) 0350 0121 TON	ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH 0360 0001 SY	ASPHALT PAVEMENT LONGITUDINAL JOINT DENSITY INCENTIVE/DISINCENTIVE 0405 0001 DOLLA	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H 0413 0245 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L 0413 2074 TON	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH 0413 6045 SY	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE 0413 9999 DOLLA	ASPHALT TACK COAT (NTT/CNTT) 0460 0004 GAL	ASPHALT PRIME COAT, CRS-2PM 4461 0001 SY	ASPHALT PAVING FABRIC 0466 0001 SY	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR 0491 0019 SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH 0501 0020 SY	PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH 0501 0030 SY	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
													210															APPROACH SLAB		118+10.55 to 118+40.56
					7606			2045																			BENCHING	LT	118+10.55 to 121+02.50
			24220		11454			7040																			BENCHING	RT	118+10.55 to 121+02.50
		11367								1782			1782					1782		1782		375					ASPHALT FULL DEPTH RECONSTRUCTION		118+40.56 to 120+77.50
														122									200				DAYLIGHTING FILL SECTION		118+40.56 to 120+77.50
																											RUBBLIZING OF EXISTING PAVEMENT	LT / RT	118+85.04 to 120+50.00
		8181																									REMOVAL OF EMBANKMENT OVER EXISTING DUAL ARCH CULVERT	LT / RT	121+02.50 to 122+55.50
																								52			CONCRETE MEDIAN	LT	121+10.00 to 123+42.25
											324		324					324				46					TEMPORARY PAVEMENT IN MEDIAN	LT	121+23.00 to 124+05.00
																											CONCRETE CURB EXTENDING FROM STRUCTURES	LT	122+71.00 to 123+12.00
																											CONCRETE CURB EXTENDING FROM STRUCTURES	RT	122+71.00 to 123+15.00
														44									70				DAYLIGHTING FILL SECTION		122+80.50 to 123+50.00
		1730										2162			2162											2162	CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	122+80.50 to 125+51.25
		623																									STORM BASIN EXCAVATION	LT	124+00.00 to 124+00.00
																											CONCRETE MEDIAN	LT	125+00.00 to 127+20.00
											29		29					29				5					TEMPORARY PAVEMENT IN MEDIAN	LT	126+18.00 to 127+20.00
																											DELWOOD ROAD		
		1395								1324			1324					1324		1324		279					ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	30+40.00 to 33+19.26
		331		331				265	265																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	30+40.00 to 33+19.26
														173									277				DAYLIGHTING FILL SECTION	LT / RT	30+40.00 to 33+20.00
																											B&P DRIVEWAY		
		2810								413			413					413		413		87					ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	10+19.00 to 11+41.12
		104		104				83	83																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	10+19.80 to 11+41.12
								601																			CHANNEL ROCK LINING	LT	10+20.00 to 11+25.00
																											45' WIDTH TEMPORARY CONNECTION IN PHASE 3 & 4	LT / RT	10+84.70 to 11+80.27
																											SR 8012 (EB OFFRAMP)		
		383										549			549											549	CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	713+00.00 to 714+02.69
																											SR 8012 (EB ONRAMP)		

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REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	24 OF 76

0526 0010 SY RUBBLIZE AND SEAT CONCRETE PAVEMENT, TYPE 2	0630 0041 LF PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	0633 0200 LF PLAIN CONCRETE MOUNTABLE CURB, TYPE A	0633 0225 LF PLAIN CONCRETE MOUNTABLE CURB, TYPE B	0703 0020 CY NO. 1 COARSE AGGREGATE	0810 0052 EACH SELECTIVE TREE REMOVAL	0850 0021 SY ROCK, CLASS R-3	0850 0024 SY ROCK, CLASS R-6	9000 0024 EACH VEHICULAR SWING GATE	9000 0025 LS REMOVE AND RESET WOOD FENCE	9000 0026 LF REMOVE AND RESET IRON FENCE	9000 0027 LS RECLAMATION OF SR 0068 TEMPORARY ROAD	9000 0108 CY DISPOSAL OF EXCAVATED BEDROCK MATERIAL	9000 0300 LS WASTE MANAGEMENT MOBILIZATION AND DEMOBILIZATION	9000 0301 EACH SOLIDS SAMPLING FOR CHARACTERIZATION	9000 0302 EACH SOLIDS SAMPLING FOR WASTE DISPOSAL	9000 0303 EACH LIQUIDS SAMPLING	9000 0304 TON DISPOSAL OF NON-HAZARDOUS WASTE	9000 0306 GAL MANAGEMENT OF CONTAMINATED DEWATERING LIQUIDS	9000 0307 EACH MONITORING WELL ABANDONMENT	9000 0400 LS BASA SEWER RELOCATION	9000 0401 LS PENNSYLVANIA AMERICAN WATER RELOCATION	9000 0402 LS INCIDENT MANAGEMENT PLAN IMPLEMENTATION	9000 0403 CY TEST PIT FOR UNDERGROUND UTILITIES	9000 0406 LS G&W - B&P RR RAILROAD WATER SERVICE RELOCATION	9000 0407 PDA G&W - B&P RAILROAD ELECTRICAL RELOCATION	9203 0108 LS TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR SLOPE	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																												APPROACH SLAB		118+10.55 to 118+40.56
																												BENCHING	LT	118+10.55 to 121+02.50
																												BENCHING	RT	118+10.55 to 121+02.50
																												ASPHALT FULL DEPTH RECONSTRUCTION		118+40.56 to 120+77.50
																												DAYLIGHTING FILL SECTION		118+40.56 to 120+77.50
668																												RUBBLIZING OF EXISTING PAVEMENT	LT / RT	118+85.04 to 120+50.00
																												REMOVAL OF EMBANKMENT OVER EXISTING DUAL ARCH CULVERT	LT / RT	121+02.50 to 122+55.50
		126																										CONCRETE MEDIAN	LT	121+10.00 to 123+42.25
																												TEMPORARY PAVEMENT IN MEDIAN	LT	121+23.00 to 124+05.00
	32																											CONCRETE CURB EXTENDING FROM STRUCTURES	LT	122+71.00 to 123+12.00
	35																											CONCRETE CURB EXTENDING FROM STRUCTURES	RT	122+71.00 to 123+15.00
																												DAYLIGHTING FILL SECTION		122+80.50 to 123+50.00
																												CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	122+80.50 to 125+51.25
																												STORM BASIN EXCAVATION	LT	124+00.00 to 124+00.00
			445																									CONCRETE MEDIAN	LT	125+00.00 to 127+20.00
																												TEMPORARY PAVEMENT IN MEDIAN	LT	126+18.00 to 127+20.00
																												DELWOOD ROAD		
																												ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	30+40.00 to 33+19.26
																												SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	30+40.00 to 33+19.26
																												DAYLIGHTING FILL SECTION	LT / RT	30+40.00 to 33+20.00
																												B&P DRIVEWAY		
																												ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	10+19.00 to 11+41.12
																												SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	10+19.80 to 11+41.12
						130	259																					CHANNEL ROCK LINING	LT	10+20.00 to 11+25.00
				302																								45' WIDTH TEMPORARY CONNECTION IN PHASE 3 & 4	LT / RT	10+84.70 to 11+80.27
																												SR 8012 (EB OFFRAMP)		
																												CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	713+00.00 to 714+02.69
																												SR 8012 (EB ONRAMP)		

COMMONWEALTH OF PENNSYLVANIA
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TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	25 OF 76

TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR PHASING	SETTLEMENT MONITORING	SETTLEMENT PLATES	6" FILL BENCH DRAIN	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS	SIDE	STATIONS
9203 0109 LS	9206 0002 SET	9206 0003 EACH	9610 7002 LF	CY	ITEM NUMBER UNIT		
					APPROACH SLAB		118+10.55 to 118+40.56
					BENCHING	LT	118+10.55 to 121+02.50
					BENCHING	RT	118+10.55 to 121+02.50
				22658	ASPHALT FULL DEPTH RECONSTRUCTION		118+40.56 to 120+77.50
					DAYLIGHTING FILL SECTION		118+40.56 to 120+77.50
					RUBBLIZING OF EXISTING PAVEMENT	LT / RT	118+85.04 to 120+50.00
					REMOVAL OF EMBANKMENT OVER EXISTING DUAL ARCH CULVERT	LT / RT	121+02.50 to 122+55.50
					CONCRETE MEDIAN	LT	121+10.00 to 123+42.25
					TEMPORARY PAVEMENT IN MEDIAN	LT	121+23.00 to 124+05.00
					CONCRETE CURB EXTENDING FROM STRUCTURES	LT	122+71.00 to 123+12.00
					CONCRETE CURB EXTENDING FROM STRUCTURES	RT	122+71.00 to 123+15.00
					DAYLIGHTING FILL SECTION		122+80.50 to 123+50.00
				1108	CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	122+80.50 to 125+51.25
					STORM BASIN EXCAVATION	LT	124+00.00 to 124+00.00
					CONCRETE MEDIAN	LT	125+00.00 to 127+20.00
					TEMPORARY PAVEMENT IN MEDIAN	LT	126+18.00 to 127+20.00
					DELWOOD ROAD		
				2164	ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	30+40.00 to 33+19.26
					SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	30+40.00 to 33+19.26
					DAYLIGHTING FILL SECTION	LT / RT	30+40.00 to 33+20.00
					B&P DRIVEWAY		
				248	ASPHALT FULL DEPTH RECONSTRUCTION	LT / RT	10+19.00 to 11+41.12
					SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	10+19.80 to 11+41.12
					CHANNEL ROCK LINING	LT	10+20.00 to 11+25.00
					45' WIDTH TEMPORARY CONNECTION IN PHASE 3 & 4	LT / RT	10+84.70 to 11+80.27
					SR 8012 (EB OFFRAMP)		
				136	CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	713+00.00 to 714+02.69
					SR 8012 (EB ONRAMP)		

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL MARK BORRELLI — ENGINEER PE073152

DEMOLITION 0202 0001 LS	DEMOLITION 0202 0002 LS	CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	SELECTED BORROW EXCAVATION, 206 ROCK 4205 0200 CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-3 0205 0263 CY	SPECIAL ROLLING 0208 0001 HOUR	GEOTEXTILE, CLASS 1 0212 0001 LF	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE C 0212 0016 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 7 1/2" DEPTH 0313 0329 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 5" DEPTH 0313 0424 SY	SUBBASE 4" DEPTH (NO. 2A) 0350 0104 SY	SUBBASE 8" DEPTH (NO. 2A) 0350 0108 SY	SUBBASE (NO. 2A) 0350 0121 TON	ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH 0360 0001 SY	ASPHALT PAVEMENT LONGITUDINAL JOINT DENSITY INCENTIVE/DISINCENTIVE 0405 0001 DOLLA	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H 0413 0245 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-L 0413 2074 TON	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH 0413 6045 SY	PERCENT WITHIN LIMITS (PWL) LOT INCENTIVE/DISINCENTIVE 0413 9999 DOLLA	ASPHALT TACK COAT (NTT/CNTT) 0460 0004 GAL	ASPHALT PRIME COAT, CRS-2PM 4461 0001 SY	ASPHALT PAVING FABRIC 0466 0001 SY	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR 0491 0019 SY	PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH 0501 0020 SY	PLAIN CEMENT CONCRETE PAVEMENT, 9" DEPTH 0501 0030 SY	ITEM NUMBER UNIT — REMARKS	SIDE	STATIONS
											154		154				154				11						TEMPORARY PAVEMENT	LT	600+22.00 to 601+50.00
		444										499			499											499	CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	600+22.00 to 601+50.00
																											SR 0068 TEMPORARY ROAD		
		1043		1043				835	835																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	1+87.00 to 13+40.00
		27183									3700		3700				3700				259						TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	1+87.00 to 13+40.00
																											TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM	LT	2+25.00 to 9+25.00
											471		471				471				33						TEMPORARY PAVEMENT NEEDED DURING WINTER SHUTDOWN BETWEEN PHASE 1 AND 2	RT	9+71.06 to 11+41.12
																											DELWOOD TEMPORARY ROAD		
		1477									1146		1146				1146				81						TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	30+20.00 to 32+58.75
																											TEMPORARY ACCESS ROAD NO. 1		
		1795																										LT / RT	0+00.00 to 5+90.64
											795		795				795				56						PARCEL 12 - REPAVING OF PARKING LOT	LT	0+11.50 to 2+05.00
		889		889				711	711																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+11.94 to 4+68.99
																											GATE	LT / RT	2+55.00 to 2+60.00
																											TEMPORARY ACCESS ROAD NO. 2		
		22751			13834																							LT / RT	0+00.00 to 5+05.28
		649		649				519	519																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+20.47 to 4+68.99
																											GATE	LT / RT	1+60.00 to 1+60.00
																											TEMPORARY ACCESS ROAD NO. 3		
		461																										LT / RT	0+00.00 to 4+68.99
		200		200				160	160																		SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+00.00 to 5+05.28
---	---	91168	24220	5723	32894	60		14265	4579	8686	6619	3210	15623	458	3210	7500	17378	119	8686	30000	2594	736	2073	2073	52	3210	TOTALS		

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:27 PM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	27 OF 76

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL MARK BORRELLI — ENGINEER PE073152

ITEM NUMBER	UNIT	RUBBLIZE AND SEAT CONCRETE PAVEMENT, TYPE 2	PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	PLAIN CONCRETE MOUNTABLE CURB, TYPE A	PLAIN CONCRETE MOUNTABLE CURB, TYPE B	NO. 1 COARSE AGGREGATE	SELECTIVE TREE REMOVAL	ROCK, CLASS R-3	ROCK, CLASS R-6	VEHICULAR SWING GATE	REMOVE AND RESET WOOD FENCE	REMOVE AND RESET IRON FENCE	RECLAMATION OF SR 0068 TEMPORARY ROAD	DISPOSAL OF EXCAVATED BEDROCK MATERIAL	WASTE MANAGEMENT MOBILIZATION AND DEMOBILIZATION	SOLIDS SAMPLING FOR CHARACTERIZATION	SOLIDS SAMPLING FOR WASTE DISPOSAL	LIQUIDS SAMPLING	DISPOSAL OF NON-HAZARDOUS WASTE	MANAGEMENT OF CONTAMINATED DEWATERING LIQUIDS	MONITORING WELL ABANDONMENT	BASA SEWER RELOCATION	PENNSYLVANIA AMERICAN WATER RELOCATION	INCIDENT MANAGEMENT PLAN IMPLEMENTATION	TEST PIT FOR UNDERGROUND UTILITIES	G&W - B&P RR RAILROAD WATER SERVICE RELOCATION	G&W - B&P RAILROAD ELECTRICAL RELOCATION	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR SLOPE	REMARKS	SIDE	STATIONS
		0526 0010 SY	0630 0041 LF	0633 0200 LF	0633 0225 LF	0703 0020 CY	0810 0052 EACH	0850 0021 SY	0850 0024 SY	9000 0024 EACH	9000 0025 LS	9000 0026 LF	9000 0027 LS	9000 0108 CY	9000 0300 LS	9000 0301 EACH	9000 0302 EACH	9000 0303 EACH	9000 0304 TON	9000 0306 GAL	9000 0307 EACH	9000 0400 LS	9000 0401 LS	9000 0402 LS	9000 0403 CY	9000 0406 LS	9000 0407 PDA	9203 0108 LS			
																													TEMPORARY PAVEMENT	LT	600+22.00 to 601+50.00
																													CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	600+22.00 to 601+50.00
																													SR 0068 TEMPORARY ROAD		
																													SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	1+87.00 to 13+40.00
														1500															TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	1+87.00 to 13+40.00
																												X	TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM	LT	2+25.00 to 9+25.00
																													TEMPORARY PAVEMENT NEEDED DURING WINTER SHUTDOWN BETWEEN PHASE 1 AND 2	RT	9+71.06 to 11+41.12
																													DELWOOD TEMPORARY ROAD		
																													TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	30+20.00 to 32+58.75
																													TEMPORARY ACCESS ROAD NO. 1		
						794																								LT / RT	0+00.00 to 5+90.64
																													PARCEL 12 - REPAVING OF PARKING LOT	LT	0+11.50 to 2+05.00
																													SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+11.94 to 4+68.99
										2																			GATE	LT / RT	2+55.00 to 2+60.00
																													TEMPORARY ACCESS ROAD NO. 2		
						1071																								LT / RT	0+00.00 to 5+05.28
																													SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+20.47 to 4+68.99
										2																			GATE	LT / RT	1+60.00 to 1+60.00
																													TEMPORARY ACCESS ROAD NO. 3		
						179																								LT / RT	0+00.00 to 4+68.99
																													SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+00.00 to 5+05.28
		1991	83	126	445	2346	6	130	259	4	---	16	---	1500	---	16	5	100	1000	1241961.4	2	---	---	---	50	---	1	---	TOTALS		

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ROADWAY

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				10	BUTLER	68	253	28 OF 76

TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR PHASING 9203 0109 LS	SETTLEMENT MONITORING 9206 0002 SET	SETTLEMENT PLATES 9206 0003 EACH	6" FILL BENCH DRAIN 9610 7002 LF	EMBANKMENT (FOR INFORMATION ONLY) CY	ITEM NUMBER / UNIT	REMARKS	SIDE	STATIONS
						TEMPORARY PAVEMENT	LT	600+22.00 to 601+50.00
						CONCRETE FULL DEPTH RECONSTRUCTION	LT / RT	600+22.00 to 601+50.00
						SR 0068 TEMPORARY ROAD		
						SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	1+87.00 to 13+40.00
				7412		TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	1+87.00 to 13+40.00
						TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM	LT	2+25.00 to 9+25.00
						TEMPORARY PAVEMENT NEEDED DURING WINTER SHUTDOWN BETWEEN PHASE 1 AND 2	RT	9+71.06 to 11+41.12
						DELWOOD TEMPORARY ROAD		
				4795		TEMPORARY ASPHALT FULL DEPTH CONSTRUCTION	LT / RT	30+20.00 to 32+58.75
						TEMPORARY ACCESS ROAD NO. 1		
				1495			LT / RT	0+00.00 to 5+90.64
						PARCEL 12 - REPAVING OF PARKING LOT	LT	0+11.50 to 2+05.00
						SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+11.94 to 4+68.99
						GATE	LT / RT	2+55.00 to 2+60.00
						TEMPORARY ACCESS ROAD NO. 2		
				14539			LT / RT	0+00.00 to 5+05.28
						SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+20.47 to 4+68.99
						GATE	LT / RT	1+60.00 to 1+60.00
						TEMPORARY ACCESS ROAD NO. 3		
				354			LT / RT	0+00.00 to 4+68.99
						SUBGRADE UNDERCUT (AS DIRECTED)	LT / RT	0+00.00 to 5+05.28
---	1	8	140	73526		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
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TABULATION OF QUANTITIES

GUIDE RAIL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	29 OF 76

PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH) 0619 0459 EACH	TERMINAL SECTION, SINGLE 0620 0400 EACH	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY) 0620 0503 LF	BURIED-IN-BACKSLOPE TERMINAL, SINGLE PANEL 0620 0872 EACH	TYPE 31-S GUIDE RAIL 0620 1600 LF	TYPE 31-SC GUIDE RAIL 0620 1625 LF	TYPE 31-STRONG POST END TREATMENT 0620 1650 EACH	TYPE 31-STRONG POST ANCHOR TERMINAL 0620 1660 EACH	TYPE 31-STRONG POST IN-LINE ANCHOR 0620 1670 EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB 0620 2010 EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET 0620 2011 EACH	SINGLE FACE CONCRETE BARRIER 0623 0052 LF	END TRANSITION, SINGLE FACE CONCRETE BARRIER 0623 0122 EACH	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
													SR 0068		
1									1		400	1	CONCRETE BARRIER	LT	98+50.00 to 103+30.00
			1		675					1				RT	101+70.00 to 108+98.00
		645											REMOVE EXISTING GUIDE RAIL	RT	103+18.66 to 109+67.00
		325											REMOVE EXISTING GUIDE RAIL	LT	106+71.00 to 109+92.00
				100				1						LT	107+56.00 to 108+97.00
		480											REMOVE EXISTING GUIDE RAIL	RT	118+66.00 to 123+46.00
				137.5					1	1				RT	118+83.00 to 120+92.00
				62.5				1		1				LT	119+01.50 to 120+11.00
		56											REMOVE EXISTING GUIDE RAIL	LT	119+03.00 to 119+86.00
		218											REMOVE EXISTING GUIDE RAIL	LT	121+12.00 to 123+36.00
				12.5				1		1				LT	122+69.00 to 123+27.50
				50				1		1				RT	122+70.00 to 123+72.00
		53											REMOVE EXISTING GUIDE RAIL	RT	124+93.00 to 125+46.00
								1	1					RT	125+03.00 to 125+49.50
													DELWOOD ROAD		
				212.5		1								LT	30+00.00 to 33+14.00
		121											REMOVE EXISTING GUIDE RAIL	LT	32+51.00 to 33+14.00
													B&P LANE		
	1			287.5				1						RT	8+83.00 to 11+59.00
	1			175				1	0					LT	9+26.00 to 11+33.00
		300											REMOVE EXISTING GUIDE RAIL	RT	10+20.00 to 11+50.00
		297											REMOVE EXISTING GUIDE RAIL	LT	10+21.00 to 11+20.00
													SR 8012 (EB OFFRAMP)		
	1			37.5				1						RT	711+40.00 to 711+62.00
		279											REMOVE EXISTING GUIDE RAIL	RT	711+40.00 to 713+93.00
	1			250				2						RT	711+79.00 to 713+96.00
													SR 8012 (EB ONRAMP)		

COMMONWEALTH OF PENNSYLVANIA
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TABULATION OF QUANTITIES

GUIDE RAIL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)	TERMINAL SECTION, SINGLE	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)	BURIED-IN-BACKSLOPE TERMINAL, SINGLE PANEL	TYPE 31-S GUIDE RAIL	TYPE 31-SC GUIDE RAIL	TYPE 31-STRONG POST END TREATMENT	TYPE 31-STRONG POST ANCHOR TERMINAL	TYPE 31-STRONG POST IN-LINE ANCHOR	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET	SINGLE FACE CONCRETE BARRIER	END TRANSITION, SINGLE FACE CONCRETE BARRIER																	REMARKS	SIDE	STATIONS
0619 0459 EACH	0620 0400 EACH	0620 0503 LF	0620 0872 EACH	0620 1600 LF	0620 1625 LF	0620 1650 EACH	0620 1660 EACH	0620 1670 EACH	0620 2010 EACH	0620 2011 EACH	0623 0052 LF	0623 0122 EACH																	ITEM NUMBER UNIT		
		133																											REMOVE EXISTING GUIDE RAIL	RT	600+22.50 to 601+02.00
	1			112.5				1																						RT	600+34.00 to 601+07.00
		87																											REMOVE EXISTING GUIDE RAIL	LT	600+37.00 to 601+11.50
				87.5			1	1																						LT	600+40.00 to 601+14.00
1	5	2994	1	1525	675	1	1	12	4	5	400	1																	TOTALS		

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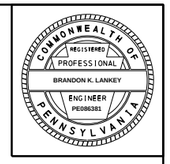
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL MARK BORRELLI ENGINEER PE073152

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	31 OF 76

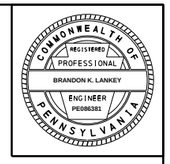


CLASS 2 EXCAVATION		SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A		FLOWABLE BACKFILL, TYPE C		18" PIPE DESIGN NO. 1		24" PIPE DESIGN NO. 2		24" PIPE DESIGN NO. 3		36" PIPE DESIGN NO. 4		42" PIPE DESIGN NO. 5		18" PIPE DESIGN NO. 6		24" PIPE DESIGN NO. 7		12" DUCTILE IRON PIPE		18" DUCTILE IRON PIPE, INCLUDES REMOVAL		24" DUCTILE IRON PIPE, INCLUDES REMOVAL		48" PIPE DESIGN NO. 8		18" PIPE DESIGN NO. 9		CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"		CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36"		24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL		18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE		18" PIPE DESIGN NO. 10		CLEANING DRAINAGE STRUCTURES		MANHOLE FRAME AND COVER		TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX		TYPE D-W ENDWALL FOR 48" PIPE		TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK		TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		REMARKS	SIDE	STATIONS
0204 0001	CY	0205 0290	CY	0220 0020	CY	0601 (+)	LF	0601 (+)	LF	0601 (+)	LF	0601 (+)	LF	0601 (+)	LF	0601 (+)	LF	0601 (+)	LF	0601 0760	LF	4601 0763	LF	4601 0765	LF	0601 (+)	LF	0601 (+)	LF	0601 5901	LF	0601 5902	LF	4601 7325	LF	0601 7508	LF	0604 (+)	LF	0605 1300	EACH	0605 2401	SET	4605 2670	EACH	0605 2678	EACH	4605 2678	EACH	0605 2731	SET	0605 2741	SET	ITEM NUMBER UNIT		
																																																				SR 0068		
																														72										1												CLEAN EXISTING PIPE AND INLET	LT / RT	99+20.00 to 99+21.00
																																																			EX IN-A	LT	99+21.00
																																																			EX IN-A, FOLLOWING TEMP ROAD REMOVAL	LT	99+21.00
																																																	1		IN-1	RT	101+02.32
																																						341												P-1	RT	101+04.21 to 104+47.58
4		4																																															REMOVE EXISTING INLET	LT	104+03.00
				6																																														FILL EXISTING PIPE FULL	LT / RT	104+03.16 to 104+44.64
																																																	1		IN-2	RT	104+49.51
																																						312												P-2	RT	104+51.43 to 107+70.15
						177																																												P-7 AND ES-1	LT	106+43.19 to 108+10.39
		15																																																FILL EXISTING PIPE FULL	LT / RT	107+64.00 to 108+06.69
																																																1		IN-3	RT	107+72.08
																																						110												P-3	RT	107+74.01 to 108+86.09
																																										1								MH-2	LT	108+12.15
				25																																															P-8	LT	108+13.90 to 108+35.00
																		15																																P-6	LT	108+64.36 to 108+69.60
																																										1								MH-1	LT	108+70.37
																												10																						P-15	LT	108+71.14 to 108+90.46
																														51																				P-5	LT	108+71.14 to 108+90.53
																22																																		P-4, IN-4 TO TMH-1	RT	108+88.04 to 108+88.91
																																																			IN-4	RT	108+88.09
																42																																		P-4, EXTEND TO IN-5	LT / RT	108+88.74 to 108+90.46
																				42																														P-27, BRIDGE DRAIN	RT	108+90.13 to 109+31.68
																																																			IN-5	LT	108+90.46
																																																			TP20	LT	109+56.09
																																																			TP21	LT	109+56.09
																						151																												TP20	LT	109+56.09 to 111+06.38

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	32 OF 76



STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2851 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3042 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3052 EACH	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5701 SET	GRADE ADJUSTMENT OF EXISTING INLETS 0606 0050 SET	GRADE ADJUSTMENT OF EXISTING MANHOLES 0606 0150 SET	REBUILT INLET BOX 0607 0013 VF	REBUILT MANHOLE 0607 0200 VF	REBUILT MANHOLE, FOR PIPE REMOVAL 4607 0200 VF	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 4854 0002 EACH	CLASS A CEMENT CONCRETE 1001 1120 CY	60 INCH STEEL JACK AND BORE PIPE 9000 0100 LS	24" TEMPORARY PIPE 9000 0317 LF	12" DIAMETER PIPE 9000 0318 LF	TEMPORARY PIPE CAP 9000 0319 EACH	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE 9203 0107 LS					MINIMUM FILL HEIGHT (FOR INFORMATION ONLY)	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																													SR 0068		
																													CLEAN EXISTING PIPE AND INLET	LT / RT	99+20.00 to 99+21.00
																													EX IN-A	LT	99+21.00
											1																		EX IN-A, FOLLOWING TEMP ROAD REMOVAL	LT	99+21.00
1																													IN-1	RT	101+02.32
																											2.5	3.9	127	P-1	RT	101+04.21 to 104+47.58
																														REMOVE EXISTING INLET	LT	104+03.00
																														FILL EXISTING PIPE FULL	LT / RT	104+03.16 to 104+44.64
1																														IN-2	RT	104+49.51
																											2.7	3.9	117	P-2	RT	104+51.43 to 107+70.15
																											2	10.5	129	P-7 AND ES-1	LT	106+43.19 to 108+10.39
																														FILL EXISTING PIPE FULL	LT / RT	107+64.00 to 108+06.69
1																														IN-3	RT	107+72.08
																											3.9	4.6	41	P-3	RT	107+74.01 to 108+86.09
				1											1															MH-2	LT	108+12.15
																											2	4.5	35	P-8	LT	108+13.90 to 108+35.00
																											2	2	12	P-6	LT	108+64.36 to 108+69.60
			1																											MH-1	LT	108+70.37
																											2	2	20	P-15	LT	108+71.14 to 108+90.46
																											2	8.4	95	P-5	LT	108+71.14 to 108+90.53
																											5.2	6.0		P-4, IN-4 TO TMH-1	RT	108+88.04 to 108+88.91
		1						1																						IN-4	RT	108+88.09
																											6	7.2		P-4, EXTEND TO IN-5	LT / RT	108+88.74 to 108+90.46
																														P-27, BRIDGE DRAIN	RT	108+90.13 to 109+31.68
1								1																						IN-5	LT	108+90.46
																					1									TP20	LT	109+56.09
																					1									TP21	LT	109+56.09
																														TP20	LT	109+56.09 to 111+06.38

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TABULATION OF QUANTITIES

DRAINAGE

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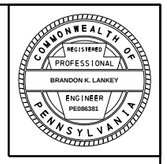
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	33 OF 76



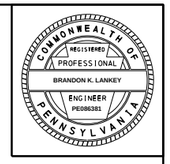
ITEM NUMBER	UNIT	CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A 0205 0290 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	18" PIPE DESIGN NO. 1 0601 (+) LF	24" PIPE DESIGN NO. 2 0601 (+) LF	24" PIPE DESIGN NO. 3 0601 (+) LF	36" PIPE DESIGN NO. 4 0601 (+) LF	42" PIPE DESIGN NO. 5 0601 (+) LF	18" PIPE DESIGN NO. 6 0601 (+) LF	24" PIPE DESIGN NO. 7 0601 (+) LF	12" DUCTILE IRON PIPE 0601 0760 LF	18" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0763 LF	24" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0765 LF	48" PIPE DESIGN NO. 8 0601 (+) LF	18" PIPE DESIGN NO. 9 0601 (+) LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36" 0601 5901 LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36" 0601 5902 LF	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL 4601 7325 LF	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE 0601 7508 LF	18" PIPE DESIGN NO. 10 0604 (+) LF	CLEANING DRAINAGE STRUCTURES 0605 1300 EACH	MANHOLE FRAME AND COVER 0605 2401 SET	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX 4605 2670 EACH	TYPE D-W ENDWALL FOR 48" PIPE 0605 2678 EACH	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK 4605 2678 EACH	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2731 SET	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2741 SET	REMARKS	SIDE	STATIONS
													151																TP21	LT	109+56.09 to 111+06.41
																													P-16	LT / RT	110+11.00 to 111+54.00
																									1				EW-2	LT	110+27.51
																						1							MH-6	LT	110+27.94
																														LT / RT	110+30.48 to 111+28.23
														192															TP22	LT	110+57.85 to 112+17.30
																													REMOVE AND REPLACE PARKING LOT PIPES	LT	111+26.00 to 111+73.00
																								1					EW-3	RT	111+28.23
																				60									TP16	LT	111+68.70 to 112+18.68
																													TP19	LT	118+02.20 to 118+23.77
																													TP17	RT	118+26.21 to 118+50.74
																										1			IN-9	RT	118+46.12
									62																				P-17	RT / LT	118+46.12 to 118+68.78
									66																				P-19	RT	118+47.96 to 119+12.64
																										1			IN-7	LT	118+68.80
																													IN-10	RT	119+14.49
									65																				P-18	RT / LT	119+14.52 to 119+32.19
									83																				P-20	RT	119+16.33 to 119+98.00
																													IN-8	LT	119+32.18
																								1					MH-7	RT	120+00.00
									48																				P-21	RT	120+01.69 to 120+42.31
																													TSP1	RT	120+42.31 to 121+01.54
																													TP18	LT	122+41.63 to 122+78.88
									34																				P-25	LT	122+98.87 to 123+00.12
									72																				P-22	LT / RT	123+00.12 to 123+02.82
																													IN-13	LT	123+00.13
																													P-22	LT	123+01.17
									31																				P-24	LT	123+01.95 to 123+32.08

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	34 OF 76



STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2851 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3042 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3052 EACH	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5701 SET	GRADE ADJUSTMENT OF EXISTING INLETS 0606 0050 SET	GRADE ADJUSTMENT OF EXISTING MANHOLES 0606 0150 SET	REBUILT INLET BOX 0607 0013 VF	REBUILT MANHOLE 0607 0200 VF	REBUILT MANHOLE, FOR PIPE REMOVAL 4607 0200 VF	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 4854 0002 EACH	CLASS A CEMENT CONCRETE 1001 1120 CY	60 INCH STEEL JACK AND BORE PIPE 9000 0100 LS	24" TEMPORARY PIPE 9000 0317 LF	12" DIAMETER PIPE 9000 0318 LF	TEMPORARY PIPE CAP 9000 0319 EACH	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE 9203 0107 LS				MINIMUM FILL HEIGHT (FOR INFORMATION ONLY) LF	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY) LF	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																												TP21	LT	109+56.09 to 111+06.41
																			X					X				P-16	LT / RT	110+11.00 to 111+54.00
																												EW-2	LT	110+27.51
							1											2										MH-6	LT	110+27.94
																													LT / RT	110+30.48 to 111+28.23
																												TP22	LT	110+57.85 to 112+17.30
																					65							REMOVE AND REPLACE PARKING LOT PIPES	LT	111+26.00 to 111+73.00
																												EW-3	RT	111+28.23
																												TP16	LT	111+68.70 to 112+18.68
																				131								TP19	LT	118+02.20 to 118+23.77
																				123								TP17	RT	118+26.21 to 118+50.74
1																												IN-9	RT	118+46.12
																										2.3	5.2	-	P-17	RT / LT	118+46.12 to 118+68.78
																										4.4	5.3	-	P-19	RT	118+47.96 to 119+12.64
1																												IN-7	LT	118+68.80
1								1																				IN-10	RT	119+14.49
																										2.3	6.3	-	P-18	RT / LT	119+14.52 to 119+32.19
																										3	6.7	-	P-20	RT	119+16.33 to 119+98.00
1								1																				IN-8	LT	119+32.18
				1														1										MH-7	RT	120+00.00
																										1.5	8.1	94	P-21	RT	120+01.69 to 120+42.31
																	1											TSP1	RT	120+42.31 to 121+01.54
																				46								TP18	LT	122+41.63 to 122+78.88
																										2	5.7	48	P-25	LT	122+98.87 to 123+00.12
																										2.1	5.8	-	P-22	LT / RT	123+00.12 to 123+02.82
1								1																				IN-13	LT	123+00.13
																						1						P-22	LT	123+01.17
																										3.3	4.5	-	P-24	LT	123+01.95 to 123+32.08

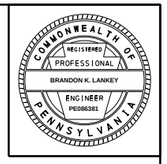
PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	35 OF 76



CLASS 2 EXCAVATION	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A	FLOWABLE BACKFILL, TYPE C	18" PIPE DESIGN NO. 1	24" PIPE DESIGN NO. 2	24" PIPE DESIGN NO. 3	36" PIPE DESIGN NO. 4	42" PIPE DESIGN NO. 5	18" PIPE DESIGN NO. 6	24" PIPE DESIGN NO. 7	12" DUCTILE IRON PIPE	18" DUCTILE IRON PIPE, INCLUDES REMOVAL	24" DUCTILE IRON PIPE, INCLUDES REMOVAL	48" PIPE DESIGN NO. 8	18" PIPE DESIGN NO. 9	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36"	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE	18" PIPE DESIGN NO. 10	CLEANING DRAINAGE STRUCTURES	MANHOLE FRAME AND COVER	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX	TYPE D-W ENDWALL FOR 48" PIPE	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	REMARKS	SIDE	STATIONS
0204 0001 CY	0205 0290 CY	0220 0020 CY	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 0760 LF	4601 0763 LF	4601 0765 LF	0601 (+) LF	0601 (+) LF	0601 5901 LF	0601 5902 LF	4601 7325 LF	0601 7508 LF	0604 (+) LF	0605 1300 EACH	0605 2401 SET	4605 2670 EACH	0605 2678 EACH	4605 2678 EACH	0605 2731 SET	0605 2741 SET	ITEM NUMBER UNIT			
																											IN-12	RT	123+02.81
																											IN-12	RT	123+02.81
															81												CLEAN EXISTING PIPE	LT	123+07.00 to 123+68.00
																									1		IN-11	LT	123+34.03
																									1		IN-15	LT	123+34.03
								17																			P-23	LT	123+34.03
																				1							CLEAN EXISTING INLET	LT	123+68.00
																											EX IN-B	LT	123+68.00
															92												CLEAN EXISTING PIPE	LT	123+69.00 to 124+61.00
																				1							CLEAN EXISTING END WALL	RT	123+96.00
																118											CLEAN EXISTING PIPE	RT	123+96.00 to 125+14.00
																				1							CLEAN EXISTING MH	RT	124+23.00
																				1							CLEAN EXISTING INLET	LT	124+61.00
															37												CLEAN EXISTING PIPE	LT	124+62.00 to 124+92.00
																				1							CLEAN EXISTING INLET	LT	124+93.00
																											EX IN-D	LT	124+93.00
															179												CLEAN EXISTING PIPE	LT	124+95.00 to 126+73.00
															69												CLEAN EXISTING PIPE	RT	125+13.00 to 125+44.00
																				1							CLEAN EXISTING INLET	RT	125+14.00
																				1							CLEAN EXISTING INLET	RT	125+44.00
																											EX IN-E	RT	125+44.00
															143												CLEAN EXISTING PIPE	RT	125+46.00 to 126+88.00
																		8							1		IN-14	LT	125+48.86
																				1							CLEAN EXISTING INLET	LT	126+75.00
															20												CLEAN EXISTING PIPE	LT	126+76.00 to 126+93.00
																				1							CLEAN EXISTING INLET	RT	126+90.00
															36												CLEAN EXISTING PIPE	RT	126+91.00 to 127+22.00
															55												CLEAN EXISTING PIPE	RT / LT	126+91.00 to 127+24.00

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	36 OF 76

STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2851 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3042 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3052 EACH	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5701 SET	GRADE ADJUSTMENT OF EXISTING INLETS 0606 0050 SET	GRADE ADJUSTMENT OF EXISTING MANHOLES 0606 0150 SET	REBUILT INLET BOX 0607 0013 VF	REBUILT MANHOLE 0607 0200 VF	REBUILT MANHOLE, FOR PIPE REMOVAL 4607 0200 VF	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 4854 0002 EACH	CLASS A CEMENT CONCRETE 1001 1120 CY	60 INCH STEEL JACK AND BORE PIPE 9000 0100 LS	24" TEMPORARY PIPE 9000 0317 LF	12" DIAMETER PIPE 9000 0318 LF	TEMPORARY PIPE CAP 9000 0319 EACH	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE 9203 0107 LS				MINIMUM FILL HEIGHT (FOR INFORMATION ONLY)	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
1								1																					IN-12	RT	123+02.81
											1																		IN-12	RT	123+02.81
																													CLEAN EXISTING PIPE	LT	123+07.00 to 123+68.00
1																													IN-11	LT	123+34.03
1																													IN-15	LT	123+34.03
																										2.4	3.1	-	P-23	LT	123+34.03
																													CLEAN EXISTING INLET	LT	123+68.00
											1																		EX IN-B	LT	123+68.00
																													CLEAN EXISTING PIPE	LT	123+69.00 to 124+61.00
																													CLEAN EXISTING END WALL	RT	123+96.00
																													CLEAN EXISTING PIPE	RT	123+96.00 to 125+14.00
																													CLEAN EXISTING MH	RT	124+23.00
																													CLEAN EXISTING INLET	LT	124+61.00
																													CLEAN EXISTING PIPE	LT	124+62.00 to 124+92.00
																													CLEAN EXISTING INLET	LT	124+93.00
									1																				EX IN-D	LT	124+93.00
																													CLEAN EXISTING PIPE	LT	124+95.00 to 126+73.00
																													CLEAN EXISTING PIPE	RT	125+13.00 to 125+44.00
																													CLEAN EXISTING INLET	RT	125+14.00
																													CLEAN EXISTING INLET	RT	125+44.00
									1																				EX IN-E	RT	125+44.00
																													CLEAN EXISTING PIPE	RT	125+46.00 to 126+88.00
1																													IN-14	LT	125+48.86
																													CLEAN EXISTING INLET	LT	126+75.00
																													CLEAN EXISTING PIPE	LT	126+76.00 to 126+93.00
																													CLEAN EXISTING INLET	RT	126+90.00
																													CLEAN EXISTING PIPE	RT	126+91.00 to 127+22.00
																													CLEAN EXISTING PIPE	RT / LT	126+91.00 to 127+24.00

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BRANDON K. LANKEY — ENGINEER PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

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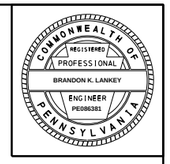
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	37 OF 76

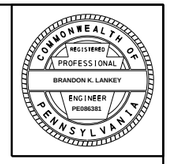


CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A 0205 0290 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	18" PIPE DESIGN NO. 1 0601 (+) LF	24" PIPE DESIGN NO. 2 0601 (+) LF	24" PIPE DESIGN NO. 3 0601 (+) LF	36" PIPE DESIGN NO. 4 0601 (+) LF	42" PIPE DESIGN NO. 5 0601 (+) LF	18" PIPE DESIGN NO. 6 0601 (+) LF	24" PIPE DESIGN NO. 7 0601 (+) LF	12" DUCTILE IRON PIPE 0601 0760 LF	18" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0763 LF	24" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0765 LF	48" PIPE DESIGN NO. 8 0601 (+) LF	18" PIPE DESIGN NO. 9 0601 (+) LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36" 0601 5901 LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36" 0601 5902 LF	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL 4601 7325 LF	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE 0601 7508 LF	18" PIPE DESIGN NO. 10 0604 (+) LF	CLEANING DRAINAGE STRUCTURES 0605 1300 EACH	MANHOLE FRAME AND COVER 0605 2401 SET	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX 4605 2670 EACH	TYPE D-W ENDWALL FOR 48" PIPE 0605 2678 EACH	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK 4605 2678 EACH	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2731 SET	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2741 SET	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																			1							CLEAN EXISTING INLET	LT	126+95.00
																			1							CLEAN EXISTING INLET	LT	127+24.00
																			1							CLEAN EXISTING INLET	RT	127+24.00
																										SR 0068 TEMPORARY ROAD		
5																										REMOVE TIN-1	LT	3+65.00
																							1			TIN-1	LT	3+65.00
7																										REMOVE TP1	LT / RT	3+65.00
								22																		TP1	LT / RT	3+65.00
6																										REMOVE TIN-2	RT	3+65.00
																							1			TIN-2	RT	3+65.00
91																										REMOVE TP2	RT	3+66.89 to 5+98.11
								229																		TP2	RT	3+66.89 to 5+98.11
5																										REMOVE TIN-3	LT	6+00.00
																							1			TIN-3	LT	6+00.00
7																										REMOVE TP3	LT / RT	6+00.00
								22																		TP3	LT / RT	6+00.00
5																										REMOVE TIN-4	RT	6+00.00
																							1			TIN-4	RT	6+00.00
95																										REMOVE TP4	RT	6+01.89 to 8+48.08
								245																		TP4	RT	6+01.89 to 8+48.08
5																										REMOVE TIN-5	LT	8+50.00
																							1			TIN-5	LT	8+50.00
7																										REMOVE TP5	LT / RT	8+50.00
								22																		TP5	LT / RT	8+50.00
5																										REMOVE TIN-6	RT	8+50.00
																							1			TIN-6	RT	8+50.00
35																										REMOVE TP6	RT	8+51.92 to 9+48.09
								95																		TP6	RT	8+51.92 to 9+48.09

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	38 OF 76



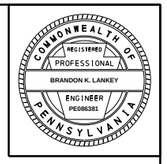
STANDARD INLET BOX, HEIGHT < /= 10'	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20'	TYPE 4 INLET BOX, HEIGHT < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE	GRADE ADJUSTMENT OF EXISTING INLETS	GRADE ADJUSTMENT OF EXISTING MANHOLES	REBUILT INLET BOX	REBUILT MANHOLE	REBUILT MANHOLE, FOR PIPE REMOVAL	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21	CLASS A CEMENT CONCRETE	60 INCH STEEL JACK AND BORE PIPE	24" TEMPORARY PIPE	12" DIAMETER PIPE	TEMPORARY PIPE CAP	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE				MINIMUM FILL HEIGHT (FOR INFORMATION ONLY)	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS	SIDE	STATIONS
0605 2850 EACH	0605 2851 EACH	0605 2854 EACH	0605 3011 EACH	0605 3012 EACH	0605 3041 EACH	0605 3042 EACH	0605 3052 EACH	0605 5701 SET	0606 0050 SET	0606 0150 SET	0607 0013 VF	0607 0200 VF	4607 0200 VF	4854 0002 EACH	1001 1120 CY	9000 0100 LS	9000 0317 LF	9000 0318 LF	9000 0319 EACH	9203 0107 LS								ITEM NUMBER	UNIT			
																												CLEAN EXISTING INLET	LT	126+95.00
																												CLEAN EXISTING INLET	LT	127+24.00
																												CLEAN EXISTING INLET	RT	127+24.00
																												SR 0068 TEMPORARY ROAD		
																											5	REMOVE TIN-1	LT	3+65.00
1																												TIN-1	LT	3+65.00
																											7	REMOVE TP1	LT / RT	3+65.00
																										2.1	2.5	-	TP1	LT / RT	3+65.00
																												6	REMOVE TIN-2	RT	3+65.00
1																												TIN-2	RT	3+65.00
																											91	REMOVE TP2	RT	3+66.89 to 5+98.11
																										2.2	3.8	-	TP2	RT	3+66.89 to 5+98.11
																												5	REMOVE TIN-3	LT	6+00.00
1																												TIN-3	LT	6+00.00
																											7	REMOVE TP3	LT / RT	6+00.00
																										2.1	2.5	-	TP3	LT / RT	6+00.00
																												5	REMOVE TIN-4	RT	6+00.00
1																												TIN-4	RT	6+00.00
																											95	REMOVE TP4	RT	6+01.89 to 8+48.08
																										2.5	3.3	-	TP4	RT	6+01.89 to 8+48.08
																												5	REMOVE TIN-5	LT	8+50.00
1																												TIN-5	LT	8+50.00
																											7	REMOVE TP5	LT / RT	8+50.00
																										2.1	2.4	-	TP5	LT / RT	8+50.00
																												5	REMOVE TIN-6	RT	8+50.00
1																												TIN-6	RT	8+50.00
																											35	REMOVE TP6	RT	8+51.92 to 9+48.09
																										2.5	2.9	-	TP6	RT	8+51.92 to 9+48.09

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	39 OF 76



CLASS 2 EXCAVATION	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A	FLOWABLE BACKFILL, TYPE C	18" PIPE DESIGN NO. 1	24" PIPE DESIGN NO. 2	24" PIPE DESIGN NO. 3	36" PIPE DESIGN NO. 4	42" PIPE DESIGN NO. 5	18" PIPE DESIGN NO. 6	24" PIPE DESIGN NO. 7	12" DUCTILE IRON PIPE	18" DUCTILE IRON PIPE, INCLUDES REMOVAL	24" DUCTILE IRON PIPE, INCLUDES REMOVAL	48" PIPE DESIGN NO. 8	18" PIPE DESIGN NO. 9	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36"	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE	18" PIPE DESIGN NO. 10	CLEANING DRAINAGE STRUCTURES	MANHOLE FRAME AND COVER	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX	TYPE D-W ENDWALL FOR 48" PIPE	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	REMARKS	SIDE	STATIONS
0204 0001 CY	0205 0290 CY	0220 0020 CY	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0601 0760 LF	4601 0763 LF	4601 0765 LF	0601 (+) LF	0601 (+) LF	0601 5901 LF	0601 5902 LF	4601 7325 LF	0601 7508 LF	0604 (+) LF	0605 1300 EACH	0605 2401 SET	4605 2670 EACH	0605 2678 EACH	4605 2678 EACH	0605 2731 SET	0605 2741 SET	ITEM NUMBER UNIT			
5																											REMOVE TIN-7	RT	9+50.00
																								1			TIN-7	RT	9+50.00
50																											REMOVE TP7	RT	9+51.92 to 10+63.08
								110																			TP7	RT	9+51.92 to 10+63.08
9																											REMOVE TIN-8	RT	10+65.00
5																											REMOVE TIN-9	RT	10+65.00
6																											REMOVE TP8	RT	10+65.00
																								1			TIN-8	RT	10+65.00
																								1			TIN-9	RT	10+65.00
								12																			TP8	RT	10+65.00
81																											REMOVE TP9	RT	10+66.92 to 11+63.07
								95																			TP9	RT	10+66.92 to 11+63.07
18																											REMOVE TMH-3	LT	11+65.00
																					1						TMH-3	LT	11+65.00
39																											REMOVE TP12	LT / RT	11+65.00
								42																			TP12	LT / RT	11+65.00
9																											REMOVE TIN-10	RT	11+65.00
10	10																										REMOVE TMH-2	RT	11+65.00
10																											REMOVE TP25	RT	11+65.00
																								1			TIN-10	RT	11+65.00
																					1						TMH-2	RT	11+65.00
								12																			TP25	RT	11+65.00
57																											REMOVE TP13	LT	11+66.44 to 12+04.39
									56																		TP13	LT	11+66.44 to 12+04.39
84																											REMOVE TP11	RT	11+66.91 to 13+08.16
								142																			TP11	RT	11+66.91 to 13+08.16
71																											REMOVE TP14	RT	11+66.97 to 12+40.19
								74																			TP14	RT	11+66.97 to 12+40.19

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	40 OF 76

STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2851 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3042 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3052 EACH	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5701 SET	GRADE ADJUSTMENT OF EXISTING INLETS 0606 0050 SET	GRADE ADJUSTMENT OF EXISTING MANHOLES 0606 0150 SET	REBUILT INLET BOX 0607 0013 VF	REBUILT MANHOLE 0607 0200 VF	REBUILT MANHOLE, FOR PIPE REMOVAL 4607 0200 VF	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 4854 0002 EACH	CLASS A CEMENT CONCRETE 1001 1120 CY	60 INCH STEEL JACK AND BORE PIPE 9000 0100 LS	24" TEMPORARY PIPE 9000 0317 LF	12" DIAMETER PIPE 9000 0318 LF	TEMPORARY PIPE CAP 9000 0319 EACH	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE 9203 0107 LS				MINIMUM FILL HEIGHT (FOR INFORMATION ONLY)	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
																												5		REMOVE TIN-7	RT	9+50.00
1																														TIN-7	RT	9+50.00
																												50		REMOVE TP7	RT	9+51.92 to 10+63.08
																										2.8	4.3	-		TP7	RT	9+51.92 to 10+63.08
																												9		REMOVE TIN-8	RT	10+65.00
																												5		REMOVE TIN-9	RT	10+65.00
																												6		REMOVE TP8	RT	10+65.00
1																														TIN-8	RT	10+65.00
1																														TIN-9	RT	10+65.00
																										2	5.9	-		TP8	RT	10+65.00
																												81		REMOVE TP9	RT	10+66.92 to 11+63.07
																										7.1	7.5	272		TP9	RT	10+66.92 to 11+63.07
																												18		REMOVE TMH-3	LT	11+65.00
				1											1															TMH-3	LT	11+65.00
																												39		REMOVE TP12	LT / RT	11+65.00
																										7.3	9.2	153		TP12	LT / RT	11+65.00
																												9		REMOVE TIN-10	RT	11+65.00
																														REMOVE TMH-2	RT	11+65.00
																												10		REMOVE TP25	RT	11+65.00
	1																													TIN-10	RT	11+65.00
			1																											TMH-2	RT	11+65.00
																										6.7	7.0	42		TP25	RT	11+65.00
																												57		REMOVE TP13	LT	11+66.44 to 12+04.39
																										2	13.3	236		TP13	LT	11+66.44 to 12+04.39
																												84		REMOVE TP11	RT	11+66.91 to 13+08.16
																										2.2	7.4	-		TP11	RT	11+66.91 to 13+08.16
																												71		REMOVE TP14	RT	11+66.97 to 12+40.19
																										6.3	10.8	-		TP14	RT	11+66.97 to 12+40.19

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BRANDON K. LANKEY — ENGINEER PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	41 OF 76

CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A 0205 0290 CY	FLOWABLE BACKFILL, TYPE C 0220 0020 CY	18" PIPE DESIGN NO. 1 0601 (+) LF	24" PIPE DESIGN NO. 2 0601 (+) LF	24" PIPE DESIGN NO. 3 0601 (+) LF	36" PIPE DESIGN NO. 4 0601 (+) LF	42" PIPE DESIGN NO. 5 0601 (+) LF	18" PIPE DESIGN NO. 6 0601 (+) LF	24" PIPE DESIGN NO. 7 0601 (+) LF	12" DUCTILE IRON PIPE 0601 0760 LF	18" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0763 LF	24" DUCTILE IRON PIPE, INCLUDES REMOVAL 4601 0765 LF	48" PIPE DESIGN NO. 8 0601 (+) LF	18" PIPE DESIGN NO. 9 0601 (+) LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36" 0601 5901 LF	CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36" 0601 5902 LF	24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL 4601 7325 LF	18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE 0601 7508 LF	18" PIPE DESIGN NO. 10 0604 (+) LF	CLEANING DRAINAGE STRUCTURES 0605 1300 EACH	MANHOLE FRAME AND COVER 0605 2401 SET	TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX 4605 2670 EACH	TYPE D-W ENDWALL FOR 48" PIPE 0605 2678 EACH	TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK 4605 2678 EACH	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2731 SET	TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE 0605 2741 SET	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
9	9																								REMOVE TMH-1	RT	12+44.08
																				1					TMH-1	RT	12+44.08
5																									REMOVE TIN-11	LT	13+10.00
																							1		TIN-11	LT	13+10.00
7																									REMOVE TP10	LT / RT	13+10.00
								22																	TP10	LT / RT	13+10.00
5																									REMOVE TIN-12	RT	13+10.00
																							1		TIN-12	RT	13+10.00
																									TEMPORARY DELWOOD ROAD		
							43																		P-13	LT	30+16.21 to 30+50.45
																				1					MH-5	LT	30+53.04
						89																			P-12	LT	30+56.53 to 31+45.01
																								1	IN-6	RT	31+48.36
			31																						P-11, TIN-13 TO MH-4	LT / RT	31+48.50
																								1	TIN-13	RT	31+48.50
																				1					MH-4	LT	31+48.51
						138																			P-10	LT / RT	31+51.88 to 32+55.14
59	59																								REMOVE EXISTING PIPE AND HEADWALL	RT / LT	32+32.00 to 32+34.00
																					1				EW-1	RT	32+52.41
						16																			P-9	RT	32+52.41 to 32+55.46
																				1					MH-3	RT	32+56.26
																									REBUILD MH-3	RT	32+56.26
12																									REMOVE TP15 AND TES-1	RT	32+57.97 to 32+67.65
					20																				TP15 AND TES-1	RT	32+57.97 to 32+67.65
																									DELWOOD ROAD		
															72					2					CLEAN EXISTING PIPE AND END WALLS	LT / RT	30+16.00 to 30+19.00
																									ADJUST MH-5 TO FINAL GRADE	LT	30+53.04
			6																						P-11, EXTEND TO IN-6	RT	31+48.50

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BRANDON K. LANKEY — PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	42 OF 76

STANDARD INLET BOX, HEIGHT < /= 10' 0605 2850 EACH	STANDARD INLET BOX, HEIGHT > 10' AND < /= 20' 0605 2851 EACH	TYPE 4 INLET BOX, HEIGHT < /= 10' 0605 2854 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3012 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10' 0605 3041 EACH	TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3042 EACH	TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20' 0605 3052 EACH	TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE 0605 5701 SET	GRADE ADJUSTMENT OF EXISTING INLETS 0606 0050 SET	GRADE ADJUSTMENT OF EXISTING MANHOLES 0606 0150 SET	REBUILT INLET BOX 0607 0013 VF	REBUILT MANHOLE 0607 0200 VF	REBUILT MANHOLE, FOR PIPE REMOVAL 4607 0200 VF	TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21 4854 0002 EACH	CLASS A CEMENT CONCRETE 1001 1120 CY	60 INCH STEEL JACK AND BORE PIPE 9000 0100 LS	24" TEMPORARY PIPE 9000 0317 LF	12" DIAMETER PIPE 9000 0318 LF	TEMPORARY PIPE CAP 9000 0319 EACH	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE 9203 0107 LS				MINIMUM FILL HEIGHT (FOR INFORMATION ONLY) LF	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY) LF	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																												REMOVE TMH-1	RT	12+44.08
			1																									TMH-1	RT	12+44.08
																											5	REMOVE TIN-11	LT	13+10.00
1																												TIN-11	LT	13+10.00
																											7	REMOVE TP10	LT / RT	13+10.00
																										2.1	2.4	-	TP10	LT / RT	13+10.00
																												5	REMOVE TIN-12	RT	13+10.00
1																													TIN-12	RT	13+10.00
																													TEMPORARY DELWOOD ROAD		
																										2	4.5	62	P-13	LT	30+16.21 to 30+50.45
						1																							MH-5	LT	30+53.04
																										2.5	5.8	-	P-12	LT	30+56.53 to 31+45.01
1																													IN-6	RT	31+48.36
																										3.3	5.5	-	P-11, TIN-13 TO MH-4	LT / RT	31+48.50
1																													TIN-13	RT	31+48.50
					1																								MH-4	LT	31+48.51
																										5.9	11.9	-	P-10	LT / RT	31+51.88 to 32+55.14
																													REMOVE EXISTING PIPE AND HEADWALL	RT / LT	32+32.00 to 32+34.00
																													EW-1	RT	32+52.41
																										1.5	4.7	19	P-9	RT	32+52.41 to 32+55.46
						1									2														MH-3	RT	32+56.26
													3																REBUILD MH-3	RT	32+56.26
																											12	REMOVE TP15 AND TES-1	RT	32+57.97 to 32+67.65
																										2	2	13	TP15 AND TES-1	RT	32+57.97 to 32+67.65
																													DELWOOD ROAD		
																													CLEAN EXISTING PIPE AND END WALLS	LT / RT	30+16.00 to 30+19.00
										1																			ADJUST MH-5 TO FINAL GRADE	LT	30+53.04
																										5.9	6.6	-	P-11, EXTEND TO IN-6	RT	31+48.50

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

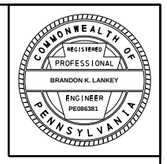
PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	43 OF 76



0204 0001 CY CLASS 2 EXCAVATION	0205 0290 CY SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 2A	0220 0020 CY FLOWABLE BACKFILL, TYPE C	0601 (+) LF 18" PIPE DESIGN NO. 1	0601 (+) LF 24" PIPE DESIGN NO. 2	0601 (+) LF 24" PIPE DESIGN NO. 3	0601 (+) LF 36" PIPE DESIGN NO. 4	0601 (+) LF 42" PIPE DESIGN NO. 5	0601 (+) LF 18" PIPE DESIGN NO. 6	0601 (+) LF 24" PIPE DESIGN NO. 7	0601 0760 LF 12" DUCTILE IRON PIPE	4601 0763 LF 18" DUCTILE IRON PIPE, INCLUDES REMOVAL	4601 0765 LF 24" DUCTILE IRON PIPE, INCLUDES REMOVAL	0601 (+) LF 48" PIPE DESIGN NO. 8	0601 (+) LF 18" PIPE DESIGN NO. 9	0601 5901 LF CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"	0601 5902 LF CLEANING EXISTING PIPE CULVERTS, DIAMETERS OVER 36"	4601 7325 LF 24" REINFORCED CONCRETE PIPE, TYPE B, 2' - 1.5' FILL, INCLUDES REMOVAL	0601 7508 LF 18" REINFORCED CONCRETE PIPE, TYPE A, 3' - 2' FILL, SHORE/TRENCH BOX, 100 YEAR DESIGN LIFE	0604 (+) LF 18" PIPE DESIGN NO. 10	0605 1300 EACH CLEANING DRAINAGE STRUCTURES	0605 2401 SET MANHOLE FRAME AND COVER	4605 2670 EACH TYPE E-S ENDWALL FOR 36" PIPE, INCLUDES TRASH RACK AND SHORE/TRENCH BOX	0605 2678 EACH TYPE D-W ENDWALL FOR 48" PIPE	4605 2678 EACH TYPE D-W ENDWALL FOR 48" PIPE, INCLUDES TRASH RACK	0605 2731 SET TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	0605 2741 SET TYPE S CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
13	13																								REMOVE TIN-13	RT	31+48.50
																									ADJUST MH-4 TO FINAL GRADE	LT	31+48.51
841	95	21	37	25	197	243	43	1686	71	42	302	192	10	51	856	118	60	8	763	15	10	1	1	1	17	5	TOTALS		

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

DRAINAGE

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	44 OF 76

0605 2850 EACH STANDARD INLET BOX, HEIGHT < /= 10'	0605 2851 EACH STANDARD INLET BOX, HEIGHT > 10' AND < /= 20'	0605 2854 EACH TYPE 4 INLET BOX, HEIGHT < /= 10'	0605 3011 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3012 EACH TYPE 4 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3041 EACH TYPE 7 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'	0605 3042 EACH TYPE 7 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 3052 EACH TYPE 8 MANHOLE, STORM WATER, HEIGHT >10' AND < /= 20'	0605 5701 SET TYPE C CONCRETE TOP UNIT, 4" CURB HEIGHT AND BICYCLE SAFE GRATE	0606 0050 SET GRADE ADJUSTMENT OF EXISTING INLETS	0606 0150 SET GRADE ADJUSTMENT OF EXISTING MANHOLES	0607 0013 VF REBUILT INLET BOX	0607 0200 VF REBUILT MANHOLE	4607 0200 VF REBUILT MANHOLE, FOR PIPE REMOVAL	4854 0002 EACH TEMPORARY SLOPE PIPE, INCLUDES TEMP CONNECTION TO P-21	1001 1120 CY CLASS A CEMENT CONCRETE	9000 0100 LS 60 INCH STEEL JACK AND BORE PIPE	9000 0317 LF 24" TEMPORARY PIPE	9000 0318 LF 12" DIAMETER PIPE	9000 0319 EACH TEMPORARY PIPE CAP	9203 0107 LS TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM FOR DRAINAGE PIPE					MINIMUM FILL HEIGHT (FOR INFORMATION ONLY)	MAXIMUM FILL HEIGHT (FOR INFORMATION ONLY)	EMBANKMENT (FOR INFORMATION ONLY)	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
												0.9																	REMOVE TIN-13	RT	31+48.50
																													ADJUST MH-4 TO FINAL GRADE	LT	31+48.51
26	1	1	3	3	1	2	1	6	2	1	3	0.9	3	1	7	---	300	65	3	---				128.7	229.9	2261	TOTALS		

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:38:52 PM

TABULATION OF QUANTITIES

PAVEMENT BASE DRAIN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	45 OF 76

GEOTEXTILE, CLASS 1	8" PAVEMENT BASE DRAIN	8" SUBSURFACE DRAIN OUTLETS	SUBSURFACE DRAIN OUTLET ENDWALL	66" RED SUBSURFACE DRAIN OUTLET MARKER	REMARKS	SIDE	STATIONS
0212 0001 LF	0610 7003 LF	0615 0023 LF	0615 0040 EACH	0615 0066 EACH	ITEM NUMBER UNIT		
					SR 0068		
500	500				CONNECT TO EXISTING PAVEMENT BASE DRAIN	LT	101+00.00 to 106+00.00
94	94				LATERAL	LT / RT	106+00.00 to 106+72.00
291	291				OUTLET TO INLET IN-5	LT	106+00.00 to 108+90.50
7	7				OUTLET TO INLET IN-4	RT	108+94.44 to 109+01.22
65	65				UNDER APPROACH SLAB	RT / LT	109+01.22 to 109+23.56
12	12				OUTLET TO INLET IN-9	RT	118+31.57 to 118+43.78
63	63				UNDER APPROACH SLAB	RT / LT	118+31.57 to 118+53.25
13	13				OUTLET TO INLET IN-7	LT	118+53.25 to 118+60.00
88	88	22	1	1	UNDER APPROACH SLAB AND OUTLET TO SLOPE	RT / LT	120+72.64 to 120+85.48
65	65				UNDERDRAIN ACROSS APPROACH SLAB	LT / RT	122+80.54 to 122+81.97
20	20				OUTLET TO IN-13	LT	122+80.54 to 123+00.00
18	18				OUTLET TO IN-12	RT	122+81.97 to 123+02.82
31	31				OUTLET TO MANHOLE MH-8	LT	123+00.00 to 123+31.00
164	164	30	1	1	OUTLET THROUGH SLOPE, INCLUDES RADIUS	RT	123+02.82 to 124+43.71
87	87				OUTLET TO MANHOLE MH-8, INCLUDES RADIUS	LT	123+34.00 to 123+88.00
91	91				OUTLET TO EXISTING INLET IN-D, INCLUDES RADIUS	LT	124+25.00 to 124+93.50
115	115	52	1	1	OUTLET THROUGH SLOPE, INCLUDES RADIUS	RT	124+69.85 to 124+41.42
50	50				OUTLET TO INLET IN-14	LT	124+93.50 to 125+48.86
					DELWOOD ROAD		
18	18	26	1	1	OUTLET THROUGH SLOPE	LT / RT	30+37.00 to 30+37.00
147	147					RT	30+37.00 to 31+84.00
					SR 8012 (EB OFFRAMP)		
62	62					RT	712+75.00 to 713+37.24
69	69					LT	712+75.00 to 713+43.86
					SR 8012 (EB ONRAMP)		
56	56					LT	600+90.78 to 601+50.00
57	57					RT	600+93.94 to 601+50.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE073152

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:11 PM

TABULATION OF QUANTITIES

PAVEMENT BASE DRAIN

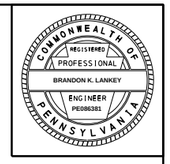
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	46 OF 76

0212 0001 LF GEOTEXTILE, CLASS 1	0610 7003 LF 8" PAVEMENT BASE DRAIN	0615 0023 LF 8" SUBSURFACE DRAIN OUTLETS	0615 0040 EACH SUBSURFACE DRAIN OUTLET ENDWALL	0615 0066 EACH 66" RED SUBSURFACE DRAIN OUTLET MARKER	ITEM NUMBER UNIT REMARKS	SIDE

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	47 OF 76



CLASS 1 EXCAVATION 0203 0001 CY	CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 0205 0281 CY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	TOPSOIL FURNISHED AND PLACED 0802 0001 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH 0804 0001 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH 0804 0003 LB	SEEDING - FORMULA E, INCLUDING MULCH 0804 0004 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH 0804 0005 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH 0804 0007 LB	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING 4806 0121 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A 0806 0140 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-5, GROUTED 4850 0033 CY	ROCK APRON 0851 0003 SY	TEMPORARY INSTALLATIONS 0851 0005 EACH	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	REMOVAL SEDIMENT AND ROCK BARRIER 0856 0001 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE S INLET 0860 0001 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	REMARKS (ITEM NUMBER / UNIT)	SIDE	STATIONS
																												PRIOR TO PHASE 1		
																													LT	110+75.00 to 111+00.00
																													RT	111+41.00 to 111+75.00
																													RT	111+75.00 to 112+75.00
																													RT	111+80.00 to 114+61.00
																													RT	112+65.00 to 112+90.00
																													RT	115+80.00 to 116+05.00
																													LT	117+31.00 to 117+91.00
																													RT	117+60.00 to 121+40.00
																													LT	120+90.00 to 122+30.00
																												PHASE 1		
																					2	2						AS DIRECTED, PWFB'S FOR TEMPORARY PUMP BYPASS SYTEM	LT / RT	96+00.00 to 127+50.00
													1															RCE-5	LT / RT	0+28.00
													1															RCE-3	LT / RT	0+36.00
													1															RCE-4	LT / RT	0+54.00
	160											800																TEMP SWALE 1	LT	1+22.00 to 9+85.28
													1															RCE-1	LT / RT	3+36.00
																									1			TIN-1	LT	3+65.00
																									1			TIN-2	RT	3+65.00
																									1			TIN-3	LT	6+00.00
																									1			TIN-4	RT	6+00.00
																									1			TIN-5	LT	8+50.00
																									1			TIN-6	RT	8+50.00
													1															RCE-2	LT / RT	8+96.00
																									1			TIN-7	RT	9+50.00
			5	0.5										1									1						RB-5	LT	9+75.00
																									1			TIN-8	RT	10+65.00
																									1			TIN-9	RT	10+65.00

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:22 PM

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	48 OF 76

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BRANDON K. LANKEY — PE086381

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY WETLAND PROTECTION MATTING	TEMPORARY PIPE BYPASS SYSTEM	TEMPORARY CHANNEL DIVERSION	TEMPORARY PUMP BYPASS SYSTEM	COMPOST SOCK SEDIMENT TRAP	COMPOST (NETTED OR OTHERWISE SECURED)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0200 SY	9000 0201 LS	9000 0202 LS	9000 0204 LS	9000 0206 LF	9000 0207 CY	CY	ITEM NUMBER / UNIT		
											PRIOR TO PHASE 1		
	30											LT	110+75.00 to 111+00.00
	50											RT	111+41.00 to 111+75.00
	75											RT	111+75.00 to 112+75.00
	292											RT	111+80.00 to 114+61.00
	35											RT	112+65.00 to 112+90.00
	40											RT	115+80.00 to 116+05.00
	155											LT	117+31.00 to 117+91.00
	350											RT	117+60.00 to 121+40.00
	290											LT	120+90.00 to 122+30.00
											PHASE 1		
	150										AS DIRECTED, PWFB'S FOR TEMPORARY PUMP BYPASS SYTEM	LT / RT	96+00.00 to 127+50.00
		20									RCE-5	LT / RT	0+28.00
		20									RCE-3	LT / RT	0+36.00
		20									RCE-4	LT / RT	0+54.00
											TEMP SWALE 1	LT	1+22.00 to 9+85.28
		20									RCE-1	LT / RT	3+36.00
											TIN-1	LT	3+65.00
											TIN-2	RT	3+65.00
											TIN-3	LT	6+00.00
											TIN-4	RT	6+00.00
											TIN-5	LT	8+50.00
											TIN-6	RT	8+50.00
		20									RCE-2	LT / RT	8+96.00
											TIN-7	RT	9+50.00
									0.5		RB-5	LT	9+75.00
											TIN-8	RT	10+65.00
											TIN-9	RT	10+65.00

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	49 OF 76

CLASS 1 EXCAVATION	CLASS 2 EXCAVATION	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1	GEOTEXTILE, CLASS 4, TYPE A	NO. 57 COARSE AGGREGATE	TOPSOIL FURNISHED AND PLACED	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	ROCK, CLASS R-3	ROCK, CLASS R-4	ROCK, CLASS R-5	ROCK, CLASS R-5, GROUTED	ROCK APRON	TEMPORARY INSTALLATIONS	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	REMOVAL SEDIMENT AND ROCK BARRIER	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE S INLET	INLET FILTER BAG FOR TYPE C INLET	REMARKS	SIDE	STATIONS
0203 0001 CY	0204 0001 CY	0205 0281 CY	0212 0014 SY	0703 0025 CY	0802 0001 CY	0804 0001 LB	0804 0003 LB	0804 0004 LB	0804 0005 LB	0804 0007 LB	4806 0121 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0850 0031 CY	0850 0032 CY	0850 0033 CY	4850 0033 CY	0851 0003 SY	0851 0005 EACH	0855 0003 EACH	0855 0004 EACH	0856 0001 EACH	0860 0000 EACH	0860 0001 EACH	0860 0002 EACH	ITEM NUMBER UNIT			
																								1			TIN-10	RT	11+65.00
																			19	1							TRA-1	LT	12+04.00 to 12+13.00
																								1			TIN-11	LT	13+10.00
																								1			TIN-12	RT	13+10.00
	55																		109								RA-4	LT	30+09.00 to 30+16.00
																									1		TIN-13	RT	31+52.00
	37		44															26									GR-1	RT	32+49.00 to 32+52.41
																												LT	101+00.00 to 104+88.00
																								1			EX IN-F	LT	104+03.00
																												LT	108+72.00 to 109+15.00
													120															LT	109+40.00 to 109+77.00
																											ROCK, CLASS R-5	LT	109+44.00 to 109+85.00
	18		27														13											LT	109+44.50 to 109+62.00
																												LT	110+13.00 to 110+31.00
																												RT	110+50.00 to 112+00.00
																												LT	110+65.00 to 110+98.00
																												LT	110+81.00 to 111+00.00
	26		37															21									GR-5	LT	111+06.51 to 111+17.02
	151		189													76											TCH-A	LT	111+17.02 to 112+22.81
																												LT	112+13.00 to 112+41.00
			5	0.5											1								1				RB-1	LT	112+23.00
																												RT	113+05.00 to 113+58.00
													136															RT	113+20.00 to 114+22.00
																												RT	113+60.00 to 114+14.00
																												LT	114+27.00 to 115+17.00
													34															RT	114+33.00 to 114+45.00
																												RT	114+42.00 to 114+58.00
																												RT / LT	114+45.00 to 114+80.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:22 PM

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	50 OF 76

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY WETLAND PROTECTION MATTING	TEMPORARY PIPE BYPASS SYSTEM	TEMPORARY CHANNEL DIVERSION	TEMPORARY PUMP BYPASS SYSTEM	COMPOST SOCK SEDIMENT TRAP	COMPOST (NETTED OR OTHERWISE SECURED)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0200 SY	9000 0201 LS	9000 0202 LS	9000 0204 LS	9000 0206 LF	9000 0207 CY	CY	ITEM NUMBER UNIT		
											TIN-10	RT	11+65.00
											TRA-1	LT	12+04.00 to 12+13.00
											TIN-11	LT	13+10.00
											TIN-12	RT	13+10.00
											RA-4	LT	30+09.00 to 30+16.00
											TIN-13	RT	31+52.00
											GR-1	RT	32+49.00 to 32+52.41
423												LT	101+00.00 to 104+88.00
											EX IN-F	LT	104+03.00
155												LT	108+72.00 to 109+15.00
												LT	109+40.00 to 109+77.00
		96									ROCK, CLASS R-5	LT	109+44.00 to 109+85.00
												LT	109+44.50 to 109+62.00
	32											LT	110+13.00 to 110+31.00
	360											RT	110+50.00 to 112+00.00
	54											LT	110+65.00 to 110+98.00
	52											LT	110+81.00 to 111+00.00
											GR-5	LT	111+06.51 to 111+17.02
											TCH-A	LT	111+17.02 to 112+22.81
	40											LT	112+13.00 to 112+41.00
									0.5		RB-1	LT	112+23.00
	82											RT	113+05.00 to 113+58.00
												RT	113+20.00 to 114+22.00
	60											RT	113+60.00 to 114+14.00
	112											LT	114+27.00 to 115+17.00
												RT	114+33.00 to 114+45.00
	32											RT	114+42.00 to 114+58.00
	108											RT / LT	114+45.00 to 114+80.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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CLASS 1 EXCAVATION 0203 0001 CY	CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 0205 0281 CY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	TOPSOIL FURNISHED AND PLACED 0802 0001 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH 0804 0001 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH 0804 0003 LB	SEEDING - FORMULA E, INCLUDING MULCH 0804 0004 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH 0804 0005 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH 0804 0007 LB	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING 4806 0121 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A 0806 0140 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-5, GROUTED 4850 0033 CY	ROCK APRON 0851 0003 SY	TEMPORARY INSTALLATIONS 0851 0005 EACH	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	REMOVAL SEDIMENT AND ROCK BARRIER 0856 0001 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE S INLET 0860 0001 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
													309																RT	114+47.00 to 114+57.00
																													LT / RT	114+89.00 to 115+09.00
																													LT	114+95.00 to 115+07.00
																													RT	115+13.00 to 117+65.00
																													RT	116+68.00 to 117+74.00
68		196	1666													1704												DOWNSTREAM TEMPORARY ACCESS ROAD	RT	116+80.00 to 121+42.00
																													RT	117+10.86 to 117+73.38
																													RT	117+71.95 to 118+51.50
																													RT	117+73.63 to 118+60.46
													214																RT	118+03.00 to 118+91.00
																													RT	118+05.00 to 118+47.00
																				23	1							TRA-2	RT	118+24.00 to 118+25.00
																													RT	118+57.00 to 119+39.00
																													RT	118+58.00 to 119+09.00
																													RT	118+90.22 to 119+79.05
																													RT	121+19.50 to 121+27.47
													92																LT	121+53.00 to 121+69.00
49		98	672													414												UPSTREAM TEMPORARY ACCESS ROAD	LT	122+08.00 to 123+87.00
																													LT	122+21.00 to 122+38.00
	14		27																14									GR-2	LT	122+31.10 to 122+44.11
			8	0.5												2									1			RB-2	LT	122+41.00
													207																LT	122+45.00 to 122+78.00
																													LT	122+48.00 to 122+79.00
	52		47															28										ROCK, CLASS R-5	LT	122+66.00 to 122+87.00
																													LT	122+82.00 to 122+94.00
			8	0.5												2									1			RB-3	LT	122+84.00
																										1		EX IN-B	LT	123+68.00
																										1		EX IN-C	LT	124+61.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	52 OF 76

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

COMPOST FILTER SOCK, 12" DIAMETER 0867 0012 LF	COMPOST FILTER SOCK, 18" DIAMETER 0867 0018 LF	COMPOST FILTER SOCK, 24" DIAMETER 0867 0022 LF	COMPOST FILTER SOCK, 32" DIAMETER 0867 0032 LF	TEMPORARY WETLAND PROTECTION MATTING 9000 0200 SY	TEMPORARY PIPE BYPASS SYSTEM 9000 0201 LS	TEMPORARY CHANNEL DIVERSION 9000 0202 LS	TEMPORARY PUMP BYPASS SYSTEM 9000 0204 LS	COMPOST SOCK SEDIMENT TRAP 9000 0206 LF	COMPOST (NETTED OR OTHERWISE SECURED) 9000 0207 CY	EMBANKMENT (FOR INFORMATION ONLY) CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
	53											RT	114+47.00 to 114+57.00
	91											LT / RT	114+89.00 to 115+09.00
	42											LT	114+95.00 to 115+07.00
												RT	115+13.00 to 117+65.00
	118											RT	116+68.00 to 117+74.00
											DOWNSTREAM TEMPORARY ACCESS ROAD	RT	116+80.00 to 121+42.00
				82								RT	117+10.86 to 117+73.38
				178								RT	117+71.95 to 118+51.50
								133				RT	117+73.63 to 118+60.46
												RT	118+03.00 to 118+91.00
	48											RT	118+05.00 to 118+47.00
											TRA-2	RT	118+24.00 to 118+25.00
		123										RT	118+57.00 to 119+39.00
		72										RT	118+58.00 to 119+09.00
				198								RT	118+90.22 to 119+79.05
								57				RT	121+19.50 to 121+27.47
												LT	121+53.00 to 121+69.00
											UPSTREAM TEMPORARY ACCESS ROAD	LT	122+08.00 to 123+87.00
	32											LT	122+21.00 to 122+38.00
											GR-2	LT	122+31.10 to 122+44.11
									0.5		RB-2	LT	122+41.00
												LT	122+45.00 to 122+78.00
		66										LT	122+48.00 to 122+79.00
											ROCK, CLASS R-5	LT	122+66.00 to 122+87.00
			86									LT	122+82.00 to 122+94.00
									0.5		RB-3	LT	122+84.00
											EX IN-B	LT	123+68.00
											EX IN-C	LT	124+61.00

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	53 OF 76

CLASS 1 EXCAVATION 0203 0001 CY	CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 0205 0281 CY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	TOPSOIL FURNISHED AND PLACED 0802 0001 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH 0804 0001 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH 0804 0003 LB	SEEDING - FORMULA E, INCLUDING MULCH 0804 0004 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH 0804 0005 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH 0804 0007 LB	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING 4806 0121 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A 0806 0140 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-5, GROUTED 4850 0033 CY	ROCK APRON 0851 0003 SY	TEMPORARY INSTALLATIONS 0851 0005 EACH	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	REMOVAL SEDIMENT AND ROCK BARRIER 0856 0001 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE S INLET 0860 0001 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																									1			EX IN-D	LT	124+93.00
																									1			EX IN-J	RT	125+14.00
																									1			EX IN-E	RT	125+44.00
																									1			EX IN-G	LT	126+75.00
																									1			EX IN-H	RT	126+90.00
																									1			EX IN-I	LT	127+24.00
																												PHASE 2		
																										1		IN-1	RT	101+00.00
														1														RCE-6	LT / RT	101+27.00
																													RT	102+08.00 to 102+56.00
																													RT	102+47.00 to 102+88.00
																													RT	102+87.00 to 103+88.00
																													RT	103+99.00 to 104+67.00
																										1		IN-2	RT	104+49.00
																													RT	104+57.00 to 105+18.00
																													RT	105+12.00 to 106+29.00
																						1	1						RT	107+62.40
																										1		IN-3	RT	107+72.00
																													RT	107+77.00 to 109+10.00
																										1		IN-4	RT	108+91.00
																						1	1						LT	110+47.05
																													RT	112+15.00 to 112+66.00
																						1	1						RT	112+71.38
1900																												DOWNSTREAM TEMPORARY ACCESS ROAD REMOVAL	RT	116+80.00 to 121+42.00
																													RT / LT	117+93.00 to 118+01.00
	24										64																	TCH-B	RT	117+93.26 to 118+01.53
			5	0.5											1									1				RB-6	RT	117+99.00
																									1			IN-9	RT	118+46.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	54 OF 76

0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0200 SY	9000 0201 LS	9000 0202 LS	9000 0204 LS	9000 0206 LF	9000 0207 CY	CY	ITEM NUMBER / UNIT	REMARKS	SIDE	STATIONS
COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY WETLAND PROTECTION MATTING	TEMPORARY PIPE BYPASS SYSTEM	TEMPORARY CHANNEL DIVERSION	TEMPORARY PUMP BYPASS SYSTEM	COMPOST SOCK SEDIMENT TRAP	COMPOST (NETTED OR OTHERWISE SECURED)	EMBANKMENT (FOR INFORMATION ONLY)				
												EX IN-D	LT	124+93.00
												EX IN-J	RT	125+14.00
												EX IN-E	RT	125+44.00
												EX IN-G	LT	126+75.00
												EX IN-H	RT	126+90.00
												EX IN-I	LT	127+24.00
												PHASE 2		
												IN-1	RT	101+00.00
		20										RCE-6	LT / RT	101+27.00
	57												RT	102+08.00 to 102+56.00
	50												RT	102+47.00 to 102+88.00
	108												RT	102+87.00 to 103+88.00
	77												RT	103+99.00 to 104+67.00
												IN-2	RT	104+49.00
	63												RT	104+57.00 to 105+18.00
	120												RT	105+12.00 to 106+29.00
	75												RT	107+62.40
												IN-3	RT	107+72.00
	142												RT	107+77.00 to 109+10.00
												IN-4	RT	108+91.00
	75												LT	110+47.05
67													RT	112+15.00 to 112+66.00
	75												RT	112+71.38
												DOWNSTREAM TEMPORARY ACCESS ROAD REMOVAL	RT	116+80.00 to 121+42.00
			87										RT / LT	117+93.00 to 118+01.00
												TCH-B	RT	117+93.26 to 118+01.53
									0.5			RB-6	RT	117+99.00
												IN-9	RT	118+46.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:22 PM

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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CLASS 1 EXCAVATION 0203 0001 CY	CLASS 2 EXCAVATION 0204 0001 CY	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 0205 0281 CY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	TOPSOIL FURNISHED AND PLACED 0802 0001 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH 0804 0001 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH 0804 0003 LB	SEEDING - FORMULA E, INCLUDING MULCH 0804 0004 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH 0804 0005 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH 0804 0007 LB	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING 4806 0121 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A 0806 0140 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-5, GROUTED 4850 0033 CY	ROCK APRON 0851 0003 SY	TEMPORARY INSTALLATIONS 0851 0005 EACH	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	REMOVAL SEDIMENT AND ROCK BARRIER 0856 0001 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE S INLET 0860 0001 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																													RT	118+54.00 to 119+05.00
																												1	IN-10	RT	119+15.00
																							1	1						RT	120+55.79
866																													CHANNEL EXCAVATION	RT / LT	121+73.00 to 122+15.00
																														RT / LT	122+07.00 to 122+19.00
																														RT	123+25.00 to 124+15.00
														1															RCE-7	RT	123+80.00
																							1	1						RT	123+91.19
																														RT	124+90.00 to 125+46.00
																													PHASE 3		
																											1		IN-6	RT	31+49.00
																														LT	99+00.00 to 106+40.00
														1															RCE-8	LT	100+26.00
			5	0.5											1									1				RB-7	LT	102+53.00
														1															RCE-9	LT	106+09.00
																			19										RA-2	LT	108+35.00 to 108+46.00
																														LT	108+38.00 to 109+15.00
																			19										RA-1	LT	108+60.00 to 108+64.00
																											1		IN-5	LT	108+91.00
																							1	1						LT	110+47.05
																														RT	110+60.00 to 111+02.00
	102																		109										RA-5	RT	111+28.00 to 111+46.00
	141										207																		CHANNEL CH-1B	RT	112+23.89 to 112+28.25
	4										25																		CHANNEL CH-1A	LT / RT	112+37.90 to 112+23.89
																							1	1						RT	112+38.17
			14	1.5												5									1				RB-4	RT	112+63.00
																														LT	118+14.00 to 120+15.00
																											1		IN-7	LT	118+68.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	56 OF 76

0867 0012 LF COMPOST FILTER SOCK, 12" DIAMETER	0867 0018 LF COMPOST FILTER SOCK, 18" DIAMETER	0867 0022 LF COMPOST FILTER SOCK, 24" DIAMETER	0867 0032 LF COMPOST FILTER SOCK, 32" DIAMETER	9000 0200 SY TEMPORARY WETLAND PROTECTION MATTING	9000 0201 LS TEMPORARY PIPE BYPASS SYSTEM	9000 0202 LS TEMPORARY CHANNEL DIVERSION	9000 0204 LS TEMPORARY PUMP BYPASS SYSTEM	9000 0206 LF COMPOST SOCK SEDIMENT TRAP	9000 0207 CY COMPOST (NETTED OR OTHERWISE SECURED)	CY EMBANKMENT (FOR INFORMATION ONLY)	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
		72										RT	118+54.00 to 119+05.00
											IN-10	RT	119+15.00
	75											RT	120+55.79
											CHANNEL EXCAVATION	RT / LT	121+73.00 to 122+15.00
			117									RT / LT	122+07.00 to 122+19.00
108												RT	123+25.00 to 124+15.00
		20									RCE-7	RT	123+80.00
	75											RT	123+91.19
69												RT	124+90.00 to 125+46.00
											PHASE 3		
											IN-6	RT	31+49.00
			830									LT	99+00.00 to 106+40.00
		20									RCE-8	LT	100+26.00
								0.5			RB-7	LT	102+53.00
		20									RCE-9	LT	106+09.00
											RA-2	LT	108+35.00 to 108+46.00
		220										LT	108+38.00 to 109+15.00
											RA-1	LT	108+60.00 to 108+64.00
											IN-5	LT	108+91.00
	75											LT	110+47.05
	125											RT	110+60.00 to 111+02.00
											RA-5	RT	111+28.00 to 111+46.00
											CHANNEL CH-1B	RT	112+23.89 to 112+28.25
											CHANNEL CH-1A	LT / RT	112+37.90 to 112+23.89
	75											RT	112+38.17
								0.5			RB-4	RT	112+63.00
			232									LT	118+14.00 to 120+15.00
											IN-7	LT	118+68.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	57 OF 76

CLASS 1 EXCAVATION	CLASS 2 EXCAVATION	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1	GEOTEXTILE, CLASS 4, TYPE A	NO. 57 COARSE AGGREGATE	TOPSOIL FURNISHED AND PLACED	SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	SEEDING - FORMULA E, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	ROCK, CLASS R-3	ROCK, CLASS R-4	ROCK, CLASS R-5	ROCK, CLASS R-5, GROUTED	ROCK APRON	TEMPORARY INSTALLATIONS	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	REMOVAL SEDIMENT AND ROCK BARRIER	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE S INLET	INLET FILTER BAG FOR TYPE C INLET	REMARKS	SIDE	STATIONS
0203 0001 CY	0204 0001 CY	0205 0281 CY	0212 0014 SY	0703 0025 CY	0802 0001 CY	0804 0001 LB	0804 0003 LB	0804 0004 LB	0804 0005 LB	0804 0007 LB	4806 0121 SY	0806 0140 SY	0811 0003 LF	0849 0020 EACH	0850 0031 CY	0850 0032 CY	0850 0033 CY	4850 0033 CY	0851 0003 SY	0851 0005 EACH	0855 0003 EACH	0855 0004 EACH	0856 0001 EACH	0860 0000 EACH	0860 0001 EACH	0860 0002 EACH	ITEM NUMBER UNIT		
																										1	IN-8	LT	119+32.00
														1													RCE-10	RT	120+09.00
																												LT	120+37.00 to 120+64.00
																					1	1						RT	120+55.78
																												LT	120+94.00 to 120+95.00
																												LT	122+66.00 to 123+42.00
																												LT	122+95.00 to 123+75.00
																			9								RA-3	LT	122+99.00 to 122+99.00
																										1	IN-13	LT	123+00.00
																										1	IN-12	RT	123+03.00
																								1			IN-11	LT	123+33.00
														1													RCE-11	LT	123+46.00
																					1	1						RT	123+91.19
																												LT	124+28.00 to 125+00.00
																								1			IN-14	LT	125+49.00
																											PHASE 4		
																										1	EX IN-A	LT	99+21.00
	21																										REMOVE GR-5 AND RESTORE AREA	LT	111+06.51 to 111+17.02
	76																										REMOVE TCH-A AND RESTORE AREA	LT	111+17.02 to 112+22.81
																												RT	114+13.00 to 114+46.00
	30											53															CHANNEL CH-2B	RT	117+88.05 to 117+98.86
	44											213															CHANNEL CH-2C	RT	117+98.86 to 119+13.87
	38										105																CHANNEL CH-2A	LT / RT	118+06.59 to 117+88.05
			5	0.5											1								1				RB-8	RT	119+00.00
	33		53															24									GR-3A	RT	120+42.14 to 120+78.56
	35		57															26									GR-3B	RT	120+78.56 to 120+98.00
	65		73															36									GR-3C	RT	120+98.00 to 121+46.36
512																											UPSTREAM TEMPORARY ACCESS ROAD REMOVAL	LT	122+08.00 to 123+87.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:22 PM

TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	58 OF 76

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY WETLAND PROTECTION MATTING	TEMPORARY PIPE BYPASS SYSTEM	TEMPORARY CHANNEL DIVERSION	TEMPORARY PUMP BYPASS SYSTEM	COMPOST SOCK SEDIMENT TRAP	COMPOST (NETTED OR OTHERWISE SECURED)	EMBANKMENT (FOR INFORMATION ONLY)	REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0200 SY	9000 0201 LS	9000 0202 LS	9000 0204 LS	9000 0206 LF	9000 0207 CY	CY	ITEM NUMBER UNIT		
											IN-8	LT	119+32.00
		20									RCE-10	RT	120+09.00
54												LT	120+37.00 to 120+64.00
	75											RT	120+55.78
	76											LT	120+94.00 to 120+95.00
185												LT	122+66.00 to 123+42.00
310												LT	122+95.00 to 123+75.00
											RA-3	LT	122+99.00 to 122+99.00
											IN-13	LT	123+00.00
											IN-12	RT	123+03.00
											IN-11	LT	123+33.00
		20									RCE-11	LT	123+46.00
	75											RT	123+91.19
98												LT	124+28.00 to 125+00.00
											IN-14	LT	125+49.00
											PHASE 4		
											EX IN-A	LT	99+21.00
										26	REMOVE GR-5 AND RESTORE AREA	LT	111+06.51 to 111+17.02
										151	REMOVE TCH-A AND RESTORE AREA	LT	111+17.02 to 112+22.81
	57											RT	114+13.00 to 114+46.00
											CHANNEL CH-2B	RT	117+88.05 to 117+98.86
											CHANNEL CH-2C	RT	117+98.86 to 119+13.87
											CHANNEL CH-2A	LT / RT	118+06.59 to 117+88.05
									0.5		RB-8	RT	119+00.00
											GR-3A	RT	120+42.14 to 120+78.56
											GR-3B	RT	120+78.56 to 120+98.00
											GR-3C	RT	120+98.00 to 121+46.36
											UPSTREAM TEMPORARY ACCESS ROAD REMOVAL	LT	122+08.00 to 123+87.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
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TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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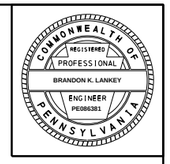

0203 0001 CY CLASS 1 EXCAVATION	0204 0001 CY CLASS 2 EXCAVATION	0205 0281 CY SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1	0212 0014 SY GEOTEXTILE, CLASS 4, TYPE A	0703 0025 CY NO. 57 COARSE AGGREGATE	0802 0001 CY TOPSOIL FURNISHED AND PLACED	0804 0001 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA B, INCLUDING MULCH	0804 0003 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	0804 0004 LB SEEDING - FORMULA E, INCLUDING MULCH	0804 0005 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA N, INCLUDING MULCH	0804 0007 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA W, INCLUDING MULCH	4806 0121 SY TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B ORGANIC COIR MATTING	0806 0140 SY PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	0811 0003 LF TEMPORARY PROTECTIVE FENCE	0849 0020 EACH ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	0850 0031 CY ROCK, CLASS R-3	0850 0032 CY ROCK, CLASS R-4	0850 0033 CY ROCK, CLASS R-5	4850 0033 CY ROCK, CLASS R-5, GROUTED	0851 0003 SY ROCK APRON	0851 0005 EACH TEMPORARY INSTALLATIONS	0855 0003 EACH PUMPED WATER FILTER BAG	0855 0004 EACH REPLACEMENT PUMPED WATER FILTER BAG	0856 0001 EACH REMOVAL SEDIMENT AND ROCK BARRIER	0860 0000 EACH INLET FILTER BAG FOR TYPE M INLET	0860 0001 EACH INLET FILTER BAG FOR TYPE S INLET	0860 0002 EACH INLET FILTER BAG FOR TYPE C INLET	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
	53		96															53									GR-4	LT	122+68.71 to 123+08.86
																											SR 68-253		
																											AS DIRECTED FOR STOCKPILE	LT / RT	96+00.00 to 127+50.00
					1316	527	1874	483	635	50	33405																ENTIRE PROJECT AS DIRECTED	LT / RT	96+00.00 to 127+50.00
3395	1179	294	3043	5	1316	527	1874	483	635	50	33806	1066	1112	11	9	2199	41	200	307	2	11	11	8	26	6	5	TOTALS		

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TABULATION OF QUANTITIES

EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	TEMPORARY WETLAND PROTECTION MATTING	TEMPORARY PIPE BYPASS SYSTEM	TEMPORARY CHANNEL DIVERSION	TEMPORARY PUMP BYPASS SYSTEM	COMPOST SOCK SEDIMENT TRAP	COMPOST (NETTED OR OTHERWISE SECURED)	EMBANKMENT (FOR INFORMATION ONLY)																							REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	9000 0200 SY	9000 0201 LS	9000 0202 LS	9000 0204 LS	9000 0206 LF	9000 0207 CY	CY																							ITEM NUMBER UNIT		
																																	GR-4	LT	122+68.71 to 123+08.86
																																	SR 68-253		
	250																																AS DIRECTED FOR STOCKPILE	LT / RT	96+00.00 to 127+50.00
					X	X	X																										ENTIRE PROJECT AS DIRECTED	LT / RT	96+00.00 to 127+50.00
1469	4583	869	1352	458	---	---	---	190	4	177																							TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BRANDON K. LANKEY
PE086381

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TABULATION OF QUANTITIES

POST CONSTRUCTION STORM MANAGEMENT

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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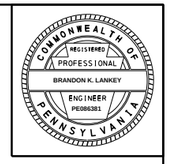


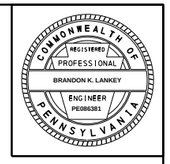
0203 0001 CY CLASS 1 EXCAVATION	0204 0001 CY CLASS 2 EXCAVATION	0212 0014 SY GEOTEXTILE, CLASS 4, TYPE A	0601 0313 LF 18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	0610 0002 LF 6" PIPE UNDERDRAIN TYPE I BACKFILL	0615 0023 LF 8" SUBSURFACE DRAIN OUTLETS	0703 0025 CY NO. 57 COARSE AGGREGATE	0703 0026 CY NO. 3 COARSE AGGREGATE	0804 0003 LB SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	4806 0113 SY TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	4806 0121 SY TEMPORARY EXTENDED-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 3B	0808 7131 EACH TUSSOCK SEDGE (PLUG)	0808 7170 EACH SOFT RUSH (PLUG)	0808 7210 EACH SOFT STEM BULRUSH (PLUG)	0850 0032 CY ROCK, CLASS R-4	9000 0312 CY IMPERVIOUS LINER	9000 0313 LF 8" PERFORATED PIPE WITH TYPE 2 BACKFILL	9000 0314 CY BASIN SOIL MIX	9000 0315 EACH OUTLET STRUCTURE	9000 0320 EACH INFILTRATION TESTING	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																			INFILTRATION TRENCH		
	84	360				2	84		438				5		418			2		LT	102+38.00 to 106+43.00
					67														OUTLET TO MH-3	LT	106+43.00 to 106+72.50
																			INFILTRATION BASIN 1		
64			40					24		706	125	125	125			160				LT	108+27.00 to 109+23.00
																	1			LT	108+99.00
																			DETENTION BASIN 1		
161			35	113				31		402	165	165	165		68		210			LT	122+84.00 to 123+80.00
																	1			LT	123+38.00
225	84	360	75	113	67	2	84	55	438	1108	290	290	290	5	68	418	370	2	2	TOTALS		

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:43 PM

TABULATION OF QUANTITIES

STREAM MITIGATION

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				10	BUTLER	68	253	62 OF 76



CLASS 2 EXCAVATION	TOPSOIL FURNISHED AND PLACED	MULCHING - STRAW	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D ORGANIC COIR MATTING	TREE, SWAMP WHITE OAK (1 1/2" CAL., B&B)	SHRUB, HAZEL ALDER (2' HT, #3 CONT.)	SHRUB, SILKY DOGWOOD (2' HT, #3 CONT.)	LIVE STAKES (SILKY DOGWOOD)	LIVE STAKES (BLACK WILLOW)	SEEDING AND SOIL SUPPLEMENTS - RIPARIAN BUFFER SEED MIXTURE	FURNISHED AND PLACED STREAMBED MATERIAL	CHANNEL BED MATERIAL	VEGETATED ROCK	IMPERVIOUS LINER	RECOVER AND STOCKPILE EXISTING CHANNEL BED SUBSTRATE														REMARKS	SIDE	STATIONS
0204 0001 CY	0802 0001 CY	0805 0022 TON	4806 0113 SY	4808 0100 EACH	4808 0120 EACH	4808 0121 EACH	4808 0140 EACH	4808 0141 EACH	9000 0308 LB	9000 0309 CY	9000 0310 CY	9000 0311 LF	9000 0312 CY	9000 0316 CY														ITEM NUMBER UNIT		
																												RELOCATED S-01		
224	42	0.1	125		11	9	125	125	1	21	60		39	19														RELOCATED S-01 UPSTREAM	LT / RT	100+65.00 to 101+87.00
474	49	0.1	147						1	11	31	396	59															RELOCATED S-01 DOWNSTREAM	LT / RT	103+93.00 to 105+92.00
																												RELOCATED UNT-1		
290	44	0.1	131		13	13	88	88	1	21	66		42	30														RELOCATED UNT-1	LT / RT	300+00.00 to 301+30.00
																												CONNOQUENESSING CREEK		
					6	6						108																CONNOQUENESSING CREEK	RT	600+00.00 to 600+95.00
				2	6	8						237																CONNOQUENESSING CREEK	LT	600+00.00 to 602+46.00
				1								59																CONNOQUENESSING CREEK	RT	601+81.00 to 602+46.00
988	135	0.3	403	3	36	36	213	213	3	53	157	800	140	49														TOTALS		

PROJECT ID: 4712 MPMS: 86105 ECMS: 86105 5/24/2023 8:39:53 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	63 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

5/25/2023 10:54:25 AM

SURVEY AND CONSTR ℄ SR 0068

21.23' 90°01'32" 89°58'55" 94 82.34' 79.93' 179°59'51"

MAG NAIL SET | MAG NAIL SET | MAG NAIL SET

POT STA 93+49.37

LIMIT OF WORK
STA 95+50.00
SEGMENT 0490 OFFSET 2582
SR 0068 SECTION 253
BUTLER TOWNSHIP
BUTLER COUNTY

SURVEY AND CONSTR ℄ SR 0068

98 89°57'07" 30.07' 89°54'47" 90°01'50" 68.65' 68.29'

3/4" REBAR | 3/4" REBAR | MAG NAIL SET

PI STA 98+15.73

CURVE DATA SR 0068
PI STA 98+15.73
Δ=8°36'50" LT
D=2°01'16"
T=213.51'
L=426.22'
R=2835.00'
E=8.03'
SE=MATCH EXISTING
PC STA 96+02.21
PT STA 100+28.43

(1) BUTLER COUNTY MEMORIAL HOSPITAL

EXISTING SIDEWALK
EXISTING CURB
HOSPITAL WAY
EXISTING CURB

START WORK
STA 96+00.00
SEGMENT 0490 OFFSET 2632
SR 0068 SECTION 253

LEGAL RIGHT-OF-WAY LINE
0.8 MILES TO SR 2004
LEGAL RIGHT-OF-WAY LINE

BEGIN MILL AND OVERLAY
STA 96+00.00

LEGAL SLOPE EASEMENT

+00 45' | +00 30' | +00 45' | +00 45' | +90 90'

END TRANSITION, SINGLE FACE CONCRETE BARRIER

LEGAL RIGHT-OF-WAY LINE

CONSTR ℄ SR 0068 TEMPORARY ROAD (SEE TRAFFIC CONTROL PLAN)

ITEM 9203-0108 TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM FOR SLOPE

UNDERGROUND STRUCTURE SUPPORT EASEMENT

+25 110' | +55 124' | +25 155'

LEGAL RIGHT-OF-WAY LINE

6" MP PLAS | TH #1A 4" LP PLASTIC | TH #1 5" PLASTIC STORM | 20" METALLIC WATER

N12°11'48"E | N0°06'08"W | PC | PT | 4 | 5

95 | 96 | 97 | 98 | 99 | 100 | 101 | 102

N21°04'02"E | N14°52'54"E | N12°27'12"E

BM#3

6" RELOCATED GAS LINE (BY OTHERS)

SURVEY AND CONSTR ℄ SR 0068

SINGLE FACE CONCRETE BARRIER

SR 0068 (EAST JEFFERSON STREET)

ASPHALT WEDGE CURB

SEE SHEET 64

20" RELOCATED WATER LINE (BY CONTRACTOR)

END MILL AND OVERLAY
BEGIN FULL DEPTH RECONSTRUCTION
STA 101+00.00

+00 30' | +00 35' | +00 50' | +50 35' | +70 50'

BILLBOARD | BILLBOARD

PROPOSED UTILITY POLE (BY OTHERS)

TO REMAIN AND BE PROTECTED

LEGAL RIGHT-OF-WAY LINE

TEMPORARY CONSTRUCTION EASEMENT

BURIED-IN-BACKSLOPE TERMINAL, SINGLE RAIL

+70 90' | +50 90'

TEMPORARY CONSTRUCTION EASEMENT

(21) BACHER HOLDINGS, LLC, A PENNSYLVANIA LIMITED LIABILITY COMPANY

(23) PITTSBURGH BESSEMER AND LAKE ERIE RAILROAD COMPANY

B&LE RAILROAD TRACKS
B&LE RAILROAD TRACKS
B&LE RAILROAD TRACKS
B&LE RAILROAD TRACKS

BUILDING

SCALE
0 25 50 FEET

LEGEND
*** THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB

FOR GEOMETRIC LAYOUT SEE SHEET 4
SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PROFILE, SEE SHEET 69

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

DES: TJM	DWG: BSP	CKD: JMB

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	64 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

BM #2 ELEV 1048.90
35.11' LT STA 106+59.42
SURVEY AND CONSTR ℄ SR 0068
CONTROL POINT

179°58'35"
218°26'47"
136°06'39"
75.47'
60.98'
105.11'
3/4" REBAR W/ CAP
SURVEY AND CONSTR ℄ SR 0068
106
PI STA 105+96.86

JEANEAN FRANCESE
PEOPLES GAS COMPANY LLC UTILITY EASEMENT
BRENT C. BENOIT, A SINGLE MAN
JOHN D. WHITTINGTON, SR. AND LORNA M. WHITTINGTON, HUSBAND AND WIFE, AS TENANTS BY THE ENTIRETY
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
EAST BRADY STREET
MARTIN MEDIA A CALIFORNIA LIMITED PARTNERSHIP, A CALIFORNIA PARTNERSHIP
PROTECT UTILITY POLES
TEMPORARY CONSTRUCTION EASEMENT
WILLIAM A. KLINE AND LUCY M. KLINE, HIS WIFE
TEMPORARY CONSTRUCTION EASEMENT
BEGIN PAVING STA 30+37.00 DELWOOD ROAD
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
LEGAL RIGHT-OF-WAY LINE

PORTION OF FENCE TO BE TEMPORARILY REMOVED BY CONTRACTOR
SIGN TO BE REMOVED
TREE (TO BE REMOVED)
UNDERGROUND STRUCTURE SUPPORT EASEMENT
ITEM 9203-0108 TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM FOR SLOPE
PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)
CONSTR ℄ SR 0068 TEMPORARY ROAD
SURVEY AND CONSTR ℄ DELWOOD ROAD
TYPE ES ENDWALL
DITCH 1
SURVEY AND CONSTR ℄ SR 0068
6" RELOCATED GAS LINE (BY OTHERS)
20" RELOCATED WATER LINE (BY CONTRACTOR)
ASPHALT WEDGE CURB
TYPE 31-SC GUIDE RAIL
LEGAL RIGHT-OF-WAY LINE
BM#2
END SECTION
N12°27'12"E 23.5'
22.0'
8.0'
86°40'27"
STOP WORK STA 33+19.26 DELWOOD ROAD
S07°01'06"W 32
TYPE 31-STRONG POST IN-LINE ANCHOR
TYPE 31-S GUIDE RAIL
PLAIN CEMENT CONCRETE CURB
DENSE VEGETATION
WETLANDS
SR 0068 (EAST JEFFERSON ST)
TYPE 31-SC GUIDE RAIL
BEGIN APPROACH SLAB STA 109+16.54
END APPROACH SLAB BEGIN STRUCTURE STA 109+41.54
N39°04'14"E 110.1'
23.5'
8.0'
TEMPORARY CONSTRUCTION EASEMENT
PITTSBURGH BESSEMER AND LAKE ERIE RAILROAD COMPANY
BACHER HOLDINGS, LLC A PENNSYLVANIA LIMITED LIABILITY COMPANY
B&LE RAILROAD TRACKS
LEGAL RIGHT-OF-WAY LINE
LEGAL AERIAL EASEMENT
SEE SHEET 63
SEE SHEET 65

CURVE DATA SR 0068
PI STA 105+96.86
Δ=26°37'03" RT
D=4°48'53"
T=281.49'
L=552.83'
R=1190.00'
E=32.84'
SE=5.0%
PC STA 103+15.36
PT STA 108+68.19

THE BUTLER WATER COMPANY, A CORPORATION CREATED BY AND EXISTING UNDER THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA

CURVE DATA DELWOOD ROAD
PI STA 32+55.52
Δ=68°42'40" LT
D=88°08'50"
T=44.43'
L=77.95'
R=65.00'
E=13.74'
SE=2.0%
PC STA 32+11.09
PT STA 32+89.04

FOR GEOMETRIC LAYOUT SEE SHEET 4
SURVEY BOOK #10-0068-253-0490-2582-0520-0669

SCALE 0 25 50 FEET

LEGEND
- ✱ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET
- ✱✱✱ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB
- ⧓ TREES TO REMAIN AND BE PROTECTED
- ✕ TREES AND PLANTER TO BE REMOVED
- —o—o— TEMPORARY FENCE

FOR PROFILE, SEE SHEETS 70 & 74

PROPOSED STRUCTURE DATA - SR 0068 OVER B&P RAILROAD AND B&LE RAILROAD	
STATION	113+80.00
TYPE	3 SPAN CONTINUOUS COMPOSITE STEEL PLATE GIRDER BRIDGE
SPAN LENGTH	860'-0" TOTAL, 1@ 270', 1 @ 300', 1 @ 290'
UNDERCLEARANCE	23.92'
ROADWAY WIDTH	63'-0"
SKEW	70°00'00" LEFT
STRUCTURE NO	S-39526

EXISTING STRUCTURE DATA	
STATION	61+40.00
TYPE	12 SPAN PRESTRESSED CONCRETE BOX BEAM, STEEL THROUGH TRUSS, AND STEEL THROUGH GIRDER BRIDGE
SPAN LENGTH	868'-0" TOTAL; TRUSS SPAN: 2@167'-6"
UNDERCLEARANCE	21.3' (SPAN 2), 21.1' (SPAN 10), 22.4' (SPAN 11)
CLEAR ROADWAY WIDTH	34'-0"
SKEW	53°41'51" LEFT
STRUCTURE NO	BMS# 10-0068-0510-0000
BUILT DATE	1936

DES: TJM | DWG: BSP | CKD: JMB

PLANS PREPARED BY MICHAEL BAKER INTERNATIONAL MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL MARK BORRELLI ENGINEER PE071352

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	65 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

PROPERTY TABULATION

(15) THE BALTIMORE AND OHIO RAILROAD COMPANY, A MARYLAND CORPORATION; AND MANUFACTURERS HANOVER TRUST COMPANY, A NEW YORK CORPORATION; AND D.B. HERTERICH, AS TRUSTEES UNDER B&O'S REFUNDING AND GENERAL MORTGAGE DATED DECEMBER 1, 1915, AS SUPPLEMENTED AND AMENDED & ALLEGHENY & WESTERN RAILROAD COMPANY, A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF PENNSYLVANIA

(12) THE BUTLER WATER COMPANY, A CORPORATION CREATED BY AND EXISTING UNDER THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA

(13) NIXSAR CORPORATION, A PENNSYLVANIA NOT-FOR-PROFIT CORPORATION

(14) WEINEL ENTERPRISES, LLC

(23) PITTSBURGH BESSEMER AND LAKE ERIE RAILROAD COMPANY

(7) KEVIN J. KRIEBEL, A SINGLE MAN

HYDRAULIC DATA:

UNT CONNOQUENESSING CREEK
DRAINAGE AREA = 0.17 SQUARE MILES (PROPOSED)
LOW CHORD ELEV = 1034.92

50 YEAR DESIGN FLOOD
DISCHARGE = 127 CFS
PROPOSED WATER SURFACE ELEVATION = 1007.97
PROPOSED CHANNEL VELOCITY = 0.34 FPS

100 YEAR FLOOD
DISCHARGE = 139 CFS
PROPOSED WATER SURFACE ELEVATION = 1008.06
PROPOSED CHANNEL VELOCITY = 0.34 FPS

FLOOD OF RECORD: NONE

RIGHT-OF-WAY FOR THE BALTIMORE AND OHIO RAILROAD COMPANY / ALLEGHENY & WESTERN RAILROAD COMPANY BASED ON CSX VAL MAP "RIGHT-OF-WAY AND TRACK MAP ALLEGHENY AND WESTERN RY", DATED JUNE 30, 1917 AND DBV 193 PAGE 282

START WORK STA 29+55.00 DELWOOD ROAD

THE BUTLER WATER COMPANY RIGHT-OF-WAY

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

ALL UNDERGROUND FACILITIES ON PARCEL 12 ARE NOT TO BE DISTURBED OR REMOVED UNLESS OTHERWISE NOTED

TEMPORARY CONSTRUCTION EASEMENT

S82°32'50"E

S65°19'23"E

S-01 TO CONNOQUENESSING CREEK (SEE STREAM MITIGATION PLAN)

℄ EXISTING BUTLER AREA SEWER AUTHORITY LICENSE AGREEMENT (DEC 15, 1978)

3/4" REBAR W/ CAP

52.59'

209.98'

53.35'

179°58'56"

89°59'32"

49°50'16"

SURVEY AND CONSTR ℄ SR 0068

POT STA 113+00.00

DENSE WOODS

ARCHAEOLOGICAL BOUNDARY

B&LE RAILROAD TRACK

PLAIN CEMENT CONCRETE CURB

CONSTR & SR 0068 TEMPORARY ROAD (SEE TRAFFIC CONTROL PLAN)

TYPE D-W ENDWALL

25' GATE

28' GATE

TYPE 8 MANHOLE

MH-6 S38°59'58"W

EW-2

KCI-201

KCI-202

KCI-203

RA-4

RA-5

P-13

P-14

P-16

P-21

N39°04'14"E

N39°11'41"E

CONSTR & TEMPORARY ACCESS ROAD NO. 1 (SEE TRAFFIC CONTROL PLAN)

LEGAL AERIAL EASEMENT

SURVEY AND CONSTR ℄ SR 0068

(EAST JEFFERSON STREET)

CONSTR & TEMPORARY ACCESS ROAD NO. 3

UNT 1 TO CONNOQUENESSING CREEK (SEE STREAM MITIGATION PLAN)

RELOCATED WATER SERVICE LINE (BY CONTRACTOR)

TEMPORARY CONSTRUCTION EASEMENT

LEGAL CHANNEL EASEMENT

LEGAL DRAINAGE EASEMENT

RELOCATED WATER 24" LINE (BY CONTRACTOR)

S-01 TO CONNOQUENESSING CREEK (SEE STREAM MITIGATION PLAN)

℄ EXISTING BUTLER AREA SEWER AUTHORITY LICENSE AGREEMENT (DEC 15, 1978)

END APPROACH SLAB BEGIN STRUCTURE STA 109+41.54

BEGIN APPROACH SLAB STA 109+16.54

SEE SHEET 64

SEE SHEET 66

MATCH LINE THIS SHEET

MATCH LINE THIS SHEET

BUTLER TOWNSHIP
SUMMIT TOWNSHIP
APPROXIMATE LOCATION

LEGEND
* THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET
** TYPE 31-S STRONG POST END TREATMENT
—PE— PRIVATE OVERHEAD ELECTRIC
—PCOM— PRIVATE OVERHEAD COMMUNICATION
—WI— PRIVATE WATER SERVICE LINE

DES: TJM	DWG: BSP	CKD: JMB

SCALE
0 25 50 FEET

SURVEY BOOK #10-0068-253-0490-2582-0520-0669
FOR GEOMETRIC LAYOUT SEE SHEET 4
FOR STRUCTURE DATA, SEE SHEET 64
FOR PROFILE, SEE SHEET 71

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER
PE073152

5/25/2023 10:54:31 AM

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	66 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

EXISTING STRUCTURE DATA	
STATION	121+80.78
TYPE	TWIN-CELL CONCRETE ARCH CULVERT
SPAN LENGTH	68'-9" TOTAL; 2 @ 34'-4½"
UNDERCLEARANCE	20'-7"
CLEAR ROADWAY WIDTH	50'-0"
SKEW	90°00'00"
STRUCTURE NO	BMS# 10-0068-0520-0027
BUILT DATE	1937

SEE SHEET 68

CURVE DATA SR 0068
PI STA 118+88.36
Δ=3°46'43" LT
D=3°43'14"
T=50.80'
L=101.56
R=1540.00'
E=0.84'
SE=4.4%
PC STA 118+37.56
PT STA 119+39.13

BM #1 ELEV 1028.67
45.59' LT STA 121+18.38
SURVEY AND CONSTR ℄ SR 0068
CONTROL POINT

SECTION, SINGLE

CURVE DATA B&P LANE
PI STA 10+49.31
Δ=13°25'02" LT
D=28°38'52"
T=23.53'
L=46.84'
R=200.00'
E=1.38'
SE=N/A
PC STA 10+25.78
PT STA 10+72.62

CURVE DATA SR 0068
PI STA 122+98.03
Δ=3°46'43" RT
D=4°48'53"
T=39.25'
L=78.48'
R=1190.00"
E=0.65'
SE=5.0%
PC STA 122+58.77
PT STA 123+37.25

SEE SHEET 65
SEE SHEET 67

DENSE WOODS
TEMPORARY CONSTRUCTION EASEMENT
B & P RAILROAD TRACK
LEGAL RIGHT-OF-WAY LINE
LEGAL SLOPE EASEMENT LINE
TYPE 31-S GUIDE RAIL
SURVEY AND CONSTR ℄ B&P LANE
STOP WORK STA 11+41.12 B&P LANE
BEGIN APPROACH SLAB STA 120+77.50
END APPROACH SLAB BEGIN STRUCTURE STA 121+02.50
EXISTING BASA 24" AC PIPE INTERCEPTOR SEWER
CONNOQUENESSING CREEK
RELOCATED WATER 24" LINE (BY CONTRACTOR)
EXTENT OF LIMITED ACCESS
PLAIN CEMENT CONCRETE CURB
CONCRETE MOUNTABLE CURB, TYPE A
GUIDE RAIL
SURVEY AND CONSTR ℄ SR 0068
SURVEY AND CONSTR ℄ EXISTING RR SEWER FACILITY
PI STA 118+88.36
PLAIN CEMENT CONCRETE CURB
TYPE 31-S GUIDE RAIL
SR 0068 (EAST JEFFERSON STREET)
CONNECT RELOCATED RR SEWER LINE TO EXISTING DUMP STATION
END STRUCTURE BEGIN APPROACH SLAB STA 118+10.55
MH#3012 TO BE ABANDONED
END APPROACH SLAB STA 118+40.56
EXISTING BASA 24" AC PIPE INTERCEPTOR SEWER TO BE ABANDONED AND GROUTED
EXISTING RR SEWER LINE 4" PVC SDR 35 TO BE ABANDONED AND GROUTED
RELOCATE RR SEWER LINE 6" PVC SDR 26
CONNECT TO EXIST 24" SEWER CONSTRUCT NEW BASA MH #3370 OVER EXIST SEWER
EXISTING BUTLER AREA SEWER AUTHORITY LICENSE AGREEMENT (DEC 15, 1978)
EXISTING BASA 24" AC PIPE INTERCEPTOR SEWER TO REMAIN
THE BALTIMORE AND OHIO RAILROAD COMPANY, A MARYLAND CORPORATION; AND MANUFACTURERS HANOVER TRUST COMPANY, A NEW YORK CORPORATION; AND D.B. HERTERICH, AS TRUSTEES UNDER B&O'S REFUNDING AND GENERAL MORTGAGE DATED DECEMBER 1, 1915, AS SUPPLEMENTED AND AMENDED & ALLEGHENY & WESTERN RAILROAD COMPANY, A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF PENNSYLVANIA
TEMPORARY CONSTRUCTION EASEMENT
CONSTR ℄ TEMPORARY ACCESS ROAD NO.2 (SEE TRAFFIC CONTROL PLAN)
NEW BASA MH #3371
RELOCATED BASA 24" SEWER
NEW BASA MH #3012
CONNECT TO EXIST SEWER, REPLACE BASA MH #3013 AT SAME LOCATION
END STRUCTURE BEGIN APPROACH SLAB STA 122+55.50
END APPROACH SLAB STA 122+80.50
TEMPORARY CONSTRUCTION EASEMENT
℄ EXISTING BUTLER AREA SEWER AUTHORITY LICENSE AGREEMENT (DEC 15, 1978)
EXISTING PAWC 24" WATER TRANSMISSION MAIN (BY RECORD)
LEGAL CHANNEL EASEMENT
TEMPORARY CONSTRUCTION EASEMENT
JEROME P. OLIVER
UNKNOWN OWNER
LEGAL RIGHT-OF-WAY LINE
WETLANDS WE
WETLANDS WH
WETLANDS WI
BUTLER TOWNSHIP
SUMMIT TOWNSHIP
APPROXIMATE LOCATION
TH #8 0.50" DIRECT BURIED CABLE BURIED TELEPHONE
TYPE 31-S GUIDE RAIL
SURVEY AND CONSTR ℄ B&P LANE
BM#1
MH#30 L4
MH#3013
#9 WATER-NOT FOUND 24" METALLIC (RECORDS)
GR-4
GR-3
GR-2
P-17
P-18
P-19
P-20
P-21
MH-7
IN-7
IN-8
IN-9
IN-10
IN-13

HYDRAULIC DATA:

SINGLE SPAN BRIDGE OVER CONNOQUENESSING CREEK
DRAINAGE AREA = 44.2 SQUARE MILES
LOW CHORD ELEV = 1019.73

50 YEAR DESIGN FLOOD
DISCHARGE = 5,030 CFS
PROPOSED WATER SURFACE ELEVATION = 1009.13
PROPOSED CHANNEL VELOCITY = 5.5 FPS

100 YEAR FLOOD
DISCHARGE = 5,860 CFS
PROPOSED WATER SURFACE ELEVATION = 1009.98
PROPOSED CHANNEL VELOCITY = 5.9 FPS
FLOOD OF RECORD: 24,500 CFS (SEPTEMBER 18, 2004)

PROPOSED STRUCTURE DATA - SR 0068 OVER CONNOQUENESSING CREEK	
STATION	121+79.00
TYPE	1 SPAN COMPOSITE PRESTRESSED CONCRETE PA BULB TEE-BEAM BRIDGE
SPAN LENGTH	150'-0" TOTAL
UNDERCLEARANCE	22'-4¾"
ROADWAY WIDTH	74'-7½"
SKEW	90°00'00"
STRUCTURE NO	S-39527

LEGEND
* THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET
** THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB AND INLET
—PE— PRIVATE OVERHEAD ELECTRIC
—WI— PRIVATE WATER SERVICE LINE

SCALE 0 25 50 FEET

FOR STRUCTURE AND HYDRAULIC DATA FOR SR 0068 OVER B&P RAILROAD AND B&LE RAILROAD SEE SHEET 64
FOR GEOMETRIC LAYOUT SEE SHEET 4
SURVEY BOOK #10-0068-253-0490-2582-0520-0669
FOR PROFILE, SEE SHEETS 72 , 73 & 74

PLANS PREPARED BY MICHAEL BAKER INTERNATIONAL MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL MARK BORRELLI ENGINEER PE071352

DES: TJM	DWG: BSP	CKD: JMB

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	67 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

BM #4 ELEV 1024.50
67.52' LT STA 124+59.42
SURVEY AND CONSTR ℄ SR 0068
CONTROL POINT

CURVE DATA
SR 8012 (EB OFFRAMP)
PI STA 711+24.90
Δ = 6°31'35" RT
D = 3°29'37"
T = 93.51'
L = 186.81'
R = 1640.00'
E = 2.66'
SE=EXISTING
PC STA 710+31.39
PT STA 712+18.20

CONNECT TO EXISTING GUIDE RAIL
TYPE 31-S GUIDE RAIL
TERMINAL SECTION, SINGLE
REMOVE EXISTING GUIDE RAIL
TERMINAL SECTION, SINGLE
START WORK STA 711+40.00 SR 8012 (EB OFFRAMP)
BEGIN FULL DEPTH RECONSTRUCTION STA 712+75.00
STOP WORK STA 714+02.69 SR 8012 (EB OFFRAMP)
TEMPORARY CONSTRUCTION EASEMENT
UNKNOWN OWNER (24)
℄ LEGAL CHANNEL EASEMENT
EX. 12" RIGHT BUTLER SEWER
LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS
WETLANDS WG
MH #3015 RIM EL 1006.79 INV EL 988.09
MH #3014 RIM EL 1002.82 INV EL 987.77
EXTENT OF LIMITED ACCESS
PLAIN CEMENT CONCRETE CURB
TYPE 31-STRONG POST IN-LINE ANCHOR
TYPE 31-S GUIDE RAIL
EXISTING INLET (GRATE ADJUSTMENT)
EXISTING PIPE (TO REMAIN)
BM#4
SURVEY AND CONSTR ℄ SR 8012 (EB OFFRAMP)
N50°55'46"W 713
SR 8012 EB OFF RAMP
GUIDE RAIL
R 20'
R10.0'
R=10'
R=61'
R=50'
R=50'
R=70'
R=85'
R=48'
R=36'
R=34'
PT
PC
SIGN
BRUSH
POLE
STUE
STOE
LP
EX IN-B
EX IN-C
EX IN-D
EX IN-E
IN-13
IN-14
IN-15
IN-11
IN-12
P-22
P-23
P-24
P-25
P-26
GR-4
RA-3
+10 165'
+55 93'
+42
+55 54'
+40 47'
+25 110'
+25 130'
9.7'
11.6'
11.6'
4.5'
10.0'
12.0'
5.0'
12.0'
8.3'
9.2'
14.0'
8.9'
8.0'
33.0'
31.3'
10.4'
24.0'
3.3'
3.9'
20.3' STA 125+51.25
20.7'
9.2'
9.4'
15.0'
14.7'
5.0'
4.6'
10.2'
SEE SHEET 66
SURVEY AND CONSTR ℄ SR 0068
N39°04'14"E
S55°39'58"E
SR 0068 (EAST JEFFERSON STREET)
EXISTING INLET (GRATE ADJUSTMENT)
RECONSTRUCT WITH PLAIN CEMENT CONCRETE MOUNTABLE CURB, TYPE B
TYPE 31-STRONG POST ANCHOR TERMINAL
TYPE 31-S GUIDE RAIL
PLAIN CEMENT CONCRETE CURB
END APPROACH SLAB STA 122+80.50
END STRUCTURE BEGIN APPROACH SLAB STA 122+55.50
START WORK STA 600+22.00 SR 8012 (EB ONRAMP)
TEMPORARY CONSTRUCTION EASEMENT
TERMINAL SECTION, SINGLE
PARCEL 16 5' GRAVEL DRIVEWAY
JEROME P. OLIVER (16)
STOP WORK STA 601+50.00 SR 8012 (EB ONRAMP)
LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS
EB ON RAMP
SR 8012
SR 0422 (EB)
SR 0422 (WB)
BENJAMIN FRANKLIN HIGHWAY (EB)
BENJAMIN FRANKLIN HIGHWAY (WB)
422
MH #9 WATER-NOT FOUND
MH #3013 4" METALLIC (RECORDS) RIM EL 1000.28 DENSE WOODS INV EL 987.68
TH #10 2" PLASTIC BURIED ELECTRIC
NW 20" RCP INV 1014.895
NW 48" CMP INV 1015.121
SW 48" CMP INV 1014.895
SW 48" CMP INV 1013.961
OVERHEAD SIGN
601
602
SCALE 0 25 50 FEET

3/4" REBAR W/ CAP
75.60'
75.06'
180°10'18"
89°54'34"
90°01'44"
60.04'
123
SURVEY AND CONSTR ℄ SR 0068
PI STA 122+98.05

3/4" REBAR W/ CAP
136.54'
76.04'
180°01'14"
90°02'38"
80.00'
89°57'46"
129
SURVEY AND CONSTR ℄ SR 0068
POT STA 129+48.57

STOP WORK STA 127+50.00 SEGMENT 0520 OFFSET 0619 SR 0068 SECTION 253

LIMIT OF WORK STA 128+00.00 SEGMENT 0520 OFFSET 0669 SR 0068 SECTION 253 SUMMIT TOWNSHIP BUTLER COUNTY

0.08 MILES TO SR 0038

CURVE DATA
SR 8012 (EB ONRAMP)
PI STA 601+07.47
Δ = 24°51'13" LT
D = 14°52'55"
T = 84.84'
L = 167.00'
R = 385.00'
E = 9.24'
SE=EXISTING
PC STA 600+22.63
PT STA 601+89.64

CURVE DATA SR 0068
PI STA 122+98.03
Δ=3°46'43" RT
D=4°48'53"
T=39.25'
L=78.48'
R=1190.00'
E=0.65'
SE=5.0%
PC STA 122+58.77
PT STA 123+37.25

LEGEND
✱ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET
—STUE— SUMMIT TOWNSHIP UNDERGROUND ELECTRIC
—STOE— SUMMIT TOWNSHIP OVERHEAD ELECTRIC

FOR STRUCTURE AND HYDRAULIC DATA FOR SR 0068 OVER CONNOQUENESSING CREEK SEE SHEET 66

FOR GEOMETRIC LAYOUT SEE SHEET 4

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PROFILE, SEE SHEETS 72 , 73 & 75

PLANS PREPARED BY MICHAEL BAKER INTERNATIONAL MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL MARK BORRELLI ENGINEER PE071352

DES: TJM | DWG: BSP | CKD: JMB

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SR_0068_Roadway_Plans.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	68 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

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DENSE WOODS
B&LE RAILROAD TRACK
B&LE RAILROAD TRACK
B&LE RAILROAD TRACK
B&LE RAILROAD TRACK
B&LE RAILROAD TRACK
DENSE WOODS
BUILDING
B & P RAILROAD TRACK
BUFFALO & PITTSBURGH RAILROAD YARD
SIGN
STOCKPILES
CONNOQUENESSING CREEK
START WORK
STA 8+50.00
B&P LANE
TEMPORARY CONSTRUCTION EASEMENT
TEMPORARY ACCESS ROAD
120+55
340'
121+30
350'
121+60
305'
PARKING
PE
BUTLER TOWNSHIP
SUMMIT TOWNSHIP
APPROXIMATE LOCATION
CURVE DATA B&P LANE
PI STA 10+49.31
Δ=11°25'02" LT
D=28°38'52"
T=23.53'
L=46.84'
R=200.00'
E=1.38'
SE=NORMAL CROWN
PC STA 10+25.78
PT STA 10+72.62
℄ EXISTING RIGHT-OF-WAY BUTLER AREA SEWER AUTHORITY
+84
292'
24
UNKNOWN OWNER
TEMPORARY CONSTRUCTION EASEMENT
LEGAL CHANNEL EASEMENT
121+15
300'
120+75
300'
TERMINAL SECTION, SINGLE
TYPE 31-S GUIDE RAIL
121+32
244'
121+55
240'
TERMINAL SECTION, SINGLE
24
UNKNOWN OWNER
TYPE 31-S GUIDE RAIL
LEGAL RIGHT-OF-WAY LINE
WETLANDS WE
LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS
SMH #3015
RIM EL 10
INV EL 98
SEE SHEET 67
TEMPORARY ACCESS TO PROPOSED SLOPE (MINIMUM 11')
TYPE 31-S GUIDE RAIL
SURVEY AND CONSTR LINE @ B&P LANE
120+90
170'
+25
170'
+10
155'
RELOCATED WATER 24" LINE (BY CONTRACTOR)
GR-4
LEGAL RIGHT-OF-WAY LINE
CONNOQUENESSING CREEK
24" W WATER
8" SANIT
SMH#30
RIM EL 1002.82
INV EL 987.77
+55
93'
EXTENT OF LIMITED ACCESS
S24°36'08"E 19.41'
8.3'
+19.80
+00
93'
PC
PT
P-UP
TANK
SHED
BUILDING
AIR LINE
TANKS
UNKNOWN
BLDG
FLAGPOLE
117+25
200'
117+45
100'
118+75
95'
118+60
85'
119+40
245'
119+42
210'
119+35
181'
119+20
180'
119+20
135'
119+70
115'
119+25
95'
119+25
75'
120+20
68'
LEGAL SLOPE EASEMENT LINE
LEGAL RIGHT-OF-WAY LINE
LEGAL RIGHT-OF-WAY LINE
SCALE
0 25 50 FEET
SEE SHEET 66
SURVEY BOOK #10-0068-253-0490-2582-0520-0669
FOR CURVE DATA AND GEOMETRIC LAYOUT, SEE SHEET 4
FOR B&P LANE PROFILE, SEE SHEET 74

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

DES: TJM	DWG: BSP	CKD: JMB

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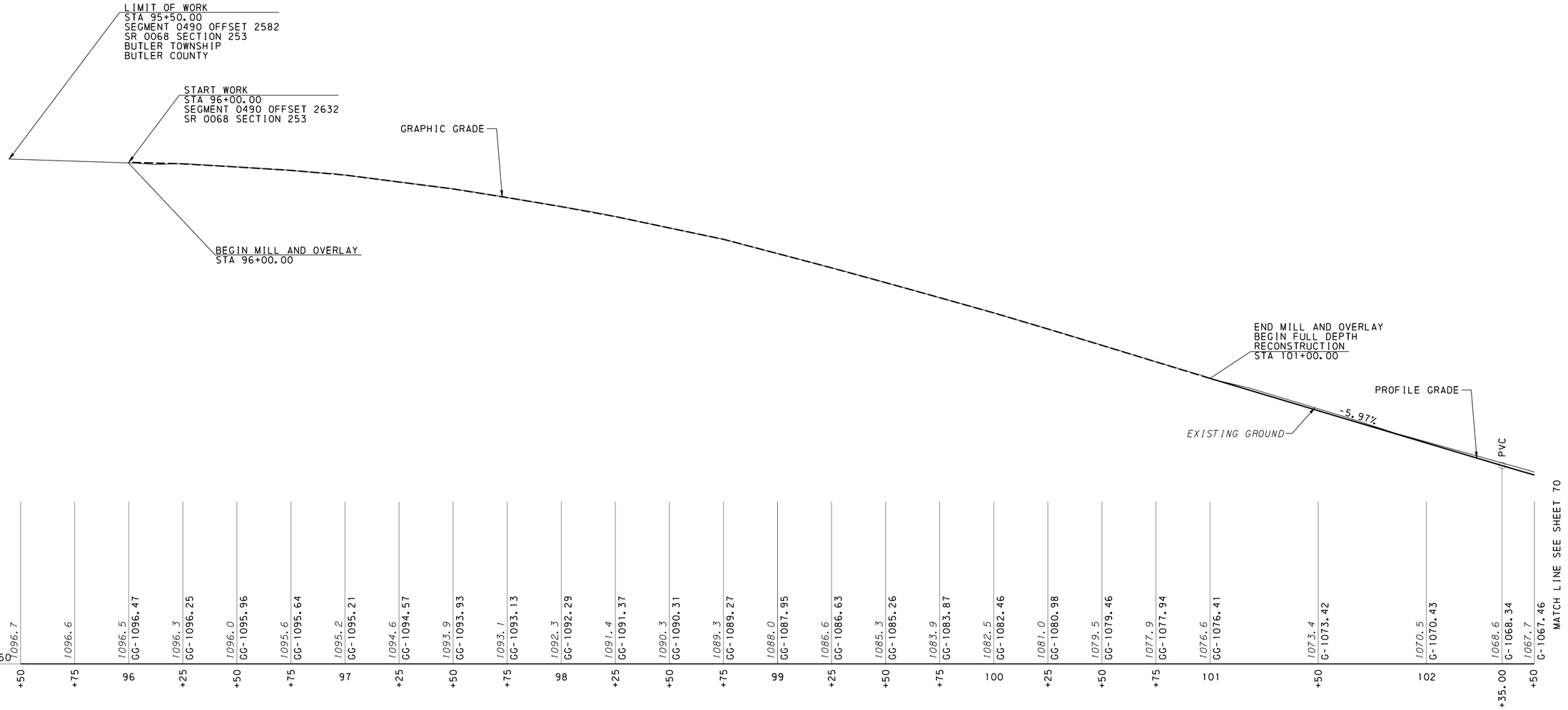
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	69 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PROFILE SR 0068

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DES: TJM	DWG: BSP	CKD: JMB

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
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SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEET 63

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SR0068_253_pro.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	70 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

EXISTING STRUCTURE DATA	
STATION	61+40.00
TYPE	12 SPAN PRESTRESSED CONCRETE BOX BEAM, STEEL THROUGH TRUSS, AND STEEL THROUGH GIRDER BRIDGE
SPAN LENGTH	868'-0" TOTAL; TRUSS SPAN: 2@167'-6"
UNDERCLEARANCE	21.3' (SPAN 2, 21.1' (SPAN 10), 22.4' (SPAN 11)
CLEAR ROADWAY WIDTH	34'-0"
SKEW	53°41'51" LEFT
STRUCTURE NO	BMS# 10-0068-0510-0000
BUILT DATE	1936

PROPOSED STRUCTURE DATA - SR 0068 OVER B&P RAILROAD AND B&LE RAILROAD	
STATION	113+80.00
TYPE	3 SPAN CONTINUOUS COMPOSITE STEEL PLATE GIRDER BRIDGE
SPAN LENGTH	860'-0" TOTAL, 1@ 270', 1 @ 300', 1 @ 290'
UNDERCLEARANCE	23'-11"
ROADWAY WIDTH	63'-0"
SKEW	70°00'00" LEFT
STRUCTURE NO	S-39526

E,C

PVI STA 104+50.00
ELEV = 1055.50'
VC =430.00'
MO = 2.84'
HLSD = 372'

PROFILE GRADE

PVT

-0.69%

EXISTING GROUND

18" PIPE

MATCH LINE SEE SHEET 69

MATCH LINE SEE SHEET 71

| | | | |

HYDRAULIC DATA:

UNT CONNOQUENESSING CREEK
DRAINAGE AREA = 0.17 SQUARE MILES (PROPOSED)
LOW CHORD ELEV = 1034.92

50 YEAR DESIGN FLOOD
DISCHARGE = 127 CFS
PROPOSED WATER SURFACE ELEVATION = 1007.97
PROPOSED CHANNEL VELOCITY = 0.34 FPS

100 YEAR FLOOD

DISCHARGE = 139 CFS
PROPOSED WATER SURFACE ELEVATION = 1008.06
PROPOSED CHANNEL VELOCITY = 0.34 FPS

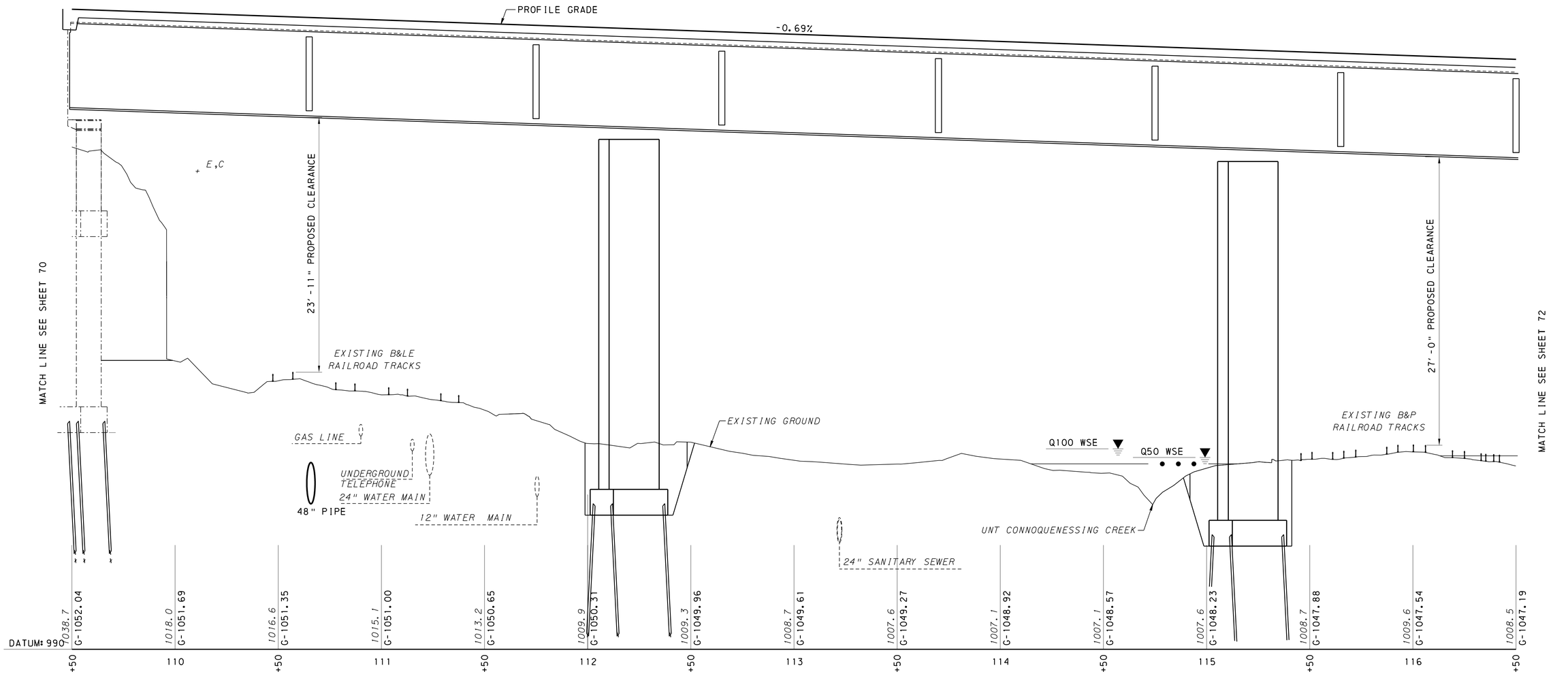
FLOOD OF RECORD: NONE

EXISTING STRUCTURE DATA	
STATION	61+40.00
TYPE	12 SPAN PRESTRESSED CONCRETE BOX BEAM, STEEL THROUGH TRUSS, AND STEEL THROUGH GIRDER BRIDGE
SPAN LENGTH	868'-0" TOTAL; TRUSS SPAN: 2@167'-6"
UNDERCLEARANCE	21.3' (SPAN 2, 21.1' (SPAN 10), 22.4' (SPAN 11)
CLEAR ROADWAY WIDTH	34'-0"
SKEW	53°41'51" LEFT
STRUCTURE NO	BMS# 10-0068-0510-0000
BUILT DATE	1936

PROPOSED STRUCTURE DATA - SR 0068 OVER B&P RAILROAD AND B&LE RAILROAD	
STATION	113+80.00
TYPE	3 SPAN CONTINUOUS COMPOSITE STEEL PLATE GIRDER BRIDGE
SPAN LENGTH	860'-0" TOTAL, 1@ 270', 1 @ 300', 1 @ 290'
UNDERCLEARANCE	23'-11"
ROADWAY WIDTH	63'-0"
SKEW	70°00'00" LEFT
STRUCTURE NO	S-39526

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	71 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PROFILE SR 0068

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DES: TJM	DWG: BSP	CKD: JMB

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEET 65

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EXISTING STRUCTURE DATA	
STATION	121+80.78
TYPE	TWIN-CELL CONCRETE ARCH CULVERT
SPAN LENGTH	68'-9" TOTAL; 2 @ 34'-4½"
UNDERCLEARANCE	20'-7"
CLEAR ROADWAY WIDTH	50'-0"
SKEW	90°00'00"
STRUCTURE NO	BMS# 10-0068-0520-0027
BUILT DATE	1937

PROPOSED STRUCTURE DATA - SR 0068 OVER CONNOQUENESSING CREEK	
STATION	121+79.00
TYPE	1 SPAN COMPOSITE PRESTRESSED CONCRETE PA BULB TEE-BEAM BRIDGE
SPAN LENGTH	150'-0" TOTAL
UNDERCLEARANCE	22'-10"
ROADWAY WIDTH	74'-7½"
SKEW	90°00'00"
STRUCTURE NO	S-39527

HYDRAULIC DATA:

SINGLE SPAN BRIDGE OVER
CONNOQUENESSING CREEK
DRAINAGE AREA = 44.2 SQUARE MILES
LOW CHORD ELEV = 1019.73

50 YEAR DESIGN FLOOD
DISCHARGE = 5,030 CFS
PROPOSED WATER SURFACE ELEVATION = 1009.13
PROPOSED CHANNEL VELOCITY = 5.5 FPS

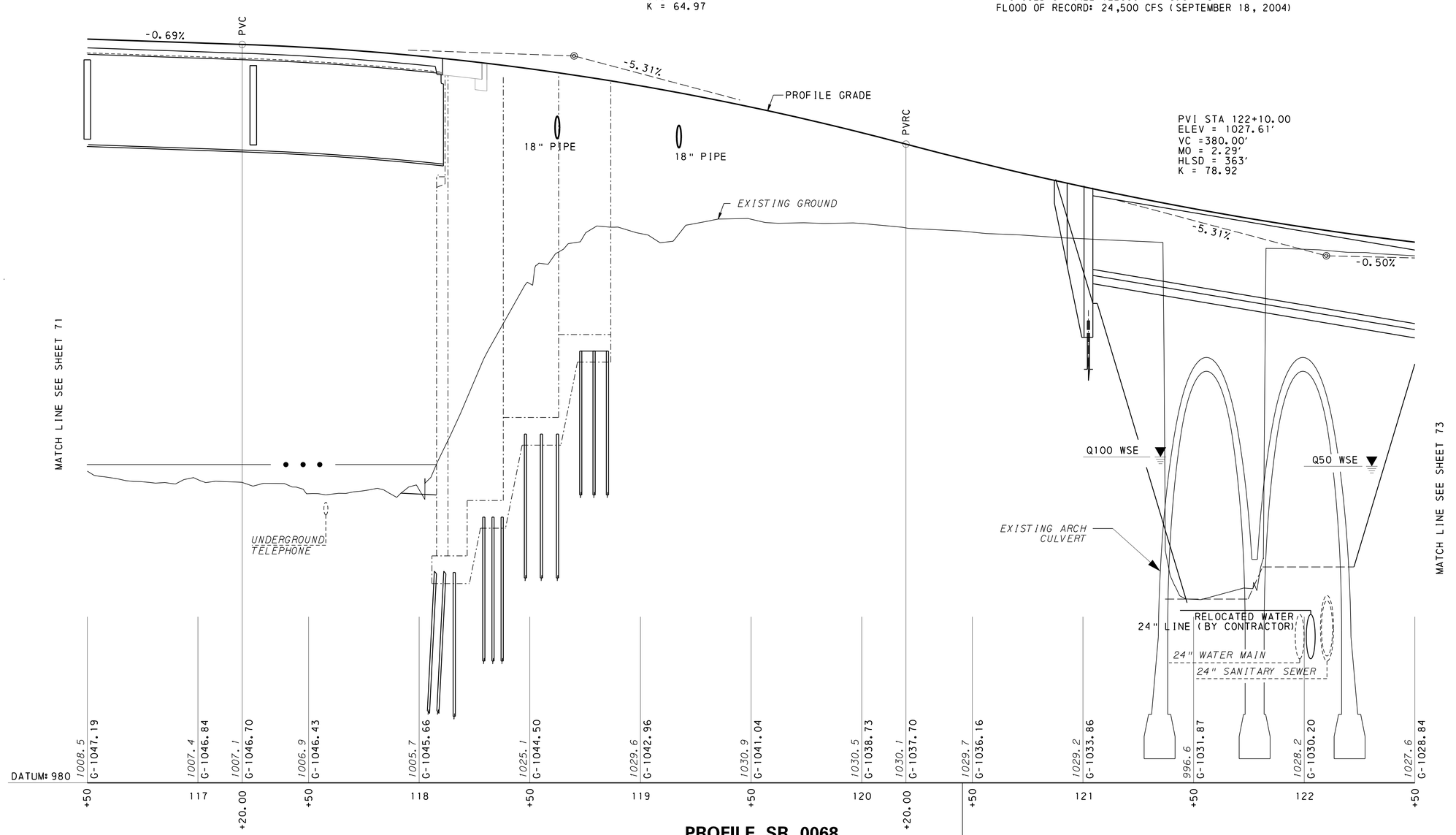
100 YEAR FLOOD
DISCHARGE = 5,860 CFS
PROPOSED WATER SURFACE ELEVATION = 1009.98
PROPOSED CHANNEL VELOCITY = 5.9 FPS
FLOOD OF RECORD: 24,500 CFS (SEPTEMBER 18, 2004)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	72 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA 118+70.00
ELEV = 1045.67'
VC =300.00'
MO = -1.73'
SSD = 384'
K = 64.97

PVI STA 122+10.00
ELEV = 1027.61'
VC =380.00'
MO = 2.29'
HLSD = 363'
K = 78.92



PROFILE SR 0068

STA 120+45.56 SURVEY AND CONSTR ℄ SR 0068 =
STA 11+80.27 SURVEY AND CONSTR ℄ B&P LANE

SCALE
HORIZONTAL 0 25 50 FEET
VERTICAL 0 5 10 FEET

DES: TJM | DWG: BSP | CKD: JMB

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEET 66

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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PE073152

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	73 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

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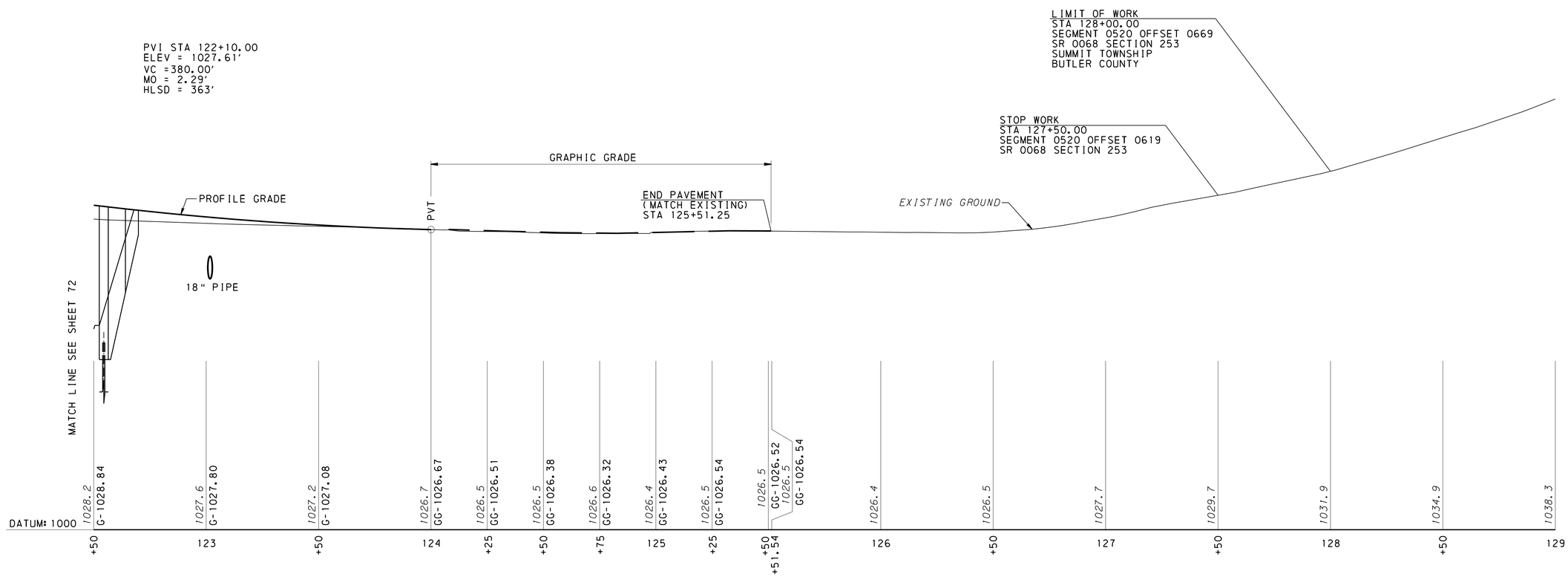
PVI STA 122+10.00
ELEV = 1027.61'
VC =380.00'
MO = 2.29'
HLSD = 363'

LIMIT OF WORK
STA 128+00.00
SEGMENT 0520 OFFSET 0669
SR 0068 SECTION 253
SUMMIT TOWNSHIP
BUTLER COUNTY

STOP WORK
STA 127+50.00
SEGMENT 0520 OFFSET 0619
SR 0068 SECTION 253



PROFILE SR 0068

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DES: TJM	DWG: BSP	CKD: JMB

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEET 67

PLANS PREPARED BY
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

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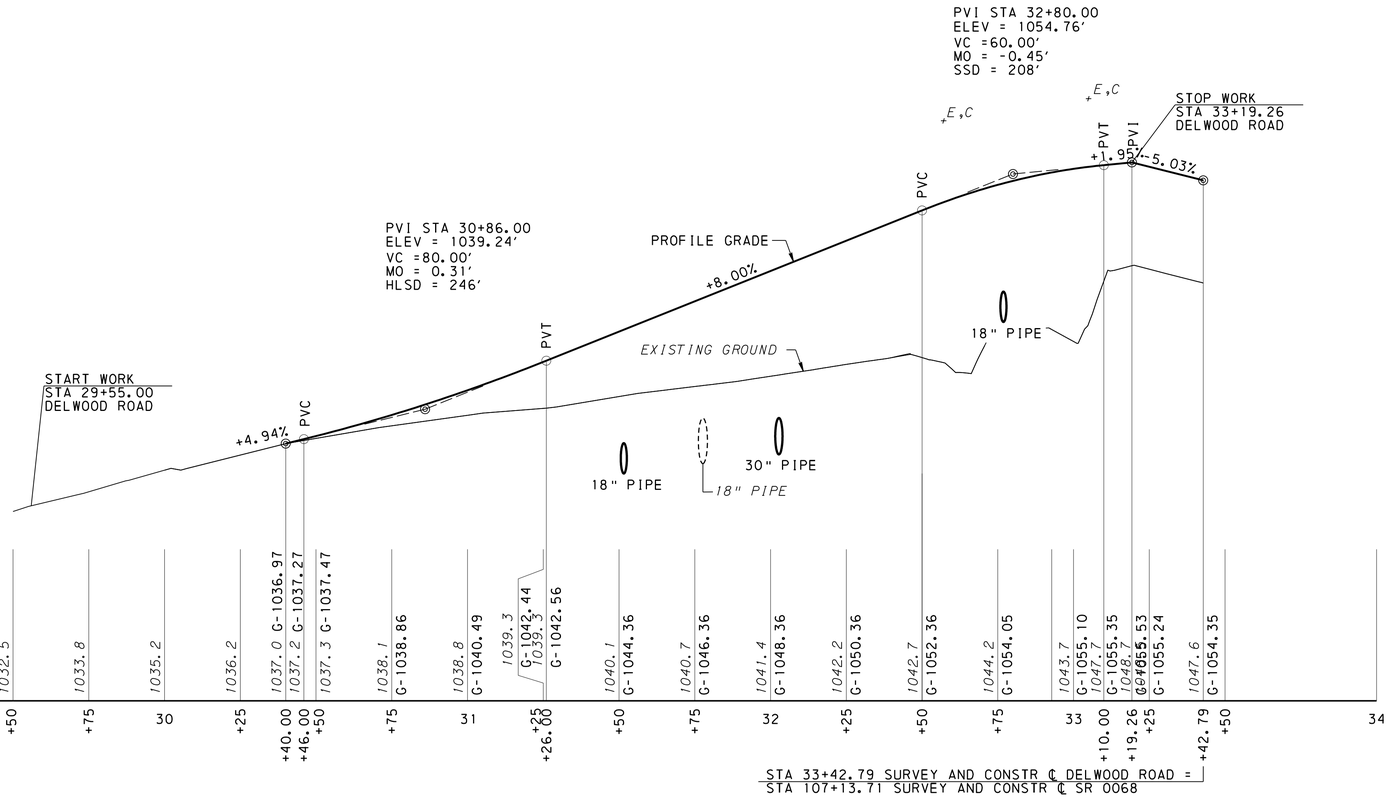
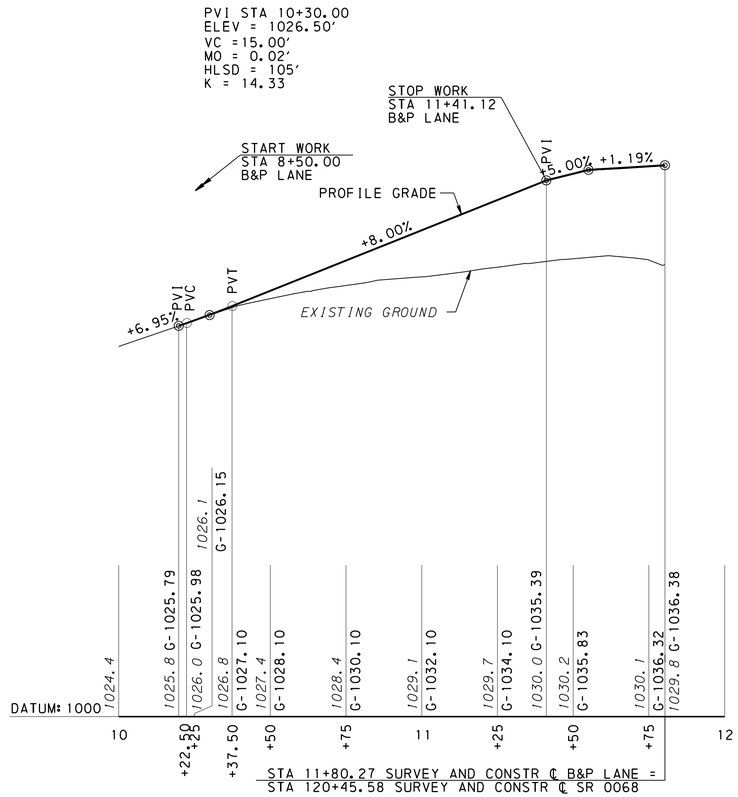
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	74 OF 76

BUTLER TOWNSHIP AND SUMMIT TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



PROFILE DELWOOD ROAD



PROFILE B&P LANE

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DES: TJM	DWG: BSP	CKD: JMB

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
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REGISTERED PROFESSIONAL
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ENGINEER PE071352

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEETS 64 , 66 & 68

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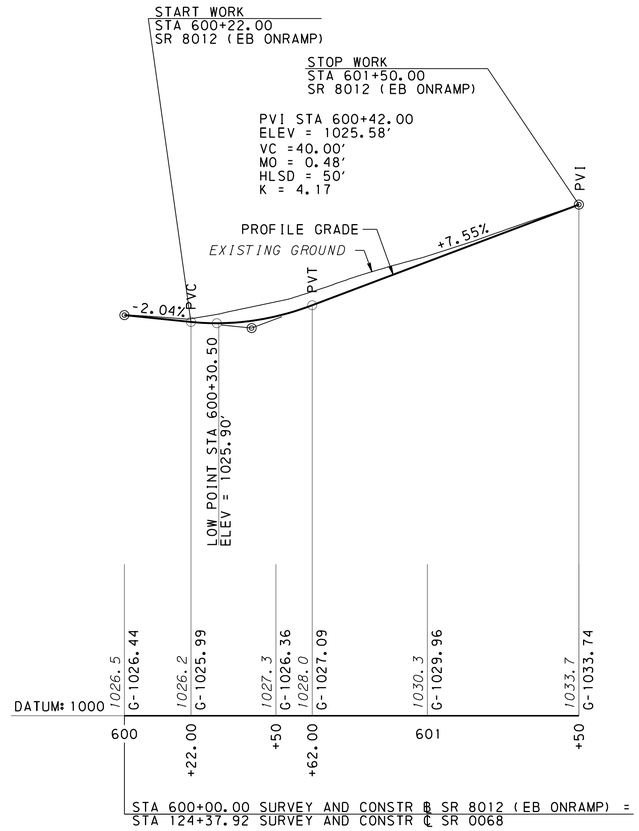
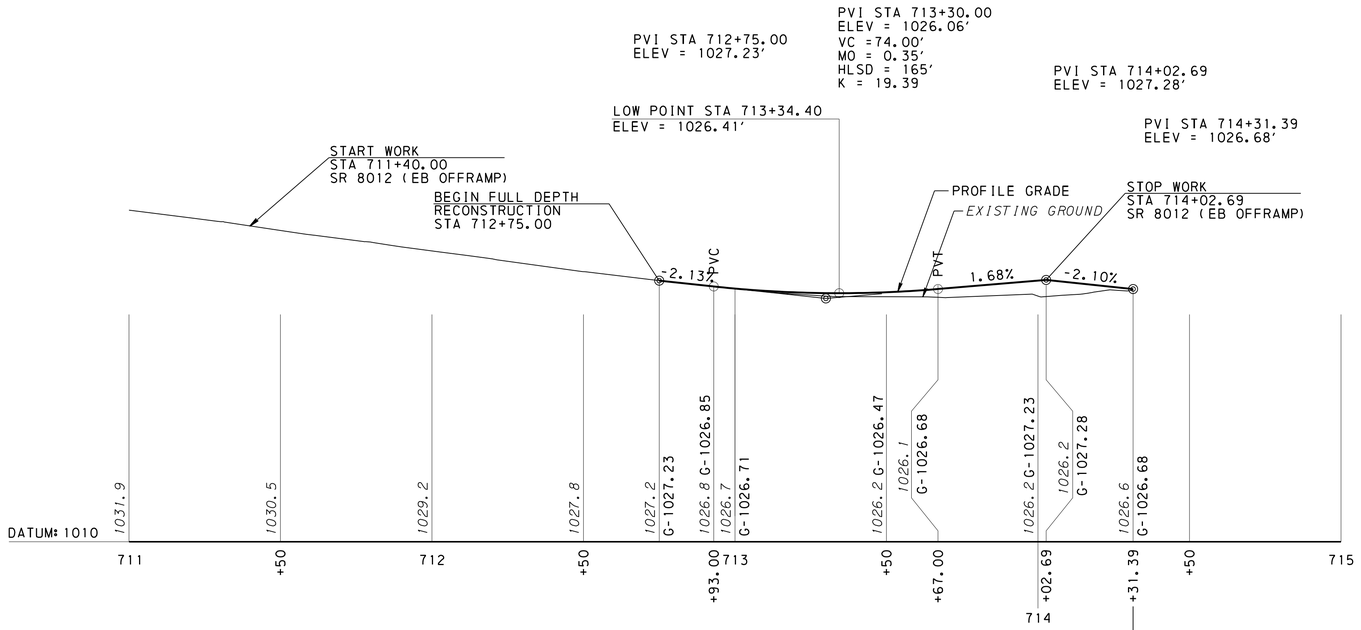
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	75 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PROFILE SR 8012 (EB ON RAMP)



PROFILE SR 8012 (EB OFF RAMP)

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DES: TJM	DWG: BSP	CKD: JMB

SURVEY BOOK #10-0068-253-0490-2582-0520-0669

FOR PLAN, SEE SHEETS 67

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL MARK BORRELLI
ENGINEER PE073152

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	BUTLER	0068	253	76 OF 76
BUTLER TOWNSHIP AND SUMMIT TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PROPOSED DRAINAGE

IN-6:

TYPE S CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 31+48.36, 19.11' RT
TG EL 1044.04
INV OUT EL 1036.24

MH-4:

REBUILT MANHOLE
STA 31+48.51, 21.62' LT
TG EL 1043.56

MH-5:

GRADE ADJUSTMENT OF
EXISTING MANHOLES
STA 30+53.04, 18.80' LT
TG EL 1036.41

IN-1:

TYPE S CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 101+02.48, 16.22' RT
TG EL 1075.88
INV OUT EL 1070.40

IN-2:

TYPE S CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 104+49.51, 27.21 RT
TG EL 1057.55
INV IN EL 1052.00
INV OUT EL 1051.83

IN-3:

TYPE S CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 107+72.08, 29.40' RT
TG EL 1052.42
INV IN EL 1047.00
INV OUT EL 1046.83

IN-4:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
TYPE 4 INLET BOX, HEIGHT < /=10'
STA 108+88.09, 30.85' RT
TG EL 1051.56
INV IN EL 1045.50 (IN-3)
INV IN EL 1047.00 (WALL DRAIN)
INV IN EL 1045.12 (12" DIP)
INV OUT EL 1044.95

IN-5:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 108+90.46, 31.35' LT
TG EL 1052.95
INV IN EL 1044.30
INV OUT EL 1044.13

MH-1:

MANHOLE FRAME AND COVER
TYPE 4 MANHOLE, STORM WATER,
HEIGHT >5' AND < /= 10'
STA 108+70.37, 79.16' LT
TG EL 1034.25
INV IN EL 1029.75
INV OUT EL 1027.70

OUTLET:

STA 108+64.36, 94.30' LT (24" PIPE)
INV OUT EL 1027.50

ES-1:

END SECTIONS FOR 24" PIPE
STA 106+48.85, 49.20' LT (24" PIPE)
INV IN EL 1053.25 (24" PIPE)

MH-2:

MANHOLE FRAME AND COVER
TYPE 4 MANHOLE, STORM WATER,
HEIGHT >10' AND < /= 20',
INCLUDES ADDITIONAL FORMED CONCRETE
STA 108+12.15, 94.84' LT
TG EL 1036.75
INV IN EL 1032.50
INV OUT EL 1027.75

OUTLET:

STA 108+35.00, 103.47' LT (24" PIPE)
INV OUT EL 1027.50

IN-7:

TYPE M CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 118+68.80, 29.69' LT
TG EL 1043.26
INV OUT EL 1039.30

IN-8:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 119+32.18, 30.48' LT
TG EL 1041.00
INV OUT EL 1037.00

IN-9:

TYPE M CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 118+46.12, 30.02' RT
TG EL 1045.44
INV IN EL 1038.60
INV OUT EL 1038.43

IN-10:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 119+14.49, 33.15' RT
TG EL 1043.49
INV IN EL 1035.50 (IN-8)
INV IN EL 1037.50 (IN-9)
INV OUT EL 1035.00

MH-7:

MANHOLE FRAME AND COVER
TYPE 4 MANHOLE, STORM WATER,
HEIGHT >10' AND < /= 20',
INCLUDES ADDITIONAL FORMED CONCRETE
STA 120+00.00, 34.91' RT
TG EL 1038.55
INV IN EL 1034.00
INV OUT EL 1028.60

OUTLET:

STA 120+42.32, 61.57' RT (18" PIPE)
INV OUT EL 1028.00

IN-12:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 123+02.81, 40.94' RT
TG EL 1026.73
INV OUT EL 1022.90

IN-11:

TYPE M CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 123+34.03, 12.50' LT
TG EL 1028.56
INV OUT EL 1024.50

IN-15:

TYPE M CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 123+34.03, 31.89' LT
TG EL 1028.94
INV IN EL 1024.20
INV OUT EL 1024.00

IN-13:

TYPE C CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 123+00.13, 33.19' LT
TG EL 1029.86
INV IN EL 1022.50 (IN-12)
INV IN EL 1023.60 (MH-8)
INV OUT EL 1022.33

OUTLET:

STA 122+98.87, 67.28' LT (18" PIPE)
INV OUT EL 1022.00

IN-14:

TYPE M CONC TOP UNIT AND
BICYCLE SAFE GRATE
STANDARD INLET BOX, HEIGHT < /=10'
STA 125+48.86, 40.20' LT
TG EL 1025.77

EW-2:

TYPE D-W ENDWALL FOR 48" PIPE,
INCLUDES TRASH RACK
STA 110+27.51, 55.91' LT
INV IN EL 1014.00

MH-6:

MANHOLE FRAME AND COVER
TYPE 8 MANHOLE, STORM WATER,
HEIGHT >10' AND < /= 20',
INCLUDES ADDITIONAL FORMED CONCRETE
STA 110+27.94, 41.92' LT
TG EL 1019.85
INV IN EL 1013.42
INV OUT EL 1004.49

EW-3 (OUTLET):

TYPE D-W ENDWALL FOR 48" PIPE,
STA 111+28.23, 79.90' RT
INV OUT EL 1003.41

DES: SKW	DWG: SKW	CKD: BKL

DRAINAGE SCHEDULE

PLANS PREPARED BY
MICHAEL BAKER INTERNATIONAL
MOON TOWNSHIP, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
BRANDON K. LANKEY
ENGINEER
PE086381

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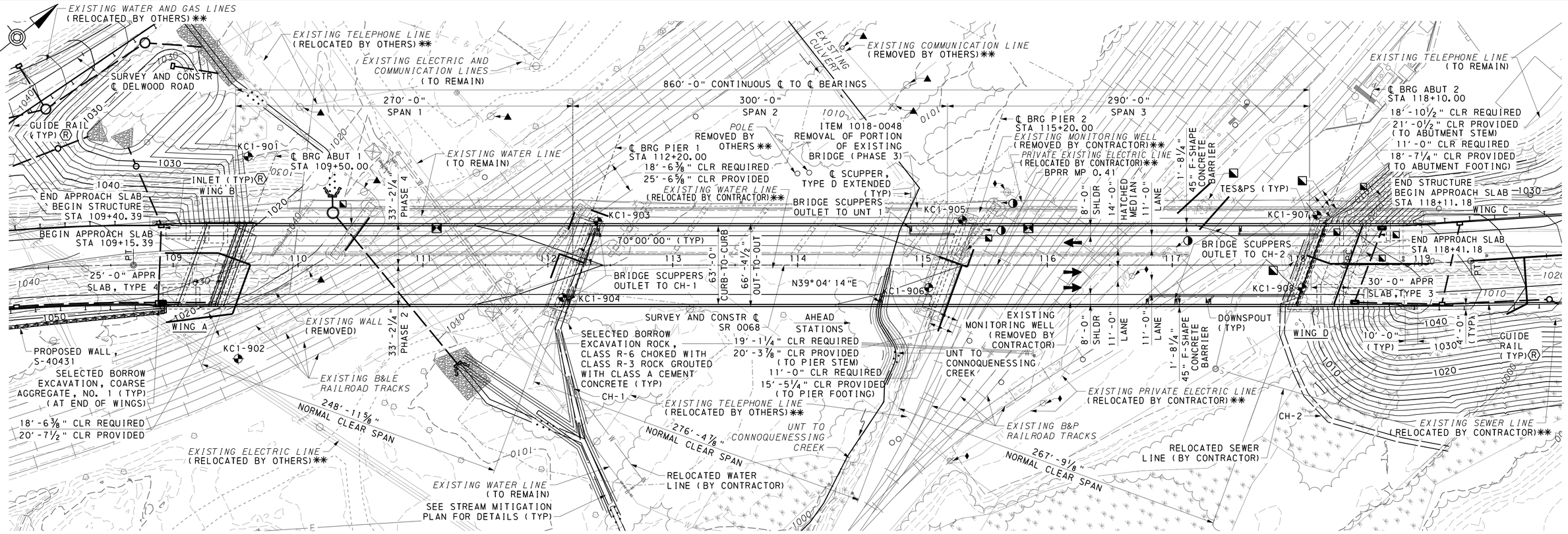
0068 Karns Drainage schedule.dgn



PLAN

NOTES:

1. FOR EXISTING BRIDGE INFORMATION, SEE GENERAL NOTES.

LEGEND:

- ➔ DENOTES TRAFFIC DIRECTION
- ·---· DENOTES EXISTING GROUND CONTOURS (2 FT INTERVALS)
- ——— DENOTES PROPOSED GROUND CONTOURS (2 FT INTERVALS)
- ⊠ DENOTES POINT OF MINIMUM VERTICAL CLEARANCE AT STA 111+07.97 OFFSET 29.75' LT FOR B&LE RAILROAD AT STA 115+84.84 OFFSET 29.75' LT FOR B&PRR
- ⊕ DENOTES CORE BORING LOCATION
- Ⓡ DENOTES ROADWAY ITEM
- ** DENOTES SEE ROADWAY CONSTRUCTION PLAN
- ▲ DENOTES *EXISTING POLE* (REMOVED BY OTHERS)
- ♦ DENOTES *EXISTING POLE* (REMOVED BY CONTRACTOR)
- ◪ DENOTES ENTIRE EXISTING FOOTING REMOVED
- ◑ DENOTES PORTION OF FOOTING REMOVED (SEE DETAIL ON SHEET 2)
- TES&PS DENOTES TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM
- B&LE DENOTES BESSEMER & LAKE ERIE
- B&PRR DENOTES BUFFALO & PITTSBURGH RAILROAD
- MP DENOTES MILEPOST

AS-DRILLED CORE BORINGS

BORING	STATION	OFFSET	TOP OF HOLE ELEV
KC1-901	109+60.00	87.0' LT	1020.0
KC1-902	109+52.00	75.0' RT	1015.9
KC1-903	112+40.00	35.0' LT	1011.0
KC1-904	112+12.00	26.0' RT	1009.1
KC1-905	115+32.00	36.0' LT	1008.4
KC1-906	115+05.00	18.0' RT	1008.5
KC1-907	118+16.00	40.0' LT	1007.0
KC1-908	118+04.00	18.0' RT	1005.4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

Sean J Hart 11/29/2023

PREPARED BY:

Michael Baker INTERNATIONAL

AIRSIDE BUSINESS PARK
100 AIRSIDE DRIVE
MOON TOWNSHIP, PA 15108
PHONE: (412) 269-6300

DES: SJH | CKD: BEG | DWG: CLG | CKD: SJH

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS AND RATINGS	3
2.	GENERAL NOTES 1 & 2	4 & 5
3.	CONSTRUCTION PHASING 1 & 2	7 & 8
4.	DECK ELEVATIONS	11 & 12

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG NO	RECM'D DATE
PROTECTIVE FENCE	BC-701M	11/23/2022
TEMPORARY CONCRETE BARRIER, STRUCTURE MOUNTED	BC-719M	01/31/2019
PERMANENT METAL DECK FORMS	BC-732M	11/23/2022
ANCHOR SYSTEMS	BC-734M	02/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	09/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	11/23/2022
BRIDGE DRAINAGE	BC-751M	01/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	11/23/2022
STEEL GIRDER DETAILS	BC-753M	01/31/2019
STEEL DIAPHRAGMS FOR STEEL BEAM/GIRDER STRUCTURES (STRAIGHT GIRDERS ONLY)	BC-754M	11/23/2022
BEARINGS	BC-755M	01/31/2019
HIGH LOAD MUTI ROTATIONAL POT BEARINGS	BC-756M	11/23/2022
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	09/30/2016
TOOTH EXPANSION DAM FOR PRESTRESSED CONCRETE & STEEL BEAM BRIDGES	BC-762M	01/31/2019
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	11/23/2022
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	11/23/2022
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	11/23/2022
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	11/23/2022
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06/01/2010
BACKFILL AT STRUCTURES	RC-12M	11/01/2022
GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS	RC-50M	02/19/2021

HORIZONTAL CURVE DATA

PI STA = 118+88.36
△ = 03°46'43" LT
D = 03°43'14"
T = 50.80'
L = 101.56'
R = 1540.00'
E = 0.84'
PC STA 118+37.56
PT STA 191+39.13

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
GENERAL PLAN

RECOMMENDED _____
CHIEF BRIDGE ENGINEER

SHEET 1 OF 121 + SUPPLEMENTAL DRAWINGS

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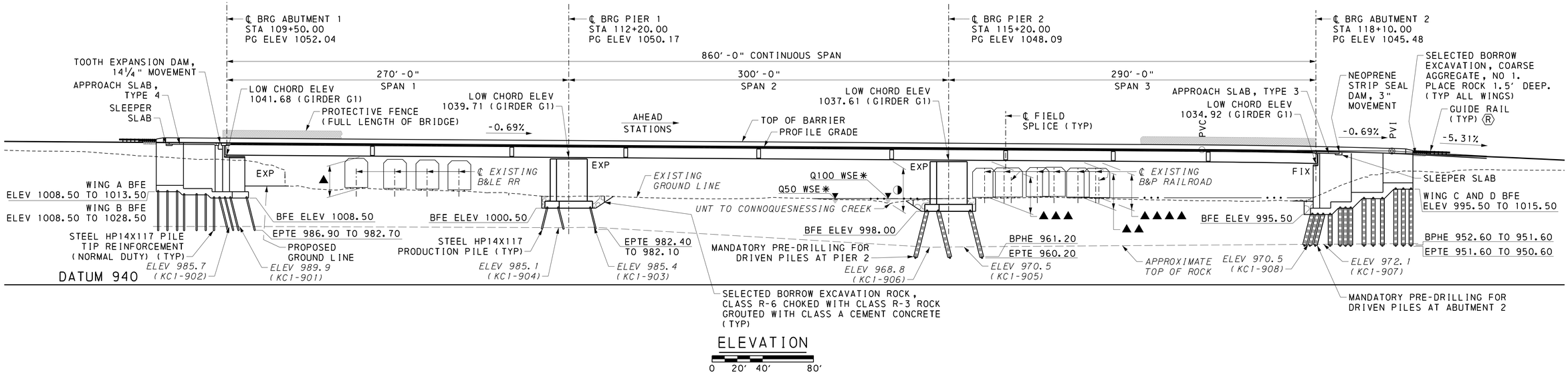

ELEVATION

0 20′ 40′ 80′

LEGEND:

EXP	DENOTES EXPANSION DISC BEARINGS
FIX	DENOTES FIXED DISC BEARINGS
BFE	DENOTES BOTTOM OF FOOTING ELEVATION
EPTE	DENOTES ESTIMATED PILE TIP ELEVATION
BPHE	DENOTES BOTTOM OF PRE-DRILLED HOLE ELEVATION
B&LE	DENOTES BESSEMER & LAKE ERIE
B&PRR	DENOTES BUFFALO & PITTSBURGH RAILROAD
Ⓡ	DENOTES ROADWAY ITEM
▲	DENOTES VERTICAL CLEARANCE (CONTROLLING FOR B&LE RAILROAD) EXISTING = 21′-4" LEFT TRUSS LINE, TRACK 1 REQUIRED = 23′-0" PROPOSED = 23′-11" G1, TRACK 1
▲▲	DENOTES VERTICAL CLEARANCE (CONTROLLING FOR B&P RAILROAD) EXISTING = 21′-2" LEFT TRUSS LINE, TRACK 6 REQUIRED = 23′-0" PROPOSED = 27′-0" G1, TRACK 6
▲▲▲	DENOTES VERTICAL CLEARANCE EXISTING = 23′-11" RIGHT TRUSS LINE, TRACK 1 REQUIRED = 23′-0" PROPOSED = 28′-7" G1, TRACK 1
▲▲▲▲	DENOTES VERTICAL CLEARANCE EXISTING = 22′-5" LEFT TRUSS LINE, TRACK 10 REQUIRED = 23′-0" PROPOSED = 28′-7" G1, TRACK 10
*	DENOTES WSE ELEVATIONS SHOWN ARE FROM THE UNT TO CONNOQUENESSING CREEK
◑	DENOTES UNDERCLEARANCE TO UNT TO CONNOQUENESSING CREEK EXISTING = 25′-9¾" PROPOSED = 28′-5⅜"

HYDRAULIC DATA:

UNT TO CONNOQUENESSING CREEK
DRAINAGE AREA - 0.17 SQUARE MILES (PROPOSED)
PROPOSED LOW CHORD ELEV = 1034.92

50 YEAR DESIGN FLOOD
DISCHARGE = 127 CFS
PROPOSED WATER SURFACE ELEVATION = 1007.97
PROPOSED CHANNEL VELOCITY = 0.34 FPS

100 YEAR DESIGN FLOOD
DISCHARGE = 139 CFS
PROPOSED WATER SURFACE ELEVATION = 1008.06
PROPOSED CHANNEL VELOCITY = 0.34 FPS

FLOOD OF RECORD: NONE

VERTICAL CURVE DATA

-0.69% ○ -5.31%

PVI STA = 118+70.00
PVI ELEV = 1045.67
VC = 300.00′
MO = -1.73′

REFERENCES:

		SHEET:
1.	WORK THIS SHEETS WITH SHEET	1
2.	CONSTRUCTION PHASING	7 & 8
3.	SUPERELEVATION TRANSITION TABLE	7

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GENERAL ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 2 OF 121

S - 39526

DES: SJH | CKD: BEG | DWG: CLG | CKD: SJH

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32	ABUTMENT 2 ELEVATION	87	SCUPPER AND DRAINAGE DETAILS 2
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53	LATERAL BRACING DETAILS 1	108	APPROACH SLAB REINF BAR SCHEDULE 2
54	LATERAL BRACING DETAILS 2	109-121	CORE BORINGS 1 THRU 13
55	CAMBER TABLE 1		

BRIDGE LOAD RATING (LRFD)

ADTT: 421 (2025), 519 (2045)

WITH FUTURE WEARING SURFACE		PLATE GIRDER						
		H20	HS20	ML-80	TK527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.914	0.914	0.879	0.879	0.914	---	---
	LOCATION (FT)	262.50	262.50	125.00	95.00	262.50	---	---
	SPAN	2	2	1	1	2	---	---
	GIRDER	G2	G2	G1	G1	G2	---	---
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	STR-I	---	---
	RATING FACTOR	1.59M	1.59M	2.44M	2.30M	1.17M	---	---
	RATING - TONS	32.0	57.5	89.6	92.0	---	---	---
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.914	0.914	0.879	0.879	0.914	0.879	0.879
	LOCATION (FT)	262.50	262.50	125.00	95.00	262.50	95.000	225.00
	SPAN	2	2	1	1	2	1	3
	GIRDER	G2	G2	G1	G1	G2	G1	G1
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.06M	2.06M	3.16M	2.98M	1.52M	1.45M	1.02M
	RATING - TONS	41.4	74.6	116.1	119.2	---	148.1	168.7
WITHOUT FUTURE WEARING SURFACE		PLATE GIRDER						
		H20	HS20	ML-80	TK527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.914	0.914	0.879	0.879	0.914	---	---
	LOCATION (FT)	262.50	262.50	125.00	125.00	262.50	---	---
	SPAN	2	2	1	1	2	---	---
	GIRDER	G2	G2	G1	G1	G2	---	---
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	STR-I	---	---
	RATING FACTOR	1.79M	1.79M	2.70M	2.55M	1.32M	---	---
	RATING - TONS	36.1	64.9	99.1	102.1	---	---	---
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.914	0.914	0.879	0.879	0.914	0.879	0.879
	LOCATION (FT)	262.50	262.50	125.00	125.00	262.50	95.000	225.00
	SPAN	2	2	1	1	2	1	3
	GIRDER	G2	G2	G1	G1	G2	G1	G1
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.33M	2.33M	3.50M	3.30M	1.71M	1.61M	1.14M
	RATING - TONS	46.8	84.2	128.5	132.3	---	164.7	189.0

MEMBER	G2 (TYPICAL INTERIOR)
MAXIMUM FACTORED FLEXURAL RESISTANCE (KIP-FT)	-67710.87
LOCATION (FT)	SPAN 3, 29.00
MAXIMUM FACTORED SHEAR RESISTANCE (KIP)	2486.75
LOCATION (FT)	SPAN 1, 0.00; SPAN 2, 0.00 ; SPAN 3, 0.00

MEMBER	G1 (TYPICAL EXTERIOR)
MAXIMUM FACTORED FLEXURAL RESISTANCE (KIP-FT)	-66847.45
LOCATION (FT)	SPAN 3, 26.75
MAXIMUM FACTORED SHEAR RESISTANCE (KIP)	2486.75
LOCATION (FT)	SPAN 1, 0.00; SPAN 2, 0.00; SPAN 3, 0.00

NOTES:

1. THE GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LIVE LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING.
2. BRIDGE LOAD RATINGS BASED ON THE LRFD METHOD.
3. FUTURE WEARING SURFACE OF 30 LBS PER SQUARE FOOT.

LEGEND:

M - MOMENT RATING FACTOR CONTROLS

V - SHEAR RATING FACTOR CONTROLS

REFERENCES:

1. GENERAL NOTES 1 & 2

SHEET:

4 & 5

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

INDEX OF DRAWINGS AND RATINGS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

RECOMMENDED _____

SHEET 3 OF 121

S - 39526

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GENERAL NOTES

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 8TH EDITION 2017, AND AS SUPPLEMENTED BY PENNDOT DESIGN MANUAL, PART 4, STRUCTURES, DECEMBER 2019 EDITION (INCLUDING LATEST REVISIONS).

LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM-4 DISTRIBUTION FACTORS.

DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

DESIGN LIVE LOADS:

PHL-93 OR P-82 (204 KIP PERMIT LOAD) AND P2016-13 (330 KIP PERMIT LOAD).

FATIGUE DESIGN IS BASED ON THE FOLLOWING:
STEEL STRUCTURE: ADTT 598 (2125) (ONE-DIRECTIONAL)

DEAD LOADS:

INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS WHICH TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.

INCLUDES 0.022 KLF FOR A FUTURE PROTECTIVE FENCE LOAD AND 0.100 KLF FOR POLYESTER POLYMER CONCRETE (PPC) OVERLAY.

GENERAL:

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS PUBLICATION 408/2020, AASHTO/AWS D1.5: 2015 BRIDGE WELDING CODE, AND THE CONTRACT SPECIAL PROVISIONS (USE AASHTO/AWS D1.1: 2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5: 2015).

ALL STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

SEISMIC FORCES: SITE CLASS IS NOT CLASS E.

PLACE ABUTMENT BACKWALLS UP TO A CONSTRUCTION JOINT BELOW THE LEVEL OF THE BOTTOM OF THE DECK SLAB PRIOR TO CONSTRUCTION OF THE DECK.

PLACE CURTAIN WALLS AND BACKWALL CONCRETE AFTER GIRDERS ARE SET IN POSITION.

DO NOT USE ADHESIVE ANCHORS IN TENSION APPLICATION FOR PERMANENT INSTALLATIONS.

DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.

PROVIDE A MINIMUM WIDTH OF 2½" AT 68 DEGREES F FOR THE STRIP SEAL INSTALLATION AT ABUTMENT 2.

THE PROPOSED BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408 SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.

CONCRETE:

PROVIDE 2 INCHES CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AAAP CEMENT CONCRETE IN DECK SLAB, END DIAPHRAGMS AND TYPE 3 APPROACH SLAB.

USE CLASS AA CEMENT CONCRETE, EXCEPT FOR USE NO 8 COARSE AGGREGATE IN BARRIERS.

USE CLASS AA CEMENT CONCRETE, SULFATE RESISTANT IN TYPE 4 APPROACH SLABS, CURB, ABUTMENT BACKWALLS, U-WINGS ABOVE BRIDGE SEAT CONSTRUCTION JOINT AND SLEEPER SLABS.

USE CLASS A CONCRETE, SULFATE RESISTANT IN ABUTMENTS, WINGS, ABUTMENT FOUNDATIONS, CURTAIN WALLS, PIER CAPS, PIER SHAFTS, AND PIER FOUNDATIONS.

SUBSTITUTE A HIGHER CLASS CONCRETE FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.

IN ACCORDANCE WITH THE SPECIAL PROVISION ENTITLED CLASS AA AND A CEMENT CONCRETE, SULFATE RESISTANT USE CORROSION RESISTANT PORTLAND CEMENT CONCRETE WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND CONTAINING NO CHLORIDE ADDITIVES.

PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(K)9.

ALTERNATE DECK PLACEMENT SEQUENCES ARE NOT PERMITTED.

USE PERMANENT METAL FORMS TO CONSTRUCT THE DECK SLAB.

PROVIDE A 1" DEPTH PPC OVERLAY ON THE BRIDGE DECK ONLY, CURE THE BRIDGE DECK CONCRETE A MINIMUM 28 DAYS PRIOR TO INSTALLING THE PPC OVERLAY.

DECK SLAB THICKNESS DOES NOT INCLUDE A 0.5" INTEGRAL WEARING SURFACE DUE TO THE 1" PPC OVERLAY.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

TEXTURIZE THE PPC OVERLAY AND APPROACH SLABS WITH LONGITUDINAL SAWED GROOVES.

DO NOT USE PRECAST BARRIERS AND DO NOT SLIP FORM BARRIERS.

PLACE CONCRETE IN THE BARRIERS IN THREE LIFTS WITH THE FIRST BEING 8 INCHES IN HEIGHT.

CHAMFER EXPOSED CONCRETE EDGES 1 INCH BY 1 INCH, EXCEPT AS NOTED.

PROVIDE A MAXIMUM SPACING OF 10 FT FOR MODIFIED DEFLECTION JOINTS ACROSS THE FULL LENGTH OF BRIDGE BARRIERS. SEAL DOWN THE REAR FACE OF MODIFIED DEFLECTION JOINTS WITH SILICONE JOINT SEALANT IN ADDITION TO THE FRONT FACE AND TOP AS SHOWN ON THE BARRIER DETAILS SHEET AND BC-752M. SEE BC-752M FOR ADDITIONAL NOTES AND DETAILS.

ALONG THE GUTTERLINES, DO NOT ATTACH BARRIER FORMS TO THE NEWLY PLACED CONCRETE DECK WITHIN THE WATER TABLE AREA (OUTSIDE OF THE BARRIER FORM).

APPLY PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS), IN ACCORDANCE WITH SECTION 1019, TO THE EXPOSED CONCRETE APPROACH SLAB SURFACES, BARRIER FACES AND DOWN TO THE DECK DRIP NOTCH ON THE SUPERSTRUCTURE. LIMITS OF THE APPROACH SLAB INCLUDE THE EXPOSED ROADWAY SURFACES INCLUDING THE OUTSIDE EXPOSED SURFACE TO THE GROUND LINE, PIERS, ABUTMENTS, AND WINGS.

APPLY MEMBRANE WATERPROOFING OVER ALL CONSTRUCTION AND EXPANSION JOINTS IN THE ABUTMENTS AND WINGS.

PROVIDE EPOXY BONDING COMPOUND IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 706.1 AND 1001.3(m). DO NOT PROVIDE EPOXY BONDING COMPOUND AT HORIZONTAL JOINTS AT STEM/FOOTING AND STEM INTERFACES AND VERTICAL CONSTRUCTION JOINTS BETWEEN ABUTMENTS AND WINGS.

SET ANCHOR BOLTS IN PREFORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PREFORMED HOLES WITH NON-SHRINK GROUT. FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES IN MASONRY PLATES WITH APPROVED NON-HARDENING CAULKING COMPOUND CONFORMING TO PUBLICATION 408, SECTION 705.7. DO NOT LET THE HOLES SIT OVER WINTER WITHOUT GROUT.

TEXTURE THE PPC SURFACE WITH LONGITUDINAL SAWED GROOVES IN ACCORDANCE WITH PUBLICATION 408 SECTION 1001.3(K)6.f.3 WITH THE FOLLOWING CHARACTERISTICS:
- PARALLEL WITH TANGENT LINE
- ⅛ INCH (± ½₂INCH) IN WIDTH
- ⅛ INCH TO 3/16 INCH IN DEPTH
- ¾ INCH NOMINAL CENTER-TO-CENTER SAWED GROOVE SPACING

PLACE A 2" X 2" WIDE STRIP OF EPOXY SEALER (GEL) ALONG THE BASE OF THE BARRIER REVEAL AND THE EDGE OF THE APPROACH SLABS. SEE BULLETIN 15, SECTION MISC. FOR THE EPOXY SEALER.

USE THE FOLLOWING JOINT SEALING MATERIAL WHERE INDICATED. JOINT SEALING IS INCIDENTAL TO THE ASSOCIATED CONCRETE PAY ITEM.
A. SILICONE JOINT SEALING MATERIAL: SECTION 705.4(a)
B. EPOXY JOINT SEALING MATERIAL: SECTION 706.1 EPOXY BONDING COMPOUND
C. RUBBERIZED JOINT SEALING MATERIAL: 705.4(b) OR (c)
D. EPOXY SEALER (GEL) IN ACCORDANCE WITH SECTION 706.1

REINFORCEMENT:

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615, A996, OR A706. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. DO NOT USE RAIL STEEL ASTM A996 REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS IN ALL BRIDGE COMPONENTS.

REPAIR THE EPOXY COATING AS PER PUBLICATION 408 SECTION 1002.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

SUBSTITUTE GALVANIZED REINFORCEMENT BARS FOR EPOXY COATED REINFORCEMENT BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

STEEL NOTES:

PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270/M270M GRADE 50W (ASTM A709/A709M GRADE 50W) AND AASHTO M270/270M GRADE 70W (ASTM A709/A GRADE 70W) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE.

DETAIL AND FABRICATE THE STEEL SUPERSTRUCTURE FOR STEEL DEAD LOAD FIT (SDLF).

IF THE GIRDERS CANNOT BE SHIPPED IN THE LENGTHS SHOWN ON THE PLANS, FIELD SPLICE(S) ARE PERMITTED AT THE REQUEST OF THE CONTRACTOR, BUT NO COMPENSATION WILL BE ALLOWED FOR THE SPLICES.

IF GIRDERS CAN BE FABRICATED IN LENGTHS LONGER THAN THE SECTIONS SHOWN ON THE PLANS BY ELIMINATING FIELD SPLICES, FIELD SPLICES MAY BE OMITTED AT THE REQUEST OF THE CONTRACTOR. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR SECURING A HAULING PERMIT. APPROVAL FOR ELIMINATION OF A FIELD SPLICE AT THE SHOP DRAWING STAGE DOES NOT OBLIGATE THE DEPARTMENT TO ISSUE A HAULING PERMIT.

REAM SUBDRILLED OR SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP.

BLAST CLEAN THE UNPAINTED FAYING SURFACES OF SPLICES AND CONNECTIONS OF ALL WEATHERING STEEL STRUCTURAL ELEMENTS IN ACCORDANCE WITH PUBLICATION 408 SECTION 1060.3(b)3. REBLAST UNPAINTED ELEMENTS THAT REMAIN UNASSEMBLED FOR A PERIOD OF 12 MONTHS OR MORE FOLLOWING THE INITIAL CLEANING.

PERFORM CHARPY V-NOTCH (CVN) TESTS AS INDICATED AS SPECIFIED IN PUBLICATION 408, SECTION 1105.02(a)5.

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

PROVIDE A CLASS B SLIP COEFFICIENT FOR THE CONTACT AREA OF BOLTED PARTS FOR THE NON-PAINTED AREAS AND CLASS A SLIP COEFFICIENT FOR THE PAINTED AREAS.

ALL FASTENERS ARE ⅞" INCH DIAMETER ASTM F3125 (GRADE A325), TYPE 3 HIGH STRENGTH BOLTS IN UNPAINTED AREAS. USE TYPE 1 HIGH STRENGTH BOLTS IN PAINTED AREAS.

EXCLUDE BOLT THREADS FROM SHEAR PLANES UNLESS OTHERWISE NOTED. WHERE FEASIBLE PLACE BOLTS SO THAT THE THREADED ENDS ARE PROTECTED FROM THE WEATHER.

PROVIDE SWEDGE ANCHOR BOLTS CONFORMING TO ASTM F1554 WITH SWEDGES PRESSED (STAMPED) OR ROLLED IN. "ALL-THREAD" BOLTS ARE NOT PERMITTED.

THE COST TO FURNISH AND INSTALL ALL NUTS, BOLTS AND WASHERS IS INCIDENTAL TO THE FABRICATED STRUCTURAL STEEL ITEM.

USE THE TURN-OF-THE-NUT METHOD FOR BOLTED CONNECTIONS. AFTER OBTAINING SNUG FIT CONDITION, MARK WITH A STRAIGHT LINE ALL BOLTS, NUTS AND PLATES TO MONITOR ALL ROTATIONS ON BOLTS AND NUTS RELATIVE TO THE PLATES.

PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO ASTM A108. INSTALL SHEAR CONNECTORS IN THE FIELD AFTER INSTALLATION OF THE DECK FORMS.

GIRDER HAUNCH REINFORCEMENT IS REQUIRED FOR THE ENTIRE LENGTH OF THE BRIDGE.

PROVIDE THE BRIDGE INSPECTION HANDRAILS ON THE GIRDERS AS SHOWN IN BC-753M AND IN THIS PLAN.

PROVIDE DRIP BARS FOR WEATHERING STEEL GIRDERS ONLY. DO NOT PROVIDE DRIP BARS AT THE ABUTMENT WHEN THE GIRDER SLOPE IS AWAY FROM THE ABUTMENT.

PAINT THE ENDS OF EACH GIRDER IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060. PAINTING IS INCIDENTAL TO THE FABRICATED STRUCTURAL STEEL ITEM. APPLY THE PRIMER, INTERMEDIATE AND FINISH COATS IN WITHIN THE LIMITS OF THE CONCRETE DIAPHRAGM. THE CONTRACTOR IS RESPONSIBLE TO TOUCH UP AREA IN THE FIELD. SUBMIT PROCEDURE TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL.

PROVIDE A FINISH COAT MATCHING FEDERAL COLOR NUMBER 20055. PROVIDE PAINT CHIPS TO THE DISTRICT BRIDGE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PERFORMING THE PAINTING OPERATIONS.

TEMP. STRUCTURAL STEEL MEMBERS FABRICATION & REPORTING REQUIREMENTS:

TEMPORARY STRUCTURAL STEEL MEMBERS TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN PENNSYLVANIA TO MEET DESIGN REQUIREMENTS AND SHOWN ON SIGNED AND SEALED DRAWINGS PREPARED AS SPECIFIED IN PUBLICATION 408, SECTION 105.02(c).

FABRICATE TEMPORARY STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE.

FABRICATION IN SHOP TO BE PERFORMED BY A BULLETIN 15 CERTIFIED FABRICATOR. FABRICATION IN THE FIELD MAY BE PERFORMED IF APPROVED BY THE DEPARTMENT REPRESENTATIVE.

FRACTURE CRITICAL COMPONENTS TO BE FABRICATED IN A BULLETIN 15 CERTIFIED FACILITY WITH FRACTURE CRITICAL ENDORSEMENT.

WELDING TO BE PERFORMED BY AN AWS CERTIFIED WELDER (CW) WITH CERTIFICATION APPROPRIATE TO THE METHOD, POSITION AND MATERIALS BEING USED.

INSPECT WELDS IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105 AND ASNT RECOMMENDED PRACTICE NO. SNT-TC-1A. FOR FILLET WELDS, ENSURE PROPER WELD SIZE AND PROFILE AND PERFORM MAG PARTICLE TESTING. FOR PARTIAL AND FULL PENETRATION WELDS, PERFORM ULTRASONIC TESTING AND RADIOGRAPHIC TESTING AS APPROPRIATE.

WELDS TO BE INSPECTED BY QUALITY CONTROL PERSONNEL INCLUDING AN AWS CERTIFIED WELDING INSPECTOR (CWI) AS REQUIRED BY PUBLICATION 408, SECTION 1105.01(g)3.

NON-DESTRUCTIVE TESTING (NDT) TO BE PERFORMED BY AN SNT-TC-1A CERTIFIED TECHNICIAN. THE ENGINEER SHALL CERTIFY THAT THE TEMPORARY STRUCTURAL STEEL MEMBERS HAVE BEEN ASSEMBLED AS SHOWN ON THE ENGINEER'S SIGNED AND SEALED DRAWINGS.

THE CONTRACTOR IS REQUIRED TO PROVIDE A WRITTEN REPORT OF FABRICATION TO THE DEPARTMENT REPRESENTATIVE PRIOR TO PLACING LOADS ON THE TEMPORARY STRUCTURAL STEEL MEMBERS. THE REPORT IS TO BE PREPARED BY THE CONTRACTORS' PROFESSIONAL ENGINEER, THE CERTIFIED WELDING INSPECTOR (CWI) AND THE CERTIFIED NDT TECHNICIAN. THE REPORT IS TO DEFINE THE FABRICATION REQUIREMENTS FOR THE TEMPORARY STRUCTURAL STEEL MEMBERS AND ADDRESS INSPECTION AND NON-DESTRUCTIVE TESTING REQUIRED BY PUBLICATION 408, SECTION 1105 AND APPLICABLE AMERICAN WELDING SOCIETY STANDARDS. AT A MINIMUM, THE REPORT IS TO INCLUDE THE FOLLOWING:

ACCEPTED FABRICATION DRAWINGS; FABRICATOR NAME, FACILITY AND APPLICABLE CERTIFICATIONS, INCLUDE A COPY OF THEIR APPLICABLE AISC CERTIFICATION(S); WELDING METHOD(S) TO BE USED IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105.03(m)6.a FOR MAIN LOAD CARRYING BRIDGE MEMBERS; APPROVED PROCEDURE QUALIFICATION RECORDS (PQR) AND WELDING PROCEDURE SPECIFICATIONS (WPS); MATERIAL CERTIFICATION: MILL TEST REPORTS (MTR) AND MILL TEST CERTIFICATIONS (MTC); WELDER QUALIFICATIONS; METHODS FOR HANDLING WELDING CONSUMABLES; FOR PRE-APPROVED FIELD WELDING, LIST OF QUALITY CONTROL PERSONNEL INCLUDING AN AWS CERTIFIED WELDING INSPECTOR (CWI) AS REQUIRED BY PUBLICATION 408, SECTION 1105.01(g)3; NON-DESTRUCTIVE TESTING (NDT) WRITTEN PRACTICE; RECORDS OF NON-DESTRUCTIVE TESTING THAT WAS PERFORMED AND TEST EQUIPMENT CALIBRATION DATA; ACCEPTANCE OF WELDS BY CWI AND NDT TECHNICIAN; AND CERTIFICATION BY THE ENGINEER THAT THE TEMPORARY STRUCTURAL STEEL MEMBERS HAVE BEEN ASSEMBLED AS SHOWN ON THE ENGINEER'S SIGNED AND SEALED DRAWINGS.

REFERENCES:

1. GENERAL NOTES 2

SHEET:

5

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107
PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GENERAL NOTES 1

RECOMMENDED _____

SHEET 4 OF 121

S - 39526

DES: SJH	CKD: JMF	DWG: KTS	CKD: SJH

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GENERAL NOTES (CONT'D):

WELDING NOTES:

MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING IS PERMITTED.

DO NOT MAKE WELDS BY MANUAL SHIELDED METAL ARC PROCESS FOR PRIMARY GIRDER WELDS, SUCH AS FLANGE-TO-WEB WELDS OR FOR SHOP SPLICES OF WEBS AND FLANGES.

DO NOT WELD WHEN SURFACES PREPARED FOR WELDING ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF THE WORK.

DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0 DEGREES FAHRENHEIT. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70 DEGREES FAHRENHEIT WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0 DEGREES FAHRENHEIT AND 32 DEGREES FAHRENHEIT DURING WELDING OR BURNING.

PREHEAT THE STEEL TO THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN 3 INCHES IN ALL DIRECTIONS FROM THE POINT OF WELDING.

REMOVE ANY MOISTURE PRESENT AT POINT OF WELD BY APPLICATION OF HEAT. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.

THOROUGHLY CLEAN ALL PORTIONS OF NEW SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, FOR A DISTANCE OF 2 INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF WELD PRIOR TO PLACING WELD.

TEST COMPLETED WELDS USING VISUAL AND NONDESTRUCTIVE METHODS IN ACCORDANCE WITH AASHTO/AWS D1.5 BRIDGE WELDING CODE CHAPTER 6.

FIELD WELDING, EXCEPT FOR THE SHEAR CONNECTORS AND STAY-IN-PLACE FORMS, IS NOT PERMITTED UNLESS APPROVED BY THE DEPARTMENT REPRESENTATIVE.

DO NOT WELD PERMANENT METAL DECK FORMS OR OTHER ATTACHMENTS TO GIRDER TOP FLANGES IN TENSION AREAS. (TENSION AREAS OF TOP FLANGES ARE DESIGNATED ON THE PLANS). THREADED STUDS FOR THE SUPPORT OF THE OVERHANG DECK FORMING BRACKET ARE PERMITTED PROVIDING THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESSING AS THE SHEAR STUDS.

ERECTION:

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFE ERECTION OF ALL STRUCTURES AND SHALL PROVIDE NECESSARY BRACING AND SUPPORTS. CONSTRUCTION ACTIVITY WILL NOT BE ALLOWED OUTSIDE OF THE RIGHT-OF-WAY.

MAINTAIN THE STABILITY OF THE GIRDERS DURING ALL STAGES OF CONSTRUCTION. DO NOT LIFT THE GIRDER SECTIONS OVER ACTIVE TRAINS.

IN ACCORDANCE WITH PUBLICATION 408 SECTION 1050.3(c)3, SUBMIT AN ERECTION PLAN SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR REVIEW AND APPROVAL. DO NOT ERECT ANY STEEL UNTIL THE ERECTION PLAN IS APPROVED.

PROVIDE TEMPORARY WIND BRACING DURING GIRDER ERECTION AND DECK SLAB PLACEMENT. DESIGN THE BRACING CONFIGURATION, SIZES AND LOCATIONS AND SUBMIT TO THE DISTRICT REPRESENTATIVE FOR REVIEW AND APPROVAL. THE BRACING IS NOT TO CHANGE THE SUPERSTRUCTURE BEHAVIOR AND LOAD DISTRIBUTION ASSUMED FOR THE DESIGN OF THE GIRDERS EITHER TEMPORARILY DURING CONSTRUCTION OR AFTER CONSTRUCTION.

THE CONTRACTOR IS TO MAINTAIN STABILITY OF PARTIAL GIRDERS AND COMPLETE GIRDERS DURING ERECTION, UNTIL ALL GIRDERS AND CROSS FRAMES ARE IN-PLACE AND BOLTS ARE PROPERLY INSTALLED. THE CONTRACTOR IS TO EVALUATE ERECTION LOADS INCLUDING SELF WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS FOR STABILITY, STRESSES AND DEFLECTIONS ON THE STEEL MEMBERS DURING ANY STAGE OF ERECTION AND DURING THE CONCRETE PLACEMENT.

SUBMIT DESIGNS FOR TEMPORARY BENTS, GUY WIRES AND ALL OTHER SUPPORT SYSTEMS REQUIRED FOR ERECTION TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL.

DESIGN AND ERECT ALL FALSEWORK IN ACCORDANCE WITH PUBLICATION 408 SECTION 1050.3(c)2.

DESIGN THE TEMPORARY OVERHANG SUPPORT SYSTEM FOR THE APPROPRIATE LOADING AND SUBMIT FOR REVIEW AND APPROVAL SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA.

SEE THE SPECIAL PROVISIONS ENTITLED: "FEDERAL AVIATION ADMINISTRATION REQUIREMENTS FOR CRANES" FOR ADDITIONAL CRANE REQUIREMENTS.

THE COST FOR FALSEWORK, TEMPORARY BENTS, WIND BRACING AND ALL OTHER TEMPORARY SUPPORT SYSTEMS REQUIRED DURING ANY STAGES OF CONSTRUCTION IS INCIDENTAL TO THE FABRICATED STRUCTURAL STEEL ITEM.

BRACE STEEL FRAMEWORK IN LONGITUDINAL AND LATERAL DIRECTIONS UNTIL MEMBERS ARE IN STABLE (FINAL BRACED) CONDITION.

APPROACH SLAB:

CONSTRUCT BRIDGE APPROACH SLABS AFTER THE DECK IS CONSTRUCTED.

PLACE CONCRETE IN ONE CONTINUOUS OPERATION UNLESS OTHERWISE INDICATED OR DIRECTED.

USE DECK FINISHING MACHINE (I.E. BIDWELL OR SIMILAR) OR VIBRATORY SCREED TO PLACE THE APPROACH SLABS.

TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.

FOUNDATION NOTES:

DO NOT BLAST TO EXCAVATE ROCK.

ASSUME THAT ALL CLASS 3 EXCAVATION IS UNSUITABLE MATERIAL.

STRUCTURE BACKFILL SHOULD BE CONSTRUCTED USING PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION RC-12M BACKFILL AT STRUCTURES. PROVIDE AASHTO NO 1 COARSE AGGREGATE AS STRUCTURE BACKFILL.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

FOR EXCAVATIONS EXTENDING BELOW THE STREAMBED ELEVATION, DEWATERING WILL BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH TO BE INSPECTED BY THE DISTRICT GEOTECHNICAL ENGINEER OR REPRESENTATIVE AND FOR CONSTRUCTION OF THE FOOTINGS.

FOR PIER 2 AND ABUTMENT 2, PRE-AUGER THE PILE INSTALLATIONS TO THE BOTTOM OF PREDRILLED HOLE ELEVATIONS (BPHE) IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SECTION 1005.3(i).

FOR ALL SUBSTRUCTURE UNITS, DRIVE PILES TO CASE 2 ABSOLUTE REFUSAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408, SECTION 1005.3(b).5.a. CONTROL PILE DRIVING IN ACCORDANCE WITH METHOD A AS SPECIFIED IN PENNDOT DESIGN MANUAL, PART 4, (DECEMBER 2019), SECTION PP1.7.5.1. LIMIT THE MAXIMUM PILE DRIVING STRESSES TO 45 KSI (90% OF THE PILE YIELD STRESS).

DRIVE TWO (2) TEST PILES AT EACH SUBSTRUCTURE UNIT (8 TOTAL) PRIOR TO THE DRIVING OF THE REPRESENTATIVE BEARING PILES. PERFORM DYNAMIC PILE MONITORING ON TEST PILES TO VERIFY THE PILE LENGTH; TO EVALUATE HAMMER PERFORMANCE, DRIVING STRESS AND BEARING CAPACITIES; AND TO ESTABLISH THE DRIVING CRITERIA. PERFORM DYNAMIC PILE MONITORING IN ACCORDANCE WITH PUBLICATION 408.

DO NOT DRIVE THE REMAINING BEARING PILES UNTIL THE ASSOCIATED TEST PILES ARE COMPLETE AND EVALUATED BY THE DISTRICT STRUCTURE CONTROL ENGINEER, DISTRICT GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE.

FACTORED AXIAL RESISTANCE PER PILE IS 474 KIPS FOR STRENGTH FOR ABUTMENT 1 AND PIER 1 AND 569 KIPS FOR STRENGTH FOR PIER 2 AND ABUTMENT 2. 1/8" PILE SECTION LOSS IS ACCOUNTED FOR AT ALL SUBSTRUCTURE LOCATIONS DUE TO THE POTENTIAL FUTURE CORROSION OF THE PILE SECTION.

THE PILES ARE ASTM A709 (FY = 50 KSI), GALVANIZED.

INSTALL ALL HP 14X117 PILES WITH "NORMAL DUTY" PILE TIP REINFORCEMENT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1005.2(c) AND BC-757M.

PROVIDE SELECTED BORROW EXCAVATION ROCK (SBER), CLASS R-6 CHOKED WITH SBER, CLASS R-3 ROCK GROUTED WITH CLASS A CEMENT CONCRETE FOR SCOUR PROTECTION IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SECTION 850.2(a)2.

UTILITY NOTES:

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.

COORDINATE THE REQUIREMENTS FOR PROTECTION AND/OR RELOCATION OF UTILITIES WITH THE UTILITY OWNER PRIOR TO STARTING WORK. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES ARE NOT DISRUPTED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

PRIOR TO ANY EXCAVATION OR DEMOLITION WORK, CONTACT THE PA ONE CALL SYSTEM, INC. AT 1-800-242-1776 AND COMPLY WITH THE PROVISIONS OF PA ACT 287 OF 1994 AS AMENDED BY ACT 187 OF 1996. IDENTIFY ALL OVERHEAD LINES AND NOTIFY AND COMPLY WITH THE APPLICABLE UTILITY OWNER'S CLEARANCE REQUIREMENTS.

WATERWAY REGULATIONS:

NOTIFY THE REGIONAL HEADQUARTERS OF THE PENNSYLVANIA FISH AND BOAT COMMISSION WITH THE PROJECT INFORMATION, PERMIT NUMBER AND LOCATION PRIOR TO CONSTRUCTION AND COOPERATE WITH THE PENNSYLVANIA FISH AND BOAT COMMISSION DURING CONSTRUCTION, NORTHWEST REGIONAL OFFICE, 11528 STATE HIGHWAY 98, MEADVILLE, PA 16335, (814) 337-0444.

DEP APPROVED WATERWAY PERMIT 13865. THERE ARE IN-STREAM WORK RESTRICTIONS FOR THE UNT TO CONNOQUENESSING CREEK FROM FEBRUARY 15 TO JUNE 1 AND OCTOBER 1 TO DECEMBER 31.

ANY PROPOSED CONSTRUCTION ACTIVITIES IN OR ADJACENT TO UNT TO CONNOQUENESSING CREEK OR CONNOQUENESSING CREEK THAT DIFFER FROM THE EROSION & SEDIMENTATION CONTROL PLAN, INCLUDING ANY REVISIONS TO THE WATER DIVERSION DEVICES WILL REQUIRE THE CONTRACTOR TO PREPARE REVISIONS TO THE FOLLOWING:

1. PERMIT
2. HYDROLOGIC & HYDRAULIC REPORT
3. EROSION & SEDIMENTATION POLLUTION CONTROL PLAN

SUBMIT REVISIONS TO THE APPROPRIATE AGENCIES FOR APPROVAL PRIOR TO THE COMMENCEMENT OF THE REVISED CONSTRUCTION ACTIVITIES.

EXISTING BRIDGE NOTES:

THE EXISTING BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408 SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.

DISPOSE OF ALL EXISTING CONCRETE REMOVED FROM THE STRUCTURE, OFF SITE, TO THE SATISFACTION OF THE DEPARTMENT REPRESENTATIVE.

REMOVE THE PORTION OF THE EXISTING BRIDGE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

TESTING WAS NOT PERFORMED ON THE EXISTING BRIDGE STRUCTURAL MEMBERS BUT MEMBERS ARE ASSUMED TO CONTAIN LEAD PAINT AND OTHER TOXIC MATERIALS (SUCH AS CADMIUM, CHROMIUM, ARSENIC, ETC.)

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING BRIDGE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.

VERIFY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

BIDDERS ARE ADVISED TO FIELD-VERIFY INFORMATION PRESENTED. THE DATA SHOWN HEREIN IS NOT A PART OF THE PLANS, PROPOSAL, OR CONTRACT, AND IS NOT CONSIDERED AS A BASIS FOR COMPUTATION FOR ANY PURPOSE.

EXISTING DRAWINGS:

S-981, 7 SHEETS, DATED 8/10/1936
S-981 SHOP DRAWINGS, 48 SHEETS, DATED 2/23/1937
BRIDGE #285AA, 2 SHEETS, DATED 6/18/1971
S-14441, 69 SHEETS, DATED 5/20/1983
S-14441 SHOP DRAWINGS, 11 SHEETS, DATED 9/23/1983

RAILROAD REQUIREMENTS:

DO NOT LIFT THE GIRDER SECTIONS OVER ACTIVE TRAINS.

COORDINATE WITH EACH RAILROAD CONCERNING POSSIBLE TRACK CLOSURE DATES AND TIMES.

RAILROAD FLAGGERS WILL BE REQUIRED FOR THE PROJECT. COORDINATE WITH EACH RAILROAD ACCORDINGLY.

REFERENCES:

1. GENERAL NOTES 1

SHEET:

4

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

NOTES FOR PILE INSTALLATION INFORMATION

SUBSTRUCTURE UNIT	PILE TYPE	PILE TIP (NONE, NORMAL, HEAVY DUTY)	PILE TIP ELEVATION	FACTORED DESIGN LOAD (KIP)	ULTIMATE PILE CAPACITY AT END OF DRIVING (KIP)	WEAP OR PDA

COMPLETE THIS TABLE FOR THE TEST PILES AFTER INSTALLATION ON THE "AS-BUILT" PLANS.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GENERAL NOTES 2

RECOMMENDED _____

SHEET 5 OF 121

S - 39526

DES: SJH | CKD: JMF | DWG: KTS | CKD: SJH

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ALTERNATE STRUCTURE ITEMS

ITEM NO	DESCRIPTION		UNIT	TOTAL
8120-0001	BRIDGE STRUCTURE, AS DESIGNED, S-39526	(2)	LS	LUMP SUM
8000-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE	(2)	LS	LUMP SUM
8100-0001	STEEL BRIDGE STRUCTURE	(2)	LS	LUMP SUM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED, S-39526

	ITEM NO	DESCRIPTION		UNIT	ABUT 1	PIER 1	PIER 2	ABUT 2	SUPER-STRUCTURE	APPR SLAB ABUT 1	APPR SLAB ABUT 2	TOTAL
	8120-0001	BRIDGE STRUCTURE, AS DESIGNED, S-39526	(1)(2)	LS	---	---	---	---	---	---	---	---
	(1)	CLASS 3 EXCAVATION		CY	9,334	870	870	5,710	---	---	---	16,784
	(1)	STRUCTURE BACKFILL		CY	5,438	---	---	7,541	---	---	---	12,979
	(1)	MEMBRANE WATERPROOFING SYSTEM INSTALLED ON OTHER SURFACES		SY	85	---	---	113	---	---	---	198
	(1)	MECHANICAL TEXTURIZING WITH LONGITUDINAL SAWED GROOVES		SY	---	---	---	---	6,100	180	210	6,490
	(1)	CLASS AAAP CEMENT CONCRETE	(4)	CY	---	---	---	---	2,070	---	120	2,190
	(1)	CLASS AA CEMENT CONCRETE, SULFATE RESISTANT	(2)	CY	110	---	---	70	---	100	20	300
	(1)	CLASS A CEMENT CONCRETE, SULFATE RESISTANT	(2)	CY	1,421	701	711	1,759	---	---	---	4,593
	(1)	CLASS AA CEMENT CONCRETE, EXCEPT USE NO 8 COARSE AGGREGATE		CY	---	---	---	---	290	10	10	310
	(1)	STEEL HP14X117 TEST PILE, GALVANIZED	(9)	LS	2 @ 25 FT	2 @ 19 FT	2 @ 39 FT	2 @ 45 FT	---	---	---	LS
	(1)	POLYESTER POLYMER CONCRETE OVERLAY, 1"		SY	---	---	---	---	6,070	---	---	6,070
	(1)	PROTECTIVE COATING FOR REINF. SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)		SY	532	588	597	786	---	---	---	2,503
	(1)	PROTECTIVE COATING FOR REINF. SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURES)		SY	---	---	---	---	8,150	240	290	8,680
	(1)	TOOTH EXPANSION DAM WITH DRAIN TROUGH		LB	---	---	---	---	---	15,300	---	15,300
	(1)	NEOPRENE STRIP SEAL DAM, (3" MOVEMENT)		LF	---	---	---	---	---	---	68	68
	(1)	FABRICATED STRUCTURAL STEEL, UNPAINTED GRADE 50W	(8)	LB	---	---	---	---	3,996,754	---	---	3,996,754
	(1)	FABRICATED STRUCTURAL STEEL, UNPAINTED GRADE 70W	(8)	LB	---	---	---	---	1,072,700	---	---	1,072,700
	(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - FIXED	(6)	EA	---	---	---	8	---	---	---	8
	(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - GUIDED EXPANSION	(6)	EA	5	5	4	---	---	---	---	14
	(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - NON-GUIDED EXPANSION	(6)	EA	4	4	3	---	---	---	---	11
	(1)	SHEAR CONNECTORS		EA	---	---	---	---	9,300	---	---	9,300
	(1)	SCUPPER, TYPE D EXTENDED	(2)	EA	---	---	---	---	8	---	---	8
	(1)	DOWNSPOUTING		LF	---	---	---	---	320	---	---	320
	(1)	RAILROAD PROTECTIVE FENCE, STEEL ALUMINIZED		LF	---	---	---	---	1750	---	---	1,750
AND	1002-0052	REINFORCEMENT BARS, EPOXY COATED	(3)	LB	161,238	58,754	58,869	192,527	680,683	21,309	33,875	1,207,256
AND	1002-0151	MECHANICAL SPLICE SYSTEM FOR NO 4 REINFORCEMENT BARS, EPOXY COATED		EA	---	33	33	10	---	---	---	76
AND	1002-0152	MECHANICAL SPLICE SYSTEM FOR NO 5 REINFORCEMENT BARS, EPOXY COATED		EA	26	---	---	---	---	14	14	54
AND	1002-0153	MECHANICAL SPLICE SYSTEM FOR NO 6 REINFORCEMENT BARS, EPOXY COATED		EA	3	---	---	---	32	24	---	59
AND	1002-0154	MECHANICAL SPLICE SYSTEM FOR NO 7 REINFORCEMENT BARS, EPOXY COATED		EA	135	106	106	120	---	---	29	496
AND	5005-1410	MANDATORY PREDRILLING FOR DRIVEN PILES ADD NO 8 COARSE AGGREGATE	(2)	LF	---	---	1,646	6,156	---	---	---	7,802
AND	1005-1950	STEEL HP14X117 PILE TIP REINFORCEMENT (NORMAL DUTY)		EA	72	42	42	119	---	---	---	275
AND	5005-2850	STEEL HP14X117 PRODUCTION PILE, GALVANIZED	(2)	LF	2,166	825	1,658	6,313	---	---	---	10,961
AND	9000-3001	EXISTING PILE EXTRACTION	(2)	DOLLA	---	3,000	12,000	30,000	---	---	---	45,000
AND	9005-1950	INSPECT SPLICED STEEL BEAM TEST PILES, HP14X117	(2)	EA	---	---	---	2	---	---	---	2
	0205-0281	SELECTED BORROW EXCAVATION ROCK, COARSE AGGREGATE, NO 1	(5)	CY	8	---	---	8	---	---	---	16
	0205-0363	SELECTED BORROW EXCAVATION ROCK, CLASS R-3	(5)(7)	TON	---	290	290	---	---	---	---	580
	0205-0366	SELECTED BORROW EXCAVATION ROCK, CLASS R-6	(5)(7)	TON	---	435	435	---	---	---	---	869
	5018-0048	REMOVAL OF PORTION OF EXISTING BRIDGE, S-39526	(2)	LS	---	---	---	---	---	---	---	LS
	9203-0101	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 ABUTMENT 1	(2)	LS	LS	---	---	---	---	---	---	LS
	9203-0102	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 PIER 1	(2)	LS	---	LS	---	---	---	---	---	LS
	9203-0103	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 PIER 2	(2)	LS	---	---	LS	---	---	---	---	LS
	9203-0104	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39526 ABUTMENT 2	(2)	LS	---	---	---	LS	---	---	---	LS
	9203-0111	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, EXISTING PIER	(2)	LS	---	---	---	---	---	---	---	LS

LEGEND:

(1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8120-0001 GIVEN FOR INFORMATION ONLY
(2) SEE THE CONTRACT SPECIAL PROVISIONS
(3) FOR THE AS-DESIGNED STRUCTURE, INCLUDE IN THE BRIDGE BID ITEMS FOR ALTERNATE DESIGNS INCLUDE IN BRIDGE STRUCTURE LUMP SUM ITEM
(4) INCLUDES APPROXIMATELY 165 CY OF CONCRETE IN THE VALLEYS OF THE SIP FORMS
(5) GEOTEXTILE, CLASS 4, TYPE A AND CLASS A CEMENT CONCRETE GROUTING ARE INCIDENTAL TO THIS ITEM
(6) INCLUDES ONE ADDITIONAL BEARING PER CLASSIFICATION FOR SAMPLING AND TESTING
(7) QUANTITY IS BASED ON 1.5 TON/CY
(8) HIGH STRENGTH BOLTS, NUTS AND WASHERS ARE INCIDENTAL TO THE FABRICATED STRUCTURAL STEEL
(9) INCLUDES THE MANDATORY PRE-DRILLING, GALVANIZED PRODUCTION PILE AND GALVANIZED PILE TIP

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
SUMMARY OF QUANTITIES

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 6 OF 121

S - 39526

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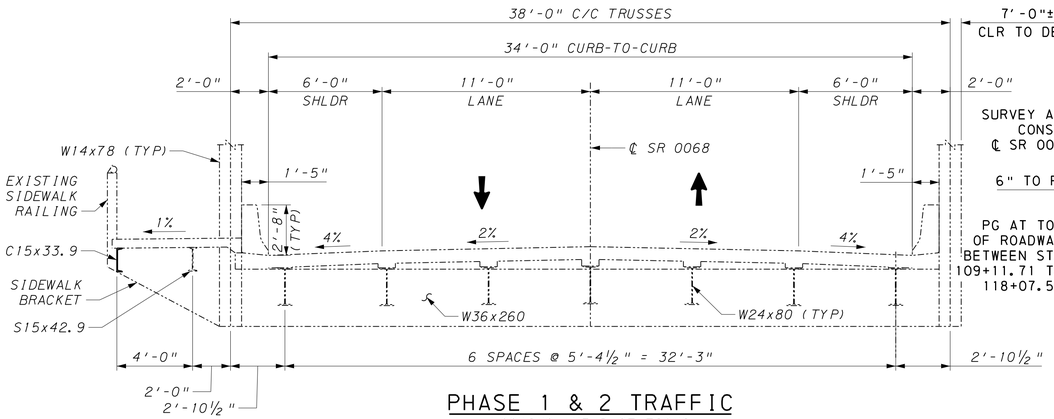
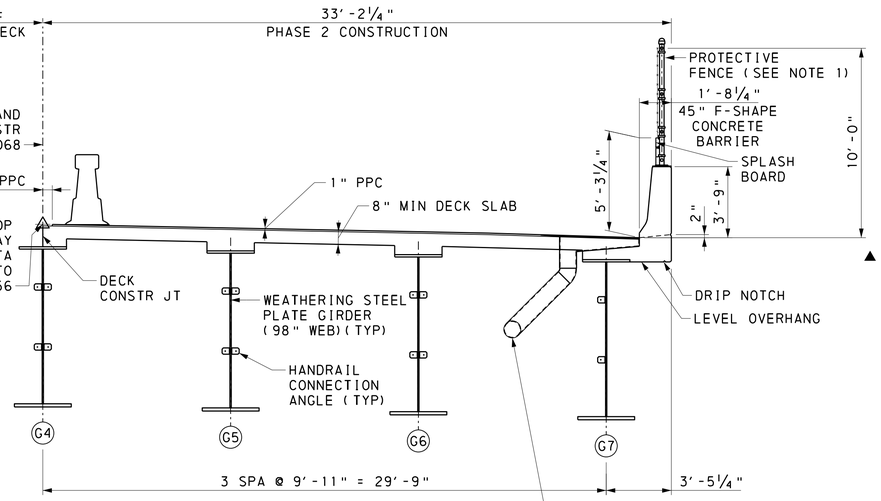


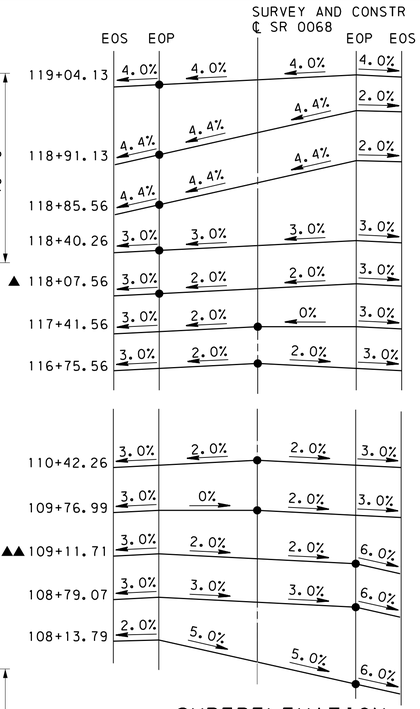
PHASE 1 & 2 TRAFFIC

LOOKING AHEAD STATIONS
SPAN 10 SHOWN, OTHERS SIMILAR
NOT TO SCALE



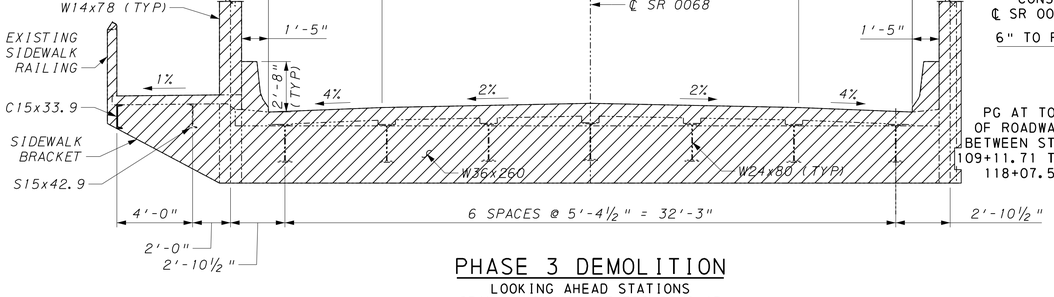
PHASE 2 CONSTRUCTION

LOOKING AHEAD STATIONS
NOT TO SCALE



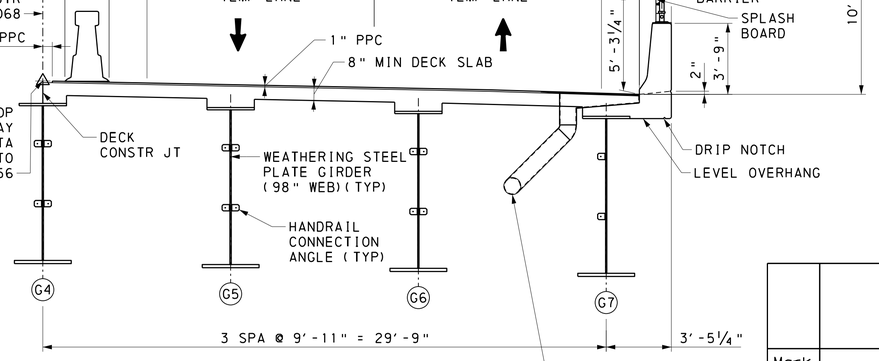
SUPERELEVATION TRANSITION TABLE

NOT TO SCALE



PHASE 3 DEMOLITION

LOOKING AHEAD STATIONS
SPAN 10 SHOWN, OTHERS SIMILAR
NOT TO SCALE



PHASE 3 TRAFFIC

LOOKING AHEAD STATIONS
NOT TO SCALE

NOTES:

1. CONSTRUCT ANTI-CLIMB SHIELD BOTH SIDES AT EACH END OF BRIDGE.
2. PHASE 1 IS THE CONSTRUCTION OF THE TEMPORARY ROADWAY.
3. PHASE 2 IS THE CONSTRUCTION OF THE EASTERN PORTION OF THE PROPOSED BRIDGE.
4. PHASE 3 IS THE REMOVAL OF THE EXISTING BRIDGE.
5. PHASE 4 IS THE CONSTRUCTION OF THE WESTERN PORTION OF THE PROPOSED BRIDGE.

LEGEND:

- (G5) DENOTES GIRDER NUMBER
- ** DENOTES TEMPORARY BARRIER, STRUCTURE MOUNTED (ROADWAY ITEM) FOR TEMPORARY ANCHORAGE, USE BOLT-THROUGH ANCHORS FOR THE EXISTING DECK AND ADHESIVE ANCHORS FOR THE NEW DECK. SEE BC-719M FOR ADDITIONAL INFORMATION ON THE CONCRETE BARRIER. PROVIDE TYPE B INSTALLATION. THE INSTALLATION OF THE STEEL TEMPORARY BARRIER IS PER MANUFACTURER'S SPECIFICATIONS.
- ← DENOTES TRAFFIC DIRECTION
- ▨ DENOTES REMOVAL LIMITS
- PPC DENOTES POLYESTER POLYMER CONCRETE
- EOS DENOTES EDGE OF SHOULDER
- EOP DENOTES EDGE OF PAVEMENT
- ● DENOTES SUPERELEVATION ROTATION POINT
- ▲ DENOTES BEGIN INSIDE ROTATION POINT, END CENTER ROTATION POINT
- ▲▲ DENOTES END INSIDE ROTATION POINT, BEGIN CENTER ROTATION POINT

REFERENCES:

1. CONSTRUCTION PHASING 2
2. FUTURE REDECKING

SHEET:

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9

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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BUTLER COUNTY
SR 0068 SECTION 253
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CONSTRUCTION PHASING 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 7 OF 121

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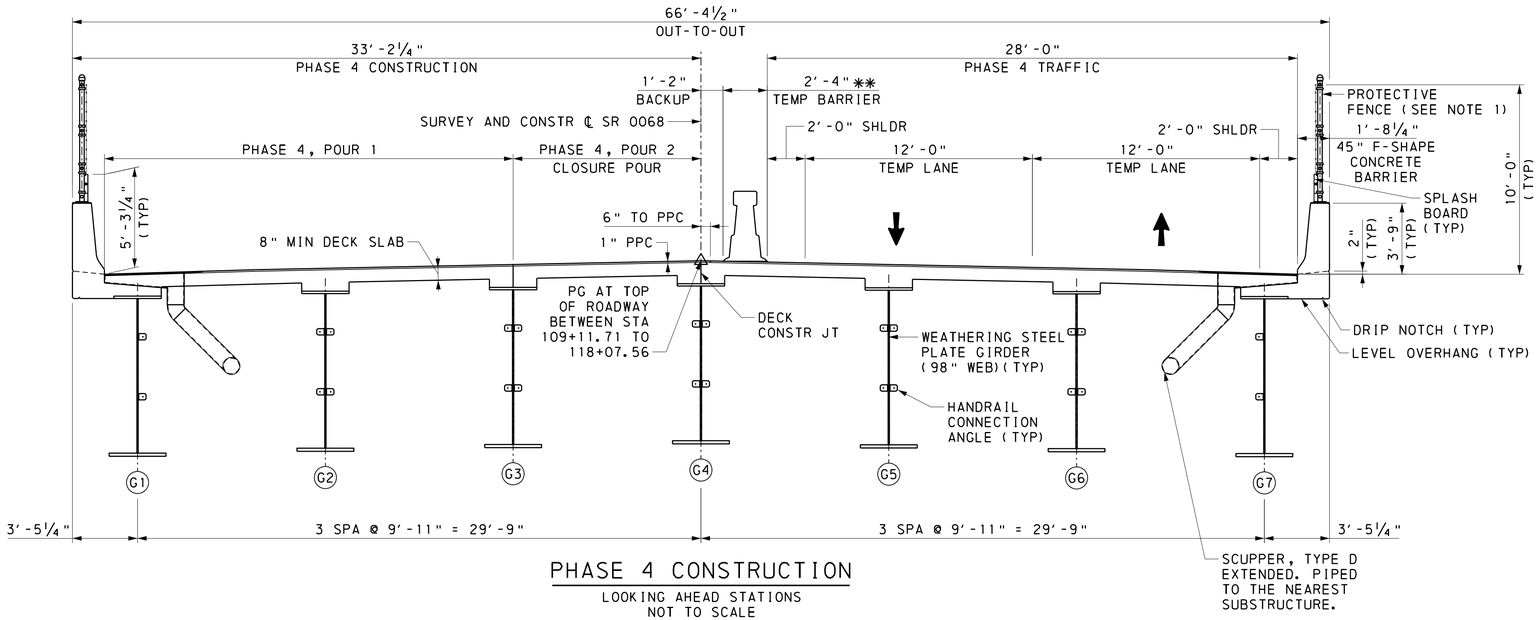
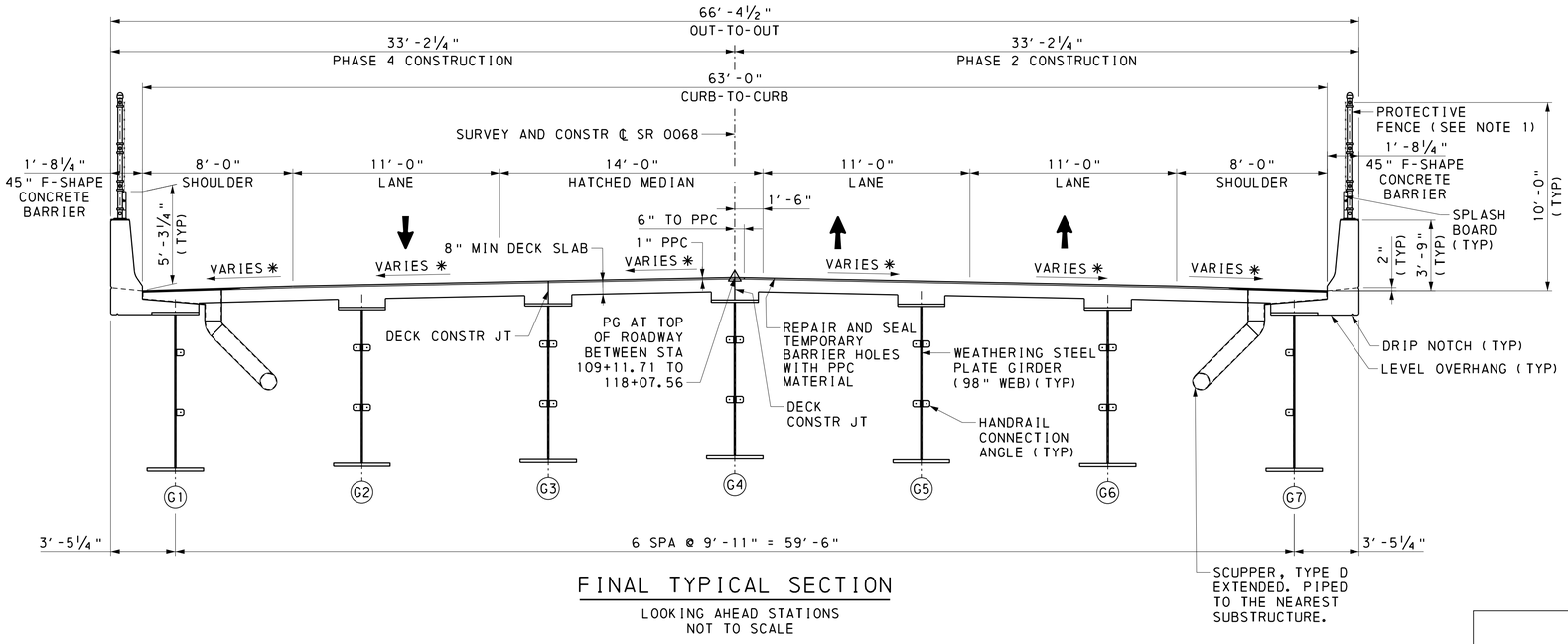


PHASE 4 CONSTRUCTION

LOOKING AHEAD STATIONS
NOT TO SCALE



FINAL TYPICAL SECTION

LOOKING AHEAD STATIONS
NOT TO SCALE

LEGEND:

(G5) DENOTES GIRDER NUMBER

* DENOTES SEE SUPERELEVATION TRANSITION TABLE

** DENOTES TEMPORARY BARRIER, STRUCTURE MOUNTED (ROADWAY ITEM) FOR TEMPORARY ANCHORAGE, USE BOLT-THROUGH ANCHORS FOR THE EXISTING DECK AND ADHESIVE ANCHORS FOR THE NEW DECK. SEE BC-719M FOR ADDITIONAL INFORMATION ON THE CONCRETE BARRIER. PROVIDE TYPE B INSTALLATION. THE INSTALLATION OF THE STEEL TEMPORARY BARRIER IS PER THE MANUFACTURER'S SPECIFICATIONS.

← DENOTES TRAFFIC DIRECTION

PPC DENOTES POLYESTER POLYMER CONCRETE

REFERENCES:

		SHEET:
1.	SUPERELEVATION TRANSITION TABLE	7
2.	CONSTRUCTION PHASING 1	7
3.	FUTURE REDECKING	9

NOTES:

1. CONSTRUCT ANTI-CLIMB SHIELD BOTH SIDES AT EACH END OF BRIDGE.
2. PHASE 1 IS THE CONSTRUCTION OF THE TEMPORARY ROADWAY.
3. PHASE 2 IS THE CONSTRUCTION OF THE EASTERN PORTION OF THE PROPOSED BRIDGE.
4. PHASE 3 IS THE REMOVAL OF THE EXISTING BRIDGE.
5. PHASE 4 IS THE CONSTRUCTION OF THE WESTERN PORTION OF THE PROPOSED BRIDGE.

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BUTLER COUNTY
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CONSTRUCTION PHASING 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 8 OF 121

S - 39526

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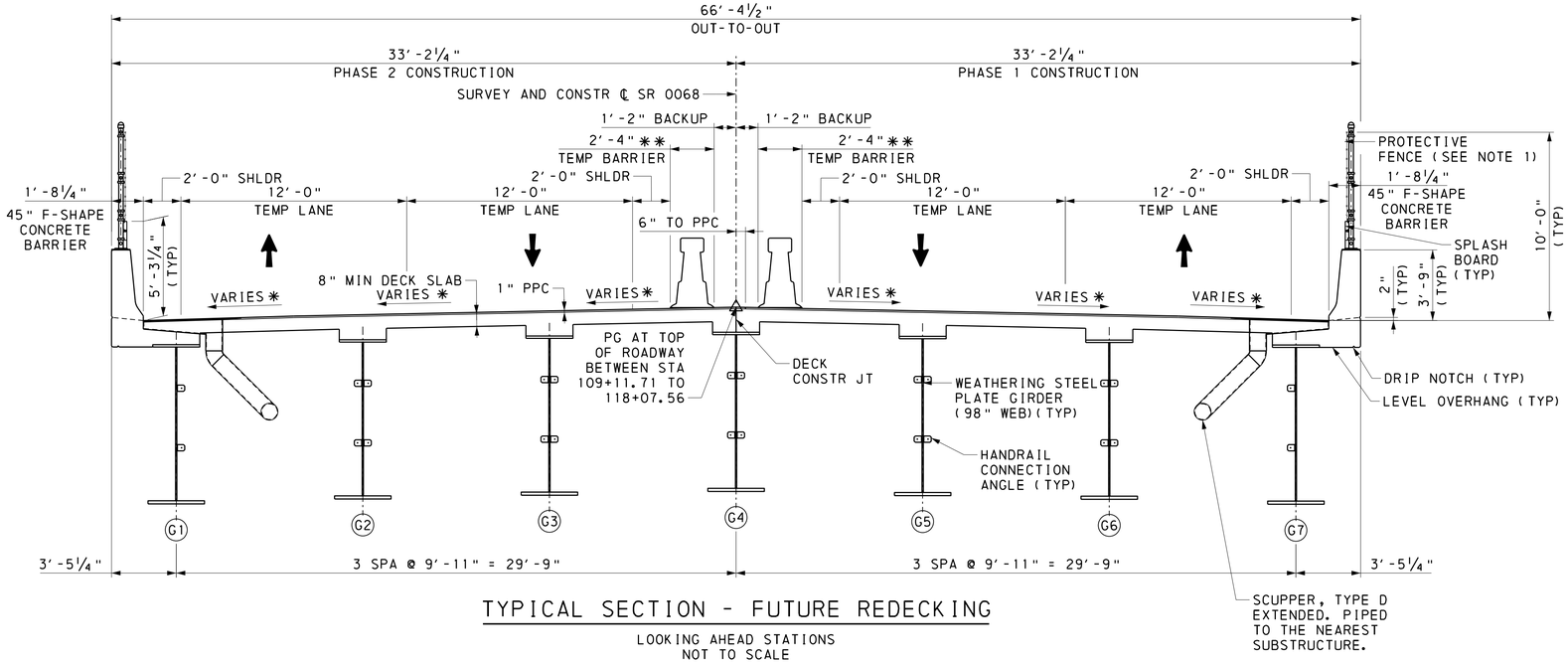

TYPICAL SECTION - FUTURE REDECKING

LOOKING AHEAD STATIONS
NOT TO SCALE

LEGEND:

- (G5) DENOTES GIRDER NUMBER
- * DENOTES SEE SUPERELEVATION TRANSITION TABLE
- ** DENOTES TEMPORARY BARRIER, STRUCTURE MOUNTED (ROADWAY ITEM) FOR TEMPORARY ANCHORAGE, USE BOLT-THROUGH ANCHORS FOR THE EXISTING DECK AND ADHESIVE ANCHORS FOR THE NEW DECK. SEE BC-719M FOR ADDITIONAL INFORMATION ON THE CONCRETE BARRIER. PROVIDE TYPE B INSTALLATION. THE INSTALLATION OF THE STEEL TEMPORARY BARRIER IS PER THE MANUFACTURER'S SPECIFICATIONS.
- ← DENOTES TRAFFIC DIRECTION
- PPC DENOTES POLYESTER POLYMER CONCRETE

REFERENCES:

		SHEET:
1.	SUPERELEVATION TRANSITION TABLE	7
2.	CONSTRUCTION PHASING 1	7
3.	CONSTRUCTION PHASING 2	8

NOTES:

1. CONSTRUCT ANTI-CLIMB SHIELD BOTH SIDES AT EACH END OF BRIDGE.

Mark	Description	By	Chk'd.	Recm'd.	Date
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FUTURE REDECKING

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 9 OF 121

S - 39526

DES: SJH | CKD: BEG | DWG: CLG | CKD: SJH

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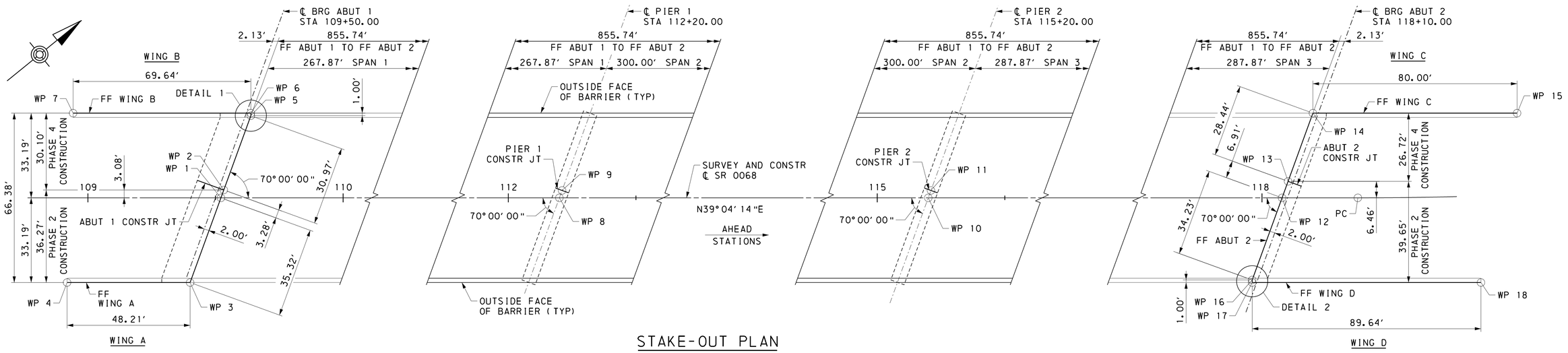
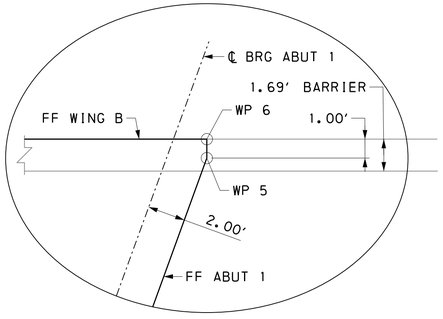


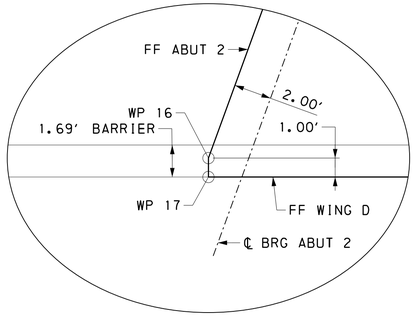
STAKE-OUT PLAN

NOT TO SCALE



DETAIL 1

NOT TO SCALE



DETAIL 2

NOT TO SCALE

STAKE-OUT WORK POINTS

WORK POINT	STATION	OFFSET (FT)	COORDINATES NORTHING (FT)	COORDINATES EASTING (FT)
WP 1	109+52.13	0.00	566,854.7693	1,380,229.2199
WP 2	109+53.25	3.08 LT	566,857.5848	1,380,227.5329
WP 3	109+40.05	33.19 RT	566,824.4740	1,380,247.3723
WP 4	108+91.84	33.19 RT	566,787.0466	1,380,216.9877
WP 5	109+63.84	32.19 LT	566,884.1518	1,380,211.6144
WP 6	109+63.84	33.19 LT	566,884.7821	1,380,210.8380
WP 7	108+94.21	33.19 LT	566,830.7188	1,380,166.9479
WP 8	112+20.00	0.00	567,062.7365	1,380,398.0537
WP 9	112+21.05	2.90 LT	567,065.3813	1,380,396.4689
WP 10	115+20.00	0.00	567,295.6472	1,380,587.1373
WP 11	115+21.05	2.90 LT	567,298.2920	1,380,585.5525
WP 12	118+07.87	0.00	567,519.1418	1,380,768.5766
WP 13	118+10.22	6.46 LT	567,525.0420	1,380,765.0413
WP 14	118+19.95	33.19 LT	567,549.4372	1,380,750.4242
WP 15	119+01.29	31.90 LT	567,611.5467	1,380,800.8465
WP 16	117+96.16	32.19 RT	567,489.7594	1,380,786.1821
WP 17	117+96.16	33.19 RT	567,489.1291	1,380,786.9585
WP 18	118+84.76	33.93 RT	567,558.7197	1,380,843.4542

CLOSURE DISTANCES

WORK POINT	DISTANCE (FT)
WP 3 TO WP 14	882.40
WP 5 TO WP 16	834.80

NOTES:

1. PROJECT COORDINATES BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPSC 83, PA SOUTH ZONE).
2. OFFSET IS MEASURED PERPENDICULAR TO SURVEY AND CONSTR ℄ SR 0068, LOOKING AHEAD STATIONS.
3. FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) DECIMAL POINTS.

LEGEND:

FF DENOTES FRONT FACE
WP DENOTES WORK POINT

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	ABUTMENT 1 PLAN	16
6.	PIER 1 PLAN AND FOOTING PLAN	27
7.	PIER 2 PLAN AND FOOTING PLAN	29
8.	ABUTMENT 2 PLAN	31

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 10 OF 121

S - 39526

DES: CLG | CKD: JMF | DWG: CLG | CKD: JMF

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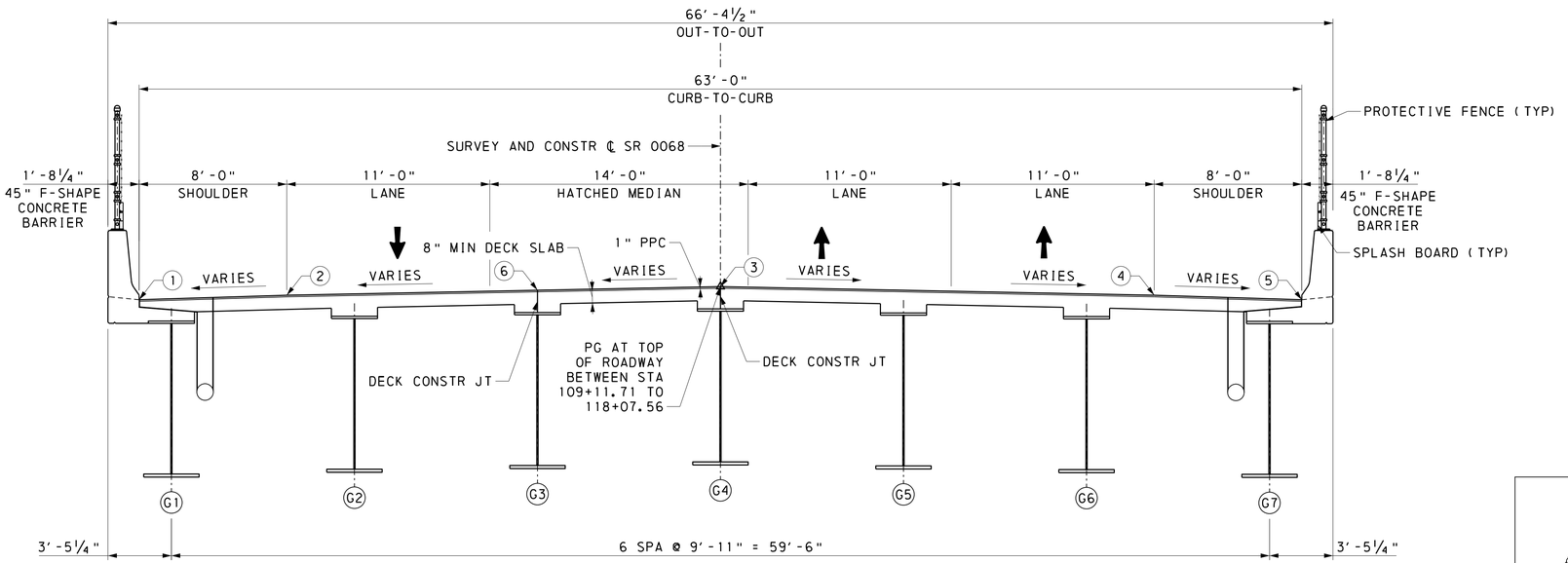
TOP OF PPC OVERLAY ELEVATIONS AT BREAK POINTS

STATION	PT 1	PT 2	PT 6	PT 3	PT 4	PT 5
109+38.53	---	---	---	---	---	1051.27
109+40.00	---	---	---	---	---	1051.26
109+41.45	---	---	---	---	1051.63	1051.26
109+50.00	---	---	---	1052.04	1051.57	1051.23
109+53.61	---	---	1052.08	1052.01	1051.54	1051.22
109+58.55	---	1052.11	1052.04	1051.98	1051.51	1051.20
109+60.00	---	1052.09	1052.02	1051.97	1051.50	1051.20
109+61.47	1051.83	1052.07	1052.01	1051.96	1051.49	1051.19
109+70.00	1051.71	1051.95	1051.92	1051.90	1051.43	1051.16
109+80.00	1051.57	1051.81	1051.82	1051.83	1051.36	1051.12
109+90.00	1051.43	1051.67	1051.72	1051.76	1051.29	1051.05
110+00.00	1051.29	1051.53	1051.62	1051.69	1051.22	1050.98
110+10.00	1051.14	1051.38	1051.52	1051.62	1051.15	1050.91
110+20.00	1051.00	1051.24	1051.42	1051.55	1051.08	1050.84
110+30.00	1050.86	1051.10	1051.32	1051.48	1051.01	1050.77
110+40.00	1050.72	1050.96	1051.22	1051.41	1050.94	1050.70
110+50.00	1050.64	1050.88	1051.15	1051.35	1050.88	1050.64
110+60.00	1050.57	1050.81	1051.08	1051.28	1050.81	1050.57
110+70.00	1050.50	1050.74	1051.01	1051.21	1050.74	1050.50
110+80.00	1050.43	1050.67	1050.94	1051.14	1050.67	1050.43
110+90.00	1050.36	1050.60	1050.87	1051.07	1050.60	1050.36
111+00.00	1050.29	1050.53	1050.80	1051.00	1050.53	1050.29
111+10.00	1050.22	1050.46	1050.73	1050.93	1050.46	1050.22
111+20.00	1050.15	1050.39	1050.66	1050.86	1050.39	1050.15
111+30.00	1050.08	1050.32	1050.59	1050.79	1050.32	1050.08
111+40.00	1050.01	1050.25	1050.52	1050.72	1050.25	1050.01
111+50.00	1049.94	1050.18	1050.45	1050.65	1050.18	1049.94
111+60.00	1049.87	1050.11	1050.39	1050.58	1050.11	1049.87
111+70.00	1049.80	1050.04	1050.32	1050.51	1050.04	1049.80
111+80.00	1049.74	1049.98	1050.25	1050.45	1049.98	1049.74
111+90.00	1049.67	1049.91	1050.18	1050.38	1049.91	1049.67
112+00.00	1049.60	1049.84	1050.11	1050.31	1049.84	1049.60
112+08.53	1049.54	1049.78	1050.05	1050.25	1049.78	1049.54
112+10.00	1049.53	1049.77	1050.04	1050.24	1049.77	1049.53
112+11.45	1049.52	1049.76	1050.03	1050.23	1049.76	1049.52
112+20.00	1049.46	1049.70	1049.97	1050.17	1049.70	1049.46
112+23.61	1049.43	1049.67	1049.94	1050.14	1049.67	1049.43

STATION	PT 1	PT 2	PT 6	PT 3	PT 4	PT 5
112+28.55	1049.40	1049.64	1049.91	1050.11	1049.64	1049.40
112+30.00	1049.39	1049.63	1049.90	1050.10	1049.63	1049.39
112+31.47	1049.38	1049.62	1049.89	1050.09	1049.62	1049.38
112+40.00	1049.32	1049.56	1049.83	1050.03	1049.56	1049.32
112+50.00	1049.25	1049.49	1049.76	1049.96	1049.49	1049.25
112+60.00	1049.18	1049.42	1049.69	1049.89	1049.42	1049.18
112+70.00	1049.11	1049.35	1049.62	1049.82	1049.35	1049.11
112+80.00	1049.04	1049.28	1049.55	1049.75	1049.28	1049.04
112+90.00	1048.97	1049.21	1049.48	1049.68	1049.21	1048.97
113+00.00	1048.90	1049.14	1049.42	1049.61	1049.14	1048.90
113+10.00	1048.83	1049.07	1049.35	1049.54	1049.07	1048.83
113+20.00	1048.77	1049.01	1049.28	1049.48	1049.01	1048.77
113+30.00	1048.70	1048.94	1049.21	1049.41	1048.94	1048.70
113+40.00	1048.63	1048.87	1049.14	1049.34	1048.87	1048.63
113+50.00	1048.56	1048.80	1049.07	1049.27	1048.80	1048.56
113+60.00	1048.49	1048.73	1049.00	1049.20	1048.73	1048.49
113+70.00	1048.42	1048.66	1048.93	1049.13	1048.66	1048.42
113+80.00	1048.35	1048.59	1048.86	1049.06	1048.59	1048.35
113+90.00	1048.28	1048.52	1048.79	1048.99	1048.52	1048.28
114+00.00	1048.21	1048.45	1048.72	1048.92	1048.45	1048.21
114+10.00	1048.14	1048.38	1048.65	1048.85	1048.38	1048.14
114+20.00	1048.07	1048.31	1048.58	1048.78	1048.31	1048.07
114+30.00	1048.00	1048.24	1048.51	1048.71	1048.24	1048.00
114+40.00	1047.93	1048.17	1048.45	1048.64	1048.17	1047.93
114+50.00	1047.86	1048.10	1048.38	1048.57	1048.10	1047.86
114+60.00	1047.80	1048.04	1048.31	1048.51	1048.04	1047.80
114+70.00	1047.73	1047.97	1048.24	1048.44	1047.97	1047.73
114+80.00	1047.66	1047.90	1048.17	1048.37	1047.90	1047.66
114+90.00	1047.59	1047.83	1048.10	1048.30	1047.83	1047.59
115+00.00	1047.52	1047.76	1048.03	1048.23	1047.76	1047.52
115+08.53	1047.46	1047.70	1047.97	1048.17	1047.70	1047.46
115+10.00	1047.45	1047.69	1047.96	1048.16	1047.69	1047.45
115+11.45	1047.44	1047.68	1047.95	1048.15	1047.68	1047.44
115+20.00	1047.38	1047.62	1047.89	1048.09	1047.62	1047.38
115+23.61	1047.35	1047.59	1047.87	1048.06	1047.59	1047.35
115+28.55	1047.32	1047.56	1047.83	1048.03	1047.56	1047.32
115+30.00	1047.31	1047.55	1047.82	1048.02	1047.55	1047.31

STATION	PT 1	PT 2	PT 6	PT 3	PT 4	PT 5
115+31.47	1047.30	1047.54	1047.81	1048.01	1047.54	1047.30
115+40.00	1047.24	1047.48	1047.75	1047.95	1047.48	1047.24
115+50.00	1047.17	1047.41	1047.68	1047.88	1047.41	1047.17
115+60.00	1047.10	1047.34	1047.61	1047.81	1047.34	1047.10
115+70.00	1047.03	1047.27	1047.55	1047.74	1047.27	1047.03
115+80.00	1046.96	1047.20	1047.48	1047.67	1047.20	1046.96
115+90.00	1046.89	1047.13	1047.41	1047.60	1047.13	1046.89
116+00.00	1046.83	1047.07	1047.34	1047.54	1047.07	1046.83
116+10.00	1046.76	1047.00	1047.27	1047.47	1047.00	1046.76
116+20.00	1046.69	1046.93	1047.20	1047.40	1046.93	1046.69
116+30.00	1046.62	1046.86	1047.13	1047.33	1046.86	1046.62
116+40.00	1046.55	1046.79	1047.06	1047.26	1046.79	1046.55
116+50.00	1046.48	1046.72	1046.99	1047.19	1046.72	1046.48
116+60.00	1046.41	1046.65	1046.92	1047.12	1046.65	1046.41
116+70.00	1046.34	1046.58	1046.85	1047.05	1046.58	1046.34
116+80.00	1046.27	1046.51	1046.78	1046.98	1046.54	1046.30
116+90.00	1046.20	1046.44	1046.71	1046.91	1046.55	1046.31
117+00.00	1046.13	1046.37	1046.64	1046.84	1046.55	1046.31
117+10.00	1046.06	1046.30	1046.58	1046.77	1046.55	1046.31
117+20.00	1045.99	1046.23	1046.51	1046.70	1046.55	1046.31
117+30.00	1045.92	1046.16	1046.43	1046.63	1046.55	1046.31
117+40.00	1045.83	1046.07	1046.34	1046.54	1046.52	1046.28
117+50.00	1045.72	1045.96	1046.23	1046.43	1046.49	1046.25
117+60.00	1045.59	1045.83	1046.11	1046.30	1046.44	1046.20
117+70.00	1045.46	1045.70	1045.97	1046.17	1046.37	1046.13
117+80.00	1045.30	1045.54	1045.81	1046.01	1046.29	1046.05
117+90.00	1045.13	1045.37	1045.64	1045.84	1046.19	1045.95
117+98.53	1044.98	1045.22	1045.49	1045.69	1046.09	1045.85
118+00.00	1044.95	1045.19	1045.46	1045.66	1046.07	---
118+01.45	1044.92	1045.16	1045.43	1045.63	1046.06	---
118+10.00	1044.75	1044.99	1045.27	1045.48	---	---
118+13.61	1044.67	1044.91	1045.21	---	---	---
118+18.55	1044.56	1044.80	---	---	---	---
118+20.00	1044.53	---	---	---	---	---
118+21.47	1044.50	---	---	---	---	---



TYPICAL SECTION

LOOKING AHEAD STATIONS
NOT TO SCALE

NOTES:

1. LOCATION OF DECK SLAB THICKNESS IS WHERE THE ℄ OF GIRDER INTERSECTS THE ℄ OF THE BEARING.
2. DECK SLAB THICKNESS IS MEASURED FROM THE TOP OF DECK TO THE TOP OF GIRDER.
3. ELEVATIONS GIVEN AT THE FIRST AND LAST STATIONS LISTED FOR EACH POINT ARE LOCATED AT THE ℄ OF BEARING.
4. CROSS SLOPES VARY. FOR THE SUPERELEVATION TRANSITION TABLE, SEE THE CONSTRUCTION PHASING 1 SHEET.

REFERENCES:

		SHEET:
1.	CONSTRUCTION PHASING 1	7
2.	FINAL TYPICAL SECTION	8

LEGEND:

(G5) DENOTES GIRDER NUMBER

◀ DENOTES TRAFFIC DIRECTION

PPC DENOTES POLYESTER POLYMER CONCRETE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK ELEVATIONS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 11 OF 121

S - 39526

DES: BEG | CKD: SJH | DWG: KTS | CKD: SJH

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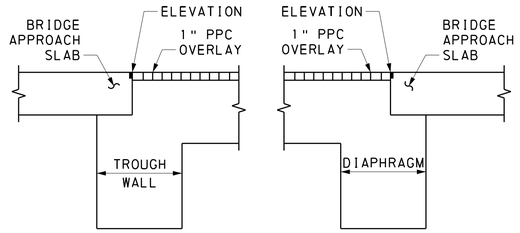
TOP OF PPC OVERLAY ELEVATIONS AT 10TH POINTS ALONG CENTERLINE OF GIRDER

LOCATION	GIRDER NUMBER						
	G1	G2	G3	G4	G5	G6	G7
CL BRG ABUT 1	1051.89	1052.11	1052.08	1052.04	1051.86	1051.69	1051.35
0.05L	1051.70	1051.93	1051.95	1051.94	1051.77	1051.60	1051.29
0.10L	1051.51	1051.76	1051.82	1051.85	1051.68	1051.50	1051.24
0.15L	1051.32	1051.58	1051.68	1051.76	1051.58	1051.41	1051.18
0.20L	1051.13	1051.41	1051.55	1051.66	1051.49	1051.32	1051.08
0.25L	1050.94	1051.23	1051.41	1051.57	1051.40	1051.22	1050.99
0.30L	1050.75	1051.06	1051.28	1051.48	1051.30	1051.13	1050.89
0.35L	1050.65	1050.94	1051.16	1051.38	1051.21	1051.04	1050.80
0.40L	1050.56	1050.84	1051.07	1051.29	1051.12	1050.94	1050.71
0.45L	1050.46	1050.75	1050.97	1051.20	1051.02	1050.85	1050.61
0.50L	1050.37	1050.66	1050.88	1051.10	1050.93	1050.76	1050.52
0.55L	1050.28	1050.56	1050.79	1051.01	1050.84	1050.66	1050.43
0.60L	1050.18	1050.47	1050.69	1050.92	1050.74	1050.57	1050.33
0.65L	1050.09	1050.38	1050.60	1050.82	1050.65	1050.48	1050.24
0.70L	1050.00	1050.28	1050.51	1050.73	1050.56	1050.38	1050.15
0.75L	1049.90	1050.19	1050.41	1050.64	1050.46	1050.29	1050.05
0.80L	1049.81	1050.10	1050.32	1050.54	1050.37	1050.20	1049.96
0.85L	1049.72	1050.00	1050.23	1050.45	1050.28	1050.10	1049.87
0.90L	1049.62	1049.91	1050.13	1050.35	1050.18	1050.01	1049.77
0.95L	1049.53	1049.81	1050.04	1050.26	1050.09	1049.91	1049.68
CL PIER 1	1049.44	1049.72	1049.94	1050.17	1049.99	1049.82	1049.59
0.05L	1049.33	1049.62	1049.84	1050.06	1049.89	1049.72	1049.48
0.10L	1049.23	1049.51	1049.74	1049.96	1049.79	1049.61	1049.38
0.15L	1049.12	1049.41	1049.63	1049.86	1049.68	1049.51	1049.27
0.20L	1049.02	1049.31	1049.53	1049.75	1049.58	1049.41	1049.17
0.25L	1048.92	1049.20	1049.43	1049.65	1049.48	1049.30	1049.07
0.30L	1048.81	1049.10	1049.32	1049.54	1049.37	1049.20	1048.96
0.35L	1048.71	1048.99	1049.22	1049.44	1049.27	1049.09	1048.86
0.40L	1048.60	1048.89	1049.11	1049.34	1049.16	1048.99	1048.75
0.45L	1048.50	1048.79	1049.01	1049.23	1049.06	1048.89	1048.65
0.50L	1048.40	1048.68	1048.91	1049.13	1048.96	1048.78	1048.55
0.55L	1048.29	1048.58	1048.80	1049.02	1048.85	1048.68	1048.44
0.60L	1048.19	1048.47	1048.70	1048.92	1048.75	1048.57	1048.34
0.65L	1048.08	1048.37	1048.59	1048.82	1048.64	1048.47	1048.23
0.70L	1047.98	1048.27	1048.49	1048.71	1048.54	1048.37	1048.13
0.75L	1047.88	1048.16	1048.39	1048.61	1048.44	1048.26	1048.03
0.80L	1047.77	1048.06	1048.28	1048.51	1048.33	1048.16	1047.92
0.85L	1047.67	1047.95	1048.18	1048.40	1048.23	1048.05	1047.82
0.90L	1047.57	1047.85	1048.07	1048.30	1048.12	1047.95	1047.72
0.95L	1047.46	1047.75	1047.97	1048.19	1048.02	1047.85	1047.61
CL PIER 2	1047.36	1047.64	1047.87	1048.09	1047.92	1047.74	1047.51
0.05L	1047.26	1047.54	1047.77	1047.99	1047.82	1047.64	1047.41
0.10L	1047.16	1047.44	1047.67	1047.89	1047.72	1047.54	1047.31
0.15L	1047.06	1047.34	1047.57	1047.79	1047.62	1047.44	1047.21
0.20L	1046.96	1047.24	1047.46	1047.69	1047.51	1047.34	1047.11
0.25L	1046.86	1047.14	1047.36	1047.59	1047.41	1047.24	1047.01
0.30L	1046.75	1047.04	1047.26	1047.49	1047.31	1047.14	1046.90
0.35L	1046.65	1046.94	1047.16	1047.39	1047.21	1047.04	1046.80
0.40L	1046.55	1046.84	1047.06	1047.29	1047.11	1046.94	1046.70
0.45L	1046.45	1046.74	1046.96	1047.19	1047.02	1046.84	1046.61
0.50L	1046.35	1046.64	1046.86	1047.09	1046.91	1046.74	1046.50
0.55L	1046.25	1046.54	1046.76	1046.98	1046.81	1046.64	1046.40
0.60L	1046.15	1046.44	1046.66	1046.88	1046.76	1046.61	1046.36
0.65L	1046.05	1046.34	1046.56	1046.78	1046.70	1046.59	1046.36
0.70L	1045.94	1046.23	1046.46	1046.68	1046.64	1046.58	1046.36
0.75L	1045.79	1046.09	1046.33	1046.56	1046.57	1046.56	1046.36
0.80L	1045.61	1045.92	1046.16	1046.40	1046.47	1046.50	1046.33
0.85L	1045.40	1045.71	1045.97	1046.22	1046.33	1046.42	1046.27
0.90L	1045.15	1045.48	1045.74	1046.00	1046.16	1046.30	1046.18
0.95L	1044.88	1045.21	1045.48	1045.74	1045.96	1046.15	1046.05
CL BRG ABUT 2	1044.57	1044.92	1045.21	1045.48	1045.73	1045.97	1045.90



ABUTMENT 1

NOT TO SCALE

ABUTMENT 2

NOT TO SCALE

	TRANSVERSE JOINT LOCATION	STATION	ELEVATION
ABUT 1 ELEVATION	PT 1	109+51.85	1051.97
	PT 2	109+48.94	1052.25
	PT 3	109+40.39	1052.10
	PT 4	109+31.84	1051.69
	PT 5	109+28.92	1051.30
ABUT 2 ELEVATION	PT 1	118+22.64	1044.47
	PT 2	118+19.73	1044.78
	PT 3	118+11.18	1045.46
	PT 4	118+02.62	1046.04
	PT 5	117+99.71	1045.84

NOTES:

1. SEE THE DECK SECTIONS SHEET FOR DETAILS ON THE DECK SLAB THICKNESSES "A" AT THE ℄ OF BEARINGS AT EACH GIRDER.
2. THE PROFILE GRADE ELEVATION IS GIVEN AT THE TOP OF DECK
3. DECK ELEVATIONS ARE GIVEN AT THE ℄ OF EACH GIRDER.
4. LOCATIONS GIVEN ARE THE DISTANCE (FT) ALONG THE ℄ OF EACH GIRDER TO EACH 10TH POINT AS MEASURED FROM THE ℄ OF BEARING AT THE BACK STATION SUBSTRUCTURE OF EACH SPAN.
5. FOR THE APPROACH SLAB ELEVATIONS AND CROSS SLOPES, SEE THE APPROACH SLAB & DETAILS SHEETS.

REFERENCES:

		SHEET:
1.	FINAL TYPICAL SECTION	8
2.	DECK SECTIONS	75
3.	APPROACH SLAB & DETAILS	89 - 92

LEGEND:

G5 DENOTES GIRDER NUMBER

PPC DENOTES POLYESTER POLYMER CONCRETE

Mark	Description	By	Chk'd.	Recm'd.	Date
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SR 0068 PREVIOUSLY KNOWN AS LR 214
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK ELEVATIONS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 12 OF 121

S - 39526

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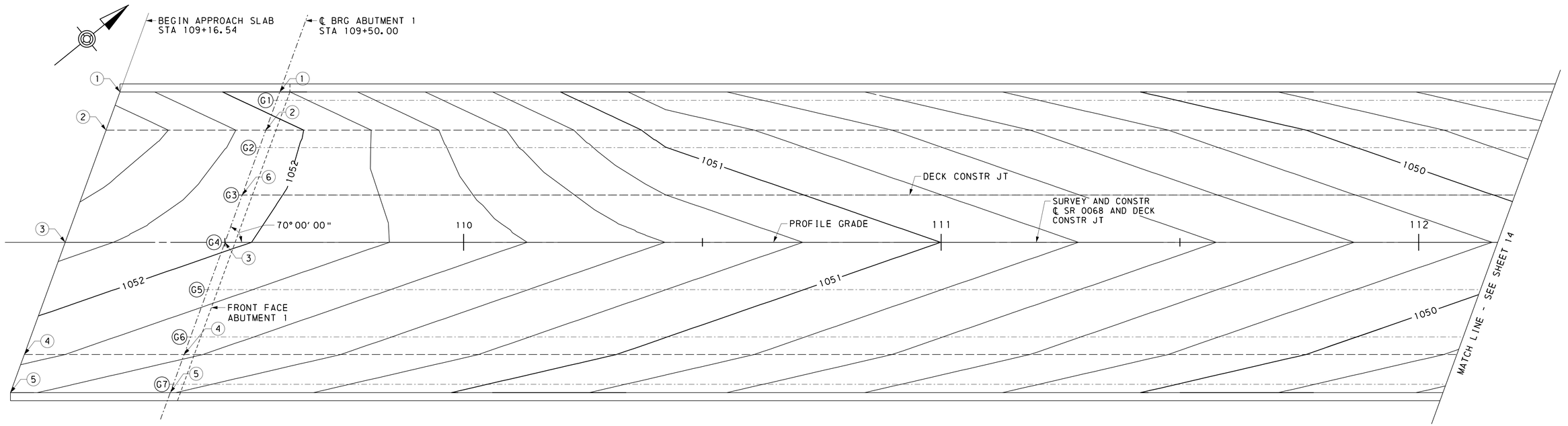

SPAN 1

PARTIAL PLAN
DECK SURFACE CONTOURS

0 5' 10' 20'

LEGEND:

(G1) THRU (G7) DENOTES GIRDER ELEVATION AT ℄ GIRDER

(1) THRU (6) DENOTES ELEVATION AT BREAK POINTS

REFERENCES:

	SHEET:
1. LIST OF PENNDOT STANDARD DRAWINGS	1
2. INDEX OF DRAWINGS AND RATINGS	3
3. CONSTRUCTION PHASING 1 & 2	7 & 8
4. DECK ELEVATIONS 1 & 2	11 & 12
5. WORK THIS SHEET WITH SHEETS	14 & 15

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107
PENNSYLVANIA

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK CONTOUR PLAN 1

RECOMMENDED _____

SHEET 13 OF 121

S - 39526

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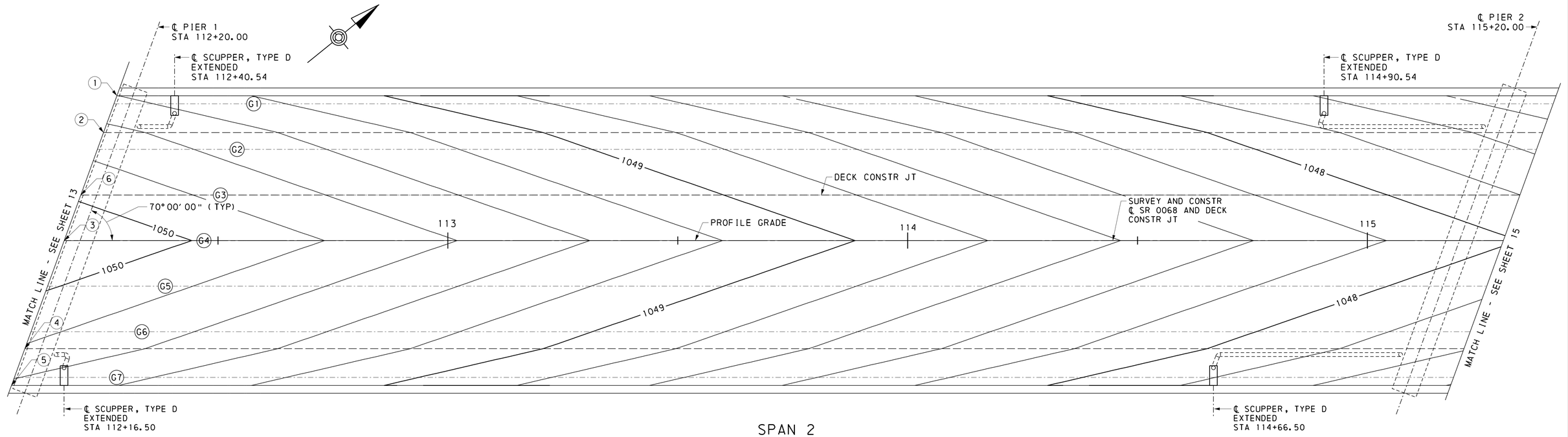

SPAN 2

PARTIAL PLAN
DECK SURFACE CONTOURS

0 5' 10' 20'

LEGEND:

(G1) THRU (G7) DENOTES GIRDER ELEVATION AT ℄ GIRDER

(1) THRU (6) DENOTES ELEVATION AT BREAK POINTS

REFERENCES:	SHEET:
1. LIST OF PENNDOT STANDARD DRAWINGS	1
2. INDEX OF DRAWINGS AND RATINGS	3
3. CONSTRUCTION PHASING 1 & 2	7 & 8
4. DECK ELEVATIONS 1 & 2	11 & 12
5. WORK THIS SHEET WITH SHEETS	13 & 15

COMMONWEALTH OF PENNSYLVANIA
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SEAN J. HART
ENGINEER
No. 071107
PENNSYLVANIA

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KARNS CROSSING

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK CONTOUR PLAN 2

RECOMMENDED _____

SHEET 14 OF 121

S - 39526

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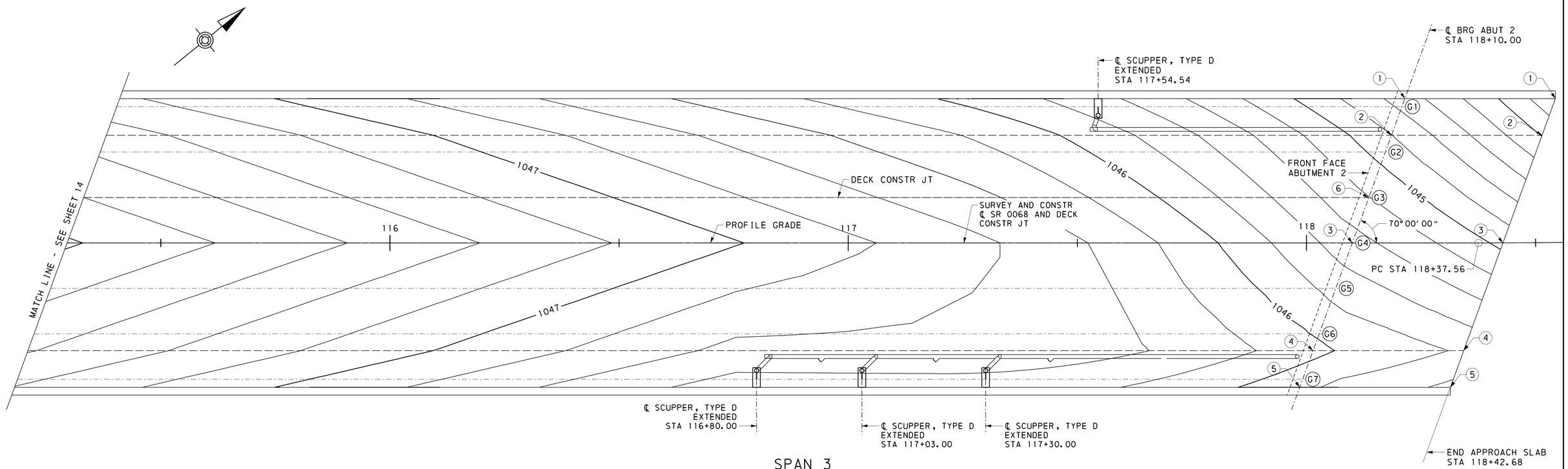

SPAN 3

PARTIAL PLAN
DECK SURFACE CONTOURS

0 5' 10' 20'

LEGEND:

(G1) THRU (G7) DENOTES GIRDER ELEVATION AT ℄ GIRDER

(1) THRU (6) DENOTES ELEVATION AT BREAK POINTS

REFERENCES:

	SHEET:
1. LIST OF PENNDOT STANDARD DRAWINGS	1
2. INDEX OF DRAWINGS AND RATINGS	3
3. CONSTRUCTION PHASING 1 & 2	7 & 8
4. DECK ELEVATIONS 1 & 2	11 & 12
5. WORK THIS SHEET WITH SHEETS	13 & 14

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
COMMONWEALTH OF PENNSYLVANIA

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
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SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK CONTOUR PLAN 3

RECOMMENDED _____

SHEET 15 OF 121

S - 39526

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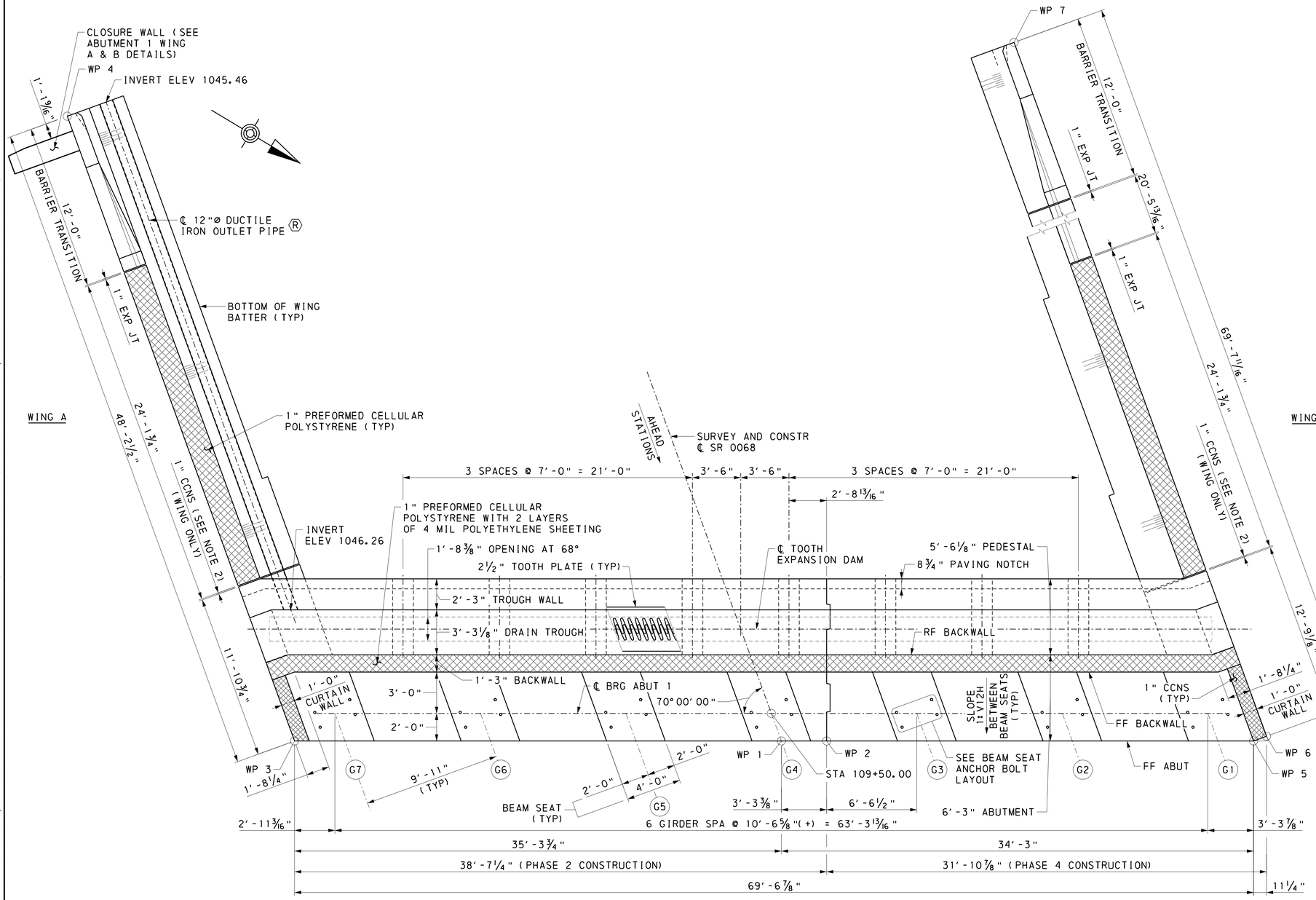

ABUTMENT 1 PLAN

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ABUTMENT FOOTING OUTLINE NOT SHOWN.
2. SEE WING ELEVATION VIEW FOR ½" FLUSH EXPANSION JOINT BELOW.
3. AT LEAST SEVEN DAYS PRIOR TO SETTING GIRDERS, SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL AS-BUILT BEAM SEAT ELEVATIONS. PROVIDE DRAWING(S) AND/OR SPREADSHEET(S) STAMPED BY A PROFESSIONAL LAND SURVEYOR CURRENTLY REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA. PROVIDE AS-BUILT ELEVATIONS SHOWN ON THE STRUCTURE SHEETS. DO NOT SET GIRDERS UNTIL APPROVAL IS GRANTED BY THE DEPARTMENT REPRESENTATIVE. FOR ALL BEAM SEAT ELEVATIONS THAT DO NOT MEET THE PUB 408, SECTION 1001.3(K)9 CRITERIA, SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL A REMEDIATION PROCEDURE. DO NOT SET GIRDERS UNTIL THE REMEDIATION PROCEDURE IS APPROVED BY THE DEPARTMENT REPRESENTATIVE. THE COST OF THIS WORK IS INCIDENTAL TO THE COST OF THE CONCRETE PLACED IN THE BEAM SEATS.

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
WP	DENOTES WORK POINT
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
(G3)	DENOTES GIRDER NUMBER
Ⓡ	DENOTES ROADWAY ITEM

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING 1 & 2	7 & 8
3.	STAKE-OUT PLAN	10
4.	WORK THIS DRAWING WITH SHEETS	17 - 25
5.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
6.	WING BARRIER TRANSITION 1 & 2	43 & 44
7.	FRAMING PLAN 1 & 2	45 & 46

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

RECOMMENDED _____

SHEET 16 OF 121

S - 39526

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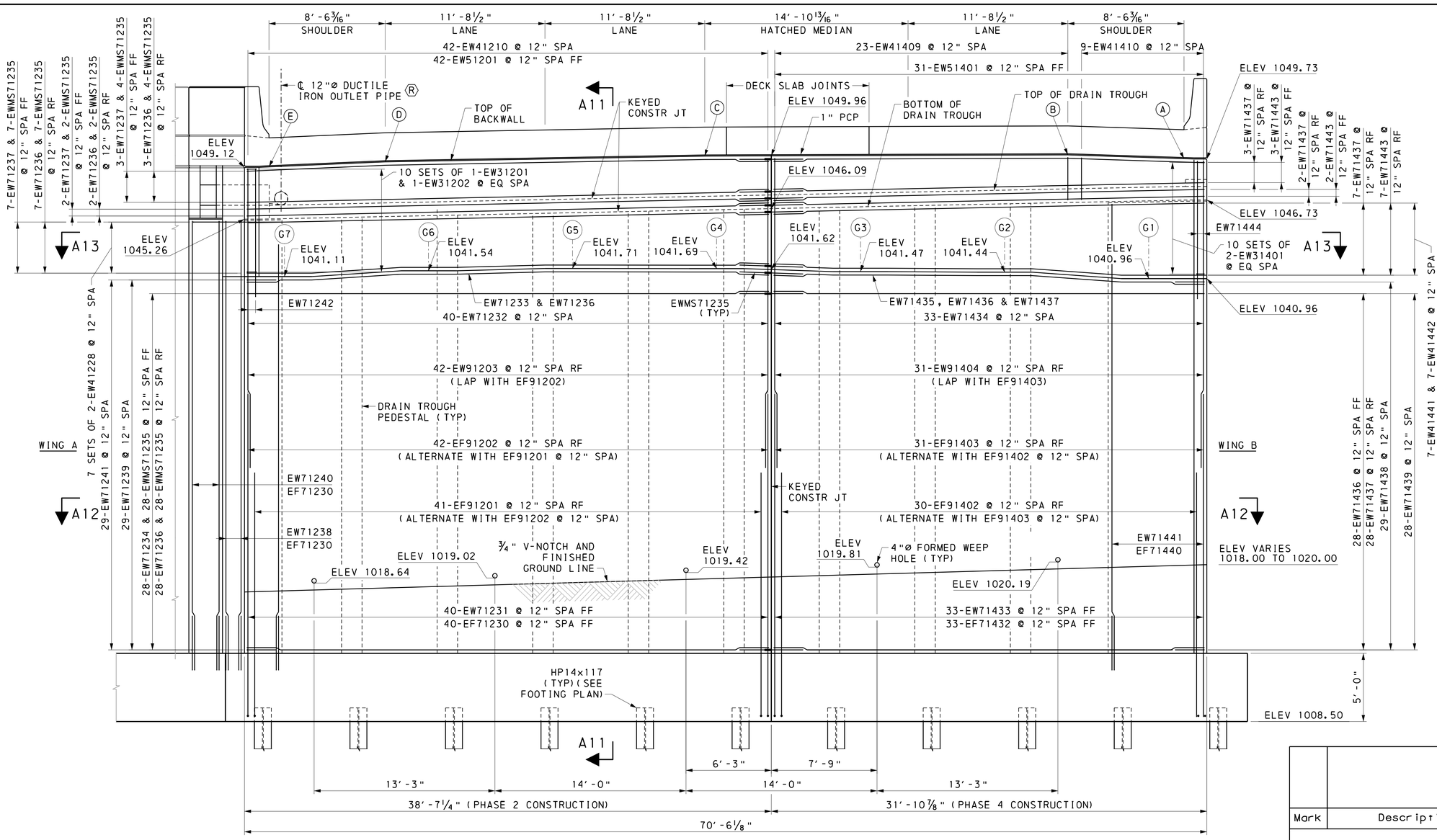

ABUTMENT 1 ELEVATION

LOOKING BACK STATIONS

0 1' 2' 3' 4' 5' 6'

ABUTMENT 1 BACKWALL ELEVATIONS @ FF

	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
STA	109+58.27	109+55.36	109+46.81	109+38.25	109+35.34
ELEVATION	1049.53	1050.12	1050.02	1049.61	1049.24

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
ES	DENOTES EACH SIDE
PCP	1" PREFORMED CELLULAR POLYSTYRENE
(G3)	DENOTES GIRDER NUMBER
(R)	DENOTES ROADWAY ITEM

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 & 18 - 25
2.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
3.	WING BARRIER TRANSITION 1 & 2	43 & 44
4.	ABUTMENT 1 REINF BAR SCHEDULE 1-4	93 & 96

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
2. BEAM SEAT ELEVATIONS SHOWN TAKEN AT CENTERLINE OF BEARING. CURTAIN WALL ELEVATION SHOWN TAKEN AT END OF SLAB.
3. THE BEAM SEATS ARE LEVEL IN THE LONGITUDINAL AND TRANSVERSE DIRECTIONS.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
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SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 ELEVATION

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S - 39526

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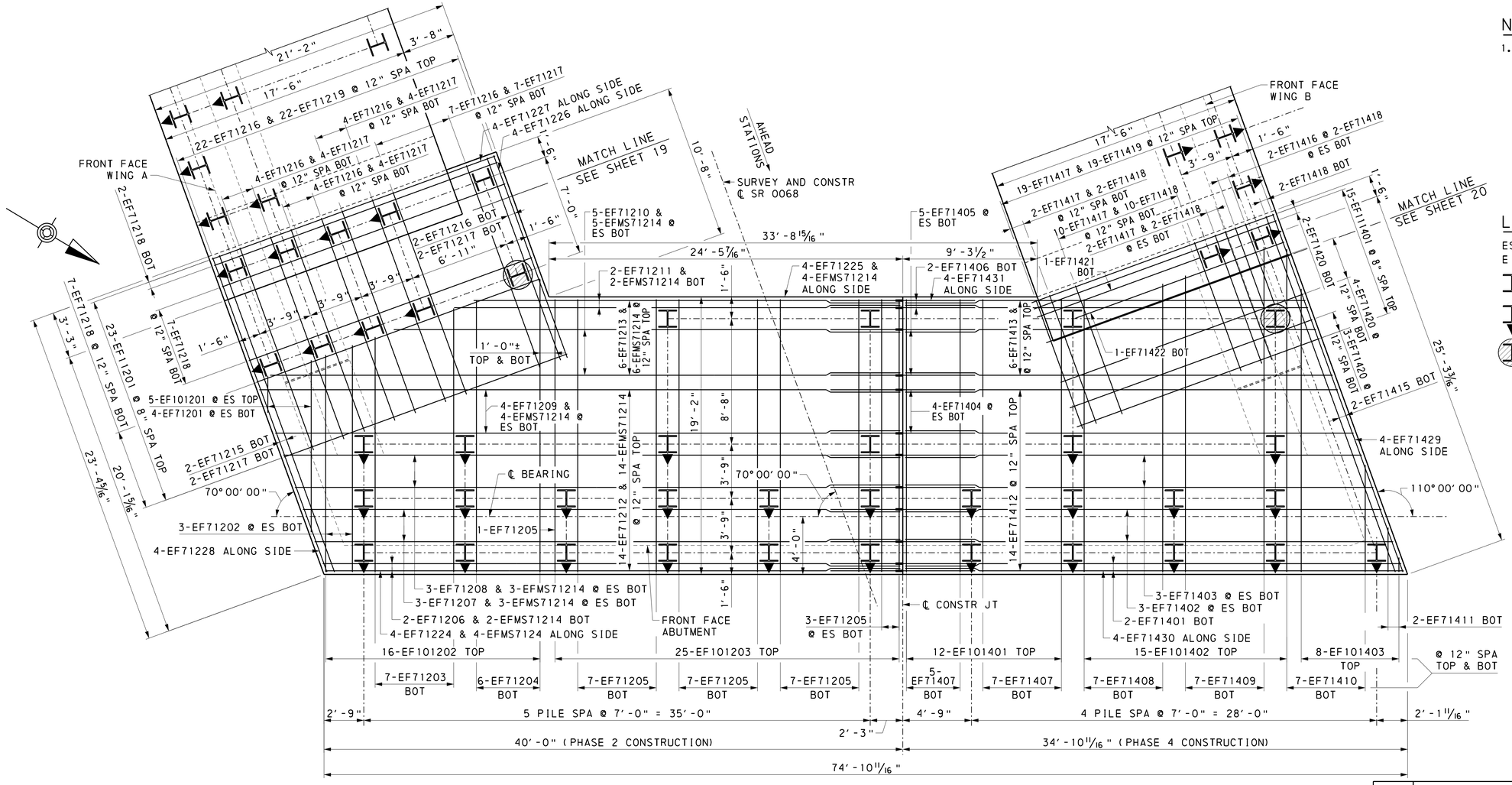

PARTIAL PLAN - PILE AND FOOTING

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

LEGEND:

ES DENOTES EQUAL SPACE
E DENOTES EPOXY COATED BARS
DENOTES VERTICAL PILE (HP 14x117)
DENOTES BATTERED PILE 3:12 (HP 14x117)
DENOTES TEST PILE (HP 14x117)

ABUTMENT 1 AXIAL PILE LOADING

LOCATION	ABUTMENT 1	WING A	WING B
LIMIT STATE	STRENGTH - I	STRENGTH - III	STRENGTH - III
LOAD STATE	MAXIMUM	MAXIMUM	MAXIMUM
STAGE	FINAL	TEMP	TEMP
FACTORED AXIAL LOAD (KIP/PILE)	430.0	457.0	457.0
FACTORED AXIAL RESISTANCE (KIP/PILE)	474.0	474.0	474.0
PERFORMANCE RATIO	1.10	1.04	1.04

ABUTMENT 1 LATERAL PILE LOADING

LOCATION	ABUTMENT 1	WING A	WING B
LIMIT STATE	STRENGTH - I	STRENGTH - I	STRENGTH - I
LOAD STATE	MAXIMUM	MAXIMUM	MAXIMUM
STAGE	FINAL	FINAL	FINAL
FACTORED LATERAL LOAD (KIP/FT)	38.4	45.5	30.6
FACTORED LATERAL RESISTANCE (KIP/FT)	41.1	46.0	30.7
PERFORMANCE RATIO	1.07	1.01	1.00

REFERENCES:

1. WORK THIS DRAWING WITH SHEETS 16 - 17 & 19 - 25
2. ABUTMENT 1 REINF BAR SCHEDULE 1-4 93 - 96

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 PILE AND FOOTING REINF PLAN 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 18 OF 121

S - 39526

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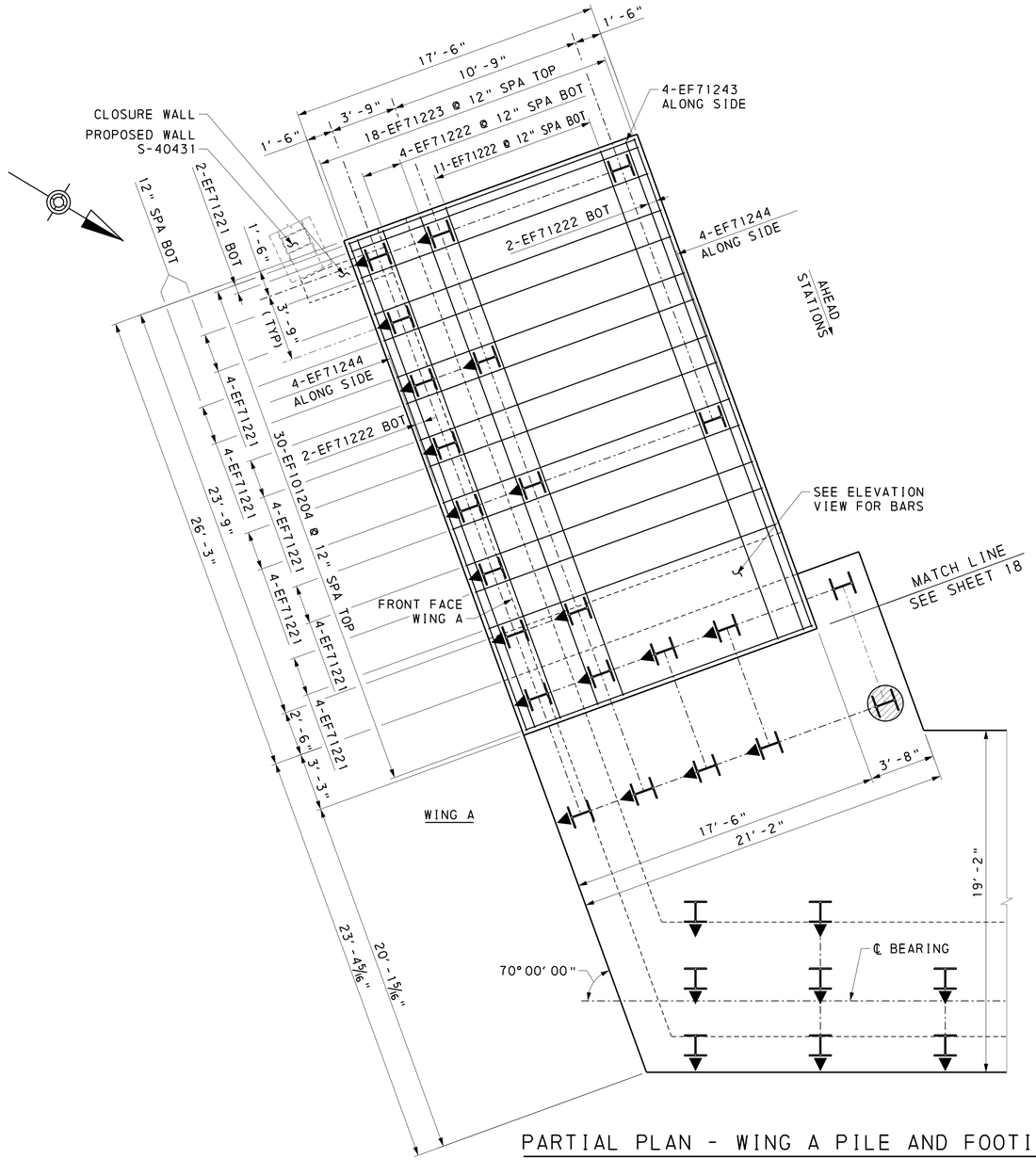

PARTIAL PLAN - WING A PILE AND FOOTING

0 1' 2' 3' 4' 5' 6'

LEGEND:

ES DENOTES EQUAL SPACE
E DENOTES EPOXY COATED BARS
DENOTES VERTICAL PILE (HP 14x117)
DENOTES BATTERED PILE 3:12 (HP 14x117)
DENOTES TEST PILE (HP 14x117)

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

REFERENCES:

1. WORK THIS DRAWING WITH SHEETS
2. ABUTMENT 1 REINF BAR SCHEDULE

SHEET:

16 - 18 & 20 - 25
93 - 96

Mark	Description	By	Chk'd.	Recm'd.	Date
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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 PILE AND FOOTING REINF PLAN 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 19 OF 121

S - 39526

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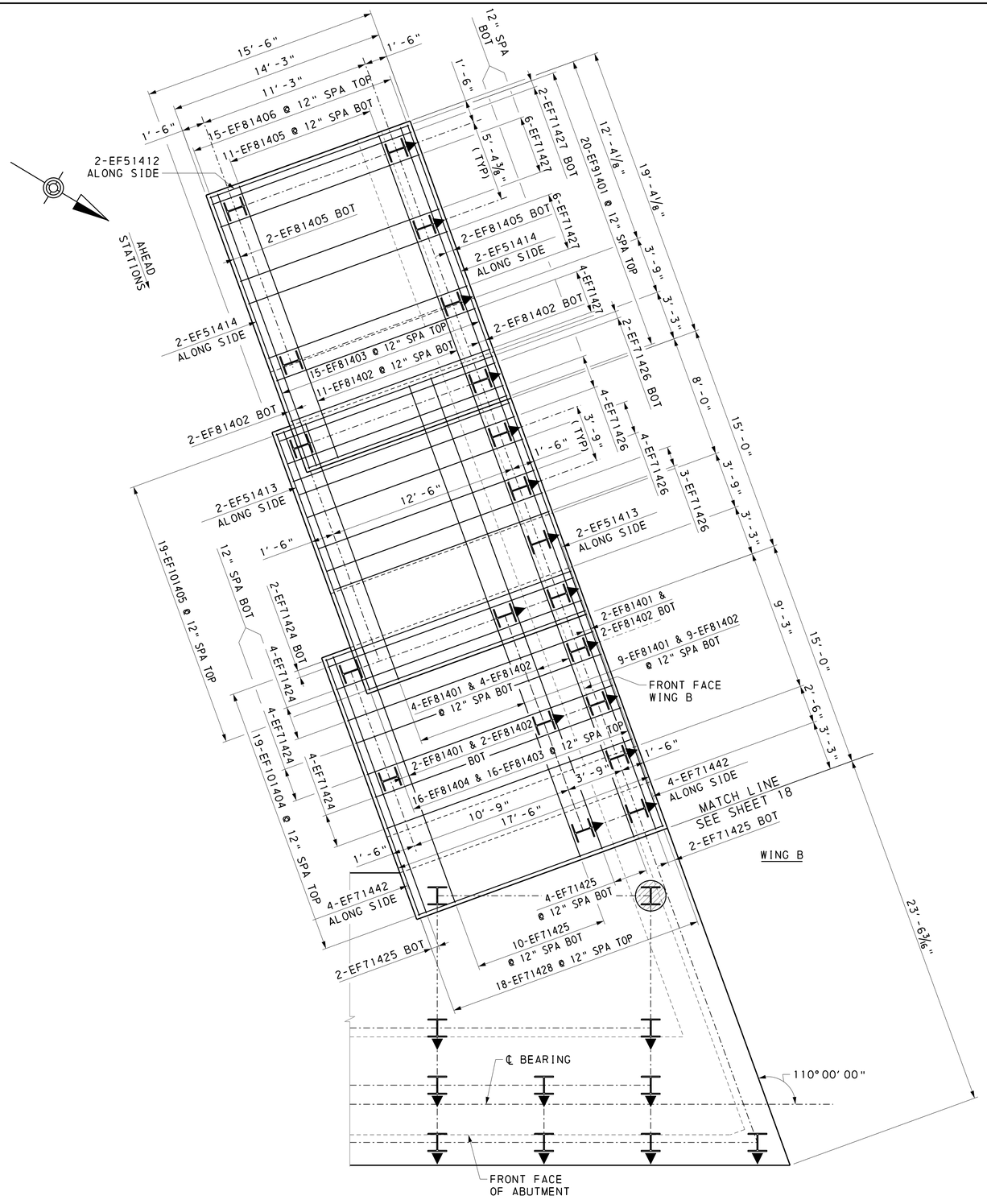

PARTIAL PLAN - WING B PILE AND FOOTING

0 1' 2' 3' 4' 5' 6'

LEGEND:

ES DENOTES EQUAL SPACE
E DENOTES EPOXY COATED BARS

DENOTES VERTICAL PILE (HP 14x117)

DENOTES BATTERED PILE 3:12 (HP 14x117)

DENOTES TEST PILE (HP 14x117)

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

REFERENCES:

1. WORK THIS DRAWING WITH SHEETS 16 - 19 & 21 - 25
2. ABUTMENT 1 REINF BAR SCHEDULE 1-4 93 - 96

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 PILE AND FOOTING REINF PLAN 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 20 OF 121

S - 39526

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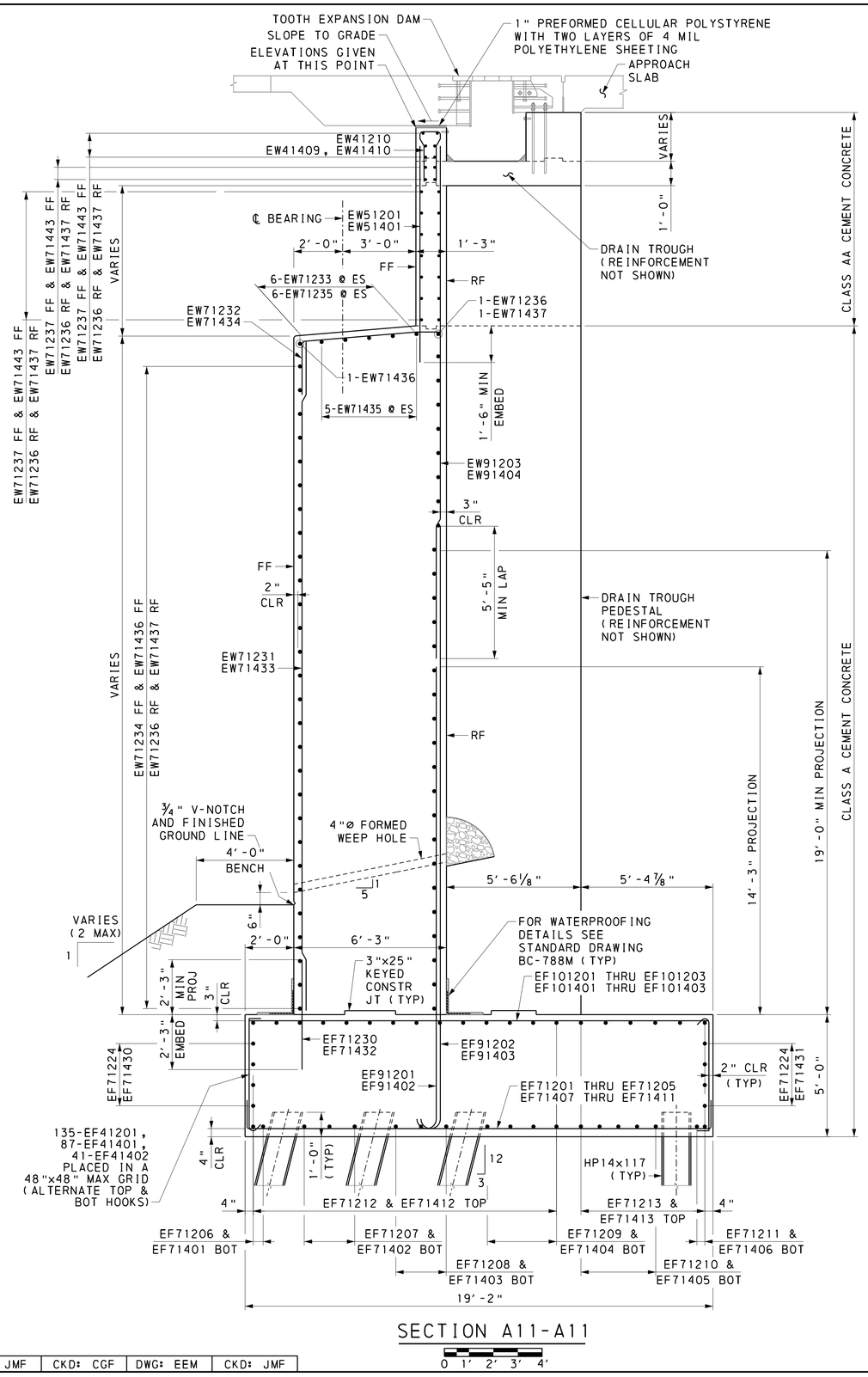

SECTION A11-A11

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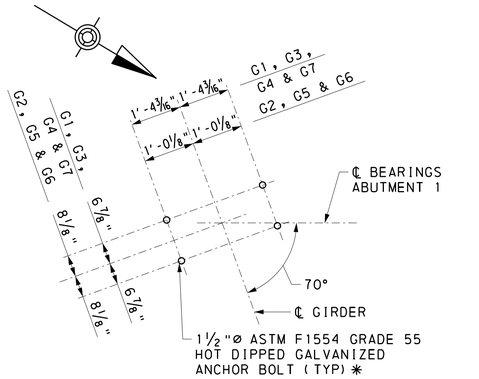
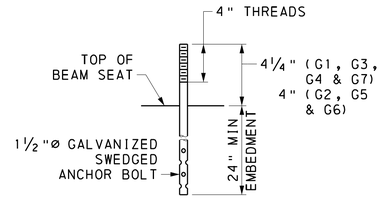


BEAM SEAT ANCHOR BOLT LAYOUT

NOT TO SCALE



ANCHOR BOLT DETAIL

NOT TO SCALE

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
ES	DENOTES EACH SIDE
✱	DENOTES GROUT ANCHOR BOLTS WITH NON-SHRINK GROUT PREFORMED HOLES

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 - 20 & 22 - 25
2.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
3.	ABUTMENT 1 REINF BAR SCHEDULE	93 - 96

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 SECTIONS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 21 OF 121

S - 39526

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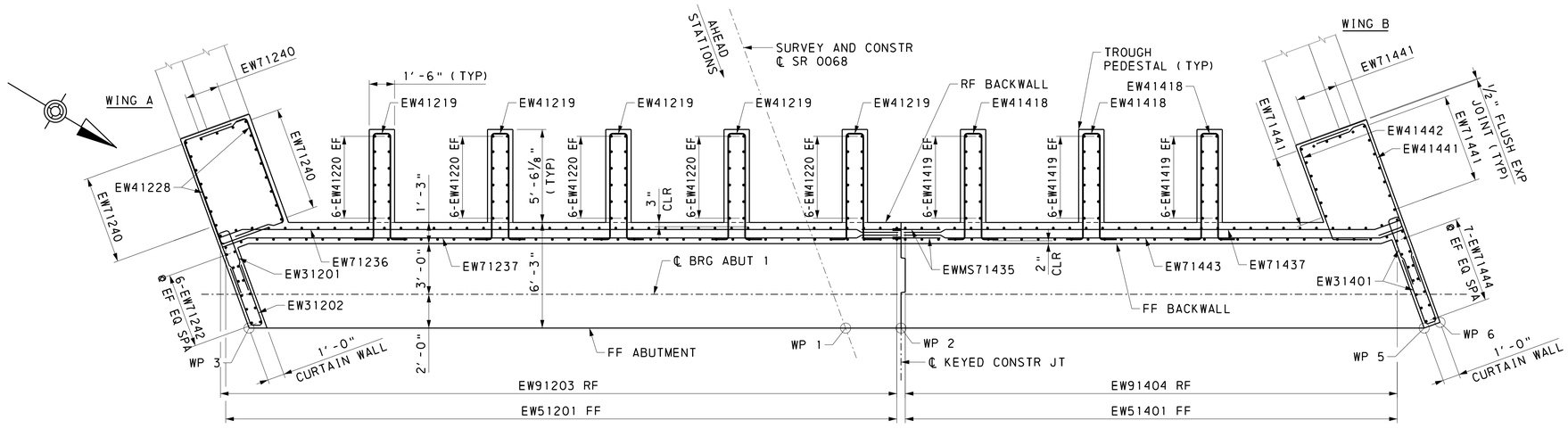


SECTION A13-A13

0 1' 2' 3' 4' 5' 6'

LEGEND:

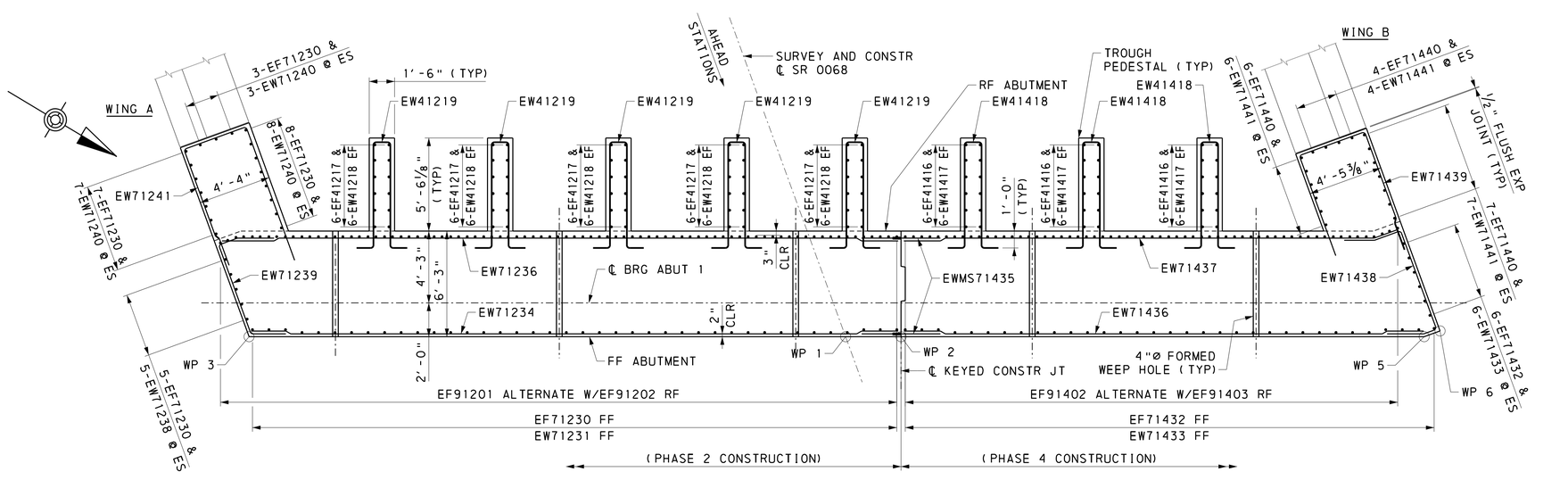
FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 - 21 & 23 - 25
2.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
3.	ABUTMENT 1 REINF BAR SCHEDULE	93 & 96

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.



SECTION A12-A12

0 1' 2' 3' 4' 5' 6'

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 SECTIONS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 22 OF 121

S - 39526

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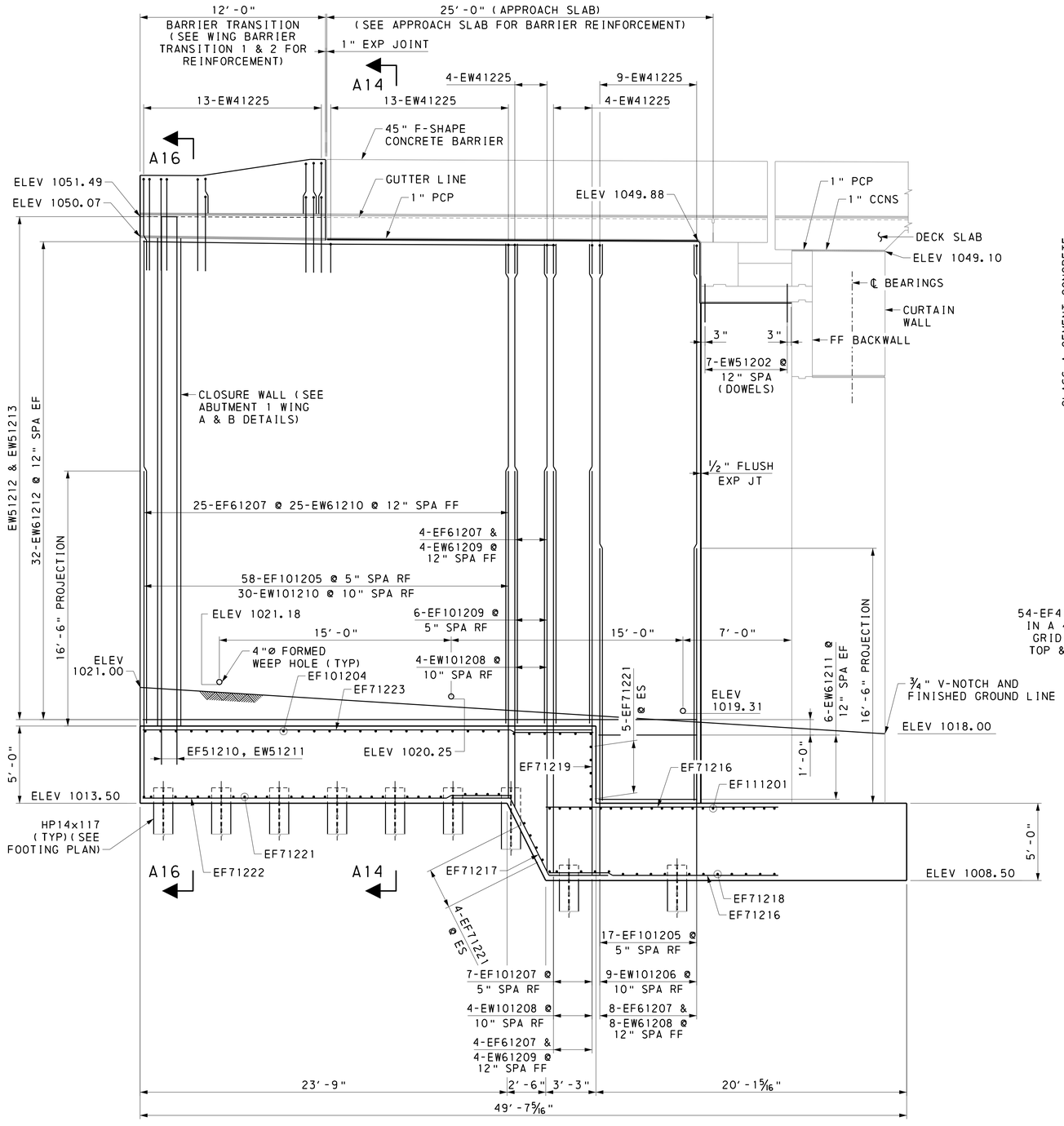
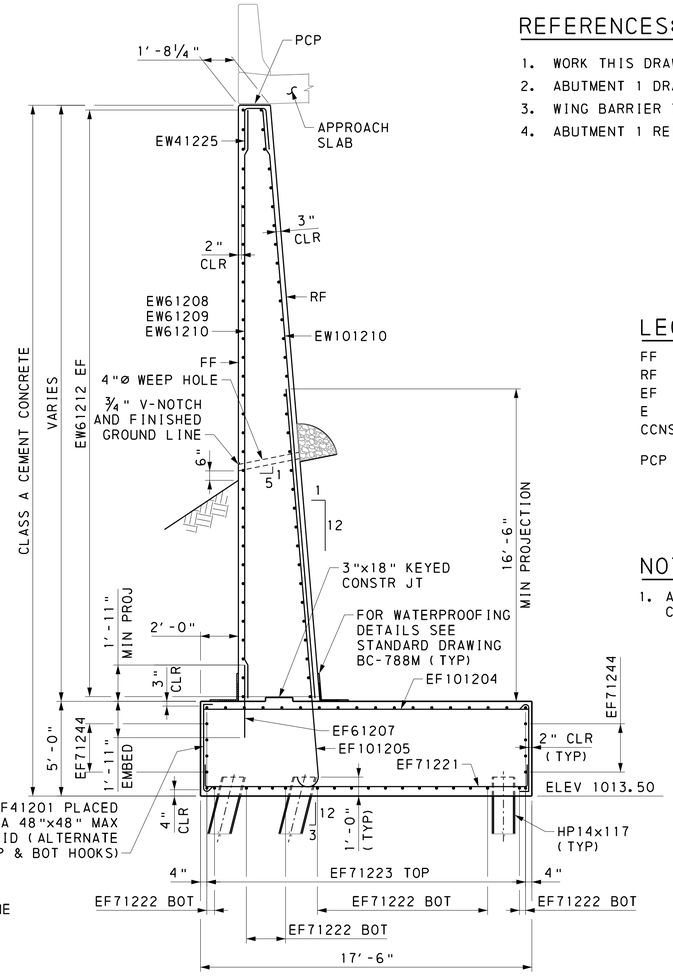


WING A - ELEVATION

0 1' 2' 3' 4' 5' 6'



SECTION A14-A14

0 1' 2' 3' 4' 5' 6'

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 - 22 & 24 - 25
2.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
3.	WING BARRIER TRANSITION 1 & 2	43 & 44
4.	ABUTMENT 1 REINF BAR SCHEDULE	93 - 96

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYETHYLENE SHEETING

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 WING A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 23 OF 121

S - 39526

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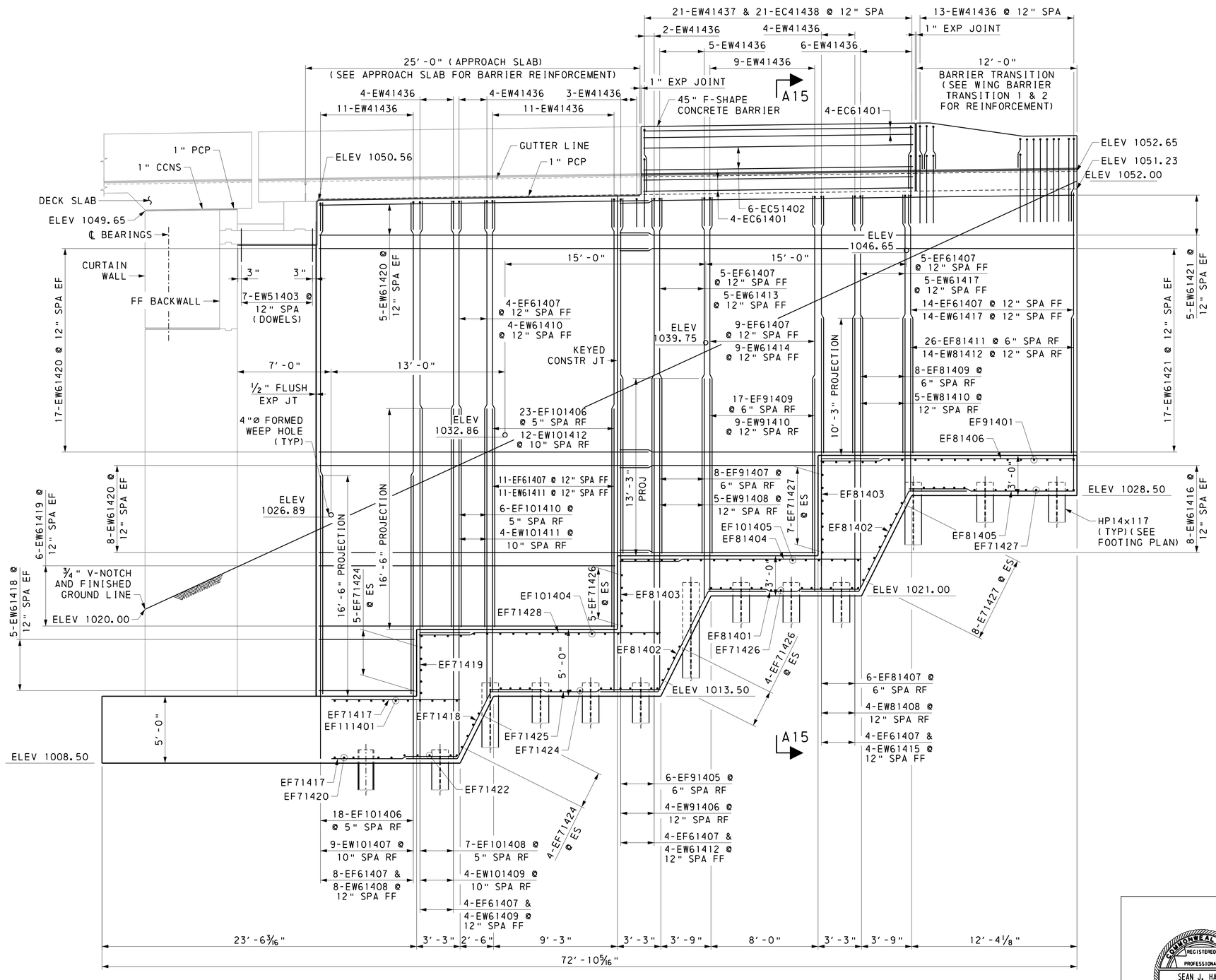

WING B - ELEVATION

0 1' 2' 3' 4' 5' 6'

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 - 23 & 25
2.	ABUTMENT 1 DRAIN TROUGH DETAILS	26
3.	WING BARRIER TRANSITION 1 & 2	43 & 44
4.	ABUTMENT 1 REINF BAR SCHEDULE	93 - 96

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS
CCNS DENOTES CLOSED CELL NEOPRENE SPONGE

PCP DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYETHYLENE SHEETING

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

Mark	Description	By	Chk'd.	Recm'd.	Date
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SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 WING B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 24 OF 121

S - 39526

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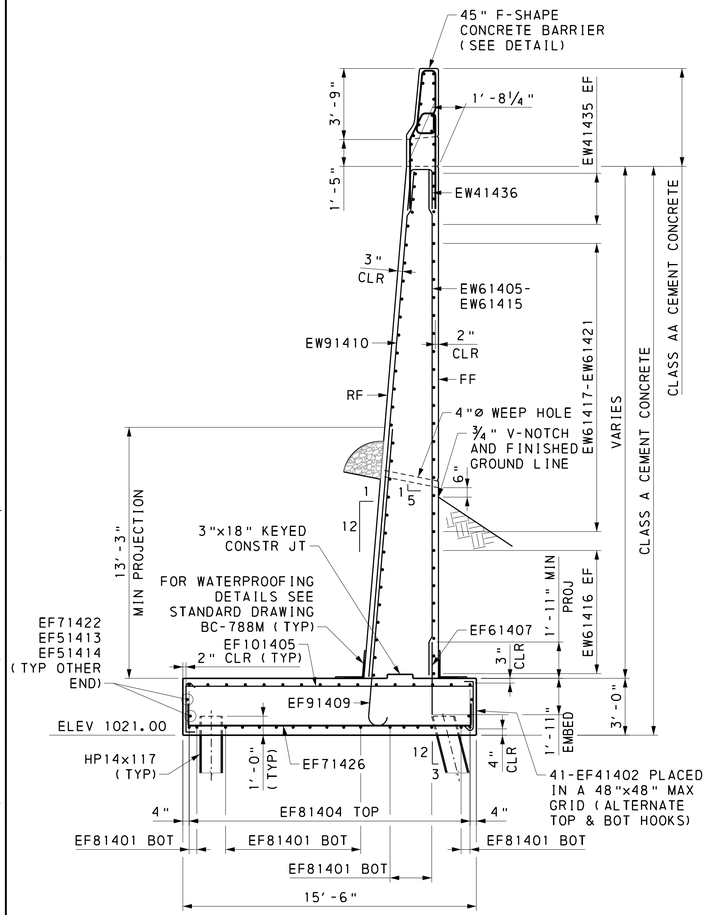
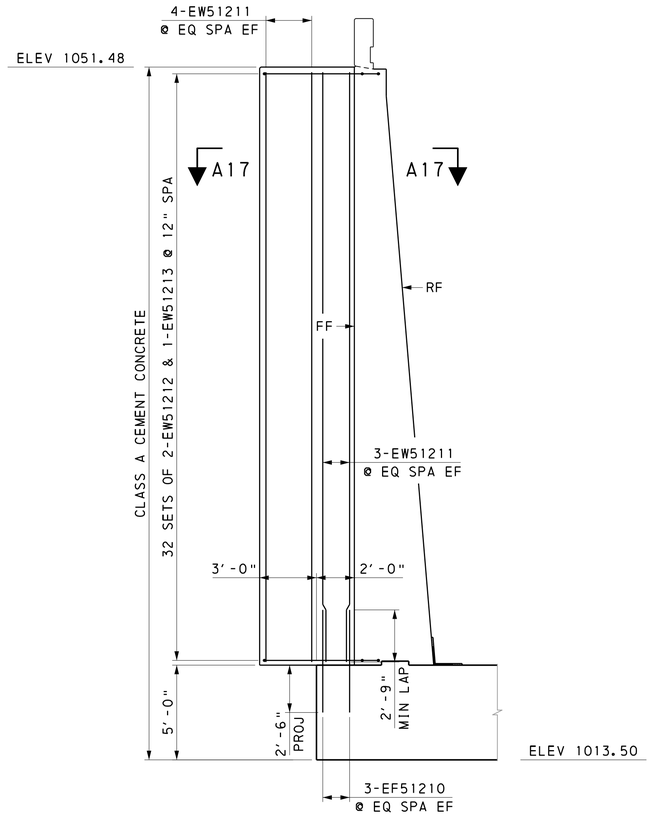


SECTION A15-A15

0 1' 2' 3' 4' 5' 6'



SECTION A16-A16

WING A FOOTING, WALL AND BARRIER REINFORCEMENT NOT SHOWN

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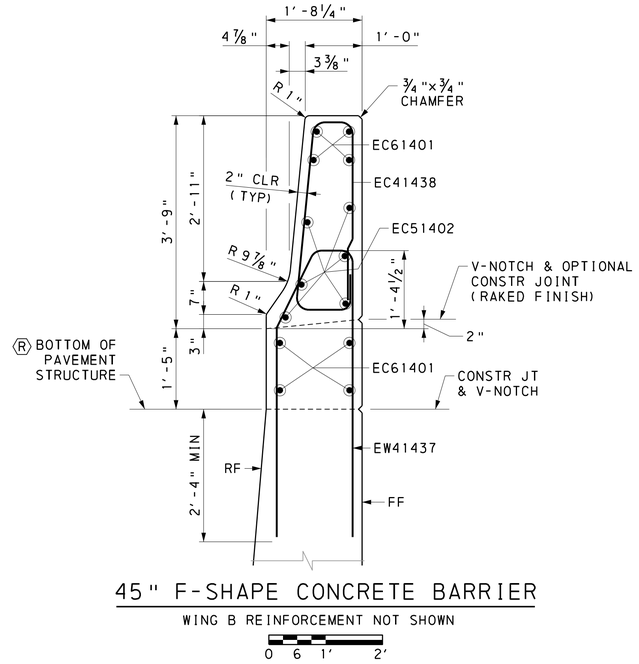
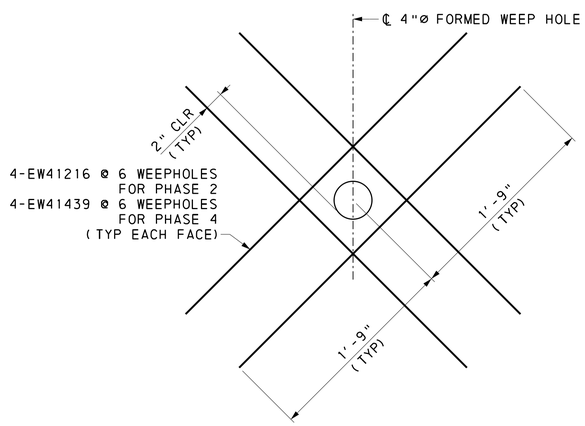


45" F-SHAPE CONCRETE BARRIER

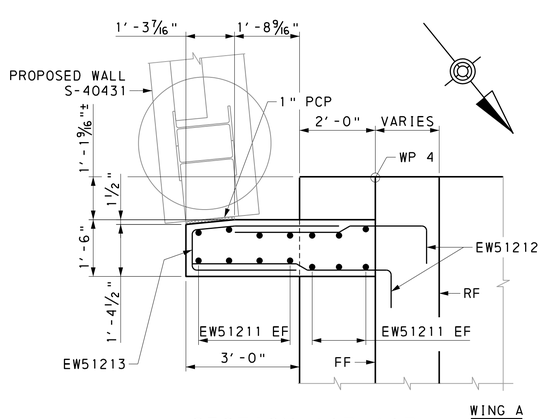
WING B REINFORCEMENT NOT SHOWN

0 6 1' 2'



WEEP HOLE REINFORCEMENT DETAIL

NOT TO SCALE



SECTION A17-A17

0 6 1' 2' 3' 4'

REFERENCES:

		SHEET:
1.	WORK THIS DRAWING WITH SHEETS	16 - 24
2.	WING BARRIER TRANSITION 1 & 2	43 & 44
3.	ABUTMENT 1 REINF BAR SCHEDULE 1-4	93 - 96

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
PCP	DENOTES PREFORMED CELLULAR POLYSTYRENE
Ⓡ	DENOTES ROADWAY ITEM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 WING A AND B DETAILS

RECOMMENDED _____

SHEET 25 OF 121

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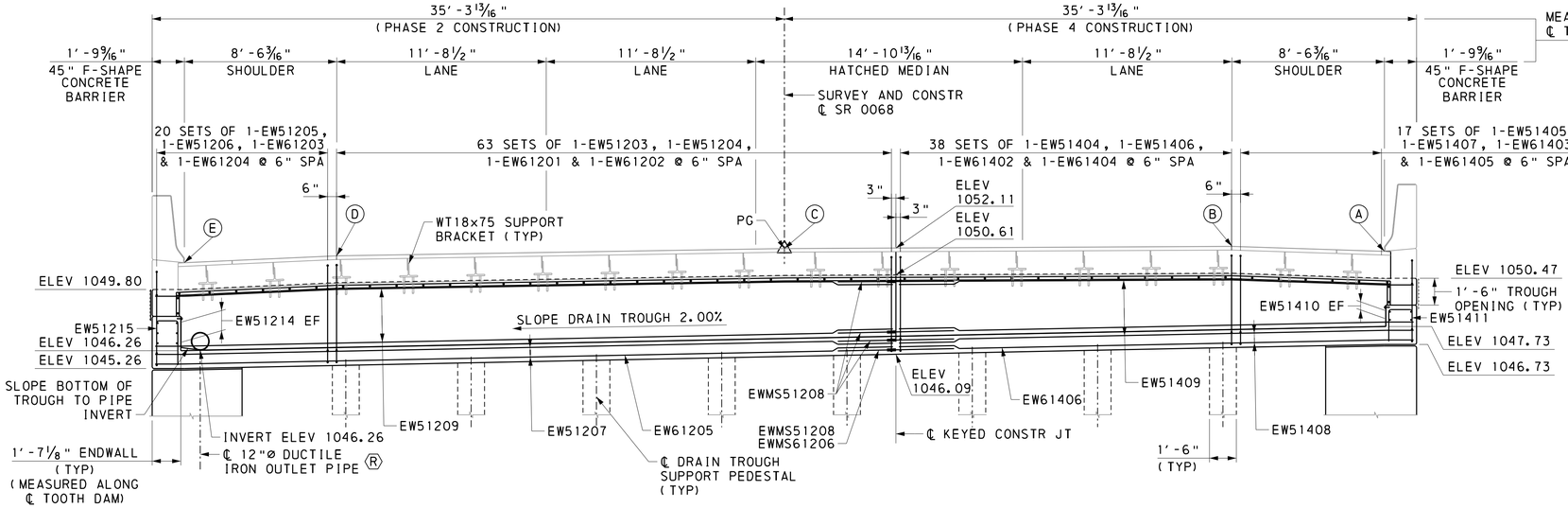
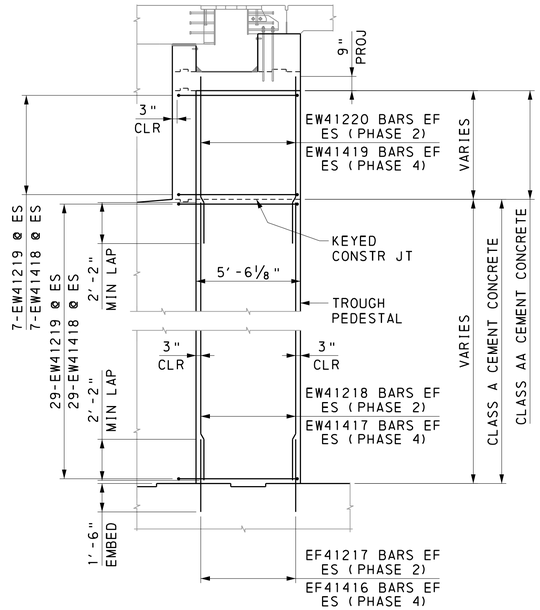


DRAIN TROUGH ELEVATION

LOOKING BACK STATIONS

0 1′ 2′ 3′ 4′ 5′ 6′



TROUGH PEDESTAL REINFORCEMENT DETAIL

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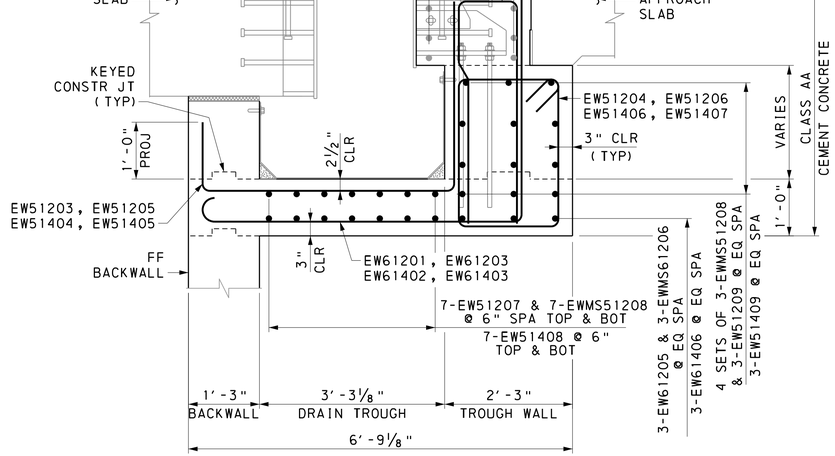
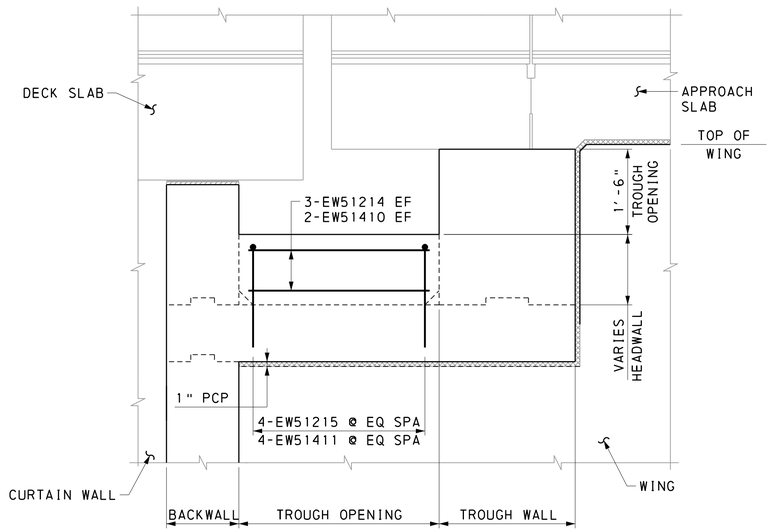


DRAIN TROUGH REINFORCEMENT DETAIL

BACKWALL REINFORCEMENT NOT SHOWN.
TROUGH PEDESTAL NOT SHOWN.

0 6 1′ 2′



DRAIN TROUGH ENDWALL DETAIL

HEAVY WELDED GALVANIZED STEEL GRATE NOT SHOWN. (SEE ABUT 1 TOOTH DAM DETAILS 2)

ABUTMENT & DRAIN TROUGH REINFORCEMENT NOT SHOWN.

0 6 1′ 2′

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
ES	DENOTES EQUAL SPACE
Ⓡ	DENOTES ROADWAY ITEM

REFERENCES:

	SHEET:
1. WORK THIS DRAWING WITH SHEETS	16 - 25
2. ABUTMENT 1 REINF BAR SCHEDULE	93 - 96

CENTERLINE OF TOOTH DAM ELEVATIONS

	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
STA	109+54.96	109+52.05	109+43.50	109+34.95	109+32.03
ELEVATION	1051.92	1052.20	1052.08	1051.67	1051.29

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 1 DRAIN TROUGH DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 26 OF 121

S - 39526

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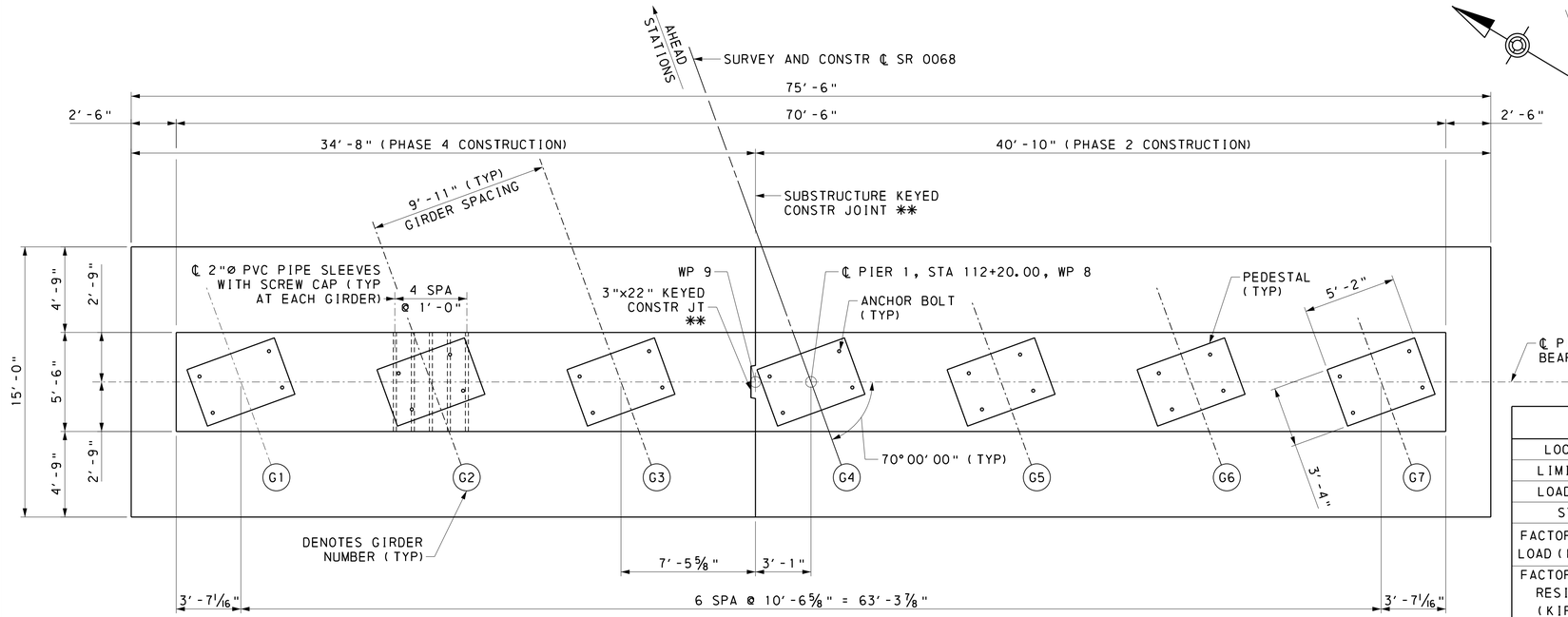
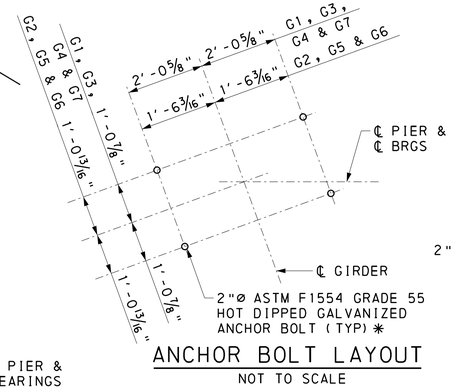


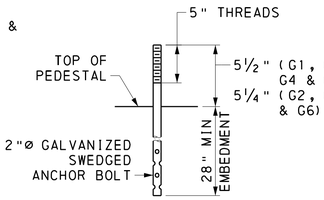
PIER 1 PLAN

0 1′ 2′ 3′ 4′ 5′ 6′



ANCHOR BOLT LAYOUT

NOT TO SCALE



ANCHOR BOLT DETAIL

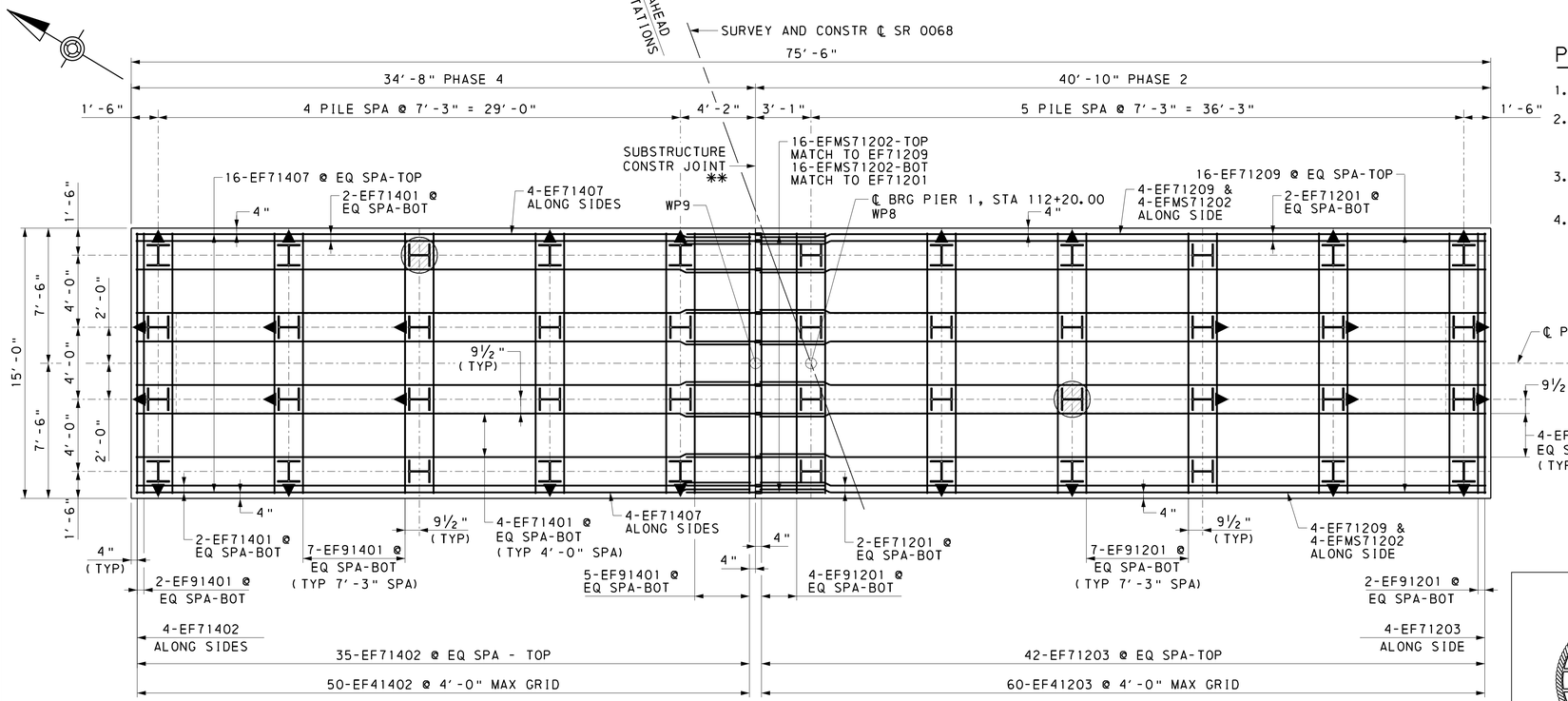
NOT TO SCALE

PIER 1 PILE LOADING

LOCATION	PIER 1 - AXIAL	PIER 1 - LATERAL
LIMIT SATE	STRENGTH - I	EXTREME - II
LOAD STATE	MAXIMUM	MAXIMUM
STAGE	TEMP	FINAL
FACTORED AXIAL LOAD (KIP/PILE)	432.0	100.0
FACTORED AXIAL RESISTANCE (KIP/PILE)	474.0	115.0
PERFORMANCE RATIO	1.10	1.15

LEGEND:

- I — DENOTES HP 14x117 PILE
- I — DENOTES HP 14x117 PILE WITH BATTER 3:12
- I — DENOTES HP 14x117 TEST PILE
- EF — DENOTES EACH FACE
- E — DENOTES EPOXY COATED BARS
- WP — DENOTES WORK POINT
- * — DENOTES GROUT ANCHOR BOLTS WITH NON-SHRINK GROUT PREFORMED HOLES
- ** — DENOTES SEE BC-735M FOR DETAILS
- ■ — DENOTES DEPRESSED JOINT IS NOT PERMITTED



PIER 1 FOOTING PLAN

0 1′ 2′ 3′ 4′ 5′ 6′

PIPE SLEEVE NOTES:

1. PLACE SLEEVE LEVEL.
2. PLACE SLEEVES TO CLEAR REINFORCEMENT AND ANCHOR BOLTS, DO NOT CUT STEEL.
3. INSTALL THREADED PLUG AT EACH END OF SLEEVE.
4. SLEEVES & SCREW CAPS ARE INCIDENTAL TO CLASS A CEMENT CONCRETE.

REFERENCES:

1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL PLAN	1
4.	GENERAL ELEVATION	2
5.	GENERAL NOTES	4 & 5
6.	CONSTRUCTION PHASING 1 & 2	7 & 8
7.	WORK THIS SHEET WITH SHEET	28
8.	PIER 1 REINF BAR SCHEDULE	102

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 1 PLAN AND FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 27 OF 121

S - 39526

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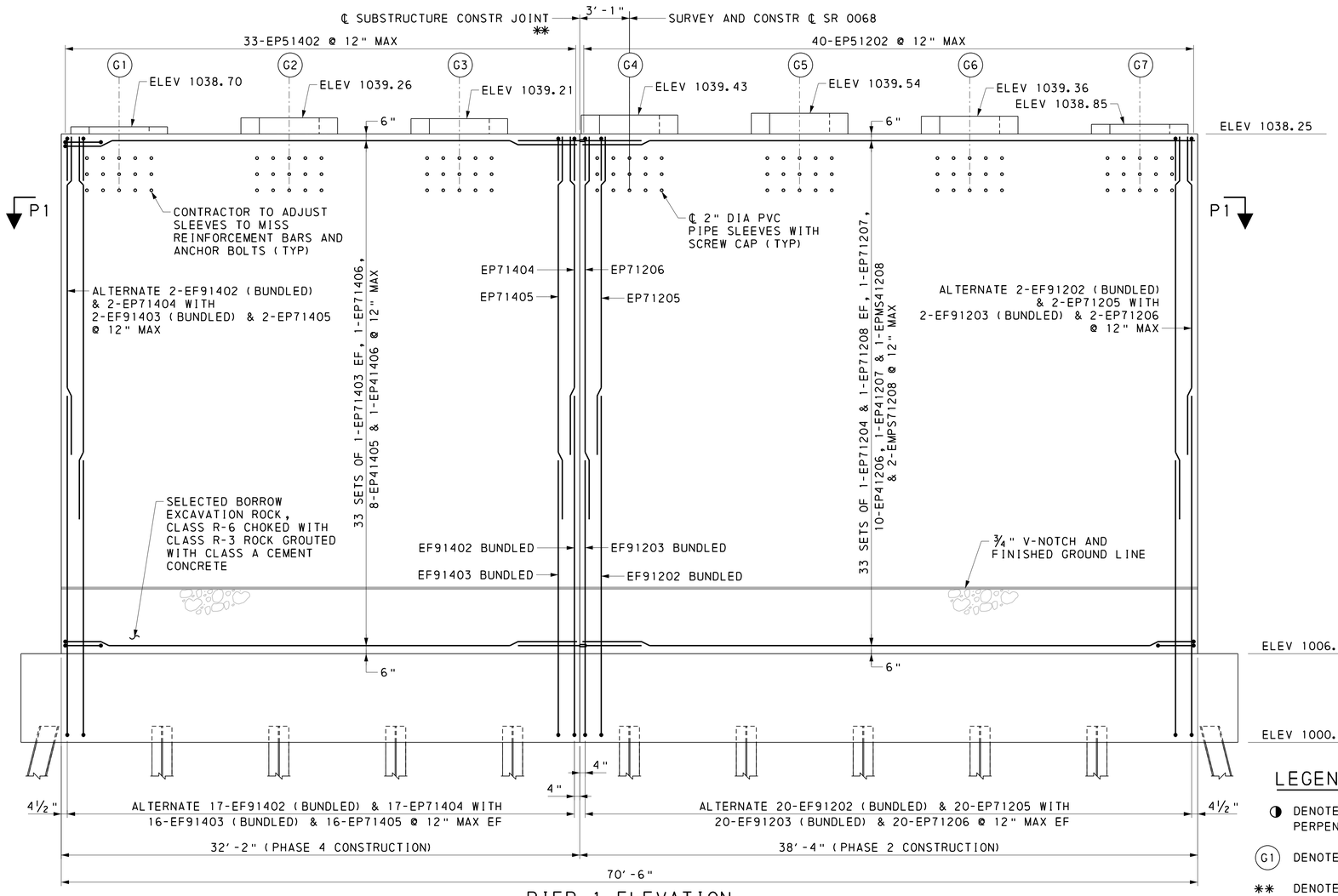
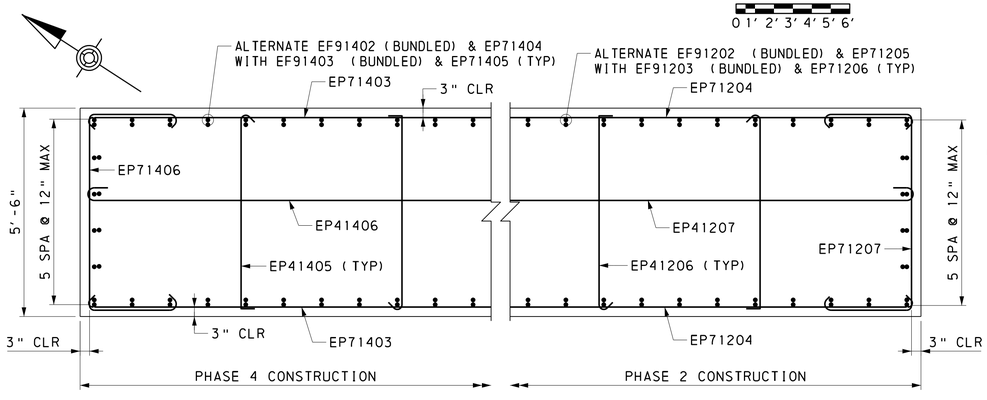


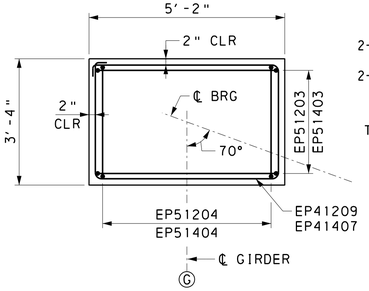
PIER 1 ELEVATION

0 1' 2' 3' 4' 5' 6'



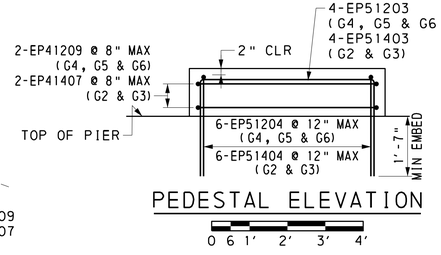
SECTION P1-P1

0 6 1' 2' 3' 4'



PEDESTAL PLAN

0 6 1' 2' 3' 4'



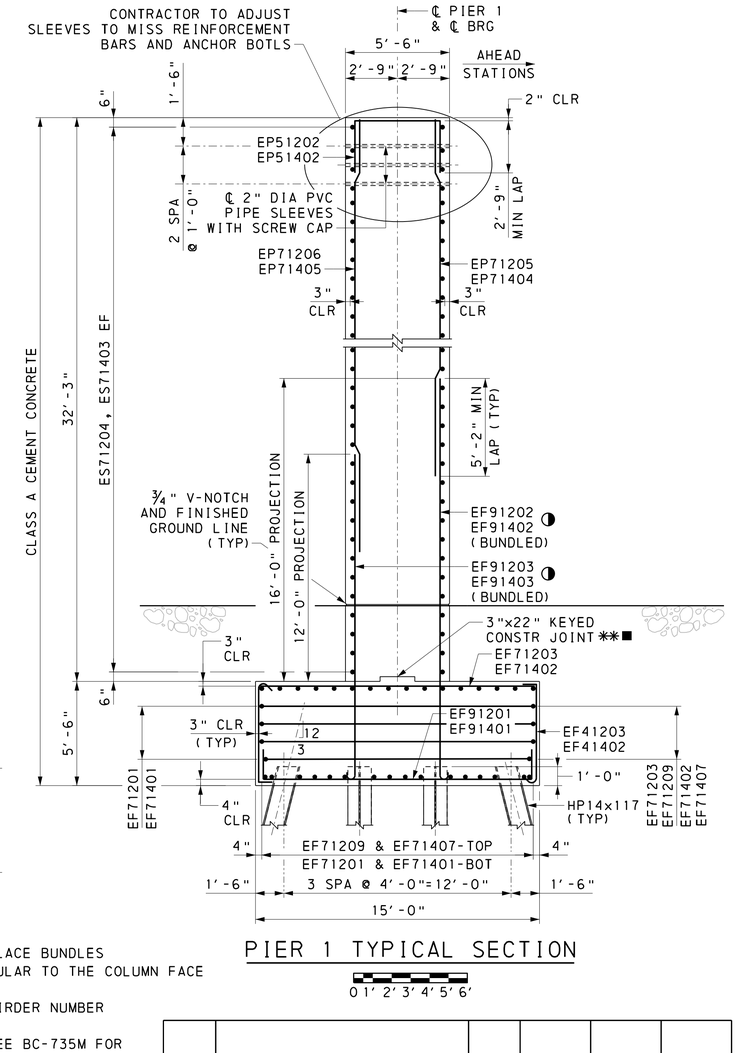
PEDESTAL ELEVATION

0 6 1' 2' 3' 4'

REFERENCES:

1. WORK THIS SHEET WITH SHEET 27
2. PIER 1 REINF BAR SCHEDULE 102

SHEET:



PIER 1 TYPICAL SECTION

0 1' 2' 3' 4' 5' 6'

LEGEND:

◑ DENOTES PLACE BUNDLES PERPENDICULAR TO THE COLUMN FACE

(G1) DENOTES GIRDER NUMBER

** DENOTES SEE BC-735M FOR DETAILS

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 1 ELEVATION AND DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 28 OF 121

S - 39526

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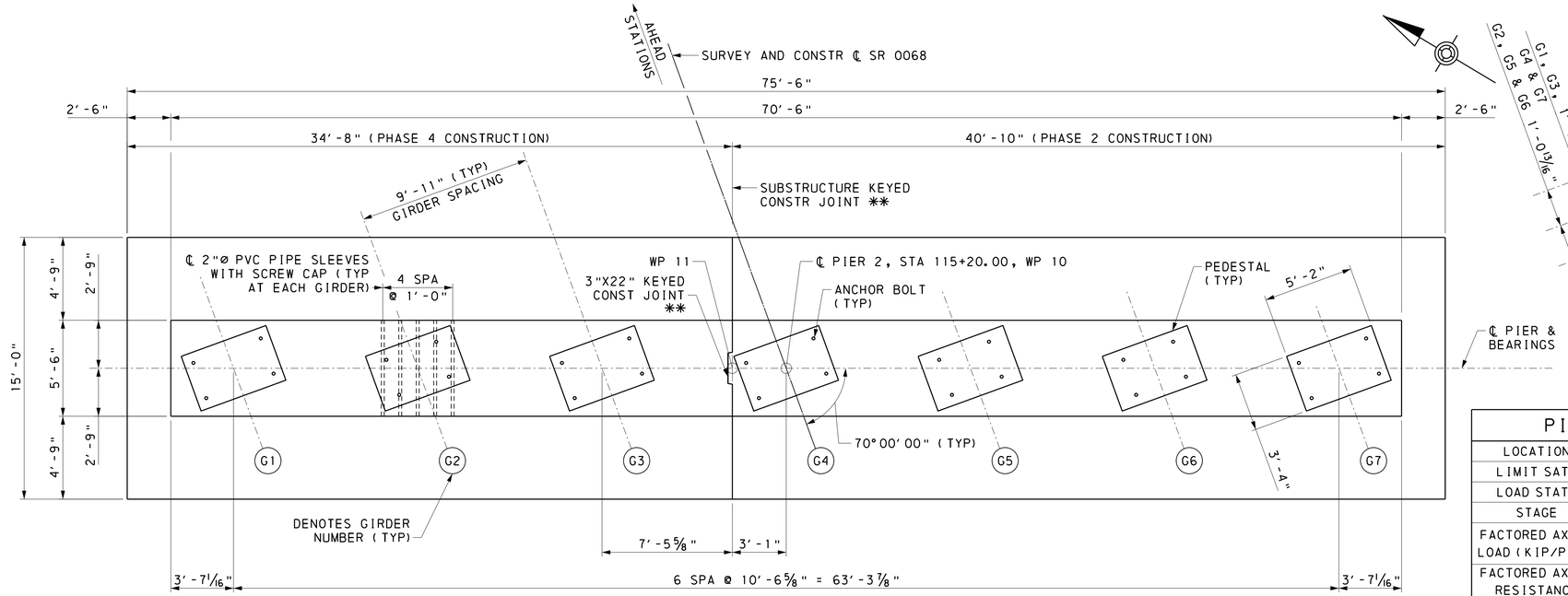
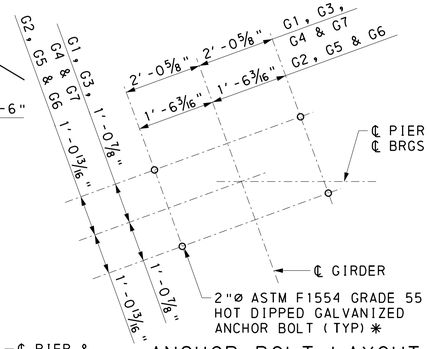
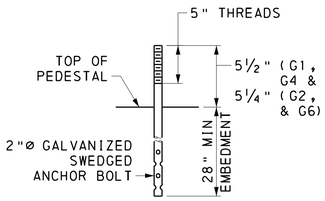


PIER 2 PLAN



ANCHOR BOLT LAYOUT

NOT TO SCALE



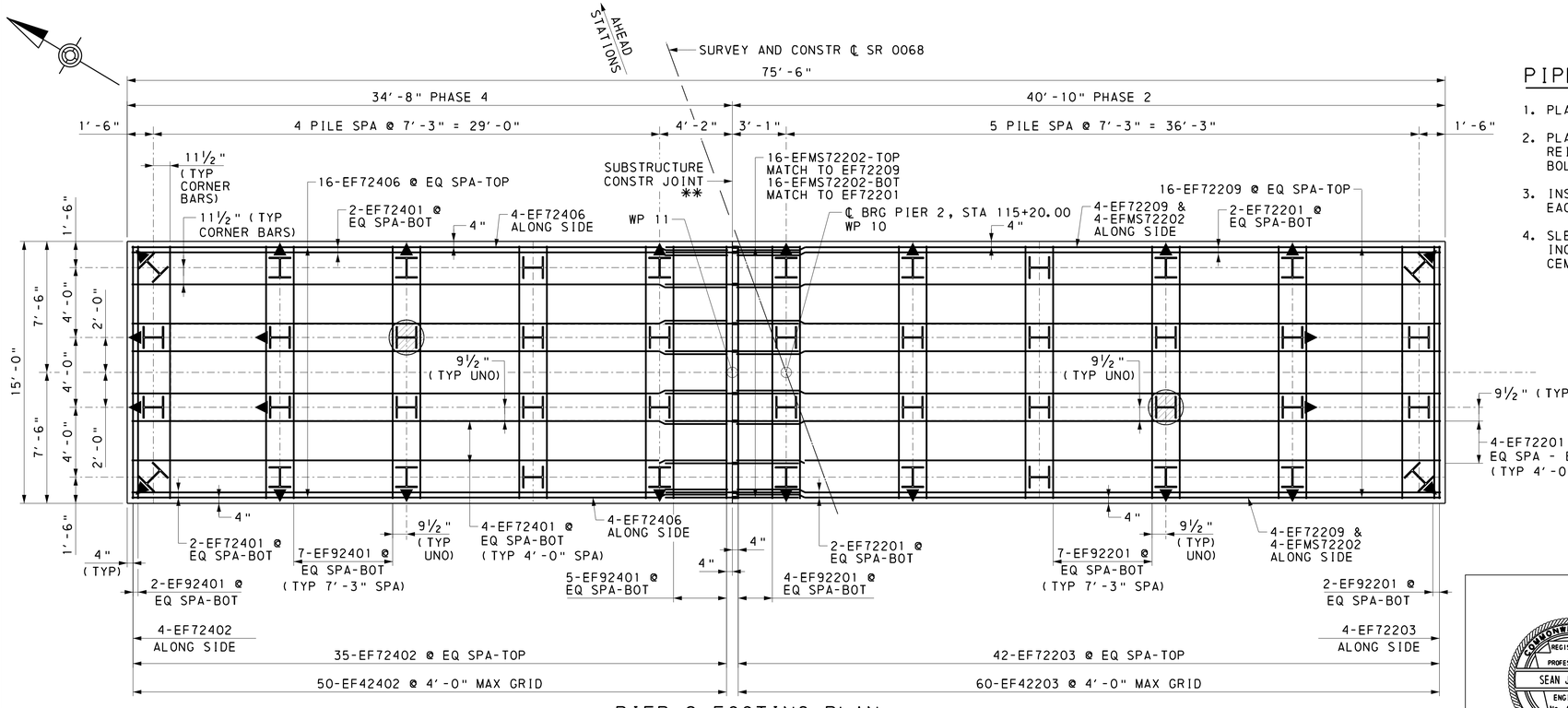
ANCHOR BOLT DETAIL

NOT TO SCALE

PIER 2 PILE LOADING		
LOCATION	PIER 2 - AXIAL	PIER 2 - LATERAL
LIMIT SATE	STRENGTH - I	EXTREME - II
LOAD STATE	MAXIMUM	MAXIMUM
STAGE	TEMP	FINAL
FACTORED AXIAL LOAD (KIP/PILE)	471.0	100.0
FACTORED AXIAL RESISTANCE (KIP/PILE)	569.0	114.4
PERFORMANCE RATIO	1.21	1.14

LEGEND:

- DENOTES HP 14x117 PILE
- DENOTES HP 14x117 PILE WITH BATTER 3:12
- DENOTES HP 14x117 TEST PILE
- EF DENOTES EACH FACE
- E DENOTES EPOXY COATED BARS
- WP DENOTES WORK POINT
- * DENOTES GROUT ANCHOR BOLTS WITH NON-SHRINK GROUT PREFORMED HOLES
- ** DENOTES SEE BC-735M FOR DETAILS
- ■ DENOTES DEPRESSED JOINT IS NOT PERMITTED



PIER 2 FOOTING PLAN

PIPE SLEEVE NOTES:

1. PLACE SLEEVE LEVEL.
2. PLACE SLEEVES TO CLEAR REINFORCEMENT AND ANCHOR BOLTS, DO NOT CUT STEEL.
3. INSTALL THREADED PLUG AT EACH END OF SLEEVE.
4. SLEEVES & SCREW CAPS ARE INCIDENTAL TO CLASS A CEMENT CONCRETE.

REFERENCES:

1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL PLAN	1
4.	GENERAL ELEVATION	2
5.	GENERAL NOTES	4 & 5
6.	CONSTRUCTION PHASING 1 & 2	7 & 8
7.	WORK THIS SHEET WITH SHEET	30
8.	PIER 2 REINF BAR SCHEDULE	103

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 2 PLAN AND FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 29 OF 121

S - 39526

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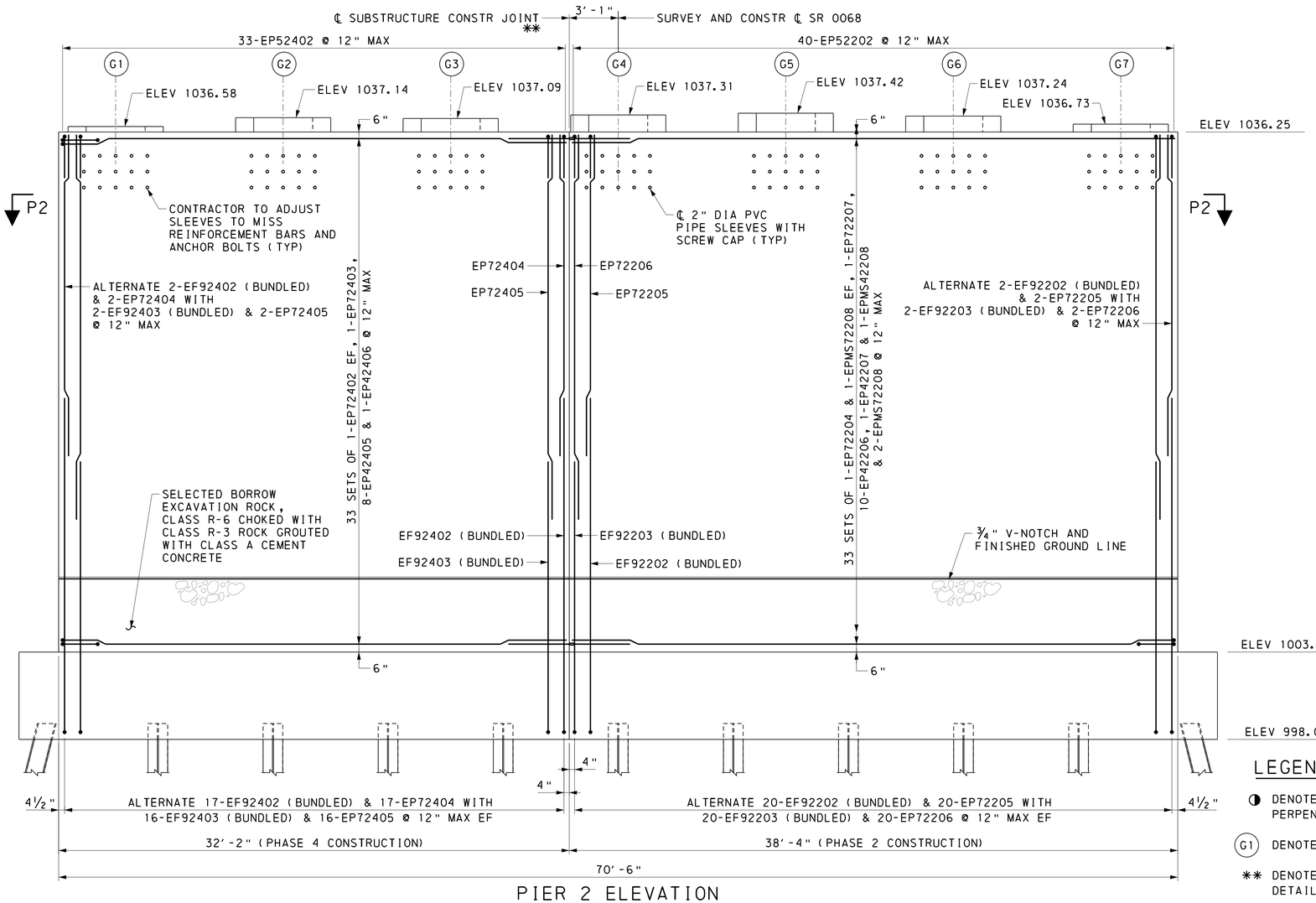

PIER 2 ELEVATION

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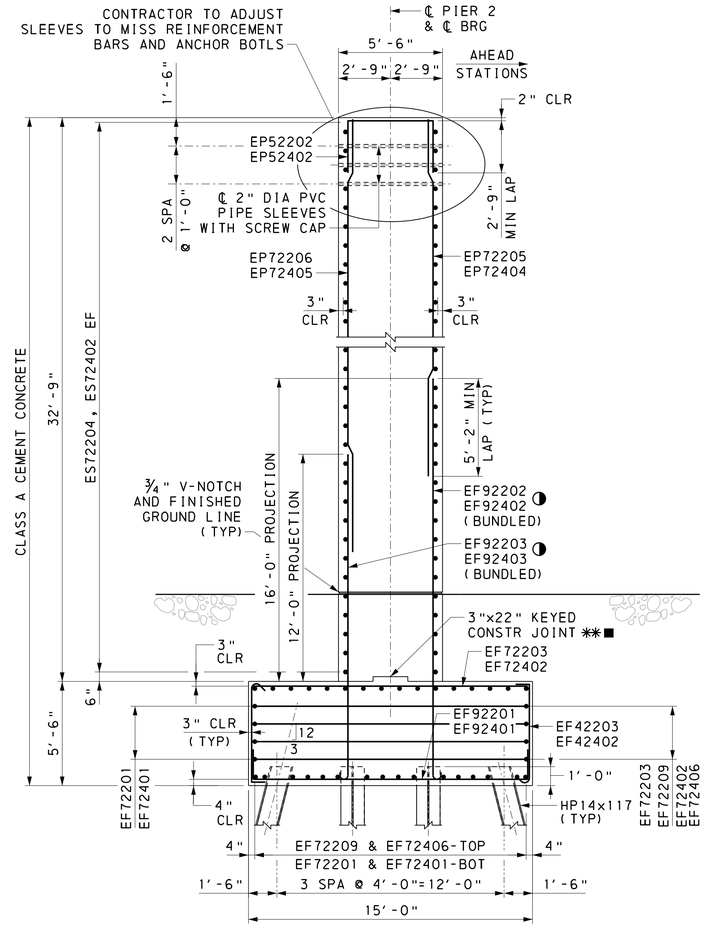


PIER 2 TYPICAL SECTION

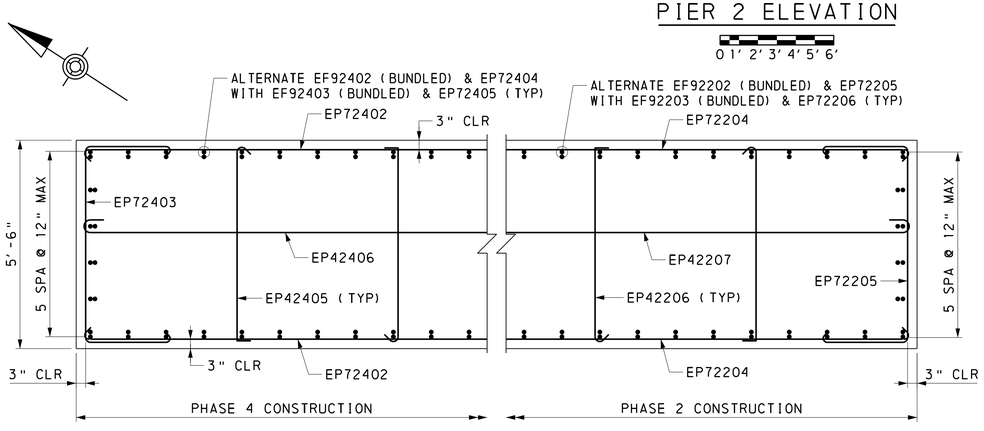
0 1' 2' 3' 4' 5' 6'

LEGEND:

◑ DENOTES PLACE BUNDLES PERPENDICULAR TO THE COLUMN FACE

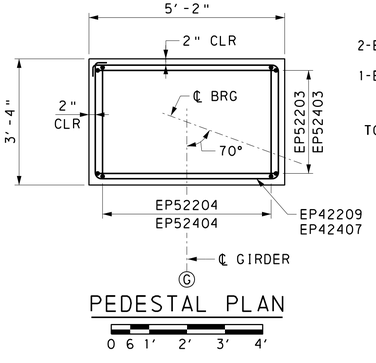
(G1) DENOTES GIRDER NUMBER

** DENOTES SEE BC-735M FOR DETAILS



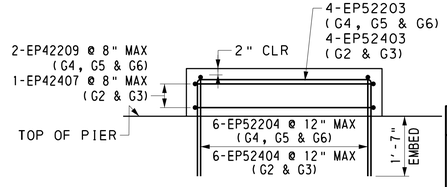
SECTION P2-P2

0 6 1' 2' 3' 4'



PEDESTAL PLAN

0 6 1' 2' 3' 4'



PEDESTAL ELEVATION

0 6 1' 2' 3' 4'

REFERENCES:

1. WORK THIS SHEET WITH SHEET 29

SHEET:

29

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 2 ELEVATION AND DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 30 OF 121

S - 39526

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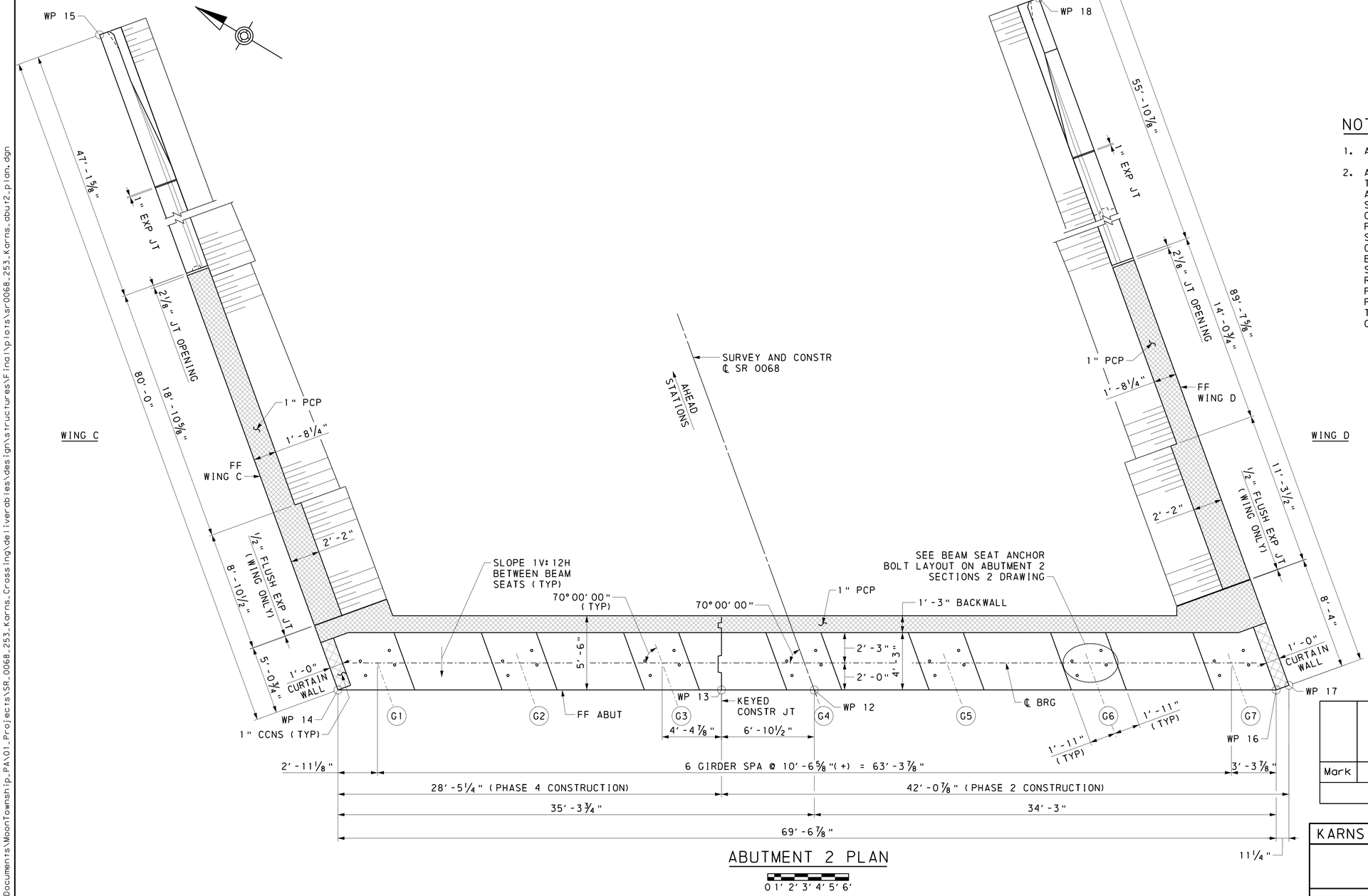

ABUTMENT 2 PLAN

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ABUTMENT FOOTING OUTLINE NOT SHOWN.
2. AT LEAST SEVEN DAYS PRIOR TO SETTING GIRDERS, SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL AS-BUILT BEAM SEAT ELEVATIONS. PROVIDE DRAWINGS(S) AND/OR SPREADSHEET(S) STAMPED BY A PROFESSIONAL LAND SURVEYOR CURRENTLY REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA. PROVIDE AS-BUILT ELEVATIONS SHOWN ON THE STRUCTURE SHEETS. DO NOT SET GIRDERS UNTIL APPROVAL IS GRANTED BY THE DEPARTMENT REPRESENTATIVE. FOR ALL BEAM SEAT ELEVATIONS THAT DO NOT MEET THE PUB 408, SECTION 1001.3(K)9 CRITERIA, SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW AND APPROVAL A REMEDIATION PROCEDURE. DO NOT SET GIRDERS UNTIL THE REMEDIATION PROCEDURE IS APPROVED BY THE DEPARTMENT REPRESENTATIVE. THE COST OF THIS WORK IS INCIDENTAL TO THE COST OF THE CONCRETE PLACED IN THE BEAM SEATS.

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
WP	DENOTES WORK POINT
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYETHYLENE SHEETING

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING 1 & 2	7 & 8
3.	STAKE-OUT PLAN	10
4.	WORK THIS SHEET WITH SHEETS	32 - 42
5.	WING BARRIER TRANSITION 1 & 2	43 & 44
6.	FRAMING PLAN 1 & 2	45 & 46

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 31 OF 121

S - 39526

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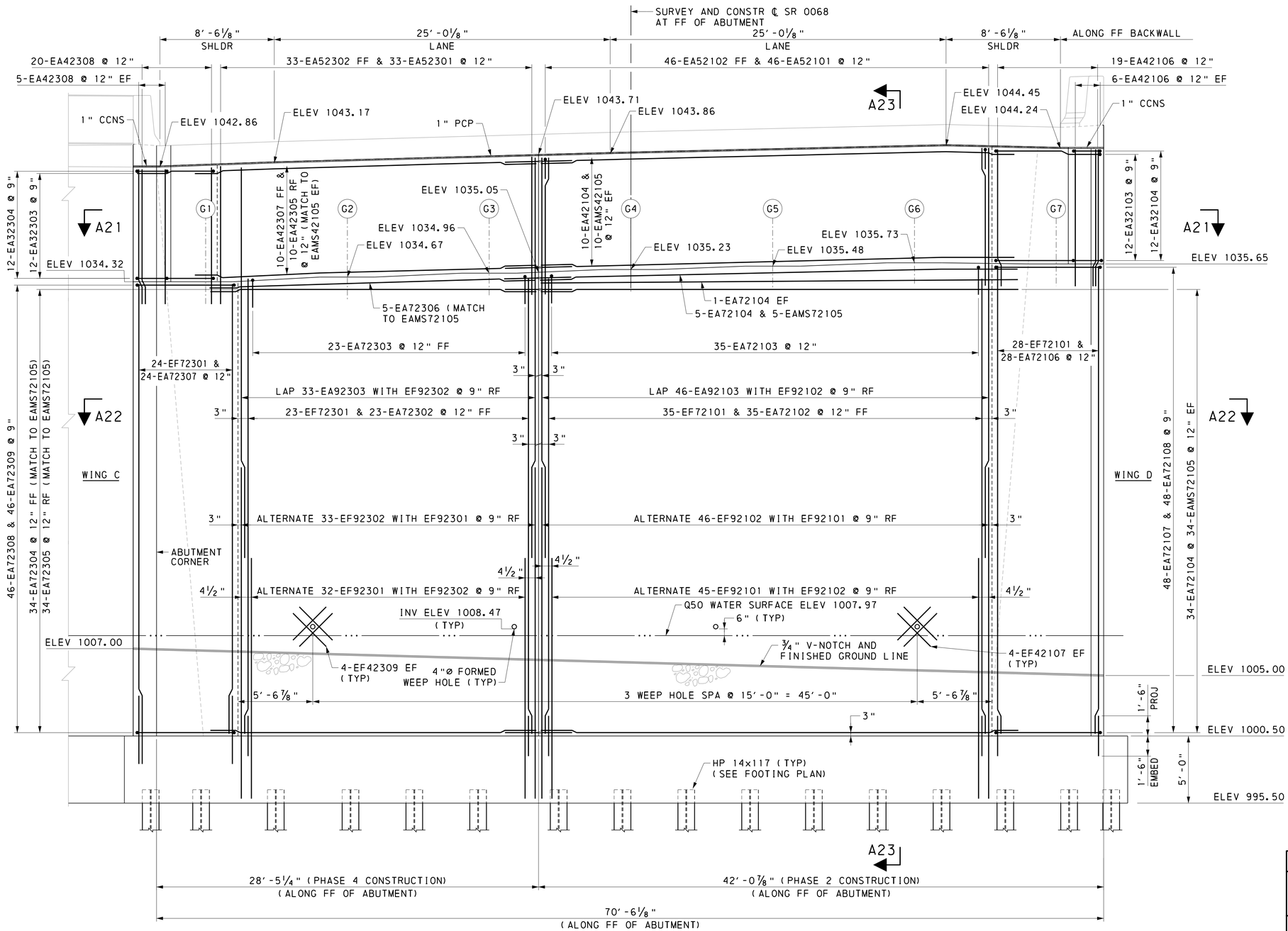

ABUTMENT 2 ELEVATION

NOTES:

1. ALL BAR SPACING'S INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
2. BEAM SEAT ELEVATIONS SHOWN TAKEN AT CENTERLINE OF BEARING. CURTAIN WALL ELEVATIONS SHOWN TAKEN AT END OF SLAB.
3. THE BEAM SEATS ARE LEVEL IN THE LONGITUDINAL AND TRANSVERSE DIRECTIONS.

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYETHYLENE SHEETING
(G1)	DENOTES GIRDER NUMBER
WSE	DENOTES WATER SURFACE ELEVATION
	DENOTES SELECTED BORROW EXCAVATION ROCK, CLASS R-6 CHOKED WITH CLASS R-3 ROCK GROUTED WITH CLASS A CEMENT CONCRETE

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING 1 & 2	7 & 8
3.	WORK THIS DRAWING WITH SHEETS	31 & 33 - 42
4.	WING BARRIER TRANSITION 1 & 2	43 & 44
5.	SCUPPER AND DRAINAGE DETAILS 3	88
6.	ABUTMENT 2 REINF BAR SCHEDULE 1-4	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 32 OF 121

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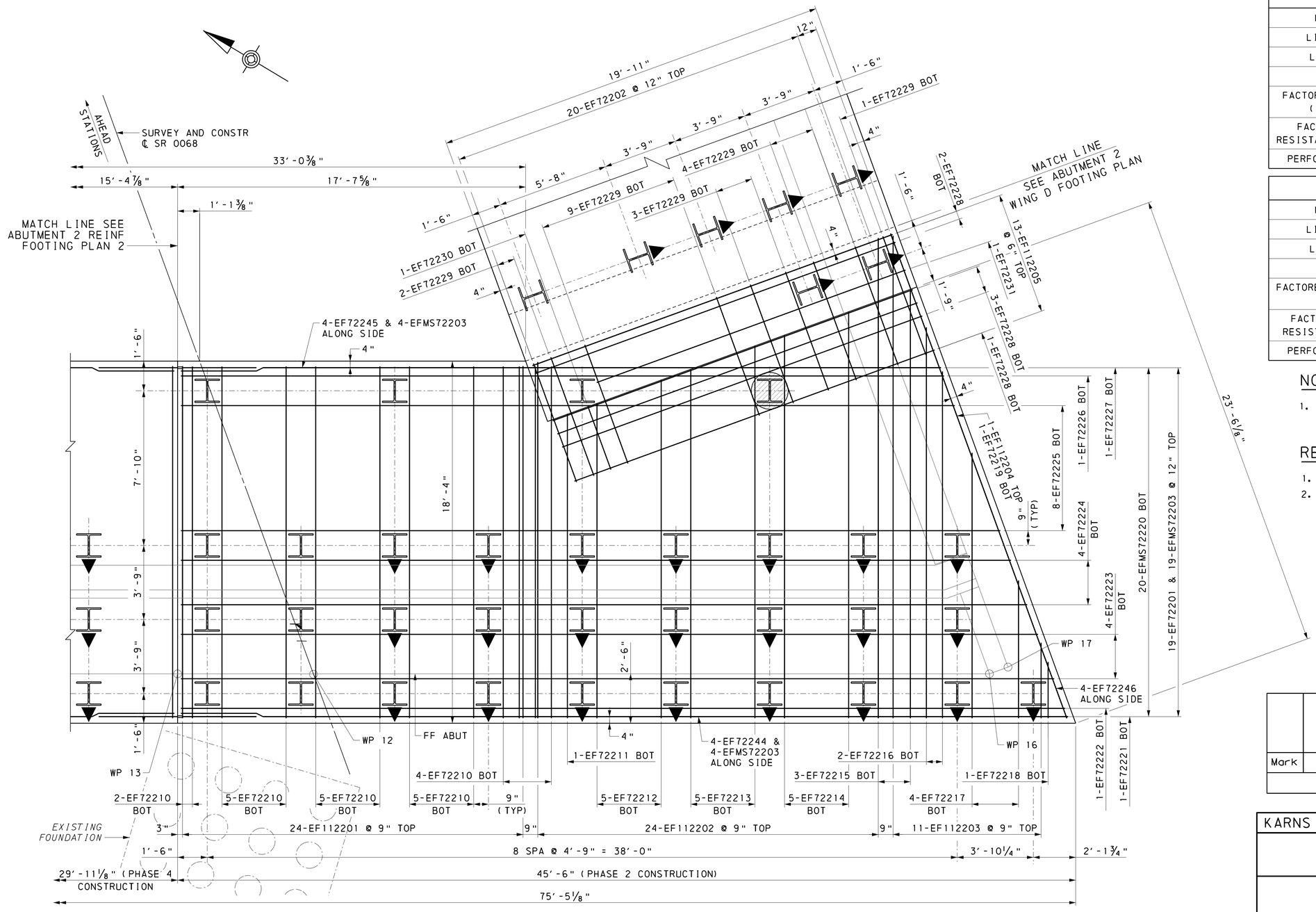

ABUTMENT 2 PARTIAL PILE AND FOOTING PLAN (PHASE 2)

0 1' 2' 3' 4'

ABUTMENT 2 AXIAL PILE LOADING

LOCATION	ABUTMENT 2	WING C	WING D
LIMIT STATE	STRENGTH - I	STRENGTH - I	STRENGTH - I
LOAD STATE	MAXIMUM	MAXIMUM	MAXIMUM
STAGE	FINAL	FINAL	FINAL
FACTORED AXIAL LOAD (KIP/PILE)	498.0	372.0	372.0
FACTORED AXIAL RESISTANCE (KIP/PILE)	547.0	410.0	410.0
PERFORMANCE RATIO	1.10	1.10	1.10

ABUTMENT 2 LATERAL PILE LOADING

LOCATION	ABUTMENT 2	WING C	WING D
LIMIT STATE	STRENGTH - I	STRENGTH - I	STRENGTH - I
LOAD STATE	MAXIMUM	MAXIMUM	MAXIMUM
STAGE	FINAL	FINAL	FINAL
FACTORED LATERAL LOAD (KIP/FT)	53.2	59.9	59.9
FACTORED LATERAL RESISTANCE (KIP/FT)	55.3	61.3	61.3
PERFORMANCE RATIO	1.04	1.02	1.02

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	31 - 32 & 34 - 42
2. ABUTMENT 2 REINF BAR SCHEDULE 1-4	97 - 100

LEGEND:

FF DENOTES FRONT FACE
E DENOTES EPOXY COATED BARS
WP DENOTES WORK POINT

DENOTES VERTICAL PILE (HP 14x117)

DENOTES BATTERED PILE 3:12 (HP 14x117)

DENOTES TEST PILE (HP 14x117)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 REINF FOOTING PLAN 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 33 OF 121

S - 39526

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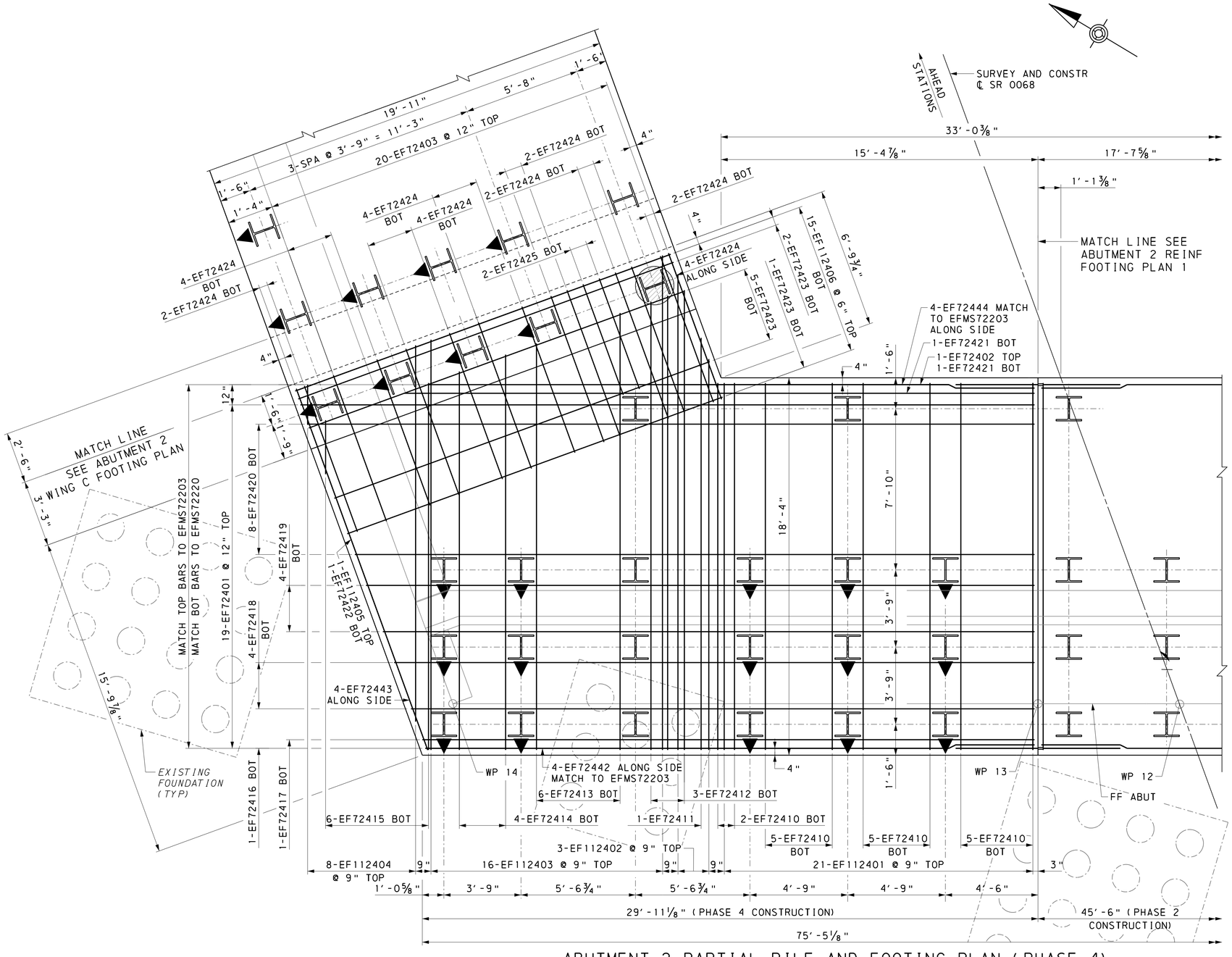

ABUTMENT 2 PARTIAL PILE AND FOOTING PLAN (PHASE 4)

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

REFERENCES:

		SHEET:
1.	WORK THIS SHEET WITH SHEETS	31 - 33 & 35 - 42
2.	ABUTMENT 2 REINF BAR SCHEDULE 1-4	97 - 100

LEGEND:

FF DENOTES FRONT FACE
E DENOTES EPOXY COATED BARS
WP DENOTES WORK POINT

I DENOTES VERTICAL PILE (HP 14x117)

I DENOTES BATTERED PILE 3:12 (HP 14x117)

I DENOTES TEST PILE (HP 14x117)

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 REINF FOOTING PLAN 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 34 OF 121

S - 39526

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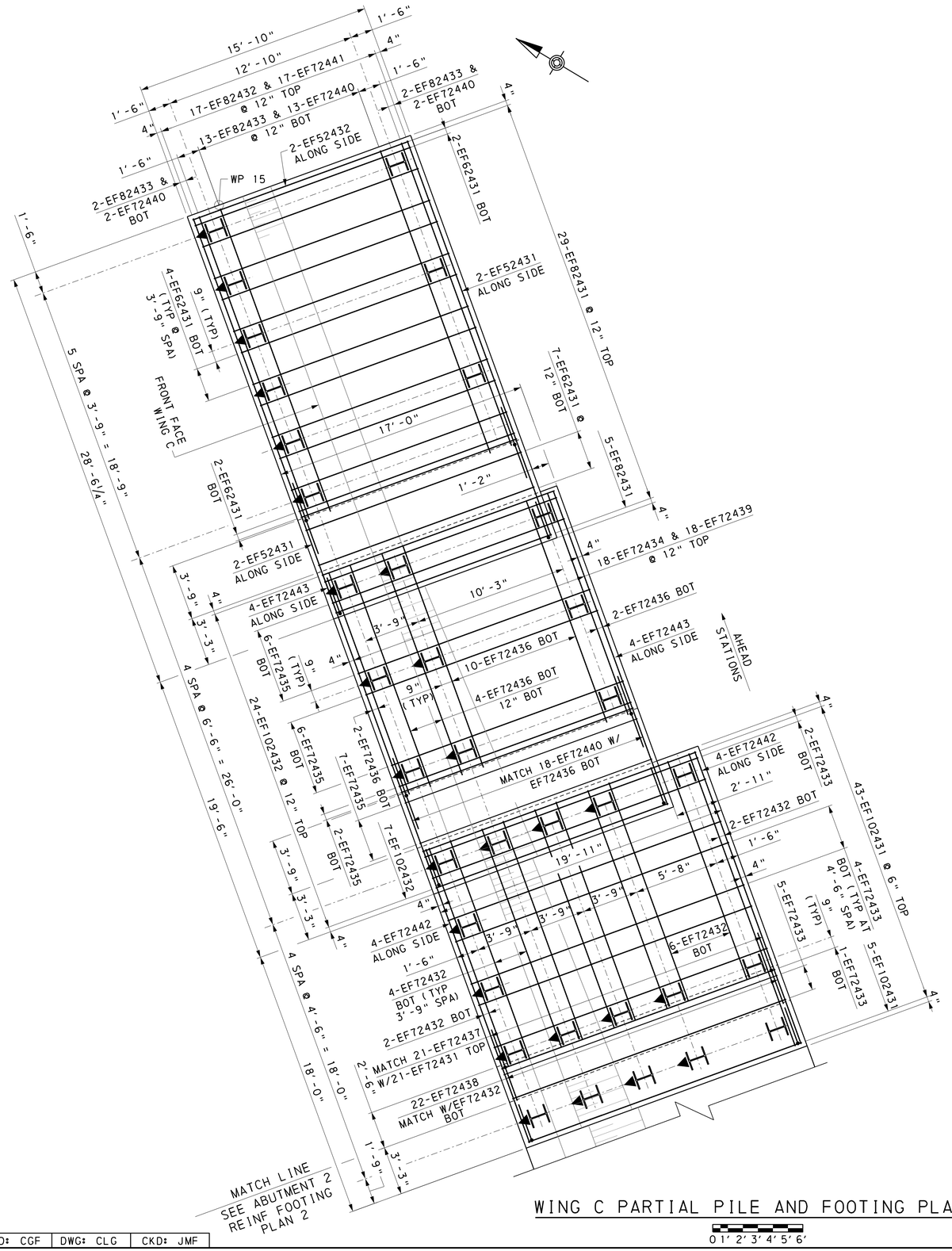

WING C PARTIAL PILE AND FOOTING PLAN

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

LEGEND:

FF DENOTES FRONT FACE
E DENOTES EPOXY COATED BARS
WP DENOTES WORK POINT

DENOTES VERTICAL PILE (HP 14x117)

DENOTES BATTERED PILE 3:12 (HP 14x117)

DENOTES TEST PILE (HP 14x117)

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	31 - 34 & 36 - 42
2. ABUTMENT 2 REINF BAR SCHEDULE	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 WING C FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 35 OF 121

S - 39526

DES: JMF | CKD: CGF | DWG: CLG | CKD: JMF

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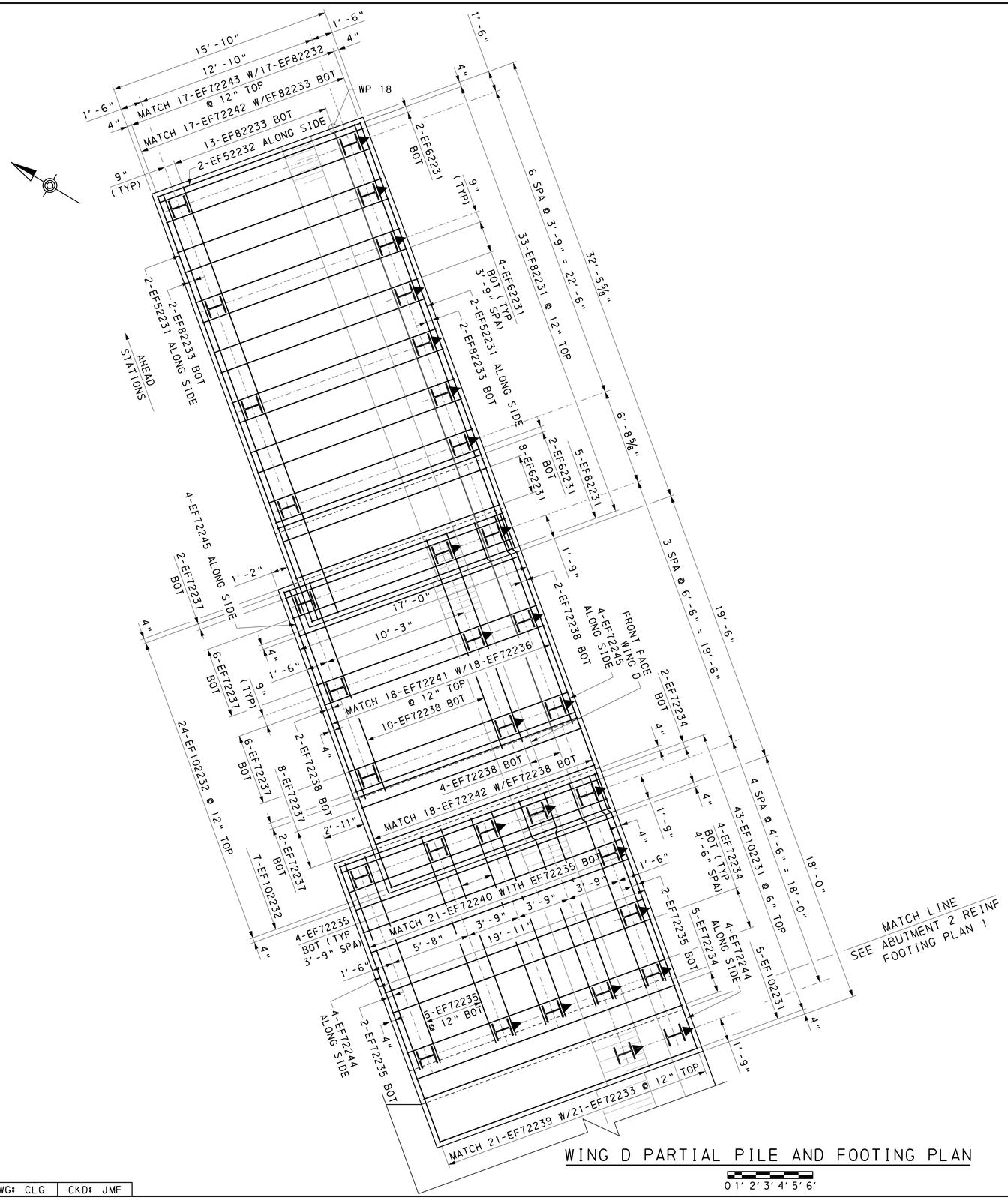

WING D PARTIAL PILE AND FOOTING PLAN

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

LEGEND:

FF DENOTES FRONT FACE
E DENOTES EPOXY COATED BARS
WP DENOTES WORK POINT

DENOTES VERTICAL PILE (HP 14x117)

DENOTES BATTERED PILE 3:12 (HP 14x117)

DENOTES TEST PILE (HP 14x117)

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	31 - 35 & 37 - 42
2. ABUTMENT 2 REINF BAR SCHEDULE	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 WING D FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
PENNSYLVANIA

RECOMMENDED _____

SHEET 36 OF 121

S - 39526

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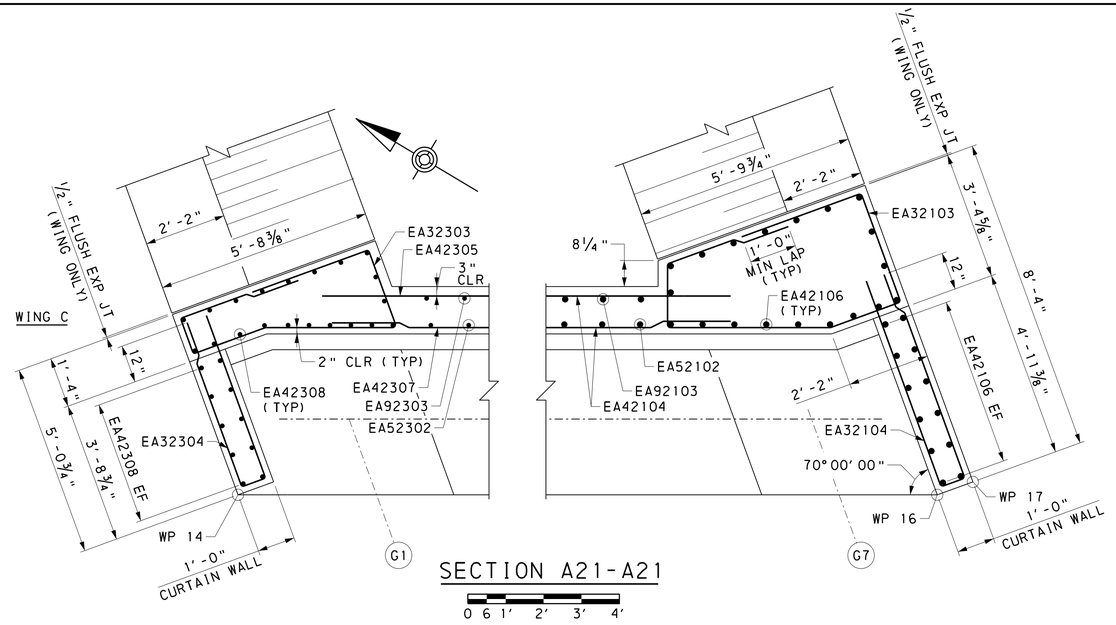

SECTION A21-A21

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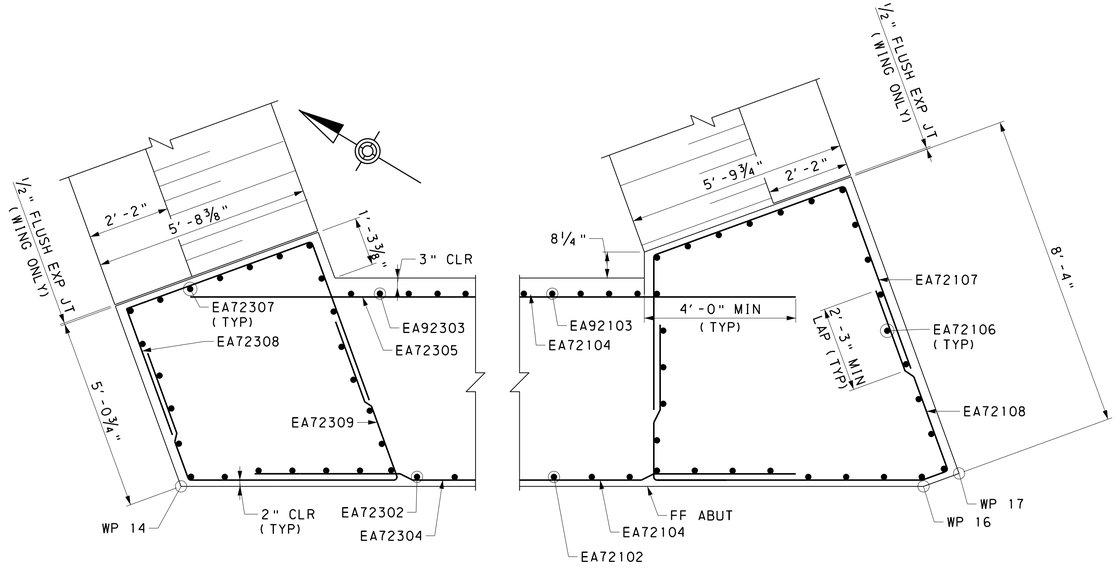

SECTION A22-A22

0 6 1' 2' 3' 4'

LEGEND:

FF DENOTES FRONT FACE
EF DENOTES EF
E DENOTES EPOXY COATED BARS
WP DENOTES WORK POINT

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	31 - 36 & 38 - 42
2. ABUTMENT 2 REINF BAR SCHEDULE	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 SECTIONS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 37 OF 121

S - 39526

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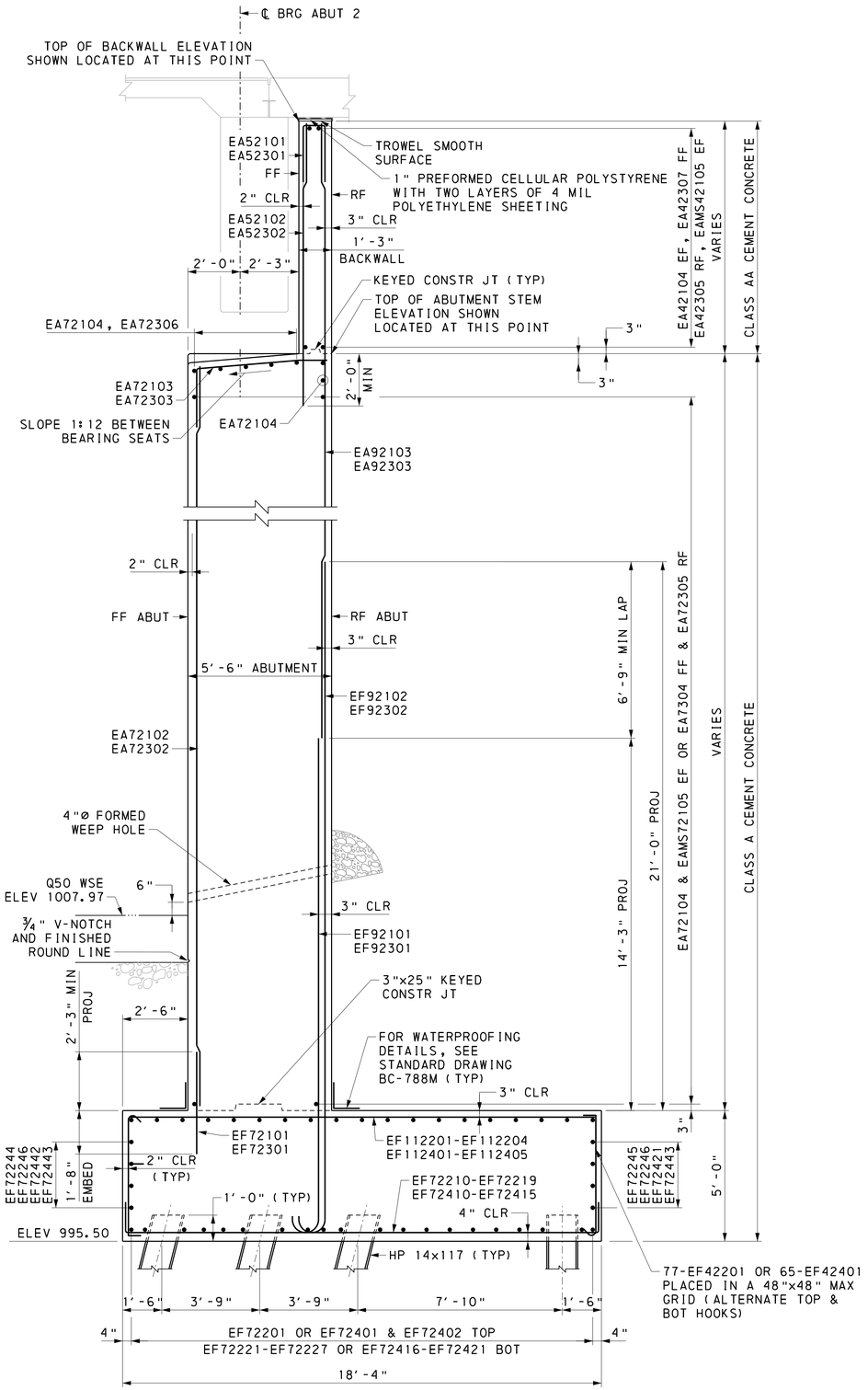

SECTION A23-A23

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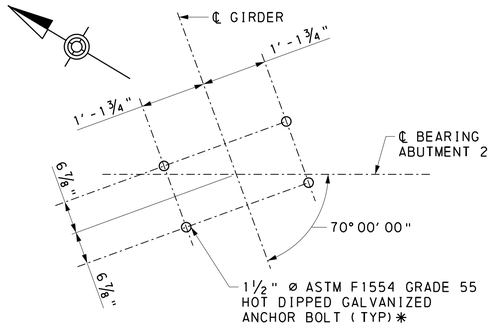
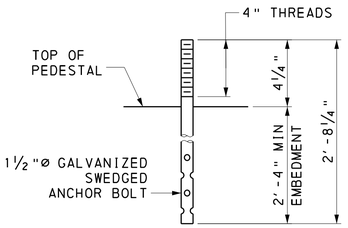


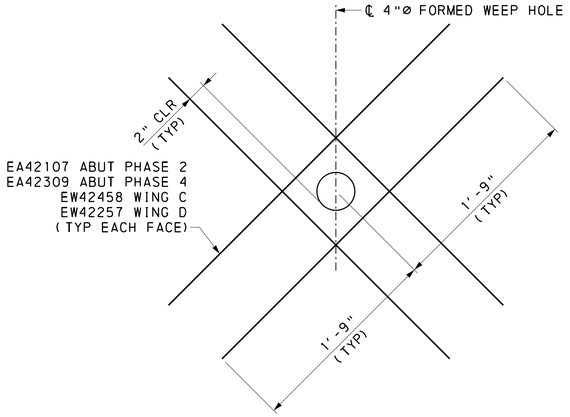
BEAM SEAT ANCHOR BOLT LAYOUT

NOT TO SCALE



ANCHOR BOLT DETAIL

NOT TO SCALE



WEEP HOLE REINFORCEMENT DETAIL

NOT TO SCALE

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
*	DENOTES GROUT ANCHOR BOLTS WITH NON-SHRINK GROUT PREFORMED HOLES
WSE	DENOTES WATER SURFACE ELEVATION
	DENOTES SELECTED BORROW EXCAVATON ROCK, CLASS R-6 CHOKED WITH CLASS R-3 ROCK GROUTED WITH CLASS A CEMENT CONCRETE

REFERENCES:

		SHEET:
1.	WORK THIS SHEET WITH SHEETS	31 - 37 & 39 - 42
2.	SCUPPER AND DRAINAGE DETAILS 3	88
3.	ABUTMENT 2 REINF BAR SCHEDULE	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUTMENT 2 SECTIONS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 38 OF 121

S - 39526

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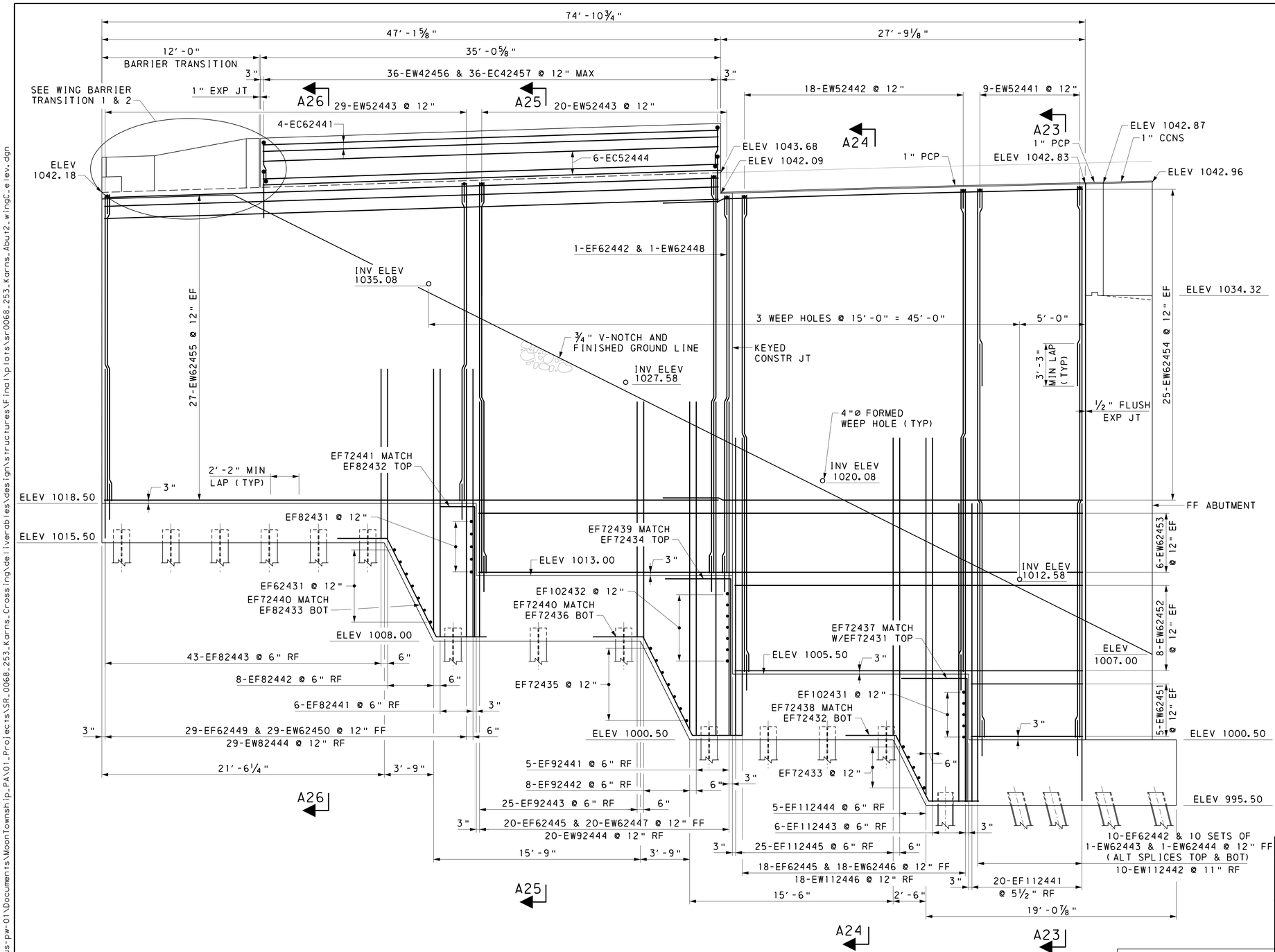

WING C ELEVATION

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BAR

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYETHYLENE SHEETING

REFERENCES:

1. WORK THIS SHEET WITH SHEETS — 31 - 38 & 40 - 42
2. ABUTMENT 2 REINF BAR SCHEDULE — 97 - 100

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
WING C ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 39 OF 121

S - 39526

DES: JMF | CKD: CGF | DWG: CLG | CKD: JMF

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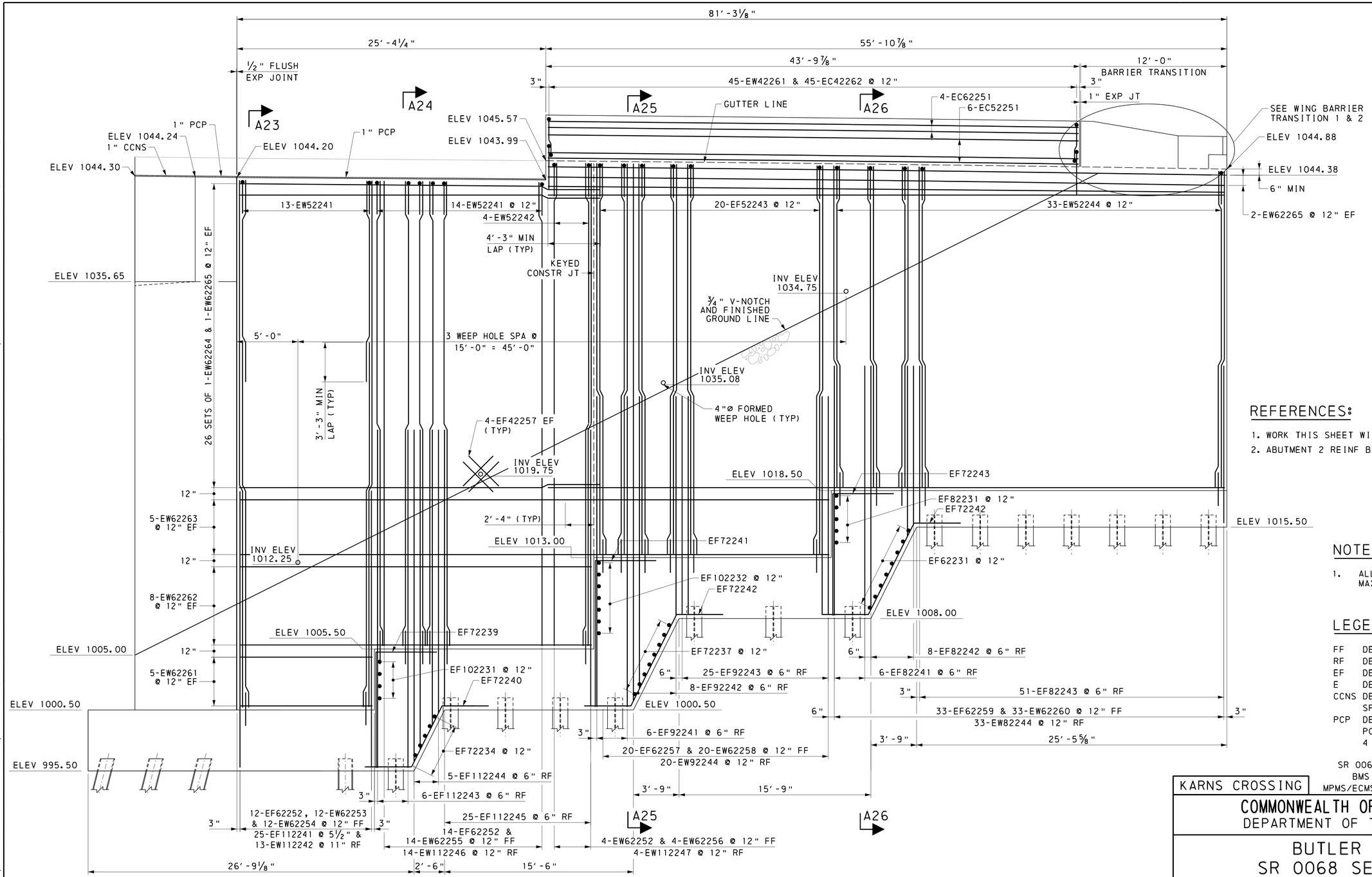

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 31 - 39 , 41 & 42
2. ABUTMENT 2 REINF BAR SCHEDULES 1-4 97 - 100

SHEET:

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BAR

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE WITH TWO LAYERS OF 4 MIL POLYSTYRENE SHEETING

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

WING D ELEVATION

0 1′ 2′ 3′ 4′ 5′ 6′

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071101

RECOMMENDED _____

SHEET 40 OF 121

S - 39526

DES: JMF	CKD: CGF	DWG: CLG	CKD: JMF

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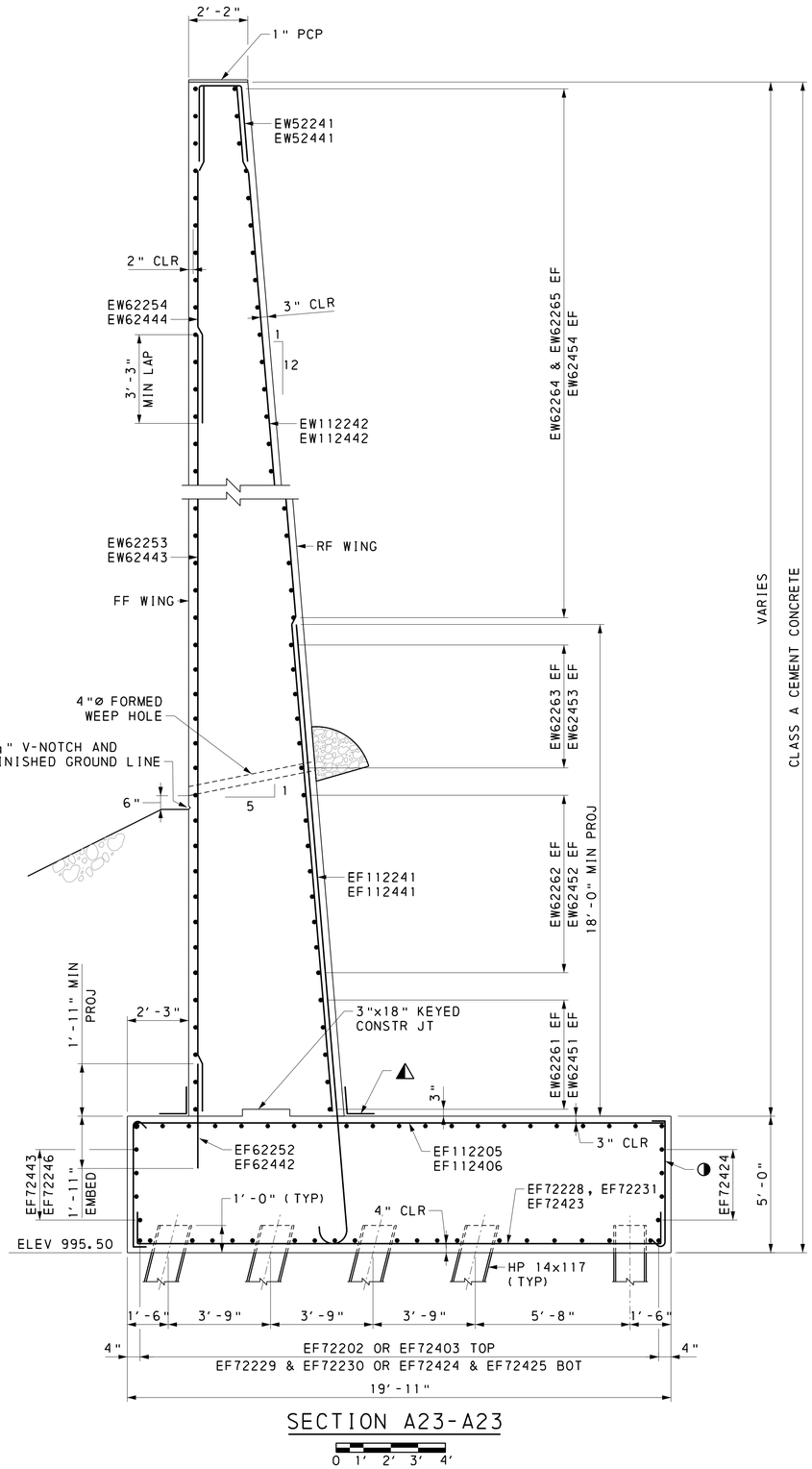

SECTION A23-A23

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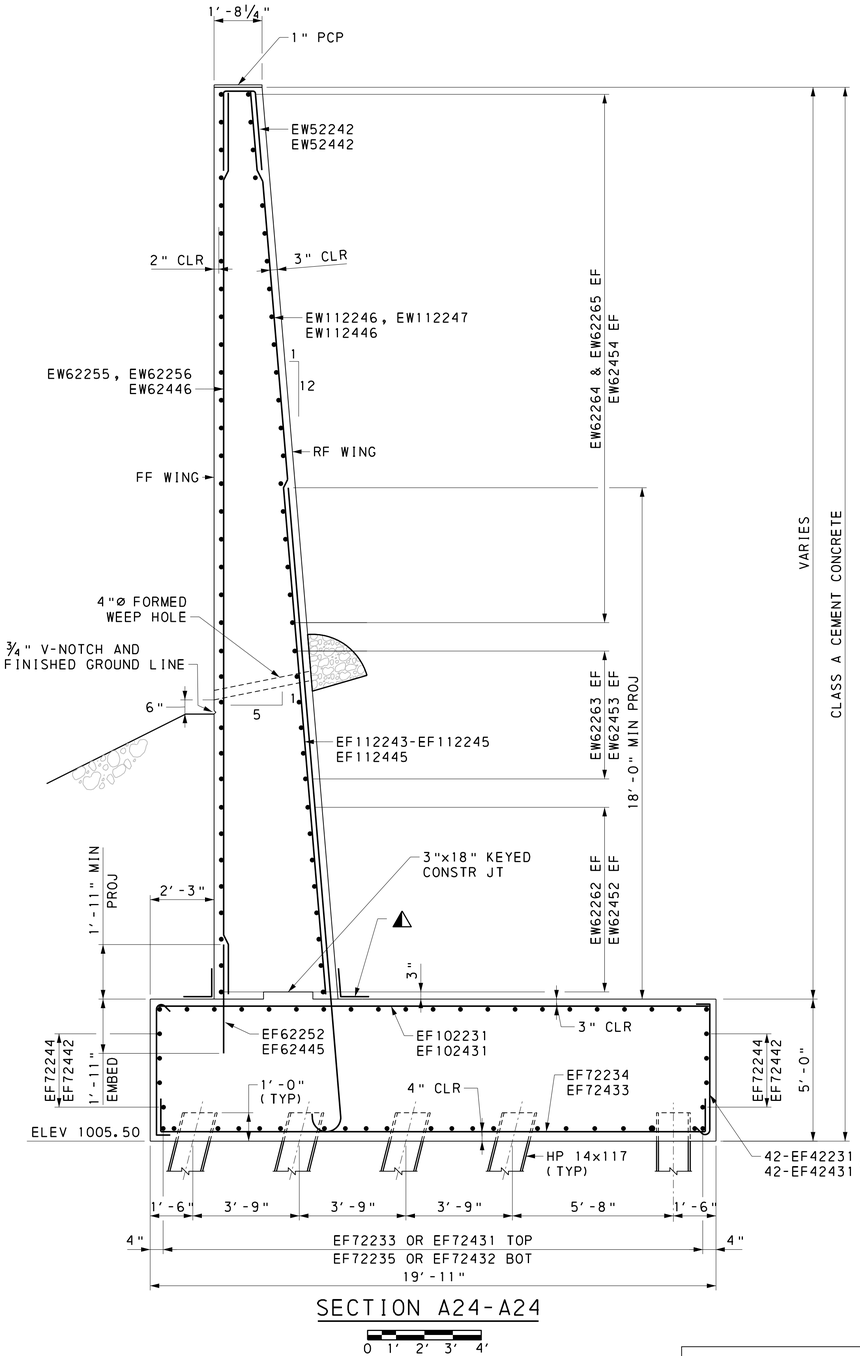

SECTION A24-A24

0 1' 2' 3' 4'

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS

△ DENOTES ABUTMENT AND WING WATERPROOFING DETAIL

◑ DENOTES EF42231 OR EF42431 PLACED IN A 48"x48" MAX GRID (ALTERNATE TOP & BOT HOOKS)

REFERENCES:

		SHEET:
1.	WORK THIS SHEET WITH SHEETS	31 - 40 & 42
2.	ABUTMENT 2 REINF BAR SCHEDULE 1-4	97 - 100

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

WING C AND WING D SECTIONS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 41 OF 121

S - 39526

DES: JMF | CKD: CGF | DWG: CLG | CKD: JMF

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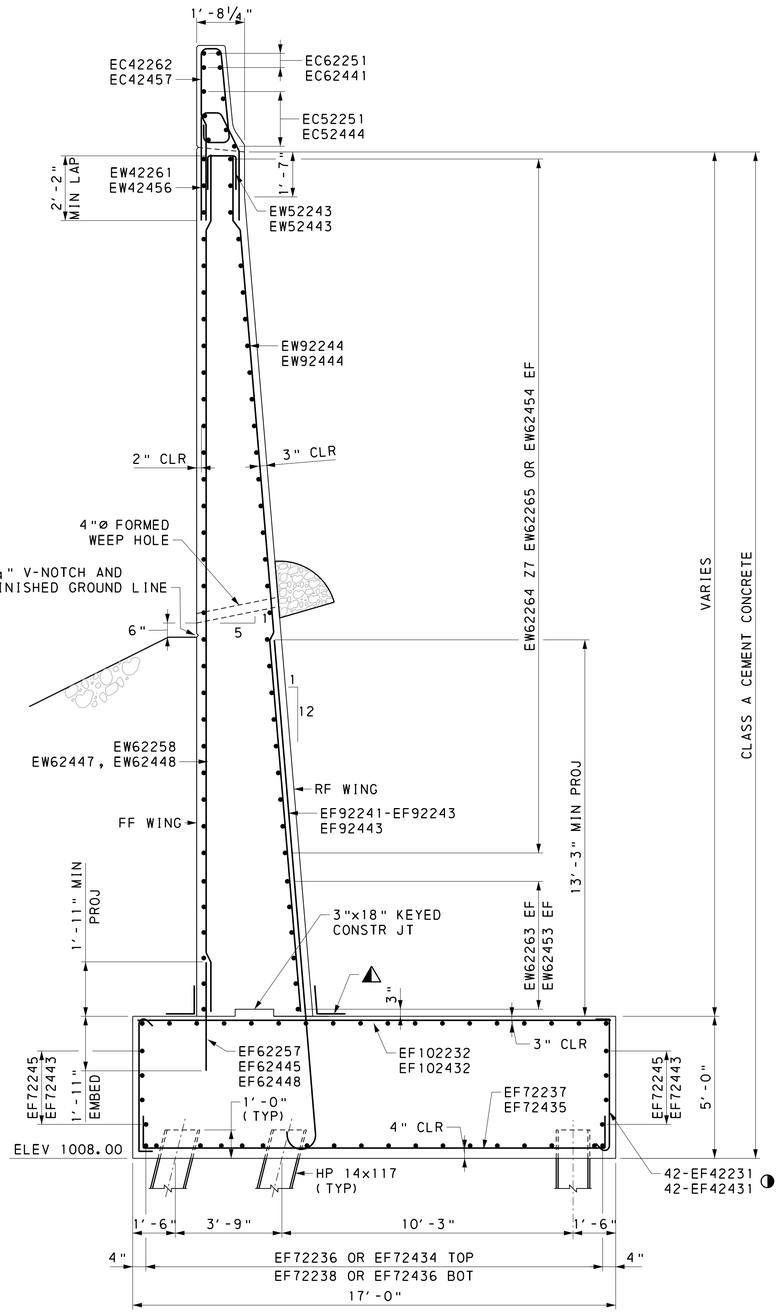

SECTION A25-A25

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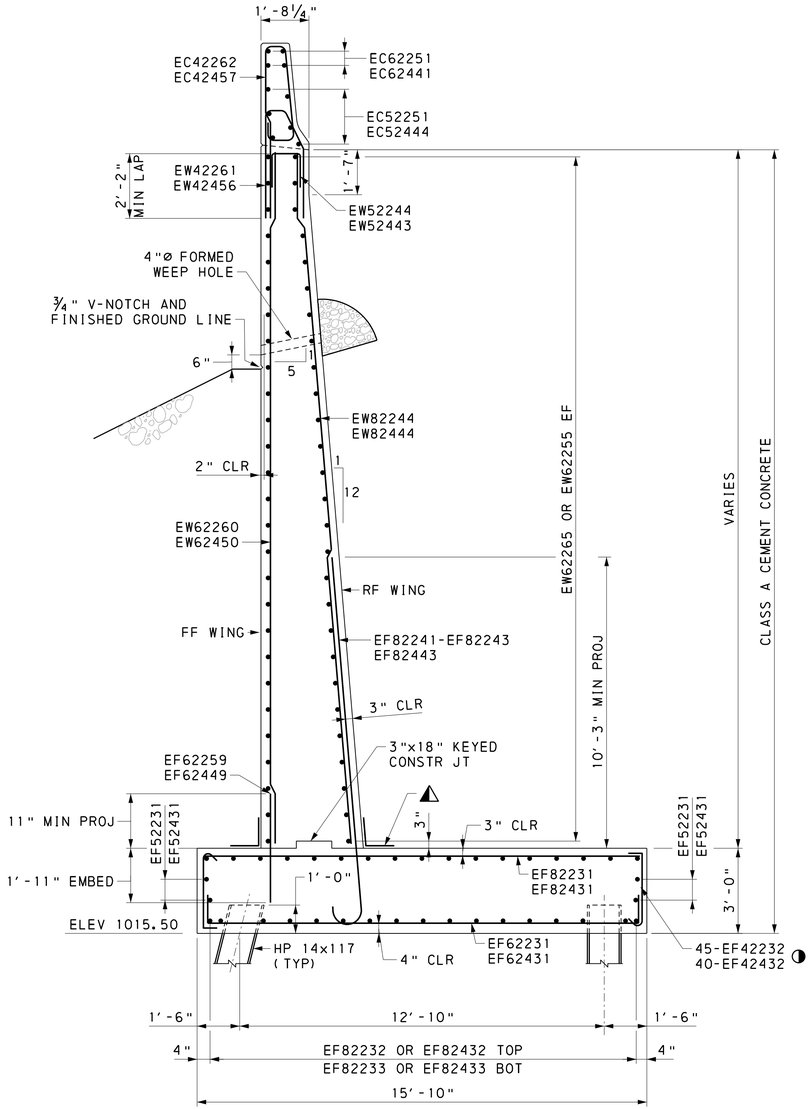

SECTION A26-A26

0 1' 2' 3' 4'

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS

◭ DENOTES ABUTMENT AND WING WATERPROOFING DETAIL

◑ DENOTES EF42231, EF42232, EF42431 OR EF42432 PLACED IN A 48"x48" MAX GRID (ALTERNATE TOP & BOT HOOKS)

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 31 - 41
2. ABUTMENT 2 REINF BAR SCHEDULE 97 - 100

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
WING C AND WING D SECTIONS 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 42 OF 121

S - 39526

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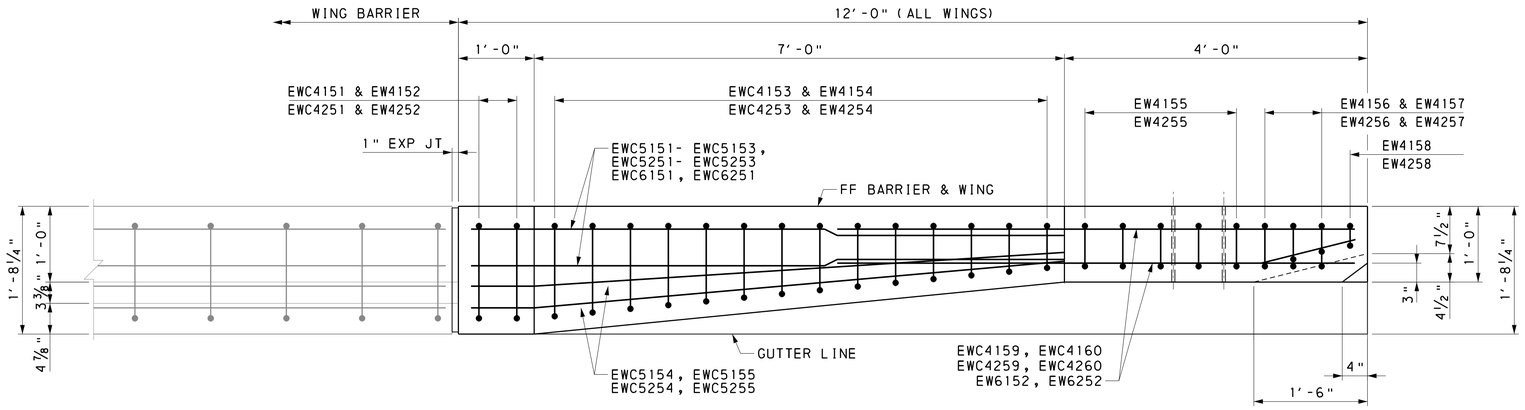
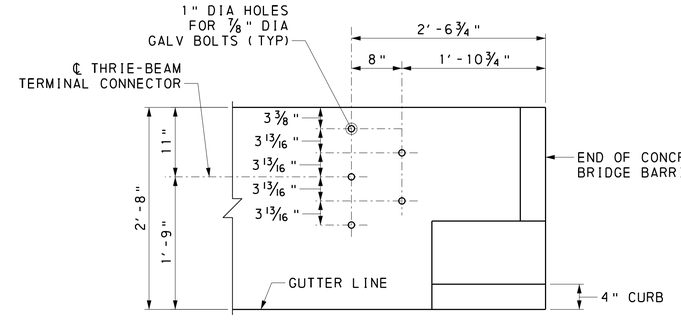


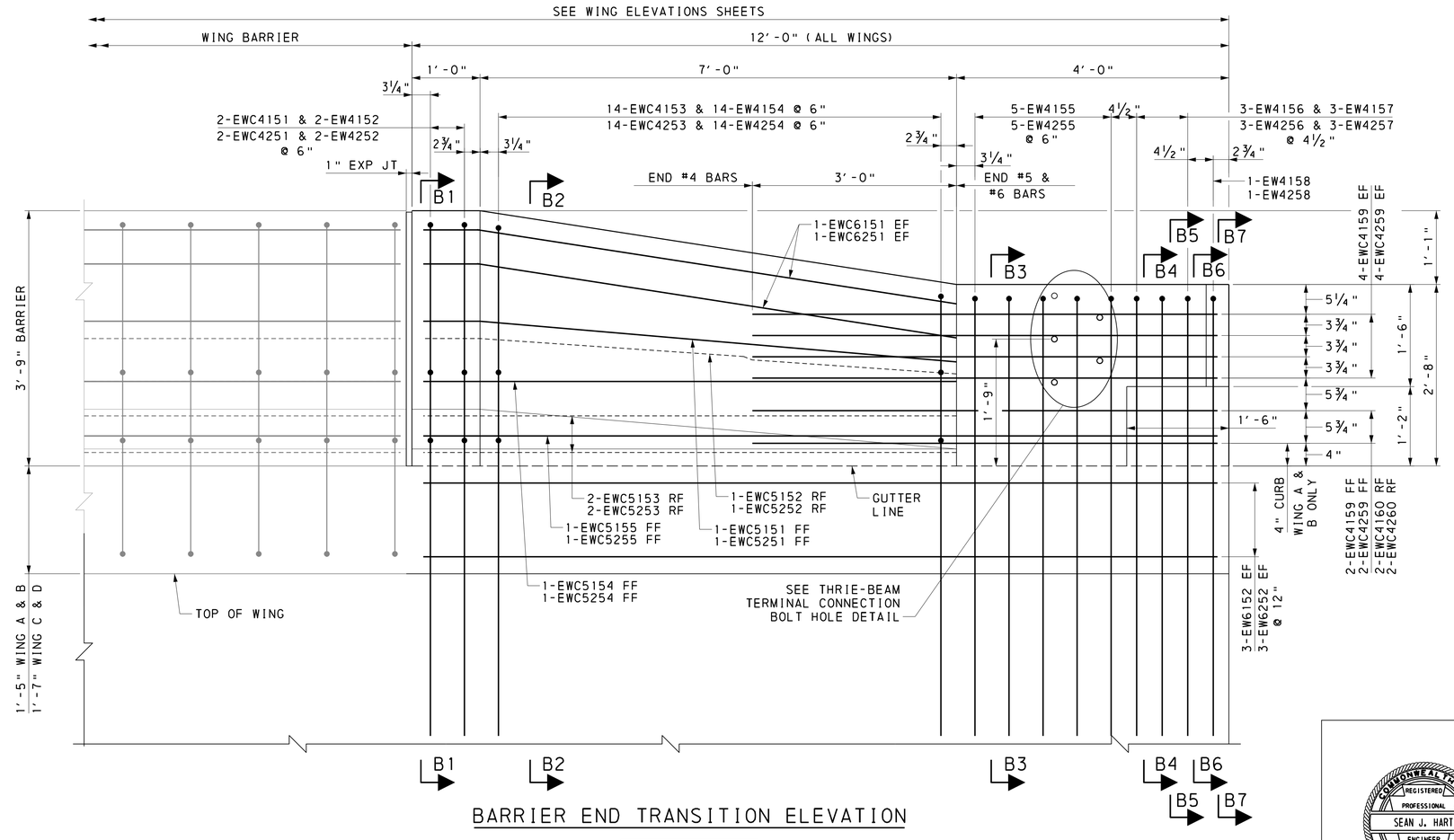
BARRIER END TRANSITION PLAN

0 3 6 9 1' 2'



THRIE-BEAM TERMINAL CONNECTOR BOLT HOLE DETAIL

0 3 6 9 1' 2'



BARRIER END TRANSITION ELEVATION

0 3 6 9 1' 2'

NOTES:

1. ALL BAR SPACING'S INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS
PCP	DENOTES PREFORMED CELLULAR POLYSTYRENE

REFERENCES:

		SHEET:
1.	ABUTMENT 1 WING DETAILS	23 - 25
2.	ABUTMENT 2 WING DETAILS	39 - 42
3.	WING BARRIER TRANSITION 2	44
4.	APPROACH SLAB DETAILS	89 - 92
5.	BARRIER TRANSITION REINF BAR SCHEDULE	101

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

WING BARRIER TRANISTION 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 43 OF 121

S - 39526

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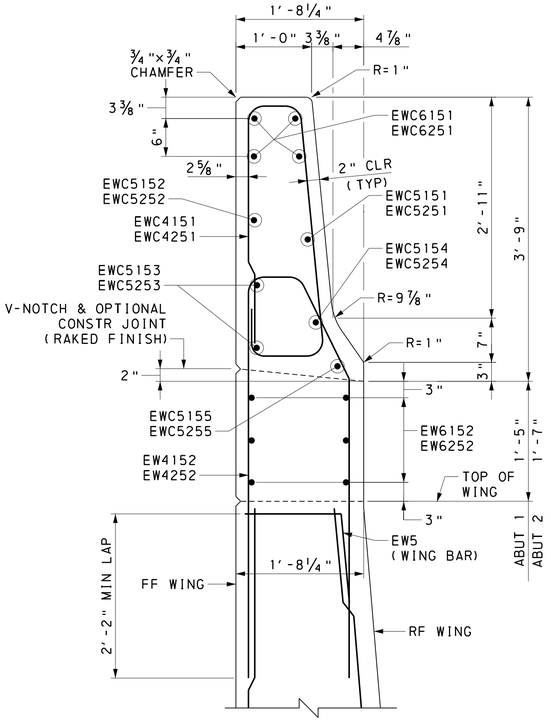

SECTION B1-B1

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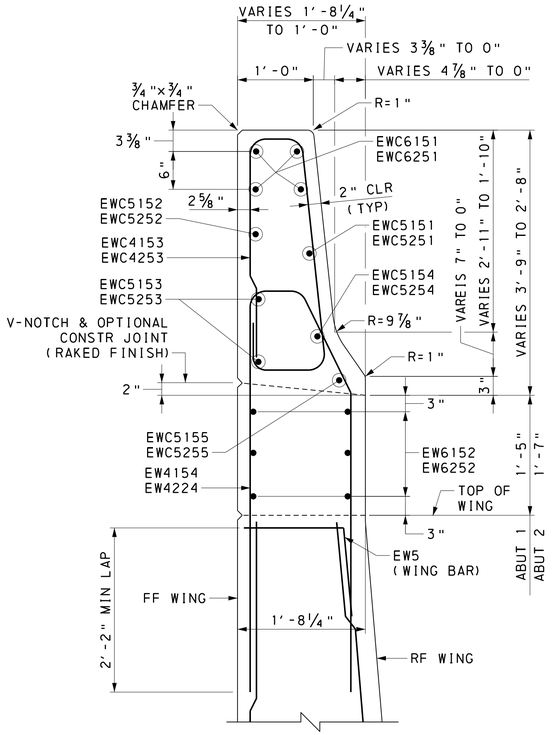

SECTION B2-B2

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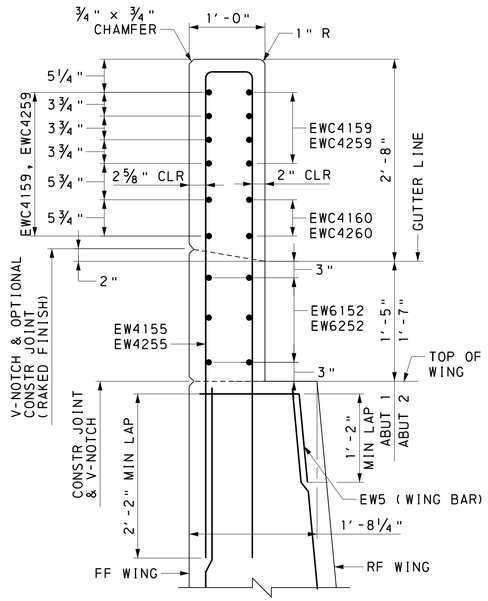

SECTION B3-B3

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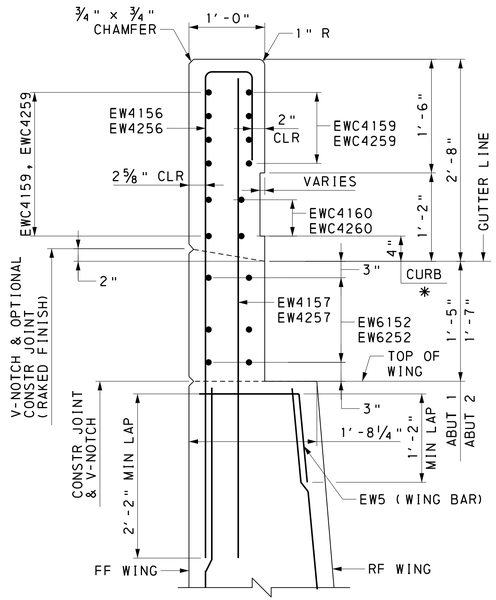

SECTION B4-B4

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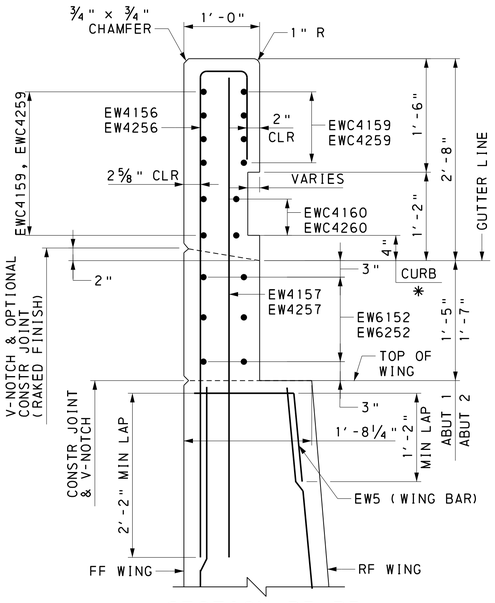
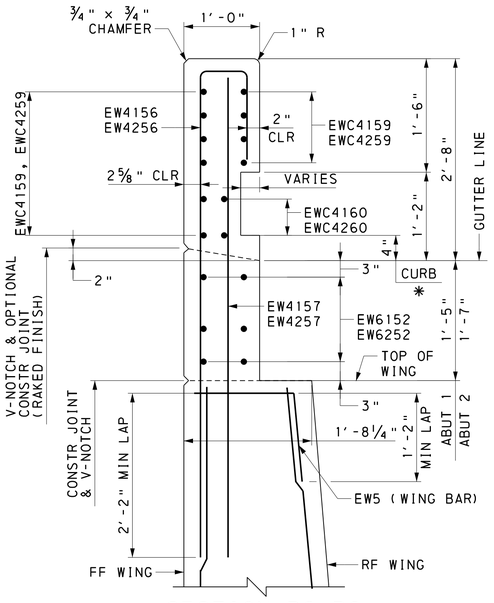


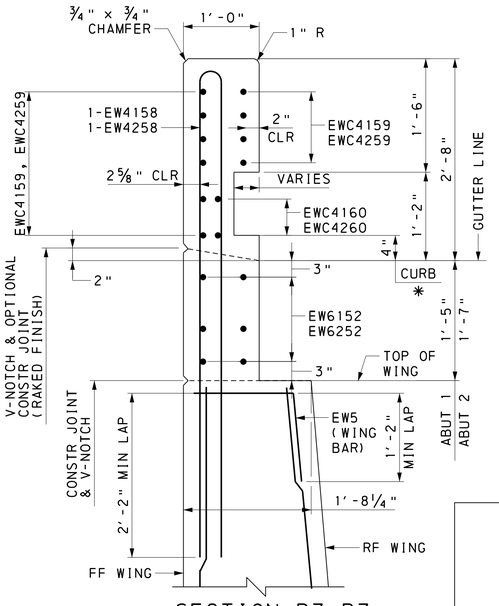
SECTION B5-B5

0 3 6 9 1′ 2′



SECTION B6-B6

0 3 6 9 1′ 2′



SECTION B7-B7

0 3 6 9 1′ 2′

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS
* DENOTES CURB AT WINGS A AND B ONLY

REFERENCES:

1. WORK THIS SHEET WITH SHEET 43

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

WING BARRIER TRANISTION 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

RECOMMENDED _____

SHEET 44 OF 121

S - 39526

DES: CLG	CKD: JMF	DWG: CLG	CKD: JMF

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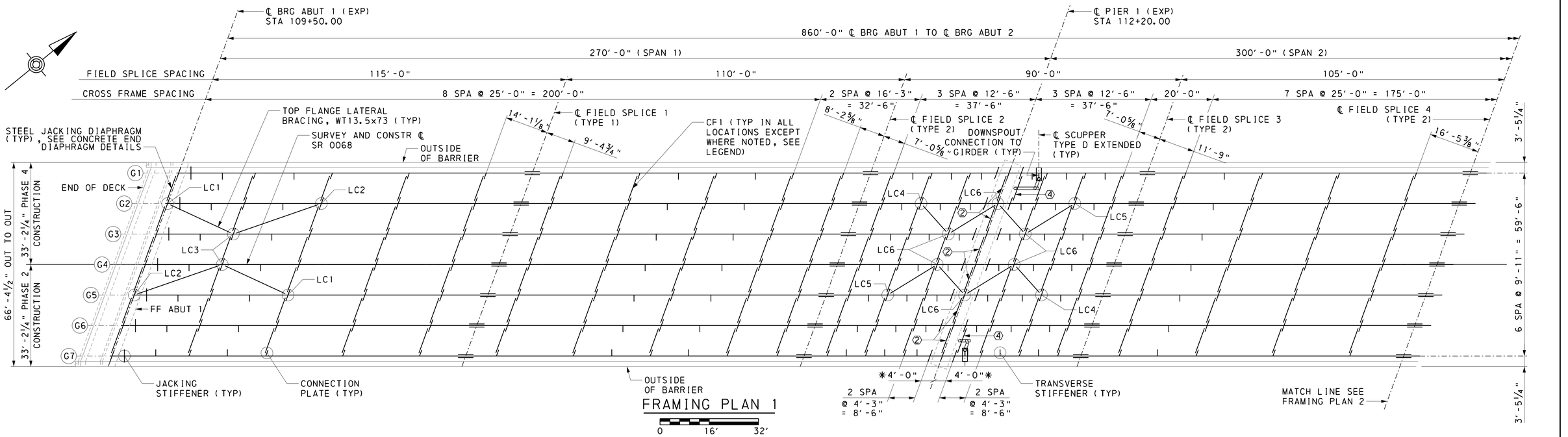

FRAMING PLAN 1

0 16' 32'

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY BRACING THE GIRDERS.
2. FIELD DRILL THE HOLES IN THE CROSS FRAME CONNECTION PLATES FOR ONE END OF THE BAY 3 CROSS FRAMES DUE TO ALIGNMENT CONCERNS AND PHASED CONSTRUCTION. SHOP DRILL THE HOLES IN THE CROSS FRAME CONNECTION PLATES FOR THE OTHER END. TOUCH UP THE AREA IN ACCORDANCE WITH PUBLICATION 408 SECTION 1105. FIELD DRILLING IS INCIDENTAL TO FABRICATED STRUCTURAL STEEL, UNPAINTED.

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS	3
2.	GENERAL NOTES	4 - 5
3.	CONSTRUCTION PHASING	7 & 8
4.	ABUTMENT 1 DETAILS	16 - 26
5.	PIER 1 DETAILS	27 & 28
6.	PIER 2 DETAILS	29 & 30
7.	ABUTMENT 2 DETAILS	31 - 42
8.	FRAMING PLAN 2	46
9.	GIRDER ELEVATION	47 - 49
10.	FIELD SPLICE DETAILS	50
11.	CROSSFRAME DETAILS 1 & 2	51 & 52
12.	LATERAL BRACING DETAILS 1 & 2	53 & 54
13.	BEARING DETAILS	57 - 62
14.	CONCRETE END DIAPHRAGM DETAILS	68 - 71

LEGEND:

FIX	DENOTES FIXED BEARING
EXP	DENOTES EXPANSION BEARING
FF	DENOTES FRONT FACE
LC1	DENOTES LATERAL BRACING CONNECTION TYPE
(G1)	DENOTES GIRDER NUMBER
*	DENOTES JACKING STIFFENER
②	DENOTES CROSS FRAME TYPE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
FRAMING PLAN 1

RECOMMENDED _____

SHEET 45 OF 121

S - 39526

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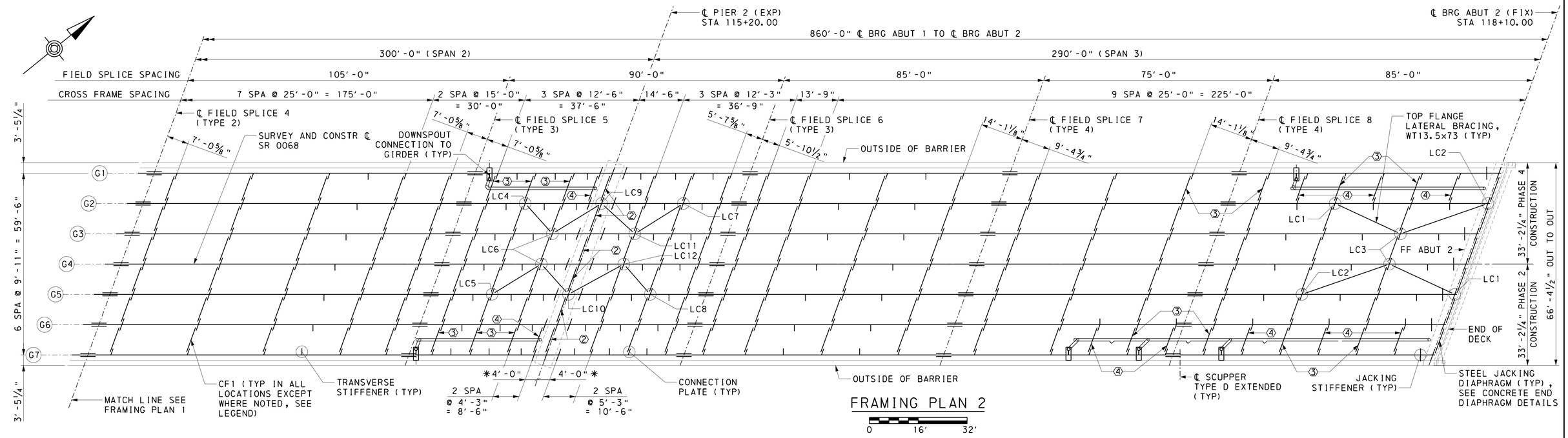
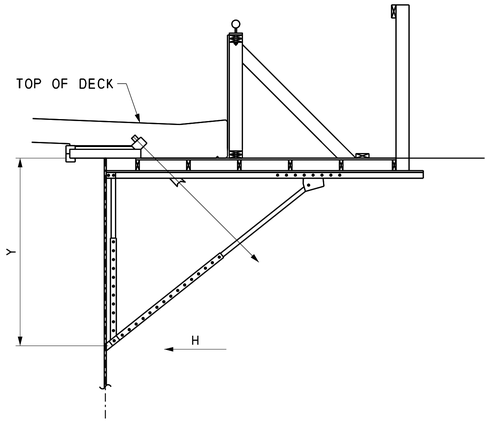


FRAMING PLAN 2

0 16' 32'

Y (IN)	HORIZONTAL LOAD (H) KIP/FT
75	0.350



TYPICAL OVERHANG FORMING DETAIL

(NOT TO SCALE)

NOTE:

THE FASCIA GIRDERS ARE DESIGNED FOR A TEMPORARY CONSTRUCTION LOAD APPLIED TO THE WEB AT A MAXIMUM 3'-0" INTERVAL. THIS LOAD (SEE TABLE) APPROXIMATES THE HORIZONTAL COMPONENT OF A DECK OVERHANG FORM SUPPORT BRACKET AND CONSISTS OF AN ALLOWANCE FOR THE WEIGHT OF THE CONCRETE, FORMS AND INCIDENTAL LOADS, PLUS THE DECK FINISHING MACHINE. THE SPACING OF THE TRANSVERSE STIFFENERS FOR THE FINAL DESIGN SHEAR ARE ADEQUATE FOR CONSTRUCTABILITY BASED ON THE OVERHANG FORM SUPPORT BRACKET LOCATION AND FORCE AS INDICATED. THE CONTRACTOR HAS THE OPTION TO MODIFY THE OVERHANG BRACKET FROM THAT DESCRIBED HEREIN PROVIDED WORKING DRAWINGS INCLUDING CALCULATIONS, SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA, ARE SUBMITTED FOR REVIEW AND ACCEPTANCE AND SHOW THE MODIFICATIONS DO NOT CAUSE UNACCEPTABLE DEFORMATIONS OR STRESSES IN THE BRIDGE AND IT IS UNDERSTOOD THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF THE BRIDGE.

NOTES:

1. SEE FRAMING PLAN 1 FOR APPLICABLE NOTES.

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS	3
2.	GENERAL NOTES	4 - 5
3.	CONSTRUCTION PHASING	7 & 8
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5.	PIER 1 DETAILS	27 & 28
6.	PIER 2 DETAILS	29 & 30
7.	ABUTMENT 2 DETAILS	31 - 42
8.	FRAMING PLAN 1	45
9.	GIRDER ELEVATION	47 - 49
10.	FIELD SPLICE DETAILS	50
11.	CROSSFRAME DETAILS 1 & 2	51 & 52
12.	LATERAL BRACING DETAILS 1 & 2	53 & 54
13.	DISC BEARING DETAILS	57 - 62
14.	CONCRETE END DIAPHRAGM DETAILS	68 - 71

LEGEND:

FIX DENOTES FIXED BEARING
EXP DENOTES EXPANSION BEARING
FF DENOTES FRONT FACE
LC1 DENOTES LATERAL BRACING CONNECTION TYPE
(G1) DENOTES GIRDER NUMBER
* DENOTES JACKING STIFFENER
(2) DENOTES CROSS FRAME TYPE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071101 PENNSYLVANIA

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BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

FRAMING PLAN 2

RECOMMENDED _____

SHEET 46 OF 121

S - 39526

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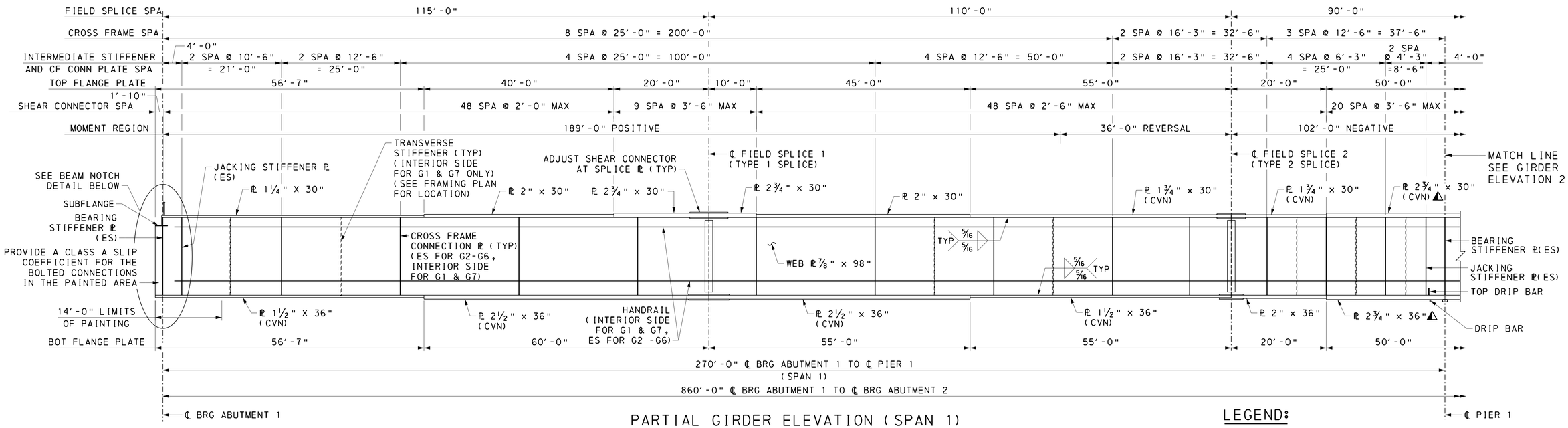
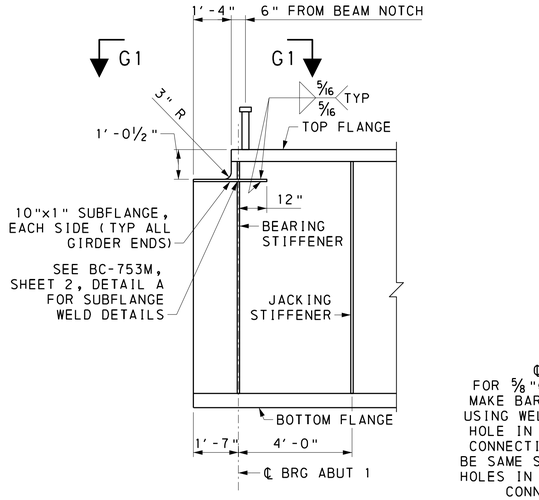
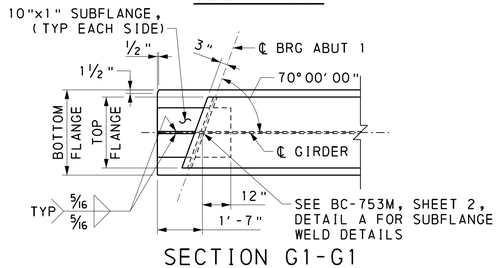


PARTIAL GIRDER ELEVATION (SPAN 1)

NOT TO SCALE
(GIRDER G7 SHOWN, GIRDERS G1 THRU G6 SIMILAR)



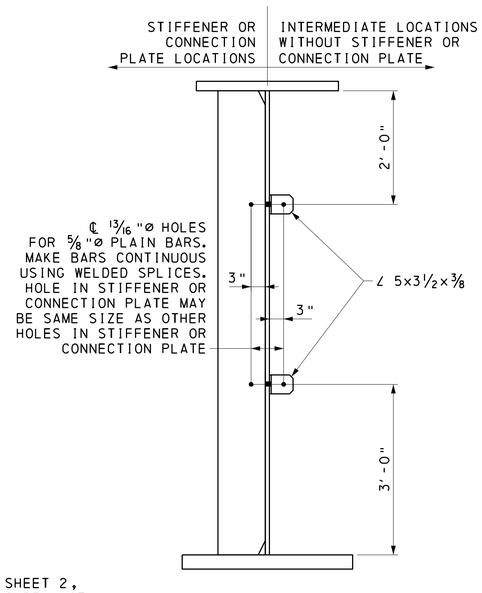
ELEVATION



SECTION G1-G1

BEAM NOTCH DETAILS

NOT TO SCALE



HANDRAIL SECTION

NOT TO SCALE

NOTES:

1. PROVIDE AASHTO M270, GRADE 50W (ASTM A709, GRADE 50W) STEEL UNLESS OTHERWISE NOTED.
2. ALL GIRDER DIMENSIONS ARE HORIZONTAL AND MEASURED ALONG THE CENTERLINE OF GIRDER.
3. ALL STIFFENER DIMENSIONS ARE MEASURED TO CENTERLINE OF STIFFENER.
4. PLACE ALL CROSS FRAME CONNECTION PLATES PARALLEL TO THE SKEW ANGLE.
5. FABRICATOR SHALL DETAIL LOCATION OF CROSS FRAME CONNECTION PLATES ON THE SHOP DRAWINGS.
6. ALL CROSS FRAME CONNECTION PLATES AND INTERMEDIATE TRANSVERSE STIFFENERS ARE 9" x 3/4".
7. BEARING AND JACKING STIFFENER PLATES ARE 12" x 1 1/2" AT THE PIERS, AND 10" x 1 1/2" AT THE ABUTMENTS. WHERE STEEL JACKING DIAPHRAGMS ARE CONNECTED TO ABUTMENT BEARING STIFFENERS, THE BEARING STIFFENER PLATES ACT AS CONNECTION PLATES AND ARE 16" x 1 1/2".
8. BEARING AREAS: PROVIDE BOTTOM FLANGE IN A TRUE HORIZONTAL PLANE IN TRANSVERSE DIRECTION AND IN A TRUE PLANE LONGITUDINALLY OVER DIMENSION "L", WHERE L = WIDTH OF SOLE PLANE +6" AHEAD AND BACK, WHERE APPLICABLE. PROVIDE THE SOLE PLATE MEETING THE SAME FLATNESS REQUIREMENTS. EACH BEARING MUST BE STRESSED UNIFORMLY AFTER ALL DEAD LOAD IS IN PLACE. MAKE NECESSARY SHOP AND/OR FIELD ADJUSTMENTS TO PROVIDE UNIFORM BEARING STRESS UNDER ALL DEAD LOADS.
9. FOR SHEAR CONNECTOR DETAILS, SEE FIELD SPLICE DETAILS.
10. DO NOT PROVIDE DRIP BARS AT THE ABUTMENT WHEN THE BEAM SLOPE IS AWAY FROM THE ABUTMENT.
11. WELD AT TOP AND BOTTOM WHEN THE BEARING STIFFENER IS USED AS CONNECTION PLATE.
12. FOR HANDRAIL, USE ANGLES BETWEEN STIFFENERS WHEN STIFFENERS ARE SPACED AT 8'-6" OR GREATER.
13. UNDER FULL DEAD LOAD BEAM ENDS AND ALL BEARING STIFFENERS, INCLUDING BEARING STIFFENERS AT PIERS, ARE VERTICAL TO WITHIN APPLICABLE AASHTO/AWS FABRICATION AND CONSTRUCTION TOLERANCES.
14. DIRECTION OF WELDS IS NOT APPLICABLE IF STIFFENERS ARE FITTED WITH TACK WELDS.
15. TIGHT FIT AT TENSION FLANGES AT INTERIOR SUPPORTS. FILLET WELDS OVER END SUPPORTS.
16. STIFFENERS MAY BE TIGHT FITTED AT THE COMPRESSION FLANGE WHEN PLACED IN PAIRS, ONE ON EACH SIDE OF THE WEB.
17. WHEN INTERMEDIATE AND JACKING STIFFENERS FUNCTION AS CROSS FRAME CONNECTION PLATES, THEY ARE TO BE ORIENTED PARALLEL TO THE SKEW. ALL OTHER INTERMEDIATE AND JACKING STIFFENERS, AS WELL AS ALL BEARING STIFFENERS, ARE TO BE ORIENTED PERPENDICULAR TO THE GIRDER WEBS.

LEGEND:

ES DENOTES EACH SIDE
CVN DENOTES CHARPY V-NOTCH
⚠ DENOTES PLATE MATERIAL IS AASHTO M270 GRADE 70W (ASTM A709 GRADE 70W)

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING	7 & 8
3.	FRAMING PLAN	45 & 46
4.	GIRDER ELEVATION 2 AND 3	48 & 49
5.	FIELD SPLICE DETAILS	50
6.	CROSS FRAME DETAILS 1 & 2	51 & 52
7.	LATERAL BRACING DETAILS 1 & 2	53 & 54
8.	DISC BEARING DETAILS	57 - 62
9.	PENNDOT STANDARD DRAWING	BC-753M

Mark	Description	By	Chk'd.	Recm'd.	Date
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SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GIRDER ELEVATION 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

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S - 39526

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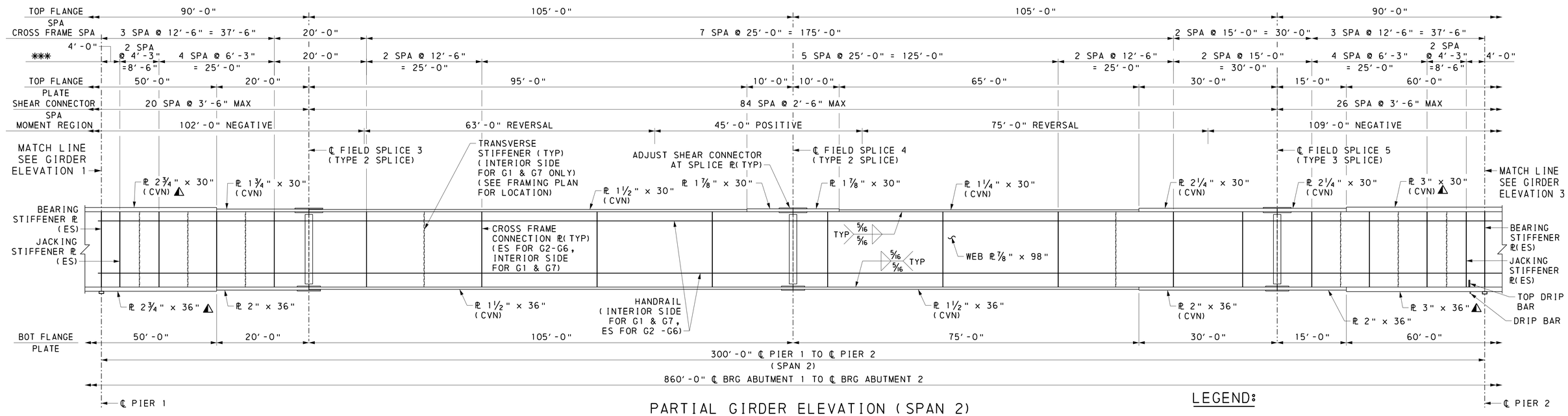


PARTIAL GIRDER ELEVATION (SPAN 2)

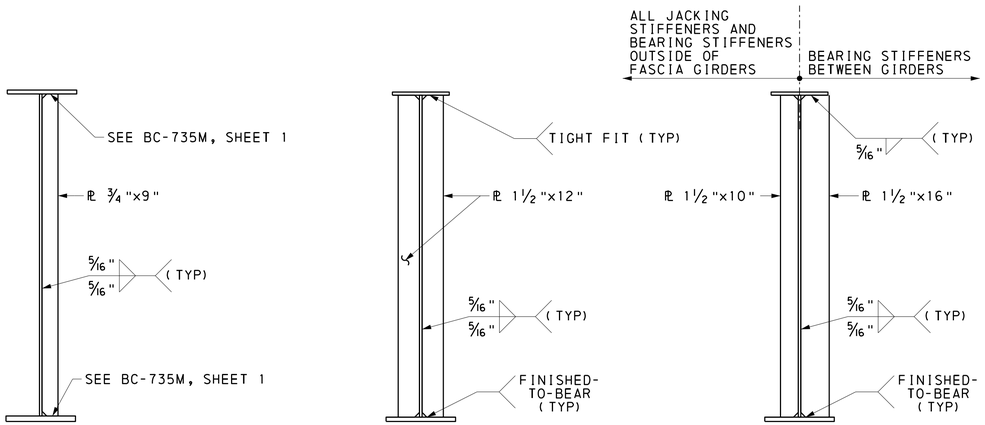
NOT TO SCALE
(GIRDER G7 SHOWN, GIRDERS G1 THRU G6 SIMILAR)

LEGEND:

ES	DENOTES EACH SIDE
CVN	DENOTES CHARPY V-NOTCH
◭	DENOTES PLATE MATERIAL IS AASHTO M270 GRADE 70W (ASTM A709 GRADE 70W)
***	DENOTES INTERMEDIATE STIFFENER AND CROSS FRAME CONNECTION PLATE SPACING

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING	7 & 8
3.	FRAMING PLAN	45 & 46
4.	GIRDER ELEVATION 1 AND 3	47 & 49
5.	FIELD SPLICE DETAILS	50
6.	CROSS FRAME DETAILS 1 & 2	51 & 52
7.	LATERAL BRACING DETAILS 1 & 2	53 & 54
8.	DISC BEARING DETAILS	57 - 62



INTERMEDIATE STIFFENER AND CF CONNECTION PLATE

NOT TO SCALE

PIER BEARING AND JACKING STIFFENER

NOT TO SCALE

ABUTMENT BEARING AND JACKING STIFFENER

NOT TO SCALE

NOTES:

1. SEE GIRDER ELEVATION 1 SHEET FOR NOTES.

Mark	Description	By	Chk'd.	Recm'd.	Date
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KARNS CROSSING

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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GIRDER ELEVATION 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 48 OF 121

S - 39526

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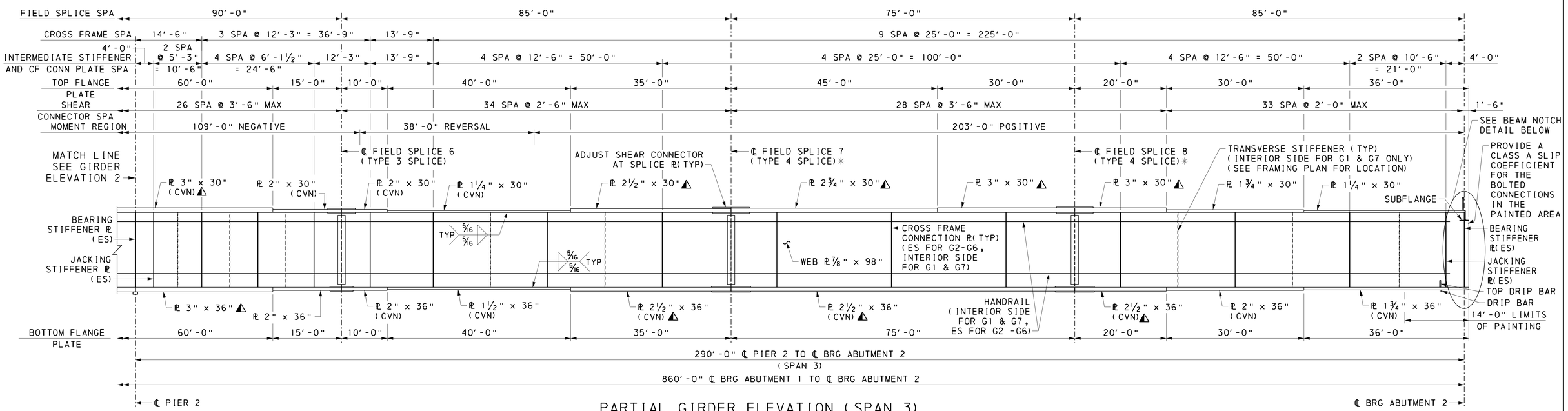
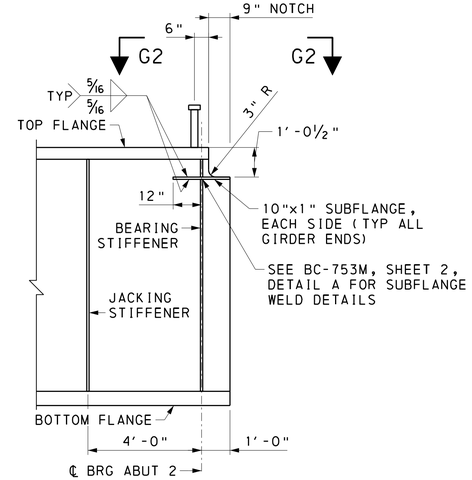
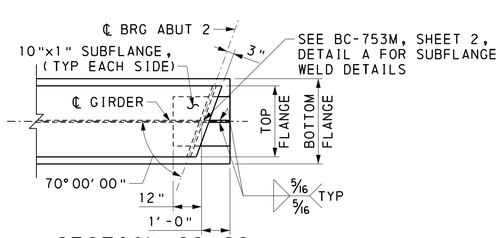


PARTIAL GIRDER ELEVATION (SPAN 3)

NOT TO SCALE
(GIRDER G7 SHOWN, GIRDERS G1 THRU G6 SIMILAR)



ELEVATION



SECTION G2-G2
BEAM NOTCH DETAILS

NOT TO SCALE

NOTES:

1. SEE GIRDER ELEVATION 1 SHEET FOR NOTES.

LEGEND:

*	DENOTES PLATE MATERIAL IS M270 GRADE 70W (ASTM A709 GRADE 70W) FOR THE TOP AND BOTTOM FLANGE SPLICE PLATES AT TYPE 4 SPLICES
ES	DENOTES EACH SIDE
CVN	DENOTES CHARPY V-NOTCH
⚠	DENOTES PLATE MATERIAL IS AASHTO M270 GRADE 70W (ASTM A709 GRADE 70W)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING	7 & 8
3.	FRAMING PLAN	45 & 46
4.	GIRDER ELEVATION 1 AND 2	47 & 48
5.	FIELD SPLICE DETAILS	50
6.	CROSS FRAME DETAILS 1 & 2	51 & 52
7.	LATERAL BRACING DETAILS 1 & 2	53 & 54
8.	DISC BEARING DETAILS	57 - 62

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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KARNS CROSSING

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SR 0068 SECTION 253

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SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GIRDER ELEVATION 3

RECOMMENDED _____

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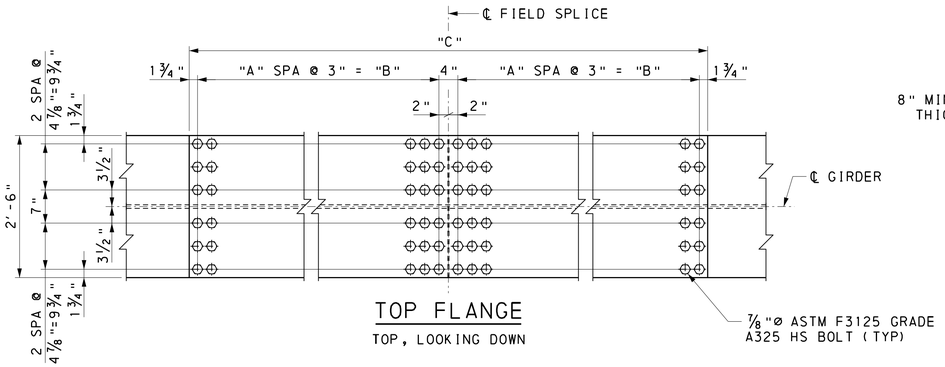
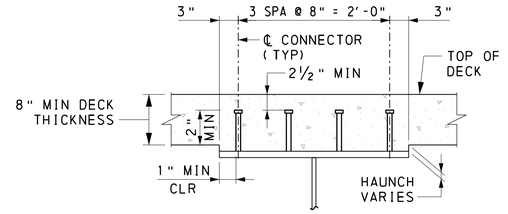


TOP FLANGE

TOP, LOOKING DOWN



SHEAR CONNECTOR DETAIL

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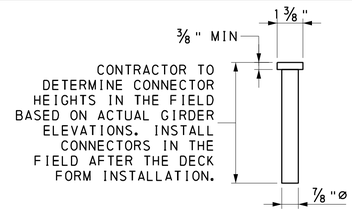

CONNECTOR DETAIL

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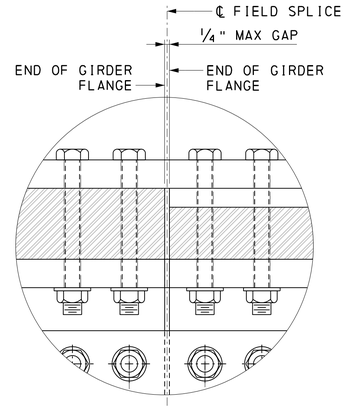
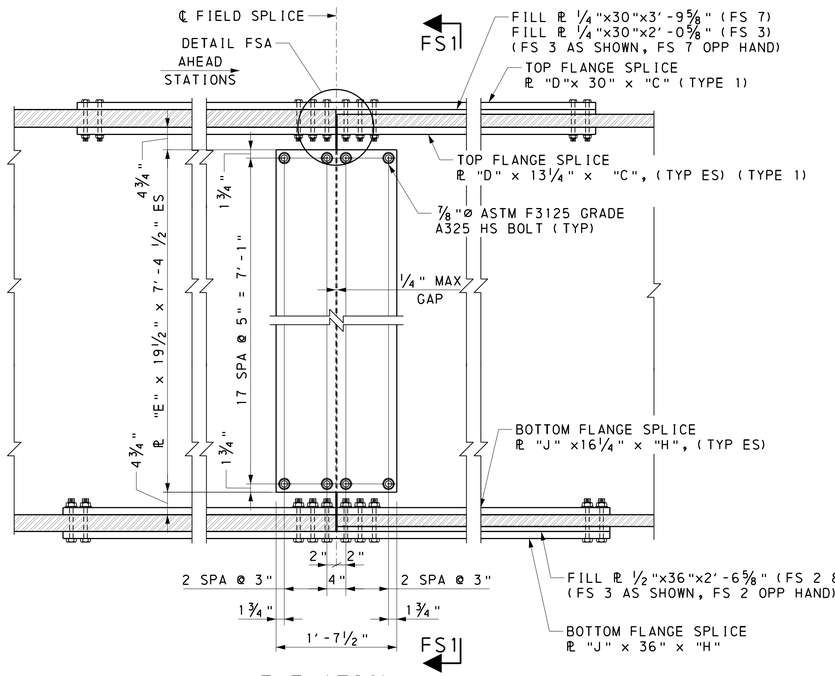
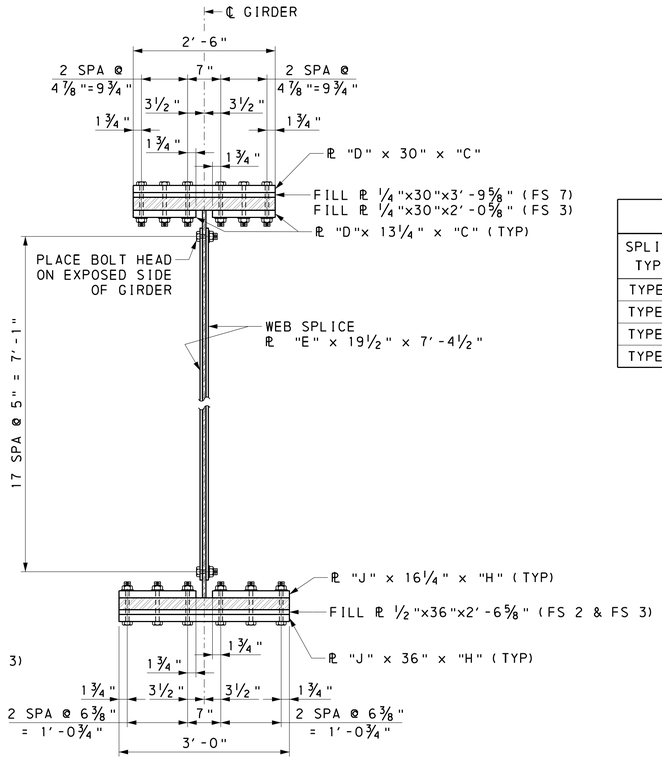


DETAIL FSA

NOT TO SCALE

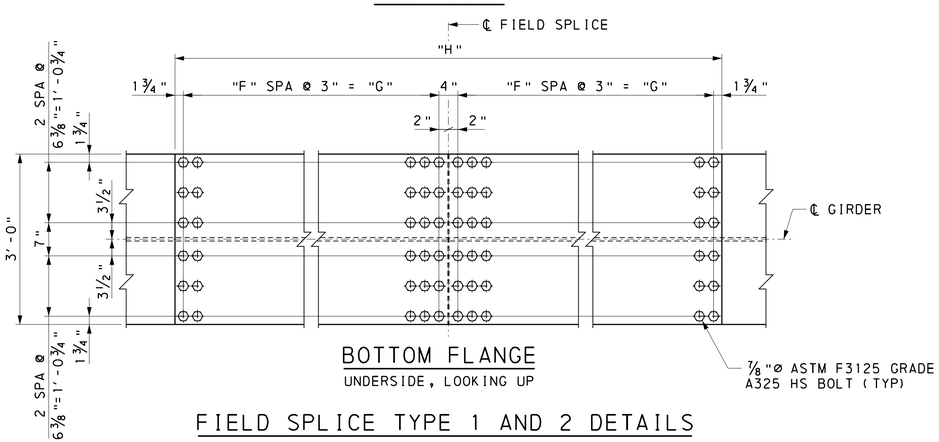


ELEVATION



SECTION FS1-FS1

NOT TO SCALE



BOTTOM FLANGE

UNDERSIDE, LOOKING UP

FIELD SPLICE TYPE 1 AND 2 DETAILS

0 6 1' 2'

SPLICE DESIGN SUMMARY

SPLICE TYPE	STEEL GRADE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"
TYPE 1	50W	10	2'-6"	5'-7½"	1⅝"	⅜"	12	3'-0"	6'-7½"	1½"
TYPE 2	50W	7	1'-9"	4'-1½"	1⅛"	⅜"	9	2'-3"	5'-1½"	⅞"
TYPE 3	50W	8	2'-0"	4'-7½"	1⅜"	½"	9	2'-3"	5'-1½"	1¼"
TYPE 4	70W	14	3'-6"	7'-7½"	1¾"	⅜"	14	3'-6"	7'-7½"	1½"

LEGEND:

HS DENOTES HIGH STRENGTH
NS DENOTES NEAR SIDE
FS DENOTES FAR SIDE
ES DENOTES EACH SIDE

NOTES:

1. PROVIDE AASHTO M270, GRADE 50W (ASTM A709, GRADE 50W), EXCEPT WHERE NOTED OTHERWISE FOR TYPE 4 FLANGE SPLICE PLATES.
2. PROVIDE ALL SPLICE PLATES CONFORMING TO THE CHARPY V-NOTCH REQUIREMENTS.
3. PROVIDE CLASS B SLIP SURFACE CONDITION FOR ALL FIELD SPLICES.
4. ALL HOLES 15⁄16" DIAMETER FOR ⅞" DIAMETER AASHTO F3125 GRADE A325 HIGH STRENGTH BOLTS, TYPE 3, EXCLUDE THREADS FROM SHEAR PLANE.
5. PLACE NUTS ON INSIDE FACE OF WEB SPLICE ON FASCIA GIRDERS. PLACE NUTS ON INSIDE FACE OF TOP AND BOTTOM FLANGES AT ALL GIRDER SPLICES. SEE BC-753M, SHEET 2.

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING	7 & 8
3.	FRAMING PLAN	45 & 46
4.	GIRDER ELEVATIONS	47 - 49

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

FIELD SPLICE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 50 OF 121

S - 39526

DES: BEG | CKD: RMS | DWG: CLG | CKD: RMS

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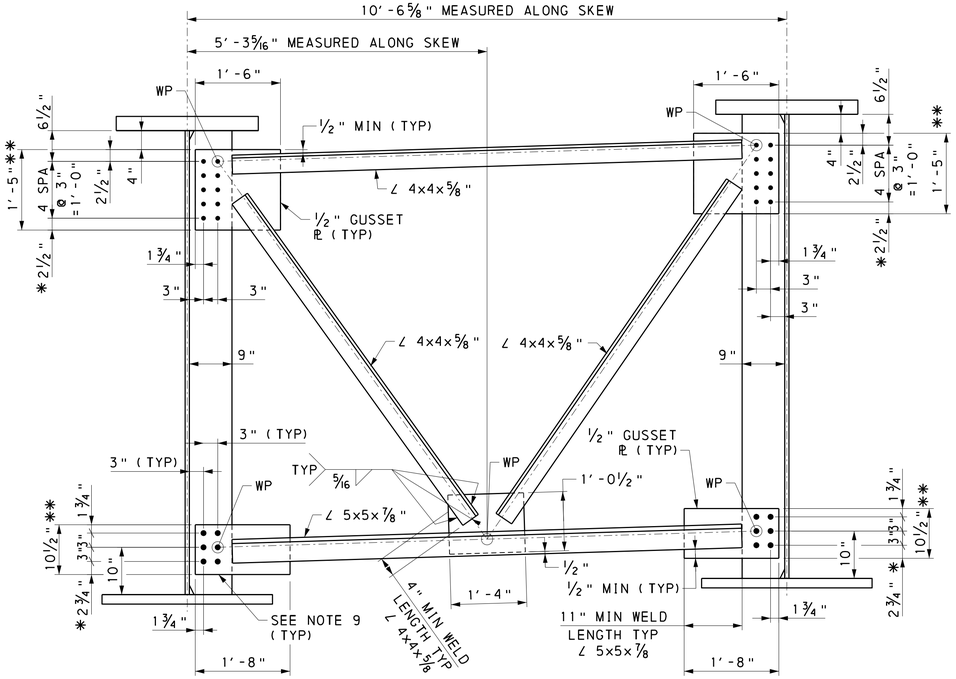
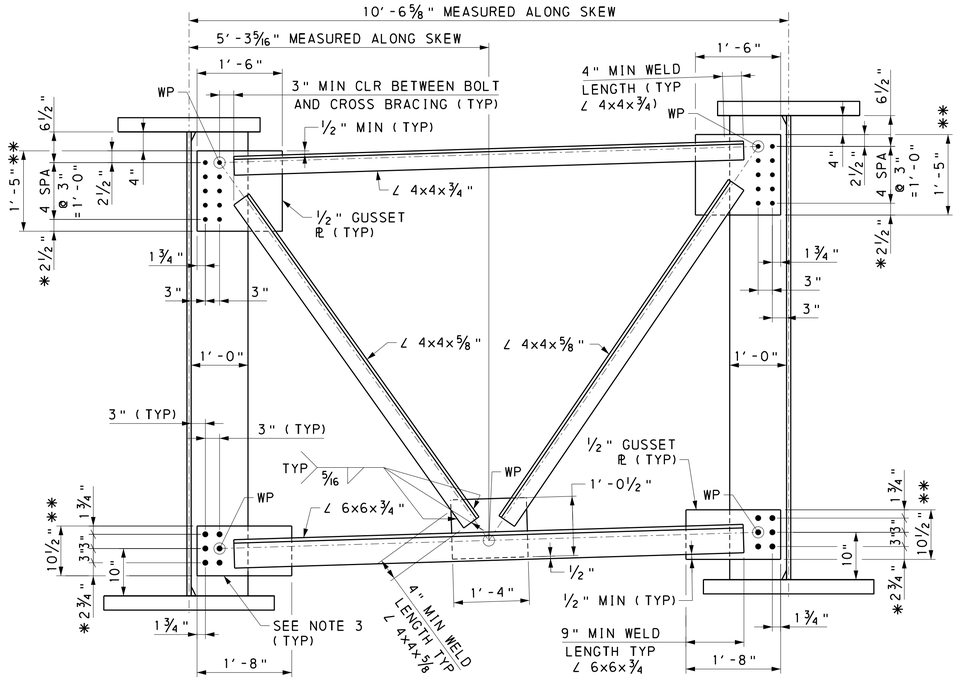


CF1 (INTERMEDIATE CROSS FRAME)

0 6 1' 2'

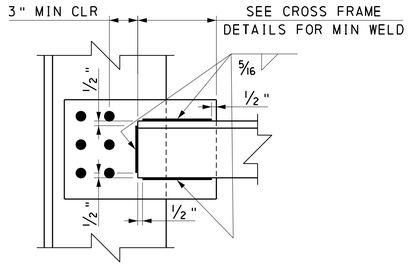


CF2 (PIER CROSS FRAME)

0 6 1' 2'

NOTES:

1. ALL CROSS FRAME STEEL SHALL BE AASHTO M270, GRADE 50W.
2. SEE BC-753M FOR THE BEARING STIFFENER AND CONNECTION PLATE INSTALLATION DETAILS.
3. 1 1/16" DIAMETER HOLE IN BEARING STIFFENERS; 15/16" DIAMETER HOLE IN CONNECTION PLATE FOR 7/8" DIAMETER ASTM F3125 GRADE A325 BOLTS. OVERSIZE HOLE IN BEARING STIFFENERS IS OPTIONAL. STANDARD SIZE HOLE IS PERMITTED. IF A STANDARD HOLE IS PROVIDED IN THE CONNECTION PLATE, THE EDGE DISTANCE MAY BE REDUCED TO 1 1/2".
4. USE 7/8" DIAMETER ASTM F3125 GRADE A325 BOLTS HAVING AN UNTHREADED SHANK OF SUFFICIENT LENGTH TO NOT ALLOW ANY THREADS TO EXIST IN THE PLANE BETWEEN THE CONNECTED PARTS (SHEAR PLANE).
5. PROVIDE WELDING AS SHOWN IN "DETAIL D". THIS DETAIL IS TYPICAL FOR ALL WELDING CONNECTIONS. TERMINATE WELDS 1/2" SHORT OF EDGE AT EACH END OF EACH WELD.
6. SEE FRAMING PLAN FOR CROSS FRAME LOCATIONS.
7. FIELD DRILL THE HOLES IN THE CROSS FRAME CONNECTION PLATES FOR ONE END OF THE BAY 3 CROSS FRAMES DUE TO ALIGNMENT CONCERNS AND PHASED CONSTRUCTION. SHOP DRILL THE HOLES IN THE CROSS FRAME CONNECTION PLATES FOR THE OTHER END.
8. 1 1/16" DIAMETER HOLE IN CONNECTION PLATE; 15/16" DIAMETER HOLE IN CONNECTION MEMBER, FOR 7/8" DIAMETER ASTM F3125 GRADE A325 BOLTS. OVERSIZE HOLE IN CONNECTION PLATE IS OPTIONAL. STANDARD SIZE HOLE IS PERMITTED.



DETAIL D

NOT TO SCALE

LEGEND:

* DENOTES BOTTOM CONNECTIONS:
MINIMUM END DISTANCE = 1 3/4"
MAXIMUM END DISTANCE = 4"

DENOTES TOP CONNECTIONS:
MINIMUM END DISTANCE = 2 1/2"
MAXIMUM END DISTANCE = 4"

** DENOTES MINIMUM HEIGHT FOR GUSSET PLATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 THRU 2	4 & 5
4.	CONSTRUCTION PHASING 1 - 2	7 & 8
5.	FRAMING PLANS 1 - 2	45 & 46
6.	CROSS FRAME DETAILS 2	52

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CROSS FRAMES DETAILS 1

RECOMMENDED _____

SHEET 51 OF 121

S - 39526

DES: BEG | CKD: WAR | DWG: CLG | CKD: WAR

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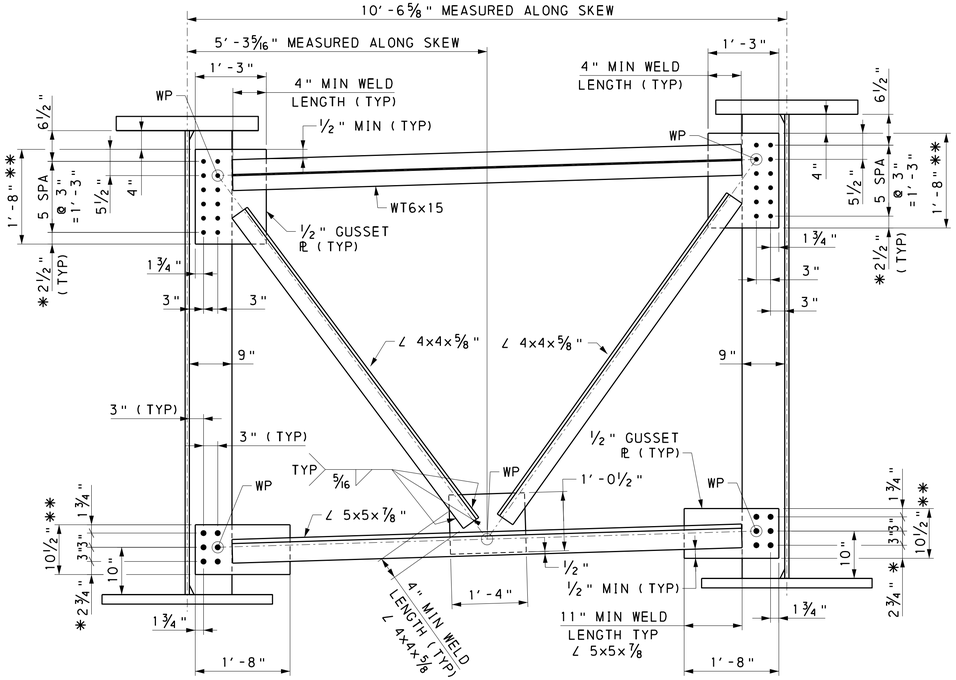
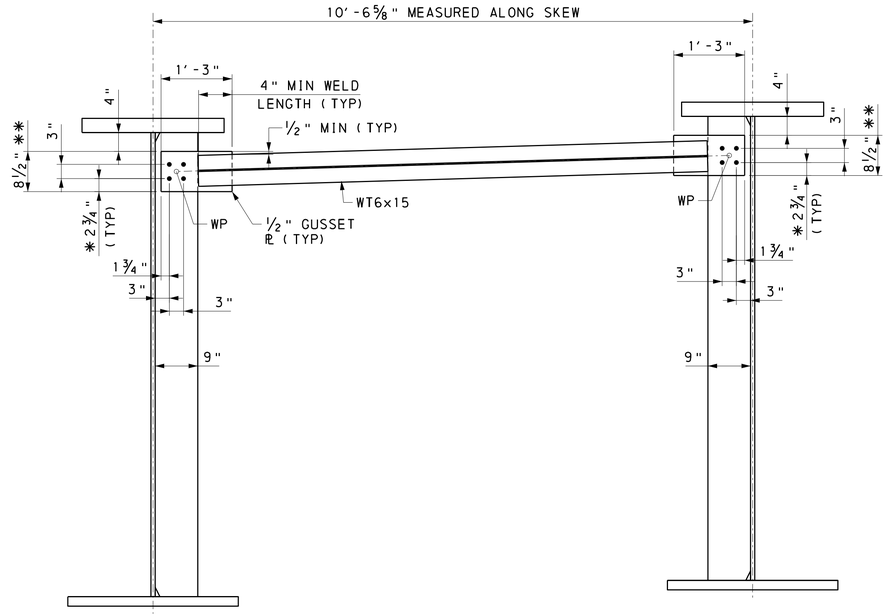


CF3 (AT DOWNSPOUT LOCATIONS)

0 6 1' 2'



CF4 (AT DOWNSPOUT LOCATIONS)

0 6 1' 2'

NOTES:

1. SEE CROSS FRAME DETAILS 1 FOR ALL APPLICABLE NOTES.

LEGEND:

* DENOTES BOTTOM CONNECTIONS:
MINIMUM END DISTANCE = 1 3/4"
MAXIMUM END DISTANCE = 4"

DENOTES TOP CONNECTIONS:
MINIMUM END DISTANCE = 2 1/2"
MAXIMUM END DISTANCE = 4"

** DENOTES MINIMUM HEIGHT FOR GUSSET PLATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	FRAMING PLANS 1 & 2	45 & 46
6.	CROSS FRAME DETAILS 1	51

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CROSS FRAMES DETAILS 2

RECOMMENDED _____

SHEET 52 OF 121

S - 39526

DES: BEG | CKD: WAR | DWG: CLG | CKD: WAR

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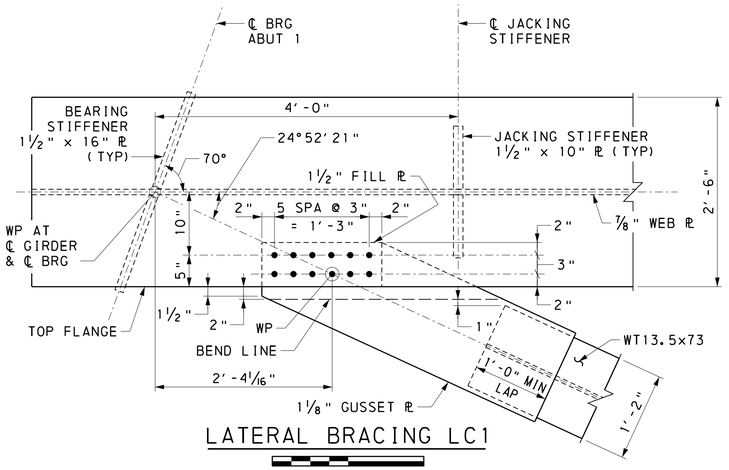
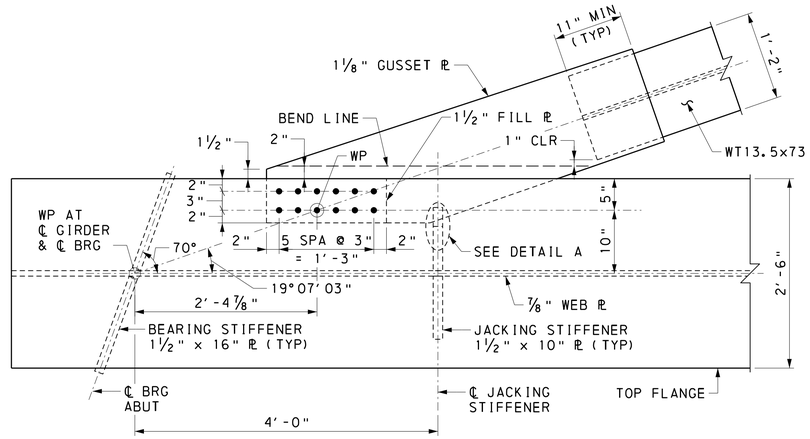
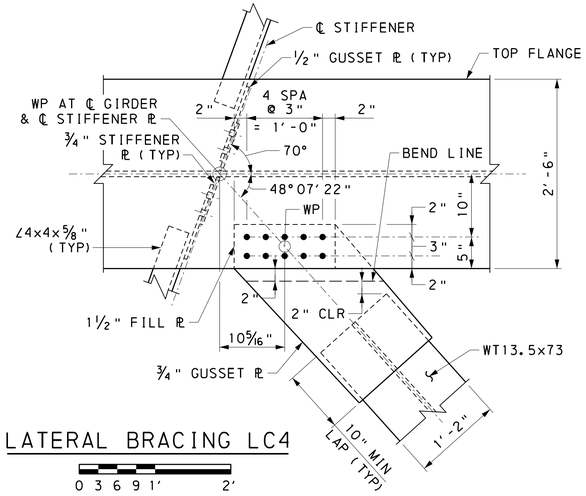


LATERAL BRACING LC1

0 3 6 9 1' 2'

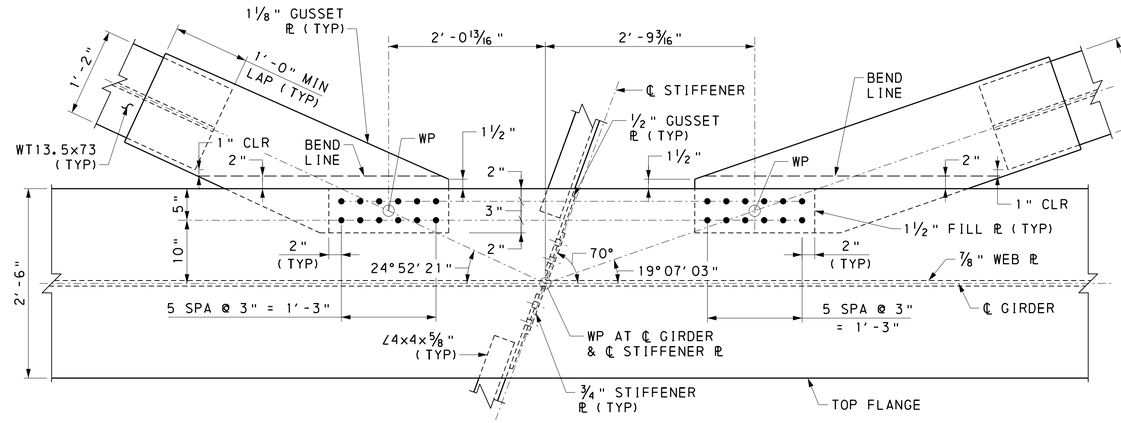


LATERAL BRACING LC2



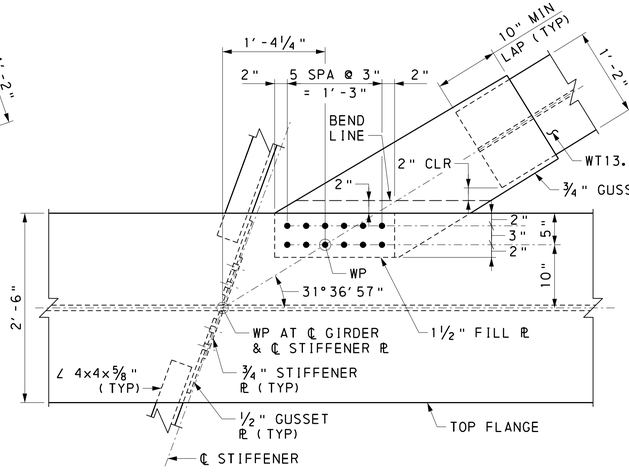
LATERAL BRACING LC4

0 3 6 9 1' 2'



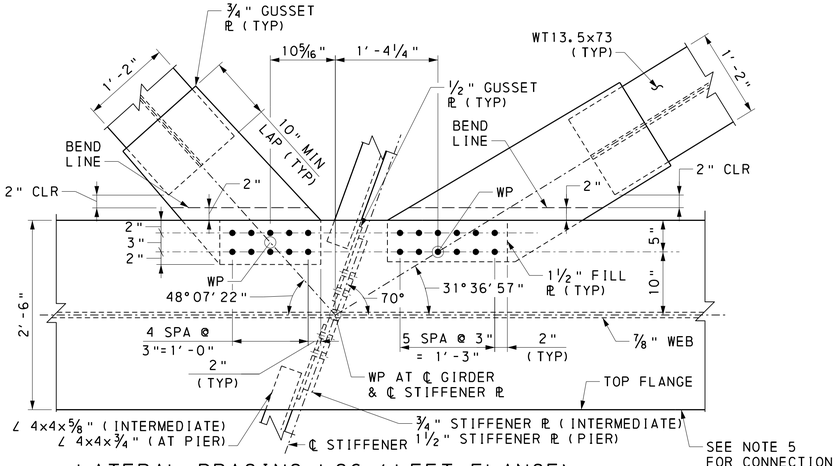
LATERAL BRACING LC3

0 3 6 9 1' 2'



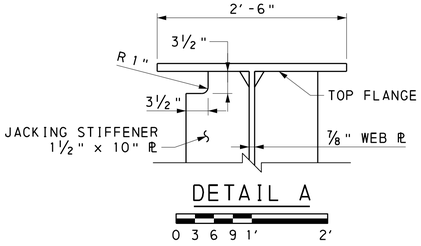
LATERAL BRACING LC5

0 3 6 9 1' 2'



LATERAL BRACING LC6 (LEFT FLANGE)

0 3 6 9 1' 2'



DETAIL A

0 3 6 9 1' 2'

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING 1 & 2	7 & 8
3.	FRAMING PLAN	45 & 46
4.	INTERMEDIATE CROSS FRAMES	51
5.	PIER CROSS FRAMES	52
6.	LATERAL BRACING DETAILS 2	54

NOTES:

1. ALL LATERAL BRACING STEEL SHALL BE AASHTO M270, GRADE 50W.
2. SEE BC-753M FOR THE BEARING STIFFENER AND CONNECTION PLATE INSTALLATION DETAILS.
3. USE ⅞" DIAMETER ASTM F3125 GRADE A325 BOLTS HAVING AN UNTHREADED SHANK OF SUFFICIENT LENGTH TO NOT ALLOW ANY THREADS TO EXIST IN THE PLANE BETWEEN THE CONNECTED PARTS (SHEAR PLANE).
4. PROVIDE WELDING AS SHOWN IN "TYPICAL WELDS FOR LATERAL BRACING" DETAIL. THIS DETAIL IS TYPICAL FOR ALL WELDED CONNECTIONS. TERMINATE WELDS ½" SHORT OF EDGE AT EACH END OF EACH WELD.
5. THE DETAIL SHOWN FOR LATERAL BRACING LC6 ONLY DETAILS CONNECTIONS TO THE LEFT SIDE OF THE TOP FLANGE. DETAILS FOR LC6 CONNECTIONS TO THE RIGHT SIDE OF FLANGE WILL BE CATER-CORNERED TO THOSE SHOWN HERE AT THE LEFT SIDE OF THE FLANGE. THESE CONNECTIONS WILL FOLLOW THE CENTERLINES SHOWN IN THE DETAIL.
6. LATERAL BRACING FIELD CONNECTIONS SHALL BE MADE FOR ⅞"Ø AASHTO F3125 GRADE A325 HIGH STRENGTH BOLTS USING OVERSIZED HOLES IN THE GUSSET PLATES, MINIMUM 2 BOLTS PER CONNECTION. USE TYPE 3 HIGH STRENGTH BOLTS EXCEPT AS NOTED BELOW. USE TYPE 1 HIGH STRENGTH MECHANICALLY GALVANIZED BOLTS IN PAINTED AREAS ONLY. CLEAN THE LUBRICANT FROM THE GALVANIZED BOLTS BY A METHOD APPROVED BY THE DEPARTMENT RESPRESENTATIVE PRIOR TO PAINTING.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

LATERAL BRACING DETAILS 1

RECOMMENDED _____

SHEET 53 OF 121

S - 39526

DES: BEG	CKD: WAR	DWG: CLG	CKD: WAR

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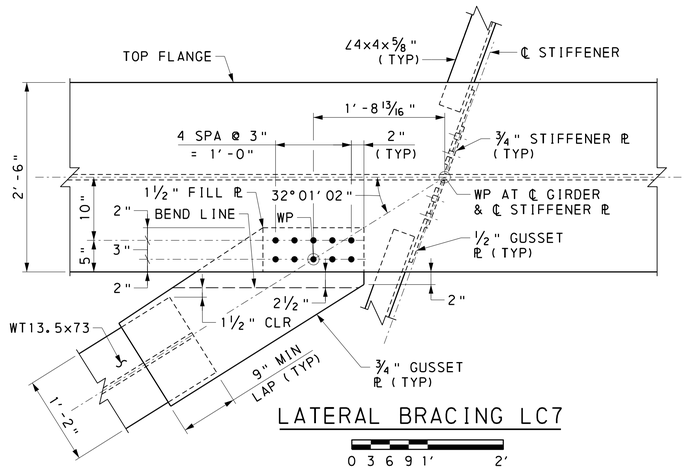
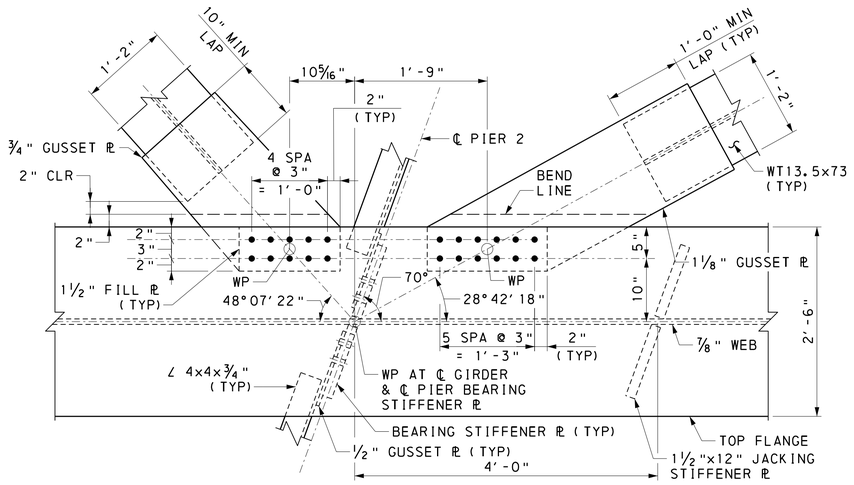


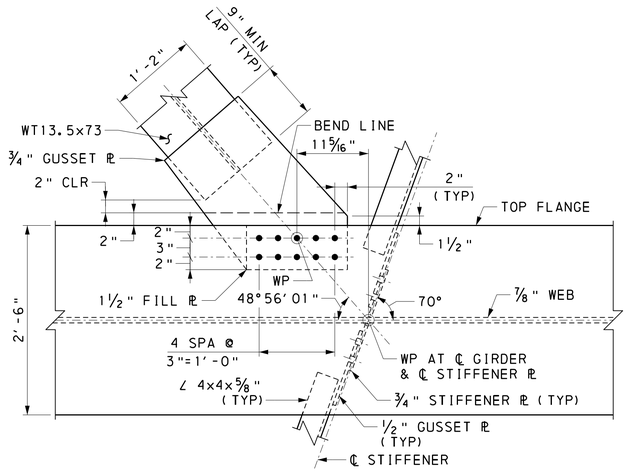
LATERAL BRACING LC7

0 3 6 9 1' 2'



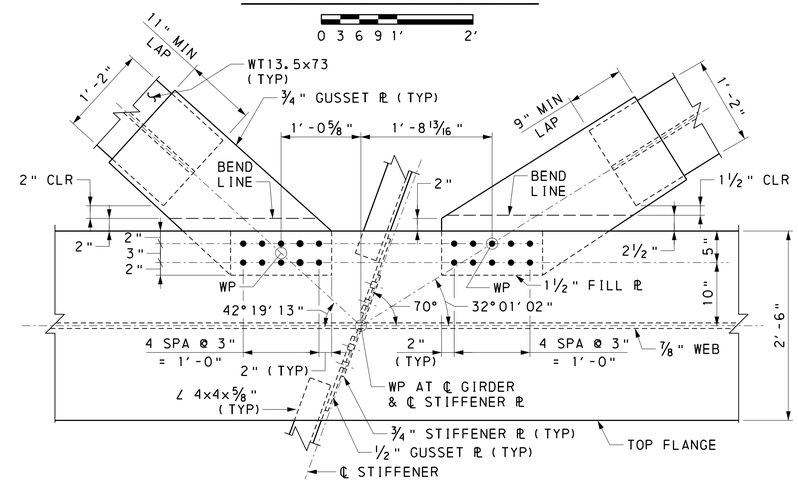
LATERAL BRACING LC10

0 3 6 9 1' 2'



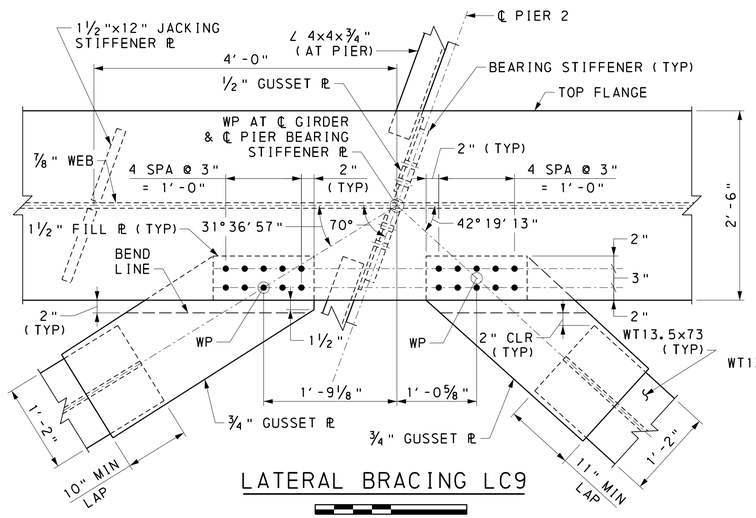
LATERAL BRACING LC8

0 3 6 9 1' 2'



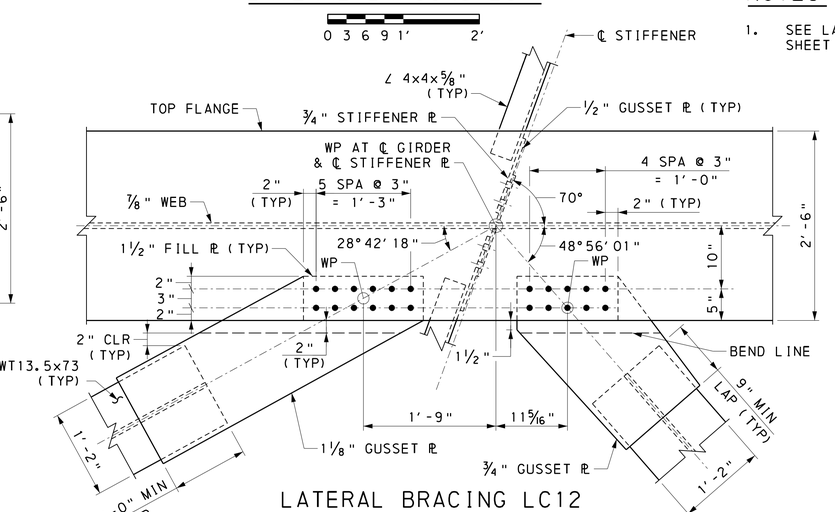
LATERAL BRACING LC11

0 3 6 9 1' 2'



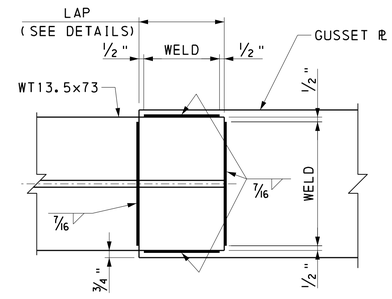
LATERAL BRACING LC9

0 3 6 9 1' 2'



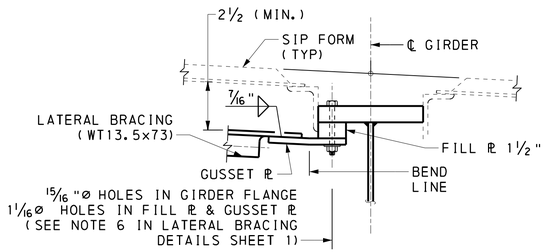
LATERAL BRACING LC12

0 3 6 9 1' 2'



TYPICAL WELDS FOR LATERAL BRACING

0 3 6 9 1'



TYPICAL SECTION

SHOP WELDED, FIELD BOLTED BRACE
NOT TO SCALE

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4 & 5
2.	CONSTRUCTION PHASING 1 & 2	7 & 8
3.	FRAMING PLAN	45 & 46
4.	INTERMEDIATE CROSS FRAMES	51
5.	PIER CROSS FRAMES	52
6.	LATERAL BRACING DETAILS 1	53

NOTES:

1. SEE LATERAL BRACING DETAILS 1 SHEET FOR ALL APPLICABLE NOTES.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

LATERAL BRACING DETAILS 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071101

RECOMMENDED _____

SHEET 54 OF 121

S - 39526

DES: BEG | CKD: WAR | DWG: CLG | CKD: WAR

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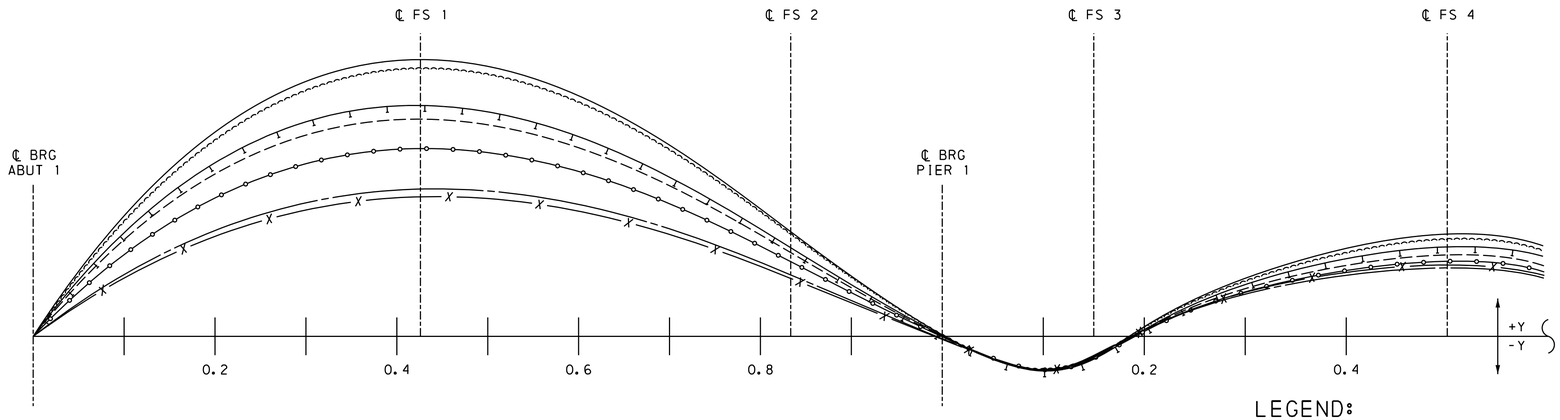
GIRDER CAMBER ORDINATES - "Y" INCHES

GIRDER NUMBER	TYPE OF CAMBER	CL BRG ABUT 1	SPAN 1																					CL BRG PIER 1	SPAN 2									
			0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	FS 1	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	FS 2	0.85	0.90	0.95		0.05	0.10	0.15 / FS 3	0.20	0.25	0.30	0.35	0.40	0.45	0.50 / FS 4
G1	STEEL DEAD LOAD	0.00	0.92	1.82	2.59	3.32	3.85	4.28	4.61	4.78	4.83	4.84	4.72	4.56	4.23	3.83	3.28	2.72	2.09	1.67	1.46	0.89	0.39	0.00	-0.22	-0.32	-0.30	-0.18	0.00	0.17	0.35	0.47	0.56	0.57
	TOTAL DECK DL	0.00	1.32	2.60	3.70	4.74	5.48	6.10	6.57	6.82	6.89	6.89	6.70	6.45	5.93	5.31	4.48	3.63	2.70	2.09	1.81	1.04	0.42	0.00	-0.07	0.10	0.47	1.04	1.69	2.31	2.90	3.29	3.60	3.68
	SUPERIMPOSED DL	0.00	0.24	0.47	0.67	0.86	0.99	1.10	1.18	1.22	1.23	1.23	1.19	1.15	1.05	0.94	0.80	0.65	0.49	0.38	0.33	0.19	0.08	0.00	-0.01	0.02	0.08	0.17	0.26	0.36	0.44	0.50	0.54	0.55
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	2.48	4.89	6.96	8.92	10.32	11.48	12.36	12.82	12.95	12.95	12.61	12.15	11.21	10.09	8.55	6.99	5.27	4.14	3.61	2.12	0.89	0.00	-0.31	-0.20	0.25	1.02	1.95	2.84	3.69	4.25	4.70	4.80
G2	STEEL DEAD LOAD	0.00	0.93	1.83	2.61	3.34	3.86	4.30	4.63	4.80	4.85	4.86	4.74	4.58	4.25	3.85	3.30	2.73	2.10	1.68	1.47	0.90	0.40	0.00	-0.22	-0.32	-0.30	-0.18	0.00	0.18	0.35	0.47	0.56	0.57
	TOTAL DECK DL	0.00	1.00	1.97	2.81	3.59	4.15	4.62	4.97	5.16	5.22	5.22	5.08	4.89	4.50	4.03	3.40	2.76	2.06	1.60	1.39	0.80	0.33	0.00	-0.06	0.07	0.34	0.76	1.23	1.69	2.12	2.40	2.63	2.69
	SUPERIMPOSED DL	0.00	0.15	0.30	0.43	0.55	0.64	0.72	0.77	0.80	0.80	0.80	0.78	0.75	0.69	0.62	0.53	0.43	0.32	0.26	0.22	0.13	0.06	0.00	-0.01	0.00	0.04	0.09	0.14	0.20	0.25	0.28	0.31	0.32
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	2.08	4.11	5.84	7.48	8.66	9.63	10.37	10.76	10.87	10.88	10.60	10.22	9.43	8.50	7.22	5.92	4.48	3.53	3.08	1.83	0.78	0.00	-0.30	-0.25	0.07	0.66	1.38	2.06	2.72	3.15	3.50	3.57
G3	STEEL DEAD LOAD	0.00	0.93	1.84	2.61	3.35	3.88	4.31	4.64	4.81	4.86	4.87	4.75	4.59	4.26	3.86	3.30	2.74	2.10	1.68	1.48	0.90	0.40	0.00	-0.23	-0.32	-0.30	-0.18	-0.01	0.17	0.35	0.46	0.55	0.56
	DECK DL , PHASE 4	0.00	0.56	1.10	1.56	2.00	2.31	2.58	2.77	2.88	2.91	2.91	2.83	2.73	2.51	2.26	1.91	1.55	1.16	0.90	0.78	0.45	0.19	0.00	-0.05	0.01	0.14	0.36	0.61	0.84	1.07	1.22	1.34	1.37
	DECK DL , CLOSURE	0.00	0.12	0.25	0.35	0.44	0.51	0.56	0.60	0.62	0.63	0.62	0.61	0.58	0.54	0.48	0.41	0.34	0.25	0.20	0.17	0.10	0.04	0.00	0.00	0.02	0.06	0.11	0.16	0.21	0.25	0.28	0.31	0.31
	SUPERIMPOSED DL	0.00	0.07	0.14	0.19	0.25	0.29	0.32	0.35	0.36	0.37	0.37	0.36	0.35	0.32	0.29	0.25	0.20	0.16	0.12	0.11	0.07	0.03	0.00	-0.01	-0.02	-0.01	0.00	0.02	0.04	0.06	0.07	0.08	0.08
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	1.68	3.32	4.72	6.04	6.99	7.77	8.37	8.68	8.77	8.77	8.55	8.25	7.63	6.89	5.87	4.83	3.67	2.91	2.55	1.52	0.66	0.00	-0.28	-0.30	-0.11	0.29	0.78	1.26	1.73	2.03	2.27	2.32
G4	STEEL DEAD LOAD	0.00	0.94	1.85	2.64	3.38	3.91	4.35	4.68	4.86	4.91	4.91	4.79	4.63	4.29	3.89	3.33	2.76	2.12	1.70	1.49	0.91	0.40	0.00	-0.23	-0.32	-0.30	-0.18	0.00	0.18	0.36	0.48	0.57	0.58
	DECK DL , PHASE 2	0.00	0.59	1.17	1.67	2.13	2.47	2.74	2.95	3.07	3.10	3.10	3.01	2.90	2.67	2.39	2.02	1.64	1.22	0.95	0.82	0.47	0.19	0.00	-0.04	0.03	0.18	0.42	0.70	0.96	1.21	1.38	1.51	1.54
	DECK DL , CLOSURE	0.00	0.12	0.23	0.32	0.41	0.47	0.52	0.56	0.58	0.58	0.58	0.56	0.54	0.50	0.45	0.38	0.31	0.24	0.19	0.16	0.10	0.04	0.00	0.00	0.02	0.06	0.11	0.16	0.20	0.25	0.27	0.29	0.30
	SUPERIMPOSED DL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04	-0.04	-0.04
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	1.65	3.26	4.63	5.92	6.85	7.62	8.20	8.50	8.59	8.59	8.37	8.08	7.47	6.74	5.74	4.72	3.59	2.84	2.48	1.48	0.64	0.00	-0.27	-0.28	-0.08	0.33	0.83	1.32	1.78	2.09	2.33	2.38
G5	STEEL DEAD LOAD	0.00	0.93	1.84	2.63	3.36	3.90	4.33	4.67	4.84	4.89	4.89	4.78	4.62	4.28	3.88	3.32	2.75	2.11	1.69	1.48	0.90	0.40	0.00	-0.23	-0.32	-0.30	-0.17	0.01	0.19	0.37	0.48	0.58	0.59
	TOTAL DECK DL	0.00	0.89	1.76	2.51	3.21	3.71	4.12	4.44	4.61	4.65	4.66	4.53	4.36	4.02	3.60	3.04	2.47	1.84	1.43	1.24	0.72	0.29	0.00	-0.05	0.06	0.31	0.68	1.11	1.52	1.90	2.16	2.36	2.41
	SUPERIMPOSED DL	0.00	0.07	0.15	0.21	0.27	0.31	0.35	0.37	0.38	0.39	0.39	0.37	0.36	0.33	0.30	0.25	0.20	0.15	0.12	0.10	0.06	0.03	0.00	-0.01	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.14	0.14
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	1.90	3.75	5.34	6.84	7.91	8.80	9.48	9.83	9.93	9.94	9.68	9.34	8.63	7.78	6.61	5.42	4.11	3.25	2.83	1.68	0.72	0.00	-0.28	-0.26	0.02	0.55	1.18	1.80	2.38	2.77	3.08	3.14
G6	STEEL DEAD LOAD	0.00	0.93	1.83	2.61	3.35	3.87	4.31	4.64	4.82	4.87	4.87	4.75	4.59	4.26	3.86	3.31	2.74	2.10	1.68	1.48	0.90	0.40	0.00	-0.22	-0.32	-0.30	-0.17	0.00	0.19	0.36	0.48	0.58	0.58
	TOTAL DECK DL	0.00	1.07	2.12	3.01	3.85	4.45	4.95	5.33	5.54	5.60	5.60	5.45	5.25	4.83	4.33	3.66	2.96	2.21	1.72	1.49	0.85	0.35	0.00	-0.07	0.07	0.37	0.82	1.34	1.84	2.32	2.63	2.88	2.95
	SUPERIMPOSED DL	0.00	0.15	0.30	0.42	0.54	0.62	0.69	0.74	0.77	0.78	0.77	0.75	0.72	0.66	0.59	0.50	0.41	0.31	0.24	0.21	0.12	0.05	0.00	-0.01	0.01	0.05	0.10	0.16	0.21	0.27	0.30	0.33	0.33
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	2.15	4.25	6.04	7.73	8.95	9.95	10.72	11.12	11.24	11.24	10.95	10.56	9.75	8.79	7.46	6.11	4.62	3.64	3.17	1.88	0.80	0.00	-0.30	-0.24	0.11	0.75	1.51	2.24	2.95	3.41	3.79	3.87
G7	STEEL DEAD LOAD	0.00	0.92	1.82	2.59	3.32	3.84	4.28	4.61	4.78	4.83	4.84	4.72	4.56	4.23	3.83	3.28	2.72	2.09	1.67	1.46	0.89	0.39	0.00	-0.23	-0.32	-0.30	-0.18	0.00	0.18	0.35	0.47	0.56	0.57
	TOTAL DECK DL	0.00	1.25	2.47	3.51	4.49	5.20	5.78	6.23	6.47	6.54	6.55	6.37	6.14	5.65	5.07	4.27	3.46	2.58	2.01	1.74	1.00	0.40	0.00	-0.08	0.08	0.43	0.96	1.58	2.17	2.73	3.10	3.41	3.48
	SUPERIMPOSED DL	0.00	0.22	0.44	0.63	0.80	0.93	1.03	1.11	1.15	1.16	1.16	1.12	1.08	0.99	0.89	0.75	0.61	0.46	0.36	0.31	0.18	0.08	0.00	-0.01	0.02	0.07	0.15	0.24	0.33	0.41	0.47	0.51	0.52
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	2.39	4.73	6.73	8.62	9.97	11.09	11.95	12.40	12.53	12.54	12.21	11.77	10.86	9.79	8.30	6.79	5.13	4.03	3.51	2.07	0.88	0.00	-0.31	-0.22	0.20	0.94	1.82	2.68	3.50	4.04	4.48	4.57



GIRDER CAMBER DIAGRAM 1

NOT TO SCALE

NOTES:

1. CAMBER DUE TO STEEL DEAD LOADS INCLUDE STEEL SELF WEIGHT, CROSS FRAMES, LATERAL BRACING AND STIFFENERS.
2. CAMBER DUE TO NON-COMPOSITE DEAD LOAD (DC1) INCLUDES DECK, HAUNCHES, OVERHANGS AND STAY-IN-PLACE FORMS.
3. SUPERIMPOSED DEAD LOAD (DC2) INCLUDES BARRIERS, BUT DOES NOT INCLUDE FUTURE WEARING SURFACE.
4. POSITIVE CAMBER IS UPWARD.
5. FOR CALCULATION OF DECK FORM ELEVATIONS, SUBTRACT THE STEEL DEAD LOAD AND GEOMETRIC CAMBER VALUES FROM THE TOTAL CAMBER VALUE.

LEGEND:

FS DENOTES FIELD SPLICE
—— DENOTES GIRDER G1
—·— DENOTES GIRDER G2
– – – DENOTES GIRDER G3
—x— DENOTES GIRDER G4
—o—o— DENOTES GIRDER G5
DENOTES GIRDER G6
~~~~ DENOTES GIRDER G7

REFERENCES:

		SHEET:
1.	CAMBER TABLE 2	56
2.	FRAMING PLANS 1 AND 2	45 & 46
3.	GIRDER ELEVATIONS 1 - 3	47 - 49
4.	FIELD SPLICE DETAILS	50

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CAMBER TABLE 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 55 OF 121

S - 39526

DES: SJH | CKD: BEG | DWG: KTS | CKD: BEG

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pw:\\mb-us-pw.bentley.com:mb-us-pw-01\Documents\WoonTownship_PA\01_Projects\SR_0068_253_Karns_Crossing\Design\Structures\Final\Plots\sr0068_253_Karns_CamberTable.dgn
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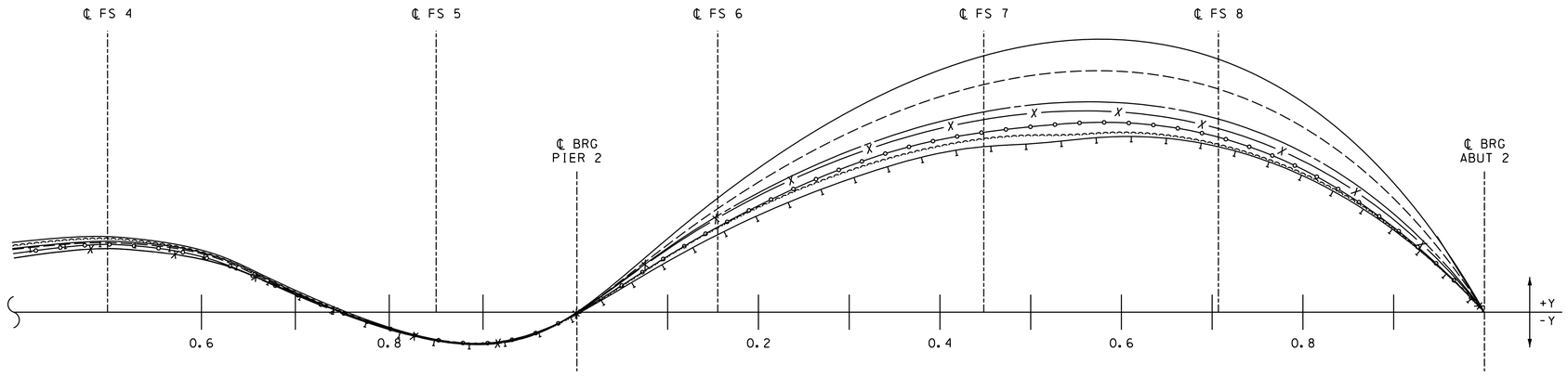
GIRDER CAMBER ORDINATES - "Y" INCHES

GIRDER NUMBER	TYPE OF CAMBER	SPAN 2										CL BRG PIER 2	SPAN 3																					CL BRG ABUT 2
		0.50 / FS 4	0.55	0.60	0.65	0.70	0.75	0.80	0.85 / FS 5	0.90	0.95		0.05	0.10	0.15	FS 6	0.20	0.25	0.30	0.35	0.40	FS 7	0.45	0.50	0.55	0.60	0.65	0.70	FS 8	0.75	0.80	0.85	0.90	0.95	
G1	STEEL DEAD LOAD	0.57	0.50	0.38	0.21	0.01	-0.18	-0.33	-0.44	-0.43	-0.28	0.00	0.51	1.14	1.88	1.96	2.68	3.47	4.22	4.86	5.41	5.80	5.81	6.02	6.11	6.08	5.83	5.42	5.36	4.87	4.15	3.28	2.29	1.16	0.00
	TOTAL DECK DL	3.68	3.55	3.24	2.72	2.16	1.50	0.89	0.35	-0.01	-0.12	0.00	0.52	1.27	2.22	2.32	3.29	4.37	5.44	6.35	7.14	7.71	7.73	8.05	8.19	8.14	7.81	7.25	7.17	6.51	5.55	4.40	3.07	1.55	0.00
	SUPERIMPOSED DL	0.55	0.53	0.48	0.40	0.32	0.22	0.13	0.04	-0.01	-0.03	0.00	0.10	0.25	0.43	0.45	0.62	0.82	1.02	1.18	1.33	1.43	1.43	1.49	1.52	1.52	1.46	1.36	1.34	1.22	1.04	0.82	0.57	0.29	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.94	1.41	1.46	1.88	2.35	2.82	3.29	3.76	4.21	4.22	4.69	5.16	5.63	6.10	6.40	6.41	6.30	5.82	4.94	3.68	2.04	0.00
	TOTAL	4.80	4.58	4.10	3.33	2.49	1.54	0.68	-0.05	-0.45	-0.43	0.00	1.60	3.61	5.93	6.19	8.47	11.01	13.50	15.67	17.63	19.15	19.19	20.26	20.98	21.37	21.20	20.43	20.29	18.90	16.55	13.45	9.62	5.04	0.00
G2	STEEL DEAD LOAD	0.57	0.51	0.38	0.21	0.02	-0.18	-0.33	-0.43	-0.43	-0.28	0.00	0.51	1.15	1.89	1.97	2.69	3.48	4.24	4.87	5.42	5.81	5.82	6.04	6.13	6.09	5.85	5.44	5.38	4.88	4.16	3.30	2.30	1.16	0.00
	TOTAL DECK DL	2.69	2.59	2.36	1.99	1.57	1.09	0.64	0.24	-0.01	-0.09	0.00	0.40	0.98	1.69	1.77	2.50	3.32	4.13	4.81	5.42	5.85	5.86	6.10	6.21	6.18	5.93	5.51	5.45	4.95	4.22	3.35	2.34	1.18	0.00
	SUPERIMPOSED DL	0.32	0.30	0.28	0.23	0.18	0.12	0.07	0.02	-0.01	-0.02	0.00	0.07	0.17	0.28	0.29	0.41	0.54	0.66	0.77	0.87	0.93	0.94	0.98	0.99	0.99	0.96	0.89	0.88	0.80	0.68	0.54	0.38	0.19	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.86	1.29	1.33	1.72	2.15	2.58	3.01	3.44	3.85	3.87	4.30	4.73	5.16	5.59	5.92	5.94	5.88	5.46	4.64	3.44	1.85	0.00
	TOTAL	3.57	3.40	3.02	2.42	1.77	1.03	0.37	-0.18	-0.45	-0.40	0.00	1.41	3.15	5.15	5.37	7.32	9.49	11.61	13.47	15.15	16.45	16.49	17.41	18.06	18.42	18.32	17.76	17.65	16.52	14.52	11.83	8.45	4.39	0.00
G3	STEEL DEAD LOAD	0.56	0.50	0.38	0.20	0.01	-0.18	-0.33	-0.44	-0.43	-0.28	0.00	0.51	1.15	1.89	1.97	2.70	3.48	4.24	4.88	5.43	5.82	5.83	6.05	6.14	6.10	5.86	5.45	5.39	4.89	4.17	3.30	2.31	1.17	0.00
	DECK DL , PHASE 4	1.37	1.32	1.20	1.00	0.78	0.53	0.30	0.10	-0.03	-0.06	0.00	0.22	0.55	0.94	0.99	1.40	1.85	2.30	2.68	3.02	3.26	3.27	3.41	3.47	3.46	3.32	3.09	3.06	2.78	2.37	1.88	1.32	0.67	0.00
	DECK DL , CLOSURE	0.31	0.30	0.28	0.24	0.19	0.14	0.09	0.04	0.01	-0.01	0.00	0.05	0.13	0.22	0.23	0.31	0.41	0.51	0.59	0.66	0.71	0.71	0.74	0.75	0.75	0.72	0.67	0.67	0.61	0.52	0.41	0.29	0.15	0.00
	SUPERIMPOSED DL	0.08	0.07	0.06	0.05	0.03	0.01	0.00	-0.02	-0.02	-0.02	0.00	0.03	0.08	0.13	0.14	0.19	0.25	0.31	0.36	0.40	0.43	0.43	0.45	0.46	0.46	0.44	0.42	0.41	0.37	0.32	0.25	0.18	0.09	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.78	1.17	1.21	1.56	1.95	2.34	2.73	3.12	3.49	3.51	3.90	4.28	4.67	5.06	5.41	5.44	5.43	5.06	4.30	3.16	1.62	0.00
	TOTAL	2.32	2.19	1.91	1.49	1.02	0.50	0.05	-0.31	-0.47	-0.37	0.00	1.21	2.69	4.36	4.54	6.16	7.95	9.70	11.23	12.63	13.71	13.75	14.54	15.10	15.44	15.41	15.04	14.96	14.08	12.44	10.15	7.24	3.69	0.00
G4	STEEL DEAD LOAD	0.58	0.52	0.39	0.22	0.02	-0.17	-0.33	-0.44	-0.43	-0.28	0.00	0.51	1.16	1.91	1.99	2.72	3.51	4.28	4.92	5.48	5.87	5.88	6.10	6.19	6.16	5.91	5.50	5.44	4.94	4.21	3.33	2.33	1.18	0.00
	DECK DL , PHASE 2	1.54	1.48	1.35	1.13	0.89	0.61	0.35	0.12	-0.02	-0.06	0.00	0.24	0.58	1.01	1.05	1.49	1.98	2.46	2.87	3.23	3.48	3.49	3.64	3.70	3.69	3.54	3.29	3.25	2.95	2.52	2.00	1.39	0.71	0.00
	DECK DL , CLOSURE	0.30	0.29	0.27	0.23	0.19	0.14	0.09	0.05	0.01	0.00	0.00	0.05	0.12	0.20	0.21	0.29	0.38	0.46	0.54	0.60	0.65	0.65	0.68	0.69	0.69	0.66	0.62	0.61	0.56	0.48	0.38	0.27	0.14	0.00
	SUPERIMPOSED DL	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.01	-0.01	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.01	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.73	1.09	1.13	1.45	1.82	2.18	2.54	2.91	3.26	3.27	3.63	4.00	4.36	4.73	5.08	5.12	5.17	4.87	4.18	3.11	1.64	0.00
	TOTAL	2.38	2.25	1.97	1.54	1.06	0.54	0.09	-0.29	-0.45	-0.36	0.00	1.17	2.60	4.22	4.40	5.97	7.72	9.42	10.91	12.25	13.30	13.33	14.09	14.62	14.93	14.87	14.52	14.46	13.65	12.10	9.92	7.12	3.67	0.00
G5	STEEL DEAD LOAD	0.59	0.53	0.40	0.22	0.03	-0.17	-0.32	-0.43	-0.43	-0.28	0.00	0.51	1.16	1.90	1.98	2.71	3.50	4.27	4.91	5.46	5.86	5.87	6.08	6.17	6.14	5.89	5.48	5.42	4.92	4.19	3.32	2.32	1.17	0.00
	TOTAL DECK DL	2.41	2.33	2.13	1.79	1.42	0.99	0.59	0.23	0.00	-0.08	0.00	0.35	0.87	1.50	1.57	2.22	2.96	3.67	4.28	4.82	5.20	5.21	5.43	5.53	5.50	5.27	4.90	4.85	4.41	3.76	2.98	2.08	1.05	0.00
	SUPERIMPOSED DL	0.14	0.13	0.12	0.10	0.07	0.05	0.02	0.00	-0.01	-0.01	0.00	0.04	0.08	0.14	0.15	0.20	0.27	0.33	0.38	0.43	0.46	0.46	0.48	0.49	0.49	0.47	0.44	0.43	0.39	0.33	0.26	0.18	0.09	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	0.33	0.34	0.43	0.54	0.65	0.76	0.87	0.97	0.98	1.15	1.40	1.84	2.47	3.10	3.19	3.56	3.62	3.30	2.59	1.49	0.00
	TOTAL	3.14	2.99	2.65	2.11	1.53	0.87	0.29	-0.20	-0.44	-0.37	0.00	1.01	2.32	3.87	4.04	5.57	7.27	8.92	10.33	11.58	12.49	12.52	13.14	13.58	13.96	14.10	13.92	13.89	13.27	11.91	9.87	7.17	3.81	0.00
G6	STEEL DEAD LOAD	0.58	0.52	0.40	0.22	0.03	-0.17	-0.32	-0.43	-0.42	-0.28	0.00	0.51	1.15	1.89	1.97	2.70	3.49	4.25	4.88	5.44	5.83	5.84	6.06	6.15	6.11	5.87	5.46	5.40	4.90	4.17	3.31	2.31	1.17	0.00
	TOTAL DECK DL	2.95	2.85	2.60	2.19	1.74	1.21	0.72	0.28	0.00	-0.10	0.00	0.42	1.03	1.79	1.87	2.65	3.53	4.40	5.13	5.78	6.24	6.25	6.51	6.63	6.59	6.32	5.88	5.81	5.28	4.50	3.57	2.49	1.26	0.00
	SUPERIMPOSED DL	0.33	0.32	0.29	0.24	0.19	0.13	0.08	0.03	-0.01	-0.02	0.00	0.07	0.16	0.26	0.28	0.39	0.51	0.63	0.73	0.82	0.88	0.88	0.92	0.94	0.94	0.90	0.84	0.83	0.75	0.64	0.50	0.35	0.18	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.14	-0.28	-0.43	-0.44	-0.57	-0.71	-0.85	-1.00	-1.14	-1.34	-1.34	-1.42	-1.32	-0.90	-0.06	0.91	1.03	1.71	2.15	2.19	1.85	1.12	0.00
	TOTAL	3.87	3.69	3.29	2.66	1.96	1.18	0.47	-0.12	-0.43	-0.39	0.00	0.85	2.05	3.52	3.68	5.17	6.82	8.42	9.75	10.89	11.61	11.63	12.06	12.39	12.74	13.03	13.08	13.07	12.64	11.46	9.57	7.00	3.73	0.00
G7	STEEL DEAD LOAD	0.57	0.51	0.39	0.21	0.02	-0.18	-0.33	-0.43	-0.43	-0.28	0.00	0.50	1.14	1.88	1.96	2.68	3.46	4.22	4.85	5.40	5.79	5.80	6.02	6.11	6.07	5.83	5.42	5.36	4.87	4.15	3.28	2.29	1.16	0.00
	TOTAL DECK DL	3.48	3.36	3.07	2.59	2.06	1.43	0.85	0.34	0.00	-0.11	0.00	0.48	1.19	2.08	2.18	3.09	4.12	5.13	5.98	6.74	7.28	7.29	7.59	7.73	7.69	7.38	6.85	6.78	6.16	5.25	4.16	2.91	1.47	0.00
	SUPERIMPOSED DL	0.52	0.50	0.46	0.39	0.31	0.22	0.13	0.05	0.00	-0.02	0.00	0.09	0.22	0.38	0.40	0.56	0.74	0.92	1.07	1.21	1.30	1.30	1.36	1.38	1.38	1.33	1.23	1.22	1.11	0.94	0.74	0.52	0.26	0.00
	GEOMETRIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.24	-0.48	-0.72	-0.74	-0.95	-1.19	-1.43	-1.67	-1.91	-2.20	-2.21	-2.39	-2.38	-2.09	-1.28	-0.21	-0.08	0.75	1.37	1.61	1.46	0.93	0.00
	TOTAL	4.57	4.38	3.92	3.19	2.39	1.48	0.66	-0.04	-0.42	-0.41	0.00	0.84	2.08	3.63	3.80	5.37	7.13	8.83	10.24	11.44	12.17	12.18	12.58	12.85	13.06	13.26	13.30	13.29	12.87	11.71	9.80	7.18	3.82	0.00



GIRDER CAMBER DIAGRAM 2

NOT TO SCALE

LEGEND:

FS DENOTES FIELD SPLICE

DENOTES GIRDER G1

DENOTES GIRDER G2

DENOTES GIRDER G3

DENOTES GIRDER G4

DENOTES GIRDER G5

DENOTES GIRDER G6

DENOTES GIRDER G7

NOTES:

1. SEE NOTES ON CAMBER TABLE 1 FOR APPLICABLE NOTES.

REFERENCES:

		SHEET:
1.	CAMBER TABLE 1	55
2.	FRAMING PLANS 1 & 2	45 & 46
3.	GIRDER ELEVATIONS 1 - 3	47 - 49
4.	FIELD SPLICE DETAILS	50

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CAMBER TABLE 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 56 OF 121

S - 39526

DES: SJH | CKD: BEG | DWG: KTS | CKD: BEG

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GENERAL NOTES:

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408, ANSI/AASHTO/AWS/D1.5 BRIDGE WELDING CODE AND CONTRACT SPECIAL PROVISIONS.

2. MARK CENTERLINE OF GUIDED AND NON-GUIDED DISC BEARINGS ON THE SIDES OF MASONRY PLATE AND SOLE PLATE. THE CENTERLINE IDENTIFICATION MARKS WILL BE USEFUL TO LOCATE OFFSET DISTANCES IN THE FIELD. USE INDELIBLE INK TO PLACE ALL MARKS.

3. MARK EACH BEARING WITH THE NAME OF THE MANUFACTURER, TYPE OR MODEL NUMBER, INSTALLATION LOCATION, AND DATE OF MANUFACTURE. PLACE THE NAME OF THE MANUFACTURER AND TYPE OR MODEL NUMBER IN A PERMANENT MANNER AND LOCATION SO THAT IT IS VISIBLE AFTER ERECTION.

4. ENSURE ALL BEARING SURFACES, INCLUDING THE BEARING SEAT, ARE LEVEL PRIOR TO INSTALLATION OF DISC BEARINGS IN ACCORDANCE WITH PUBLICATION 408.

5. FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SECTION 1111.03 AND AWS D1.5.

6. MARK THE THICKER EDGE OF THE SOLE PLATE FOR THE PURPOSE OF FIELD IDENTIFICATION. PLACE MARK ON THE EDGE OF THE SOLE PLATE SO THAT THE EDGE OF THE SOLE PLATE WILL BE VISIBLE AFTER BEARING INSTALLATION.

7. CONTRACTOR SHALL DESIGN DISC BEARINGS AND SHALL SUBMIT SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS (BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA) OF REQUIRED DISC BEARING DIMENSIONS TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW. DESIGN SHALL INCLUDE PENNDOT CONSTRUCTION TOLERANCES FOR DISC BEARINGS.

8. SET MASONRY PLATES SO THEY WILL BE CENTERED WITH THE SOLE PLATES AND BEARING PLATES AT 68 DEGREES F AND UNDER FULL DEAD LOAD. MAKE ADJUSTMENT FOR THE DIFFERENCE IN TEMPERATURE, FROM 68 DEGREES F, AT TIME OF ERECTION. COMPENSATE FOR THE CHANGE IN LENGTH OF THE BOTTOM FLANGE DUE TO THE LATER ADDITION OF DEAD LOADS.

MATERIALS:

1. ALL STEEL SHALL BE OF DOMESTIC ORIGIN, AASHTO M270 (ASTM A709), GRADE 50.

2. ALL STAINLESS STEEL SHALL BE 12 GAUGE, ASTM A240 TYPE 304, AND HAVE A NO. 8 BRIGHT MIRROR FINISH.

3. DISC SHALL MEET THE APPLICABLE MATERIAL REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, 2002, DIVISION II, SECTION 18.4.8.1. THE TOP AND BOTTOM SURFACES OF THE DISC SHALL BE ROUGHENED.

4. PTFE SHEET SHALL BE UNFILLED, DIMPLED, LUBRICATED, AND SHALL MEET THE APPLICABLE MATERIAL REQUIREMENTS OF PENNDOT PUBLICATION 408. ALL PTFE SHALL BE ETCHED ON ONE SIDE PRIOR TO BONDING. A UNIFORM LAYER OF CHEMGRIP OR APPROVED EQUAL ADHESIVE SHALL BE APPLIED FOR EFFECTIVE BONDING.

5. ANCHOR BOLTS, NUTS AND WASHERS SHALL BE ASTM F1554 GRADE 55, ASTM A563 GRADE DH, AND ASTM F436, TYPE 1 RESPECTIVELY.

6. SHEAR PINS SHALL BE ASTM A193 GRADE B7, UNLESS NOTED OTHERWISE.

7. BEDDING MATERIAL SHALL BE SUPPLIED IN ACCORDANCE WITH PUBLICATION 408 SECTION 1113.03(h).

COATINGS:

1. ALL MILL SCALE SHALL BE REMOVED FROM STEEL PLATES VIA ABRASIVE BLASTING IN ACCORDANCE WITH SSPC-SP10. THE PLATE SURFACES ABOVE AND BELOW THE DISC SHALL BE ABRASIVE BLASTED TO A NEAR WHITE CONDITION AS DEFINED IN SSPC-SP10. THE BLAST PROFILE SHALL BE JAGGED RATHER THAN "PEENED".

2. DISC BEARINGS SHALL BE HOT-DIP GALVANIZED BY A METHOD CONFORMING TO ASTM A123.

3. PAINT ALL EXPOSED STEEL SURFACES IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 1060. THE FOLLOWING AREAS ARE NOT TO BE PAINTED:
   - AREAS DIRECTLY ABOVE AND BELOW THE DISC.
   - ALL STAINLESS STEEL AND PTFE SURFACES.
   - SHEAR PINS AND SHEAR PIN HOLES.

4. THE FOLLOWING AREAS ARE TO RECEIVE PRIME COAT ONLY:
   - TOP OF SOLE PLATE.
   - BOTTOM OF MASONRY PLATE.

5. FULLY THREADED ANCHOR BOLTS, HEAVY HEX NUTS, AND HARDENED WASHERS SHALL BE HOT-DIP GALVANIZED BY A METHOD CONFORMING TO ASTM A153.

WELDING:

1. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/AASHTO/AWS D1.5: BRIDGE WELDING CODE.

2. WELDING TO BEARING PLATES AFTER ASSEMBLY IS PERMITTED PROVIDED WELDING PROCEDURES RESTRICT THE MAXIMUM TEMPERATURE IN THE AREAS OF THE DISC AND PTFE TO NO MORE THAN 225° F AS DETERMINED BY USE OF TEMPERATURE INDICATING WAX PENCILS. PROTECTIVE MATERIAL SHALL BE PLACED OVER THE BEARING ASSEMBLY TO PROTECT AGAINST SPARKS AND FLASH.

3. AFTER WELDING IS COMPLETE, EXPOSED STEEL SHALL BE TOUCHED UP IN ACCORDANCE WITH THE BRIDGE PAINT SYSTEM.

4. PROVIDE AN AWS CERTIFIED WELDING INSPECTOR (CWI) AND ACCESS FOR THE CWI TO ALL FIELD WELDS. PROVIDE AN AWS CERTIFIED WELDING INSPECTOR AT THE TIME OF FIELD WELDING TO ACCEPT OR REJECT THE MATERIAL AND WORKMANSHIP AND TO PERFORM MAGNETIC PARTICLE TESTING ON THE WELDS IN ACCORDANCE WITH AASHTO/AWS BRIDGE WELDING CODE D1.5. PROVIDE AN INSPECTOR THAT IS ASNT LEVEL 2 CERTIFIED TO PERFORM THE MAGNETIC PARTICLE TESTING. PROVIDE A REPORT OF THE MAGNETIC PARTICLE TESTING RESULTS TO THE REPRESENTATIVE. USE THE STANDARD FORM PROVIDED IN AASHTO/AWS BRIDGE WELDING CODE D1.5.

5. SUBMIT WELDING PROCEDURE, INCLUDING WELDER'S QUALIFICATIONS, AND SOLE PLATE TEMPERATURE MONITORING FOR REVIEW AND APPROVAL.

SHIPPING AND HANDLING:

1. PROTECT THE PTFE AND STAINLESS STEEL FROM DAMAGE, AIRBORNE DEBRIS AND CONTAMINANTS AT ALL TIMES. INSPECT THE SURFACES FOR SUCH DAMAGE AND DEBRIS PRIOR TO FINAL ASSEMBLY AND INSTALLATION.

2. STEEL BAND THE COMPLETED BEARINGS INDIVIDUALLY IN THE UPRIGHT POSITION. THE STEEL BANDS MUST PREVENT SEPARATION OF UPPER AND LOWER BEARING COMPONENTS AND MUST NOT BE REMOVED PRIOR TO INSTALLATION.

3. HANDLE THE BEARING ASSEMBLIES BY THEIR BOTTOM SURFACES ONLY, AND THEY MUST NOT BE LIFTED BY THEIR TOPS, SIDES AND/OR SHIPPING BANDS.

4. STORE THE BEARINGS IN A CLEAN, DRY AND UPRIGHT POSITION.

5. AT NO TIME PRIOR TO THE COMPLETION OF THE PROJECT MAY ANY BEARING BE DISASSEMBLED WITHOUT AUTHORIZATION FROM THE BEARING MANUFACTURER.

TESTING:

1. TEST THE BEARINGS IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.03(f).

2. CONDUCT THE TESTING AT A TESTING FACILITY WITH PRIOR EXPERIENCE TESTING BEARINGS OF THIS TYPE.

MATERIAL DESIGN PARAMETERS:

1. ALLOWABLE PRESSURE IN POLYURETHANE DISC: 5000 PSI

2. ALLOWABLE PRESSURE IN PTFE: 4500 PSI

3. COEFFICIENT OF FRICTION BETWEEN PTFE AND STAINLESS STEEL: 0.04

ANCHOR BOLT INSTALLATION:

1. IF ANCHOR BOLTS ARE INSTALLED BEFORE THE MASONRY PLATE INSTALLATION, USE ANCHOR BOLT DETAIL 1 SHOWN ON BEARING CONNECTION DETAILS SHEET. THE USE OF A BLOCKOUT FORM IS OPTIONAL.

2. IF ANCHOR BOLTS ARE INSTALLED AFTER THE BEARINGS ARE INSTALLED, USE ANCHOR BOLT DETAIL 2 SHOWN ON BEARING CONNECTION DETAILS SHEET.

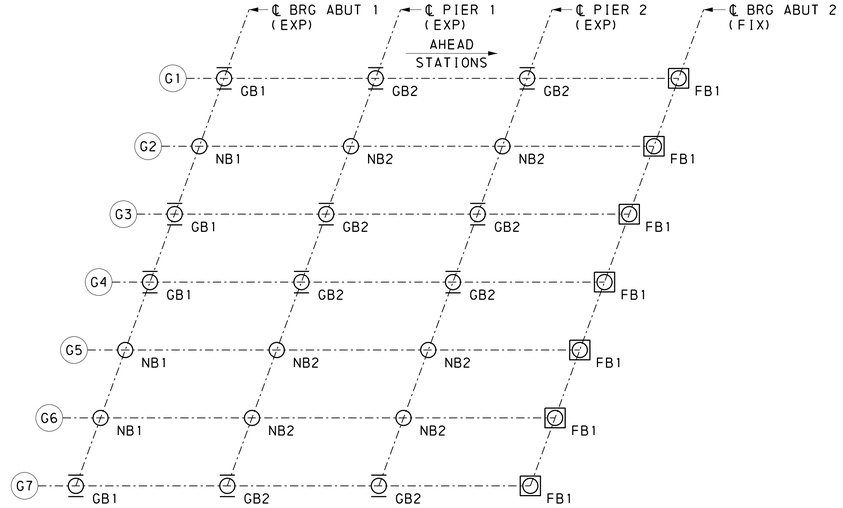
3. IF BLOCKOUTS ARE USED, REMOVE BLOCKOUT FORM AND DEBRIS FROM HOLE PRIOR TO GROUTING. INSTALL NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408 SECTION 1001. DO NOT GROUT UNTIL ALL GIRDER UNITS ARE PROPERLY ALIGNED.

4. PREVENT WATER FROM ACCUMULATING IN THE PREFORMED ANCHOR BOLT HOLES OR STANDARD PIPE AND ENSURE THE HOLES ARE COMPLETELY FILLED WITH GROUT.

LAYOUT SCHEMATIC:

1. GB1, NB1, FB1 AND SIMILAR DESIGNATIONS REPRESENT BEARING TYPES AS USED IN DESIGN TABLES FOR BEARINGS ON THIS SHEET.

2. GUIDED EXPANSION BEARINGS ARE ARRANGED IN AN ASYMMETRIC PATTERN ACROSS THE BRIDGE CROSS-SECTION TO ENABLE THE EXTERIOR GIRDERS IN EACH CONSTRUCTION PHASE TO BE GUIDED.



DISC BEARING LAYOUT SCHEMATIC

NOT TO SCALE

LEGEND:

- ◎ DENOTES GUIDED EXPANSION
- ○ DENOTES NON-GUIDED EXPANSION
- ◙ DENOTES FIXED

REFERENCES:

1. FRAMING PLAN 1 & 2
2. DISC BEARING TABLES
3. FIXED BEARING DETAILS
4. GUIDED BEARING DETAILS
5. NON-GUIDED BEARING DETAILS
6. BEARING CONNECTION DETAILS
7. PIER JACKING DETAILS

SHEET:

45 & 46
58
59
60
61
62

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DISC BEARING NOTES

RECOMMENDED _____

SHEET 57 OF 121

S - 39526

DES: BEG | CKD: JMF | DWG: CLG | CKD: BEG

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DESIGN TABLE FOR GUIDED DISC BEARINGS

LOCATION	MAXIMUM LOADS (KIPS)		ROTATION (RADIANS)	MASONRY PLATE					ANCHOR BOLTS		DISC			SRM		BEARING BLOCK			TOP PTFE		SIDE PTFE		
	VERTICAL	HORIZONTAL		A	B	C	D	E	G	QTY	H	J	K	L	M	N	P	Q	R	S	T	U	V
GB1	533	91	0.025	39.375	20.75	1.625	16.188	6.875	1.50	4	16.375	4.375	2.625	5.97	4.25	28.00	18.375	2.25	16.75	0.188	20.00	1.75	0.188
GB2	1358	198	0.025	56.25	32.75	2.25	24.625	12.875	2.00	4	25.875	7.875	4.00	9.13	7.75	39.875	29.00	3.00	26.625	0.188	34.875	2.50	0.188

DESIGN TABLE FOR GUIDED DISC BEARINGS (CONT'D)

LOCATION	TOP STAINLESS STEEL			SIDE STAINLESS STEEL			GUIDE BARS			SOLE PLATE					BRG HEIGHT
	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH1	HH2	JJ	KK
GB1	22.00	24.50	0.105	32.75	2.00	0.105	33.75	2.375	2.125	25.375	34.25	1.375	2.152	0.388	8.59
GB2	31.875	31.375	0.105	44.625	2.75	0.105	45.625	3.125	5.25	42.25	46.125	2.50	*	*	*

GB2 VARIABLE DIMENSIONS

LOCATION	HH1	HH2	JJ	KK
PIER 1	2.50	2.63	0.06	12.14
PIER 2	2.50	3.04	0.27	12.34

DESIGN TABLE FOR NON-GUIDED DISC BEARINGS

LOCATION	MAXIMUM LOADS (KIPS)		ROTATION (RADIANS)	MASONRY PLATE					ANCHOR BOLTS		DISC			SRM		BEARING BLOCK		TOP PTFE	
	VERTICAL	HORIZONTAL		A	B	C	D	E	G	QTY	H	J	K	L	M	N	Q	R	S
NB1	533	0	0.025	28.625	20.625	1.25	12.125	8.125	1.50	4	15.625	3.125	2.50	3.76	3.00	25.125	0.75	16.625	0.188
NB2	1358	0	0.025	43.375	32.625	2.00	18.188	12.813	2.00	4	24.625	5.125	3.875	5.96	5.00	32.125	1.125	26.125	0.25

DESIGN TABLE FOR NON-GUIDED DISC BEARINGS (CONT'D)

LOCATION	TOP STAINLESS STEEL			SOLE PLATE					BRG HEIGHT
	W	X	Y	FF	GG	HH1	HH2	JJ	KK
NB1	18.875	29.375	0.105	19.875	30.375	1.25	1.939	0.344	6.42
NB2	28.375	35.875	0.105	29.375	36.875	1.375	**	**	**

NB2 VARIABLE DIMENSIONS

LOCATION	HH1	HH2	JJ	KK
PIER 1	1.38	1.48	0.05	8.78
PIER 2	1.38	1.81	0.22	8.95

DESIGN TABLE FOR FIXED DISC BEARINGS

LOCATION	MAXIMUM LOADS (KIPS)		ROTATION (RADIANS)	MASONRY PLATE					ANCHOR BOLTS		DISC			SRM		UPPER BEARING PLATE		SOLE PLATE		BRG HEIGHT
	VERTICAL	HORIZONTAL		A	B	C	D	E	G	QTY	H	J	K	L	M	N	Q	FF	GG	KK
FB1	554	104	0.025	34.50	20.75	1.625	13.75	6.875	1.50	4	16.375	4.375	2.625	5.81	4.25	18.50	1.875	20.50	20.50	7.18

FB1 SOLE PLATE HEIGHTS

LOCATION	HH1	HH2	JJ	KK
G1	0.875	0.985	0.055	7.18
G2	0.892	0.968	0.038	7.18
G3	0.930	0.930	---	7.18
G4	0.966	0.894	0.036	7.18
G5	0.930	0.930	---	7.18
G6	0.965	0.895	0.035	7.18
G7	0.982	0.878	0.052	7.18

FACTORED BEARING DESIGN LOADS

LOCATION	LOAD COMBINATION	FACTORED LOADS (KIPS)										FACTORED ROTATION (RADIANS)
		VERTICAL						HORIZONTAL				
		DL		LL+I		FROM HORIZ LOADS		TRANSVERSE		LONGITUDINAL		
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
ABUTMENT 1	SERVICE 1	255	361	-21	162	-10	10	-89	89	-15	15	0.025
	EXTREME EVENT 1	255	361	-11	81	0	0	-98	98	-15	15	0.025
PIER 1	SERVICE 1	675	917	-40	345	-21	21	-187	187	-37	37	0.025
	EXTREME EVENT 1	675	917	-20	172	0	0	-253	253	-37	37	0.025
PIER 2	SERVICE 1	726	983	-34	354	-21	21	-193	193	-40	40	0.025
	EXTREME EVENT 1	726	983	-17	177	0	0	-271	271	-40	40	0.025
ABUTMENT 2	SERVICE 1	269	376	-20	167	-11	11	-95	95	-42	42	0.025
	EXTREME EVENT 1	269	376	-10	83	0	0	-59	59	-69	69	0.025

TOTAL LONGITUDINAL DESIGN MOVEMENT SUMMARY

SUBSTRUCTURE UNIT	TOTAL LONGITUDINAL DESIGN MOVEMENT (INCHES)
ABUTMENT 1	12.46
PIER 1	9.18
PIER 2	5.53
ABUTMENT 2	2.00

NOTES:

1. ALL BEARING DIMENSIONS ARE IN INCHES, UNLESS NOTED OTHERWISE.
2. BEARING HEIGHT (DIMENSION KK) IS UNLOADED, IT INCLUDES 0.125 INCHES BEDDING MATERIAL, AND IT ACCOUNTS FOR SOLE PLATE BEVEL UP TO THE CENTERLINE OF BEARING.

LEGEND:

* DENOTES SEE GB2 VARIABLE DIMENSION TABLE, THIS SHEET
** DENOTES SEE NB2 VARIABLE DIMENSION TABLE, THIS SHEET

REFERENCES:

		SHEET:
1.	DISC BEARING NOTES	57
2.	FIXED BEARING DETAILS	59
3.	GUIDED BEARING DETAILS	60
4.	NON-GUIDED BEARING DETAILS	61
5.	BEARING CONNECTION DETAILS	62

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DISC BEARING TABLES

RECOMMENDED _____

SHEET 58 OF 121

S - 39526

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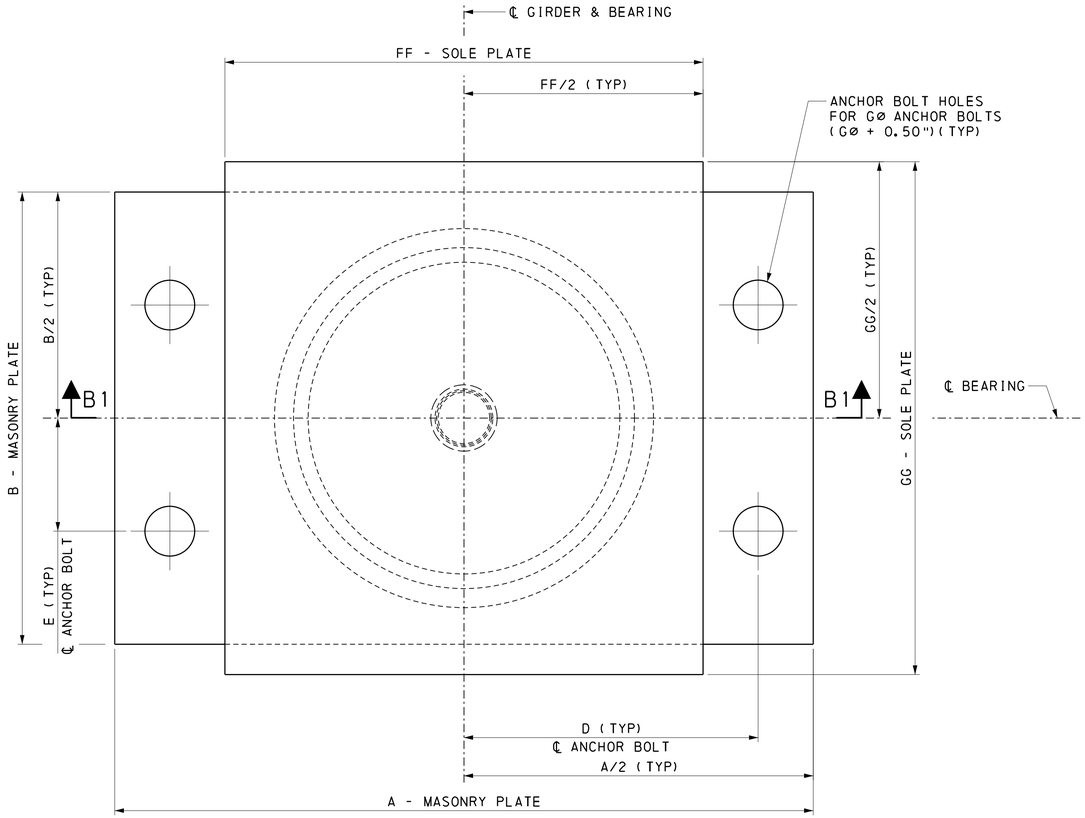

FIXED BEARING PLAN

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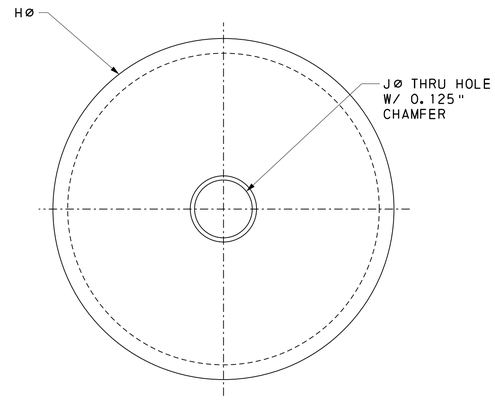

DISC PLAN

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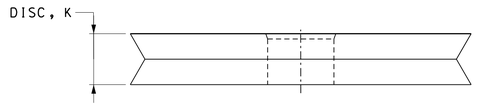

DISC SECTION

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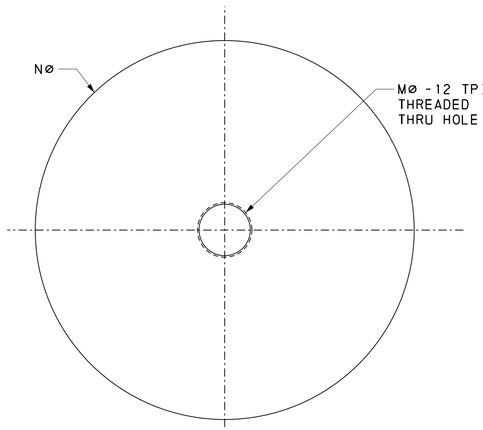

UPPER BEARING PLATE PLAN

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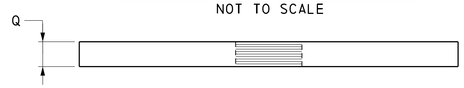

UPPER BEARING PLATE SECTION

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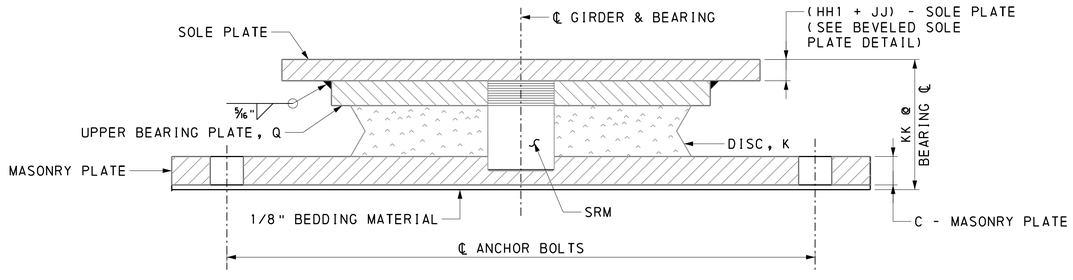

SECTION B1-B1

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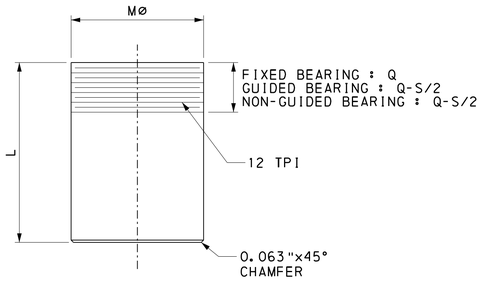

SHEAR RESTRICTING MECHANISM (SRM)

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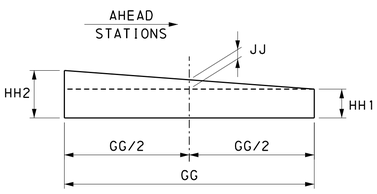

BEVELED SOLE PLATE DETAIL

NOT TO SCALE

LEGEND:

TPI DENOTES THREADS PER INCH

REFERENCES:

		SHEET:
1.	FRAMING PLAN 1 & 2	45 & 46
2.	DISC BEARING NOTES	57
3.	DISC BEARING TABLES	58
4.	GUIDED BEARING DETAILS	60
5.	NON-GUIDED BEARING DETAILS	61
6.	BEARING CONNECTION DETAILS	62

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107
PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

FIXED BEARING DETAILS

RECOMMENDED _____

SHEET 59 OF 121

S - 39526

DES: BEG	CKD: JMF	DWG: CLG	CKD: BEG

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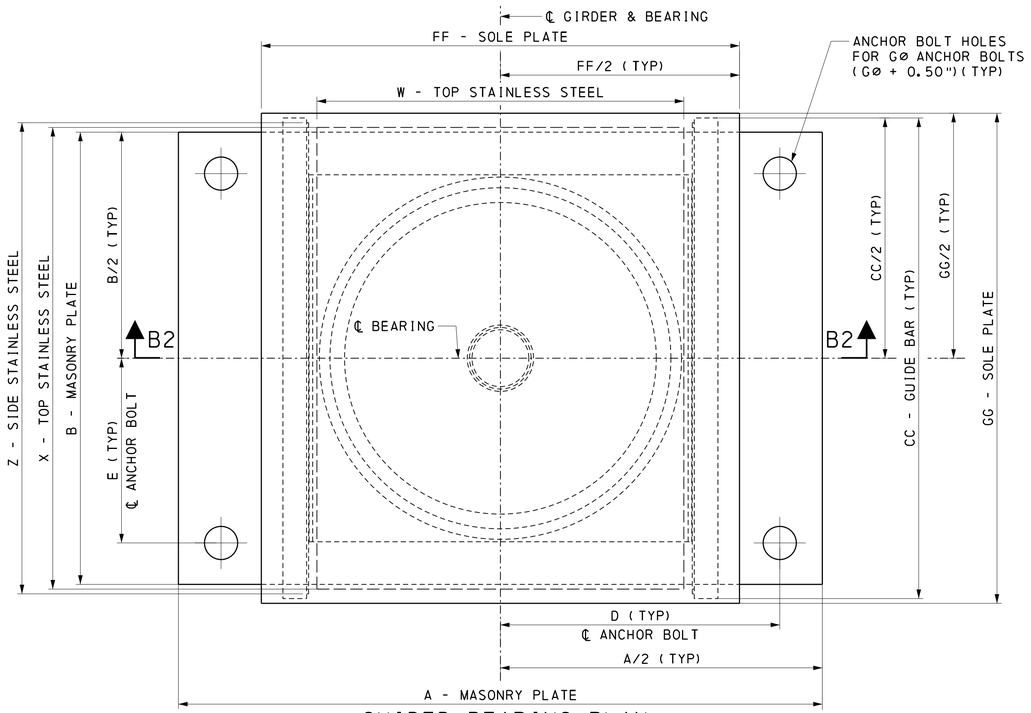

GUIDED BEARING PLAN

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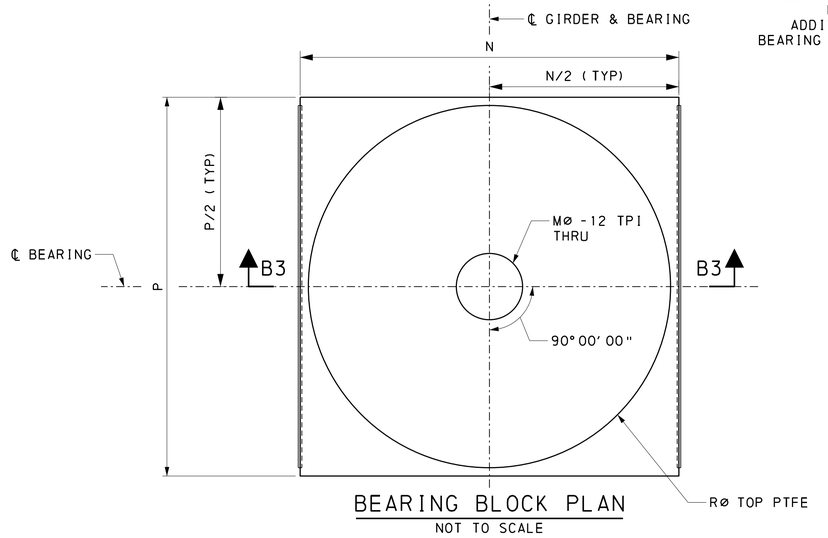

BEARING BLOCK PLAN

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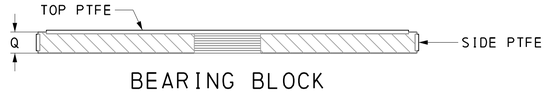

BEARING BLOCK SECTION B3-B3

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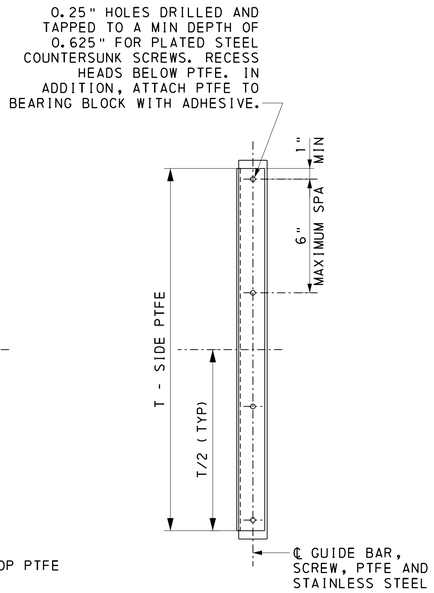
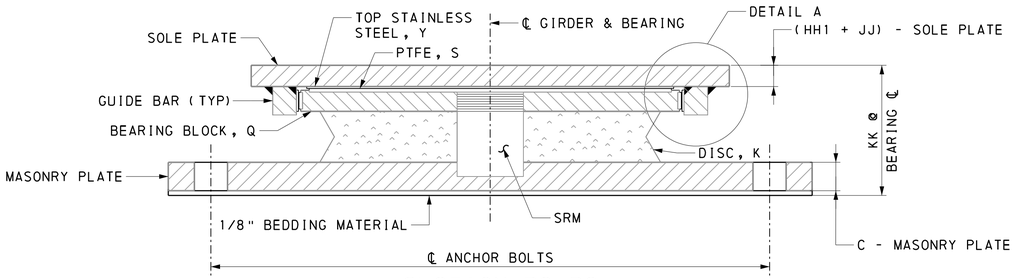


BEARING BLOCK SIDE VIEW

NOT TO SCALE



SECTION B2-B2

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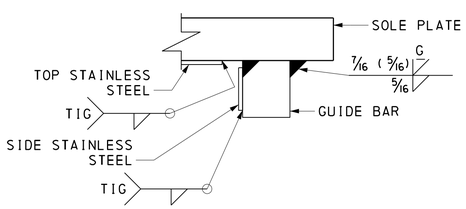
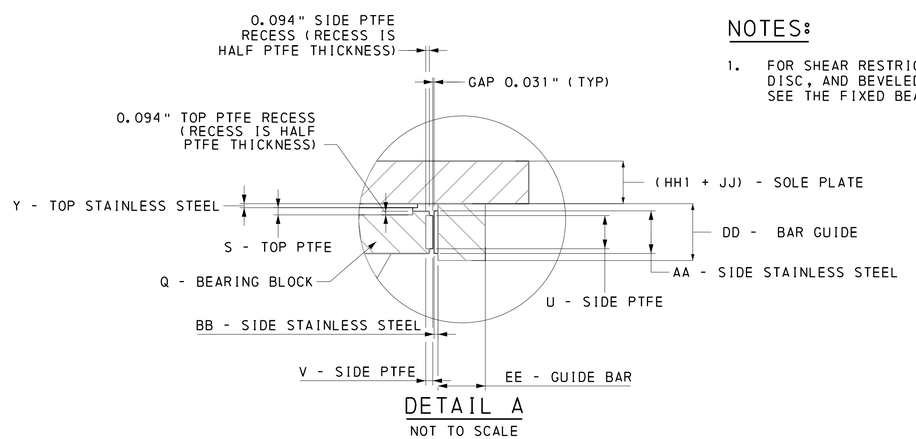


GUIDE BAR & STAINLESS STEEL WELD DETAIL

NOT TO SCALE



DETAIL A

NOT TO SCALE

NOTES:

1. FOR SHEAR RESTRICTING MECHANISM (SRM) , DISC, AND BEVELED SOLE PLATE DETAIL, SEE THE FIXED BEARING DETAILS SHEET.

LEGEND:

TIG	DENOTES TUNGSTEN INERT GAS
TPI	DENOTES THREADS PER INCH
SRM	DENOTES SHEAR RESTRICTING MECHANISM

REFERENCES:

		SHEET:
1.	FRAMING PLAN 1 & 2	45 & 46
2.	DISC BEARING NOTES	57
3.	DISC BEARING TABLES	58
4.	BEARING CONNECTION DETAILS	62
5.	FIXED BEARING DETAILS	59

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

GUIDED BEARING DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 60 OF 121

S - 39526

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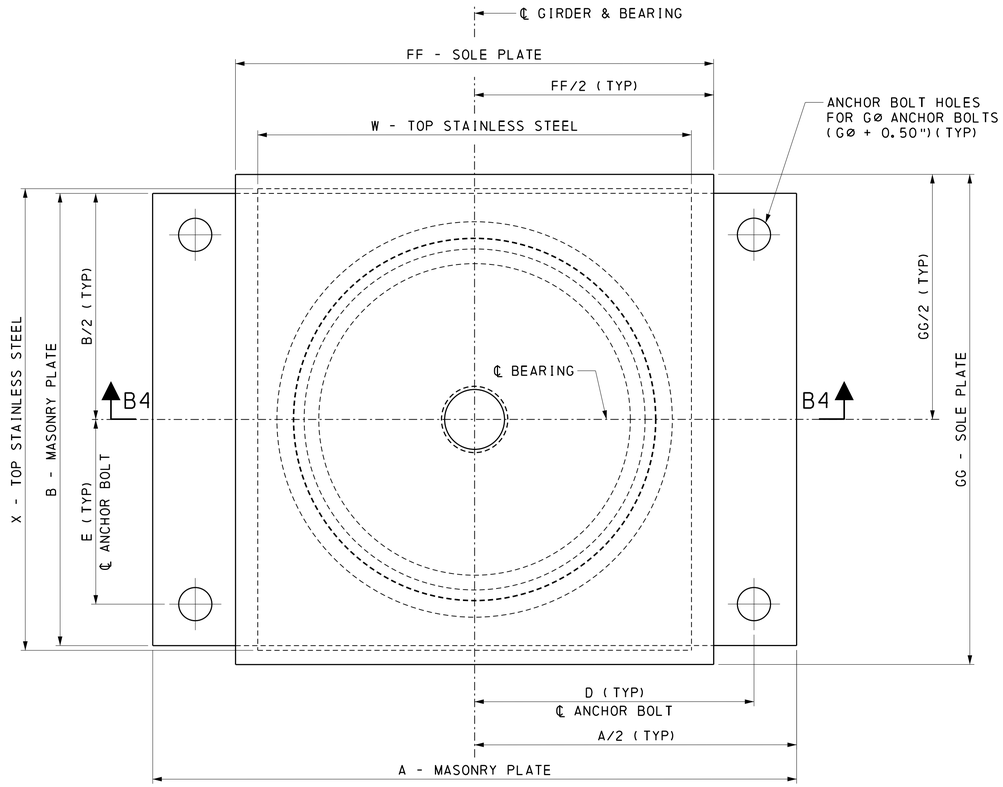

NON-GUIDED BEARING PLAN

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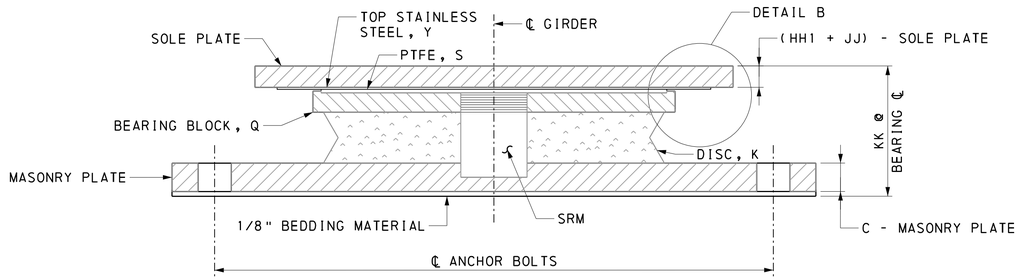

SECTION B4-B4

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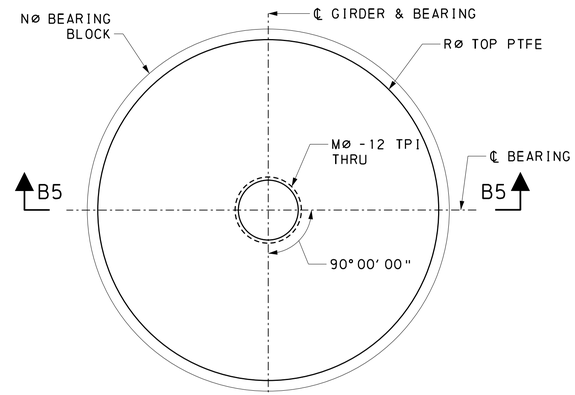

BEARING BLOCK PLAN

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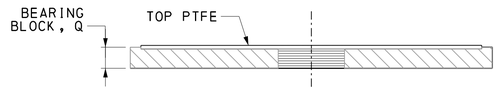

BEARING BLOCK SECTION B5-B5

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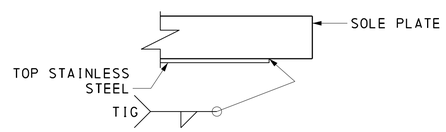
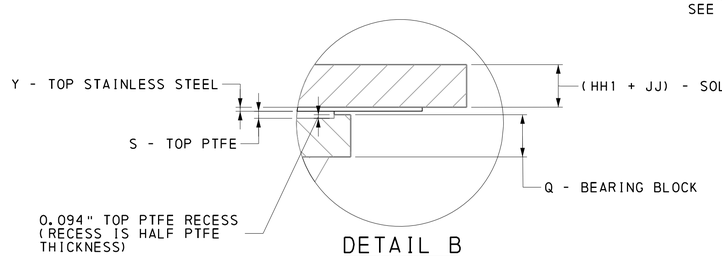


STAINLESS STEEL WELD DETAIL

NOT TO SCALE



DETAIL B

NOT TO SCALE

LEGEND:

TIG	DENOTES TUNGSTEN INERT GAS
TPI	DENOTES THREADS PER INCH
SRM	DENOTES SHEAR RESTRICTING MECHANISM

NOTES:

1. FOR SHEAR RESTRICTING MECHANISM (SRM), DISC, AND BEVELED SOLE PLATE DETAIL, SEE THE FIXED BEARING DETAILS SHEET.

REFERENCES:

		SHEET:
1.	FRAMING PLAN 1 & 2	45 & 46
2.	DISC BEARING NOTES	57
3.	DISC BEARING TABLES	58
4.	BEARING CONNECTION DETAILS	62
5.	FIXED BEARING DETAILS	59

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
NON-GUIDED BEARING DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 61 OF 121

S - 39526

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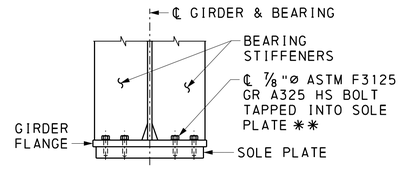
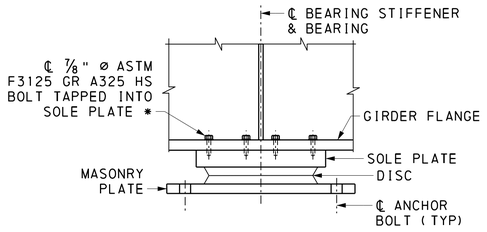


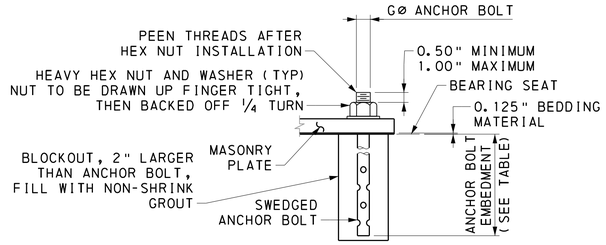
END VIEW - TAP BOLT CONNECTION

NOT TO SCALE



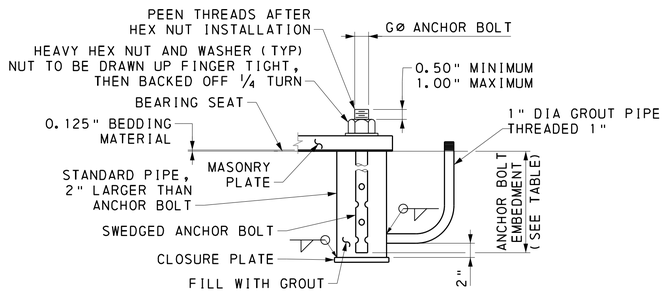
SIDE VIEW - TAP BOLT CONNECTION

NOT TO SCALE



ANCHOR BOLT DETAIL 1

NOT TO SCALE

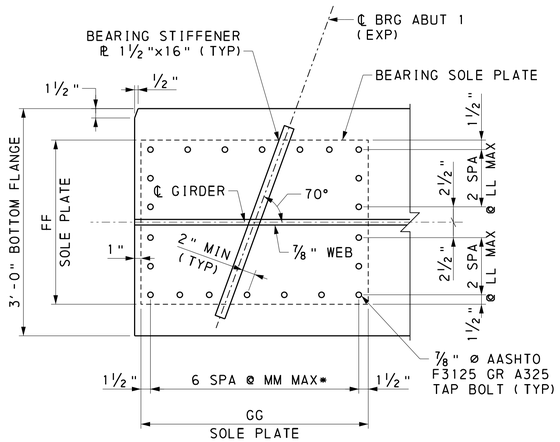


ANCHOR BOLT DETAIL 2

NOT TO SCALE

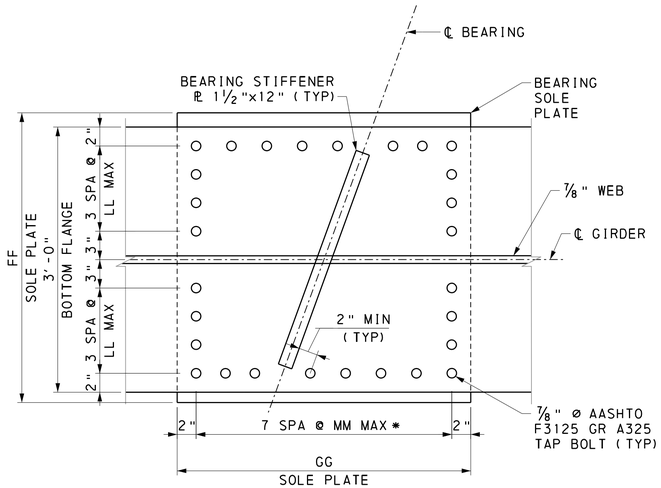
NOTE TO CONTRACTOR:

CONTRACTOR MAY SELECT EITHER TAPPED BOLT OR WELDED GIRDER CONNECTION. CONTRACTOR TO DESIGN THE WELD AND SUBMIT THE DESIGN CALCULATIONS TO PENNDOT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. PROVIDE SAME CONNECTION FOR ALL BEARINGS AT ALL GIRDERS.



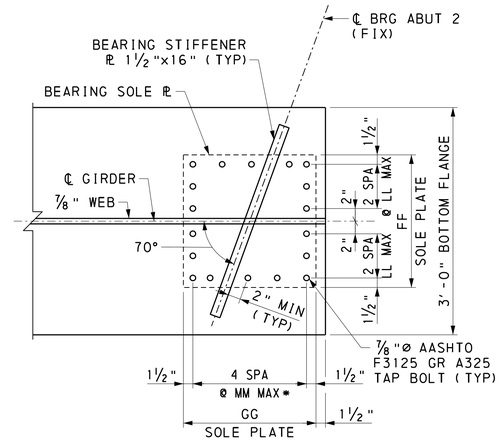
TAP BOLT LAYOUT - ABUTMENT 1

NOT TO SCALE



TAP BOLT LAYOUT - PIERS

NOT TO SCALE



TOP BOLT LAYOUT - ABUTMENT 2

NOT TO SCALE

TAPPED BOLT CONNECTION SUMMARY

SUBSTRUCTURE UNIT	NUMBER OF TAPPED BOLTS
ABUTMENT 1	24
PIER 1	32
PIER 2	32
ABUTMENT 2	20

ANCHOR BOLT EMBEDMENT SUMMARY

SUBSTRUCTURE UNIT	EMBEDMENT
ABUTMENT 1	24
PIER 1	28
PIER 2	28
ABUTMENT 2	24

TAP BOLT LAYOUT SUMMARY

LOCATION	FF	GG	LL	MM
GB1	25.375	34.25	4⅜	6
NB1	19.875	30.375	3	6
GB2	42.25	46.125	5⅜	6⅛
NB2	29.375	36.875	3¼	6
FB1	20.50	20.50	3⅜	6

ANCHOR BOLT LOCATION SUMMARY

LOCATION	A	B	D	E	NN	PP
GB1	39.375	20.75	16.188	6.875	3.50	3.50
NB1	28.625	20.625	12.125	8.125	2.188	2.188
GB2	56.25	32.75	24.625	12.875	3.50	3.50
NB2	43.375	32.625	18.188	12.813	3.50	3.50
FB1	34.50	20.75	13.75	6.875	3.50	3.50

NOTES:

1. MINIMUM REQUIRED LENGTH OF TAP BOLT ENGAGEMENT INTO BEARING SOLE PLATES:
   - ABUTMENTS = ¾"
   - PIERS = ½"
2. ALL DIMENSIONS ARE IN INCHES, UNLESS NOTED OTHERWISE.
3. TAP BOLT LAYOUT AT PIERS IS SHOWN WITH SOLE PLATE WIDER THAN BOTTOM FLANGE. DETAIL IS SIMILAR WHEN SOLE PLATE IS NARROWER THAN BOTTOM FLANGE, WITH EDGE CLEARANCES TAKEN TO EDGE OF SOLE PLATE.

REFERENCES:

		SHEET:
1.	FRAMING PLAN 1 & 2	45 & 46
2.	DISC BEARING NOTES	57
3.	DISC BEARING TABLES	58
4.	FIXED BEARING DETAILS	59
5.	GUIDED BEARING DETAILS	60
6.	NON-GUIDED BEARING DETAILS	61

LEGEND:

HS DENOTES HIGH STRENGTH

* DENOTES ADJUST TAP BOLT SPACING AS NECESSARY TO AVOID BEARING STIFFENER; MAINTAIN MINIMUM 2" CLEAR TO STIFFENER.

** DENOTES THROUGH BOLT CONNECTIONS BETWEEN GIRDER AND SOLE PLATE ARE ACCEPTABLE PROVIDED ALL CLEARANCE REQUIREMENTS ARE SATISFIED

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

BEARING CONNECTION DETAILS

RECOMMENDED _____

SHEET 62 OF 121

S - 39526

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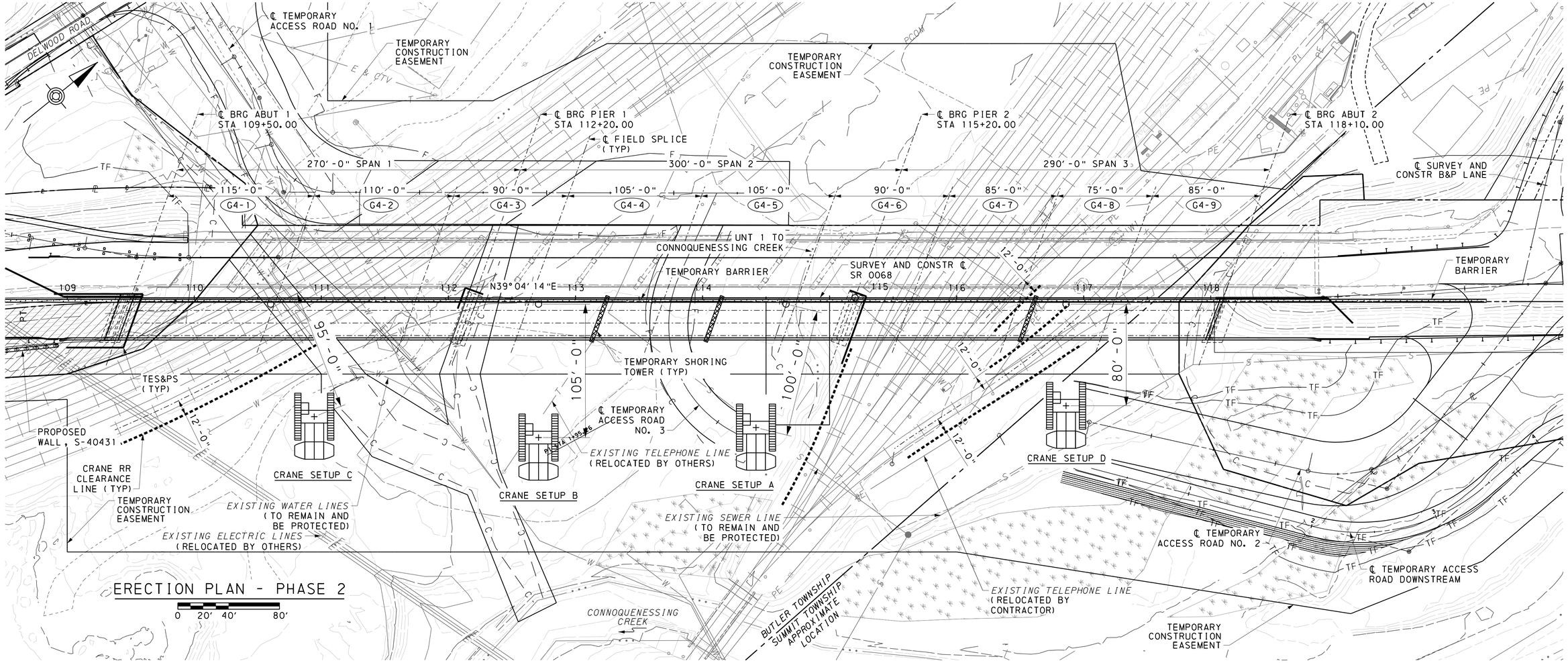

ERECTION PLAN - PHASE 2

0 20' 40' 80'

NOTES:

PHASE 1 IS THE CONSTRUCTION OF THE TEMPORARY ROADWAY.
PHASE 3 IS THE DEMOLITION OF THE EXISTING BRIDGE.
ERECT TWO GIRDERS AT A TIME.

CRANE SETUP A: FOR GIRDER SECTION G4-5, G4-6

CRANE SETUP B: FOR GIRDER SECTIONS G4-3, G4-4

CRANE SETUP C: FOR GIRDER SECTION G4-1, G4-2

CRANE SETUP D: FOR GIRDER SECTIONS G4-7, G4-8, G4-9

FOLLOW THE SAME SETUPS FOR THE OTHER GIRDERS FOR PHASE 2.

THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND INSTALLING GROUND PROTECTION FOR ALL UNDERGROUND UTILITIES FROM ALL EQUIPMENT LOADING.

THIS IS A CONCEPTUAL ERECTION PLAN. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A FINAL ERECTION PLAN BASED ON THE AVAILABLE EQUIPMENT NEEDED TO ERECT THE BRIDGE. DETAILED TEMPORARY TOWER DESIGNS MUST BE SUBMITTED ALONG WITH THE ERECTION PLAN SUBMISSION.

SEE THE GENERAL NOTES 1 AND 2 FOR ADDITIONAL NOTES AND REQUIREMENTS.

REFERENCES:

		SHEET:
1.	GENERAL NOTES 1 & 2	4 & 5
2.	WORK THIS SHEET WITH SHEETS	64 - 66

LEGEND:

TES&PS — DENOTES TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

DENOTES MANITOWOC MLC650 VPC-MAX (EXTENDED REAR COUNTERWEIGHT NOT SHOWN FOR CLARITY)

DENOTES TEMPORARY BARRIER

DENOTES TEMPORARY SHORING TOWER

Mark	Description	By	Chk'd.	Recm'd.	Date
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SR 0068 PREVIOUSLY KNOWN AS LR 214
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KARNS CROSSING

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SR 0068 SECTION 253
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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CONCEPTUAL ERECTION PLAN - PHASE 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 63 OF 121

S - 39526

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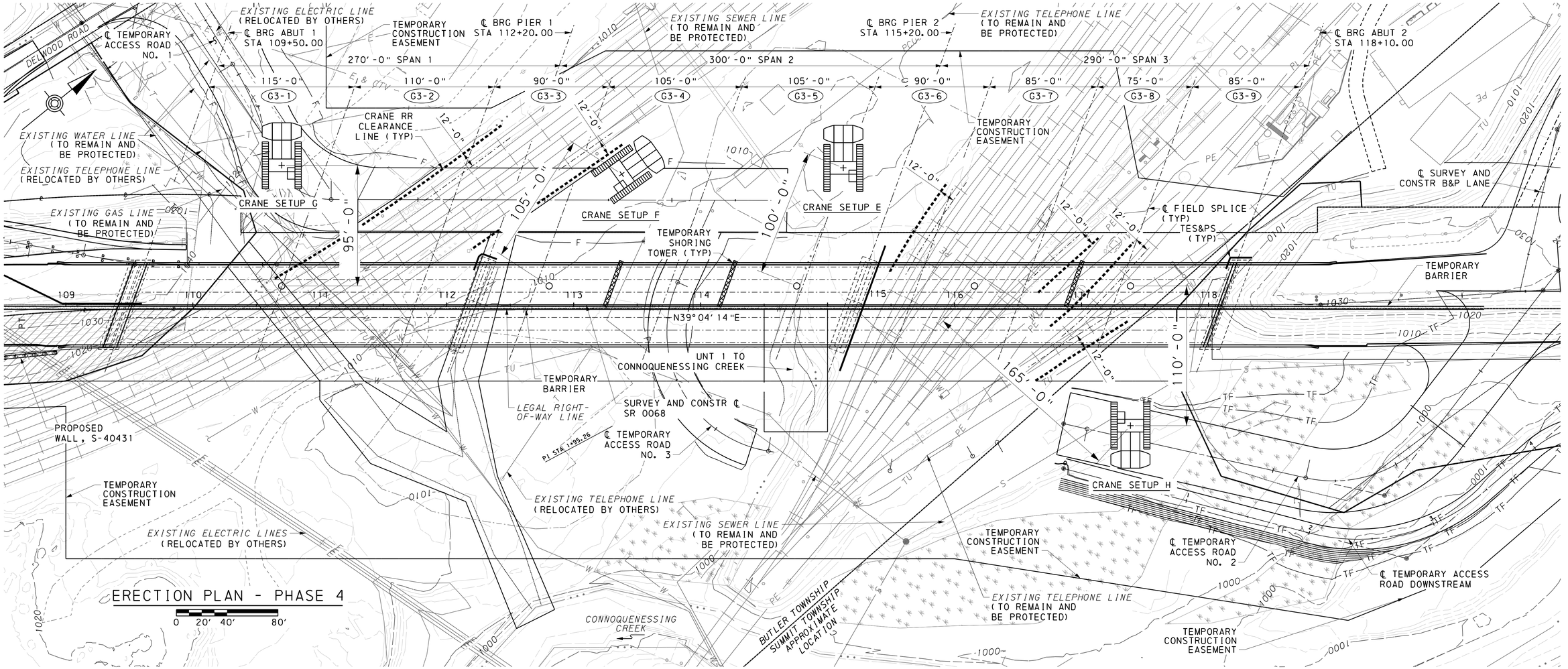

ERECTION PLAN - PHASE 4

0 20' 40' 80'

NOTES:

PHASE 1 IS THE CONSTRUCTION OF THE TEMPORARY ROADWAY.
PHASE 3 IS THE DEMOLITION OF THE EXISTING BRIDGE.
ERECT TWO GIRDERS AT A TIME.

CRANE SETUP E: FOR GIRDER SECTIONS G3-5, G3-6

CRANE SETUP F: FOR GIRDER SECTION G3-3, G3-4

CRANE SETUP G: FOR GIRDER SECTION G3-1, G3-2

CRANE SETUP H: FOR GIRDER SECTIONS G3-7, G3-8, G3-9

FOLLOW THE SAME SETUPS FOR THE OTHER GIRDERS FOR PHASE 2.

THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND INSTALLING GROUND PROTECTION FOR ALL UNDERGROUND UTILITIES FROM ALL EQUIPMENT LOADING.

THIS IS A CONCEPTUAL ERECTION PLAN. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A FINAL ERECTION PLAN BASED ON THE AVAILABLE EQUIPMENT NEEDED TO ERECT THE BRIDGE. DETAILED TEMPORARY TOWER DESIGNS MUST BE SUBMITTED ALONG WITH THE ERECTION PLAN SUBMISSION.

SEE THE GENERAL NOTES 1 AND 2 FOR ADDITIONAL NOTES AND REQUIREMENTS.

REFERENCES:

1.	GENERAL NOTES 1 & 2	4 & 5
2.	WORK THIS SHEET WITH SHEETS	63 & 65 - 66

SHEET:

LEGEND:

TES&PS DENOTES TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

DENOTES MANITIWOC MLC650 VPC-MAX (EXTENDED REAR COUNTERWEIGHT NOT SHOWN FOR CLARITY)

DENOTES TEMPORARY BARRIER

DENOTES TEMPORARY SHORING TOWER

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
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OVER B&LE RAILROAD AND B&P RAILROAD
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CONCEPTUAL ERECTION PLAN - PHASE 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 64 OF 121

S - 39526

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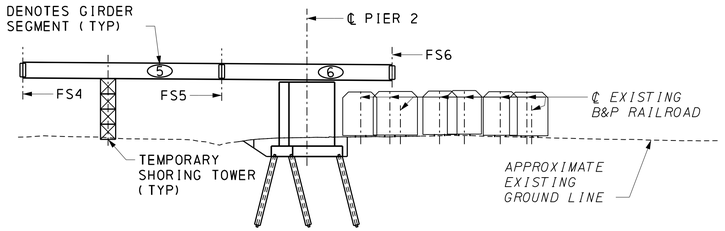


PHASE 2 STAGE 1:

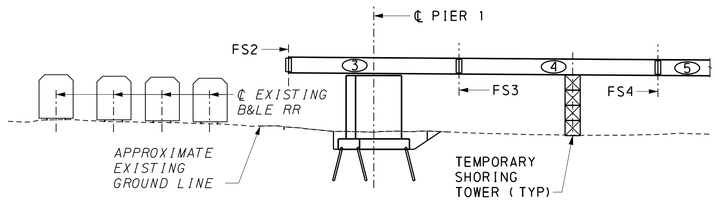
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 5.

SET BEARINGS FOR GIRDERS G4 THRU G7 ON PIER 2 AND TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 5 AND 6 GIRDERS G4 AND G5. CONNECT FIELD SPLICE 5 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT PIER 2 AND TEMPORARY SHORING TOWER.

REPEAT PREVIOUS STEPS FOR GIRDER G6 AND G7. INSTALL LATERAL BRACING BETWEEN GIRDERS G4 AND G5 AND REMAINING CROSS FRAMES.



PHASE 2 STAGE 2:

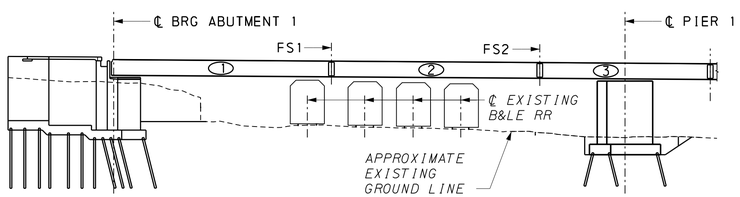
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 4.

SET BEARINGS FOR GIRDERS G4 THRU G7 ON PIER 1 AND TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 3 AND 4 GIRDERS G4 AND G5. CONNECT FIELD SPLICE 3 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT PIER 1 AND TEMPORARY SHORING TOWER. MAKE UP FIELD SPLICE 4.

REPEAT PREVIOUS STEPS FOR GIRDERS G6 AND G7. INSTALL LATERAL BRACING BETWEEN GIRDERS G4 AND G5 AND REMAINING CROSS FRAMES.



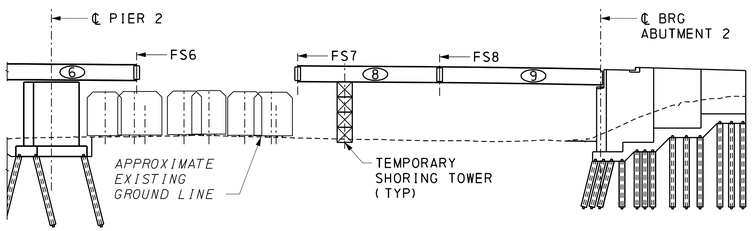
PHASE 2 STAGE 3:

SET BEARINGS FOR GIRDERS G4 THRU G7 ON ABUTMENT 1.

UNLOAD AND ASSEMBLE SEGMENT 1 AND 2 GIRDERS G4 AND G5. CONNECT FIELD SPLICE 1 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT ABUTMENT 1 AND MAKE UP FIELD SPLICE 2.

REPEAT PREVIOUS STEPS FOR GIRDERS G6 AND G7. INSTALL LATERAL BRACING BETWEEN GIRDERS G4 AND G5 AND REMAINING CROSS FRAMES.



PHASE 2 STAGE 4:

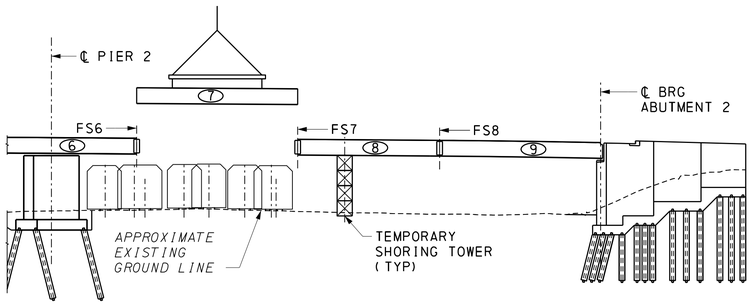
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 8 IN BETWEEN B&P RAILROAD TRACKS. MAINTAIN 12'-0" HORIZONTAL CLEARANCE FROM ℄ OF ADJACENT TRACKS.

SET BEARINGS FOR GIRDERS G4 THRU G7 ON ABUTMENT 2 AND THE TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 8 AND 9 GIRDERS G4 AND G5. CONNECT FIELD SPLICE 8 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER AND SET ON BEARINGS AT ABUTMENT 2 AND TEMPORARY SHORING TOWER.

REPEAT PREVIOUS STEPS FOR GIRDERS G6 AND G7. INSTALL LATERAL BRACING BETWEEN GIRDERS G4 AND G5 AND REMAINING CROSS FRAMES.



PHASE 2 STAGE 5:

UNLOAD AND ASSEMBLE SEGMENT 7 GIRDERS G4 AND G5 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT GIRDER PAIR AND MAKE UP FIELD SPLICES 6 AND 7.

REPEAT PREVIOUS STEPS FOR GIRDERS G6 AND G7.

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR STABILITY OF ASSEMBLED AND ERECTED GIRDERS AT ALL STAGES OF CONSTRUCTION. ADDITIONAL TEMPORARY BRACING, HYDRAULIC JACKS, TIE-DOWNS, OR HOLD CRANES MAY BE REQUIRED. THE CONTRACTOR SHALL PREPARE A DETAILED ERECTION PLAN AND SUBMIT TO THE ENGINEER FOR REVIEW SHOWING THE SEQUENCE OF ERECTION AND ALL TEMPORARY SUPPORTS REQUIRED TO ENSURE STABILITY OF THE ERECTED GIRDERS AT ALL STAGES OF CONSTRUCTION.

REFERENCES:

		SHEET:
1.	GENERAL NOTES 1 & 2	4 & 5
2.	WORK THIS SHEET WITH SHEETS	63 - 64 & 66

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ERECTION PLAN DETAILS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 65 OF 121

S - 39526

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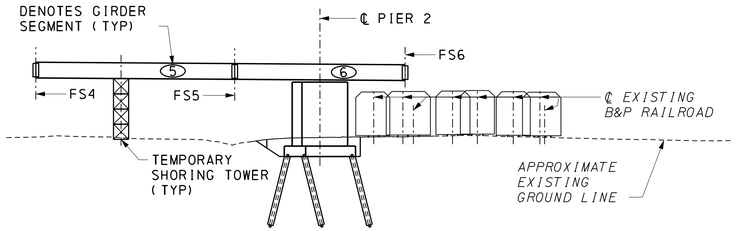


PHASE 4 STAGE 1:

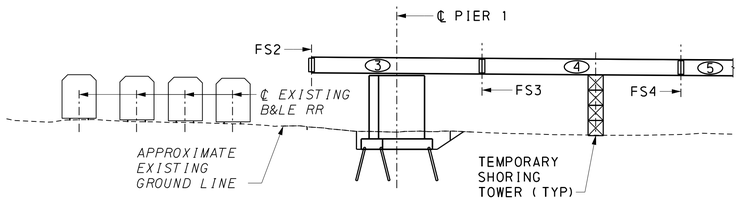
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 5.

SET BEARINGS FOR GIRDERS G1 THRU G3 ON PIER 2 AND TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 5 AND 6 GIRDERS G3 AND G2. CONNECT FIELD SPLICE 5 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT PIER 2 AND TEMPORARY SHORING TOWER.

REPEAT PREVIOUS STEPS FOR GIRDER G1. INSTALL LATERAL BRACING BETWEEN GIRDERS G3 AND G2 AND REMAINING CROSS FRAMES.



PHASE 4 STAGE 2:

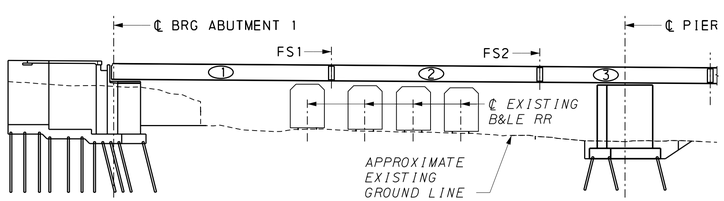
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 4.

SET BEARINGS FOR GIRDERS G1 THRU G3 ON PIER 1 AND TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 3 AND 4 GIRDERS G3 AND G2. CONNECT FIELD SPLICE 3 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT PIER 1 AND TEMPORARY SHORING TOWER. MAKE UP FIELD SPLICE 4.

REPEAT PREVIOUS STEPS FOR GIRDER G1. INSTALL LATERAL BRACING BETWEEN GIRDERS G2 AND G3 AND REMAINING CROSS FRAMES.



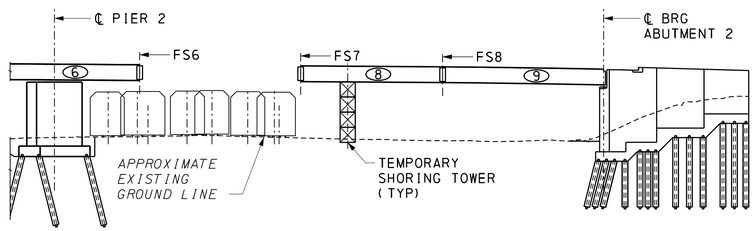
PHASE 4 STAGE 3:

SET BEARINGS FOR GIRDERS G1 THRU G3 ON ABUTMENT 1.

UNLOAD AND ASSEMBLE SEGMENT 1 AND 2 GIRDERS G3 AND G2. CONNECT FIELD SPLICE 1 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER PAIR AND SET ON BEARINGS AT ABUTMENT 1 AND MAKE UP FIELD SPLICE 2.

REPEAT PREVIOUS STEPS FOR GIRDER G1. INSTALL LATERAL BRACING BETWEEN GIRDERS G2 AND G3 AND REMAINING CROSS FRAMES.



PHASE 4 STAGE 4:

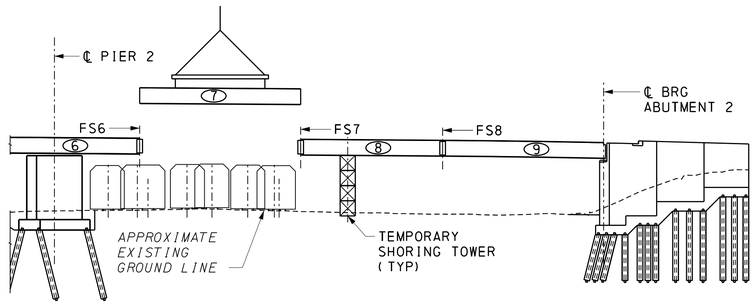
ERECT TEMPORARY SHORING TOWER UNDER SEGMENT 8 IN BETWEEN B&P RAILROAD TRACKS. MAINTAIN 12'-0" HORIZONTAL CLEARANCE FROM ℄ OF ADJACENT TRACKS.

SET BEARINGS FOR GIRDERS G1 THRU G3 ON ABUTMENT 2 AND THE TEMPORARY SHORING TOWER.

UNLOAD AND ASSEMBLE SEGMENT 8 AND 9 GIRDERS G3 AND G2. CONNECT FIELD SPLICE 8 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT ASSEMBLED GIRDER AND SET ON BEARINGS AT ABUTMENT 2 AND TEMPORARY SHORING TOWER.

REPEAT PREVIOUS STEPS FOR GIRDER G1. INSTALL LATERAL BRACING BETWEEN GIRDERS G2 AND G3 AND REMAINING CROSS FRAMES.



PHASE 4 STAGE 5:

UNLOAD AND ASSEMBLE SEGMENT 7 GIRDERS G3 AND G2 AND BOLT UP CROSS FRAMES. PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY WHEN LIFTING.

ERECT GIRDER PAIR AND MAKE UP FIELD SPLICES 6 AND 7.

REPEAT PREVIOUS STEPS FOR GIRDER G1.

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR STABILITY OF ASSEMBLED AND ERECTED GIRDERS AT ALL STAGES OF CONSTRUCTION. ADDITIONAL TEMPORARY BRACING, HYDRAULIC JACKS, TIE-DOWNS, OR HOLD CRANES MAY BE REQUIRED. THE CONTRACTOR SHALL PREPARE A DETAILED ERECTION PLAN AND SUBMIT TO THE ENGINEER FOR REVIEW SHOWING THE SEQUENCE OF ERECTION AND ALL TEMPORARY SUPPORTS REQUIRED TO ENSURE STABILITY OF THE ERECTED GIRDERS AT ALL STAGES OF CONSTRUCTION.

REFERENCES:

		SHEET:
1.	GENERAL NOTES 1 & 2	4 & 5
2.	WORK THIS SHEET WITH SHEETS	63 - 65

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ERECTION PLAN DETAILS 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 66 OF 121

S - 39526

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GIRDER SECTION PROPERTIES

GIRDER NUMBER	GIRDER SEGMENT	SEGMENT LENGTH (FT)	As (IN^2)	DEPTH STEEL SECTION (IN)	DISTANCE TO NEUTRAL AXIS FROM BOTTOM (IN)				MOMENT OF INERTIA (IN^4)				S BOTTOM (IN^3)				S TOP (IN^3)			
					NON-COMP	3N	N	NEG	NON-COMP	3N	N	NEG	NON-COMP	3N	N	NEG	NON-COMP	3N	N	NEG
G1 & G7	A	55	177.25	100.75	45.84	55.23	67.19	45.84	290,801	388,955	514,248	290,801	6,343	7,043	7,654	6,343	5,296	8,544	15,324	5,296
	B	40	235.75	102.50	45.04	52.71	63.44	45.04	436,119	547,329	703,262	436,119	9,683	10,385	11,085	9,683	7,590	10,992	18,006	7,590
	C	30	258.25	103.25	50.08	56.66	66.13	50.08	504,818	602,128	742,230	504,818	10,080	10,627	11,225	10,080	9,495	12,924	19,993	9,495
	D	45	235.75	102.50	45.04	52.71	63.44	45.04	436,119	547,329	703,262	436,119	9,683	10,385	11,085	9,683	7,590	10,992	18,006	7,590
	E	55	192.25	101.25	50.15	58.34	69.09	50.15	332,876	419,865	534,143	332,876	6,638	7,197	7,731	6,638	6,514	9,785	16,611	6,514
	F	20	210.25	101.75	46.33	54.52	65.58	46.33	374,678	477,095	615,688	374,678	8,087	8,752	9,388	8,087	6,761	10,101	17,022	6,761
	G	50	267.25	103.50	48.64	55.21	64.75	48.64	526,740	630,280	780,766	526,740	10,829	11,416	12,057	10,829	9,601	13,052	20,151	9,601
	H	20	210.25	101.75	46.33	54.52	65.58	46.33	374,678	477,095	615,688	374,678	8,087	8,752	9,388	8,087	6,761	10,101	17,022	6,761
	I	95	184.75	101.00	48.08	56.83	68.16	48.08	312,593	404,854	524,386	312,593	6,502	7,124	7,693	6,502	5,907	9,166	15,970	5,907
	J	20	196.00	101.38	51.13	59.06	69.54	51.13	342,506	427,065	538,888	342,506	6,699	7,231	7,749	6,699	6,816	10,093	16,929	6,816
	K	65	177.25	100.75	45.84	55.23	67.19	45.84	290,801	388,955	514,248	290,801	6,343	7,043	7,654	6,343	5,296	8,544	15,324	5,296
	L	45	225.25	102.25	50.04	57.33	67.41	50.04	418,068	510,593	638,564	418,068	8,355	8,906	9,473	8,355	8,007	11,367	18,329	8,007
	M	60	283.75	104.00	48.80	55.06	64.31	48.80	570,815	676,248	831,955	570,815	11,698	12,282	12,937	11,698	10,340	13,818	20,961	10,340
	N	25	217.75	102.00	48.25	55.96	66.51	48.25	397,019	494,254	627,320	397,019	8,229	8,832	9,431	8,229	7,386	10,736	17,678	7,386
	O	40	177.25	100.75	45.84	55.23	67.19	45.84	290,801	388,955	514,248	290,801	6,343	7,043	7,654	6,343	5,296	8,544	15,324	5,296
	P	35	250.75	103.00	48.49	55.40	65.26	48.49	483,084	584,640	729,637	483,084	9,962	10,552	11,180	9,962	8,863	12,283	19,335	8,863
	Q	45	258.25	103.25	50.08	56.66	66.13	50.08	504,818	602,128	742,230	504,818	10,080	10,627	11,225	10,080	9,495	12,924	19,993	9,495
	R	50	265.75	103.50	51.59	57.86	66.96	51.59	525,519	618,917	754,462	525,519	10,188	10,697	11,268	10,188	10,123	13,560	20,645	10,123
	S	30	210.25	101.75	46.33	54.52	65.58	46.33	374,678	477,095	615,688	374,678	8,087	8,752	9,388	8,087	6,761	10,101	17,022	6,761
	T	35	186.25	101.00	43.87	53.21	65.33	43.87	308,899	415,399	553,753	308,899	7,041	7,807	8,476	7,041	5,407	8,692	15,524	5,407
G2 - G6	A	55	177.25	100.75	45.84	56.62	69.51	45.84	290,801	403,489	538,505	290,801	6,343	7,127	7,748	6,343	5,296	9,142	17,235	5,296
	B	40	235.75	102.50	45.04	53.89	65.66	45.04	436,119	564,577	735,454	436,119	9,683	10,476	11,201	9,683	7,590	11,615	19,962	7,590
	C	30	258.25	103.25	50.08	57.69	68.11	50.08	504,818	617,412	771,701	504,818	10,080	10,702	11,330	10,080	9,495	13,552	21,963	9,495
	D	45	235.75	102.50	45.04	53.89	65.66	45.04	436,119	564,577	735,454	436,119	9,683	10,476	11,201	9,683	7,590	11,615	19,962	7,590
	E	55	192.25	101.25	50.15	59.57	71.21	50.15	332,876	432,933	556,699	332,876	6,638	7,268	7,817	6,638	6,514	10,387	18,534	6,514
	F	20	210.25	101.75	46.33	55.76	67.81	46.33	374,678	492,708	643,601	374,678	8,087	8,836	9,492	8,087	6,761	10,714	18,961	6,761
	G	50	267.25	103.50	48.64	56.25	66.77	48.64	526,740	646,616	812,634	526,740	10,829	11,496	12,170	10,829	9,601	13,684	22,127	9,601
	H	20	210.25	101.75	46.33	55.76	67.81	46.33	374,678	492,708	643,601	374,678	8,087	8,836	9,492	8,087	6,761	10,714	18,961	6,761
	I	95	184.75	101.00	48.08	58.14	70.38	48.08	312,593	418,618	547,759	312,593	6,502	7,200	7,783	6,502	5,907	9,767	17,887	5,907
	J	20	196.00	101.38	51.13	60.26	71.62	51.13	342,506	439,810	561,059	342,506	6,699	7,299	7,834	6,699	6,816	10,696	18,856	6,816
	K	65	177.25	100.75	45.84	56.62	69.51	45.84	290,801	403,489	538,505	290,801	6,343	7,127	7,748	6,343	5,296	9,142	17,235	5,296
	L	45	225.25	102.25	50.04	58.46	69.47	50.04	418,068	524,848	664,732	418,068	8,355	8,979	9,569	8,355	8,007	11,984	20,278	8,007
	M	60	283.75	104.00	48.80	56.06	66.29	48.80	570,815	693,008	865,311	570,815	11,698	12,362	13,054	11,698	10,340	14,455	22,946	10,340
	N	25	217.75	102.00	48.25	57.14	68.65	48.25	397,019	509,158	654,330	397,019	8,229	8,910	9,531	8,229	7,386	11,351	19,622	7,386
	O	40	177.25	100.75	45.84	56.62	69.51	45.84	290,801	403,489	538,505	290,801	6,343	7,127	7,748	6,343	5,296	9,142	17,235	5,296
	P	35	250.75	103.00	48.49	56.49	67.32	48.49	483,084	600,528	759,955	483,084	9,962	10,632	11,288	9,962	8,863	12,910	21,301	8,863
	Q	45	258.25	103.25	50.08	57.69	68.11	50.08	504,818	617,412	771,701	504,818	10,080	10,702	11,330	10,080	9,495	13,552	21,963	9,495
	R	50	265.75	103.50	51.59	58.85	68.88	51.59	525,519	633,643	783,137	525,519	10,188	10,768	11,370	10,188	10,123	14,190	22,620	10,123
	S	30	210.25	101.75	46.33	55.76	67.81	46.33	374,678	492,708	643,601	374,678	8,087	8,836	9,492	8,087	6,761	10,714	18,961	6,761
	T	35	186.25	101.00	43.87	54.60	67.70	43.87	308,899	431,309	580,853	308,899	7,041	7,899	8,580	7,041	5,407	9,296	17,444	5,407

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
GIRDER SECTION PROPERTIES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 67 OF 121

S - 39526

DES: SJH | CKD: BEG | DWG: KTS | CKD: BEG

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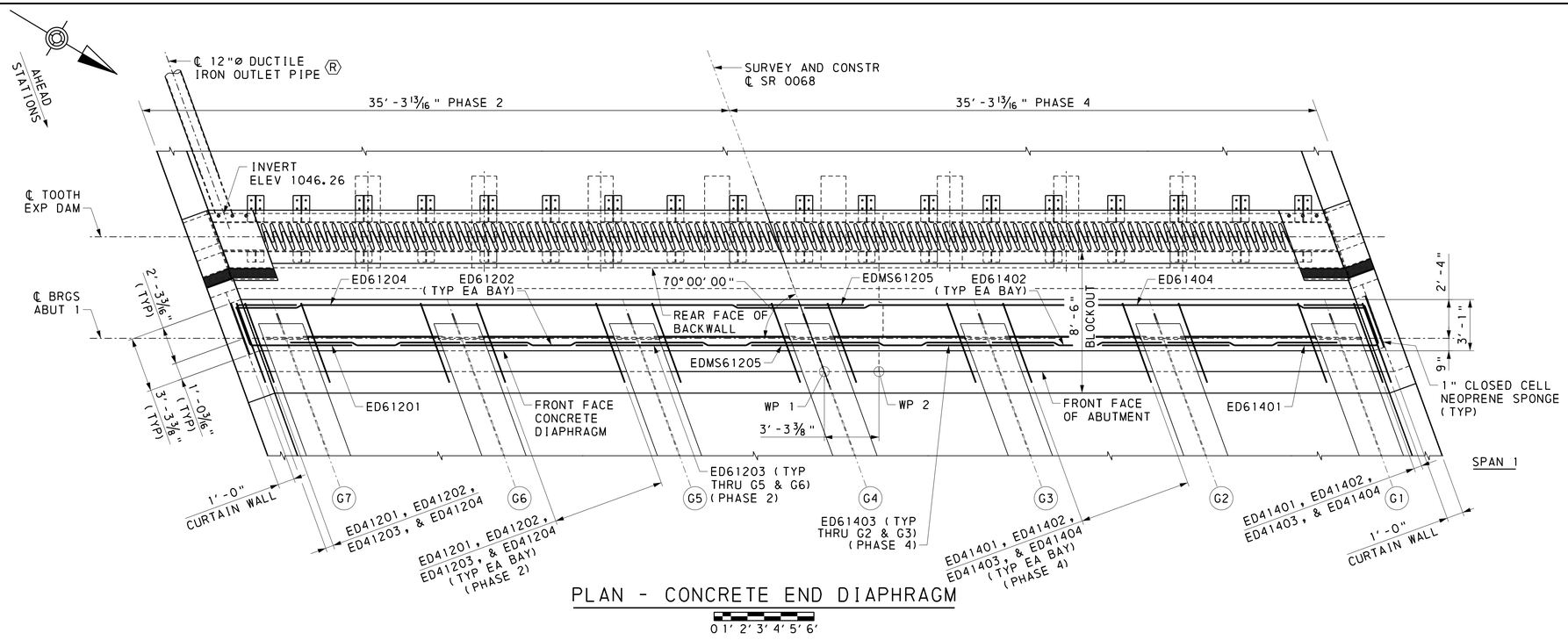

PLAN - CONCRETE END DIAPHRAGM

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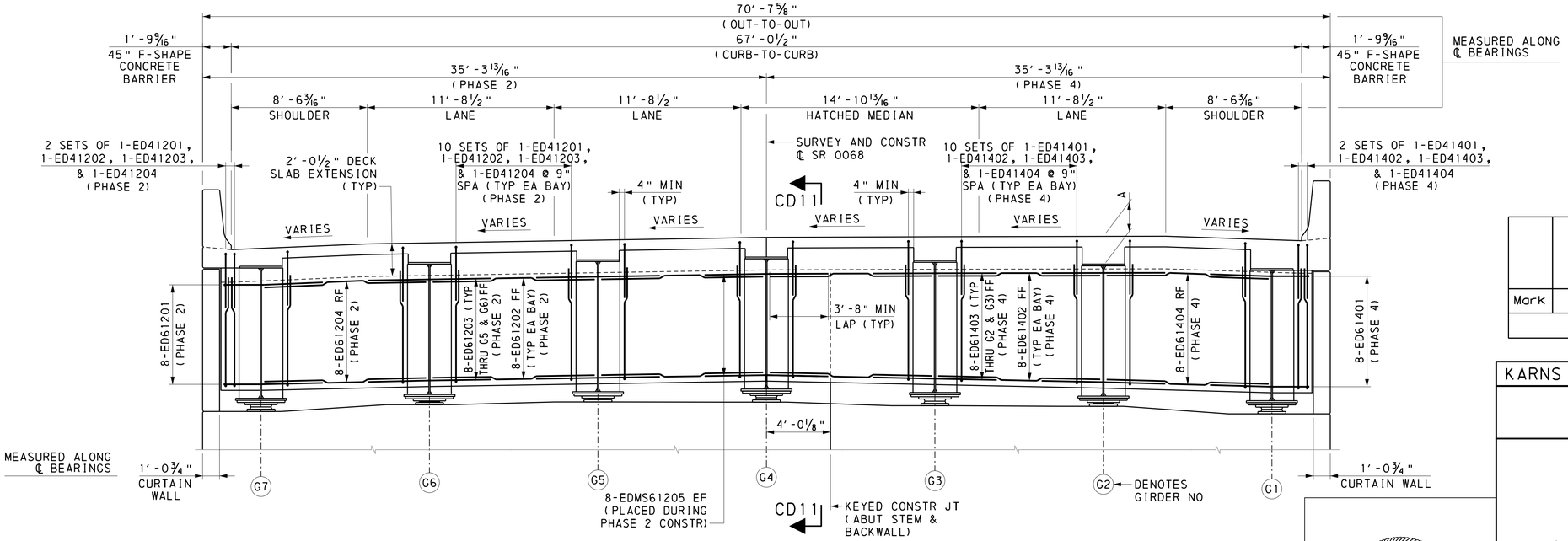

CONCRETE END DIAPHRAGM ELEVATION

@ ℄ BEARINGS ABUTMENT 1

LOOKING BACK STATIONS

0 1' 2' 3' 4' 5' 6'

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 2 & 4	7 & 8
5.	SUPERELEVATION TRANSITION TABLE	7
6.	SECTION CD1-CD1	69
7.	CONCRETE END DIAPHRAGM REINF SCHEDULE	104

NOTES:

1. DECK SLAB REINFORCEMENT AND SHEAR CONNECTORS NOT SHOWN.
2. ALL BARS SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
3. STEEL JACKING DIAPHRAGMS AND BEVELED JACKING PLATES NOT SHOWN IN ELEVATION VIEW.
4. GIRDER BOTTOM FLANGES AND STEEL JACKING DIAPHRAGM FLANGES NOT SHOWN IN PLAN VIEW.
5. FOR TABLE OF "A" DIMENSIONS, SEE ABUT 1 CONCRETE END DIAPHRAGM DETAILS 2.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 CONCRETE END DIAPHRAGM DETAILS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

RECOMMENDED _____

SHEET 68 OF 121

S - 39526

DES: BEG | CKD: JMF | DWG: EEM | CKD: BEG

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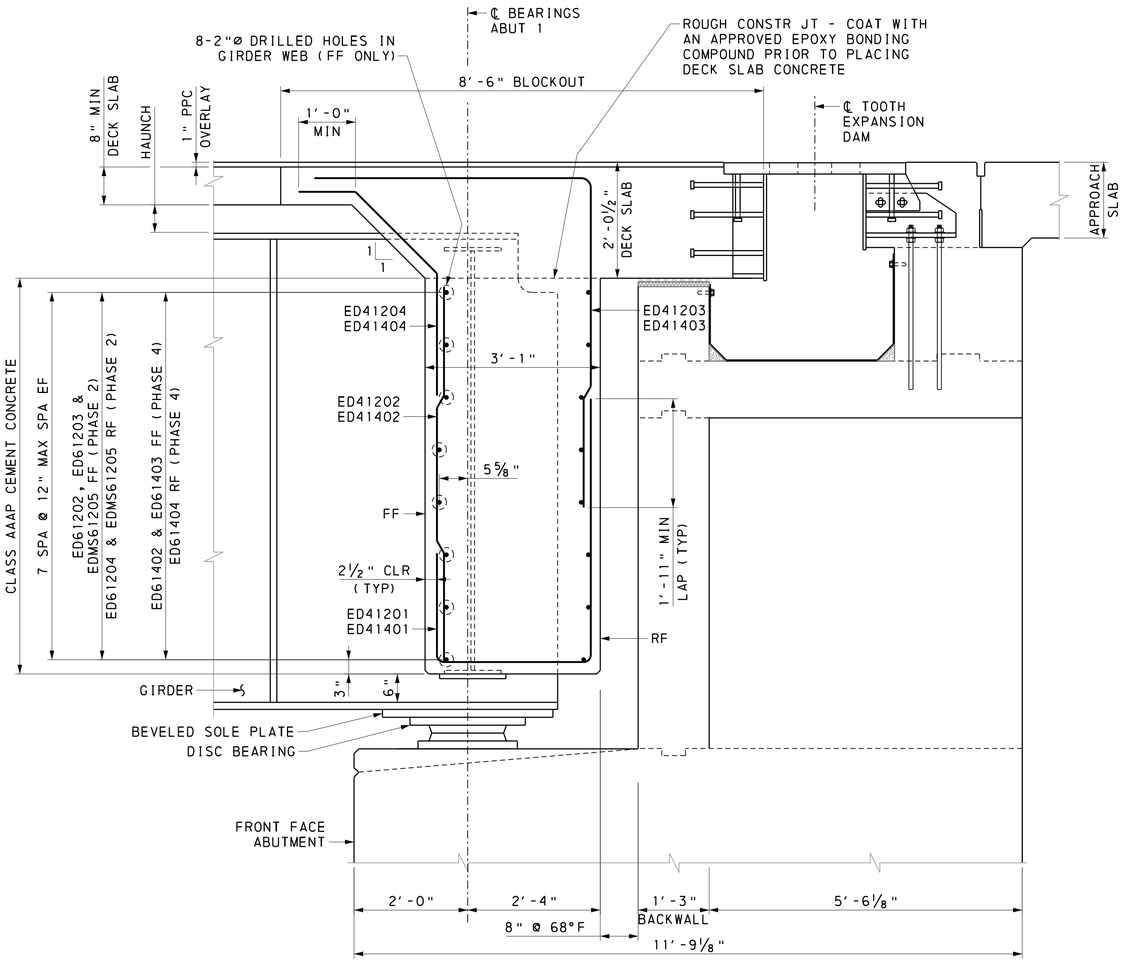

SECTION CD11-CD11
CONCRETE END DIAPHRAGM DETAIL

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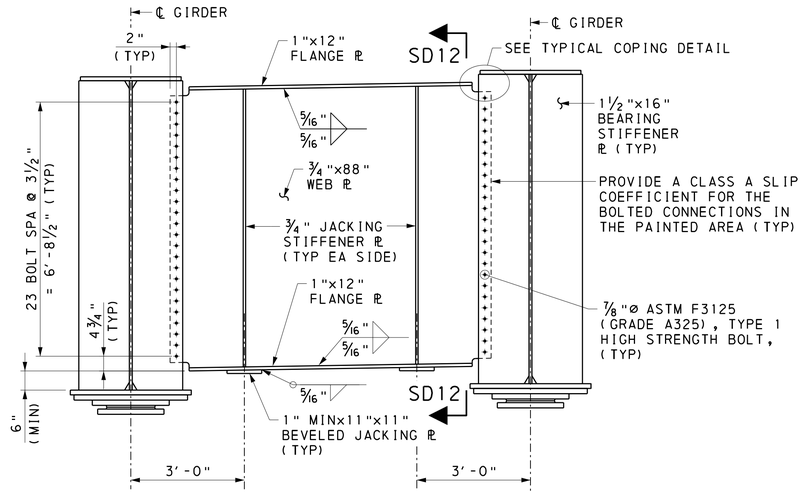

STEEL JACKING DIAPHRAGM DETAIL

LOOKING BACK STATIONS

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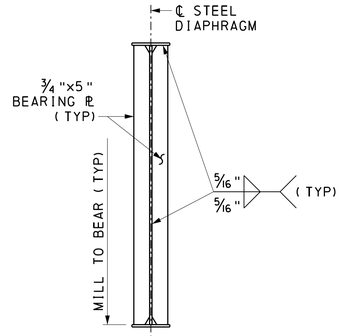
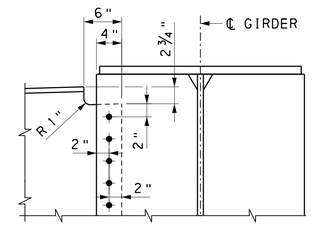


SECTION SD12-SD12

NOT TO SCALE



TYPICAL COPING DETAIL

NOT TO SCALE

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS

NOTES:

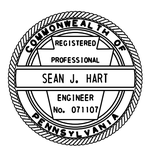
1. DECK SLAB REINFORCEMENT AND SHEAR CONNECTORS NOT SHOWN.
2. ALL BAR SPACING INDICATED ARE MAXIMUMS CENTER TO CENTER OF BAR.
3. "A" DIMENSION MEASURES A CONSTANT 16 INCHES FOR ALL LOCATIONS BEYOND THOSE SHOWN IN TABLE.
4. STEEL JACKING DIAPHRAGMS ARE TO BE INSTALLED AFTER GIRDERS ARE ERECTED AND BEARING INSTALLATION IS COMPLETE.
5. ALL JACKING DIAPHRAGM STEEL SHALL BE AASHTO M270, GRADE 50W.

TABLE OF "A" DIMENSIONS

GIRDER 1			GIRDER 2			GIRDER 3			GIRDER 4			GIRDER 5			GIRDER 6			GIRDER 7		
X/L	STATION	"A"	X/L	STATION	"A"	X/L	STATION	"A"	X/L	STATION	"A"	X/L	STATION	"A"	X/L	STATION	"A"	X/L	STATION	"A"
0.00	109+60.83	23.04	0.00	109+57.22	22.20	0.00	109+53.61	19.23	0.00	109+50.00	16.00	0.00	109+46.39	16.00	0.00	109+42.78	16.00	0.00	109+39.17	14.70
0.05	109+74.33	21.87	0.05	109+70.72	21.22	0.05	109+67.11	18.74	0.05	109+63.50	16.00	0.05	109+59.89	16.00	0.05	109+56.28	16.00	0.05	109+52.67	15.16
0.10	109+87.83	20.70	0.10	109+84.22	20.23	0.10	109+80.61	18.25	0.10	109+77.00	16.00	0.10	109+73.39	16.00	0.10	109+69.78	16.00	0.10	109+66.17	15.63
0.15	110+01.33	19.54	0.15	109+97.72	19.25	0.15	109+94.11	17.76	0.15	109+90.50	16.00	0.15	109+86.89	16.00	0.15	109+83.28	16.00	0.15	109+79.67	16.00
0.20	110+14.83	18.37	0.20	110+11.22	18.26	0.20	110+07.61	17.26	0.20	110+04.00	16.00	0.20	110+00.39	16.00	0.20	109+96.78	16.00	0.20	109+93.17	16.00
0.25	110+28.33	17.20	0.25	110+24.72	17.28	0.25	110+21.11	16.77	0.25	110+17.50	16.00	0.25	110+13.89	16.00	0.25	110+10.28	16.00	0.25	110+06.67	16.00
0.30	110+41.83	16.04	0.30	110+38.22	16.29	0.30	110+34.61	16.28	0.30	110+31.00	16.00	0.30	110+27.39	16.00	0.30	110+23.78	16.00	0.30	110+20.17	16.00
0.35	110+55.33	16.00	0.35	110+51.72	16.00	0.35	110+48.11	16.00	0.35	110+44.50	16.00	0.35	110+40.89	16.00	0.35	110+37.28	16.00	0.35	110+33.67	16.00

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	CONSTRUCTION PHASE 2 & 4	7 & 8
5.	LOCATION OF CD1-CD1	68
6.	CONCRETE END DIAPHRAGM REINF BAR SCHEDULE	104



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
ABUT 1 CONCRETE END DIAPHRAGM DETAILS 2

RECOMMENDED _____

SHEET 69 OF 121

S - 39526

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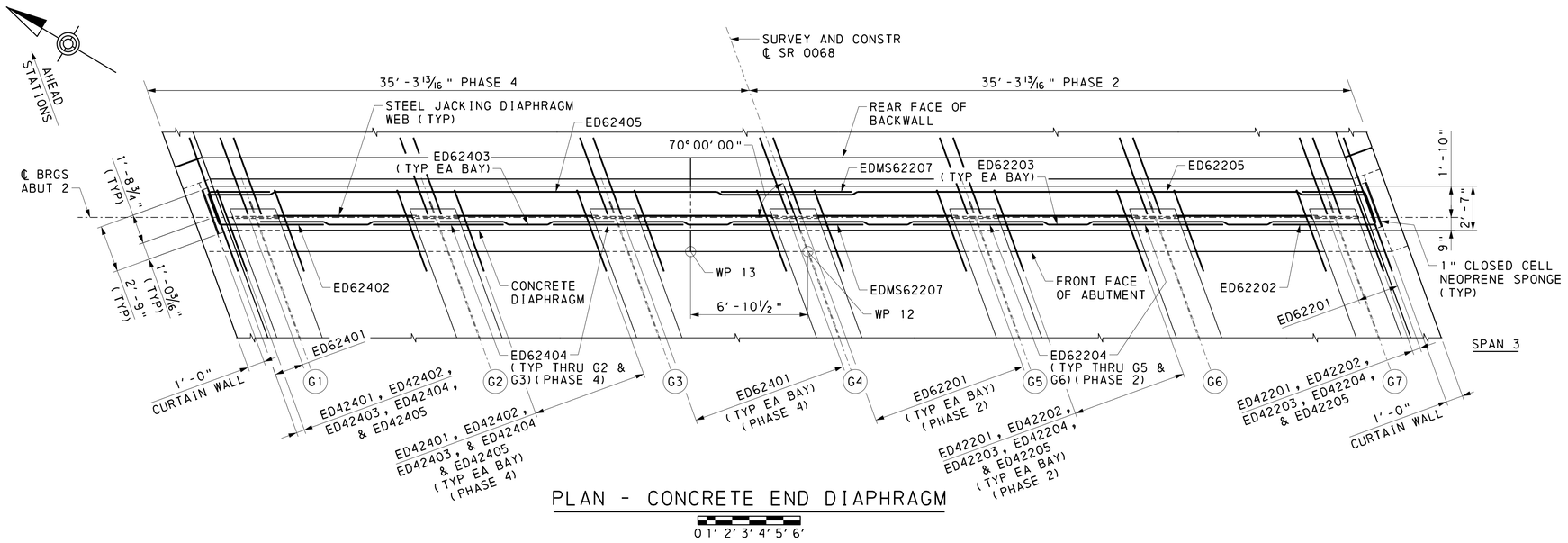
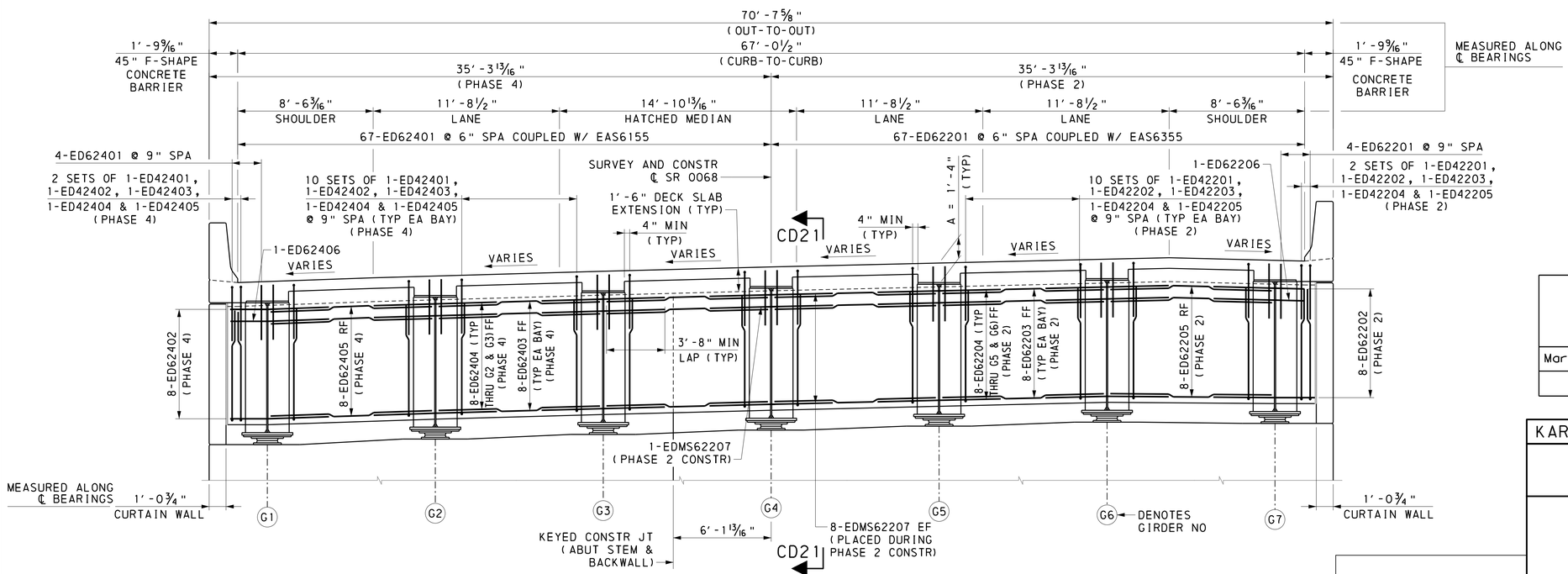


PLAN - CONCRETE END DIAPHRAGM

0 1′ 2′ 3′ 4′ 5′ 6′



CONCRETE END DIAPHRAGM ELEVATION @ ℄ BEARINGS ABUTMENT 2

LOOKING AHEAD STATIONS

0 1′ 2′ 3′ 4′ 5′ 6′

LEGEND:

FF DENOTES FRONT FACE
RF DENOTES REAR FACE
EF DENOTES EACH FACE
E DENOTES EPOXY COATED BARS

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	CONSTRUCTION PHASING 2 & 4	7 & 8
5.	SUPERELEVATION TRANSITION TABLE	7
6.	SECTION CD2-CD2	71
7.	CONCRETE END DIAPHRAGM REINF SCHEDULE	104

NOTES:

1. DECK SLAB REINFORCEMENT AND SHEAR CONNECTORS NOT SHOWN.
2. ALL BARS SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
3. STEEL JACKING DIAPHRAGMS AND BEVELED JACKING PLATES NOT SHOWN IN ELEVATION VIEW.
4. GIRDER BOTTOM FLANGES AND STEEL JACKING DIAPHRAGM FLANGES NOT SHOWN IN PLAN VIEW.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 CONCRETE END DIAPHRAGM DETAILS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 70 OF 121

S - 39526

DES: BEG | CKD: JMF | DWG: EEM | CKD: BEG

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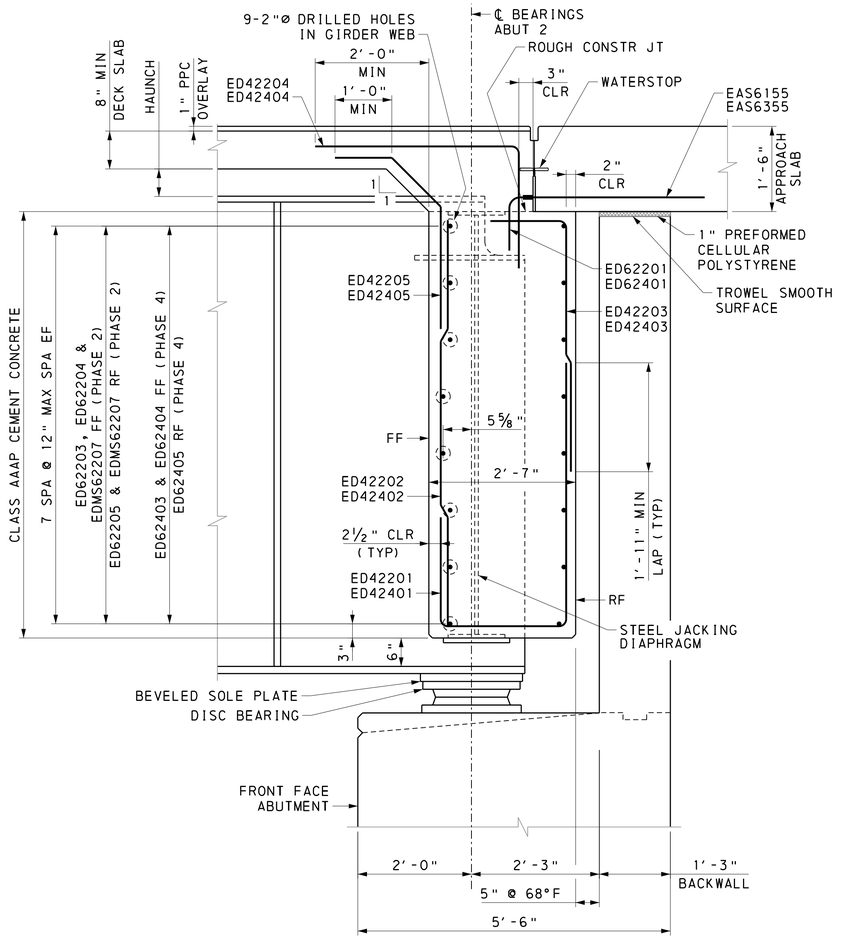
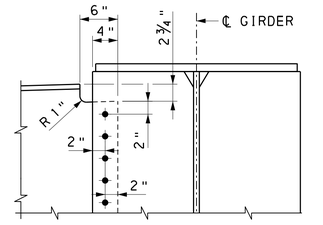
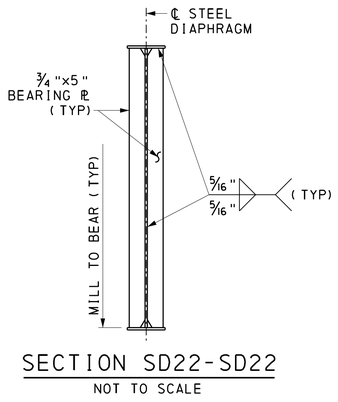


SECTION CD21-CD21
CONCRETE END DIAPHRAGM DETAIL

0 6 1' 2'



TYPICAL COPING DETAIL
NOT TO SCALE



SECTION SD22-SD22
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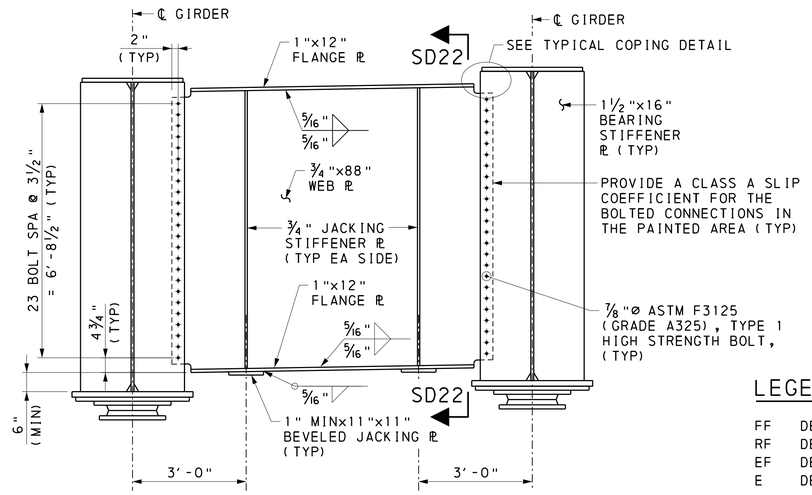

STEEL JACKING DIAPHRAGM DETAIL
LOOKING AHEAD STATIONS

0 6 1' 2' 3' 4'

LEGEND:

FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
EF	DENOTES EACH FACE
E	DENOTES EPOXY COATED BARS

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASE 2 & 4	7 & 8
5.	LOCATION OF CD2-CD2	70
6.	CONCRETE END DIAPHRAGM REINF BAR SCHEDULE	104

NOTES:

1. DECK SLAB REINFORCEMENT AND SHEAR CONNECTORS NOT SHOWN.
2. ALL BAR SPACING INDICATED ARE MAXIMUMS CENTER TO CENTER OF BAR.
3. STEEL JACKING DIAPHRAGMS ARE TO BE INSTALLED AFTER GIRDERS ARE ERECTED AND BEARING INSTALLATION IS COMPLETE.
4. ALL JACKING DIAPHRAGM STEEL SHALL BE AASHTO M270, GRADE 50W.

Mark	Description	By	Chk'd.	Recm'd.	Date
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MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
ABUT 2 CONCRETE END DIAPHRAGM DETAILS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 71 OF 121

S - 39526

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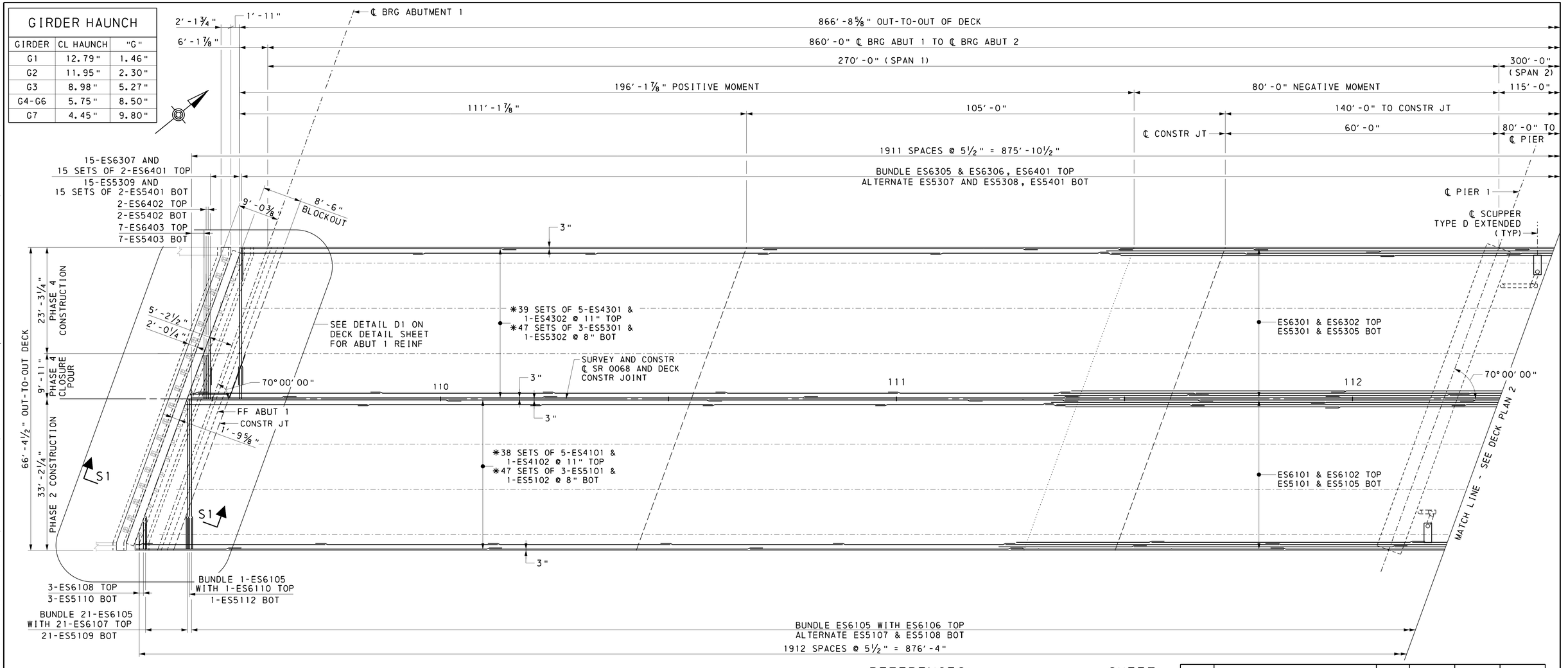
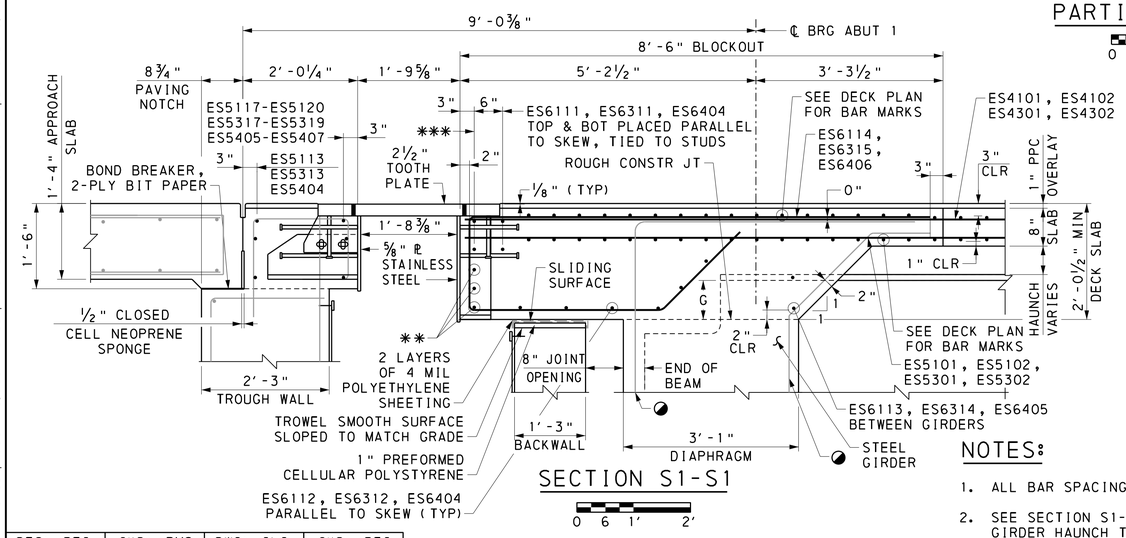
GIRDER HAUNCH		
GIRDER	CL HAUNCH	"G"
G1	12.79"	1.46"
G2	11.95"	2.30"
G3	8.98"	5.27"
G4-G6	5.75"	8.50"
G7	4.45"	9.80"



PARTIAL DECK PLAN

0 5' 10' 20'



SECTION S1-S1

0 6 1' 2'

REFERENCES:

	SHEET:
1. INDEX OF DRAWINGS AND RATINGS	3
2. DECK ELEVATIONS	11 & 12
3. CONCRETE END DIAPHRAGM DETAILS 1 & 2	68 & 69
4. WORK THIS SHEET WITH SHEETS	73 - 77
5. BARRIER PLAN AND DETAILS	78
6. DECK REINF BAR SCHEDULE	105 & 106

LEGEND:

*	DENOTES ALTERNATE BAR LAPS
**	DENOTES ES6115-ES6118, ES6316-ES6318, ES6407-ES6409, PARALLEL TO SKEW
***	DENOTES ES6115-ES6118, ES6316-ES6318, ES6407-ES6409, TOP & BOT PLACED PARALLEL TO SKEW, TIED TO STUDS
FF	DENOTES FRONT FACE
E	DENOTES EPOXY COATED BARS
PPC	DENOTES POLYESTER POLYMER CONCRETE
◒	DENOTES SEE CONCRETE END DIAPHRAGM DETAILS FOR BAR MARKS

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
2. SEE SECTION S1-S1 FOR LOCATION OF DIMENSION "G" TABULATED IN GIRDER HAUNCH TABLE.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

Mark	Description	By	Chk'd.	Recm'd.	Date
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MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
DECK PLAN 1

RECOMMENDED _____

SHEET 72 OF 121

S - 39526

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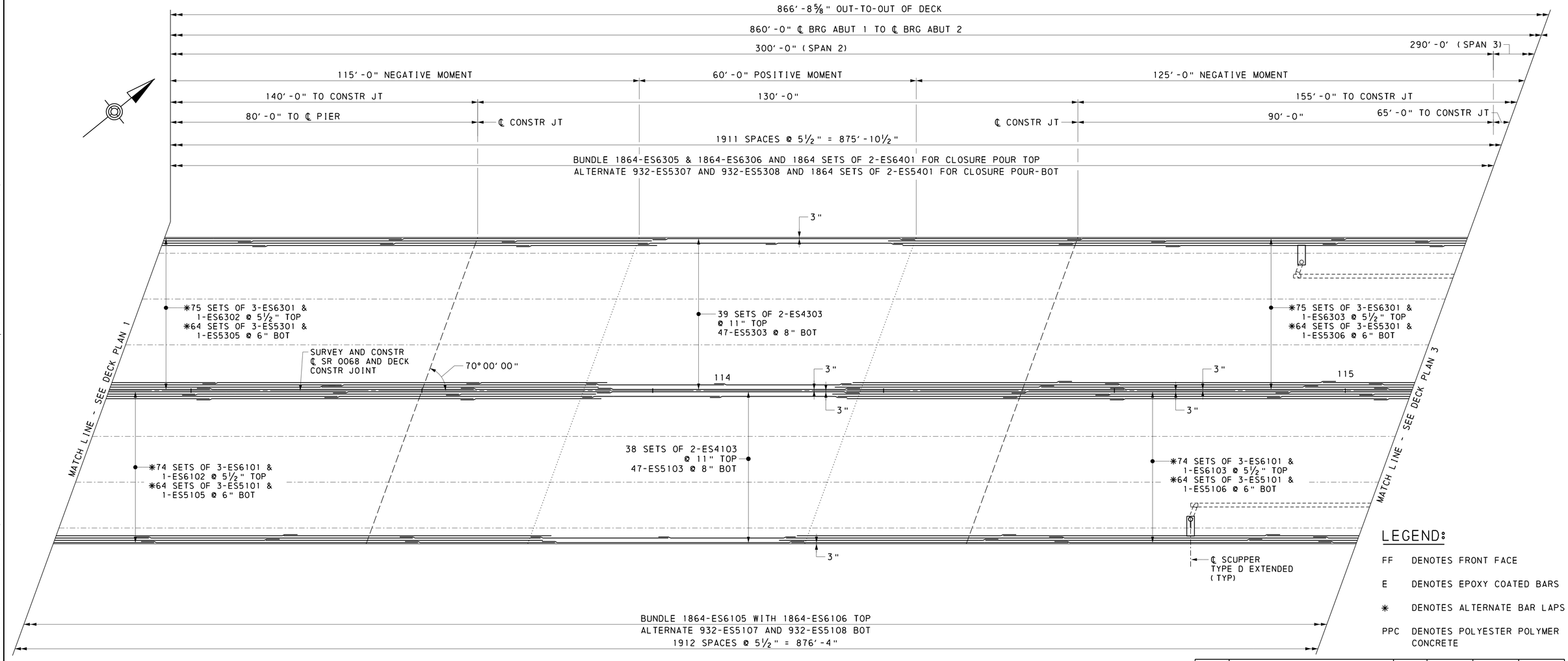


LEGEND:

FF DENOTES FRONT FACE

E DENOTES EPOXY COATED BARS

* DENOTES ALTERNATE BAR LAPS

PPC DENOTES POLYESTER POLYMER CONCRETE

HAUNCH BARS				
GIRDER	TRANS BARS	NO OF TRANS BARS AT 11" SPA	LONGITUDINAL BARS	NUMBER OF LONGITUDINAL BARS
G1	ES3301	942	ES4305	2 SETS OF 23 BARS
G2	ES3301	942	ES4305	2 SETS OF 23 BARS
G3	ES3302	942	ES4305	2 SETS OF 23 BARS
G4	ES3101	942	ES4105	2 SETS OF 23 BARS
G5	ES3101	942	ES4105	2 SETS OF 23 BARS
G7	ES3101	942	ES4105	2 SETS OF 23 BARS
G7	ES3101	942	ES4105	2 SETS OF 23 BARS

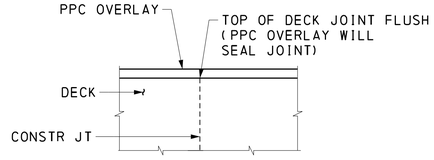
PARTIAL DECK PLAN

0 5′ 10′ 20′

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	DECK ELEVATIONS	11 & 12
6.	DECK PLAN 1 AND DECK PLAN 3	72 & 74
7.	WORK THIS SHEET WITH SHEETS	75 - 77
8.	BARRIER PLAN AND DETAILS	78
9.	DECK REINF BAR SCHEDULE 1 & 2	105 & 106

MINIMUM DECK REINFORCEMENT BAR LAP LENGTH		
BAR SIZE	LOCATION	LAP LENGTH
#4	TOP, LONGITUDINAL	2′-2"
#5	BOTTOM, LONGITUDINAL	2′-10"
#6	TOP, LONGITUDINAL	3′-10"



LONGITUDINAL & TRANSVERSE CONSTRUCTION JOINT DETAIL

NOT TO SCALE

NOTES:

1. FOR LONGITUDINAL CONSTRUCTION JOINT DETAILS, SEE STANDARD DRAWING BC-752M. SEAL JOINT WITH AN EPOXY JOINT SEALING MATERIAL.
2. START HAUNCH BAR SPACING AT 3" FROM END OF GIRDER AT ABUTMENT 1 AND END 3" BEFORE END OF GIRDER AT ABUTMENT 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK PLAN 2

RECOMMENDED _____

SHEET 73 OF 121

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℄ PIER 2

866′-8⅝" OUT-TO-OUT OF DECK

860′-0" ℄ BRG ABUT 1 TO ℄ BRG ABUT 2

℄ BRG ABUTMENT 2

6¾"

290′-0" (SPAN 3)

125′-0" NEGATIVE MOMENT

85′-0" NEGATIVE MOMENT

205′-6¾" POSITIVE MOMENT

155′-0" TO CONSTR JT

115′-0"

110′-0"

90′-0" TO CONST JT

65′-0"

℄ CONSTR JT

1911 SPACES @ 5½" = 875′-10½"

BUNDLE ES6305 & ES6306, ES6401 TOP
ALTERNATE ES5307 AND ES5308, ES5401 BOT

BUNDLE 12-ES6305 & 12-ES6308 TOP
12-ES5310 BOT

BUNDLE 7-ES6305 & 7-ES6306, 7-ES6403 TOP
7-ES5307 AND 7-ES5403 BOT

BUNDLE 1-ES6305 & 1-ES6310 TOP; 1-ES5312 BOT

BUNDLE 1-ES6305 & 1-ES6306, 1-ES6402 TOP
1-ES5307 & 1-ES5402 BOT

3-ES6309 TOP; 3-ES5311 BOT

MATCH LINE - SEE DECK PLAN 2

ES6301 & ES6303 TOP
ES5301 & ES5306 BOT

*39 SETS OF 5-ES4301 &
1-ES4304 @ 11" TOP
*47 SETS OF 3-ES5301 &
1-ES5304 @ 8" BOT

70°00′00"

116

117

118

SURVEY AND CONSTR
℄ SR 0068 AND DECK
CONSTR JOINT

SEE DETAIL D2 ON
DECK DETAIL SHEET
FOR ABUT 2 REINF

FF ABUT 2

3"

ES6101 & ES6103 TOP
ES5101 & ES5106 BOT

*38 SETS OF 5-ES4101 &
1-ES4104 @ 11" TOP
*47 SETS OF 3-ES5101 &
1-ES5104 @ 8" BOT

S2

2′-0"

1′-3"
BACKWALL
1′-1¼"
8¾"

33′-2¼"
PHASE 3 CONSTRUCTION

33′-2¼"
PHASE 1 CONSTRUCTION
66′-4½" OUT-TO-OUT DECK

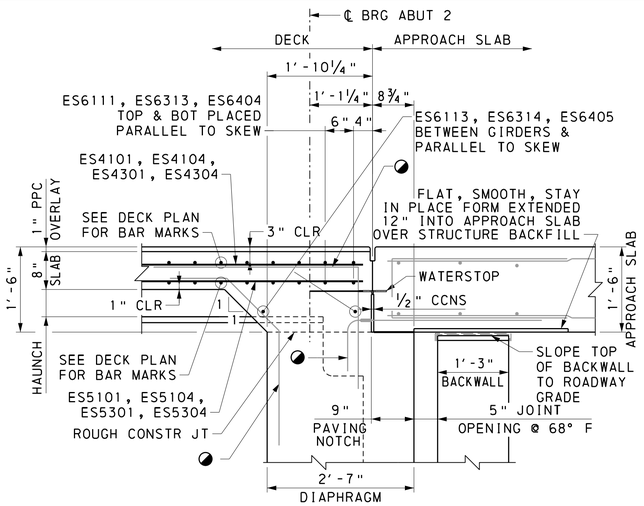
℄ SCUPPER
TYPE D EXTENDED
(TYP)

1′-4" TO ℄ BRG ABUT 2

BUNDLE ES6105 WITH ES6106 TOP
ALTERNATE ES5107 AND ES5108 BOT
1912 SPACES @ 5½" = 876′-4"

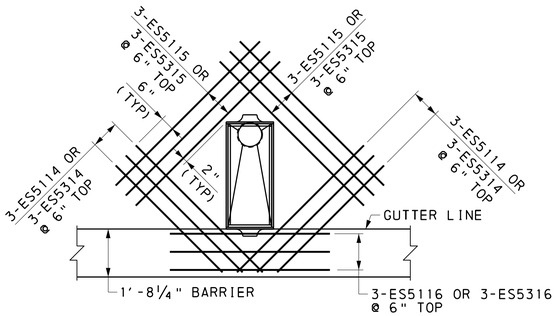
24-ES6109 TOP
24-ES5111 BOT

SECTION S2-S2



PARTIAL DECK PLAN

0 5′ 10′ 20′



DECK REINFORCEMENT AT SCUPPER

CUT AND/OR REPOSITION DECK REINFORCEMENT
TO ACCOMMODATE SCUPPERS OR DRAINS

5 REQ'D FOR PHASE 2 CONSTRUCTION
3 REQ'D FOR PHASE 4 CONSTRUCTION

0 1′ 2′ 3′ 4′

REFERENCES:

	SHEET:
1. LIST OF PENNDOT STANDARD DRAWINGS AND INDEX OF DRAWINGS AND RATINGS	1
2. GENERAL NOTES	4 & 5
3. CONSTRUCTION PHASING 1 & 2	7 & 8
4. DECK ELEVATIONS	11 & 12
5. ABUTMENT 2 DETAILS	31 - 93
6. CONCRETE END DIAPHRAGM DETAILS 1 & 2	68 - 69
7. WORK THIS SHEET WITH SHEETS	72, 73 & 77
8. BARRIER PLAN AND DETAILS	78
9. DECK REINF BAR BAR SCHEDULE	105 & 106

LEGEND:

E	DENOTES EPOXY COATED BARS
FF	DENOTES FRONT FACE
RF	DENOTES REAR FACE
*	DENOTES ALTERNATE BAR LAPS
CCNS	DENOTES CLOSED CELL NEOPRENE SPONGE
◕	DENOTES SEE CONCRETE END DIAPHRAGM DETAILS FOR BAR MARKS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

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KARNS CROSSING

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SR 0068 SECTION 253

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK PLAN 3

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SHEET 74 OF 121

S - 39526

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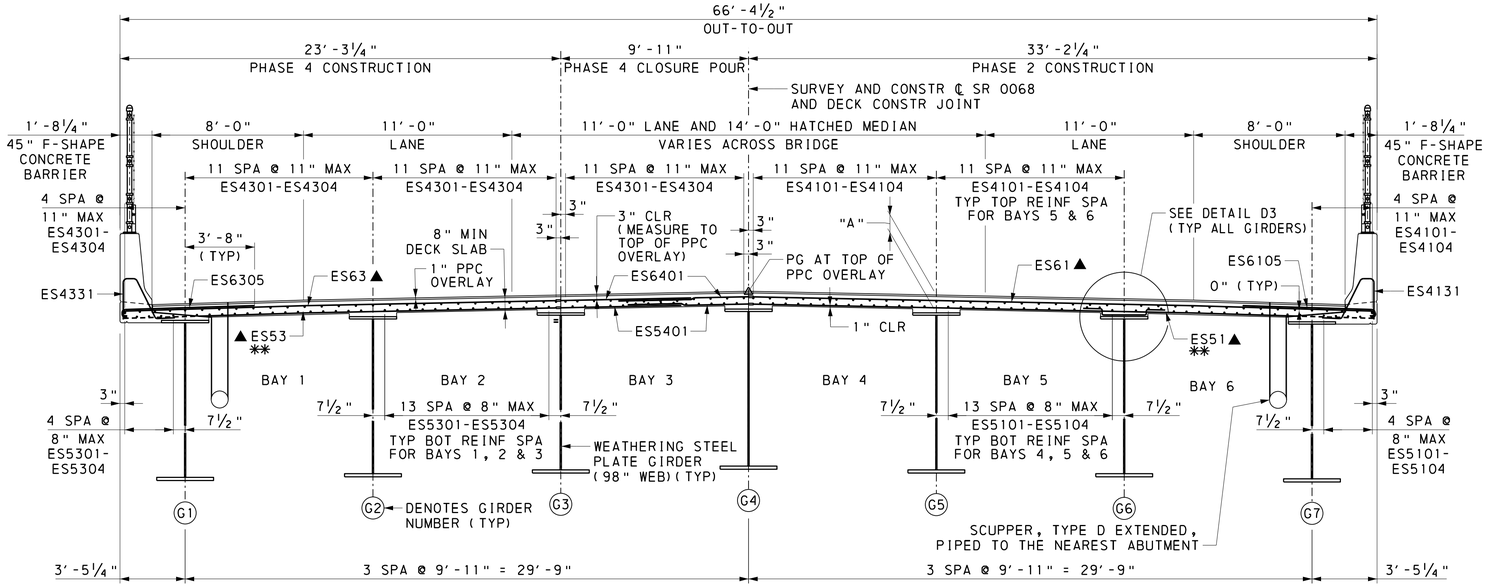
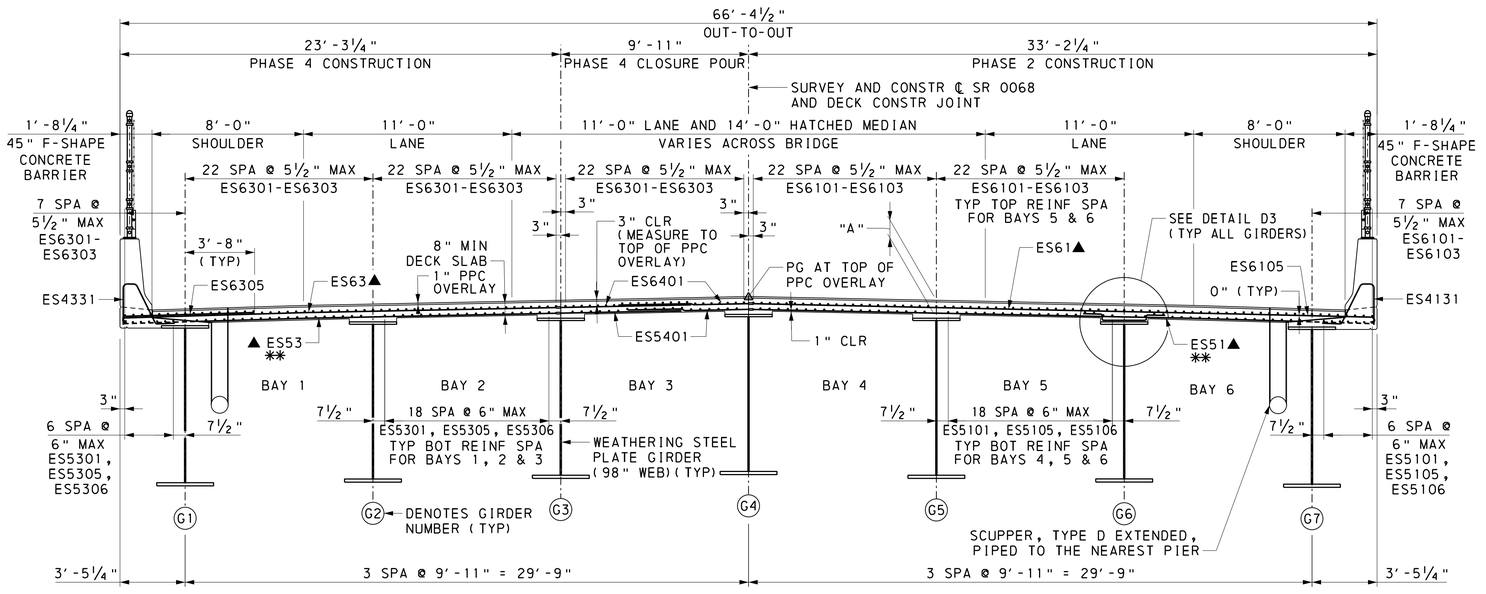


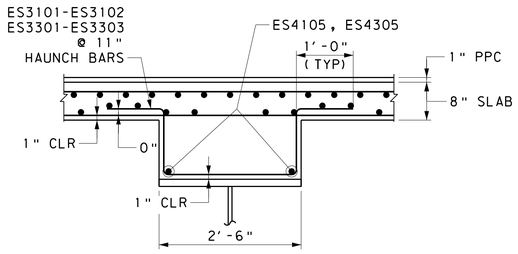
TYPICAL DECK SECTION FOR POSITIVE MOMENT REGION

0 1' 2' 3' 4' 5' 6'



TYPICAL DECK SECTION FOR NEGATIVE MOMENT REGION

0 1' 2' 3' 4' 5' 6'



DETAIL D3

REQUIRED THE FULL LENGTH OF ALL 7 GIRDERS
NOT TO SCALE

LEGEND:

E DENOTES EPOXY COATED BARS

PPC DENOTES POLYESTER POYMER CONCRETE

▲ DENOTES BAR MARKS NOT SHOWN FOR CLARITY, SEE DECK PLANS FOR BAR MARKS

** DENOTES EXTEND ONE HALF OF THE BOTTOM TRANSVERSE BARS ACROSS THE FULL WIDTH OF THE OVERHANG. THE ALTERNATE BARS WHICH DO NOT EXTEND INTO THE OVERHANG SHALL EXTEND 6" MIN BEYOND THE INTERIOR EDGE OF THE FLANGE OF THE FASCIA GIRDER.

NOTES:

1. ALL BAR SPACES INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.
2. "A" DIMENSION SHOWN ON DECK SECTIONS MEASURES A CONSTANT 16 INCHES, EXCEPT FOR LOCATIONS WITHIN SPAN 1. SEE TABLE OF "A" DIMENSIONS ON ABUT 1 CONCRETE END DIAPHRAGM DETAILS 2 FOR THESE VALUES.

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	DECK ELEVATIONS	11 & 12
6.	DECK REINFORCEMENT PLANS	72 - 74
7.	DECK DETAILS	76
8.	DECK POUR SEQUENCE	77
9.	DECK BARRIER PLAN	78
10.	DECK REINF BAR SCHEDULES	105 & 106

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KARNS CROSSING

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DECK SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
PENNSYLVANIA

RECOMMENDED _____

SHEET 75 OF 121

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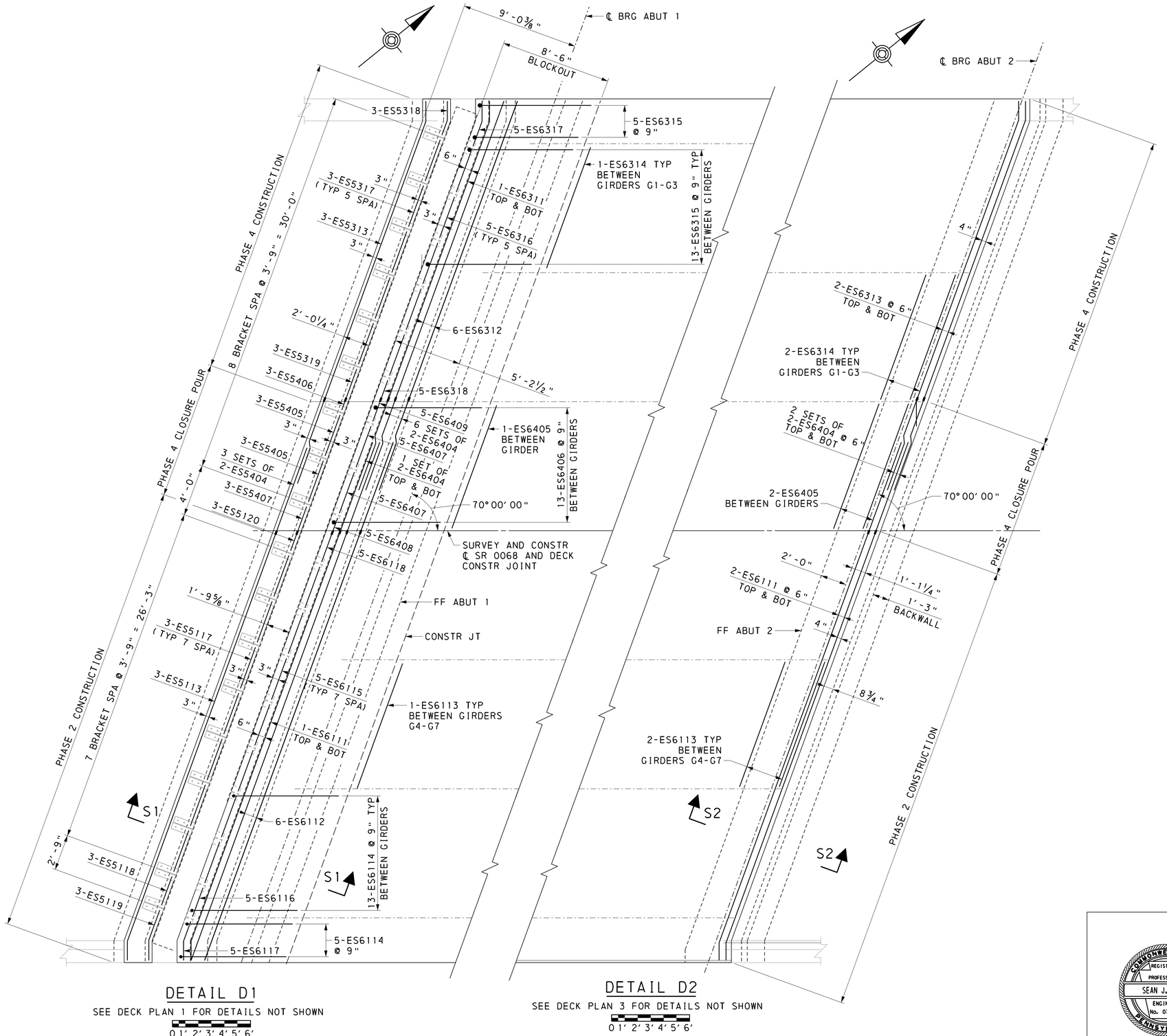

DETAIL D1

SEE DECK PLAN 1 FOR DETAILS NOT SHOWN

0 1' 2' 3' 4' 5' 6'

DETAIL D2

SEE DECK PLAN 3 FOR DETAILS NOT SHOWN

0 1' 2' 3' 4' 5' 6'

NOTES:

1. ALL BAR SPACINGS INDICATED ARE MAXIMUMS CENTER TO CENTER OF BARS.

LEGEND:

FF DENOTES FRONT FACE
E DENOTES EPOXY COATED BARS

REFERENCES:

	SHEET:
1. CONSTRUCTION PHASING 1 & 2	7 & 8
2. ABUTMENT 1 DETAILS	16 - 26
3. ABUTMENT 2 DETAILS	31 - 42
4. CONCRETE END DIAPHRAGM	68 & 69
5. DECK PLANS 1 THRU 3	72 - 74
6. WORK SHEET WITH SHEETS	75 & 77
7. BARRIER PLAN AND DETAILS	78
8. DECK REINF BAR BAR SCHEDULE	105 & 106

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DECK DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 76 OF 121

S - 39526

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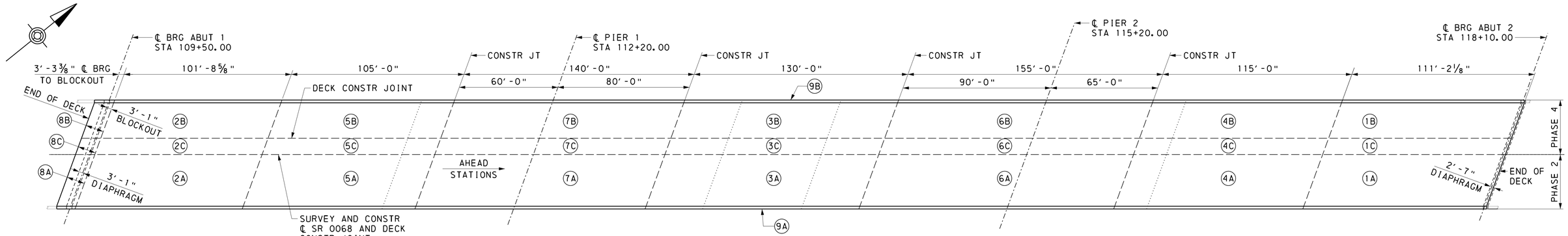
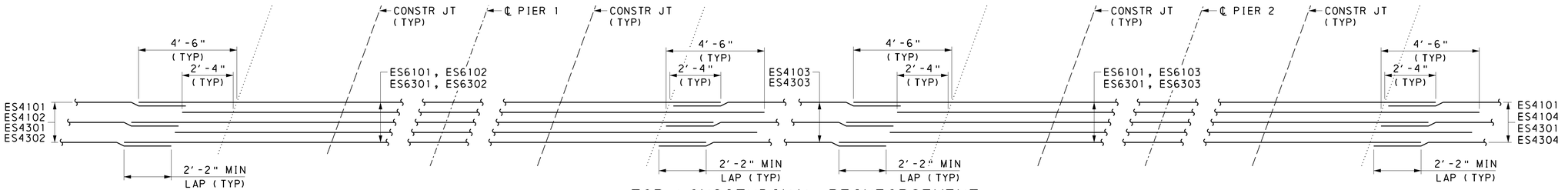


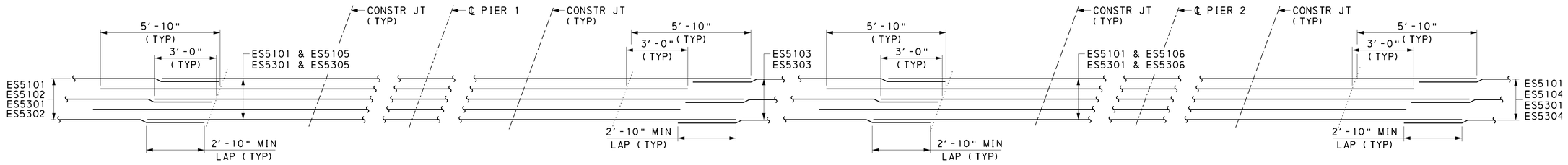
DECK PLAN POUR SEQUENCE

NOT TO SCALE



TOP LONGITUDINAL REINFORCEMENT

NOT TO SCALE



BOTTOM LONGITUDINAL REINFORCEMENT

NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

PLACEMENT SEQUENCE NOTES:

1. NO ALTERNATE DECK PLACEMENT SEQUENCE IS PERMITTED.
2. THE PHASE 4 "B" POURS ARE TO BE COMPLETED PRIOR TO PLACING THE "C" CLOSURE POURS.
3. PLACEMENTS 1C AND 2C CAN BE COMBINED.
   PLACEMENTS 4C AND 5C CAN BE COMBINED.
   PLACEMENTS 6C AND 7C CAN BE COMBINED.
4. A MINIMUM WAITING PERIOD OF 2 CURING DAYS BETWEEN POSITIVE MOMENT REGION PLACEMENTS IN IMMEDIATELY ADJACENT POSITIVE MOMENT PLACEMENTS IN THE SAME SPAN.

LEGEND:

(1A) DENOTES DECK PLACEMENT NUMBER, PHASE 2 CONSTRUCTION

(1B) DENOTES DECK PLACEMENT NUMBER, PHASE 4 CONSTRUCTION

(1C) DENOTES DECK PLACEMENT NUMBER, PHASE 4 CLOSURE POUR

E DENOTES EPOXY COATED BARS

REFERENCES:

	SHEET:
1. DECK PLANS 1 - 3	72 - 74
2. BARRIER PLAN AND DETAILS	78
3. DECK REINF BAR SCHEDULE 1 & 2	105 & 106

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK POUR SEQUENCE

RECOMMENDED _____

SHEET 77 OF 121

S - 39526

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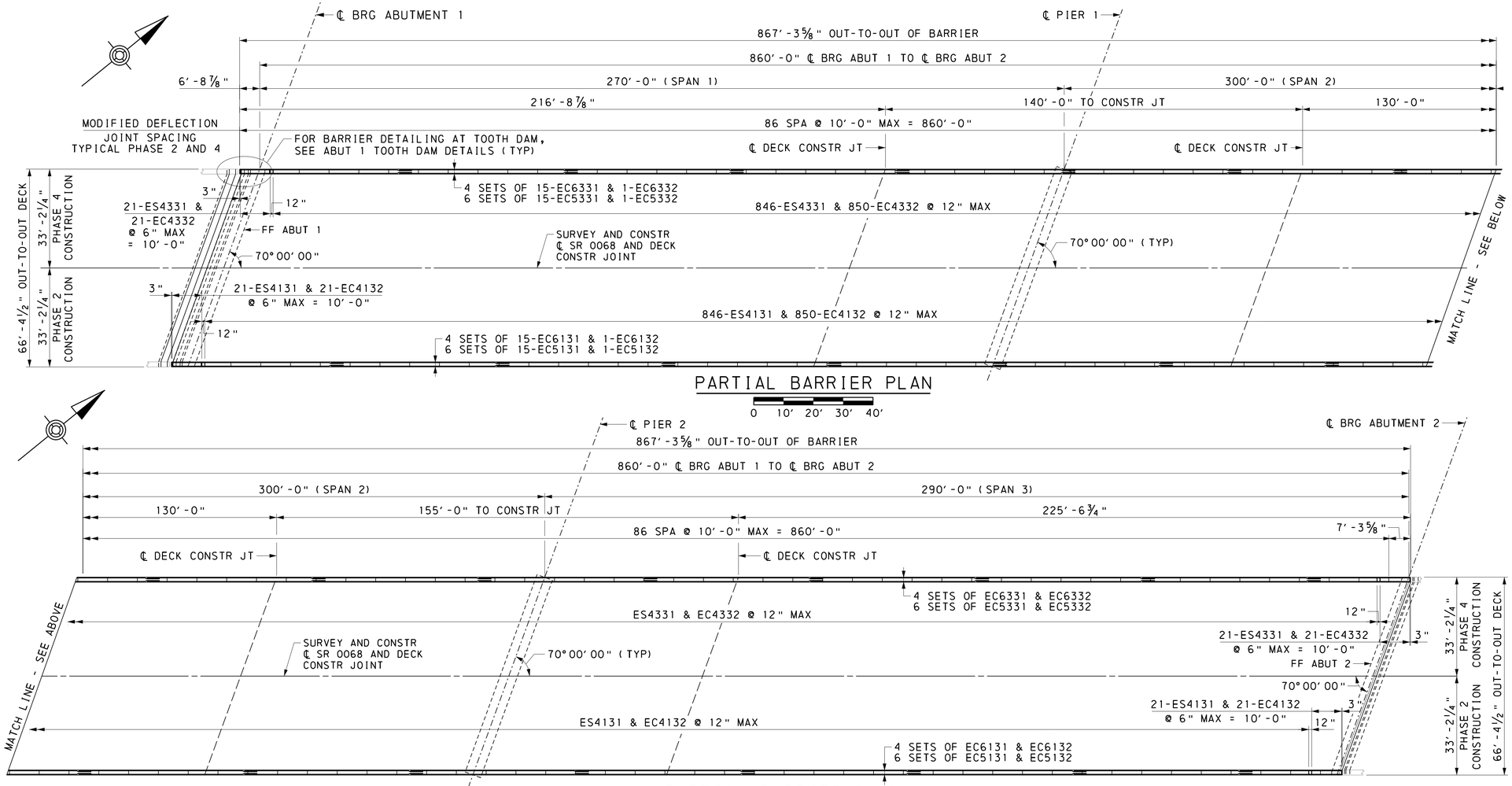
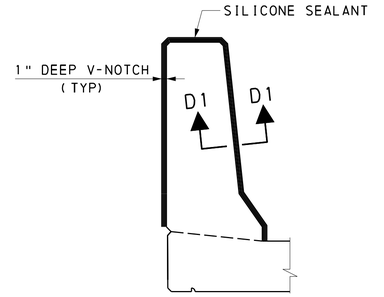


PARTIAL BARRIER PLAN

0 10′ 20′ 30′ 40′

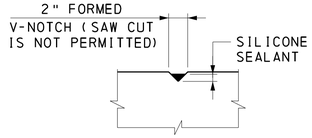
PARTIAL BARRIER PLAN

0 10′ 20′ 30′ 40′



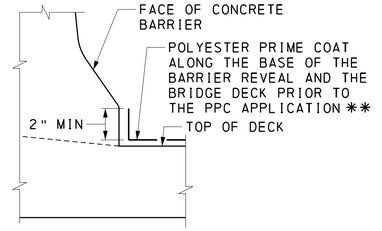
MODIFIED DEFLECTION JOINT DETAIL

NOT TO SCALE



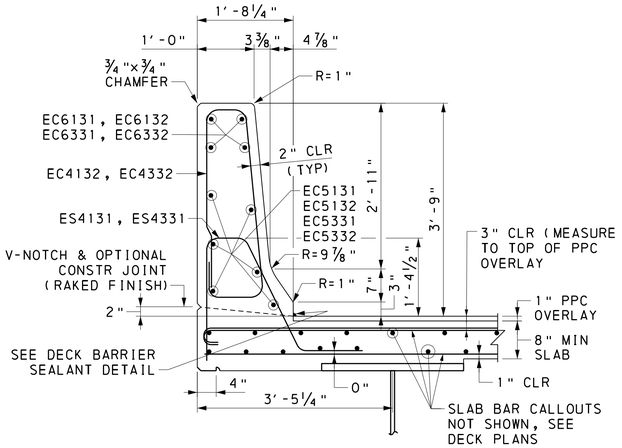
SECTION D1-D1

NOT TO SCALE



DECK BARRIER SEALANT DETAIL

NOT TO SCALE



TYPICAL 45" F-SHAPE BARRIER SECTION

0 6 1′ 2′

NOTES:

1. FOR BRIDGE BARRIER REINFORCEMENT TIE-IN TO WING BARRIER REINFORCEMENT TIE-IN, SEE RESPECTIVE ABUTMENT DETAIL SHEETS.
2. PROVIDE A ONE PART SILICONE SEALANT CONFORMING TO BULLETIN 15, SECTION 705.4(a). THIS SEALANT IS INCIDENTAL TO CLASS AA CEMENT CONCRETE, EXCEPT USE NO 8 COARSE AGGREGATE. SEE MODIFIED DEFLECTION JOINT DETAIL.
3. MODIFIED DEFLECTION JOINT TO BE FORMED. DO NOT SAW CUT. SEAL FRONT FACE, TOP AND REAR FACE OF JOINT WITH ONE-PART SILICONE JOINT SEALANT FROM BULLETIN 15, SECTION 705.4(a). SEALANT IS INCIDENTAL TO CLASS AA CEMENT CONCRETE, EXCEPT USE NO 8 COARSE AGGREGATE. LONGITUDINAL REINFORCEMENT IS CONTINUOUS THROUGH THE MODIFIED DEFLECTION JOINTS.
4. DO NOT USE PRECAST BARRIERS. DO NOT SLIP FORM BARRIERS.
5. CONTRACTOR TO ADJUST DEFLECTION JOINT SPACING BASED ON FENCE POST SPACING.
6. FOR TRANSVERSE CONSTRUCTION JOINT DETAIL AND V-NOTCH DETAIL, SEE STANDARD DRAWING BC-752M.
7. FOR DRIP NOTCH DETAIL, SEE STANDARD BC-775M.

LEGEND:

E DENOTES EPOXY COATED BARS

PPC DENOTES POLYESTER POLYMER CONCRETE

** DENOTES INCIDENTAL TO THE PPC OVERLAY

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	DECK ELEVATIONS	11 & 12
6.	ABUTMENT 1 DETAILS	16 - 94
7.	DECK DETAILS	72 - 76
8.	TOOTH DAM DETAILS	82 - 84
9.	APPROACH SLAB DETAILS	89 - 92
10.	DECK REINF BAR SCHEDULE 1 & 2	105 & 106

MINIMUM BARRIER REINFORCEMENT BAR LAP LENGTH

BAR SIZE	LOCATION	LAP LENGTH
#5	LONGITUDINAL	3′-7"
#6	LONGITUDINAL	4′-4"

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

BARRIER PLAN AND DETAILS

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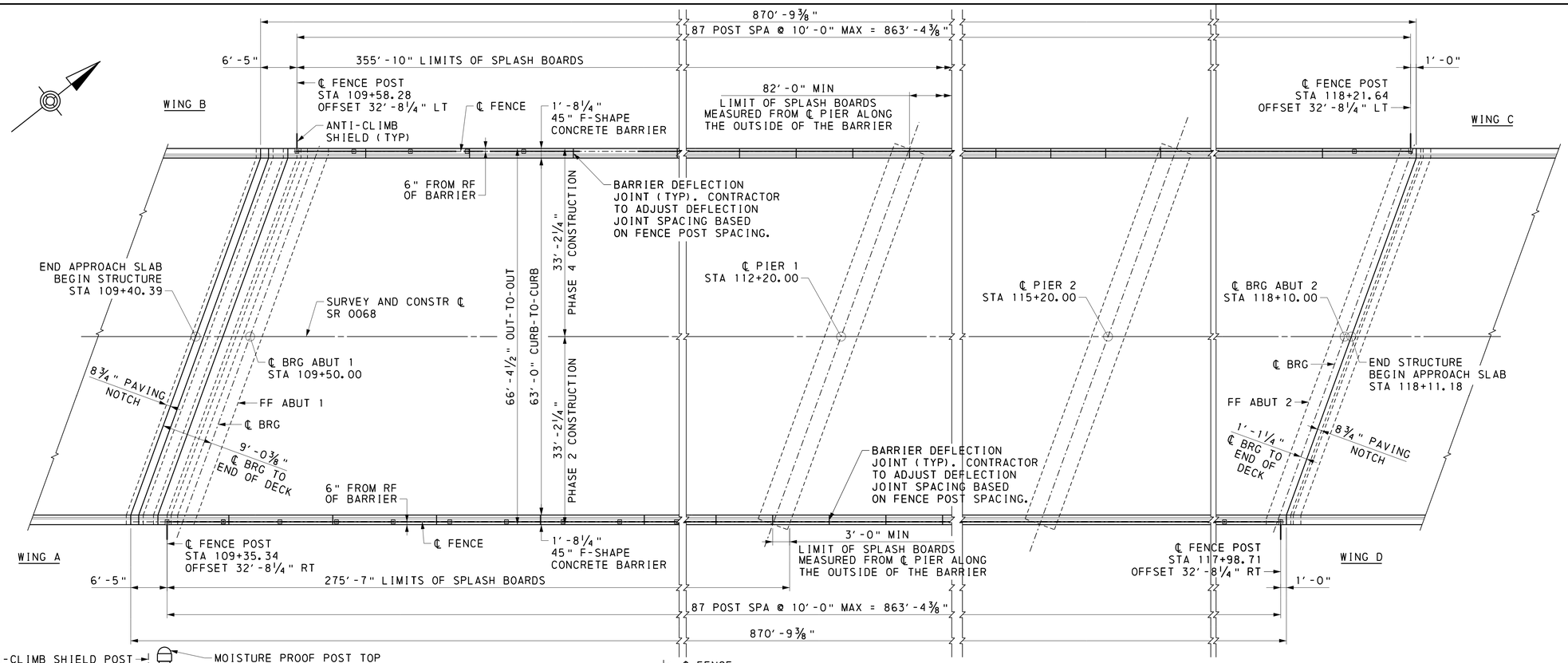
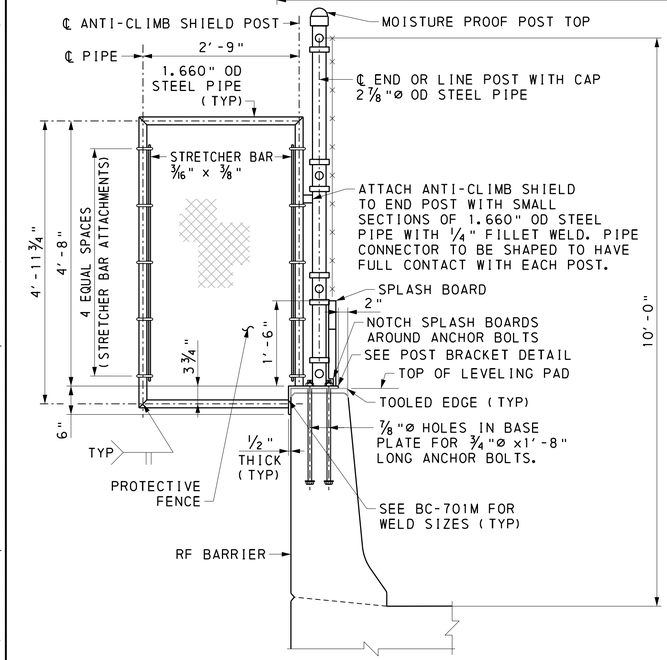


FENCE PLAN

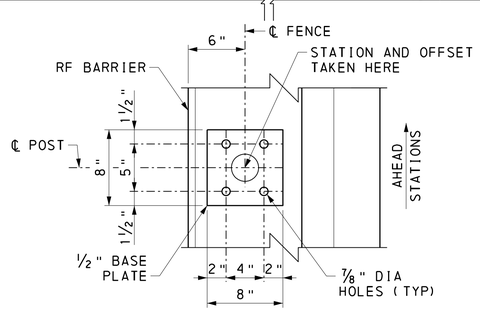
NOT TO SCALE



ANTI-CLIMB SHIELD DETAILS

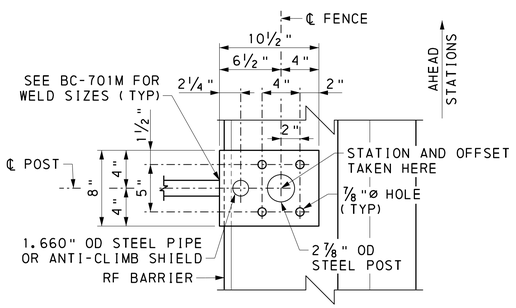
1 REQUIRED FOR EACH END OF FENCE

0 6 1′ 2′



TYPICAL BASE PLATE DETAIL

0 3 6 9 1′



POST BRACKET DETAIL AT ANTI-CLIMB SHIELD

0 3 6 9 1′

NOTES:

1. PLACE FENCE POST AND ANCHOR BOLTS TRULY VERTICAL. PLACE RAILS PARALLEL TO GRADE.
2. SPLASH BOARDS ARE INCIDENTAL TO THE FENCE ITEM.

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	BARRIER PLAN AND DETAILS	78
6.	SPLASH BOARD DETAILS 1 & 2	80 & 81
7.	FENCE DETAILS NOT SHOWN	BC-701M

LEGEND:

RF DENOTES REAR FACE
FF DENOTES FRONT FACE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107
KENNEY TANEY

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KARNS CROSSING

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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

FENCE DETAILS

RECOMMENDED _____

SHEET 79 OF 121

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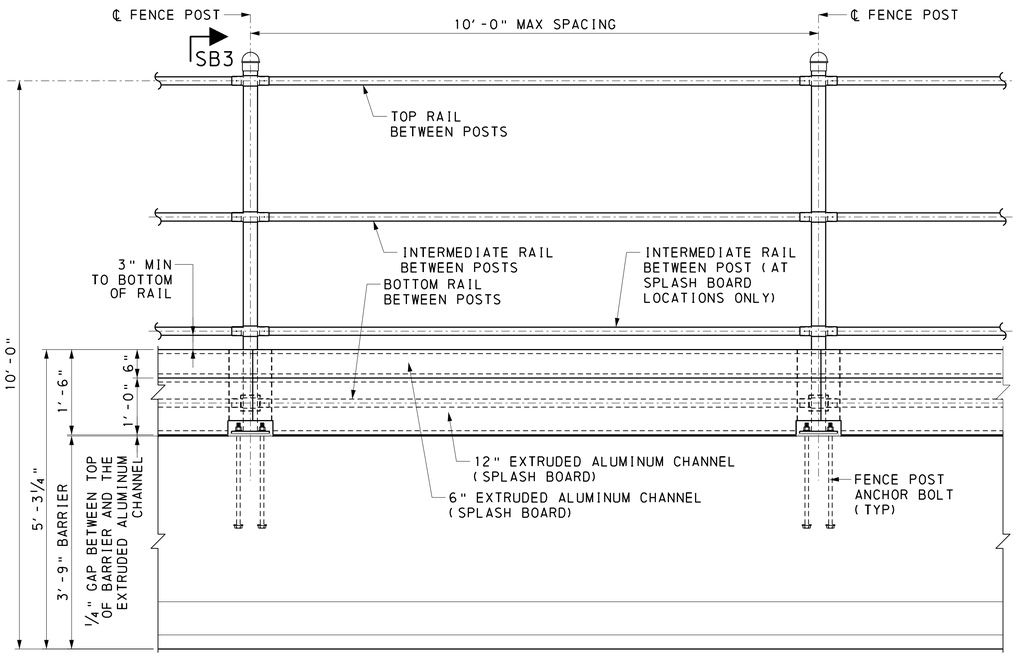
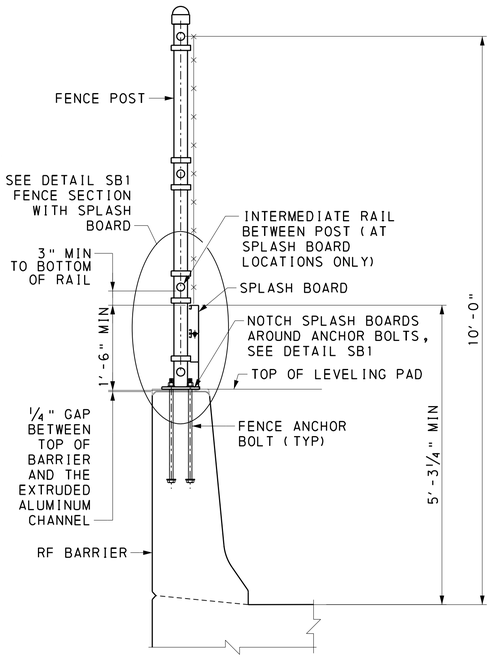


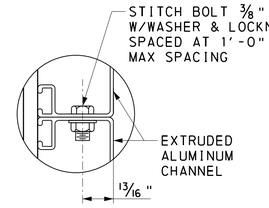
SPLASH BOARD ELEVATION

0 6 1' 2'



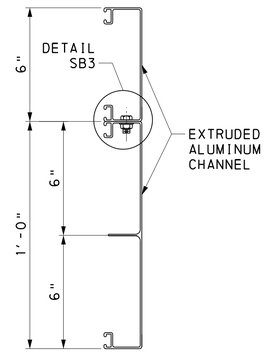
SPLASH BOARD SECTION SB3-SB3

0 6 1' 2'



DETAIL SB3

NOT TO SCALE



SPLASH BOARD DETAIL

NOT TO SCALE

LEGEND:

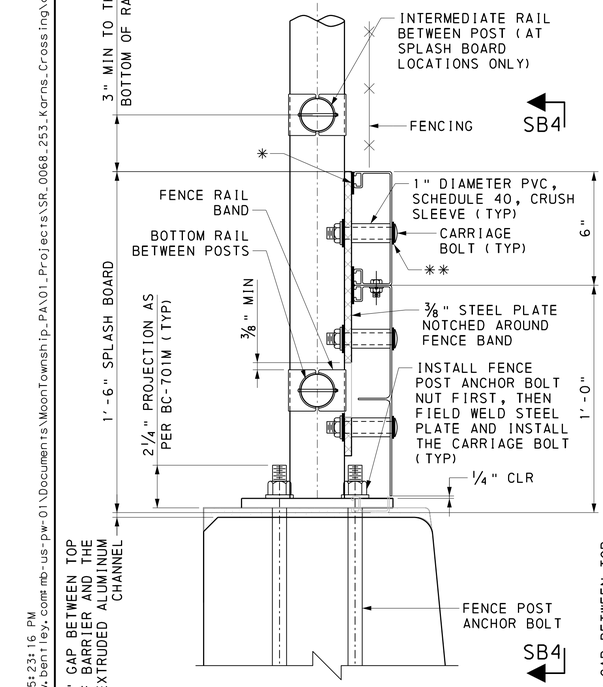
RF DENOTES REAR FACE

* DENOTES PROVIDE ⅛" THICK (MINIMUM) NYLON, POLYVINYLCHLORIDE, POLYETHYLENE SPACERS OR SHEATHING TO ENSURE NO CONTACT BETWEEN THE STEEL PLATE AND THE EXTRUDED ALUMINUM CHANNEL DUE TO DISSIMILAR METALS

** DENOTES PROVIDE A ⅛" THICK (MINIMUM) NYLON, POLYVINYLCHLORIDE, POLYETHYLENE SPACERS OR SHEATHING TO ENSURE NO CONTACT BETWEEN THE EXTRUDED ALUMINUM CHANNEL AND THE STAINLESS STEEL BOLT DUE TO DISSIMILAR METALS (TYP)

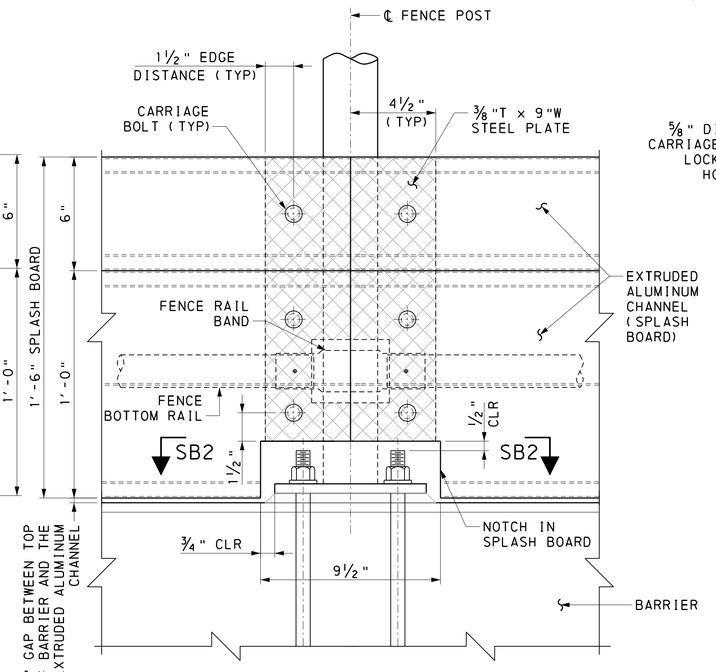
NOTES:

1. THESE SPLASH BOARD DETAILS WERE DEVELOPED AND PROVIDED BASED ON THE CANADIAN NATIONAL (CN) RAILROAD REQUIREMENTS NOTED IN THE CN RAILROAD ENGINEERING SPECIFICATIONS FOR INDUSTRIAL TRACKS AND SHOWN ON THE STANDARD FIGURE ENTITLED "DESIGN CLEARANCES FOR HIGHWAY AND PEDESTRIAN OVERPASS" DRAWING. SEE THE FENCE DETAILS SHEET FOR THE LIMITS OF THE SPLASH BOARDS.
2. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH PUBLICATION 408.
3. FOR EXTRUDED ALUMINUM CHANNEL DETAILS, SEE PENNDOT STANDARD DRAWING TC-8701E.
4. USE EITHER THE STANDARD SECTION (28008) OR THE LIGHT SECTION (401771) EXTRUDED ALUMINUM CHANNEL.
5. PROVIDE STEEL PLATES CONFORMING TO ASTM A709, GRADE 36.
6. HOT DIP GALVANIZE ALL STEEL PLATES AFTER FABRICATION.
7. ALUMINIZE ALL FENCE PARTS AS PER PUBLICATION 408 SECTION 1110.01.
8. PROVIDE ALUMINUM CONFORMING TO ASTM B308 FOR ALUMINUM ALLOY 6061-T6.
9. SPLASH BOARDS CHANNELS, STEEL PLATES, BOLTS, LOCKNUTS, WASHERS, DISSIMILAR METAL SHEETING AND PVC PIPES ARE INCIDENTAL TO THE FENCE ITEM.
10. SPLASH BOARDS ARE INCIDENTAL TO THE FENCE ITEM.



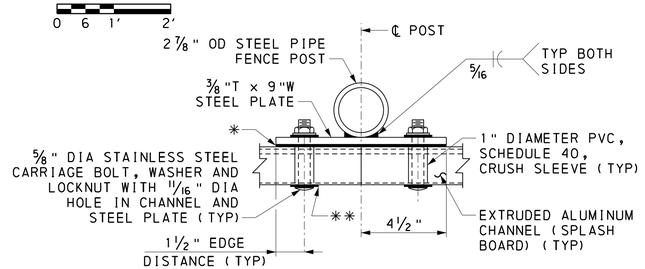
DETAIL SB1

NOT TO SCALE



SECTION SB4-SB4

NOT TO SCALE



SECTION SB2-SB2 WITH SPLASH BOARD

NOT TO SCALE

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES 1 & 2	4 & 5
4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	BARRIER PLAN AND DETAILS	78
6.	FENCE DETAILS	79
7.	WORK THIS SHEET WITH SHEET	81

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

SPLASH BOARD DETAILS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 80 OF 121

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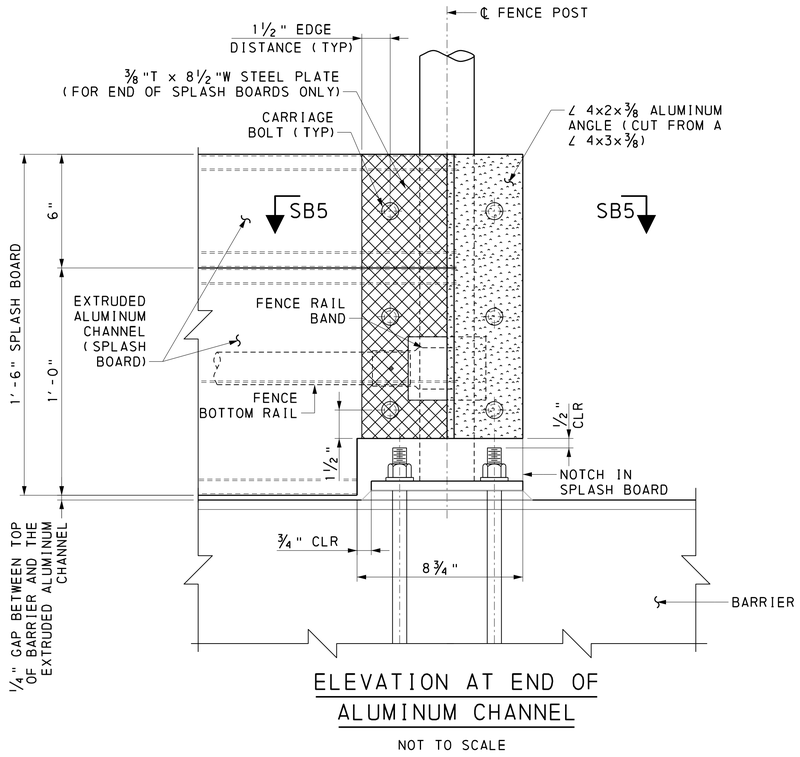
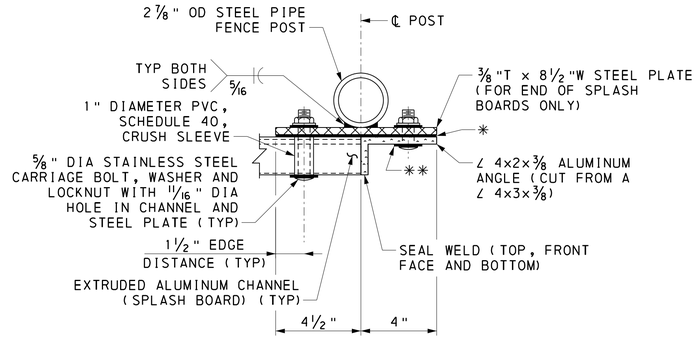


ELEVATION AT END OF
ALUMINUM CHANNEL

NOT TO SCALE



SECTION SB5-SB5
WITH SPLASH BOARD

NOT TO SCALE

LEGEND:

* DENOTES PROVIDE 1/8" THICK (MINIMUM) NYLON, POLYVINYLCHLORIDE, POLYETHYLENE SPACERS OR SHEATHING TO ENSURE NO CONTACT BETWEEN THE STEEL PLATE AND THE EXTRUDED ALUMINUM CHANNEL DUE TO DISSIMILAR METALS

** DENOTES PROVIDE A 1/8" THICK (MINIMUM) NYLON, POLYVINYLCHLORIDE, POLYETHYLENE SPACERS OR SHEATHING TO ENSURE NO CONTACT BETWEEN THE EXTRUDED ALUMINUM CHANNEL AND THE STAINLESS STEEL BOLT DUE TO DISSIMILAR METALS (TYP)

REFERENCES:

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1.	LIST OF PENNDOT STANDARD DRAWINGS	1
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4.	CONSTRUCTION PHASING 1 & 2	7 & 8
5.	BARRIER PLAN AND DETAILS	78
6.	FENCE DETAILS	79
7.	WORK THIS SHEET WITH SHEET	80

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KARNS CROSSING

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SPLASH BOARD DETAILS 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

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SHEET 81 OF 121

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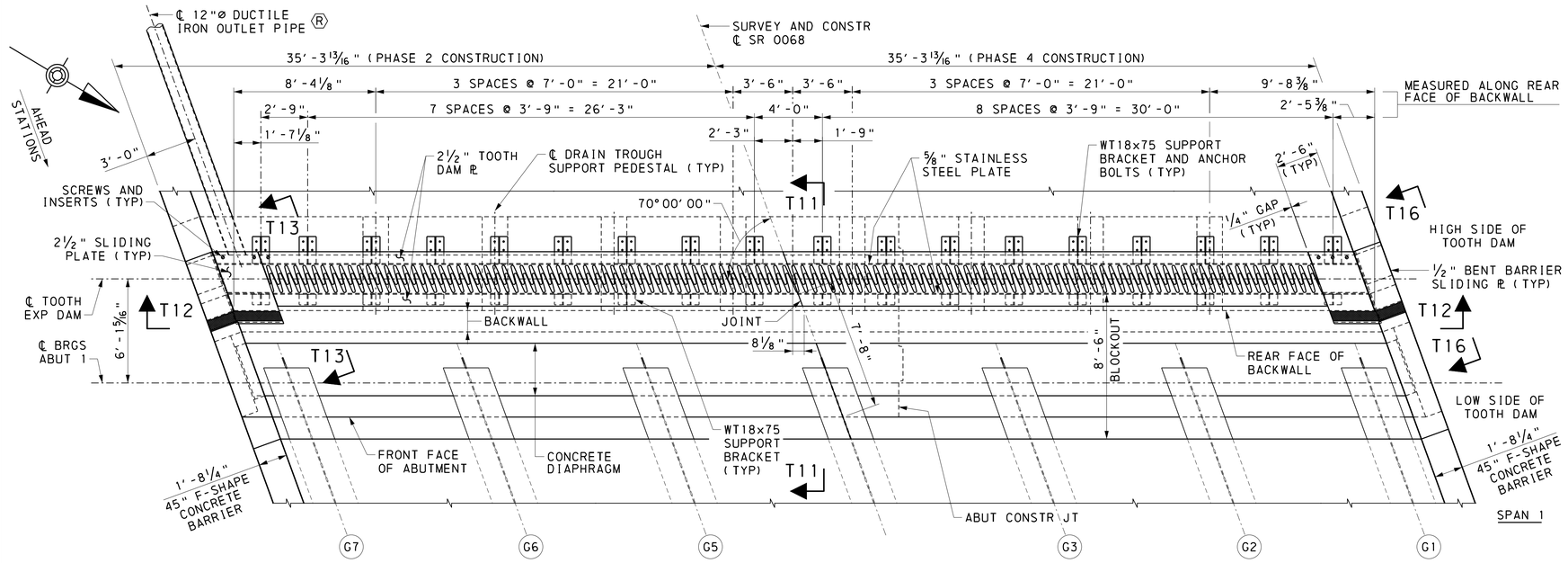
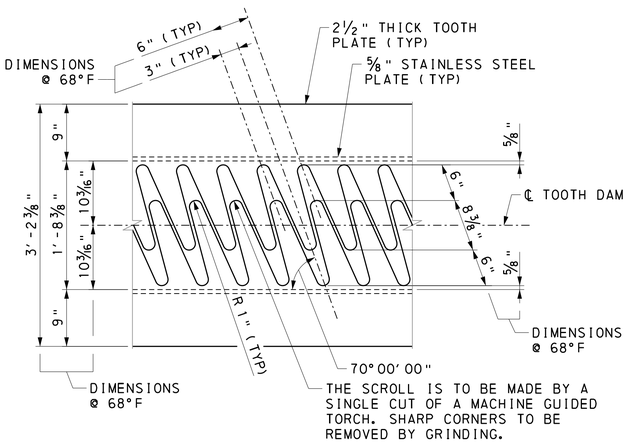


PLAN - TOOTH EXPANSION DAM

0 1' 2' 3' 4' 5' 6'



TOOTH PLATE DETAIL

0 3 6 9 1' 2'

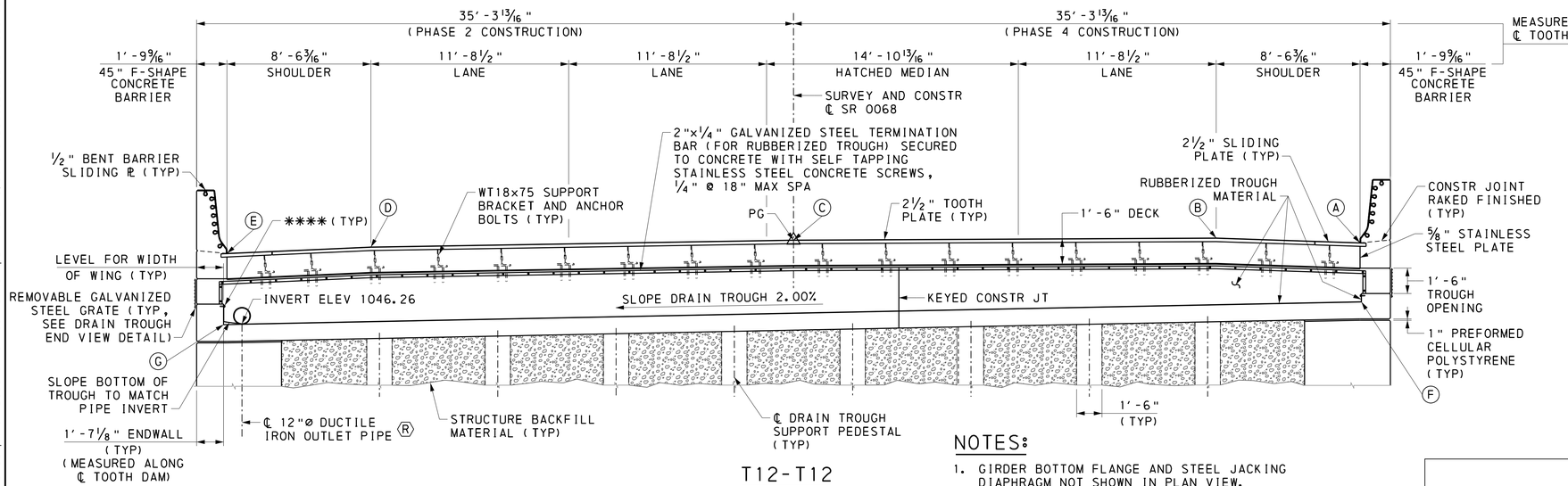
LEGEND:

Ⓡ DENOTES ROADWAY ITEM

**** DENOTES 2"x1/4" GALVANIZED STEEL (ASTM A709, GR 36 OR 50) BATTEN SECURED TO CONCRETE WITH SELF-TAPPING STAINLESS STEEL CONCRETE SCREWS, 1/4" @ 18" MAX SPA (TYP)(ATTACHMENT INCIDENTAL TO PERMANENT STRUCTURE)

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	CONSTRUCTION PHASING 2 & 4	7 & 8
5.	ABUT 1 TOOTH DAM DETAILS 1	83
6.	ABUT 1 TOOTH DAM DETAILS 2	84
7.	TOOTH DAM SECTION T11-T11	83
8.	CONCEPTUAL INSTALLATION SCHEME	83
9.	TOOTH DAM SECTION T13-T13	84
10.	DRAIN TROUGH END VIEW DETAIL	84



T12-T12
ALONG ℄ OF TOOTH DAM

LOOKING BACK STATIONS

0 1' 2' 3' 4' 5' 6'

NOTES:

1. GIRDER BOTTOM FLANGE AND STEEL JACKING DIAPHRAGM NOT SHOWN IN PLAN VIEW.
2. GALVANIZE THE STEEL AS PER BC-762M. FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN, SEE BC-762M.
3. ALL ELEVATION SHOWN ARE GIVEN AT CENTERLINE OF TOOTH EXPANSION DAM.
4. STAINLESS STEEL PLATE, STUDS, ANCHOR BOLTS, RUBBERIZED TROUGH MATERIAL, GALVANIZED STEEL TERMINATION BARS, SELF-TAPPING STAINLESS CONCRETE SCREWS, NON-SHRINK GROUT AND ALL OTHER ITEMS ARE INCIDENTAL TO THE COST OF THE TOOTH EXPANSION DAM.

CENTERLINE OF TOOTH DAM ELEVATIONS

	A	B	C	D	E	D	E
STA	109+54.96	109+52.05	109+43.50	109+34.95	109+32.03	109+54.96	109+32.03
ELEVATION	1051.92	1052.20	1052.08	1051.67	1051.29	1047.73	1046.26

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ABUT 1 - TOOTH DAM PLAN AND ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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DES: BEG | CKD: RMS | DWG: EEM | CKD: MJB

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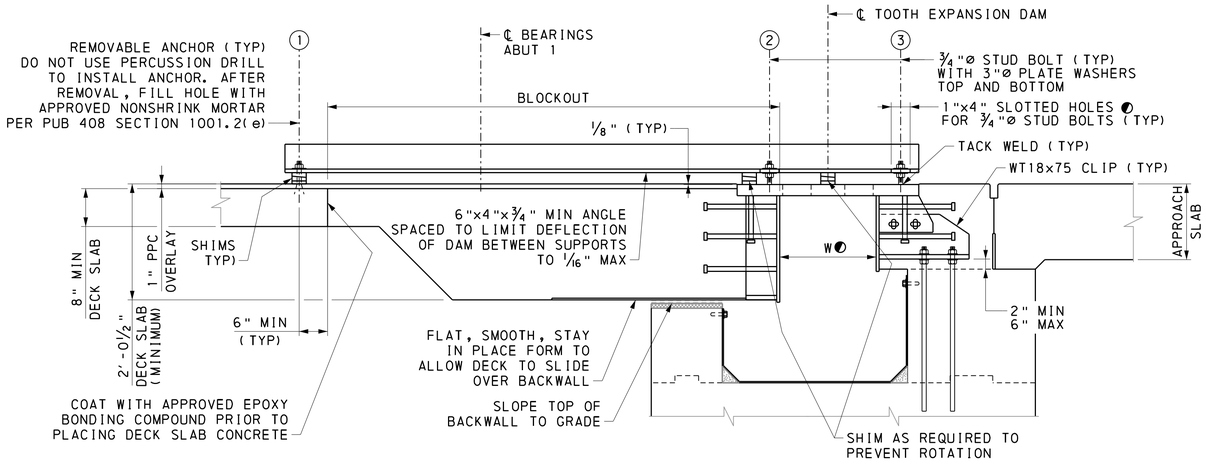


CONCEPTUAL INSTALLATION SCHEME ◐◐

0 6 1′ 2′

JOINT INSTALLATION NOTES:

CAST ANCHOR BOLTS INTO INTEGRAL CONCRETE DRAIN TROUGH.

INSTALL AND ADJUST FIXED PORTION OF TOOTH DAM ON TROUGH WALL TO THE PROPER LINE AND GRADE.

THE SURFACE OF THE BLOCKOUT MUST BE COMPLETELY CLEAN WHEN THE JOINT IS INSTALLED.

SUPPORT MOVABLE PORTION OF TOOTH DAM IN THE BLOCKOUT FROM THE DECK SLAB AND FIXED PORTION OF THE TOOTH DAM (SEE CONCEPTUAL INSTALLATION SCHEME).

ADJUST MOVABLE PORTION OF TOOTH DAM TO THE PROPER LINE AND GRADE WITH THE JOINT OPENING (W) SET WITH RESPECT TO THE INSTALLATION TEMPERATURE SHOWN ON THE PLANS.

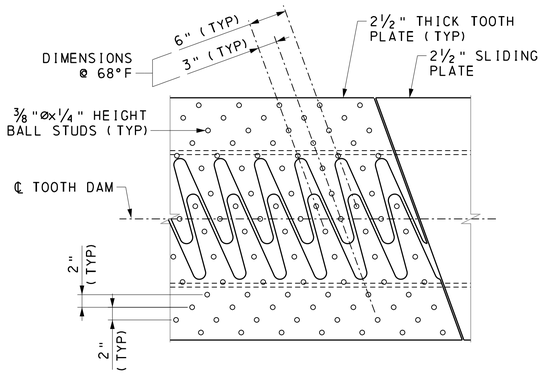
DURING ASSEMBLY INSTALLATION TIGHTEN ANCHOR (1) AND BOTH NUTS ON STUD BOLTS (2) AND (3) MAKING SURE THE JOINT OPENING (W) REFLECTS THE INSTALLATION TEMPERATURE.

IMMEDIATELY AFTER BLOCKOUT IS CAST, LOOSEN TOP NUT ON STUD BOLT (3) TO PERMIT TEMPERATURE MOVEMENT IN THE ASSEMBLY. ALTERNATE THE PATTERN BETWEEN THE NEAR SIDE AND FAR SIDE OF JOINT ON SUCCESSIVE ASSEMBLIES, I.E. LOOSEN TOP NUT ON STUD BOLT (2) IMMEDIATELY AFTER BLOCKOUT IS CAST TO PREVENT MOVEMENT.

PROVIDE LOW FRICTION INTERFACE BETWEEN BOTTOM NUT AND WASHER ON STUD BOLTS AND ANGLE.

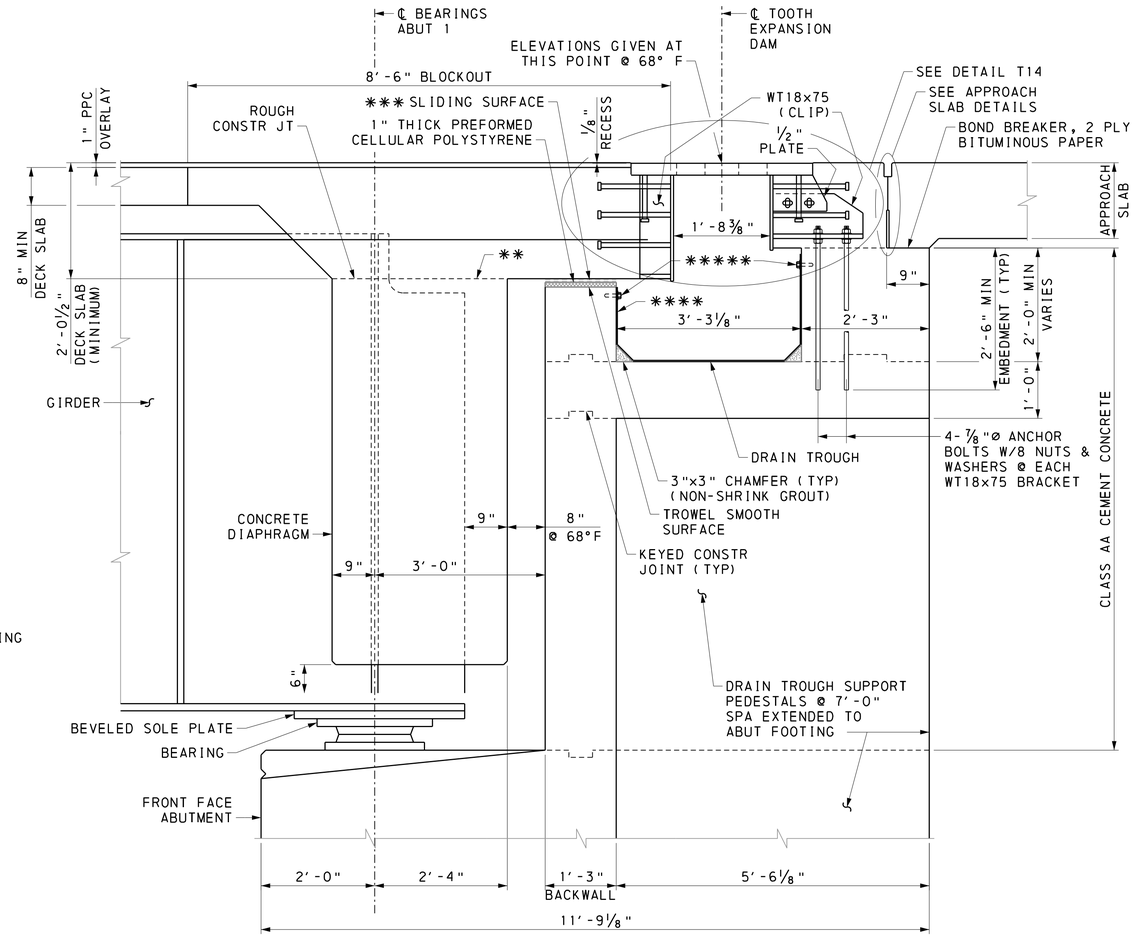
AFTER THE CONCRETE OF THE BLOCKOUT ACHIEVES THE MINIMUM COMPRESSIVE STRENGTH SPECIFIED IN PUBLICATION 408, SECTION 1001.3(q)1, REMOVE THE TEMPORARY SUPPORT ASSEMBLY AND GRIND OFF THE TACK WELDS UNTIL SMOOTH.

APPLY TOUCH-UP PAINT.



BALL STUD DETAIL

0 3 6 9 1′ 2′



SECTION T11-T11

0 6 1′ 2′

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

REFERENCES:

1. LIST OF PENNDOT STANDARD DRAWINGS
2. INDEX OF DRAWINGS AND RATINGS
3. GENERAL NOTES
4. ABUT 1 TOOTH DAM PLAN & ELEVATION
5. LOCATION OF SECTION T11-T11
6. ABUT 1 TOOTH DAM DETAILS 2
7. TOOTH DAM DETAIL T14

SHEET:

1
3
4 & 5
82
82
84
84

NOTES:

1. STEEL JACKING DIAPHRAGM NOT SHOWN.
2. FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN, SEE BC-762M.
3. ALL DIMENSIONS SHOWN ARE MEASURED NORMAL TO CENTERLINE OF BEARING AND CENTERLINE OF TOOTH EXPANSION DAM, UNLESS NOTED OTHERWISE.
4. STAINLESS STEEL PLATE, STUDS, ANCHOR BOLTS, RUBBERIZED TROUGH MATERIAL, GALVANIZED STEEL TERMINATION BARS, SELF-TAPPING STAINLESS CONCRETE SCREWS, NON-SHRINK GROUT AND ALL OTHER ITEMS ARE INCIDENTAL TO THE COST OF THE TOOTH EXPANSION DAM.

LEGEND:

◐ DENOTES TO BE ADJUSTED FOR INSTALLATION TEMPERATURE FOR SPECIFIED MOVEMENT CLASSIFICATION

◐◐ DENOTES CONTRACTOR MAY USE AN ALTERNATE SCHEME WITH THE APPROVAL OF THE DISTRICT BRIDGE ENGINEER OR DISTRICT STRUCTURE CONTROL ENGINEER

** DENOTES COAT WITH AN APPROVED EPOXY BONDING COMPOUND PRIOR TO PLACING DECK SLAB CONCRETE

*** DENOTES 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING

**** DENOTES RUBBERIZED TROUGH MATERIAL (SECTION 1020.2(h) PUB 408) ATTACHED TO CONCRETE WITH APPROVED ADHESIVE

***** DENOTES 2"x1/4" GALVANIZED STEEL (ASTM A709, GR 36 OR 50) BATTEN SECURED TO CONCRETE WITH SELF-TAPPING STAINLESS STEEL CONCRETE SCREWS, 1/4"ø18" MAX SPA (TYP)(ATTACHMENT INCIDENTAL TO PERMANENT STRUCTURE)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 TOOTH DAM DETAILS 1

RECOMMENDED _____

SHEET 83 OF 121

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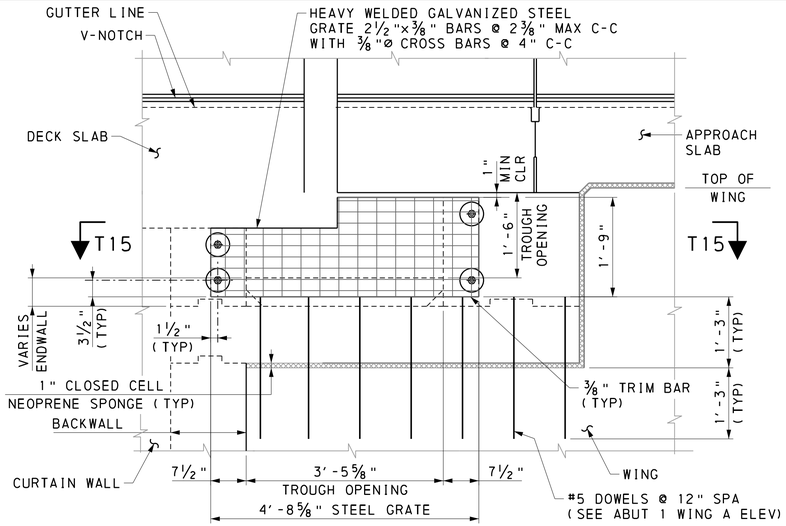
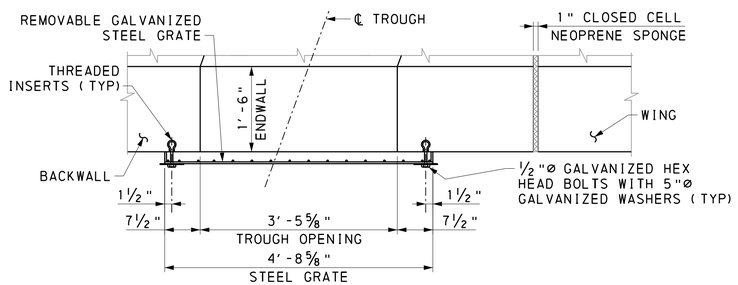


DRAIN TROUGH END VIEW DETAIL

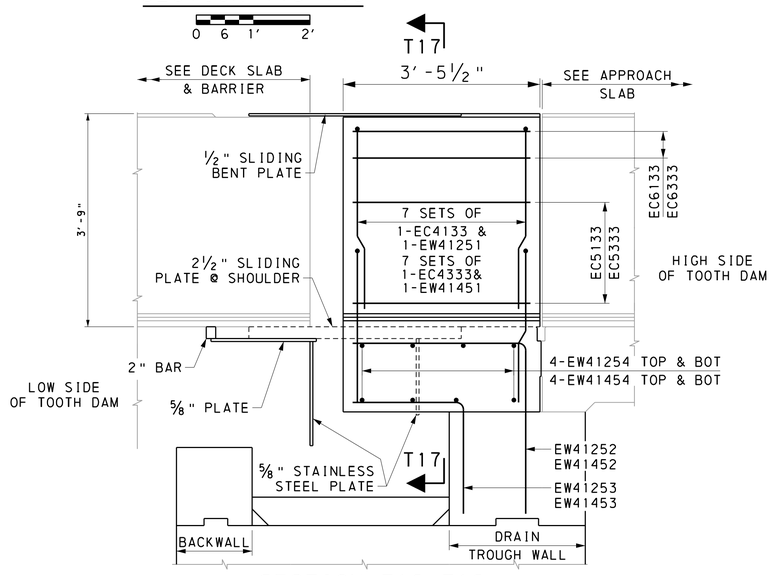
(WING B SHOWN, WING A SIMILAR)

0 6 1' 2'



SECTION T15-T15

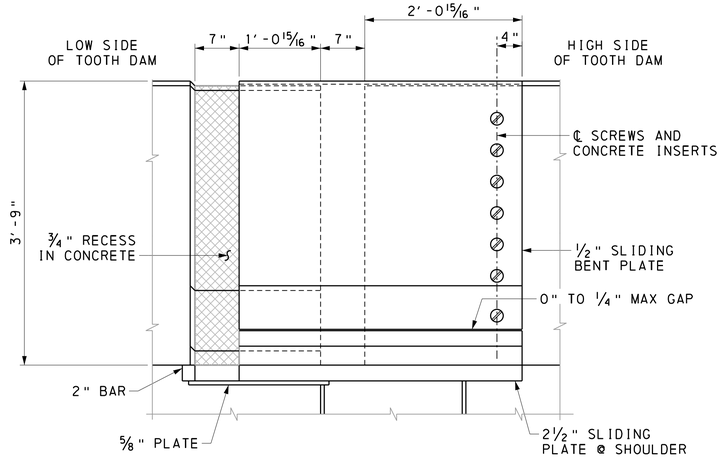
0 6 1' 2'



SECTION T16-T16

PROTECTIVE FENCE NOT SHOWN

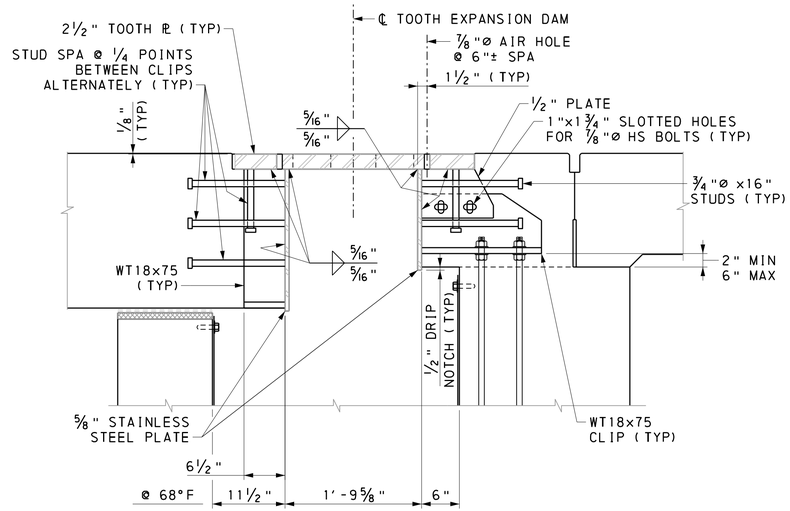
0 6 1' 2'



SECTION T13-T13

PROTECTIVE FENCE NOT SHOWN

0 3 6 9 1' 2'



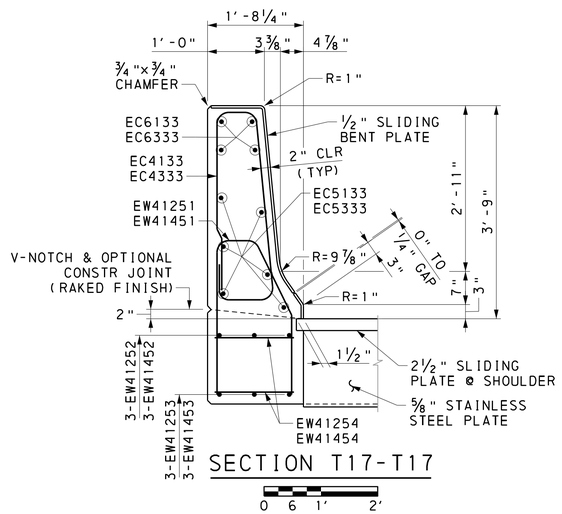
DETAIL T14

ALL DIMENSIONS SHOWN ARE MEASURED NORMAL TO CENTERLINE OF TOOTH EXPANSION DAM

0 3 6 9 1' 2'

NOTES:

1. FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN, SEE BC-762M.
2. HEAVY WELDED GALVANIZED STEEL GRATE, ⅜" TRIM BARS, GALVANIZED HEX HEAD BOLTS, GALVANIZED WASHERS, THREADED INSERTS AND CLOSED CELL NEOPRENE SPONGE SHOWN IN THE DRAIN TROUGH END VIEW DETAIL AND SECTION T15-T15, ARE INCIDENTAL TO THE COST OF THE TOOTH EXPANSION DAM.



SECTION T17-T17

0 6 1' 2'

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS AND RATINGS	3
3.	GENERAL NOTES	4 & 5
4.	ABUT 1 TOOTH DAM PLAN & ELEVATION	82
5.	LOCATION OF SECTION T13-T13	82
6.	ABUT 1 TOOTH DAM DETAILS 1	83
7.	LOCATION OF DETAIL T14	82

LEGEND:

E DENOTES EPOXY COATED BARS

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 TOOTH DAM DETAILS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 84 OF 121

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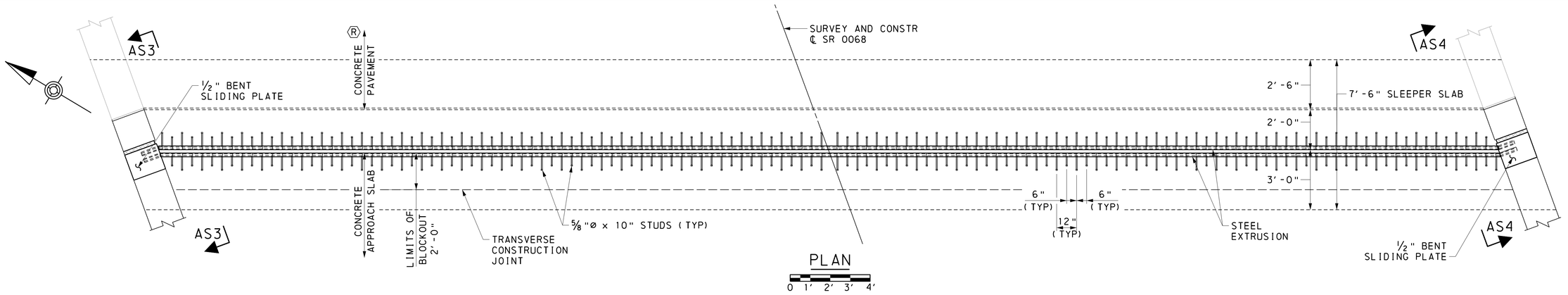
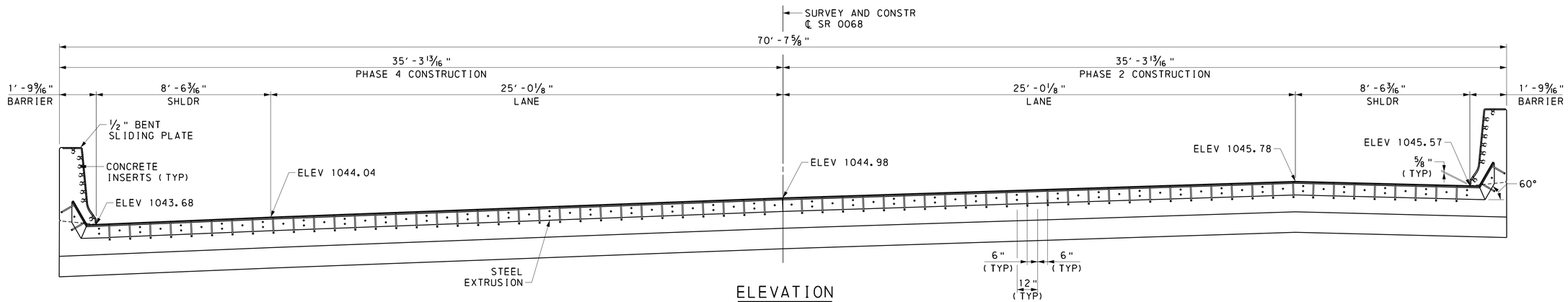


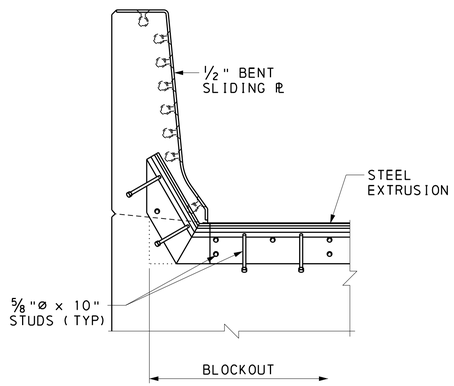
PLAN

0 1' 2' 3' 4'



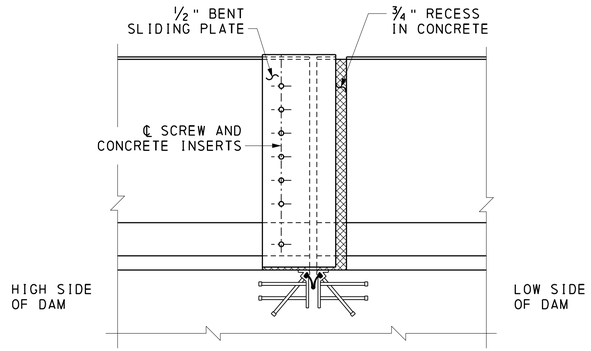
ELEVATION

0 1' 2' 3' 4'



SECTION AT BARRIER

0 6 1' 2'



NOTE:

FORM CONCRETE RECESS AREA IN BARRIER AND GRIND TO PROVIDE SMOOTH SURFACE. APPLY ONE COAT OF ASPHALT CEMENT PAINT WA-1 OR PERFORMANCE GRADED ASPHALT CEMENT PG 64-22 TO ALLOW BENT SLIDING PLATE TO MOVE FREELY WITHOUT FRICTION.

SECTION AS3-AS3 (AS SHOWN)
SECTION AS4-AS4 (SIMILAR)

0 6 1' 2'

LEGEND:

Ⓡ DENOTES ROADWAY ITEM

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS AND RATINGS	3
2.	GENERAL NOTES	4 & 5
3.	CONSTRUCTION PHASING 1 & 2	7 & 8
4.	ABUTMENT 2 DETAILS	31 & 42
5.	APPROACH SLAB - ABUTMENT 2	90
6.	APPROACH SLAB 2 DETAILS	92
7.	DETAILS AND NOTES NOT SHOWN	BC-767M

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KARNS CROSSING

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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 - NEOPRENE STRIP SEAL DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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ENGINEER No. 071107

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SHEET 85 OF 121

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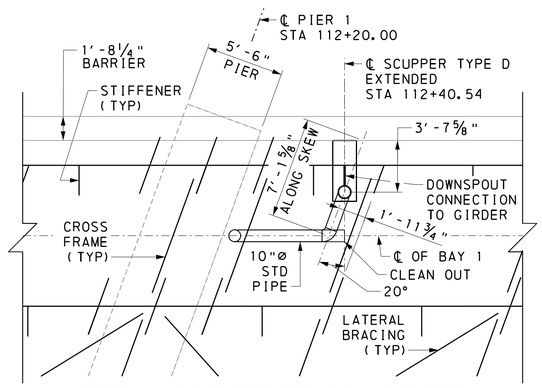
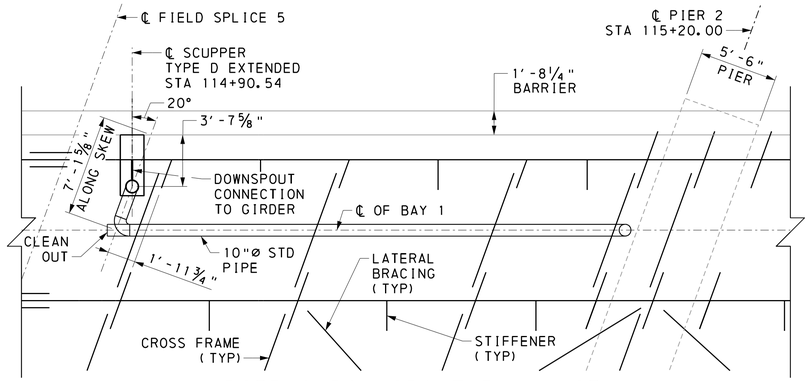


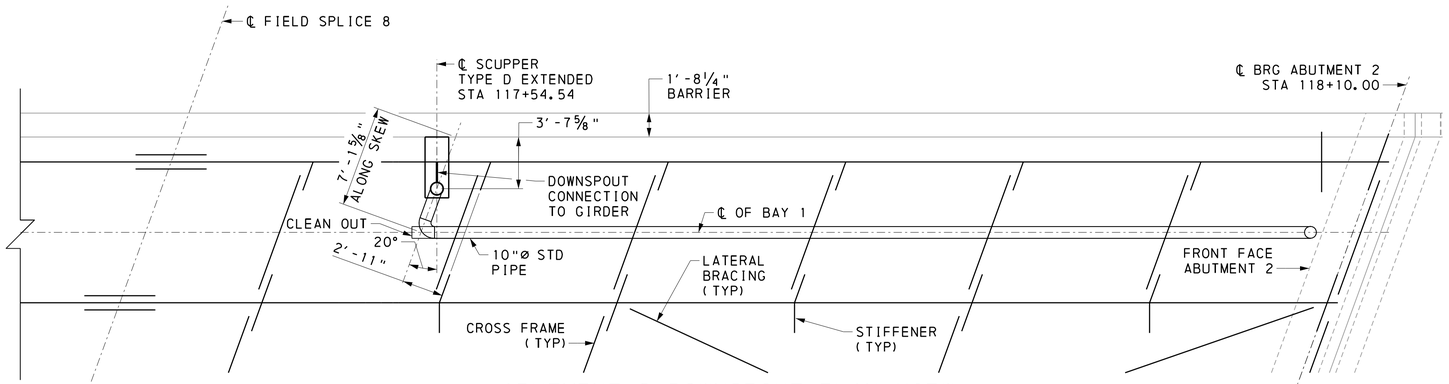
PIER 1 DOWNSPOUT PLAN VIEW

BAY 1 SHOWN
NOT TO SCALE



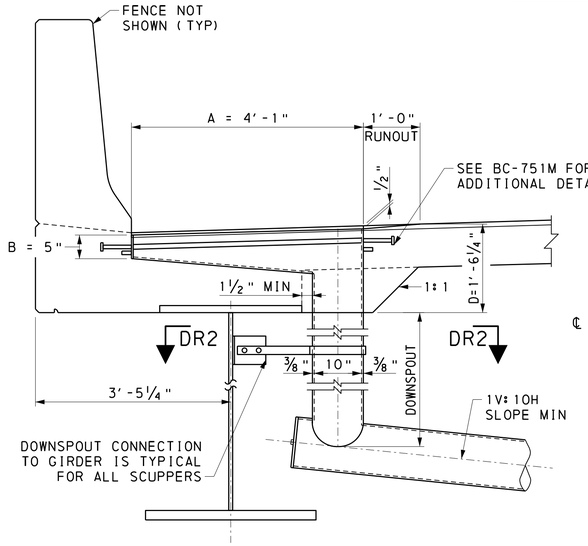
PIER 2 DOWNSPOUT PLAN VIEW

BAY 1 SHOWN
NOT TO SCALE



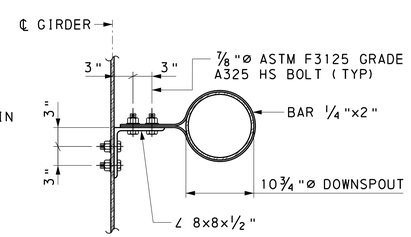
ABUTMENT 2 DOWNSPOUT PLAN VIEW

BAY 1 SHOWN
NOT TO SCALE



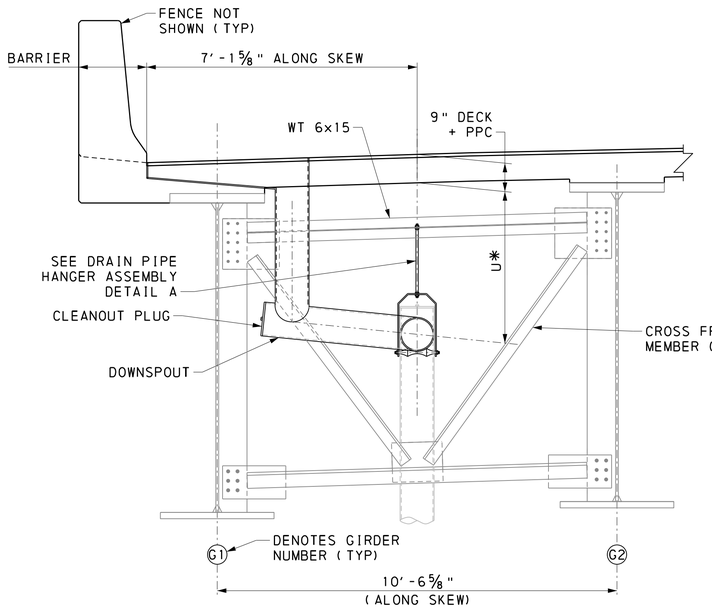
SCUPPER TYPE D EXTENDED

LOOKING AHEAD STATIONS
NOT TO SCALE



SECTION DR2-DR2

DOWNSPOUT CONNECTION TO GIRDER
IS TYPICAL FOR ALL SCUPPERS
NOT TO SCALE



DOWNSPOUT DETAIL

BAY 1 SHOWN, BAY 6 SIMILAR
CF3 SHOWN, CF4 SIMILAR
CF4 HAS TOP CHORD ONLY
LOOKING AHEAD STATIONS
NOT TO SCALE

LEGEND:

* DENOTES DRAIN PIPE DROP DIMENSION IS MEASURED FROM BOTTOM OF SIP FORM/DECK TO ℄ OF DRAIN PIPE ALONG ℄ OF THREADED ROD

PPC DENOTES POLYESTER POLYMER CONCRETE

HS DENOTES HIGH STRENGTH

NOTES:

1. USE GALVANIZED STEEL FOR ALL DOWNSPOUTS, DRAIN BOXES, PIPE JOINTS AND STRAPS. FIBERGLASS OR PVC PIPE IS NOT ALLOWED.

REFERENCES:

		SHEET:
1.	PIER 1 DETAILS	27 & 28
2.	PIER 2 DETAILS	29 & 30
3.	ABUTMENT 2 DETAILS	31 - 38
4.	FRAMING PLANS	45 & 46
5.	WORK THIS SHEET WITH SHEETS	87 & 88
6.	DRAIN PIPE HANGER ASSEMBLY DETAIL A	87

BAY 1

STA	LOCATION	PIPE SLOPE	PIPE DROP 'U', INCHES
112+32.80	DOWNSPOUT	-----	-----
112+33.02	CROSS FRAME	20.1%	4′-1"
112+39.42	BEND	-----	2′-9"
112+40.54	SCUPPER	-----	-----
114+89.42	BEND	-----	2′-9"
114+90.54	SCUPPER	-----	-----
114+91.52	CROSS FRAME	11.1%	2′-11⅝"
115+04.02	CROSS FRAME	10.7%	4′-2⅝"
115+16.52	CROSS FRAME	10.7%	5′-5⅝"
115+25.02	CROSS FRAME	10.7%	6′-3⅞"
115+25.24	DOWNSPOUT	-----	-----
117+53.42	BEND	-----	2′-6"
117+54.54	SCUPPER	-----	-----
117+56.52	CROSS FRAME	9.3%	2′-9"
117+69.02	CROSS FRAME	9.4%	3′-9"
117+81.52	CROSS FRAME	9.5%	4′-9"
117+94.02	CROSS FRAME	9.7%	5′-9"
118+06.52	CROSS FRAME	9.9%	6′-9"
118+15.02	CROSS FRAME	10.1%	7′-5¼"
118+16.04	DOWNSPOUT	-----	-----

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

SCUPPER AND DRAINAGE DETAILS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

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SHEET 86 OF 121

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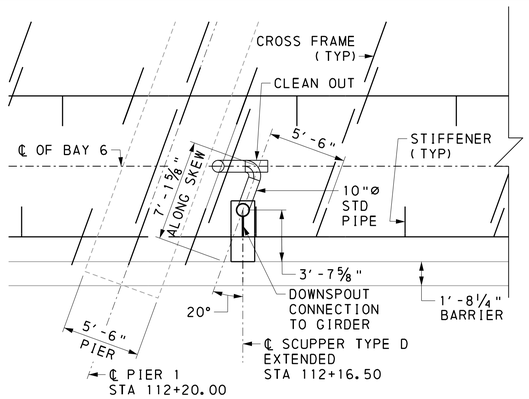
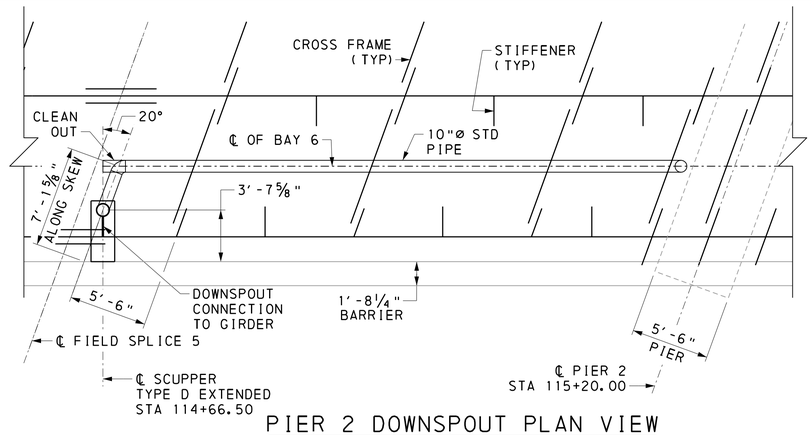


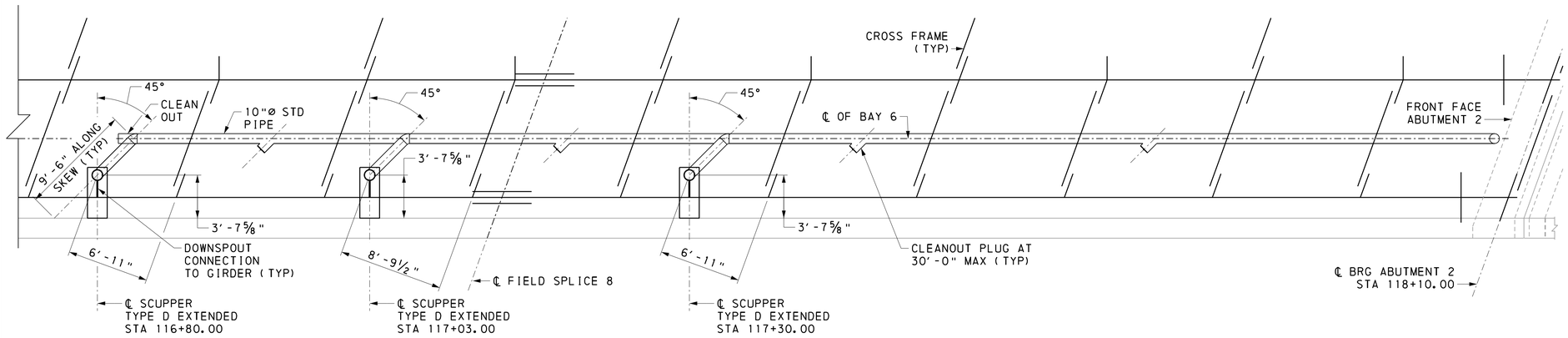
PIER 1 DOWNSPOUT PLAN VIEW

BAY 6 SHOWN
NOT TO SCALE



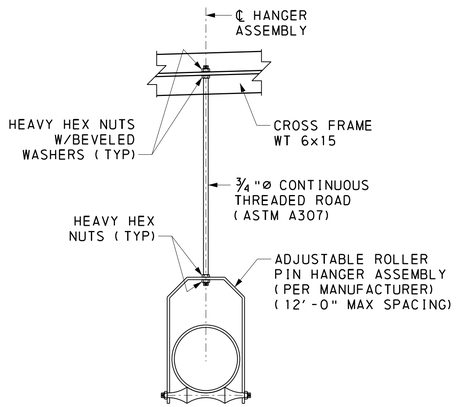
PIER 2 DOWNSPOUT PLAN VIEW

BAY 6 SHOWN
NOT TO SCALE



ABUTMENT 2 DOWNSPOUT PLAN VIEW

BAY 6 SHOWN
NOT TO SCALE



DRAIN PIPE HANGER ASSEMBLY DETAIL A

NOT TO SCALE

BAY 6			
STA	LOCATION	PIPE SLOPE	PIPE DROP 'U', INCHES
112+14.76	DOWNSPOUT	-----	-----
112+14.98	CROSS FRAME	27.7%	3'-6"
112+17.62	BEND	-----	2'-9"
112+16.50	SCUPPER	-----	-----
114+66.50	SCUPPER	-----	-----
114+67.62	BEND	-----	2'-9"
114+73.48	CROSS FRAME	8.9%	3'-2¾"
114+85.98	CROSS FRAME	8.7%	4'-2¾"
114+98.48	CROSS FRAME	8.7%	5'-2¾"
115+06.98	CROSS FRAME	8.8%	5'-11"
115+07.20	DOWNSPOUT	-----	-----
116+80.00	SCUPPER	-----	-----
116+83.07	BEND	-----	2'-6"
116+88.48	CROSS FRAME	3.7%	2'-8⅜"
117+00.98	CROSS FRAME	3.5%	3'-1⅝"
117+03.00	SCUPPER	-----	-----
117+06.07	BEND	3.7%	3'-3⅞"
117+13.48	CROSS FRAME	3.6%	3'-7"
117+25.98	CROSS FRAME	5.6%	4'-3¼"
117+30.00	SCUPPER	-----	-----
117+33.07	BEND	3.7%	4'-6¼"
117+38.48	CROSS FRAME	3.9%	4'-8⅝"
117+50.98	CROSS FRAME	3.9%	5'-1⅞"
117+63.48	CROSS FRAME	4.1%	5'-7⅛"
117+75.98	CROSS FRAME	4.3%	6'-0⅜"
117+88.48	CROSS FRAME	4.5%	6'-5⅝"
117+96.98	CROSS FRAME	5.0%	6'-9¼"
117+98.00	DOWNSPOUT	-----	-----

NOTES:

1. USE GALVANIZED STEEL FOR ALL DOWNSPOUTS, DRAIN BOXES, PIPE JOINTS AND STRAPS. FIBERGLASS OR PVC PIPE IS NOT ALLOWED.

REFERENCES:

		SHEET:
1.	PIER 1 DETAILS	27 & 28
2.	PIER 2 DETAILS	29 & 30
3.	ABUTMENT 2 DETAILS	31 - 38
4.	FRAMING PLANS	45 & 46
5.	WORK THIS SHEET WITH SHEETS	86 & 88

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

SCUPPER AND DRAINAGE DETAILS 2

RECOMMENDED _____

SHEET 87 OF 121

S - 39526

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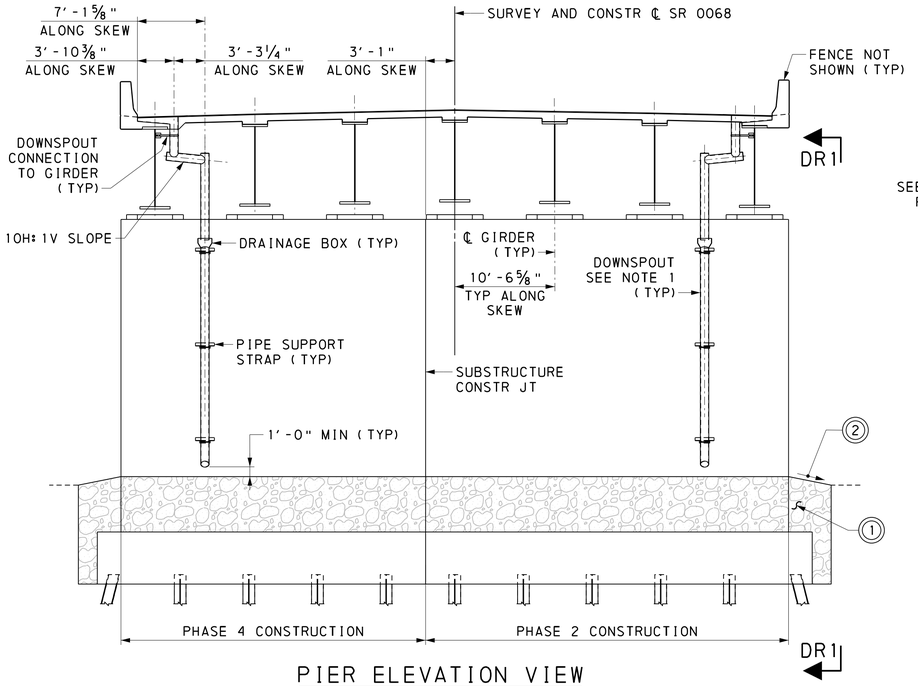
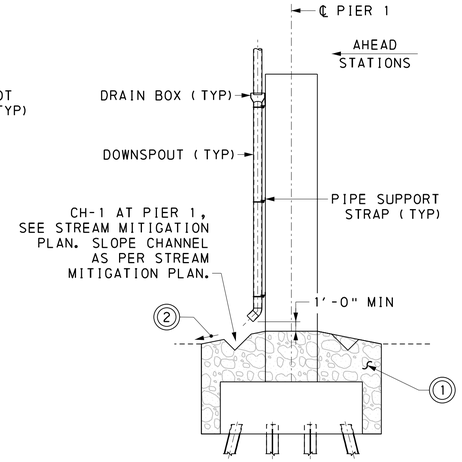


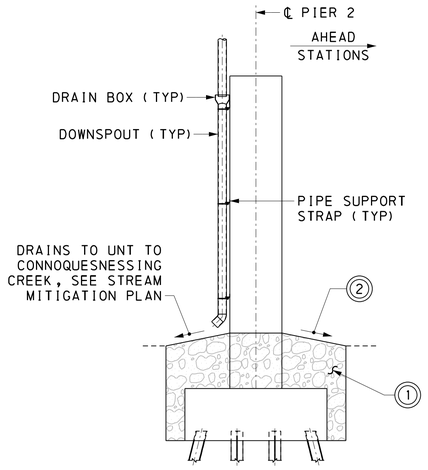
PIER ELEVATION VIEW

PIER 1 AHEAD STATION SIDE SHOWN
PIER 2 BACK STATION SIDE SHOWN
NOT TO SCALE



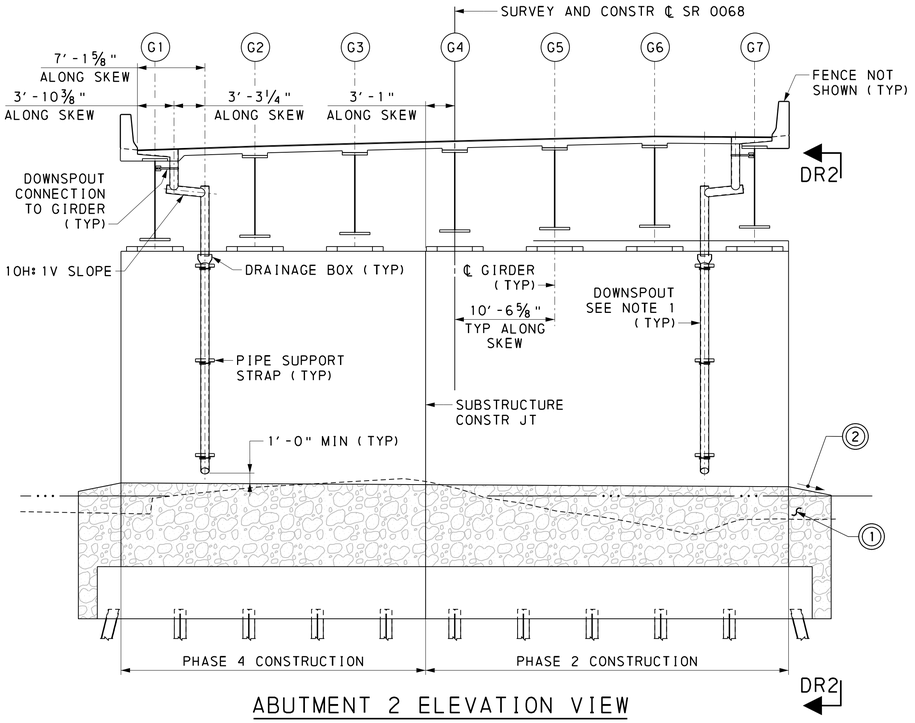
SECTION DR1-DR1 AT PIER 1

NOT TO SCALE



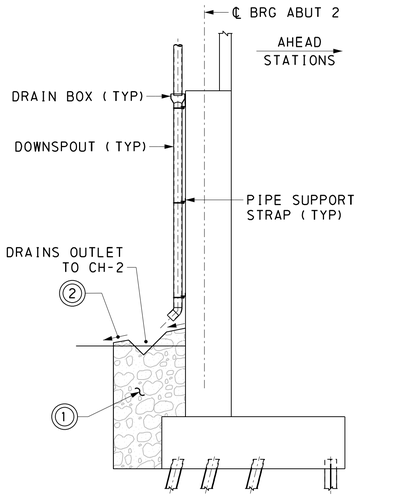
SECTION DR1-DR1 AT PIER 2

NOT TO SCALE



ABUTMENT 2 ELEVATION VIEW

LOOKING AHEAD STATIONS
NOT TO SCALE



SECTION DR2-DR2 AT ABUT 2

NOT TO SCALE

NOTES:

1. USE GALVANIZED STEEL MATERIAL FOR ALL DOWNSPOUTS, DRAIN BOXES, PIPE JOINTS AND STRAPS. FIBERGLASS OR PVC PIPE IS NOT ALLOWED.
2. GALVANIZE ALL MATERIAL AFTER FABRICATION.
3. FOR ADDITIONAL DETAILS AND NOTES, SEE BC-715M.

LEGEND:

(1) DENOTES SELECTED BORROW EXCAVATION ROCK, CLASS R-6 CHOKED WITH CLASS R-3 ROCK GROUTED WITH CLASS A CEMENT CONCRETE

(2) DENOTES SLOPE AT 1 VERTICAL TO 5 HORIZONTAL SLOPE MINIMUM TO DRAIN

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 86 & 87

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
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SR 0068 PREVIOUSLY KNOWN AS LR 214
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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BUTLER COUNTY
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3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

SCUPPER AND DRAINAGE DETAILS 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 88 OF 121

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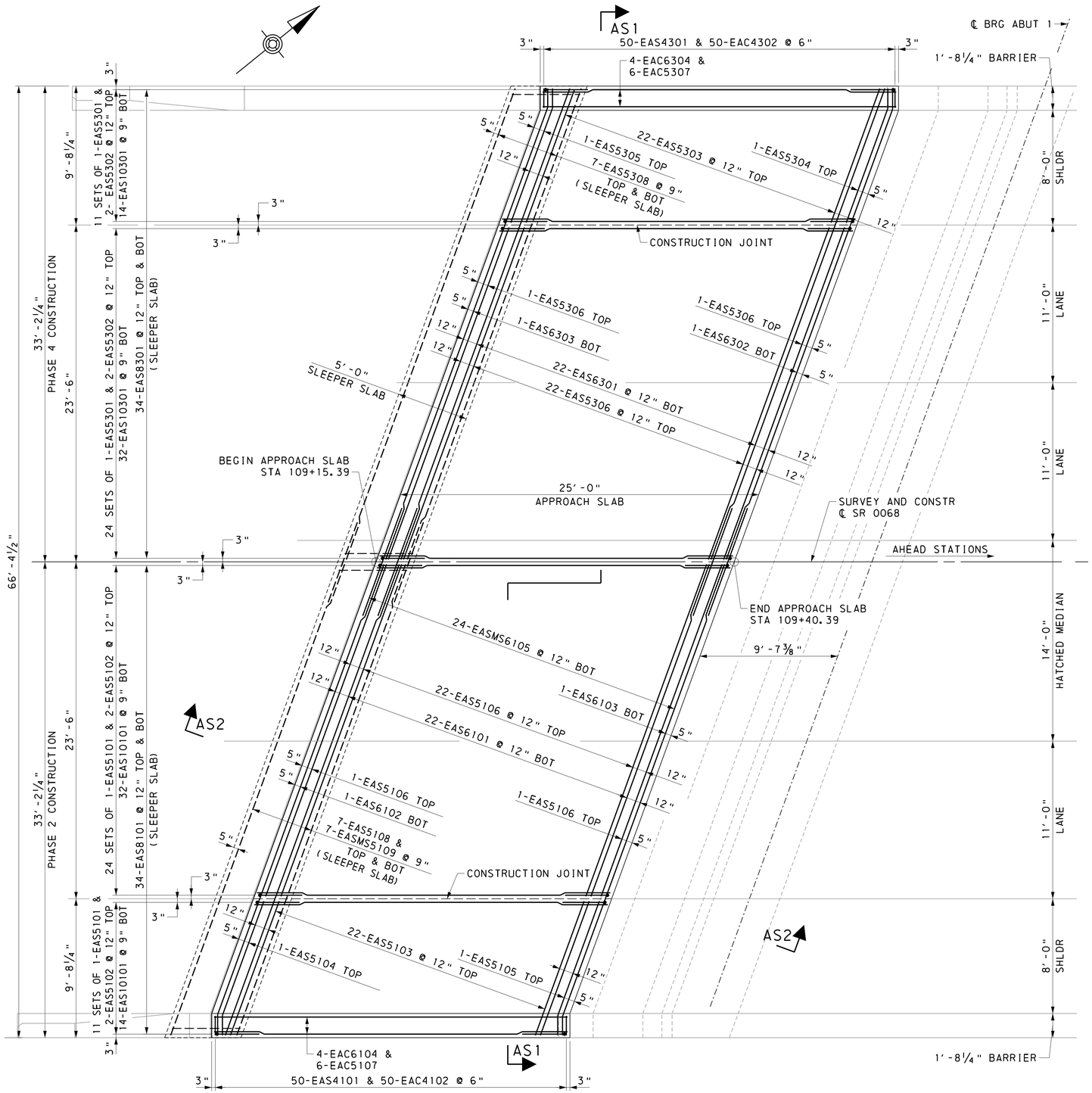

ABUTMENT 1 APPROACH SLAB PLAN

0 1' 2' 3' 4' 5' 6'

ABUTMENT 1 APPROACH SLAB ELEVATIONS AT BREAK POINTS

STATION	LEFT GUTTERLINE (1)	EDGE LEFT LANE (2)	PG ELEV (3)	EDGE RIGHT LANE (4)	RIGHT GUTTERLINE (5)
109+03.92	---	---	---	---	1051.41
109+06.84	---	---	---	1051.87	1051.39
109+10.00	---	---	---	1051.85	1051.37
109+15.39	---	---	1052.28	1051.81	1051.34
109+20.00	---	---	1052.25	1051.78	1051.33
109+23.94	---	1052.60	1052.22	1051.75	1051.31
109+26.85	1052.32	1052.56	1052.20	1051.73	1051.30
109+28.92	1052.29	1052.53	1052.18	1051.71	1051.30
109+30.00	1052.28	1052.52	1052.18	1051.71	---
109+31.84	1052.25	1052.49	1052.16	1051.69	---
109+40.00	1052.13	1052.37	1052.11	---	---
109+40.39	1052.13	1052.37	1052.10	---	---
109+48.94	1052.01	1052.25	---	---	---
109+50.00	1051.99	---	---	---	---
109+51.85	1051.97	---	---	---	---

NOTES:

1. ALL BARS SPACES INDICATED ARE MAXIMUM CENTER TO CENTER OF BAR.
2. CONSTRUCT BRIDGE APPROACH SLABS AFTER THE BRIDGE DECK SLAB IS CONSTRUCTED.
3. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE INDICATED OR DIRECTED.
4. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.
5. POLYETHYLENE SHEETING, WATERSTOP, BOND BREAKER, JOINT SEALING MATERIAL, CLOSED CELL NEOPRENE SPONGE, NEOPRENE COMPRESSION SEAL, FLAT STAY IN PLACE FORMS, AND SAW CUTTING ARE INCIDENTAL TO CLASS AAAP CEMENT CONCRETE.
6. APPLY PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER) IN ACCORDANCE WITH PUBLICATION 408, SECTION 1019, TO THE TOP SURFACE OF THE APPROACH SLAB AND BARRIERS.
7. USE ONLY APPROVED SEALS, AS LISTED IN BULLETIN 15. INSTALL JOINT SEALS TO A UNIFORM DEPTH WITH THE TOP OF THE SEAL FROM ¼" TO ½" BELOW THE LEVEL OF THE PAVEMENT SURFACE. MAKE THE TOP EDGES OF THE CONTACT SURFACES ON BOTH SIDES OF THE SEAL AT THE SAME ELEVATION.

LEGEND:

E DENOTES EPOXY COATED BARS

REFERENCES:

		SHEET:
1.	LIST OF PENNDOT STANDARD DRAWINGS	1
2.	INDEX OF DRAWINGS	3
3.	ABUTMENT 1 DETAILS	16 - 26
4.	WING BARRIER TRANSITION 1 & 2	43 & 44
5.	DECK DETAILS	72 - 76
6.	BARRIER PLAN AND DETAILS	78
7.	APPROACH SLAB DETAILS 1 & 2	91 & 92
8.	APPROACH SLAB REINF SCHEDULE 1	107

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BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

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ABUTMENT 1 APPROACH SLAB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

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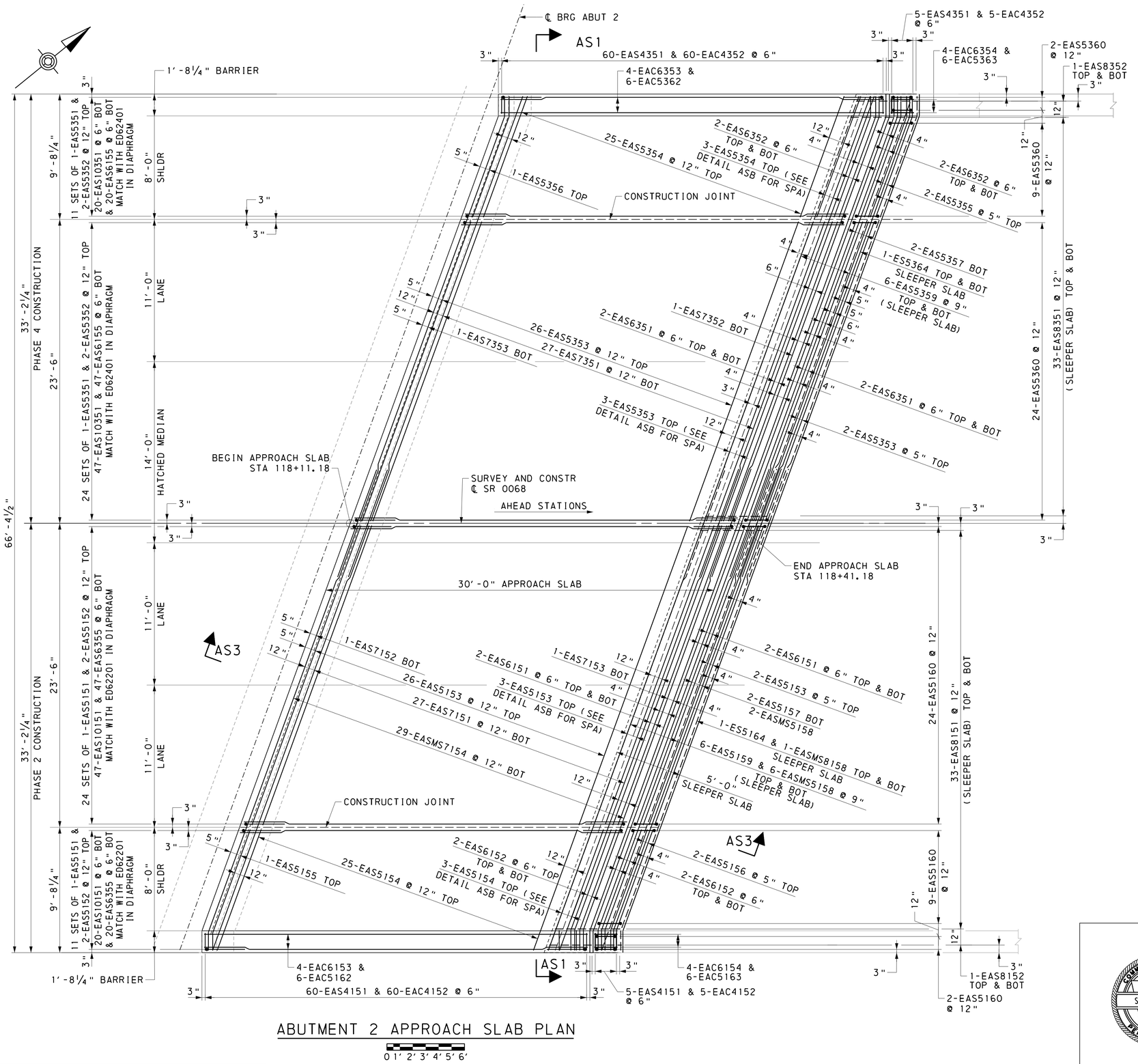

ABUTMENT 2 APPROACH SLAB PLAN

DES: BEG	CKD: MEM	DWG: CLG	CKD: MEM

ABUTMENT 2 APPROACH SLAB ELEVATIONS AT BREAK POINTS

STATION	LEFT GUTTERLINE (1)	EDGE LEFT LANE (2)	PG ELEV (3)	EDGE RIGHT LANE (4)	RIGHT GUTTERLINE (5)
117+99.71	1.00	---	---	---	1045.84
118+00.00	---	---	---	---	1045.83
118+02.62	---	---	---	1046.04	1045.80
118+10.00	---	---	---	1045.96	1045.72
118+11.18	---	---	1045.46	1045.96	1045.72
118+19.73	---	1044.78	1045.34	1045.89	1045.65
118+20.00	---	1044.77	1045.33	1045.89	1045.65
118+22.64	1044.47	1044.71	1045.29	1045.87	1045.63
118+29.71	1044.31	1044.55	1045.18	1045.81	1045.57
118+30.00	1044.30	1044.54	1045.17	1045.80	---
118+32.62	1044.24	1044.48	1045.13	1045.78	---
118+40.00	1044.06	1044.30	1045.00	---	---
118+41.18	1044.02	1044.27	1044.98	---	---
118+49.93	1043.77	1044.04	---	---	---
118+50.00	1043.77	---	---	---	---
118+52.96	1043.68	---	---	---	---

NOTES:

1. SEE ABUTMENT 1 APPROACH SLAB FOR NOTES.

LEGEND:

E DENOTES EPOXY CODED BARS

REFERENCES:

1. LIST OF PENNDOT STANDARD DRAWINGS
2. INDEX OF DRAWINGS
3. ABUTMENT 2 DETAILS
4. WING BARRIER TRANSITION 1 & 2
5. DECK DETAILS
6. BARRIER PLAN AND DETAILS
7. APPROACH SLAB DETAILS 1 & 2
8. APPROACH SLAB REINF SCHEDULE 1

SHEET:

1
3
31 - 42
43 & 44
72 - 77
78
91 & 92
108

Mark	Description	By	Chk'd.	Recm'd.	Date
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KARNS CROSSING

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ABUTMENT 2 APPROACH SLAB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

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SHEET 90 OF 121

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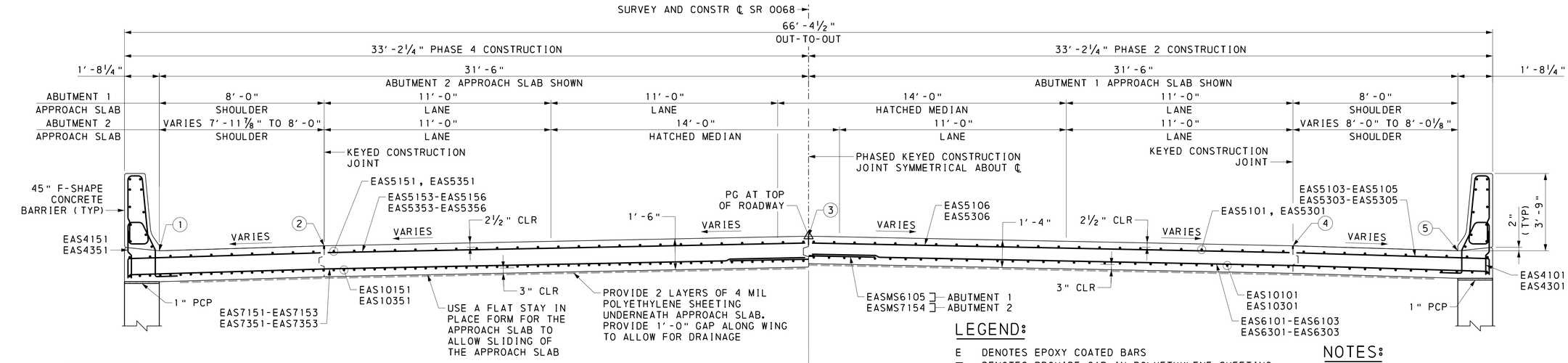

SECTION AS1-AS1

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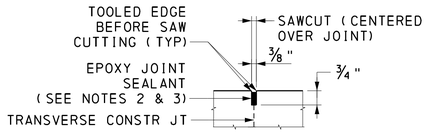


JOINT SEALING DETAIL

NOT TO SCALE

LEGEND:

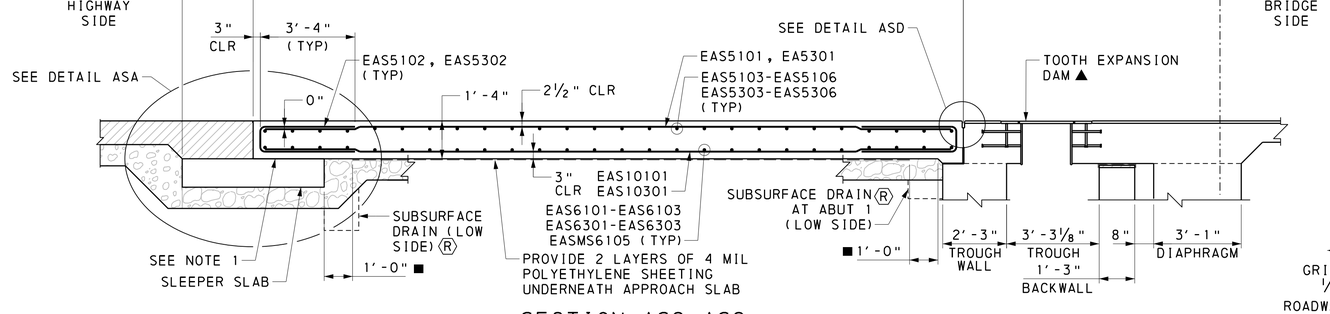
E DENOTES EPOXY COATED BARS

■ DENOTES PROVIDE GAP IN POLYETHYLENE SHEETING ALONG BACKWALL TO ALLOW FOR DRAINAGE

▲ DENOTES SEE BC-762M FOR TOOTH EXPANSION DAM

PCP DENOTES 1" PREFORMED CELLULAR POLYSTYRENE

DENOTES JOINT OPENING FOR JOINT SEAL, SEE JOINT PREPARATION NOTES. WIDTH OF OPENING SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING. SEE MANUFACTURER'S DATA.



SECTION AS2-AS2

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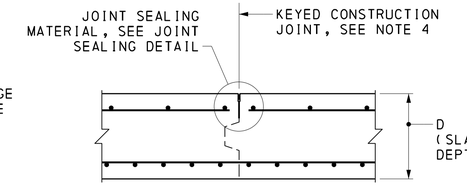
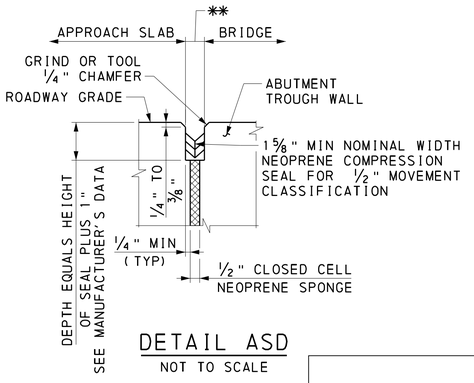


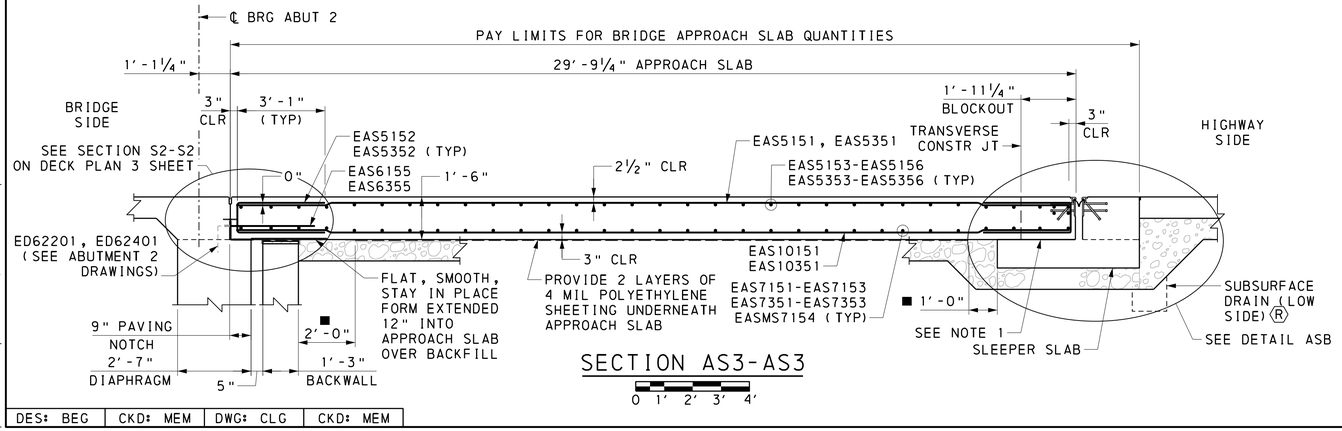
CONSTRUCTION JOINT DETAIL

NOT TO SCALE



DETAIL ASD

NOT TO SCALE



SECTION AS3-AS3

0 1′ 2′ 3′ 4′

NOTES:

1. WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
2. SEAL CONCRETE-TO-CONCRETE DECK CONSTRUCTION JOINTS WITH AN EPOXY SEALANT PER BC-752M. USE AN EPOXY SEALANT FROM BULLETIN 15 SECTION 706.1 EPOXY BONDING COMPOUND. THE EPOXY SEALANT IS INCIDENTAL TO THE CLASS AAAP CEMENT CONCRETE.
3. PROVIDE AN EPOXY BONDING COMPOUND IN ACCORDANCE WITH PUBLICATION 408 SECTION 706 AND SECTION 1001.3(m). EPOXY BONDING COMPOUND IS INCIDENTAL TO CLASS AAAP CEMENT CONCRETE.
4. TOP REINFORCEMENT NOT CONTINUOUS THRU JOINT. BOTTOM REINFORCEMENT CONTINUOUS THRU JOINT. MECHANICAL SPLICES ARE PERMITTED AS AN OPTION FOR BOTTOM REINFORCEMENT.

REFERENCES:

		SHEET:
1.	GENERAL NOTES	4
2.	ABUTMENT 1 DETAILS	16 - 26
3.	ABUTMENT 2 DETAILS	31 - 42
4.	ABUTMENT 1 APPROACH SLAB	89
5.	ABUTMENT 2 APPROACH SLAB	90
6.	APPROACH SLAB DETAILS 2	92
7.	APPROACH SLAB REINF BAR SCHEDULE 1 & 2	107 & 108

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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
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APPROACH SLAB DETAILS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107

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SHEET 91 OF 121

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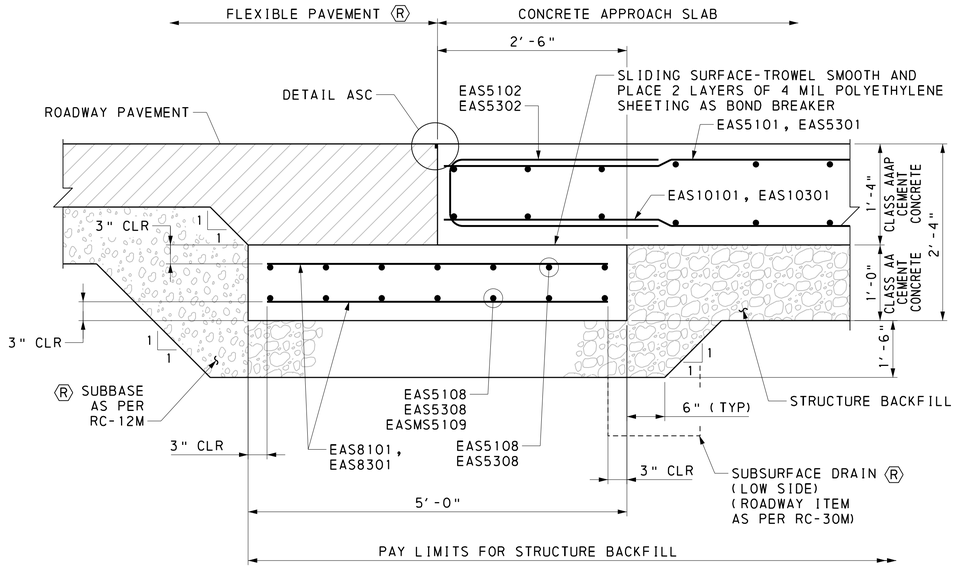
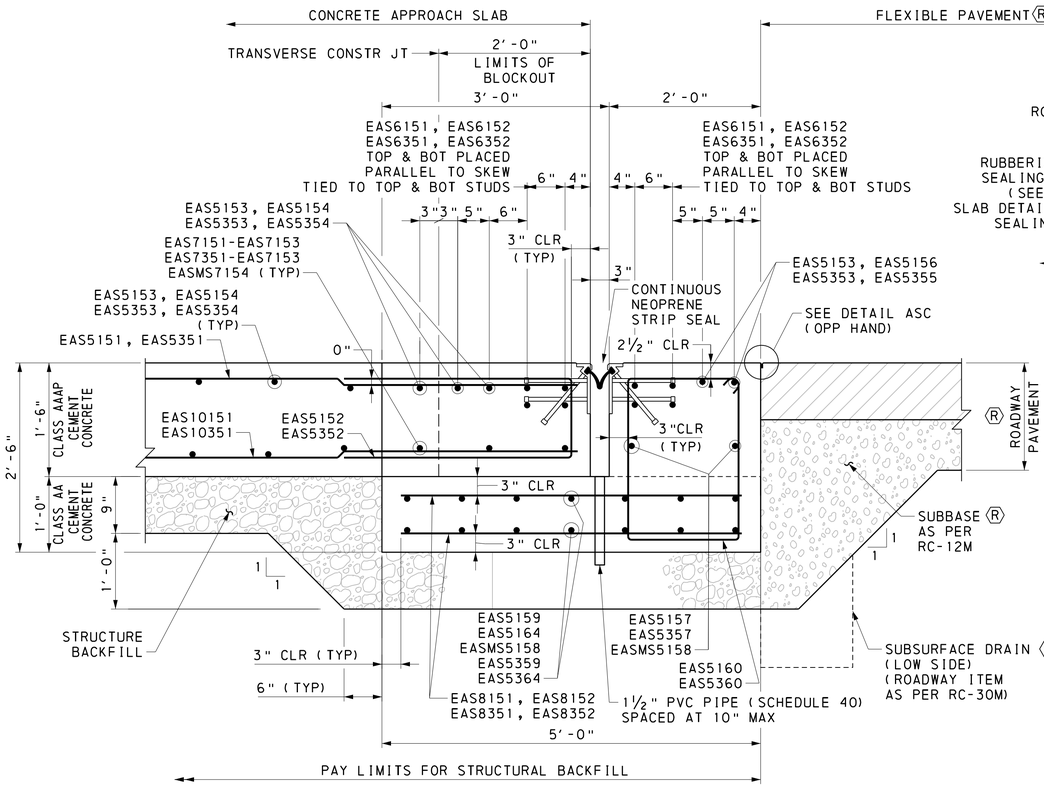


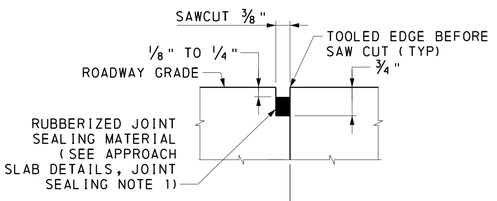
DETAIL ASA

ABUTMENT 1 PHASE 2 APPROACH SLAB AS SHOWN
ABUTMENT 1 PHASE 4 APPROACH SLAB, SIMILAR
NOT TO SCALE



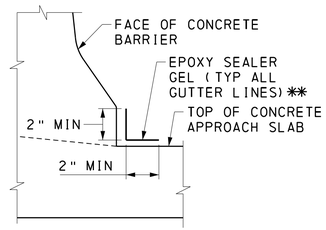
DETAIL ASB

ABUTMENT 2 PHASE 2 APPROACH SLAB AS SHOWN
ABUTMENT 2 PHASE 4 APPROACH SLAB SIMILAR
NOT TO SCALE



DETAIL ASC

NOT TO SCALE



APPROACH SLAB BARRIER SEALANT DETAIL

NOT TO SCALE

JOINT PREPARATION NOTES:

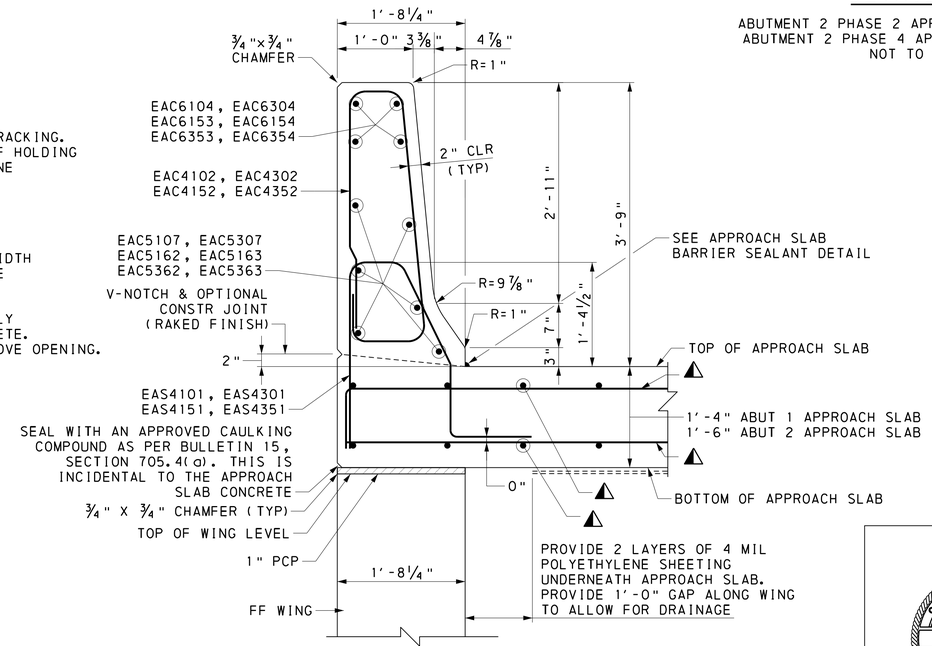
1. THE JOINT OPENING IS TO BE FORMED BY A TWO-STAGE SAWING OPERATION WHERE ACCESSIBLE AND FORMED ELSEWHERE. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING. THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF ±1#16" TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL OR INVERTED V JOINT SEAL.
2. WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
3. THE DEPTH OF THE SEAL OPENING EQUALS THE HEIGHT OF THE SEAL PLUS ¾". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING, SEE MANUFACTURER'S PRODUCT INFORMATION.
4. BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
5. PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.

NOTES:

1. PROVIDE A RUBBERIZED JOINT SEALING MATERIAL CONFORMING TO BULLETIN 15, SECTION 705.4(b) & (c). THIS SEALING MATERIAL IS INCIDENTAL TO CLASS AAAP CEMENT CONCRETE.

LEGEND:

E	DENOTES EPOXY COATED BARS
FF	DENOTES FRONT FACE
PCP	DENOTES 1" PREFORMED CELLULAR POLYSTYRENE
Ⓡ	DENOTES ROADWAY ITEM
◭	DENOTES SEE ABUTMENT 1 AND ABUTMENT 2 APPROACH SLAB FOR BAR MARKS
*	DENOTES TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING AS BOND BREAKER
**	DENOTES EPOXY SEALANT GEL (APPLY BEFORE PENETRATING SEALER) IN ACCORDANCE WITH PUBLICATION 408, SECTION 706.1 (INCIDENTIAL TO CLASS AA CEMENT CONCRETE, EXCEPT USE NO 8 COARSE AGGREGATE)



TYPICAL APPROACH SLAB BARRIER SECTION

0 3 6 9 1' 2'

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	89 - 91
2. APPROACH SLAB REINF BAR SCHEDULE 1 & 2	107 & 108

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

APPROACH SLAB DETAILS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 92 OF 121

S - 39526

DES: BEG | CKD: MEM | DWG: CLG | CKD: MEM

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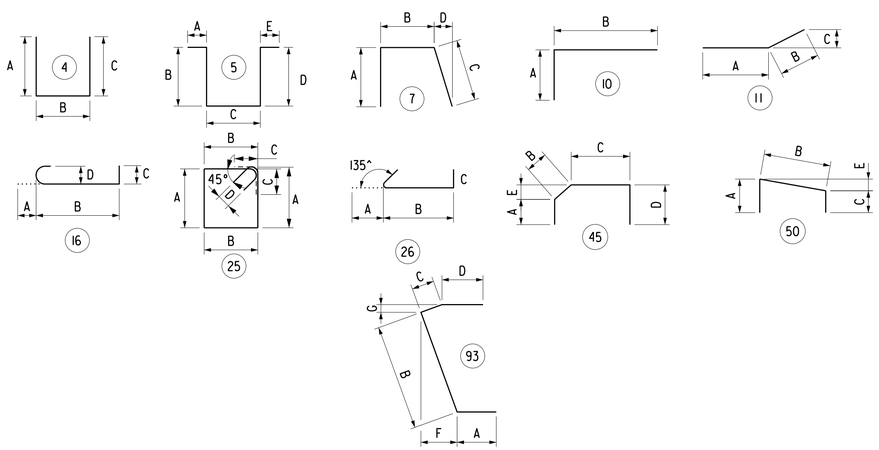
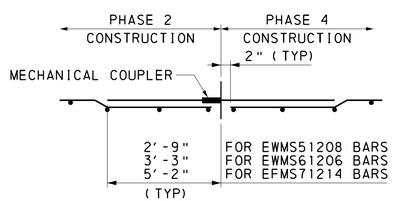
ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 2 CONSTR)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EW31201	3	10	8'-4"	4	3'-10"	8"	3'-10"				
EW31202	3	10	8'-1"	50	3'-10"	8"	3'-7"		3"		
EF41201	4	135	5'-1"	26	4 ½"	4'-4"	4 ½"				
EW41210	4	42	8'-0"	4	3'-7"	10"	3'-7"				
EW41216	4	48	3'-6"	STR							WEEP HOLES
EF41217	4	60	4'-8"	STR							
EW41218	4	60	31'-6"	STR							
EW41219	4	180	15'-7"	5	1'-0"	6'-3 ½"	1'-0"	6'-3 ½"	1'-0"		
EW41220	4	60	8'-1"	STR							
EW41225	4	43	5'-7"	7	2'-2"	1'-3"	2'-2"	2 ¼"			
EW41228	4	14	12'-9"	4	3'-0"	6'-9"	3'-0"				
EW51201	5	42	10'-5"	STR							
EW51202	5	7	2'-6"	STR							
EW51203	5	63	10'-9" TO 10'-11"	4	1'-3"	4'-6"	5'-0" TO 5'-2"				VARY EA C BY 1/16"-
EW51204	5	63	12'-6" TO 12'-10"	25	4'-0" TO 4'-2"	1'-9"	6"				VARY EA A BY 1/16"-
EW51205	5	20	10'-9" TO 10'-11"	4	1'-3"	4'-6"	5'-0" TO 5'-2"				VARY EA C BY 1/8"-
EW51206	5	20	12'-6" TO 12'-10"	25	4'-0" TO 4'-2"	1'-9"	6"				VARY EA A BY 1/8"-
EW51207	5	14	40'-6" TO 41'-7"	11	38'-11½" TO 40'-1"	1'-6½" TO 1'-6"	6 3/8" TO 6 ¼"				VARY EA A BY 2 ¼", VARY EA B BY 1/16"+, VARY EA C BY 1/16"
EWMS51208	5	26									MECHANICAL SPLICE SYSTEM
EW51209	5	12	41'-9" TO 42'-5"	11	40'-2" TO 40'-11"	1'-7" TO 1'-6"	6 ½" TO 6"				MECHANICAL SPLICE SYSTEM 4 SETS OF 3: VARY A SET BY 4 ½", VARY B SET BY ½", VARY C SET BY ¼"
EF51210	5	6	5'-5"	STR							
EW51211	5	14	31'-3"	STR							
EW51212	5	64	6'-2"	10	1'-0"	5'-2"					
EW51213	5	32	7'-8"	45	2'-9"	1'-1½"	1'-0½"	2'-9"	1¼"		
EW51214	5	6	3'-0"	STR							
EW51215	5	4	6'-6"	4	2'-7"	1'-4"	2'-7"				

ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 2 CONSTR) CONT'D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EW61201	6	63	11'-8" TO 11'-10"	16	8"	5'-6"	5'-6" TO 5'-8"				VARY EA C BY 1/16"-
EW61202	6	63	12'-0" TO 12'-4"	4	5'-6" TO 5'-8"	1'-0"	5'-6" TO 5'-8"				VARY EA A & C BY 1/16"-
EW61203	6	20	11'-8" TO 11'-10"	16	8"	5'-6"	5'-6" TO 5'-8"				VARY EA C BY 1/8"-
EW61204	6	20	12'-0" TO 12'-4"	4	5'-6" TO 5'-8"	1'-0"	5'-6" TO 5'-8"				VARY EA A & C BY 1/8"-
EW61205	6	3	41'-9" TO 42'-5"	11	40'-2" TO 40'-11"	1'-7" TO 1'-6"	6 ½" TO 6"				VARY EA A BY 4 ½", VARY EA BY BY ½", VARY EA C BY ¼"
EWMS61206	6	3									MECHANICAL SPLICE SYSTEM
EF61207	6	41	3'-10"	STR							
EW61208	6	8	36'-1"	STR							
EW61209	6	8	31'-1"	STR							
EW61210	6	25	31'-1" TO 31'-3"	STR							VARY EA BY 1/16"+
EW61211	6	12	6'-5"	STR							
EW61212	6	64	35'-11"	STR							





MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 16 - 26

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 REINF BAR SCHEDULE 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 93 OF 121

S - 39526

DES: EEM | CKD: JMF | DWG: EEM | CKD: JMF

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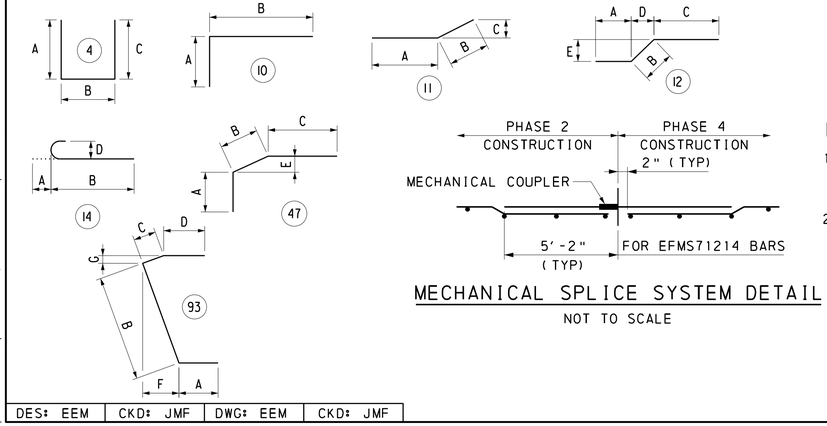
ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 2 CONSTR) CONT' D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EF71201	7	4	2'-6" TO 11'-11"	STR							VARY EA BY 3'-1⅝"+
EF71202	7	3	16'-2" TO 16'-10"	10	1'-2"	15'-0" TO 15'-8"					VARY EA B BY 4"
EF71203	7	7	17'-5" TO 19'-5"	10	1'-2"	16'-3" TO 18'-3"					VARY EA B BY 4"
EF71204	7	6	20'-0" TO 21'-5"	10	1'-2"	18'-10" TO 20'-3"					VARY EA B 3⅜"+
EF71205	7	25	21'-2"	4	1'-2"	18'-10"	1'-2"				
EF71206	7	2	40'-11" TO 41'-1"	10	1'-2"	39'-9" TO 39'-11"					VARY EA B BY 1"
EF71207	7	3	40'-6" TO 41'-4"	STR							VARY EA BY 5"
EF71208	7	3	41'-10" TO 42'-8"	STR							VARY EA BY 5"
EF71209	7	4	43'-3" TO 44'-4"	STR							VARY EA BY 4 5/16"+
EF71210	7	5	35'-0" TO 43'-7"	STR							VARY EA BY 2'-1¾"
EF71211	7	2	29'-6" TO 30'-10"	STR							VARY EA BY 8"
EF71212	7	14	39'-9" TO 44'-4"	STR							VARY EA BY 4¼"
EF71213	7	6	29'-6" TO 43'-7"	STR							VARY EA BY 2'-9 13/16"
EFMS71214	7	47									MECHANICAL SPLICE SYSTEM
EF71215	7	2	24'-3" TO 24'-5"	10	1'-2"	23'-1" TO 23'-3"					VARY EA B BY 2"
EF71216	7	43	16'-0"	STR							
EF71217	7	23	13'-3"	12	3'-10"	5'-7"	3'-10"	2'-6"	5'-0"		
EF71218	7	16	23'-2"	4	1'-2"	20'-10"	1'-2"				
EF71219	7	22	14'-5"	10	5'-0"	9'-5"					
EF71221	7	35	19'-6"	4	1'-2"	17'-2"	1'-2"				
EF71222	7	19	24'-9"	10	1'-2"	23'-7"					
EF71223	7	18	29'-2"	STR							
EF71224	7	4	39'-9"	STR							
EF71225	7	4	28'-2"	STR							
EF71226	7	4	15'-0"	STR							
EF71227	7	4	20'-10"	STR							
EF71228	7	4	23'-1"	STR							
EF71230	7	63	3'-8"	STR							
EW71231	7	40	27'-3"	STR							
EW71232	7	40	9'-9"	47	3'-10"	4'-10"	1'-1"		4⅞"		
EW71233	7	6	38'-6" TO 40'-3"	STR							VARY EA BY 4 3/16"+
EW71234	7	28	38'-6"	STR							
EWMS71235	7	88									MECHANICAL SPLICE SYSTEM
EW71236	7	41	40'-4"	11	38'-10½"	1'-5½"	6"				
EW71237	7	12	40'-1"	11	38'-6"	1'-7"	6½"				
EW71238	7	5	27'-3"	STR							
EW71239	7	29	11'-4"	93	2'-2"	5'-6½"	1'-5½"	2'-2"			F=1'-10⅞", G=6"
EW71240	7	18	31'-3"	STR							
EW71241	7	29	18'-3"	4	6'-9"	3'-11"	7'-7"				
EW71242	7	12	9'-4"	STR							
EF71243	7	4	17'-2"	STR							
EF71244	7	8	29'-2"	STR							

ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 2 CONSTR) CONT' D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EF91201	9	41	20'-2"	14	1'-3"	18'-11"					
EF91202	9	42	24'-11"	14	1'-3"	23'-8"					
EW91203	9	42	21'-9"	STR							
EF101201	10	5	2'-6" TO 11'-11"	STR							VARY EA BY 2'-4¼"
EF101202	10	16	15'-0" TO 20'-3"	STR							VARY EA BY 4 3/16"+
EF101203	10	25	18'-10"	STR							
EF101204	10	30	17'-2"	STR							
EF101205	10	75	22'-7"	14	1'-5"	21'-2"					
EF101206	10	9	36'-1"	STR							
EF101207	10	7	27'-7"	14	1'-5"	26'-2"					
EW101208	10	8	31'-1"	STR							
EF101209	10	6	23'-3" TO 27'-5"	14	1'-5"	21'-10" TO 26'-0"					VARY EA B 10"
EW101210	10	30	31'-1" TO 31'-3"	STR							VARY EA BY 1/16"
EF111201	11	23	20'-10"	STR							



MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

16 - 26

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 REINF BAR SCHEDULE 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 94 OF 121

S - 39526

DES: EEM	CKD: JMF	DWG: EEM	CKD: JMF

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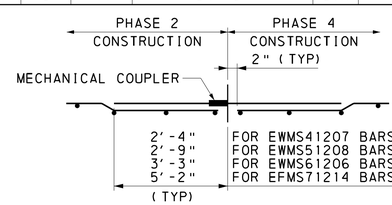
ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 4 CONSTR)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EW31401	3	20	8′-10"	4	4′-1"	8"	4′-1"				
EF41401	4	87	5′-1"	26	4 ½"	4′-4"	4 ½"				
EF41402	4	41	3′-1"	26	4 ½"	2′-4"	4 ½"				
EW41409	4	23	7′-2" TO 8′-0"	4	3′-2" TO 3′-7"	10"	3′-2" TO 3′-7"				VARY EA A & C BY ¼"-
EW41410	4	9	6′-2" TO 7′-0"	4	2′-8" TO 3′-1"	10"	2′-8" TO 3′-1"				VARY EA A & C BY ⅝"
EW41416	4	36	4′-6"	STR							
EW41417	4	36	32′-4"	STR							
EW41418	4	108	15′-7"	5	1′-0"	6′-3 ½"	1′-0"	6′-3 ½"	1′-0"		
EW41419	4	36	8′-1"	STR							
EW41436	4	72	5′-7"	7	2′-2"	1′-3"	2′-2"	2 ¼"			
EW41437	4	21	11′-0"	30	4′-11 ½"	3′-8 ⅝"	1′-4"				
EC41438	4	21	8′-7"	27	3′-0 ½"	3 ⅜"	2′-10 ¾"	6 ¾"	5 ⅞"		F=3 ⅜"
EW41439	4	48	3′-6"	STR							WEEP HOLES
EW41440	4	8	14′-8"	STR							
EW41441	4	7	11′-4"	4	1′-6"	6′-9"	3′-1"				
EW41442	4	7	10′-11"	7	3′-1"	5′-9"	2′-1"	8 ½"			
EW51401	5	31	10′-2"	STR							
EC51402	5	6	20′-2"	STR							
EW51403	5	7	2′-6"	STR							
EW51404	5	38	10′-4" TO 10′-8"	4	1′-3"	4′-6"	4′-7" TO 4′-11"				VARY EA C BY ⅛"-
EW51405	5	17	9′-9" TO 10′-3"	4	1′-3"	4′-6"	4′-0" TO 4′-6"				VARY EA BY ⅜"
EW51406	5	38	11′-10" TO 12′-6"	25	3′-8" TO 4′-0"	1′-9"	6"				
EW51407	5	17	10′-8" TO 11′-10"	25	3′-1" TO 3′-8"	1′-9"	6"				
EW51408	5	14	28′-1" TO 29′-4"	11	26′-7" TO 27′-9"	1′-6" TO 1′-7"	6 ⅛" TO 6 ⅜"				VARY EA SET OF 7 , VARY EA A BY 5/16"+ , VARY EA B BY ⅛"+ , VARY EA C BY 1/16"+
EW51409	5	9	27′-4" TO 28′-2"	11	25′-10" TO 26′-7"	1′-6" TO 1′-7"	6" TO 6 ½"				VARY EA SET OF 3 , VARY EA A BY 4 ½" , VARY EA B BY ½" , VARY EA C BY ¼"
EW51410	5	4	3′-0"	STR							
EW51411	5	4	4′-8"	4	1′-8"	1′-4"	1′-8"				
EF51412	5	2	12′-1"	STR							
EF51413	5	4	17′-11"	STR							
EF51414	5	4	19′-0"	STR							

ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 4 CONSTR) CONT'D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EW61401	6	8	20′-2"	STR							
EW61402	6	38	11′-3" TO 11′-7"	16	8"	5′-6"	5′-1" TO 5′-5"				VARY EA C BY ⅛"-
EW61403	6	17	10′-10" TO 11′-4"	16	8"	5′-6"	4′-8" TO 5′-2"				VARY EA C BY ¼"
EW61404	6	38	11′-2" TO 11′-10"	4	5′-1" TO 5′-5"	1′-0"	5′-1" TO 5′-5"				VARY EA A & C BY ⅛"-
EW61405	6	17	11′-4" TO 12′-4"	4	5′-2" TO 5′-8"	1′-0"	5′-2" TO 5′-8"				VARY EA A & C BY ⅜"
EW61406	6	3	27′-4" TO 28′-2"	11	25′-10" TO 26′-7"	1′-6" TO 1′-7"	6" TO 6 ½"				VARY EA A BY 4 ½" , VARY EA B BY ½" , VARY EA C BY ¼"
EF61407	6	68	3′-10"	STR							
EW61408	6	8	36′-10"	STR							
EW61409	6	4	31′-10"	STR							
EW61410	6	4	31′-11"	STR							
EW61411	6	11	31′-11" TO 32′-1"	STR							VARY EA BY 3/16"+
EW61412	6	4	26′-6"	STR							
EW61413	6	5	26′-7"	STR							
EW61414	6	9	26′-8"	STR							
EW61415	6	4	19′-2"	STR							
EW61416	6	8	19′-3"	STR							
EW61417	6	14	19′-5" TO 19′-7"	STR							VARY EA BY ¼"+
EW61418	6	10	7′-2"	STR							
EW61419	6	12	22′-2"	STR							
EW61420	6	60	24′-8"	STR							
EW61421	6	44	34′-0"	STR							
EW61418	6	10	7′-2"	STR							
EW61419	6	12	22′-2"	STR							
EW61420	6	60	24′-8"	STR							
EW61421	6	44	34′-0"	STR							



MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

REFERENCES:

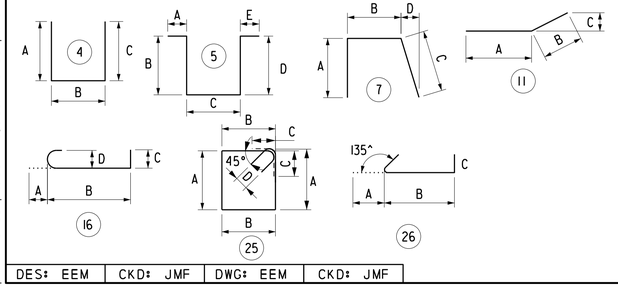
1. WORK THIS SHEET WITH SHEETS 16 - 26

SHEET:

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 1 REINF BAR SCHEDULE 3

RECOMMENDED _____

SHEET 95 OF 121

S - 39526

DES: EEM | CKD: JMF | DWG: EEM | CKD: JMF

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ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 4 CONSTR) CONT' D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EF71401	7	2	35'-5" TO 35'-7"	10	1'-2"	34'-3" TO 34'-5"					VARY EA B BY 2"
EF71402	7	3	34'-1" TO 34'-10"	10	1'-2"	32'-11" TO 33'-8"					VARY EA B BY 4 ½"
EF71403	7	3	32'-8" TO 33'-6"	10	1'-2"	31'-6" TO 32'-4"					VARY EA B BY 5"
EF71404	7	4	31'-1" TO 32'-2"	10	1'-2"	29'-11" TO 31'-0"					VARY EA B BY 4 5/16"
EF71405	7	5	28'-5" TO 29'-6"	STR							VARY EA BY 3 ¼"
EF71406	7	2	27'-8" TO 27'-10"	STR							VARY EA BY 2"
EF71407	7	12	21'-2"	4	1'-2"	18'-10"	1'-2"				
EF71408	7	7	20'-0" TO 21'-1"	10	1'-2"	18'-10" TO 19'-11"					VARY EA B BY 2 3/16"-
EF71409	7	7	21'-8" TO 23'-7"	10	1'-2"	20'-6" TO 22'-5"					VARY EA B BY 3 13/16"+
EF71410	7	7	8'-6" TO 23'-5"	10	1'-2"	7'-4" TO 22'-3"					VARY EA B BY 2'-5 13/16"+
EF71411	7	2	2'-2" TO 4'-3"	10	1'-2"	1'-0" TO 3'-1"					VARY EA B BY 2'-1"
EF71412	7	14	29'-11" TO 34'-5"	STR							VARY EA BY 4 ⅛"+
EF71413	7	6	27'-8" TO 29'-6"	STR							VARY EA B BY 4 3/16"+
EF71415	7	2	27'-4" TO 27'-6"	10	1'-2"	26'-2" TO 26'-4"					VARY EA B BY 2"
EF71416	7	2	5'-11"	STR							
EF71417	7	33	9'-6"	STR							
EF71418	7	18	13'-3"	12	3'-10"	5'-7"	3'-10"	2'-6"	5'-0"		
EF71419	7	19	14'-5"	10	5'-0"	9'-5"					
EF71420	7	9	19'-0"	10	1'-2"	17'-10"					
EF71421	7	1	12'-0"	STR							
EF71422	7	1	15'-4"	STR							
EF71424	7	23	19'-6"	4	1'-2"	17'-2"	1'-2"				
EF71425	7	18	12'-6"	STR							
EF71426	7	22	17'-6"	4	1'-2"	15'-2"	1'-2"				
EF71427	7	33	16'-3"	4	1'-2"	13'-11"	1'-2"				
EF71428	7	18	17'-11"	STR							
EF71429	7	4	26'-4"	STR							
EF71430	7	4	34'-5"	STR							
EF71431	7	4	13'-0"	STR							
EF71432	7	39	4'-6"	STR							
EW71433	7	39	26'-9"	STR							
EW71434	7	33	9'-9"	47	3'-10"	4'-10"	1'-1"		4 7/8"		
EW71435	7	5	30'-0" TO 31'-3"	STR							VARY EA BY 3 ¾"
EW71436	7	29	31'-0"	STR							
EW71437	7	41	29'-5"	11	27'-10"	1'-7"	6 ½"				
EW71438	7	29	13'-1"	94	2'-2"	10"	6'-4"	1'-7"	2'-2"		F=3 ¼", G=2'-2 ⅛", H=6 ½"
EW71439	7	28	17'-11"	4	6'-5"	4'-1"	7'-5"				
EF71440	7	17	4'-6"	STR							
EW71441	7	17	32'-10"	STR							
EF71442	7	8	17'-11"	STR							
EW71443	7	12	29'-9"	11	28'-3"	1'-6"	6"				
EW71444	7	14	10'-2"	STR							

ABUTMENT 1 REINFORCEMENT BAR SCHEDULE (PHASE 4 CONSTR) CONT' D

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EF81401	8	17	11'-3"	STR							
EF81402	8	32	17'-1"	11	4'-4"	8'-5"	4'-4"	3'-9"	7'-6"		
EF81403	8	31	14'-3"	10	9'-11"	4'-4"					
EF81404	8	16	17'-11"	STR							
EF81405	8	15	13'-3"	10	1'-2"	12'-1"					
EF81406	8	15	19'-0"	STR							
EF81407	8	6	21'-4"	14	11"	20'-5"					
EW81408	8	4	19'-2"	STR							
EF81409	8	8	14'-2" TO 21'-4"	14	11"	13'-3" TO 20'-5"					VARY EA B BY 1'-0 ¼"+
EW81410	8	5	19'-3"	STR							
EF81411	8	26	13'-10"	14	11"	12'-11"					
EW81412	8	14	19'-5" TO 19'-7"	STR							VARY EA BY ⅛"+
EF91401	9	20	13'-11"	STR							
EF91402	9	30	20'-2"	14	1'-3"	18'-11"					
EF91403	9	31	24'-11"	14	1'-3"	23'-8"					
EW91404	9	31	22'-0"	STR							
EF91405	9	6	24'-8"	14	1'-3"	23'-5"					
EW91406	9	4	26'-6"	STR							
EF91407	9	8	17'-9" TO 24'-9"	14	1'-3"	16'-6" TO 23'-6"					VARY EA B BY 1'-0"
EW91408	9	5	26'-7"	STR							
EF91409	9	17	17'-2"	14	1'-3"	15'-11"					
EW91410	9	9	26'-8"	STR							
EF101401	10	12	18'-10"	STR							
EF101402	10	15	18'-10" TO 22'-3"	STR							VARY EA BY 2 15/16"-
EF101403	10	8	1'-0" TO 19'-6"	STR							VARY EA BY 2'-7 11/16"+
EF101404	10	19	17'-2"	STR							
EF101405	10	19	15'-2"	STR							
EF101406	10	41	22'-7"	14	1'-5"	21'-2"					
EW101407	10	9	36'-10"	STR							
EF101408	10	7	27'-7"	14	1'-5"	26'-2"					
EW101409	10	4	31'-10"	STR							
EF101410	10	6	23'-2" TO 27'-7"	14	1'-5"	21'-9" TO 26'-2"					VARY EA B BY 10 ½"+
EW101411	10	4	31'-11"	STR							
EW10412	10	12	31'-11" TO 32'-1"	STR							VARY EA BY 3/16"-
EF111401	11	15	17'-10"	STR							

REINFORCEMENT NOTES:

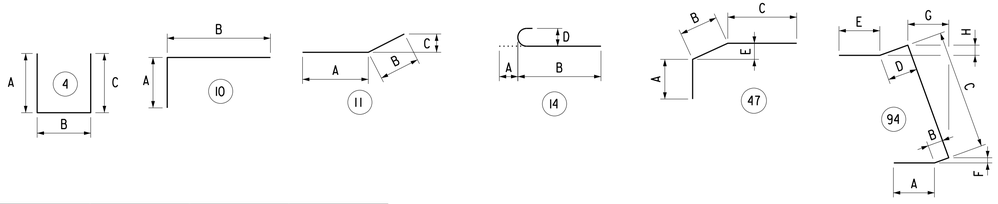
1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

16 - 26



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
ABUT 1 REINF BAR SCHEDULE 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 96 OF 121

S - 39526

DES: EEM | CKD: JMF | DWG: EEM | CKD: JMF

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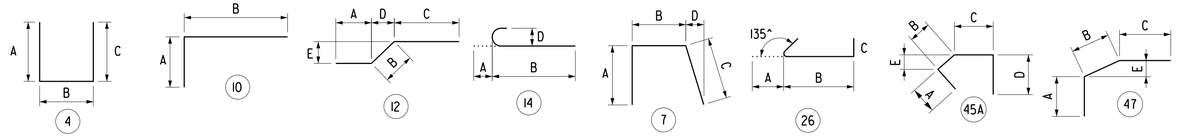
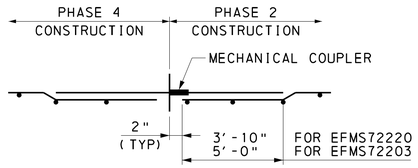
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT FOOTING											
EF42201	4	77	5′-1"	26	4½"	4′-4"	4½"				
EF72201	7	19	38′-6" TO 45′-0"	STR							VARY EA BAR BY 4 5/16"
EF72202	7	20	6′-2"	STR							
EFMS72203	7	27									MECHANICAL SPLICE SYSTEM
EF72210	7	21	20′-2"	4	1′-2"	17′-10"	1′-2"				
EF72211	7	1	16′-7"	10	1′-2"	15′-5"					
EF72212	7	5	17′-2" TO 18′-4"	10	1′-2"	16′-0" TO 17′-2"					VARY EA B BY 3½"
EF72213	7	5	18′-11" TO 20′-1"	10	1′-2"	17′-9" TO 18′-11"					VARY EA B BY 3½"
EF72214	7	5	20′-7" TO 21′-9"	10	1′-2"	19′-5" TO 20′-7"					VARY EA B BY 3½"
EF72215	7	3	22′-4" TO 22′-10"	10	1′-2"	21′-2" TO 21′-8"					VARY EA B BY 3"
EF72216	7	2	18′-9" TO 21′-0"	10	1′-2"	17′-7" TO 19′-10"					VARY EA B BY 2′-3"
EF72217	7	4	8′-2" TO 14′-8"	10	1′-2"	7′-0" TO 13′-6"					VARY EA B BY 2′-2"
EF72218	7	1	4′-0"	10	1′-2"	2′-10"					
EF72219	7	1	53′-6"	10	1′-2"	26′-2"					
EFMS72220	7	20									MECHANICAL SPLICE SYSTEM
EF72221	7	1	46′-2"	10	1′-2"	45′-0"					
EF72222	7	1	46′-0"	10	1′-2"	44′-10"					
EF72223	7	4	44′-7" TO 45′-5"	10	1′-2"	43′-5" TO 44′-3"					VARY EA B BY 3 5/16"
EF72224	7	4	43′-2" TO 44′-1"	10	1′-2"	42′-0" TO 42′-11"					VARY EA B BY 3 1/16"
EF72225	7	8	40′-5" TO 42′-9"	10	1′-2"	39′-3" TO 41′-7"					VARY EA B BY 4"
EF72226	7	1	39′-10"	10	1′-2"	38′-8"					
EF72227	7	1	39′-8"	10	1′-2"	38′-6"					
EF72228	7	6	21′-9"	4	1′-2"	19′-5"	1′-2"				
EF72229	7	19	6′-5"	STR							
EF72230	7	1	3′-5"	STR							
EF72231	7	1	17′-10"	10	1′-2"	16′-8"					
EF72244	7	4	44′-10"	STR							
EF72245	7	4	18′-0"	STR							
EF72246	7	4	26′-2"	STR							
EF112201	11	24	17′-10"	STR							
EF112202	11	24	18′-1" TO 24′-4"	STR							VARY EA BAR BY 3¼"
EF112203	11	11	3′-10" TO 24′-5"	STR							VARY EA BAR BY 2′-0 1/16"
EF112204	11	1	26′-2"	STR							
EF112205	11	13	19′-5"	STR							
WING D FOOTING											
EF42231	4	84	5′-1"	26	4½"	4′-4"	4½"				
EF42232	4	45	3′-1"	26	4½"	2′-4"	4½"				
EF52231	5	4	32′-0"	STR							
EF52232	5	2	15′-4"	STR							
EF62231	6	36	17′-4"	4	1′-0"	15′-4"	1′-0"				
EF72233	7	21	20′-11"	STR							
EF72234	7	19	21′-9"	4	1′-2"	19′-5"	1′-2"				
EF72235	7	21	15′-7"	STR							
EF72236	7	18	22′-5"	STR							
EF72237	7	24	18′-10"	4	1′-2"	16′-6"	1′-2"				
EF72238	7	18	15′-10"	STR							
EF72239	7	21	14′-5"	10	5′-0"	9′-5"					
EF72240	7	21	13′-3"	12	3′-10"	5′-7"	3′-10"	2′-6"	5′-0"		
EF72241	7	18	16′-11"	10	5′-0"	11′-11"					
EF72242	7	35	16′-1"	12	3′-10"	8′-5"	3′-10"	3′-9"	7′-6"		
EF72243	7	17	14′-11"	10	5′-0"	9′-11"					
EF72244	7	8	20′-11"	STR							
EF72245	7	8	22′-5"	STR							

ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WING D FOOTING											
EF82231	8	38	15′-4"	STR							
EF82232	8	17	32′-0"	STR							
EF82233	8	17	36′-9"	10	1′-4"	35′-5"					
EF102231	10	48	19′-5"	STR							
EF102232	10	31	16′-6"	STR							
ABUTMENT ELEVATION											
EA32103	3	12	17′-3"	STR							BEND IN FIELD
EA32104	3	12	12′-4"	4	5′-10"	8"	5′-10"				
EF42104	4	10	35′-7"	STR							
EAMS42105	4	10									MECHANICAL SPLICE SYSTEM
EA42106	4	31	10′-6"	STR							
EA42107	4	16	3′-6"	STR							WEEP HOLES
EA52101	5	46	4′-0"	4	1′-7"	10"	1′-7"				
EA52102	5	46	10′-7"	STR							
EF72101	7	63	3′-11"	STR							
EA72102	7	35	34′-3"	STR							
EA72103	7	35	7′-5"	47	2′-3"	4′-1"	1′-1"		4"		
EA72104	7	75	35′-7"	STR							
EAMS72105	7	73									MECHANICAL SPLICE SYSTEM
EA72106	7	28	35′-0"	STR							
EA72107	7	48	14′-8"	7	5′-0½"	5′-4½"	4′-3"	1′-4¾"			
EA72108	7	48	17′-1"	45A	5′-0½"	11½"	6′-10"	4′-3"	3"		
EF92101	9	45	20′-2"	14	1′-3"	18′-11"					
EF92102	9	46	26′-11"	14	1′-3"	25′-8"					
EA92103	9	46	29′-7"	STR							





MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

REFERENCES:

	SHEET:
1. WORK THIS SHEET WITH SHEETS	31 - 42
2. REINFORCEMENT NOTES	98

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 REINF BAR SCHEDULE 1

RECOMMENDED _____

SHEET 97 OF 121

S - 39526

DES: CLG | CKD: CGF | DWG: CLG | CKD: JMF

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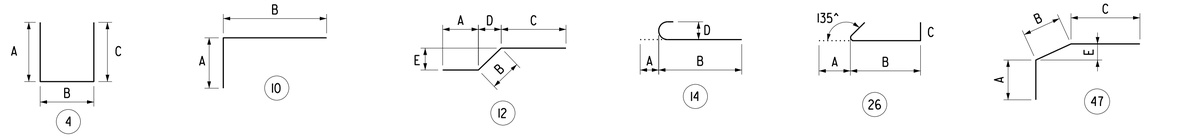
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 4)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT FOOTING											
EF42401	4	65	5′-1"	26	4 ½"	4′-4"	4 ½"				
EF72401	7	19	29′-7" TO 35′-8"	STR							VARY EA BAR BY 4 1/16"
EF72402	7	1	29′-6"	STR							
EF72403	7	20	7′-2"	STR							
EF72410	7	17	20′-2"	4	1′-2"	17′-10"	1′-2"				
EF72411	7	1	21′-2"	10	1′-2"	20′-0"					
EF72412	7	3	22′-11" TO 23′-6"	10	1′-2"	21′-9" TO 22′-4"					VARY EA B BY 3 ½"
EF72413	7	6	20′-11" TO 22′-5"	10	1′-2"	19′-9" TO 21′-3"					VARY EA B BY 3 5/8"
EF72414	7	4	19′-7" TO 20′-5"	10	1′-2"	18′-5" TO 19′-3"					VARY EA B BY 3 5/16"
EF72415	7	6	3′-10" TO 19′-0"	10	1′-2"	2′-8" TO 17′-10"					VARY EA B BY 3′-0 3/8"
EF72416	7	1	30′-9"	10	1′-2"	29′-7"					
EF72417	7	1	30′-11"	10	1′-2"	29′-9"					
EF72418	7	4	31′-6" TO 32′-4"	10	1′-2"	30′-4" TO 31′-2"					VARY EA BAR BY 3 5/16"
EF72419	7	4	32′-10" TO 33′-8"	10	1′-2"	31′-8" TO 32′-6"					VARY EA BAR BY 3 5/16"
EF72420	7	8	34′-2" TO 36′-6"	10	1′-2"	33′-0" TO 35′-4"					VARY EA BAR BY 4"
EF72421	7	6	30′-8"	STR							
EF72422	7	1	19′-10"	10	1′-2"	18′-8"					
EF72423	7	8	21′-9"	4	1′-2"	19′-5"	1′-2"				
EF72424	7	24	7′-7"	STR							
EF72425	7	2	5′-9"	STR							
EF72442	7	4	29′-7"	STR							
EF72443	7	4	18′-8"	STR							
EF72444	7	4	16′-0"	STR							
EF112401	11	21	17′-10"	STR							
EF112402	11	3	19′-0" TO 23′-1"	STR							VARY EA BAR BY 2′-0 ½"
EF112403	11	16	19′-11" TO 24′-0"	STR							VARY EA BAR BY 3 ¼"
EF112404	11	8	1′-11" TO 18′-3"	STR							VARY EA BAR BY 2′-4"
EF112405	11	1	18′-8"	STR							
EF112406	11	15	19′-5"	STR							
WING C FOOTING											
EF42431	4	84	5′-1"	26	4 ½"	4′-4"	4 ½"				
EF42432	4	40	3′-1"	26	4 ½"	2′-4"	4 ½"				
EF52431	5	4	21′-6"	STR							
EF52432	5	2	15′-4"	STR							
EF62431	6	31	17′-4"	4	1′-0"	15′-4"	1′-0"				
EF72431	7	21	20′-11"	STR							
EF72432	7	22	15′-7"	STR							
EF72433	7	20	21′-9"	4	1′-2"	19′-5"	1′-2"				
EF72434	7	18	22′-5"	STR							
EF72435	7	21	18′-10"	4	1′-2"	16′-6"	1′-2"				
EF72436	7	18	15′-10"	STR							
EF72437	7	21	14′-5"	10	5′-0"	9′-5"					
EF72438	7	22	13′-3"	12	3′-10"	5′-7"	3′-10"	2′-6"	5′-0"		
EF72439	7	18	16′-11"	10	5′-0"	11′-11"					
EF72440	7	35	16′-1"	12	3′-10"	8′-5"	3′-10"	3′-9"	7′-6"		
EF72441	7	17	14′-11"	10	5′-0"	9′-11"					
EF72442	7	8	20′-11"	STR							
EF72443	7	8	22′-6"	STR							
EF82431	8	34	15′-4"	STR							
EF82432	8	17	28′-0"	STR							
EF82433	8	17	22′-10"	10	1′-4"	21′-6"					

ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 4)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EF102431	10	48	19′-5"	STR							
EF102432	10	31	16′-6"	STR							
ABUTMENT ELEVATION											
EA32303	3	12	14′-8"	STR							BEND IN FIELD
EA32304	3	12	9′-10"	4	4′-7"	8"	4′-7"				
EF42305	4	10	26′-2"	STR							WEEP HOLES
EA42307	4	10	25′-9"	STR							
EA42308	4	30	10′-6"	STR							
EA42309	4	16	3′-6"	STR							
EA52301	5	33	4′-0"	4	1′-7"	10"	1′-7"				
EA52302	5	33	10′-7"	STR							
EF72301	7	47	3′-11"	STR							
EA72302	7	23	33′-6"	STR							
EA72303	7	23	7′-5"	47	2′-3"	4′-1"	1′-1"		4"		VARY EA BAR BY 4 ¼"
EA72304	7	34	26′-4"	STR							
EA72305	7	34	28′-1"	STR							
EA72306	7	5	24′-2" TO 25′-7"	STR							
EA72307	7	24	33′-6"	STR							
EA72308	7	46	13′-3"	4	3′-6 ½"	5′-2 ½"	4′-6"				
EA72309	7	46	13′-7"	7A	3′-6 ½"	5′-6 ½"	4′-6"	1′-2 ½"	1′-6 ½"		
EF92301	9	32	20′-2"	14	1′-3"	18′-11"					
EF92302	9	33	26′-11"	14	1′-3"	25′-8"					
EA92303	9	33	29′-0"	STR							



REFERENCES:

1. WORK THIS SHEET WITH SHEETS 31 - 42

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 REINF BAR SCHEDULE 2

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SEAN J. HART — ENGINEER No. 071107

RECOMMENDED _____

SHEET 98 OF 121

S - 39526

DES: CLG | CKD: CGF | DWG: CLG | CKD: JMF

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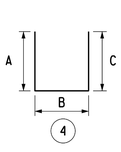
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 4)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WING C ELEVATION											
EW42456	4	36	11′-0"	30	4′-11½"	3′-8⅝"	1′-4"		2¼"		
EC42457	4	36	8′-7"	27	3′-0½"	3⅜"	2′-10¾"	6¾"	5⅞"		F=3⅜"
EW42458	4	32	3′-6"	STR							WEEP HOLES
EW52441	5	9	7′-3"	7	2′-9½"	1′-8½"	2′-9"	2¾"			
EW52442	5	18	6′-9"	7	2′-9¼"	1′-2¾"	2′-9"	2¾"			
EW52443	5	49	6′-9"	4	2′-9⅛"	1′-2¾"	2′-9⅛"				
EC52444	5	6	34′-8"	STR							
EC62441	6	4	34′-8"	STR							
EF62442	6	11	3′-10"	STR							
EW62443	6	10	30′-0"	STR							
EW62444	6	10	15′-3"	STR							
EF62445	6	38	4′-5"	STR							
EW62446	6	18	36′-4"	STR							
EF62447	6	20	29′-9"	STR							
EW62448	6	1	28′-10"	STR							
EF62449	6	29	4′-1"	STR							
EW62450	6	29	23′-4"	STR							
EW62451	6	10	8′-6"	STR							
EW62452	6	16	26′-6"	STR							
EW62453	6	12	45′-9"	STR							
EW62454	6	50	32′-1"	STR							
EW62455	6	54	46′-10"	STR							
EF82441	8	6	22′-3"	14	11"	21′-4"					
EF82442	8	8	17′-9" TO 22′-3"	14	11"	16′-10" TO 21′-4"					VARY EA B BY 7 1/16"
EF82443	8	43	17′-9"	14	11"	16′-10"					
EW82444	8	29	23′-4"	STR							
EF92441	9	5	28′-7"	14	1′-3"	27′-4"					
EF92442	9	8	20′-9" TO 27′-10"	14	1′-3"	19′-6" TO 26′-7"					VARY EA B BY 1′-5"
EF92443	9	25	20′-9"	14	1′-3"	19′-6"					
EW92444	9	20	29′-9"	STR							
EF112441	11	20	19′-10"	14	1′-7"	18′-3"					
EW112442	11	10	41′-10"	STR							
EF112443	11	6	29′-1"	14	1′-7"	27′-6"					
EF112444	11	5	24′-11" TO 28′-11"	14	1′-7"	23′-4" TO 27′-4"					VARY EA B BY 1′-0"
EF112445	11	25	24′-9"	14	1′-7"	23′-2"					VARY EA B BY 1′-0"
EF112446	11	18	36′-4"	STR							



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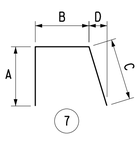

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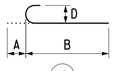

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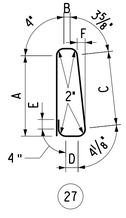

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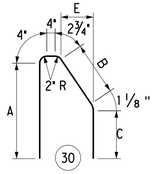

30

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SEAN J. HART — ENGINEER No. 071107 — PENNSYLVANIA

REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

31 - 42

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 REINF BAR SCHEDULE 3

RECOMMENDED _____

SHEET 99 OF 121

S - 39526

DES: CLG | CKD: CGF | DWG: CLG | CKD: JMF

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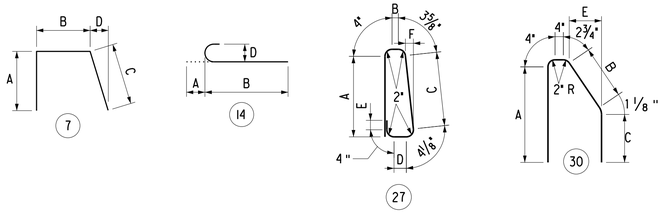
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE (PHASE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WING D ELEVATION											
EW42256	4	4	14′-9"	STR							
EW42257	4	32	3′-6"	STR							WEEP HOLES
EW42261	4	45	11′-0"	30	4′-11½"	3′-8⅝"	1′-4"		2¼"		
EC42262	4	45	8′-7"	27	3′-0½"	3⅜"	2′-10¾"	6¾"	5⅞"		F=3⅜"
EW52241	5	27	7′-7"	7	2′-11½"	1′-8½"	2′-11"	2⅞"			
EW52242	5	4	7′-3"	7	2′-9½"	1′-8½"	2′-9"	2¾"			
EW52243	5	20	7′-9"	7	3′-0½"	1′-8½"	3′-0"	3"			
EW52244	5	33	8′-1"	7	3′-2½"	1′-8½"	3′-2"	3⅛"			
EC52251	5	6	43′-6"	STR							
EC62251	6	4	43′-6"	STR							
EF62252	6	30	3′-10"	STR							
EW62253	6	12	30′-0"	STR							
EW62254	6	12	16′-6"	STR							
EW62255	6	14	38′-2"	STR							
EW62256	6	4	39′-8"	STR							
EF62257	6	20	4′-0"	STR							
EW62258	6	20	32′-0"	STR							
EW62259	6	33	4′-4"	STR							
EW62260	6	33	26′-1"	STR							
EW62261	6	10	11′-0"	STR							
EW62262	6	16	29′-0"	STR							
EW62263	6	10	48′-5"	STR							
EW62264	6	54	29′-8"	STR							
EW62265	6	58	55′-7"	STR							
EF82241	8	6	21′-4"	14	11"	20′-5"					
EF82242	8	8	13′-0" TO 20′-0"	STR							VARY EACH BAR BY 1′-0"
EF82243	8	51	13′-10"	14	11"	12′-11"					
EW82244	8	33	26′-1"	STR							
EF92241	9	6	26′-8"	14	1′-3"	25′-5"					
EF92242	9	8	18′-0" TO 25′-0"	STR							VARY EA BAR BY 1′-0"
EF92243	9	25	19′-2"	14	1′-3"	17′-11"					
EF92244	9	20	32′-0"	STR							
EF112241	11	25	24′-4"	14	1′-7"	22′-9"					
EW112242	11	13	43′-3"	STR							
EF112243	11	6	29′-3"	14	1′-7"	27′-8"					
EF112244	11	5	23′-3" TO 27′-3"	STR							VARY EA BAR BY 1′-0"
EF112245	11	25	24′-3"	14	1′-7"	22′-8"					
EW112246	11	14	38′-2"	STR							
EW112247	11	4	39′-8"	STR							



REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SEAN J. HART — ENGINEER No. 071107 — PENNSYLVANIA

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 31 - 42

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

ABUT 2 REINF BAR SCHEDULE 4

RECOMMENDED _____

SHEET 100 OF 121

S - 39526

DES: CLG | CKD: CGF | DWG: CLG | CKD: JMF

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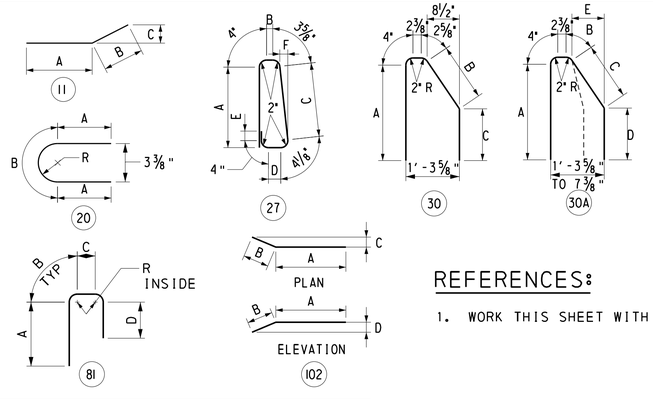
BARRIER TRANSITION REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WING A											
EWC4151	4	2	8'-5"	27	3'-0 ½"	2 ¾"	2'-10 ¾"	6 ⅛"	5 ⅛"		F=3 ⅜"
EW4152	4	2	11'-0"	30	4'-11"	1'-5 ¼"	3'-10 ¾"				
EWC4153	4	14	7'-1" TO 8'-5"	27	3'-0 ½"	2 ¾"	1'-9 ¾" TO 2'-10 ¾"	2 ¾" TO 6 ⅛"	5 ½" TO 5 ⅛"		F=0" TO 3 ⅜", VARY EA C IN SET BY 1", VARY EA D IN SET BY ¼", VARY EA F IN SET BY ¼" VARY EA E IN SET BY 1/16"
EW4154	4	14	11'-0" TO 11'-1"	30A	4'-11"	2 ⅝" TO 4"	1'-5 ¼"	3'-10 ¾" TO 3'-10 ⅜"	8 ½" TO ¼"		VARY EA B IN SET BY ⅛", VARY EA E IN SET BY ⅝"
EW4155	4	5	13'-4"	81	6'-3 ⅜"	2 ⅜"	4 ⅜"	6'-3 ½"		1"	
EW4156	4	3	8'-1"	81	6'-3 ⅜"	2 ⅜"	4 ⅜"	1'-0 ½"		1"	
EW4157	4	3	6'-2"	STR							
EW4158	4	1	12'-8"	20	6'-1 ⅜"	5 ¼"				1 3/16"	
EWC4159	4	10	6'-10"	STR							
EWC4160	4	2	6'-11"	11	5'-6"	1'-5"	4 ⅛"				
EWC5151	5	1	7'-10"	102	7'-0"	10"	1 ⅝"	6 ⅝"			
EWC5152	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC5153	5	2	7'-10"	STR							
EWC5154	5	1	7'-10"	11	7'-0"	10"	3 ⅜"				
EWC5155	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC6151	6	4	7'-11"	11	7'-1"	10"	1'-1"				
EW6152	6	6	11'-8"	STR							
WING B											
EWC4151	4	2	8'-5"	27	3'-0 ½"	2 ¾"	2'-10 ¾"	6 ⅛"	5 ⅛"		F=3 ⅜"
EW4152	4	2	11'-0"	30	4'-11"	1'-5 ¼"	3'-10 ¾"				
EWC4153	4	14	7'-1" TO 8'-5"	27	3'-0 ½"	2 ¾"	1'-9 ¾" TO 2'-10 ¾"	2 ¾" TO 6 ⅛"	5 ½" TO 5 ⅛"		F=0" TO 3 ⅜", VARY EA C IN SET BY 1", VARY EA D IN SET BY ¼", VARY EA F IN SET BY ¼" VARY EA E IN SET BY 1/16"
EW4154	4	14	11'-0" TO 11'-1"	30A	4'-11"	2 ⅝" TO 4"	1'-5 ¼"	3'-10 ¾" TO 3'-10 ⅜"	8 ½" TO ¼"		VARY EA B IN SET BY ⅛", VARY EA E IN SET BY ⅝"
EW4155	4	5	13'-4"	81	6'-3 ⅜"	2 ⅜"	4 ⅜"	6'-3 ½"		1"	
EW4156	4	3	8'-1"	81	6'-3 ⅜"	2 ⅜"	4 ⅜"	1'-0 ½"		1"	
EW4157	4	3	6'-2"	STR							
EW4158	4	1	12'-8"	20	6'-1 ⅜"	5 ¼"				1 3/16"	
EWC4159	4	10	6'-10"	STR							
EWC4160	4	2	6'-11"	11	5'-6"	1'-5"	4 ⅛"				
EWC5151	5	1	7'-10"	102	7'-0"	10"	1 ⅝"	6 ⅝"			
EWC5152	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC5153	5	2	7'-10"	STR							
EWC5154	5	1	7'-10"	11	7'-0"	10"	3 ⅜"				
EWC5155	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC6151	6	4	7'-11"	11	7'-1"	10"	1'-1"				
EW6152	6	6	11'-8"	STR							

BARRIER TRANSITION REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
WING C											
EWC4251	4	2	8'-5"	27	3'-0 ½"	2 ¾"	2'-10 ¾"	6 ⅛"	5 ⅛"		F=3 ⅜"
EW4252	4	2	11'-4"	30	5'-1"	1'-5 ¼"	4'-0 ¾"				
EWC4253	4	14	7'-1" TO 8'-5"	27	3'-0 ½"	2 ¾"	1'-9 ¾" TO 2'-10 ¾"	2 ¾" TO 6 ⅛"	5 ½" TO 5 ⅛"		F=0" TO 3 ⅜", VARY EA C IN SET BY 1", VARY EA D IN SET BY ¼", VARY EA F IN SET BY ¼" VARY EA E IN SET BY 1/16"
EW4254	4	14	11'-4" TO 11'-5"	30A	5'-1"	2 ⅝" TO 4"	1'-5 ¼"	4'-0 ¾" TO 4'-0 ⅜"	8 ½" TO ¼"		VARY EA B IN SET BY ⅛", VARY EA E IN SET BY ⅝"
EW4255	4	5	13'-8"	81	6'-5 ⅜"	2 ⅜"	4 ⅜"	6'-5 ½"		1"	
EW4256	4	3	8'-3"	81	6'-5 ⅜"	2 ⅜"	4 ⅜"	1'-0 ½"		1"	
EW4257	4	3	6'-4"	STR							
EW4258	4	1	13'-0"	20	6'-3 ⅜"	5 ¼"				1 3/16"	
EWC4259	4	10	6'-10"	STR							
EWC4260	4	2	6'-11"	11	5'-6"	1'-5"	4 ⅛"				
EWC5251	5	1	7'-10"	102	7'-0"	10"	1 ⅝"	6 ⅝"			
EWC5252	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC5253	5	2	7'-10"	STR							
EWC5254	5	1	7'-10"	11	7'-0"	10"	3 ⅜"				
EWC5255	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC6251	6	4	7'-11"	11	7'-1"	10"	1'-1"				
EW6252	6	6	11'-8"	STR							
WING D											
EWC4251	4	2	8'-5"	27	3'-0 ½"	2 ¾"	2'-10 ¾"	6 ⅛"	5 ⅛"		F=3 ⅜"
EW4252	4	2	11'-4"	30	5'-1"	1'-5 ¼"	4'-0 ¾"				
EWC4253	4	14	7'-1" TO 8'-5"	27	3'-0 ½"	2 ¾"	1'-9 ¾" TO 2'-10 ¾"	2 ¾" TO 6 ⅛"	5 ½" TO 5 ⅛"		F=0" TO 3 ⅜", VARY EA C IN SET BY 1", VARY EA D IN SET BY ¼", VARY EA F IN SET BY ¼" VARY EA E IN SET BY 1/16"
EW4254	4	14	11'-4" TO 11'-5"	30A	5'-1"	2 ⅝" TO 4"	1'-5 ¼"	4'-0 ¾" TO 4'-0 ⅜"	8 ½" TO ¼"		VARY EA B IN SET BY ⅛", VARY EA E IN SET BY ⅝"
EW4255	4	5	13'-8"	81	6'-5 ⅜"	2 ⅜"	4 ⅜"	6'-5 ½"		1"	
EW4256	4	3	8'-3"	81	6'-5 ⅜"	2 ⅜"	4 ⅜"	1'-0 ½"		1"	
EW4257	4	3	6'-4"	STR							
EW4258	4	1	13'-0"	20	6'-3 ⅜"	5 ¼"				1 3/16"	
EWC4259	4	10	6'-10"	STR							
EWC4260	4	2	6'-11"	11	5'-6"	1'-5"	4 ⅛"				
EWC5251	5	1	7'-10"	102	7'-0"	10"	1 ⅝"	6 ⅝"			
EWC5252	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC5253	5	2	7'-10"	STR							
EWC5254	5	1	7'-10"	11	7'-0"	10"	3 ⅜"				
EWC5255	5	1	7'-10"	11	7'-0"	10"	6 ⅝"				
EWC6251	6	4	7'-11"	11	7'-1"	10"	1'-1"				
EW6252	6	6	11'-8"	STR							



REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

43 & 44

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

BARRIER TRANSITION REINF BAR SCHEDULE

RECOMMENDED _____

SHEET 101 OF 121

S - 39526

DES: CLG | CKD: JMF | DWG: CLG | CKD: JMF

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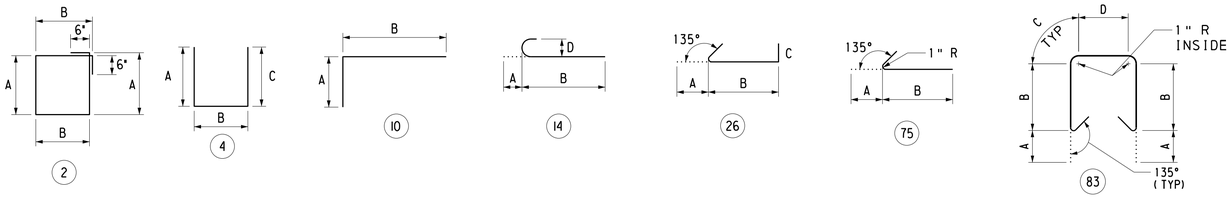
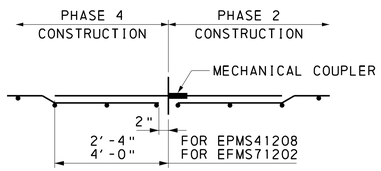
PIER 1 REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
FOOTING - PHASE 2 CONSTRUCTION											
EF41203	4	60	5'-8"	26	4½"	4'-11"	4½"				
EF71201	7	16	41'-7"	10	1'-2"	40'-5"					
EFMS71202	7	40									MECHANICAL SPLICE SYSTEM
EF71203	7	46	14'-6"	STR							
EF71209	7	24	40'-5"	STR							
EF91201	9	41	17'-8"	4	1'-7"	14'-6"	1'-7"				
EF91202	9	84	22'-5"	14	1'-3"	21'-2"					
EF91203	9	84	18'-5"	14	1'-3"	17'-2"					
COLUMN - PHASE 2 CONSTRUCTION											
EP41206	4	330	5'-9"	26	4½"	5'-0"	4½"				
EP41207	4	33	38'-5"	14	6"	37'-11"					
EPMS41208	4	33									MECHANICAL SPLICE SYSTEM
EP41209	4	6	16'-8"	2	3'-0"	4'-10"					
EP51202	5	40	10'-6"	4	2'-9"	5'-0"	2'-9"				
EP51203	5	12	10'-3"	4	2'-9"	4'-9"	2'-9"				
EP51204	5	18	8'-5"	4	2'-9"	2'-11"	2'-9"				
EP71204	7	66	38'-8"	75	9"	37'-11"					
EP71205	7	42	21'-3"	STR							
EP71206	7	42	25'-3"	STR							
EP71207	7	33	11'-5"	83	9"	2'-3"	2½"	5'-0"			
EPMS71208	7	66									MECHANICAL SPLICE SYSTEM

PIER 1 REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
FOOTING - PHASE 4 CONSTRUCTION											
EF41402	4	50	5'-8"	26	4½"	4'-11"	4½"				
EF71401	7	16	35'-5"	10	1'-2"	34'-3"					
EF71402	7	39	14'-6"	STR							
EF71407	7	24	34'-3"	STR							
EF91401	9	35	17'-8"	4	1'-7"	14'-6"	1'-7"				
EF91402	9	72	22'-5"	14	1'-3"	21'-2"					
EF91403	9	68	18'-5"	14	1'-3"	17'-2"					
COLUMN - PHASE 4 CONSTRUCTION											
EP41405	4	264	5'-9"	26	4½"	5'-0"	4½"				
EP41406	4	33	32'-3"	14	6"	31'-9"					
EP41407	4	4	16'-8"	2	3'-0"	4'-10"					
EP51402	5	33	10'-6"	4	2'-9"	5'-0"	2'-9"				
EP51403	5	8	9'-7"	4	2'-5"	4'-9"	2'-5"				
EP51404	5	12	7'-9"	4	2'-5"	2'-11"	2'-5"				
EP71403	7	66	32'-6"	75	9"	31'-9"					
EP71404	7	36	21'-3"	STR							
EF71405	7	34	25'-3"	STR							
EP71406	7	33	11'-5"	83	9"	2'-3"	2½"	5'-0"			





MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SEAN J. HART — ENGINEER No. 071107 — PENNSYLVANIA

REFERENCES:

1. WORK THIS SHEET WITH SHEETS 27 & 28

SHEET:

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 1 REINF BAR SCHEDULE

RECOMMENDED _____

SHEET 102 OF 121

S - 39526

DES: JMF | CKD: CGF | DWG: CLG | CKD: JMF

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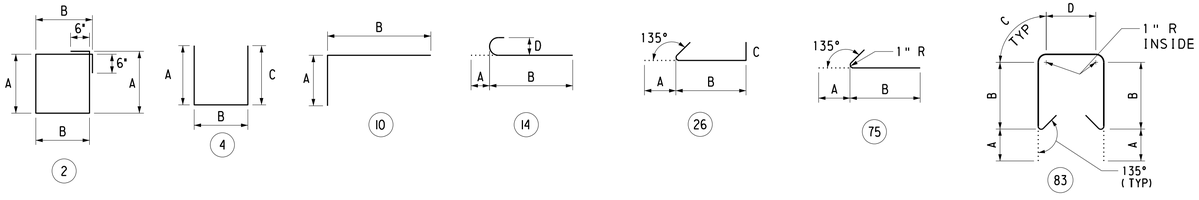
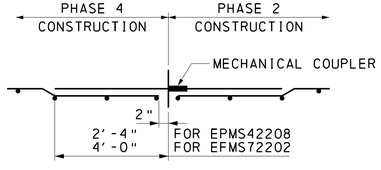
PIER 2 REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
FOOTING - PHASE 2 CONSTRUCTION											
EF42203	4	60	5'-8"	26	4½"	4'-11"	4½"				
EF72201	7	16	41'-7"	10	1'-2"	40'-5"					
EFMS72202	7	40									MECHANICAL SPLICE SYSTEM
EF72203	7	46	14'-6"	STR							
EF72209	7	24	40'-5"	STR							
EF92201	9	41	17'-8"	4	1'-7"	14'-6"	1'-7"				
EF92202	9	84	22'-5"	14	1'-3"	21'-2"					
EF92203	9	84	18'-5"	14	1'-3"	17'-2"					
COLUMN - PHASE 2 CONSTRUCTION											
EP42206	4	330	5'-9"	26	4½"	5'-0"	4½"				
EP42207	4	33	38'-5"	14	6"	37'-11"					
EPMS42208	4	33									MECHANICAL SPLICE SYSTEM
EP42209	4	6	16'-8"	2	3'-0"	4'-10"					
EP52202	5	40	10'-6"	4	2'-9"	5'-0"	2'-9"				
EP52203	5	12	10'-1"	4	2'-8"	4'-9"	2'-8"				
EP52204	5	18	8'-3"	4	2'-8"	2'-11"	2'-8"				
EP72204	7	66	38'-7½"	75	9"	37'-10½"					
EP72205	7	42	21'-9"	STR							
EP72206	7	42	25'-9"	STR							
EP72207	7	33	11'-5"	83	9"	2'-3"	2½"	5'-0"			
EPMS72208	7	66									MECHANICAL SPLICE SYSTEM

PIER 2 REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
FOOTING - PHASE 4 CONSTRUCTION											
EF42402	4	50	5'-8"	26	4½"	4'-11"	4½"				
EF72401	7	16	35'-5"	10	1'-2"	34'-3"					
EF72402	7	39	14'-6"	STR							
EF72406	7	24	34'-3"	STR							
EF92401	9	35	17'-8"	4	1'-7"	14'-6"	1'-7"				
EF92402	9	72	22'-5"	14	1'-3"	21'-2"					
EF92403	9	68	18'-5"	14	1'-3"	17'-2"					
COLUMN - PHASE 4 CONSTRUCTION											
EP42405	4	264	5'-9"	26	4½"	5'-0"	4½"				
EP42406	4	33	32'-3"	14	6"	31'-9"					
EP42407	4	2	16'-8"	2	3'-0"	4'-10"					
EP52402	5	33	10'-6"	4	2'-9"	5'-0"	2'-9"				
EP52403	5	8	9'-5"	4	2'-4"	4'-9"	2'-4"				
EP52404	5	12	7'-7"	4	2'-4"	2'-11"	2'-4"				
EP72402	7	66	32'-5½"	75	9"	31'-8½"					
EP72403	7	33	11'-5"	83	9"	2'-3"	2½"	5'-0"			
EP72404	7	36	21'-9"	STR							
EP72405	7	34	25'-9"	STR							





MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
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REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107 PENNSYLVANIA

REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

29 & 30

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

PIER 2 REINF BAR SCHEDULE

RECOMMENDED _____

SHEET 103 OF 121

S - 39526

DES: JMF | CKD: CGF | DWG: CLG | CKD: JMF

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ABUTMENT 1 REINFORCEMENT BAR SCHEDULE CONCRETE DIAPHRAGM (PHASE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ED41201	4	32	10′-2"	4	2′-1"	2′-10"	5′-3"				
ED41202	4	32	6′-4"	STR							
ED41203	4	32	10′-4"	10	5′-1"	5′-3"					
ED41204	4	32	5′-3"	48	2′-2"	2′-1"	1′-0"				
ED61201	6	8	12′-7"	50	6′-2"	2′-9"	3′-8"		11¼"		
ED61202	6	24	10′-1"	STR							
ED61203	6	16	7′-10"	STR							
ED61204	6	8	33′-10"	STR							
EDMS61205	6	16									MECHANICAL SPLICE SYSTEM

ABUTMENT 2 REINFORCEMENT BAR SCHEDULE CONCRETE DIAPHRAGM (PHASE 2)

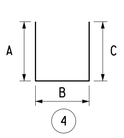
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ED42201	4	32	9′-6"	4	2′-1"	2′-10"	4′-7"				
ED42202	4	32	7′-1"	STR							
ED42203	4	32	5′-11"	10	1′-4"	4′-7"					
ED42204	4	32	7′-0"	10	2′-6"	4′-6"					
ED42205	4	32	4′-6"	48	2′-2"	1′-4"	1′-0"				
ED62201	6	67	1′-5"	10A	5"	1′-0"					MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ED62202	6	8	12′-7"	50	6′-2"	2′-9"	3′-8"		11¼"		
ED62203	6	24	10′-1"	STR							
ED62204	6	16	7′-10"	STR							
ED62205	6	8	33′-10"	STR							
EDMS62207	6	16									MECHANICAL SPLICE SYSTEM

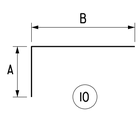
ABUTMENT 1 REINFORCEMENT BAR SCHEDULE CONCRETE DIAPHRAGM (PHASE 4)

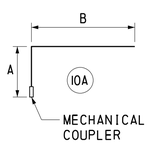
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ED41401	4	32	10′-11"	4	2′-6"	2′-10"	5′-7"				
ED41402	4	32	7′-1"	STR							
ED41403	4	32	10′-8"	10	5′-1"	5′-7"					
ED41404	4	32	5′-3"	48	2′-2"	2′-1"	1′-0"				
ED61401	6	8	12′-7"	50	6′-2"	2′-9"	3′-8"		11¼"		
ED61402	6	24	10′-1"	STR							
ED61403	6	16	7′-10"	STR							
ED61404	6	8	33′-10"	STR							

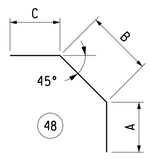
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE CONCRETE DIAPHRAGM (PHASE 4)

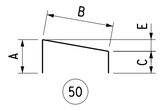
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ED42401	4	32	9′-6"	4	2′-1"	2′-10"	4′-7"				
ED42402	4	32	7′-1"	STR							
ED42403	4	32	5′-11"	10	1′-4"	4′-7"					
ED42404	4	32	7′-0"	10	2′-6"	4′-6"					
ED42405	4	32	4′-6"	48	2′-2"	1′-4"	1′-0"				
ED62401	6	67	1′-5"	10A	5"	1′-0"					MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ED62402	6	8	12′-7"	50	6′-2"	2′-9"	3′-8"		11¼"		
ED62403	6	24	10′-1"	STR							
ED62404	6	16	7′-10"	STR							
ED62405	6	8	33′-10"	STR							

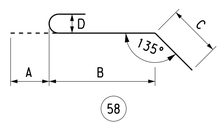












REFERENCES:

1. WORK THIS SHEET WITH SHEETS

SHEET:

16 - 42

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
COMMONWEALTH OF PENNSYLVANIA

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CONCRETE DIAPHRAGM REINF BAR SCHEDULE

RECOMMENDED _____

SHEET 104 OF 121

S - 39526

DES: EEM | CKD: JMF | DWG: EEM | CKD: BEG

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PHASE 2 DECK REINFORCEMENT BAR SCHEDULE

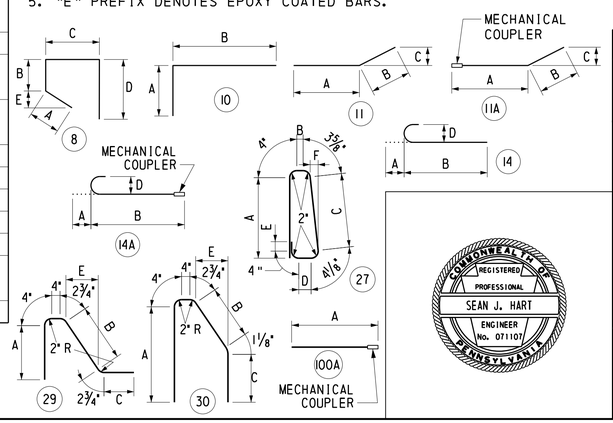
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 2 DECK											
ES3101	3	3768	6'-0"	STR							HAUNCH BARS, BEND IN FIELD
ES4101	4	380	40'-0"	STR							
ES4102	4	38	4'-6"	STR							
ES4103	4	76	29'-10"	STR							
ES4104	4	38	17'-4"	STR							
ES4105	4	184	40'-0"	STR							LONGITUDINAL HAUNCH BARS
ES5101	5	666	60'-0"	STR							
ES5102	5	47	24'-4"	STR							
ES5103	5	47	56'-10"	STR							
ES5104	5	47	32'-2"	STR							
ES5105	5	64	32'-4"	STR							
ES5106	5	64	47'-4"	STR							
ES5107	5	932	33'-0"	100A	33'-0"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5108	5	932	29'-0"	100A	29'-0"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5109	5	21	7'-4" TO 32'-4"	STR							VARY EA BAR BY 1'-3"
ES5110	5	3	3'-7" TO 6'-1"	STR							VARY EA BAR BY 1'-3"
ES5111	5	24	2'-0" TO 31'-0"	100A							VARY EA BAR BY 1'-3⅛" MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5112	5	1	32'-10"	STR							
ES5113	5	3	35'-0"	11A	33'-6"	1'-6"	6"				MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5114	5	30	5'-4" TO 6'-4"	STR							SCUPPER 3 BARS IN SET, VARY EACH BAR IN SET BY 6"
ES5115	5	30	7'-3"	STR							SCUPPER
ES5116	5	15	5'-8"	STR							SCUPPER
ES5117	5	21	3'-5"	STR							
ES5118	5	3	2'-5"	STR							
ES5119	5	3	3'-11"	11	2'-5"	1'-6"	6"				
ES5120	5	3	1'-8"	100A	1'-8"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6101	6	444	60'-0"	STR							
ES6102	6	74	34'-1"	STR							
ES6103	6	74	49'-1"	STR							
ES6105	6	1886	7'-8"	14	8"	7'-0"					
ES6106	6	1864	33'-8"	14A	8"	33'-0"					MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6107	6	21	8'-0" TO 33'-0"	14	8"	7'-4" TO 32'-4"					VARY EA BAR BY 1'-3"
ES6108	6	3	4'-3" TO 6'-9"	14	8"	3'-7" TO 6'-1"					VARY EA BAR BY 1'-3"
ES6109	6	24	2'-0" TO 31'-0"	100A							VARY EA BAR BY 1'-3⅛" MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6110	6	1	33'-6"	14	8"	32'-10"					
ES6111	6	6	35'-0"	11A	33'-6"	1'-6"	6"				MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6112	6	6	35'-2"	100A	35'-2"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6113	6	9	10'-3"	STR							BETWEEN GIRDERS
ES6114	6	44	15'-9"	8	1'-11"	3'-8"	1'-7"	8'-7"	1'-4½"		
ES6115	6	35	3'-5"	STR							
ES6116	6	5	2'-5"	STR							
ES6117	6	5	3'-3"	11	1'-9"	1'-6"	6"				
ES6118	6	5	2'-7"	100A	2'-7"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH

PHASE 2 AND PHASE 4 DECK BARRIER REINF BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 2 BARRIER											
ES4131	4	892	6'-6"	29	1'-10"	2'-0"	1'-6½"		10½"		
EC4132	4	892	8'-7"	27	3'-0½"	3⅜"	2'-10¾"	6¾"	5⅞"		F=3⅜"
EC4133	4	7	8'-7"	27	3'-0½"	3⅜"	2'-10¾"	6¾"	5⅞"		F=3⅜"
EC5131	5	90	60'-0"	STR							
EC5132	5	6	20'-9"	STR							
EC5133	5	6	3'-0"	STR							
EC6131	6	60	60'-0"	STR							
EC6132	6	4	32'-0"	STR							
EC6133	6	4	3'-0"	STR							
PHASE 4 BARRIER											
ES4331	4	892	6'-6"	29	1'-10"	2'-0"	1'-6½"		10½"		
EC4332	4	892	8'-7"	27	3'-0½"	3⅜"	2'-10¾"	6¾"	5⅞"		F=3⅜"
EC4333	4	7	8'-7"	27	3'-0½"	3⅜"	2'-10¾"	6¾"	5⅞"		F=3⅜"
EC5331	5	90	60'-0"	STR							
EC5332	5	6	20'-9"	STR							
EC5333	5	6	3'-0"	STR							
EC6331	6	60	60'-0"	STR							
EC6332	6	4	32'-0"	STR							
EC6333	6	4	3'-0"	STR							
PHASE 2 BARRIER AT TOOTH DAM ENDWALL											
EW41251	4	7	6'-6"	30	2'-6"	1'-4"	1'-4"		7"		
EW41252	4	3	6'-0"	10	3'-0"	3'-0"					
EW41253	4	3	4'-0"	10	2'-0"	2'-0"					
EW41254	4	8	1'-2"	STR							
PHASE 4 BARRIER AT TOOTH DAM ENDWALL											
EW41451	4	7	6'-6"	30	2'-6"	1'-4"	1'-4"		7"		
EW41452	4	3	6'-0"	10	3'-0"	3'-0"					
EW41453	4	3	4'-0"	10	2'-0"	2'-0"					
EW41454	4	8	1'-2"	STR							

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.



REFERENCES:

		SHEET:
1.	DECK DETAILS	72 - 77
2.	BARRIER PLAN AND DETAILS	78
3.	ABUT 1 TOOTH DAM DETAILS 2	84

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK REINF BAR SCHEDULE 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 105 OF 121

S - 39526

DES: CLG | CKD: RMS | DWG: CLG | CKD: BEG

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PHASE 4 DECK REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 4 DECK											
ES3301	3	1884	6′-6"	STR							HAUNCH BARS, BEND IN FIELD
ES3302	3	942	5′-8"	STR							HAUNCH BARS, BEND IN FIELD
ES4301	4	390	40′-0"	STR							
ES4302	4	39	4′-6"	STR							
ES4303	4	78	29′-10"	STR							
ES4304	4	39	17′-4"	STR							
ES4305	4	138	40′-0"	STR							LONGITUDINAL HAUNCH BARS
ES5301	5	666	60′-0"	STR							
ES5302	5	47	24′-4"	STR							
ES5303	5	47	56′-10"	STR							
ES5304	5	47	32′-2"	STR							
ES5305	5	64	32′-4"	STR							
ES5306	5	64	47′-4"	STR							
ES5307	5	940	23′-1"	100A	23′-1"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5308	5	932	19′-1"	100A	19′-1"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5309	5	15	3′-6" TO 21′-1"	100A	3′-6" TO 21′-1"						VARY EA BAR BY 1′-3 ⅛" MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5310	5	12	8′-8" TO 22′-6"	STR							VARY EA BAR BY 1′-3 ⅛"
ES5311	5	3	4′-10" TO 7′-4"	STR							VARY EA BAR BY 1′-3"
ES5312	5	1	23′-1"	STR							
ES5313	5	3	24′-5"	11A	22′-11"	1′-6"	6"				MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES5314	5	18	5′-4" TO 6′-4"	STR							SCUPPER 3 BARS IN SET, VARY EACH BAR IN SET BY 6"
ES5315	5	18	7′-3"	STR							SCUPPER
ES5316	5	9	5′-8"	STR							SCUPPER
ES5317	5	15	3′-5"	STR							
ES5318	5	3	2′-9"	11	1′-3"	1′-6"	6"				
ES5319	5	3	2′-8"	100A	2′-8"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6301	6	450	60′-0"	STR							
ES6302	6	75	34′-1"	STR							
ES6303	6	75	49′-1"	STR							
ES6305	6	1885	7′-8"	14	8"	7′-0"					
ES6306	6	1872	23′-9"	14A	8"	23′-1"					MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6307	6	15	3′-6" TO 21′-1"	100A	3′-6" TO 21′-1"						VARY EA BAR BY 1′-3 ⅛" MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6308	6	12	9′-4" TO 23′-2"	14	8"	8′-8" TO 22′-6"					VARY EA BAR BY 1′-3 ⅛"
ES6309	6	3	5′-6" TO 8′-0"	14	8"	4′-10" TO 7′-4"					VARY EA BAR BY 1′-3"
ES6310	6	1	23′-9"	14	8"	23′-1"					
ES6311	6	2	24′-5"	11A	22′-11"	1′-6"	6"				MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6312	6	6	24′-6"	100A	24′-6"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6313	6	4	24′-5"	11A	22′-11"	1′-6"	6"				MECHANICAL COUPLER INCLUDED IN BAR LENGTH
ES6314	6	6	10′-3"	STR							BETWEEN GIRDERS

PHASE 4 DECK REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 4 DECK											
ES6315	6	44	15′-9"	8	1′-11"	3′-8"	1′-7"	8′-7"	1′-4 ½"		
ES6316	6	25	3′-5"	STR							
ES6317	6	5	3′-6"	11	2′-0"	1′-6"	6"				
ES6318	6	5	1′-9"	100A	1′-9"						MECHANICAL COUPLER INCLUDED IN BAR LENGTH
CLOSURE POUR											
ES5401	5	3758	6′-5"	100B	6′-5"						THREADED END NOT INCLUDED IN BAR LENGTH
ES5402	5	3	9′-9"	100B	9′-9"						THREADED END NOT INCLUDED IN BAR LENGTH
ES5403	5	14	2′-1" TO 9′-7"	100B	2′-1" TO 9′-7"						VARY EA BAR BY 6 15/16" THREADED END NOT INCLUDED IN BAR LENGTH
ES5404	5	6	6′-9"	100B	6′-9"						THREADED END NOT INCLUDED IN BAR LENGTH
ES5405	5	6	3′-5"	STR							
ES5406	5	3	8"	100B	8"						THREADED END NOT INCLUDED IN BAR LENGTH
ES5407	5	3	2′-0"	100B	2′-0"						THREADED END NOT INCLUDED IN BAR LENGTH
ES6401	6	3758	6′-11"	100B	6′-11"						THREADED END NOT INCLUDED IN BAR LENGTH
ES6402	6	3	9′-9"	100B	9′-9"						THREADED END NOT INCLUDED IN BAR LENGTH
ES6403	6	14	2′-1" TO 9′-7"	100B	2′-1" TO 9′-7"						VARY EA BAR BY 1′-3" THREADED END NOT INCLUDED IN BAR LENGTH
ES6404	6	24	7′-3"	100B	7′-3"						THREADED END NOT INCLUDED IN BAR LENGTH
ES6405	6	3	10′-3"	STR							BETWEEN GIRDERS
ES6406	6	13	15′-9"	8	1′-11"	3′-8"	1′-7"	8′-7"	1′-4 ½"		
ES6407	6	10	3′-5"	STR							
ES6408	6	3	1′-1"	100B	1′-1"						THREADED END NOT INCLUDED IN BAR LENGTH
ES6409	6	3	1′-8"	100B	1′-8"						THREADED END NOT INCLUDED IN BAR LENGTH

REINFORCEMENT NOTES:

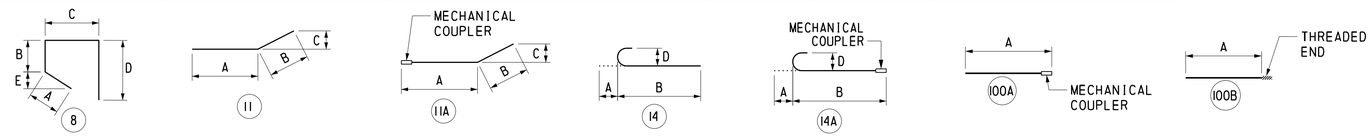
1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

REFERENCES:

1. DECK DETAILS
2. BARRIER PLAN AND DETAILS

SHEET:

72 - 77
78



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

DECK REINF BAR SCHEDULE 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
SEAN J. HART
ENGINEER
No. 071107

RECOMMENDED _____

SHEET 106 OF 121

S - 39526

DES: CLG | CKD: RMS | DWG: CLG | CKD: BEG

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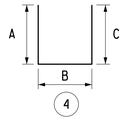
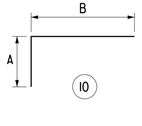
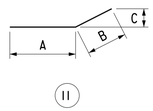
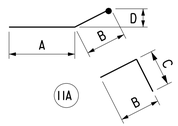
ABUTMENT 1 APPROACH SLAB REINFORCEMENT BAR SCHEDULE

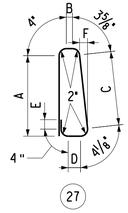
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 2											
EAS4101	4	50	7′-3"	30A	2′-3"	1′-4 3/8"	9 3/4"	1′-6"	7 1/4"		
EAC4102	4	50	8′-7"	27	3′-0 1/2"	3 3/8"	2′-10 3/4"	6 3/4"	5 7/8"		F=3 3/8"
EAS5101	5	35	24′-6"	STR							
EAS5102	5	70	7′-6"	4	3′-4"	10"	3′-4"				
EAS5103	5	22	10′-10"	10	10"	10′-0"					
EAS5104	5	1	10′-8"	11A	8′-5"	1′-5"	10"	5 3/4"			
EAS5105	5	1	10′-8"	11A	8′-3"	1′-7"	10"	6 1/2"			
EAS5106	5	24	24′-6"	STR							
EAC5107	5	6	24′-6"	STR							BARRIER
EAS5108	5	14	35′-0"	STR							SLEEPER SLAB
EASMS5109	5	14									MECHANICAL SPLICE SYSTEM
EAS6101	6	22	35′-0"	STR							
EAS6102	6	1	34′-10"	11	33′-5"	1′-5"	5 3/4"				
EAS6103	6	1	34′-10"	11	33′-3"	1′-7"	6 1/2"				
EAC6104	6	4	24′-6"	STR							BARRIER
EASMS6105	6	24									MECHANICAL SPLICE SYSTEM
EAS8101	8	68	4′-10"	STR							SLEEPER SLAB
EAS10101	10	46	24′-6"	STR							
PHASE 4											
EAS4301	4	50	7′-3"	30A	2′-3"	1′-4 3/8"	9 3/4"	1′-6"	7 1/4"		
EAC4302	4	50	8′-7"	27	3′-0 1/2"	3 3/8"	2′-10 3/4"	6 3/4"	5 7/8"		F=3 3/8"
EAS5301	5	35	24′-6"	STR							
EAS5302	5	70	7′-6"	4	3′-4"	10"	3′-4"				
EAS5303	5	22	10′-10"	10	10"	10′-0"					
EAS5304	5	1	10′-8"	11A	8′-5"	1′-5"	10"	5 3/4"			
EAS5305	5	1	10′-8"	11A	8′-3"	1′-7"	10"	6 1/2"			
EAS5306	5	24	24′-6"	STR							
EAC5307	5	6	24′-6"	STR							BARRIER
EAS5308	5	14	35′-0"	STR							SLEEPER SLAB
EAS6301	6	22	35′-0"	STR							
EAS6302	6	1	34′-10"	11	33′-5"	1′-5"	5 3/4"				
EAS6303	6	1	34′-10"	11	33′-3"	1′-7"	6 1/2"				
EAC6304	6	4	24′-6"	STR							BARRIER
EAS8301	8	68	4′-10"	STR							SLEEPER SLAB
EAS10301	10	46	24′-6"	STR							

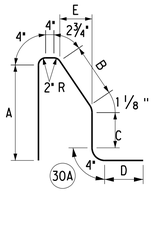


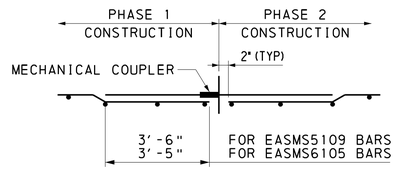












MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS AND RATINGS	3
2.	ABUTMENT 1 APPROACH SLAB	89
3.	APPROACH SLAB DETAILS 1 & 2	91 & 92

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

APPROACH SLAB REINF BAR SCHEDULE 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SEAN J. HART
ENGINEER No. 071107
PENNSYLVANIA

RECOMMENDED _____

SHEET 107 OF 121

S - 39526

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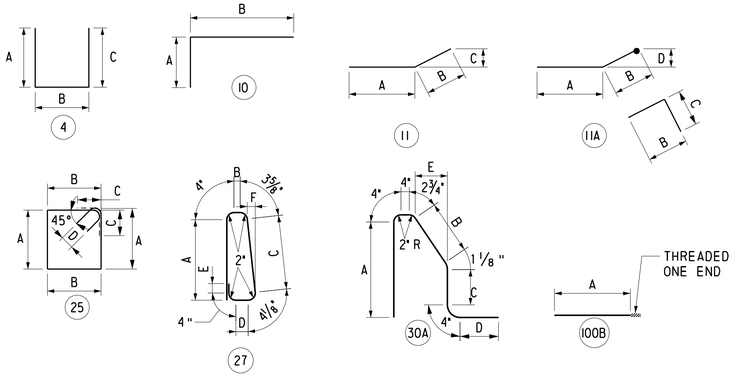
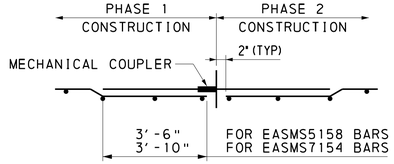
ABUTMENT 2 APPROACH SLAB REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 2											
EAS4151	4	65	7′-7"	30A	2′-5"	1′-4 3/8"	11 3/4"	1′-6"	7 1/4"		
EAC4152	4	65	8′-7"	27	3′-0 1/2"	3 3/8"	2′-10 3/4"	6 3/4"	5 7/8"		F=3 3/8"
EAS5151	5	35	29′-8"	STR							
EAS5152	5	70	7′-2"	4	3′-1"	1′-0"	3′-1"				
EAS5153	5	31	24′-8"	STR							
EAS5154	5	28	11′-0"	10	1′-0"	10′-0"					
EAS5155	5	1	10′-10"	11A	8′-5"	1′-5"	1′-0"	5 3/4"			
EAS5156	5	2	10′-10"	11A	8′-3"	1′-7"	1′-0"	6 1/2"			
EAS5157	5	2	34′-11"	11	33′-4"	1′-7"	6 1/2"				
EASMS5158	5	14									MECHANICAL SPLICE SYSTEM
EAS5159	5	12	35′-0"	STR							SLEEPER SLAB
EAS5160	5	35	7′-10"	35	2′-0 1/2"	1′-5"	5 1/2"	2 1/2"			
EAC5162	5	6	29′-8"	STR							BARRIER
EAC5163	5	6	1′-10"	STR							BARRIER
EAC5164	5	2	34′-9"	11	33′-3 3/4"	1′-5 1/4"	6 1/8"				SLEEPER SLAB
EAS6151	6	8	24′-8"	STR							
EAS6152	6	8	9′-10"	11	8′-3"	1′-7"	6 1/2"				
EAC6153	6	4	29′-8"	STR							BARRIER
EAC6154	6	4	1′-10"	STR							BARRIER
EAS6155	6	67	3′-0"	100B	3′-0"						THREADED END NOT INCLUDED IN BAR LENGTH
EAS7151	7	27	35′-0"	STR							
EAS7152	7	1	34′-10"	11	33′-5"	1′-5"	5 3/4"				
EAS7153	7	1	34′-11"	11	33′-4"	1′-7"	6 1/2"				
EASMS7154	7	29									MECHANICAL SPLICE SYSTEM
EAS8151	8	66	4′-10"	STR							SLEEPER SLAB
EAS8152	8	2	5′-4"	STR							SLEEPER SLAB
EAS10151	10	67	29′-8"	STR							

ABUTMENT 2 APPROACH SLAB REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PHASE 4											
EAS4351	4	65	7′-7"	30A	2′-5"	1′-4 3/8"	11 3/4"	1′-6"	7 1/4"		
EAC4352	4	65	8′-7"	27	3′-0 1/2"	3 3/8"	2′-10 3/4"	6 3/4"	5 7/8"		F=3 3/8"
EAS5351	5	35	29′-8"	STR							
EAS5352	5	70	7′-2"	4	3′-1"	1′-0"	3′-1"				
EAS5353	5	31	24′-8"	STR							
EAS5354	5	28	11′-0"	10	1′-0"	10′-0"					
EAS5355	5	2	10′-10"	11A	8′-5"	1′-5"	1′-0"	5 3/4"			
EAS5356	5	1	10′-10"	11A	8′-3"	1′-7"	1′-0"	6 1/2"			
EAS5357	5	2	34′-10"	11	33′-5"	1′-5"	5 3/4"				
EAS5359	5	12	35′-0"	STR							SLEEPER SLAB
EAS5360	5	35	7′-10"	25	2′-0 1/2"	1′-5"	5 1/2"	2 1/2"			
EAC5362	5	6	29′-6"	STR							BARRIER
EAC5363	5	6	1′-10"	STR							BARRIER
EAC5364	5	2	34′-10"	STR	33′-4 3/4"	1′-5 1/4"	5 3/4"				
											SLEEPER SLAB
EAS6351	6	8	24′-8"	STR							
EAS6352	6	8	10′-0"	11	8′-5"	1′-7"	5 3/4"				
EAC6353	6	4	29′-6"	STR							BARRIER
EAC6354	6	4	1′-10"	STR							BARRIER
EAS6355	6	67	3′-0"	100B	3′-0"						THREADED END NOT INCLUDED IN BAR LENGTH
EAS7351	7	27	35′-0"	STR							
EAS7352	7	1	34′-10"	11	33′-5"	1′-5"	5 3/4"				
EAS7353	7	1	34′-11"	11	33′-4"	1′-7"	6 1/2"				
EAS8351	8	66	4′-10"	STR							SLEEPER SLAB
EAS8352	8	2	4′-4"	STR							SLEEPER SLAB
EAS10351	10	67	29′-8"	STR							





MECHANICAL SPLICE SYSTEM DETAIL

NOT TO SCALE

NOTES:

1. EACH MECHANICAL SPLICE SYSTEM CONSISTS OF 2 REINFORCEMENT BARS AND ONE MECHANICAL COUPLER. THE REINFORCEMENT BARS ARE INCIDENTAL TO THE MECHANICAL SPLICE SYSTEM.
2. THE MECHANICAL COUPLERS ARE PAID FOR UNDER THE MECHANICAL SPLICE SYSTEM. THE REINFORCEMENT BARS THAT HAVE MECHANICAL COUPLERS ARE INCLUDED UNDER THE REINFORCEMENT BARS, EPOXY COATED ITEM.

REINFORCEMENT NOTES:

1. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
2. NUMBERS IN CIRCLES DENOTE TYPES.
3. "D" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS TO THE INSIDE OF THE BAR.
5. "E" PREFIX DENOTES EPOXY COATED BARS.

REFERENCES:

		SHEET:
1.	INDEX OF DRAWINGS AND RATINGS	3
2.	ABUTMENT 2 APPROACH SLAB	90
3.	APPROACH SLAB DETAILS 1 & 2	91 & 92

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

APPROACH SLAB REINF BAR SCHEDULE 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SEAN J. HART ENGINEER No. 071107

RECOMMENDED _____

SHEET 108 OF 121

S - 39526

DES: BEG | CKD: MEM | DWG: CLG | CKD: MEM

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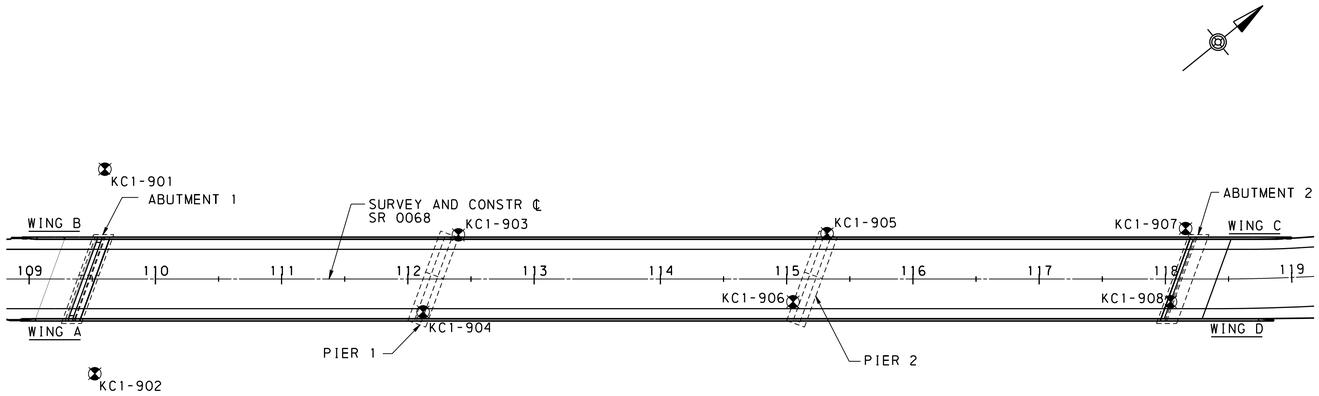

BORING LOCATION PLAN

NOT TO SCALE

AS-DRILLED CORE BORINGS

BORING	STATION	OFFSET (FT)	TOP OF HOLE ELEV
KC1-901	109+60.00	87.0 LT	1020.0
KC1-902	109+52.00	75.0 RT	1015.9
KC1-903	112+40.00	35.0 LT	1011.0
KC1-904	112+12.00	26.0 RT	1009.1
KC1-905	115+32.00	36.0 LT	1008.4
KC1-906	115+05.00	18.0 RT	1008.5
KC1-907	118+16.00	40.0 LT	1007.0
KC1-908	118+04.00	18.0 RT	1005.4

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

C. H. Satish Kumar

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST

DATE: 11-15-2021

LEGEND - GEOTECHNICAL GRAPHIC SYMBOLS

SOIL

- MECHANICALLY BROKEN ROCK
- S-G SAND-GRAVEL
- S-GSL SAND-GRAVEL AND SILT
- S-GSLc SAND-GRAVEL AND SILT W/ CLAY
- S-Gsl SAND-GRAVEL WITH SILT
- s-gslc MIX SAND-GRAVEL SILT AND CLAY
- S-Gslc SAND-GRAVEL W/ SILT AND CLAY
- S-GC SAND-GRAVEL AND CLAY
- S-GCsl SAND-GRAVEL AND CLAY W/ SILT
- S-Gc SAND-GRAVEL WITH CLAY
- SLs-gc SILT W/ SAND-GRAVEL AND CLAY
- SLCs-g SILT AND CLAY W/ SAND-GRAVEL
- Cs-g CLAY WITH SAND-GRAVEL
- Cs-gsl CLAY W/ SAND-GRAVEL AND SILT
- Csl CLAY WITH SILT
- O ORGANICS - TOPSOIL

ROCK

- ARGILLITE
- BITUMINOUS CONCRETE
- CLAYSTONE
- COAL
- CONCRETE / MASONRY
- CONGLOMERATE / BRECCIA
- IGNEOUS ROCK
- INTERBEDDED ROCK
- LIMESTONE / DOLOMITE
- METAMORPHIC ROCK
- OTHER SEDIMENTARY
- SANDSTONE
- SHALE
- SILTSTONE
- NO RECOVERY
- OTHER
- UNSAMPLED
- VOID

REFER TO PENNDOT PUBLICATION 222 FOR GRAPHIC SYMBOLS AND DESCRIPTIONS USED TO REPRESENT SOIL AND ROCK.

LEGEND:

DENOTES CORE BORING LOCATION

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

C. H. Satish Kumar

SIGNATURE

DATE: 11-15-2021

DISTRICT GEOTECHNICAL ENGINEER

DATE:

SHEET 109 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

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SUBSTRUCTURE UNIT: LOG 1 OF 1

ABUTMENT 1 AND WING B

BORING NUMBER:	BORING LOCATION	START: 08/18/2020 10:00 AM	HAMMER: AUTOMATIC
KC1-901	STATION: 109+60.0 OFFSET: 87.0 FT. LT.	FINISH: 08/18/2020 2:00 PM	EFFICIENCY: 0.8 ERa

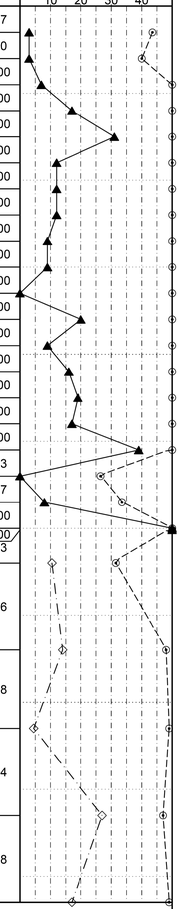
DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG	1.874 IN.	0 FT. 5 FT.	1020.0 FT.

DRILLING INSPECTOR: MITCH ARMSTRONG
DRILLER & DRILLING COMPANY: JASON RITENOUR
ARMSTRONG DRILLING, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1003.6 ft.- - 11.8 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1020.0 ft. - 25.0 hr.[1]

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		CLAY and **SAND**, little Gravel, trace Silt, very soft, moist, poorly graded, brown and black, fill. 3.0'/El. 1017.0	a-6 / cl	1.5	S-1	3-1-1	3	1.3	87
				3.0	S-2	1-1-1	3	1.2	80
		SILT, some Sand, little Clay, trace Gravel, medium to stiff, moist to wet, light brown to orange brown, fill. 13.5'/El. 1006.5	A-4 / CL-ML	4.5	S-3	2-2-3	7	1.5	100
				6.0	S-4	3-4-9	17	1.5	100
1015				7.5	S-5	10-13-10	31	1.5	100
				9.0	S-6	4-4-5	12	1.5	100
1010				10.5	S-7	4-4-5	12	1.5	100
BPCE 1008.50				12.0	S-8	4-4-5	12	1.5	100
				13.5	S-9	4-3-4	9	1.5	100
		Fine **SAND**, some Clay, very loose to loose, wet, uniformly graded, brown to light gray, alluvium. 18.0'/El. 1002.0	a-2-6 / sc	15.0	S-10	2-2-5	9	1.5	100
1005				16.5	S-11	WOH-WOH-WOH	0	1.5	100
				18.0	S-12	2-9-6	20	1.5	100
		CLAY and **SILT**, medium to stiff, moist, gray, alluvium. 21.0'/El. 999.0	a-6 / cl	19.5	S-13	3-3-4	9	1.5	100
1000				21.0	S-14	4-7-5	16	1.5	100
		SAND, little Clay, trace Gravel, very loose to medium dense, wet, poorly graded, brown, alluvium. 28.5'/El. 991.5	a-2-6 / sc	22.5	S-15	11-7-7	19	1.5	100
				24.0	S-16	3-5-8	17	1.5	100
995				25.5	S-17	9-16-13	39	1.5	100
				27.0	S-18	WOH-WOH-WOH	0	0.8	53
				28.5	S-19	WOH-WOH-6	8	1.0	67
		SAND and **GRAVEL**, very dense, dry to damp, poorly graded, light gray, residuum, *Weathered shale*. 30.1'/El. 989.9	a-1-b / sp	30.0	S-20	46-50-50	133	1.5	100
TOR 989.90				30.1	S-21	50/.1'	>67	0.1	100
		Argillaceous **SANDSTONE**, light gray to brown, fine grained, soft to medium hard, fresh to moderately weathered, narrow to moderate bedding with flat dip, Joint Set 1; bedding joints, close to moderate spacing, flat dip, tight joints, Joint Set 2; random fracture, narrow joint opening, *UNIT RQD=26%(1.8/6.9)*. 37.0'/El. 983.0		32.0	R-1		21%	1.2	63
EPTE 986.90				37.0	R-2		28%	4.8	96
985				41.5	R-3		9%	4.4	98
980		**SILTSTONE**, gray to dark gray, medium hard to hard, fresh to slightly weathered, indistinct to narrow bedding with flat dip, random fractures, close to moderate spacing, flat to sheer dip, tight joints, *UNIT RQD=33%(4.8/14.5)*.		46.5	R-4		54%	4.7	94
975					R-5		34%	4.9	98
970		51.5'/El. 968.5							

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)



[1]24-hr. Water: Full of water

**SAMPLE NO. shading indicates lab testing performed.

DES: SC | CKD: SED | DWG: WRB | CKD: SC

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

SIGNATURE
DATE: 11-15-2021

DATE:

SHEET 110 OF 121

S - 39526

PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION_12.2.3_9-21-2016.GDT - 11/19/21 14:34 - \\MOONRATG1.BKR.MBAKERCORP.COM\HRH_PROJECTS\GEOTECH\TRANSPORTATION\DOTSPW\DOTS\PAD-105\R_0068_KARNS CROSSING\EFH\BORING LOGS\SR0068 KARNS CROSSING BRIDGEWLAB.GPJ
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SUBSTRUCTURE UNIT: LOG 1 OF 1

ABUTMENT 1 AND WING A

BORING NUMBER:	BORING LOCATION	START: 05/17/2021 9:00 AM	HAMMER: AUTOMATIC
KC1-902	STATION: 109+52.0 OFFSET: 75.0 FT. RT	FINISH: 05/17/2021 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. 5 FT.	1015.9 FT.

DRILLING INSPECTOR: DUSTIN SOLLER

DRILLER & DRILLING COMPANY: RICHARD CRUM
TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1013.1 ft. - 0.0 hr.

▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO. **	BLOW COUNT ------- PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
1015		Coarse **GRAVEL**, loose, dry, homogeneous, poorly graded, angular, non-plastic, gray, fill. 1.0'/El. 1014.9	a-1-b / sw	1.5	S-1	2-4-3	9	0.6	40
				3.0	S-2	4-7-8	20	1.3	87
		Fine to coarse **SAND**, some fine to coarse Gravel, little Silt, contains bituminous concrete fragments, contains slag, medium dense, moist, heterogeneous, well graded, sub-angular, non-plastic, dark brown and black, fill. 3.0'/El. 1012.9	A-6 / SC	4.5	S-3	5-3-3	8	0.9	60
				6.0	S-4	5-6-7	17	1.1	73
1010				7.5	S-5	7-12-15	36	1.5	100
		Some Sand, some Clay, some Silt, some Gravel, loose to medium dense, moist, homogeneous, gap graded, medium plastic fines, brown, fill. 6.5'/El. 1009.4	a-2-4 / sw-sm	9.0	S-6	9-8-8	21	1.3	87
BPCE 1008.50				10.5	S-7	9-8-11	25	1.0	67
1005				12.0	S-8	6-9-10	25	0.8	53
		Fine to coarse **SAND**, some Silt, little Clay, little fine to coarse Gravel, contains organics, medium dense, moist to wet, homogeneous, well graded, sub-angular, non-plastic, brown, alluvium. 16.0'/El. 999.9		13.5	S-9	8-8-7	20	1.1	73
				15.0	S-10	8-9-8	23	1.5	100
1000				16.5	S-11	4-4-8	16	0.9	60
		CLAY, some Silt, trace Sand, trace Gravel, medium to very stiff, moist, homogeneous, gap graded, medium plastic fines, gray, alluvium.		18.0	S-12	9-8-9	23	0.9	60
				19.5	S-13	4-5-7	16	0.7	47
				21.0	S-14	4-5-6	15	0.7	47
995			A-6 / CL	22.5	S-15	5-5-6	15	1.0	67
				24.0	S-16	6-6-7	17	1.0	67
				25.5	S-17	3-3-4	9	1.3	87
				27.0	S-18	2-2-4	8	1.5	100
990				28.5	S-19	3-2-5	9	1.5	100
		28.3'/El. 987.6		30.0	S-20	14-37-43	107	1.2	80
		MECHANICALLY BROKEN ROCK, very dense, dry, homogeneous, non-plastic, gray, residuum, *weathered siltstone.*		30.2	S-21	50/.2'	>67	0.2	100
TOR 985.70		30.2'/El. 985.7			R-1		0%	1.0	50
985		**SILTSTONE**, gray, medium hard, slightly weathered, thin to narrow bedding with flat dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD= 28%.*		32.2	R-2		30%	2.8	93
EPTE 982.70				35.2	R-3		54%	5.0	100
980				40.2	R-4		32%	5.0	100
975				45.2	R-5		8%	5.0	100
970		50.2'/El. 965.7							

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

Mark	Description	By	Chk'd.	Recm'd.	Date

REVISIONS

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

C.H. Satish Kumar
SIGNATURE
DATE: 11-15-2021

DATE:

SHEET 111 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 1.2.2.3, 9-21-2016 EDIT - 11/18/21 14:34 - \\MDOMPA01.BKR.MBAKERCORP.COM\MH\ PROJECTS\GEOTECH\TRANSPORTATION\DOT\SR\0068\253\KARNS CROSSING\FOUNDATIONS\PAD 1\SR 0068 KARNS CROSSING FOUNDATION BORING LOGS.GPJ

2/4/2022 3:25:42 PM
pw:\\mb-us-pw.bentley.com:mb-us-pw-01\Documents\MoonTownship_PA\01_Projects\SR_0068_253_Karns_Crossing\deliverables\design\geotech\plots\SR_0068_Core_Borings.dgn

SUBSTRUCTURE UNIT:
PIER 1

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 04/26/2021 12:35 PM	HAMMER: AUTOMATIC
KC1-903	STATION: 112+40.0 OFFSET: 35.0 FT. LT.	FINISH: 04/27/2021 11:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. 5 FT.	1011.0 FT.

DRILLING INSPECTOR: DUSTIN SOLLER
DRILLER & DRILLING COMPANY:RICHARD CRUM
TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1005.5 ft. - 0.0 hr. ▼ *
▼ 24 HR. READING - ELAPSED TIME: El. 1005.9 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲ 10 20 30 40
1010		**TOPSOIL**. 0.4'/El. 1010.6	a-2-6 / sw-sc	1.5	S-1	2-3-6	12	1.1	73	
		Fine to coarse **SAND**, some Clay, little Silt, contains organics, medium dense, moist, heterogeneous, well graded, sub-angular, non-plastic, black, fill, *coal fragments*. 1.5'/El. 1009.5		3.0	S-2	3-3-6 **2.00**	12	1.2	80	
1005			A-4 / CL	4.5	S-3	6-8-7 **2.00**	20	1.3	87	
				6.0	S-4	3-5-6 **2.50**	15	1.5	100	
		Some Silt, some fine and medium Sand, some Clay, trace Gravel, stiff to very stiff, moist, homogeneous, uniformly graded, low plastic fines, light brown. 7.5'/El. 1003.5		7.5	S-5	7-8-11 **3.00**	25	1.4	93	
				9.0	S-6	6-7-7	19	1.5	100	
		Fine to coarse **SAND** and fine and medium **GRAVEL**, little Clay, little Silt, medium dense, damp to wet, homogeneous, well graded, sub-rounded, non-plastic, light brown, alluvium, *water in sample S-7*.		10.5	S-7	7-5-8	17	1.5	100	
1000		**BPCE 1000.50**	a-2-6 / sw-sc	12.0	S-8	7-8-8	21	1.5	100	
				13.5	S-9	11-10-9	25	1.5	100	
				15.0	S-10	5-6-8	19	1.5	100	
				16.5	S-11	7-5-6	15	1.5	100	
		17.5'/El. 993.5		18.0	S-12	7-5-7 **1.50**	16	1.5	100	
995		**CLAY**, some Silt, trace fine Sand, stiff, moist to damp, homogeneous, gap graded, medium plastic fines, gray, alluvium. 18.5'/El. 992.5	a-6 / cl a-4 / ml	19.5	S-13	4-6-7	17	1.3	87	
				21.0	S-14	7-6-23	39	1.0	67	
		SILT and fine **SAND**, little Clay, very stiff, damp, homogeneous, gap graded, non-plastic, gray, alluvium. 20.5'/El. 990.5		22.5	S-15	16-20-23	57	1.2	80	
990				22.9	S-16	50/.4"	>67	0.4	100	
		MECHANICALLY BROKEN ROCK, very dense, dry, non-plastic, gray, residuum, *weathered siltstone*. 25.6'/El. 985.4		24.0	A-1					
				25.5	S-17	32-24-50	99	1.3	87	
985		**TOR 985.40**		25.6	S-18	50/.1'	>67	0.1	100	
		EPTE 982.40		27.5	R-1		0%	1.2	63	
		SILTSTONE, gray, medium hard, slightly weathered to weathered, thin bedding with flat dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=14%*.		30.0	R-2		0%	2.5	100	
980				32.5	R-3		0%	2.1	84	
				37.5	R-4		8%	5.0	100	
975				42.5	R-5		8%	5.0	100	
					R-6		46%	5.0	100	
970										
965		47.5'/El. 963.5								

*48-hr. Elev: 1003.8 ft.
**SAMPLE NO. shading indicates lab testing performed.

DES: SC | CKD: SED | DWG: WRB | CKD: SC

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

SIGNATURE
DATE: 11-15-2021

DATE:

SHEET 112 OF 121

S - 39526

PENNDOT STRUCTURE BORING LOG_PENNDOT.GINT, VERSION_1.2.3, 9-21-2016.GDT - 11/18/21 14:24 - \\MOONPAS1.BKF.MBAKERCORP.COM\PW PROJECTS\GEOTECH\TRANSPORTATION\DOTS\PAUD-105 R. 0068 KARNS CROSSING\GEOTECH\BORING LOGS\SR0068 KARNS CROSSING BRIDGE\KAB.GPJ
2/4/2022 3:26:09 PM
pw:\\mb-us-pw.bentley.com:mb-us-pw-01\Documents\MoonTownship_PA\01_Projects\SR_0068_253_Karns_Crossing\deliverables\design\geotech\plots\SR_0068_Core_Borings.dgn

SUBSTRUCTURE UNIT: LOG 1 OF 1

PIER 1

BORING NUMBER:	BORING LOCATION	START: 04/27/2021 11:30 AM	HAMMER: AUTOMATIC
KC1-904	STATION: 112+12.0 OFFSET: 26.0 FT. RT.	FINISH: 04/28/2021 9:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. 5 FT.	1009.1 FT.

DRILLING INSPECTOR: DUSTIN SOLLER

DRILLER & DRILLING COMPANY: RICHARD CRUM
TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1007.4 ft. - 0.5 hr. ▽ *

▼ 24 HR. READING - ELAPSED TIME: El. 1006.3 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
		Fine to coarse **SAND**, some Clay, little fine and medium Gravel, little Silt, contains bituminous concrete fragments, contains rock fragments, medium dense, dry to moist, heterogeneous, well graded, sub-angular, non-plastic, dark brown, fill.	a-2-6 / sc	1.5	S-1	3-7-12	25	1.5	100
				3.0	S-2	6-8-9	23	0.5	33
				4.5	S-3	6-6-7	17	0.9	60
1005		4.0'/El. 1005.1							
		Some Gravel, some Sand, some Silt, little Clay, loose to medium dense, moist, homogeneous, poorly graded, medium plastic fines, brown, fill.	a-6 / sc	6.0	S-4	2-2-2	5	0.3	20
				7.5	S-5	3-4-9	17	0.6	40
		7.3'/El. 1001.8							
BPCE 1000.50		Fine to coarse **SAND** and fine and medium **GRAVEL**, little Clay, little Silt, medium dense, damp to wet, homogeneous, well graded, sub-rounded, non-plastic, light brown, alluvium.	a-2-6 / sw-sc	9.0	S-6	7-10-12	29	1.5	100
1000				10.5	S-7	12-12-6	24	1.5	100
				12.0	S-8	2-6-8	19	1.5	100
				13.5	S-9	10-9-8	23	0.9	60
		14.8'/El. 994.3							
995		**SILT** and fine **SAND**, little Clay, very stiff, damp, homogeneous, gap graded, non-plastic, gray, alluvium.	a-4 / ml	15.0	S-10	7-5-4	12	1.3	87
				16.5	S-11	4-6-7	17	1.3	87
				18.0	S-12	8-9-9	24	1.2	80
		19.0'/El. 990.1							
990		**MECHANICALLY BROKEN ROCK**, medium dense to very dense, dry, non-plastic, light gray, residuum, *weathered claystone.*		19.5	S-13	9-9-9	24	1.0	67
				21.0	S-14	3-4-10	19	1.0	67
				22.5	S-15	16-18-20	51	1.2	80
		24.0'/El. 985.1							
TOR 985.10		**SILTSTONE**, gray, medium hard, slightly weathered to weathered, thin to narrow bedding with flat dip, bedding joints, close spacing, flat dip, *Unit RQD=0%.*		23.9	S-16	15-22-50/.4'	96	1.4	100
985				24.0	A-1	50/.0'	>67	0.0	0
				24.0	S-17		0%	0.6	40
				25.5	R-1				
EPTE 982.10		25.5'/El. 983.6			R-2		20%	2.0	100
980		**SANDSTONE**, gray, hard, weathered, thin bedding with flat dip, bedding joints, narrow spacing, flat dip, *Unit RQD=0%.*		27.5	R-3		0%	3.5	100
		26.6'/El. 982.5							
		SILTSTONE, gray to dark gray, medium hard, slightly weathered to weathered, thin to narrow bedding with flat dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=14%.*		31.0	R-4		14%	5.0	100
975				36.0	R-5		32%	5.0	100
970				41.0	R-6		0%	3.0	100
		44.0'/El. 965.1							

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)

*48-hr. Elev: 1002.6 ft.
**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

Mark	Description	By	Chk'd.	Recm'd.	Date
	REVISIONS				

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 5

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

S. H. Satish Kumar
SIGNATURE
DATE: 11-15-2021

DATE:

SHEET 113 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

PENNDOT STRUCTURE BORING LOG_PENNDOT.GINT, VERSION: 1.2.3.9.21.2016.GDT - 11/19/21 14:34 - \\MOONPAGIS.BKR.MBAKERCORP.COM\PA DRIVE PROJECTS\GEOTECH\TRANSPORTATION\DOTS\PAD-105-8_0068\KARNS CROSSING\GEOTECH\DRILLING LOGS\SR0068 KARNS CROSSING BRIDGE\KARNS CROSSING BRIDGE\KARNS CROSSING BRIDGE.GPJ
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SUBSTRUCTURE UNIT: PIER 2 — LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 05/19/2021 7:24 AM	HAMMER: AUTOMATIC
KC1-905	STATION: 115+32.0 OFFSET: 36.0 FT. LT	FINISH: 05/19/2021 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. [redacted] 5 FT.	1008.4 FT.

DRILLING INSPECTOR: DUSTIN SOLLER
DRILLER & DRILLING COMPANY: RICHARD CRUM
TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1002.2 ft. - 0.0 hr. ▼ *
▼ 24 HR. READING - ELAPSED TIME: El. 1002.2 ft. - 24.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1005		Fine to coarse **SAND** and fine to coarse **GRAVEL**, little Silt, contains slag and cinders, contains bituminous concrete fragments, medium dense to very dense, dry to moist, heterogeneous, well graded, sub-angular, non-plastic, dark brown with black, fill, *coal fragments, trace bluish staining throughout.* 3.0'/El. 1005.4	a-1-b / sw	1.5	S-1	4-6-19	33	1.3	87	
				3.0	S-2	15-18-20	51	1.5	100	
			a-2-4 / sw-sm	4.5	S-3	6-6-4	13	1.3	87	
1000		Fine to coarse **SAND**, some Silt, little Clay, trace fine and medium Gravel, contains bituminous concrete fragments, medium dense, moist, heterogeneous, uniformly graded, sub-angular, low plastic fines, dark brown with black, fill, *coal fragments.* 4.5'/El. 1003.9		6.0	S-4	2-1-2	4	1.1	73	
			A-4 / CL	7.5	S-5	WOH-WOH-WOH	0	1.2	80	
BPCE 998.00				9.0	S-6	WOH-1-2	4	1.4	93	
				10.5	S-7	2-4-4	11	1.5	100	
		SILT, some fine Sand, some Clay, little Gravel, very soft to stiff, damp to wet, homogeneous, poorly graded, low plastic fines, dark gray to brown, alluvium. 11.2'/El. 997.2	a-2-4 / sp-sm	12.0	S-8	2-4-5	12	1.5	100	
				13.5	S-9	WOH-WOH-1	1	0.5	33	
995		Fine and medium **SAND**, some Silt, trace Clay, trace fine and medium Gravel, very loose to medium dense, wet, homogeneous, gap graded, non-plastic, brown, alluvium. 13.5'/El. 994.9		15.0	S-10	7-4-6	13	1.1	73	
				16.5	S-11	2-6-9	20	1.1	73	
				18.0	S-12	5-7-6	17	1.0	67	
		Fine to coarse **SAND**, some Silt, little Clay, little fine to coarse Gravel, contains organics, medium dense to very dense, wet, well graded, non-plastic, gray, alluvium.		19.5	S-13	10-10-15	33	1.0	67	
			a-2-4 / sw-sm	21.0	S-14	4-6-8	19	1.1	73	
990				22.5	S-15	8-17-41	77	1.2	80	
				24.0	S-16	10-11-10	28	1.3	87	
				25.5	S-17	18-28-35	84	1.4	93	
				26.9	S-18	15-37-50/.4'	116	1.4	100	
				27.0	A-1 S-19	10-11-12	31	1.5	100	
985				28.5	S-20	19-19-16	47	1.2	80	
				30.0	S-21	8-9-14	31	1.5	100	
				31.5	S-22	26-20-18	51	0.1	7	
				33.0	S-23	23-20-17	49	0.5	33	
				34.5	S-24	8-14-28	56	1.5	100	
				36.0	S-25	49-50/.1'	>67	0.6	100	
				36.6	A-2					
				37.5	S-26	50/.4'	>67	0.4	100	
980		**SILT**, some fine Sand, little Clay, hard, moist to wet, homogeneous, poorly graded, low plastic fines, gray, alluvium. 35.5'/El. 972.9	a-4 / ml	37.9	R-1		0%	1.0	48	
				40.0	R-2		0%	1.2	40	
				43.0	R-3		38%	4.9	98	
975				48.0	R-4		70%	4.9	98	
				53.0	R-5		74%	5.0	100	
				58.0	R-6		94%	5.0	100	
		MECHANICALLY BROKEN ROCK, very dense, dry, purple gray, residuum, *weathered claystone.* 37.9'/El. 970.5		63.0	R-7		40%	1.0	100	
TOR 970.50		**CLAYSTONE**, purple gray, waxy luster, soft, weathered to moderately weathered, indistinct bedding, foliation joints, narrow spacing, flat dip, *Unit RQD=0%.* 38.3'/El. 970.1								
970		**SILTSTONE**, dark gray, medium hard, slightly weathered, thin bedding with flat dip, bedding joints, narrow spacing, flat dip, *Unit RQD=0%.* 41.2'/El. 967.2								
		COAL, black, soft, weathered, narrow to moderate bedding with flat dip, random fractures, *Unit RQD=0%.* 43.3'/El. 965.1								
BPHE 961.20 EPTE 960.20		**CLAYSTONE**, gray, soft, slightly weathered, indistinct bedding, foliation joints, close spacing, flat dip, *Unit RQD=0%.* 45.8'/El. 962.6								
960		**SANDSTONE interbedded with SILTSTONE**, gray, fine grained, hard, fresh to slightly weathered, thin to narrow bedding with flat to shallow dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=54%.*								
955										
950										
945		64.0'/El. 944.4								

SUBSTRUCTURE UNIT: PIER 2 — LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
KC1-905	STATION: 115+32.0 OFFSET: 36.0 FT. LT	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 1002.2 ft. - 0.0 hr. ▼ * ▼ 24 HR.: El. 1002.2 ft. - 24.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)

*48-hr. Elev: 1002.2 ft.
*Before core Elev: 1000.4 ft.
**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
SC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 6

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SATISH K. CHELLABOINA — ENGINEER — PE079295

C.H. Satish Kumar
SIGNATURE
DATE: 11-15-2021

DATE: _____

SHEET 114 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 1.2.2.3 9-21-2016.GDT - 11/18/21 14:34 - \\MOONPA\GLI\BKR\MBAKERCORP.COM\PH_PROJECTS\GEOTECH\TRANSPORTATION\DOTSPA\D-105 E_0068 KARNS CROSSING\GEOTECH\BORING LOGS\SR0068 KARNS CROSSING BRIDGE\MLAB.GPJ

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pw:\\mb-us-pw.bentley.com:mb-us-pw-01\Documents\MoonTownship_PA\01_Projects\SR_0068_253_Karns_Crossing\Geotech\Deliverables\design\geotechnical\SR_0068_Core_Borings.dgn

SUBSTRUCTURE UNIT:
PIER 2

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 05/20/2021 7:33 AM	HAMMER: AUTOMATIC
KC1-906	STATION: 115+05.0 OFFSET: 18.0 FT. RT	FINISH: 05/20/2021 12:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. [redacted] 5 FT.	1008.5 FT.

DRILLING INSPECTOR: DUSTIN SOLLER
DRILLER & DRILLING COMPANY:RICHARD CRUM
TRC

▽ 0 HR. READING - ELAPSED TIME: El. 999.7 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1001.9 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1005		Fine to coarse **SAND** and fine to coarse **GRAVEL**, some Silt, little Clay, contains rock fragments and cinders, contains bituminous concrete fragments, medium dense, dry to moist, heterogeneous, well graded, sub-angular, non-plastic, black, fill.	a-2-4 / sw-sm	1.5	S-1	5-4-8	16	0.5	33	
				3.0	S-2	11-9-11	27	1.0	67	
				4.5	S-3	5-2-4	8	1.2	80	
		4.0'/El. 1004.5	a-2-6 / sc	6.0	S-4	2-1-1	3	1.2	80	
1000		Fine and medium **SAND** and **CLAY**, little Silt, trace fine to coarse Gravel, loose, moist to damp, homogeneous, well graded, sub-angular, low plastic fines, brown, fill.	a-4 / ml	7.5	S-5	WOH-WOH-WOH	0	0.8	53	
		5.5'/El. 1003.0		9.0	S-6	WOH-3-3	8	1.2	80	
		SILT, some fine and medium Sand, little Clay, very soft to medium, damp to wet, homogeneous, gap graded, low plastic fines, gray, alluvium.		10.5	S-7	3-6-8	19	1.2	80	
BPCE 998.00		8.4'/El. 1000.1	a-2-6 / sw-sc	12.0	S-8	2-4-11	20	1.1	73	
995		Fine to coarse **SAND**, some Clay, little Silt, little fine and medium Gravel, medium dense, wet, homogeneous, well graded, sub-rounded, non-plastic, brown, alluvium.		13.5	S-9	12-12-10	29	1.5	100	
		16.1'/El. 992.4		15.0	S-10	1-4-5	12	1.3	87	
		Fine to coarse **SAND**, some Silt, little fine and medium Gravel, little Clay, medium dense to very dense, damp, homogeneous, well graded, sub-rounded, non-plastic, gray, alluvium.		16.5	S-11	3-6-8	19	0.8	53	
				18.0	S-12	10-11-15	35	1.4	93	
990				19.5	S-13	22-27-28	73	1.5	100	
				21.0	S-14	9-16-14	40	1.5	100	
				22.5	S-15	24-30-24	72	1.0	67	
				24.0	S-16	7-13-18	41	1.5	100	
			a-1-b / sm	25.1	S-17	33-46-50/.1'	128	1.1	100	
				25.5	A-1 / S-18	28-50/.2'	>67	0.7	100	
				26.2	A-2					
985				27.0	S-19	22-48-50/.1'	131	1.1	100	
				28.1	A-3					
				28.5	S-20	17-48-47	127	1.4	93	
				30.0	S-21 / A-4	50/.3'	>67	0.3	100	
		31.5'/El. 977.0		30.3						
980		**SILT**, some fine Sand, little Clay, hard, wet, homogeneous, poorly graded, low plastic fines, gray, alluvium.	a-4 / ml	31.5	S-22	8-9-20	39	1.5	100	
				33.0	S-23	30-33-33	88	1.5	100	
				34.5	S-24	23-14-25	52	1.5	100	
		36.0'/El. 972.5		36.0	S-25	27-29-30	79	1.0	67	
975		**MECHANICALLY BROKEN ROCK**, very dense, dry, non-plastic, purple gray, residuum, *weathered claystone*.		37.5	S-26	40-40-50	120	0.9	60	
				39.0	S-27	49-50/.2'	>67	0.6	86	
		39.7'/El. 968.8		39.7						
TOR 968.80		**CLAYSTONE**, gray, soft, weathered, indistinct bedding, random fractures, close spacing, flat dip, *Unit RQD=0%.*		42.0	R-1		0%	0.7	30	
		42.9'/El. 965.6								
970		**COAL**, black, soft, moderately weathered, thin bedding, random fractures, narrow spacing, flat to steep dip, *Unit RQD=0%.*		47.0	R-2		0%	3.0	60	
		45.2'/El. 963.3								
BPHE 961.20		**CLAYSTONE**, gray, soft, slightly weathered, indistinct bedding, random fractures, close spacing, flat dip, *Unit RQD=0%.*		52.0	R-3		70%	5.0	100	
EPTE 960.20		47.3'/El. 961.2								
965		**SANDSTONE interbedded with SILTSTONE**, light gray, fine grained, medium hard to hard, fresh to slightly weathered, thin to narrow bedding with flat dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=80%.*		57.0	R-4		86%	5.0	100	
				62.0	R-5		80%	5.0	100	
960										
955										
950										

SUBSTRUCTURE UNIT:
PIER 2

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
KC1-906	STATION: 115+05.0 OFFSET: 18.0 FT. RT	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 999.7 ft. - 0.0 hr. ▼ 24 HR.: El. 1001.9 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT ------- PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		65.5'/El. 943.0			R-6		80%	3.4	97	

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
SC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 7

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

C. H. Satish Kumar
SIGNATURE
DATE: 11-15-2021

DATE: _____

SHEET 115 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

PENNDOT STRUCTURE BORING LOG_PENNDOT GINT VERSION 1.2.3, 9-21-2016.GDT - 11/18/21 14:34 - \\MDOPAICL\BKP\MBARCORP.COM\PA_PROJECTS\GEOTECH\TRANSPORTATION\DOTS\PAD-105.8_0068.KARNS CROSSING\GEOTECH\DELIVERABLES\DESIGN\GEOTECH\PLOTS\SR_0068_Core_Borings.dgn

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SUBSTRUCTURE UNIT: LOG 1 OF 2

ABUTMENT 2 AND WING C

BORING NUMBER:	BORING LOCATION	START: 05/05/2021 7:30 AM	HAMMER: AUTOMATIC
KC1-907	STATION: 118+16.0 OFFSET: 40.0 FT. LT.	FINISH: 05/05/2021 3:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. 5 FT.	1007.0 FT.

DRILLING INSPECTOR: DUSTIN SOLLER

DRILLER & DRILLING COMPANY: RICHARD CRUM TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1001.6 ft. - 0.0 hr.

▼ 24 HR. READING - ELAPSED TIME: El. 1001.5 ft. - 23.0 hr.

ELEV.		GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1005			Fine to coarse **SAND** and fine to coarse **GRAVEL**, some Clay, little Silt, contains bituminous concrete fragments, contains brick fragments and cinders, very loose to medium dense, moist, heterogeneous, well graded, sub-angular to sub-rounded, non-plastic, brown to black, fill, *petroleum odor, PID readings=0.0 ppm.*	a-2-6 / sw-sc	1.5	S-1	2-2-3	7	1.1	73	
					3.0	S-2	5-4-5	12	1.3	87	
					4.5	S-3	3-2-3	7	1.4	93	
					6.0	S-4	1-1-1	3	0.6	40	
					7.5	S-5	1-1-1	3	0.0	0	
1000	▽▼		7.5'/El. 999.5		9.0	S-6	WOH-WOH-WOH	0	0.9	60	
			Fine **SAND**, some Silt, some Clay, trace Gravel, very loose to medium dense, damp to wet, poorly graded, medium plastic fines, gray, alluvium, *petroleum odor, PID readings=0.3-0.4 ppm.*	A-6 / CL	10.5	S-7	WOH-WOH-WOH	0	1.5	100	
					12.0	S-8	1-3-5	11	1.4	93	
995	BPCE 995.50		13.5'/El. 993.5		13.5	S-9	1-1-1	3	1.5	100	
			Fine to coarse **SAND**, some Clay, little fine and medium Gravel, little Silt, loose to very dense, moist, lensed, well graded, sub-rounded, low plastic fines, gray with brown, alluvium, *petroleum odor ends at 16.5'. PID reading=0.5 ppm.*		15.0	S-10	3-7-9	21	1.5	100	
					16.5	S-11	2-12-20	43	1.0	67	
					18.0	S-12	6-10-7	23	1.1	73	
					19.5	S-13	3-3-3	8	1.0	67	
					21.0	S-14	5-6-5	15	1.0	67	
					22.5	S-15	7-10-15	33	1.0	67	
					24.0	S-16	15-33-46	105	1.5	100	
					25.5	S-17	30-32-50	109	1.3	87	
					26.9	S-18	33-47-50/.4'	129	1.3	93	
					27.0	A-1 / S-19	28-50	67	0.9	90	
					28.0	A-2 / S-20	43-50/.2'	>67	0.3	43	
					29.2	A-3 / S-21	33-46-49	127	1.4	93	
980				a-2-6 / sc	31.5	S-22	34-21-31	69	1.1	73	
					33.0	S-23	24-34-50/.4'	112	1.0	71	
			34.0'/El. 973.0		34.4	A-4 / S-24					
975	TOR 972.10		**MECHANICALLY BROKEN ROCK**, very dense, dry, non-plastic, gray, residuum.		34.5	R-1		0%	1.5	71	
			34.9'/El. 972.1		37.0	R-2		0%	1.7	68	
			SILTSTONE, dark gray, soft to medium hard, slightly weathered to weathered, thin to narrow bedding with flat dip, bedding joints, narrow to close spacing, flat dip, *Unit RQD=2%.*		39.5	R-3		0%	2.5	100	
970					42.0	R-4		0%	5.0	100	
965											
960					47.0	R-5		8%	5.0	100	
			51.0'/El. 956.0								
955			**COAL**, black, soft, weathered, moderate bedding with flat dip, random fractures, narrow spacing, flat to moderate dip, *Unit RQD=0%.*		52.0	R-6		28%	4.7	94	
			52.5'/El. 954.5								
950	BPHE 952.60 EPTE 951.60		**CLAYSTONE**, gray, waxy luster, soft, slightly weathered to weathered, indistinct bedding, foliation joints, close spacing, flat dip, *Unit RQD=0%.*		57.0	R-7		94%	4.9	98	
			54.4'/El. 952.6								
945			**SANDSTONE**, light gray, fine grained, medium hard, fresh to slightly weathered, thin to narrow bedding with flat dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=39%.*		62.0						

DES: SC | CKD: SED | DWG: WRB | CKD: SC

SUBSTRUCTURE UNIT: LOG 2 OF 2

ABUTMENT 2 AND WING C

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
KC1-907	STATION: 118+16.0 OFFSET: 40.0 FT. LT.	0 FT. 5 FT.	▽ 0 HR.: El. 1001.6 ft. - 0.0 hr. ▼ 24 HR.: El. 1001.5 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
940		64.1'/El. 942.9		67.0	R-8		86%	5.0	100	
		Carbonaceous **SANDSTONE interbedded with SILTSTONE**, light gray to gray, fine grained, medium hard, slightly weathered, thin to narrow bedding with flat to shallow dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=55%.*			R-9		20%	4.8	96	
935		74.0'/El. 933.0		72.0	R-10		100%	2.0	100	

*Before Core Elev: 1001.2 ft.

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SATISH K. CHELLABOINA — ENGINEER — PE079295 — PENNSYLVANIA

C. H. Satish Kumar

SIGNATURE

DATE: 02-04-2022

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214

BMS STR ID: 10-0068-0500-1278

MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278

SR 0068-253 STA 113+80.00

OVER B&LE RAILROAD AND B&P RAILROAD

3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CORE BORINGS 8

DATE:

SHEET 116 OF 121

S - 39526

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PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 12.2.3 9-21-2016.GDT 2/2/22 14:46 - \\MOONPA1CLUHRN.PROJECTS\GEOTECH\TRANSPORTATION\DOTS\PA\0-195\R_0068\KARNS CROSSING\GFDS\RTN\DESIGN\KARNS CROSSING BRIDGE\WA\BORING LOG\KARNS CROSSING BRIDGE WA\B102221.GPJ

SUBSTRUCTURE UNIT: LOG 1 OF 2

ABUTMENT 2 AND WING D

BORING NUMBER:	BORING LOCATION	START: 05/04/2021 7:42 AM	HAMMER: AUTOMATIC
KC1-908	STATION: 118+04.0 OFFSET: 18.0 FT. RT.	FINISH: 05/04/2021 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER SOIL MAX TRACK RIG W/ SAFETY HMR.	1.874 IN.	0 FT. 5 FT.	1005.4 FT.

DRILLING INSPECTOR: DUSTIN SOLLER

DRILLER & DRILLING COMPANY: RICHARD CRUM TRC

▽ 0 HR. READING - ELAPSED TIME: El. 1002.2 ft. - 0.0 hr. ▽ *

▼ 24 HR. READING - ELAPSED TIME: El. 1001.9 ft. - 22.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
1005		Fine to coarse **SAND** and fine to coarse **GRAVEL**, little Silt, trace Clay, contains rock fragments and cinders, contains brick fragments, very loose to loose, moist, well graded, sub-angular, non-plastic, dark brown and black, fill. 6.0'/El. 999.4	a-1-b / sw	1.5	S-1	1-3-3	8	0.9	60	
				3.0	S-2	4-3-3	8	1.1	73	
				4.5	S-3	2-1-1	3	0.8	53	
				6.0	S-4	1-1-1	3	0.6	40	
1000		**SILT**, some Clay, some fine Sand, trace Gravel, very soft, damp to wet, poorly graded, low plastic fines, gray, alluvium, *petroleum odor from 6.0-12.0', PID readings=0.0 ppm.* 12.5'/El. 992.9	A-4 / CL	7.5	S-5	WOH-WOH-1	1	1.5	100	
				9.0	S-6	WOH-WOH-WOH	0	1.1	73	
995	BPCE 995.50			10.5	S-7	WOR-WOR-WOR	0	1.5	100	
				12.0	S-8	WOH-WOH-WOH	0	1.5	100	
		Fine to coarse **SAND** and fine and medium **GRAVEL**, some Clay, little Silt, dense to very dense, moist to wet, well graded, sub-rounded, non-plastic, brown to black, alluvium, *coal fragments*.	a-2-6 / sw-sc	13.5	S-9	3-5-5	13	1.5	100	
				15.0	S-10	7-11-22	44	1.1	73	
				16.5	S-11	8-14-17	41	0.6	40	
				18.0	S-12	13-13-15	37	1.5	100	
990				19.5	S-13	12-14-18	43	1.5	100	
				21.0	S-14	17-13-12	33	1.5	100	
				22.5	S-15	17-25-48	97	1.2	80	
				24.0	S-16	43-44-49	124	1.5	100	
985				25.5	S-17	33-24-33	76	1.5	100	
				27.0	S-18	15-20-21	55	1.0	67	
				28.5	S-19	15-13-20	44	1.3	87	
				30.0	S-20	17-16-20	48	1.4	93	
980				31.5	S-21	12-37-28	87	1.1	73	
				33.0	S-22	22-24-25	65	1.0	67	
				33.7	S-23	46-50/.2'	>67	0.7	100	
				34.5	A-1					
				34.9	S-24	50/.4'	>67	0.4	100	
975		32.5'/El. 972.9								
		MECHANICALLY BROKEN ROCK, very dense, dry, non-plastic, gray, residuum, *weathered siltstone.* 34.9'/El. 970.5		37.0	R-1		0%	1.1	52	
970	TOR 970.50	**SILTSTONE**, dark gray, medium hard, slightly weathered, thin to narrow bedding with flat dip, bedding joints, narrow to close spacing, flat dip, *Unit RQD=7%.*		40.0	R-2		0%	3.0	100	
				42.0	R-3		0%	1.9	95	
965				47.0	R-4		0%	5.0	100	
				52.0	R-5		18%	5.0	100	
960				57.0	R-6		60%	4.9	98	
				62.0	R-7		66%	5.0	100	
		48.7'/El. 956.7								
955		**COAL**, black, soft, weathered, medium bedding with flat dip, random fractures, narrow spacing, flat dip, *Unit RQD=0%.* 50.8'/El. 954.6								
		CLAYSTONE, gray, nodules, mineral veins, soft, slightly weathered, indistinct bedding, *Unit RQD=0%.* 53.8'/El. 951.6								
950	BPHE 951.60 EPTE 950.60	**SANDSTONE**, light gray, fine grained, medium hard, fresh to slightly weathered, moderate bedding with flat dip, foliation joints, close to moderate spacing, flat dip, *Unit RQD=77%.*								
945		62.0'/El. 943.4								
		(Layer description on next log page)								

SUBSTRUCTURE UNIT: LOG 2 OF 2

ABUTMENT 2 AND WING D

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
KC1-908	STATION: 118+04.0 OFFSET: 18.0 FT. RT.	0 FT. 5 FT.	▽ 0 HR.: El. 1002.2 ft. - 0.0 hr. ▽ * ▼ 24 HR.: El. 1001.9 ft. - 22.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ⊙ Soil/Rock Rec. % ⊙ ▲ SPT (N_{60}) ▲
940		Carbonaceous **SANDSTONE interbedded with SILTSTONE**, light gray to gray, fine grained, medium hard, slightly weathered, thin to narrow bedding with flat to shallow dip, bedding joints, close to moderate spacing, flat dip, *Unit RQD=62%.(Layer continued from the previous log page)*		67.0	R-8		58%	5.0	100	
					R-9		68%	4.0	100	
935		71.0'/El. 934.4								

*48-hr. Elev: 1002.0 ft.
**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

SC

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CORE BORINGS 9

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SATISH K. CHELLABOINA — ENGINEER — PE079295

C.H. Satish Kumar
SIGNATURE

DATE: 02-04-2022

DATE: _____

SHEET 117 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

PENNDOT STRUCTURE BORING LOG - PENNDOT GINT VERSION 1.2.3 8-21-2019.GDT - 2/2/22 13:30 - \\MONPAS1\HRU PROJECTS\GEOTECH\TRANSPORTATION\DOT\PA\O-105\R 0068 KARNS CROSSING\FOR PERMIT\BEESPANBRIDGE\SUBMISSION 2\BACKUPS\R0068 KARNS CROSSING BRIDGE\WLAB\20220221.GPJ
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pennsylvania
DEPARTMENT OF TRANSPORTATION

ECMS: 86105
Date Prepared: 11/11/2021 Prepared by: Michael Baker International

Butler County
SR 0068 Section 253
Karns Crossing Bridge

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMB.	STATION & OFFSET	SAMP. #	TEST DEPTH (FT.)	NAT. MOIST. %	GRAV. %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
KC1-901	109+60.0 87 ft. LT.	S-5 to 8	6.0 to 12.0	17.8	6.0	34.7			59.3	43.8	15.5	A-4	CL-ML		26	19	7					
KC1-902	109+52.0 75 ft. RT	S-3 to 4	3.0 to 6.0	18.9	22.4	28.0	15.5	12.5	49.6	23.6	26.0	A-6	SC		29	16	13					
KC1-902	109+52.0 75 ft. RT	S-13 to 14	18.0 to 21.0	25.4	3.7	9.2	2.8	6.4	87.1	28.5	58.6	A-6	CL		37	20	17					
KC1-903	112+40.0 35 ft. LT.	S-3 to 4	3.0 to 6.0	16.5	8.9	33.5	9.4	24.1	57.6	32.3	25.3	A-4	CL		25	17	8					
KC1-904	112+12.0 26 ft. RT.	S-8	10.5 to 12.0	13.7																		
KC1-905	115+32.0 36 ft. LT	S-4 to 6	4.5 to 9.0	27.2	12.2	31.0	8.5	22.5	56.8	34.5	22.3	A-4	CL		29	19	10					
KC1-905	115+32.0 36 ft. LT	S-21	30.0 to 31.5	18.5																		
KC1-906	115+05.0 18 ft. RT	S-5	6.0 to 7.5	40.0																		
KC1-907	118+16.0 40 ft. LT.	S-7 to 8	9.0 to 12.0	28.3	0.3	38.6	3.5	35.1	61.1	34.2	26.9	A-6	CL		31	19	12					

GENERAL NOTES

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FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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LEGEND

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T	TORVANE
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TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 10

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

SIGNATURE
DATE: 11-15-2021

DATE: _____

SHEET 118 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

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pennsylvania
DEPARTMENT OF TRANSPORTATION

Butler County
SR 0068 Section 253
Karns Crossing Bridge

ECMS: 86105
Date Prepared: 11/11/2021 Prepared by: Michael Baker International

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMB.	STATION & OFFSET	SAMP. #	TEST DEPTH (FT.)	NAT. MOIST. %	GRAV. %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
KC1-907	118+16.0 40 ft. LT.	S-13	18.0 to 19.5	13.4																		
KC1-908	118+04.0 18 ft. RT.	S-5 to 7	6.0 to 10.5	32.9	7.6	27.2	0.7	26.5	65.2	41.1	24.1	A-4	CL		29	19	10					
KC1-908	118+04.0 18 ft. RT.	S-13 to 14	18.0 to 21.0	11.8																		

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 11

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

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DATE: 11-15-2021

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SHEET 119 OF 121

S - 39526

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pennsylvania
DEPARTMENT OF TRANSPORTATION

ECMS: 86105
Date Prepared: 11/11/2021 Prepared by: Michael Baker International

Butler County
SR 0068 Section 253
Karns Crossing Bridge

Sheet 1 of 2

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX / TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
KC1-901	109+60.0 87 ft. LT.	R-2	34.0 to 34.5	Point Load Test	17669.0 PSI / 1,272.2 TSF	No		96	28	SANDSTONE	Allegheny Group
KC1-901	109+60.0 87 ft. LT.	R-3	37.3 to 37.7	Point Load Test	18834.0 PSI / 1,356.0 TSF	No		98	9	SILTSTONE	Allegheny Group
KC1-901	109+60.0 87 ft. LT.	R-4	41.8 to 42.3	Point Load Test	8786.0 PSI / 632.6 TSF	No		94	54	SILTSTONE	Allegheny Group
KC1-902	109+52.0 75 ft. RT	R-3	35.4 to 35.7	Unconfined Compressive Test	2726.0 PSI / 196.3 TSF	No		100	54	SILTSTONE	Allegheny Group
KC1-903	112+40.0 35 ft. LT.	R-6	45.0 to 45.3	Unconfined Compressive Test	1826.0 PSI / 131.5 TSF	No		100	46	SILTSTONE	Allegheny Group
KC1-904	112+12.0 26 ft. RT.	R-5	36.3 to 36.6	Unconfined Compressive Test	906.0 PSI / 65.2 TSF	No		100	32	SILTSTONE	Allegheny Group
KC1-905	115+32.0 36 ft. LT	R-3	46.2 to 46.4	Unconfined Compressive Test	1095.0 PSI / 78.8 TSF	No		98	38	SANDSTONE	Allegheny Group
KC1-905	115+32.0 36 ft. LT	R-5	53.5 to 53.9	Unconfined Compressive Test	1313.0 PSI / 94.5 TSF	No		100	74	SANDSTONE	Allegheny Group
KC1-906	115+05.0 18 ft. RT	R-3	48.3 to 49.2	Unconfined Compressive Test	2450.0 PSI / 176.4 TSF	No		100	70	SANDSTONE	Allegheny Group
KC1-907	118+16.0 40 ft. LT.	R-6	56.2 to 57.0	Unconfined Compressive Test	1004.0 PSI / 72.3 TSF	No		94	28	SANDSTONE	Allegheny Group
KC1-907	118+16.0 40 ft. LT.	R-8	62.0 to 62.3	Unconfined Compressive Test	5202.0 PSI / 374.5 TSF	No		100	86	SANDSTONE	Allegheny Group

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GENERAL NOTES

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LEGEND

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T	TORVANE
NTS	NOT TO SCALE
BHE	BOTTOM OF HOLE ELEVATION
BORS	BOTTOM OF ROCK SOCKET ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
BPHE	BOTTOM OF PREDRILLED HOLE ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TODS	TOP OF DRILLED SHAFT ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION
TORS	TOP OF ROCK SOCKET ELEVATION

pennsylvania
DEPARTMENT OF TRANSPORTATION

ECMS: 86105
Date Prepared: 11/11/2021 Prepared by: Michael Baker International

Butler County
SR 0068 Section 253
Karns Crossing Bridge

Sheet 2 of 2

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX / TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
KC1-908	118+04.0 18 ft. RT.	R-6	52.0 to 52.4	Unconfined Compressive Test	3051.0 PSI / 219.7 TSF	No		98	60	CLAYSTONE	Allegheny Group

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
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KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253

SEG 0500 OFFSET 1278
SR 0068-253 STA 113+80.00
OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE

CORE BORINGS 12

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

SIGNATURE

DATE: 11-15-2021

DATE:

SHEET 120 OF 121

S - 39526

DES: SC | CKD: SED | DWG: WRB | CKD: SC

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DEPARTMENT OF TRANSPORTATION

Butler County
SR 0068 Section 253
Karns Crossing Bridge

ECMS: 86105
Date Prepared: 11/11/2021 Prepared by: Michael Baker International

Sheet 1 of 1

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
KC1-902	109+52.0 75 ft. RT	S-3 to 4	3.0 to 6.0	GROUNDWATER SOIL	 7.0	 3,600	 30	 72	 No	No No	No No
KC1-904	112+12.0 26 ft. RT.	S-4	4.5 to 7.3	GROUNDWATER SOIL	 6.7	 2,100	 395	 58	 No	No No	No Resist.w/Chlor.
KC1-905	115+32.0 36 ft. LT	S-4 to 6	4.5 to 9.0	GROUNDWATER SOIL	 7.2	 1,900	 30	 137	 No	No No	No Resistivity
KC1-908	118+04.0 18 ft. RT.	S-5 to 7	6.0 to 10.5	GROUNDWATER SOIL	 7.0	 4,000	 151	 513	 No	No No	No Resist.w/Sulf.,Resist.w/Chlor.

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Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

SR 0068 PREVIOUSLY KNOWN AS LR 214
BMS STR ID: 10-0068-0500-1278
MPMS/ECMS PROJECT: 86105 BRKEY: 67492

KARNS CROSSING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUTLER COUNTY
SR 0068 SECTION 253
SEG 0500 OFFSET 1278
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OVER B&LE RAILROAD AND B&P RAILROAD
3 SPAN CONT COMP STEEL PLATE GIRDER BRIDGE
CORE BORINGS 13

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SATISH K. CHELLABOINA
ENGINEER
PE079295

SIGNATURE
DATE: 11-15-2021

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SHEET 121 OF 121

S - 39526

DES: SC	CKD: SED	DWG: WRB	CKD: SC

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to replace the existing structure that carries State Route 0068 over four tracks of the Bessemer and Lake Erie Railroad (DOT No. 051 674J) and ten tracks of the Buffalo and Pittsburgh Railroad, Inc. (DOT No. 149 033 D) in Butler County and the allocation of costs incident thereto.	Application Docket No. **A-2020-3022688** **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 mail pursuant to the Emergency Order at Docket Number M-2020-3019262:

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Thomas.Brasseur@cn.ca

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michael_sliper@csx.com

Debra-Ann Bocash, Manager - Engineering
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Honorable Leslie A. Osche
Butler County Commissioners
Government Center
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Butler, PA 16003-1208
losche@co.butler.pa.us

Wilfred Adams, Chairperson
Summit Township Supervisors
502 Bonniebrook Road
Butler, PA 16002
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David Zarnick, President
Butler Township Supervisors
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Dated this 25th Day of January, 2024

Jeffrey Matko Digitally signed by Jeffrey Matko
Date: 2024.01.25 14:34:03 -05'00'

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