

YORK COUNTY BOARD OF COMMISSIONERS

COMMISSIONERS
JULIE WHEELER, PRESIDENT
SCOTT BURFORD, VICE PRESIDENT
DOUG HOKE, COMMISSIONER

DEPUTY CHIEF CLERK
CLAIR R. DOLL

CHIEF FINANCIAL OFFICER
TYER CHRONISTER



August 28, 2025

Matthew Homsher, Secretary
Pennsylvania Public Utility Commission
PO Box 3265
Harrisburg, PA 17105-3265

Re: York County / Cumberland County
Monaghan Township / Upper Allen Township
T-913 (North Grantham Road) / Mill Road
PUC No. A-2023-3040441
ECMS # 111023

Dear Secretary Homsher:

In accordance with ordering paragraph number 3 and 4 of the PUC Secretarial Letter/Order at Docket No. A-2023-3040441 dated March 8, 2024, please find attached for your approval one hard copy of the signed title sheet and a CD containing a copy of the final plans for Construction of Township Route T-913 in York County and of Township Route Mill Road in Cumberland County, consisting of sheets 1 through 8 of 67. Also attached to the set of construction drawings are the following "Also" plans.

1. Traffic Control Plan consisting of sheets 9 through 12 of 67.
2. Aids to Navigation consisting of sheets 13 through 16 of 67.
3. Erosion and Sediment Pollution Control Plan consisting of 17 through 23 of 67.
4. Signing and Pavement Marking Plan consisting of 24 through 27 of 67.
5. Final signed Structure Plan (L-366) consisting of 28 through 67 of 67.

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

We respectfully request the approval of these plans and the subsequent issuance of a PUC Order. Should you have any questions or concerns, please feel free to contact Matthew Lena at mlena@hrg-inc.com.

Sincerely,

Joshua Dewees
Director of Public Works

cc: Parties of Record

FILE NAME: P:\0037\003721_0431\Microsoft\ton\CONSTR\01-T0037210431 CONSTR T1.dgn
PLOTTER: 8/26/2025 4:19:04 PM
PEN TABLE: file date user tb
PLOT DRIVER: r1\SYS - Microsoft\standards\plotdrv\wm\pdf\pdf.bw, full, plotcf

YORK COUNTY
BOARD OF COMMISSIONERS

AND

CUMBERLAND COUNTY
BOARD OF COMMISSIONERS

DRAWINGS
FOR
CONSTRUCTION
OF

TOWNSHIP ROUTE T-913
IN YORK COUNTY

FROM STA. 0+50.00 TO STA. 2+38.73 LENGTH 138.73 FT. 0.026 MI.

AND

TOWNSHIP ROUTE MILL ROAD
IN CUMBERLAND COUNTY

FROM STA. 2+38.73 TO STA. 5+01.00 LENGTH 212.27 FT. 0.040 MI.

TOTAL = 351.00 FT.= 0.066 MI.

PUC APPLICATION DOCKET NUMBER A-2023-3040441

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DESIGN DESIGNATION

HIGHWAY CLASSIFICATION - RURAL LOCAL ROAD
DESIGN SPEED - 25 MPH
PAVEMENT WIDTH - 20'-0"
SHOULDER WIDTH - 4'-0" LT/RT

TRAFFIC DATA

CURRENT A.D.T. - 903 (2025)
DESIGN YEAR A.D.T. - 1,034 (2045)
D.H.V - 117
D - 50%
T - 9%

COUNTY	TOWNSHIP	ROUTE	SECTION	TOTAL SHEETS
YORK	MONAGHAN	T-913	-	8
CUMBERLAND	UPPER ALLEN	-	-	

ECMS: 111023

ALSO INCLUDED

TRAFFIC CONTROL PLAN	4 SHEETS
AIDS TO NAVIGATION PLAN	4 SHEETS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	7 SHEETS
SIGNING AND PAVEMENT MARKING PLAN	4 SHEETS
STRUCTURE PLAN (L-366)	40 SHEETS
CROSS SECTIONS	4 SHEETS

PREPARED BY
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



Matthew J. Lena

PROFESSIONAL ENGINEER
DATE: 08/27/2025

RECOMMENDED DATE: _____
DISTRICT EXECUTIVE

APPROVED DATE: _____

PRESIDENT, YORK COUNTY
BOARD OF COMMISSIONERS

FILE NAME: P:\0037\003721_0431\MI\coros\to\ton\CONSTR\02 - T0037210431 - CONSTR.GN.dgn
PLOTTER: 8/15/2025 12:07:57 PM r_santana
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\sys - Microstationstandards\plotdrv\wm\pdf.pdf.bw.full.plt.ctb

PA ONE CALL

ACT 181 OF 2006



PENNSYLVANIA ACT 287 (1974) AS AMENDED, REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH. AS REQUIRED BY PA ACT 287, AS AMENDED, HRG HAS PROVIDED THE NAME OF THE FACILITY OWNERS AS SHOWN ON THE LIST FROM THE ONE CALL SYSTEM, THE SERIAL NUMBER OF ONE CALL NOTICE AND THE TOLL FREE NUMBER OF THE ONE CALL SYSTEM. ADDITIONALLY, AS REQUIRED BY PENNDOT, ADDRESSES AND PHONE HAVE BEEN PROVIDED FOR INFORMATIONAL AND CONVENIENCE PURPOSES AND HRG IS NOT RESPONSIBLE FOR THEIR ACCURACY.

THE PA ONE CALL NOTIFICATIONS PERFORMED DURING PROJECT DEVELOPMENT ARE AS FOLLOWS:

-PRELIMINARY DESIGN SERIAL NO.20202022151, 20202021839, 20202021767, 20202021684 ON JULY 20, 2020 FOR MONAGHAN TOWNSHIPAND UPPER ALLEN TOWNSHIP.
-FINAL DESIGN SERIAL NO.---- ON ---- FOR MONAGHAN TOWNSHIP AND UPPER ALLEN TOWNSHIP.

LIST OF PUBLIC UTILITIES

LUMEN
ATTN: DAVID VEGA
1025 ELDORADO BLVD
BROOMFIELD, CO 80021
DAVID.VEGA@LUMEN.COM

COMCAST
ATTN: ERIC HUBBARD
505 BALTIMORE ST
HANOVER, PA 17331
ERICHUBBARD@CABLE.COMCAST.COM

TU

CATV

SPRINT (T-MOBILE)
ATTN: MIKE BROWN
484 WILLIAMSPORT PIKE, BOX 113
MARTINSBURG, WV 25404
MICHAEL.P.BROWN@T-MOBILE.COM

VERIZON
ATTN: DEB BARUM
1026 HAY ST
PITTSBURGH, PA 15221
DEBORAH.D.DELIA@VERIZON.COM

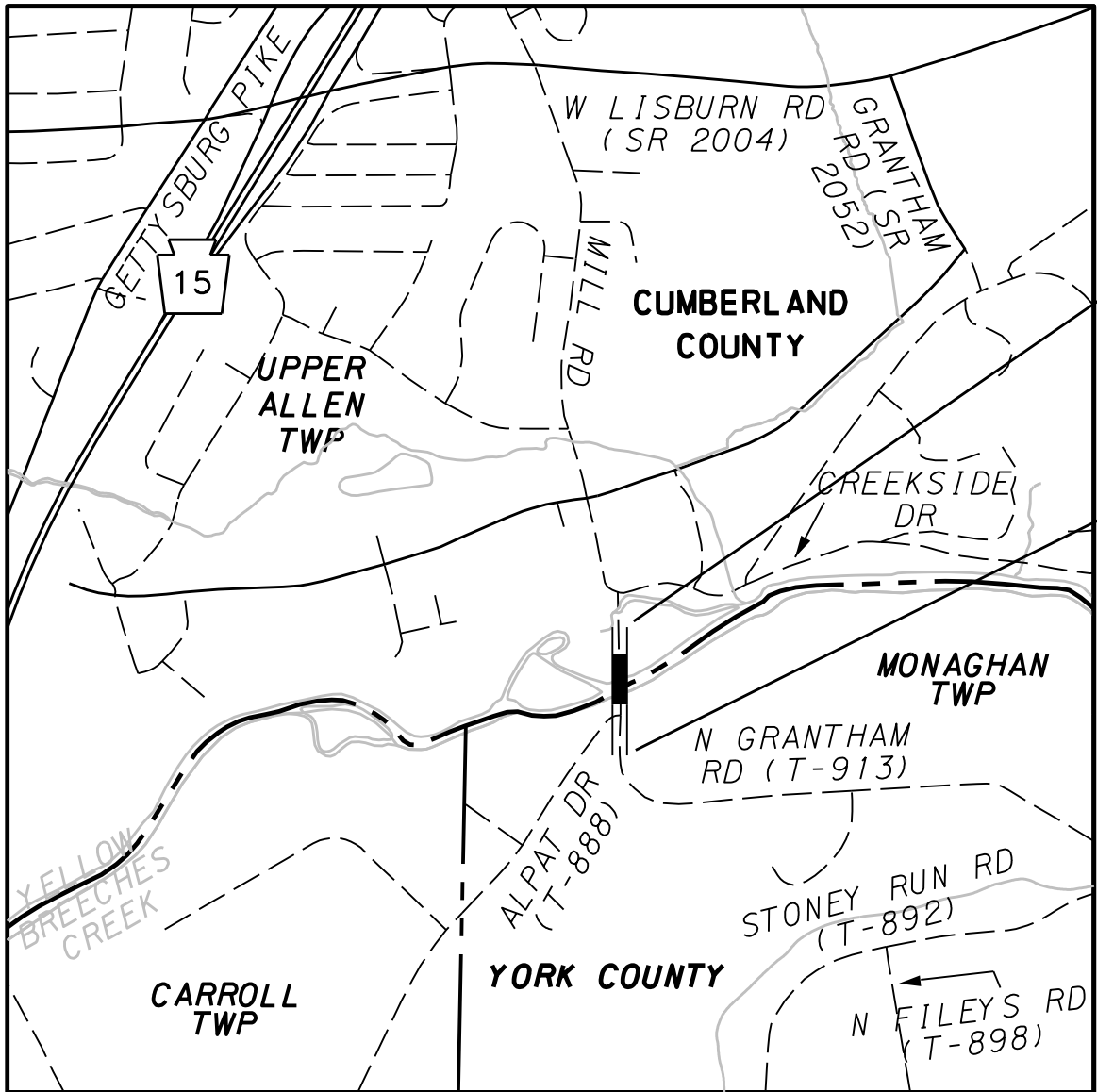
FOU

T

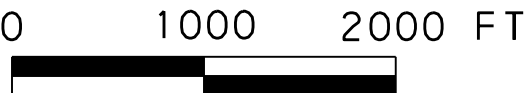
WINDSTREAM
ATTN: LISA ZINGULA
1450 N CENTER POINT RD
HIAWATHA, IA 52233
LISA.ZINGULA@WINDSTREAM.COM

FOU

LOCATION MAP



SCALE



LEGEND

- STATE ROAD
- TOWNSHIP ROAD
- LEGISLATIVE BOUNDARY LINE
- STREAM

TABULATION OF OVERALL LENGTH

T-913 STA 00+50.00 TO STA 5+01.00 = 451.00 FT = 0.085 MI

TABULATION OF CONSTRUCTION LENGTH

T-913 STA 1+00.00 TO STA 4+51.00 = 351.00 FT = 0.066 MI

SUMMARY OF PROJECT COORDINATES

PA STATE PLANE COORDINATE SYSTEM - PA SOUTH (NAD 83)

ROUTE	STATION	POINT	COORDINATES		BEARINGS
			NORTH	EAST	
SURVEY & CONSTR #	0+00.00	POT	299520.5750	2179359.9465	N1°30' 14"E
	1+50.50	PC	299671.0227	2179363.8960	N1°30' 14"E
	1+70.05	PI	299690.5710	2179364.4091	N2°58' 32"W
	1+89.59	PT	299710.0998	2179363.3940	N2°58' 32"W
	3+34.04	PC	299854.3524	2179355.8955	N2°58' 32"W
	3+73.20	PI	299893.4645	2179353.8624	N1°30' 36"E
	4+12.33	PCC	299932.6157	2179354.8944	N1°30' 36"E
	4+61.55	PI	299981.8192	2179356.1914	N13°33' 06"W
	5+10.41	PT	300029.6694	2179367.7249	N13°33' 06"W
	5+64.50	POT	300082.2605	2179380.4010	

FOUR (4) PLACE COORDINATES ARE FOR COMPUTATION PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) DECIMAL PLACES.

SUMMARY OF TRAVERSE COORDINATES

PA STATE PLANE COORDINATE SYSTEM - PA SOUTH (NAD 83)

DESCRIPTION	STATION	OFFSET	SIDE	COORDINATES	
				NORTH	EAST
SURVEY & CONSTR 電					
T-REBAR (#1)	-	-	-	300812.8940	2178423.4940
T-REBAR (#2)	-	-	-	300338.6650	2179811.8860
T-REBAR (#3)	-	-	-	300320.9400	2180159.0620
T-REBAR (#4)	4+30.41	17.37'	RT	299949.5480	2179373.0500
T-REBAR (#5)	-	-	-	299487.7310	2179346.4110
T-MAG (#6)	0+65.92	18.15'	LT	299586.9510	2179343.5360
T-REBAR (#7)	1+57.04	12.55'	LT	299677.7270	2179351.4740
T-REBAR (#8)	2+96.64	17.09'	RT	299817.8930	2179374.9060
T-REBAR (#9)	3+95.84	115.26'	RT	299914.9940	2179469.8470
T-REBAR (#11)	2+13.34	50.98'	RT	299736.4640	2179413.0710
T-REBAR (#12)	1+75.11	59.00'	LT	299694.2730	2179304.9490
T-REBAR (#13)	2+55.23	98.50'	LT	299770.5350	2179261.6240
T-MAG (#50)	-	-	-	299520.5460	2179360.0610
T-MAG (#51)	4+48.46	0.47'	LT	299968.7160	2179356.7810

FOUR (4) PLACE COORDINATES ARE FOR COMPUTATION PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) DECIMAL PLACES.

EARTHWORK SUMMARY ENTIRE PROJECT

THE INFORMATION ON ESTIMATED AMOUNTS OF EARTHWORK HAS BEEN USED IN THE PRELIMINARY ESTIMATE. DO NOT USE AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACTS.					
CUBIC YARDS OF EXCAVATION					
CLASS 1	CLASS 1A	CLASS 1C	CLASS 2	CLASS 3 **	CLASS 4
127	-	-	-	3395	30
CUBIC YARDS OF COMPLETED EMBANKMENT *					
2231					
CUBIC YARDS OF BORROW EXCAVATION					
-					
CUBIC YARDS OF SELECTED BORROW ***					
2078					
CUBIC YARDS OF WASTE					
2266					

* INCLUDE ALL BORROW ITEMS.

** PART OF LUMP SUM STRUCTURE ITEM.

*** INCLUDES 27 CY OF SELECTED BORROW EXCAVATION ROCK, CLASS R-6, 765 CY OF SELECTED BORROW EXCAVATION ROCK, CLASS R-7 CHOKED WITH SELECTED BORROW EXCAVATION ROCK AND 1286 CY OF SELECTED BORROW EXCAVATION, STRUCTURAL BACKFILL.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	2 OF 8	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON T-888, AL-PAT DRIVE, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933. P.L. 103, SECTION 1105, AS AMENDED. IT HAS BEEN OPENED AND MAINTAINED FOR TWENTY-ONE YEARS OR MORE BY MONAGHAN TOWNSHIP, A SECOND-CLASS TOWNSHIP. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-888, AL-PAT DRIVE (AT THE INTERSECTION WITH NORTH GRANTHAM), IS VARIABLE BASED ON THE ACTUAL WIDTH OCCUPIED BY PAVEMENT AND SHOULDERS AS MEASURED IN THE FIELD. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-913, NORTH GRANTHAM ROAD, FROM STATION 0+50.00 TO STATION 1+05.80, LEFT AND FROM STATION 0+50.00 TO STATION 1+38.00, RIGHT, IS 33 FEET, IS BASED ON THE ACT OF MAY 1, 1933. P.L. 103, SECTION 1105, AS AMENDED. IT HAS BEEN OPENED AND MAINTAINED FOR TWENTY-ONE YEARS OR MORE BY MONAGHAN TOWNSHIP, A SECOND-CLASS TOWNSHIP. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-913, NORTH GRANTHAM ROAD, FROM STATION 1+05.80 TO STATION 2+38.73, LEFT AND FROM STATION 1+38.00 TO STATION 3+66.00, RIGHT IS VARIABLE, BASED ON A PLAN OF T-913, NORTH GRANTHAM ROAD, SECTION R/W SIGNED ON _____ AND RECORDED ON _____ IN CUMBERLAND COUNTY RECORDER'S OFFICE.

THE LEGAL RIGHT-OF-WAY ON MILL ROAD, FROM STATION 2+38.73 TO STATION 5+01.00 LEFT AND FROM STATION 3+66.00 TO STATION 5+01.00 RIGHT, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933. P.L. 103, SECTION 1105, AS AMENDED. IT HAS BEEN OPENED AND MAINTAINED FOR TWENTY-ONE YEARS OR MORE BY UPPER ALLEN TOWNSHIP, A FIRST-CLASS TOWNSHIP. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON MILL ROAD, FROM STATION 2+38.73 TO STATION 3+66.00, RIGHT IS VARIABLE, BASED ON A PLAN OF T-913, NORTH GRANTHAM ROAD, SECTION R/W SIGNED ON _____ AND RECORDED ON _____ IN CUMBERLAND COUNTY RECORDER'S OFFICE.

BULDINGS AND STRUCTURES MARKED [C] HAVE BEEN OR ARE TO BE REMOVED OR ALTERED BY THE DEPARTMENT OR OTHER AUTHORITY RESPONSIBLE FOR THE PAYMENT OF PROPERTY DAMAGES AND SUCH WORK IS NOT PART OF THIS CONTRACT.

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

RC-10M 6/01/2010	RC-25M 2/27/2023	RC-46M 2/19/2021	RC-70M 2/08/2019
RC-11M 6/01/2010	RC-30M 2/27/2023	RC-50M 2/27/2023	RC-72M 2/08/2019
RC-12M 11/01/2022	RC-31M 11/30/2021	RC-51M 9/01/2023	RC-74M 2/08/2019
RC-13M 6/01/2010	RC-45M 2/19/2021	RC-54M 9/01/2023	RC-75M 6/01/2010

RC-77M 12/17/2019	TC-8600 6/13/2013	TC-8716 2/21/2024
	TC-8604 8/17/2021	
	TC-8700C 6/13/2013	
	TC-8702B 6/13/2013	

BC-709M 10/07/2024	BC-736M 11/23/2022	BC-788M 11/23/2022
BC-732M 11/23/2022	BC-752M 11/23/2022	
BC-734M 2/19/2021	BC-755M 1/31/2019	
BC-735M 9/30/2016	BC-775M 11/23/2022	

THIS IS A FEDERAL-AID PROJECT AND AS SUCH IS SUBJECT TO INSPECTION BY THE 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 MONAGHAN TOWNSHIP AND SERIAL NO. _____ FOR UPPER ALLEN TOWNSHIP.

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.PAICALL.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).

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 OWNER.

THE HORIZONTAL CONTROL IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 1983) PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.

VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

SHEET INDEX BLOCK

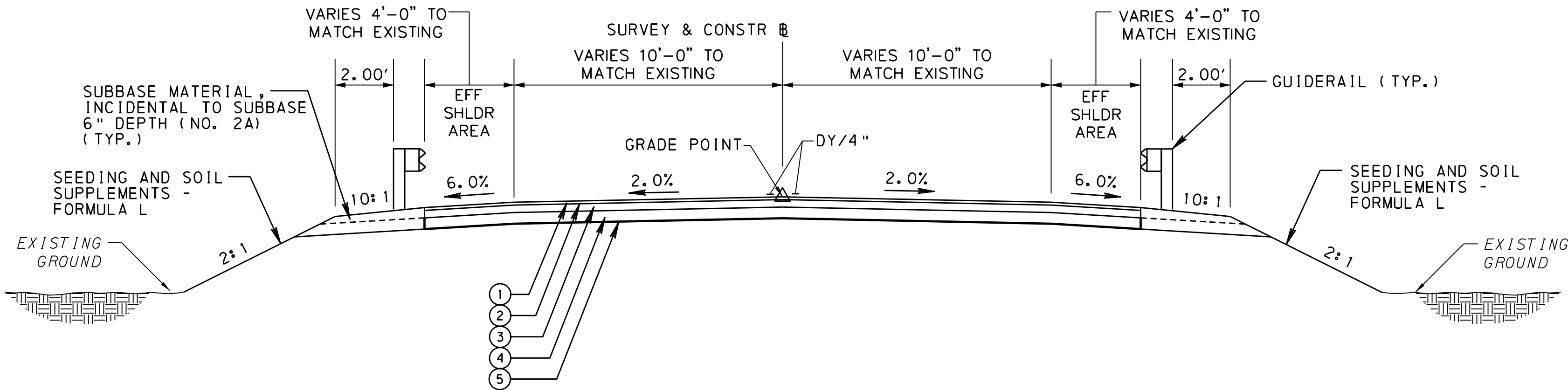
DESCRIPTION	SHEET
TITLE SHEET	1
GENERAL NOTES	2
TYPICAL SECTIONS	3
SUMMARY SHEET	4
TABULATION SHEETS	5-6
PLAN SHEET	7
PROFILE SHEET	8

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



FILE NAME: P:\0037\003721_0431\Microstation\CONSTR\03-T0037210431_CONSTR_TS.dgn
PLOT DATE: 8/15/2025 10:45:29 AM
PEN TABLE: file date user: fb r:santana
PLOT DRIVER: r1\SYS - Microstation\standards\plotdrv\xm\pdf\pdf.bw, full, plotcf

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	3 OF 8	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



TYPICAL SECTION
NOT TO SCALE
STA 1+10.00 TO STA 1+94.20
STA 2+99.80 TO STA 4+41.77

- ① SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L
- ② ASPHALT TACK COAT
- ③ SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH
- ④ SUBBASE 6" DEPTH (NO. 2A)
- ⑤ GEOTEXTILE CLASS 4, TYPE A

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



SPM - SIGNING AND PAVEMENT MARKING PLAN TCP - TRAFFIC CONTROL PLAN STR - STRUCTURE PLAN (L-366)										REVISION NO		REVISIONS		DATE	BY	DISTRICT	COUNTY		ROUTE	SECTION	SHEET			
															08	YORK		7219	BRG	4 OF 8				
◆ - SEE SPECIAL PROVISIONS																								
QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	UNIT					UNIT					UNIT					UNIT					UNIT			
	4201 0001	CLEARING AND GRUBBING		NO TAB	4	0620 2030	THRIE-BEAM GUIDE RAIL TO PA TYPE 10M BRIDGE BARRIER TRANSITION WITHOUT CURB		5	2	0945 0001	RESET POST MOUNTED SIGNS, TYPE F		SPM										
	LS					EACH					EACH													
127	0203 0001	CLASS 1 EXCAVATION		5	20	0627 3020	TEMPORARY BARRIER, TEST LEVEL 3, BARRIER DEFLECTION DISTANCE < /=2'		TCP	4	0958 0281	TEMPORARY TIMING ADJUSTMENTS TO EXISTING PERMANENT TRAFFIC SIGNAL CONTROLLER		TCP										
	CY					LF					EACH													
27	0205 0266	SELECTED BORROW EXCAVATION ROCK, CLASS R-6		6		0686 0050	CONSTRUCTION SURVEYING, TYPE D		NO TAB	1	0960 0125	WHITE HOT THERMOPLASTIC LEGEND, "RR CROSSING", 6' - 6", 10' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS)		SPM										
	CY					LS					EACH													
262	4205 0266	SELECTED BORROW EXCAVATION ROCK, CLASS R-6 (TEMPORARY CAUSEWAY)		6		0688 0020	MICROCOMPUTER, TYPE C		NO TAB	12	0962 1004	24" WHITE WATERBORNE PAVEMENT MARKINGS		SPM										
	CY					LS					LF													
765	4205 0267	SELECTED BORROW EXCAVATION ROCK, CLASS R-7 CHOKED WITH SELECTED BORROW EXCAVATION ROCK, CLASS R-4		5		0689 0003	CPM SCHEDULE		NO TAB	664	0962 1005	4" YELLOW WATERBORNE PAVEMENT MARKINGS		SPM										
	CY					LS					LF													
56	4205 0281	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 1 (TEMPORARY CAUSEWAY)		6	260	0802 0001	TOPSOIL FURNISHED AND PLACED		6	8	0971 0001	REMOVE POST MOUNTED SIGNS, TYPE B		SPM										
	CY					CY					EACH													
703	0212 0014	GEOTEXTILE, CLASS 4, TYPE A		5	114	0804 0027	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH		6		1018 0001	REMOVAL OF EXISTING BRIDGE		NO TAB										
	SY					LB					LS													
703	0313 0322	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		5	16	0804 0032	SEEDING - FORMULA T TEMPORARY GRASS MIX, INCLUDING MULCH		6	1000	1999 9999	TRAINEES		NO TAB										
	SY					LB					HOUR													
914	0350 0106	SUBBASE 6" DEPTH (NO. 2A)		5	469	0806 0113	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D		6		8010 0001	BRIDGE STRUCTURE, AS DESIGNED, L-366		STR										
	SY					SY					LS													
703	0413 0195	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		5	483	0811 0003	TEMPORARY PROTECTIVE FENCE		6	AND 68748	1002 0053	REINFORCEMENT BARS, EPOXY COATED	1	STR										
	SY					LF					LB													
703	0460 0001	ASPHALT TACK COAT		5	1000	0845 0001	UNFORESEEN WATER POLLUTION CONTROL		NO TAB	AND 72	1002 0220	STAINLESS STEEL REINFORCEMENT BARS	1	STR										
	SY					DOLLA					LB													
45	0601 0400	18" THERMOPLASTIC PIPE, GROUP VI, 15'-2' FILL		5	2	0849 0010	ROCK CONSTRUCTION ENTRANCE		6	AND 100	1091 0331	EPOXY INJECTION CRACK SEAL	1	STR										
	LF					EACH					LF													
1	0605 2620	TYPE D-W ENDWALL		5	17	0851 0003	ROCK APRON		6	AND 180	5001 0020	CLASS C CEMENT CONCRETE, OVEREXCAVATION	1	STR										
	EACH					SY					CY													
1	0605 2730	TYPE M CONCRETE TOP UNIT AND GRATE		5	2	0855 0003	PUMPED WATER FILTER BAG		6	AND 180	9204 0102	CLASS 3 EXCAVATION, OVEREXCAVATION	1	STR										
	SET					EACH					CY													
1	0605 2850	STANDARD INLET BOX, HEIGHT < /= 10'		5	2	0855 0004	REPLACEMENT PUMPED WATER FILTER BAG		6		8000 0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE	1	STR										
	EACH					EACH					LS													
	0608 0001	MOBILIZATION		NO TAB	155	0867 0012	COMPOST FILTER SOCK, 12" DIAMETER		6		8100 0001	STEEL BRIDGE STRUCTURE	1	STR										
	LS					LF					LS													
	0609 0004	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE C		NO TAB		0901 0001	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION		NO TAB		9000 0001	AIDS TO NAVIGATION (ATON) PLAN		NO TAB										
	LS					LS					LS													
	0609 0009	EQUIPMENT PACKAGE		NO TAB	200	0901 0240	ADDITIONAL TRAFFIC CONTROL SIGNS		TCP		9000 0002	TEMPORARY STREAM DIVERSION, STAGE 1		6										
	LS					SF					LS													
2	0619 0459	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)		5	664	0901 0320	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		SPM		9000 0003	TEMPORARY STREAM DIVERSION, STAGE 2		6										
	EACH					LF					LS													
2	0620 0400	TERMINAL SECTION, SINGLE		5	1	0901 0451	3-LINE CHANGEABLE MESSAGE SIGN WITHOUT TELECOMMUNICATIONS		TCP	20000	9000 0351	DIRECT HIRE FOR PROTECTIVE SERVICES (FLAGGING)		NO TAB										
	EACH					EACH					DOLLA													
207	0620 0503	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)		5	24	0931 0001	POST MOUNTED SIGNS, TYPE B		SPM		9203 2101	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM		NO TAB										
	LF					SF					LS													
88	0620 1600	TYPE 31-S GUIDE RAIL		5	14	0935 0001	POST MOUNTED SIGNS, TYPE F		SPM															
	LF					SF																		
63	0620 1645	CURVED W-BEAM GUIDE RAIL AT INTERSECTIONS		5	33	0936 0200	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS		SPM															
	LF					SF																		
2	0620 1670	TYPE 31-STRONG POST IN-LINE ANCHOR		5	2	0941 0001	RESET POST MOUNTED SIGNS, TYPE B		SPM															
	EACH					EACH																		

COMMONWEALTH OF PENNSYLVANIA

REGISTERED PROFESSIONAL

MATTHEW JOSEPH LENA

ENGINEER

PE074288

SHEET 1 OF 1

PROJECT ID: 5444

MPMS: 111023

ECMS: 111023

8/15/2025 11:29:19 AM

TABULATION OF QUANTITIES

ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK	7219	BRG	5 OF 8

[illegible]

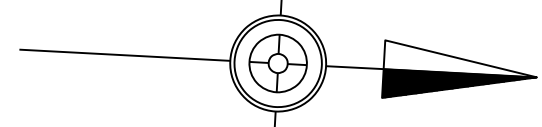
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK	7219	BRG	6 OF 8

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK	7219	BRG	6 OF 8

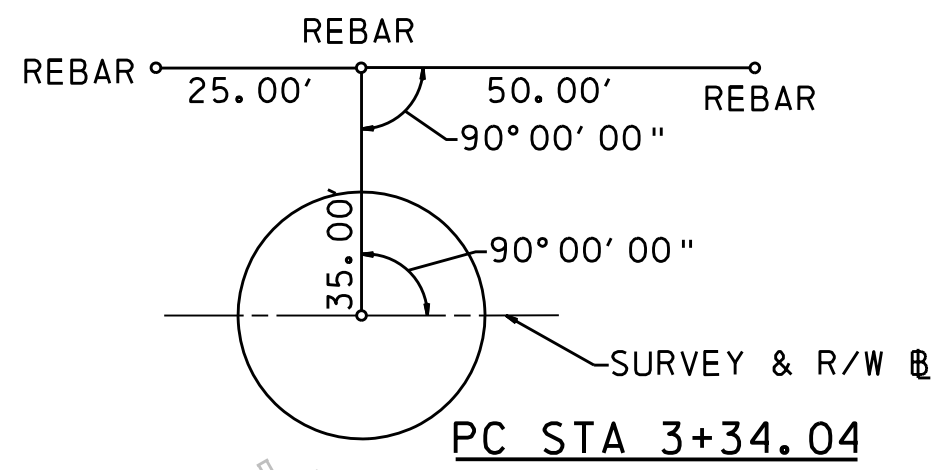
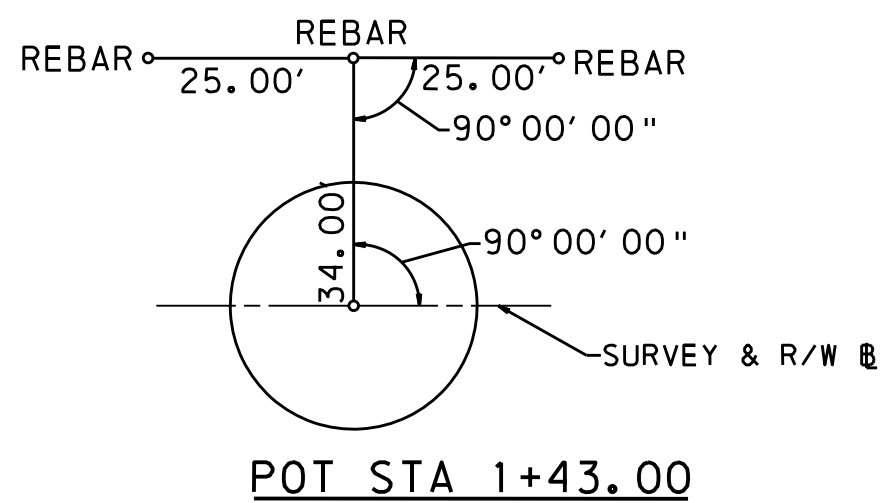
[illegible]

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	YORK	T-913	-	7 OF 8
	CUMBERLAND	-	-	
MONAGHAN AND UPPER ALLEN TOWNSHIPS				
REVISION NUMBER	REVISIONS			DATE BY

BM#1 ELEV 415.07
NORTHING 300078.1960
EASTING 2179391.8011
BARN SPIKE SET IN WEST SIDE
OF "VZ 41"
STA. 5+63.22, OFF. 12.04' RT



BM#2 ELEV 417.49
NORTHING 299491.6198
EASTING 2179341.5301
A SPIKE SET IN EAST SIDE OF
"BT CO. OF PA #42-A"



5
N/F
PENNSYLVANIA LINES LLC
C/O NORFOLK SOUTHERN RAILWAY COMPANY
DB 238 PG 590

PI STA 3+73.20
Δ = 4°29'08" RT
T = 39.16'
L = 78.29'
R = 1000.00'
E = 0.77'
PC STA 3+34.04
PCC STA 4+12.33
SUPERELEVATION N/A

PI STA 1+70.05
Δ = 4°28'46" LT
T = 19.56'
L = 39.09'
R = 500.00'
E = 0.38'
PC STA 1+50.50
PT STA 1+89.59
SUPERELEVATION - EXISTING

4
N/F
KEELEY, JAMES H. JR AND MARY K.
TMP: 38000PD00240000000
INSTRUMENT #2024009547
PARCEL 2

LIMIT OF WORK
STA 2+38.73
T-913
(NORTH GRANTHAM ROAD)
MONAGHAN TOWNSHIP
YORK COUNTY

LIMIT OF WORK
STA 2+38.73
MILL ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY

LEGAL RIGHT-OF-WAY
(EASEMENT FOR
HIGHWAY PURPOSES)

END FULL DEPTH
RECONSTRUCTION
STA 4+41.77

LIMIT OF WORK
STA 5+01.00
MILL ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY

LEGAL RIGHT-OF-WAY
LINE FOR TOWNSHIP ROAD

LEGAL RIGHT-OF-WAY
(EASEMENT FOR
HIGHWAY PURPOSES)

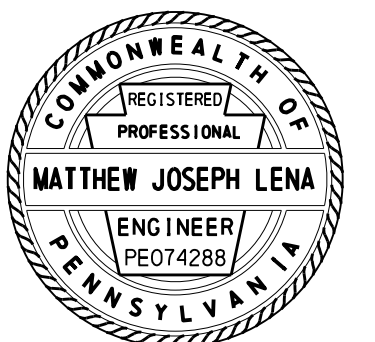
PI STA 4+61.55
Δ = 12°02'30" RT
T = 49.22'
L = 98.08'
R = 466.67'
E = 2.59'
PCC STA 4+12.33
PT STA 5+10.41
SUPERELEVATION N/A

5
N/F
PENNSYLVANIA LINES LLC
C/O NORFOLK SOUTHERN RAILWAY COMPANY
DB 238 PG 590

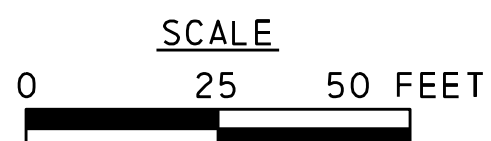
LEGEND

- SELECTED BORROW EXCAVATION ROCK, CLASS R-7 CHOKED WITH SELECTED BORROW EXCAVATION ROCK, CLASS R-4
- ROCK APRON
- PARCEL IDENTIFICATION NUMBER

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



CONSTRUCTION PLAN



SURVEY BOOK NUMBER 003721.0431

FOR PROFILE, SEE SHEET 8

NOTE:

1. A MINIMUM OF 15'-0" HORIZONTAL CLEARANCE IS TO BE MAINTAINED FROM CENTERLINE OF ADJACENT TRACK TO FACE OF IMPACT HEAD OF ATTENUATOR.

EXISTING STRUCTURE

STA 2+48.28
TWO-SPAN PRESTRESSED CONCRETE
NON COMPOSITE ADJACENT BOX BEAM
SPAN LENGTH = 53'-0" C/C BRGS.
UNDERCLEARANCE = 11'-6" (±)
RAIL/RAIL = 21'-4"
OUT/OUT = 22'-8"
SKEW = 90 DEG.

PROPOSED STRUCTURE

STA 2+47.00
TWO-SPAN CONTINUOUS COMPOSITE
PRESTRESSED CONCRETE SPREAD
BOX BEAM BRIDGE
SPAN LENGTH = 52'-0" C/C BRGS.
UNDERCLEARANCE = 11'-1" (±)
CURB/CURB = 28'-0"
OUT/OUT = 31'-0"
SKEW = 70 DEG.

HYDRAULIC DATA

DRAINAGE AREA: 168.8 SQ. MI.

DESIGN FLOOD:

FREQUENCY = 25 YEARS
MAGNITUDE = 6,541 CFS
EXISTING VELOCITY = 3.61 FPS
EXISTING ELEVATION = 412.14
PROP. VELOCITY = 3.81 FPS
PROP. ELEVATION = 411.60

100 YR. FLOOD:

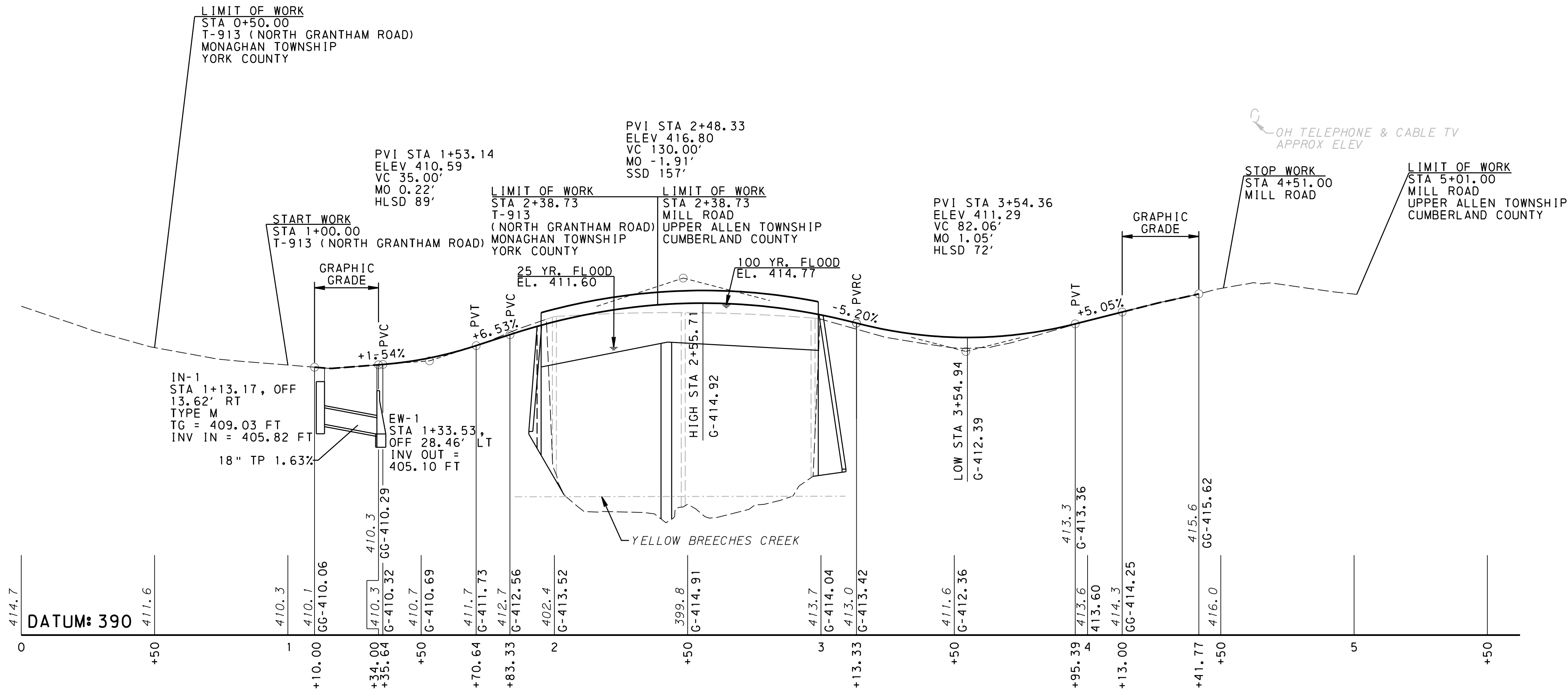
MAGNITUDE = 10,745 CFS
EXISTING VELOCITY = 4.41 FPS
EXISTING ELEVATION = 414.92
PROP. VELOCITY = 4.48 FPS
PROP. ELEVATION = 414.77

FLOOD OF RECORD: N/A

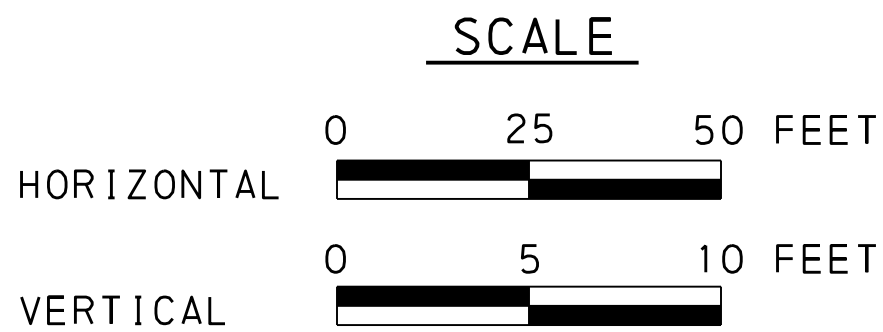
FILE NAME: P:\003721\0431\micros\station\CONSTR\07-T0037210431.CONSTR.PLO1.dgn
PLOTTER: 8/19/2025 9:22:03 AM rstantona
PEN TABLE: file date user: fb
PLOT DRIVER: r1\sys - Microstation standards\plotdrv\xm\pdf\pdf.bw.full.plt.ctb

FILE NAME: P:\0037\003721\0431\Microsoft\ton\CONSTR\08-T0037210431 CONSTR PR.dgn
PLOT DATE: 8/15/2025 10:45:53 AM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\SYS - Microsoft\standards\plotdrv\p1\pdf\pdf_bw_full.pltcf

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	8 OF 8	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



PROFILE - T-913 (NORTH GRANTHAM ROAD)



SURVEY BOOK NUMBER 003721.0431

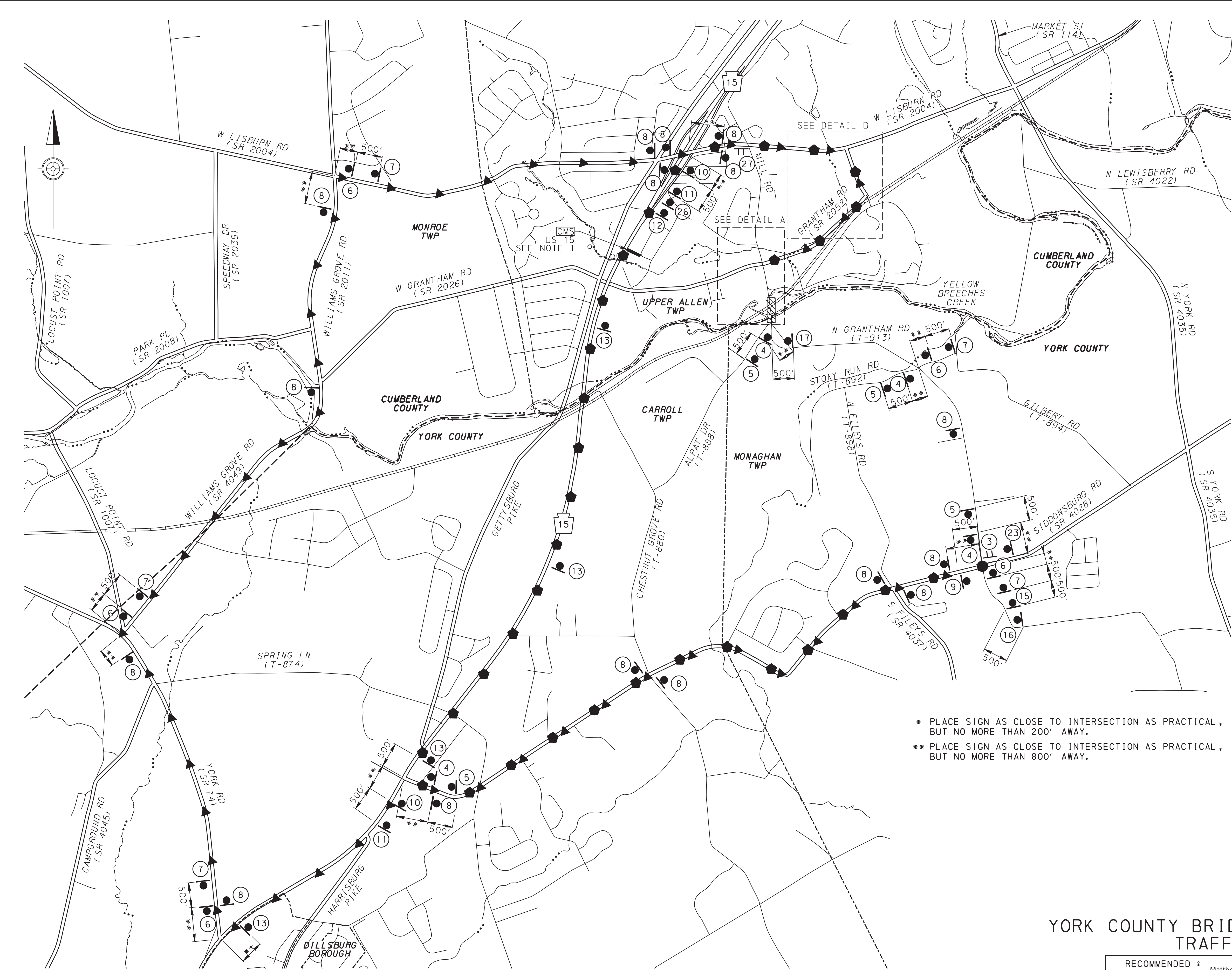
FOR PLAN, SEE SHEET 7

PROFILE

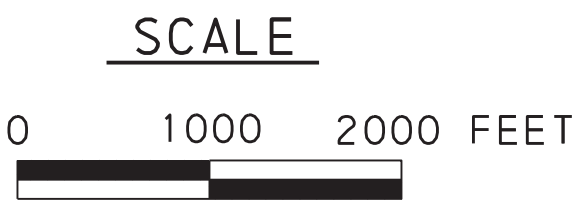
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



FILE NAME: P:\0037\003721_0431\Microsoft\T\CP\Nor th Grantham Detour.dgn
PLOTTER: 2/13/2025 11:00:59 PM r_santana
PEN TABLE: file_date_user.tb
PLOT DRIVER: r1\SYS - Microsoft\standards\plotdrv\wm\pdf\pdf_bw_full.plt.ctb



NORTHBOUND DETOUR LENGTH = 6.5 MILES
SOUTHBOUND DETOUR LENGTH = 9.4 MILES



* PLACE SIGN AS CLOSE TO INTERSECTION AS PRACTICAL,
BUT NO MORE THAN 200' AWAY.
** PLACE SIGN AS CLOSE TO INTERSECTION AS PRACTICAL,
BUT NO MORE THAN 800' AWAY.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	YORK CUMBERLAND	T-913 -	- -	1 OF 4
MONAGHAN & UPPER ALLEN TOWNSHIPS				
REVISION NUMBER	REVISIONS			DATE BY

LEGEND	
	NORTHBOUND DETOUR
	SOUTHBOUND DETOUR
	WORK AREA
	STATE ROAD
	LOCAL ROAD
	STREAM
	SIGN/TYPE B MOUNTING
	SIGN/TYPE III BARRICADE
	SIGN GROUP
	RAILROAD
	MUNICIPAL BOUNDARY
	COUNTY BOUNDARY
	CHANGEABLE MESSAGE SIGN

NOTES:

1. CMS MESSAGE

SCREEN 1

DETOUR
GRANTHAM
RD

SCREEN 2

USE
NEXT
EXIT

YORK COUNTY BRIDGE #247 (T-913)
TRAFFIC CONTROL PLAN

RECOMMENDED : Matthew S. Clouser
Digitally signed by Matthew S. Clouser
Date: 2025.05.12 10:11:38 -0400

5-12-2025

for DISTRICT TRAFFIC ENGINEER DATE

RECOMMENDED : Michael E. Reeder
Digitally signed by Michael E. Reeder, PE
Date: 2025.05.12 12:51:01 -0400

5-12-25

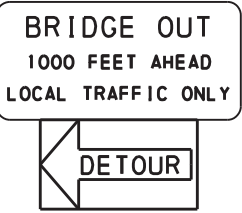
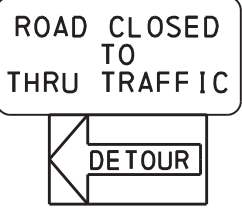
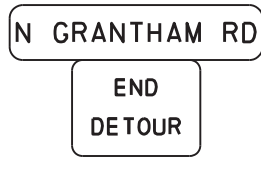
ASSIST. DIST. EXEC. - CONSTRUCTION DATE

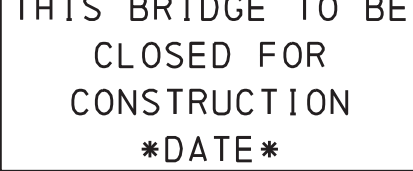
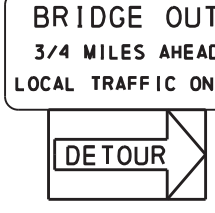
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



02/14/2025

FILE NAME: P:\0037\003721\0431\Microsoft\T\CP\North Grantham Detour.dgn
PLOTTER: 2/13/2025 1:01:00 PM rstantona
PEN TABLE: file date user tb
PLOT DRIVER: r1\SYS - Microsoft\standards\plotdrv\xm\pdf\pdf.bw,full,plcfcg

TABULATION OF SIGNS AND DEVICES FOR DETOUR ROUTE MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION (ITEM 0901-0001 - FOR INFORMATION ONLY)						
NO.	LEGEND	SERIES	SIZE	MOUNTING	QUANTITY	REMARKS
1		R11-2-1	48 "X30 "	TYPE III BARRICADE	4	BARRICADES MUST EXTEND ACROSS FULL WIDTH OF NORTH GRANTHAM RD. DO NOT BLOCK AL-PAT DR.
2		R11-3B R11-3A M4-10L	48 "X12 " 60 "X30 " 48 "X18 "	TYPE III BARRICADE	1	PLACE ON RIGHT SIDE OF MILL RD.
3		R11-4 M4-10L	60 "X30 " 48 "X18 "	TYPE III BARRICADE	1	PLACE ON RIGHT SIDE OF NORTH GRANTHAM RD AT INTERSECTION WITH W. SIDDONSBURG RD.
4		SP-1 M4-9R	42 "X6 " 30 "X24 "	TYPE B	7	
5		SP-1 M4-9SR	42 "X6 " 30 "X24 "	TYPE B	7	
6		SP-1 M4-9L	42 "X6 " 30 "X24 "	TYPE B	6	
7		SP-1 M4-9SL	42 "X6 " 30 "X24 "	TYPE B	6	
8		SP-1 M4-9S	42 "X6 " 30 "X24 "	TYPE B	21	
9		SP-1 M4-8A	42 "X6 " 24 "X18 "	TYPE B	2	
10		SP-1 M4-9R	42 "X6 " 48 "X36 "	TYPE B	2	
11		SP-1 M4-9SR	42 "X6 " 48 "X36 "	TYPE B	2	
12		SP-1 M4-9-1AR	42 "X6 " 48 "X36 "	TYPE B	1	PLACE IN ADVANCE OF LISBURN RD EXIT
13		SP-1 M4-9S	42 "X6 " 48 "X36 "	TYPE B	4	

TABULATION OF SIGNS AND DEVICES FOR DETOUR ROUTE MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION (ITEM 0901-0001 - FOR INFORMATION ONLY)						
NO.	LEGEND	SERIES	SIZE	MOUNTING	QUANTITY	REMARKS
14		W20-2 W30-1-1	36 "X36 " 20 "X6 "	TYPE B	1	
15		W20-2 W30-1-2	36 "X36 " 20 "X6 "	TYPE B	2	
16		W20-2 W30-1-3	36 "X36 " 20 "X6 "	TYPE B	1	
17		W20-3 W30-1-1	36 "X36 " 20 "X6 "	TYPE B	1	
18 ***		W23-101	96 "X48 "	TYPE III BARRICADE	2	
20		SP-2 M4-9L	24 "X6 " 30 "X24 "	TYPE B	1	
21		SP-2 M4-9SL	24 "X6 " 30 "X24 "	TYPE B	1	
22		R11-4 M4-10R	60 "X30 " 48 "X18 "	TYPE III BARRICADE	1	PLACE ON RIGHT SIDE OF N GRANTHAM RD AT INTERSECTION WITH MILL RD.
23		W20-2 W30-1-6	36 "X36 " 20 "X6 "	TYPE B	2	
24		SP-2 SP-3	24 "X6 " 30 "X30 "	TYPE B	2	
25		SP-1 M4-9-1BR	42 "X6 " 30 "X24 "	TYPE B	2	
26		SP-1 M4-9-1BR	42 "X6 " 48 "X36 "	TYPE B	1	
27		R11-3B R11-3A M4-10R	48 "X12 " 60 "X30 " 48 "X18 "	TYPE III BARRICADE	1	PLACE ON RIGHT SIDE OF MILL RD AT INTERSECTION WITH W LISBURN RD.

***TO BE INSTALLED TWO WEEKS PRIOR TO IMPLEMENTING THE DETOUR AND REMOVED ONCE DETOUR IS IN PLACE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	2 OF 4	
	CUMBERLAND	-	-		
MONAGHAN & UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY

GENERAL NOTES

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

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

- SPECIAL PROVISIONS OF THE CONTRACT
- FHWA – MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- PDT PUB. 35 – QUALIFIED PRODUCTS LIST FOR CONSTRUCTION (BULLETIN 15)
- PDT PUB. 45 – TRAFFIC ENGINEERING MANUAL
- PDT PUB. 111 – TRAFFIC CONTROL-PAVEMENT MARKINGS AND SIGNING STANDARDS
- PDT PUB. 212 – OFFICIAL TRAFFIC CONTROL DEVICES-CHAPTER 212
- PDT PUB. 213 – TEMPORARY TRAFFIC CONTROL GUIDELINES-SUPPLEMENTING FHWA'S MUTCD
- PDT PUB. 236 – HANDBOOK OF APPROVED SIGNS
- PDT PUB. 408 – HIGHWAY CONSTRUCTION SPECIFICATIONS, 2020

THESE PLANS HAVE BEEN REVIEWED AND ARE IN COMPLIANCE WITH STANDARDS PRESCRIBED IN CHAPTER 212 OF TITLE 67 PA CODE AS CURRENTLY AMENDED. THE APPROVAL OF THIS TRAFFIC CONTROL PLAN IS NOT INTENDED TO RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE PROTECTION OF THE PUBLIC AND THE CONSTRUCTION PERSONNEL. STANDARDS SPECIFIED IN SECTION 901.3(a) OF PDT PUB. 408 ARE MINIMUM AND ADDITIONAL PROTECTION MAY BE NEEDED IF PROBLEMS ARE ENCOUNTERED DURING THE TERM OF THE CONTRACT. CONSTANTLY REVIEW THIS PLAN FOR ADEQUACY AND RECOMMEND CHANGES FOR DEPARTMENT APPROVAL WHEN INADEQUACIES ARE DISCOVERED.

NOTIFY THE INSPECTOR-IN-CHARGE AT LEAST TWO (2) WEEKS PRIOR TO MODIFYING THIS TRAFFIC CONTROL PLAN. ANY MODIFICATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE DISTRICT PRIOR TO PUTTING THEM INTO OPERATION.

ALL WORK IS TO BE PERFORMED WITHIN LEGAL RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENTS.

UNLESS OTHERWISE SPECIFIED OR DIRECTED, TRAFFIC CONTROL DEVICES SHALL HAVE TYPE III OR BETTER RETRO-REFLECTIVE SHEETING AND USE RIGID SIGNS. THEY ARE TO BE IN EXCELLENT CONDITION ACCEPTABLE TO THE INSPECTOR-IN-CHARGE AND MAINTAINED AS SUCH FOR THE LIFE OF THE PROJECT.

ALL SIGNS AND CHANNELIZING DEVICE LOCATIONS MAY BE ADJUSTED BACKWARD OR FORWARD DUE TO INTERSECTING STREETS, DRIVEWAYS, ETC., AND/OR AS FIELD CONDITIONS DICTATE.

COVER OR REMOVE CONFLICTING OR OBSOLETE SIGNS AS DIRECTED WITHOUT TAPING THEIR FACE. RESTORE SIGNS IN A TIMELY MANNER AS DIRECTED BY THE INSPECTOR-IN-CHARGE.

UPON COMPLETION OF WORK, REMOVE TRAFFIC CONTROL DEVICES AS DIRECTED. THE DEPARTMENT SHALL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY DEPARTMENT FORCES.



BACKGROUND - ORANGE PRISMATIC SHEETING
LEGEND - BLACK NON-REFLECTIVE 4"
UPPERCASE LETTERING SERIES C

SPACE - 1.6 "
N - 2.2 "
SPACE - 4.0 "
G - 3.0 "
R - 2.9 "
A - 3.2 "
N - 2.9 "
T - 2.7 "
H - 2.9 "
A - 3.2 "
M - 2.6 "
SPACE - 4.0 "
R - 3.0 "
D - 2.2 "
SPACE - 1.6 "
TOTAL - 42.0 "

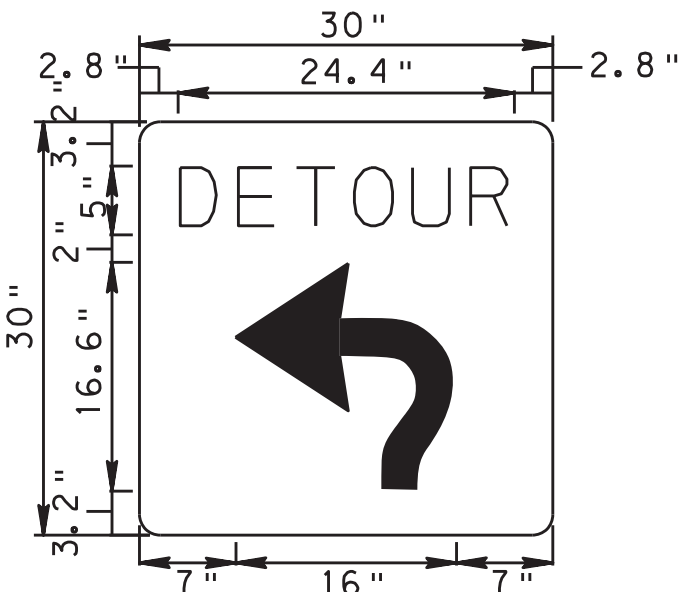
SP-1
NOT TO SCALE



BACKGROUND - ORANGE PRISMATIC SHEETING
LEGEND - BLACK NON-REFLECTIVE 4"
UPPERCASE LETTERING SERIES C

SPACE - 2.65 "
M - 3.4 "
I - 1.4 "
L - 2.7 "
L - 2.0 "
SPACE - 4.0 "
R - 3.0 "
D - 2.2 "
SPACE - 1.65 "
TOTAL - 24.0 "

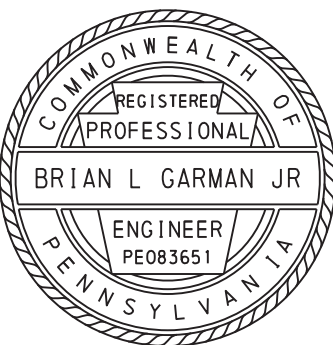
SP-2
NOT TO SCALE



1.5" RADIUS, 0.6" BORDER, 0.4" INDENT,
BLACK ON ORANGE, "DETOUR", D 2K

SP-3
NOT TO SCALE

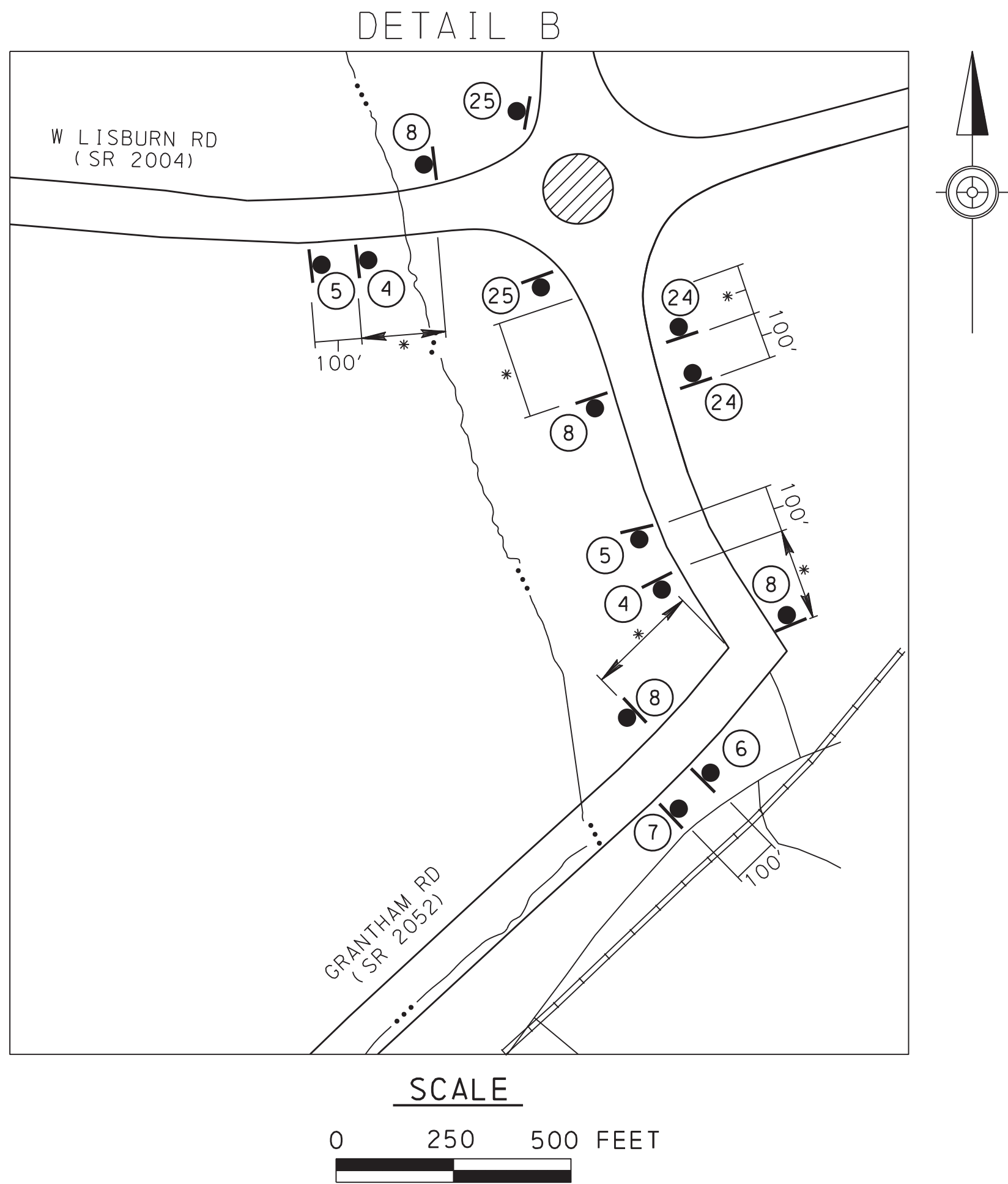
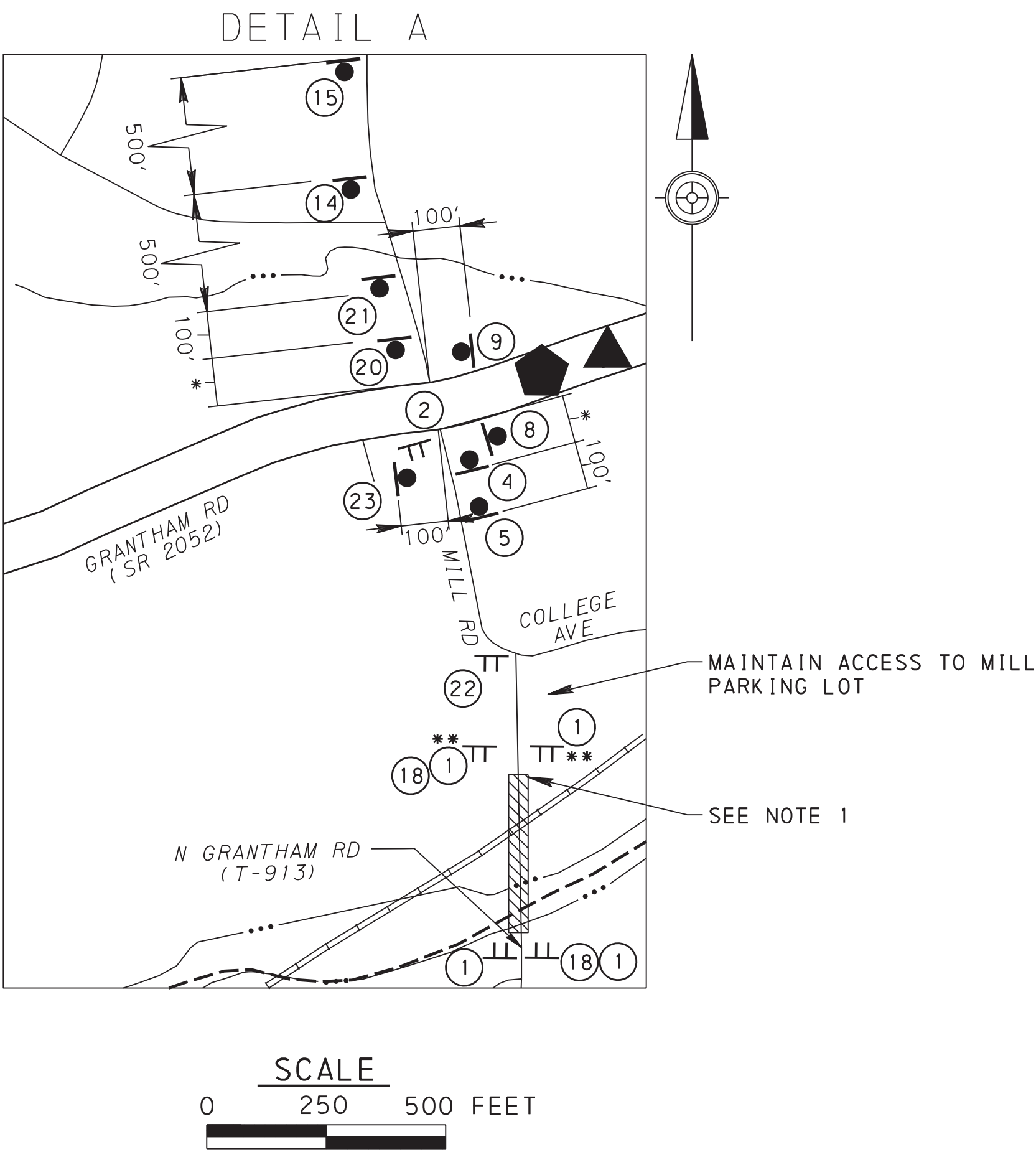
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



YORK COUNTY BRIDGE #247 (T-913)
TRAFFIC CONTROL PLAN

FILE NAME: P:\0037\003721-0431\Microstation\TOP\North Grantham Detour.dgn
PLOTTED: 2/13/2025 1:01:00 PM rstantana
PEN TABLE: file_date-user.tbl
PLOT DRIVER: rtsys - Microstation\standards\plotdrv\wm\pdf\pdf_bw_full.pltcf

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8 - 0	YORK	T- 913	-	3 OF 4	
	CUMBERLAND	-	-		
MONAGHAN & UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



* PLACE SIGN AS CLOSE TO INTERSECTION AS PRACTICAL, BUT NO MORE THAN 200' AWAY.

** PLACE SIGN AS CLOSE TO THE ENTRANCE OF THE MESSIAH UNIVERSITY PARKING LOT AS POSSIBLE, BUT NO CLOSER THAN 25'-0" FROM CENTERLINE OF RAILROAD TRACK.

NOTES

1. THE CONTRACTOR SHALL PLACE TEMPORARY BARRIER ACROSS MILL ROAD A MINIMUM DISTANCE OF 25'-0" FROM CENTERLINE OF TRACK TO PREVENT PUBLIC ACCESS OVER THE AT-GRADE CROSSING DURING THE DETOUR.

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



YORK COUNTY BRIDGE #247 (T-913)
TRAFFIC CONTROL PLAN

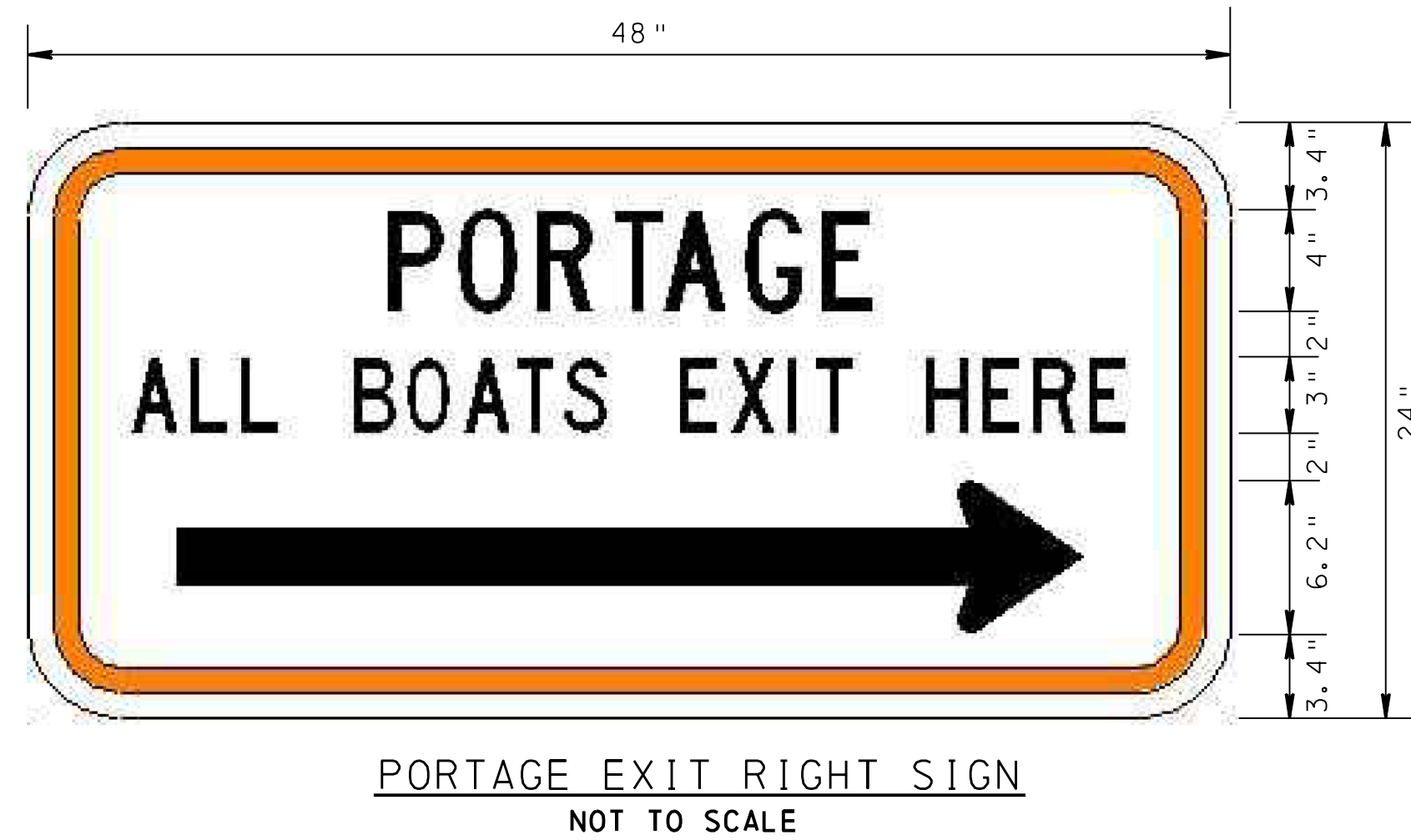
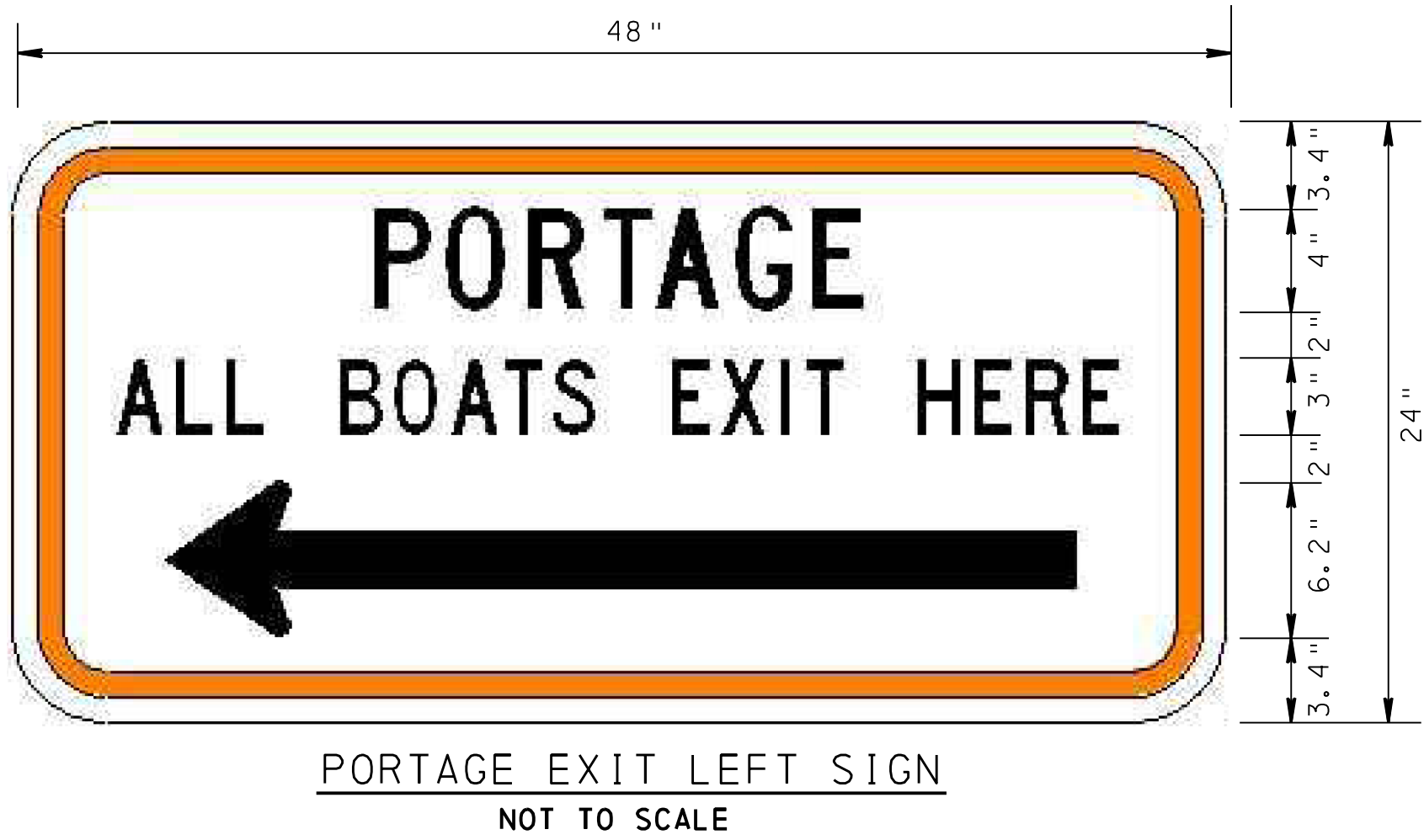
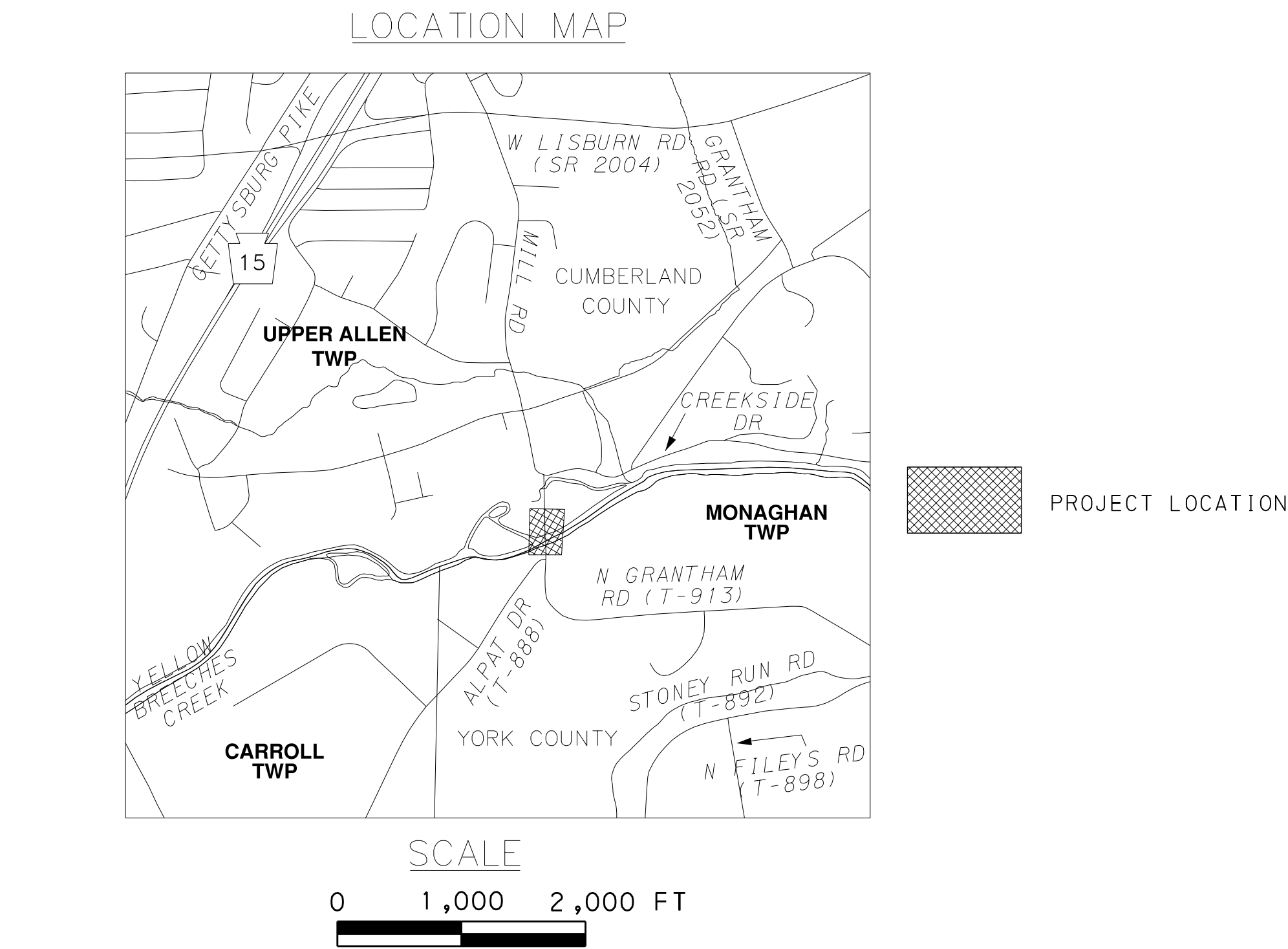
TABULATION OF QUANTITIES

TRAFFIC CONTROL PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK	7219	BRG	4 OF 4

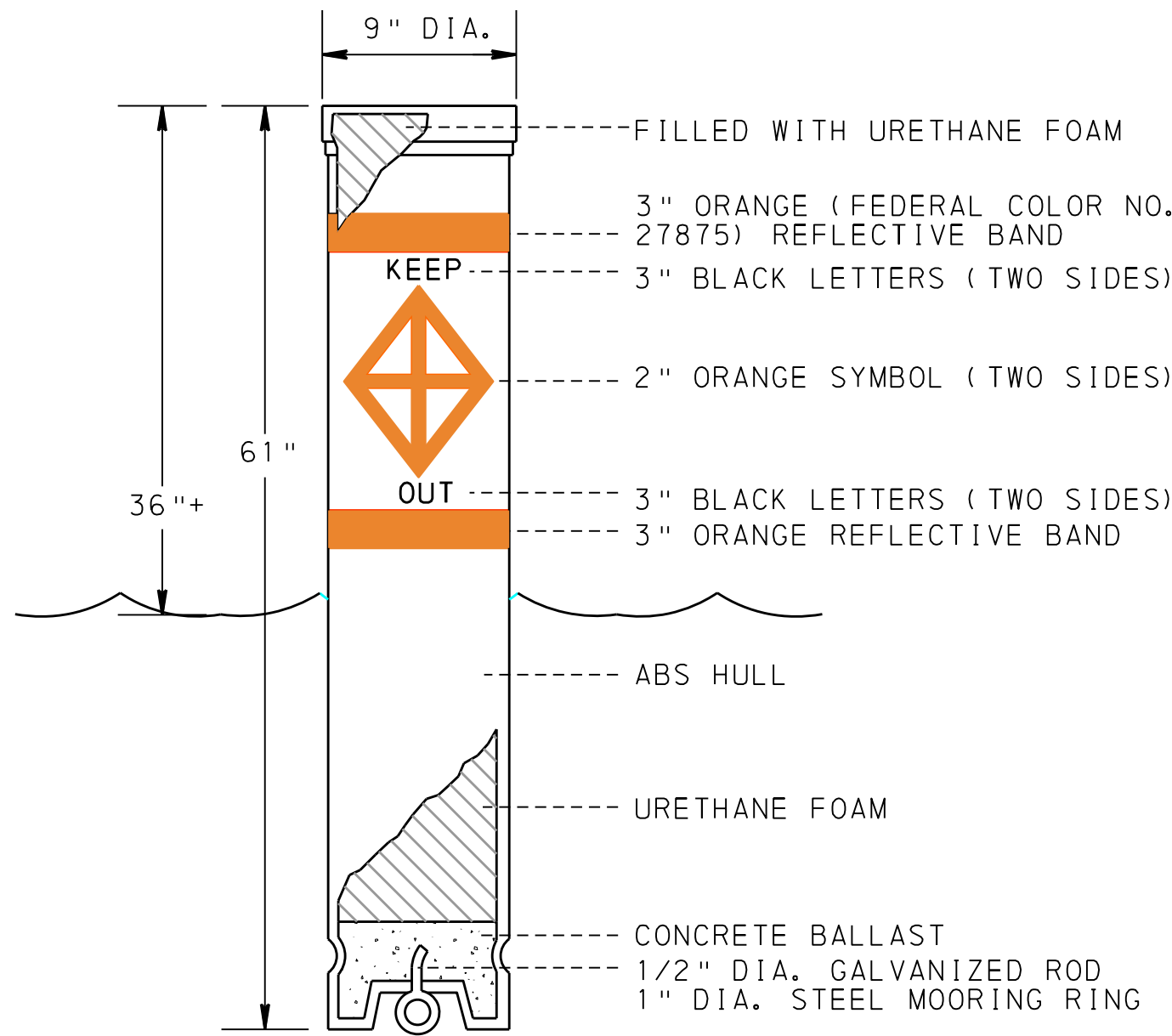
[illegible]

FILE NAME: P:\003721\0431\micross\atton\001- T0037210431 ATON GN.dgn
PLOTTER: 8/5/2021 4:58:50 PM
PEN TABLE: file: color_user.tbl
PLOT DRIVER: R:\micross\atton\standards\plotdrv\XMAPDF.pdf,color_full.plt

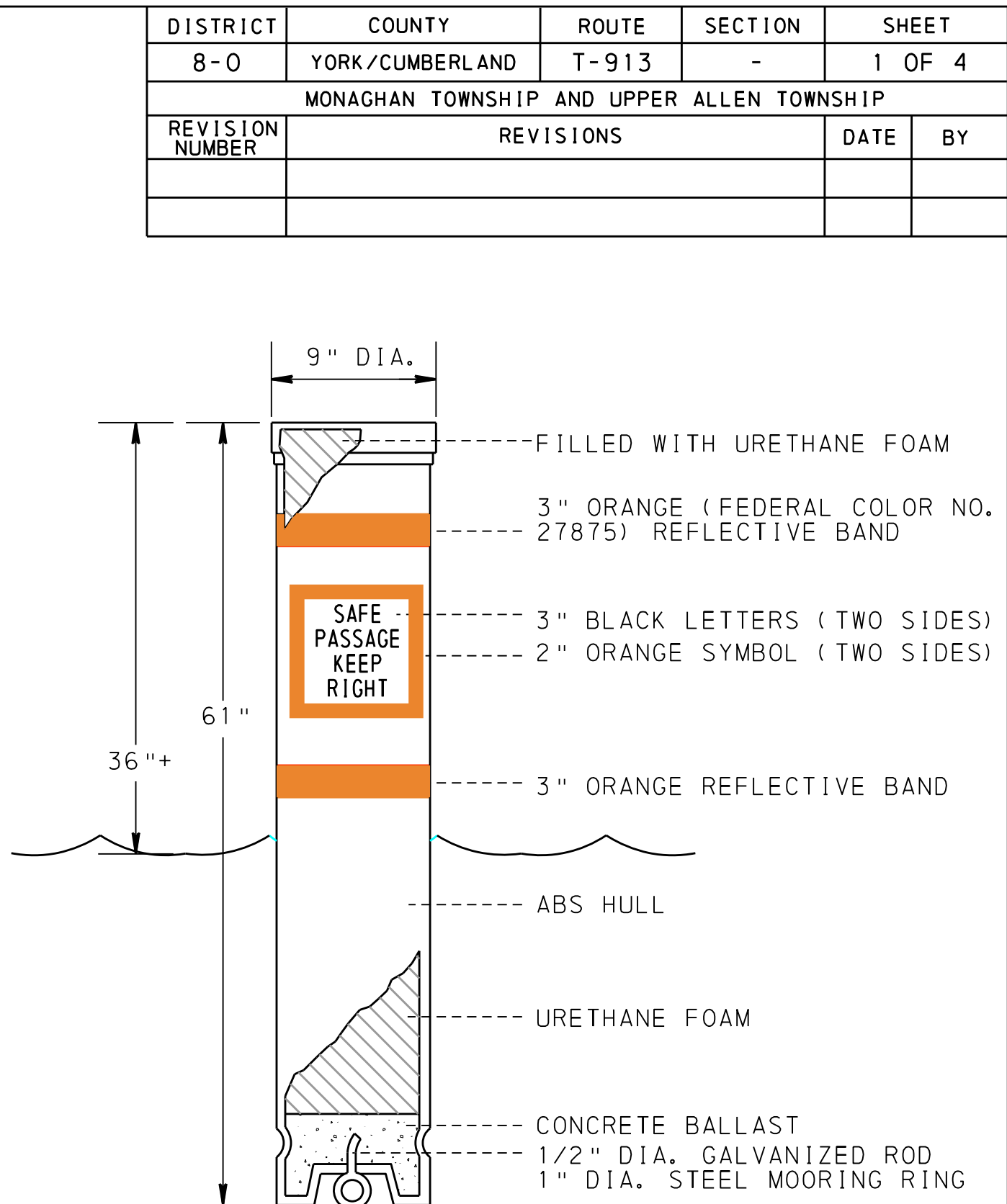


ADVANCED WARNING SIGN - TYPE I
NOT TO SCALE

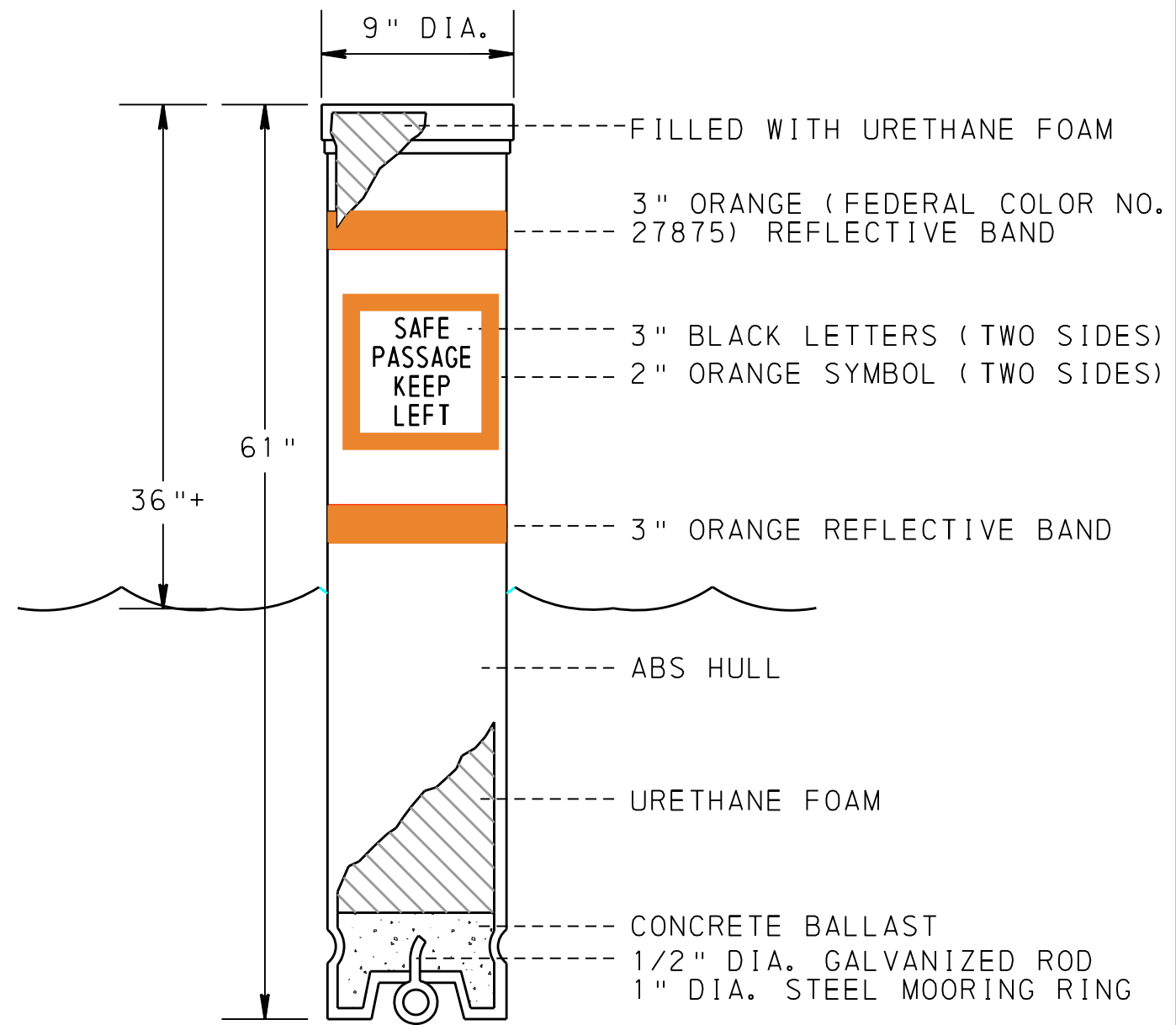
WARNING SIGN NOTES:
1" ORANGE BORDER, 2.5" RADIUS
BLACK TEXT, SERIES B ON WHITE BACKGROUND



EXCLUSION BUOY
NOT TO SCALE



KEEP RIGHT INFORMATION BUOY
NOT TO SCALE



KEEP LEFT INFORMATION BUOY
NOT TO SCALE

GENERAL NOTES

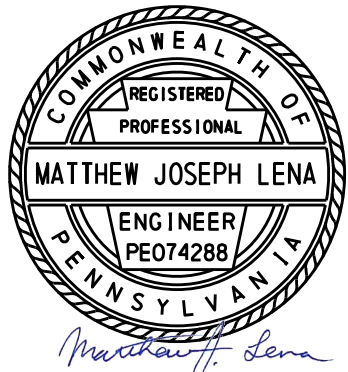
SEE PENNDOT PUBLICATION 13M, (DM-2) FIGURES 10.5.1 AND 10.5.3 FOR ADDITIONAL ATON SIGN DETAILS

REFERENCE PENNDOT PUBLICATION 111M, TC-8700 SERIES
RECOMMENDED JUNE 13, 2013, AND ANY CHANGES OR REVISIONS,
FOR SIGNING STANDARDS.

ALL SIGNS TO BE DOUBLE POST-MOUNTED TYPE B SIGNS IN
ACCORDANCE WITH TC-8702B DATED JUNE 13, 2013

NOTE:
ANCHOR BUOYS AT THE LOCATIONS
INDICATED. USE ANCHOR CHAIN,
HARDWARE, AND ANCHOR IN ACCORDANCE
WITH CURRENT US COAST GUARD
COMMANDANT NOTICE 16500, CHAPTER-7
AIDS TO NAVIGATION MANUAL -
TECHNICAL, COMDTINST M16500.3A

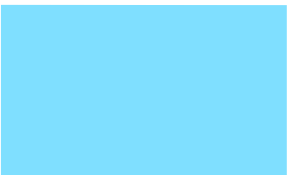
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



8/15/2025

FILE NAME: \\192.168.0.34\Project\0037\003721_0431\Microstation\ATON\002-T0037210431 ATON PL 1.dgn
PLOTTER: 7/14/2025 10:46:30 AM njohnson
PEN TABLE: file_date_user.tb
PLOT DRIVER: R:\SYS - Microstation\standards\plotdrv\XMPDF\pdf_color_full.plt.ctb

LEGEND



WATERWAY

WORK ZONE

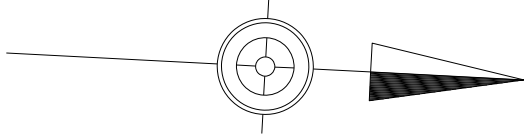
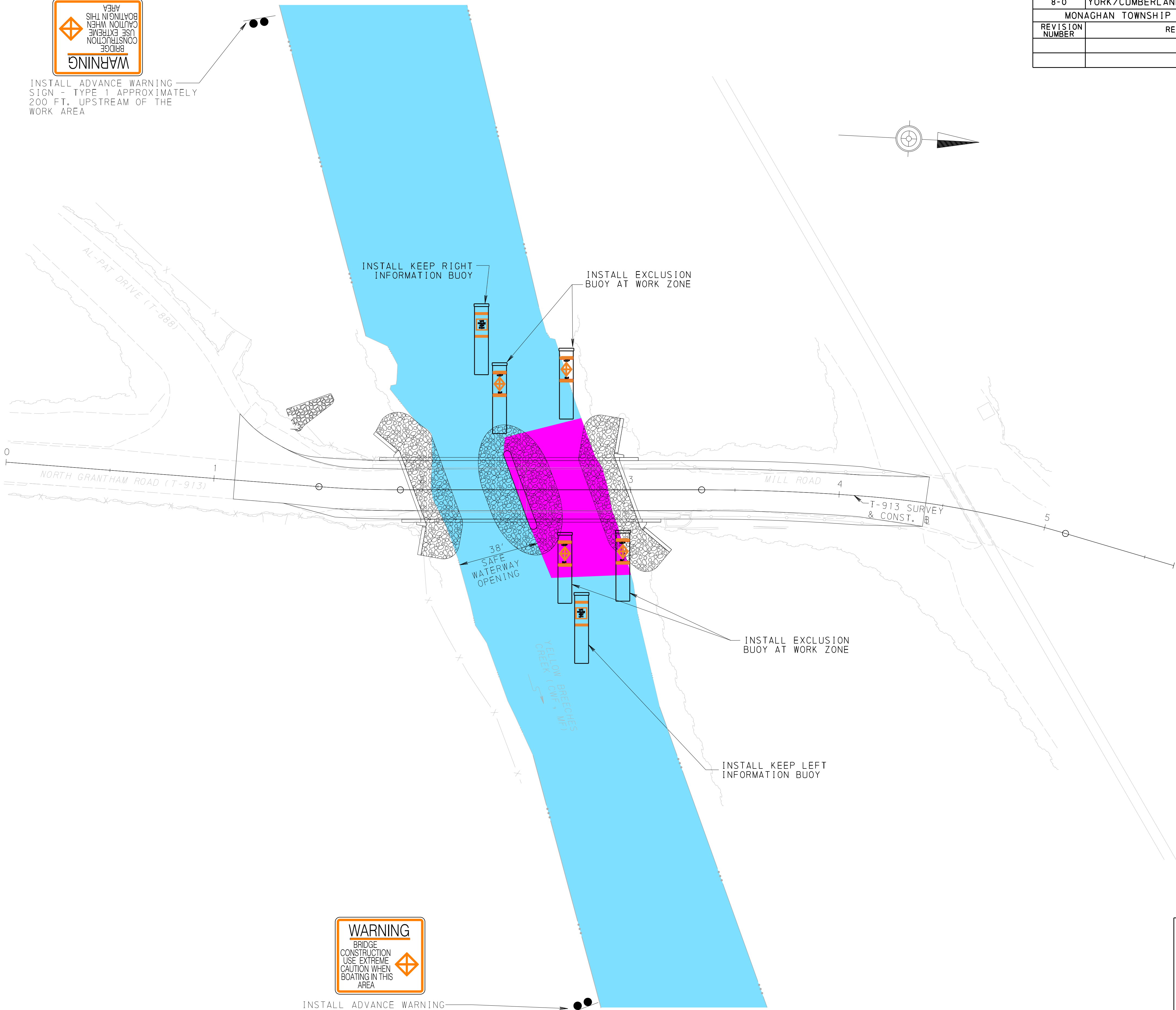
— X — ORANGE SAFETY FENCE



INSTALL ADVANCE WARNING SIGN - TYPE 1 APPROXIMATELY 200 FT. UPSTREAM OF THE WORK AREA



INSTALL ADVANCE WARNING SIGN - TYPE 1 APPROXIMATELY 200 FT. DOWNSTREAM OF THE WORK ZONE

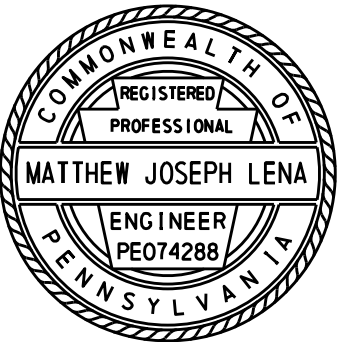


DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK/CUMBERLAND	T-913	-	2 OF 4	
MONAGHAN TOWNSHIP AND UPPER ALLEN TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY

SCALE

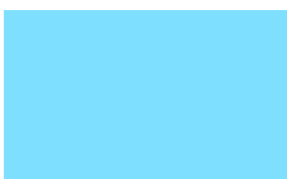


HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



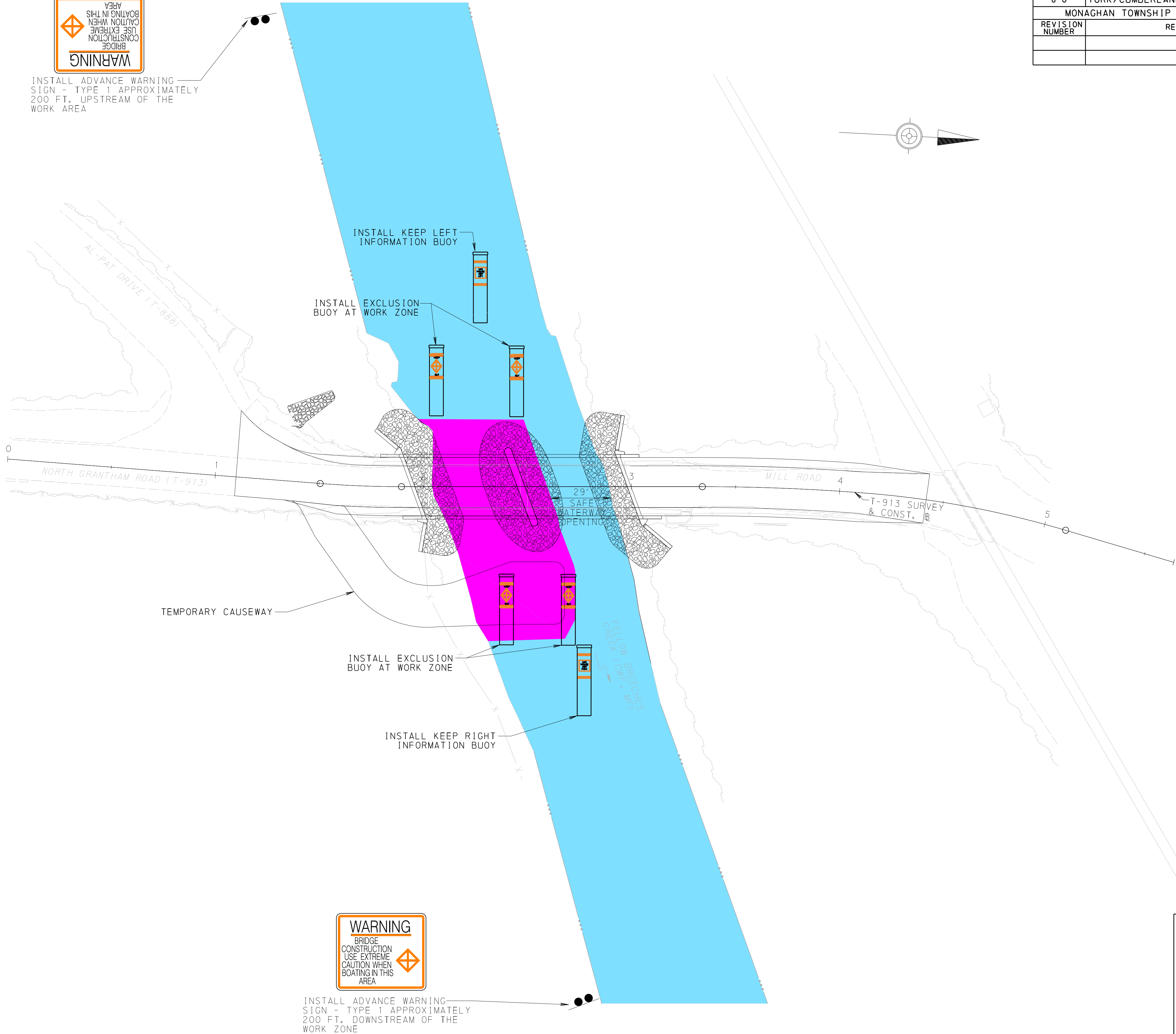
FILE NAME: \\192.168.0.34\Project\0037\003721_0431\Microstation\ATON\003-T0037210431 ATON PL 2.dgn
PLOTTER: 7/14/2025 10:46:05 AM
PEN TABLE: file date user: tb
PLOT DRIVER: R:\SYS - Microstation\standards\plotdrv\XMPDF\pdf_color_full.plt.ctb

LEGEND

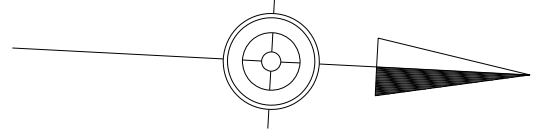
-  WATERWAY
-  WORK ZONE
-  ORANGE SAFETY FENCE



INSTALL ADVANCE WARNING SIGN - TYPE 1 APPROXIMATELY 200 FT. UPSTREAM OF THE WORK AREA



INSTALL ADVANCE WARNING SIGN - TYPE 1 APPROXIMATELY 200 FT. DOWNSTREAM OF THE WORK ZONE

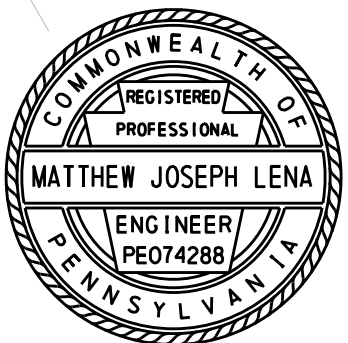


DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	YORK/CUMBERLAND	T-913	-	3 OF 4
MONAGHAN TOWNSHIP AND UPPER ALLEN TOWNSHIP				
REVISION NUMBER	REVISIONS			DATE

SCALE

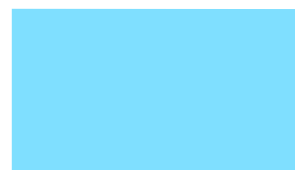
0 25 50 FEET

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111

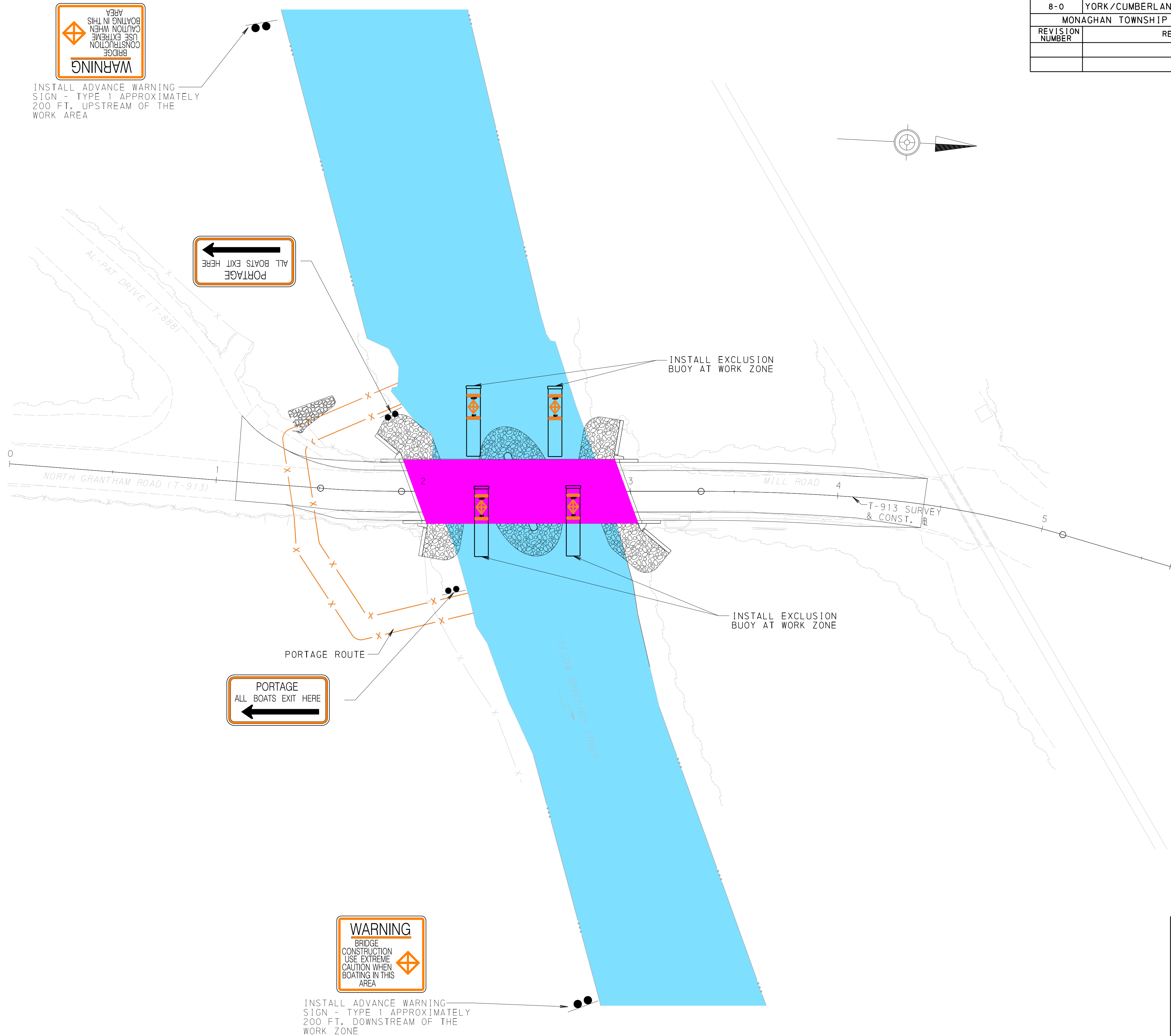


FILE NAME: P:\0037\003721_0431\Microsoft\ATON\004-T0037210431 ATON PL 3.dgn
PLOTTER: 7/16/2025 5:43:06 PM r:santana
PEN TABLE: file date user: tb
PLOT DRIVER: R:\SYS - Microsoft\standards\p10tdrv\XMPDF\pdf_color_full.plt.ctb

LEGEND

-  WATERWAY
-  WORK ZONE

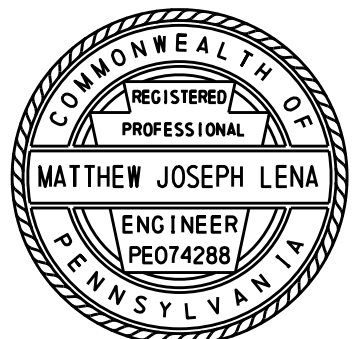
 ORANGE SAFETY FENCE



DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK / CUMBERLAND	T-913	-	4 OF 4	
MONAGHAN TOWNSHIP AND UPPER ALLEN TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY

SCALE
0 25 50 FEET

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111

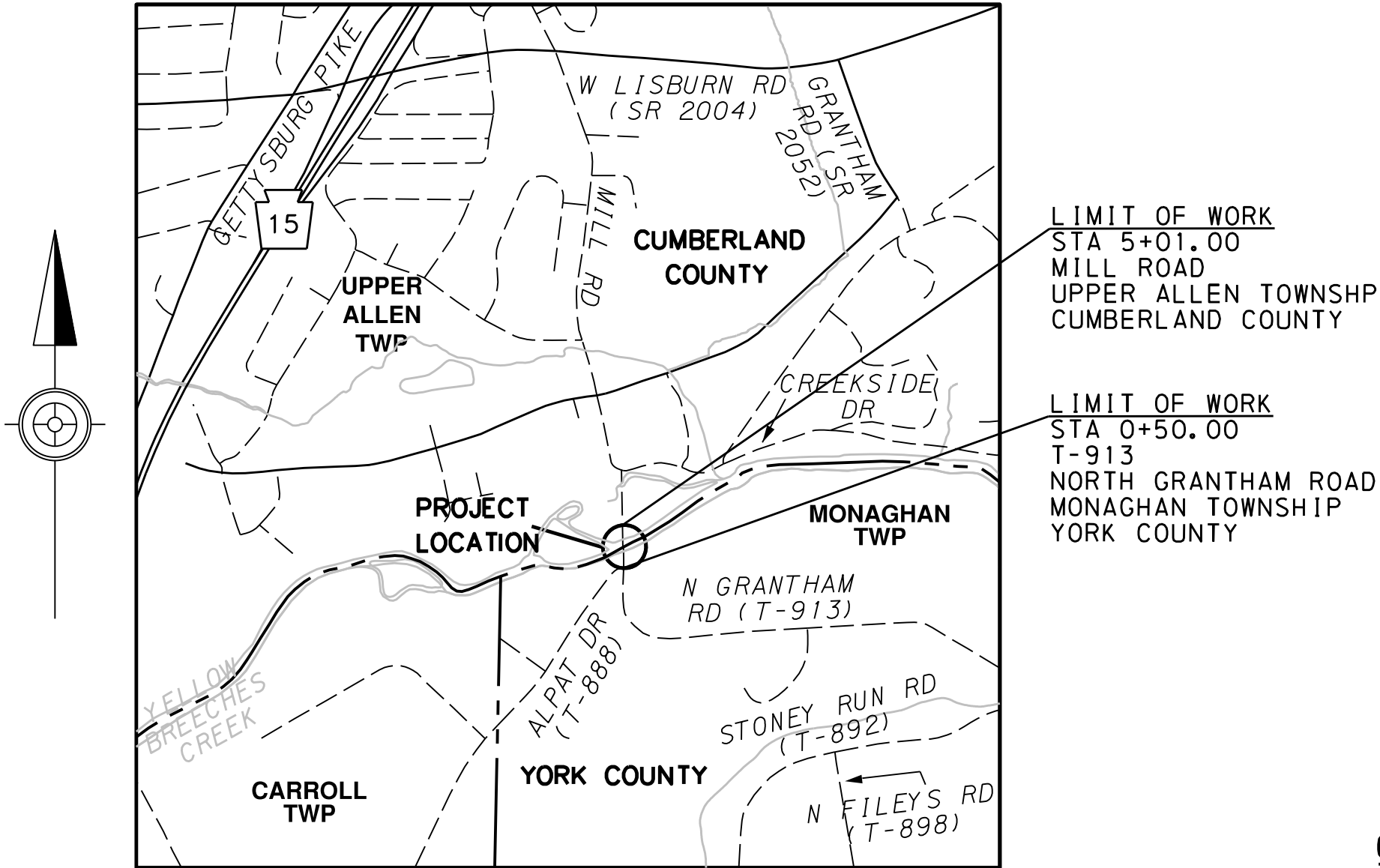


FILE NAME: P:\0037\003721\0431\micros\rotation\ESC\T0037210431 ESC DT.dgn
PLOTTER: 8/12/2025 8:19:56 AM mpanela
PEN TABLE: file date user: fb
PLOT DRIVER: r1 SYS - micros\rotation\standards\plotdrv\xm.pdf bw, full, plotcf

GENERAL NOTES

- BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR TO ANY OTHER PLANS THAT MAY CHANGE THE EFFECTIVENESS OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, CONTACT THE YORK COUNTY CONSERVATION DISTRICT TO RECEIVE APPROVAL.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- CONTRACTOR SHALL UTILIZE TOPSOIL STOCKPILE LOCATION(S), INSTALL COMPOST FILTER SOCK DOWNSLOPE OF THE STOCKPILE LOCATION, AND STRIP AND STOCKPILE TOPSOIL ONLY AS NECESSARY FOR THE REQUIRED IMPROVEMENTS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 3:1 OR FLATTER.
- AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL INVITE ALL OPERATORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE YORK COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY PENNSYLVANIA ONE-CALL SYSTEM INCORPORATED AT 1 (800) 242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE NOTED ON THESE PLANS. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- WHEN THE ENGINEER, MUNICIPAL OFFICIAL, OR COUNTY CONSERVATION DISTRICT REPRESENTATIVE DETERMINES THAT EROSION CONTROL MEASURES INCLUDING COMPOST FILTER SOCK ARE NECESSARY THAT WERE NOT FORESEEN IN THE DESIGN STAGE, ESTIMATE THE EROSION POTENTIAL AND SELECT MEASURES THAT MEET ANY APPLICABLE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP).
- ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP. SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- UNTIL THE SITE IS STABILIZED, CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING SHALL BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

LOCATION MAP



SCALE

0 1000 2000 FT

LEGEND

- STATE ROAD
- TOWNSHIP ROAD
- MUNICIPAL BOUNDARY LINE
- STREAM

GENERAL NOTES CONT'D

- THE PERMITTEE AND CO-PERMITTEE MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION TO THE WATERS OF THE COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:
 - A. A SUMMARY OF THE SITE CONDITIONS, E&S BMPS, AND COMPLIANCE; AND
 - B. THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION.
- ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
- ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ. 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
- CONTRACTOR IS RESPONSIBLE FOR PREPARING AND HAVING AVAILABLE ON-SITE PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN.
- GRADING OPERATIONS WILL BE CONDUCTED IN SUCH A WAY THAT THE AREAS OF UNPROTECTED SOIL ARE KEPT TO A MINIMUM. THE WORK AREA WILL BE KEPT WELL DRAINED AND CONCENTRATION OF WATER AVOIDED.
- PRIOR TO SUSPENSION OF CONSTRUCTION OPERATIONS FOR AN APPRECIABLE LENGTH OF TIME, THE CONTRACTOR WILL BE REQUIRED TO SHAPE THE TOP OF EARTHWORK IN SUCH A MANNER AS TO ALLOW RUNOFF OF RAINWATER WITHOUT UNDUE RESIDUE.
- IMMEDIATELY AFTER EARTH DISTURBANCE CEASES, THE CONTRACTOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
- FOR ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, THE CONTRACTOR MUST SUBMIT FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
- ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL."
- BACKFILL MATERIAL AND/OR CONSTRUCTION MATERIAL SHALL NOT BE STORED IN THE FLOODWAY AND/OR WETLANDS.
- THE NATURALLY OCCURRING GEOLOGIC FEATURES ARE NOT ANTICIPATED TO HAVE ANY IMPACT ON THE PROJECT. THE SOIL TYPES IN THE AREA OF DISTURBANCE DO NOT POSE THE POTENTIAL FOR POLLUTION. THE E&S PLAN CONTAINS BMPS TO MINIMIZE THE IMPACTS OF CONSTRUCTION TO THE SURROUNDING AREAS.
- THE PROPOSED BRIDGE REPLACEMENT WILL NOT SIGNIFICANTLY INCREASE THE IMPERVIOUS AREA AT THE SITE AND THEREFORE IT IS NOT ANTICIPATED TO CREATE ANY POTENTIAL THERMAL IMPACTS.
- TREES AND SHRUBS ALONG A HIGHWAY PREVIOUSLY OPENED TO TRAFFIC BELONG TO THE PROPERTY OWNER. SURRENDER ALL MATERIAL FROM THE REMOVAL OF TREES AND SHRUBS TO THE OWNER OF THE ABUTTING PROPERTY. DELIVER ACCEPTED WOOD TO A NEARBY LOCATION AS DIRECTED. DISPOSE OF THE TREES AND SHRUBS IF THE OWNER REFUSES TO ACCEPT THE WOOD.

CONSTRUCTION STAGING AND DEMOLITION SEQUENCE

- FIELD MARK THE LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF ANY EARTH DISTURBANCE.
- SET UP NECESSARY TRAFFIC CONTROL MEASURES TO IMPLEMENT THE ROADWAY DETOUR DURING CONSTRUCTION.
- REMOVE TREES (NO GRUBBING) PRIOR TO STAGE 1. INSTALL TEMPORARY GRADED RAMP FOR UTILITY ACCESS.

STAGE 1 - STA. 2+47.00 TO STA 4+75.00 (NORTHERN BRIDGE SPAN & ROADWAY APPROACH)

- INSTALL ROCK CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT AS INDICATED ON THE PLANS.
- ESTABLISH STOCKPILE AND STAGING AREA. INSTALL COMPOST FILTER SOCK FOR STAGE 1 CONSTRUCTION, INCLUDING DOWNSLOPE OF THE STOCKPILE LOCATION. STRIP AND STOCKPILE TOPSOIL ONLY AS NECESSARY FOR THE REQUIRED IMPROVEMENTS.

CONSTRUCTION STAGING AND DEMOLITION SEQUENCE CONT'D

- INSTALL TEMPORARY COFFERDAM AND PUMPED WATER FILTER BAG AS INDICATED ON THE PLANS FOR STAGE 1 IN ORDER TO DEWATER THE CONSTRUCTION AREA.
- REMOVE THE EXISTING SPAN 2 BRIDGE SUPERSTRUCTURE AND ABUTMENT 2 AND ASSOCIATED WINGWALLS. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING MATERIAL FROM FALLING INTO THE STREAM.
- CONSTRUCT ABUTMENT 2 AND ASSOCIATED WINGWALLS; BACKFILL AROUND ABUTMENT AND PLACE SCOUR PROTECTION; PLACE ROADWAY APPROACH EMBANKMENT AND ASSOCIATED EROSION CONTROL MULCH BLANKET. REMOVE TEMPORARY COFFERDAM AND PUMPED WATER FILTER BAG FROM THE STAGE 1 WORK AREA WHEN STAGE 1 CONSTRUCTION ACTIVITIES WITHIN THE STREAM ARE COMPLETE.
- STAGE 1 MUST BE COMPLETED PRIOR TO STARTING STAGE 2 WORK.

STAGE 2 - STA. 0+50.00 TO STA. 2+47.00 (SOUTHERN BRIDGE SPAN & ROADWAY APPROACH)

- INSTALL STAGE 2 ROCK CONSTRUCTION ENTRANCE AND COMPOST FILTER SOCK AS INDICATED ON THE PLANS.
- INSTALL TEMPORARY CAUSEWAY ALONG WITH TEMPORARY COFFERDAM AND PUMPED WATER FILTER BAG AS INDICATED ON THE PLANS FOR STAGE 2 IN ORDER TO DEWATER THE CONSTRUCTION AREA.
- REMOVE THE EXISTING SPAN 1 BRIDGE SUPERSTRUCTURE, EXISTING PIER, AND ABUTMENT 1 AND ASSOCIATED WINGWALLS. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING MATERIAL FROM FALLING INTO THE STREAM.
- CONSTRUCT PIER, ABUTMENT 1 AND ASSOCIATED WINGWALLS; BACKFILL AROUND ABUTMENT AND PLACE SCOUR PROTECTION; PLACE ROADWAY APPROACH EMBANKMENT AND ASSOCIATED EROSION CONTROL MULCH BLANKET. REMOVE TEMPORARY COFFERDAM AND PUMPED WATER FILTER BAG FROM THE STAGE 2 WORK AREA WHEN STAGE 2 CONSTRUCTION ACTIVITIES WITHIN THE STREAM ARE COMPLETE. REMOVE TEMPORARY CAUSEWAY.

STAGE 3 - STA. 0+50.00 TO STA. 4+75.00 (SOUTHERN AND NORTHERN BRIDGE SPAN & ROADWAY APPROACH)

- INSTALL PORTAGE, PLACE BRIDGE BEAMS, DECK AND BRIDGE BARRIER. REMOVE CONCRETE WASHOUT.
- REMOVE PORTAGE AND RESTORE STREAMBANK EMBANKMENT GRADING TO PRE-PROJECT CONDITIONS; PLACE EROSION CONTROL MULCH BLANKET AND ROCK WITHIN RESTORATION AREA.
- CONSTRUCT PIPE AND ROADWAY SECTION AS SHOWN ON THE PLANS WITHIN THE LIMITS OF STAGE 3. REMOVE ROCK CONSTRUCTION ENTRANCES.
- ESTABLISH PERMANENT EROSION AND SEDIMENT CONTROLS.
- AFTER THE SITE HAS ACHIEVED 70% PERMANENT STABILIZATION, REMOVE TEMPORARY E&S MEASURES.

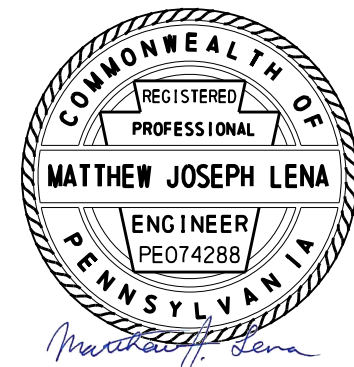
TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES DURING CONSTRUCTION

- CONTRACTOR SHALL NOTIFY THE COUNTY CONSERVATION DISTRICT OF THE LOCATION OF THE STAGING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE EROSION CONTROLS NECESSARY FOR THE CONSTRUCTION OF THESE STAGING AREAS.
- CONTRACTOR SHALL USE TEMPORARY SEEDING ON EXPOSED SLOPES THAT CANNOT BE PERMANENTLY SEEDED BECAUSE OF UNFAVORABLE SEEDING TIME.
- DURING CONSTRUCTION, THE ROADBED WILL BE MAINTAINED IN SUCH CONDITION THAT IT WILL BE WELL-DRAINED AT ALL TIMES WITHOUT SERIOUS EROSION.
- WHERE DUST OR WIND EROSION IS A PROBLEM, CONTRACTOR SHALL SPRINKLE UNSTABLE SURFACE(S) WITH WATER OR OTHER SUITABLE DUST SUPPRESSOR.
- ANY TEMPORARY EROSION CONTROL MEASURES USED BY THE CONTRACTOR SHALL BE CONTINUED UNTIL THE VEGETATIVE COVER ON SLOPES IS SUFFICIENTLY ESTABLISHED.
- CONTRACTOR SHALL EMPLOY MEASURES DURING CONSTRUCTION TO PREVENT SPILLS OF FUELS OR LUBRICANTS. IF A SPILL OCCURS, CONTROL IT IMMEDIATELY TO PREVENT ITS ENTRY INTO NEARBY WATERWAYS.
- CONTRACTOR SHALL PERFORM EARTHMOVING ACTIVITIES IN A MANNER THAT MINIMIZES THE AMOUNT OF DISTURBED LAND. CLEAR AND GRUB ONLY IN THE AREAS DESCRIBED FOR EACH STAGE OF CONSTRUCTION.
- CONTRACTOR SHALL DESIGNATE AT LEAST ONE INDIVIDUAL, WHO WILL BE PRESENT AT THE PROJECT SITE DAILY, WHO IS RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENTATION CONTROL.
- CONTRACTOR SHALL MAINTAIN A MAINTENANCE PROGRAM FOR INSPECTION OF THE TEMPORARY CONTROLS ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT, INCLUDING THE REPAIR OF DAMAGED TEMPORARY CONTROLS.
- UNLESS OTHERWISE INDICATED, CONTRACTOR SHALL ENSURE THAT ALL MATERIALS AND WORKMANSHIP CONFORMS TO THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408 SPECIFICATIONS, CURRENT EDITION.

IN-STREAM RESTRICTIONS

NO WORK IN STREAM CHANNEL DURING THE FOLLOWING DATES:
STOCKED TROUT - FEBRUARY 15 THROUGH JUNE 1
WILD TROUT - OCTOBER 1 THROUGH DECEMBER 31

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



8/15/2025

EROSION AND SEDIMENT POLLUTION CONTROL PLAN

FILE NAME: P:\003721\0431\micr\station\ESC\T003721\0431 ESC DT.dgn
PLOTTER: 8/12/2025 8:20:17 AM
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SVS - Microstation standards plotdrv.xml pdf, bw, full, plotcf

PERMANENT EROSION AND SEDIMENT POLLUTION CONTROL MEASURES

1. PERMANENT SOIL PROTECTION WILL BE COMPLETED AS EARLY AS PRACTICAL.
2. PERMANENT SEEDING AND MULCHING WILL BE INCORPORATED INTO THE CONSTRUCTION PHASE DURING AN APPROVED PLANTING SEASON.
3. ALL AREAS DISTURBED BY CONSTRUCTION, OTHER THAN THOSE RECEIVING LANDSCAPING OR PAVING, SHALL BE STABILIZED BY APPLYING A SEED MIXTURE TO ESTABLISH AN EROSION RESISTANT STAND OF VEGETATION.

THE FOLLOWING TYPES OF TREATMENT HAVE BEEN RECOMMENDED FOR THIS PROJECT:

- A. FORMULA L SEED MIXTURE (PENNDOT SPECIFICATIONS - GENERAL SEEDING)
 - (1) SEED @ 48.0 LBS./1000 S.Y.
 - A. HARD FESCUE - 55% BY WEIGHT
 - B. CREEPING RED FESCUE - 35% BY WEIGHT
 - C. ANNUAL RYEGRASS - 10% BY WEIGHT
 - (2) MULCHING - STRAW @ 1240 LBS./1000 S.Y.

4. IMPLEMENT ALL PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE REQUIREMENTS OF THE PA DEP EROSION AND SEDIMENT CONTROL PROGRAM MANUAL UNLESS OTHERWISE NOTED.

MAINTENANCE OF EROSION AND SEDIMENT POLLUTION CONTROL MEASURES

1. CHECK ALL SEDIMENT AND EROSION CONTROL FACILITIES FOR DAMAGE WEEKLY AND AFTER EACH STORM. REPLACE ALL FACILITIES THAT ARE DAMAGED, CLOGGED, OR CAN NO LONGER FUNCTION AS INTENDED.
2. DOCUMENT ALL SITE INSPECTIONS IN AN INSPECTION LOG KEPT FOR THIS PURPOSE WITH THE COMPLIANCE ACTIONS, DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION. KEEP THE INSPECTION LOG ON-SITE AT ALL TIMES AND AVAILABLE UPON REQUEST BY THE COUNTY CONSERVATION DISTRICT.
3. PERFORM IMMEDIATELY ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING, AND RE-NETTING. IF EROSION AND SEDIMENTATION BMPS FAIL TO PERFORM AS EXPECTED, REPLACE OR MODIFY BMPS AS NEEDED.
4. RECORD THE FOLLOWING INFORMATION IF BMPS CONTINUE TO FAIL TO ALLEVIATE EROSION AND SEDIMENT POLLUTION:
 - a. RECORD LOCATION AND SEVERITY OF BMPS FAILURE.
 - b. ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
 - c. THE TIME FRAME TO CORRECT THE NON COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.
5. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION SHALL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
6. ON ANY PERMANENT SEEDING AREAS THAT BECOME ERODED OR DISTURBED, CONTRACTOR SHALL REPLACE THE TOPSOIL, RE-SOW THE GRASS, AND APPLY MULCH.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL FACILITIES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL OFF-SITE EROSION AND SEDIMENT POLLUTION CONTROL.
9. CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ANY EXCESS MATERIAL IN A MANNER APPROVED BY PA DEP.

SEEDING SCHEDULE

APPLICATION	SEEDING FORMULA	SPECIES	APPLICATION RATE	FERTILIZER	LIMING RATE	SEEDING DATE	MULCH	MULCH RATE
TEMPORARY	PENNDOT FORMULA T	OATS (SPRING)	6 LBS/1000 SY	SEE NOTE 1 BELOW	800LBS/1000 SY	3/15 TO 6/1 AND 8/1 TO 10/15	STRAW	1200 LBS/1000 SY****
		(AVENA SATIVA) CEREAL (FALL) (SECALE CEREALE)	6 LBS/1000 SY					
LAWN AREAS WITH SLOPES 3:1 AND GREATER	PENNDOT FORMULA L	HARD FESCUE***	26.4 LBS/1000 SY	SEE NOTE 1 BELOW	800LBS/1000 SY	3/15 TO 6/1 AND 8/1 TO 10/15	STRAW	1200 LBS /1000 SY****
		(FESTUCA LONGIFOLIA) CREEPING RED FESCUE	16.8 LBS/1000 SY					
		(FESTUCA RUBRA) ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	4.8 LBS/1000 SY					

1. FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH A SOIL TEST. IN THE ABSENCE OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AS FOLLOWS:
 - A. 10-20-20 ANALYSIS COMMERCIAL FERTILIZER AT 140 LBS/1000 SY AND
 - B. 38-0-0 UREAFORM FERTILIZER AT 50 LBS/1000 SY OR
 - 32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER AT 59-50 LBS/1000 SY AS DIRECTED OR
 - 31-0-0 IBDU FERTILIZER AT 61 LBS/1000 SY
2. SPECIFICATION ITEMS OBTAINED USING PENNDOT PUBLICATION NO. 408
3. ALL AREAS RECEIVING PERMANENT SEEDING SHALL HAVE A MINIMUM OF 4" OF ORGANIC TOPSOIL.
4. MULCH CONTROL NETTING MUST BE PLACED ON ALL SLOPES STEEPER THAN 3:1

*** HARD FESCUE: A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL HARD FESCUE COMPONENT.
**** MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER AT 160 LBS/1000 SY OR EQUAL.

TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES

1. TEMPORARY SEEDING/MULCHING
 - A. CONTRACTOR SHALL USE PENNDOT PUBLICATION 408 FORMULA T TEMPORARY GRASS MIX SEEDING (OATS (SPRING) OR CEREAL RYE (FALL), 100 PERCENT BY WEIGHT), OR EQUIVALENT, FOR TEMPORARY SEEDING. PLACE AT THE RATE OF 6 POUNDS PER 1,000 SQUARE YARDS. APPLY TEMPORARY SEEDING TO THOSE AREAS THAT ARE A POTENTIAL EROSION PROBLEM DURING CONSTRUCTION AND TO THOSE AREAS EXPOSED FOR LONGER THAN 20 CALENDAR DAYS. IF CONDITIONS DO NOT PERMIT TEMPORARY SEEDING, MULCHING SHALL BE EMPLOYED.
 - B. CONTRACTOR SHALL PERFORM ALL SITE PREPARATIONS INCLUDING LIMING, FERTILIZING, TIME AND METHOD OF SEEDING IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 - C. IN PLACES WHERE EROSION IS A PROBLEM DURING THE GROW-IN PHASE OF THE COURSE, CONTRACTOR MAY USE MULCH TO HELP STABILIZE THOSE AREAS. MULCH SHALL CONSIST OF HAY OR STRAW APPLIED AT A RATE OF 1,240 POUNDS PER 1,000 SQUARE YARDS.
2. COMPOST FILTER SOCK
 - A. CONTRACTOR SHALL PLACE COMPOST FILTER SOCK BARRIER DOWN SLOPE OF CRITICAL EROSION AREAS AND/OR AS SHOWN ON THE PLAN IN ORDER TO PREVENT SEDIMENT FROM ENTERING ONTO ADJACENT PROPERTIES AND EXITING THE SITE.
3. CONCRETE WASHOUT
 - A. CONTRACTOR SHALL INSTALL CONCRETE WASHOUT AT LOCATIONS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL USE CONCRETE WASHOUTS TO CLEAN DELIVERY VEHICLES. UNDER NO CIRCUMSTANCES IS WASH WATER FROM THE VEHICLES PERMITTED TO ENTER SURFACE WATERS.
4. TEMPORARY COFFERDAM
 - A. CONTRACTOR SHALL INSTALL COFFERDAMS AT LOCATIONS INDICATED ON DRAWINGS. COFFERDAM SHALL BE INSTALLED PER TYPICAL SECTIONS AND NOT TO BE REMOVED UNTIL INDICATED BY THE CONSTRUCTION STAGING.
5. ROCK CONSTRUCTION ENTRANCE
 - A. CONTRACTOR SHALL INSTALL ROCK CONSTRUCTION ENTRANCE AT LOCATIONS INDICATED ON THE PLANS. REPLACE ANY LOST STONE IMMEDIATELY.
6. PUMPED WATER FILTER BAG
 - A. CONTRACTOR SHALL UTILIZE A PUMPED WATER FILTER BAG WHENEVER EXCAVATIONS MUST BE PUMPED FOR DE-WATERING PURPOSES. FILTER BAG SHALL BE PLACED IN WELL-VEGETATED AREAS, WHERE POSSIBLE, AND DISCHARGE SHALL BE TO A STABLE, EROSION RESISTANT AREA DOWNSTREAM OF EXCAVATION.
7. TEMPORARY ROLLED EROSION CONTROL PRODUCTS
 - A. CONTRACTOR TO PLACE TEMPORARY EROSION CONTROL MULCH BLANKETS ON ALL SLOPES 3:1 OR GREATER. E&S BLANKETS MUST BE IN PLACE AND ANCHORED PRIOR TO SEEDING AND MULCHING.
8. TEMPORARY CAUSEWAY
 - A. CONTRACTOR SHALL CONSTRUCT TEMPORARY CAUSEWAY AT THE LOCATION SHOWN ON THE PLANS AND ACCORDING TO THE DETAIL PROVIDED. REMOVE THE TEMPORARY CAUSEWAY USING COFFERDAMS AND PUMPED WATER FILTER BAGS FOLLOWING SUPERSTRUCTURE.

SOIL LIMITATIONS

LINDSIDE SILT LOAM (Ls) - CUTBANKS CAVE, CORROSIVE TO STEEL, FLOODING, DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE, HYDRIC/ HYDRIC INCLUSIONS, LOW STRENGTH/ LANDSLIDE PRONE, SLOW PERCOLATION, PIPING, FROST ACTION, POTENTIAL SINKHOLE AND WETNESS.

DISTURBED ACERAGE

41,248 SF = 0.947 ACRES OF TOTAL LIMITS OF DISTURBANCE

ANTICIPATED CONSTRUCTION WASTES

CONCRETE SOIL
BUILDING RUBBLE ROCK

RECEIVING WATER COURSE

STORMWATER FROM THIS PROJECT FLOWS TO YELLOW BREECHES CREEK. THE CHAPTER 93 CLASSIFICATION OF THIS WATER COURSE IS COLD WATER FISHES (CWF), MIGRATORY FISHES (MF).

SOIL LIMITATIONS CONT'D

MONOGAHELA SILT LOAM (MnB) - CUTBANKS CAVE, CORROSIVE TO CONCRETE/STEEL, EASILY ERODIBLE, DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE, HYDRIC/ HYDRIC INCLUSIONS, LOW STRENGTH/ LANDSLIDE PRONE, SLOW PERCOLATION, PIPING, FROST ACTION, SHRINK-SWELL AND WETNESS.

CODORUS SILT LOAM (Cm) - CUTBANKS CAVE, CORROSIVE TO CONCRETE/STEEL, FLOODING, DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE, HYDRIC/ HYDRIC INCLUSIONS, LOW STRENGTH/ LANDSLIDE PRONE, SLOW PERCOLATION, PIPING, FROST ACTION, AND WETNESS.

LEGORE CHANNERY SILT LOAM (LgC,LgD) - CUTBANKS CAVE, CORROSIVE TO CONCRETE/STEEL, DROUGHTY, LOW STRENGTH/ LANDSLIDE PRONE, SLOW PERCOLATION, PIPING, POOR SOURCE OF TOPSOIL, FROST ACTION AND SHRINK-SWELL.

SOIL LIMITATION RESOLUTIONS

LIMITATION	RESOLUTION
CUTBANKS CAVE	CONDUCT TRENCHING OPERATIONS IN ACCORDANCE WITH OSHA TECHNICAL MANUAL FOR TRENCHING. STABILIZE BANKS IMMEDIATELY WITH SEED, MULCH, EROSION CONTROL MATS, BONDED FIBER MATRIX, OR A COMBINATION OF THESE AND/OR OTHER METHODS.
CORROSIVE TO CONCRETE OR STEEL	PROTECT CONCRETE AND STEEL WITH PROTECTIVE COATINGS, SELECT ALTERNATIVE MATERIALS IN LIEU OF CONCRETE OR STEEL, OR A COMBINATION OF THESE AND OR OTHER METHODS.
DROUGHTY	SELECT VEGETATIVE SPECIES TOLERANT TO DRY CONDITIONS, IRRIGATE VEGETATED AREAS, OR IMPLEMENT COMBINATIONS OF THESE AND/OR OTHER METHODS.
EASILY ERODIBLE	PROVIDE TEMPORARY OR PERMANENT CHANNEL LINING, DECREASE CHANNEL GRADE, INCREASE CHANNEL WIDTH, SELECT VEGETATION WITH A GREATER RETARDANCE, SELECT PERMANENT LININGS OTHER THAN GRASSES, OR IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
DEPTH TO SATURATED ZONE \ SEASONAL HIGH WATER TABLE \ WETNESS \ FLOODING \ PONDING \ HYDRIC SOILS	SELECT VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS, TILE VEGETATED AREAS, OR IMPLEMENT COMBINATIONS OF THESE AND/OR OTHER METHODS. UTILIZE PUMPED WATER FILTER BAGS TO DEWATER DISTURBED AREAS DURING CONSTRUCTION.
LOW STRENGTH \ LANDSLIDE PRONE	LOCATE ROADWAYS TO OTHER SOIL TYPES, IMPORT OTHER SOILS FOR ROADWAY CONSTRUCTION, OR IMPLEMENT A COMBINATION OF THESE AND/OR OTHER METHODS. FOR CUT/FILL SLOPES, REDUCE SLOPE, INSTALL EROSION CONTROL MATTING, OR IMPLEMENT A COMBINATION OF THESE AND/OR OTHER METHODS.
SLOW PERCOLATION	LOCATE INFILTRATION FACILITIES TO ANOTHER SOIL TYPE, RESTRICT CONSTRUCTION TRAFFIC AT THOSE LOCATIONS, TILL SOIL IN THOSE LOCATIONS, ADD SOIL AMENDMENTS SUCH AS COMPOST AT THOSE LOCATIONS.
PIPING	IMPORT OTHER SOIL FOR EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORM WATER RETENTION BASINS AND STORM WATER DETENTION BASINS, LOCATE THOSE FACILITIES ON OTHER SOIL TYPES, LIMIT EMBANKMENT SLOPE STEEPNESS, OR IMPLEMENT COMBINATIONS OF THESE AND/OR OTHER METHODS.
POOR SOURCE OF TOPSOIL	IDENTIFY AND RESOLVE CHARACTERISTICS THAT RENDER THE SOIL TYPES POORLY SUITED AS TOPSOIL. PERFORM SOIL TESTS TO DETERMINE THE REQUIRED SOIL AMENDMENTS AND APPLICATION RATES. IDENTIFY SOILS ON-SITE THAT ARE ADEQUATE SOURCES OF TOPSOIL AND STOCKPILE THESE FOR USE DURING RESTORATION.
FROST ACTION	IMPORT OTHER SOIL FOR EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORM WATER RETENTION BASINS AND STORM WATER DETENTION BASINS, LOCATE THOSE FACILITIES ON OTHER SOIL TYPES, DO NOT CONSTRUCT EMBANKMENTS DURING PERIODS PRONE TO FROST, OR IMPLEMENT COMBINATIONS OF THESE AND/OR OTHER METHODS.
SHRINK-SWELL	LOCATE FACILITIES THAT MAY BE SUSCEPTIBLE TO DAMAGE FROM SHRINK OR SWELLING TO ANOTHER SOIL TYPE, IMPORT OTHER SOILS FOR THESE FACILITIES, OR IMPLEMENT COMBINATION OF THESE AND/OR OTHER METHODS.
POTENTIAL SINKHOLE	LOCATE SEDIMENT BASINS, SEDIMENT TRAPS, STORM WATER RETENTION BASINS AND STORM WATER DETENTION BASINS ON OTHER TYPES OF SOIL, LINE RESERVOIR AREAS WITH IMPERMEABLE LININGS, LIMIT STANDING WATER DEPTHS, LIMIT RETENTION TIMES, AND IMPLEMENT COMBINATIONS OF THESE AND/OR OTHER METHODS.

PROJECT SOIL TYPES

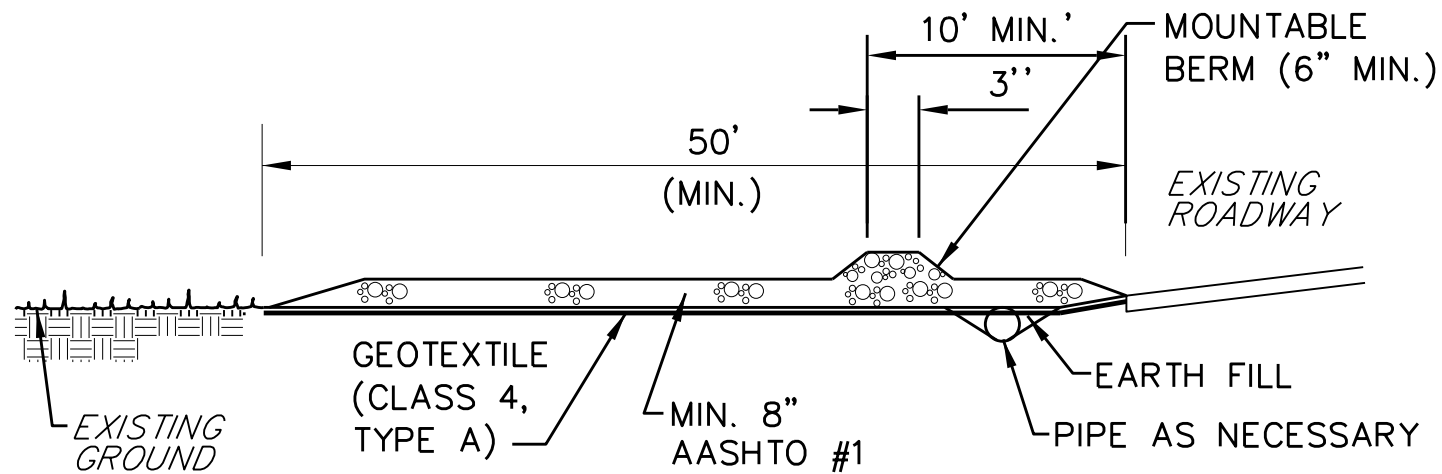
NAME	SLOPE	SYMBOL	DEPTH TO RESTRICTIVE FEATURE	HYDROLOGIC SOIL GROUP	DEPTH TO WATER TABLE
LINDSIDE SILT LOAM	0 TO 3 PERCENT	Ls	MORE THAN 80 INCHES	C	ABOUT 18 TO 36 INCHES
MONOGAHELA SILT LOAM	3 TO 8 PERCENT	MnB	18 TO 30 INCHES TO FRAGIPAN	C/D	ABOUT 18 TO 30 INCHES
CODORUS SILT LOAM	0 TO 3 PERCENT	Cm	72 TO 99 INCHES TO LITHIC BEDROCK	C	ABOUT 18 TO 36 INCHES
LEGORE CHANNERY SILT LOAM	8 TO 15 PERCENT	LgC	MORE THAN 80 INCHES	B	MORE THAN 80 INCHES
LEGORE CHANNERY SILT LOAM	15 TO 25 PERCENT	LgD	MORE THAN 80 INCHES	B	MORE THAN 80 INCHES

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111

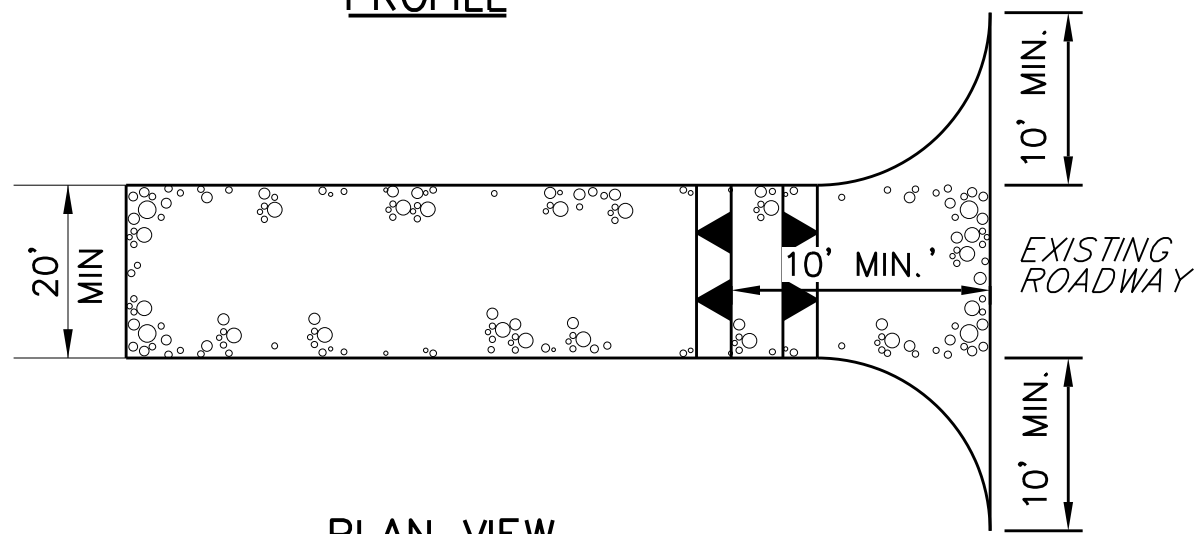


EROSION AND SEDIMENT POLLUTION CONTROL PLAN

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	3 OF 7	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



PROFILE

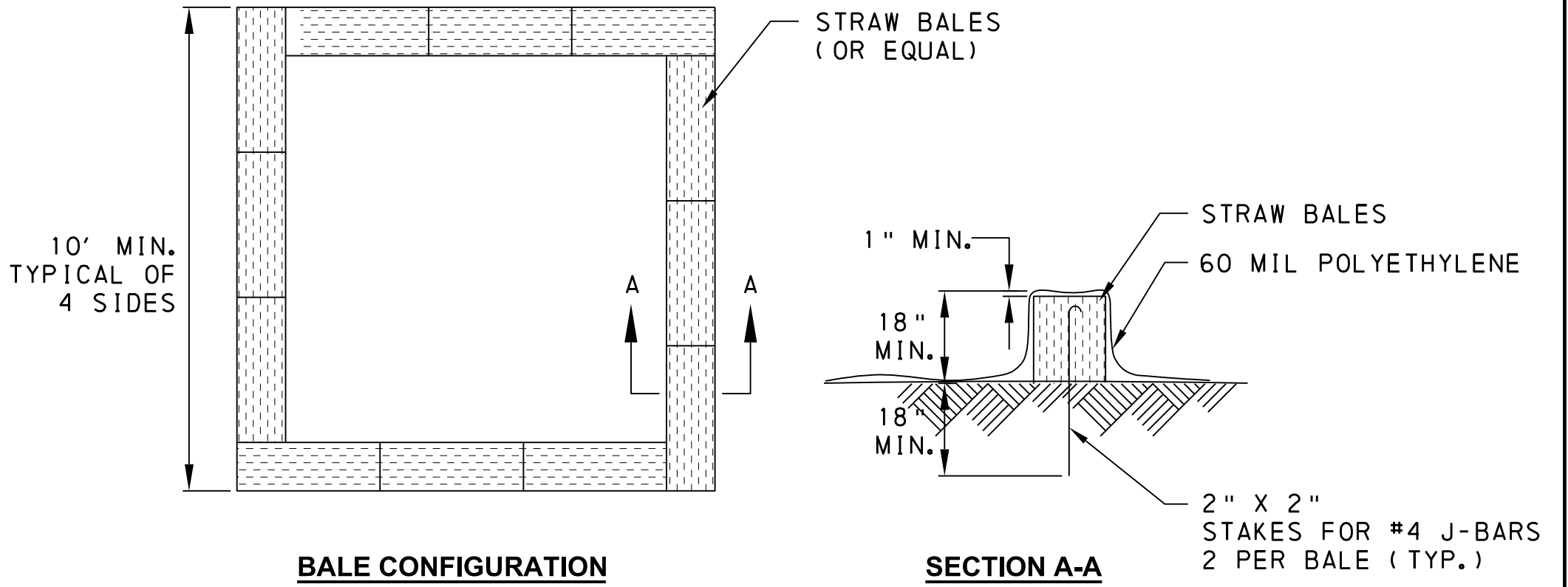
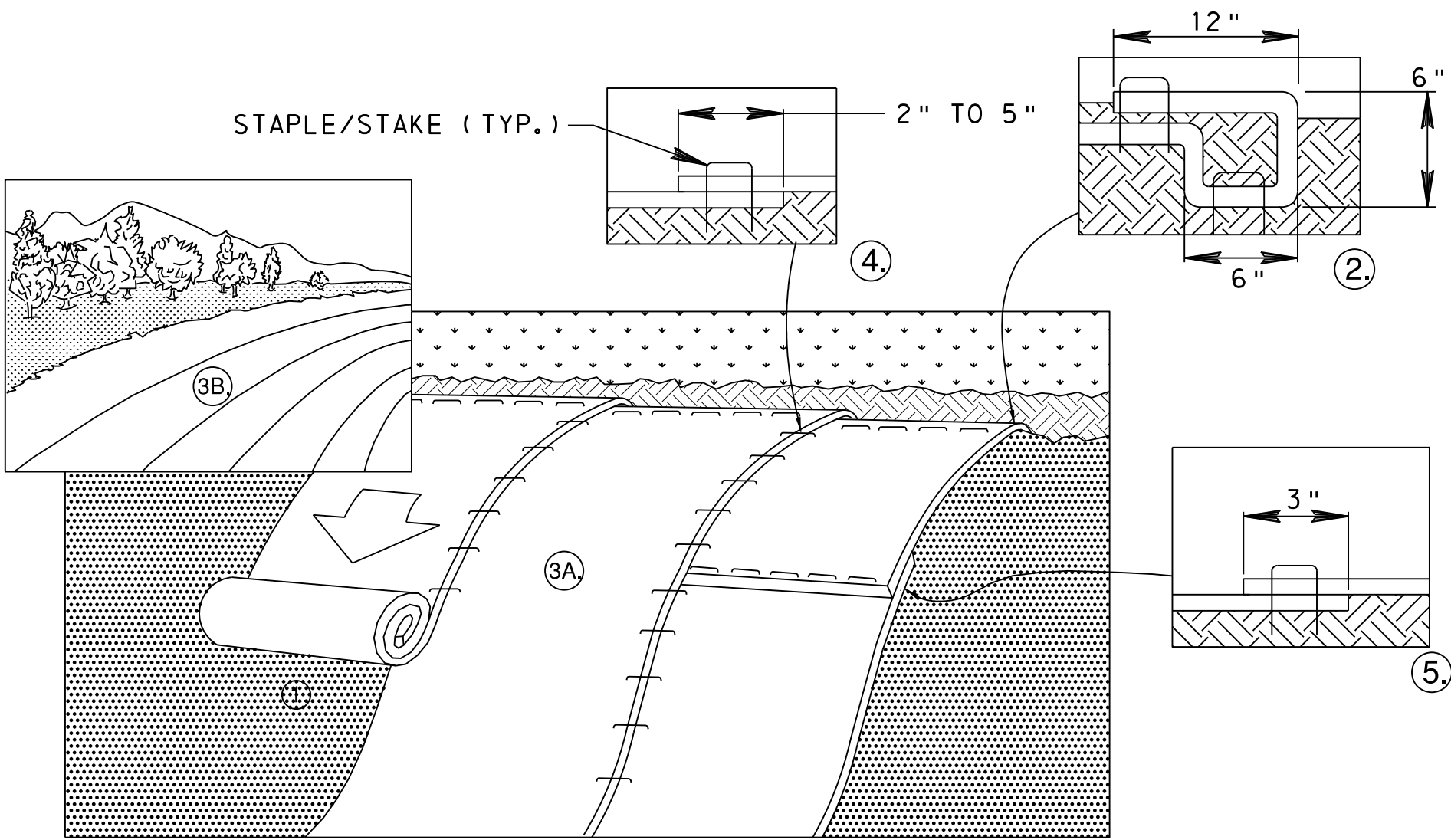


PLAN VIEW

- NOTES:
1. TOPSOIL SHOULD BE REMOVED PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE.
 2. EXTEND ROCK OVER FULL DISTANCE OF ENTRANCE.
 3. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 4. MOUNTABLE BERM SHOULD BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED. PIPE TO BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
 5. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50' INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL A WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE WAYS IS NOT ACCEPTABLE.

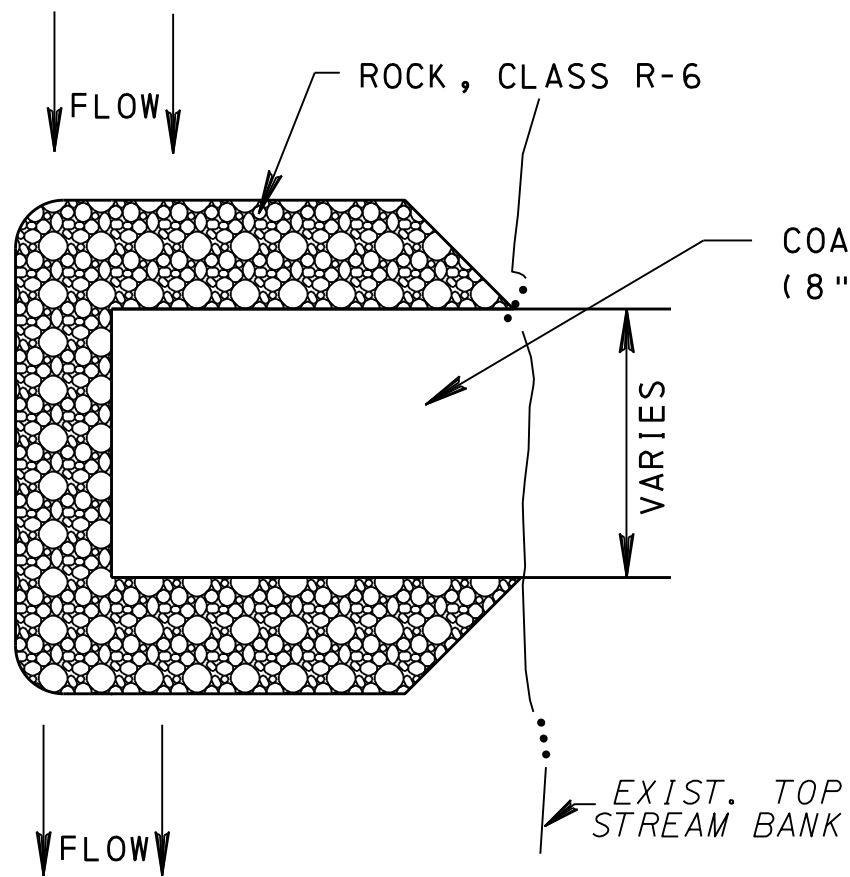
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



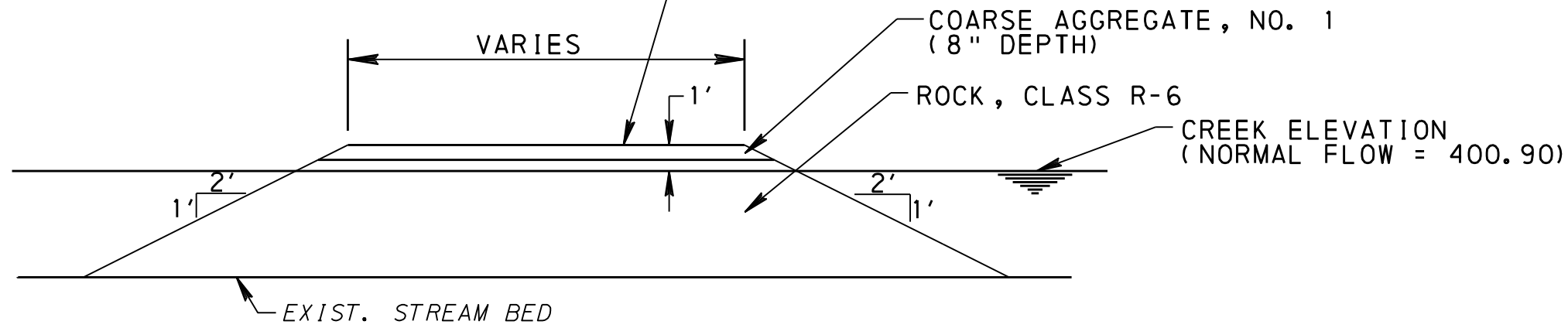
BALE CONFIGURATION

SECTION A-A



PLAN

NOT TO SCALE



TYPICAL SECTION

NOT TO SCALE

TEMPORARY CAUSEWAY DETAIL

*NOTES:

1. HEIGHT OF CAUSEWAY LESS THAN ELEVATIONS SPECIFIED TO BE AT THE DISCRETION AND RISK OF CONTRACTOR AND ACTUAL FIELD CONDITIONS.

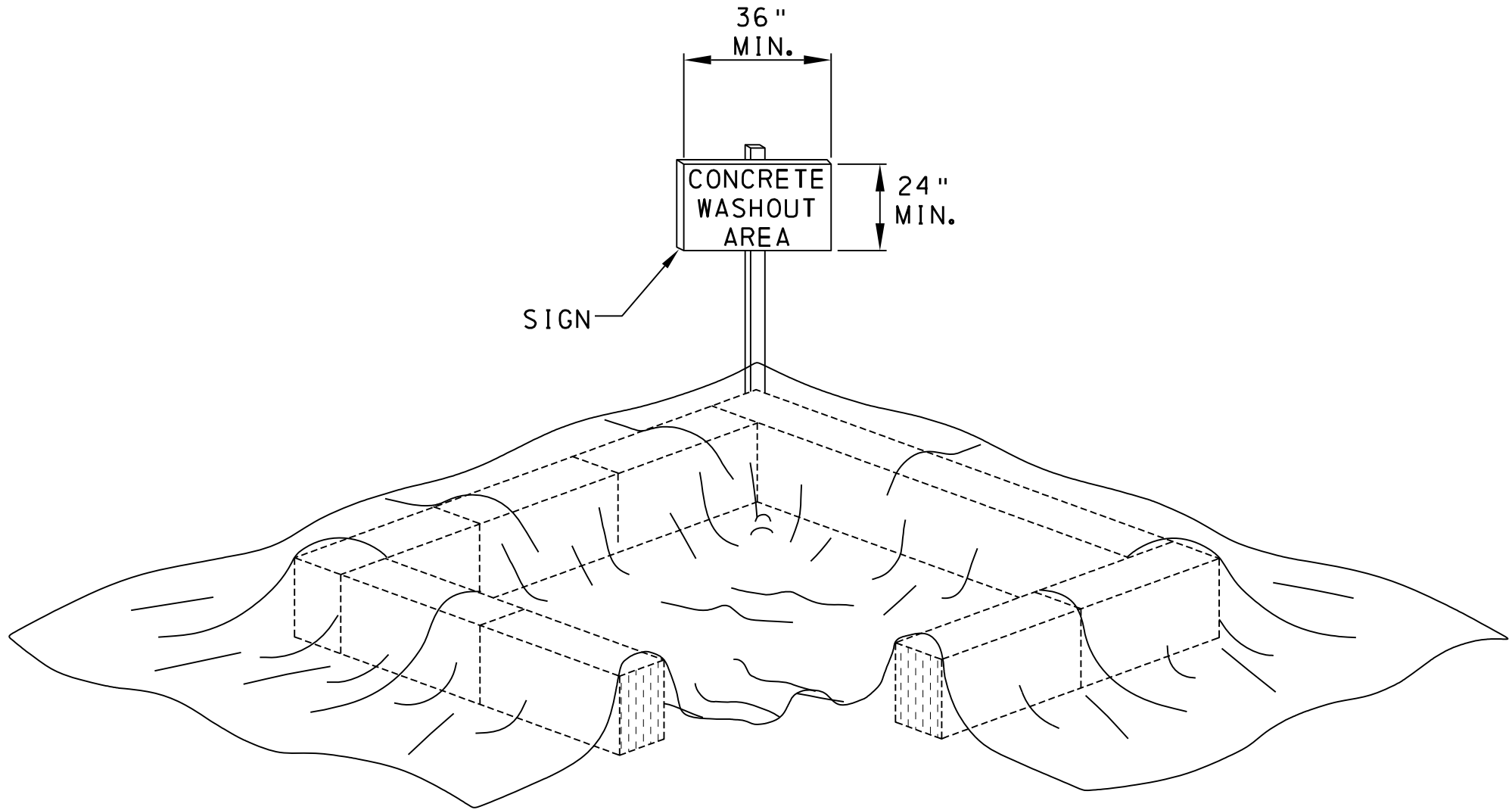
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:

- *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL MULCH BLANKET

NOT TO SCALE



THIS SECTION REMOVED FOR GRAPHICAL REPRESENTATION ONLY. STRAW BALE PERIMETER SHALL BE CONTINUOUS.

NOTES:

1. PROVIDE PROPER SIGNAGE FOR CONCRETE DELIVERY VEHICLE DRIVERS SO THAT THEY ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.
2. WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50' OF STORM DRAINS, OPEN DITCHES, OR SURFACE WATERS. UNDER NO CIRCUMSTANCES SHOULD WASH WATER BE ALLOWED TO ENTER ANY SURFACE WATERS.
3. WHEREVER POSSIBLE, CONCRETE WASHOUTS SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE.

CONCRETE WASHOUT

NOT TO SCALE

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111

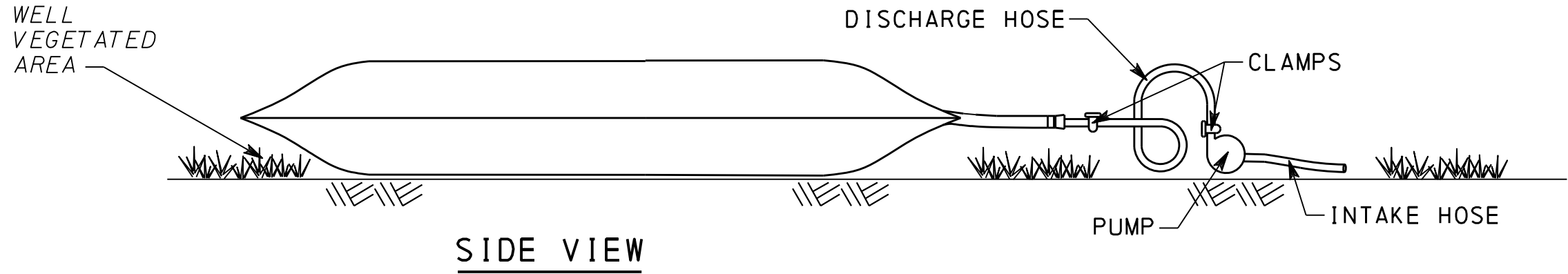
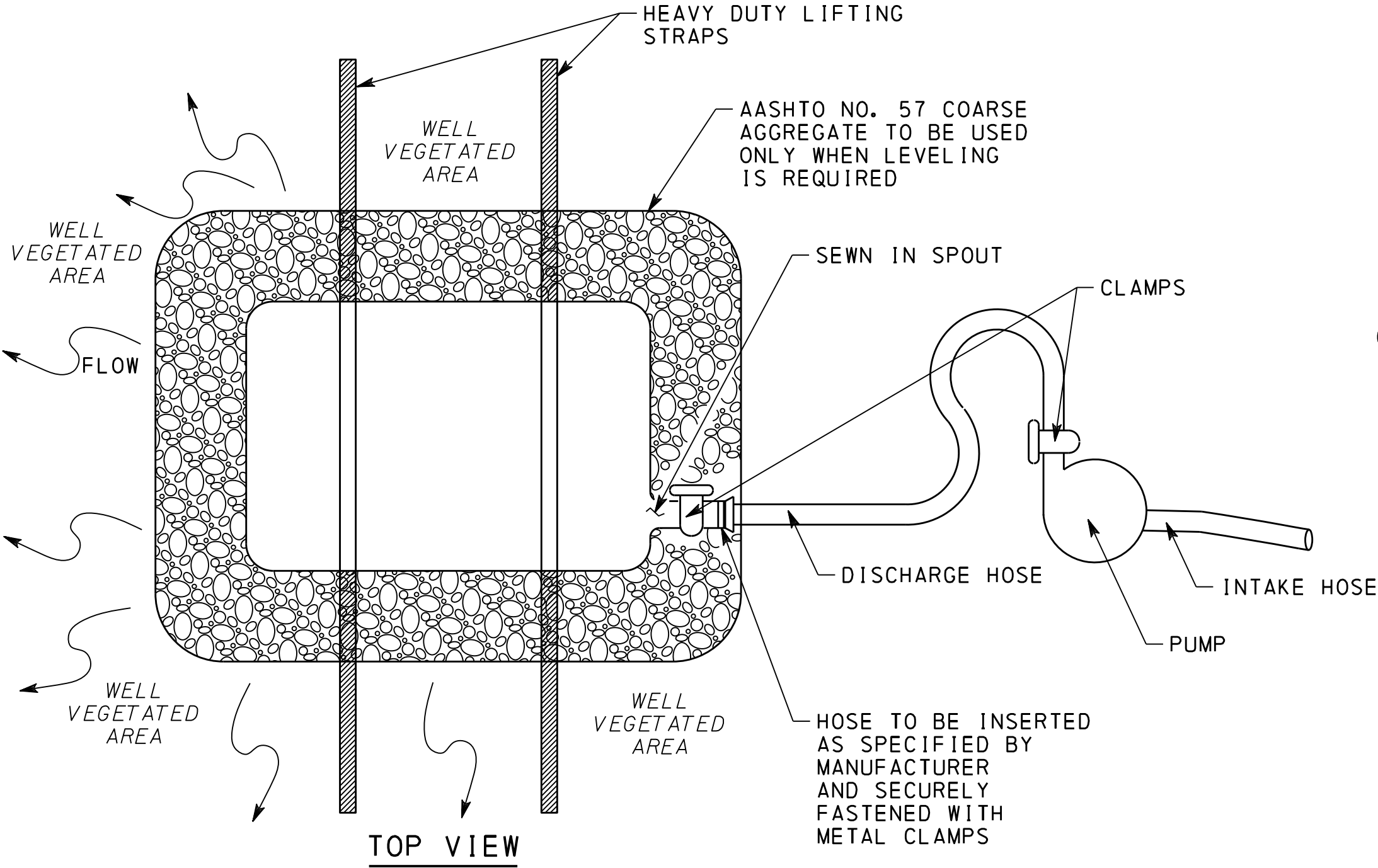


EROSION AND SEDIMENT POLLUTION CONTROL PLAN

FILE NAME: P:\0037\003721_0431\micros\station\ESC\T0037210431 ESC DT.dgn
PLOTTER: 8/12/2025 8:24:16 AM
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SYS - Microstation standards\p10tdrv.xml\pdf.pdf.bw, full, plotcfg

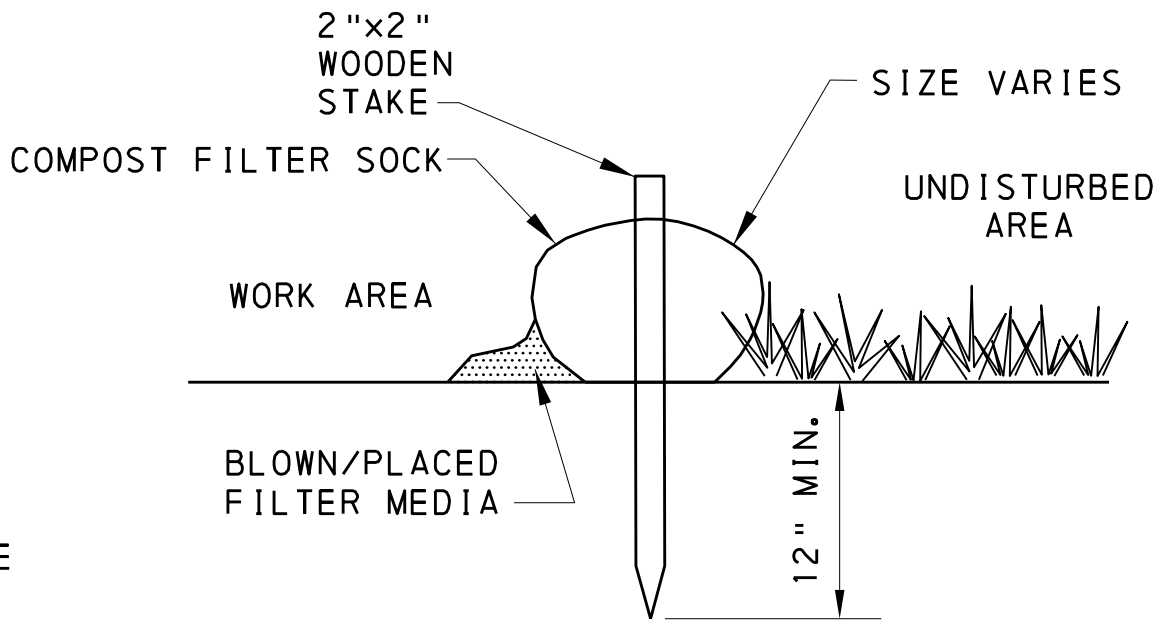
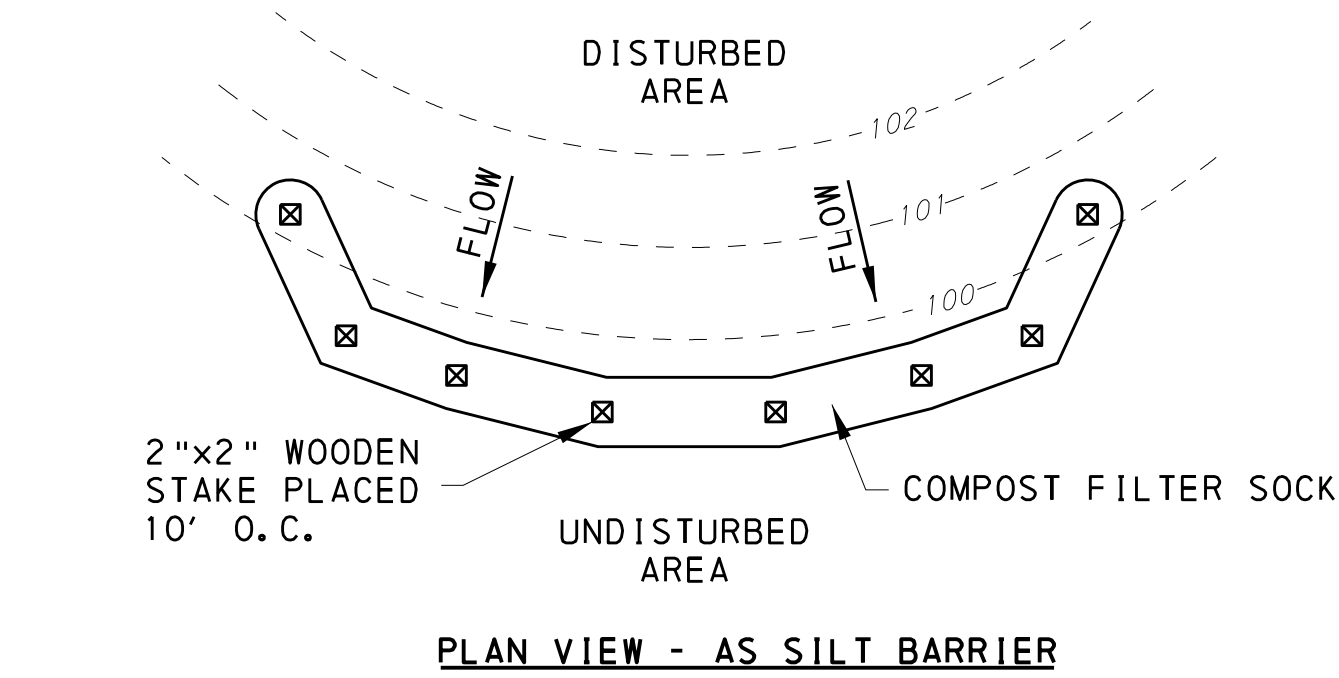
FILE NAME: P:\0037\003721\0431\microrotation\ESC\T0037210431 ESC DT.dgn
PLOT DATE: 8/12/2025 8:24:40 AM
PEN TABLE: file date user tb
PLOT DRIVER: r1\SYS - Microstation standards\plotdrv\mxd\pdf.pdf.bw.full.plt.ctb

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	4 OF 7	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



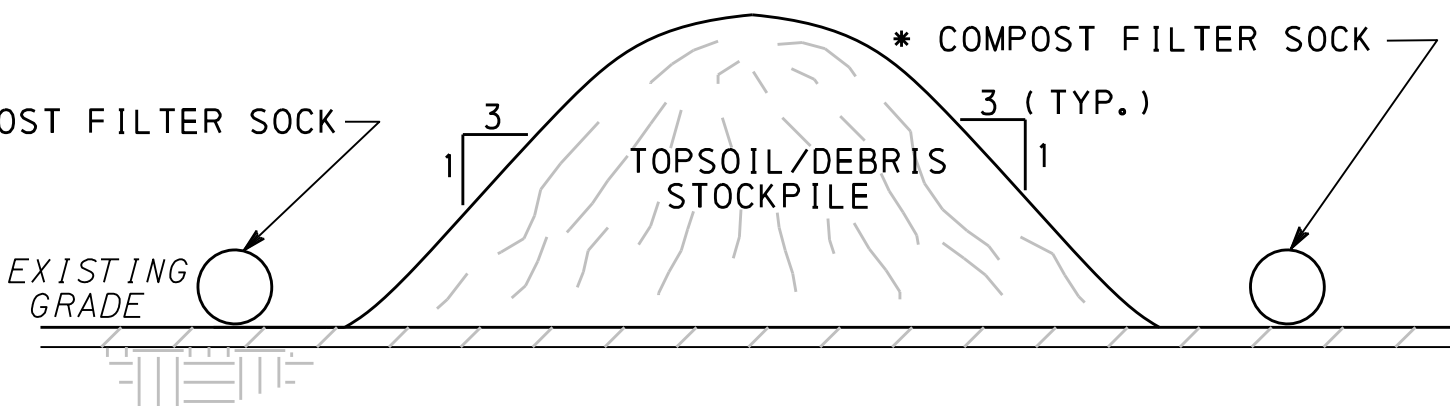
- NOTES:
1. LOCATE BAG IN LEVEL AREAS (LESS THAN 5% GRADE). WHEN LEVEL AREAS ARE NOT AVAILABLE, PLACE AASHTO NO. 57 COARSE AGGREGATE TO LEVEL THE BAG.
 2. LOCATE BAG IN A WELL VEGETATED AREA. DISCHARGE ONTO A STABLE, EROSION RESISTANT AREA. WHEN VEGETATED AREA IS NOT AVAILABLE, PROVIDE A GEOTEXTILE (CLASS 4, TYPE A) LINED FLOW PATH TO A STABLE EROSION RESISTANT RECEIVING WATER COURSE OR A WELL VEGETATED AREA.
 3. LOCATE BAG IN AN AREA ACCESSIBLE BY EQUIPMENT FOR MAINTENANCE AND REMOVAL PURPOSES.
 4. DO NOT INSERT MORE THAN ONE HOSE INTO A BAG.
 5. REPLACE THE BAG WHEN 50% OF THE SEDIMENT CAPACITY HAS BEEN FILLED AND/OR WHEN THERE IS A FAILURE.
 6. REMOVE AND PROPERLY DISPOSE OF THE PUMPED WATER FILTER BAGS. RESTORE THE AREA IN ACCORDANCE WITH THE SPECIFICATIONS IN PUBLICATION 408. DO NOT CUT FILTER BAG OR DISTRIBUTE AND SEED SEDIMENT.
 7. DO NOT PERMIT DISCHARGE FROM THE BAG TO DRAIN BACK INTO WORK OR ACCESS AREAS OF THE PROJECT.

PUMPED WATER FILTER BAG
NOT TO SCALE



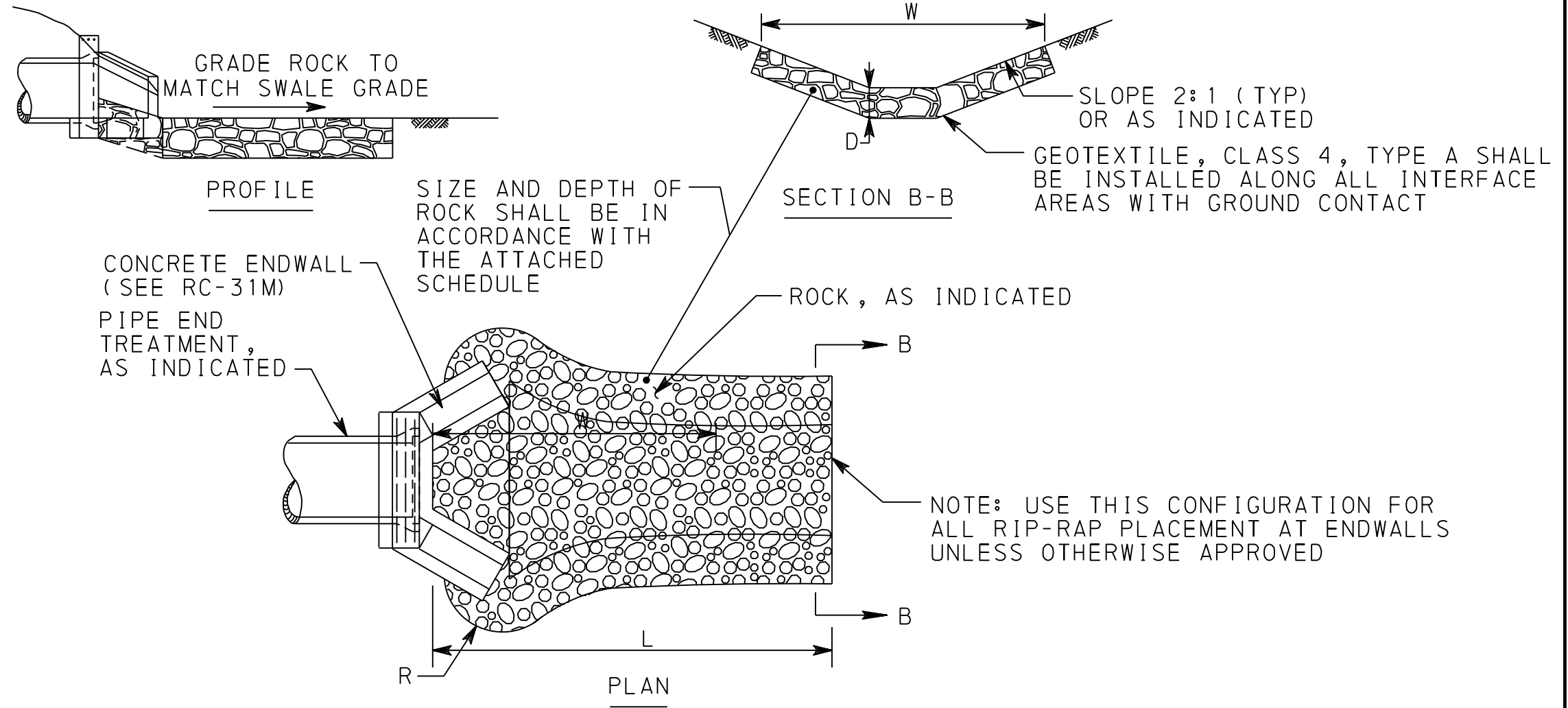
- NOTES:
1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN IN THE PENNSYLVANIA EROSION CONTROL BEST MANAGEMENT PRACTICE MANUAL.
 2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCK.
 3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED IN THE PENNSYLVANIA EROSION CONTROL BEST MANAGEMENT PRACTICE MANUAL.
 4. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 5. SOCK FABRIC AND COMPOST SHALL MEET THE STANDARDS OF THE LATEST VERSION OF THE PENNSYLVANIA EROSION CONTROL BEST MANAGEMENT PRACTICE MANUAL.
 6. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK
NOT TO SCALE



- * SEE COMPOST FILTER SOCK DETAIL FOR INSTALLATION
- NOTE: STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 3 : 1 OR FLATTER.

TYPICAL STOCKPILE DETAIL
NOT TO SCALE



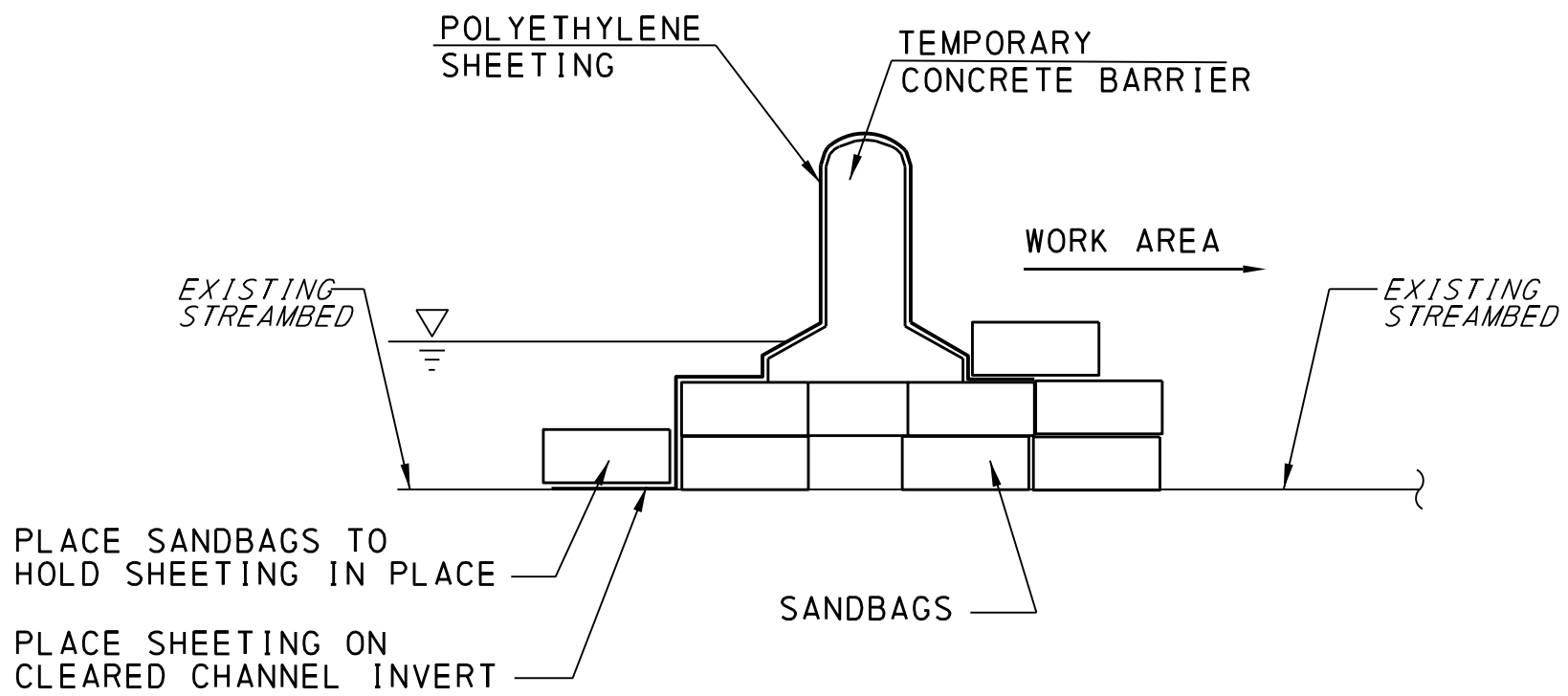
CONSTRUCT ALL APRONS TO THE DIMENSIONS SHOWN. ADJUST TERMINAL WIDTHS AS NECESSARY TO MATCH RECEIVING CHANNELS.

INSPECT ALL APRONS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.

REPLACE DISPLACED RIPRAP WITHIN THE APRON IMMEDIATELY.

SCHEDULE						
ENDWALL NO.	PIPE DIAMETER (DIA.)	LENGTH L	WIDTH W	RIPRAP SIZE	DEPTH D	RADIUS R
EW-1	18"	20'	12.5'	R-4	18"	2'

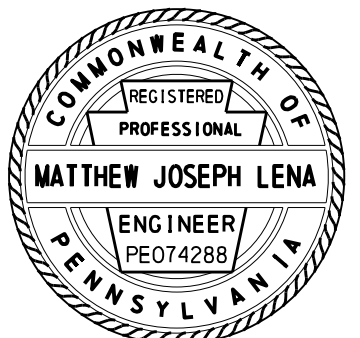
ROCK APRON (DEFINED CHANNEL) DETAIL
NOT TO SCALE



TYPICAL SECTION

COFFERDAM DETAIL
NOT TO SCALE

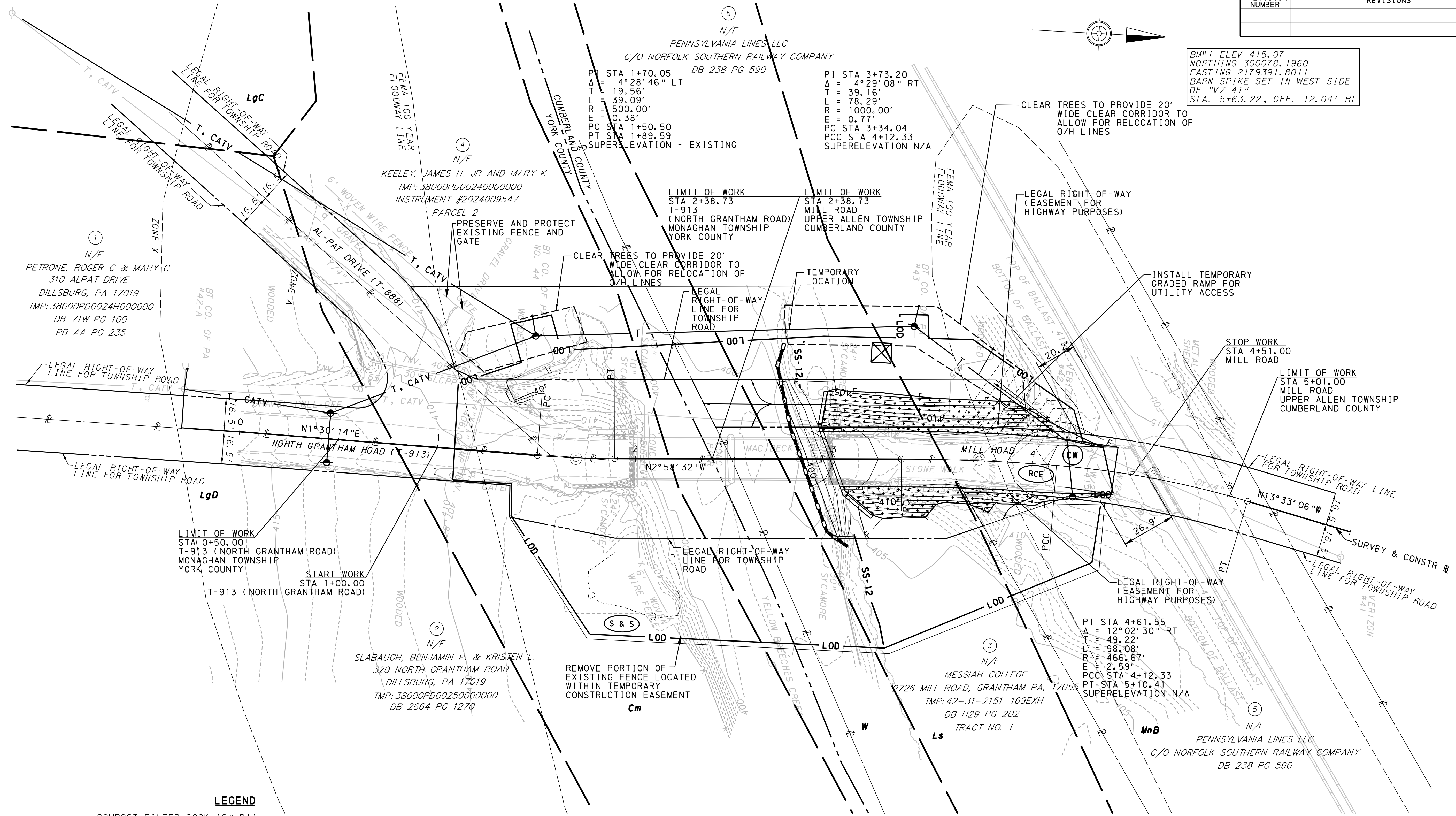
HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	YORK	T-913	-	5 OF 7
	CUMBERLAND	-	-	
MONAGHAN AND UPPER ALLEN TOWNSHIPS				
REVISION NUMBER	REVISIONS			DATE BY

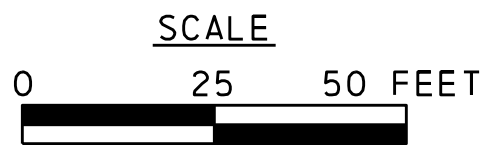
BM#1 ELEV 415.07
NORTHING 300078.1960
EASTING 2179391.8011
BARN SPIKE SET IN WEST SIDE
OF "VZ 41"
STA. 5+63.22, OFF. 12.04' RT

BM#2 ELEV 417.49
NORTHING 299491.6198
EASTING 2179341.5301
A SPIKE SET IN EAST SIDE OF
"BT CO. OF PA #42-A"



LEGEND

- | | | | |
|-------|--|-------|----------------------------|
| SS-12 | COMPOST FILTER SOCK 12" DIA. | MnC | SOIL TYPE |
| F | FILL LINE | S & S | STOCKPILE & STAGING AREA |
| C | CUT LINE | CW | CONCRETE WASHOUT |
| LOD | LIMIT OF DISTURBANCE | RCE | CONSTRUCTION ROCK ENTRANCE |
| --- | SOIL BOUNDARY | X | PUMP WATER FILER BAG |
| --- | FEMA 100 YEAR FLOODWAY BOUNDARY | --- | COFFERDAM |
| X | TEMPORARY PROTECTIVE FENCE | | |
| --- | TEMPORARY ROLLED EROSION CONTROL PRODUCT | | |



SURVEY BOOK NUMBER 003721.0431

EROSION AND SEDIMENT POLLUTION CONTROL PLAN - STAGE 1

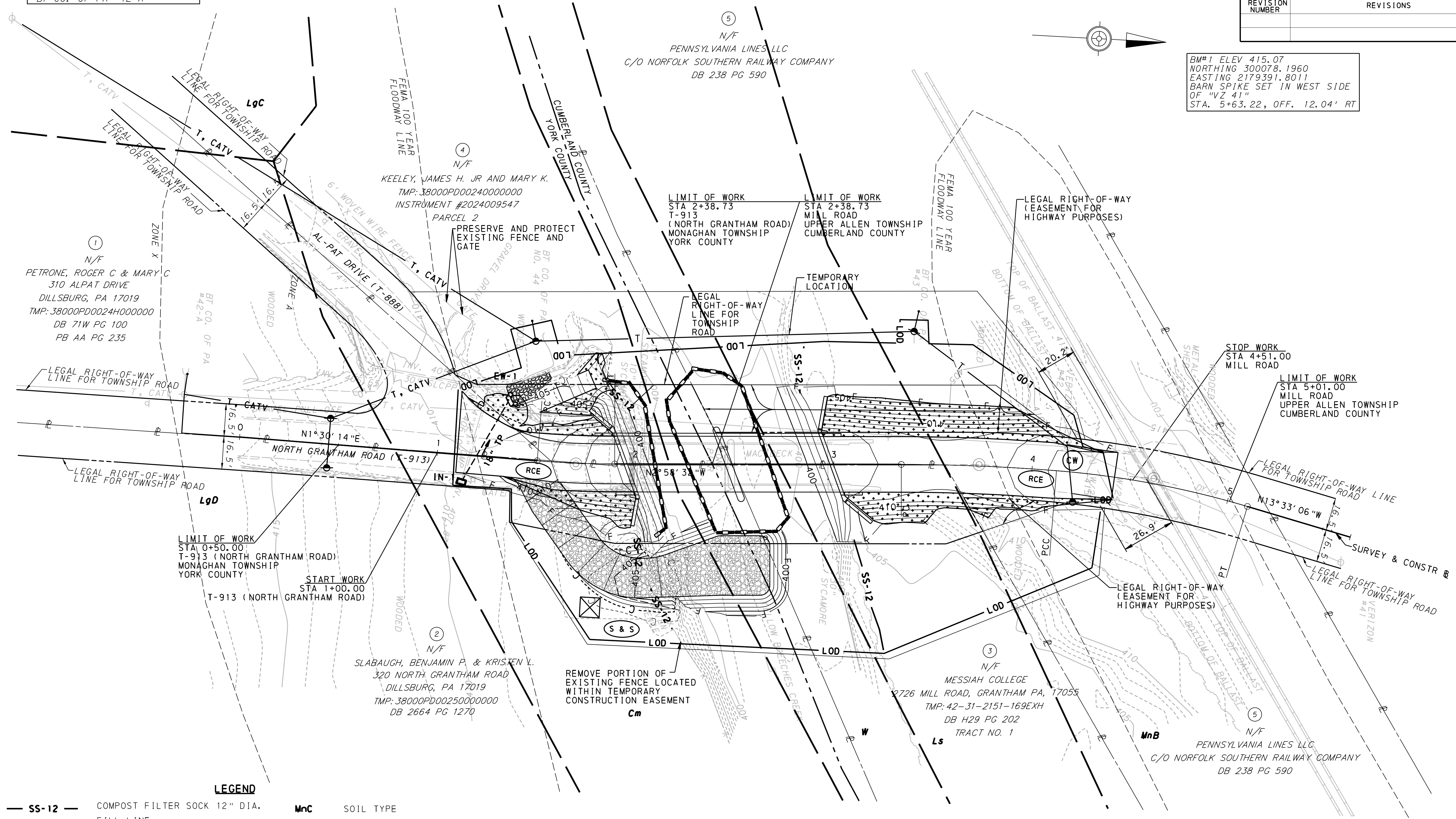
HERBERT, ROWLAND & GRUBIC INC.
CONSULTING ENGINEERS
369 EAST PARK DRIVE
HARRISBURG, PA 17111



DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	6 OF 7	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY

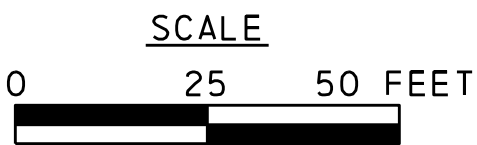
BM#1 ELEV 415.07
NORTHING 300078.1960
EASTING 2179391.8011
BARN SPIKE SET IN WEST SIDE
OF "VZ 41"
STA. 5+63.22, OFF. 12.04' RT

BM#2 ELEV 417.49
NORTHING 299491.6198
EASTING 2179341.5301
A SPIKE SET IN EAST SIDE OF
"BT CO. OF PA #42-A"



LEGEND

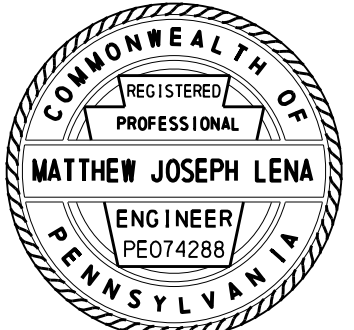
SS-12	COMPOST FILTER SOCK 12" DIA.	MnC	SOIL TYPE
F	FILL LINE	S & S	STOCKPILE & STAGING AREA
C	CUT LINE	CW	CONCRETE WASHOUT
LOD	LIMIT OF DISTURBANCE	RCE	ROCK CONSTRUCTION ENTRANCE
SOIL BOUNDARY		PUMP WATER FILER BAG	
FEMA 100 YEAR FLOODWAY BOUNDARY		ROCK APRON	
TEMPORARY PROTECTIVE FENCE		COFFERDAM	
TEMPORARY ROLLED EROSION CONTROL PRODUCT			
TEMPORARY CAUSEWAY			



SURVEY BOOK NUMBER 003721.0431

EROSION AND SEDIMENT POLLUTION CONTROL PLAN - STAGE 2

HERBERT, ROWLAND & GRUBIC INC.
CONSULTING ENGINEERS
369 EAST PARK DRIVE
HARRISBURG, PA 17111

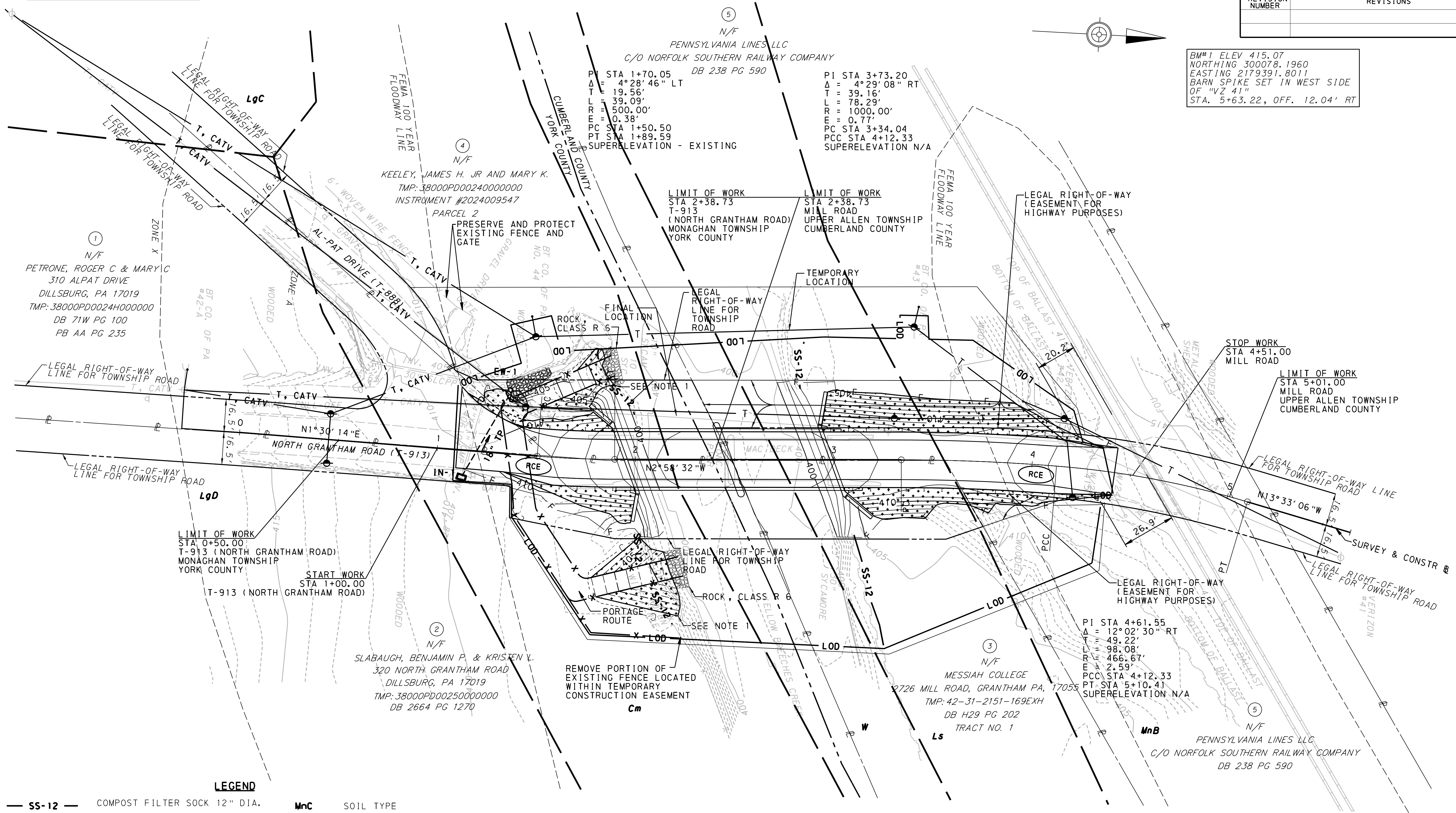


FILE NAME: P:\003721\003721_0431\Microstation\ESC\T0037210431 ESC PL02.dgn
PLOT DATE: 8/12/2025 9:02:19 AM
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SYS - Microstation standards\plotdrv\p10431.dwt

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
8-0	YORK	T-913	-	7 OF 7
	CUMBERLAND	-	-	
MONAGHAN AND UPPER ALLEN TOWNSHIPS				
REVISION NUMBER	REVISIONS			DATE BY

BM#1 ELEV 415.07
NORTHING 300078.1960
EASTING 2179391.8011
BARN SPIKE SET IN WEST SIDE
OF "VZ 41"
STA. 5+63.22, OFF. 12.04' RT

BM#2 ELEV 417.49
NORTHING 299491.6198
EASTING 2179341.5301
A SPIKE SET IN EAST SIDE OF
"BT CO. OF PA #42-A"



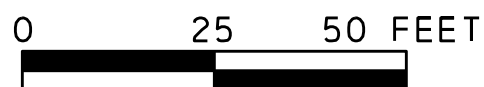
LEGEND

SS-12	COMPOST FILTER SOCK 12" DIA.	MnC	SOIL TYPE
F	FILL LINE	S & S	STOCKPILE & STAGING AREA
C	CUT LINE	CW	CONCRETE WASHOUT
LOD	LIMIT OF DISTURBANCE	RCE	ROCK CONSTRUCTION ENTRANCE
SOIL BOUNDARY		⊗	PUMP WATER FILER BAG
FEMA 100 YEAR FLOODWAY BOUNDARY		ROCK APRON	
TEMPORARY PROTECTIVE FENCE			
TEMPORARY ROLLED EROSION CONTROL PRODUCT			

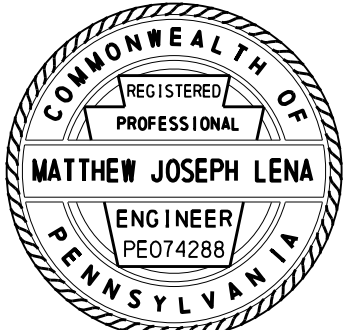
NOTES:

1. UPON REMOVAL OF PORTAGE RESTORE STREAMBANK EMBANKMENT GRADING TO PRE-PROJECT CONDITIONS; BACKFILL WITH CLASS R-6 ROCK TO ELEVATION 402' AND PLACE EROSION CONTROL MULCH BLANKET ON REMAINING DISTURBED EMBANKMENT SLOPES.

SCALE

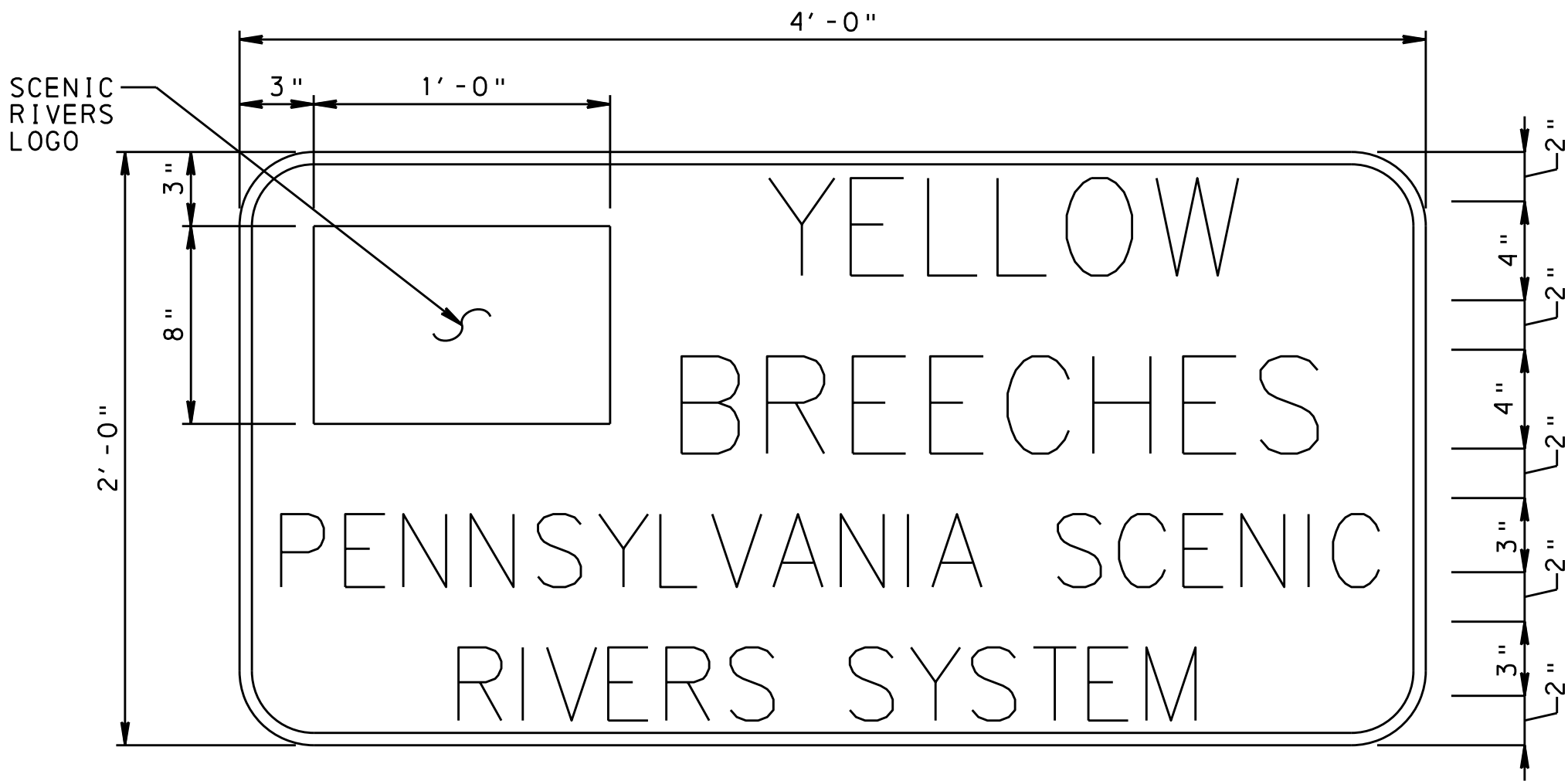


HERBERT, ROWLAND & GRUBIC INC.
CONSULTING ENGINEERS
369 EAST PARK DRIVE
HARRISBURG, PA 17111



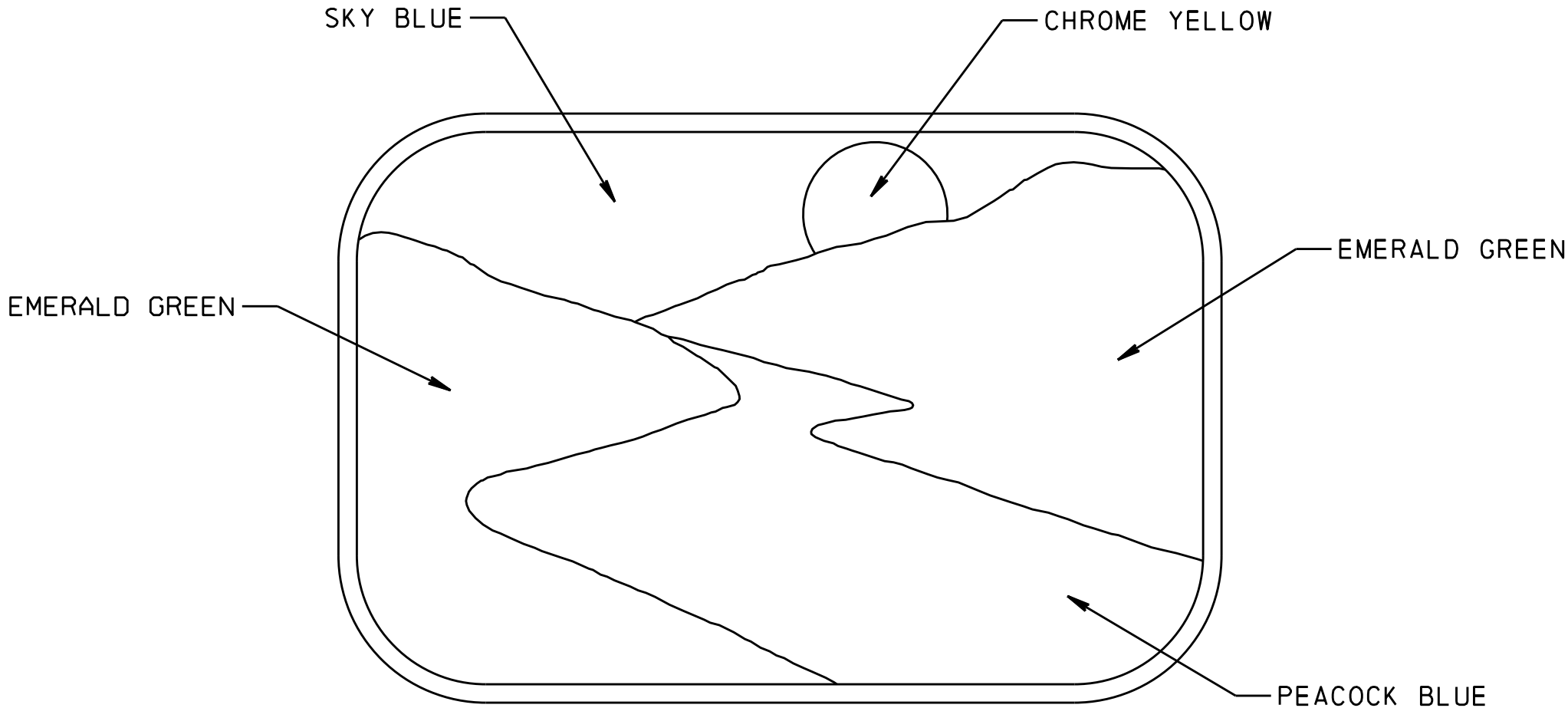
FILE NAME: P:\0037\003721_0431\Microstation\SPM\T0037210431_SPM_GN.DGN
PLOT DATE: 4/1/2025 12:08:00 PM
PEN TABLE: filedateuser.tbl
PLOT DRIVER: r1\sys - Microstationstandards\plotdrv\p1\pdf\pdf.bw,full,pltrcg

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	1 OF 4	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY



DCNR SIGN "A" DETAIL
NOT TO SCALE

PENNSYLVANIA DEPARTMENT OF
CONSERVATION AND NATURAL RESOURCES
SIGN: 0.080 GAUGE ALUMINUM
COLOR: LEGEND AND BORDER - WHITE TYPE III
BACKGROUND - BLUE TYPE III

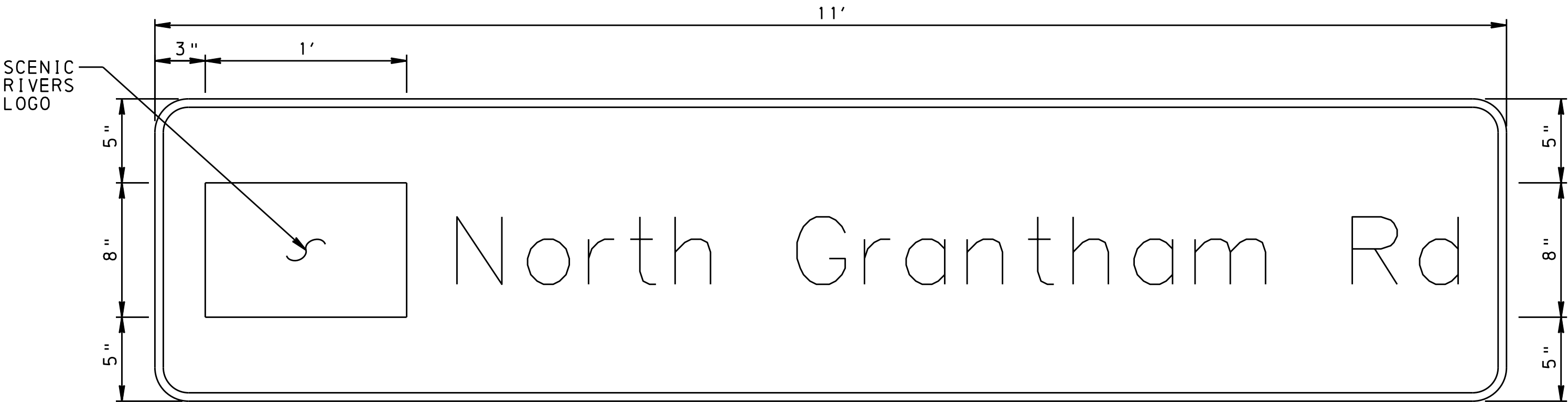


SCENIC RIVERS LOGO
NOT TO SCALE

COLOR: RIVER - PEACOCK BLUE - AD-VANCE
LAND - EMERALD GREEN - COLONIAL
SUN - CHROME YELLOW - COLONIAL
BACKGROUND - SKY BLUE
BORDER - WHITE TYPE III
SIZE: SIZE OF LOGO SHOULD BE IN PROPORTION
TO SIZE OF SIGN WITH LETTERING

GENERAL NOTES

- ALL STATIONS ARE APPROXIMATE.
- FINAL APPLICATION OF ALL PAVEMENT MARKINGS SHALL BE AFTER COMPLETION OF ALL ASSOCIATED PROJECT ROADWAY CLEAN-UP.
- GOVERNING PUBLICATIONS FOR SIGNING AND PAVEMENT MARKING OPERATIONS ARE AS FOLLOWS:
FHWA - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
PDT PUB. 35 - APPROVED CONSTRUCTION MATERIALS (BULLETIN 15)
PDT PUB. 46 - TRAFFIC ENGINEERING MANUAL
PDT PUB. 111 - TRAFFIC CONTROL PAVEMENT MARKING AND SIGNING STANDARDS
PDT PUB. 236 - HANDBOOK OF APPROVED SIGNS
PDT PUB. 408 - SPECIFICATIONS, (CURRENT LET DATE EDITION)
- UNLESS OTHERWISE SPECIFIED, EXISTING SIGNS DISTURBED DURING CONSTRUCTION SHALL BE PROMPTLY REPLACED BY CONTRACTOR.
- REMOVE ADVANCE LOAD POSTING SIGNS OUTSIDE OF THE PROJECT LIMITS.

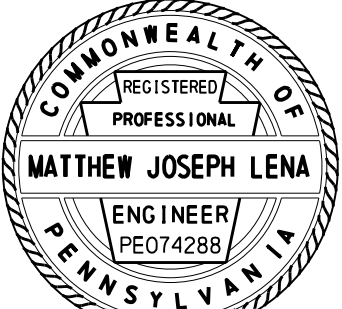


WAYFINDING SIGN (I18-1)
NOT TO SCALE

COLOR: LEGEND AND BORDER - WHITE (NON-REFLECTIVE)
BACKGROUND - BLUE (NON-REFLECTIVE)
FONT: CLEARVIEW HIGHWAY 3W
8" UPPER CASE/6" LOWER CASE LETTER HEIGHT

SPACE	-	2.42
LOGO	-	12.00
SPACE	-	2.44
N	-	7.92
o	-	7.68
r	-	4.40
t	-	5.44
h	-	4.96
SPACE	-	8.00
l	-	4.80
a	-	7.44
r	-	6.64
d	-	5.44
h	-	6.00
a	-	7.44
m	-	8.24
SPACE	-	8.00
R	-	6.96
d	-	5.20
SPACE	-	2.42
TOTAL	-	132.0

HERBERT, ROWLAND & GRUBIC, INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111



RECOMMENDED : Matthew S. Clouser
Digitally signed by Matthew S. Clouser
Date: 2025.05.12 10:59:53 -0400
5-12-25

for DISTRICT TRAFFIC ENGINEER DATE

4/03/2025

TABULATION OF QUANTITIES

PAVEMENT MARKINGS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK	7219	BRG	2 OF 4

[illegible]

TABULATION OF QUANTITIES

SIGNING

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				08	YORK			3 OF 4

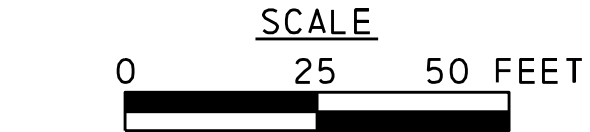
[illegible]

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
8-0	YORK	T-913	-	4 OF 4	
	CUMBERLAND	-	-		
MONAGHAN AND UPPER ALLEN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY

FILE NAME: P:\003721\0431\micros\station\SPM\T0037210431 SPM PL.DGN
PLOTTER: 8/11/2025 2:55:32 PM
PEN TABLE: file date user: jlb
PLOT DRIVER: R:\SYS - Microstation\standards\plotdrv\XMPDF.pdf.bw.full.plt.ctb

LEGEND

- DY/4"
- PROPOSED POST MOUNTED SIGN, TYPE B
- T
- PROPOSED STRUCTURE MOUNTED SIGN
- ▲
- GUIDE RAIL MOUNTED DELINEATOR TYPE B (W/B) AND TYPE D (W/B)
- DY/4"
- EXISTING 4" DOUBLE YELLOW PAVEMENT MARKINGS
- Y/4"
- EXISTING 4" SINGLE YELLOW PAVEMENT MARKINGS
- W/24"
- EXISTING 24" SINGLE WHITE PAVEMENT MARKINGS
- p
- EXISTING SIGN



SURVEY BOOK NUMBER 003721.0431

SIGNING AND PAVEMENT MARKING NOTES

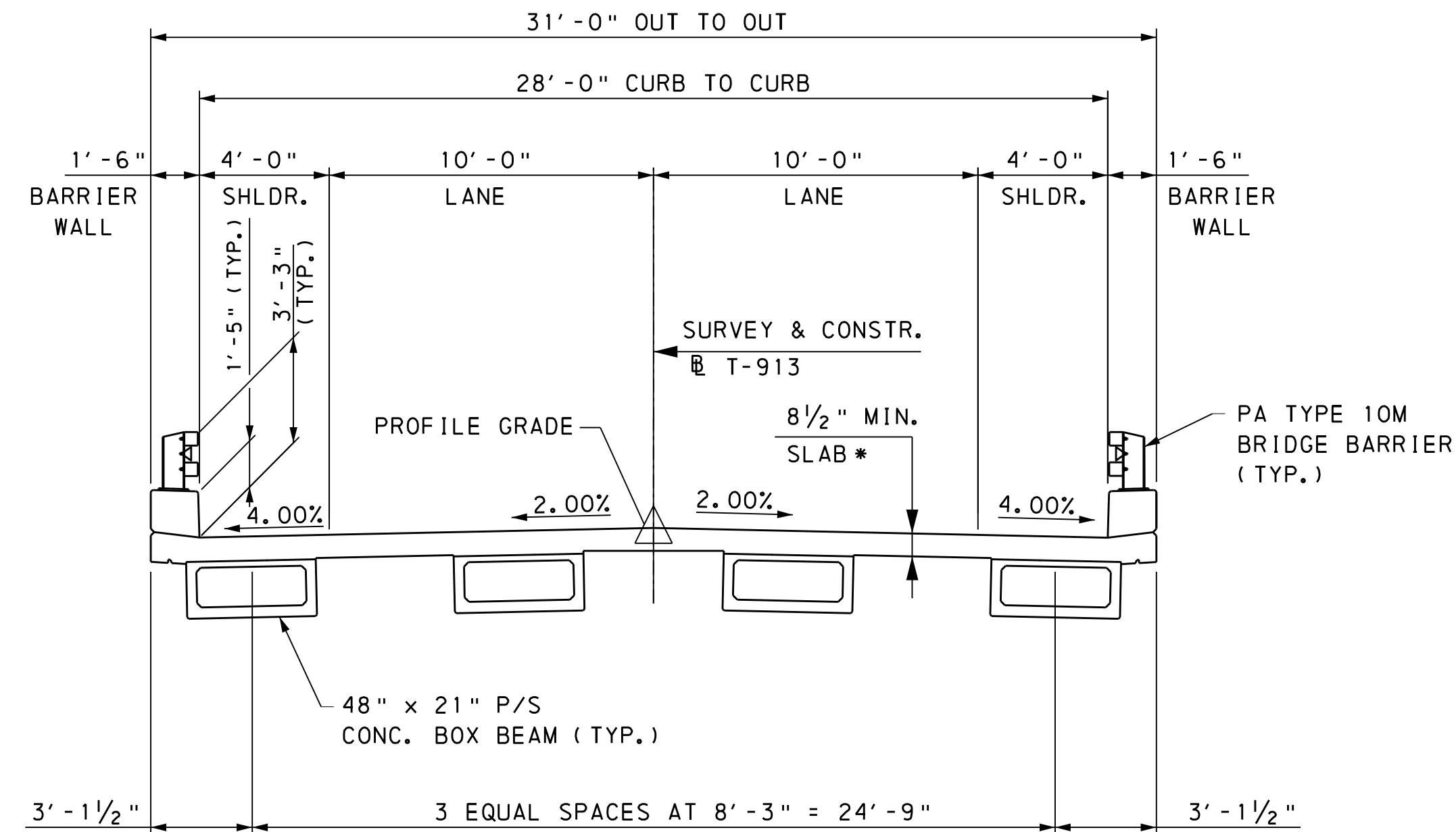
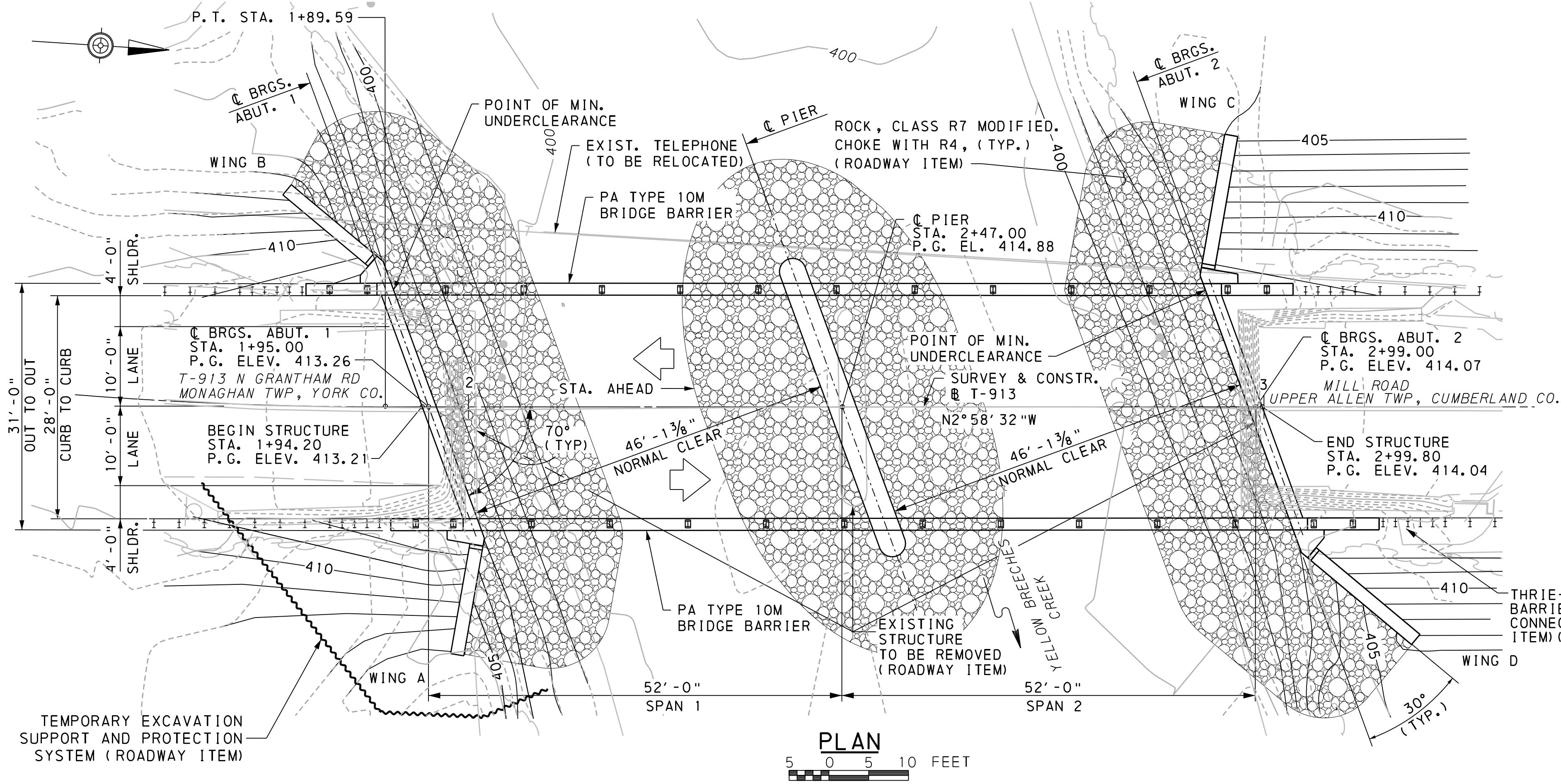
1. REMOVE ADVANCE LOAD POSTING SIGNS AT THE INTERSECTION OF NORTH GRANTHAM ROAD AND SUMMIT DRIVE (BRIDGE/WEIGHT LIMIT 25 TONS/EXCEPT COMBINATIONS 38 TONS/ 1/2 MILES AHEAD) AND MILL ROAD AND UNIVERSITY AVENUE (BRIDGE/WEIGHT LIMIT 25 TONS/EXCEPT COMBINATIONS 38 TONS/ 450 FEET)



HERBERT, ROWLAND & GRUBIC INC.
CONSULTING ENGINEERS
369 EAST PARK DRIVE
HARRISBURG, PA 17111

SIGNING AND PAVEMENT MARKING PLAN

FILE NAME: P:\0037\003721_0431\micr\station\BRIDGE\01-B0037210431-Br Idge 247 General Plan.dgn
PLOTTER: 4/29/2025 2:54:48 PM
PEN TABLE: file date user: tb
PLOT DRIVER: r1\SYS - Microstation\Br Idge\pdf_bw_full.plt.ctb



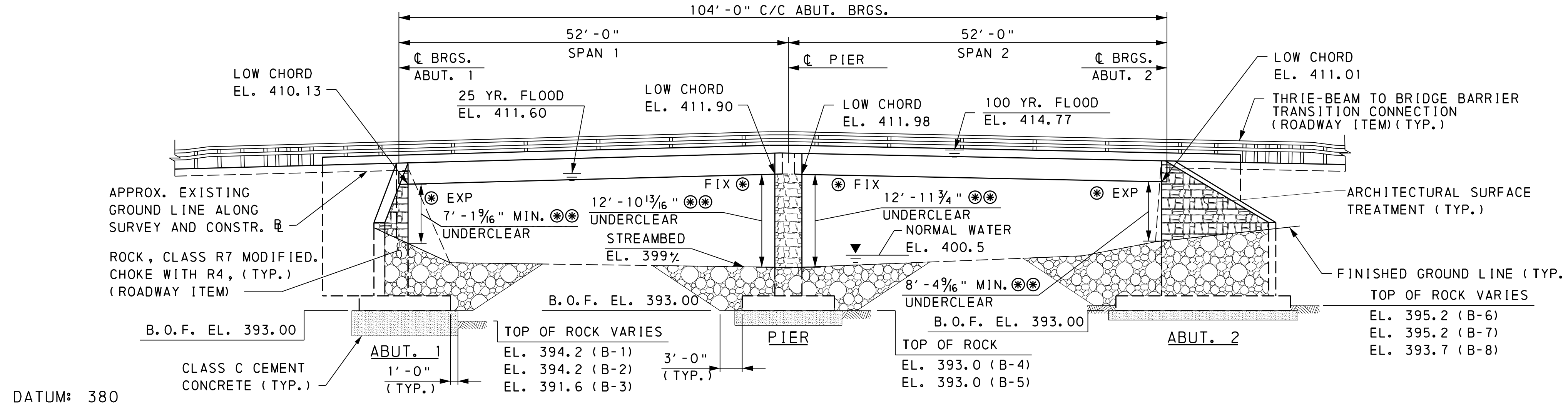
HORIZONTAL CURVE DATA

P.I. STA. 1+70.05
D = 11°27'33"
Δ = 4°28'46" LT.
R = 500.00'
T = 19.56'
L = 39.09'
E = 0.38'

VERTICAL CURVE DATA

PVI STA. 2+48.33
PVI EL. 416.80'
L.V.C. 130.00'
M.O. -1.91'

6.530 % -5.200 %



HYDRAULIC DATA

DRAINAGE AREA = 168.8 SQ. MI.

DESIGN FLOOD:

FREQUENCY = 25 YEARS
MAGNITUDE = 6,541 CFS
EXIST. VELOCITY = 3.61 FPS
EXIST. ELEVATION = 412.14
PROP. VELOCITY = 3.81 FPS
PROP. ELEVATION = 411.60

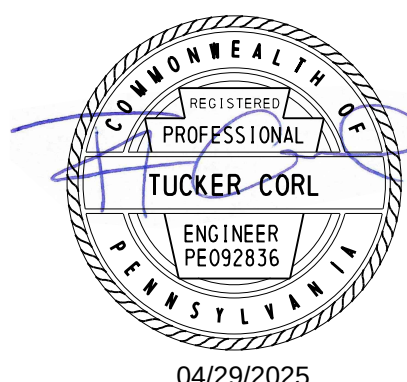
100 YR. FLOOD:

MAGNITUDE = 10,745 CFS
EXIST. VELOCITY = 4.41 FPS
EXIST. ELEVATION = 414.92
PROP. VELOCITY = 4.48 FPS
PROP. ELEVATION = 414.77

FLOOD OF RECORD: N/A

LEGEND

- EXISTING OVERHEAD TELEPHONE LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- TRAFFIC DIRECTION



PREPARED BY
HERBERT, ROWLAND AND GRUBIC INC.
369 EAST PARK DRIVE
HARRISBURG, PA 17111

SUPPLEMENTAL DRAWINGS

DESCRIPTION	DWG. NO.	RECM'D DATE
PA TYPE 10M BRIDGE BARRIER	BC-709M	10-07-24
PERMANENT METAL DECK FORMS	BC-732M	11-23-22
ANCHOR SYSTEMS	BC-734M	02-19-21
WALL CONSTRUCTION & EXPANSION JOINT DETAILS	BC-735M	09-30-16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	11-23-22
CONCRETE DECK SLAB DETAILS	BC-752M	11-23-22
BEARINGS	BC-755M	01-31-19
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	11-23-22
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	11-23-22
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06-01-10
BACKFILL AT STRUCTURES	RC-12M	11-01-22
GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS	RC-50M	02-27-23
TYPE 31 STRONG POST GUIDE RAIL	RC-51M	09-01-23

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
GENERAL PLAN AND ELEVATION

RECOMMENDED 2025.05.19
Derek Mitch
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 40
+ SUPPLEMENTAL DRAWINGS
L-366

GENERAL NOTES

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL PART 4, DECEMBER 2019 EDITION

LIVE LOAD DISTRIBUTION IS BASED UPON DM-4 DISTRIBUTION FACTORS METHOD.

DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

DESIGN LIVE LOADS

PHL-93, P-82 AND P2016-13

FATIGUE DESIGN IS BASED ON THE FOLLOWING:
PRESTRESSED CONCRETE: ADTT 92 (2044) ONE DIRECTIONAL

MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE: 0.0948 √f'c

DEAD LOADS

INCLUDES 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.

GENERAL

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5 2015 BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.

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

USE CLASS AAP CEMENT CONCRETE IN DECK SLAB.

USE CLASS AA CEMENT CONCRETE IN BARRIERS, CONCRETE DIAPHRAGMS, CHEEKWALLS, CURTAIN WALLS, SHEAR BLOCKS, AND SAFETY WINGS.

USE CLASS A CEMENT CONCRETE IN PIERS, ABUTMENTS BELOW BRIDGE SEAT, WINGWALLS, AND FOOTINGS.

USE CLASS C CEMENT CONCRETE BELOW THE BOTTOM OF FOOTINGS WHEN SPECIFIED.

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

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS IN ALL COMPONENTS UNLESS OTHERWISE NOTED.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

USE STAINLESS STEEL DOWEL BARS PER PUBLICATION 408/2020 SECTION 709.1(f).

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS EXCEPT AS INDICATED.

SITE CLASS IS NOT CLASS E.

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

PLACE CHEEKWALLS AND CONCRETE SHEAR BLOCKS AFTER BEAMS ARE SET IN POSITION.

CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH BY 3/4 INCH, EXCEPT AS NOTED.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

USE EITHER PERMANENT METAL FORMS OR REMOVABLE FORMS TO CONSTRUCT THE DECK SLAB.

DECK SLAB THICKNESS INCLUDES A 1/2 INCH INTEGRAL WEARING SURFACE.

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

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

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

DO NOT START TO CAST THE CONTINUITY DIAPHRAGM PRIOR TO NINETY (90) DAYS FROM THE TIME OF BEAM CASTING.

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

EXISTING BRIDGE IS POSTED FOR A WEIGHT RESTRICTION OF 25 TONS. EXCEPT COMBINATIONS 38 TONS. CONSTRUCTION LOADING LIMITS HAVE BEEN REDUCED IN ACCORDANCE WITH PUBLICATION 408, SECTION 105.17. THE CONSTRUCTION LOADING LIMITS ARE: NO MATERIAL STOCKPILE SHALL BE PLACED ON THE BRIDGE. VEHICLES AND EQUIPMENT SHALL NOT EXCEED THE POSTED LIMIT.

NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH FISH COMMISSION DURING CONSTRUCTION:
SOUTHCENTRAL REGIONAL OFFICE
1704 PINE ROAD
NEWVILLE, PA 17241
(717) 486-7087

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.

FOUNDATION NOTES

THE FINAL PREPARED FOOTING EXCAVATIONS ARE TO BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER (DGE) OR HIS REPRESENTATIVE. NOTIFY THE DGE OF A FIRM DATE AND TIME AT LEAST 48 HOURS BEFORE THE REQUESTED DATE AND TIME OF THE INSPECTION OF AN EXCAVATION, BUT GIVE THE NOTICE BETWEEN THE START OF WORK ON MONDAY AND NOON THE FOLLOWING FRIDAY. DO NOT SCHEDULE AN INSPECTION OF A FOUNDATION ON SATURDAYS, SUNDAYS, OR HOLIDAYS WITHOUT PRIOR APPROVAL OF THE DGE. PROVIDE SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH TO INSPECT.

EXCAVATE TO THE PLANNED BEARING ELEVATION USING MECHANICAL EQUIPMENT, MAKING ALL EXCAVATIONS NEAT. BLASTING IS NOT PERMITTED FOR ROCK EXCAVATION. THE EXCAVATION IN ROCK SHOULD BE CUT NEAT AND CONCRETE PLACED AGAINST A VERTICAL ROCK SURFACE.

THE ACTUAL BEARING CONDITIONS AT THE BOTTOM OF THE EXCAVATION SHOULD BE CONFIRMED IN THE FIELD DURING EXCAVATION, UNDER SUPERVISION OF A PROFESSIONAL ENGINEER QUALIFIED IN GEOTECHNICAL ENGINEERING. THE BEARING STRATUM DOES NOT MEET THE STRENGTH CHARACTERISTICS OF THE ANALYZED BEARING MATERIALS, THE EXCAVATION SHOULD CONTINUE UNTIL THE BEARING STRATUM MEETS OR EXCEEDS THE DESIGN CRITERIA. THE RESULTING OVER-EXCAVATION SHOULD BE BACKFILLED TO THE FOUNDATION ELEVATION WITH CLASS C CEMENT IN ACCORDANCE WITH THE SPECIAL PROVISIONS-CLASS C CEMENT CONCRETE, OVER EXCAVATION.

OVER EXCAVATE A MINIMUM OF 2 FEET BELOW ROCK (AFTER ROCK IS ENCOUNTERED) AT THE PROPOSED FOOTINGS.

UPON APPROVAL OF THE BEARING SURFACES, PLACE CLASS C CEMENT CONCRETE OVER THE ENTIRE BEARING SURFACE PRIOR TO THE END OF THE WORK SHIFT TO MINIMIZE EXPOSURE OF THE BEARING SURFACE TO THE ELEMENTS.

THE EXCAVATION SHOULD BE COMPLETELY CLEANED OF LOOSE MATERIAL OR DEBRIS IMMEDIATELY PRIOR TO PLACEMENT.

DIRECT ALL SURFACE RUNOFF AWAY FROM EXCAVATIONS.

CONTINUOUSLY DEWATER ALL EXCAVATIONS.

THE DEPARTMENT REPRESENTATIVE MAY ORDER THE FOOTING TO BE CONSTRUCTED AT ANY ELEVATION OR OF ANY DIMENSIONS NECESSARY TO PROVIDE A PROPER FOUNDATION.

PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS. DESIGN ALL TEMPORARY EXCAVATIONS IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS (29 CFR PART 1926.650-652, SUBPART P). THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND DESIGN OF TEMPORARY SHORING AND BRACING. EVERY EFFORT SHOULD BE MADE TO PREVENT SURFACE WATER FROM ENTERING OPEN EXCAVATIONS. ANY WATER WHICH MAY ACCUMULATE IN THE BOTTOMS OF THE EXCAVATION SHOULD BE REMOVED IMMEDIATELY. THE SPECIAL PROVISION CONTAINS PARAMETERS FOR THE DESIGN OF TEMPORARY BRACING AND SHORING. ANY SIGNIFICANT VARIATIONS IN MATERIAL TO BE SUPPORTED MAY NECESSITATE A RE-DESIGN FOR THE TEMPORARY SHORING. THIS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PROTECTIVE COATING NOTES

APPLY PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE) IN ACCORDANCE WITH PUBLICATION 408, SECTION 1019, TO THE TOP OF DECK, AND INSIDE AND TOP SURFACES OF THE BARRIERS.

LIST OF ABBREVIATIONS

B.O.F. = BOTTOM OF FOOTING
BRGS. = BEARINGS
C.G. = CENTER OF GRAVITY
C/C = CENTER TO CENTER
E.F. = EACH FACE
EL. = ELEVATION
F.F. = FRONT FACE
FIN. = FINAL
HORIZ. = HORIZONTAL
I.F. = INSIDE FACE
MOM. = MOMENT
O.F. = OUTSIDE FACE
PUB. = PUBLICATION
P/S = PRESTRESSED
R.F. = REAR FACE
SPA. = SPACES
STR = STRENGTH
W.P. = WORKING POINT

INDEX OF DRAWINGS

SHEET NUMBER	TITLE
1	GENERAL PLAN
2	GENERAL NOTES
3	STAKE-OUT PLAN
4	QUANTITIES & BRIDGE RATINGS
5	ABUTMENT 1 - PLAN AND ELEVATION
6	ABUTMENT 1 - FOOTING PLAN
7	ABUTMENT 1 - WINGWALLS
8	ABUTMENT 1 - SAFETY WING A
9	ABUTMENT 1 - SAFETY WING A DETAILS
10	ABUTMENT 1 - SAFETY WING B
11	ABUTMENT 1 - SAFETY WING B DETAILS
12	ABUTMENT 2 - PLAN AND ELEVATION
13	ABUTMENT 2 - FOOTING PLAN
14	ABUTMENT 2 - WINGWALLS
15	ABUTMENT 2 - SAFETY WING C
16	ABUTMENT 2 - SAFETY WING C DETAILS
17	ABUTMENT 2 - SAFETY WING D
18	ABUTMENT 2 - SAFETY WING D DETAILS
19	PIER
20	PIER DETAILS
21	FRAMING PLAN
22	BEAM NOTES AND TABLES
23	BEAM REINFORCING DETAILS
24	BEAM DETAILS
25	DAP DETAILS
26	BEARING PAD DETAILS
27	SLAB PLAN
28	SLAB TYPICAL SECTION
29	BARRIER DETAILS
30	DIAPHRAGM DETAILS
31	REINF. BAR SCHEDULE-ABUTMENTS
32	REINF. BAR SCHEDULE-PIER
33	REINF. BAR SCHEDULE-SUPERSTRUCTURE
34	BRIDGE PLAQUE DETAILS
35	TEST BORING RESULTS
36	TEST BORING RESULTS
37	TEST BORING RESULTS
38	TEST BORING RESULTS
39	TEST BORING RESULTS
40	TEST BORING RESULTS

Mark	Descr iption	By	Chk' d.	Recm' d.	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

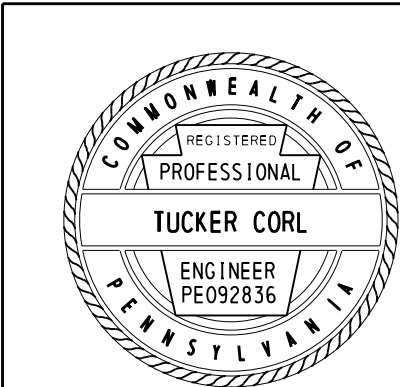
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
GENERAL NOTES

RECOMMENDED 2025.05.19

SHEET 2 OF 40

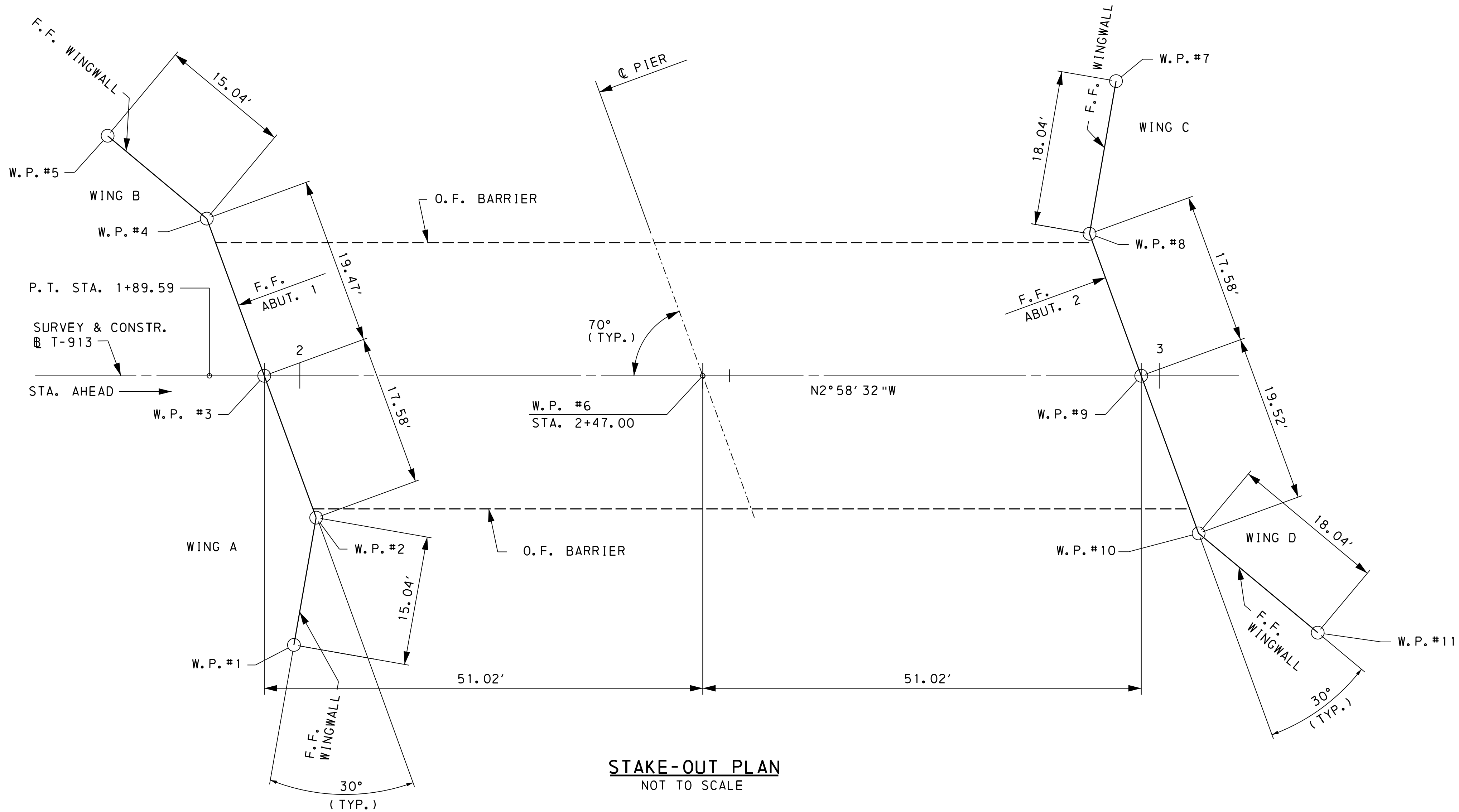
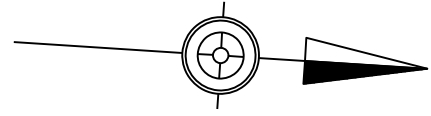
L - 366



FILE NAME: P:\0037\003721\0431\Microstation\BRIDGE\02-B3721_0431 GN.dgn
PLOTTER: 12/4/2024 8:47:57 AM kbookman
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SYS - Microstation\BrIDGE\pdf_bw_full.plt.ctb

DES: TJC DWG: KSB CKD: TJC

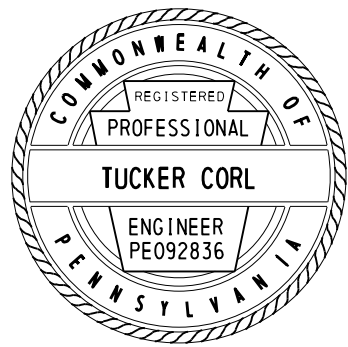
FILE NAME: P:\0037\003721_0431\Microstation\BRIDGE\03-B3721_0431 SO.dgn
PLOT DATE: 7/23/2024 4:48:29 PM
PEN TABLE: file date user: tb
PLOT DRIVER: r1\SYS - Microstation\Bridge\pdf_bw_full.plt.ctb



STAKE-OUT PLAN
NOT TO SCALE

WORKING POINT COORDINATES		
W. P.	NORTHING	EASTING
1	299721.5011	2179394.1781
2	299723.3403	2179379.2509
3	299716.4769	2179363.0625
4	299708.8775	2179345.1382
5	299696.8685	2179336.0808
6	299767.4326	2179360.4137
7	299813.7311	2179323.6702
8	299811.5247	2179341.5765
9	299818.3883	2179357.7650
10	299826.0081	2179375.7372
11	299840.4122	2179386.6011

FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
STAKE-OUT PLAN

RECOMMENDED	2025.05.19	SHEET 3 OF 40
		L-366

FILE NAME: P:\0037\003721\0431\microsotion\BRIDGE\04-B3721_0431_QT.dgn
PLOTTER: 4/22/2025 4:34:48 PM
PEN TABLE: file date user: tb
PLOT DRIVER: r1\sys - Microstation\Br-Idge\pdf_bw_full.plt.ctg

		ALTERNATE STRUCTURE ITEMS						
ITEM NO.	ITEM	UNIT	TOTAL					
8010-0001	BRIDGE STRUCTURE, AS DESIGNED, L-366 (8)	LS	LUMP SUM					
8000-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE (8)	LS	LUMP SUM					
8100-0001	STEEL BRIDGE STRUCTURE (8)	LS	LUMP SUM					
APPROXIMATE QUANTITIES - BRIDGE STRUCTURE AS DESIGNED								
ITEM NO.	ITEM	UNIT	ABUT. 1	ABUT. 2	PIER	SUPER.	TOTAL	
8010-0001	BRIDGE STRUCTURE, AS DESIGNED, L-366 (8)	LS						
(1)	CLASS 3 EXCAVATION	CY	1,215	1,695	305	—	3,215	
(1)	STRUCTURE BACKFILL	CY	600	686	—	—	1,286	
(1)	CLASS AAAP CEMENT CONCRETE (2)	CY	—	—	—	106	106	
(1)	CLASS AA CEMENT CONCRETE (3) (4)	CY	21	22	1	21	65	
(1)	CLASS A CEMENT CONCRETE	CY	144	164	101	—	409	
(1)	NO.57 COARSE AGGREGATE (7) (9)	CY	10	10	—	—	20	
(1)	48" x 21" PRESTRESSED CONC. SPREAD BOX BEAMS (6)	LF	—	—	—	421	421	
(1)	MEMBRANE WATERPROOFING SYSTEM INSTALLED ON OTHER SURFACES (10)	SY	64	70	18	—	152	
(1)	6" STRUCTURE FOUNDATION DRAIN	LF	45	45	—	—	90	
(1)	6" PVC PIPE (SCHEDULE 40)	LF	3	3	—	—	6	
(1)	ARCHITECTURAL SURFACE TREATMENT (8)	SF	474	556	639	—	1,669	
(1)	STAINING OF REINFORCED CONCRETE SURFACES (8)	SF	474	556	639	—	1,669	
(1)	MECHANICALLY GROOVING BRIDGE DECK SURFACE WITH LONGITUDINAL GROOVES (8)	SY	—	—	—	304	304	
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER, BRIDGE SUPERSTRUCTURE) (11)	SY	—	—	—	410	410	
(1)	PA TYPE 10M BRIDGE BARRIER	LF	—	—	—	250	250	
(1)	BRONZE PLAQUE (8)	EA	—	—	—	2	2	
AND								
1002-0053	REINFORCEMENT BARS, EPOXY COATED (5)	LB	12,915	15,204	7,574	33,055	68,748	
AND								
1002-0220	STAINLESS STEEL REINFORCEMENT BARS (5)	LB	—	—	72	—	72	
AND								
1091-0331	EPOXY INJECTION CRACK SEAL	LF	—	—	—	100	100	
AND								
5001-0020	CLASS C CEMENT CONCRETE, OVEREXCAVATION (8)	CY	63	72	45	—	180	
AND								
9204-0100	CLASS 3 EXCAVATION, OVEREXCAVATION (8)	CY	63	72	45	—	180	
(1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8010-0001 GIVEN FOR INFORMATION ONLY. (2) INCLUDES CLASS AAAP CONCRETE IN DECK SLAB AND APPROXIMATELY 7 CUBIC YARDS OF CLASS AAAP CONCRETE TO ACCOUNT FOR STAY-IN-PLACE FORM TROUGHS. (3) INCLUDES CLASS AA CONCRETE IN THE CHEEKWALLS, CURTAIN WALLS, SHEAR BLOCKS AND SAFETY-WINGS. (4) INCLUDES CLASS AA CONCRETE IN BARRIERS AND CONCRETE DIAPHRAGMS. (5) FOR AS DESIGNED STRUCTURE, INCLUDED IN BRIDGE BID ITEMS. FOR ALTERNATE DESIGNS, INCLUDED IN BRIDGE STRUCTURE LUMP SUM BID ITEM. (6) PRESTRESSED CONCRETE SPREAD BOX BEAMS INCLUDES FABRICATION, DELIVERY AND ERECTION OF 8-48"x21" BEAMS. BEAMS ALSO INCLUDE ALL BEARING PADS, STYROFOAM, CLOSED CELL NEOPRENE SPONGE WATERPROOFING REQUIRED AT THE BEAM SEATS, DRILLING OF DOWEL HOLES, SETTING THE DOWEL BARS AND GROUTING. (7) GEOTEXTILE REQUIRED FOR ENCASEMENT IS INCIDENTAL TO THE NO. 57 COARSE AGGREGATE. (8) SEE SPECIAL PROVISIONS. (9) TOTAL QUANTITY INCLUDES 3 CUBIC YARDS OF NO. 57 COARSE AGGREGATE AT THE WEEPHOLES AND 7 CUBIC YARDS OF NO. 57 COARSE AGGREGATE AT THE STRUCTURE FOUNDATION DRAINS. (10) PROVIDE MEMBRANE WATERPROOFING AT TOP OF ABUTMENT 1 AND 2 STEMS, AT THE VERTICAL 1/2" FLUSH EXPANSION JOINT BETWEEN THE ABUTMENT AND WINGS AND ALONG BOTH FACES OF ABUTMENT STEMS, WINGWALLS AND PIER AT THE BASE. INCLUDES 1" AND 2" PREFORMED CELLULAR POLYSTYRENE, STEEL BATTEN PLATES AND SELF TAPPING SCREWS. (11) ONLY APPLY PROTECTIVE COATING TO BRIDGE DECK IF CONCRETE IS POURED BETWEEN SEPTEMBER 1 AND MARCH 1 PER PUBLICATION 408, SECTION 1001.3(k)6								
DES: TJC	DWG: KSB	CKD: TJC						

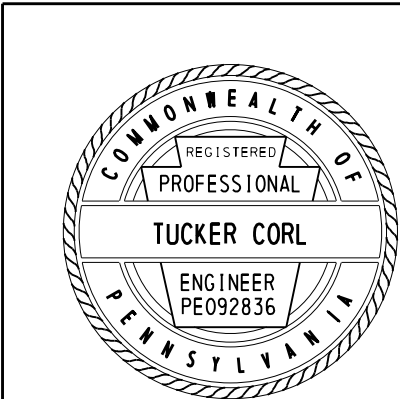
BRIDGE LOAD RATINGS (TONS) WITH FUTURE WEARING SURFACE									
ADTT:	81 (2024)								
ADTT:	92 (2044)								
LIVE LOAD DISTRIBUTION METHOD:			DM-4 DISTRIBUTION FACTORS						
DESIGN & ANALYSIS METHOD:			LOAD AND RESISTANCE FACTOR DESIGN (LRFD)						
CRITICAL BEAM	INTERIOR (EXCEPT TK527, PHL-93 AND ML-80 IR)		BEAM TYPE/SIZE:		P/S SPREAD BOX BEAM, 48" x 21"				
			H-20	HS-20	ML-80	TK527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR		0.777	0.777	0.709	0.709	0.709	-----	-----
	CRITICAL LOCATION		0.11L, SP. 1	0.11L, SP. 1	0.50L, SP. 1	0.50L, SP. 1	0.50L, SP. 1	-----	-----
	LIMIT STATE		STR-I	STR-I	SERV-III	SERV-III	SERV-III	-----	-----
	RATING FACTOR		2.06 (S)	1.45 (S)	1.19 (M)	1.26 (M)	1.05 (M)	-----	-----
	RATING (TONS)		41.1	52.3	43.6	50.4	-----	-----	-----
OPERATING RATING (OR)	DISTRIBUTION FACTOR		0.777	0.777	0.777	0.777	0.777	0.777	0.777
	CRITICAL LOCATION		0.11L, SP. 1	0.11L, SP. 1	0.11L, SP. 1	0.11L, SP. 1	0.11L, SP. 1	0.11L, SP. 1	0.11L, SP. 1
	LIMIT STATE		STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR		2.66 (S)	1.88 (S)	1.67(S)	1.68 (S)	1.53 (S)	1.14 (S)	1.02 (S)
	RATING (TONS)		53.3	67.8	61.2	67.0	-----	116.3	168.8
MAXIMUM FACTORED RESISTANCE	POSITIVE FLEXURE		3,000.47 K-FT						
	CRITICAL LOCATION		0.40L, SP. 1 AND SP. 2						
	NEGATIVE FLEXURE		2,003 K-FT						
	CRITICAL LOCATION		CL. PIER						
	SHEAR		403.20K, SP. 1 AND 403.47K, SP. 2						
CRITICAL LOCATION		0.05L, SP. 1 AND 0.91L, SP. 2							

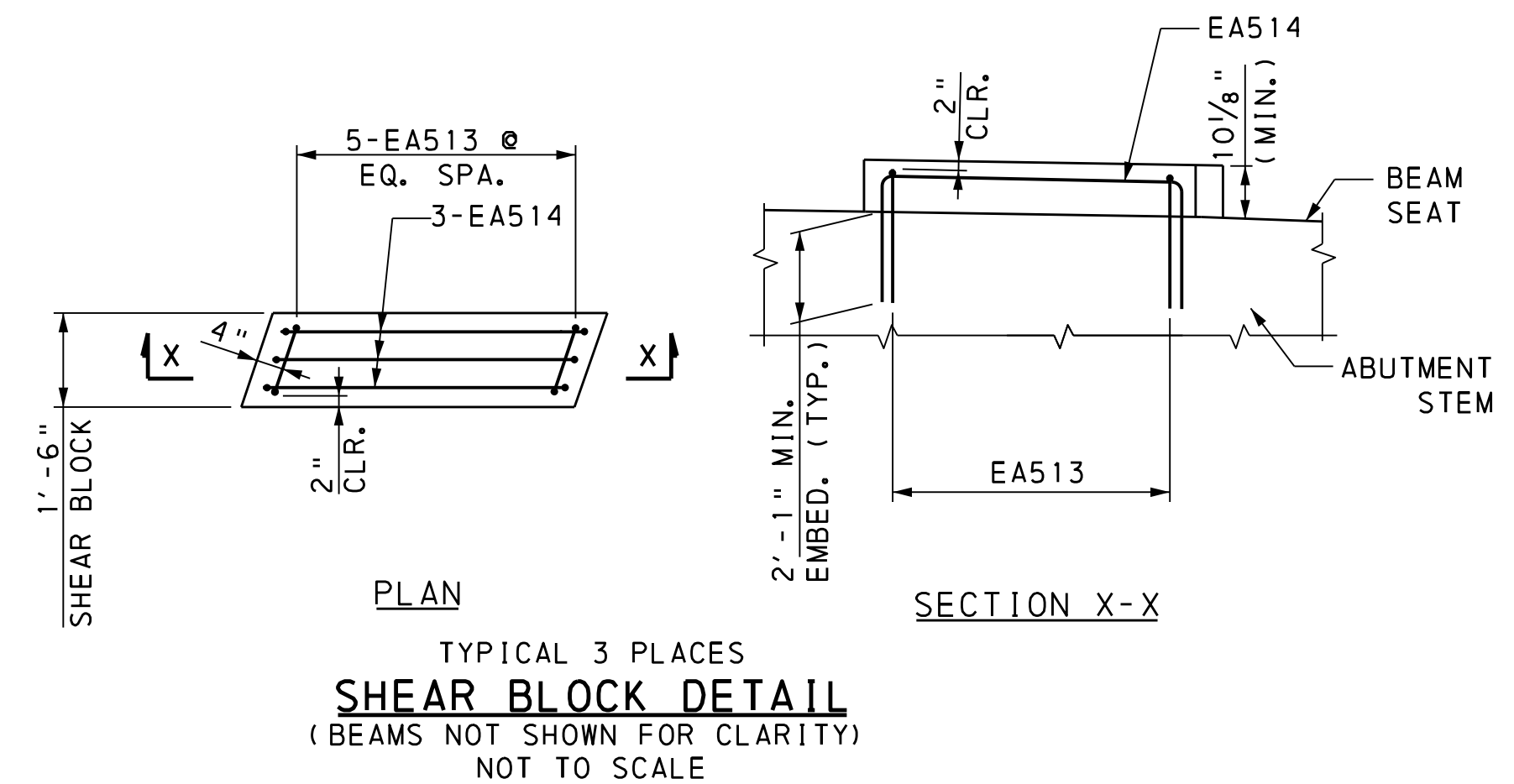
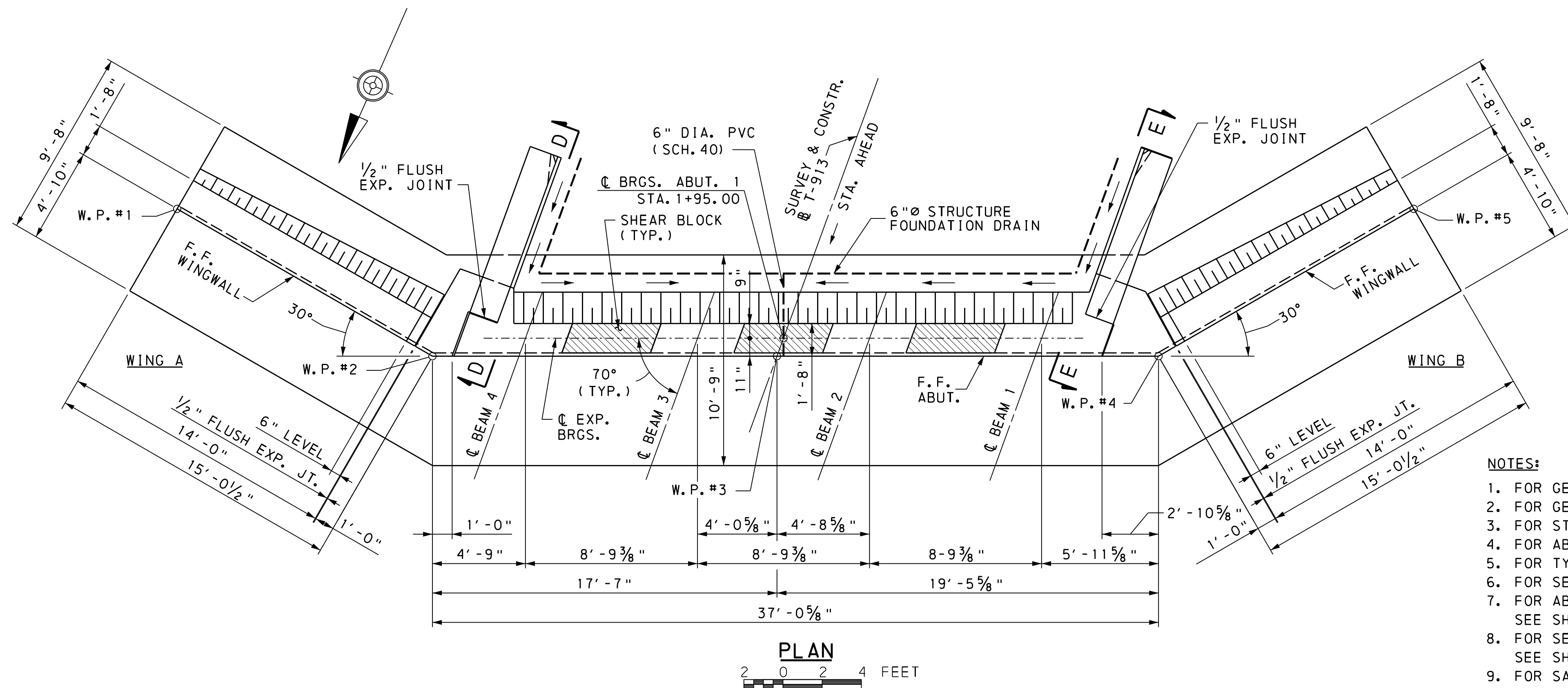
BRIDGE LOAD RATINGS (TONS) WITHOUT FUTURE WEARING SURFACE									
ADTT:	81 (2024)								
ADTT:	92 (2044)								
LIVE LOAD DISTRIBUTION METHOD:			DM-4 DISTRIBUTION FACTORS						
DESIGN & ANALYSIS METHOD:			LOAD AND RESISTANCE FACTOR DESIGN (LRFD)						
CRITICAL BEAM	INTERIOR (EXCEPT PHL-93 AND ML-80 IR)		BEAM TYPE/SIZE:		P/S SPREAD BOX BEAM, 48" x 21"				
			H-20	HS-20	ML-80	TK527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR		0.777	0.777	0.709	0.777	0.709	-----	-----
	CRITICAL LOCATION		0.11L, SP.1	0.11L, SP.1	0.50L, SP.1	0.11L, SP.1	0.50L, SP.1	-----	-----
	LIMIT STATE		STR-I	STR-I	SERV-III	STR-I	SERV-III	-----	-----
	RATING FACTOR		2.16 (S)	1.52 (S)	1.28 (M)	1.36 (S)	1.13 (M)	-----	-----
	RATING (TONS)		43.1	54.9	47.0	54.3	-----	-----	-----
OPERATING RATING (OR)	DISTRIBUTION FACTOR		0.777	0.777	0.777	0.777	0.777	0.777	0.777
	CRITICAL LOCATION		0.11L, SP.1	0.11L, SP.1	0.11L, SP.1	0.11L, SP.1	0.11L, SP.1	0.11L, SP.1	0.33L, SP.2
	LIMIT STATE		STR-II	STR-II	STR-II	STR-II	STR-II	STR-II	STR-II
	RATING FACTOR		2.79 (S)	1.98 (S)	1.75 (S)	1.76 (S)	1.60 (S)	1.20 (S)	1.07 (S)
	RATING (TONS)		55.9	71.1	64.2	70.3	-----	122.0	177.1
MAXIMUM FACTORED RESISTANCE	POSITIVE FLEXURE		3,000.47 K-FT						
	CRITICAL LOCATION		0.40L, SP. 1 AND 0.35L, SP. 2						
	NEGATIVE FLEXURE		2,003 K-FT						
	CRITICAL LOCATION		CL. PIER						
	SHEAR		403.20K, SP. 1 AND 403.47K, SP. 2						
	CRITICAL LOCATION		0.05L, SP. 1 AND 0.91L, SP. 2						

RATING NOTES

1. (S) DENOTES CRITICAL RATING GOVERNED BY SHEAR.
2. (M) DENOTES CRITICAL RATING GOVERNED BY MOMENT.
3. (SM) DENOTES CRITICAL RATING GOVERNED BY SHEAR/MOMENT INTERACTION.
4. THE CRITICAL LOCATION GIVEN IS FROM CENTERLINE OF BEARINGS.
5. THE GIVEN DISTRIBUTION FACTOR IS FOR THE VEHICULAR LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING.
6. RATINGS SHOWN WERE OBTAINED FROM PENNDOT'S LRFD PRESTRESSED CONCRETE GIRDER DESIGN & RATING PROGRAM (VERSION 2.16.0.0).

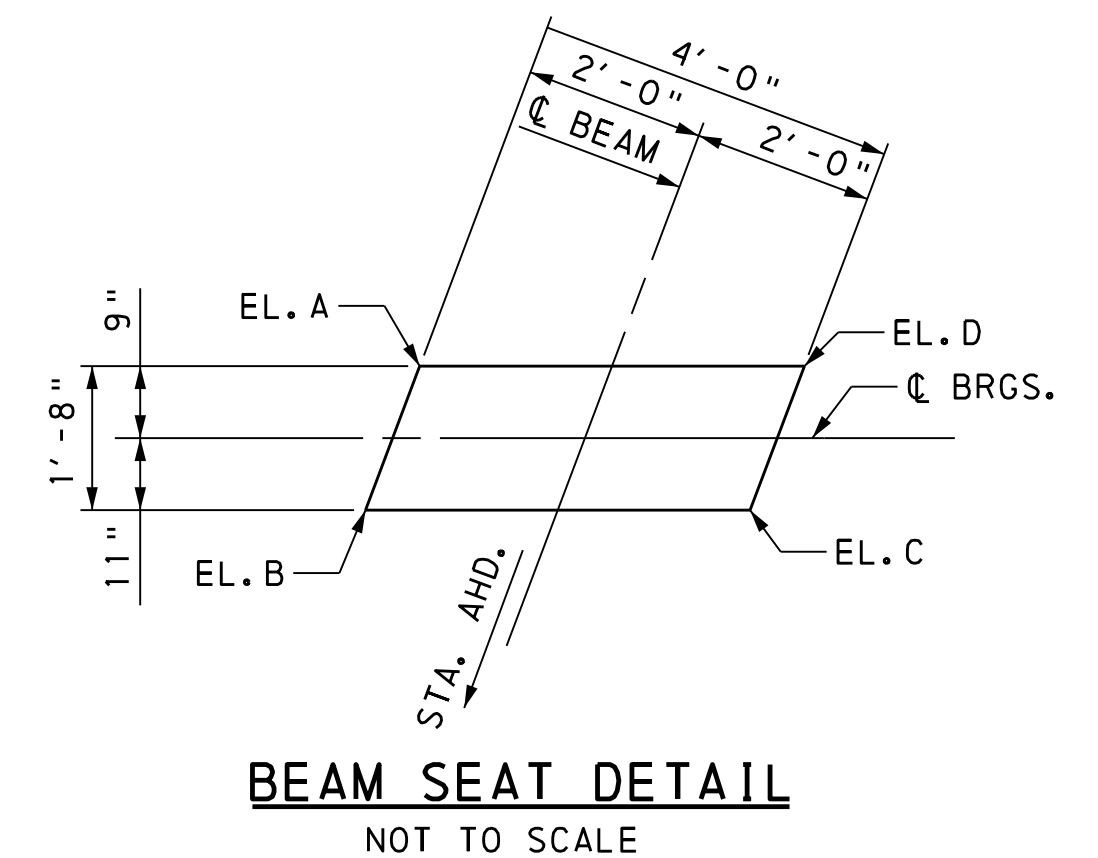
Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386					
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION					
YORK AND CUMBERLAND COUNTIES MONAGHAN AND UPPER ALLEN TOWNSHIPS T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00 OVER YELLOW BREECHES CREEK TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAM BRIDGE QUANTITIES & BRIDGE RATINGS					
RECOMMENDED 2025.05.19					SHEET 4 OF 40
					L - 366





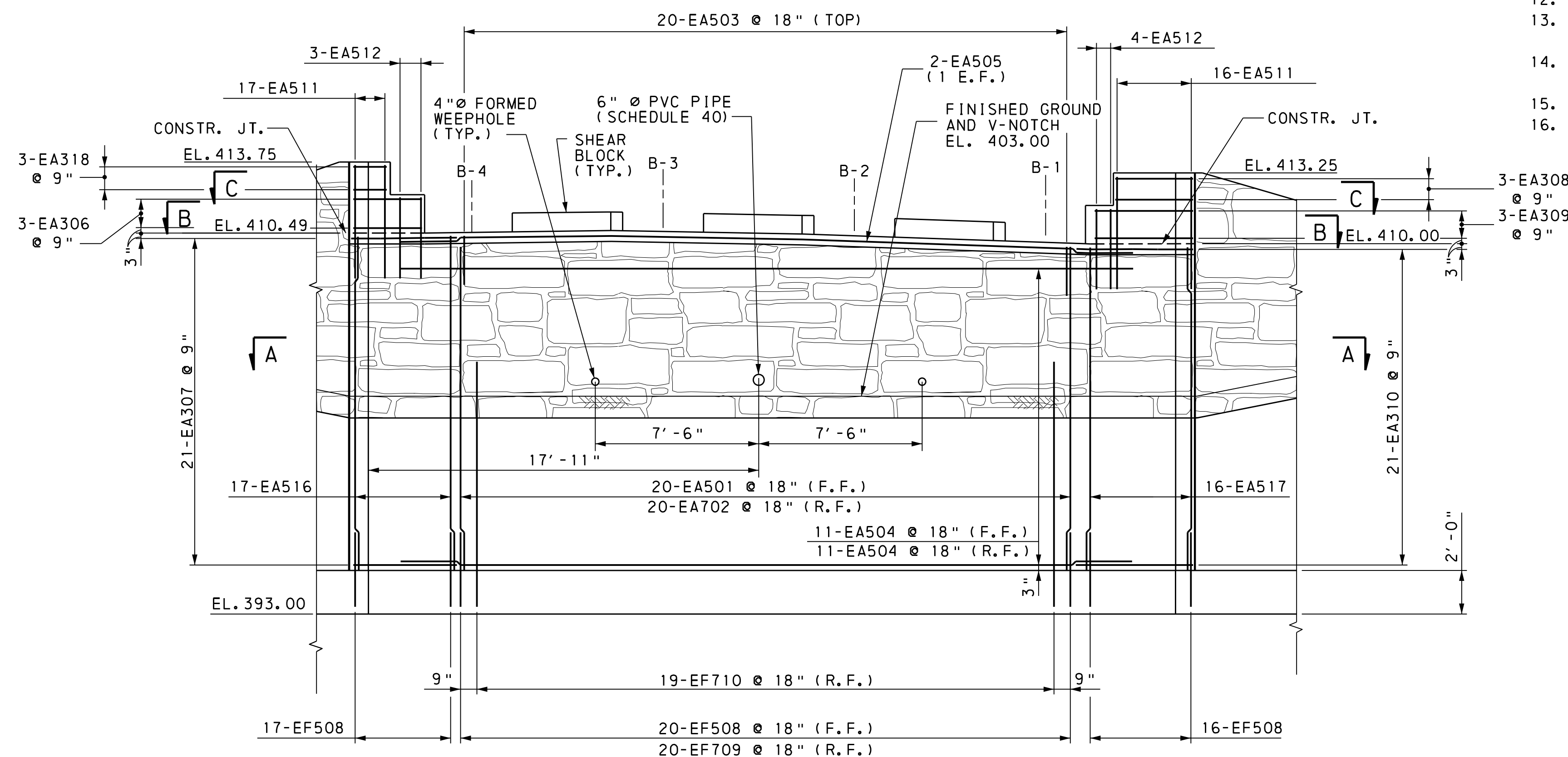
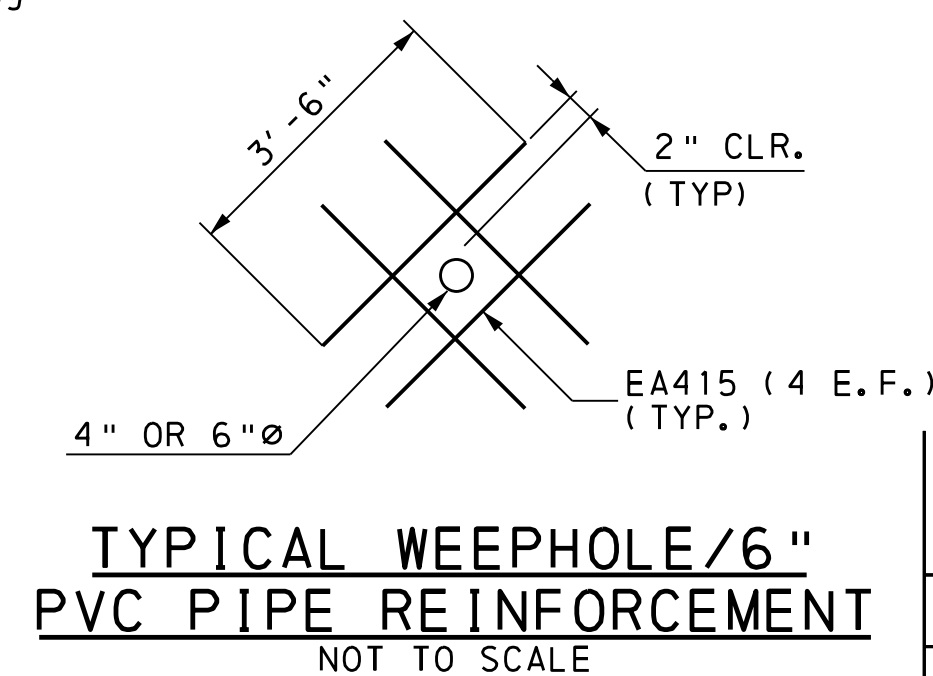
- NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 1 FOOTING PLAN, SEE SHEET 6 .
5. FOR TYPICAL SECTION, SEE SHEET 6.
6. FOR SECTIONS A-A, B-B, & C-C SEE SHEET 7.
7. FOR ABUTMENT 1 WINGWALL ELEVATIONS AND SECTIONS,
SEE SHEET 7.
8. FOR SECTION D-D AND OTHER SAFETY WING A SECTIONS,
SEE SHEET 8.
9. FOR SAFETY WING A BARRIER DETAILS, SEE SHEET 9.
10. FOR SECTION E-E AND OTHER SAFETY WING B SECTIONS,
SEE SHEET 10.
11. FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
12. FOR FRAMING PLAN, SEE SHEET 21.
13. FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE,
SEE SHEET 31.
14. WEEPHOLE LOCATION MAY BE ADJUSTED TO AVOID
CUTTING STEM REINFORCEMENT.
15. FOR ABUTMENT WEEPHOLE ELEVATIONS, SEE SHEET 6.
16. FOR WINGWALL WEEPHOLE ELEVATIONS, SEE SHEET 7.



BEAM SEAT ELEVATION TABLE					
BEAM	BEAM BRG.	EL. A	EL. B	EL. C	EL. D
1	410.08	410.16	410.16	410.00	410.00
2	410.46	410.50	410.50	410.42	410.42
3	410.62	410.58	410.58	410.66	410.66
4	410.57	410.49	410.49	410.65	410.65

SLOPE TOP OF ABUTMENT UNIFORMLY BETWEEN
BEAM SEAT AREAS.



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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

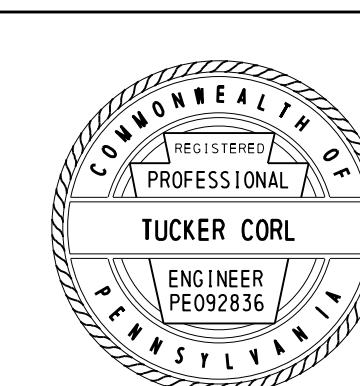
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK

TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 1 - PLAN AND ELEVATION

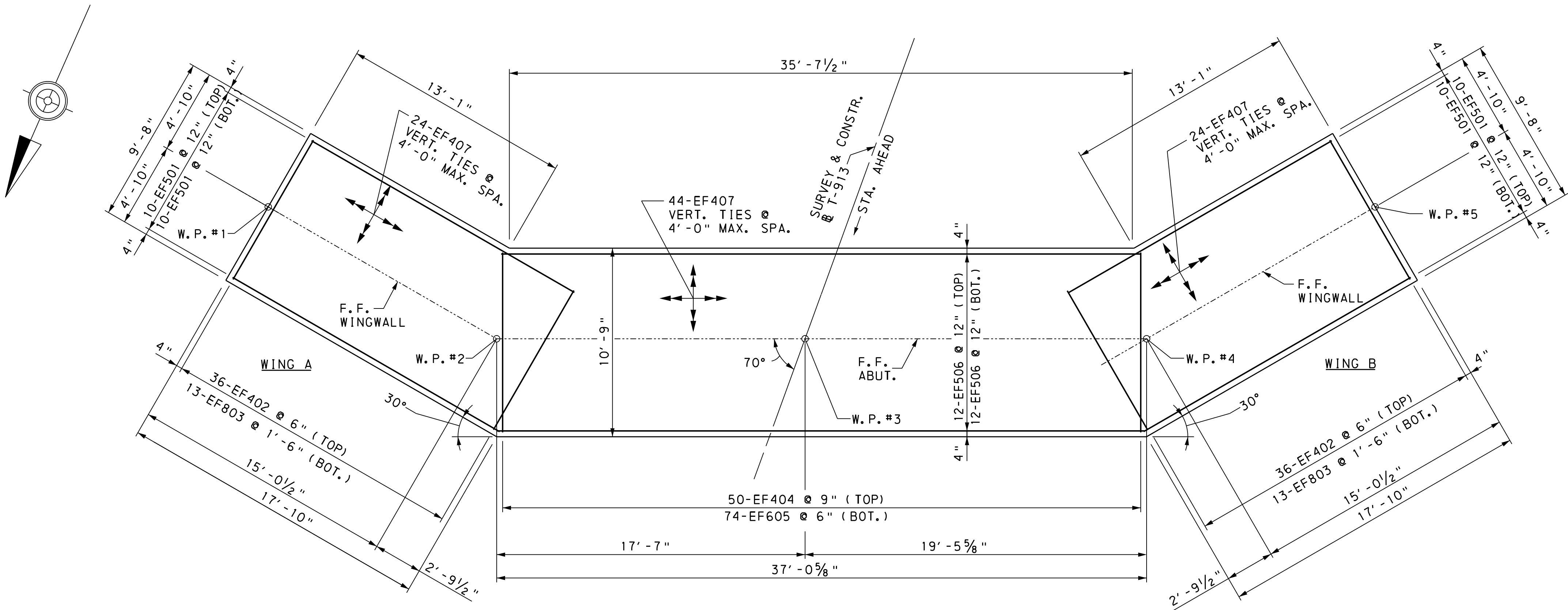
RECOMMENDED 2025.05.19

SHEET 5 OF 40

L - 366



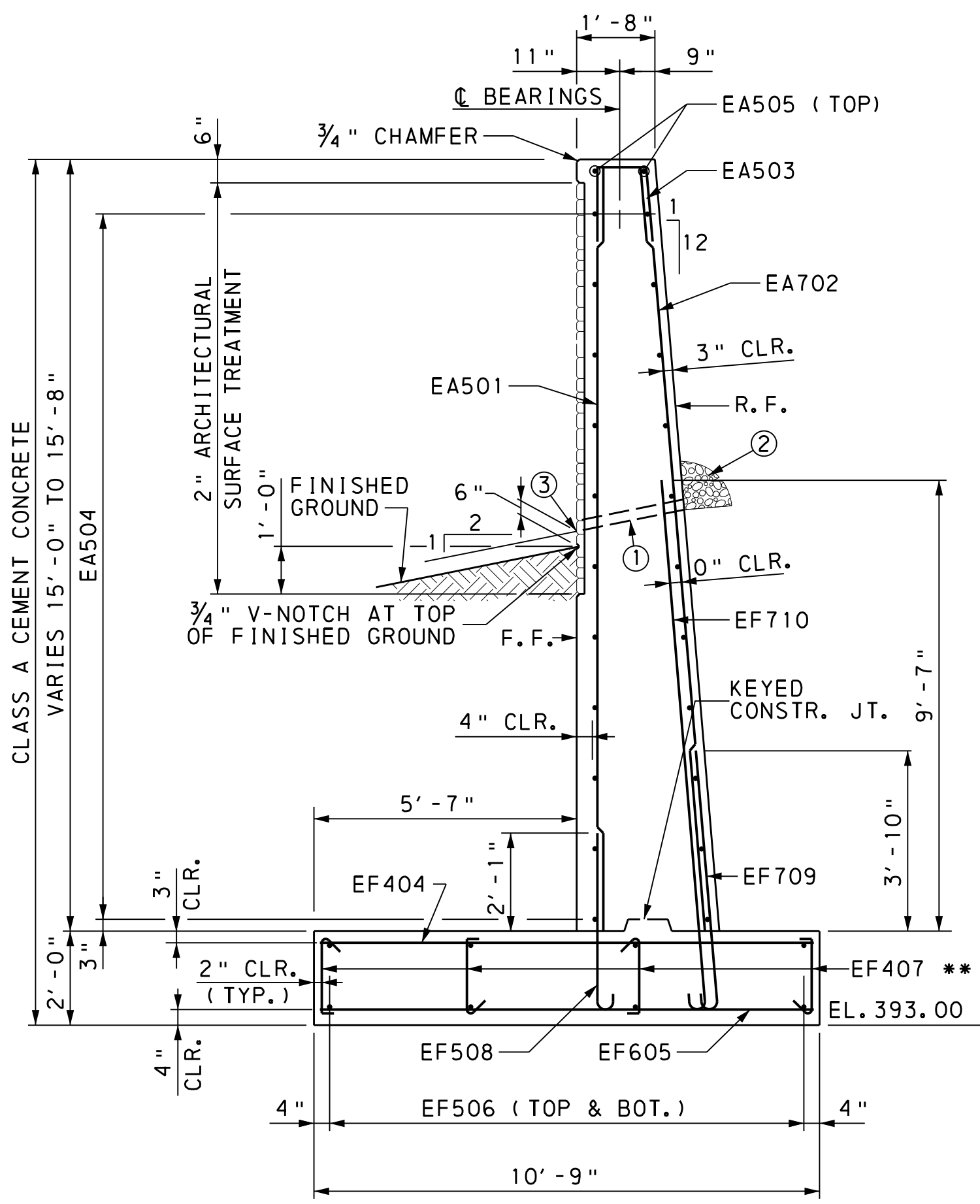
FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\B3721_0431_A1FTG.dgn
PLOT DATE: 7/23/2024 4:49:30 PM
PLOT DRIVER: r1\sys - Microsoft\Bridges\pdf_bw_full.plt
PLOT TABLE: file_date_user.tbl



FOOTING PLAN
2 0 2 4 FEET

WEEPHOLE NOTES

- 4"Ø FORMED WEEPHOLES AND 6" FOUNDATION DRAIN - SEE ELEVATION VIEW FOR LOCATIONS, SHEET 5.
- 1/2 CU. YD. NO. 57 COARSE AGGREGATE, ENCASED WITH CLASS 1 GEOTEXTILE MATERIAL AT EACH WEEPHOLE, SEE PUB. 408 SECTION 1001.3 (c) & (d).
- INV. EL. A = 403.50



TYPICAL ABUTMENT SECTION

1 0 1 2 3 FEET

** ALTERNATE 90° AND 135° HOOK
AT TOP IN ALTERNATE TIES.

NOTES:

- FOR GENERAL PLAN, SEE SHEET 1.
- FOR GENERAL NOTES, SEE SHEET 2.
- FOR STAKE-OUT PLAN, SEE SHEET 3.
- FOR ABUTMENT 1 PLAN AND ELEVATION, SEE SHEET 5.
- FOR ABUTMENT 1 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 7.
- FOR SAFETY WING A ELEVATIONS AND SECTIONS, SEE SHEET 8.
- FOR SAFETY WING A BARRIER DETAILS, SEE SHEET 9.
- FOR SAFETY WING B ELEVATIONS AND SECTIONS, SEE SHEET 10.
- FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
- FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.
- ABUTMENT 1:
FACTORED BEARING RESISTANCE = 3.00 TSF
FACTORED UNIFORM BEARING PRESSURE = 3.03 TSF
LIMIT STATE: STR-I MAX. FIN.
- FACTORED HORIZONTAL FORCE = 11.44 KIPS
FACTORED SLIDING RESISTANCE = 14.86 KIPS
LIMIT STATE: STR-I MIN. TMP.
- WINGS A & B:
FACTORED BEARING RESISTANCE = 3.00 TSF
FACTORED UNIFORM BEARING PRESSURE = 2.94 TSF
LIMIT STATE: STR-I MIN. TMP.
- FACTORED HORIZONTAL FORCE = 11.46 KIPS
FACTORED SLIDING RESISTANCE = 14.30 KIPS
LIMIT STATE: STR-I MIN. TMP.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

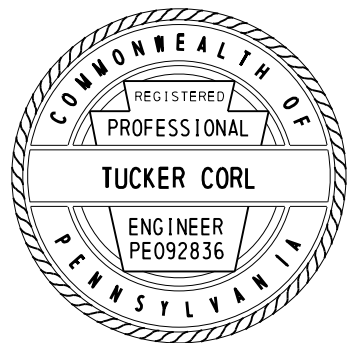
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 1 - FOOTING PLAN

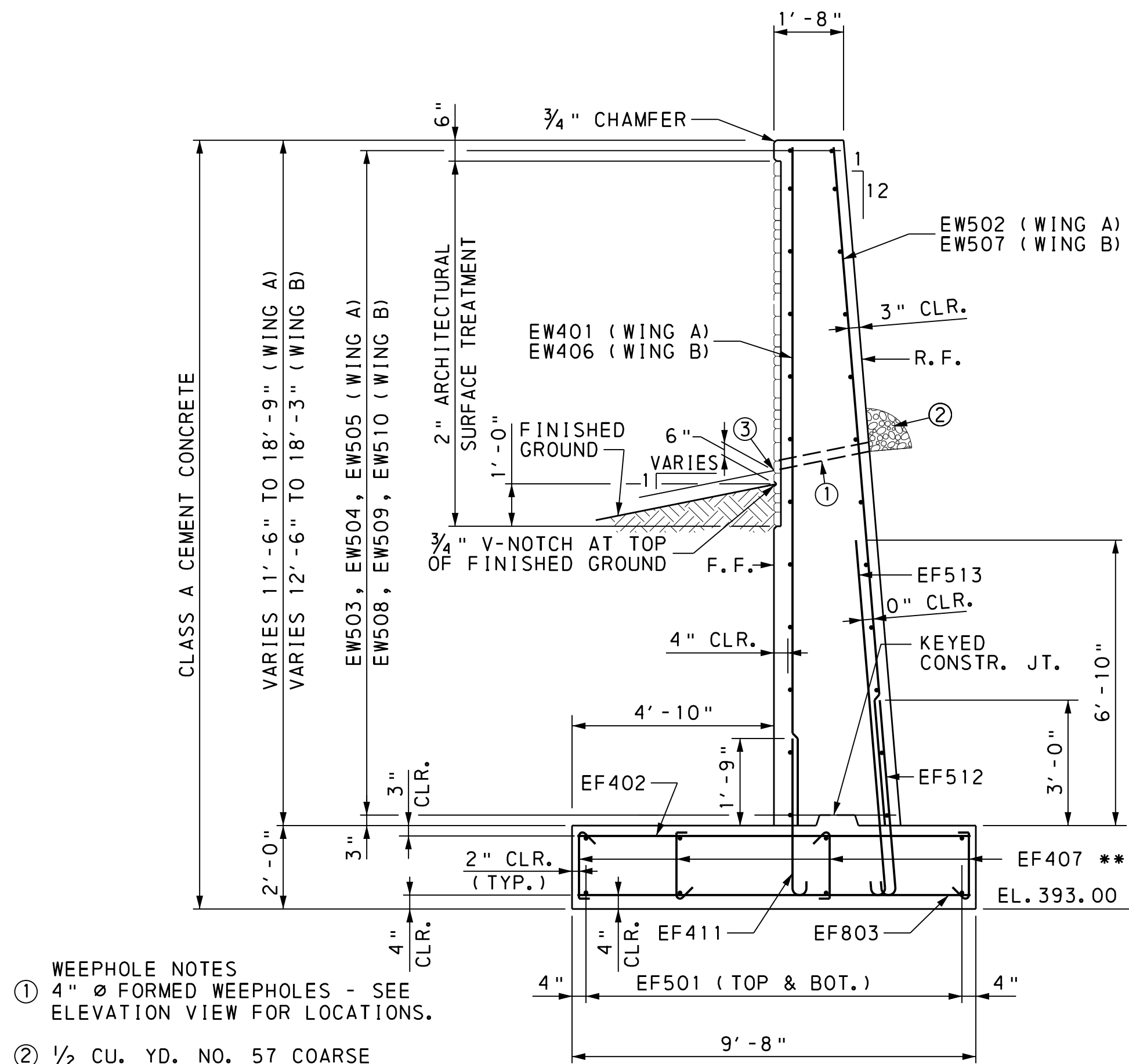
RECOMMENDED 2025.05.19

SHEET 6 OF 40

L-366



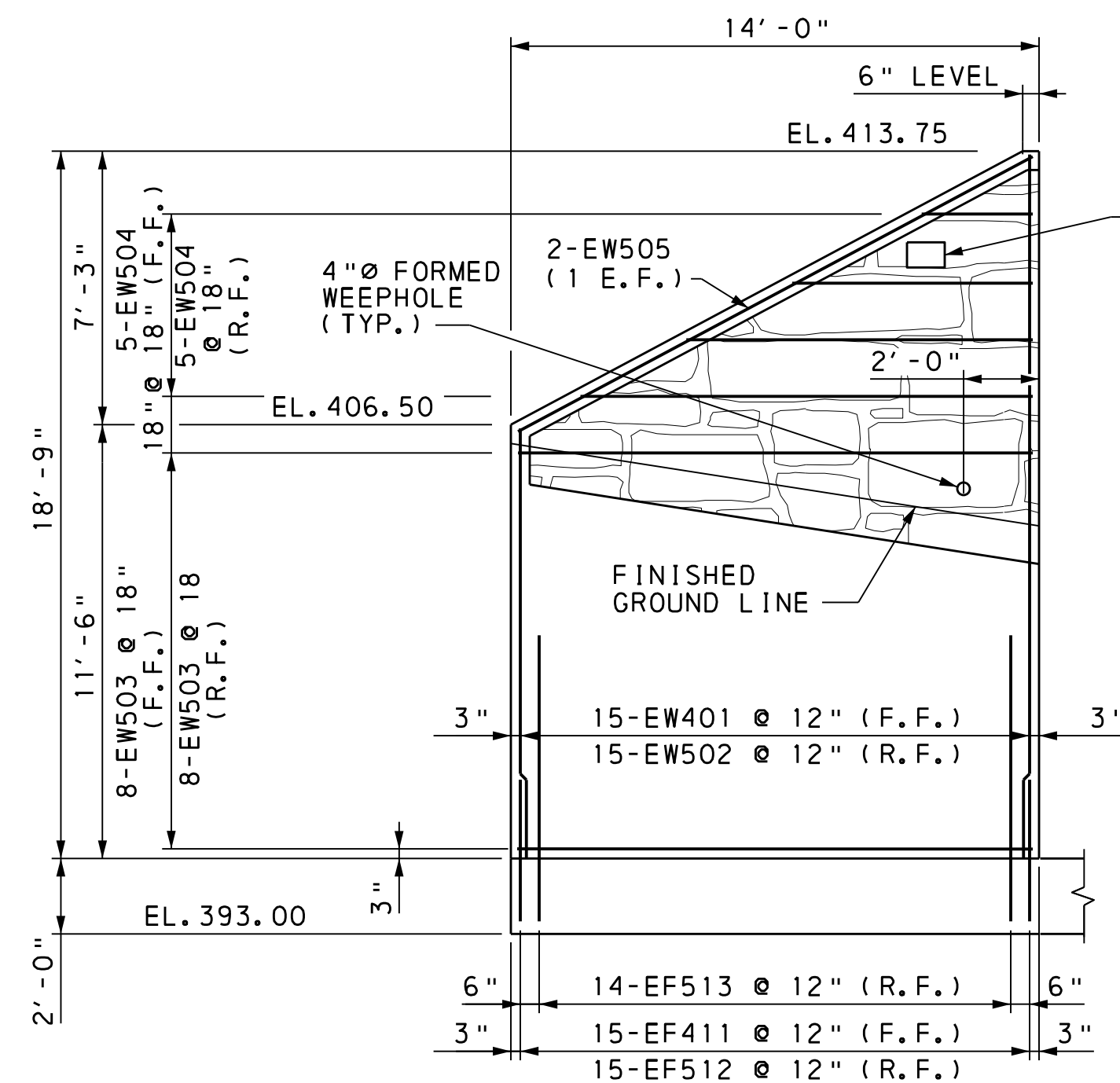
FILE NAME: P:\0037\003721\0431\Microsoft\Bridges\IDG\07-B3721-0431 A1WW.dgn
PLOTTER: 7/23/2024 4:50:30 PM kbookman
PEN TABLE: file date user: db
PLOT DRIVER: r4\SYS - Microsoft\Bridges\IDG\pdf_bw_full.plt.ctb



- ① WEEPHOLE NOTES
4" Ø FORMED WEEPHOLES - SEE ELEVATION VIEW FOR LOCATIONS.
- ② 1/2 CU. YD. NO. 57 COARSE AGGREGATE, ENCASED WITH CLASS 1 GEOTEXTILE MATERIAL AT EACH WEEPHOLE, SEE PUB. 408 SECTION 1001.3 (c) & (d).
- ③ INV. WING A = EL. 404.50
WING B = EL. 404.50

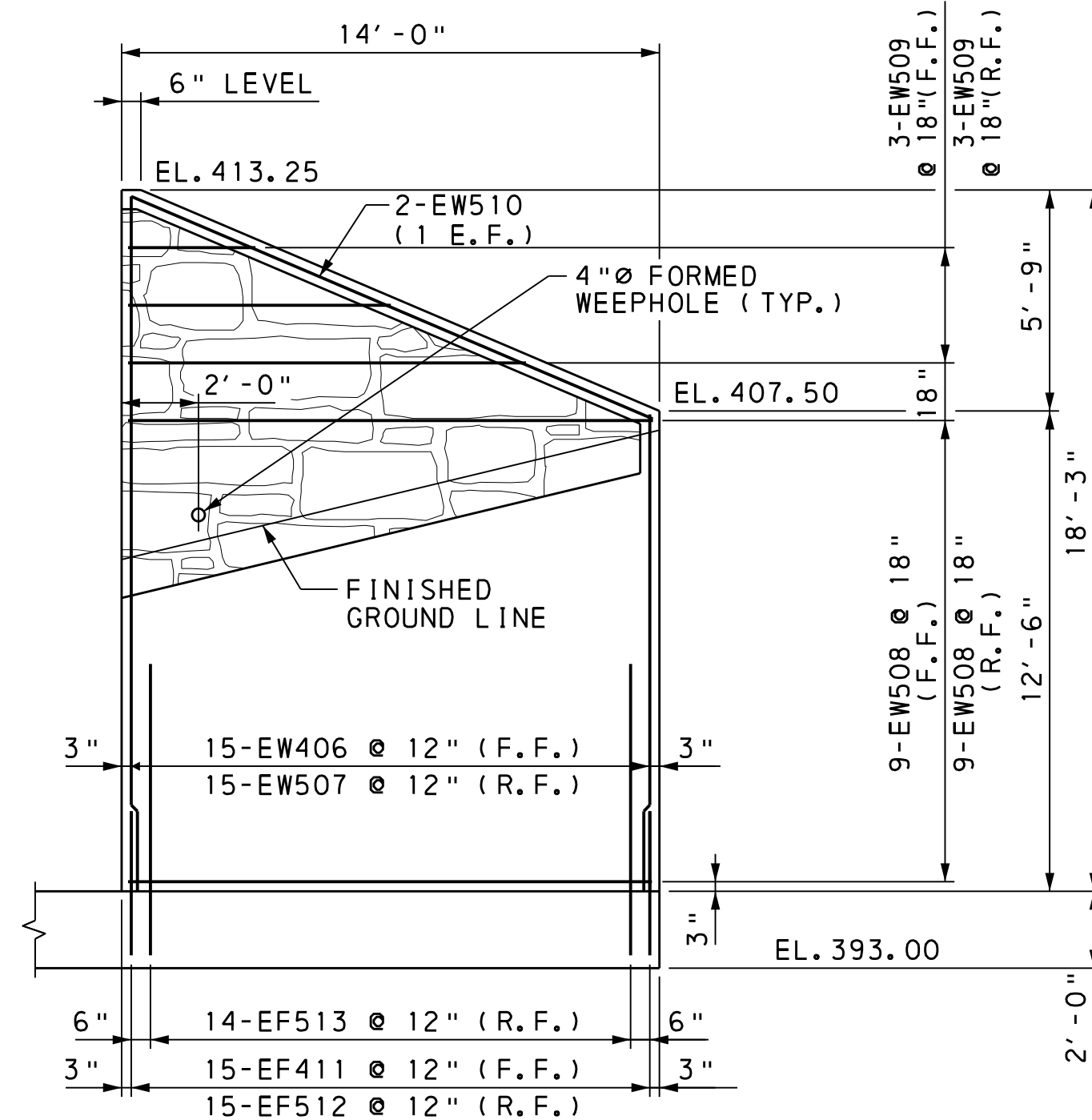
TYPICAL WINGWALL SECTION

** ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATE TIES.

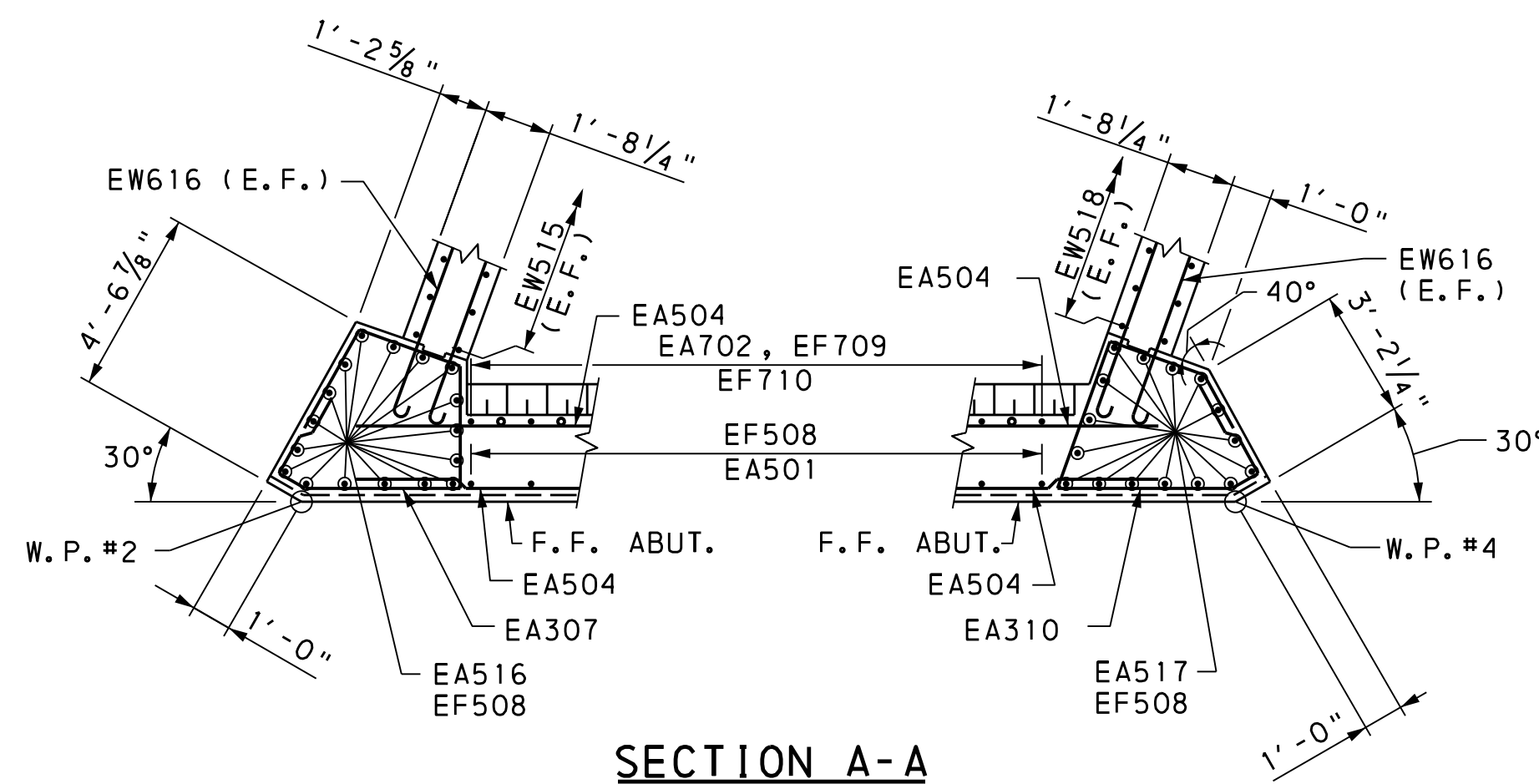


WINGWALL A ELEVATION

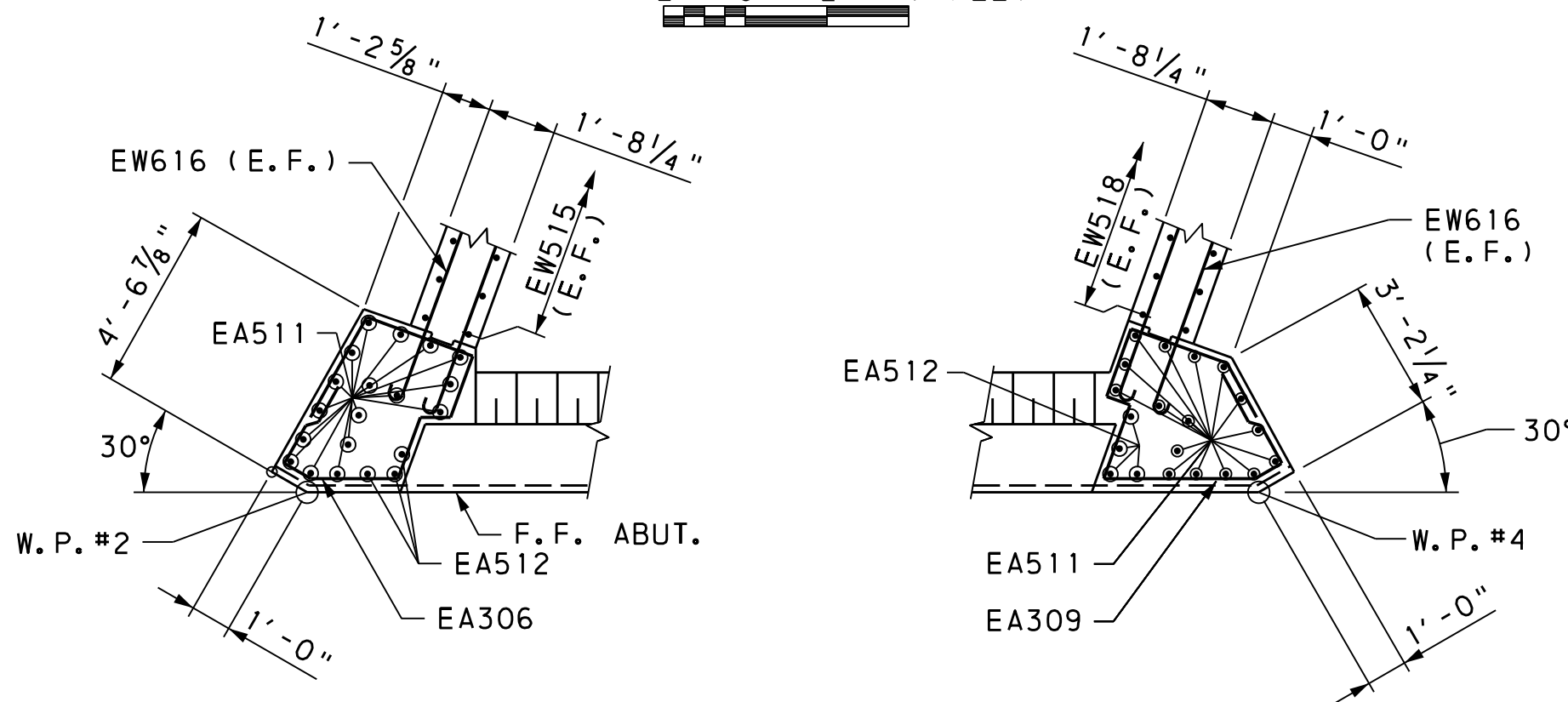
NOTE:
WEEPHOLE REINFORCEMENT NOT SHOWN FOR CLARITY



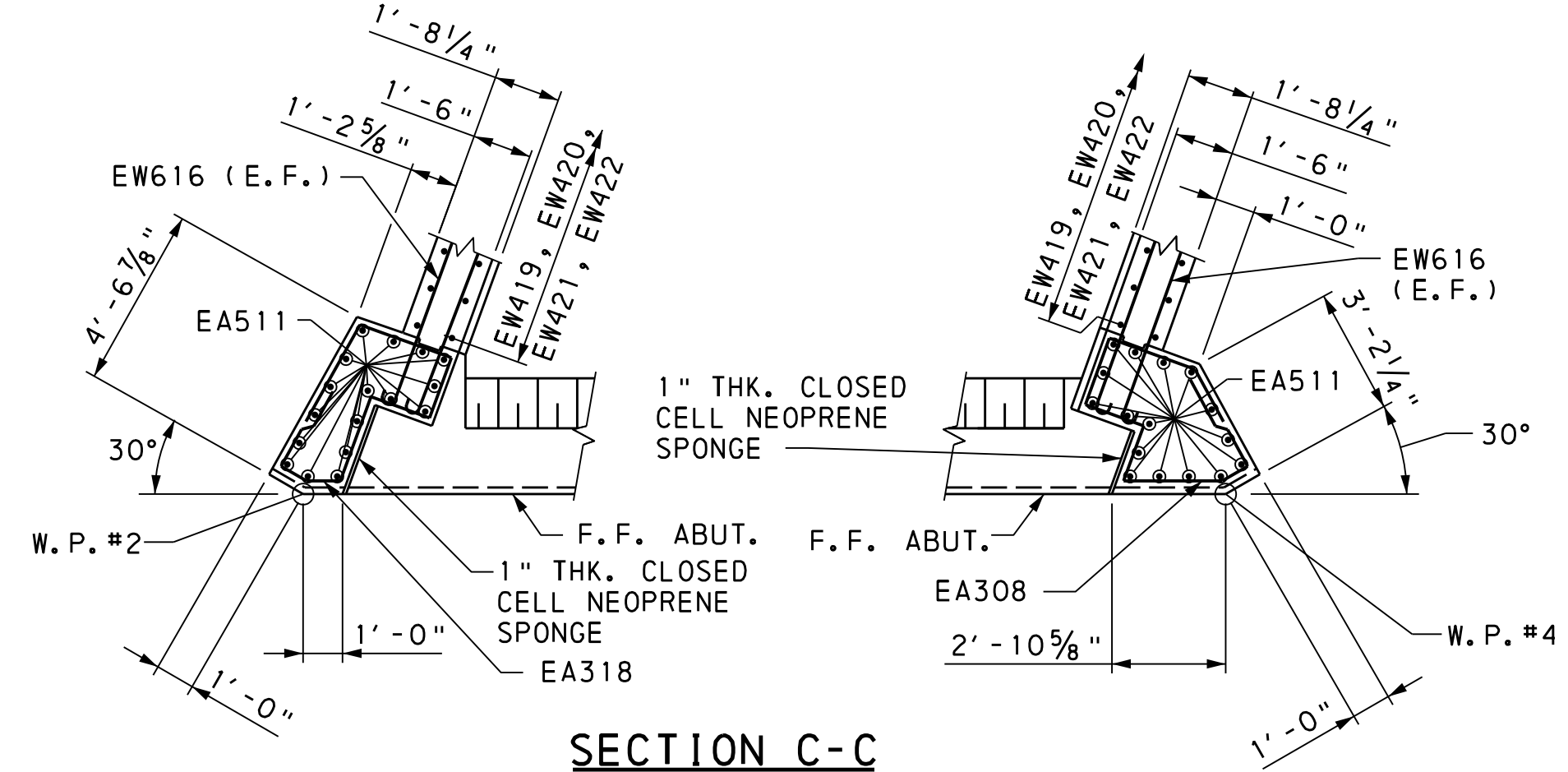
WINGWALL B ELEVATION



SECTION A-A



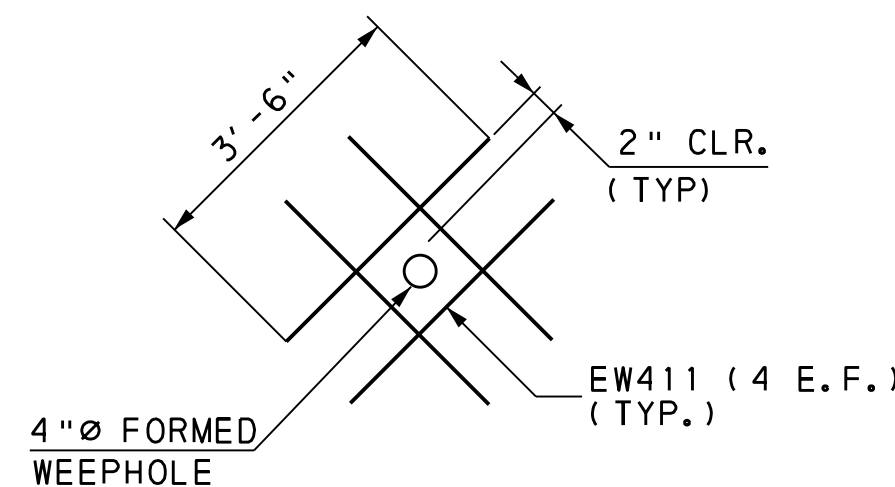
SECTION B-B



SECTION C-C

NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 1 PLAN AND ELEVATION, SEE SHEET 5.
5. FOR LOCATION VIEWS OF SECTIONS A-A, B-B, AND C-C, SEE SHEET 5.
6. FOR ABUTMENT 1 FOOTING PLAN, SEE SHEET 6.
7. FOR SAFETY WING A ELEVATIONS AND SECTIONS, SEE SHEET 8.
8. FOR SAFETY WING A BARRIER DETAILS, SEE SHEET 9.
9. FOR SAFETY WING B ELEVATIONS AND SECTIONS, SEE SHEET 10.
10. FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
11. FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.



TYPICAL WEEPHOLE REINFORCEMENT
NOT TO SCALE

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

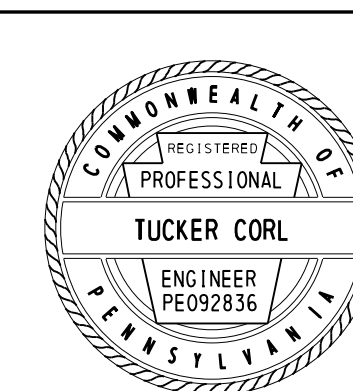
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 1 - WINGWALLS

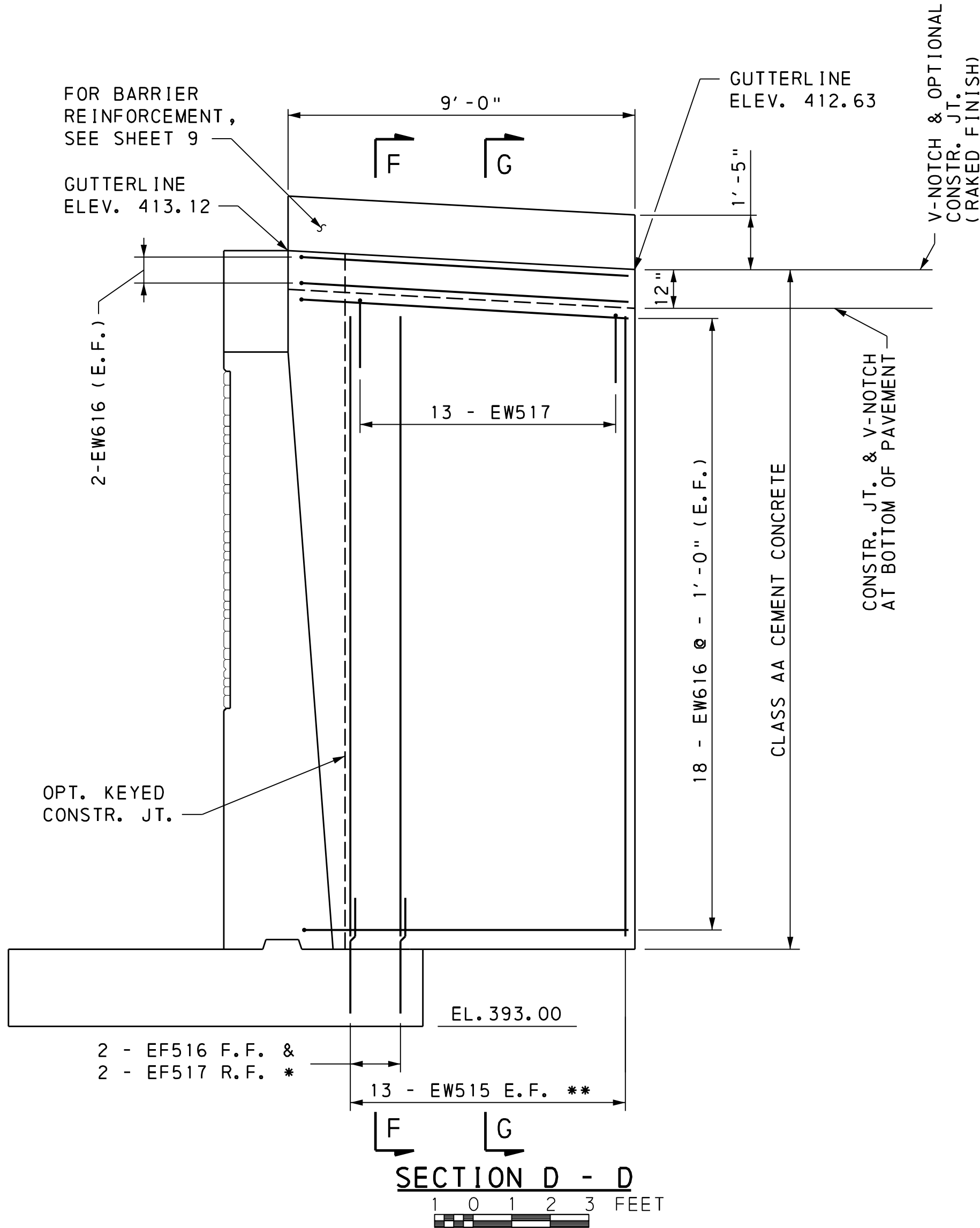
RECOMMENDED 2025.05.19

SHEET 7 OF 40

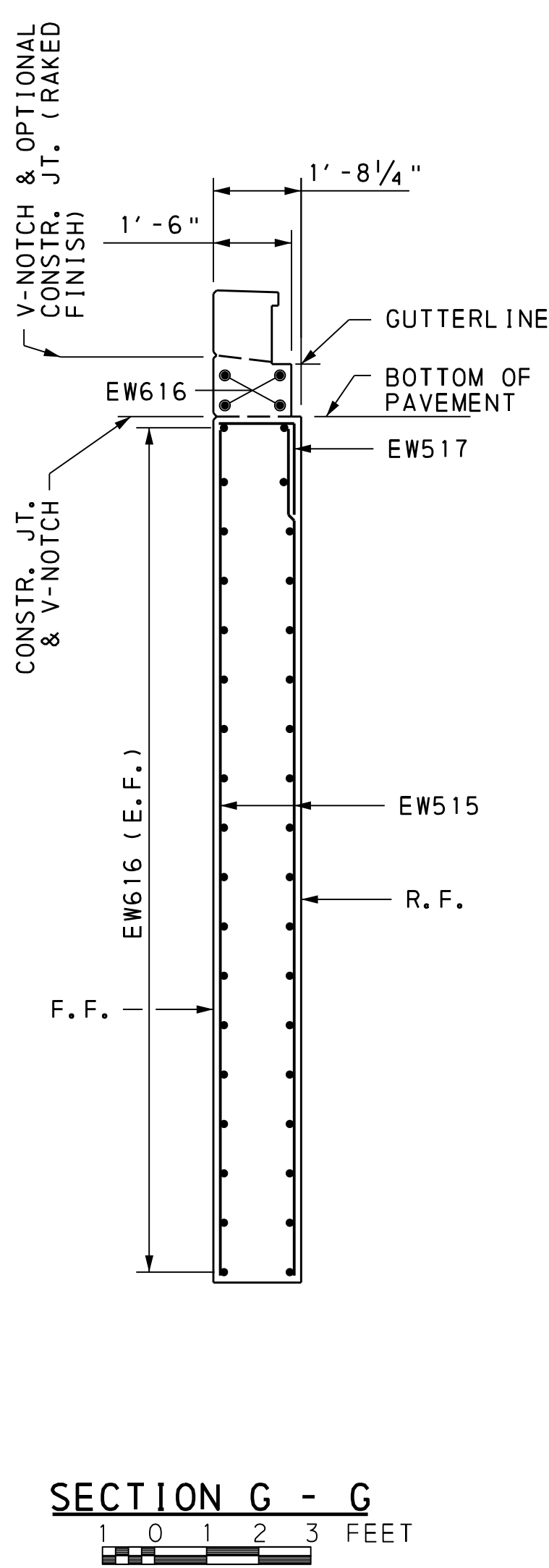
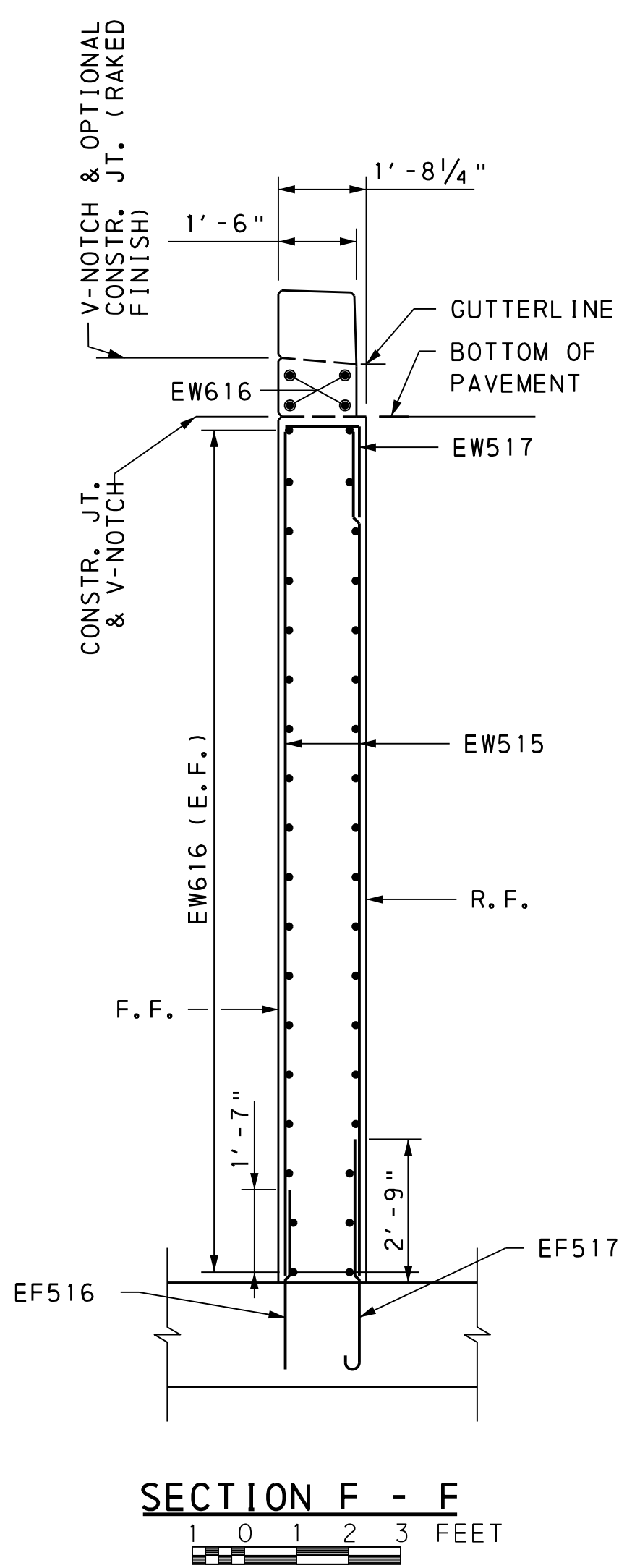
L-366



FILE NAME: P:\0037\003721\0431\Microstation\BRIDGE\06-B3721_0431_A1SWA.dgn
PLOT DATE: 12/4/2024 8:49:53 AM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\sys - Microstation\Bridge\pdf_bw_full.plt.ctb



- * MATCH EF516 AND EF517 WITH EW515
WHEN SAFETY WING IS OVER FOOTING
** MATCH EW515 AND EW517 WITH BARRIER
REINFORCEMENT



NOTE: BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY

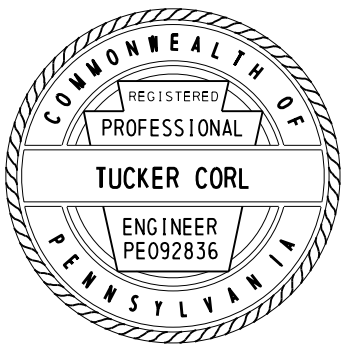
NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 1 PLAN AND ELEVATION, SEE SHEET 5.
5. FOR LOCATION OF VIEW D-D, SEE SHEET 5.
6. FOR ABUTMENT 1 FOOTING PLAN, SEE SHEET 6.
7. FOR ABUTMENT 1 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 7.
8. FOR SAFETY WING A BARRIER DETAILS, SEE SHEET 9.
9. FOR SAFETY WING B ELEVATIONS AND SECTIONS, SEE SHEET 10.
10. FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
11. FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 1 - SAFETY WING A

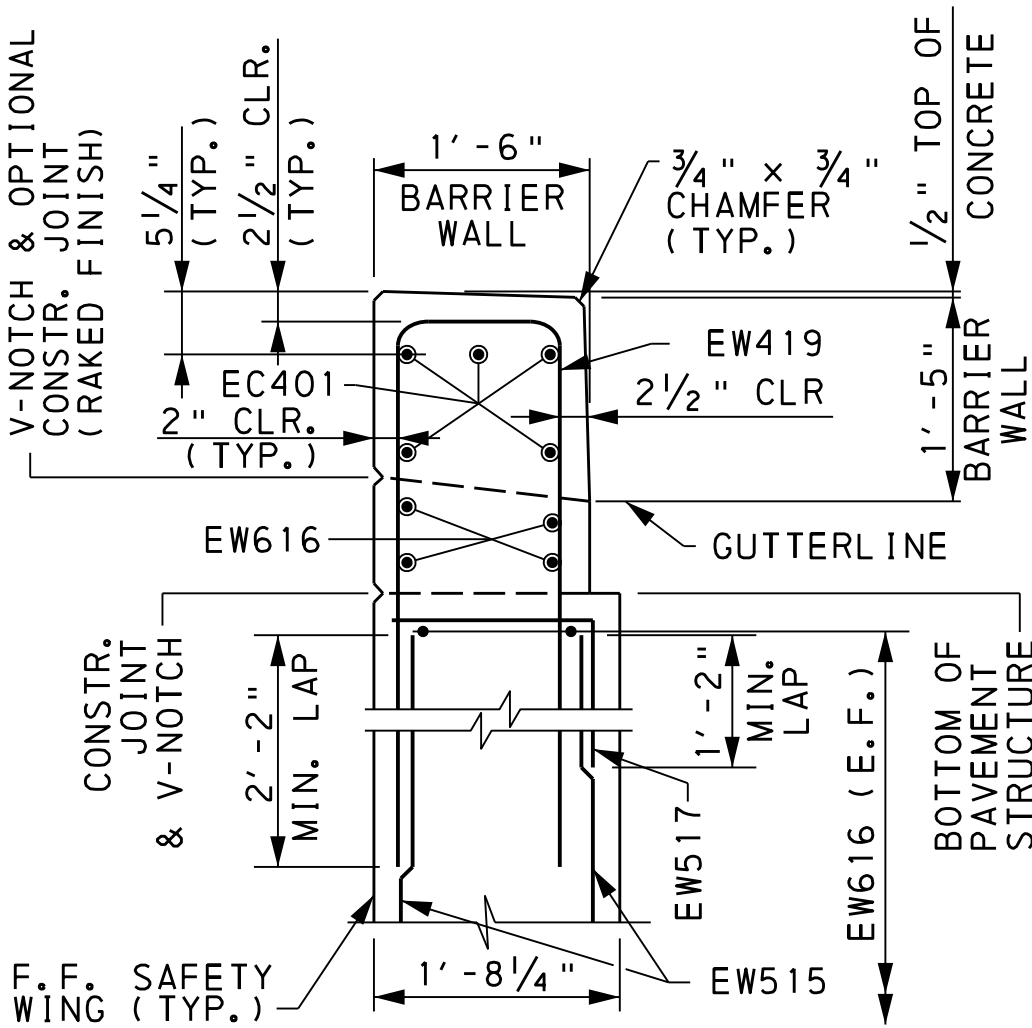


RECOMMENDED 2025.05.19

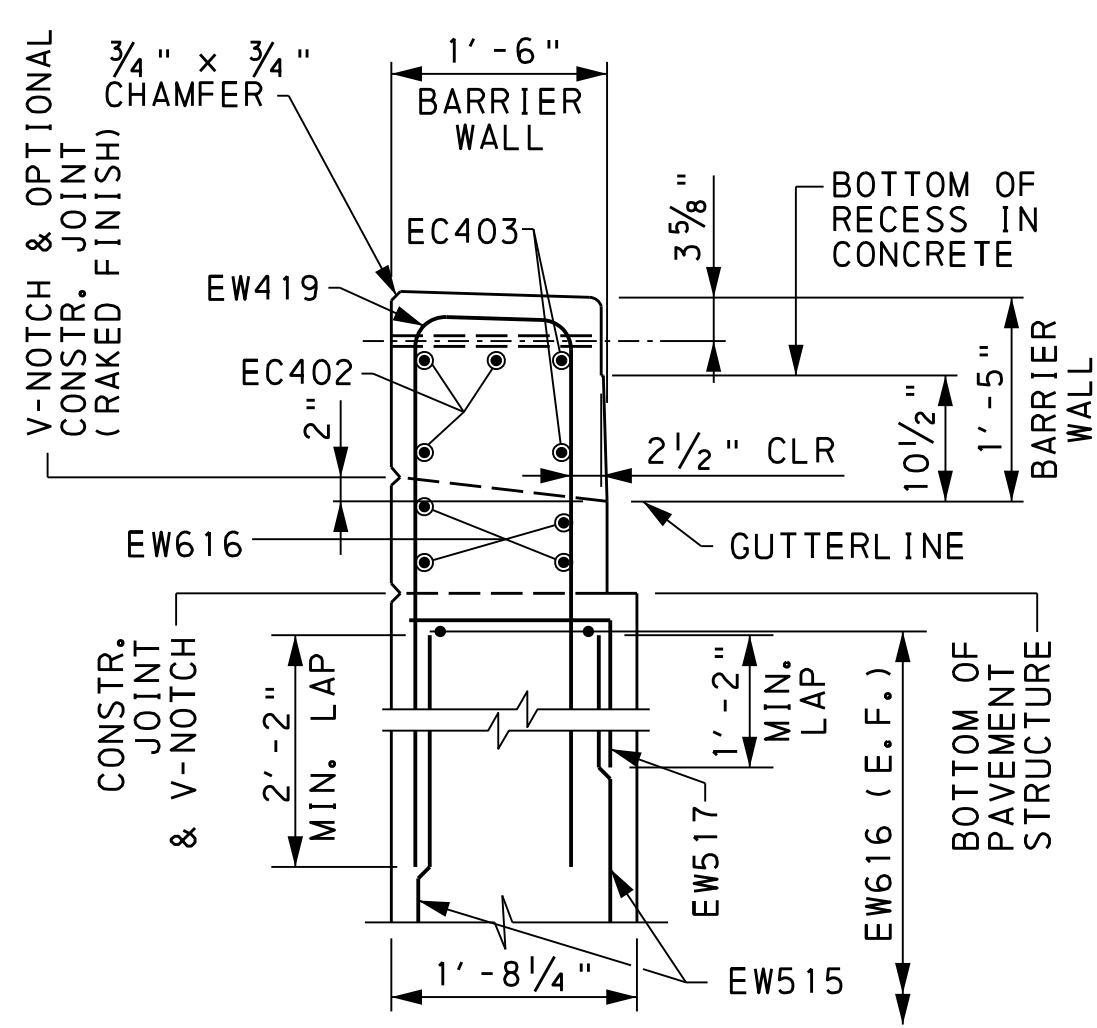
SHEET 8 OF 40

L-366

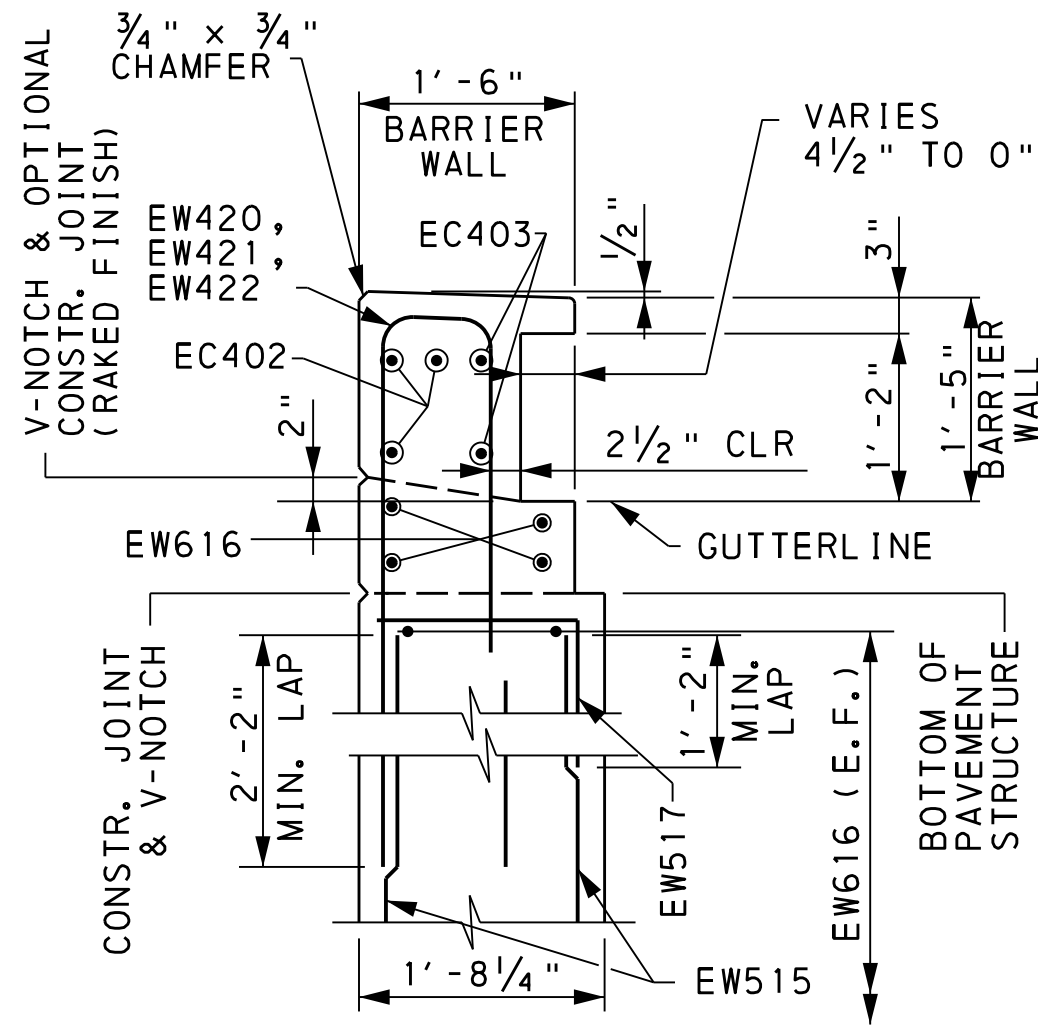
FILE NAME: P:\0037\003721\0431\micr\station\BRIDGE\05-B3721-0431 A1BE1.dgn
PLOT DATE: 5/15/2024 8:25:11 AM kbookman
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SYS - Microstation\Bridges\pdf_bw_full.plt;cf



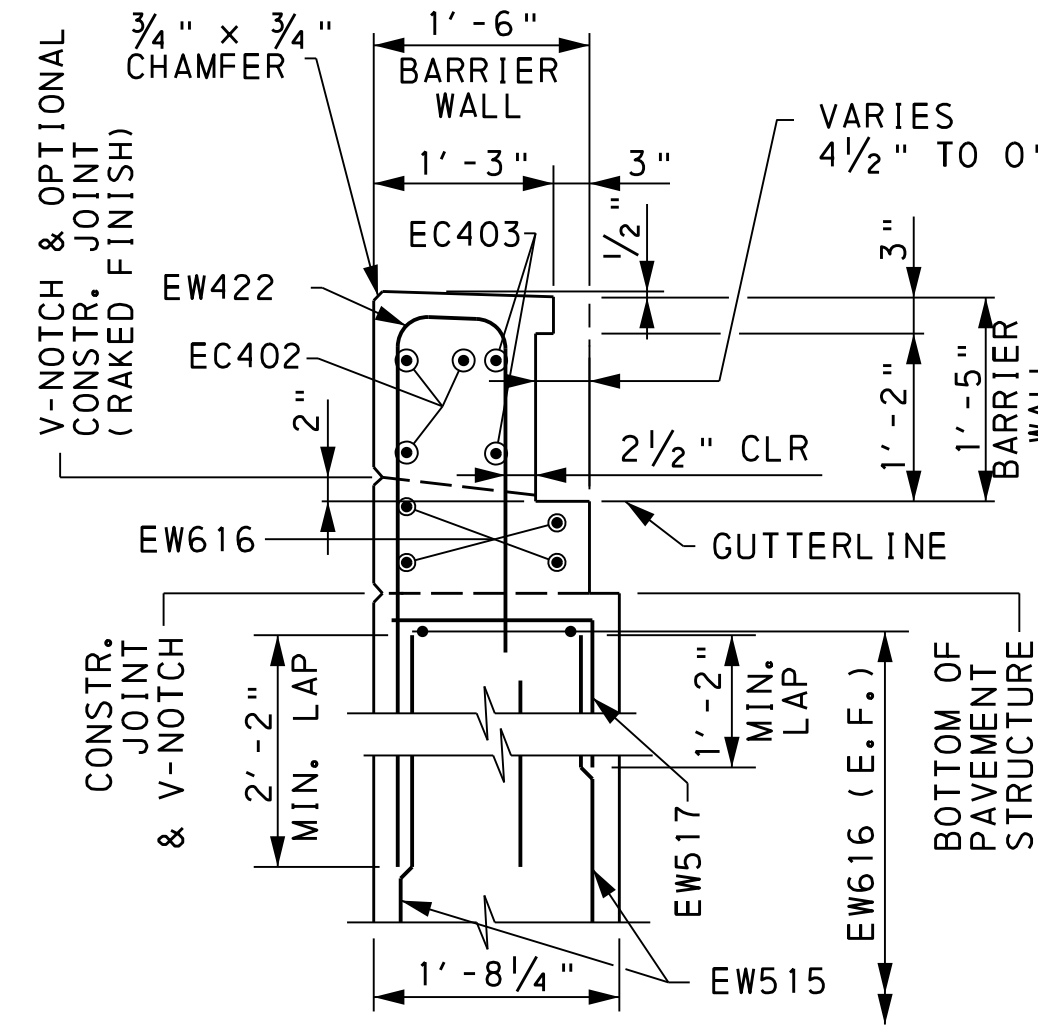
SECTION AA-AA



SECTION AB-AB



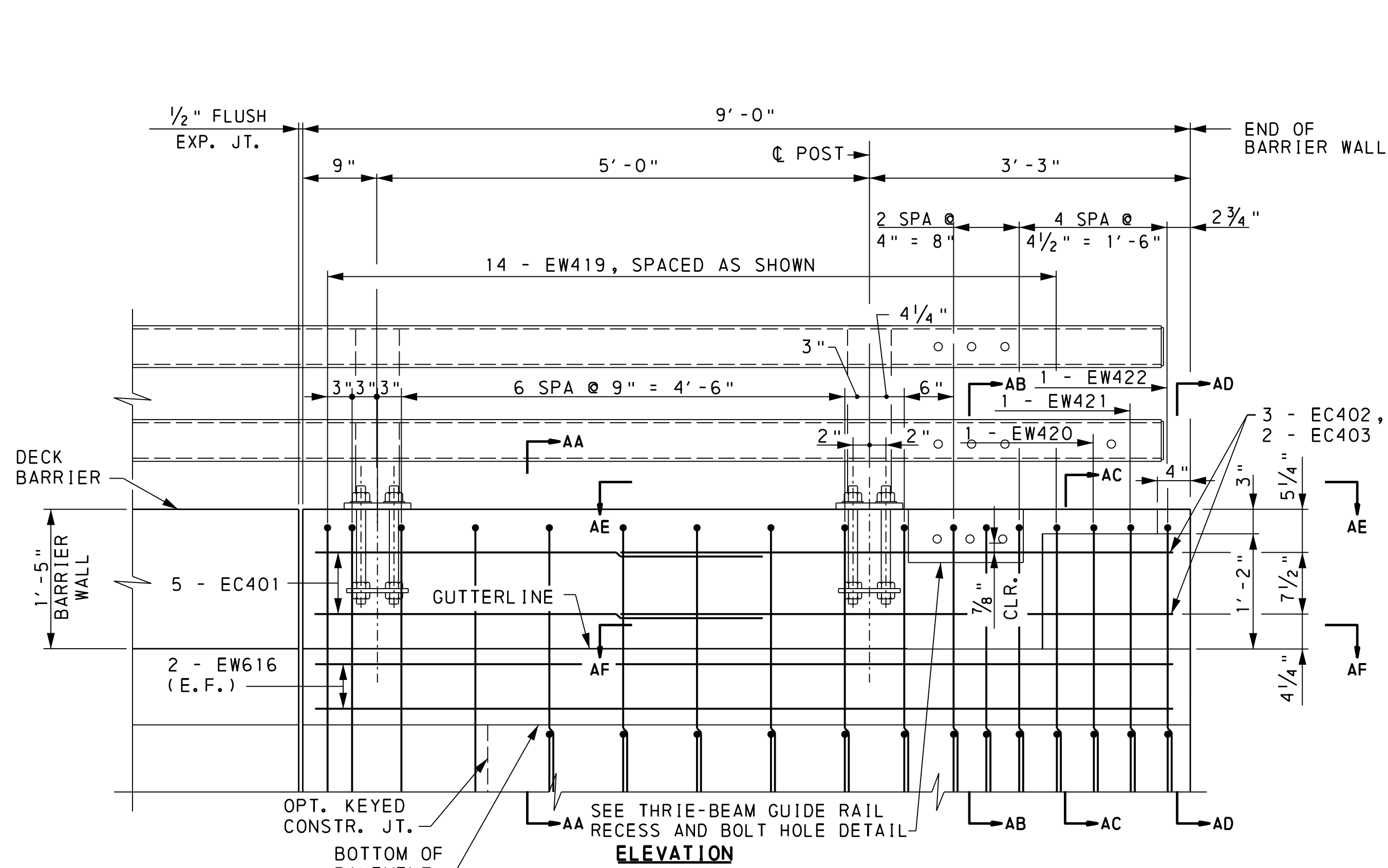
SECTION AC-AC



SECTION AD-AD

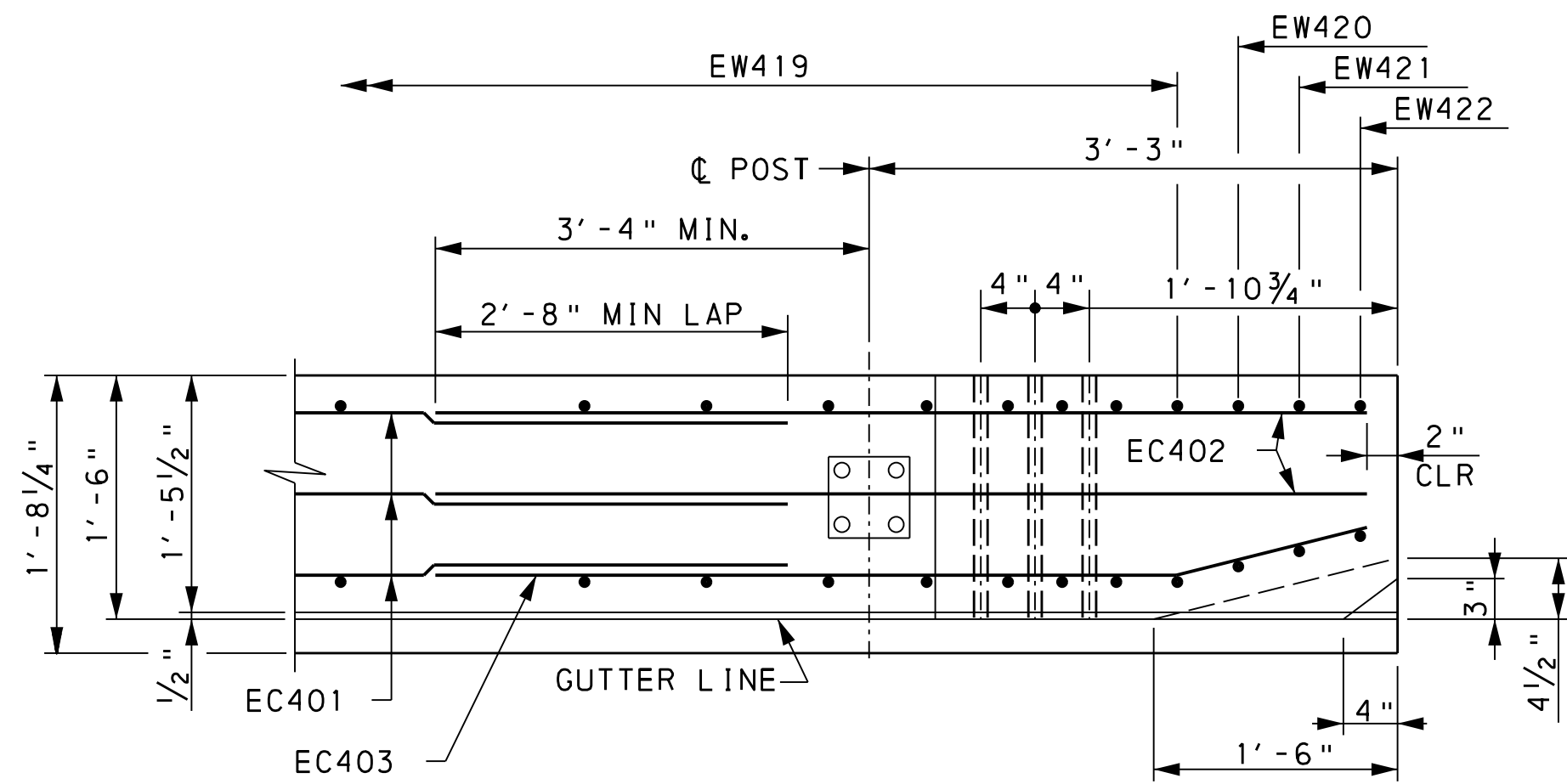
BARRIER TRANSITION SECTIONS

12 0 12 INCHES



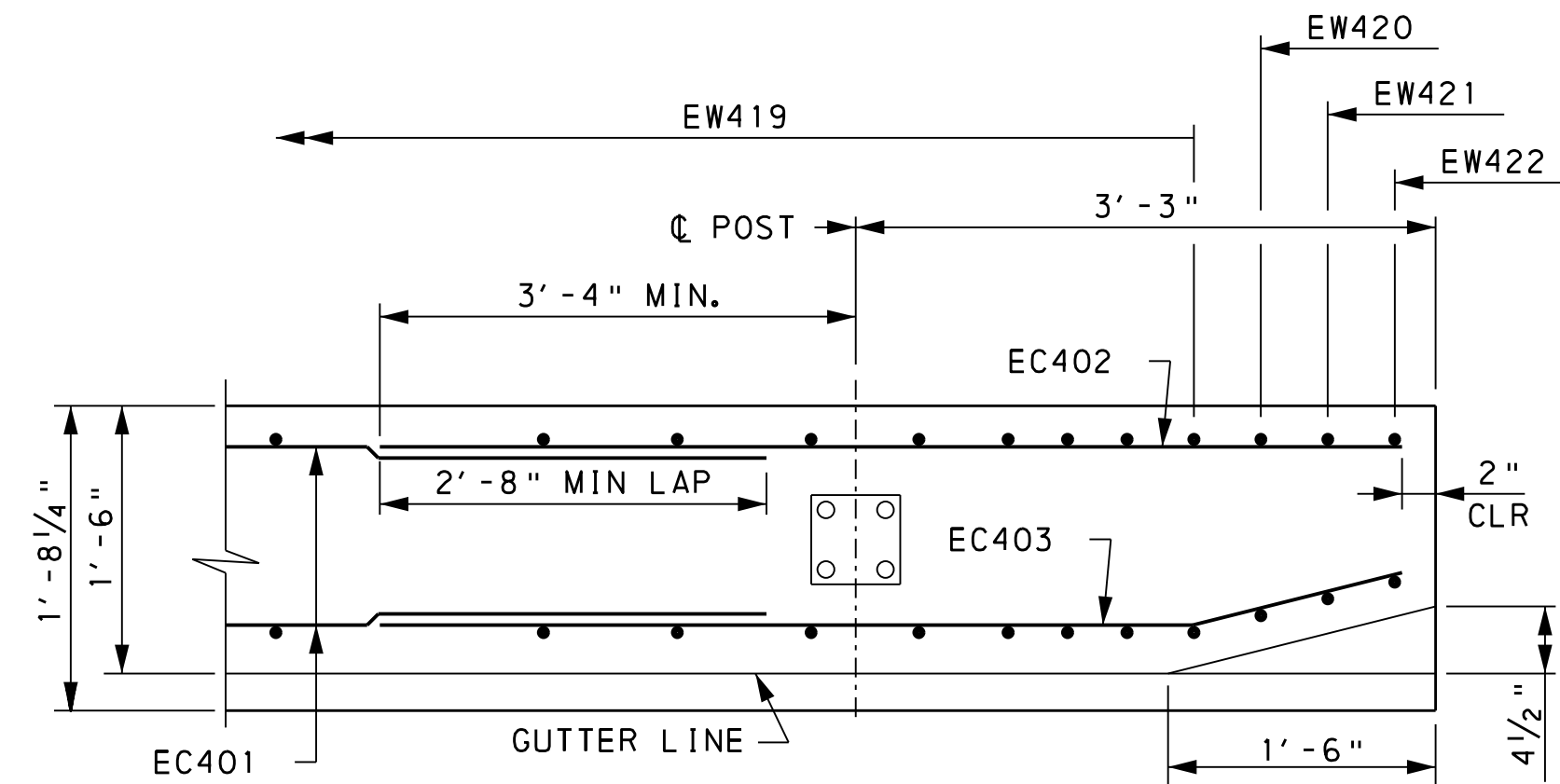
PA TYPE 10M BARRIER END TRANSITION

6 0 6 12 INCHES



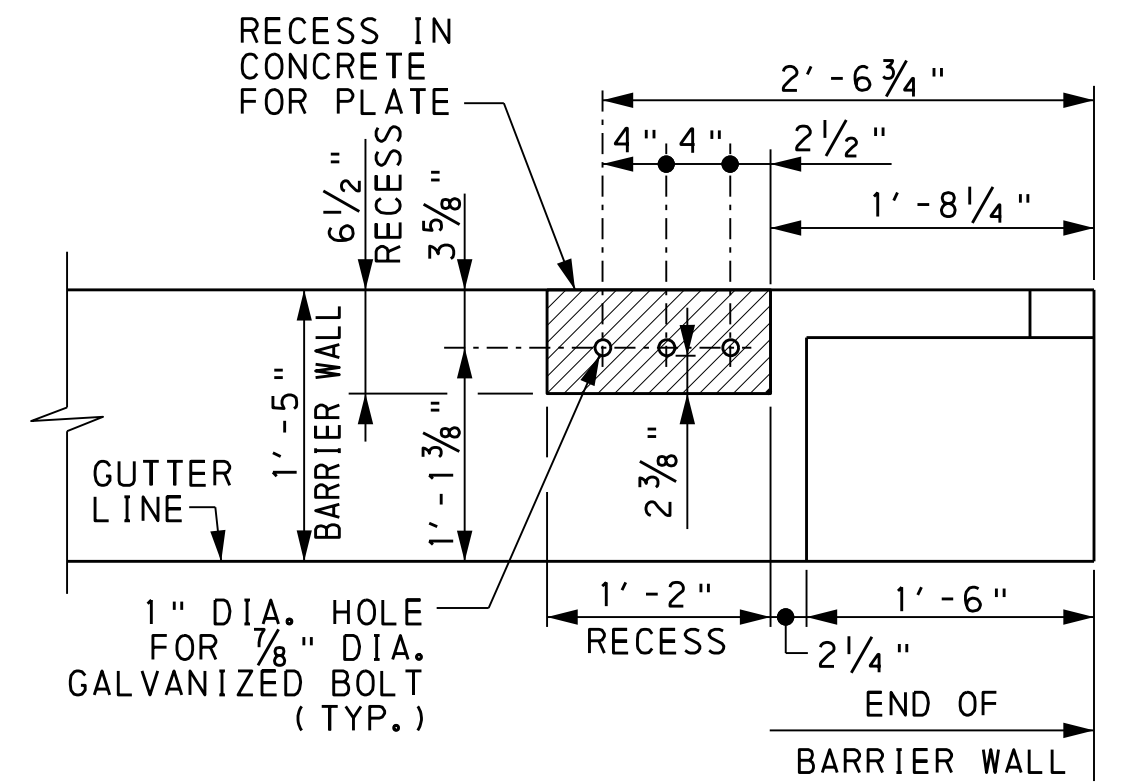
SECTION AE-AE

6 0 6 12 INCHES



SECTION AF-AF

6 0 6 12 INCHES



THREE-BEAM GUIDE RAIL
RECESS AND BOLT HOLE DETAIL

6 0 6 12 INCHES

NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 1 PLAN AND ELEVATION, SEE SHEET 5.
5. FOR ABUTMENT 1 FOOTING PLAN, SEE SHEET 6.
6. FOR ABUTMENT 1 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 7.
7. FOR SAFETY WING A ELEVATIONS AND SECTIONS, SEE SHEET 8.
8. FOR SAFETY WING B ELEVATIONS AND SECTIONS, SEE SHEET 10.
9. FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
10. FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

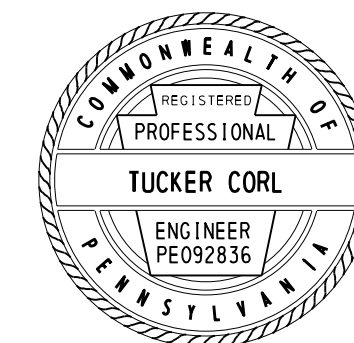
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

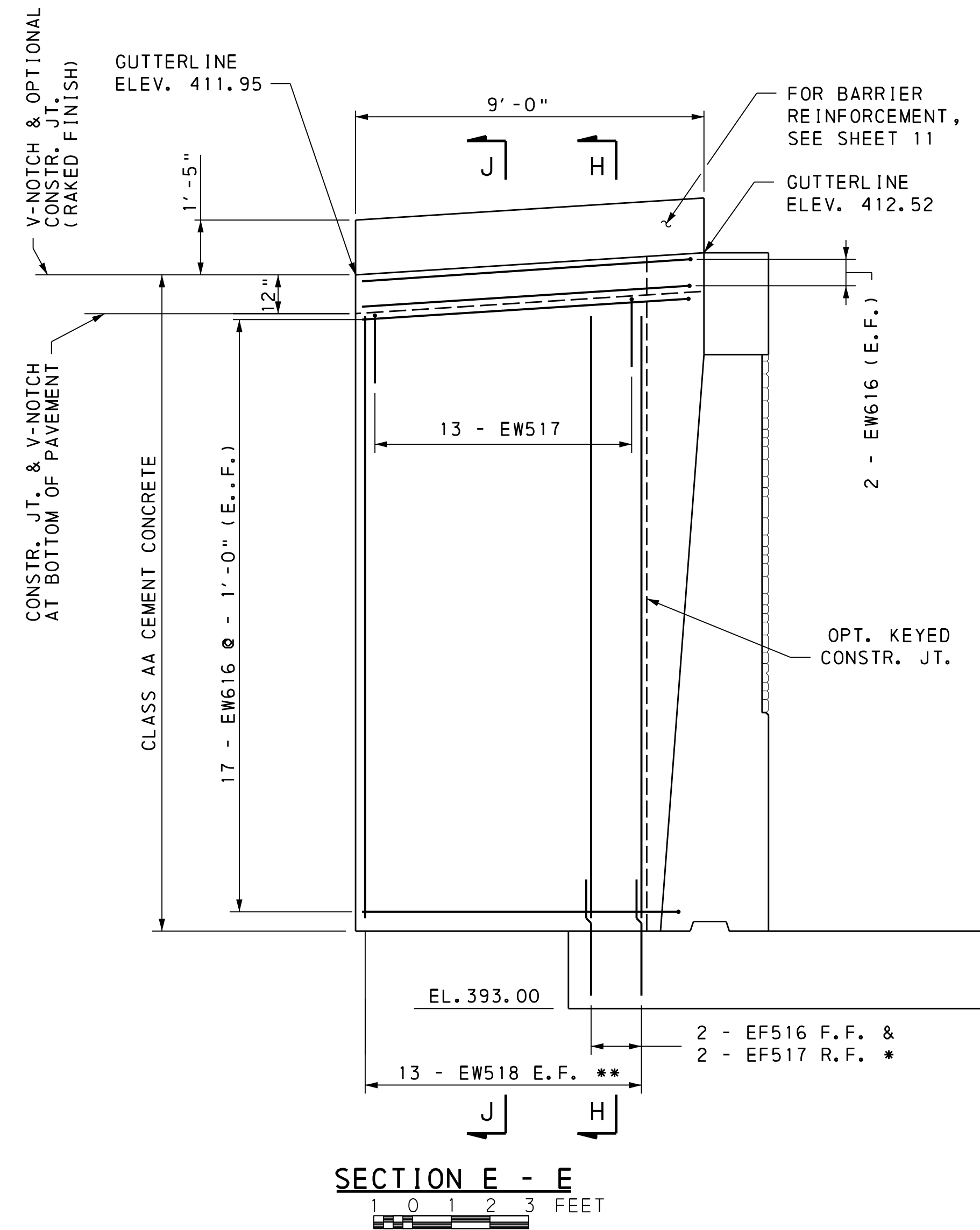
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUT. 1 - SAFETY WING A DETAILS

RECOMMENDED 2025.05.19

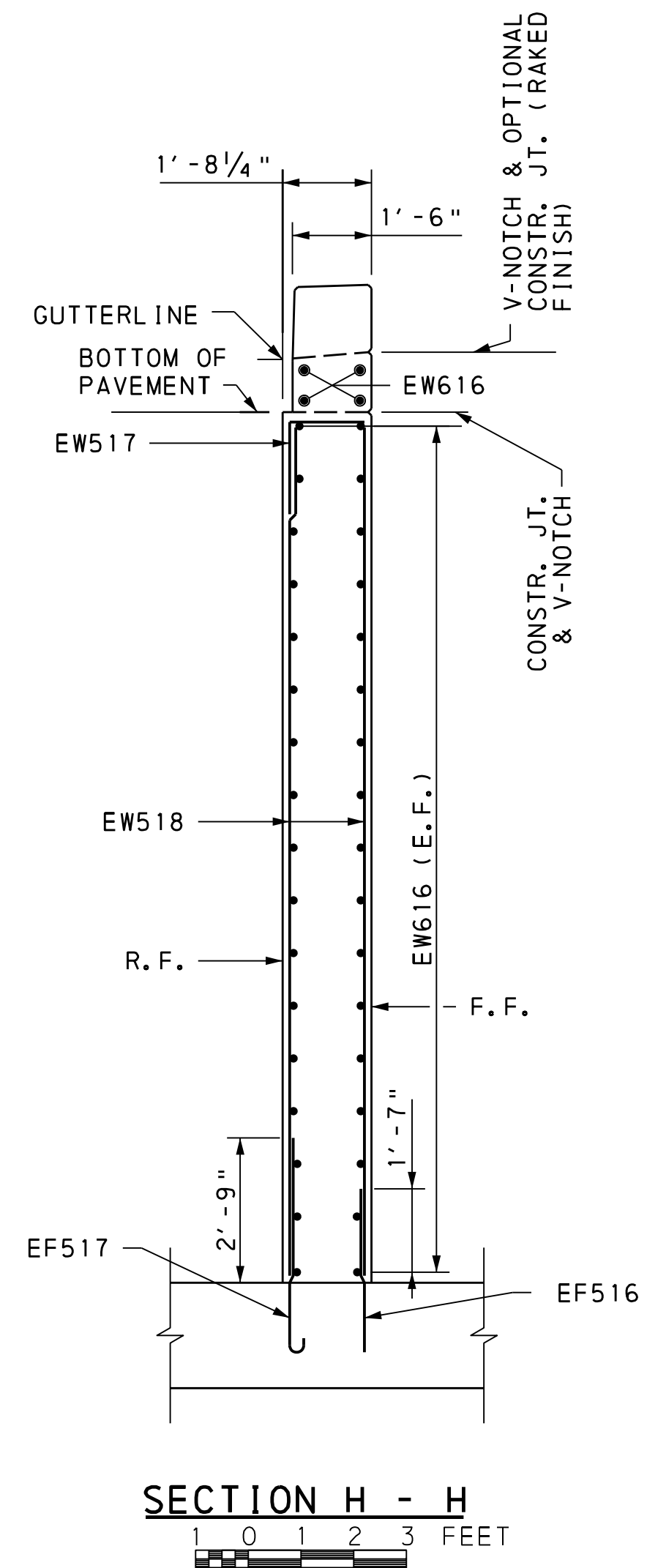
SHEET 9 OF 40

L-366

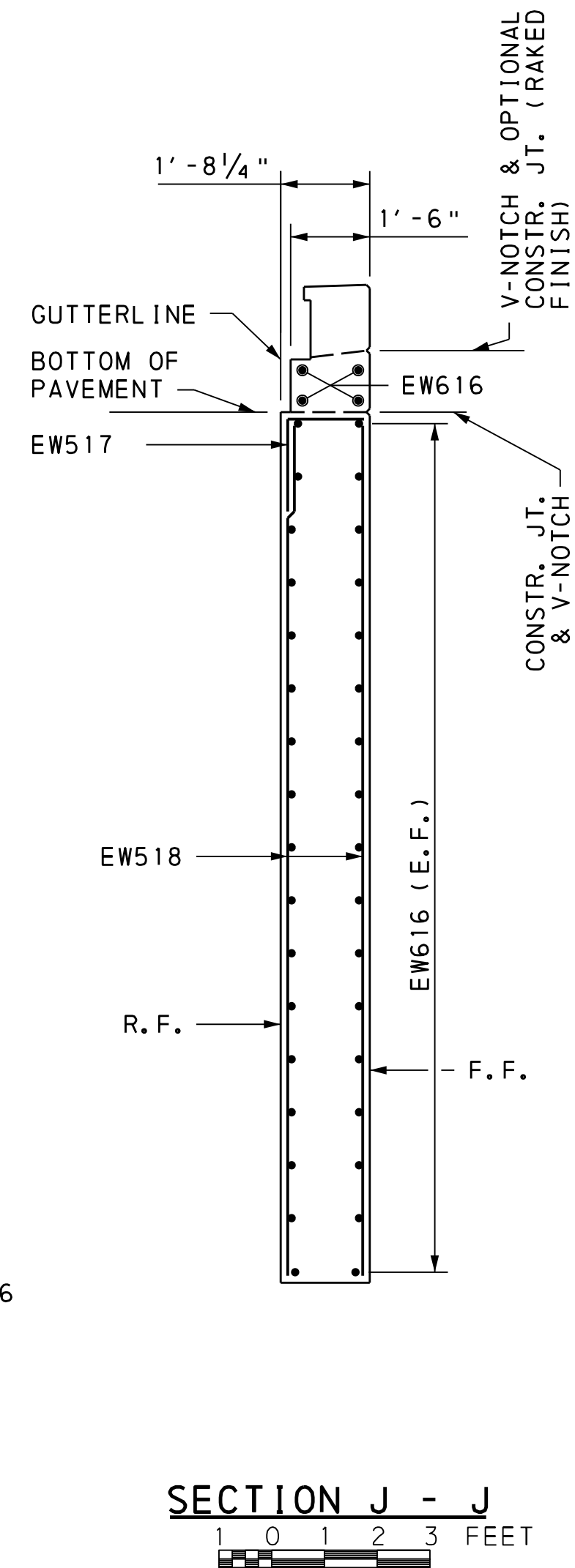




* MATCH EF516 AND EF517 WITH EW518
WHEN SAFETY WING IS OVER FOOTING
** MATCH EW518 AND EW517 WITH BARRIER
REINFORCEMENT



NOTE: BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY



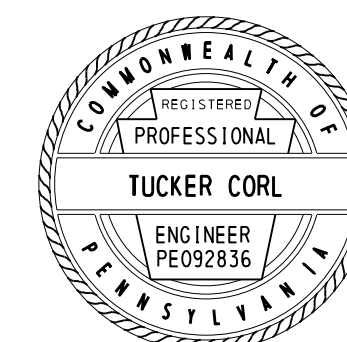
- NOTES:**
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-OUT PLAN, SEE SHEET 3.
 4. FOR ABUTMENT 1 PLAN AND ELEVATION, SEE SHEET 5.
 5. FOR LOCATION OF VIEW E-E, SEE SHEET 5.
 6. FOR ABUTMENT 1 FOOTING PLAN, SEE SHEET 6.
 7. FOR ABUTMENT 1 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 7.
 8. FOR SAFETY WING A ELEVATIONS AND SECTIONS, SEE SHEET 8.
 9. FOR SAFETY WING A BARRIER DETAILS, SEE SHEET 9.
 10. FOR SAFETY WING B BARRIER DETAILS, SEE SHEET 11.
 11. FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

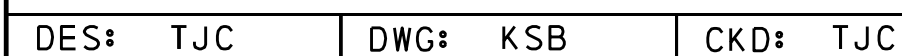
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 1 - SAFETY WING B

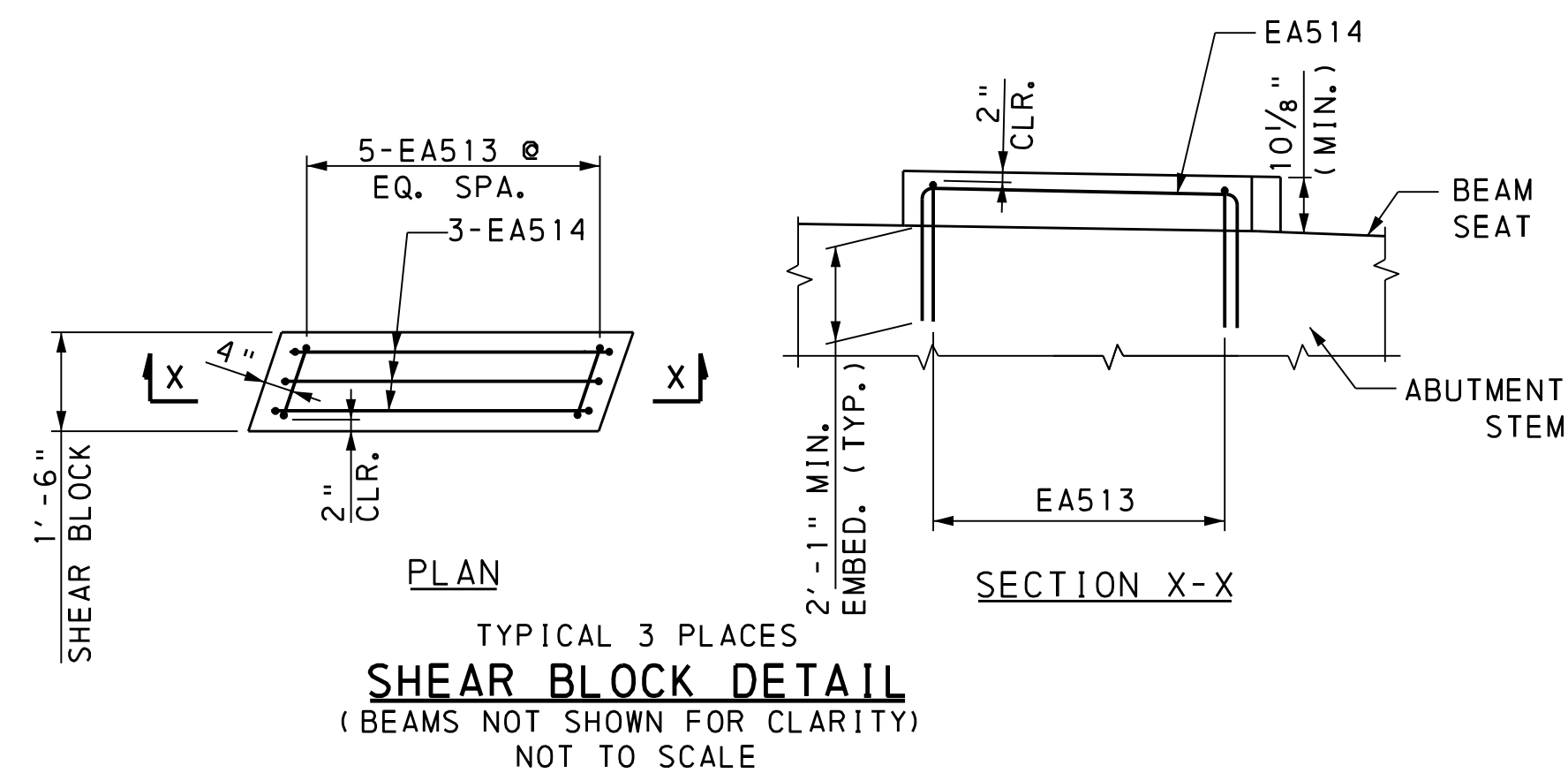
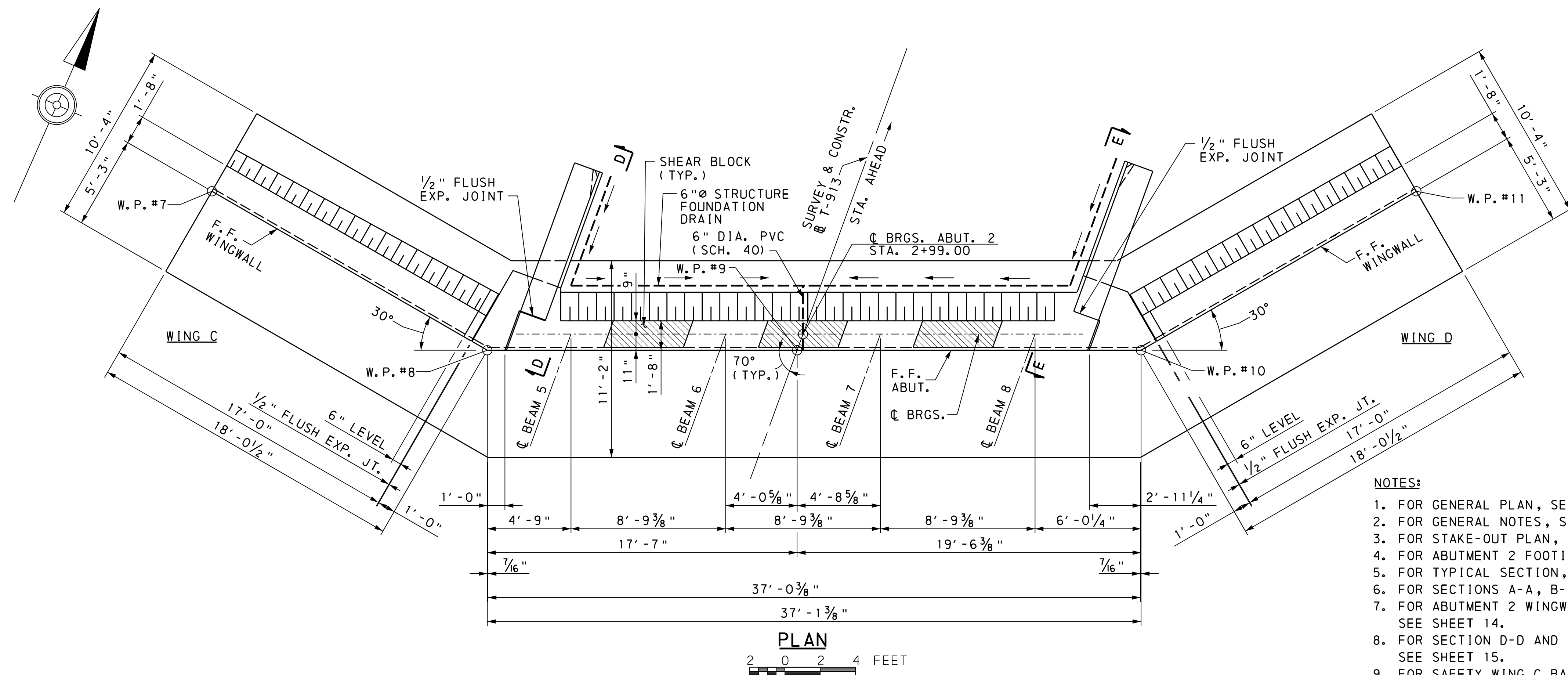


RECOMMENDED 2025.05.19

SHEET 10 OF 40

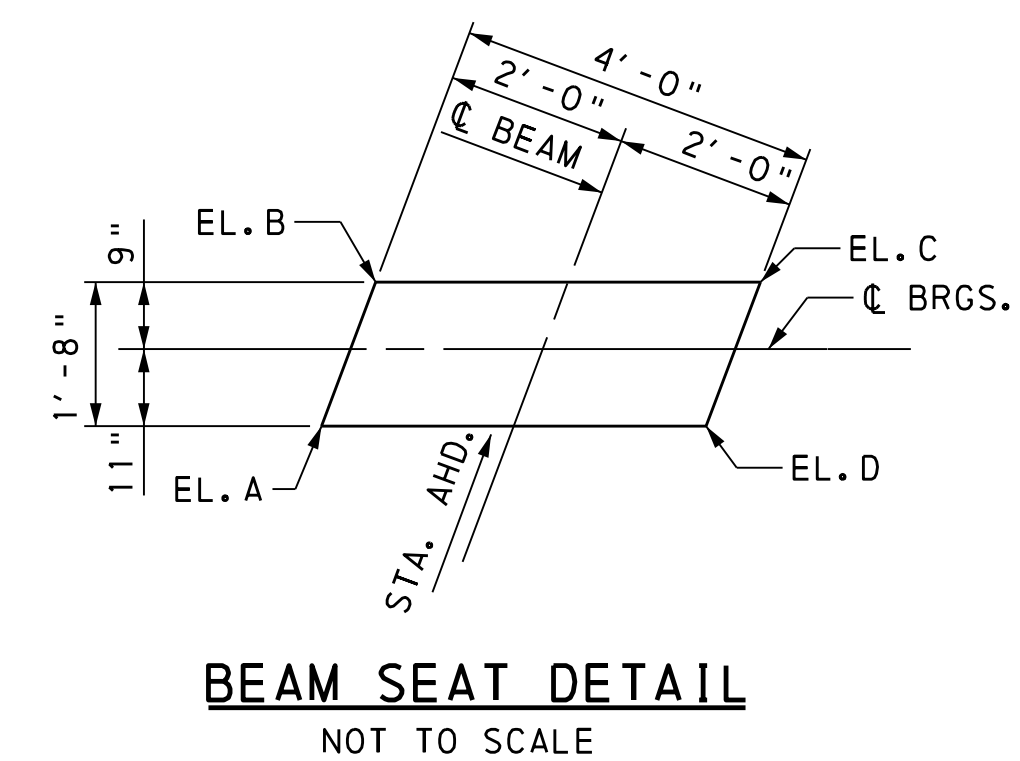
L - 366





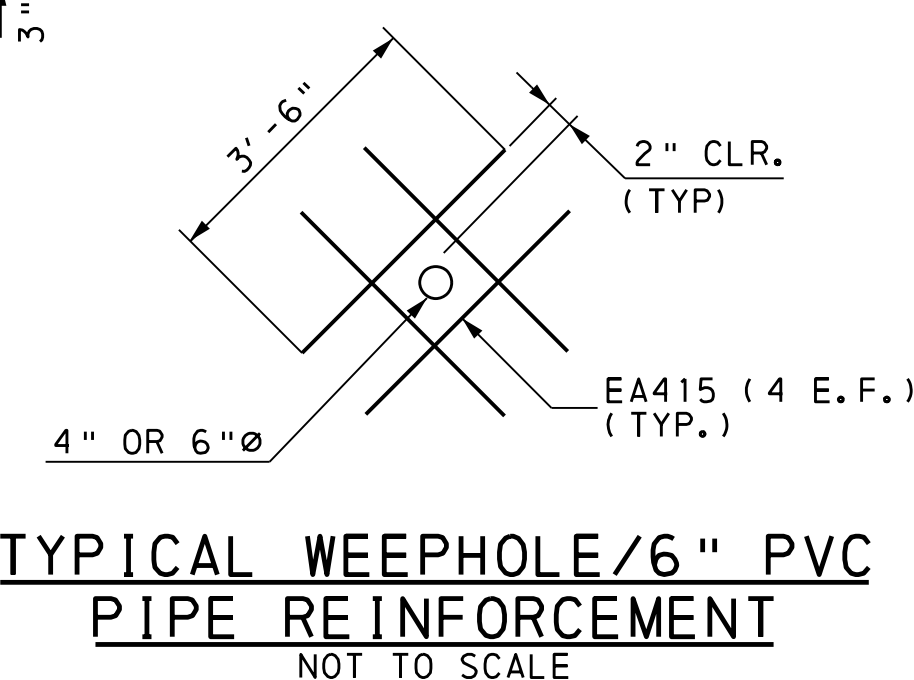
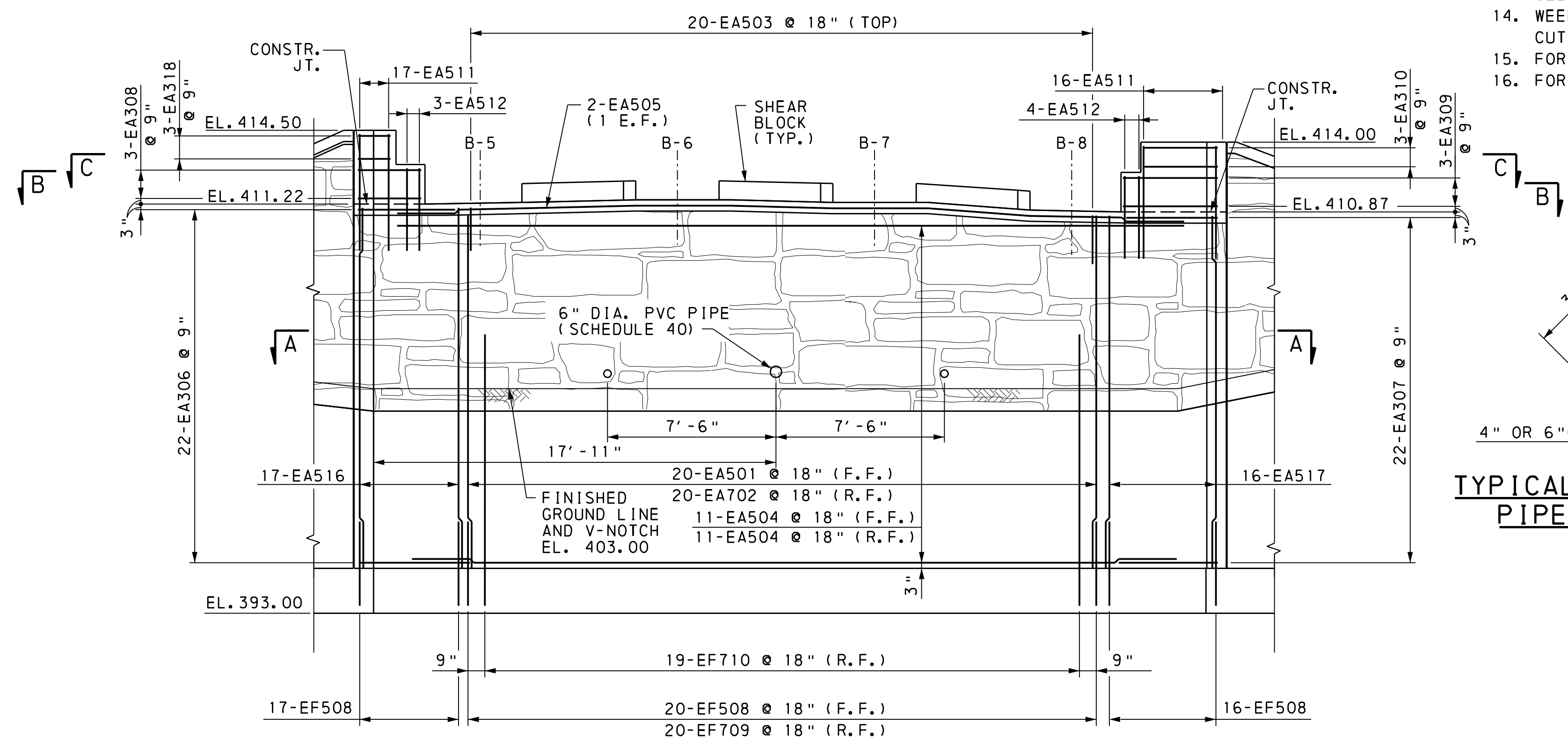
- NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 2 FOOTING PLAN, SEE SHEET 13.
5. FOR TYPICAL SECTION, SEE SHEET 13.
6. FOR SECTIONS A-A, B-B, & C-C, SEE SHEET 14.
7. FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
8. FOR SECTION D-D AND OTHER SAFETY WING C SECTIONS, SEE SHEET 15.
9. FOR SAFETY WING C BARRIER DETAILS, SEE SHEET 16.
10. FOR SECTION E-E AND OTHER SAFETY WING D SECTIONS, SEE SHEET 17.
11. FOR SAFETY WING D BARRIER DETAILS, SEE SHEET 18.
12. FOR FRAMING PLAN, SEE SHEET 21.
13. FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.
14. WEEPHOLE LOCATION MAY BE ADJUSTED TO AVOID CUTTING STEM REINFORCEMENT.
15. FOR ABUTMENT WEEPHOLE ELEVATIONS, SEE SHEET 13.
16. FOR WINGWALL WEEPHOLE ELEVATIONS, SEE SHEET 14.



BEAM SEAT ELEVATION TABLE					
BEAM	BEAM ELEV. BRO.	EL. A	EL. B	EL. C	EL. D
5	411.30	411.22	411.22	411.38	411.38
6	411.41	411.37	411.37	411.45	411.45
7	411.29	411.33	411.33	411.25	411.25
8	410.95	411.03	411.03	410.87	410.87

SLOPE TOP OF ABUTMENT UNIFORMLY BETWEEN
BEAM SEAT AREAS.



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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

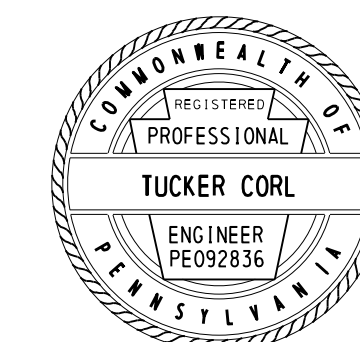
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 2 - PLAN AND ELEVATION

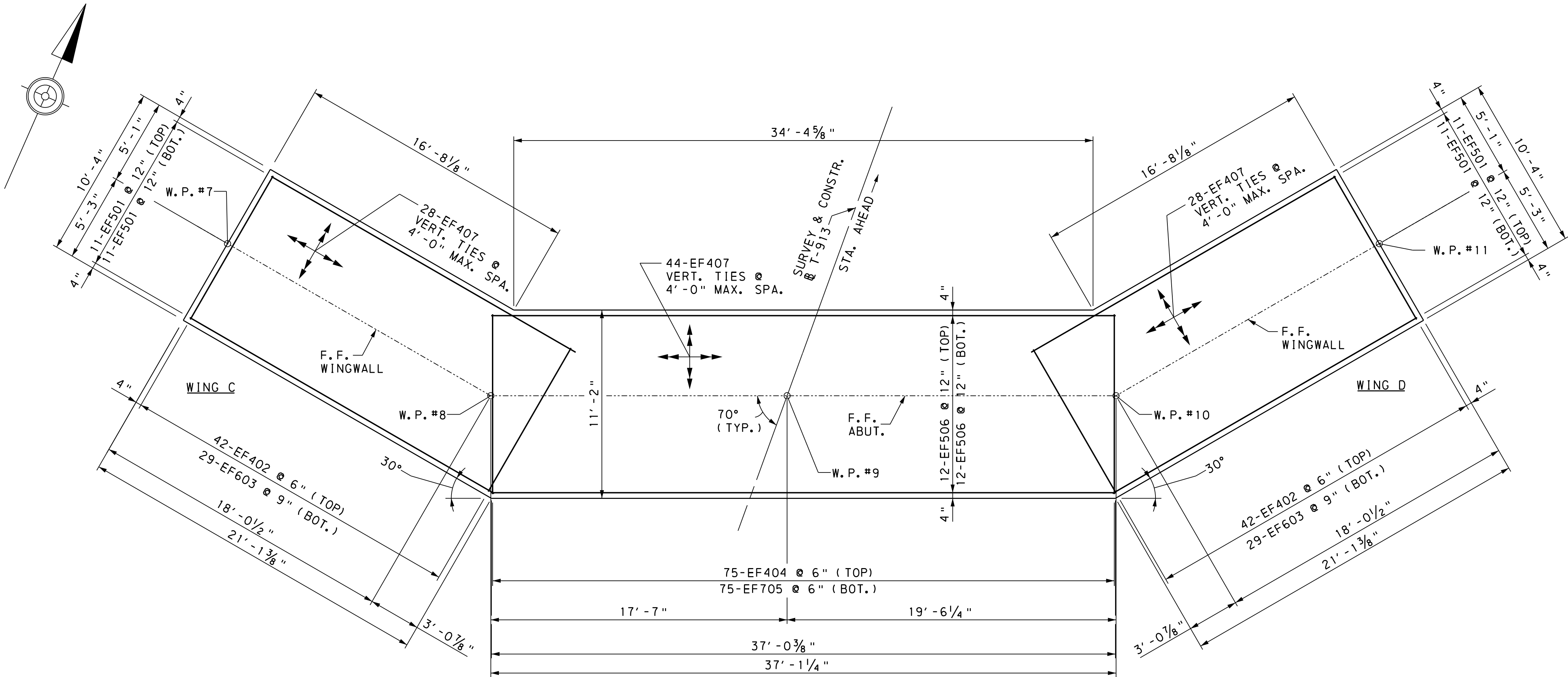
RECOMMENDED 2025.05.19

SHEET 12 OF 40

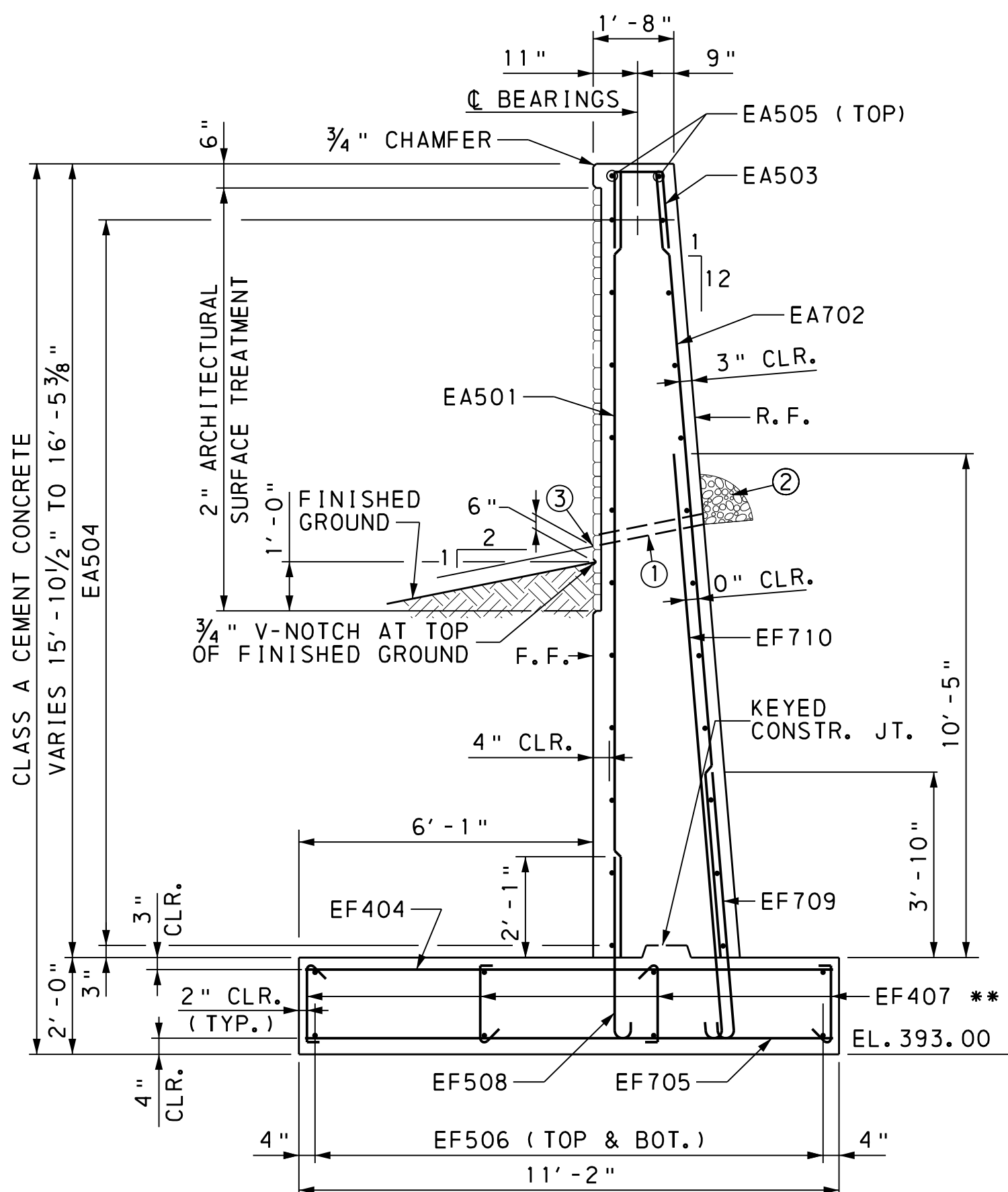
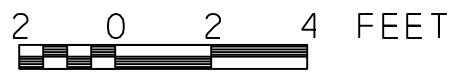
L - 366



FILE NAME: P:\003721\0431\Microstation\Bridges\13-B3721_0431_A2FTG.dgn
PLOTTER: 7/23/2024 4:52:46 PM kbookman
PEN TABLE: file date user: fb
PLOT DRIVER: r1\SYS - Microstation\Bridges\pdf_bw_full.plt.ctg



FOOTING PLAN

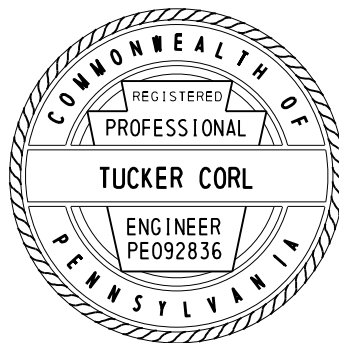


TYPICAL ABUTMENT SECTION

** ALTERNATE 90° AND 135° HOOK AT TOP IN ALTERNATE TIES.

WEEPHOLE NOTES

- 4" Ø FORMED WEEPHOLES AND 6" FOUNDATION DRAIN - SEE ELEVATION VIEW FOR LOCATIONS, SHEET 12.
- 1/2 CU. YD. NO. 57 COARSE AGGREGATE, ENCASED WITH CLASS 1 GEOTEXTILE MATERIAL AT EACH WEEPHOLE, SEE PUB. 408 SECTION 1001.3 (c) & (d).
- INV. EL. A = 403.50



NOTES:

- FOR GENERAL PLAN, SEE SHEET 1.
- FOR GENERAL NOTES, SEE SHEET 2.
- FOR STAKE-OUT PLAN, SEE SHEET 3.
- FOR ABUTMENT 2 PLAN AND ELEVATION, SEE SHEET 12.
- FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
- FOR SAFETY WING C ELEVATIONS AND SECTIONS, SEE SHEET 15.
- FOR SAFETY WING C BARRIER DETAILS, SEE SHEET 16.
- FOR SAFETY WING D ELEVATIONS AND SECTIONS, SEE SHEET 17.
- FOR SAFETY WING D BARRIER DETAILS, SEE SHEET 18.
- FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.
- ABUTMENT 2:
FACTORED BEARING RESISTANCE = 3.00 TSF
FACTORED UNIFORM BEARING PRESSURE = 3.05 TSF
LIMIT STATE: STR-I MIN. FIN.

FACTORED HORIZONTAL FORCE = 10.88 KIPS
FACTORED SLIDING RESISTANCE = 15.27 KIPS
LIMIT STATE: STR-I MIN. TMP.
- WINGS C & D:
FACTORED BEARING RESISTANCE = 3.00 TSF
FACTORED UNIFORM BEARING PRESSURE = 2.84 TSF
LIMIT STATE: STR-I MIN. TMP.

FACTORED HORIZONTAL FORCE = 10.64 KIPS
FACTORED SLIDING RESISTANCE = 15.20 KIPS
LIMIT STATE: STR-I MIN. TMP.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

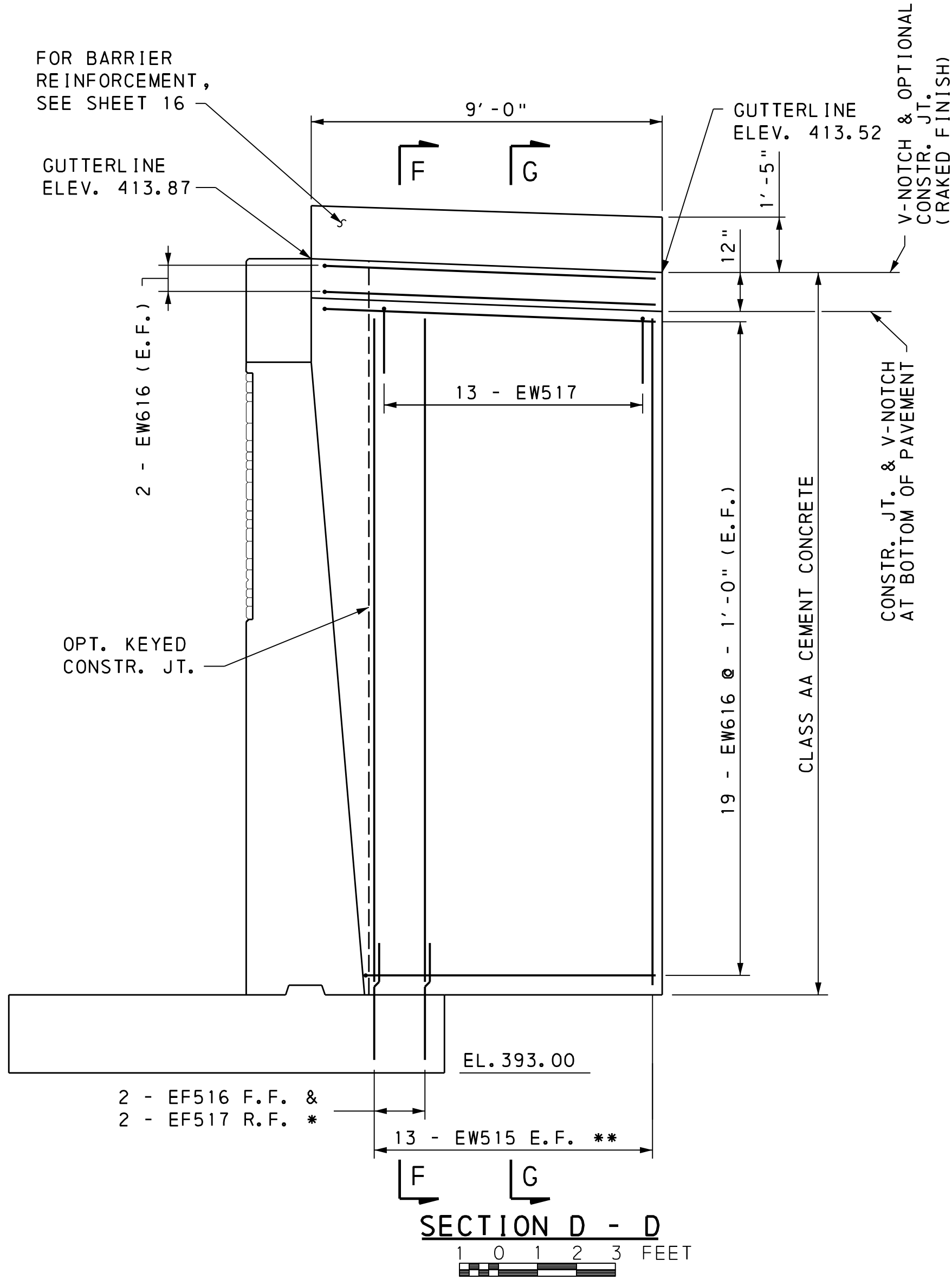
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 2 - FOOTING PLAN

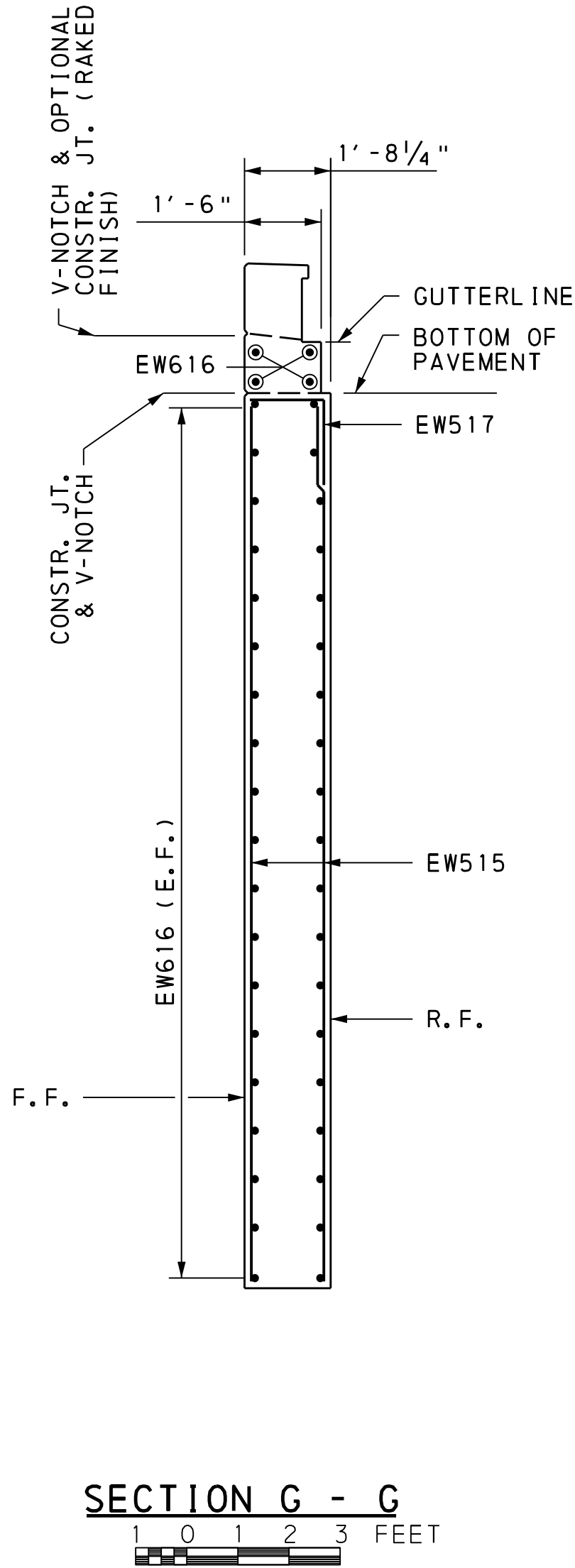
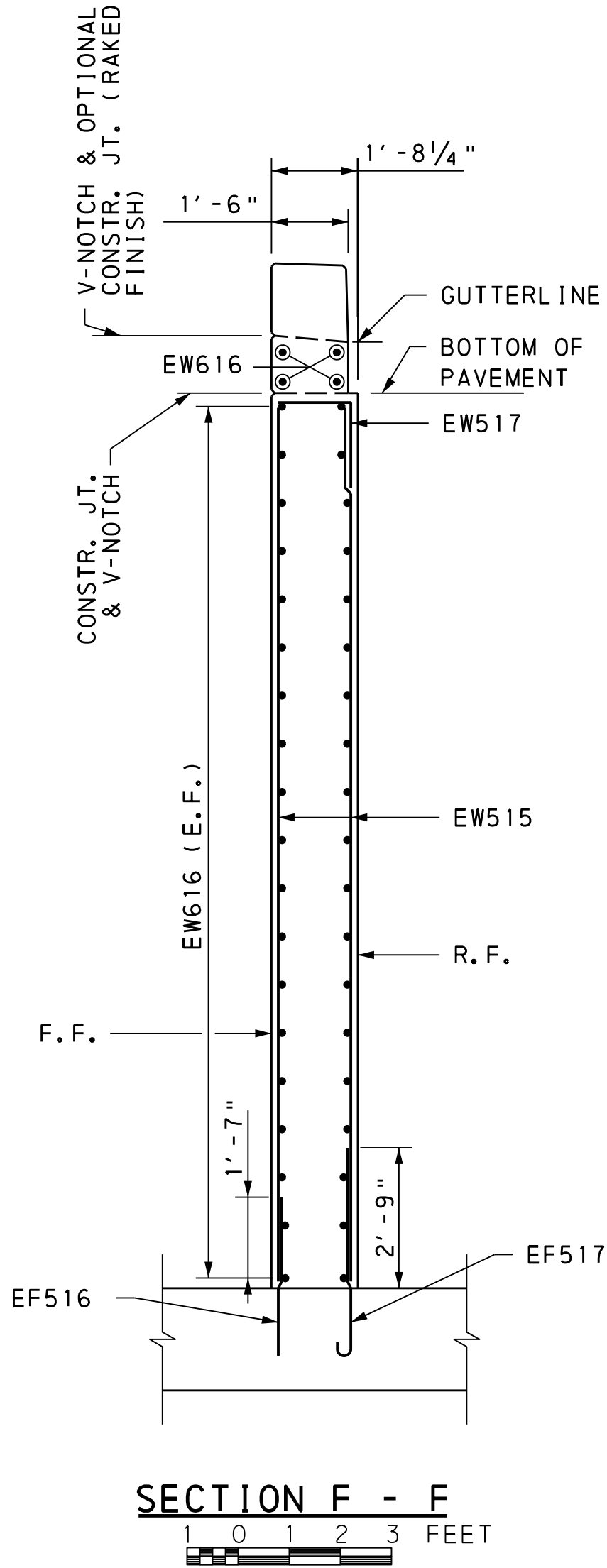
RECOMMENDED 2025.05.19

SHEET 13 OF 40
L-366

FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\15-B3721_0431 A2SWC.dgn
PLOT DATE: 12/4/2024 8:52:52 AM
PEN TABLE: file date user: kb
PLOT DRIVER: r1\sys - Microsoft\Bridges\pdf_bw_full.plt



* MATCH EF516 AND EF517 WITH EW515
WHEN SAFETY WING IS OVER FOOTING
** MATCH EW515 AND EW517 WITH BARRIER
REINFORCEMENT



NOTE: BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY

- NOTES:
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-OUT PLAN, SEE SHEET 3.
 4. FOR ABUTMENT 2 PLAN AND ELEVATION, SEE SHEET 12.
 5. FOR LOCATION OF VIEW D-D, SEE SHEET 12.
 6. FOR ABUTMENT 2 FOOTING PLAN, SEE SHEET 13.
 7. FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
 8. FOR SAFETY WING C BARRIER DETAILS, SEE SHEET 16.
 9. FOR SAFETY WING D ELEVATIONS AND SECTIONS, SEE SHEET 17.
 10. FOR SAFETY WING D BARRIER DETAILS, SEE SHEET 18.
 11. FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

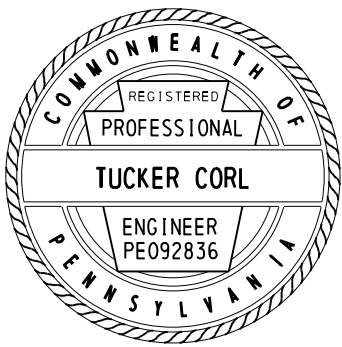
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 2 - SAFETY WING C

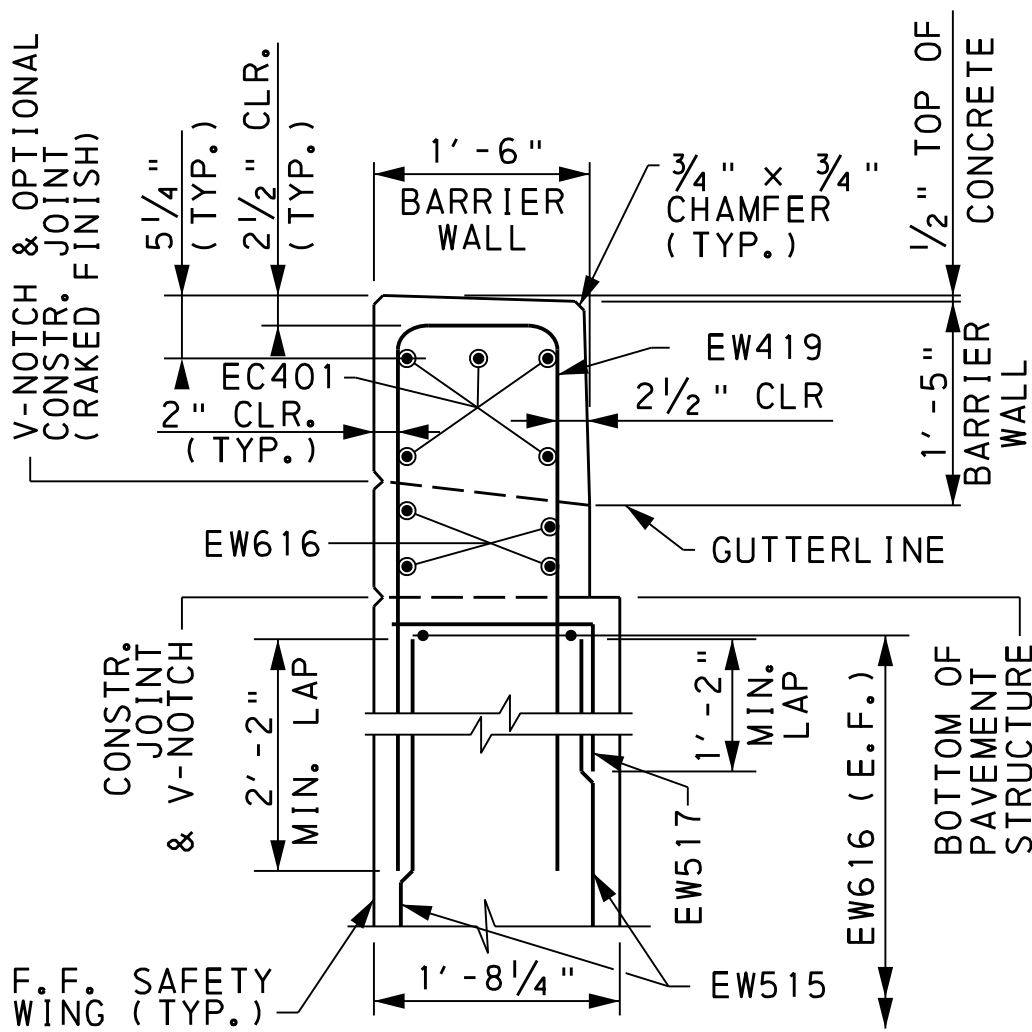
RECOMMENDED 2025.05.19

SHEET 15 OF 40

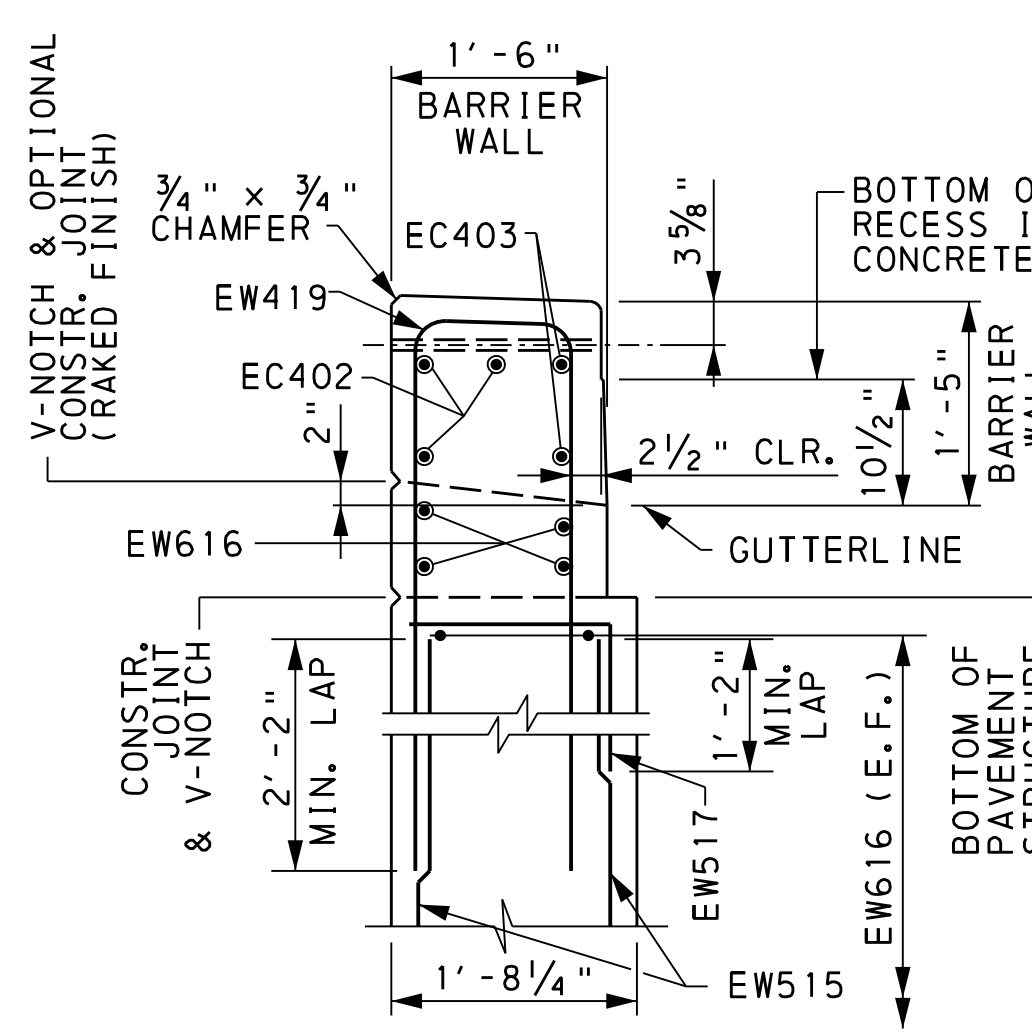
L-366



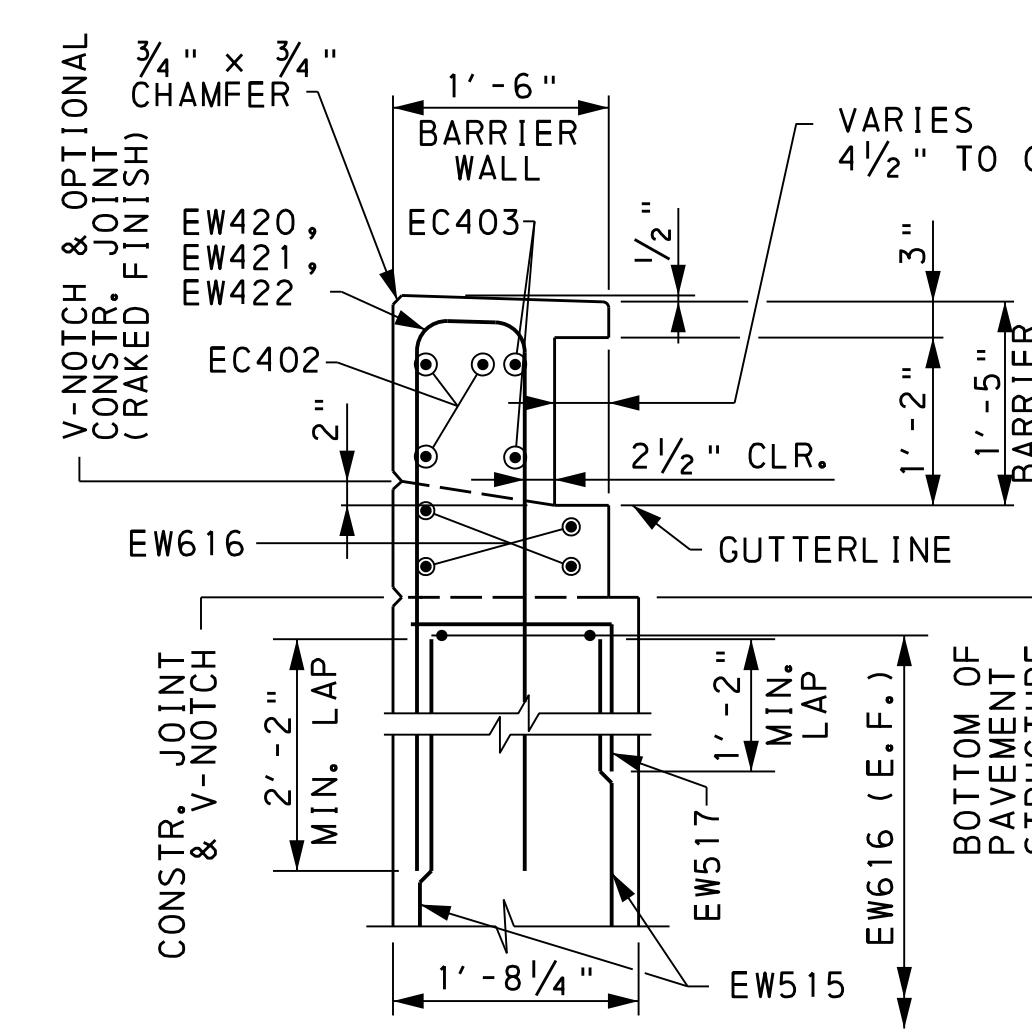
FILE NAME: P:\0037\003721\0431\Microsoft\Bridges\16-B3721-0431 A2BE3.dgn
PLOTTER: 7/23/2024 4:54:34 PM kbookman
PEN TABLE: file date user tb
PLOT DRIVER: r1\SYS - Microsoft\Bridges\pdf_bw_full.plt;cg



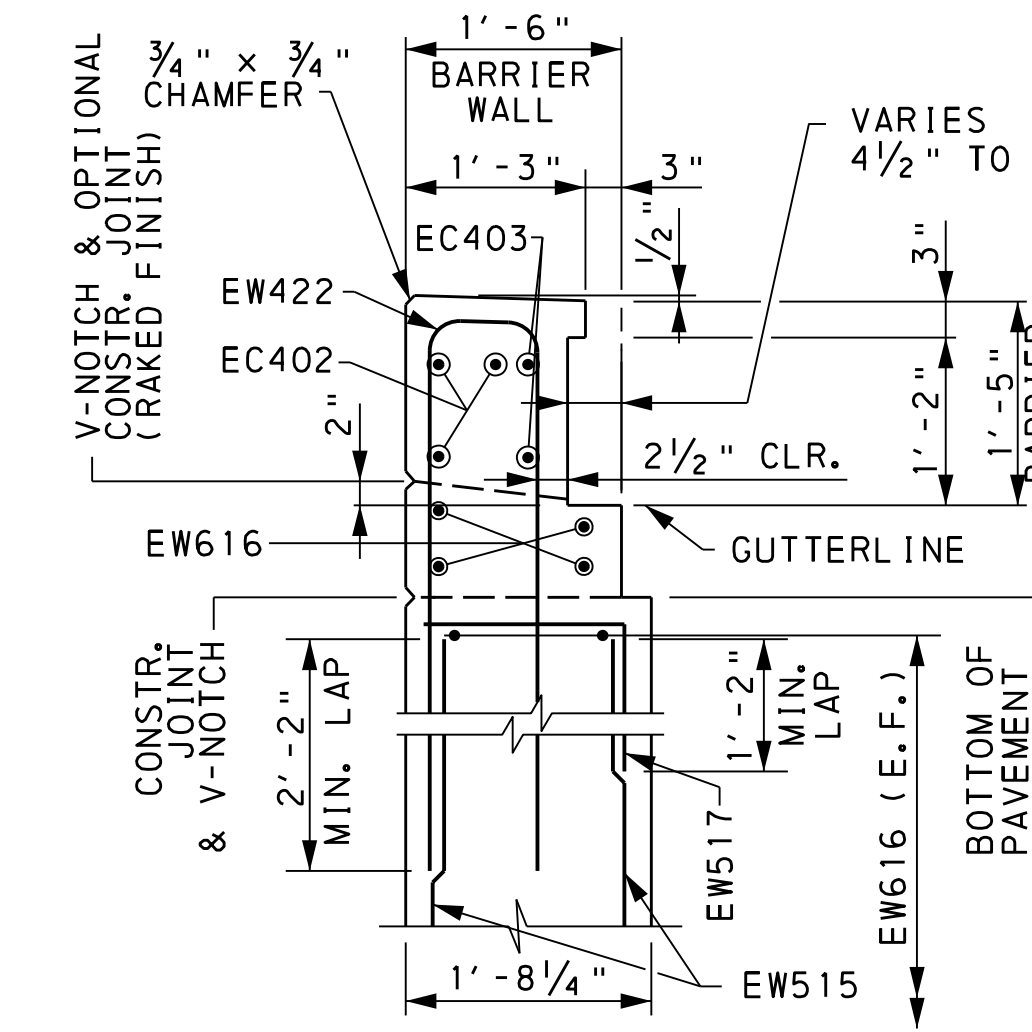
SECTION CA-CA



SECTION CB-CB



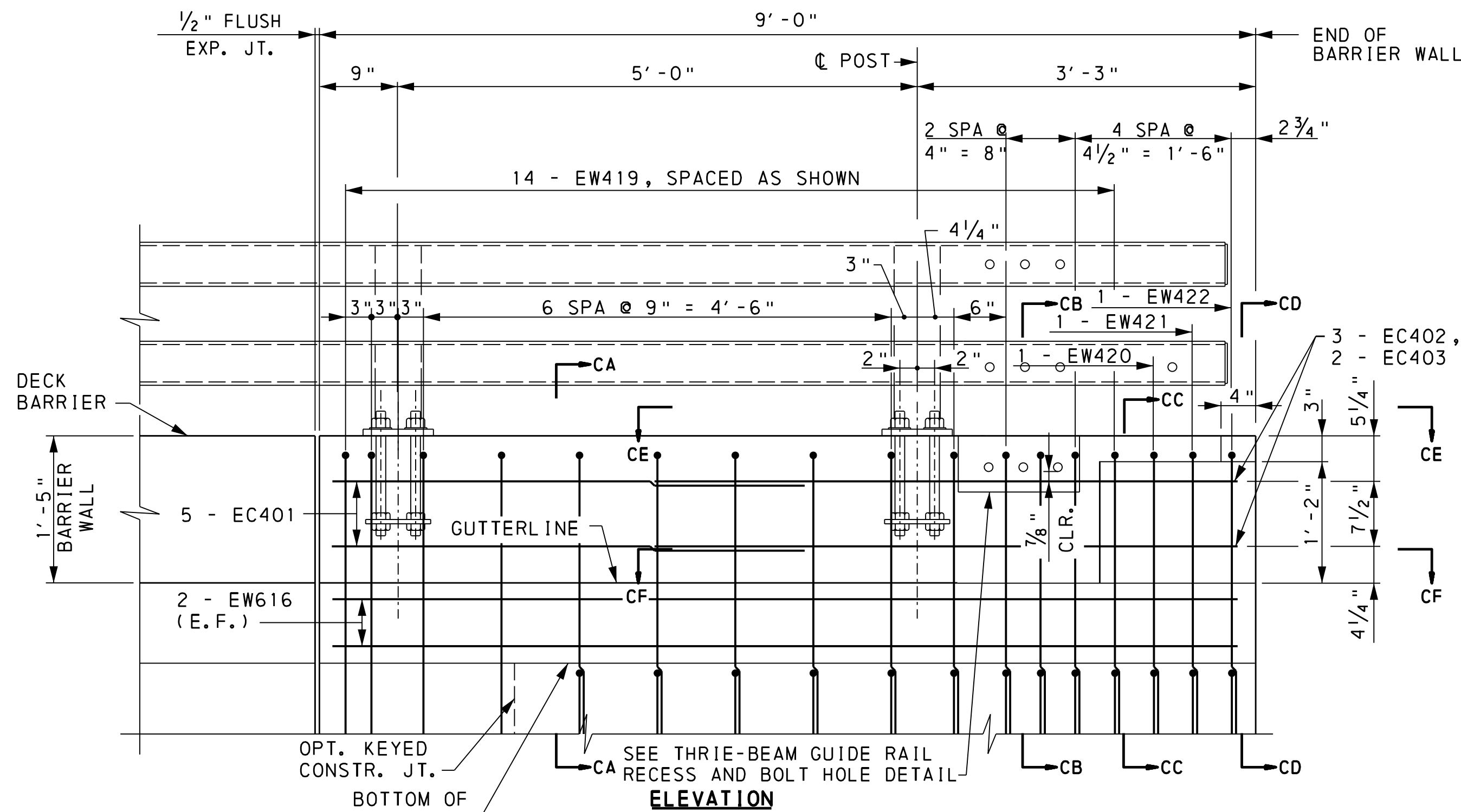
SECTION CC-CC



SECTION CD-CD

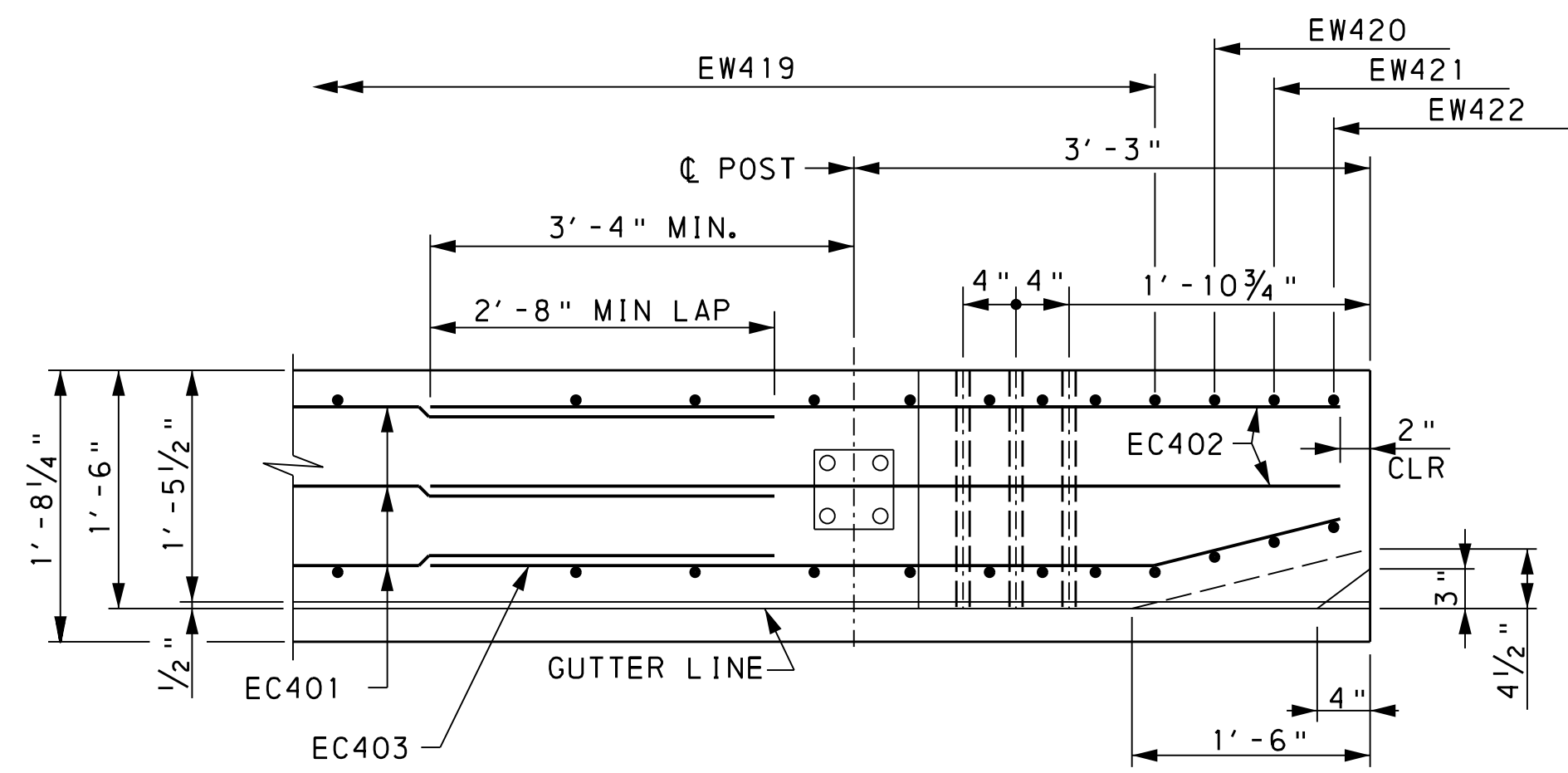
BARRIER TRANSITION SECTIONS

12 0 12 INCHES



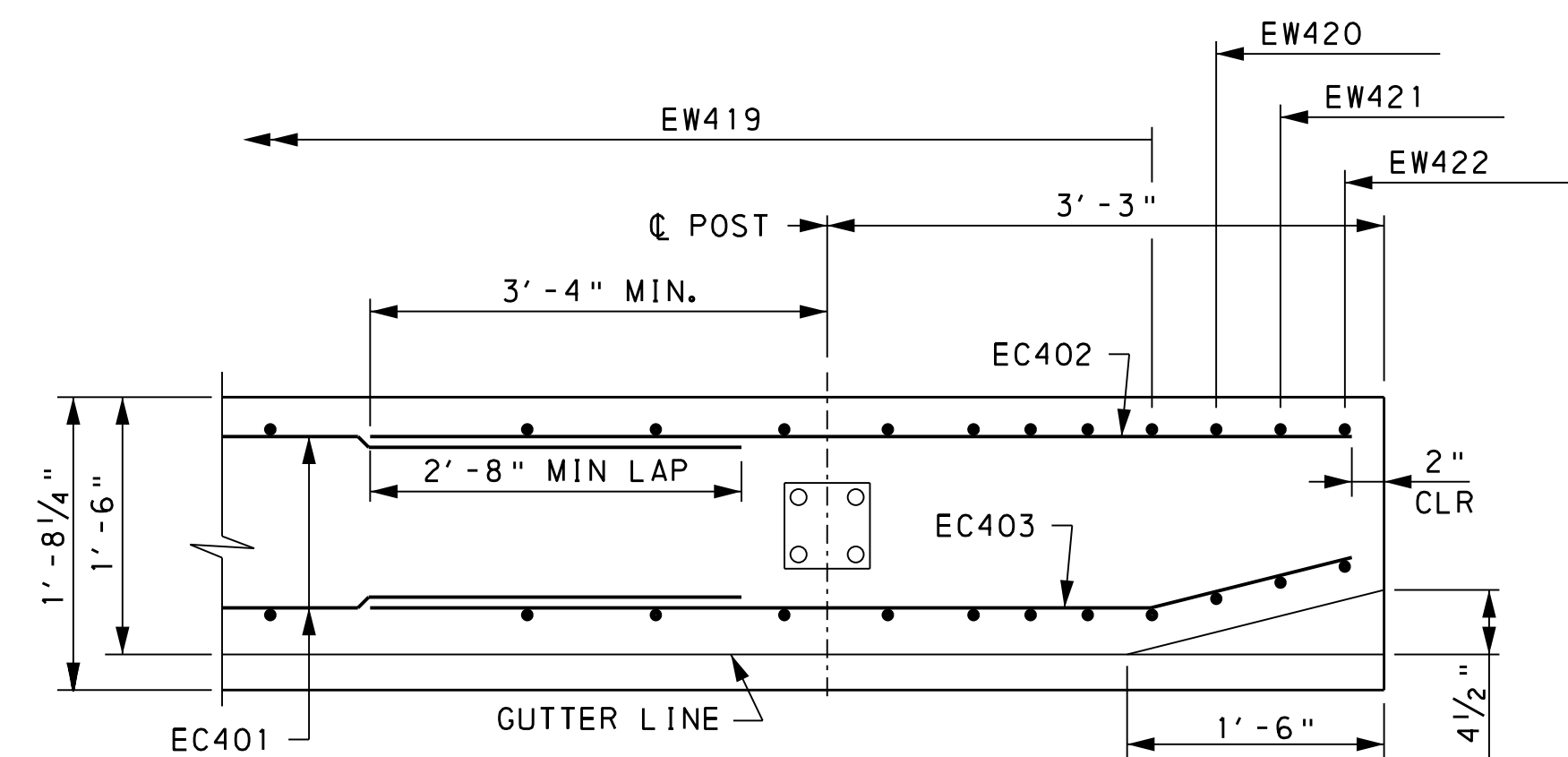
PA TYPE 10M BARRIER END TRANSITION

6 0 6 12 INCHES



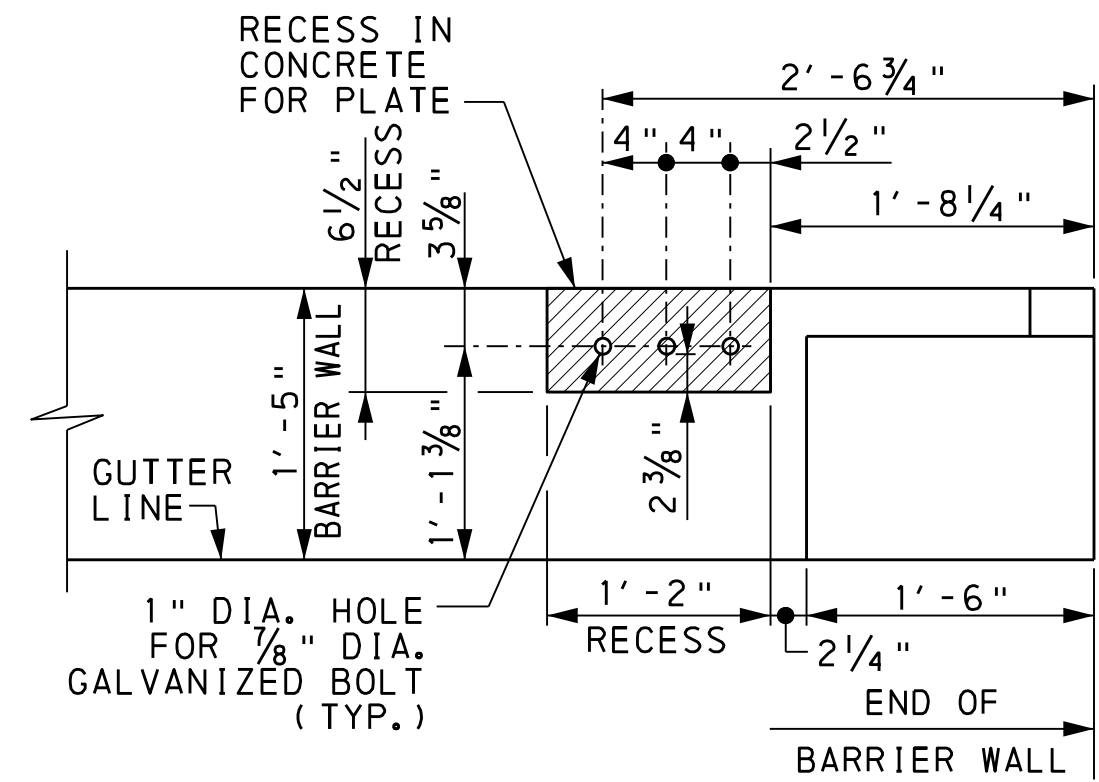
SECTION CE-CE

6 0 6 12 INCHES



SECTION CF-CF

6 0 6 12 INCHES



THREE-BEAM GUIDE RAIL
RECESS AND BOLT HOLE DETAIL

6 0 6 12 INCHES

NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT 2 PLAN AND ELEVATION, SEE SHEET 12.
5. FOR ABUTMENT 2 FOOTING PLAN, SEE SHEET 13.
6. FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
7. FOR SAFETY WING C ELEVATIONS AND SECTIONS, SEE SHEET 15.
8. FOR SAFETY WING D ELEVATIONS AND SECTIONS, SEE SHEET 17.
9. FOR SAFETY WING D BARRIER DETAILS, SEE SHEET 18.
10. FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

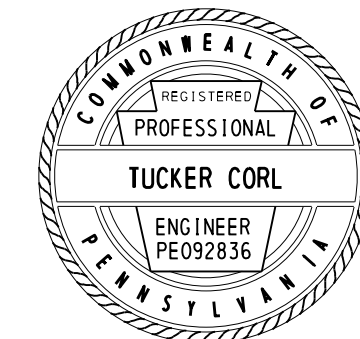
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUT. 2 - SAFETY WING C DETAILS

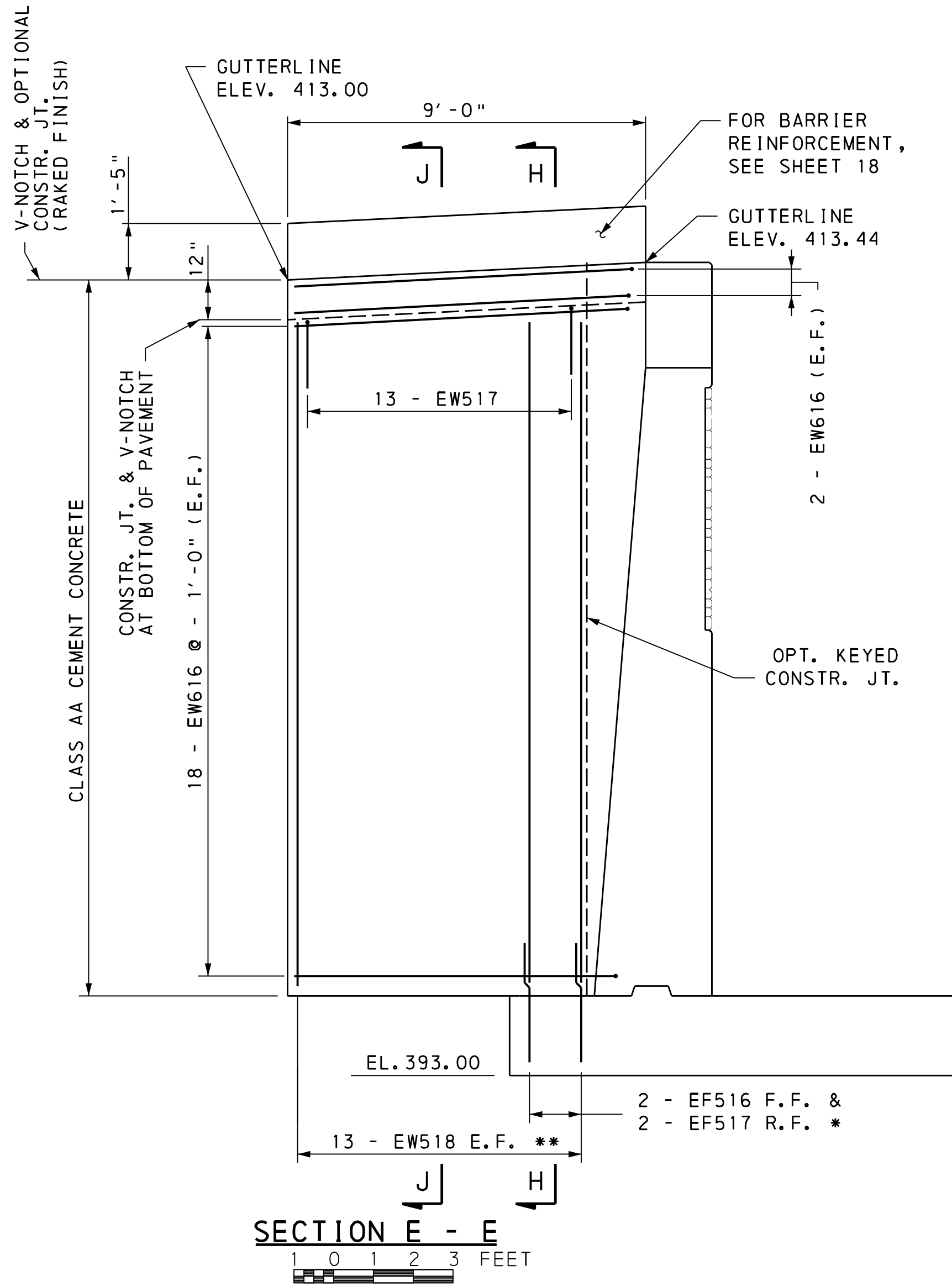
RECOMMENDED 2025.05.19

SHEET 16 OF 40

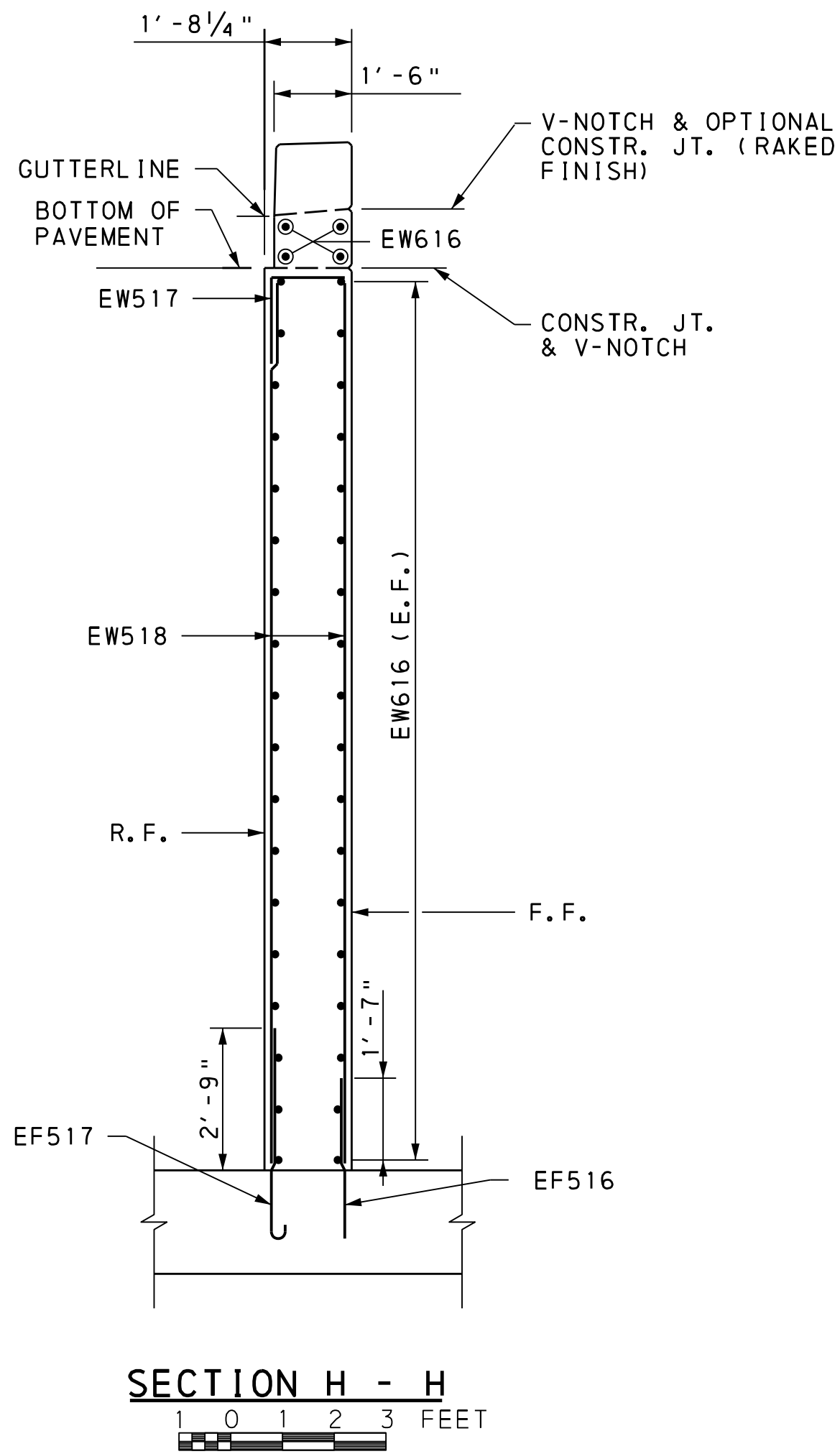
L-366



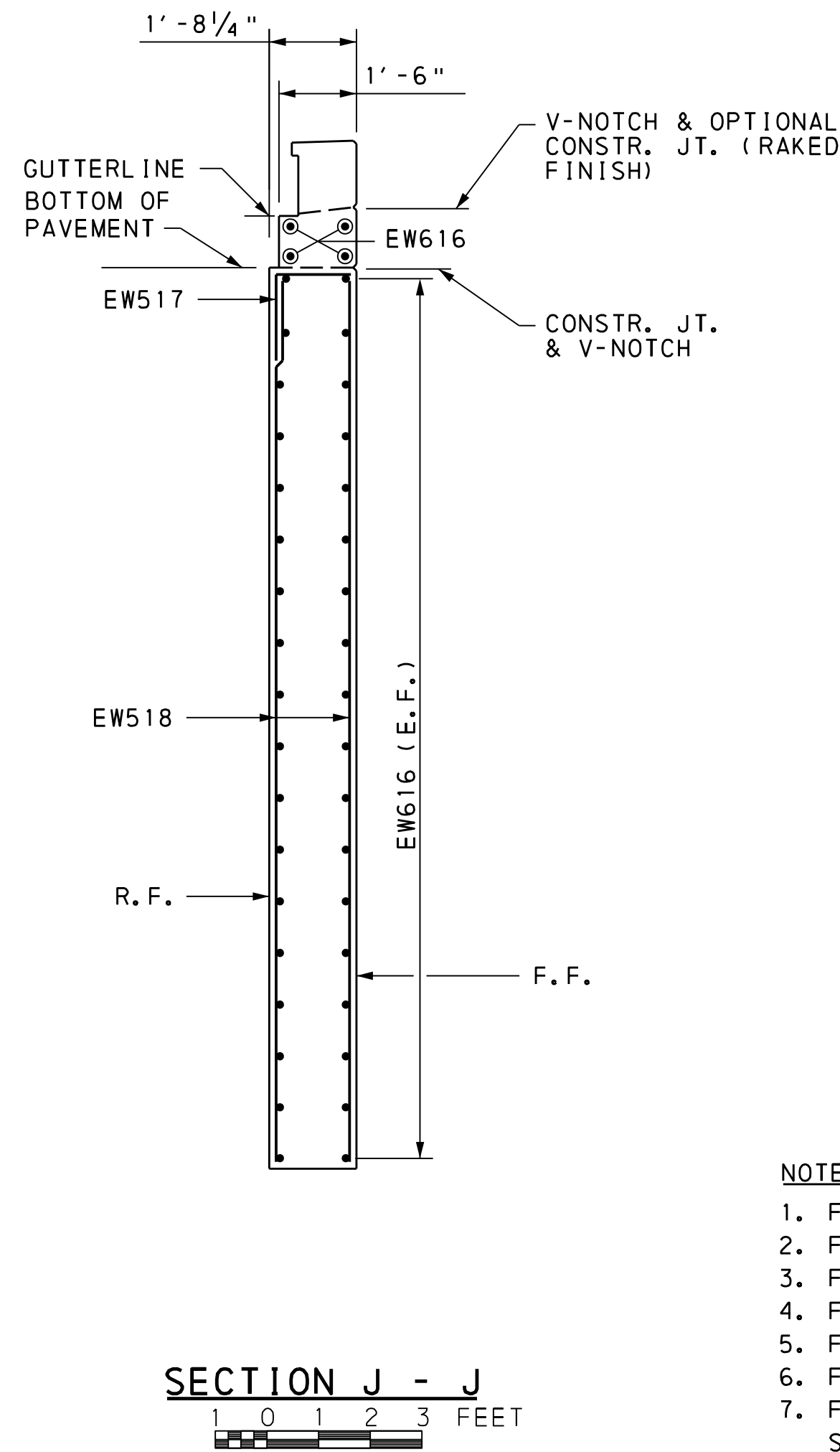
FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\B3721_0431_A2SWD.dgn
PLOT DATE: 12/4/2024 8:54:17 AM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\SYS - Microsoft\Bridges\B3721_0431_A2SWD.dgn



* MATCH EF516 AND EF517 WITH EW518
WHEN SAFETY WING IS OVER FOOTING
** MATCH EW518 AND EW517 WITH BARRIER
REINFORCEMENT



NOTE: BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY

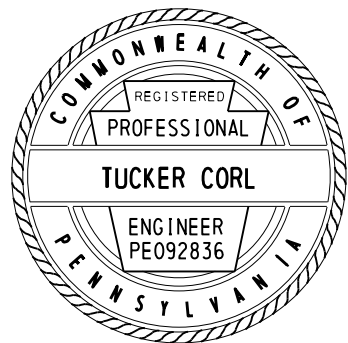


- NOTES:
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-OUT PLAN, SEE SHEET 3.
 4. FOR ABUTMENT 2 PLAN AND ELEVATION, SEE SHEET 12.
 5. FOR LOCATION OF VIEW E-E, SHEET 12.
 6. FOR ABUTMENT 2 FOOTING PLAN, SEE SHEET 13.
 7. FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
 8. FOR SAFETY WING C ELEVATIONS AND SECTIONS, SEE SHEET 15.
 9. FOR SAFETY WING C BARRIER DETAILS, SEE SHEET 16.
 10. FOR SAFETY WING D BARRIER DETAILS, SEE SHEET 18.
 11. FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

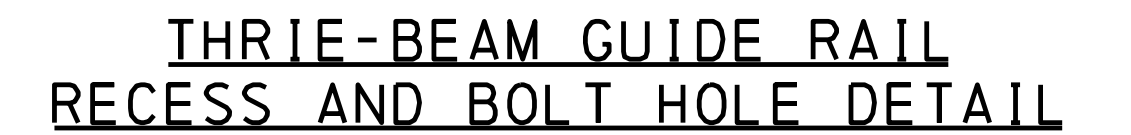
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUTMENT 2 - SAFETY WING D



RECOMMENDED 2025.05.19

SHEET 17 OF 40

L-366



- NOTES:**
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-OUT PLAN, SEE SHEET 3.
 4. FOR ABUTMENT 2 PLAN AND ELEVATION, SEE SHEET 12.
 5. FOR ABUTMENT 2 FOOTING PLAN, SEE SHEET 13.
 6. FOR ABUTMENT 2 WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 14.
 7. FOR SAFETY WING C ELEVATIONS AND SECTIONS, SEE SHEET 15.
 8. FOR SAFETY WING C BARRIER DETAILS, SEE SHEET 16.
 9. FOR SAFETY WING D ELEVATIONS AND SECTIONS, SEE SHEET 17.
 10. FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.



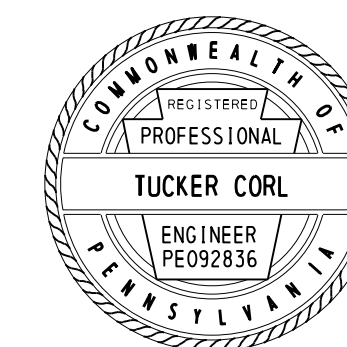
12 0 12 INCHES

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

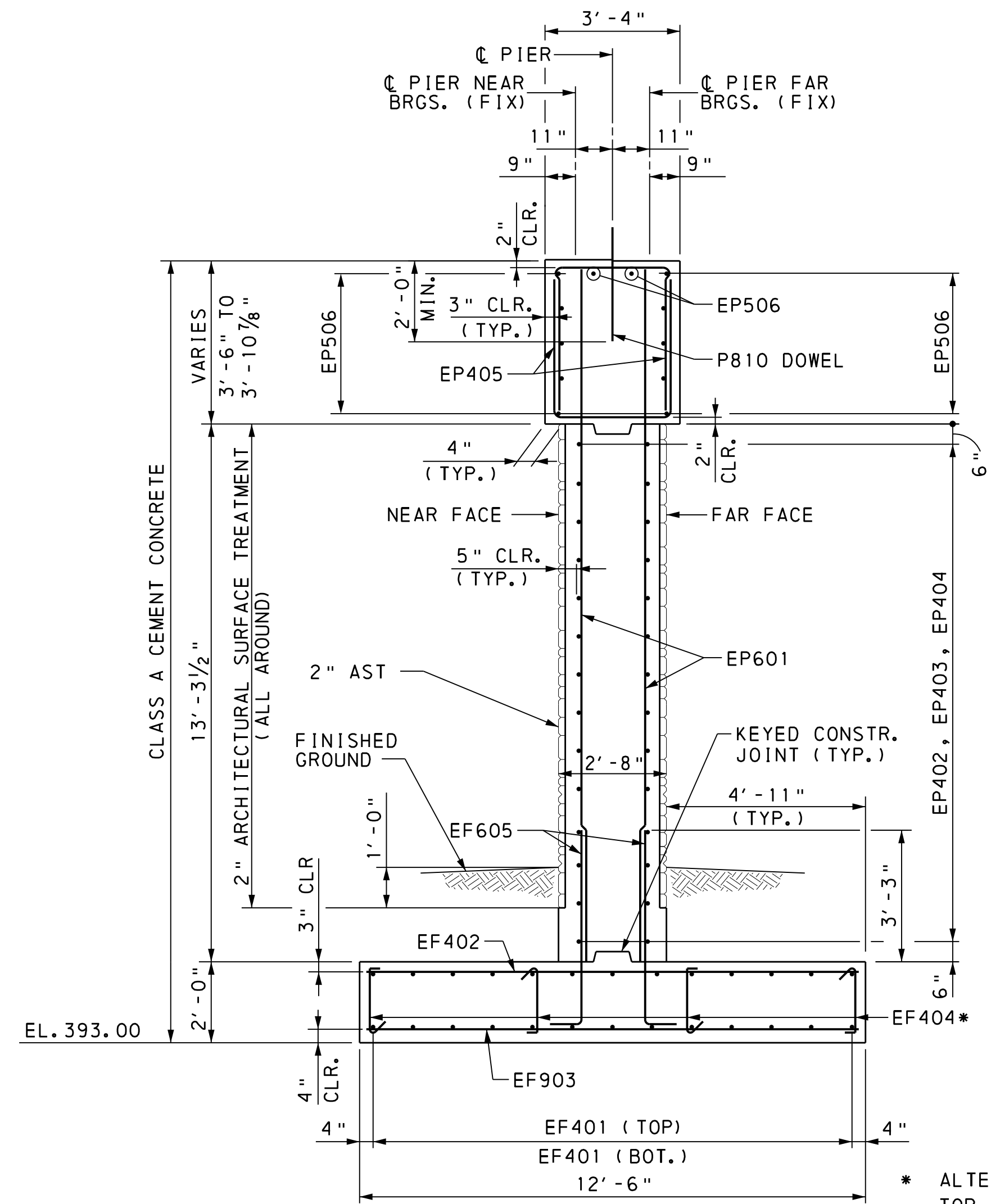
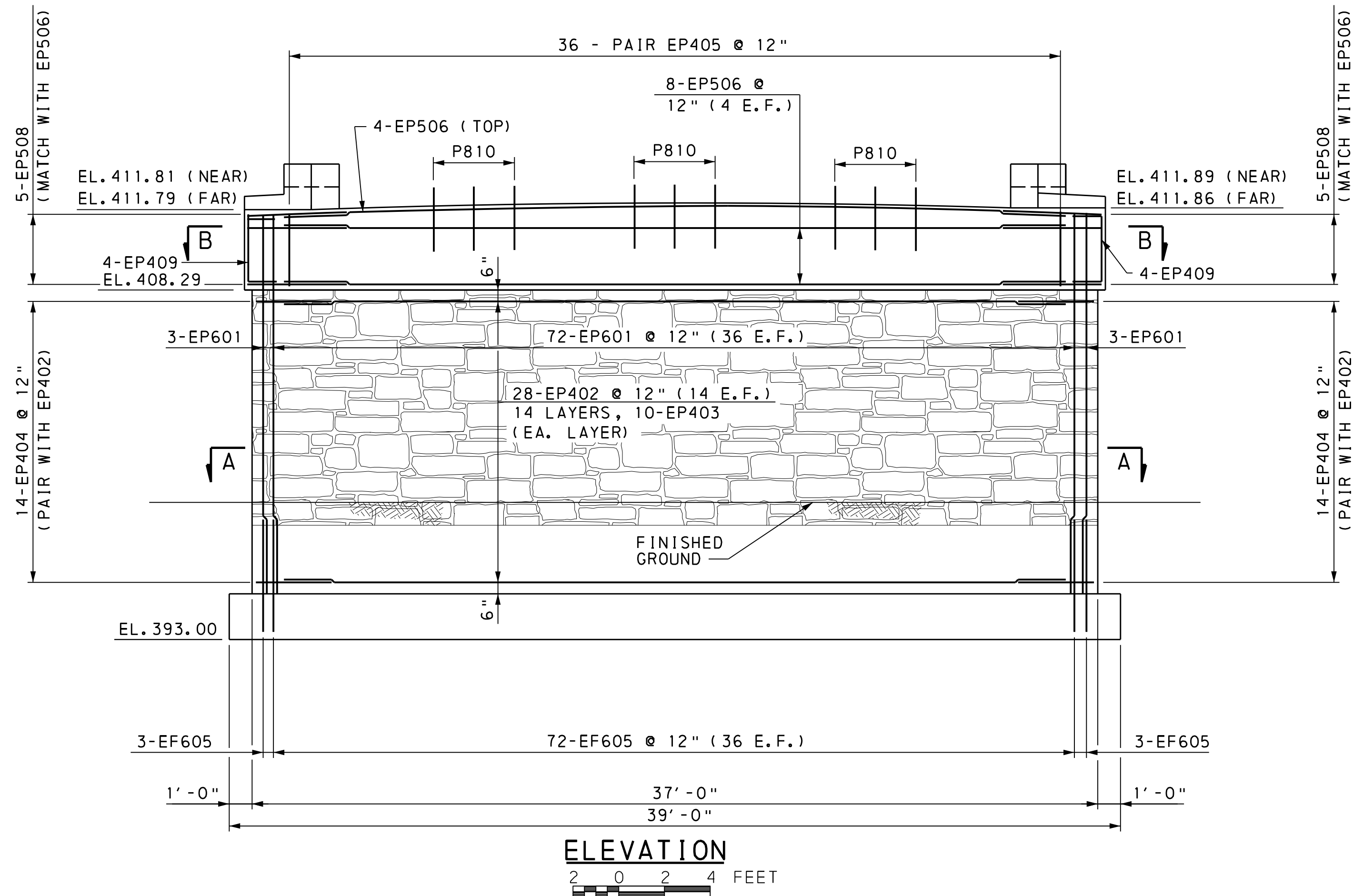
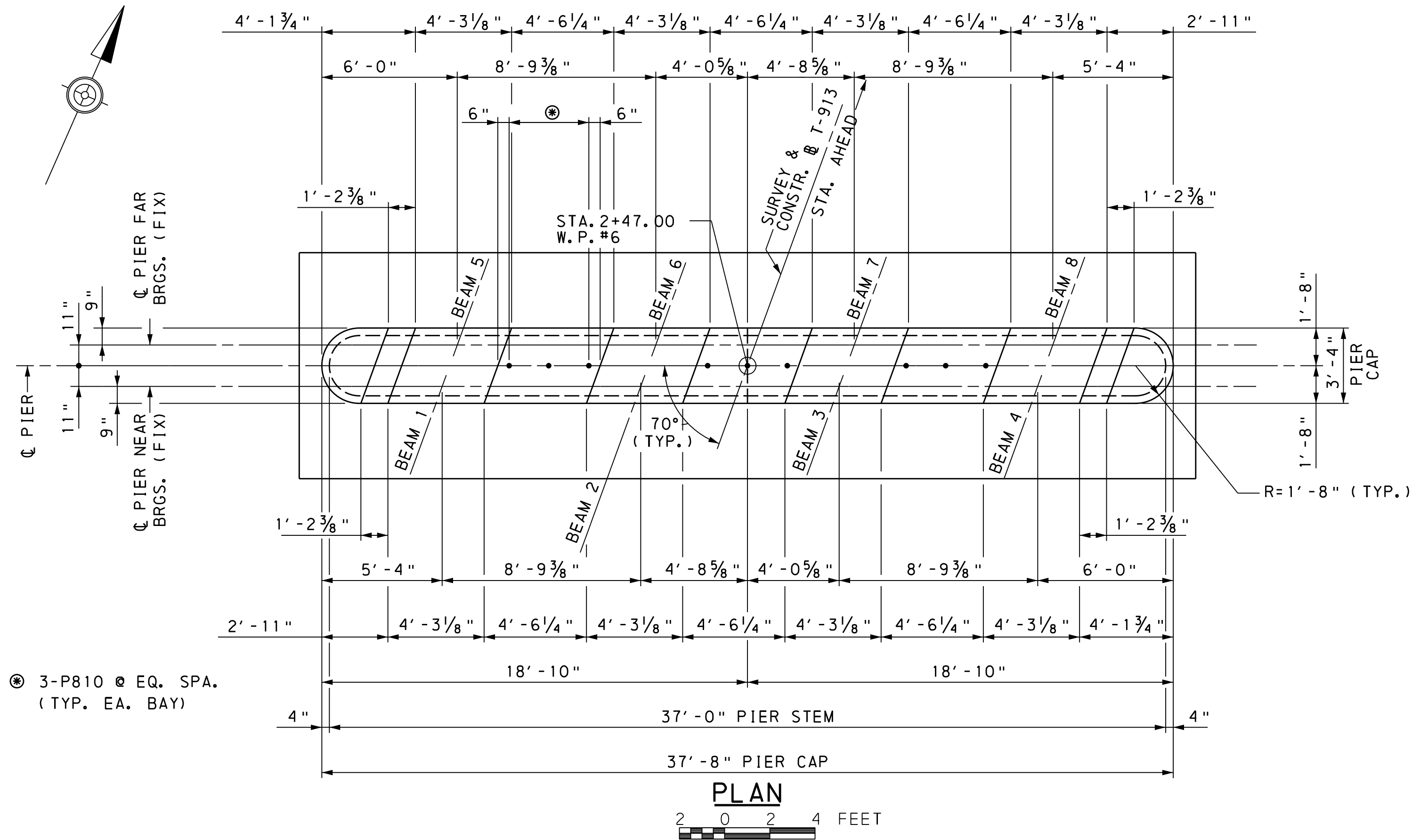
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
ABUT. 2 - SAFETY WING D DETAILS

SHEET 18 OF 40

L - 366

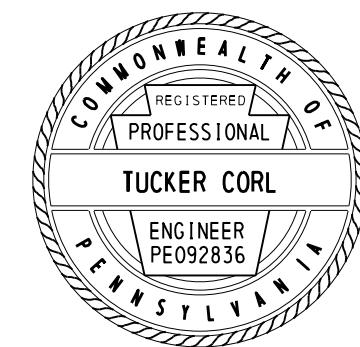


FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\B3721_0431 P1.dgn
PLOTTER: 7/23/2024 4:55:41 PM kbookman
PEN TABLE: file date user.tbl
PLOT DRIVER: r1\SYS - Microsoft\Bridges\pdf_bw_full.plt.ctg



NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR FOOTING PLAN, SEE SHEET 20.
5. FOR SECTIONS A-A & B-B, SEE SHEET 20.
6. FOR BEAM SEAT ELEVATIONS, SEE SHEET 20.
7. FOR CHEEKWALL/CURTAIN WALL DETAILS, SEE SHEET 20
8. FOR FRAMING PLAN, SEE SHEET 21.
9. FOR DIAPHRAGM DETAILS, SEE SHEETS 30.
10. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 32.
11. FACTORED BEARING RESISTANCE = 3.00 T.S.F.
FACTORED UNIFORM BEARING PRESSURE = 2.78 T.S.F.
LIMIT STATE = STR-I



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS

T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK

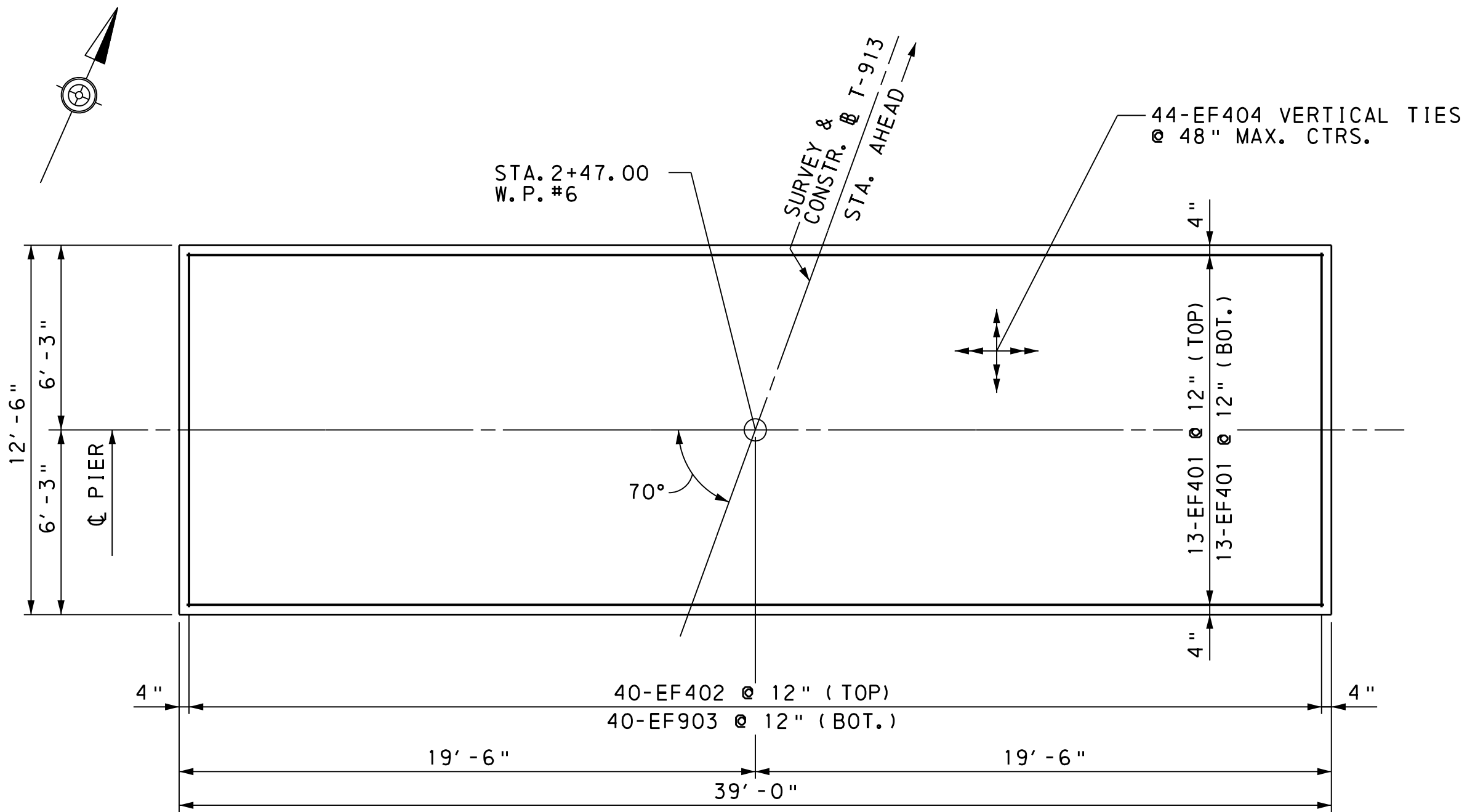
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
PIER

RECOMMENDED 2025.05.19

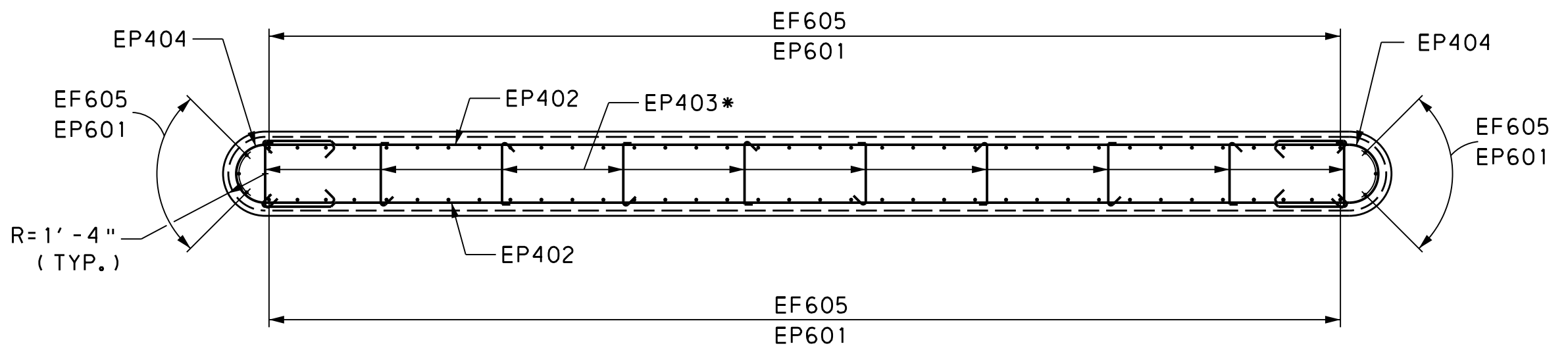
SHEET 19 OF 40

L-366

FILE NAME: P:\0037\003721\0431\Microstation\BRIDGE\20-B3721_0431_P1D.dgn
PLOTTER: 5/15/2024 11:27:56 AM kbookman
PEN TABLE: file date user tb
PLOT DRIVER: r1\SYS - Microstation\Bridges\pdf_bw_full.plt.ctg



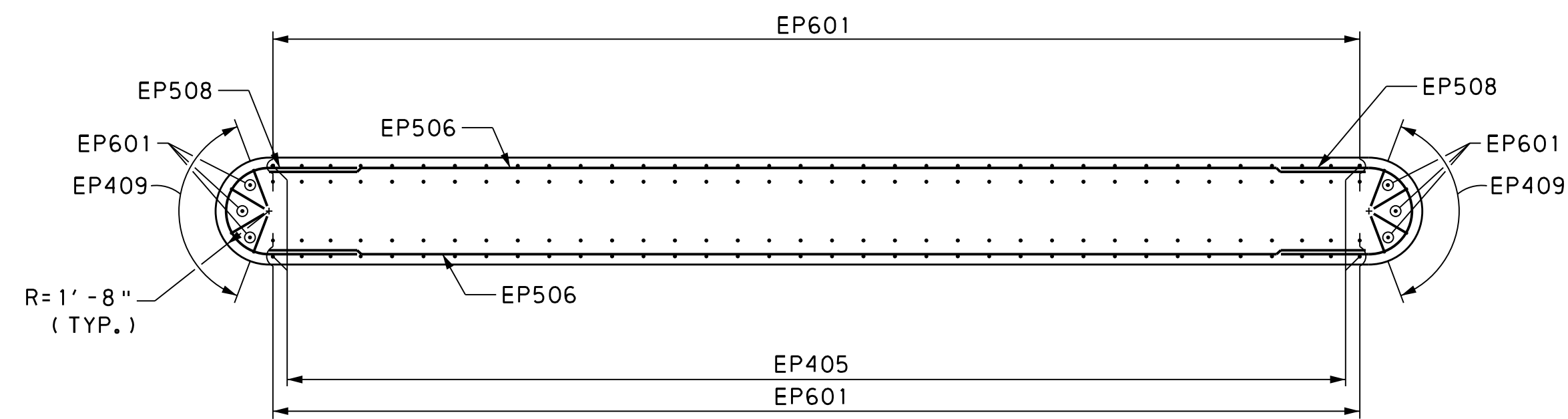
FOOTING PLAN
2 0 2 4 FEET



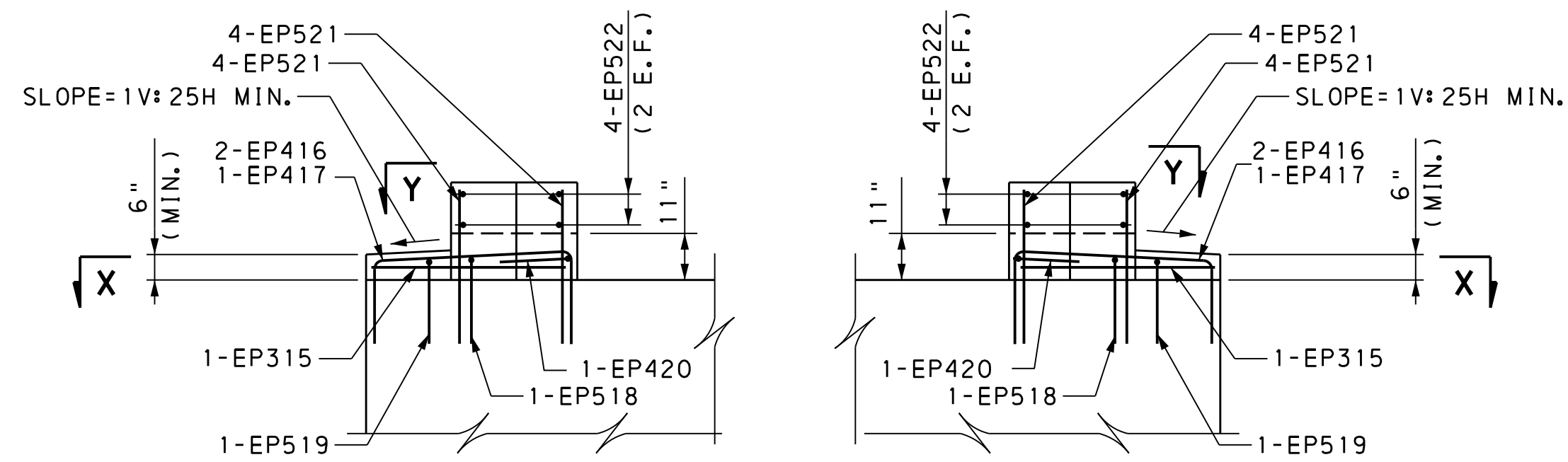
SECTION A-A
2 0 2 4 FEET

* ALTERNATE 90° & 135° HOOK
IN ALTERNATE TIES.

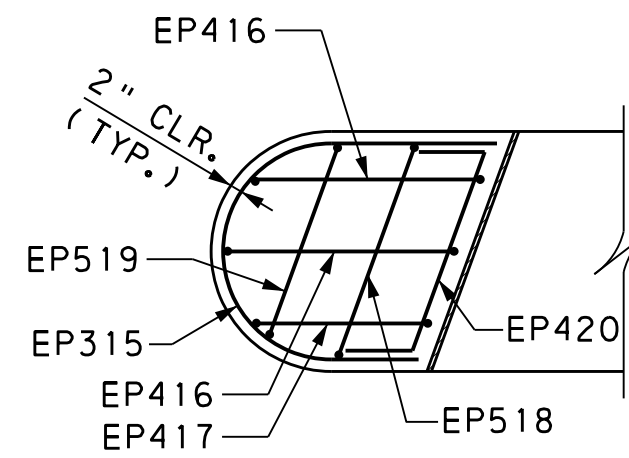
REQ'D. LAP LENGTHS
#4 BARS = 2'-2"
#5 BARS = 2'-9"



SECTION B-B
2 0 2 4 FEET



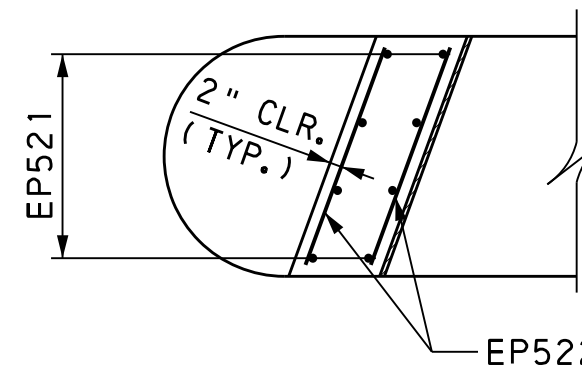
CHEEKWALL/CURTAIN WALL ELEVATIONS



1 0 1 2 3 FEET

SECTION X-X

1 0 1 2 3 FEET



SECTION Y-Y

1 0 1 2 3 FEET

NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR PIER PLAN, ELEVATION & TYPICAL SECTION, SEE SHEET 19.
5. FOR LOCATION OF SECTIONS A-A & B-B, SEE SHEET 19.
6. FOR DIAPHRAGM DETAILS, SEE SHEETS 30.
7. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 32.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

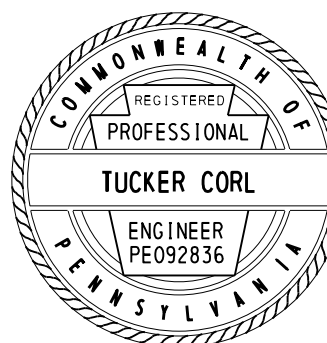
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
PIER DETAILS

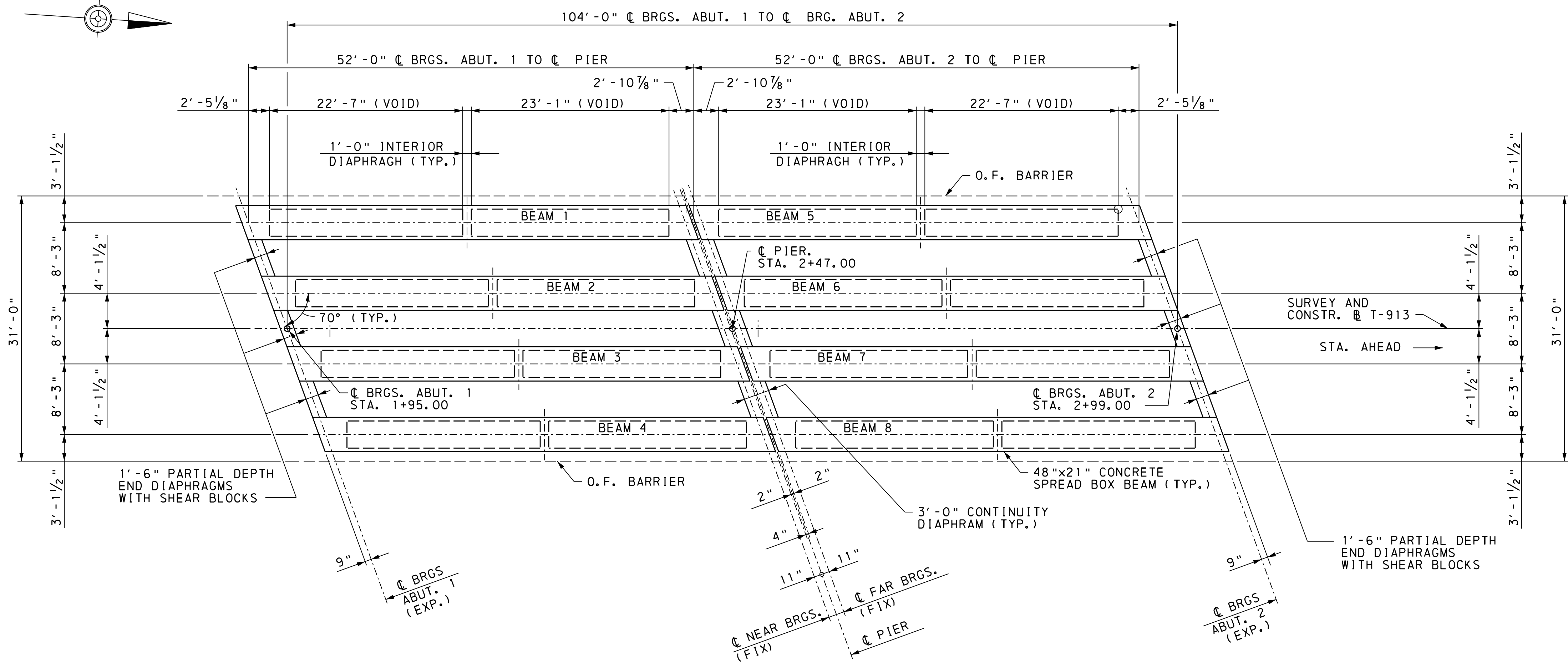
RECOMMENDED 2025.05.19

SHEET 20 OF 40

L-366

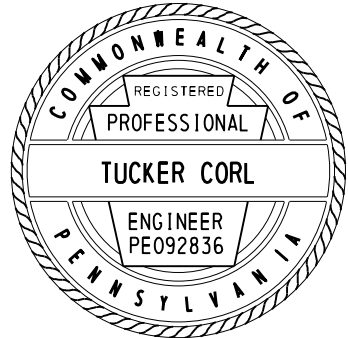


FILE NAME: P:\0037\003721_0431\Microstation\BRIDGE\21-B3721_0431 FP.dgn
PLOT DATE: 5/15/2024 11:30:38 AM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\sys - Microstation\bridge\pdf_bw_full.plt.ctb



BEAM DATA TABLE				
BEAM NO.	SKEW ANGLE	℄ TO ℄ BRGS.	BEAM LENGTH	DIAPH.
1-8	70°	51'-0 1/4"	52'-7 1/2"	1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. FOR STAKE-OUT PLAN, SEE SHEET 3.
 3. FOR BEAM REINFORCEMENT DETAILS, SEE SHEET 23.
 4. FOR BEARING PAD DETAILS, SEE SHEET 26.
 5. FOR TYPICAL SECTION, SEE SHEET 28.
 6. FOR DIAPHRAGM DETAILS, SEE SHEET 30.



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
FRAMING PLAN

RECOMMENDED 2025.05.19

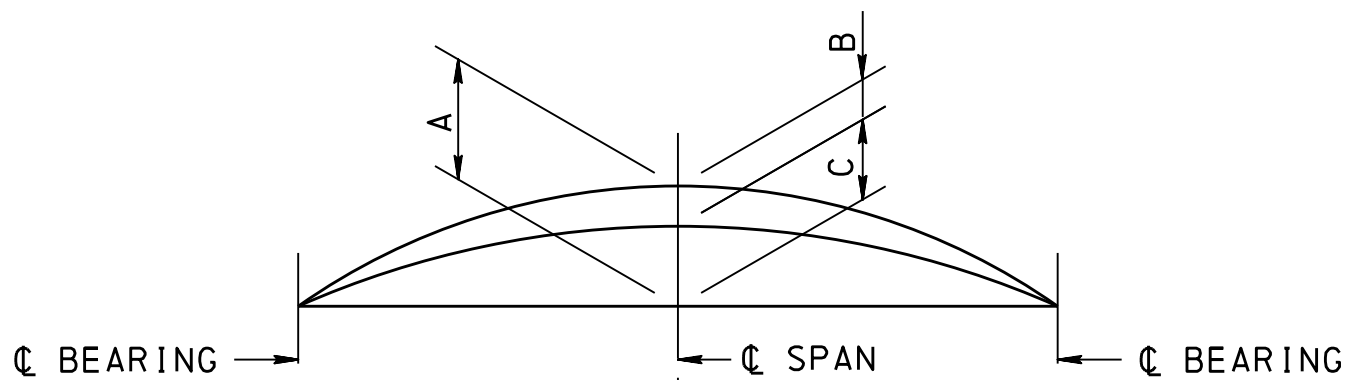
SHEET 21 OF 40

L-366

PRESTRESS NOTES

1. EPOXY COAT ALL REBARs FOR A DISTANCE OF 9'-0" FROM BEAM ENDS.
2. EPOXY COAT ALL REINFORCEMENT THAT PROTRUDES INTO BRIDGE DECK FROM TOP OF BEAMS.
3. SHOW DESIGN LENGTH AND CASTING LENGTH ON SHOP DRAWINGS.
4. SHOW PLAN, ELEVATION, SECTIONS AND ALL REINFORCEMENT DETAILS ON SHOP DRAWINGS.
5. SHOW ANY MODIFICATION TO REINFORCEMENT SPLICE AND BENDING DETAILS ON SHOP DRAWINGS.
6. SHOW THE FOLLOWING DATA ON THE SHOP DRAWINGS:
 - A. THE SIZE AND LOCATION OF THE TEMPORARY STORAGE SUPPORTS.
 - B. THE TYPE AND LOCATION OF THE BRACING AND TEMPORARY SUPPORTS USED FOR THE TRANSPORTATION AND ERECTION OF THE BEAMS.
7. END ZONE REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT THE FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
8. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.
9. END REINFORCEMENT SPACING MAY BE REDUCED AS REQUIRED TO SATISFY SHEAR REINFORCEMENT REQUIREMENTS, BUT DO NOT REDUCE THE MINIMUM AREA TO BE REINFORCED.
10. MINIMUM COVER ON REINFORCEMENT BARS:
TOP SLAB = 1"
INSIDE VOID = 1"
ELSEWHERE = 2" (UNLESS OTHERWISE NOTED)
11. USE 0.600" DIA. , 0.217 SQ. IN. , 270 KSI LOW RELAXATION STRANDS.
12. ALL BEAM MILD STEEL REINFORCEMENT IS GRADE 60.
13. PROVIDE A SCORED FINISH ON THE TOPS OF THE BEAMS IN ACCORDANCE WITH PUB. 408.
14. FOR GROUTED RECESS DETAIL FOR STRANDS AT BEAM ENDS, SEE BC-775M.
15. PROVIDE THREADED INSERTS FOR DIAPHRAGM BARS WHERE INDICATED AT THE LOCATIONS AND SPACING SHOWN (SEE DIAPHRAGM DETAILS). PLACE INSERTS AT A SKEW THAT ALIGNS WITH THE LATERAL ORIENTATION OF THE DIAPHRAGM REINFORCEMENT BAR. OMIT INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS.

BEAM DESIGN DATA TABLE		
		SPAN 1&2
PRESTRESSED BEAM SIZE (IN.) / TYPE		48x21 BOX
CONCRETE DESIGN STRENGTH (PSI)	RELEASE	6,800
	28 DAYS	8,000
INITIAL JACKING P/S TENSION PER STRAND (KSI)		202.5
TOTAL NUMBER OF 0.520" DIA. P/S STRANDS		40
TOTAL INITIAL JACKING FORCE (KIPS)		1352.7
C.G. OF STRANDS ABOVE BOTTOM OF BEAM (IN.)	AT MIDPOINT OF BEAM	4.00
	@ $\bar{C}$ OF BEARINGS	4.11



CAMBER DIAGRAM
NOT TO SCALE

CAMBER VALUES				
SPAN	BEAM	A	B	C
1 & 2	EXT	2.40	0.98	1.42
	INT	2.40	1.07	1.33

CAMBER NOTES

A = ESTIMATED PRESTRESSED CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR (CHECK IN FIELD).
B = DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.
C = A-B = NET FINAL CAMBER.

VARY THE THICKNESS OF THE CONCRETE HAUNCH TO COMPENSATE FOR ANY INACCURACIES IN THE BEAM CAMBER. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THIS VARIATION.

A, B & C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIABLE PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSSES.

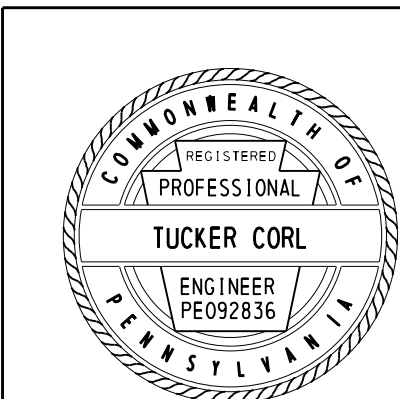
ASSUMED CREEP FACTOR = 1.60 ASSUMED PRESTRESS LOSS = 10%.

PRESTRESSED CONCRETE BEAM SECTION PROPERTIES-SPANS 1 & 2									
COMPOSITE	BASIC BEAM	BEAMS 1 & 5		BEAMS 2 & 6		BEAMS 3 & 7		BEAMS 4 & 8	
		GROSS	TRANSFORMED*	GROSS	TRANSFORMED*	GROSS	TRANSFORMED*	GROSS	TRANSFORMED*
AREA (in²)	575.50	-----	-----	-----	-----	-----	-----	-----	-----
MOMENT OF INERTIA (in⁴)	30,033	98,623	102,653	103,617	107,991	103,617	107,991	98,623	102,653
DISTANCE TO NEUTRAL AXIS FROM TOP OF SLAB (in)	N/A	12.56	12.87	12.06	12.35	12.06	12.35	12.56	12.87
DISTANCE TO NEUTRAL AXIS FROM TOP OF BEAM (in)	11.82	4.56	4.87	4.06	4.35	4.06	4.35	4.56	4.87
DISTANCE TO NEUTRAL AXIS FROM BOTTOM OF BEAM (in)	9.18	16.44	16.13	16.94	16.65	16.94	16.65	16.44	16.13
SECTION MODULUS AT TOP OF SLAB (in³)	N/A	7,849	7,976	8,595	8,741	8,595	8,741	7,849	7,976
SECTION MODULUS AT TOP OF BEAM (in³)	2,542	21,606	21,080	25,551	24,801	25,551	24,801	21,606	21,080
SECTION MODULUS AT BOTTOM OF BEAM (in³)	3,270	6,001	6,364	6,115	6,488	6,115	6,488	6,001	6,364

*TRANSFORMED SECTION PROPERTIES GIVEN AT MID SPAN.

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 2.
2. FOR STAKE-OUT PLAN, SEE SHEET 3.
2. FOR BEAM REINFORCEMENT DETAILS, SEE SHEET 23.
3. FOR BEARING PAD DETAILS, SEE SHEET 26.
4. FOR TYPICAL SECTION, SEE SHEET 28.
5. FOR DIAPHRAGM DETAILS, SEE SHEET 30.



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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS

T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK

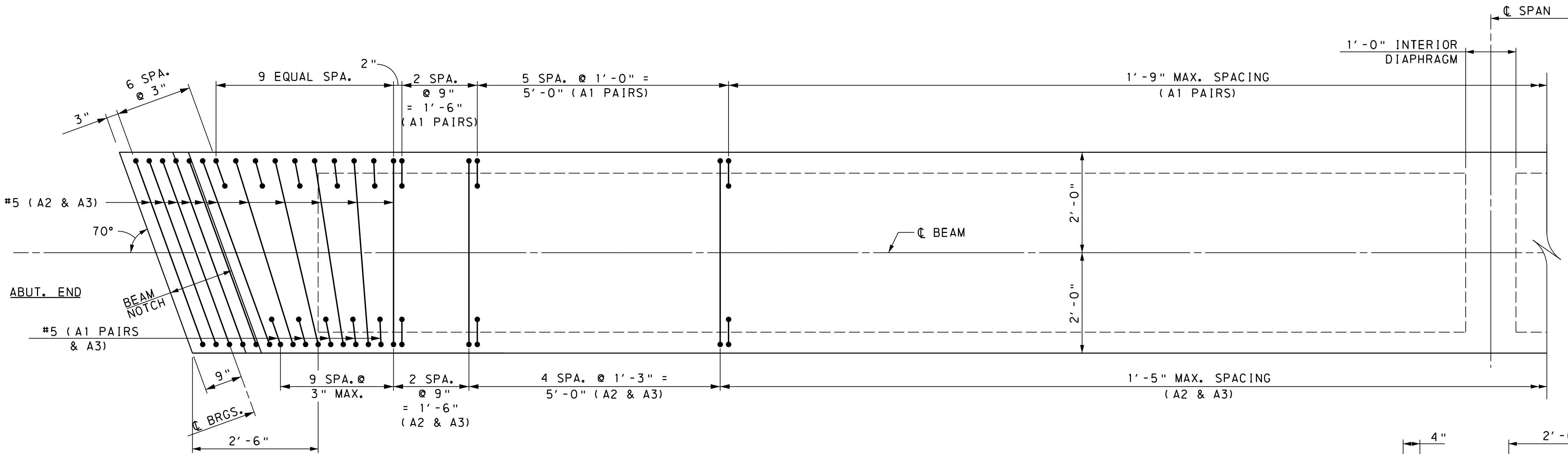
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAM BRIDGE BEAM NOTES AND TABLES

RECOMMENDED 2025.05.19

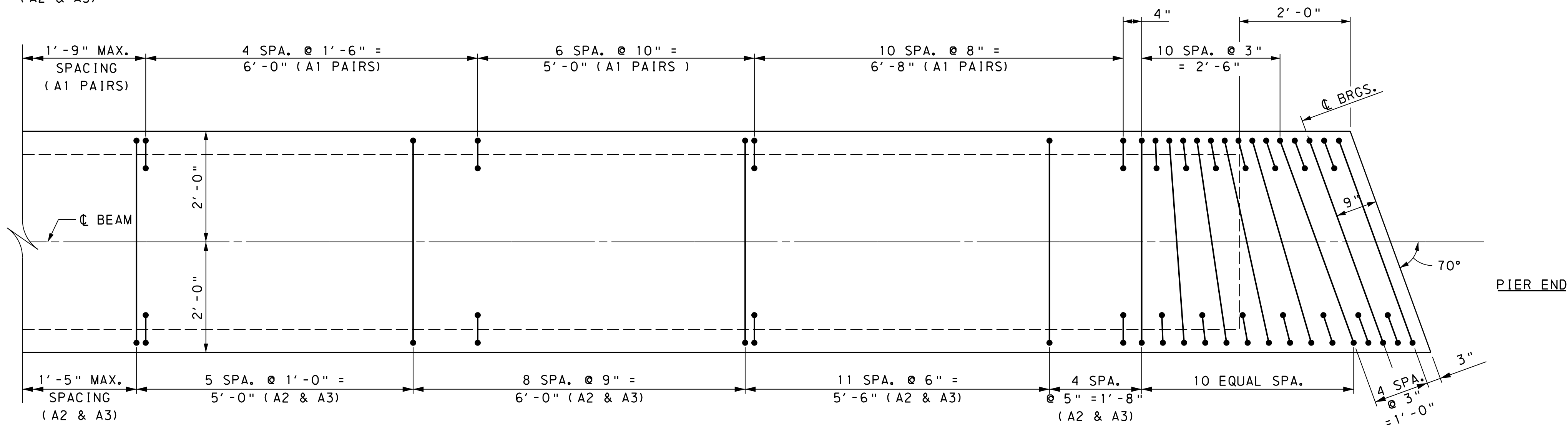
SHEET 22 OF 40

L-366

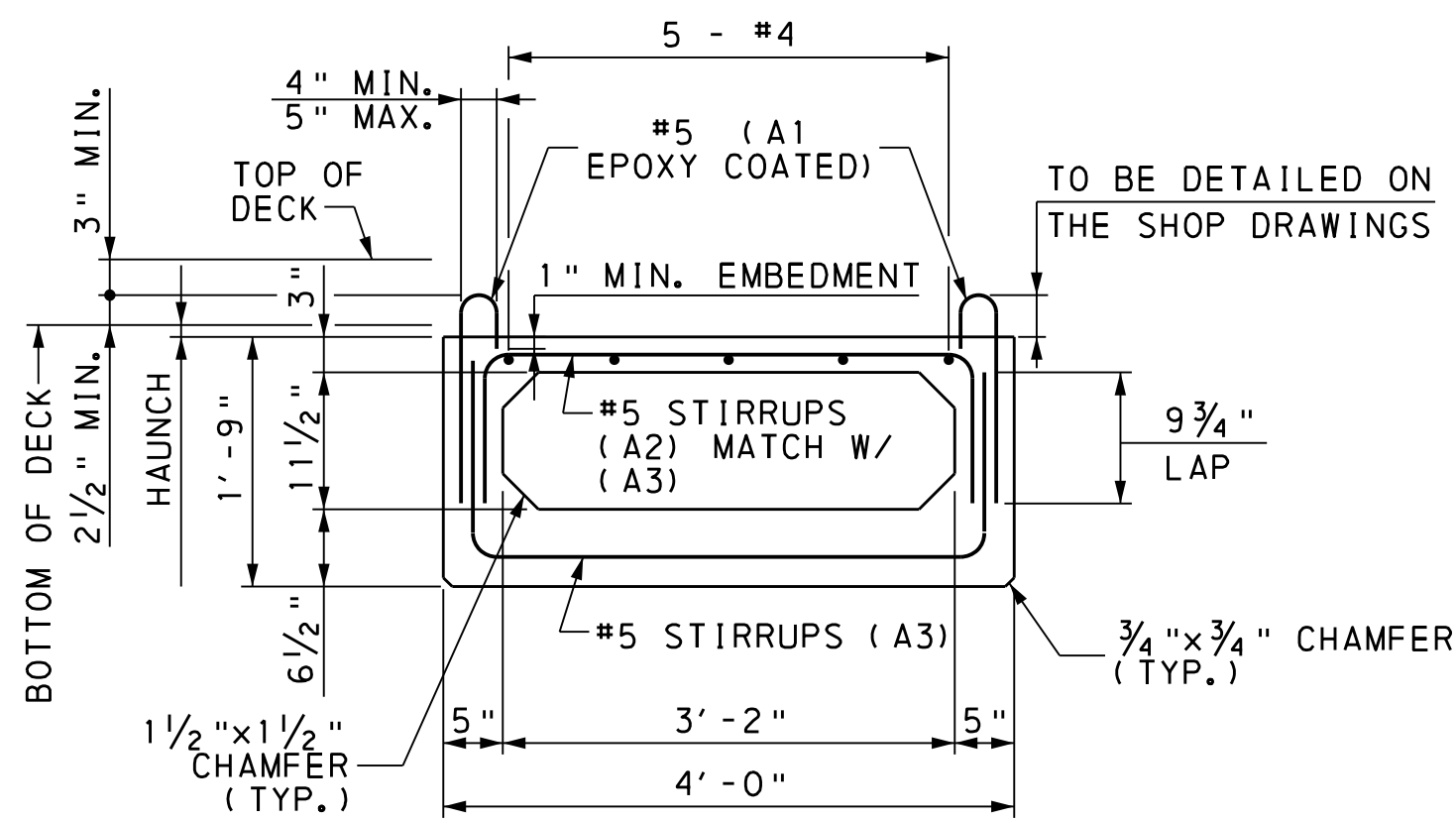
FILE NAME: P:\003721\0431\Microsoft\BRIDGE\23-B3721_0431 Beam Reinf Detail .dgn
PLOTTER: 5/15/2024 11:35:33 AM kbookman
PEN TABLE: file date user .tbl
PLOT DRIVER: r1\SYS - Microsoft\Bridg\pdf_bw_full.plt.ctg



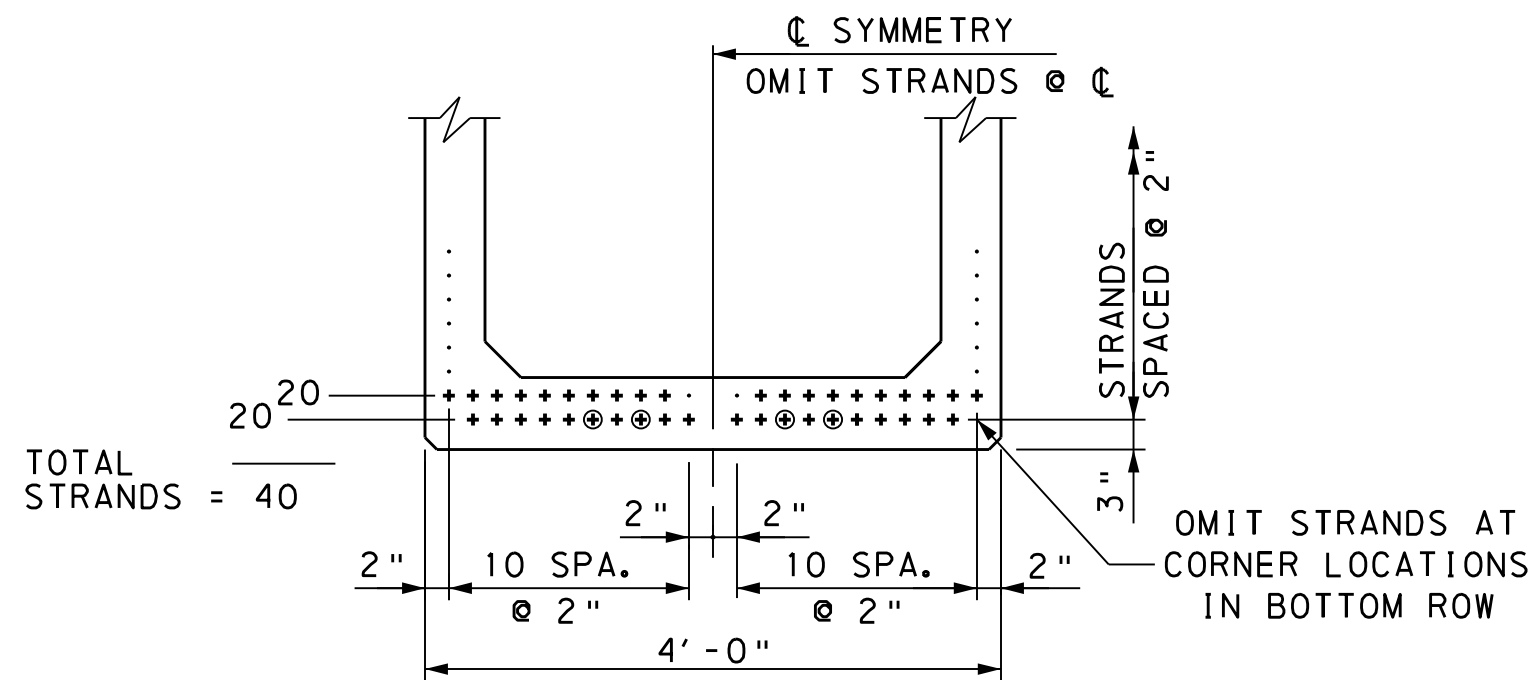
- NOTES:
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-OUT PLAN, SEE SHEET 3.
 4. FOR FRAMING PLAN - SEE SHEET 21.
 5. FOR PRESTRESSED NOTES AND BEAM TABLES, SEE SHEET 22.
 6. FOR END BLOCK REINFORCEMENT DETAILS, SEE SHEET 24.
 7. FOR DAP DETAILS, SEE SHEET 25.
 8. FOR BEARING PAD DETAILS, SEE SHEET 26.
 9. FOR DIAPHRAGM DETAILS, SEE SHEET 30.



SPAN 1 SHOWN, SPAN 2 IS OPPOSITE HAND
BEAM REINFORCING PLAN



TYPICAL BEAM SECTION

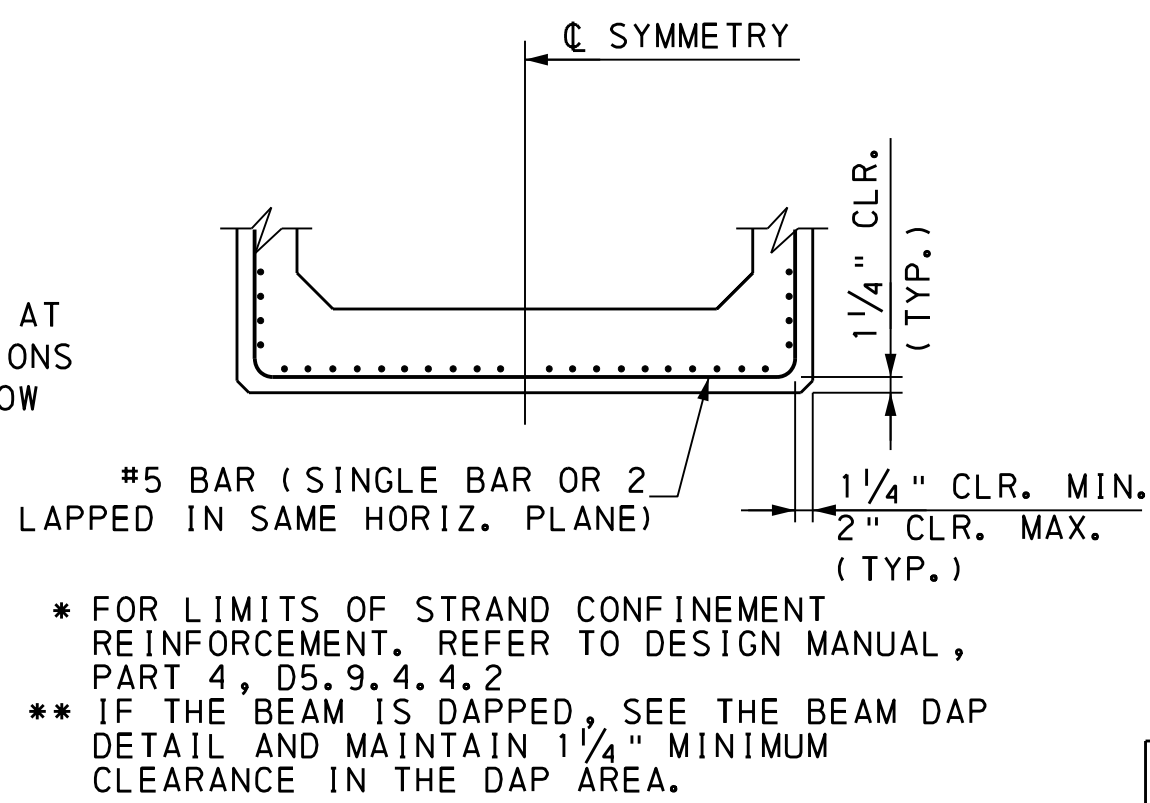


- INDICATES AVAILABLE STRAND LOCATION
- + INDICATES AS DESIGNED STRAND LOCATION
- ⊙ DEBOND THESE 4 STRANDS 4'-3" FROM CL BEARINGS

NOTE: FABRICATOR MAY ADJUST STRAND LOCATION AND DEBONDED STRAND LOCATION ON A PER ROW BASIS BASED ON FABRICATOR'S NEEDS AND/OR EXPERIENCE.

SUGGESTED STRAND PATTERN

ALL BEAMS



- * FOR LIMITS OF STRAND CONFINEMENT REINFORCEMENT. REFER TO DESIGN MANUAL, PART 4, D5.9.4.4.2
- ** IF THE BEAM IS DAPPED, SEE THE BEAM DAP DETAIL AND MAINTAIN 1 1/4" MINIMUM CLEARANCE IN THE DAP AREA.

TYPICAL STRAND CONFINEMENT

ALL BEAMS



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

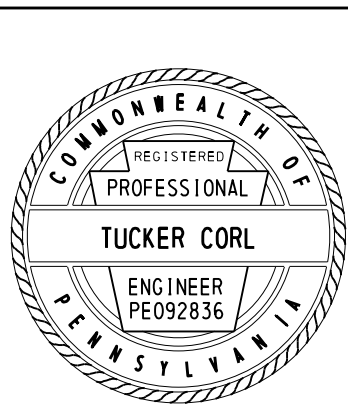
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
BEAM REINFORCING DETAILS

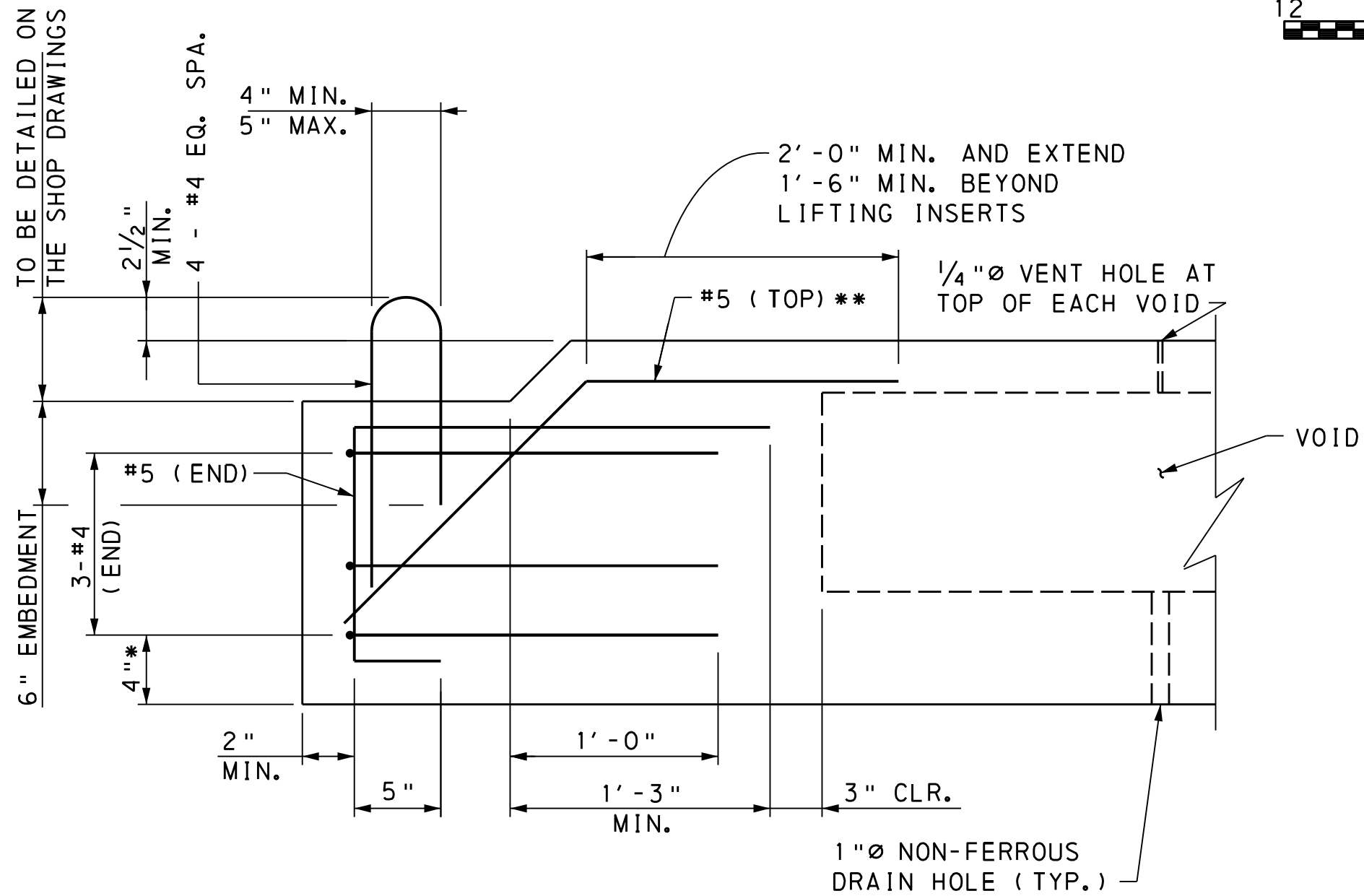
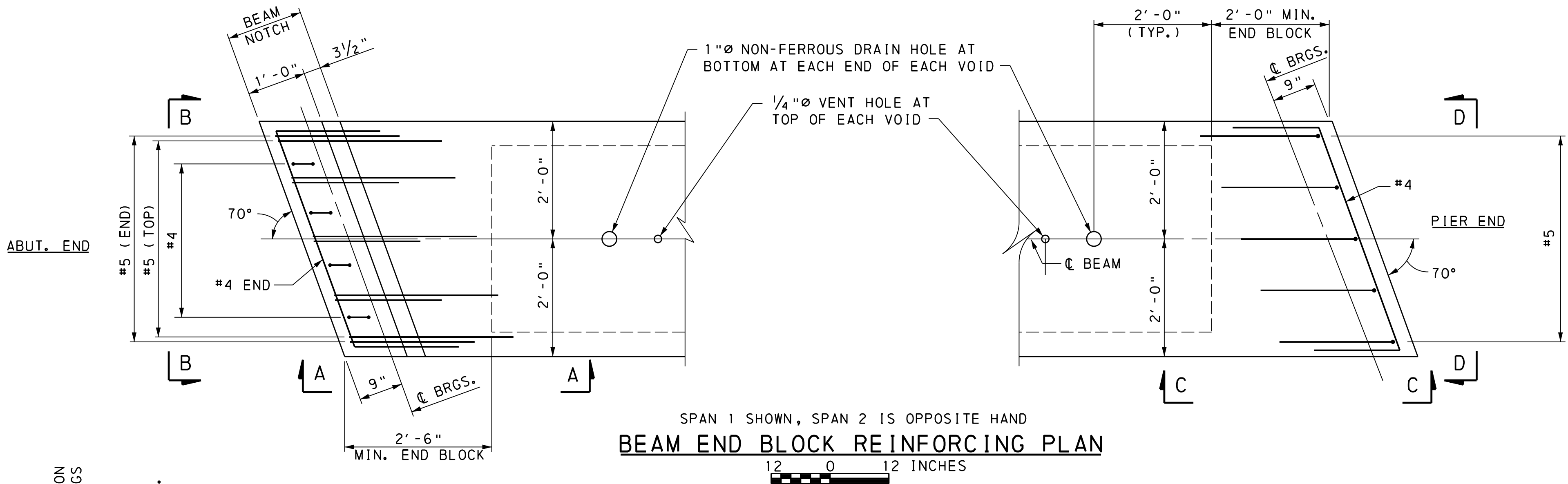
RECOMMENDED 2025.05.19

SHEET 23 OF 40

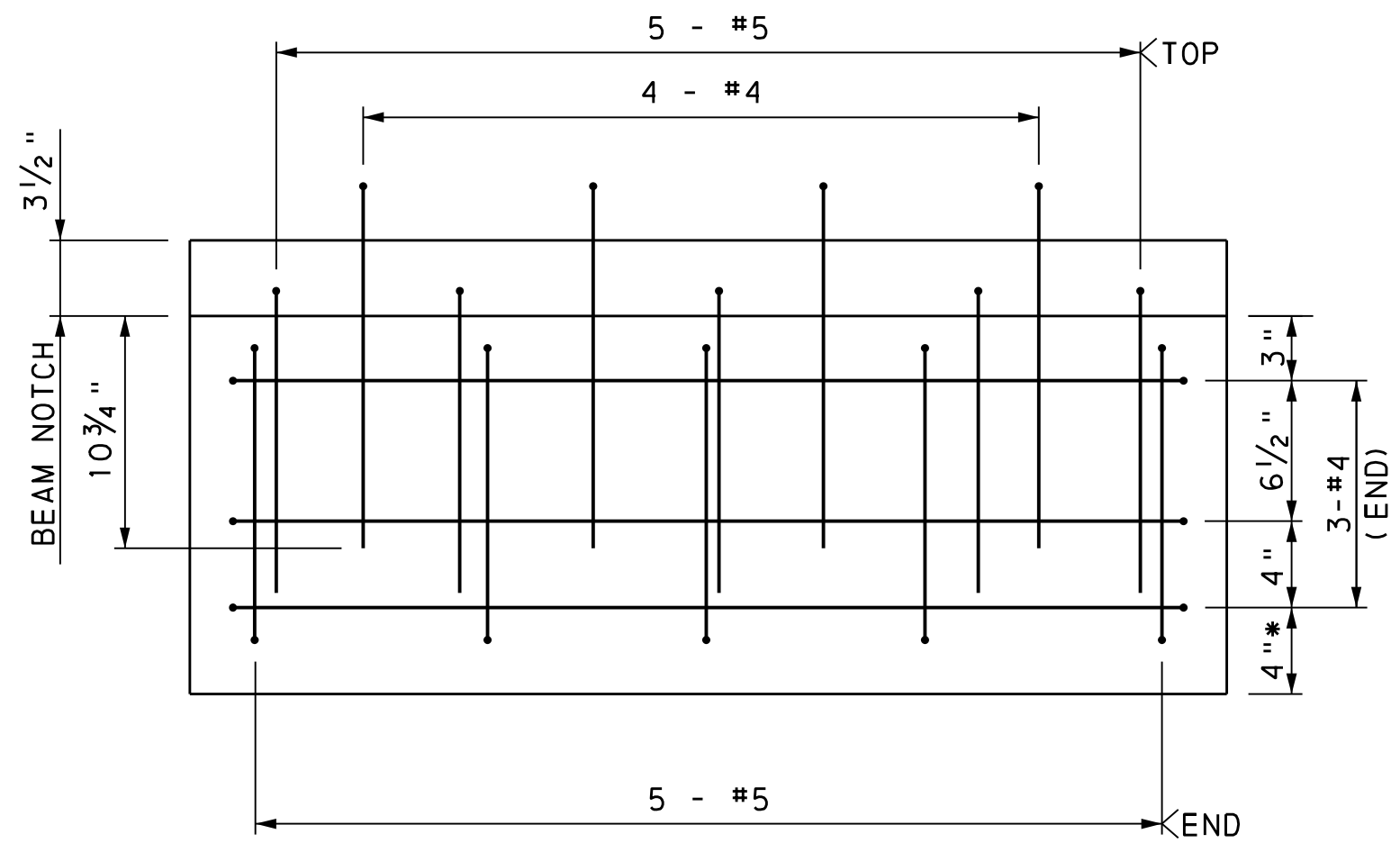
L-366



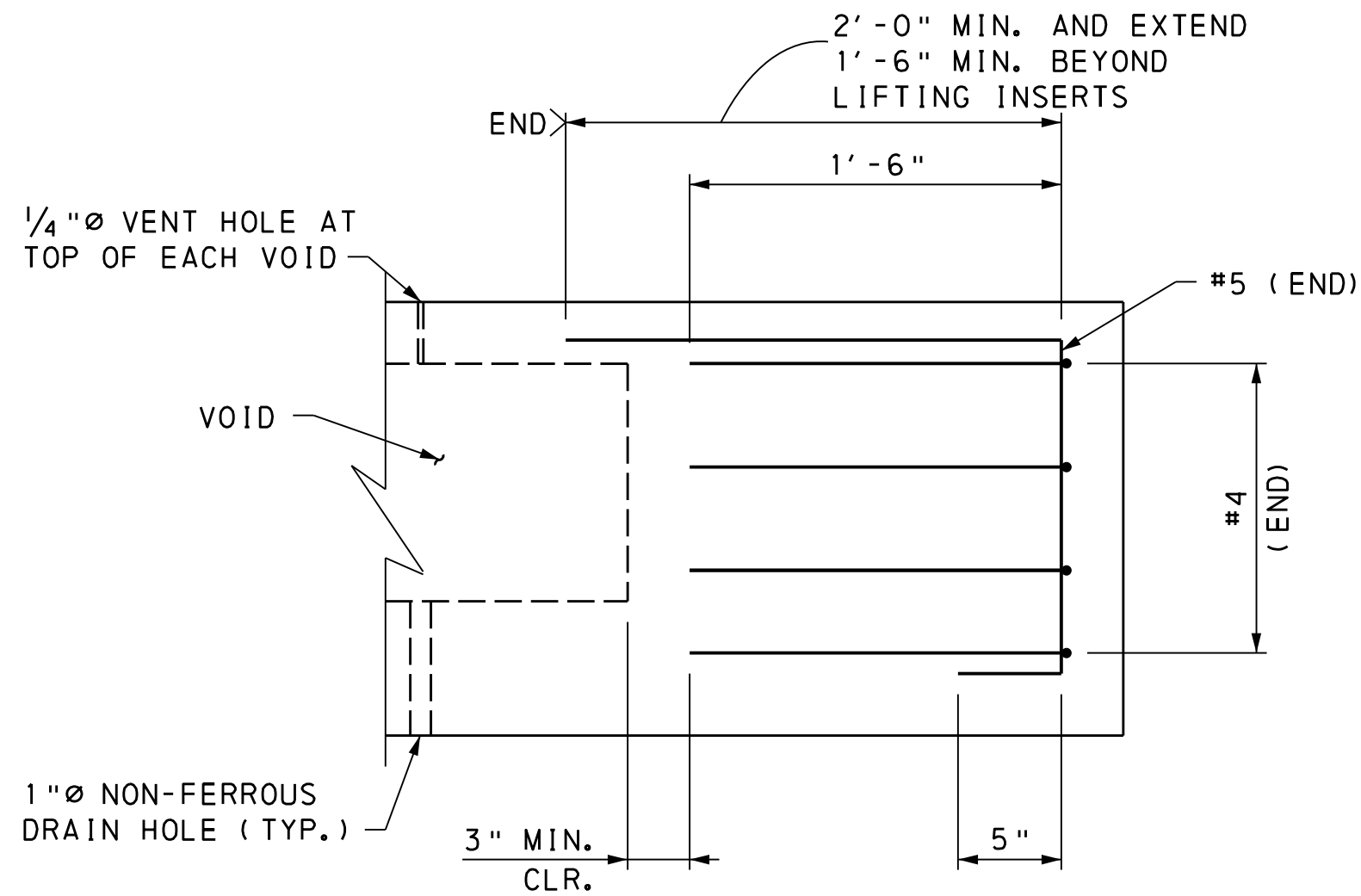
FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\IDG\24-B3721_0431 Beam Details.dgn
PLOTTER: 5/15/2024 11:36:43 AM kbookman
PEN TABLE: file date user - db
PLOT DRIVER: r1\SYS - Microsoft\Bridges\IDG\pdf_bw_full.plt



VIEW A-A
6 0 6 INCHES

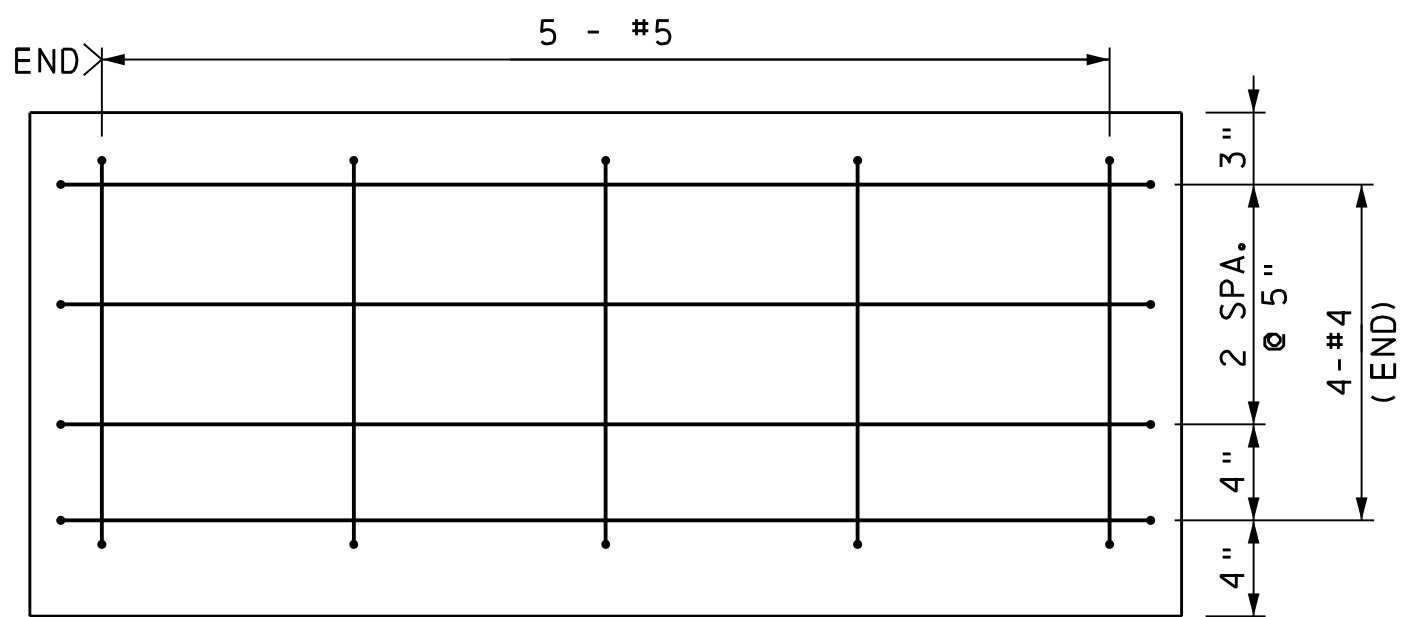


VIEW B-B
6 0 6 INCHES

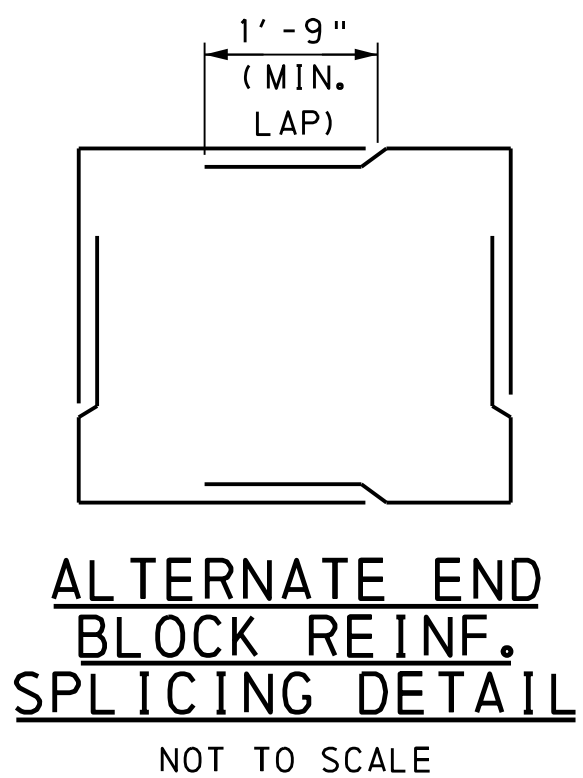


VIEW C-C
6 0 6 INCHES

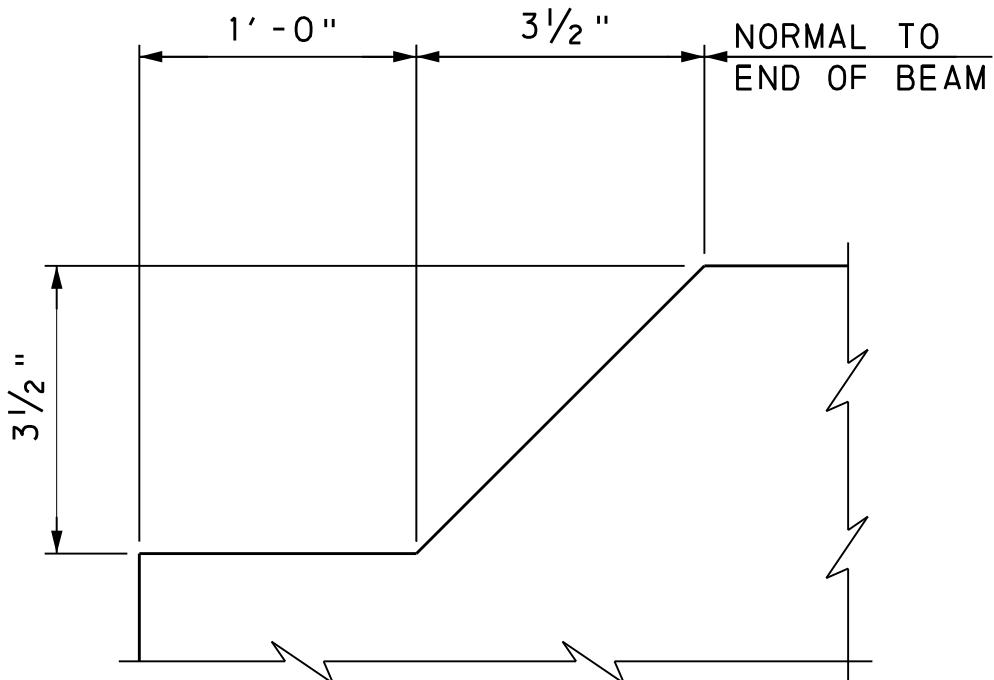
* 1" ABOVE BOTTOM ROW OF STRANDS
** BARS TO TERMINATED TO PROVIDE 2" MIN. COVER TO BEAM REAR FACE OR 1'-3" BELOW BEAM NOTCH, WHICHEVER IS LESS



VIEW D-D
6 0 6 INCHES



NOT TO SCALE



BEAM NOTCH DETAIL
ABUTMENT ENDS ONLY
NOT TO SCALE

- NOTES:
1. FOR GENERAL PLAN, SEE SHEET 1.
 2. FOR GENERAL NOTES, SEE SHEET 2.
 3. FOR STAKE-PLAN, SEE SHEET 3.
 4. FOR FRAMING PLAN, SEE SHEET 21.
 5. FOR PRESTRESSED NOTES AND BEAM TABLES, SEE SHEET 22.
 6. FOR BEAM REINFORCEMENT DETAILS, SEE SHEET 23.
 7. FOR DAP DETAILS, SEE SHEET 25.
 8. FOR BEARING PAD DETAILS, SEE SHEET 26.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
BEAM DETAILS

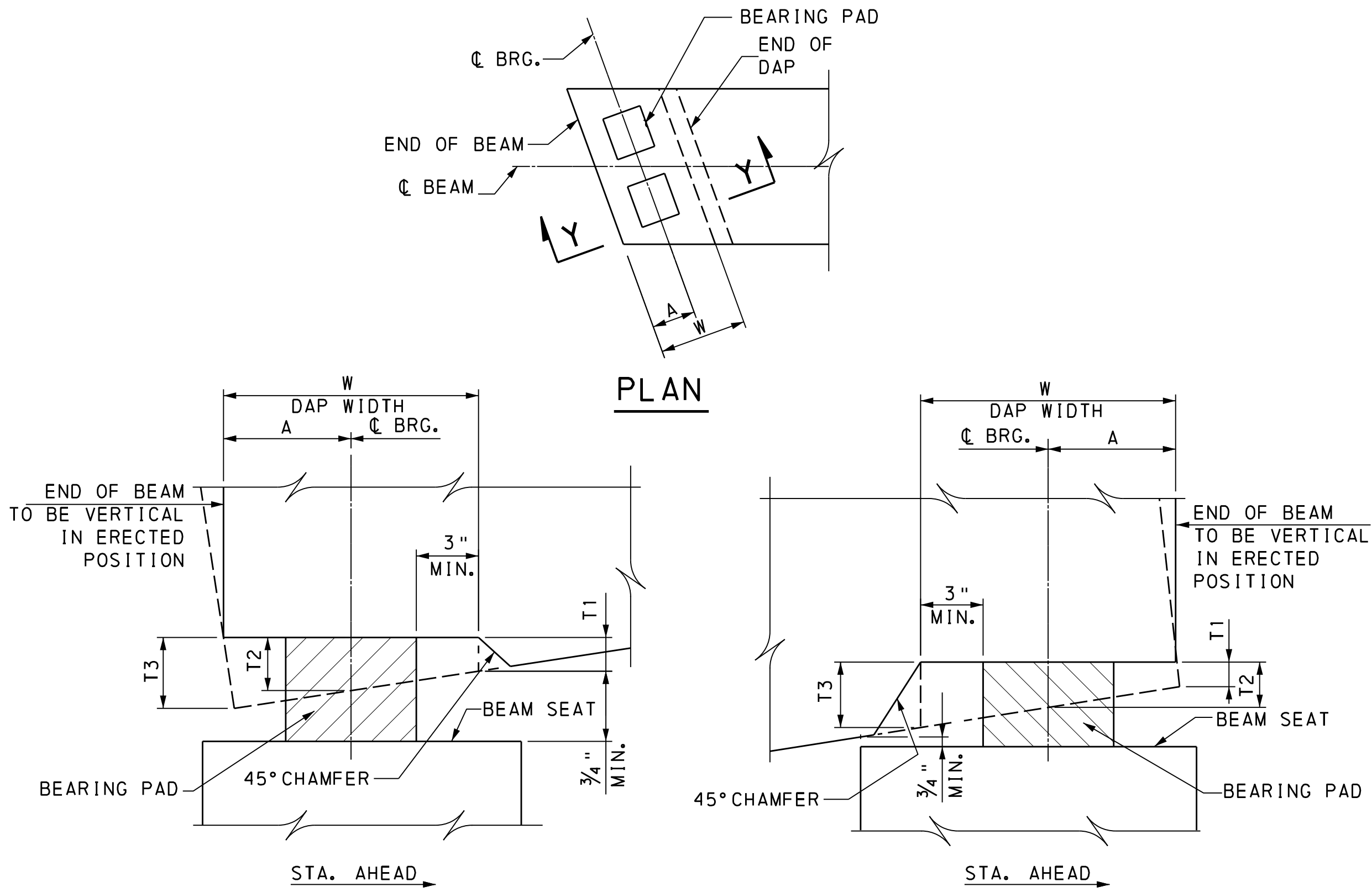
RECOMMENDED 2025.05.19

SHEET 24 OF 40

L-366

DES: TJC DWG: KSB CKD: TJC

FILE NAME: P:\0037\003721\0431\Microsoft\Bridges\B3721_0431 DAP.dgn
PLOT DATE: 12/4/2024 8:59:30 AM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\sys - Microsoft\Bridges\pdf_bw_full.plt



SECTION Y-Y AT
NEAR END OF BEAM

SECTION Y-Y AT
FAR END OF BEAM

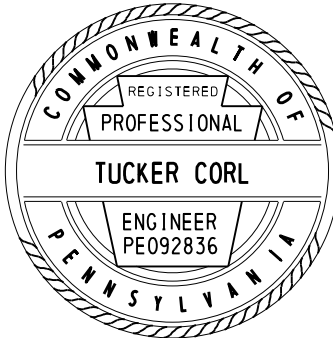
BEAM DAP DETAILS
NOT TO SCALE

NOTE: ADJUST BEAM REINFORCING TO MAINTAIN
MINIMUM CONCRETE COVER OF 1" TO
CONFINEMENT REINFORCEMENT.

SPAN 1 – BEAM DAP TABLE											
ABUTMENT 1						SPAN 1 PIER					
BEAM	W	A	T1	T3	T2	BEAM	W	A	T1	T3	T2
1	16 "	9 "	1/4 "	15/16 "	9/16 "	1	16 "	9 "	1/4 "	5/8 "	7/16 "
2	16 "	9 "	1/4 "	15/16 "	9/16 "	2	16 "	9 "	1/4 "	5/8 "	7/16 "
3	16 "	9 "	1/4 "	15/16 "	9/16 "	3	16 "	9 "	1/4 "	5/8 "	7/16 "
4	16 "	9 "	1/4 "	15/16 "	9/16 "	4	16 "	9 "	1/4 "	5/8 "	7/16 "

SPAN 2 – BEAM DAP TABLE											
SPAN 2 PIER						ABUTMENT 2					
BEAM	W	A	T1	T3	T2	BEAM	W	A	T1	T3	T2
5		NO DAP				5	16 "	9 "	11/16 "	1/4 "	7/16 "
6		NO DAP				6	16 "	9 "	11/16 "	1/4 "	7/16 "
7		NO DAP				7	16 "	9 "	11/16 "	1/4 "	7/16 "
8		NO DAP				8	16 "	9 "	11/16 "	1/4 "	7/16 "

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. FOR STAKE-OUT PLAN, SEE SHEET 3.
 3. FOR FRAMING PLAN, SEE SHEET 21.
 4. FOR BEAM REINFORCING DETAILS, SEE SHEET 23.
 5. FOR BEARING PAD DETAILS, SEE SHEET 24.



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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

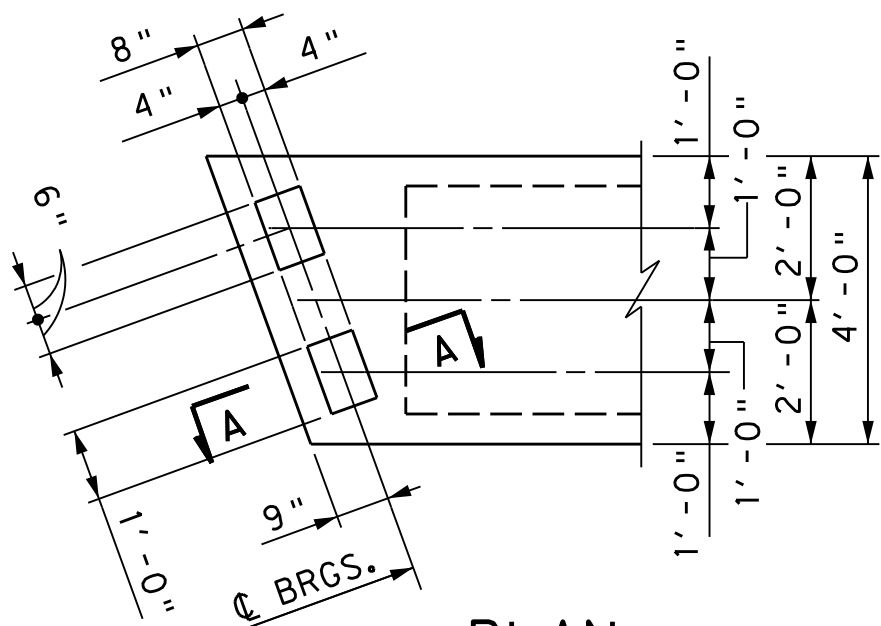
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
DAP DETAILS

RECOMMENDED 2025.05.19

SHEET 25 OF 40

L-366

FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\B3721_0431 BRGS.dgn
PLOTTER: 7/23/2024 4:57:01 PM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\sys - Microsoft\Bridges\pdf_bw_full.plt.ctb



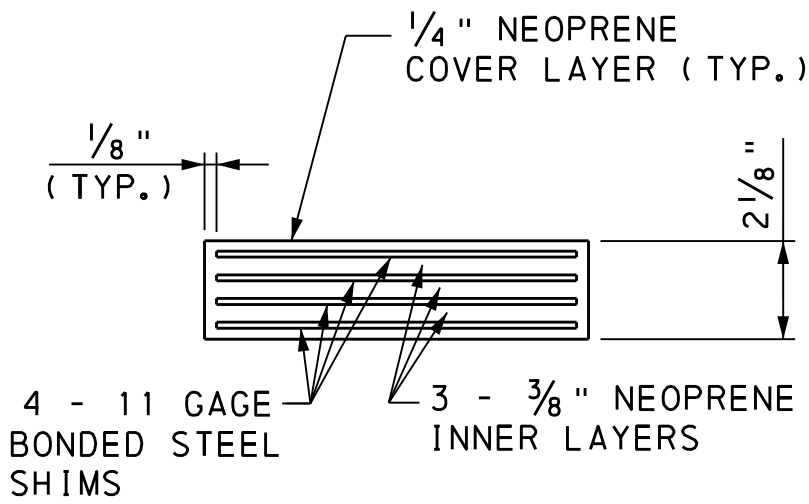
PLAN

(ABUTMENT 1 SHOWN, ABUTMENT 2 IS OPPOSITE HAND)

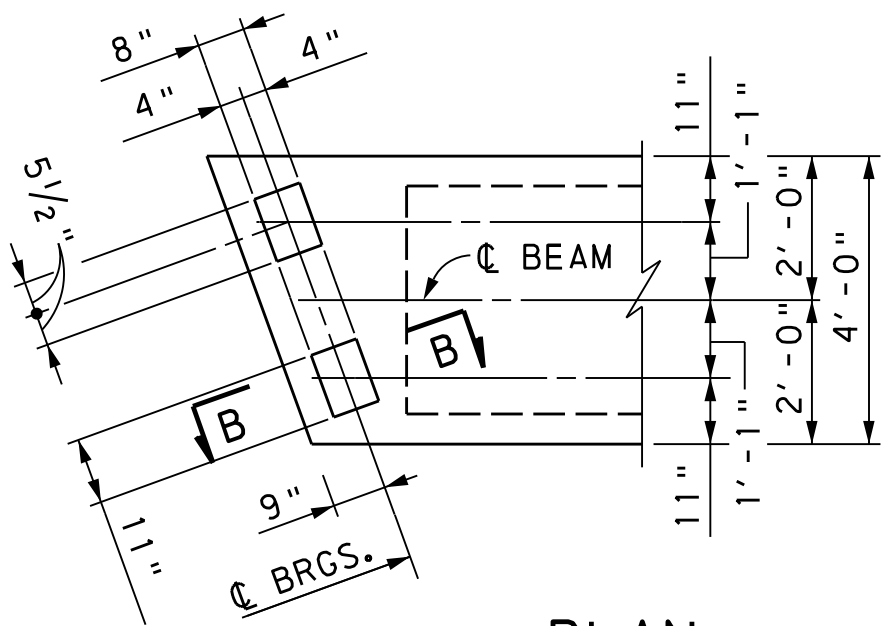
TOTAL NUMBER OF PADS = 16
TOTAL NUMBER OF STEEL SHIMS = 64

ABUTMENT 1 & 2
BEARING PAD DETAILS

NOT TO SCALE



SECTION A-A



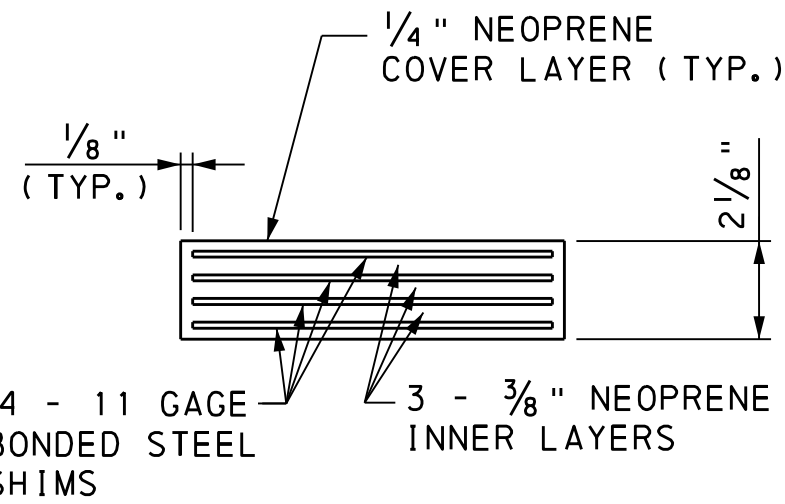
PLAN

(PIER (FAR) SHOWN, PIER (NEAR) IS OPPOSITE HAND)

TOTAL NUMBER OF PADS = 16
TOTAL NUMBER OF STEEL SHIMS = 64

PIER (NEAR & FAR)
BEARING PAD DETAILS

NOT TO SCALE



SECTION B-B

BEARING PAD NOTES:

- SMOOTH CUT AND DEBURR METAL SHIMS.
- GRIT BLAST AND DEGREASE METAL SHIMS.
- MANUFACTURE ALL BEARINGS IN ACCORDANCE WITH THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PLANS AND SPECIFICATIONS (PUB. 408) SECTION 1113.
- ALL BEARING PADS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
- PROVIDE NEOPRENE 50 +/-5 DUROMETER.
- PROVIDE MINIMUM LOW-TEMPERATURE NEOPRENE GRADE 3.
- PROVIDE INTERNAL SHIMS AS PER ASTM A36/A36M GRADE 36.
- VULCANIZE PATCH PIN GROOVES.
- FABRICATOR MAY USE CONTRACT DRAWINGS TO FABRICATE THE BEARING PADS.
- FOR ADDITIONAL NOTES AND DETAILS, SEE BC-755M.

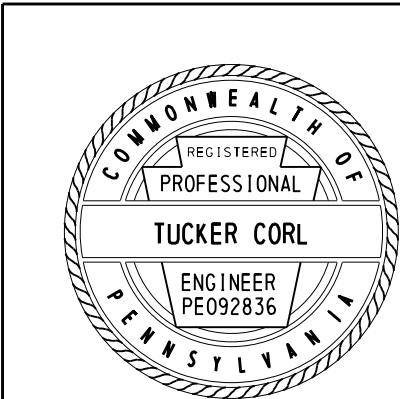
NOTES:

1. FOR GENERAL NOTES, SEE SHEET 2.
2. FOR STAKE-OUT PLAN, SEE SHEET 3.
3. FOR FRAMING PLAN, SEE SHEET 21.
4. FOR BEAM DETAILS, SEE SHEET 24.

BEARING PAD DESIGN DATA TABLE			
DESCRIPTION	ABUTS	PIER	
		(NEAR)	(FAR)
PAD FIXITY (FIX OR EXP.)	EXP.	FIX	FIX
NO. OF PADS PER BEAM END	2	2	2
SHAPE FACTOR	6.40	6.20	6.20
AREA (in. ²)	192.00	176.00	176.00
LENGTH/HEIGHT	3.8	3.8	3.8
WIDTH/HEIGHT	5.7	5.2	5.2
NO. ELASTOMER LAYERS	5	5	5
TOTAL ELASTOMER THICKNESS (in.)	1.63	1.63	1.63
TOTAL BRG. PAD THICKNESS (in.)	2.10	2.10	2.10
LENGTH (in.)	8	8	8
WIDTH (in.)	12	11	11
CONSTRUCTION TOLERANCE (RAD.) TRANSVERSE AXIS	0.003	0.003	0.003
CONSTRUCTION TOLERANCE (RAD.) LONGITUDINAL AXIS	0.000	0.000	0.000

Mark	Description	By	Chk' d.	Rec'm d.	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386



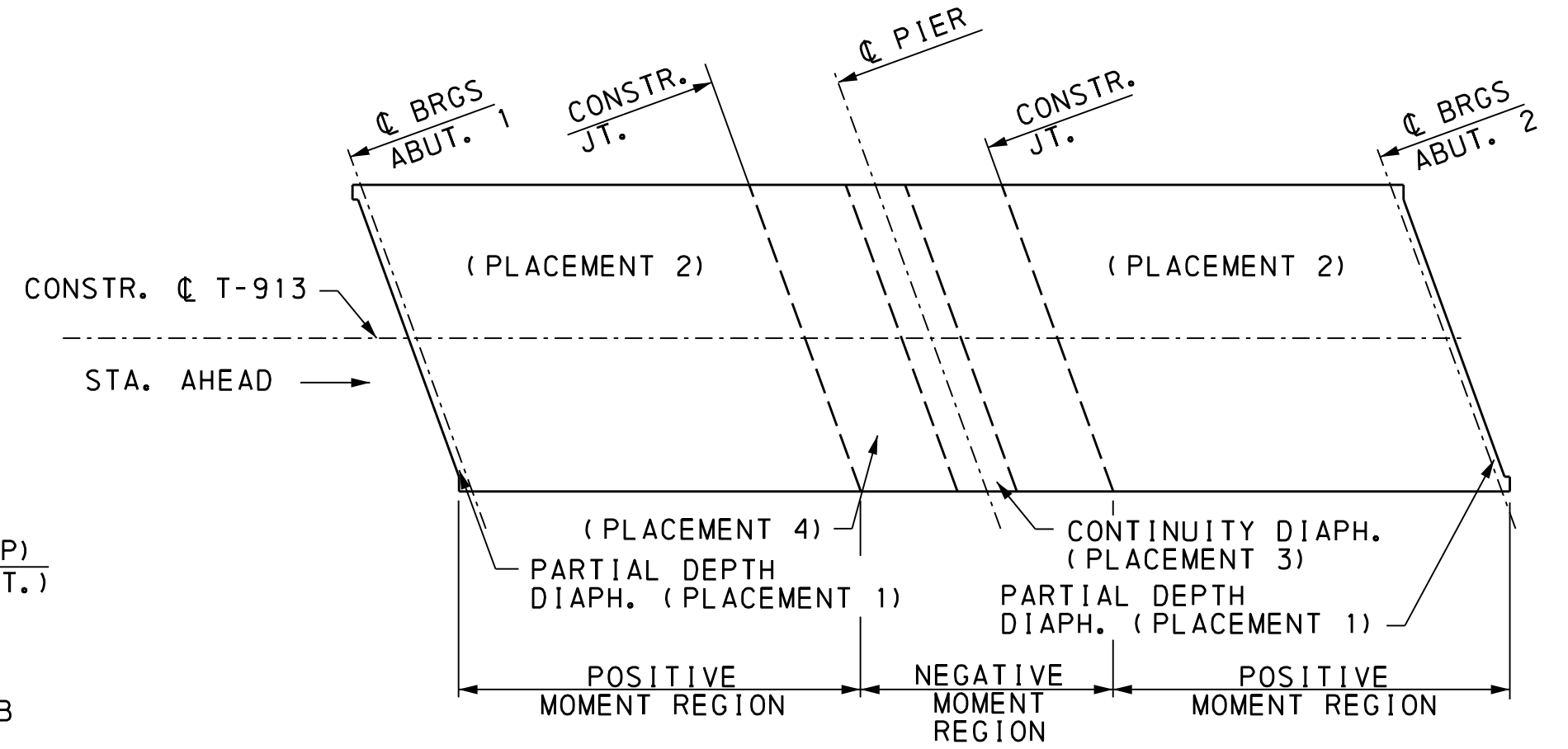
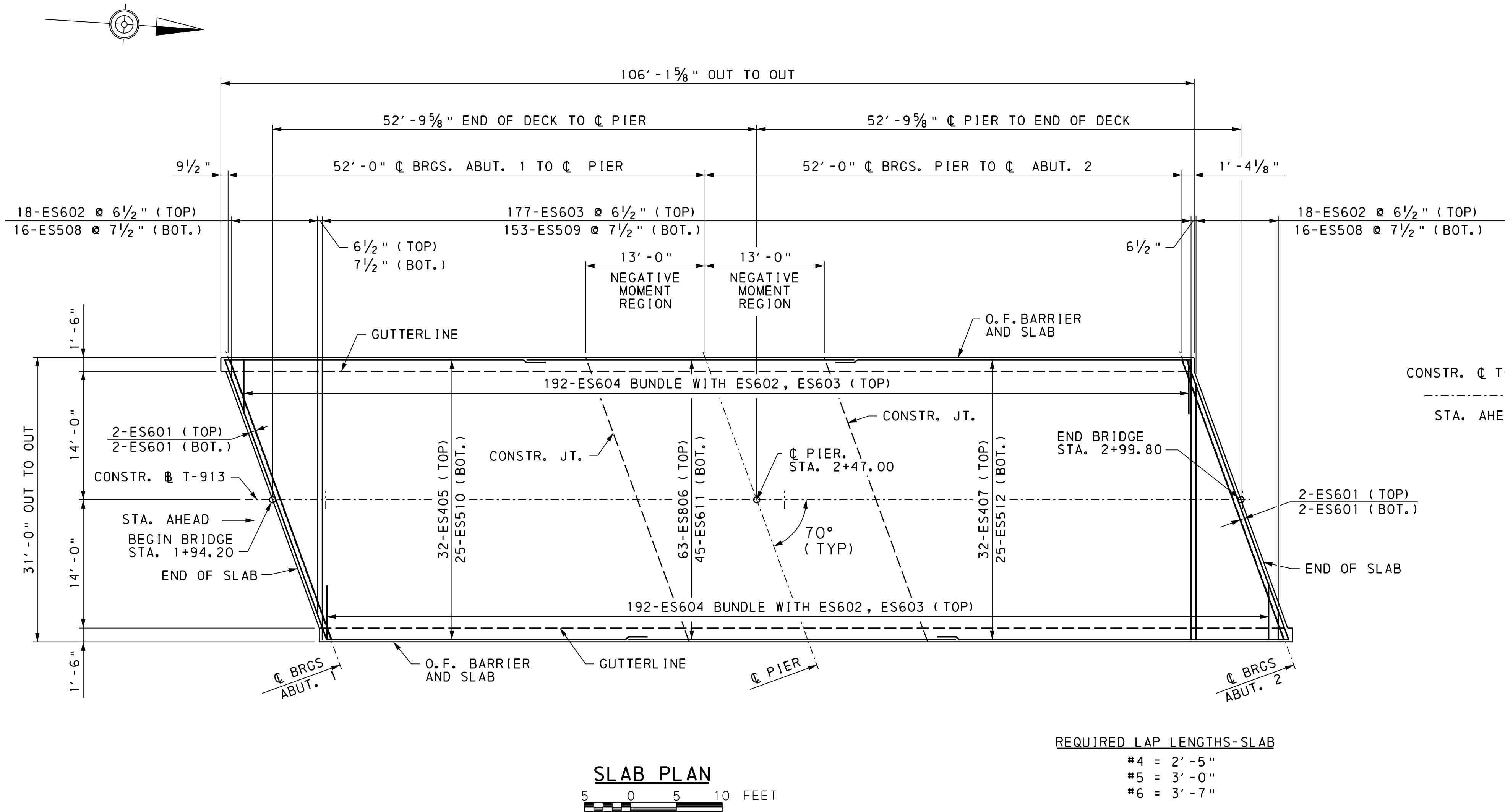
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
BEARING PAD DETAILS

RECOMMENDED 2025.05.19

SHEET 26 OF 40
L-366

FILE NAME: P:\0037\003721_0431\Microstation\BRIDGE\27-B3721_0431.SP.dgn
PLOT DATE: 8/8/2024 3:27:28 PM
PEN TABLE: file date user tb
PLOT DRIVER: r1\sys - Microstation\BrIDGE\pdf_bw_full.plt.ctb



SLAB PLACEMENT SEQUENCE

NOT TO SCALE

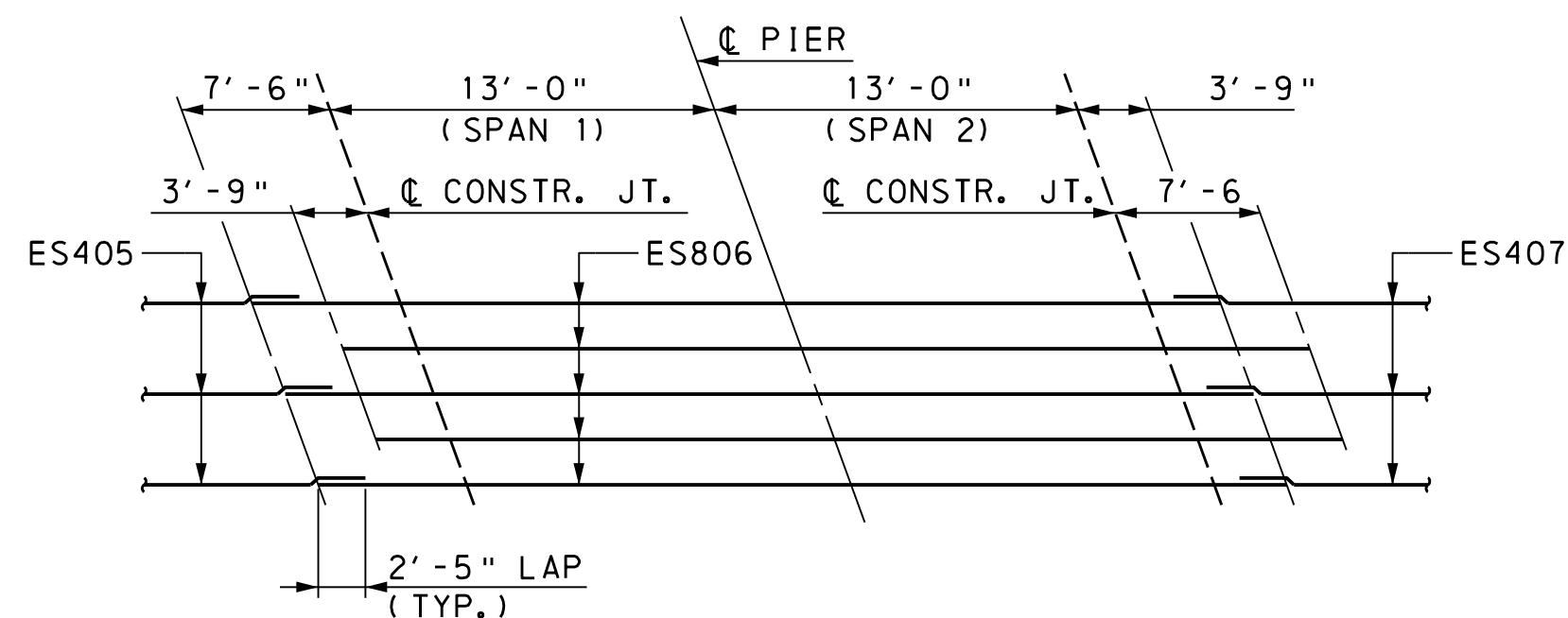
PLACEMENT SEQUENCE

STEP NO. ITEM

- CAST PLACEMENT 1 (PARTIAL DEPTH END DIAPHRAGMS AT ABUTMENTS).
- CAST PLACEMENT 2 (POSITIVE MOMENT REGION). TWO DAYS MUST ELAPSE BETWEEN PLACEMENTS IN ADJACENT SPANS.
- CAST PLACEMENT 3 (CONTINUITY DIAPHRAGMS AT PIER)
- CAST PLACEMENT 4 (NEGATIVE MOMENT REGION) MIN. OF 2 HOURS AFTER POUR 3.
- THE CONTRACTOR MAY USE AN ALTERNATE SLAB PLACEMENT SEQUENCE IF THE PROVISIONS IN THE DM-4, SECTION 2.5.3 ARE MET.

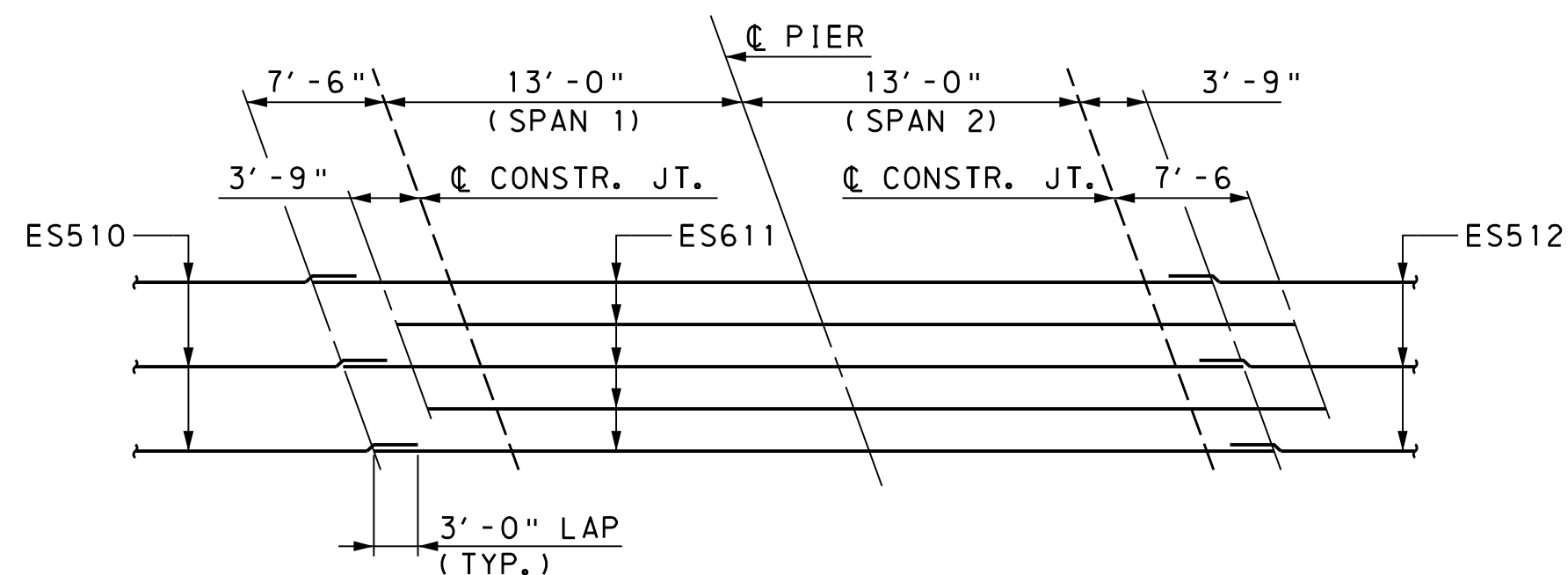
NOTES:

- FOR GENERAL PLAN, SEE SHEET 1.
- FOR GENERAL NOTES, SEE SHEET 2.
- FOR STAKE-OUT PLAN, SEE SHEET 3.
- FOR TYPICAL SECTION, SEE SHEET 28.
- FOR BARRIER PLAN AND DETAILS, SEE SHEET 29.
- FOR DIAPHRAGM DETAILS, SEE SHEET 30.
- FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 33.



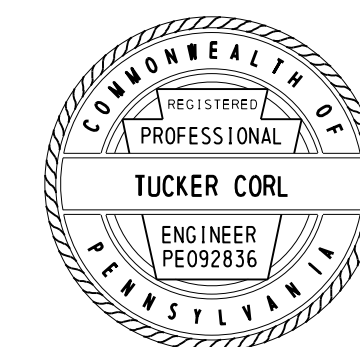
TOP LONGITUDINAL REINFORCEMENT PLACEMENT DETAIL

NOT TO SCALE



BOTTOM LONGITUDINAL REINFORCEMENT PLACEMENT DETAIL

NOT TO SCALE



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

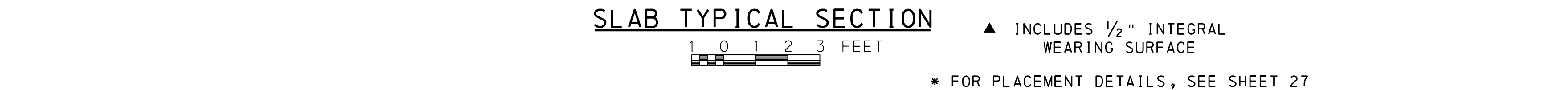
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
SLAB PLAN

RECOMMENDED 2025.05.19

SHEET 27 OF 40

L-366



NOTE: DETAILS SHOWN AT ONE BARRIER ARE
TYPICAL FOR BOTH BARRIERS.

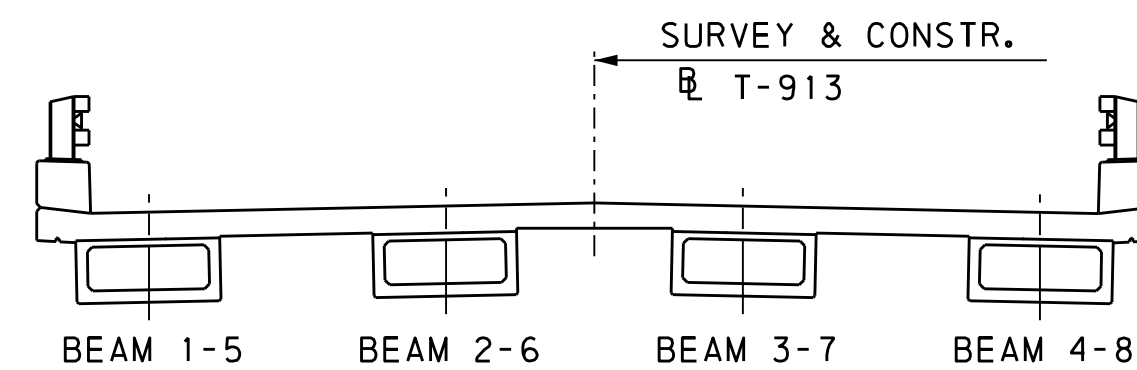
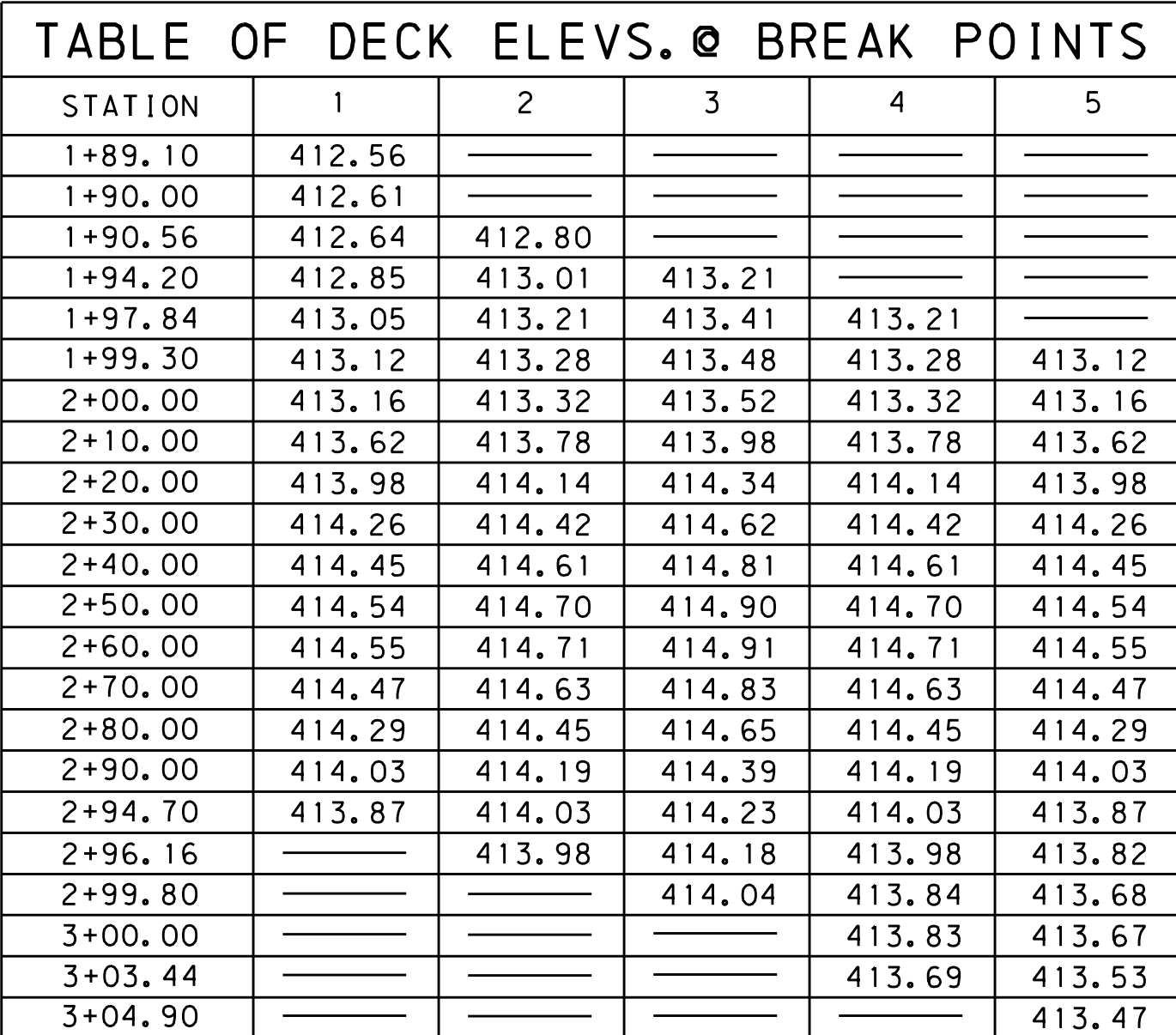


LEGEND

- INDICATES ADDITIONAL NEGATIVE MOMENT REINFORCEMENT
- INDICATES POSITIVE AND NEGATIVE MOMENT REINFORCEMENT



1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR SLAB PLAN, SEE SHEET 27.
5. FOR DECK PLACEMENT SEQUENCE, SEE SHEET 27.
6. FOR BARRIER PLAN AND DETAILS, SEE SHEET 29.
7. FOR DIAPHRAGM DETAILS, SEE SHEET 30.
8. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 33.



		TOP OF DECK ELEVATIONS @ C BEAM TENTH POINTS										
		BEAM	NEAR BRG.	0. 10L	0. 20L	0. 30L	0. 40L	0. 50L	0. 60L	0. 70L	0. 80L	0. 90L
SPAN 1	1	412.71	412.99	413.26	413.50	413.72	413.91	414.08	414.23	414.36	414.46	414.53
	2	413.09	413.36	413.62	413.84	414.05	414.23	414.39	414.52	414.63	414.72	414.78
	3	413.25	413.52	413.75	413.97	414.16	414.32	414.47	414.59	414.68	414.76	414.81
	4	413.20	413.45	413.67	413.87	414.05	414.20	414.33	414.43	414.52	414.58	414.61
SPAN 2	5	414.56	414.60	414.62	414.62	414.59	414.54	414.47	414.37	414.25	414.11	413.94
	6	414.80	414.83	414.84	414.82	414.78	414.72	414.63	414.52	414.39	414.23	414.05
	7	414.82	414.84	414.83	414.80	414.75	414.67	414.57	414.44	414.30	414.12	413.93
	8	414.62	414.62	414.60	414.56	414.49	414.40	414.28	414.15	413.99	413.80	413.59

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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

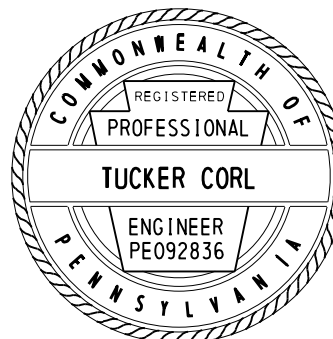
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

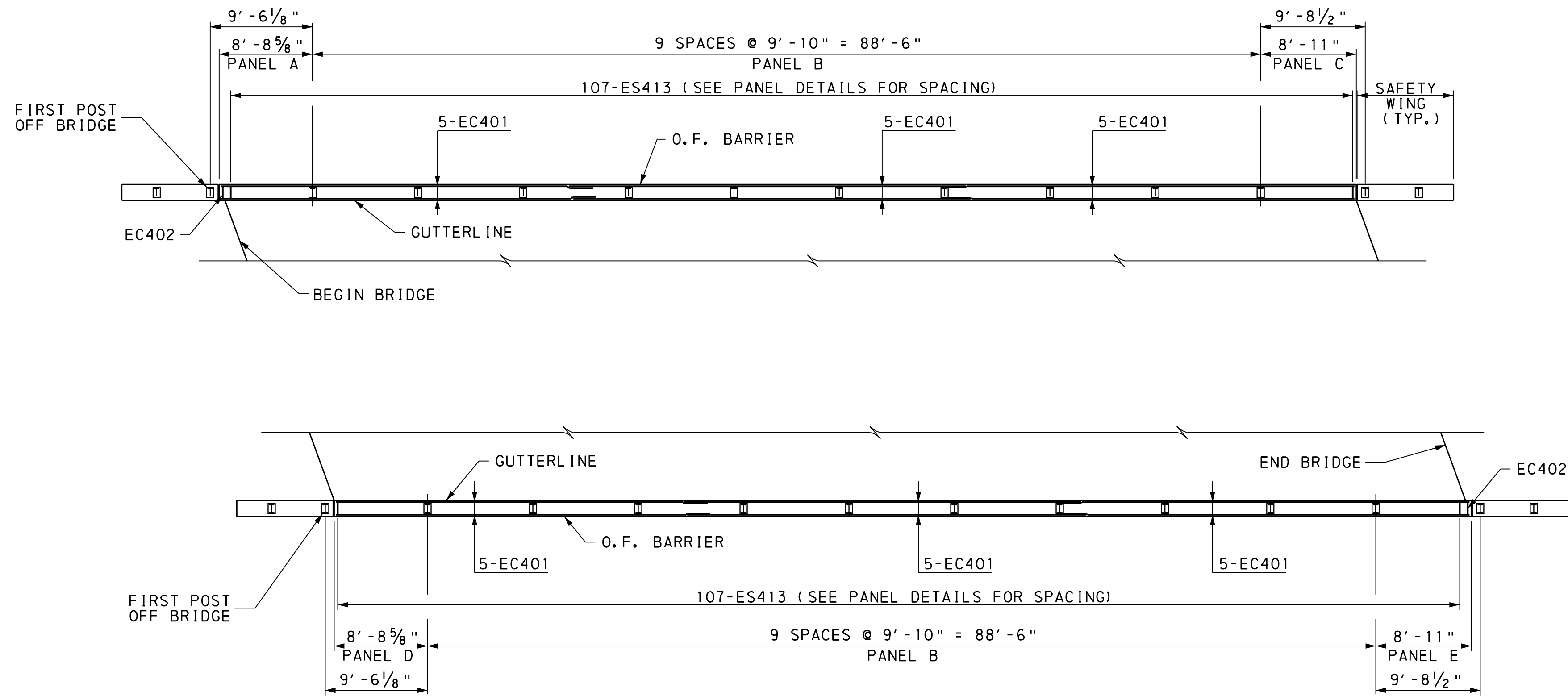
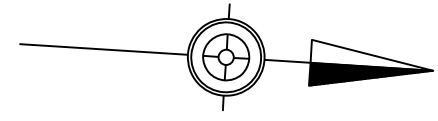
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
SLAB TYPICAL SECTION

RECOMMENDED 2025.05.19

SHEET 28 OF 40

L-366

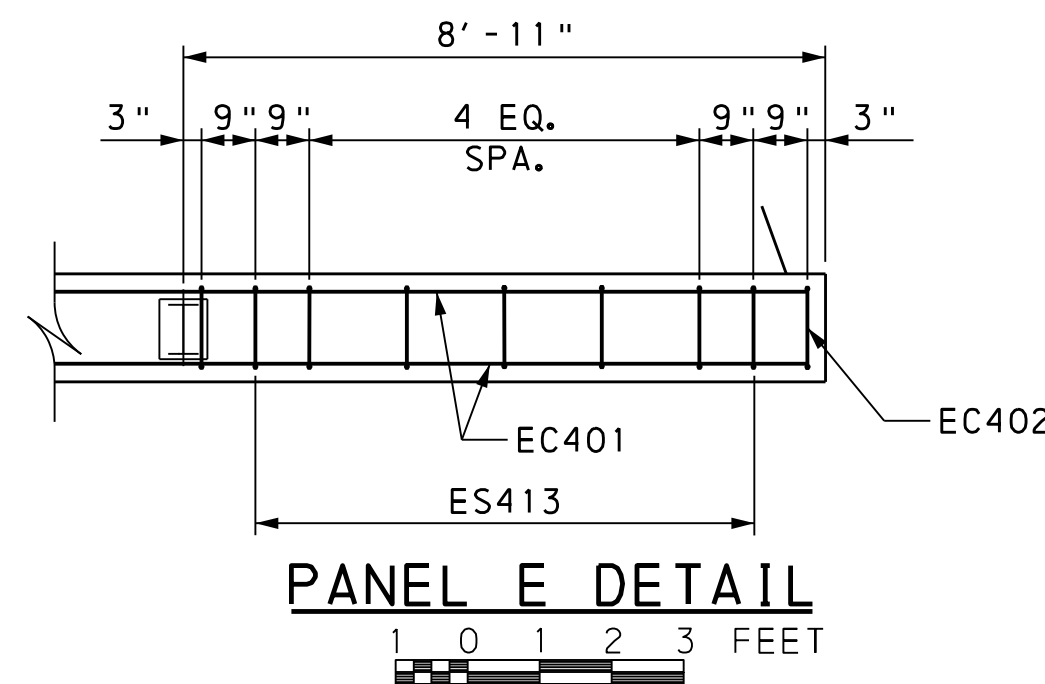
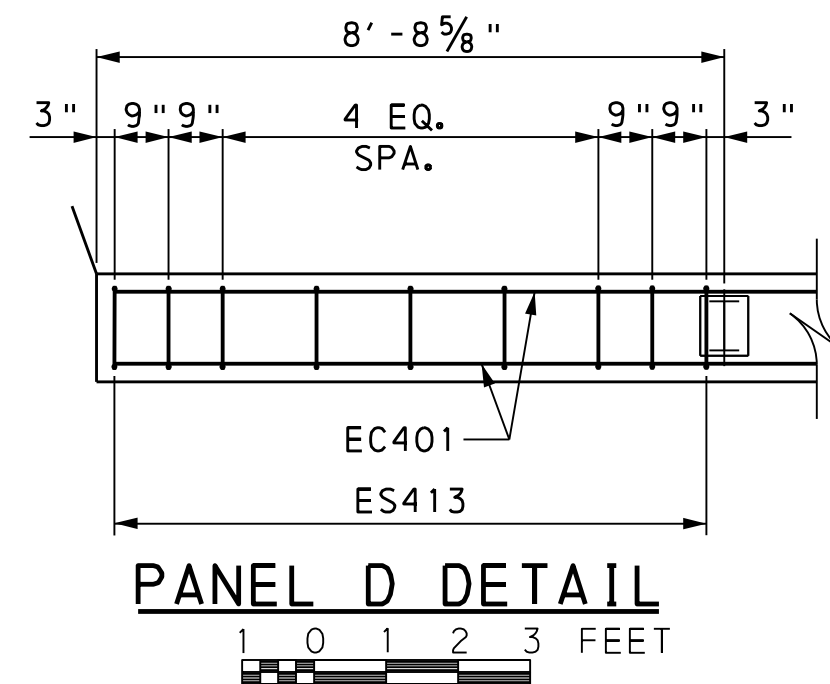
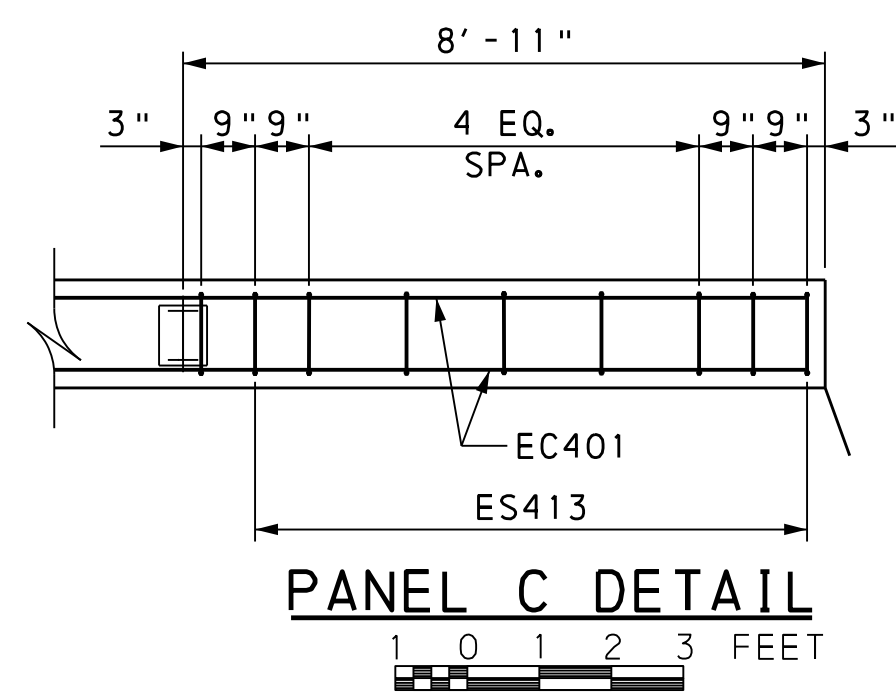
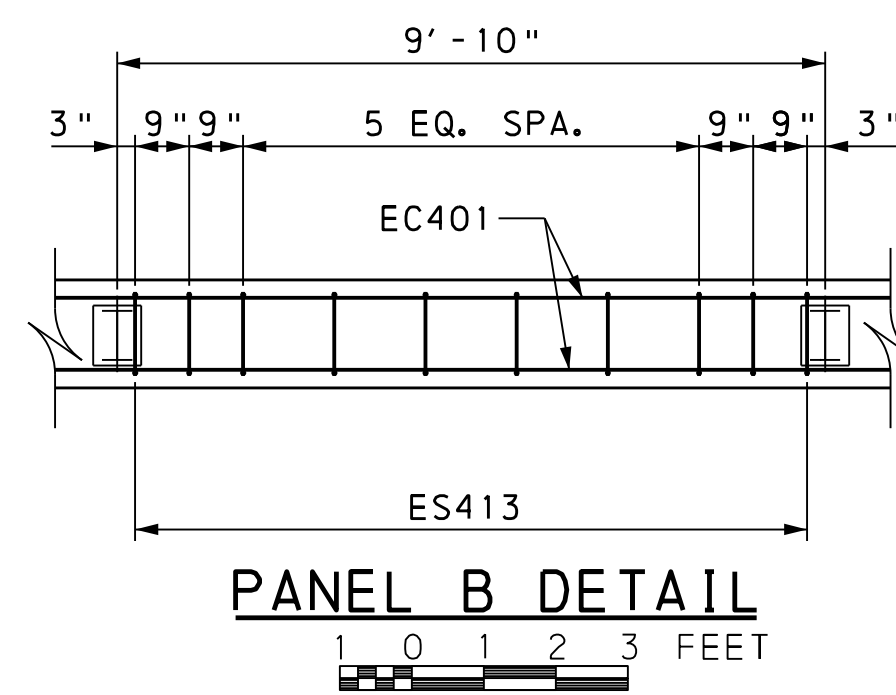
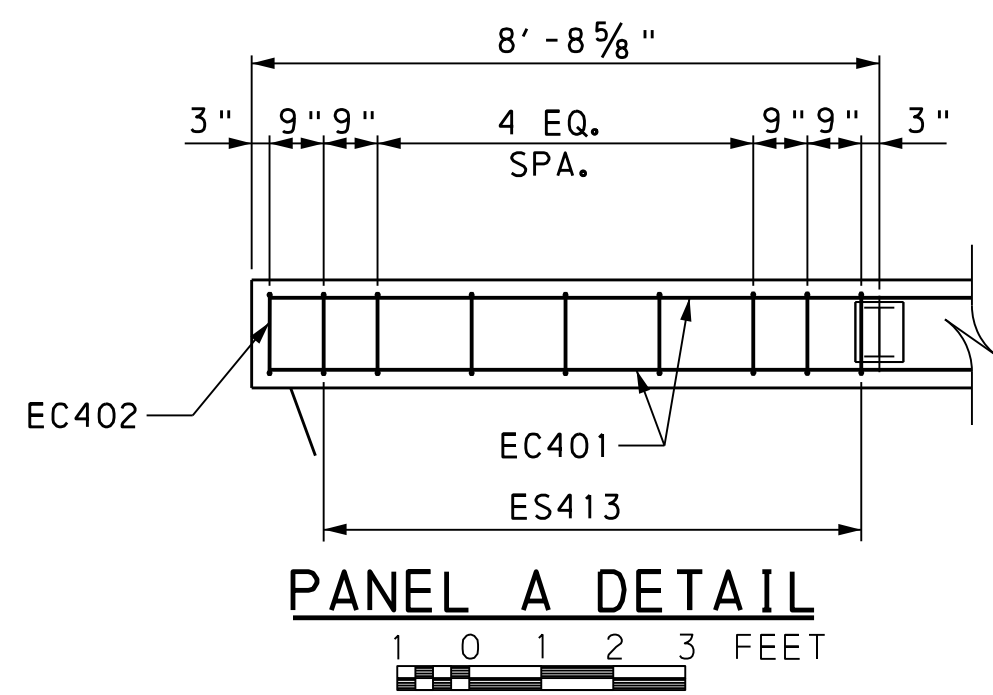




BARRIER PLAN



NOTE:
BARRIER LAP SPLICE LENGTH = 2'-8" FOR #4 BARS



NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR SLAB PLAN, SEE SHEET 27.
4. FOR TYPICAL SECTION, SEE SHEET 28.
5. FOR DIAPHRAGMS DETAILS, SEE SHEET 30.
6. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 33.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

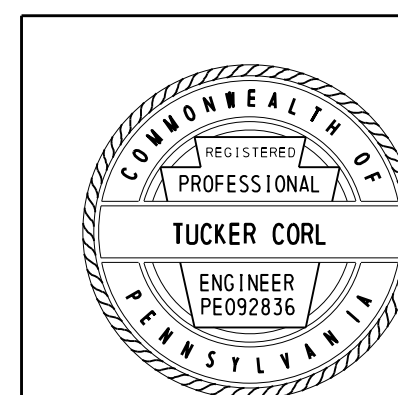
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
BARRIER DETAILS

RECOMMENDED 2025.05.19

SHEET 29 OF 40

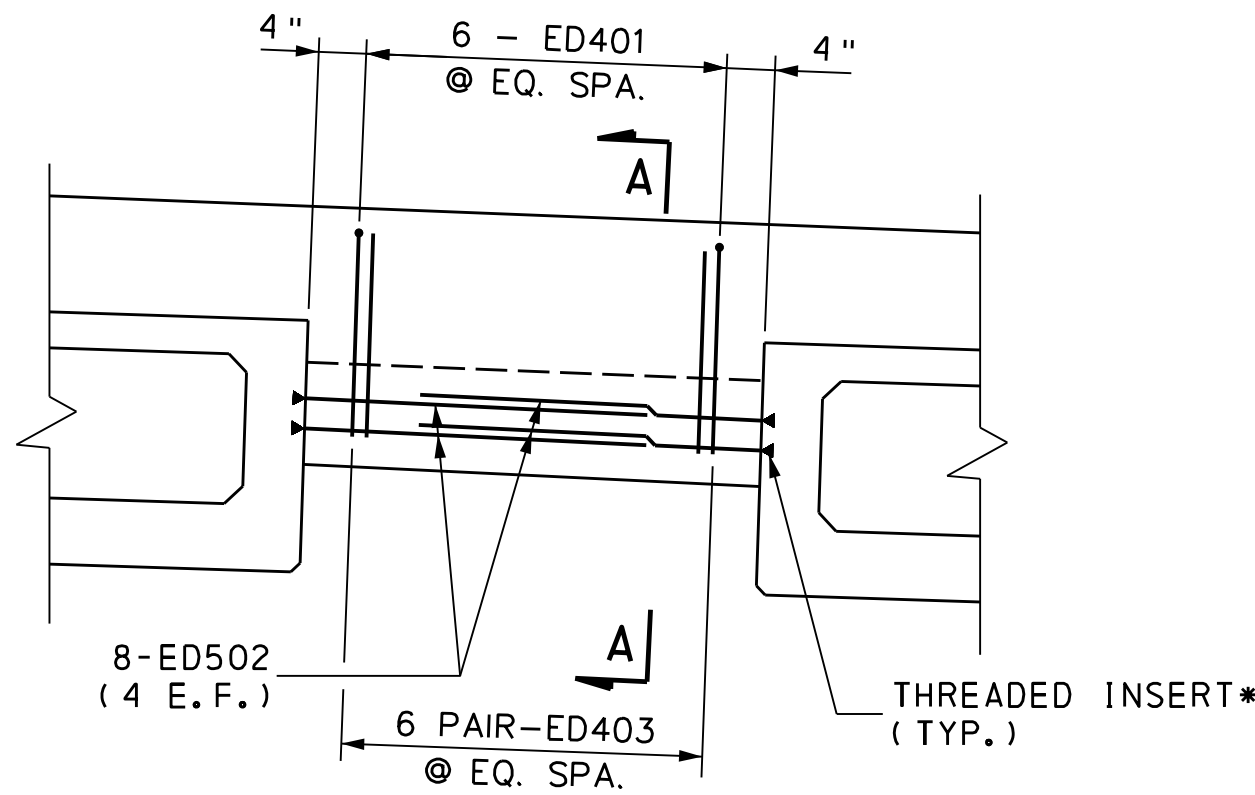
L-366



FILE NAME: P:\0037\003721_0431\Microsoft\Bridges\29-B3721_0431 BARRIER DETAILS.dgn
PLOT DATE: 7/25/2024 11:28:14 PM
PEN TABLE: file date user: b1
PLOT DRIVER: r1\SYS - Microstation\Bridges\pdf_bw_full.plt.ctb

DES: TJC DWG: KSB CKD: TJC

FILE NAME: P:\0037\003721_0431\Microstation\BRIDGE\30-B3721_0431 DIAPHRAM DETAILS.dgn
PLOTTER: 5/15/2024 3:00:48 PM kbookman
PEN TABLE: file date user to
PLOT DRIVER: r1\SYS - Microstation\Bridge\pdf_bw_full.plt.ctb

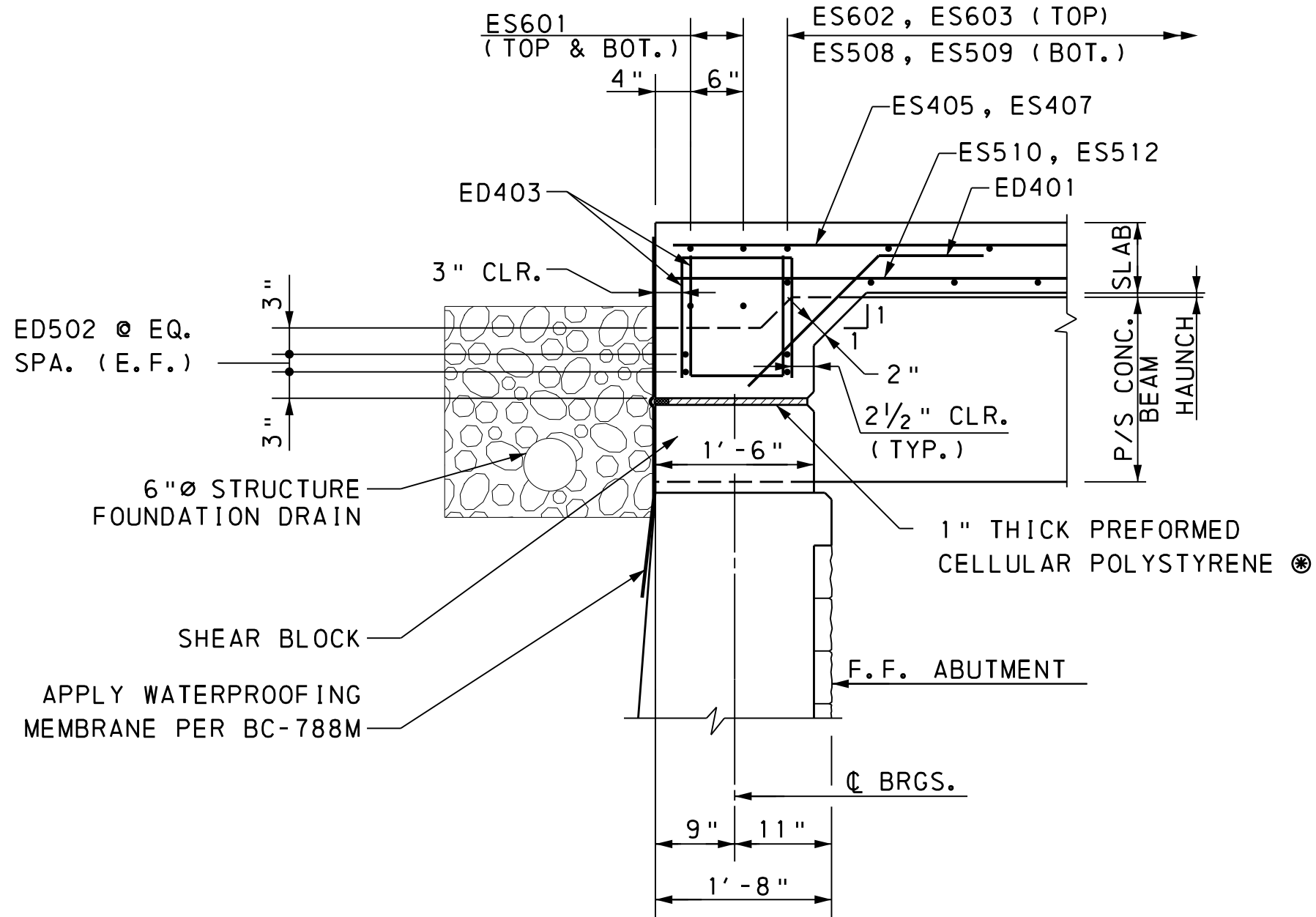


PARTIAL DEPTH END DIAPHRAGM
WITH SHEAR BLOCK @ ABUTMENTS

12 0 12 INCHES

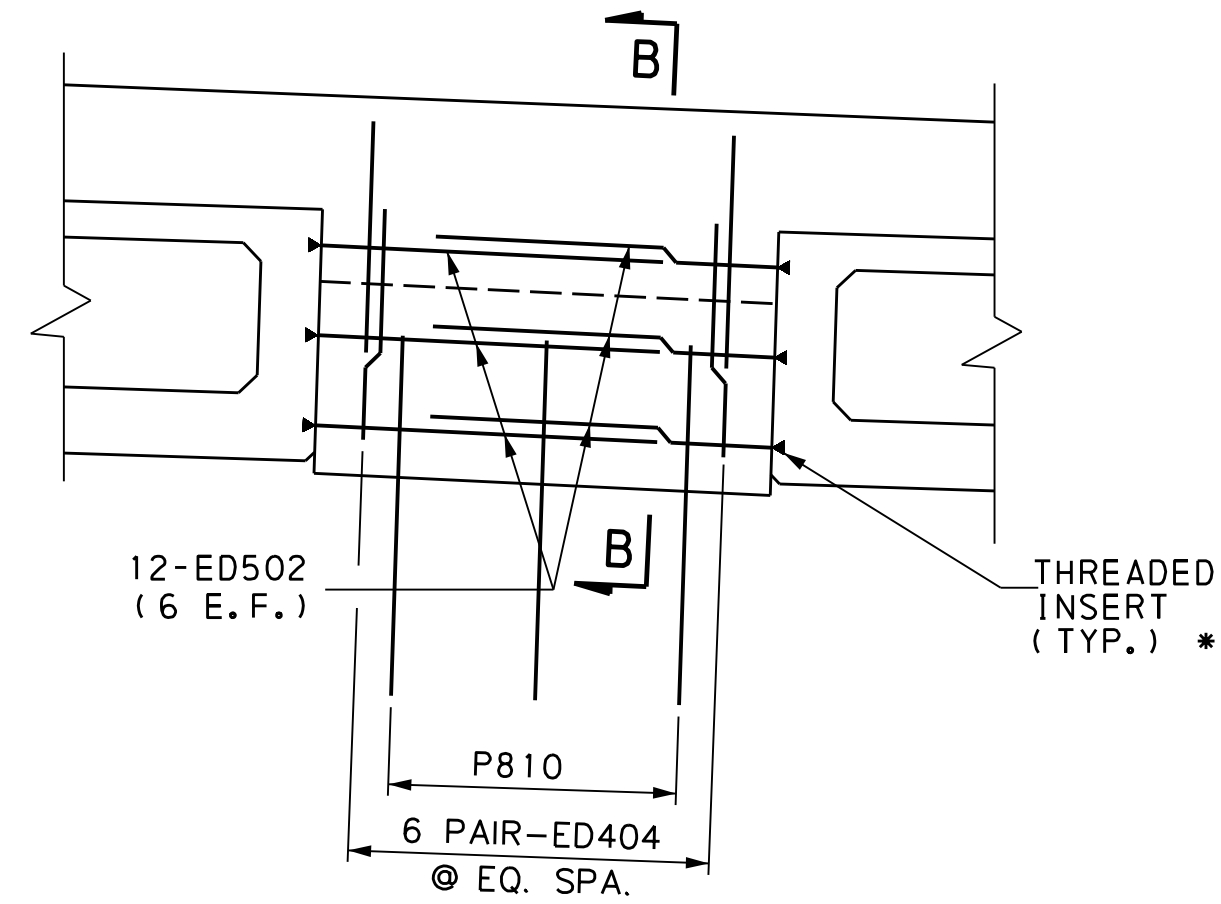
REQUIRED LAP LENGTHS

- #4 = 1'-0"
- #5 = 2'-7"



SECTION A-A

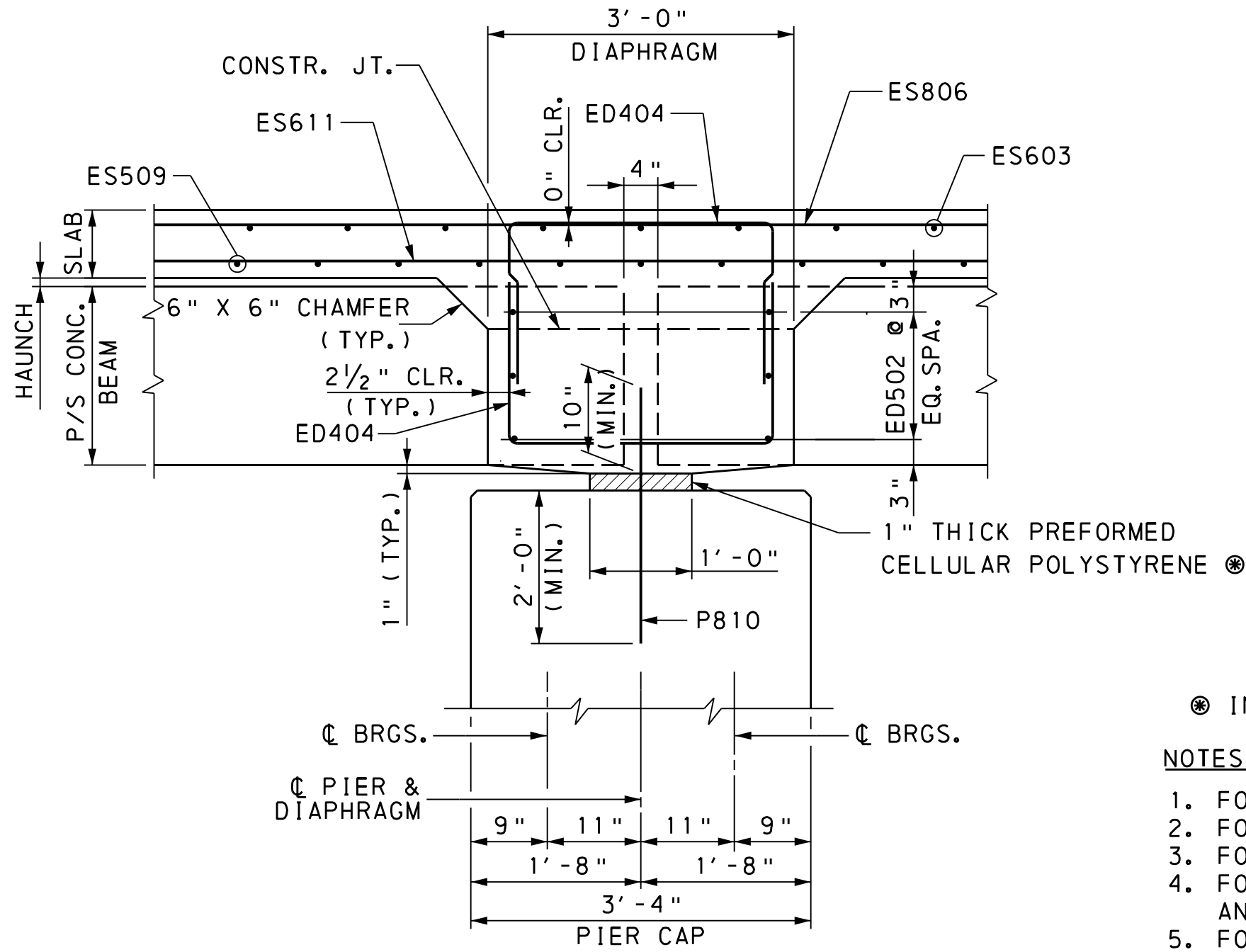
12 0 12 INCHES



FULL DEPTH CONTINUITY
DIAPHRAGM @ PIER

(TYP. 3 PLACES)

12 0 12 INCHES



SECTION B-B

12 0 12 INCHES

⊗ INCIDENTAL TO P/S BEAMS

NOTES:

1. FOR GENERAL PLAN, SEE SHEET 1.
2. FOR GENERAL NOTES, SEE SHEET 2.
3. FOR STAKE-OUT PLAN, SEE SHEET 3.
4. FOR ABUTMENT SHEAR BLOCK LOCATIONS AND DETAILS, SEE SHEETS 5 AND 12.
5. FOR PIER PLAN, SEE SHEET 19.
6. FOR FRAMING PLAN, SEE SHEET 21.
7. FOR BEARING PAD DETAILS, SEE SHEET 26.
8. FOR SLAB PLAN, SEE SHEET 27.
9. FOR TYPICAL SECTION, SEE SHEET 28.
10. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 33.
11. FOR WATERPROOFING DETAILS, SEE BC-788M.

* USE SAME SIZE INSERTS FOR PLAIN BARS AND ONE SIZE SMALLER INSERTS FOR DEFORMED BARS. THE MINIMUM LENGTH OF THE INSERT IS 3"

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

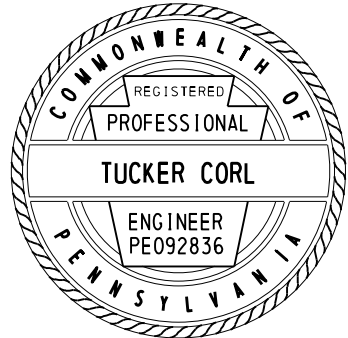
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
DIAPHRAGM DETAILS

RECOMMENDED 2025.05.19

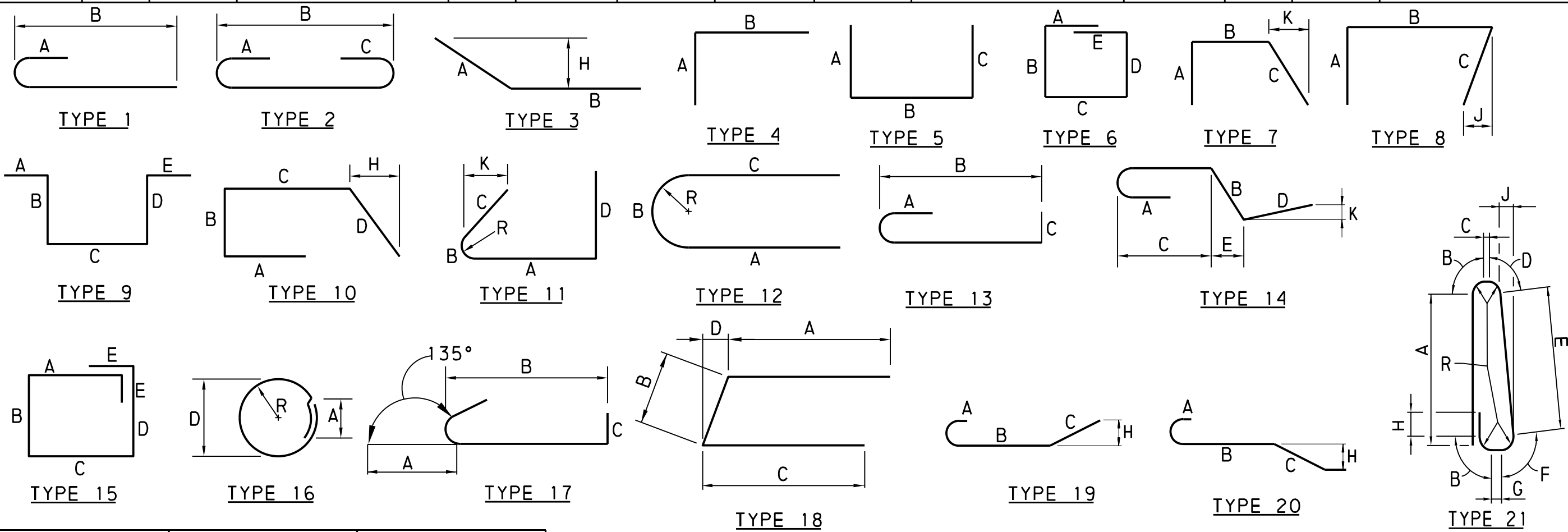
SHEET 30 OF 40

L-366

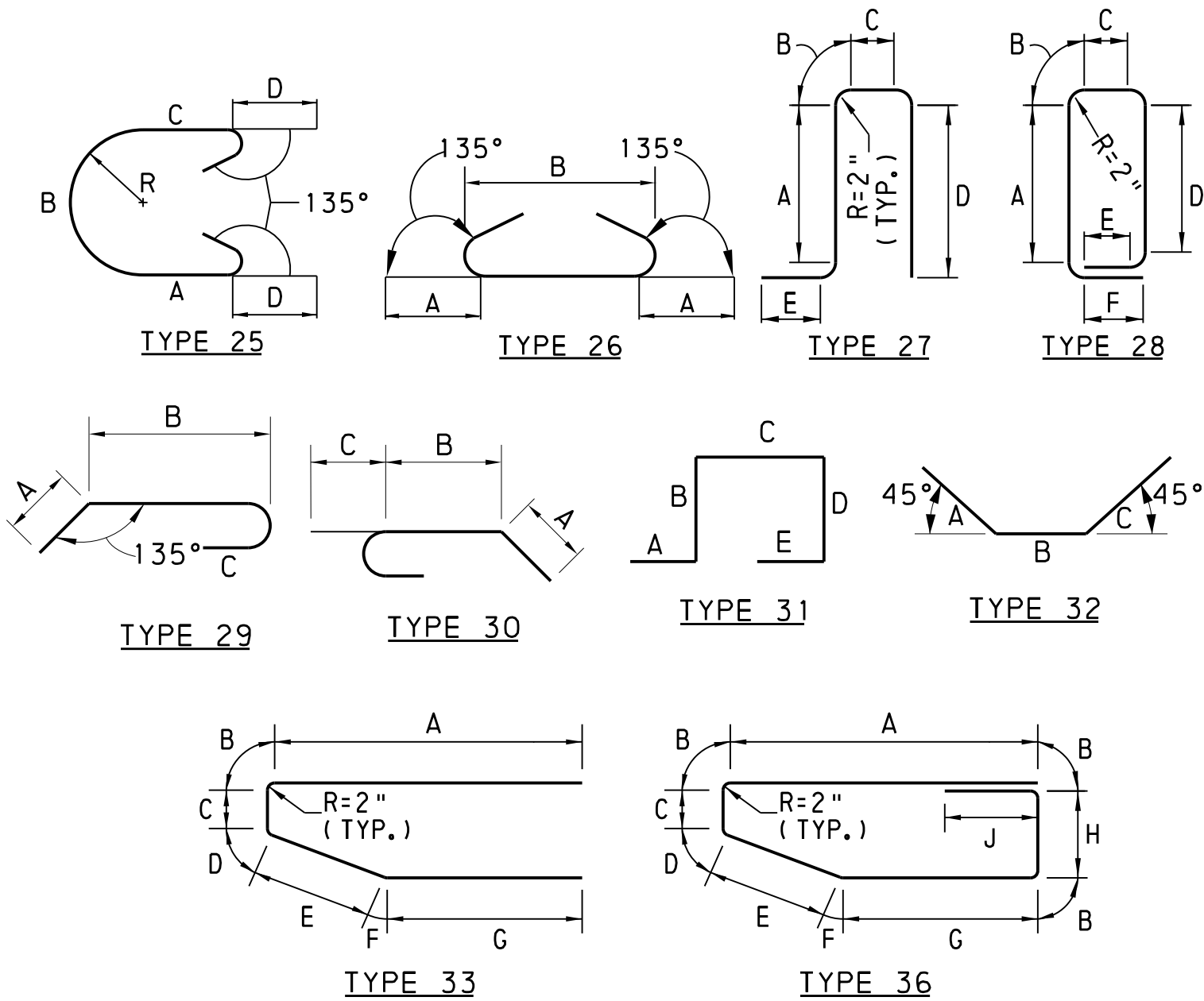


FILE NAME: P:\0037\003721\0431\microsrotation\BRIDGE\31-B3721_0431BS1.dgn
PLOTTER: 7/23/2024 5:04:53 PM kbookman
PEN TABLE: file date user tb
PLOT DRIVER: r4\SYS - Microstation\BrIdge\pdf_bw_full.plt.ctb

ABUTMENT 1										ABUTMENT 2									
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	REMARKS	MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	REMARKS
EA501	5	20	14'-9"	STR						EA501	5	20	15'-8"	STR					
EA702	7	20	14'-9"	STR						EA702	7	20	15'-8"	STR					
EA503	5	20	5'-6"	7	2'-3"	1'-0"	2'-3"		K=2¼	EA503	5	20	5'-4"	7	2'-2"	1'-0"	2'-2"		K=2¼
EA504	5	22	34'-0"	STR						EA504	5	22	34'-0"	STR					
EA505	5	2	34'-0"	STR					BEND IN FIELD	EA505	5	2	34'-0"	STR					BEND IN FIELD
EA306	3	3	14'-9"	STR					BEND IN FIELD	EA306	3	22	15'-7"	STR					BEND IN FIELD
EA307	3	21	15'-6"	STR					BEND IN FIELD	EA307	3	22	15'-6"	STR					BEND IN FIELD
EA308	3	3	14'-8"	STR					BEND IN FIELD	EA308	3	3	14'-9"	STR					BEND IN FIELD
EA309	3	3	15'-3"	STR					BEND IN FIELD	EA309	3	3	15'-3"	STR					BEND IN FIELD
EA310	3	21	15'-6"	STR					BEND IN FIELD	EA310	3	3	14'-5"	STR					BEND IN FIELD
EA511	5	33	5'-3"	STR						EA511	5	33	5'-3"	STR					
EA512	5	7	3'-9"	STR						EA512	5	7	3'-8"	STR					
EA513	5	15	6'-8"	5	2'-9"	1'-2"	2'-9"			EA513	5	15	6'-8"	5	2'-9"	1'-2"	2'-9"		
EA514	5	9	9'-8"	5	2'-9"	4'-2"	2'-9"			EA514	5	9	9'-8"	5	2'-9"	4'-2"	2'-9"		
EA415	4	24	3'-6"	STR						EA415	4	24	3'-6"	STR					
EA516	5	17	15'-4"	STR						EA516	5	17	16'-0"	STR					
EA517	5	16	14'-9"	STR						EA517	5	16	15'-8"	STR					
EA318	3	3	14'-9"	STR					BEND IN FIELD	EA318	3	3	14'-9"	STR					BEND IN FIELD
EW401	4	15	11'-3" TO 18'-6"	STR					VARY EA. BY 6¼"	EW501	5	12	10'-3" TO 19'-3"	STR					VARY EA BY 9¾"
EW502	5	15	11'-3" TO 18'-6"	STR					VARY EA. BY 6¼"	EW702	7	12	10'-3" TO 19'-3"	STR					VARY EA BY 9¾"
EW503	5	16	13'-8"	STR						EW503	5	14	16'-8"	STR					
EW504	5	10	3'-0" TO 12'-0"	STR					VARY EA. BY 2'-3"	EW504	5	12	3'-0" TO 16'-0"	STR					VARY EA BY 2'-7¼"
EW505	5	2	15'-3"	STR						EW505	5	2	18'-9"	STR					
EW406	4	15	12'-3" TO 18'-0"	STR					VARY EA. BY 5"	EW506	5	12	12'-3" TO 18'-10"	STR					VARY EA BY 7⅛"
EW507	5	15	12'-3" TO 18'-0"	STR					VARY EA. BY 5"	EW707	7	12	12'-3" TO 18'-10"	STR					VARY EA BY 7⅛"
EW508	5	18	13'-8"	STR						EW508	5	18	16'-8"	STR					
EW509	5	6	3'-4" TO 10'-4"	STR					VARY EA. BY 3'-6"	EW509	5	8	3'-0" TO 13'-2"	STR					VARY EA BY 3'-4½"
EW510	5	2	14'-7"	STR						EW510	5	2	17'-9"	STR					
EW411	4	16	3'-6"	STR						EW411	4	16	3'-6"	STR					
EW515	5	26	16'-4"	STR						EW515	5	26	17'-3"	STR					
EW616	6	78	9'-4"	1		8"	8'-8"			EW616	6	82	9'-4"	1	8"	8'-8"			
EW517	5	26	3'-1"	4	1'-9"	1'-4"				EW517	5	26	3'-1"	4	1'-9"	1'-4"			
EW518	5	26	15'-8"	STR						EW518	5	26	16'-8"	STR					
EW419	4	28	11'-2½"	27	4'-11"	4"	8½"	4'-11"	E = 0"	EW419	4	28	11'-0½"	27	4'-10"	4"	8½"	4'-10"	E = 0"
EW420	4	2	11'-0⅞"	27	4'-11"	4"	6⅞"	4'-11"	E = 0"	EW420	4	2	10'-10⅞"	27	4'-10"	4"	6⅞"	4'-10"	E = 0"
EW421	4	2	10'-11¾"	27	4'-11"	4"	5¾"	4'-11"	E = 0"	EW421	4	2	10'-9¾"	27	4'-10"	4"	5¾"	4'-10"	E = 0"
EW422	4	2	10'-10¾"	27	4'-11"	4"	4¾"	4'-11"	E = 0"	EW422	4	2	10'-8¾"	27	4'-10"	4"	4¾"	4'-10"	E = 0"
EF501	5	40	17'-6"	STR						EF501	5	44	20'-9"	STR					
EF402	4	72	9'-4"	STR						EF402	4	84	10'-0"	STR					
EF803	8	26	9'-4"	STR						EF603	6	58	10'-0"	STR					
EF404	4	50	10'-5"	STR						EF404	4	75	10'-10"	STR					
EF605	6	74	10'-5"	STR						EF705	7	75	10'-10"	STR					
EF506	5	24	37'-0"	STR						EF506	5	24	37'-0"	STR					
EF407	4	92	2'-2"	17	4½"	1'-5"	4½"			EF407	4	100	2'-2"	17	4½"	1'-5"	4½"		
EF508	5	53	4'-4"	1	7"	3'-9"				EF508	5	53	4'-4"	1	7"	3'-9"			
EF709	7	20	6'-4"	1	10"	5'-6"				EF709	7	20	6'-4"	1	10"	5'-6"			
EF710	7	19	12'-1"	1	10"	11'-3"				EF710	7	19	12'-11"	1	10"	12'-1"			
EF411	4	30	3'-11"	1	6"	3'-5"				EF511	5	24	4'-4"	1	7"	3'-9"			
EF512	5	30	5'-3"	1	7"	4'-8"				EF712	7	24	6'-4"	1	10"	5'-6"			
EF513	5	28	9'-1"	1	7"	8'-6"				EF713	7	22	8'-5"	1	10"	7'-7"			
EF516	5	4	3'-5"	STR						EF516	5	4	3'-5"	STR					
EF517	5	4	5'-0"	1	7"	4'-5"				EF517	5	4	5'-0"	1	7"	4'-5"			
EC401	4	10	4'-11"	STR						EC401	4	10	4'-11"	STR					
EC402	4	6	6'-5"	STR						EC402	4	6	6'-5"	STR					
EC403	4	4	6'-5½"	3	1'-2½"	5'-3"			H = 3¾"	EC403	4	4	6'-5½"	3	1'-2½"	5'-3"			H = 3¾"



- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- PREFIX "E" DENOTES EPOXY-COATED BARS.



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

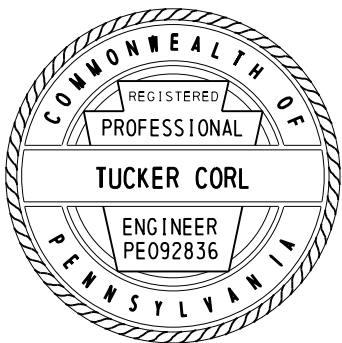
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
REINF. BAR SCHEDULE-ABUTMENTS

RECOMMENDED 2025.05.19

SHEET 31 OF 40

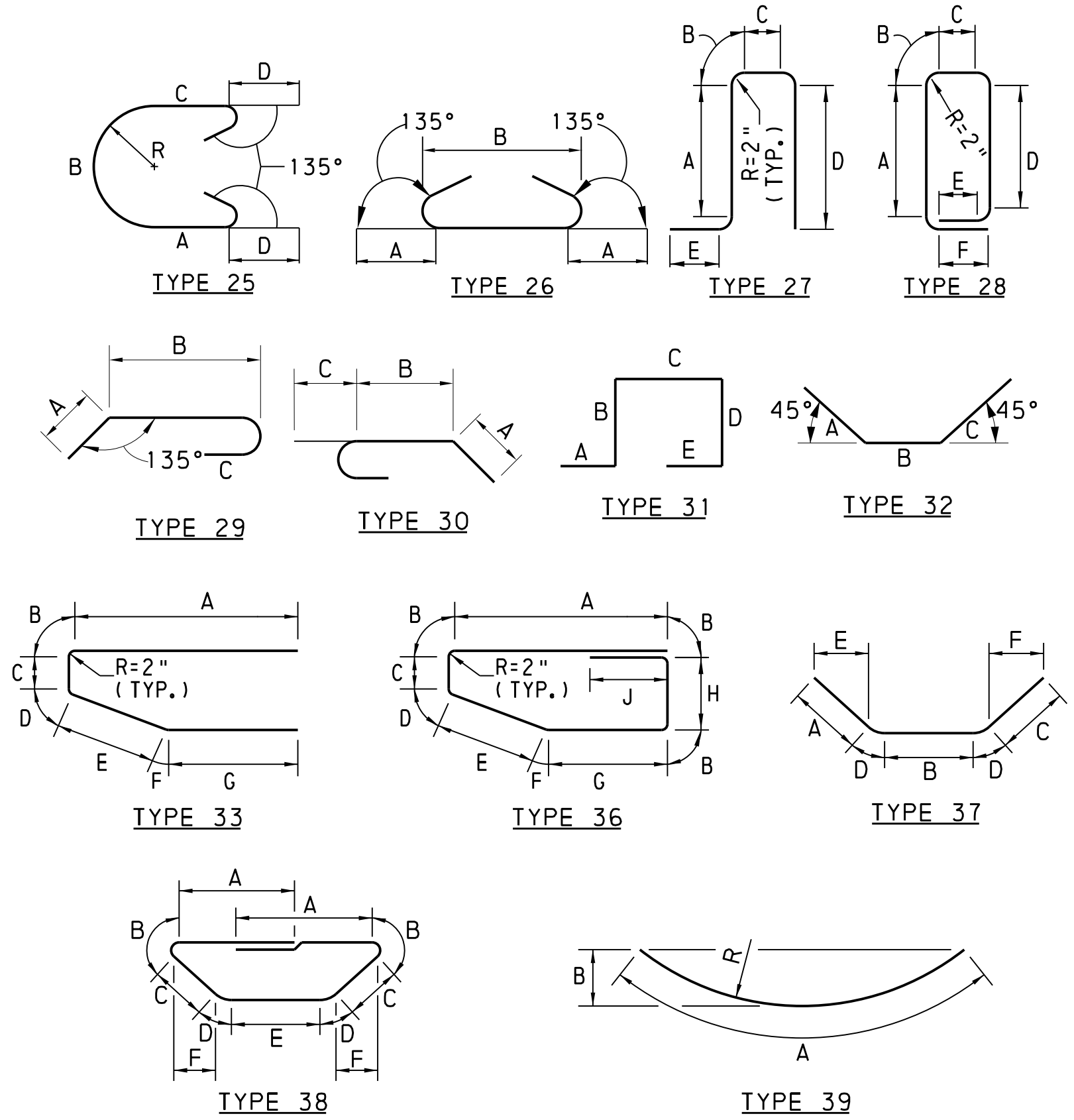
L-366



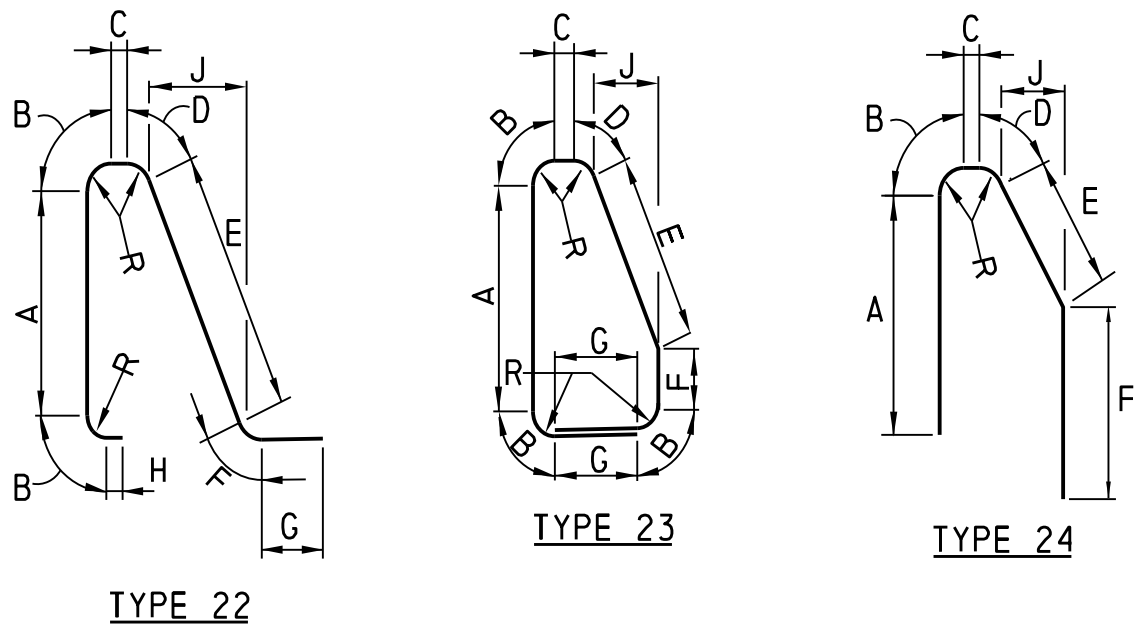
DES: TJC DWG: KSB CKD: TJC

FILE NAME: P:\0037\003721\0431\Microstation\BRIDGE\33-B3721_0431_BS3.dgn
PLOTTER: 5/15/2024 12:03:57 PM kbookman
PEN TABLE: file date user tb
PLOT DRIVER: r1\sys - Microstation\Bridge\pdf_bw_full.plt.ctg

SUPERSTRUCTURE									
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	REMARKS
ES601	6	8	32'-7"	STR					
ES602	6	36	28'-6" TO 3'-2"	1	8"	27'-10" TO 2'-6"			VARY 2 EA BY 1'-6"
ES603	6	177	32'-0"	2	8"	30'-8"	8"		
ES604	6	384	6'-7"	1	8"	5'-11"			
ES405	4	32	34'-7"	STR					
ES806	8	63	37'-3"	STR					
ES407	4	32	38'-4"	STR					
ES508	5	32	27'-8" TO 1'-11"	STR					VARY 2 EA BY 1'-8 ⁵ / ₈ "
ES509	5	153	30'-8"	STR					
ES510	5	25	35'-2"	STR					
ES611	6	45	37'-3"	STR					
ES512	5	25	38'-11"	STR					
ES413	4	214	6'-4"	27	1'-5 ¹ / ₂ "	4"	8 ¹ / ₂ "	1'-8"	E = 1'-6"
EC401	4	30	37'-1"	STR					
EC402	4	2	6'-8 ¹ / ₂ "	28	1'-8"	4"	8 ¹ / ₂ "	1'-8"	E = 8"; F = 8"
ED401	4	36	2'-9"	3	1'-9"	1'-0"			H = 8 ¹ / ₂ "
ED502	5	84	3'-8"	STR					THREAD ONE END 3"
ED403	4	72	3'-4"	5	1'-2"	1'-0"	1'-2"		
ED404	4	36	5'-9"	5	1'-7"	2'-7"	1'-7"		



- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- PREFIX "E" DENOTES EPOXY-COATED BARS.



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

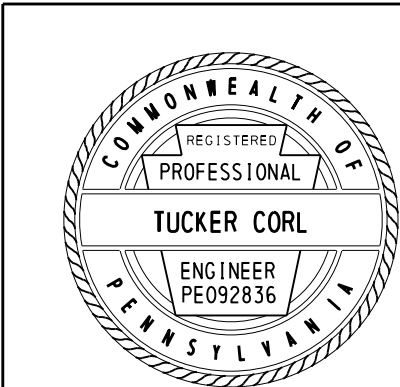
BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

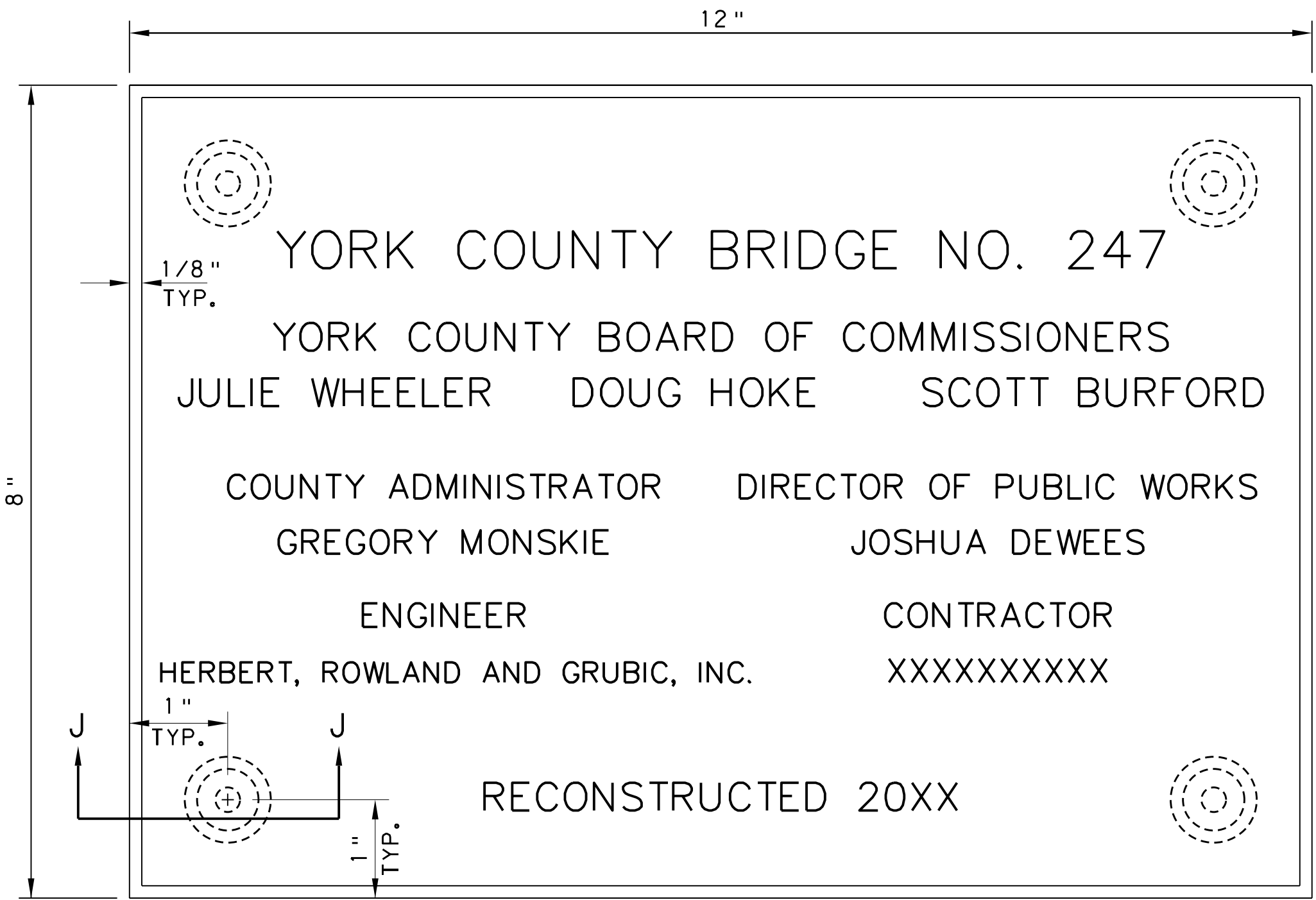
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
REINF. BAR SCHEDULE-SUPERSTRUCTURE

RECOMMENDED 2025.05.19

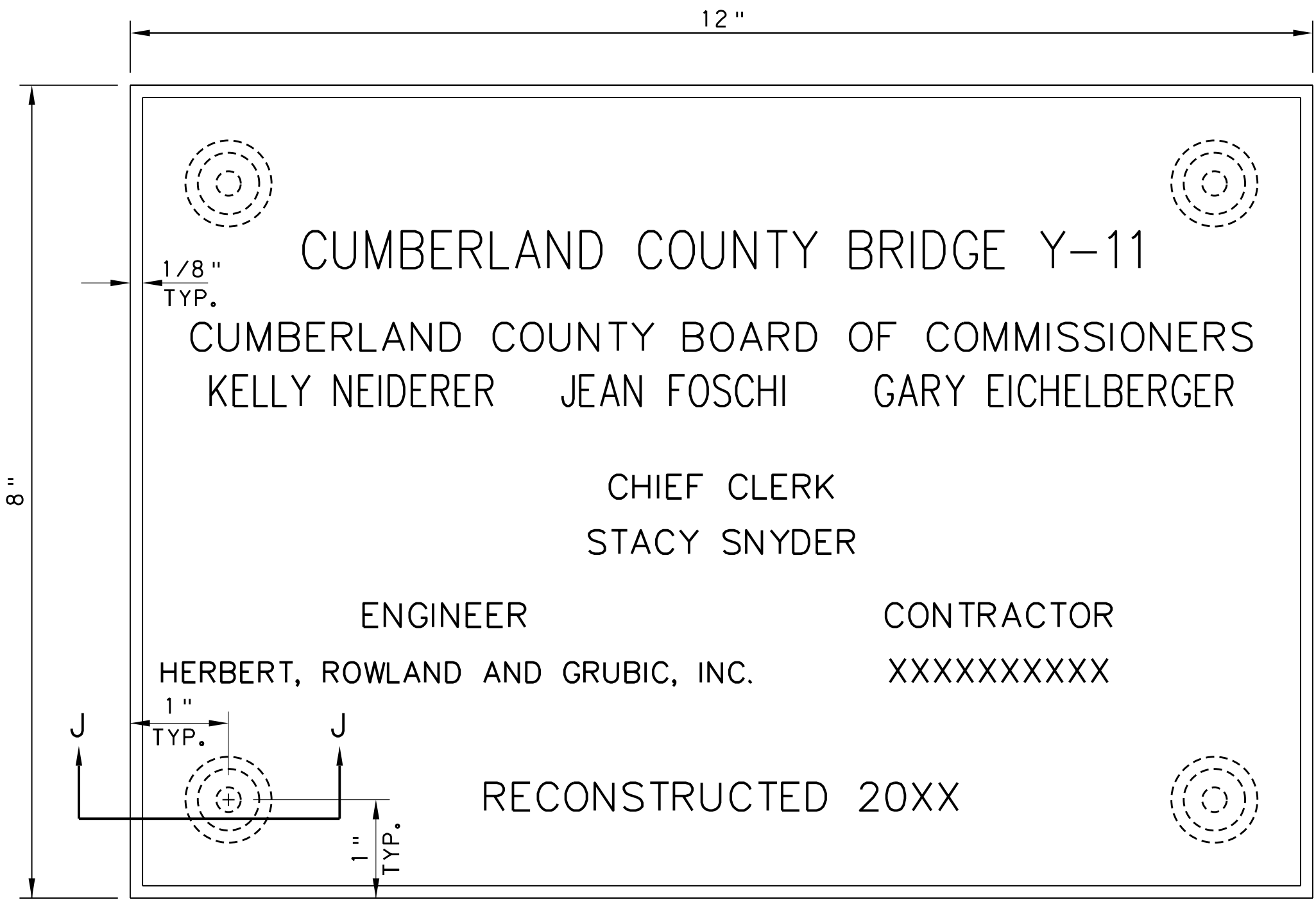
SHEET 33 OF 40
L-366





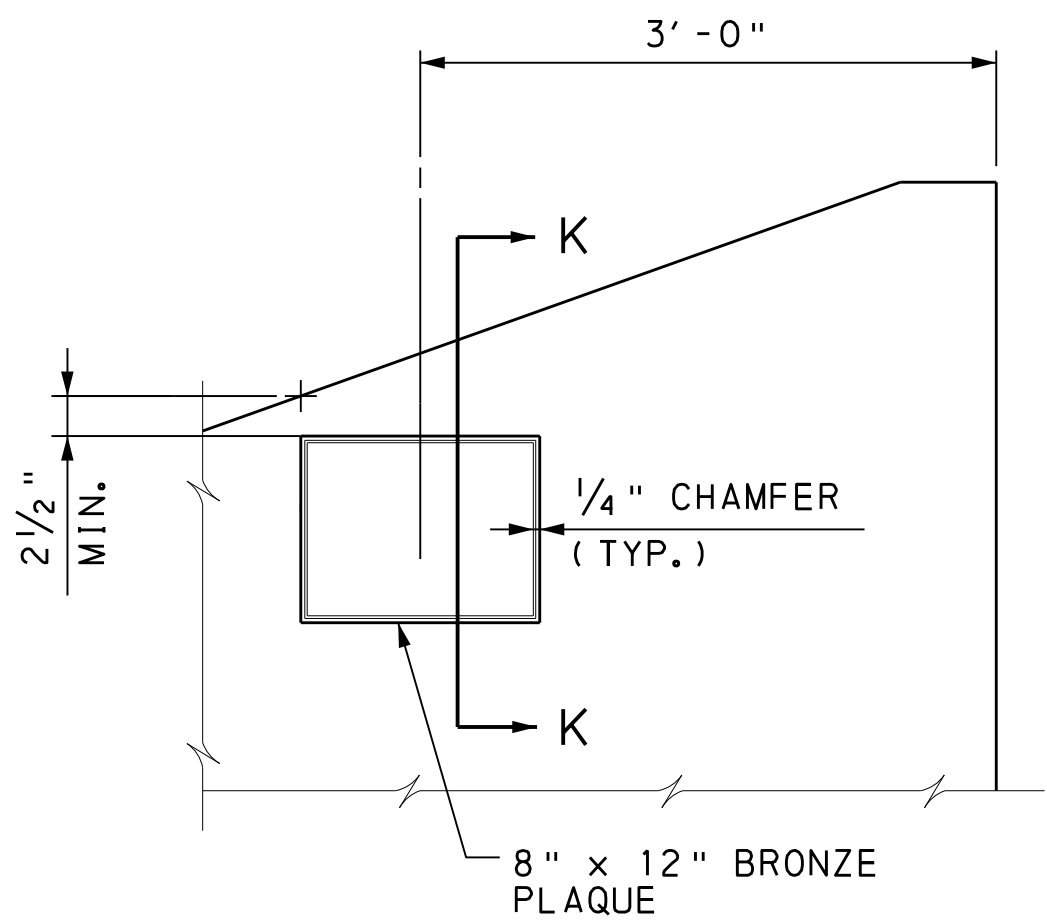
BRONZE PLAQUE DETAIL - YORK COUNTY

NOT TO SCALE
TO BE PLACED ON WING A, SEE SHEET 7. LOCATION TO BE VERIFIED BY OWNER

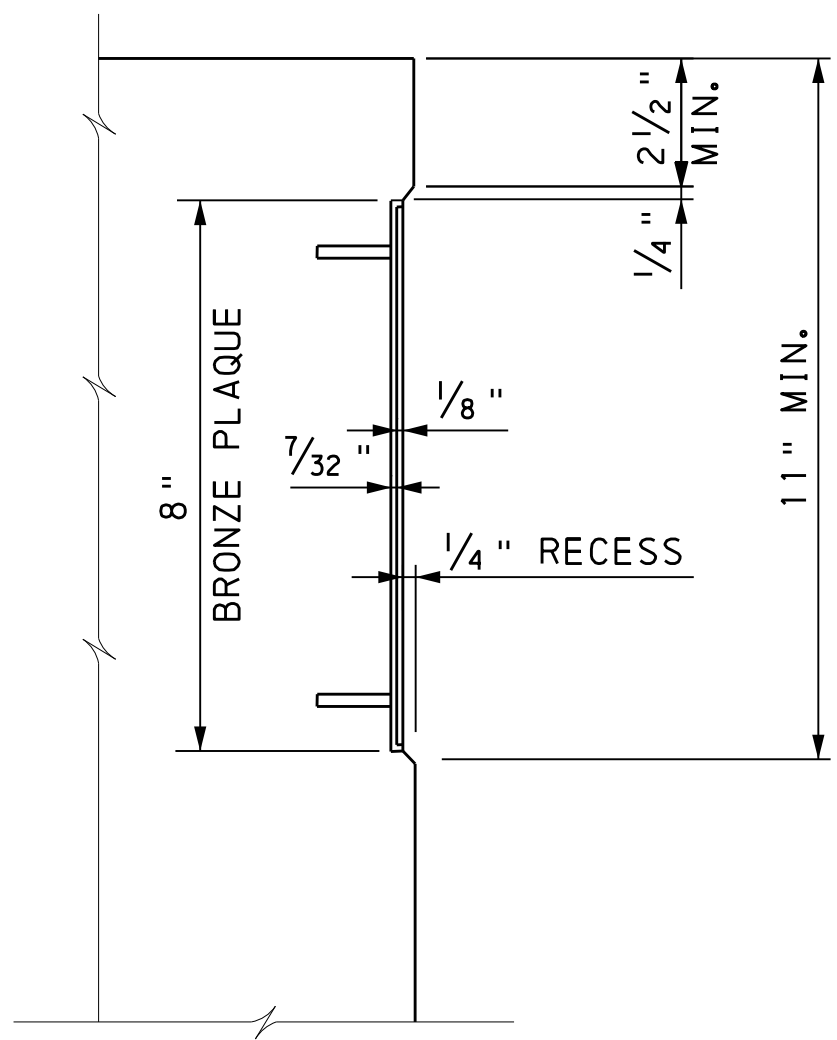


BRONZE PLAQUE DETAIL - CUMBERLAND COUNTY

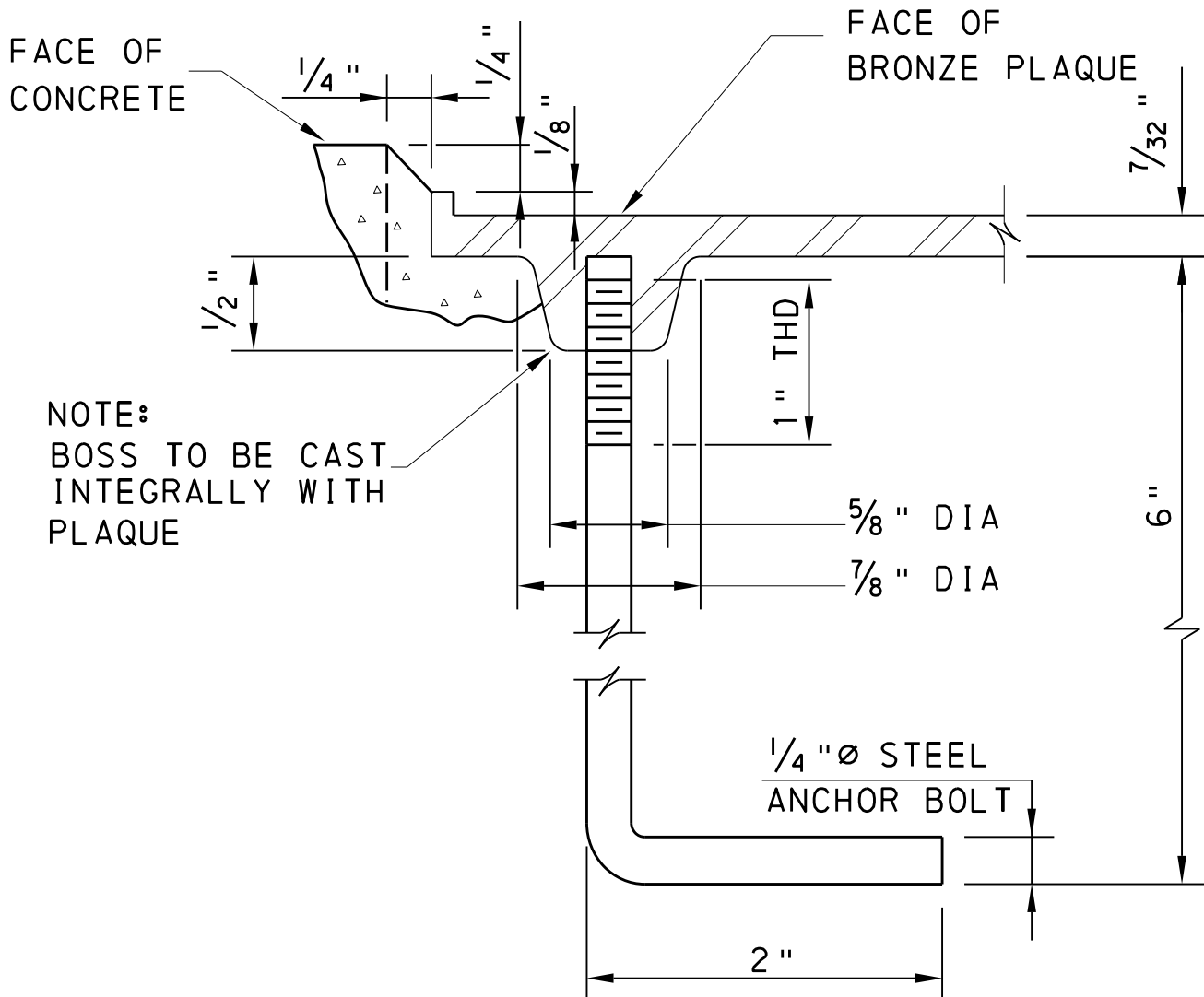
NOT TO SCALE
TO BE PLACED ON WING C, SEE SHEET 14. LOCATION TO BE VERIFIED BY OWNER



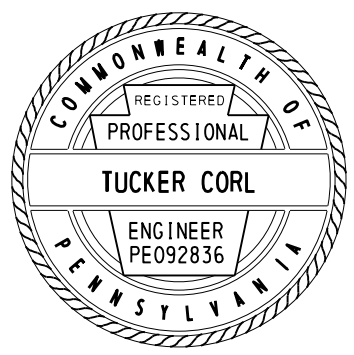
BRONZE PLAQUE LOCATION
NOT TO SCALE



SECTION K-K
NOT TO SCALE



SECTION J-J
NOT TO SCALE



Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
BRIDGE PLAQUE DETAILS

RECOMMENDED 2025.05.19

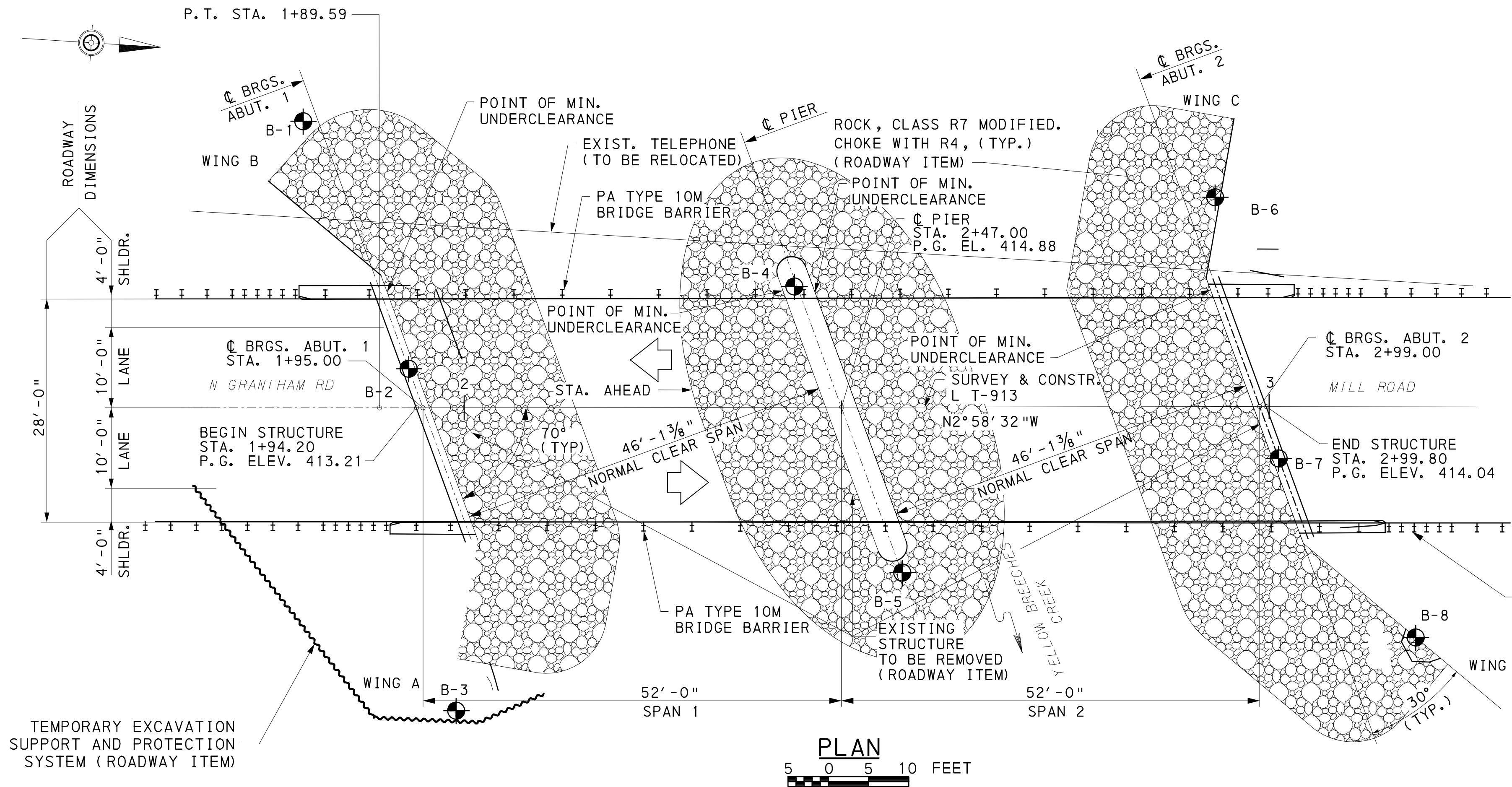
SHEET 34 OF 40

L-366

FILE NAME: P:\003721\0431\Microstation\BRIDGE\34-3721_0431_PLAQUE.DGN
PLOTTER: 5/15/2024 12:04:54 PM
PEN TABLE: file_date_user.tbl
PLOT DRIVER: r1\SYS - Microstation\Bridges\pdf_bw_full.plt

FILE NAME: \$designfiles\$
PLOT DATE: \$DATE\$
PEN TABLE: \$PENL\$
PLOT DRIVER: \$PLTDVLS\$

\$\$\$USER\$\$\$
\$\$\$TIME\$\$\$



AS-DRILLED CORE BORING LOCATIONS

BORING NO.	STATION	OFFSET
B-1	1+80	LT. 35.6'
B-2	1+94	LT. 5'
B-3	1+99	RT. 37.2'
B-4	2+41	LT. 15'
B-5	2+55	RT. 19'
B-6	2+93	LT. 26'
B-7	3+01	RT. 6'
B-8	3+20	RT. 29'

● DENOTES CORE BORING LOCATION
OFFSETS ARE FROM SURVEY & CONSTR. L T-913 (NORTH GRANTHAM ROAD)

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
BFE	BOTTOM OF FOOTING ELEVATION
BOCC	BOTTOM OF CLASS C CONCRETE
SBE	STREAMBED ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

WML

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.

Walter M. Lorence
GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST

4/6/23
DATE:

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

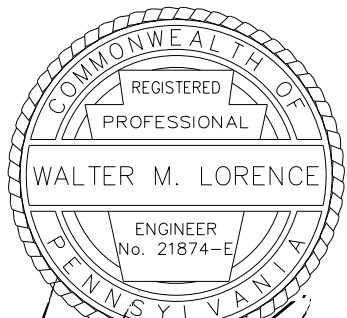
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONT. COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
TEST BORING RESULTS

RECOMMENDED 2025.05.19

SHEET 35 OF 40

L-366

PREPARED BY
GeoMechanics, Inc.
600 Munir Drive
Elizabeth, PA 17870



Walter M. Lorence
REG. PROF. ENGINEER

4/6/23

DATE

DES: BJM DWG: JPB CKD: WML

FILE NAME: \$\$\$designfiles\$\$\$
PLOTTER: \$\$\$DATE\$\$\$
PEN TABLE: \$\$\$PENL\$\$\$
PLOT DRIVER: \$PLTDRL\$

\$\$\$USER\$\$\$

\$\$\$TIME\$\$\$

SUBSTRUCTURE UNIT:
ABUTMENT 1

BORING NUMBER:
B-1

BORING LOCATION
STATION: 1+80.0
OFFSET: 35.6 FT. LT.

START: 10/21/2022 8:40 AM
FINISH: 10/01/2022 11:40 AM

HAMMER: AUTOMATIC
EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:
DOUBLE TUBE-NQ, AUTOMATIC,
ACKER SOIL MAX TRACK RIG

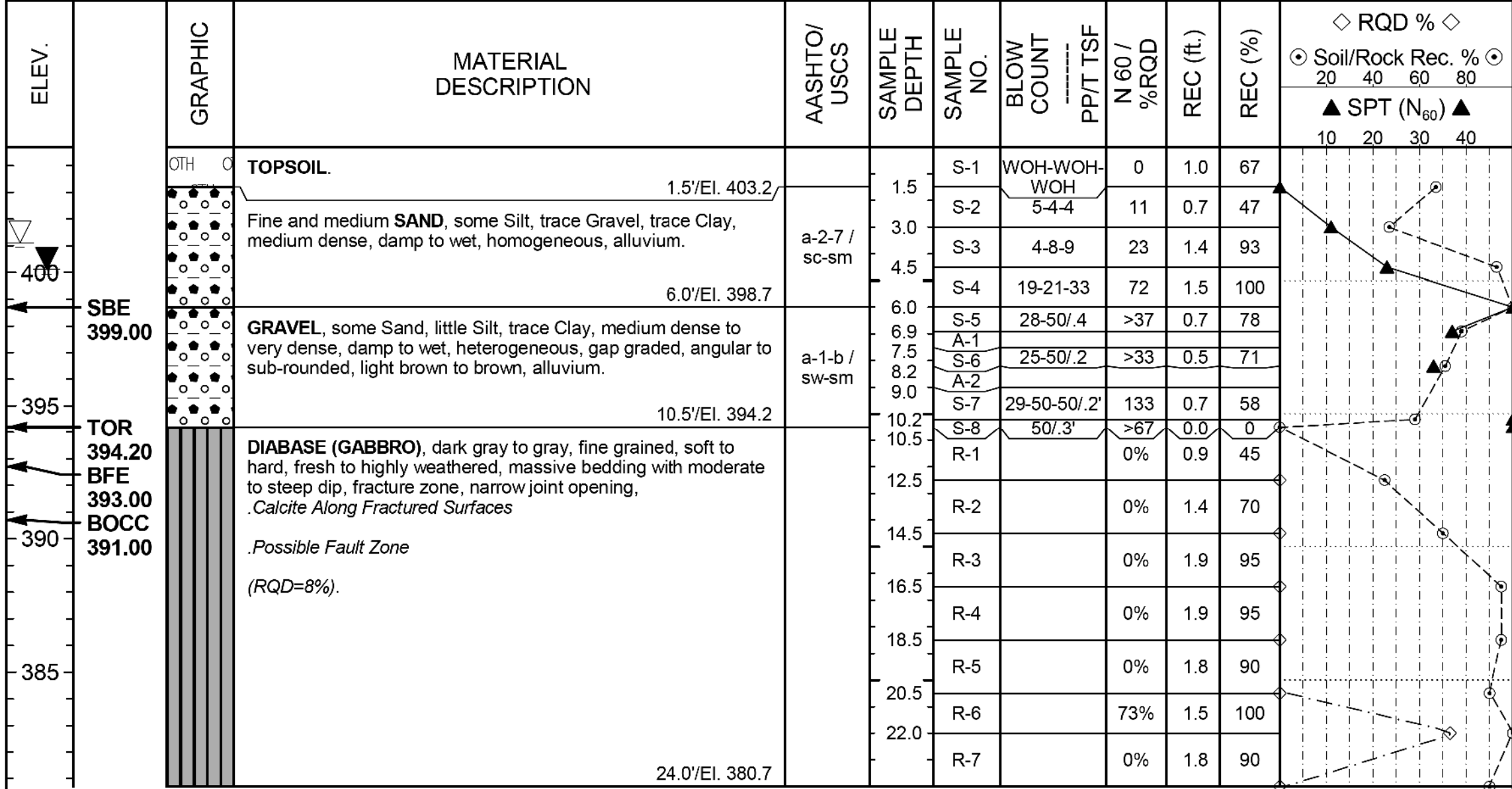
SIZE OF CORE:
1.874 IN.

VERTICAL SCALE:
0 FT. 5 FT.

TOP OF BORING
ELEVATION:
404.7 FT.

DRILLING INSPECTOR: WILLIAM THIRY
DRILLER & DRILLING COMPANY: D. RIZIO
NAVARRO & WRIGHT

0 HR. READING - ELAPSED TIME: EI. 401.1 ft. - 480.3 hr.
24 HR. READING - ELAPSED TIME: EI. 400.1 ft. - 549.0 hr.



SUBSTRUCTURE UNIT:
ABUTMENT 1

BORING NUMBER:
B-2

BORING LOCATION
STATION: 1+94.0
OFFSET: 5.0 FT. LT.

START: 10/18/2022 8:30 AM
FINISH: 10/18/2022 2:00 PM

HAMMER: AUTOMATIC
EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:
DOUBLE TUBE-NQ, AUTOMATIC,
ACKER SOIL MAX TRACK RIG

SIZE OF CORE:
1.874 IN.

VERTICAL SCALE:
0 FT. 5 FT.

TOP OF BORING
ELEVATION:
413.4 FT.

DRILLING INSPECTOR: WILLIAM THIRY
DRILLER & DRILLING COMPANY: D. RIZIO
NAVARRO & WRIGHT

0 HR. READING - ELAPSED TIME: EI. 400.7 ft. - 0.2 hr.
24 HR. READING - ELAPSED TIME: EI. 400.7 ft. - 25.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/USCS	SAMPLE DEPTH	SAMPLE NO.	BLOW COUNT	PP/T TSE	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ ○ Soil/Rock Rec. % ○ ▲ SPT (N ₆₀) ▲
410		BITUMINOUS CONCRETE, black.		1.5	A-1						
		1.1'/EI. 412.3	a-1-a / gp	3.0	S-1	6-11-38	65	0.7	47		
		GRAVEL, trace Silt, medium dense, moist, homogeneous, uniformly graded, angular, non-plastic, gray, subbase.		3.1	S-2	50/.1	>	0.1	100		
		1.7'/EI. 411.7	a-2-7 / gc-gm	4.5	A-2						
		GRAVEL, some Sand, little Silt, trace Clay, medium dense to very dense, moist to wet, heterogeneous, poorly graded, angular to sub-rounded, non-plastic, gray brown, fill.		6.0	S-3	15-10-15	33	0.9	60		
		8.0'/EI. 405.4		6.8	S-4	9-50/.3	>12	0.4	50		
		GRAVEL and COBBLES, some Sand, little Silt, trace Clay, gap graded, angular to sub-rounded, dark brown to dark gray, fill, weathered Diabase.		7.5	A-3	7-50/.0	>9	0.1	20		
		Rock fragments and boulders in a silty sand matrix.		8.0	R-1		35%	1.0	50		
				10.0	R-2		0%	1.1	55		
				12.0	R-3		0%	1.6	80		
				14.0	R-4		0%	1.2	40		
				17.0	R-5		0%	0.9	45		
		19.2'/EI. 394.2	a-1-a / gp-gm	19.0	R-6		0%	1.3	65		
		Argillaceous DIABASE (GABBRO), dark gray to gray, soft to hard, fresh to highly weathered, massive bedding with moderate to steep dip, fracture zone, narrow to moderate spacing.		21.0	R-7		0%	0.9	90		
		Calcite Along Fractured Surfaces		22.0	R-8		0%	2.0	100		
		(RQD=18%).		24.0	R-9		0%	3.0	100		
				27.0	R-10		0%	2.0	100		
				29.0	R-11		33%	3.0	100		
				32.0	R-12		63%	3.0	100		
		35.0'/EI. 378.4									

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

T

NTS

BFE

BOCC

SBE

TOR

POCKET PENETROMETER

TORVANE

NOT TO SCALE

BOTTOM OF FOOTING ELEVATION

BOTTOM OF CLASS C CONCRETE

STREAMBED ELEVATION

ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

Mark	Description	By	Chk' d.	Rec'm d.	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONT. COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
TEST BORING RESULTS

RECOMMENDED 2025.05.19

SHEET 36 OF 40

L-366

PREPARED BY
GeoMechanics, Inc.
600 Munir Drive
Elizabeth, PA 17870

REG. PROF. ENGINEER

4/6/23

DATE

DES: BJM DWG: JPB CKD: WML

FILE NAME: \$designfiles\$
PLOTTER: \$date\$
PEN TABLE: \$pen\$
PLOT DRIVER: \$plotdrv\$

\$USER\$

\$TIME\$

\$PEN\$

\$PLOT\$

SUBSTRUCTURE UNIT:
PIER 1

BORING NUMBER:
B-5

BORING LOCATION
STATION: 2+55.0
OFFSET: 19.0 FT. RT.

START: 10/24/2022 9:00 AM
FINISH: 10/24/2022 11:20 AM

HAMMER: AUTOMATIC
EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:
DOUBLE TUBE-NQ, AUTOMATIC,
ACKER SOIL MAX TRACK RIG

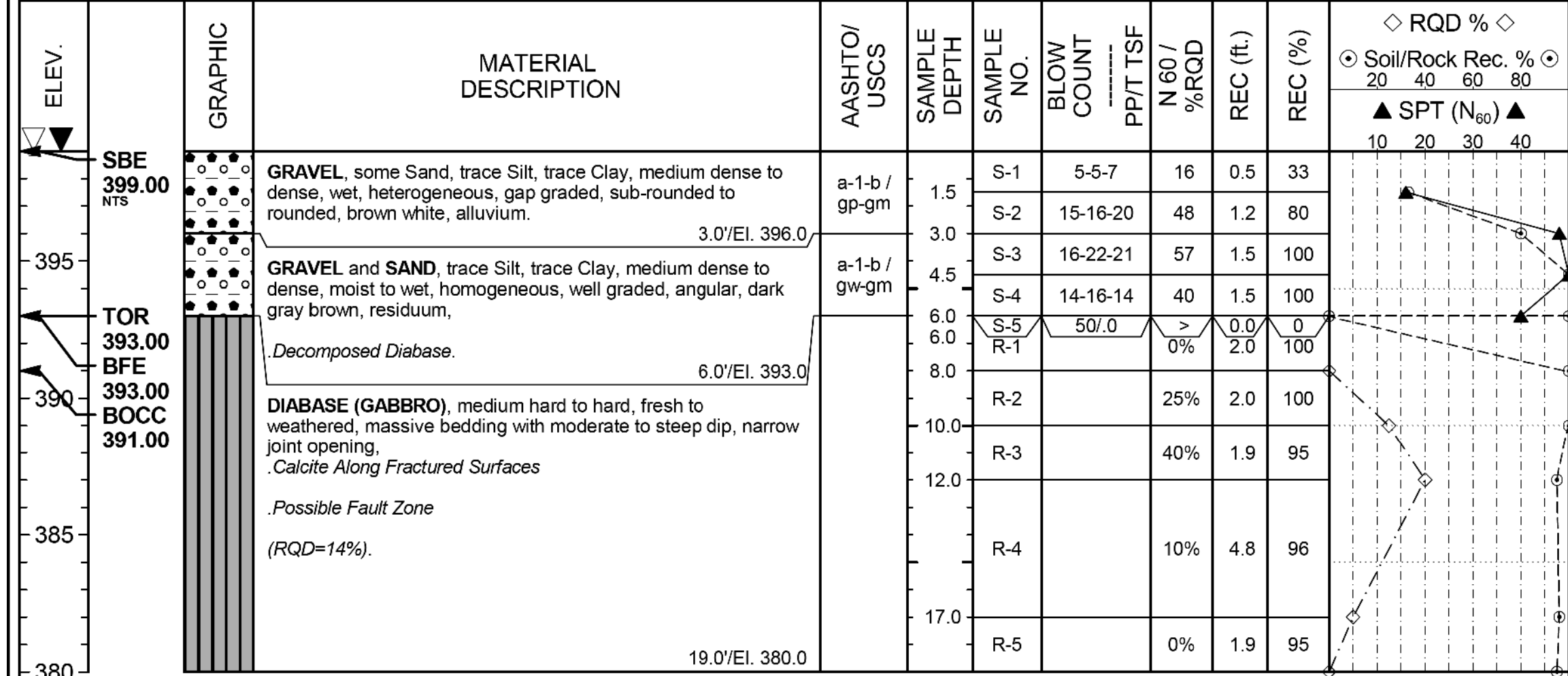
SIZE OF CORE:
1.874 IN.

VERTICAL SCALE:
0 FT. 5 FT.

TOP OF BORING
ELEVATION:
399.0 FT.

DRILLING INSPECTOR: WILLIAM THIRY
DRILLER & DRILLING COMPANY: D. RIZIO
NAVARRO & WRIGHT

0 HR. READING - ELAPSED TIME: El. 399.0 ft. - 0.0 hr.
24 HR. READING - ELAPSED TIME: El. 399.0 ft. - 24.0 hr.



3.0'/El. 396.0
6.0'/El. 393.0
19.0'/El. 380.0

Decomposed Diabase.
Diabase (GABBRO), medium hard to hard, fresh to weathered, massive bedding with moderate to steep dip, narrow joint opening.
Calcite Along Fractured Surfaces
Possible Fault Zone
(RQD=14%).

SUBSTRUCTURE UNIT:
ABUTMENT 2

BORING NUMBER:
B-6

BORING LOCATION
STATION: 2+93.0
OFFSET: 26.0 FT. LT.

START: 10/24/2022 11:45 AM
FINISH: 10/24/2022 2:45 PM

HAMMER: AUTOMATIC
EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:
DOUBLE TUBE-NQ, AUTOMATIC,
ACKER SOIL MAX TRACK RIG

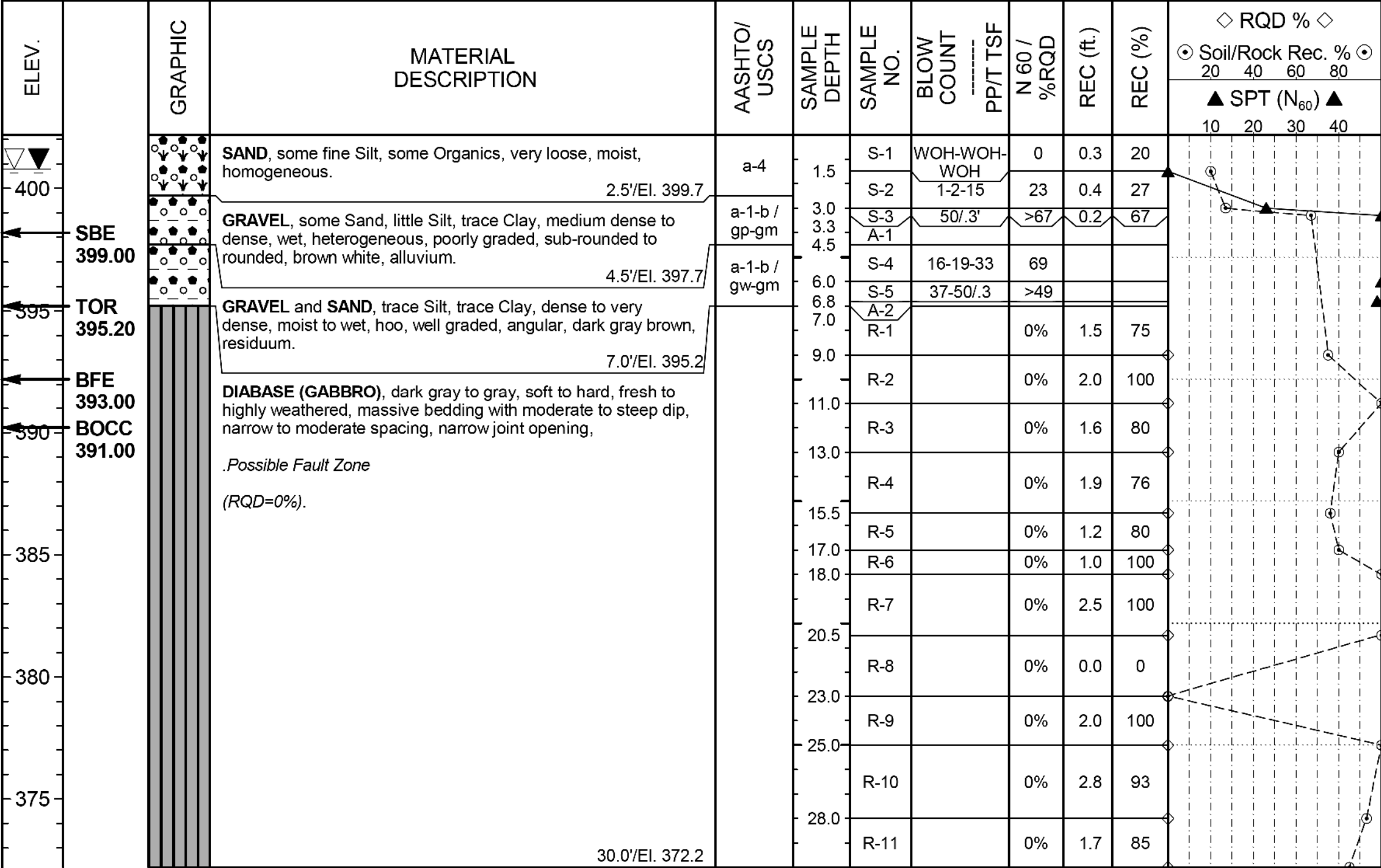
SIZE OF CORE:
1.874 IN.

VERTICAL SCALE:
0 FT. 5 FT.

TOP OF BORING
ELEVATION:
402.2 FT.

DRILLING INSPECTOR: WILLIAM THIRY
DRILLER & DRILLING COMPANY: D. RIZIO
NAVARRO & WRIGHT

0 HR. READING - ELAPSED TIME: El. 400.8 ft. - 0.2 hr.
24 HR. READING - ELAPSED TIME: El. 400.8 ft. - 0.2 hr.



2.5'/El. 399.7
4.5'/El. 397.7
7.0'/El. 395.2
30.0'/El. 372.2

GRAVEL, some Sand, little Silt, trace Clay, medium dense to dense, wet, heterogeneous, poorly graded, sub-rounded to rounded, brown white, alluvium.
GRAVEL and SAND, trace Silt, trace Clay, dense to very dense, moist to wet, hoo, well graded, angular, dark gray brown, residuum.
Diabase (GABBRO), dark gray to gray, soft to hard, fresh to highly weathered, massive bedding with moderate to steep dip, narrow to moderate spacing, narrow joint opening.
Possible Fault Zone
(RQD=0%).

PREPARED BY
GeoMechanics, Inc.
600 Munir Drive
Elizabeth, PA 17870

WALTER M. LORENCE
ENGINEER
No. 21874-E
PENNSYLVANIA

REG. PROF. ENGINEER
4/6/23
DATE

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
BFE BOTTOM OF FOOTING ELEVATION
BOCC BOTTOM OF CLASS C CONCRETE
SBE STREAMBED ELEVATION
TOR ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONT. COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
TEST BORING RESULTS

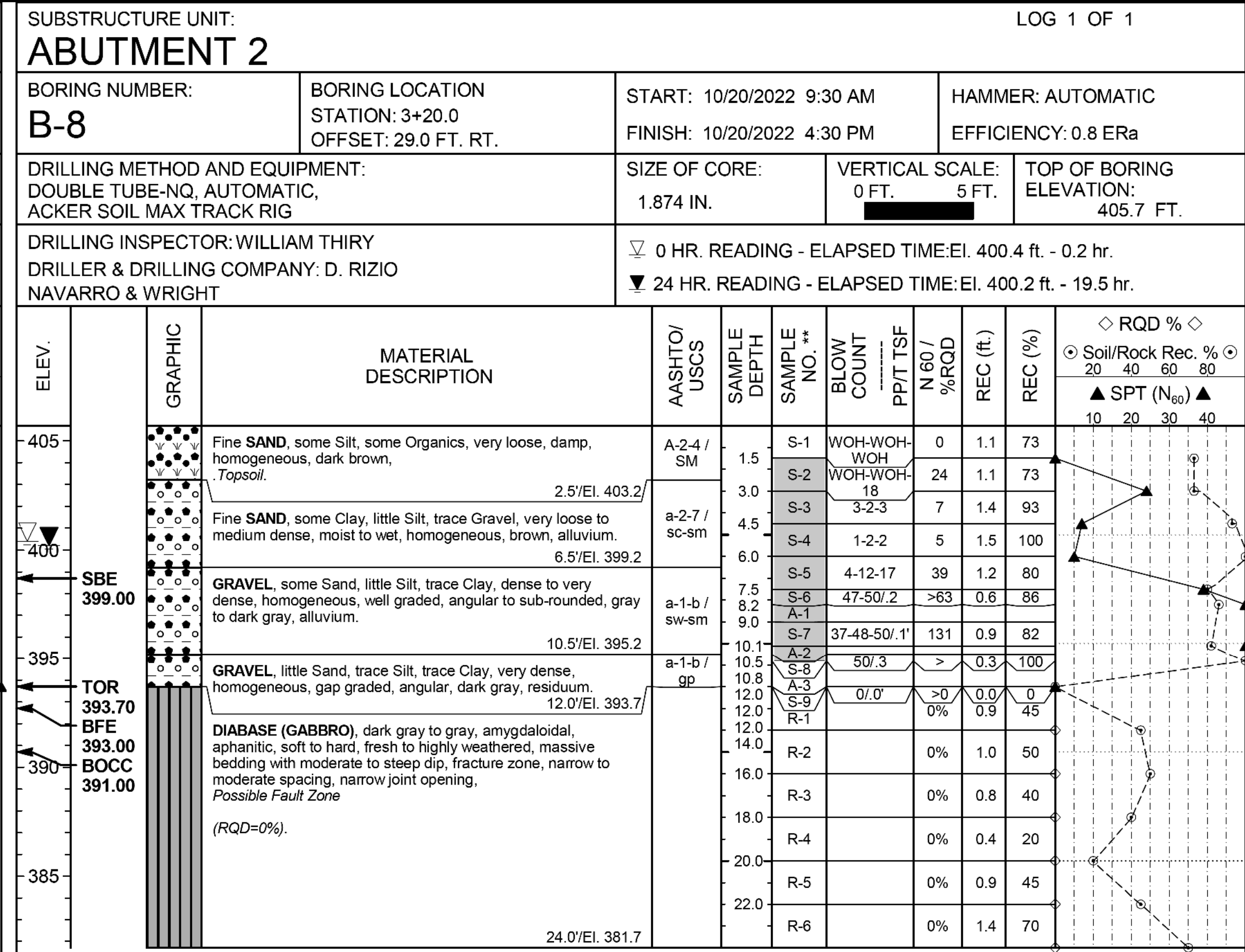
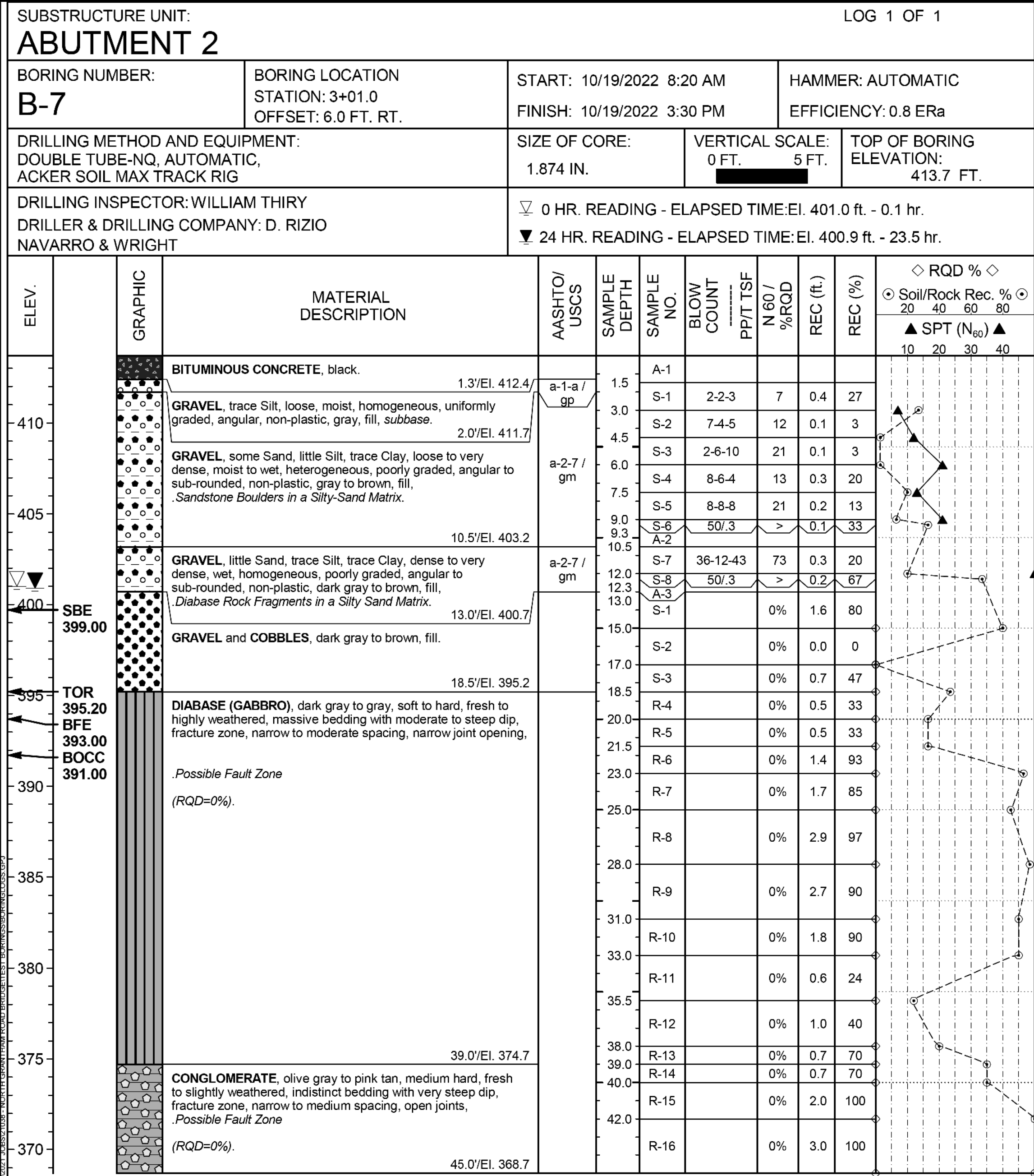
RECOMMENDED 2025.05.19

SHEET 38 OF 40
L-366

FILE NAME: \$\$\$\$designfiles\$\$\$
PLOTTER: \$\$\$\$DATE\$\$\$
PEN TABLE: \$PENL\$
PLOT DRIVER: \$PLTDRVL\$

\$USER\$

\$\$\$TIME\$\$\$



**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
BFE BOTTOM OF FOOTING ELEVATION
BOCC BOTTOM OF CLASS C CONCRETE
SBE STREAMBED ELEVATION
TOR ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

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

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

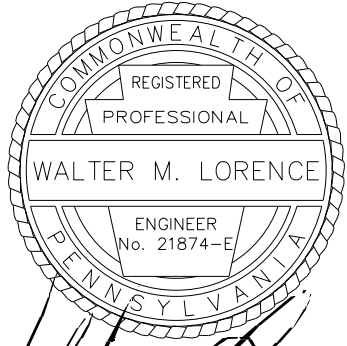
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONT. COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
TEST BORING RESULTS

RECOMMENDED 2025.05.19

SHEET 39 OF 40

L-366

PREPARED BY
GeoMechanics, Inc.
600 Munir Drive
Elizabeth, PA 17870



REG. PROF. ENGINEER

4/6/23

DATE

DES: BJM DWG: JPB CKD: WML

FILE NAME: \$designfiles\$
PLOTTER: \$plotter\$
PEN TABLE: \$pen\$
PLOT DRIVER: \$plotdrv\$

\$\$\$USER\$\$\$
\$\$\$TIME\$\$\$

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
T
NTS
BFE
BOCC
SBE
TOR
- POCKET PENETROMETER
TORVANE
NOT TO SCALE
BOTTOM OF FOOTING ELEVATION
BOTTOM OF CLASS C CONCRETE
STREAMBED ELEVATION
ESTIMATED TOP OF ROCK ELEVATION

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	φ (DEG.)	C' (TSF)	φ' (DEG)	TEST METHOD
B-3	1+99.0 37.2 ft. RT.	S-1 to 9	1.5 to 13.4	13.4	37.8	43.2	19.7	23.5	19.0	12.6	6.4	A-1-b	SM		NP	NP	NP					
B-8	3+20.0 29 ft. RT.	S-1 to 8	1.5 to 10.8	17.0	37.0	39.9	11.0	28.9	23.1	16.9	6.2	A-2-4	SM		NP	NP	NP					
STREAMBED					89.8			10.2														

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
B-1	1+80.0 35.6 ft. LT.	R-2	12.5 to 20.5	POINT LOAD TEST	7408.3 PSI / 533.4 TSF	NO		70	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-2	1+94.0 5 ft. LT	R-9	24.0 to 32.0	POINT LOAD TEST	3304.3 PSI / 237.9 TSF	NO		100	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-3	1+99.0 37.2 ft. RT.	R-1	14.0 to 23.0	POINT LOAD TEST	5148.3 PSI / 370.7 TSF	NO		95	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-4	2+41.0 15 ft. LT.	R-2	8.0 to 14.5	POINT LOAD TEST	9581.9 PSI / 689.9 TSF	NO		80	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-5	2+55.0 19 ft. RT.	R-2	8.0 to 17.0	POINT LOAD TEST	8473.4 PSI / 610.1 TSF	NO		100	25	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-6	2+93.0 26 ft. LT.	R-3	11.0 to 20.5	POINT LOAD TEST	5455.0 PSI / 392.8 TSF	NO		80	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-7	3+01.0 6 ft. RT.	R-7	23.0 to 35.5	POINT LOAD TEST	11084.3 PSI / 798.1 TSF	NO		85	0	DIABASE (GABBRO)	GETTYSBURG FORMATION
B-8	3+20.0 29 ft. RT.	R-2	14.0 to 24.0	POINT LOAD TEST	16147.1 PSI / 1,162.6 TSF	NO		50	0	DIABASE (GABBRO)	GETTYSBURG FORMATION

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?
B-3	1+99.0 37.2 ft. RT.	S-1 to 9	1.5 to 13.4	SOIL	7.1	3,600	29	20	No	No	No
B-8	3+20.0 29 ft. RT.	S-1 to 8	1.5 to 10.8	SOIL	7.5	2,600	46	25	No	No	No
YELLOW BREECHES CREEK			0.0 to 0.5	GROUNDWATER	6.8	2,250	38	50	No	No	No

Potentially Corrosive Environments per DM-4

Soil: Resistivity < 2,000 ohm-cm
2,000 ohm-cm < Resistivity < 5000 ohm-cm with sulfate concentration > 200 ppm
2,000 ohm-cm < Resistivity < 5000 ohm-cm with chloride concentration > 100 ppm
pH < 5.5
5.5 < pH <8.5 in soils with high organic content
Sulfate >1,000 ppm

Water: Chloride Content > 1000 ppm
Sulfate Content > 150 ppm
High Organic Content
pH < 5.5

Corrosive for Concrete: ph<4 or Sulfates > 1000ppm

Refer to DM-4 for landfill and cinder fills, soils subject to mine or industrial drainage, and mixtures of high resistivity and low resistivity high alkaline soils

Mark	Description	By	Chk'd	Rec'd	Date
REVISIONS					

BMS STR. ID: 66-7219-0912-3247 MPMS PROJ: 111023 BRKEY: 68386

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

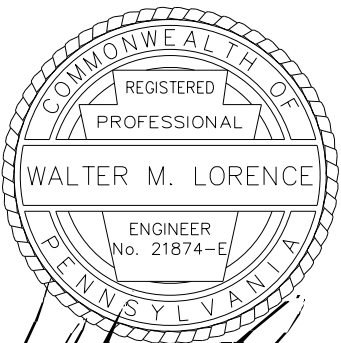
YORK AND CUMBERLAND COUNTIES
MONAGHAN AND UPPER ALLEN TOWNSHIPS
T-913 (NORTH GRANTHAM ROAD) STA. 2+47.00
OVER YELLOW BREECHES CREEK
TWO SPAN CONT. COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
TEST BORING RESULTS

RECOMMENDED 2025.05.19

SHEET40 OF 40

L-366

PREPARED BY
GeoMechanics, Inc.
600 Munir Drive
Elizabeth, PA 17870



REG. PROF. ENGINEER

4/6/23

DATE

DES: BJM DWG: JPB CKD: WML