pennsylvania
DEPARTMENT OF TRANSPORTATION

March 11, 2024

ELECTRONICALLY FILED

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

Re: PUC Docket No. A-2023-3043480

Dear Secretary Chiavetta:

In accordance with ordering paragraph number 3 of the PUC Secretarial Letter/Order at Docket No. A-2023-3043480 dated November 29, 2023, please find attached for your approval an electronic copy of the final plans for Construction of State Route 435, Section 251 and 253 in Lackawanna County, consisting of sheets 1 through 56 of 56. Also attached to the set of construction drawings are the following half-size plans:

1. Traffic Control Plan consisting of sheets 1 through 66 of 66.
2. Signing, Pavement and Marking plan 1 through 8 of 8.
3. Erosion & Sediment Pollution Control Plan consisting of sheets 1 through 37 of 37.
4. Final signed Structure Plan (L-367) consisting of sheets 1 through 18 of 18.
5. Final signed Structure Plan (L-404) consisting of sheets 1 through 20 of 20.
6. Final signed Structure Plan (L-39602) consisting of sheets 1 through 42 of 42.
7. Final signed Structure Plan (L-39603) consisting of sheets 1 through 83 of 83.
8. Cross sections consisting of sheets 1 through 47 of 47.
9. Existing Structure Plan (S-1276) consisting of sheets 1 through 1 of 1.
10. Existing Structure Plan (S-1285) consisting of sheets 1 through 11 of 11.

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

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 John Pfeiffer at 570.963.4995.

Enclosed for filing, please find the final plans submission for the above referenced project.

A copy of this Application and Exhibits has been served electronically upon the parties in the Certificate of Service to the Application.

Sincerely,

John E. Pfeiffer

John E. Pfeiffer
Grade Crossing Engineer
Engineering District 4-0
Department of Transportation

Attachments

cc: Parties of Record
Barry Basom, P.E., Chief, Right-of-Way and Utilities Section, 7th Floor, CKB
Karen Cummings, Office of Chief Counsel, 9th Floor, CKB
William Sinick, P.E., Rail Safety Engineering Section PUC, 3rd Floor, CKB
Benjamin Martz P.E. Senior Structural Engineer CDR/Maguire Engineering
Richard Poplawski, Assistant Liaison Engineer, PennDOT

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Re: Application of the Pennsylvania Department of Transportation for approval to alter the public crossing (DOT 264 067 L) where State Route 0435 crosses, above grade, the tracks of Pennsylvania Northeast Regional Railroad Authority operated thereon by Delaware & Lackawanna Railroad, located in Elmhurst Township, Lackawanna County, and the allocation of cost thereto.	**Application** **Docket No.** A-2023-3043480 **Electronically Filed**

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below, in accordance with the requirements of 52 Pa. Code § 1.54, by first class mail, postage prepaid:

Larry Malski Esq.
Pennsylvania Northeast Regional Railroad Authority
280 Cliff Street
Scranton, Pa. 18503
570-963-6676
lmalski@pnrra.org

Charlene Doyle
Pennsylvania Northeast Regional Railroad Authority
280 Cliff Street
Scranton, Pa. 18503
570-963-6676
cdoyle@pnrra.org

Lorie Ransom, Superintendent
Delaware & Lackawanna Railroad
280 Cliff Street
Scranton, Pa. 18503
570-343-4580
lransom@gvtrail.com

Benjamin Martz P.E.
CDR/Maguire Engineering
3500 Winchester Road Suite 300
Allentown, Pa. 18104
610-871-1509
ben.martz@cdrmaguire.com

John Pfeiffer
District Grade Crossing Engineer
PennDot
55 Keystone Industrial Park
Dunmore, Pa 18512
570-963-4995
jopfeiffer@pa.gov

Brian Jeffers, Manager
Lackawanna County
123 Wyoming Ave
Scranton PA 18503
570-963-6800
JeffersB@lackawannacounty.org

Merle Lyon, President
Elmhurst Township
112 Municipal Lane
Elmhurst Township, PA 18444
570-842-9999
worthit1@comcast.net

Jeremy Nelson
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2699 Stafford Ave.
Scranton, Pa. 18505
570-351-0138
Jeremy.Nelson@amwater.com

Richard Miller
Elmhurst Township Sewer Authority
112 Municipal Lane
Elmhurst Township, Pa. 18444
570-842-9999
elmhurstsewer@comcast.net

Nathan Deal
Wanrack, LLC
15700 College Blvd
Suite 200
Lenexa, KS 66219
Nathan.Deal@wanrack.com

Charlotte Krupa
PPL Electric Utilities Corp.
2 North Ninth Street
Allentown, Pa. 18101-1179
610-774-6287
cakrupa@pplweb.com

Thomas Hartman
Verizon Pennsylvania Inc.
222 South Main Street
Wilkes-Barre, Pa. 18701
570-826-4263
thomas.m.hartman@verizon.com

Ronald Pawlowski
Comcast Cable Communications
1 Comcast Way
Duryea, Pa. 18642-1114
570-471-7814
Ronald_Pawlowski@cable.comcast.com

Dated this 8th Day of March, 2024

John E. Pfeiffer
Grade Crossing Engineer
PennDOT District 4-0
55 Keystone Industrial Park
Dunmore, Pa. 18512

PLAN PREPARATION

DESIGNER: CDR MAGUIRE ENGINEERING
3500 WINCHESTER RD. SUITE 300
ALLENTOWN, PA 18104

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
4-0	LACKAWANNA	ELMHURST		0435	251 253	56

ECMS NO 8191

SR 0435 PREVIOUSLY KNOWN AS LR 168

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS FOR CONSTRUCTION OF STATE ROUTE 0435 SECTION 251/253 IN LACKAWANNA COUNTY

FROM STA 526+72.00 TO STA 550+55.00 LENGTH 2183.00 FT 0.413 MI
FROM SEG 0210 OFFSET 2736 TO SEG 0230 OFFSET 0240

PUC APPLICATION DOCKET NUMBER: A-2023-3043480

ALSO INCLUDED:

TRAFFIC CONTROL PLAN	66 SHEETS
SIGNING AND PAVEMENT MARKING PLAN	8 SHEETS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	37 SHEETS
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	16 SHEETS
STRUCTURE PLAN	
L-367	18 SHEETS
L-404	20 SHEETS
S-39602	42 SHEETS
S-39603	83 SHEETS
CROSS SECTIONS	47 SHEETS
EXISTING STRUCTURE PLANS	
S-1276	1 SHEET
S-1285	11 SHEETS

SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

DESIGN DESIGNATION

SR 0435-251		SR 0435-253		TRAFFIC DATA	
HIGHWAY CLASSIFICATION	- MAJOR COLLECTOR, URBAN	HIGHWAY CLASSIFICATION	- MAJOR COLLECTOR, URBAN	CURRENT YEAR A.D.T.	- 6,010 (2024)
DESIGN SPEED	- 45 MPH (POSTED)	DESIGN SPEED	- 45 MPH (POSTED)	DESIGN YEAR A.D.T.	- 6,010 (2044)
PAVEMENT WIDTH	- 22' (2-11' LANES)	PAVEMENT WIDTH	- 22' (2-11' LANES)	DHV	- 541
SHOULDER WIDTH	- 10'	SHOULDER WIDTH	- 8'	D	- 50%
MEDIAN WIDTH	- NA	MEDIAN WIDTH	- NA	T	- 7%

PREPARED BY:
CDR MAGUIRE ENGINEERING
3500 WINCHESTER RD.
SUITE 300
ALLENTOWN, PA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

Digitally signed by Benjamin Martz
Date: 2024.02.23 07:57:18 -05'00'

RECOMMENDED DATE: 02/28/2024
Richard N. Roman, P.E.
Digitally signed by Richard N. Roman, P.E.
Date: 2024.02.28 10:32:10 -05'00'
DISTRICT EXECUTIVE

RECOMMENDED DATE:
DEPUTY SECRETARY

APPROVED DATE:
SECRETARY OF TRANSPORTATION
(ON BEHALF OF THE GOVERNOR AS WELL AS THE SECRETARY)

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Roadway Title.dgn
Mode:Roadway Title Sheet 2/22/2024 2:29:10 PM By:laura.hower

SHEET INDEX BLOCK	
DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2
LOCATION MAP & GENERAL NOTES	3-4
GEOMETRIC SKETCH	5
LIGHTING DETAILS	6
TYPICAL SECTIONS	7-10
BENCHING DETAILS	11
GUIDE RAIL DETAILS	12-15
INTERSECTION GRADING	16
SUMMARY SHEET	17-19
TABULATION SHEETS	20-45
PLAN SHEETS	46-49
PROFILE SHEETS	50-56

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	2 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF SEGMENT EQUALITIES

SEGMENT 0220 OFFSET 0000 = STATION 528+54.00
SEGMENT 0230 OFFSET 0000 = STATION 548+15.00

LIST OF PROPERTY OWNERS

1. PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY
2. CHARLES SCHWARTZ & KATHLEEN SCHWARTZ, HIS WIFE
3. DANIEL J. CHESIK, SR. & DANIEL J. CHESIK, JR. AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP
4. ROBERT PAGOTTO
5. DAVID S. McDERMOTT
6. FREDERICK N. SCHANK
7. DONNA KAY OHARA
8. THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
9. IRENE COCKING
10. RANDOLPH S. ARMITAGE & EVA ANN CIEMIECKI, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP,AND NOT AS TENANTS IN COMMON
11. JOHN G. MEYERS, JR. & BARBARA A. MEYERS, H&W
12. STEPHEN M. WAGNER
13. GERALDINE WILLIAMS, WIDOW, FOR THE TERM OF HER NATURAL LIFE ONLY & TIMOTHY SCOTT RAFFERTY, SINGLE, HER SON, AS TO THE REMAINDER INTEREST
14. KERRI A. LOTTERMAN
15. THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

LACKAWANNA COUNTY
ELMHURST TOWNSHIP

STA 530+00.00 SR 0435
STA 39+86.44 GARDNER ROAD

STOP WORK
STA 1+76.50
PRIVATE ACCESS DRIVE

START WORK
STA 0+16.00
PRIVATE ACCESS DRIVE

STOP WORK
STA 29+21.52
FRONT STREET

STOP WORK
STA 39+67.18
GARDNER ROAD

START WORK
STA 39+14.00
GARDNER ROAD

PRIVATE ACCESS DRIVE

FRONT STREET SHIFT CONSTR & SURVEY ℄

T-711 SIMERSON ROAD

FRONT ST CONSTR & SURVEY ℄

RAILROAD

T-733

G C SMITH STREET CONSTR & SURVEY ℄

STOP WORK
STA 501+95.50
G C SMITH STREET

T-718 G C SMITH STREET

ROARING BROOK

GARDNER RD CONSTR & SURVEY ℄

T-330 GARDNER ROAD

FRONT STREET

SR 0435 TEMPORARY ROAD CONSTR & SURVEY ℄

START WORK
STA 500+12.00
G C SMITH STREET

SR 0435

SR 0435 CONSTR & SURVEY ℄

START WORK
STA 22+32.79
FRONT STREET

DELAWARE & LACKAWANNA

ROARING BROOK

STA 532+00.00 SR 0435
STA 22+00.00 FRONT ST

2.7 MILES TO MOSCOW BOROUGH

3.6 MILES TO SR 84

STOP WORK
STA 549+55.00
SEG 0230 OFFSET 0140
SR 0435 SEC 251/253

LIMIT OF WORK
STA 550+55.00
SEG 0230 OFFSET 0240
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

LIMIT OF WORK
STA 526+72.00
SEG 0210 OFFSET 2736
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

START WORK
STA 527+72.00
SEG 0210 OFFSET 2836
SR 0435 SEC 251/253

LEGEND

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

INDEX MAP

SCALE
0 100 200 FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Index Map.dgn
Model:Roadway - Index 2/28/2024 11:18:17 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	3 OF 56
ELMHURST TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

LIST OF PUBLIC UTILITIES

COMCAST CABLE COMMUNICATIONS
1 COMCAST WAY
DURYEA, PA 18642-1114
ATTN: RONALD PAWLOWSKI
570.335.1074
RONALD_PAWLOWSKI@CABLE.COMCAST.COM
CTV

PPL ELECTRIC UTILITIES CORP.
2 NORTH NINTH STREET
ALLENTOWN, PA 18101-1179
ATTN: CHARLOTTE KRUPA
610.774.6287
CAKRUPA@PPLWEB.COM
E

ELMHURST TOWNSHIP SEWER AUTHORITY
112 MUNICIPAL LANE
ELMHURST TWP, PA 18444
ATTN: RICH MILLER
570.650.2603
ELMHURSTTOWNSHIP@COMCAST.NET
S

PENNSYLVANIA AMERICAN WATER
2699 STAFFORD AVENUE
SCRANTON, PA 18505
ATTN: JEREMY A. NELSON, PE
570.351.0138
JEREMY.NELSON@AMWATER.COM
W

VERIZON PENNSYLVANIA, INC.
MONAHAN AVENUE
DUNMORE, PA 18512
ATTN: TOM HARTMAN
570.348.5912
THOMAS.M.HARTMAN@VERIZON.COM
T

WANRACK, LLC
15700 COLLEGE BLVD SUITE 200
LENEXA, KS 66219
ATTN: NATHAN DEAL
816.605.0629
NATHAN.DEAL@WANRACK.COM
FOU

LIST OF EQUALITIES

NONE

TABULATION OF OVERALL LENGTH

STA 526+72.00 TO STA 550+55.00 = 2383.00 FT = 0.451 MI

TABULATION OF CONSTRUCTION LENGTH

STA 527+72.00 TO STA 549+55.00 = 2183.00 FT = 0.413 MI

LIST OF PA ONE CALLS

THE PA ONE CALL NOTIFICATIONS PERFORMED DURING PROJECT DEVELOPMENT ARE AS FOLLOWS:
PA ONE CALL PHONE NUMBER: 1-800-222-6470

- PRELIMINARY DESIGN SERIAL NO. 20200291305 ON 01/29/20 FOR ELMHURST TOWNSHIP
- FINAL DESIGN SERIAL NO. 20233030647 ON 10/30/2023 FOR ELMHURST TOWNSHIP

SUMMARY OF TRAVERSE CONTROL POINT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	POINT NO	DESCRIPTION	COORDINATES		STATION	OFFSET
			NORTH	EAST		
SR 0435 CONSTR & SURVEY	1	MAG HUB	447569.1962	2573753.4876	536+97.66	181.98' LT
	2	REBAR w/CAP	448282.9894	2573879.8177	543+90.45	23.72' LT
	3	MAG NAIL	448528.0054	2573655.3606	546+85.96	207.26' LT
	4	MAG NAIL	447770.9287	2573700.0603	538+87.01	216.88' LT
	102	MAG HUB	447378.1427	2573913.4286	534+88.96	54.54' LT
	103	MAG NAIL	447133.0259	2573994.2963	532+34.31	16.00' LT
	107	MAG NAIL	448558.9470	2573846.0779	546+71.37	14.53' LT
	116	MAG NAIL	447518.4824	2573958.9918	536+19.79	13.70' RT
	121	MAG NAIL	446747.2387	2574202.1192	527+94.24	14.23' RT

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

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 0435, FORMERLY LEGISLATIVE ROUTE NO. 168, FROM STATION 528+50.00 TO STATION 529+11.00 IS 30.00 FEET ON THE RIGHT AND 25 FEET ON THE LEFT, FROM STATION 529+11.00 TO STATION 529+50.00 IS 30.00 FEET ON THE RIGHT AND VARIABLE ON THE LEFT, FROM STATION 529+50.00 TO STATION 529+69.00 IS 60.00 FEET, FROM STATION 530+44.22 TO STATION 532+25.00 IS 60.00 FEET, FROM STATION 533+46.99 TO STATION 542+20.00 IS 60.00 FEET, AND FROM STATION 545+40.00 TO STATION 546+33.00 IS 60.00 FEET BASED ON THE DRAWINGS FOR CONSTRUCTION AND CONDEMNATION OF RIGHT-OF-WAY FOR ROUTE NOS. 335 AND 168, SECTION 11, SIGNED IN JUNE 1942 BY THE GOVERNOR AND LAST REVISED JANUARY 10, 1944.

THE LEGAL RIGHT-OF-WAY ON SR 0435, FORMERLY LEGISLATIVE ROUTE NO. 168, FROM STATION 529+69.00 TO STATION 530+44.22 IS VARIABLE, FROM STATION 532+25.00 TO STATION 533+46.99 IS VARIABLE, AND FROM STATION 542+20.00 TO STATION 545+40.00 IS VARIABLE, BASED ON DRAWINGS AUTHORIZING ACQUISITION OF RIGHT-OF-WAY FOR STATE ROUTE 0435 SECTION 251/253 R/W, SIGNED BY THE SECRETARY OF TRANSPORTATION ON OCTOBER 3, 2023 AND RECORDED IN THE LACKAWANNA COUNTY RECORDER OF DEEDS OFFICE IN MAP BOOK 6M, PAGE 5604 ON OCTOBER 19, 2023.

THE LEGAL RIGHT-OF-WAY ON T-718, G C SMITH STREET, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-733, FRONT STREET, FROM STATION 22+10.12 TO STATION 26+76.52 IS VARIABLE BASED ON DRAWINGS AUTHORIZING ACQUISITION OF RIGHT-OF-WAY FOR STATE ROUTE 0435 SECTION 251/253 R/W, SIGNED BY THE SECRETARY OF TRANSPORTATION ON OCTOBER 3, 2023 AND RECORDED IN THE LACKAWANNA COUNTY RECORDER OF DEEDS OFFICE IN MAP BOOK 6M, PAGE 5604 ON OCTOBER 19, 2023.

THE LEGAL RIGHT-OF-WAY ON T-733, FRONT STREET, FROM STATION 26+76.52 TO STATION 30+14.24 IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-330, GARDNER ROAD, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON SR 0590, FORMERLY LEGISLATIVE ROUTE NO. 335, FROM STATION 13+00.00 TO STATION 13+83.56 IS 30.00 FEET ON THE RIGHT AND 40.00 FEET ON THE LEFT, FROM STATION 13+83.56 TO STATION 16+83.00 IS 25.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 16+83.00 TO STATION 19+98.23 IS 20.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 19+98.23 TO STATION 25+03.98 IS 14.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 25+03.98 TO STATION 30+05.98 IS 15.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT BASED ON THE DRAWINGS FOR CONSTRUCTION AND CONDEMNATION OF RIGHT-OF-WAY FOR ROUTE NOS. 335 AND 168, SECTION 11, SIGNED IN JUNE 1942 BY THE GOVERNOR AND LAST REVISED JANUARY 10, 1944, AND DRAWINGS FOR CONSTRUCTION OF ROUTE NO. 335, SIGNED ON MAY 19, 1924 BY THE GOVERNOR.

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

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

THREE TO TEN WORKING DAYS PRIOR TO EXCAVATION BASED ON THE COMPLEXITY OF THE PROJECT, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776, SERIAL NO. FOR ELMHURST TOWNSHIP, LACKAWANNA COUNTY. ADDITIONAL INFORMATION IS AVAILABLE AT HTTPS://WWW.PAICALL.ORG/PA811/PUBLIC/.

THE CONTRACTOR IS REQUIRED TO NOTIFY THE DEPARTMENT AND SUBMIT AN ALLEGED VIOLATION REPORT (AVR) TO THE PA PUBLIC UTILITY COMMISSION THROUGH THE PA ONE CALL SYSTEM, WWW.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)

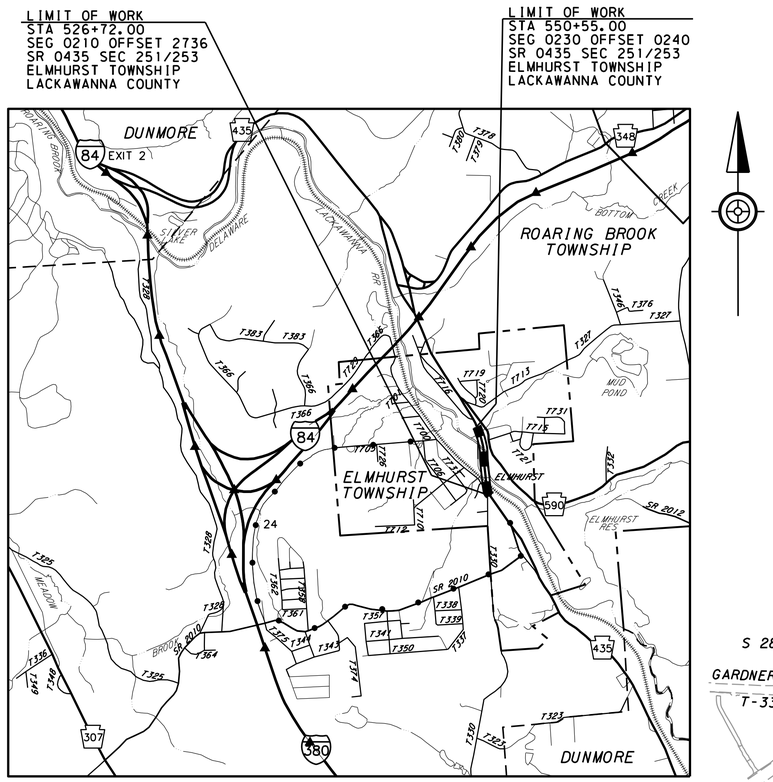
SR 0435 PREVIOUSLY KNOWN AS LEGISLATIVE ROUTE 168.

VERTICAL CONTROL FOR THE PROJECT IS BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (GEOID 12A).

HORIZONTAL CONTROL IS TIED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NORTH ZONE), NORTH AMERICAN DATUM, NAD83 (2011).

THE AVERAGE COMBINED SCALE FACTOR IS 0.99988982.

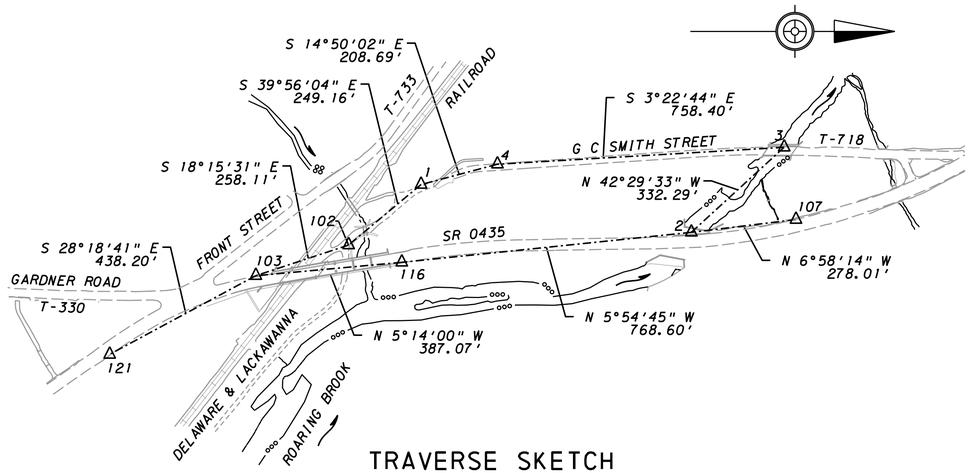
ALL CURVE DATA IS BASED ON THE ARC DEFINITION UNLESS OTHERWISE NOTED.



LOCATION MAP

SCALE

0 0.5 1 MILE



TRAVERSE SKETCH

SCALE

0 200 400 FEET

LEGEND

- PROJECT LOCATION
- MAJOR STATE RD
- STATE RD
- TOWNSHIP RD
- BOROUGH LINE
- TOWNSHIP LINE
- RAILROAD
- FRONT STREET CAR DETOUR (6.23 MILES)
- SR 435 TRUCK DETOUR (4.05 MILES)

EARTHWORK SUMMARY ENTIRE PROJECT

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

CUBIC YARDS OF EXCAVATION					CUBIC YARDS OF COMPLETED EMBANKMENT	CUBIC YARDS OF BORROW EXCAVATION	CUBIC YARDS OF SELECT BORROW	CUBIC YARDS OF WASTE
CLASS 1	CLASS 1B	CLASS 2	CLASS 3*	CLASS 4				
9858	-	-	19,032	-	1022	342	5039	22,487

* 19,032 CY PART OF LUMP SUM STRUCTURE ITEM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\MKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Location Map.dgn
Mode:Location Plan 2/28/2024 11:18:20 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	4 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0435 CONSTR & SURVEY @	527+50.00	POT	446702.9795	2574216.2854	
	528+30.08	PC	446768.1065	2574169.6884	N35°34'58"W
	530+50.69	PI	446947.5225	2574041.3204	N35°34'58"W
	532+63.69	PT	447165.0640	2574004.6580	N9°33'58"W
	536+18.42	PC	447514.8612	2573945.7066	N9°33'58"W
	537+92.49	PI	447686.5075	2573916.7790	N9°33'58"W
	539+65.89	PT	447860.5538	2573914.1070	N0°52'46"W
	542+64.86	PC	448159.4951	2573909.5178	N0°52'46"W
	547+47.95	PI	448642.5263	2573902.1024	N0°52'46"W
	552+11.20	PT	449063.9520	2573665.9362	N29°15'58"W
	553+00.00	POT	449141.4210	2573622.5227	N29°15'58"W

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
FRONT STREET CONSTR & SURVEY @	22+10.12	POB	447102.6578	2574017.3286	
	22+40.60	PC	447095.6004	2573987.6763	S76°36'44"W
	22+92.65	PI	447083.5485	2573937.0391	S76°36'44"W
	23+33.17	PT	447124.5335	2573904.9518	N38°03'27"W
	24+32.73	PC	447202.9271	2573843.5772	N38°03'27"W
	25+32.71	PI	447281.6499	2573781.9448	N38°03'27"W
	26+32.63	PT	447364.1512	2573725.4701	N34°23'00"W
	26+75.33	PC	447399.3967	2573701.3519	N34°23'00"W
	27+36.99	PI	447450.2790	2573666.5338	N34°23'00"W
	27+97.45	PT	447486.5873	2573616.7038	N53°55'17"W
	30+14.24	POT	447614.2591	2573441.4852	N53°55'17"W

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
PRIVATE ACCESS DRIVE CONSTR & SURVEY @	0+00.00	POB	447093.8858	2573959.9575	
	0+15.94	PC	447078.0452	2573958.2161	S 6°16'24"W
	0+32.39	PI	447061.6885	2573956.4181	S 6°16'24"W
	0+47.16	PT	447048.8015	2573966.6503	S38°26'58"E
	0+68.24	PC	447032.2920	2573979.7587	S38°26'58"E
	1+14.49	PRC	446999.9251	2573962.4295	S38°26'58"E
	1+43.25	PI	447002.3000	2573934.0192	N85°13'18"W
	1+67.97	PT	446981.7742	2573914.2334	S43°56'54"W
	1+76.50	POE	446975.6349	2573908.3154	S43°56'54"W

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

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
GARDNER ROAD CONSTR & SURVEY @	32+86.10	PC	446232.7670	2574035.3911	
	34+33.46	PI	446380.1157	2574033.1868	N0°51'25"W
	35+80.73	PRC	446527.3018	2574040.4518	N2°49'33"E
	36+97.09	PI	446643.5198	2574046.1882	N2°49'33"W
	38+13.41	PCC	446759.8750	2574047.2015	N0°29'56"E
	38+69.68	PI	446816.1353	2574047.6914	N0°29'56"E
	39+25.93	PRC	446872.3793	2574046.2480	N1°28'12"W
	39+49.88	PI	446896.3263	2574045.6334	N1°28'12"W
	39+68.40	PT	446906.5968	2574067.2750	N64°36'44"E
	39+86.47	POE	446914.3436	2574083.5989	N64°36'44"E

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
FRONT STREET SHIFT CONSTR & SURVEY @	126+32.63	PC	447364.1512	2573725.4701	
	126+74.04	PI	447398.3231	2573702.0784	N34°23'34"W
	127+14.49	PRC	447421.6650	2573667.8725	N55°41'26"W
	127+73.23	PI	447454.7737	2573619.3543	N55°41'26"W
	128+31.23	PRC	447499.8209	2573581.6587	N39°55'21"W
	128+72.33	PI	447531.3419	2573555.2819	N39°55'21"W
	129+13.02	PT	447555.5462	2573522.0636	N53°55'17"W

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0435 TEMPORARY ROAD CONSTR & SURVEY @	6+94.03	POB	447441.2634	2573641.4192	
	8+72.79	PC	447582.1007	2573751.5111	N38°00'53"E
	10+49.33	PI	447721.1880	2573860.2351	N38°00'53"E
	12+12.20	PT	447897.7067	2573857.5252	N0°52'46"W
	18+26.73	PC	448512.1634	2573848.0923	N0°52'46"W
	19+48.07	PI	448633.4822	2573846.2298	N0°52'46"W
	20+67.40	PT	448748.2867	2573806.9658	N18°52'52"W

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
GC SMITH STREET CONSTR & SURVEY @	500+00.00	POB	447603.9846	2573767.6781	
	500+14.68	PC	447612.3849	2573755.6348	N55°06'13"W
	500+62.58	PI	447639.7840	2573716.3539	N55°06'13"W
	501+04.01	PT	447687.5643	2573713.0784	N 3°55'18"W
	501+96.34	POE	447779.6758	2573706.7638	N 3°55'18"W

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

GENERAL NOTES (CONTINUED)

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

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

CHANNEL EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF THE COURSE OF THE CHANNEL. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER.

THERE ARE NO NAVIGABLE STREAMS WITHIN THE PROJECT LIMITS.

BUILDINGS 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	JUN 1, 2010	BC-701M	NOV 23, 2022
RC-11M	JUN 1, 2010	BC-721M	FEB 19, 2021
RC-12M	NOV 1, 2022	BC-732M	NOV 23, 2022
RC-13M	JUN 1, 2010	BC-734M	FEB 19, 2021
RC-23M	FEB 8, 2019	BC-735M	SEP 30, 2016
RC-30M	FEB 27, 2023	BC-736M	NOV 23, 2022
RC-31M	NOV 30, 2021	BC-751M	JAN 31, 2019
RC-45M	FEB 19, 2021	BC-752M	NOV 23, 2022
RC-46M	FEB 19, 2021	BC-753M	JAN 31, 2019
RC-50M	FEB 27, 2023	BC-754M	NOV 23, 2022
RC-51M	SEPT 1, 2023	BC-755M	JAN 31, 2019
RC-58M	SEPT 1, 2023	BC-756M	NOV 23, 2022
RC-70M	FEB 8, 2019	BC-757M	SEP 30, 2016
RC-72M	FEB 8, 2019	BC-766M	NOV 23, 2022
RC-73M	FEB 8, 2019	BC-775M	SEP 30, 2016
RC-74M	FEB 8, 2019	BC-788M	NOV 23, 2022
RC-75M	JUN 1, 2010	BC-798M	FEB 14, 2023
RC-77M	DEC 17, 2019		
RC-84M	JUN 1, 2010	87-402PE	APR 13, 2017

TC-8600	JUN 13, 2013
TC-8604	AUG 17, 2021
TC-8702B	JUN 13, 2013
TC-8716	JUN 13, 2013
TC-8717	JUN 13, 2013

RECORD OF EXISTING TYPES OF ROADWAY PAVEMENT

LIMIT OF WORK ADJACENT TO SEGMENT 0210 OFFSET 2736 TO LIMIT OF WORK ADJACENT TO SEGMENT 0230 OFFSET 0240	24'	SPAV, ASP WRG, 64-22, 9.5MM, H, 1.5" DEPTH
	24'	SPAV, ASP WRGSCRC, 64-22, 9.5MM, 0.5" DEPTH
	24'	MILLING (AVERAGE DEPTH), -2" DEPTH
	24'	SPAV, HMA WRG, 64-22, 9.5MM, E, 1.5" DEPTH
	24'	MILLING (AVERAGE DEPTH), -1.5" DEPTH
	24'	LEVEL BITUM WEARING CRSE ID-2, 1" DEPTH
	24'	BITUM WEARING CRSE ID-2, 1" DEPTH
	24'	BITUM WEARING CRSE ID-2, 1" DEPTH
	24'	BITUM WEARING CRSE ID-2, 1.25" DEPTH
	24'	UNKNOWN BITUM WEARING COURSE, 3" DEPTH
	24'	BITUM WEARING CRSE ID-2, 1" DEPTH
	24'	UNKNOWN PCCP, 9" DEPTH

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

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Location Map.dgn
Model: Coordinate Sheet
Date: 2/28/2024 11:18:21 PM
By: laura.hower

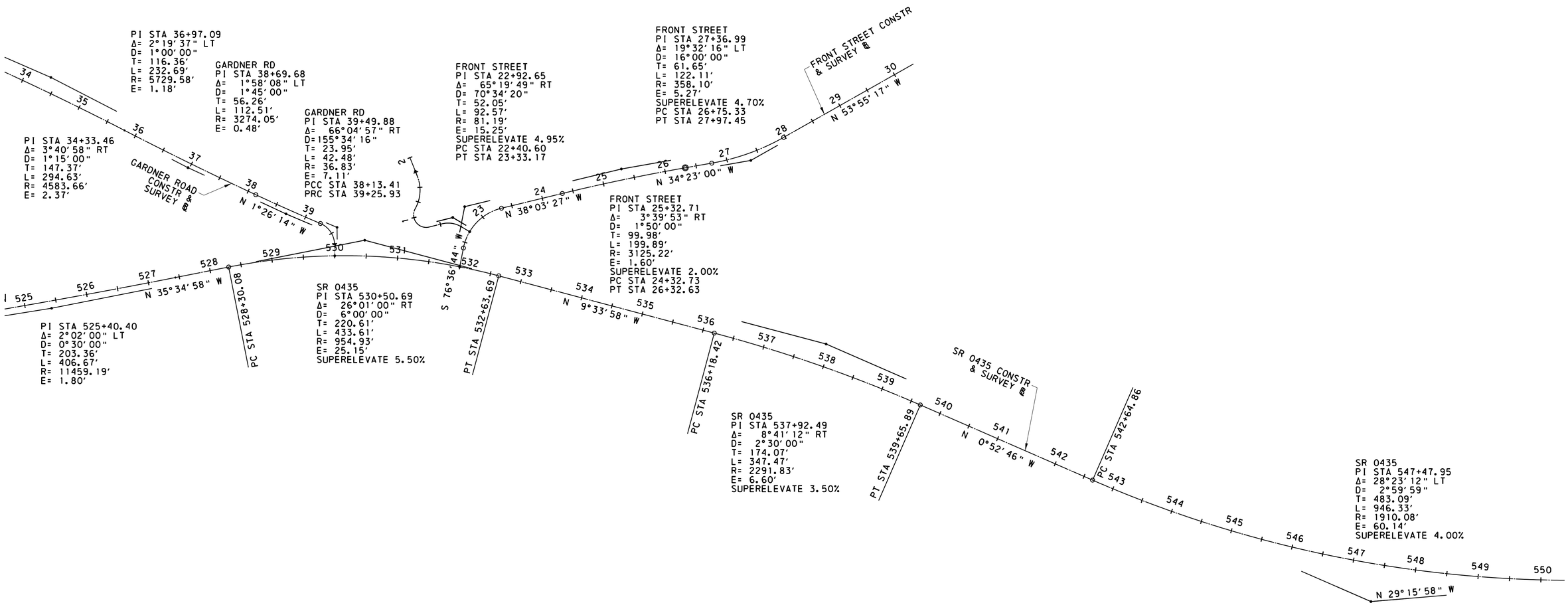
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	5 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

PRIVATE ACCESS DRIVE
PI STA 1+43.25
Δ= 50°49'48" LT
D= 95°29'35"
T= 28.51'
L= 53.23'
R= 60.00'
E= 6.43'
PRC 1+14.74
PT 1+67.97

PRIVATE ACCESS DRIVE
PI STA 1+14.49
Δ= 133°13'40" LT
D=286°28'44"
T= 46.25'
L= 46.51'
R= 20.00'
E= 30.39'
PC 0+68.24
PRC 1+14.74



GEOMETRIC SKETCH

SCALE

0 25 50FEET

NOTES:

1. SEE SHEET 4 FOR SUMMARY OF PROJECT COORDINATES.

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SURVEY BOOK NO 30431

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Highway\SR435 251-253 Construction RGE0.dgn
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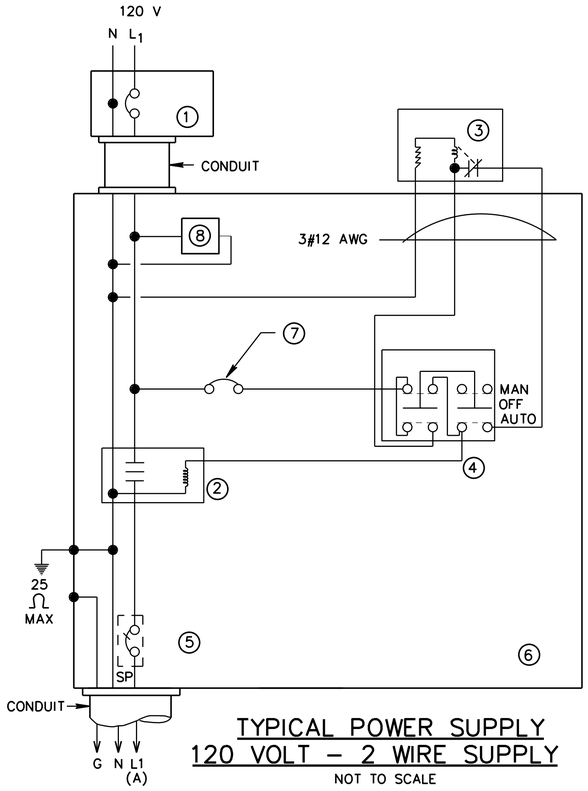
8/28/2024 11:18:25 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	6 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL POWER SUPPLY
120 VOLT – 2 WIRE SUPPLY
NOT TO SCALE

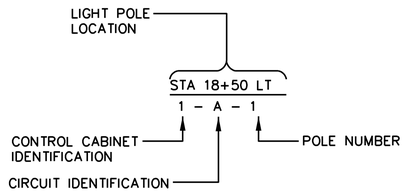
ITEMS

G –GROUND
N –NEUTRAL
L_1–LINE 1
MAN –MANUAL
AUTO –AUTOMATIC

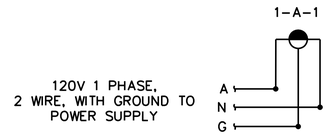
(1)–MAIN DISCONNECT, 30 AMP, SINGLE POLE
(2)–CONTROL CONTACTOR, 30 AMP, SINGLE POLE
(3)–PHOTOELECTRIC CELL (PLUG–IN TYPE)
(4)–SELECTOR SWITCH
(5)–DISTRIBUTION BREAKER, 20 AMP
(6)–CONTROL CABINET
(7)–15 A, SP BREAKER
(8)–LIGHTNING ARRESTER
SP–SINGLE POLE
DP–DOUBLE POLE

NOTES:

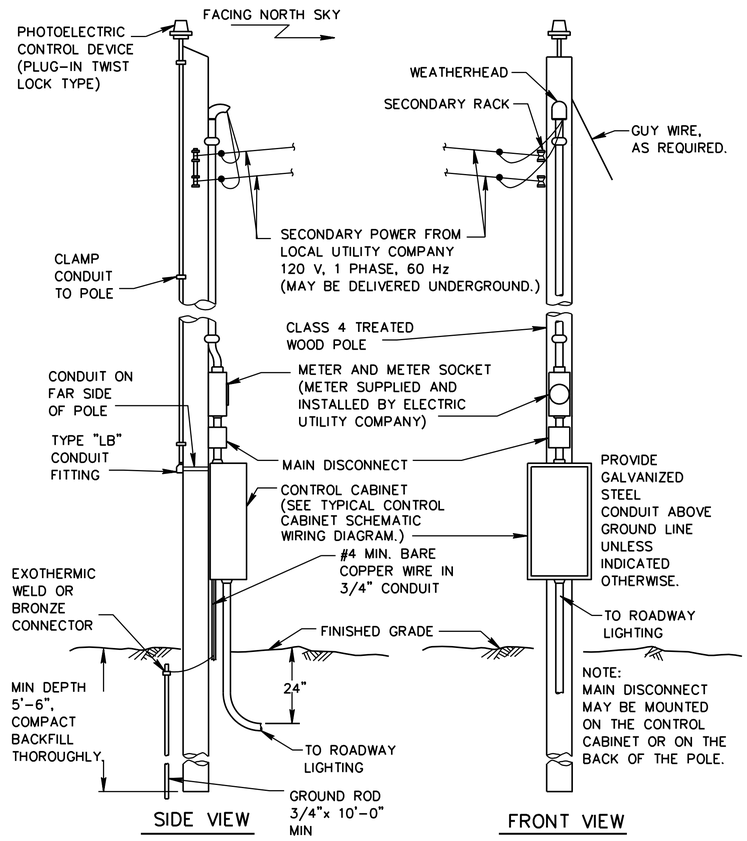
1. PROVIDE A MAIN DISCONNECT IN A SEPARATE NEMA 3R OR 4 ENCLOSURE AHEAD OF THE CONTROL CABINET LABELED AS "SUITABLE FOR USE AS SERVICE EQUIPMENT." PROVIDE WITH A LOCKABLE COVER AND NO EXTERNAL HANDLE. THE DISCONNECT MAY BE PROVIDED INTEGRAL TO THE CONTROL CABINET IF THE CABINET IS DEADFRONT AND LABELED AS "SUITABLE FOR USE AS SERVICE EQUIPMENT."



POLE/LUMINAIRE IDENTIFICATION



CIRCUIT DIAGRAM
NOT TO SCALE



POLE EQUIPMENT DETAIL
NOT TO SCALE

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PE081839

LIGHTING DETAILS

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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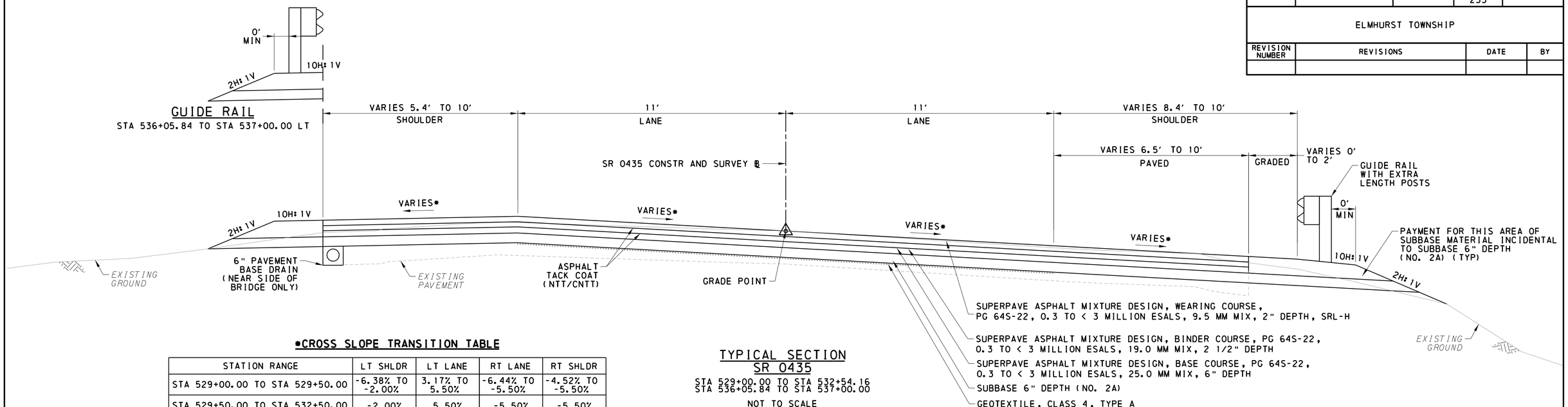
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



***CROSS SLOPE TRANSITION TABLE**

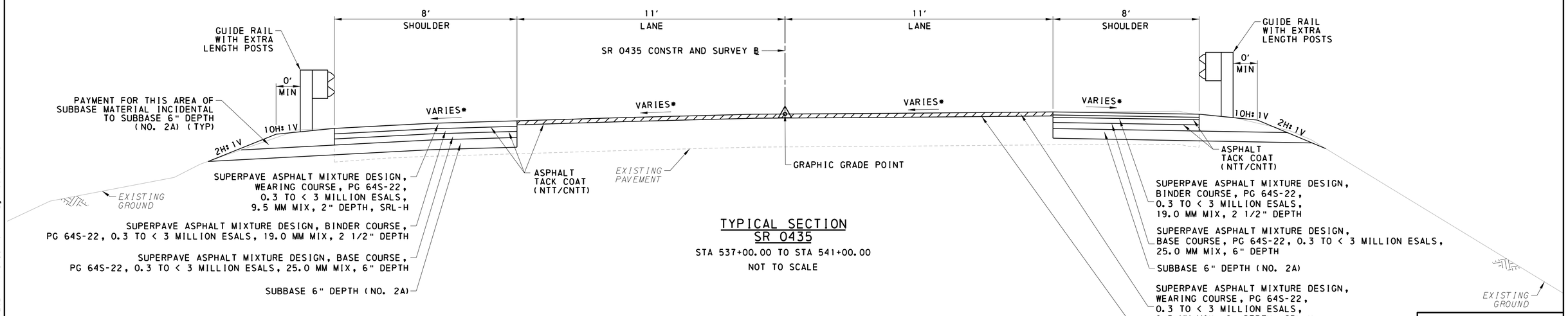
STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 529+00.00 TO STA 529+50.00	-6.38% TO -2.00%	3.17% TO 5.50%	-6.44% TO -5.50%	-4.52% TO -5.50%
STA 529+50.00 TO STA 532+50.00	-2.00%	5.50%	-5.50%	-5.50%
STA 532+50.00 TO STA 532+93.00	-2.00%	5.50% TO 3.50%	-5.50% TO -3.50%	-5.50% TO -3.50%
STA 532+93.00 TO STA 536+50.00	-2.00%	3.50%	-3.50%	-3.50%
STA 536+50.00 TO STA 537+00.00	-2.00% TO -4.51%	3.50% TO 1.33%	-3.50% TO -2.31%	-3.50% TO -4.72%

TYPICAL SECTION
SR 0435

STA 529+00.00 TO STA 532+54.16
STA 536+05.84 TO STA 537+00.00

NOT TO SCALE

STRUCTURE STA 532+54.16 TO STA 536+05.84
(APPROACH SLAB TO APPROACH SLAB)



TYPICAL SECTION
SR 0435

STA 537+00.00 TO STA 541+00.00

NOT TO SCALE

LEGEND

MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR

***CROSS SLOPE TRANSITION TABLE**

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 537+00.00 TO 541+00.00	-4.51 TO -3.65%	1.33% TO -1.57%	-2.31% TO -1.00%	-4.72% TO -3.38%

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ENGINEER
PE081839

TYPICAL SECTIONS

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Model:TYP SECTION 1 2/28/2024 1:18:30 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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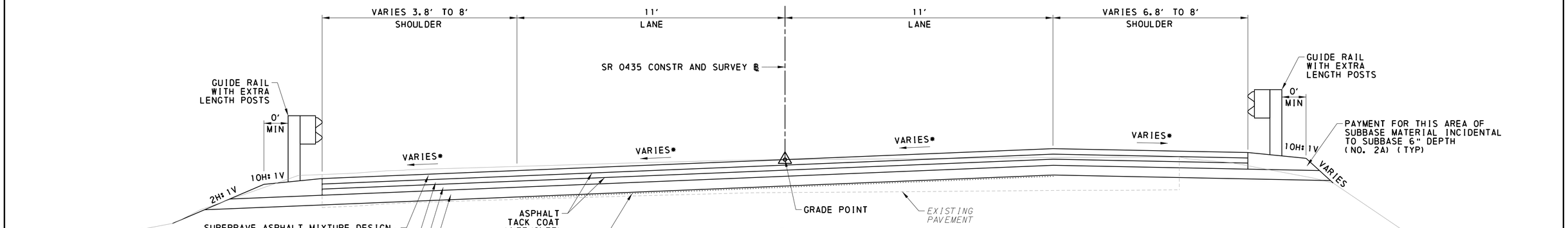
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION
SR 0435

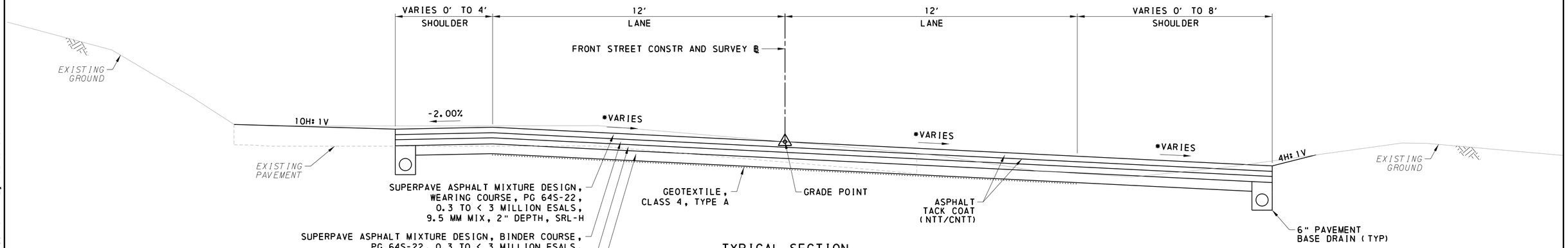
STA 541+00.00 TO STA 543+07.75
STA 544+59.82 TO STA 546+00.00

NOT TO SCALE

STRUCTURE STA 543+07.75 TO STA 544+59.82
(APPROACH SLAB TO APPROACH SLAB)

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 541+00.00 TO STA 542+85.00	-3.65% TO -4.00%	1.57% TO -4.00%	-1.00% TO 4.00%	-3.38% TO -2.00%
STA 542+85.00 TO STA 545+40.00	-4.00%	-4.00%	4.00%	-2.00%
STA 545+40.00 TO STA 546+00.00	-4.00% TO -4.64%	-4.00% TO -4.64%	4.00% TO 1.29%	-2.00% TO -0.51%



TYPICAL SECTION
FRONT STREET

STA 22+32.79 TO STA 23+50.00

NOT TO SCALE

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 22+32.79 TO STA 23+00.00	-2.00%	4.95%	-4.95%	-4.95%
STA 23+00.00 TO STA 23+50.00	-2.00%	4.95% TO 2.00%	-4.95% TO -2.00%	-4.95% TO -2.00%
STA 23+50.00 TO STA 24+20.00	N/A	2.00% TO -2.00%	-2.00%	N/A

COMMONWEALTH OF PENNSYLVANIA
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ENGINEER
PE081839

TYPICAL SECTIONS

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Mode: TYP SECTION 2 2/28/2024 11:18:30 PM By: laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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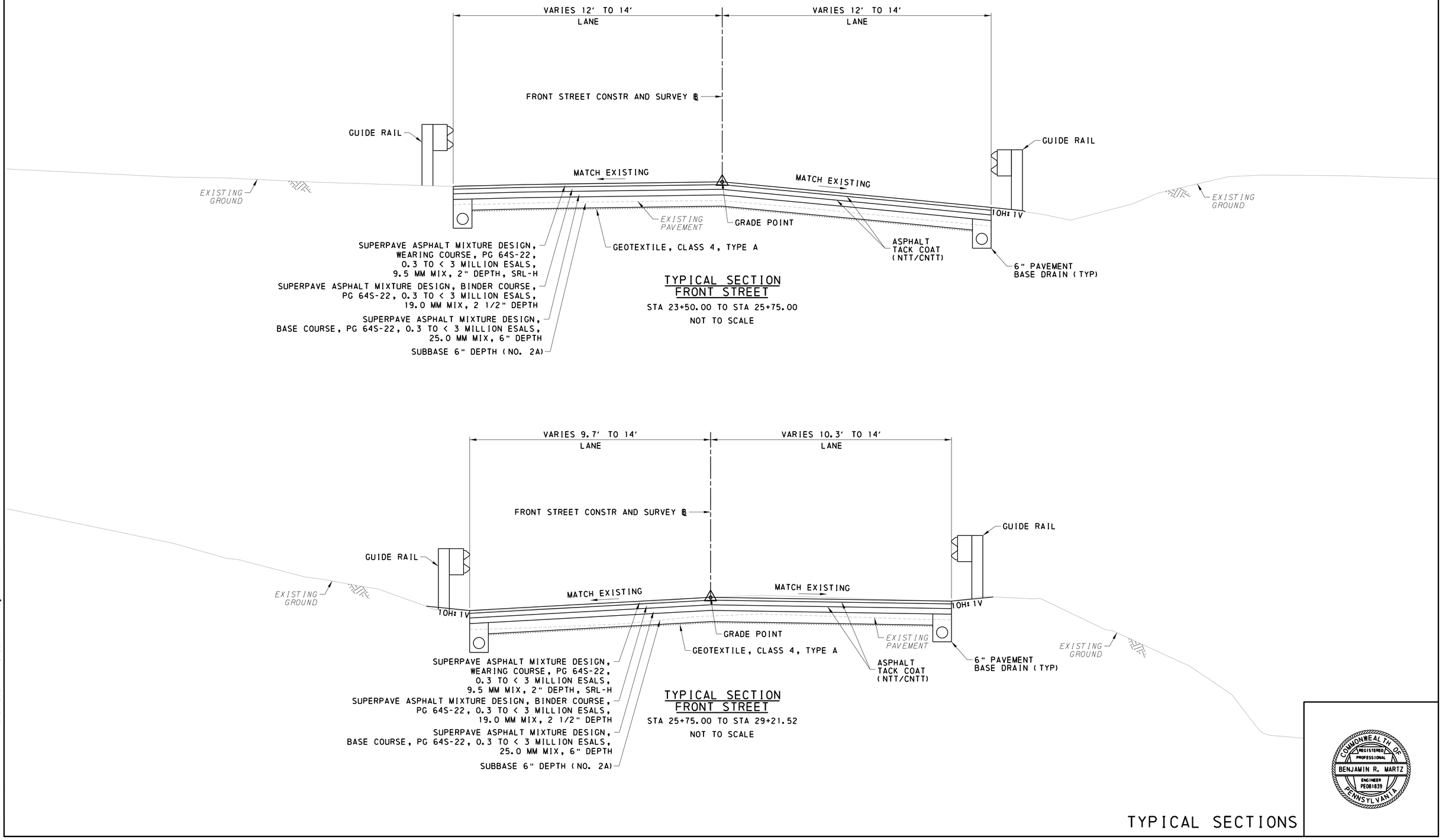
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION
FRONT STREET

STA 23+50.00 TO STA 25+75.00

NOT TO SCALE

TYPICAL SECTION
FRONT STREET

STA 25+75.00 TO STA 29+21.52

NOT TO SCALE

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PE081839

TYPICAL SECTIONS

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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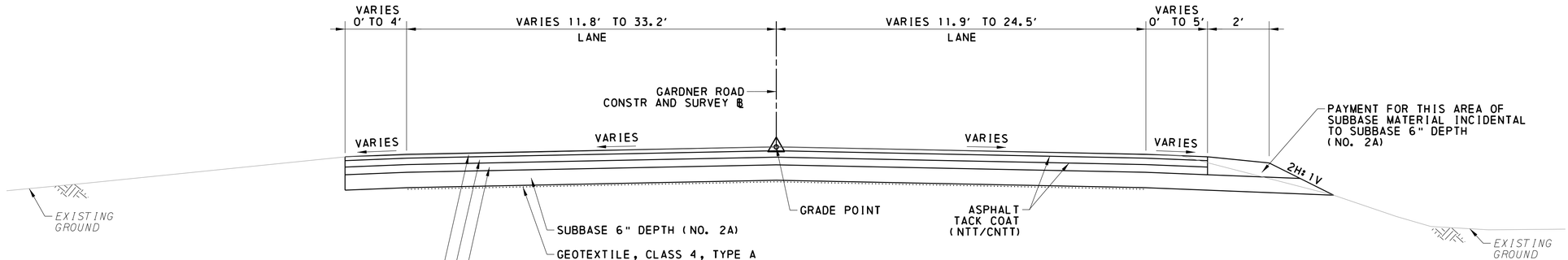
ELMHURST TOWNSHIP				

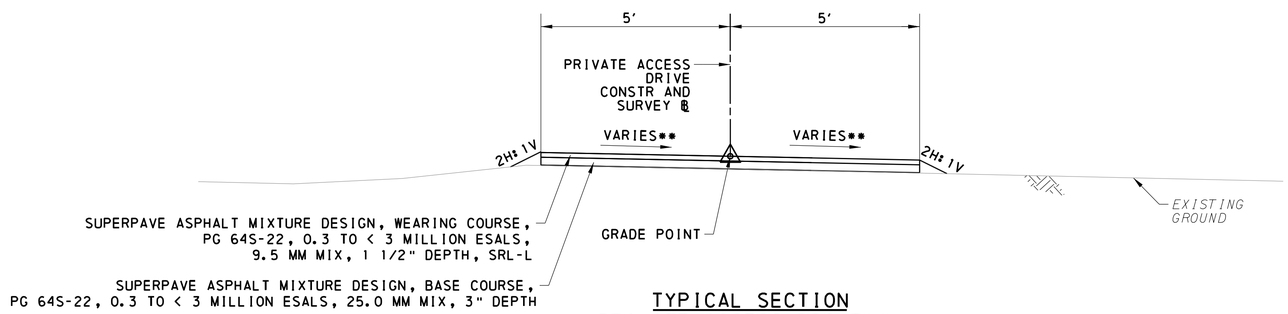
REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION
GARDNER ROAD

STA 39+14.00 TO STA 39+67.18

NOT TO SCALE



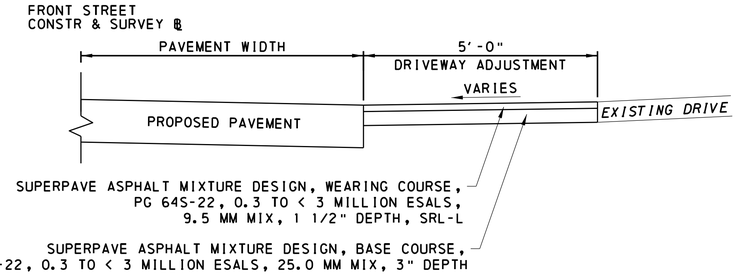
TYPICAL SECTION
PRIVATE ACCESS DRIVEWAY

STA 0+16.00 TO STA 1+76.50

NOT TO SCALE

**PRIVATE ACCESS DRIVEWAY CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SIDE	RT SIDE
STA 0+16.00 TO STA 1+60.00	8.55% TO 2.00%	-8.55% TO -2.00%
STA 1+60.00 TO STA 1+76.50	2.00%	-2.00% TO -7.83%



BITUMINOUS DIVEWAY ADJUSTMENT DETAIL

NOT TO SCALE

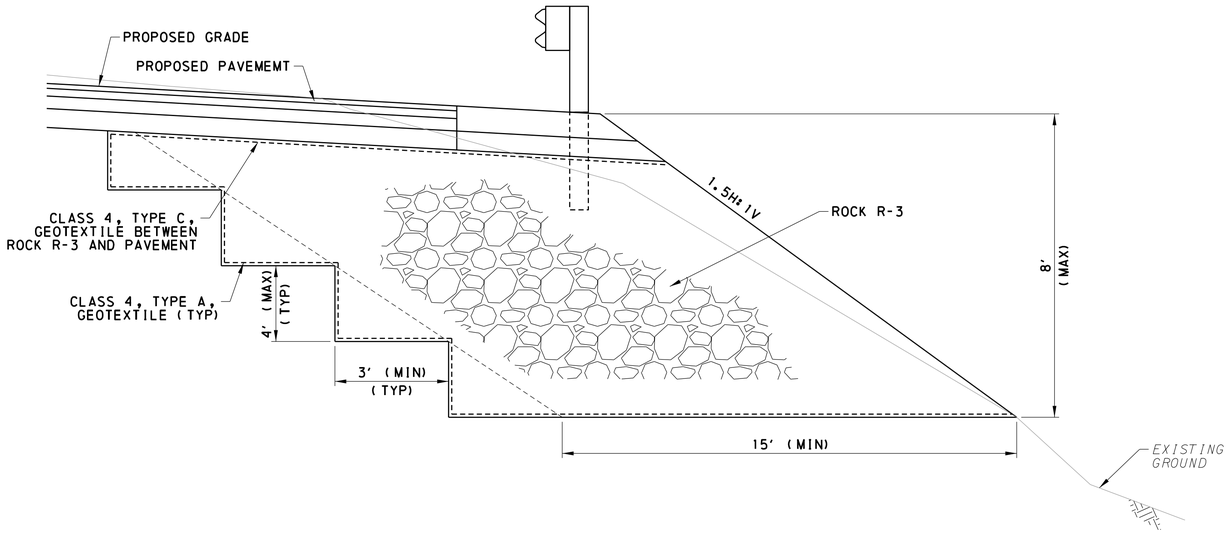
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TYPICAL SECTIONS

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Roadway Typicals.dgn
Mode: TYP SECTION 4 2/28/2024 11:18:30 PM By: laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	11 OF 56
ELMHURST TOWNSHIP				

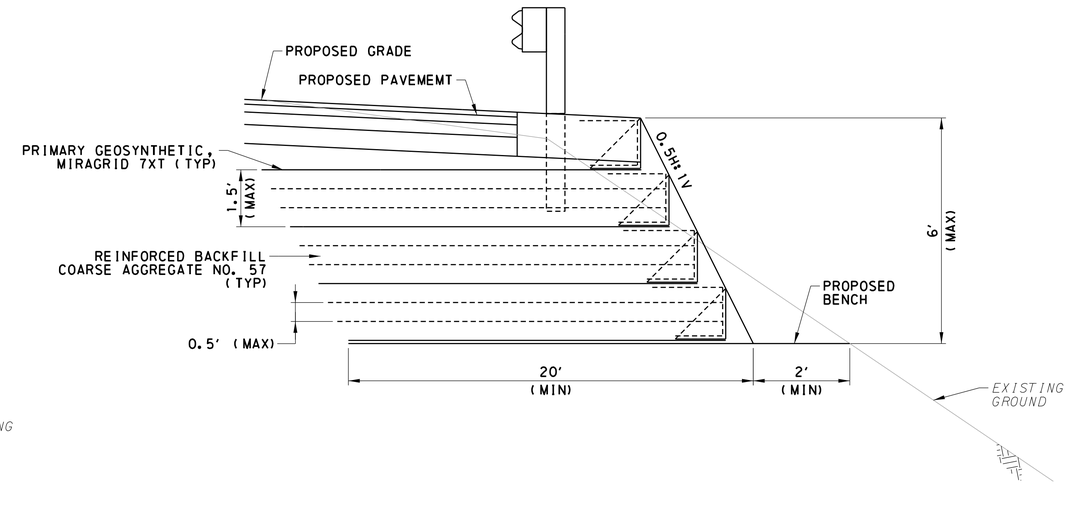
REVISION NUMBER	REVISIONS	DATE	BY



BENCHING DETAIL

STA 529+40.00 TO STA 529+30.00 RT
STA 531+25.00 TO STA 532+25.00 RT

NOT TO SCALE



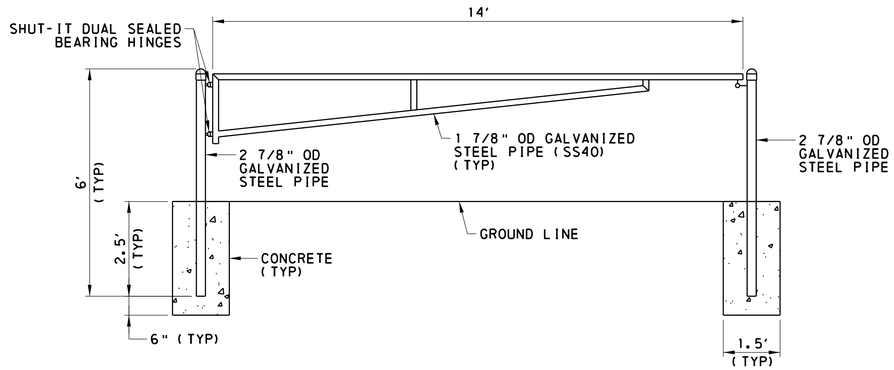
GRS SLOPE DETAIL

STA 536+50.00 TO STA 537+75.00 RT
STA 541+75.00 TO STA 542+50.00 RT

NOT TO SCALE

NOTE:

CONSTRUCT GRS SLOPE IN GENERAL CONFORMANCE WITH GRS SLOPE SPECIAL PROVISION AND STANDARD DRAWING RC-14M, TYPE A SLOPE



ACCESS GATE DETAIL

NOT TO SCALE

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REGISTERED PROFESSIONAL
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DETAILS

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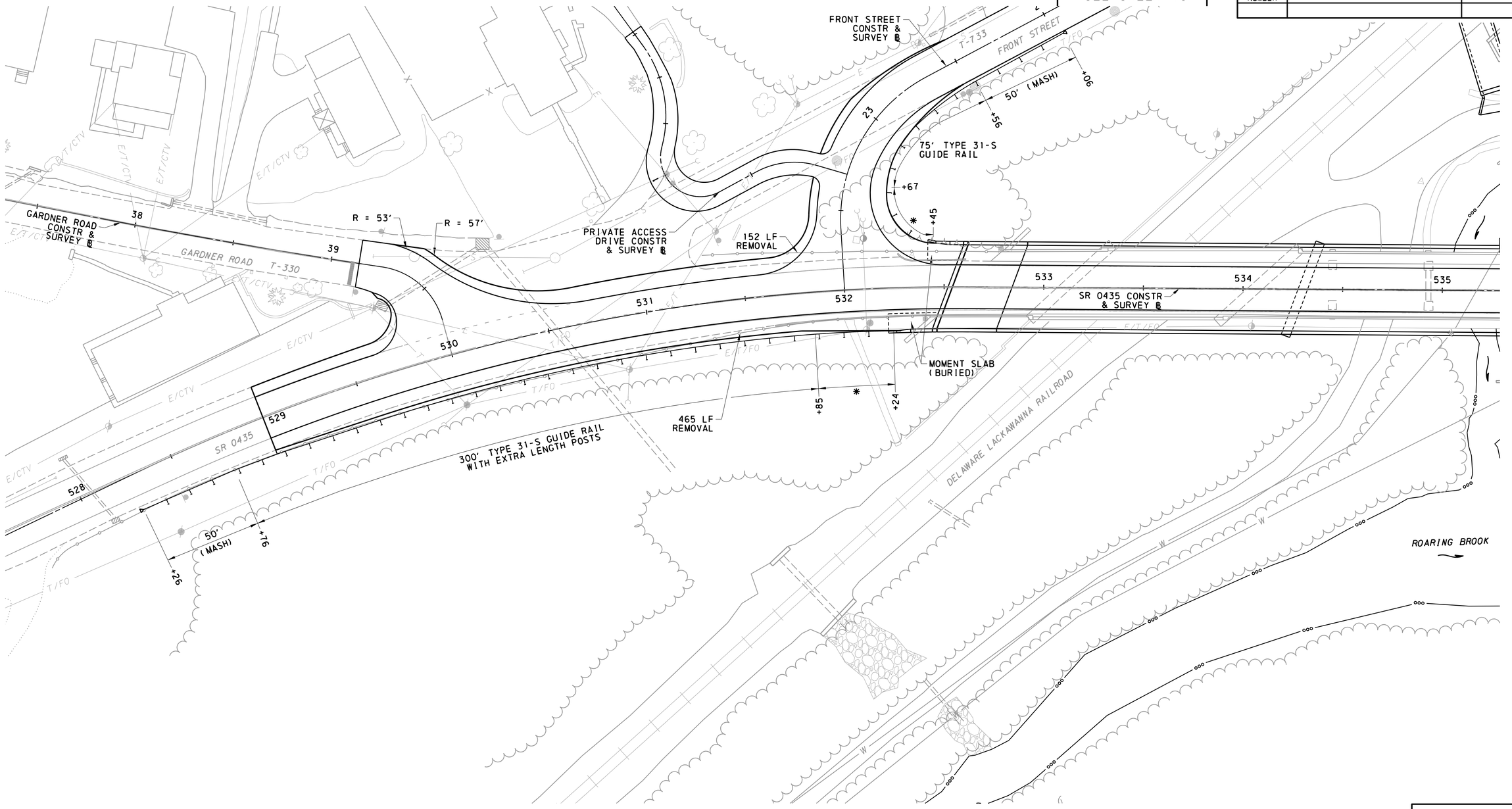
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	12 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 15

SEE SHEET 13



LEGEND

*	THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION
(MASH)	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
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GUIDE RAIL DETAILS

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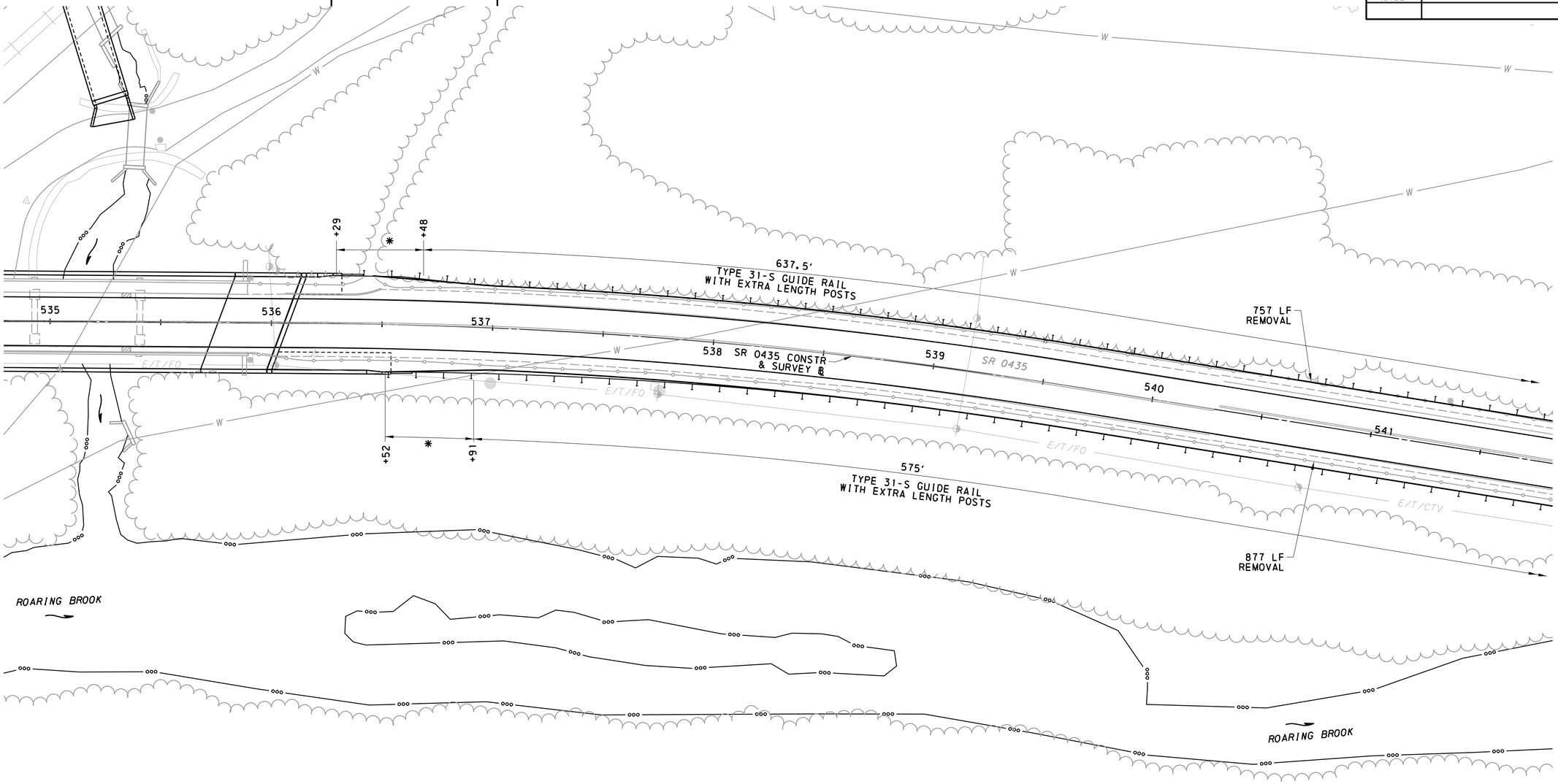
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	13 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 15

SEE SHEET 12

SEE SHEET 14



LEGEND

*	THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION
(MASH)	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
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GUIDE RAIL DETAILS

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Model:Guide Rail Sheet 02/28/2024 11:18:38 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	14 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 13

637.5′ TYPE 31-S GUIDE RAIL WITH EXTRA LENGTH POSTS

575′ TYPE 31-S GUIDE RAIL WITH EXTRA LENGTH POSTS

127 LF REMOVAL

TYPE 31-S GUIDE RAIL WITH 7′ EXTRA LENGTH POST

37.5′ 50′ (MASH)

12.5′ TYPE 31-S GUIDE RAIL

R=10′

TERMINAL SECTION, SINGLE

ROARING BROOK

T-718 G C SMITH STREET

SR 0435

SR 0435 CONSTR & SURVEY

E/T/CTV

542 543 544 545 546 547 548 549

LEGEND

* THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION

(MASH) PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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GUIDE RAIL DETAILS

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	15 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 12

SEE SHEET 13

LEGEND

* THRIE-BEAM GUIDE RAIL TO PA BRIDGE BARRIER TRANSITION

(MASH) PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
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BENJAMIN R. MARTZ
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PE081839

GUIDE RAIL DETAILS

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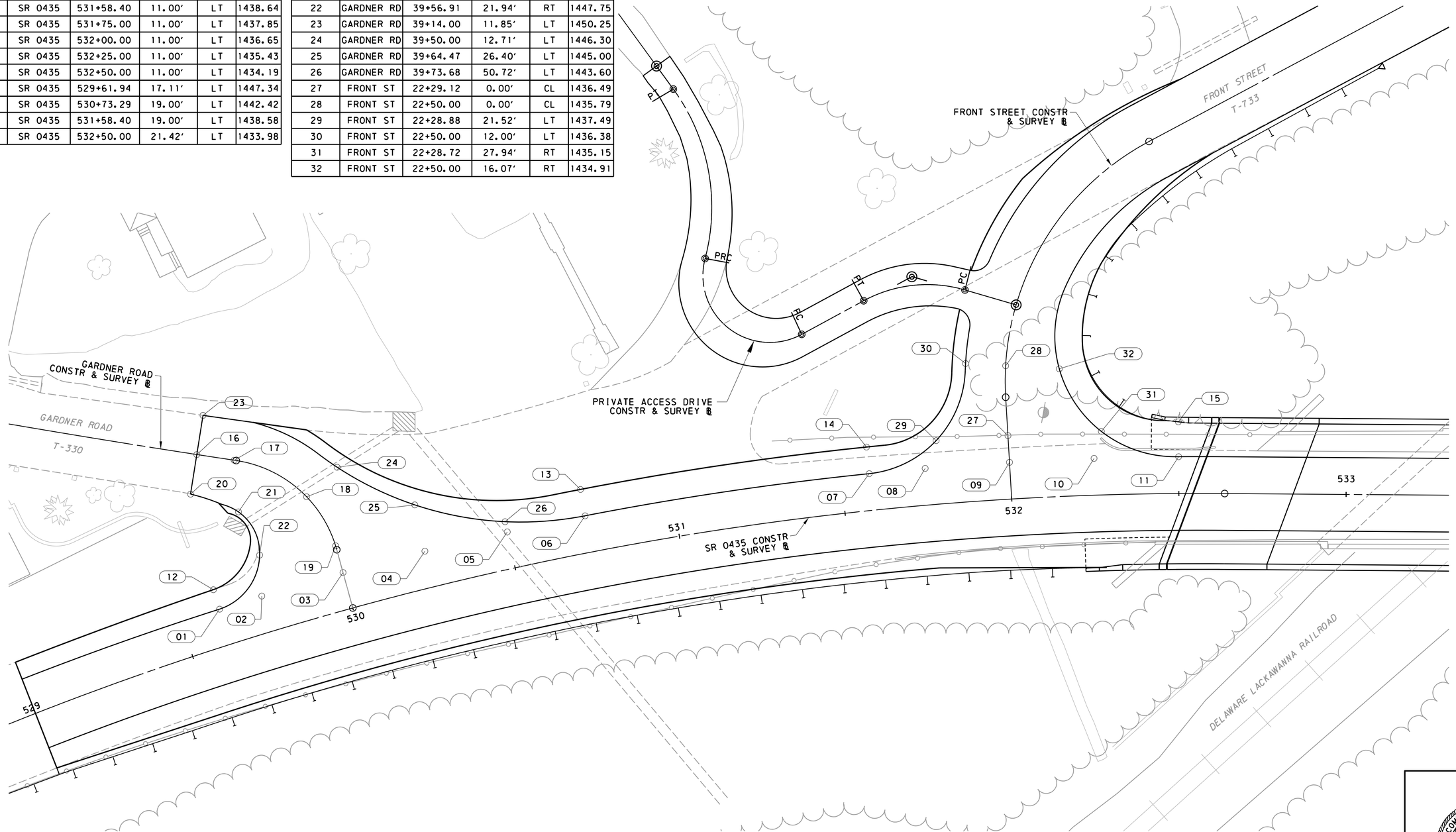
ModelGuide Rail Sheet 04 2/28/2024 1:18:39 PM By:laura.hower

POINT	ROUTE	STATION	OFFSET	SIDE	ELEV
01	SR 0435	529+61.94	11.00'	LT	1447.46
02	SR 0435	529+75.00	11.00'	LT	1446.90
03	SR 0435	530+00.00	11.00'	LT	1445.82
04	SR 0435	530+25.00	11.00'	LT	1444.73
05	SR 0435	530+50.00	11.00'	LT	1443.62
06	SR 0435	530+73.29	11.00'	LT	1442.58
07	SR 0435	531+58.40	11.00'	LT	1438.64
08	SR 0435	531+75.00	11.00'	LT	1437.85
09	SR 0435	532+00.00	11.00'	LT	1436.65
10	SR 0435	532+25.00	11.00'	LT	1435.43
11	SR 0435	532+50.00	11.00'	LT	1434.19
12	SR 0435	529+61.94	17.11'	LT	1447.34
13	SR 0435	530+73.29	19.00'	LT	1442.42
14	SR 0435	531+58.40	19.00'	LT	1438.58
15	SR 0435	532+50.00	21.42'	LT	1433.98

POINT	ROUTE	STATION	OFFSET	SIDE	ELEV
16	GARDNER RD	39+14.00	0.00'	CL	1450.54
17	GARDNER RD	39+25.00	0.00'	CL	1449.24
18	GARDNER RD	39+50.00	0.00'	CL	1446.73
19	GARDNER RD	39+67.18	0.00'	CL	1445.98
20	GARDNER RD	39+14.00	11.98'	RT	1449.80
21	GARDNER RD	39+30.85	14.88'	RT	1448.00
22	GARDNER RD	39+56.91	21.94'	RT	1447.75
23	GARDNER RD	39+14.00	11.85'	LT	1450.25
24	GARDNER RD	39+50.00	12.71'	LT	1446.30
25	GARDNER RD	39+64.47	26.40'	LT	1445.00
26	GARDNER RD	39+73.68	50.72'	LT	1443.60
27	FRONT ST	22+29.12	0.00'	CL	1436.49
28	FRONT ST	22+50.00	0.00'	CL	1435.79
29	FRONT ST	22+28.88	21.52'	LT	1437.49
30	FRONT ST	22+50.00	12.00'	LT	1436.38
31	FRONT ST	22+28.72	27.94'	RT	1435.15
32	FRONT ST	22+50.00	16.07'	RT	1434.91

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	16 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



SCALE

0 15 30FEET

INTERSECTION GRADING DETAIL

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE061839

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TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING & PAVEMENT MARKING PLAN

♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - S-39603
STR2 - S-39602
STR3 - L-367
STR4 - L-404

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	17 OF 56
				ELMHURST TOWNSHIP				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	0201 0001 LS	CLEARING AND GRUBBING		NO TAB	OR 85	0601 7313 LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	3	25	2640	0620 0502 LF	REMOVE EXISTING GUIDE RAIL (DEPARTMENT PROPERTY)		24	71	0850 0031 CY	ROCK, CLASS R-3		26-45
4599	0203 0001 CY	CLASS 1 EXCAVATION		TCP, 20-23, 26-45	EITHER 12	0601 0353 LF	18" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL	2	25	463	0620 1600 LF	TYPE 31-S GUIDE RAIL		24	94	0850 0032 CY	ROCK, CLASS R-4		26-45
88	0204 0150 CY	CLASS 4 EXCAVATION		TCP	AND 1	0616 1252 EACH	THERMOPLASTIC END SECTION FOR 18" PIPE	2	25	2588	0620 1601 LF	TYPE 31-S GUIDE RAIL WITH 7' EXTRA LENGTH POSTS		TCP, 24	114	0850 0033 CY	ROCK, CLASS R-5		26-45
342	0205 0100 CY	FOREIGN BORROW EXCAVATION		26-45	OR 12	0601 1743 LF	18" SPIRAL RIB ALUMINUM ALLOY PIPE, TYPE IR, (3/4" X 3/4" X 7 1/2" CORRUGATIONS), 16 GAGE	2	25	175	0620 1645 LF	CURVED W-BEAM GUIDE RAIL AT INTERSECTIONS		TCP	266	0850 0034 CY	ROCK, CLASS R-6		26-45
695	4205 0265 CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-5 CHOKED WITH CLASS R-3 AND NATIVE STREAMBED MATERIAL ♦		STR2	AND 1	0616 0602 EACH	ALUMINUM ALLOY END SECTIONS, 16 GAGE, FOR 18" PIPE	2	25	4	0620 1670 EACH	TYPE 31-STRONG POST IN-LINE ANCHOR		TCP	1541	0850 0036 CY	ROCK, CLASS R-8		26-45
2258	4205 0268 CY	SELECTED BORROW EXCAVATION ROCK, CLASS R-8 CHOKED WITH CLASS R-4 AND NATIVE STREAMBED MATERIAL ♦		STR2	OR 12	0601 7313 LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	2	25	7	0620 2010 EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB		TCP, 24	21	0851 0003 SY	ROCK APRON		TCP
1954	0212 0001 LF	GEOTEXTILE, CLASS 1		20-23	AND 1	0616 1202 EACH	CONCRETE END SECTIONS FOR 18" PIPE	2	25	4	0620 2011 EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET		24	3	0855 0003 EACH	PUMPED WATER FILTER BAG		26-45
7	0212 0008 SY	GEOTEXTILE, CLASS 3, TYPE B		26-45	EITHER 375	0601 7313 LF	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	1	TCP, 25	762	0627 3091 LF	TEMPORARY BARRIER, CONCRETE, PLATE, F-SHAPE (PENNDOT)		TCP	3	0855 0004 EACH	REPLACEMENT PUMPED WATER FILTER BAG		26-45
5078	0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE A		20-23, 26-45	OR 147	0601 1743 LF	18" SPIRAL RIB ALUMINUM ALLOY PIPE, TYPE IR, (3/4" X 3/4" X 7 1/2" CORRUGATIONS), 16 GAGE	1	TCP, 25	20	0630 0021 LF	PLAIN CEMENT CONCRETE CURB, 4" HEIGHT		20-23	8	0860 0000 EACH	INLET FILTER BAG FOR TYPE M INLET		26-45
278	0313 0420 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		20-23	9	0605 2731 SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		TCP, 25		0686 0050 LS	CONSTRUCTION SURVEYING, TYPE D		NO TAB	2	0860 0002 EACH	INLET FILTER BAG FOR TYPE C INLET		26-45
11579	0313 0426 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH		TCP, 20-23	5	4605 2731 SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE, TEMPORARY ♦		25		0689 0005 LS	CPM SCHEDULE, WITH UPDATES		NO TAB	6	0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET		26-45
12502	0350 0106 SY	SUBBASE 6" DEPTH (NO. 2A)		TCP, 20-23	9	0605 2850 EACH	STANDARD INLET BOX, HEIGHT < /= 10'		TCP, 25	1000	0690 0001 DOLLA	INTERNAL FACILITATION		NO TAB	2	0860 0012 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET		26-45
27	0350 0121 TON	SUBBASE (NO. 2A)		TCP, 20-23	5	4605 2850 EACH	STANDARD INLET BOX, HEIGHT < /= 10', TEMPORARY ♦		25	3	0696 0580 EACH	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE IV, TEST LEVEL 3		TCP	83	0861 0001 CY	CLEANING SEDIMENTATION STRUCTURES		26-45
278	0413 0248 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		20-23	2	0605 3011 EACH	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'		25	52	0703 0025 CY	NO. 57 COARSE AGGREGATE		TCP, 26-45	1132	0867 0012 LF	COMPOST FILTER SOCK, 12" DIAMETER		26-45
12557	0413 0250 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 2" DEPTH, SRL-H		TCP, 20-23		0608 0001 LS	MOBILIZATION		NO TAB	96	0703 0026 CY	NO. 3 COARSE AGGREGATE		26-45	1206	0867 0018 LF	COMPOST FILTER SOCK, 18" DIAMETER		26-45
11579	0413 6045 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		TCP, 20-23		0609 0003 LS	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE B		NO TAB	85	0804 0025 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH		26-45	181	0867 0022 LF	COMPOST FILTER SOCK, 24" DIAMETER		26-45
24130	0460 0003 SY	ASPHALT TACK COAT (NTT/CNTT)		TCP, 20-23		0609 0009 LS	EQUIPMENT PACKAGE ♦		NO TAB	297	0804 0027 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH		26-45	592	0867 0032 LF	COMPOST FILTER SOCK, 32" DIAMETER		26-45
1030	0491 0019 SY	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		20-23	1954	0610 7002 LF	6" PAVEMENT BASE DRAIN		20-23	179	0804 0028 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH		26-45	6656	0868 0113 SY	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX		26-45
EITHER 269	4601 0313 LF	18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL, TEMPORARY ♦	4	25	145	0615 0022 LF	6" SUBSURFACE DRAIN OUTLETS		20-23	21	0804 0033 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH		26-45		0901 0001 LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION		TCP
OR 269	4601 1743 LF	18" SPIRAL RIB ALUMINUM ALLOY PIPE, TYPE IR, (3/4" X 3/4" X 7 1/2" CORRUGATIONS), 16 GAGE, TEMPORARY ♦	4	25	9	0615 0040 EACH	SUBSURFACE DRAIN OUTLET ENDWALL		20-23	41	0804 0043 LB	SEEDING - FORMULA T TEMPORARY GRASS MIX		26-45	2	0901 0102 EACH	SHADOW VEHICLE		TCP
EITHER 26	4601 0317 LF	30" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL, TEMPORARY ♦	5	25	9	0615 0066 EACH	66" RED SUBSURFACE DRAIN OUTLET MARKER		20-23	7202	0806 0112 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C		26-45	100	0901 0231 DAY	ADDITIONAL WARNING LIGHTS, TYPE B		TCP
OR 26	4601 1747 LF	30" SPIRAL RIB ALUMINUM ALLOY PIPE, TYPE IR, (3/4" X 3/4" X 7 1/2" CORRUGATIONS), 16 GAGE, TEMPORARY ♦	5	25	9	0619 0458 EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 2, TANGENT (MASH)		TCP, 24	1568	0806 0113 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D		26-45					
EITHER 85	0601 0353 LF	18" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL	3	25	2	0619 0459 EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH)		24	2407	0811 0003 LF	TEMPORARY PROTECTIVE FENCE		26-45					
OR 85	0601 1743 LF	18" SPIRAL RIB ALUMINUM ALLOY PIPE, TYPE IR, (3/4" X 3/4" X 7 1/2" CORRUGATIONS), 16 GAGE	3	25	2	0620 0400 EACH	TERMINAL SECTION, SINGLE		TCP, 24	6	0849 0020 EACH	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK		26-45					

COMMONWEALTH OF PENNSYLVANIA
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TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING & PAVEMENT MARKING PLAN

♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - S-39603
STR2 - S-39602
STR3 - L-367
STR4 - L-404

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	18 OF 56
				ELMHURST TOWNSHIP				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
100	0901 0240 / SF	ADDITIONAL TRAFFIC CONTROL SIGNS		TCP
4324	0901 0320 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW		TCP
4387	0901 0330 / LF	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
75	0901 0334 / LF	24" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE		TCP
2	0901 0450 / EACH	3-LINE CHANGEABLE MESSAGE SIGN WITH TELECOMMUNICATIONS		TCP
1	0910 0154 / EACH	POLE FOUNDATION, TYPE FC		20-23
EITHER 1	0910 0252 / EACH	STEEL LIGHTING POLE WITH 20-FOOT BRACKET ARM (30-FOOT MOUNTING HEIGHT) TYPE A	6	20-23
OR ---	0910 1052 / EACH	ALUMINUM LIGHTING POLE WITH 20-FOOT BRACKET ARM (30-FOOT MOUNTING HEIGHT) TYPE A	6	20-23
120	0910 4116 / LF	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR		20-23
30	0910 5055 / LF	2" DIRECT BURIAL CONDUIT		20-23
10	0910 6000 / LF	TRENCH		20-23
1	0910 7020 / EACH	COMPLETE POWER SUPPLY SYSTEM		20-23
	0910 7210 / LS	TESTING OF ENTIRE LIGHTING SYSTEM		20-23
79	0931 0001 / SF	POST MOUNTED SIGNS, TYPE B		S & PMP
9	0933 0001 / SF	POST MOUNTED SIGNS, TYPE D		S & PMP
8	0935 0001 / SF	POST MOUNTED SIGNS, TYPE F		S & PMP
51	0937 0106 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/B)		S & PMP
31	0937 0107 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/W)		TCP
51	0937 0113 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE D, (W/B)		S & PMP
31	0937 0114 / EACH	GUIDE RAIL MOUNTED DELINEATOR TYPE D, (W/W)		TCP
6	0937 0195 / EACH	BARRIER MOUNTED DELINEATOR, SIDE MOUNT TYPE R, (W/W)		TCP
6	0937 0196 / EACH	BARRIER MOUNTED DELINEATOR, TOP MOUNT TYPE R, (W/W)		TCP
13	0937 0208 / EACH	BARRIER MOUNTED DELINEATOR, TOP AND SIDE-MOUNT TYPE R, (W/B)		S & PMP
2	0941 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE B		S & PMP
1	0945 0001 / EACH	RESET POST MOUNTED SIGNS, TYPE F		S & PMP
4324	0960 0026 / LF	24" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		S & PMP
4387	0962 1000 / LF	4" WHITE WATERBORNE PAVEMENT MARKINGS		S & PMP
75	0962 1005 / LF	4" YELLOW WATERBORNE PAVEMENT MARKINGS		S & PMP
2	0962 1050 / EACH	WHITE WATERBORNE PAVEMENT LEGEND, "RR CROSSING", 6'-6", 10' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS)		TCP
2	0962 1052 / EACH	WHITE WATERBORNE PAVEMENT LEGEND, "RR CROSSING", 6'-6", 12' LANE WIDTH (INCLUDES "X", "RR", AND 2 TRANSVERSE BANDS)		TCP
333	0963 0001 / SF	PAVEMENT MARKING REMOVAL		TCP
3402	0963 0004 / LF	4" PAVEMENT MARKING REMOVAL		TCP
7	0971 0001 / EACH	REMOVE POST MOUNTED SIGNS, TYPE B		S & PMP
1	0975 0001 / EACH	REMOVE POST MOUNTED SIGNS, TYPE F		S & PMP
15000	1005 1420 / DOLLA	PREDRILLING FOR UNFORESEEN OBSTRUCTIONS, EARTH DRILLING		STR1
15000	1005 1430 / DOLLA	PREDRILLING FOR UNFORESEEN OBSTRUCTIONS, OBSTRUCTION DRILLING		STR1
15000	1005 1440 / DOLLA	PILE EXTRACTION AND REDRIVING		STR1
15000	1005 1450 / DOLLA	MOBILIZATION FOR PREDRILLING OF UNFORESEEN OBSTRUCTIONS		STR1
6	1005 1480 / EACH	DYNAMIC PILE LOAD TEST		STR1
8000	1091 0335 / DOLLA	EPOXY INJECTION CRACK SEAL		STR1
EITHER	8030 0002 / LS	BRIDGE STRUCTURE, AS DESIGNED, S-39602 ♦	12	STR2
AND 253400	1002 0191 / LB	REINFORCEMENT BARS, EPOXY COATED	12	STR2
AND	1002 0100 / LS	STAINLESS STEEL REINFORCEMENT BARS	12	STR2
AND 84	1002 0152 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEMENT BARS, EPOXY COATED	12	STR2
AND 67	1002 0154 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 7 REINFORCEMENT BARS, EPOXY COATED	12	STR2
AND 44	1002 0156 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 9 REINFORCEMENT BARS, EPOXY COATED	12	STR2
AND 23	1002 0158 / EACH	MECHANICAL SPLICE SYSTEM FOR NO. 11 REINFORCEMENT BARS, EPOXY COATED	12	STR2
OR	8000 0001 / LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	12	STR2
OR	8100 0001 / LS	STEEL BRIDGE STRUCTURE ♦	12	STR2
EITHER	8120 0001 / LS	BRIDGE STRUCTURE, AS DESIGNED, S-39603 ♦	10	STR1
AND 109332	1002 0190 / LB	REINFORCEMENT BARS, EPOXY COATED	10	STR1
AND 4338	1005 1830 / LF	STEEL HP12X84 PRODUCTION PILE	10	STR1
AND 60	1005 2030 / EACH	STEEL HP12X84 PILE TIP REINFORCEMENT (HEAVY DUTY)	10	STR1
AND 441	1019 0050 / SY	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)	10	STR1
OR	8000 0001 / LS	PRESTRESSED CONCRETE BRIDGE STRUCTURE ♦	10	STR1
OR	8100 0001 / LS	STEEL BRIDGE STRUCTURE ♦	10	STR1
EITHER	8510 0003 / LS	PRECAST CONCRETE BOX CULVERT, AS DESIGNED, L-367 ♦	13	STR3
AND 14147	1002 0192 / LB	REINFORCEMENT BARS, EPOXY COATED	13	STR3
OR	8510 0013 / LS	PRECAST CONCRETE BOX CULVERT ♦	13	STR3
OR	8520 0003 / LS	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT ♦	13	STR3
EITHER	8510 0004 / LS	PRECAST CONCRETE BOX CULVERT, AS DESIGNED, L-404 ♦	14	STR4
AND 4373	1002 0193 / LB	REINFORCEMENT BARS, EPOXY COATED	14	STR4
OR	8510 0014 / LS	PRECAST CONCRETE BOX CULVERT ♦	14	STR4
OR	8520 0004 / LS	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT ♦	14	STR4
EITHER	8622 0001 / LS	PRECAST MODULAR WINGWALLS, AS DESIGNED, S-39603P ♦	11	STR1
OR	8610 0001 / LS	REINFORCED CONCRETE WINGWALLS, S-39603 ♦	11	STR1
	9000 0001 / LS	TEMPORARY BERM ♦		26-45
	9000 0002 / LS	TEMPORARY PIPE BY-PASS STREAM DIVERSION ♦		26-45
	9000 0003 / LS	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION ♦		26-45
	9000 0004 / LS	TEMPORARY PIPE FLUME STREAM DIVERSION ♦		26-45
	9000 0005 / LS	BRACED SHEET PILE COFFERDAM STREAM DIVERSION ♦		26-45
	9000 0006 / LS	PERMANENT PAWC ACCESS ROAD ♦		26-45
	9000 0007 / LS	TEMPORARY STAGING AREA ♦		26-45
	9000 0008 / LS	CRANE PAD ♦		26-45
	9000 0009 / LS	TEMPORARY ACCESS ROADS ♦		26-45
1	9000 0010 / EACH	TEMPORARY WETLAND CROSSING ♦		26-45
1335	9000 0011 / CY	AMENDED SOILS ♦		26-45
7219	9000 0012 / SY	TOPSOIL RESTORATION ♦		26-45
219	9000 0013 / CY	OVER EXCAVATION AND BACKFILLING UNDER FOUNDATIONS-BEARING ON SOIL ♦		STR2
	9000 0014 / LS	CONSTRUCTION VIBRATION MONITORING, S-39603 ♦		STR1
	9000 0015 / LS	CONSTRUCTION VIBRATION MONITORING, TEMPORARY BRIDGE ♦		TCP
1	9000 0016 / EACH	REMOVE AND RESET MAILBOX ♦		20-23
	9000 0017 / LS	ACCESS ROAD GATE ♦		20-23
1	9000 0018 / EACH	LED LUMINAIRE, ARM MOUNT ♦		20-23
	9000 0019 / LS	TEMPORARY LIGHTING ♦		TCP
	9000 0020 / LS	TEMPORARY RAILROAD CROSSING ♦		TCP
	9000 0021 / LS	ASBESTOS MATERIAL REMOVAL AND DISPOSAL ♦		NO TAB
	9000 0022 / LS	HEALTH AND SAFETY PLAN ♦		NO TAB
	9000 0023 / LS	WASTE MANAGMENT PLAN ♦		NO TAB
	9000 1001 / LS	INSTALLATION OF ELMHURST SANITARY SEWER RELOCATION ♦		NO TAB
	9000 5101 / LS	ELECTRONIC TICKETING (E-TICKETING) FOR CONSTRUCTION AGGREGATE ♦		NO TAB
	9000 5102 / LS	ELECTRONIC TICKETING (E-TICKETING) FOR CONSTRUCTION ASPHALT ♦		NO TAB
	9000 5103 / LS	ELECTRONIC TICKETING (E-TICKETING) FOR CONSTRUCTION CONCRETE ♦		NO TAB

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TCP - TRAFFIC CONTROL PLAN
S & PMP - SIGNING & PAVEMENT MARKING PLAN

♦ - SEE SPECIAL PROVISIONS

SUMMARY

STR1 - S-39603
STR2 - S-39602
STR3 - L-367
STR4 - L-404

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	19 OF 56
				ELMHURST TOWNSHIP				

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	9203 0101 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-39602 ♦		STR2
	9203 0102 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, L-404 ♦		STR4
	9203 0103 / LS	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, TEMP BRIDGE ♦		TCP
	9903 0001 / LS	TEMPORARY BRIDGE ♦		TCP
	9903 0002 / LS	TEMPORARY ROADWAY ♦		TCP

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:11:11 AM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081939

TABULATION OF QUANTITIES

ROADWAY

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	20 OF 56
				ELMHURST TOWNSHIP				

0203 0001 CY CLASS 1 EXCAVATION	0212 0001 LF GEOTEXTILE, CLASS 1	0212 0014 SY GEOTEXTILE, CLASS 4, TYPE A	0313 0420 SY SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH	0313 0426 SY SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	0350 0106 SY SUBBASE 6" DEPTH (NO. 2A)	0350 0121 TON SUBBASE (NO. 2A)	0413 0248 SY SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L	0413 0260 SY SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 2" DEPTH, SRL-H	0413 6045 SY SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	0460 0003 SY ASPHALT TACK COAT (NTT/CNTT)	0491 0019 SY MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	0610 7002 LF 6" PAVEMENT BASE DRAIN	0615 0022 LF 6" SUBSURFACE DRAIN OUTLETS	0615 0040 EACH SUBSURFACE DRAIN OUTLET ENDWALL	0615 0066 EACH 66" RED SUBSURFACE DRAIN OUTLET MARKER	0630 0021 LF PLAIN CEMENT CONCRETE CURB, 4" HEIGHT	0910 0154 EACH POLE FOUNDATION, TYPE FC	0910 (+) EACH DESIGN NO. 6	0910 4116 LF AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	0910 5055 LF 2" DIRECT BURIAL CONDUIT	0910 6000 LF TRENCH	0910 7020 EACH COMPLETE POWER SUPPLY SYSTEM	0910 7210 LS TESTING OF ENTIRE LIGHTING SYSTEM	9000 0016 EACH REMOVE AND RESET MAILBOX	9000 0017 LS ACCESS ROAD GATE	9000 0018 EACH LED LUMINAIRE, ARM MOUNT	ITEM NUMBER / UNIT REMARKS	SIDE	STATIONS
																											SR 0435		
	340											340	15	1	1													LT	529+00.00 to 532+40.00
917		866		1513	1732			1513	1513	3026																	FULL DEPTH RECONSTRUCTION	CL	529+00.00 to 532+54.16
																	1	1	120	30	10	1	X			1		LT	532+27.00 to 532+31.00
		231		419	461			419	419	837																	FULL DEPTH RECONSTRUCTION	CL	536+05.84 to 537+00.00
																10												LT	536+31.50 to 536+41.50
	115											115	15	1	1													LT	536+35.00 to 537+50.00
																10												RT	536+54.50 to 536+64.50
								978		978	978																MILL AND OVERLAY	CL	537+00.00 to 541+00.00
286				356	534			356	356	712																	FULL DEPTH SHOULDER RECONSTRUCTION	LT	537+00.00 to 541+00.00
286				356	534			356	356	712																	FULL DEPTH SHOULDER RECONSTRUCTION	RT	537+00.00 to 541+00.00
																								X				LT	537+10.00
396		508		878	1062			878	878	1755																	FULL DEPTH RECONSTRUCTION	CL	541+00.00 to 543+07.75
	70											70	15	1	1													LT	542+50.00 to 543+20.00
	145											145	15	1	1													RT	544+55.00 to 546+00.00
234		345		589	711			589	589	1177																	FULL DEPTH RECONSTRUCTION	CL	544+59.20 to 546+00.00
	75											75	25	1	1													LT	545+25.00 to 546+00.00
																											FRONT STREET		
702		1684		1921	1921			1921	1921	3841																	FULL DEPTH RECONSTRUCTION	CL	22+32.79 to 29+21.52
	342											342	15	1	1													LT	22+33.00 to 25+75.00
																									1			LT	22+60.00
	275											275	15	1	1													RT	23+00.00 to 25+75.00
			14				14				14																BITUMINOUS DRIVEWAY ADJUSTMENT	LT	23+50.00 to 23+75.00
			23				23				23																BITUMINOUS DRIVEWAY ADJUSTMENT	LT	24+75.00 to 25+15.00
	296											296	15	1	1												OUTLET TO RIGHT SIDE	LT	26+25.00 to 29+21.00
	296											296	15	1	1													RT	26+25.00 to 29+21.00
			15				15				15																BITUMINOUS DRIVEWAY ADJUSTMENT	LT	28+94.00 to 29+20.00

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BENJAMIN R. MARTZ — PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:09:02 AM

TABULATION OF QUANTITIES
ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	21 OF 56
				ELMHURST TOWNSHIP				

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

EMBANKMENT (FOR INFORMATION ONLY) CY	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
		SR 0435		
			LT	529+00.00 to 532+40.00
285		FULL DEPTH RECONSTRUCTION	CL	529+00.00 to 532+54.16
			LT	532+27.00 to 532+31.00
		FULL DEPTH RECONSTRUCTION	CL	536+05.84 to 537+00.00
			LT	536+31.50 to 536+41.50
			LT	536+35.00 to 537+50.00
			RT	536+54.50 to 536+64.50
		MILL AND OVERLAY	CL	537+00.00 to 541+00.00
10		FULL DEPTH SHOULDER RECONSTRUCTION	LT	537+00.00 to 541+00.00
10		FULL DEPTH SHOULDER RECONSTRUCTION	RT	537+00.00 to 541+00.00
			LT	537+10.00
10		FULL DEPTH RECONSTRUCTION	CL	541+00.00 to 543+07.75
			LT	542+50.00 to 543+20.00
			RT	544+55.00 to 546+00.00
10		FULL DEPTH RECONSTRUCTION	CL	544+59.20 to 546+00.00
			LT	545+25.00 to 546+00.00
		FRONT STREET		
234		FULL DEPTH RECONSTRUCTION	CL	22+32.79 to 29+21.52
			LT	22+33.00 to 25+75.00
			LT	22+60.00
			RT	23+00.00 to 25+75.00
		BITUMINOUS DRIVEWAY ADJUSTMENT	LT	23+50.00 to 23+75.00
		BITUMINOUS DRIVEWAY ADJUSTMENT	LT	24+75.00 to 25+15.00
		OUTLET TO RIGHT SIDE	LT	26+25.00 to 29+21.00
			RT	26+25.00 to 29+21.00
		BITUMINOUS DRIVEWAY ADJUSTMENT	LT	28+94.00 to 29+20.00

TABULATION OF QUANTITIES

ROADWAY

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	22 OF 56
				ELMHURST TOWNSHIP				

CLASS 1 EXCAVATION	GEOTEXTILE, CLASS 1	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH	SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 6" DEPTH	SUBBASE 6" DEPTH (NO. 2A)	SUBBASE (NO. 2A)	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 2" DEPTH, SRL-H	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	ASPHALT TACK COAT (NTT/CNTT)	MILLING OF ASPHALT PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	6" PAVEMENT BASE DRAIN	6" SUBSURFACE DRAIN OUTLETS	SUBSURFACE DRAIN OUTLET ENDWALL	66" RED SUBSURFACE DRAIN OUTLET MARKER	PLAIN CEMENT CONCRETE CURB, 4" HEIGHT	POLE FOUNDATION, TYPE FC	DESIGN NO. 6	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	2" DIRECT BURIAL CONDUIT	TRENCH	COMPLETE POWER SUPPLY SYSTEM	TESTING OF ENTIRE LIGHTING SYSTEM	REMOVE AND RESET MAILBOX	ACCESS ROAD GATE	LED LUMINAIRE, ARM MOUNT	REMARKS	SIDE	STATIONS
0203 0001 CY	0212 0001 LF	0212 0014 SY	0313 0420 SY	0313 0426 SY	0350 0106 SY	0350 0121 TON	0413 0248 SY	0413 0260 SY	0413 6045 SY	0460 0003 SY	0491 0019 SY	0610 7002 LF	0615 0022 LF	0615 0040 EACH	0615 0066 EACH	0630 0021 LF	0910 0154 EACH	0910 (+) EACH	0910 4116 LF	0910 5055 LF	0910 6000 LF	0910 7020 EACH	0910 7210 LS	9000 0016 EACH	9000 0017 LS	9000 0018 EACH	ITEM NUMBER / UNIT		
																											GARDNER ROAD		
		241		268	268			268	268	535																		CL	39+14.00 to 39+67.18
																											PRIVATE DRIVE		
			226			12	226																				FULL DEPTH RECONSTRUCTION	CL	0+16.00 to 1+76.50
2821	1954	3875	278	6300	7223	12	278	7278	6300	13573	1030	1954	145	9	9	20	1	1	120	30	10	1	---	1	---	1	TOTALS		

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BENJAMIN R. MARTZ — PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:09:02 AM

TABULATION OF QUANTITIES
ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	23 OF 56
				ELMHURST TOWNSHIP				

EMBANKMENT (FOR INFORMATION ONLY) CY	ITEM NUMBER	UNIT	REMARKS	SIDE	STATIONS
			GARDNER ROAD		
				CL	39+14.00 to 39+67.18
			PRIVATE DRIVE		
			FULL DEPTH RECONSTRUCTION	CL	0+16.00 to 1+76.50

TABULATION OF QUANTITIES

GUIDE RAIL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	24 OF 56
				ELMHURST TOWNSHIP				

PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 2, TANGENT (MASH) 0619 0458 EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3, TANGENT (MASH) 0619 0459 EACH	TERMINAL SECTION, SINGLE 0620 0400 EACH	REMOVE EXISTING GUIDE RAIL (DEPARTMENT PROPERTY) 0620 0502 LF	TYPE 31-S GUIDE RAIL 0620 1600 LF	TYPE 31-S GUIDE RAIL WITH 7' EXTRA LENGTH POSTS 0620 1601 LF	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITHOUT CURB 0620 2010 EACH	THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER TRANSITION WITH CURB AND INLET 0620 2011 EACH	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
									SR 0435		
	1		465		300	1				RT	529+26.00 to 532+24.00
			152							LT	531+30.00 to 532+80.00
			757		637.5	1	1			LT	536+29.00 to 543+41.00
			877		575	1	1			RT	536+52.00 to 543+06.00
		1			12.5		1		10' SHOP FORMED RADIUS	RT	544+24.00 to 544+59.00
	1		127		37.5		1			LT	544+67.00 to 545+95.00
									FRONT STREET		
1				75		1				RT	22+31.00 to 24+06.00
1			262	350					CONNECT TO EXISTING GUIDE RAIL	RT	25+27.00 to 29+22.00
2				37.5						LT	25+28.00 to 26+67.00
4	2	1	2640	462.5	1562.5	4	4		TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:15:03 AM

TABULATION OF QUANTITIES

DRAINAGE

(+) SEE SUMMARY SHEET FOR COMPLETE ITEM NUMBERS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	25 OF 56
				ELMHURST TOWNSHIP				

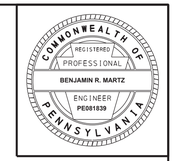
DESIGN NO. 4	DESIGN NO. 5	DESIGN NO. 3	DESIGN NO. 2	DESIGN NO. 1	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE, TEMPORARY	STANDARD INLET BOX, HEIGHT < /= 10'	STANDARD INLET BOX, HEIGHT < /= 10', TEMPORARY	TYPE 4 MANHOLE, STORM WATER, HEIGHT >5' AND < /= 10'																					REMARKS	SIDE	STATIONS
4601 (+) LF	4601 (+) LF	0601 (+) LF	0601 (+) LF	0601 (+) LF	0605 2731 SET	4605 2731 SET	0605 2850 EACH	4605 2850 EACH	0605 3011 EACH																				ITEM NUMBER UNIT		
																													GROUPING TITLE HERE		
						1		1																					INLET 200	RT	9+44.00
60																														RT / LT	9+44.00 to 9+60.00
						1		1																					INLET 204	RT	11+50.00
42																														RT / LT	11+50.00 to 11+50.00
						1		1																					INLET 201	RT	13+89.00
42																														RT / LT	13+89.00 to 13+96.00
103																														RT	13+91.00 to 14+94.00
						1		1																					INLET 203	LT	14+96.00
						1		1																					INLET 202	RT	14+96.00
22																														LT / RT	14+96.00 to 14+96.00
					1		1																						INLET 105	LT	22+56.00
				54																										LT / RT	22+56.00 to 22+60.00
					1		1																						INLET 106	LT	23+06.00
				49																										LT / RT	23+06.00 to 23+39.00
			12																											LT	535+36.00 to 535+47.00
									1																				MH2	LT	535+49.00
		82																												LT	535+49.00 to 536+35.00
					1		1																						INLET 103	LT	536+35.00
									1																				MH1	LT	536+35.00
		3																												LT	536+35.00 to 536+35.00
				44																										LT / RT	536+35.00 to 536+58.00
					1		1																						INLET 102	RT	536+58.00
	26																													LT	546+20.00 to 546+25.00
269	26	85	12	147	4	5	4	5	2																				TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:16:07 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	26 OF 56
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 3, TYPE B 0212 0008 SY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	NO. 3 COARSE AGGREGATE 0703 0026 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH 0804 0025 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH 0804 0027 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH 0804 0028 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH 0804 0033 LB	SEEDING - FORMULA T TEMPORARY GRASS MIX 0804 0043 LB	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C 0806 0112 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D 0806 0113 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-6 0850 0034 CY	ROCK, CLASS R-8 0850 0036 CY	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET 0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET 0860 0012 EACH	CLEANING SEDIMENTATION STRUCTURES 0861 0001 CY	ITEM NUMBER	UNIT	REMARKS	SIDE	STATIONS
																														STAGE 1		
																														AS DIRECTED - MUTLIPLE LOCATIONS		0+00.00
											223																				LT	7+63.00 to 501+70.00
												86																			RT	7+66.00 to 8+62.00
			223																											FS-37	RT	7+74.00 to 8+49.00
			223																											STOCKPILE	RT	7+75.00 to 8+39.00
			223																											FS-24	LT	7+76.00 to 7+79.00
																														FS-15	RT	8+56.00 to 8+76.00
														1																	RT	8+62.00 to 8+84.00
											131																				RT	9+00.00 to 10+10.00
																															LT / RT	9+41.00 to 12+96.00
															7															A-303	LT	9+60.00
			14																											A-303	LT	9+60.00
																														FS-26	LT	9+92.00 to 11+20.00
																														FS-27	LT	11+39.00 to 12+77.00
																														FS-28	LT	12+88.00 to 13+67.00
250																														SEDIMENT TRAP	LT	12+96.00 to 13+23.00
	250																													SEDIMENT TRAP	LT	12+96.00 to 13+23.00
											102																				LT	12+96.00 to 15+09.00
											115																				LT	12+98.00 to 15+20.00
43																														SEDIMENT TRAP	LT	13+23.00 to 13+89.00
	43																													SEDIMENT TRAP	LT	13+23.00 to 13+89.00
																														FS-29	LT	13+70.00 to 15+34.00
																									1					IN201	LT	13+89.00
43																														SEDIMENT TRAP	LT	13+89.00 to 14+24.00
	43																													SEDIMENT TRAP	LT	13+89.00 to 14+24.00
6																														SEDIMENT TRAP	LT	14+24.00 to 15+20.00
	6																													SEDIMENT TRAP	LT	14+24.00 to 15+20.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	27 OF 56
				ELMHURST TOWNSHIP				

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BENJAMIN R. MARTZ — PE081839

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	TEMPORARY BERM	TEMPORARY PIPE BY-PASS STREAM DIVERSION	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	TEMPORARY PIPE FLUME STREAM DIVERSION	BRACED SHEET PILE COFFERDAM STREAM DIVERSION	PERMANENT PAWC ACCESS ROAD	TEMPORARY STAGING AREA	CRANE PAD	TEMPORARY ACCESS ROADS	TEMPORARY WETLAND CROSSING	AMENDED SOILS	TOPSOIL RESTORATION										REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	0868 0113 SY	9000 0001 LS	9000 0002 LS	9000 0003 LS	9000 0004 LS	9000 0005 LS	9000 0006 LS	9000 0007 LS	9000 0008 LS	9000 0009 LS	9000 0010 EACH	9000 0011 CY	9000 0012 SY										ITEM NUMBER UNIT		
																										STAGE 1		
													X													AS DIRECTED - MUTLIPLE LOCATIONS		0+00.00
																											LT	7+63.00 to 501+70.00
																											RT	7+66.00 to 8+62.00
	150																									FS-37	RT	7+74.00 to 8+49.00
																										STOCKPILE	RT	7+75.00 to 8+39.00
29																										FS-24	LT	7+76.00 to 7+79.00
160																										FS-15	RT	8+56.00 to 8+76.00
																											RT	8+62.00 to 8+84.00
																											RT	9+00.00 to 10+10.00
				X																							LT / RT	9+41.00 to 12+96.00
																										A-303	LT	9+60.00
																										A-303	LT	9+60.00
132																										FS-26	LT	9+92.00 to 11+20.00
144																										FS-27	LT	11+39.00 to 12+77.00
84																										FS-28	LT	12+88.00 to 13+67.00
																										SEDIMENT TRAP	LT	12+96.00 to 13+23.00
																										SEDIMENT TRAP	LT	12+96.00 to 13+23.00
																											LT	12+96.00 to 15+09.00
																											LT	12+98.00 to 15+20.00
																										SEDIMENT TRAP	LT	13+23.00 to 13+89.00
																										SEDIMENT TRAP	LT	13+23.00 to 13+89.00
169																										FS-29	LT	13+70.00 to 15+34.00
																										IN201	LT	13+89.00
																										SEDIMENT TRAP	LT	13+89.00 to 14+24.00
																										SEDIMENT TRAP	LT	13+89.00 to 14+24.00
																										SEDIMENT TRAP	LT	14+24.00 to 15+20.00
																										SEDIMENT TRAP	LT	14+24.00 to 15+20.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	28 OF 56
				ELMHURST TOWNSHIP				

0203 0001 CLASS 1 EXCAVATION CY	0205 0100 FOREIGN BORROW EXCAVATION CY	0212 0008 GEOTEXTILE, CLASS 3, TYPE B SY	0212 0014 GEOTEXTILE, CLASS 4, TYPE A SY	0703 0025 NO. 57 COARSE AGGREGATE CY	0703 0026 NO. 3 COARSE AGGREGATE CY	0804 0025 SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH LB	0804 0027 SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH LB	0804 0028 SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH LB	0804 0033 SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH LB	0804 0043 SEEDING - FORMULA T TEMPORARY GRASS MIX LB	0806 0112 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C SY	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D SY	0811 0003 TEMPORARY PROTECTIVE FENCE LF	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK EACH	0850 0031 ROCK, CLASS R-3 CY	0850 0032 ROCK, CLASS R-4 CY	0850 0033 ROCK, CLASS R-5 CY	0850 0034 ROCK, CLASS R-6 CY	0850 0036 ROCK, CLASS R-8 CY	0855 0003 PUMPED WATER FILTER BAG EACH	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG EACH	0860 0000 INLET FILTER BAG FOR TYPE M INLET EACH	0860 0002 INLET FILTER BAG FOR TYPE C INLET EACH	0860 0010 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET EACH	0860 0012 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET EACH	0861 0001 CLEANING SEDIMENTATION STRUCTURES CY	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
		7																									SEDIMENT TRAP	RT	15+02.00 to 15+27.00
			8																								SEDIMENT TRAP	RT	15+02.00 to 15+27.00
																										83	SEDIMENT TRAP	RT	15+02.00 to 15+27.00
											9																	LT	15+10.00 to 15+14.00
											1133																	LT	15+10.00 to 501+80.00
																											FS-46	LT	15+20.00 to 15+75.00
											82																	LT	15+24.00 to 16+03.00
																							1				IN202	LT	15+26.00
															34												RIPRAP CHANNEL - 4A	LT	15+29.00 to 15+99.00
					11																						RIPRAP CHANNEL - 4A	LT	15+29.00 to 15+99.00
														6													RIPRAP CHANNEL - 4B	LT	15+30.00 to 15+78.00
					4																						RIPRAP CHANNEL - 4B	LT	15+30.00 to 15+78.00
																											FS-30	LT	15+33.00 to 15+38.00
															3												A-304	LT	15+80.00
			6																								A-304	LT	15+80.00
																											FS-40	LT	16+02.00 to 16+20.00
											150																	RT	16+43.00 to 16+93.00
											76																	LT	16+95.00 to 17+57.00
																											FS-41	LT	17+50.00 to 18+00.00
																											FS-42	LT	18+12.00 to 18+28.00
																											FS-43	LT	18+42.00 to 19+00.00
																											FS-44	LT	19+04.00 to 19+99.00
																											FS-45	LT	20+30.00 to 549+71.00
					3																						RIPRAP CHANNEL - 1D	RT	22+84.00 to 23+37.00
														20													RIPRAP CHANNEL - 1C	RT	23+37.00 to 24+46.00
					13																						RIPRAP CHANNEL - 1C	RT	23+37.00 to 24+46.00
														1														RT	24+57.00 to 25+39.00
														12													RIPRAP CHANNEL - 1B	RT	24+61.00 to 25+61.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	29 OF 56
				ELMHURST TOWNSHIP				

0867 0012 LF COMPOST FILTER SOCK, 12" DIAMETER	0867 0018 LF COMPOST FILTER SOCK, 18" DIAMETER	0867 0022 LF COMPOST FILTER SOCK, 24" DIAMETER	0867 0032 LF COMPOST FILTER SOCK, 32" DIAMETER	0868 0113 SY COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	9000 0001 LS TEMPORARY BERM	9000 0002 LS TEMPORARY PIPE BY-PASS STREAM DIVERSION	9000 0003 LS TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	9000 0004 LS TEMPORARY PIPE FLUME STREAM DIVERSION	9000 0005 LS BRACED SHEET PILE COFFERDAM STREAM DIVERSION	9000 0006 LS PERMANENT PAWC ACCESS ROAD	9000 0007 LS TEMPORARY STAGING AREA	9000 0008 LS CRANE PAD	9000 0009 LS TEMPORARY ACCESS ROADS	9000 0010 EACH TEMPORARY WETLAND CROSSING	9000 0011 CY AMENDED SOILS	9000 0012 SY TOPSOIL RESTORATION	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																		SEDIMENT TRAP	RT	15+02.00 to 15+27.00
																		SEDIMENT TRAP	RT	15+02.00 to 15+27.00
																		SEDIMENT TRAP	RT	15+02.00 to 15+27.00
																			LT	15+10.00 to 15+14.00
																			LT	15+10.00 to 501+80.00
		60																FS-46	LT	15+20.00 to 15+75.00
																			LT	15+24.00 to 16+03.00
																		IN202	LT	15+26.00
																		RIPRAP CHANNEL - 4A	LT	15+29.00 to 15+99.00
																		RIPRAP CHANNEL - 4A	LT	15+29.00 to 15+99.00
																		RIPRAP CHANNEL - 4B	LT	15+30.00 to 15+78.00
																		RIPRAP CHANNEL - 4B	LT	15+30.00 to 15+78.00
59																		FS-30	LT	15+33.00 to 15+38.00
																		A-304	LT	15+80.00
																		A-304	LT	15+80.00
	30																	FS-40	LT	16+02.00 to 16+20.00
																			RT	16+43.00 to 16+93.00
																			LT	16+95.00 to 17+57.00
	79																	FS-41	LT	17+50.00 to 18+00.00
32																		FS-42	LT	18+12.00 to 18+28.00
68																		FS-43	LT	18+42.00 to 19+00.00
95																		FS-44	LT	19+04.00 to 19+99.00
145																		FS-45	LT	20+30.00 to 549+71.00
																		RIPRAP CHANNEL - 1D	RT	22+84.00 to 23+37.00
																		RIPRAP CHANNEL - 1C	RT	23+37.00 to 24+46.00
																		RIPRAP CHANNEL - 1C	RT	23+37.00 to 24+46.00
																			RT	24+57.00 to 25+39.00
																		RIPRAP CHANNEL - 1B	RT	24+61.00 to 25+61.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

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0203 0001 CLASS 1 EXCAVATION CY	0205 0100 FOREIGN BORROW EXCAVATION CY	0212 0008 GEOTEXTILE, CLASS 3, TYPE B SY	0212 0014 GEOTEXTILE, CLASS 4, TYPE A SY	0703 0025 NO. 57 COARSE AGGREGATE CY	0703 0026 NO. 3 COARSE AGGREGATE CY	0804 0025 SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH LB	0804 0027 SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH LB	0804 0028 SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH LB	0804 0033 SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH LB	0804 0043 SEEDING - FORMULA T TEMPORARY GRASS MIX LB	0806 0112 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C SY	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D SY	0811 0003 TEMPORARY PROTECTIVE FENCE LF	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK EACH	0850 0031 ROCK, CLASS R-3 CY	0850 0032 ROCK, CLASS R-4 CY	0850 0033 ROCK, CLASS R-5 CY	0850 0034 ROCK, CLASS R-6 CY	0850 0036 ROCK, CLASS R-8 CY	0855 0003 PUMPED WATER FILTER BAG EACH	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG EACH	0860 0000 INLET FILTER BAG FOR TYPE M INLET EACH	0860 0002 INLET FILTER BAG FOR TYPE C INLET EACH	0860 0010 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET EACH	0860 0012 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET EACH	0861 0001 CLEANING SEDIMENTATION STRUCTURES CY	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
					8																							RIPRAP CHANNEL - 1B	RT	24+61.00 to 25+61.00
																												FS-31	LT	25+08.00 to 25+89.00
																							1		1			INLET NO. 100	LT	25+55.00
																							1		1			INLET NO. 101	RT	25+55.00
											40																		RT	25+59.00 to 25+93.00
															30													RIPRAP CHANNEL - 1A	RT	25+61.00 to 25+98.00
					10																							RIPRAP CHANNEL - 1A	RT	25+61.00 to 25+98.00
																												FS-33	LT	25+71.00 to 25+76.00
															4													A-309	RT	25+80.00
			9																									A-309	RT	25+80.00
																												FS-32	LT	25+80.00 to 25+85.00
																												FS-34	LT	26+02.00 to 26+14.00
											21																		RT	26+14.00 to 26+28.00
											32																		RT	26+35.00 to 27+37.00
											198																		LT	26+83.00 to 28+56.00
													426																LT / RT	27+28.00 to 532+95.00
													395																LT / RT	27+35.00 to 533+40.00
											72																		RT	27+64.00 to 28+34.00
													23																RT	27+75.00 to 27+95.00
													22																RT	27+75.00 to 27+95.00
																												FS-25	RT	501+24.00 to 501+94.00
														1															LT / RT	501+50.00 to 501+96.00
							33																					SEDIMENT TRAP	RT	528+00.00 to 529+00.00
																							1		1			EXISTING INLET	LT	529+70.00
																							1		1			EXISTING INLET	LT	530+25.00
																													LT	534+00.00 to 535+50.00
																													LT / RT	534+65.00 to 8+56.00
																						1							RT	534+81.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TABULATION OF QUANTITIES
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REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	TEMPORARY BERM	TEMPORARY PIPE BY-PASS STREAM DIVERSION	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	TEMPORARY PIPE FLUME STREAM DIVERSION	BRACED SHEET PILE COFFERDAM STREAM DIVERSION	PERMANENT PAWC ACCESS ROAD	TEMPORARY STAGING AREA	CRANE PAD	TEMPORARY ACCESS ROADS	TEMPORARY WETLAND CROSSING	AMENDED SOILS	TOPSOIL RESTORATION										REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	0868 0113 SY	9000 0001 LS	9000 0002 LS	9000 0003 LS	9000 0004 LS	9000 0005 LS	9000 0006 LS	9000 0007 LS	9000 0008 LS	9000 0009 LS	9000 0010 EACH	9000 0011 CY	9000 0012 SY										ITEM NUMBER UNIT		
																										RIPRAP CHANNEL - 1B	RT	24+61.00 to 25+61.00
	105																									FS-31	LT	25+08.00 to 25+89.00
																										INLET NO. 100	LT	25+55.00
																										INLET NO. 101	RT	25+55.00
																											RT	25+59.00 to 25+93.00
																										RIPRAP CHANNEL - 1A	RT	25+61.00 to 25+98.00
																										RIPRAP CHANNEL - 1A	RT	25+61.00 to 25+98.00
15																										FS-33	LT	25+71.00 to 25+76.00
																										A-309	RT	25+80.00
																										A-309	RT	25+80.00
			14																							FS-32	LT	25+80.00 to 25+85.00
	26																									FS-34	LT	26+02.00 to 26+14.00
																											RT	26+14.00 to 26+28.00
																											RT	26+35.00 to 27+37.00
																											LT	26+83.00 to 28+56.00
																											LT / RT	27+28.00 to 532+95.00
																											LT / RT	27+35.00 to 533+40.00
																											RT	27+64.00 to 28+34.00
																											RT	27+75.00 to 27+95.00
																											RT	27+75.00 to 27+95.00
	97																									FS-25	RT	501+24.00 to 501+94.00
																											LT / RT	501+50.00 to 501+96.00
																										SEDIMENT TRAP	RT	528+00.00 to 529+00.00
																										EXISTING INLET	LT	529+70.00
																										EXISTING INLET	LT	530+25.00
							X																				LT	534+00.00 to 535+50.00
										X																	LT / RT	534+65.00 to 8+56.00
																											RT	534+81.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

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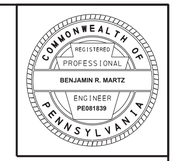
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 3, TYPE B 0212 0008 SY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	NO. 3 COARSE AGGREGATE 0703 0026 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH 0804 0025 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH 0804 0027 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH 0804 0028 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH 0804 0033 LB	SEEDING - FORMULA T TEMPORARY GRASS MIX 0804 0043 LB	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C 0806 0112 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D 0806 0113 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-6 0850 0034 CY	ROCK, CLASS R-8 0850 0036 CY	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET 0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET 0860 0012 EACH	CLEANING SEDIMENTATION STRUCTURES 0861 0001 CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
																					1								LT	534+86.00
											28																		LT	534+88.00 to 535+30.00
					22																								STREAM CROSSING	LT	534+88.00 to 535+53.00
			100																										STREAM CROSSING	LT	534+88.00 to 535+53.00
																													STREAM CROSSING	LT	534+88.00 to 535+53.00
											35																			LT	534+99.00 to 535+80.00
											75																			LT	535+01.00 to 535+19.00
			5																										A-306	LT	535+35.00
															1														A-306	RT	535+35.00
											81																			LT	535+35.00 to 535+54.00
																													FS-16	LT	535+39.00 to 535+62.00
																														LT	535+55.00 to 536+42.00
																														LT	536+11.00 to 536+29.00
													88																	LT	536+32.00 to 536+91.00
													722																	LT	538+28.00 to 544+20.00
			765																										STREAMBANK RESTORATION	RT	542+66.00 to 543+82.00
																				1530									STREAMBANK RESTORATION	RT	542+66.00 to 543+82.00
																														LT / RT	543+00.00 to 545+00.00
					10																								RIPRAP CHANNEL - 3A	RT	543+50.00
																	46												RIPRAP CHANNEL - 3A	RT	543+50.00
					10																								RIPRAP CHANNEL - 3B	RT	543+70.00
																	46												RIPRAP CHANNEL - 3B	RT	543+70.00
					5																								RIPRAP CHANNEL - 3C	RT	543+80.00
																	22												RIPRAP CHANNEL - 3C	RT	543+80.00
													308																	RT	544+32.00 to 546+07.00
													158																	LT	545+66.00 to 547+01.00
																					1									LT	545+69.00
																						1								LT	545+86.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

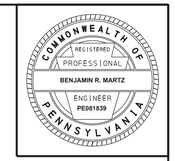
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	33 OF 56
				ELMHURST TOWNSHIP				

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	TEMPORARY BERM	TEMPORARY PIPE BY-PASS STREAM DIVERSION	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	TEMPORARY PIPE FLUME STREAM DIVERSION	BRACED SHEET PILE COFFERDAM STREAM DIVERSION	PERMANENT PAWC ACCESS ROAD	TEMPORARY STAGING AREA	CRANE PAD	TEMPORARY ACCESS ROADS	TEMPORARY WETLAND CROSSING	AMENDED SOILS	TOPSOIL RESTORATION											REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	0868 0113 SY	9000 0001 LS	9000 0002 LS	9000 0003 LS	9000 0004 LS	9000 0005 LS	9000 0006 LS	9000 0007 LS	9000 0008 LS	9000 0009 LS	9000 0010 EACH	9000 0011 CY	9000 0012 SY											ITEM NUMBER UNIT		
																												LT	534+86.00
																												LT	534+88.00 to 535+30.00
																											STREAM CROSSING	LT	534+88.00 to 535+53.00
																											STREAM CROSSING	LT	534+88.00 to 535+53.00
																											STREAM CROSSING	LT	534+88.00 to 535+53.00
																												LT	534+99.00 to 535+80.00
																												LT	535+01.00 to 535+19.00
																											A-306	LT	535+35.00
																											A-306	RT	535+35.00
																												LT	535+35.00 to 535+54.00
	58																										FS-16	LT	535+39.00 to 535+62.00
											X																	LT	535+55.00 to 536+42.00
														1														LT	536+11.00 to 536+29.00
																												LT	536+32.00 to 536+91.00
																												LT	538+28.00 to 544+20.00
																											STREAMBANK RESTORATION	RT	542+66.00 to 543+82.00
																											STREAMBANK RESTORATION	RT	542+66.00 to 543+82.00
						X																						LT / RT	543+00.00 to 545+00.00
																											RIPRAP CHANNEL - 3A	RT	543+50.00
																											RIPRAP CHANNEL - 3A	RT	543+50.00
																											RIPRAP CHANNEL - 3B	RT	543+70.00
																											RIPRAP CHANNEL - 3B	RT	543+70.00
																											RIPRAP CHANNEL - 3C	RT	543+80.00
																											RIPRAP CHANNEL - 3C	RT	543+80.00
																												RT	544+32.00 to 546+07.00
																												LT	545+66.00 to 547+01.00
																												LT	545+69.00
																												LT	545+86.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	34 OF 56
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION	FOREIGN BORROW EXCAVATION	GEOTEXTILE, CLASS 3, TYPE B	GEOTEXTILE, CLASS 4, TYPE A	NO. 57 COARSE AGGREGATE	NO. 3 COARSE AGGREGATE	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH	SEEDING - FORMULA T TEMPORARY GRASS MIX	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	ROCK, CLASS R-3	ROCK, CLASS R-4	ROCK, CLASS R-5	ROCK, CLASS R-6	ROCK, CLASS R-8	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET	CLEANING SEDIMENTATION STRUCTURES	REMARKS	SIDE	STATIONS
0203 0001 CY	0205 0100 CY	0212 0008 SY	0212 0014 SY	0703 0025 CY	0703 0026 CY	0804 0025 LB	0804 0027 LB	0804 0028 LB	0804 0033 LB	0804 0043 LB	0806 0112 SY	0806 0113 SY	0811 0003 LF	0849 0020 EACH	0850 0031 CY	0850 0032 CY	0850 0033 CY	0850 0034 CY	0850 0036 CY	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0860 0010 EACH	0860 0012 EACH	0861 0001 CY	ITEM NUMBER UNIT		
																											STAGE 2		
																											AS DIRECTED - MULTIPLE LOCATION		0+00.00
			12																								A-310	LT	11+50.00
																6											A-310	LT	11+50.00
			12																								A-301	LT	13+95.00
																6											A-301	LT	13+95.00
																				1								LT	17+66.00
																					1							LT	17+83.00
											327																	RT	530+92.00 to 532+78.00
																											FS-9	RT	532+15.00 to 532+29.00
																											FS-10	RT	532+30.00 to 532+78.00
											111																	LT	532+78.00 to 533+22.00
																											FS-11	LT / RT	532+79.00 to 533+32.00
																												LT	534+00.00 to 535+50.00
																		266									STREAM CROSSING	LT	534+88.00 to 535+53.00
																											FS-13	LT	535+53.00 to 535+59.00
																											FS-14	LT	535+54.00 to 535+69.00
																											FS-12	RT	535+54.00 to 535+90.00
											523																	LT / RT	535+58.00 to 537+25.00
																											FS-17	RT	535+97.00 to 536+52.00
																						1		1			INLET NO. 103	LT	536+36.00
											477																	LT	536+37.00 to 538+10.00
																											FS-18	LT	536+53.00 to 537+01.00
																						1		1			INLET NO. 102	LT	536+58.00
														1														LT	536+90.00 to 538+15.00
																											FS-19	RT	537+01.00 to 537+82.00
																											FS-20	RT	537+83.00 to 539+24.00
																											FS-21	RT	539+24.00 to 540+18.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	35 OF 56
				ELMHURST TOWNSHIP				

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	TEMPORARY BERM	TEMPORARY PIPE BY-PASS STREAM DIVERSION	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	TEMPORARY PIPE FLUME STREAM DIVERSION	BRACED SHEET PILE COFFERDAM STREAM DIVERSION	PERMANENT PAWC ACCESS ROAD	TEMPORARY STAGING AREA	CRANE PAD	TEMPORARY ACCESS ROADS	TEMPORARY WETLAND CROSSING	AMENDED SOILS	TOPSOIL RESTORATION										REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	0868 0113 SY	9000 0001 LS	9000 0002 LS	9000 0003 LS	9000 0004 LS	9000 0005 LS	9000 0006 LS	9000 0007 LS	9000 0008 LS	9000 0009 LS	9000 0010 EACH	9000 0011 CY	9000 0012 SY										ITEM NUMBER UNIT		
																										STAGE 2		
												X														AS DIRECTED - MULTIPLE LOCATION		0+00.00
																										A-310	LT	11+50.00
																										A-310	LT	11+50.00
																										A-301	LT	13+95.00
																										A-301	LT	13+95.00
																											LT	17+66.00
																											LT	17+83.00
																											RT	530+92.00 to 532+78.00
			16																							FS-9	RT	532+15.00 to 532+29.00
			63																							FS-10	RT	532+30.00 to 532+78.00
																											LT	532+78.00 to 533+22.00
			78																							FS-11	LT / RT	532+79.00 to 533+32.00
								X																			LT	534+00.00 to 535+50.00
																										STREAM CROSSING	LT	534+88.00 to 535+53.00
			28																							FS-13	LT	535+53.00 to 535+59.00
			54																							FS-14	LT	535+54.00 to 535+69.00
			74																							FS-12	RT	535+54.00 to 535+90.00
																											LT / RT	535+58.00 to 537+25.00
	59																									FS-17	RT	535+97.00 to 536+52.00
																										INLET NO. 103	LT	536+36.00
																											LT	536+37.00 to 538+10.00
	50																									FS-18	LT	536+53.00 to 537+01.00
																										INLET NO. 102	LT	536+58.00
																											LT	536+90.00 to 538+15.00
	83																									FS-19	RT	537+01.00 to 537+82.00
	144																									FS-20	RT	537+83.00 to 539+24.00
	100																									FS-21	RT	539+24.00 to 540+18.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	36 OF 56
				ELMHURST TOWNSHIP				

0203 0001 CLASS 1 EXCAVATION CY	0205 0100 FOREIGN BORROW EXCAVATION CY	0212 0008 GEOTEXTILE, CLASS 3, TYPE B SY	0212 0014 GEOTEXTILE, CLASS 4, TYPE A SY	0703 0025 NO. 57 COARSE AGGREGATE CY	0703 0026 NO. 3 COARSE AGGREGATE CY	0804 0025 SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH LB	0804 0027 SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH LB	0804 0028 SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH LB	0804 0033 SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH LB	0804 0043 SEEDING - FORMULA T TEMPORARY GRASS MIX LB	0806 0112 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C SY	0806 0113 TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D SY	0811 0003 TEMPORARY PROTECTIVE FENCE LF	0849 0020 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK EACH	0850 0031 ROCK, CLASS R-3 CY	0850 0032 ROCK, CLASS R-4 CY	0850 0033 ROCK, CLASS R-5 CY	0850 0034 ROCK, CLASS R-6 CY	0850 0036 ROCK, CLASS R-8 CY	0855 0003 PUMPED WATER FILTER BAG EACH	0855 0004 REPLACEMENT PUMPED WATER FILTER BAG EACH	0860 0000 INLET FILTER BAG FOR TYPE M INLET EACH	0860 0002 INLET FILTER BAG FOR TYPE C INLET EACH	0860 0010 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET EACH	0860 0012 CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET EACH	0861 0001 CLEANING SEDIMENTATION STRUCTURES CY	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																											FS-22	RT	540+18.00 to 540+90.00
																											FS-23	RT	540+90.00 to 541+85.00
											244																	RT	541+89.00 to 542+49.00
													265															RT	542+79.00 to 544+37.00
											283																	RT	542+82.00 to 544+18.00
			14																								A-307	RT	543+36.00
																			11								A-307	RT	543+36.00
														1														RT	544+34.00 to 544+78.00
																											FS-38	RT	545+68.00 to 546+06.00
																											STAGE 3		
										41																	ENTIRE PROJECT	LT / RT	0+00.00
															2												ROCK FILTER	LT	15+02.00 to 15+27.00
				1																							ROCK FILTER	LT	15+02.00 to 15+27.00
															3												SEDIMENT TRAP	LT	15+02.00 to 15+27.00
															18												SEDIMENT TRAP	LT	15+02.00 to 15+27.00
				11																							SEDIMENT TRAP	LT	15+02.00 to 15+27.00
												834																RT	22+29.00 to 24+62.00
								7																			INFILTRATION BERM	RT	22+29.00 to 24+62.00
															4												INFILTRATION BERM	RT	22+46.00 to 23+65.00
																						1		1			INLET NO. 105	LT	22+56.00
								1																				LT	22+56.00 to 23+03.00
																												LT	22+56.00 to 23+03.00
																												LT	22+56.00 to 23+03.00
						7																						LT	22+56.00 to 23+08.00
								1																			INFILTRATION BERM	RT	22+57.00 to 23+42.00
																											INFILTRATION BERM	RT	22+57.00 to 23+42.00
																						1		1			INLET NO. 106	LT	23+06.00
						1																						LT	23+09.00 to 23+51.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	37 OF 56
				ELMHURST TOWNSHIP				

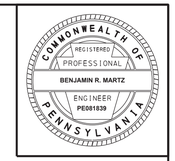
COMPOST FILTER SOCK, 12" DIAMETER 0867 0012 LF	COMPOST FILTER SOCK, 18" DIAMETER 0867 0018 LF	COMPOST FILTER SOCK, 24" DIAMETER 0867 0022 LF	COMPOST FILTER SOCK, 32" DIAMETER 0867 0032 LF	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX 0868 0113 SY	TEMPORARY BERM 9000 0001 LS	TEMPORARY PIPE BY-PASS STREAM DIVERSION 9000 0002 LS	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION 9000 0003 LS	TEMPORARY PIPE FLUME STREAM DIVERSION 9000 0004 LS	BRACED SHEET PILE COFFERDAM STREAM DIVERSION 9000 0005 LS	PERMANENT PAWC ACCESS ROAD 9000 0006 LS	TEMPORARY STAGING AREA 9000 0007 LS	CRANE PAD 9000 0008 LS	TEMPORARY ACCESS ROADS 9000 0009 LS	TEMPORARY WETLAND CROSSING 9000 0010 EACH	AMENDED SOILS 9000 0011 CY	TOPSOIL RESTORATION 9000 0012 SY	REMARKS	SIDE	STATIONS
	81																FS-22	RT	540+18.00 to 540+90.00
	101																FS-23	RT	540+90.00 to 541+85.00
																		RT	541+89.00 to 542+49.00
																		RT	542+79.00 to 544+37.00
																		RT	542+82.00 to 544+18.00
																	A-307	RT	543+36.00
																	A-307	RT	543+36.00
																		RT	544+34.00 to 544+78.00
	43																FS-38	RT	545+68.00 to 546+06.00
																	STAGE 3		
																	ENTIRE PROJECT	LT / RT	0+00.00
																	ROCK FILTER	LT	15+02.00 to 15+27.00
																	ROCK FILTER	LT	15+02.00 to 15+27.00
																	SEDIMENT TRAP	LT	15+02.00 to 15+27.00
																	SEDIMENT TRAP	LT	15+02.00 to 15+27.00
																	SEDIMENT TRAP	LT	15+02.00 to 15+27.00
																		RT	22+29.00 to 24+62.00
																	INFILTRATION BERM	RT	22+29.00 to 24+62.00
																	INFILTRATION BERM	RT	22+46.00 to 23+65.00
																	INLET NO. 105	LT	22+56.00
																		LT	22+56.00 to 23+03.00
															17			LT	22+56.00 to 23+03.00
																101		LT	22+56.00 to 23+03.00
																		LT	22+56.00 to 23+08.00
																	INFILTRATION BERM	RT	22+57.00 to 23+42.00
															60		INFILTRATION BERM	RT	22+57.00 to 23+42.00
																	INLET NO. 106	LT	23+06.00
																		LT	23+09.00 to 23+51.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	38 OF 56
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION	FOREIGN BORROW EXCAVATION	GEOTEXTILE, CLASS 3, TYPE B	GEOTEXTILE, CLASS 4, TYPE A	NO. 57 COARSE AGGREGATE	NO. 3 COARSE AGGREGATE	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH	SEEDING - FORMULA T TEMPORARY GRASS MIX	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	ROCK, CLASS R-3	ROCK, CLASS R-4	ROCK, CLASS R-5	ROCK, CLASS R-6	ROCK, CLASS R-8	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET	CLEANING SEDIMENTATION STRUCTURES	REMARKS	SIDE	STATIONS
0203 0001 CY	0205 0100 CY	0212 0008 SY	0212 0014 SY	0703 0025 CY	0703 0026 CY	0804 0025 LB	0804 0027 LB	0804 0028 LB	0804 0033 LB	0804 0043 LB	0806 0112 SY	0806 0113 SY	0811 0003 LF	0849 0020 EACH	0850 0031 CY	0850 0032 CY	0850 0033 CY	0850 0034 CY	0850 0036 CY	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0860 0010 EACH	0860 0012 EACH	0861 0001 CY	ITEM NUMBER UNIT		
			11																								INFILTRATION BERM	RT	23+46.00 to 23+65.00
								0.44																			INFILTRATION BERM	RT	23+62.00 to 23+84.00
																											INFILTRATION BERM	RT	23+62.00 to 23+84.00
						2																						LT	23+74.00 to 24+78.00
			16																								INFILTRATION BERM	RT	23+86.00 to 24+19.00
															5												INFILTRATION BERM	RT	23+86.00 to 24+19.00
								0.42																			INFILTRATION BERM	RT	24+19.00 to 24+42.00
																											INFILTRATION BERM	RT	24+19.00 to 24+42.00
											4																INFILTRATION BERM	RT	24+39.00 to 24+51.00
									0.38																			RT	25+12.00 to 25+93.00
									1.27																			LT	25+14.00 to 25+94.00
									0.91																			RT	25+17.00 to 25+93.00
									0.6																			LT	25+82.00 to 26+27.00
									0.84																			RT	26+09.00 to 26+37.00
																											WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
																											WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
								3																			WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
																											WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
						37																						LT	26+18.00 to 28+96.00
																											WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																											WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
								3																			WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																											WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																											WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
							25																					RT	26+32.00 to 29+30.00
																											WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
																											WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
								2																			WOODLAND RESTORATION	LT	26+66.00 to 28+59.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	39 OF 56
				ELMHURST TOWNSHIP				

COMPOST FILTER SOCK, 12" DIAMETER 0867 0012 LF	COMPOST FILTER SOCK, 18" DIAMETER 0867 0018 LF	COMPOST FILTER SOCK, 24" DIAMETER 0867 0022 LF	COMPOST FILTER SOCK, 32" DIAMETER 0867 0032 LF	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX 0868 0113 SY	TEMPORARY BERM 9000 0001 LS	TEMPORARY PIPE BY-PASS STREAM DIVERSION 9000 0002 LS	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION 9000 0003 LS	TEMPORARY PIPE FLUME STREAM DIVERSION 9000 0004 LS	BRACED SHEET PILE COFFERDAM STREAM DIVERSION 9000 0005 LS	PERMANENT PAWC ACCESS ROAD 9000 0006 LS	TEMPORARY STAGING AREA 9000 0007 LS	CRANE PAD 9000 0008 LS	TEMPORARY ACCESS ROADS 9000 0009 LS	TEMPORARY WETLAND CROSSING 9000 0010 EACH	AMENDED SOILS 9000 0011 CY	TOPSOIL RESTORATION 9000 0012 SY	ITEM NUMBER UNIT	REMARKS	SIDE	STATIONS
																		INFILTRATION BERM	RT	23+46.00 to 23+65.00
																		INFILTRATION BERM	RT	23+62.00 to 23+84.00
															37			INFILTRATION BERM	RT	23+62.00 to 23+84.00
																			LT	23+74.00 to 24+78.00
																		INFILTRATION BERM	RT	23+86.00 to 24+19.00
																		INFILTRATION BERM	RT	23+86.00 to 24+19.00
																		INFILTRATION BERM	RT	24+19.00 to 24+42.00
																		INFILTRATION BERM	RT	24+19.00 to 24+42.00
															35			INFILTRATION BERM	RT	24+19.00 to 24+42.00
																		INFILTRATION BERM	RT	24+39.00 to 24+51.00
																			RT	25+12.00 to 25+93.00
																			LT	25+14.00 to 25+94.00
																			RT	25+17.00 to 25+93.00
																			LT	25+82.00 to 26+27.00
																			RT	26+09.00 to 26+37.00
																349		WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
															58			WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
																		WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
				349														WOODLAND RESTORATION	RT	26+15.00 to 26+95.00
																			LT	26+18.00 to 28+96.00
																347		WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
															58			WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																		WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
				347														WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																		WOODLAND RESTORATION	RT	26+26.00 to 27+35.00
																			RT	26+32.00 to 29+30.00
																192		WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
															32			WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
																		WOODLAND RESTORATION	LT	26+66.00 to 28+59.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	40 OF 56
				ELMHURST TOWNSHIP				

CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 3, TYPE B 0212 0008 SY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	NO. 3 COARSE AGGREGATE 0703 0026 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH 0804 0025 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH 0804 0027 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH 0804 0028 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH 0804 0033 LB	SEEDING - FORMULA T TEMPORARY GRASS MIX 0804 0043 LB	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C 0806 0112 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D 0806 0113 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-6 0850 0034 CY	ROCK, CLASS R-8 0850 0036 CY	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET 0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET 0860 0012 EACH	CLEANING SEDIMENTATION STRUCTURES 0861 0001 CY	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																												WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
												436																	LT	26+84.00 to 28+60.00
											77																		RT	27+15.00 to 27+75.00
																													RT	27+15.00 to 27+75.00
																												WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
																												WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
								13																				WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
																												WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
						2																							RT	38+55.00 to 39+26.00
																													RT	38+55.00 to 39+26.00
							8																						RT	528+00.00 to 529+00.00
											429																		RT	529+00.00 to 532+07.00
								12																					RT	529+00.00 to 532+86.00
																												FS-1	RT	529+10.00 to 529+50.00
																												FS-2	RT	529+50.00 to 530+08.00
																												FS-3	RT	530+10.00 to 530+49.00
								4																					LT	530+15.00 to 531+83.00
																													LT	530+15.00 to 531+83.00
																													LT	530+15.00 to 531+83.00
						12																							LT	530+26.00 to 531+18.00
																												FS-4	RT	530+49.00 to 530+70.00
																												FS-5	RT	530+71.00 to 531+07.00
																												FS-6	RT	531+07.00 to 531+40.00
																												FS-7	RT	531+40.00 to 531+88.00
																												FS-8	RT	531+88.00 to 532+09.00
																4												A-308	LT	532+40.00 to -3+08.00
			8																									A-308	LT	532+40.00
								11																					LT	532+92.00 to 534+89.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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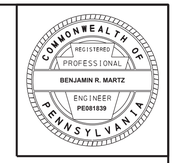
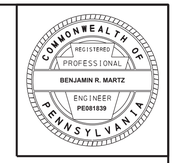
				ELMHURST TOWNSHIP				



COMPOST FILTER SOCK, 12" DIAMETER 0867 0012 LF	COMPOST FILTER SOCK, 18" DIAMETER 0867 0018 LF	COMPOST FILTER SOCK, 24" DIAMETER 0867 0022 LF	COMPOST FILTER SOCK, 32" DIAMETER 0867 0032 LF	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX 0868 0113 SY	TEMPORARY BERM 9000 0001 LS	TEMPORARY PIPE BY-PASS STREAM DIVERSION 9000 0002 LS	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION 9000 0003 LS	TEMPORARY PIPE FLUME STREAM DIVERSION 9000 0004 LS	BRACED SHEET PILE COFFERDAM STREAM DIVERSION 9000 0005 LS	PERMANENT PAWC ACCESS ROAD 9000 0006 LS	TEMPORARY STAGING AREA 9000 0007 LS	CRANE PAD 9000 0008 LS	TEMPORARY ACCESS ROADS 9000 0009 LS	TEMPORARY WETLAND CROSSING 9000 0010 EACH	AMENDED SOILS 9000 0011 CY	TOPSOIL RESTORATION 9000 0012 SY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
				192													WOODLAND RESTORATION	LT	26+66.00 to 28+59.00
																		LT	26+84.00 to 28+60.00
																		RT	27+15.00 to 27+75.00
																		RT	27+15.00 to 27+75.00
																1448	WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
															241		WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
																	WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
				1448													WOODLAND RESTORATION	RT	27+41.00 to 27+94.00
																		RT	38+55.00 to 39+26.00
																		RT	38+55.00 to 39+26.00
																		RT	528+00.00 to 529+00.00
																		RT	529+00.00 to 532+07.00
																		RT	529+00.00 to 532+86.00
		41															FS-1	RT	529+10.00 to 529+50.00
			60														FS-2	RT	529+50.00 to 530+08.00
		42															FS-3	RT	530+10.00 to 530+49.00
																		LT	530+15.00 to 531+83.00
																462		LT	530+15.00 to 531+83.00
															77			LT	530+15.00 to 531+83.00
																		LT	530+26.00 to 531+18.00
			21														FS-4	RT	530+49.00 to 530+70.00
			39														FS-5	RT	530+71.00 to 531+07.00
		38															FS-6	RT	531+07.00 to 531+40.00
			56														FS-7	RT	531+40.00 to 531+88.00
			26														FS-8	RT	531+88.00 to 532+09.00
																	A-308	LT	532+40.00 to -3+08.00
																	A-308	LT	532+40.00
																		LT	532+92.00 to 534+89.00

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	42 OF 56
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION 0203 0001 CY	FOREIGN BORROW EXCAVATION 0205 0100 CY	GEOTEXTILE, CLASS 3, TYPE B 0212 0008 SY	GEOTEXTILE, CLASS 4, TYPE A 0212 0014 SY	NO. 57 COARSE AGGREGATE 0703 0025 CY	NO. 3 COARSE AGGREGATE 0703 0026 CY	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH 0804 0025 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH 0804 0027 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH 0804 0028 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH 0804 0033 LB	SEEDING - FORMULA T TEMPORARY GRASS MIX 0804 0043 LB	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C 0806 0112 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D 0806 0113 SY	TEMPORARY PROTECTIVE FENCE 0811 0003 LF	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK 0849 0020 EACH	ROCK, CLASS R-3 0850 0031 CY	ROCK, CLASS R-4 0850 0032 CY	ROCK, CLASS R-5 0850 0033 CY	ROCK, CLASS R-6 0850 0034 CY	ROCK, CLASS R-8 0850 0036 CY	PUMPED WATER FILTER BAG 0855 0003 EACH	REPLACEMENT PUMPED WATER FILTER BAG 0855 0004 EACH	INLET FILTER BAG FOR TYPE M INLET 0860 0000 EACH	INLET FILTER BAG FOR TYPE C INLET 0860 0002 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET 0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET 0860 0012 EACH	CLEANING SEDIMENTATION STRUCTURES 0861 0001 CY	REMARKS ITEM NUMBER UNIT	SIDE	STATIONS
							5																							RT	533+45.00 to 534+59.00
								1																						LT	534+10.00 to 534+69.00
								1																						LT	534+42.00 to 534+82.00
									0.26																					RT	534+70.00 to 535+04.00
									0.87																					LT	534+83.00 to 535+22.00
							13																							LT	534+87.00 to 536+30.00
																														FS-36	LT	534+90.00 to 535+05.00
									0.2																					RT	535+27.00 to 535+50.00
									0.45																					LT	535+29.00 to 535+53.00
																														FS-39	LT	535+35.00 to 535+45.00
							14																							LT	535+50.00 to 537+33.00
								33																						RT	535+50.00 to 543+06.00
								47																						LT	535+52.00 to 543+51.00
							5																							LT	535+77.00 to 536+69.00
																														RT	535+77.00 to 536+69.00
									1.39																					LT	535+95.00 to 536+85.00
											878																			LT	536+15.00 to 538+11.00
						1																								LT	537+74.00 to 537+96.00
							164																							LT	537+89.00 to 543+19.00
						7																								LT	538+18.00 to 538+95.00
											1246																			LT	539+11.00 to 543+38.00
																														WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
																														WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
								15																						WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
																														WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
									1.37																					RT	541+00.00 to 543+15.00
																														WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
																														WOODLAND RESTORATION	RT	542+36.00 to 545+05.00

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

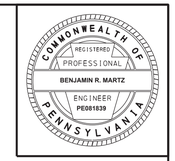
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	43 OF 56
				ELMHURST TOWNSHIP				

0867 0012 LF COMPOST FILTER SOCK, 12" DIAMETER	0867 0018 LF COMPOST FILTER SOCK, 18" DIAMETER	0867 0022 LF COMPOST FILTER SOCK, 24" DIAMETER	0867 0032 LF COMPOST FILTER SOCK, 32" DIAMETER	0868 0113 SY COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	9000 0001 LS TEMPORARY BERM	9000 0002 LS TEMPORARY PIPE BY-PASS STREAM DIVERSION	9000 0003 LS TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	9000 0004 LS TEMPORARY PIPE FLUME STREAM DIVERSION	9000 0005 LS BRACED SHEET PILE COFFERDAM STREAM DIVERSION	9000 0006 LS PERMANENT PAWC ACCESS ROAD	9000 0007 LS TEMPORARY STAGING AREA	9000 0008 LS CRANE PAD	9000 0009 LS TEMPORARY ACCESS ROADS	9000 0010 EACH TEMPORARY WETLAND CROSSING	9000 0011 CY AMENDED SOILS	9000 0012 SY TOPSOIL RESTORATION	ITEM NUMBER UNIT REMARKS	SIDE	STATIONS
																		RT	533+45.00 to 534+59.00
																		LT	534+10.00 to 534+69.00
																		LT	534+42.00 to 534+82.00
																		RT	534+70.00 to 535+04.00
																		LT	534+83.00 to 535+22.00
																		LT	534+87.00 to 536+30.00
			43														FS-36	LT	534+90.00 to 535+05.00
																		RT	535+27.00 to 535+50.00
																		LT	535+29.00 to 535+53.00
			20														FS-39	LT	535+35.00 to 535+45.00
																		LT	535+50.00 to 537+33.00
																		RT	535+50.00 to 543+06.00
																		LT	535+52.00 to 543+51.00
																		LT	535+77.00 to 536+69.00
																		RT	535+77.00 to 536+69.00
																		LT	535+95.00 to 536+85.00
																		LT	536+15.00 to 538+11.00
																		LT	537+74.00 to 537+96.00
																		LT	537+89.00 to 543+19.00
																		LT	538+18.00 to 538+95.00
																		LT	539+11.00 to 543+38.00
															1623		WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
																271	WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
																	WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
				1623													WOODLAND RESTORATION	RT	539+18.00 to 543+98.00
																		RT	541+00.00 to 543+15.00
															2697		WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
																449	WOODLAND RESTORATION	RT	542+36.00 to 545+05.00

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	44 OF 56
				ELMHURST TOWNSHIP				



CLASS 1 EXCAVATION	FOREIGN BORROW EXCAVATION	GEOTEXTILE, CLASS 3, TYPE B	GEOTEXTILE, CLASS 4, TYPE A	NO. 57 COARSE AGGREGATE	NO. 3 COARSE AGGREGATE	SEEDING AND SOIL SUPPLEMENTS - FORMULA B RESIDENTIAL MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA L CLEAR ZONE MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA N CONSERVATION MIX, INCLUDING MULCH	SEEDING AND SOIL SUPPLEMENTS - FORMULA W WETLAND CONSERVATION MIX, INCLUDING MULCH	SEEDING - FORMULA T TEMPORARY GRASS MIX	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2C	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D	TEMPORARY PROTECTIVE FENCE	ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	ROCK, CLASS R-3	ROCK, CLASS R-4	ROCK, CLASS R-5	ROCK, CLASS R-6	ROCK, CLASS R-8	PUMPED WATER FILTER BAG	REPLACEMENT PUMPED WATER FILTER BAG	INLET FILTER BAG FOR TYPE M INLET	INLET FILTER BAG FOR TYPE C INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE C INLET	CLEANING SEDIMENTATION STRUCTURES	REMARKS	SIDE	STATIONS
0203 0001 CY	0205 0100 CY	0212 0008 SY	0212 0014 SY	0703 0025 CY	0703 0026 CY	0804 0025 LB	0804 0027 LB	0804 0028 LB	0804 0033 LB	0804 0043 LB	0806 0112 SY	0806 0113 SY	0811 0003 LF	0849 0020 EACH	0850 0031 CY	0850 0032 CY	0850 0033 CY	0850 0034 CY	0850 0036 CY	0855 0003 EACH	0855 0004 EACH	0860 0000 EACH	0860 0002 EACH	0860 0010 EACH	0860 0012 EACH	0861 0001 CY	ITEM NUMBER / UNIT		
								24																			WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
																											WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
																												LT / RT	543+00.00 to 545+00.00
												212																LT	543+31.00 to 544+02.00
									1.82																			LT	543+31.00 to 544+28.00
									1.84																			RT	543+51.00 to 544+11.00
							9																					RT	543+98.00 to 544+59.00
							21																					LT	544+66.00 to 546+00.00
									1.8																			LT	544+84.00 to 545+65.00
									4.79																			RT	545+00.00 to 546+56.00
														1														RT	545+67.00 to 547+00.00
									1.7																			LT	546+00.00 to 546+35.00
						12																						LT	546+46.00 to 548+00.00
						4																						LT	548+28.00 to 548+90.00
342	342	7	1203	12	96	85	297	178.86	20.49	41	7202	1568	2407	6	71	94	114	266	1541	3	3	8	2	6	2	83	TOTALS		

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

TABULATION OF QUANTITIES
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				04	LACKAWANNA	0435	251/253	45 OF 56
				ELMHURST TOWNSHIP				

COMPOST FILTER SOCK, 12" DIAMETER	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	COMPOST FILTER SOCK, 32" DIAMETER	COMPOST BLANKET - SEEDED WITH FORMULA N CONSERVATION MIX	TEMPORARY BERM	TEMPORARY PIPE BY-PASS STREAM DIVERSION	TEMPORARY COFFERDAM AND PUMP BY-PASS STREAM DIVERSION	TEMPORARY PIPE FLUME STREAM DIVERSION	BRACED SHEET PILE COFFERDAM STREAM DIVERSION	PERMANENT PAWC ACCESS ROAD	TEMPORARY STAGING AREA	CRANE PAD	TEMPORARY ACCESS ROADS	TEMPORARY WETLAND CROSSING	AMENDED SOILS	TOPSOIL RESTORATION										REMARKS	SIDE	STATIONS
0867 0012 LF	0867 0018 LF	0867 0022 LF	0867 0032 LF	0868 0113 SY	9000 0001 LS	9000 0002 LS	9000 0003 LS	9000 0004 LS	9000 0005 LS	9000 0006 LS	9000 0007 LS	9000 0008 LS	9000 0009 LS	9000 0010 EACH	9000 0011 CY	9000 0012 SY										ITEM NUMBER UNIT		
																										WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
				2697																						WOODLAND RESTORATION	RT	542+36.00 to 545+05.00
									X																		LT / RT	543+00.00 to 545+00.00
																											LT	543+31.00 to 544+02.00
																											LT	543+31.00 to 544+28.00
																											RT	543+51.00 to 544+11.00
																											RT	543+98.00 to 544+59.00
																											LT	544+66.00 to 546+00.00
																											LT	544+84.00 to 545+65.00
																											RT	545+00.00 to 546+56.00
																											RT	545+67.00 to 547+00.00
																											LT	546+00.00 to 546+35.00
																											LT	546+46.00 to 548+00.00
																											LT	548+28.00 to 548+90.00
1132	1206	181	592	6656	---	---	---	---	---	---	---	---	---	1	1335	7219										TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

PROJECT ID: 5803 MPMS: 8191 ECMS: 8191 3/4/2024 10:17:13 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	46 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

BM#1 = ELEV 1435.88
25' LT STA 532+09 (SR 0435)
MAG NAIL SET IN EAST SIDE OF GUY POLE
PPL 60541/N44715, BT 2 1/2

SEE SHEET 49

SEE SHEET 47

180°00'00" REBAR 79.35' REBAR 78.95' REBAR 114°50'47" 65.00'
STA AHEAD
SR 0435 CONSTR & SURVEY ℄
POC STA 532+00.00 SR 0435 CONSTR & SURVEY ℄
START WORK STA 39+14.00 GARDNER ROAD BEGIN FULL DEPTH RECONSTRUCTION
2 STY DWELLING
MACADAM DRIVE
STONE WALL
GARDNER ROAD CONSTR & SURVEY ℄
N 1°26'14" W 39
GARDNER ROAD T-330
CONC SIDEWALK
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
STA 529+00.00 SR 0435 SEC 251/253 BEGIN FULL DEPTH RECONSTRUCTION
2 STY COMMERCIAL
GRAVEL LOT
LEGAL RIGHT-OF-WAY LINE
LEGAL LIMIT OF SLOPE EASEMENT
2.7 MILES TO MOSCOW
SR 0435
N 35°34'58" W
START WORK STA 527+72.00 SEG 0210 OFFSET 2836 SR 0435 SEC 251/253
LIMIT OF WORK STA 526+72.00 SEG 0210 OFFSET 2736 SR 0435 SEC 251/253 ELMHURST TOWNSHIP LACKAWANNA COUNTY
ROBERT PAGOTTO ④
CHARLES SCHWARTZ & KATHLEEN SCHWARTZ, HIS WIFE ②
DAVID S. McDERMOTT ⑤
STOP WORK STA 1+76.50 PRIVATE ACCESS DRIVE END FULL DEPTH RECONSTRUCTION
STOP WORK STA 39+67.18 GARDNER ROAD END FULL DEPTH RECONSTRUCTION
STA 22+68.51 FRONT STREET = STA 0+00.00 PRIVATE ACCESS DRIVE
START WORK STA 22+32.79 FRONT STREET BEGIN FULL DEPTH RECONSTRUCTION
TEMPORARY CONSTRUCTION EASEMENT
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
PRIVATE ACCESS DRIVE CONSTR & SURVEY ℄
START WORK STA 0+16.00 PRIVATE ACCESS DRIVE BEGIN FULL DEPTH RECONSTRUCTION
STA 530+00.00 SR 0435 STA 39+86.47 GARDNER ROAD
LEGAL LIMIT OF SLOPE EASEMENT
STA 532+00.00 SR 0435 STA 22+10.12 FRONT STREET
LEGAL RIGHT-OF-WAY LINE
FRONT STREET CONSTR & SURVEY ℄
POWER SUPPLY 1 STA 532+27
FREDERICK N. SCHANK ⑥
PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY ①
TEMPORARY CONSTRUCTION EASEMENT
LEGAL RIGHT-OF-WAY LINE
STA 533+48.38 SR 0435 (℄ D&L RAILROAD)
SR 0435 CONSTR & SURVEY ℄
N 9°33'58" W
DELAWARE LACKAWANNA RAILROAD
PPL MOS TAP8-6 60543 N44724
PPL 60546 N44708
PPL 60551 N44691 VZ 15
PPL 60545 N44694
PPL XXXXX N44679
BTCo 112
ROARING BROOK
FALLS
THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA ⑧

EXISTING STRUCTURE DATA
STATION: 534+24.17
TYPE: SIMPLE SPAN REINFORCED CONCRETE T-BEAMS (SPANS 1, 3, 4, 5 & 6)
SIMPLE SPAN STEEL RIVETED THRU GIRDER (SPAN 2)
SPANS: 50'-2", 33'-6", 39'-10", 48'-0", 48'-0", 46'-6"
UNDERCLEARANCE: 22'-5" (D&L RAILROAD)
ROADWAY WIDTH = 33'-11" OUT TO OUT, 26'-0" CURB TO CURB
SKEW: 42°30'00" (ABUT 1 & PIERS 1 THRU 2), 90°00'00" (ABUT 2 & PIERS 3 THRU 5)
STRUCTURE S-1285

PROPOSED STRUCTURE DATA
STATION: 534+30.00
TYPE: TWO SPAN COMPOSITE STEEL PLATE GIRDER BRIDGE
SPAN: 145'-0", 145'-0"
ROADWAY WIDTH = 42'-0" CURB TO CURB
UNDERCLEARANCE: 22'-0" MIN
SKEW: 70°00'00"
STRUCTURE S-39603 RECOMMENDED

PLAN

SCALE

0 25 50FEET

HYDRAULIC DATA	
DRAINAGE AREA	0.77 MI²
Q_{100} FLOW	335 CFS
Q_{100} ELEV	1382.30
Q_{100} VEL	13.97 FPS
Q_{25} FLOW	433 CFS
Q_{25} ELEV	1384.93
Q_{25} VEL	4.10 FPS
FLOOD OF RECORD = UNKNOWN	

LEGEND
* RELOCATE PRIVATE DRIVE MAILBOX
** TREE (TO BE REMOVED)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

FOR CURVE DATA, SEE SHEET 5 | FOR PROFILE, SEE SHEET 50,51,53,55,56 | SURVEY BOOK NO 30431

File: pwt \\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\NKA\DGN\Highway\01261-01 SR 0435-251 Plan Sheet.dgn
Model: SR 0435-251 Plan Sheet
8/28/2024 1:18:47 PM By: laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	47 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 46

SEE SHEET 48

STA AHEAD

SR 0435 CONSTR & SURVEY ℄

25.00'

90° 04' 51"

180° 00' 00"

REBAR 76.50' REBAR 77.07' REBAR

POC STA 537+00.00
SR 0435 CONSTR & SURVEY ℄

BM#2 = ELEV 1406.34
24' RT STA 537+76 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60541/N44763

BM#3 = ELEV 1383.40
27' RT STA 542+27 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60539/N44810/8

SEE SHEET 49

RELOCATED ACCESS ROAD

EXISTING CULVERT #2

ROCK WALL

ROCK

TEMPORARY CONSTRUCTION EASEMENT

LEGAL LIMIT OF SLOPE EASEMENT

⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

LEGAL RIGHT-OF-WAY LINE

535 536 537 538 539 540 541 542

SR 0435

N 9° 33' 58" W

N 0° 52' 46" W

PC PT

+45 10' +00 11' 11' +00 8' +00 11' 8' +00

E/T/FO

STA 537+00.00
SR 435 SEC 251/253
END FULL DEPTH RECONSTRUCTION
BEGIN MILL AND OVERLAY
BEGIN FULL DEPTH SHOULDER RECONSTRUCTION LT/RT

SR 0435 CONSTR & SURVEY ℄

PPL 60535 N44778 BTCO 6 1/2

PPL 60540 N44778 VZ 6

PPL 60539 N44793 VZ 7

PPL 60539 N44810 VZ 8

BM3

STA 541+00.00
SR 435 SEC 251/253
END MILL AND OVERLAY
END FULL DEPTH SHOULDER RECONSTRUCTION LT/RT
BEGIN FULL DEPTH RECONSTRUCTION

+76 147'

+23 164'

+23 143'

+00 70'

FALLS

ROARING BROOK

TEMPORARY CONSTRUCTION EASEMENT

⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

PLAN

SCALE

0 25 50 FEET

FOR CURVE DATA, SEE SHEET 5 | FOR PROFILE, SEE SHEETS 50, 51 | SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Roadway Plan.dgn
Model:SR 0435-251 Plan Sheet
Date:8/2/2024 11:18:48 PM
By:laura.hower

EXISTING STRUCTURE DATA
STATION: 543+73.69
TYPE: REINFORCED CONCRETE ARCH CULVERT
SPANS: SINGLE SPAN @ 77'-0"
53'-10" (CLEAR SPAN)
UNDERCLEARANCE: APPROX. 21'
ROADWAY WIDTH = 32'-0" CLEAR
SKEW: 45°00'00" & 60°00'00"
STRUCTURE S-1276

PROPOSED STRUCTURE DATA
STATION: 543+83.76
TYPE: COMPOSITE P/S CONCRETE
BULB TEE BEAM BRIDGE
SPAN: SINGLE SPAN 100'-0"
68'-2" (CLEAR SPAN)
ROADWAY WIDTH = 38'-0" CURB TO CURB
UNDERCLEARANCE: 18'-7"
SKEW: 45°00'00"
STRUCTURE S-39602 RECOMMENDED

BM#4 = ELEV 1381.35
29' RT STA 545+08 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60534/N44840/11

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251	48 OF 56
			253	
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 47

TEMPORARY CONSTRUCTION EASEMENT
GRAVEL
WOODED
+32 160'
⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
LEGAL LIMIT OF SLOPE EASEMENT
+39 90'
+20.00 75.00'
+20.00 30.00'
542
N 0°52'46" W
PC
543
544
545
SR 0435
546
BM3
PPL 60539 N44810 VZ 8
+20.00 30.00'
+80.00 70.00'
+80.00 80.00'
+20.00 80.00'
ROARING BROOK
R=1,980.08'
+25.00 70.00'
+25.00 45.00'
+65.00 30.00'
+65.00 45.00'
BM4
PPL 60534/N44840 VZ 11 w/ ELEC BOX
E/T/CTV
⑫ STEPHEN M. WAGNER CHURCH
MB
PPL 60514 N44840
LEGAL CHANNEL EASEMENT
+30 89'
+40.00 75.00'
+40.00 30.00'
R=1,835.08
ROARING BROOK
⑬ GERALDINE WILLIAMS, WIDOW, FOR THE TERM OF HER NATURAL LIFE ONLY, & TIMOTHY SCOTT RAFFERTY, SINGLE, HER SON, AS TO THE REMAINDER INTEREST
MACADAM DRIVE
HEDGE ROW
GRAVEL DRIVE
⑭ KERRI A. LOTTERMAN
2 STY DWELLING
1 STY DWELLING
GARAGE
SHED
PLANTER
STUMP
STUMPS
GRAVEL DRIVE
+33 65'
+33 45'
+02 38'
+02 30'
+80 80'
3.8'
6.8'
T-718 G C SMITH STREET
37'
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
CONC SLAB
LEGAL RIGHT-OF-WAY LINE
3.6 MILES TO SR 0084
549
548
547
SR 0435 CONSTR & SURVEY ℄
LEGAL RIGHT-OF-WAY LINE
LEGAL LIMIT OF SLOPE EASEMENT
MACADAM PARKING LOT
N 29°15'58" W
GAS PUMPS
CONC SLAB
PAVILION
1 STY GAS STATION
STA 546+00.00 END FULL DEPTH RECONSTRUCTION
LIMIT OF WORK
STA 550+55.00
SEG 0230 OFFSET 0240
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY
STOP WORK
STA 549+55.00
SEG 0230 OFFSET 0140
SR 435 SECTION 251/253
TEMPORARY CONSTRUCTION EASEMENT
LEGAL CHANNEL EASEMENT
⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
+40 160'
+77 182'
⑮ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
12"ST
+91 233'
LEGAL RIGHT-OF-WAY LINE
24"RCP
+09 262'
SR 0590 HAMLIN ROAD
+05 50'
+05 75'
R=1,955.08'
+35 79'

PLAN

SCALE

0 25 50FEET

HYDRAULIC DATA	
DRAINAGE AREA	38.5 MI²
Q_{50} FLOW	11,001 CFS
Q_{50} ELEV	1371.23
Q_{50} VEL	8.05 FPS
Q_{100} FLOW	14,249 CFS
Q_{100} ELEV	1372.99
Q_{100} VEL	9.38 FPS
FLOOD OF RECORD = UNKNOWN	

FOR CURVE DATA, SEE SHEET 5	FOR PROFILE, SEE SHEET 53	SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Roadway Plan.dgn
Model:SR 0435-251 Plan Sheet
Date:8/2/2024 11:18:49 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	49 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PROPOSED STRUCTURE DATA
STATION: 26+02.50
TYPE: PRECAST CONCRETE BOX CULVERT
SPAN: 14'-0"
RISE: 7'-0"
ROADWAY WIDTH = 28'-0"
SKEW: 90°00'00"
STRUCTURE L-367 RECOMMENDED _____

HYDRAULIC DATA
DRAINAGE AREA 0.77 MI²
Q_{50} FLOW 335 CFS
Q_{50} ELEV 1400.51
Q_{50} VEL 5.21 FPS
Q_{100} FLOW 433 CFS
Q_{100} ELEV 1401.34
Q_{100} VEL 5.35 FPS
FLOOD OF RECORD = UNKNOWN

EXISTING STRUCTURE DATA
STATION: 26+02.50
TYPE: TWIN CORRUGATED METAL PIPES
CLEAR SPAN: (2) 60" DIAMETER
RISE: 5'-0"
ROADWAY WIDTH = 22'-0"
SKEW: 90°00'00"

STOP WORK
STA 29+21.52
FRONT STREET
END FULL DEPTH
RECONSTRUCTION

⑨ IRENE COCKING

⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

⑰ DONNA KAY OHARA

① PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY

⑩ RANDOLPH S. ARMITAGE & EVA ANN CIEMIECKI, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP, AND NOT AS TENANTS IN COMMON

TEMPORARY CONSTRUCTION EASEMENT

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

FRONT STREET CONSTR & SURVEY ℄

N 53°55'17" W

N 34°23'00" W

N 38°03'27" W

2 STY DWELLING

MACADAM DRIVE

CONC SDWK

SIMERSON ROAD T-711

FRONT STREET T-733

DELAWARE LACKAWANNA RAILROAD

VZ 118 ATTCH 60518 N4473F

EXISTING CULVERT #1

EXISTING CULVERT #2

RELOCATED ACCESS ROAD

ACCESS GATE

BRICK

GRAVEL

WOODED

I STY DWELLING

WELL

G C SMITH STREET T-718

BTCO F31-6ELH-32 PH 60515/N4477B

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

SEE SHEET 46

SEE SHEET 47

PROPOSED STRUCTURE DATA
STATION: RAILROAD CULVERT
TYPE: PRECAST CONCRETE BOX CULVERT
SPAN: 14'-0"
RISE: 7'-0"
ROADWAY WIDTH = N/A
SKEW: 65°00'00"
STRUCTURE L-404 RECOMMENDED _____

EXISTING STRUCTURE DATA
REINFORCED CONCRETE BOX CULVERT #1
SPAN: 8'-0"
RISE: 5'-0"
LENGTH: 48'-0"
SKEW: 72°00'00"
REINFORCED CONCRETE BOX CULVERT #2
SPAN: 8'-0"
RISE: 6'-0"
LENGTH: 28'-0"
SKEW: 90°00'00"

PLAN

SCALE

0 25 50FEET

HYDRAULIC DATA
DRAINAGE AREA 0.77 MI²
Q_{50} FLOW 335 CFS
Q_{50} ELEV 1394.74
Q_{50} VEL 5.02 FPS
Q_{100} FLOW 433 CFS
Q_{100} ELEV 1395.55
Q_{100} VEL 5.28 FPS
FLOOD OF RECORD = UNKNOWN

FOR CURVE DATA, SEE SHEET 5	FOR PROFILE, SEE SHEET 54	SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Highway\01261-01 SR 0435 Sire 251-253 Roadway Plan.dgn
Model:SR 0435-251 Plan Sheet
Date:8/28/2024 11:18:50 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	50 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

LIMIT OF WORK
STA 526+72.00
SEG 0210 OFFSET 2736
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

START WORK
STA 527+72.00
SEG 0210 OFFSET 2836
SR 435 SECTION 251/253

STA 529+00.00
SR 435 SECTION 251/253
BEGIN FULL DEPTH
RECONSTRUCTION

PVI STA = 530+95.28
ELEV = 1441.25
VC = 300.00'
MO = -0.28'
SSD = 1588'

-4.20%
PVC
-4.20%
-4.95%
PVT
-4.95%

22'-0" MIN
VERTICAL CLEARANCE

SEE SHEET 51

SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET
VERTICAL 0 5 10FEET

DATUM:1370

527	+50	528	+50	529	+45.28 +50	530	+50	531	+50	532	+45.28 +50	533	+50
1458.0	1455.7	1453.6	1451.6	1449.5	1447.4	1445.4	1443.4	1441.2	1438.9	1436.3	1433.6	1410.7	1400.3
				G-1449.45	G-1447.35	G-1445.21	G-1443.01	G-1440.75	G-1438.42	G-1436.04	G-1433.58	G-1431.11	G-1428.63
					1447.6 G-1447.55						1433.8 G-1433.82		

POC STA 530+00.00 SR 0435 =
POT STA 39+86.47 GARDNER RD

POC STA 532+00.00 SR 0435 =
POT STA 22+10.12 FRONT ST

FOR PLAN, SEE SHEET 46

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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Model: SR 0435 Sire 251-253 Roadway Profiles.dgn

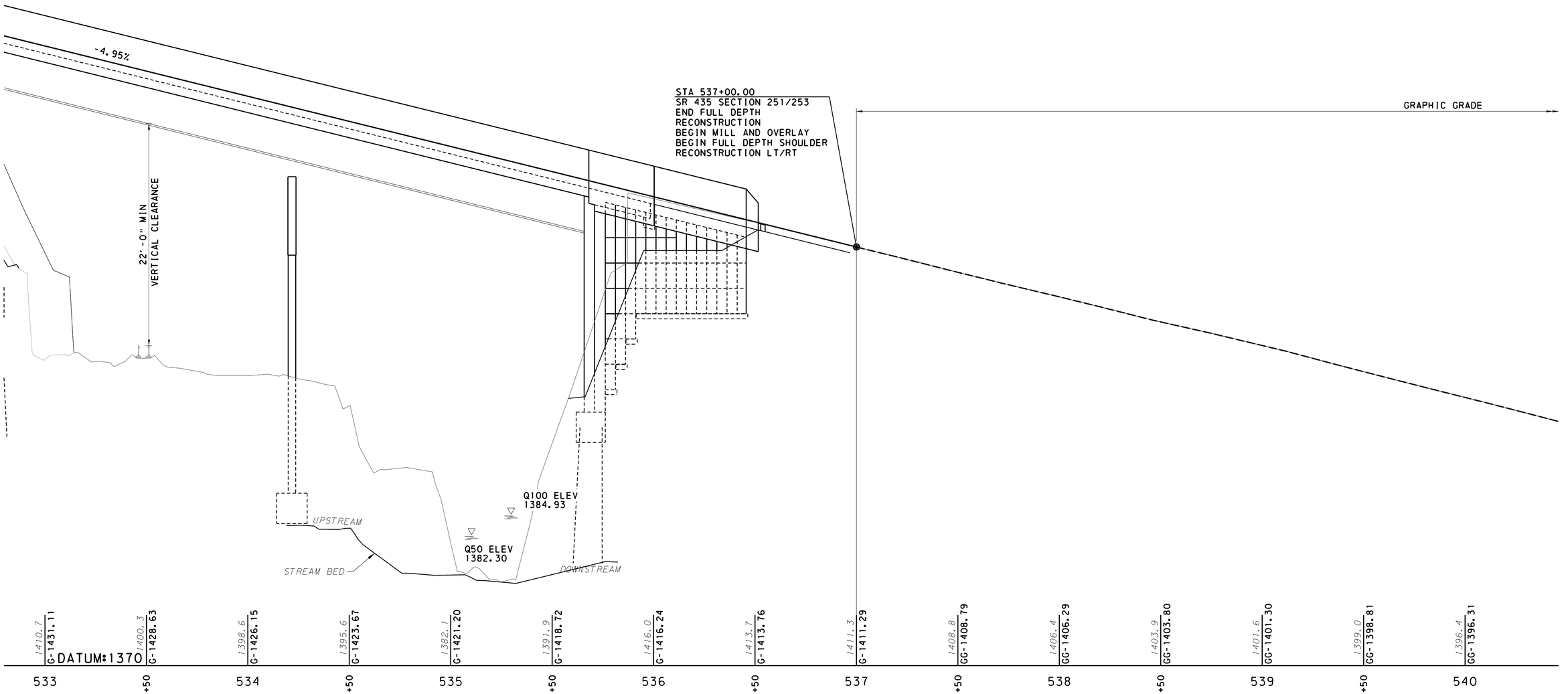
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	51 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 50

SEE SHEET 52



SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

FOR PLAN, SEE SHEET 46,47

SURVEY BOOK NO 30431

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	52 OF 56

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 51

GRAPHIC GRADE

STA 541+00.00
SR 435 SECTION 251/253
END MILL AND OVERLAY
END FULL DEPTH SHOULDER
RECONSTRUCTION LT/RT
BEGIN FULL DEPTH
RECONSTRUCTION

PVC

PVI STA = 543+50.00
ELEV = 1378.97
VC = 500.00'
MO = 2.63'
HLSD = 505'

-4.94%

-0.74%

LIMIT OF WORK
STA 550+55.00
SEG 0230 OFFSET 0240
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

STOP WORK
STA 549+55.00
SEG 0230 OFFSET 0140
SR 0435 SECTION 251/253

STA 546+00.00
END FULL DEPTH
RECONSTRUCTION

PVT

Q100 ELEV
1372.99'

Q50 ELEV
1371.23

DOWNSTREAM

STREAM BED

UPSTREAM

1399.0	1396.4	1393.9	1391.3	1389.0	1386.9	1385.0	1383.2	1381.8	1380.4	1379.1	1378.3	1377.7	1377.1	1376.6
GG-1398.81	GG-1396.31	GG-1393.82	G-1391.32	G-1388.95	G-1386.80	G-1384.85	G-1383.12	G-1381.59	G-1380.28	G-1379.18	G-1378.28	G-1377.60	G-1377.12	
DATUM: 1340														
+50	540	+50	541	+50	542	+50	543	+50	544	+50	545	+50	546	+50

SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

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REGISTERED PROFESSIONAL
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ENGINEER
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FOR PLAN, SEE SHEET 48,49	SURVEY BOOK NO 30431

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	53 OF 56
ELMHURST TOWNSHIP				

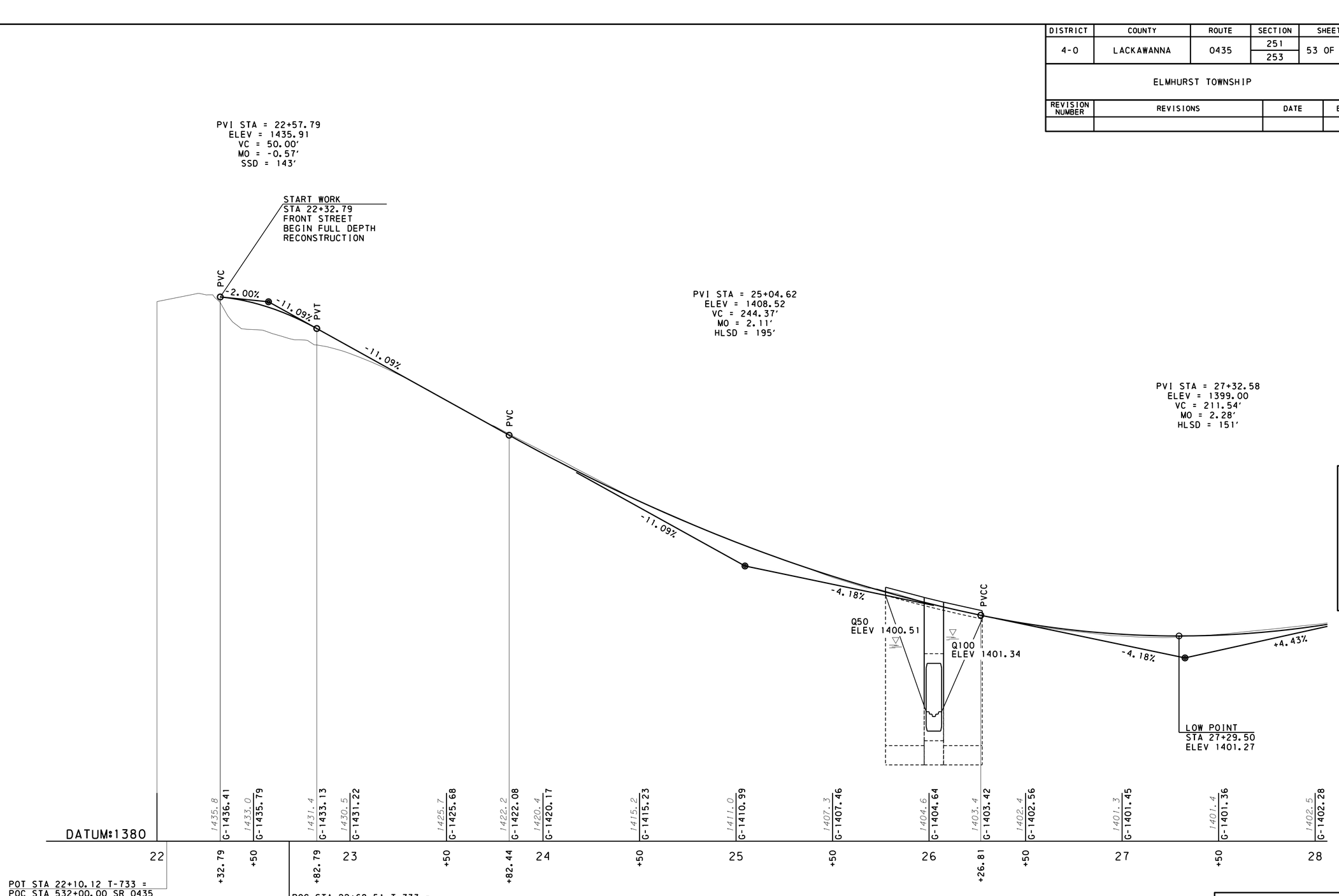
REVISION NUMBER	REVISIONS	DATE	BY

PVI STA = 22+57.79
ELEV = 1435.91
VC = 50.00'
MO = -0.57'
SSD = 143'

START WORK
STA 22+32.79
FRONT STREET
BEGIN FULL DEPTH
RECONSTRUCTION

PVI STA = 25+04.62
ELEV = 1408.52
VC = 244.37'
MO = 2.11'
HLSD = 195'

PVI STA = 27+32.58
ELEV = 1399.00
VC = 211.54'
MO = 2.28'
HLSD = 151'



POT STA 22+10.12 T-733 =
POC STA 532+00.00 SR 0435

POC STA 22+68.51 T-733 =
POT STA 0+00.00 PRIVATE ACCESS DRIVE

FRONT STREET

PROFILE SCALE

HORIZONTAL 0 25 50FEET
VERTICAL 0 5 10FEET

SEE SHEET 54

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REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
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FOR PLAN, SEE SHEET 47,49

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Model:20 - Front Street Sheet
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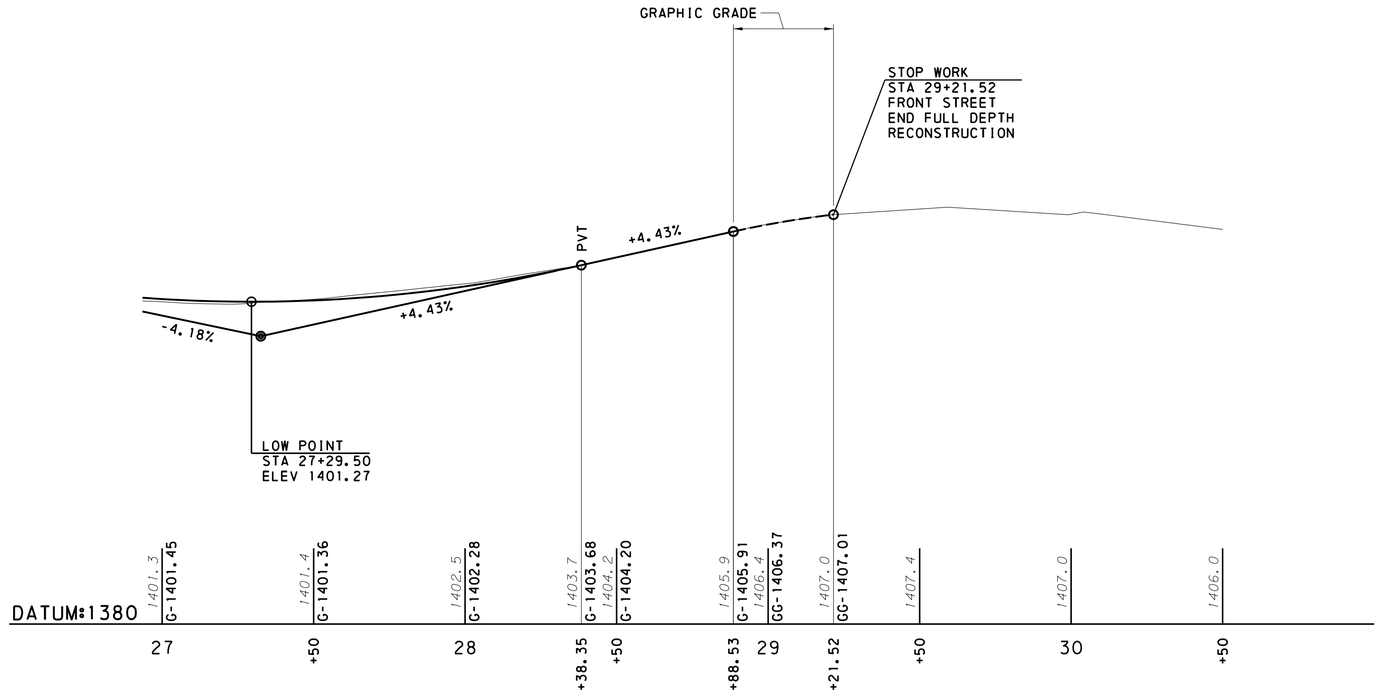
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	54 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA = 27+32.58
ELEV = 1399.00
VC = 211.54'
MO = 2.28'
HLSD = 151'



FRONT STREET

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
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PE081839

FOR PLAN, SEE SHEET 49

SURVEY BOOK NO 30431

SEE SHEET 53

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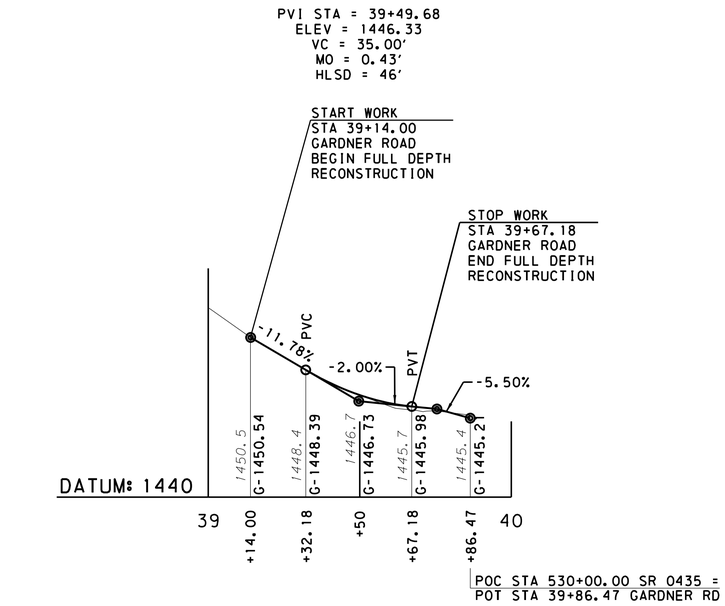
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	55 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	



GARDNER ROAD

PROFILE SCALE

HORIZONTAL 0 25 50 FEET

VERTICAL 0 5 10 FEET

FOR PLAN, SEE SHEET 46

SURVEY BOOK NO 30431

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ENGINEER
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Model: 22 - Gardner Road Sheet
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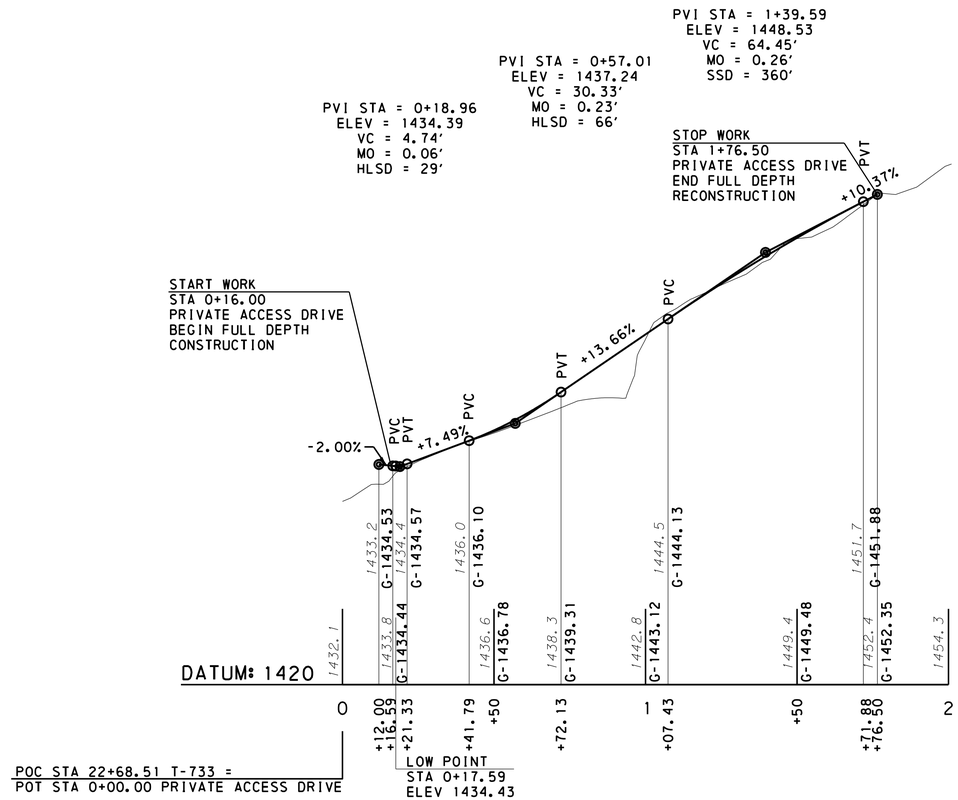
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	56 OF 56
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	



PRIVATE ACCESS DRIVE

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

COMMONWEALTH OF PENNSYLVANIA
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ENGINEER
PE081839

FOR PLAN, SEE SHEET 46	SURVEY BOOK NO 30431

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	1 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

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

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

1. THE SPECIAL PROVISIONS OF THE CONTRACT.
2. PA CODE, TITLE 67, CHAPTER 212, OFFICIAL TRAFFIC CONTROL DEVICES.
3. PDT PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES.
4. PDT PUBLICATION 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15).
5. PUBLICATION 408, SPECIFICATIONS.
6. FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
7. PUBLICATION 111, TRAFFIC CONTROL-PAVEMENT MARKINGS AND SIGNING STANDARDS.
8. PDT PUBLICATION 236, HANDBOOK OF APPROVED SIGNS.
9. PDT PUBLICATION 46, TRAFFIC ENGINEERING MANUAL.

IMMEDIATELY UPON COMPLETION OF THE WORK, REMOVE THE DEVICES. THE DEPARTMENT WILL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY DEPARTMENT FORCES.

COVER OR REMOVE ALL SIGNS NOT IN USE.

ALL SIGNS TO BE MOUNTED ON TYPE III BARRICADES UNLESS OTHERWISE NOTED.

COORDINATE WORK ZONE SIGNING AND OPERATIONS WITH PROJECTS IN THE AREA.

ALL TRAFFIC CONTROL DEVICES SHALL BE NEW OR LIKE NEW CONDITION AND MAINTAINED AS SUCH.

MAINTAIN ACCESS TO ALL DRIVEWAYS, AT ALL TIMES, DURING CONSTRUCTION.

INDEX OF DRAWINGS

DESCRIPTION	SHEET
INDEX OF DRAWINGS, GENERAL NOTES & CONSTRUCTION SEQUENCE	1
TABULATION OF QUANTITIES	2-8
CAR DETOUR	9-10
TRUCK DETOUR	11-12
TEMPORARY RAILROAD CROSSING	13-14
CONCEPTUAL TEMPORARY TRACK LAYOUT	15
STAGE 1	16-20
STAGE 2	21-25
STAGE 3	26-30
TEMPORARY ROADWAY TYPICAL SECTIONS	31-32
TEMPORARY ROADWAY LIGHTING DETAILS	33
TEMPORARY ROADWAY CONSTRUCTION PLANS	34-36
TEMPORARY ROADWAY PROFILES	37-40
TEMPORARY CROSS SECTIONS	41-66

CONSTRUCTION SEQUENCE

STAGE 1

1. INSTALL E&S MEASURES AS INDICATED ON THE E&S PLAN.
2. IMPLEMENT THE FRONT STREET CAR DETOUR.
3. USING SHORT-TERM PATA 107, CONSTRUCT ROADWAY WORK ON THE NB SIDE OF THE TEMPORARY ROAD AND SR 0435 TO ALLOW FOR CONSTRUCTION ACCESS TO THE NB SIDE OF THE TEMPORARY BRIDGE. ONCE CONSTRUCTION ACCESS HAS BEEN ESTABLISHED. INSTALL TRAFFIC CONTROL AS SHOWN ON THE PLANS.
4. PERFORM FULL-DEPTH PAVEMENT RECONSTRUCTION OPERATIONS, INSTALL GUIDE RAIL. CONSTRUCT THE CULVERT AND ROADWAY REALIGNMENT ON FRONT STREET.
5. ONCE THE CULVERT AND ROADWAY REALIGNMENT ON FRONT STREET ARE COMPLETE, REOPEN FRONT STREET TO TRAFFIC.
6. COORDINATE WITH THE RAILROAD FOR INSTALLATION OF THE TEMPORARY RAILROAD ACTUATOR AND CONSTRUCT THE TEMPORARY ROAD, TEMPORARY BRIDGE, AND GC SMITH STREET CONNECTION.
7. UPON COMPLETION OF STAGE 1 CONSTRUCTION ACTIVITIES, REMOVE ALL STAGE 1 TRAFFIC CONTROL DEVICES.

STAGE 2

1. IMPLEMENT THE TRUCK DETOUR FOR SR 0435.
2. PRIOR TO SHIFTING TRAFFIC ONTO TEMPORARY ROAD, IMPLEMENT THE STAGE 1 CAR DETOUR AND CONSTRUCT THE CONNECTION OF EXISTING FRONT STREET UP TO THE EDGE OF THE SR 435 SB LANE USING PATA 107. MAINTAIN ACCESS TO THE PRIVATE DRIVE ON FRONT STREET, LEFT OF STA 531+00.
3. USING PATA 106 TO CLOSE THE SB LANE OF SR 0435, CONSTRUCT THE SR 0435 SB TEMPORARY CONNECTION TO THE FRONT STREET CONNECTION. TEMPORARILY CLOSE THE NORTH END OF GARDNER ROAD.
4. SHIFT TRAFFIC ONTO THE TEMPORARY ROAD, FRONT STREET AND THE SB LANE OF SR 0435, MAINTAIN FLAGGING AT THE INTERSECTION OF SR 435 AND EXISTING FRONT STREET AND COMPLETE THE NB TEMPORARY CONNECTION TO EXIST FRONT STREET. SET TEMPORARY CONCRETE BARRIER AS INDICATED. REOPEN THE TEMPORARY SR 0435/FRONT STREET CONNECTION. THE TEMPORARY CONNECTION MUST BE COMPLETED PRIOR TO THE END OF THE WORK DAY TO MAINTAIN STAGE 2 TRAFFIC PATTERNS.
5. ERECT TRAFFIC CONTROL SIGNS AND DEVICES AS INDICATED ON THE TRAFFIC CONTROL PLAN FOR STAGE 2.
6. REMOVE THE SR 0435 BRIDGE AND ARCH CULVERT.
7. CONSTRUCT THE TWO NEW SR 0435 STRUCTURES AND SUBBASE, BASE, BINDER AND WEARING COURSES FOR THE ROADWAY WORK FROM STA 531+00 TO STA 545+30. CONSTRUCT FRONT STREET ENTRANCE FROM STA 22+32.79 TO STA 22+50.00 TO THE BINDER COURSE.
8. INSTALL FINAL PAVEMENT MARKINGS FROM STA 531+00 TO STA 545+30.
9. UPON COMPLETION OF STAGE 2 CONSTRUCTION ACTIVITIES, REMOVE ALL STAGE 2 TRAFFIC CONTROL DEVICES AND SHIFT TRAFFIC ONTO THE NEWLY CONSTRUCTED PORTION OF SR 0435.

STAGE 3

1. IMPLEMENT THE CAR DETOUR THAT WAS USED DURING STAGE 1 OF CONSTRUCTION.
2. RECONSTRUCT FRONT STREET BACK TO ITS ORIGINAL LAYOUT FROM STA 26+31 TO STA 29+21. CONSTRUCT THE FRONT STREET TIE TO THE NEW SR 0435 INTERSECTION. INSTALL FINAL PAVEMENT MARKINGS ON FRONT STREET.
3. REOPEN FRONT STREET TO TRAFFIC.
4. USING LONG TERM PATA 202-A, CONSTRUCT PRIVATE DRIVE ACCESS AT STA 22+68.51, LT ON FRONT STREET.
5. REMOVE THE TEMPORARY BRIDGE AND TEMPORARY ROAD, RESTORING THE IMPACTED AREAS BACK TO ORIGINAL GROUND ELEVATIONS.
6. USING SHORT TERM PATA 107, REMOVE THE NB TEMPORARY ROADWAY TIE IN WITH SR 0435 AND CONSTRUCT THE REMAINING PORTION OF SR 0435. INSTALL FINAL PAVEMENT MARKINGS ONCE THE WORK IS COMPLETE. ONLY CONSTRUCT THE PORTION OF THE ROADWAY THAT CAN BE REOPENED TO TRAFFIC AT THE END OF THE WORKDAY.
7. USING SHORT TERM PATA 107 AND 109-H, CONSTRUCT THE INTERSECTION PAVING WORK WITH GARDNER ROAD AND SR 0435. INSTALL FINAL PAVEMENT MARKINGS ONCE THE WORK IS COMPLETE. ONLY CONSTRUCT THE PORTION OF ROADWAY THAT CAN BE REOPENED TO TRAFFIC AT THE END OF THE WORKDAY.
8. UPON COMPLETION OF STAGE 3 CONSTRUCTION ACTIVITIES, REMOVE ALL STAGE 3 TRAFFIC CONTROL DEVICES.

RECOMMENDED _____ 20_

Digitally signed by Robert A. Kretschmer
Date: 2024.02.27 08:37:05 -05'00'

DISTRICT TRAFFIC ENGINEER

TRAFFIC CONTROL PLAN

PREPARED BY:
CDR MAGUIRE ENGINEERING
3500 WINCHESTER RD.
SUITE 300
ALLENTOWN, PA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

Digitally signed by Benjamin Martz
Date: 2024.02.20 09:16:04 -05'00'

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TCP-Title 2/20/2024 8:17:59 AM By: laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	2 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

TABULATION OF TRAFFIC CONTROL DEVICES
(INCLUDED IN LUMP SUM ITEM 0901-0001)
FOR INFORMATION ONLY

SERIES DESIGNATION	DESCRIPTION	SIZE	STAGE 1	STAGE 2	STAGE 3	QUANTITY
FAB-1	FRONT STREET	36" X 18"	37	-	37	37
FAB-2	DETOUR INFO AHEAD	36" X 36"	-	7	-	7
G20-2	END ROAD WORK	36" X 18"	2	2	2	2
M1-5	PENNSYLVANIA ROUTE 435	30" X 24"	-	31	-	31
		45" X 36"	-	52	-	52
M3-1	NORTH	24" X 12"	-	15	-	15
		30" X 15"	-	22	-	22
M3-3	SOUTH	24" X 12"	-	15	-	15
		30" X 15"	-	23	-	23
M4-10L	DETOUR ARROW, LEFT	48" X 18"	2	1	2	2
M4-10R	DETOUR ARROW, RIGHT	48" X 18"	2	-	2	2
M4-8-2	TRUCK DETOUR	24" X 24"	-	62	-	62
M4-8A	END DETOUR	24" X 18"	2	2	2	2
M4-9S	DETOUR ARROW, STRAIGHT	30" X 24"	10	-	10	10
M4-9SR	RIGHT ADVANCE DETOUR	30" X 24"	3	-	3	3
M4-9R	DETOUR ARROW, RIGHT	30" X 24"	3	-	3	3
M4-9SL	LEFT ADVANCE DETOUR	30" X 24"	3	-	3	3
M4-9L	DETOUR ARROW, LEFT	30" X 24"	4	-	4	4
M4-9-1AL	LEFT ADVANCE 45° DETOUR	30" X 24"	2	-	2	2
M4-9-1BL	45° LEFT TURN DETOUR	30" X 24"	2	-	2	2
M4-9-1BR	45° RIGHT TURN DETOUR	30" X 24"	1	-	1	1
M4-9-1AR	RIGHT ADVANCE 45° DETOUR	30" X 24"	1	-	1	1
M5-1L	ADVANCE 90° LEFT TURN	21" X 15"	-	1	-	1
		30" X 18"	-	7	-	7
M5-1R	ADVANCE 90° RIGHT TURN	21" X 15"	-	6	-	6
M5-2L	ADVANCE 45° LEFT TURN	21" X 15"	-	1	-	1
M5-2R	ADVANCE 45° RIGHT TURN	30" X 18"	-	4	-	4
M6-1	90° TURN	21" X 15"	-	9	-	9
		30" X 18"	-	7	-	7
M6-2L	LEFT ADVANCE 45°	21" X 15"	-	1	-	1
M6-2R	RIGHT ADVANCE 45°	30" X 18"	-	4	-	4
M6-3	STRAIGHT THROUGH	21" X 15"	-	2	-	2
		30" X 18"	-	19	-	19
R1-1	STOP	30" X 30"	-	5	-	5
R1-10P	EXCEPT RIGHT TURN PLAQUE	24" X 18"	-	1	-	1
R2-1	SPEED LIMIT 25 MPH	24" X 30"	-	3	-	3
R5-2	NO TRUCK	24" X 24"	-	3	-	3
R5-2-3	EXCEPT LOCAL DELIVERIES	24" X 18"	-	3	-	3
R8-10A	STOP HERE WHEN FLASHING	24" X 30"	-	2	-	2
R11-2	ROAD CLOSED	48" X 30"	4	4	6	6
R11-2-1	BRIDGE CLOSED	48" X 30"	-	2	-	2

SERIES DESIGNATION	DESCRIPTION	SIZE	STAGE 1	STAGE 2	STAGE 3	QUANTITY
R11-3A	ROAD CLOSED - LOCAL TRAFFIC ONLY	60" X 30"	4	4	4	4
R11-3B	BRIDGE OUT - LOCAL TRAFFIC ONLY	48" X 12"	-	4	-	4
R15-1	RAILROAD CROSSBUCK	24" X 4.5"	-	2	-	2
W1-2R	RIGHT CURVE	36" X 36"	-	1	-	1
W1-4L	LEFT REVERSE CURVE	36" X 36"	-	1	-	1
W3-5	25 MPH SPEED REDUCTION	36" X 36"	-	2	-	2
W10-1	RAILROAD WARNING	36" X 36"	-	3	-	3
W10-3	RAILROAD CROSSING ON SIDE ROAD	36" X 36"	-	3	-	3
W13-1P	ADVISORY SPEED PLAQUE 15 MPH	24" X 24"	-	1	-	1
W5-4-1, W30-1-6	LANE NARROWS AHEAD	24" X 24"	-	1	-	1
W5-5, W30-1-6	LANES SHIFT AHEAD	36" X 36"	-	1	-	1
W20-1, W30-1-1	ROAD WORK 500 FT	36" X 36"	-	-	1	1
W20-1, W30-1-3	ROAD WORK 1500 FT	36" X 36"	1	-	1	1
W20-1, W30-1-6	ROAD WORK AHEAD	36" X 36"	1	2	-	2
W20-2, W30-1-2	DETOUR 1000 FT	36" X 36"	6	3	6	6
		48" X 48"	-	2	2	2
W20-2, W30-1-3	DETOUR 1500 FT	36" X 36"	6	3	6	6
		48" X 48"	-	2	2	2
W20-3, W30-1-1	ROAD CLOSED 500 FT	36" X 36"	1	2	3	3
W20-3, W30-1-2	ROAD CLOSED 1000 FT	36" X 36"	1	2	3	3
W21-5	SHOULDER WORK	36" X 36"	1	-	1	1
W21-5BR, W30-1-1	RT SHOULDER CLOSED 500FT	36" X 36"	1	-	1	1
W23-101	BRIDGE TO BE CLOSED FOR CONSTRUCTION	96" X 48"	2	2	2	2
W25-5	CONSTRUCTION ENTRANCE AHEAD	36" X 36"	3	-	-	3
W4-4APL	TRAFFIC FROM LEFT DOES NOT STOP	30" X 15"	-	1	-	1
	TYPE B SIGN POST		-	-	-	SUFF
	TYPE B FLASHING LIGHT (YELLOW)		-	-	-	SUFF
	TYPE III BARRICADE		-	-	-	SUFF

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REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TRAFFIC CONTROL PLAN

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TABULATION OF QUANTITIES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

TABULATION OF QUANTITIES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

TABULATION OF QUANTITIES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

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REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

TABULATION OF QUANTITIES

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

TABULATION OF QUANTITIES

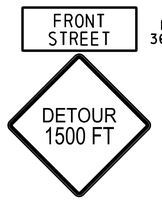
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
								OF

ITEM NUMBER	UNIT	REMARKS	SIDE	

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	9 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

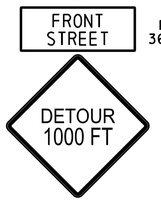
Ⓐ



FAB-1*
36"x18"

W20-2
36"x36"
W30-1-3

Ⓑ



FAB-1*
36"x18"

W20-2
36"x36"
W30-1-2

Ⓒ

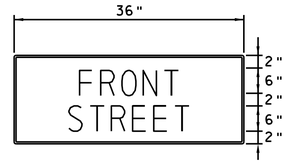
W20-3
36"x36"
W30-1-2

Ⓓ

W20-3
36"x36"
W30-1-1

***

W23-101
96"X48"



FAB-1

NOT TO SCALE

FRONT STREET - 6" SERIES B
UPPER CASE, NON-COMPRESSED
LEGEND AND BORDER - BLACK
BACKGROUND - ORANGE

	9.9"		8.5"
F	2.3"	S	2.5"
R	3.2"	T	3.4"
O	3.4"	R	3.2"
N	3.9"	E	3.7"
T	3.4"	E	3.2"
	9.9"	T	2.9"
	36"		8.5"
			36"

Ⓔ

FAB-1*
36"x18"

M4-9S
30"x24"

Ⓕ

FAB-1*
36"x18"

M4-9SR
30"x24"

Ⓖ

FAB-1*
36"x18"

M4-9R
30"x24"

Ⓗ

FAB-1*
36"x18"

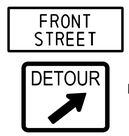
M4-9SL
30"x24"

Ⓘ

FAB-1*
36"x18"

M4-9L
30"x24"

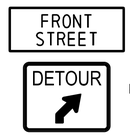
Ⓙ



FAB-1*
36"x18"

M4-9-1BR
30"x24"

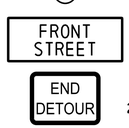
Ⓚ



FAB-1*
36"x18"

M4-9-1AR
30"x24"

Ⓛ



FAB-1*
36"x18"

M4-8A
24"x18"

Ⓜ

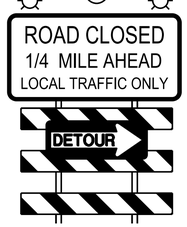
R11-3A
60"x30"

M4-10L
48"x18"

Ⓝ

R11-3A
60"x30"

Ⓞ



R11-3A
60"x30"

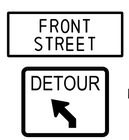
M4-10R
48"x18"

**

Ⓟ

R11-2
48"x30"

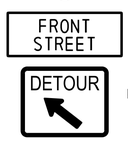
Ⓠ



FAB-1*
36"x18"

M4-9-1AL
30"x24"

Ⓡ



FAB-1*
36"x18"

M4-9-1BL
30"x24"

NOTES

* SEE FABRICATION DETAIL, THIS SHEET

** EXTEND TYPE III BARRICADES ACROSS THE ENTIRE ROADWAY WIDTH.

*** PLACE W23-101 SIGNS AT LEAST (14) WORKING DAYS PRIOR TO IMPLEMENTING THE DETOUR AND CLOSING THE ROADWAY TO TRAFFIC. DATE TO BE PROVIDED BY CONTRACTOR AT TIME OF CONSTRUCTION.

LEGEND

☼ TYPE "B" FLASHING LIGHT (YELLOW)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

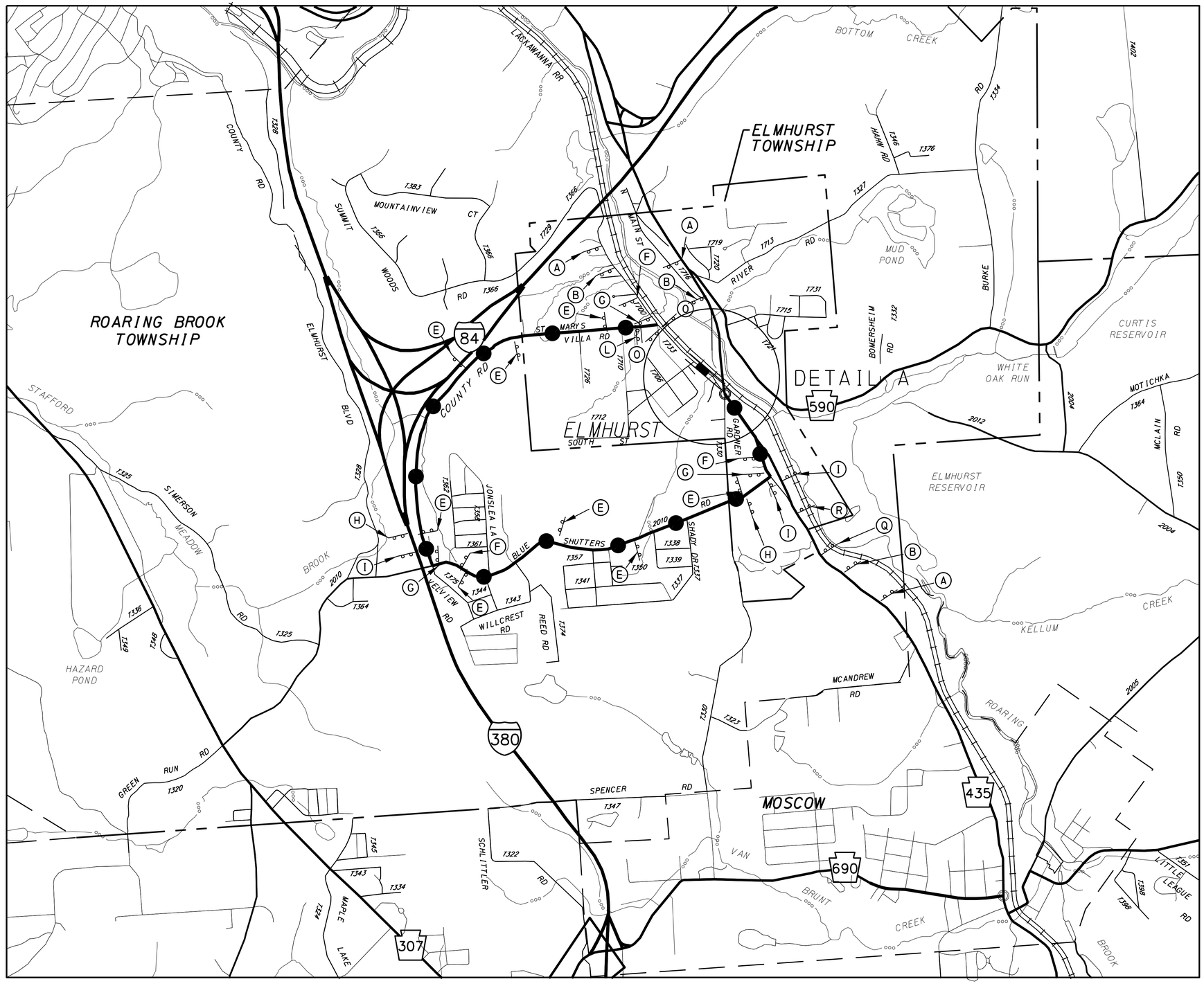
TRAFFIC CONTROL PLAN CAR DETOUR STAGES 1 & 3

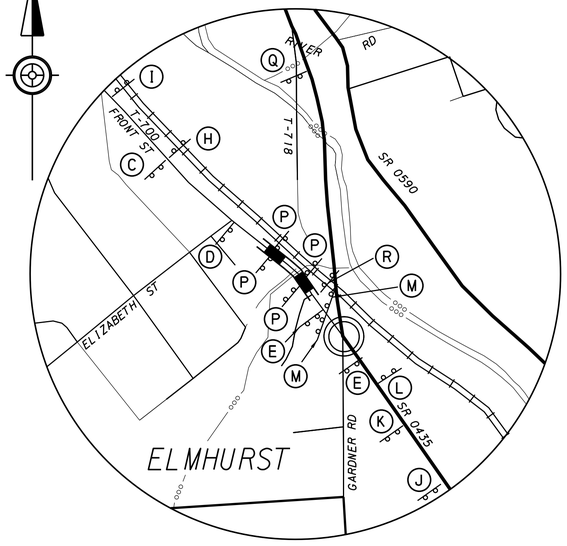
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\01261 SR 435 Car Detour Map.dgn
Model:SHEET 2 2/28/2024 11:41:39 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	10 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY





DETAIL A
NOT TO SCALE

LEGEND

- WORK AREA
- CAR DETOUR (4.05 MILES)
- COUNTY LINE
- TOWNSHIP LINE
- INTERSTATE ROAD
- MAJOR STATE ROAD
- STATE ROAD
- TOWNSHIP ROAD
- WATERWAY
- RAILWAY
- SIGNS ON TYPE III BARRICADE

SCALE

0 1/2 1 2

MILES

TRAFFIC CONTROL PLAN CAR DETOUR STAGES 1 & 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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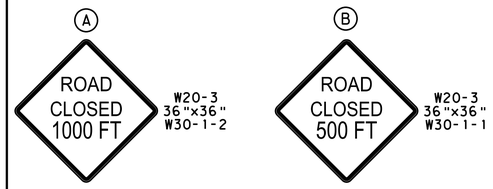
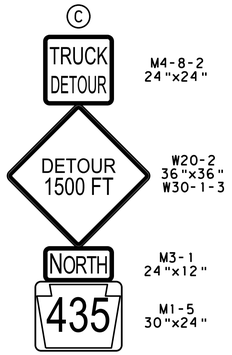
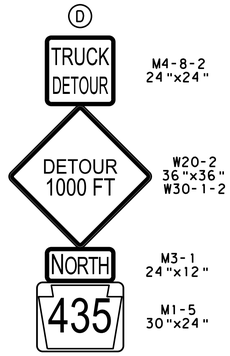
Mode:SHEET 3 2/28/2024 11:41:39 PM By:laura.hower

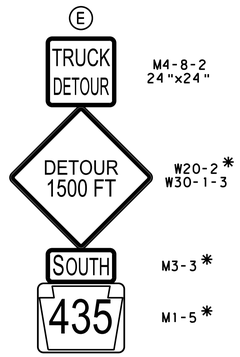
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	11 OF 66
ELMHURST TOWNSHIP				

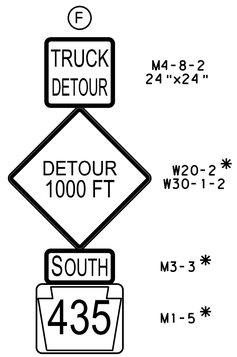
REVISION NUMBER	REVISIONS	DATE	BY

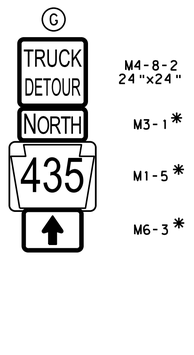


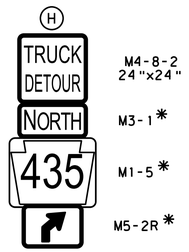


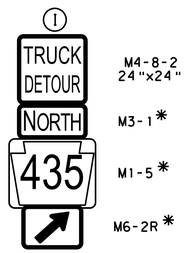


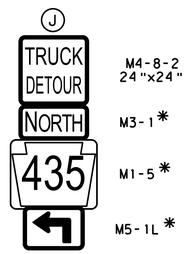


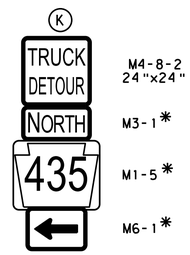


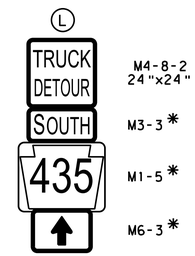


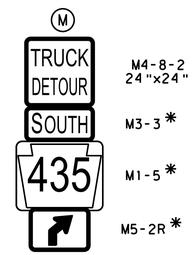


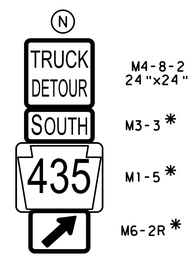


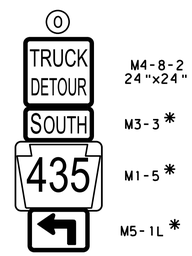


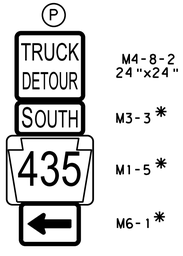


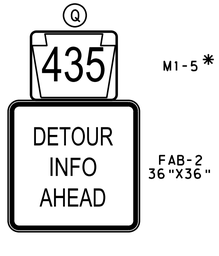


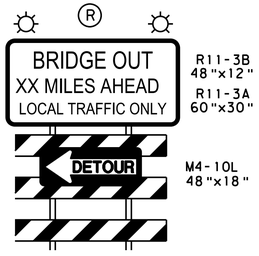


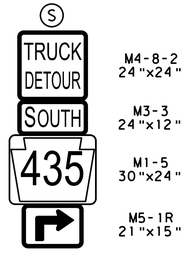


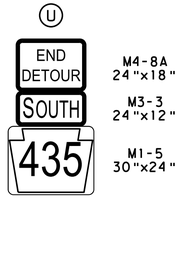


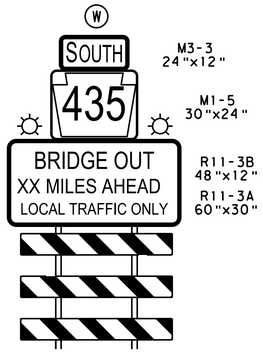


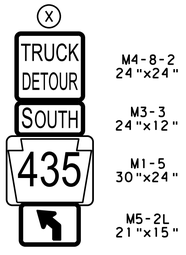


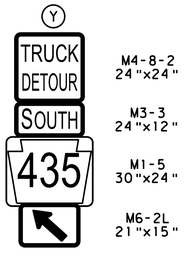


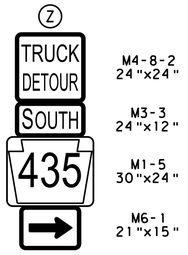


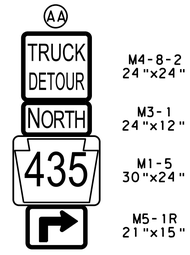


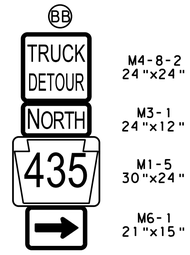


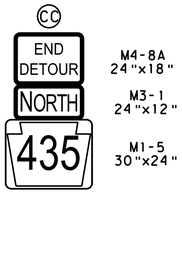


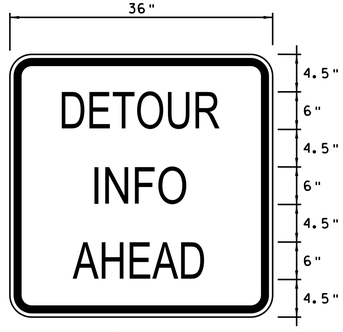












UTILIZE A PORTABLE CHANGEABLE MESSAGE SIGN IN CONJUNCTION WITH "DETOUR INFO AHEAD" SIGN.

FAB-2

NOT TO SCALE

DETOUR INFO AHEAD - 6" SERIES B
UPPER CASE, NON-COMPRESSED
LEGEND AND BORDER - BLACK
BACKGROUND - ORANGE

D	8.0"				
E	2.5"			A	9.0"
T	3.7"		13.2"	H	3.2"
O	2.9"	I	0.8"	E	4.1"
U	3.2"	N	1.9"	A	3.7"
R	3.9"	F	3.7"	D	2.9"
	3.7"	O	3.2"		4.1"
	8.0"		13.2"		9.0"
	36"		36"		36"

LEGEND

TYPE "B" FLASHING LIGHT (YELLOW)

NOTES

* M1 SERIES SIGNS:
INTERSTATE: 45"X36"
ALL OTHER ROADS: 30"X24"

M3 SERIES SIGNS:
INTERSTATE: 30"X15"
ALL OTHER ROADS: 24"X12"

M5 & M6 SERIES SIGNS:
INTERSTATE: 30"X18"
ALL OTHER ROADS: 21"X15"

W20 SERIES SIGNS:
INTERSTATE: 48"X48"
ALL OTHER ROADS: 36"X36"

** EXTEND TYPE III BARRICADES ACROSS THE ENTIRE ROADWAY WIDTH.

*** PLACE W23-101 SIGNS AT LEAST (14) WORKING DAYS PRIOR TO IMPLEMENTING THE DETOUR AND CLOSING THE ROADWAY TO TRAFFIC. DATE TO BE PROVIDED BY CONTRACTOR AT TIME OF CONSTRUCTION.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TRAFFIC CONTROL PLAN TRUCK DETOUR STAGE 2

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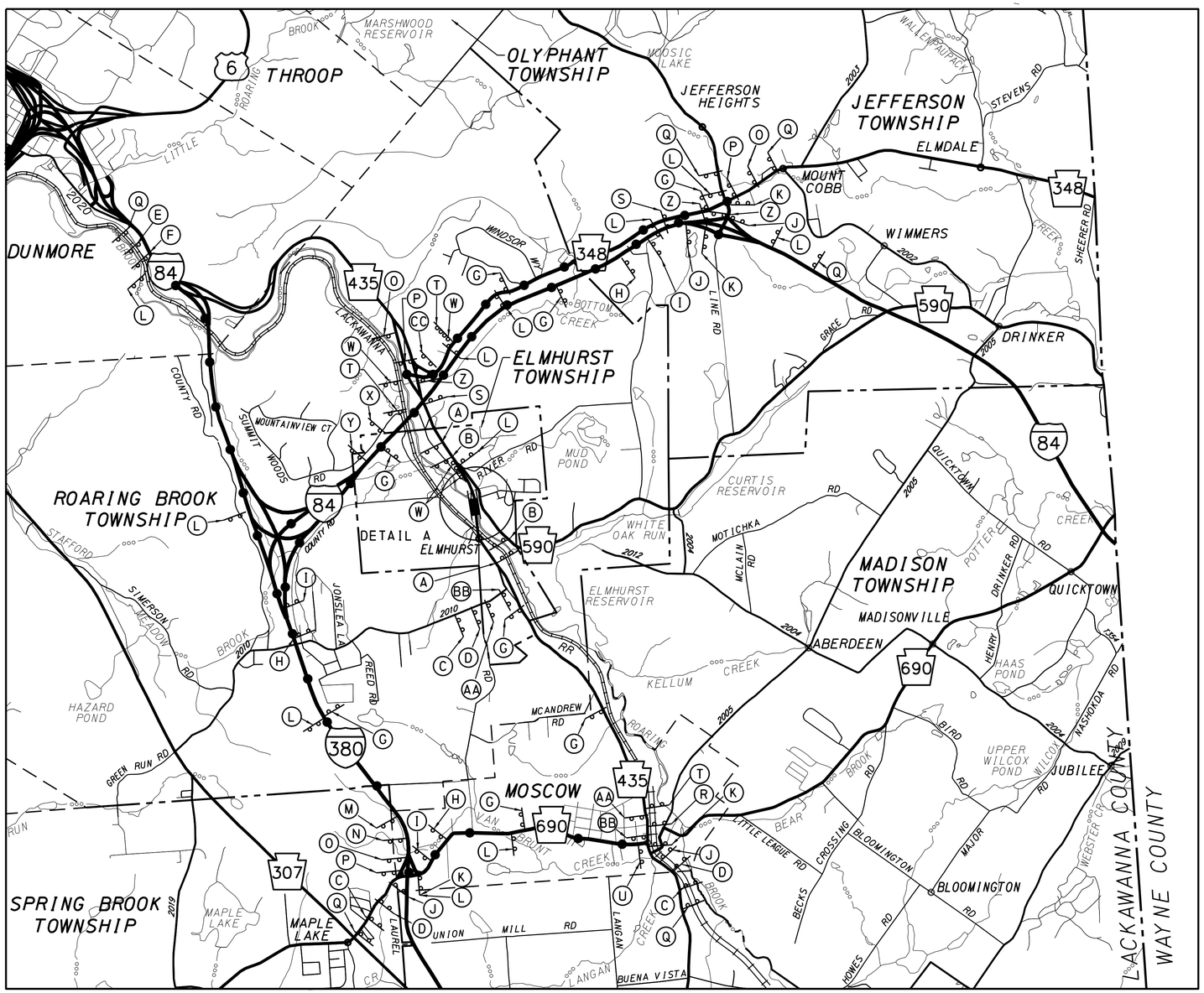
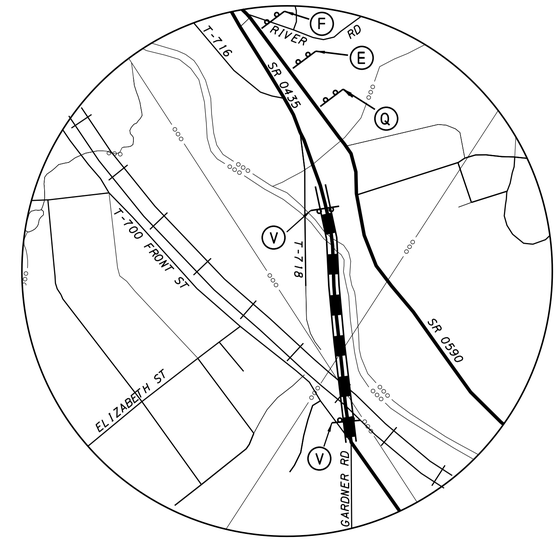
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	12 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY





DETAIL A
NOT TO SCALE

LEGEND

- WORK AREA
- SR 0435 DETOUR (6.23 MILES)
- COUNTY LINE
- TOWNSHIP LINE
- INTERSTATE ROAD
- MAJOR STATE ROAD
- STATE ROAD
- TOWNSHIP ROAD
- WATERWAY
- RAILWAY
- SIGNS ON TYPE III BARRICADE

SCALE

0 1/4 1/2 1

MILES

NOTE:
SEE STAGE 2 FOR ADDITIONAL SIGNS RELATED TO ROAD CLOSURE.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TRAFFIC CONTROL PLAN TRUCK DETOUR STAGE 2

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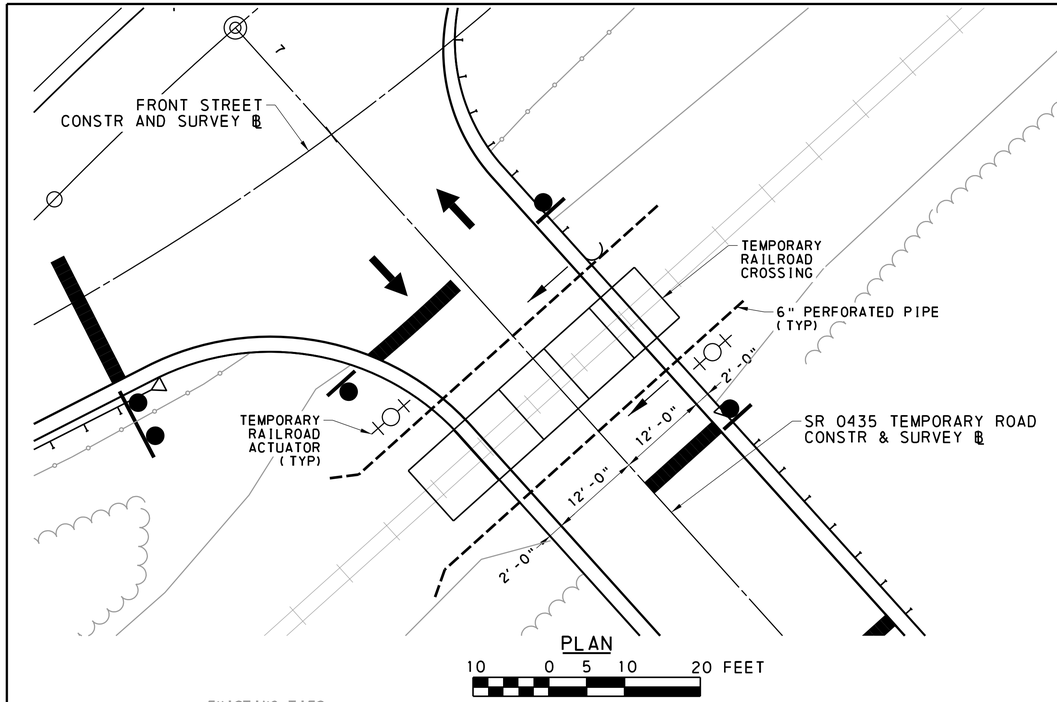
Mode:SHEET 3 2/28/2024 11:41:43 PM By:laura.hower

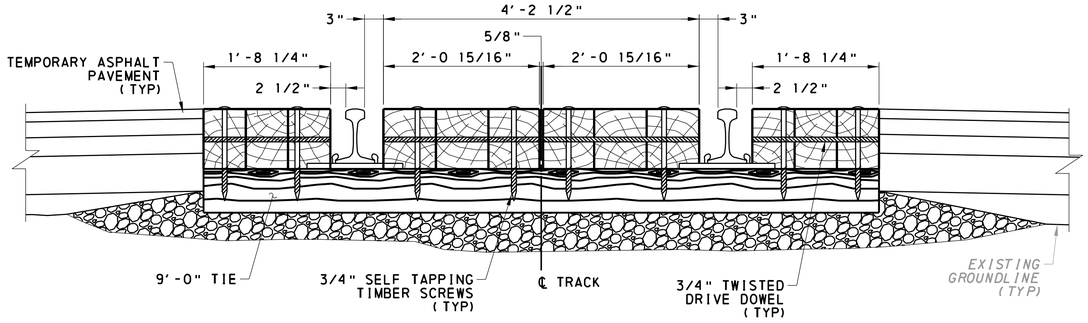
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	13 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PLAN

10 0 5 10 20 FEET



SECTION A-A

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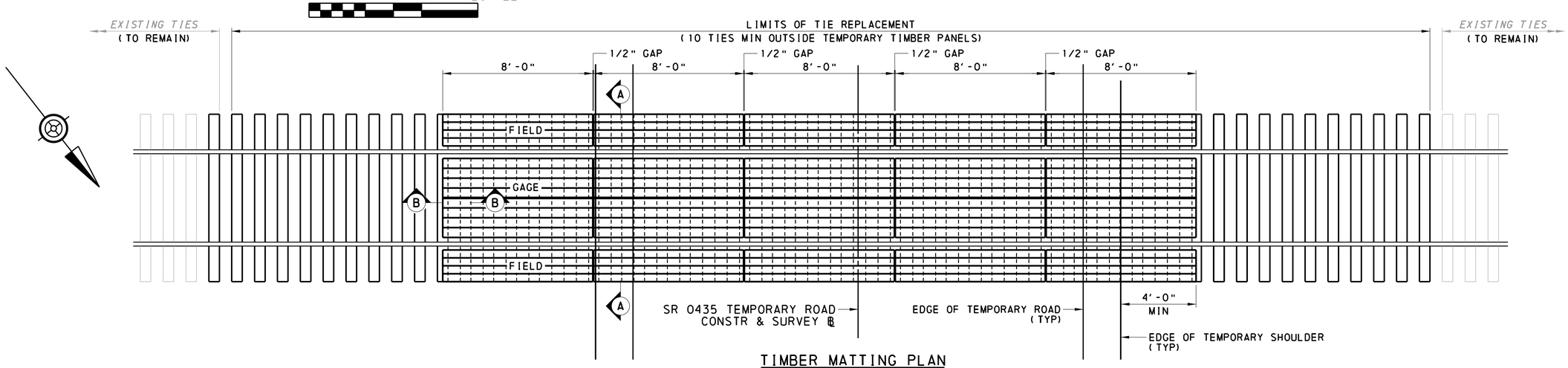
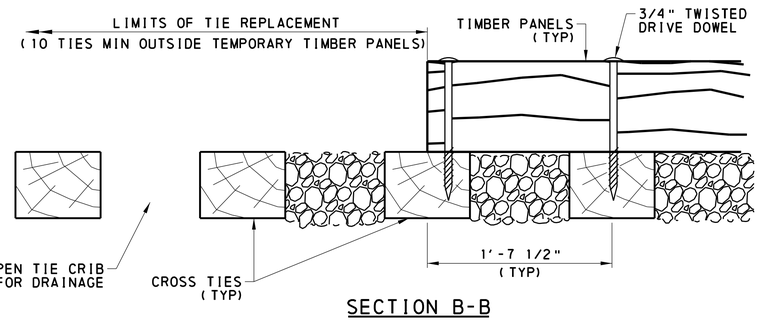


TIMBER MATTING PLAN

3 0 1 3 6 FEET



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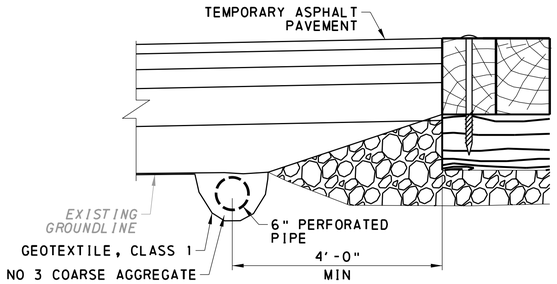

SECTION WITH DRAIN

(NOT TO SCALE)

NOTES:

1. SEE SHEET 2 FOR GENERAL NOTES.

MATERIALS AND INSTALLATION:

1. REQUISITIONS FOR PREFABRICATED CROSSING SECTIONS TO BE MADE SPECIFYING THE NUMBER OF EACH TYPE OF SECTION REQUIRED (A OR B) AND THE WEIGHT OF RAIL WITH WHICH IT IS TO BE USED (133, 131, ETC) AS DENOTED IN THE DIMENSION CHART UNDER CATEGORIES. DRILLING TO START AT THE CENTERLINE OF CROSSING AND WORK TOWARDS THE ENDS.
2. GEOTEXTILE AND PIPE TO BE INSTALLED ONLY AT LOCATIONS WHERE REQUIRED BY STATE OR LOCAL AGENCIES OR WHERE DESIGNATED BY THE RAILROAD'S CHIEF ENGINEER.
3. ALL EXCEPTIONS TO THIS PLAN MUST BE APPROVED BY THE RAILROAD'S CHIEF ENGINEER.

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ENGINEER
PE081839

TEMPORARY RAILROAD CROSSING

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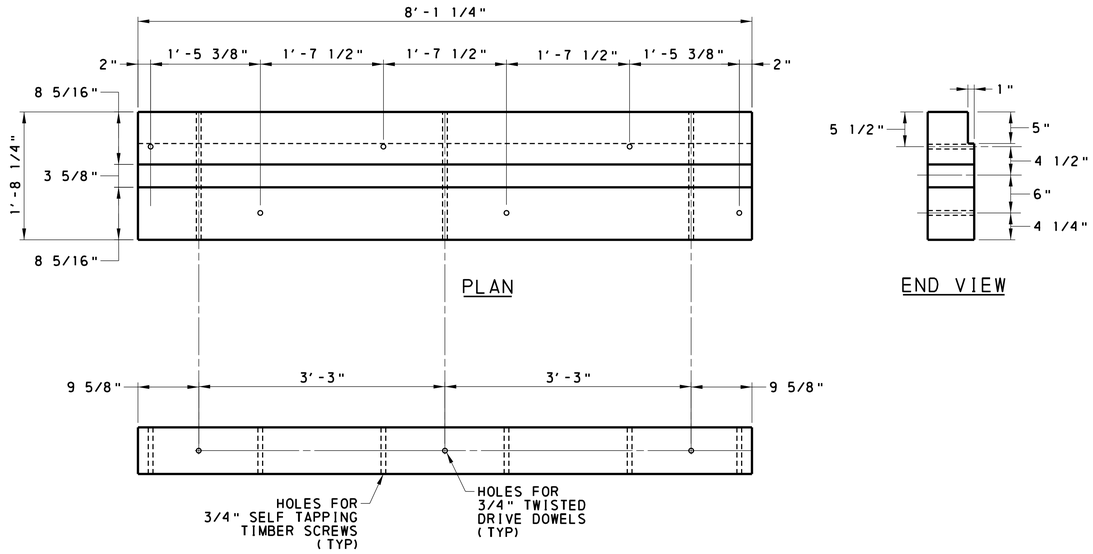
Model:01 DETAIL SHEET 01 2/28/2024 1:41:48 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	14 OF 66

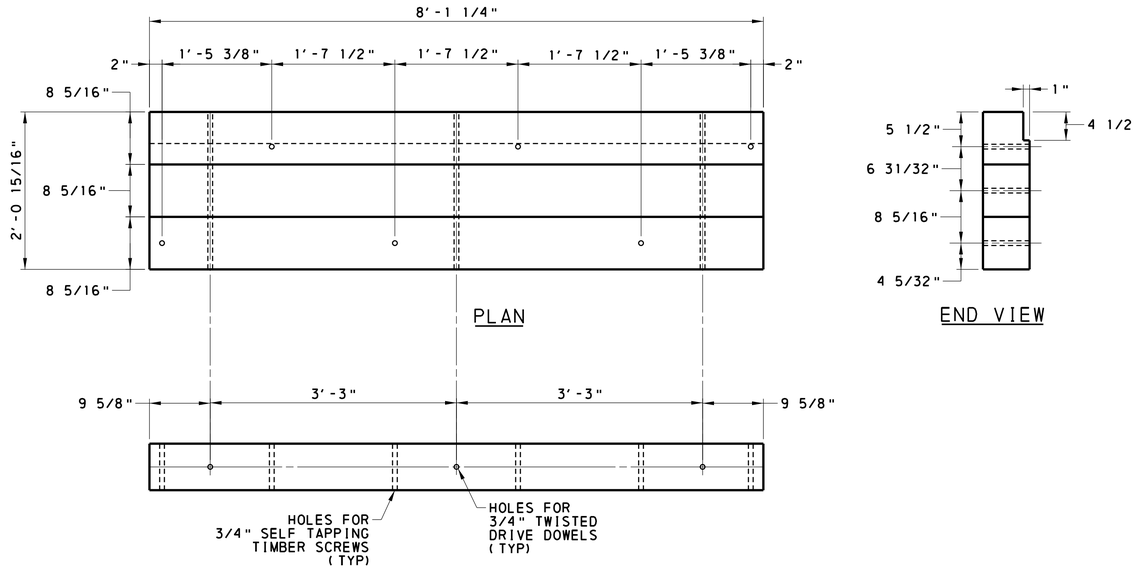
ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



FIELD TIMBER PANEL A

MATERIAL FOR ONE SECTION
2-A x 8 1/2" x 8'-1 1/4" TIMBERS
3-3/4" x 19 1/2" TWISTED DRIVE DOWELS
6-3/4" x 12" SELF TAPPING TIMBER SCREWS
1-A x 3 1/4" x 8'-1 1/4" TIMBER



GAGE TIMBER PANEL B

MATERIAL FOR ONE SECTION
3-A x 8 1/2" x 8'-1 1/4" TIMBERS
3-3/4" x 24" TWISTED DRIVE DOWELS
6-3/4" x 13" SELF TAPPING TIMBER SCREWS

GENERAL NOTES:

1. CROSSING PANELS MUST BE EVENLY SUPPORTED ON ALL TIES. TRACK STRUCTURE INCLUDING RAIL, OTM, TIES, BALLAST AND ROADBED MUST BE 9' LONG, SPACED AT 19 1/2" CENTERS AND EXTEND TEN TIES BEYOND END OF CROSSING. FIELD DRILL PANEL ANCHORAGE HOLES TO ENSURE PROPER FIT. NEW TRACK TIES TO BE INSTALLED IF NECESSARY, AND ALL TIES TO BE REPLACED PERMANENTLY WITHIN THE LIMITS SHOWN.
2. CROSSING SITE IS TO BE INSPECTED PRIOR TO START OF INSTALLATION TO DETERMINE THAT PROPER DRAINAGE AND SURFACE SUPPORT IS PROVIDED, TRACK GRADE IS UNIFORM AND EXISTING TIES ARE AT LEAST 9' LONG.
3. IF CONDITIONS WARRANT, SITE IS TO BE OVER-EXCAVATED AND CROSSING DRAINAGE SYSTEM INSTALLED USING COMPACTED, WELL GRADED GRANULAR FILL; SUBBALLAST, GEOTEXTILE AND PERFORATED DRAINAGE PIPE (IF REQUIRED) INSTALLED PER DETAILS OF THIS DRAWING.
4. ADDITIONAL SITE DRAINAGE INCLUDING PROPER DRAINAGE AT EACH QUADRANT OF CROSSING SHALL BE COMPLETED TO ENSURE CROSSING DAMAGE.
5. RAIL JOINTS ARE TO BE LOCATED OUTSIDE OF THE TEMPORARY ROADWAY CROSSING AREA (INLUDING LANES AND SHOULDERS) AND A MINIMUM OF 15'-0" FROM THE END OF CROSSING TIMBERS. REPLACE RAILS AS NECESSARY IF EXISTING RAIL JOINTS DO NOT MEET THE CRITERIA SPECIFIED ABOVE. DO NOT WELD NEW RAILS TO EXISTING RAILS.

TEMPORARY RAILROAD CROSSING
ITEM 9000-0020

REQUIRED COMPONENTS	
RAIL WEIGHT	131#-141#
FIELD TIMBER PANEL A	XX SETS
8" X 8 1/4" X 8'-1 1/4"	XX
8" X 3 1/4" X 8'-1 1/4"	XX
3/4" X 12" SELF TAP TIMBER SCREWS	XX
3/4" X 19 1/2" TWISTED DRIVE DOWELS	XXX
FIELD TIMBER PANEL B	XX SETS
8" X 8 1/4" X 8'-1 1/4"	XX
3/4" X 12" SELF TAP TIMBER SCREWS	XX
3/4" X 19 1/2" TWISTED DRIVE DOWELS	XXX
6" PERFORATED PIPE ITEM #0610-7002	XXX LF
GEOTEXTILE CLASS 1 ITEM #0212-0001	XXX LF
NO. 3 COARSE AGGREGATE ITEM #0703-0026	XX CY

DIMENSION CHART		
*RAIL SIZE	A	SCREWS
131# - 141#	8"	3/4" x 13"
110# - 119#	7 3/8"	3/4" x 13"
90# & 100#	6 3/4"	3/4" x 12"

* RAIL SHALL BE AT LEAST 115# FOR A MINIMUM LENGTH OF 20' BEYOND THE EDGE OF TRAVELED WAY

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TEMPORARY RAILROAD CROSSING

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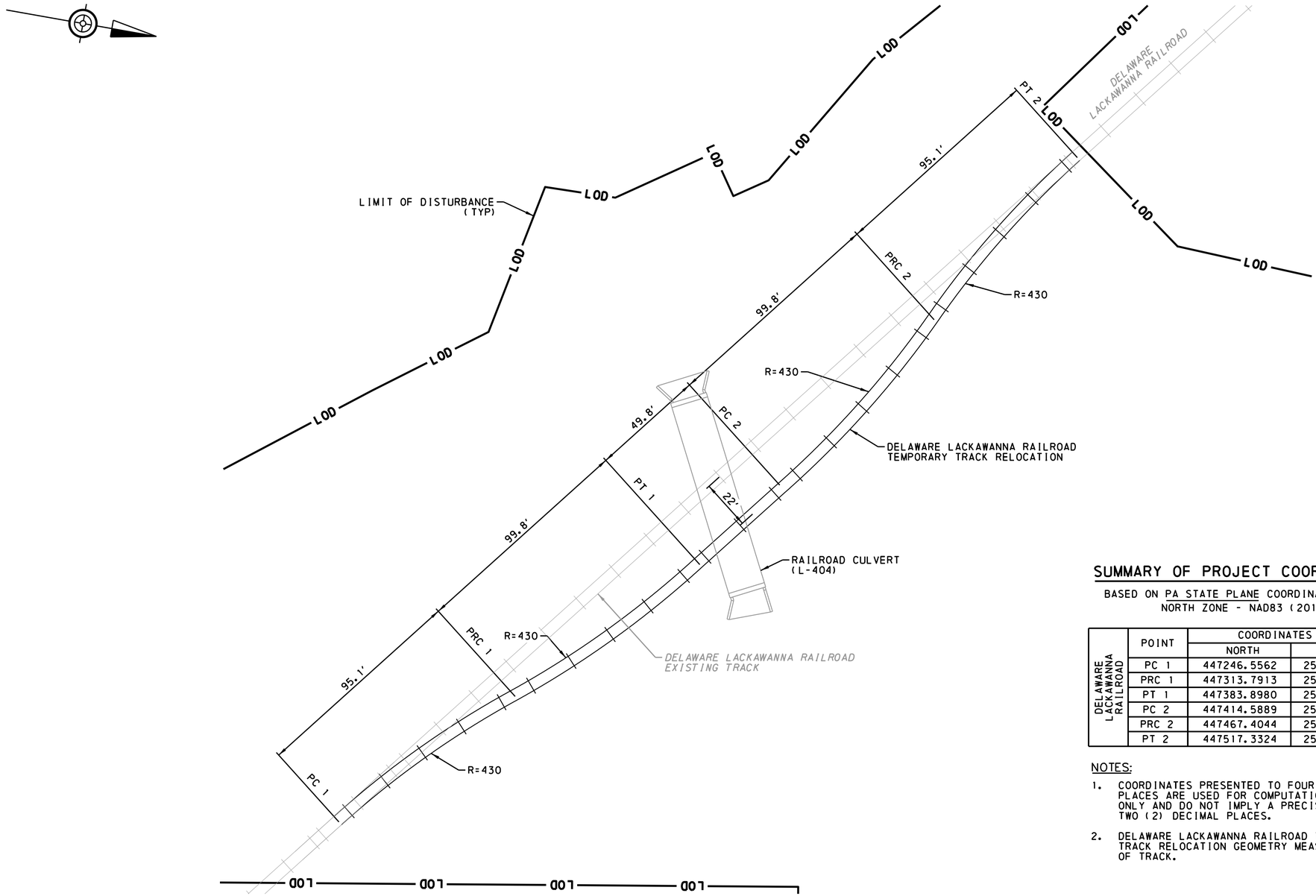
Model:02 DETAIL SHEET 02 2/28/2024 11:41:48 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251/253	15 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PLAN

SCALE

0 25 50FEET

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

	POINT	COORDINATES	
		NORTH	EAST
DELAWARE LACKAWANNA RAILROAD	PC 1	447246.5562	2573993.1694
	PRC 1	447313.7913	2573924.9922
	PT 1	447383.8980	2573853.1276
	PC 2	447414.5889	2573813.8656
	PRC 2	447467.4044	2573728.4795
	PT 2	447517.3324	2573646.7735

NOTES:

1. COORDINATES PRESENTED TO FOUR (4) DECIMAL PLACES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) DECIMAL PLACES.
2. DELAWARE LACKAWANNA RAILROAD TEMPORARY TRACK RELOCATION GEOMETRY MEASURED FROM ℄ OF TRACK.

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CONCEPTUAL TEMPORARY TRACK LAYOUT

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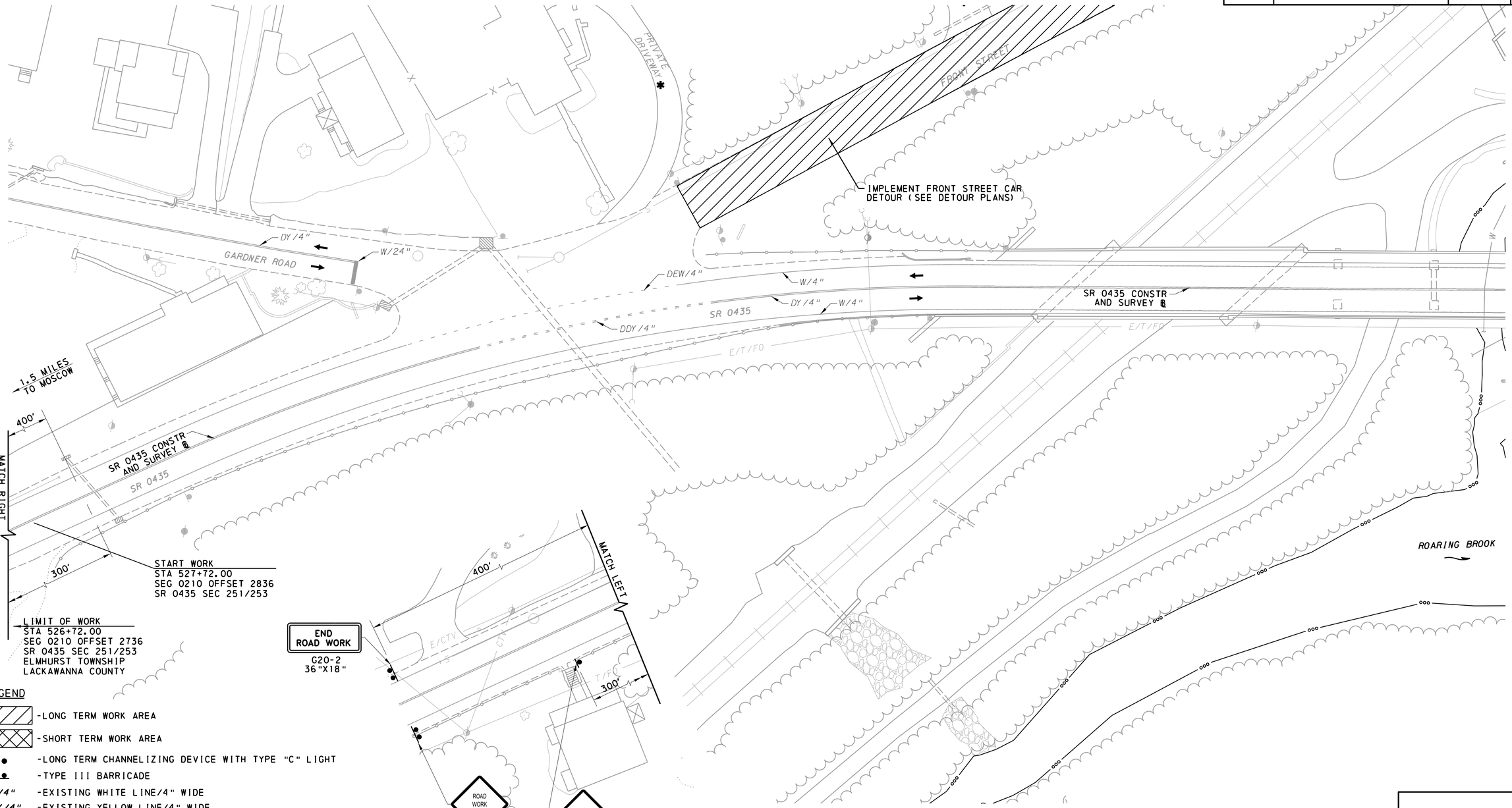
Model: TEMP TRACK 2/28/2024 11:41:52 PM By: laura.hower

SEE SHEET 17

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	16 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- W/4" -EXISTING WHITE LINE/4" WIDE
- DY/4" -EXISTING YELLOW LINE/4" WIDE
- DEW/4" -EXISTING DOTTED EXTENSION WHITE LINE/4" WIDE
- DDY/4" -EXISTING DOUBLE DOTTED YELLOW LINE/4" WIDE
- TY/4" -TEMPORARY SOLID YELLOW LINE/4" WIDE
- TDDY/4" -TEMPORARY DOUBLE DOTTED YELLOW LINE/4" WIDE
- TDEW/4" -TEMPORARY DOTTED EXTENSION WHITE LINE/4" WIDE
- TW/4" -TEMPORARY SOLID WHITE LINE/4" WIDE
- -TRAFFIC FLOW DIRECTION
- * -MAINTAIN ACCESS TO PRIVATE DRIVEWAYS

PLAN

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TRAFFIC CONTROL PLAN STAGE 1

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 1.dgn
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	17 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- W/4" -EXISTING WHITE LINE/4" WIDE
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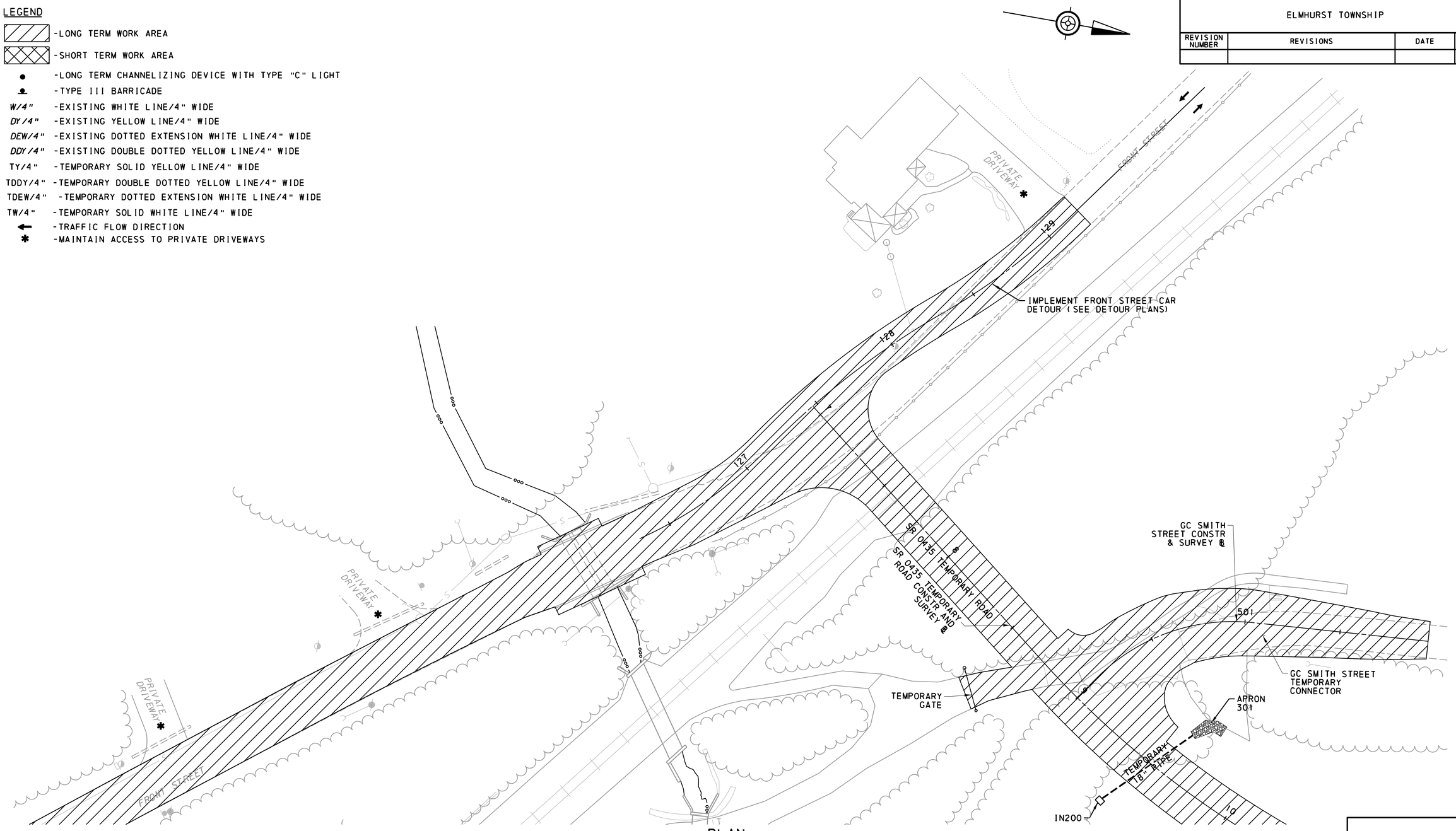
- -TRAFFIC FLOW DIRECTION
- * -MAINTAIN ACCESS TO PRIVATE DRIVEWAYS



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0 25 50FEET

SEE SHEET 16

SEE SHEET 18

TRAFFIC CONTROL PLAN STAGE 1

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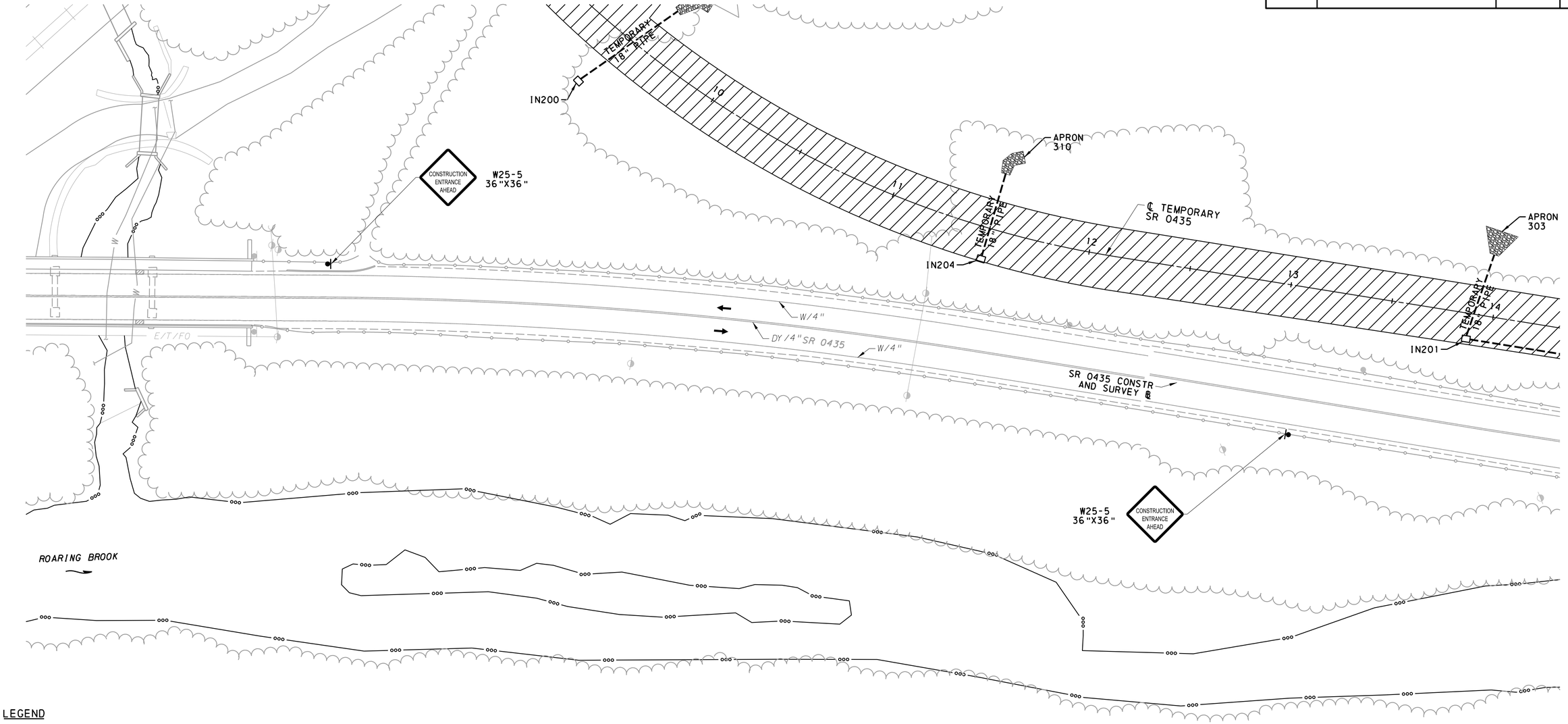
SEE SHEET 17

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	18 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 16

SEE SHEET 19

LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- ● -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- *W/4"* -EXISTING WHITE LINE/4" WIDE
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- ← -TRAFFIC FLOW DIRECTION
- ✱ -MAINTAIN ACCESS TO PRIVATE DRIVEWAYS

PLAN

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TRAFFIC CONTROL PLAN STAGE 1

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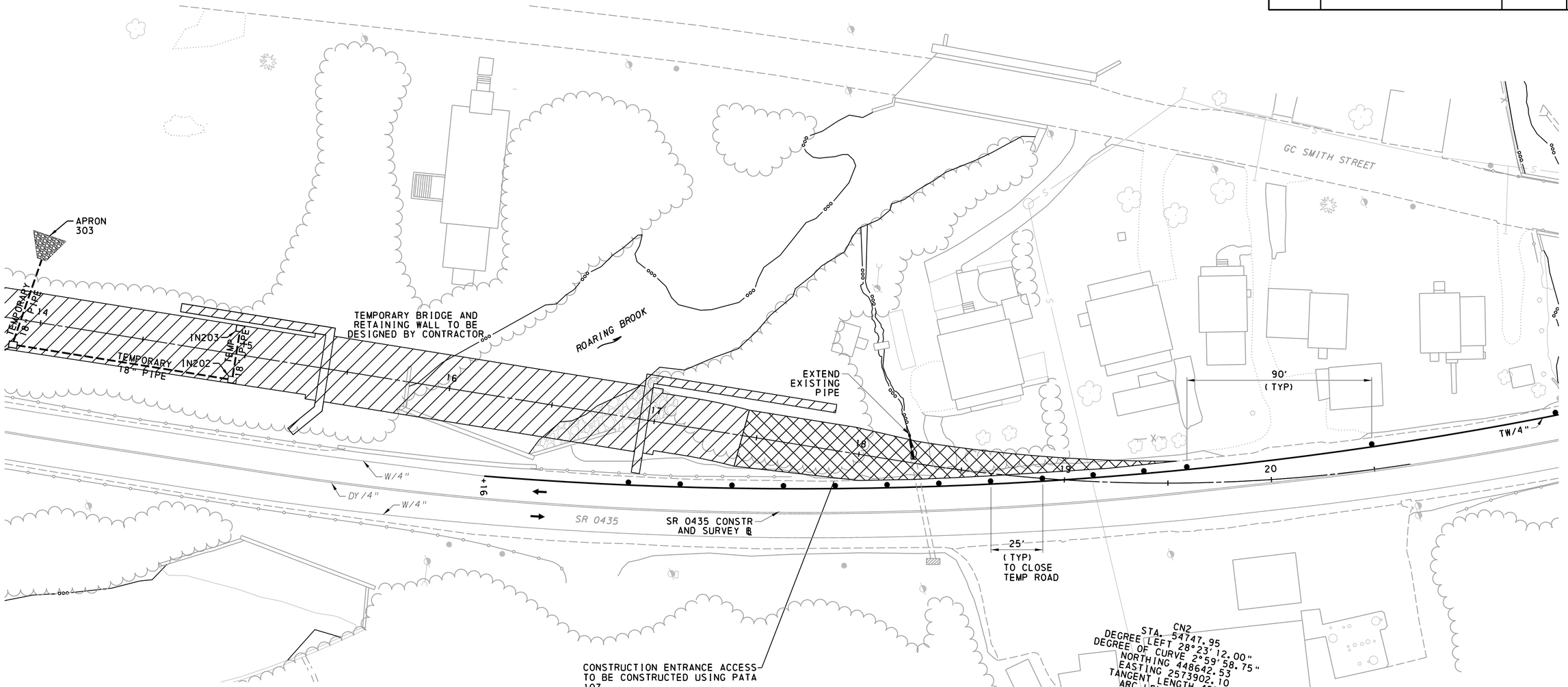
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	19 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 18

SEE SHEET 20



LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- W/4" -EXISTING WHITE LINE/4" WIDE
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- -TRAFFIC FLOW DIRECTION
- * -MAINTAIN ACCESS TO PRIVATE DRIVEWAYS

PLAN

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0 25 50FEET

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TRAFFIC CONTROL PLAN STAGE 1

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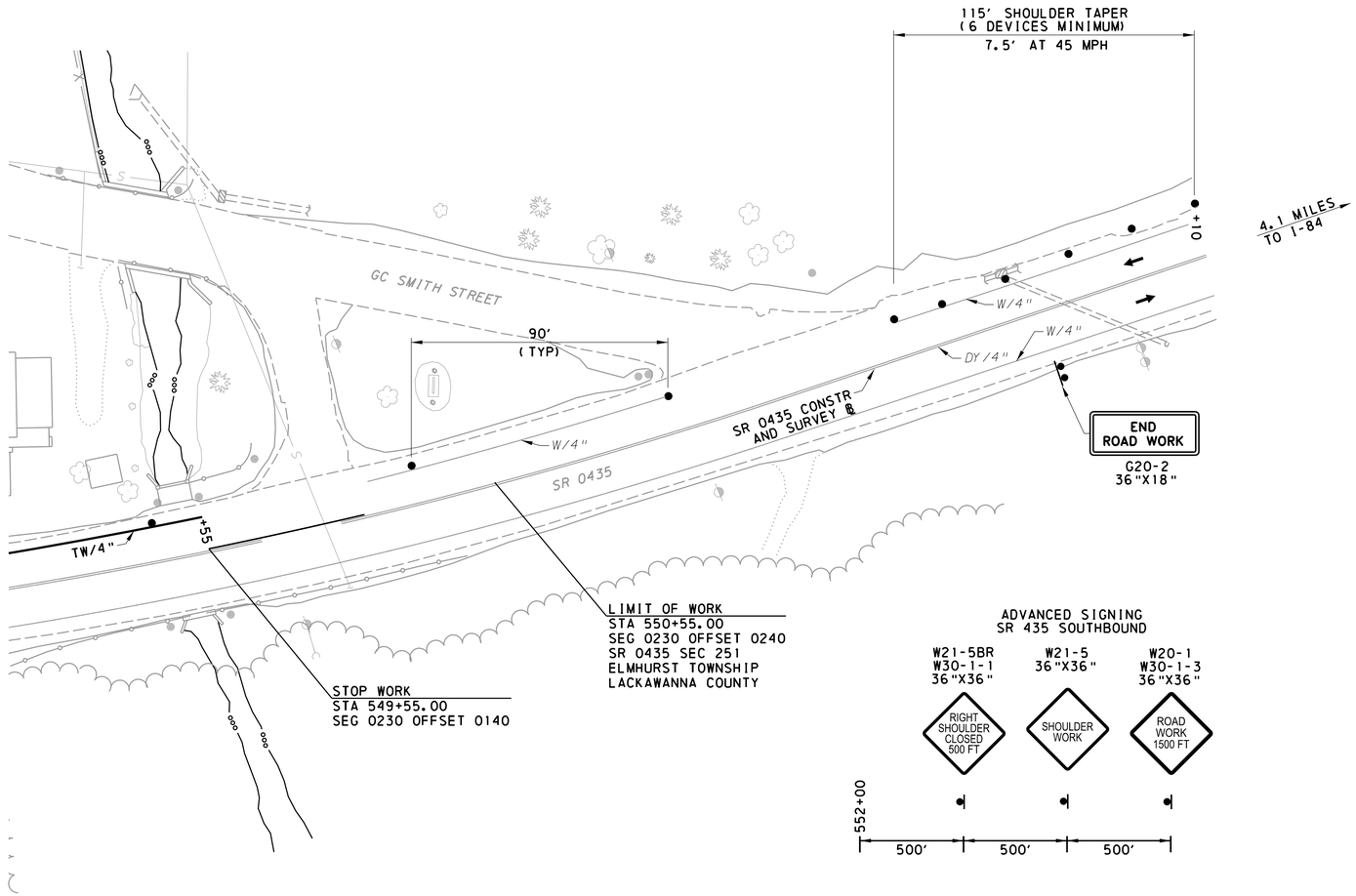
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	20 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 19



LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- ● -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- *W/4"* -EXISTING WHITE LINE/4" WIDE
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- ← -TRAFFIC FLOW DIRECTION
- ✱ -MAINTAIN ACCESS TO PRIVATE DRIVEWAYS

PLAN

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TRAFFIC CONTROL PLAN STAGE 1

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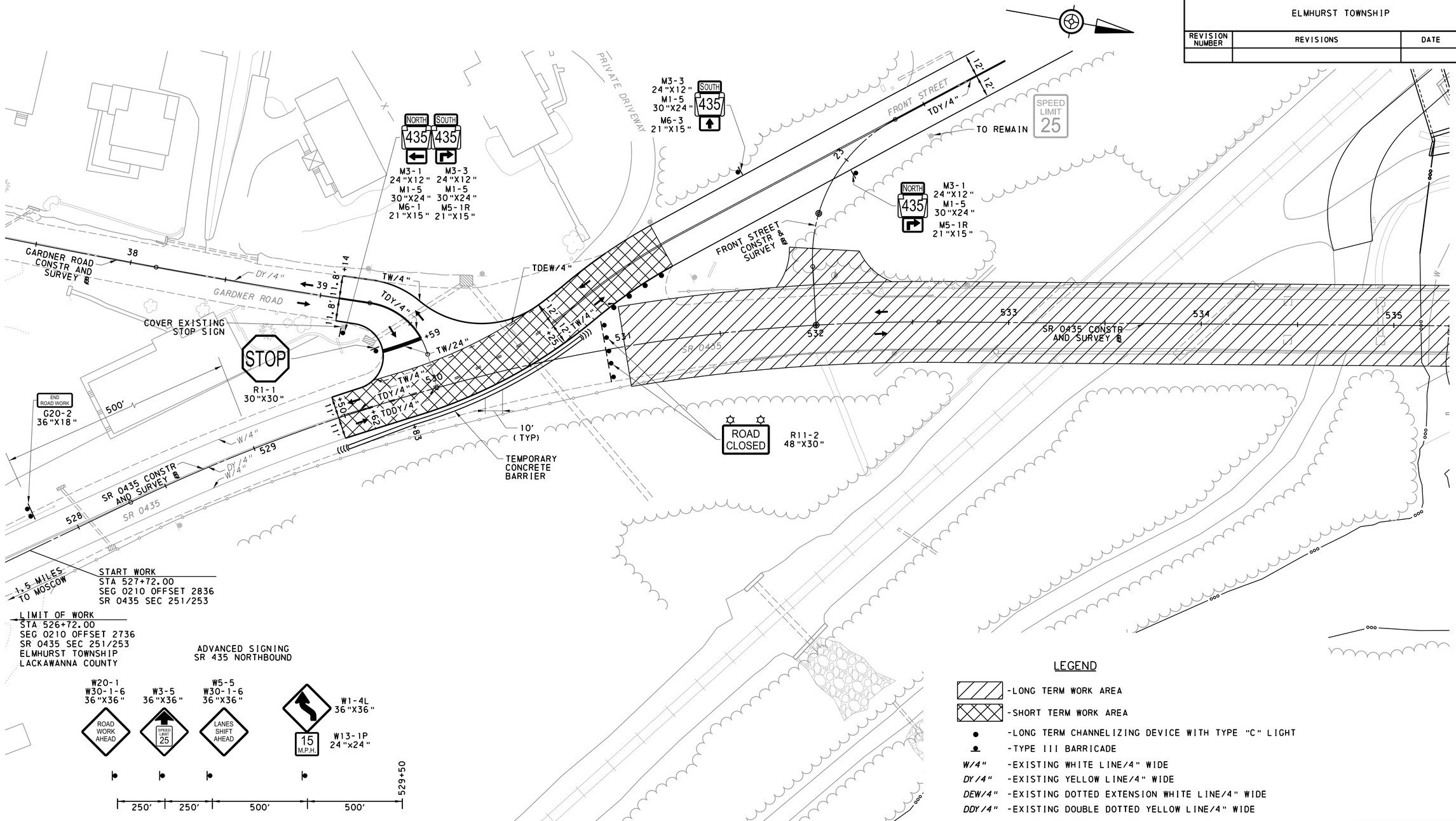
SEE SHEET 22

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	21 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



PLAN

SCALE

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SEE SHEET 23

LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- W/4" -EXISTING WHITE LINE/4" WIDE
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- TW/4" -TEMPORARY SOLID WHITE LINE/4" WIDE
- -TRAFFIC FLOW DIRECTION
- ((((-TEMPORARY IMPACT ATTENUATING DEVICE

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TRAFFIC CONTROL PLAN STAGE 2

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	22 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
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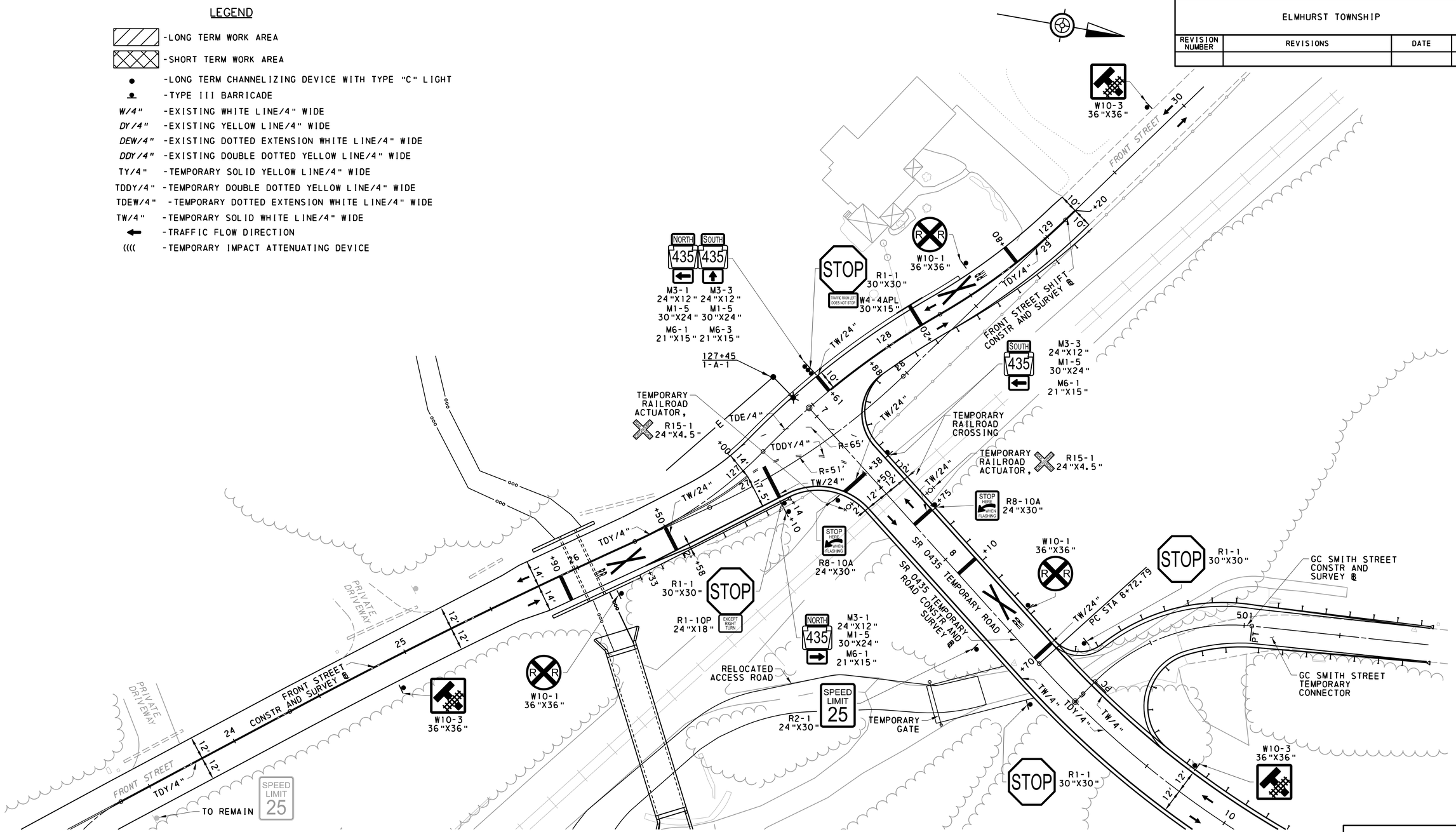
- TW/4" -TEMPORARY SOLID WHITE LINE/4" WIDE
- -TRAFFIC FLOW DIRECTION
- -TEMPORARY IMPACT ATTENUATING DEVICE



PLAN

SCALE

0 25 50FEET

SEE SHEET 21

SEE SHEET 23

TRAFFIC CONTROL PLAN STAGE 2

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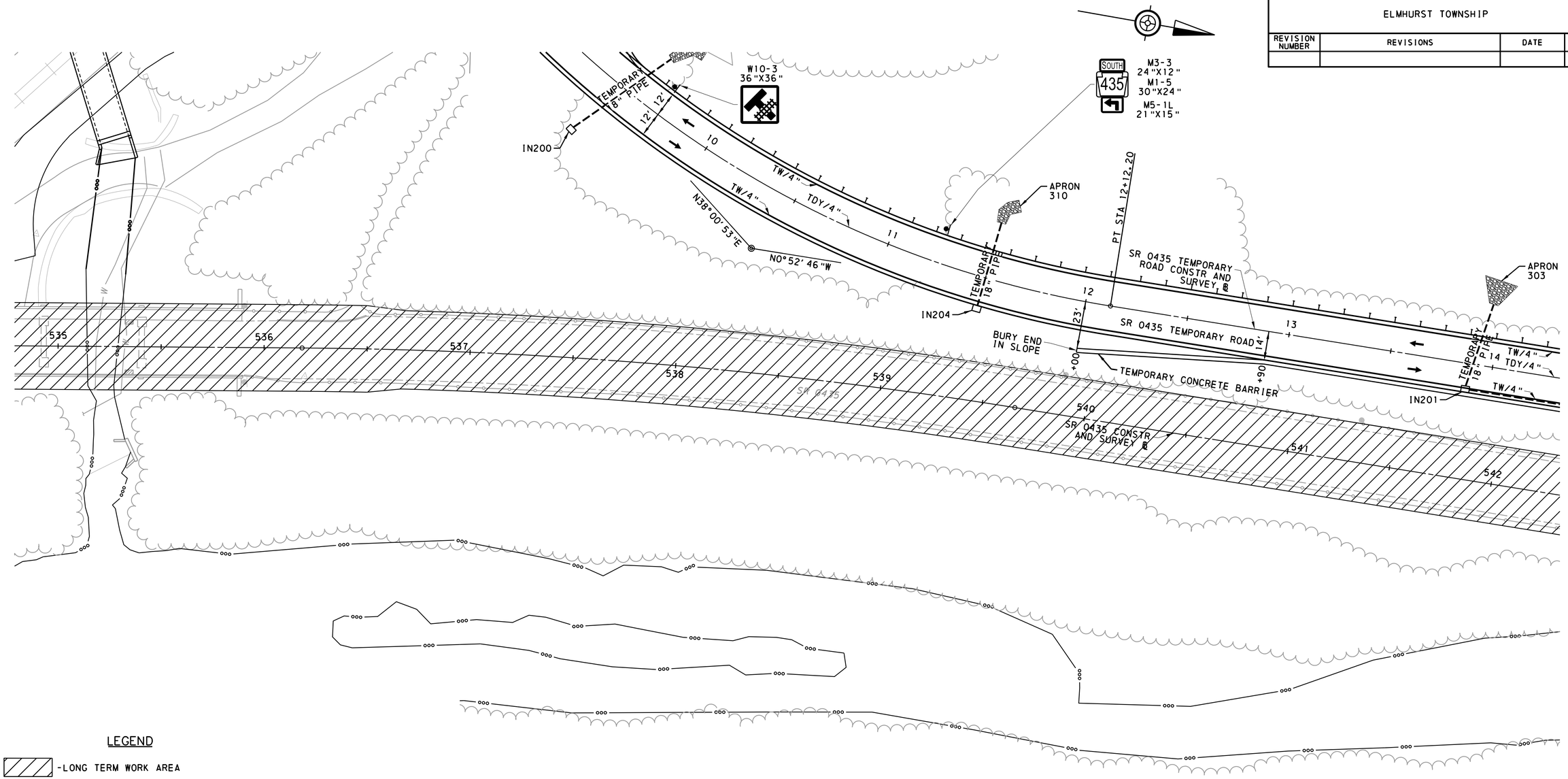
Model:TC 2 Sheet 02 3/5/2024 3t 09:33 PM By: laura.hower

SEE SHEET 22

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	23 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 21

SEE SHEET 24

LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
- -TYPE III BARRICADE
- *W/4"* -EXISTING WHITE LINE/4" WIDE
- *DY/4"* -EXISTING YELLOW LINE/4" WIDE
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- TW/4" -TEMPORARY SOLID WHITE LINE/4" WIDE
- -TRAFFIC FLOW DIRECTION
- ((((-TEMPORARY IMPACT ATTENUATING DEVICE

PLAN

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TRAFFIC CONTROL PLAN STAGE 2

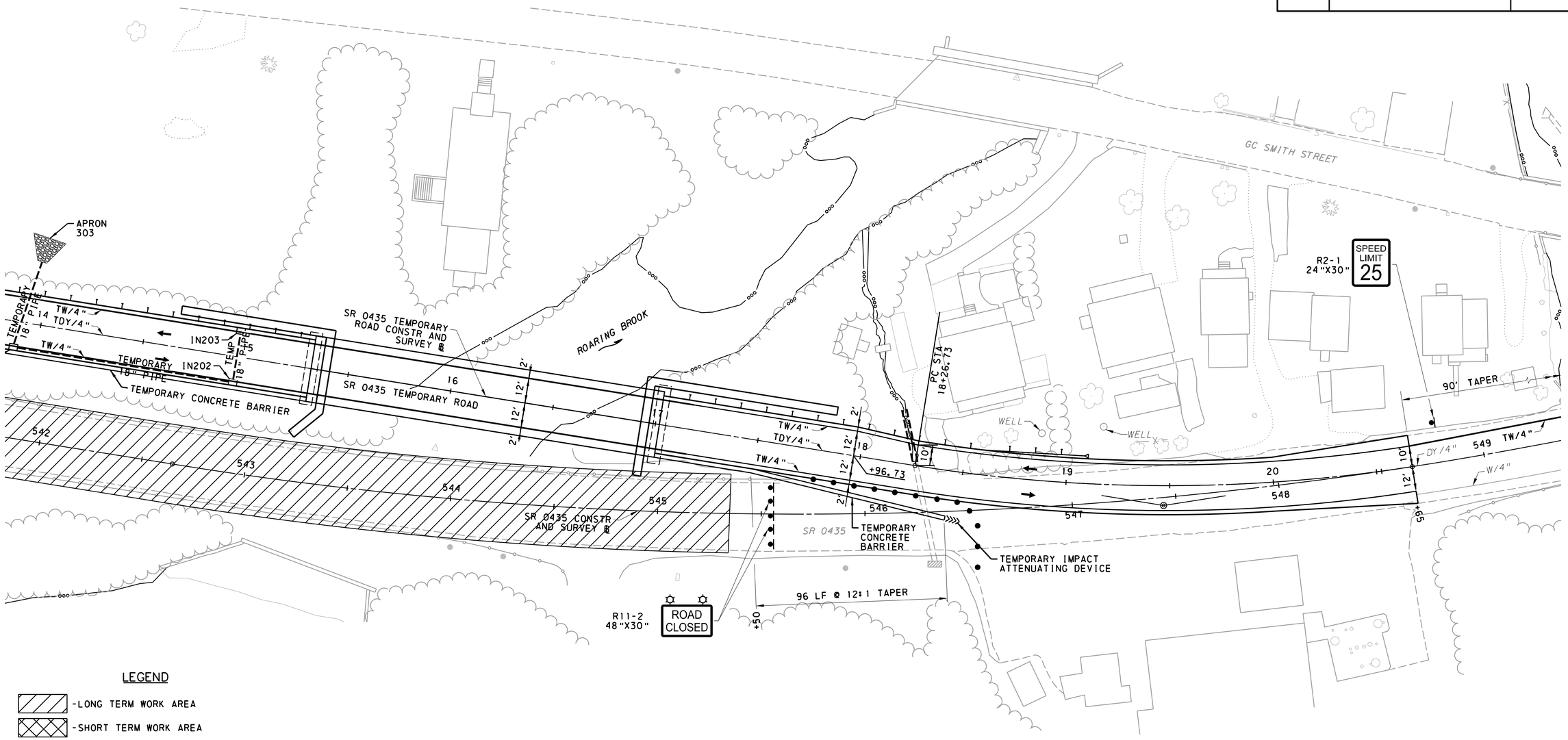
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 2.dgn
Model:TC 2 Sheet 03 3/5/2024 3:10:14 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	24 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 23

SEE SHEET 25



LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
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PLAN

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
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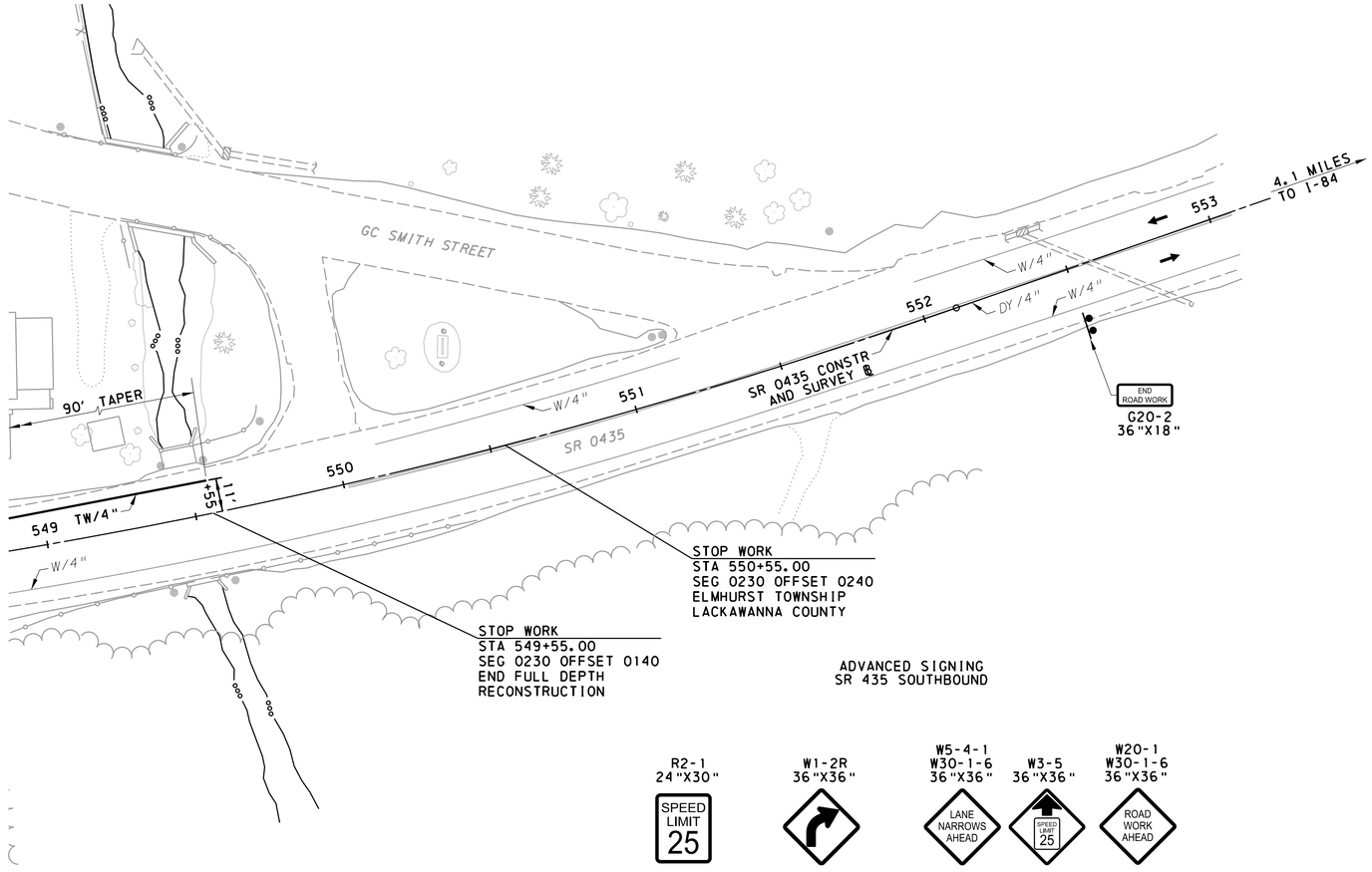
TRAFFIC CONTROL PLAN STAGE 2

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 2.dgn
Model: TC 2 Sheet 04 3/5/2024 2:24:32 PM By: laura.hower

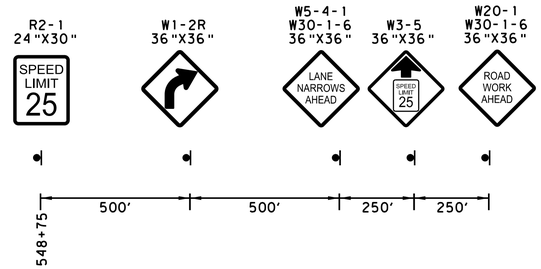
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	25 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 24



ADVANCED SIGNING
SR 435 SOUTHBOUND



LEGEND

- -LONG TERM WORK AREA
- -SHORT TERM WORK AREA
- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
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- ((((-TEMPORARY IMPACT ATTENUATING DEVICE

PLAN

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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TRAFFIC CONTROL PLAN STAGE 2

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 2.dgn
Model:TC 2 Sheet 05 3/5/2024 2:24:32 PM By:laura.hower

SEE SHEET 27

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	26 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

START WORK
STA 22+32.79
FRONT STREET
BEGIN FULL DEPTH
RECONSTRUCTION

START WORK
STA 39+14.00
GARDNER ROAD
BEGIN FULL DEPTH
RECONSTRUCTION

FRONT STREET
TDY/4"
FRONT STREET CONSTR AND SURVEY ℄

GARDNER ROAD CONSTR AND SURVEY ℄

GARDNER ROAD
DY/4"

IMPLEMENT FRONT STREET CAR DETOUR (SEE DETOUR PLANS)

90'

SR 0435
SR 0435 CONSTR AND SURVEY ℄

ROAD CLOSED
R11-2
48"X30"

STOP WORK
STA 39+67.18
GARDNER ROAD
END FULL DEPTH
RECONSTRUCTION

INTERSECTION PAVING OPERATIONS TO BE DONE USING PATA 107 AND PATA 109-H

MATCH RIGHT

500'

W/4"
DY/4"
W/4"

SR 0435 CONSTR AND SURVEY ℄

SR 0435

1.5 MILES TO MOSCOW

START WORK
STA 527+72.00
SEG 0210 OFFSET 2836
SR 0435 SEC 251/253

LIMIT OF WORK
STA 526+72.00
SEG 0210 OFFSET 2736
SR 0435 SEC 251/253
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

END ROAD WORK
G20-2
36"X18"

MATCH LEFT

500'

526

ROAD WORK 500 FT.
W20-1
W30-1-1
36"X36"

LEGEND

- -LONG TERM WORK AREA
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- -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT
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- -TRAFFIC FLOW DIRECTION

PLAN

SCALE

0 25 50FEET

SEE SHEET 28

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TRAFFIC CONTROL PLAN STAGE 3

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 3.dgn
Model:TC 3 Sheet 01 3/5/2024 10:21:25 AM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	27 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

- -LONG TERM WORK AREA
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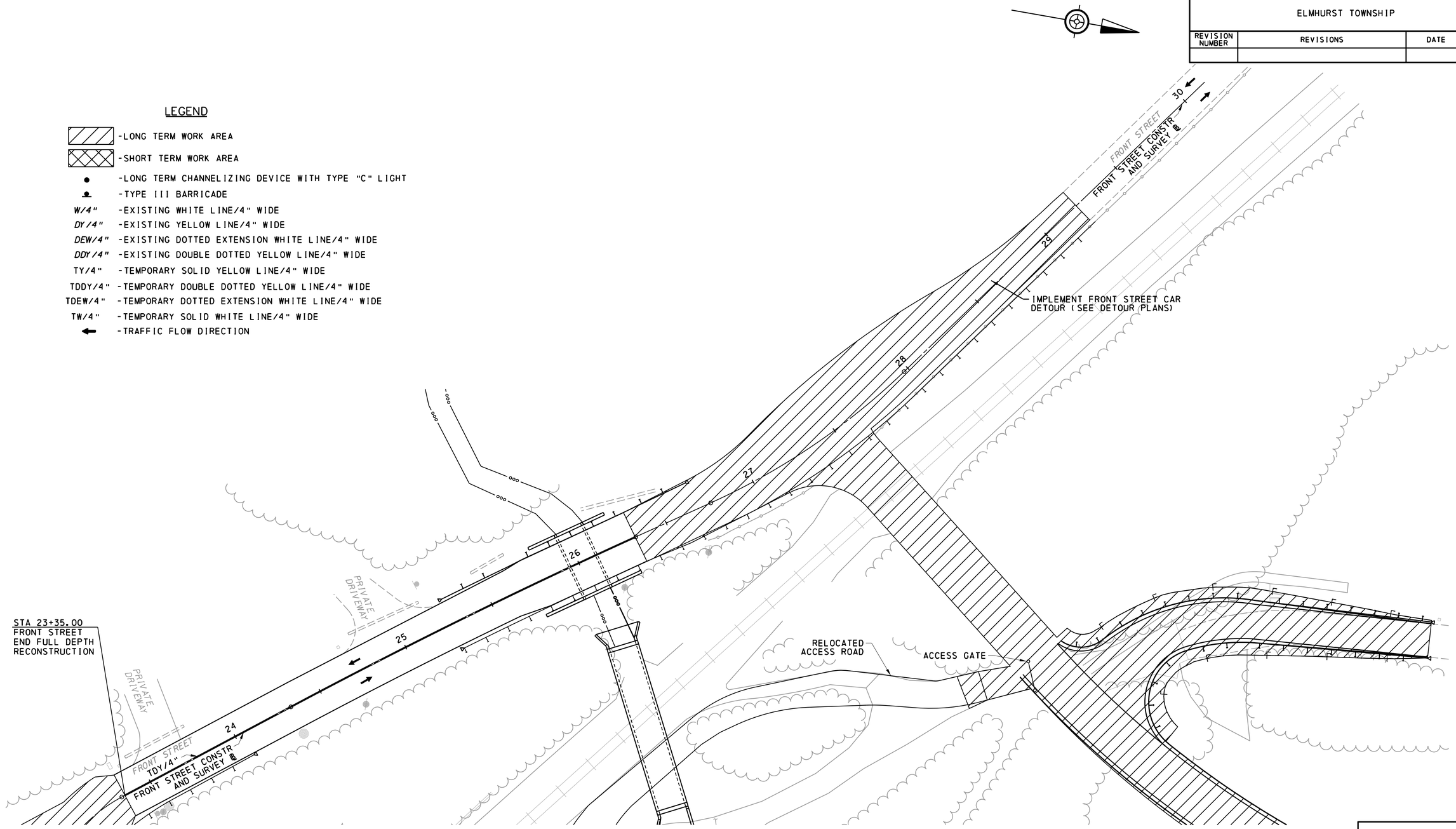

PLAN

SCALE

0 25 50FEET

SEE SHEET 26

SEE SHEET 28

TRAFFIC CONTROL PLAN STAGE 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

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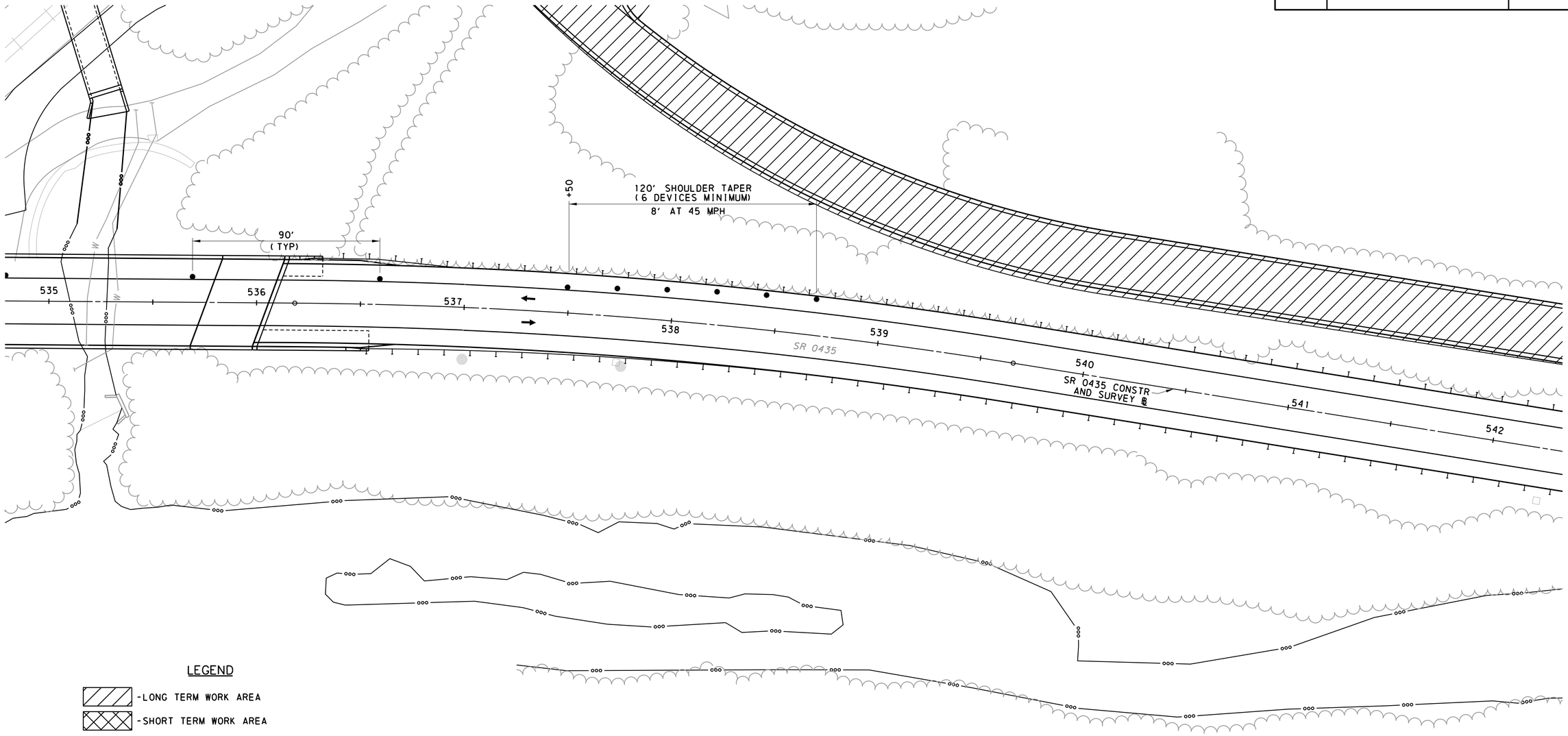
Model:TC 3 Sheet 02 3/5/2024 10:21:25 AM By:laura.hower

SEE SHEET 27

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	28 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 26

SEE SHEET 29

LEGEND

-LONG TERM WORK AREA

-SHORT TERM WORK AREA

● -LONG TERM CHANNELIZING DEVICE WITH TYPE "C" LIGHT

-TYPE III BARRICADE

W/4" -EXISTING WHITE LINE/4" WIDE

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← -TRAFFIC FLOW DIRECTION

PLAN

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
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TRAFFIC CONTROL PLAN STAGE 3

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 3.dgn
Model:TC 3 Sheet 03 3/5/2024 10:21:26 AM Byt laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	29 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 28

SEE SHEET 30

GC SMITH STREET

SR 0435

SR 0435 CONSTR AND SURVEY @

542 543 544 545 546 547 548 549

TW/4"

TDY/4"

DY/4"

W/4"

12.8' 11'

00+

RIGHT SHOULDER CLOSED 500 FT

W21-5BR
W30-1-1
36"X36"

SHOULDER WORK

W21-5
36"X36"

CONSTRUCTION ENTRANCE ACCESS AND ROADWAY APPROACH WORK TO BE CONSTRUCTED USING PATA 107

LEGEND

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PLAN

SCALE

0 25 50FEET

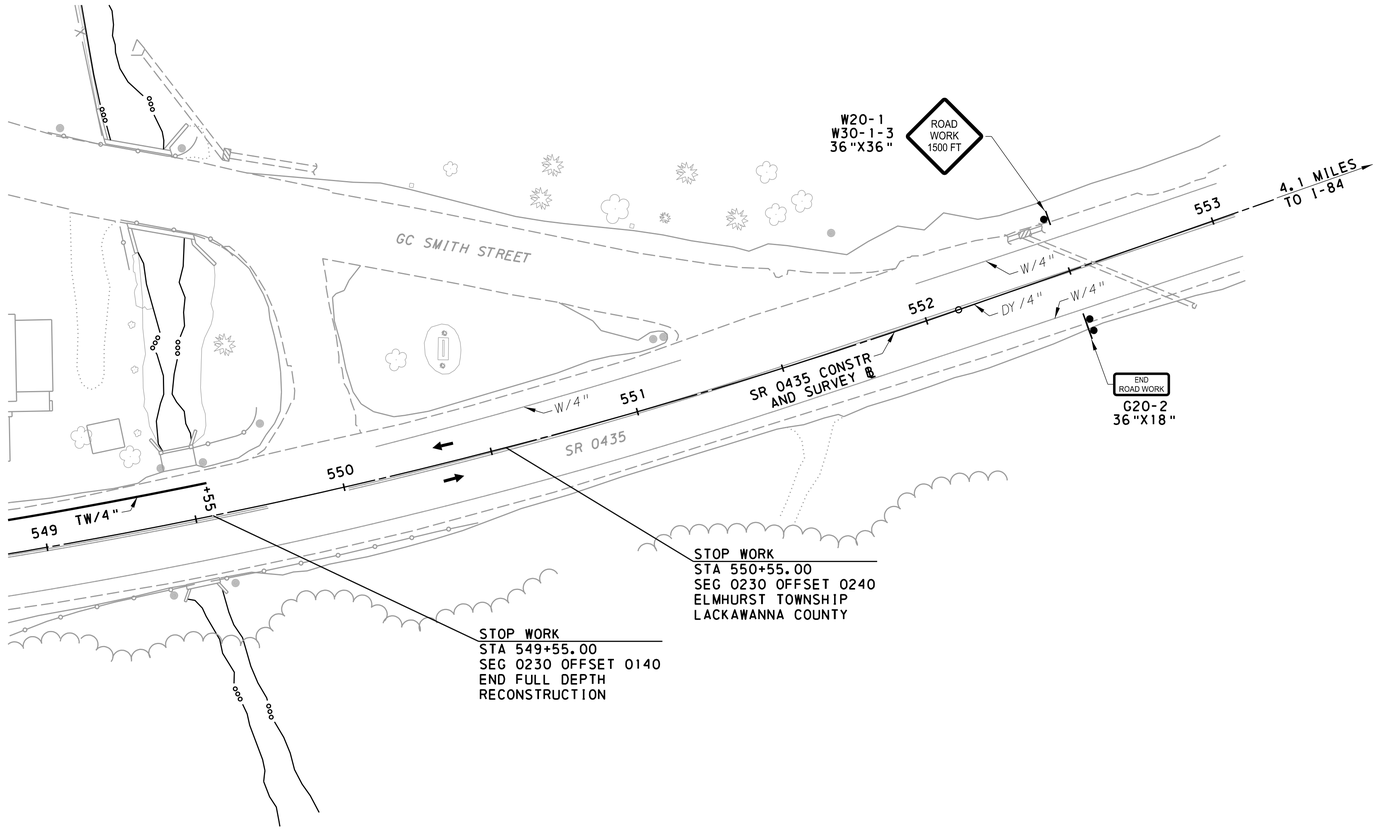
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

TRAFFIC CONTROL PLAN STAGE 3

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WA\DGN\Traffic Control\SR 0435-251 253 Traffic Control Plan Stage 3.dgn
Model:TC 3 Sheet 04 3/5/2024 10:21:26 AM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	30 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



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PLAN

SCALE

0 25 50FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
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PE081839

TRAFFIC CONTROL PLAN STAGE 3

SEE SHEET 29

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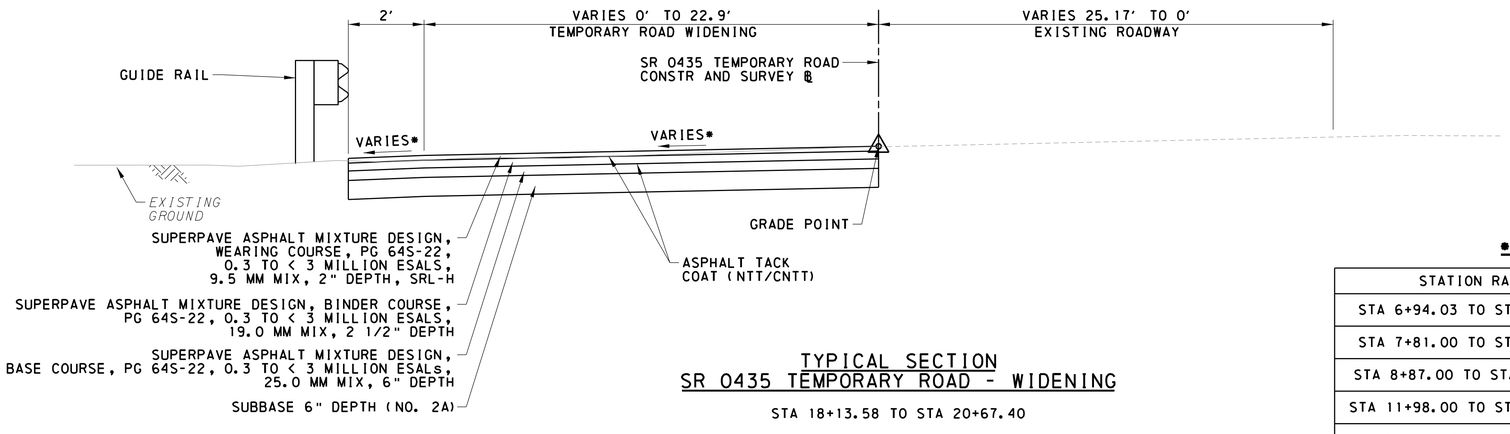
Model:TC 3 Sheet 05 3/5/2024 10:21:26 AM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	31 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



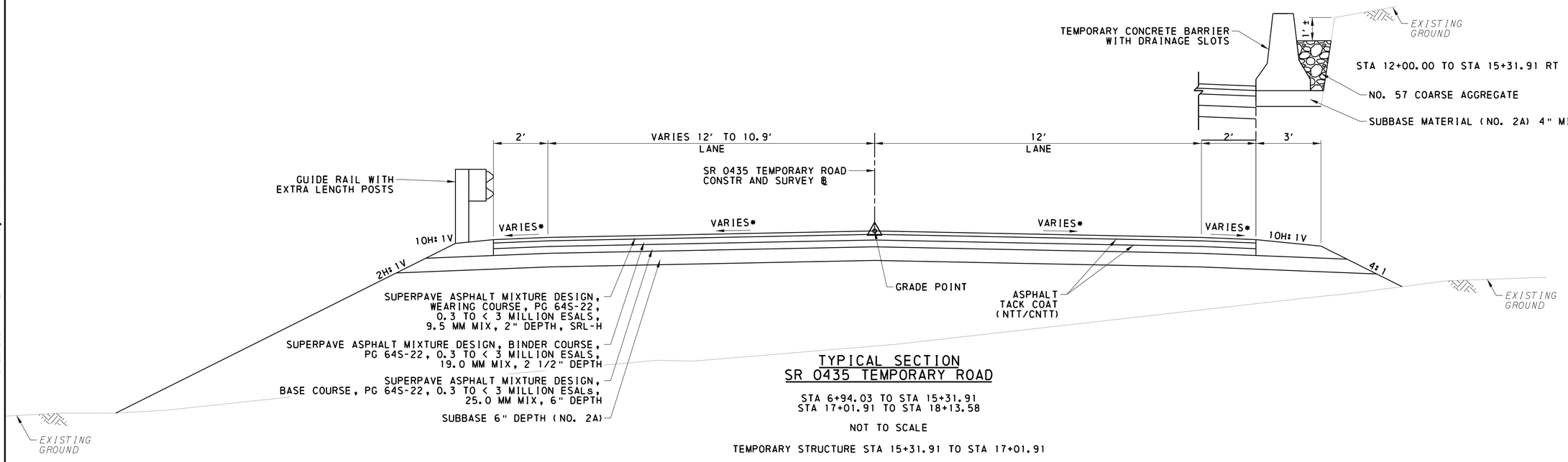
TYPICAL SECTION
SR 0435 TEMPORARY ROAD - WIDENING

STA 18+13.58 TO STA 20+67.40

NOT TO SCALE

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 6+94.03 TO STA 7+81.00	-4.00%	-2.00%	-2.00%	-4.00%
STA 7+81.00 TO STA 8+87.00	-4.00% TO -4.10%	-2.00% TO -4.10%	-2.00% TO 4.10%	-4.00% TO -2.00%
STA 8+87.00 TO STA 11+98.00	-4.10%	-4.10%	4.10%	-2.00%
STA 11+98.00 TO STA 13+04.00	-4.10% TO -4.00%	-4.10% TO -2.00%	4.10% TO -2.00%	-2.00% TO -4.00%
STA 13+04.00 TO STA 17+47.00	-4.00%	-2.00%	-2.00%	-4.00%
STA 17+47.00 TO STA 18+16.00	-4.00%	-2.00%	-2.00% TO 2.00%	-4.00% TO EXIST
STA 18+16.00 TO STA 18+50.00	-4.00%	-2.00% TO -4.00%	2.00% TO 4.00%	---
STA 18+50.00 TO STA 18+60.00	-4.00%	-4.00% TO EXIST	4.00% TO EXIST	---
STA 18+60.00 TO STA 20+67.40	-4.00%	EXIST PAVT WIDENING	EXIST PAVT WIDENING	---



TYPICAL SECTION
SR 0435 TEMPORARY ROAD

STA 6+94.03 TO STA 15+31.91
STA 17+01.91 TO STA 18+13.58

NOT TO SCALE

TEMPORARY STRUCTURE STA 15+31.91 TO STA 17+01.91

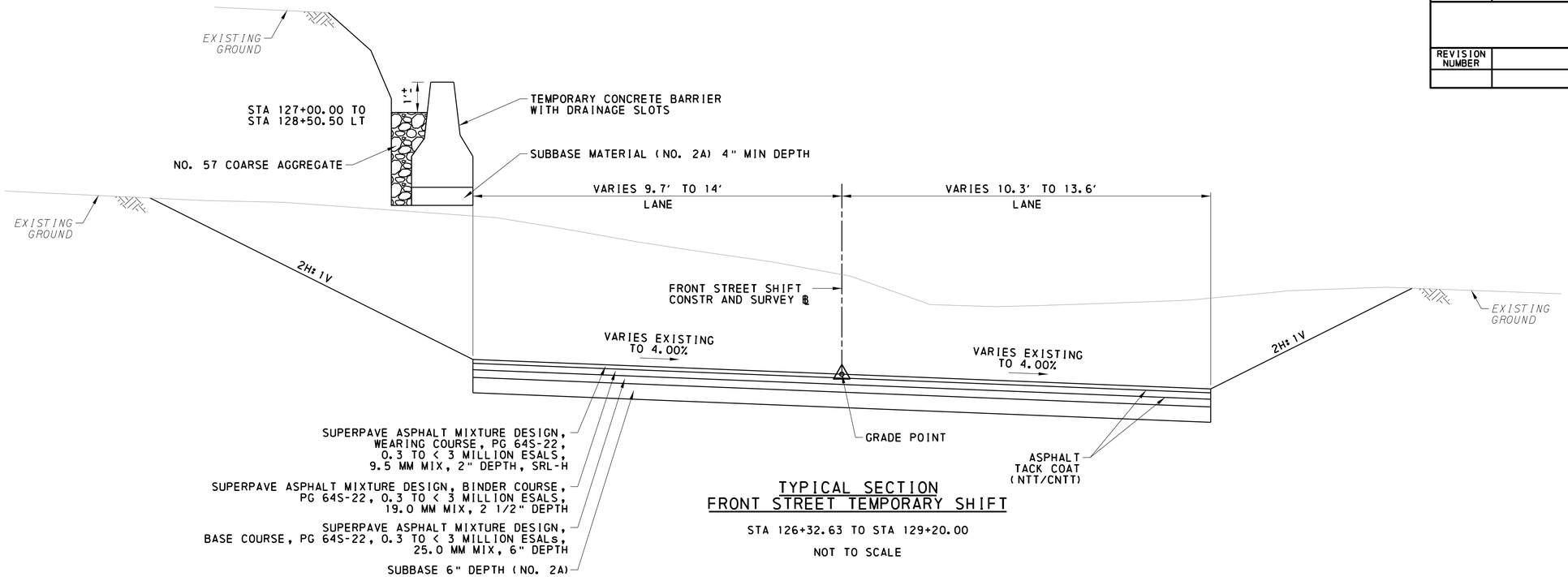
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

TRAFFIC CONTROL PLAN
TEMPORARY ROADWAY TYPICAL SECTIONS

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251-253\MKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Roadway Typicals.dgn
Model:TYP SECTION 4 2/28/2024 11:42:14 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	32 OF 66
ELMHURST TOWNSHIP				

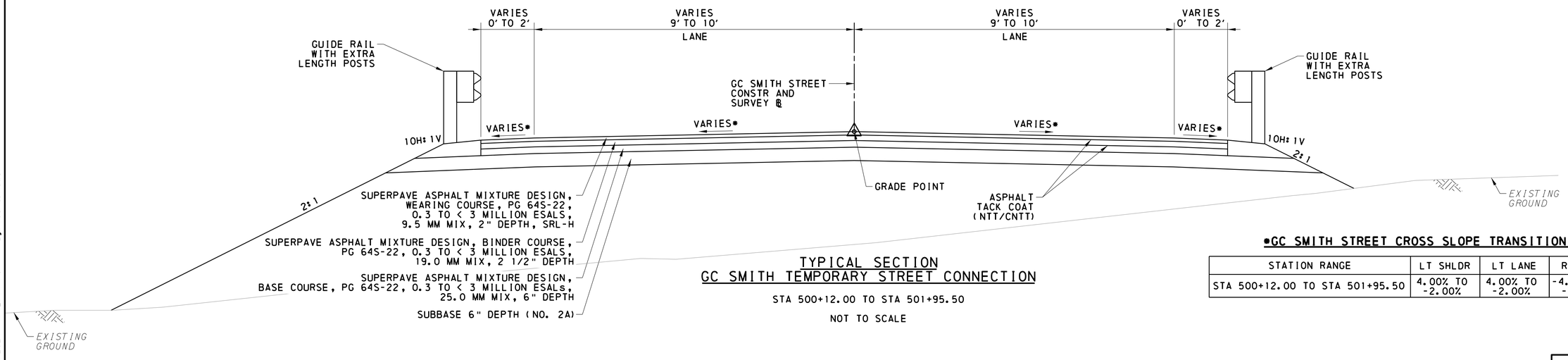
REVISION NUMBER	REVISIONS	DATE	BY



TYPICAL SECTION
FRONT STREET TEMPORARY SHIFT

STA 126+32.63 TO STA 129+20.00

NOT TO SCALE



TYPICAL SECTION
GC SMITH TEMPORARY STREET CONNECTION

STA 500+12.00 TO STA 501+95.50

NOT TO SCALE

*GC SMITH STREET CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 500+12.00 TO STA 501+95.50	4.00% TO -2.00%	4.00% TO -2.00%	-4.00% TO -2.00%	-4.10% TO -2.00%

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
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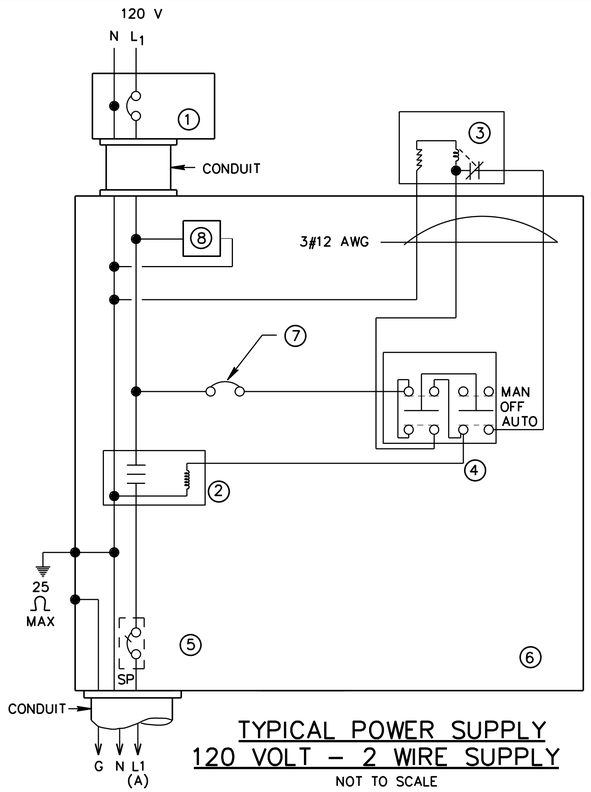
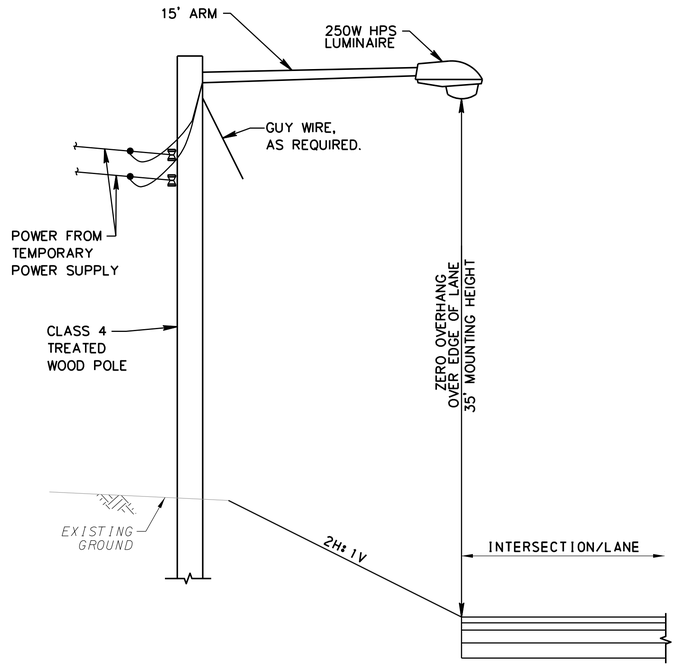
PE081839

TRAFFIC CONTROL PLAN
TEMPORARY ROADWAY TYPICAL SECTIONS

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Roadway Typicals.dgn
Mode:TYP SECTION 5 2/28/2024 11:42:14 PM By:laura.hower



TYPICAL POWER SUPPLY
120 VOLT – 2 WIRE SUPPLY
NOT TO SCALE



TYPICAL SECTION
NOT TO SCALE

ITEMS

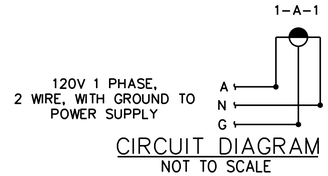
G –GROUND
N –NEUTRAL
L_1–LINE 1
MAN –MANUAL
AUTO –AUTOMATIC

1. MAIN DISCONNECT, 30 AMP, SINGLE POLE
2. CONTROL CONTACTOR, 30 AMP, SINGLE POLE
3. PHOTOELECTRIC CELL (PLUG-IN TYPE)
4. SELECTOR SWITCH
5. DISTRIBUTION BREAKER, 20 AMP
6. CONTROL CABINET
7. 15 A, SP BREAKER
8. LIGHTNING ARRESTER

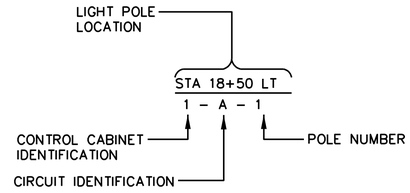
SP–SINGLE POLE
DP–DOUBLE POLE

NOTES:

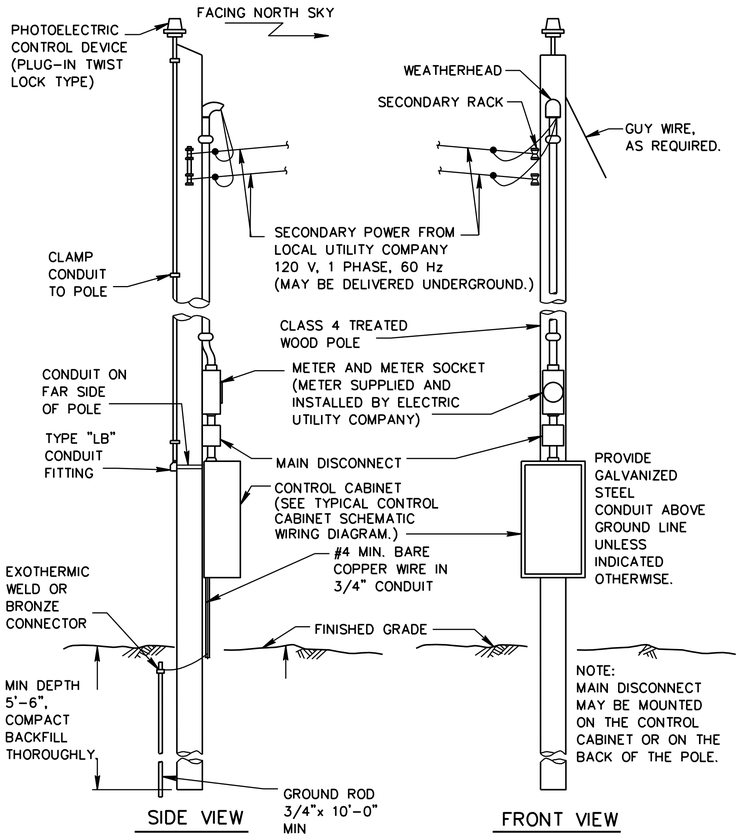
1. PROVIDE A MAIN DISCONNECT IN A SEPARATE NEMA 3R OR 4 ENCLOSURE AHEAD OF THE CONTROL CABINET LABELED AS "SUITABLE FOR USE AS SERVICE EQUIPMENT." PROVIDE WITH A LOCKABLE COVER AND NO EXTERNAL HANDLE. THE DISCONNECT MAY BE PROVIDED INTEGRAL TO THE CONTROL CABINET IF THE CABINET IS DEADFRONT AND LABELED AS "SUITABLE FOR USE AS SERVICE EQUIPMENT."



CIRCUIT DIAGRAM
NOT TO SCALE



POLE/LUMINAIRE IDENTIFICATION



POLE EQUIPMENT DETAIL
NOT TO SCALE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	33 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

1. PROVIDE MATERIAL MEETING THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS. NEW MATERIAL IS NOT REQUIRED AS LONG AS THE PERFORMANCE IS ACCEPTABLE. SHOP INSPECTION AND AASHTO STRUCTURAL DESIGN CALCULATIONS ARE NOT REQUIRED FOR THE WOOD POLE OR THE ARM. PROVIDE CREOSOTE, PENTA, CCA OR EQUIVALENT WOOD POLES AS PERMITTED MEETING ENVIRONMENTAL REQUIREMENTS. PROVIDE EITHER COPPER OR ALUMINUM AERIAL CABLE. PROVIDE POWER SUPPLY MATERIAL MEETING NEC AND POWER COMPANY REQUIREMENTS. ENAMELED OR HOT DIPPED GALVANIZED ENCLOSURES MAY BE USED IN ADDITION TO STAINLESS STEEL OR ALUMINUM. PROVIDE CATALOG CUTS OR SHOP DRAWINGS FOR MATERIAL. PROVIDE PHOTOMETRIC INFORMATION FOR LUMINAIRES.

2. CONSTRUCT IN ACCORDANCE WITH THE APPLICABLE STANDARD DRAWINGS, SPECIFICATIONS, AND SPECIAL PROVISIONS. PROVIDE 250 WATT HPS, M-C-III CONVENTIONAL (COBRAHEAD) LUMINAIRES ON WOOD POLES AT A 35 FOOT MOUNTING HEIGHT AS SHOWN ON THE PLAN. PROVIDE ARM LENGTHS THAT PROVIDE THE INDICATED OVERHANGS TO THE EDGE OF THE TRAVEL LANE. REFER TO STANDARD DRAWING RC-83M FOR DEFINITIONS. LIMIT OVERHEAD SPANS TO 250 FEET. GUY THE POLES AS NECESSARY. GROUND THE LIGHTING SYSTEM.

3. THIS PAY ITEM INCLUDES FURNISHING, INSTALLING AND MAINTAINING ALL EQUIPMENT AND MATERIAL FOR THE TEMPORARY LIGHTING SYSTEM, ENERGY COSTS, COSTS ASSOCIATED WITH THE POWER SUPPLY AND LINE EXTENSION, THE COST OF REMOVING THE SYSTEM, AND THE PROTECTION OF POLES. TEST THE GROUND RODS. ALL MATERIAL PROVIDED FOR THE TEMPORARY LIGHTING SYSTEM WILL REMAIN THE PROPERTY OF THE CONTRACTOR.

4. PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR WITH ALL HIGHWAY LIGHTING CIRCUITS. DO NOT CONNECT THE NEUTRAL TO GROUND EXCEPT AT THE CONTROL CABINET. ALL CABLE QUANTITIES NOTED UNDER "ENTIRE PROJECT" ON THE "TABULATION OF QUANTITIES" INCLUDE THE EQUIPMENT GROUNDING CONDUCTORS SIMILAR TO CIRCUIT CONDUCTORS. BARE GROUND WIRE IS NOT ACCEPTABLE.

5. PER ACT 187, MAINTAIN A MINIMUM OF 1.5 FEET OF CLEARANCE FROM ALL UNDERGROUND UTILITIES.

6. SEAL CONDUITS/CONDULETS AT ENCLOSURES TO PREVENT RODENT ENTRY.

7. PROVIDE WATERTIGHT SUBMERSIBLE, PREMOLDED, DISCONNECTABLE CONNECTOR KIT FOR ALL SPLICES.

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

RC-84M JUNE 1, 2010

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TRAFFIC CONTROL PLAN
TEMPORARY LIGHTING DETAILS

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Roadway Typicals.dgn
Model:TYP SECTION 6 2/28/2024 11:42:14 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	34 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

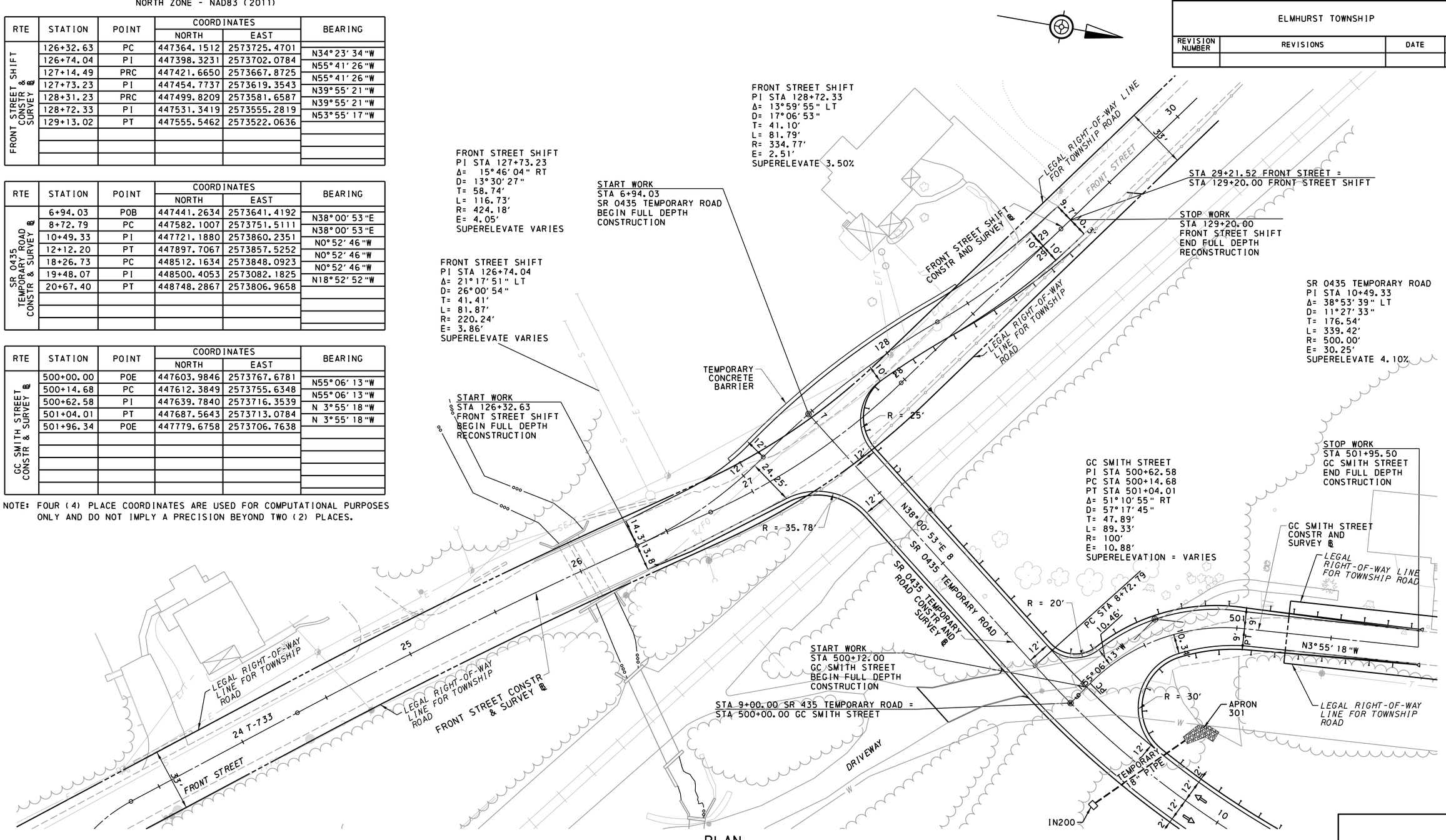
BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
FRONT STREET SHIFT CONSTR & SURVEY ℄	126+32.63	PC	447364.1512	2573725.4701	
	126+74.04	PI	447398.3231	2573702.0784	N34°23'34"W
	127+14.49	PRC	447421.6650	2573667.8725	N55°41'26"W
	127+73.23	PI	447454.7737	2573619.3543	N55°41'26"W
	128+31.23	PRC	447499.8209	2573581.6587	N39°55'21"W
	128+72.33	PI	447531.3419	2573555.2819	N39°55'21"W
	129+13.02	PT	447555.5462	2573522.0636	N53°55'17"W

RTE	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
SR 0435 TEMPORARY ROAD CONSTR & SURVEY ℄	6+94.03	POB	447441.2634	2573641.4192	
	8+72.79	PC	447582.1007	2573751.5111	N38°00'53"E
	10+49.33	PI	447721.1880	2573860.2351	N38°00'53"E
	12+12.20	PT	447897.7067	2573857.5252	N0°52'46"W
	18+26.73	PC	448512.1634	2573848.0923	N0°52'46"W
	19+48.07	PI	448500.4053	2573082.1825	N0°52'46"W
	20+67.40	PT	448748.2867	2573806.9658	N18°52'52"W

RTE	STATION	POINT	COORDINATES NORTH	COORDINATES EAST	BEARING
GC SMITH STREET CONSTR & SURVEY ℄	500+00.00	POE	447603.9846	2573767.6781	
	500+14.68	PC	447612.3849	2573755.6348	N55°06'13"W
	500+62.58	PI	447639.7840	2573716.3539	N55°06'13"W
	501+04.01	PT	447687.5643	2573713.0784	N 3°55'18"W
	501+96.34	POE	447779.6758	2573706.7638	N 3°55'18"W

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



PLAN

SCALE

0 25 50FEET

SEE SHEET 35 | FOR PROFILE, SEE SHEET 37

TEMPORARY ROADWAY TRAFFIC CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

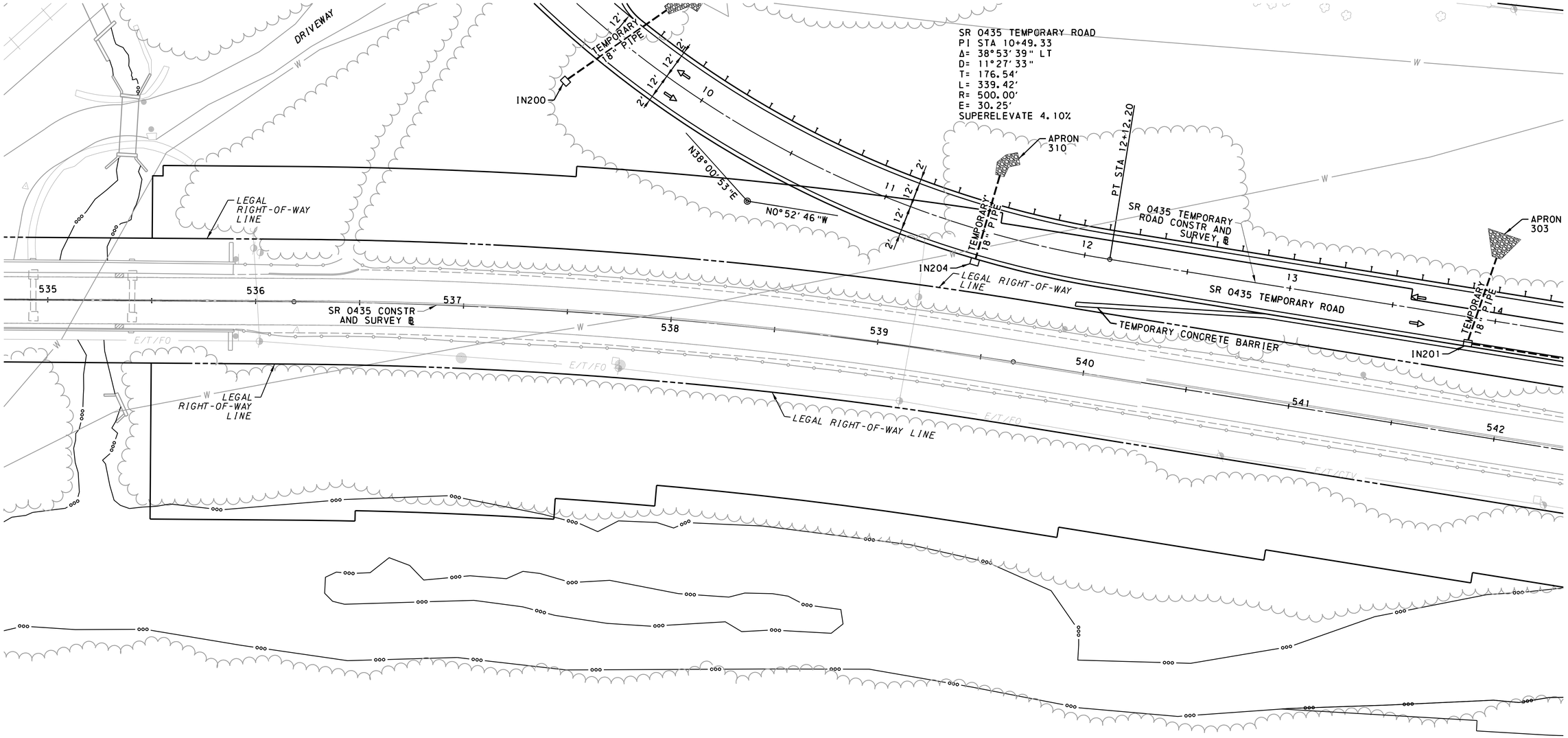
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\WKA\DGN\Traffic Control\SR 435-253 253 Temporary Roadway Plan
Model: Temp Road 01 3/5/2024 12:48:48 PM By: laura.hower

SEE SHEET 34

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	35 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 36

PLAN

SCALE

0 25 50FEET

FOR PROFILE, SEE SHEET 37

TEMPORARY ROADWAY TRAFFIC CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

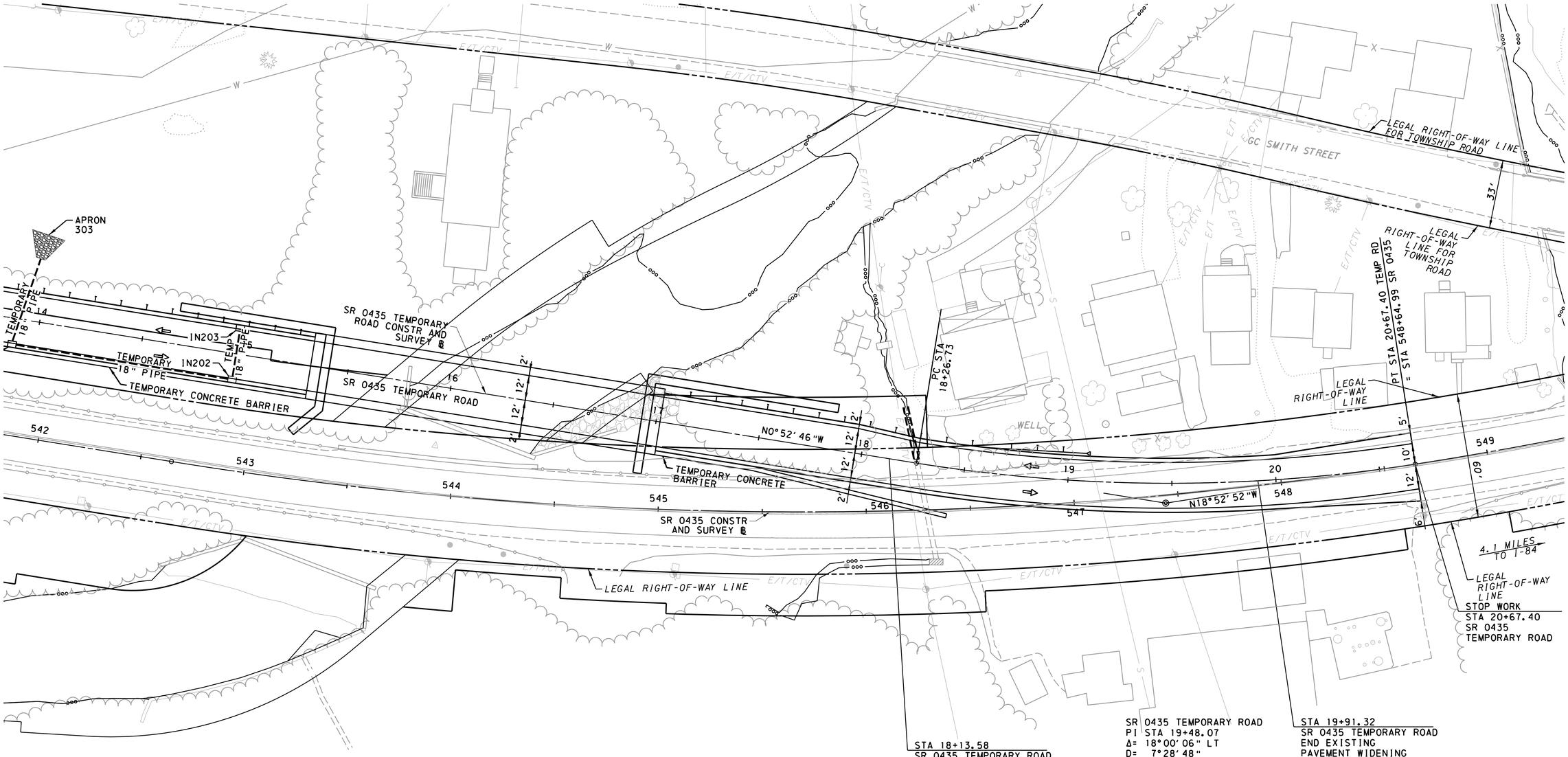
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\SR 435-253 253 Temporary Roadway Plan
Model:Temp Road 02 3/5/2024 12:48:49 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	36 OF 66

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 35



STA 18+13.58
SR 0435 TEMPORARY ROAD
END FULL-DEPTH
CONSTRUCTION
BEGIN EXISTING
PAVEMENT WIDENING

SR 0435 TEMPORARY ROAD
PI STA 19+48.07
Δ= 18°00'06" LT
D= 7°28'48"
T= 121.33'
L= 240.67'
R= 766.00'
E= 9.55'
SUPERELEVATION = 6.0%
PC STA 18+26.73
PT STA 20+67.39

STA 19+91.32
SR 0435 TEMPORARY ROAD
END EXISTING
PAVEMENT WIDENING

PLAN

SCALE

0 25 50FEET

FOR PROFILE, SEE SHEET 38

TEMPORARY ROADWAY TRAFFIC CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\SR 435-253 253 Temporary Roadway Plan
Model:Temp Road 03 3/5/2024 12:48:49 PM By:laura.hower

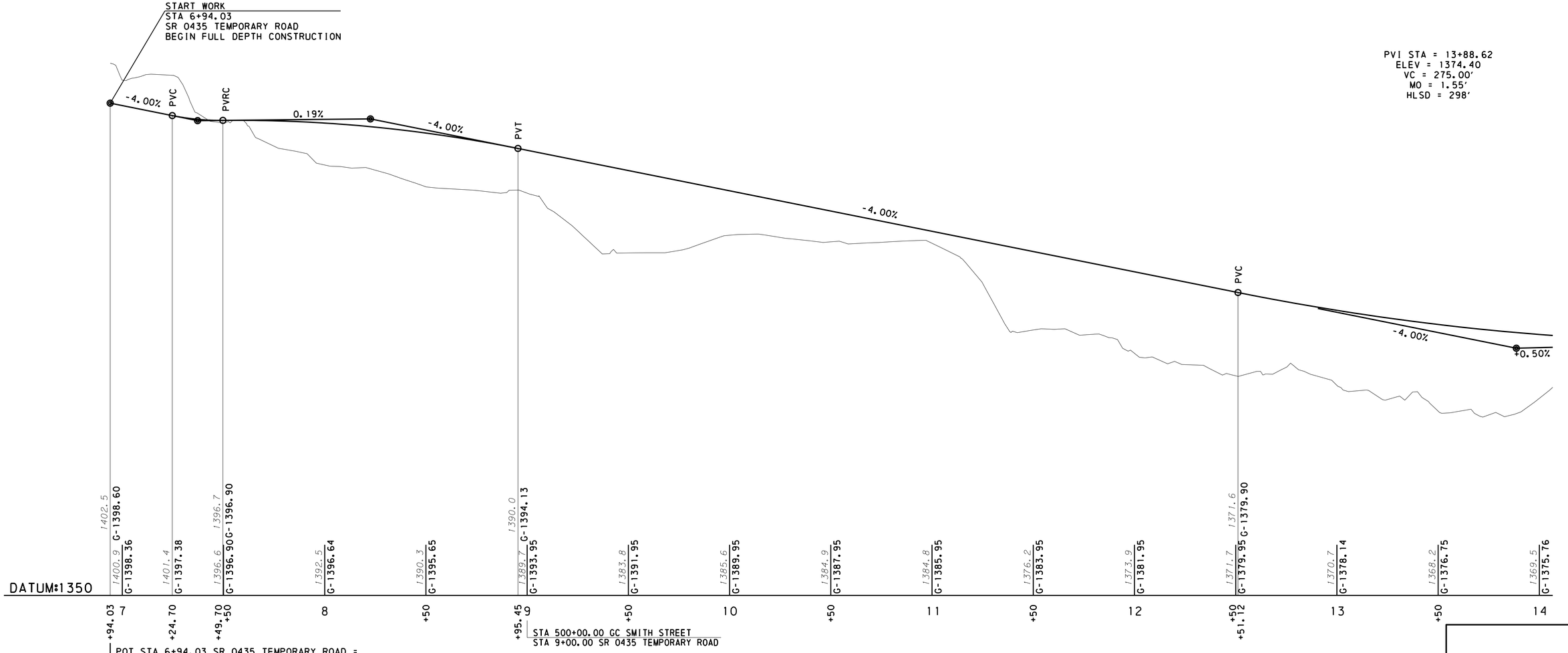
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	37 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA = 7+37.20
ELEV = 1396.88
VC = 25.00'
MO = 0.13'
HLSD = 103'

PVI STA = 8+22.57
ELEV = 1397.04
VC = 145.75'
MO = -0.76'
SSD = 330'

PVI STA = 13+88.62
ELEV = 1374.40
VC = 275.00'
MO = 1.55'
HLSD = 298'



SEE SHEET 35

SR 0435 TEMPORARY ROAD

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

TRAFFIC CONTROL PLAN
TEMPORARY ROADWAY PROFILE

FOR PLAN, SEE SHEET 34, 35

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Temporary Road Profiles.dgn
Model: 30 - SR 0435 TEMPORARY ROAD PROFILE
Date: 8/5/2021 5:58:07 PM By: laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	38 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 34

PVI STA = 13+88.62
ELEV = 1374.40
VC = 275.00'
MO = 1.55'
HLSD = 298'

PVI STA = 17+90.03
ELEV = 1376.41
VC = 50.00'
MO = -0.09'
SSD = 811'

STA 18+13.58
SR 0435 TEMPORARY ROAD
END FULL-DEPTH
CONSTRUCTION
BEGIN EXISTING
PAVEMENT WIDENING

GRAPHIC GRADE

STA 19+91.32
SR 0435 TEMPORARY ROAD
END EXISTING
PAVEMENT WIDENING

STOP WORK
STA 20+67.40
SR 0435 TEMPORARY ROAD

HIGH POINT
STA 17+83.25
ELEV 1376.33

-4.00%
+0.50%
PVT
+0.50%
PVC
-0.87%
PVT

MIN LOW CHORD
ELEV 1370.00

167'-0"
MIN CLEAR SPAN

DATUM: 1350

| | | | |

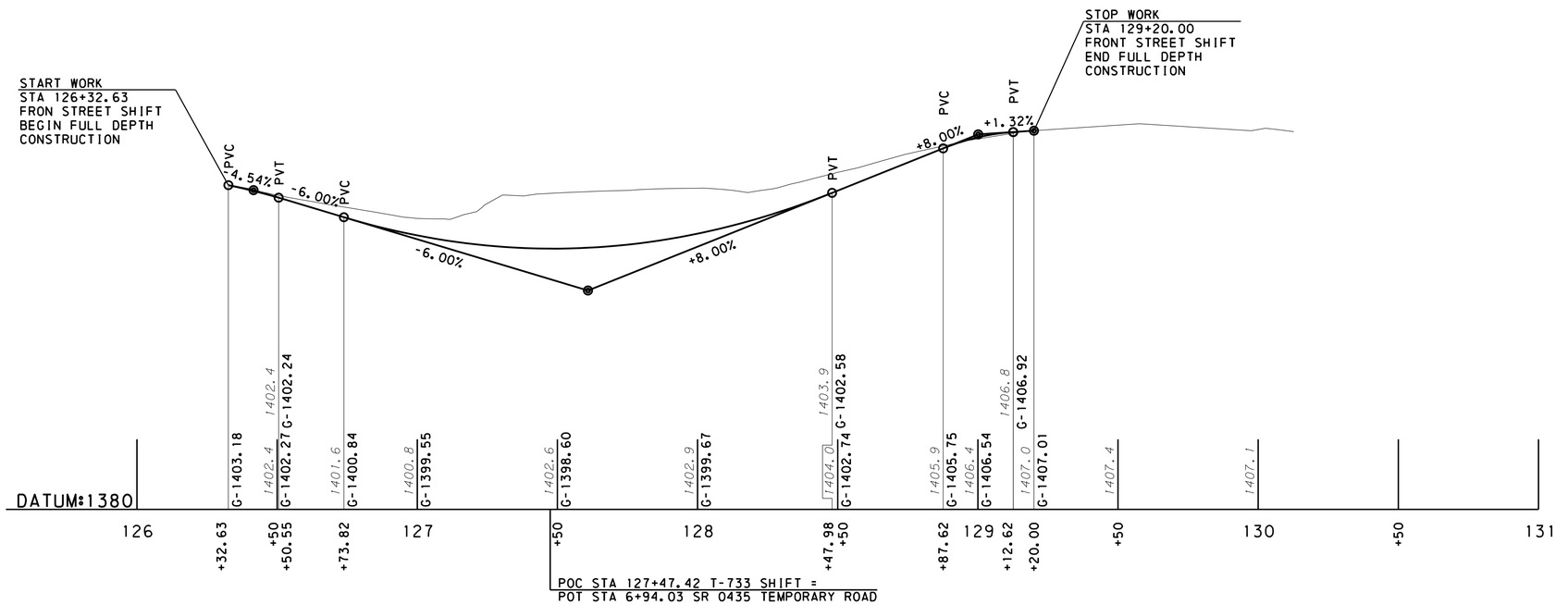
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	39 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA = 126+41.59
ELEV = 1402.77
VC = 17.93'
MO = -0.03'
SSD = 748'

PVI STA = 127+60.90
ELEV = 1395.62
VC = 174.16'
MO = 3.05'
HLSD = 96'

PVI STA = 129+00.12
ELEV = 1406.75
VC = 25.00'
MO = -0.21'
SSD = 243'



FRONT STREET TEMPORARY SHIFT

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN R. MARTZ
PE081839

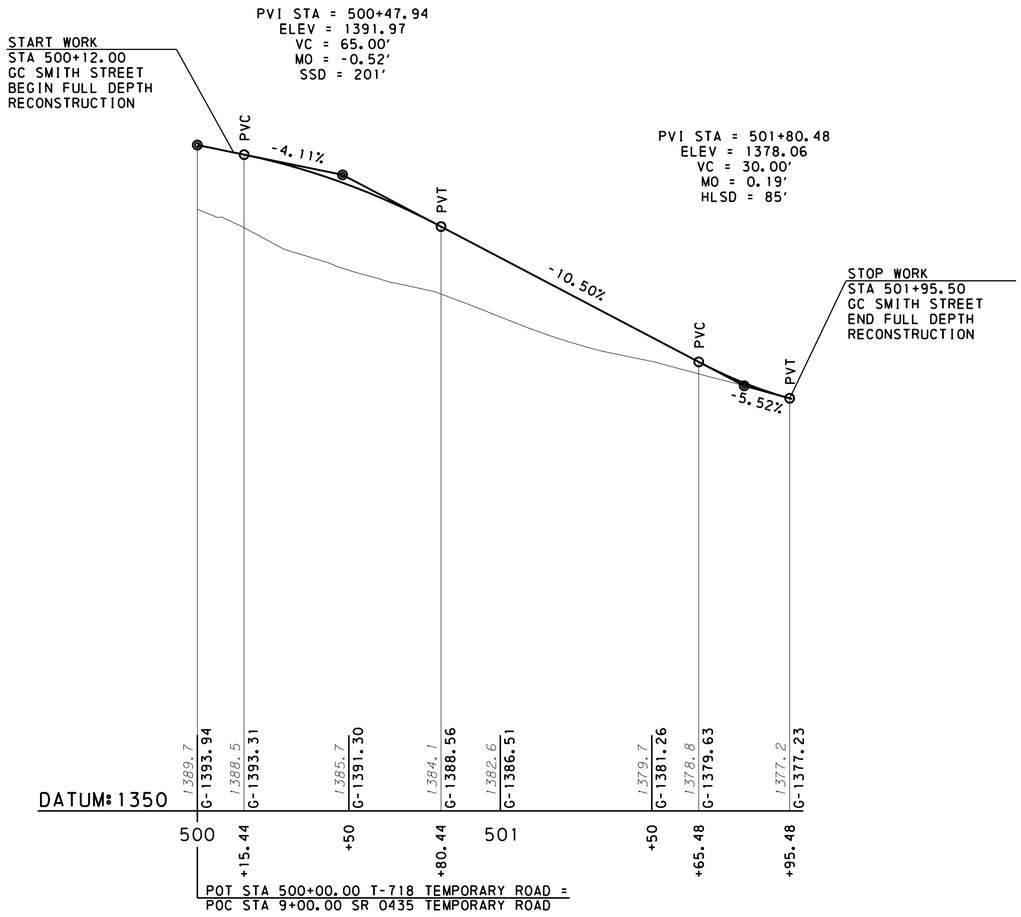
TRAFFIC CONTROL PLAN
TEMPORARY ROADWAY PROFILE

FOR PLAN, SEE SHEET 34 | SURVEY BOOK NO 30431

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Temporary Road Profiles.dgn
Model:32 - Front Street SR 0435 Site 251-253
Date:7/25/2022 2:55:08 PM By:laura.hower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 253	40 OF 66
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



SR 0435 - GC SMITH TEMPORARY STREET CONNECTION

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

TRAFFIC CONTROL PLAN
TEMPORARY ROADWAY PROFILE

FOR PLAN, SEE SHEET 34	SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Traffic Control\01261-01 SR 0435 Site 251-253 Temporary Road Profiles.dgn
Model: 33 - SR 0435 CG SMITH 5/9/2024 12:55:08 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			41 OF 66

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

1400 1395 1390 1410 1405 1400 1395 1390 1415 1410 1405 1400 1395 1390

TEMPORARY CONSTRUCTION EASEMENT

℄

2.00' SHOULDER | 12.00' LANE | 12.00' LANE | 2.00' SHOULDER

4.00% | 2.00% | 2.00% | 4.00%

G-1396.90

7+50.00

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

2.00' SHOULDER | 12.00' LANE | 12.00' LANE | 2.00' SHOULDER

MATCHLINE SEE FRONT STREET CROSS SECTIONS

4.00% | 2.00% | 2.00% | 4.00%

G-1398.36

MATCHLINE SEE FRONT STREET CROSS SECTIONS

7+00.00

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

2.00' SHOULDER | 12.00' LANE | 12.00' LANE | 2.00' SHOULDER

MATCHLINE SEE FRONT STREET CROSS SECTIONS

4.00% | 2.00% | 2.00% | 4.00%

G-1398.60

MATCHLINE SEE FRONT STREET CROSS SECTIONS

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

6+94.03

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

℄

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SCALE 1 INCH = 5 FEET

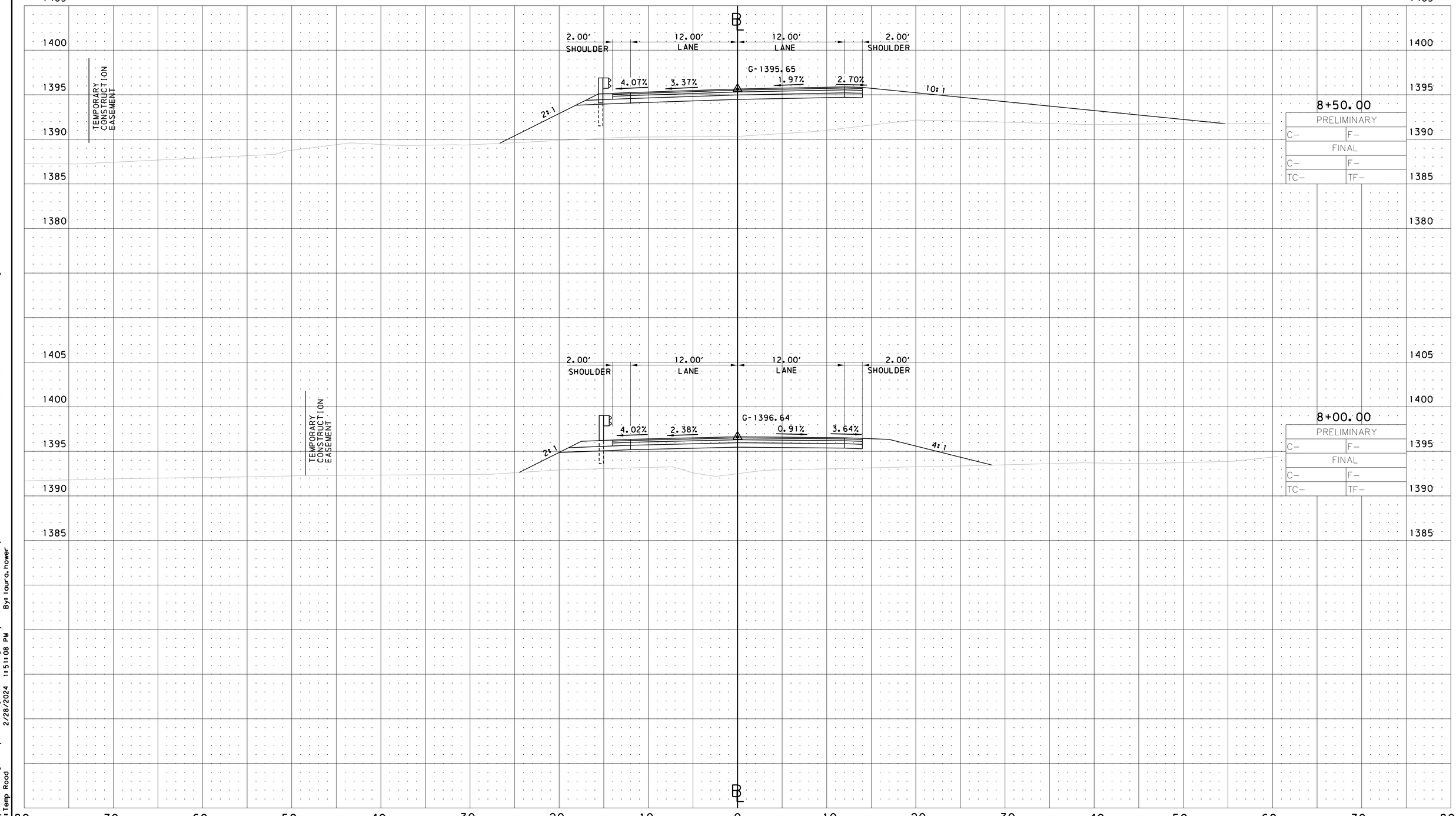
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\REF\Corridor\SR 435_X-Sections.dgn
Model: Temp Road 2/28/2024 11:51:07 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			42 OF 66



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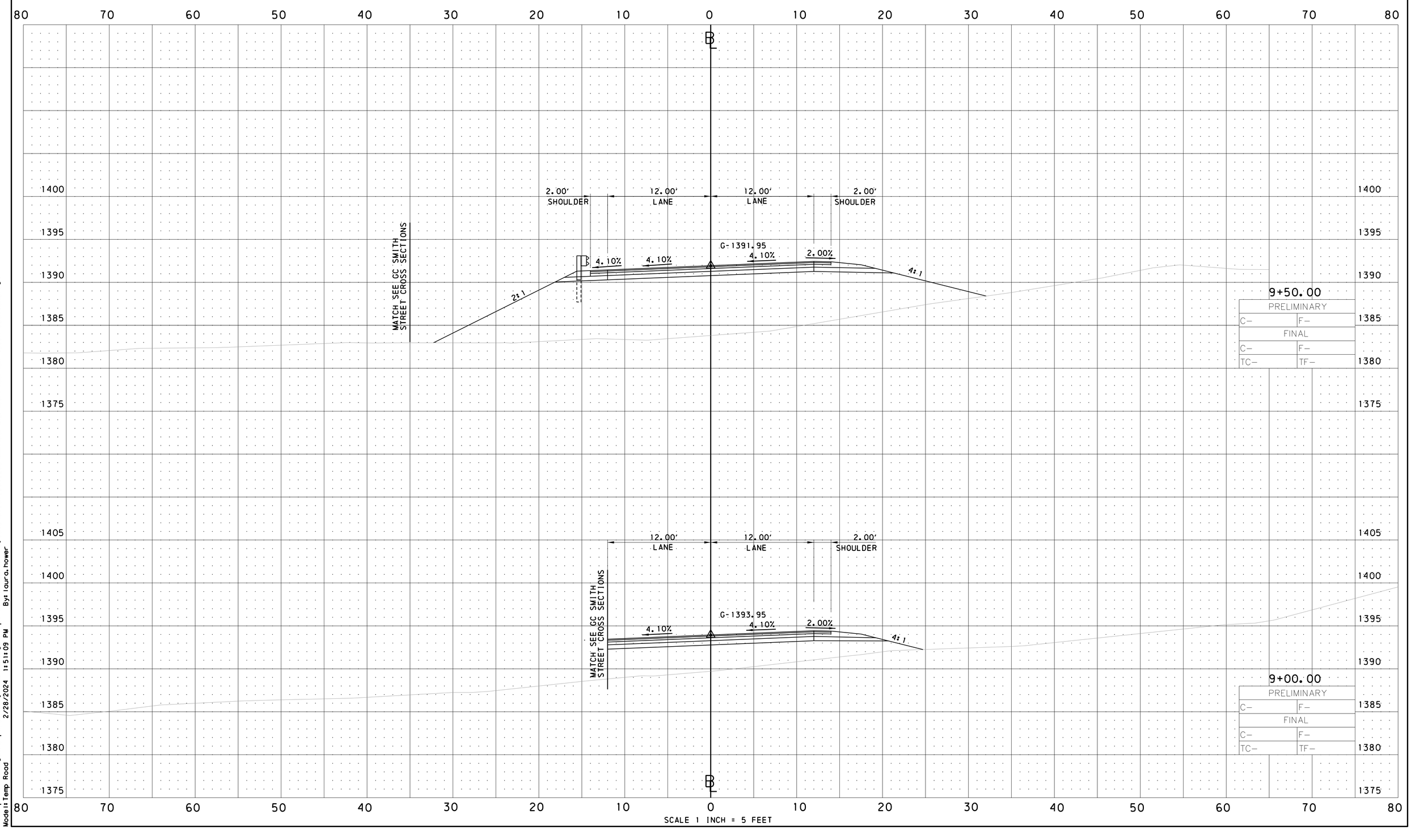
Model:Temp Road 2/28/2024 11:51:08 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			43 OF 66



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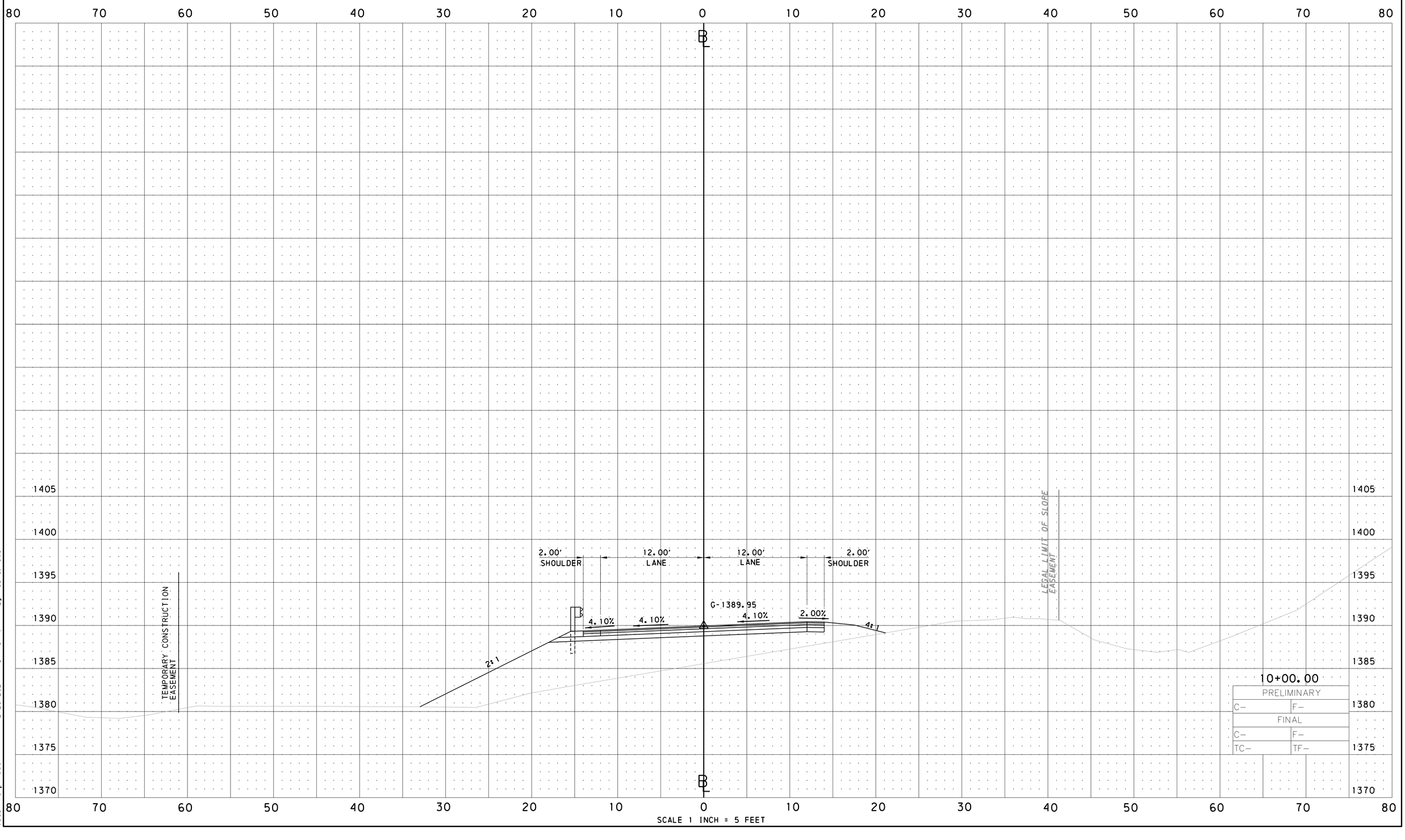
Model: Temp Road
2/28/2024 11:51:09 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			44 OF 66



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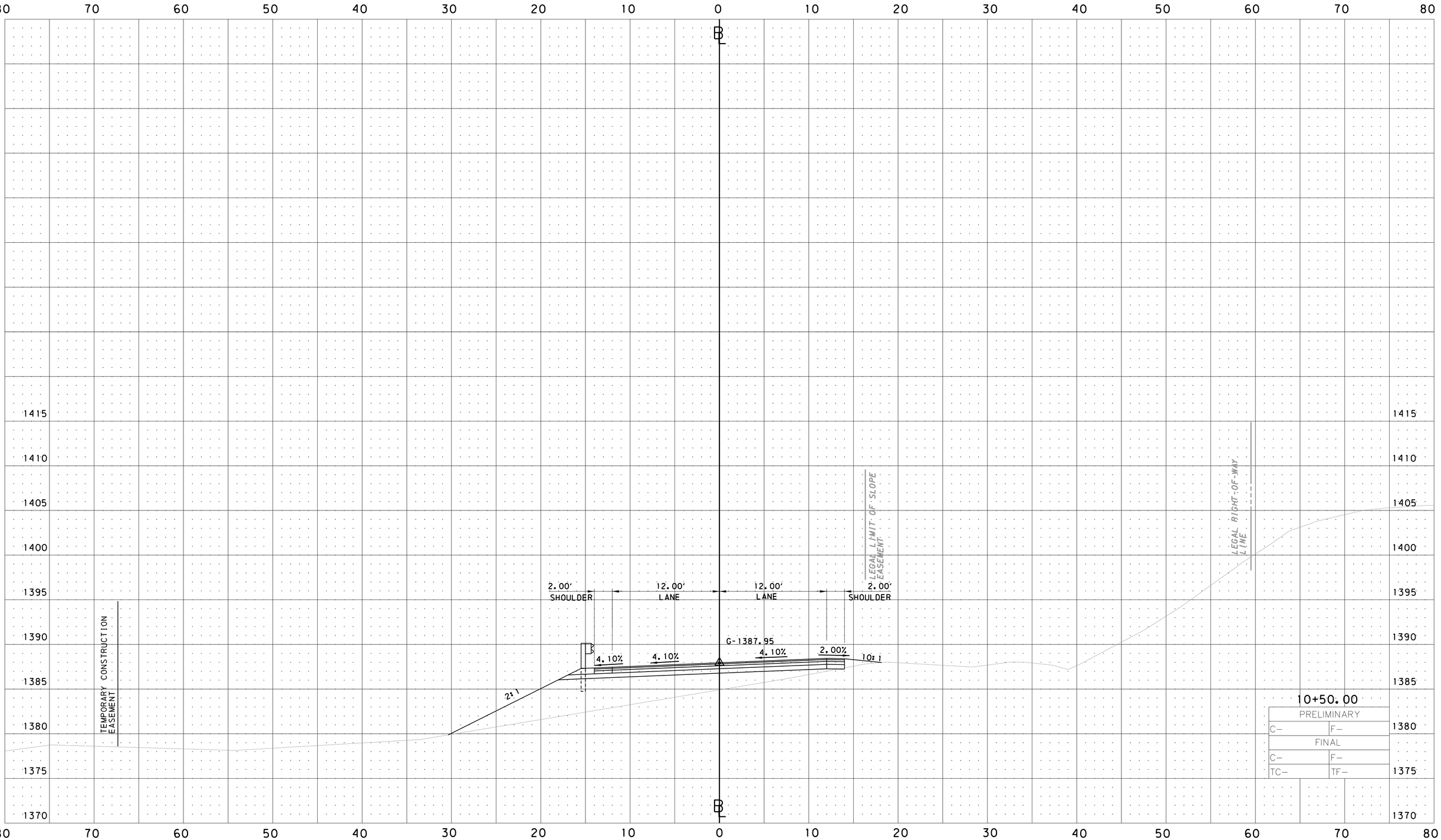
Model: Temp Road
2/28/2024 11:51:10 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			45 OF 66



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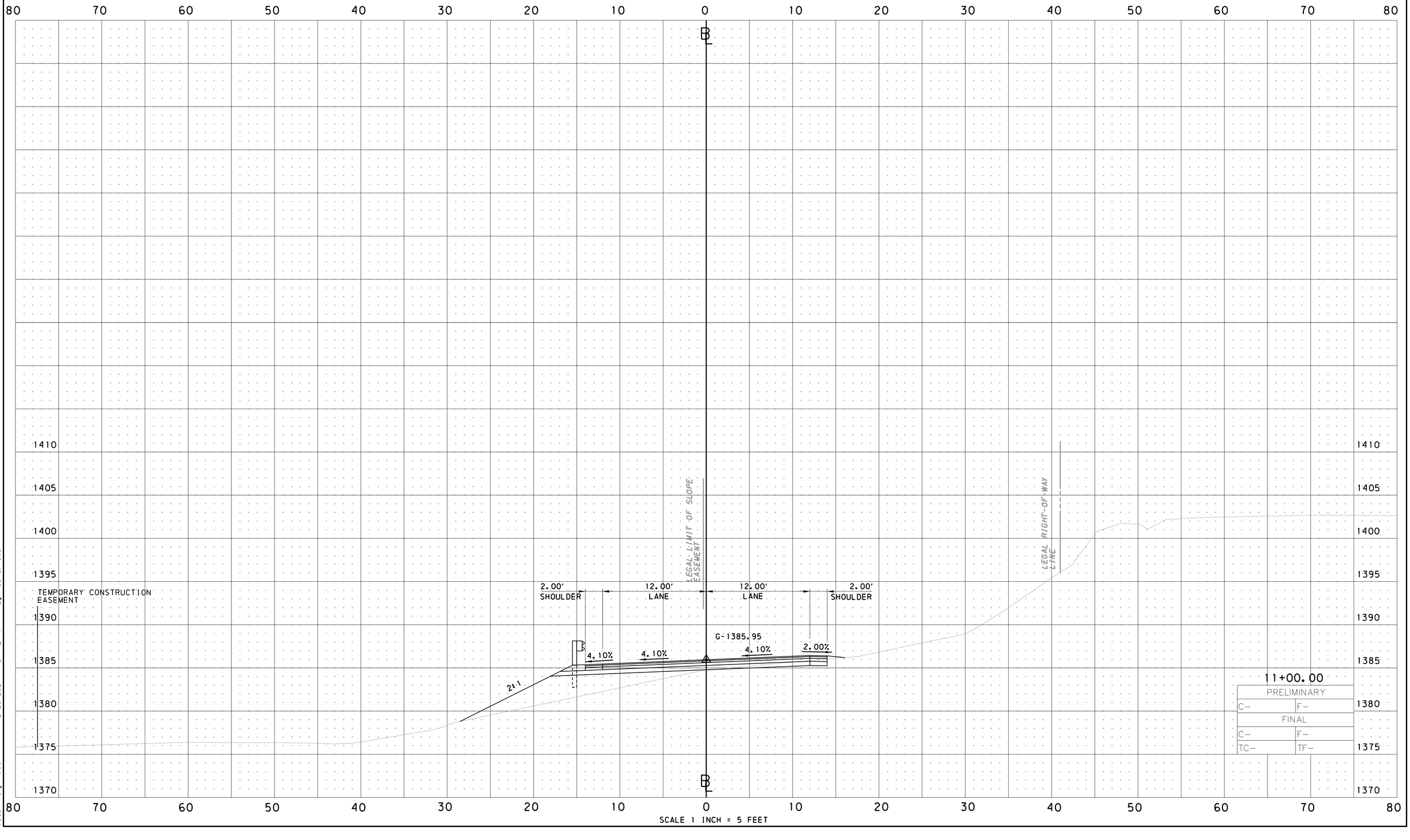
Model: Temp Road
2/28/2024 11:51:33 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			46 OF 66



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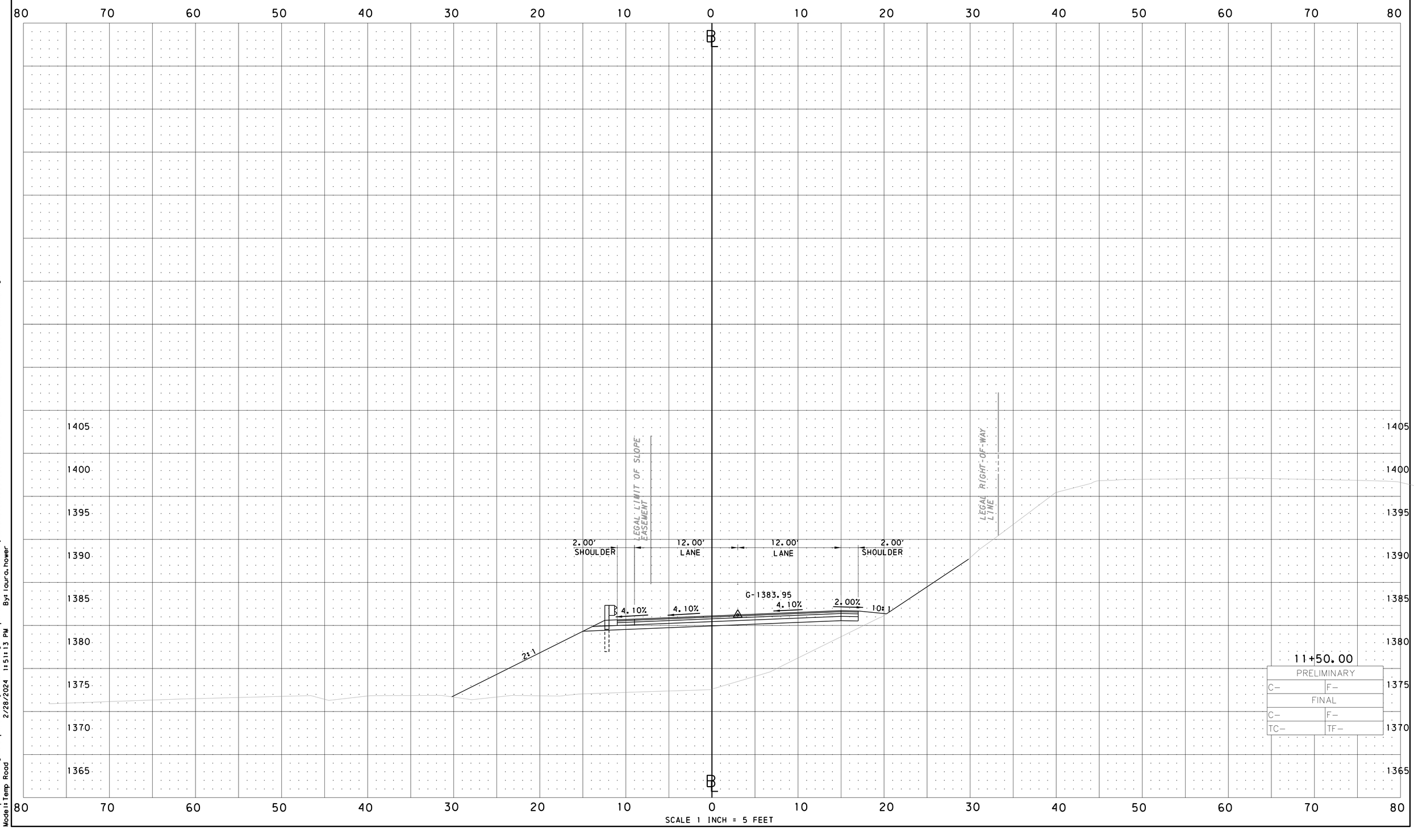
Model: Temp Road
2/28/2024 11:51:12 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS

SR 435
TEMPORARY ROAD

4-0	LACKAWANNA		0435	251		
DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
						47 OF 66



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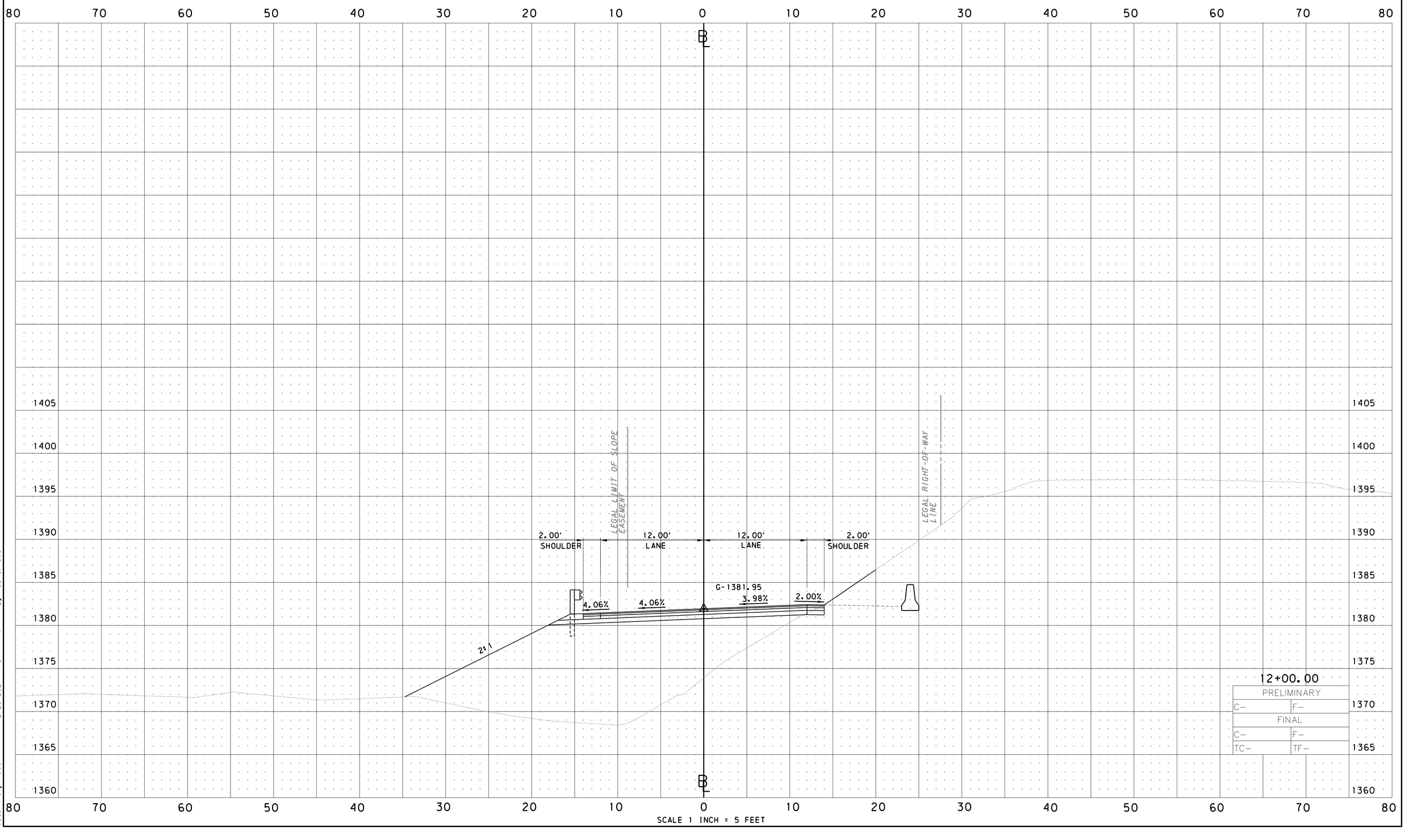
Model: Temp Road
2/28/2024 11:51:13 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			48 OF 66



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Model: Temp Road
2/28/2024 11:51:14 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			49 OF 66

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

℄

LEGAL LIMIT OF SLOPE EASEMENT

LEGAL RIGHT-OF-WAY LINE

2.00' SHOULDER | 12.00' LANE | 12.00' LANE | 2.00' SHOULDER

4.05% | 3.07% | G-1379.60 | 1.11% | 2.98%

2:1

1400 1395 1390 1385 1380 1375 1370 1365 1360

12+50.00

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

℄

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SCALE 1 INCH = 5 FEET

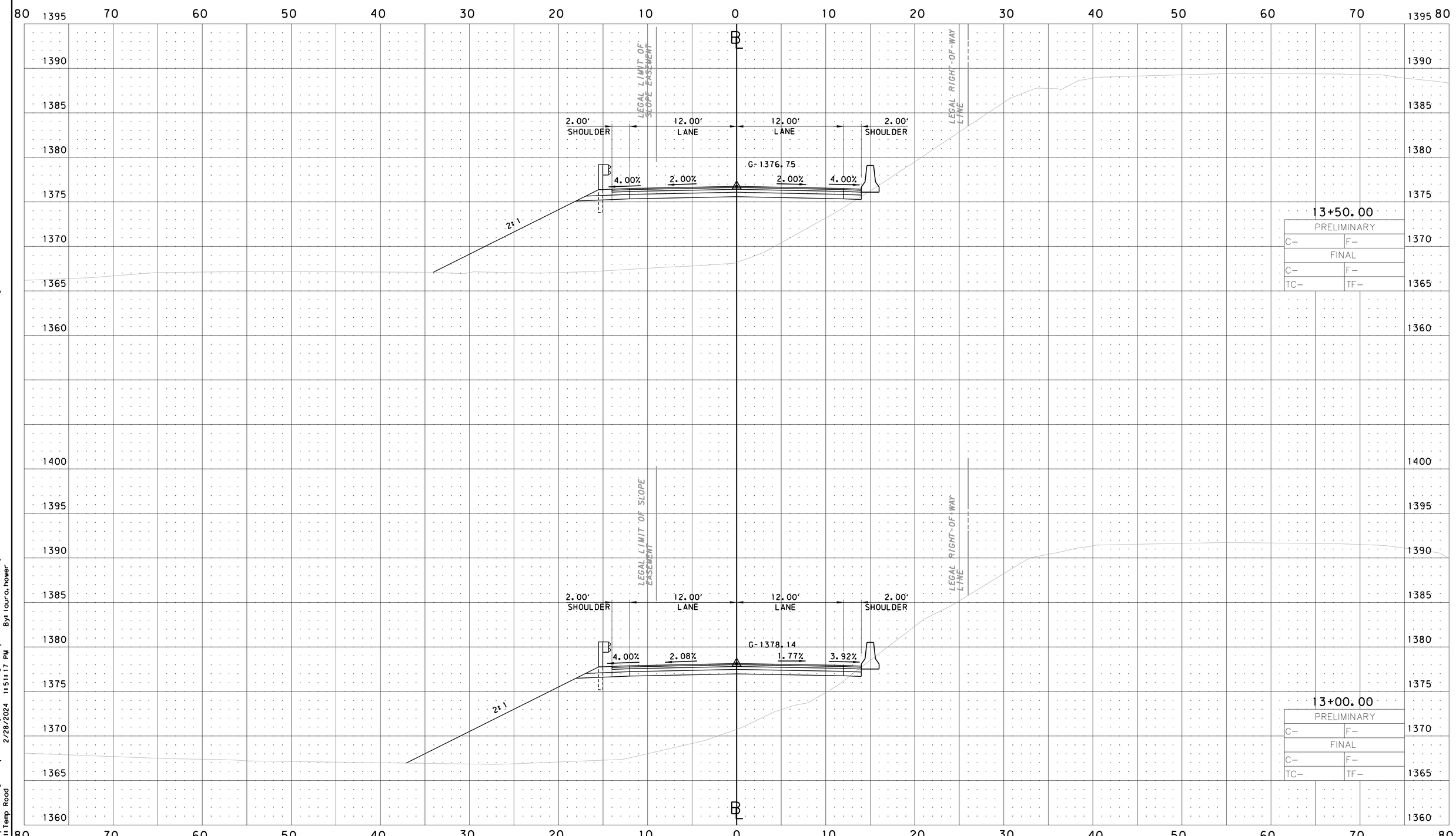
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\REF\Corridor\SR 435_X-Sections.dgn
Model: Temp Road
2/28/2024 11:51:15 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			50 OF 66



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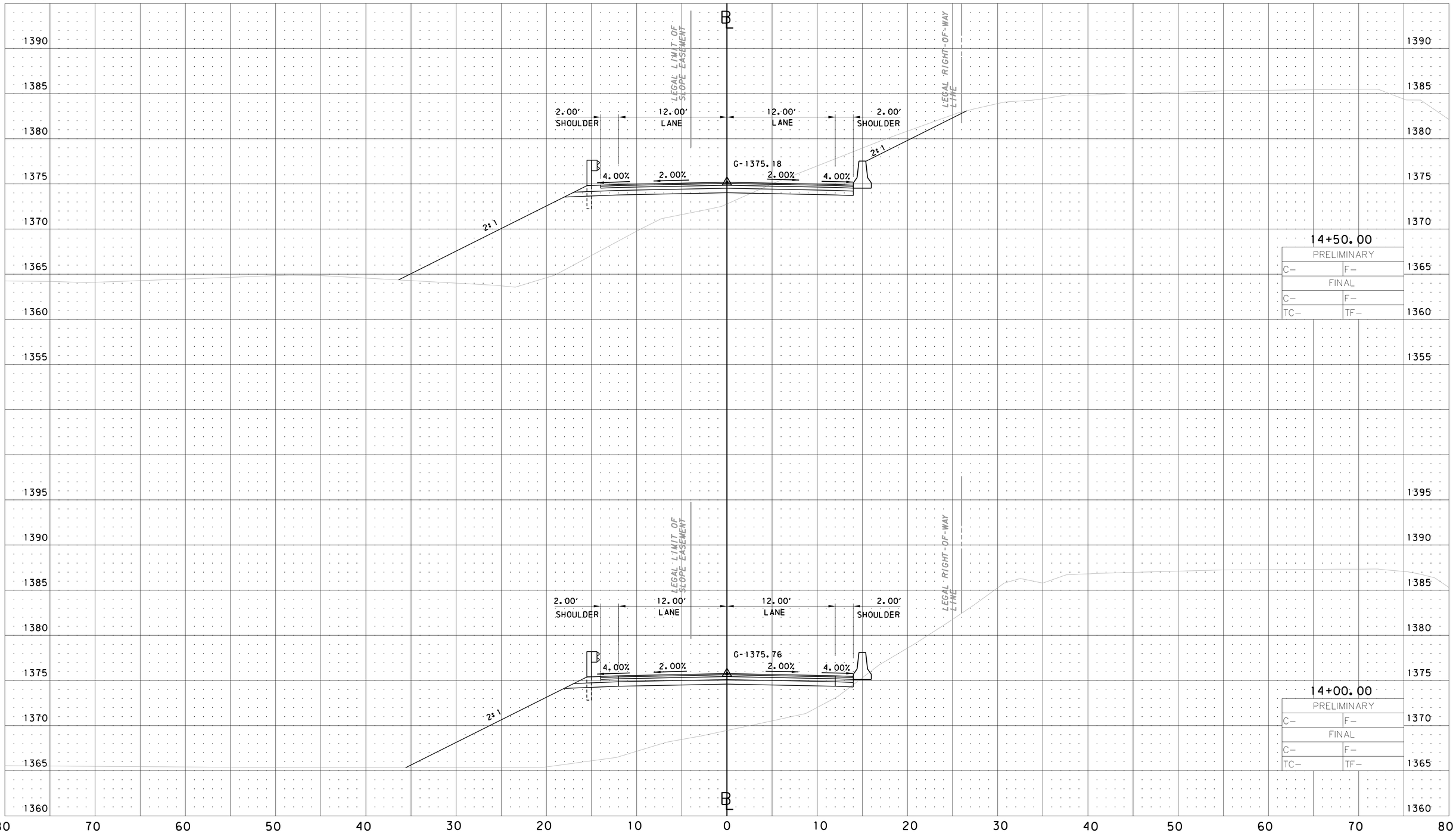
Model: Temp Road
2/28/2024 11:51:17 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			51 OF 66



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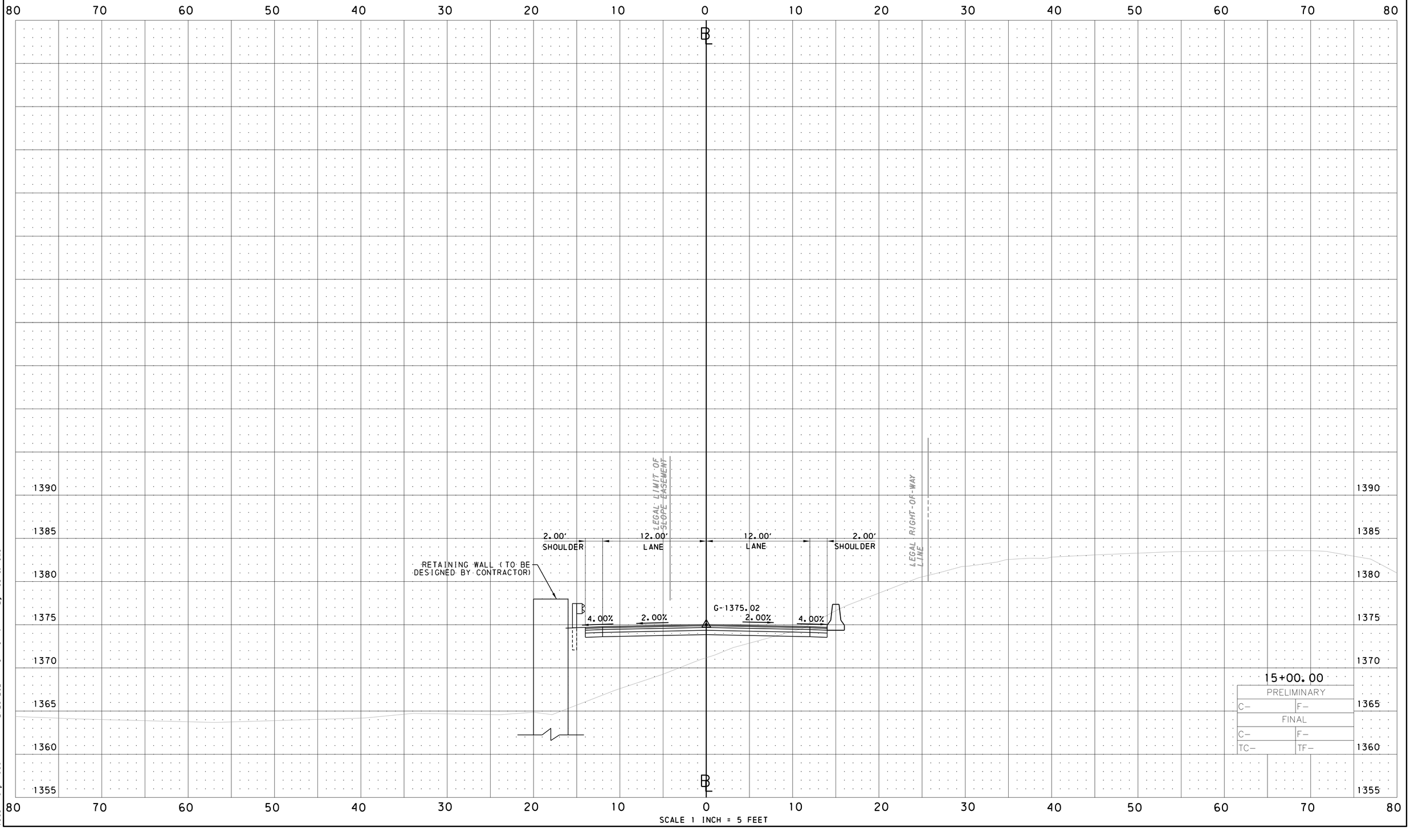
2/28/2024 11:51:18 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			52 OF 66



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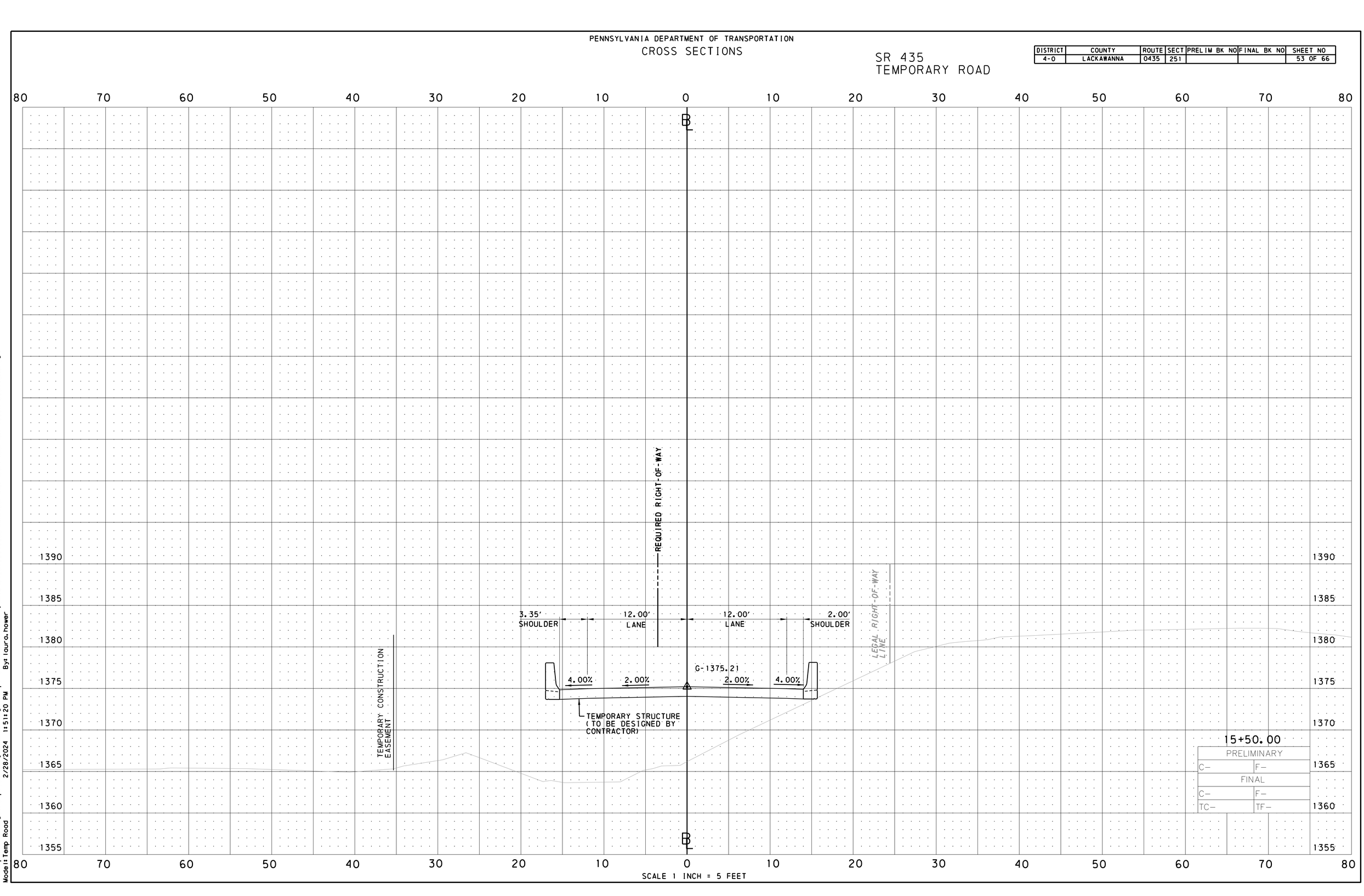
Model:Temp Road
2/28/2024 11:51:19 PM
By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			53 OF 66



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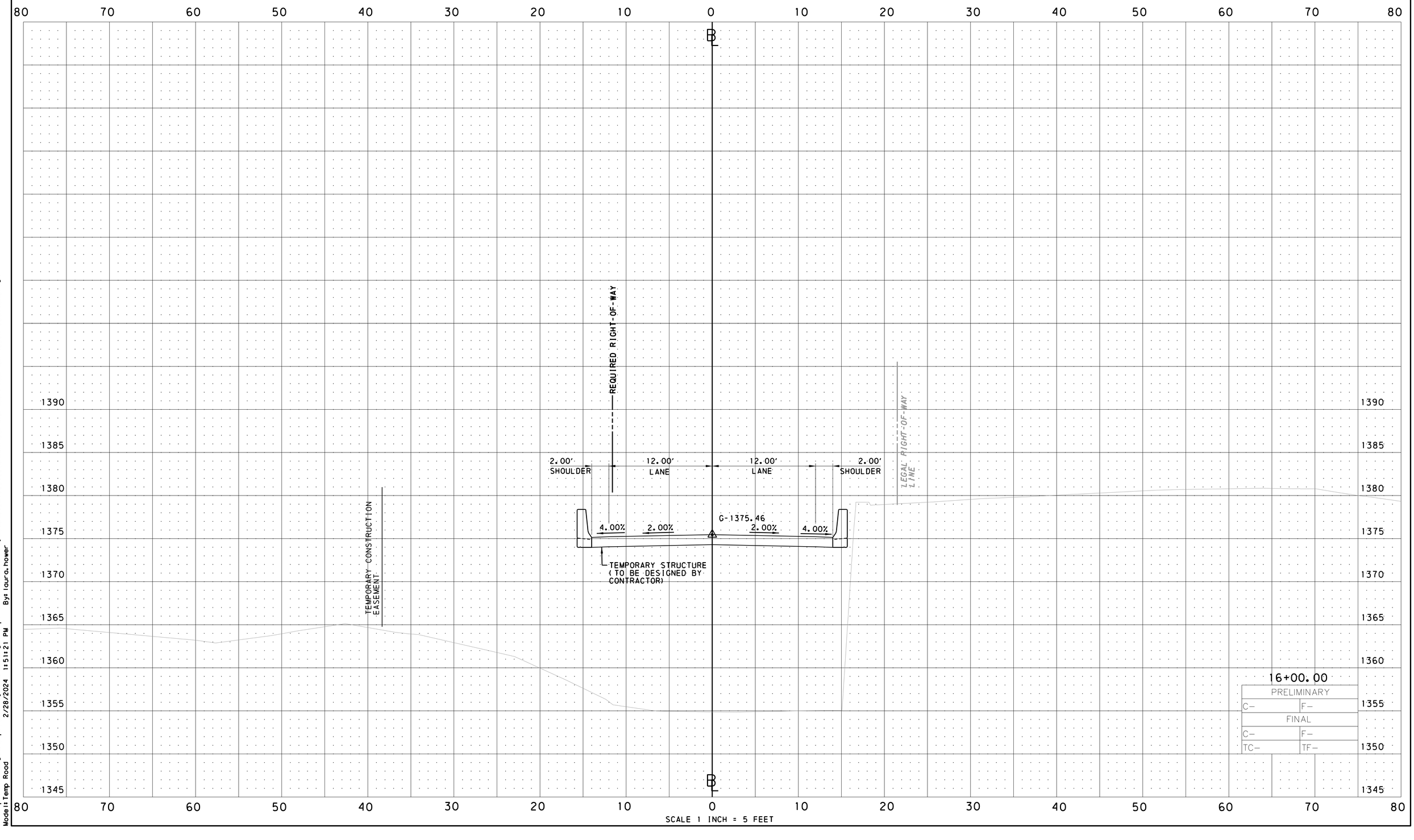
Model: Temp Road
2/28/2024 11:51:20 PM By: laura.hover

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			54 OF 66



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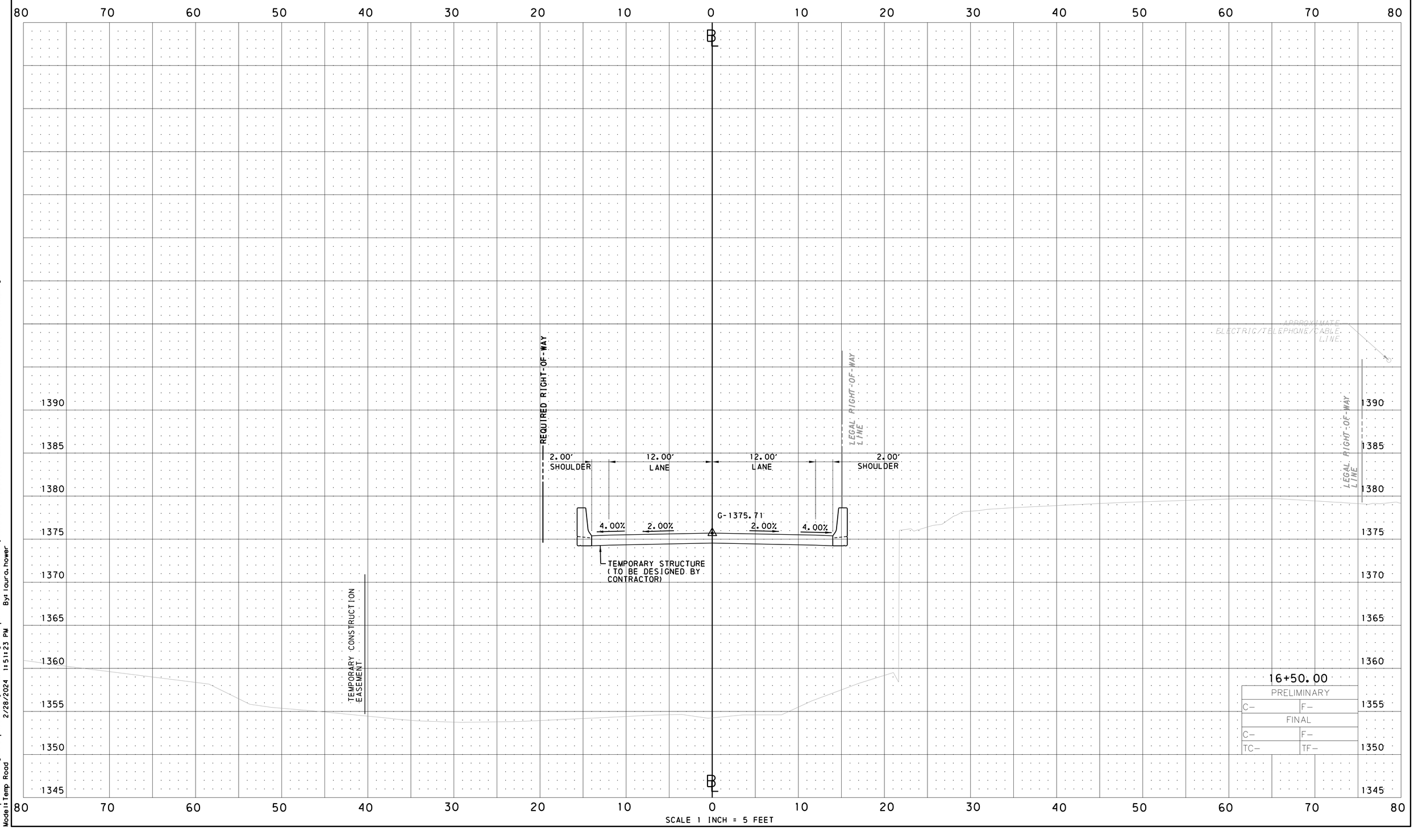
Model:Temp Road 2/28/2024 11:51:21 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			55 OF 66



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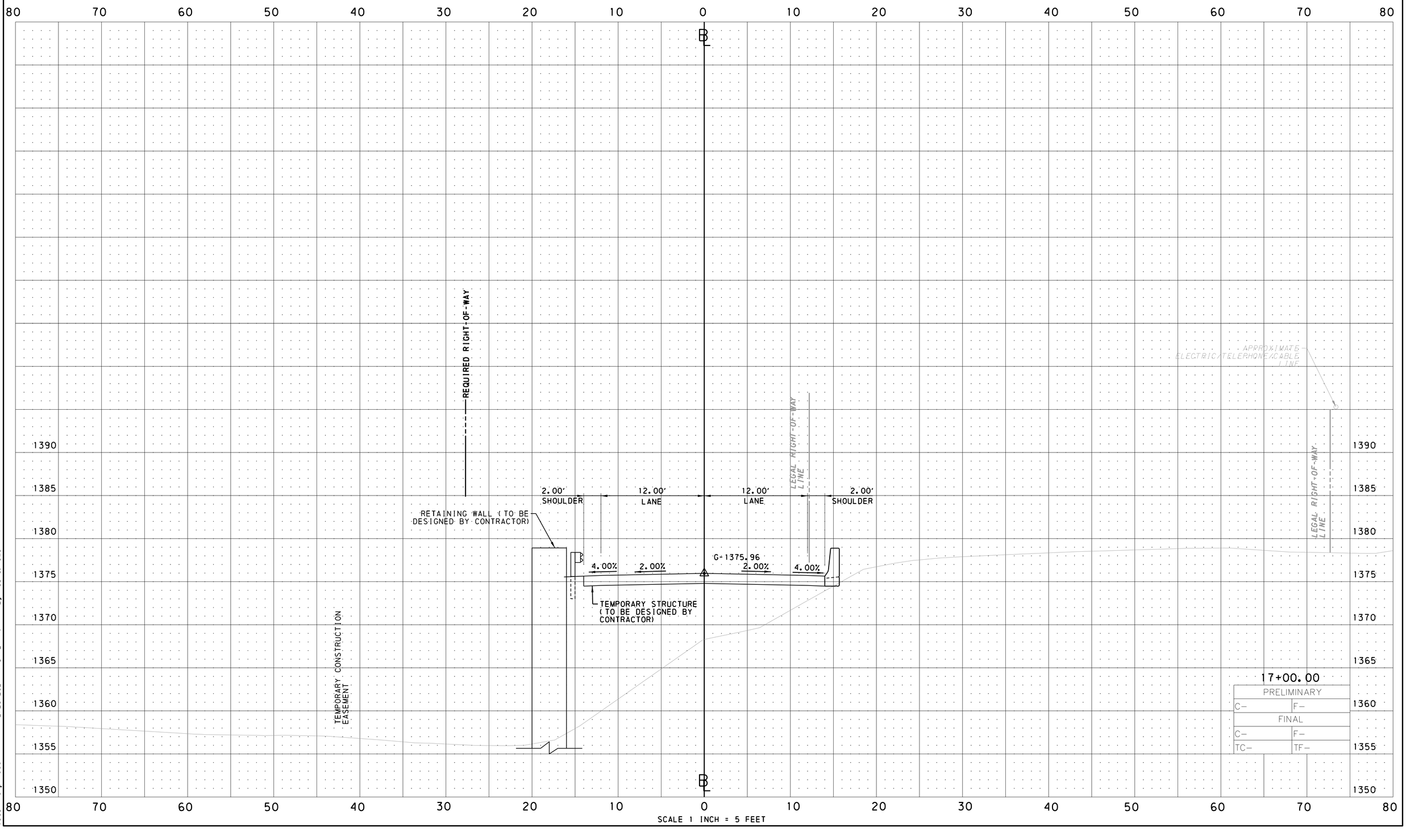
Model:Temp Road 2/28/2024 11:51:23 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			56 OF 66



17+00.00

PRELIMINARY	
C-	F-
FINAL	
C-	F-
TC-	TF-

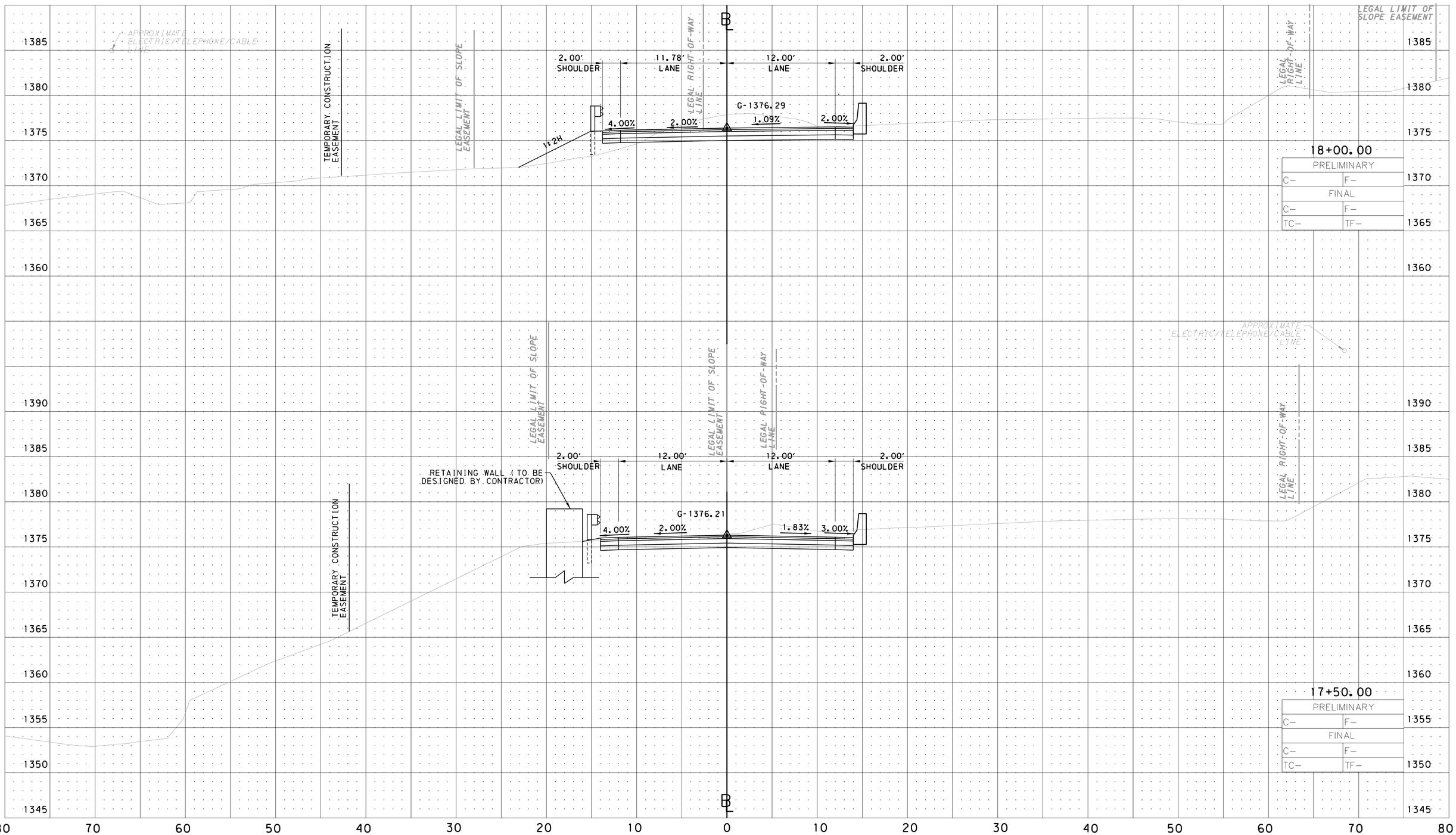
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\REF\Corridor\SR 435_X-Sections.dgn
Model: Temp Road
2/28/2024 11:51:24 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			57 OF 66



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2/28/2024 11:11:26 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			58 OF 66

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

℄

TEMPORARY CONSTRUCTION EASEMENT

LEGAL RIGHT-OF-WAY LINE

2.00' SHOULDER | 10.00' LANE | 12.00' LANE | 2.00' SHOULDER

6H:1V

3.45%

GG-1375.88

3.45%

LEGAL RIGHT-OF-WAY LINE

19+00.00

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

1385 1380 1375 1370 1365

TEMPORARY CONSTRUCTION EASEMENT

LEGAL RIGHT-OF-WAY LINE

2.00' SHOULDER | 10.00' LANE | 12.00' LANE | 2.00' SHOULDER

2:1

4.00% 4.00%

GG-1375.91

4.00%

APPROXIMATE ELECTRIC/TELEPHONE/CABLE LINE

LEGAL RIGHT-OF-WAY LINE

18+50.00

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

1390 1385 1380 1375 1370 1365

℄

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SCALE 1 INCH = 5 FEET

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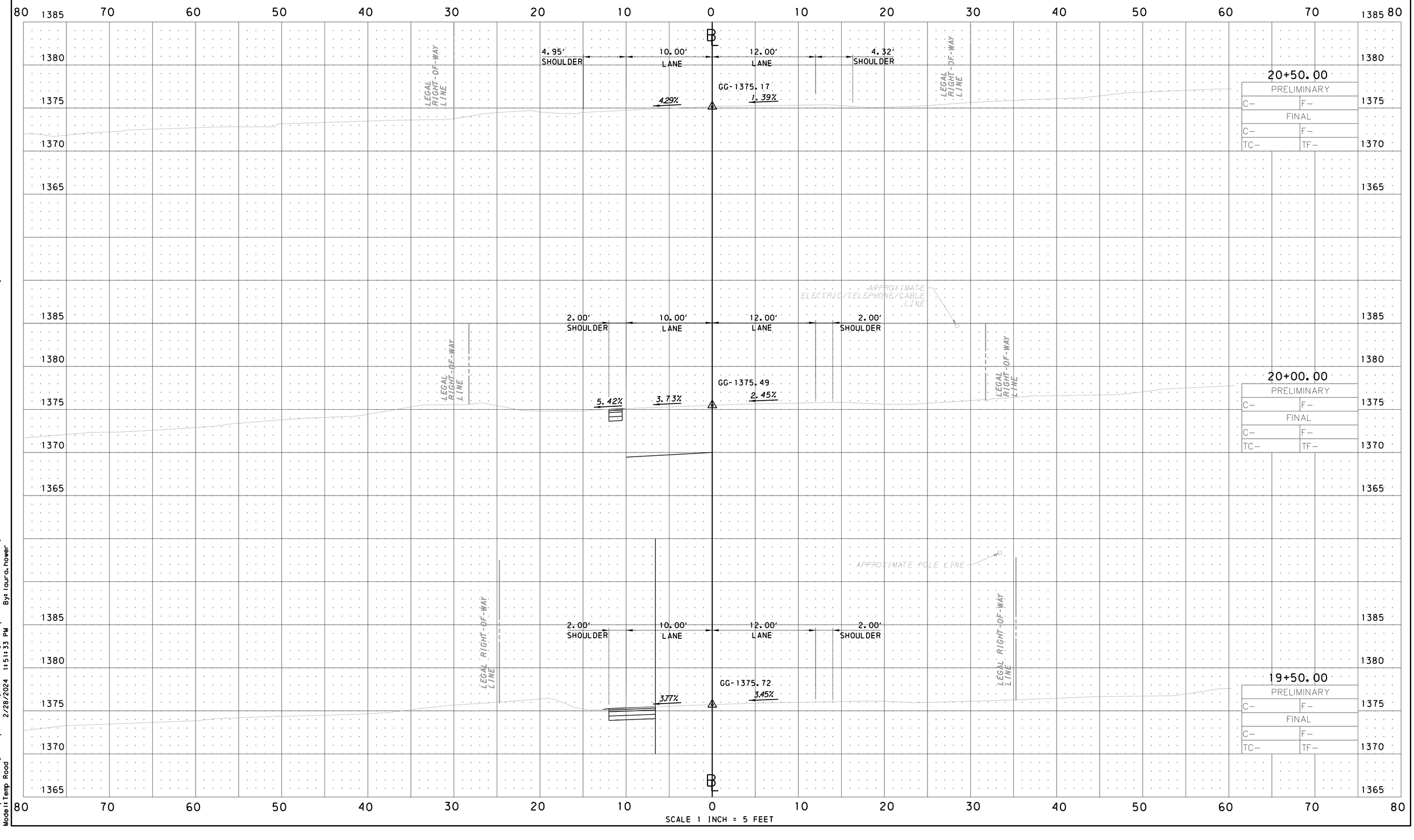
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			59 OF 66



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Model:Temp Road 2/28/2024 11:11:33 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SR 435
TEMPORARY ROAD

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			60 OF 66

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

℄

1385 1380 1375 1370 1365

SHOULDER 10.00' LANE 12.00' LANE 5.91' SHOULDER

LEGAL RIGHT-OF-WAY LINE

LEGAL RIGHT-OF-WAY LINE

GG-1375.02

4.72% 1.29%

20+67.39

PRELIMINARY	
C–	F–
FINAL	
C–	F–
TC–	TF–

SCALE 1 INCH = 5 FEET

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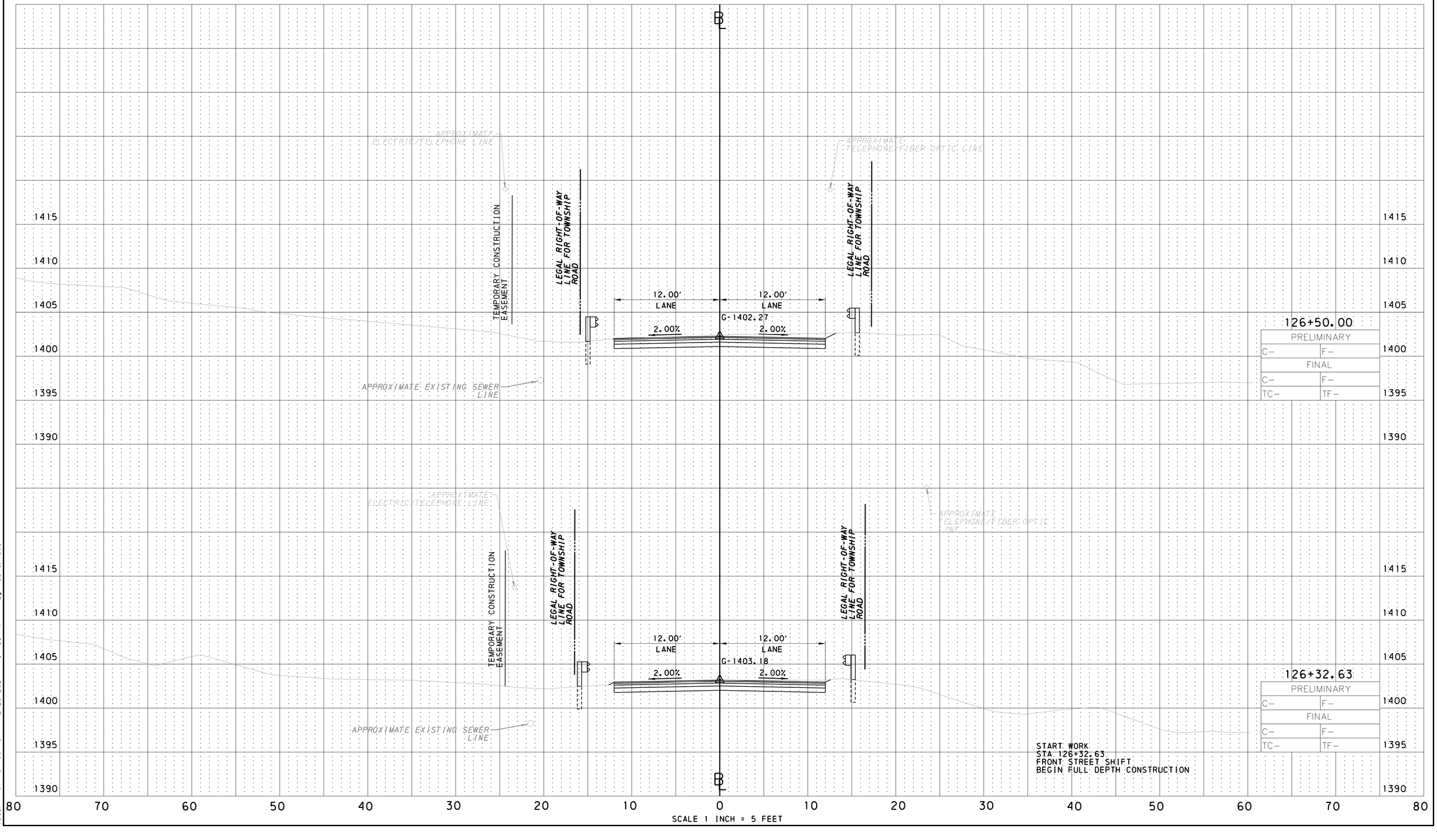
Model: Temp Road
2/28/2024 11:51:33 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

FRONT STREET
TEMPORARY SHIFT

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			61 OF 66



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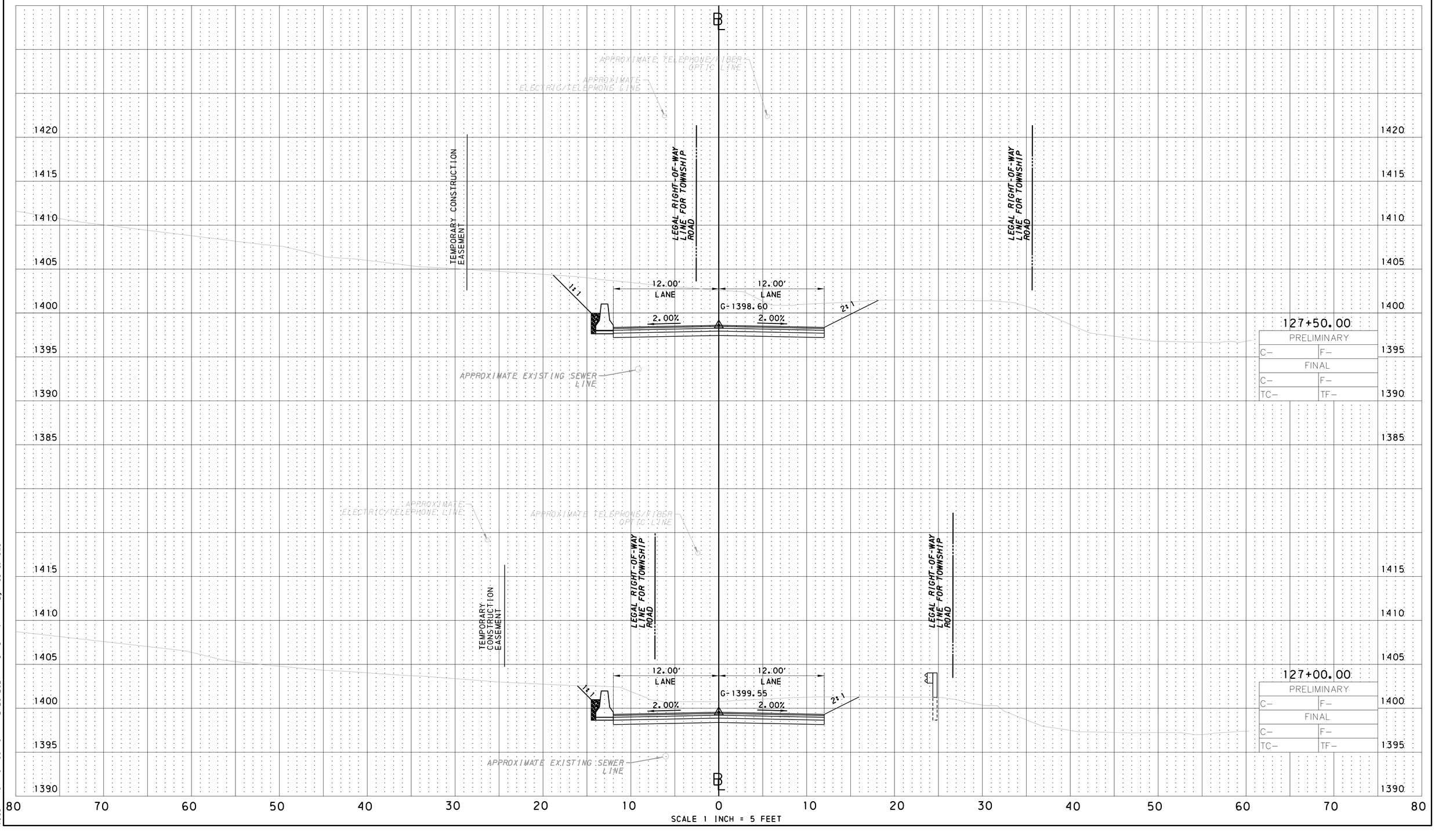
Model:Front Street Shift 2/28/2024 11:11:33 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

FRONT STREET
TEMPORARY SHIFT

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			62 OF 66



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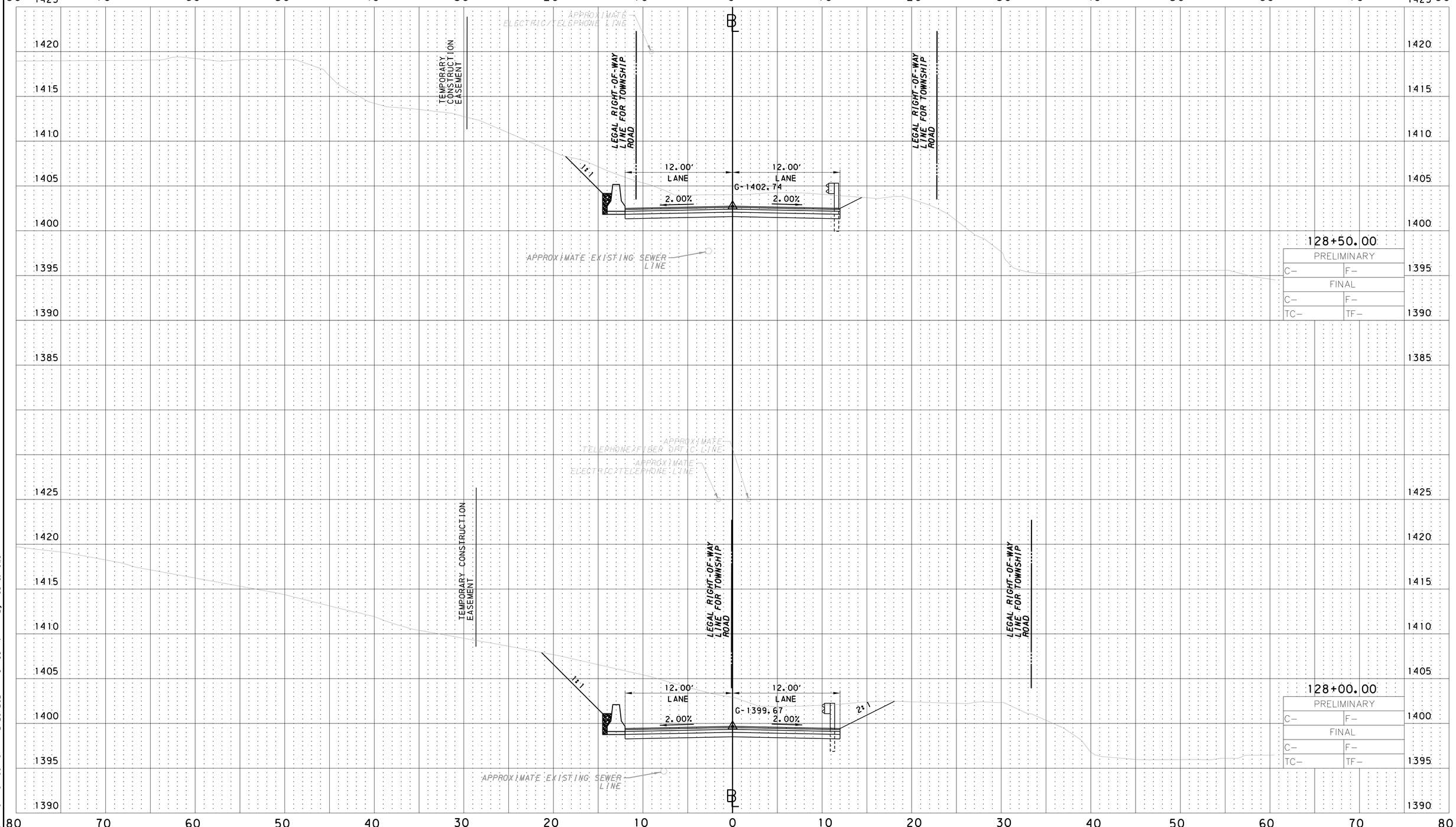
Date: 2/28/2024 11:11:34 PM
By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

FRONT STREET
TEMPORARY SHIFT

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			63 OF 66



SCALE 1 INCH = 5 FEET

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

FRONT STREET
TEMPORARY SHIFT

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			64 OF 66

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

℄

APPROXIMATE ELECTRIC/TELEPHONE LINE

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD

12.00' LANE

12.00' LANE

G-1406.92

2.00%

2.00%

STOP WORK
STA 129+20.00
FRONT STREET SHIFT
END FULL DEPTH CONSTRUCTION

1420 1415 1410 1405 1400 1395 1390 1385

129+00.00

PRELIMINARY	
C-	F-
FINAL	
C-	F-
TC-	TF-

℄

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SCALE 1 INCH = 5 FEET

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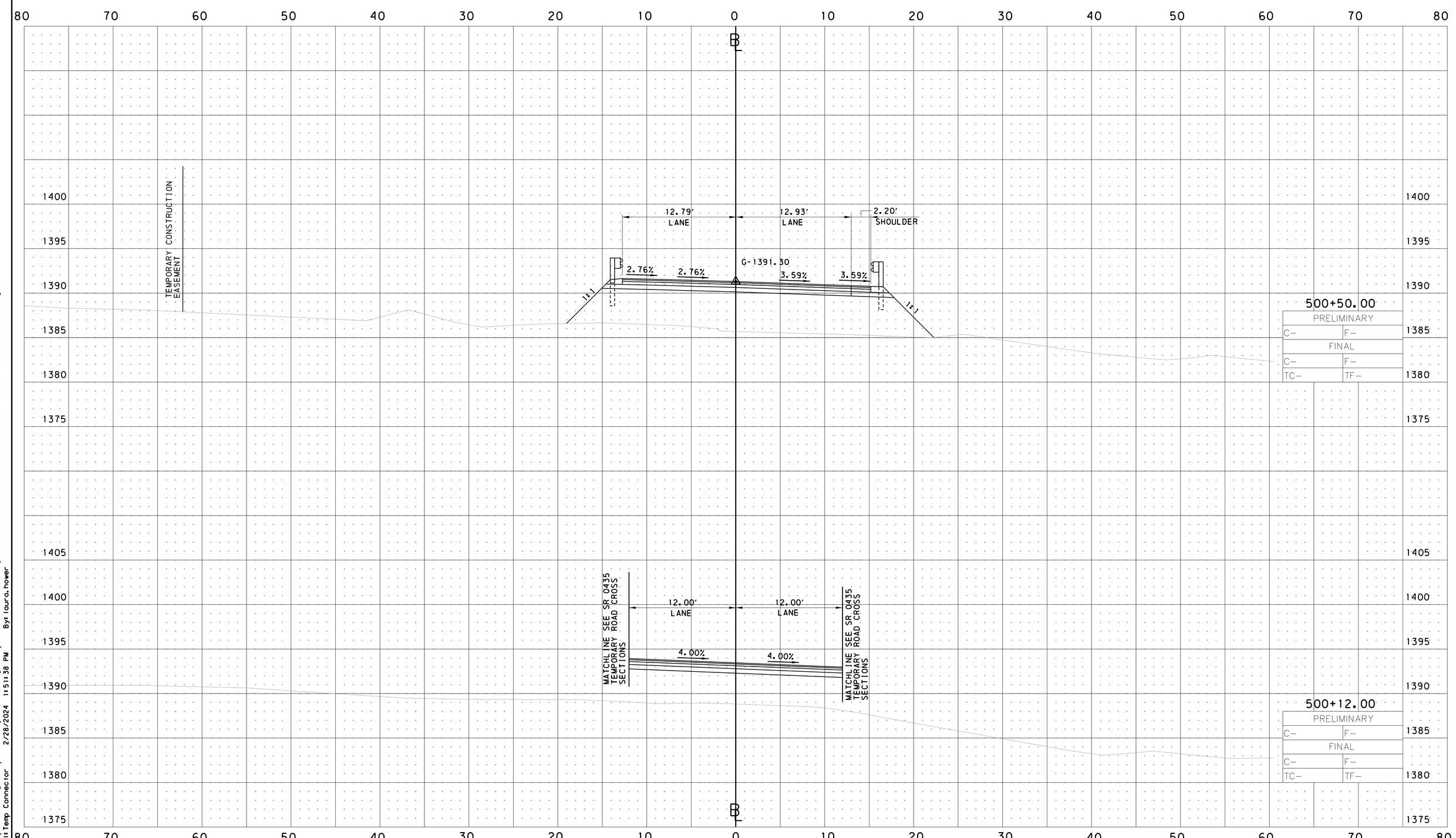
Model:Front Street Shift 2/28/2024 11:51:37 PM By:laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

GC SMITH STREET TEMPORARY CONNECTOR

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			65 OF 66



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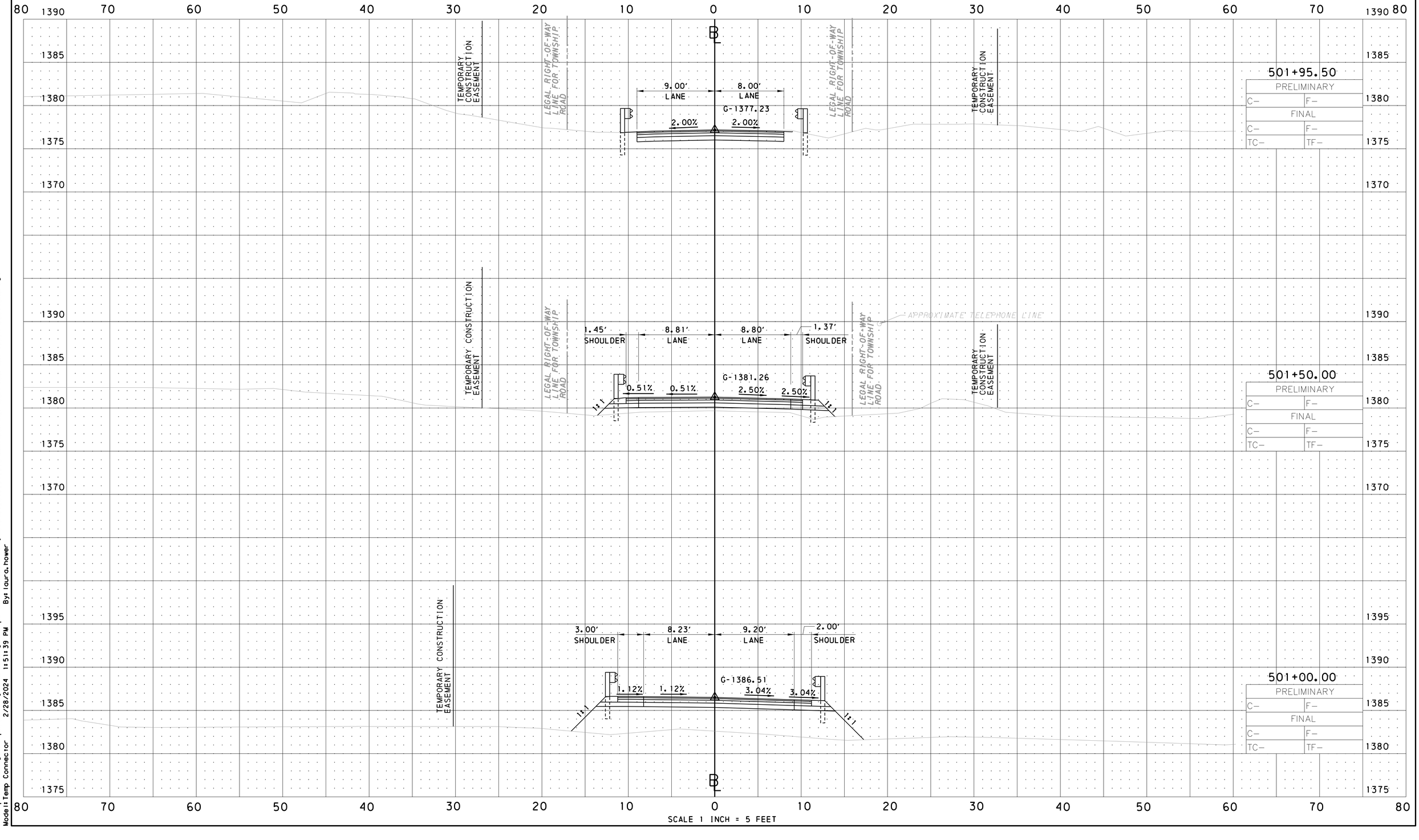
Model: Temp Connector 2/28/2024 11:51:38 PM By: laura.hower

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

GC SMITH STREET TEMPORARY CONNECTOR

DISTRICT	COUNTY	ROUTE	SECT	PRELIM BK NO	FINAL BK NO	SHEET NO
4-0	LACKAWANNA	0435	251			66 OF 66



SCALE 1 INCH = 5 FEET

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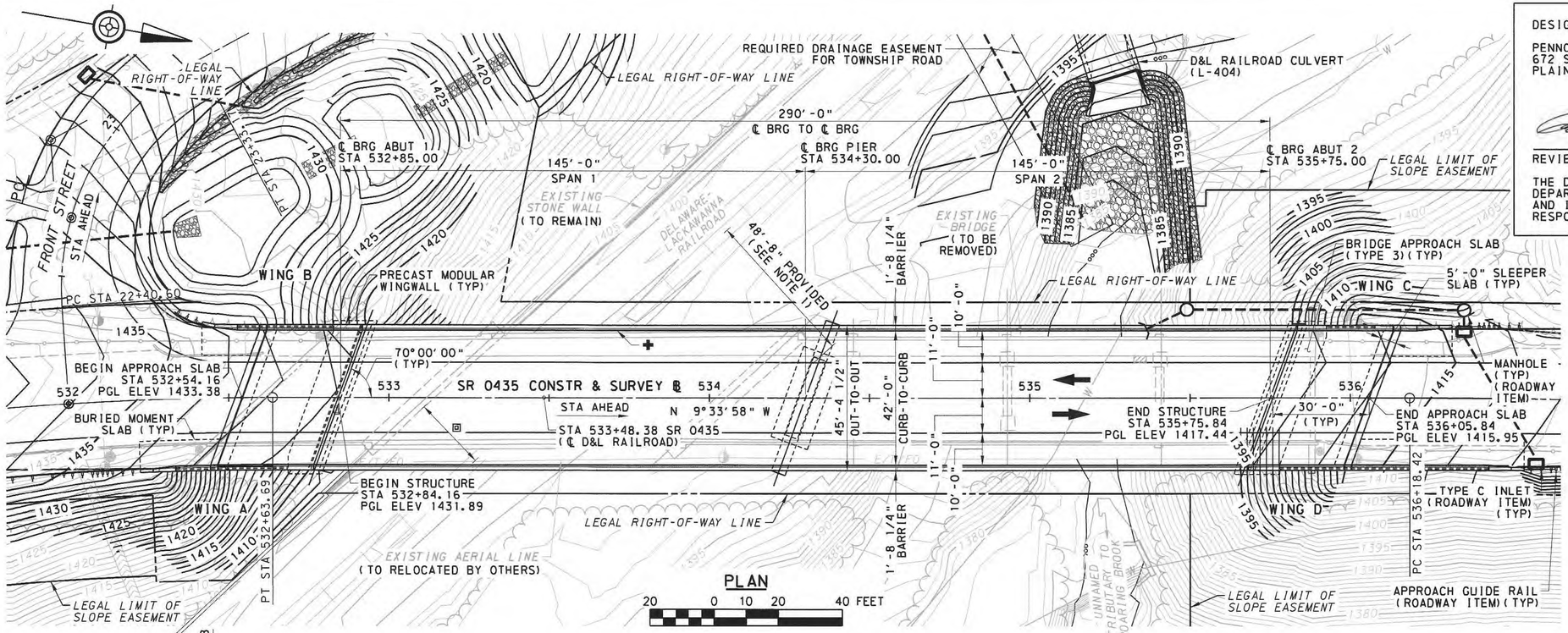

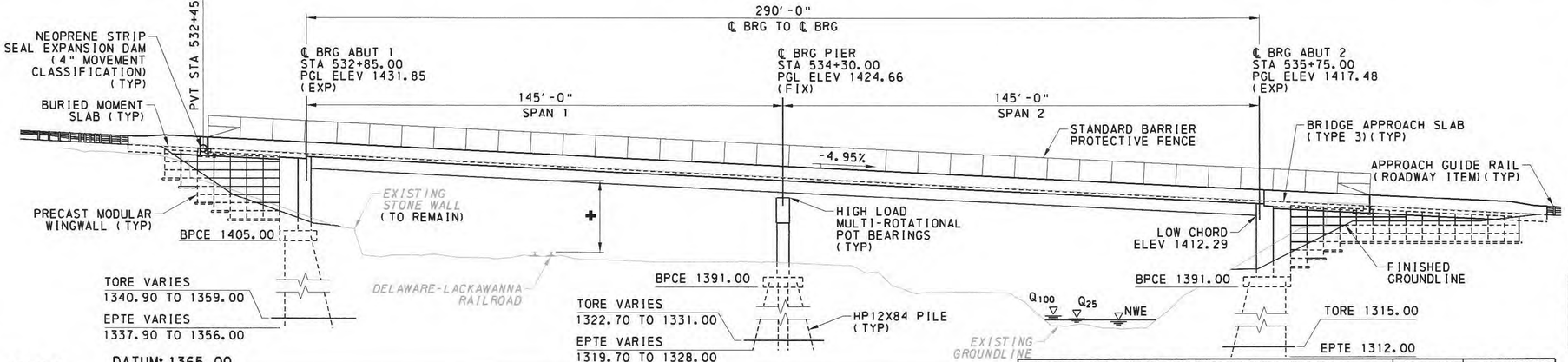

LEGEND

- EXISTING 1' CONTOURS
- 1420 EXISTING 5' CONTOURS
- PROPOSED 1' CONTOURS
- 1420 PROPOSED 5' CONTOURS
- ✚ POINT OF MINIMUM VERTICAL CLEARANCE: 22'-0" MIN PROVIDED & REQUIRED
- ◈ POINT OF MINIMUM HORIZONTAL CLEARANCE: 23'-2" MIN PROVIDED, 18'-0" REQUIRED
- BPCE BOTTOM OF PILE CAP ELEVATION
- EPTE ESTIMATED PILE TIP ELEVATION
- NWE NORMAL WATER ELEVATION (ELEV 1381.00±)
- TORE TOP OF ROCK ELEVATION

NOTES:

1. PROVIDED HORIZONTAL CLEARANCE ACCOMMODATES A FUTURE D&L RR TRACK WITH 18 FEET MINIMUM HORIZONTAL CLEARANCE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

CDR MAGUIRE
3500 Winchester Road
Suite 300
Allentown, PA 18104
phone:610-841-2700
fax:610-841-2709

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

Benjamin R. Martz 2-20-2024

BENJAMIN R. MARTZ, P/E. PE081839

DESIGN REVIEWED BY:

PENNONI
672 SOUTH RIVER STREET, SUITE 313
PLAINS, PA 18705

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT LLOYD NAUGLE, JR ENGINEER PE-044769E

03/04/2024

REVIEW CONSULTANT'S SIGNATURE — DATE

THE DESIGN REVIEW IS FOR GENERAL CONFORMANCE WITH THE DEPARTMENT'S DESIGN AND CONSTRUCTION CRITERIA AND STANDARDS AND IS NOT INTENDED TO RELIEVE THE DESIGNER OF FULL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THE PLANS.

HORIZONTAL CURVE DATA
SR 0435

PI STA = 530+50.69	PI STA = 537+92.49
Δ = 26°01'00" RT	Δ = 8°41'12" RT
D = 6°00'00"	D = 2°30'00"
T = 220.61'	T = 174.07'
L = 433.61'	L = 347.47'
R = 954.93'	R = 2291.83'
E = 25.15'	E = 6.60'
SE = 5.5%	SE = 3.5%

VERTICAL CURVE DATA
SR 0435

PVI STA = 530+95.28
PVI ELEV = 1441.25
LVC = 300.00'
MO = -0.28'
SSD = 1588'

-4.20% -4.95%

STA 532+45.28 ELEV 1433.82 — -4.95% — STA 537+00.00 ELEV 1411.29

HYDRAULIC DATA

DRAINAGE AREA 0.77 SQ MILES
Q_{50} FLOW 335 CFS
Q_{50} ELEV 1382.30
Q_{50} VEL 13.97 FPS

Q_{100} FLOW 433 CFS
Q_{100} ELEV 1384.93
Q_{100} VEL 4.10 FPS

FLOOD OF RECORD = UNKNOWN

DESIGN DESIGNATION
SR 0435

HIGHWAY CLASSIFICATION = URBAN MAJOR COLLECTOR
DESIGN SPEED = 45 MPH
ADT (2024) = 6,010
ADT (2044) = 6,010
TRUCK % = 7

EXISTING STRUCTURE DATA:

SIMPLE SPAN REINFORCED CONCRETE T-BEAMS (SPANS 1, 3, 4, 5 & 6)
SIMPLE SPAN STEEL RIVETED THRU GIRDER (SPAN 2)
SPANS: 50'-2", 33'-6", 39'-10", 48'-0", 48'-0", 46'-6"
ROADWAY: 33'-11" OUT-TO-OUT
26'-0" CURB-TO-CURB
SKEW: 42°30'00" (ABUT 1 & PIERS 1 THRU 2)
90°00'00" (ABUT 2 & PIERS 3 THRU 5)
VERTICAL CLR: 22'-5" (D&L RAILROAD)

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	11/1/2022
PROTECTIVE FENCE	BC-701M	11/23/2022
ELECTRICAL DETAILS	BC-721M	2/19/2021
PERMANENT METAL DECK FORMS	BC-732M	11/23/2022
ANCHOR SYSTEMS	BC-734M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	11/23/2022
BRIDGE DRAINAGE	BC-751M	1/31/2019
CONCRETE DECK SLAB DETAILS	BC-752M	11/23/2022
STEEL GIRDER DETAILS	BC-753M	1/31/2019
STEEL DIAPHRAGMS FOR STEEL BEAM/ GIRDER STRUCTURES (STRAIGHT GIRDERS ONLY)	BC-754M	11/23/2022
HIGH LOAD MULTI ROTATIONAL POT BEARINGS	BC-756M	11/23/2022
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	9/30/2016
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	11/23/2022
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	11/23/2022
PREFABRICATED T-WALL RETAINING WALL SYSTEM	87-402PE	4/13/2017
DESCRIPTION	DWG NO	APP DATE

SUPPLEMENTAL DRAWINGS

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
GENERAL PLAN & ELEVATION

RECOMMENDED 03/04/2024
2024.03.04 11:21:48 -05'00'
For CHIEF BRIDGE ENGINEER

SHEET 1 OF 83 + SUPPLEMENTAL DRAWINGS

S-39603

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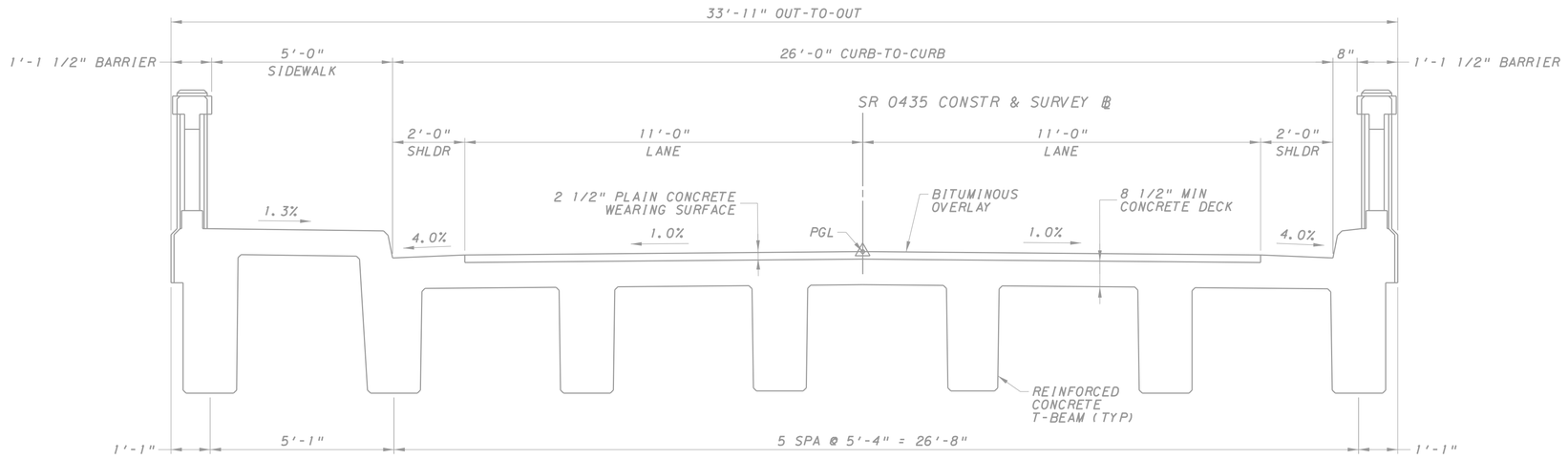
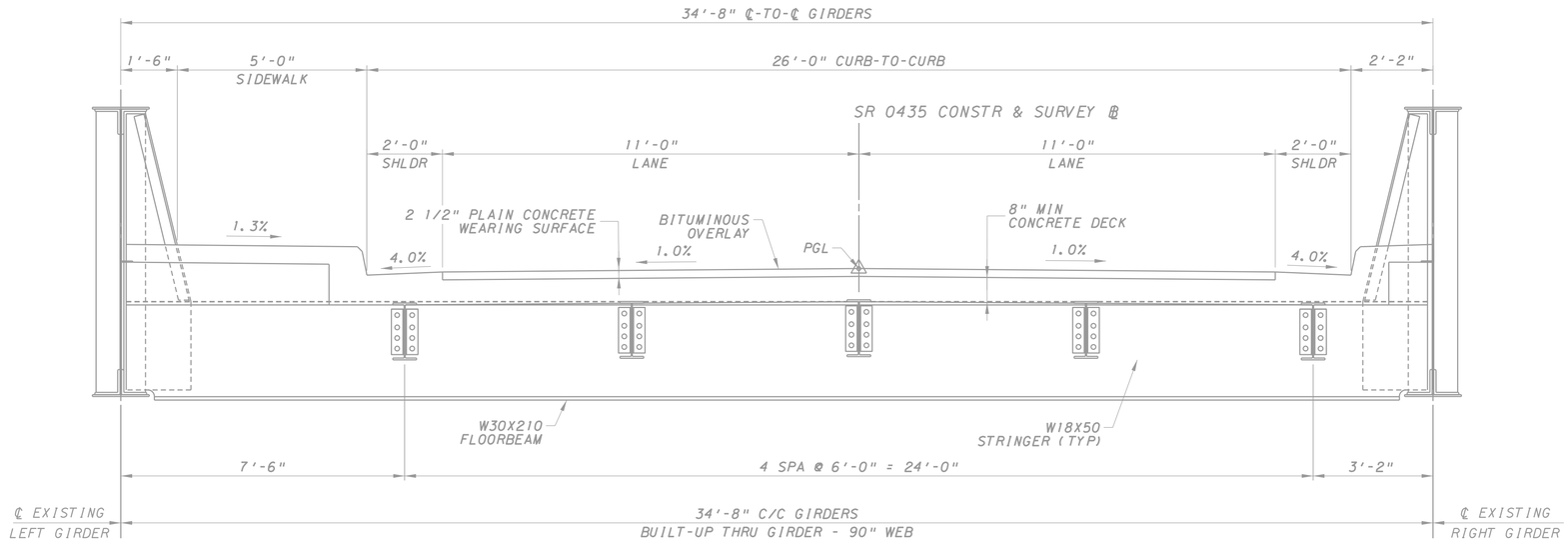
Model: 01 GENERAL PLAN 2/20/2024 2:23:11 PM By: lourdes.hower



EXISTING TYPICAL SECTION
(SPANS 1, 3, 4, 5 & 6)

2 0 1 2 4 FEET



EXISTING TYPICAL SECTION
(SPAN 2)

2 0 1 2 4 FEET

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REVISIONS					

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EXISTING TYPICAL SECTIONS

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SHEET 2 OF 83

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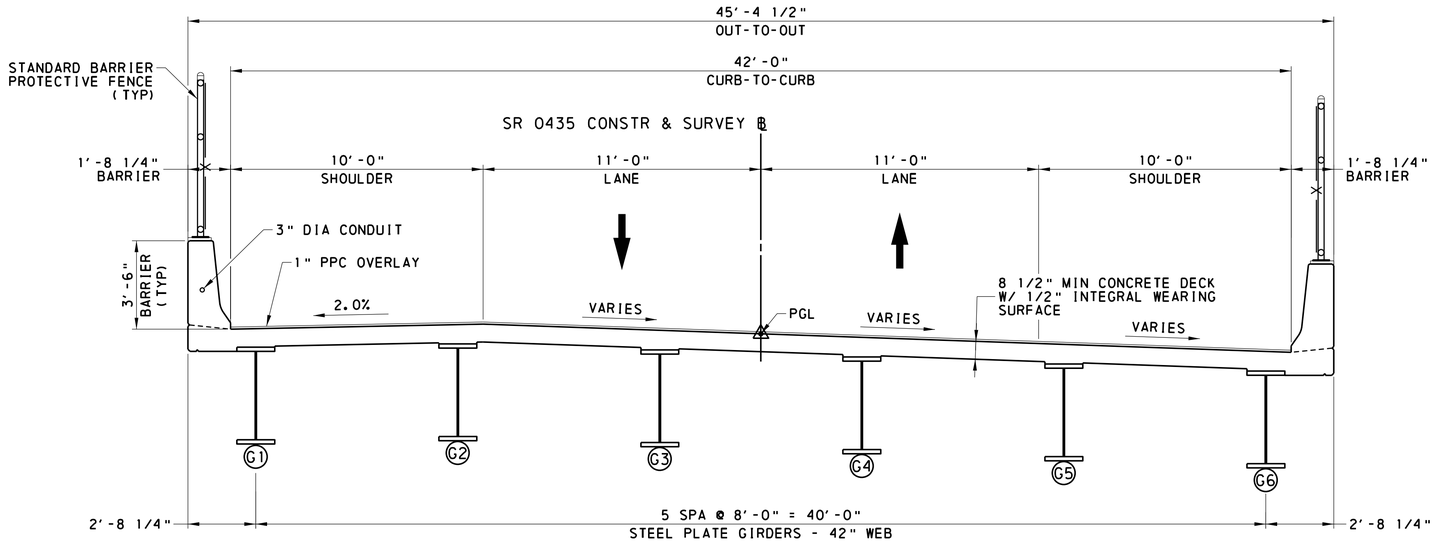
Model:02 EXIST TYP SECTIONS
Date:3/4/2024 12:59:18 PM By:laura.hower



PROPOSED TYPICAL SECTION

3 0 1 3 6 FEET

CROSS SLOPES				
STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER
529+50.00	-2.00%	5.50%	-5.50%	-5.50%
532+50.00	-2.00%	5.50%	-5.50%	-5.50%
532+93.00	-2.00%	3.50%	-3.50%	-3.50%
536+50.00	-2.00%	3.50%	-3.50%	-3.50%
537+00.00	-4.51%	1.33%	-2.31%	-4.72%

DRAWING INDEX			
TITLE	SHEET	TITLE	SHEET
GENERAL PLAN & ELEVATION	1	HLMR POT BEARING DETAILS - GUIDED	43
EXISTING TYPICAL SECTIONS	2	HLMR POT BEARING DETAILS - NON-GUIDED	44
PROPOSED TYPICAL SECTION & DRAWING INDEX	3	CONCRETE END DIAPHRAGM DETAILS	45
LOAD RATINGS	4	DECK PLAN	46
GENERAL NOTES - 1	5	TYPICAL DECK SECTION - 1	47
GENERAL NOTES - 2	6	TYPICAL DECK SECTION - 2	48
QUANTITIES	7	BARRIER PLAN	49
STAKE-OUT PLAN	8	DECK POUR SEQUENCE	50
ABUTMENT 1 FOOTING PLAN	9	DECK ELEVATIONS	51
ABUTMENT 1 PLAN	10	DECK REINFORCEMENT SCHEDULE	52
ABUTMENT 1 ELEVATION	11	APPROACH SLAB 1 PLAN	53
ABUTMENT 1 TYPICAL SECTION	12	APPROACH SLAB 2 PLAN	54
ABUTMENT 1 DETAILS	13	APPROACH SLAB SECTIONS	55
WING A - REINFORCED CONCRETE DETAILS	14	NEOPRENE STRIP SEAL DETAILS	56
WING A - PRECAST MODULAR DETAILS	15	JOINT & WATERSTOP DETAILS	57
WING B - REINFORCED CONCRETE DETAILS	16	APPROACH SLAB 1 REINFORCEMENT SCHEDULE	58
WING B - PRECAST MODULAR DETAILS	17	APPROACH SLAB 2 REINFORCEMENT SCHEDULE	59
ABUTMENT 1 REINFORCEMENT SCHEDULE	18	MOMENT SLAB A & B PLAN	60
ABUTMENT 2 FOOTING PLAN	19	MOMENT SLAB A BARRIER PLAN	61
ABUTMENT 2 PLAN	20	MOMENT SLAB B BARRIER PLAN	62
ABUTMENT 2 ELEVATION	21	MOMENT SLAB A & B SECTIONS	63
ABUTMENT 2 TYPICAL SECTION	22	MOMENT SLAB A REINFORCEMENT SCHEDULE	64
ABUTMENT 2 DETAILS	23	MOMENT SLAB B REINFORCEMENT SCHEDULE	65
WING C - REINFORCED CONCRETE DETAILS	24	MOMENT SLAB C & D PLAN	66
WING C - PRECAST MODULAR DETAILS	25	MOMENT SLAB C BARRIER PLAN	67
WING D - REINFORCED CONCRETE DETAILS	26	MOMENT SLAB C SECTIONS	68
WING D - PRECAST MODULAR DETAILS	27	MOMENT SLAB D BARRIER PLAN	69
ABUTMENT 2 REINFORCEMENT SCHEDULE	28	MOMENT SLAB D SECTIONS	70
PIER PLAN AND ELEVATION	29	MOMENT SLAB C REINFORCEMENT SCHEDULE	71
PIER FOOTING PLAN	30	MOMENT SLAB D REINFORCEMENT SCHEDULE	72
PIER DETAILS - 1	31	STRUCTURE BORINGS (1 OF 11)	73
PIER DETAILS - 2	32	STRUCTURE BORINGS (2 OF 11)	74
PIER REINFORCEMENT SCHEDULE	33	STRUCTURE BORINGS (3 OF 11)	75
FRAMING PLAN	34	STRUCTURE BORINGS (4 OF 11)	76
STEEL GIRDER ELEVATION	35	STRUCTURE BORINGS (5 OF 11)	77
STIFFENER DETAILS	36	STRUCTURE BORINGS (6 OF 11)	78
CROSS FRAME DETAILS	37	STRUCTURE BORINGS (7 OF 11)	79
FIELD SPLICE	38	STRUCTURE BORINGS (8 OF 11)	80
STEEL GIRDER CAMBER	39	STRUCTURE BORINGS (9 OF 11)	81
BEARING PLAN & NOTES	40	STRUCTURE BORINGS (10 OF 11)	82
HLMR POT BEARING DESIGN LOADS	41	STRUCTURE BORINGS (11 OF 11)	83
HLMR POT BEARING DETAILS - FIXED	42		

LEGEND

PPC POLYESTER POLYMER CONCRETE

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ENGINEER
PE081839

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SHEET 3 OF 83

S-39603

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BRIDGE LOAD RATINGS WITH FUTURE WEARING SURFACE

ADTT (2023) = 421

STEEL PLATE GIRDERS		H20	HS20	ML-80	TK-527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.690	0.690	0.690	0.690	0.690	-	-
	LOCATION	1.00 L (SI)	1.00 L (SI)	0.40 L (SI)	0.40 L (SI)	1.00 L (SI)	-	-
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	STR-I	-	-
	RATING FACTOR	1.93 M	1.93 M	2.16 M	2.08 M	1.30 M	-	-
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.690	0.690	0.690	0.690	0.690	0.690	0.690
	LOCATION	1.00 L (SI)	1.00 L (SI)	0.40 L (SI)	0.40 L (SI)	1.00 L (SI)	0.40 L (SI)	0.35 L (SI)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.50 M	2.50 M	2.80 M	2.70 M	1.68 M	1.44 M	1.18 M

CRITICAL MEMBER: EXTERIOR GIRDER
MAXIMUM FACTORED FLEXURAL RESISTANCE (KIP-FT): -15398.7
LOCATION: 0.74 L (SI)
MAXIMUM FACTORED SHEAR RESISTANCE (KIPS): 683.2
LOCATION: 0.00 L (SI)

BRIDGE LOAD RATINGS WITHOUT FUTURE WEARING SURFACE

ADTT (2023) = 421

STEEL PLATE GIRDERS		H20	HS20	ML-80	TK-527	PHL-93	P-82	P2016-13
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.690	0.690	0.690	0.690	0.690	-	-
	LOCATION	1.00 L (SI)	1.00 L (SI)	0.40 L (SI)	0.40 L (SI)	1.00 L (SI)	-	-
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	STR-I	-	-
	RATING FACTOR	2.17 M	2.17 M	2.29 M	2.21 M	1.46 M	-	-
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.690	0.690	0.690	0.690	0.690	0.690	0.690
	LOCATION	1.00 L (SI)	1.00 L (SI)	0.40 L (SI)	0.40 L (SI)	1.00 L (SI)	0.40 L (SI)	0.35 L (SI)
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.81 M	2.81 M	2.96 M	2.86 M	1.89 M	1.52 M	1.26 M

CRITICAL MEMBER: EXTERIOR GIRDER
MAXIMUM FACTORED FLEXURAL RESISTANCE (KIP-FT): 15995.0
LOCATION: 0.80 L (SI)
MAXIMUM FACTORED SHEAR RESISTANCE (KIPS): 683.2
LOCATION: 0.00 L (SI)

GIRDER SECTION PROPERTIES

NON-COMPOSITE

CRITICAL GIRDER	SPAN	LOCATION	AREA (IN^2)	I (IN^4)	Y-BOT (IN)	Y-TOP (IN)	Y-REINF (IN)	S-BOT (IN^3)	S-TOP (IN^3)	S-REINF (IN^3)
EXTERIOR	1	0.35 L	107.25	43,544	23.25	23.25	N/A	1,873	1,873	N/A
EXTERIOR	1	0.40 L	107.25	43,544	23.25	23.25	N/A	1,873	1,873	N/A
EXTERIOR	1	1.00 L	170.25	76,867	24.00	24.00	N/A	3,203	3,203	N/A

COMPOSITE (3N)

CRITICAL GIRDER	SPAN	LOCATION	AREA (IN^2)	I (IN^4)	Y-BOT (IN)	Y-TOP (IN)	Y-REINF (IN)	S-BOT (IN^3)	S-TOP (IN^3)	S-REINF (IN^3)
EXTERIOR	1	0.35 L	-	57,068	28.24	18.26	20.11	2,021	3,125	2,838
EXTERIOR	1	0.40 L	-	57,068	28.24	18.26	20.11	2,021	3,125	2,838
EXTERIOR	1	1.00 L	-	91,458	27.40	20.61	21.71	3,339	4,439	4,214

COMPOSITE (N) (POSITIVE FLEXURE)

CRITICAL GIRDER	SPAN	LOCATION	AREA (IN^2)	I (IN^4)	Y-BOT (IN)	Y-TOP (IN)	Y-REINF (IN)	S-BOT (IN^3)	S-TOP (IN^3)	S-REINF (IN^3)
EXTERIOR	1	0.35 L	-	72,661	33.95	12.55	14.40	2,140	5,790	5,046
EXTERIOR	1	0.40 L	-	72,661	33.95	12.55	14.40	2,140	5,790	5,046
EXTERIOR	1	1.00 L	-	111,383	32.01	15.99	17.09	3,480	6,965	6,517

COMPOSITE (NEGATIVE FLEXURE)

CRITICAL GIRDER	SPAN	LOCATION	AREA (IN^2)	I (IN^4)	Y-BOT (IN)	Y-TOP (IN)	Y-REINF (IN)	S-BOT (IN^3)	S-TOP (IN^3)	S-REINF (IN^3)
EXTERIOR	1	0.35 L	-	49,323	25.40	21.10	22.95	1,942	2,337	2,149
EXTERIOR	1	0.40 L	-	49,323	25.40	21.10	22.95	1,942	2,337	2,149
EXTERIOR	1	1.00 L	-	82,835	25.40	22.60	23.70	3,262	3,665	3,495

NOTES:

1. RATINGS ARE BASED ON THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.
2. GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING.
3. "M" & "V" DENOTE THAT MOMENT OR SHEAR CONTROL THE RATING FACTOR, RESPECTIVELY.
4. RATING VEHICLE DEFINITIONS:
   ML-80 = PENNSYLVANIA MAXIMUM LEGAL LOAD
   TK527 = PENNSYLVANIA LEGAL LOAD
   P-82 = PENNSYLVANIA PERMIT LOAD
   P2016-13 = PENNSYLVANIA PERMIT LOAD
5. SECTION PROPERTIES AND UNFACTORED BEAM LOADS GIVEN FOR CRITICAL MEMBER.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
LOAD RATINGS

RECOMMENDED 03/04/2024

SHEET 4 OF 85

S-39603

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Model: 04 RATING TABLES 3/4/2024 12:59:19 PM By: laura.hower

DESIGN SPECIFICATIONS

1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (2017) AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.
2. LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM4 DISTRIBUTION FACTOR METHOD.
3. DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LIVE LOADS

1. PHL-93, P-82, AND P2016-13.
2. FATIGUE DESIGN IS BASED ON THE FOLLOWING:
   ADTT 421 (2043)

DEAD LOADS

1. INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB. THE PROPOSED PPC OVERLAY (0.012 KSF) IS INCLUDED AS PART OF THE FUTURE WEARING SURFACE CONTINGENCY.
2. INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS THAT TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.
3. INCLUDES A WEIGHT OF 50 PLF FOR THE WEIGHT OF THE PROTECTIVE FENCE.

GENERAL

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, PUBLICATION 408 (2020), AASHTO/AWS D1.5M/D1.5:2015 BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS. USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015.
2. PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50W (ASTM A709 GRADE 50W) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE.
3. PROVIDE 2 INCHES OF CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.
4. USE CLASS AAAP CEMENT CONCRETE IN DECK SLAB, CONCRETE END DIAPHRAGMS, AND APPROACH SLABS.
5. USE CLASS AA CEMENT CONCRETE IN BARRIERS, ABUTMENT BACKWALLS, U-WINGS ABOVE BRIDGE SEAT CONSTRUCTION JOINT, SLEEPER SLABS, AND MOMENT SLABS.
6. USE CLASS A CEMENT CONCRETE IN PIERS, ABUTMENTS BELOW BRIDGE SEAT, WINGWALLS, FOOTINGS, AND PRECAST MODULAR WINGWALL LEVELING PADS.
7. 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.
8. 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.
9. USE EPOXY-COATED REINFORCEMENT BARS UNLESS INDICATED OTHERWISE.
10. GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.
11. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.
12. SITE CLASS IS NOT CLASS E.
13. USE RETARDER ADMIXTURE CONFORMING TO PUBLICATION 408 (2020) IN THE CONCRETE DECK SLAB, AS NECESSARY FOR PROPER CURE OF THE DECK.
14. CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.
15. ABUTMENT BACKWALLS MAY BE PLACED UP TO A CONSTRUCTION JOINT BELOW THE LEVEL OF THE BOTTOM OF DECK SLAB PRIOR TO CONSTRUCTION OF THE DECK.
16. NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH FISH COMMISSION DURING CONSTRUCTION.

    NORTHEAST REGION:
    5566 MAIN ROAD
    SWEET VALLEY, PA 18656
    (570) 477-5717

17. PLACE BACKWALL CONCRETE AFTER GIRDERS ARE SET IN POSITION.
18. CHAMFER EXPOSED CONCRETE EDGES 3/4 IN. BY 3/4 IN., EXCEPT AS NOTED.
19. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
20. USE EITHER PERMANENT METAL FORMS OR REMOVABLE FORMS TO CONSTRUCT THE DECK SLAB.
21. DECK SLAB THICKNESS INCLUDES A 1/2 INCH INTEGRAL WEARING SURFACE.
22. SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68°F.
23. PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.
24. PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(k)9.
25. BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408, SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.
26. PROVIDE A MINIMUM WIDTH OF 2-1/2" @ 68°F FOR STRIP SEAL INSTALLATIONS UNLESS OTHERWISE INDICATED.
27. DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.

GENERAL (CONT'D)

28. DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.
29. DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.
30. THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.
31. THE EXISTING BRIDGE STRUCTURAL MEMBERS CONTAIN LEAD PAINT AND OTHER TOXIC MATERIALS BASED ON LABORATORY TESTING.
32. THE 42" F-SHAPE CONCRETE BARRIER IS DESIGNATED AS MASH TL-4 WHEN AN OVERLAY IS PLACED ON THE STRUCTURE AND REDUCES THE BARRIER HEIGHT BELOW 42".

STEEL GIRDERS

1. IF GIRDERS CANNOT BE SHIPPED IN THE LENGTHS SHOWN ON THE PLANS, FIELD SPLICE(S) WILL BE PERMITTED AT THE REQUEST OF THE CONTRACTOR, BUT NO COMPENSATION WILL BE ALLOWED FOR THE SPLICES.
2. IF GIRDERS CAN BE FABRICATED IN LENGTHS LONGER THAN THE SECTIONS SHOWN ON THE PLANS BY ELIMINATING FIELD SPLICES, FIELD SPLICE(S) MAY BE OMITTED AT THE REQUEST OF THE CONTRACTOR. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR SECURING A HAULING PERMIT. APPROVAL FOR ELIMINATION OF A FIELD SPLICE AT THE SHOP DRAWING STAGE DOES NOT OBLIGATE THE DEPARTMENT TO ISSUE A HAULING PERMIT.
3. DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.
4. USE 7/8" DIAMETER ASTM DESIGNATION A325 TYPE 3 BOLTS HAVING AN UNTHREADED SHANK OF SUFFICIENT LENGTH TO NOT ALLOW ANY THREADS TO EXIST IN THE PLANE BETWEEN THE TWO CONNECTED PARTS (SHEAR PLANE). USE STANDARD SIZE BOLT HOLES, UNLESS NOTED OTHERWISE. OVERSIZED BOLT HOLES ARE NOT PERMITTED.
5. REAM SUBDRILLED OR SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP.
6. DO NOT MAKE WELDS BY MANUAL SHIELDED METAL ARC PROCESS FOR PRIMARY GIRDER WELDS, SUCH AS FLANGE-TO-WEB WELDS OR FOR SHOP SPLICES OF WEBS AND FLANGES.
7. DO NOT WELD PERMANENT METAL DECK FORMS OR OTHER ATTACHMENTS TO GIRDER TOP FLANGES IN TENSION AREAS. TENSION AREAS OF TOP FLANGES ARE DESIGNATED ON THE PLAN AS NEGATIVE OR REVERSAL MOMENT REGIONS. THREADED STUDS FOR THE SUPPORT OF THE OVERHANG DECK FORMING BRACKET IS PERMITTED PROVIDED THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESSING AS THE SHEAR STUDS.
8. WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.
9. PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO ASTM A 108.
10. SET ANCHOR BOLTS TO TEMPLATE OR IN PREFORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PREFORMED HOLES WITH NON-SHRINK GROUT. FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES IN MASONRY PLATES WITH APPROVED NON-HARDENING CAULKING COMPOUND CONFORMING TO PUBLICATION 408, SECTION 705.8.
11. PAINT STRUCTURAL STEEL IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060, WITH FINISH COAT PAINT COLOR MATCHING FEDERAL STANDARD 20045. SUBMIT FINISH COAT PAINT COLOR CHIPS FOR APPROVAL. PAINT ALL STRUCTURAL STEEL WITHIN 15 FEET OF BEARING CENTERLINE AT EACH ABUTMENT AND THE OUTSIDE FACE OF ALL EXTERIOR GIRDERS THE FULL LENGTH OF THE BRIDGE. PAINT ALL HLMR BEARINGS. PAINT PRIMER ONLY ON PORTIONS OF STEEL THAT WILL BE EMBEDDED IN CONCRETE.
12. FABRICATE ALL MEMBERS OR MEMBER COMPONENTS DESIGNATED AS FRACTURE CRITICAL MEMBERS (FCM) TO CONFORM TO THE REQUIREMENTS OF DESIGN MANUAL, PART 4, SECTION 6, ARTICLE D6.6.2, AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 6.6.2, AND PUBLICATION 408, SECTIONS 1105.02(a)5 AND 1105.03(m)9. MEET THE BASE METAL CHARPY V-NOTCH (CVN) REQUIREMENTS FOR ZONE 2.
13. STABILITY OF PARTIAL GIRDERS AND COMPLETE GIRDERS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION, UNTIL ALL GIRDERS AND DIAPHRAGMS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE STEEL MEMBERS DURING ANY STAGE OF ERECTION.
14. AN ALTERNATE SLAB PLACEMENT SEQUENCE MAY BE PERMITTED AT THE REQUEST OF THE CONTRACTOR. SUBMIT FOR REVIEW AND APPROVAL TO THE DEPARTMENT A REVISED SLAB PLACEMENT SEQUENCE WITH SUPPORT CALCULATIONS AND COMPUTER STRESS ANALYSIS. SATISFY THE REQUIREMENTS OF THE ORIGINAL SLAB PLACEMENT SEQUENCE. OBTAIN WRITTEN APPROVAL PRIOR TO THE USE OF THE REVISED SLAB PLACEMENT SEQUENCE AND/OR CAMBER VALUES. NO COMPENSATION WILL BE ALLOWED FOR THE DEVELOPMENT AND APPROVAL OF THE REVISED SLAB PLACEMENT SEQUENCE AND CAMBER VALUES. THE DEPARTMENT WILL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF THE REVISED SLAB PLACEMENT SEQUENCE AND CAMBER VALUES.
15. HEAT-CURVED GIRDERS ARE NOT PERMITTED.

STEEL GIRDERS (CONT'D)

16. BLAST CLEAN THE FAYING SURFACES OF SPLICES AND CONNECTION OF ALL STRUCTURAL ELEMENTS IN ACCORDANCE WITH PUBLICATION 408 SECTION 1060.3(b)3. REBLAST UNPAINTED ELEMENTS THAT REMAIN UNASSEMBLED FOR A PERIOD OF 12 MONTHS OR MORE FOLLOWING THE INITIAL CLEANING.
17. ALL FAYING SURFACES FOR BOLTED CONNECTIONS ARE TO BE CLASS B. FURNISH PAINT THAT HAS BEEN QUALIFIED AS CLASS B IN ACCORDANCE WITH SECTION 6.13.2.8 OF THE AASHTO LRFD SPECIFICATIONS.
18. DETAIL AND FABRICATE THE STEEL SUPERSTRUCTURE FOR TOTAL DEAD LOAD FIT (TDLF). GIRDER WEBS ARE TO BE PLUMB AFTER APPLICATION OF ALL PERMANENT DEAD LOAD.

WELDING

1. WELDING SPECIFICATIONS: AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE (2015) CONSISTENT WITH PUBLICATION 408, SECTION 1105.03(m) AND THE CONTRACT SPECIAL PROVISIONS. DO NOT FIELD-WELD ON ANY PART OF THE EXISTING BRIDGE, EXCEPT WHERE SHOWN ON THE DRAWINGS, WITHOUT PRIOR APPROVAL OF THE DISTRICT BRIDGE ENGINEER.
2. WELDING OF EXISTING STRUCTURAL STEEL: USE THE SHIELDED METAL ARC PROCESS AND LOW HYDROGEN ELECTRODES THAT ARE COMPATIBLE WITH THE BASE METAL AS SPECIFIED, AND IN ACCORDANCE WITH AN APPROVED WELD PROCEDURE SPECIFICATION.
3. MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.
4. DO NOT WELD WHEN SURFACES TO BE WELDED ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF THE WORK.
5. DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0°F. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70°F WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0°F AND 32°F DURING WELDING OR BURNING.
6. PREHEAT THE STEEL TO THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN 3 INCHES IN ALL DIRECTIONS FROM THE POINT OF WELDING.
7. REMOVE BY APPLICATION OF HEAT ANY MOISTURE PRESENT AT POINT OF WELD. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.
8. PRIOR TO PLACING THE WELD, THOROUGHLY CLEAN ALL PORTIONS OF NEW AND EXISTING SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM, FOR A DISTANCE OF 2 INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD.
9. TEST COMPLETED WELDS USING VISUAL AND NONDESTRUCTIVE METHODS IN ACCORDANCE WITH AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE CHAPTER 6.

UTILITY NOTES

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

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
GENERAL NOTES - 1

RECOMMENDED 03/04/2024

SHEET 5 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 0435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 05 GENERAL NOTES 3/4/2024 12:59:19 PM By: laura.hower

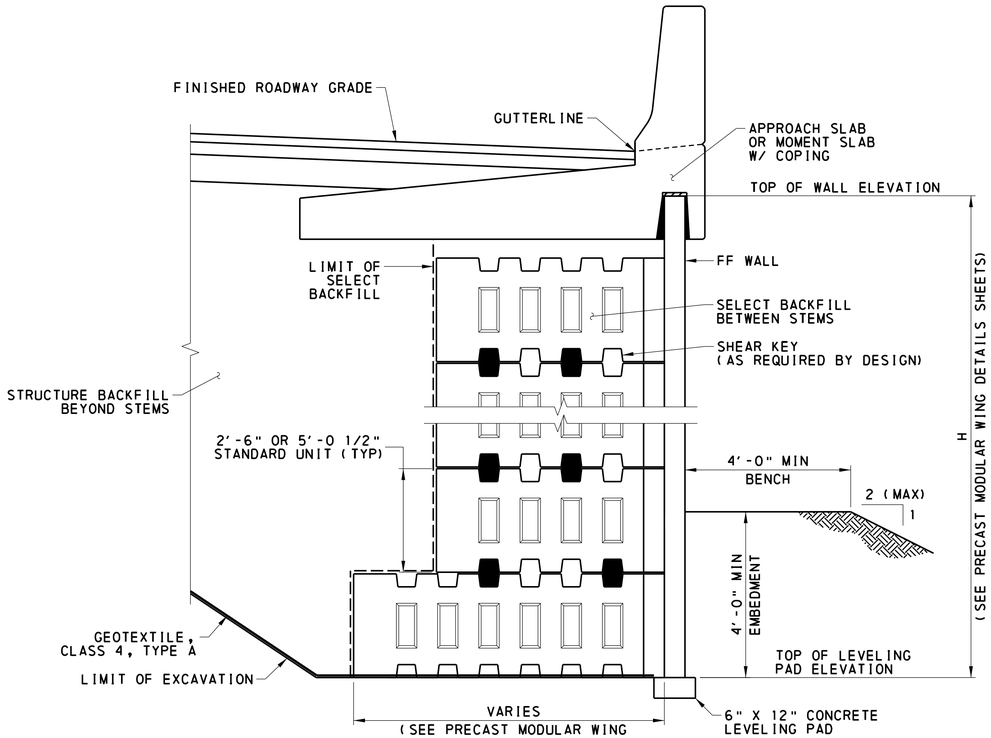
FOUNDATION NOTES

1. REMOVE THE EXISTING STRUCTURE AND FOUNDATIONS TO A MINIMUM OF TWO (2) FEET BELOW THE FINISHED GROUNDLINE. COMPLETELY REMOVE ANY PART OF THE EXISTING STRUCTURE THAT INTERFERES WITH THE PROPOSED FOUNDATIONS.
2. PROVIDE SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH TO BE INSPECTED BY THE DISTRICT STRUCTURE CONTROL ENGINEER OR THE DISTRICT GEOTECHNICAL ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL TEMPORARILY EXCAVATES SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. PERFORM ALL EXCAVATION IN ACCORDANCE WITH OSHA REQUIREMENTS.
4. BLASTING IS NOT PERMITTED TO BE USED AS A METHOD OF EXCAVATION. EXCAVATIONS MUST BE COMPLETED IN A MANNER THAT DOES NOT DISTURB THE DELAWARE LACKAWANNA RAILROAD.
5. CONTROL PILE DRIVING BY WAVE EQUATION ANALYSES IN ACCORDANCE WITH PUBLICATION 408 SECTION 1005.3(b)5g, CASE 2 ABSOLUTE REFUSAL. PERFORM DYNAMIC PILE LOAD MONITORING ON SIX TEST PILES PER SUBSTRUCTURE AT LOCATIONS INDICATED, ACCORDING TO PUBLICATION 408, SECTION 1005. THE ESTIMATED PILE TIP ELEVATION IS TAKEN AS THREE FEET BELOW THE TOP OF ROCK ELEVATION IN SANDSTONE BEDROCK. THE STRUCTURAL CONTROL ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE BEARING PILES WHICH ATTAIN ABSOLUTE REFUSAL ABOVE THE PREDETERMINED TIP ELEVATIONS.
6. COBBLES AND BOULDERS MAY BE ENCOUNTERED DURING PILE INSTALLATION. IN THE EVENT THAT OBSTRUCTIONS ARE ENCOUNTERED, EXTRACT THE PILE AND PRE-DRILL THROUGH THE OBSTRUCTION. INSPECT PILE FOR DAMAGE PRIOR TO RE-DRIVING THE PILE TO REFUSAL.
7. USE STEEL HPILES CONFORMING TO AASHTO M270 (GRADE 50). THE MAXIMUM DRIVING STRESS SHALL NOT EXCEED 45 KSI FOR GRADE 50 STEEL. PROVIDE PILE SPLICES THAT DEVELOP A MAXIMUM STRENGTH EQUAL TO OR EXCEEDING THE PILE YIELD STRENGTH. USE HEAVY DUTY PILE TIP REINFORCEMENT ON ALL PILES, IN ACCORDANCE WITH PUBLICATION 408, SECTION 1005.3(b)11.
8. WAIT A MINIMUM OF 3 DAYS AFTER PILE INSTALLATION BEFORE POURING CONCRETE FOOTINGS.
9. PERFORM VIBRATION MONITORING OF THE EXISTING RAILROAD DURING PILE INSTALLATION ACCORDING TO THE SPECIAL PROVISION "VIBRATION MONITORING AND CONTROL".
10. COMPLETE PILE INSTALLATION INFORMATION TABLE (THIS SHEET) FOR EACH TEST PILE.

PRECAST MODULAR WINGWALL

1. PROVIDE DESIGN AND INSTALLATION OF PRECAST MODULAR WINGWALLS IN ACCORDANCE WITH PA DOT DWG NO 87-402 PE (REVISION IV DATED 4-13-2017) AND CONTRACT SPECIAL PROVISIONS.
2. SET PRECAST MODULAR WINGWALL UNITS WITH A TRULY VERTICAL FRONT FACE.
3. PROVIDE A MINIMUM DEPTH OF FOUR FEET FROM FINISHED GROUNDLINE TO TOP OF LEVELING PAD.
4. PROVIDE A FOUR (4) FOOT WIDE LEVEL BENCH IN FRONT OF WINGWALLS.
5. DO NOT EXCEED 2'-0" DIFFERENCE IN ELEVATION BETWEEN THE REINFORCED SOIL MASS AND EMBANKMENT BACKFILL.
6. REFER TO WINGWALL DETAIL SHEETS WITHIN THIS PLAN SET FOR PRECAST MODULAR WALL DESIGN PARAMETERS.
7. MAXIMUM ALLOWABLE SETTLEMENT IS 1.0 INCHES.
8. DESIGN THE PRECAST MODULAR WINGWALLS USING A BEARING CAPACITY RESISTANCE FACTOR OF 0.45 AND A SLIDING RESISTANCE FACTOR OF 1.0. THE LOCATION OF THE RESULTANT FACTORED BEARING PRESSURE MUST BE WITHIN THE MIDDLE HALF OF THE BASE. THE MINIMUM BASE WIDTH MUST BE AT LEAST 70 PERCENT OF THE VERTICAL WALL HEIGHT.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT RECOMMENDED BASE WIDTHS SATISFY INTERNAL STABILITY.

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



TYPICAL PRECAST MODULAR WINGWALL SECTION
(NOT TO SCALE)

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
GENERAL NOTES - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 6 OF 85

S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

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Model:05B GENERAL NOTES 23/4/2024 11:00:57 PM By:laura.hower

ALTERNATE STRUCTURE ITEMS

ITEM NO	DESCRIPTION	UNIT	TOTAL
8120-0001	BRIDGE STRUCTURE, AS DESIGNED, S-39603 *	LS	LUMP SUM
8000-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE *	LS	LUMP SUM
8100-0001	STEEL BRIDGE STRUCTURE *	LS	LUMP SUM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION	UNIT	APPROACH SLAB 1 (2)	ABUTMENT 1	PIER	ABUTMENT 2	APPROACH SLAB 2 (2)	SUPERSTRUCTURE	TOTAL
8120-0001	BRIDGE STRUCTURE, AS DESIGNED, S-39603 (*)	LS							LS
(1)	CLASS 3 EXCAVATION	CY		2,248	250	2,043			4,541
(1)	STRUCTURE BACKFILL	CY		973		655			1,628
(1)	GEOTEXTILE, CLASS 4, TYPE A (3)	SY		357		404			761
(1)	MEMBRANE WATERPROOFING SYSTEM, INSTALLED ON OTHER SURFACES	SY		12	14	13			39
(1)	NO 57 COARSE AGGREGATE (4)	CY		4		4			8
(1)	JUNCTION BOXES J.B.-25	EACH						2	2
(1)	3" CONDUIT IN STRUCTURE	LF	30				30	290	350
(1)	CLASS AAAP CEMENT CONCRETE (5)	CY	81				81	446	608
(1)	CLASS AA CEMENT CONCRETE	CY	45	10		9	66	91	221
(1)	CLASS A CEMENT CONCRETE	CY		230	168	232			630
(1)	STEEL HP12X84 TEST PILE (6)	EACH		2	2	2			6
(1)	BARRIER PROTECTIVE FENCE, STEEL	LF						700	700
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)	SY		52		49			101
(1)	NEOPRENE STRIP SEAL DAM, (4" MOVEMENT)	LF	49				49		98
(1)	POLYESTER POLYMER CONCRETE OVERLAY, 1"	SY	139				139	1,362	1,640
(1)	FABRICATED STRUCTURAL STEEL, GRADE 50W	LB						792,082	792,082
(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - FIXED	EACH			6				6
(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - GUIDED EXPANSION	EACH		4		4			8
(1)	HIGH LOAD MULTI-ROTATIONAL BEARINGS - NON-GUIDED EXPANSION	EACH		2		2			4
(1)	SHEAR CONNECTORS	EACH						5,808	5,808
AND									
1002-0190	REINFORCEMENT BARS, EPOXY COATED (7)	LB	27,244	16,779	17,581	17,223	30,505		109,332
AND									
1005-1830	STEEL HP12X84 PRODUCTION PILE (7)	LF		1,141	1,854	1,343			4,338
AND									
1005-2030	STEEL HP12X84 PILE TIP REINFORCEMENT (HEAVY DUTY) (7)	EACH		17	26	17			60
AND									
1019-0050	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE) (7) (8)	SY	62				78	301	441
1005-1420	PREDRILLING FOR UNFORESEEN OBSTRUCTIONS, EARTH DRILLING	DOLLAR		5,000	5,000	5,000			15,000
1005-1430	PREDRILLING FOR UNFORESEEN OBSTRUCTIONS, OBSTRUCTION DRILLING	DOLLAR		5,000	5,000	5,000			15,000
1005-1440	PILE EXTRACTION AND REDRIVING	DOLLAR		5,000	5,000	5,000			15,000
1005-1450	MOBILIZATION FOR PREDRILLING OF UNFORESEEN OBSTRUCTIONS	DOLLAR		5,000	5,000	5,000			15,000
1005-1480	DYNAMIC PILE LOAD TEST	EACH		2	2	2			6
1091-0335	EPOXY INJECTION CRACK SEAL	DOLLAR						8,000	8,000

APPROXIMATE QUANTITIES - PRECAST MODULAR WINGWALLS, AS DESIGNED

ITEM NO	DESCRIPTION	UNIT	WING A	WING B	WING C	WING D	TOTAL
8622-0001	PRECAST MODULAR WINGWALLS, AS DESIGNED, S-39603P (*) (9) (10)						
(9)	PRECAST MODULAR WALL UNITS	SF	765	350	117	962	2,194
(9)	SPECIFIED BACKFILL	CY	521	141	37	979	1,678
(9)	CLASS A CEMENT CONCRETE (LEVELING PAD)	CY	1	1	1	2	5
OR							
8610-0001	REINFORCED CONCRETE WINGWALLS, S-39603 (*)	LS					LS

QUANTITY NOTES:

(*) SEE SPECIAL PROVISIONS

(1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8120-0001 GIVEN FOR INFORMATION ONLY. COST OF CONCRETE WASHOUT FACILITIES IS INCIDENTAL TO THE STRUCTURE LUMP SUM ITEM.

(2) APPROACH SLAB QUANTITIES INCLUDE MOMENT SLABS.

(3) INCLUDES GEOTEXTILE TO BE PLACED AT EXCAVATION LIMITS BEHIND ABUTMENTS AND WINGWALLS.

(4) CLASS 1 GEOTEXTILE IS INCIDENTAL TO NO 57 COARSE AGGREGATE.

(5) INCLUDES APPROXIMATELY 27 CUBIC YARDS OF CLASS AAAP CEMENT CONCRETE IN THE VALLEYS OF THE STAY-IN-PLACE FORMS.

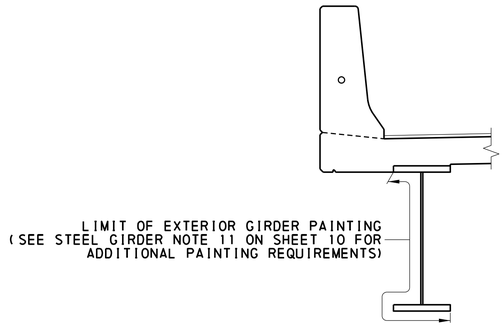
(6) INCLUDES PILE TIP REINFORCEMENT FOR EACH TEST PILE.

(7) FOR AS-DESIGNED STRUCTURE, INCLUDED IN BRIDGE BID ITEMS. FOR ALTERNATIVE DESIGNS, INCLUDED IN BRIDGE STRUCTURE LUMP SUM BID ITEM.

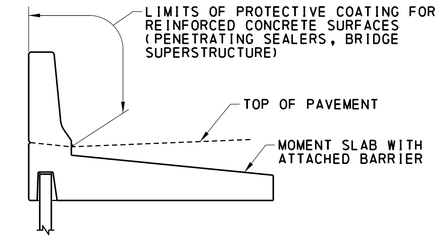
(8) INCLUDES PROTECTIVE COATING FOR BARRIERS ON BRIDGE DECK, APPROACH SLABS, AND MOMENT SLABS.

(9) ITEMS IN LUMP SUM ITEM 8622-0001 GIVEN FOR INFORMATION ONLY. COST OF CONCRETE WASHOUT FACILITIES IS INCIDENTAL TO THE STRUCTURE LUMP SUM ITEM.

(10) CLASS 3 EXCAVATION IS NOT INCLUDED WITH PRECAST MODULAR WINGWALLS SINCE THE EXCAVATION IS INCLUDED IN THE AS-DESIGNED BRIDGE STRUCTURE ITEM.



PAINTING LIMIT DETAIL
NOT TO SCALE



MOMENT SLAB PROTECTIVE COATING DETAIL
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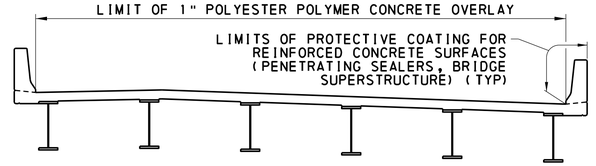

DECK PROTECTIVE COATING DETAIL
(NOT TO SCALE)

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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QUANTITIES

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER BENJAMIN R. MARTZ PE081839

RECOMMENDED 03/04/2024

SHEET 7 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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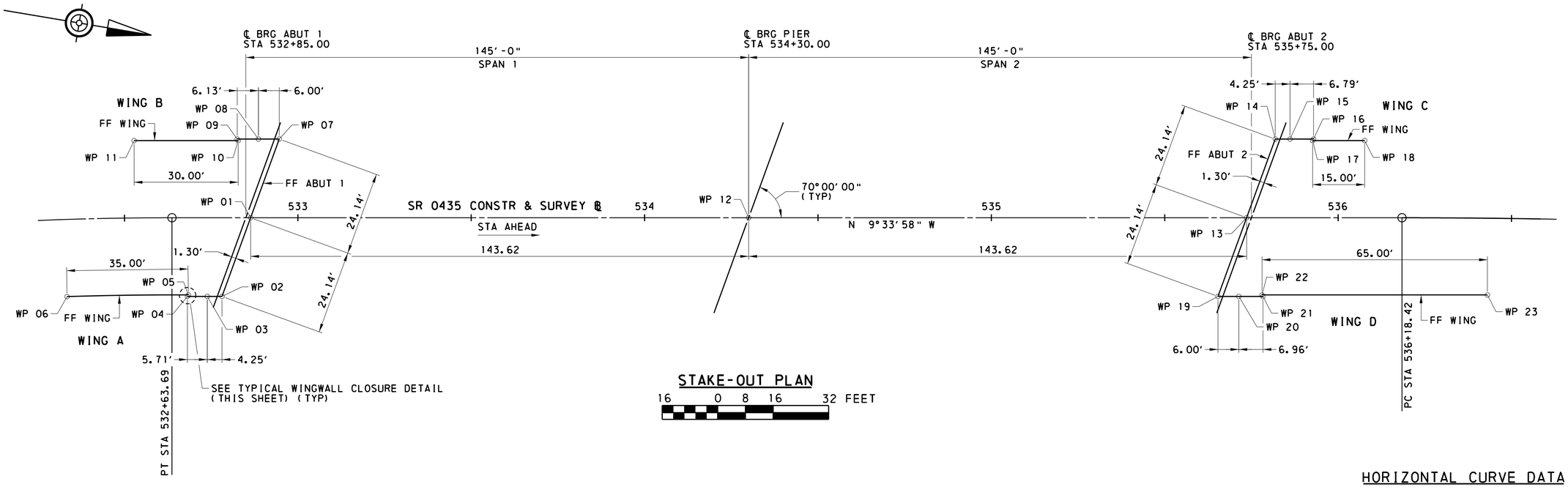
Model:06 QUANTITIES 3/4/2024 12:59:20 PM By:laura.hower



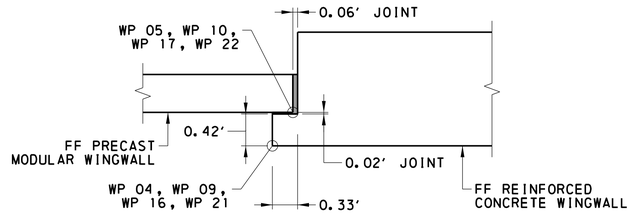
STAKE-OUT PLAN

16 0 8 16 32 FEET

HORIZONTAL CURVE DATA
SR 0435

PI STA = 530+50.69	PI STA = 537+92.49
Δ = 26°01'00" RT	Δ = 8°41'12" RT
D = 6°00'00"	D = 2°30'00"
T = 220.61'	T = 174.07'
L = 433.61'	L = 347.47'
R = 954.93'	R = 2291.83'
E = 25.15'	E = 6.60'
SE = 5.5%	SE = 3.5%

WORK POINT DATA				
WP	COORDINATE		STATION	OFFSET
	NORTHING	EASTING		
WP-01	447187.4377	2574000.8874	532+86.38	0.00
WP-02	447183.0653	2574024.6317	532+78.12	22.69' RT
WP-03	447178.8704	2574025.3387	532+73.87	22.69' RT
WP-04	447173.2457	2574026.2866	532+68.16	22.69' RT
WP-05	447173.4400	2574025.8102	532+68.44	22.25' RT
WP-06	447139.0079	2574032.1082	532+32.71	22.25' RT
WP-07	447191.8101	2573977.1431	532+94.64	22.69' LT
WP-08	447185.8884	2573978.1411	532+88.63	22.69' LT
WP-09	447179.8473	2573979.1592	532+82.51	22.69' LT
WP-10	447180.1870	2573979.5456	532+82.78	22.25' LT
WP-11	447150.6042	2573984.5312	532+53.03	22.25' LT
WP-12	447329.0615	2573977.0195	534+30.00	0.00
WP-13	447470.6808	2573953.1523	535+73.62	0.00
WP-14	447475.0532	2573929.4080	535+81.88	22.69' LT
WP-15	447479.2528	2573928.7002	535+86.13	22.69' LT
WP-16	447485.9501	2573927.5715	535+92.93	22.69' LT
WP-17	447485.7558	2573928.0480	535+92.66	22.25' LT
WP-18	447500.5472	2573925.5552	536+07.66	22.25' LT
WP-19	447466.3085	2573976.8966	535+65.36	22.69' RT
WP-20	447472.2337	2573975.8980	535+71.37	22.69' RT
WP-21	447479.1017	2573974.7406	535+78.33	22.69' RT
WP-22	447478.7620	2573974.3542	535+78.06	22.25' RT
WP-23	447542.8581	2573963.5520	536+43.30	22.25' RT



TYPICAL WINGWALL CLOSURE DETAIL

(WING A SHOWN, OTHERS SIMILAR)

1 0 0.5 1 2 FEET

NOTES:

1. WORK POINTS ARE REFERENCED TO THE SR 0435 CONSTR & SURVEY ℄.
2. COORDINATES PRESENTED TO 4 DECIMAL PLACES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY ACCURACY BEYOND 2 DECIMAL PLACES.
3. COORDINATES ARE BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83) NORTH ZONE. THE COMBINED AVERAGE SCALE FACTOR IS 0.99988982.

LEGEND

FF FRONT FACE
WP WORK POINT

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STAKE-OUT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

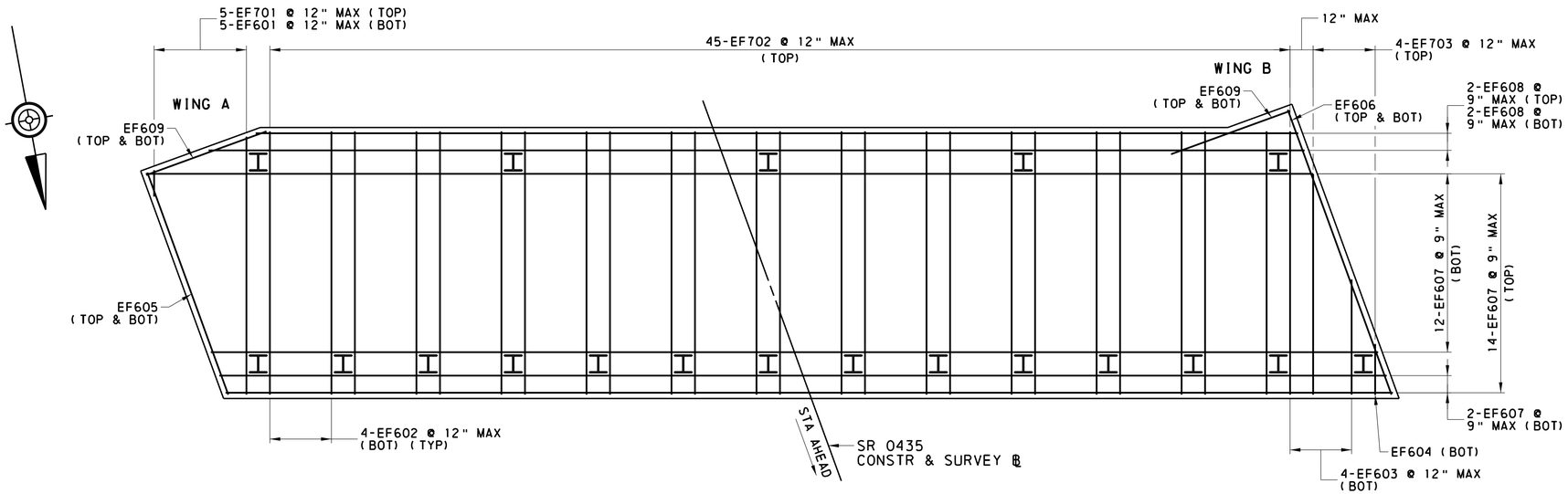
RECOMMENDED 03/04/2024

SHEET 8 OF 85

S-39603

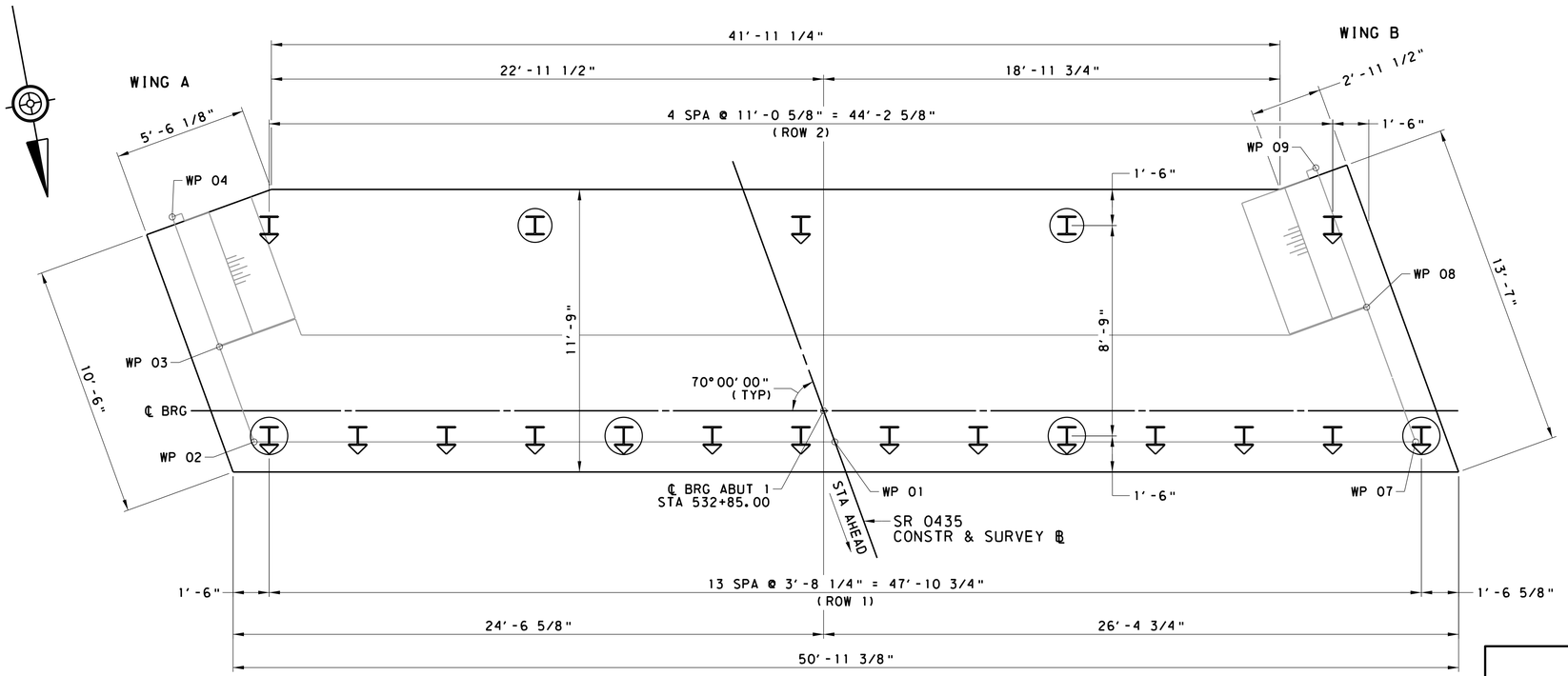
DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 07 STAKE-OUT PLAN 3/4/2024 12:59:21 PM By: laura.hower



FOOTING REINFORCEMENT PLAN

3 0 1 3 6 FEET



FOOTING PLAN

3 0 1 3 6 FEET

LEGEND

WP	WORK POINT
I	HP12X84 VERTICAL PILE
I	HP12X84 BATTERED PILE (1:4 IN DIRECTION OF ARROW)
I	HP12X84 VERTICAL TEST PILE
I	HP12X84 BATTERED PILE TEST PILE (1:4 IN DIRECTION OF ARROW)

NOTES:

1. PLACE EF401 AT 4'-0" MAX SPACING EACH WAY IN FOOTING. ALTERNATE 90° & 135° HOOKS (56 TOTAL).
2. MAINTAIN 1" MIN CLEARANCE FROM FOOTING BOTTOM BARS TO PILES.
3. SEE SHEET 1 FOR GENERAL ELEVATION AND PILE TIP ELEVATIONS.
4. SEE SHEET 8 FOR STAKE-OUT PLAN.
5. SEE SHEET 12 FOR ABUTMENT 1 TYPICAL SECTION.
6. SEE SHEET 14 FOR WING A TYPICAL SECTION.
7. SEE SHEET 16 FOR WING B TYPICAL SECTION.
8. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

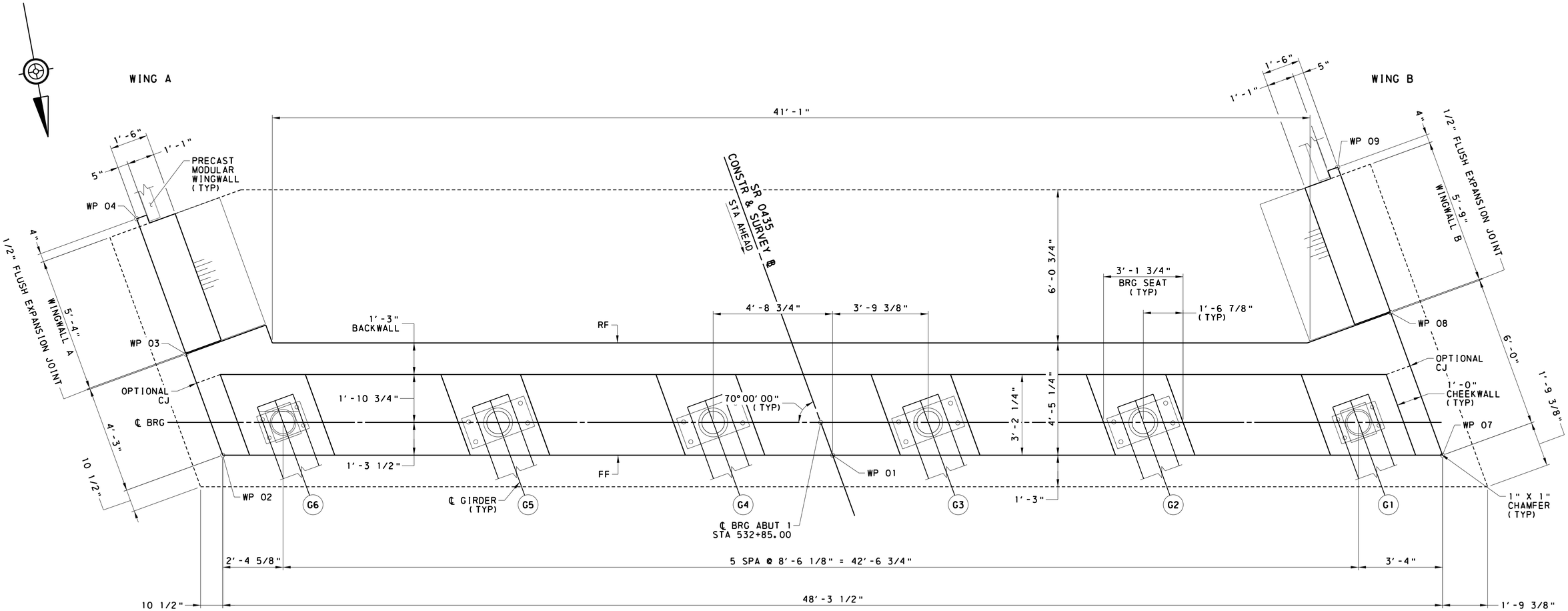
RECOMMENDED 03/04/2024

SHEET 9 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 Model:08 ABUT 1 FOOTING PLAN 3/4/2024 12:59:21 PM By:laura.hower



PLAN

2 0 1 2 4 FEET

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

LEGEND

FF FRONT FACE
RF REAR FACE
WP WORK POINT

NOTES:

1. SEE SHEET 8 FOR STAKE-OUT PLAN.
2. SEE SHEET 11 FOR ABUTMENT 1 ELEVATION.
3. SEE SHEET 14 FOR WING A ELEVATION & TYPICAL SECTION.
4. SEE SHEET 16 FOR WING B ELEVATION & TYPICAL SECTION.
5. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.
6. SEE SHEET 34 FOR FRAMING PLAN.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

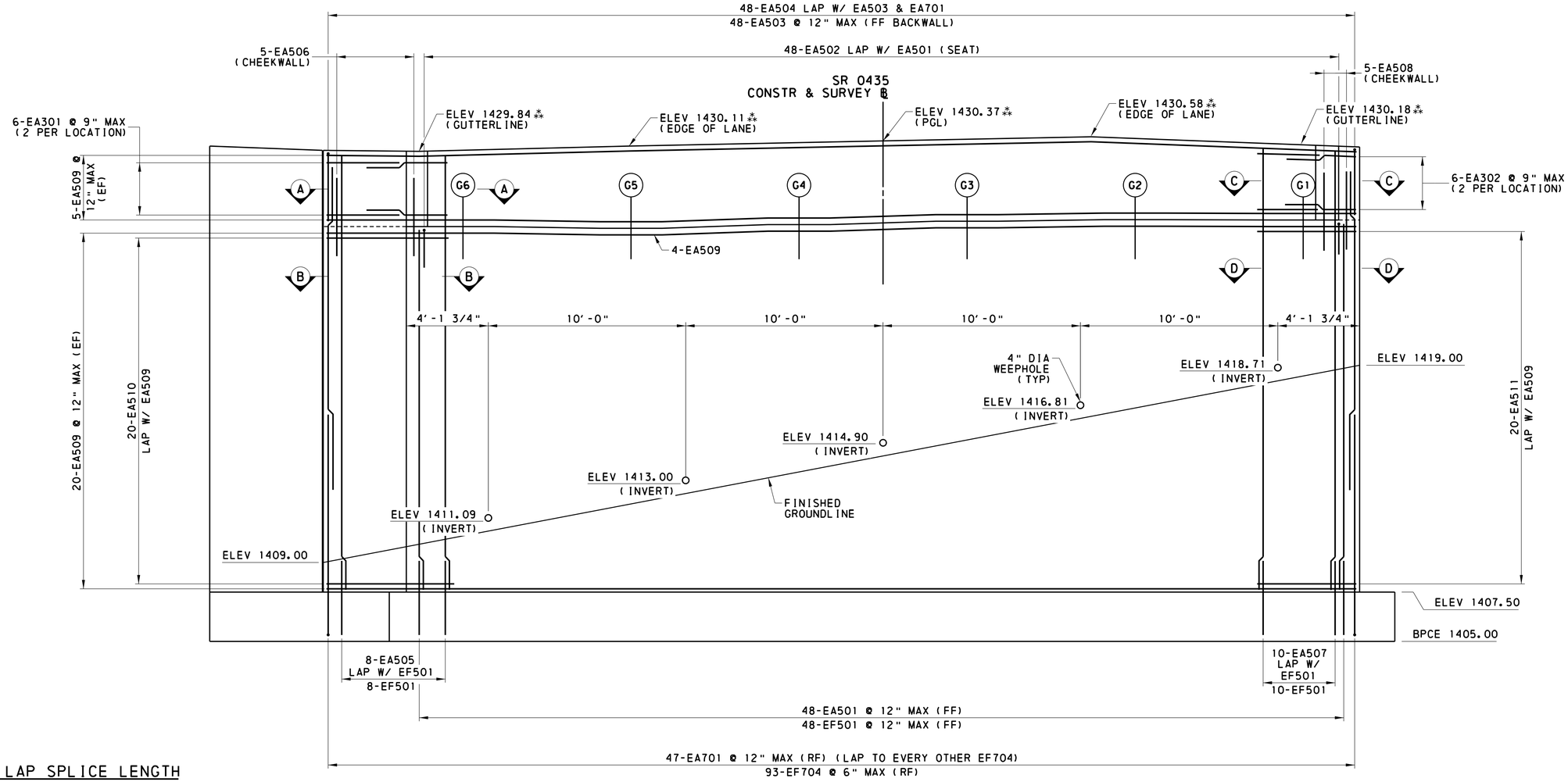
LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 PLAN

RECOMMENDED 03/04/2024

SHEET 10 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\09 ABUT 1 PLAN.dgn
Model: 3/4/2024 12:59:22 PM By: laura.hower



MIN LAP SPLICE LENGTH

#5 - 2'-9"
#7 - 3'-10"

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
EF	EACH FACE
FF	FRONT FACE
RF	REAR FACE
⁂	TOP OF BACKWALL ELEVATION GIVEN AT FF OF BACKWALL

NOTES:

1. SEE BC-788M FOR ABUTMENT WATERPROOFING DETAILS.
2. BEARING SEATS TO BE LEVEL IN ALL DIRECTIONS.
3. PILES ARE NOT SHOWN IN ABUTMENT ELEVATION FOR CLARITY.
4. SEE SHEET 9 FOR ABUTMENT 1 FOOTING PLAN.
5. SEE SHEET 12 FOR WEEPHOLE REINFORCEMENT DETAIL.
6. SEE SHEET 14 FOR WING A ELEVATION.
7. SEE SHEET 16 FOR WING B ELEVATION.
8. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

ELEVATION
(LOOKING STA BACK)
3 0 1 3 6 FEET

BEARING SEAT ELEVATIONS	
GIRDER	ELEVATION
G1	1426.36
G2	1426.38
G3	1426.30
G4	1426.13
G5	1425.94
G6	1426.03

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 ELEVATION

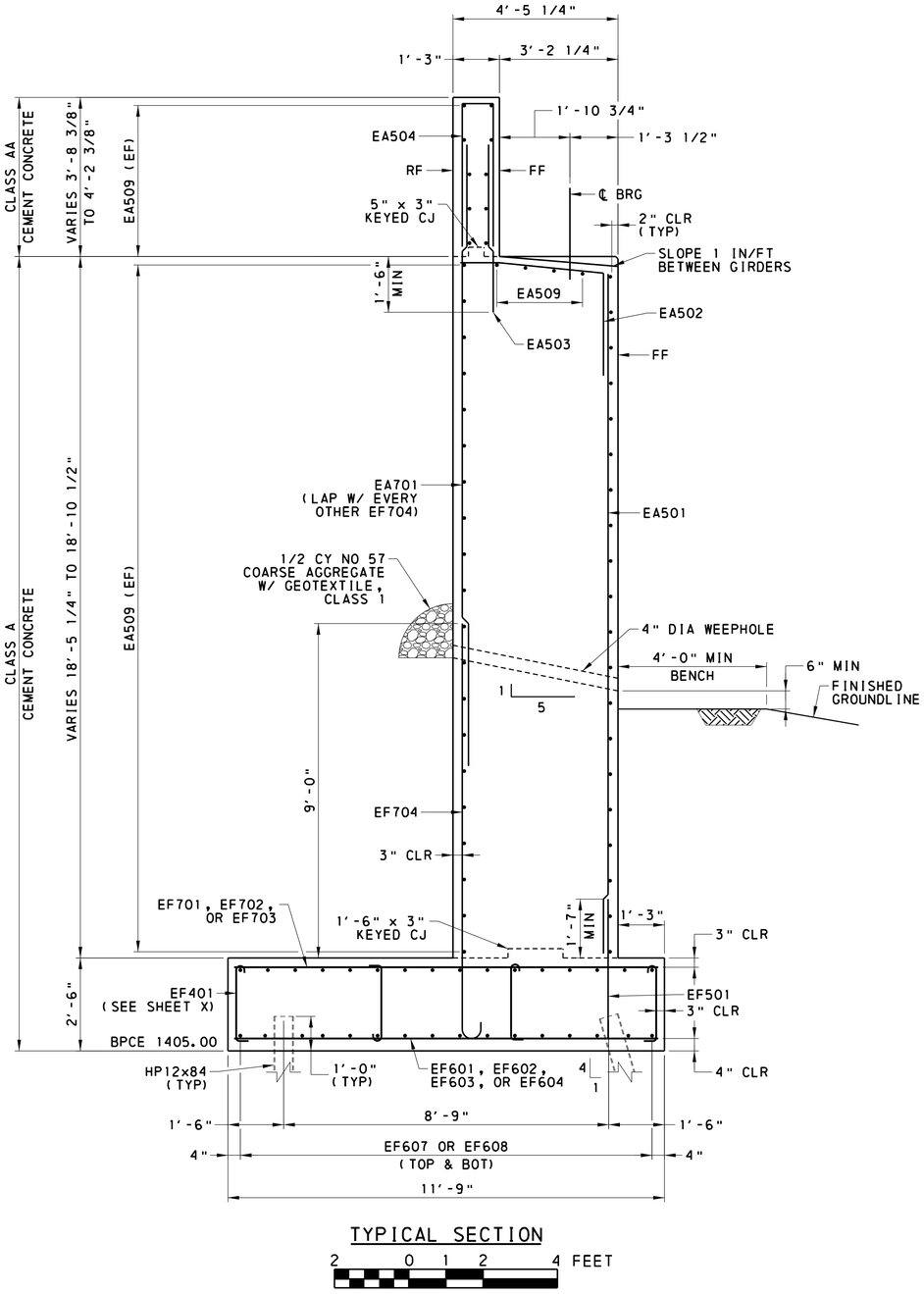
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 11 OF 85

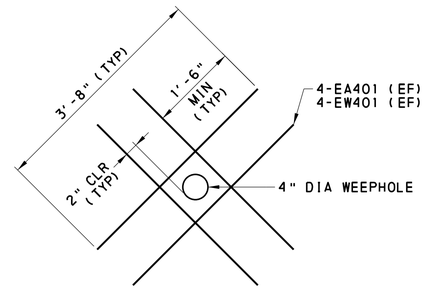
S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\Model\09B ABUT 1 ELEVATION 3/4/2024 12:59:22 PM By: laura.hower



TYPICAL SECTION

2 0 1 2 4 FEET



WEEPHOLE REINFORCEMENT DETAIL

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#5 - 2'-9"
#7 - 3'-10"

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

NOTES:

1. SEE SHEET 8 FOR STAKE-OUT PLAN.
2. SEE SHEET 11 FOR ABUTMENT 1 ELEVATION.
3. SEE SHEET 14 FOR WING A ELEVATION & TYPICAL SECTION.
4. SEE SHEET 16 FOR WING B ELEVATION & TYPICAL SECTION.
5. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 12 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 10 ABUT 1 TYP SECTION
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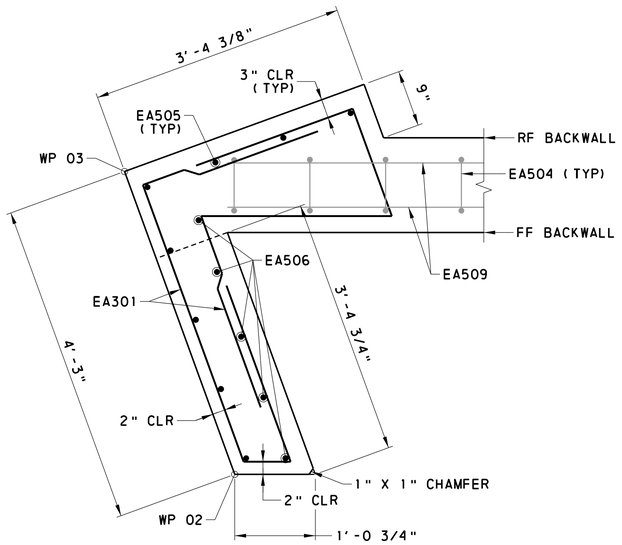
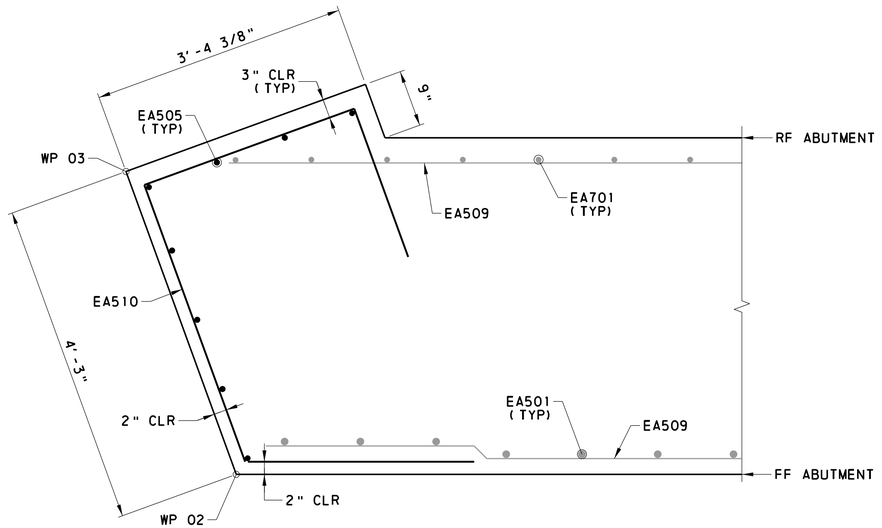


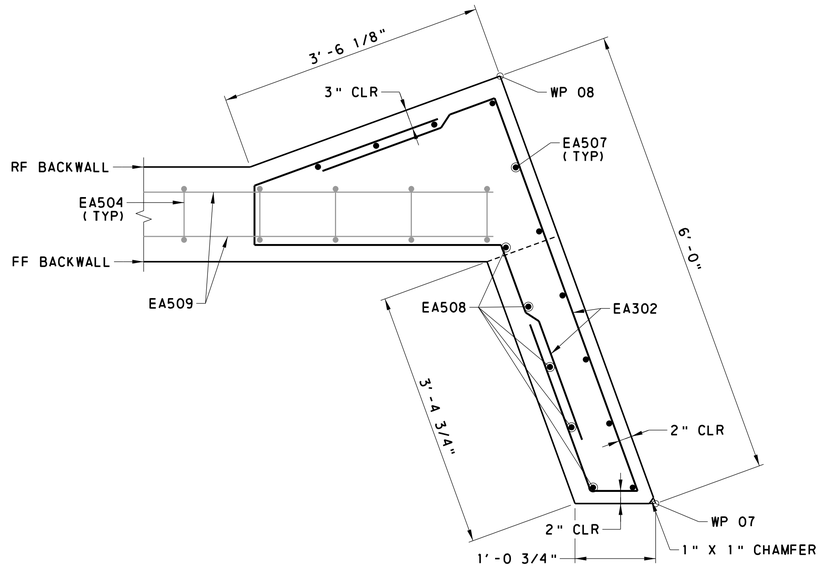
SECTION A-A

1 0 0.5 1 2 FEET



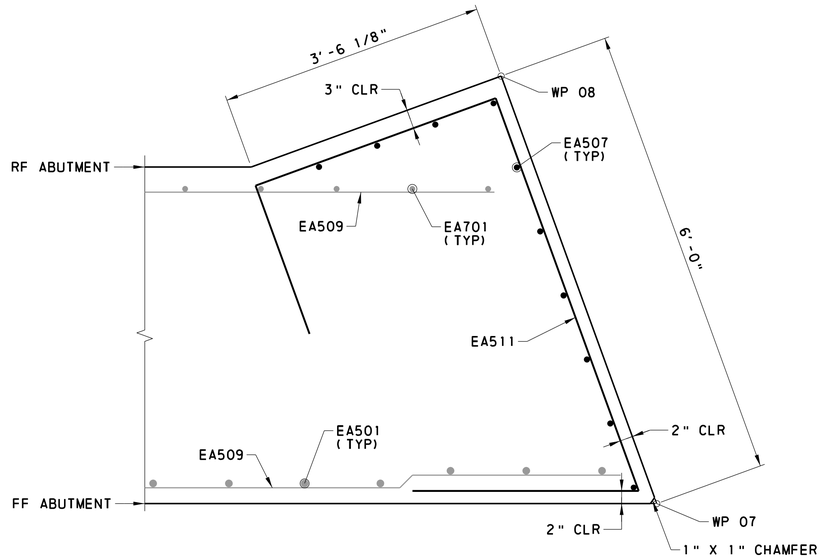
SECTION B-B

1 0 0.5 1 2 FEET



SECTION C-C

1 0 0.5 1 2 FEET



SECTION D-D

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#3 - 1'-8"

LEGEND

CJ CONSTRUCTION JOINT
FF FRONT FACE
RF REAR FACE

NOTES:

1. SEE SHEET 11 FOR ABUTMENT 1 ELEVATION.
2. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 13 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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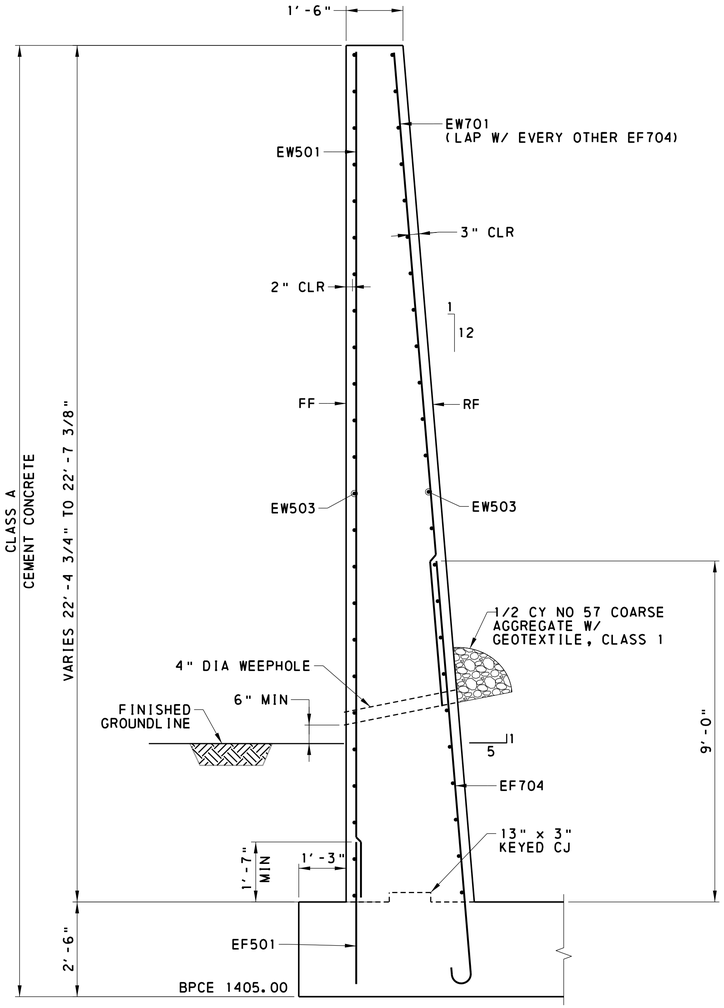
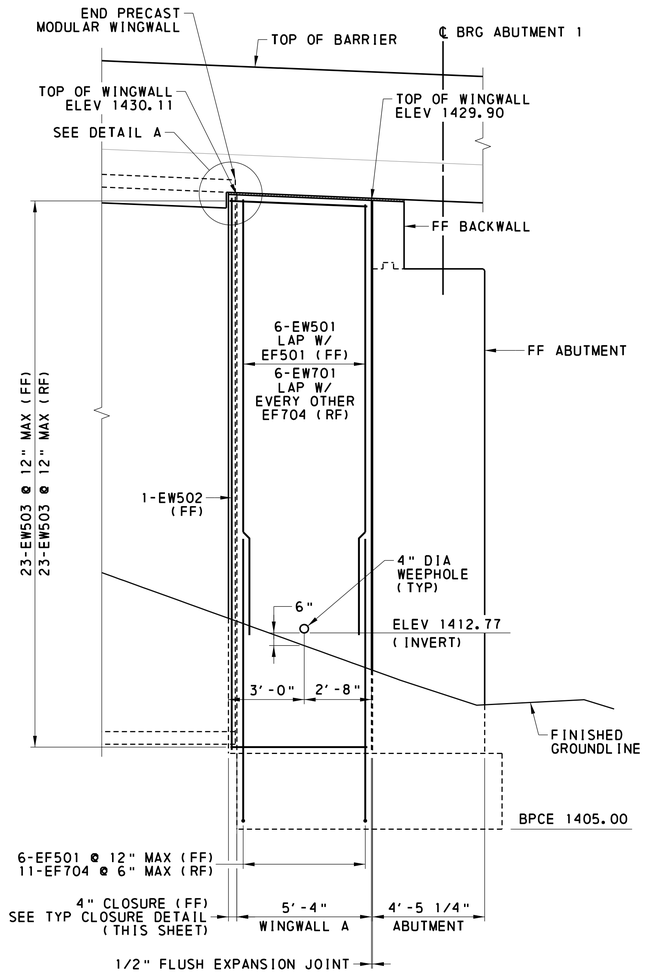


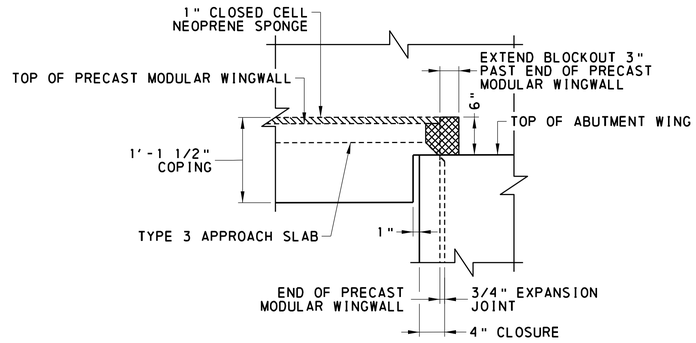
TYPICAL SECTION

2 0 1 2 4 FEET



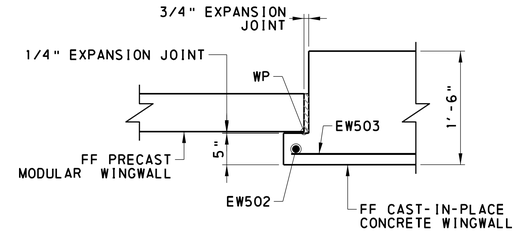
ELEVATION

3 0 1 3 6 FEET



DETAIL A

1 0 0.5 1 2 FEET



TYPICAL CLOSURE DETAIL

1 0 0.5 1 2 FEET

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

NOTES:

1. PILES ARE NOT SHOWN IN WINGWALL ELEVATION FOR CLARITY.
2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 10 FOR ABUTMENT 1 PLAN.
4. SEE SHEET 12 FOR TYPICAL WEEPHOLE DETAIL.
5. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

MIN LAP SPLICE LENGTH

#7 - 3'-10"

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING A - REINFORCED CONCRETE DETAILS

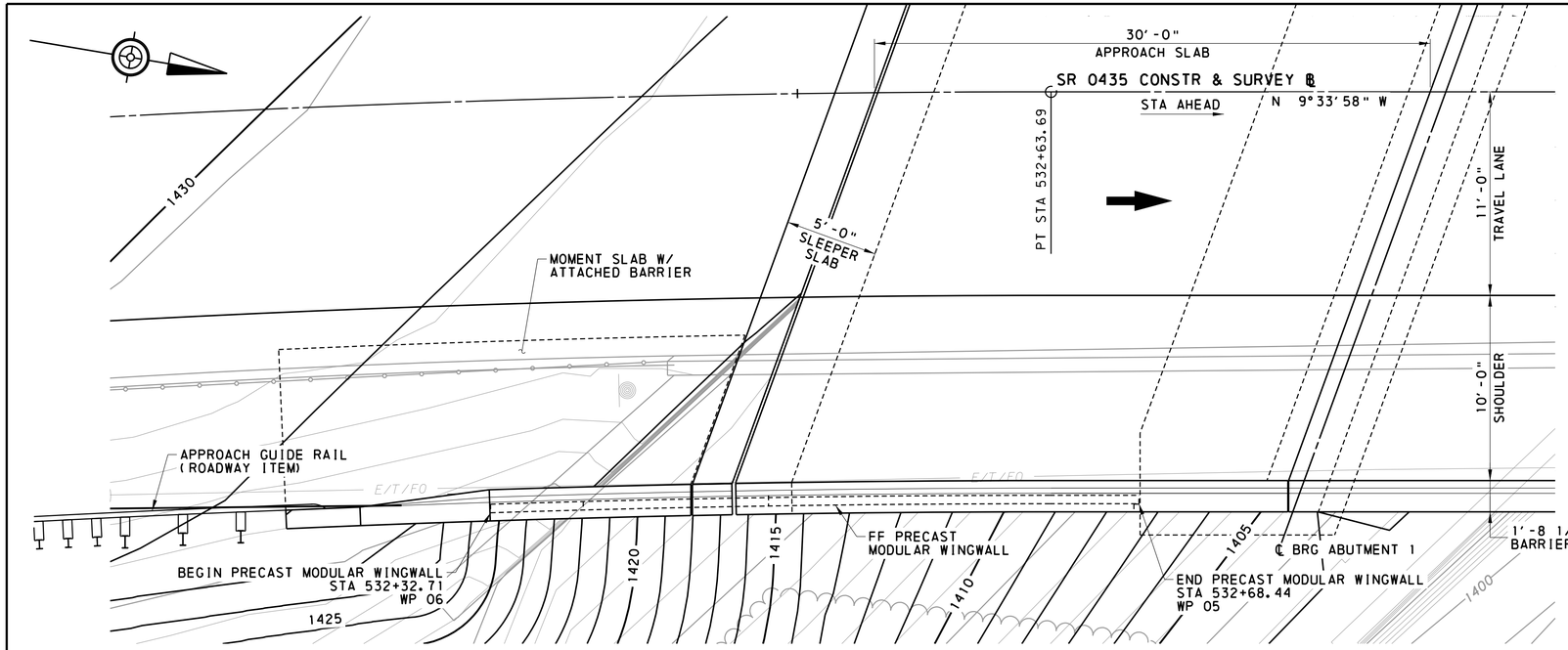
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 14 OF 85

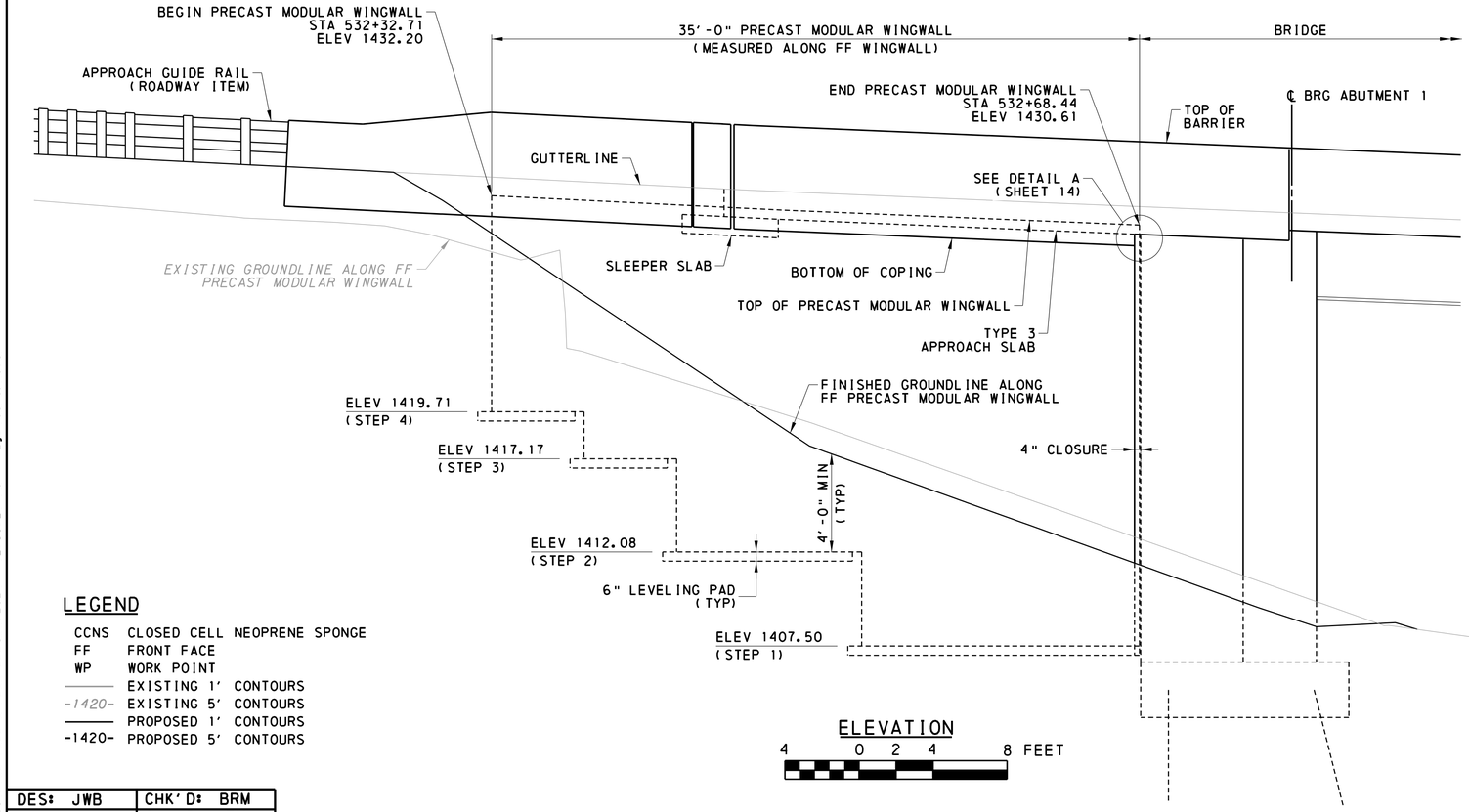
S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 10C ABUT 1 WINGWALL 3#4/2024 12:59:24 PM By: laura.hower



PLAN

4 0 2 4 8 FEET



ELEVATION

4 0 2 4 8 FEET

LEGEND

CCNS	CLOSED CELL NEOPRENE SPONGE
FF	FRONT FACE
WP	WORK POINT
———	EXISTING 1' CONTOURS
-1420-	EXISTING 5' CONTOURS
———	PROPOSED 1' CONTOURS
-1420-	PROPOSED 5' CONTOURS

FOUNDATION DESIGN PARAMETERS				
	STEP 1	STEP 2	STEP 3	STEP 4
TOP OF LEVELING PAD ELEVATION	1407.50	1412.08	1417.17	1419.71
TOP OF ROCK ELEVATION	1340.90	1340.90	1340.90	1340.90
MAX WALL HEIGHT (FT)	25.9	21.8	17.0	14.7
MIN STEM LENGTH (FT)	19.0	19.0	16.0	16.0
FRICTION ANGLE (DEGREE)	32	32	32	32
COHESION (PSF)	0	0	0	0
MASS UNIT WEIGHT (PCF)	120	120	120	120
SATURATED UNIT WEIGHT (PCF)	125	125	125	125
ELASTIC MODULUS (KSF)	400	400	400	400
SLOPING GROUND	YES	YES	YES	YES
Nc	35.5	35.5	35.5	35.5
Nq	23.2	23.2	23.2	23.2
Nγ	30.2	30.2	30.2	30.2

NOTES:

1. PRECAST MODULAR WINGWALL SPECIFIED BACKFILL DESIGN PARAMETERS:

   BACKFILL BETWEEN STEMS:
   FRICTION ANGLE = 34°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

   BACKFILL BEHIND STEMS:
   FRICTION ANGLE = 32°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 8 FOR STAKE-OUT PLAN.
4. SEE SHEET 14 FOR WING A DETAILS.
5. SEE SHEETS 53 THOUGH 59 FOR APPROACH SLAB DETAILS.
6. SEE SHEETS 60 THROUGH 65 FOR MOMENT SLAB DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING A - PRECAST MODULAR DETAILS

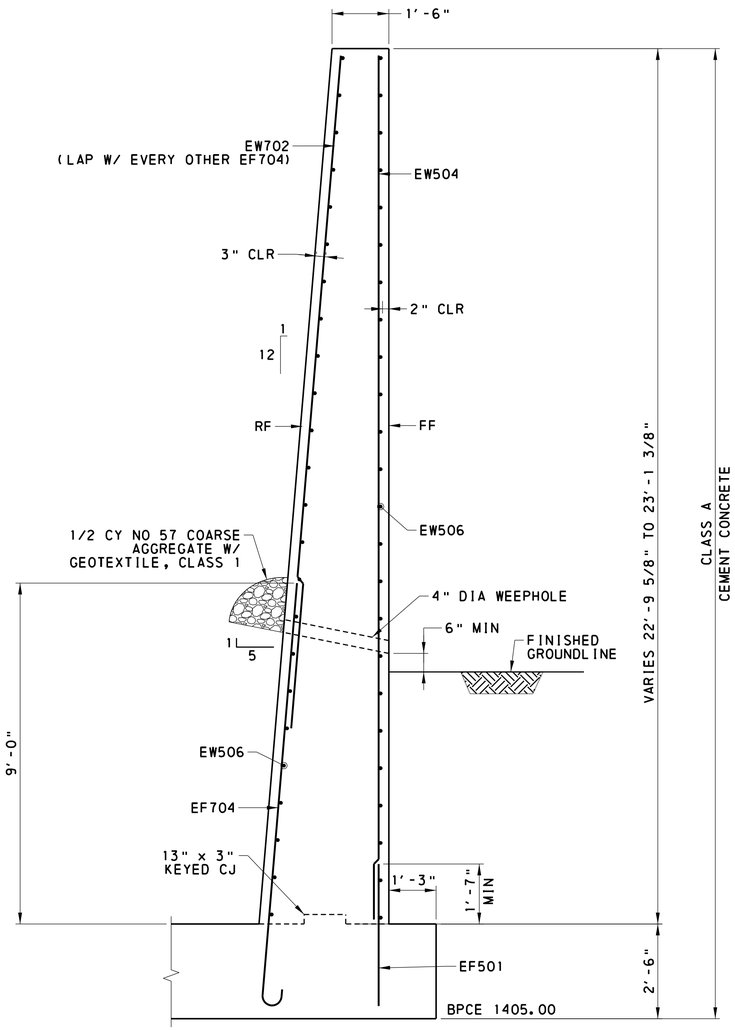
RECOMMENDED 03/04/2024

SHEET 15 OF 85

S-39603

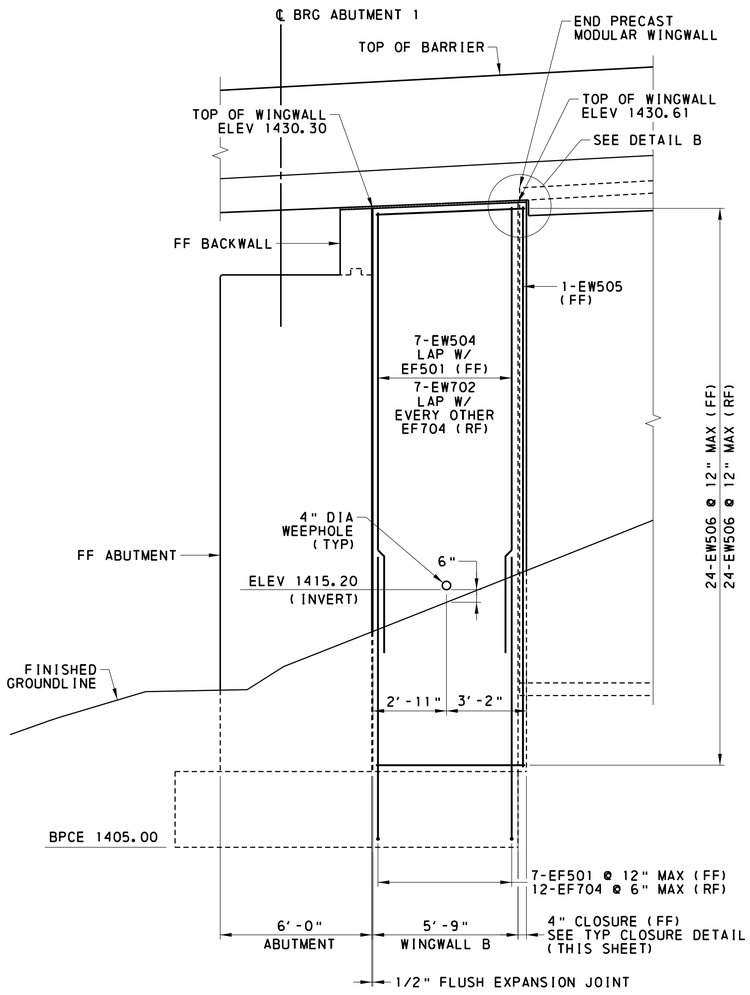
DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:10D WALL A PLAN ELEV 3/4/2024 12:59:27 PM By:laura.hower



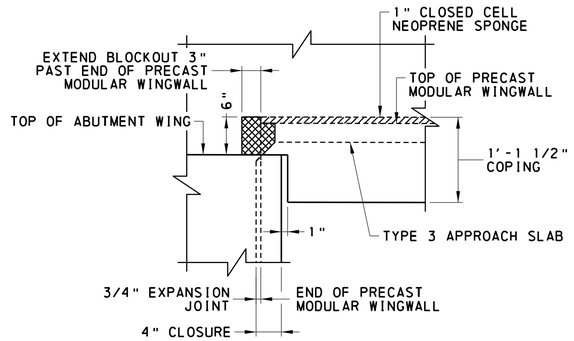
TYPICAL SECTION

2 0 1 2 4 FEET



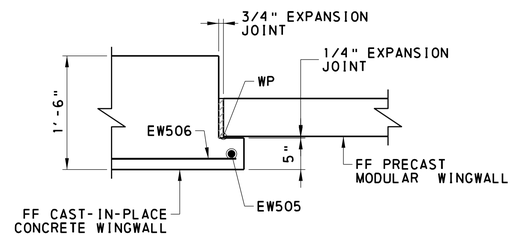
ELEVATION

3 0 1 3 6 FEET



DETAIL B

1 0 0.5 1 2 FEET



TYPICAL CLOSURE DETAIL

1 0 0.5 1 2 FEET

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

NOTES:

1. PILES ARE NOT SHOWN IN WINGWALL ELEVATION FOR CLARITY.
2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 10 FOR ABUTMENT 1 PLAN.
4. SEE SHEET 12 FOR TYPICAL WEEPHOLE DETAIL.
5. SEE SHEET 18 FOR ABUTMENT 1 REINFORCEMENT SCHEDULE.

MIN LAP SPLICE LENGTH

#7 - 3'-10"

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839
PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

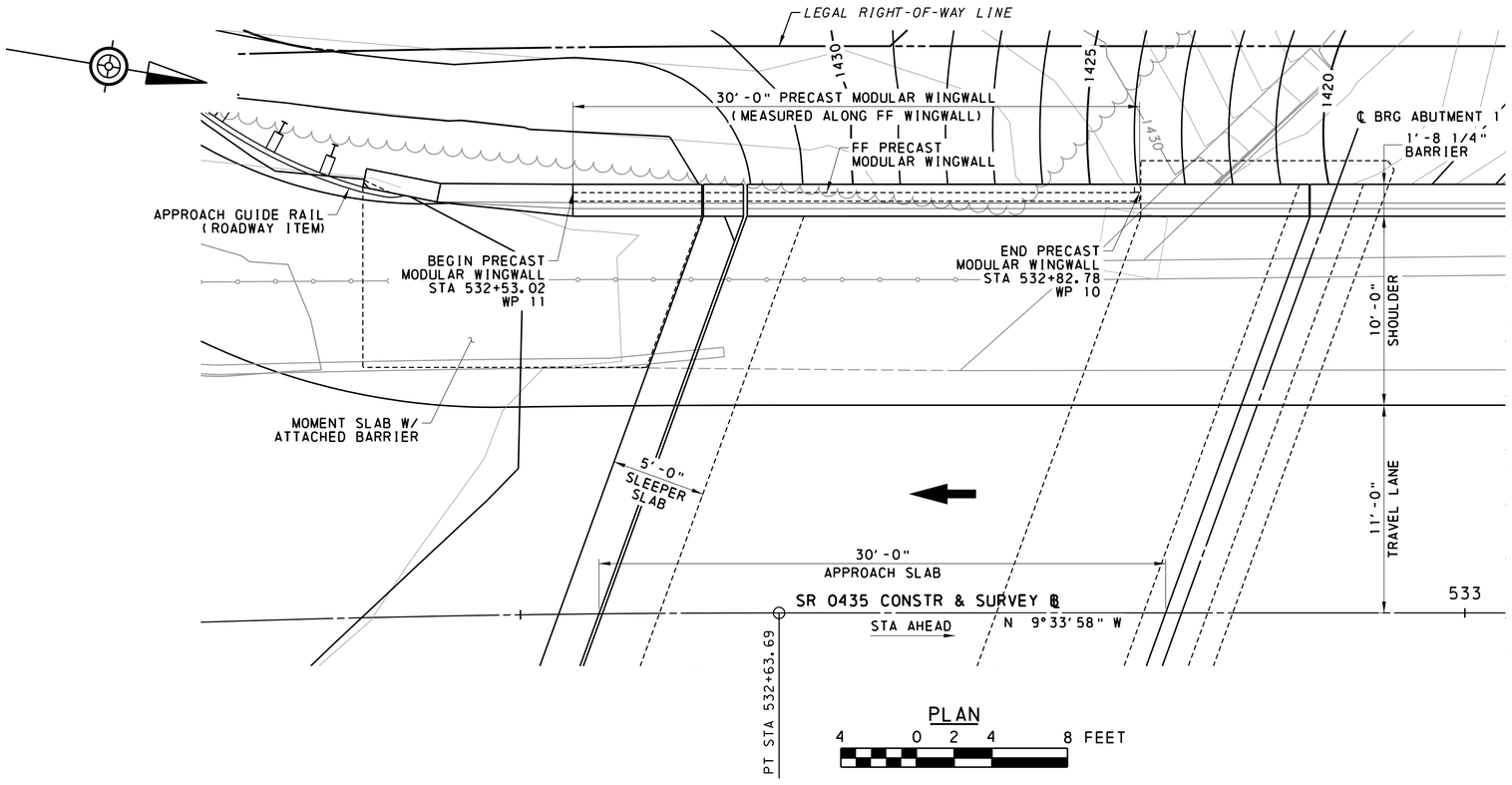
LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING B - REINFORCED CONCRETE DETAILS

RECOMMENDED 03/04/2024

SHEET 16 OF 85

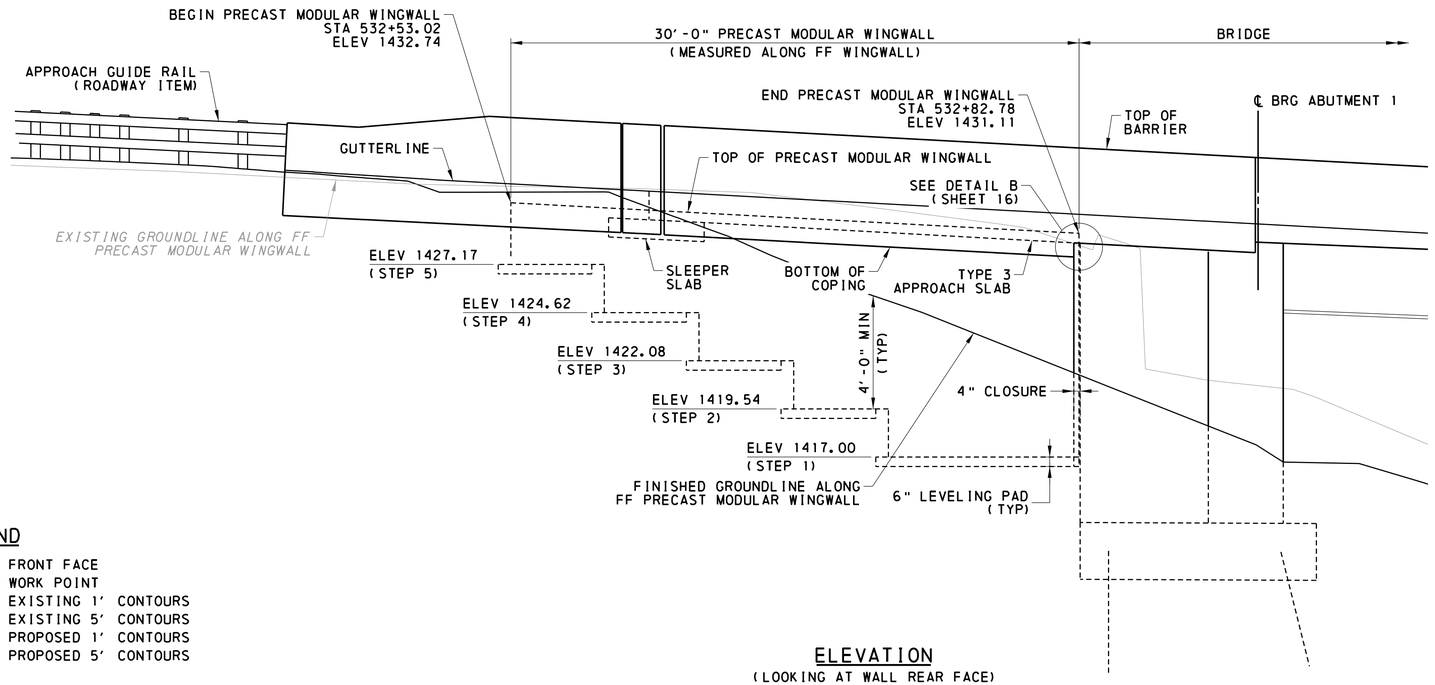
S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 10E ABUT 1 WINGWALL 3D
3/4/2024 12:59:27 PM By: laura.hower



PLAN

4 0 2 4 8 FEET



ELEVATION

(LOOKING AT WALL REAR FACE)

4 0 2 4 8 FEET

LEGEND

FF	FRONT FACE
WP	WORK POINT
———	EXISTING 1' CONTOURS
-1420-	EXISTING 5' CONTOURS
———	PROPOSED 1' CONTOURS
-1420-	PROPOSED 5' CONTOURS

FOUNDATION DESIGN PARAMETERS					
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
TOP OF LEVELING PAD ELEVATION	1417.00	1419.54	1422.08	1424.62	1427.17
TOP OF ROCK ELEVATION	1359.00	1359.00	1359.00	1359.00	1359.00
MAX WALL HEIGHT (FT)	15.5	13.2	10.9	8.6	6.3
MIN STEM LENGTH (FT)	12.0	12.0	10.0	8.0	8.0
FRICTION ANGLE (DEGREE)	32	32	32	32	32
COHESION (PSF)	0	0	0	0	0
MASS UNIT WEIGHT (PCF)	120	120	120	120	120
SATURATED UNIT WEIGHT (PCF)	125	125	125	125	125
ELASTIC MODULUS (KSF)	400	400	400	400	400
SLOPING GROUND	NO	NO	NO	NO	NO
Nc	35.5	35.5	35.5	35.5	35.5
Nq	23.2	23.2	23.2	23.2	23.2
Nγ	30.2	30.2	30.2	30.2	30.2

NOTES:

1. PRECAST MODULAR WINGWALL SPECIFIED BACKFILL DESIGN PARAMETERS:

   BACKFILL BETWEEN STEMS:
   FRICTION ANGLE = 34°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

   BACKFILL BEHIND STEMS:
   FRICTION ANGLE = 32°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF
2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 8 FOR STAKE-OUT PLAN.
4. SEE SHEET 16 FOR WING B DETAILS.
5. SEE SHEETS 53 THOUGH 59 FOR APPROACH SLAB DETAILS.
6. SEE SHEETS 60 THROUGH 65 FOR MOMENT SLAB DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING B - PRECAST MODULAR DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
PENNSYLVANIA

RECOMMENDED 03/04/2024

SHEET 17 OF 85

S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

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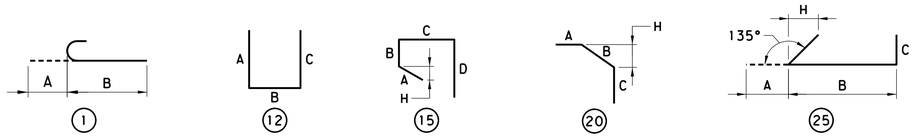
Model: 10F WALL B PLAN ELEV
Date/Time: 3/4/2024 12:59:28 PM
By: laura.hower

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EA301	3	9'-2"	12	STR												BEND IN FIELD
EA302	3	10'-2"	12	STR												BEND IN FIELD
EF401	4	2'-8"	56	25	4 1/2"	1'-11"	4 1/2"					3"				
EA401	4	3'-8"	40	STR												
EW401	4	3'-8"	16	STR												
EF501	5	4'-5"	79	STR												
EA501	5	18'-2"	48	STR												
EA502	5	7'-4"	48	20	1'-0"	3'-0"	3'-4"					3"				
EA503	5	5'-0"	48	STR												
EA504	5	7'-8"	48	12	3'-5"	10"	3'-5"									
EA505	5	22'-1"	8	STR												
EA506	5	5'-3"	5	STR												
EA507	5	22'-3"	10	STR												
EA508	5	5'-6"	5	STR												
EA509	5	47'-11"	54	STR												
EA510	5	11'-10"	20	15	3'-0"	3'-10"	2'-11"	2'-1"				1'-0"				
EA511	5	13'-11"	20	15	3'-0"	5'-6"	3'-4"	2'-1"				1'-0"				
EW501	5	22'-1"	6	STR												
EW502	5	22'-4"	1	STR												
EW503	5	5'-4"	46	STR												
EW504	5	22'-6"	7	STR												
EW505	5	22'-9"	1	STR												
EW506	5	5'-9"	48	STR												
EF601	6	VARIES 1'-2" TO 11'-2"	5	STR												1 SET OF 5, STEP EACH BY 2'-6"
EF602	6	11'-5"	48	STR												
EF603	6	VARIES 5'-0" TO 11'-5"	4	STR												1 SET OF 4, STEP EACH BY 2'-1 5/8"
EF604	6	2'-2 1/4"	1	STR												
EF605	6	10'-2"	2	STR												
EF606	6	13'-3"	2	STR												
EF607	6	50'-7"	28	STR												
EF608	6	VARIES 45'-2" TO 47'-6"	4	STR												2 SETS OF 2, STEP EACH BY 2'-4"
EF609	6	5'-6"	4	STR												
EF701	7	VARIES 1'-2" TO 11'-2"	5	STR												1 SET OF 5, STEP EACH BY 2'-6"
EF702	7	11'-5"	45	STR												
EF703	7	VARIES 2'-2" TO 9'-0"	4	STR												1 SET OF 4, STEP EACH BY 2'-3 3/8"
EF704	7	12'-2"	116	1	10"	11'-4"										
EA701	7	17'-0"	47	STR												
EW701	7	17'-6"	6	STR												
EW702	7	18'-0"	7	STR												



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES: JWB	CHK'D: BRM		
DWG: LAH	CHK'D: TML		

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 1 REINFORCEMENT SCHEDULE

RECOMMENDED 03/04/2024

SHEET 18 OF 85

S-39603

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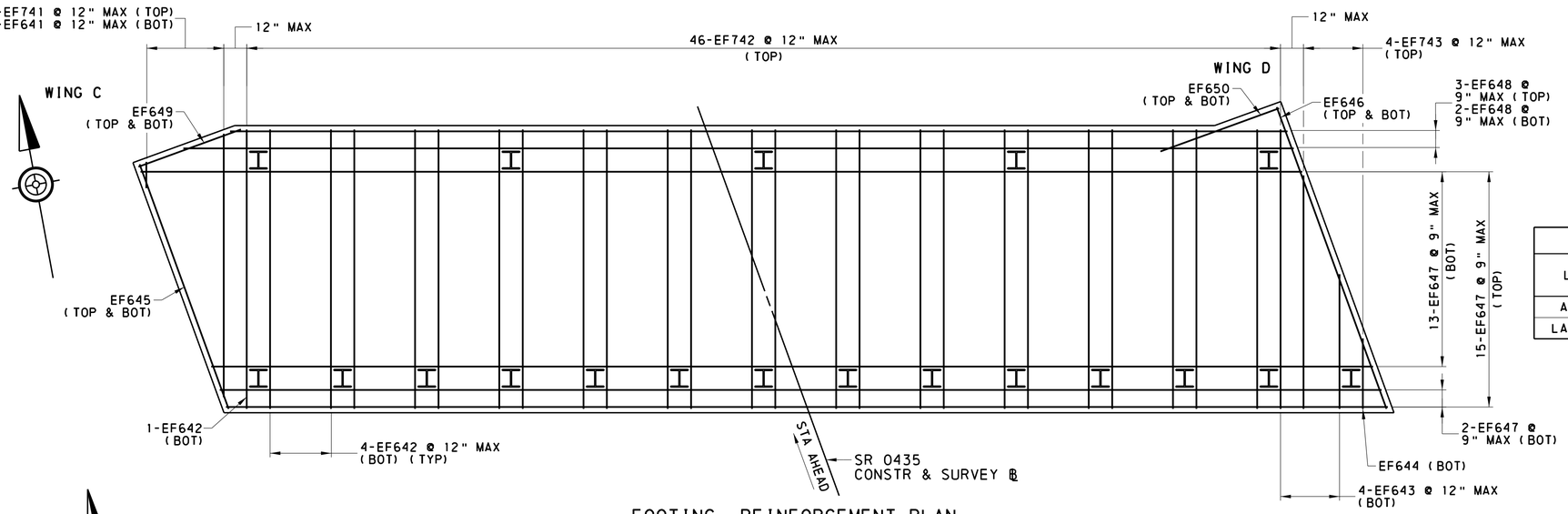
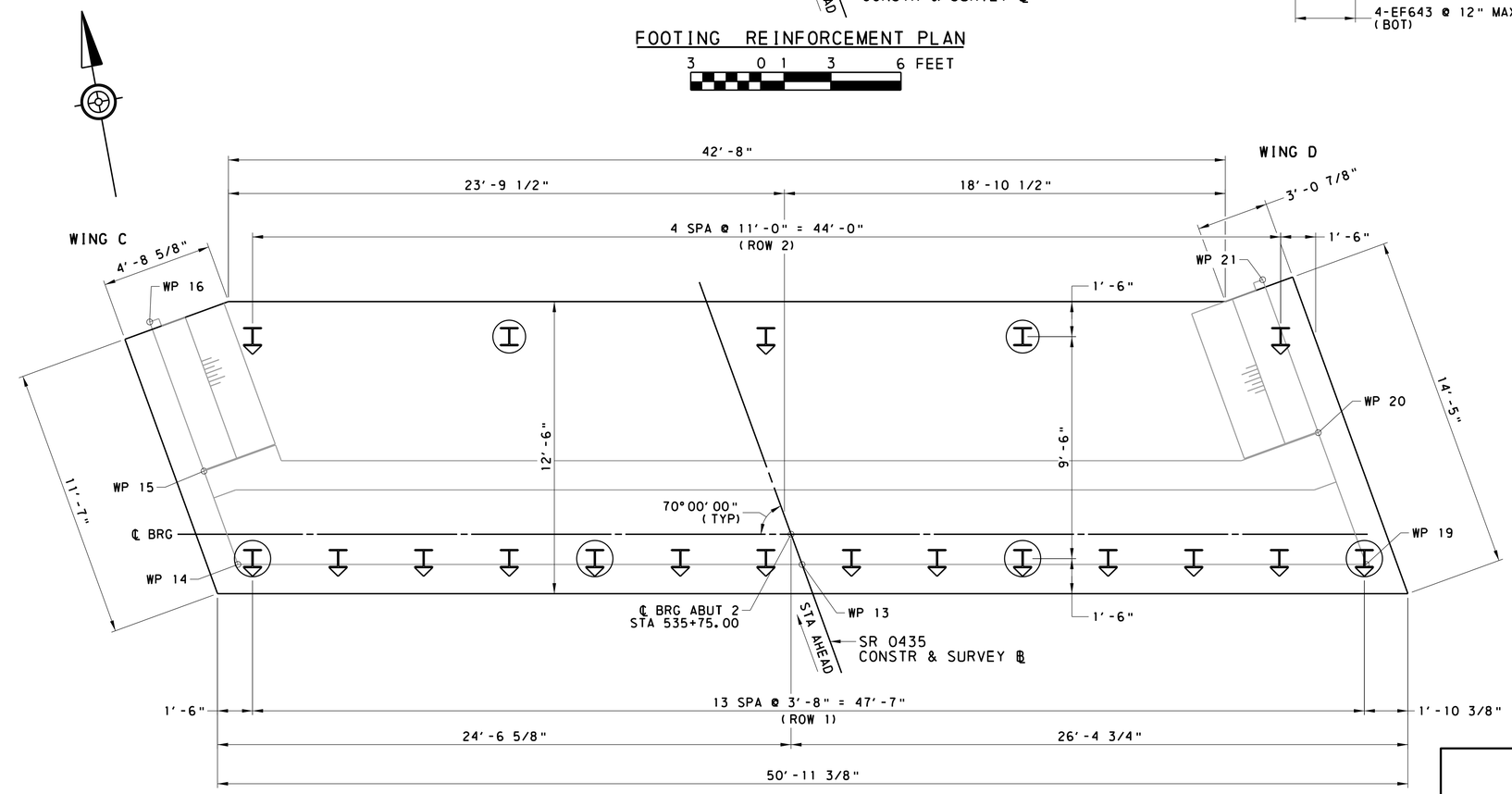


FOOTING REINFORCEMENT PLAN

3 0 1 3 6 FEET

HPILE DESIGN LOADS					
LOAD	LIMIT STATE	LOAD CASE	STAGE	FACTORED LOAD	FACTORED RESISTANCE
AXIAL	STR-1	MAX	FIN	263.5 KIP/PILE	327.0 KIP/PILE
LATERAL	STR-1	MAX	FIN	21.8 KIP/FT	23.1 KIP/FT



FOOTING PLAN

3 0 1 3 6 FEET

LEGEND

WP WORK POINT

HP12X84 VERTICAL PILE

HP12X84 BATTERED PILE (1:4 IN DIRECTION OF ARROW)

HP12X84 VERTICAL TEST PILE

HP12X84 BATTERED PILE TEST PILE (1:4 IN DIRECTION OF ARROW)

NOTES:

1. PLACE EF401 AT 4'-0" MAX SPACING EACH WAY IN FOOTING. ALTERNATE 90° & 135° HOOKS (56 TOTAL).
2. MAINTAIN 1" MIN CLEARANCE FROM FOOTING BOTTOM BARS TO PILES.
3. SEE SHEET 1 FOR GENERAL ELEVATION AND PILE TIP ELEVATIONS.
4. SEE SHEET 8 FOR STAKE-OUT PLAN.
5. SEE SHEET 22 FOR ABUTMENT 2 TYPICAL SECTION.
6. SEE SHEET 24 FOR WING C TYPICAL SECTION.
7. SEE SHEET 26 FOR WING D TYPICAL SECTION.
8. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 19 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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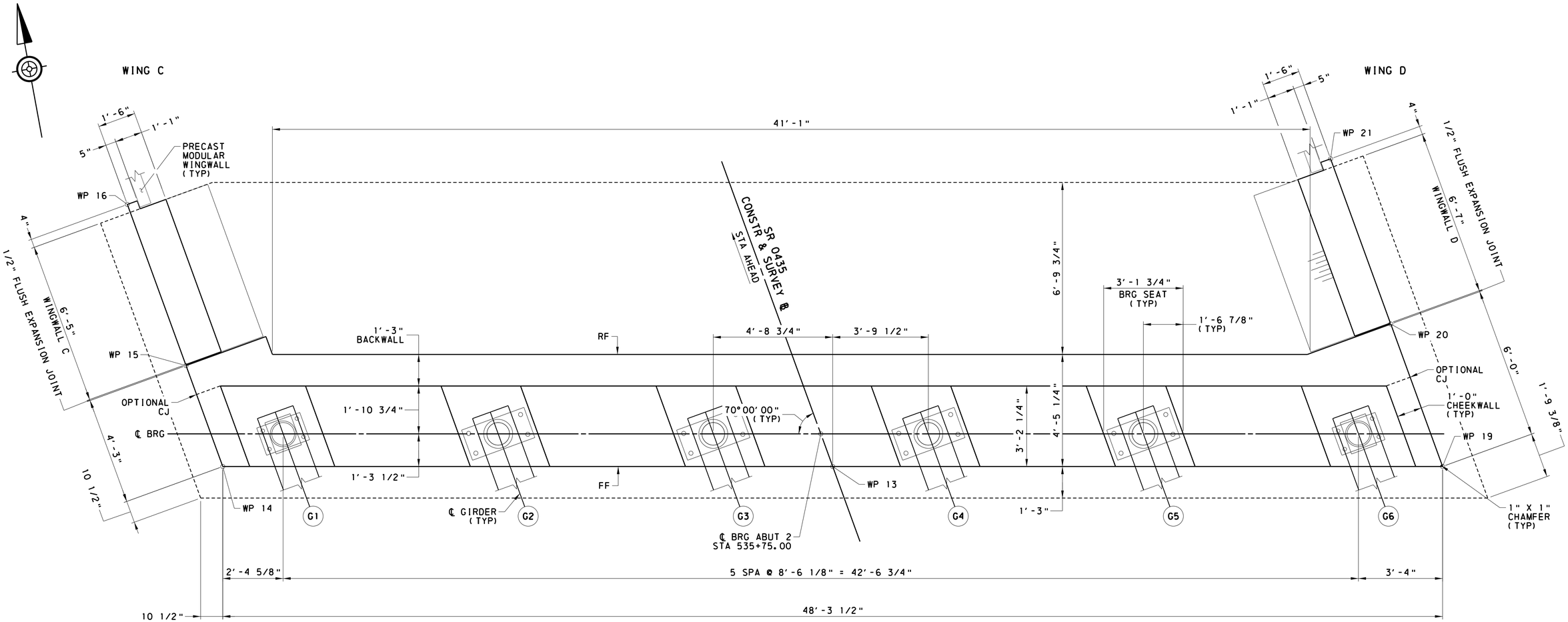

PLAN

2 0 1 2 4 FEET

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

LEGEND

FF FRONT FACE
RF REAR FACE
WP WORK POINT

NOTES:

1. SEE SHEET 8 FOR STAKE-OUT PLAN.
2. SEE SHEET 21 FOR ABUTMENT 2 ELEVATION.
3. SEE SHEET 24 FOR WING C ELEVATION & TYPICAL SECTION.
4. SEE SHEET 26 FOR WING D ELEVATION & TYPICAL SECTION.
5. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.
6. SEE SHEET 34 FOR FRAMING PLAN.

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 PLAN

RECOMMENDED 03/04/2024

SHEET 20 OF 85

S-39603

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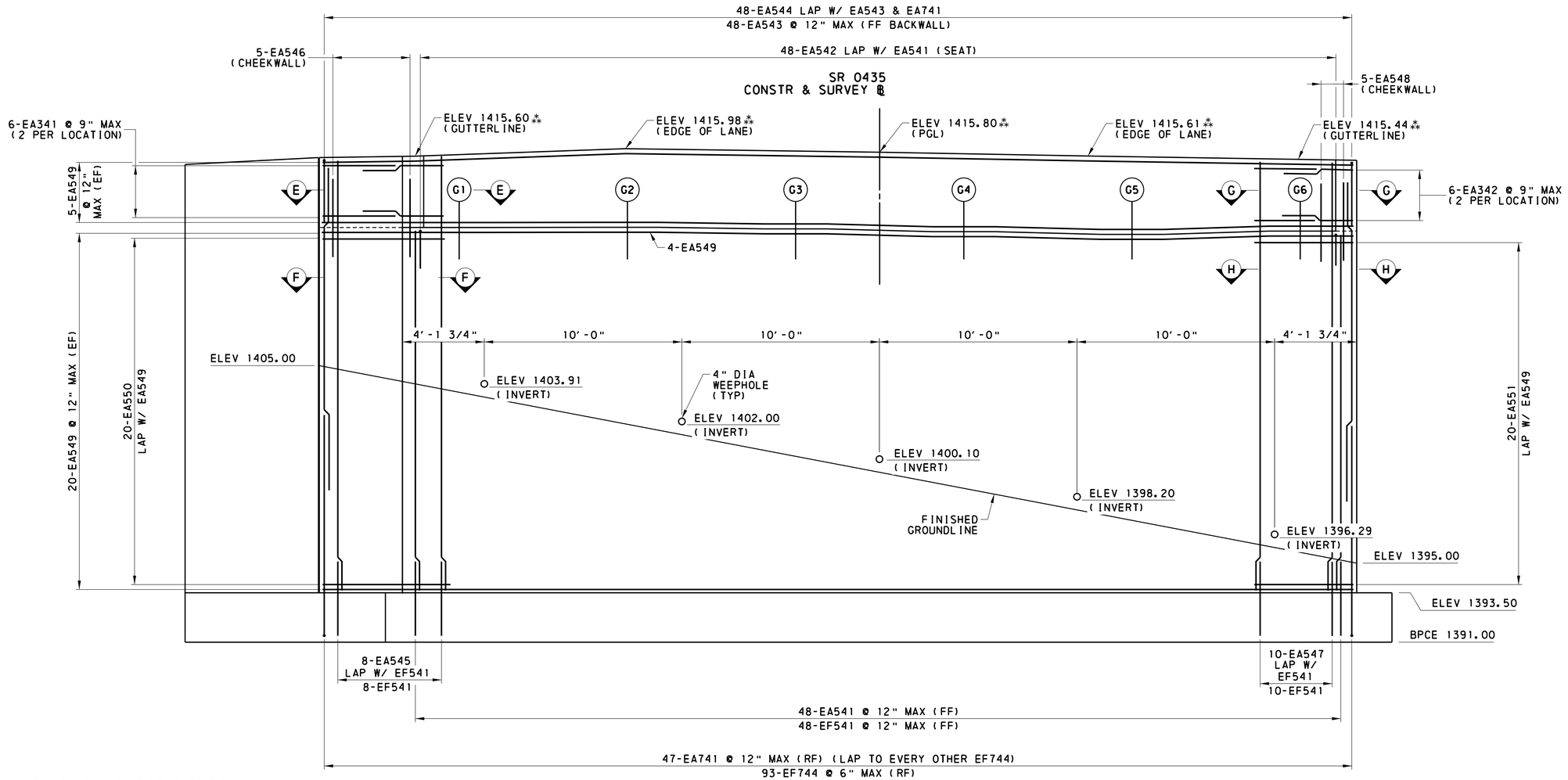

MIN LAP SPLICE LENGTH

#5 - 2'-9"
#7 - 3'-10"

ELEVATION

3 0 1 3 6 FEET

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
EF	EACH FACE
FF	FRONT FACE
RF	REAR FACE
⁂	TOP OF BACKWALL ELEVATION GIVEN AT FF OF BACKWALL

NOTES:

1. SEE BC-788M FOR ABUTMENT WATERPROOFING DETAILS.
2. BEARING SEATS TO BE LEVEL IN ALL DIRECTIONS.
3. PILES ARE NOT SHOWN IN ABUTMENT ELEVATION FOR CLARITY.
4. SEE SHEET 19 FOR ABUTMENT 2 FOOTING PLAN.
5. SEE SHEET 22 FOR WEEPHOLE REINFORCEMENT DETAIL.
6. SEE SHEET 24 FOR WING C ELEVATION.
7. SEE SHEET 26 FOR WING D ELEVATION.
8. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

BEARING SEAT ELEVATIONS

GIRDER	ELEVATION
G1	1411.99
G2	1412.00
G3	1411.92
G4	1411.78
G5	1411.64
G6	1411.81

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 21 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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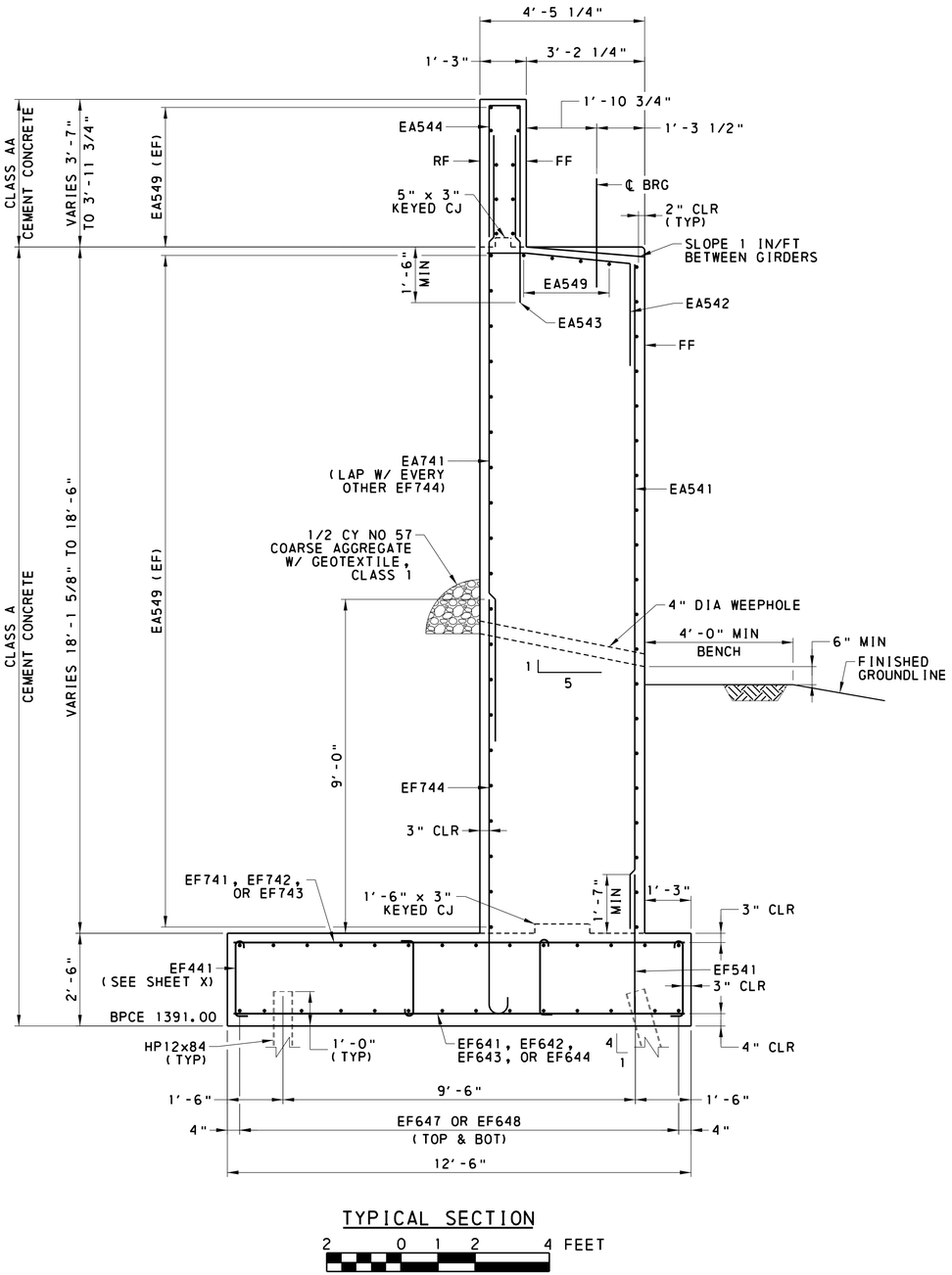
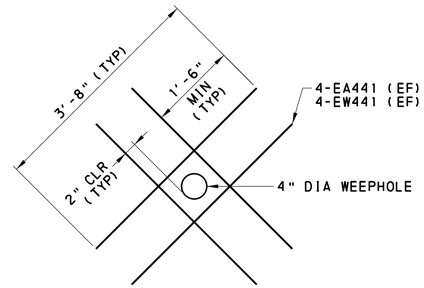


TYPICAL SECTION

2 0 1 2 4 FEET



WEEPHOLE REINFORCEMENT DETAIL

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#5 - 2'-9"
#7 - 3'-10"

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

NOTES:

1. SEE SHEET 8 FOR STAKE-OUT PLAN.
2. SEE SHEET 21 FOR ABUTMENT 2 ELEVATION.
3. SEE SHEET 24 FOR WING C ELEVATION & TYPICAL SECTION.
4. SEE SHEET 26 FOR WING D ELEVATION & TYPICAL SECTION.
5. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 TYPICAL SECTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 22 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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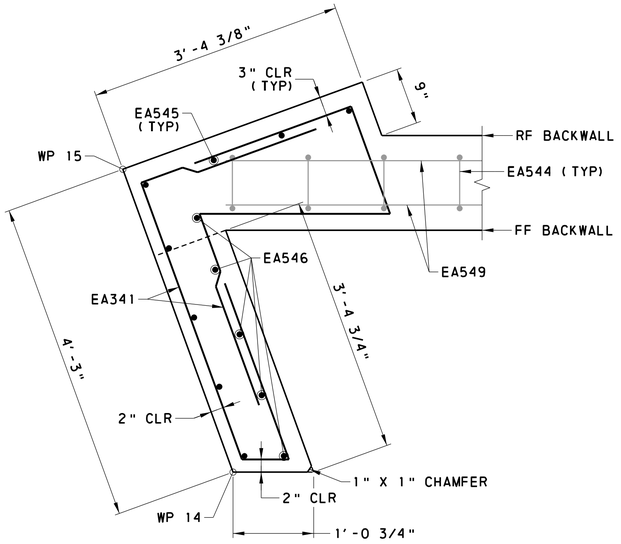
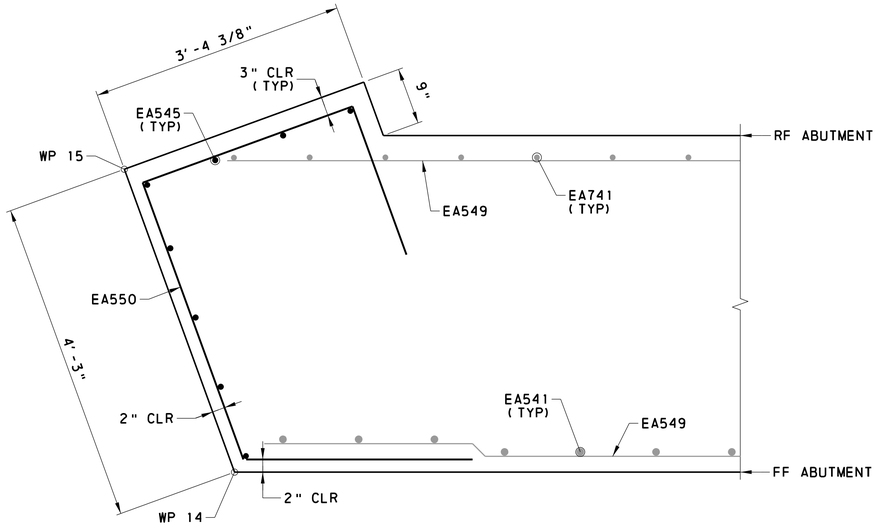


SECTION E-E

1 0 0.5 1 2 FEET



SECTION F-F

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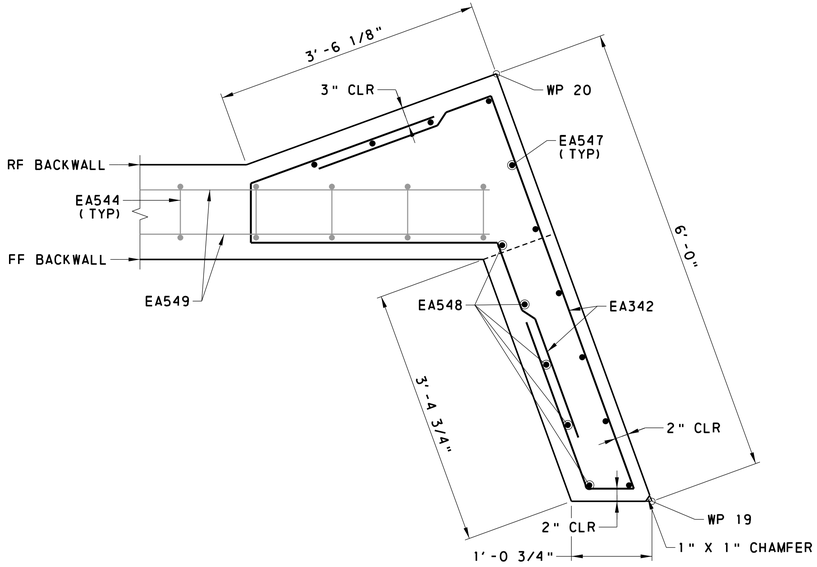

SECTION G-G

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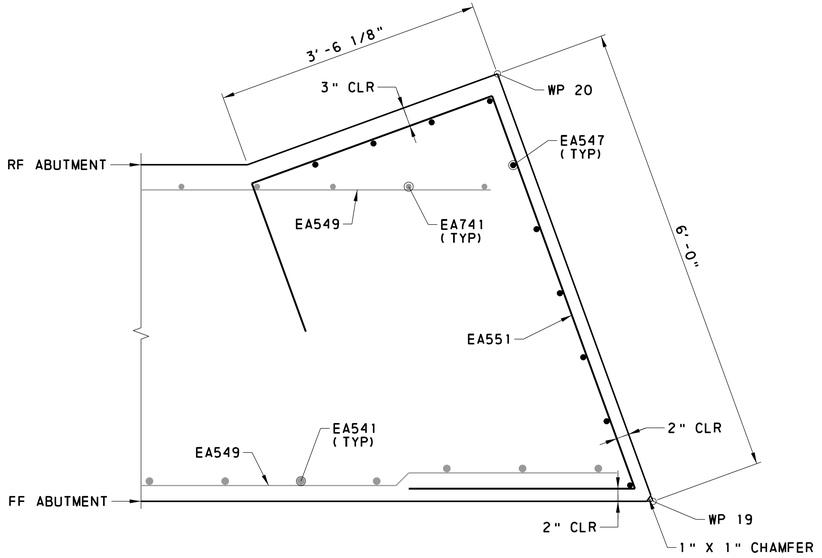

SECTION H-H

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#3 - 1'-8"

LEGEND

CJ CONSTRUCTION JOINT
FF FRONT FACE
RF REAR FACE

NOTES:

1. SEE SHEET 21 FOR ABUTMENT 2 ELEVATION.
2. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 23 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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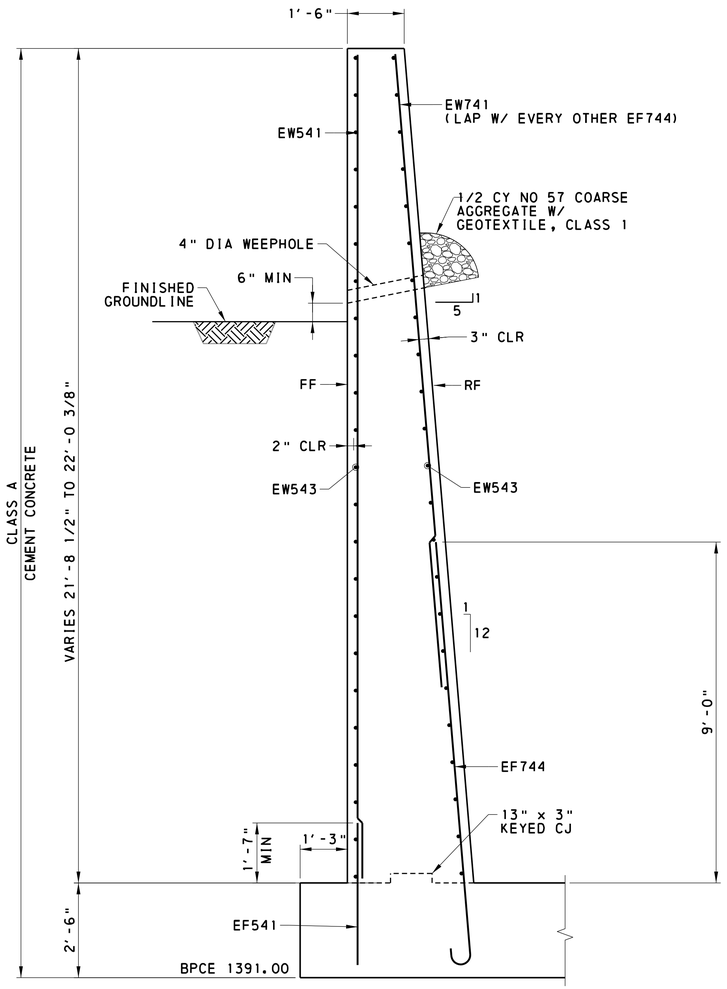
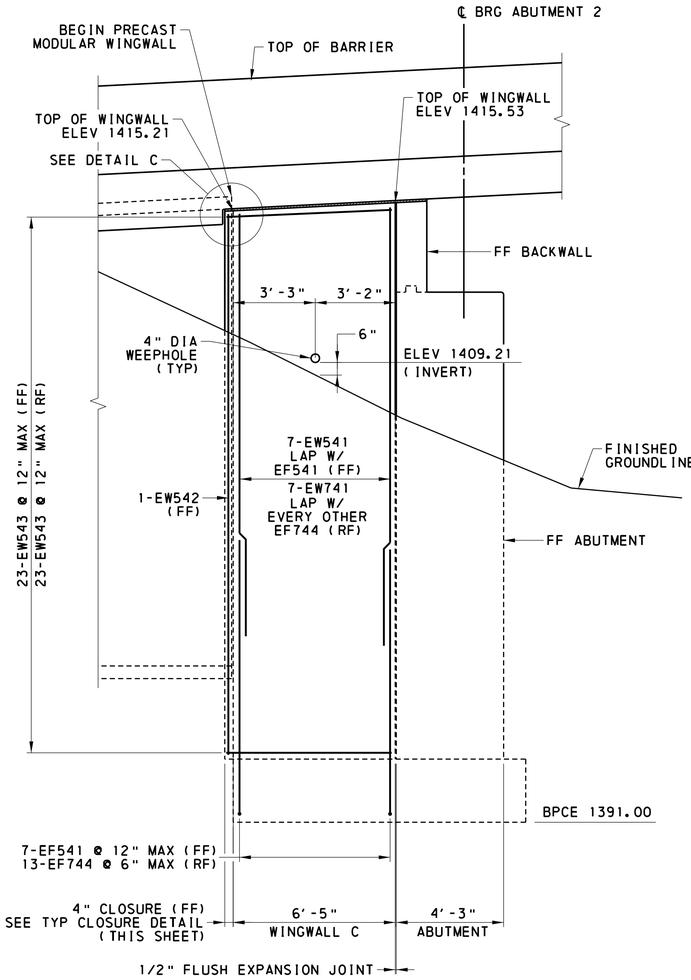


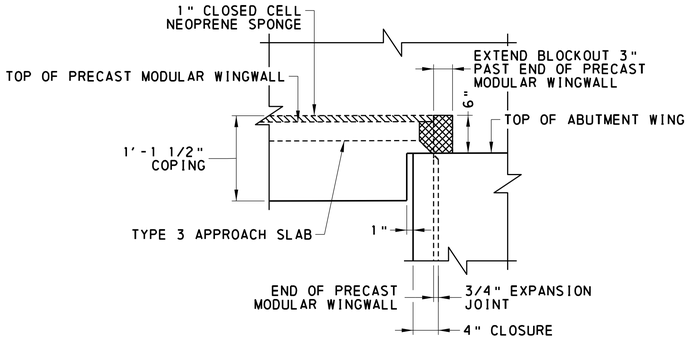
TYPICAL SECTION

2 0 1 2 4 FEET



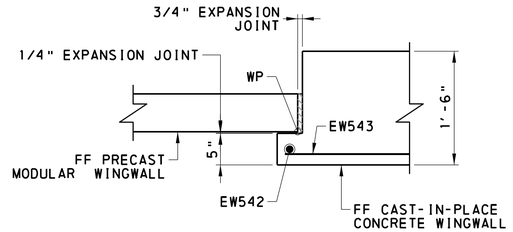
ELEVATION

3 0 1 3 6 FEET



DETAIL C

1 0 0.5 1 2 FEET



TYPICAL CLOSURE DETAIL

1 0 0.5 1 2 FEET

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

NOTES:

1. PILES ARE NOT SHOWN IN WINGWALL ELEVATION FOR CLARITY.
2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 20 FOR ABUTMENT 2 PLAN.
4. SEE SHEET 22 FOR TYPICAL WEEPHOLE DETAIL.
5. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

MIN LAP SPLICE LENGTH

#7 - 3'-10"

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING C - REINFORCED CONCRETE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 24 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
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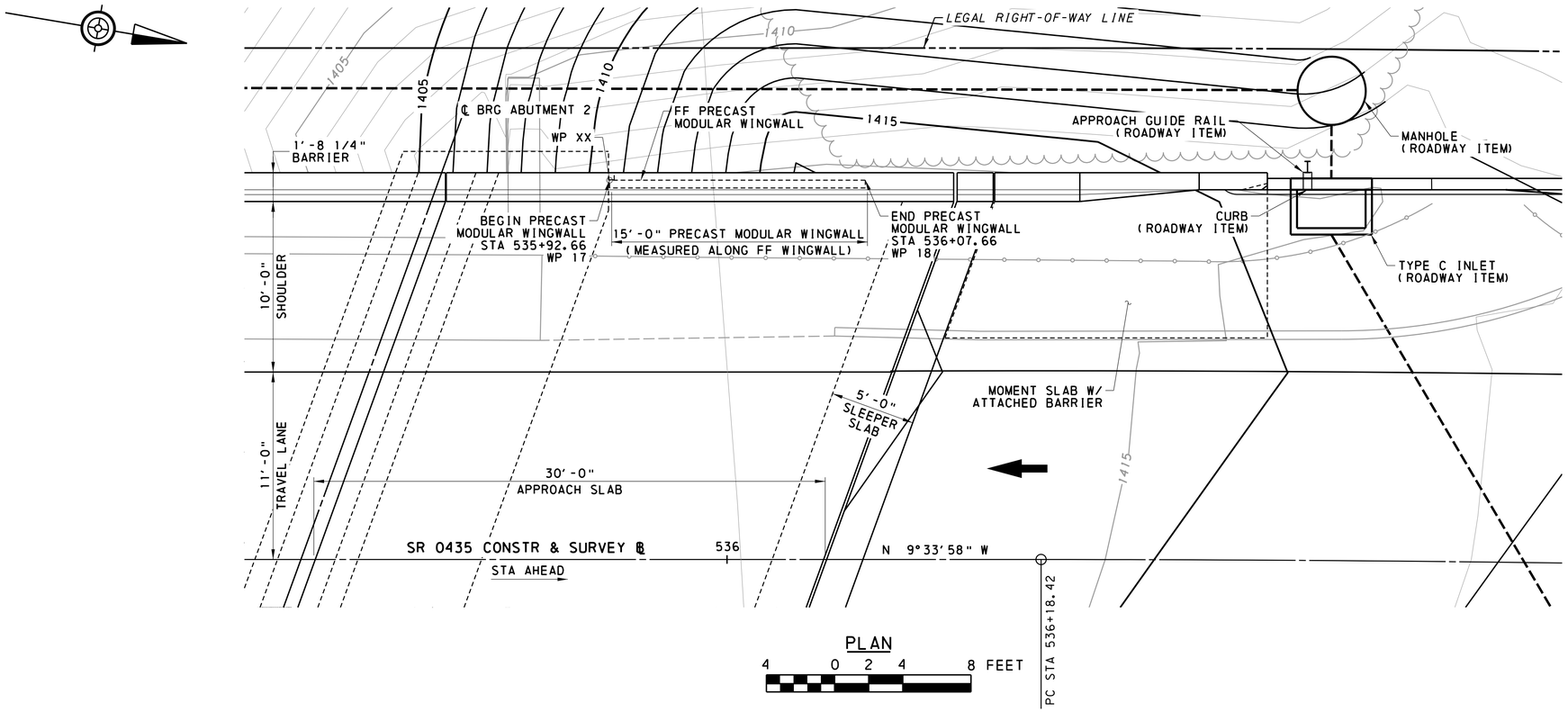
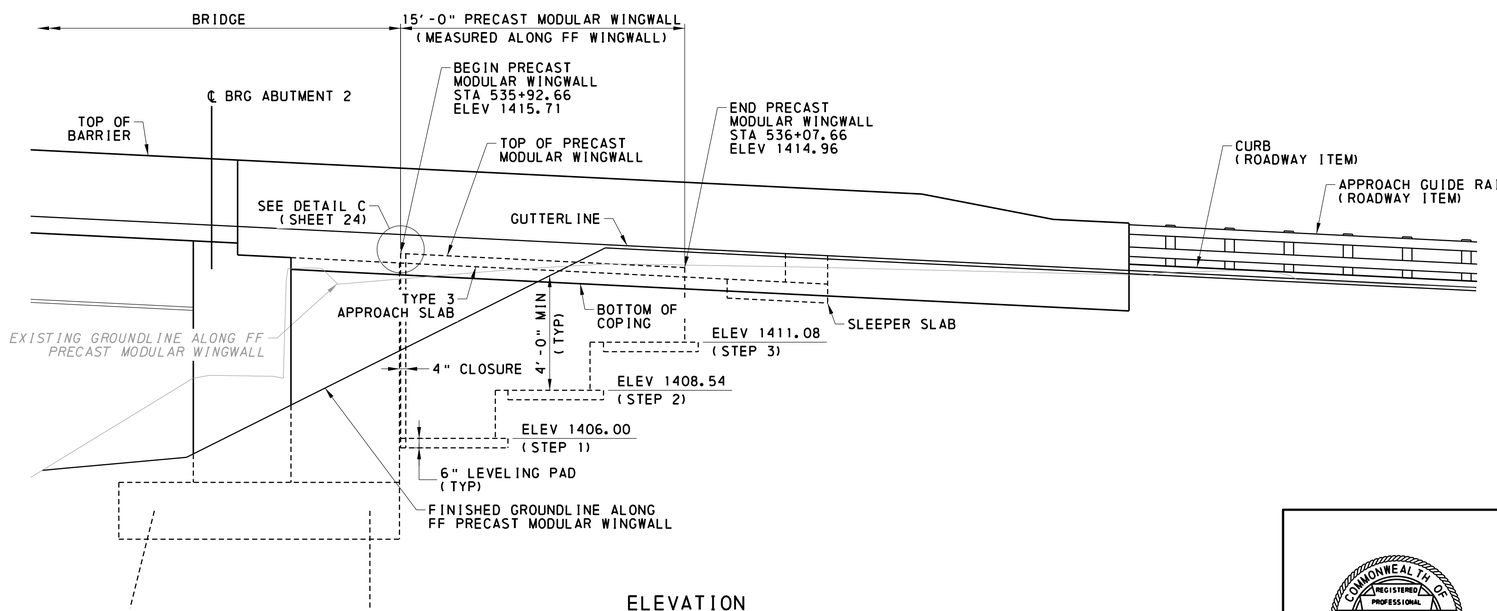


PLAN

4 0 2 4 8 FEET



ELEVATION

(LOOKING AT WALL REAR FACE)

4 0 2 4 8 FEET

LEGEND

FF	FRONT FACE
WP	WORK POINT
———	EXISTING 1' CONTOURS
-1420-	EXISTING 5' CONTOURS
———	PROPOSED 1' CONTOURS
-1420-	PROPOSED 5' CONTOURS

FOUNDATION DESIGN PARAMETERS			
	STEP 1	STEP 2	STEP 3
TOP OF LEVELING PAD ELEVATION	1406.00	1408.54	1411.08
TOP OF ROCK ELEVATION	1315.00	1315.00	1315.00
MAX WALL HEIGHT (FT)	10.6	7.8	5.0
MIN STEM LENGTH (FT)	9.0	8.0	8.0
FRICTION ANGLE (DEGREE)	34	34	34
COHESION (PSF)	0	0	0
MASS UNIT WEIGHT (PCF)	130	130	130
SATURATED UNIT WEIGHT (PCF)	135	135	135
ELASTIC MODULUS (KSF)	400	400	400
SLOPING GROUND	YES	YES	YES
Nc	42.2	42.2	42.2
Nq	29.4	29.4	29.4
Nγ	41.1	41.1	41.1

NOTES:

1. PRECAST MODULAR WINGWALL SPECIFIED BACKFILL DESIGN PARAMETERS:

   BACKFILL BETWEEN STEMS:
   FRICTION ANGLE = 34°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

   BACKFILL BEHIND STEMS:
   FRICTION ANGLE = 32°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 8 FOR STAKE-OUT PLAN.
4. SEE SHEET 24 FOR WING C DETAILS.
5. SEE SHEETS 53 THROUGH 59 FOR APPROACH SLAB DETAILS.
6. SEE SHEETS 66 THROUGH 72 FOR MOMENT SLAB DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING C - PRECAST MODULAR DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 25 OF 85

S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

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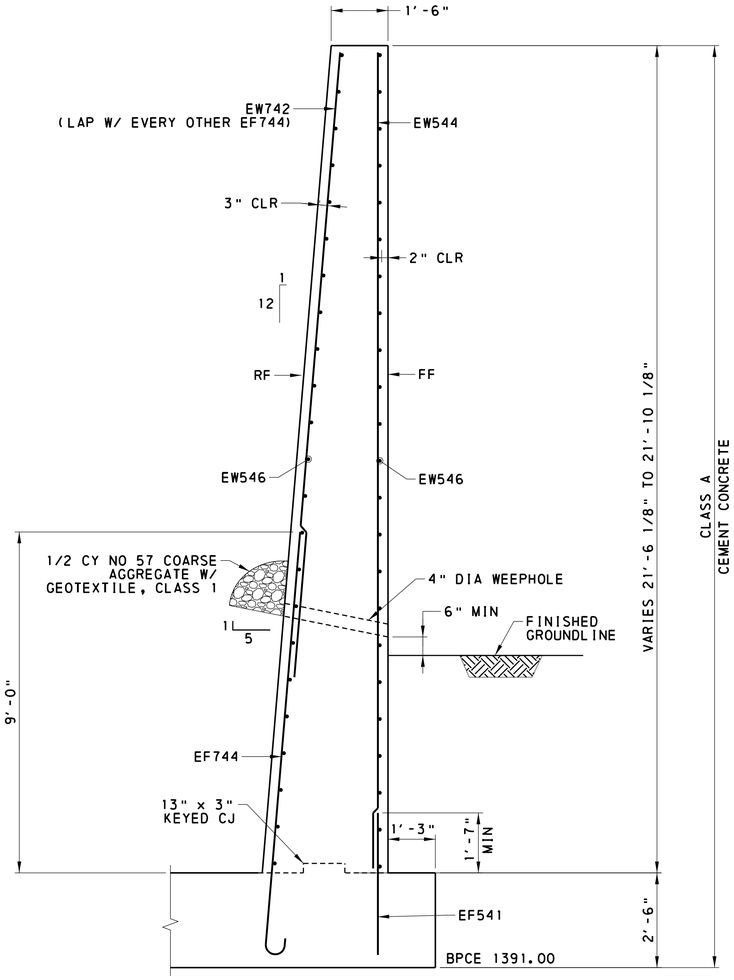
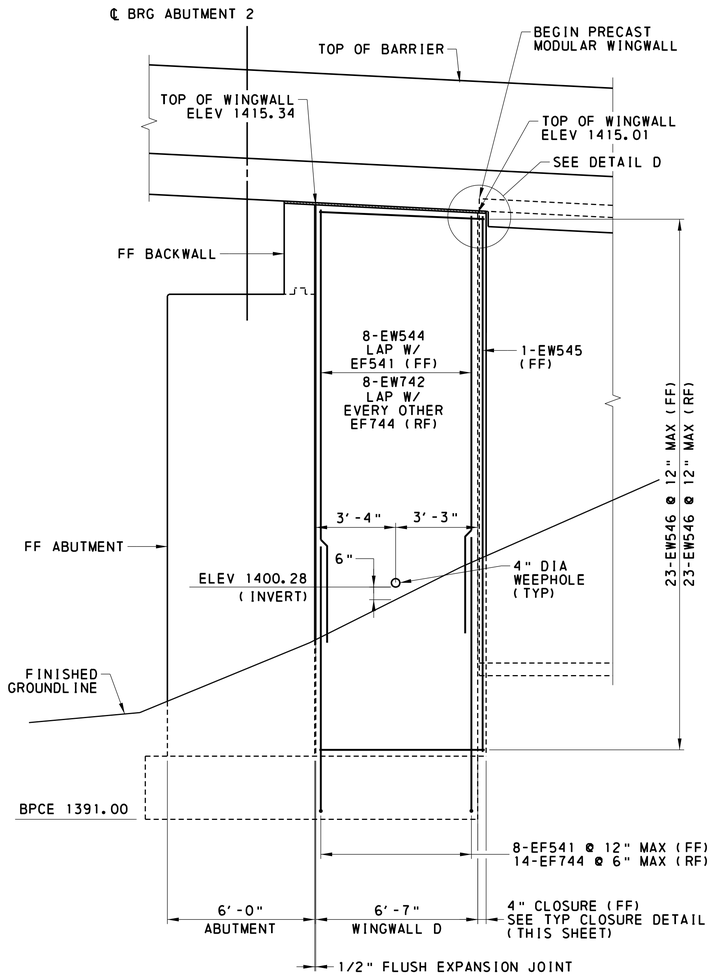


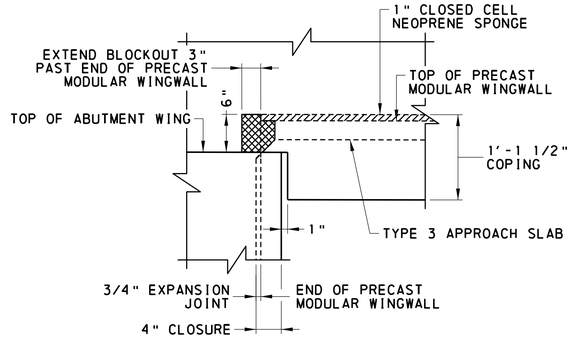
TYPICAL SECTION

2 0 1 2 4 FEET



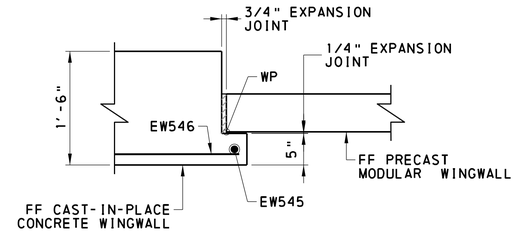
ELEVATION

3 0 1 3 6 FEET



DETAIL D

1 0 0.5 1 2 FEET



TYPICAL CLOSURE DETAIL

1 0 0.5 1 2 FEET

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
FF	FRONT FACE
RF	REAR FACE
WP	WORK POINT

MIN LAP SPLICE LENGTH

#7 - 3'-10"

NOTES:

1. PILES ARE NOT SHOWN IN WINGWALL ELEVATION FOR CLARITY.
2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 20 FOR ABUTMENT 2 PLAN.
4. SEE SHEET 22 FOR TYPICAL WEEPHOLE DETAIL.
5. SEE SHEET 28 FOR ABUTMENT 2 REINFORCEMENT SCHEDULE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING D - REINFORCED CONCRETE DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 26 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
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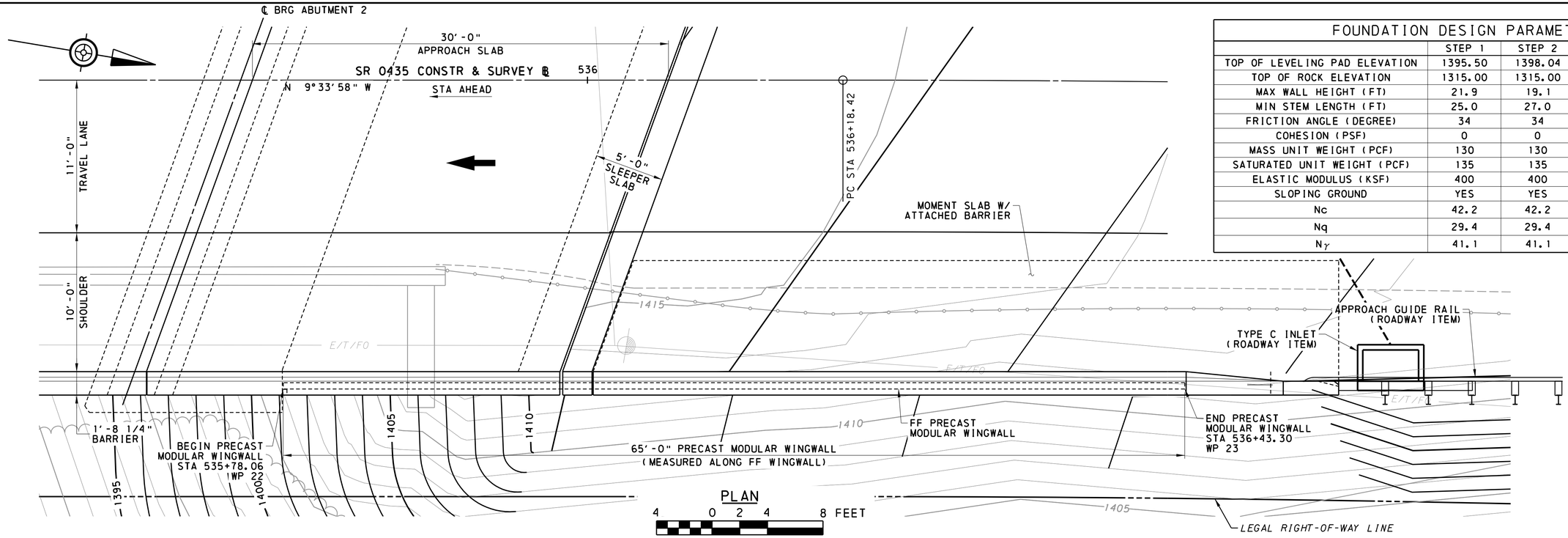

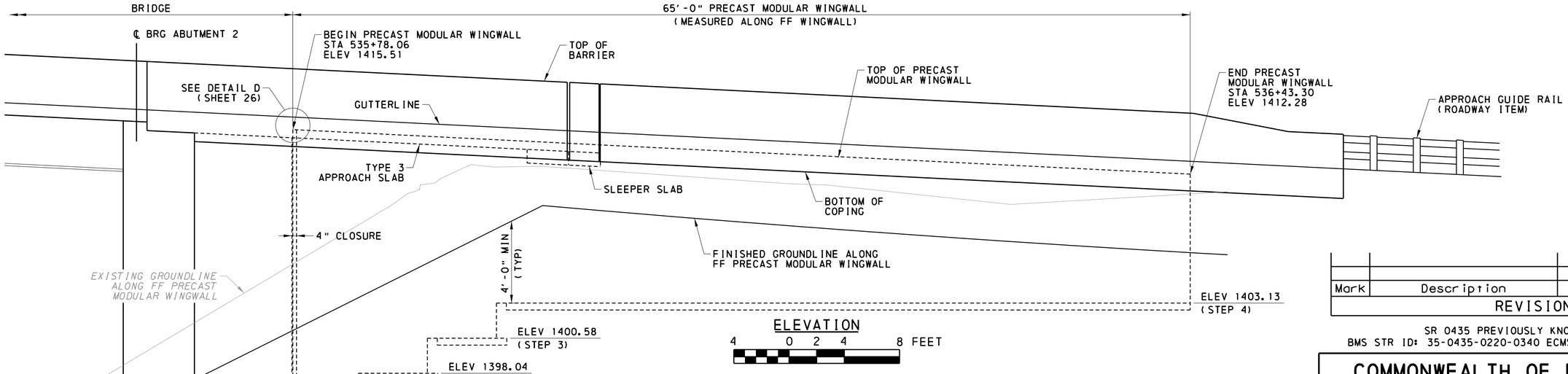

FOUNDATION DESIGN PARAMETERS				
	STEP 1	STEP 2	STEP 3	STEP 4
TOP OF LEVELING PAD ELEVATION	1395.50	1398.04	1400.58	1403.13
TOP OF ROCK ELEVATION	1315.00	1315.00	1315.00	1315.00
MAX WALL HEIGHT (FT)	21.9	19.1	16.3	13.5
MIN STEM LENGTH (FT)	25.0	27.0	27.0	28.0
FRICTION ANGLE (DEGREE)	34	34	34	34
COHESION (PSF)	0	0	0	0
MASS UNIT WEIGHT (PCF)	130	130	130	130
SATURATED UNIT WEIGHT (PCF)	135	135	135	135
ELASTIC MODULUS (KSF)	400	400	400	400
SLOPING GROUND	YES	YES	YES	YES
Nc	42.2	42.2	42.2	42.2
Nq	29.4	29.4	29.4	29.4
N_γ	41.1	41.1	41.1	41.1

LEGEND

FF	FRONT FACE
WP	WORK POINT
———	EXISTING 1' CONTOURS
-1420-	EXISTING 5' CONTOURS
———	PROPOSED 1' CONTOURS
-1420-	PROPOSED 5' CONTOURS

NOTES:

1. PRECAST MODULAR WINGWALL SPECIFIED BACKFILL DESIGN PARAMETERS:

   BACKFILL BETWEEN STEMS:
   FRICTION ANGLE = 34°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

   BACKFILL BEHIND STEMS:
   FRICTION ANGLE = 32°
   COHESION = 0 PSF
   MASS UNIT WEIGHT = 120 PCF

2. SEE SHEET 6 FOR TYPICAL PRECAST MODULAR WINGWALL SECTION.
3. SEE SHEET 8 FOR STAKE-OUT PLAN.
4. SEE SHEET 26 FOR WING D DETAILS.
5. SEE SHEETS 53 THROUGH 59 FOR APPROACH SLAB DETAILS.
6. SEE SHEETS 66 THROUGH 72 FOR MOMENT SLAB DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
WING D - PRECAST MODULAR DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 27 OF 85

S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: TML

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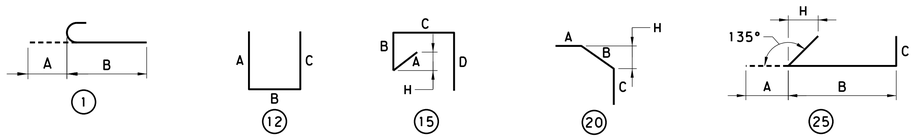
Model: 18 WALL D PLAN ELEV
By: laura.hower
12:59:33 PM
03/04/2024

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EA341	3	9'-2"	12	STR												BEND IN FIELD
EA342	3	10'-2"	12	STR												BEND IN FIELD
EF441	4	2'-8"	56	25	4 1/2"	1'-11"	4 1/2"					3"				
EA441	4	3'-8"	40	STR												
EW441	4	3'-8"	16	STR												
EF541	5	4'-5"	81	STR												
EA541	5	17'-6"	48	STR												
EA542	5	7'-4"	48	20	1'-0"	3'-0"	3'-4"					3"				
EA543	5	5'-0"	48	STR												
EA544	5	7'-8"	48	12	3'-5"	10"	3'-5"									
EA545	5	21'-9"	8	STR												
EA546	5	5'-3"	5	STR												
EA547	5	21'-8"	10	STR												
EA548	5	5'-3"	5	STR												
EA549	5	47'-11"	54	STR												
EA550	5	11'-10"	20	15	3'-0"	3'-10"	2'-11"	2'-1"				1'-0"				
EA551	5	13'-11"	20	15	3'-0"	5'-6"	3'-4"	2'-1"				1'-0"				
EW541	5	21'-4"	7	STR												
EW542	5	21'-4"	1	STR												
EW543	5	6'-0"	46	STR												
EW544	5	21'-2"	8	STR												
EW545	5	21'-2"	1	STR												
EW546	5	6'-3"	46	STR												
EF641	6	VARIES 1'-2" TO 11'-5"	5	STR												1 SET OF 5, STEP EACH BY 2'-6 3/4"
EF642	6	12'-0"	49	STR												
EF643	6	VARIES 5'-10" TO 12'-2"	4	STR												1 SET OF 4, STEP EACH BY 2'-1 3/8"
EF644	6	3'-0"	1	STR												
EF645	6	11'-4"	2	STR												
EF646	6	13'-11"	2	STR												
EF647	6	50'-6"	30	STR												
EF648	6	VARIES 46'-0" TO 48'-4"	4	STR												2 SETS OF 2, STEP EACH BY 2'-4"
EF649	6	4'-9"	2	STR												
EF650	6	5'-6"	2	STR												
EF741	7	VARIES 1'-2" TO 11'-5"	5	STR												1 SET OF 5, STEP EACH BY 2'-6 3/8"
EF742	7	12'-0"	46	STR												
EF743	7	VARIES 3'-0" TO 10'-2"	4	STR												1 SET OF 4, STEP EACH BY 2'-4 5/8"
EF744	7	12'-2"	120	1	10"	11'-4"										
EA741	7	16'-6"	47	STR												
EW741	7	17'-0"	7	STR												
EW742	7	16'-9"	8	STR												



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES: JWB	CHK'D: BRM		
DWG: LAH	CHK'D: TML		

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
PENNSYLVANIA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
ABUTMENT 2 REINFORCEMENT SCHEDULE

RECOMMENDED 03/04/2024

SHEET 28 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
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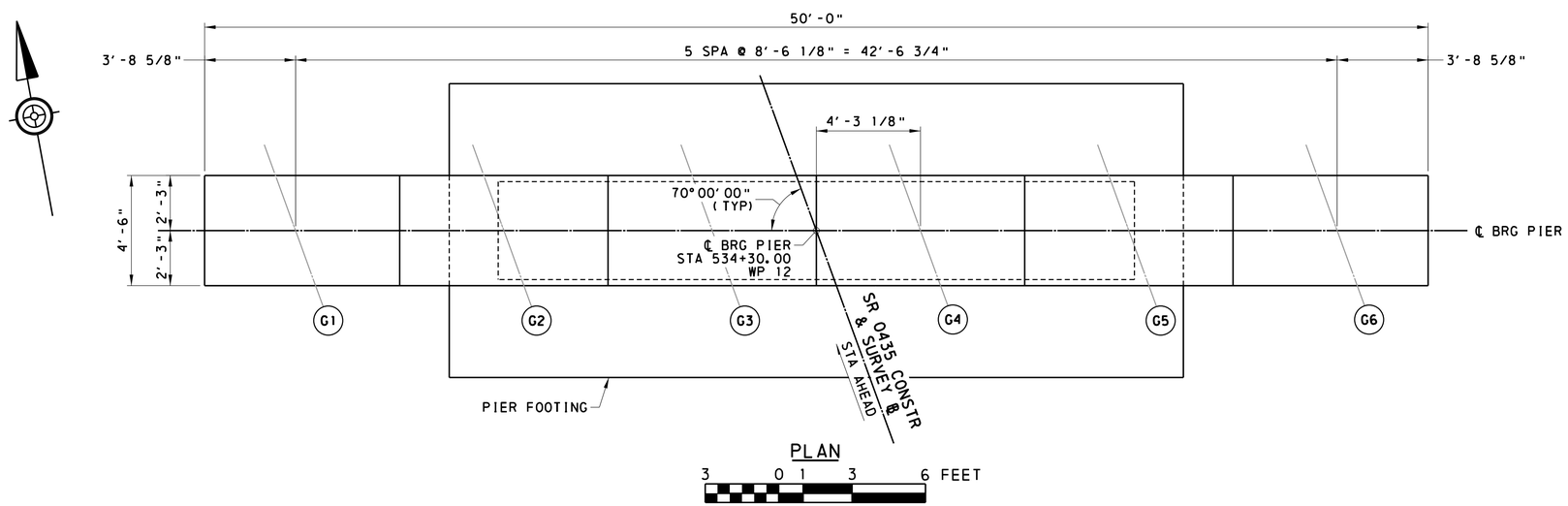
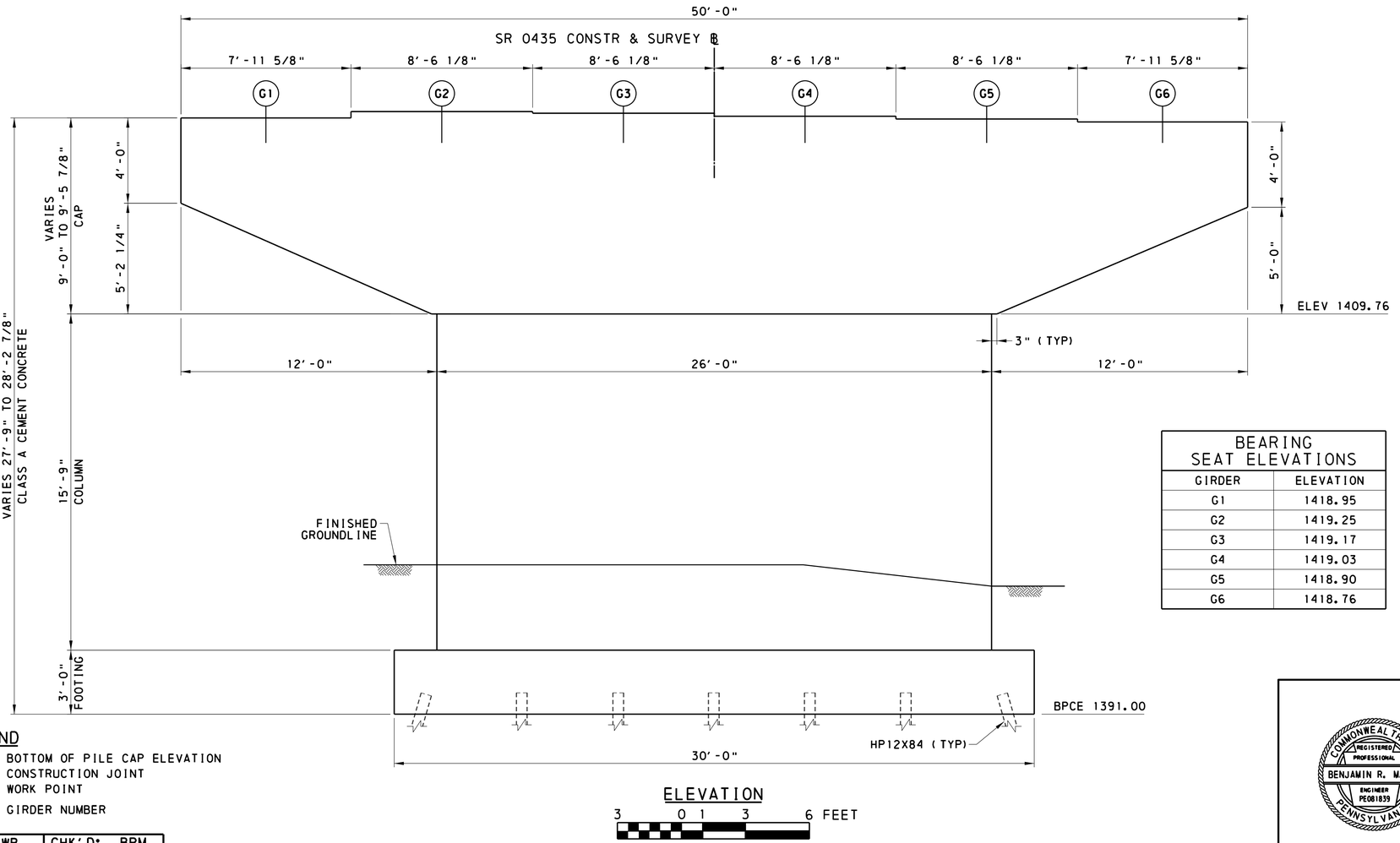


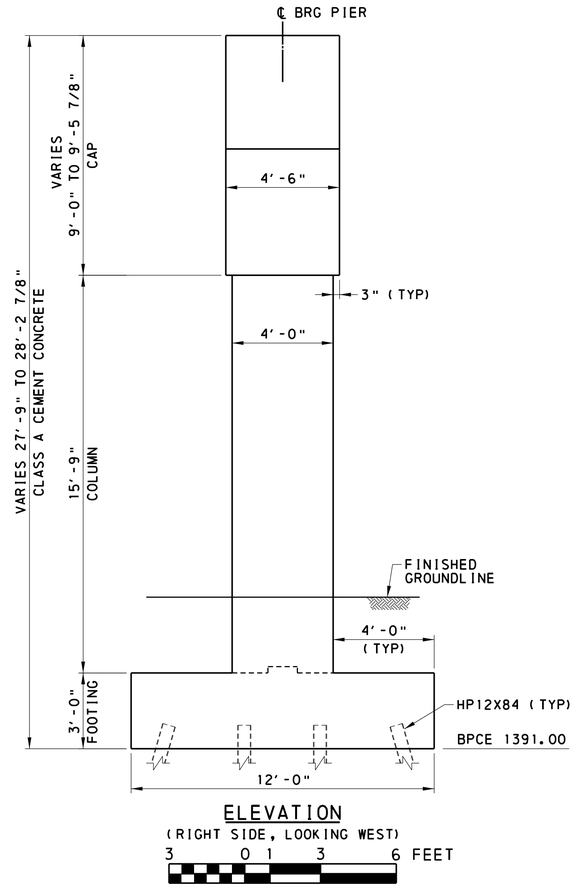
PLAN

3 0 1 3 6 FEET



ELEVATION

3 0 1 3 6 FEET



ELEVATION

(RIGHT SIDE, LOOKING WEST)

3 0 1 3 6 FEET

BEARING SEAT ELEVATIONS	
GIRDER	ELEVATION
G1	1418.95
G2	1419.25
G3	1419.17
G4	1419.03
G5	1418.90
G6	1418.76

LEGEND

BPCE	BOTTOM OF PILE CAP ELEVATION
CJ	CONSTRUCTION JOINT
WP	WORK POINT
(G1)	GIRDER NUMBER

NOTES:

1. SEE BC-735M FOR KEYED CJ DETAILS.
2. SEE BC-788M FOR PIER WATERPROOFING DETAILS.
3. SEE SHEET 8 FOR STAKE-OUT PLAN.
4. SEE SHEET 30 FOR PIER FOOTING DETAILS.
5. SEE SHEETS 31 & 32 FOR PIER DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
PIER PLAN AND ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

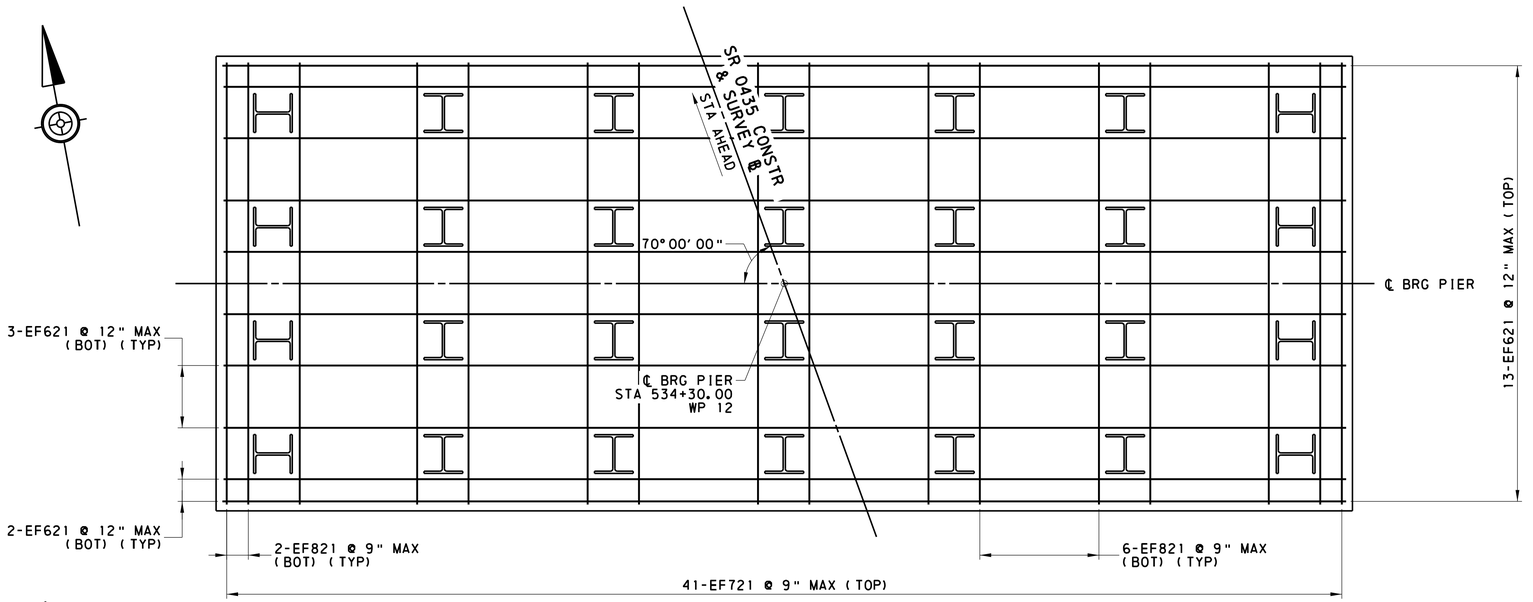
RECOMMENDED 03/04/2024

SHEET 29 OF 85

S-39603

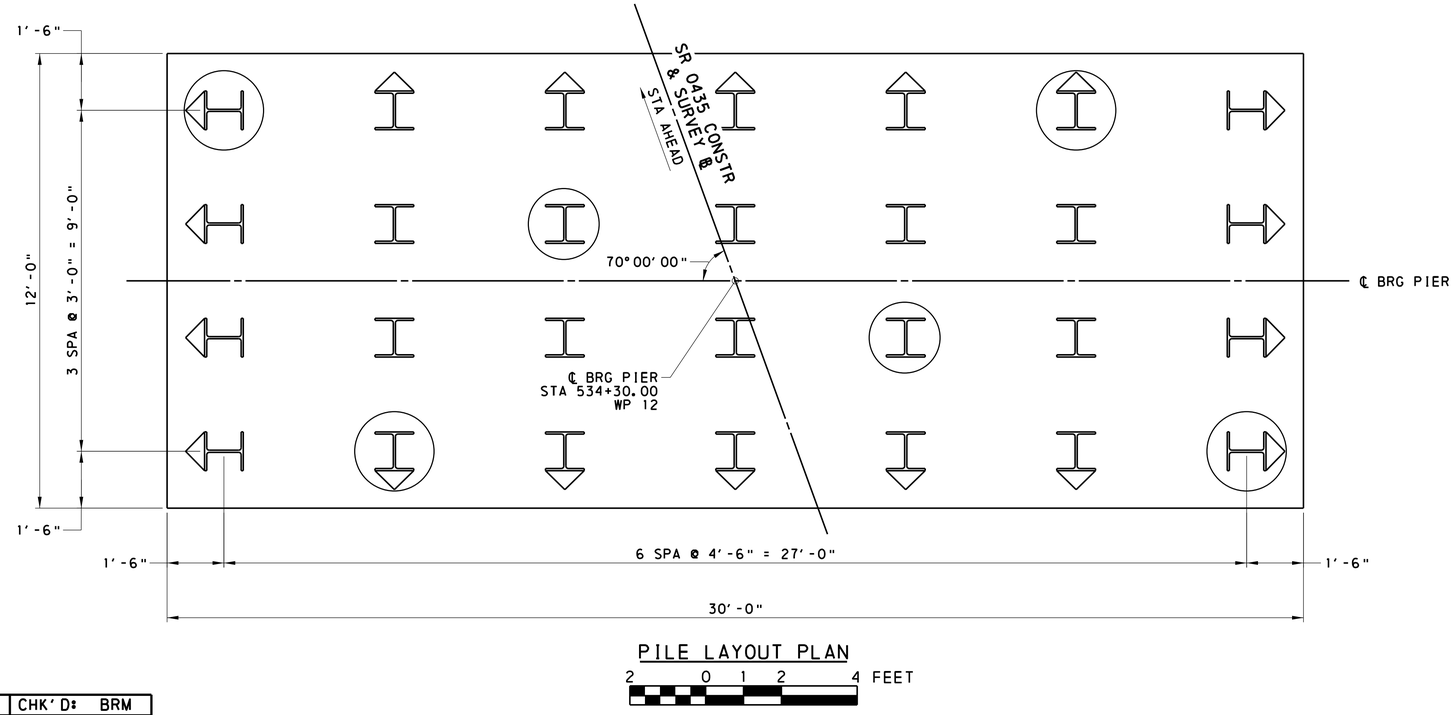
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 20 PIER PLAN 3/4/2024 12:59:33 PM By: laura.hower



FOOTING REINFORCEMENT PLAN

2 0 1 2 4 FEET



PILE LAYOUT PLAN

2 0 1 2 4 FEET

HPILE DESIGN LOADS					
LOAD	LIMIT STATE	LOAD CASE	STAGE	FACTORED LOAD	FACTORED RESISTANCE
AXIAL	STR-I	MAX	FIN	266.7 KIP/PILE	327.0 KIP/PILE
LATERAL	STR-V	MAX	FIN	130.9 KIP	396.6 KIP

LEGEND

WP WORK POINT

HP12X84 VERTICAL PILE

HP12X84 BATTERED PILE (1:4 IN DIRECTION OF ARROW)

HP12X84 VERTICAL TEST PILE

HP12X84 BATTERED PILE TEST PILE (1:4 IN DIRECTION OF ARROW)

NOTES:

1. PLACE EF421 AT 4'-0" C-C MAX SPACING EACH WAY IN FOOTING. ALTERNATE 90° AND 135° HOOKS. (TOTAL = 36)
2. MAINTAIN 1" MIN CLEARANCE FROM FOOTING BOTTOM BARS TO PILES
3. SEE SHEET 1 FOR GENERAL ELEVATION AND PILE TIP ELEVATIONS.
4. SEE SHEET 8 FOR STAKE-OUT PLAN.
5. SEE SHEET 31 FOR TYPICAL SECTION.
6. SEE SHEET 33 FOR PIER REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
PIER FOOTING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

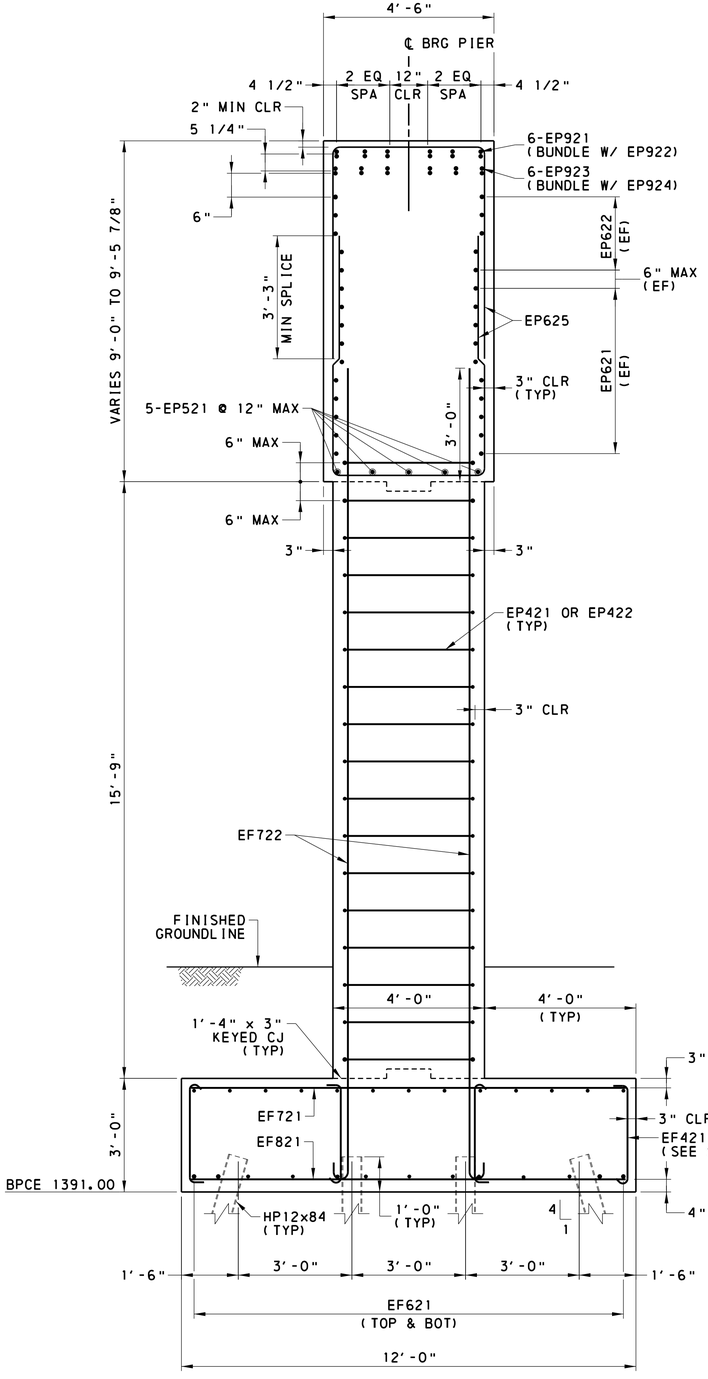
RECOMMENDED 03/04/2024

SHEET 30 OF 85

S-39603

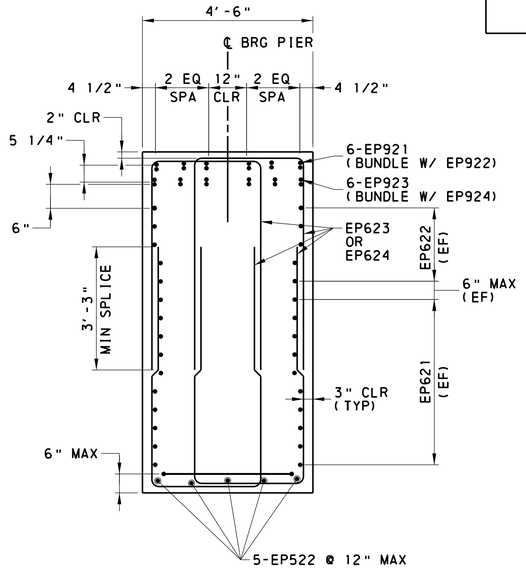
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 PIER FOOTING PLAN.dgn
Model: 21 PIER FOOTING PLAN 3/4/2024 12:59:34 PM By: laura.hower



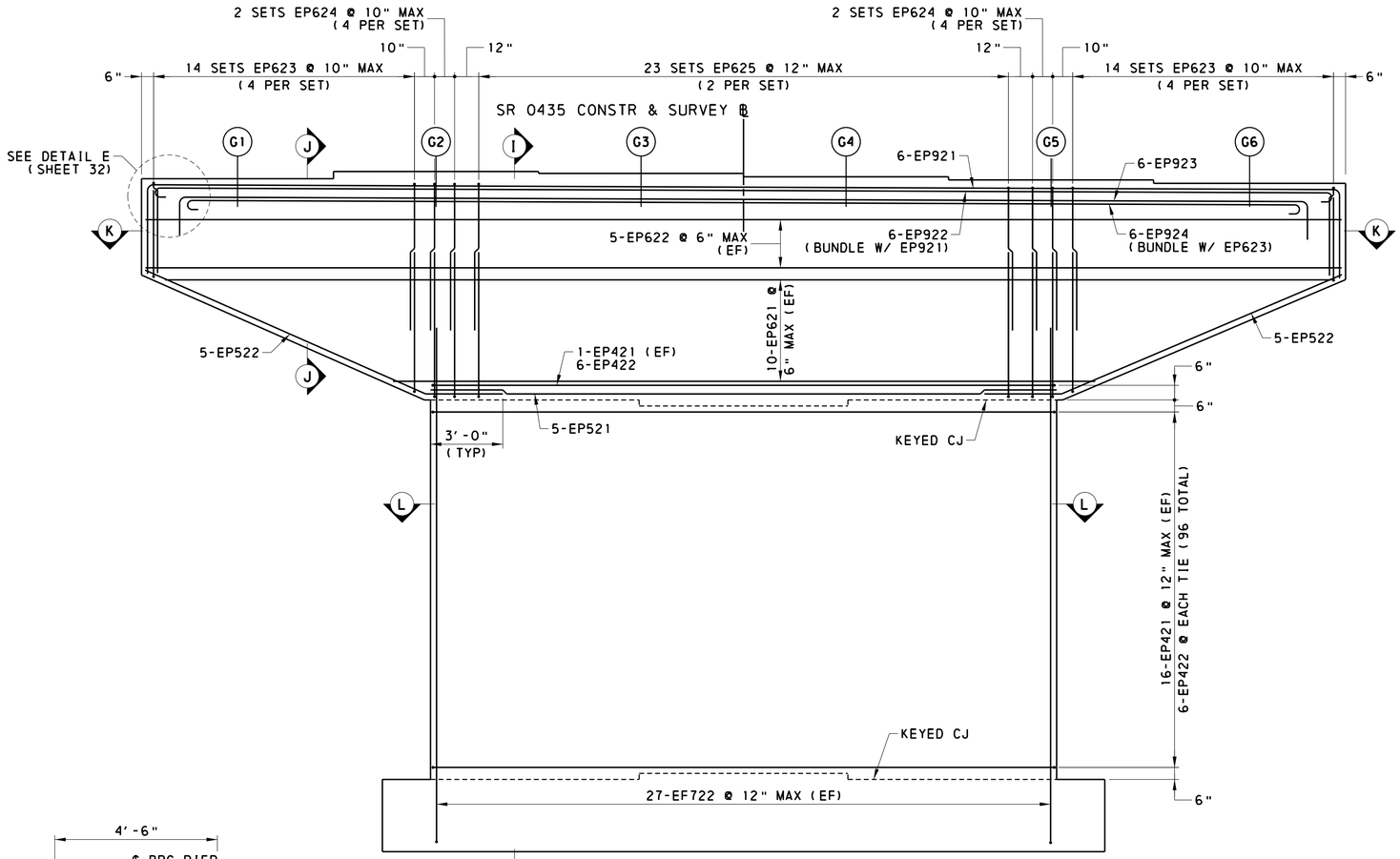
SECTION I-I

2 0 1 2 4 FEET



SECTION J-J

2 0 1 2 4 FEET



PIER ELEVATION

3 0 1 3 6 FEET

MIN LAP SPLICE LENGTH

#4 - 2'-2"
#6 - 3'-3"

LEGEND

BPCE BOTTOM OF PILE CAP ELEVATION
CJ CONSTRUCTION JOINT

NOTES:

1. ALTERNATE 90° & 135° HOOKS ON CROSS TIES BOTH VERTICALLY & HORIZONTALLY.
2. SEE SHEET 29 FOR PIER PLAN.
3. SEE SHEET 30 FOR PIER FOOTING PLAN.
4. SEE SHEET 32 FOR ADDITIONAL PIER DETAILS.
5. SEE SHEET 33 FOR PIER REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
PIER DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

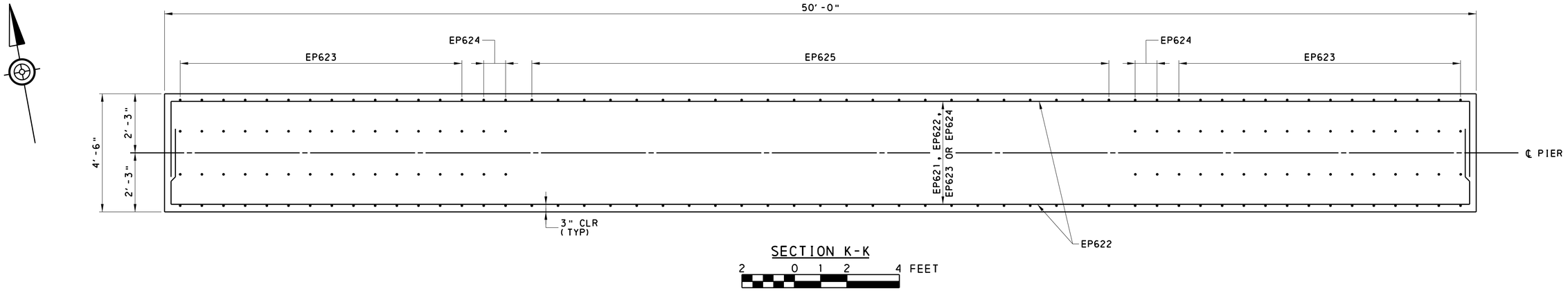
RECOMMENDED 03/04/2024

SHEET 31 OF 85

S-39603

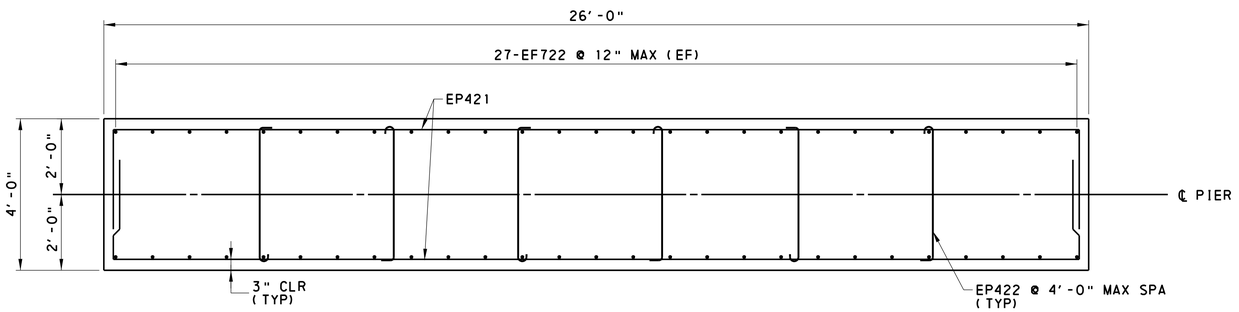
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:23 PIER DETAILS - 13/4/2024 12:59:34 PM By:laura.hower



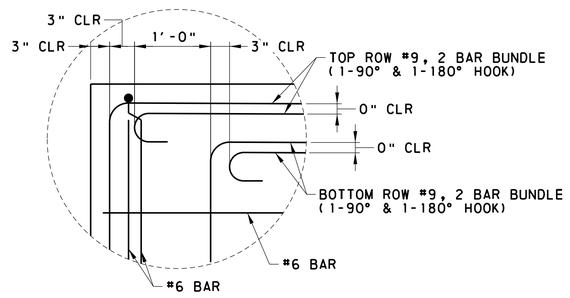
SECTION K-K

2 0 1 2 4 FEET



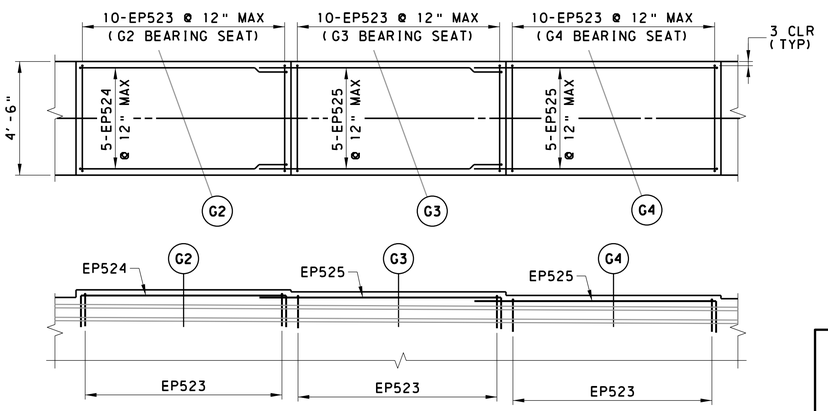
SECTION L-L

2 0 1 2 4 FEET



DETAIL E

1 0 0.5 1 2 FEET



PARTIAL BEARING SEAT PLAN & ELEVATION

(NO REINFORCEMENT REQ'D FOR BEARING SEATS 1, 5 & 6)

3 0 1 3 6 FEET

MIN LAP SPLICE LENGTH

#4 - 2'-2"
#6 - 3'-3"

LEGEND

EF EACH FACE

NOTES:

1. SEE SHEET 31 FOR PIER ELEVATION & TYPICAL SECTION.
2. SEE SHEET 33 FOR PIER REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
PIER DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 32 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

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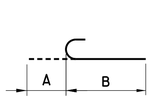
Model:24 PIER DETAILS - 23/4/2024 12:59:35 PM By: laura.hower

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EF421	4	3'-2"	36	25	4 1/2"	2'-5"	4 1/2"					3"				
EP421	4	32'-0"	34	12	3'-3"	25'-6"	3'-3"									
EP422	4	4'-3"	102	25	4 1/2"	3'-6"	4 1/2"					3"				
EP521	5	26'-0"	5	STR												
EP522	5	15'-11"	10	2	3'-3"	12'-8"						1'-4 3/4"				
EP523	5	5'-8"	30	12	10"	4'-0"	10"									
EP524	5	9'-8"	5	12	10"	8'-0"	10"									
EP525	5	10'-4"	10	10	10"	9'-6"										
EF621	6	29'-6"	26	STR												
EP621	6	VARIES 36'-2" TO 56'-3"	20	12	3'-9"	VARIES 28'-8" TO 48'-9"	3'-9"									2 SETS OF 10, STEP B BY 2'-2 3/4"
EP622	6	57'-0"	10	12	3'-9"	49'-6"	3'-9"									
EP623	6	VARIES 10'-2" TO 14'-8"	112	12	VARIES 3'-7" TO 5'-10"	3'-0"	VARIES 3'-7" TO 5'-10"									4 SETS OF 14, STEP A/C BY 2"
EP624	6	15'-6"	16	12	6'-3"	3'-0"	6'-3"									
EP625	6	16'-6"	46	12	6'-3"	4'-0"	6'-3"									
EF721	7	11'-6"	41	STR												
EF722	7	22'-3"	54	1	10"	21'-5"										
EF821	8	11'-6"	40	STR												
EP921	9	55'-6"	6	12	3'-0"	49'-6"	3'-0"									
EP922	9	51'-6"	6	4	1'-3"	49'-0"	1'-3"									
EP923	9	50'-2"	6	12	1'-7"	47'-0"	1'-7"									
EP924	9	49'-0"	6	4	1'-3"	46'-6"	1'-3"									



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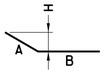

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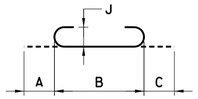

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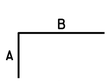

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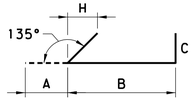
(12)



(25)

NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	TML

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
PIER REINFORCEMENT SCHEDULE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 33 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
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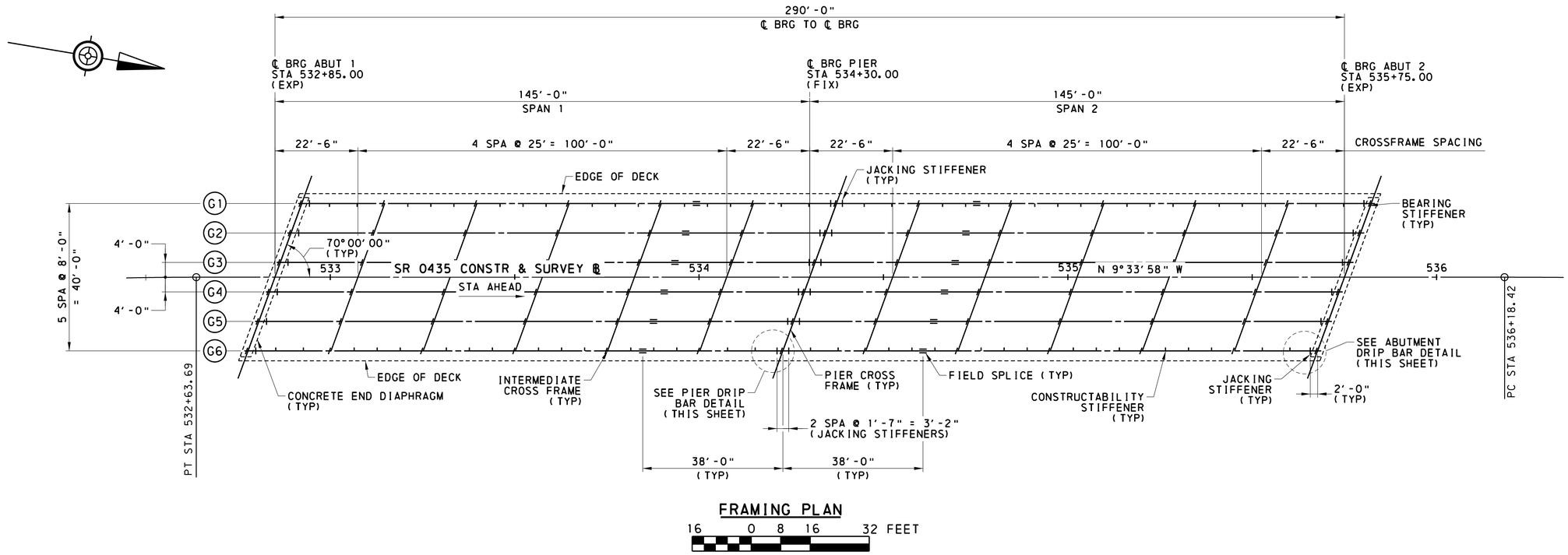
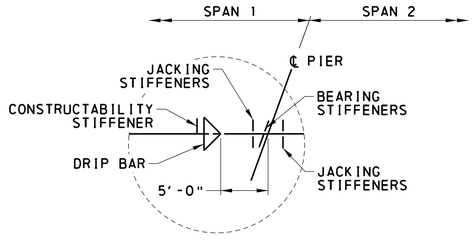


FRAMING PLAN

16 0 8 16 32 FEET

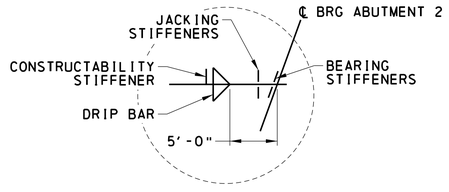
NOTES:

1. SEE BC-753M FOR ADDITIONAL STEEL GIRDER DETAILS.
2. SPACE CONSTRUCTABILITY STIFFENS EQUALLY BETWEEN CROSS FRAMES ON THE INSIDE OF EACH FASCIA GIRDER.
3. PROVIDE IMMEDIATE CROSS FRAMES AT ℄ BRG OF ABUTMENTS.
4. SEE SHEET 35 FOR STEEL GIRDER ELEVATION.
5. SEE SHEET 36 FOR STIFFENER DETAILS.
6. SEE SHEET 37 FOR CROSS FRAME DETAILS.
7. SEE SHEET 38 FOR FIELD SPLICE DETAILS.



PIER DRIP BAR DETAIL

(TYPICAL, ALL SPAN 1 GIRDERS)
NOT TO SCALE



ABUTMENT 2 DRIP BAR DETAIL

(TYPICAL, ALL SPAN 2 GIRDERS)
NOT TO SCALE

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
FRAMING PLAN

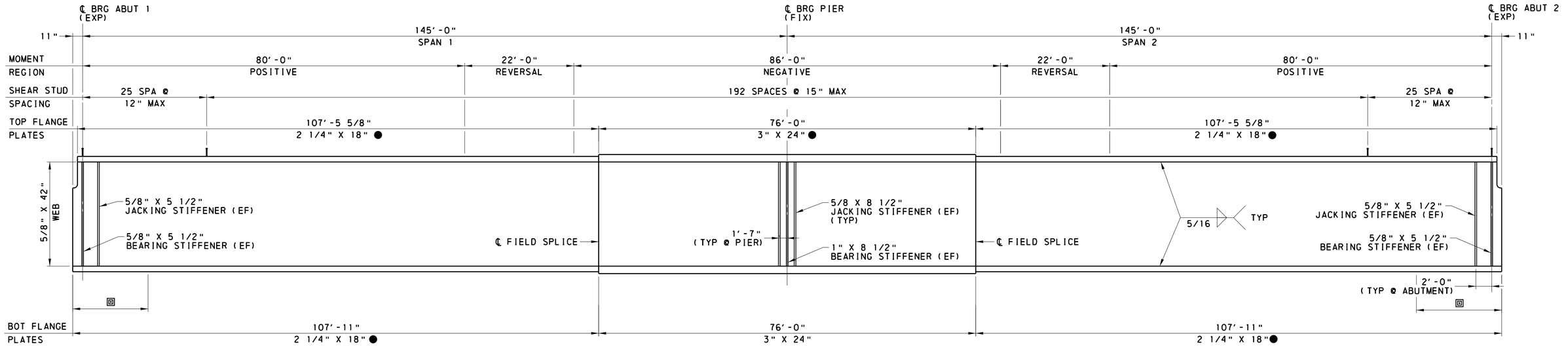
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

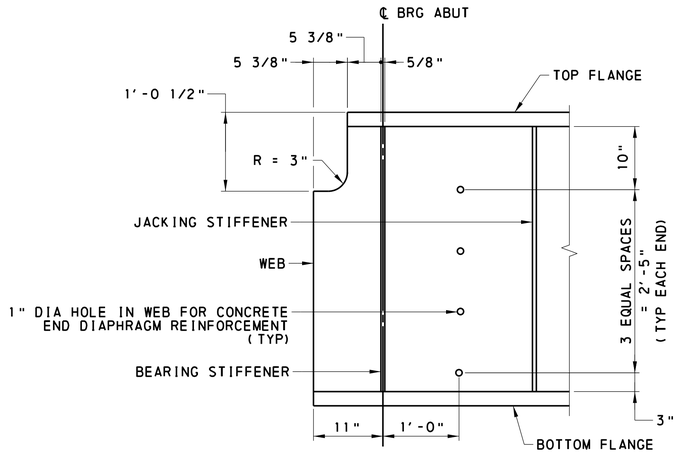
SHEET 34 OF 85

S-39603

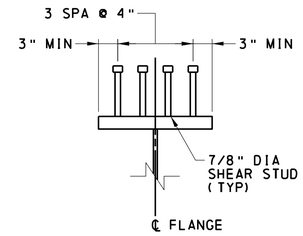
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 26 FRAMING PLAN 3/4/2024 12:59:35 PM By: laura.hower



GIRDER ELEVATION
NOT TO SCALE



GIRDER END DETAIL
1 0 0.5 1 2 FEET



SHEAR STUD DETAIL
NOT TO SCALE

LEGEND
- ● CHARPY V-NOTCH TEST REQUIRED
- ▣ 15'-0" LIMIT OF PAINTING (ALL GIRDERS)
- EF EACH FACE

NOTES:
1. REFER TO BC-753M FOR ADDITIONAL STEEL GIRDER DETAILS.
2. PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270/ M270M (ASTM A709/ A709M) GRADE 50W DESIGNATION.
3. CHARPY V-NOTCH TEST ALL INDICATED GIRDER PLATES IN ACCORDANCE WITH PUB 408 SECTION 1105.02(a)5.
4. BEARING STIFFENERS AND JACKING STIFFENERS ARE TO BE TRULY VERTICAL.
5. PAINT THE OUTSIDE FACE OF ALL EXTERIOR GIRDERS THE FULL LENGTH OF THE BRIDGE. SEE SHEET 7 FOR PAINTING LIMIT DETAIL.
6. SEE SHEET 36 FOR STIFFENER DETAILS.
7. SEE SHEET 38 FOR FIELD SPLICE DETAILS.
8. SEE SHEET 41 FOR JACKING LOADS.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

SR 0435 PREVIOUSLY KNOWN AS LR 0168
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COMMONWEALTH OF PENNSYLVANIA
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STEEL GIRDER ELEVATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 35 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 STEEL GIRDER ELEVATION.dgn
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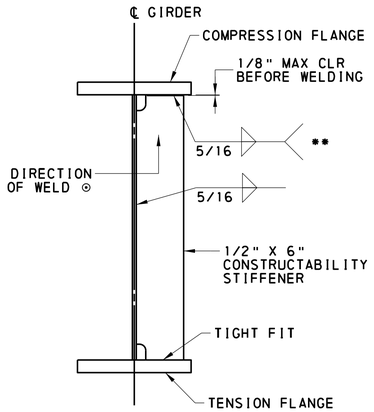
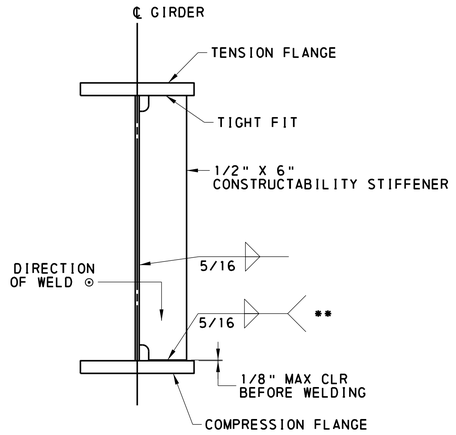
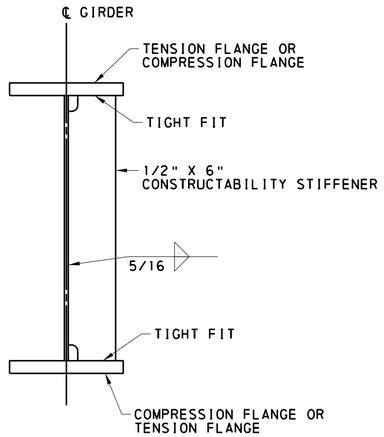
03/04/2024



TYPE I
(POSITIVE MOMENT REGION)



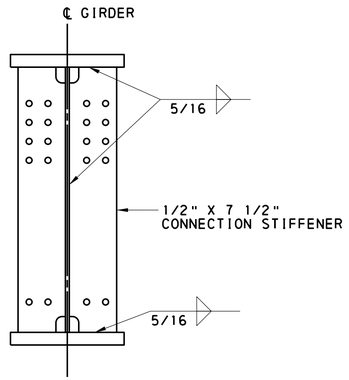
TYPE II
(NEGATIVE MOMENT REGION)



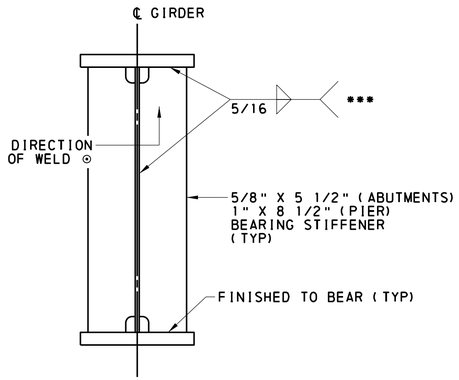
TYPE III
(STRESS REVERSAL REGION)

CONSTRUCTABILITY STIFFENER DETAILS

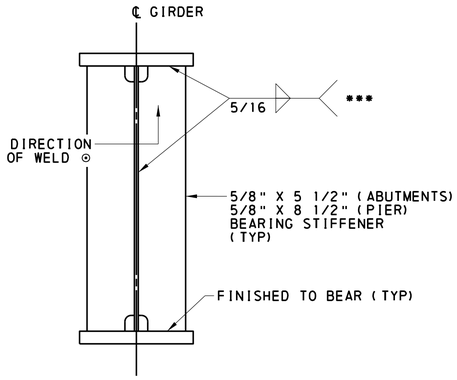
1 0 0.5 1 2 FEET



CONNECTION STIFFENER
(OMIT STIFFENER ON OUTSIDE OF FASCIA GIRDER)
1 0 0.5 1 2 FEET



BEARING STIFFENER
(HOLES OMITTED FOR CLARITY)
1 0 0.5 1 2 FEET



JACKING STIFFENER
1 0 0.5 1 2 FEET

LEGEND

⊙	DIRECTION OF WELD IS NOT APPLICABLE IF STIFFENERS ARE FITTED WITH TACK WELDS.
**	MAY BE TIGHT FITTED AT A COMPRESSION FLANGE WHEN STIFFENERS ARE PLACED IN PAIRS, ONE ON EACH SIDE OF THE WEB
***	TIGHT FIT AT TENSION FLANGES AT INTERIOR SUPPORTS. FILLET WELDS OVER END SUPPORTS. WELD AT TOP AND BOTTOM FLANGE WHEN STIFFENER IS USED AS A CONNECTION PLATE.

NOTES:

1. REFER TO BC-753M FOR ADDITIONAL STEEL GIRDER DETAILS.
2. PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50W (ASTM A709-50W).
3. BEARING STIFFENERS AND JACKING STIFFENERS ARE TO BE TRULY VERTICAL.
4. SEE SHEET 34 FOR FRAMING PLAN.
5. SEE SHEET 35 FOR STEEL GIRDER ELEVATION.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STIFFENER DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

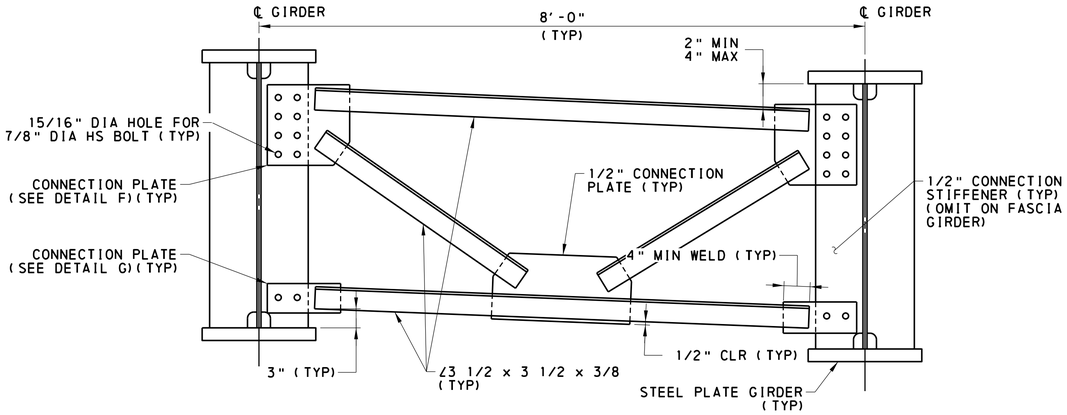
RECOMMENDED 03/04/2024

SHEET 36 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

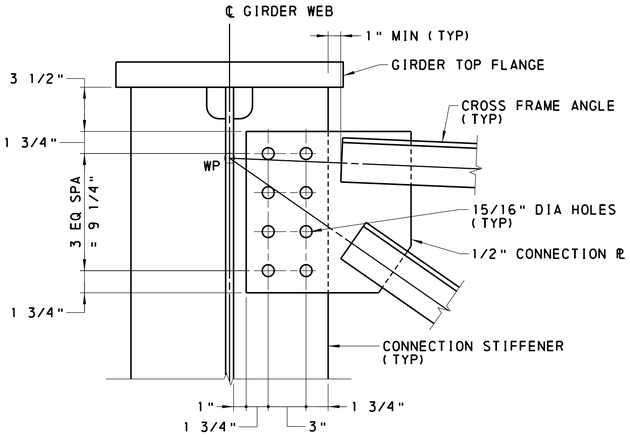
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: STIFFENER DETAILS 3/4/2024 12:59:36 PM By: laura.hower



TYPICAL INTERMEDIATE CROSS FRAME

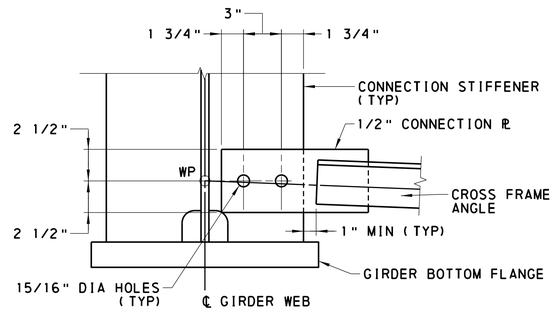
(ALSO USED AT ABUTMENT ℄ BEARINGS)

1 0 0.5 1 2 FEET



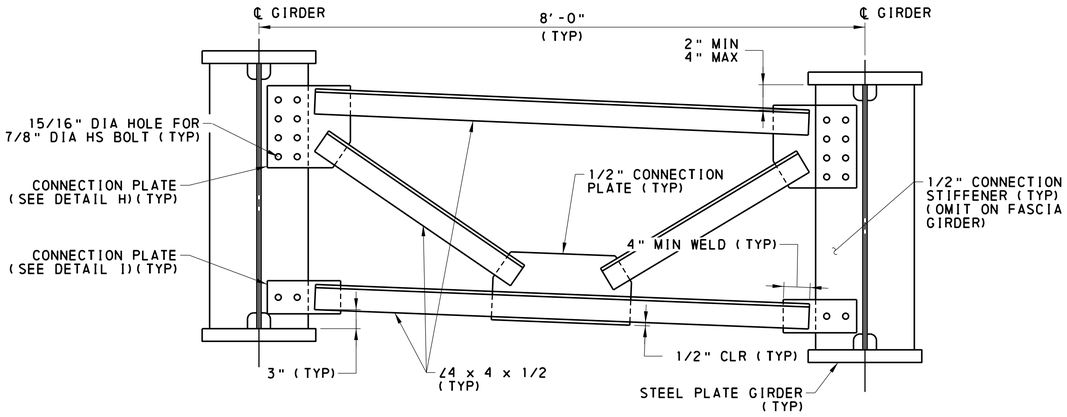
DETAIL F

0.5 0 0.25 0.5 1 FOOT



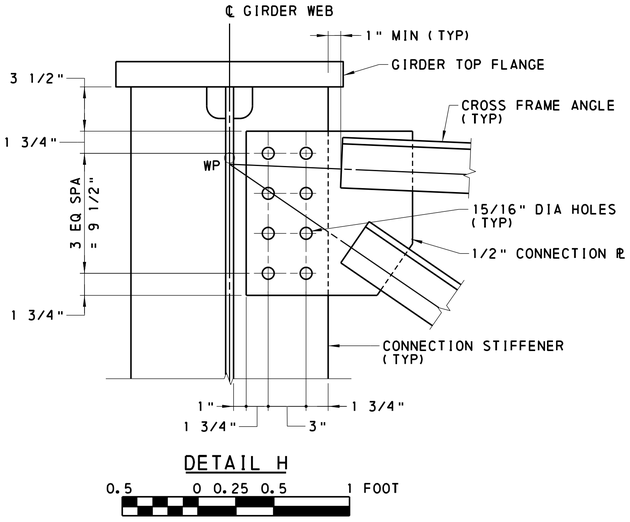
DETAIL G

0.5 0 0.25 0.5 1 FOOT



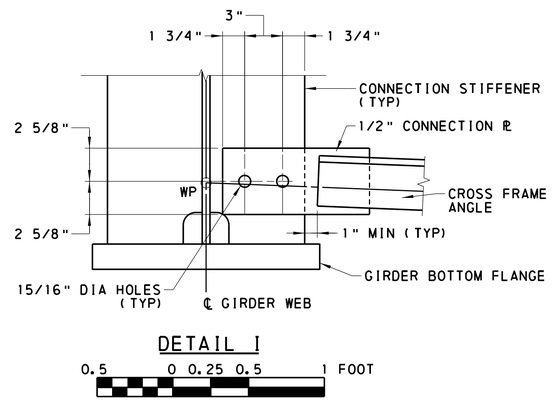
TYPICAL PIER CROSS FRAME

1 0 0.5 1 2 FEET



DETAIL H

0.5 0 0.25 0.5 1 FOOT



DETAIL I

0.5 0 0.25 0.5 1 FOOT

NOTES:

1. SEE BC-753M AND BC-754M FOR ADDITIONAL CROSS FRAME DETAILS.
2. PROVIDE STEEL CROSS FRAMES AND CONNECTION PLATES CONFORMING TO AASHTO M270 GRADE 50W (ASTM A709-50W).
3. PROVIDE BOLTED CONNECTIONS WITH STANDARD HOLES. USE 7/8" DIAMETER ASTM DESIGNATION A325 TYPE 3 BOLTS, UNLESS OTHERWISE NOTED.
4. PROVIDE CLASS B FAYING SURFACES FOR ALL CONNECTION PLATES.
5. TERMINATE WELD 1/2" SHORT OF EDGE AT EACH END OF EACH WELD.
6. SEE SHEET 34 FOR FRAMING PLAN.
7. SEE SHEET 36 FOR STIFFENER DETAILS.

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE

CROSS FRAME DETAILS

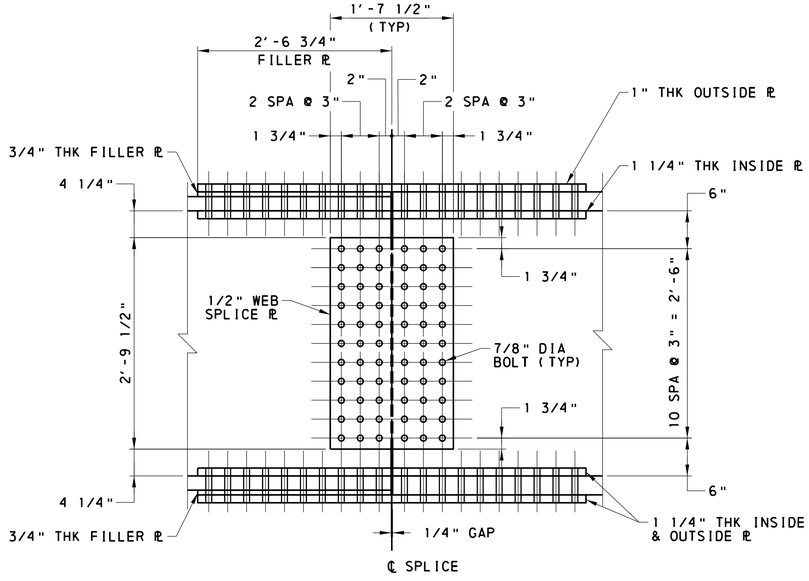
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

RECOMMENDED 03/04/2024

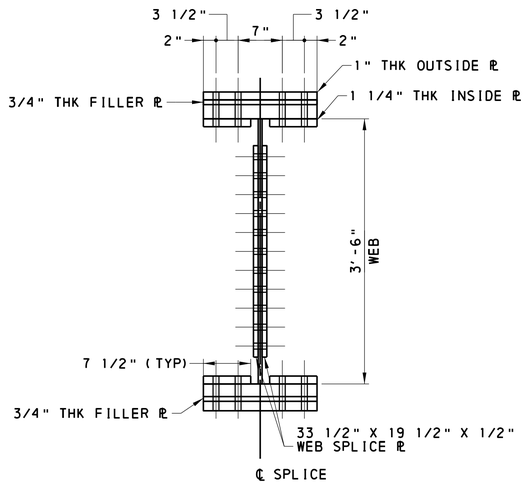
SHEET 37 OF 85

S-39603

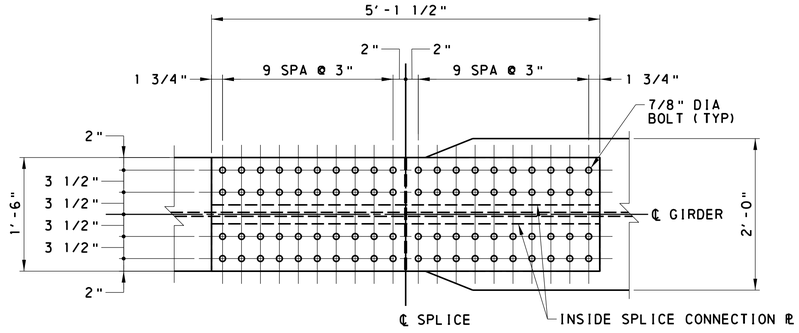
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 29 CROSS FRAME DETAILS
Date: 8/9/2024 12:59:37 PM By: laura.hower



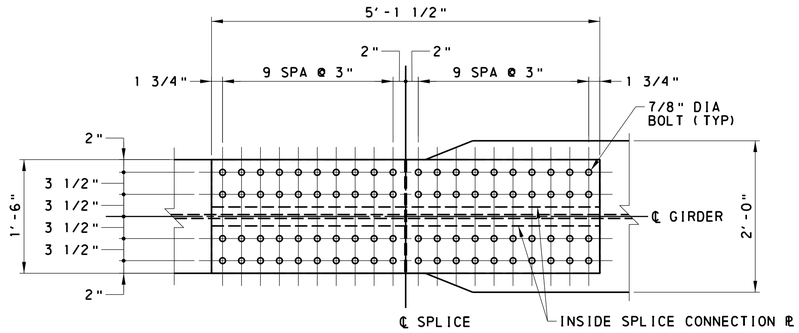
ELEVATION



SECTION @ ℄ SPLICE



TOP FLANGE FIELD SPLICE
(LOOKING DOWN)



BOTTOM FLANGE FIELD SPLICE
(LOOKING UP)

FIELD SPLICE DETAILS

1 0 0.5 1 2 FEET

NOTES:

1. SEE BC-753M FOR ADDITIONAL FIELD SPLICE DETAILS.
2. PROVIDE STEEL FIELD SPLICE PLATES CONFORMING TO AASHTO M270 GRADE 50W (ASTM A709 GRADE 50W). FILL PLATES TO BE AN APPROVED WEATHERING STEEL EQUIVALENT.
3. PROVIDE BOLTED CONNECTIONS WITH STANDARD HOLES. USE 7/8" DIAMETER ASTM DESIGNATION A325 TYPE 3 BOLTS. INSTALL FLANGE BOLTS WITH THE BOLT HEAD UP.
4. PROVIDE CLASS B FAYING SURFACES FOR ALL SPLICE PLATES.
5. CHARPY V-NOTCH TEST ALL FIELD SPLICE PLATES (EXCEPT FILLER PLATES) IN ACCORDANCE WITH PUB 408, SECTION 1105.02(a)5.
6. USE ONLY ONE FILLER PLATE WHERE REQUIRED.
7. EXCLUDE BOLT THREADS FROM SHEAR PLANE.
8. SEE SHEET 34 FOR FRAMING PLAN.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
FIELD SPLICE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 38 OF 85

S-39603

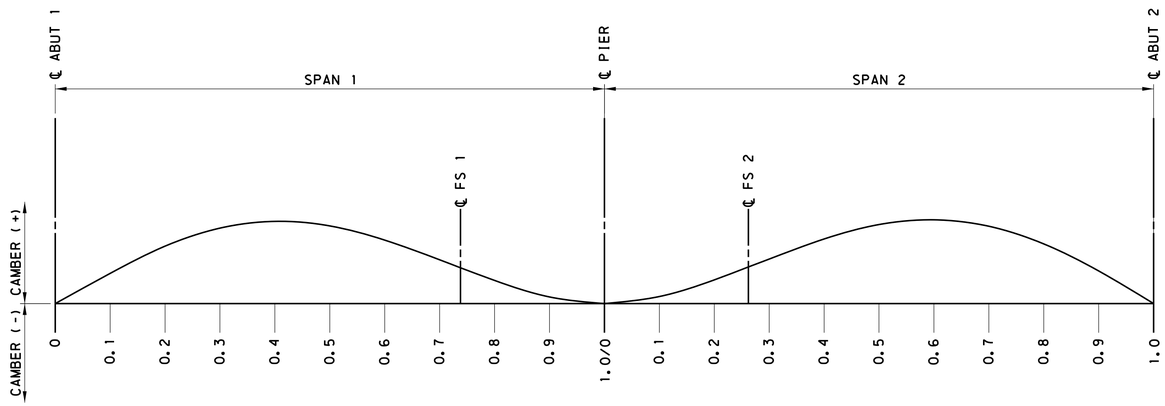
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 0435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 130 FIELD SPLICE DETAILS
Date: 3/4/2024 12:59:37 PM By: laura.hower

TABLE OF CAMBER ORDINATES (INCH)

		ABUT 1	SPAN 1									PIER
		0.0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	FS	0.8L	0.9L	1.0L
GIRDER 1	Wsteel	0.00	0.42	0.77	1.00	1.09	1.03	0.84	0.59	0.48	0.31	0.09	0.00
	Wdeck	0.00	0.96	1.76	2.28	2.47	2.32	1.90	1.30	1.07	0.69	0.20	0.00
	Wsdl	0.00	0.27	0.49	0.63	0.69	0.65	0.53	0.37	0.30	0.20	0.06	0.00
	Geometric	0.00	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	0.00
	TOTAL	0.00	1.61	2.98	3.88	4.21	3.97	3.25	2.24	1.84	1.19	0.35	0.00
GIRDER 2	Wsteel	0.00	0.43	0.78	1.01	1.10	1.04	0.86	0.59	0.49	0.32	0.09	0.00
	Wdeck	0.00	1.04	1.90	2.46	2.66	2.50	2.04	1.40	1.15	0.74	0.22	0.00
	Wsdl	0.00	0.26	0.47	0.61	0.66	0.63	0.52	0.36	0.29	0.19	0.06	0.00
	Geometric	0.00	-0.20	-0.18	-0.16	-0.13	-0.11	-0.09	-0.07	-0.06	-0.04	-0.02	0.00
	TOTAL	0.00	1.52	2.97	3.92	4.29	4.06	3.32	2.28	1.87	1.20	0.35	0.00
GIRDER 3	Wsteel	0.00	0.43	0.78	1.01	1.10	1.04	0.86	0.59	0.49	0.32	0.09	0.00
	Wdeck	0.00	1.04	1.90	2.46	2.66	2.50	2.04	1.40	1.15	0.74	0.22	0.00
	Wsdl	0.00	0.26	0.47	0.61	0.66	0.63	0.52	0.36	0.29	0.19	0.06	0.00
	Geometric	0.00	-0.13	-0.12	-0.10	-0.09	-0.07	-0.06	-0.04	-0.04	-0.03	-0.01	0.00
	TOTAL	0.00	1.59	3.03	3.98	4.34	4.10	3.35	2.31	1.89	1.22	0.35	0.00
GIRDER 4	Wsteel	0.00	0.43	0.78	1.01	1.10	1.04	0.86	0.59	0.49	0.32	0.09	0.00
	Wdeck	0.00	1.04	1.90	2.46	2.66	2.50	2.04	1.40	1.15	0.74	0.22	0.00
	Wsdl	0.00	0.26	0.47	0.61	0.66	0.63	0.52	0.36	0.29	0.19	0.06	0.00
	Geometric	0.00	0.19	0.17	0.15	0.13	0.11	0.08	0.06	0.06	0.04	0.02	0.00
	TOTAL	0.00	1.91	3.31	4.23	4.55	4.27	3.50	2.41	1.99	1.29	0.39	0.00
GIRDER 5	Wsteel	0.00	0.43	0.78	1.01	1.10	1.04	0.86	0.59	0.49	0.32	0.09	0.00
	Wdeck	0.00	1.04	1.90	2.46	2.66	2.50	2.04	1.40	1.15	0.74	0.22	0.00
	Wsdl	0.00	0.26	0.47	0.61	0.66	0.63	0.52	0.36	0.29	0.19	0.06	0.00
	Geometric	0.00	0.75	0.66	0.58	0.50	0.41	0.33	0.25	0.22	0.17	0.08	0.00
	TOTAL	0.00	2.46	3.81	4.66	4.92	4.58	3.74	2.60	2.15	1.41	0.45	0.00
GIRDER 6	Wsteel	0.00	0.42	0.77	1.00	1.09	1.03	0.84	0.59	0.48	0.31	0.09	0.00
	Wdeck	0.00	0.96	1.76	2.28	2.47	2.32	1.90	1.30	1.07	0.69	0.20	0.00
	Wsdl	0.00	0.27	0.49	0.63	0.69	0.65	0.53	0.37	0.30	0.20	0.06	0.00
	Geometric	0.00	1.45	1.36	1.19	1.02	0.85	0.68	0.51	0.45	0.34	0.17	0.00
	TOTAL	0.00	3.09	4.38	5.11	5.26	4.85	3.95	2.76	2.30	1.54	0.52	0.00

TABLE OF CAMBER ORDINATES (INCH)

		PIER	SPAN 2									ABUT 2
		0.0L	0.1L	0.2L	FS	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
GIRDER 1	Wsteel	0.00	0.09	0.31	0.48	0.59	0.84	1.03	1.09	1.00	0.77	0.42	0.00
	Wdeck	0.00	0.20	0.69	1.07	1.30	1.90	2.32	2.47	2.28	1.76	0.96	0.00
	Wsdl	0.00	0.06	0.20	0.30	0.37	0.53	0.65	0.69	0.63	0.49	0.27	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.35	1.20	1.85	2.25	3.27	4.00	4.24	3.91	3.02	1.65	0.00
GIRDER 2	Wsteel	0.00	0.09	0.32	0.49	0.59	0.86	1.04	1.10	1.01	0.78	0.43	0.00
	Wdeck	0.00	0.22	0.74	1.15	1.40	2.04	2.50	2.66	2.46	1.90	1.04	0.00
	Wsdl	0.00	0.06	0.19	0.29	0.36	0.52	0.63	0.66	0.61	0.47	0.26	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.37	1.25	1.93	2.35	3.41	4.17	4.42	4.08	3.15	1.72	0.00
GIRDER 3	Wsteel	0.00	0.09	0.32	0.49	0.59	0.86	1.04	1.10	1.01	0.78	0.43	0.00
	Wdeck	0.00	0.22	0.74	1.15	1.40	2.04	2.50	2.66	2.46	1.90	1.04	0.00
	Wsdl	0.00	0.06	0.19	0.29	0.36	0.52	0.63	0.66	0.61	0.47	0.26	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.37	1.25	1.93	2.35	3.41	4.17	4.42	4.08	3.15	1.72	0.00
GIRDER 4	Wsteel	0.00	0.09	0.32	0.49	0.59	0.86	1.04	1.10	1.01	0.78	0.43	0.00
	Wdeck	0.00	0.22	0.74	1.15	1.40	2.04	2.50	2.66	2.46	1.90	1.04	0.00
	Wsdl	0.00	0.06	0.19	0.29	0.36	0.52	0.63	0.66	0.61	0.47	0.26	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.37	1.25	1.93	2.35	3.41	4.17	4.42	4.08	3.15	1.72	0.00
GIRDER 5	Wsteel	0.00	0.09	0.32	0.49	0.59	0.86	1.04	1.10	1.01	0.78	0.43	0.00
	Wdeck	0.00	0.22	0.74	1.15	1.40	2.04	2.50	2.66	2.46	1.90	1.04	0.00
	Wsdl	0.00	0.06	0.19	0.29	0.36	0.52	0.63	0.66	0.61	0.47	0.26	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.37	1.25	1.93	2.35	3.41	4.17	4.42	4.08	3.15	1.72	0.00
GIRDER 6	Wsteel	0.00	0.09	0.31	0.48	0.59	0.84	1.03	1.09	1.00	0.77	0.42	0.00
	Wdeck	0.00	0.20	0.69	1.07	1.30	1.90	2.32	2.47	2.28	1.76	0.96	0.00
	Wsdl	0.00	0.06	0.20	0.30	0.37	0.53	0.65	0.69	0.63	0.49	0.27	0.00
	Geometric	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.00	0.35	1.20	1.85	2.25	3.27	4.00	4.24	3.91	3.02	1.65	0.00



GIRDER CAMBER DIAGRAM
NOT TO SCALE

LEGEND

Wsteel	DEFLECTION DUE TO GIRDER SELF WEIGHT, CROSS FRAMES AND OTHER MISCELLANEOUS STEEL ATTACHMENTS.
Wdeck	DEFLECTION DUE TO WEIGHT OF DECK, HAUNCHES AND PERMANENT METAL DECK FORMS.
Wsdl	DEFLECTION DUE TO WEIGHT OF BARRIER.
GEO	GEOMETRIC CAMBER DUE TO DECK SUPERELEVATION AND VERTICAL CURVATURE

NOTES:

1. TENTH POINTS ARE MEASURED ALONG GIRDER CENTERLINE.
2. CAMBER DUE TO WEIGHT OF DECK WAS DETERMINED FROM AN ANALYSIS IN WHICH THE WEIGHT OF THE DECK SLAB IS APPLIED ALL AT ONCE.
3. SUPERIMPOSED DEAD LOAD DOES NOT INCLUDE FUTURE WEARING SURFACE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STEEL GIRDER CAMBER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

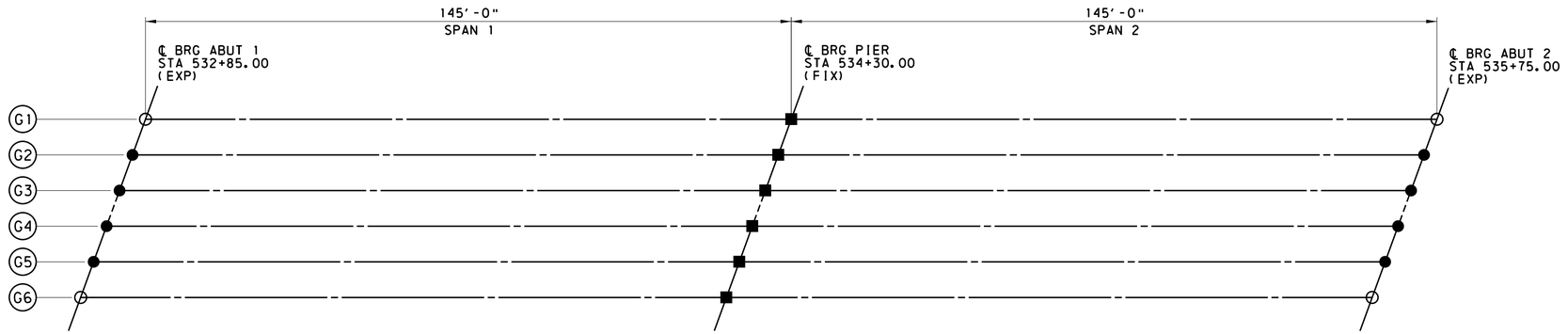
RECOMMENDED 03/04/2024

SHEET 39 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Mode: 31 STEEL GIRDER CAMBER 3/4/2024 11:05:23 PM By: laura.hower



BEARING LAYOUT PLAN
(NOT TO SCALE)

GENERAL NOTES:

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408, ANSI/AASHTO/AWS/D1.5 BRIDGE WELDING CODE AND CONTRACT SPECIAL PROVISIONS.
2. SANDBLAST IN ACCORDANCE WITH SSPC-SP10 TO REMOVE MILL SCALE FROM BEARINGS.
3. GRIND SMOOTH ALL STEEL SURFACES AND EDGES AND REMOVE ANY SHARP PROTRUSIONS. FABRICATION TOLERANCES AND THE LIMITATIONS ON SURFACE FINISH WILL BE IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.
4. PAINT ALL STEEL SURFACES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060. APPLY ALL COATS IN THE FABRICATION SHOP ONLY. DO NOT PAINT PTFE, STAINLESS STEEL OR THE INSIDE OF THE POT. APPLY ONLY PRIME COAT TO THE CONTACT AREA BETWEEN BEAM BOTTOM FLANGE AND SOLE PLATE AND TO THE BOTTOM SIDE OF THE MASONRY PLATE.
5. ROUND ALL PTFE CORNERS TO ACCOMMODATE THE MACHINED RECESS IN STEEL GUIDE PLATE/ PISTON
6. ETCH PTFE ON ONE SIDE FOR BONDING INTO THE MACHINED RECESS.
7. PTFE ON THE SIDE OF GUIDE PLATE MUST BE PIGMENTED.
8. PRIOR TO THE APPLICATION OF ADHESIVE, CLEAN ALL MATING STEEL AND PTFE SURFACES BY GRIT BLASTING AND DEGREASING. APPLY ADHESIVE AS PER THE MANUFACTURE'S RECOMMENDATION.
9. LUBRICATE ALL SURFACES OF NEOPRENE DISC WITH SILICONE GREASE IN ACCORDANCE WITH MILITARY SPECIFICATION SAE-AS8660.
10. CUT FLAT BRASS SEALING RING ENDS AT 45° ANGLE WITH A MAXIMUM GAP OF 0.05". STAGGER THE OPENINGS IN THE BRASS RINGS 120° APART.
11. MARK THE THICKER EDGE OF THE SOLE PLATE AS SUCH FOR THE PURPOSE OF FIELD IDENTIFICATION. PLACE MARK ON THE EDGE OF SOLE PLATE SO THAT IT WILL BE VISIBLE AFTER BEARING INSTALLATION. IN THE CASE OF A SOLE PLATE WITH A COMPOUND BEVEL PLACE THE MARK ON EITHER EDGE OF THE THICKEST SOLE PLATE CORNER.
12. MARK CENTERLINE OF GUIDED AND NON-GUIDED POT BEARING ON THE SIDES OF MASONRY PLATE AND SOLE PLATE. THE CENTERLINE IDENTIFICATION MARKS WILL BE USEFUL TO LOCATE OFFSET DISTANCES IN THE FIELD. USE INDELIBLE INK TO PLACE ALL MARKS.
13. MARK EACH BEARING WITH THE NAME OF THE MANUFACTURER AND TYPE OR MODEL NUMBER. PLACE THE IDENTIFICATION MARK IN A PERMANENT MANNER AND LOCATION SO THAT IT IS VISIBLE AFTER ERECTION.
14. WHEN THE POT IS RECESSED INTO THE MASONRY PLATE SEAL AROUND THE POT PERIMETER WITH AN APPROVED CAULKING COMPOUND IN THE SHOP AFTER PAINT COATING HAS DRIED.
15. ENSURE ALL BEARING SURFACES INCLUDING THE BEARING SEAT ARE LEVEL PRIOR TO INSTALLATION OF POT BEARINGS IN ACCORDANCE WITH PUBLICATION 408.
16. TEST ONE BEARING PER TYPE OR PER LOT SIZE OF 25 FOR A HORIZONTAL FORCE CAPACITY PRIOR TO SHIPMENT.

MATERIALS:

1. STRUCTURAL STEEL:
   MATERIAL 4" THICK OR LESS - AASHTO M270 (ASTM A709/A A709M) GRADE 50
   MATERIAL GREATER THAN 4" THICK - ASTM A572 GRADE 50
2. ANCHOR BOLTS: ASTM F1554, GRADE 55.
3. NUTS: ASTM A563, GRADE DH.
4. WASHERS: ASTM F436, TYPE 1.
5. GALVANIZING OF ANCHOR BOLTS, NUTS AND WASHERS: PUBLICATION 408, SECTION 1105.02(S).
6. STAINLESS STEEL: ASTM A240, GRADE 30, TYPE 304 WITH AN ANSI 0.02 mil SURFACE FINISH OR LESS.
7. FLAT BRASS SEALING RINGS: ASTM B36 (HALF HARD) SPECIFICATION.
8. ELASTOMERIC DISC: VIRGIN PLAIN NEOPRENE OR NATURAL RUBBER WITH HARDNESS OF 50 DUROMETER (+/-10) PER AASHTO M251.
9. MAIN SLIDING SURFACE PTFE: (UNFILLED, DIMPLED AND LUBRICATED) MADE FROM VIRGIN TFE RESIN PER ASTM D4894. DIMPLES MUST HAVE A MINIMUM EDGE DISTANCE OF 0.5 INCHES AND CONFORM TO 1998 AASHTO LRFD SECTION 14.7.2.
10. GUIDE BAR SURFACE PTFE: (PIGMENTED, FILLED OR UNFILLED) MADE FROM VIRGIN TFE RESIN PER ASTM D4894.
11. CAULK FOR SEALING AROUND THE POT PERIMETER: SIKAFLEX 1A OR APPROVED EQUAL.
12. BEDDING MATERIAL: PUBLICATION 408, SECTION 1113.03 (h). TYPE II.

MATERIAL DESIGN PARAMETERS:

1. ALLOWABLE PRESSURE IN ELASTOMER AND PTFE:
   MAXIMUM = 3500 psi ELASTOMER AND PTFE
   MINIMUM = 700 psi ELASTOMER
2. COEFFICIENT OF FRICTION BETWEEN PTFE AND STAINLESS STEEL: 0.04.
3. CONCRETE BEARING STRENGTH: f'c=3000 psi.
4. DESIGN ROTATION (ALL BEARINGS): 0.03 RADIANS (INCLUDING 0.02 RADIANS OF CONSTRUCTION TOLERANCE).

ANCHOR BOLT INSTALLATION:

1. IF ANCHOR BOLTS ARE INSTALLED BEFORE THE MASONRY PLATE INSTALLATION, USE TYPICAL ANCHOR BOLT DETAIL. THE USE OF A BLOCKOUT FORM IS OPTIONAL.
2. IF ANCHOR BOLTS ARE INSTALLED AFTER THE BEARINGS ARE INSTALLED, USE ALTERNATE ANCHOR BOLT DETAIL.
3. IF BLOCKOUTS ARE USED, REMOVE BLOCKOUT FORM AND DEBRIS FROM HOLE PRIOR TO GROUTING. INSTALL NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1001. DO NOT GROUT UNTIL ALL UNITS ARE PROPERLY ALIGNED.
4. PREVENT WATER FROM ACCUMULATING IN THE PREFORMED ANCHOR BOLT HOLES AND ENSURE HOLES ARE COMPLETELY FILLED WITH GROUT.

LEGEND

HLMR	HIGH LOAD MULTI-ROTATIONAL
PTFE	POLYTETRAFLUOROETHYLENE
■	FIXED HLMR POT BEARING (700 KIP)
●	GUIDED HLMR POT BEARING (300 KIP)
○	NON-GUIDED HLMR POT BEARING (300 KIP)
(G1)	GIRDER NUMBER

NOTES:

1. SEE SHEET 41 FOR HLMR BEARING DESIGN LOADS.
2. SEE SHEET 42 FOR FIXED HLMR POT BEARING DETAILS.
3. SEE SHEET 43 FOR GUIDED HLMR POT BEARING DETAILS.
4. SEE SHEET 44 FOR NON-GUIDED HLMR POT BEARING DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
BEARING PLAN & NOTES

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 40 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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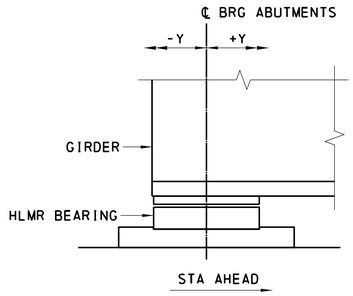
Mode: 32 BRG PLAN AND NOTES 4/2024 12:59:38 PM By: laura.hower

HLMR POT BEARING DESIGN SCHEDULE

LOCATION	BEARING TYPE	LIMIT STATE	FACTORED LOADS (kips) VERTICAL MIN	VERTICAL MAX	HORIZONTAL TRANSVERSE	HORIZONTAL LONGITUDINAL	HORIZONTAL RESOLUTION	ROTATIONS (RADIANS) SERVICE LONGITUDINAL ROTATION	SERVICE TRANSVERSE ROTATION	TOTAL LONGITUDINAL ROTATION	TOTAL TRANSVERSE ROTATION	MOVEMENTS (in) MAXIMUM LONGITUDINAL (ONE-WAY)	MAXIMUM TRANSVERSE (ONE-WAY)
ABUT 1	NG	STR-I	55	339	0	0	0	0.0055	0.0000	0.0255	0.0200	0.88	0.00
		STR-III	42	144	0	0	0						
		STR-V	50	302	0	0	0						
		SER-I	65	234	0	0	0						
		EXT-I	76	178	0	0	0						
	G	STR-I	55	375	0	0	0	0.0051	0.0000	0.0251	0.0200	0.88	0.00
		STR-III	53	167	42	0	42						
		STR-V	53	337	13	0	13						
		SER-I	69	261	11	0	11						
		EXT-I	79	186	36	0	36						
PIER	FIX	STR-I	238	861	0	19	19	0.0034	0.0000	0.0234	0.0200	0.00	0.00
		STR-III	170	446	84	48	97						
		STR-V	219	786	26	33	42						
		SER-I	250	609	21	28	35						
		EXT-I	238	484	62	110	129						
ABUT 2	NG	STR-I	55	339	0	0	0	0.0055	0.0000	0.0255	0.0200	0.88	0.00
		STR-III	42	144	0	0	0						
		STR-V	50	302	0	0	0						
		SER-I	65	234	0	0	0						
		EXT-I	76	178	0	0	0						
	G	STR-I	55	375	0	0	0	0.0051	0.0000	0.0251	0.0200	0.88	0.00
		STR-III	53	167	42	0	42						
		STR-V	53	337	13	0	13						
		SER-I	69	261	11	0	11						
		EXT-I	79	186	36	0	36						

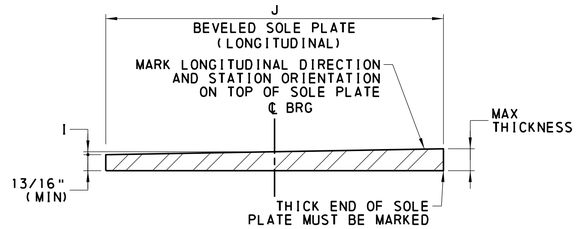
UNFACTORED JACKING LOADS

LOCATION	LOAD	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6
ABUTMENT 1	DL	139	146	146	146	146	139
	LL+IM	92	108	108	108	108	92
PIER	DL	365	379	379	379	379	365
	LL+IM	183	216	216	216	216	183
ABUTMENT 2	DL	139	146	146	146	146	139
	LL+IM	92	108	108	108	108	92



SETTING DIMENSION

STEEL TEMPERATURE (°F)	Y (in) ABUTMENT 1	Y (in) ABUTMENT 2
-10	7/8	- 7/8
0	3/4	- 3/4
10	5/8	- 5/8
20	1/2	- 1/2
30	7/16	- 7/16
40	3/8	- 3/8
50	1/4	- 1/4
60	1/8	- 1/8
70	0	0
80	- 1/8	1/8
90	- 1/4	1/4
100	- 3/8	3/8
110	- 1/2	1/2



BEVELED SOLE PLATE

(NOT TO SCALE)

BEVELED SOLE PLATE

LOCATION	BEARING TYPE	J (in)	I (in)	MAX THICKNESS (in)
ABUTMENTS	G	12 3/4	15 3/4	13/16
ABUTMENTS	NG	21	18 5/8	13/16
PIER	FIX	20 3/4	20 3/4	13/16

LEGEND

HLMR	HIGH LOAD MULTI-ROTATIONAL
FIX	FIXED HLMR POT BEARING
G	GUIDED HLMR POT BEARING
NG	NON-GUIDED HLMR POT BEARING

NOTES:

1. BOTTOM OF GIRDER LONGITUDINAL SLOPES SHOWN ARE BASED ON PROFILE GRADE AND SUPERELEVATION TRANSITION.
2. UNFACTORED DL JACKING LOADS INCLUDE FUTURE WEARING SURFACE.
3. HORIZONTAL LOADS FOR THE EXTREME EVENT (EXT-I) LIMIT STATE HAVE BEEN DIVIDED BY 1.50.
4. FRICTIONAL RESISTANCE OF BEARING SLIDE SURFACES IS NOT INCLUDED WITH HORIZONTAL LOADS SHOWN.
5. TOTAL LONGITUDINAL AND TRANSVERSE ROTATIONS INCLUDE A CONSTRUCTION TOLERANCE OF 0.020 RADIANS.
6. LONGITUDINAL AND TRANSVERSE (ONE-WAY) MOVEMENTS ARE BASED ON A TEMPERATURE VARIATION OF 78° F (MAXIMUM OF EITHER RISE OR FALL). MULTIPLY BY 2 FOR TOTAL DESIGN MOVEMENT FROM 156° F TEMPERATURE RANGE (DM4 3.12.2.1).
7. EXPANSION BEARINGS ARE SIZED FOR A 1" CONSTRUCTION TOLERANCE IN EACH DIRECTION LONGITUDINALLY.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
HLMR POT BEARING DESIGN LOADS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 41 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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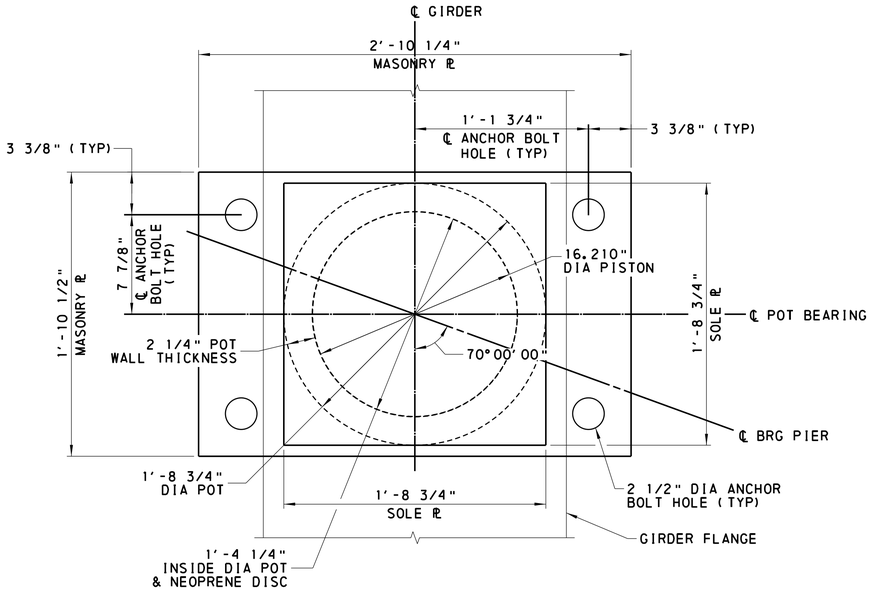
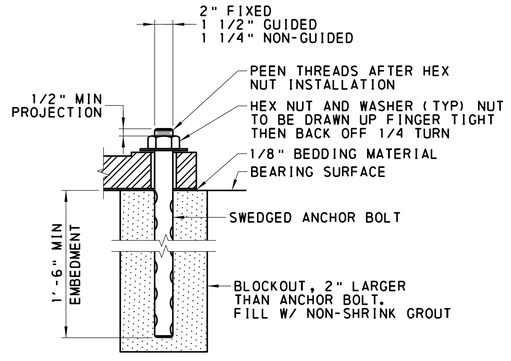


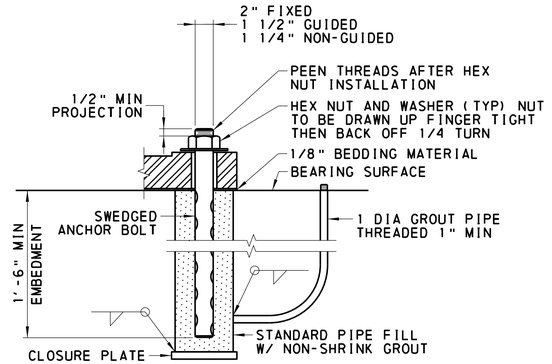
FIXED HLMR POT BEARING PLAN

0.5 0 0.25 0.5 1 FOOT



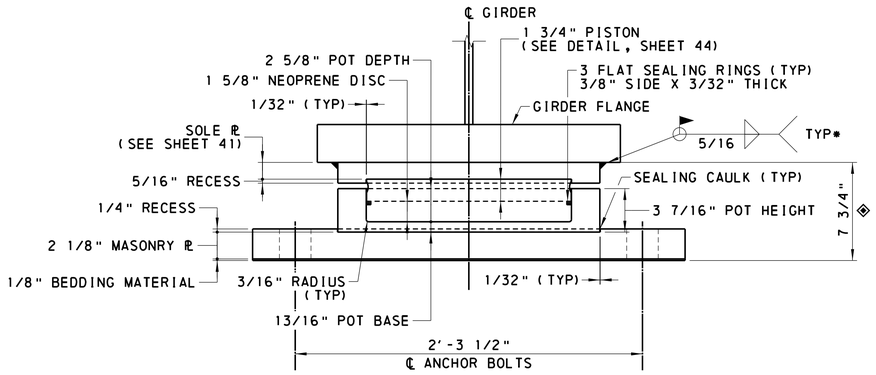
TYPICAL ANCHOR BOLT DETAIL

PORTION OF BEARING NOT SHOWN FOR CLARITY
(NOT TO SCALE)



ALTERNATE ANCHOR BOLT DETAIL

PORTION OF BEARING NOT SHOWN FOR CLARITY
(NOT TO SCALE)



FIXED HLMR POT BEARING SECTION

0.5 0 0.25 0.5 1 FOOT

LEGEND

HLMR	HIGH LOAD MULTI-ROTATIONAL
◈	MEASURED AT ℄ BRG
*	REQUIRED WELD LENGTH = 34"

NOTES:

1. REFER TO BC-756M FOR ADDITIONAL HLMR POT BEARING DETAILS.
2. SEE SHEET 40 FOR BEARING PLAN & NOTES.
3. SEE SHEET 41 FOR HLMR BEARING DESIGN LOADS AND SOLE PLATE DETAIL.
4. SEE SHEET 44 FOR TYPICAL PISTON DETAIL.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
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SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
HLMR POT BEARING DETAILS - FIXED

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 42 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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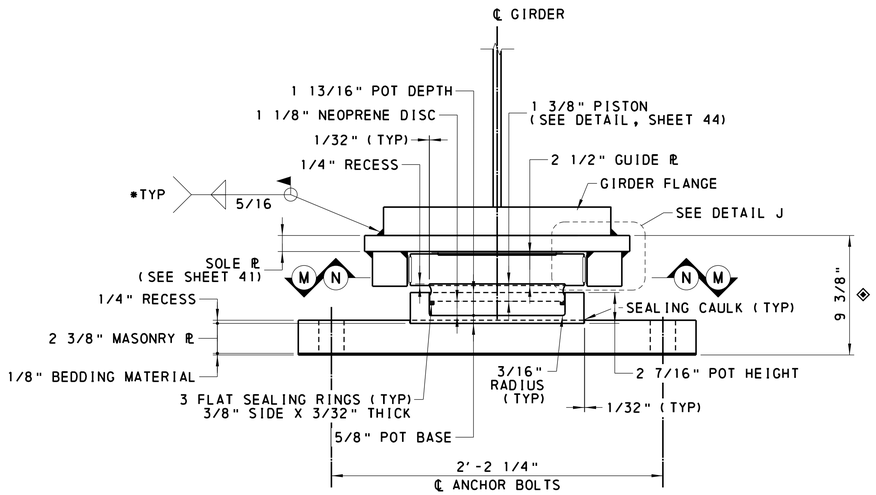
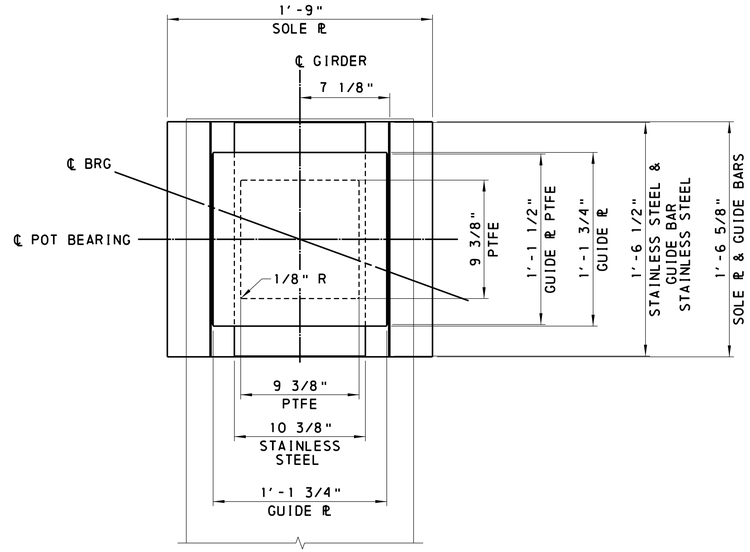


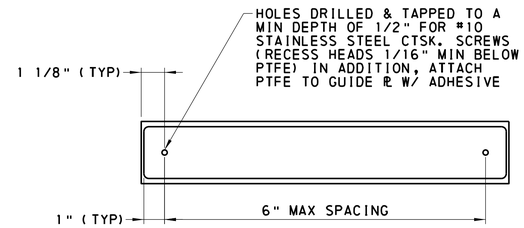
GUIDED HLMR POT BEARING SECTION

0.5 0 0.25 0.5 1 FOOT



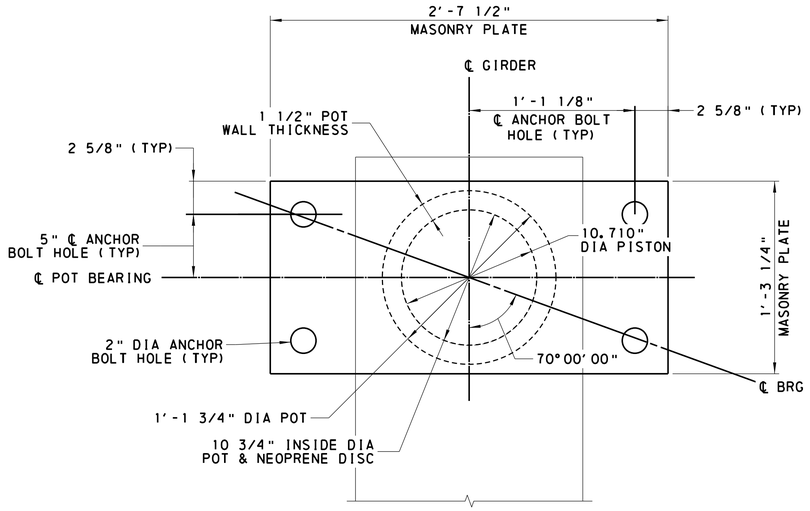
SECTION N-N

0.5 0 0.25 0.5 1 FOOT



TYPICAL GUIDE ℞ PTFE DETAIL

(GUIDED BEARINGS ONLY)
(NOT TO SCALE)



SECTION M-M

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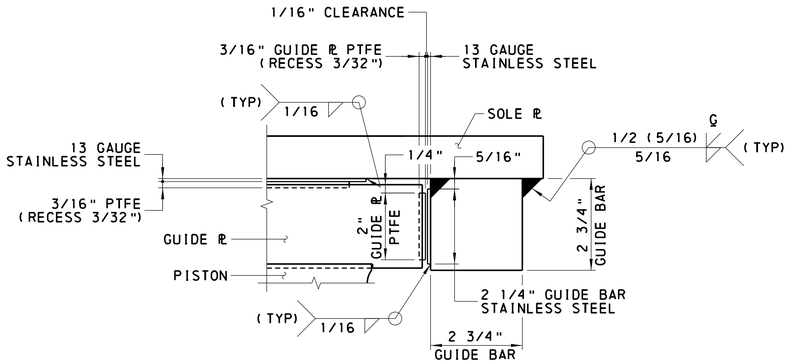

DETAIL J

(GUIDED BEARINGS ONLY)
NOTE: SEE TYPICAL GUIDE ℞ PTFE DETAIL
(NOT TO SCALE)

LEGEND

HLMR	HIGH LOAD MULTI-ROTATIONAL
PTFE	POLYTETRAFLUOROETHYLENE
◈	MEASURED AT ℄ BRG
*	REQUIRED WELD LENGTH = 10"

NOTES:

1. REFER TO BC-756M FOR ADDITIONAL HLMR POT BEARING DETAILS.
2. SEE SHEET 40 FOR BEARING PLAN & NOTES.
3. SEE SHEET 41 FOR HLMR BEARING DESIGN LOADS AND SOLE PLATE DETAIL.
4. SEE SHEET 44 FOR TYPICAL PISTON DETAIL.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
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TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
HLMR POT BEARING DETAILS - GUIDED

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 43 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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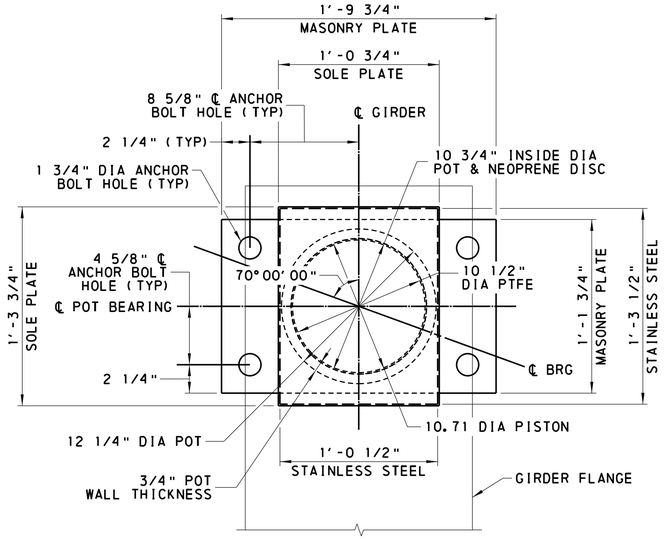
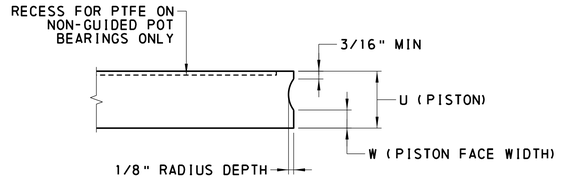


NON-GUIDED HLMR POT BEARING PLAN

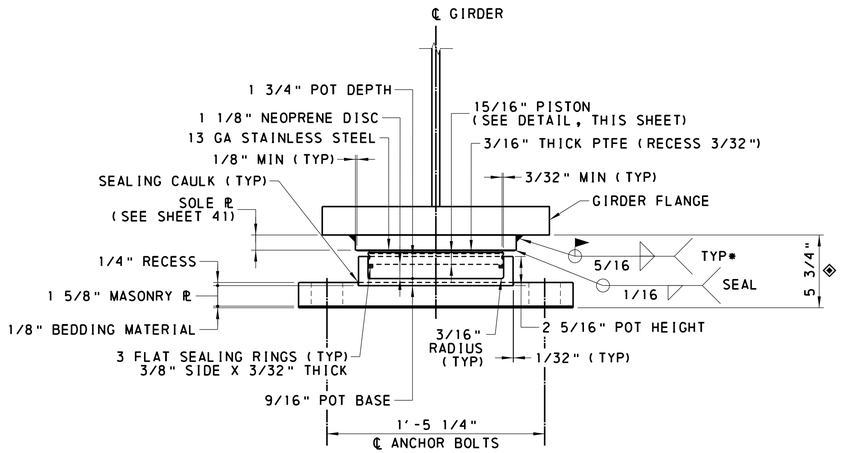
0.5 0 0.25 0.5 1 FOOT



TYPICAL PISTON DETAIL

(NOT TO SCALE)

PISTON		
BEARING TYPE	U (in)	W (in)
G	1 3/8	7/16
NG	15/16	3/8
FIX	1 3/4	11/16



NON-GUIDED HLMR POT BEARING SECTION

0.5 0 0.25 0.5 1 FOOT

LEGEND

HLMR	HIGH LOAD MULTI-ROTATIONAL
PTFE	POLYTETRAFLUOROETHYLENE
◈	MEASURED AT ℄ BRG
*	REQUIRED WELD LENGTH = 10"

NOTES:

1. REFER TO BC-756M FOR ADDITIONAL HLMR POT BEARING DETAILS.
2. SEE SHEET 40 FOR BEARING PLAN & NOTES.
3. SEE SHEET 41 FOR HLMR BEARING DESIGN LOADS AND SOLE PLATE DETAIL.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
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TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
HLMR POT BEARING DETAILS - NON-GUIDED

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 44 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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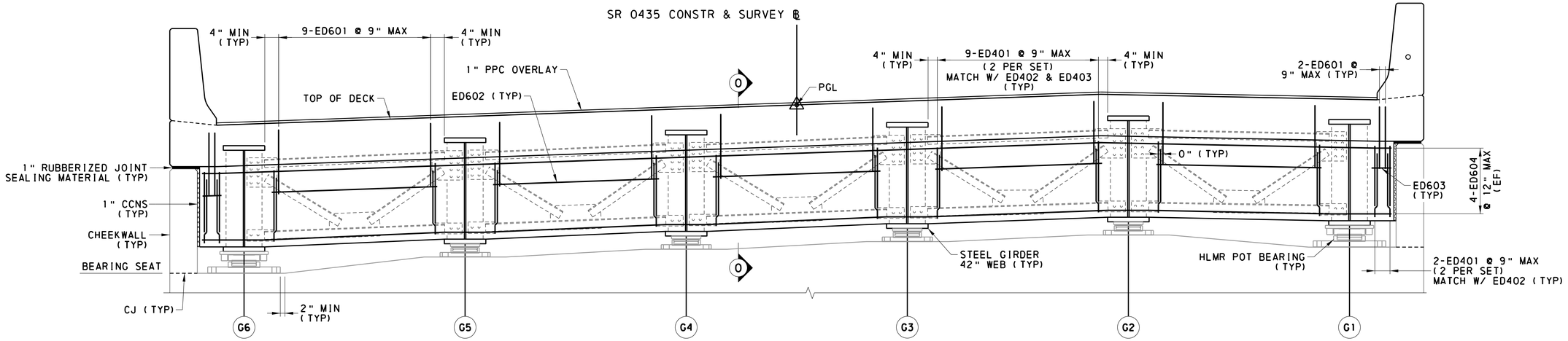
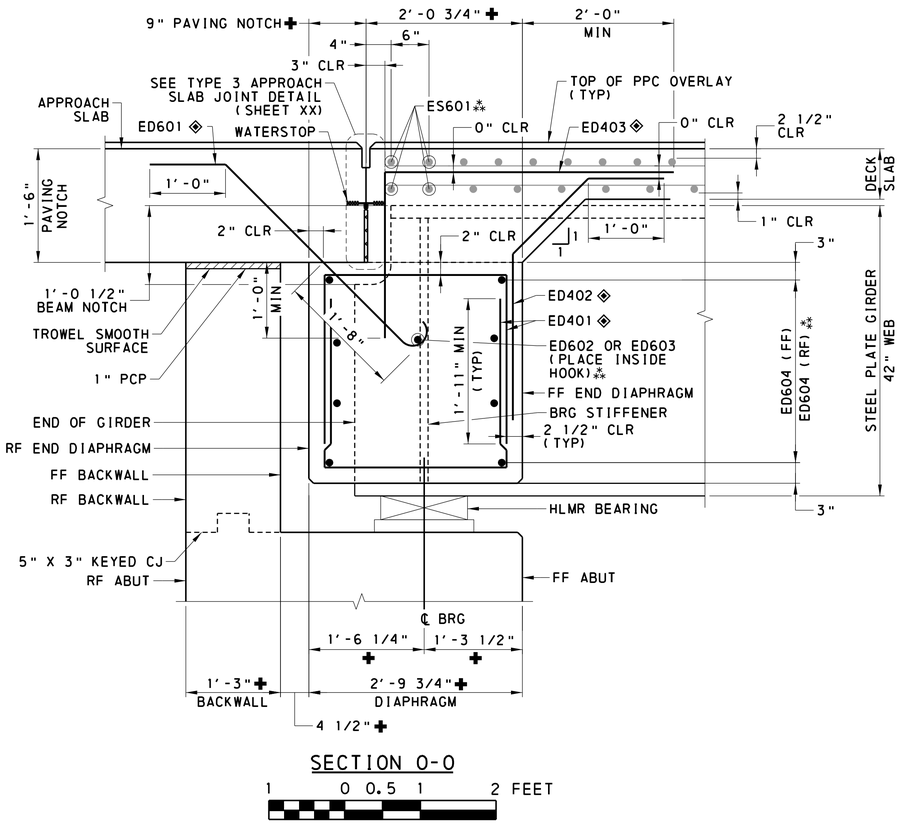


CONCRETE END DIAPHRAGM

(ABUT 1 SHOWN, ABUT 2 SIMILAR)
(LOOKING STA BACK)

2 0 1 2 4 FEET



SECTION O-O

1 0 0.5 1 2 FEET

LEGEND

CCNS	CLOSED CELL NEOPRENE SPONGE
CJ	CONSTRUCTION JOINT
EF	EACH FACE
FF	FRONT FACE
HLMR	HIGH LOAD MULTI-ROTATIONAL
PPC	POLYESTER POLYMER CONCRETE
RF	REAR FACE
✚	MEASURED PERPENDICULAR TO ℄ BEARING
◈	PLACED PARALLEL TO BEAMS & SPACED BETWEEN GIRDER FLANGES
⁂	PLACED PARALLEL TO SKEW

NOTES:

1. SEE BC-788M FOR ADDITIONAL WATERPROOFING DETAILS.
2. SEE SHEET 35 FOR GIRDER ELEVATION.
3. SEE SHEET 52 FOR DECK REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
CONCRETE END DIAPHRAGM DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

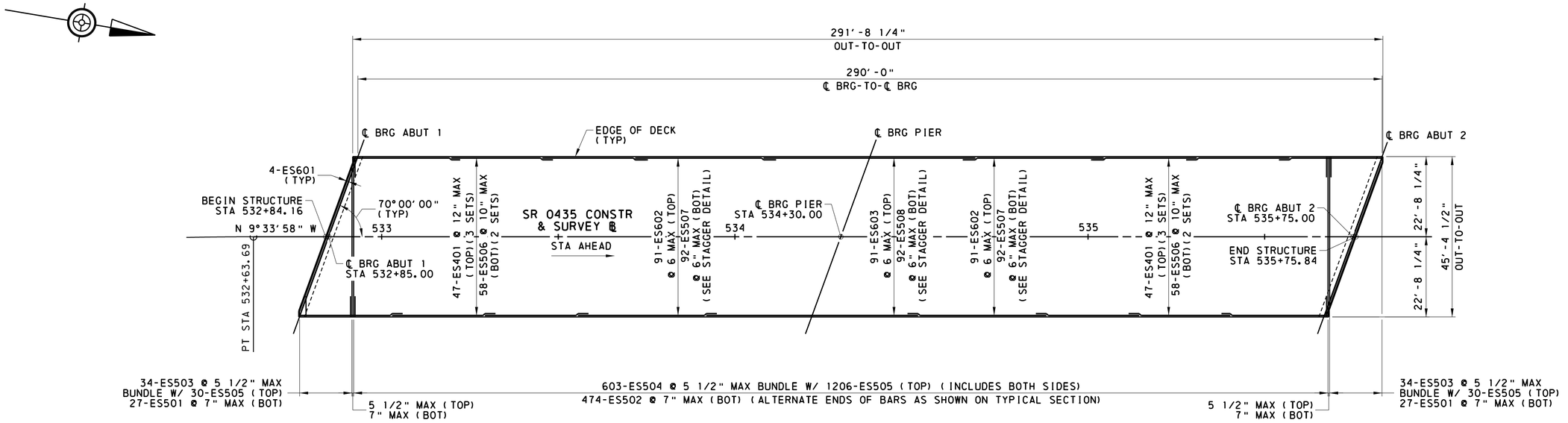
RECOMMENDED 03/04/2024

SHEET 45 OF 85

S-39603

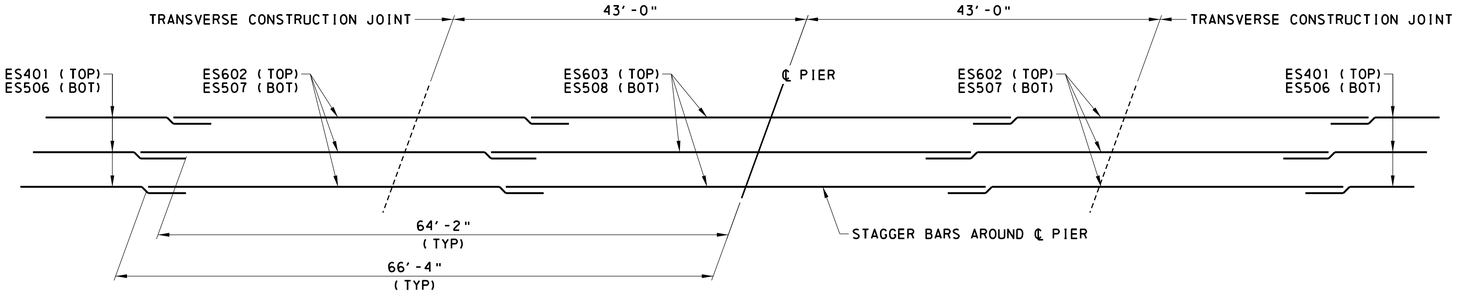
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:36B CONC END DIAPHR
Date/Time:3/4/2024 12:59:40 PM
By:laura.hower



DECK PLAN

16 0 8 16 32 FEET



LONGITUDINAL REINFORCEMENT STAGGER DETAIL IN NEGATIVE MOMENT REGION

NOT TO SCALE

MIN LAP SPLICE LENGTH

#4 - 1'-11"
#5 - 3'-0"
#6 - 3'-7"

NOTES:

1. SEE SHEET 45 FOR CONCRETE END DIAPHRAM DETAILS.
2. SEE SHEETS 47 & 48 FOR TYPICAL DECK SECTIONS.
3. SEE SHEET 49 FOR BARRIER PLAN.
4. SEE SHEET 50 FOR DECK POUR SEQUENCE.
5. SEE SHEET 51 FOR DECK ELEVATIONS.
6. SEE SHEET 52 FOR DECK REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
DECK PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

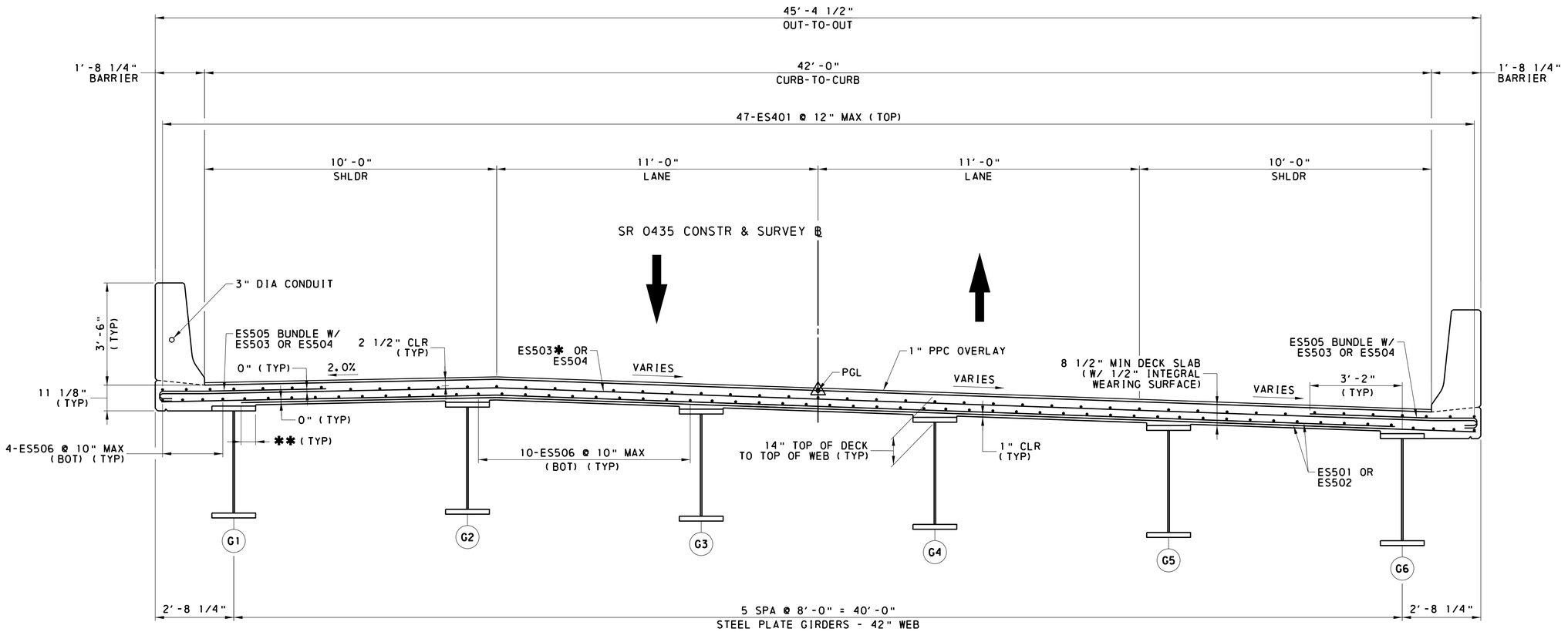
RECOMMENDED 03/04/2024

SHEET 46 OF 85

S-39603

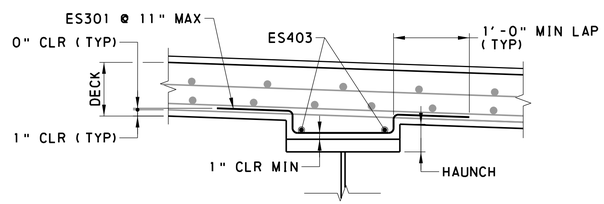
DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 37 DECK PLAN 3/4/2024 12:59:40 PM By: laura.hower



TYPICAL DECK SECTION
(POSITIVE MOMENT)

2 0 1 2 4 FEET



HAUNCH REINFORCEMENT DETAIL

1 0 0.5 1 2 FEET

LEGEND

PPC POLYESTER POLYMER CONCRETE

* OMIT END HOOK AND ES505 AT END OF DECK ALONG SKEW

** ES501 TO EXTEND FULL WIDTH OF DECK AT SKEWED ENDS. ES502 TO EXTEND 6" MIN BEYOND THE INSIDE EDGE OF THE FASCIA GIRDER TOP FLANGE. ALTERNATE EVERY OTHER BAR THE FULL WIDTH OF THE OVERHANG.

NOTES:

1. SEE BC-752M FOR V-NOTCH DETAIL.
2. SEE BC-775M FOR DRIP NOTCH DETAIL.
3. SEE SHEET 46 FOR DECK PLAN.
4. SEE SHEET 49 FOR BARRIER PLAN.
5. SEE SHEET 51 FOR DECK ELEVATIONS.
6. SEE SHEET 52 FOR DECK REINFORCEMENT SCHEDULE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
TYPICAL DECK SECTION - 1

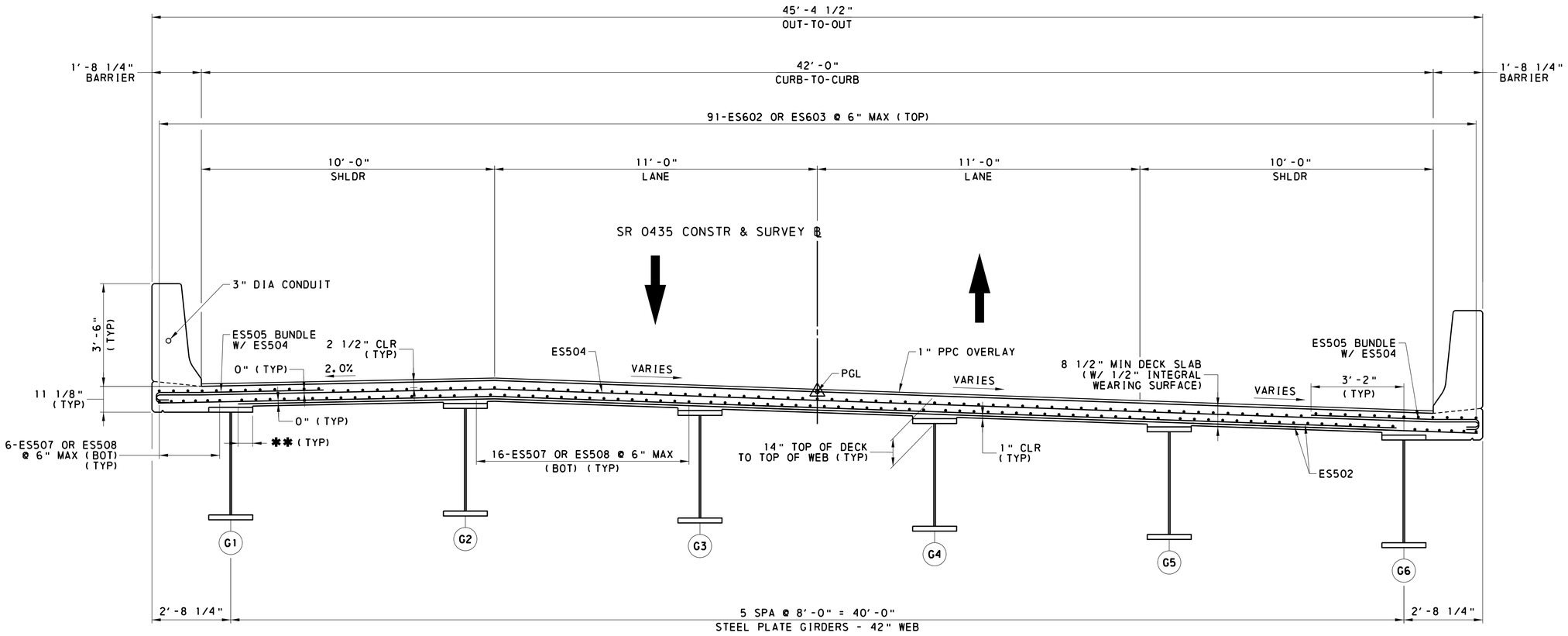
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 47 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:38 TYP DECK SECTION3/4/2024 12:59:41 PM By:laura.hower



TYPICAL DECK SECTION
(NEGATIVE MOMENT)

2 0 1 2 4 FEET

LEGEND

PPC POLYESTER POLYMER CONCRETE

** ES502 TO EXTEND 6" MIN BEYOND THE INSIDE EDGE OF THE FASCIA BEAM TOP FLANGE. ALTERNATE EVERY OTHER BAR THE FULL WIDTH OF THE OVERHANG.

NOTES:

1. SEE BC-752M FOR V-NOTCH DETAIL.
2. SEE BC-775M FOR DRIP NOTCH DETAIL.
3. SEE SHEET 46 FOR DECK PLAN.
4. SEE SHEET 49 FOR BARRIER PLAN.
5. SEE SHEET 51 FOR DECK ELEVATIONS.
6. SEE SHEET 52 FOR DECK REINFORCEMENT SCHEDULE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE061839
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

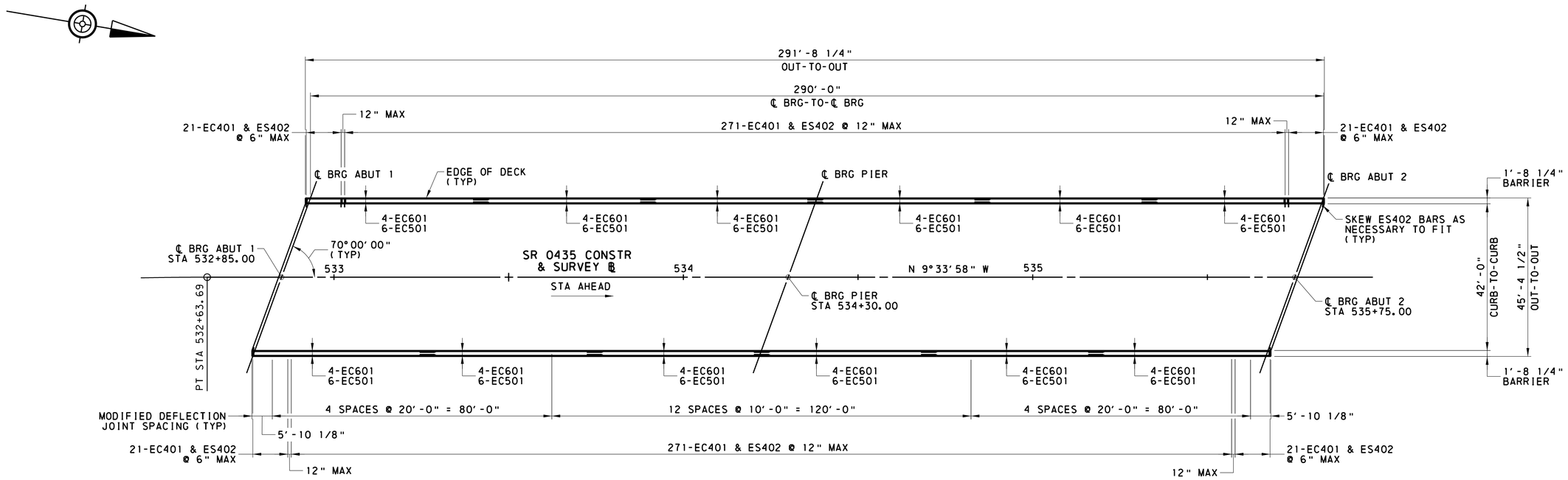
LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
TYPICAL DECK SECTION - 2

RECOMMENDED 03/04/2024

SHEET 48 OF 85

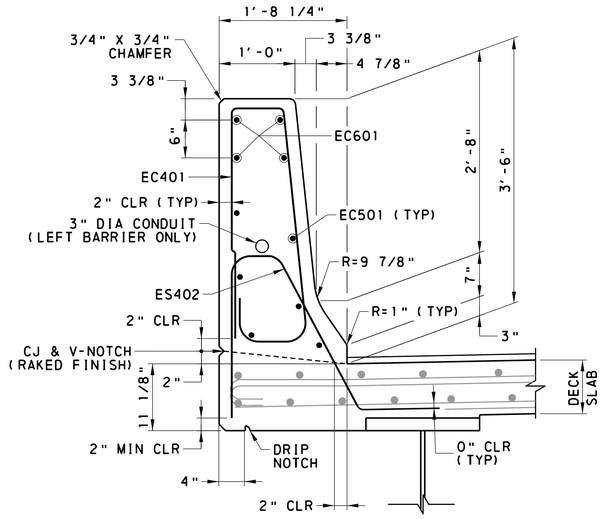
S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 TYP DECK SECTION.dgn
Mode: 139 By: laura.hower
3/4/2024 12:59:41 PM



DECK PLAN

16 0 8 16 32 FEET



TYPICAL BARRIER SECTION

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#5 - 3'-7" (BARRIER)
#6 - 4'-4" (BARRIER)

NOTES:

1. SEE SHEET 46 FOR DECK PLAN.
2. SEE SHEETS 47 & 48 FOR TYPICAL DECK SECTIONS.
3. SEE SHEET 52 FOR DECK REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
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LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
BARRIER PLAN

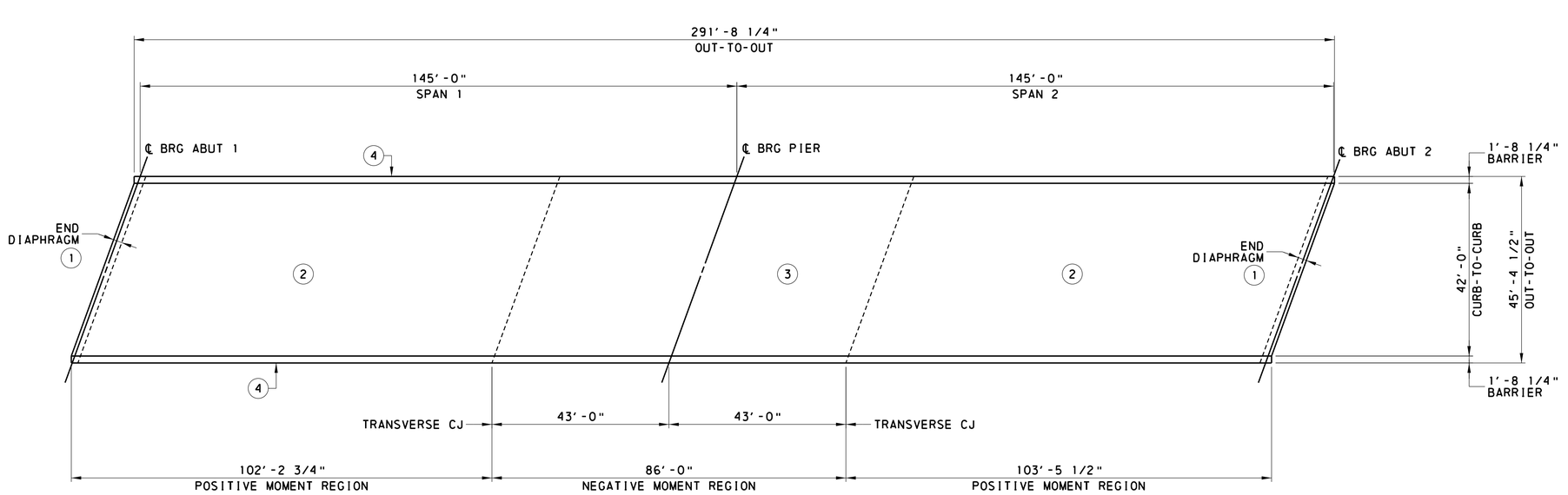
RECOMMENDED 03/04/2024

SHEET 49 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 40 BARRIER PLAN 3/4/2024 12:59:42 PM By: laura.hower



DECK POUR SEQUENCE

16 0 8 16 32 FEET

LEGEND

CJ CONSTRUCTION JOINT

DECK POUR SEQUENCE:

1. THE CONTRACTOR MAY SUBMIT AN ALTERNATE DECK POUR SEQUENCE TO THE DEPARTMENT FOR APPROVAL.
2. DECK POURS MUST SATISFY AMBIENT CONDITIONS DURING PLACEMENT SPECIFIED IN PUBLICATION 408 SECTION 1001.3(k)6.b.
3. POUR END DIAPHRAGMS AFTER GIRDERS ARE SET IN PLACE.
4. POUR BOTH DECK POSITIVE MOMENT REGIONS (SPANS 1 & 2) A MINIMUM OF 2 HOURS AFTER PLACEMENT OF THE END DIAPHRAGMS.
5. POUR THE DECK NEGATIVE MOMENT REGION.
6. PLACE BARRIER CONCRETE ON DECK SLAB AFTER ALL THE SPANS HAVE REACHED THE MINIMUM 7 DAY STRENGTH. PLACE BARRIERS IN POSITIVE MOMENT REGION, THEN NEGATIVE MOMENT REGION, UNLESS CONTINUOUS POURING CAN BE MAINTAINED.

POUR SEQUENCE LEGEND:

(1) : POUR END DIAPHRAGMS
(2) : POUR POSITIVE MOMENT REGIONS
(3) : POUR NEGATIVE MOMENT REGION
(4) : POUR BARRIER (SEE NOTE 7)

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
DECK POUR SEQUENCE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 50 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Mode: 41 DECK POUR SEQUENCE 4/2024 12:59:42 PM By: laura.hower

TOP OF DECK ELEVATIONS

STATION	A	B	C	D	E
532+76.52	-	-	-	-	1431.37
532+80.00	-	-	-	-	1431.24
532+80.16	-	-	-	1431.64	1431.23
532+84.16	-	-	1431.89	1431.46	1431.07
532+88.16	-	1432.10	1431.69	1431.28	1430.91
532+90.00	-	1432.00	1431.60	1431.20	1430.84
532+91.80	1431.70	1431.90	1431.51	1431.12	1430.77
533+00.00	1431.29	1431.49	1431.11	1430.72	1430.37
533+10.00	1430.80	1431.00	1430.61	1430.23	1429.88
533+20.00	1430.30	1430.50	1430.12	1429.73	1429.38
533+30.00	1429.80	1430.00	1429.62	1429.23	1428.88
533+40.00	1429.31	1429.51	1429.12	1428.74	1428.39
533+50.00	1428.81	1429.01	1428.63	1428.24	1427.89
533+60.00	1428.32	1428.52	1428.13	1427.75	1427.40
533+70.00	1427.82	1428.02	1427.64	1427.25	1426.90
533+80.00	1427.33	1427.53	1427.14	1426.76	1426.41
533+90.00	1426.83	1427.03	1426.65	1426.26	1425.91
534+00.00	1426.34	1426.54	1426.15	1425.77	1425.42
534+10.00	1425.84	1426.04	1425.66	1425.27	1424.92
534+20.00	1425.35	1425.55	1425.16	1424.78	1424.43
534+22.36	1425.23	1425.43	1425.04	1424.66	1424.31
534+26.00	1425.05	1425.25	1424.86	1424.48	1424.13
534+30.00	1424.85	1425.05	1424.66	1424.28	1423.93
534+34.00	1424.65	1424.85	1424.47	1424.08	1423.73
534+37.64	1424.47	1424.67	1424.29	1423.90	1423.55
534+40.00	1424.35	1424.55	1424.17	1423.78	1423.43
534+50.00	1423.86	1424.06	1423.67	1423.29	1422.94
534+60.00	1423.36	1423.56	1423.18	1422.79	1422.44
534+70.00	1422.87	1423.07	1422.68	1422.30	1421.95
534+80.00	1422.37	1422.57	1422.19	1421.80	1421.45
534+90.00	1421.88	1422.08	1421.69	1421.31	1420.96
535+00.00	1421.38	1421.58	1421.20	1420.81	1420.46
535+10.00	1420.89	1421.09	1420.70	1420.32	1419.97
535+20.00	1420.39	1420.59	1420.21	1419.82	1419.47
535+30.00	1419.89	1420.09	1419.71	1419.32	1418.97
535+40.00	1419.40	1419.60	1419.21	1418.83	1418.48
535+50.00	1418.90	1419.10	1418.72	1418.33	1417.98
535+60.00	1418.41	1418.61	1418.22	1417.84	1417.49
535+68.20	1418.00	1418.20	1417.82	1417.43	1417.08
535+70.00	1417.91	1418.11	1417.73	1417.34	-
535+71.84	1417.82	1418.02	1417.64	1417.25	-
535+75.84	1417.62	1417.82	1417.44	-	-
535+79.85	1417.42	1417.62	-	-	-
535+80.00	1417.42	-	-	-	-
535+83.49	1417.24	-	-	-	-

TOP OF DECK ELEVATIONS AT CENTERLINE OF GIRDERS

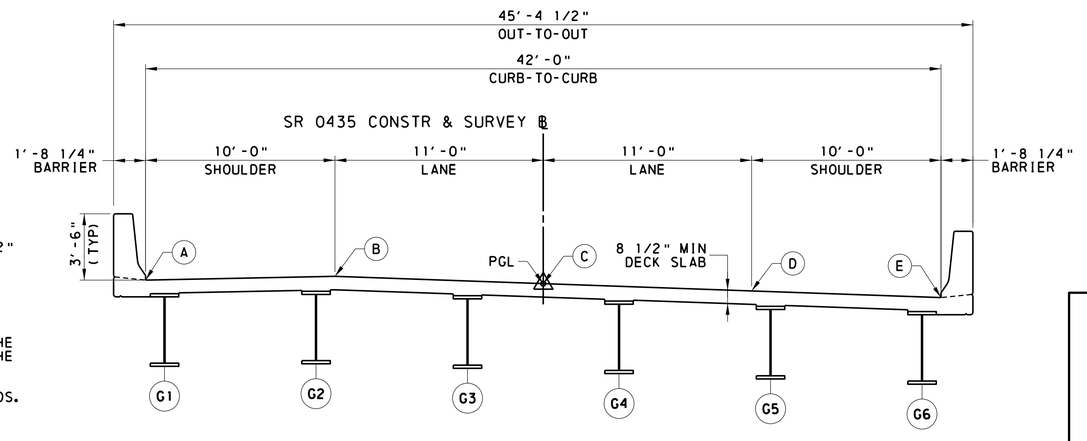
	LOCATION	GIRDER 1			GIRDER 2			GIRDER 3			GIRDER 4			GIRDER 5			GIRDER 6		
		STATION	ELEV	*	STATION	ELEV	*	STATION	ELEV	*	STATION	ELEV	*	STATION	ELEV	*	STATION	ELEV	*
SPAN 1	0.0L	532+92.28	1431.70	YES	532+89.37	1432.02	YES	532+86.46	1431.93	YES	532+83.55	1431.76	YES	532+80.63	1431.58	YES	532+77.72	1431.37	YES
	0.1L	533+06.78	1430.98	YES	533+03.87	1431.28	YES	533+00.96	1431.20	YES	532+98.05	1431.06	YES	532+95.13	1430.93	YES	532+92.22	1430.78	YES
	0.2L	533+21.28	1430.26	YES	533+18.37	1430.56	YES	533+15.46	1430.48	YES	533+12.55	1430.34	YES	533+09.63	1430.21	YES	533+06.72	1430.07	YES
	0.3L	533+35.78	1429.54	YES	533+32.87	1429.84	YES	533+29.96	1429.76	YES	533+27.05	1429.63	YES	533+24.13	1429.49	YES	533+21.22	1429.35	YES
	0.4L	533+50.28	1428.82	YES	533+47.37	1429.12	YES	533+44.46	1429.04	YES	533+41.55	1428.91	YES	533+38.63	1428.77	YES	533+35.72	1428.64	YES
	0.5L	533+64.78	1428.10	YES	533+61.87	1428.41	YES	533+58.96	1428.32	YES	533+56.05	1428.19	YES	533+53.13	1428.05	YES	533+50.22	1427.92	YES
	0.6L	533+79.28	1427.38	YES	533+76.37	1427.69	YES	533+73.46	1427.61	YES	533+70.55	1427.47	YES	533+67.63	1427.34	YES	533+64.72	1427.20	YES
	0.7L	533+93.78	1426.66	NO	533+90.87	1426.97	NO	533+87.96	1426.89	NO	533+85.05	1426.75	NO	533+82.13	1426.62	NO	533+79.22	1426.48	NO
	0.8L	534+08.28	1425.95	NO	534+05.37	1426.25	NO	534+02.46	1426.17	NO	533+99.55	1426.03	NO	533+96.63	1425.90	NO	533+93.72	1425.76	NO
	0.9L	534+22.78	1425.23	NO	534+19.87	1425.53	NO	534+16.96	1425.45	NO	534+14.05	1425.32	NO	534+11.13	1425.18	NO	534+08.22	1425.04	NO
SPAN 2	0.0L	534+37.28	1424.51	NO	534+34.37	1424.81	NO	534+31.46	1424.73	NO	534+28.55	1424.60	NO	534+25.63	1424.46	NO	534+22.72	1424.33	NO
	0.1L	534+51.78	1423.79	NO	534+48.87	1424.09	NO	534+45.96	1424.01	NO	534+43.05	1423.88	NO	534+40.13	1423.74	NO	534+37.22	1423.61	NO
	0.2L	534+66.28	1423.07	NO	534+63.37	1423.38	NO	534+60.46	1423.30	NO	534+57.55	1423.16	NO	534+54.63	1423.02	NO	534+51.72	1422.89	NO
	0.3L	534+80.78	1422.35	NO	534+77.87	1422.66	NO	534+74.96	1422.58	NO	534+72.05	1422.44	NO	534+69.13	1422.31	NO	534+66.22	1422.17	NO
	0.4L	534+95.28	1421.64	YES	534+92.37	1421.94	YES	534+89.46	1421.86	YES	534+86.55	1421.72	YES	534+83.63	1421.59	YES	534+80.72	1421.45	YES
	0.5L	535+09.78	1420.92	YES	535+06.87	1421.22	YES	535+03.96	1421.14	YES	535+01.05	1421.00	YES	534+98.13	1420.87	YES	534+95.22	1420.73	YES
	0.6L	535+24.28	1420.20	YES	535+21.37	1420.50	YES	535+18.46	1420.42	YES	535+15.55	1420.29	YES	535+12.63	1420.15	YES	535+09.72	1420.01	YES
	0.7L	535+38.78	1419.48	YES	535+35.87	1419.78	YES	535+32.96	1419.70	YES	535+30.05	1419.57	YES	535+27.13	1419.43	YES	535+24.22	1419.30	YES
	0.8L	535+53.28	1418.76	YES	535+50.37	1419.07	YES	535+47.46	1418.98	YES	535+44.55	1418.85	YES	535+41.63	1418.71	YES	535+38.72	1418.58	YES
	0.9L	535+67.78	1418.04	YES	535+64.87	1418.35	YES	535+61.96	1418.27	YES	535+59.05	1418.13	YES	535+56.13	1418.00	YES	535+53.22	1417.86	YES
	1.0L	535+82.28	1417.32	YES	535+79.37	1417.63	YES	535+76.46	1417.55	YES	535+73.55	1417.41	YES	535+70.63	1417.28	YES	535+67.72	1417.14	YES

TOP OF APPROACH SLAB 1 ELEVATIONS

STATION	A	B	C	D	E
532+46.09	-	-	-	-	1432.62
532+50.00	-	-	-	-	1432.43
532+49.98	-	-	-	1432.98	1432.43
532+54.16	-	-	1433.38	1432.79	1432.26
532+58.24	-	1433.74	1433.18	1432.61	1432.10
532+60.00	-	1433.64	1433.09	1432.53	1432.03
532+61.86	1433.34	1433.54	1433.00	1432.45	1431.96
532+70.00	1432.90	1433.10	1432.59	1432.09	1431.63
532+76.52	1432.54	1432.74	1432.27	1431.80	1431.37
532+80.00	1432.35	1432.55	1432.10	1431.65	-
532+80.16	1432.34	1432.54	1432.09	1431.64	-
532+84.16	1432.12	1432.32	1431.89	-	-
532+88.16	1431.90	1432.10	-	-	-
532+90.00	1431.80	-	-	-	-
532+91.80	1431.70	-	-	-	-

TOP OF APPROACH SLAB 2 ELEVATIONS

STATION	A	B	C	D	E
535+68.20	-	-	-	-	1417.08
535+70.00	-	-	-	-	1416.99
535+71.84	-	-	-	1417.25	1416.90
535+75.84	-	-	1417.44	1417.05	1416.70
535+79.85	-	1417.62	1417.24	1416.85	1416.50
535+80.00	-	1417.62	1417.23	1416.85	1416.50
535+83.49	1417.24	1417.44	1417.06	1416.67	1416.32
535+90.00	1416.92	1417.12	1416.74	1416.35	1416.00
535+98.20	1416.52	1416.72	1416.33	1415.95	1415.60
536+00.00	1416.43	1416.63	1416.24	1415.86	-
536+01.84	1416.34	1416.54	1416.15	1415.77	-
536+05.84	1416.14	1416.34	1415.95	-	-
536+09.85	1415.94	1416.14	-	-	-
536+10.00	1415.93	-	-	-	-
536+13.74	1415.75	-	-	-	-



TYPICAL DECK SECTION
(NOT TO SCALE)

LEGEND

* HAUNCH REINFORCEMENT REQUIRED (YES OR NO)

NOTES:

1. THE LOCATION GIVEN IS THE DISTANCE (FT) ALONG THE ℄ GIRDER TO EACH 10TH POINT AS MEASURED FROM THE NEAR SPAN SUPPORT.
2. TOP OF DECK ELEVATIONS ARE GIVEN AT THE TOP OF 8 1/2" DECK SLAB, PRIOR TO THE APPLICATION OF POLYESTER POLYMER CONCRETE (PPC) OVERLAY.
3. THE HAUNCH REINFORCEMENT QUANTITY SHOWN ON THE DECK REINFORCEMENT BAR SCHEDULE PROVIDES THE AMOUNT NECESSARY TO COVER THE LIMITS SHOWN ON THIS SHEET. PROVIDE HAUNCH REINFORCEMENT IN ALL REGIONS ALONG THE LENGTH OF THE GIRDERS WHERE ACTUAL HAUNCH EXCEEDS THE THICKNESS SPECIFIED IN BC-752M.
4. ADJUST HAUNCH REINFORCEMENT BARS TO CLEAR SHEAR STUDS.
5. SEE SHEET 3 FOR TYPICAL SECTION.
6. SEE SHEET 47 FOR HAUNCH REINFORCEMENT DETAIL.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
DECK ELEVATIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

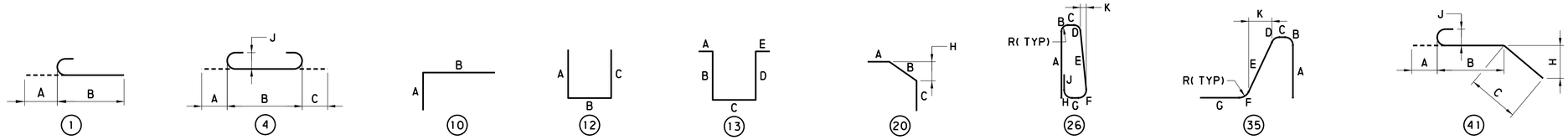
SHEET 51 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 42 DECK ELEVATION T
Date: 3/4/2024 12:59:42 PM
By: laura.hower

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
ES301	3	4'-2"	1392	13	1'-0"	5"	1'-4"	5"	1'-0"							
ED401	4	7'-1 1/2"	196	12	2'-3"	2'-7 1/2	2'-3"									
ED402	4	4'-8"	98	20	2'-3"	1'-5"	1'-0"					10 5/8"				
ED403	4	6'-3"	98	10	2'-4"	3'-11"										
ES401	4	29'-8"	282	STR												
ES402	4	6'-4 1/2"	626	35	1'-9 1/2"	4"	4"	2 3/4"	1'-11 1/2"	2 3/4"	1'-6"			10 1/4"	2"	
ES403	4	36'-3"	72	STR												
EC401	4	8'-0 1/8"	626	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"	2"	
ES501	5	VARIES 1'-8" TO 42'-6"	54	STR												2 SETS OF 27, STEP EACH BY 1'-6 7/8"
ES502	5	42'-4"	474	STR												
ES503	5	VARIES 2'-3" TO 43'-1"	68	1	7"	VARIES 1'-8" TO 42'-6"										2 SETS OF 34, STEP EACH BY 1'-2 7/8"
ES504	5	46'-2"	603	4	7"	45'-0"	7"									
ES505	5	6'-4"	1266	1	7"	5'-9"										
ES506	5	44'-0"	232	STR												
ES507	5	37'-2"	184	STR												
ES508	5	60'-0"	92	STR												
EC501	5	51'-7"	72	STR												
ED601	6	5'-2"	98	41	8"	3'-6"	1'-0"					8 1/2"				
ED602	6	6'-4"	10	STR												
ED603	6	1'-7"	4	STR												
ED604	6	45'-9"	16	STR												
ES601	6	46'-6"	8	STR												
ES602	6	37'-9"	182	STR												
ES603	6	60'-0"	91	STR												
EC601	6	52'-3"	48	STR												



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

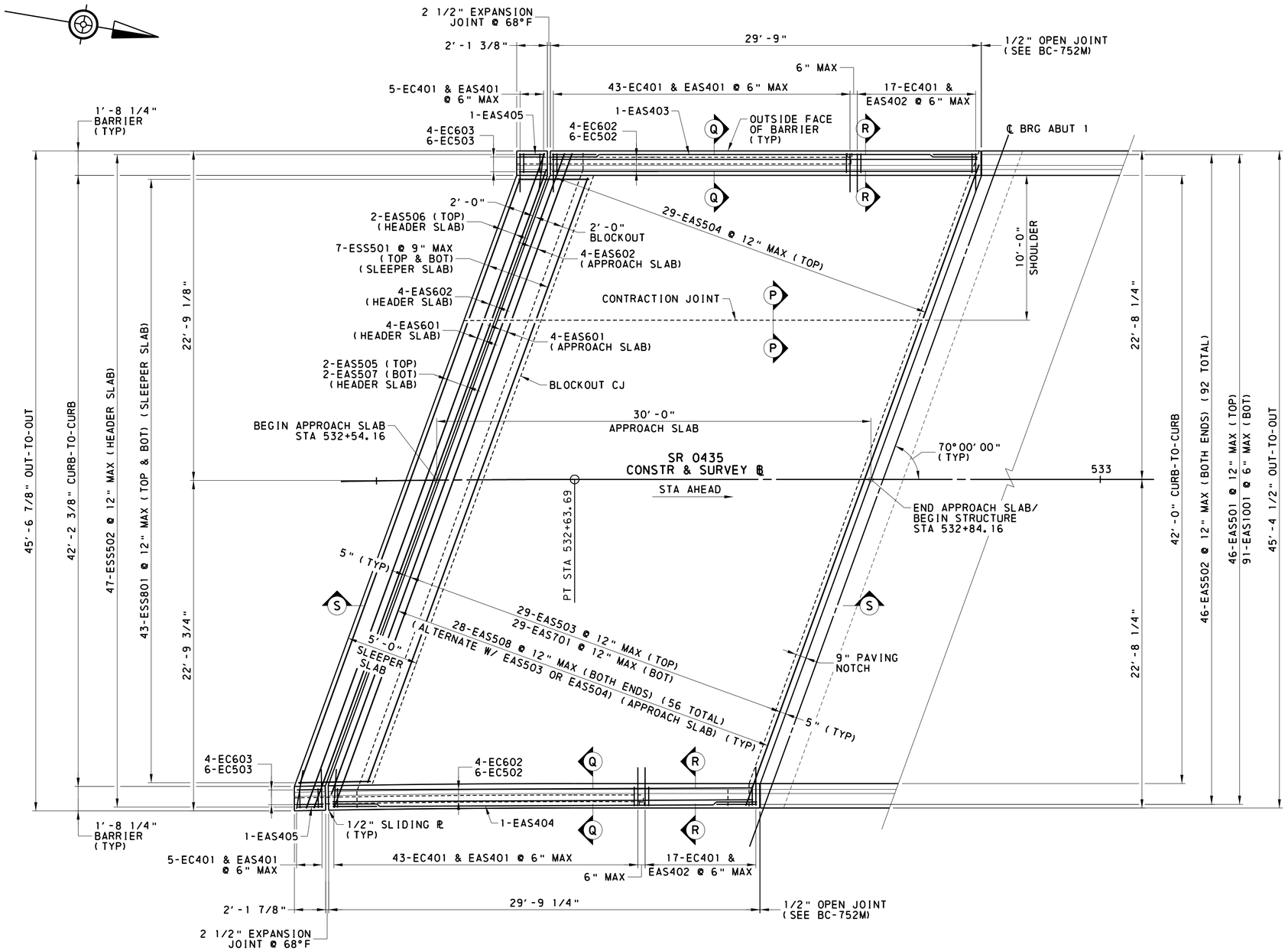
LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
DECK REINFORCEMENT SCHEDULE

RECOMMENDED 03/04/2024

SHEET 52 OF 85

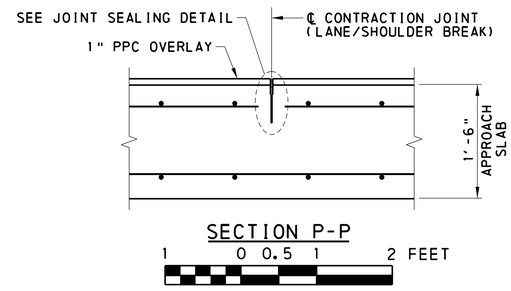
S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 43 DECK REINF BAR SCHEDULE
04-MAR-2024 11:59:43 PM By: laura.hower



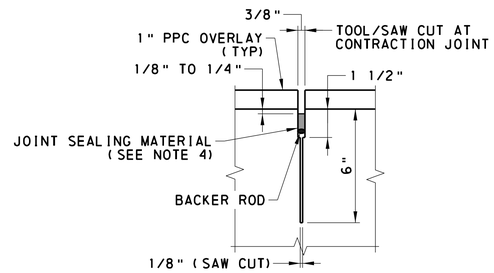
APPROACH SLAB 1 PLAN

4 0 2 4 8 FEET



SECTION P-P

1 0 0.5 1 2 FEET



JOINT SEALING DETAIL

0.5 0 0.25 0.5 1 FOOT

NOTES:

1. CONSTRUCT APPROACH SLAB AFTER THE DECK SLAB IS CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE NOTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE NOTED.
4. FOR JOINT MATERIAL, REFER TO PUB 408 SECTIONS 501.2 AND 705.4(a), (b), OR (d).
5. SEE SHEET 7 FOR APPROACH SLAB PROTECTIVE COATING DETAIL.
6. SEE SHEET 55 FOR APPROACH SLAB SECTIONS.
7. SEE SHEET 56 FOR STRIP SEAL PLAN & DETAILS.
8. SEE SHEET 57 FOR APPROACH SLAB JOINT AND WATERSTOP DETAILS.
9. SEE SHEET 58 FOR REINFORCEMENT SCHEDULE.

LEGEND

CJ CONSTRUCTION JOINT
PPC POLYESTER POLYMER CONCRETE

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
APPROACH SLAB 1 PLAN

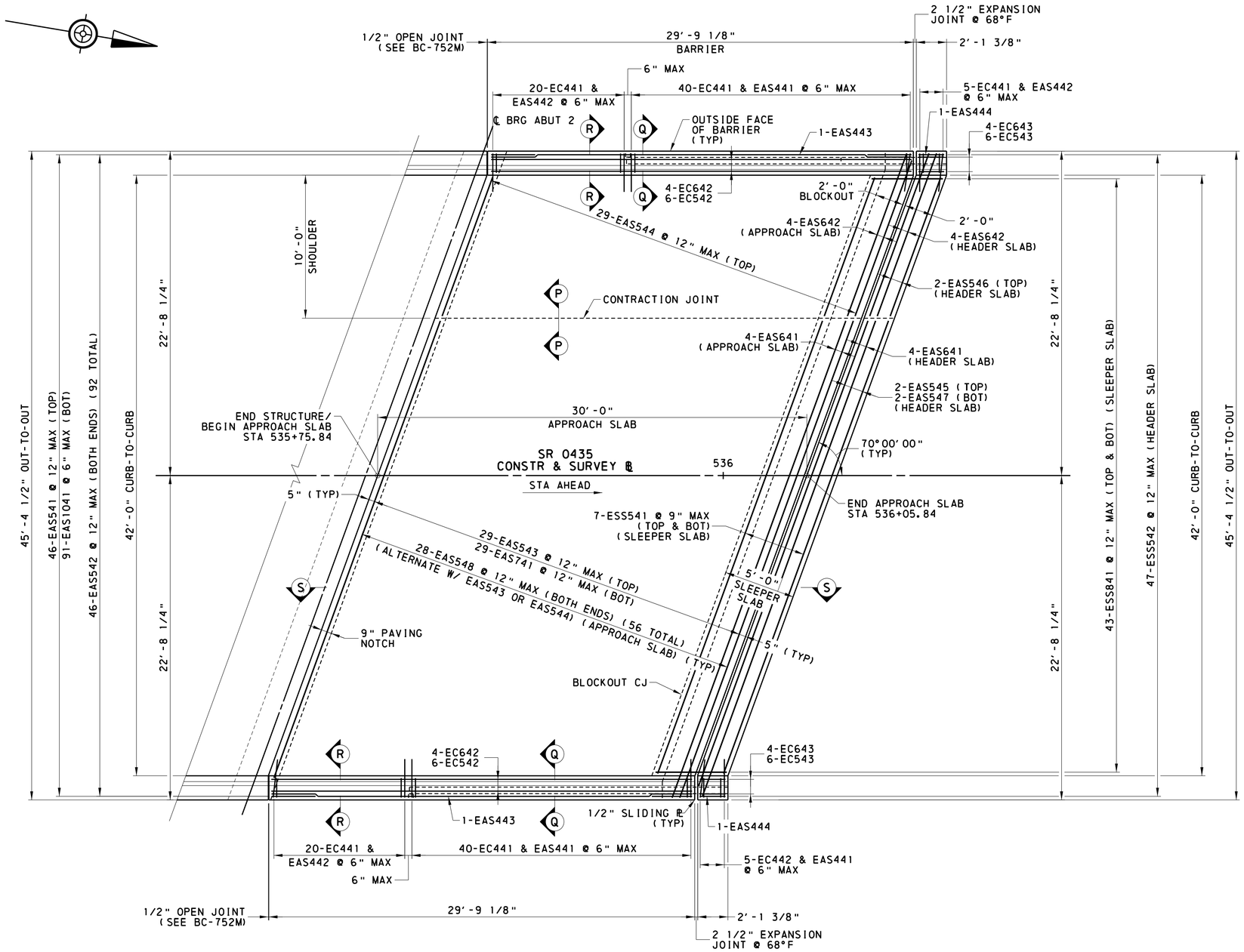
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 53 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:44 APP SLAB 1 PLAN 3/4/2024 12:59:43 PM By:laura.hower



APPROACH SLAB 2 PLAN

4 0 2 4 8 FEET

NOTES:

1. CONSTRUCT APPROACH SLAB AFTER THE DECK SLAB IS CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE NOTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE NOTED.
4. FOR JOINT MATERIAL, REFER TO PUB 408 SECTIONS 501.2 AND 705.4(a), (b), OR (d).
5. SEE SHEET 7 FOR APPROACH SLAB PROTECTIVE COATING DETAIL.
6. SEE SHEET 53 FOR FOR SECTION P-P AND JOINT SEALING DETAIL.
7. SEE SHEET 55 FOR APPROACH SLAB SECTIONS.
8. SEE SHEET 56 FOR STRIP SEAL PLAN & DETAILS.
9. SEE SHEET 57 FOR APPROACH SLAB JOINT AND WATERSTOP DETAILS.
10. SEE SHEET 59 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
APPROACH SLAB 2 PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 54 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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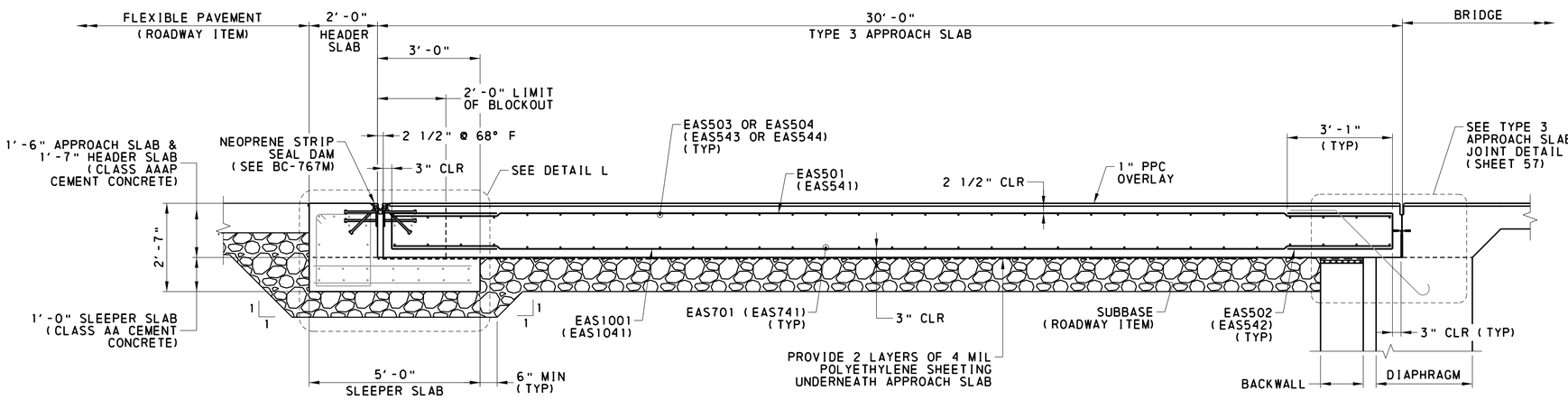
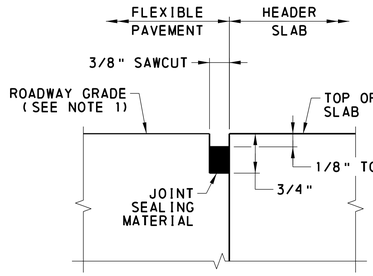


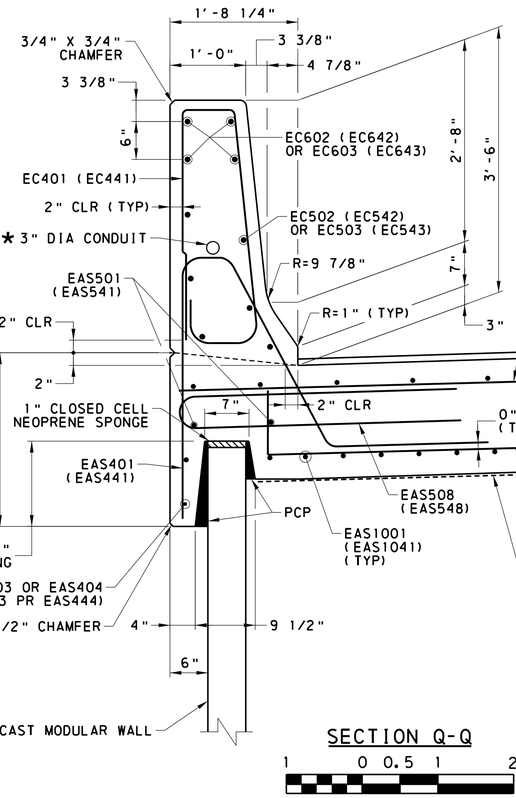
SECTION S-S

2 0 1 2 4 FEET



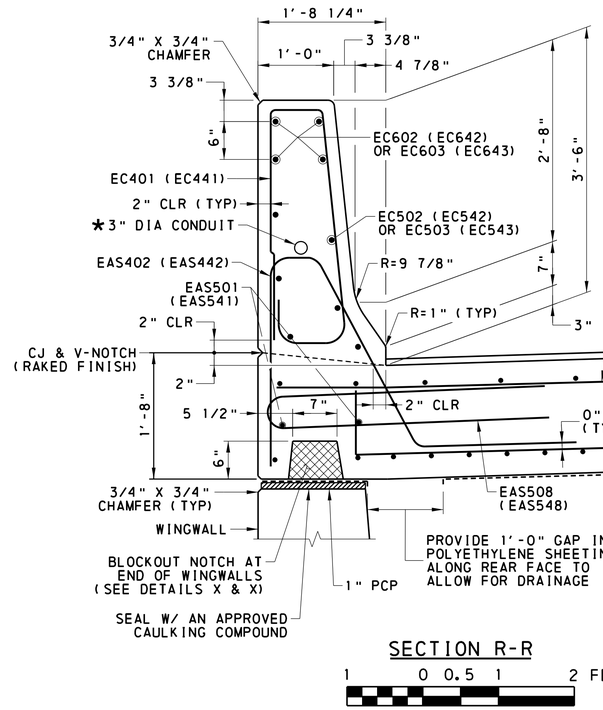
DETAIL K

(NOT TO SCALE)



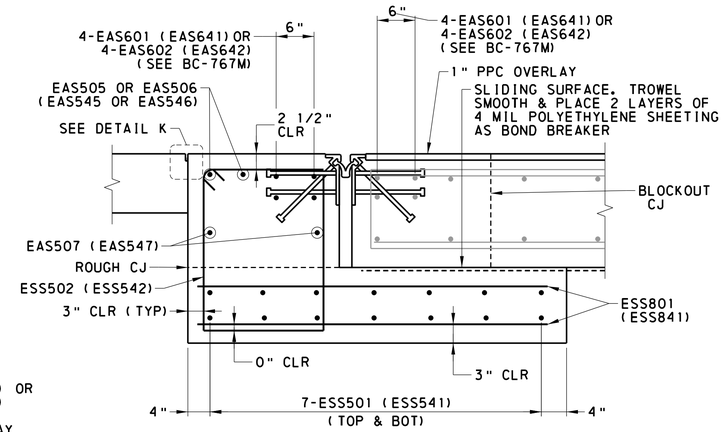
SECTION Q-Q

1 0 0.5 1 2 FEET



SECTION R-R

1 0 0.5 1 2 FEET



DETAIL L

1 0 0.5 1 2 FEET

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

LEGEND

PPC POLYESTER POLYMER CONCRETE
* PROVIDE CONDUIT ONLY IN LEFT BARRIER (LOOKING STA AHEAD)

NOTES:

1. TAPER FLEXIBLE PAVEMENT TO MATCH TOP OF HEADER SLAB.
2. REINFORCEMENT BAR MARKS ARE PROVIDED FOR APPROACH SLAB 1 WITH THOSE FOR APPROACH SLAB 2 SHOWN IN PARENTHESIS ( ).
3. SEE SHEET 56 FOR STRIP SEAL PLAN & DETAILS.
4. SEE SHEET 57 FOR APPROACH SLAB JOINT AND WATERSTOP DETAILS.
5. SEE SHEETS 58 & 59 FOR REINFORCEMENT SCHEDULES.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839 PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
APPROACH SLAB SECTIONS

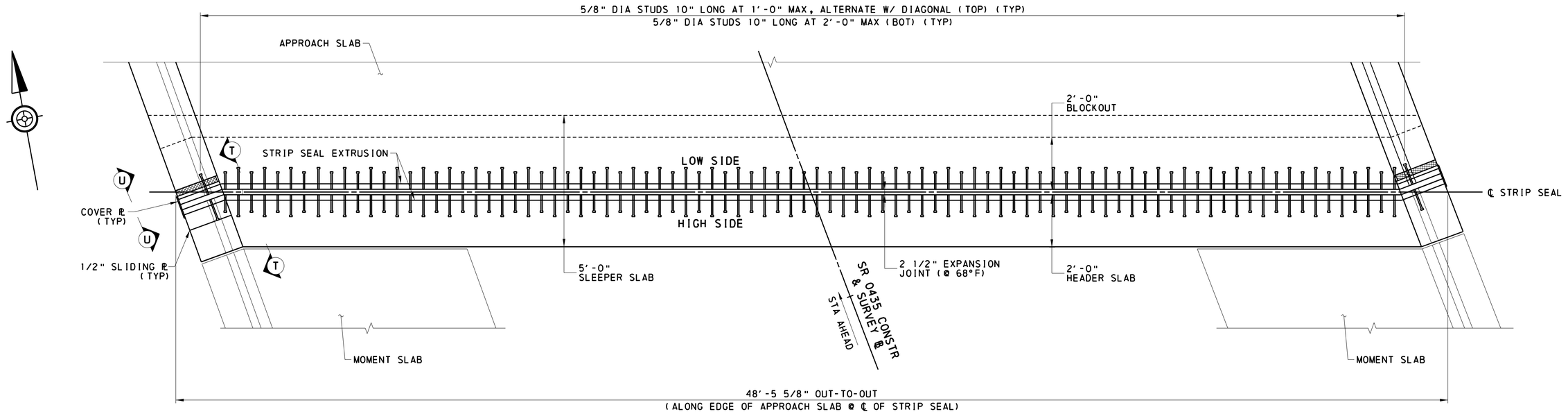
RECOMMENDED 03/04/2024

SHEET 55 OF 85

S-39603

DES: JWB	CHK'D: BRM		
DWG: LAH	CHK'D: BRM		

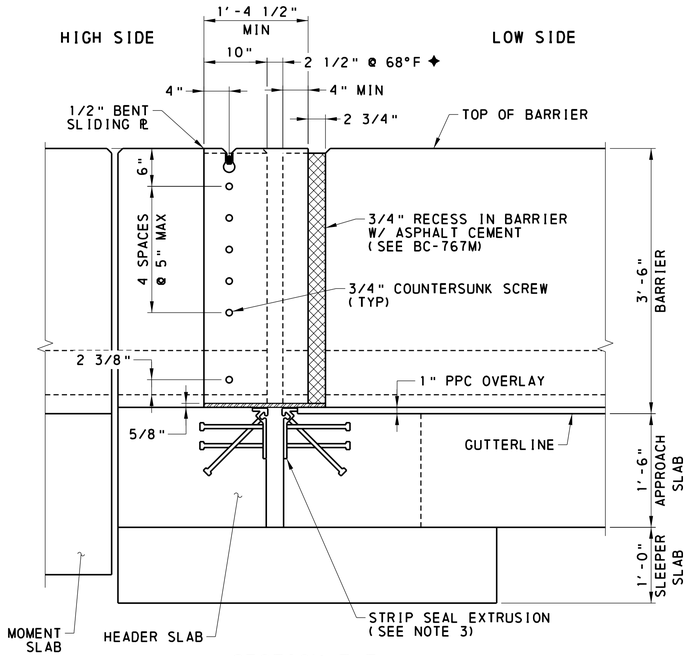
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 435 APP SLAB SECTIONS.dgn
Model:46 APP SLAB SECTIONS 3/4/2024 12:59:44 PM By: laura.hower



NEOPRENE STRIP SEAL PLAN

(APPROACH SLAB 1 SHOWN, APPROACH SLAB 2 SIMILAR)

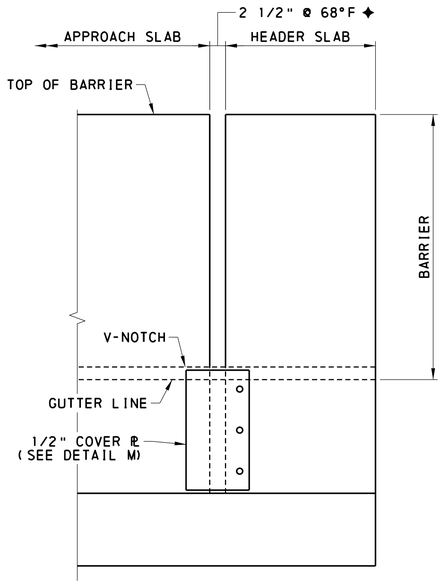
2 0 1 2 4 FEET



SECTION T-T

(1/2" BENT SLIDING PL AT BARRIER)

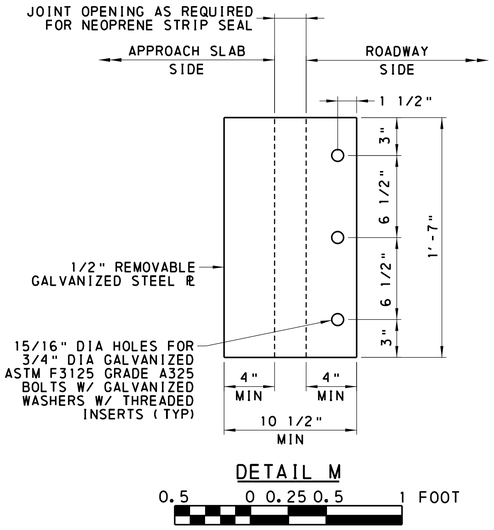
1 0 0.5 1 2 FEET



SECTION U-U

(END COVER PL AT BARRIER)
(BENT SLIDING PL NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET



DETAIL M

0.5 0 0.25 0.5 1 FOOT

LEGEND

✦ FABRICATOR TO PROVIDE TABLE OF JOINT OPENINGS ON SHOP DRAWINGS BASED ON 10° INTERVALS FROM -10° F TO 110° F.

PPC POLYESTER POLYMER CONCRETE

NOTES:

1. SEE BC-767M FOR ADDITIONAL JOINT DETAILS.
2. END COVER PLATES, BOLTS, WASHERS AND THREADED INSERTS ARE INCIDENTAL TO THE NEOPRENE STRIP SEAL DAM.
3. SET NEOPRENE STRIP SEAL EXTRUSIONS 1" ABOVE FINISHED GRADE ELEVATIONS TO ACCEPT THE POLYESTER POLYMER CONCRETE (PPC) OVERLAY

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
NEOPRENE STRIP SEAL DETAILS

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

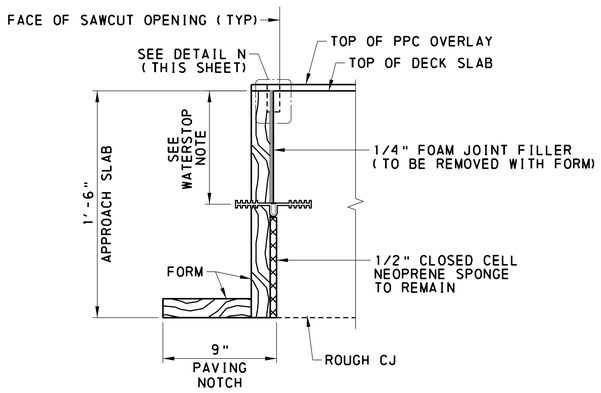
RECOMMENDED 03/04/2024

SHEET 56 OF 85

S-39603

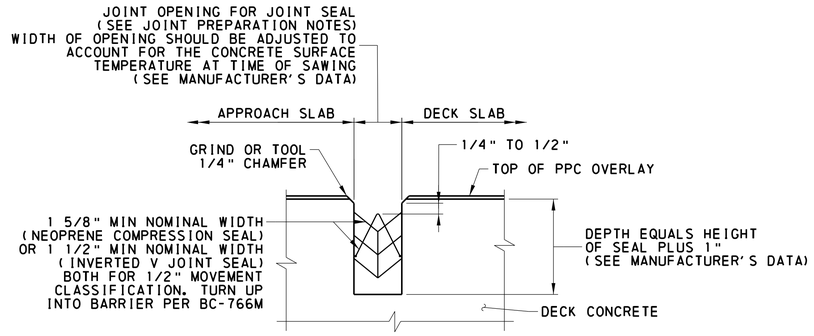
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Modified: 3/4/2024 12:59:45 PM By: laura.hower
STRIP SEAL PLAN



TYPE 3 APPROACH SLAB FORMING DETAIL

NOT TO SCALE



DETAIL N

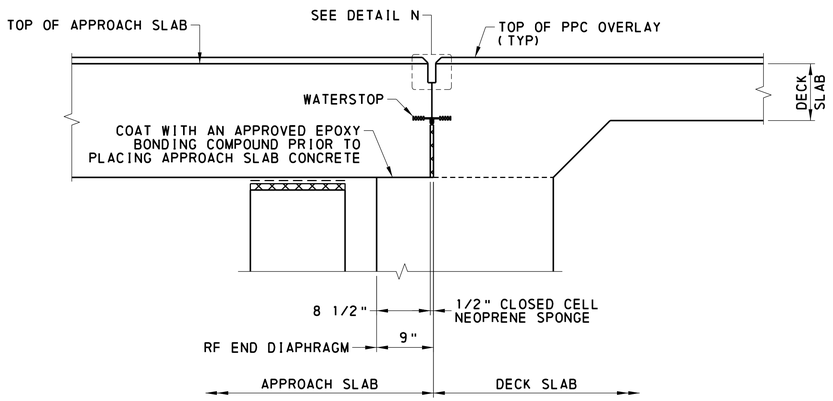
(NOT TO SCALE)

JOINT PREPARATION NOTES:

1. THE JOINT OPENING IS TO BE FORMED BY A TWO-STAGE SAWING OPERATION WHERE ACCESSIBLE. WHERE ACCESSIBILITY IS LIMITED, THE JOINT OPENING SHALL BE FORMED. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING. THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF ±1/16" TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL OR INVERTED V JOINT SEAL.
2. WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
3. THE DEPTH OF THE JOINT OPENING EQUALS THE HEIGHT OF THE SEAL PLUS 1". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF THE SAWING, SEE MANUFACTURER'S PRODUCT INFORMATION.
4. BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
5. PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
6. DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.
7. USE ONLY APPROVED SEALS, AS LISTED IN BULLETIN 15. INSTALL JOINT SEALS TO A UNIFORM DEPTH WITH THE TOP OF THE SEAL FROM 1/4" TO 1/2" BELOW THE LEVEL OF THE CHAMFER. MAKE THE TOP EDGES OF THE CONTACT SURFACES ON BOTH SIDES OF THE SEAL AT THE SAME ELEVATION.

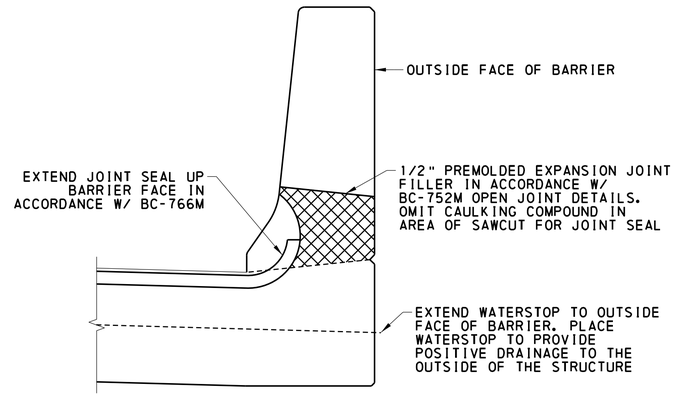
WATERSTOP NOTE:

AN EXPANSION WATERSTOP (TYPE E1 OR E2), IN ACCORDANCE WITH BC-735M, MUST BE INSTALLED AT MID-DEPTH OF APPROACH SLAB. EXTEND WATERSTOP TO OUTSIDE FACE OF BARRIER. PLACE WATERSTOP TO PROVIDE POSITIVE DRAINAGE TO THE OUTSIDE OF THE STRUCTURE.



TYPE 3 APPROACH SLAB JOINT DETAIL

1 0 0.5 1 2 FEET



JOINT SEAL AND WATERSTOP TERMINATION DETAIL

NOT TO SCALE

LEGEND

CJ	CONSTRUCTION JOINT
PPC	POLYESTER POLYMER CONCRETE
RF	REAR FACE

NOTES:

1. COMPRESSION SEALS OR INVERTED V JOINT SEALS, WATERSTOPS, POLYETHYLENE SHEETING, EPOXY BONDING COMPOUND, SAWING AND SEALING JOINTS, BACKER ROD, AND ASPHALT-SATURATED PAPER ITEMS ARE INCIDENTAL TO THE APPROACH SLAB CONCRETE.
2. SEE SHEET 45 FOR CONCRETE END DIAPHRAGM DETAILS.
3. SEE SHEET 55 FOR APPROACH SLAB SECTIONS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
JOINT & WATERSTOP DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 57 OF 85

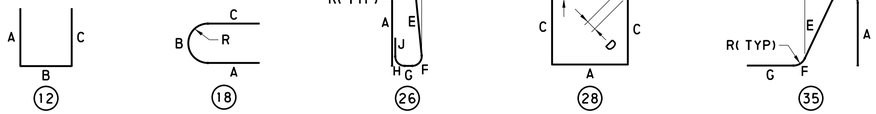
S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: WATERSTOP DETAILS 3/4/2024 12:59:45 PM By: laura.hower

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EAS401	4	8'-7"	96	35	3'-2 1/2"	4"	4"	2 3/4"	2'-9"	2 3/4"	1'-6"			1'-2 1/2"	2"	
EAS402	4	7'-11 1/2"	34	35	2'-7"	4"	4"	2 3/4"	2'-9"	2 3/4"	1'-6"			1'-2 1/2"	2"	
EAS403	4	20'-0"	1	STR												
EAS404	4	21'-0"	1	STR												
EAS405	4	1'-9"	2	STR												
EC401	4	8'-0 1/8"	130	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"		
EAS501	5	29'-3"	50	STR												
EAS502	5	7'-2 1/2"	92	12	3'-1"	1'-0 1/2"	3'-1"									
EAS503	5	35'-6"	29	STR												
EAS504	5	12'-1"	29	STR												
EAS505	5	35'-6"	2	STR												
EAS506	5	12'-1"	2	STR												
EAS507	5	48'-1"	2	STR												
EAS508	5	8'-9 1/2"	56	18	4'-0"	9 1/2"	4'-0"								2 1/2"	
ESS501	5	44'-6"	14	STR												
ESS502	5	8'-4"	47	28	1'-7"	5 1/2"	2'-1 1/2"	2 1/2"				3 3/4"				
EC502	5	29'-5"	12	STR												
EC503	5	1'-9"	12	STR												
EAS601	6	35'-6"	8	STR												
EAS602	6	12'-1"	8	STR												
EC602	6	29'-5"	8	STR												
EC603	6	1'-9"	8	STR												
EAS701	7	47'-5"	29	12	1'-2"	45'-1"	1'-2"									
ESS801	8	4'-9 1/2"	86	STR												
EAS1001	10	29'-5"	91	STR												



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
APPROACH SLAB 1 REINFORCEMENT SCHEDULE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

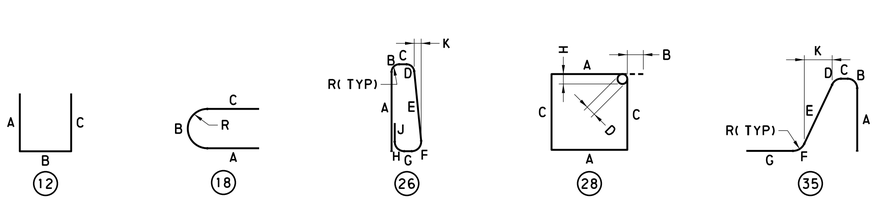
SHEET 58 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 49 APP SLAB 1 REINF 39603 By: laura.hower
2024 MEDUU 12:59:46 PM

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EAS441	4	8'-7"	90	35	3'-2 1/2"	4"	4"	2 3/4"	2'-9"	2 3/4"	1'-6"			1'-2 1/2"	2"	
EAS442	4	7'-11 1/2"	40	35	2'-7"	4"	4"	2 3/4"	2'-9"	2 3/4"	1'-6"			1'-2 1/2"	2"	
EAS443	4	19'-5"	1	STR												
EAS444	4	1'-9"	2	STR												
EC441	4	8'-0 1/8"	130	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"		
EAS541	5	29'-3"	50	STR												
EAS542	5	7'-2 1/2"	92	12	3'-1"	1'-0 1/2"	3'-1"									
EAS543	5	35'-6"	29	STR												
EAS544	5	12'-1"	29	STR												
EAS545	5	35'-6"	2	STR												
EAS546	5	12'-1"	2	STR												
EAS547	5	47'-11"	2	STR												
EAS548	5	8'-9 1/2"	56	18	4'-0"	9 1/2"	4'-0"								2 1/2"	
ESS541	5	44'-4"	14	STR												
ESS542	5	8'-4"	46	28	1'-7"	5 1/2"	2'-1 1/2"	2 1/2"				3 3/4"				
EC542	5	29'-5"	12	STR												
EC543	5	1'-9"	12	STR												
EAS641	6	35'-6"	8	STR												
EAS642	6	12'-1"	8	STR												
EC642	6	29'-5"	8	STR												
EC643	6	1'-9"	8	STR												
EAS741	7	47'-5"	29	12	1'-2"	45'-1"	1'-2"									
ESS841	8	4'-9 1/2"	86	STR												
EAS1041	10	29'-5"	91	STR												



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
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4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
APPROACH SLAB 2 REINFORCEMENT SCHEDULE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 59 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
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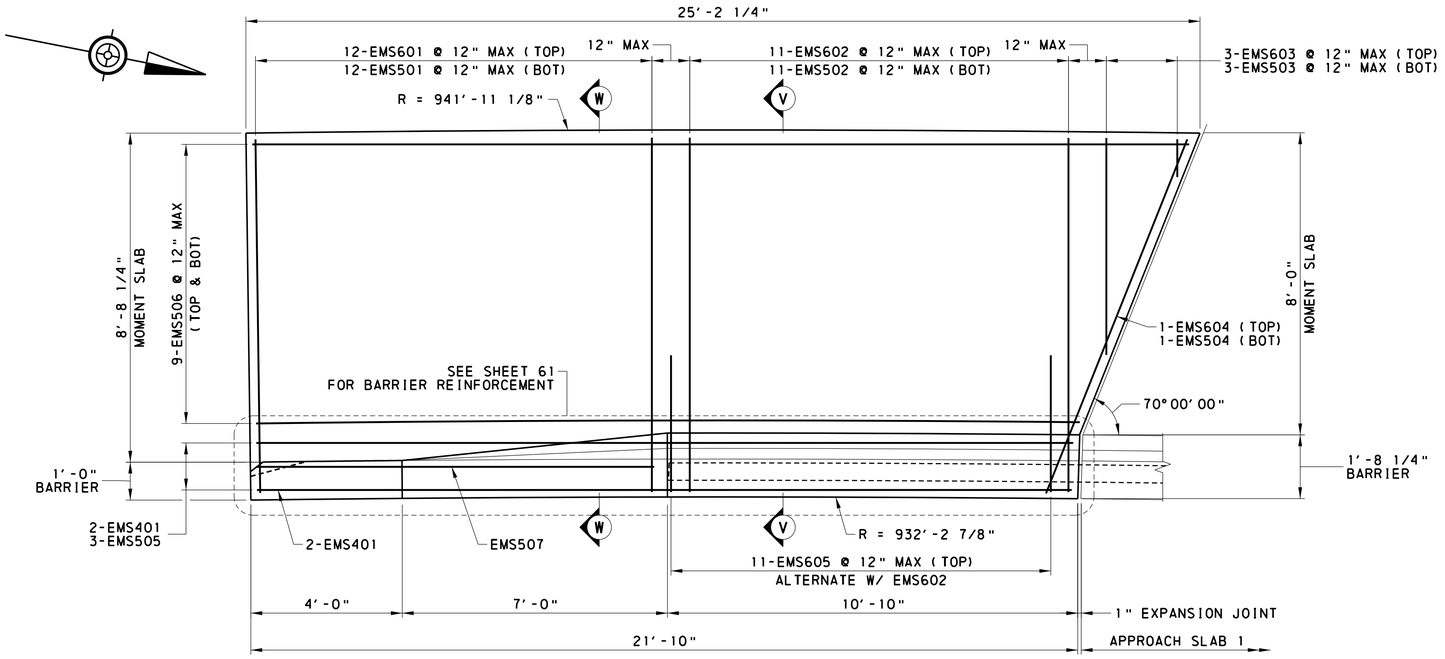
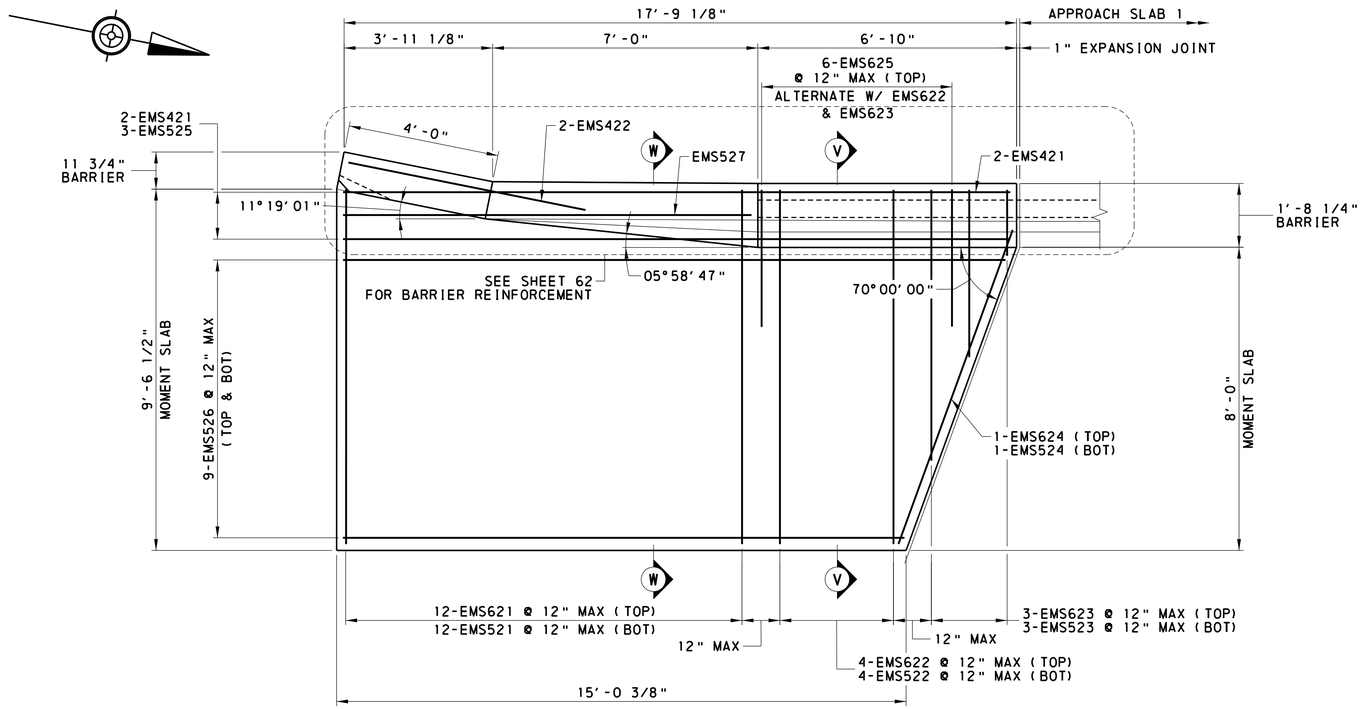


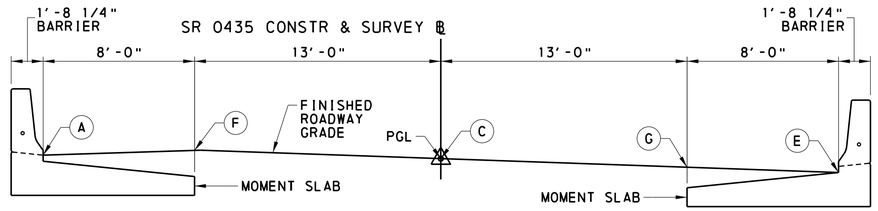
MOMENT SLAB A PLAN

2 0 1 2 4 FEET



MOMENT SLAB B PLAN

2 0 1 2 4 FEET



TYPICAL MOMENT SLAB SECTION

(NOT TO SCALE)

MOMENT SLAB A & B ELEVATIONS					
STATION	A	F	C	G	E
532+21.41	-	-	1434.99	1434.28	1433.84
532+30.00	-	-	1434.57	1433.86	1433.42
532+40.00	-	-	1434.08	1433.36	1432.92
532+41.95	1434.39	1434.55	1433.98	1433.27	1432.83
532+43.80	1434.30	1434.46	1433.89	1433.18	1432.74
532+46.95	1434.14	1434.30	1433.73	1433.02	-
532+50.00	1433.99	1434.15	1433.58	-	-
532+56.78	1433.62	1433.78	1433.25	-	-
532+59.69	1433.46	-	1433.10	-	-

MOMENT SLAB C & D ELEVATIONS					
STATION	A	F	C	G	E
536+00.41	-	-	1416.22	-	1415.49
536+03.32	-	-	1416.08	1415.62	1415.34
536+10.00	-	-	1415.75	1415.29	1415.01
536+12.79	-	1415.95	1415.61	1415.15	1414.87
536+15.70	1415.65	1415.81	1415.46	1415.01	1414.73
536+20.00	1415.44	1415.60	1415.25	1414.80	1414.52
536+30.00	1414.94	1415.10	1414.75	1414.30	1414.02
536+31.62	1414.86	1415.02	1414.67	1414.22	1413.94
536+40.00	-	-	1414.26	1413.80	1413.52
536+50.00	-	-	1413.76	1413.31	1413.03
536+54.36	-	-	1413.55	1413.10	1412.81

NOTES:

1. SEE SHEET 7 FOR MOMENT SLAB PROTECTIVE COATING DETAIL. DO NOT PLACE PENETRATING SEALER ON TOP OF ANY SURFACE THAT RECEIVES ASPHALT OVERLAY.
2. SEE SHEET 61 FOR MOMENT SLAB A BARRIER PLAN.
3. SEE SHEET 62 FOR MOMENT SLAB B BARRIER PLAN.
4. SEE SHEET 63 FOR MOMENT SLAB SECTIONS.
5. SEE SHEETS 64 & 65 FOR REINFORCEMENT SCHEDULES.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB A & B PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER BENJAMIN R. MARTZ PE081839

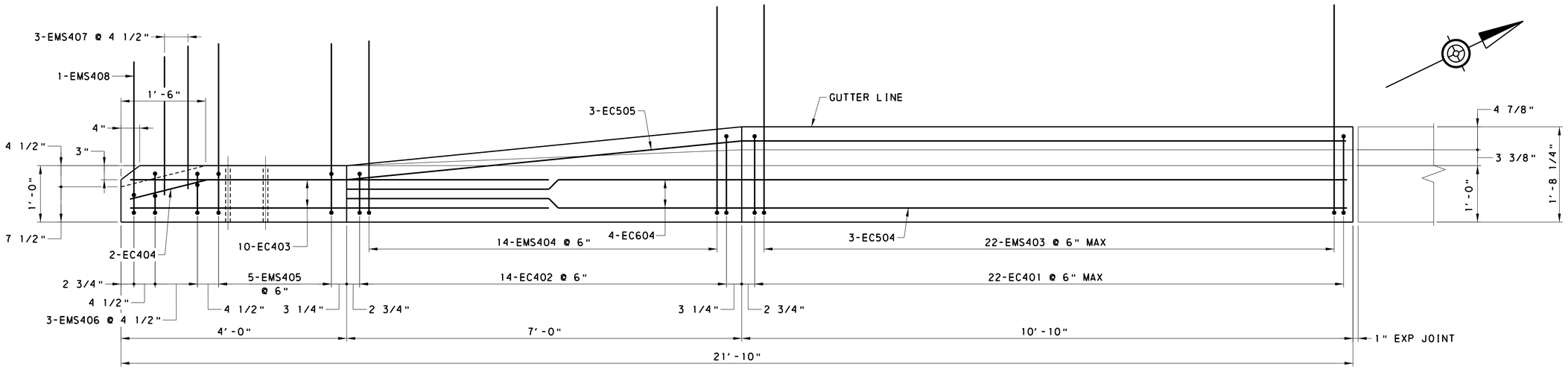
RECOMMENDED 03/04/2024

SHEET 60 OF 85

S-39603

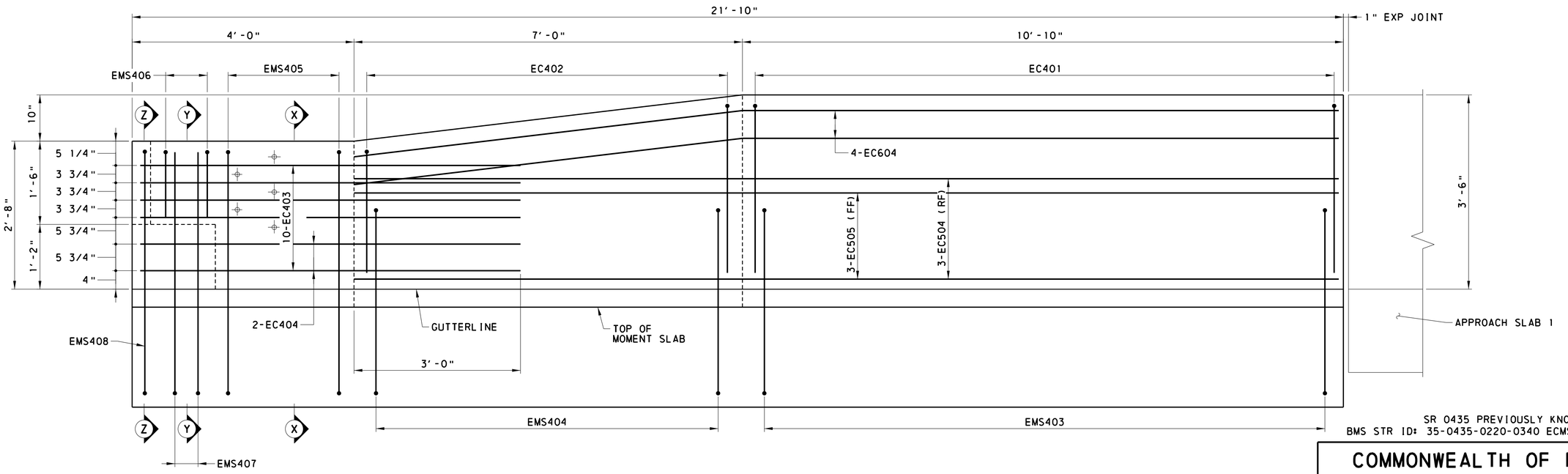
DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 50 MOM SLAB AB PLAN 3/4/2024 12:59:46 PM By: laura.hower



MOMENT SLAB A BARRIER PLAN

1 0 0.5 1 2 FEET



MOMENT SLAB A BARRIER ELEVATION

1 0 0.5 1 2 FEET

NOTES:

1. SEE SHEET 60 FOR MOMENT SLAB PLAN.
2. SEE SHEET 63 FOR MOMENT SLAB SECTIONS.
3. SEE SHEET 64 FOR REINFORCEMENT SCHEDULE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839 PENNSYLVANIA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB A BARRIER PLAN

RECOMMENDED 03/04/2024

SHEET 61 OF 85

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 51 MOM SLAB A BARRIER
By: laura.hower
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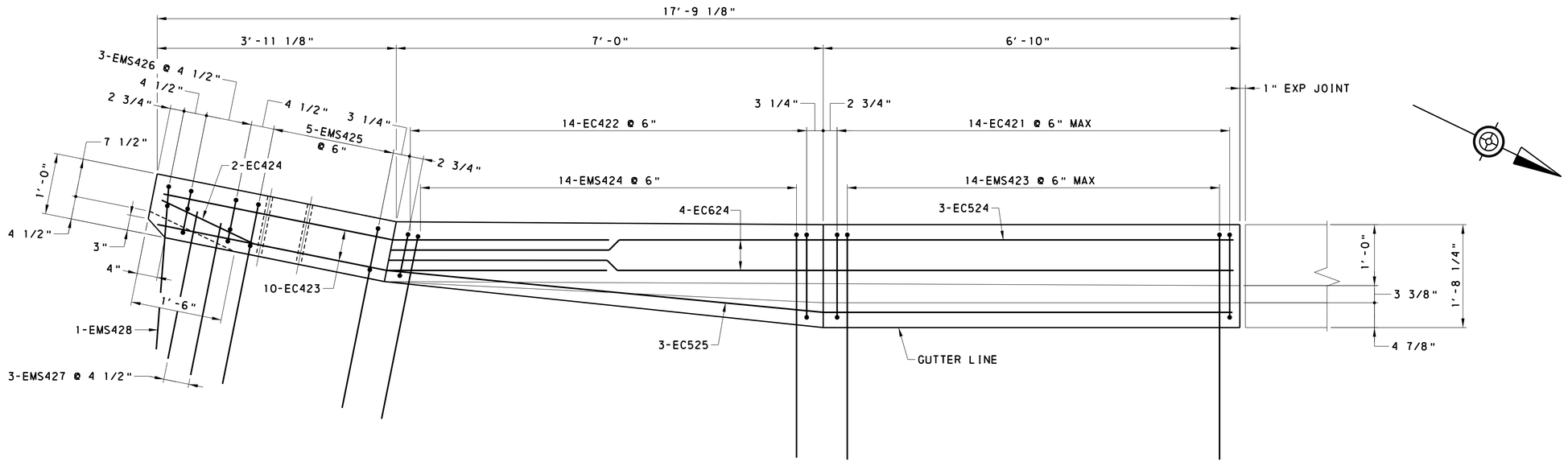
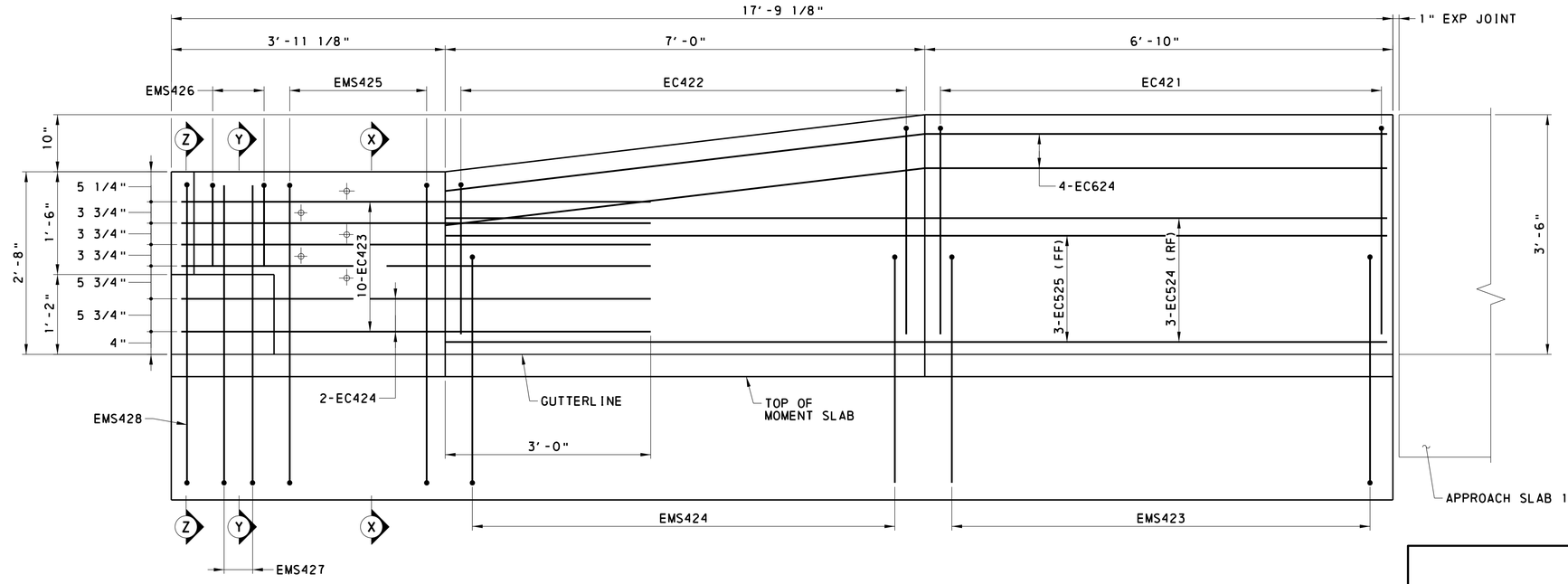


MOMENT SLAB B BARRIER PLAN

1 0 0.5 1 2 FEET



MOMENT SLAB B BARRIER ELEVATION

1 0 0.5 1 2 FEET

NOTES:

1. SEE SHEET 60 FOR MOMENT SLAB PLAN.
2. SEE SHEET 63 FOR MOMENT SLAB SECTIONS.
3. SEE SHEET 65 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB B BARRIER PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

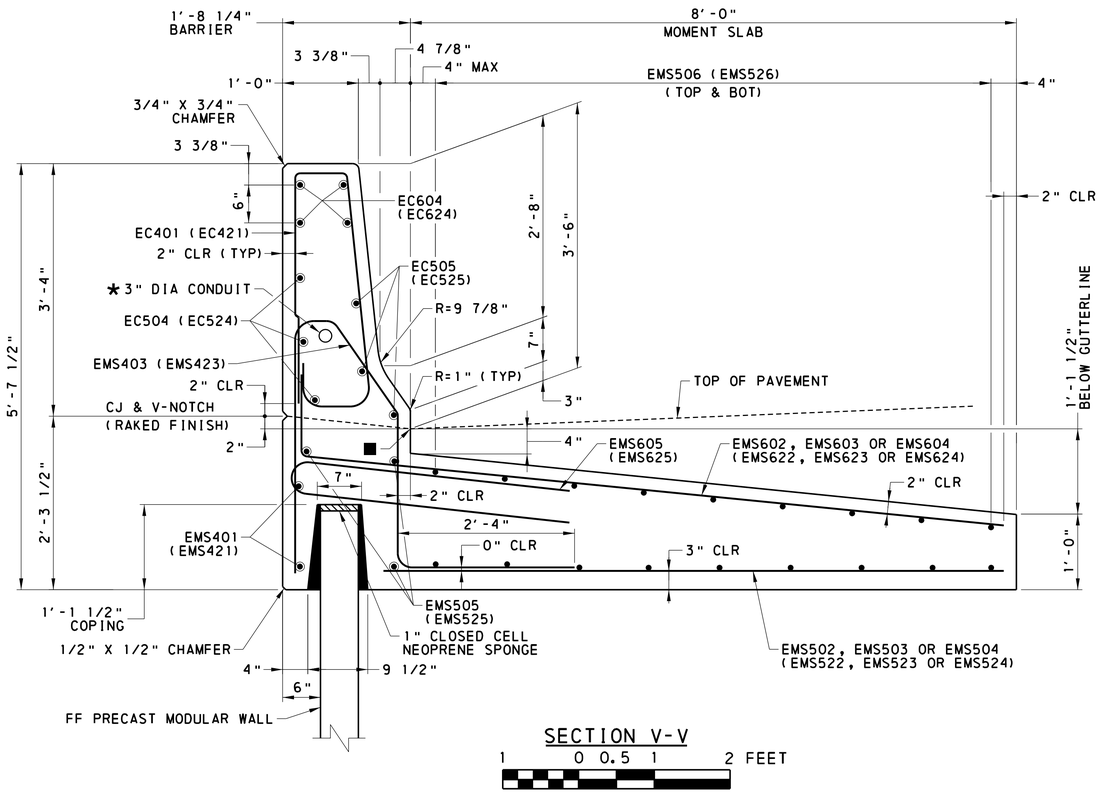
RECOMMENDED 03/04/2024

SHEET 62 OF 85

S-39603

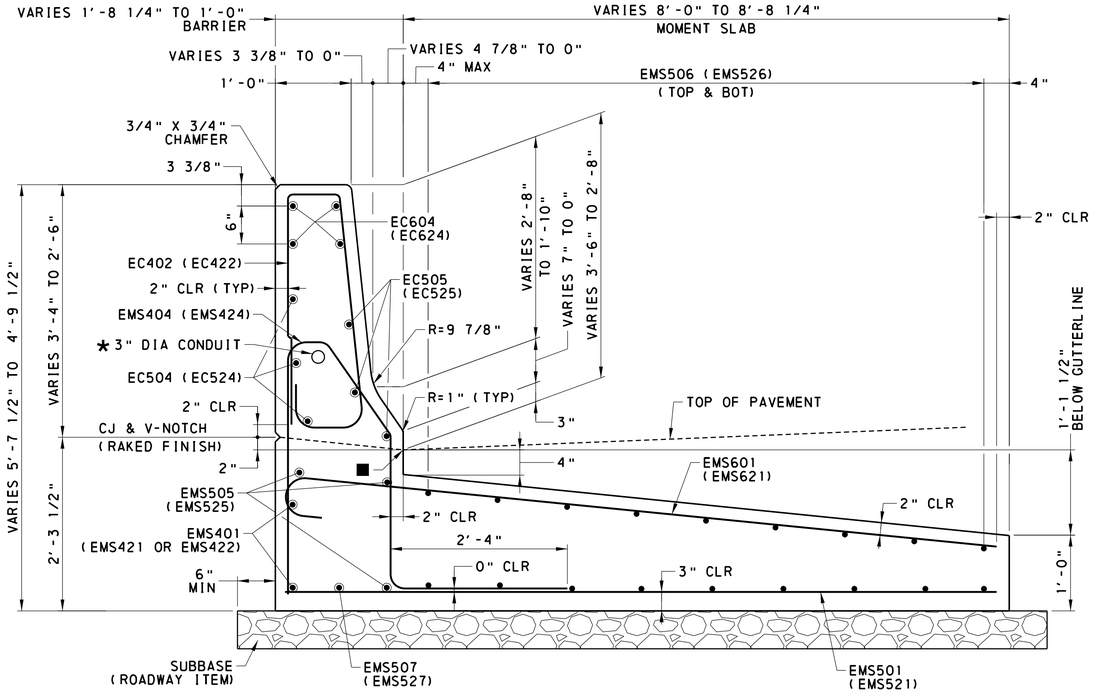
DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251B MOM SLAB B BARRIER.dgn
Model: MOM SLAB B BARRIER
Date: 3/4/2024 12:59:47 PM By: laura.hower



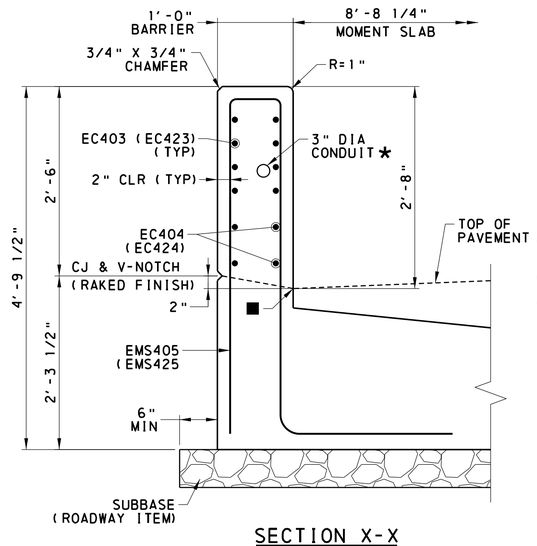
SECTION V-V

1 0 0.5 1 2 FEET



SECTION W-W

1 0 0.5 1 2 FEET



SECTION X-X

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

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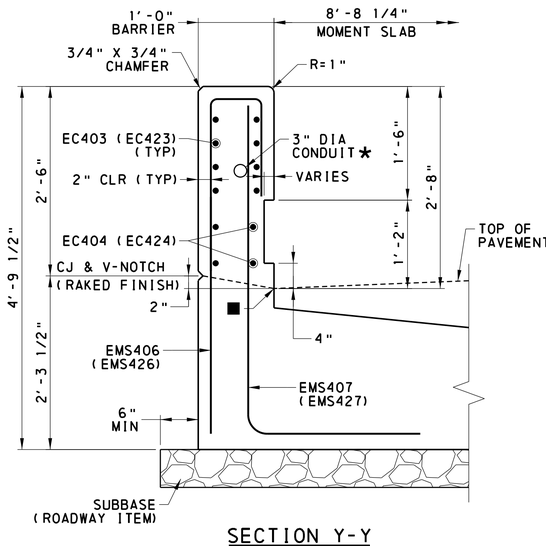

SECTION Y-Y

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

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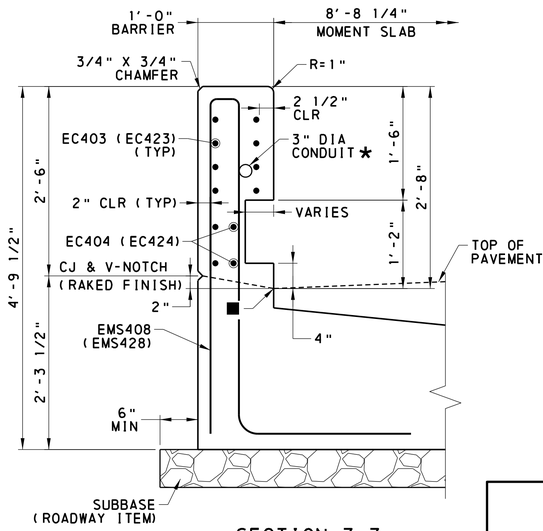


SECTION Z-Z

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET

LEGEND

■ ASPHALT RUBBER SEALING COMPOUND [PUB 408, SECTION 705.4(g)]

★ PROVIDE CONDUIT AT MOMENT SLAB B ONLY

NOTES:

1. REINFORCEMENT BAR MARKS ARE PROVIDED FOR MOMENT SLAB A WITH THOSE FOR MOMENT SLAB B SHOWN IN PARENTHESIS ().
2. SEE SHEET 60 FOR MOMENT SLAB PLAN.
3. SEE SHEETS 61 & 62 FOR MOMENT SLAB BARRIER PLAN AND ELEVATION.
4. SEE SHEETS 64 & 65 FOR REINFORCEMENT SCHEDULES.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB A & B SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 63 OF 85

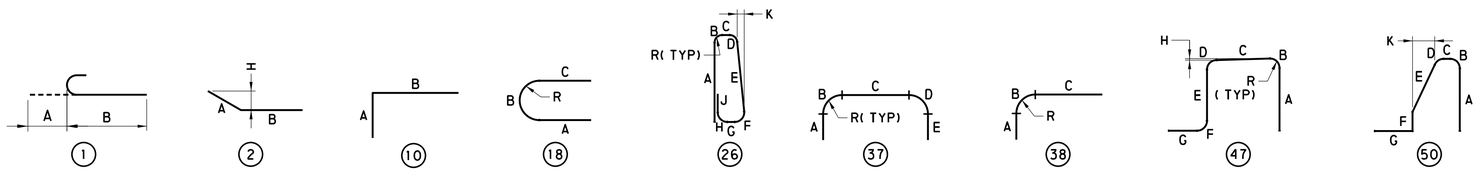
S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 52 MOM SLAB AB SECTIONS
2024 12:59:47 PM By: laura.hower

MOMENT SLAB A REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EMS401	4	21'-6"	2	STR												
EMS403	4	9'-5 1/2"	22	50	3'-0"	4"	4"	2 1/2"	1'-4 1/2"	1'-10 1/2"	2'-4"			8 5/8"	2"	
EMS404	4	VARIES 9'-2 1/4" TO 9'-5 1/2"	14	50	3'-0"	4"	VARIES 3" TO 4"	VARIES 2 1/2" TO 4"	1'-4 1/2"	VARIES 1'-8 1/4" TO 1'-10 1/2"	2'-4"			VARIES 1/4" TO 8 5/8"	2"	1 SET OF 14, STEP C BY 1/16", D/F BY 1/8" & K BY 5/8"
EMS405	4	11'-8 1/8"	5	47	4'-3"	2 3/8"	5"	2 3/8"	4'-1"	2 3/8"	2'-4"	0"			1"	
EMS406	4	6'-0 3/4"	3	37	4'-3"	2 3/8"	5"	2 3/8"	1'-0"						1"	
EMS407	4	6'-8"	3	38	2'-4"	2 3/8"	4'-1 5/8"								1"	
EMS408	4	11'-4 3/8"	1	47	4'-2 1/2"	3 1/8"	0"	3 1/8"	4'-0 1/2"	3 1/8"	2'-4"	0"			1 1/2"	
EC401	4	8'-0 1/8"	22	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"	2"	
EC402	4	VARIES 6'-0 3/4" TO 8'-0 1/8"	14	26	VARIES 1'-11 1/2" TO 2'-9 1/2"	4"	3 3/8"	3 5/8"	VARIES 1'-9 3/4" TO 2'-7 3/4"	4 1/8"	VARIES 3 3/8" TO 6 3/4"	4"	5"	VARIES 0" TO 3 3/8"	2"	1 SET OF 14, STEP A/E BY 3/4" & G/K BY 1/4"
EC403	4	6'-10"	10	STR												
EC404	4	6'-10 5/8"	2	2	1'-5"	5'-5 5/8"						4 1/8"				
EMS501	5	9'-4"	12	STR												
EMS502	5	8'-2"	11	STR												
EMS503	5	VARIES 1'-0" TO 5'-9"	3	STR												1 SET OF 3, STEP EACH BY 2'-4 1/2"
EMS504	5	8'-8"	1	STR												
EMS505	5	21'-6"	3	STR												
EMS506	5	VARIES 21'-6" TO 24'-10"	18	STR												2 SETS OF 9, STEP EACH BY 1/2"
EMS507	5	10'-8"	1	STR												
EC504	5	17'-8"	3	STR												
EC505	5	17'-8"	3	2	7'-0"	10'-8"						8 1/4"				
EMS601	6	10'-0"	12	1	8"	9'-4"										
EMS602	6	10'-4"	11	10	1'-0"	9'-4"										
EMS603	6	VARIES 1'-0" TO 5'-9"	3	STR												1 SET OF 3, STEP EACH BY 2'-4 1/2"
EMS604	6	9'-11"	1	STR												
EMS605	6	8'-9 1/2"	11	18	4'-0"	9 1/2"	4'-0"								2 1/2"	
EC604	6	17'-8"	4	2	7'-0"	10'-8"						10"				



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB A REINFORCEMENT SCHEDULE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE061839

RECOMMENDED 03/04/2024

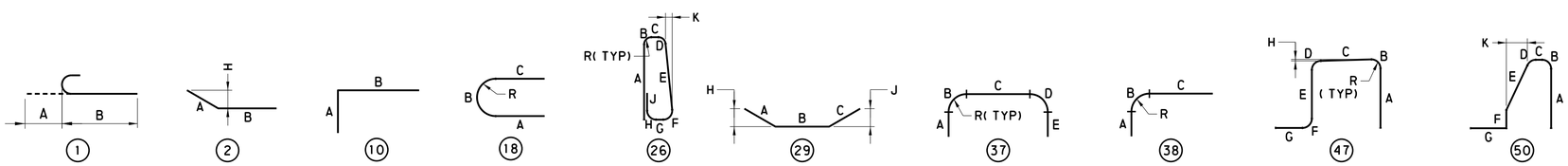
SHEET 64 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 0435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:152B MOM SLAB A REINFORCEMENT
Date/Time:8/2/2022 9:59:48 PM By:laura.hower

MOMENT SLAB B REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EMS421	4	17'-5"	2	STR												
EMS422	4	5'-5"	2	STR												
EMS423	4	9'-5 1/2"	14	50	3'-0"	4"	4"	2 1/2"	1'-4 1/2"	1'-10 1/2"	2'-4"			8 5/8"	2"	
EMS424	4	VARIES 9'-2 1/4" TO 9'-5 1/2"	14	50	3'-0"	4"	VARIES 3" TO 4"	VARIES 2 1/2" TO 4"	1'-4 1/2"	VARIES 1'-8 1/4" TO 1'-10 1/2"	2'-4"			VARIES 1/4" TO 8 5/8"	2"	1 SET OF 14, STEP C BY 1/16", D/F BY 1/8" & K BY 5/8"
EMS425	4	11'-8 1/8"	5	47	4'-3"	2 3/8"	5"	2 3/8"	4'-1"	2 3/8"	2'-4"	0"			1"	
EMS426	4	6'-0 3/4"	3	37	4'-3"	2 3/8"	5"	2 3/8"	1'-0"						1"	
EMS427	4	6'-8"	3	38	2'-4"	2 3/8"	4'-1 5/8"								1"	
EMS428	4	11'-4 3/8"	1	47	4'-2 1/2"	3 1/8"	0"	3 1/8"	4'-0 1/2"	3 1/8"	2'-4"	0"			1 1/2"	
EC421	4	8'-0 1/8"	14	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"	2"	
EC422	4	VARIES 6'-0 3/4" TO 8'-0 1/8"	14	26	VARIES 1'-11 1/2" TO 2'-9 1/2"	4"	3 3/8"	3 5/8"	VARIES 1'-9 3/4" TO 2'-7 3/4"	4 1/8"	VARIES 3 3/8" TO 6 3/4"	4"	5"	VARIES 0" TO 3 3/8"	2"	1 SET OF 14, STEP A/E BY 3/4" & G/K BY 1/4"
EC423	4	7'-6"	10	2	3'-10"	3'-8"						9"				
EC424	4	7'-7"	2	29	1'-8"	2'-3"	3'-8"					4 7/8"	8 1/2"			
EMS521	5	9'-4"	12	STR												
EMS522	5	8'-2"	4	STR												
EMS523	5	VARIES 1'-9" TO 7'-2"	3	STR												1 SET OF 3, STEP EACH BY 2'-8 1/2"
EMS524	5	8'-6"	1	STR												
EMS525	5	17'-5"	3	STR												
EMS526	5	VARIES 14'-8" TO 17'-7"	18	STR												2 SETS OF 9, STEP EACH BY 4 3/8"
EMS527	5	10'-8"	1	STR												
EC524	5	13'-8"	3	STR												
EC525	5	13'-8"	3	2	7'-0"	6'-8"						8 1/4"				
EMS621	6	10'-0"	12	1	8"	9'-4"										
EMS622	6	10'-4"	4	10	1'-0"	9'-4"										
EMS623	6	VARIES 1'-9" TO 7'-2"	3	STR												1 SET OF 3, STEP EACH BY 2'-8 1/2"
EMS624	6	8'-6"	1	STR												
EMS625	6	8'-9 1/2"	6	18	4'-0"	9 1/2"	4'-0"								2 1/2"	
EC624	6	13'-8"	4	2	7'-0"	6'-8"						10"				



Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

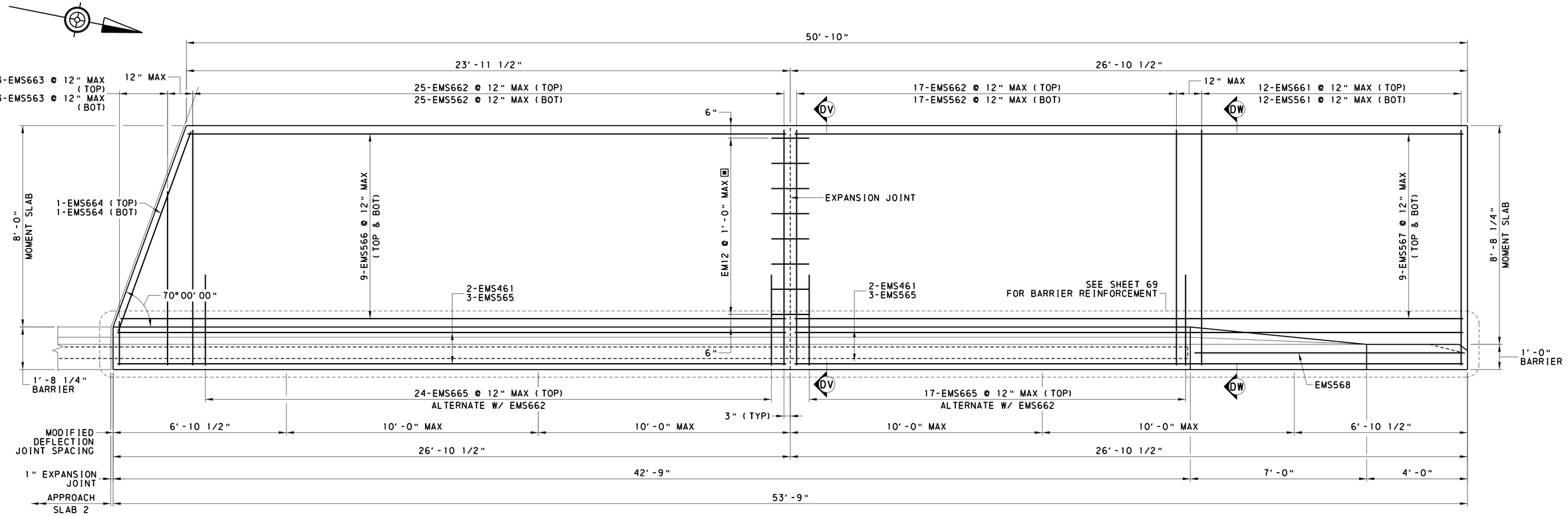
LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB B REINFORCEMENT SCHEDULE

RECOMMENDED 03/04/2024

SHEET 65 OF 85

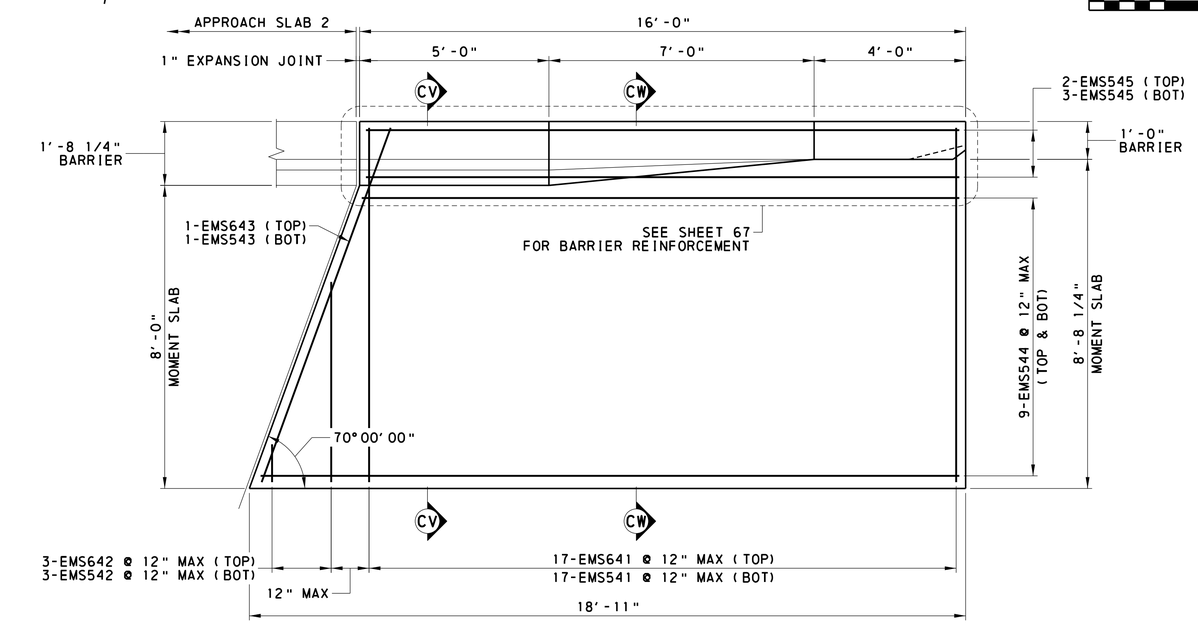
S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model:52C MOM SLAB B REINF
Date:3/4/2024 2:59:48 PM By:laura.hower



MOMENT SLAB D PLAN

2 0 1 2 4 FEET



MOMENT SLAB C PLAN

2 0 1 2 4 FEET

LEGEND

▣ USE TYPE E OR D JOINT PER RC-20M

NOTES:

1. SEE SHEET 7 FOR MOMENT SLAB PROTECTIVE COATING DETAIL. DO NOT PLACE PENETRATING SEALER ON TOP OF ANY SURFACE THAT RECEIVES ASPHALT OVERLAY.
2. SEE SHEET 67 FOR MOMENT C SLAB BARRIER PLAN.
3. SEE SHEET 68 FOR MOMENT SLAB C SECTIONS.
4. SEE SHEET 69 FOR MOMENT D SLAB BARRIER PLAN.
5. SEE SHEET 70 FOR MOMENT SLAB D SECTIONS.
6. SEE SHEETS 71 & 72 FOR REINFORCEMENT SCHEDULES.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB C & D PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER BENJAMIN R. MARTZ PE081839

RECOMMENDED 03/04/2024

SHEET 66 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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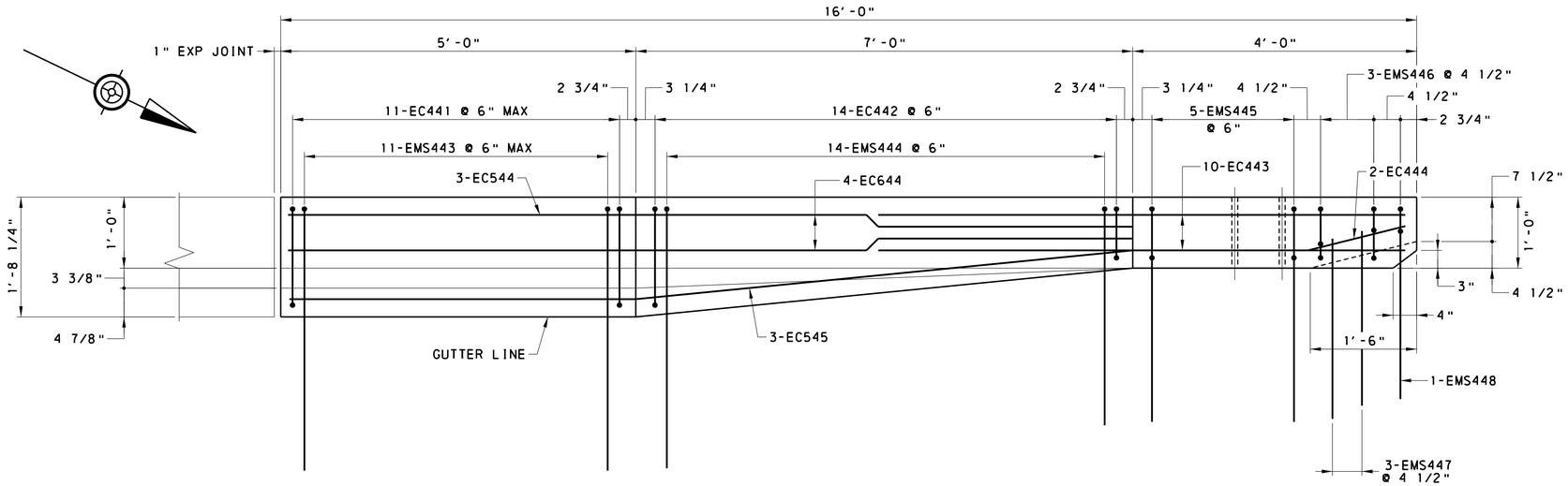
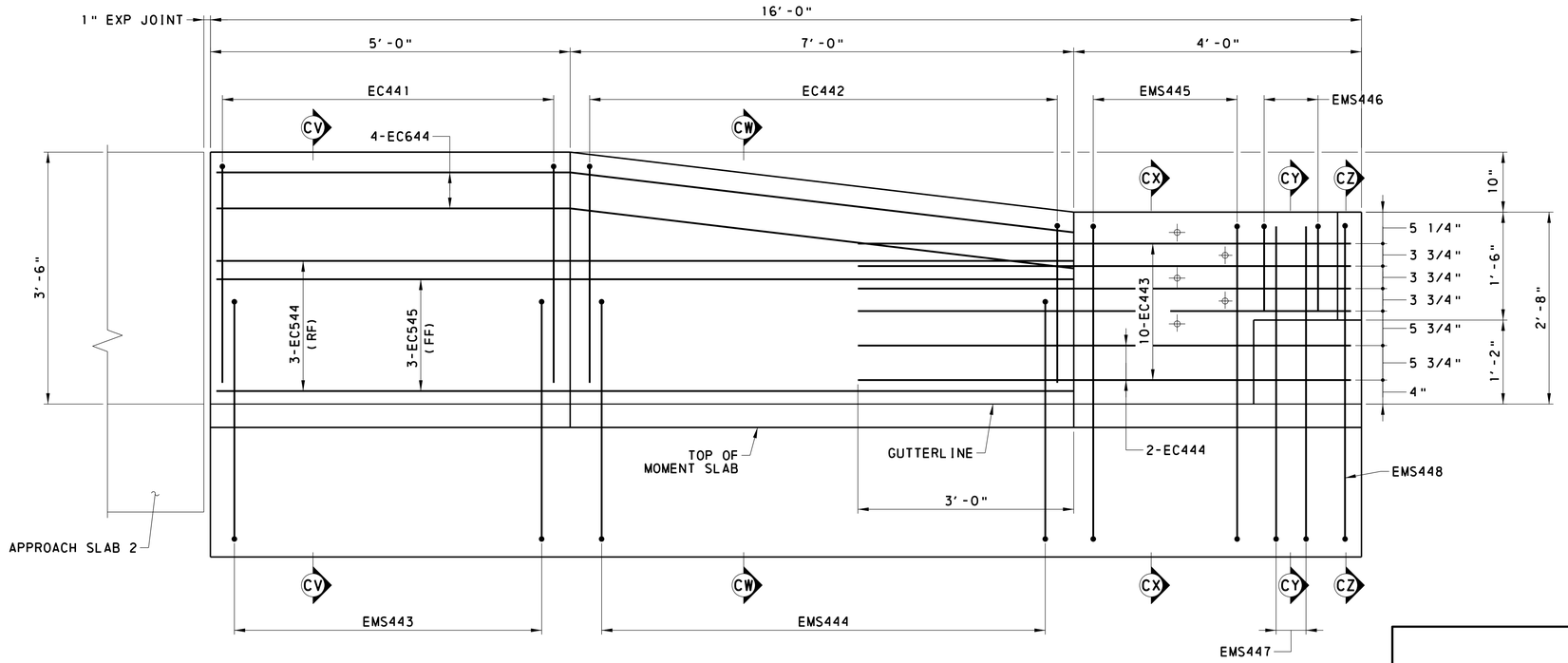


MOMENT SLAB C BARRIER PLAN

1 0 0.5 1 2 FEET



MOMENT SLAB C BARRIER ELEVATION

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET

NOTES:

1. SEE SHEET 66 FOR MOMENT SLAB PLAN.
2. SEE SHEET 68 FOR MOMENT SLAB C SECTIONS.
3. SEE SHEET 71 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB C BARRIER PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 67 OF 85

S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

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Model: 54 MOM SLAB C BARRIER
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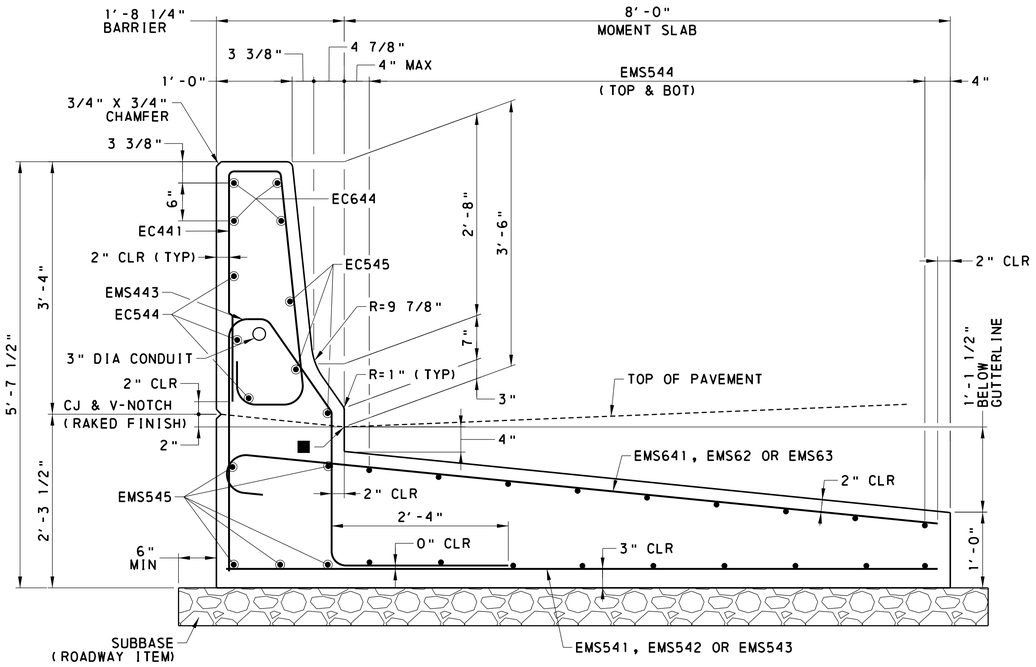

SECTION CV-CV

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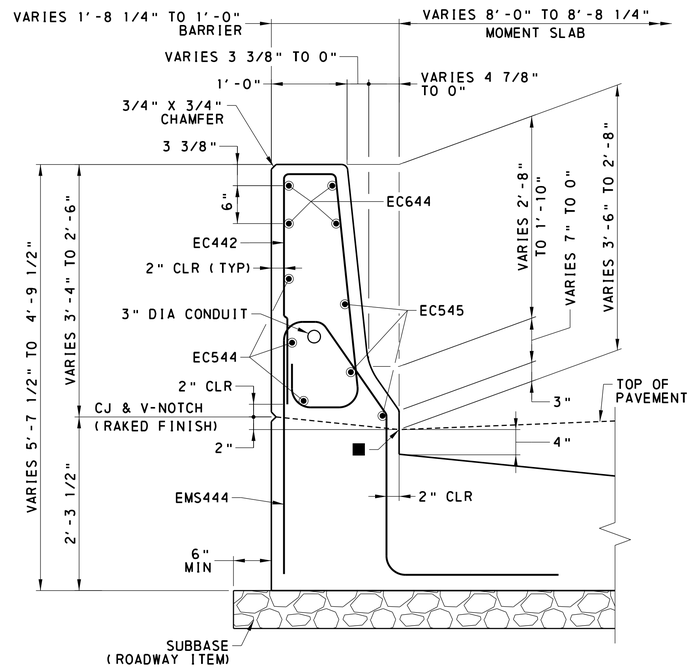

SECTION CW-CW

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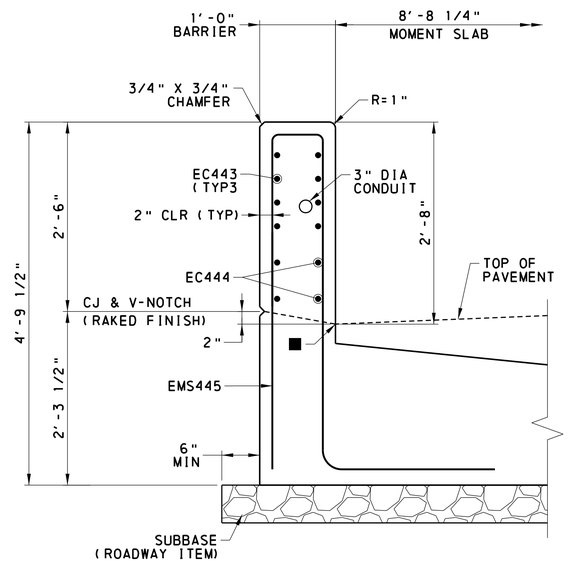

SECTION CX-CX

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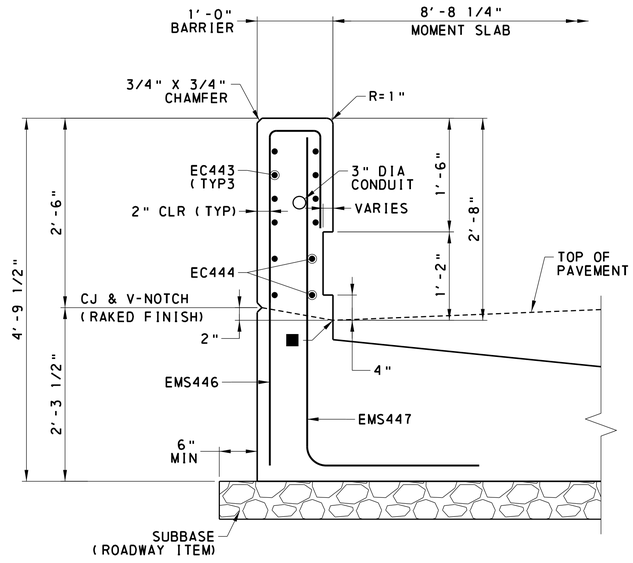

SECTION CY-CY

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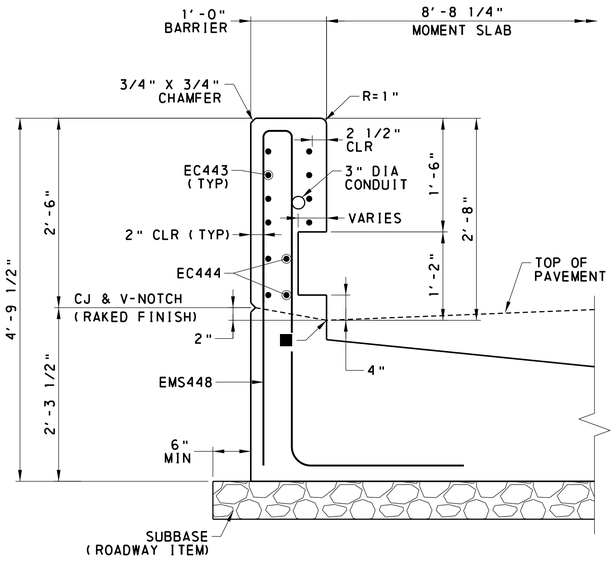

SECTION CZ-CZ

1 0 0.5 1 2 FEET

LEGEND

■ ASPHALT RUBBER SEALING COMPOUND [PUB 408, SECTION 705.4(g)]

NOTES:

1. SEE SHEET 67 FOR MOMENT SLAB BARRIER PLAN AND ELEVATION.
2. SEE SHEET 71 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB C SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 68 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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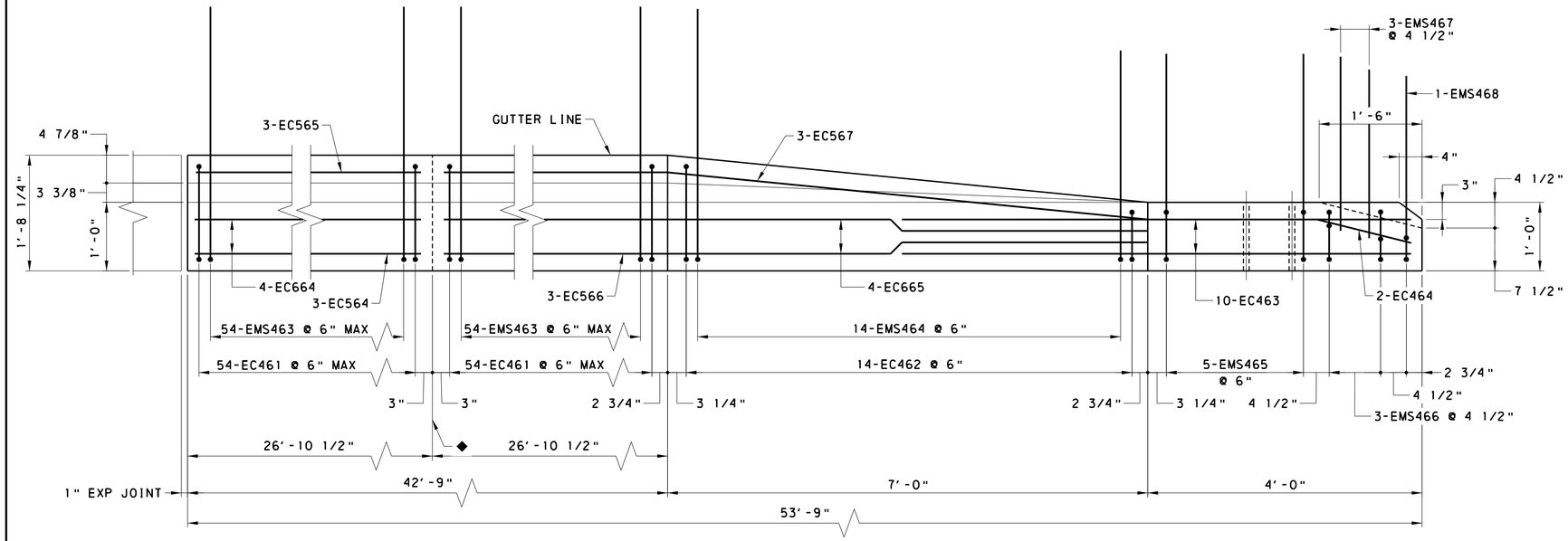
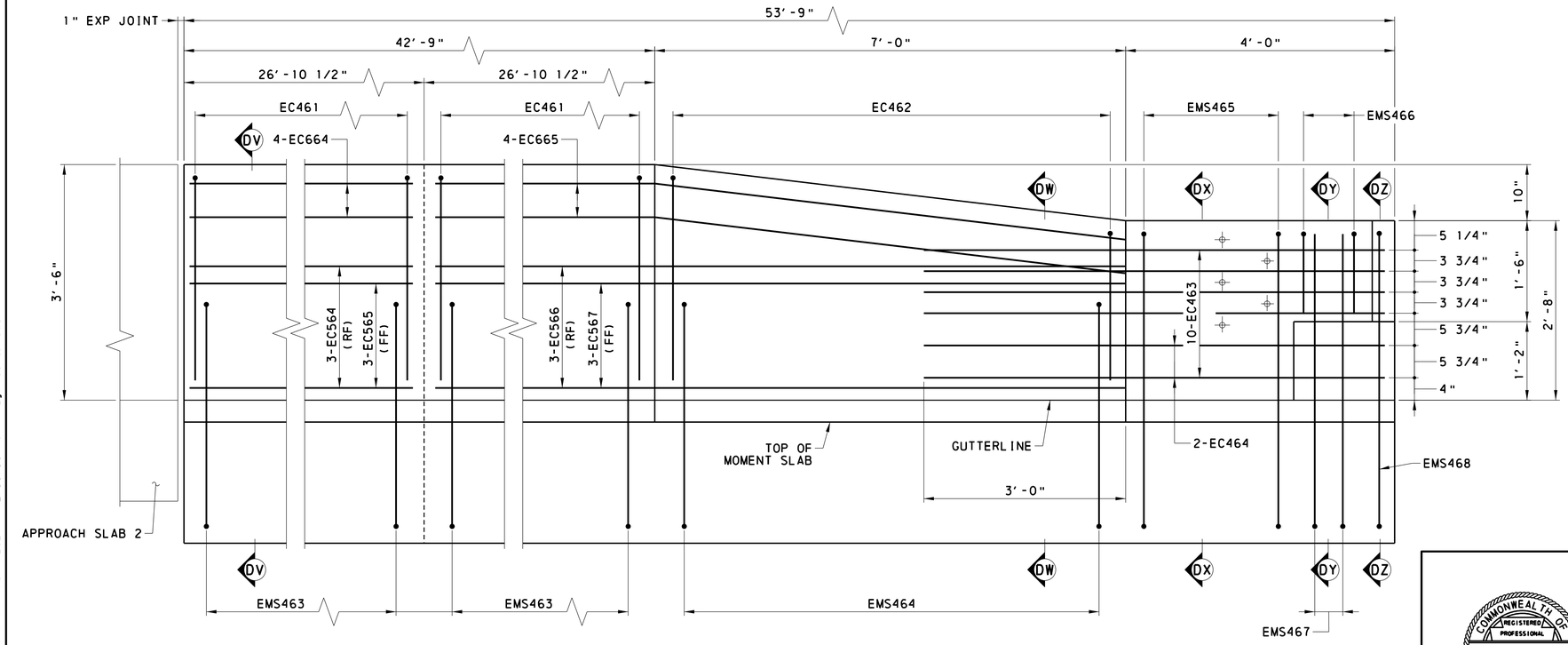


MOMENT SLAB D BARRIER PLAN

1 0 0.5 1 2 FEET



MOMENT SLAB D BARRIER ELEVATION

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET

LEGEND

◆ PROVIDE OPEN JOINTS IN BARRER AT SAME LOCATION AS THOSE PROVIDED FOR MOMENT SLABS. SEE BC-752M FOR DETAILS

NOTES:

1. SEE SHEET 66 FOR MOMENT SLAB PLAN.
2. SEE SHEET 70 FOR MOMENT SLAB D SECTIONS.
3. SEE SHEET 72 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
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OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB D BARRIER PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 69 OF 85

S-39603

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

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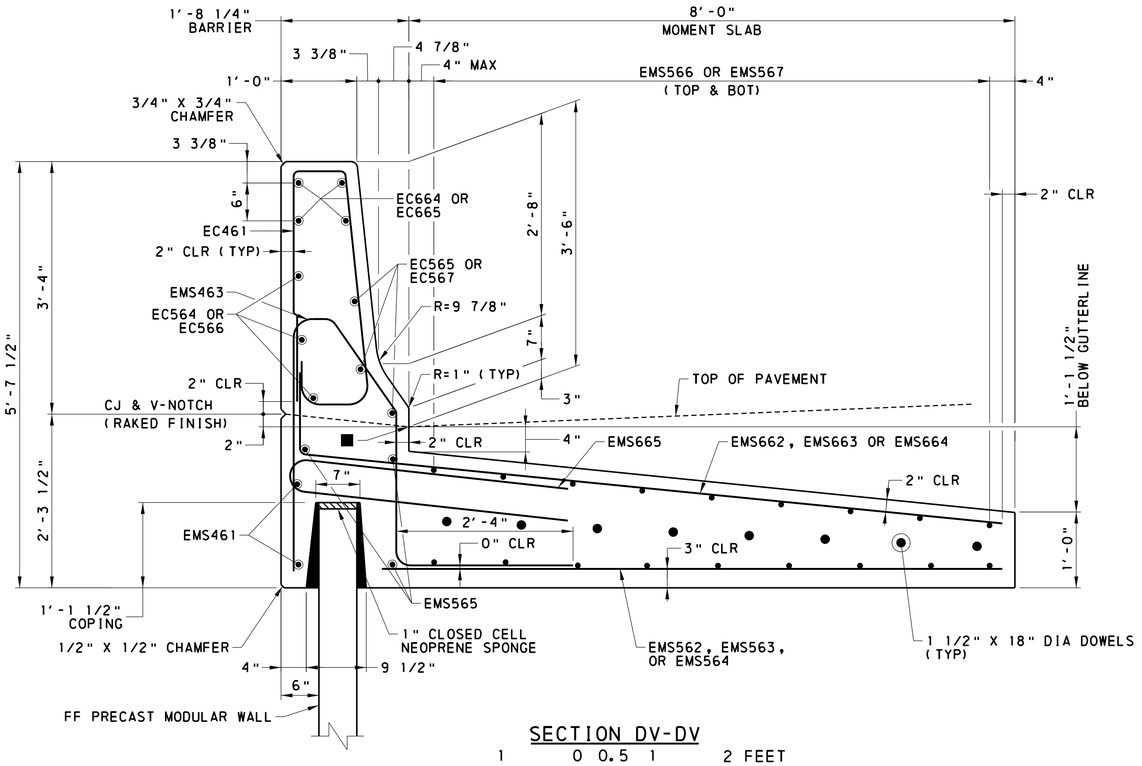

SECTION DV-DV

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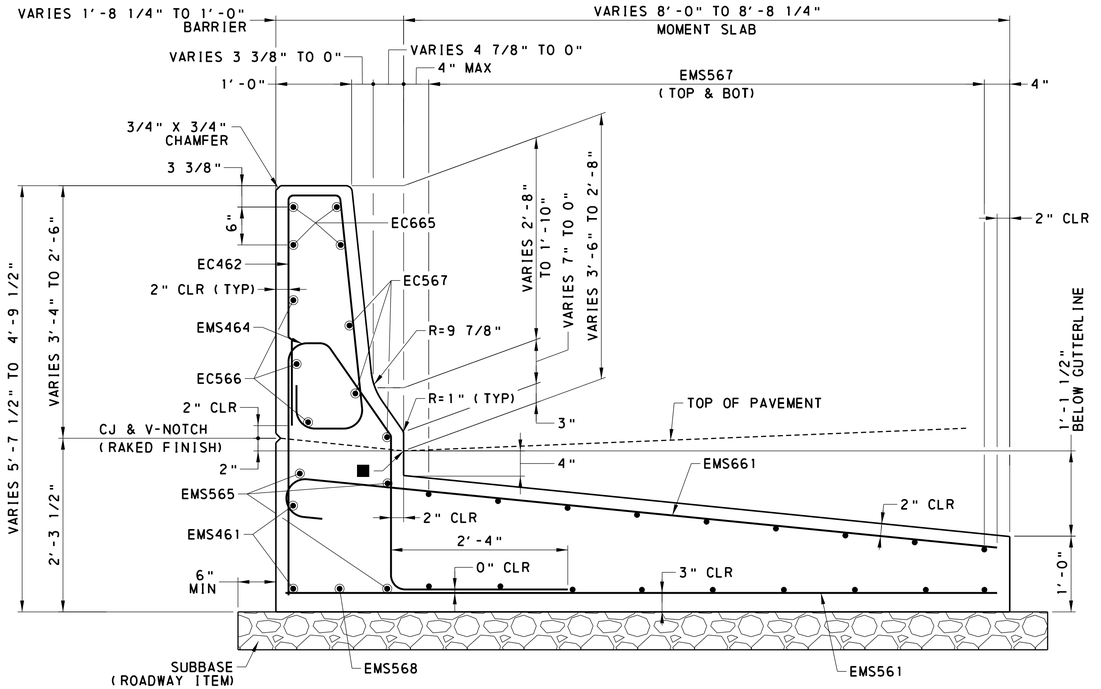
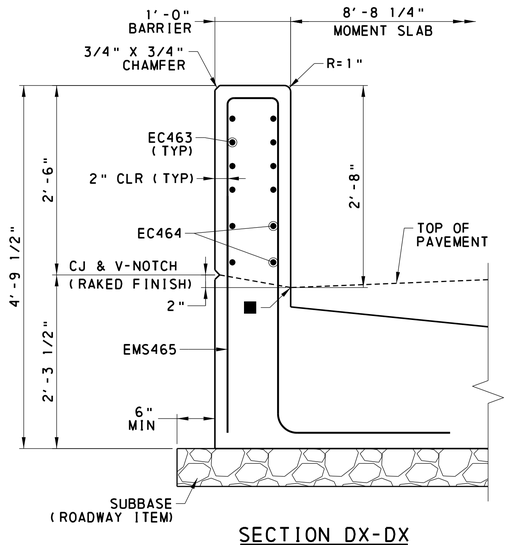


SECTION DW-DW

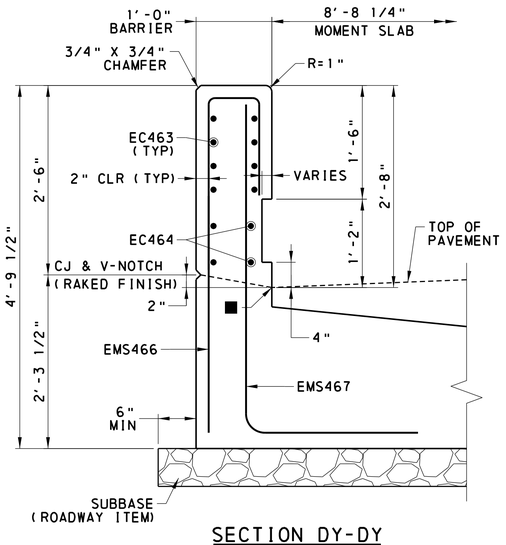
1 0 0.5 1 2 FEET



SECTION DX-DX

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

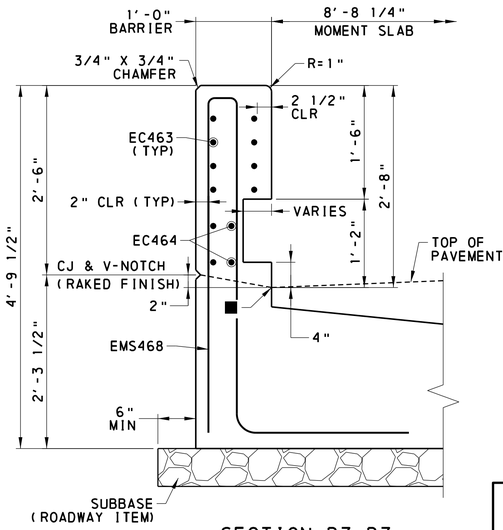
1 0 0.5 1 2 FEET



SECTION DY-DY

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET



SECTION DZ-DZ

(MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

1 0 0.5 1 2 FEET

LEGEND

■ ASPHALT RUBBER SEALING COMPOUND [PUB 408, SECTION 705.4(g)]

NOTES:

1. SEE SHEET 69 FOR MOMENT SLAB BARRIER PLAN AND ELEVATION.
2. SEE SHEET 72 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB D SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 70 OF 85

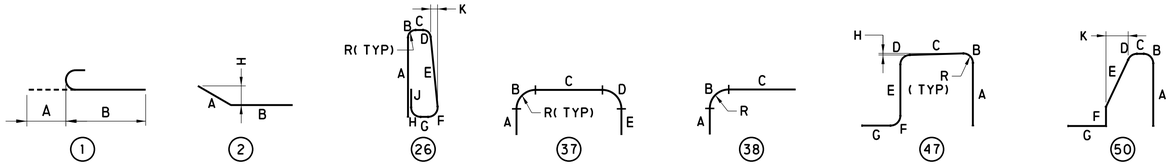
S-39603

DES: JWB	CHK'D: BRM
DWG: LAH	CHK'D: BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 58 MOM SLAB D SECTIONS
Date: 3/3/2024 12:59:50 PM By: laura.hower

MOMENT SLAB C REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EMS443	4	9'-5 1/2"	11	50	3'-0"	4"	4"	2 1/2"	1'-4 1/2"	1'-10 1/2"	2'-4"			8 5/8"	2"	
EMS444	4	VARIES 9'-2 1/4" TO 9'-5 1/2"	14	50	3'-0"	4"	VARIES 3" TO 4"	VARIES 2 1/2" TO 4"	1'-4 1/2"	VARIES 1'-8 1/4" TO 1'-10 1/2"	2'-4"			VARIES 1/4" TO 8 5/8"	2"	1 SET OF 14, STEP C BY 1/16", D/F BY 1/8" & K BY 5/8"
EMS445	4	11'-8 1/8"	5	47	4'-3"	2 3/8"	5"	2 3/8"	4'-1"	2 3/8"	2'-4"	0"			1"	
EMS446	4	6'-0 3/4"	3	37	4'-3"	2 3/8"	5"	2 3/8"	1'-0"						1"	
EMS447	4	6'-8"	3	38	2'-4"	2 3/8"	4'-1 5/8"								1"	
EMS448	4	11'-4 3/8"	1	47	4'-2 1/2"	3 1/8"	0"	3 1/8"	4'-0 1/2"	3 1/8"	2'-4"	0"			1 1/2"	
EC441	4	8'-0 1/8"	11	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"	2"	
EC442	4	VARIES 6'-0 3/4" TO 8'-0 1/8"	14	26	VARIES 1'-11 1/2" TO 2'-9 1/2"	4"	3 3/8"	3 5/8"	VARIES 1'-9 3/4" TO 2'-7 3/4"	4 1/8"	VARIES 3 3/8" TO 6 3/4"	4"	5"	VARIES 0" TO 3 3/8"	2"	1 SET OF 14, STEP A/E BY 3/4" & G/K BY 1/4"
EC443	4	6'-10"	10	STR												
EC444	4	6'-10 5/8"	2	2	1'-5"	5'-5 5/8"						4 1/8"				
EMS541	5	9'-4"	17	STR												
EMS542	5	VARIES 1'-0" TO 5'-3"	3	STR												1 SET OF 3, STEP EACH BY 2'-1 1/2"
EMS543	5	9'-11"	1	STR												
EMS544	5	VARIES 15'-8" TO 18'-7"	18	STR												2 SETS OF 9, STEP EACH BY 3'-4 3/8"
EMS545	5	15'-8"	5	STR												
EC544	5	11'-10"	3	STR												
EC545	5	11'-10"	3	2	7'-0"	4'-10"						8 1/4"				
EMS641	6	10'-0"	17	1	8"	9'-4"										
EMS642	6	VARIES 1'-0" TO 5'-3"	3	STR												1 SET OF 3, STEP EACH BY 2'-1 1/2"
EMS643	6	9'-11"	1	STR												
EC644	6	11'-10"	4	2	7'-0"	4'-10"						10"				



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB C REINFORCEMENT SCHEDULE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

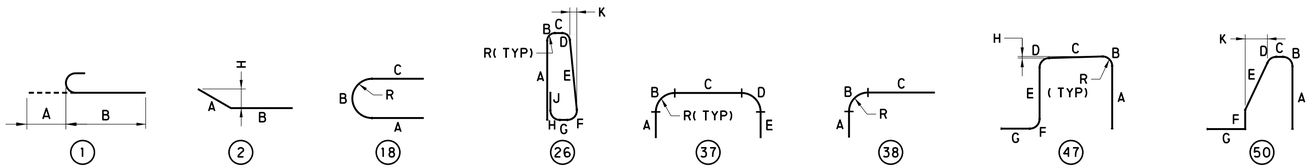
SHEET 71 OF 85

S-39603

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\WKA\DGN\Bridge\SR 435 SEC 251 BRIDGE FINAL PLAN.dgn
Model: 59 MOM SLAB C REINF SCHEDULE 3/4/2024 2:59:50 PM By: laura.hower

MOMENT SLAB D REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EMS461	4	26'-6"	4	STR												
EMS463	4	9'-5 1/2"	108	50	3'-0"	4"	4"	2 1/2"	1'-4 1/2"	1'-10 1/2"	2'-4"			8 5/8"	2"	
EMS464	4	VARIES 9'-2 1/4" TO 9'-5 1/2"	14	50	3'-0"	4"	VARIES 3" TO 4"	VARIES 2 1/2" TO 4"	1'-4 1/2"	VARIES 1'-8 1/4" TO 1'-10 1/2"	2'-4"			VARIES 1/4" TO 8 5/8"	2"	1 SET OF 14, STEP C BY 1/16", D/F BY 1/8" & K BY 5/8"
EMS465	4	11'-8 1/8"	5	47	4'-3"	2 3/8"	5"	2 3/8"	4'-1"	2 3/8"	2'-4"	0"			1"	
EMS466	4	6'-0 3/4"	3	37	4'-3"	2 3/8"	5"	2 3/8"	1'-0"						1"	
EMS467	4	6'-8"	3	38	2'-4"	2 3/8"	4'-1 5/8"								1"	
EMS468	4	11'-4 3/8"	1	47	4'-2 1/2"	3 1/8"	0"	3 1/8"	4'-0 1/2"	3 1/8"	2'-4"	0"			1 1/2"	
EC461	4	8'-0 1/8"	108	26	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	4 1/8"	6 3/4"	4"	5"	3 3/8"	2"	
EC462	4	VARIES 6'-0 3/4" TO 8'-0 1/8"	14	26	VARIES 1'-11 1/2" TO 2'-9 1/2"	4"	3 3/8"	3 5/8"	VARIES 1'-9 3/4" TO 2'-7 3/4"	4 1/8"	VARIES 3 3/8" TO 6 3/4"	4"	5"	VARIES 0" TO 3 3/8"	2"	1 SET OF 14, STEP A/E BY 3/4" & G/K BY 1/4"
EC463	4	6'-10"	10	STR												
EC464	4	6'-10 5/8"	2	2	1'-5"	5'-5 5/8"						4 1/8"				
EMS561	5	9'-4"	12	STR												
EMS562	5	8'-2 3/4"	42	STR												
EMS563	5	VARIES 1'-9" TO 6'-11"	3	STR												1 SET OF 3, STEP EACH BY 2'-7"
EMS564	5	8'-5"	1	STR												
EMS565	5	26'-6"	6	STR												
EMS566	5	VARIES 23'-7" TO 26'-4"	18	STR												2 SETS OF 9, STEP EACH BY 3 3/4"
EMS567	5	26'-6"	18	STR												
EC564	5	26'-6"	3	STR												
EC565	5	26'-6"	3	STR												
EC566	5	33'-8"	3	STR												
EC567	5	33'-8"	3	2	7'-0"	15'-8 1/2"	26'-8"					8 1/4"				
EMS661	6	10'-0"	12	1	8"	9'-4"										1 SET OF 3
EMS662	6	10'-4"	42	2	1'-0"	9'-4"										
EMS663	6	VARIES 1'-9" TO 6'-11"	3	STR												STEP EACH BY 2'-7"
EMS664	6	8'-2 3/8"	1	STR												
EMS665	6	8'-9 1/2"	41	18	4'-0"	9 1/2"	4'-0"								2 1/2"	
EC664	6	26'-6"	4	STR												
EC665	6	33'-8"	4	2	7'-0"	15'-8 1/2"	26'-8"					10"				
EM12	1 1/2"	1'-6"	8	STR												PLAIN DOWEL



NOTES:

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4. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	LAH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR & TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
MOMENT SLAB D REINFORCEMENT SCHEDULE

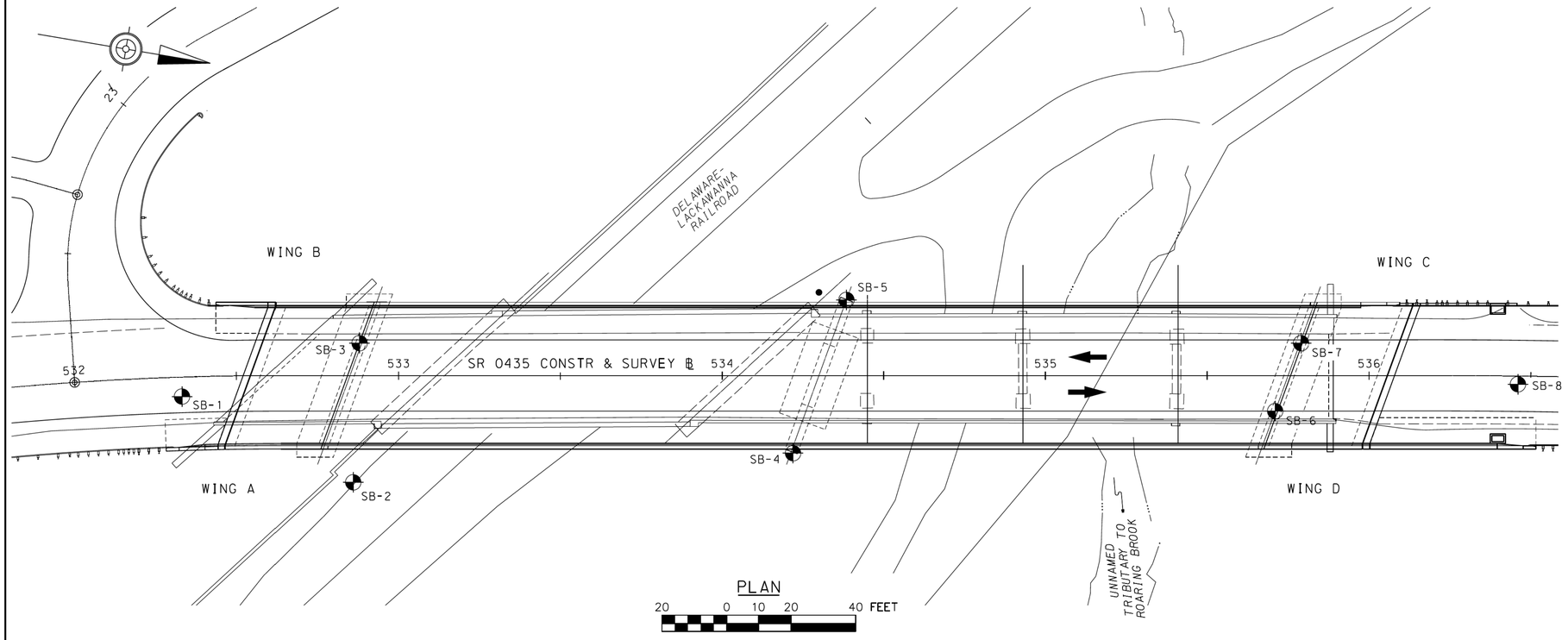
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 72 OF 83

S-39603

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\Model\60 WOM SLAB D REINF 39603.dgn
Date/Time: 3/4/2024 12:59:51 PM By: laura.hower



PLAN

20 0 10 20 40 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

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.

Tariq Amin

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST

DATE: 08/02/2023

TEST BORING DATA

BORING NUMBER	STATION	OFFSET	SURFACE ELEVATION	NORTHING	EASTING
SB-01	532+33.0	6.0 ft. RT.	1429.9 ft.	447135.9440 N	2574016.3175 E
SB-02	532+86.0	33.0 ft. RT.	1400.0 ft.	447192.7558 N	2574033.4612 E
SB-03	532+88.0	10.0 ft. LT.	1431.8 ft.	447188.0514 N	2573990.3402 E
SB-04	534+22.0	24.0 ft. RT	1397.3 ft.	447324.7000 N	2574001.0000 E
SB-05	534+39.0	24.0 ft. LT.	1397.9 ft.	447333.6000 N	2573953.0000 E
SB-06	535+71.0	11.0 ft. RT.	1417.4 ft.	447469.9107 N	2573964.6211 E
SB-07	535+79.0	10.0 ft. LT.	1417.1 ft.	447473.9886 N	2573942.4093 E
SB-08	536+46.0	6.0 ft. RT.	1413.9 ft.	447542.9120 N	2573947.1206 E

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

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (SHEET 1 OF 11)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST
NO. PG003910

2024.03.05 08:02:12 -05'00'

For DISTRICT GEOTECHNICAL ENGINEER

SHEET 73 OF 83

S-39603

DES: AMF | DWG: AMF | CKD: MTA

\\AWKSRVHBG\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GEO-01.dgn
1:56:14 PM 10/23/2023

SUBSTRUCTURE UNIT:
WINGWALL A

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/16/2022 8:00 AM	HAMMER: AUTOMATIC
SB-01	STATION: 532+33.0 OFFSET: 6.0 FT. RT.	FINISH: 09/19/2022 10:55 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1429.9 FT.

DRILLING INSPECTOR: TARIQ AMIN
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1369.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		BITUMINOUS CONCRETE, to. 0.5'/El. 1429.4		1.5	PC-1					
		CEMENT CONCRETE. 1.5'/El. 1428.4	a-1-a / gp	3.0	S-1	7-9-5	19	1.0	67	
1425		**GRAVEL** and **SAND**, some Clay, trace Silt, medium dense, wet, heterogeneous, poorly graded, angular to sub-rounded, low plastic fines, gray brown, fill. 6.0'/El. 1423.9		4.5	S-2	14-12-7	25	1.0	67	
				4.6	A-3	50/4"	>67	0.4	100	
				6.0	A-4	3-4-7	15	1.0	67	
		CLAY and **SILT**, trace Gravel, stiff to very stiff, homogeneous, poorly graded, sub-rounded, medium plastic fines, gray brown, fill. 10.5'/El. 1419.4	a-4 / cl-ml	7.5	S-4	1.50				
1420		BFE Step 4 1419.71		9.0	S-5	8-8-9 2.50	23	1.3	87	
		BFE Step 3 1417.17		10.5	S-6	8-10-8 2.00	24	1.5	100	
				12.0	S-7	8-9-10	25	1.5	100	
		SAND, some Clay, some Silt, trace Gravel, medium dense to dense, heterogeneous, poorly graded, sub-rounded, low plastic fines, brown black to gray, fill.		13.5	S-8	11-11-12	31	1.0	67	
				15.0	S-9	8-9-11	27	1.5	100	
1415				16.5	S-10	11-22-15	49	1.0	67	
				18.0	S-11	9-10-9	25	1.5	100	
				19.5	S-12	10-15-16	41	1.5	100	
				21.0	S-13	11-15-12	36	1.5	100	
				22.5	S-14	18-15-12	36	0.0	0	
			a-2-6 / sc	24.0	S-15	12-15-50	87	0.9	60	
		BFE Step 2 1412.08		25.5	S-16	19-19-20 3.00	52	1.5	100	
1410				27.0	S-17	19-16-11 1.75	36	1.5	100	
				28.5	S-18	10-14-16 2.50	40	1.5	100	
				30.0	S-19	11-15-16 3.00	41	1.5	100	
				31.5	S-20	18-18-18 2.25	48	1.5	100	
				33.0	S-21	7-10-10	27	1.5	100	
				34.5	S-22	14-20-17 3.00	49	1.5	100	
				36.0	S-23	14-17-21 1.75	51	1.5	100	
				37.5	S-24	10-13-12 2.50	33	1.5	100	
				39.0	S-25	19-18-18 1.50	48	1.5	100	
				40.5	S-26	14-14-18 2.00	43	1.5	100	
			A-4 / ML	42.0	S-27	19-17-12 2.50	39	1.5	100	
				43.5	S-28	5-8-9 1.00	23	1.5	100	
				45.0	S-29	11-15-17 2.75	43	1.5	100	
				46.5	S-30	11-18-17 1.75	47	1.5	100	
				48.0	S-31	5-8-9 1.50	23	1.5	100	
				49.5	S-32	10-15-20 2.00	47	1.5	100	
				51.0	S-33	18-18-22 1.00	53	1.5	100	
				52.5	S-34	5-8-12 1.00	27	1.5	100	
				54.0	S-35	17-18-22 2.50	53	1.5	100	
				55.5	S-36	19-22-28 1.25	64	1.5	100	
				57.0	S-37	16-19-26 1.00	80	1.5	100	
				57.9	S-38	10-50/.4"	>67	0.9	100	
				58.6	S-39	3.50 50/.1"	>67	0.1	100	
				60.0	S-40	50/.2"	>67	0.2	100	
				61.5	S-41	50/.3"	>67	0.3	100	
				61.8	R-1		0%	1.0	45	

57.5'/El. 1372.4

GRAVEL, trace Sand, very dense, wet, fissured, poorly graded, angular to sub-angular, non-plastic, gray, residuum. — a-1-a / gp

61.8'/El. 1368.1

TOR 1368.10

(Layer description on next log page)

PENNDOT STRUCTURE BORING LOG PENNDOT GINT VERSION 4.2.3.3 8-21-2018.GDT 7/24/23 10:35 P:\2020\EC2014_SR0435-251_LACKAWANNA\CODE\GEO\DRILLING\BORING LOGS\PENNDOT STRUCTURE BORING LOG_PENNDOT GINT_VERSION_4_2_3_3_

SUBSTRUCTURE UNIT:
WINGWALL B

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/16/2022 8:00 AM	HAMMER: AUTOMATIC
SB-01	STATION: 532+33.0 OFFSET: 6.0 FT. RT.	FINISH: 09/19/2022 10:55 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1429.9 FT.

DRILLING INSPECTOR: TARIQ AMIN
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1369.9 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		BITUMINOUS CONCRETE, to. 0.5'/El. 1429.4		1.5	PC-1					
BFE Step 5 1427.17		**CEMENT CONCRETE**. 1.5'/El. 1428.4	a-1-a / gp	3.0	S-1	7-9-5	19	1.0	67	
1425 BFE Step 4 1424.62		**GRAVEL** and **SAND**, some Clay, trace Silt, medium dense, wet, heterogeneous, poorly graded, angular to sub-rounded, low plastic fines, gray brown, fill. 6.0'/El. 1423.9		4.5	S-2	14-12-7	25	1.0	67	
				4.9	A-3	50/4"	>67	0.4	100	
BFE Step 3 1422.08		**CLAY** and **SILT**, trace Gravel, stiff to very stiff, homogeneous, poorly graded, sub-rounded, medium plastic fines, gray brown, fill. 10.5'/El. 1419.4	a-4 / cl-ml	6.0	A-					
1420 BFE Step 2 1419.54				7.5	S-4	3-4-7 **1.50**	15	1.0	67	
BFE Step 1 1417.00		**SAND**, some Clay, some Silt, trace Gravel, medium dense to dense, heterogeneous, poorly graded, sub-rounded, low plastic fines, brown black to gray, fill. 24.0'/El. 1405.9	a-2-6 / sc	9.0	S-5	8-8-9 **2.50**	23	1.3	87	
1415				10.5	S-6	8-10-8 **2.00**	24	1.5	100	
				12.0	S-7	8-9-10	25	1.5	100	
1410				13.5	S-8	11-11-12	31	1.0	67	
				15.0	S-9	8-9-11	27	1.5	100	
				16.5	S-10	11-22-15	49	1.0	67	
				18.0	S-11	9-10-9	25	1.5	100	
				19.5	S-12	10-15-16	41	1.5	100	
				21.0	S-13	11-15-12	36	1.5	100	
				22.5	S-14	18-15-12	36	0.0	0	
				24.0	S-15	12-15-50	87	0.9	60	
1405		**SILT**, little Clay, trace Sand, trace Gravel, hard, moist to wet, homogeneous, poorly graded, rounded, medium plastic fines, brown, residuum, *Decomposed rock.*		25.5	S-16	19-19-20 **3.00**	52	1.5	100	
				27.0	S-17	19-16-11 **1.75**	36	1.5	100	
				28.5	S-18	10-14-16 **2.50**	40	1.5	100	
1400				30.0	S-19	11-15-16 **3.00**	41	1.5	100	
				31.5	S-20	18-18-18 **2.25**	48	1.5	100	
				33.0	S-21	7-10-10	27	1.5	100	
				34.5	S-22	14-20-17 **3.00**	49	1.5	100	
1395				36.0	S-23	14-17-21 **1.75**	51	1.5	100	
				37.5	S-24	10-13-12 **2.50**	33	1.5	100	
				39.0	S-25	19-18-18 **1.50**	48	1.5	100	
1390			A-4 / ML	40.5	S-26	14-14-18 **2.00**	43	1.5	100	
				42.0	S-27	19-17-12 **2.50**	39	1.5	100	
				43.5	S-28	5-8-9 **1.00**	23	1.5	100	
				45.0	S-29	11-15-17 **2.75**	43	1.5	100	
1385				46.5	S-30	11-18-17 **1.75**	47	1.5	100	
				48.0	S-31	5-8-9 **1.50**	23	1.5	100	
				49.5	S-32	10-15-20 **2.00**	47	1.5	100	
1380				51.0	S-33	18-18-22 **1.00**	53	1.5	100	
				52.5	S-34	5-8-12 **1.00**	27	1.5	100	
				54.0	S-35	17-18-22 **2.50**	53	1.5	100	
1375				55.5	S-36	19-22-28 **1.25**	64	1.5	100	
		57.5'/El. 1372.4		57.0	S-37	16-19-26 **1.00**	80	1.5	100	
		GRAVEL, trace Sand, very dense, wet, fissured, poorly graded, angular to sub-angular, non-plastic, gray, residuum.	a-1-a / gp	57.9	S-38	10-20/.4	>67	0.9	100	
1370 ▽				58.5	S-39	**3.50** 50/.1	>67	0.1	100	
TOR 1368.10		61.8'/El. 1368.1		60.0	S-40	50/.2	>67	0.2	100	
		(Layer description on next log page)		61.5	S-41	50/.3	>67	0.3	100	
				61.8	R-1		0%	1.0	45	

SUBSTRUCTURE UNIT:
WINGWALL B

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-01	STATION: 532+33.0 OFFSET: 6.0 FT. RT.	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 1369.9 ft. - 0.0 hr. ▼ 24 HR.: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1365		**SANDSTONE**, brown, hard to hard, slightly weathered to weathered, thin bedding with flat dip, Joint Set 1: jointed, moderate to moderate spacing, flat to moderate dip, narrow joint opening, Joint Set 2: fracture zone, close to moderate spacing, steep dip, open joints, *Argillaceous joints* *Staining on joints (Layer continued from the previous log page)*		64.0	R-2		0%	1.0	50	
				66.0	R-3		0%	0.8	40	
1360		*Steep fracture.*		68.0	R-4		48%	5.0	100	
		Steep fracture.		73.0	R-5		93%	2.8	93	
1355		76.0'/El. 1353.9								

**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
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (3 OF 13)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MOHAMMAD TARIQ AMIN GEO-OCIST NO. PG00391.0

2024.03.05
DATE

SHEET 75 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-03.dgn
11:02:19 AM 8/1/2023

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/08/2022 10:30 AM	HAMMER: AUTOMATIC
SB-02	STATION: 532+86.0 OFFSET: 33.0 FT. RT.	FINISH: 09/08/2022 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
NQZ WIRELINE, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1400.0 FT.

DRILLING INSPECTOR: KONSTANTIN KASAMIAS
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

0 HR. READING - ELAPSED TIME: El. 1378.8 ft. - 22.5 hr. *
24 HR. READING - ELAPSED TIME: NR - NR

BCPE 1405.00 NTS

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1395		**SAND** and **GRAVEL**, loose to medium dense, damp to moist, heterogeneous, poorly graded, angular to sub-angular, non-plastic, light black to brown, fill. *S-2 washed out.*	a-1-a / gp	1.5	S-1	1-2-2	5	0.3	20	
		5.0'/El. 1395.0		3.0	S-2	5-5-7	16	0.0	0	
				4.5	S-3	8-9-9	24	1.3	87	
				6.0	S-4	8-9-9	24	1.5	100	
				7.5	S-5	4-6-7	17	1.3	87	
1390				9.0	S-6	6-10-10	27	1.5	100	
				10.5	S-7	11-12-13	33	1.5	100	
				12.0	S-8	9-12-14	35	1.5	100	
				13.5	S-9	6-9-10	25	1.3	87	
1385				15.0	S-10	9-19-13	43	1.3	87	
				16.5	S-11	11-13-10	31	1.5	100	
				18.0	S-12	5-10-8	24	1.5	100	
				19.5	S-13	12-18-14	43	1.5	100	
1380				21.0	S-14	21-20-20	53	1.5	100	
				22.5	S-15	6-10-10	27	1.5	100	
				24.0	S-16	11-15-16	41	1.5	100	
				25.5	S-17	16-18-18	48	1.5	100	
1375				27.0	S-18	11-14-16	40	1.5	100	
			A-4 / ML	28.5	S-19	6-8-9	23	1.5	100	
				30.0	S-20	11-16-20	48	1.3	87	
1370				31.5	S-21	20-20-19	52	1.5	100	
				33.0	S-22	4-8-10	24	1.3	87	
				34.5	S-23	11-14-16	40	1.3	87	
1365				36.0	S-24	11-19-19	51	1.5	100	
				37.5	S-25	7-10-12	29	1.5	100	
				39.0	S-26	15-20-21	55	1.2	80	
1360				40.5	S-27	22-28-24	89	1.5	100	
				42.0	S-28	12-17-24	55	1.5	100	
				43.5	S-29	7-14-12	35	1.5	100	
1355				45.0	S-30	11-17-21	51	1.5	100	
				46.5	S-31	16-18-17	47	1.5	100	
				48.0	S-32	6-8-12	27	0.9	60	
				49.5	S-33	20-30-28	77	1.5	100	
1350				51.0	S-34	28-38-25	84	1.1	73	
		51.0'/El. 1349.0		51.5	S-35	50-50'/0'	>67	0.3	60	
		SAND and **GRAVEL**, trace Silt, very dense, wet, heterogeneous, poorly graded, angular to sub-angular, medium plastic fines, dark brown to light gray, residuum.		52.5	A- S-36	17-45-50/.2'	127	1.2	100	
			a-1-a / gp	53.7	A-					
1345				54.0	S-37	50-49-25	99	1.5	100	
				55.5	S-38	24-28-35	84	1.5	100	
				57.0	S-39	50'/0'	>67	0.0	0	
		59.1'/El. 1340.9		58.5	A- S-40	28-50/.1'	>67	0.6	100	
TOR 1340.90		*Fracture zone at 59.1'-59.4'.*		59.1	R-1		20%	1.0	50	
1340		**SANDSTONE**, gray tan to blue, dull luster, medium hard, weathered, narrow to moderate bedding with shallow to flat dip, bedding joints, close to moderate spacing, flat to shallow dip, open joints.		61.1	R-2		23%	2.7	90	
EPTE 1337.90										

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-02	STATION: 532+86.0 OFFSET: 33.0 FT. RT.	0 FT. [redacted] 5 FT.	0 HR.: El. 1378.8 ft. - 22.5 hr. * 24 HR.: NR - NR

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1335		*Infilling at 63.1'-61.5' and at 52.5'-62.7'.*		64.1						
		SANDSTONE, gray tan to blue, dull luster, medium hard, weathered, narrow to moderate bedding with shallow to flat dip, bedding joints, close to moderate spacing, flat to shallow dip, open joints. *(Layer continued from the previous log page)*			R-3		62%	5.0	100	
		Clay at bottom of R-3, took 5' to get out of it.		69.1						
1330					R-4		42%	3.2	80	
		73.1'/El. 1326.9								

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (4 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST NO. PG003910

2024.03.05
DATE

SHEET 76 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-04.dgn
7:53:01 AM 8/1/2023

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/18/2022 12:30 PM	HAMMER: AUTOMATIC
SB-03	STATION: 532+88.0 OFFSET: 10.0 FT. LT.	FINISH: 09/19/2022 12:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1431.8 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1382.0 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1382.7 ft. - 98.0 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ Soil/Rock Rec. % (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
1430		**BITUMINOUS CONCRETE.** 0.2'/El. 1431.6		1.1	PC-1					
	VOID	**CEMENT CONCRETE**, *Bridge Deck.* 1.1'/El. 1430.7								
	VOID	**VOID.**								
1425	VOID									
	VOID									
1420	VOID	12.0'/El. 1419.8		12.0	S-1	2-4-3	9	0.2	13	
		GRAVEL, some Sand, trace Silt, loose to very dense, dry to damp, heterogeneous, poorly graded, angular to sub-angular, non-plastic, gray black, fill.	a-1-a / gp	13.5	S-2	4-8-50/.0'	77	0.8	100	
		16.5'/El. 1415.3		14.3	A-S-3	50/.2	>67	0.0	0	
1415		**SAND** and **SILT**, some Gravel, very loose, wet, heterogeneous, poorly graded, sub-angular, non-plastic, gray and black, fill.	a-2-4 / sm	15.2	A-S-4	4-4-2	8	0.0	0	
		24.0'/El. 1407.8		16.5	S-5	1-WOH-1	1	0.2	13	
1410				18.0	S-6	WOH-WOH-2	3	0.1	7	
				19.5	S-7	2-WOH-1 **0.25**	1	1.0	67	
				21.0	S-8	WOH-WOH-2	3	1.2	80	
				22.5	S-9	**0.25** 1-2-11	17	1.5	100	
1405		**BPCE** 1405.00		24.0	S-10	15-18-10	37	1.5	100	
		GRAVEL, some Clay, trace Sand, loose to medium dense, moist to wet, heterogeneous, poorly graded, sub-angular, medium plastic fines, brown to red brown, fill.	a-2-6 / gp	25.5	S-11	3-6-3	12	1.0	67	
		28.5'/El. 1403.3		27.0	S-12	6-9-10 **2.50**	25	1.5	100	
1400		**SILT**, little Clay, trace Sand, trace Gravel, very stiff to hard, damp to wet, homogeneous, poorly graded, sub-angular to sub-rounded, medium plastic fines, brown, glacial outwash.		28.5	S-13	13-12-14 **2.75**	35	1.5	100	
				30.0	S-14	5-8-9 **3.00**	23	1.5	100	
				31.5	S-15	12-10-14 **3.50**	32	1.5	100	
1395				33.0	S-16	10-15-17 **2.00**	43	1.5	100	
				34.5	S-17	5-8-7 **2.00**	20	1.5	100	
				36.0	S-18	13-18-18 **3.25**	48	1.5	100	
1390				37.5	S-19	13-20-16 **2.00**	48	1.5	100	
				39.0	S-20	8-10-14 **2.75**	32	1.5	100	
				40.5	S-21	5-8-8 **2.00**	21	1.5	100	
				42.0	S-22	14-18-23 **2.00**	55	1.5	100	
1385				43.5	S-23	14-19-18 **2.25**	49	1.5	100	
			A-4 / ML	45.0	S-24	8-9-11 **2.25**	27	1.5	100	
				46.5	S-25	12-18-15 **3.00**	44	1.5	100	
1380				48.0	S-26	17-20-19 **3.00**	52	1.5	100	
				49.5	S-27	6-11-12 **3.00**	31	1.5	100	
				51.0	S-28	15-15-18 **3.75**	44	1.5	100	
				52.5	S-29	16-22-22 **4.00**	59	1.5	100	
1375				54.0	S-30	14-18-19 **2.00**	49	1.5	100	
				55.5	S-31	7-9-13	29	0.2	13	
				57.0	S-32	14-20-24 **1.50**	59	1.5	100	
				58.5	S-33	19-21-22	57	1.5	100	
1370				60.0	S-34	6-10-9 **2.25**	25	1.5	100	
				61.5						
				63.0						

SUBSTRUCTURE UNIT:
ABUTMENT 1

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-03	STATION: 532+88.0 OFFSET: 10.0 FT. LT.	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 1382.0 ft. - 0.0 hr. ▼ 24 HR.: El. 1382.7 ft. - 98.0 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ Soil/Rock Rec. % (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
1365		**SILT**, little Clay, trace Sand, trace Gravel, very stiff to hard, damp to wet, homogeneous, poorly graded, sub-angular to sub-rounded, medium plastic fines, brown, glacial outwash. *(Layer continued from the previous log page)*	A-4 / ML	64.5	S-35	16-19-21 **2.75**	53	1.5	100	
		69.0'/El. 1362.8		66.0	S-36	17-22-21 **2.50**	57	1.5	100	
		SILT and **CLAY**, some Gravel, trace Sand, hard, damp, heterogeneous, poorly graded, sub-angular, low plastic fines, brown with black, glacial outwash.	a-6 / cl	67.5	S-37	10-12-18 **2.00**	40	1.5	100	
1360		72.0'/El. 1359.8		69.0	S-38	17-23-24 **4.00**	63	1.5	100	
		MECHANICALLY BROKEN ROCK, *Mehcanically broken rock.* 72.5'/El. 1359.0		70.5	S-39	26-33-48	108	1.5	100	
TOR 1359.00				71.7	S-40	22-26-50/.2'	101	1.2	100	
				72.0	A-S-41	22-26-50/.0'	101	0.0	0	
				72.8	R-1		0%	0.4	18	
EPTE 1356.00		**SANDSTONE**, gray brown, medium hard to hard, slightly weathered to weathered, thin bedding with flat to shallow dip, Joint Set 1: jointed, narrow to moderate spacing, shallow to moderate dip, narrow joint opening, Joint Set 2: fracture zone, narrow to moderate spacing, moderate to sheer dip, open joints, *iron staining on joints argillaceous in joints.*		75.0	R-2		0%	0.4	40	
1355				76.0	R-3		0%	1.7	85	
				78.0	R-4		24%	4.2	84	
1350				83.0	R-5		40%	4.8	96	
		Soft zone. *Clay filling in vertical fracture.* 88.0'/El. 1343.8								
1345										

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
SBE	STREAMBED ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ#: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (5 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEO-OCIST NO. PG00391.0

2024.03.05
DATE

SHEET 77 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-05.dgn
11:05:47 AM 8/1/2023

SUBSTRUCTURE UNIT: PIER — LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 08/02/0200 1:00 PM	HAMMER: AUTOMATIC
SB-04	STATION: 534+22.0 OFFSET: 24.0 FT. RT	FINISH: 08/03/2022 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
NQZ DOUBLE TUBE WIRE LINE, AUTOMATIC, ACKER XLS TACK RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1397.3 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

0 HR. READING - ELAPSED TIME: El. 1373.1 ft. - 0.2 hr.
24 HR. READING - ELAPSED TIME: El. 1376.1 ft. - 44.5 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1395		**GRAVEL**, little Sand, trace Silt, medium dense, dry, heterogeneous, poorly graded. angular to sub-angular, non-plastic. gray tan and black, fill. 3.0'/El. 1394.3	a-1-a / gp	1.5	S-1	2-4-14	24	1.5	100	
		SAND, some Gravel, little Silt, medium dense, dry to damp, homogeneous, poorly graded, sub-angular, non-plastic, brown, fill. 6.0'/El. 1391.3	a-1-b / sp	3.0	S-2	35-19-11	40	1.5	100	
				4.5	S-3	11-8-13	28	1.5	100	
				6.0	S-4	12-12-13	33	1.5	100	
BPCE 1391.00				7.5	S-5	6-9-10 **1.50**	25	1.5	100	
1390		**SILT**, little Clay, trace Sand. trace Gravel, dense to very dense, damp to wet, homogeneous, well graded, sub-angular, low plastic fines, orange brown to brown. glacial outwash.		9.0	S-6	12-12-13 **2.50**	33	1.5	100	
				10.5	S-7	12-13-18	41	1.5	100	
				12.0	S-8	13-17-18	47	1.5	100	
				13.5	S-9	7-11-10	28	1.5	100	
1385				15.0	S-10	8-11-12	31	1.5	100	
				16.5	S-11	11-18-13	41	1.2	80	
				18.0	S-12	6-7-9 **1.00**	21	1.5	100	
				19.5	S-13	14-14-15	39	1.5	100	
1380				21.0	S-14	14-15-15 **1.50**	40	1.5	100	
				22.5	S-15	6-9-8 **1.00**	23	1.5	100	
				24.0	S-16	12-12-17	39	1.5	100	
				25.5	S-17	15-16-16	43	1.5	100	
1375				27.0	S-18	5-9-10	25	1.5	100	
				28.5	S-19	5-8-9	23	1.5	100	
				30.0	S-20	14-15-15 **1.75**	40	1.5	100	
				31.5	S-21	14-29-17	61	1.5	100	
1370				33.0	S-22	7-11-15	35	1.5	100	
				34.5	S-23	11-20-18 **3.00**	51	1.5	100	
			A-4 / ML	36.0	S-24	12-23-18	55	1.5	100	
				37.5	S-25	3-10-13 **2.50**	31	1.5	100	
				39.0	S-26	8-15-13	37	1.5	100	
1365		*More moisture in spoons with lower blow count.*		40.5	S-27	8-11-14 **2.75**	33	1.5	100	
				42.0	S-28	5-8-10 **1.50**	24	1.5	100	
				43.5	S-29	7-8-9 **1.75**	23	1.5	100	
				45.0	S-30	13-18-20	51	1.5	100	
1360				46.5	S-31	12-18-19	49	1.5	100	
				48.0	S-32	7-10-11 **1.75**	28	1.5	100	
				49.5	S-33	12-18-23	55	1.5	100	
				51.0	S-34	26-26-23	85	1.5	100	
1355				52.5	S-35	8-13-16 **2.75**	39	1.5	100	
				54.0	S-36	19-24-23	83	1.5	100	
				55.5	S-37	21-25-31 **3.00**	75	1.5	100	
				57.0	S-38	11-11-12 **1.50**	31	1.5	100	
1350				58.5	S-39	8-10-11	28	1.5	100	
				60.0	S-40	14-23-23	61	1.5	100	
				61.5	S-41	19-19-24	57	1.5	100	
1345				63.0	S-42	7-12-16 **1.75**	37	1.5	100	
1340										
1335										

SUBSTRUCTURE UNIT: PIER — LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-04	STATION: 534+22.0 OFFSET: 24.0 FT. RT	0 FT. [redacted] 5 FT.	0 HR.: El. 1373.1 ft. - 0.2 hr. 24 HR.: El. 1376.1 ft. - 44.5 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		64.5'/El. 1332.8		64.5	S-43	20-25-29	72	1.5	100	
TOR 1331.00		**GRAVEL**, some Sand, trace Silt, very dense. moist, fissured, poorly graded, angular to sub-angular. non-plastic, brown tan, residuum. 66.3'/El. 1331.0	a-1-a / gp	65.8	S-44	20-35-50/.3	113	1.5	115	
1330				66.0	A-S-45	50/.3	>67	1.3	433	
				66.3	R-1		0%	0.5	25	
EPTE 1328.00		**SANDSTONE**, gray to brown gray, *very broken, low recovery & no RQD.*		68.3	R-2		0%	1.4	70	
1325				70.3	R-3		0%	1.1	55	
		73.3'/El. 1324.0		72.3	R-4		0%	0.6	60	

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (6 OF 13)

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MOHAMMAD TARIQ AMIN — GEOLOGIST NO. PG003910

2024.03.05
DATE

SHEET 78 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-06.dgn
9:14:20 AM 8/1/2023

SUBSTRUCTURE UNIT: PIER — LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/09/2022 12:15 PM	HAMMER: AUTOMATIC
SB-05	STATION: 534+39.0 OFFSET: 24.0 FT. LT.	FINISH: 09/12/2022 1:45 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
NQZ WIRELINE, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1397.9 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: NR - NR
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
1395		**SILT**, little Gravel, some Sand, trace Clay, very loose to dense, dry to wet, heterogeneous, poorly graded, angular to sub-angular, non-plastic, gray black to black, fill.	a-1-a / gp	1.5	S-1	4-5-4	12	0.6	40	
				3.0	S-2	8-12-9	28	1.5	100	
				4.5	S-3	20-13-12	33	1.5	100	
				6.0	S-4	10-11-11	29	0.6	40	
				7.5	S-5	7-6-5	15	0.3	20	
BPCE 1391.00				9.0	S-6	7-5-4	12	0.7	47	
1390				10.5	S-7	9-5-4	12	0.1	7	
				12.0	S-8	3-1-1	3	0.4	27	
		13.5'/El. 1384.4		13.5	S-9	1-3-3	8	0.4	27	
1385		**SILT**, trace Clay, some Sand, little Gravel, very stiff to hard, damp to wet, homogeneous, poorly graded, sub-angular to sub-rounded, medium plastic fines, brown tan, glacial outwash.		15.0	S-10	3-6-8 **4.00**	19	1.3	87	
				16.5	S-11	11-12-12 **4.50**	32	1.5	100	
				18.0	S-12	6-8-13 **2.50**	28	1.5	100	
1380				19.5	S-13	12-13-18 **3.00**	41	1.5	100	
				21.0	S-14	14-15-15 **2.50**	40	0.9	60	
				22.5	S-15	7-9-10 **2.50**	25	1.4	93	
				24.0	S-16	14-15-19 **3.00**	45	1.5	100	
1375				25.5	S-17	13-16-15 **3.00**	41	0.8	53	
				27.0	S-18	14-15-17 **3.00**	43	0.9	60	
				28.5	S-19	6-8-10 **3.50**	24	1.3	87	
1370				30.0	S-20	14-18-19 **4.50**	49	1.3	87	
				31.5	S-21	18-20-24 **3.50**	59	1.3	87	
				33.0	S-22	6-9-11 **2.00**	27	1.5	100	
				34.5	S-23	14-19-17 **1.00**	48	1.5	100	
1365				36.0	S-24	19-20-22 **1.50**	56	1.5	100	
				37.5	S-25	6-8-11 **2.25**	25	1.5	100	
			A-4 / ML	39.0	S-26	11-15-25 **1.75**	53	1.5	100	
				40.5	S-27	19-18-18	48	1.5	100	
1360				42.0	S-28	6-13-13 **2.50**	35	1.5	100	
				43.5	S-29	6-9-11 **2.00**	27	1.5	100	
				45.0	S-30	15-16-17	44	1.5	100	
				46.5	S-31	17-16-19 **2.25**	47	1.5	100	
1355				48.0	S-32	8-8-14 **2.00**	29	1.5	100	
				49.5	S-33	17-25-23	64	1.5	100	
				51.0	S-34	18-18-23 **2.50**	55	1.5	100	
1350				52.5	S-35	6-11-13 **1.75**	32	1.5	100	
				54.0	S-36	16-22-23	80	1.5	100	
				55.5	S-37	13-21-20	55	1.5	100	
1345				57.0	S-38	8-12-15	36	1.5	100	
				58.5	S-39	8-9-9	24	1.5	100	
				60.0	S-40	11-18-21	52	1.5	100	
1340				61.5	S-41	19-20-19	52	1.5	100	
				63.0	S-42	7-13-14	36	1.5	100	
1335										

SUBSTRUCTURE UNIT: PIER — LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-05	STATION: 534+39.0 OFFSET: 24.0 FT. LT.	0 FT. [redacted] 5 FT.	▽ 0 HR.: NR - NR ▼ 24 HR.: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
		66.0'/El. 1331.9	A-4 / ML	64.5	S-43	23-20-28	84	1.5	100	
				66.0	S-44	23-23-34	76	1.5	100	
1330		**GRAVEL**, some Sand, trace Silt, very dense, wet, heterogeneous, poorly graded, sub-angular, low plastic fines, red brown, glacial outwash.		67.2	S-45	10-28-50/.2'	104	1.2	100	
				67.5	A-					
				69.0	S-46	13-46-50	128	1.0	67	
				69.1	S-47	50/.1	>67	0.1	100	
			a-1-a / gp	70.5	A-					
				72.0	S-48	48-34-50	112	1.0	67	
1325				72.8	S-49	41-50/.3'	>67	0.8	100	
				73.5	A-					
		75.2'/El. 1322.7		74.8	S-50	42-46-50/.3'	128	1.3	100	
TOR 1322.70		*75.2-75.6 Fracture zone.*		75.0	A-	50/.2'	>67	0.0	0	
		SANDSTONE, gray brown, medium hard to hard, slightly weathered to fresh, thin bedding with flat dip, Joint Set 1: bedding joints, narrow to close spacing, flat to shallow dip, tight joints, Joint Set 2: jointed, moderate spacing, shallow to moderate dip, narrow joint opening.		75.2	S-51 / R-1		0%	1.7	65	
1320				77.2						
EPTE 1319.70		*Fracture zone, vertical fractures.*			R-2		20%	4.0	100	
		80.2-81.2 Argillaceous in joints.		81.2						
1315					R-3		74%	4.7	94	
				86.2						
1310		*81.7-90.2 Carbonaceous laminations.*			R-4		70%	3.7	92	
		90.2'/El. 1307.7								

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (7 OF 13)

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MOHAMMAD TARIQ AMIN — GEO. OGIST NO. PE060391 0

2024.03.05
DATE

SHEET 79 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-07.dgn
9:15:53 AM 8/1/2023

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 08/29/2022 9:45 AM	HAMMER: AUTOMATIC
SB-06	STATION: 535+71.0 OFFSET: 11.0 FT. RT.	FINISH: 08/31/2022 11:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1417.4 FT.

DRILLING INSPECTOR: KONSTANTIN KASAMIAS
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1369.4 ft. - 0.0 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1366.4 ft. - 553.7 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ ⊙Soil/Rock Rec. % ⊙ (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
1415		**BITUMINOUS CONCRETE.** 0.4'/El. 1417.0								
	VOID	**CEMENT CONCRETE**, *Bridge Deck.* 1.4'/El. 1416.0								
	VOID	*1.4' thick pavement core*								
	VOID	*0.4' recovered, 1.0' fell into void..*								
	VOID	*Air space encountered.*								
1410	VOID									
	VOID									
	VOID									
	VOID									
1405	VOID	13.5'/El. 1403.9								
		GRAVEL, some Sand, some Silt, trace Clay, loose to very dense, damp to wet, heterogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, light brown to brown, glacial outwash.		13.5	S-1	1-3-2	7	1.5	100	
				15.0	S-2	8-10-8	24	1.0	67	
				16.5	S-3	7-9-9	24	0.5	33	
				18.0	S-4	8-11-14	33	1.3	87	
1400				19.5	S-5	10-9-10	25	1.0	67	
				21.0	S-6	7-17-16	44	1.0	67	
				22.5	S-7	17-13-16	39	1.0	67	
1395				24.0	S-8	13-15-9	32	1.2	80	
				25.5	S-9	5-10-11	28	1.4	93	
BPCE 1391.00			A-2-4 / GM	27.0	S-10	17-10-22	43	0.6	40	
1390				28.5	S-11	35-27-24	68	1.1	73	
				30.0	S-12	16-27-26	71	1.3	87	
				31.5	S-13	10-14-10	32	1.2	80	
1385				33.0	S-14	10-11-22	44	1.2	80	
		S-15: Low recovery due to gravel un tip. Traps placed after S-16.		34.5	S-15	18-50/.4'	>67	0.4	44	
				35.4	A-6					
1380				36.0	S-16	9-9-20	39	0.1	7	
				37.5	S-17	8-8-6	19	0.9	60	
				39.0	S-18	4-4-4	11	0.3	20	
1375				40.5	S-19	4-6-9	20	0.0	0	
		43.5'/El. 1373.9		42.0	S-20	1-2-2	5	0.6	40	
		CLAY and **SAND**, some Silt, stiff to hard, damp to wet, homogeneous, well graded, sub-angular to sub-rounded, medium plastic fines, brown tan to light brown, glacial outwash.		43.5	S-21	3-5-6	15	1.3	87	
1370				45.0	S-22	6-7-8	20	0.1	7	
				46.5	S-23	4-6-8	19	1.5	100	
				48.0	S-24	9-10-13	31	1.5	100	
1365				49.5	S-25	13-13-13	35	1.5	100	
				51.0	S-26	4-7-9	21	1.3	87	
				52.5	S-27	6-9-15	32	1.5	100	
1360			a-2-6 / sc	54.0	S-28	10-12-13	33	1.4	93	
				55.5	S-29	9-12-14	35	1.4	93	
				57.0	S-30	4-7-9	21	1.5	100	
1355				58.5	S-31	9-10-13	31	1.5	100	
				60.0	S-32	9-13-18	41	1.5	100	
				61.5	S-33	6-11-19	40	1.3	87	
				63.0						

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-06	STATION: 535+71.0 OFFSET: 11.0 FT. RT.	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 1369.4 ft. - 0.0 hr. ▼ 24 HR.: El. 1366.4 ft. - 553.7 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ ⊙Soil/Rock Rec. % ⊙ (20 40 60 80) ▲SPT (N_{60})▲ (10 20 30 40)
1350		**CLAY** and **SAND**, some Silt, stiff to hard, damp to wet, homogeneous, well graded, sub-angular to sub-rounded, medium plastic fines, brown tan to light brown, glacial outwash. *(Layer continued from the previous log page)*		64.5	S-34	19-16-21	49	1.5	100	
				66.0	S-35	19-25-24	65	1.5	100	
				67.5	S-36	9-12-15	36	1.3	87	
				69.0	S-37	16-22-15	49	1.5	100	
1345				70.5	S-38	16-22-25	63	1.5	100	
				72.0	S-39	8-10-9	25	1.5	100	
				73.5	S-40	5-9-13	29	1.5	100	
				75.0	S-41	14-18-20	51	1.5	100	
1340				76.5	S-42	22-21-21	56	1.5	100	
				78.0	S-43	5-9-9	24	1.5	100	
		78.0'/El. 1339.4	a-2-6 / sc	79.5	S-44	14-18-22	53	1.2	80	
		SAND, some Gravel, trace Clay, dense to very dense, wet, heterogeneous, well graded, rounded, non-plastic, gray to brown black, glacial outwash.	a-1-a / gw	81.0	S-45	18-22-25	63	1.0	67	
		82.5'/El. 1334.9		82.5	S-46	7-11-14	33	0.7	47	
1335		**SAND**, some Clay, little Silt, trace Gravel, dense to very dense, wet, varved, uniformly graded, flat to rounded, medium plastic fines, brown to brown tan, glacial outwash.		84.0	S-47	19-23-28	65	1.5	100	
				85.5	S-48	16-18-22	53	1.5	100	
				87.0	S-49	19-24-25	65	1.5	100	
				88.5	S-50	8-11-15	35	1.3	87	
1330			a-2-6 / sc	90.0	S-51	8-11-15	35	1.2	80	
				91.4	S-52	22-40-50/.4'	120	1.1	79	
				91.5	A-6 S-53	10-23-27	67	1.2	80	
				93.0	S-54	11-18-24	56	1.2	80	
1325				94.5	S-55	11-18-24	56	1.0	67	
				96.0	S-56	5-8-18	35	1.2	80	
				97.5	S-57	13-25-50/.3'	100	1.3	100	
		97.5'/El. 1319.9		98.8	A-6 S-58	46-50/.4'	>67	0.9	100	
1320		**GRAVEL**, some Sand, little Silt, very dense, wet, heterogeneous, poorly graded, rounded to angular, non-plastic, dark blue to gray brown, glacial outwash.	a-1-a / gp	99.9	A-6 S-59	23-50-50/.1'	133	1.1	100	
		102.4'/El. 1315.0		101.6	A-6 S-60	50/.4'	>67	0.4	100	
TOR 1315.00		**SANDSTONE**, light gray to brown, dull luster, hard, fresh to slightly weathered, narrow to moderate bedding with shallow to moderate dip, bedding joints, close to moderate spacing, flat dip.		102.4	R-1		0%	1.6	80	
1315				104.4	R-2		55%	1.8	90	
EPTE 1312.00				106.4	R-3		28%	4.8	96	
1310				111.4	R-4		42%	4.0	100	
		Greasy Texture.								
1305		115.4'/El. 1302.0 *Lost water.*								

**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
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (8 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST No. PG003910
ENGINEER

2024.03.05
DATE

SHEET 80 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-08.dgn
10:12:20 AM 8/1/2023

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 09/20/2022 1:30 PM	HAMMER: AUTOMATIC
SB-07	STATION: 535+79.0 OFFSET: 10.0 FT. LT.	FINISH: 09/21/2022 2:00 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1417.1 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: El. 1365.1 ft. - 0.2 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1368.1 ft. - 47.2 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ Soil/Rock Rec. % / ▲SPT (N_{60})▲
1415		**BITUMINOUS CONCRETE.** 0.5'/El. 1416.6		2.0	PC-1					
	VOID	**CEMENT CONCRETE**, *Bridge Deck.* 2.0'/El. 1415.1								
	VOID	*Void from bridge deck to ground surface.*			A-					
1410	VOID	9.0'/El. 1408.1		9.0						
		GRAVEL and **SAND**, some Silt, very loose to medium dense, dry, heterogeneous, well graded, angular to sub-angular, low plastic fines, brown and gray, fill. 12.0'/El. 1405.1	a-1-a / gp	10.5	S-1	WOH-1-2	4	1.0	67	
1405				12.0	S-2	5-6-5	15	1.5	100	
				13.5	S-3	WOH-1-7	11	1.2	80	
		CLAY and **GRAVEL**, little Sand, medium dense, wet to moist, heterogeneous, poorly graded, angular to sub-angular, medium plastic fines, brown, fill. 18.0'/El. 1399.1	a-2-6 / gc	15.0	S-4	12-11-8	25	1.0	67	
1400				16.5	S-5	7-8-8	21	1.0	67	
				18.0	S-6	5-1-22	31	0.8	53	
		GRAVEL, some Sand, very dense, wet, heterogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown and tan, fill. 19.5'/El. 1397.6	a-1-a / gp	18.2	S-7 A-	50/ 2"	>67	0.1	50	
				19.5	S-8	11-7-10	23	1.5	100	
1395		**GRAVEL**, some Sand, some Silt, trace Clay, medium dense to very dense, damp to moist, heterogeneous, poorly graded, sub-angular, medium plastic fines, brown, glacial outwash.	A-2-4 / SM	21.0	S-9	5-7-10	23	1.5	100	
				22.5	S-10	11-13-11	32	1.5	100	
				24.0	S-11	13-15-11	35	1.5	100	
BPCE 1391.00				25.5	S-12	9-14-13	36	1.5	100	
1390				27.0	S-13	11-11-9	27	1.5	100	
				28.5	S-14	19-20-23	57	1.5	100	
				30.0	S-15 A-	23-50/.3"	>67	0.8	100	
		33.0'/El. 1384.1		30.8						
1385		**GRAVEL**, some Sand, medium dense to very dense, wet, heterogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, mottled brown with black, glacial outwash.	a-1-a / gp	31.5	S-16 A-	50/ 2"	>67	0.1	50	
				31.7						
				33.0	S-17	7-4-4	11	1.5	100	
				34.5	S-18	18-14-15	39	1.0	67	
1380				36.0	S-19	16-45-23	91	1.5	100	
				37.5	S-20	34-11-4	20	1.0	67	
				39.0	S-21	14-17-29	61	1.5	100	
		42.0'/El. 1375.1		40.5	S-22	10-17-11	37	0.0	0	
1375		**SILT** and **CLAY**, some Sand, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.	a-4 / ml	42.0	S-23	6-6-7 / 1.50	17	1.5	100	
				43.5	S-24	9-12-14	35	0.0	0	
				45.0	S-25	13-12-15 / 1.00	36	1.5	100	
				46.5	S-26	6-10-9	25	0.0	0	
1370				48.0	S-27	9-11-13 / 3.25	32	1.5	100	
				49.5	S-28	13-13-15 / 2.50	37	1.5	100	
				51.0	S-29	5-6-8	19	0.0	0	
1365				52.5	S-30	9-12-14 / 2.00	35	1.5	100	
				54.0	S-31	10-14-13 / 2.25	36	1.5	100	
				55.5	S-32	14-18-16 / 1.75	45	1.5	100	
				57.0	S-33	8-9-12 / 1.25	28	1.5	100	
1360				58.5	S-34	19-17-19 / 3.00	48	1.5	100	
				60.0	S-35	12-21-16 / 3.50	49	1.5	100	
				61.5	S-36	5-7-12 / 2.75	25	1.5	100	
1355				63.0						

SUBSTRUCTURE UNIT:
ABUTMENT 2

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-07	STATION: 535+79.0 OFFSET: 10.0 FT. LT.	0 FT. [redacted] 5 FT.	▽ 0 HR.: El. 1365.1 ft. - 0.2 hr. ▼ 24 HR.: El. 1368.1 ft. - 47.2 hr.

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇RQD %◇ Soil/Rock Rec. % / ▲SPT (N_{60})▲
1350		**SILT** and **CLAY**, some Sand, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash. *(Layer continued from the previous log page)*	a-4 / ml	64.5	S-37	14-14-17 / 1.50	41	1.5	100	
				66.0	S-38	14-13-11	32	1.5	100	
				67.5	S-39	5-10-11 / 3.00	28	1.5	100	
				69.0	S-40	12-13-15 / 1.25	37	1.5	100	
1345				70.5	S-41	10-12-14 / 1.50	35	1.5	100	
				72.0	S-42	10-15-12 / 2.75	36	1.5	100	
				73.5	S-43	2-6-8 / 3.00	19	1.5	100	
				75.0	S-44	11-11-16 / 3.50	36	1.5	100	
1340				76.5	S-45	14-18-20 / 2.50	51	1.5	100	
				78.0	S-46	7-9-11 / 3.25	27	1.5	100	
				79.5	S-47	12-16-17 / 2.50	44	1.5	100	
				81.0	S-48	16-22-22	59	1.5	100	
1335				82.5	S-49	7-12-13 / 2.50	33	0.5	33	
				84.0	S-50	14-19-27 / 2.50	61	1.5	100	
				85.5	S-51	15-22-24	61	1.5	100	
				87.0	S-52	22-21-27	64	1.5	100	
		90.0'/El. 1327.1		88.5	S-53	9-11-14 / 2.75	33	1.5	100	
1330					S-54	20-25-32 / 3.50	76	1.5	100	

EPTE 1312.00 NTS

**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
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (9 OF 13)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MOHAMMAD TARIQ AMIN GEO-OCIST NO. PG003910

2024.03.05
DATE

SHEET 81 OF 85

S-39603

\\192.168.1.222\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\04-Bridge over DL RR\Cadd\EC2014_SR0435-251_GE0-09.dgn
10:13:58 AM 8/1/2023

SUBSTRUCTURE UNIT:
WINGWALL C

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 08/23/2022 9:40 AM	HAMMER: AUTOMATIC
SB-08	STATION: 536+46.0 OFFSET: 6.0 FT. RT.	FINISH: 08/25/2022 10:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. 5 FT.	ELEVATION: 1413.9 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: MATT JOHNSON
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: NR - NR
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		BITUMINOUS CONCRETE. 0.4'/El. 1413.5		1.3	PC-1			0.4	31	
BFE Step 3 1411.08		**CEMENT CONCRETE.** 1.5'/El. 1412.4	a-1-a / gp	3.0	S-1	6-7-6	17	0.2	12	
BFE Step 2 1408.54		**GRAVEL**, trace Sand, medium dense, wet, heterogeneous, poorly graded, angular to sub-angular, non-plastic, black and brown, fill. 3.5'/El. 1410.4	a-6 / cl	4.5	S-2	7-10-15	33	1.2	80	
				6.0	S-3	10-8-9	23	1.5	100	
BFE Step 1 1406.00		**CLAY** and **SILT**, little Sand, trace Gravel, very stiff, moist, homogeneous, poorly graded, sub-angular, medium plastic fines, brown, fill. 9.0'/El. 1404.9		7.5	S-4	5-5-6	15	1.5	100	
				9.0	S-5	8-8-8	21	1.5	100	
		GRAVEL, some Sand, some Silt, trace Clay, medium dense, damp to moist, heterogeneous, poorly graded, sub-angular to angular, medium plastic fines, brown, fill.		10.5	S-6	11-15-25	53	1.5	100	
				12.0	S-7	8-11-11	29	1.0	67	
				13.5	S-8	4-6-7	17	1.5	100	
				15.0	S-9	5-8-8	21	1.5	100	
				16.5	S-10	11-10-11	28	0.2	13	
				18.0	S-11	9-7-10	23	0.0	0	
				19.5	S-12	12-9-12	28	1.0	67	
			A-2-4 / GM	21.0	S-13	19-14-15	39	1.5	100	
				22.5	S-14	8-10-7	23	1.0	67	
				24.0	S-15	11-14-20	45	1.5	100	
				25.5	S-16	10-12-12 / 3.50	32	1.5	100	
				27.0	S-17	12-17-14	41	0.5	33	
				28.5	S-18	9-19-19	51	1.0	67	
				30.0	S-19	13-20-20	53	1.2	80	
				31.5	S-20	15-14-21 / 4.25	47	1.5	100	
		33.0'/El. 1380.9		33.0	S-21	13-12-12	32	1.2	80	
		GRAVEL, some Sand, little Silt, medium dense, damp to moist, heterogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown with tan, glacial outwash.		34.5	S-22	21-16-15	41	1.5	100	
			a-1-a / gp	36.0	S-23	15-36-23	79	1.5	100	
				37.5	S-24	16-12-10	29	1.5	100	
				39.0	S-25	16-24-19	57	1.5	100	
		40.0'/El. 1373.9		40.5	S-26	19-23-5	37	1.5	100	
		SILT and **SAND**, trace Gravel, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.		42.0	S-27	7-6-9 / 3.00	20	1.2	80	
				43.5	S-28	5-8-9 / 1.25	23	1.5	100	
				45.0	S-29	12-12-11 / 3.75	31	1.5	60	
				46.0	S-30	12-14-12 / 3.00	35	1.5	100	
				46.5	S-31	4-8-9 / 2.00	23	1.5	100	
			a-4 / ml	48.0	S-32	19-21-19 / 1.75	53	1.5	100	
				49.5	S-33	26-22-23 / 3.25	80	1.5	100	
				51.0	S-34	7-12-13	33	1.5	100	
				52.5	S-35	17-18-19 / 2.00	49	1.5	100	
				54.0	S-36	22-18-18	48	1.5	100	
				55.5	S-37	7-10-10	27	1.5	100	
				57.0	S-38	7-10-11 / 1.50	28	1.5	100	
				58.5	S-39	15-17-20	49	1.5	100	
		60.0'/El. 1353.9		60.0	S-40	17-20-26 / 1.00	61	1.5	100	
		SAND, little Silt, medium dense to dense, damp, homogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown, glacial outwash.	a-1-b / sp	61.5	S-41	10-12-11	31	1.5	100	
				63.0						

SUBSTRUCTURE UNIT:
WINGWALL C

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-08	STATION: 536+46.0 OFFSET: 6.0 FT. RT.	0 FT. 5 FT.	▽ 0 HR.: NR - NR ▼ 24 HR.: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
		SAND, little Silt, medium dense to dense, damp, homogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown, glacial outwash. *(Layer continued from the previous log page)*	a-1-b / sp	64.5	S-42	14-22-22	59	1.5	100	
				66.0	S-43	30-19-17	48	1.5	100	
				67.5	S-44	8-9-10	25	1.5	100	
				69.0	S-45	20-16-20	48	1.5	100	
				70.5	S-46	12-20-20	53	1.5	100	
				72.0	S-47	8-8-13	28	1.5	100	
				73.5	S-48	3-10-14	32	1.5	100	
				75.0	S-49	19-18-19	49	1.5	100	
		76.5'/El. 1337.4		76.5	S-50	28-27-25	69	1.5	100	
		SILT and **SAND**, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.		78.0	S-51	6-6-12 / 1.50	24	1.5	100	
				79.5	S-52	12-20-18 / 1.50	51	1.5	100	
				81.0	S-53	22-23-24 / 3.00	83	1.5	100	
				82.5	S-54	8-8-9 / 1.50	23	1.5	100	
				84.0	S-55	18-18-19 / 2.00	49	1.5	100	
				85.5	S-56	19-22-20 / 3.00	56	1.5	100	
			a-4 / ml	87.0	S-57	8-14-18	43	1.5	100	
				88.5	S-58	5-13-18	41	1.5	100	
				90.0	S-59	24-31-41	96	1.5	100	
				91.5	S-60	28-32-40 / 2.50	96	1.5	100	
				93.0	S-61	7-18-23	55	1.5	100	
				94.5	S-62	28-39-47	115	1.5	100	
				96.0	S-63	32-31-48	105	1.5	100	
		96.0'/El. 1317.9		97.1	S-64	10-48-50/.1'	131	1.1	100	
TOR 1316.30		**GRAVEL**, little Sand, trace Silt, very dense, wet, fissured, poorly graded, sub-angular to angular, non-plastic, gray and brown, residuum. 97.6'/El. 1316.3	a-1-a / gp	97.5	A-S-65	50/.1'	>67 / 0%	0.0	0	
		SANDSTONE, gray, medium hard to hard, fresh to slightly weathered, narrow bedding with flat to shallow dip, Joint Set 1: bedding joints, close to moderate spacing, flat to shallow dip, tight joints, Joint Set 2: jointed, medium spacing, moderate to steep dip, narrow joint opening. *97.6-99.8: Mechanically broken rock. 100.4-100.6: Clay seams. R-2: Argillaceous in joints.* 106.6'/El. 1307.3		97.6	R-1			0.4	20	
				99.6	R-2		25%	1.4	70	
				101.6	R-3		68%	5.0	100	

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (10 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST NO. PG003910
CERTIFICATE

2024.03.05
DATE

SHEET 82 OF 85

S-39603

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SUBSTRUCTURE UNIT:
WINGWALL D

LOG 1 OF 2

BORING NUMBER:	BORING LOCATION	START: 08/23/2022 9:40 AM	HAMMER: AUTOMATIC
SB-08	STATION: 536+46.0 OFFSET: 6.0 FT. RT.	FINISH: 08/25/2022 10:30 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING
DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. 5 FT.	ELEVATION: 1413.9 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY: MATT JOHNSON
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME: NR - NR
▼ 24 HR. READING - ELAPSED TIME: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1410		**BITUMINOUS CONCRETE.** 0.4'/El. 1413.5		1.3	PC-1			0.4	31	
		CEMENT CONCRETE. 1.5'/El. 1412.4	a-1-a / gp	3.0	S-1	6-7-6	17	0.2	12	
		GRAVEL, trace Sand, medium dense, wet, heterogeneous, poorly graded, angular to sub-angular, non-plastic, black and brown, fill. 3.5'/El. 1410.4	a-6 / cl	4.5	S-2	7-10-15	33	1.2	80	
				6.0	S-3	10-8-9	23	1.5	100	
				7.5	S-4	5-5-6	15	1.5	100	
1405		**CLAY** and **SILT**, little Sand, trace Gravel, very stiff, moist, homogeneous, poorly graded, sub-angular, medium plastic fines, brown, fill. 9.0'/El. 1404.9		9.0	S-5	8-8-8	21	1.5	100	
				10.5	S-6	11-15-25	53	1.5	100	
BFE Step 4 1403.13		**GRAVEL**, some Sand, some Silt, trace Clay, medium dense, damp to moist, heterogeneous, poorly graded, sub-angular to angular, medium plastic fines, brown, fill.		12.0	S-7	8-11-11	29	1.0	67	
BFE Step 3 1400.58				13.5	S-8	4-6-7	17	1.5	100	
1400				15.0	S-9	5-8-8	21	1.5	100	
BFE Step 2 1398.04				16.5	S-10	11-10-11	28	0.2	13	
BFE Step 1 1395.50				18.0	S-11	9-7-10	23	0.0	0	
1395				19.5	S-12	12-9-12	28	1.0	67	
				21.0	S-13	19-14-15	39	1.5	100	
			A-2-4 / GM	22.5	S-14	8-10-7	23	1.0	67	
1390				24.0	S-15	11-14-20	45	1.5	100	
				25.5	S-16	10-12-12 **3.50**	32	1.5	100	
				27.0	S-17	12-17-14	41	0.5	33	
1385				28.5	S-18	9-19-19	51	1.0	67	
				30.0	S-19	13-20-20	53	1.2	80	
				31.5	S-20	15-14-21 **4.25**	47	1.5	100	
		33.0'/El. 1380.9		33.0	S-21	13-12-12	32	1.2	80	
1380		**GRAVEL**, some Sand, little Silt, medium dense, damp to moist, heterogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown with tan, glacial outwash. 40.0'/El. 1373.9	a-1-a / gp	34.5	S-22	21-16-15	41	1.5	100	
				36.0	S-23	15-36-23	79	1.5	100	
				37.5	S-24	16-12-10	29	1.5	100	
1375				39.0	S-25	16-24-19	57	1.5	100	
				40.5	S-26	19-23-5	37	1.5	100	
		SILT and **SAND**, trace Gravel, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.		42.0	S-27	7-6-9 **3.00**	20	1.2	80	
				43.5	S-28	5-8-9 **1.25**	23	1.5	100	
1370				45.0	S-29	12-12-11 **3.75**	31	1.5	60	
				46.0	S-30	12-14-12 **3.00**	35	1.5	100	
				46.5	S-31	4-8-9 **2.00**	23	1.5	100	
			a-4 / ml	48.0	S-32	19-21-19 **1.75**	53	1.5	100	
1365				49.5	S-33	26-22-23 **3.25**	80	1.5	100	
				51.0	S-34	7-12-13	33	1.5	100	
				52.5	S-35	17-18-19 **2.00**	49	1.5	100	
1360				54.0	S-36	22-18-18	48	1.5	100	
				55.5	S-37	7-10-10	27	1.5	100	
				57.0	S-38	7-10-11 **1.50**	28	1.5	100	
1355		60.0'/El. 1353.9		58.5	S-39	15-17-20	49	1.5	100	
		SAND, little Silt, medium dense to dense, damp, homogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown, glacial outwash.	a-1-b / sp	60.0	S-40	17-20-26 **1.00**	61	1.5	100	
				61.5	S-41	10-12-11	31	1.5	100	
				63.0						

SUBSTRUCTURE UNIT:
WINGWALL D

LOG 2 OF 2

BORING NUMBER:	BORING LOCATION	VERTICAL SCALE:	
SB-08	STATION: 536+46.0 OFFSET: 6.0 FT. RT.	0 FT. 5 FT.	▽ 0 HR.: NR - NR ▼ 24 HR.: NR - NR

ELEV	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO.**	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ Soil/Rock Rec. % (20 40 60 80) ▲ SPT (N_{60}) ▲ (10 20 30 40)
1345		**SAND**, little Silt, medium dense to dense, damp, homogeneous, poorly graded, sub-angular to sub-rounded, non-plastic, brown, glacial outwash. *(Layer continued from the previous log page)* 76.5'/El. 1337.4	a-1-b / sp	64.5	S-42	14-22-22	59	1.5	100	
				66.0	S-43	30-19-17	48	1.5	100	
				67.5	S-44	8-9-10	25	1.5	100	
				69.0	S-45	20-16-20	48	1.5	100	
				70.5	S-46	12-20-20	53	1.5	100	
1340				72.0	S-47	8-8-13	28	1.5	100	
				73.5	S-48	3-10-14	32	1.5	100	
				75.0	S-49	19-18-19	49	1.5	100	
				76.5	S-50	28-27-25	69	1.5	100	
		SILT and **SAND**, stiff to very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.		78.0	S-51	6-6-12 **1.50**	24	1.5	100	
1335				79.5	S-52	12-20-18 **1.50**	51	1.5	100	
				81.0	S-53	22-23-24 **3.00**	83	1.5	100	
				82.5	S-54	8-8-9 **1.50**	23	1.5	100	
				84.0	S-55	18-18-19 **2.00**	49	1.5	100	
1330				85.5	S-56	19-22-20 **3.00**	56	1.5	100	
			a-4 / ml	87.0	S-57	8-14-18	43	1.5	100	
				88.5	S-58	5-13-18	41	1.5	100	
				90.0	S-59	24-31-41	96	1.5	100	
1325				91.5	S-60	28-32-40 **2.50**	96	1.5	100	
				93.0	S-61	7-18-23	55	1.5	100	
				94.5	S-62	28-39-47	115	1.5	100	
				96.0	S-63	32-31-48	105	1.5	100	
		96.0'/El. 1317.9		97.1	S-64	10-48-50/.1'	131	1.1	100	
1320			a-1-a / gp	97.1	A-S-65	50/.1	>67 / 0%	0.0 / 0.4	0 / 20	
TOR 1316.30				97.6	R-1					
		GRAVEL, little Sand, trace Silt, very dense, wet, fissured, poorly graded, sub-angular to angular, non-plastic, gray and brown, residuum. 97.6'/El. 1316.3		99.6	R-2		25%	1.4	70	
1315				101.6	R-3		68%	5.0	100	
		SANDSTONE, gray, medium hard to hard, fresh to slightly weathered, narrow bedding with flat to shallow dip, Joint Set 1: bedding joints, close to moderate spacing, flat to shallow dip, tight joints, Joint Set 2: jointed, medium spacing, moderate to steep dip, narrow joint opening. *97.6-99.8: Mechanically broken rock. 100.4-100.6: Clay seams. R-2: Argillaceous in joints.* 106.6'/El. 1307.3								
1310										

**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (11 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST NO. PG003910

2024.03.05
DATE

SHEET 83 OF 85

S-39603

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DEPARTMENT OF TRANSPORTATION

Lackawanna County
SR 0435 Section 251 and 253

ECMS: 8191
Date Prepared: 12/21/2022 Prepared by: AWK Consulting Engineers

Sheet 1 of 1

LABORATORY TEST SUMMARY - SOILS

					% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION			PLASTICITY PARAMETERS			SHEAR STRENGTH				
BORING NUMB.	STATION & OFFSET	SAMP. #	TEST DEPTH (FT.)	NAT. MOIST. %	GRAV. %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
SB-01	532+33.0 6 ft. RT.	S-17 to 20	25.5 to 31.5	28.7	1.1	3.6	0.8	2.8	95.4	81.5	13.9	A-4	ML		37	30	7					
SB-02	532+86.0 33 ft. RT.	S-5 to 8	6.0 to 12.0	32.5	0.0	1.2	0.4	0.8	98.8	92.6	6.2	A-4	ML							0.000	25.0	DIR. SHR.-CD
SB-03	532+88.0 10 ft. LT.	S-12 to 15	28.5 to 34.5	30.5	0.6	3.3	0.4	3.0	96.1	78.2	17.9	A-4	ML		37	30	7					
SB-04	534+22.0 24 ft. RT	S-10 to 13	13.5 to 19.5	25.7	4.1	9.0	1.6	7.4	86.8	67.4	19.4	A-4	ML		33	27	6					
SB-05	534+39.0 24 ft. LT.	S-10 to 13	13.5 to 19.5	17.1	14.5	23.2	7.8	15.4	62.3	55.1	7.2	A-4	ML		26	22	4					
SB-06	535+71.0 11 ft. RT.	S-9 to 13	25.5 to 33.0	10.3	41.0	25.6	8.8	16.7	33.4	28.0	5.4	A-2-4	GM		19	16	3					
SB-07	535+79.0 10 ft. LT.	S-11 to 15	24.0 to 30.8	10.7	35.0	31.9	10.8	21.1	33.1	27.1	6.0	A-2-4	SM		19	16	3					
SB-08	536+46.0 6 ft. RT.	S-16 to 20	24.0 to 31.5	10.9	44.0	24.6	8.6	16.0	31.4	25.6	5.8	A-2-4	GM		22	19	3			0.023	29.4	DIR. SHR.-CD

pennsylvania
DEPARTMENT OF TRANSPORTATION

Lackawanna County
SR 0435 Section 251 and 253

ECMS: 8191
Date Prepared: 12/21/2022 Prepared by: AWK Consulting Engineers

Sheet 1 of 1

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
SB-01	532+33.0 6 ft. RT.	R-4	68.0 to 73.0	Unconfined Compressive Test	13442.0 PSI / 967.8 TSF	No		100	46	SANDSTONE	
SB-02	532+86.0 33 ft. RT.	R-2	61.1 to 64.1	Unconfined Compressive Test	5335.1 PSI / 384.1 TSF	No		90	23	SANDSTONE	
SB-03	532+88.0 10 ft. LT.	R-4	78.0 to 83.0	Unconfined Compressive Test	9684.1 PSI / 697.3 TSF	No		84	24	SANDSTONE	
SB-05	534+39.0 24 ft. LT.	R-2	77.2 to 81.2	Unconfined Compressive Test	23792.2 PSI / 1,713.0 TSF	No			20	SANDSTONE	
SB-06	535+71.0 11 ft. RT.	R-2	104.4 to 106.4	Unconfined Compressive Test	30853.9 PSI / 2,221.5 TSF	No		55		SANDSTONE	
SB-08	536+46.0 6 ft. RT.	R-2	99.6 to 101.6	Unconfined Compressive Test	22846.3 PSI / 1,644.9 TSF	No		70	25	SANDSTONE	

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
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TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (12 OF 13)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST No. PG003910
PENNSYLVANIA

2024.03.05
DATE

SHEET 84 OF 85

S-39603

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pennsylvania
DEPARTMENT OF TRANSPORTATION

Lackawanna County
SR 0435 Section 251 and 253

ECMS: 8191
Date Prepared: 3/16/2023 Prepared by: AWK Consulting Engineers

Sheet 1 of 1

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
SB-03	532+88.0 10 ft. LT.	S-12 to 15	28.5 to 34.5	SOIL	8.3	2,760	60	0	No	No	No
SB-06	535+71.0 11 ft. RT.	S-9 to 13	25.5 to 33.0	SOIL	6.5	3,795	200	0	No	No	Resist.w/Chlor.
UNDER DL RR			0.0 to 1.0	GROUNDWATER	7.7	181	35	4	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

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BFE	BOTTOM OF FOOTING ELEVATION
BPCE	BOTTOM OF PILE CAP ELEVATION
EPTE	ESTIMATED PILE TIP ELEVATION
TOR	ESTIMATED TOP OF ROCK ELEVATION

SR 0435 PREVIOUSLY KNOWN AS LR 0168
BMS STR ID: 35-0435-0220-0340 ECMS PROJ: 8191 BRKEY: 20610

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
SEGMENT 0220 OFFSET 0340
SR 0435 STA 534+30.00
OVER DELAWARE-LACKAWANNA RR
& TRIB TO ROARING BROOK
TWO SPAN COMP STEEL PLATE GIRDER BRIDGE
STRUCTURE BORINGS (13 OF 13)

COMMONWEALTH OF PENNSYLVANIA
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2024.03.05
DATE

SHEET 85 OF 85

S-39603

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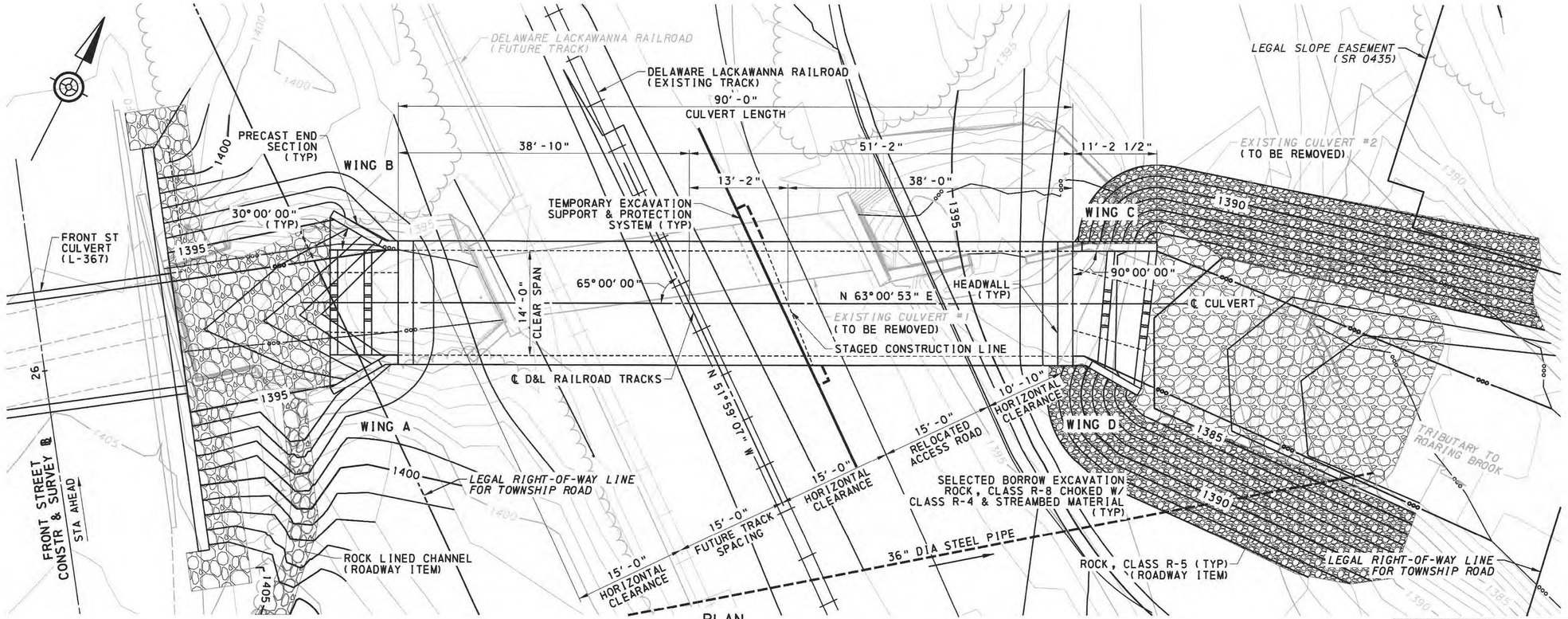
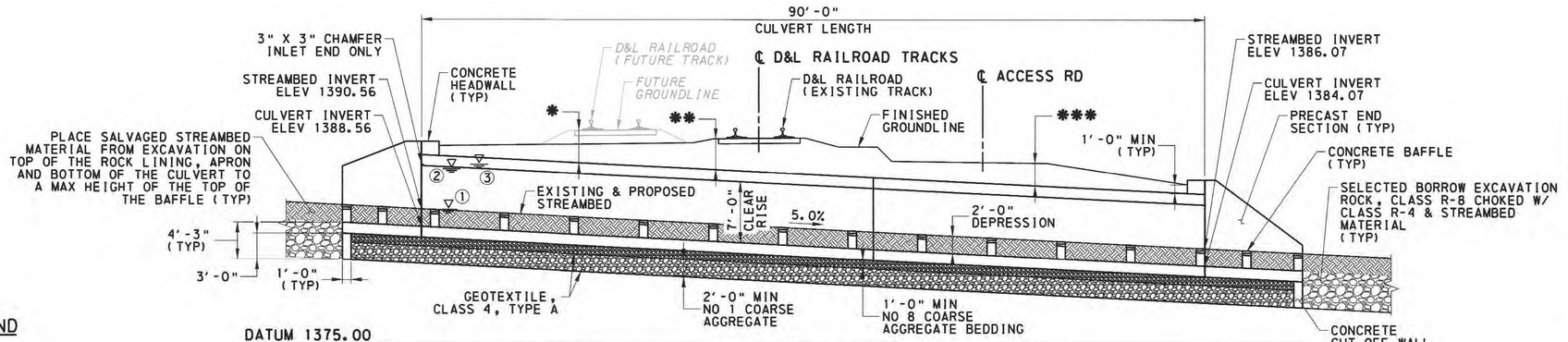


PLAN

8 0 4 8 16 FEET



SECTION ALONG ℄ CULVERT

8 0 4 8 16 FEET

HYDRAULIC DATA

DRAINAGE AREA 0.77 SQ MILES

Q_{50}	FLOW	335 CFS
Q_{50}	ELEV	1394.74
Q_{50}	VEL	5.02 FPS
Q_{100}	FLOW	433 CFS
Q_{100}	ELEV	1395.55
Q_{100}	VEL	5.28 FPS

FLOOD OF RECORD = UNKNOWN

NOTES:

1. PROVIDED HORIZONTAL CLEARANCE ALLOWS FOR A FUTURE D&L RAILROAD TRACK, AS INDICATED. FILL HEIGHTS FOR THE FUTURE CONDITION ARE BASED ON AN ASSUMED FUTURE SURFACE THAT PROVIDES A MINIMUM 30" OF FILL OVER THE TOP SLAB OF THE BOX CULVERT. FUTURE TRACK ELEVATIONS AND ASSOCIATED GRADING TO BE DETERMINED BY PNRRA.
2. SEE SHEETS 2 & 3 FOR TYPICAL SECTIONS.

LEGEND

- EXISTING 1' CONTOURS
- 1400 EXISTING 5' CONTOURS
- PROPOSED 1' CONTOURS
- 1400 PROPOSED 5' CONTOURS
- CIP CAST IN PLACE
- ① NORMAL WATER ELEVATION (ELEV 1390.70 UPSTREAM)
- ② Q_{50} ELEVATION (UPSTREAM)
- ③ Q_{100} ELEVATION (UPSTREAM)
- * FILL HEIGHT (FUTURE RAILROAD TRACKS) VARIES 2'-6" TO 3'-7"
- ** FILL HEIGHT (EXISTING RAILROAD TRACKS) VARIES 2'-9" TO 3'-6"
- *** FILL HEIGHT (ACCESS ROAD) VARIES 3'-7" TO 4'-3"

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

DESIGN REVIEWED BY:

PENNONI
672 SOUTH RIVER STREET, SUITE 313
PLAINS, PA 18705

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT LLOYD NAUGLE, JR ENGINEER PE-044769E

03/04/2024

REVIEW CONSULTANT'S SIGNATURE — DATE

THE DESIGN REVIEW IS FOR GENERAL CONFORMANCE WITH THE DEPARTMENT'S DESIGN AND CONSTRUCTION CRITERIA AND STANDARDS AND IS NOT INTENDED TO RELIEVE THE DESIGNER OF FULL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THE PLANS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

CDR MAGUIRE
3500 Winchester Road
Suite 300
Allentown, PA 18104
phone:610-841-2700
fax:610-841-2709

Benjamin R. Martz 2-20-2024
BENJAMIN R. MARTZ, P.E. PE081839

DESCRIPTION	DWG NO	APP DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	11/1/2022
ANCHOR SYSTEMS	BC-734M	2/19/2021
WALL CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-735M	9/30/2016
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	11/23/2022
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	11/23/2022
MECHANICAL CONNECTION DETAILS	BC-798M	2/14/2023

SUPPLEMENTAL DRAWINGS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

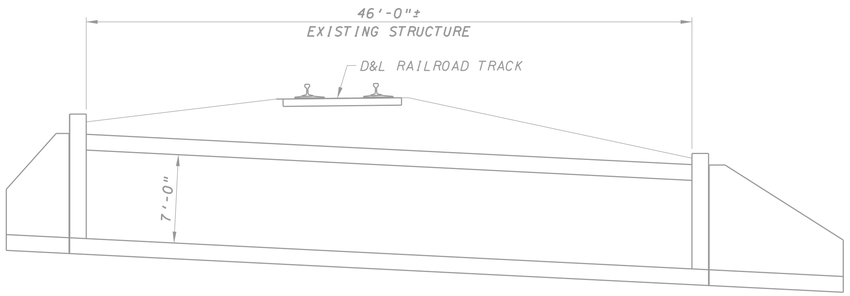
LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
GENERAL PLAN & ELEVATION

RECOMMENDED 03/04/2024
2024.03.04 11:19:32 -05'00'
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 20 + SUPPLEMENTAL DRAWINGS

L-404

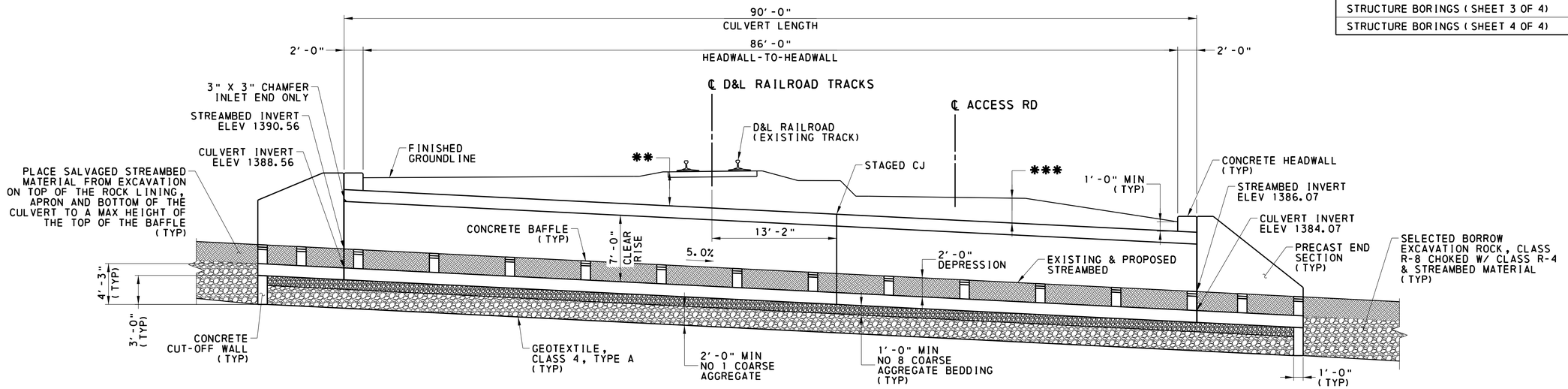
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model: 01 GEN PLAN 2/20/2024 11:49:09 AM By: laura.hower



EXISTING TYPICAL SECTION

6 0 2 6 12 FEET

INDEX OF DRAWINGS	
TITLE	SHEET
GENERAL PLAN & ELEVATION	1
TYPICAL SECTIONS	2
STAGING SECTIONS	3
QUANTITIES & GENERAL NOTES	4
STAKE-OUT PLAN & LOAD RATING TABLE	5
PRECAST CULVERT DETAILS	6
MISCELLANEOUS PRECAST DETAILS - 1	7
MISCELLANEOUS PRECAST DETAILS - 2	8
HEADWALL DETAILS	9
INLET PRECAST END SECTION DETAILS - 1	10
INLET PRECAST END SECTION DETAILS - 2	11
OUTLET PRECAST END SECTION DETAILS - 1	12
OUTLET PRECAST END SECTION DETAILS - 2	13
BAFFLE PLAN & REINFORCING DETAILS	14
BAFFLE REINFORCING DETAILS - 2	15
REINFORCEMENT SCHEDULE	16
STRUCTURE BORINGS (SHEET 1 OF 4)	17
STRUCTURE BORINGS (SHEET 2 OF 4)	18
STRUCTURE BORINGS (SHEET 3 OF 4)	19
STRUCTURE BORINGS (SHEET 4 OF 4)	20



PROPOSED TYPICAL SECTION

6 0 2 6 12 FEET

LEGEND

** FILL HEIGHT (EXISTING RAILROAD TRACKS) VARIES 2'-9" TO 3'-6"

*** FILL HEIGHT (ACCESS ROAD) VARIES 3'-7" TO 4'-3"

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 2 OF 20

L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
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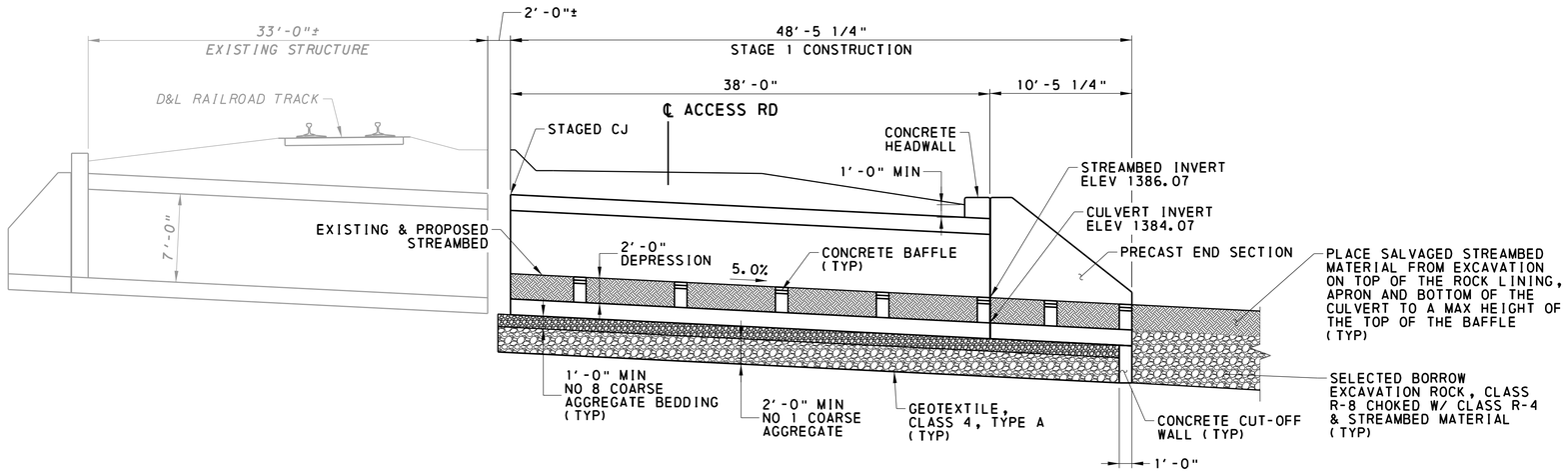
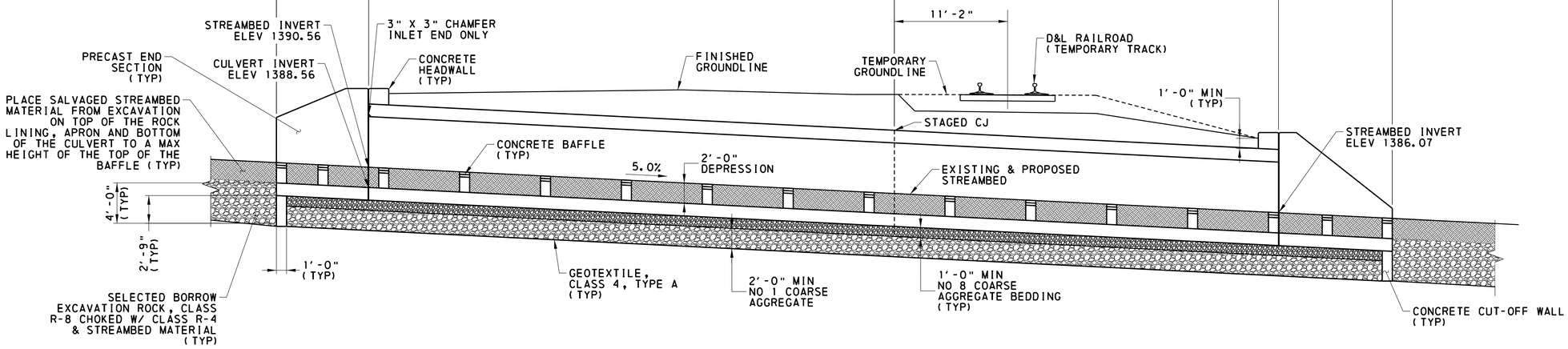


STAGE 1 TYPICAL SECTION

6 0 2 6 12 FEET



STAGE 2 TYPICAL SECTION

6 0 2 6 12 FEET

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STAGING SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 3 OF 20

L-404

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model:03 STAGING SECTIONS
3/4/2024 12:00:44 PM By:laura.hower

DESIGN SPECIFICATIONS

1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (2017) AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.
2. DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LIVE LOADS

1. PHL-93, P-82, P2016-13, AND COOPER E-80.

DEAD LOADS

1. INCLUDES FILL DENSITY OF 0.140 KCF FOR RAILROAD BALLAST AND FILL OVER CULVERT.

GENERAL

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, PUBLICATION 408 (2020), AASHTO/AWS D1.5M/D1.5:2015 BRIDGE WELDING CODE (2015) AND CONTRACT SPECIAL PROVISIONS. USE AASHTO/AWS D1.1/D1.1M:2015 FOR WELDING NOT COVERED IN AASHTO/AWS D1.5M/D1.5:2015.
2. PROVIDE 2 INCHES OF CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.
3. USE f'_c = 5000 psi CONCRETE FOR PRECAST BOX CULVERTS AND END SECTIONS.
4. USE CLASS A CEMENT CONCRETE IN HEADWALLS, BAFFLES, AND CLOSURE POURS.
5. 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.
6. 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 WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.
7. USE EPOXY-COATED REINFORCEMENT BARS UNLESS OTHERWISE INDICATED.
8. WELDED WIRE FABRIC WILL MEET THE REQUIREMENTS OF ASTM A1064 GRADE 70 AND DEFORMED WELDED WIRE FABRIC WILL MEET THE REQUIREMENTS OF ASTM A1064 GRADE 75. IF EPOXY COATED WELDED WIRE FABRIC IS USED, IT WILL MEET THE REQUIREMENTS OF ASTM A884, TYPE 1, CLASS A.
9. GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.
10. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.
11. SITE CLASS IS NOT CLASS E.
12. NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH THE FISH COMMISSION DURING CONSTRUCTION.

    CONTACT: NORTHEAST REGION OFFICE
    5566 MAIN ROAD
    SWEET VALLEY, PA 18656
    570-477-5717

13. USE 4" DIA FORMED WEEPHOLES AT EVERY OTHER SEGMENT PLACED AT A MINIMUM OF 1'-9" ABOVE THE BOTTOM SLAB OR 6" ABOVE NORMAL FLOW LINE. FOR WEEPHOLE PLACEMENT, THE WEEPHOLE LOCATION MAY BE ADJUSTED BY A MAXIMUM OF 2" IN ANY DIRECTION, OR RELOCATE REINFORCEMENT BY A MAXIMUM OF 1/2". DO NOT CUT REINFORCEMENT BARS. NO ADDITIONAL WEEPHOLE REINFORCEMENT WILL BE REQUIRED. IF WIRE MESH IS USED, CUT THE MESH TO FIT WEEPHOLE CONDUIT BUT REPLACE EQUIVALENT STEEL WITH ADDITIONAL WIRE MESH PLACED ON EACH SIDE OF THE WIRE MESH MAT.
14. USE EPOXY BONDING COMPOUND WHEREVER CAST-IN-PLACE CONCRETE COMES IN CONTACT WITH PRECAST CONCRETE CEMENT. USE TYPE 2, GRADE 2, EPOXY BONDING COMPOUND AS DESCRIBED IN ASTM-C881-90.
15. CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH X 3/4 INCH, EXCEPT AS NOTED.
16. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
17. STAGING, SPACING AND POST-TENSION FORCE TO BE SHOWN ON SHOP DRAWINGS.
18. PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS NOTED OTHERWISE.
19. PRECAST BOX CULVERT SEGMENTS MUST BE 4'-0" MINIMUM LENGTH.
20. SHOW LIFTING LOCATIONS FOR ALL PRECAST COMPONENTS ON SHOP DRAWINGS. CONTRACTOR TO DESIGN THE LIFTING HARDWARE.
21. DO NOT EXCEED A 2 FEET DIFFERENCE IN FILL ELEVATION ON THE SIDES DURING PLACEMENT OF THE BACKFILL. DO NOT ALLOW THE WHEELS OF ROLLERS TO COME CLOSER THAN 1 FOOT TO THE FACE OF THE STRUCTURE DURING COMPACTION OF THE BACKFILL.
22. DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.
23. DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.
24. SELECTED BORROW EXCAVATION ROCK IS TO BE PLACED BY MECHANICAL MEANS AND NOT END DUMPED.

BEARING PRESSURE

FACTORED BEARING RESISTANCE = 4.5 TSF

FACTORED BEARING PRESSURE (STRENGTH LIMIT STATE)
- CULVERT (RAILROAD) = 2.5 TSF
- CULVERT (ACCESS RD) = 2.3 TSF
- END SECTION = 0.5 TSF

FACTORED BEARING PRESSURE (SERVICE LIMIT STATE)
- CULVERT (RAILROAD) = 1.6 TSF
- CULVERT (ACCESS RD) = 1.5 TSF
- END SECTION = 0.4 TSF

FOUNDATION NOTES

1. REMOVE THE EXISTING STRUCTURE AND FOUNDATION (IF NECESSARY) TO A MINIMUM OF ONE (1) FOOT BELOW THE PROPOSED BOTTOM OF BEDDING ELEVATION AND BACKFILL OVEREXCAVATED AREA WITH NO. 2A COARSE AGGREGATE.
2. THE FOUNDATION SUBGRADE MUST BE INSPECTED AND APPROVED BY THE DISTRICT STRUCTURE CONTROL ENGINEER OR REPRESENTATIVE. PROVIDE 72 HOUR NOTICE FOR FOUNDATION INSPECTIONS.
3. THE DISTRICT STRUCTURE CONTROL ENGINEER (DSCE) OR REPRESENTATIVE SHALL VISUALLY INSPECT THE BEARING MATERIAL AT THE BOTTOM OF BEDDING ELEVATION. DO NOT PLACE BEDDING MATERIAL UNTIL THE FOUNDATION BEARING MATERIAL HAS BEEN COMPLETELY APPROVED.
4. UTILIZE STRUCTURE BACKFILL MEETING CRITERIA OF PUBLICATION 408/2020, INCLUDING APPLICABLE CHANGES TO DATE AND PENNDOT STANDARD DRAWING RC-12M.
5. PLACE STRUCTURE BACKFILL TO THE LIMITS SHOWN ON THE PENNDOT STANDARD DRAWINGS FOR APPROVED BRIDGE AND STRUCTURE PRODUCTS AND PENNDOT STANDARD DRAWING RC-12M.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH TO BE INSPECTED BY THE DSCE OR REPRESENTATIVE.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF TEMPORARY EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATIONS. PREFORM EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.
8. BLASTING IS NOT PERMITTED TO BE USED AS A METHOD OF EXCAVATION.

UTILITY NOTES

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

ALTERNATE STRUCTURE ITEMS

ITEM NO	DESCRIPTION	UNIT	TOTAL
8510-0004	PRECAST CONCRETE BOX CULVERT, AS DESIGNED, L-404 (*)	LS	LS
8510-0014	PRECAST CONCRETE BOX CULVERT (*)	LS	LS
8520-0004	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT (*)	LS	LS

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	DESCRIPTION	UNIT	STAGE 1	STAGE 2	TOTAL
8510-0004	PRECAST CONCRETE BOX CULVERT, AS DESIGNED, L-404 (*)	LS			LS
(1)	CLASS 3 EXCAVATION	CY	1,018	1,310	2,328
(1)	SELECTED BORROW EXCAVATION ROCK, CLASS R-8 CHOKED WITH CLASS R-4 & STREAMBED MATERIAL (*)	CY	155	35	190
(1)	STRUCTURE BACKFILL	CY	102	30	132
(1)	GEOTEXTILE, CLASS 4, TYPE A (2)	SY	542	683	1,225
(1)	MEMBRANE WATERPROOFING SYSTEM, INSTALLED ON OTHER SURFACES	SY	117	156	273
(1)	NO. 1 COARSE AGGREGATE	CY	72	91	163
(1)	NO. 8 COARSE AGGREGATE	CY	193	243	436
(1)	NO. 2A COARSE AGGREGATE	CY	-	61	61
(1)	NO. 57 COARSE AGGREGATE (3)	CY	7	8	15
(1)	CLASS A CEMENT CONCRETE (4)	CY	16	28	44
(1)	14' X 7' PRECAST REINFORCED CONCRETE BOX CULVERT SEGMENTS (5)	LF	38	52	90
(1)	PRECAST REINFORCED CONCRETE END SECTIONS (5)	EACH	1	1	2
(1)	STOCKPILING AND PLACEMENT OF STREAMBED MATERIAL (*)	CY	123	80	203
AND					
1002-0193	REINFORCEMENT BARS, EPOXY COATED (6)	LB	2,136	2,237	4,373
9203-0102	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, L-404 (*)	LS	(641 SF)	(641 SF)	LS

QUANTITY NOTES:

(*) SEE SPECIAL PROVISIONS

(1) ITEMS IN STRUCTURE LUMP SUM ITEM 8510-0004 GIVEN FOR INFORMATION ONLY. COST OF CONCRETE WASHOUT FACILITIES IS INCIDENTAL TO THE STRUCTURE LUMP SUM ITEM.

(2) INCLUDES GEOTEXTILE TO BE PLACED AT EXCAVATION LIMITS FOR CULVERT AND PRECAST END SECTIONS.

(3) GEOTEXTILE, CLASS 1 AT WEEP HOLES IS INCIDENTAL TO THE NO. 57 COARSE AGGREGATE.

(4) INCLUDES APPROXIMATELY 68 SF OF WELDED WIRE FABRIC.

(5) INCLUDES POST-TENSIONING, GROUTING, THREADED REINFORCEMENT BAR INSERTS, PRECAST CUT-OFF WALLS, AND MINOR GRADING OF BEDDING MATERIAL.

(6) FOR AS DESIGNED STRUCTURE, INCLUDED IN STRUCTURE BID ITEMS. FOR ALTERNATE DESIGNS, INCLUDED IN STRUCTURE LUMP SUM BID ITEM.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
QUANTITIES & GENERAL NOTES

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 4 OF 20

L-404

DES: JWB | CHK'D: BRM
DWG: MJH | CHK'D: BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 0435 Sht 251-253 RR Culvert Final Plan.dgn
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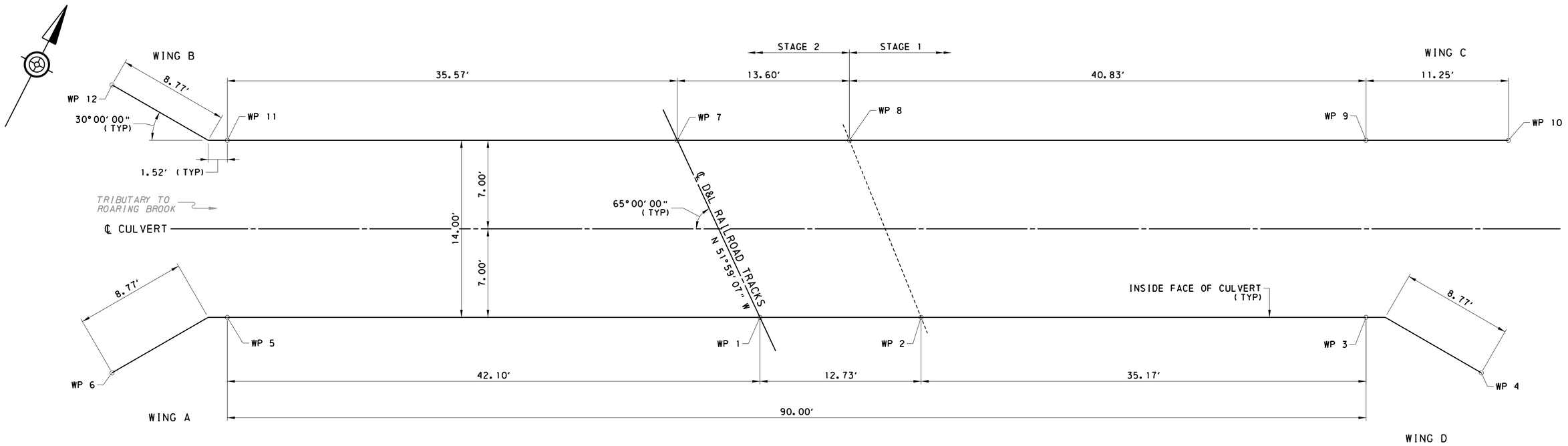
3/4/2024 12:00:44 PM By: laura.hower



STAKE-OUT PLAN

4 0 2 4 8 FEET

WORK POINT DATA

WP	COORDINATE		STATION	OFFSET
	NORTHING	EASTING		
WP 1	447379.8115	2573822.6330	535+05.70	143.81' LT
WP 2	447385.5901	2573833.9813	535+09.52	131.66' LT
WP 3	447401.5487	2573865.3214	535+20.04	98.10' LT
WP 4	447401.7763	2573875.4299	535+18.59	88.09' LT
WP 5	447360.7099	2573785.1204	534+93.10	183.97' LT
WP 6	447352.6689	2573778.9905	534+86.19	191.35' LT
WP 7	447389.3249	2573810.4628	535+17.11	154.23' LT
WP 8	447395.4968	2573822.5835	535+21.18	141.25' LT
WP 9	447414.0244	2573858.9687	535+33.40	102.29' LT
WP 10	447419.1292	2573868.9938	535+36.77	91.56' LT
WP 11	447373.1856	2573778.7677	535+06.46	188.16' LT
WP 12	447372.9580	2573768.6592	535+07.91	198.17' LT

NOTES:

1. WORK POINTS ARE REFERENCED TO THE SR 0435 CONSTR & SURVEY ℄.
2. COORDINATES PRESENTED TO 4 DECIMAL PLACES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY ACCURACY BEYOND 2 DECIMAL PLACES.
3. COORDINATES ARE BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83) NORTH ZONE. THE COMBINED AVERAGE SCALE FACTOR IS 0.99988982.

BRIDGE LOAD RATINGS WITHOUT FUTURE WEARING SURFACE

ADTT (2026) = N/A

PRECAST BOX CULVERT		H20	HS20	ML-80	TK527	PHL-93	P-82	P2016-13	COOPER E80
INVENTORY RATING (IR)	MEMBER	TOP SLAB	TOP SLAB	TOP SLAB	BOT SLAB	TOP SLAB	-	-	BOT SLAB
	LOCATION (FT)	7.00	7.00	7.00	7.00	1.49	-	-	7.00
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	STR-I	-	-	STR-I
	RATING FACTOR	4.55 F	4.55 F	3.73 F	5.37 F	2.65 V	-	-	1.21 F
OPERATING RATING (OR)	MEMBER	TOP SLAB	TOP SLAB	TOP SLAB	BOT SLAB	TOP SLAB	BOT SLAB	BOT SLAB	BOT SLAB
	LOCATION (FT)	7.00	7.00	7.00	7.00	1.49	7.00	7.00	7.00
	LIMIT STATE	STR-II	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II	STR-II
	RATING FACTOR	5.90 F	5.90 F	4.83 F	6.96 F	3.43 V	3.97 F	4.52 F	1.64 F

NOTES:

1. RATINGS ARE BASED ON THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.
2. "F" & "V" DENOTE THAT MOMENT OR SHEAR CONTROL THE RATING FACTOR, RESPECTIVELY.
3. RATING VEHICLE DEFINITIONS:
   - ML-80 = PENNSYLVANIA MAXIMUM LEGAL LOAD
   - TK527 = PENNSYLVANIA LEGAL LOAD
   - P-82 = PENNSYLVANIA PERMIT LOAD
   - P2016-13 = PENNSYLVANIA PERMIT LOAD
   - COOPER E80 = RAILROAD LIVE LOAD

LEGEND

WP WORK POINT

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STAKE-OUT PLAN & LOAD RATING TABLE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

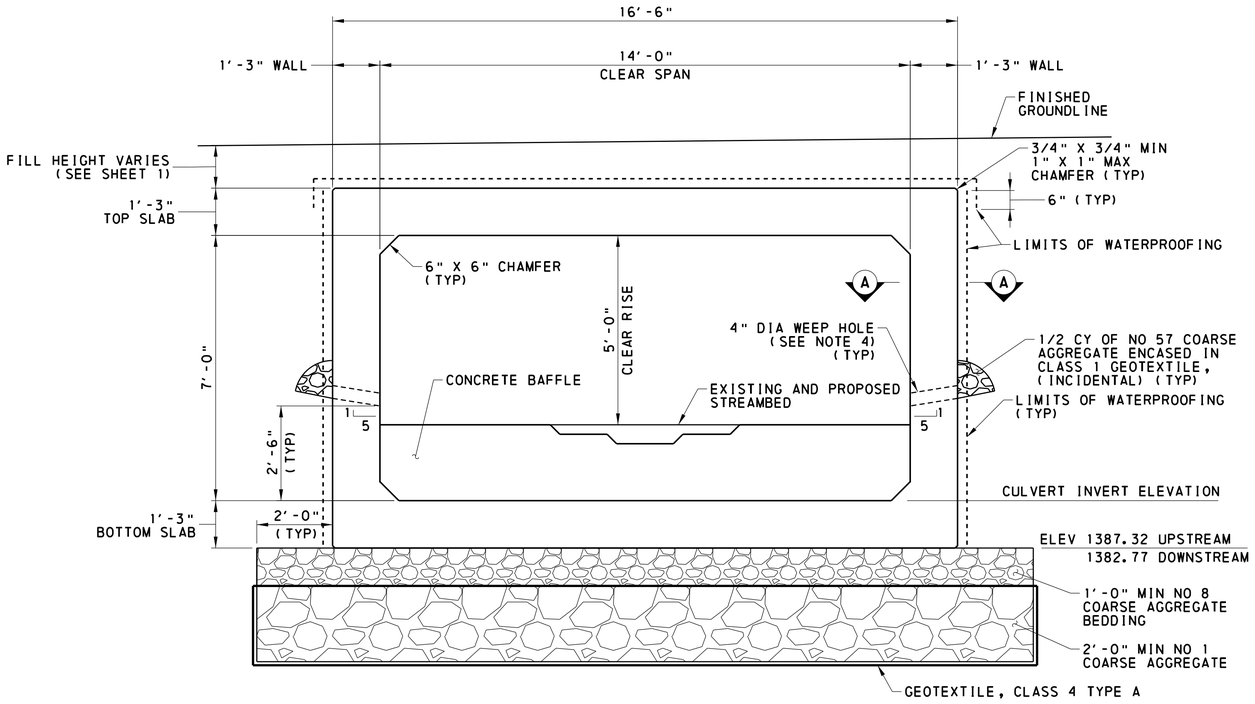
RECOMMENDED 03/04/2024

SHEET 5 OF 20

L-404

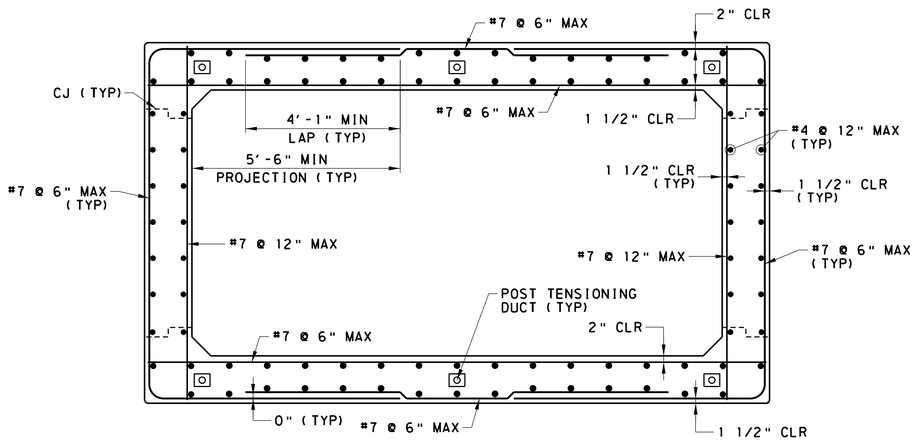
DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model: 05 STAKE-OUT AND LOAD RATING TABLES 3/4/2024 12:00:45 PM By: laura.hower



TYPICAL SECTION

2 0 1 2 4 FEET



TYPICAL REINFORCEMENT SECTION

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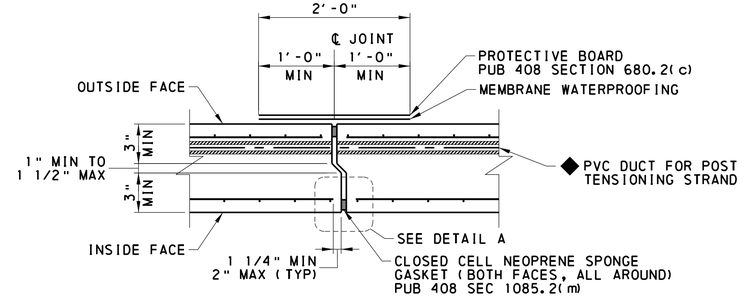


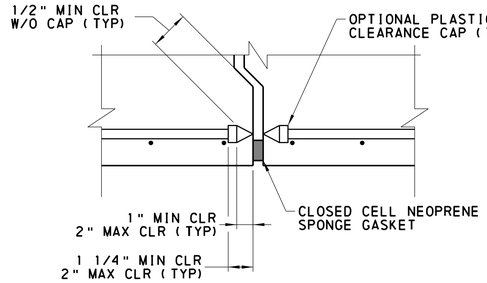
◆ POST TENSIONING DUCTS MAY BE PLACED WITHIN THE WALL OR SLAB ANYWHERE BETWEEN LAYERS OF REINFORCEMENT TO AVOID THE SLOPED PORTION OF THE JOINT SO AS TO PROMOTE SEALING OF THE DUCT

SECTION A-A

(SEAL AROUND EACH DUCT WITH A NEOPRENE SPONGE DONUT)
NOT TO SCALE

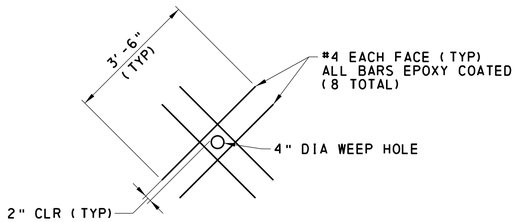
SECTION A-A NOTES:

1. PROVIDE APPROVED WATERPROOFING MEMBRANE AS PER PUB 408 SECTION 680.2(b).
2. FOR ADDITIONAL DETAILS REFER TO BC-788M.



DETAIL A

NOT TO SCALE



WEEP HOLE REINFORCEMENT DETAIL

NOT TO SCALE

LEGEND

CJ CONSTRUCTION JOINT

NOTES:

1. CONCRETE IN PRECAST CULVERT TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.
2. CONCRETE IN BAFFLES TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
3. REFER TO BC-788M FOR ADDITIONAL WATERPROOFING DETAILS.
4. SEE SHEET 4 (GENERAL NOTE 13) FOR ADDITIONAL WEEP HOLE INFORMATION.
5. SEE SHEETS 7 & 8 FOR ADDITIONAL PRECAST DETAILS.
6. SEE SHEETS 14 & 15 FOR BAFFLE DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
PRECAST CULVERT DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 6 OF 20

L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

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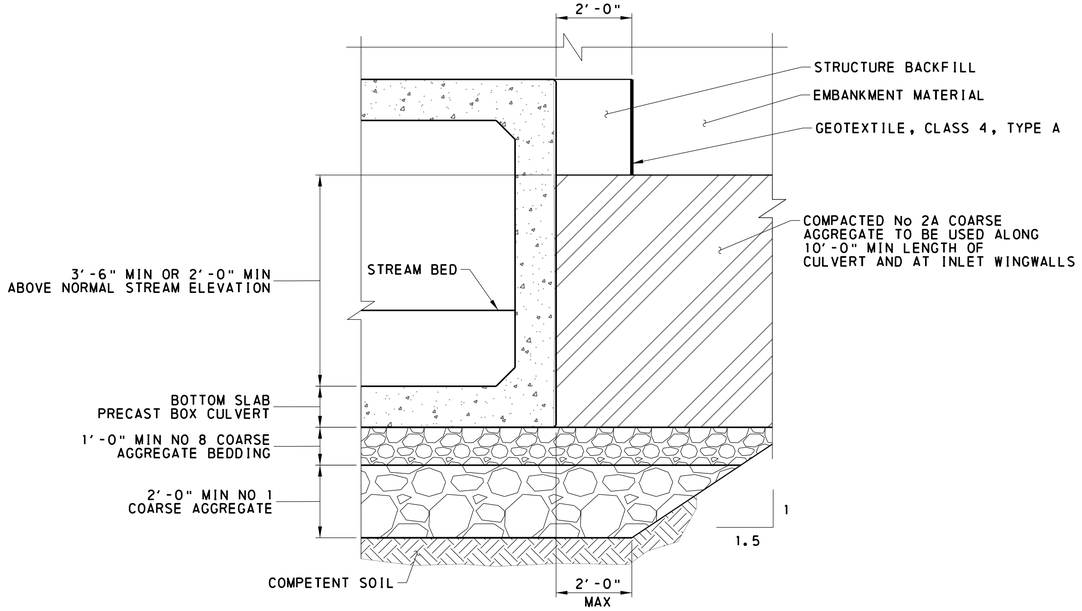
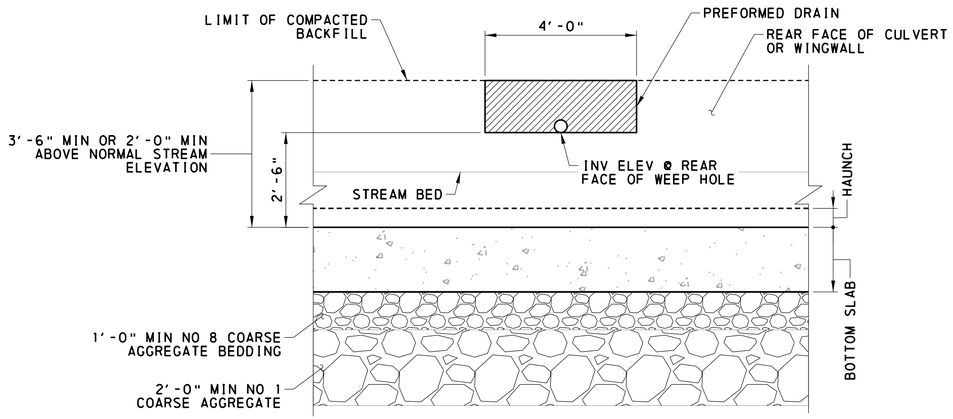
Model: 06 PRECAST CULVERT DETAIL
3/4/2024 12:00:45 PM By: laura.hover



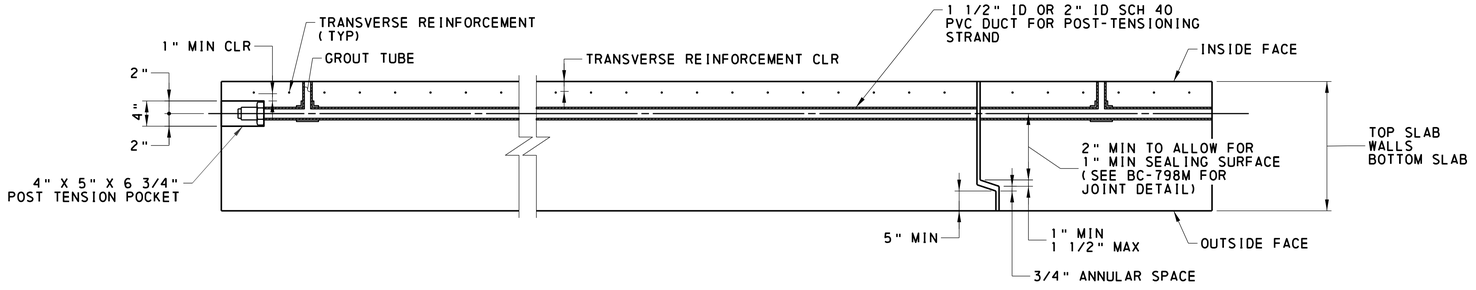
COMPACTED FILL DETAIL

(INLET END ONLY)
NOT TO SCALE



PREFORMED DRAIN DETAIL

(TO BE USED IN COMPACTED FILL AREA)
NOT TO SCALE



CONFIGURATION FOR SLAB/WALL WITH POST-TENSIONING

NOT TO SCALE

NOTES:

1. PROVIDE COMPACTED NO 2A COARSE AGGREGATE FOR A MINIMUM LENGTH OF 10'-0" PLUS WINGWALLS. HEIGHT OF COMPACTED NO 2A COARSE AGGREGATE IS A MINIMUM OF 2'-0" ABOVE NORMAL STREAM ELEVATION OR 3'-6" FROM THE BOTTOM OF WINGWALL FOOTING OR BOTTOM OF ROCK LINING WHICHEVER IS DEEPER.
2. FOR WEEP HOLES LOCATED IN THE COMPACTED NO 2A COARSE AGGREGATE AREAS, PROVIDE PREFORMED DRAIN CONFORMING TO PUB 408 SECTION 623.2(g), WHICH IS 2" MINIMUM THICK X 4'-0" WIDE CENTERED HORIZONTALLY ON THE WEEP HOLE.
3. PLACE POST-TENSIONING DUCTS IN CCORNER HAUNCHES WHEN WALL THICKNESSES ARE GREATER THAN 13".
4. SEE SHEET 8 FOR ADDITIONAL PRECAST DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

DES: JWB	CHK'D: BRM
DWG: MJH	CHK'D: BRM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
MISCELLANEOUS PRECAST DETAILS - 1

RECOMMENDED 03/04/2024

SHEET 7 OF 20

L-404

File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
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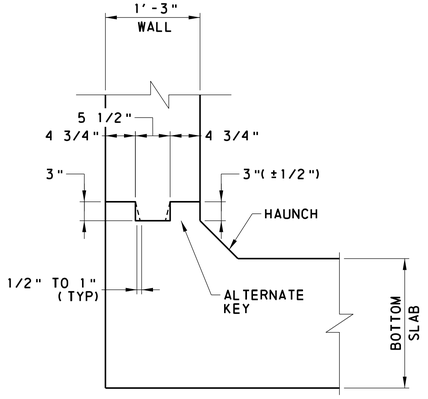
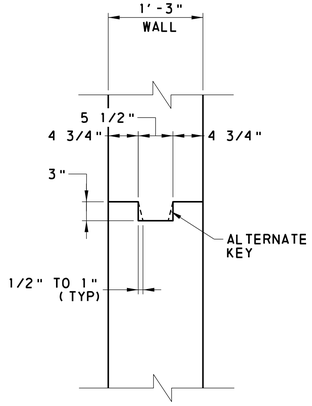


KEYED CONSTRUCTION JOINT DETAIL
NOT TO SCALE



CONSTRUCTION JOINT DETAIL
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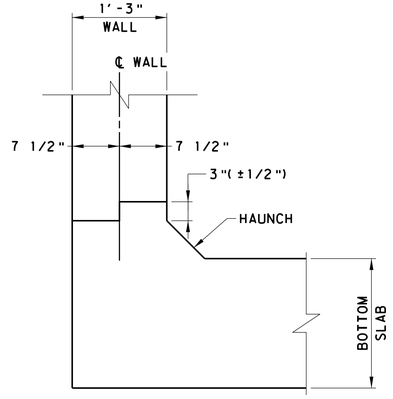
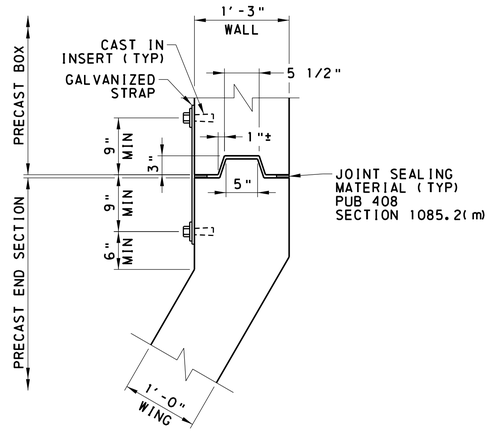
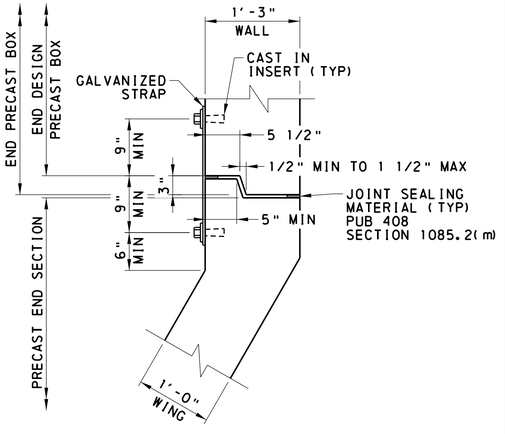


ALTERNATE SHIP-LAP
CONSTRUCTION JOINT
NOT TO SCALE



KEYED JOINT
DISCONTINUOUS IF POST
TENSIONING IS REQUIRED

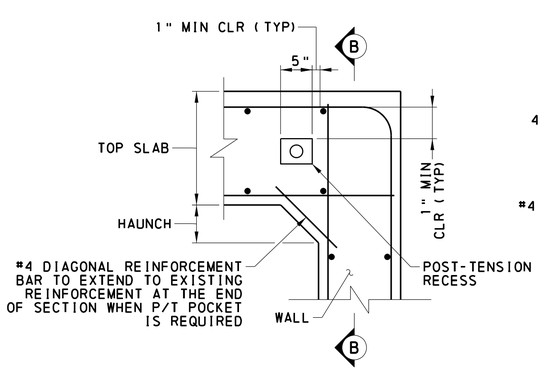


SHIP LAP JOINT
DISCONTINUOUS IF POST
TENSIONING IS REQUIRED

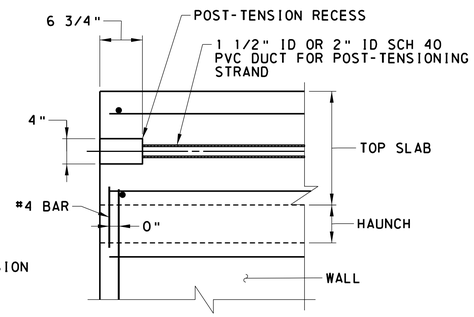
PRECAST WINGWALL CONNECTION DETAILS
NOT TO SCALE

WINGWALL CONNECTION NOTES:

1. NO BOLT THROUGH CONNECTIONS CAN BE USED.
2. EITHER SHIP LAP OR KEYED JOINTS MAY BE USED, NO FLUSH BUTT JOINTS.
3. ONE ROW OF JOINT SEALING FLEXIBLE FOAM MATERIAL EACH FACE.
4. FOR GALVANIZED STRAP DETAILS, SEE BC-798M.



ELEVATION



SECTION B-B

TYPICAL HAUNCH SECTION DETAIL
NOT TO SCALE

NOTES:

1. SEE SHEET 7 FOR ADDITIONAL PRECAST DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
MISCELLANEOUS PRECAST DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 8 OF 20

L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

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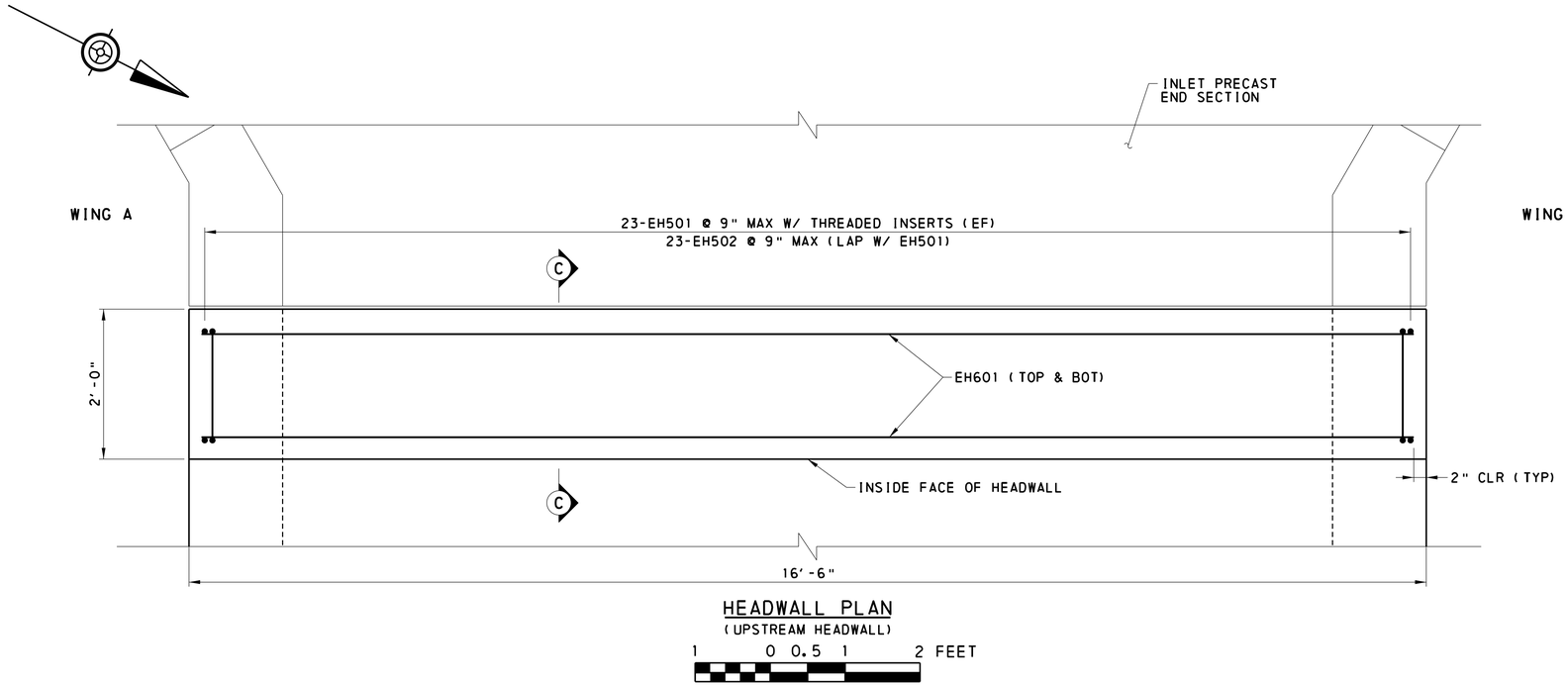
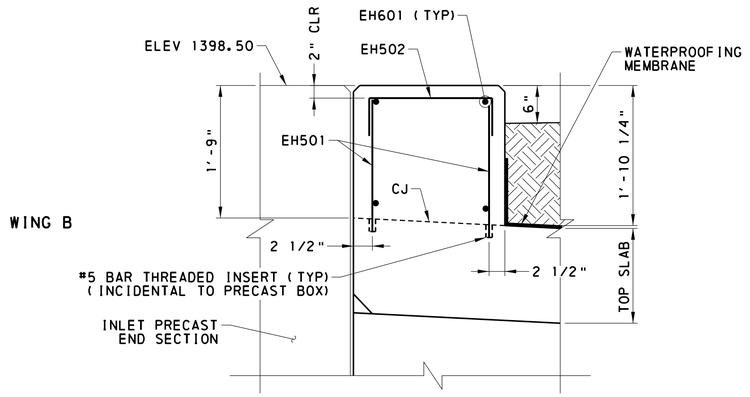
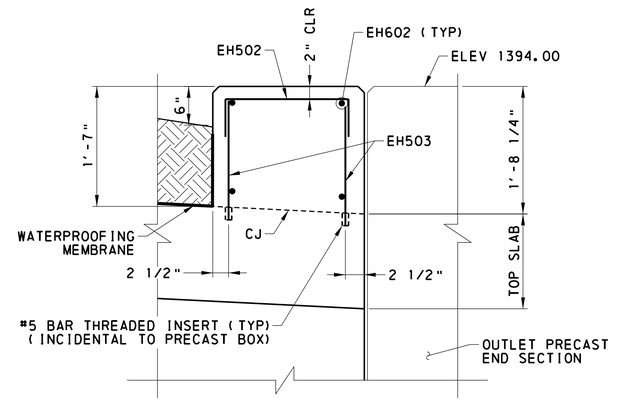


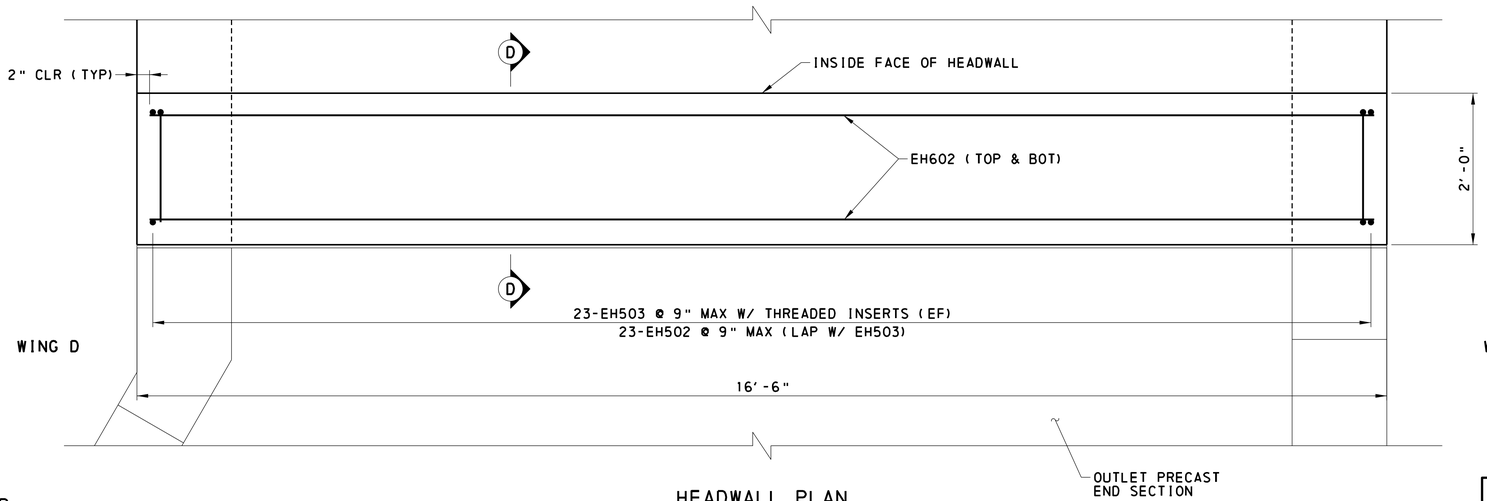
HEADWALL PLAN
(UPSTREAM HEADWALL)
1 0 0.5 1 2 FEET



SECTION C-C
1 0 0.5 1 2 FEET



SECTION D-D
1 0 0.5 1 2 FEET



HEADWALL PLAN
(DOWNSTREAM HEADWALL)
1 0 0.5 1 2 FEET

LEGEND
CJ CONSTRUCTION JOINT

NOTES:
1. SEE BC-788M FOR WATERPROOFING DETAILS.
2. ADJUST REBAR DETAIL LENGTH FOR THE ACTUAL THREADED INSERT DEPTH USED (3" ASSUMED).

DES: JWB	CHK'D: BRM
DWG: MJH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
HEADWALL DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 9 OF 20

L-404

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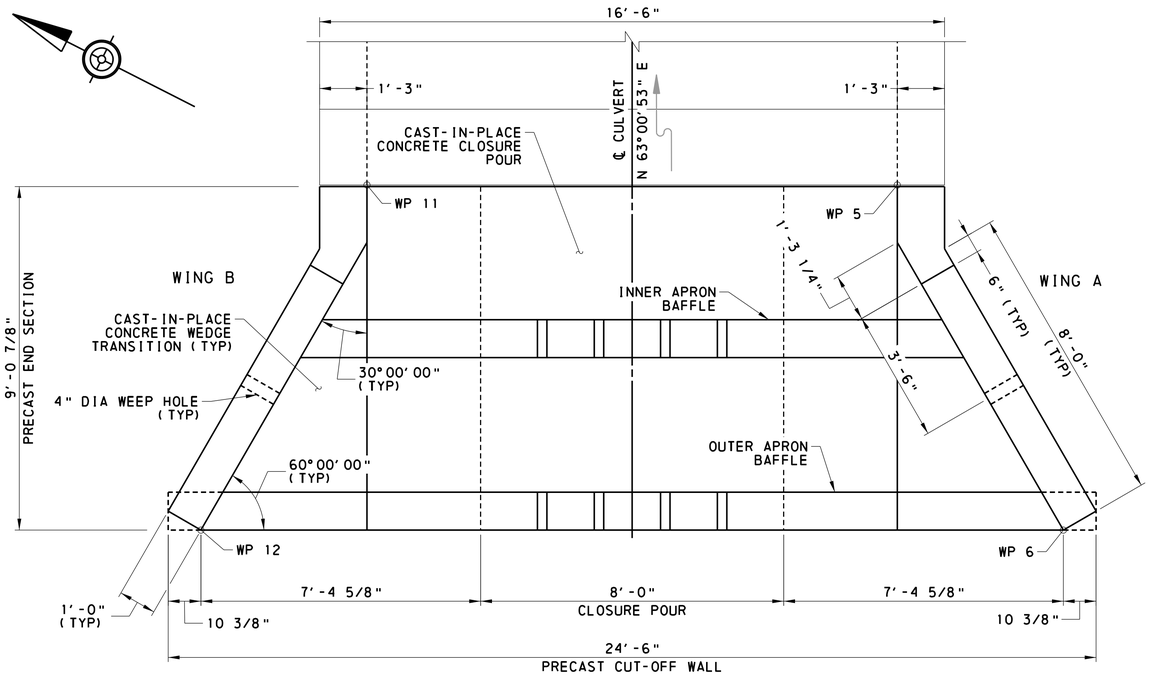
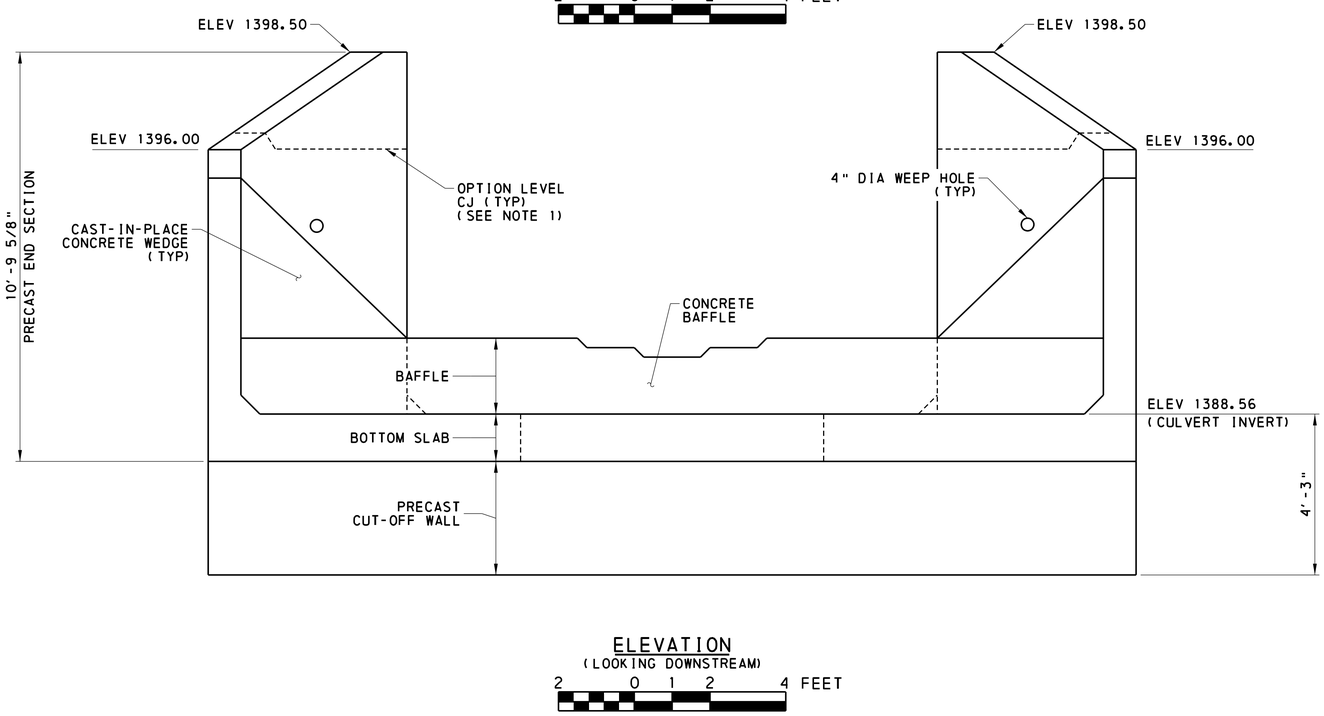


PLAN

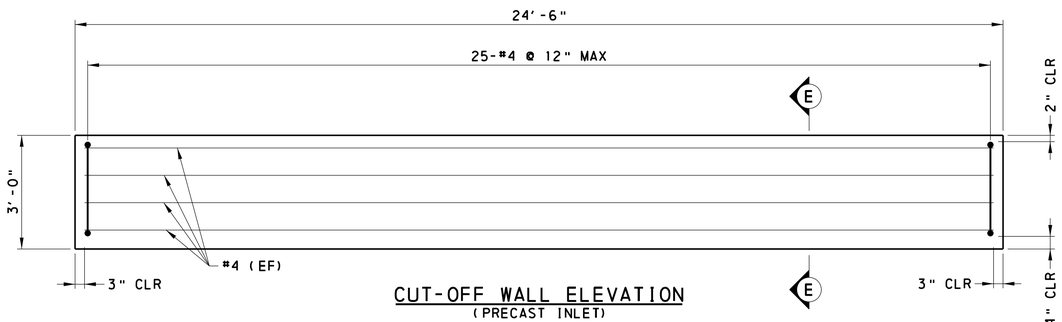
2 0 1 2 4 FEET



ELEVATION

(LOOKING DOWNSTREAM)

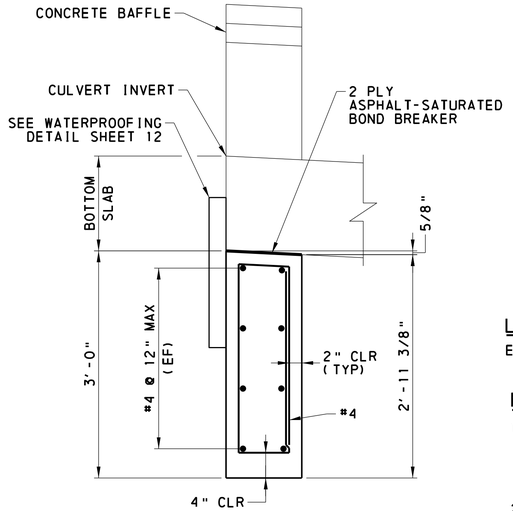
2 0 1 2 4 FEET



CUT-OFF WALL ELEVATION

(PRECAST INLET)

2 0 1 2 4 FEET



SECTION E-E

1 0 0.5 1 2 FEET

MIN LAP SPLICE LENGTH

#4 - 2'-1"

LEGEND

EF EACH FACE

NOTES:

1. CAST-IN-PLACE PORTIONS OF THE END SECTION, OTHER THAN THE CLOSURE POUR SHOWN, ARE INCIDENTAL TO THE PRECAST CONCRETE BOX CULVERT. CLOSURE POURS MAY BE ELIMINATED AND THE ENTIRE END SECTION PRECAST IF FEASIBLE FOR TRANSPORTATION AND ERECTION.
2. SEE BC-788M FOR ADDITIONAL WATERPROOFING DETAILS.
3. SEE SHEET 7 FOR COMPACTED FILL DETAIL.
4. SEE SHEET 11 FOR INLET END SECTION REINFORCEMENT DETAILS.
5. SEE SHEETS 14 & 15 FOR BAFFLE DETAILS.
6. SEE SHEET 16 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
INLET PRECAST END SECTION DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 10 OF 20

L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

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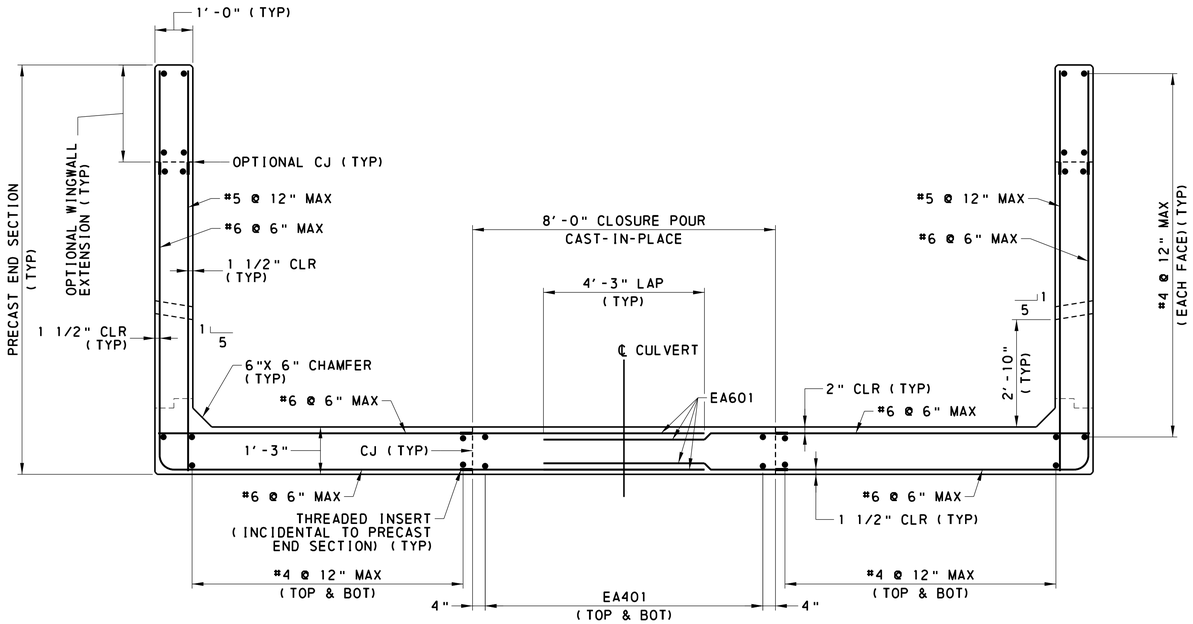
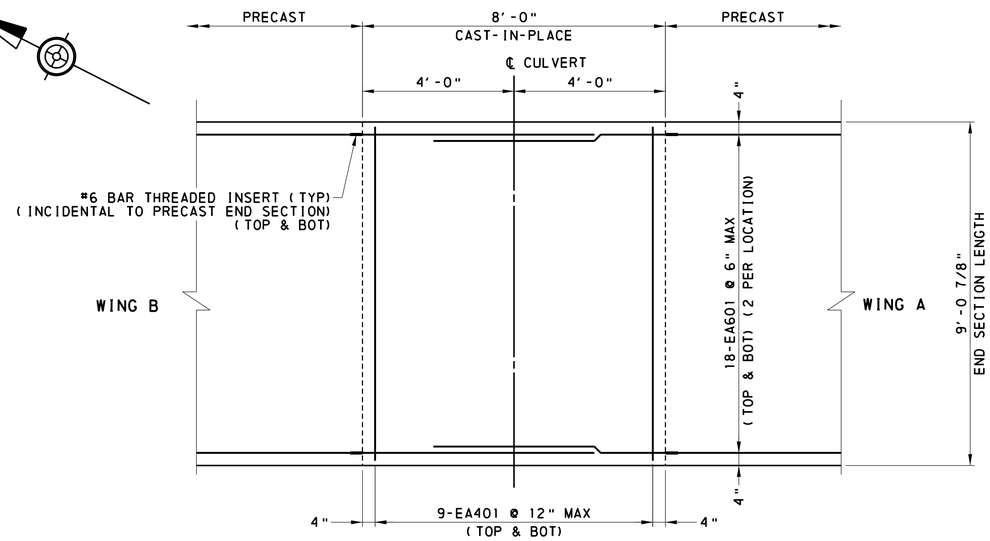
3/4/2024 12:00:47 PM By: laura.hower



TYPICAL REINFORCEMENT SECTION

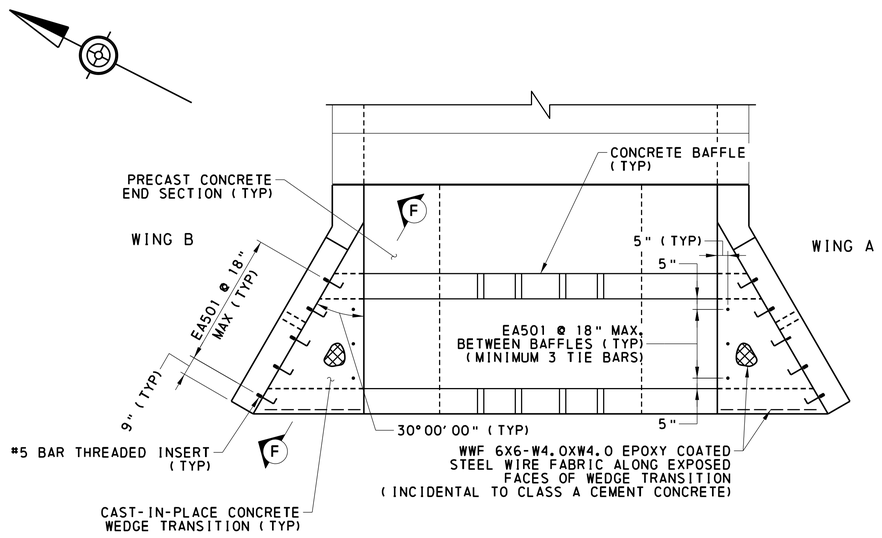
(LOOKING DOWNSTREAM)

2 0 1 2 4 FEET



CLOSURE POUR PLAN

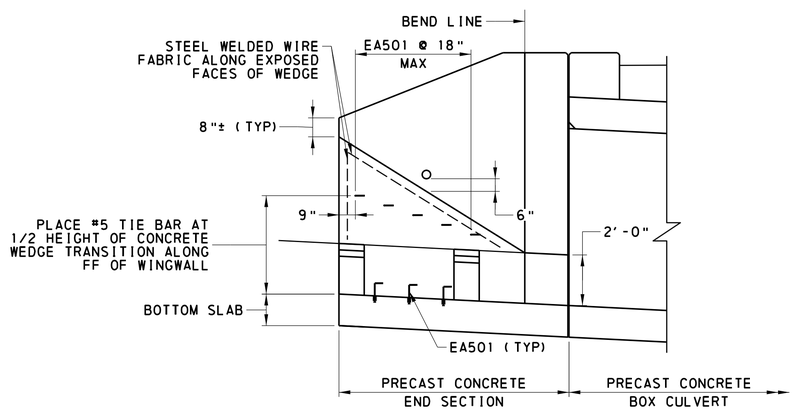
2 0 1 2 4 FEET



CAST-IN-PLACE CONCRETE WEDGE PLAN

(INLET APRON)

3 0 1 3 6 FEET



SECTION F-F

(WING B SHOWN, WING A SIMILAR)

3 0 1 3 6 FEET

LEGEND

CJ CONSTRUCTION JOINT
FF FRONT FACE

NOTES:

1. ADJUST REBAR DETAIL LENGTH FOR THE ACTUAL THREADED INSERT DEPTH USED (3" ASSUMED).
2. SEE SHEET 10 FOR INLET END SECTION DETAILS.
3. SEE SHEETS 14 & 15 FOR BAFFLE DETAILS.
4. SEE SHEET 16 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
	REVISIONS				

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
INLET PRECAST END SECTION DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

RECOMMENDED 03/04/2024

SHEET 11 OF 20

L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

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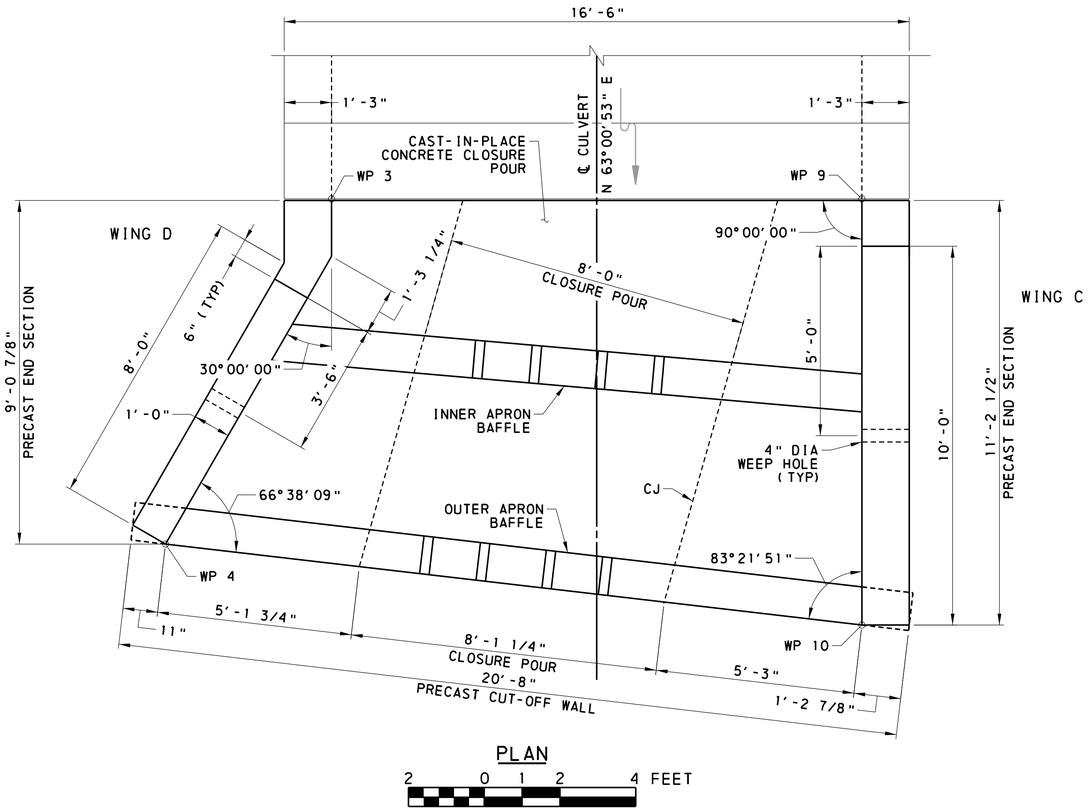
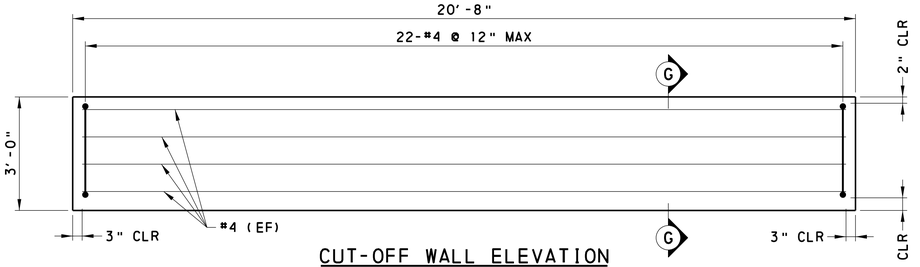
Model:11 INLET PRECAST END SECTION - 2 3/4/2024 12:00:48 PM Byt laura.hower



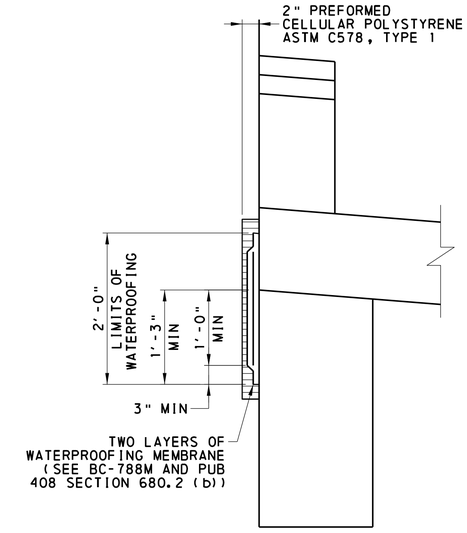
PLAN

2 0 1 2 4 FEET



CUT-OFF WALL ELEVATION
(OUTLET)

2 0 1 2 4 FEET



MIN LAP SPLICE LENGTH

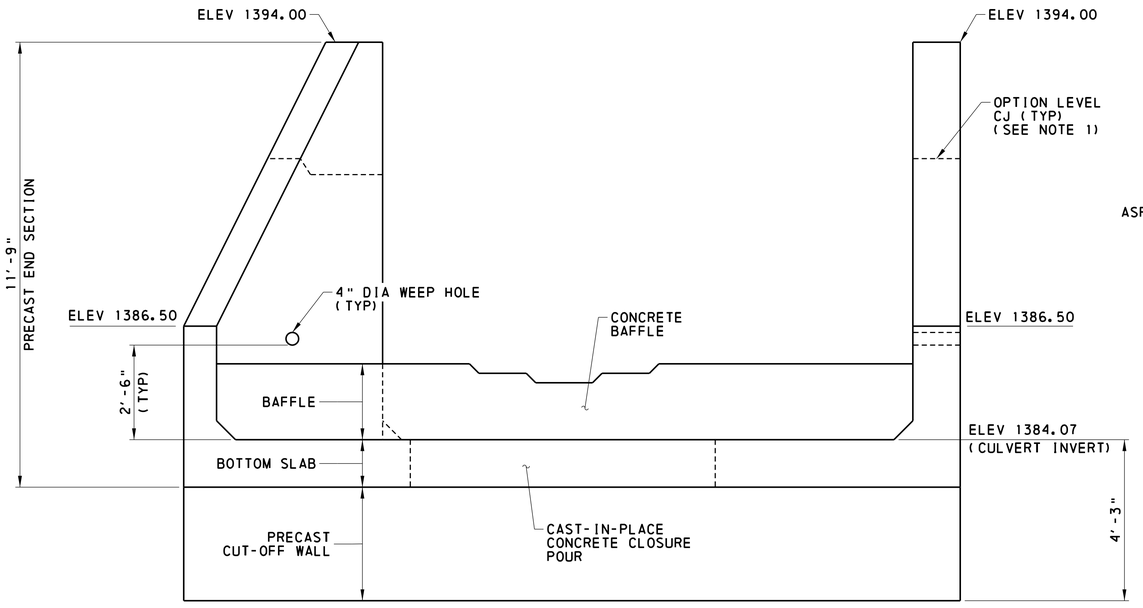
#4 - 2'-1"

LEGEND

EF EACH FACE

NOTES:

1. CAST-IN-PLACE PORTIONS OF THE END SECTION, OTHER THAN THE CLOSURE POUR SHOWN, ARE INCIDENTAL TO THE PRECAST CONCRETE BOX CULVERT. CLOSURE POURS MAY BE ELIMINATED AND THE ENTIRE END SECTION PRECAST IF FEASIBLE FOR TRANSPORTATION AND ERECTION.
2. SEE BC-788M FOR ADDITIONAL WATERPROOFING DETAILS.
3. SEE SHEET 7 FOR COMPACTED FILL DETAIL.
4. SEE SHEET 13 FOR OUTLET END SECTION REINFORCEMENT DETAILS.
5. SEE SHEETS 14 & 15 FOR BAFFLE DETAILS.
6. SEE SHEET 16 FOR REINFORCEMENT SCHEDULE.

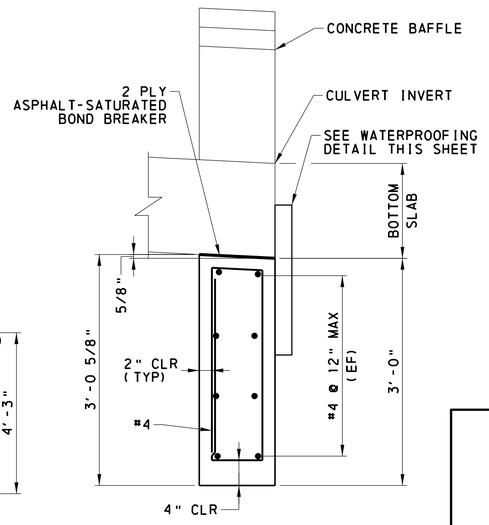


ELEVATION
(LOOKING DOWNSTREAM)

2 0 1 2 4 FEET

WATERPROOFING DETAIL

NOT TO SCALE



SECTION G-G

1 0 0.5 1 2 FEET

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
OUTLET PRECAST END SECTION DETAILS - 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

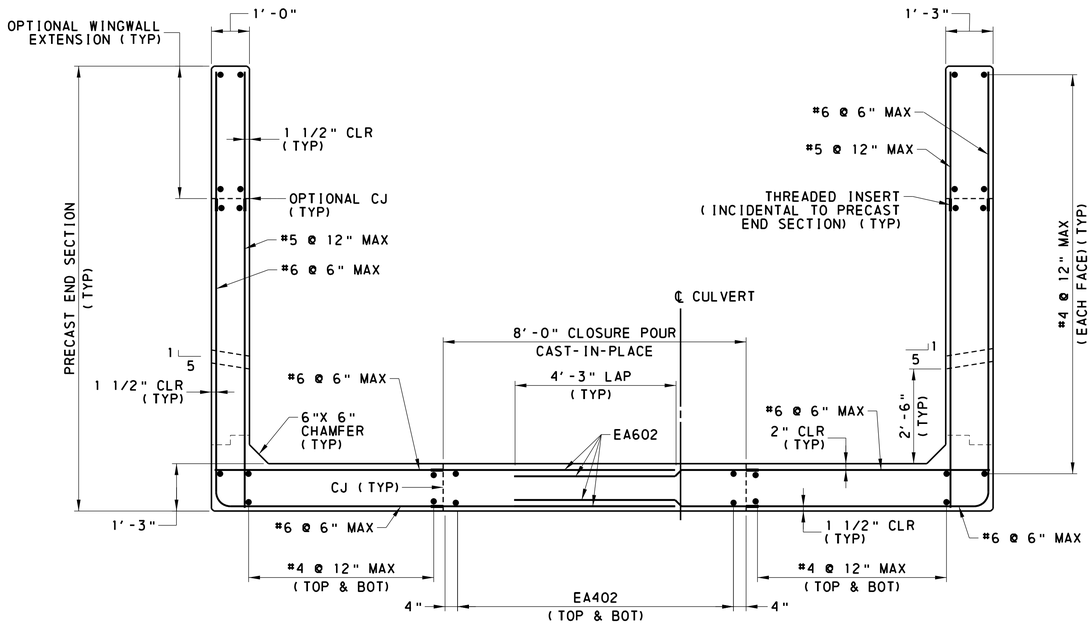
RECOMMENDED 03/04/2024

SHEET 12 OF 20

L-404

DES: JWB	CHK'D: BRM
DWG: MJH	CHK'D: BRM

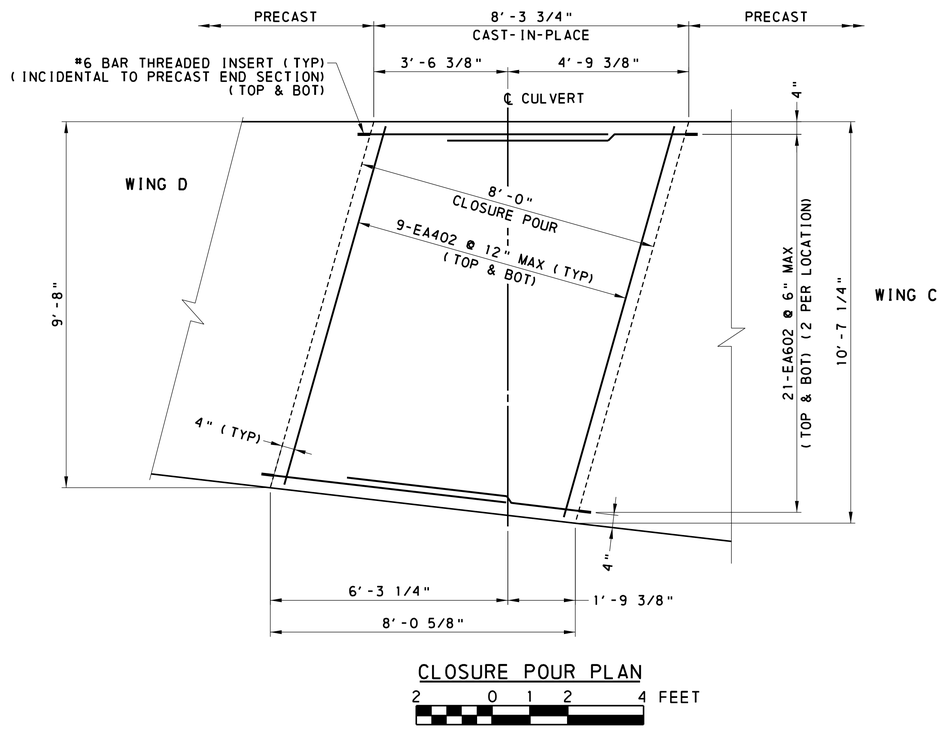
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WRA\DGN\Bridge\SR 0435 Sec 251-253 RR Culvert Final Plan.dgn
Model: 12 OUTLET PRECAST END SECTION - 1 3/4/2024 12:00:48 PM By: laura.hower



TYPICAL REINFORCEMENT SECTION

(LOOKING UPSTREAM)

2 0 1 2 4 FEET



CLOSURE POUR PLAN

2 0 1 2 4 FEET

LEGEND

CJ CONSTRUCTION JOINT

NOTES:

1. CAST-IN-PLACE CONCRETE IS PERMITTED IN ANY PORTION OF THE PRECAST END SECTIONS, ONLY IF HEIGHT AND WIDTH OF END SECTIONS ARE RESTRICTED DUE TO SHIPPING RESTRAINTS.
2. ADJUST REBAR DETAIL LENGTH FOR THE ACTUAL THREADED INSERT DEPTH USED (3" ASSUMED).
3. SEE SHEET 12 FOR OUTLET END SECTION DETAILS.
4. SEE SHEETS 14 & 15 FOR BAFFLE DETAILS.
5. SEE SHEET 16 FOR REINFORCEMENT SCHEDULE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
OUTLET PRECAST END SECTION DETAILS - 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

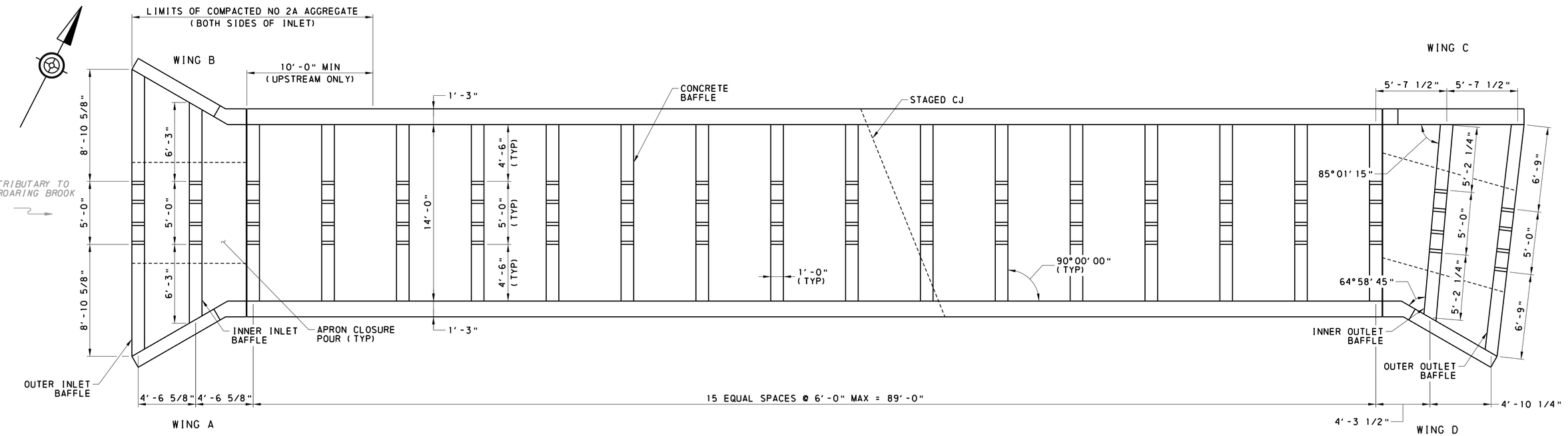
RECOMMENDED 03/04/2024

SHEET 13 OF 20

L-404

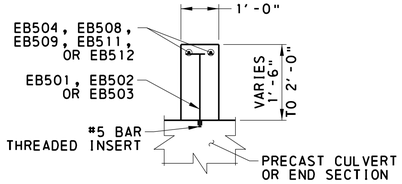
DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 0435 Sec 251-253 RR Culvert Final Plan.dgn
Model:13 OUTLET PRECAST END SECTION - 2 3/4/2024 12:00:49 PM By: laura.hower



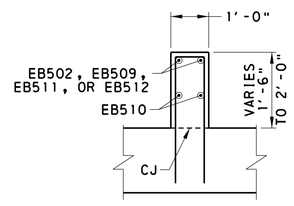
BAFFLE PLAN

4 0 2 4 8 FEET



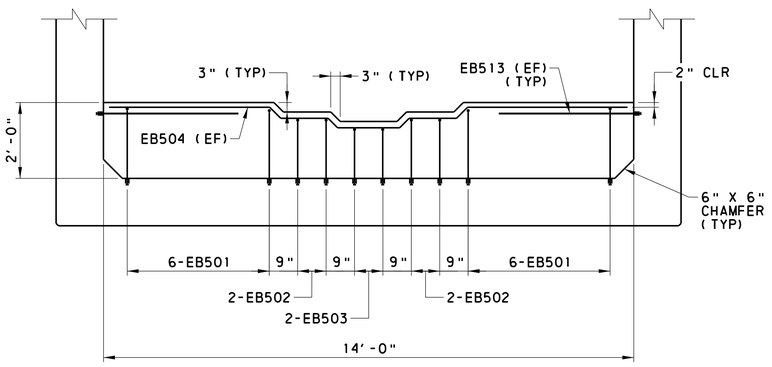
TYPICAL BAFFLE SECTION

NOT TO SCALE

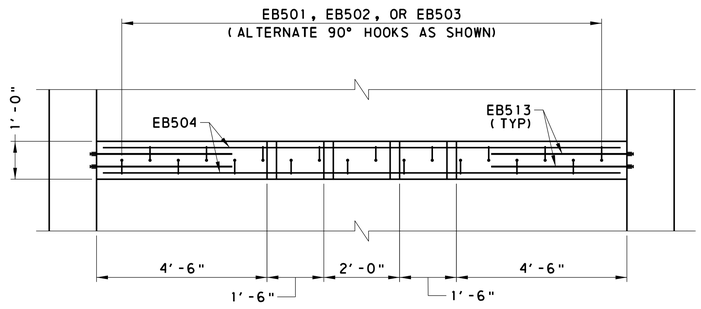


TYPICAL BAFFLE SECTION OVER CLOSURE POUR

NOT TO SCALE



ELEVATION



PLAN

CONCRETE BAFFLE DETAILS

2 0 1 2 4 FEET

LEGEND:

CJ CONSTRUCTION JOINT

NOTES:

1. INSERTS FOR BAFFLES ARE TO BE DETAILED ON THE SHOP DRAWINGS AND ARE NOT QUANTIFIED IN THIS PLAN SET.
2. ADJUST REBAR DETAIL LENGTH FOR THE ACTUAL THREADED INSERT DEPTH USED (3" ASSUMED).
3. SEE SHEET 15 FOR ADDITIONAL BAFFLE DETAILS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
BAFFLE PLAN & REINFORCING DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE061839

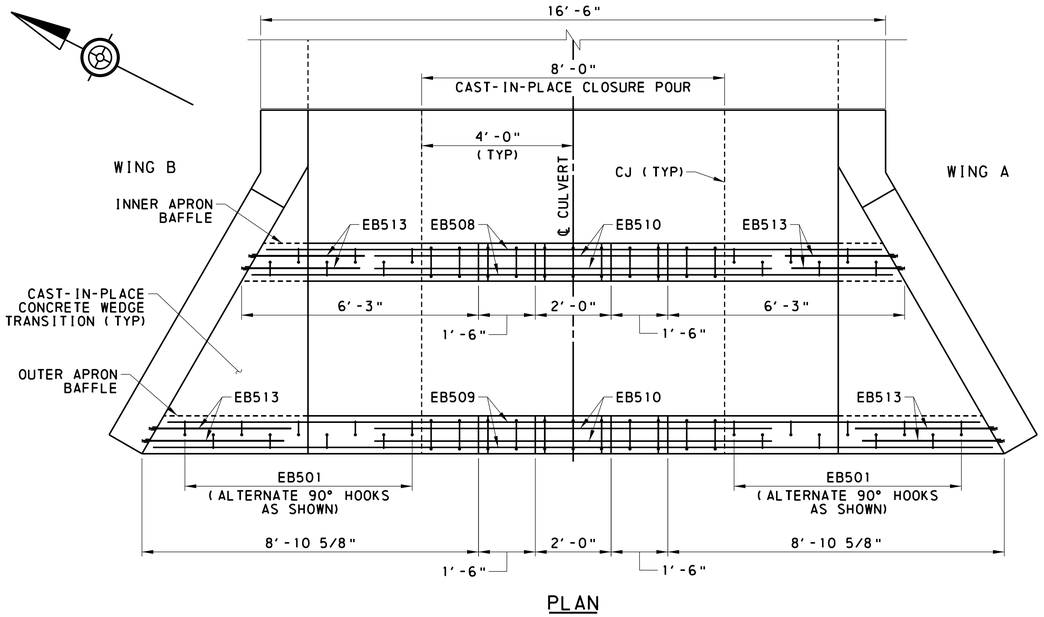
RECOMMENDED 03/04/2024

SHEET 14 OF 20

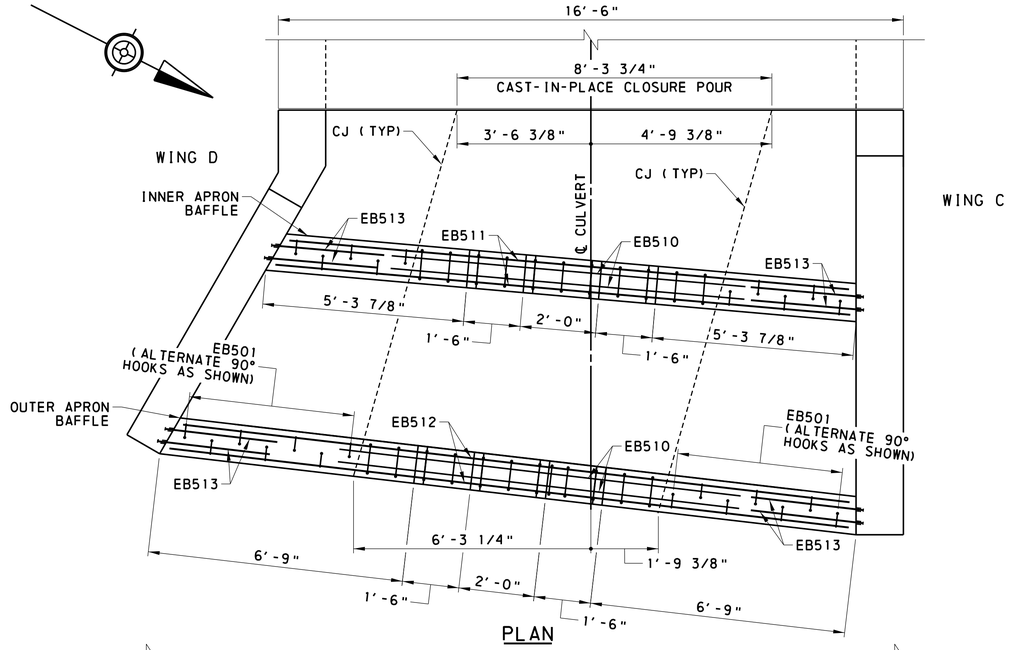
L-404

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

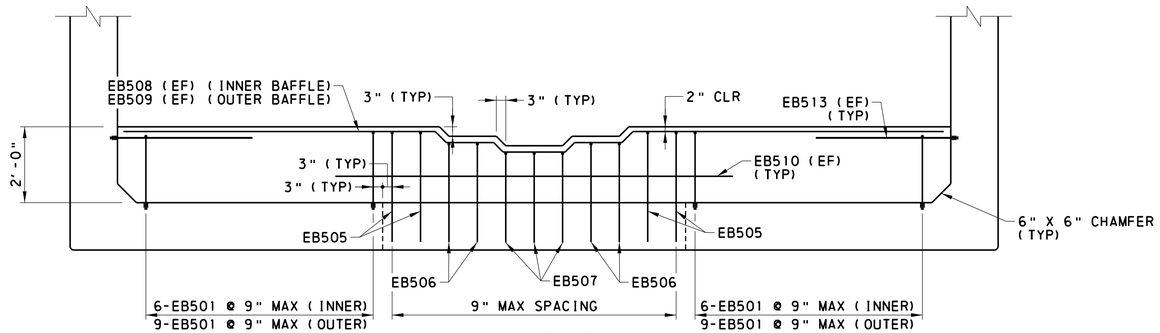
File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\NKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model: 14 BAFFLE REINFORCEMENT DETAILS - 1
3/4/2024 12:00:49 PM By: laura.hower



PLAN



PLAN

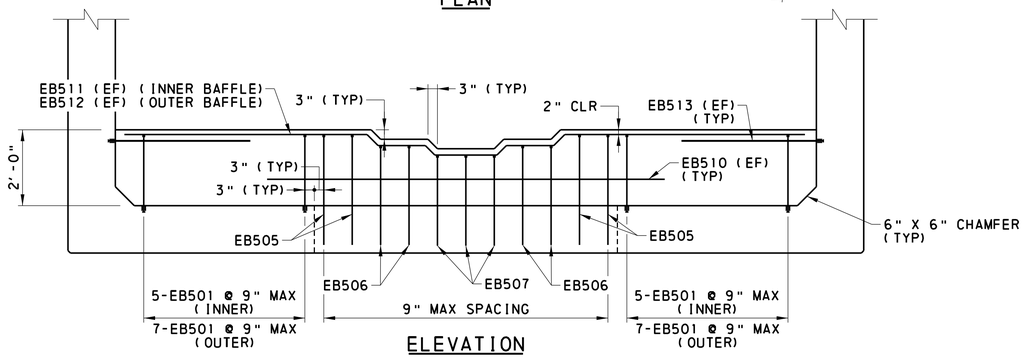


ELEVATION

INLET BAFFLE DETAILS

(OUTER BAFFLE SHOWN, INNER BAFFLE SIMILAR)

2 0 1 2 4 FEET



ELEVATION

OUTLET BAFFLE DETAILS

(OUTER BAFFLE SHOWN, INNER BAFFLE SIMILAR)

2 0 1 2 4 FEET

LEGEND:

CJ CONSTRUCTION JOINT

NOTES:

1. INSERTS FOR BAFFLES ARE TO BE DETAILED ON THE SHOP DRAWINGS AND ARE NOT QUANTIFIED IN THIS PLAN SET.
2. ADJUST REBAR DETAIL LENGTH FOR THE ACTUAL THREADED INSERT DEPTH USED (3" ASSUMED).
3. SEE SHEET 14 FOR ADDITIONAL BAFFLE DETAILS.

DES: JWB	CHK'D: BRM
DWG: MJH	CHK'D: BRM

Mark	Description	By	Chk'd	Recm'd	Date

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839 PENNSYLVANIA

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
BAFFLE REINFORCING DETAILS - 2

RECOMMENDED 03/04/2024

SHEET 15 OF 20

L-404

File: pwt:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Bridge\SR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model: 15 BAFFLE REINFORCEMENT DETAILS - 2
3/4/2024 12:00:49 PM By: laura.hower

HEADWALL REINFORCEMENT BAR SCHEDULE

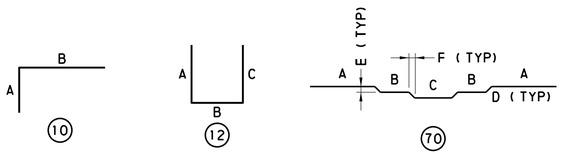
MARK	SIZE	LENGTH	QTY STAGE 1	QTY STAGE 2	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
		' - "															
EH501	5	1' - 10"		46	STR												THREAD ONE END
EH502	5	3' - 3"	23	23	12	10"	1' - 7"	10"									
EH503	5	1' - 8"	46		STR												THREAD ONE END
EH601	6	16' - 2"		4	STR												
EH602	6	16' - 2"	4		STR												

APRON REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY STAGE 1	QTY STAGE 2	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EA401	4	8' - 9"		18	STR												
EA402	4	VARIES 7' - 8" TO 7' - 11"	18		STR												2 SETS OF 9, STEP EACH BY 3/8"
EA501	5	1' - 1"		16	10	9"	4"										THREAD LONG END
EA601	6	6' - 5"		72	STR												THREAD ONE END
EA602	6	6' - 7"	84		STR												THREAD ONE END

BAFFLE REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	QTY STAGE 1	QTY STAGE 2	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EB501	5	2' - 4"	108	138	10	3"	2' - 1"										THREAD ONE END
EB502	5	2' - 1"	28	36	10	3"	1' - 10"										THREAD ONE END
EB503	5	1' - 10"	14	18	10	3"	1' - 7"										THREAD ONE END
EB504	5	14' - 1"	14	18	70	4' - 3"	1' - 3"	1' - 8"	4 1/4"	3"	3"						
EB505	5	6' - 4"	8	8	12	2' - 10"	8"	2' - 10"									
EB506	5	5' - 10"	8	8	12	2' - 7"	8"	2' - 7"									
EB507	5	5' - 4"	6	6	12	2' - 4"	8"	2' - 4"									
EB508	5	17' - 7"		2	70	6' - 0"	1' - 3"	1' - 8"	4 1/4"	3"	3"						
EB509	5	22' - 9"		2	70	8' - 7"	1' - 3"	1' - 8"	4 1/4"	3"	3"						
EB510	5	10' - 0"	4	4	STR												
EB511	5	15' - 9"	2		70	5' - 1"	1' - 3"	1' - 8"	4 1/4"	3"	3"						
EB512	5	18' - 7"	2		70	6' - 6"	1' - 3"	1' - 8"	4 1/4"	3"	3"						
EB513	5	4' - 0"	36	44	STR												THREAD ONE END



NOTES:

1. E PREFIX INDICATES EPOXY COATED.
2. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G ON STANDARD 135° AND 180° HOOKS, AND "R" WHICH IS SHOWN TO THE INSIDE OF THE BAR.
4. FOR REINFORCEMENT BAR FACRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
5. FIGURES IN CIRCLE DENOTE TYPE.

DES:	JWB	CHK'D:	BRM
DWG:	MJH	CHK'D:	BRM

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

OWNED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY
MAINTAINED BY DELAWARE LACKAWANNA RAILROAD

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
SR 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
REINFORCEMENT SCHEDULE

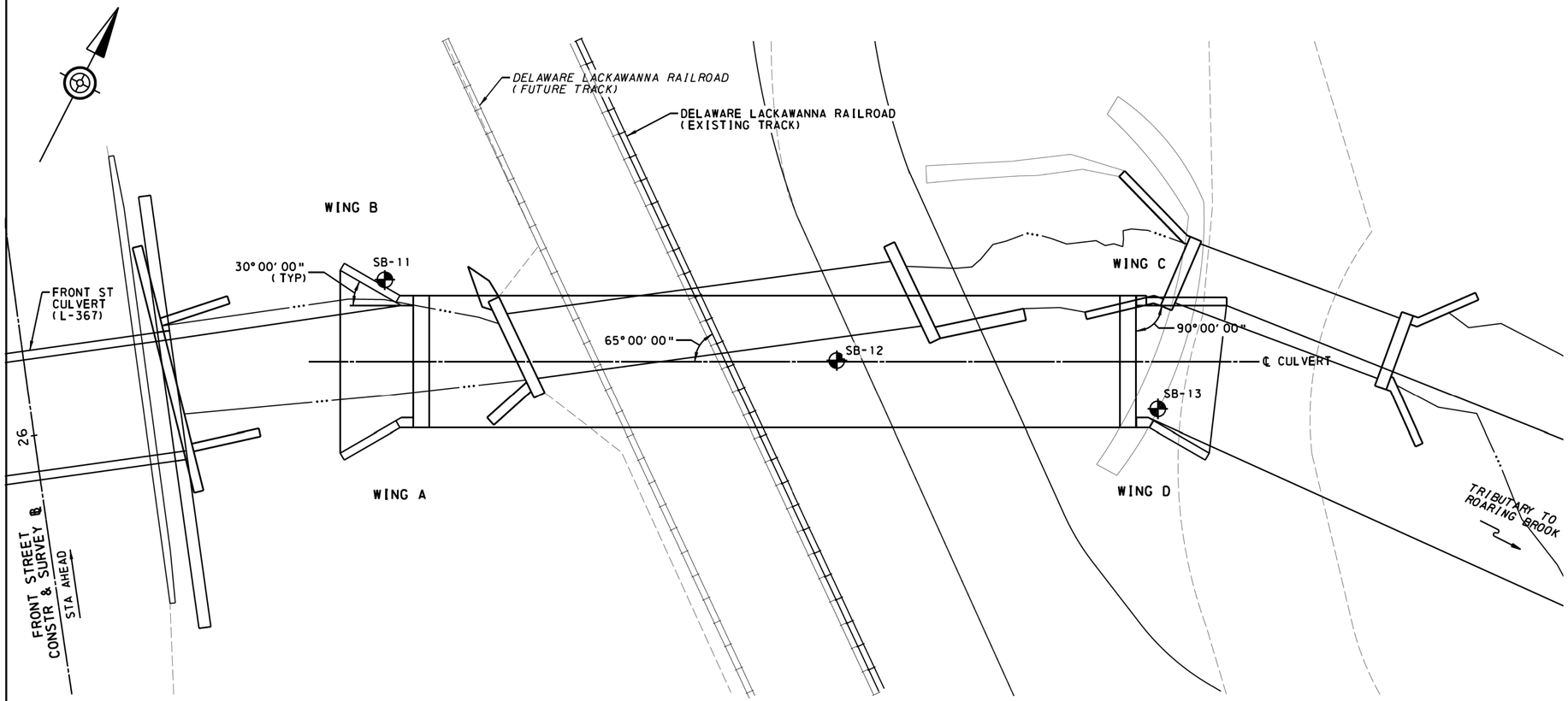
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

RECOMMENDED 03/04/2024

SHEET 16 OF 20

L-404

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\BridgeVSR 0435 Site 251-253 RR Culvert Final Plan.dgn
Model: 16 REINFORCEMENT SCHEDULE
3/4/2024 12:00:50 PM By: laura.hower



PLAN

8 0 4 8 16 FEET

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BCA	BOTTOM OF COARSE AGGREGATE
BCE	BOTTOM OF CULVERT ELEVATION
SBE	STREAMBED ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

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.

Tariq Amin — 05/15/2023

GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST — DATE:

TEST BORING DATA

BORING NUMBER	STATION	OFFSET	SURFACE ELEVATION	NORTHING	EASTING
SB-11	26+13.0	46.0 ft. RT.	1396.3 ft.	447374.4000 N	2573774.0000 E
SB-12	25+96.0	99.0 ft. RT.	1397.4 ft.	447391.1000 N	2573829.0000 E
SB-13	25+83.0	139.0 ft. RT	1391.6 ft.	447403.7000 N	2573867.0000 E

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

OWNED & MAINTAINED BY PENNSYLVANIA NORTHEAST RAILROAD AUTHORITY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
S.R. 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STRUCTURE BORINGS (SHEET 1 OF 4)

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MOHAMMAD TARIQ AMIN — GEOLOGIST — NO. PG003910

2024.03.05 08:05:10 -05'00'

For DISTRICT GEOTECHNICAL ENGINEER

SHEET 17 OF 20

L-404

DES: AMF | DWG: AMF | CKD: MTA

\\AWKSRVHBG\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\03- Culvert over TribTo Roaring Brook\ST Boring Sheets\Cadd\EC2014_SR0435-251_RR-GEO-01.dgn
1:23:22 PM 9/7/2023

SUBSTRUCTURE UNIT:
BOX CULVERT INLET

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/13/2022 11:30 AM	HAMMER: AUTOMATIC
SB-11	STATION: 26+13.0 OFFSET: 46.0 FT. RT.	FINISH: 09/13/2022 1:30 PM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1396.3 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY:JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME:El. 1390.3 ft. - 0.5 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1390.3 ft. - 19.8 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO. **	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ / ⊙ Soil/Rock Rec. % ⊙ / ▲ SPT (N_{60}) ▲
1395		**GRAVEL**, little Sand, trace Silt, very loose to dense, damp, heterogeneous, poorly graded, angular to sub-angular, low plastic fines, brown gray and tan, fill.	a-1-a / gp	1.5	S-1	1-1-1	3	0.2	13	
				3.0	S-2	10-25-6	41	1.0	67	
				4.5	S-3	10-9-6	20	1.2	80	
				6.0	S-4	10-10-10	27	1.0	67	
				7.5	S-5	8-7-7	19	1.0	67	
				9.0	S-6	5-6-10	21	1.5	100	
1390				10.5	S-7	18-19-8	36	1.2	80	
SBE 1390.56				12.0	S-8	7-8-8 / **2.50**	21	1.5	100	
		10.0'/El. 1386.3		13.5	S-9	4-6-7 / **3.00**	17	1.5	100	
BCE 1387.31		**SILT**, trace Clay, trace Sand, trace Gravel, very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, fill.		15.0	S-10	9-11-10 / **2.00**	28	1.5	100	
1385				16.5	S-11	9-12-10 / **3.00**	29	1.5	100	
BCA 1384.31				18.0	S-12	3-5-5 / **1.50**	13	1.5	100	
				19.5	S-13	6-8-9	23	1.5	100	
			A-4 / ML	21.0	S-14	10-10-9 / **1.50**	25	1.5	100	
				22.5	S-15	4-7-7 / **2.25**	19	1.5	100	
				24.0	S-16	8-12-10 / **1.75**	29	1.5	100	
1380				25.5	S-17	10-11-11	29	1.5	100	
				27.0	S-18	6-6-10 / **2.25**	21	1.5	100	
				28.5	S-19	14-16-14 / **3.00**	40	1.5	100	
1375					S-20	10-12-16	37	1.5	100	
1370		30.0'/El. 1366.3								

**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
BOX CULVERT

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 09/13/2022 9:00 AM	HAMMER: AUTOMATIC
SB-12	STATION: 25+96.0 OFFSET: 99.0 FT. RT.	FINISH: 09/13/2022 10:00 AM	EFFICIENCY: 0.8 ERa

DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
DRILLING METHOD-NO RECORD, AUTOMATIC, ACKER XLS TRUCK MOUNT RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1397.4 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY:JUSTIN MENHART
TRC ENGINEERS, INC.

▽ 0 HR. READING - ELAPSED TIME:El. 1390.6 ft. - 0.3 hr.
▼ 24 HR. READING - ELAPSED TIME: El. 1383.6 ft. - 23.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO. **	BLOW COUNT / PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)	◇ RQD % ◇ / ⊙ Soil/Rock Rec. % ⊙ / ▲ SPT (N_{60}) ▲
1395		**GRAVEL**, some Sand, trace Silt, medium dense to very dense, damp to wet, heterogeneous, poorly graded, angular to sub-angular, non-plastic, black and brown, fill.	a-1-a / gp	1.5	S-1	4-2-7	12	0.8	53	
				3.0	S-2	8-6-6	16	1.0	67	
				4.5	S-3	5-11-24	47	1.5	100	
				4.7	S-4	50/.2'	>67	0.2	100	
				6.0	A-					
				7.5	S-5	18-20-32	69	1.5	100	
				7.7	S-6	50/.2'	>67	0.2	100	
				9.0	A-					
1390				10.5	S-7	10-12-6	24	1.0	67	
SBE 1387.94				12.0	S-8	9-8-7	20	1.5	100	
		6.0'/El. 1391.4		13.5	S-9	4-5-6 / **2.00**	15	1.5	100	
		GRAVEL and **SAND**, medium dense to very dense, damp to moist, heterogeneous, poorly graded, angular to sub-angular, non-plastic, red and tan, fill.	a-1-a / gp	15.0	S-10	8-8-8 / **2.50**	21	1.5	100	
BCE 1384.69				16.5	S-11	8-10-9 / **3.50**	25	1.5	100	
				18.0	S-12	3-5-6 / **3.25**	15	1.5	100	
		10.5'/El. 1386.9		19.5	S-13	9-8-7 / **2.50**	20	1.5	100	
1385		**GRAVEL** and **CLAY**, little Sand, medium dense, damp to moist, heterogeneous, poorly graded, angular to sub-angular, medium plastic fines, orange brown, fill.	a-2-6 / gc	21.0	S-14	9-10-14 / **2.50**	32	1.5	100	
BCA 1381.69				22.5	S-15	5-5-6 / **2.25**	15	1.5	100	
		12.0'/El. 1385.4		24.0	S-16	8-8-10 / **2.75**	24	1.5	100	
		SILT, little Clay, trace Sand, trace Gravel, very stiff, damp to moist, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, glacial outwash.		25.5	S-17	11-11-11	29	1.5	100	
1380				27.0	S-18	4-8-7 / **2.75**	20	1.5	100	
			A-4 / ML	28.5	S-19	9-9-9 / **2.00**	24	1.5	100	
					S-20	10-11-11	29	1.5	100	
1375										
1370		30.0'/El. 1367.4								

**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
BCA	BOTTOM OF COARSE AGGREGATE
BCE	BOTTOM OF CULVERT ELEVATION
SBE	STREAMBED ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMJAD
GEOLOGIST NO. PG003390
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
S.R. 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STRUCTURE BORINGS (SHEET 2 OF 4)

2024.03.05
DATE

SHEET 18 OF 20

L-404

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT (VERSION 1.2.2.3, 8-21-2018) GDT - 8/6/23 09:00 - P:\2020\EC2014_SR0435-251_LACKAWANNACO\GEOTECH\DRILLING\BORING LOGS\MPMS_8181_BESTRCT_04_SR0435_SEC 251.GPJ

\\AWKSRVHBG\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\03- Culvert over TribTo Roaring Brook\ST Boring Sheets\Cadd\EC2014_SR0435-251_RR-GEO-02.dgn
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SUBSTRUCTURE UNIT:

BOX CULVERT OUTLET

LOG 1 OF 1

BORING NUMBER:	BORING LOCATION	START: 08/04/2022 8:30 AM	HAMMER: AUTOMATIC
SB-13	STATION: 25+83.0 OFFSET: 139.0 FT. RT	FINISH: 08/04/2022 10:00 AM	EFFICIENCY: 0.8 ERa

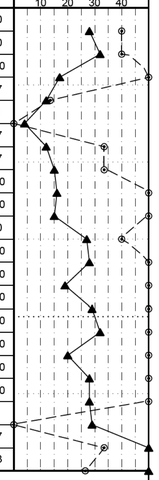
DRILLING METHOD AND EQUIPMENT:	SIZE OF CORE:	VERTICAL SCALE:	TOP OF BORING ELEVATION:
N/A, AUTOMATIC, ACKER XLS TRACKER RIG	"NO RECORD"	0 FT. [redacted] 5 FT.	1391.6 FT.

DRILLING INSPECTOR: RACHEL MITCHELL
DRILLER & DRILLING COMPANY:JUSTIN MENHART
TRC ENGINEERS, INC.

0 HR. READING - ELAPSED TIME: El. 1383.9 ft. - 0.2 hr.
24 HR. READING - ELAPSED TIME: El. 1378.0 ft. - 24.0 hr.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION	AASHTO/ USCS	SAMPLE DEPTH	SAMPLE NO. **	BLOW COUNT ------ PP/T TSF	N 60 / %RQD	REC (ft.)	REC (%)
1390		**GRAVEL**, some Sand, trace Silt, medium dense to dense, dry, heterogeneous, poorly graded, angular to sub-angular, non-plastic, gray and tan, fill.	a-1-a / gp	1.5	S-1	2-7-14	28	1.2	80
				3.0	S-2	14-13-11	32	1.2	80
				4.5	S-3	8-7-6	17	1.5	100
				6.0	S-4	9-5-4	12	0.4	27
SBE 1386.07		6.0'/El. 1385.6							
1385		**GRAVEL**, some Sand, trace Silt, very loose to medium dense, wet, heterogeneous, poorly graded, angular to sub-angular, non-plastic, brown, fill. *S-5: No recovery due to cobbles.*	a-1-a / gp	7.5	S-5	2-2-1	4	0.0	0
BCE 1382.82				9.0	S-6	2-2-7	12	1.0	67
		10.5'/El. 1381.1		10.5	S-7	7-7-4	15	1.0	67
1380 BCA 1379.82		**SILT**, little Clay, trace Sand, trace Gravel, medium to very stiff, damp to wet, homogeneous, poorly graded, sub-angular to sub-rounded, low plastic fines, brown, alluvium.	A-4 / ML	12.0	S-8	7-6-6 **2.25**	16	1.5	100
				13.5	S-9	4-5-6 **2.25**	15	1.5	100
				15.0	S-10	8-10-10 **2.00**	27	1.2	80
				16.5	S-11	9-11-10 **2.75**	28	1.5	100
				18.0	S-12	4-7-7 **0.75**	19	1.5	100
				19.5	S-13	10-11-11 **1.75**	29	1.5	100
				21.0	S-14	8-12-12 **2.00**	32	1.5	100
				22.5	S-15	4-7-8 **1.50**	20	1.5	100
				24.0	S-16	10-11-10 **2.75**	28	1.5	100
				25.5	S-17	7-11-10 **2.75**	28	1.5	100
1370				27.0	S-18	9-9-13	29	0.0	0
		27.0'/El. 1364.6							
1365		**SAND** and **GRAVEL**, trace Silt, dense, moist to wet, heterogeneous, poorly graded, sub-rounded, non-plastic, brown with white, alluvium.	a-1-b / sp	28.5	S-19	16-19-19	51	1.0	67
					S-20	16-21-27	64	0.8	53
		30.0'/El. 1361.6							

◇ RQD % ◇
⊙ Soil/Rock Rec. % ⊙ (20 40 60 80)
▲ SPT (N_{60}) ▲ (10 20 30 40)



**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BCA	BOTTOM OF COARSE AGGREGATE
BCE	BOTTOM OF CULVERT ELEVATION
SBE	STREAMBED ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

MTA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
S.R. 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STRUCTURE BORINGS (SHEET 3 OF 4)

2024.03.05
DATE

SHEET 19 OF 20

L-404

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST NO. PG003900
SEAL

PENNDOT STRUCTURE BORING LOG - PENNDOT.GINT (VERSION 1.22.3.0) 2/1/2021 09:00:01 - J:\SR0435_251_LACKAWANNA\GEOTECH\DRILLING\BORING LOGS\SB-13_LACKAWANNA.GPJ
\\AWKSRVHBG\HB Projects\2020\EC2014_SR0435-251_LackawannaCo\Geotech\SFR_FndRpt\03- Culvert over TribTo Roaring Brook\ST Boring Sheets\Cadd\EC2014_SR0435-251_RR-GEO-03.dgn
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LABORATORY TEST SUMMARY - SOILS

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	% GRAIN SIZE DISTRIBUTION (AASHTO) GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	CLASSIFICATION AASHTO	USCS	S.G.	PLASTICITY PARAMETERS LIQUID LIMIT	PLASTIC LIMIT	P. I.	SHEAR STRENGTH C (TSF)	ϕ (DEG.)	C' (TSF)	ϕ' (DEG)	TEST METHOD
SB-11	26+13.0 46 ft. RT.	S-8 to 11	10.5 to 16.5	29.8	0.0	0.4	0.0	0.3	99.6	91.7	7.9	A-4	ML		34	30	4					
SB-12	25+96.0 99 ft. RT.	S-9 to 12	12.0 to 18.0	32.2	0.5	1.3	0.6	0.8	98.1	82.4	15.7	A-4	ML		38	31	7					
SB-13	25+83.0 139 ft. RT	S-8 to 11	10.5 to 16.5	30.5	0.3	0.6	0.2	0.5	99.1	88.2	10.9	A-4	ML		33	28	5			0.000	28.7	DIR. SHR.-CD

pennsylvania
DEPARTMENT OF TRANSPORTATION

ECMS: 8191
Date Prepared: 3/15/2023 Prepared by: AWK Consulting Engineers

Lackawanna County
SR 0435 Section 251 and 253

Sheet 1 of 1

LABORATORY TEST SUMMARY - ELECTROCHEMICAL

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	SAMPLE SOURCE	pH	MINIMUM RESISTIVITY (ohm-cm)	CHLORIDE CONTENT (ppm)	SULFATE CONTENT (ppm)	HIGH ORGANIC CONTENT?	CORROSIVE FOR CONCRETE?	CORROSIVE FOR STEEL?
SB-11	26+13.0 46 ft. RT.	S-8 to 11	10.5 to 16.5	SOIL	6.3	8,740	20	0	No	No	No
STR. WATER			0.0 to 1.0	GROUNDWATER	7.7	181*	35	4	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

GENERAL NOTES

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LEGEND

PP	POCKET PENETROMETER
T	TORVANE
NTS	NOT TO SCALE
BCA	BOTTOM OF COARSE AGGREGATE
BCE	BOTTOM OF CULVERT ELEVATION
SBE	STREAMBED ELEVATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MOHAMMAD TARIQ AMIN
GEOLOGIST NO. PG003390
PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LACKAWANNA COUNTY
S.R. 0435 SECTION 251
DELAWARE LACKAWANNA RAILROAD
OVER TRIBUTARY TO ROARING BROOK
PRECAST REINFORCED CONCRETE BOX CULVERT
STRUCTURE BORINGS (SHEET 4 OF 4)

2024.03.05
DATE

SHEET 20 OF 20

L-404

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PLAN PREPARATION

DESIGNER: CDR MAGUIRE
3500 WINCHESTER ROAD
SUITE 300
ALLENTOWN, PA 18104

BT: HIGHWAY MAP B: 6M P: 05604
202315624

10/19/2023 01:25 PM # Pages: 40 Fees: $272.00
Evie Rafalko McNulty, Recorder of Deeds

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
4-0	LACKAWANNA	ELMHURST		0435	251 R/W 253 R/W	40

SR 0435 PREVIOUSLY KNOWN AS LR 168 MPMS NO 109778

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS AUTHORIZING ACQUISITION
OF
RIGHT-OF-WAY
FOR
STATE ROUTE 0435 SECTION 251/253 R/W
IN LACKAWANNA COUNTY

FROM STA. 529+69.00 TO STA. 547+02.00 LENGTH 1733.00 FT. 0.328 MI.
FROM SEG. 0220 OFFSET 0115 TO SEG. 0220 OFFSET 1848

THIS PLAN PREPARED PURSUANT TO SECTION 2003(e) OF THE ADMINISTRATIVE CODE, AS AMENDED, 71 P.S. SECTION 513(e), AND SECTION 302 (b)(3) OF THE EMINENT DOMAIN CODE, 26 Pa. C.S., SECTION 302 (b)(3).

PUC APPLICATION DOCKET NUMBER:

SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

DESIGN DESIGNATION

SR 0435

HIGHWAY CLASSIFICATION	- URBAN PRINCIPAL ARTERIAL
DESIGN SPEED	- 45 MPH (POSTED)
PAVEMENT WIDTH	- 22'(2-11' LANES)
SHOULDER WIDTH	- 10'

TRAFFIC DATA

CURRENT YEAR A.D.T.	- 6,010 (2023)
DESIGN YEAR A.D.T.	- 6,010 (2043)
DHV	- 541
D	- 50%
T	- 7%

T-733 (FRONT STREET)

HIGHWAY CLASSIFICATION	- LOCAL ROAD
DESIGN SPEED	- 25 MPH
PAVEMENT WIDTH	- 28'(2-14' LANES)
SHOULDER WIDTH	- 3'

TRAFFIC DATA

CURRENT YEAR A.D.T.	- <1,000 (2026)
DESIGN YEAR A.D.T.	- <1,000 (2046)
DHV	- XXX
D	- XX%
T	- UNKNOWN

Commonwealth of Pennsylvania - Notary Seal
MARK H HARRIS - Notary Public
Dauphin County
My Commission Expires January 5, 2027
Commission Number 1226597

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC. IN

LACKAWANNA COUNTY, PA.

IN Map BOOK 6M PAGE 5604

WITNESS MY HAND AND SEAL OF OFFICE

October 19, 2023
DATE

RECORDER

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DAUPHIN SS
BEFORE ME, A NOTARY PUBLIC, PERSONALLY CAME

Mark Carroll
KNOWN TO ME OR SATISFACTORILY PROVEN TO BE THE PERSON WHO HAS BEEN AUTHORIZED BY WRITTEN DELEGATION TO AFFIX THE FACSIMILE SIGNATURE OF MICHAEL B. CARROLL, SECRETARY OF TRANSPORTATION ON PLANS AUTHORIZING ACQUISITION OF RIGHT-OF-WAY BY THE DEPARTMENT OF TRANSPORTATION, AND AS SUCH AUTHORIZED REPRESENTATIVE ACKNOWLEDGED THE WITHIN PLAN, COMPRISING 40 SHEETS, TO BE AN OFFICIAL PLAN OF THE DEPARTMENT OF TRANSPORTATION AND DESIRED THAT THE SAME BE RECORDED AS SUCH.

WITNESS MY HAND AND NOTARIAL SEAL

10/3/2023

PREPARED BY:
CDR MAGUIRE
3500 WINCHESTER RD
SUITE 300
ALLENTOWN, PA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL M. SHINER LAND SURVEYOR SU075917

Joel M. Shiner
Digitally signed by Joel M. Shiner
DN: cn=Joel M. Shiner, o=CDR Maguire, email=joel.shiner@cdrmaguire.com, c=US
Date: 2023.08.29 10:12:43 -04'00'

REG. PROF. LAND SURVEYOR

DATE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081859

Digitally signed by Benjamin Martz
Date: 2023.08.29 10:31:30 -04'00'

REG. PROF. ENGINEER

DATE

RECOMMENDED DATE: 09/28/2023
Richard N Conway, P.E.
DISTRICT EXECUTIVE

RECOMMENDED DATE: 10/3/2023
DEPUTY SECRETARY

APPROVED DATE: 10/3/2023
SECRETARY OF TRANSPORTATION
(ON BEHALF OF THE GOVERNOR AS WELL AS THE SECRETARY)

File: per \\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RTITLE.dgn
Model: Right of Way Title Sheet
Date: 9/28/2023 9:24:43 AM By: mark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	2 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SHEET INDEX BLOCK

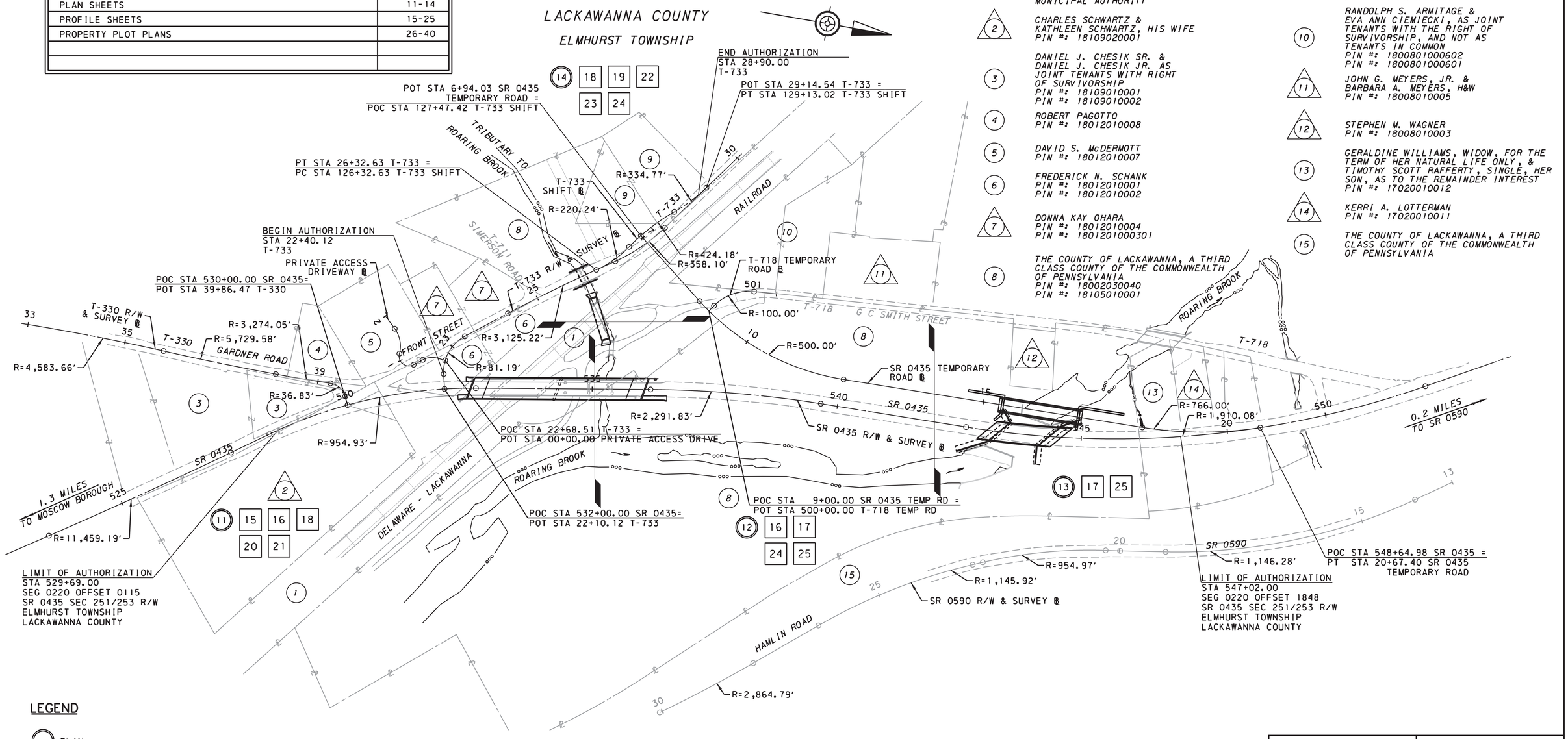
DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2
LOCATION MAP & GENERAL NOTES	3
SUMMARY OF PROJECT COORDINATES	4
GEOMETRIC SKETCH	5
TYPICAL SECTIONS	6-10
PLAN SHEETS	11-14
PROFILE SHEETS	15-25
PROPERTY PLOT PLANS	26-40

TABULATION OF SEGMENT EQUALITIES

SEGMENT 0220 OFFSET 0000 = STATION 528+54.00
SEGMENT 0230 OFFSET 0000 = STATION 548+15.00

LIST OF PROPERTY OWNERS

1. PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY, FORMERLY KNOWN AS THE MONROE COUNTY RAILROAD AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY
2. CHARLES SCHWARTZ & KATHLEEN SCHWARTZ, HIS WIFE
   PIN #: 18109020001
3. DANIEL J. CHESIK SR. & DANIEL J. CHESIK JR. AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP
   PIN #: 18109010001
   PIN #: 18109010002
4. ROBERT PAGOTTO
   PIN #: 18012010008
5. DAVID S. McDERMOTT
   PIN #: 18012010007
6. FREDERICK N. SCHANK
   PIN #: 18012010001
   PIN #: 18012010002
7. DONNA KAY OHARA
   PIN #: 18012010004
   PIN #: 1801201000301
8. THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
   PIN #: 18002030040
   PIN #: 18105010001
9. IRENE COCKING
   PIN #: 18002030039
   PIN #: 18002030038
10. RANDOLPH S. ARMITAGE & EVA ANN CIEMIECKI, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP, AND NOT AS TENANTS IN COMMON
    PIN #: 1800801000602
    PIN #: 1800801000601
11. JOHN G. MEYERS, JR. & BARBARA A. MEYERS, H&W
    PIN #: 18008010005
12. STEPHEN M. WAGNER
    PIN #: 18008010003
13. GERALDINE WILLIAMS, WIDOW, FOR THE TERM OF HER NATURAL LIFE ONLY, & TIMOTHY SCOTT RAFFERTY, SINGLE, HER SON, AS TO THE REMAINDER INTEREST
    PIN #: 17020010012
14. KERRI A. LOTTERMAN
    PIN #: 17020010011
15. THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA



LEGEND

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

INDEX MAP

0 100 200 FEET
SCALE

GENERAL NOTE

ALL REQUIRED RIGHT-OF-WAY FOR THIS PROJECT SHALL BE ACQUIRED IN FEE SIMPLE UNLESS OTHERWISE NOTED. AREAS, IF ANY, NOT TO BE ACQUIRED IN FEE SIMPLE SHALL BE ACQUIRED IN THE LESSER ESTATE OR INTEREST NOTED ON THE PLAN SHEET.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL LAND SURVEYOR — JOEL M. SHINER — SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — BENJAMIN R. MARTZ — PE081839

File:pw:\\mka-pw.benriley.com\mka-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RINDEX.dgn
Model:Right-of-way - Index 8/30/2023 8:55:15 AM By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	3 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

LIST OF PUBLIC UTILITIES

PA ONE CALL
1.800.242.1776
SERIAL NUMBER
20200291305, 20200581794
20200581924, 20200582006
ELMHURST TOWNSHIP

COMCAST CABLE COMMUNICATIONS
1 COMCAST WAY
DURYEA, PA 18642-1114
ATTN: RONALD PAWLOWSKI
570.335.1074
RONALD_PAWLOWSKI@CABLE.COMCAST.COM
CTV

PPL ELECTRIC UTILITIES CORP.
2 NORTH NINTH STREET
ALLENTOWN, PA 18101-1179
ATTN: CHARLOTTE KRUPA
610.774.6287
CAKRUPA@PPLWEB.COM
E

PENNSYLVANIA AMERICAN WATER
2699 STAFFORD AVENUE
SCRANTON, PA 18505
ATTN: JEREMY A. NELSON, PE
570.351.0138
JEREMY.NELSON@AMWATER.COM
W

VERIZON PENNSYLVANIA, INC.
MONAHAN AVENUE
DUNMORE, PA 18512
ATTN: TOM HARTMAN
570.348.5912
THOMAS.M.HARTMAN@VERIZON.COM
T

ELMHURST TOWNSHIP SEWER AUTHORITY
112 MUNICIPAL LANE
ELMHURST TWP, PA 18444
ATTN: RICH MILLER
570.650.2603
ELMHURSTTOWNSHIP@COMCAST.NET
S

LIST OF EQUALITIES

NONE

TABULATION OF AUTHORIZATION LENGTH - SR 0435

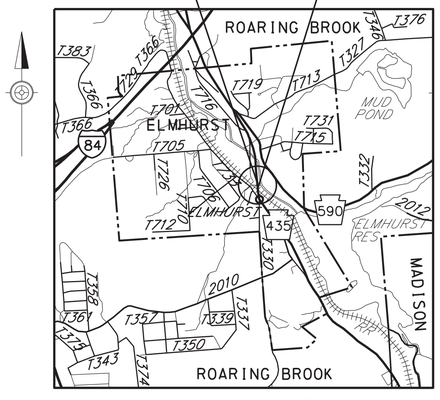
STA 529+69.00 TO STA 547+02.00 = 1733.00 FT = 0.328 MI

TABULATION OF AUTHORIZATION LENGTH - T-733

STA 22+40.12 TO STA 28+90.00 = 649.88 FT = 0.123 MI

LIMIT OF AUTHORIZATION
STA 547+02.00
SEG 0220 OFFSET 1848
SR 0435 SEC 251/253 R/W
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

LIMIT OF AUTHORIZATION
STA 529+69.00
SEG 0220 OFFSET 0115
SR 0435 SEC 251/253 R/W
ELMHURST TOWNSHIP
LACKAWANNA COUNTY



LOCATION MAP

SCALE
0 0.5 1 MILE

LEGEND
- PROJECT
- STATE ROAD
- TOWNSHIP ROAD
- TOWNSHIP LINE
- WATERWAY
- NO DETOUR

GENERAL NOTES (CONT'D)

THE FILING OF THIS PLAN IS NOT A CONDEMNATION OF THE PROPERTIES DESIGNATED THEREIN AND DOES NOT IN ANY MANNER WHATSOEVER RESTRICT THE USE OR DISPOSAL THEREOF. AUTHORIZATION TO CONDEMN UNDER THIS PLAN EXTENDS FOR ONLY ONE YEAR FROM THE DATE OF THE SECRETARY'S SIGNATURE INITIALLY AUTHORIZING ACQUISITION OR SUBSEQUENTLY REVISING THE PLAN OR REAUTHORIZING ACQUISITION THEREUNDER.

REQUIRED RIGHT-OF-WAY FOR LOCAL ROADS OR STREETS IS ACQUIRED FOR THE BENEFIT OF THE APPLICABLE MUNICIPALITY IN THE SAME ESTATE OR INTEREST AS DESIGNATED HEREIN FOR REQUIRED RIGHT-OF-WAY FOR STATE HIGHWAY PURPOSES, ALONG WITH A TEMPORARY CONSTRUCTION EASEMENT FOR THE BENEFIT AND USE OF THE COMMONWEALTH. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON THE COMPLETION OF CONSTRUCTION.

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

REQUIRED DRAINAGE EASEMENT FOR LOCAL ROAD OR STREET: AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION, AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE TO THE LOCAL APPLICABLE MUNICIPALITY PIPE OR DITCH WITHOUT WRITTEN APPROVAL BY THE APPLICABLE MUNICIPALITY. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON COMPLETION OF CONSTRUCTION.

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

CHANNEL EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF THE COURSE OF THE CHANNEL. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER.

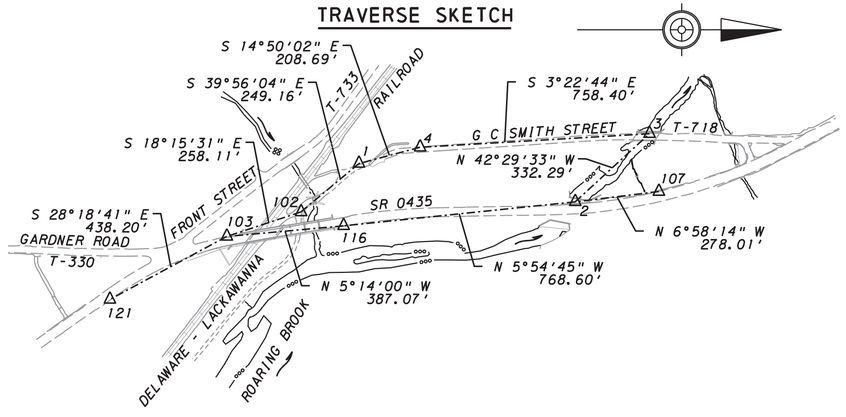
SUMMARY OF TRAVERSE CONTROL POINT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	POINT NO	DESCRIPTION	COORDINATES		STATION	OFFSET
			NORTH	EAST		
SR 0435 R/W & SURVEY ℄	1	MAG HUB	447569.1962	2573753.4876	536+97.66	181.98' LT
	2	REBAR w/CAP	448282.9894	2573879.8177	543+90.45	23.72' LT
	3	MAG NAIL	448528.0054	2573655.3606	546+85.96	207.26' LT
	4	MAG NAIL	447770.9287	2573700.0603	538+87.01	216.88' LT
	102	MAG HUB	447378.1427	2573913.4286	534+88.96	54.54' LT
	103	MAG NAIL	447133.0259	2573994.2963	532+34.31	16.00' LT
	107	MAG NAIL	448558.9470	2573846.0779	546+71.37	14.53' LT
	116	MAG NAIL	447518.4824	2573958.9918	536+19.79	13.70' RT
	121	MAG NAIL	446747.2387	2574202.1192	527+94.24	14.23' RT

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

TRAVERSE SKETCH



GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 0435, FORMERLY LEGISLATIVE ROUTE NO. 168, FROM STATION 529+69.00 TO STATION 547+02.00 IS 60.00 FEET BASED ON THE DRAWINGS FOR CONSTRUCTION AND CONDEMNATION OF RIGHT-OF-WAY FOR ROUTE NOS. 335 AND 168, SECTION 11, SIGNED IN JUNE 1942 BY THE GOVERNOR AND LAST REVISED JANUARY 10, 1944.

THE LEGAL RIGHT-OF-WAY ON SR 0590, FORMERLY LEGISLATIVE ROUTE NO. 335, FROM STATION 13+00.00 TO STATION 13+83.56 IS 30.00 FEET ON THE RIGHT AND 40.00 FEET ON THE LEFT, FROM STATION 13+83.56 TO STATION 16+83.00 IS 25.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 16+83.00 TO STATION 19+98.23 IS 20.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 19+98.23 TO STATION 25+03.98 IS 14.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT, FROM STATION 25+03.98 TO STATION 30+05.98 IS 15.00 FEET ON THE RIGHT AND 25.00 FEET ON THE LEFT BASED ON THE DRAWINGS FOR CONSTRUCTION AND CONDEMNATION OF RIGHT-OF-WAY FOR ROUTE NOS. 335 AND 168, SECTION 11, SIGNED IN JUNE 1942 BY THE GOVERNOR AND LAST REVISED JANUARY 10, 1944, AND DRAWINGS FOR CONSTRUCTION OF ROUTE NO. 335, SIGNED ON MAY 19, 1924 BY THE GOVERNOR.

THE LEGAL RIGHT-OF-WAY ON T-733, FRONT STREET, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-330, GARDNER ROAD, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY ON T-718, G C SMITH STREET, IS 33 FEET, BASED ON THE ACT OF MAY 1, 1933, P.L. 103, SECTION 1105, AS AMENDED. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

ALL REQUIRED RIGHT-OF-WAY FOR THIS PROJECT SHALL BE ACQUIRED IN FEE SIMPLE UNLESS OTHERWISE NOTED. AREAS, IF ANY, NOT TO BE ACQUIRED IN FEE SIMPLE SHALL BE ACQUIRED IN THE LESSER ESTATE OR INTEREST NOTED ON THE PLAN SHEET.

PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.

SR 0435 PREVIOUSLY KNOWN AS LEGISLATIVE ROUTE NO 168.

THE HALF CIRCLED NUMBER INDICATES A SCALED DIMENSION. (+00 / 50')

VERTICAL CONTROL FOR THE PROJECT IS BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (GEOID 12B).

HORIZONTAL CONTROL IS TIED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NORTH ZONE), NORTH AMERICAN DATUM, NAD83 (2011).

THE AVERAGE COMBINED SCALE FACTOR IS 0.99988982.

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

INDICATES SLOPE LIMITS. --C-- F (CUT / FILL)

THERE ARE NO NAVIGABLE STREAMS WITHIN THE PROJECT LIMITS.

BUILDINGS 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.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	4 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
EXISTING T-330 R/W & SURVEY @	39+24.05	PT	446870.5077	2574046.2955	N1°26'14"W
	40+00.00	POE	446946.4290	2574044.3905	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
EXISTING T-733 R/W & SURVEY @	20+00.00	POB	446862.1950	2574110.3376	N38°03'27"W
	24+32.73	PC	447202.9271	2573843.5772	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0435 R/W & SURVEY @	523+00.00	POT	446332.1310	2574471.1311	N33°32'58"W
	523+37.04	PC	446363.0033	2574450.6587	N33°32'58"W
	525+40.40	PI	446532.4813	2574338.2729	N35°34'58"W
	527+43.71	PT	446697.8650	2574219.9446	N35°34'58"W
	528+30.08	PC	446768.1065	2574169.6884	N35°34'58"W
	530+50.69	PI	446947.5225	2574041.3204	N9°33'58"W
	532+63.69	PT	447165.0640	2574004.6580	N9°33'58"W
	536+18.42	PC	447514.8612	2573945.7066	N9°33'58"W
	537+92.49	PI	447686.5075	2573916.7790	N0°52'46"W
	539+65.89	PT	447860.5538	2573914.1070	N0°52'46"W
	542+64.86	PC	448159.4951	2573909.5178	N0°52'46"W
	547+47.95	PI	448642.5263	2573902.1024	N29°15'58"W
	552+11.20	PT	449063.9520	2573665.9362	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
T-733 R/W & SURVEY @	22+10.12	POB	447102.6578	2574017.3286	S76°36'44"W
	22+40.60	PC	447095.6004	2573987.6763	S76°36'44"W
	22+92.65	PI	447083.5485	2573937.0391	N38°03'27"W
	23+33.17	PT	447124.5335	2573904.9518	N38°03'27"W
	24+32.73	PC	447202.9271	2573843.5772	N38°03'27"W
	25+32.71	PI	447281.6499	2573781.9448	N34°23'00"W
	26+32.63	PT	447364.1512	2573725.4701	N34°23'00"W
	26+75.33	PC	447399.3967	2573701.3519	N34°23'00"W
	27+36.99	PI	447450.2790	2573666.5338	N53°55'17"W
	27+97.45	PT	447486.5873	2573616.7038	N53°55'17"W
	30+14.24	POE	447614.2591	2573441.4852	

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

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
T-330 R/W & SURVEY @	32+86.10	PC	446232.7670	2574035.3911	N0°51'25"W
	34+33.46	PI	446380.1157	2574033.1868	N2°49'33"E
	35+80.73	PRC	446527.3018	2574040.4518	N2°49'33"W
	36+97.09	PI	446643.5198	2574046.1882	N0°29'56"E
	38+13.41	PCC	446759.8750	2574047.2015	N0°29'56"E
	38+69.68	PI	446816.1353	2574047.6914	N1°28'12"W
	39+25.93	PRC	446872.3793	2574046.2480	N1°28'12"W
	39+49.88	PI	446896.3263	2574045.6334	N64°36'44"E
	39+68.40	PT	446906.5968	2574067.2750	N64°36'44"E
	39+86.47	POE	446914.3436	2574083.5989	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
T-733 SHIFT @	126+32.63	PC	447364.1512	2573725.4701	N34°23'34"W
	126+74.04	PI	447398.3231	2573702.0784	N55°41'26"W
	127+14.49	PRC	447421.6650	2573667.8725	N55°41'26"W
	127+73.23	PI	447454.7737	2573619.3543	N39°55'21"W
	128+31.23	PRC	447499.8209	2573581.6587	N39°55'21"W
	128+72.33	PI	447531.3419	2573555.2819	N53°55'17"W
	129+13.02	PT	447555.5462	2573522.0636	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0435 TEMPORARY ROAD @	6+94.03	POT	447441.2634	2573641.4192	N38°00'53"E
	8+72.79	PC	447582.1007	2573751.5111	N38°00'53"E
	10+49.33	PI	447721.1880	2573860.2351	N0°52'46"W
	12+12.20	PT	447897.7067	2573857.5252	N0°52'46"W
	18+26.73	PC	448512.1634	2573848.0923	N0°52'46"W
	19+48.07	PI	448633.4822	2573846.2298	N18°52'52"W
	20+67.40	PT	448748.2867	2573806.9658	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0590 R/W & SURVEY @	5+13.54	POT	449796.9343	2573398.9777	S34°52'58"E
	13+83.56	PC	449083.2369	2573893.5425	S34°52'58"E
	16+49.26	PI	448865.2824	2574048.4927	S8°46'58"E
	19+05.73	PT	448602.7045	2574089.0615	S8°46'58"E
	19+98.23	PI *	448511.2891	2574103.1853	S8°00'18"E
	20+27.58	PC	448482.2273	2574107.2723	S8°00'18"E
	21+54.01	PI	448357.0282	2574124.8792	S23°05'18"E
	22+78.98	PT	448240.7242	2574174.4592	S23°05'18"E
	23+00.28	PC	448221.1303	2574182.8120	S23°05'18"E
	24+70.51	PI	448064.5300	2574249.5702	S39°59'18"E
	26+38.28	PT	447934.0995	2574358.9694	S39°59'18"E
	27+90.98	PC	447817.1046	2574457.0993	S39°59'18"E
	28+98.53	PI	447734.7022	2574526.2148	S35°41'18"E
	30+05.98	PT	447647.3495	2574588.9572	S35°41'18"E
	30+55.98	POE	447363.0789	2574793.1390	

* NO CURVE

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

SUMMARY OF PROJECT COORDINATES

BASED ON PA STATE PLANE COORDINATE SYSTEM
NORTH ZONE - NAD83 (2011)

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
PRIVATE ACCESS DRIVEWAY @	0+00.00	POB	447093.8858	2573959.9575	S6°16'24"W
	0+15.94	PC	447078.0452	2573958.2161	S6°16'24"W
	0+32.39	PI	447061.6885	2573956.4181	S38°26'58"E
	0+47.16	PT	447048.8015	2573966.6503	S38°26'58"E
	0+68.24	PC	447032.2920	2573979.7587	S38°26'58"E
	1+14.49	PI	446996.0725	2574008.5168	N85°13'18"W
	1+14.74	PRC	446999.9251	2573962.4295	N85°13'18"W
	1+43.25	PI	447002.3000	2573934.0192	S43°56'54"W
	1+67.97	PT	446981.7742	2573914.2334	S43°56'54"W
	2+01.00	POE	446957.9957	2573891.3122	

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

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
T-718 TEMPORARY ROAD @	500+00.00	POB	447603.9846	2573767.6781	N55°06'13"W
	500+14.68	PC	447612.3849	2573755.6348	N55°06'13"W
	500+62.58	PI	447639.7840	2573716.3539	N 3°55'18"W
	501+04.01	PT	447687.5643	2573713.0784	N 3°55'18"W
	501+96.34	POE	447779.6758	2573706.7638	

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

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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Model: Coordinate Plan 3/30/2023 9:01:59 AM Byjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	5 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435-1
PI STA 525+40.40
Δ= 2°02'00" LT
D= 0°30'00"
T= 203.36'
L= 406.67'
R= 11459.19'
E= 1.80'
PC STA 523+37.04
PT STA 527+43.71

SR 0435-2
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69

SR 0435-3
PI STA 537+92.49
Δ= 8°41'12" RT
D= 2°30'00"
T= 174.07'
L= 347.47'
R= 2291.83'
E= 6.60'
SUPERELEVATE 3.50%
PC STA 536+18.42
PT STA 539+65.89

SR 0435-4
PI STA 547+47.95
Δ= 28°23'12" LT
D= 2°59'59"
T= 483.09'
L= 946.33'
R= 1910.08'
E= 60.14'
PC STA 542+64.86
PT STA 552+11.20

T-330-1
PI STA 34+33.46
Δ= 3°40'58" RT
D= 1°15'00"
T= 147.37'
L= 294.63'
R= 4583.66'
E= 2.37'
PC STA 32+86.10
PRC STA 35+80.73

T-330-2
PI STA 36+97.09
Δ= 2°19'37" LT
D= 1°00'00"
T= 116.36'
L= 232.69'
R= 5729.58'
E= 1.18'
PRC STA 35+80.73
PCC STA 38+13.41

T-330-3
PI STA 38+69.68
Δ= 1°58'08" LT
D= 1°45'00"
T= 56.26'
L= 112.51'
R= 3274.05'
E= 0.48'
PCC STA 38+13.41
PRC STA 39+25.93

T-330-4
PI STA 39+49.88
Δ= 66°04'57" RT
D=155°34'16"
T= 23.95'
L= 42.48'
R= 36.83'
E= 7.11'
PRC STA 39+25.93
PT STA 39+68.40

SR 0590-1
PI STA 16+49.26
Δ= 26°06'00" RT
D= 4°59'54"
T= 265.69'
L= 522.17'
R= 1146.28'
E= 30.39'
PC STA 13+83.56
PT STA 19+05.73

SR 0590-2
PI STA 21+54.01
Δ= 15°05'00" LT
D= 5°59'59"
T= 126.43'
L= 251.40'
R= 954.97'
E= 8.33'
PC STA 20+27.58
PT STA 22+78.98

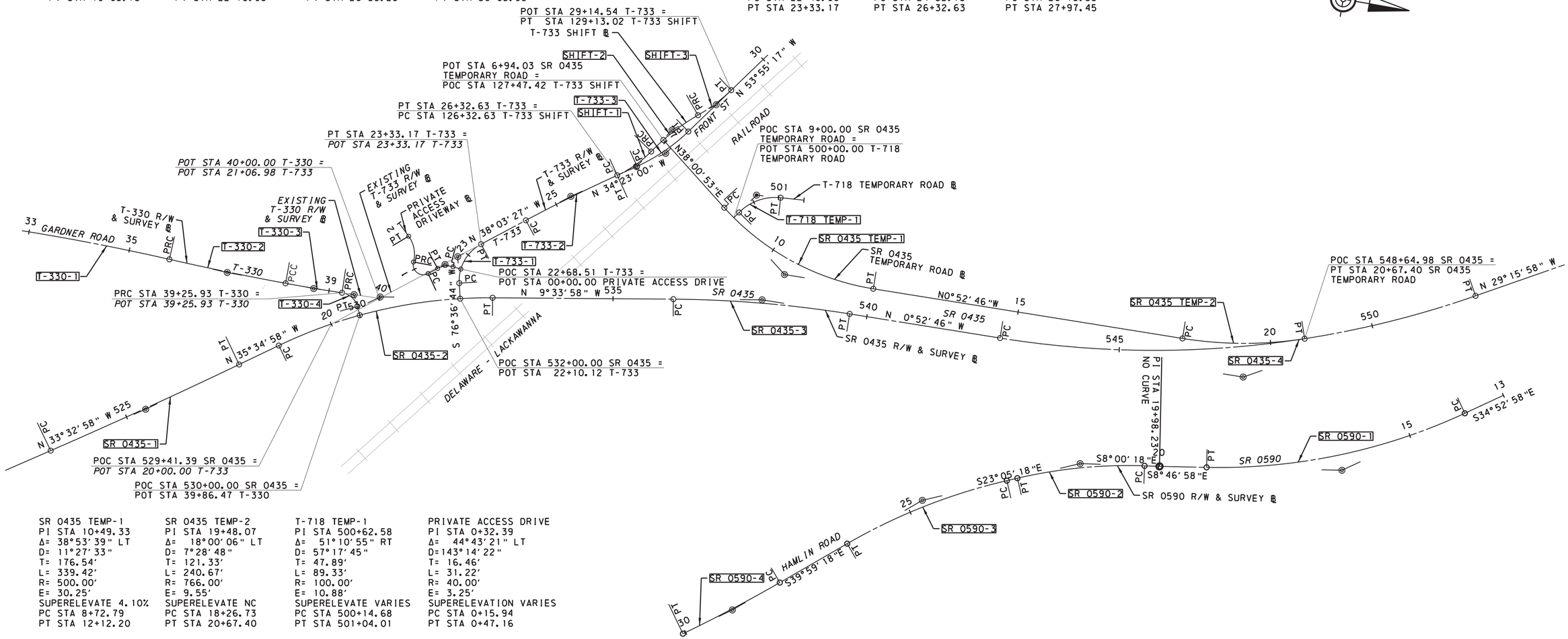
SR 0590-3
PI STA 24+70.51
Δ= 16°54'00" LT
D= 5°00'00"
T= 170.24'
L= 338.00'
R= 1145.92'
E= 12.58'
PC STA 23+00.28
PT STA 26+38.28

SR 0590-4
PI STA 28+98.53
Δ= 4°18'00" RT
D= 2°00'00"
T= 107.55'
L= 215.00'
R= 2864.79'
E= 2.02'
PC STA 27+90.98
PT STA 30+05.98

T-733-1
PI STA 22+92.65
Δ= 65°19'49" RT
D= 70°34'20"
T= 52.05'
L= 92.57'
R= 81.19'
E= 15.25'
SUPERELEVATE 4.95%
PC STA 22+40.60
PT STA 23+33.17

T-733-2
PI STA 25+32.71
Δ= 3°39'53" RT
D= 1°50'00"
T= 99.98'
L= 199.89'
R= 3125.22'
E= 1.60'
SUPERELEVATE 2.00%
PC STA 24+32.73
PT STA 26+32.63

T-733-3
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45



SR 0435 TEMP-1
PI STA 10+49.33
Δ= 38°53'39" LT
D= 11°27'33"
T= 176.54'
L= 339.42'
R= 500.00'
E= 30.25'
SUPERELEVATE 4.10%
PC STA 8+72.79
PT STA 12+12.20

SR 0435 TEMP-2
PI STA 19+48.07
Δ= 18°00'06" LT
D= 7°28'48"
T= 121.33'
L= 240.67'
R= 766.00'
E= 9.55'
SUPERELEVATE NC
PC STA 18+26.73
PT STA 20+67.40

T-718 TEMP-1
PI STA 500+62.58
Δ= 51°10'55" RT
D= 57°17'45"
T= 47.89'
L= 89.33'
R= 100.00'
E= 10.88'
SUPERELEVATE VARIES
PC STA 500+14.68
PT STA 501+04.01

PRIVATE ACCESS DRIVE
PI STA 0+32.39
Δ= 44°43'21" LT
D=143°14'22"
T= 16.46'
L= 31.22'
R= 40.00'
E= 3.25'
SUPERELEVATION VARIES
PC STA 0+15.94
PT STA 0+47.16

SHIFT-1
PI STA 126+74.04
Δ= 21°17'51" LT
D= 26°00'54"
T= 41.41'
L= 81.87'
R= 220.24'
E= 3.86'
SUPERELEVATE 2.00%
PC STA 126+32.63
PRC STA 127+14.49

SHIFT-2
PI STA 127+73.23
Δ= 15°46'04" RT
D= 13°30'27"
T= 58.74'
L= 116.73'
R= 424.18'
E= 4.05'
SUPERELEVATE 4.00%
PRC STA 127+14.49
PRC STA 128+31.23

SHIFT-3
PI STA 128+72.33
Δ= 13°59'55" LT
D= 17°06'53"
T= 41.10'
L= 81.79'
R= 334.77'
E= 2.51'
SUPERELEVATE 2.00%
PRC STA 128+31.23
PT STA 129+13.02

PRIVATE ACCESS DRIVE
PI STA 1+14.49
Δ= 133°13'40" LT
D=286°28'44"
T= 46.25'
L= 46.51'
R= 20.00'
E= 30.39'
PC STA 0+68.24
PRC STA 1+14.74

PRIVATE ACCESS DRIVE
PI STA 1+43.25
Δ= 50°49'48" LT
D= 95°29'35"
T= 28.51'
L= 53.23'
R= 60.00'
E= 6.43'
PRC STA 1+14.74
PT STA 1+67.97

GEOMETRIC SKETCH

0 100 200 FEET

SCALE

NOTE:

- SEE SHEET 4 FOR SUMMARY OF PROJECT COORDINATES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

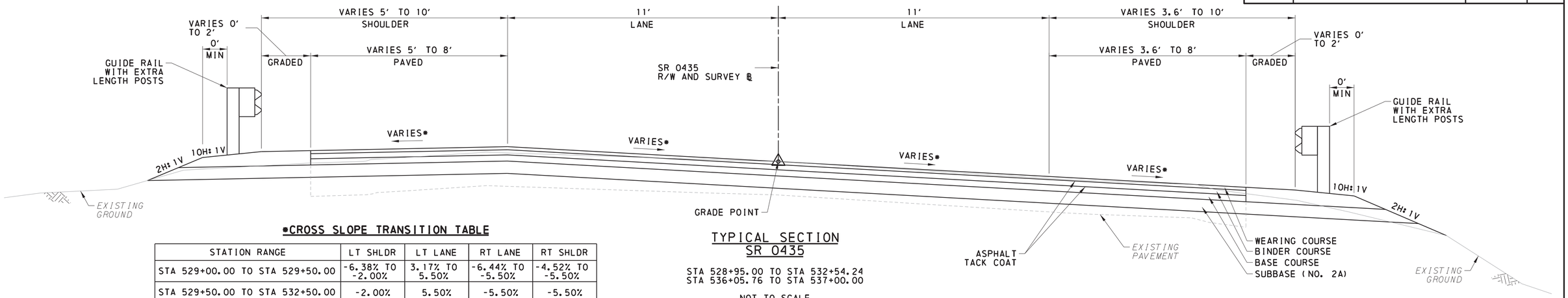
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RGE0.dgn
Model:Right-of-way - Index
8/30/2023 8:57:27 AM Byjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	6 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435



TYPICAL SECTION SR 0435

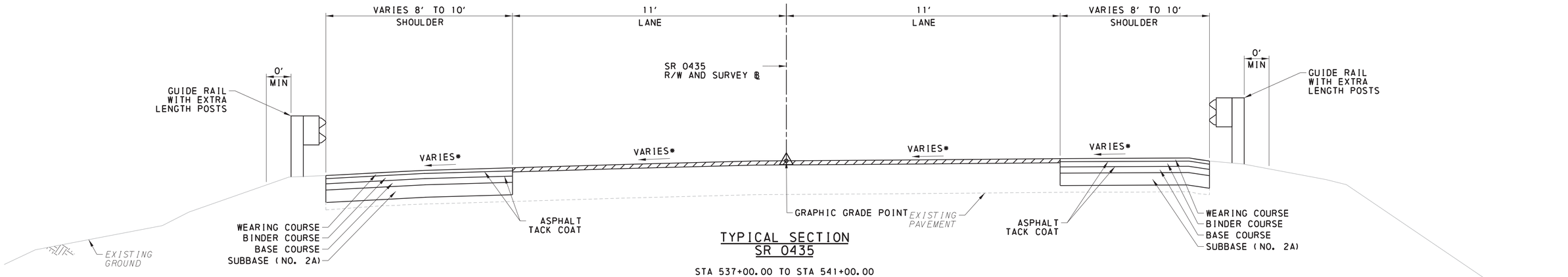
STA 528+95.00 TO STA 532+54.24
STA 536+05.76 TO STA 537+00.00

NOT TO SCALE

STRUCTURE STA 532+54.24 TO STA 536+05.76

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 529+00.00 TO STA 529+50.00	-6.38% TO -2.00%	3.17% TO 5.50%	-6.44% TO -5.50%	-4.52% TO -5.50%
STA 529+50.00 TO STA 532+50.00	-2.00%	5.50%	-5.50%	-5.50%
STA 532+50.00 TO STA 532+93.00	-2.00%	5.50% TO 3.50%	-5.50% TO -3.50%	-5.50% TO -3.50%
STA 532+93.00 TO STA 536+50.00	-2.00%	3.50%	-3.50%	-3.50%
STA 536+50.00 TO STA 537+00.00	-2.00% TO -4.51%	3.50% TO 1.33%	-3.50% TO -2.31%	-3.50% TO -4.72%



TYPICAL SECTION SR 0435

STA 537+00.00 TO STA 541+00.00

NOT TO SCALE

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 537+00.00 TO STA 541+00.00	-4.51 TO -3.65%	1.33% TO -1.57%	-2.31% TO -1.00%	-4.72% TO -3.38%

MILLING OF BITUMINOUS PAVEMENT

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL W. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

TYPICAL SECTIONS

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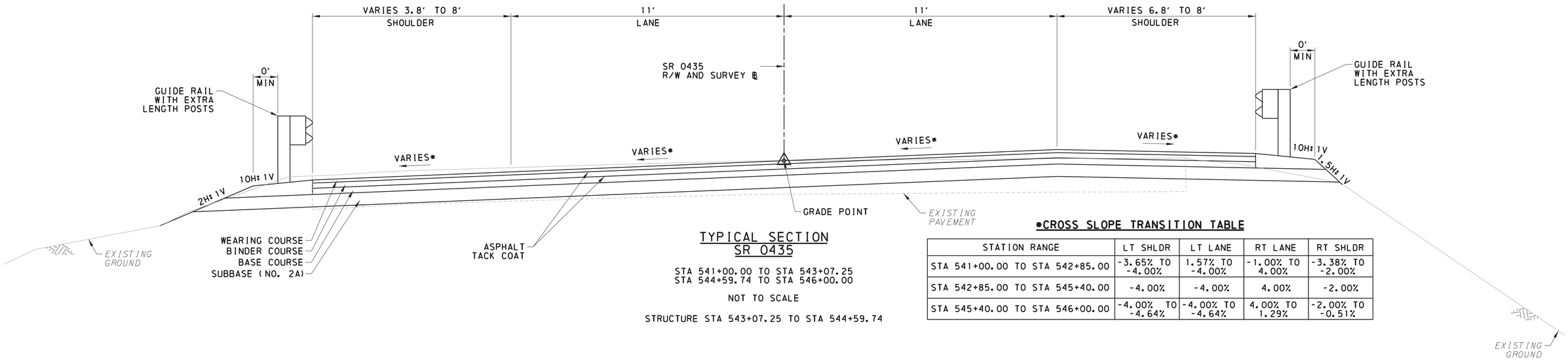
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	7 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435



TYPICAL SECTION
SR 0435

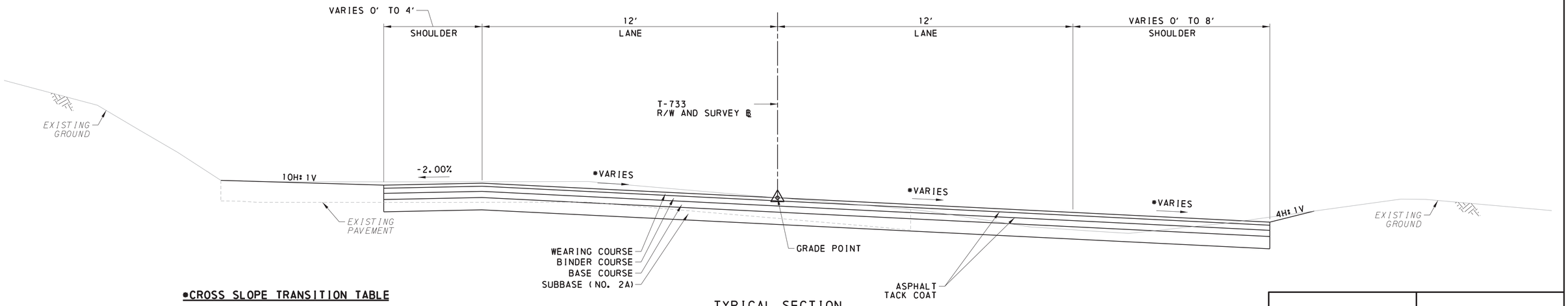
STA 541+00.00 TO STA 543+07.25
STA 544+59.74 TO STA 546+00.00

NOT TO SCALE

STRUCTURE STA 543+07.25 TO STA 544+59.74

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 541+00.00 TO STA 542+85.00	-3.65% TO -4.00%	1.57% TO -4.00%	-1.00% TO 4.00%	-3.38% TO -2.00%
STA 542+85.00 TO STA 545+40.00	-4.00%	-4.00%	4.00%	-2.00%
STA 545+40.00 TO STA 546+00.00	-4.00% TO -4.64%	-4.00% TO -4.64%	4.00% TO 1.29%	-2.00% TO -0.51%



TYPICAL SECTION
T-733 (FRONT STREET)

STA 22+32.79 TO STA 24+20.00

NOT TO SCALE

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 22+32.79 TO STA 23+00.00	-2.00%	4.95%	-4.95%	-4.95%
STA 23+00.00 TO STA 23+50.00	-2.00%	4.95% TO 2.00%	-4.95% TO -2.00%	-4.95% TO -2.00%
STA 23+50.00 TO STA 24+20.00	N/A	2.00% TO -2.00%	-2.00%	N/A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL W. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TYPICAL SECTIONS

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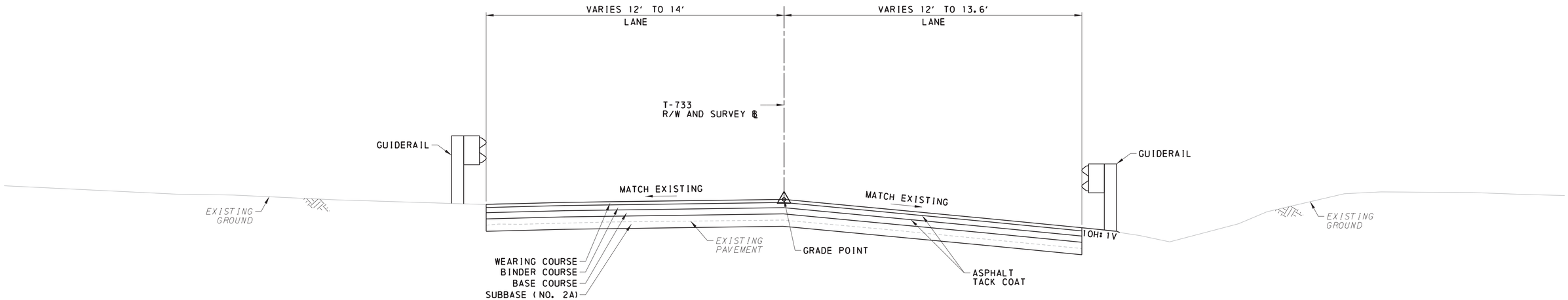
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	8 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

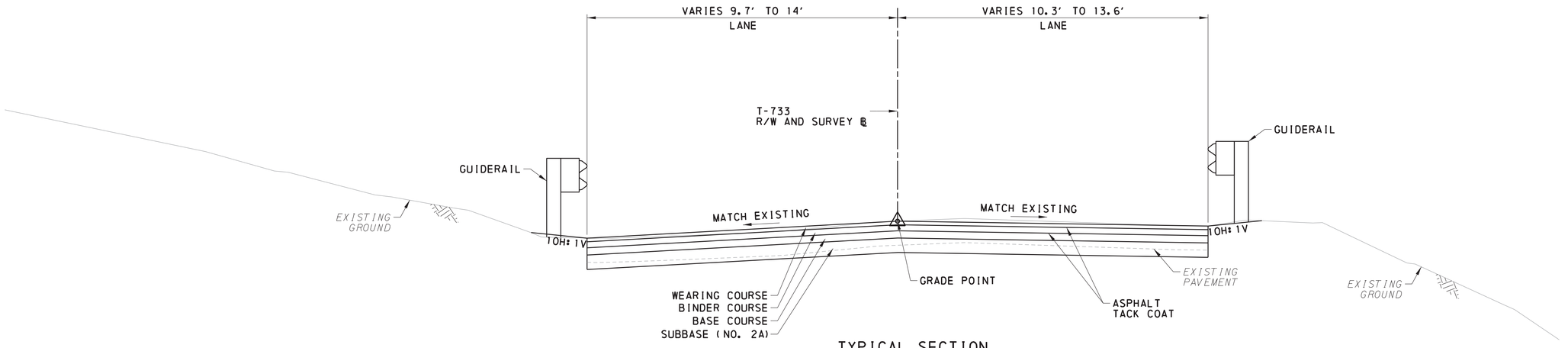
SR 0435



TYPICAL SECTION
T-733 (FRONT STREET)

STA 24+20.00 TO STA 25+75.00

NOT TO SCALE



TYPICAL SECTION
T-733 (FRONT STREET)

STA 25+75.00 TO STA 29+21.52

NOT TO SCALE

STRUCTURE STA 25+94.41 TO STA 26+10.58

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

TYPICAL SECTIONS

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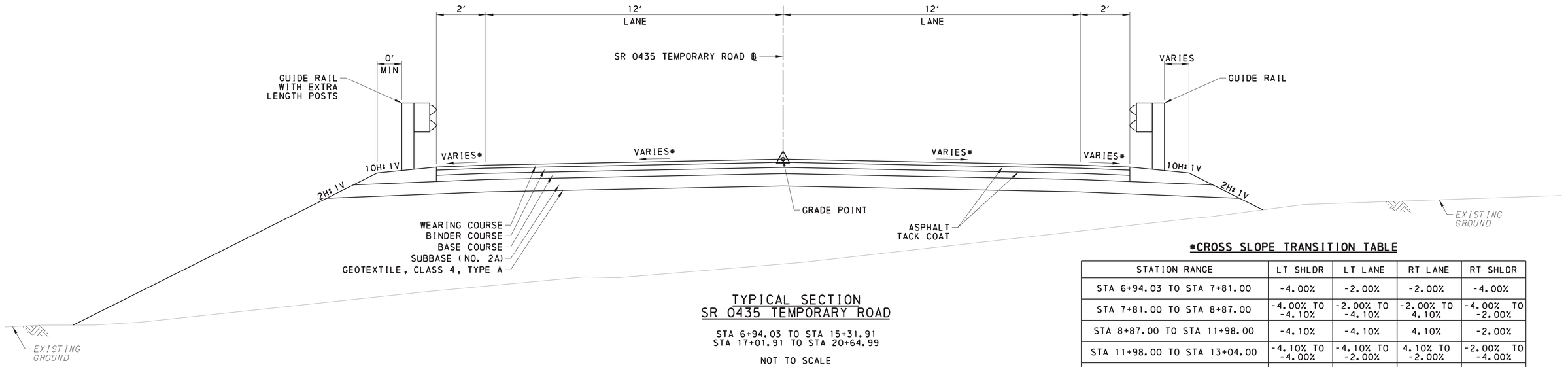
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	9 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435



TYPICAL SECTION
SR 0435 TEMPORARY ROAD

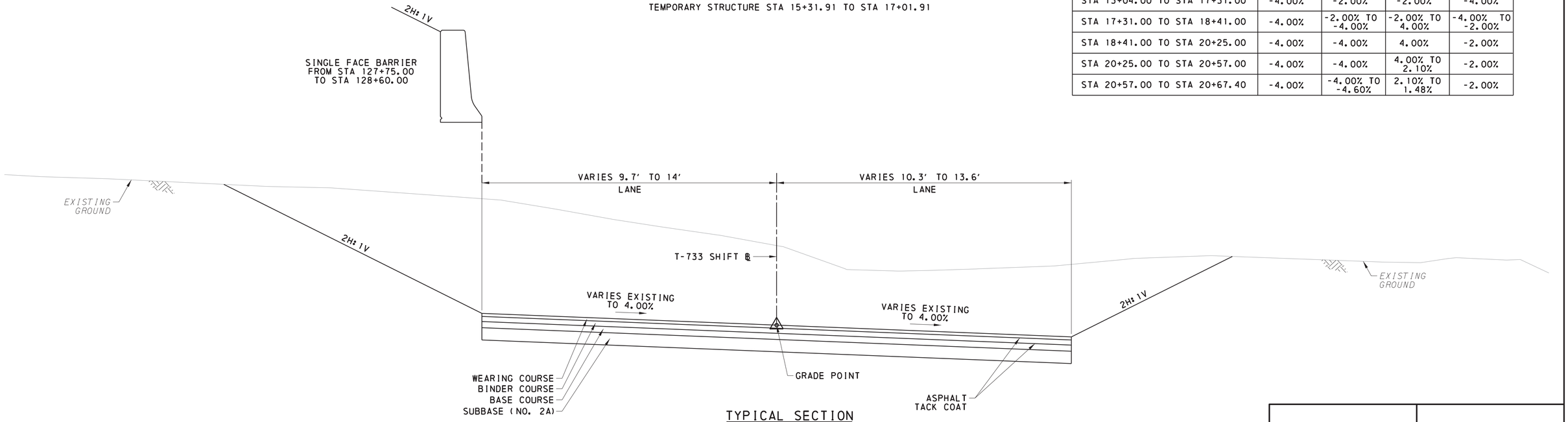
STA 6+94.03 TO STA 15+31.91
STA 17+01.91 TO STA 20+64.99

NOT TO SCALE

TEMPORARY STRUCTURE STA 15+31.91 TO STA 17+01.91

*CROSS SLOPE TRANSITION TABLE

STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 6+94.03 TO STA 7+81.00	-4.00%	-2.00%	-2.00%	-4.00%
STA 7+81.00 TO STA 8+87.00	-4.00% TO -4.10%	-2.00% TO -4.10%	-2.00% TO 4.10%	-4.00% TO -2.00%
STA 8+87.00 TO STA 11+98.00	-4.10%	-4.10%	4.10%	-2.00%
STA 11+98.00 TO STA 13+04.00	-4.10% TO -4.00%	-4.10% TO -2.00%	4.10% TO -2.00%	-2.00% TO -4.00%
STA 13+04.00 TO STA 17+31.00	-4.00%	-2.00%	-2.00%	-4.00%
STA 17+31.00 TO STA 18+41.00	-4.00%	-2.00% TO -4.00%	-2.00% TO 4.00%	-4.00% TO -2.00%
STA 18+41.00 TO STA 20+25.00	-4.00%	-4.00%	4.00%	-2.00%
STA 20+25.00 TO STA 20+57.00	-4.00%	-4.00%	4.00% TO 2.10%	-2.00%
STA 20+57.00 TO STA 20+67.40	-4.00%	-4.00% TO -4.60%	2.10% TO 1.48%	-2.00%



TYPICAL SECTION
T-733 SHIFT

STA 126+32.63 TO STA 129+13.02

NOT TO SCALE

TYPICAL SECTIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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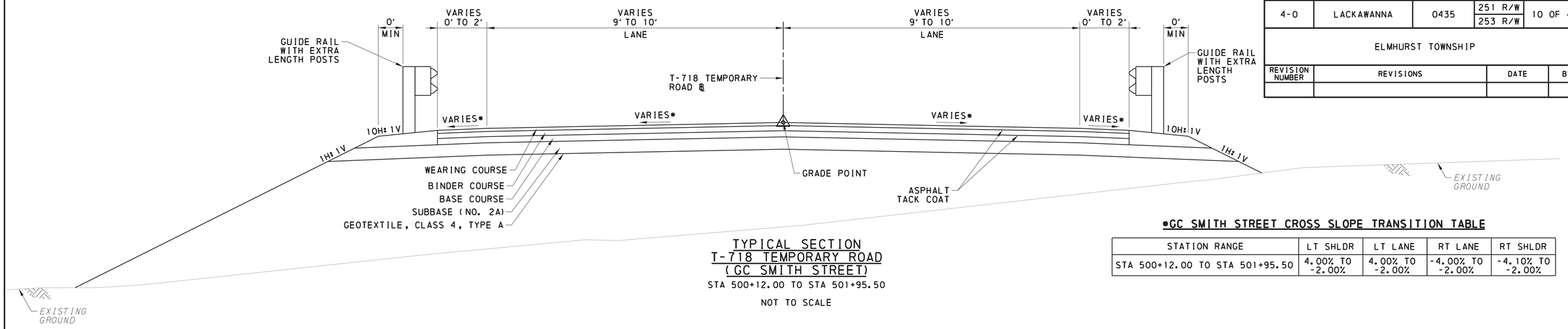
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



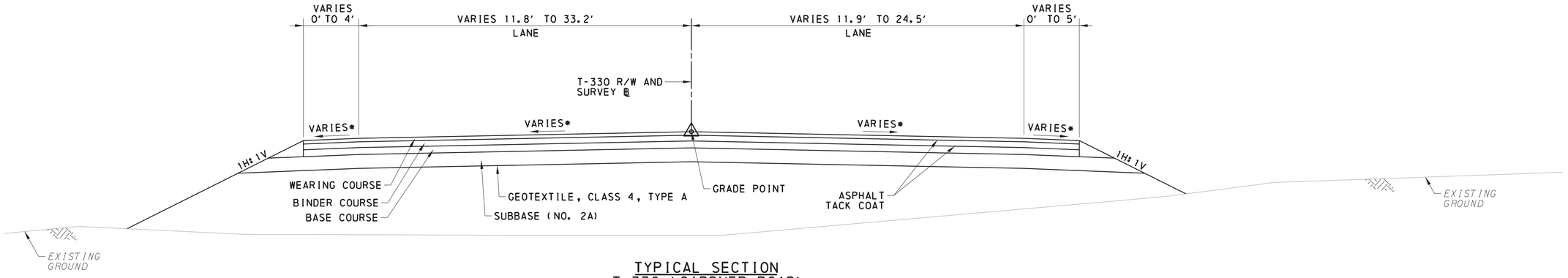
TYPICAL SECTION
T-718 TEMPORARY ROAD
(GC SMITH STREET)

STA 500+12.00 TO STA 501+95.50

NOT TO SCALE

***GC SMITH STREET CROSS SLOPE TRANSITION TABLE**

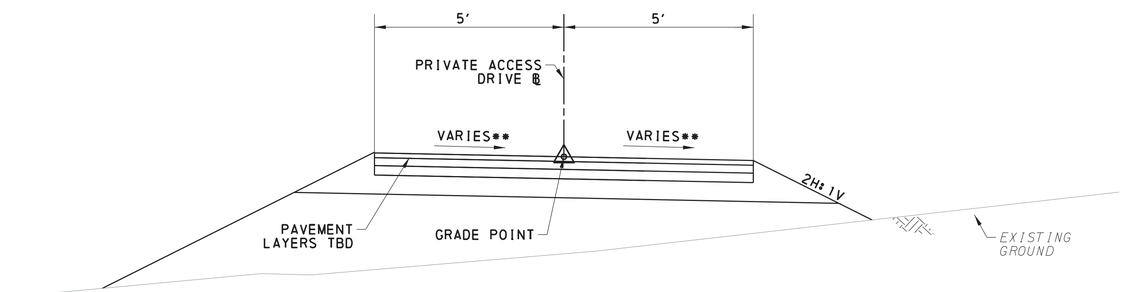
STATION RANGE	LT SHLDR	LT LANE	RT LANE	RT SHLDR
STA 500+12.00 TO STA 501+95.50	4.00% TO -2.00%	4.00% TO -2.00%	-4.00% TO -2.00%	-4.10% TO -2.00%



TYPICAL SECTION
T-330 (GARDNER ROAD)

STA 39+14.00 TO STA 39+67.18

NOT TO SCALE



****PRIVATE ACCESS DRIVEWAY CROSS SLOPE TRANSITION TABLE**

STATION RANGE	LT SIDE	RT SIDE
STA 0+16.00 TO STA 1+60.00	8.55% TO 2.00%	-8.55% TO -2.00%
STA 1+60.00 TO STA 1+76.50	2.00%	-2.00% TO -7.83%

TYPICAL SECTION
PRIVATE ACCESS DRIVEWAY

STA 0+16.00 TO STA 1+76.50

NOT TO SCALE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

TYPICAL SECTIONS

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Model: TYP SECTION 5 3/30/2023 9:00:27 AM Byjjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	11 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

BM#5 = ELEV 1453.82
26' LT STA 528+28 (SR 0435)
SPIKE SET IN EAST SIDE OF POLE
PPL 60562/N44667

BM#1 = ELEV 1435.88
25' LT STA 532+09 (SR 0435)
MAG NAIL SET IN EAST SIDE OF GUY POLE
PPL 60541/N44715, BT 2 1/2

POC STA 22+68.51 T-733 =
POT STA 00+00.00 PRIVATE ACCESS DRIVE

SEE SHEET 14

BEGIN AUTHORIZATION
STA 22+40.12
T-733

LIMIT OF AUTHORIZATION
STA 529+69.00
SEG 0220 OFFSET 0115
SR 0435 SEC 251/253 R/W
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

R/W CLAIM INFORMATION	
PARCEL NO.	PLAN SHEET NO.
1	26-28
3	29
4	30
5	31
6	32
8	33-36

(1) PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY
(2) CHARLES SCHWARTZ & KATHLEEN SCHWARTZ, HIS WIFE
(3) DANIEL J. CHESIK SR. & DANIEL J. CHESIK JR. AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP
(4) ROBERT PAGOTTO
(5) DAVID S. McDERMOTT
(6) FREDERICK N. SCHANK
(7) PPL 66541 N44700
(8) THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

EXISTING STRUCTURE DATA
STATION: 534+24.17
TYPE: SIMPLE SPAN REINFORCED CONCRETE T-BEAMS (SPANS 1, 3, 4, 5 & 6)
SIMPLE SPAN STEEL RIVETED THRU GIRDER (SPAN 2)
SPANS: 50'-2", 33'-6", 39'-10", 48'-0", 48'-0", 46'-6"
UNDERCLEARANCE: 22'-5" (D&L RAILROAD)
ROADWAY WIDTH = 33'-11" OUT TO OUT, 26'-0" CURB TO CURB
SKEW: 42°30'00" (ABUT 1 & PIERS 1 THRU 2), 90°00'00" (ABUT 2 & PIERS 3 THRU 5)
STRUCTURE S-1285

PROPOSED STRUCTURE DATA
STATION: 534+30.00
TYPE: TWO SPAN COMPOSITE STEEL PLATE GIRDER BRIDGE
SPAN: 145'-0", 145'-0"
ROADWAY WIDTH = 42'-0" CURB TO CURB
UNDERCLEARANCE: 22'-0" MIN
SKEW: 70°00'00"
STRUCTURE S-39603

PC STA 528+30.08
SR 0435 R/W & SURVEY ℄

POT STA 533+50.00
SR 0435 R/W & SURVEY ℄

PLAN
SCALE
0 25 50FEET

FOR PROFILE, SEE SHEETS 15, 16, 18, 20 & 21
FOR CURVE DATA SEE SHEET 5
SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL W. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

SEE SHEET 12

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLAN.dgn
Model:SR 0435-251 Plan Sheet 10/20/2023 9:33:25 AM By:mark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	12 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

BM#2 = ELEV 1406.34
24' RT STA 537+76 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60541/N44763

BM#3 = ELEV 1383.40
27' RT STA 542+27 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60539/N44810/8

SEE SHEET 14

SEE SHEET 11

SEE SHEET 13

REQUIRED DRAINAGE EASEMENT FOR TOWNSHIP ROAD

ACCESS DRIVE

TEMPORARY CONSTRUCTION EASEMENT

POC STA 9+00.00 SR 0435 TEMP RD =
POT STA 500+00.00 T-718 TEMP RD

TEMPORARY GUIDERAIL

(1) PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY

SR 0435 TEMPORARY ROAD ℄

(8) THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

PPL 60515/N44778

ELH-30 ATTCH 60515 N44799

BTCO F31 ELH-29/3 ATTCH 60515 N44812

+73 164'

+73 144'

+76 147'

LEGAL SLOPE EASEMENT

PPL 60538 N44747

+26 54'

+13 47'

ROCK W/O TO BE REMOVED

LEGAL RIGHT-OF-WAY LINE

+50 65'

+50 30'

PT STA 12+12.20

TEMPORARY ROAD

TEMPORARY CONCRETE BARRIER

TEMPORARY CONSTRUCTION EASEMENT

PPL 60535/ N44778 BTCO 6 1/2

535 536 537 538 539 540 541 542

N 9°33'58" W

N 0°52'46" W

SR 0435 R/W & SURVEY ℄

SR 0435

60'

PPL 60541 N44747

PPL 60541 N44763

PC STA 536+18.42

PT STA 539+65.89

PPL 60540/N44778 VZ 6

PPL 60539/N44793 VZ 7

BM2

BM3

FALLS

WOODED

ROARING BROOK

+20.00 30.00'

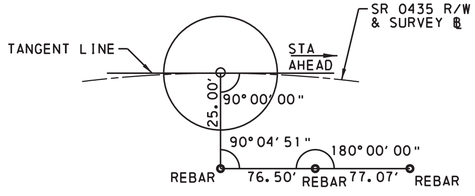
+00 70'

+20.00 80.00'

REQUIRED RIGHT-OF-WAY LINE

PPL 60539/ N44810 VZ 8

(8) THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA



POC STA 537+00.00
SR 0435 R/W & SURVEY ℄

PLAN

SCALE

0 25 50FEET

R/W CLAIM INFORMATION	
PARCEL NO.	PLAN SHEET NO.
1	26-28
8	33-36

FOR PROFILE, SEE SHEETS 16, 17, 24 & 25

FOR CURVE DATA SEE SHEET 5

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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Mode:SR 0435-251 Plan Sheet 02/17/2023 9:34:48 AM Bymark.blaukovitch

EXISTING STRUCTURE DATA
STATION: 543+73.69
TYPE: REINFORCED CONCRETE ARCH CULVERT
SPANS: SINGLE SPAN @ 77'-0"
53'-10" (CLEAR SPAN)
UNDERCLEARANCE: APPROX. 21'
ROADWAY WIDTH = 32'-0" CLEAR
SKEW: 45°00'00" & 60°00'00"
STRUCTURE S-1276

PROPOSED STRUCTURE DATA
STATION: 543+83.76
TYPE: COMPOSITE P/S CONCRETE
PA BULB TEE BEAM BRIDGE
SPAN: SINGLE SPAN 100'-0"
68'-2" (CLEAR SPAN)
ROADWAY WIDTH = 38'-0" CURB TO CURB
UNDERCLEARANCE: 18'-7"
SKEW: 45°00'00"
STRUCTURE S-39602

BM#4 = ELEV 1381.35
29' RT STA 545+08 (SR 0435)
MAG NAIL SET IN WEST SIDE OF
PPL POLE 60534/N44840/11

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	13 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 12

TEMPORARY CONSTRUCTION EASEMENT
THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
LEGAL SLOPE EASEMENT
TEMPORARY GUIDERAIL
STEPHEN M. WAGNER CHURCH
LEGAL CHANNEL EASEMENT
ROARING BROOK
REQUIRED RIGHT-OF-WAY LINE
R=1,835.08'
SR 0435 TEMPORARY ROAD
TEMPORARY ROAD
TEMPORARY SINGLE-FACED CONCRETE BARRIER
LEGAL RIGHT-OF-WAY LINE
TEMPORARY BRIDGE
TEMPORARY CONCRETE BARRIER
SR 0435
BM3
BM4
PPL 60539/N44810/VZ 8
PPL 60536/N44828/VZ 9
PPL 60534/N44840/VZ 11 w/ ELEC BOX
LEGAL RIGHT-OF-WAY LINE
LEGAL SLOPE EASEMENT
R=1,990.08'
TO BE REMOVED
STREAM BANK RESTORATION
REQUIRED RIGHT-OF-WAY LINE
R=1,980.08'
R=1,955.08'
CONC WALL
TEMPORARY CONSTRUCTION EASEMENT
LEGAL CHANNEL EASEMENT
DISCONNECTED CHANNEL RESTORATION
THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
LEGAL RIGHT-OF-WAY LINE
PPL 60564/N44822
PPL 60569/N44810
PPL 60559/N44835
PPL 60557/N44846
PPL 60552/N44845
PI STA 19+98.23
NO CURVE
PT STA 19+05.73
SR 0590 HAMLIN ROAD
SR 0590 R/W & SURVEY ℄
S8°00'18"E
S8°46'58"E
S23°05'18"E
PC
PT
T-715
GERALDINE WILLIAMS, WIDOW, FOR THE TERM OF HER NATURAL LIFE ONLY, & TIMOTHY SCOTT RAFFERTY, SINGLE, HER SON, AS TO THE REMAINDER INTEREST
KERRI A. LOTTERMAN
PPL 60513/N44868
PPL 60513/N44877
PPL 60513/N44893
PPL 60527/N44852
PPL 60531/N44852
PPL 60528/N44863
PPL 60521/N44884
T-718
G C SMITH STREET
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
LEGAL RIGHT-OF-WAY LINE
PT STA 20+67.40
PI STA 18+26.73
2 STY DWELLING
1 STY DWELLING
GARAGE
SHED
STUMPS
STUMP
GRAVEL DRIVE
MACADAM DRIVE
MACADAM PARKING LOT
GAS PUMPS
1 STY GAS STATION
CONC SLAB
PAVILION
MONITORING WELL
TREE WELL
SLAB
WOODED
GRAVEL
E/T/CTV
MB
SR 0435 R/W & SURVEY ℄
0.2 MILES TO SR 0590

LIMIT OF AUTHORIZATION
STA 547+02.00
SEG 0220 OFFSET 1848
SR 0435 SEC 251/253 R/W
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

PI STA 19+48.07
Δ= 18°00'06" LT
D= 7°28'48"
T= 121.33'
L= 240.67'
R= 766.00'
E= 9.55'
SUPERELEVATION = 6.0%
PC STA 18+26.73
PT STA 20+67.39

POC STA 548+64.98 SR 0435 =
PT STA 20+67.40 SR 0435
TEMPORARY ROAD

REBAR CAP
REBAR CAP
REBAR CAP
86.30'
86.37'
91°30'47"
180°00'00"
90°00'00"
22.54'
STA AHEAD
SR 0435 R/W & SURVEY ℄
TANGENT LINE

POC STA 547+82.54
SR 0435 R/W & SURVEY ℄

R/W CLAIM INFORMATION	
PARCEL NO.	PLAN SHEET NO.
8	33-36
13	39
15	40

LEGEND
TBR TO BE REMOVED
TR TO REMAIN

PLAN
SCALE
0 25 50 FEET

FOR PROFILE, SEE SHEETS 17 & 25
FOR CURVE DATA SEE SHEET 5
SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL W. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLAN.dgn
Mode:SR 0435-251 Plan Sheet 8/2/2023 11:50:20 PM Byjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	14 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

BM#6 = ELEV 1403.80
26' LT STA 26+63 (T-733)
MAG NAIL SET IN EAST SIDE OF
PPL POLE 60513/N44734/100/F-43/1

STA AHEAD
90°00'00"
T-733 R/W & SURVEY ℄
46.54'
85°27'40"
REBAR
REBAR 106.53' 108.86' REBAR
180°00'00"
PC STA 24+32.73
T-733 R/W & SURVEY ℄

STA AHEAD
90°00'00"
T-733 R/W & SURVEY ℄
115.50'
90°00'00"
REBAR REBAR
REBAR 75.53' 76.28'
180°00'00"
PT STA 27+97.45
T-733 R/W & SURVEY ℄

TRIBUTARY TO ROARING BROOK

PPL 60497 N44749
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
30
315'
2 STY DWELLING
MACADAM DRIVE
CONC SDWK
STA 129+13.02
+90 16.5'
+50 42'
N 53°55'17" W
129
29'
SHRUB TO REMAIN
T-733 SHIFT ℄
TEMPORARY SINGLE-FACE CONCRETE BARRIER
PPL 60504 N44734
PT STA 27+97.45
TEMPORARY CONSTRUCTION EASEMENT
+50 48'
128
POT STA 6+94.03 SR 0435 TEMPORARY ROAD = POC STA 127+47.42 T-733 SHIFT
POT STA 29+14.54 T-733 = PT STA 129+13.02 T-733 SHIFT
END AUTHORIZATION STA 28+90.00 T-733
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
+96 16.5'
PRC STA 128+31.23

⑨ IRENE COCKING

20' WIDE SANITARY EASEMENT
PT STA 26+32.63 T-733 = PC STA 126+32.63 T-733 SHIFT
PPL 60513 N44734
PRC STA 127+14.49
T-733 SHIFT
TEMPORARY ROAD
+32.00 29.00'
+58 46'
PC STA 26+32.63
+75 25'
+58 25'
BM6
+10 46'
+85 64'
TEMPORARY CONSTRUCTION EASEMENT
TEMPORARY GUIDERAIL

⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

① PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY

⑩ RANDOLPH S. ARMITAGE & EVA ANN CIEMIECKI, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP, AND NOT AS TENANTS IN COMMON

REQUIRED RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
PPL 60523 N44724
+69.00 29.00'
+32.00 16.50'
N 34°24'00" W
+32.63
16.50'
+77 16.50'
N38°00'53"E 8
TEMPORARY CONSTRUCTION EASEMENT
+35 16.5'
+69.00 16.50'
T-711 SIMERSON ROAD
PPL 60529 N44715
PC STA 24+32.63
PT STA 26+32.63
REQUIRED RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
VZ 118 ATTCH 60518 N44737
DELAWARE-LACKAWANNA RAILROAD
WOODED
TEMPORARY CONSTRUCTION EASEMENT
GATE TO REMAIN
REQUIRED DRAINAGE EASEMENT FOR TOWNSHIP ROAD
ACCESS DRIVE
GATE TO BE RELOCATED
TEMPORARY ROAD
TEMPORARY GUIDERAIL
WOODED
WELL
I STY DWELLING
+10 219'
+18 213'
+73 219'
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
TREE TO REMAIN
T-718 TEMP ROAD ℄
PC STA 8+72.79
501
N3°55'18"W
SMITH STREET
BRICK
GRAVEL
+95 194'
+95 184'
+31 173'
+31 161'
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
TEMPORARY GUIDERAIL
⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA
BTCO F31-6ELH-32
PPL 60515/N44778
+76 147'

⑦ DONNA KAY OHARA
MACADAM DRIVE
LEGAL RIGHT-OF-WAY LINE FOR TOWNSHIP ROAD
T-733 R/W & SURVEY ℄ 25
T-733
+32.73 16.50'
N 38°03'27" W 24.24'
FRONT STREET
+20.00 16.50'
+57.00 16.50'
PPL 66541 N44700
PPL 60530 N44718
⑥ FREDERICK N. SCHANK
+48 56'
+63 52'
+94 45'
+01 69'
① PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY
REQUIRED RIGHT-OF-WAY LINE
TEMPORARY CONSTRUCTION EASEMENT
POC STA 9+00.00 SR 0435 TEMP RD = POT STA 500+00.00 T-718 TEMP RD
TEMPORARY GUIDERAIL
① PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY
SR 0435 TEMPORARY ROAD ℄
WOODED

SEE SHEET 11
SEE SHEET 12

PLAN

SCALE

0 25 50FEET

EXISTING STRUCTURE DATA
STATION: 26+02.50
TYPE: TWIN CORRUGATED METAL PIPES
CLEAR SPAN: (2) 60" DIAMETER
RISE: 5'-0"
ROADWAY WIDTH = 22'-0"
SKEW: 90°00'00"

PROPOSED STRUCTURE DATA
STATION: 26+02.50
TYPE: PRECAST CONCRETE BOX CULVERT
SPAN: 8'-0"
RISE: 7'-0"
ROADWAY WIDTH = 28'-0"
SKEW: 90°00'00"
STRUCTURE L-367

R/W CLAIM INFORMATION	
PARCEL NO.	PLAN SHEET NO.
1	26-28
6	32
8	33-36
9	37
10	38

LEGEND

■ TREE TO BE REMOVED

FOR PROFILE, SEE SHEETS 18, 19, 22, 23 & 24
FOR CURVE DATA SEE SHEET 5
SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Right_of_Way\01261-01 SR 0435-251 Plan Sheet 02023 9:43:10 AM By:mark.blaukovitch
Model:SR 0435 Sire 251-253 RPLAN.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	15 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

LIMIT OF AUTHORIZATION
STA 529+69.00
SEG 0220 OFFSET 0115
SR 0435 SEC 251/253 R/W
ELMHURST TOWNSHIP
LACKAWANNA COUNTY

PVI STA = 530+95.28
ELEV = 1441.25
VC = 300.00'
MO = -0.28'
SSD = 1588'

EXISTING GRADE

-4.20%

PVC

-4.20%

-4.95%

PVT

-4.95%

OVERHEAD TELEPHONE
CLEARANCE UNKNOWN

OVERHEAD ELECTRIC
CLEARANCE UNKNOWN

OVERHEAD TELEPHONE FIBER OPTIC
CLEARANCE UNKNOWN

OVERHEAD ELECTRIC TELEPHONE
CLEARANCE UNKNOWN

OVERHEAD GUY CABLE
CLEARANCE UNKNOWN

22'-0" MIN VERTICAL CLEARANCE

DELAWARE - LACKAWANNA RAILROAD

SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

DATUM:1370

1458.0	1455.7	1453.6	1451.6	1449.5	1447.6	1447.4	1445.4	1443.4	1441.2	1438.9	1436.3	1433.8	1433.6	1410.7	1400.3
G-1449.45	G-1447.55	G-1447.35	G-1445.21	G-1443.01	G-1440.75	G-1438.42	G-1436.04	G-1433.82	G-1433.58	G-1431.11	G-1428.63
527	+50	528	+50	529	+45.28	+50	530	+50	531	+50	532	+45.28	+50	533	+50

POC STA 530+00.00 SR 0435 =
POT STA 39+86.47 T-330

POC STA 532+00.00 SR 0435 =
POT STA 22+10.12 T-733

SEE SHEET 16

FOR PLAN, SEE SHEET 11

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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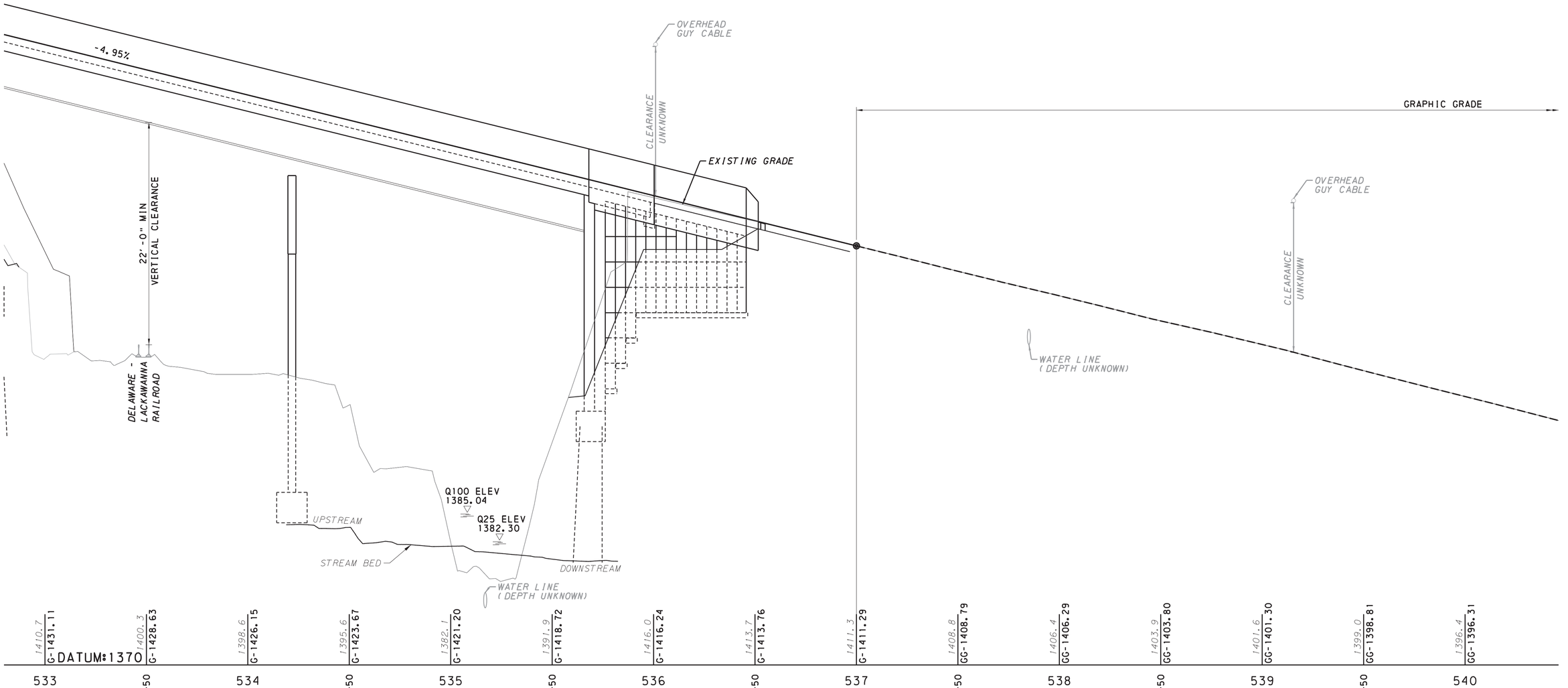
Model:SR 0435 Sheet 01 3/30/2023 10:29:43 AM By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	16 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 15



SEE SHEET 17

SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEETS 11 & 12

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

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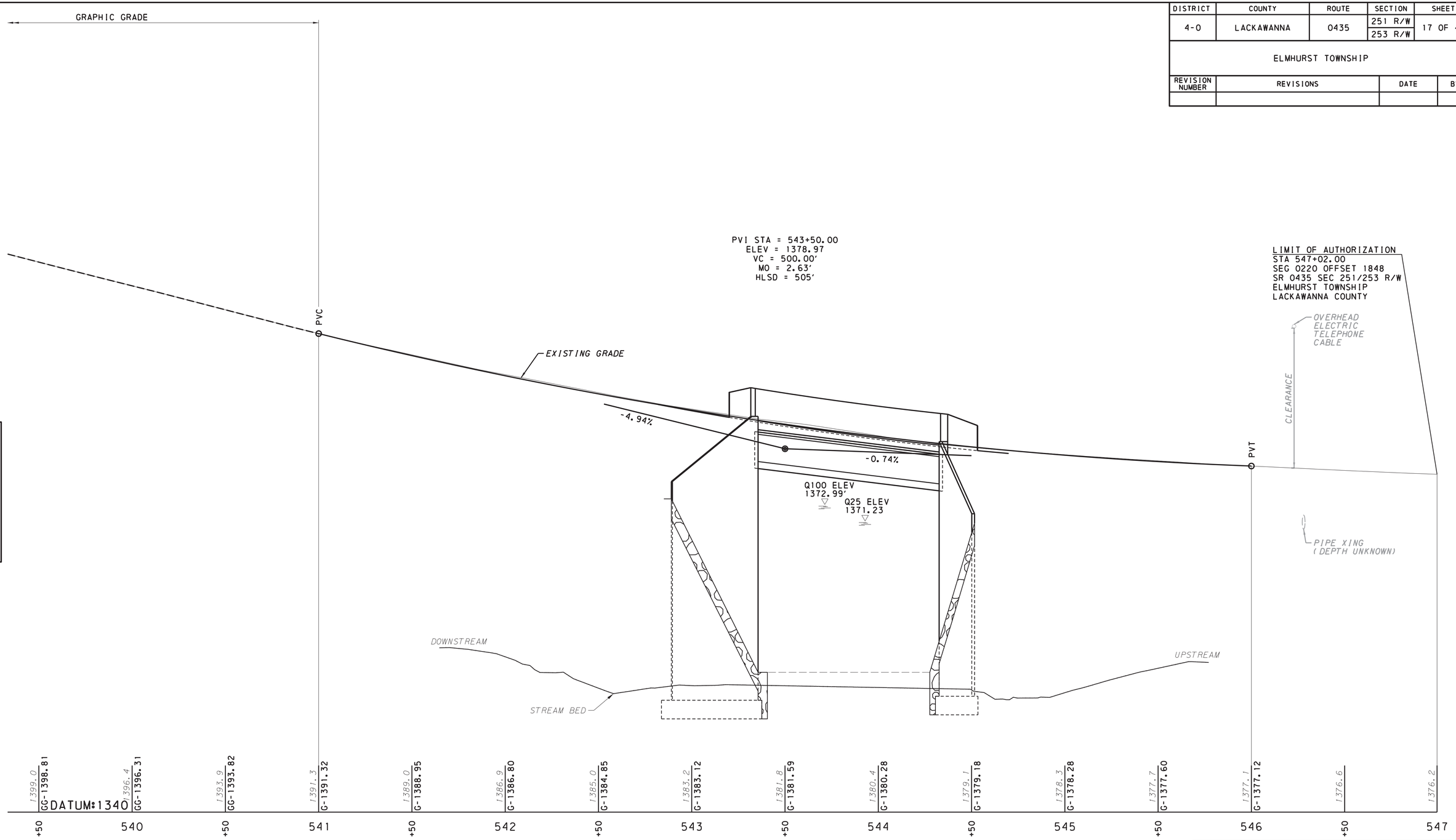
Model:SR 0435 Sheet 02 3/30/2023 10:30:06 AM Byjishiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	17 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 16



SR 0435

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEETS 12 & 13

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL M. SHINER LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

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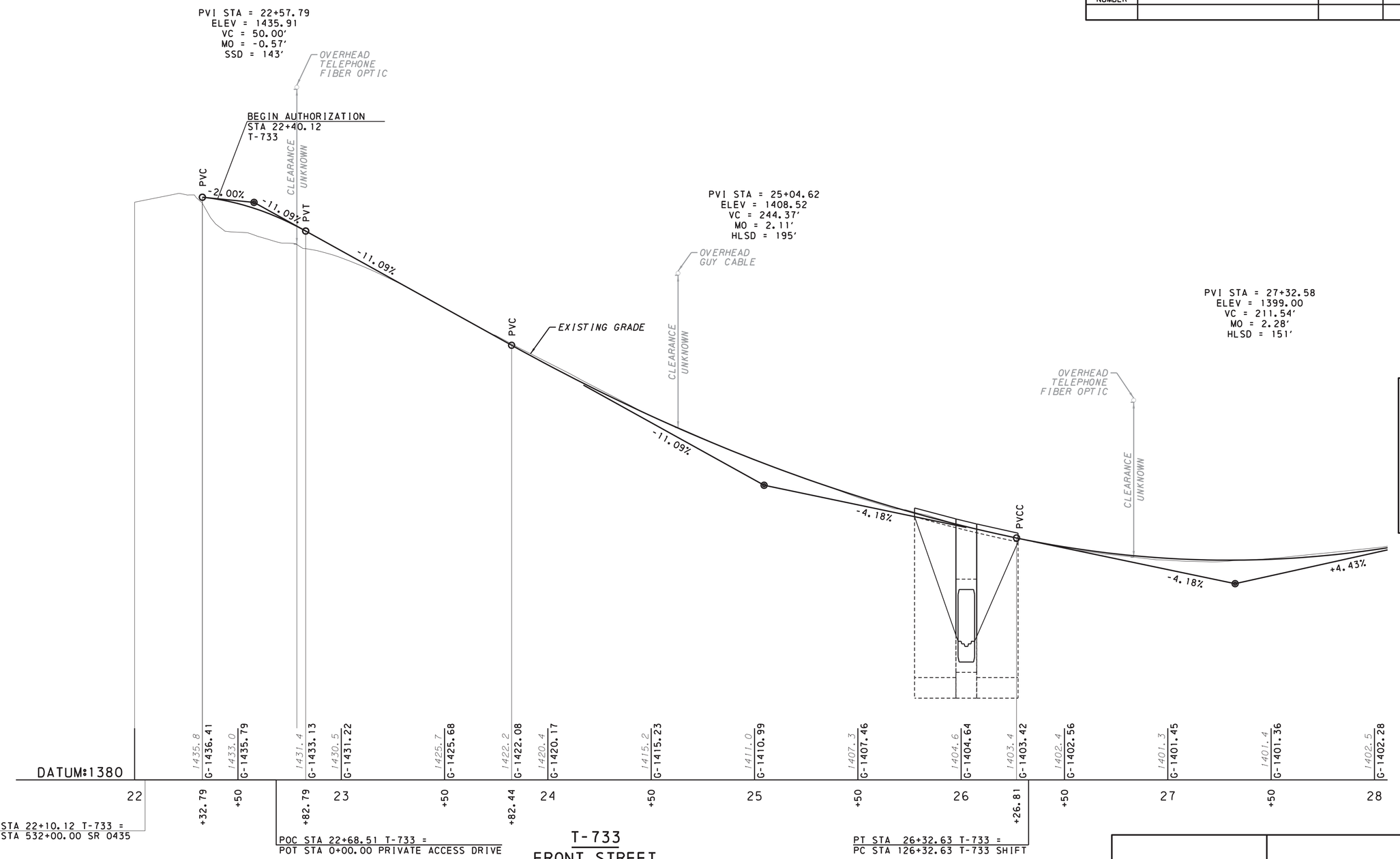
Model:SR 0435 Sheet 03 3/30/2023 10:30:26 AM By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	18 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 19

T-733
FRONT STREET

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEETS 11 & 14

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

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Model:Front Street Sheet 07/30/2023 10:35:29 AM By:jshiner

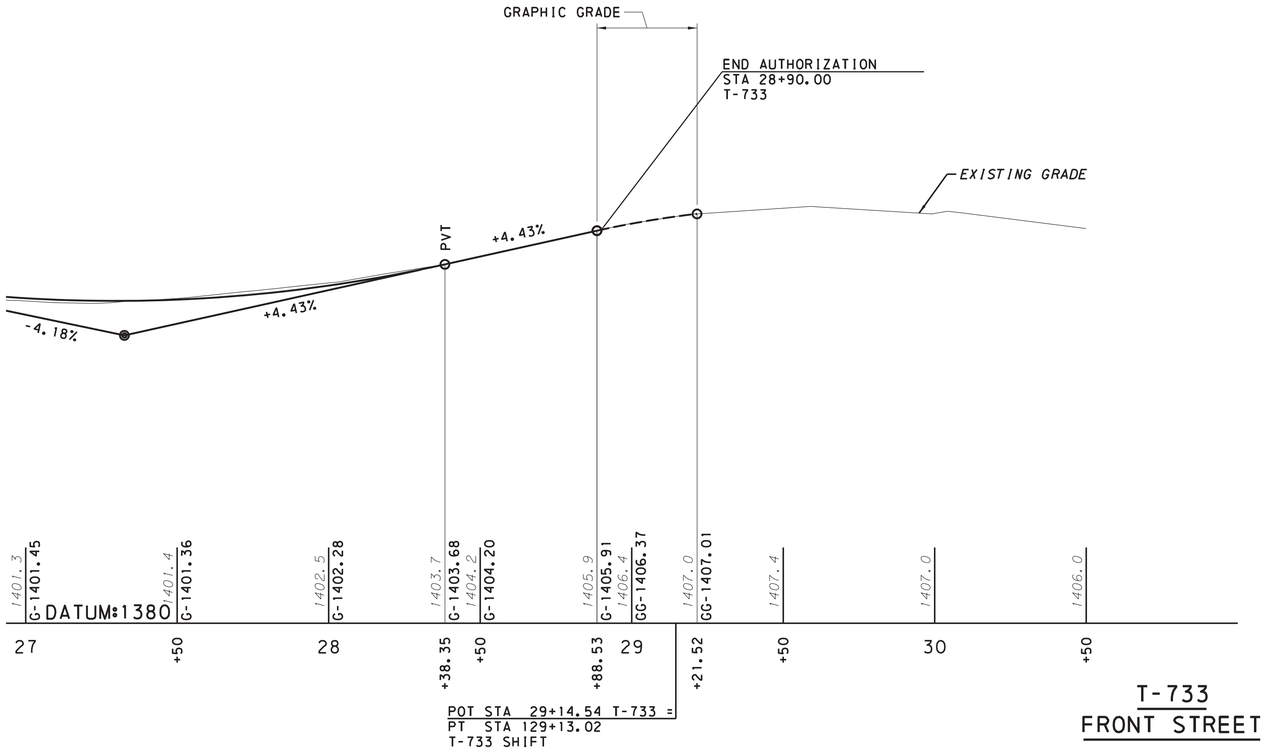
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	19 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET 18

PVI STA = 27+32.58
ELEV = 1399.00
VC = 211.54'
MO = 2.28'
HLSD = 151'



POT STA 29+14.54 T-733 =
PT STA 129+13.02
T-733 SHIFT

T-733
FRONT STREET

PROFILE SCALE

HORIZONTAL 0 25 50FEET
VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEET 14

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

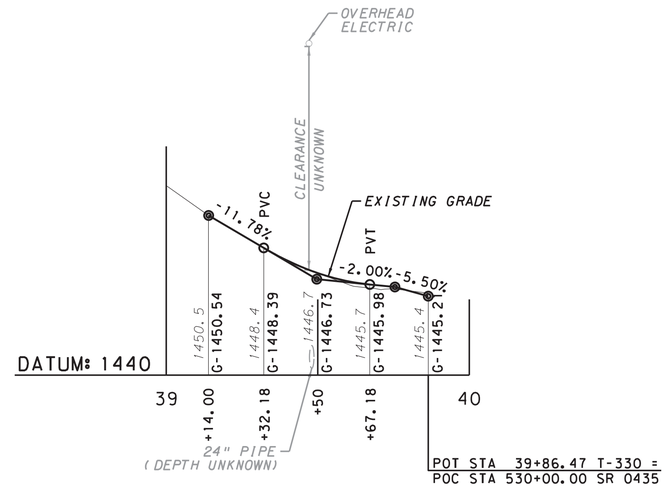
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mko-pw.bentley.com:mko-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPROFILES.dgn
Model:Front Street Sheet 02/30/2023 10:28:52 AM By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	20 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	

PVI STA = 39+49.68
ELEV = 1446.33
VC = 35.00'
MO = 0.43'
HLSD = 46'



T-330
GARDNER ROAD

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEET 11

SURVEY BOOK NO 30431

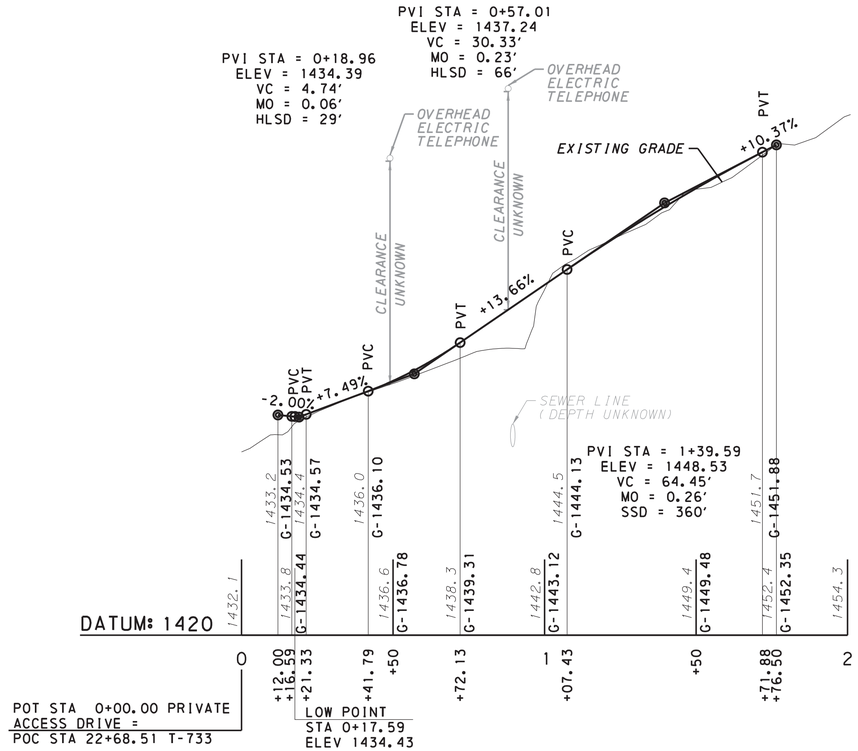
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File: pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPROFILES.dgn
Model: Gardner Road Sheet @ 5/30/2023 10:29:20 AM By: jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	21 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	



PRIVATE ACCESS DRIVE

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEET 11	SURVEY BOOK NO 30431

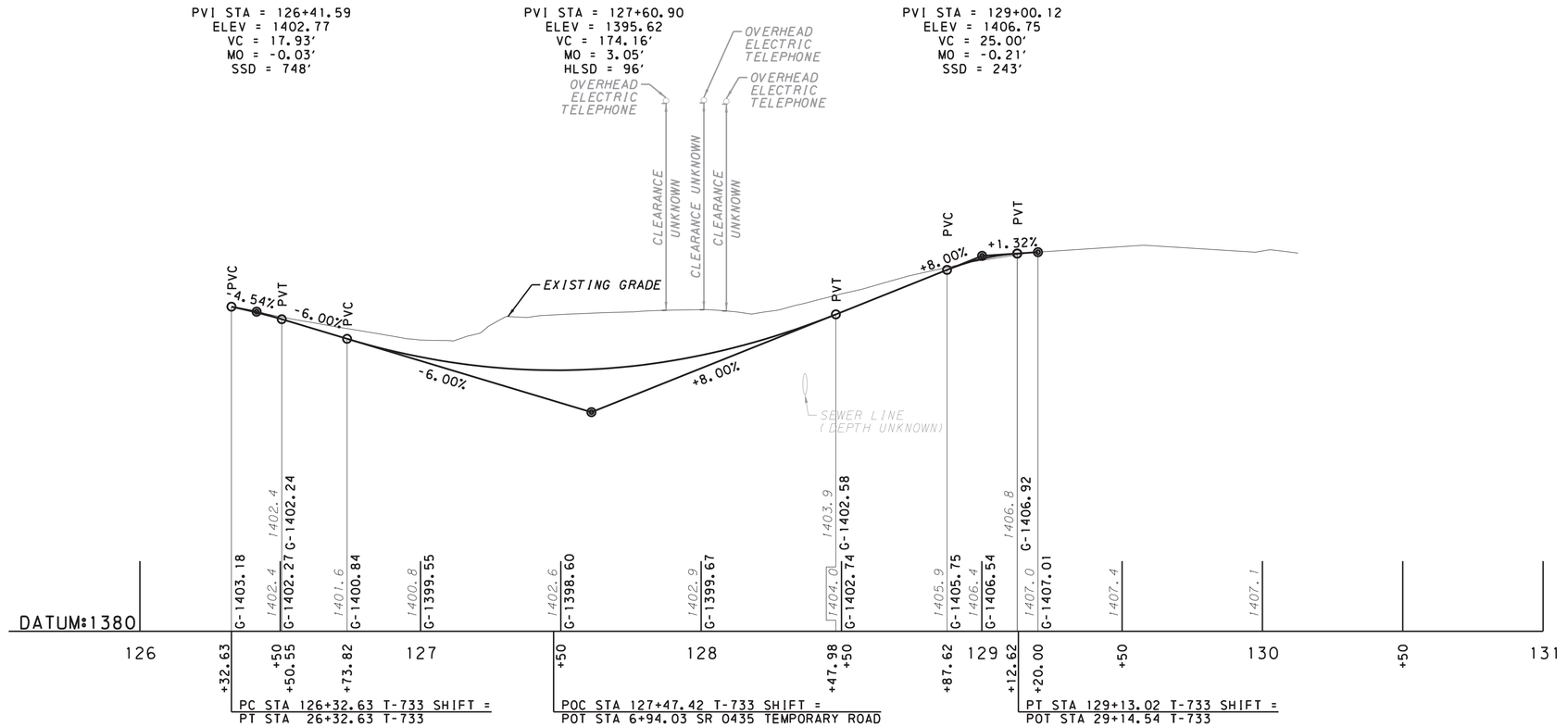
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261-251-253\MKA\DGN\Right-of-Way\01261-01 SR 0435 Site 251-253 RPROFILES.dgn
Model:Driveway Alt 2 LT 3/30/2023 10:27:36 AM Byjishiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	22 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



T-733 SHIFT

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEET 14	SURVEY BOOK NO 30431

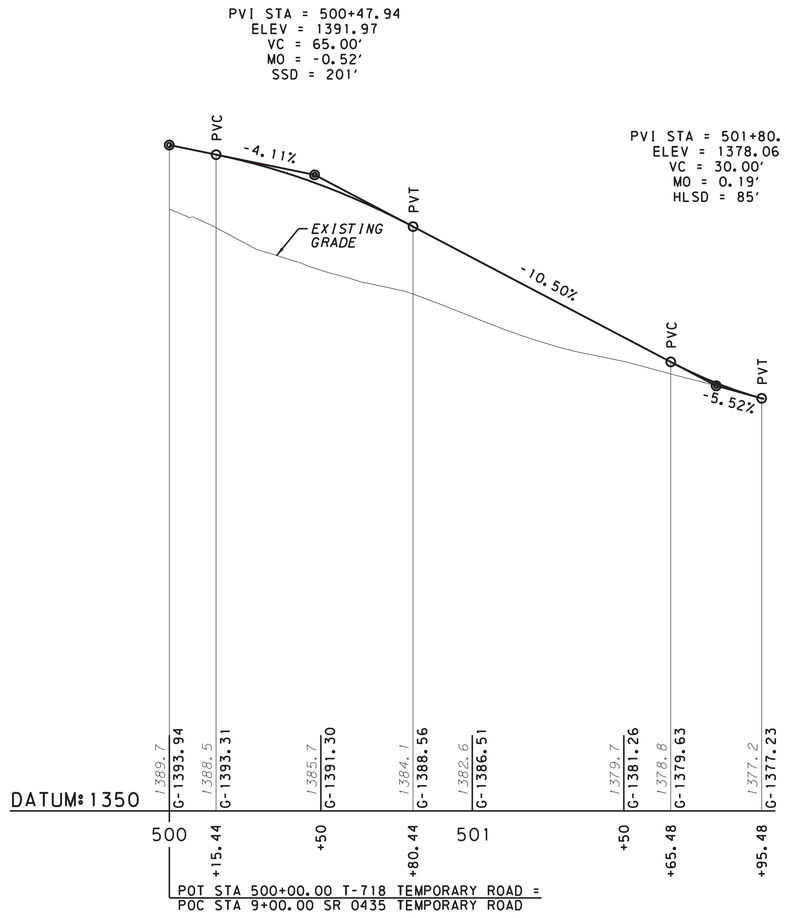
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261-251-253\MKA\DGN\Right-of-Way\01261-01 SR 0435 Site 251-253 RTEMP-PROFILES.dgn
Model:Front Street Shift Sheet
Date:3/6/2023 10:31:19 AM By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	23 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



T-718 TEMPORARY ROAD

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEET 14

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

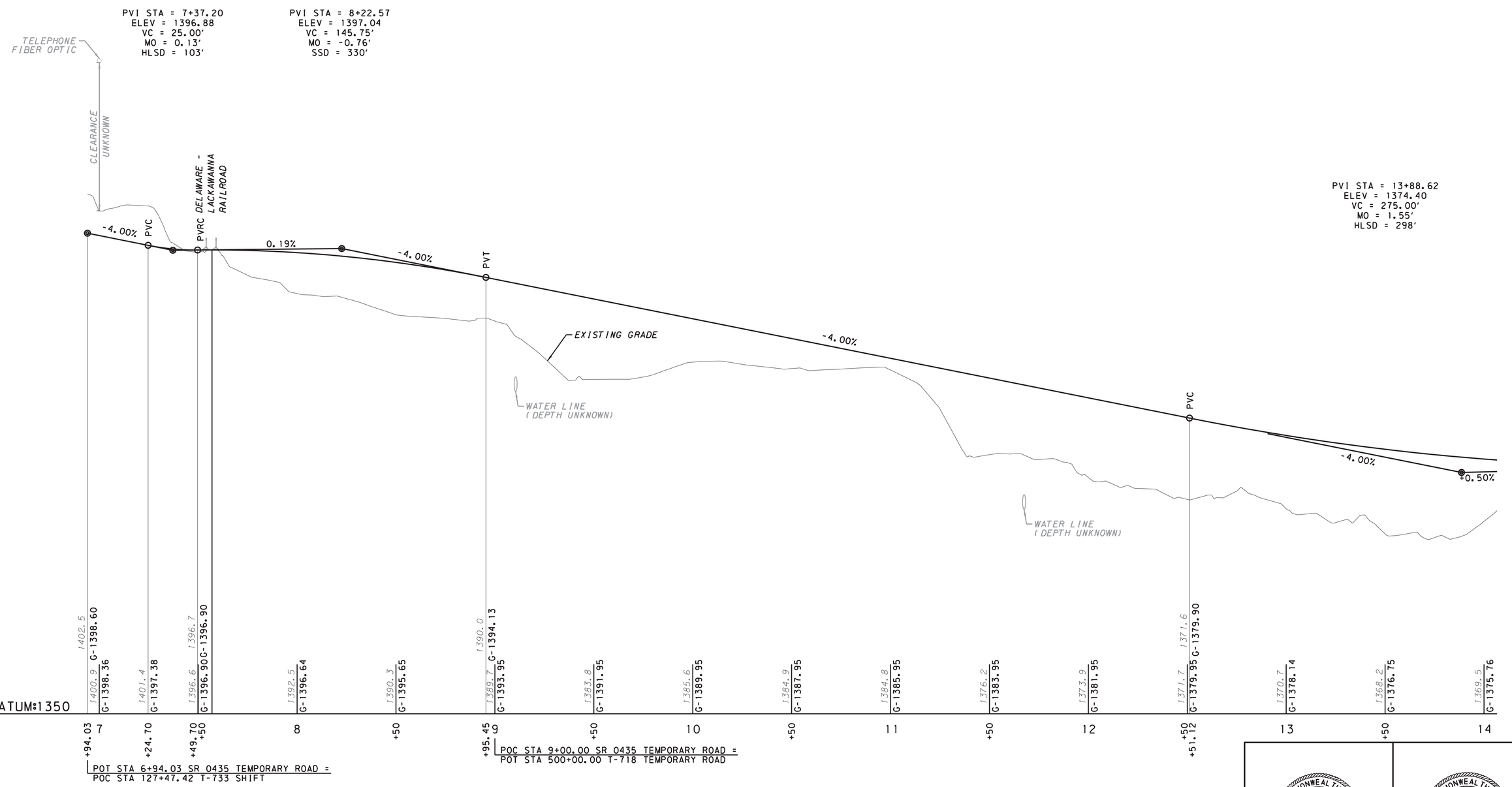
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261.251.253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RTEMP-PROFILES.dgn
Mode:SR 0435 CG SMITH ST 3/30/2023 10:31:43 AM Byjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	24 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SEE SHEET 25

SR 0435 TEMPORARY ROAD

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEETS 12 & 14

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File:pw:\\mko-pw.bentley.com:mko-pw-01\Documents\Projects\01261_251_253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RTEMP-PROFILES.dgn
ModelSR 0435 TEMPORARY ROAD PROFILE
Dgn:
Date:8/8/2022 10:32:05 AM
By:jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	25 OF 40

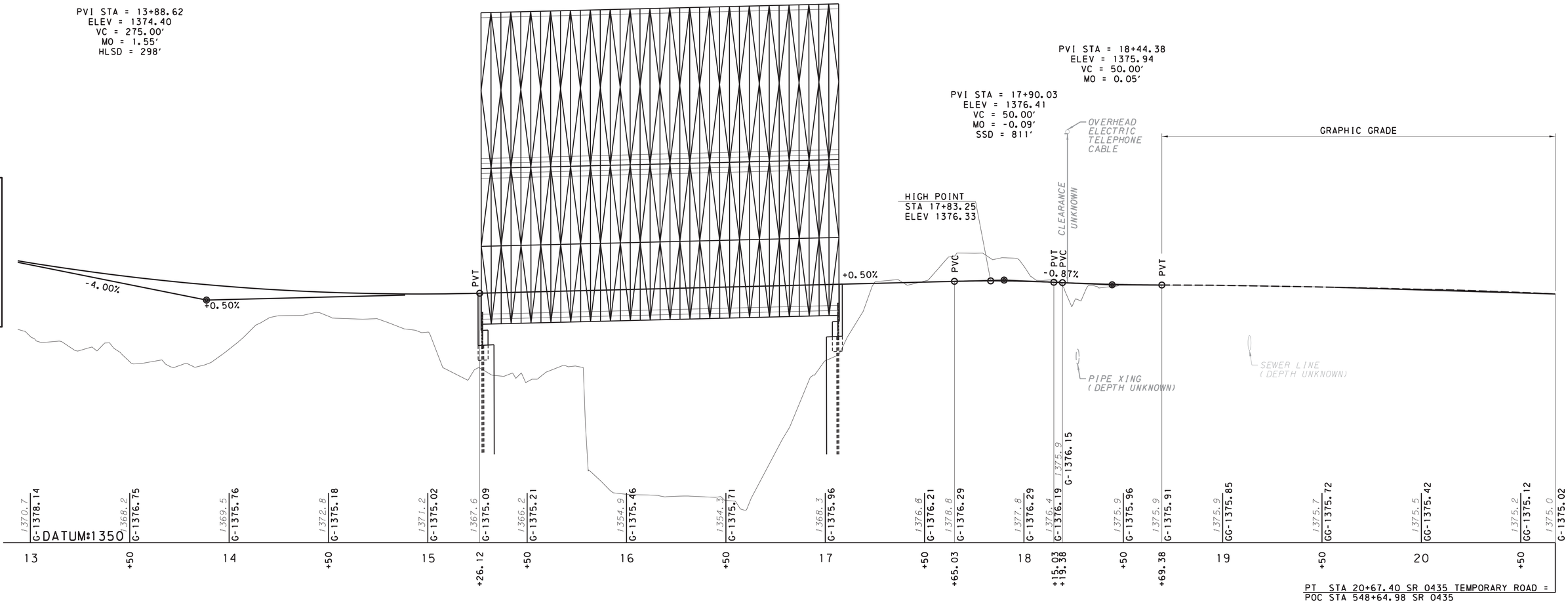
ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

PVI STA = 13+88.62
ELEV = 1374.40
VC = 275.00'
MO = 1.55'
HLSD = 298'

PVI STA = 18+44.38
ELEV = 1375.94
VC = 50.00'
MO = 0.05'

PVI STA = 17+90.03
ELEV = 1376.41
VC = 50.00'
MO = -0.09'
SSD = 811'



PT STA 20+67.40 SR 0435 TEMPORARY ROAD =
POC STA 548+64.98 SR 0435

SR 0435 TEMPORARY ROAD

PROFILE SCALE

HORIZONTAL 0 25 50FEET

VERTICAL 0 5 10FEET

FOR PLAN, SEE SHEETS 12 & 13

SURVEY BOOK NO 30431

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839

File: pw:\\nka-pw.bentley.com:nka-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RTEMP-PROFILES.dgn
Model: SR 0435 TEMPORARY ROAD
Date: 8/13/2020 3:25 AM By: jshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	26 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

T-733 SHIFT
PI STA 126+74.04
Δ= 21°17'51" LT
D= 26°00'54"
T= 41.41'
L= 81.87'
R= 220.24'
E= 3.86'
SUPERELEVATE 2.00%
PC STA 126+32.63
PRC STA 127+14.49

T-733 SHIFT
PI STA 127+73.23
Δ= 15°46'04" RT
D= 13°30'27"
T= 58.74'
L= 116.73'
R= 424.18'
E= 4.05'
SUPERELEVATE 4.00%
PRC STA 127+14.49
PRC STA 128+31.23

T-733
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45

T-733 SHIFT
PI STA 128+72.33
Δ= 13°59'55" LT
D= 17°06'53"
T= 41.10'
L= 81.79'
R= 334.77'
E= 2.51'
SUPERELEVATE 2.00%
PRC STA 128+31.23
PT STA 129+13.02

T-733
PI STA 25+32.71
Δ= 3°39'53" RT
D= 1°50'00"
T= 99.98'
L= 199.89'
R= 3125.22'
E= 1.60'
SUPERELEVATE 2.00%
PC STA 24+32.73
PT STA 26+32.63

T-733
PI STA 22+92.65
Δ= 65°19'49" RT
D= 70°34'20"
T= 52.05'
L= 92.57'
R= 81.19'
E= 15.25'
SUPERELEVATE 4.95%
PC STA 22+40.60
PT STA 23+33.17

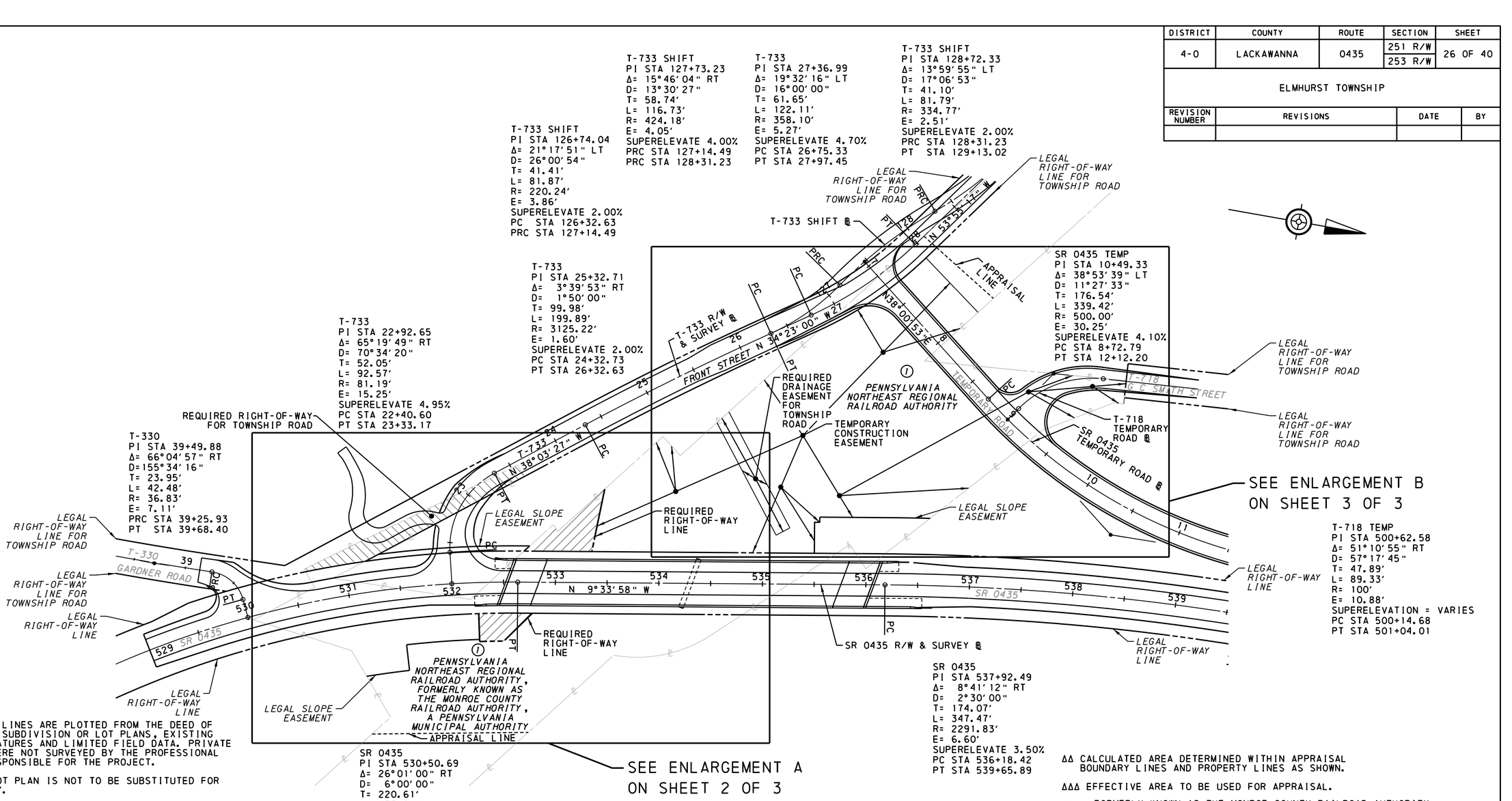
T-330
PI STA 39+49.88
Δ= 66°04'57" RT
D=155°34'16"
T= 23.95'
L= 42.48'
R= 36.83'
E= 7.11'
PRC STA 39+25.93
PT STA 39+68.40

SR 0435 TEMP
PI STA 10+49.33
Δ= 38°53'39" LT
D= 11°27'33"
T= 176.54'
L= 339.42'
R= 500.00'
E= 30.25'
SUPERELEVATE 4.10%
PC STA 8+72.79
PT STA 12+12.20

T-718 TEMP
PI STA 500+62.58
Δ= 51°10'55" RT
D= 57°17'45"
T= 47.89'
L= 89.33'
R= 100'
E= 10.88'
SUPERELEVATION = VARIES
PC STA 500+14.68
PT STA 501+04.01

SR 0435
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69

SR 0435
PI STA 537+92.49
Δ= 8°41'12" RT
D= 2°30'00"
T= 174.07'
L= 347.47'
R= 2291.83'
E= 6.60'
SUPERELEVATE 3.50%
PC STA 536+18.42
PT STA 539+65.89



NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.

2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.

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

4. REQUIRED DRAINAGE EASEMENT FOR LOCAL ROAD OR STREET: AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION, AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE TO THE LOCAL APPLICABLE MUNICIPALITY PIPE OR DITCH WITHOUT WRITTEN APPROVAL BY THE APPLICABLE MUNICIPALITY. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON COMPLETION OF CONSTRUCTION.

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

6. THE PROPERTY HAS BEEN PLOTTED FROM RAILROAD VALUATION MAPS ENTITLED "RIGHT-OF-WAY AND TRACK MAP, THE DELAWARE LACKAWANNA AND WESTERN-R.R.", HAVING REVISED PLAN NUMBER V21/54.

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

REQUIRED RIGHT-OF-WAY

REQUIRED RIGHT-OF-WAY FOR TOWNSHIP ROAD

ΔΔ CALCULATED AREA DETERMINED WITHIN APPRAISAL BOUNDARY LINES AND PROPERTY LINES AS SHOWN.

ΔΔΔ EFFECTIVE AREA TO BE USED FOR APPRAISAL.

* FORMERLY KNOWN AS THE MONROE COUNTY RAILROAD AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY

** A PENNSYLVANIA MUNICIPAL AUTHORITY

*** INCLUDES 0.078 ACRES OF EXISTING HIGHWAY EASEMENT

PLOT PLAN
SHEET 1 OF 3

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 1 SHEET NO. 11,12,14 CLAIM NO. ____
PROPERTY OWNER(S) PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY, *
GRANTOR(S) LACKAWANNA COUNTY RAILROAD AUTHORITY, **

INSTR # 200614710
DATE OF DEED 5.30.2006
DATE OF RECORD 5.31.2006
CONSIDERATION $1.00
TAX STAMPS N/A
PARCEL ID: ____

AREAS	ACRE/~~SF~~
DEED	-
CALCULATED	ΔΔ 3.000
ADVERSES	-
LEGAL R/W	0.674
EFFECTIVE	ΔΔΔ 2.326
TOTAL REQ'D R/W	*** 0.145
TOTAL RESIDUE	2.259
RESIDUE LT	1.636
RESIDUE RT	0.623

REQUIRED AREA	ACRE/~~SF~~
RIGHT OF WAY	0.067
RIGHT-OF-WAY FOR TOWNSHIP ROAD	*** 0.078
REQUIRED DRAINAGE EASEMENT FOR TOWNSHIP ROAD	0.043
TEMPORARY CONSTRUCTION EASEMENT	1.487

VERIFICATION DATE 8.7.2023
DRAWN BY CDR MAGUIRE

0 50 100 FEET
SCALE

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL W. SHINER — LAND SURVEYOR SU075517 — PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839 — PENNSYLVANIA

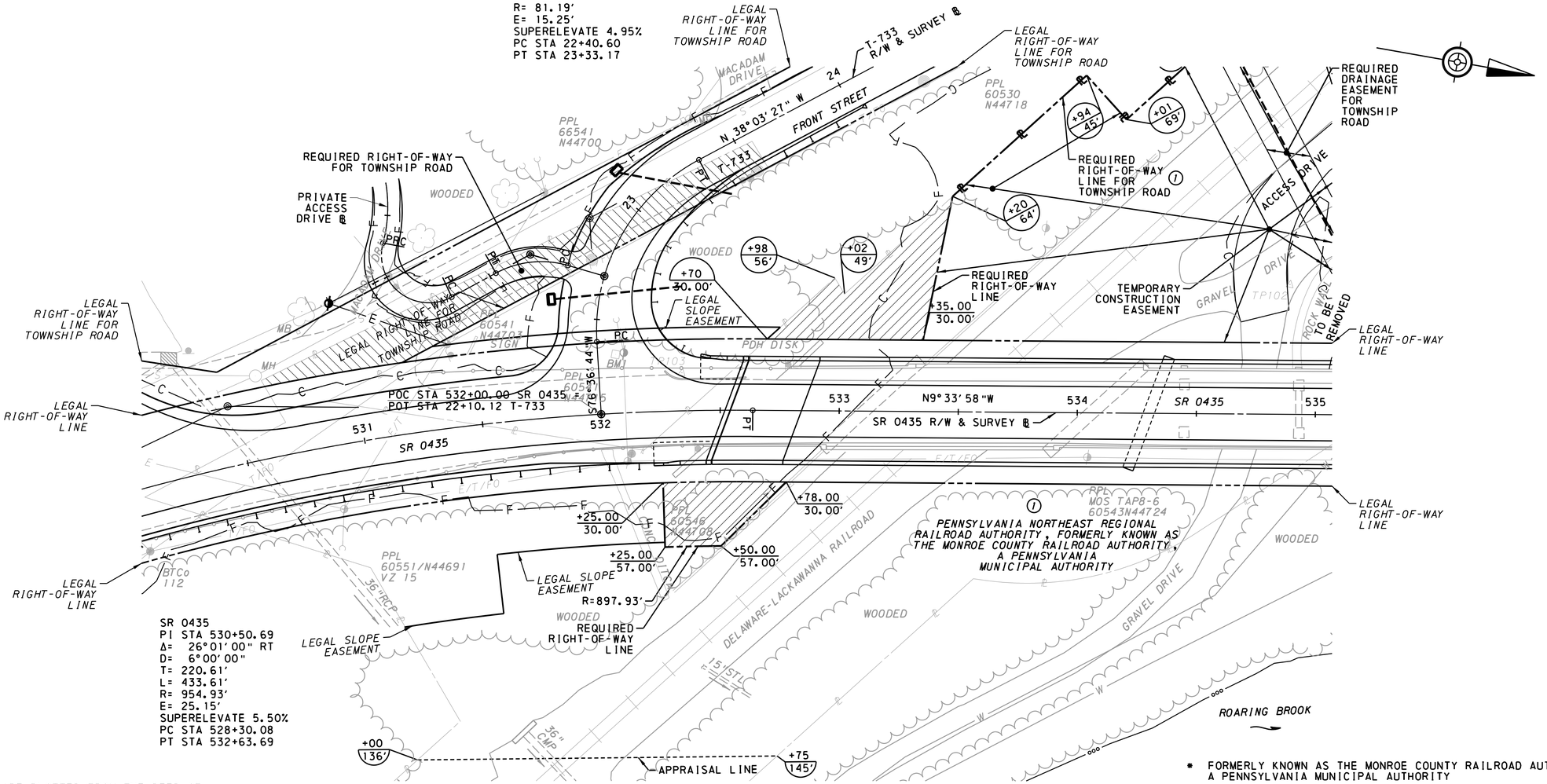
File: pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261-251.253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-1-OVERALL.dgn
Model: ROW -Plot Plan 9/14/2023 10:51:13 AM By: joel.shiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	27 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

T-733
PI STA 22+92.65
Δ= 65°19'49" RT
D= 70°34'20"
T= 52.05'
L= 92.57'
R= 81.19'
E= 15.25'
SUPERELEVATE 4.95%
PC STA 22+40.60
PT STA 23+33.17



SR 0435
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. REQUIRED DRAINAGE EASEMENT FOR LOCAL ROAD OR STREET: AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION, AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE TO THE LOCAL APPLICABLE MUNICIPALITY PIPE OR DITCH WITHOUT WRITTEN APPROVAL BY THE APPLICABLE MUNICIPALITY. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON COMPLETION OF CONSTRUCTION.
5. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*
6. THE PROPERTY HAS BEEN PLOTTED FROM RAILROAD VALUATION MAPS ENTITLED "RIGHT-OF-WAY AND TRACK MAP, THE DELAWARE LACKAWANNA AND WESTERN-R.R.", HAVING REVISED PLAN NUMBER V21/54.

ENLARGEMENT A

SCALE 0 25 50 FEET

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

REQUIRED RIGHT-OF-WAY

REQUIRED RIGHT-OF-WAY FOR TOWNSHIP ROAD

* FORMERLY KNOWN AS THE MONROE COUNTY RAILROAD AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY

** A PENNSYLVANIA MUNICIPAL AUTHORITY

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 1 SHEET NO. 11,12,14 CLAIM NO. ____
PROPERTY OWNER(S) PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY, *
GRANTOR(S) LACKAWANNA COUNTY RAILROAD AUTHORITY, **

PLOT PLAN
SHEET 2 OF 3

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL M. SHINER LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WMA\DGN\Right_of_Way\01261-01 SR 0435 Sire 251-253 RPLOT-1.dgn
Model: - ROW -Plot Plan 9/14/2023 10:59:56 AM Byjjoel.shiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	28 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

T-733 SHIFT
PI STA 126+74.04
Δ= 21°17'51" LT
D= 26°00'54"
T= 41.41'
L= 81.87'
R= 220.24'
E= 3.86'
SUPERELEVATE 2.00%
PC STA 126+32.62
PRC STA 127+14.49

T-733
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45

POT STA 6+94.03 SR 0435 TEMPORARY ROAD =
POC STA 127+47.42 T-733 SHIFT

SR 0435 TEMP
PI STA 10+49.33
Δ= 38°53'39" LT
D= 11°27'33"
T= 176.54'
L= 339.42'
R= 500.00'
E= 30.25'
SUPERELEVATE 4.10%
PC STA 8+72.79
PT STA 12+12.20

T-733
PI STA 25+32.71
Δ= 3°39'53" RT
D= 1°50'00"
T= 99.98'
L= 199.89'
R= 3125.22'
E= 1.60'
SUPERELEVATE 2.00%
PC STA 24+32.73
PT STA 26+32.63

T-718 TEMP-1
PI STA 500+62.58
Δ= 51°10'55" RT
D= 57°17'45"
T= 47.89'
L= 89.33'
R= 100.00'
E= 10.88'
SUPERELEVATE VARIES
PC STA 500+14.68
PT STA 501+04.01

POC STA 9+00.00 SR 0435 TEMP RD =
POT STA 500+00.00 T-718 TEMP RD

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. REQUIRED DRAINAGE EASEMENT FOR LOCAL ROAD OR STREET: AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION, AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE TO THE LOCAL APPLICABLE MUNICIPALITY PIPE OR DITCH WITHOUT WRITTEN APPROVAL BY THE APPLICABLE MUNICIPALITY. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON COMPLETION OF CONSTRUCTION.
5. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*
6. THE PROPERTY HAS BEEN PLOTTED FROM RAILROAD VALUATION MAPS ENTITLED "RIGHT-OF-WAY AND TRACK MAP, THE DELAWARE LACKAWANNA AND WESTERN-R.R.", HAVING REVISED PLAN NUMBER V21/54.

ENLARGEMENT B

SCALE 0 25 50 FEET

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

* FORMERLY KNOWN AS THE MONROE COUNTY RAILROAD AUTHORITY, A PENNSYLVANIA MUNICIPAL AUTHORITY

** A PENNSYLVANIA MUNICIPAL AUTHORITY

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 1 SHEET NO. 12,14 CLAIM NO.
PROPERTY OWNER(S) PENNSYLVANIA NORTHEAST REGIONAL RAILROAD AUTHORITY, *
GRANTOR(S) LACKAWANNA COUNTY RAILROAD AUTHORITY, **

PLOT PLAN
SHEET 3 OF 3

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517 — PENNSYLVANIA

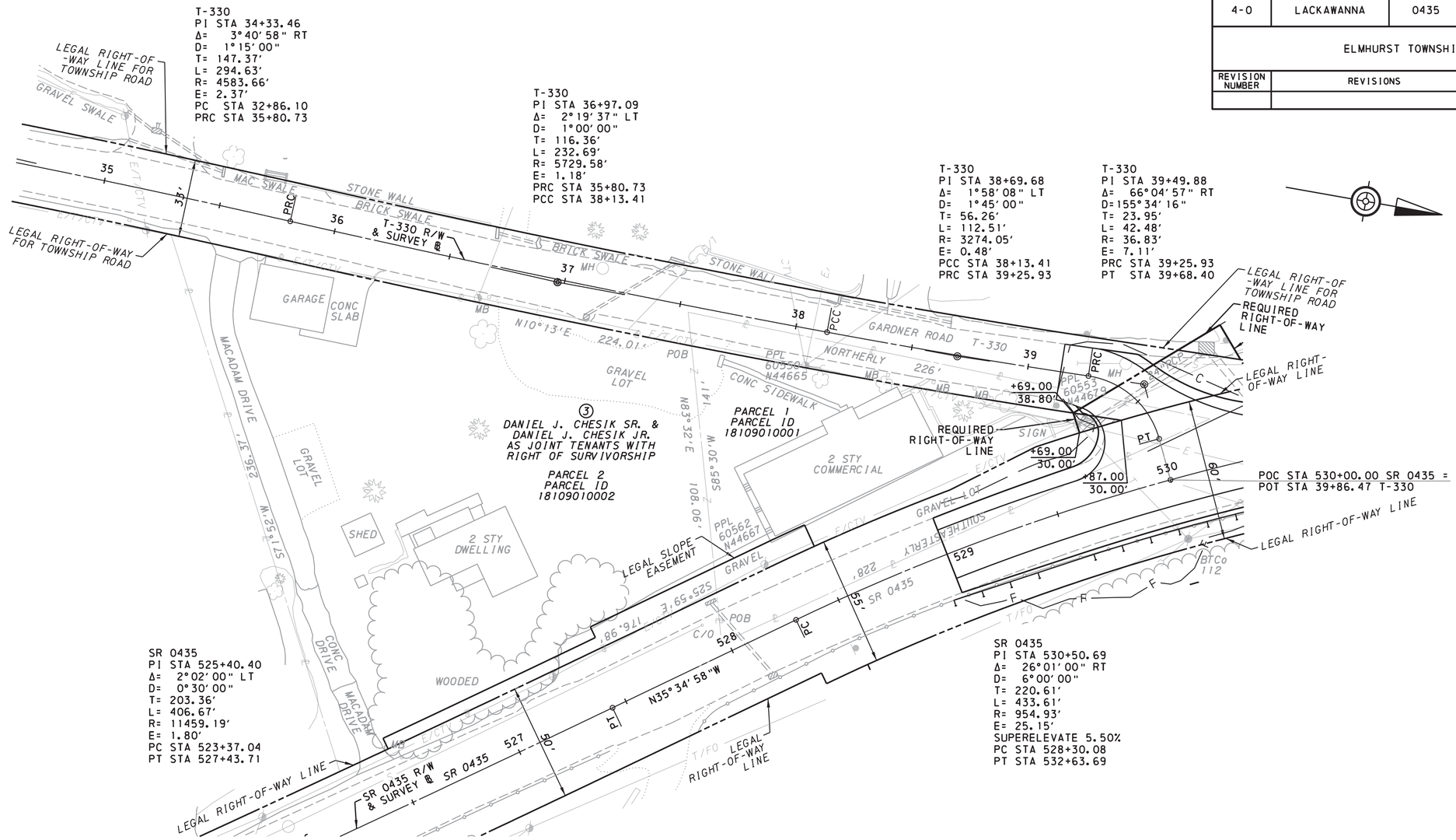
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839 — PENNSYLVANIA

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261-251-253\MKA\DGN\Right-of-Way\01261-01 SR 0435 Site 251-253 RPLOT-1.dgn
Mode:12 - ROW -Plot Plan 8/29/2023 10:07:36 AM By:joel.shiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	29 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

REQUIRED RIGHT-OF-WAY

* AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP

** EXECUTOR OF THE ESTATE OF JOSEPHINE CHESIK, A/K/A JOSEPHINE CZYZEWSKI, A/K/A JOSEPHINE C. CHESIK

*** THE LEGAL RIGHT-OF-WAY AREA INCLUDES 195 SF OF LEGAL RIGHT-OF-WAY FOR TOWNSHIP ROAD TO BECOME LEGAL RIGHT-OF-WAY FOR STATE HIGHWAY

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 3 SHEET NO. 11 CLAIM NO.
PROPERTY OWNER(S) DANIEL J. CHESIK SR. & DANIEL J. CHESIK JR. *
GRANTOR(S) DANIEL J. CHESIK, **

DEED BOOK	1594
PAGE	775
DATE OF DEED	8.8.1997
DATE OF RECORD	8.11.1997
CONSIDERATION	$1.00
TAX STAMPS	EXEMPT
PARCEL ID:	18109-010-001 18109-010-002

AREAS	~~ACRE~~/SF
DEED	36,099
CALCULATED	47,370
ADVERSES	-
LEGAL R/W	***6,314
EFFECTIVE	41,056
TOTAL REQ'D R/W	81
TOTAL RESIDUE	40,975
RESIDUE LT	40,975
RESIDUE RT	-

REQUIRED AREA ~~ACRE~~/SF	
RIGHT OF WAY	81
TEMPORARY CONSTRUCTION EASEMENT	-
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

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Model: ROW -Plot Plan 8/7/2023 9:32:26 AM Bymark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	30 OF 40
ELMHURST TOWNSHIP				

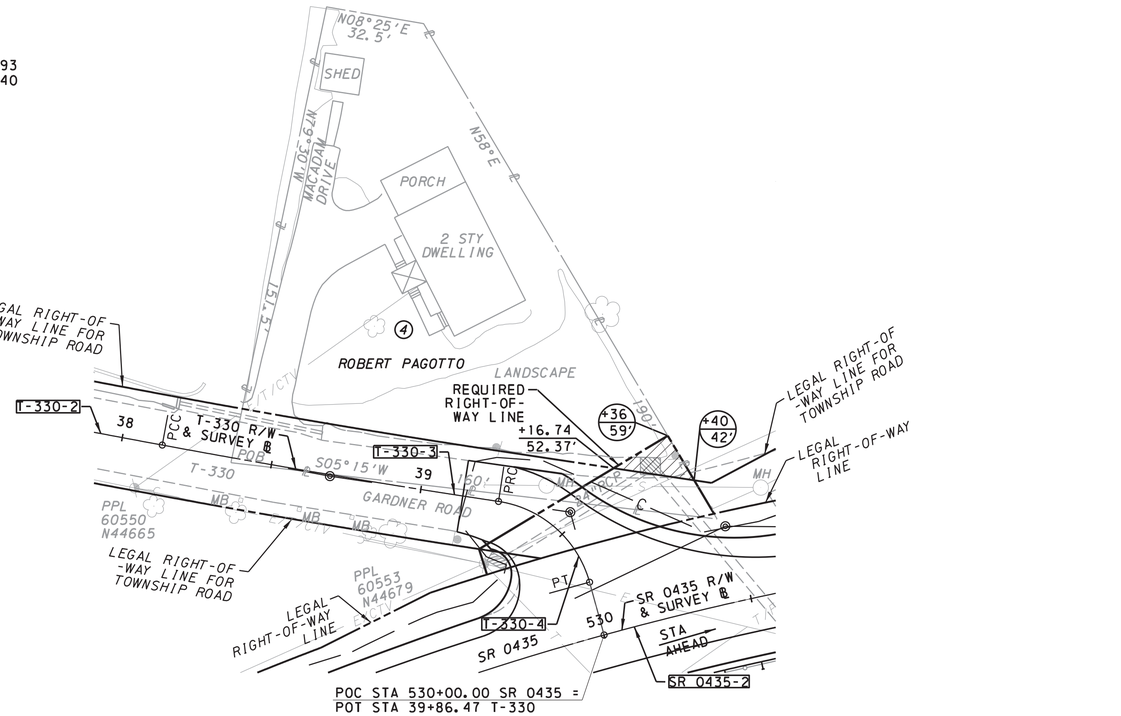
REVISION NUMBER	REVISIONS	DATE	BY

SR 0435-2
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69

T-330-2
PI STA 36+97.09
Δ= 2°19'37" LT
D= 1°00'00"
T= 116.36'
L= 232.69'
R= 5729.58'
E= 1.18'
PRC STA 35+80.73
PCC STA 38+13.41

T-330-3
PI STA 38+69.68
Δ= 1°58'08" LT
D= 1°45'00"
T= 56.26'
L= 112.51'
R= 3274.05'
E= 0.48'
PCC STA 38+13.41
PRC STA 39+25.93

T-330-4
PI STA 39+49.88
Δ= 66°04'57" RT
D=155°34'16"
T= 23.95'
L= 42.48'
R= 36.83'
E= 7.11'
PRC STA 39+25.93
PT STA 39+68.40



LEGEND

REQUIRED RIGHT-OF-WAY

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.

** THE LEGAL RIGHT-OF-WAY AREA INCLUDES 483 SF OF LEGAL RIGHT-OF-WAY FOR TOWNSHIP ROAD TO BECOME LEGAL RIGHT-OF-WAY FOR STATE HIGHWAY

* TRUSTEE FOR THE PAGOTTO FAMILY IRREVOCABLE PERSONAL RESIDENCE TRUST AGREEMENT

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
JOEL M. SHINER
LAND SURVEYOR
SU075517
PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
BENJAMIN R. MARTZ
ENGINEER
PE081839
PENNSYLVANIA

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 4 SHEET NO. 11 CLAIM NO.
PROPERTY OWNER(S) ROBERT PAGOTTO
GRANTOR(S) GINA PAGOTTO, *

INSTR # 201503868
DATE OF DEED 2.16.2015
DATE OF RECORD 3.23.2015
CONSIDERATION $1.00
TAX STAMPS EXEMPT
PARCEL ID: 18012-010-008

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	14,710
ADVERSES	-
LEGAL R/W	** 2,272
EFFECTIVE	12,438
TOTAL REQ'D R/W	178
TOTAL RESIDUE	12,260
RESIDUE LT	12,260
RESIDUE RT	-

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	178
TEMPORARY CONSTRUCTION EASEMENT	-
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

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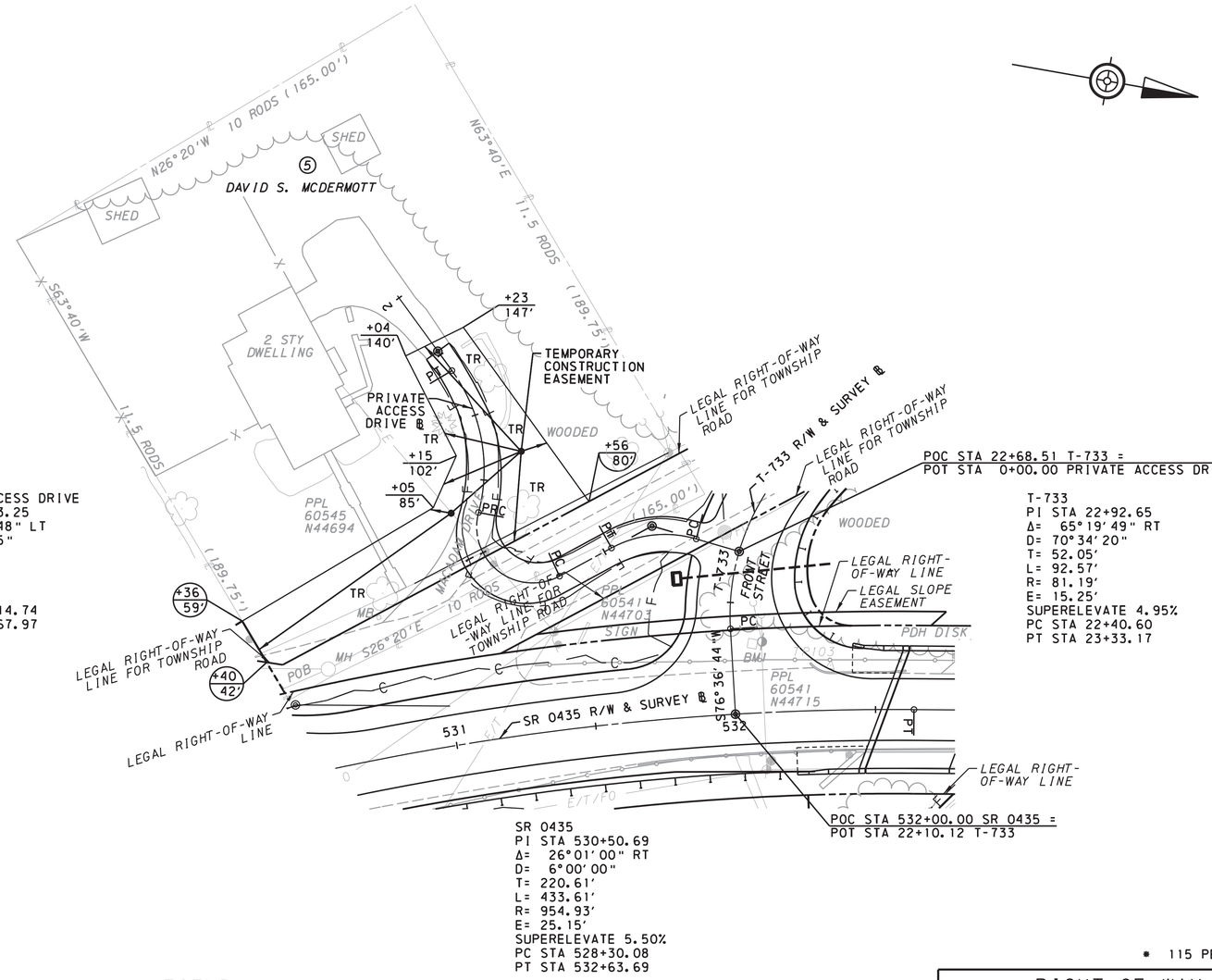
Model:ROW -Plot Plan 8/11/2023 9:40:23 AM Byjjhower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	31 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



PRIVATE ACCESS DRIVE
PI STA 0+32.39
Δ= 44°43'21" LT
D=143°14'22"
T= 16.46'
L= 31.22'
R= 40.00'
E= 3.25'
SUPERELEVATION VARIES
PC STA 0+15.94
PT STA 0+47.16

PRIVATE ACCESS DRIVE
PI STA 1+14.49
Δ= 133°13'40" LT
D=286°28'44"
T= 46.25'
L= 46.51'
R= 20.00'
E= 30.39'
PC STA 0+68.24
PRC STA 1+14.74

PRIVATE ACCESS DRIVE
PI STA 1+43.25
Δ= 50°49'48" LT
D= 95°29'35"
T= 28.51'
L= 53.23'
R= 60.00'
E= 6.43'
PRC STA 1+14.74
PT STA 1+67.97

T-733
PI STA 22+92.65
Δ= 65°19'49" RT
D= 70°34'20"
T= 52.05'
L= 92.57'
R= 81.19'
E= 15.25'
SUPERELEVATE 4.95%
PC STA 22+40.60
PT STA 23+33.17

SR 0435
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

LEGEND

+00 / 50' INDICATES SCALED DIMENSION

TR TO REMAIN

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

* 115 PERCHES

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 5 SHEET NO. 11 CLAIM NO.
PROPERTY OWNER(S) DAVID S. McDERMOTT
GRANTOR(S) DAVID M. BARRETT & SHARON BARRETT, HIS WIFE

INSTR # 200817948
DATE OF DEED 7.18.2008
DATE OF RECORD 7.21.2008
CONSIDERATION $170,000.00
TAX STAMPS $1,700.00
PARCEL ID: 18012-010-007

AREAS	~~ACRE~~/SF
DEED	*
CALCULATED	32,400
ADVERSES	-
LEGAL R/W	2,358
EFFECTIVE	30,042
TOTAL REQ'D R/W	-
TOTAL RESIDUE	30,042
RESIDUE LT	30,042
RESIDUE RT	-

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	-
TEMPORARY CONSTRUCTION EASEMENT	4,426

VERIFICATION DATE 8.7.2023
DRAWN BY CDR MAGUIRE

SCALE 0 25 50 FEET

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Model:ROW -Plot Plan 8/11/2023 9:27:45 AM Byt jhower

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	32 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

PRIVATE ACCESS DRIVE
PI STA 0+32.39
Δ= 44°43'21" LT
D=143°14'22"
T= 16.46'
L= 31.22'
R= 40.00'
E= 3.25'
SUPERELEVATION VARIES
PC STA 0+15.94
PT STA 0+47.16

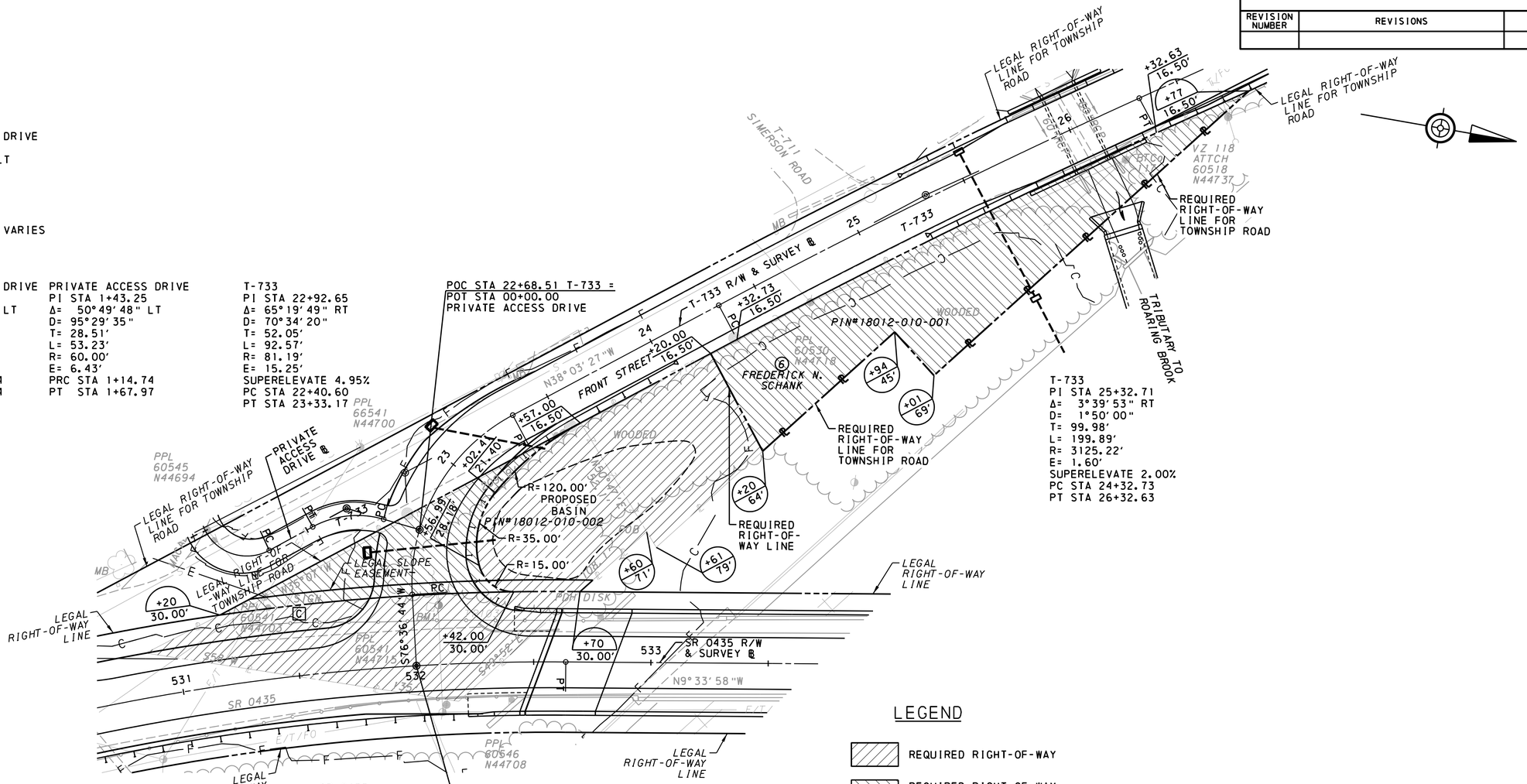
PRIVATE ACCESS DRIVE
PI STA 1+14.49
Δ= 133°13'40" LT
D=286°28'44"
T= 46.25'
L= 46.51'
R= 20.00'
E= 30.39'
PC STA 0+68.24
PRC STA 1+14.74

PRIVATE ACCESS DRIVE
PI STA 1+43.25
Δ= 50°49'48" LT
D= 95°29'35"
T= 28.51'
L= 53.23'
R= 60.00'
E= 6.43'
PRC STA 1+14.74
PT STA 1+67.97

T-733
PI STA 22+92.65
Δ= 65°19'49" RT
D= 70°34'20"
T= 52.05'
L= 92.57'
R= 81.19'
E= 15.25'
SUPERELEVATE 4.95%
PC STA 22+40.60
PT STA 23+33.17

T-733
PI STA 25+32.71
Δ= 3°39'53" RT
D= 1°50'00"
T= 99.98'
L= 199.89'
R= 3125.22'
E= 1.60'
SUPERELEVATE 2.00%
PC STA 24+32.73
PT STA 26+32.63

SR 0435
PI STA 530+50.69
Δ= 26°01'00" RT
D= 6°00'00"
T= 220.61'
L= 433.61'
R= 954.93'
E= 25.15'
SUPERELEVATE 5.50%
PC STA 528+30.08
PT STA 532+63.69



LEGEND

- REQUIRED RIGHT-OF-WAY
- REQUIRED RIGHT-OF-WAY FOR TOWNSHIP ROAD
- +00 / 50' — INDICATES SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. REQUIRED RIGHT-OF-WAY FOR LOCAL ROADS OR STREETS IS ACQUIRED FOR THE BENEFIT OF THE APPLICABLE MUNICIPALITY IN THE SAME ESTATE OR INTEREST AS DESIGNATED HEREIN FOR REQUIRED RIGHT-OF-WAY FOR STATE HIGHWAY PURPOSES, ALONG WITH A TEMPORARY CONSTRUCTION EASEMENT FOR THE BENEFIT AND USE OF THE COMMONWEALTH. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON THE COMPLETION OF CONSTRUCTION.
4. BUILDINGS 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.
5. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*

* INCLUDES 194 SF OF LEGAL SLOPE EASEMENT AND 5,046 SF OF EXISTING HIGHWAY EASEMENT

** INCLUDES 558 SF OF LEGAL SLOPE EASEMENT

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR — SU075517 — PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER — PE081839 — PENNSYLVANIA

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 6 SHEET NO. 11,14 CLAIM NO.
PROPERTY OWNER(S) FREDERICK N. SCHANK
GRANTOR(S) LEONARD N. TEMKO

DEED BOOK	756
PAGE	497
DATE OF DEED	10.12.1971
DATE OF RECORD	10.21.1971
CONSIDERATION	$689.73
TAX STAMPS	$6.90
PARCEL ID:	18012-010-001

DEED BOOK	1448
PAGE	97
DATE OF DEED	9.7.1993
DATE OF RECORD	9.23.1993
CONSIDERATION	$1.00
TAX STAMPS	N/A
PARCEL ID:	18012-010-002

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	22,382
ADVERSES	-
LEGAL R/W	5,046
EFFECTIVE	17,336
TOTAL REQ'D R/W	22,382
TOTAL RESIDUE	0
RESIDUE LT	-
RESIDUE RT	-

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	* 11,779
RIGHT OF WAY TOWNSHIP ROAD	** 10,603
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

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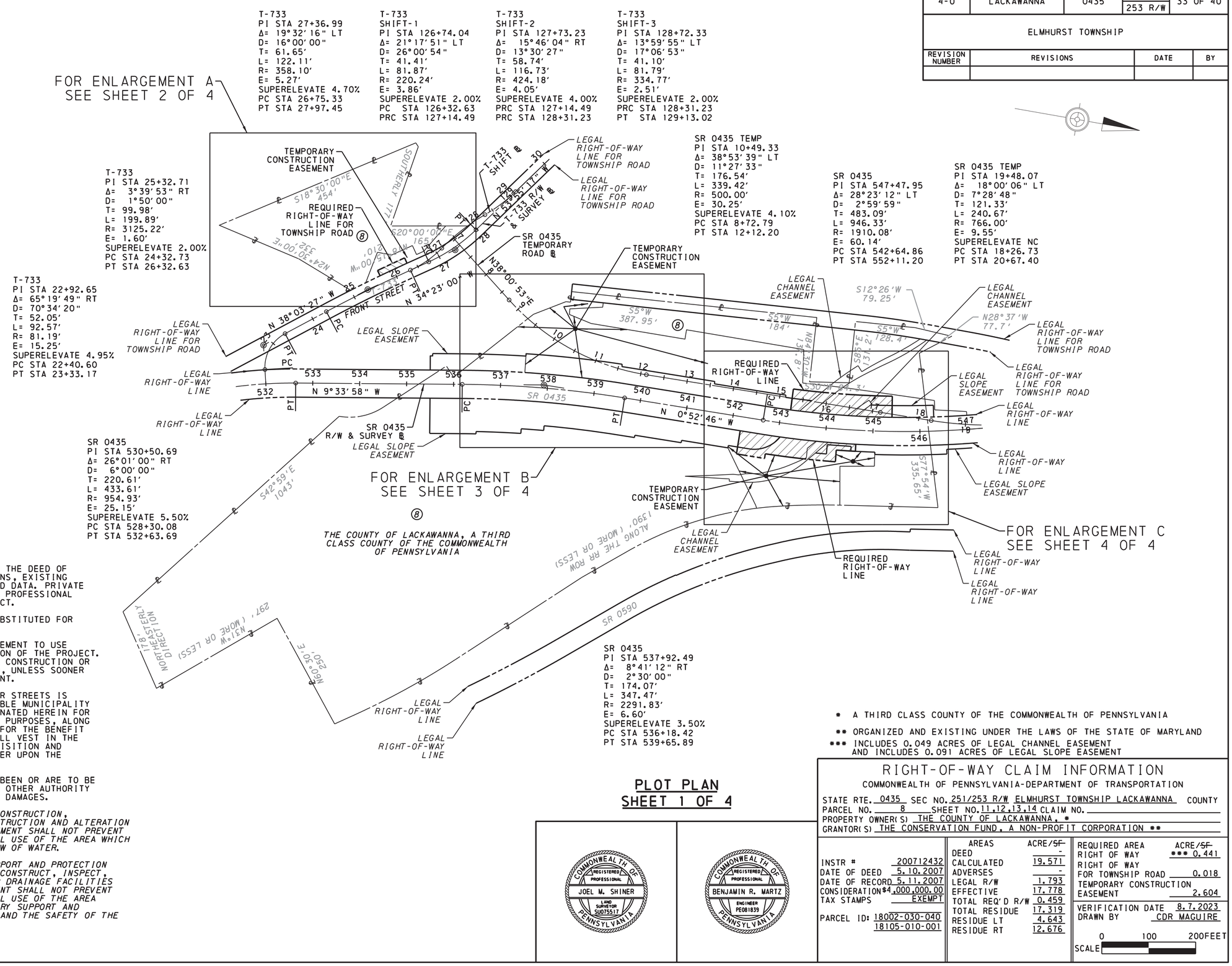
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	33 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

- REQUIRED RIGHT-OF-WAY
- REQUIRED RIGHT-OF-WAY FOR TOWNSHIP ROAD
- +00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. REQUIRED RIGHT-OF-WAY FOR LOCAL ROADS OR STREETS IS ACQUIRED FOR THE BENEFIT OF THE APPLICABLE MUNICIPALITY IN THE SAME ESTATE OR INTEREST AS DESIGNATED HEREIN FOR REQUIRED RIGHT-OF-WAY FOR STATE HIGHWAY PURPOSES, ALONG WITH A TEMPORARY CONSTRUCTION EASEMENT FOR THE BENEFIT AND USE OF THE COMMONWEALTH. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON THE COMPLETION OF CONSTRUCTION.
5. BUILDINGS 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.
6. *CHANNEL EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF THE COURSE OF THE CHANNEL. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER.*
7. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*

* A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

** ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF MARYLAND

*** INCLUDES 0.049 ACRES OF LEGAL CHANNEL EASEMENT AND INCLUDES 0.091 ACRES OF LEGAL SLOPE EASEMENT

PLOT PLAN
SHEET 1 OF 4

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517 — PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839 — PENNSYLVANIA

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 8 SHEET NO. 11,12,13,14 CLAIM NO. _____
PROPERTY OWNER(S) THE COUNTY OF LACKAWANNA, *
GRANTOR(S) THE CONSERVATION FUND, A NON-PROFIT CORPORATION **

INSTR # 200712432
DATE OF DEED 5.10.2007
DATE OF RECORD 5.11.2007
CONSIDERATION $4,000,000.00
TAX STAMPS EXEMPT

PARCEL ID: 18002-030-040
18105-010-001

AREAS	ACRE/~~SF~~
DEED	-
CALCULATED	19.571
ADVERSES	-
LEGAL R/W	1.793
EFFECTIVE	17.778
TOTAL REQ'D R/W	0.459
TOTAL RESIDUE	17.319
RESIDUE LT	4.643
RESIDUE RT	12.676

REQUIRED AREA	ACRE/~~SF~~
RIGHT OF WAY	*** 0.441
RIGHT OF WAY FOR TOWNSHIP ROAD	0.018
TEMPORARY CONSTRUCTION EASEMENT	2.604

VERIFICATION DATE 8.7.2023
DRAWN BY CDR MAGUIRE

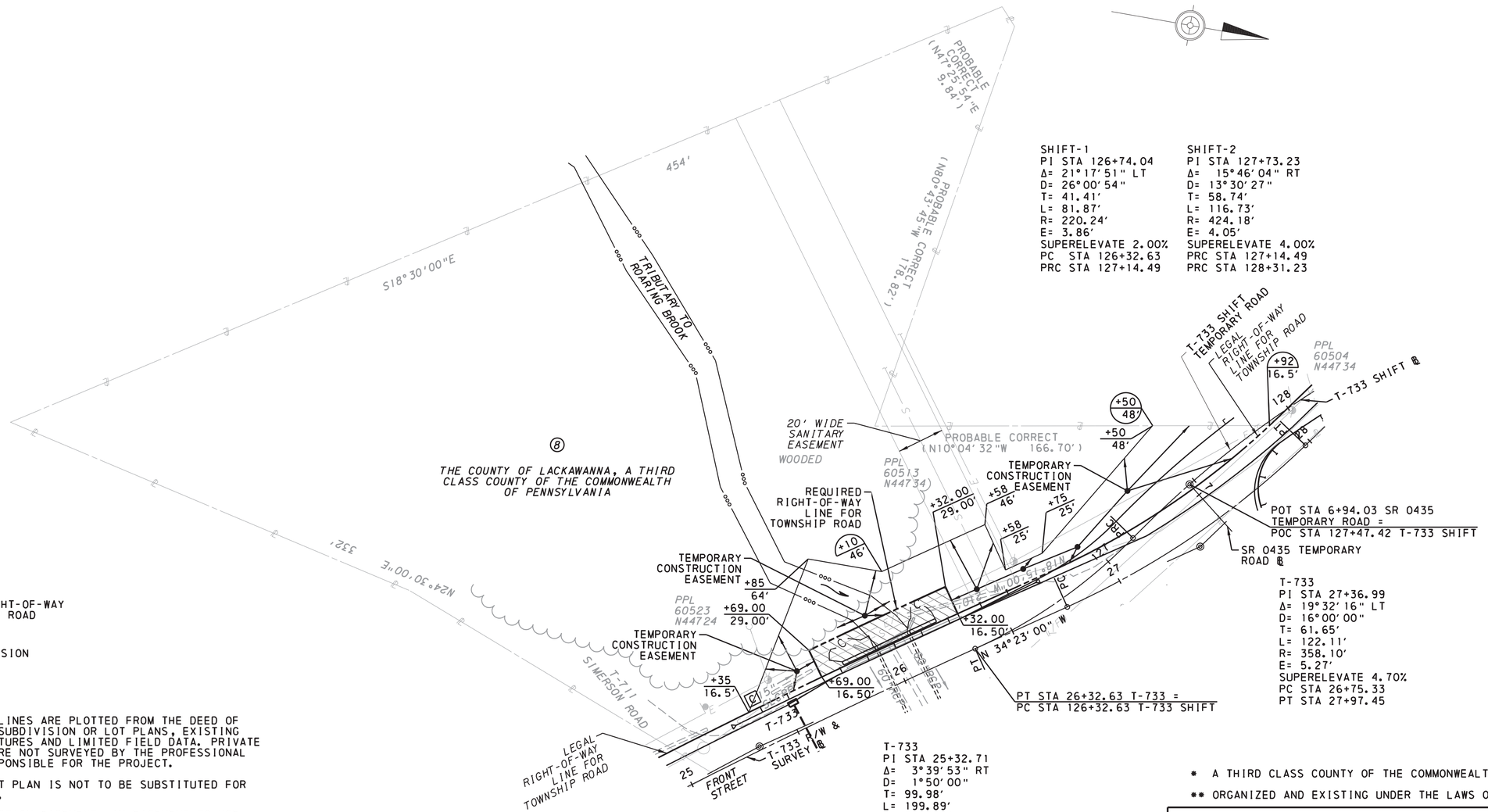
SCALE 0 100 200FEET

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WMA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-8-OVERALL.dgn
Mode:ROW - Plot Plan 8/7/2023 9:44:42 AM Bymark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	34 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



SHIFT-1
PI STA 126+74.04
Δ= 21°17'51" LT
D= 26°00'54"
T= 41.41'
L= 81.87'
R= 220.24'
E= 3.86'
SUPERELEVATE 2.00%
PC STA 126+32.63
PRC STA 127+14.49

SHIFT-2
PI STA 127+73.23
Δ= 15°46'04" RT
D= 13°30'27"
T= 58.74'
L= 116.73'
R= 424.18'
E= 4.05'
SUPERELEVATE 4.00%
PRC STA 127+14.49
PRC STA 128+31.23

T-733
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45

T-733
PI STA 25+32.71
Δ= 3°39'53" RT
D= 1°50'00"
T= 99.98'
L= 199.89'
R= 3125.22'
E= 1.60'
SUPERELEVATE 2.00%
PC STA 24+32.73
PT STA 26+32.63

ENLARGEMENT A

LEGEND

REQUIRED RIGHT-OF-WAY FOR TOWNSHIP ROAD

+00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. REQUIRED RIGHT-OF-WAY FOR LOCAL ROADS OR STREETS IS ACQUIRED FOR THE BENEFIT OF THE APPLICABLE MUNICIPALITY IN THE SAME ESTATE OR INTEREST AS DESIGNATED HEREIN FOR REQUIRED RIGHT-OF-WAY FOR STATE HIGHWAY PURPOSES, ALONG WITH A TEMPORARY CONSTRUCTION EASEMENT FOR THE BENEFIT AND USE OF THE COMMONWEALTH. TITLE SHALL VEST IN THE APPLICABLE LOCAL MUNICIPALITY UPON ACQUISITION AND MAINTENANCE RESPONSIBILITY SHALL TRANSFER UPON THE COMPLETION OF CONSTRUCTION.
5. BUILDINGS 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.

SCALE

0 25 50FEET

⑧ THE COUNTY OF LACKAWANNA, A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

* A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

** ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF MARYLAND

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 8 SHEET NO. 14 CLAIM NO.
PROPERTY OWNER(S) THE COUNTY OF LACKAWANNA, *
GRANTOR(S) THE CONSERVATION FUND, A NON-PROFIT CORPORATION **

PLOT PLAN SHEET 2 OF 4

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOEL M. SHINER LAND SURVEYOR SU075517

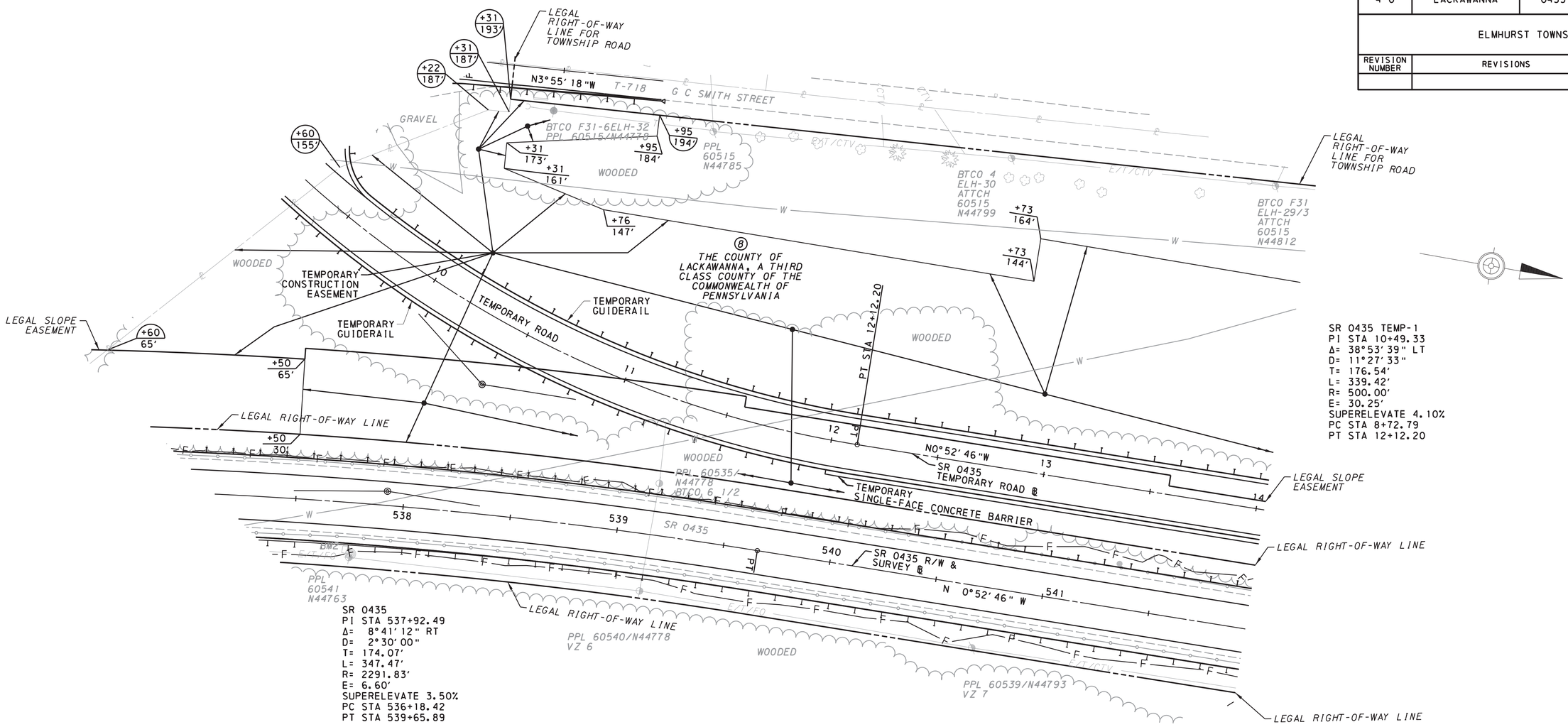
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN R. MARTZ ENGINEER PE081839

File:pw:\\mkg-pw.bentley.com:mkg-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-8.dgn
Model:ROW -Plot Plan 1 3/30/2023 9:45:58 AM Byjshiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	35 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY



ENLARGEMENT B

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*

SCALE

0 25 50FEET

* A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

** ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF MARYLAND

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 8 SHEET NO. 12,14 CLAIM NO.
PROPERTY OWNER(S) THE COUNTY OF LACKAWANNA, *
GRANTOR(S) THE CONSERVATION FUND, A NON-PROFIT CORPORATION **

PLOT PLAN
SHEET 3 OF 4

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mka-pw.bentley.com:mka-pw-01\Documents\Projects\01261.251.253\MKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-8.dgn
Model:ROW - Plot Plan 2 3/30/2023 9:46:39 AM Byjishiner

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	36 OF 40

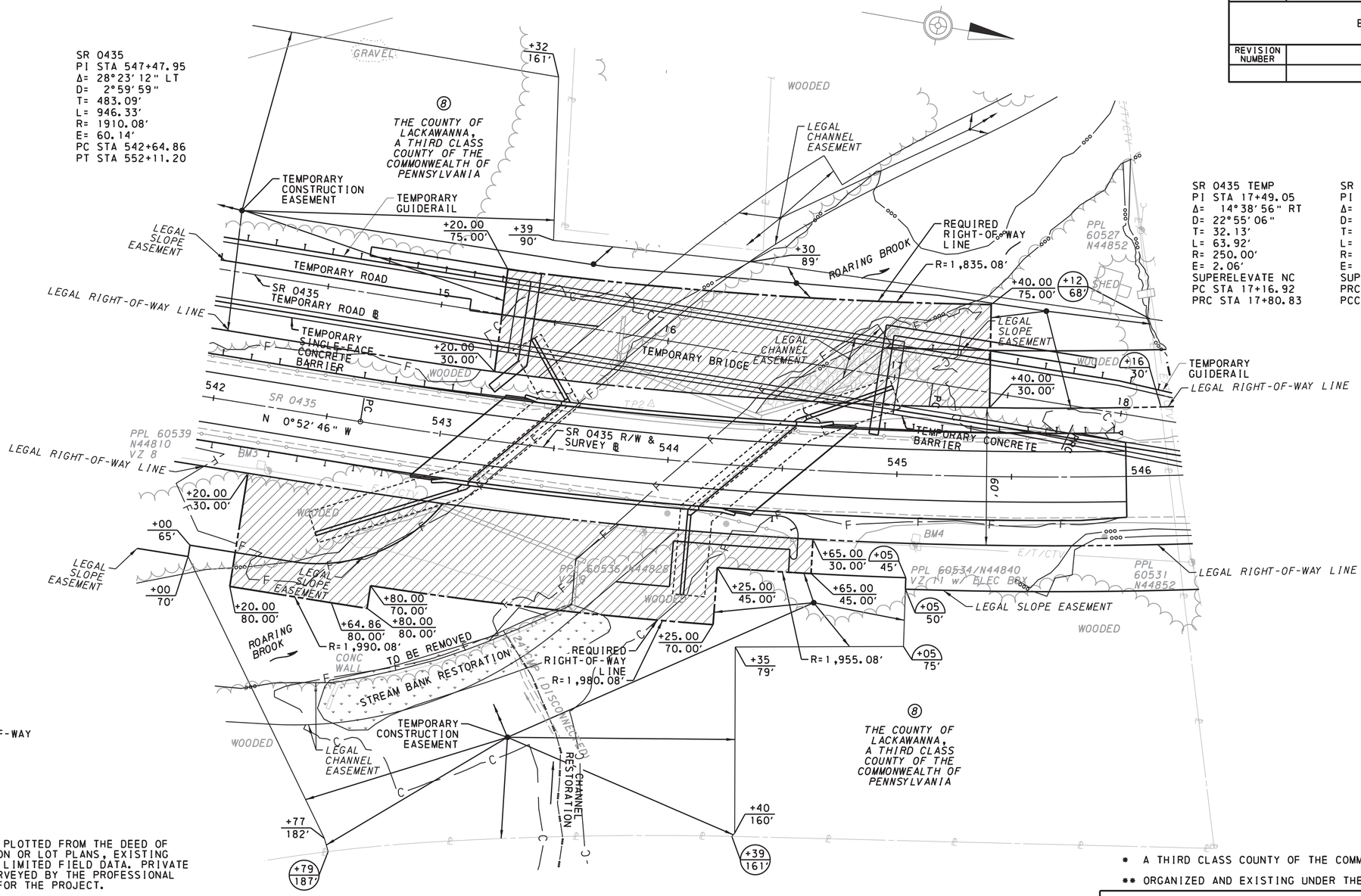
ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435
PI STA 547+47.95
Δ= 28°23'12" LT
D= 2°59'59"
T= 483.09'
L= 946.33'
R= 1910.08'
E= 60.14'
PC STA 542+64.86
PT STA 552+11.20

SR 0435 TEMP
PI STA 17+49.05
Δ= 14°38'56" RT
D= 22°55'06"
T= 32.13'
L= 63.92'
R= 250.00'
E= 2.06'
SUPERELEVATE NC
PC STA 17+16.92
PRC STA 17+80.83

SR 0435 TEMP
PI STA 18+37.07
Δ= 27°14'12" LT
D= 24°40'52"
T= 56.24'
L= 110.35'
R= 232.14'
E= 6.72'
SUPERELEVATE NC
PRC STA 17+80.83
PCC STA 18+91.19



ENLARGEMENT C

SCALE
0 25 50FEET

LEGEND

REQUIRED RIGHT-OF-WAY

+00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.
4. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*
5. *CHANNEL EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF THE COURSE OF THE CHANNEL. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER.*

* A THIRD CLASS COUNTY OF THE COMMONWEALTH OF PENNSYLVANIA

** ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF MARYLAND

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 8 SHEET NO. 13 CLAIM NO.
PROPERTY OWNER(S) THE COUNTY OF LACKAWANNA, *
GRANTOR(S) THE CONSERVATION FUND, A NON-PROFIT CORPORATION **

PLOT PLAN
SHEET 4 OF 4

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

File:pw:\\mkg-pw.bentley.com:mkg-pw-01\Documents\Projects\01261.251_253\WKA\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-8.dgn
ModelsROW -Plot Plan 3 3/30/2023 9:47:23 AM Byjshiner

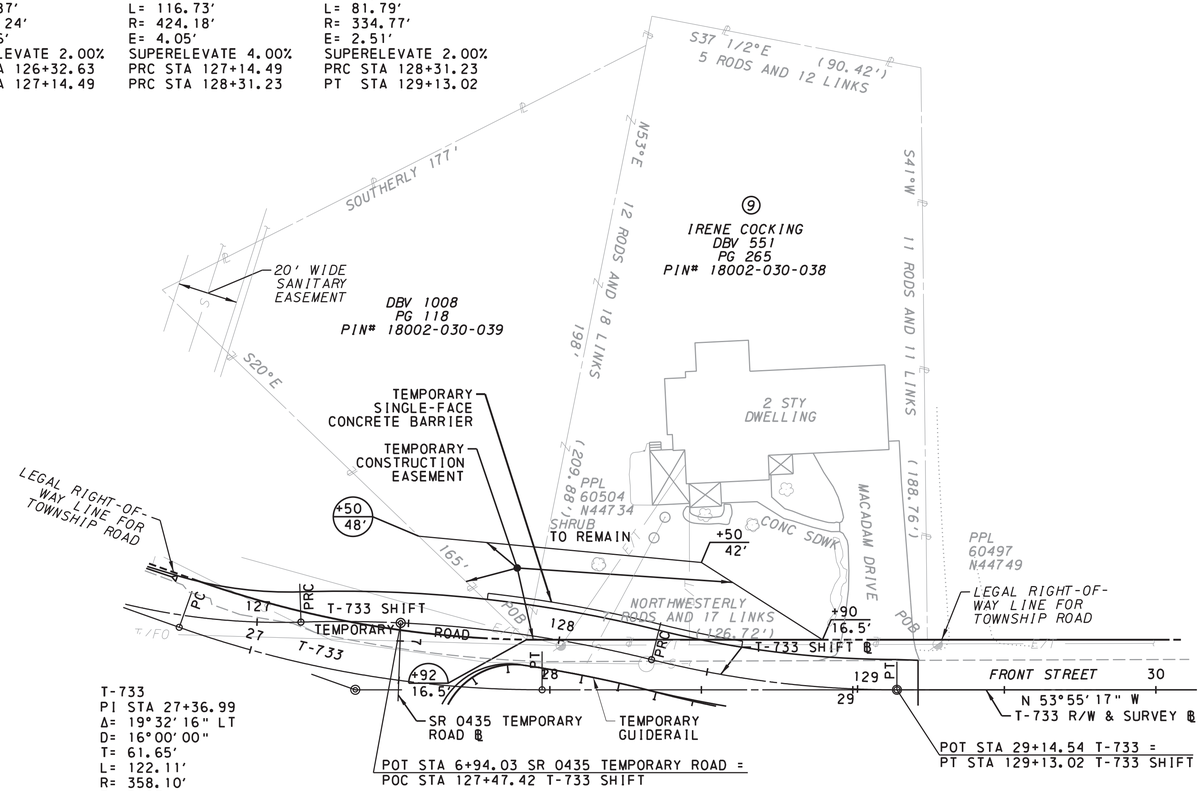
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	37 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

T-733
SHIFT-1
PI STA 126+74.04
Δ= 21°17'51" LT
D= 26°00'54"
T= 41.41'
L= 81.87'
R= 220.24'
E= 3.86'
SUPERELEVATE 2.00%
PC STA 126+32.63
PRC STA 127+14.49

T-733
SHIFT-2
PI STA 127+73.23
Δ= 15°46'04" RT
D= 13°30'27"
T= 58.74'
L= 116.73'
R= 424.18'
E= 4.05'
SUPERELEVATE 4.00%
PRC STA 127+14.49
PRC STA 128+31.23

T-733
SHIFT-3
PI STA 128+72.33
Δ= 13°59'55" LT
D= 17°06'53"
T= 41.10'
L= 81.79'
R= 334.77'
E= 2.51'
SUPERELEVATE 2.00%
PRC STA 128+31.23
PT STA 129+13.02



T-733
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

GRANTOR(S)	**
DEED BOOK	1008
PAGE	118
DATE OF DEED	7.09.1980
DATE OF RECORD	7.10.1980
CONSIDERATION	$4,500.00
TAX STAMPS	$45.00
PARCEL ID:	18002-030-039

GRANTOR(S)	***
DEED BOOK	551
PAGE	265
DATE OF DEED	8.22.1957
DATE OF RECORD	8.23.1957
CONSIDERATION	$1.00
TAX STAMPS	$15.00
PARCEL ID:	18002-030-038

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	36,032
ADVERSES	-
LEGAL R/W	-
EFFECTIVE	36,032
TOTAL REQ'D R/W	-
TOTAL RESIDUE	36,032
RESIDUE LT	36,032
RESIDUE RT	-

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	-
TEMPORARY CONSTRUCTION EASEMENT	2,685
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

** ROMAYNE E. KRIEGER, WIDOW

*** GEORGE C. SMITH AND LOIS M. SMITH, HIS WIFE

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 9 SHEET NO. 14 CLAIM NO.
PROPERTY OWNER(S) IRENE COCKING
GRANTOR(S) SEE ABOVE

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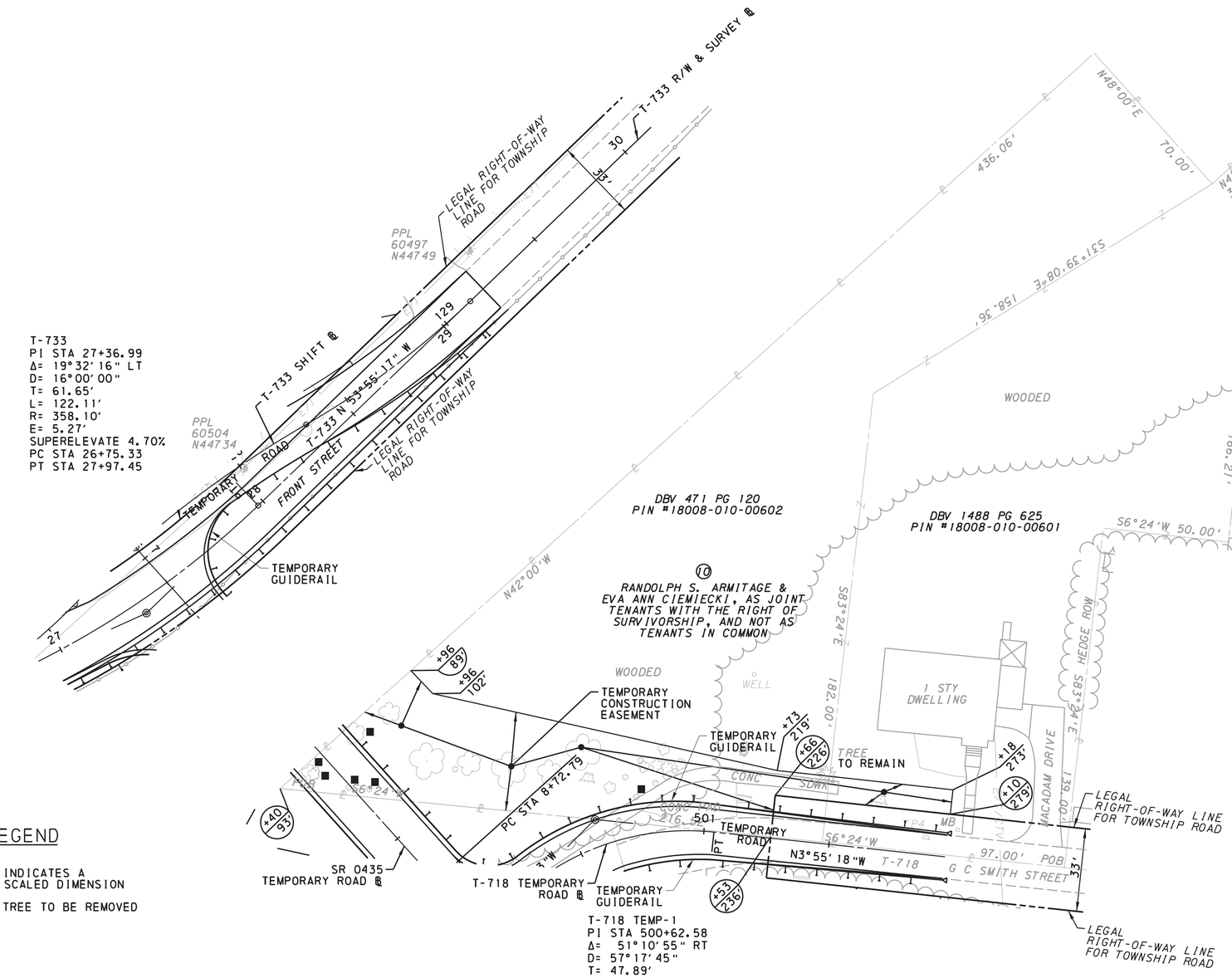
Model:ROW -Plot Plan 8/7/2023 9:45:45 AM By:mark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	38 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



T-733
PI STA 27+36.99
Δ= 19°32'16" LT
D= 16°00'00"
T= 61.65'
L= 122.11'
R= 358.10'
E= 5.27'
SUPERELEVATE 4.70%
PC STA 26+75.33
PT STA 27+97.45

T-718 TEMP-1
PI STA 500+62.58
Δ= 51°10'55" RT
D= 57°17'45"
T= 47.89'
L= 89.33'
R= 100.00'
E= 10.88'
SUPERELEVATE VARIES
PC STA 500+14.68
PT STA 501+04.01

LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

■ TREE TO BE REMOVED

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839

Δ *THE PROPERTY LINES AND CALCULATED AREA SHOWN BASED ON SUBDIVISION PLAN, TITLED "TRANSFER OF LANDS BETWEEN CIEMIECKI AND ELMHURST TOWNSHIP SEWER AUTHORITY", PREPARED BY CECO ASSOCIATES INC., RECORDED IN THE LACKAWANNA COUNTY RECORDER OF DEEDS OFFICE AS MAP BOOK 6A PG 3346.*

* *AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP*

** *ELMHURST TOWNSHIP SEWER AUTHORITY*

*** *ROBERT E. ANDERSON & AUDREY L. ANDERSON, HIS WIFE*

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 10 SHEET NO. 14 CLAIM NO.
PROPERTY OWNER(S) RANDOLPH S. ARMITAGE & EVA ANN CIEMIECKI, *
GRANTOR(S) SEE ABOVE

GRANTOR(S)	**
DEED BOOK	471
PAGE	120
DATE OF DEED	7.30.2001
DATE OF RECORD	7.31.2001
CONSIDERATION	$11,000.00
TAX STAMPS	$110.00
PARCEL ID:	18008-010-00602

GRANTOR(S)	***
DEED BOOK	1488
PAGE	625
DATE OF DEED	10.10.1994
DATE OF RECORD	10.14.1994
CONSIDERATION	$99,000.00
TAX STAMPS	$990.00
PARCEL ID:	18008-010-00601

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	Δ 61,991
ADVERSES	-
LEGAL R/W	1,922
EFFECTIVE	60,069
TOTAL REQ'D R/W	-
TOTAL RESIDUE	60,069
RESIDUE LT	-
RESIDUE RT	60,069

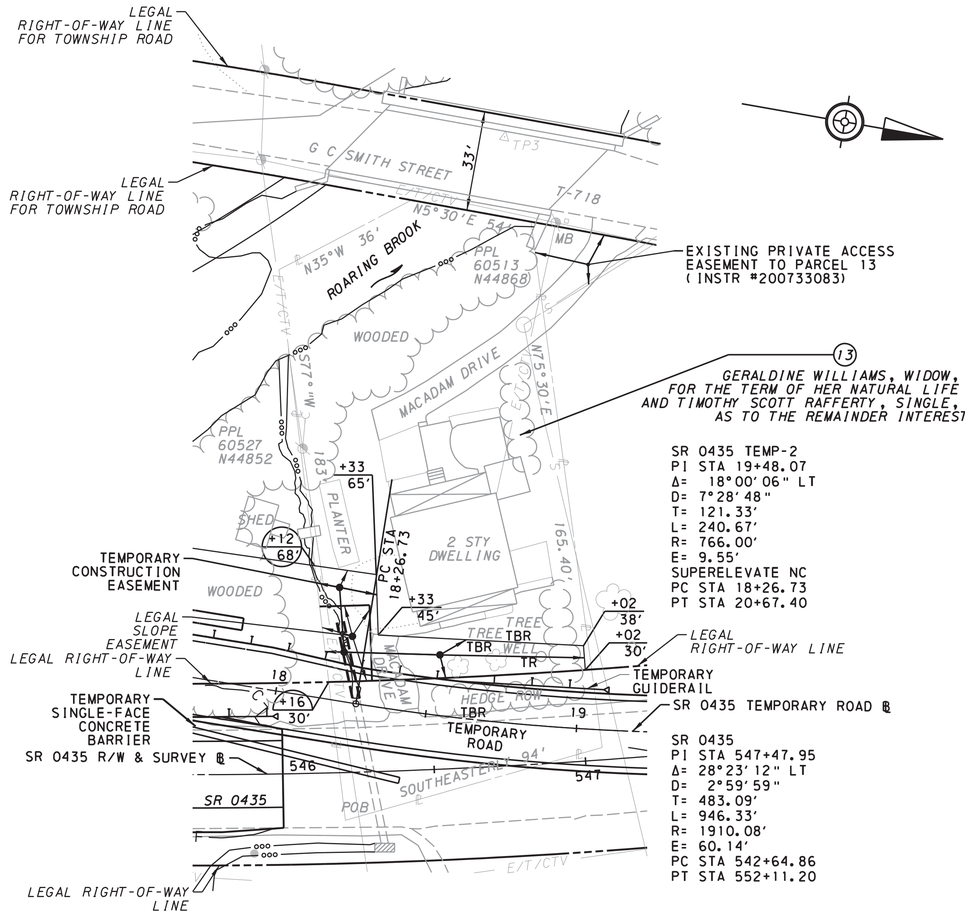
REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	-
TEMPORARY CONSTRUCTION EASEMENT	7,231
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

File:pw:\\cdrmaguire-pw.bentley.com:cdrmaguire-pw-01\Documents\Projects\01261.251_253\WK\DGN\Right_of_Way\01261-01 SR 0435 Site 251-253 RPLOT-10.dgn
Model:ROW -Plot Plan 8/8/2023 10:55:50 AM Bymark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	39 OF 40
ELMHURST TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



LEGEND

+00 / 50'	INDICATES A SCALED DIMENSION
TBR	TO BE REMOVED
TR	TO REMAIN

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
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4. *SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.*

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517 — PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839 — PENNSYLVANIA

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 13 SHEET NO. 13 CLAIM NO.
PROPERTY OWNER(S) GERALDINE WILLIAMS, WIDOW, FOR THE TERM OF HER NATURAL LIFE ONLY, AND TIMOTHY SCOTT RAFFERTY, SINGLE, HER SON, AS TO THE REMAINDER INTEREST
GRANTOR(S) GERALDINE WILLIAMS, WIDOW

INSTR #	201813742
DATE OF DEED	7.13.2018
DATE OF RECORD	8.29.2018
CONSIDERATION	$1.00
TAX STAMPS	EXEMPT
PARCEL ID:	17020-010-012

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	15,752
ADVERSES	-
LEGAL R/W	3,094
EFFECTIVE	12,658
TOTAL REQ'D R/W	-
TOTAL RESIDUE	12,658
RESIDUE LT	12,658
RESIDUE RT	-

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	-
TEMPORARY CONSTRUCTION EASEMENT	1,470
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

SCALE 0 25 50 FEET

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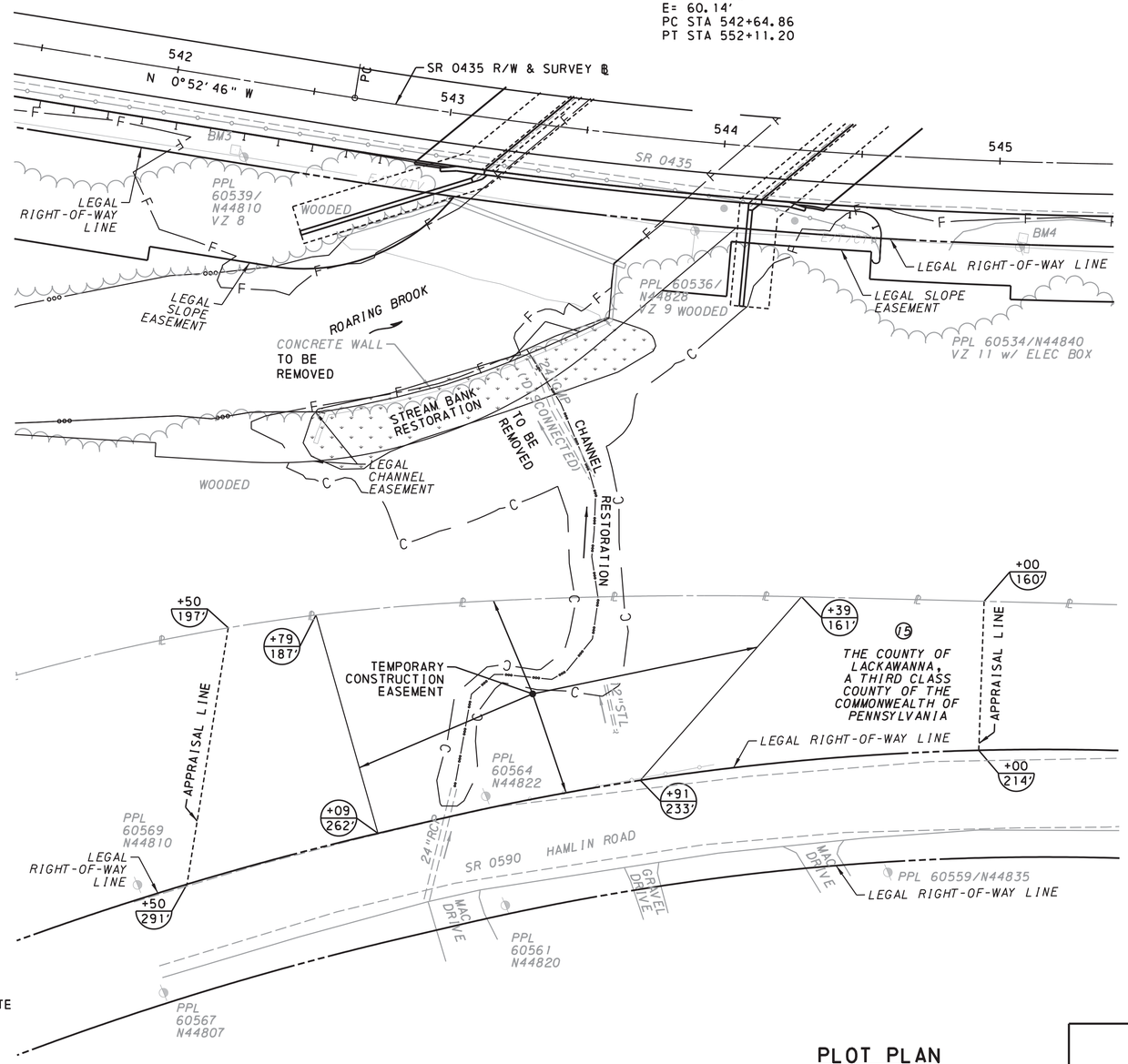
Mode:ROW - Plot Plan 8/8/2023 10:14:40 AM By:mark.blaukovitch

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	0435	251 R/W 253 R/W	40 OF 40

ELMHURST TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

SR 0435-4
PI STA 547+47.95
Δ= 28°23'12" LT
D= 2°59'59"
T= 483.09'
L= 946.33'
R= 1910.08'
E= 60.14'
PC STA 542+64.86
PT STA 552+11.20



LEGEND

+00 / 50' INDICATES A SCALED DIMENSION

NOTES:

1. PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.
2. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.
3. TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

* A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF PENNSYLVANIA

** CALCULATED AREA DETERMINED WITHIN APPRAISAL BOUNDARY LINES AND PROPERTY LINES AS SHOWN. EFFECTIVE AREA TO BE USED FOR APPRAISAL.

*** DEED NOT PLOTTABLE. THE PROPERTY HAS BEEN PLOTTED FROM RAILROAD VALUATION MAPS ENTITLED "RIGHT-OF-WAY AND TRACK MAP, THE ERIE & WYOMING VALLEY RR CO. OPERATED BY ERIE RAILROAD COMPANY, WYOMING DIVISION, HAVING REVISED PLAN NUMBER V-4-Pg/44.

**** A PARTNERSHIP FORMED FOR THE PURPOSE OF BUYING AND SELLING THE WYOMING BRANCH OF THE ERIE LACKAWANNA RAILWAY COMPANY

PLOT PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOEL M. SHINER — LAND SURVEYOR SU075517 — PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — BENJAMIN R. MARTZ — ENGINEER PE081839 — PENNSYLVANIA

RIGHT-OF-WAY CLAIM INFORMATION

COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 0435 SEC NO. 251/253 R/W ELMHURST TOWNSHIP LACKAWANNA COUNTY
PARCEL NO. 15 SHEET NO. 13 CLAIM NO.
PROPERTY OWNER(S) COUNTY OF LACKAWANNA, *
GRANTOR(S) JOHN J. WEIDNER & ROBERT ROMICH, ****

DEED BOOK	*** 1025
PAGE	592
DATE OF DEED	12.09.1980
DATE OF RECORD	3.24.1981
CONSIDERATION	$60,000.00
TAX STAMPS	$600.00
PARCEL ID:	N/A

AREAS	~~ACRE~~/SF
DEED	-
CALCULATED	** 19,675
ADVERSES	-
LEGAL R/W	-
EFFECTIVE	19,675
TOTAL REQ'D R/W	-
TOTAL RESIDUE	19,675
RESIDUE LT	-
RESIDUE RT	19,675

REQUIRED AREA	~~ACRE~~/SF
RIGHT OF WAY	-
TEMPORARY CONSTRUCTION EASEMENT	9,918
VERIFICATION DATE	8.7.2023
DRAWN BY	CDR MAGUIRE

0 25 50 FEET
SCALE

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ITEM 9000-0020 TEMPORARY RAILROAD CROSSING

DESCRIPTION - This work is the construction, maintenance, and removal of a temporary grade crossing of the Delaware Lackawanna Railroad, including all associated temporary signals. Also included with this item is the design, construction, maintenance, and removal/restoration of the temporary railroad track relocation necessary for staging of the culvert reconstruction (L-404).

NOTIFICATION –

Contact the railroad representative to make all arrangements unless otherwise directed. The appropriate railroad representative contact information is provided below:

Lori Ransom, General Superintendent
Delaware Lackawanna Railroad Co, Inc
280 Cliff Street, 3rd Floor
Scranton, PA 18503
(570) 343-4580
lransom@gvtrail.com

Tom Madej
Delaware Lackawanna Railroad Co, Inc
280 Cliff Street, 3rd Floor
Scranton, PA 18503
(716) 474-3647
tcm@gvtrail.com

Contact the Delaware Lackawanna Railroad upon award of this contract to arrange a pre-construction meeting. This meeting is required to coordinate all necessary details regarding the installation, use, and maintenance of the temporary grade crossing.

Contact the Delaware Lackawanna Railroad two weeks prior to any work so the Delaware Lackawanna Railroad can schedule a representative to inspect the crossing site prior to the temporary grade crossing installation. Coordinate any necessary track outages needed for the installation of the temporary crossing.

CONSTRUCTION –

Construct the crossing in accordance with PENNDOT Publication 408 Specifications, approved construction drawings, as directed by the Delaware Lackawanna Railroad, and as specified herein. Construction of the crossing must be completed by a contractor approved by the Pennsylvania Northeast Regional Railroad Authority (PNRRA).

Acceptable railroad contractors for temporary crossing surface work:

Tartaglia Railroad Services
5867 East Molloy Road
Syracuse, New York 13211-2099
Main Contact: Bob Wyman
Office Phone: 315-455-0100
Email: office@tartagliarail.com

Amtrac of Maryland
9436 Earley Drive
Hagerstown, MD 21740
Main Contact: Bob Matthews

Office Phone: 301-797-3730
Email: rmatthews@amtracmd.com

Acceptable railroad contractors for temporary signals:

Diamondback Signal
5965 Exchange Drive
Sykesville, MD 21784
Main Contact: Rob Hensel
Mobile Phone: 716-244-1502
Email: rhensel@diamondbacksignal.com

R. J. Corman Railroad Group
P.O. Box 788
101 RJ Corman Dr.
Nicholasville, KY 40356
Phone: 859-881-7521

Keep all debris and materials off the railroad tracks and outside 15' from the centerline of track at all times. Do not store equipment and/or vehicles in the track area, defined as 15' on either side of centerline of track.

Coordinate with the railroad representative for railroad flagging needed when contractor is on Delaware Lackawanna Railroad property.

Rail joints are to be located outside of the temporary roadway crossing area (including lanes and shoulders) and a minimum of 15'-0" from the end of crossing timbers. Replace rails as necessary if existing rail joints do not meet the criteria specified above.

The contractor is responsible for maintenance of the temporary crossing during its use.

The temporary crossing must be removed when no longer in use, and the impacted railroad property restored to existing conditions. Removal operations must be conducted by a qualified subcontractor approved by the railroad. Removal and disposal of waste material must comply with all environmental regulations and contract specific provisions. Preserve the existing rails and replace all timber ties within the limits specified on the contract plans.

Upon completion of the project, all temporary crossing materials (signals and temporary timber panels) will be retained by the Railroad. Coordinate with the railroad representative to ensure proper transfer of ownership and delivery of materials to the directed location of storage.

Signal materials and signal installation must be in accordance with MUTCD, State, and Railroad standards. All flashing light signals to be light emitting diodes (LED). Signal plans must meet final approval of PennDOT before the project begins.

Coordinate with the railroad to confirm the conceptual temporary track alignment shown on the Traffic Control Plans. Develop the final temporary track horizontal and vertical alignment to satisfy horizontal clearance requirements for the culvert staging, as shown on structure plans L-404. Submit the intended temporary track layout, including all geometry and materials, to the railroad for approval prior to initiating construction.

MEASUREMENT AND PAYMENT – Lump Sum

Includes coordination, construction, maintenance, and removal of the temporary crossing. There will be no separate or additional payment made for coordination with the Delaware Lackawanna Railroad, other related entities or any other appurtenant work and materials associated with the temporary grade

crossing. The lump sum cost includes temporary signals necessary to control traffic at the railroad crossing.

Temporary crossing materials will be retained by the Railroad upon completion of the project.

Design and construction of the temporary track relocation is included with this item.