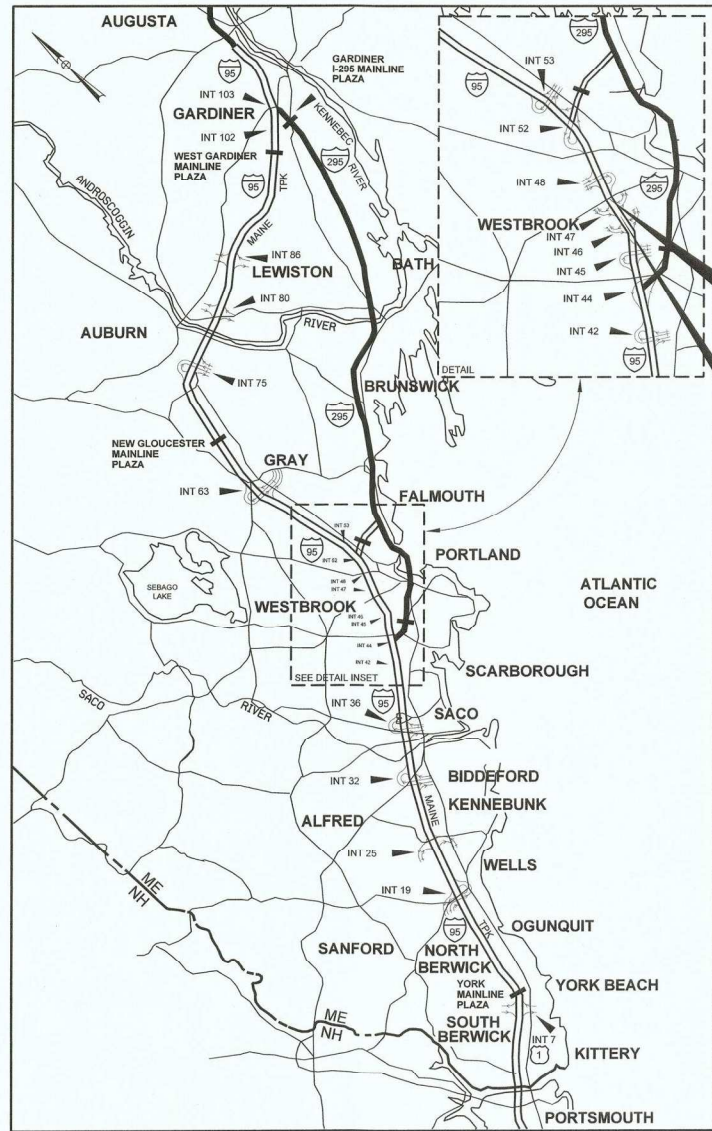


Date: 10/12/2018

Filename: 000_Master Title Sheet.dgn



LOCATION MAP

CONTRACT 2019.09
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
(MM 47.9)

CONTRACT 2019.09
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
(MM 46.7)



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
ROBERT D. STONE, VICE CHAIR
MICHAEL J. CIANCHETTE, MEMBER
JOHN E. DORITY, MEMBER
ANN R. ROBINSON, MEMBER
THOMAS J. ZUKE, MEMBER
KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2019.09 BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS MILE 46.7 BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS MILE 47.9

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CONTRACT 2019.09

APPROVED:
MAINE TURNPIKE AUTHORITY

Peter S. Merfeld
PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER

10/15/18
DATE

Stephen R. Tartre
STEPHEN R. TARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE

10/19/18
DATE

HNTB



Roland A. Lavallee
ROLAND A. LAVALLEE P.E., PLS.
VICE PRESIDENT
DIRECTOR OF OPERATIONS

10/12/18
DATE



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

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KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

PART I BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS MILE 46.7

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56-121	STRUCTURAL PLANS

Date:10/18/2018

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
201.11	Clearing		AC	1.5		1.5
202.10	Removing Existing Superstructure Property of Contractor - Stroudwater	630 CY	LS		1	1
202.12	Removing Existing Structural Concrete		CY		120	120
202.13	Removing Existing Railings Retained by Authority		LF		1272	1,272
202.15	Removing Existing Manhole or Catch Basin		EA	6		6
202.202	Removing Pavement Surface		SY	2500		2,500
202.206	Removing Rumble Strips		LF	630		630
203.20	Common Excavation		CY	21200		21,200
203.21	Rock Excavation		CY	100		100
203.25	Granular Borrow		CY	5350		5,350
203.35	Crushed Stone 3/4 - inch		CY		40	40
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY		170	170
206.10	Structural Earth Excavation - Piers		CY		1200	1,200
304.10	Aggregate Subbase Course - Gravel		CY	2700		2,700
304.14	Aggregate Base Course - Type A		CY	2300		2,300
403.207	Hot Mix Asphalt, 19 mm Nominal Maximum Size		Ton	4650		4,650
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	1300	290	1,590
403.212	Hot Mix Asphalt, 4.75 mm		Ton	110		110
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	1200	290	1,490
409.15	Bituminous Tack Coat, Applied		GAL	2150	220	2,370
419.30	Sawing Bituminous Pavement		LF	4050		4,050
470.08	Berm Dropoff Correction - Grindings		Ton	130		130
470.081	Berm Correction		LF	100		100
501.231	Dynamic Loading Test		EA		8	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF	2470		2,470
501.421	Steel H-beam Piles 57 lb/ft, in place		LF	2470		2,470
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF	1800		1,800
501.441	Steel H-beam Piles 63 lb/ft, in place		LF	1800		1,800
501.54	Steel H-beam Piles 117 lb/ft, delivered		LF	195		195
501.541	Steel H-beam Piles 117 lb/ft, in place		LF	195		195
501.90	Pile Tips		EA	72		72
501.91	Pile Splices		EA	44		44
501.92	Pile Driving Equipment Mobilization - Stroudwater		LS	1		1
502.219	Structural Concrete, Abutments and Retaining Walls - Stroudwater	250 CY	LS		1	1
502.239	Structural Concrete Piers - Stroudwater	420 CY	LS		1	1
502.249	Structural Concrete Piers (Placed Under Water)		CY	640		640
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - Stroudwater	920 CY	LS		1	1
502.264	Structural Concrete Parapets - Stroudwater	130 CY	LS		1	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB	463000		463,000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	463000		463,000
503.17	Mechanical/Welded Splice		EA	2472		2,472
504.702	Structural steel fabricated and delivered, welded - Stroudwater	312600 LB	LS		1	1
504.71	Structural steel erection - Stroudwater	312600 LB	LS		1	1
505.08	Shear Connectors - Stroudwater	14592 EA	LS		1	1
506.9102	Zinc Rich Coating System (Shop Applied) - Stroudwater	230700 LB	LS		1	1
506.9105	Field Touch-Up of Existing Steel - Stroudwater	64900 LB	LS		1	1
507.091	Aluminum Bridge Railing, 1 Bar - Stroudwater	1220 LF	LS		1	1
508.14	High Performance Waterproofing Membrane - Stroudwater	3650 SY	LS		1	1
511.071	Cofferdam Pier 1 - NB - Stroudwater		LS		1	1
511.072	Cofferdam Pier 1 - SB - Stroudwater		LS		1	1
511.073	Cofferdam Pier 2 - NB - Stroudwater		LS		1	1
511.074	Cofferdam Pier 2 - SB - Stroudwater		LS		1	1
511.091	Temporary Earth Support Systems - Stroudwater		LS		1	1
514.06	Curing Box for Concrete Cylinders		EA	1		1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1500		1500
515.23	Anti-Graffiti Coating		SY	2050		2050
518.40	Epoxy Injection Crack Repair		LF	55		55
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	94		94
518.60	Repair of Vertical Surfaces < 8 inches		SF	136		136
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	4		4
523.52	Bearing Installation		EA	20		20
523.5303	Steel Bearings, Fixed, Rocker		EA	4		4
523.5304	Steel Bearings, Expansion, Rocker		EA	16		16
523.56	Clean and Paint Bearing		EA	11		11
523.561	Clean, Paint, and Reset Bearing		EA	13		13
524.301	Temporary Structural Support - Jacking - Stroudwater		LS	1		1
524.302	Temporary Structural Support - Girders - Stroudwater		LS	1		1
524.303	Temporary Structural Support - Braces - Stroudwater		LS	1		1

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
524.40	Protective Shielding - Steel Girders		SY		2760	2760
526.301	Temporary Concrete Barrier, Type I - Stroudwater	4180 LF	LS	1		1
526.3011	Temporary Concrete Barrier, Type I: To Remain - Stroudwater	560 LF	LS	1		1
526.304	Temporary Concrete Barrier, Anchored - Stroudwater	600 LF	LS		1	1
527.341	Work Zone Crash Cushion - TL3		UNIT	2		2
603.155	12 inch Reinforced Concrete Pipe - Class III		LF	170		170
603.165	15 inch Reinforced Concrete Pipe - Class III		LF	65		65
603.175	18 inch Reinforced Concrete Pipe - Class III		LF	77		77
603.28	Concrete Collar		EA	3		3
604.09	Catch Basin Type B1		EA	4		4
604.15	Manhole		EA	1		1
604.246	Catch Basin Type F5		EA	1		1
604.26	Catch Basin Type B5		EA	5		5
604.40	Secure Catch Basin Grate		EA	11		11
605.11	12" Underdrain Type C		LF	140		140
606.1301	31" W-Beam Guardrail - Mid-Way Splice (7' Steel Post, 8" Offset Blocks, Single Faced)		LF	1900		1,900
606.1305	31" W-Beam Guardrail - Mid-Way Splice Flared Terminal (31" Height)		EA	2		2
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail		EA	2		2
606.1723	Bridge Transition - Type III		EA		4	4
606.353	Reflectorized Flexible Guardrail Marker		EA	2		2
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker		EA	6		6
606.3622	Guardrail Adjust - Double Rail		LF	190		190
607.17	Chain Link Fence - 6 foot		LF		220	220
609.15	Sloped Curb Type I		LF		1350	1,350
610.08	Plain Riprap		CY	23	1350	1,373
610.18	Stone Ditch Protection		CY	72	45	117
610.181	Temporary Stone Check Dam		CY	40		40
613.319	Erosion Control Blanket		SY	2150		2,150
615.07	Loam		CY	1850		1,850
618.14	Seeding Method Number 2		UNIT	150		150
619.1201	Mulch - Plan Quantity		UNIT	150		150
619.1202	Temporary Mulch		LS	1		1
620.58	Erosion Control Geotextile		SY	310	710	1,020
627.712	White or Yellow Pavement Marking Line		LF	15900		15,900
627.73	Temporary 6 Inch Pavement Marking Tape		LF	1800		1,800
627.77	Removing Existing Pavement Marking		SF	20100		20,100
627.78	Temporary Painted Pavement Marking Line, White or Yellow		LF	31500		31,500
629.05	Hand Labor, Straight Time		HR	20		20
631.10	Air Compressor (Including Operator)		HR	20		20
631.11	Air Tool (Including Operator)		HR	20		20
631.12	All Purpose Excavator (Including Operator)		HR	20		20
631.172	Truck - Large (Including Operator)		HR	20		20
631.32	Culvert Cleaner (Including Operator)		HR	20		20
631.36	Foreman		HR	20		20
645.272	Regulatory, Warning and Bridge Number Signs, Type 1 - Supplied By Authority		EA	2		2
645.501	Remove and Reset Mainline Sign No. 1		LS	1		1
645.502	Remove and Reset Mainline Sign No. 2		LS	1		1
645.503	Remove and Reset Mainline Sign No. 3		LS	1		1
645.504	Remove and Reset Mainline Sign No. 4		LS	1		1
645.505	Remove and Reset Mainline Sign No. 5		LS	1		1
645.506	Remove and Reset Mainline Sign No. 6		LS	1		1
645.507	Remove and Reset Mainline Sign No. 7		LS	1		1
645.508	Remove and Reset Mainline Sign No. 8		LS	1		1
652.30	Flashing Arrow		EA	2		2
652.312	Type III Barricades		EA	2		2
652.33	Drum		EA	250		250
652.34	Cone		EA	250		250
652.35	Construction Signs		SF	1150		1,150
652.361	Maintenance of Traffic Control Devices		LS	0.5	0.50	1
652.41	Portable-Changeable Message Sign		EA	2		2
652.45	Truck Mounted Attenuator		CD	65		65
652.451	Automated Trailer Mounted Speed Limit Sign		CD	65		65
656.50	Baled Hay, In Place		EA	20		20
656.60	Temporary Berms		LF	500		500
656.62	Temporary Slope Drains		LF	100		100
656.632	30 Inch Temporary Silt Fence		LF	4900		4,900
656.64	Boom Supported Floating Silt Fence		LF	500		500
659.10	Mobilization		LS	0.5	0.5	1

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Scale: **NOT TO SCALE**

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS

ESTIMATED QUANTITIES

SHEET NUMBER: EQ-01

CONTRACT: 2019.09

2 OF 121

GENERAL NOTES:

- ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MaineDOT) STANDARD DETAILS HIGHWAYS AND BRIDGES LATEST REVISION AND MDT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INCLUDED IN THESE PLANS.
- ALL EXISTING DELINEATOR AND MILE MARKER POSTS SHALL BE REMOVED AND RESET UPON COMPLETION OF THE CONTRACT. PAYMENT FOR RESETTING GUARDRAIL DELINEATOR POSTS WILL BE MADE UNDER ITEM 606.354. DELINEATOR POSTS SUPPLIED BY THE CONTRACTOR SHALL BE PAID FOR UNDER ITEM 606.353.
- THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.
- GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE BIDDER'S AND CONTRACTOR'S USE. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION. THE AUTHORITY SHALL NOT BE RESPONSIBLE FOR THE BIDDER'S AND CONTRACTOR'S INTERPRETATIONS OF, OR CONCLUSIONS DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS CONTAINED IN THE PLAN SET PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.
- CLEARING LIMITS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL CLEARING LIMITS WILL BE APPROVED BY THE RESIDENT.
- REMOVAL OF SINGLE TREES, STUMPS, OR SHRUBS IS INCIDENTAL TO ITEM 201.11.
- THE U.S. ARMY CORPS OF ENGINEERS AND THE STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMIT FOR THE STROUDWATER RIVER OVERPASS PROJECT ARE INCLUDED AS PART OF THIS CONTRACT (SEE SPECIFICATIONS). THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THESE PERMITS.
- RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

EARTHWORK NOTES:

- THE NORMAL GRUBBING WIDTH IN THE FILLS WHEN SUBGRADE IS LESS THAN 5 FEET ABOVE EXISTING GROUND SHALL BE VARIABLE LEFT OR RIGHT. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6 INCHES AND 12 INCHES IN WOODED AREAS.
- WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE AND IN ACCORDANCE WITH ALL ENVIRONMENTAL REGULATIONS.
- EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 192.6.65D-652 (CONSTRUCTION STANDARDS FOR EXCAVATION).
- REMOVAL OF EXISTING PAVEMENT, WITHIN THE AREAS OF FULL DEPTH PAVEMENT AND FULL DEPTH RECONSTRUCTION, SHALL BE PAID FOR AS COMMON EXCAVATION. EXISTING PAVEMENT THICKNESS HAS BEEN ESTIMATED TO BE 10 INCHES.
- FILL/BORROW SHALL BE COMPACTED TO 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 98% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR FOR AREAS OF BACKFILL MATERIAL BEHIND ABUTMENTS AND RETAINING WALLS, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 95% IN ALL OTHER LOCATIONS.

DRAINAGE NOTES:

- NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT. ABANDONED STRUCTURES TO REMAIN SHALL BE PLUGGED WITH BRICK AND MORTAR. THIS WORK SHALL BE INCIDENTAL TO SECTION 604 ITEMS.
- INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
- ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.

SIGN NOTES:

- BRIDGE NO. SIGNS SHALL BE SUPPLIED BY THE MAINE TURNPIKE AUTHORITY. THE CONTRACTOR SHALL SUPPLY THE U-CHANNEL POST AND SHALL INSTALL THE SIGNS. PAYMENT SHALL BE UNDER ITEM 645.272.

UTILITY NOTES:

- EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 PRIOR TO THE START OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT MAY COORDINATE WITH DIG SMART.
- SEE SPECIFICATIONS FOR REQUIRED UTILITY COORDINATION.

GUARDRAIL NOTES:

- AT THE END OF EACH DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.
- CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS, UNLESS NOTED OTHERWISE.
- ALL GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE STRUCTURES.
- SEE DOWNSPOUT DETAILS, SHEET CD-02 FOR THE SHOULDER PAVEMENT LIMITS FROM THE BRIDGE JOINT TO THE STONE DOWNSPOUT.
- GUARDRAIL REMOVED AND NOT RESET OR STACKED SHALL BE INCIDENTAL TO CONTRACT ITEMS AND INCLUDE ALL REMOVAL, DISPOSAL, EQUIPMENT, AND LABOR NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
- HOLES CREATED BY GUARDRAIL REMOVAL WILL BE FILLED AND COMPACTED WITH APPROVED MATERIALS AS DIRECTED BY THE RESIDENT. PAYMENT TO BE INCIDENTAL TO THE GUARDRAIL ITEMS.

EROSION CONTROL NOTES:

- THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT UNDER THE APPROPRIATE BID ITEMS.
- 4" LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.
- ALL SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO. 2.
- MULCH SHALL BE APPLIED IN ALL SEEDED AREAS, EXCEPT WHERE EROSION CONTROL BLANKET IS SPECIFIED.
- ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.
- TEMPORARY BERMS AND TEMPORARY SLOPE DRAINS ARE ANTICIPATED AT ALL STONE DOWNSPOUT LOCATIONS WHILE GROWTH IS BEING ESTABLISHED ON SIDE SLOPES AND PRIOR TO RIPRAP INSTALLATION.
- TEMPORARY EROSION CONTROL BLANKET, ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND 2:1 SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. LIMITS OF THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.
- PLACE A TWO FOOT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ON THE SIDE SLOPES ALONG THE TOP OF THE RIPRAP AND BEHIND THE WINGWALLS.

EARTHWORK SUMMARY

COMMON EXCAVATION FOR ESTIMATE	Northbound	Southbound	Median	
COMMON EXCAVATION (FROM CROSS SECTIONS)	12,677	7,098	495	
GRUBBING IN FILL	428	465	0	
TOTAL COMMON EXCAVATION (for estimate)	13,105	7,563	495	21,163
FILL FOR BORROW CALCULATIONS				
COMMON FILL (FROM CROSS SECTIONS)	4,339	3,277	0	
GRUBBING IN FILL	428	465	0	
TOTAL FILL	4,767	3,742	0	8,509
AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS				
(1) TOTAL COMMON EXCAVATION	13,105	7,563	495	21,163
DEDUCTIONS:				
GRUBBING IN CUT	1,634	1,269	119	
GRUBBING IN FILL	428	465	0	
PAVEMENT SALVAGE (CUT & FILL)	817	800	0	
(2) TOTAL DEDUCTIONS	2,879	2,534	119	5,532
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	10,226	5,029	376	15,631
TOTAL AVAILABLE STRUCT. EXCAVATIONS	1,300	1,030	37	2,367
RIPRAP EXCAVATION	0	0	0	
TOTAL AVAILABLE NON-ROCK EXCAVATION	11,526	6,059	376	17,961
COMPUTATION FOR COMMON BORROW FOR ESTIMATE				
(3) TOTAL FILL	4,767	3,742	0	8,509
TOTAL AVAIL. NON-ROCK EXCAV.	11,526 x 0.90 =	10,373		
(4) TOTAL AVAILABLE EXCAVATION		10,373	5,453	338
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION		-5,606	-1,711	-338
IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED				
	5,606	1,711	338	7,656

MAINTENANCE OF TRAFFIC NOTES:

- EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION WORK ZONE SIGNS SHALL BE COVERED UP.
- IF THE WORK ZONE FOR MAINE CENTRAL RAILROAD BRIDGE IS NOT IN PLACE AT THE SAME TIME AS THE STROUDWATER BRIDGE WORKZONE, APPROPRIATE APPROACH SIGNING SHALL BE TEMPORARILY INSTALLED AS DIRECTED BY THE RESIDENT.
- CONTRACTOR MAY USE TEMPORARY PAVEMENT MARKING TAPE IN PLACE OF TEMPORARY MARKINGS DURING ALL PHASES OF CONSTRUCTION.
- PRIOR TO PHASE 1A, ANY DROPOFF FROM THE EXISTING MEDIAN SHOULDER GREATER THAN OR EQUAL TO 1/2" SHALL BE CORRECTED USING ITEM 470.08 - BERM DROPOFF CORRECTION - GRINDINGS OR ITEM 403.212 - HOT MIX ASPHALT, 4.75 mm NOMINAL MAXIMUM SIZE WHEN ADJACENT TO A PAVED MEDIAN CROSSOVER.

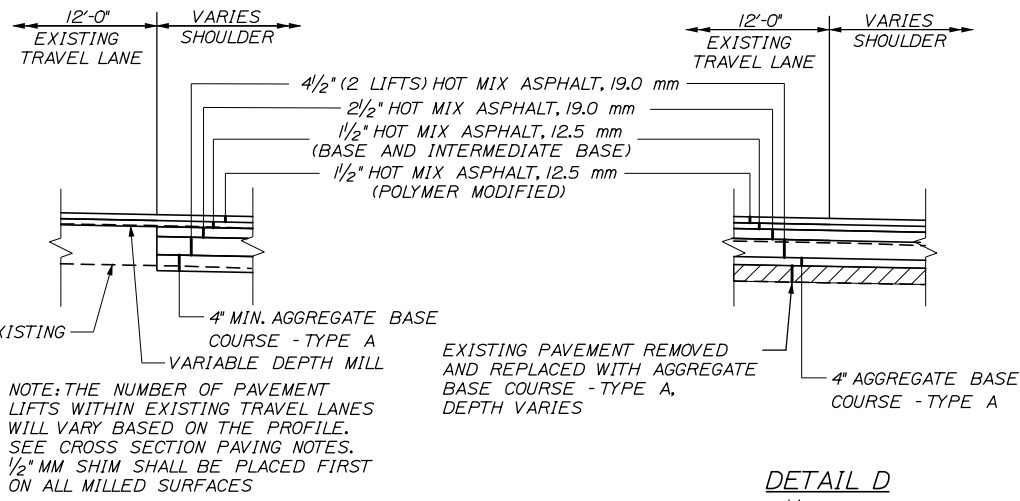
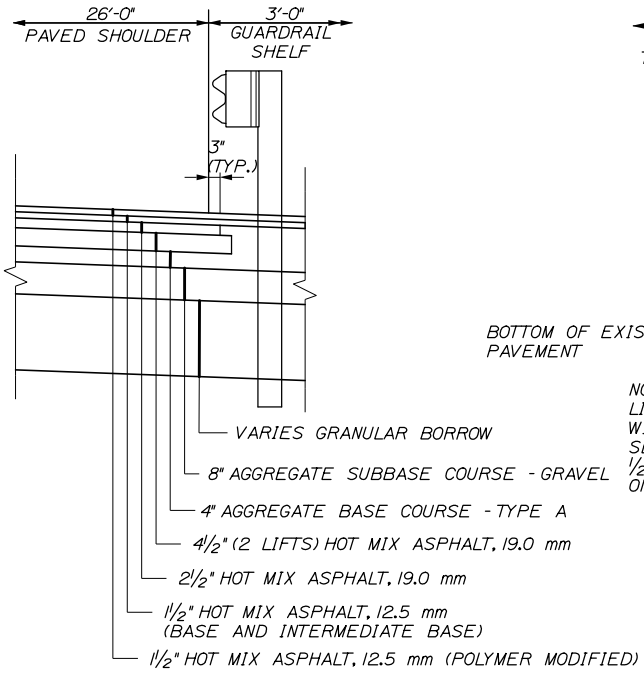
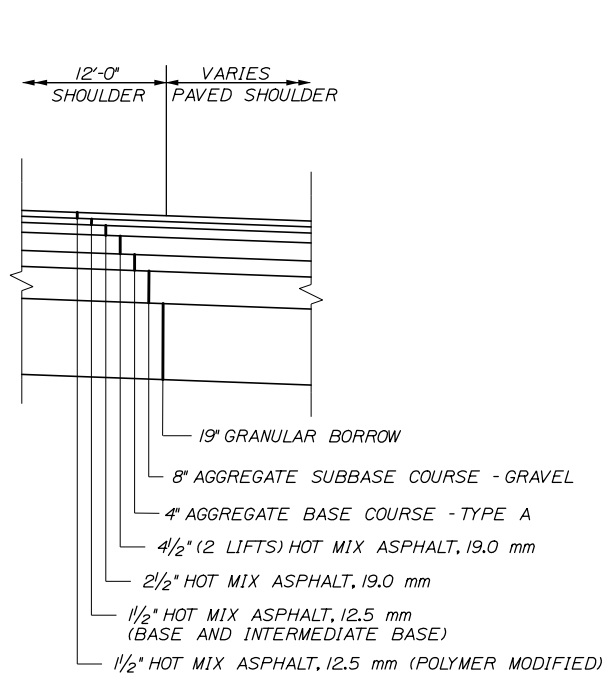
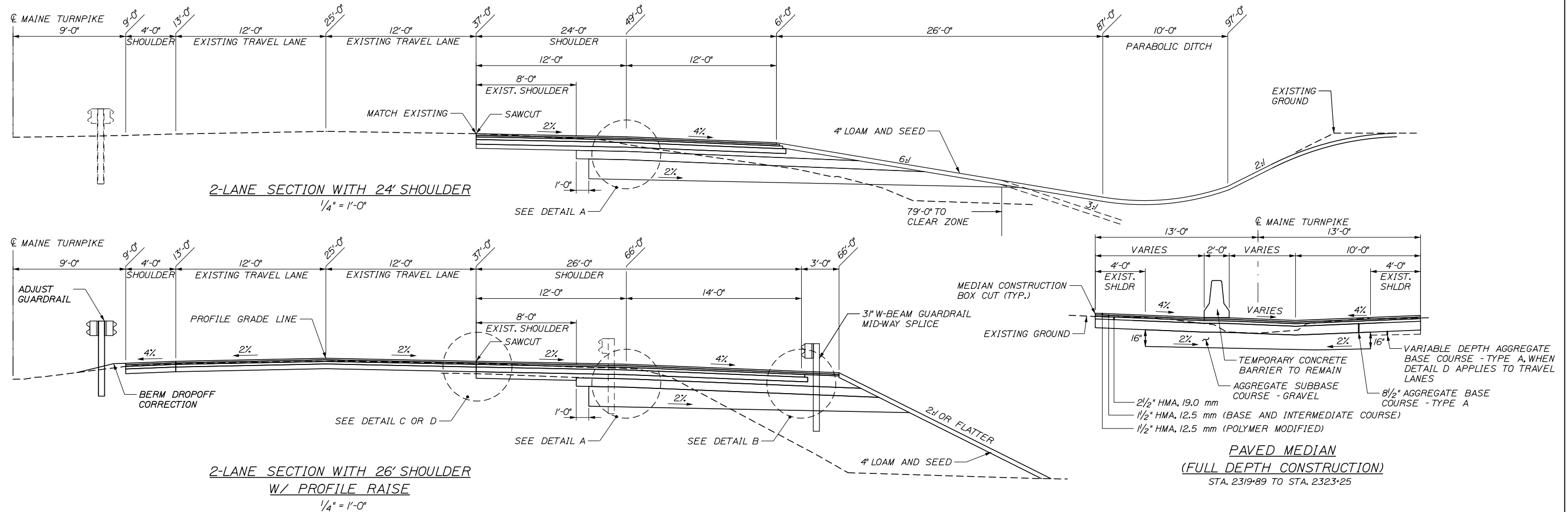
LIST OF ABBREVIATIONS

ABUT. - ABUTMENT	EQ. - EQUAL	P.S.I. - POUNDS per
ADDL. - ADDITIONAL	EXIST. - EXISTING	SQUARE INCH
ALT. - ALTERNATE	EXP. - EXPANSION	RDWY. - ROADWAY
APPROX. - APPROXIMATELY	F.F. - FAR FACE	SHLDR. - SHOULDER
BOT. - BOTTOM	JT. - JOINT	SB - SOUTHBOUND
BRG. - BEARING	MAX. - MAXIMUM	SF - SQUARE FEET
CL. - CLEAR	MEDOT - MAINE DEPARTMENT	SP. - SPACES
CL. - CENTERLINE	OF TRANSPORTATION	STA. - STATION
CONC. - CONCRETE	MIN. - MINIMUM	T.&B. - TOP & BOTTOM
CONSTR. - CONSTRUCTION	MTA - MAINE TURNPIKE AUTHORITY	TPKE. - TURNPIKE
C.Y. - CUBIC YARD	NB - NORTHBOUND	TYP. - TYPICAL
DEMO. - DEMOLITION	N.F. - NEAR FACE	U.O.N. - UNLESS
DIA. - DIAMETER	N.T.S. - NOT TO SCALE	OTHERWISE NOTED
EA. - EACH	PED. - PEDESTAL	VERT. - VERTICAL
EB - EASTBOUND	PGL - PROFILE GRADE LINE	WB - WESTBOUND
E.F. - EACH FACE	PL. - PLATE	W.P. - WORKING POINT
EL. - ELEVATION	PROP. - PROPOSED	WW - WINGWALL

Date: 10/18/2018

Filename: 003_General Notes.dgn

Scale: <p style="text-align: center; font-size: 1.2em;">NOT TO SCALE</p>	Designed by: <div style="text-align: center; font-size: 2em; font-weight: bold; margin: 10px 0;">HNTB</div>	HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909	 <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">THE GOLD STAR MEMORIAL HIGHWAY</div>	BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS GENERAL NOTES AND EARTHWORK SUMMARY SHEET NUMBER: GN-01 CONTRACT: 2019.09																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	Revision	By	Date					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.</th> </tr> <tr> <th> </th> <th>By</th> <th>Date</th> <th> </th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>BRG</td> <td>10\18</td> <td>Checked</td> <td>TJP</td> <td>10\18</td> </tr> <tr> <td>Drawn</td> <td>ERB</td> <td>10\18</td> <td>In Charge of</td> <td>RAL</td> <td>10\18</td> </tr> </tbody> </table>	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.							By	Date		By	Date	Designed	BRG	10\18	Checked	TJP	10\18	Drawn	ERB	10\18	In Charge of	RAL	10\18	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.</td> </tr> </table>	MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.		CONTRACT: 2019.09 SHEET NUMBER: GN-01 3 OF 121
No.	Revision	By	Date																																		
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.																																					
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Drawn	ERB	10\18	In Charge of	RAL	10\18																																
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.																																					



- TYPICAL SECTION NOTES:**
- A COATING OF HOT RUBBERIZED ASPHALT (ASTM D6690 TYPE IV) SHALL BE APPLIED ON THE SURFACE LIFT AT TRANSVERSE BUTT JOINTS AND LONGITUDINAL JOINTS EXCEPT WHERE THE NOTCH WEDGE IS USED.
 - BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LAYERS OF PAVEMENT AND ALL LONGITUDINAL AND TRANSVERSE JOINTS, EXCEPT IN THE SURFACE LIFT.
 - FOR BENCHING DETAIL SEE EROSION CONTROL DETAILS II.

Filename: 004_Typical Section.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, PE

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

TYPICAL SECTIONS

SHEET NUMBER: TYP-01

CONTRACT: 2019.09

4 OF 121

PHASE IA QUANTITIES

LEGEND

BWLL - BROKEN WHITE LANE LINE
 SWEL - SOLID WHITE EDGE LINE
 SYEL - SOLID YELLOW EDGE LINE
 TSSW - TEMPORARY SINGLE SOLID WHITE LINE
 TSSY - TEMPORARY SINGLE SOLID YELLOW LINE

ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE
 STA. 2316+74 RT. TO STA. 2319+74 RT.
 STA. 2316+74 LT. TO STA. 2319+74 LT.

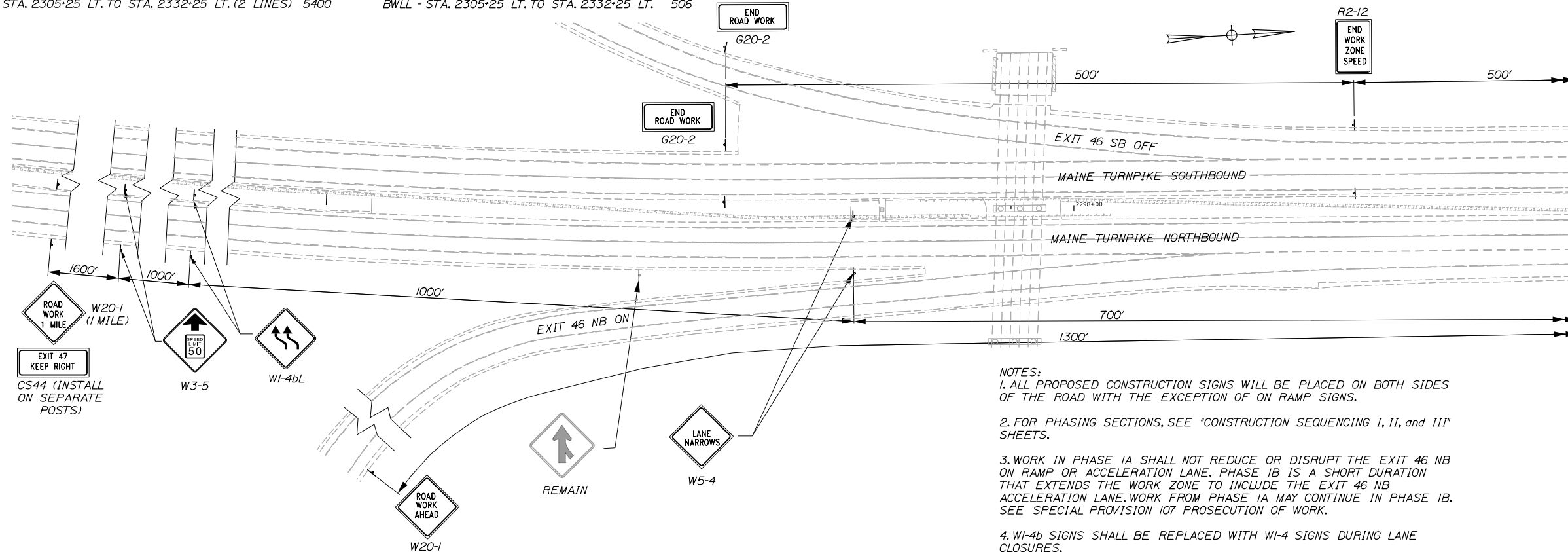
ITEM 526.306 TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY
 STA. 2310+91 RT. TO STA. 2316+74 RT.
 STA. 2319+74 RT. TO STA. 2330+60 RT.
 STA. 2306+50 LT. TO STA. 2316+74 LT.
 STA. 2319+74 LT. TO STA. 2331+14 LT.

ITEM 527.341 WORK ZONE CRASH CUSHIONS TL-3
 STA. 2310+91 RT. 1
 STA. 2331+14 LT. 1

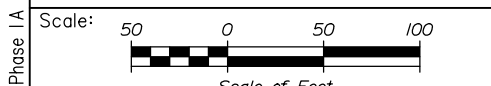
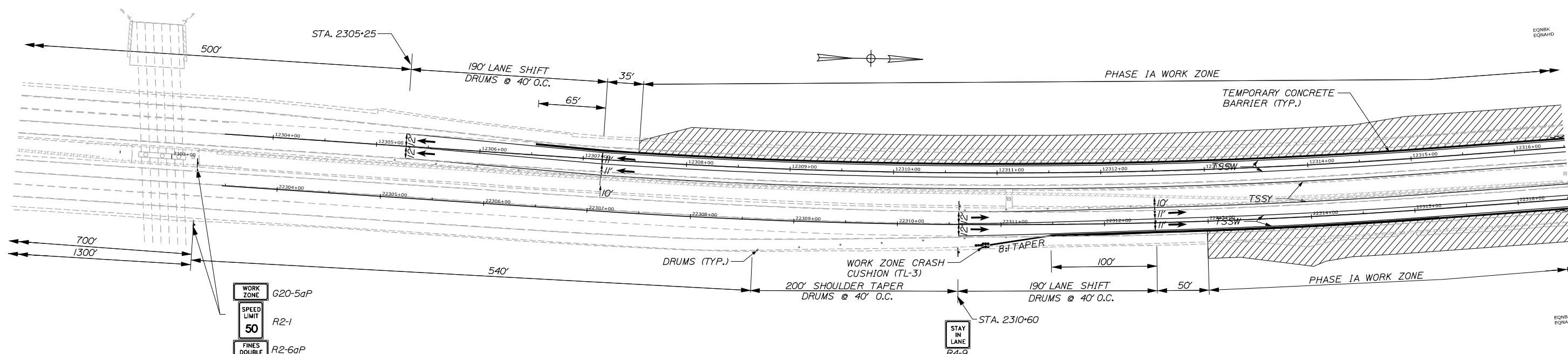
ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW LF
 NORTHBOUND
 TSSY - STA. 2310+60 RT. TO STA. 2332+50 RT. 2190
 TSSW - STA. 2310+60 RT. TO STA. 2332+50 RT. (2 LINES) 4380
 SOUTHBOUND
 TSSY - STA. 2305+25 LT. TO STA. 2332+25 LT. 2700
 TSSW - STA. 2305+25 LT. TO STA. 2332+25 LT. (2 LINES) 5400

ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS SF
 NORTHBOUND
 SYEL - STA. 2310+60 RT. TO STA. 2332+50 RT. 1095
 BWLL - STA. 2310+60 RT. TO STA. 2332+50 RT. 411
 SOUTHBOUND
 SYEL - STA. 2305+25 LT. TO STA. 2332+25 LT. 1350
 BWLL - STA. 2305+25 LT. TO STA. 2332+25 LT. 506

Date: 10/18/2018



- NOTES:**
1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 46 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXTENDS THE WORK ZONE TO INCLUDE THE EXIT 46 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
 4. W1-4b SIGNS SHALL BE REPLACED WITH W1-4 SIGNS DURING LANE CLOSURES.



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

No.	Revision	By	Date

	By	Date	Checked	By	Date
Designed	CDH	10\18	In Charge of	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

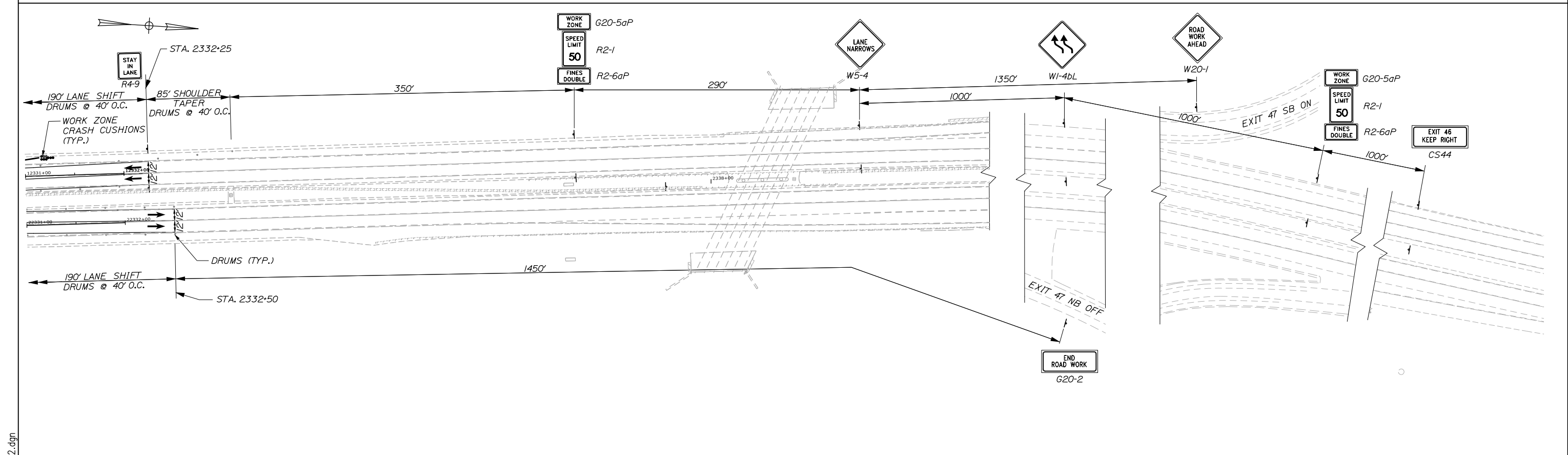
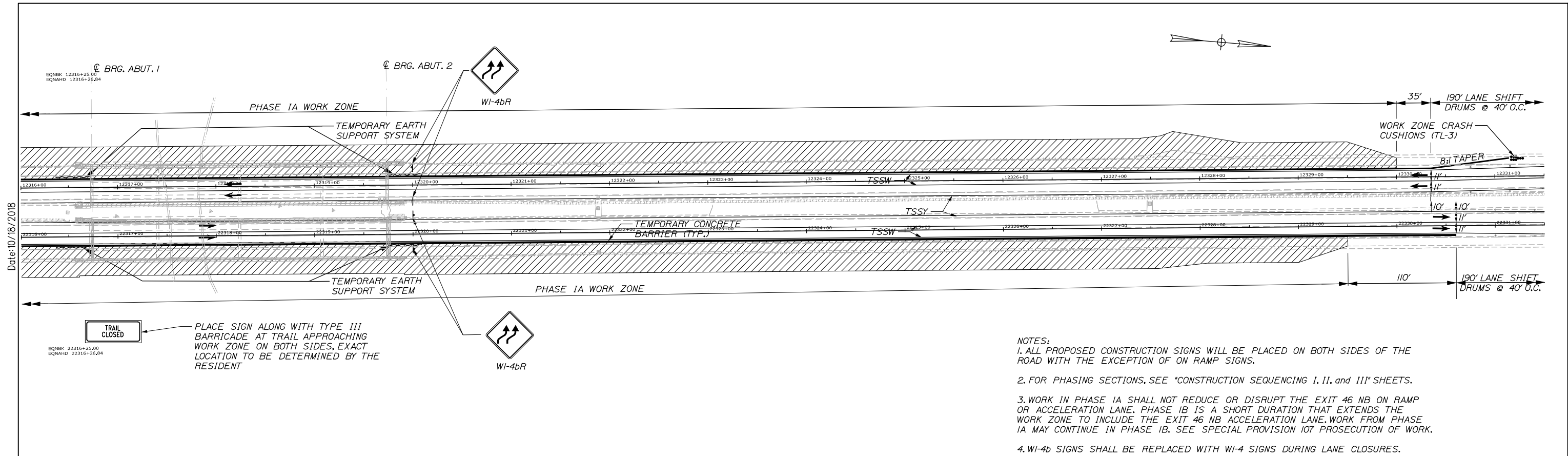
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IA

SHEET NUMBER: MOT-01
 5 OF 121

CONTRACT: 2019.09

Filename: 005_MOTPhase IA 1.dgn



Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MAINTENANCE OF TRAFFIC
PHASE IA

SHEET NUMBER: MOT-02
6 OF 121

CONTRACT: 2019.09

Date: 10/18/2018
EQNBK 22316+25,00
EQNAHD 22316+26,84
File name: 006_MOTPhase IA 2.dgn

PHASE IB QUANTITIES

LEGEND

BWLL - BROKEN WHITE LANE LINE
 SWEL - SOLID WHITE EDGE LINE
 SYEL - SOLID YELLOW EDGE LINE
 TSSW - TEMPORARY SINGLE SOLID WHITE LINE
 TSSY - TEMPORARY SINGLE SOLID YELLOW LINE

ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS SF

NORTHBOUND
 BWLL - STA. 2300+25 RT. TO STA. 2304+25 RT. 75
 BWLL - STA. 2307+10 RT. TO STA. 2310+60 RT. 66
 SYEL - STA. 2307+10 RT. TO STA. 2310+60 RT. 175
 TSSY - STA. 2310+60 RT. TO STA. 2312+50 RT. 95
 TSSW - STA. 2310+60 RT. TO STA. 2312+50 RT. (2 LINES) 190

ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE LS

STA. 2316+74 RT. TO STA. 2319+74 RT.
 STA. 2316+74 LT. TO STA. 2319+74 LT.

ITEM 526.306 TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY LS

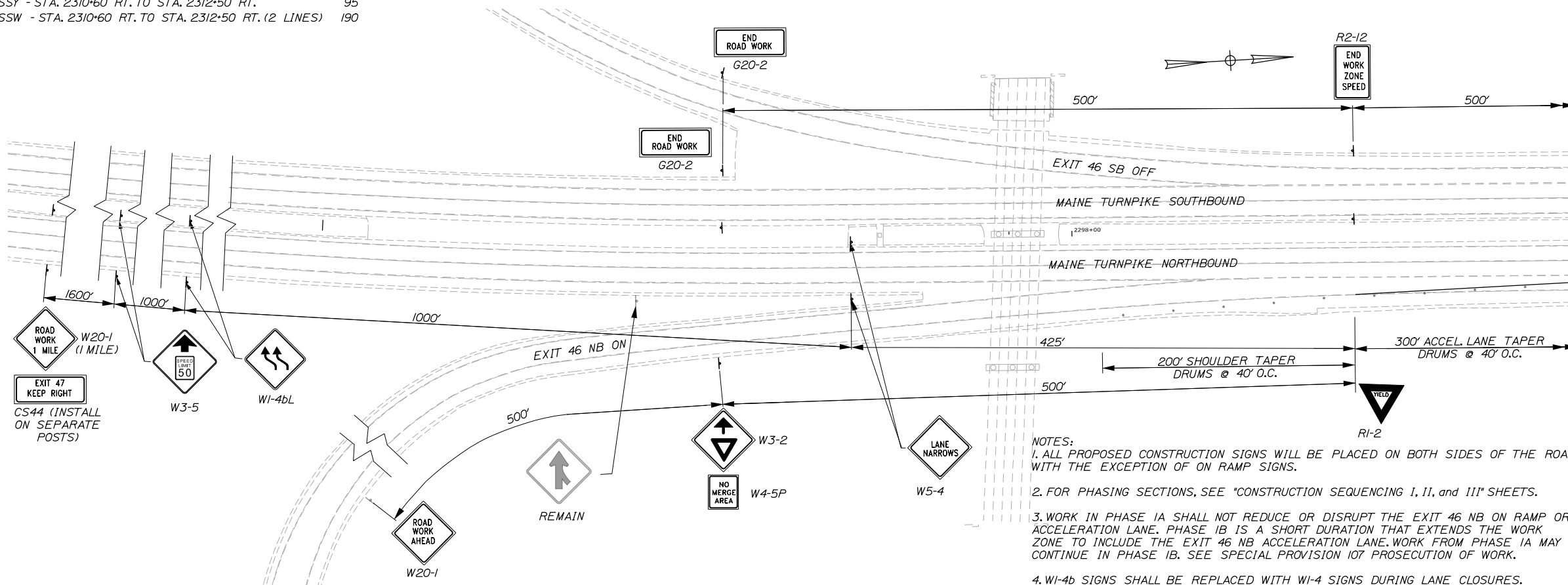
STA. 2307+63 RT. TO STA. 2316+74 RT.
 STA. 2319+74 RT. TO STA. 2330+60 RT.
 STA. 2306+50 LT. TO STA. 2316+74 LT.
 STA. 2319+74 LT. TO STA. 2331+14 LT.

ITEM 527.34 WORK ZONE CRASH CUSHIONS TL-3 UNIT

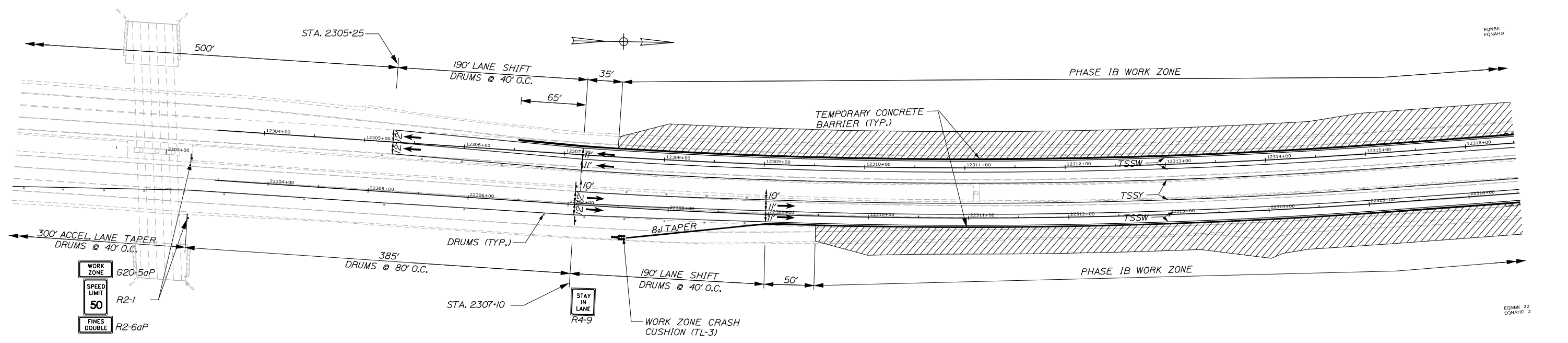
STA. 2307+63 RT. 1
 STA. 2331+14 LT. 1

ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW LF

NORTHBOUND
 TSSW - STA. 2300+25 RT. TO STA. 2312+50 RT. 1225
 TSSY - STA. 2307+10 RT. TO STA. 2312+50 RT. 540
 TSSW - STA. 2307+10 RT. TO STA. 2312+50 RT. 540



NOTES:
 1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 46 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXTENDS THE WORK ZONE TO INCLUDE THE EXIT 46 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
 4. W1-4b SIGNS SHALL BE REPLACED WITH W1-4 SIGNS DURING LANE CLOSURES.



Date: 10/18/2018

Filename: 007_MOTPhase IB 1.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
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 Westbrook, ME 04092
 TEL (207) 774-5155
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MAINE TURNPIKE

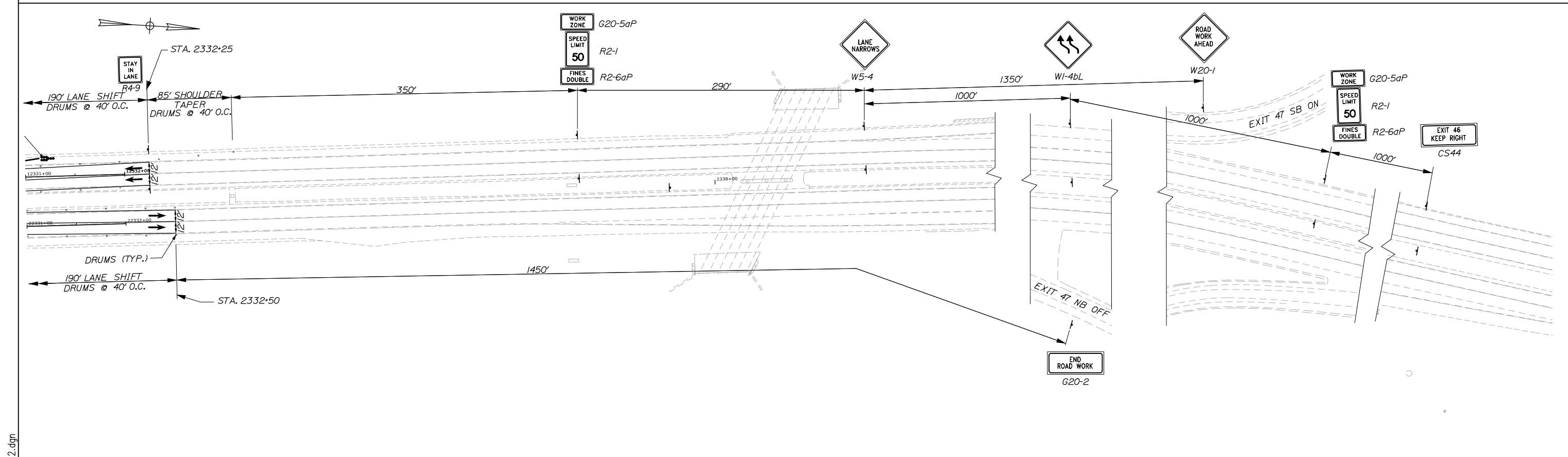
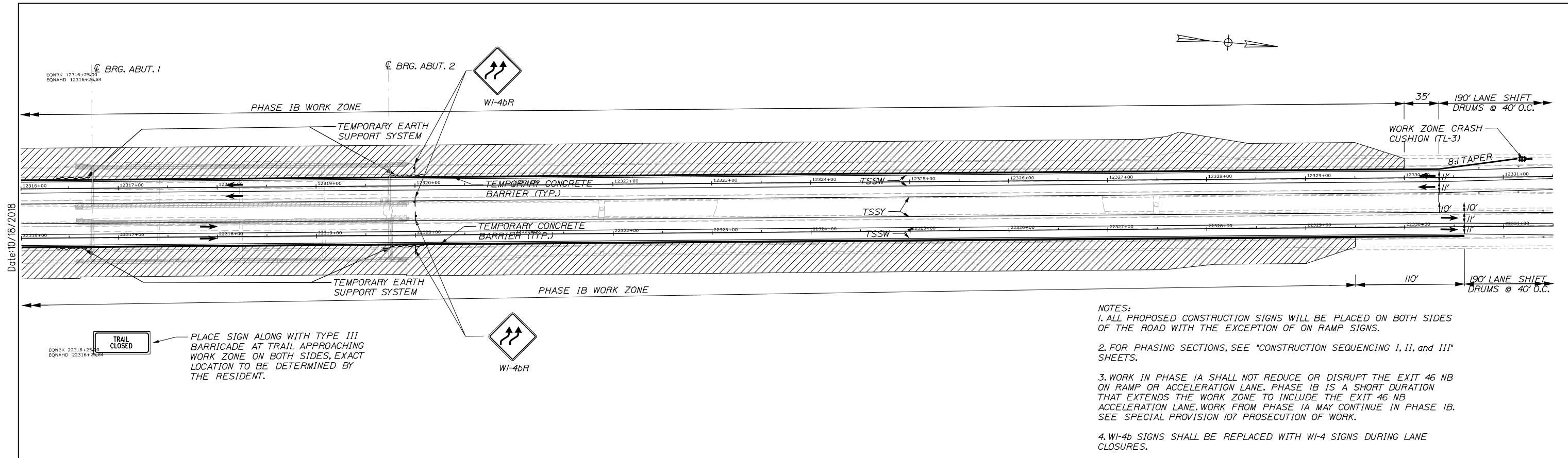
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IB

SHEET NUMBER: MOT-03
 7 OF 121

CONTRACT: 2019.09



Scale: 50 0 50 100

Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IB

CONTRACT: 2019.09

SHEET NUMBER: MOT-04

8 OF 121

File name: 008_MOTPhase IB 2.dgn

PHASE IIA QUANTITIES

BWLL - BROKEN WHITE LANE LINE
 SWEL - SOLID WHITE EDGE LINE
 SYEL - SOLID YELLOW EDGE LINE
 TSSW - TEMPORARY SINGLE SOLID WHITE LINE
 TSSY - TEMPORARY SINGLE SOLID YELLOW LINE

ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW LF

NORTHBOUND

TSSW - STA. 2305+25 RT. TO STA. 2316+74 RT.	1149
TSSY - STA. 2305+25 RT. TO STA. 2316+74 RT.	1150
TSSW - STA. 2305+25 RT. TO STA. 2316+74 RT.	1150
TSSY - STA. 2319+74 RT. TO STA. 2332+50 RT.	1275
TSSW - STA. 2319+74 RT. TO STA. 2332+50 RT. (2 LINES)	2550

SOUTHBOUND

TSSY - STA. 2305+25 LT. TO STA. 2316+74 LT.	1150
TSSW - STA. 2305+25 LT. TO STA. 2316+74 LT. (2 LINES)	2300
TSSY - STA. 2319+74 LT. TO STA. 2332+25 LT.	1250
TSSW - STA. 2319+74 LT. TO STA. 2332+25 LT. (2 LINES)	2500

ITEM 627.73 TEMPORARY 6 INCH PAVEMENT MARKING TAPE LF

NORTHBOUND

TSSY - STA. 2316+74 RT. TO STA. 2319+74 RT.	300
TSSW - STA. 2316+74 RT. TO STA. 2319+74 RT. (2 LINES)	600

SOUTHBOUND

TSSY - STA. 2316+74 LT. TO STA. 2319+74 LT.	300
TSSW - STA. 2316+74 LT. TO STA. 2319+74 LT.	600

ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS SF

NORTHBOUND

SWEL - STA. 2307+50 RT. TO STA. 2309+50 RT.	100
SWEL - STA. 2329+50 RT. TO STA. 2332+50 RT.	150
TSSW - STA. 2305+25 RT. TO STA. 2315+00 RT.	488
TSSY - STA. 2307+10 RT. TO STA. 2315+00 RT.	395
TSSW - STA. 2307+10 RT. TO STA. 2315+00 RT.	395
TSSY - STA. 2322+75 RT. TO STA. 2332+50 RT.	488
TSSW - STA. 2322+75 RT. TO STA. 2332+50 RT. (2 LINES)	975

SOUTHBOUND

SWEL - STA. 2305+25 LT. TO STA. 2307+50 LT.	113
SWEL - STA. 2330+00 LT. TO STA. 2332+25 LT.	113
TSSW - STA. 2305+25 LT. TO STA. 2315+00 LT.	488
TSSY - STA. 2305+25 LT. TO STA. 2315+00 LT. (2 LINES)	975
TSSY - STA. 2322+50 LT. TO STA. 2332+25 LT.	488
TSSW - STA. 2332+50 LT. TO STA. 2332+25 LT. (2 LINES)	975

ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE LS

STA. 2316+74 RT. TO STA. 2319+74 RT.	
STA. 2316+74 LT. TO STA. 2319+74 LT.	

ITEM 526.306 TEMPORARY CONCRETE BARRIER, TYPE I- SUPPLIED BY AUTHORITY LS

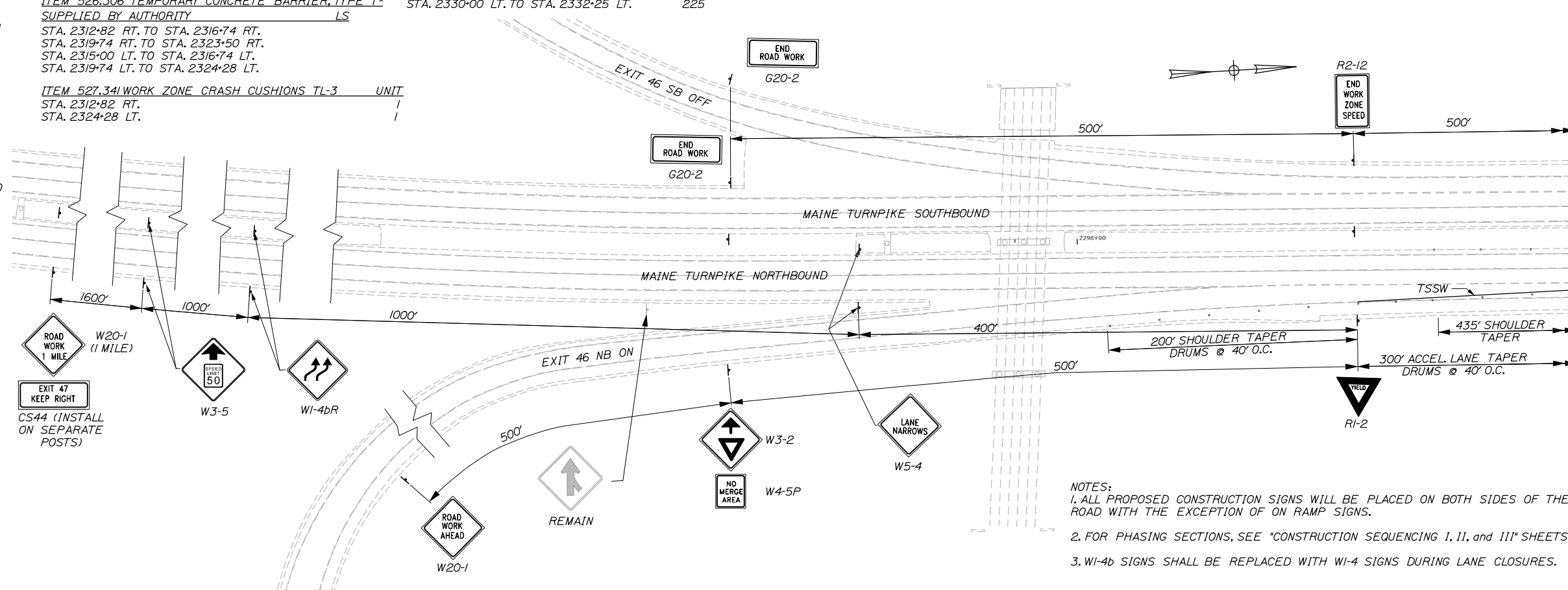
STA. 2312+82 RT. TO STA. 2316+74 RT.	
STA. 2319+74 RT. TO STA. 2323+50 RT.	
STA. 2315+00 LT. TO STA. 2316+74 LT.	
STA. 2319+74 LT. TO STA. 2324+28 LT.	

ITEM 527.341 WORK ZONE CRASH CUSHIONS TL-3 UNIT

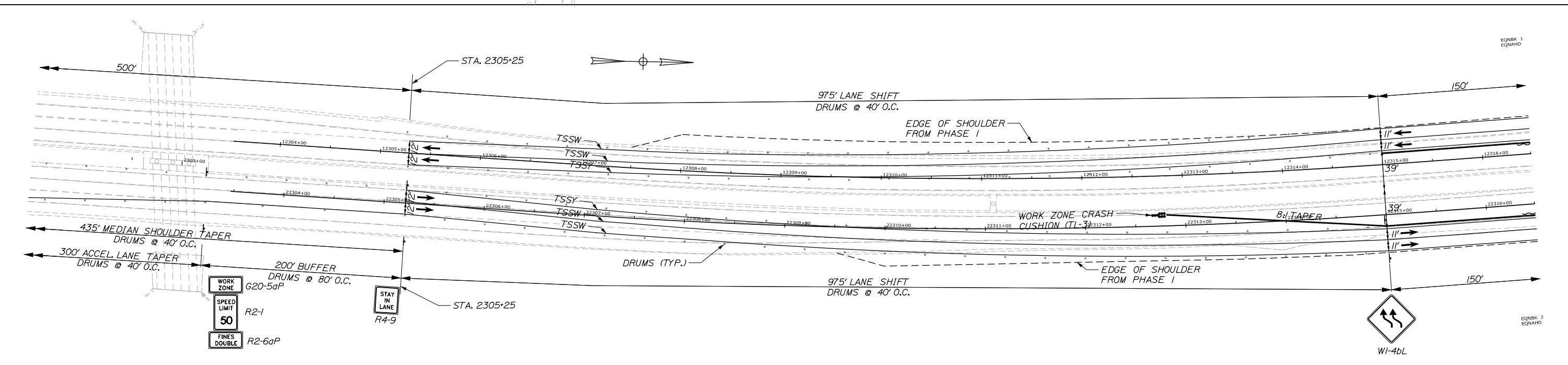
STA. 2312+82 RT.	1
STA. 2324+28 LT.	1

ITEM 202.206 REMOVING RUMBLE STRIPS LF

NORTHBOUND	
STA. 2329+50 RT. TO STA. 2332+50 RT.	300
SOUTHBOUND	
STA. 2306+50 LT. TO STA. 2307+50 LT.	100
STA. 2330+00 LT. TO STA. 2332+25 LT.	225



- NOTES:
1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. W1-4b SIGNS SHALL BE REPLACED WITH W1-4 SIGNS DURING LANE CLOSURES.



Filename: 009_MOTPhase IIA.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
Designed	CDH 10\18	Checked	JRH 10\18
Drawn	SLS 10\18	In Charge of	RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

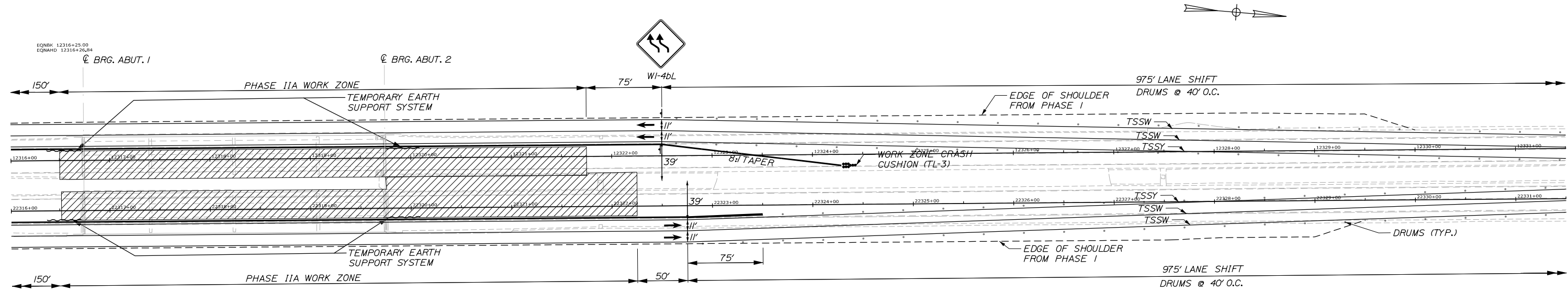
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IIA

SHEET NUMBER: MOT-05
 9 OF 121

CONTRACT: 2019.09

Date: 10/18/2018

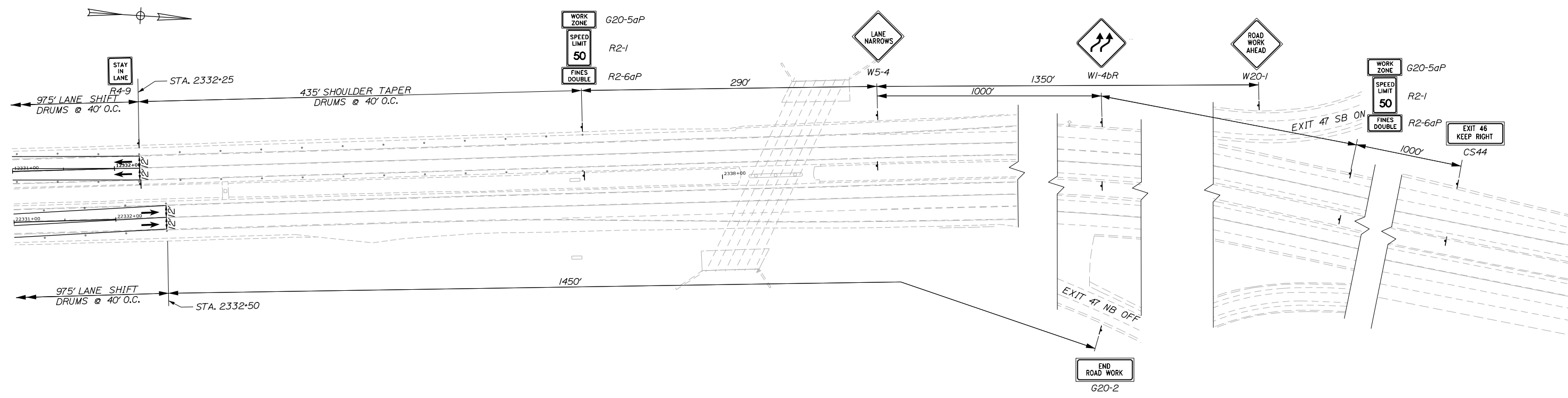


EQNBK 12316+25.00
EQNAHD 22316+26.84

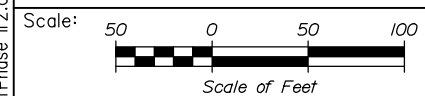
TRAIL CLOSED

PLACE SIGN ALONG WITH TYPE III BARRICADE AT TRAIL APPROACHING WORK ZONE ON BOTH SIDES, EXACT LOCATION TO BE DETERMINED BY THE RESIDENT.

- NOTES:
1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. W1-4b SIGNS SHALL BE REPLACED WITH W1-4 SIGNS DURING LANE CLOSURES.



Filename: 010_MOTPhase 112.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

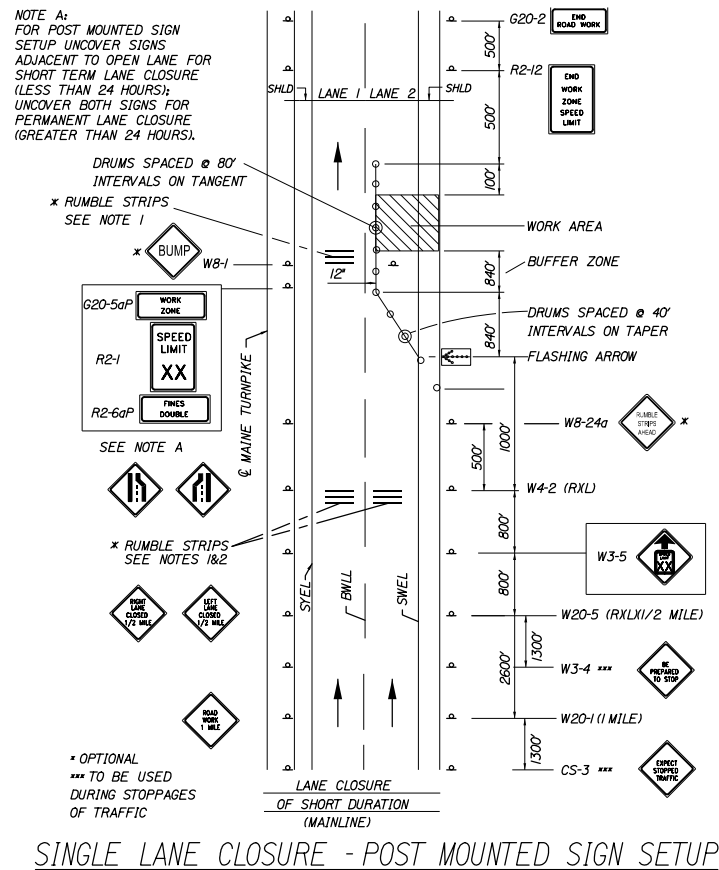
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MAINTENANCE OF TRAFFIC
PHASE IIA

CONTRACT: 2019.09

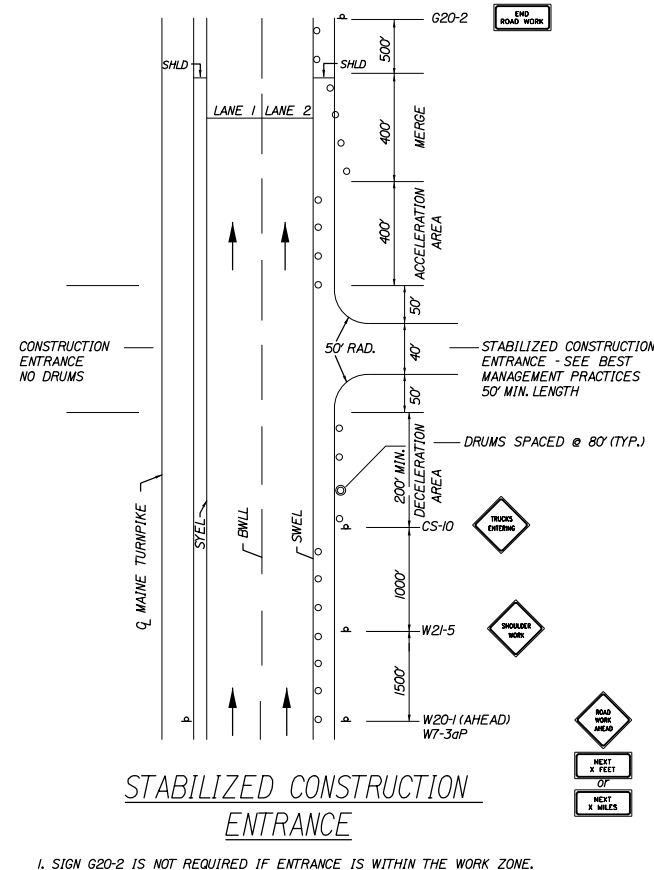
SHEET NUMBER: MOT-06

10 OF 121

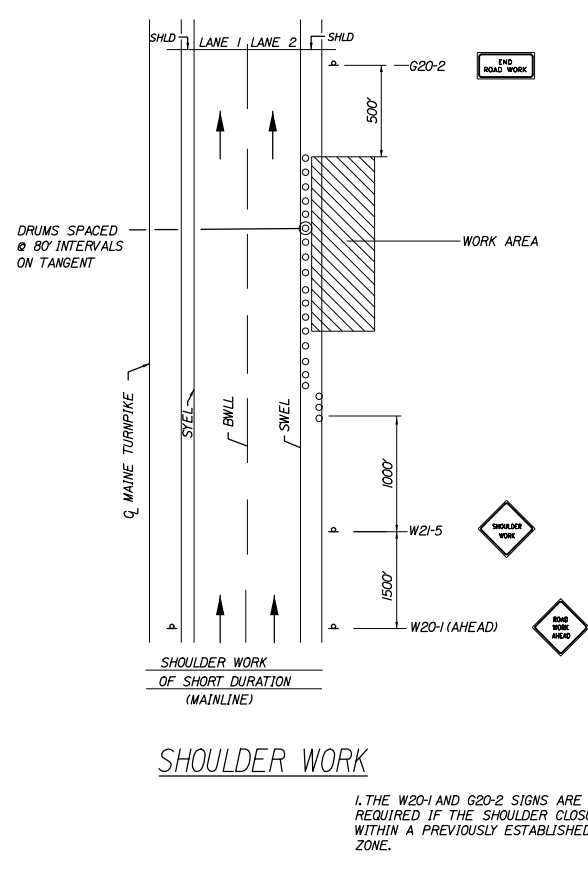
Date:10/18/2018



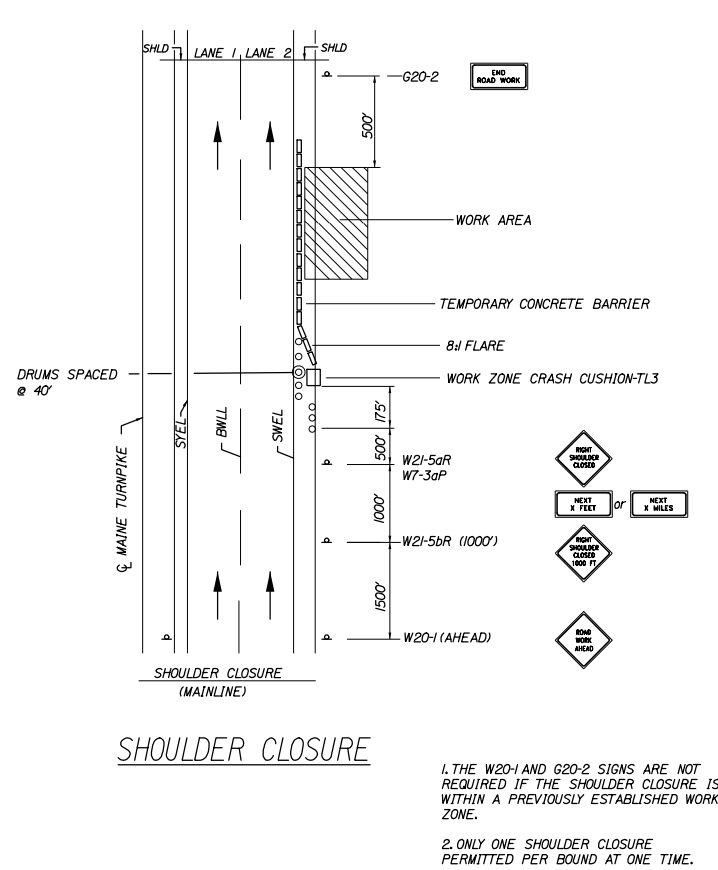
SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP



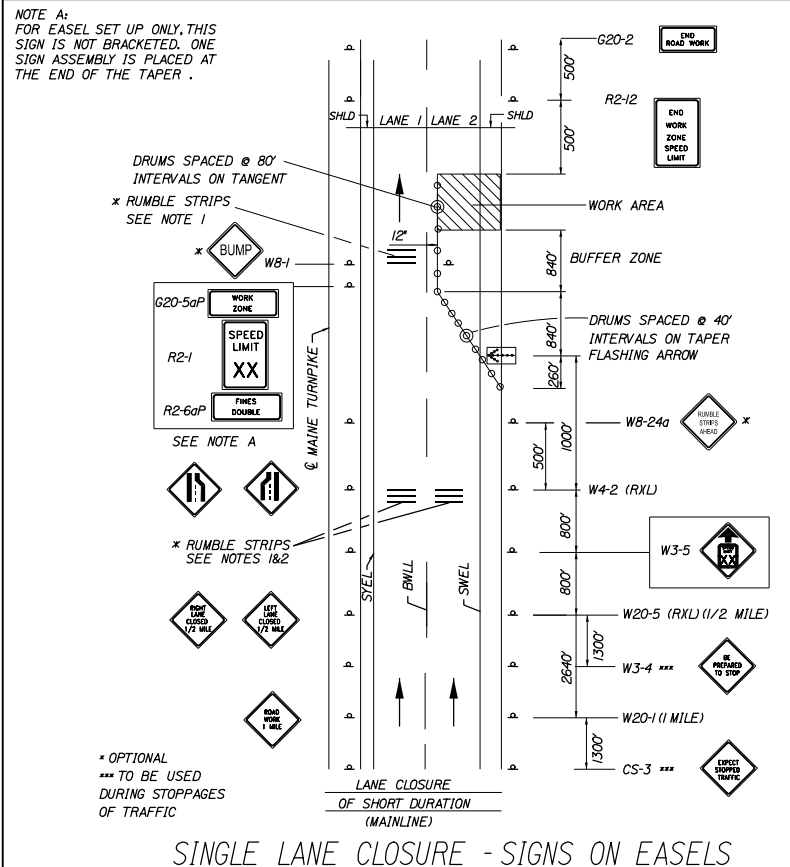
1. SIGN G20-2 IS NOT REQUIRED IF ENTRANCE IS WITHIN THE WORK ZONE.



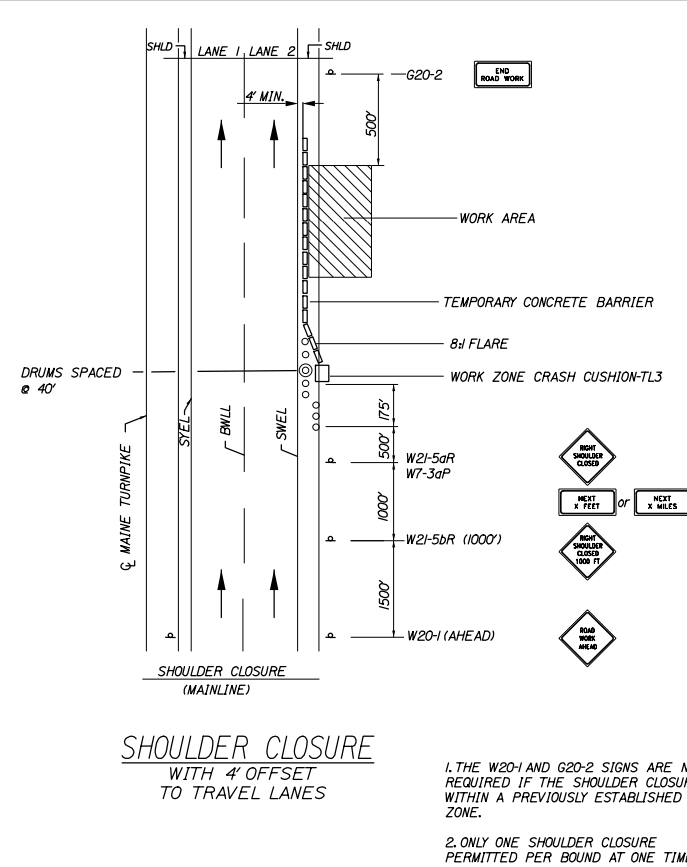
1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.



1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.
2. ONLY ONE SHOULDER CLOSURE PERMITTED PER BOUND AT ONE TIME.



SINGLE LANE CLOSURE - SIGNS ON EASELS



1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.
2. ONLY ONE SHOULDER CLOSURE PERMITTED PER BOUND AT ONE TIME.

TEMPORARY RUMBLE STRIP NOTES

- IF RUMBLE STRIPS ARE USED THEY SHALL BE PLACED IN ONE OF THE FOLLOWING CONFIGURATIONS:
 - ADJACENT TO THE WORK ZONE (1 UNIT)
 - UPSTREAM FROM THE TAPER FOR THE WORKZONE (2 UNITS)
 - BOTH ADJACENT TO THE WORKZONE AND PRIOR TO THE TAPER (3 UNITS)
- W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST RUMBLE STRIP AT ANY LOCATION. ONLY ONE SET OF W8-24a SIGNS ARE REQUIRED FOR ANY OF THE ABOVE CONFIGURATIONS.
- RUMBLE STRIPS MAY BE PLACED UPSTREAM OF THE TAPER BETWEEN THE W3-5 SIGNS AND THE W4-2 SIGNS. IF RUMBLE STRIPS ARE INSTALLED PRIOR TO TAPER, W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST STRIP AND THE W8-24a SIGNS SHALL BE MOVED TO 400' AFTER THE W20-5 SIGNS.

- GENERAL MAINTENANCE OF TRAFFIC NOTES:
- ALL PAVEMENT STRIPING & SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", U.S.D.O.T., F.H.W.A., LATEST EDITION.
 - THESE PLANS SHOW THE GENERAL CONDITION FOR TURNPIKE MAINLINE TRAFFIC CONTROL DURING CONSTRUCTION. SLIGHT MODIFICATIONS IN CONSTRUCTION PROCEDURE MAY OCCUR AND MAY REQUIRE SOME MINOR ADJUSTMENTS TO BE MADE IN THE FIELD. ALL PROCEDURES MUST BE APPROVED BY THE RESIDENT.
 - THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND MUTCD. PAYMENT SHALL BE MADE UNDER ITEM 627.77 - REMOVING PAVEMENT MARKINGS.
 - EXPOSED BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.341 - WORK ZONE CRASH CUSHION - TL-3.
 - GEOMETRIC INFORMATION FOR THE TRAFFIC PHASES SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
 - SPEED LIMIT, STOP, EXIT AND YIELD SIGNS SHALL BE A MINIMUM OF 5' ABOVE THE PAVEMENT.

ABBREVIATIONS FOR ALL M.O.T. PLANS
 BWLL = BROKEN WHITE LANE LINE
 SWLL = SOLID WHITE LANE LINE
 SYLL = SOLID YELLOW LANE LINE
 TBWLL = TEMPORARY BROKEN WHITE LANE LINE
 TSWLL = TEMPORARY SOLID WHITE LANE LINE
 TSYLL = TEMPORARY SOLID YELLOW LANE LINE

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STANDARD DETAILS

SHEET NUMBER: MOT-10
 CONTRACT: 2019.09
 11 OF 121

CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
G20-2	48"	24"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			6	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			8.00 (48)
G20-5aP	48"	24"					6				8.00 (48)
R1-2	60"	60"					1				10.83 (11)
R2-1 (50)	48"	60"					6				20.00 (120)
R2-6aP	48"	24"					6				8.00 (48)
R2-12	48"	60"					2				20.00 (40)
R4-9	36"	48"					4				12.00 (48)
R9-9	24"	12"					2				2 (4)
W1-4L	48"	48"					4				16.00 (64)
W1-4R	48"	48"					4				16.00 (64)
W1-4bL	48"	48"					4				16.00 (64)
W1-4bR	48"	48"					4				16.00 (64)
W3-2	48"	48"					1				16.00 (16)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W3-5 (50)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			2	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (32)
W4-2L	48"	48"					4				16.00 (64)
W4-2R	48"	48"					4				16.00 (64)
W4-5P	24"	30"					1				5.00 (5)
W5-4	48"	48"					4				16.00 (64)
W20-1 (AHEAD) (1 MILE)	48"	48"					2				16.00 (32)
W20-5L (1/2 MILE)	48"	48"					4				16.00 (64)
W20-5R (1/2 MILE)	48"	48"					4				16.00 (64)
CS-44 (EXIT 46) (EXIT 47)	72"	36"		8" C	7"		2				18.00 (36)
				8" C	6"		2				18.00 (36)

Date:10/18/2018

Filename: 012_MOT_SignSummary.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

By	Date	By	Date
Designed	EDD 10\18	Checked	CDH 10\18
Drawn	EDD 10\18	In Charge of	RAL 10\18

MAINE TURNPIKE AUTHORITY
 2360 Congress Street
 Portland, ME 04102
 TEL (207) 871-7771
 FAX (207) 879-5567

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

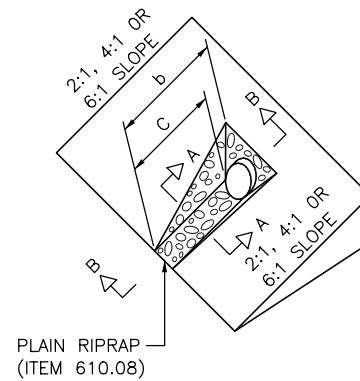
BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY

SHEET NUMBER: MOT-11
 12 OF 121

CONTRACT:2019.09

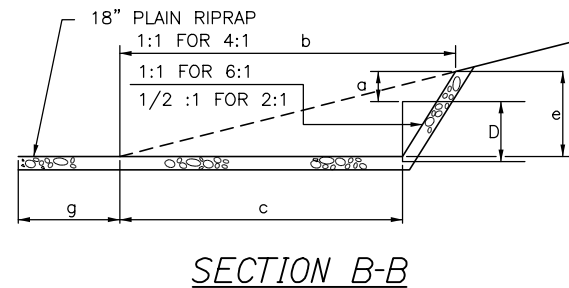
DIMENSIONS FOR SLOPE OF 2:1

D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	1.00	4.00	3.00	2.00	6.00	1.00	1.50	1.30
15"	1.00	4.50	3.37	2.25	6.75	1.63	1.50	1.70
18"	1.00	5.00	3.75	2.50	7.50	2.25	1.50	2.09
21"	1.00	5.50	4.13	2.75	8.25	2.88	1.50	2.58
24"	1.00	6.00	4.50	3.00	9.00	3.50	1.50	3.12
30"	1.00	7.00	5.25	3.50	10.50	4.75	1.50	4.33
36"	1.00	8.00	6.00	4.00	12.00	6.00	1.50	5.75
42"	1.00	9.00	6.75	4.50	13.50	7.25	1.50	7.37
48"	1.00	10.00	7.50	5.00	15.00	8.50	1.50	9.18
54"	1.00	11.00	8.25	5.50	16.50	9.75	1.50	11.19
60"	1.00	12.00	9.00	6.00	18.00	11.00	1.50	13.40
66"	1.00	13.00	9.75	6.50	19.50	12.25	1.50	15.81
72"	1.00	14.00	10.50	7.00	21.00	13.50	1.50	18.41
84"	1.00	16.00	12.00	8.00	24.00	16.00	1.50	24.22



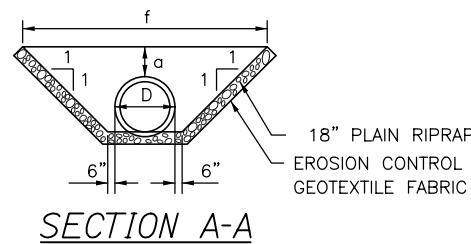
DIMENSIONS FOR SLOPE OF 4:1

D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	1.00	8.00	6.00	2.00	6.00	0.00	1.50	2.20
15"	1.00	9.00	6.75	2.25	6.75	0.00	1.50	2.80
18"	1.00	10.00	7.50	2.50	7.50	0.00	1.50	3.40
21"	1.00	11.00	8.25	2.75	8.25	0.00	1.50	4.10
24"	1.00	12.00	9.00	3.00	9.00	0.00	1.50	4.86
30"	1.00	14.00	10.50	3.50	10.50	0.00	1.50	6.58
36"	1.00	16.00	12.00	4.00	12.00	0.00	1.50	8.56
42"	1.00	18.00	13.50	4.50	13.50	0.50	1.50	10.92
48"	1.00	20.00	15.00	5.00	15.00	1.00	1.50	13.57
54"	1.00	22.00	16.50	5.50	16.50	1.50	1.50	16.50
60"	1.00	24.00	18.00	6.00	18.00	2.00	1.50	19.72
66"	1.00	26.00	19.50	6.50	19.50	2.50	1.50	23.22
72"	1.00	28.00	21.00	7.00	21.00	3.00	1.50	27.01
84"	1.00	32.00	24.00	8.00	24.00	4.00	1.50	35.45



DIMENSIONS FOR SLOPE OF 6:1

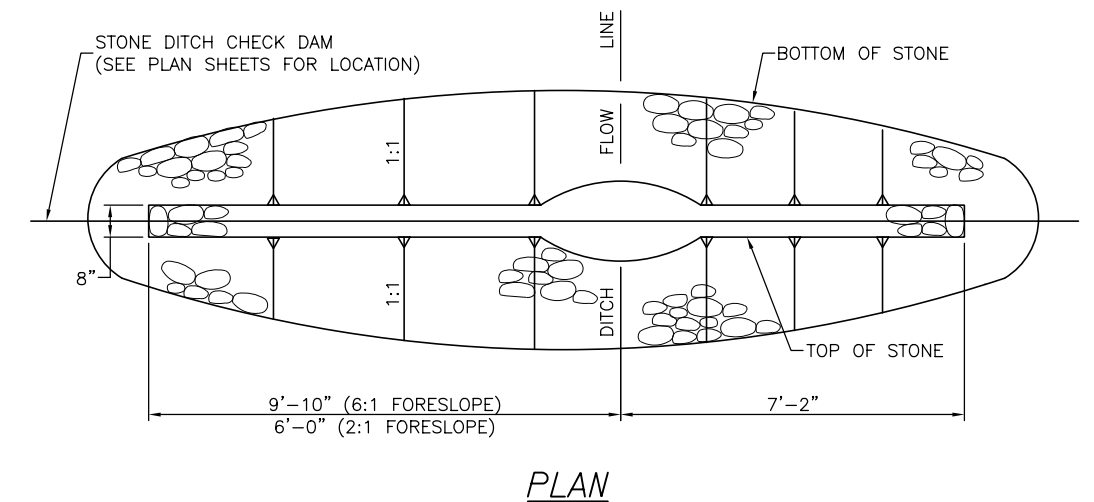
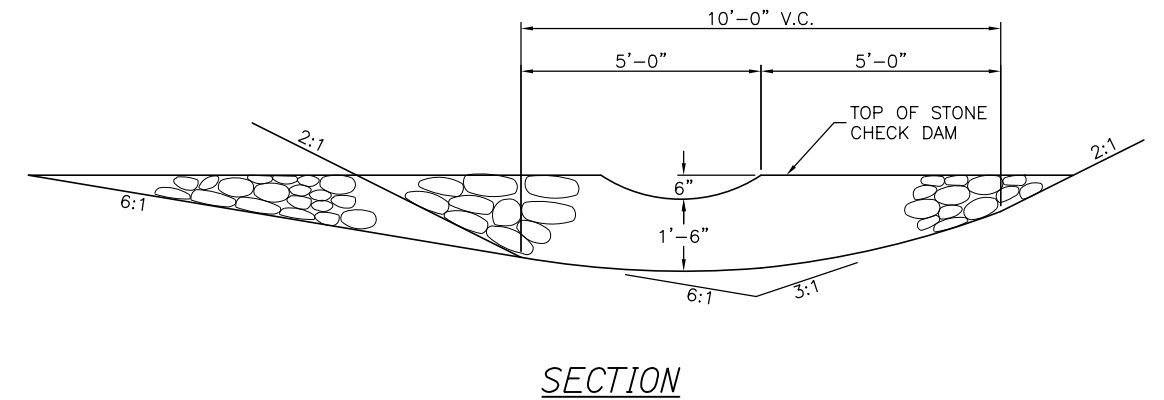
D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	0.50	9.00	7.50	1.50	4.50	0.00	1.50	2.30
15"	0.50	10.50	8.75	1.75	5.50	0.00	1.50	2.93
18"	0.50	12.00	10.00	2.00	6.50	0.00	1.50	3.57
21"	0.50	13.50	11.25	2.25	7.25	0.00	1.50	4.46
24"	0.50	15.00	12.50	2.50	8.00	0.00	1.50	5.44
30"	0.50	18.00	15.00	3.00	9.50	0.00	1.50	7.71
36"	0.50	21.00	17.50	3.50	11.00	0.00	1.50	10.37
42"	0.50	24.00	20.00	4.00	12.50	0.00	1.50	13.42
48"	0.50	27.00	22.50	4.50	14.00	0.00	1.50	16.87
54"	0.50	30.00	25.00	5.00	15.50	0.00	1.50	20.70
60"	0.50	33.00	27.50	5.50	17.00	0.00	1.50	24.93
66"	0.50	36.00	30.00	6.00	18.50	0.00	1.50	29.55
72"	0.50	39.00	32.50	6.50	20.00	0.00	1.50	34.56
84"	0.50	45.00	37.50	7.50	23.00	0.00	1.50	45.76



ROADWAY CULVERT END SLOPE TREATMENT

NOTES:

- THE DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE MODIFIED BY THE RESIDENT.
- STONE QUANTITIES ARE FOR ONE END OF THE PIPE.



STONE CHECK DAM
1" = 2'-0"

FORESLOPE	BACKSLOPE	QUANTITY C.Y. STONE
6:1	3:1	2.5
4:1	3:1	2.5
3:1	3:1	2.0
2:1	3:1	2.0

NOTES:

- STONE FOR TEMPORARY AND PERMANENT STONE CHECK DAMS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29, STONE DITCH PROTECTION.
- TEMPORARY STONE CHECK DAMS WILL BE PAID FOR UNDER ITEM 610.181.

Date:10/18/2018


Date:10/18/2018

Filename: 013_Erosion ControlDetails.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
	CDH	10\18	
	Checked	JRH	10\18
	Drawn	SLS	10\18
	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



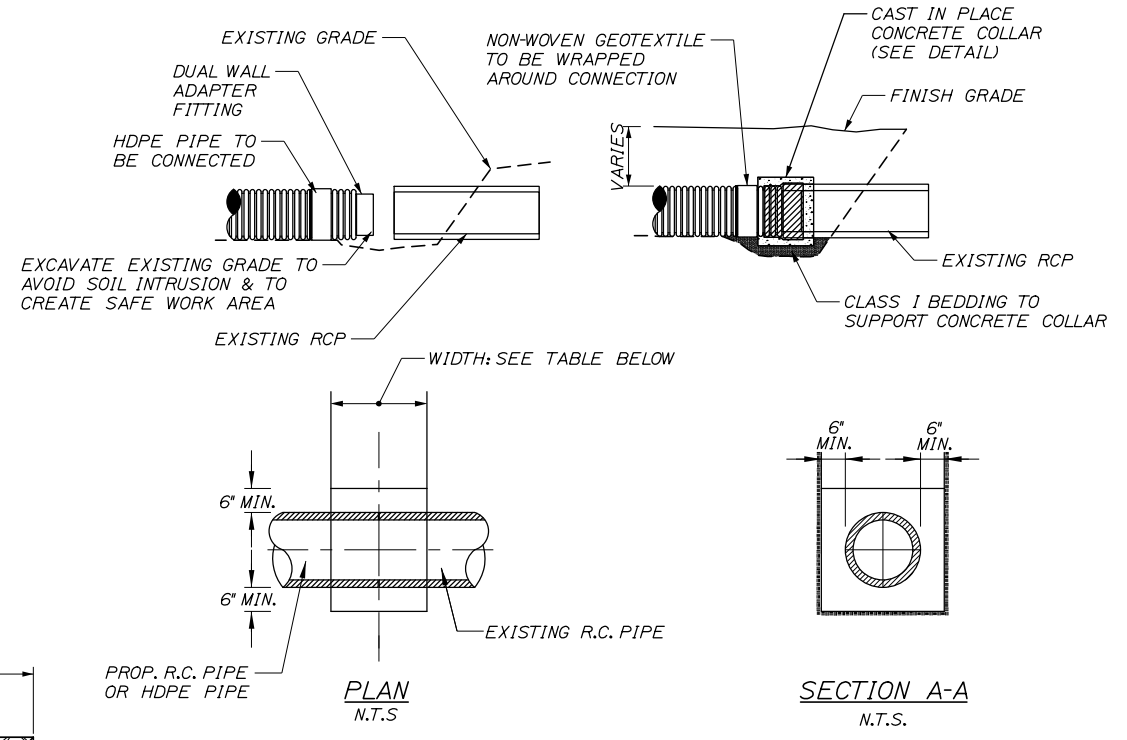
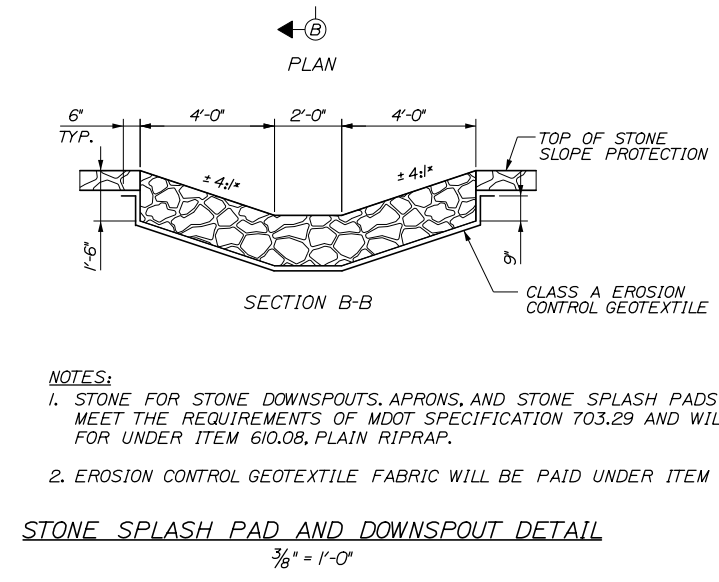
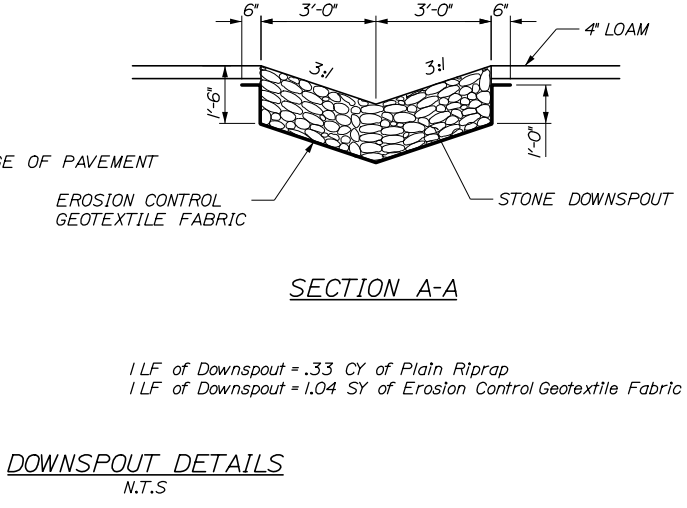
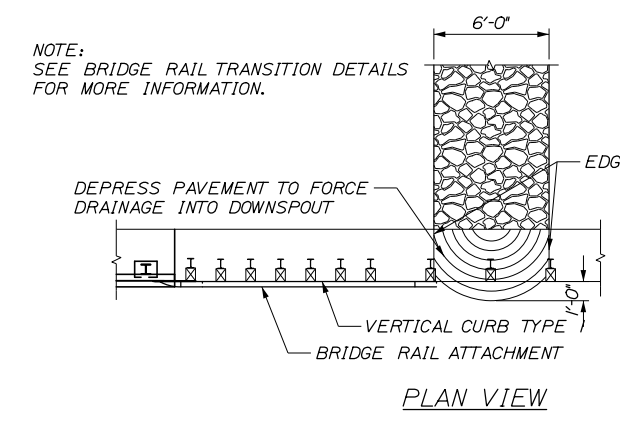
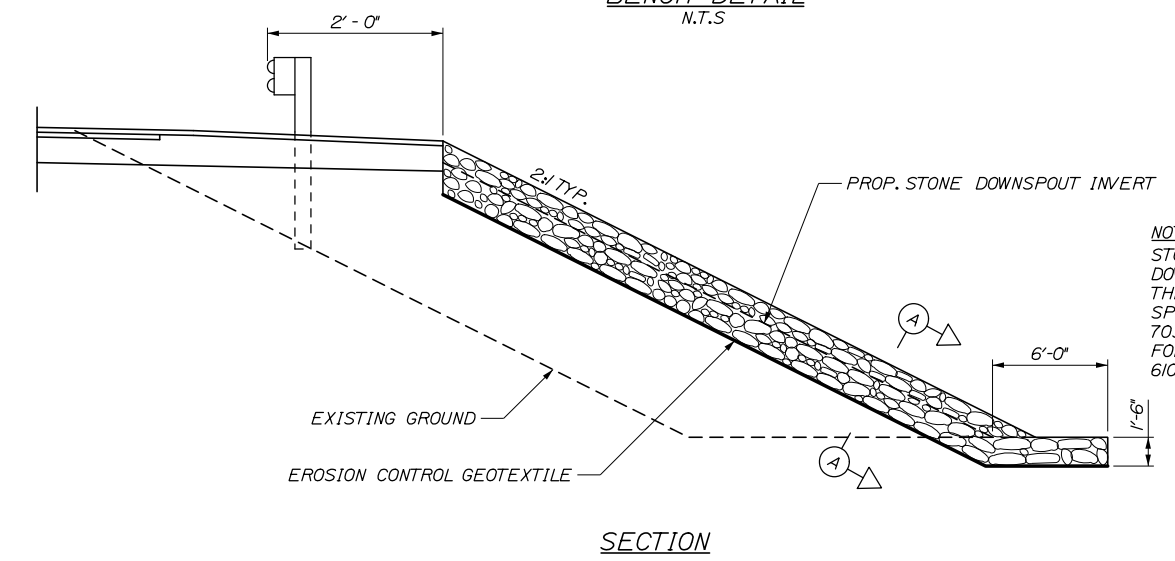
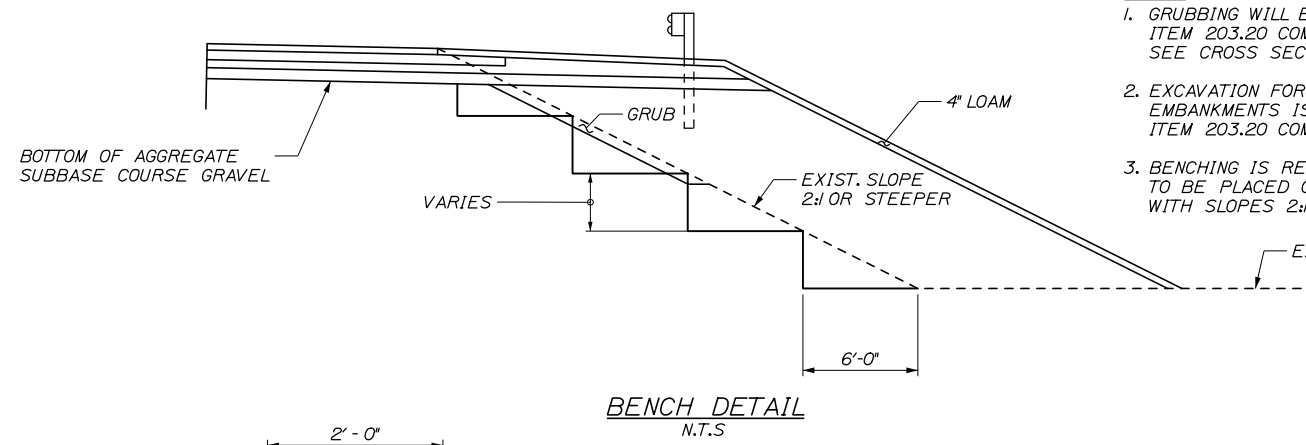
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
EROSION CONTROL DETAILS I

SHEET NUMBER: CD-01
CONTRACT:2019.09
13 OF 121

- NOTES:**
- GRUBBING WILL BE PAID FOR UNDER ITEM 203.20 COMMON EXCAVATION. SEE CROSS SECTIONS FOR ACTUAL LIMITS.
 - EXCAVATION FOR BENCHING TO RECEIVE EMBANKMENTS IS INCIDENTAL TO ITEM 203.20 COMMON EXCAVATION.
 - BENCHING IS REQUIRED WHERE FILL IS TO BE PLACED ON EXISTING EMBANKMENTS WITH SLOPES 2:1 OR STEEPER.



- NOTES:**
- CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321 (CRUSHED STONE).
 - CONCRETE SHALL BE CLASS A FIBER REINFORCED.
 - SEE CONCRETE COLLAR WIDTH SCHEDULE FOR DIMENSIONS.

CONCRETE COLLAR WIDTH SCHEDULE	
PIPE DIA. (INCHES)	WIDTH OF CONC. (INCHES)
12	24
15	24
18	24
24	24
30	30
36	36
42	48
48	48
54	60

Date: 10/18/2018
Filename: 014_Erosion ControlDetails 2.dgn

Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

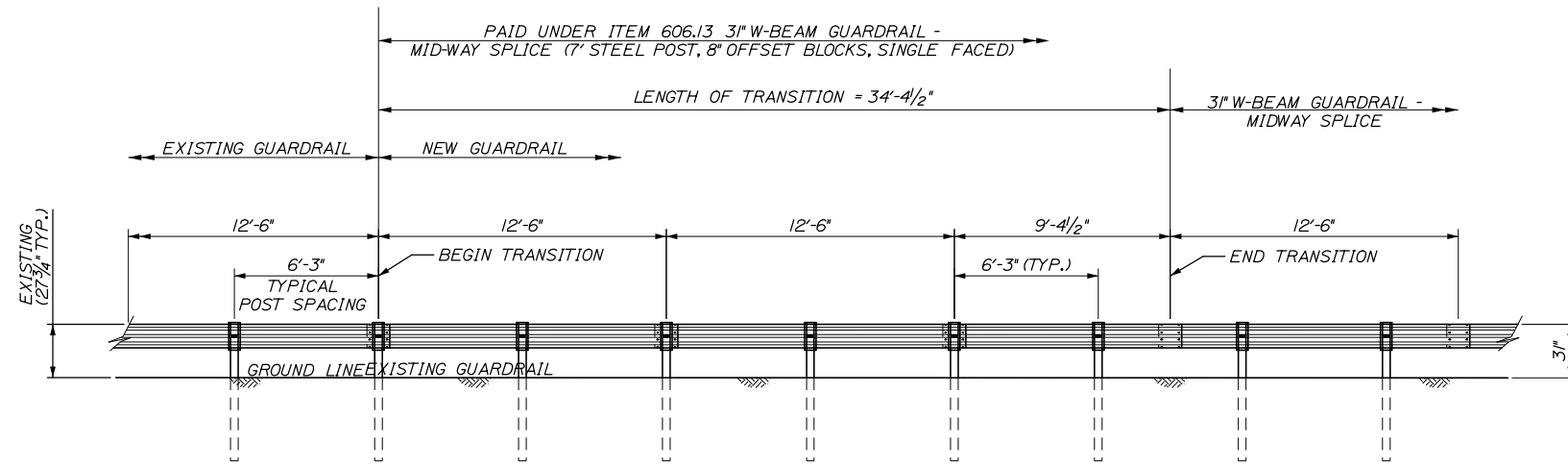
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
EROSION CONTROL DETAILS II

SHEET NUMBER: CD-02
CONTRACT: 2019.09
14 OF 121

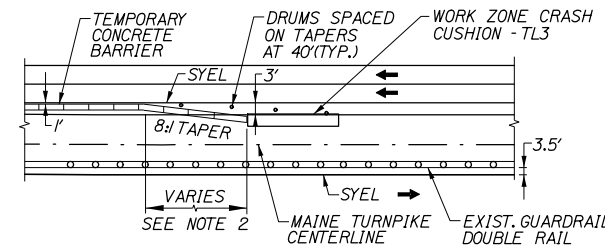
Date: 10/18/2018



TRANSITION FROM EXISTING GUARDRAIL NOTES

1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
3. ALL NEW POSTS SHALL BE 84" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

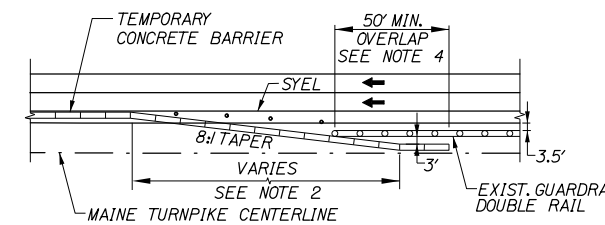
TRANSITION FROM EXISTING GUARDRAIL TO 3" MID-WAY SPLICED GUARDRAIL
NOT TO SCALE



CONCRETE BARRIER/GUARDRAIL OVERLAP NOTES:

1. BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION (TL-3), OR LAPPED BEHIND GUARDRAIL. SEE DETAILS THIS SHEET.
2. 8:1 TAPERED BARRIER LENGTH DEPENDENT ON LOCATION OF BARRIER RELATIVE TO MAINE TURNPIKE SHOULDERS OR LANES.
3. IF A WORK ZONE CRASH CUSHION - TL3 IS USED FOR A MEDIAN SHOULDER CLOSURE, THE CRASH CUSHION SYSTEM MUST BE FOUNDED ON A LEVEL SURFACE, ANY WORK NECESSARY TO PROVIDE A LEVEL SURFACE WILL BE INCIDENTAL TO THE CRASH CUSHION ITEM.
4. IF THE 50' MIN. LENGTH OF OVERLAP CANNOT BE MET, THEN THE EXISTING GUARDRAIL END MUST BE ANCHORED IN ACCORDANCE WITH DRAWING SEW02a IN THE AASHTO-AGC-ARBTA JOINT COMMITTEE TASK FORCE 13 REPORT, DRAFTED MAY 1995.

EXIST. GUARDRAIL ON FAR SIDE OF MEDIAN



EXIST. GUARDRAIL ON NEAR SIDE OF MEDIAN

CONCRETE BARRIER / GUARDRAIL OVERLAP DETAIL
NOT TO SCALE

Filename: 015_Guardrail Details 1.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	CDH	10\18		JRH	10\18	
	Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
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**THE GOLD STAR
MEMORIAL HIGHWAY**

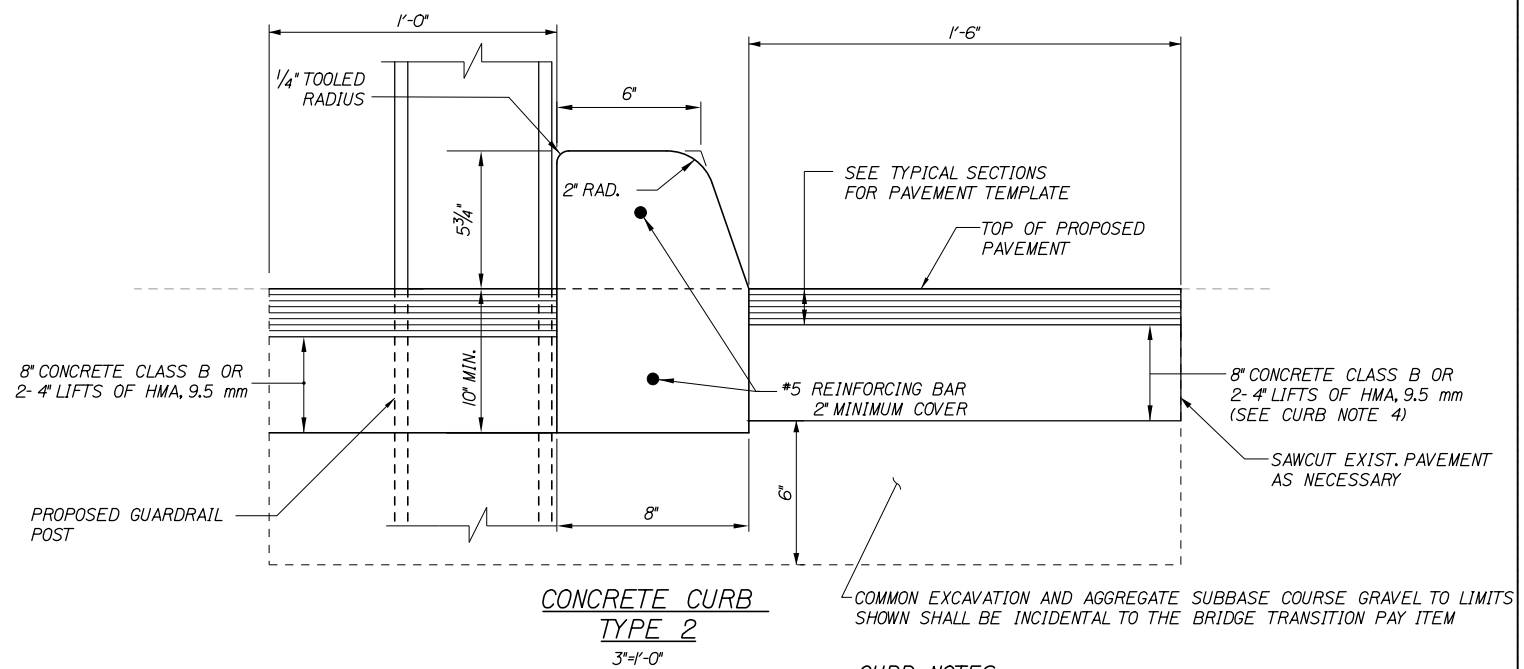
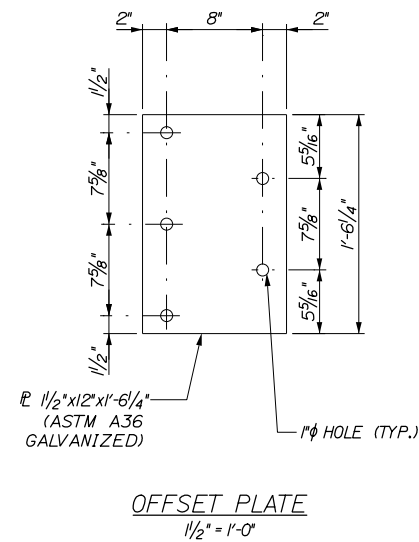
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

GUARDRAIL DETAILS

SHEET NUMBER: CD-03
CONTRACT: 2019.09
15 OF 121

Date:10/18/2018

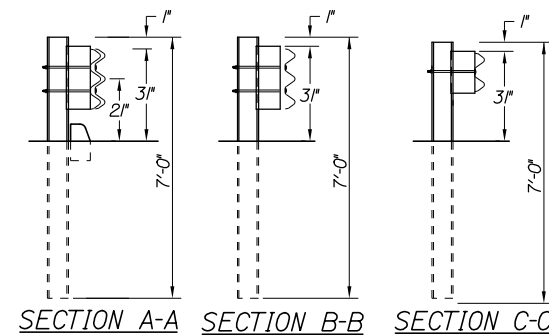
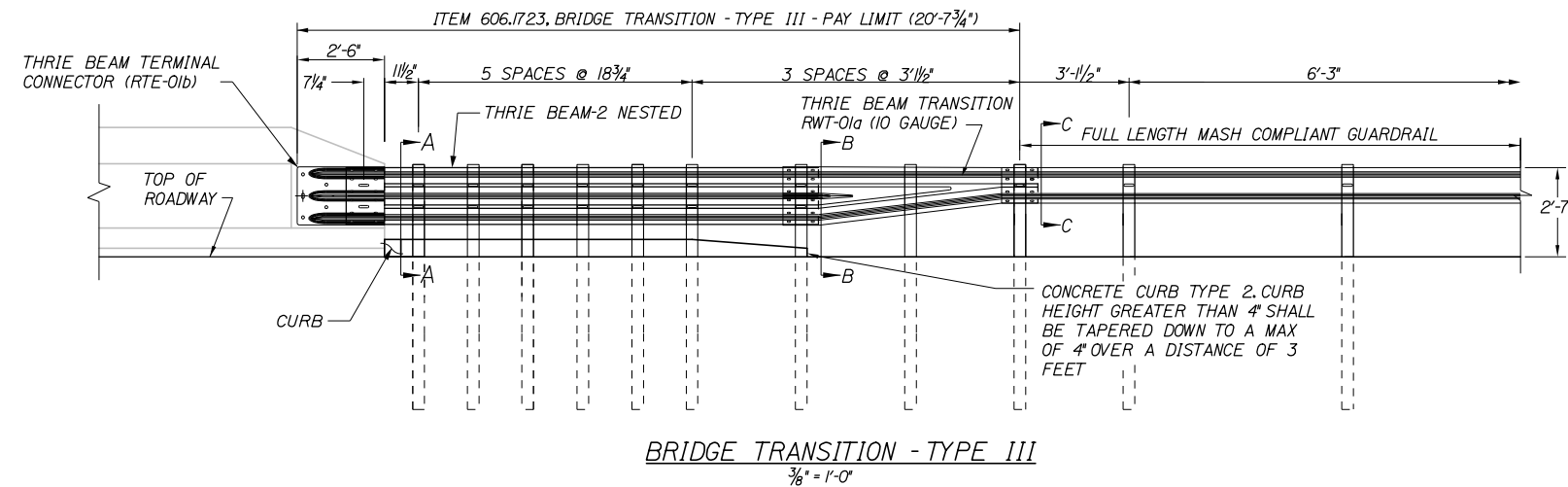
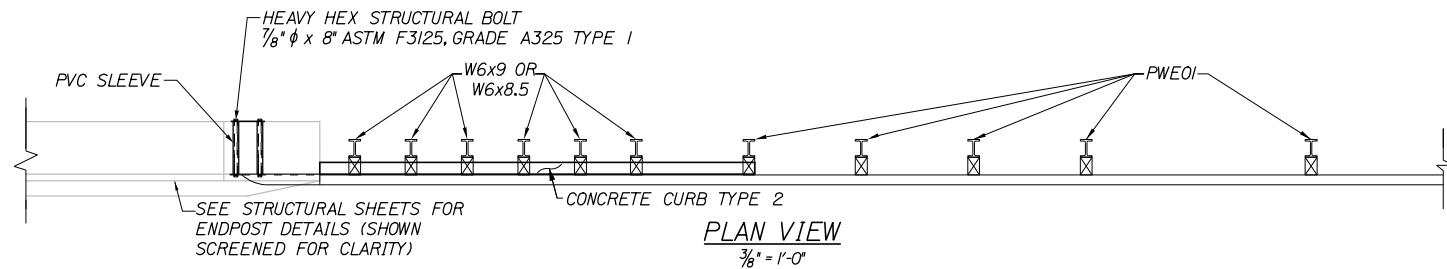


CURB NOTES:

- CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS.
- CONCRETE CURBS USED IN CONJUNCTION WITH THRIE-BEAM BRIDGE TRANSITION SHALL BE TYPE 2. SEE DETAILS THIS SHEET. CONCRETE CURBS SHALL BE SET TO FORM A CONTINUOUS GUTTERLINE WITHOUT ANY DRAINAGE OPENINGS.
- CURB TRANSITION SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.
- SAWCUTTING EXISTING PAVEMENT, CONCRETE FILL AND PAVEMENT TO LIMITS SHOWN SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.

GUARDRAIL NOTES:

- ADDITIONAL HOLES MAY BE MADE IN THE THRIE-BEAM PANELS BY DRILLING, PUNCHING, OR OTHER MEANS THAT PRODUCE A NEAT, CLEAN HOLE. BURNING HOLES WILL NOT BE ALLOWED.
- THRIE BEAM SHALL BE PLACED WITH THE COMPOSITE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE.
- RAIL ELEMENT SHALL MEET ALL REQUIREMENTS OF AASHTO M-180 EXCEPT AS MODIFIED ON THE PLANS. THE THRIE BEAM TRANSITION TO W-BEAM SHALL BE OF THE SAME MATERIAL, BUT SHALL NOT BE LESS THAN 10 GAUGE.
- AFTER INSTALLATION IS COMPLETE, UPSET THE THREAD ON THE ANCHOR BOLTS IN THREE PLACES AROUND EACH BOLT, AT THE JUNCTION OF THE NUT AND THE EXPOSED THREAD, WITH A CENTER PUNCH OR SIMILAR TOOL.
- STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THESE GUARDRAIL ATTACHMENTS. DESIGNATIONS PROVIDED IN PARENTHESES RELATE TO STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED BARRIER RAIL HARDWARE," 1979. AASHTO-AGC-ARTBA JOINT COOPERATE COMMITTEE.
- 1" HOLE IN CONCRETE SHALL BE FORMED BY A 1" I.D. PVC SLEEVE AS APPROVED BY THE ENGINEER.
- GUARDRAIL HEIGHT SHALL BE ADJUSTED UNIFORMLY BETWEEN SECTION CALLOUTS.



Filename: 016_Guardrail Details II.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	CDH	10\18		JRH	10\18	
	Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

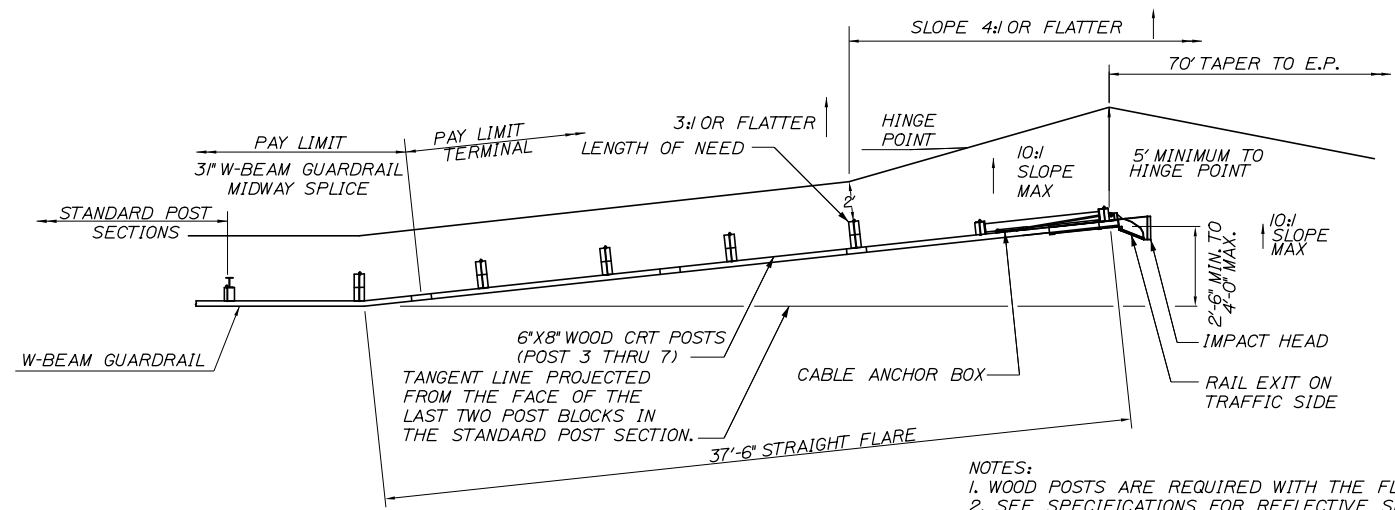
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

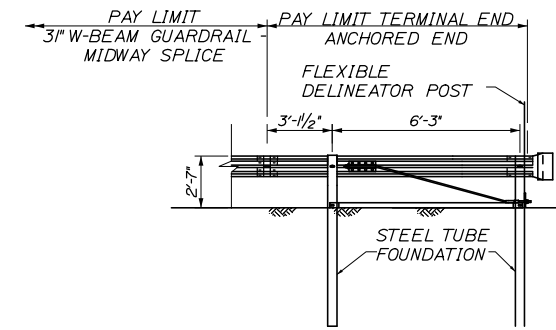
GUARDRAIL DETAILS
BRIDGE TRANSITION

SHEET NUMBER: CD-04
CONTRACT: 2019.09
16 OF 121

Date: 10/18/2018



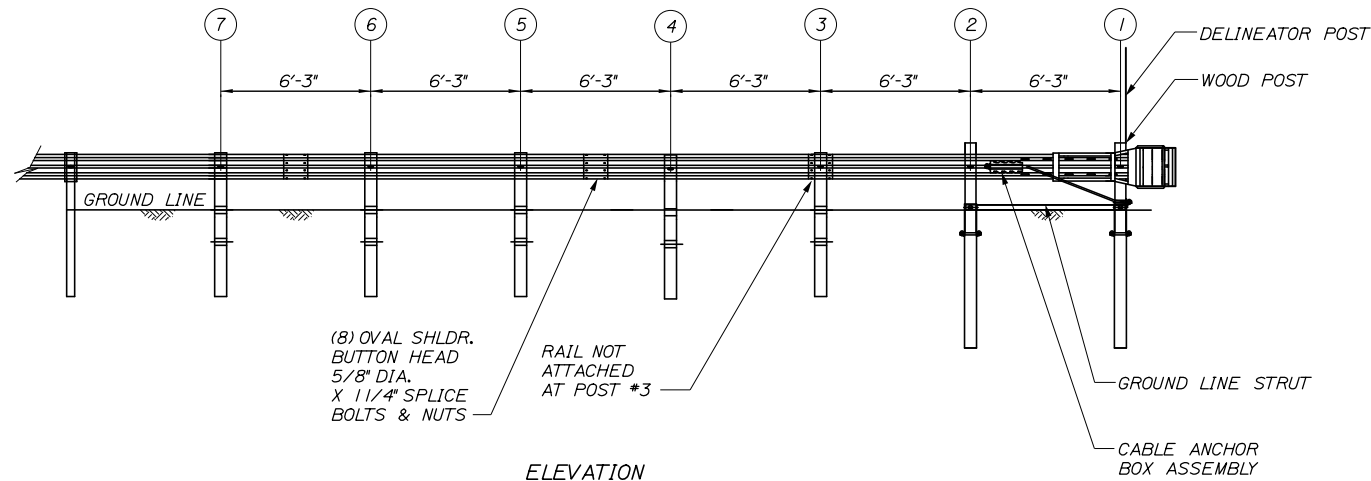
PLAN



TERMINAL END - ANCHORED END - 3\"/>

NOT TO SCALE

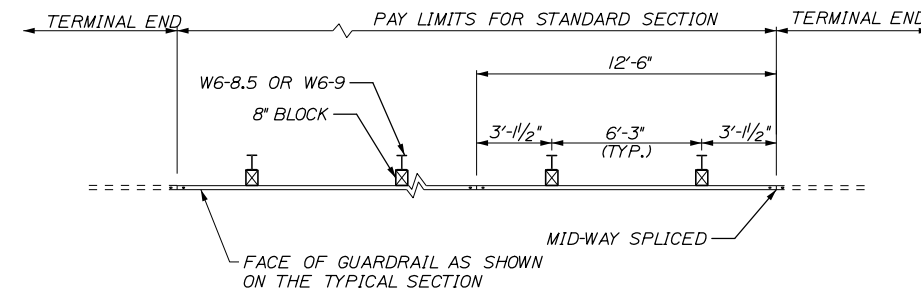
NOTES:
1. THIS DETAIL MODIFIES THE SEW31 DRAWING SUCH THAT W-BEAM DOES NOT EXTEND BEYOND THE LAST GUARDRAIL POST. THE RWM140 W-BEAM PANEL SHALL HAVE A LENGTH OF 9'-4 1/2\"/>



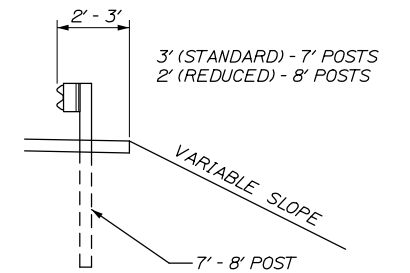
ELEVATION

GUARDRAIL 350 FLARED TERMINAL - 3\"/>

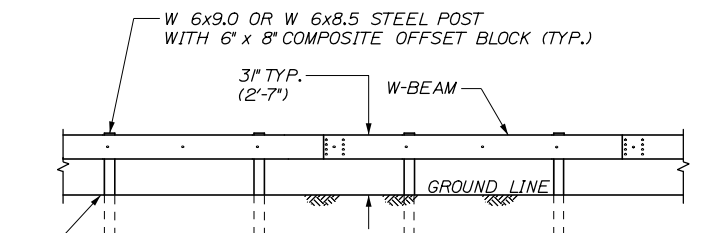
NOT TO SCALE



PLAN - SINGLE FACED



CROSS-SECTION



3\"/>

3\"/>

(ITEMS 606.1301)

NOT TO SCALE

GENERAL GUARDRAIL INSTALLATION NOTE:

1. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLATION OF ALL GUARDRAIL COMPONENTS TO BE INSTALLED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY CONFLICTS OR IRREGULARITIES BETWEEN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE CONTRACT DOCUMENTS.
 2. THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASH END TREATMENT ON ALL GUARDRAIL ENDS PRIOR TO THE REMOVAL OF ANY MOT FEATURES.
 3. GUARDRAIL HEIGHT SHALL BE 3\"/>
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CUT BOLTS, DISCARD PARTS, TRASH, PAVEMENT DEBRIS, ETC., AFTER COMPLETING THE GUARDRAIL INSTALLATION.
 5. CONNECTION FOR PROPOSED RAIL TO EXISTING RAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.

Scale:				Designed by:					
NOT TO SCALE									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	CDH	10\18	Checked	JRH	10\18
				Drawn	SLS	10\18	In Charge of	RAL	10\18

Designed by:					
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.	
By	Date	By	Date		
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
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**THE GOLD STAR
MEMORIAL HIGHWAY**

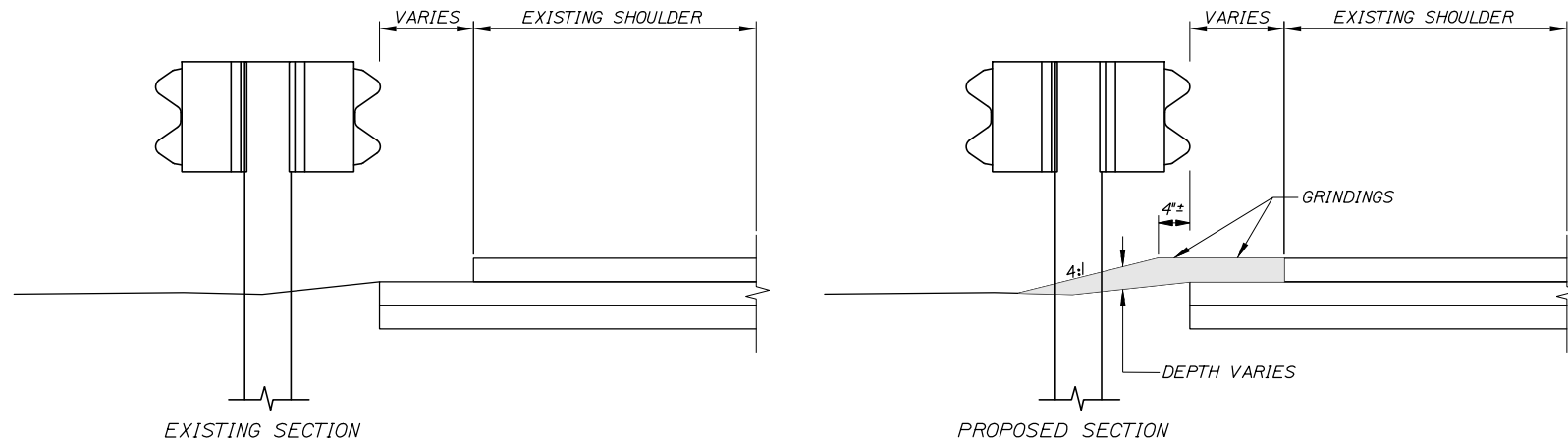
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
GUARDRAIL DETAILS
MIDWAY SPLICE

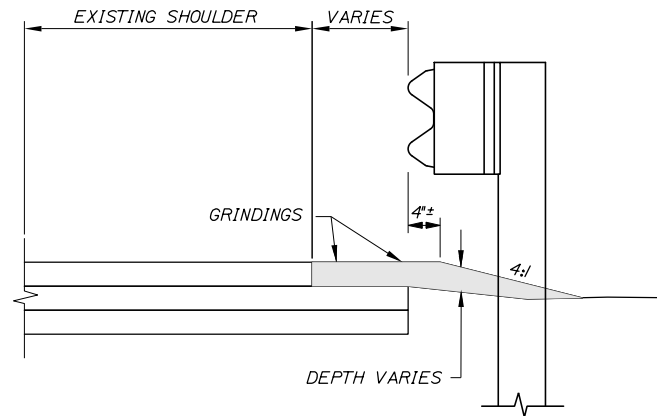
SHEET NUMBER: CD-05
17 OF 121

Filename: 017_Guardrail Details Ill.dgn

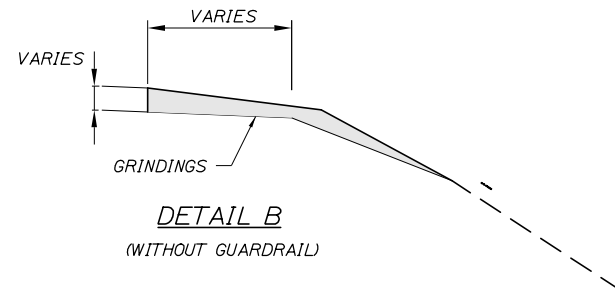
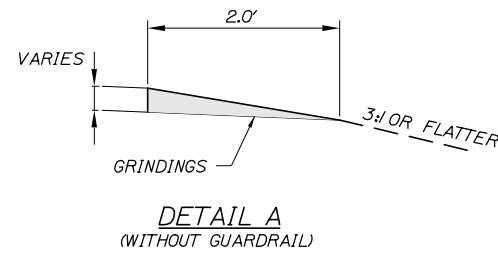
Date: 10/18/2018



BERM DROPOFF CORRECTION WITH GUARDRAIL
MEDIAN GUARDRAIL
 N.T.S.



BERM DROPOFF CORRECTION WITH GUARDRAIL
RIGHT OUTSIDE SHOULDER
 N.T.S.



Filename: 018_Berm_Details.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	CDH	10\18	Checked	JRH	10\18	
	Drawn	SLS	10\18	In Charge of	RAL	10\18

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 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

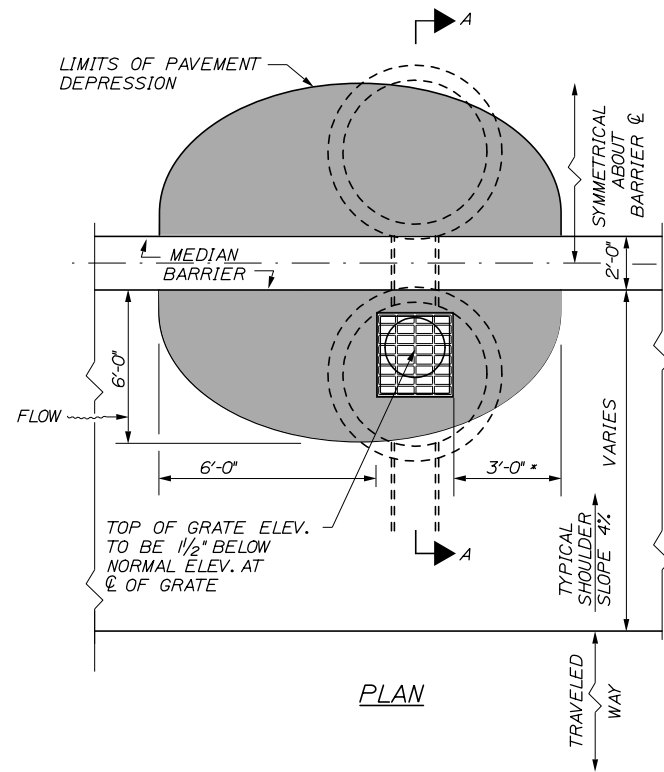
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

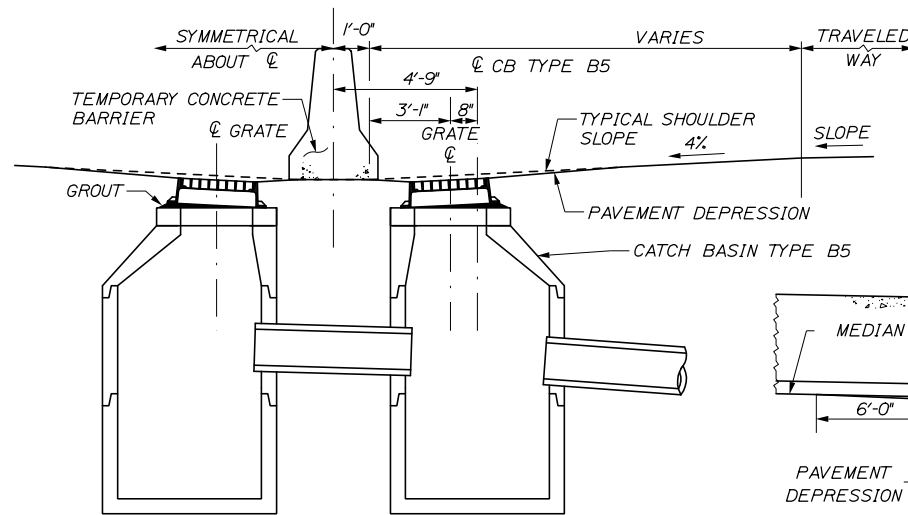
BERM DETAILS

SHEET NUMBER: CD-06
 CONTRACT: 2019.09
 18 OF 121

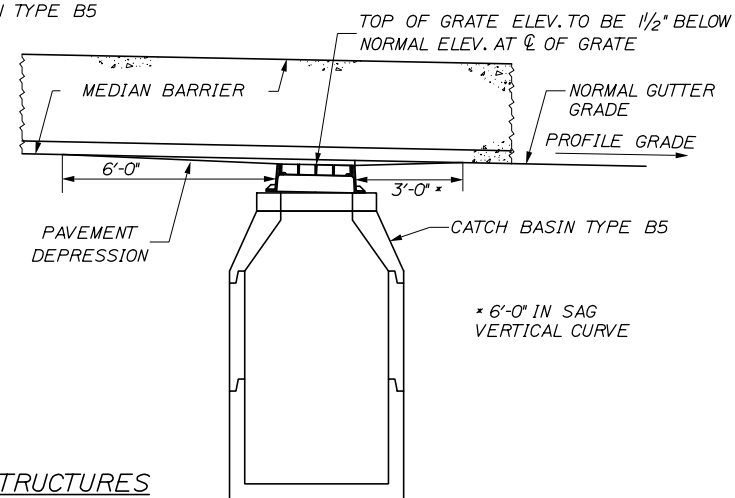
Date: 10/18/2018



PLAN



SECTION A-A



ELEVATION

PLACEMENT OF DRAINAGE STRUCTURES ALONG BARRIER

Filename: 019_Drainage_Details.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	CDH	10\18		JRH	10\18	
	Drawn	SLS	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

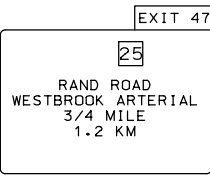
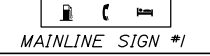

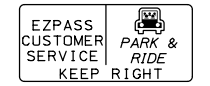
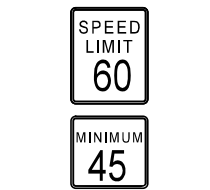


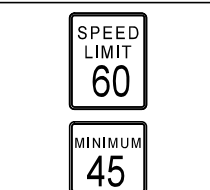

DRAINAGE DETAILS

CONTRACT: 2019.09

SHEET NUMBER: CD-07

19 OF 121

REMOVE AND RESET SIGN SUMMARY

DESCRIPTION	EXISTING						PROPOSED									
	SIGN SIZE			NUMBER AND TYPE OF POSTS	DIRECTION (NB - NORTHBOUND / SB - SOUTHBOUND)	STATION	NUMBER AND TYPE OF POSTS	POST SIZE	HEIGHT OF POST			FOUNDATION SIZE AND TYPE (REINFORCEMENT)	FOUNDATION DEPTH (FEET)	BREAKAWAY DEVICE	STATION	PAY ITEM
	WIDTH (FEET)	HEIGHT (FEET)	AREA IN (SQ. FT.)						LEFT (FEET)	CENTER (FEET)	RIGHT (FEET)					
 RAND ROAD WESTBROOK ARTERIAL 3/4 MILE 1.2 KM  MAINLINE SIGN #1	9.5	2.5	23.8													
	22	15	330	3 STEEL	NB	2314*56	3 STEEL	W 14X30	26	23	19	36" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	YES	2314*67	645.501
 MAINLINE SIGN #2	2	1	2	2 WOOD	NB	2315*99	2 WOOD	6"X6"	-	-	-	-	-	NO	2315*99	645.502
 MAINLINE SIGN #3	11.5	6	69	2 STEEL	SB	2316*22	2 STEEL	W 8X18	20	-	16.5	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2316*22	645.503
 MAINLINE SIGN #4	4	5	20	1 STEEL	NB	2322*02	1 STEEL	W 8X18	-	17	-	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2322*02	645.504
 MAINLINE SIGN #5	4	3	16	1 WOOD	SB	2322*96	1 WOOD	6"X6"	-	12	-	N/A	N/A	NO	2322*78	645.505
 MAINLINE SIGN #6	12	7	84	2 STEEL	SB	2323*28	2 STEEL	W 8X18	16	-	18	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2323*36	645.506
 MAINLINE SIGN #7	4	5	20	1 STEEL	SB	2325*98	1 STEEL	W 8X18	-	17	-	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2325*98	645.507
 MAINLINE SIGN #8	14.5	12	174	2 STEEL	NB	2327*75	2 STEEL	W 14X30	23	-	19	30" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	NO	2327*86	645.508

Date:10/18/2018

Filename: 020_Remove and Reset Sign Summary.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
By	Date	By	Date
Designed	CDH 10\18	Checked	CDH 10\18
Drawn	CDH 10\18	In Charge of	RAL 10\18

MAINE TURNPIKE AUTHORITY
 2360 Congress Street
 Portland, ME 04102
 TEL (207) 871-7771
 FAX (207) 879-5567



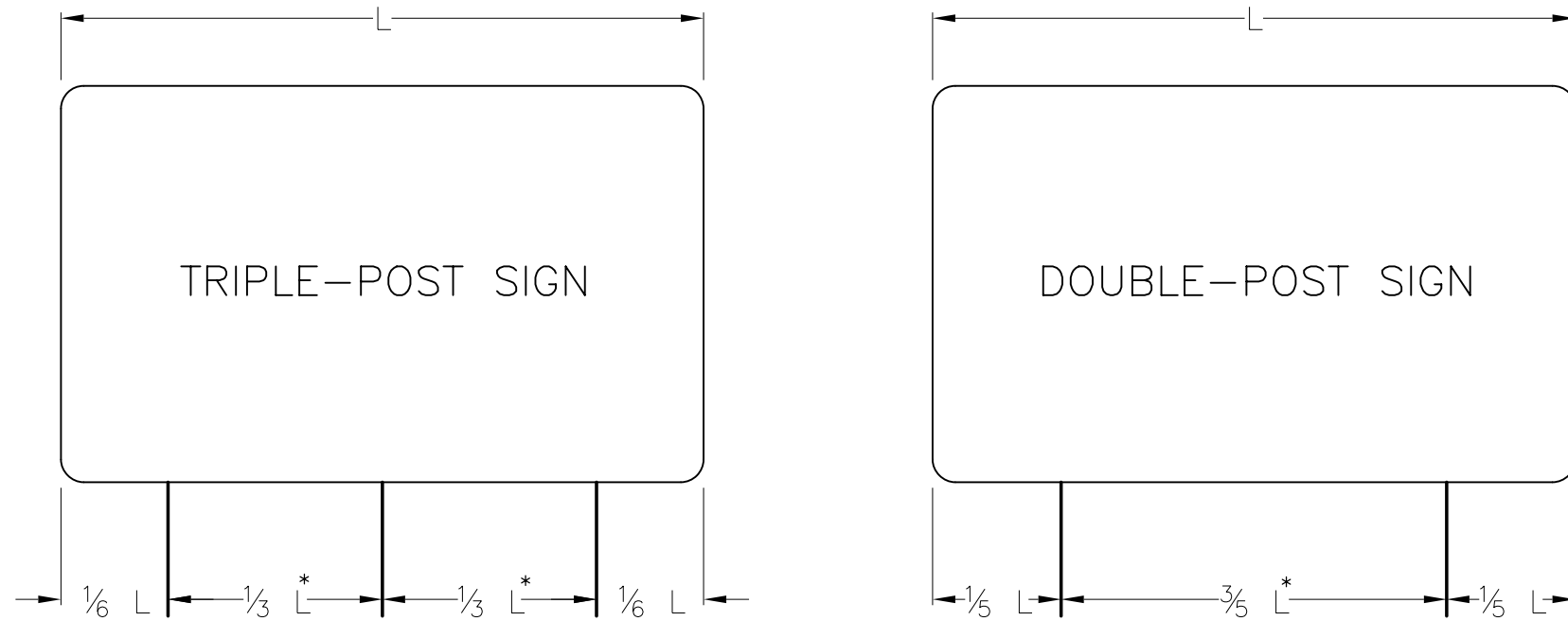
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 REMOVE AND RESET GUIDE
 SIGN SUMMARY

SHEET NUMBER: CD-08
 CONTRACT:2019.09
 20 OF 121

Date: 10/18/2018



POLE SPACING DETAIL
N.T.S.

* - A MINIMUM 7 FEET REQUIRED WHEN INSTALLED ON BREAKAWAY DEVICES

SINGLE SUPPORT SIGNS								
FOUNDATION DIAMETER	SIGN AREA (A)	SIGN WIDTH (W)	POST SIZE	BASE PLATE (1) (3)	MATERIAL	ANCHOR BOLTS (2)	BOLT CIRCLE	MAXIMUM MOUNTING HEIGHT
	$A < 4 FT^2$		U CHANNEL POST					12 FEET TO SIGN CENTER
	$4 < A \leq 10 FT^2$		WOOD POST 6"X6"					
18"	$10 < A \leq 16 FT^2$	W=4'-0" MAX. BUT INCLUDES 5'-0" YIELD SIGN	W6X9	12"X12"X1" 41 LBS.	A36	1" ϕ X 3'-0"	12"	
18"	$16 < A \leq 25 FT^2$	W=5'-0" MAX	W6X15	12"X12"X1" 41 LBS.	A36	1" ϕ X 3'-0"	12"	
24"	$25 < A \leq 42 FT^2$	W=7'-0" MAX	W8X24	14"X14"X1" 55 LBS.	A36	1-1/4" ϕ X 3'-6"	14"	

MULTIPLE SUPPORT SIGNS								
FOUNDATION DIAMETER	SIGN AREA (A)	SIGN WIDTH (W)	POST SIZE	BASE PLATE (1) (3)	MATERIAL	ANCHOR BOLTS (2)	BOLT CIRCLE	MAXIMUM MOUNTING HEIGHT
24"	TO 60 FT ² /POST		W8X18	14"X14"X1" 55 LBS.	A36	1-1/4" ϕ X 3'-6"	14"	20 FEET TO SIGN CENTER
24"	60-85 FT ² /POST		W10X22	12"X17"X1-1/4" 72 LBS.	A36	1-1/4" ϕ X 3'-6"	15"	
30"	85-110 FT ² /POST		W12X26	13"X19"X1-1/4" 87 LBS.	A36	1-1/2" ϕ X 4'-0"	17"	
30"	110-135 FT ² /POST		W14X30	14"X21"X1-1/4" 104 LBS.	A36	1-1/2" ϕ X 4'-0"	19"	

GENERAL NOTES

- BOLTS TO BE 50,000 PSI MINIMUM YIELD STRENGTH.
- POST TO BASE PLATE WELD SHALL BE 5/16" FILLET WELD.
- BASE PLATES AND H-BEAMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 720.06.

BREAKAWAY NOTES

- ON 6"X6" WOOD POSTS, DRILL 3/4" DIAMETER HOLES AT RIGHT ANGLES TO ONE ANOTHER 4 INCHES ABOVE GROUND LEVEL TO MEET BREAKAWAY STANDARDS.
- ON BREAKAWAY SUPPORTS, THE HINGE SHOULD BE A MINIMUM OF 7 FEET ABOVE THE FOUNDATION. NO PERMANENT SUPPLEMENTARY SIGNS SHALL BE ATTACHED BELOW THE HINGE.
- A SINGLE POSTED SIGN REQUIRING A BREAKAWAY DEVICE SHALL NOT HAVE A HINGE.

REMOVE AND RESET GUIDE SIGN NOTES

- EXISTING SIGN POST LENGTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR IF THE POSTS ARE TO BE REUSED.
- THE CONTRACTOR MAY REUSE EXISTING POLES, FOUNDATIONS AND BREAKAWAY DEVICES AT ANY SIGN LOCATION WHERE FEASIBLE.
- PROPOSED POLE LENGTHS ARE MEASURED FROM THE TOP OF THE FOUNDATION TO THE TOP OF SIGN AND ARE APPROXIMATE. FINAL POST LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR ONCE FOUNDATIONS ARE PLACED. SEE REMOVE AND RESET SIGN SUMMARY.

Filename: 021_Sign_Details.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

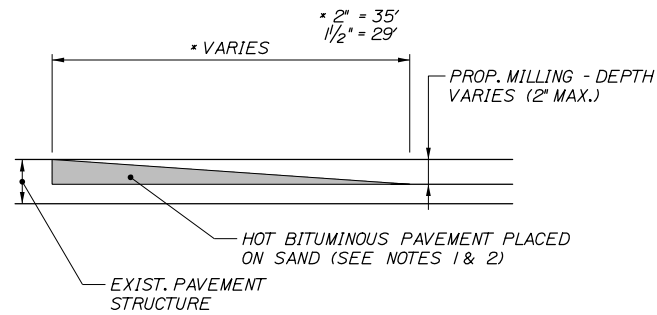
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

REMOVE AND RESET SIGNS

SHEET NUMBER: CD-09
21 OF 121

CONTRACT: 2019.09

Date:10/18/2018



TEMPORARY BITUMINOUS RAMP
N.T.S

NOTES:

1. HOT MIX ASPHALT FOR TEMPORARY RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5 MM.

2. REMOVAL OF TEMP. BITUMINOUS RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5 MM.

Filename: 022_Paving_Details.dgn

Scale:			
<i>NOT TO SCALE</i>			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

MISCELLANEOUS DETAILS

SHEET NUMBER: CD-10

CONTRACT:2019.09 22 OF 121

ITEM 606.1305 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
FLARED TERMINAL (3" HEIGHT)
STA. 22314+28, 42.00' RT. TO STA. 22314+62, 38.00' RT.

ITEM 610.08 PLAIN RIPRAP CY
STA. 2310+00 LT. 1.2
STA. 2311+11 RT. 2.0

ITEM 656.632 30 INCH TEMPORARY SILT FENCE LF
STA. 2309+52, 78' RT. TO STA. 2316+65, 100' RT.
STA. 2307+47, 64' LT. TO STA. 2316+75, 105' LT.

ITEM 610.18 STONE DITCH PROTECTION CY
STA. 2307+49 LT. TO STA. 2308+01 LT. 18.9
STA. 2309+45 LT. TO STA. 2309+98 LT. 17.9
STA. 2309+50 RT. TO STA. 2310+00 RT. 18.3
STA. 2310+00 LT. TO STA. 2310+50 LT. 16.2

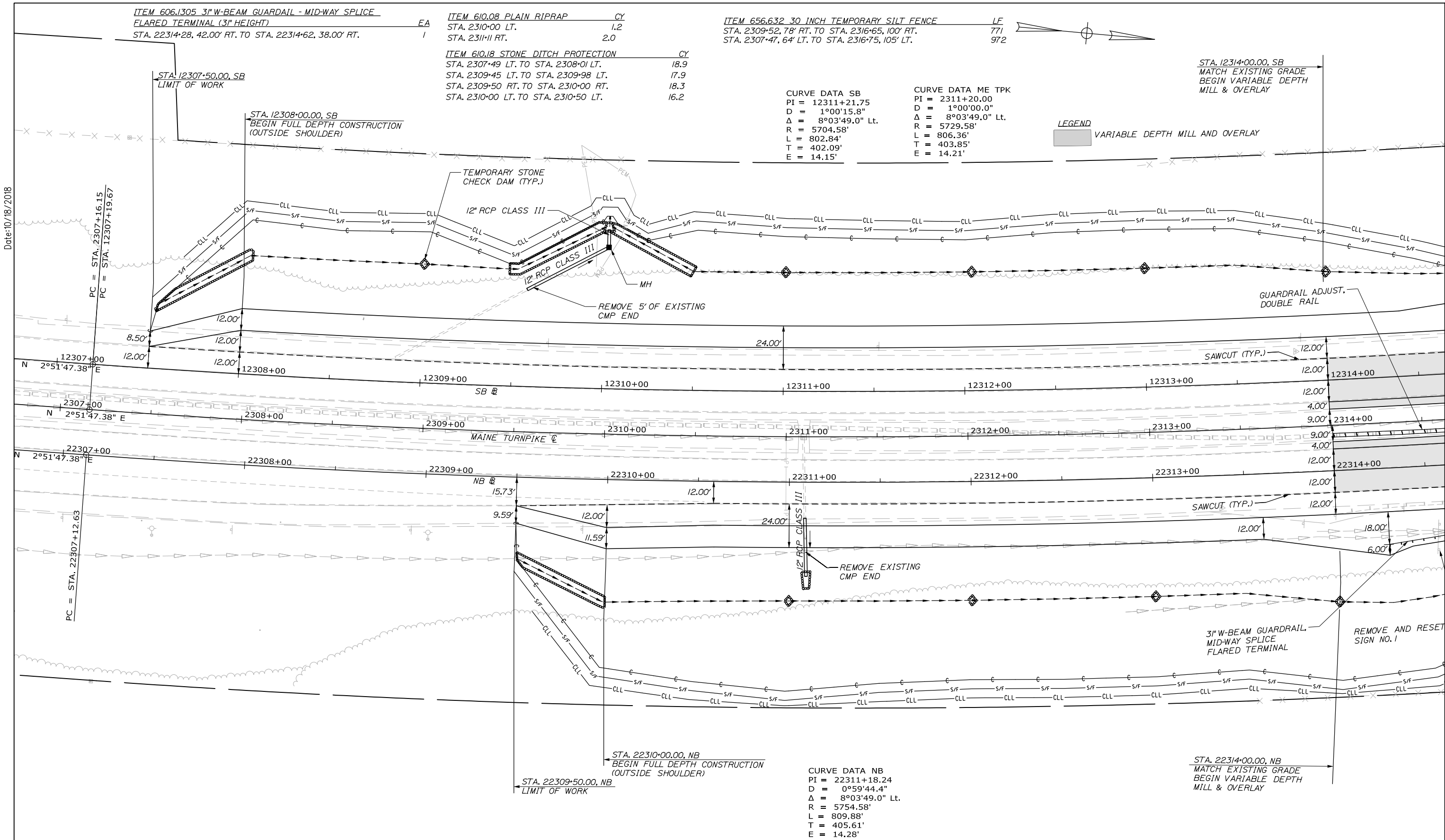
CURVE DATA SB
PI = 12311+21.75
D = 1°00'15.8"
Δ = 8°03'49.0" Lt.
R = 5704.58'
L = 802.84'
T = 402.09'
E = 14.15'

CURVE DATA ME TPK
PI = 2311+20.00
D = 1°00'00.0"
Δ = 8°03'49.0" Lt.
R = 5729.58'
L = 806.36'
T = 403.85'
E = 14.21'

STA. 12314+00.00, SB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH
MILL & OVERLAY

LEGEND
VARIABLE DEPTH MILL AND OVERLAY

Date: 10/18/2018



Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

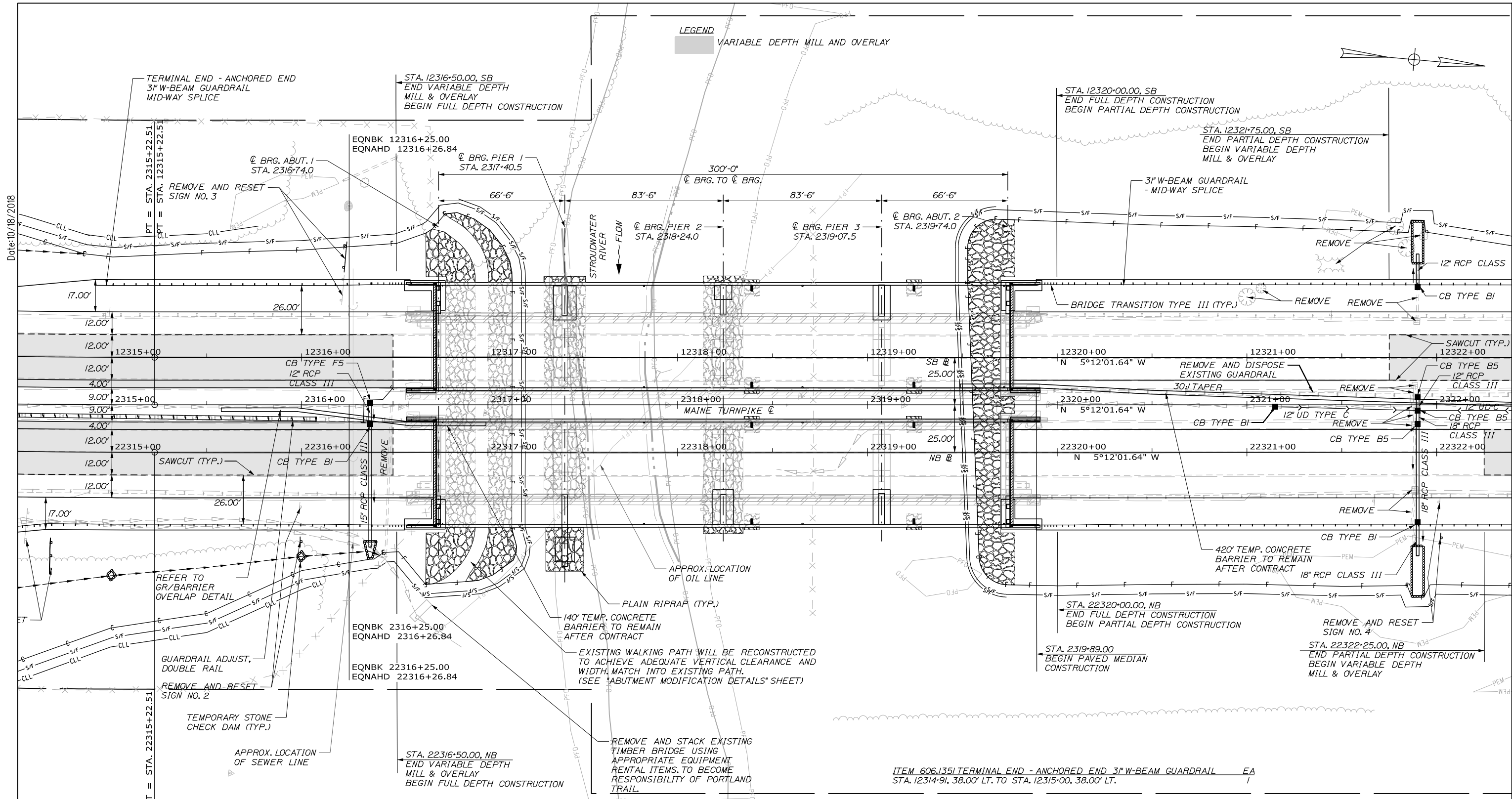
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

GENERAL PLAN 1

SHEET NUMBER: GP-01
23 OF 121

CONTRACT: 2019.09



Date: 10/18/2018

ITEM 526.3061 TEMPORARY CONCRETE BARRIER, TYPE 1 SUPPLIED BY AUTHORITY; TO REMAIN LS

STA. 2315+58, 2.56' RT. TO STA. 2316+99, 10.00' RT.	175
STA. 2319+49, 10' LT. TO STA. 2323+69, 0.00' LT.	448

ITEM 606.1723 BRIDGE TRANSITION - TYPE III

STA. 12316+39, 38.33' LT. TO STA. 12316+59, 38.33' LT.	EA	1
STA. 22316+39, 38.33' RT. TO STA. 22316+59, 38.33' RT.	EA	1
STA. 12319+89, 38.33' LT. TO STA. 12320+09, 38.33' LT.	EA	1
STA. 22319+89, 38.33' RT. TO STA. 22320+09, 38.33' RT.	EA	1

ITEM 610.08 PLAIN RIPRAP

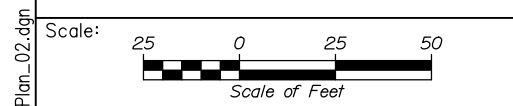
STA. 2316+38 RT.	CY	2.3
STA. 2321+90 RT.	CY	8.8
STA. 2321+90 LT.	CY	7.4

ITEM 606.1301 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (7" STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

STA. 22314+62, 38.00' RT. TO STA. 22316+39, 38.33' RT.	LF	175
STA. 12315+00, 38.00' LT. TO STA. 12316+39, 38.33' LT.	LF	137.5
STA. 12320+09, 38.33' LT. TO STA. 12328+34, 38.00' LT.	LF	825
STA. 22320+09, 38.33' RT. TO STA. 22327+47, 38.00' RT.	LF	737.5

ITEM 656.632 30 INCH TEMPORARY SILT FENCE

STA. 2316+65, 100' RT. TO STA. 2307+47, 64' LT.	LF	548
STA. 2329+50, 74' RT. TO STA. 2319+68, 103' LT.	LF	448
STA. 2319+73, 100' RT. TO STA. 2329+50, 74' RT.	LF	1020
STA. 2319+68, 103' LT. TO STA. 2330+05, 45' LT.	LF	1111



Designed by:

HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
Designed	By	Date	By	Date	
Drawn	CDH	10\18	Checked	RWH	10\18
	SLS	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

GENERAL PLAN 2

SHEET NUMBER: GP-02
CONTRACT: 2019.09
24 OF 121

Filename: 024_BDPlan_02.dgn

ITEM 606.1305 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
 FLARED TERMINAL (3' HEIGHT) EA
 STA. 12328+34, 38.00' LT. TO STA. 12328+69, 42.00' LT.

ITEM 610.08 PLAIN RIPRAP CY
 STA. 2327+48 RT.

ITEM 606.1351 TERMINAL END - ANCHORED END 3" W-BEAM GUARDRAIL EA
 STA. 22327+47, 38.00' RT. TO STA. 22327+56, 38.00' RT.



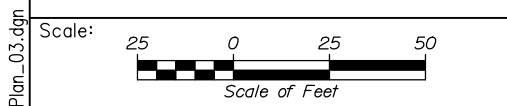
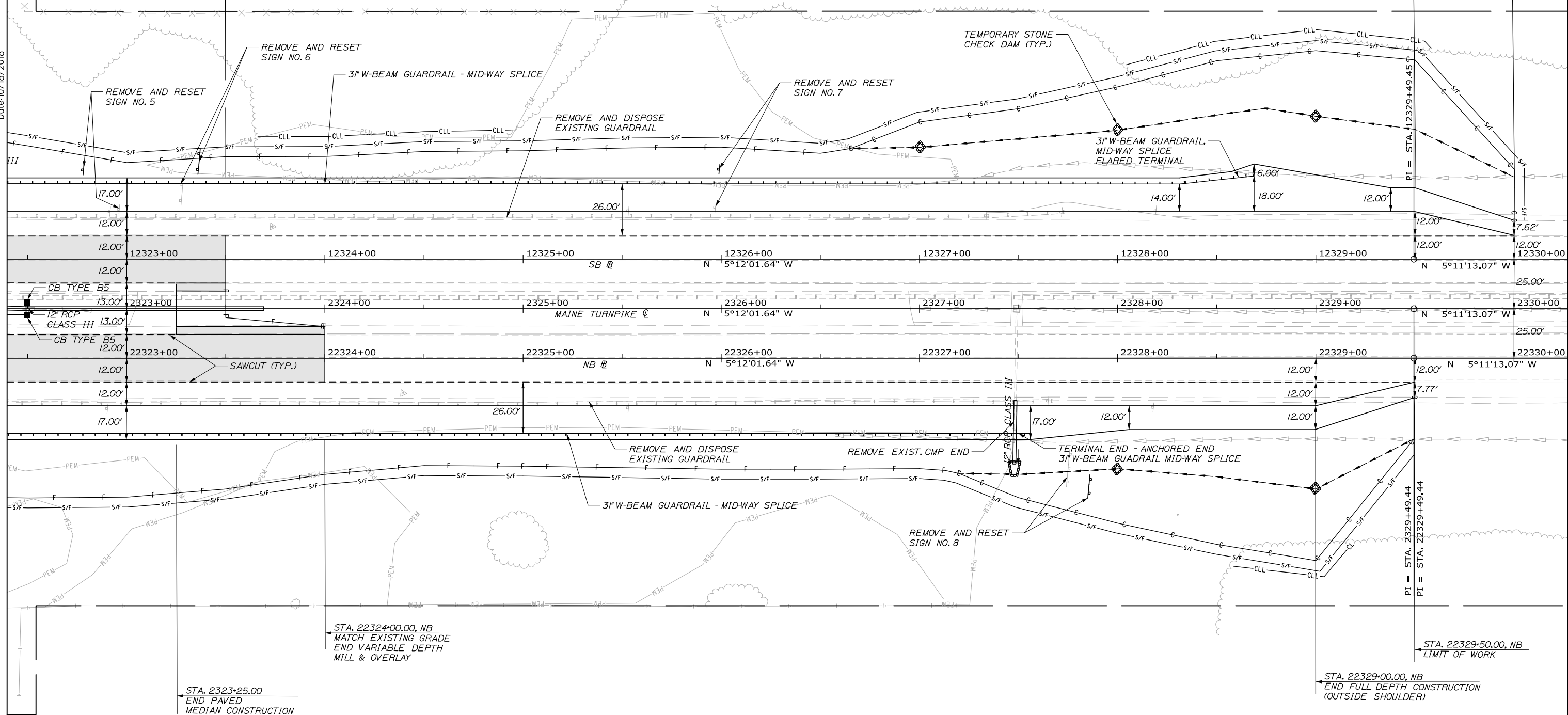
STA. 12330+00.00, SB
 LIMIT OF WORK

STA. 12323+50.00, SB
 MATCH EXISTING GRADE
 END VARIABLE DEPTH
 MILL & OVERLAY

STA. 12329+50.00, SB
 END FULL DEPTH CONSTRUCTION
 (OUTSIDE SHOULDER)

LEGEND
 VARIABLE DEPTH MILL AND OVERLAY

Date: 10/18/2018



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

GENERAL PLAN 3

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

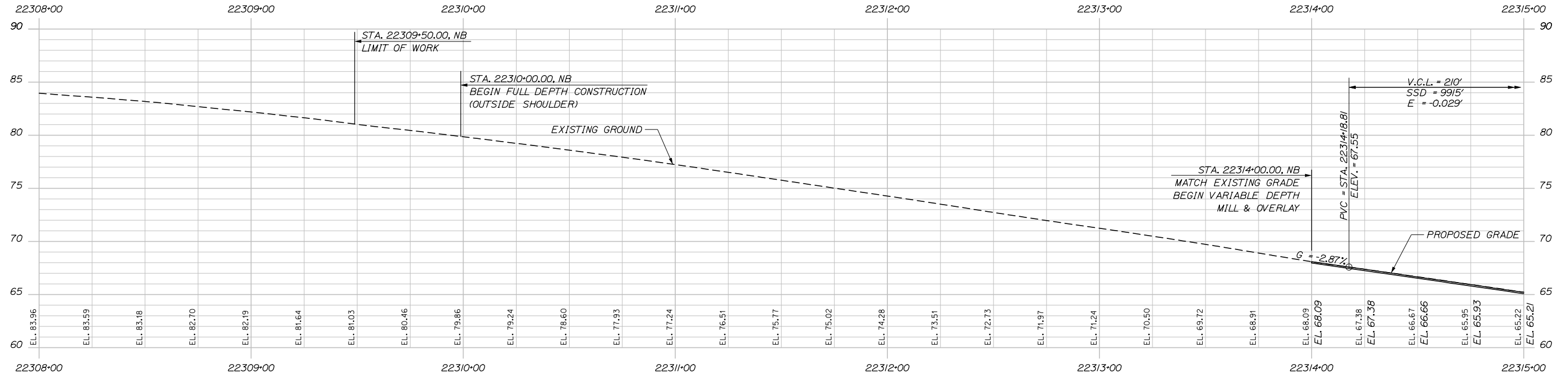
CONTRACT: 2019.09

SHEET NUMBER: GP-03

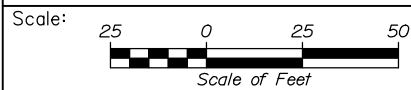
25 OF 121

Date: 10/18/2018

NOTE: EXISTING GROUND SHOWN WAS SURVEYED PRIOR TO A 3/4" OVERLAY AND MAY NOT REPRESENT EXACT GROUND ELEVATIONS ENCOUNTERED DURING THIS CONTRACT.



Filename: 026_NBPProfile_01.dgn



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

PROFILE - NORTHBOUND 1

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

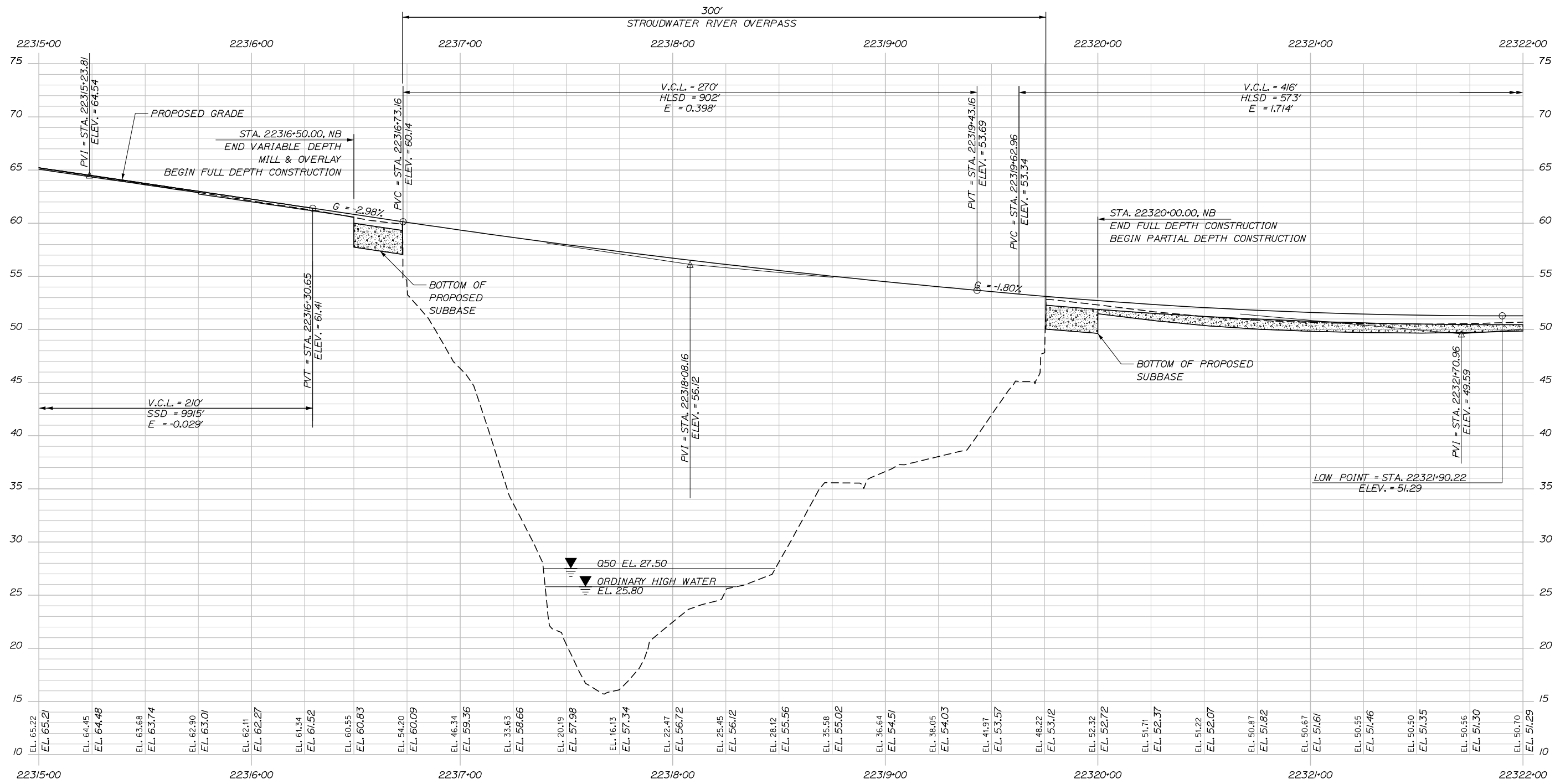
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

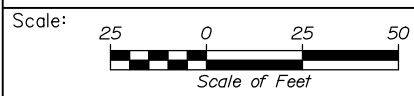
SHEET NUMBER: PRO-01

26 OF 121

Date: 10/18/2018



Filename: 027_NBProfile_02.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

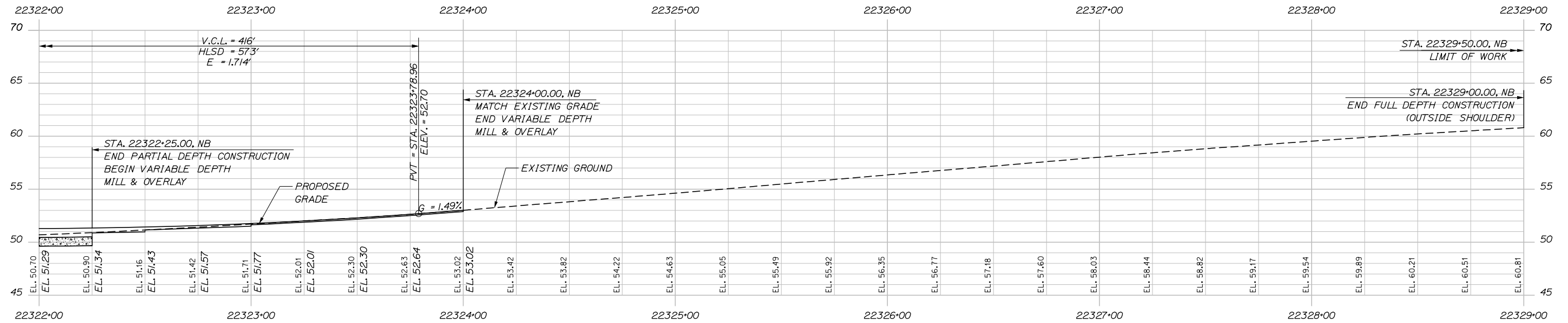
BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

PROFILE - NORTHBOUND 2

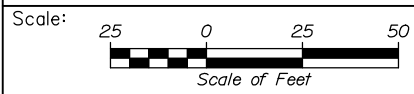
SHEET NUMBER: PRO-02
 27 OF 121

CONTRACT: 2019.09

Date: 10/18/2018



Filename: 028_NBProfile_03.dgn



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BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

PROFILE - NORTHBOUND 3

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

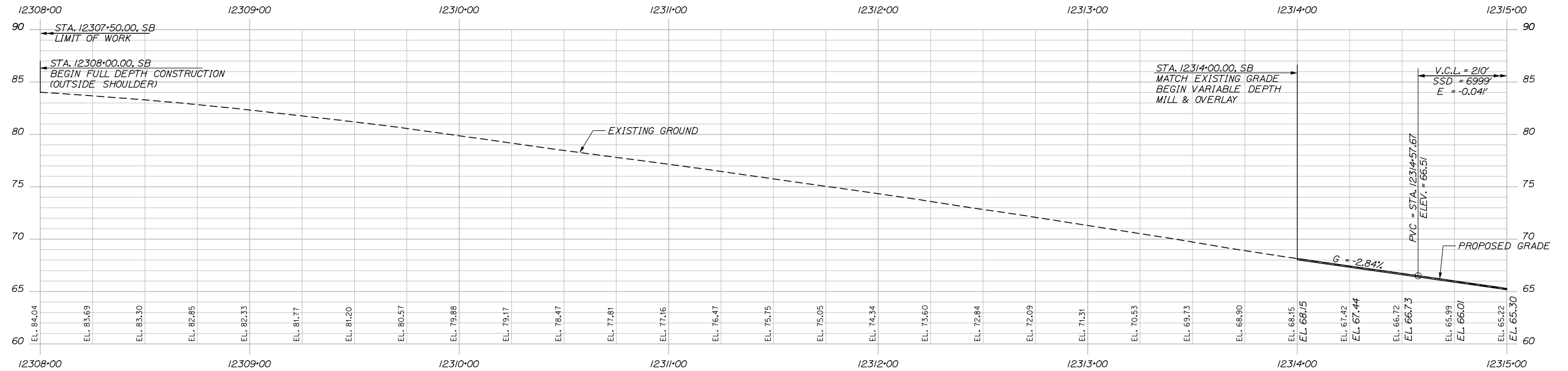
CONTRACT: 2019.09

SHEET NUMBER: PRO-03

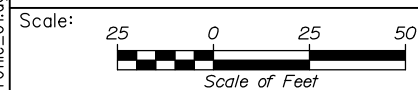
28 OF 121

Date: 10/18/2018

NOTE: EXISTING GROUND SHOWN WAS SURVEYED PRIOR TO A 3/4" OVERLAY AND MAY NOT REPRESENT EXACT GROUND ELEVATIONS ENCOUNTERED DURING THIS CONTRACT.



Filename: 029_SBPProfile_01.dgn



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

PROFILE - SOUTHBOUND 1

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

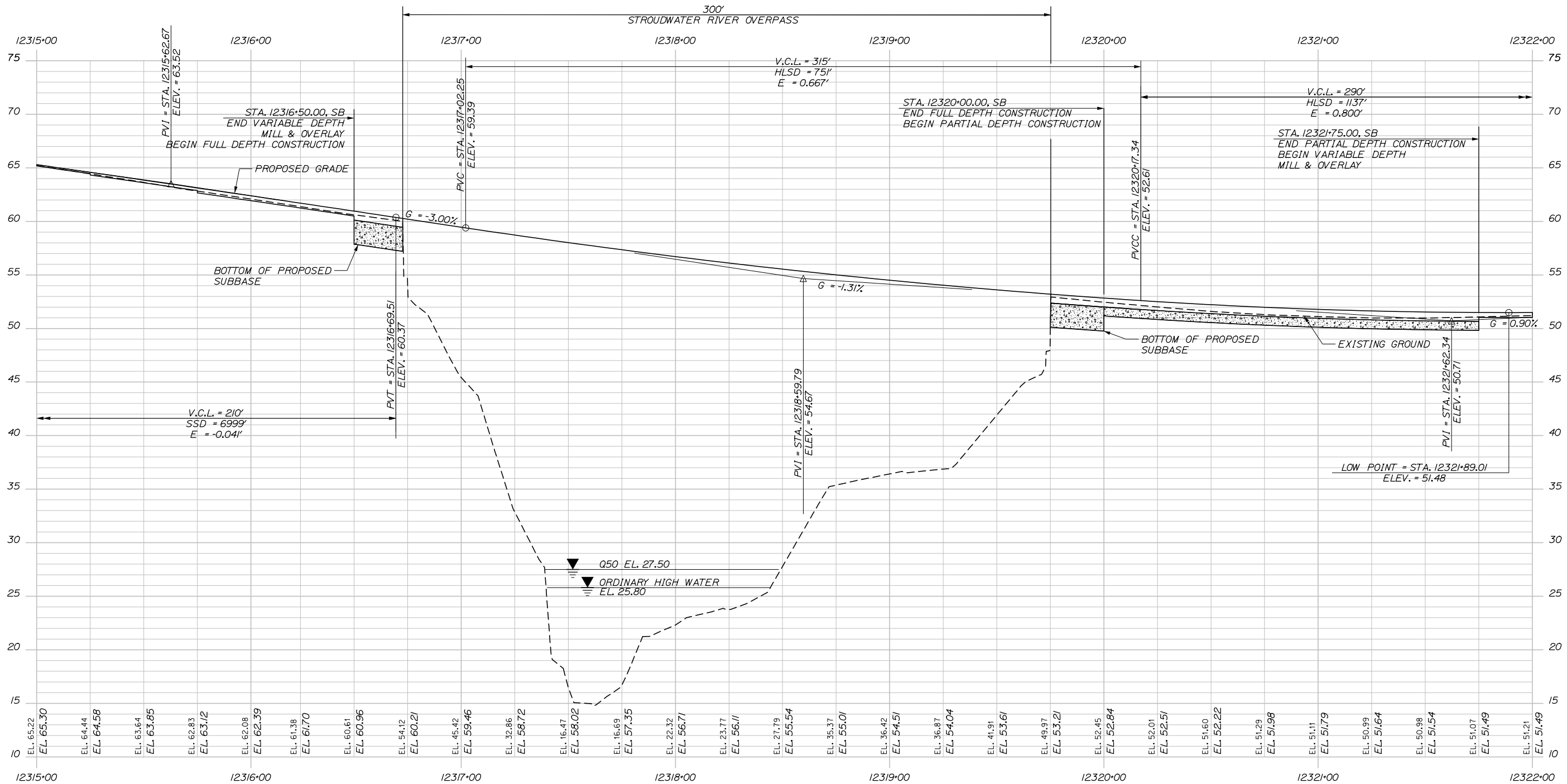
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

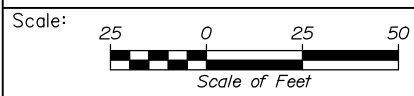
SHEET NUMBER: PRO-04

29 OF 121

Date: 10/18/2018



Filename: 030_SBPProfile_02.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

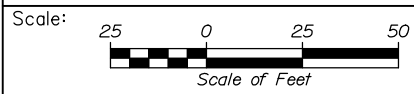
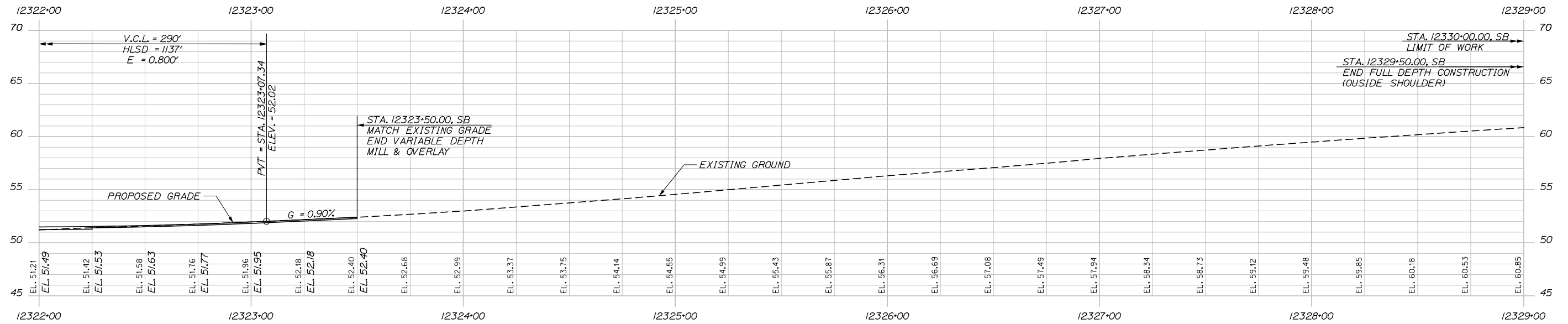
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

PROFILE - SOUTHBOUND 2

SHEET NUMBER: PRO-05
 CONTRACT: 2019.09
 30 OF 121



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

PROFILE - SOUTHBOUND 3

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

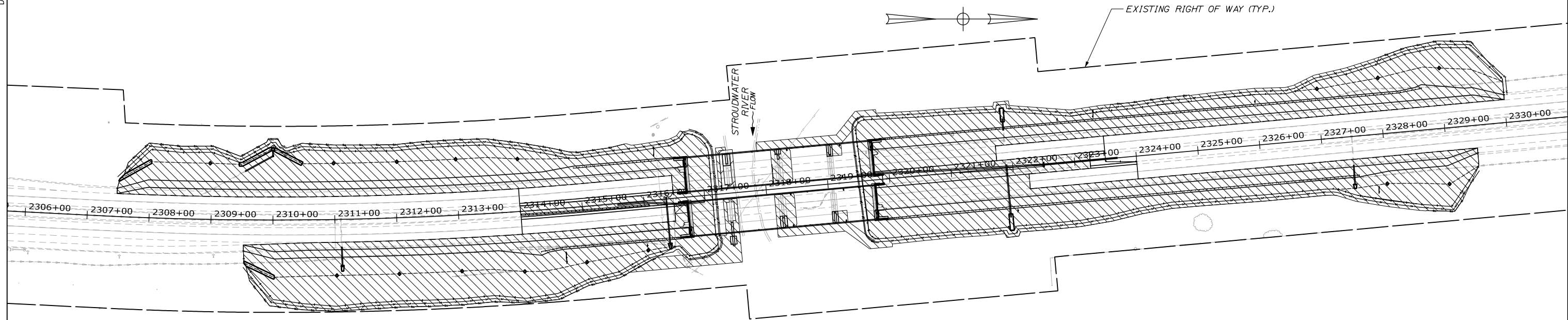
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT:2019.09

SHEET NUMBER: PRO-06

31 OF 121

Date: 10/18/2018



NOTES

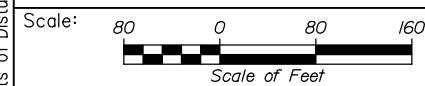
1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

3. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS

 LIMIT OF DISTURBANCE
341483.7 SF (7.84 ACRES)

Filename: 032_Limits of Disturbance.dgn



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	CDH	10\18	In Charge of	RAL	10\18

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 **THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

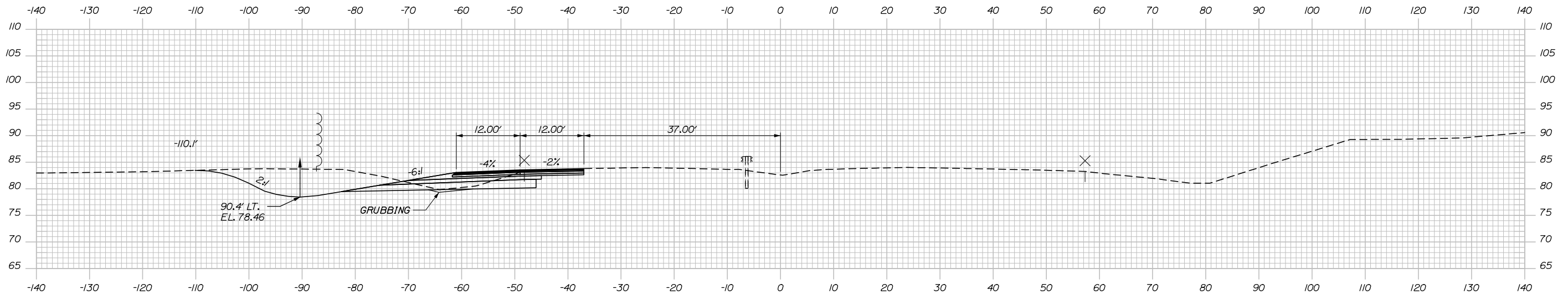
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

LIMITS OF DISTURBANCE

SHEET NUMBER: LOD-01
CONTRACT: 2019.09
32 OF 121

Date: 10/18/2018

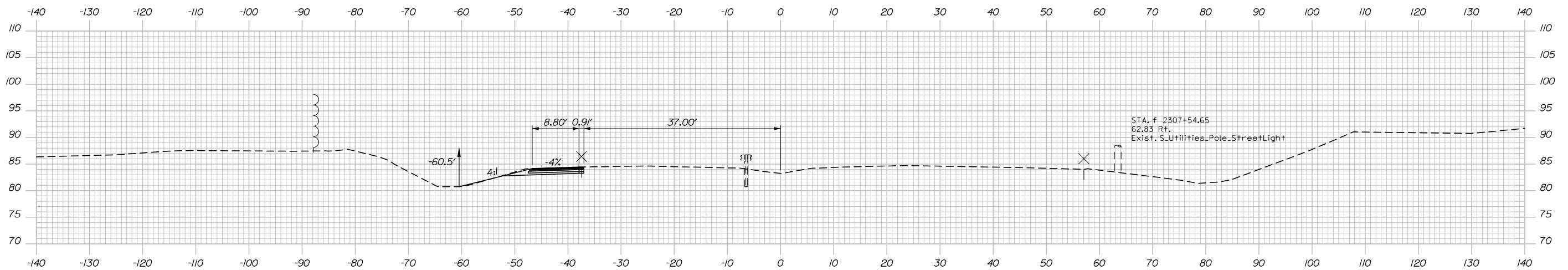
C = 250 CY
 F = 0 CY
 G = 5 CY



C = 169 CY
 F = 0 CY
 G = 2 CY

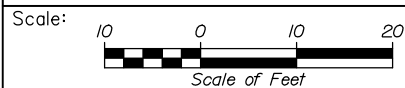
STA. 12308+00.00, SB
 BEGIN FULL DEPTH CONSTRUCTION
 (OUTSIDE SHOULDER)

2308+00.00



STA. 12307+50.00, SB
 LIMIT OF WORK

2307+50.00



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

STA. 2307+50 TO STA. 2308+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

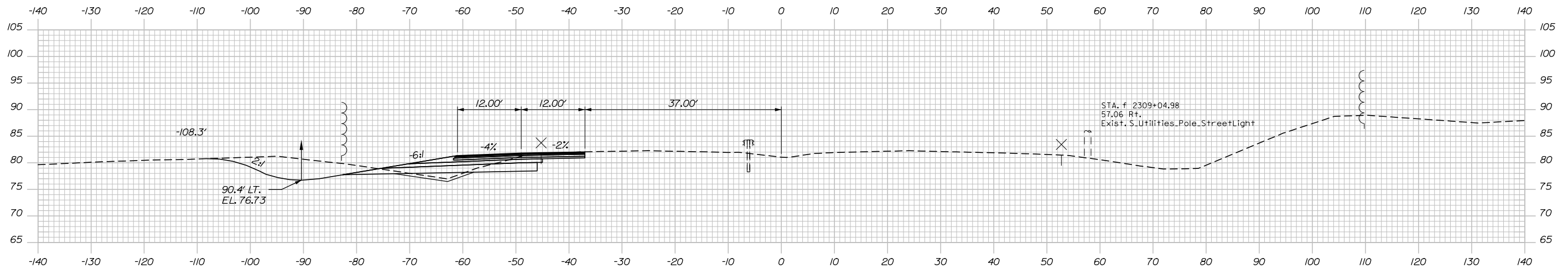
SHEET NUMBER: XS-01

33 OF 121

Filename: XSect.dgn

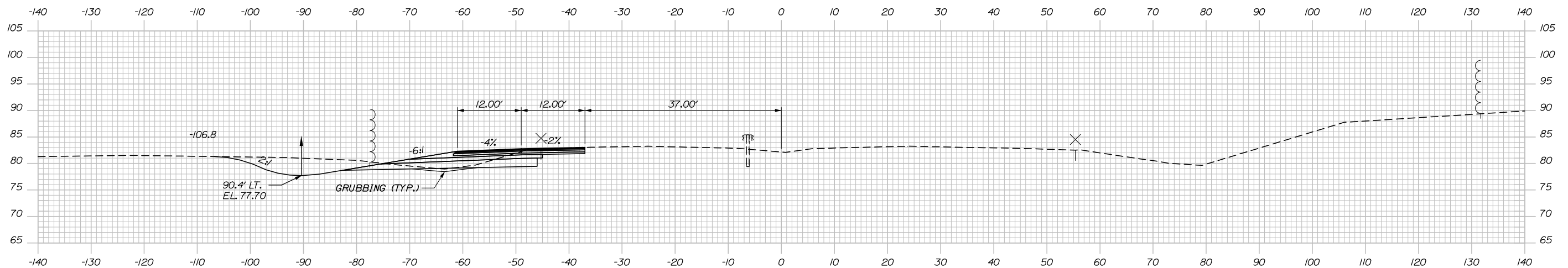
Date: 10/18/2018

C = 136 CY
F = 92 CY
G = 17 CY

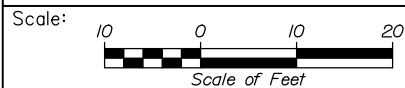


C = 199 CY
F = 6 CY
G = 9 CY

2309+00.00



2308+50.00



Designed by:



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MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2308+50 TO STA. 2309+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-02

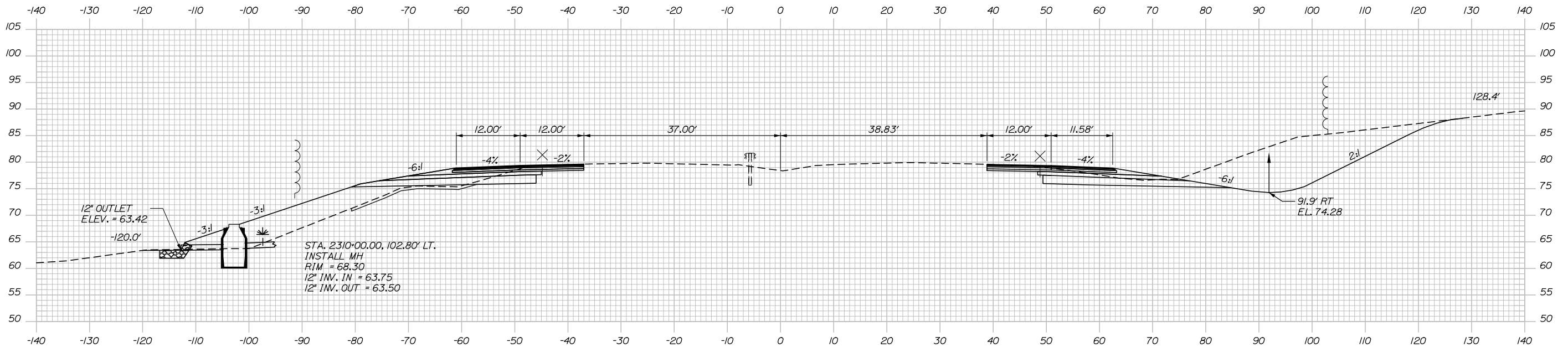
34 OF 121

Filename: XSect.dgn

Date: 10/18/2018

C = 186 CY
F = 141 CY
G = 13 CY

C = 721 CY
F = 0 CY
G = 0 CY



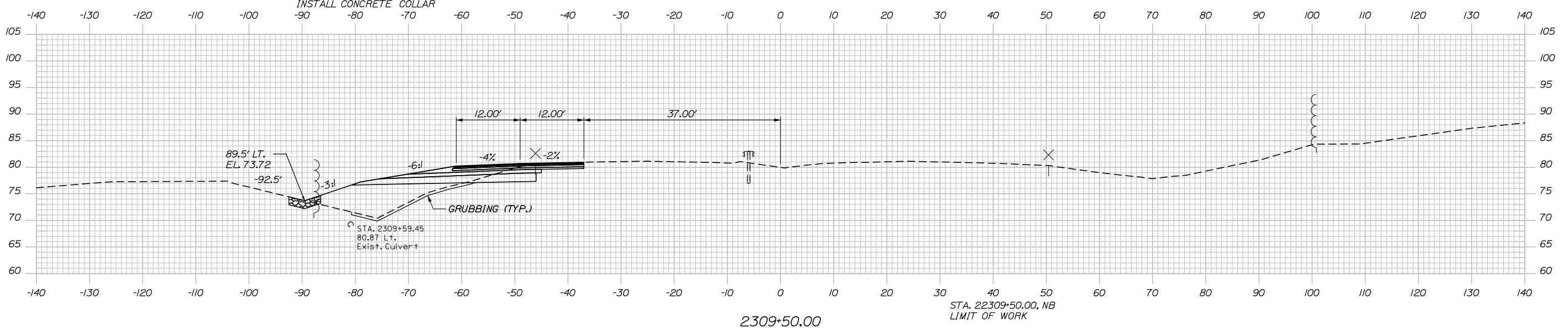
STA. 2310+00.00, 104.80' LT. TO
 STA. 2310+00.00, 112.80' LT.
 INSTALL 12" X 8' CULVERT PIPE OPT. III
 RIPRAP OUTLET
 C = 64 CY
F = 228 CY
G = 22 CY

STA. 2310+00.00, 102.80' LT.
 INSTALL MH
 RIM = 68.30
 12" INV. IN = 63.75
 12" INV. OUT = 63.50

STA. 2309+55.00, LT. TO
 STA. 2309+98.21, 101.81' LT.
 REMOVE 5' OF EXISTING CMP END
 INSTALL 12" X 48' CULVERT PIPE OPT. III
 INSTALL CONCRETE COLLAR

STA. 22310+00.00 NB,
 BEGIN FULL DEPTH CONSTRUCTION
 (OUTSIDE SHOULDER)

C = 296 CY
F = 0 CY
G = 0 CY



STA. 2309+50.00, 80.87' LT.
 Exist. Culvert
 GRUBBING (TYP.)

STA. 2309+59.45
 80.87' LT.
 Exist. Culvert

STA. 22309+50.00, NB
 LIMIT OF WORK



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BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2309+50 TO STA. 2310+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

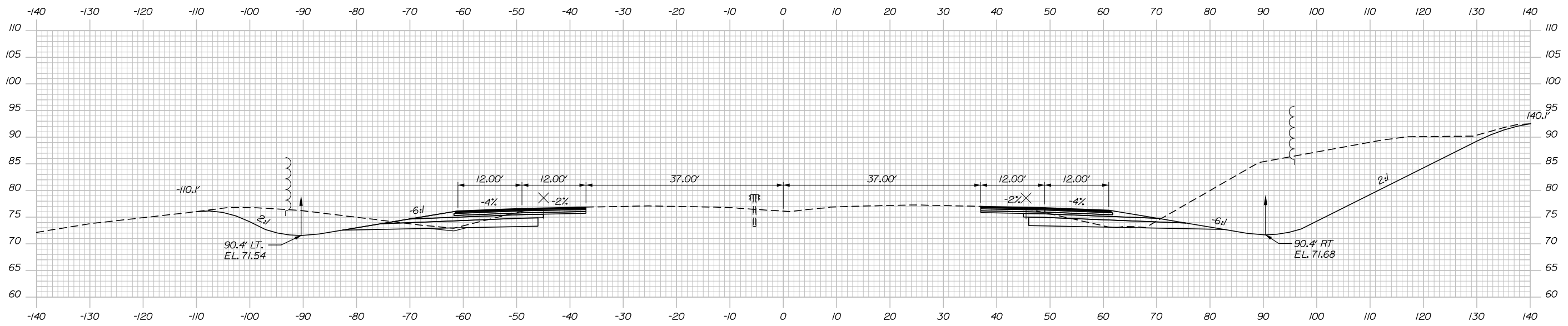
SHEET NUMBER: XS-03

35 OF 121

Filename: XSect.dgn

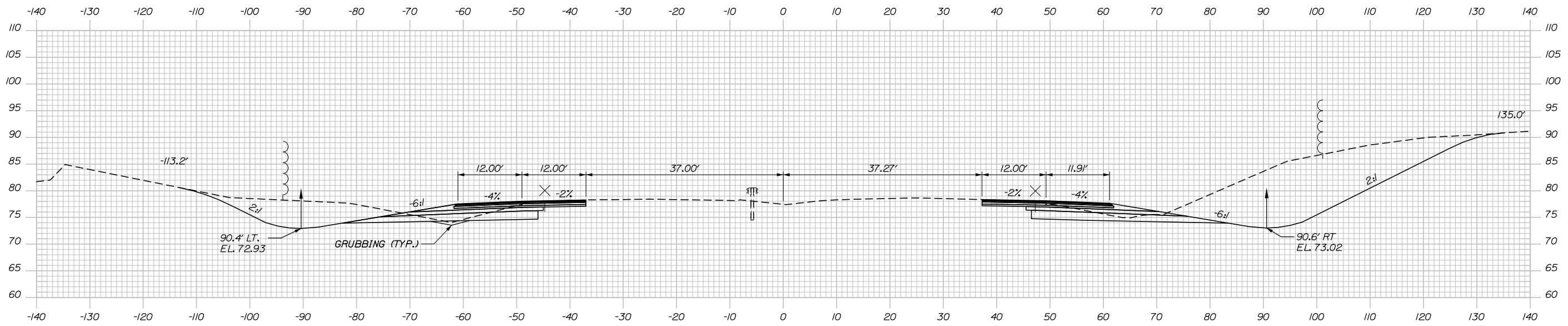
Date: 10/18/2018

C = 278 CY
F = 0 CY
G = 2 CY

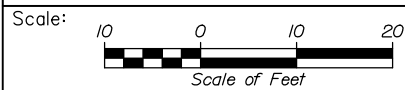


C = 1011 CY
F = 1 CY
G = 6 CY

C = 288 CY
F = 0 CY
G = 4 CY



C = 939 CY
F = 0 CY
G = 3 CY



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2310+50 TO STA. 2311+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-04

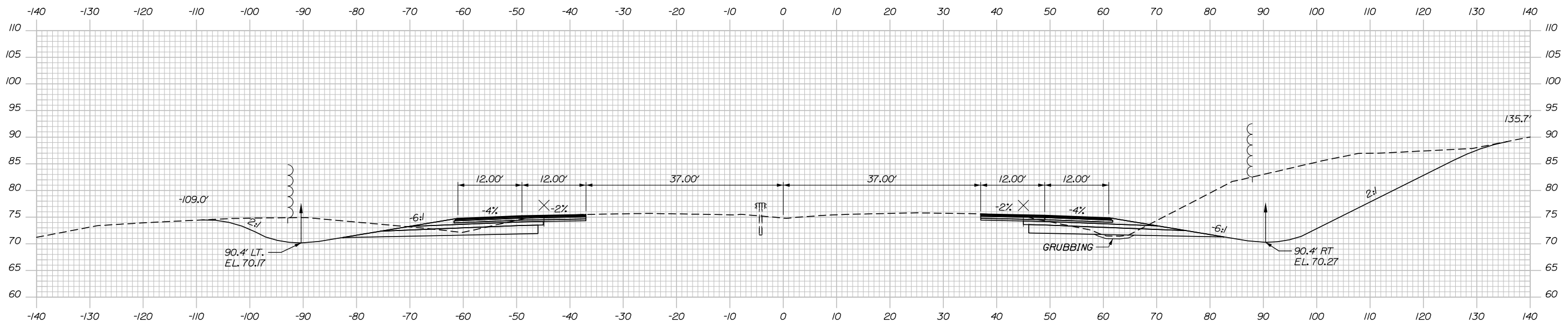
36 OF 121

Filename: XSect.dgn

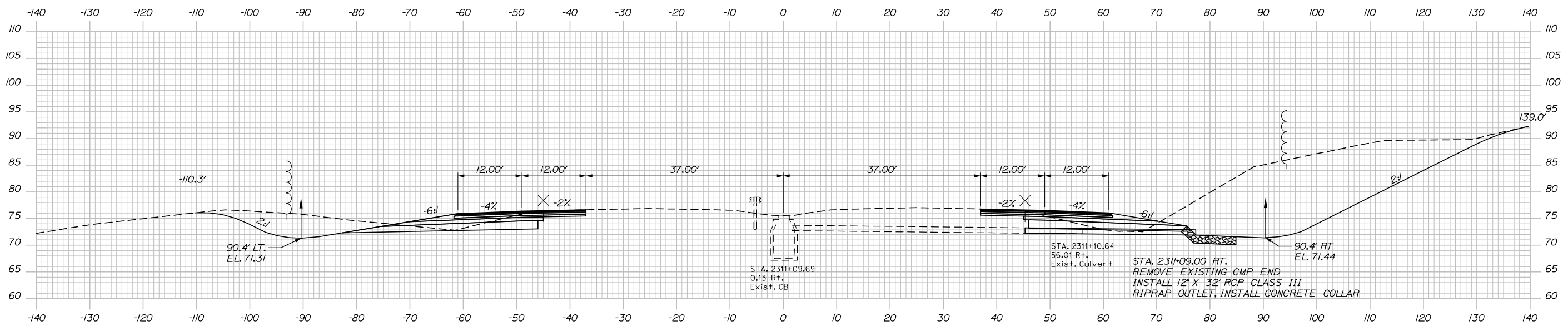
Date: 10/18/2018

C = 281 CY
F = 0 CY
G = 0 CY

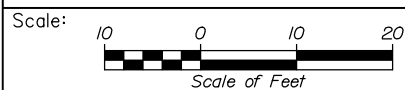
C = 953 CY
F = 1 CY
G = 6 CY



2311+50.00



2311+09.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2311+09 TO STA. 2311+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
	CDH	10\18		RWH	10\18
Drawn	By	Date	In Charge of	By	Date
	SLS	10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-05

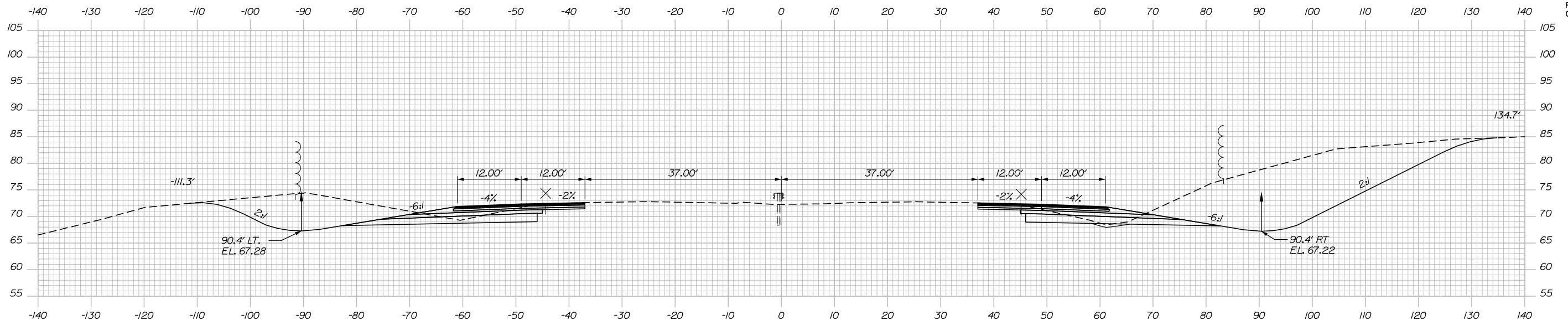
37 OF 121

Filename: XSect.dgn

Date: 10/18/2018

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F = 0 CY
G = 0 CY

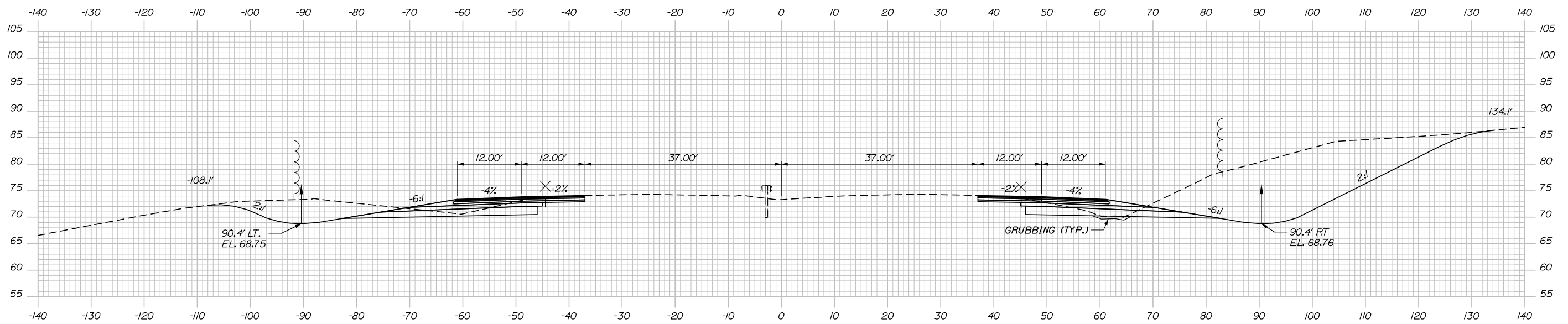
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F = 0 CY
G = 3 CY



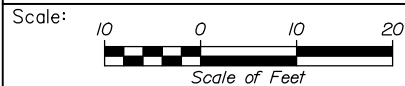
C = 338 CY
F = 0 CY
G = 0 CY

2312+50.00

C = 915 CY
F = 0 CY
G = 5 CY



2312+00.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2312+00 TO STA. 2312+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-06

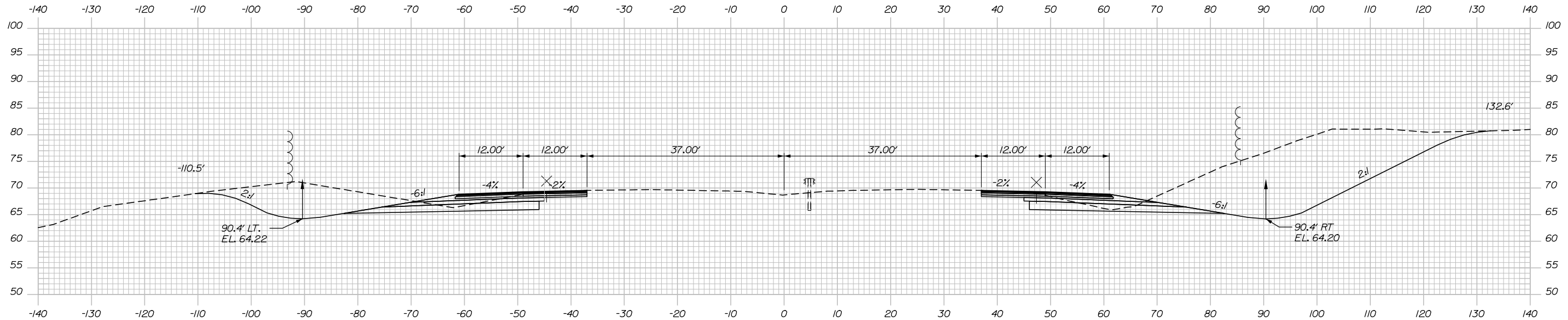
38 OF 121

Filename: XSect.dgn

Date: 10/18/2018

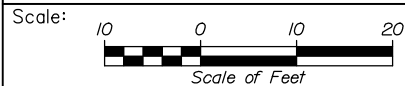
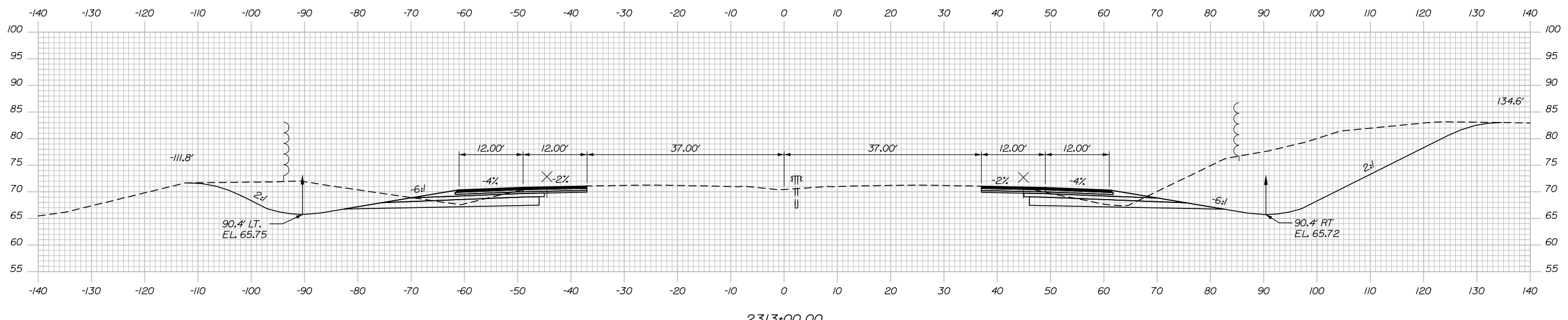
C = 310 CY
F = 0 CY
G = 0 CY

C = 1085 CY
F = 0 CY
G = 0 CY



C = 372 CY
F = 0 CY
G = 0 CY

C = 980 CY
F = 0 CY
G = 1 CY



Designed by:



HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2313+00 TO STA. 2313+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-07

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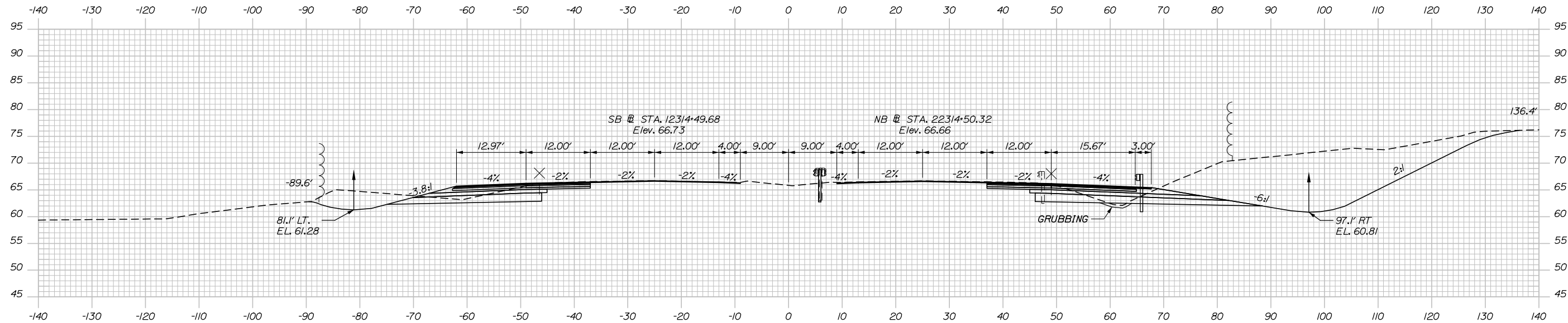
Filename: XSect.dgn

Date: 10/18/2018

C = 117 CY
F = 14 CY
G = 9 CY

STA. 22314+62, 38.00' RT. TO STA. 22316+39, 38.33' RT.
INSTALL 175' 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

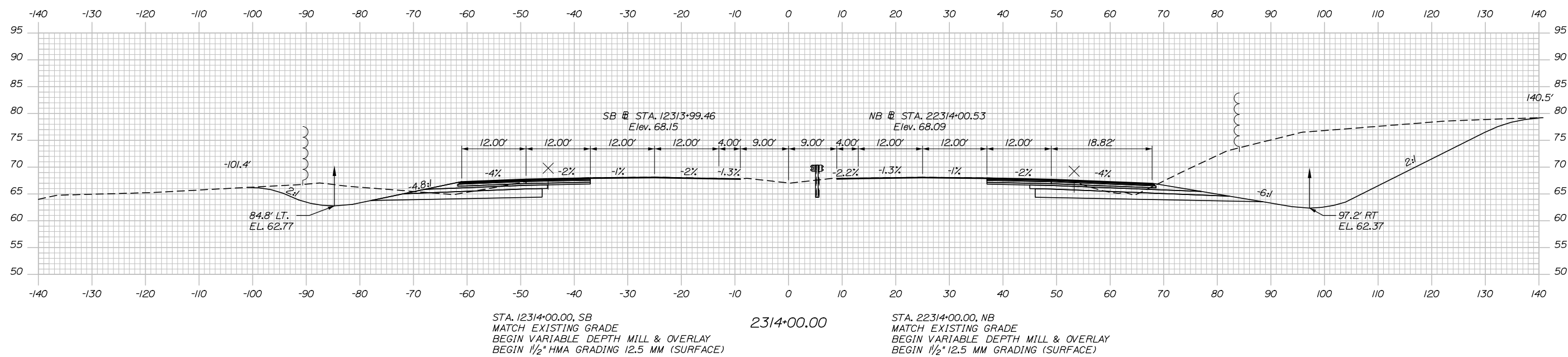
C = 691 CY
F = 2 CY
G = 5 CY



C = 207 CY
F = 0 CY
G = 0 CY

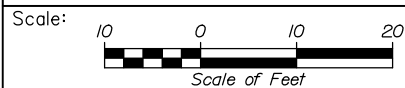
STA. 22314+28, 42.00' RT. TO STA. 22314+62, 38.00' RT.
INSTALL 3" W-BEAM GUARDRAIL, FLARED TERMINAL

C = 1037 CY
F = 1 CY
G = 2 CY



STA. 12314+00.00, SB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH MILL & OVERLAY
BEGIN 1/2" HMA GRADING 12.5 MM (SURFACE)

STA. 22314+00.00, NB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH MILL & OVERLAY
BEGIN 1/2" 12.5 MM GRADING (SURFACE)



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THE GOLD STAR
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BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2314+00 TO STA. 2314+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE						
	By	Date		By	Date	
	CDH	10\18	Checked	RWH	10\18	
	Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-08

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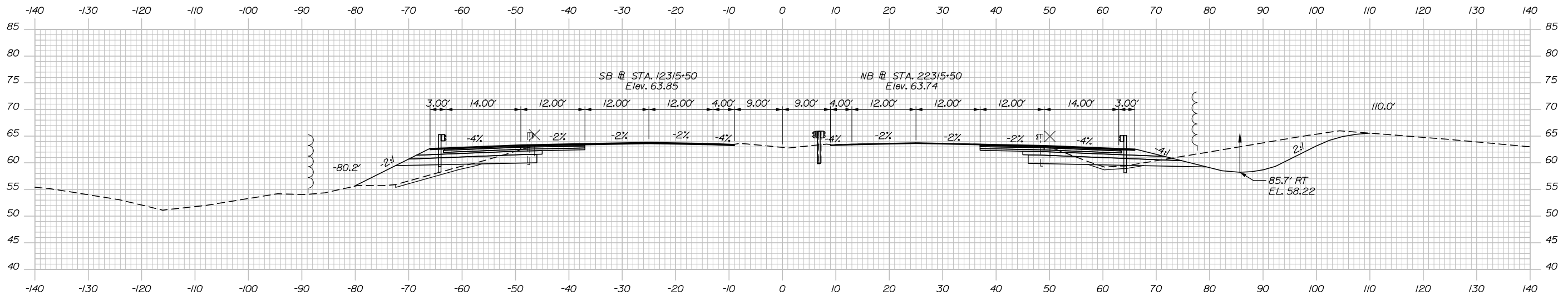
Date: 10/18/2018

C = 55 CY
F = 74 CY
G = 14 CY

STA. 12315+75.00, SB
BEGIN 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)

STA. 22315+75.00, NB
BEGIN 1 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)

C = 181 CY
F = 13 CY
G = 11 CY

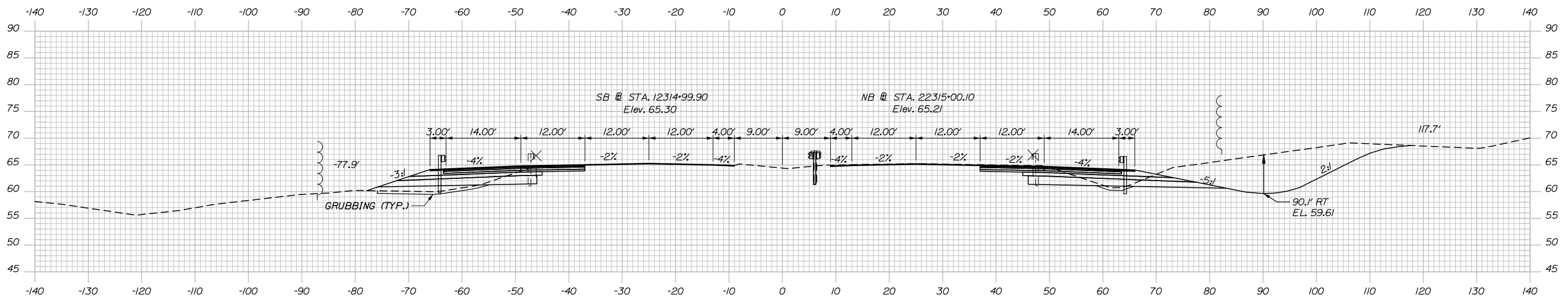


C = 54 CY
F = 50 CY
G = 17 CY

STA. 12315+25.00, SB
BEGIN 1 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)

2315+50.00

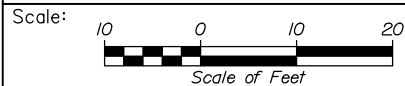
C = 383 CY
F = 2 CY
G = 7 CY



STA. 12314+91, 38.00' LT. TO STA. 12315+00, 38.00' LT.
INSTALL TERMINAL END - ANCHORED END, 3" W-BEAM GUARDRAIL

STA. 12315+00, 38.00' LT. TO STA. 12316+39, 38.33' LT.
INSTALL 137.5' 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
(STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

2315+00.00



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THE GOLD STAR
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BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2315+00 TO STA. 2315+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

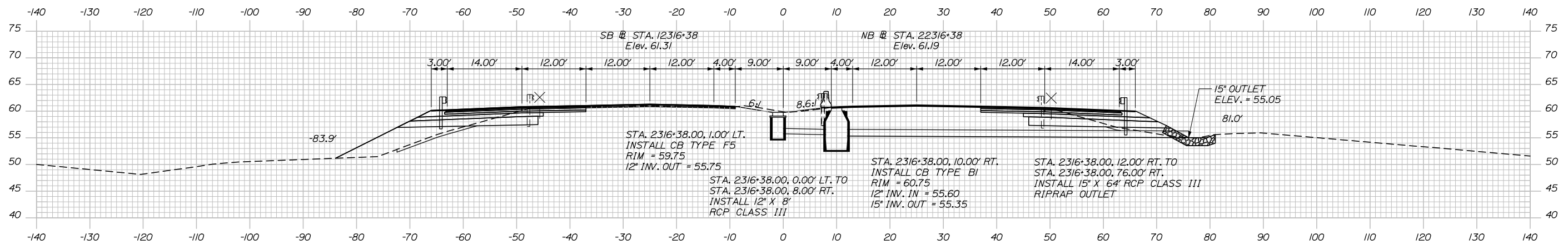
CONTRACT: 2019.09

SHEET NUMBER: XS-09

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Filename: XSect.dgn

Date: 10/18/2018



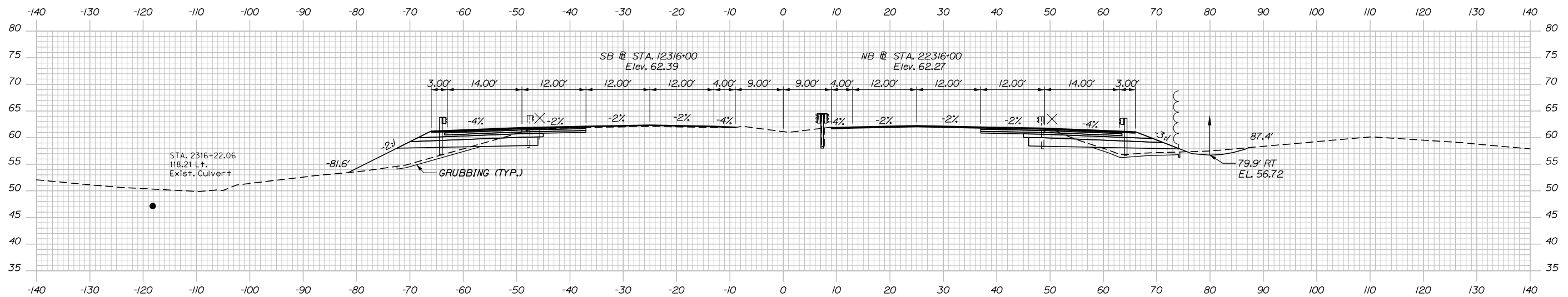
C = 158 CY
F = 107 CY
G = 15 CY

STA. 12316+39, 38.33' LT. TO STA. 12316+59, 38.33' LT.
INSTALL BRIDGE TRANSITION - TYPE III

2316+38.00

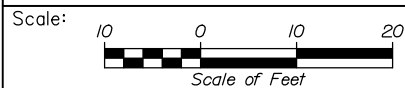
STA. 2316+58, 2.56' RT. TO STA. 2316+99, 10.00' RT.
INSTALL 140' TEMPORARY CONCRETE BARRIER TO
REMAIN AFTER CONTRACT

STA. 22316+39, 38.33' RT. TO STA. 22316+59, 38.33' RT.
INSTALL BRIDGE TRANSITION - TYPE III



C = 181 CY
F = 32 CY
G = 14 CY

2316+00.00



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THE GOLD STAR
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BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2316+00 TO STA. 2316+38

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

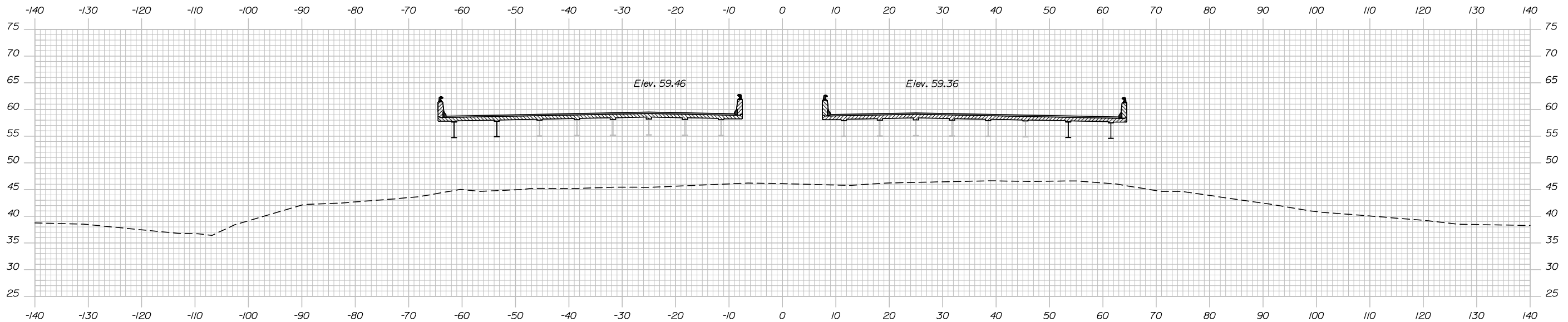
CONTRACT: 2019.09

SHEET NUMBER: XS-10

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Filename: XSect.dgn

Date: 10/18/2018



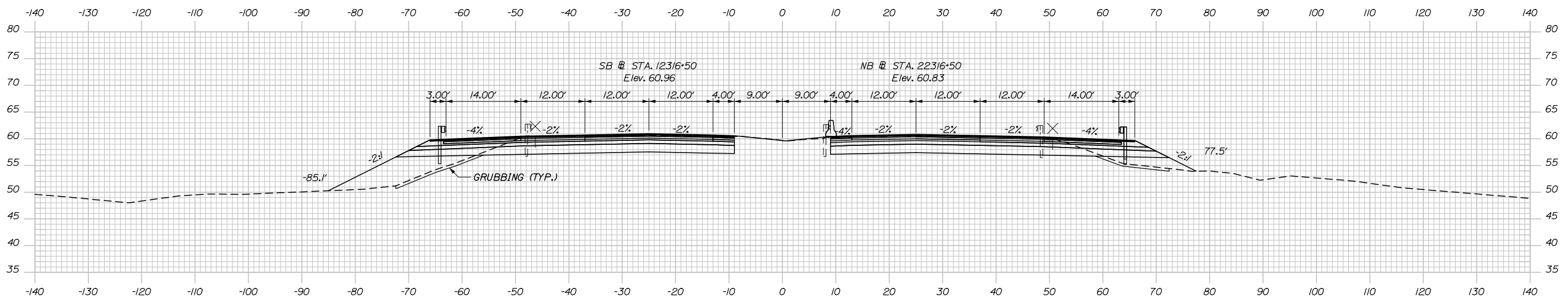
2317+00.00

C = 125 CY
F = 67 CY
G = 4 CY

STA. 12316+74.00, SB
END FULL DEPTH CONSTRUCTION
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)

STA. 22316+74.00, NB
END FULL DEPTH CONSTRUCTION
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)

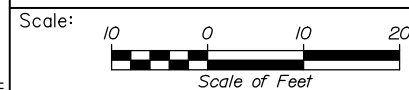
C = 134 CY
F = 19 CY
G = 3 CY



2316+50.00

STA. 12316+50.00, SB
END VARIABLE DEPTH MILL & OVERLAY
BEGIN FULL DEPTH CONSTRUCTION
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)

STA. 22316+50.00, NB
END VARIABLE DEPTH MILL & OVERLAY
BEGIN FULL DEPTH CONSTRUCTION
BEGIN 2 1/2" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2316+50 TO STA. 2317+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
	Designed	CDH 10\18		Checked	RWH 10\18
	Drawn	SLS 10\18		In Charge of	RAL 10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-11

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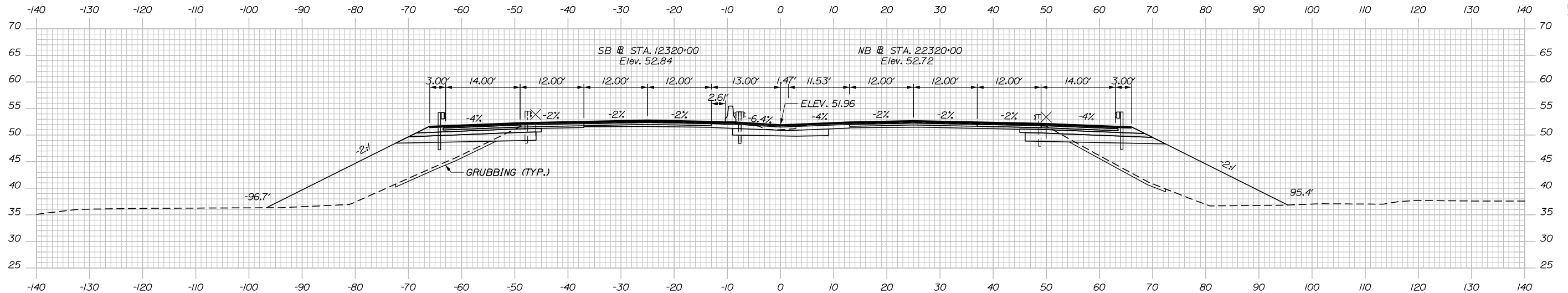
Filename: XSect.dgn

Date: 10/18/2018

C = 80 CY
F = 329 CY
G = 19 CY

C = 16 CY
F = 0 CY
G = 0 CY

C = 86 CY
F = 371 CY
G = 19 CY



STA. 12320+00.00, SB
END FULL DEPTH CONSTRUCTION
BEGIN PARTIAL DEPTH CONSTRUCTION
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 2 1/4" HMA GRADING 19 MM (BASE)
CONTINUE 2 1/4" HMA GRADING 19 MM (BASE)

STA. 12319+74.00, SB
BEGIN FULL DEPTH CONSTRUCTION
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)

2320+00.00

STA. 2319+89.00
BEGIN PAVED MEDIAN
CONSTRUCTION

STA. 22319+74.00, NB
BEGIN FULL DEPTH CONSTRUCTION
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)

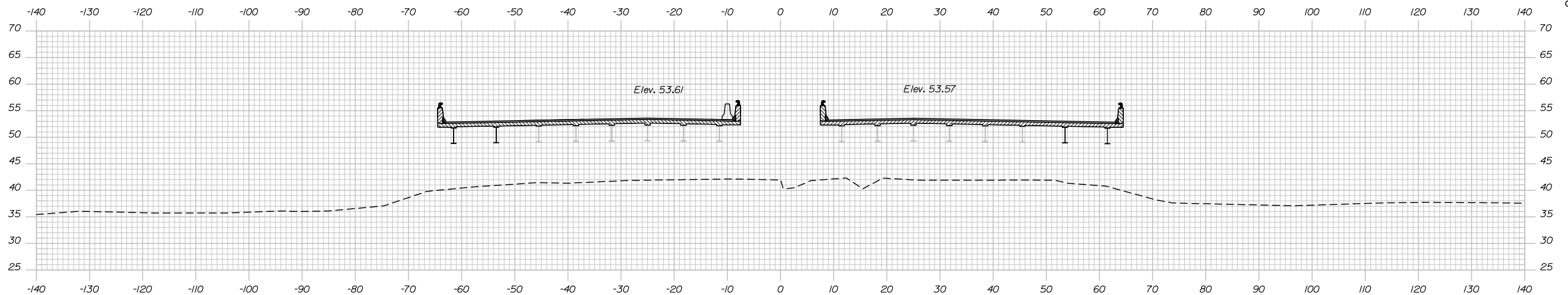
STA. 22320+00.00, NB
END FULL DEPTH CONSTRUCTION
BEGIN PARTIAL DEPTH CONSTRUCTION
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 2 1/4" HMA GRADING 19 MM (BASE)
CONTINUE 2 1/4" HMA GRADING 19 MM (BASE)

C = 90 CY
F = 184 CY
G = 5 CY

STA. 12319+89, 38.33' LT. TO STA. 12320+09, 38.33' LT.
INSTALL BRIDGE TRANSITION - TYPE III

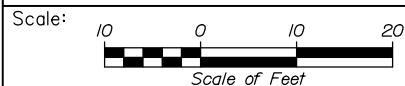
STA. 22319+89, 38.33' RT. TO STA. 22320+09, 38.33' RT.
INSTALL BRIDGE TRANSITION - TYPE III

C = 95 CY
F = 191 CY
G = 5 CY



STA. 2319+49, 10.00' LT. TO STA. 2323+69, 0.00' LT.
INSTALL 420' TEMPORARY CONCRETE BARRIER
TO REMAIN AFTER CONTRACT

2319+50.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2319+50 TO STA. 2320+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

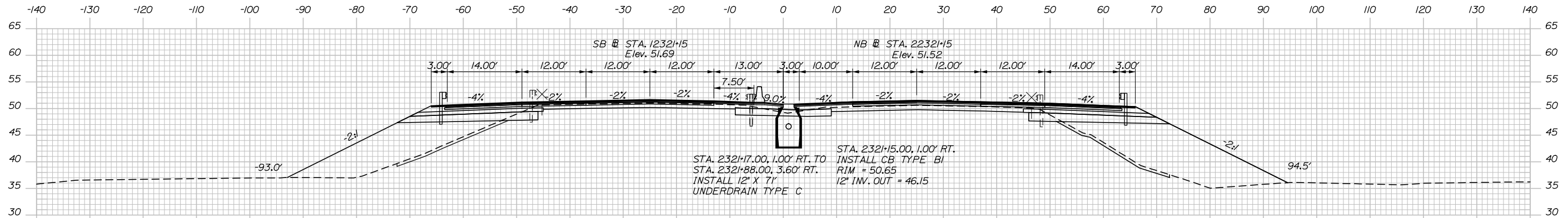
CONTRACT: 2019.09

SHEET NUMBER: XS-12

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Filename: XSect.dgn

Date: 10/18/2018

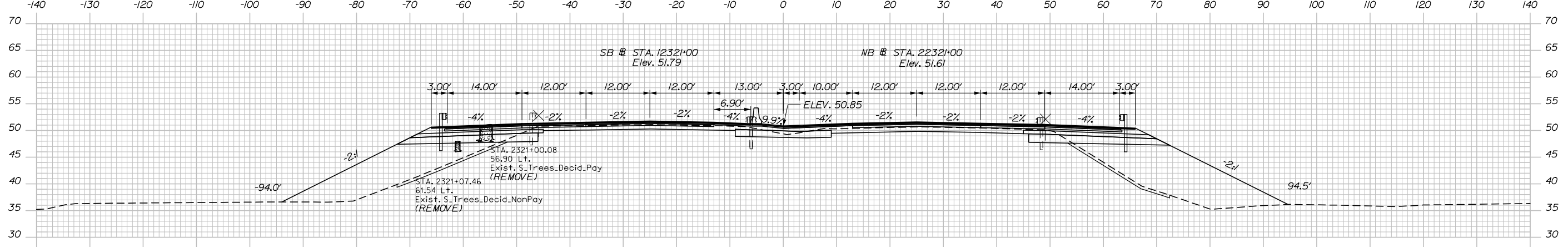


C = 67 CY
F = 321 CY
G = 21 CY

C = 58 CY
F = 0 CY
G = 0 CY

C = 72 CY
F = 421 CY
G = 21 CY

2321+15.00

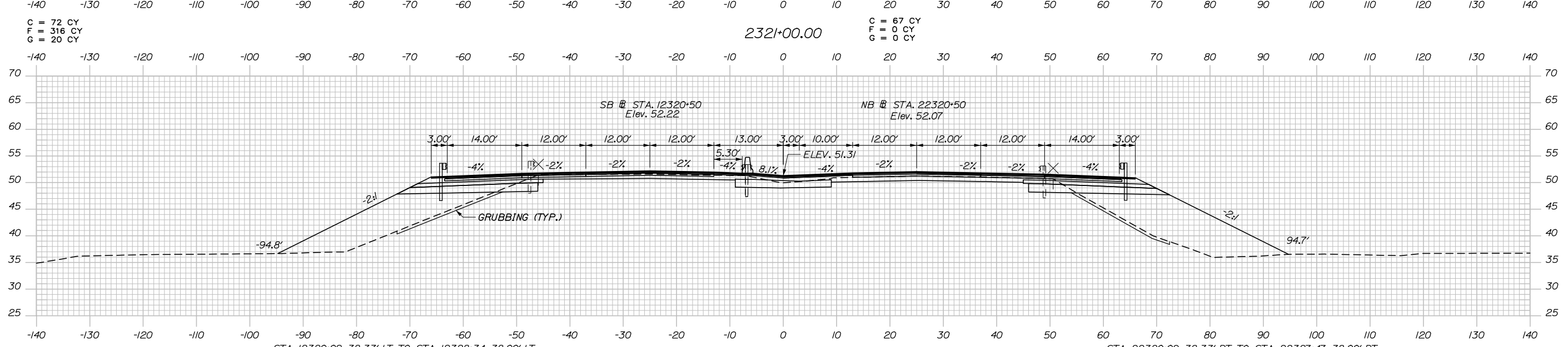


C = 72 CY
F = 316 CY
G = 20 CY

C = 67 CY
F = 0 CY
G = 0 CY

C = 81 CY
F = 393 CY
G = 19 CY

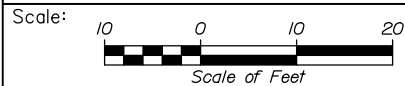
2321+00.00



STA. 12320+09, 38.33' LT. TO STA. 12328+34, 38.00' LT.
INSTALL 825' 31" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

STA. 22320+09, 38.33' RT. TO STA. 22327+47, 38.00' RT.
INSTALL 737.5' 31" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

2320+50.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2320+50 TO STA. 2321+15

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
	CDH	10\18		RWH	10\18
Drawn	By	Date	In Charge of	By	Date
	SLS	10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

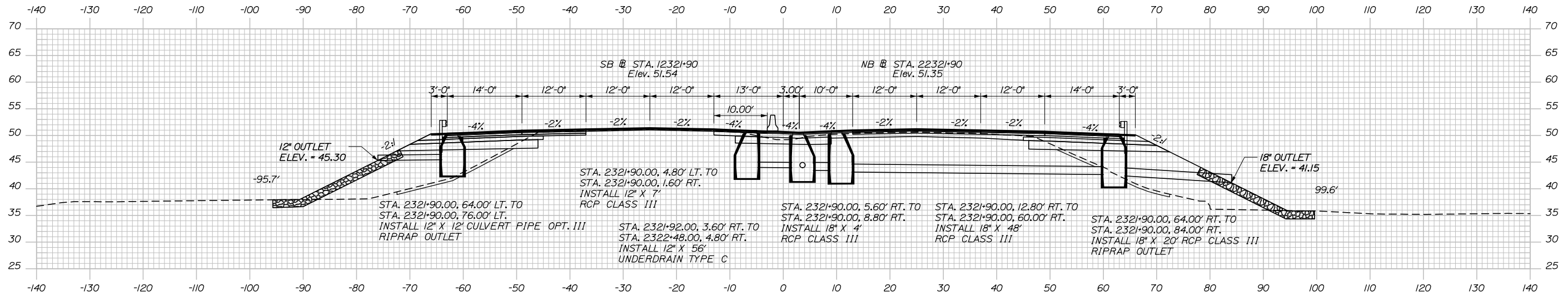
CONTRACT: 2019.09

SHEET NUMBER: XS-13

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Filename: XSect.dgn

Date: 10/18/2018



2321+90.00

STA. 2321+90.00, 62.00' LT. INSTALL CB TYPE B1 RIM = 50.40 12" INV. OUT = 45.45

STA. 2321+90.00, 6.80' LT. INSTALL CB TYPE B5 RIM = 50.80 12" INV. OUT = 44.00

STA. 2321+90.00, 3.60' RT. INSTALL CB TYPE B5 RIM = 50.50 12" INV. IN = 43.95 12" INV. IN = 43.95 12" INV. IN = 43.95 18" INV. OUT = 43.45

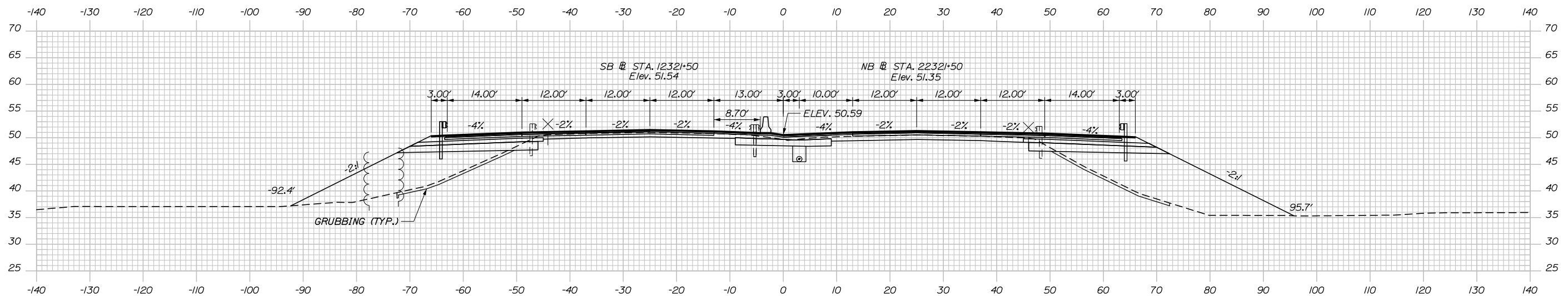
STA. 2321+90.00, 10.80' RT. INSTALL CB TYPE B5 RIM = 50.85 18" INV. IN = 43.40 18" INV. OUT = 43.16

STA. 2321+90.00, 62.00' RT. INSTALL CB TYPE B1 RIM = 50.20 18" INV. IN = 42.90 18" INV. OUT = 42.65

STA. 12321+75.00, SB END PARTIAL DEPTH CONSTRUCTION END 2 1/4" HMA GRADING 19 MM (BASE) END 2 1/4" HMA GRADING 19 MM (BASE) BEGIN VARIABLE DEPTH MILL & OVERLAY CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE) CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER) CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)

C = 48 CY
F = 309 CY
G = 21 CY

C = 59 CY
F = 0 CY
G = 0 CY



2321+50.00

STA. 2321+50.00, 62.00' LT. INSTALL CB TYPE B1 RIM = 50.40 12" INV. OUT = 45.45

STA. 2321+50.00, 6.80' LT. INSTALL CB TYPE B5 RIM = 50.80 12" INV. OUT = 44.00

STA. 2321+50.00, 3.60' RT. INSTALL CB TYPE B5 RIM = 50.50 12" INV. IN = 43.95 12" INV. IN = 43.95 12" INV. IN = 43.95 18" INV. OUT = 43.45

STA. 2321+50.00, 10.80' RT. INSTALL CB TYPE B5 RIM = 50.85 18" INV. IN = 43.40 18" INV. OUT = 43.16

STA. 2321+50.00, 62.00' RT. INSTALL CB TYPE B1 RIM = 50.20 18" INV. IN = 42.90 18" INV. OUT = 42.65

STA. 12321+50.00, SB END PARTIAL DEPTH CONSTRUCTION END 2 1/4" HMA GRADING 19 MM (BASE) END 2 1/4" HMA GRADING 19 MM (BASE) BEGIN VARIABLE DEPTH MILL & OVERLAY CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE) CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER) CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)

C = 66 CY
F = 396 CY
G = 21 CY

Scale: 10 0 10 20
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
STA. 2321+50 TO STA. 2321+90

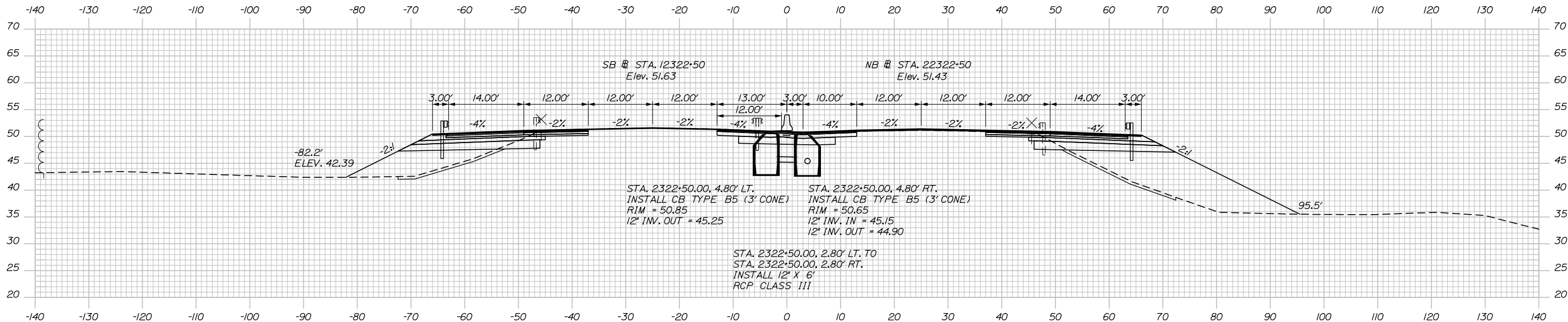
SHEET NUMBER: XS-14
CONTRACT: 2019.09
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Date: 10/18/2018

C = 53 CY
F = 76 CY
G = 15 CY

C = 78 CY
F = 0 CY
G = 0 CY

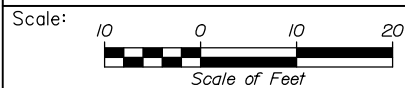
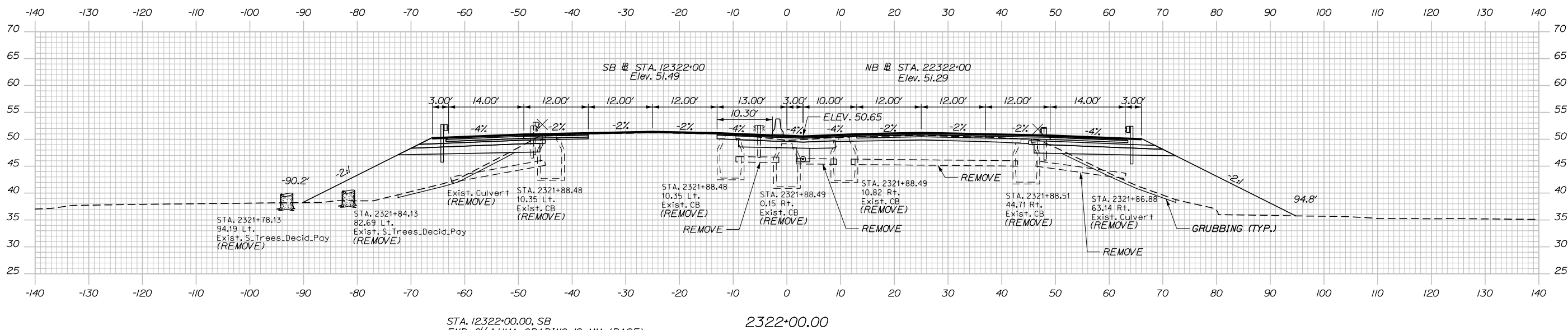
C = 36 CY
F = 391 CY
G = 21 CY



C = 37 CY
F = 223 CY
G = 20 CY

C = 67 CY
F = 0 CY
G = 0 CY

C = 50 CY
F = 373 CY
G = 21 CY



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FAX (207) 228-0909



THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2322+00 TO STA. 2322+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
	CDH	10\18	Checked	RWH	10\18
	Drawn	SLS	In Charge of		
		10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-15

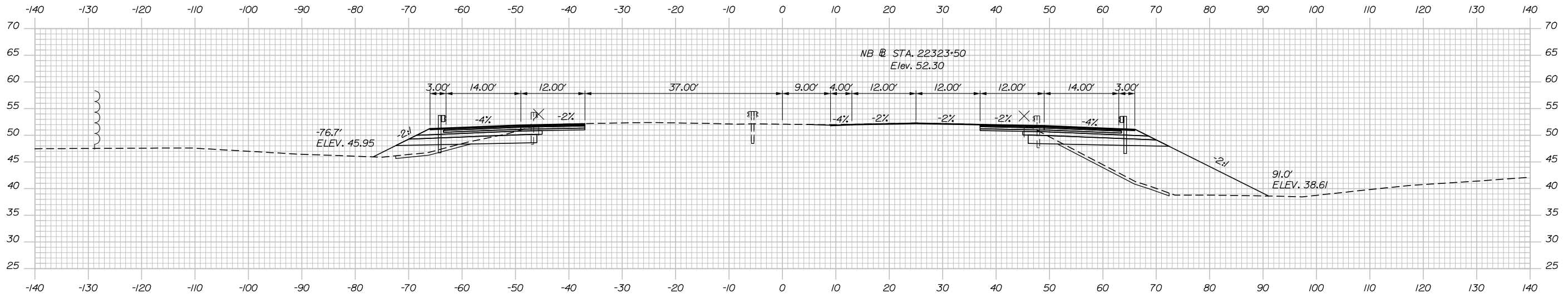
47 OF 121

Date: 10/18/2018

C = 56 CY
F = 49 CY
G = 16 CY

C = 53 CY
F = 0 CY
G = 0 CY

C = 40 CY
F = 261 CY
G = 20 CY



C = 62 CY
F = 23 CY
G = 12 CY

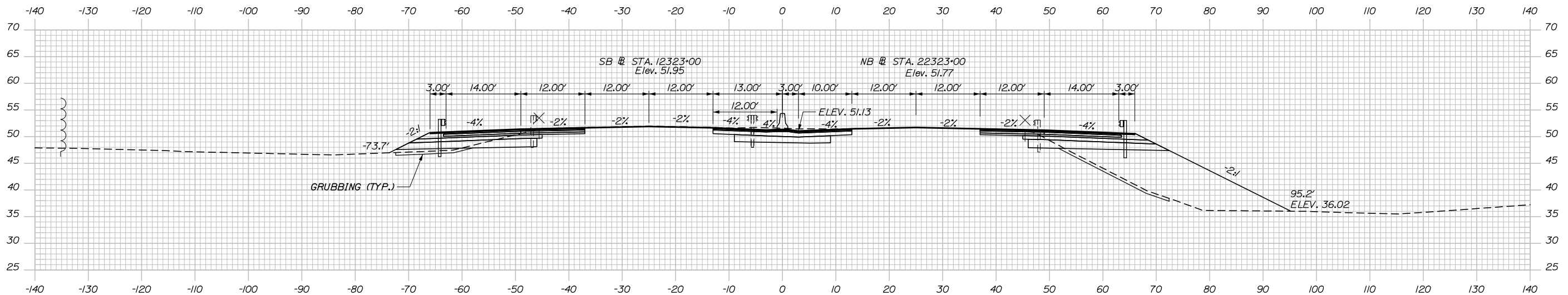
STA. 12323+50.00, SB
END VARIABLE DEPTH MILL & OVERLAY
MATCH EXISTING GRADE
END 1/2" HMA GRADING 12.5 MM (SURFACE)

2323+50.00

STA. 2323+25.00
END PAVED MEDIAN
CONSTRUCTION

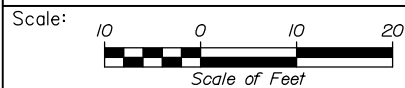
C = 96 CY
F = 0 CY
G = 0 CY

C = 39 CY
F = 364 CY
G = 21 CY



2323+00.00

STA. 22323+00.00, NB
END 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)



Designed by:



HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2323+00 TO STA. 2323+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-16

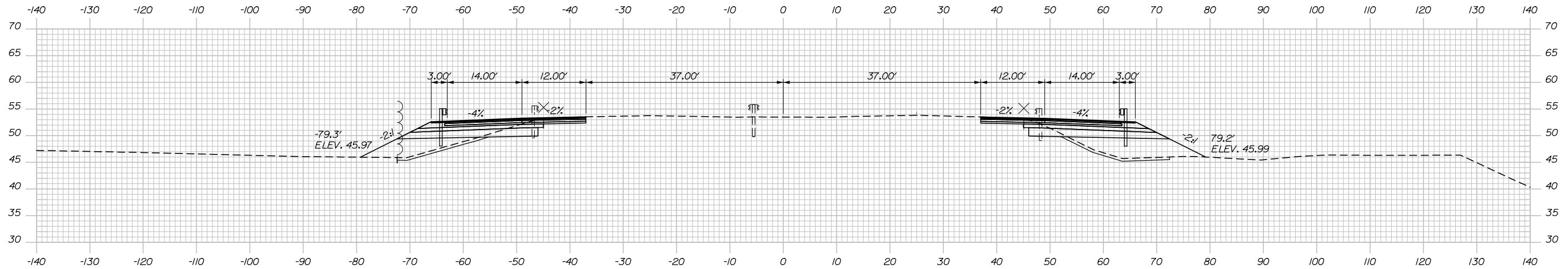
48 OF 121

Filename: XSect.dgn

Date: 10/18/2018

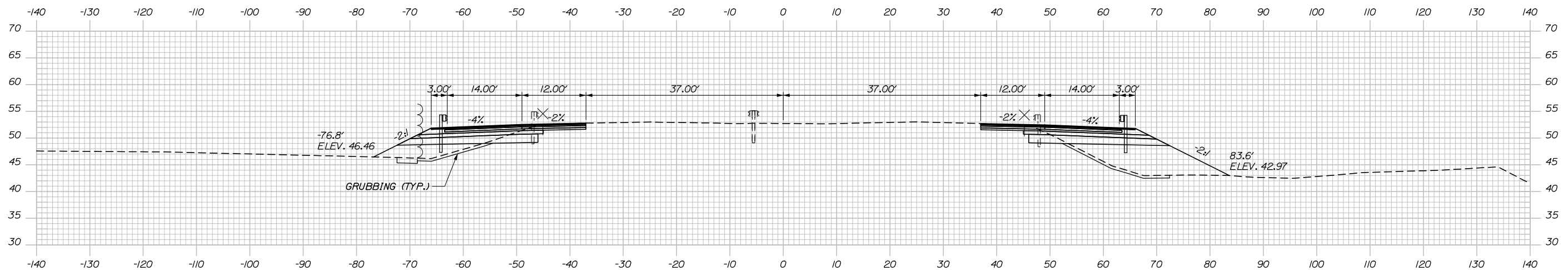
C = 52 CY
F = 83 CY
G = 16 CY

C = 40 CY
F = 124 CY
G = 19 CY

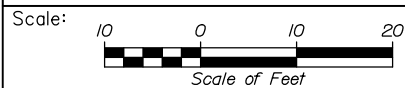


C = 51 CY
F = 71 CY
G = 18 CY

C = 41 CY
F = 156 CY
G = 19 CY



STA. 22324+00.00, NB
END VARIABLE DEPTH MILL & OVERLAY
MATCH EXISTING GRADE
END 1/2" HMA GRADING 12.5 MM (SURFACE)



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2324+00 TO STA. 2324+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-17

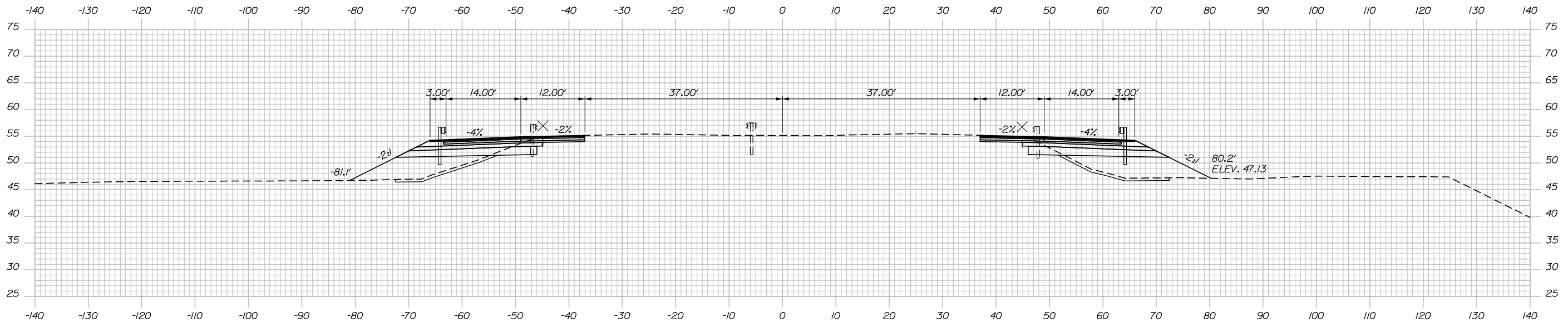
49 OF 121

Filename: XSect.dgn

Date: 10/18/2018

C = 45 CY
F = 130 CY
G = 18 CY

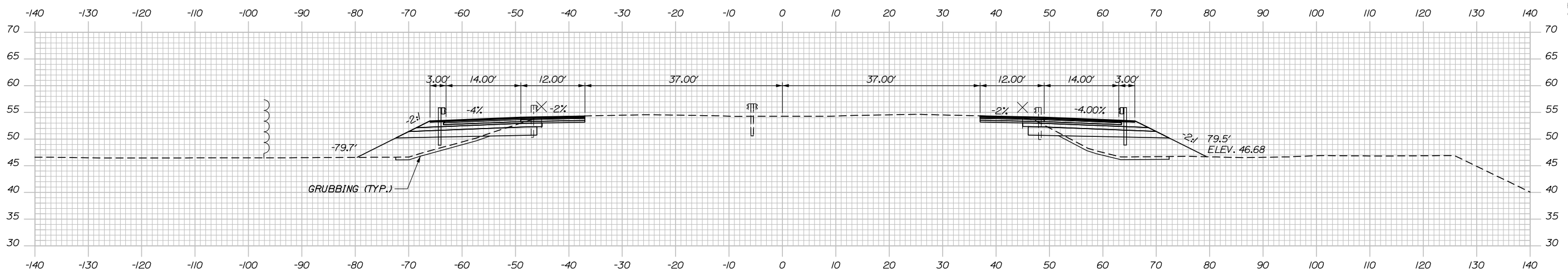
C = 38 CY
F = 144 CY
G = 20 CY



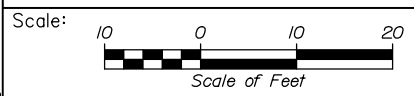
C = 49 CY
F = 103 CY
G = 17 CY

2325+50.00

C = 39 CY
F = 132 CY
G = 20 CY



2325+00.00



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

No.	Revision	By	Date

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
TEL (207) 774-5155
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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2325+00 TO STA. 2325+50

Filename: XSect.dgn

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

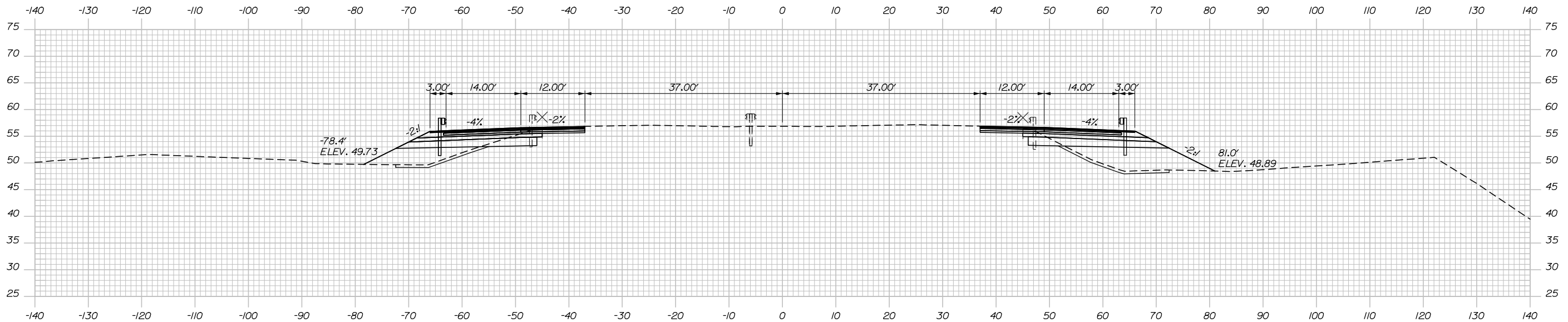
SHEET NUMBER: XS-18

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Date: 10/18/2018

C = 61 CY
 F = 68 CY
 G = 18 CY

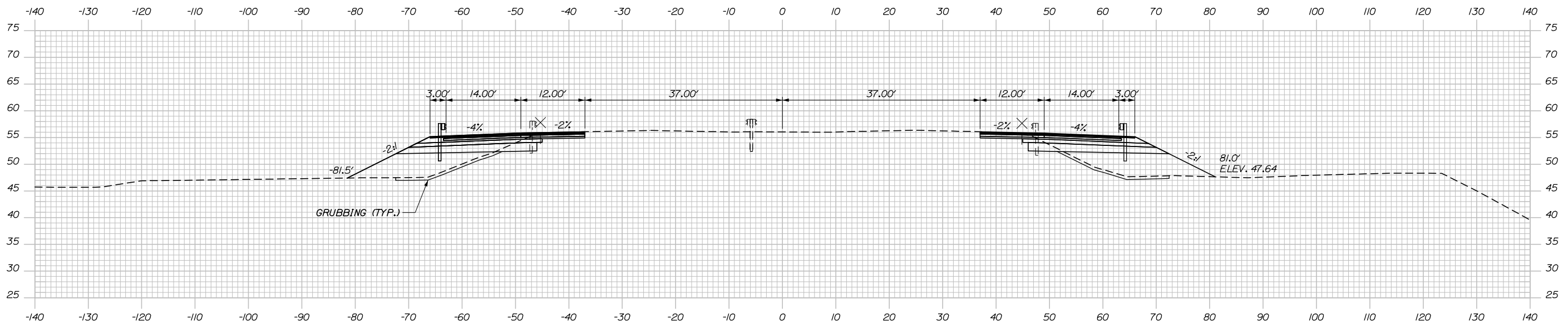
C = 42 CY
 F = 136 CY
 G = 19 CY



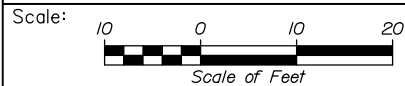
C = 47 CY
 F = 110 CY
 G = 17 CY

2326+50.00

C = 38 CY
 F = 151 CY
 G = 20 CY



2326+00.00



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

STA. 2326+00 TO STA. 2326+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-19

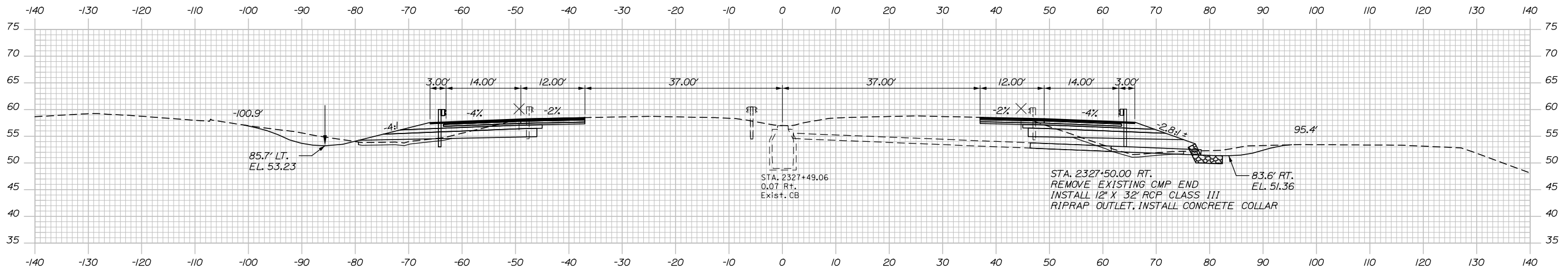
51 OF 121

Filename: XSect.dgn

Date: 10/18/2018

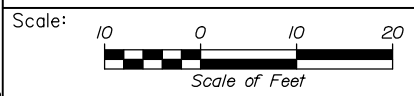
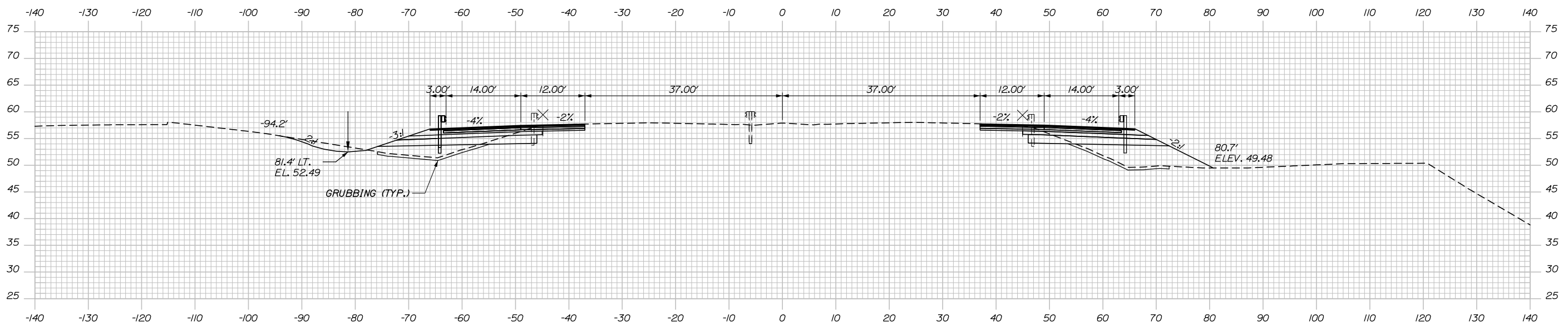
C = 204 CY
F = 9 CY
G = 13 CY

C = 59 CY
F = 101 CY
G = 18 CY



C = 99 CY
F = 33 CY
G = 17 CY

C = 42 CY
F = 136 CY
G = 19 CY



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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TEL (207) 774-5155
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
STA. 2327+00 TO STA. 2327+50

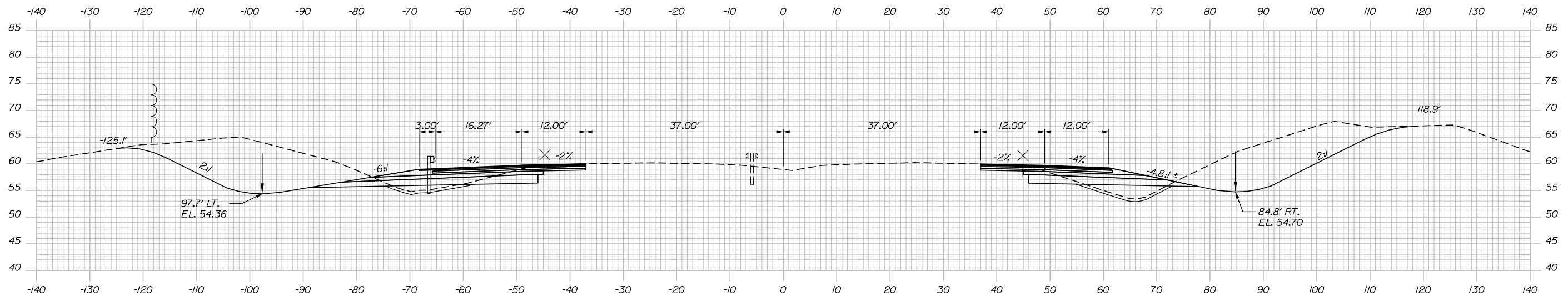
SHEET NUMBER: XS-20
CONTRACT: 2019.09
52 OF 121

Filename: XSect.dgn

Date: 10/18/2018

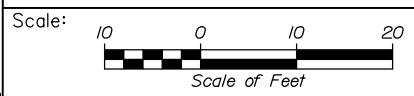
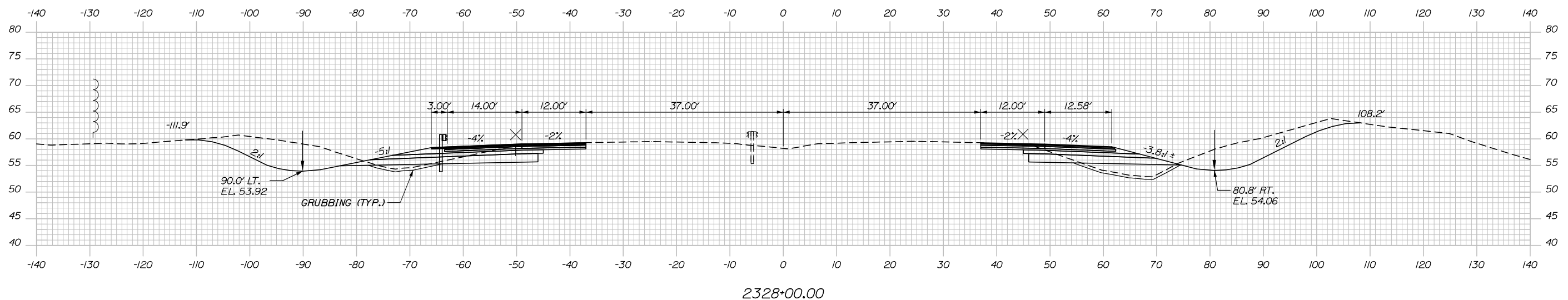
C = 630 CY
F = 19 CY
G = 14 CY

C = 338 CY
F = 45 CY
G = 17 CY



C = 420 CY
F = 12 CY
G = 13 CY

C = 145 CY
F = 64 CY
G = 19 CY



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

No.	Revision	By	Date

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2328+00 TO STA. 2328+50

Filename: XSect.dgn

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

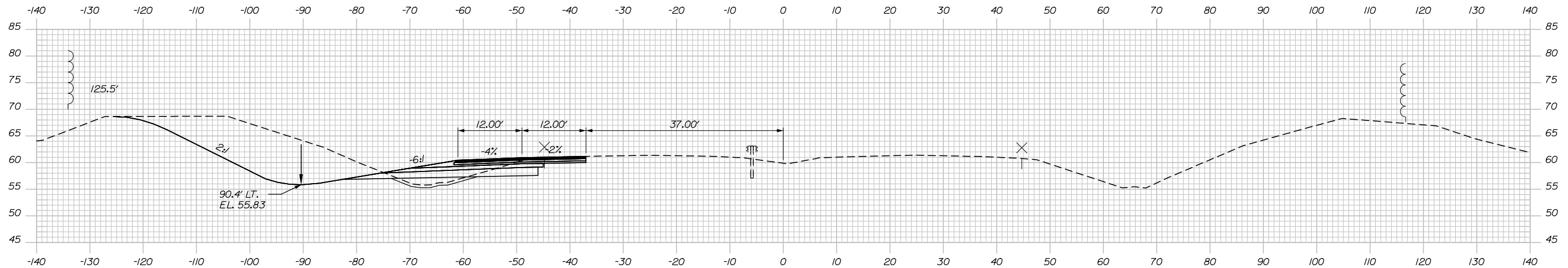
SHEET NUMBER: XS-21

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Date: 10/18/2018

C = 279 CY
F = 10 CY
G = 7 CY

C = 328 CY
F = 16 CY
G = 7 CY



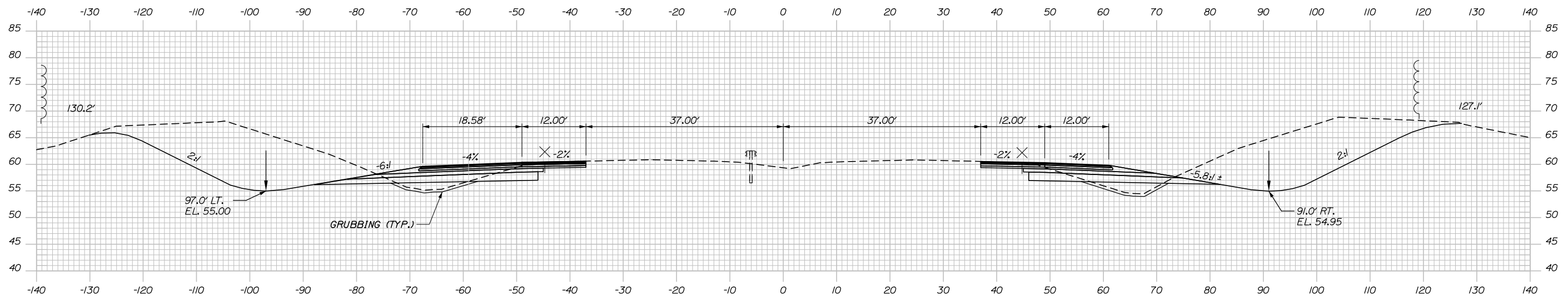
C = 629 CY
F = 22 CY
G = 14 CY

STA. 12329+50.00, SB
END FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

2329+50.00

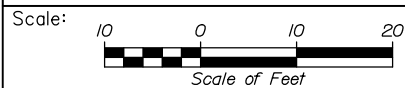
STA. 22329+50.00, NB
LIMIT OF WORK

C = 557 CY
F = 36 CY
G = 16 CY



2329+00.00

STA. 22329+00.00, NB
END FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2329+00 TO STA. 2329+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
	CDH	10\18		RWH	10\18
Drawn	By	Date	In Charge of	By	Date
	SLS	10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

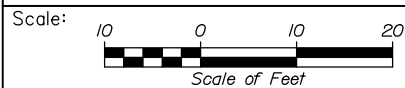
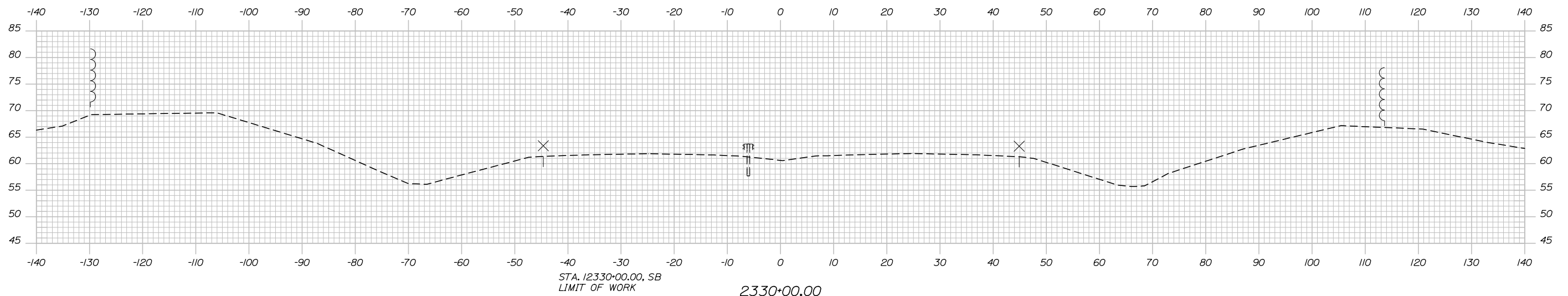
CONTRACT: 2019.09

SHEET NUMBER: XS-22

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Filename: XSect.dgn

Date: 10/18/2018



Designed by:



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**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STA. 2330+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-23

55 OF 121

Filename: XSect.dgn

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

CONSTRUCTION

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

DECK CONCRETE - CLASS AAA - DECK
STRUCTURAL CONCRETE PLACED UNDER WATER - CLASS S
ALL OTHER CONCRETE SHALL BE CLASS AAA.

REINFORCING STEEL

AASHTO M31, GRADE 60 EPOXY COATED

ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

STRUCTURAL STEEL

GIRDERS: FLANGES, WEBS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS, CONNECTION PLATES, AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

STEEL H-PILES SHALL BE ASTM A572, GRADE 50.

ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36, OR APPROVED EQUAL.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM F3125, GRADE A325, TYPE 1). BOLTS SHALL BE HOT DIPPED GALVANIZED TYPE 1.

PROTECTIVE COATING

ALL NEW STRUCTURAL STEEL EXCEPT DIAPHRAGMS SHALL BE SHOP COATED WITH NEPCOAT QUALIFIED PRODUCT FROM LIST A. PAINT COLOR SHALL BE SELECTED TO MATCH EXISTING GIRDERS.
DIAPHRAGMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

BASIC DESIGN STRESSES

CONCRETE - CLASS AAA - DECK $f'_c = 4,500$ P.S.I.
- CLASS S, $f'_c = 3,500$ P.S.I.
- CLASS AAA, $f'_c = 4,500$ P.S.I.

REINFORCING STEEL - $f_y = 60,000$ P.S.I.

STRUCTURAL STEEL AASHTO M270 (ASTM A709) GRADE 36, $F_y = 36,000$ P.S.I.
AASHTO M270 (ASTM A709) GRADE 50, $F_y = 50,000$ P.S.I.
AASHTO M270 (ASTM A572) GRADE 50, $F_y = 50,000$ P.S.I.

GENERAL NOTES:

- THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.
- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. ACCURACY OF THESE PLANS IS NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.
- ALL BRIDGE PARAPET, BARRIER, WINGWALL AND ENDPPOST CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.
- THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE ASSUMED TO BE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF THE BRIDGE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS.
- CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
- EXPOSED SURFACES OF THE PARAPETS, AND ENDPPOSTS;
- VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE;
- EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS, AND PIERS.
- PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS, AND PIERS.
- WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED, THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DOT PREQUALIFIED LIST OF CHEMICAL ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED.
- THE EXISTING GIRDERS SHALL BE JACKED IN-PLACE TO FACILITATE PEDESTAL RECONSTRUCTION, AND BEARING RESETTling.
- DIMENSIONS WITH RESPECT TO THE EXISTING BRIDGE ARE APPROXIMATE AND PROVIDED FOR REFERENCE. IF FIELD CONDITIONS VARY BY MORE THAN 1" FROM DIMENSIONS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18	Checked	TJP	10\18
	Drawn	ERB	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
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	<p>THE GOLD STAR MEMORIAL HIGHWAY</p>
<p>MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.</p>	

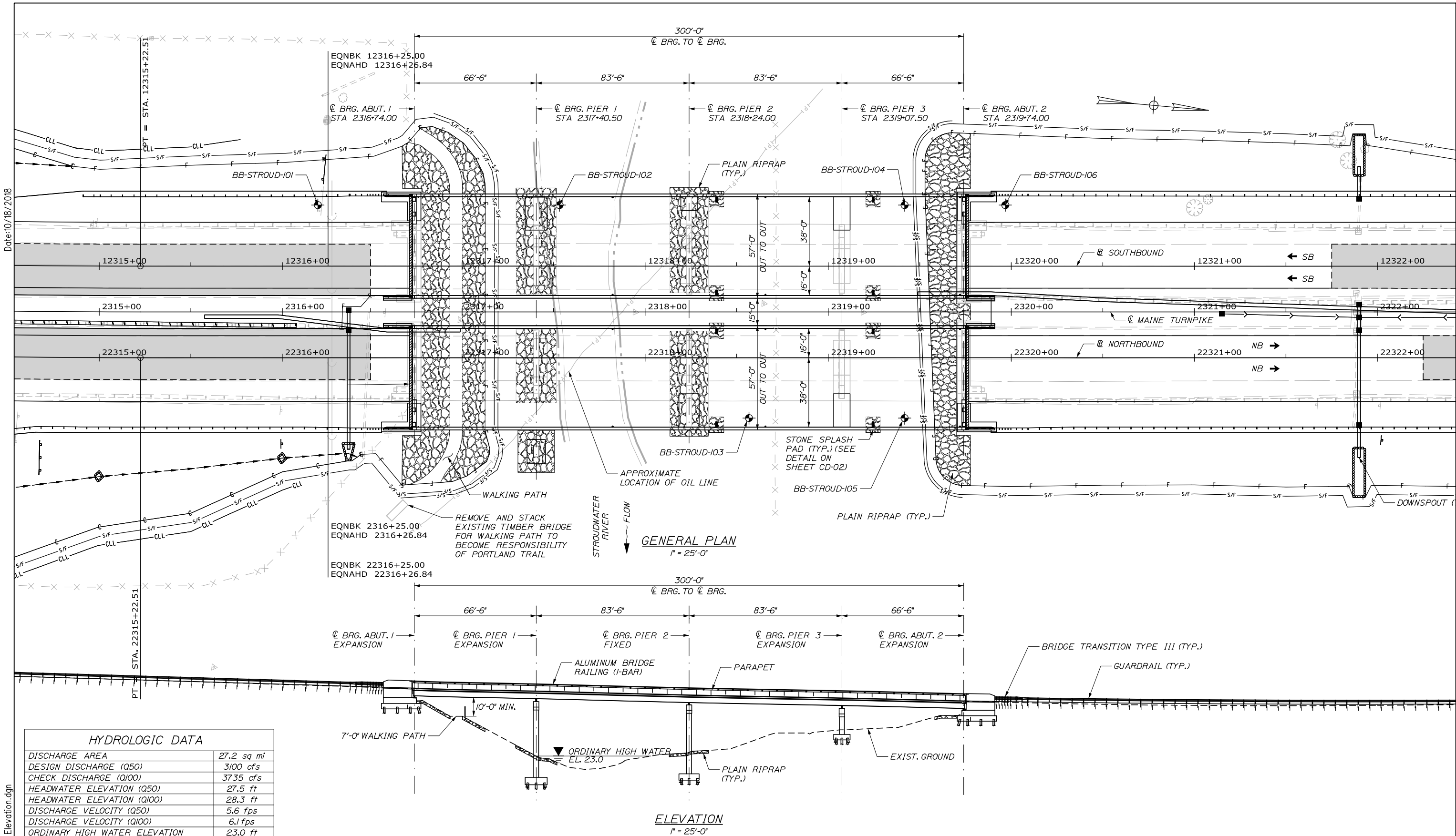
<p>BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS</p> <p>GENERAL NOTES, INDEX, AND QUANTITIES</p>	<p>SHEET NUMBER: S-01</p> <p>CONTRACT: 2019.09</p> <p>56 OF 121</p>
-------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	BRIDGE QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - Stroudwater	630 CY	LS	1
202.12	Removing Existing Structural Concrete		CY	120
202.13	Removing Existing Railings Retained by Authority		LF	1272
203.35	Crushed Stone 3/4 - inch		CY	40
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY	170
206.10	Structural Earth Excavation - Piers		CY	1200
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	290
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	290
409.15	Bituminous Tack Coat, Applied		GAL	220
501.231	Dynamic Loading Test		EA	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF	2470
501.421	Steel H-beam Piles 57 lb/ft, in place		LF	2470
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF	1800
501.441	Steel H-beam Piles 63 lb/ft, in place		LF	1800
501.54	Steel H-beam Piles 117 lb/ft, delivered		LF	195
501.541	Steel H-beam Piles 117 lb/ft, in place		LF	195
501.90	Pile Tips		EA	72
501.91	Pile Splices		EA	44
501.92	Pile Driving Equipment Mobilization - Stroudwater		LS	1
502.219	Structural Concrete, Abutments and Retaining Walls - Stroudwater	250 CY	LS	1
502.239	Structural Concrete Piers - Stroudwater	420 CY	LS	1
502.249	Structural Concrete Piers (Placed Under Water)		CY	640
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - Stroudwater	920 CY	LS	1
502.264	Structural Concrete Parapets - Stroudwater	130 CY	LS	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB	463000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	463000
503.17	Mechanical/Welded Splice		EA	2472
504.702	Structural steel fabricated and delivered, welded - Stroudwater	312600 LB	LS	1
504.71	Structural steel erection - Stroudwater	312600 LB	LS	1
505.08	Shear Connectors - Stroudwater	14592 EA	LS	1
506.9102	Zinc Rich Coating System (Shop Applied) - Stroudwater	230700 LB	LS	1
506.9105	Field Touch-Up of Existing Steel - Stroudwater	64900 LB	LS	1
507.091	Aluminum Bridge Railing, 1 Bar - Stroudwater	1220 LF	LS	1
508.14	High Performance Waterproofing Membrane - Stroudwater	3650 SY	LS	1
511.071	Cofferdam Pier 1 - NB - Stroudwater		LS	1
511.072	Cofferdam Pier 1 - SB - Stroudwater		LS	1
511.073	Cofferdam Pier 2 - NB - Stroudwater		LS	1
511.074	Cofferdam Pier 2 - SB - Stroudwater		LS	1
511.091	Temporary Earth Support Systems - Stroudwater		LS	1
514.06	Curing Box for Concrete Cylinders		EA	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1500
515.23	Anti-Graffiti Coating		SY	2050
518.40	Epoxy Injection Crack Repair		LF	55
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	94
518.60	Repair of Vertical Surfaces < 8 inches		SF	136
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	4
523.52	Bearing Installation		EA	20
523.5303	Steel Bearings, Fixed, Rocker		EA	4
523.5304	Steel Bearings, Expansion, Rocker		EA	16
523.56	Clean and Paint Bearing		EA	11
523.561	Clean, Paint, and Reset Bearing		EA	13
524.301	Temporary Structural Support - Jacking - Stroudwater		LS	1
524.302	Temporary Structural Support - Girders - Stroudwater		LS	1
524.303	Temporary Structural Support - Braces - Stroudwater		LS	1
524.40	Protective Shielding - Steel Girders		SY	2760
526.304	Temporary Concrete Barrier, Anchored - Stroudwater	600 LF	LS	1
606.1723	Bridge Transition - Type III		EA	4
607.17	Chain Link Fence - 6 foot		LF	220
609.15	Sloped Curb Type I		LF	1350
610.08	Plain Riprap		CY	1350
610.18	Stone Ditch Protection		CY	45
620.58	Erosion Control Geotextile		SY	1690
652.361	Maintenance of Traffic Control Devices - Stroudwater		LS	0.50

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Date: 10/18/2018
Filename: 056-General Notes, Index, and Quantities.dgn

Date: 10/18/2018



HYDROLOGIC DATA	
DISCHARGE AREA	27.2 sq mi
DESIGN DISCHARGE (Q50)	3100 cfs
CHECK DISCHARGE (Q100)	3735 cfs
HEADWATER ELEVATION (Q50)	27.5 ft
HEADWATER ELEVATION (Q100)	28.3 ft
DISCHARGE VELOCITY (Q50)	5.6 fps
DISCHARGE VELOCITY (Q100)	6.1 fps
ORDINARY HIGH WATER ELEVATION	23.0 ft

Scale:		AS NOTED	
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
Designed	BRG	10\18	Checked TJP 10\18
Drawn	ERB	10\18	In Charge of RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS

GENERAL PLAN AND ELEVATION

SHEET NUMBER: S-02
CONTRACT: 2019.09
57 OF 121

Date: 10/18/2018

SCHONWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Stroudwater River (MM46.7)		Boring No.: BB-STROUD-103	
LOCATION: Portland, Maine		Elevation (ft.)		Proj. No.: 18-003	
Driller:	New England Boring Contractors	Elevation (ft.)	49 (bridge deck elev 53.8)	Core Barrel:	NQ2
Operator:	Eric / Share	Date:	N/A/08	Sampler:	standard split-spoon
Logged By:	Schonwald	Rig Type:	Mobile Drill B-53	Hammer Wt/Fall:	140 lbs / 30 ft
Date Start/Finish:	3/18/18, 2020-3/19/18, 2120	Drilling Method:	cased wash boring	Hammer Type:	auto hammer
Boring Location:	per plan	Casing ID/DI:	HW to 50 ft, NW to 56.2 ft	Hammer Efficiency:	0.677
TESTING AND TESTING:		ADDITIONAL DEFINITIONS:		LABORATORY TEST RESULTS:	
D = Split Spoon Sample	N = value	WCH = weight of 40lb hammer	ASHTO / USCS soil classification	WCH = weight of 40lb hammer	ASHTO / USCS soil classification
UC = Unconsolidated	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
U = Thin Wall Tube Sample	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
V = In Situ Vane Shear Test	V = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
Sample Information		Visual Description and Remarks		Lab Testing Results	
Depth (ft.)	Sample No.	Pen (ft)	Blow (ft)	Blow (ft)	Blow (ft)
29	60	26.0	28.0-27.0	100R-01-008	0
30	70	26.11	35.0-32.0	3-10-14	28
35	80	26.11	35.0-37.0	32-01-06	43
40	90	26.11	45.0-43.0	10-10-12	19
45	100	26.11	45.0-47.0	18-10-14	30
50					
Remarks:					
1. Bridge deck 2 inches HMA over 8 inches reinforced concrete					
2. Bridge deck to ground surface: 24.2 feet.					
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.					
*Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.					
Page 2 of 3					
Boring No.: BB-STROUD-103					

SCHONWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Stroudwater River (MM46.7)		Boring No.: BB-STROUD-104	
LOCATION: Portland, Maine		Elevation (ft.)		Proj. No.: 18-003	
Driller:	New England Boring Contractors	Elevation (ft.)	49 (bridge deck elev 53.8)	Core Barrel:	NQ2
Operator:	Eric / Share	Date:	N/A/08	Sampler:	standard split-spoon
Logged By:	Schonwald	Rig Type:	Mobile Drill B-53	Hammer Wt/Fall:	140 lbs / 30 ft
Date Start/Finish:	3/26/18, 2100-3/28/18, 2120	Drilling Method:	cased wash boring	Hammer Type:	auto hammer
Boring Location:	per plan	Casing ID/DI:	HW to 50 ft, NW to 82.5 ft	Hammer Efficiency:	0.677
TESTING AND TESTING:		ADDITIONAL DEFINITIONS:		LABORATORY TEST RESULTS:	
D = Split Spoon Sample	N = value	WCH = weight of 40lb hammer	ASHTO / USCS soil classification	WCH = weight of 40lb hammer	ASHTO / USCS soil classification
UC = Unconsolidated	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
U = Thin Wall Tube Sample	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
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M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
Sample Information		Visual Description and Remarks		Lab Testing Results	
Depth (ft.)	Sample No.	Pen (ft)	Blow (ft)	Blow (ft)	Blow (ft)
10	10	26.14	51-2.0	2-4-5	7
5	20	26.8	51-7.0	7-6-4	14
10	30	26.13	101-11.0	20-34-27	60
15	40	26.18	112-17.0	3-3-12	3
20	50	26.18	211-21.0	4-5-7	7
25	60	26.18	211-21.0	4-5-7	7
30	70	26.18	211-21.0	4-5-7	7
35	80	26.18	211-21.0	4-5-7	7
40	90	26.18	211-21.0	4-5-7	7
45	100	26.18	211-21.0	4-5-7	7
50					
Remarks:					
1. Bridge deck 2-1/2 inches HMA over 8 inches reinforced concrete					
2. Bridge deck to ground surface: 14.0 feet.					
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.					
*Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.					
Page 1 of 4					
Boring No.: BB-STROUD-104					

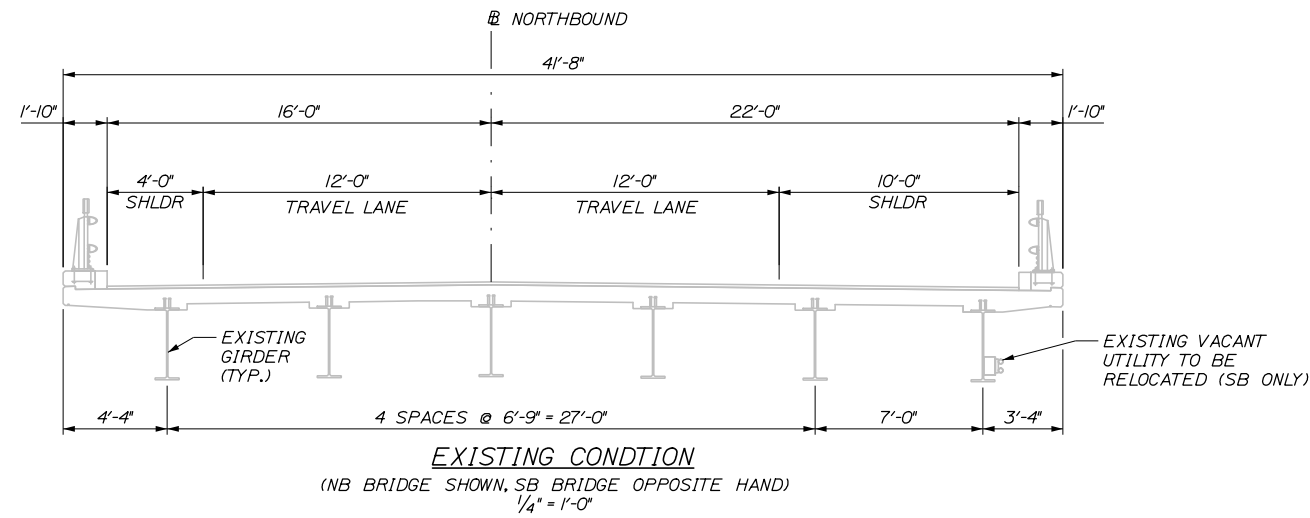
SCHONWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Stroudwater River (MM46.7)		Boring No.: BB-STROUD-104	
LOCATION: Portland, Maine		Elevation (ft.)		Proj. No.: 18-003	
Driller:	New England Boring Contractors	Elevation (ft.)	49 (bridge deck elev 53.8)	Core Barrel:	NQ2
Operator:	Eric / Share	Date:	N/A/08	Sampler:	standard split-spoon
Logged By:	Schonwald	Rig Type:	Mobile Drill B-53	Hammer Wt/Fall:	140 lbs / 30 ft
Date Start/Finish:	3/26/18, 2100-3/28/18, 2120	Drilling Method:	cased wash boring	Hammer Type:	auto hammer
Boring Location:	per plan	Casing ID/DI:	HW to 50 ft, NW to 82.5 ft	Hammer Efficiency:	0.677
TESTING AND TESTING:		ADDITIONAL DEFINITIONS:		LABORATORY TEST RESULTS:	
D = Split Spoon Sample	N = value	WCH = weight of 40lb hammer	ASHTO / USCS soil classification	WCH = weight of 40lb hammer	ASHTO / USCS soil classification
UC = Unconsolidated	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
U = Thin Wall Tube Sample	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
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V = In Situ Vane Shear Test	V = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
Sample Information		Visual Description and Remarks		Lab Testing Results	
Depth (ft.)	Sample No.	Pen (ft)	Blow (ft)	Blow (ft)	Blow (ft)
10	110	26.9	60.0-62.0	6-6-6	12
5	120	26.10	96.0-98.0	10-5-10	18
10	130	26.11	96.0-98.0	7-4-6-7	19
15	140	26.11	96.0-97.0	30-24-20-8	46
20	150	26.18	70.0-72.0	19-23-20-8	48
25	160	26.18	70.0-72.0	19-23-20-8	48
30	170	26.18	70.0-72.0	19-23-20-8	48
35	180	26.18	70.0-72.0	19-23-20-8	48
40	190	26.18	70.0-72.0	19-23-20-8	48
45	200	26.18	70.0-72.0	19-23-20-8	48
50					
Remarks:					
1. Bridge deck 2-1/2 inches HMA over 8 inches reinforced concrete					
2. Bridge deck to ground surface: 14.0 feet.					
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.					
*Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.					
Page 3 of 4					
Boring No.: BB-STROUD-104					

SCHONWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Stroudwater River (MM46.7)		Boring No.: BB-STROUD-105	
LOCATION: Portland, Maine		Elevation (ft.)		Proj. No.: 18-003	
Driller:	New England Boring Contractors	Elevation (ft.)	39.5 (bridge deck elev 53.8)	Core Barrel:	NQ2
Operator:	Eric / Share	Date:	N/A/08	Sampler:	standard split-spoon
Logged By:	Schonwald	Rig Type:	Mobile Drill B-53	Hammer Wt/Fall:	140 lbs / 30 ft
Date Start/Finish:	3/19/18, 2130-3/21/18	Drilling Method:	cased wash boring	Hammer Type:	auto hammer
Boring Location:	per plan	Casing ID/DI:	HW to 60 ft, NW to 69 ft	Hammer Efficiency:	0.677
TESTING AND TESTING:		ADDITIONAL DEFINITIONS:		LABORATORY TEST RESULTS:	
D = Split Spoon Sample	N = value	WCH = weight of 40lb hammer	ASHTO / USCS soil classification	WCH = weight of 40lb hammer	ASHTO / USCS soil classification
UC = Unconsolidated	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
U = Thin Wall Tube Sample	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
V = In Situ Vane Shear Test	V = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
Sample Information		Visual Description and Remarks		Lab Testing Results	
Depth (ft.)	Sample No.	Pen (ft)	Blow (ft)	Blow (ft)	Blow (ft)
10	10	26.9	0.0-2.0	1-2-2.5	4
5	20	26.9	6.0-7.0	5-5-5	10
10	30	26.11	10.0-12.0	24-20-23	41
15	40	26.18	15.0-17.0	10-17-2-6	2
20	50	26.10	20.0-22.0	10-10-2-0	4
25	60	26.10	20.0-22.0	10-10-2-0	4
30	70	26.10	20.0-22.0	10-10-2-0	4
35	80	26.10	20.0-22.0	10-10-2-0	4
40	90	26.10	20.0-22.0	10-10-2-0	4
45	100	26.10	20.0-22.0	10-10-2-0	4
50					
Remarks:					
1. Bridge deck 2-1/2 inches HMA over 8 inches reinforced concrete					
2. Bridge deck to ground surface: 14.3 feet.					
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.					
*Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.					
Page 1 of 4					
Boring No.: BB-STROUD-105					

SCHONWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Stroudwater River (MM46.7)		Boring No.: BB-STROUD-103	
LOCATION: Portland, Maine		Elevation (ft.)		Proj. No.: 18-003	
Driller:	New England Boring Contractors	Elevation (ft.)	31.5 (bridge deck elev 55.8)	Core Barrel:	NQ2
Operator:	Eric / Share	Date:	N/A/08	Sampler:	standard split-spoon
Logged By:	Schonwald	Rig Type:	Mobile Drill B-53	Hammer Wt/Fall:	140 lbs / 30 ft
Date Start/Finish:	3/18/18, 2020-3/19/18, 2120	Drilling Method:	cased wash boring	Hammer Type:	auto hammer
Boring Location:	per plan	Casing ID/DI:	HW to 50 ft, NW to 56.2 ft	Hammer Efficiency:	0.677
TESTING AND TESTING:		ADDITIONAL DEFINITIONS:		LABORATORY TEST RESULTS:	
D = Split Spoon Sample	N = value	WCH = weight of 40lb hammer	ASHTO / USCS soil classification	WCH = weight of 40lb hammer	ASHTO / USCS soil classification
UC = Unconsolidated	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
U = Thin Wall Tube Sample	U = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
V = In Situ Vane Shear Test	V = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
M = Unconsolidated Thin Wall Tube Sample	M = value	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification	WCH = weight of 140lb hammer	ASTM / AASHTO / USCS soil classification
Sample Information		Visual Description and Remarks		Lab Testing Results	
Depth (ft.)	Sample No.	Pen (ft)	Blow (ft)	Blow (ft)	Blow (ft)
55	110	26.11	35.0-32.0	10-9-9	18
60	120	26.11	35.0-37.0	ROD 27-2%	
65	130	26.11	35.0-37.0	ROD 30-4%	
70	140	26.11	35.0-37.0	ROD 30-4%	
75	150	26.11	35.0-37.0	ROD 30-4%	
80	160	26.11	35.0-37.0	ROD 30-4%	
85	170	26.11	35.0-37.0	ROD 30-4%	
90	180	26.11	35.0-37.0	ROD 30-4%	
95	190	26.11	35.0-37.0	ROD 30-4%	
100	200	26.11	35.0-37.0	ROD 30-4%	
105	210	26.11	35.0-37.0	ROD 30-4%	
110	220	26.11	35.0-37.0	ROD 30-4%	
115	230	26.11	35.0-37.0	ROD 30-4%	
120	240	26.11	35.0-37.0	ROD 30-4%	
125	250	26.11	35.0-37.0	ROD 30-4%	
130	260	26.11	35.0-37.0	ROD 30-4%	
135	270	26.11	35.0-37.0	ROD 30-4%	
140	280	26.11	35.0-37.0	ROD 30-4%	
145	290	26.11	35.0-37.0	ROD 30-4%	
150	300	26.11	35.0-37.0	ROD 30-4%	
155	310	26.11	35.0-37.0	ROD 30-4%	
160	320	26.11	35.0-37.0	ROD 30-4%	
165	330	26.11	35.0-37.0	ROD 30-4%	
170	340	26.11	35.0-37.0	ROD 30-4%	
175	350	26.11	35.0-37.0	ROD 30-4%	
180	360	26.11	35.0-37.0	ROD 30-4%	
185	370	26.11	35.0-37.0	ROD 30-4%	
190	380	26.11	35.0-37.0	ROD 30-4%	
195	390	26.11	35.0-37.0	ROD 30-4%	
200	400	26.11	35.0-37.0	ROD 30-4%	
205	410	26.11	35.0-37.0	ROD 30-4%	
210	420	26.11	35.0-37.0	ROD 30-4%	
215	430	26.11	35.0-37.0	ROD 30-4%	
220	440	26.11	35.0-37.0	ROD 30-4%	
225	450	26.11	35.0-37.0	ROD 30-4%	
230	460	26.11	35.0-37.0	ROD 30-4%	
235	470	26.11	35.0-37.0	ROD 3	

Date: 10/18/2018

Filename: 061_Construction Sequencing 1.dgn

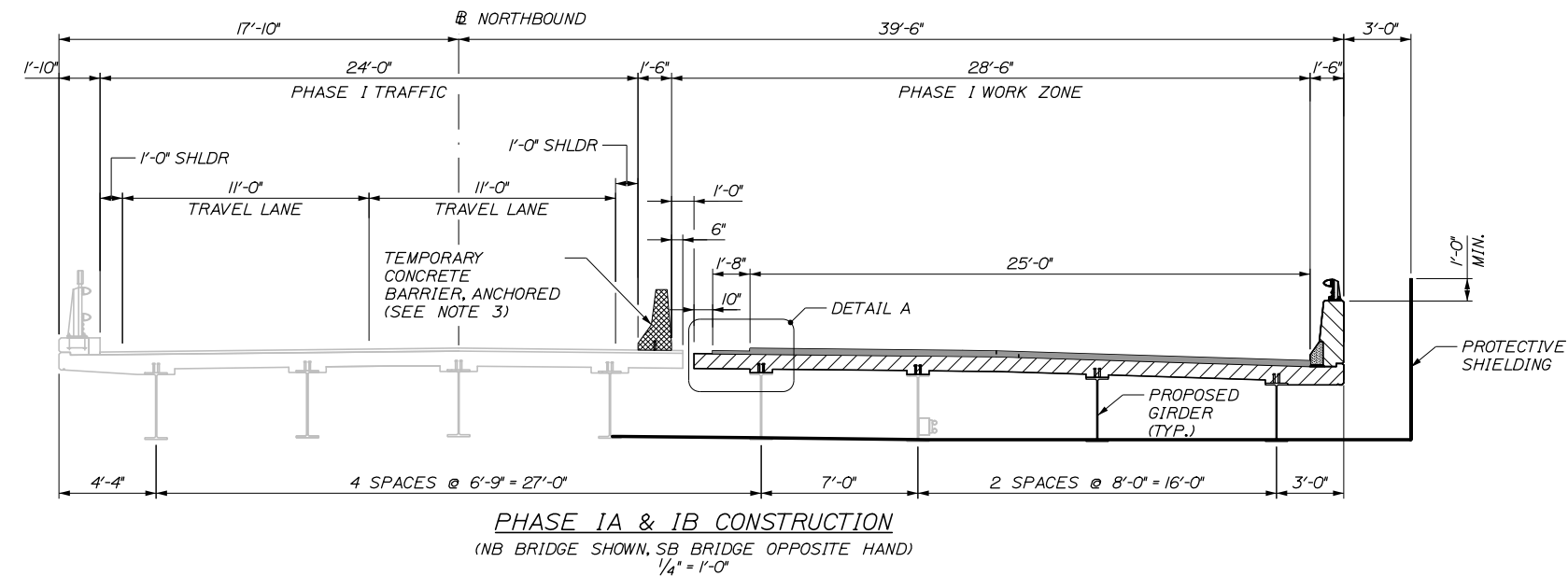
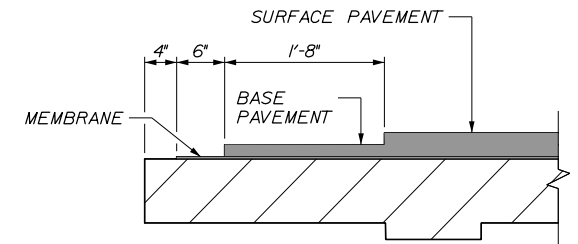
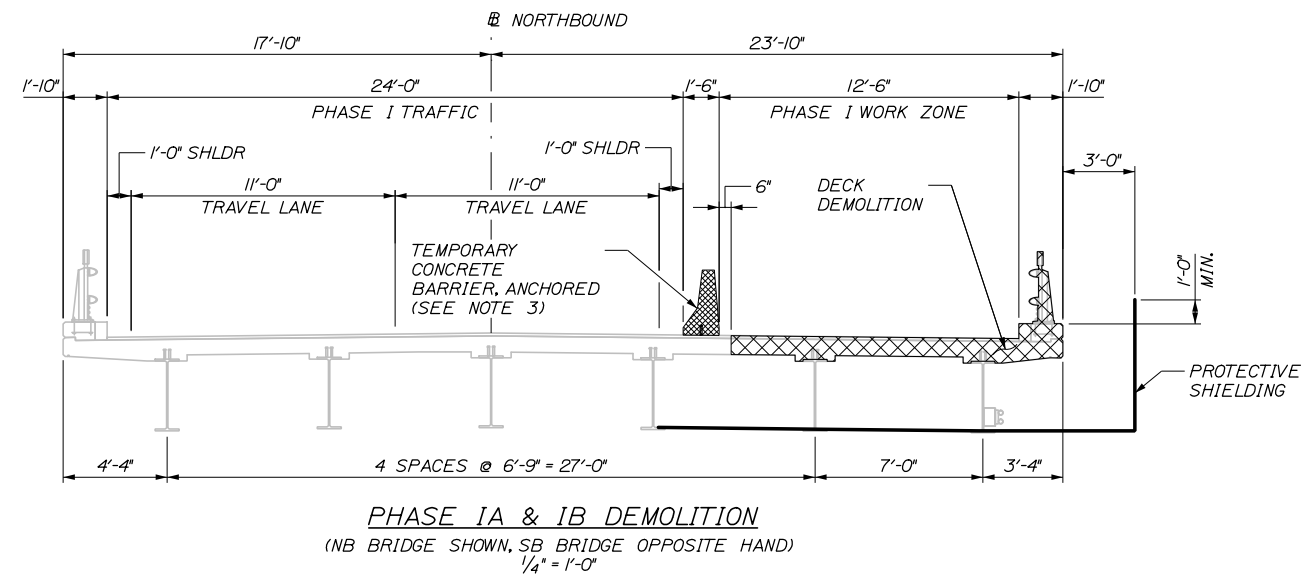


NOTES:

1. PROTECTIVE SHIELDING SHALL EXTEND LONGITUDINALLY BETWEEN PIER 1 AND PIER 2. THE WIDTH OF THE SHIELDING SHALL BE AS SHOWN IN EACH PHASE.
2. THE APPROXIMATE SHIELDING QUANTITIES REPRESENT THE TOTAL QUANTITY OF SHIELDING REQUIRED TO COMPLETE THE WORK, INCLUDING INITIAL INSTALLATION, REMOVAL, AND RESETTING OF SHIELDING.
3. USE OF THRU-BOLTING WILL NOT BE PERMITTED.

APPROXIMATE SHIELDING QUANTITIES*			
	DEMOLITION	CONSTRUCTION	TOTAL
APPROX. WIDTH OF NEW SHIELDING INSTALLED (FT)**	66.4 FT	81.8 FT	148.2 FT
APPROX. AREA OF SHIELDING INSTALLED (SY)	1240 SY	1520 SY	2760 SY

* SEE NOTES 1 AND 2
** ACCOUNTS FOR PHASE 1 AND PHASE 2



Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	BRG	10\18	Checked	KEB	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

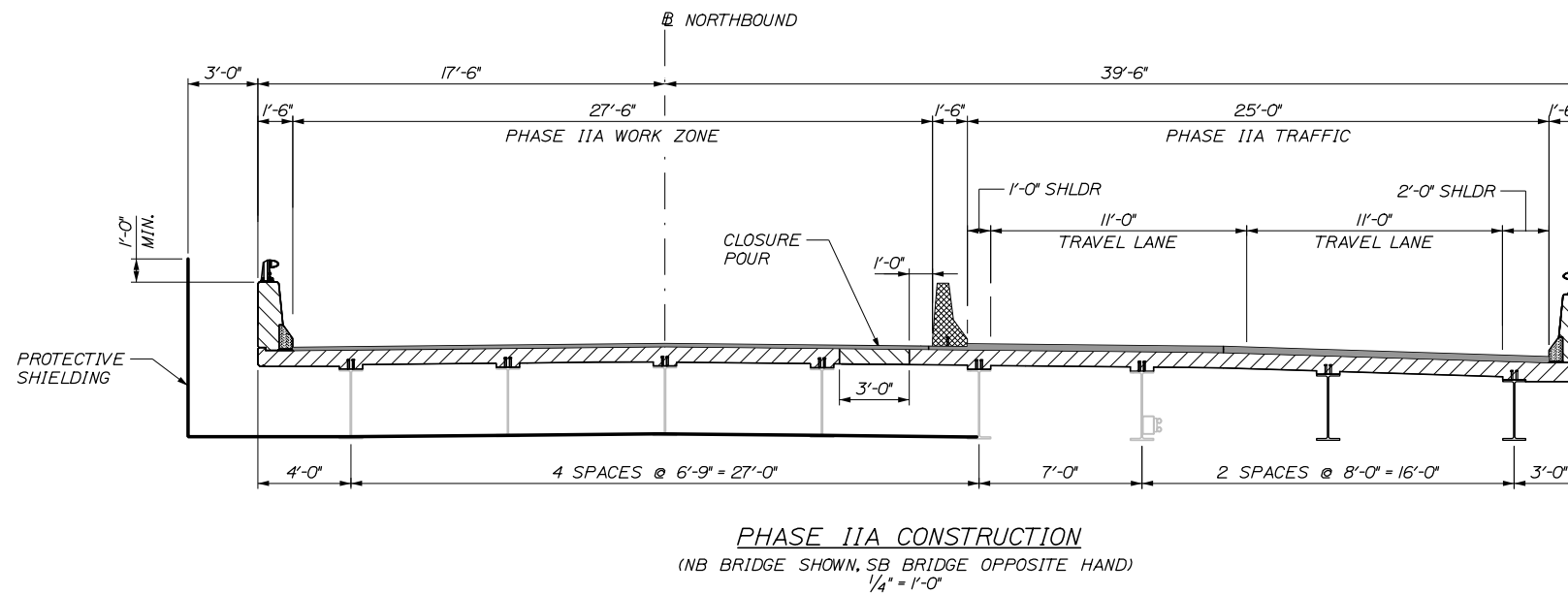
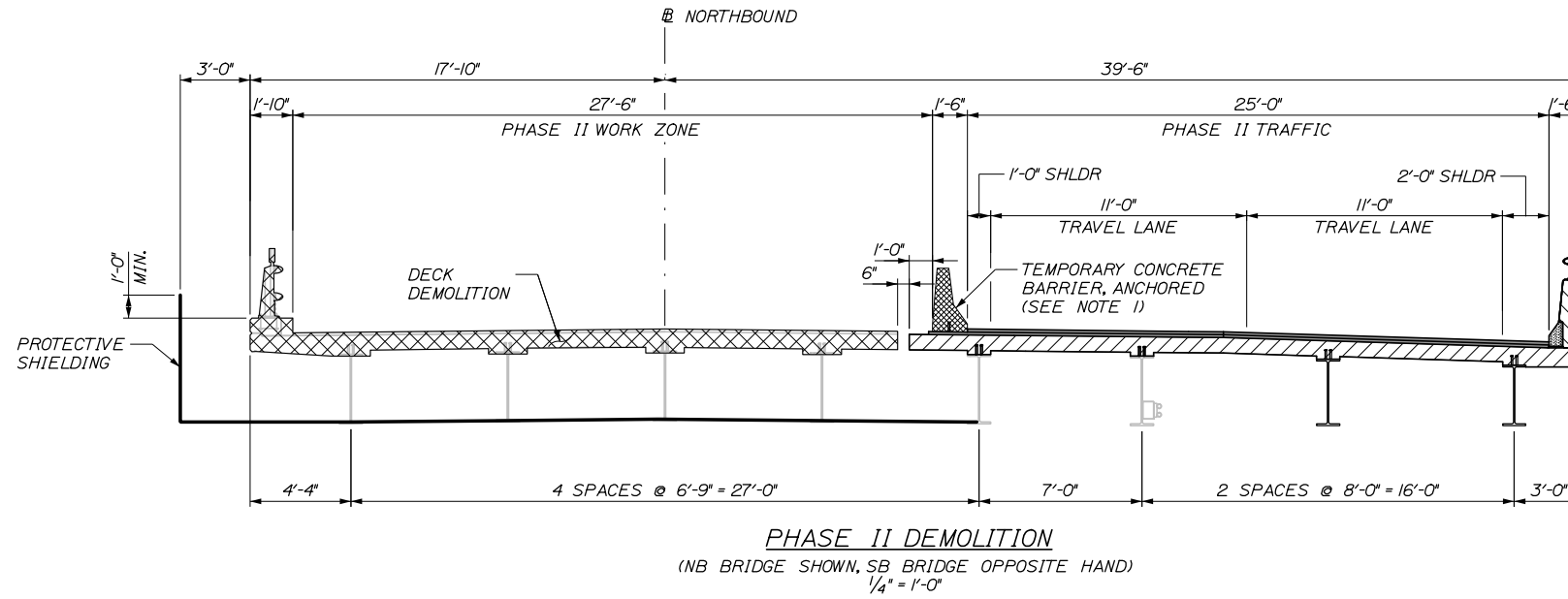
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

CONSTRUCTION SEQUENCE I

SHEET NUMBER: S-06
CONTRACT: 2019.09
61 OF 121

NOTES:

1. BASE PAVEMENT UNDER BARRIER SHALL BE REMOVED AND REPLACED DURING PHASE IIB TO FACILITATE MEMBRANE OVERLAP AND REPAIR OF HOLES IN DECK.



Date: 10/18/2018

Filename: 062_Construction Sequencing II.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

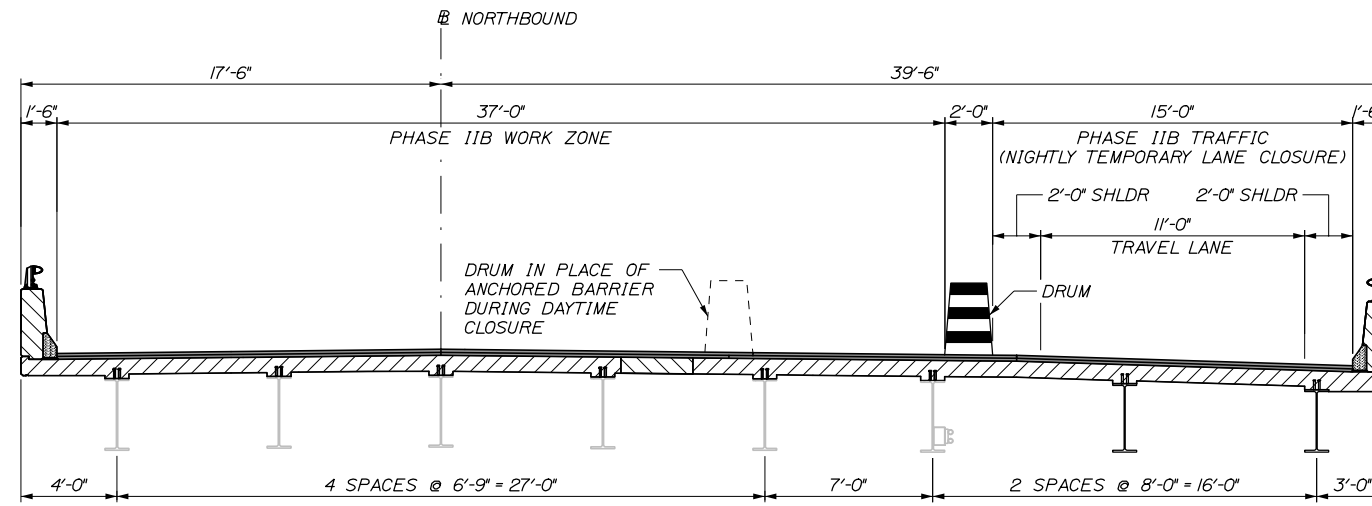
**BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS**

CONSTRUCTION SEQUENCE II

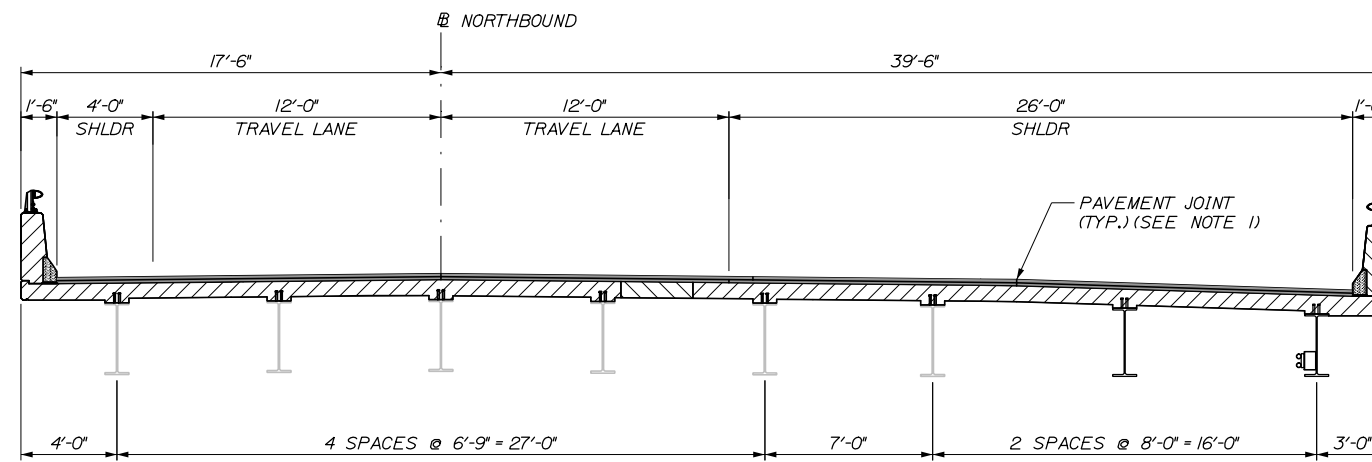
SHEET NUMBER: S-07
CONTRACT: 2019.09
62 OF 121

NOTES:

1. CONTRACTOR SHALL MAKE REASONABLE EFFORT TO LOCATE PAVED JOINTS AT LOCATIONS SHOWN.



PHASE IIB CONSTRUCTION
(NB BRIDGE SHOWN, SB BRIDGE OPPOSITE HAND)
1/4" = 1'-0"



FINAL PROPOSED CONDITION
(NB BRIDGE SHOWN, SB BRIDGE OPPOSITE HAND)
1/4" = 1'-0"

Date: 10/18/2018

Filename: 063_Construction Sequencing III.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
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	ERB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

CONSTRUCTION SEQUENCE III

SHEET NUMBER: S-08

CONTRACT: 2019.09

63 OF 121

Date: 10/18/2018

Filename: 064_Substructure Repairs_Notes and Details.dgn

ABUTMENT NOTES:

1. ABUTMENT REPAIR WORK SHALL INCLUDE: ABUTMENT SURFACE REPAIRS, EPOXY INJECTION CRACK REPAIR AND SEALING EXISTING CONSTRUCTION JOINTS. ALL ABUTMENT REPAIR AREAS ARE ABOVE THE ORDINARY HIGH WATER ELEVATION.
2. WHERE ABUTMENT SURFACE REPAIRS ARE REQUIRED THE WORK SHALL INCLUDE REMOVAL OF UNSOUND CONCRETE AND PLACEMENT AND CURING OF REPAIR MATERIALS. REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEMS 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES" AND 518.51 "REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES".
3. WHERE EPOXY INJECTION CRACK REPAIR IS SPECIFIED THE WORK SHALL INCLUDE PRESSURE INJECTION OF CRACKS 1/8" OR MORE IN WIDTH. WORK SHALL BE PAID UNDER PAY ITEM 518.40, "EPOXY INJECTION CRACK REPAIR".
4. FOR APPROXIMATE LOCATIONS OF ABUTMENT REPAIRS, SEE SUBSTRUCTURE REPAIRS SOUTHBOUND ABUTMENTS AND SUBSTRUCTURE REPAIRS NORTHBOUND ABUTMENTS SHEETS. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
5. ALL EXCAVATION REQUIRED TO COMPLETE THE ABUTMENT REPAIRS WILL NOT BE MEASURED FOR PAYMENT SEPARATELY, BUT SHALL BE INCIDENTAL TO PAY ITEM 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES".
6. THE ESTIMATED REPAIR QUANTITIES ARE BASED ON AN ANNUAL INSPECTION COMPLETED IN MAY 2017.
7. ELEVATIONS SHOWN WITH (+) ARE FOR CONTRACTOR REFERENCE AND ARE BASED ON AS-BUILT CONDITIONS WHICH MAY VARY FROM ACTUAL SITE CONDITIONS.

PIER NOTES:

1. PIER REPAIR WORK SHALL INCLUDE: PROVIDING ACCESS FOR PIER INSPECTION, PIER SURFACE REPAIRS AND EPOXY INJECTION CRACK REPAIR.
2. WHERE PIER SURFACE REPAIRS ARE REQUIRED, THE WORK SHALL INCLUDE REMOVAL OF UNSOUND CONCRETE AND PLACEMENT AND CURING OF REPAIR MATERIALS. REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES", AND 518.70, "REPAIR OF OVERHEAD SURFACES < 8 INCHES".
3. WHERE EPOXY INJECTION CRACK REPAIR IS REQUIRED THE WORK SHALL INCLUDE PRESSURE INJECTION OF CRACKS 1/8" OR MORE IN WIDTH. WORK SHALL BE PAID UNDER PAY ITEM 518.40, "EPOXY INJECTION CRACK REPAIR".
4. THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS ARE BASED ON A VISUAL INSPECTION COMPLETED IN MAY 2017.
5. FOR APPROXIMATE LOCATIONS OF REPAIR SEE SUBSTRUCTURE REPAIRS PIER 1, PIER 2, AND PIER 3 SHEETS. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION. THE RESIDENT SHALL COORDINATE DIRECTLY WITH THE CONTRACTOR'S DIVE TEAMS TO AGREE ON UNDERWATER REPAIR LIMITS.
6. IF PIER SURFACE PATCH REPAIRS ARE REQUIRED TO EXTEND MORE THAN 1/3 THE WIDTH OF THE COLUMN STEM THE WORK SHALL BE SEQUENCED SUCH THAT REMOVAL OF THE COLUMN CONCRETE IS LIMITED TO NO MORE THAN 1/3 OF THE COLUMN WIDTH AT ANY ONE TIME.
7. ELEVATIONS SHOWN WITH (+) ARE FOR CONTRACTOR REFERENCE AND ARE BASED ON AS-BUILT CONDITIONS WHICH MAY VARY FROM ACTUAL SITE CONDITIONS.

ABUTMENT AND PIER CONCRETE REPAIR PROCEDURE:

1. PRIOR TO THE START OF CONCRETE REPAIRS THE RESIDENT AND THE CONTRACTOR SHALL SOUND ALL ABUTMENT AND PIER SURFACES AND AGREE ON THE REPAIR LIMITS.
2. PERFORM 1" DEEP SAW CUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO THE DEPTH SPECIFIED IN SPECIAL PROVISION 518. IF THE REMOVAL LIMITS CHANGE DURING THE DEMOLITION PROCESS THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVALS.
4. PREPARE AND PATCH REPAIR AREAS. SEE SPECIFICATIONS FOR SURFACE PREPARATION, MATERIALS, PLACEMENT AND CURING REQUIREMENTS.
5. PERFORM GENERAL FINISHING.

EPOXY INJECTION CRACK REPAIR:

1. ALL CRACK REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH SPECIAL PROVISION 518.
2. THE SELECTED REPAIR MATERIAL FOR UNDERWATER CRACK REPAIR SHALL BE APPROVED BY THE MANUFACTURER FOR PLACEMENT UNDERWATER.
3. PREPARE CONCRETE SURFACE AND CRACK AREA BY CLEANING SUBSTRATE WITH WIRE BRUSH TO REMOVE LAITANCE AND CONTAMINANTS. BLAST CLEAN THE CRACK AND CONCRETE SURFACE; DO NOT USE WATER.
4. SET INJECTION PORTS ALONG THE LENGTH OF THE CRACK USING A HIGH-MODULUS, LOW VISCOSITY EPOXY SUCH AS SIKADUR 35, SIKADUR 55, OR APPROVED EQUAL. ONCE SET SEAL PORTS AND CRACK WITH THE SAME EPOXY ADHESIVE. EPOXY SEAL AROUND PORTS SHALL BE ALLOWED TO CURE PRIOR TO CRACK INJECTION.

GENERAL FINISHING:

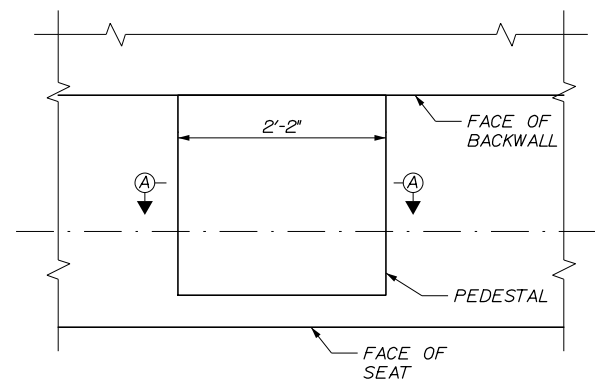
1. CONTRACTOR SHALL REMOVE GRAFFITI AND TECTYL COATING WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIAL PROVISION 518.
2. ALL EXPOSED SUBSTRUCTURE SURFACES SHALL BE COATED WITH A PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETE AND PATCH MATERIALS HAVE CURED IN ACCORDANCE WITH SPECIAL PROVISION 515.

DEMOLITION NOTES:

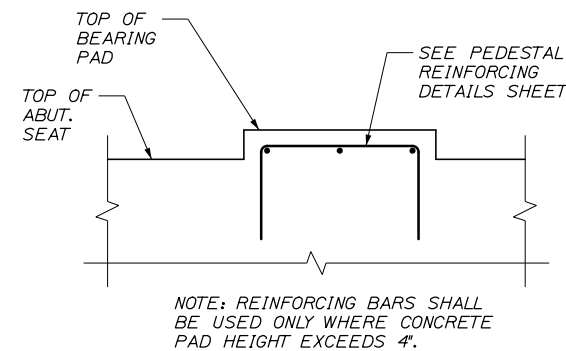
1. ALL LIMITS OF DEMOLITION SHALL BE SAWCUT 1" DEEP.
2. FOR AREAS OF ABUTMENT AND PIER REPAIRS, SEE SUBSTRUCTURE REPAIRS SHEETS.
3. DIMENSIONS OF EXISTING ABUTMENT AND PIER ELEMENTS ARE BASED ON AS-BUILT INFORMATION AND LIMITED FIELD SURVEYS.
4. ALL EXPOSED SURFACES SHALL BE COATED WITH PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES AFTER RECONSTRUCTION IS COMPLETE AND MATERIALS HAVE CURED.
5. REMOVE CONCRETE AND REINFORCEMENT AS NOTED WITHIN DEMOLITION LIMITS.
6. EXISTING REINFORCEMENT TO REMAIN AT ABUTMENTS OR PIERS SHALL BE SANDBLASTED. THE RESIDENT SHALL INSPECT THE CONDITION OF THE REINFORCEMENT AND DETERMINE WHETHER INDIVIDUAL BARS ARE DETERIORATED BEYOND REUSE. IF DETERIORATION IS DEEMED EXCESSIVE BY THE RESIDENT, A REINFORCEMENT REHABILITATION DETAIL WILL BE PROVIDED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER 503.14 AND 503.15.

PEDESTAL RECONSTRUCTION NOTES:

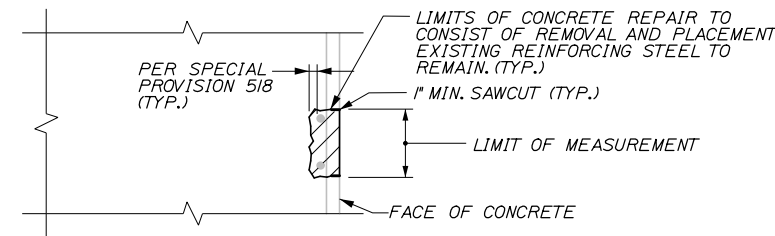
1. FOR PEDESTAL RECONSTRUCTION LOCATIONS SEE ABUTMENT SUBSTRUCTURE REPAIR SHEETS.
2. THE CONTRACTOR SHALL MEASURE THE EXISTING BEARING IN FIELD TO DETERMINE PEDESTAL HEIGHT.
3. REINFORCING SHALL BE INCIDENTAL TO ITEM 518.51 "REPAIR OF UPWARD FACING SURFACES".
4. PEDESTAL DEMOLITION AND RECONSTRUCTION SHALL BE PAID UNDER ITEM 518.51 "REPAIR OF UPWARD FACING SURFACES".
5. JACKING REQUIRED FOR PEDESTAL RECONSTRUCTION SHALL BE PAID UNDER ITEM 524.301 "TEMPORARY STRUCTURAL SUPPORT - JACKING".



PEDESTAL RECONSTRUCTION DETAIL
1" = 1'-0"



SECTION A-A
1" = 1'-0"



CONCRETE SURFACE REPAIR DETAIL
N.T.S.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18	Checked	TJP	10\18
	ERB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

SUBSTRUCTURE REPAIRS
CONCRETE REPAIR NOTES AND DETAILS

SHEET NUMBER: S-09

CONTRACT: 2019.09

64 OF 121

REPAIR QUANTITIES

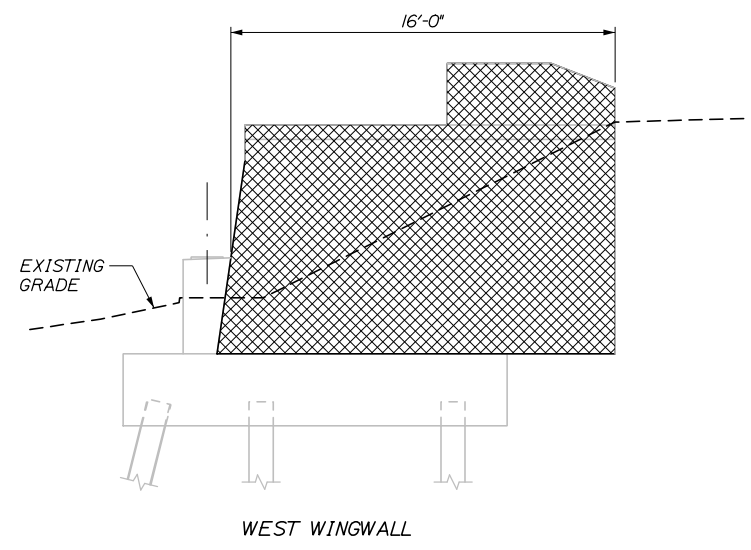
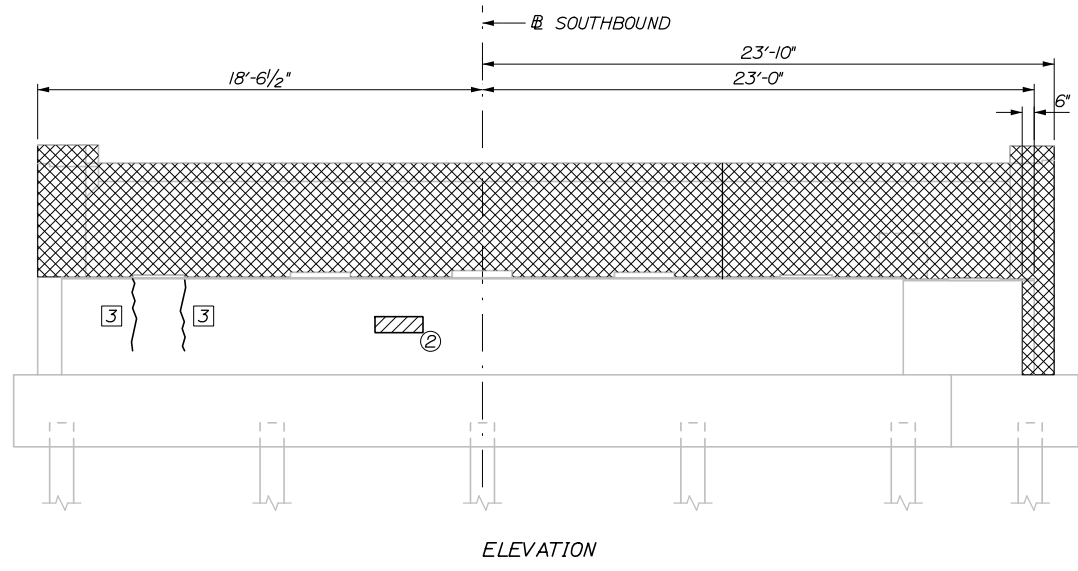
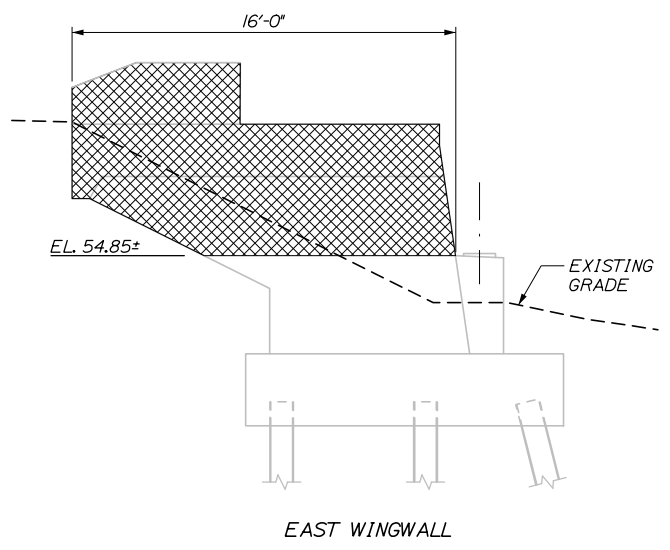
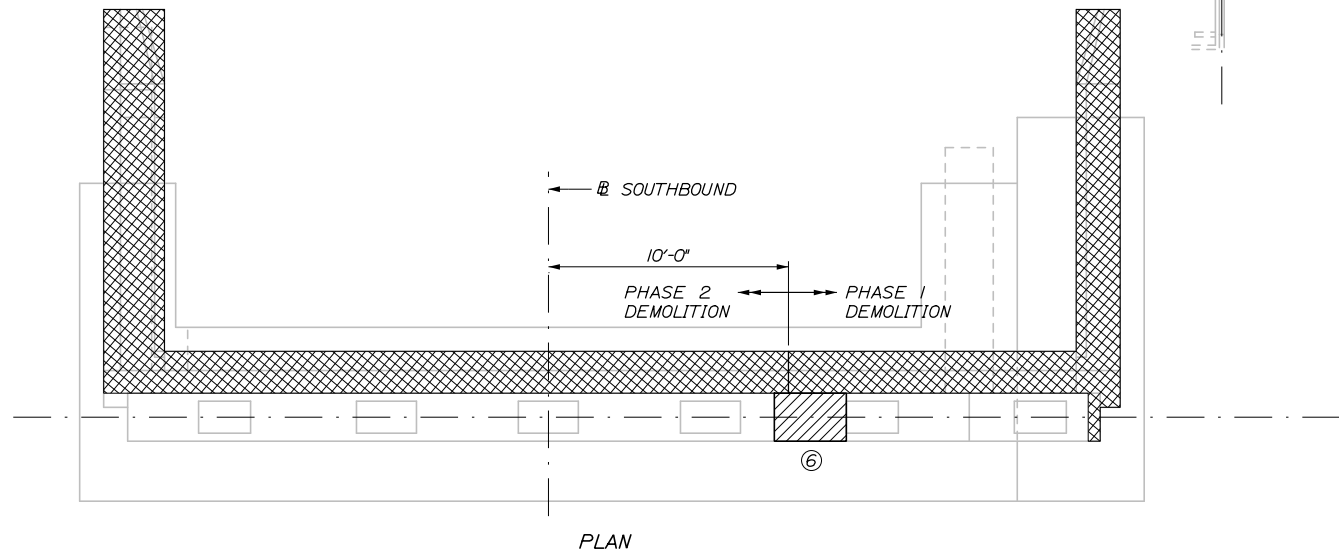
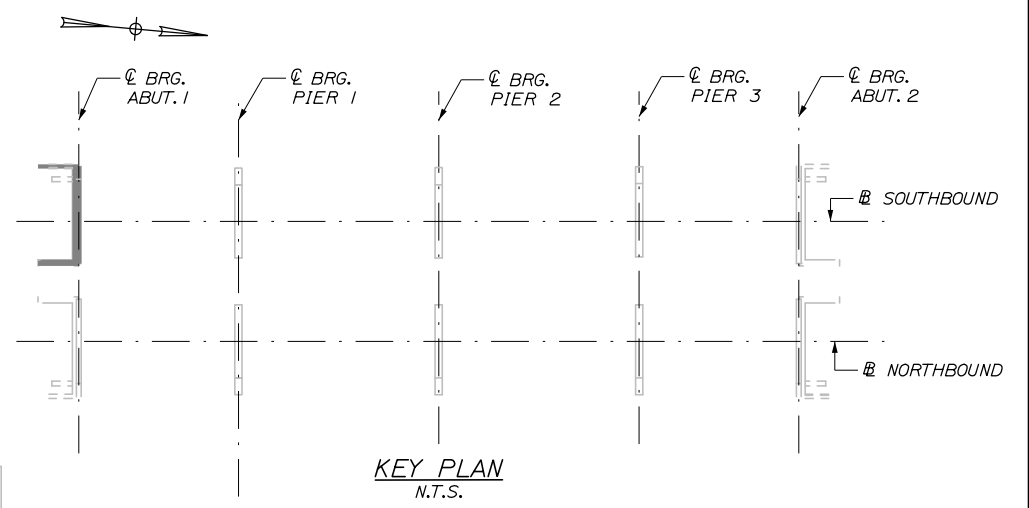
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 11 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 7 S.F.*
- EPOXY INJECTION CRACK REPAIR 11 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

NOTES:

1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR QUANTITIES NOTED ON THIS SHEET.

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR



SOUTHBOUND BRIDGE - ABUTMENT 1
1/4" = 1'-0"

Date: 10/18/2018
Filename: 065_Substructure Repairs_Southbound Abutment 1.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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TEL (207) 774-5155
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
SOUTHBOUND ABUTMENT 1

SHEET NUMBER: S-10
CONTRACT: 2019.09
95 OF 121

REPAIR QUANTITIES

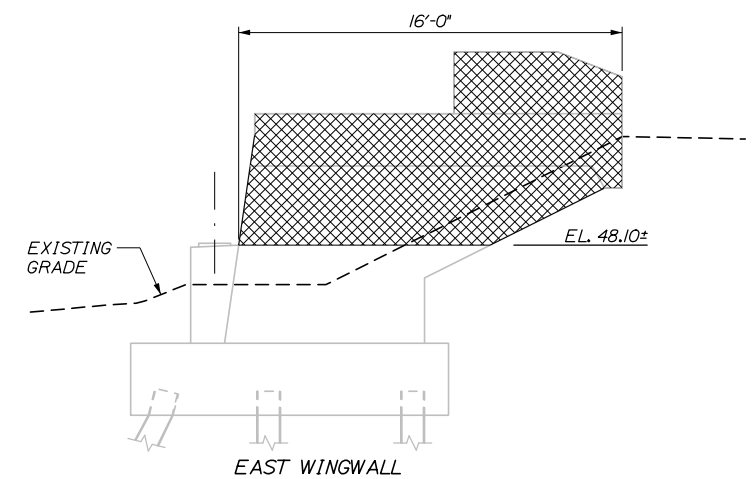
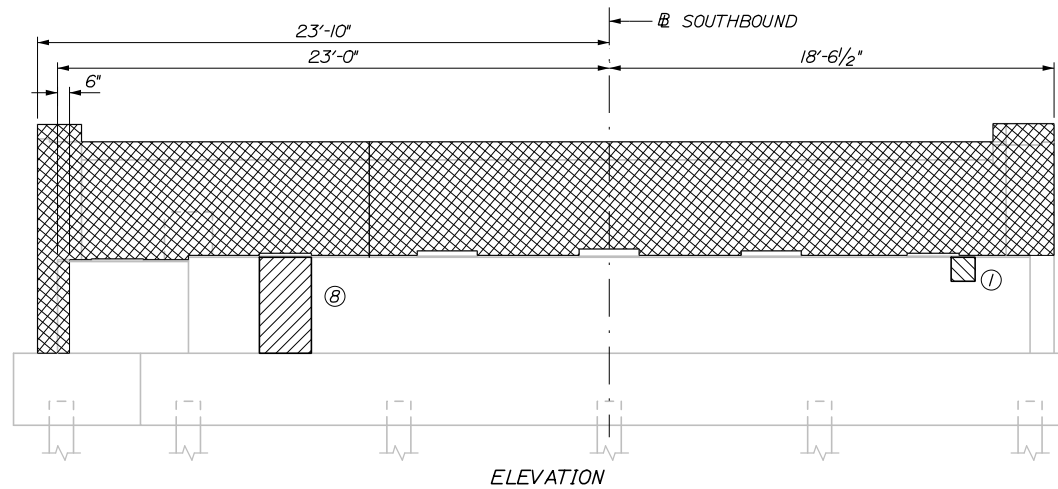
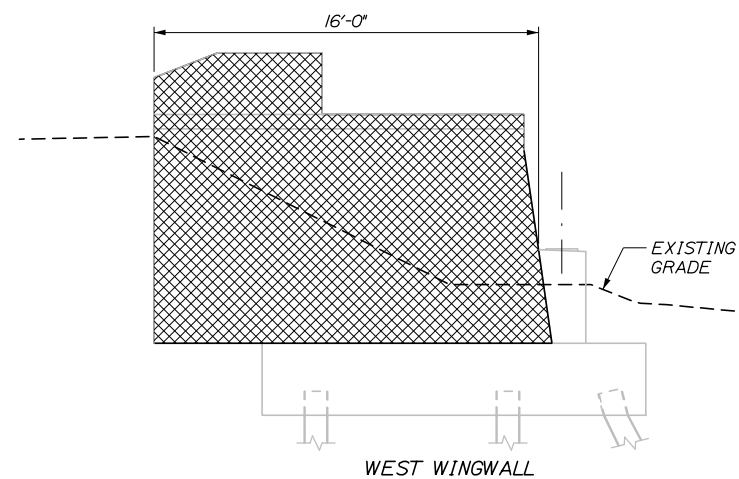
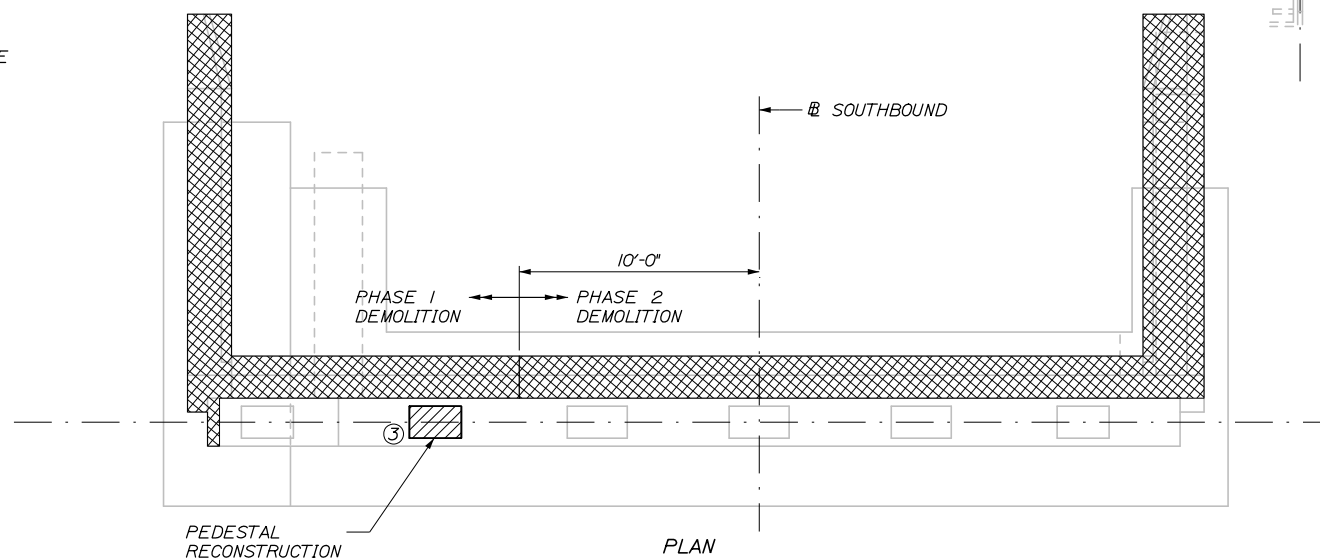
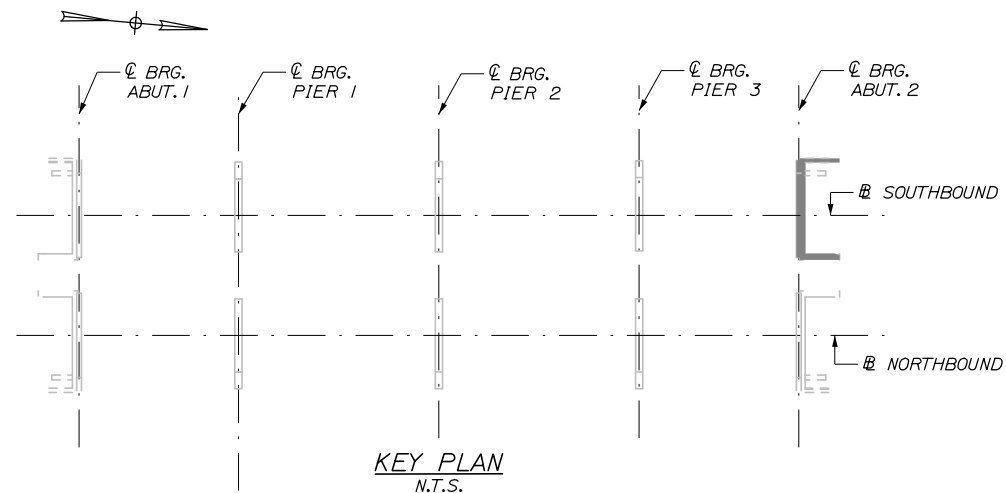
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 8 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 14 S.F.*
- EPOXY INJECTION CRACK REPAIR 5 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

NOTES:

1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. FOR PEDESTAL RECONSTRUCTION DETAIL AND PROCEDURAL NOTES SEE SUBSTRUCTURE REPAIRS CONCRETE REPAIR NOTES AND DETAILS SHEET.

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR



SOUTHBOUND BRIDGE - ABUTMENT 2
1/4" = 1'-0"

Date:10/18/2018

Filename: 066_Substructure Repairs_Southbound Abutment 2.dgn

Scale:			
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No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
SOUTHBOUND ABUTMENT 2

SHEET NUMBER: S-11
CONTRACT:2019.09
66 OF 121






REPAIR QUANTITIES

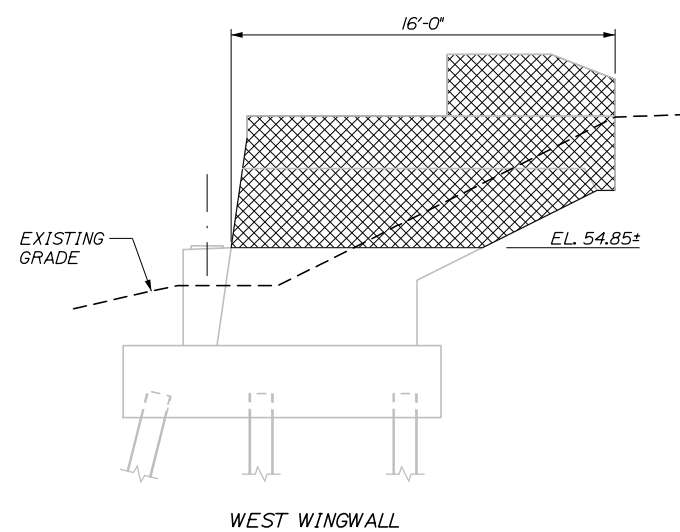
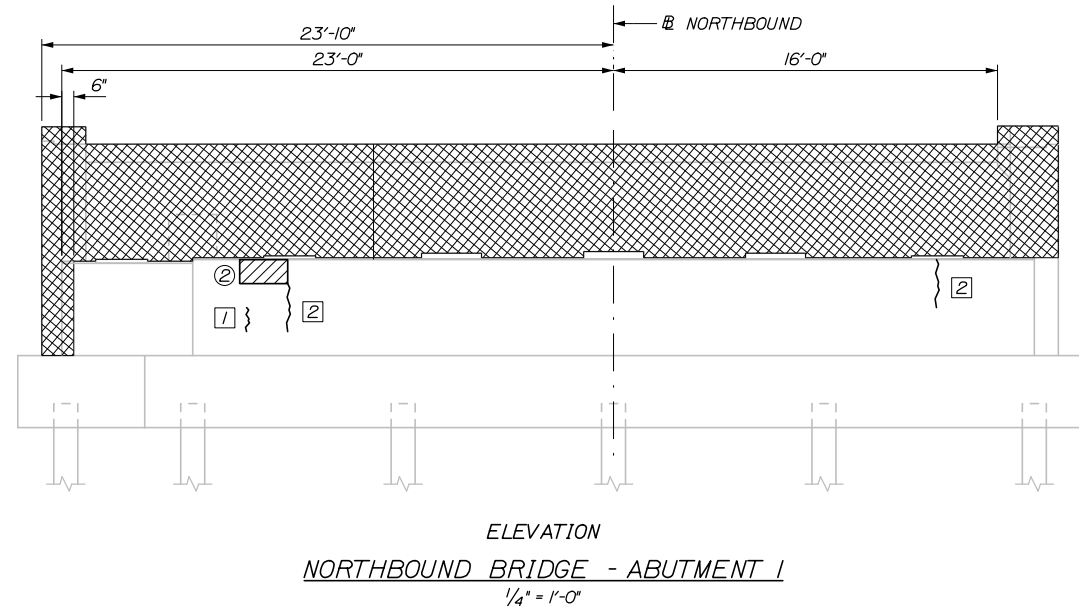
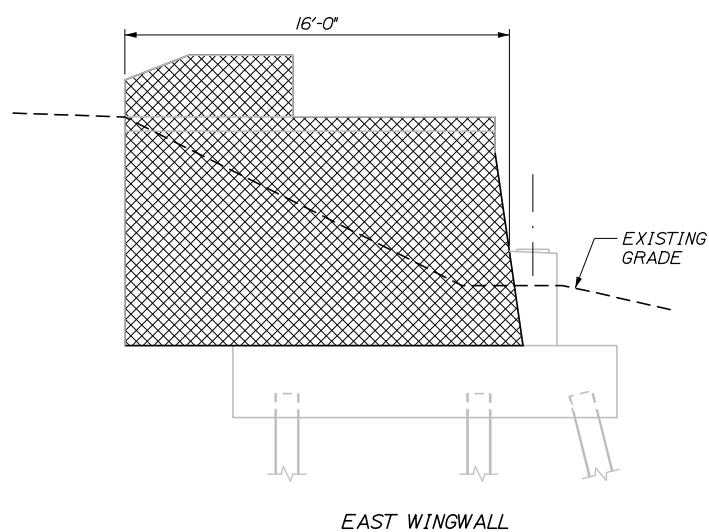
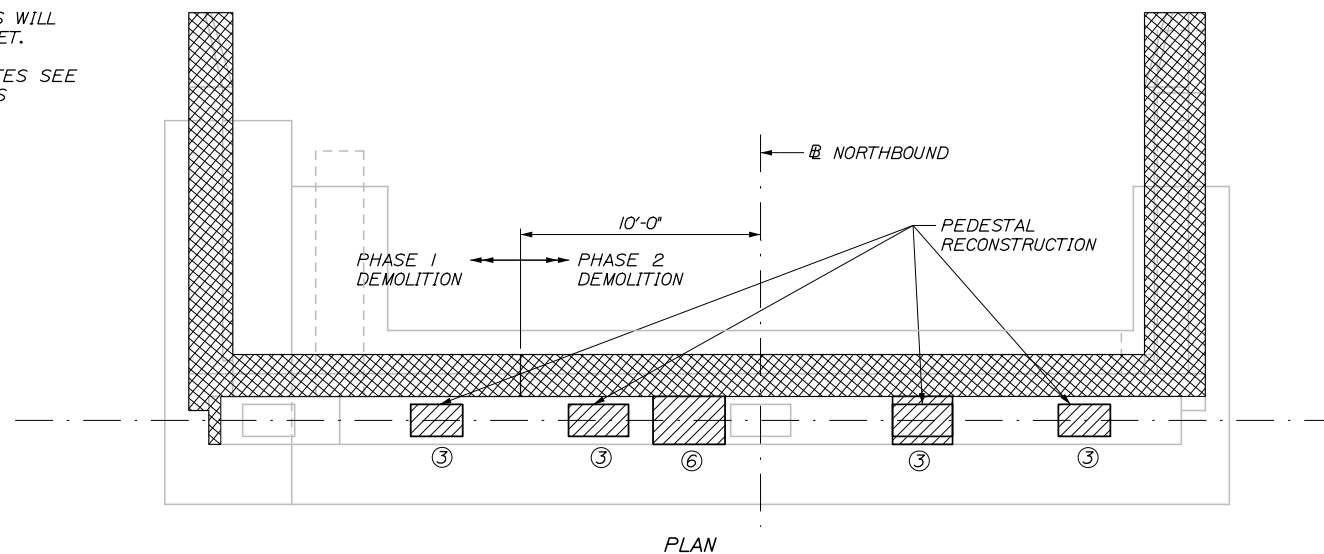
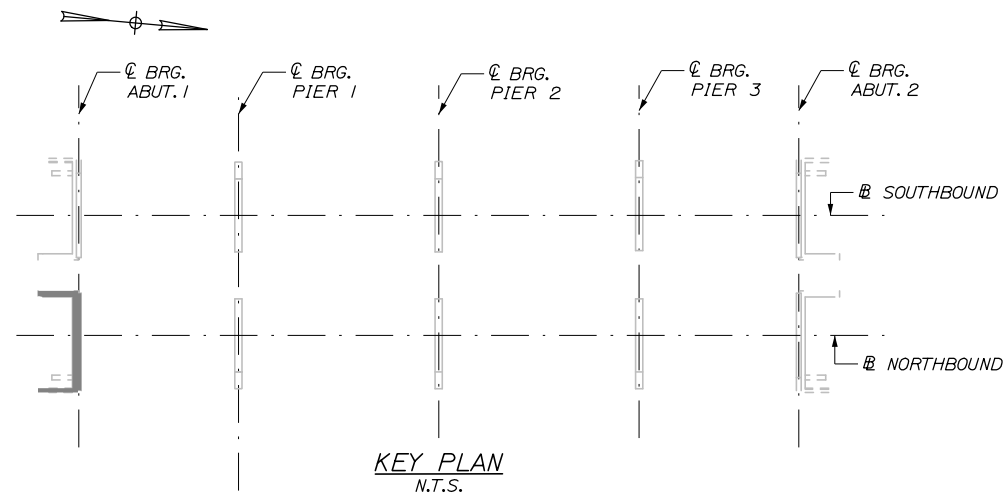
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 23 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 7 S.F.*
- EPOXY INJECTION CRACK REPAIR 10 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

NOTES:

1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. FOR PEDESTAL RECONSTRUCTION DETAIL AND PROCEDURAL NOTES SEE SUBSTRUCTURE REPAIRS CONCRETE REPAIR NOTES AND DETAILS SHEET.

LEGEND

-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



Date:10/18/2018

Filename: 067_Substructure Repairs_Northbound Abutment 1.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
NORTHBOUND ABUTMENT 1

SHEET NUMBER: S-12
CONTRACT:2019.09
67 OF 121






REPAIR QUANTITIES

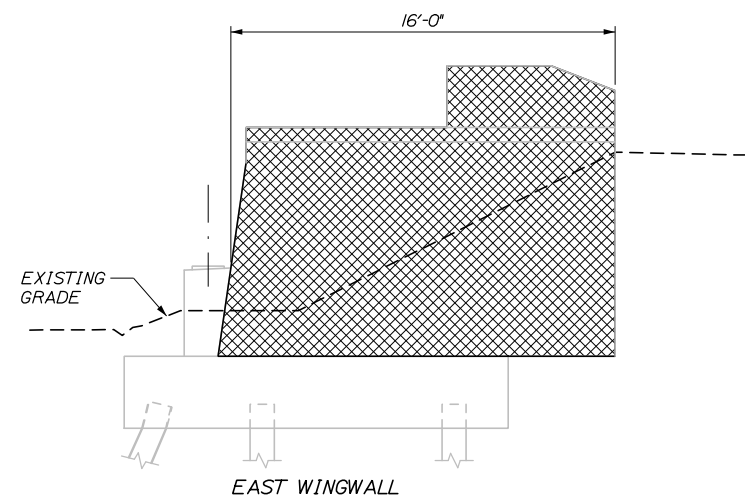
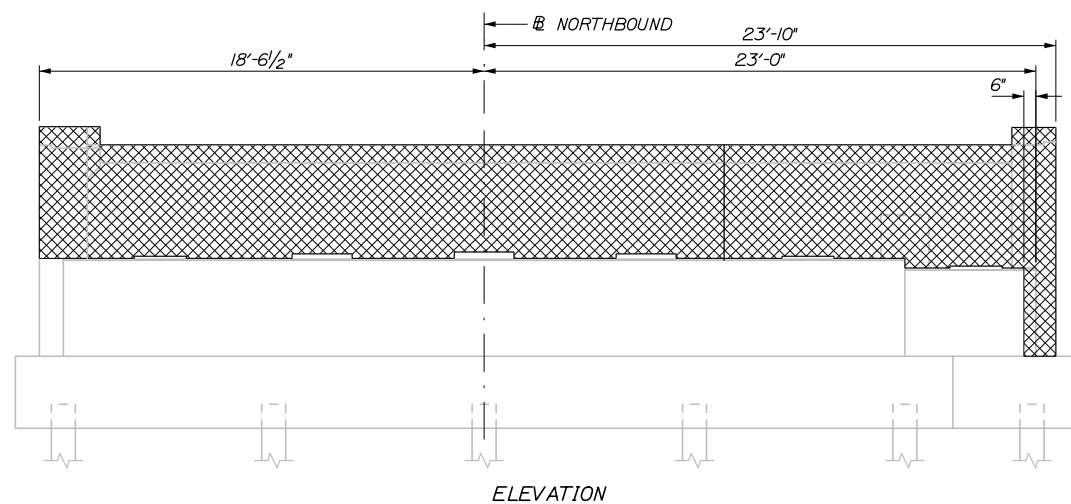
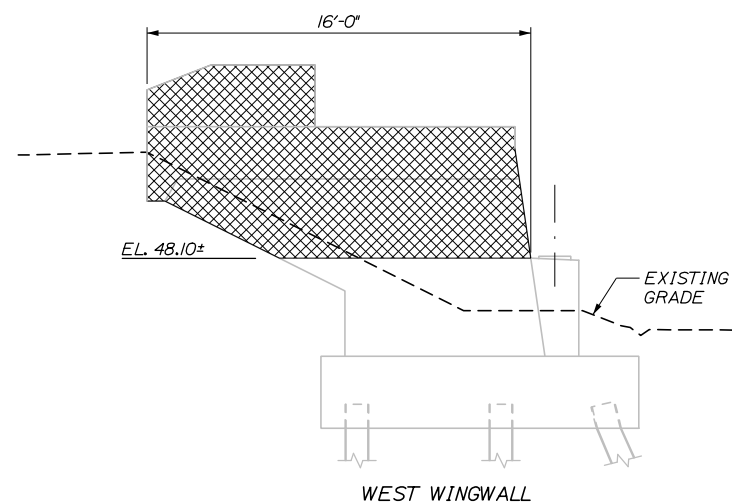
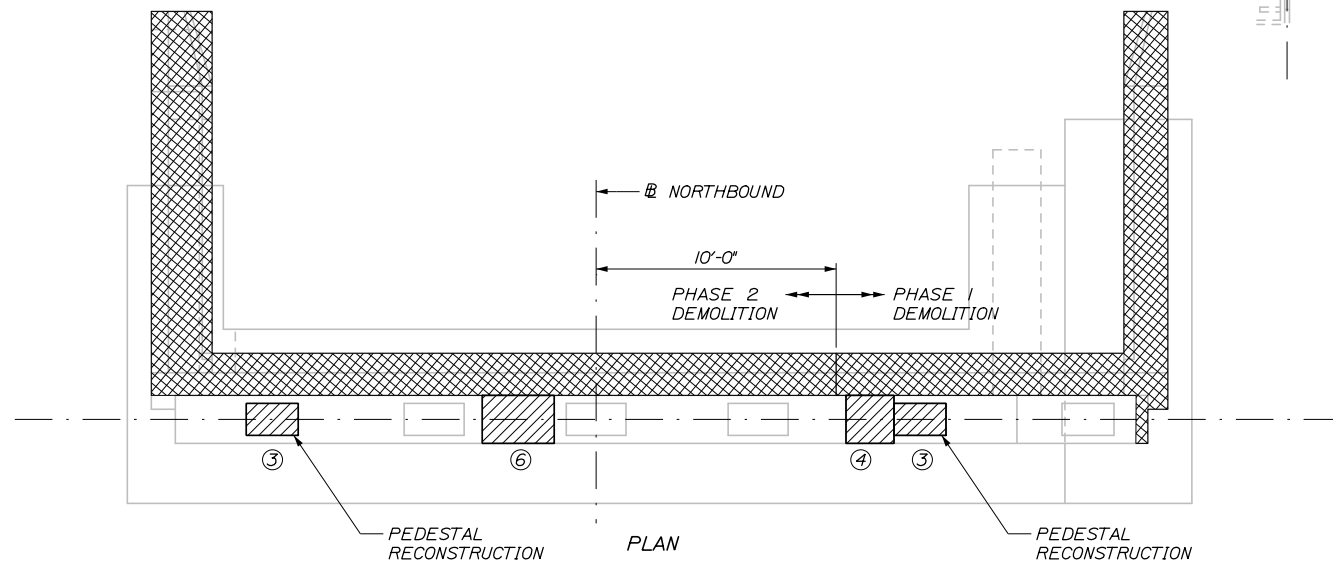
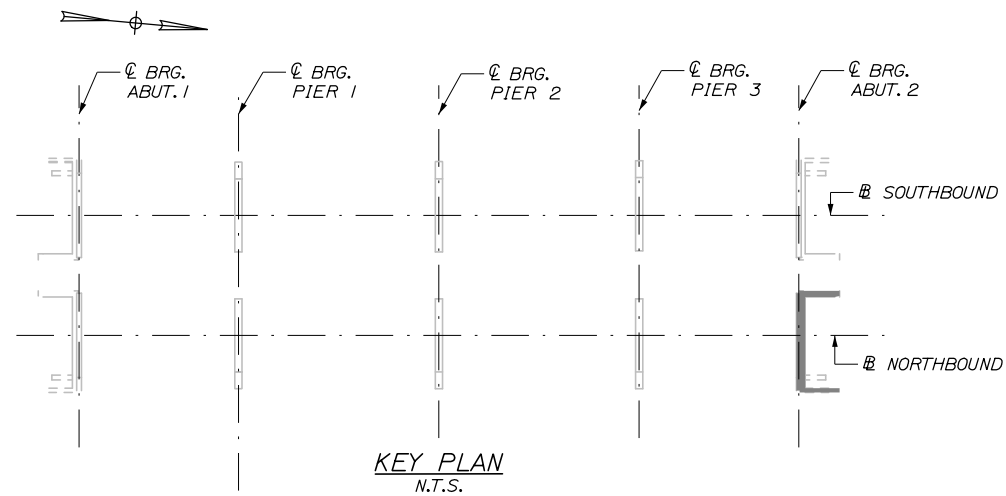
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 21 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 5 S.F.*
- EPOXY INJECTION CRACK REPAIR 5 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

NOTES:

1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. FOR PEDESTAL RECONSTRUCTION DETAIL AND PROCEDURAL NOTES SEE SUBSTRUCTURE REPAIRS CONCRETE REPAIR NOTES AND DETAILS SHEET.

LEGEND


-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



NORTHBOUND BRIDGE - ABUTMENT 2
1/4" = 1'-0"

Date: 10/18/2018

Filename: 068_Substructure Repairs_Northbound Abutment 2.dgn

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	TJP	10\18	Checked	HJW	10\18
				Drawn	ERB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C			
Westbrook, ME 04092			
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
NORTHBOUND ABUTMENT 2

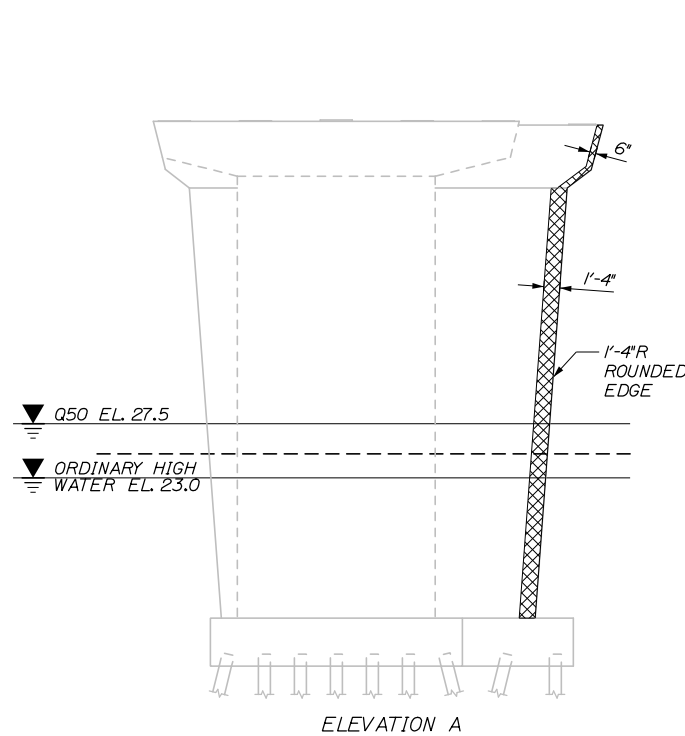
SHEET NUMBER: S-13

CONTRACT: 2019.09

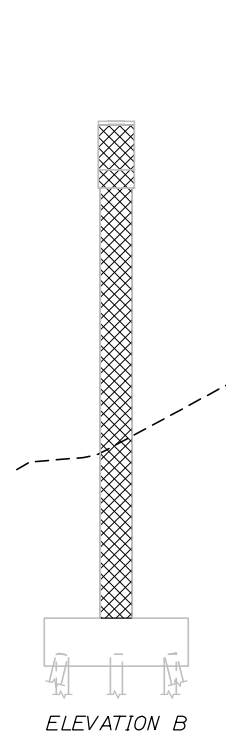
8 OF 121

Date: 10/18/2018

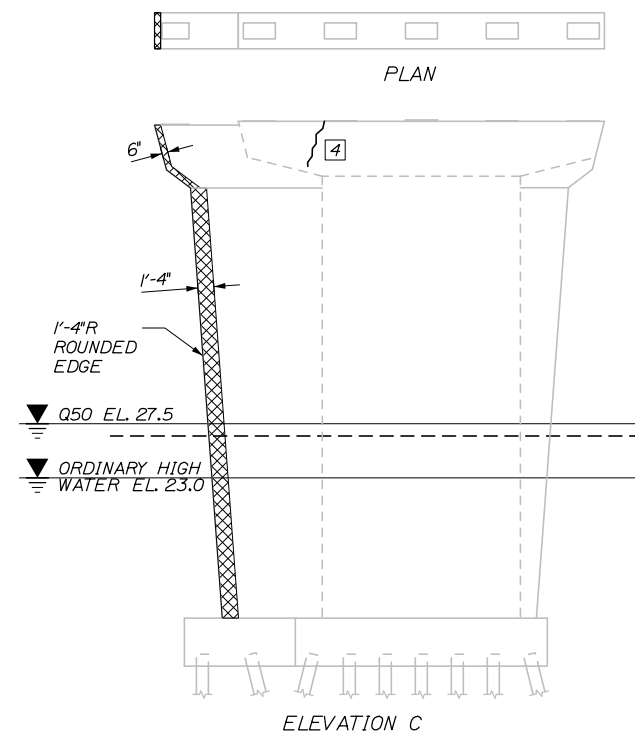
Filename: 069_Substructure Repairs_Pier 1.dgn



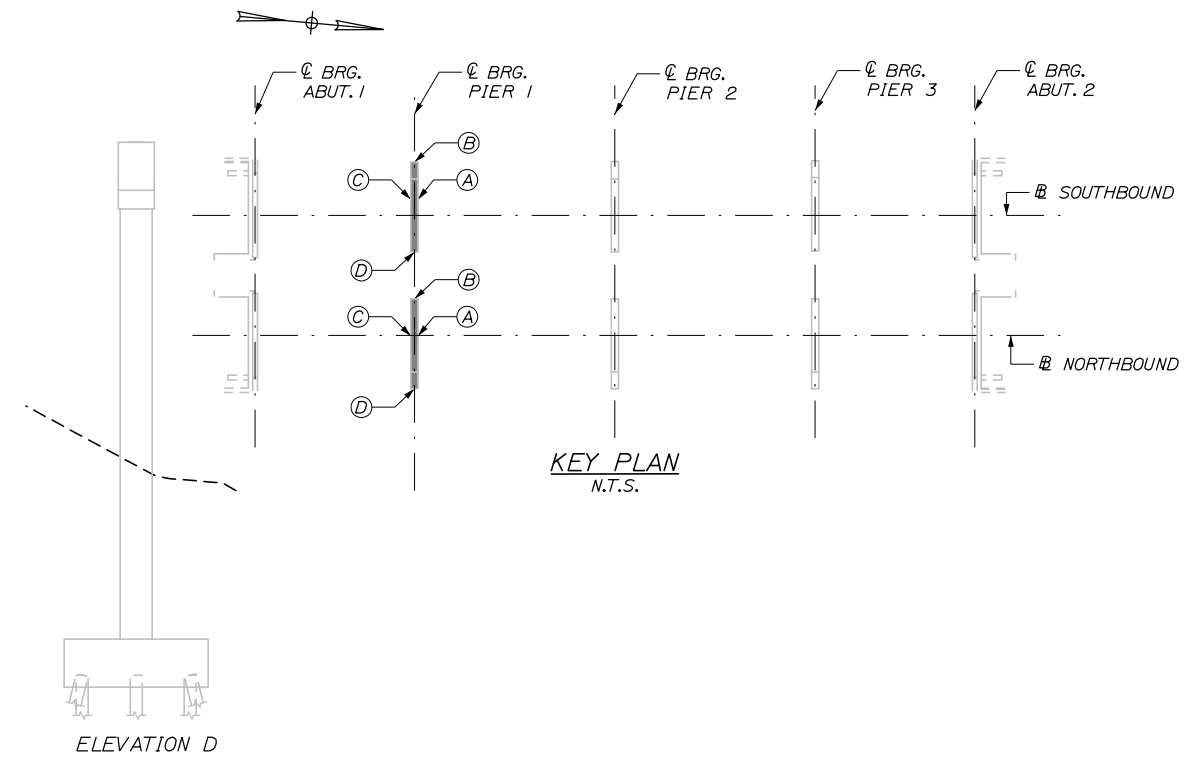
ELEVATION A



ELEVATION B



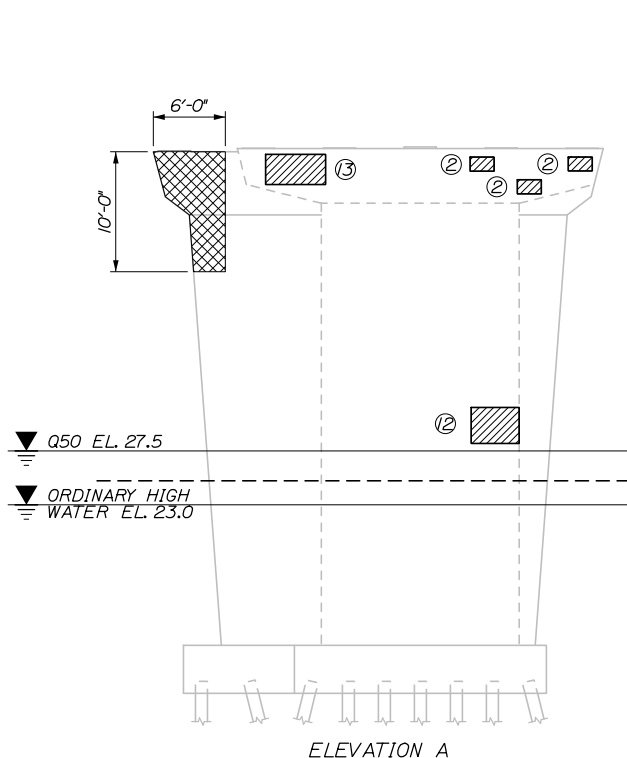
ELEVATION C



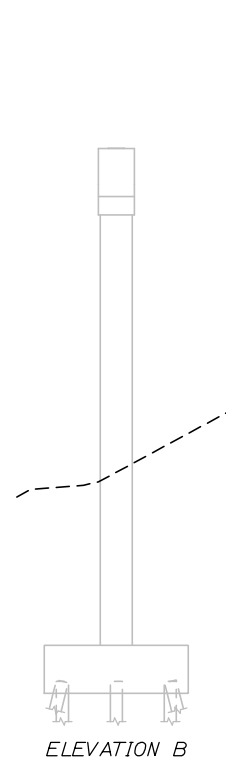
KEY PLAN
N.T.S.

SOUTHBOUND BRIDGE - PIER 1

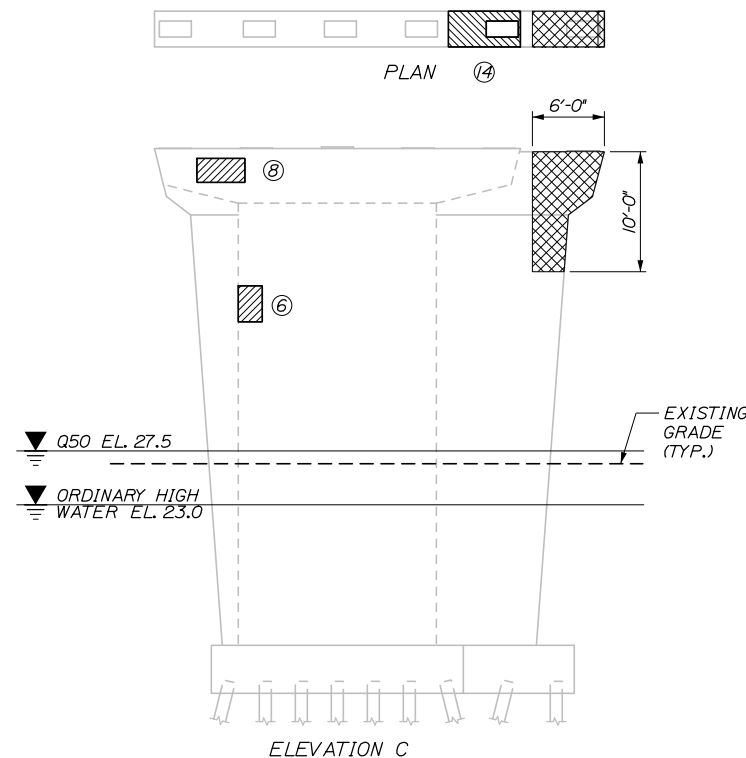
SCALE: 1/8"=1'-0"



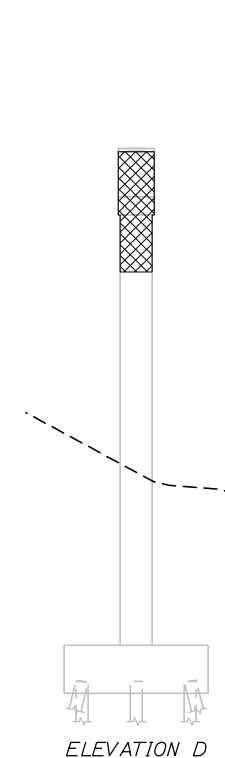
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

NORTHBOUND BRIDGE - PIER 1

SCALE: 1/8"=1'-0"

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES
< 8 INCHES 19 S.F.*

REPAIR OF VERTICAL SURFACES
< 8 INCHES 50 S.F.*

EPOXY INJECTION CRACK REPAIR 9 L.F.**

* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEMS NOTED ON THIS SHEET.
2. THE EXISTING EXTERIOR GIRDER ON PIER 1 NB SHALL BE TEMPORARILY SUPPORTED TO FACILITATE SUBSTRUCTURE WIDENING. THIS WORK SHALL BE PAID UNDER ITEM 524.302 "TEMPORARY STRUCTURAL SUPPORT - GIRDER".
3. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	JKB	10\18	Checked	JDW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
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**THE GOLD STAR
MEMORIAL HIGHWAY**

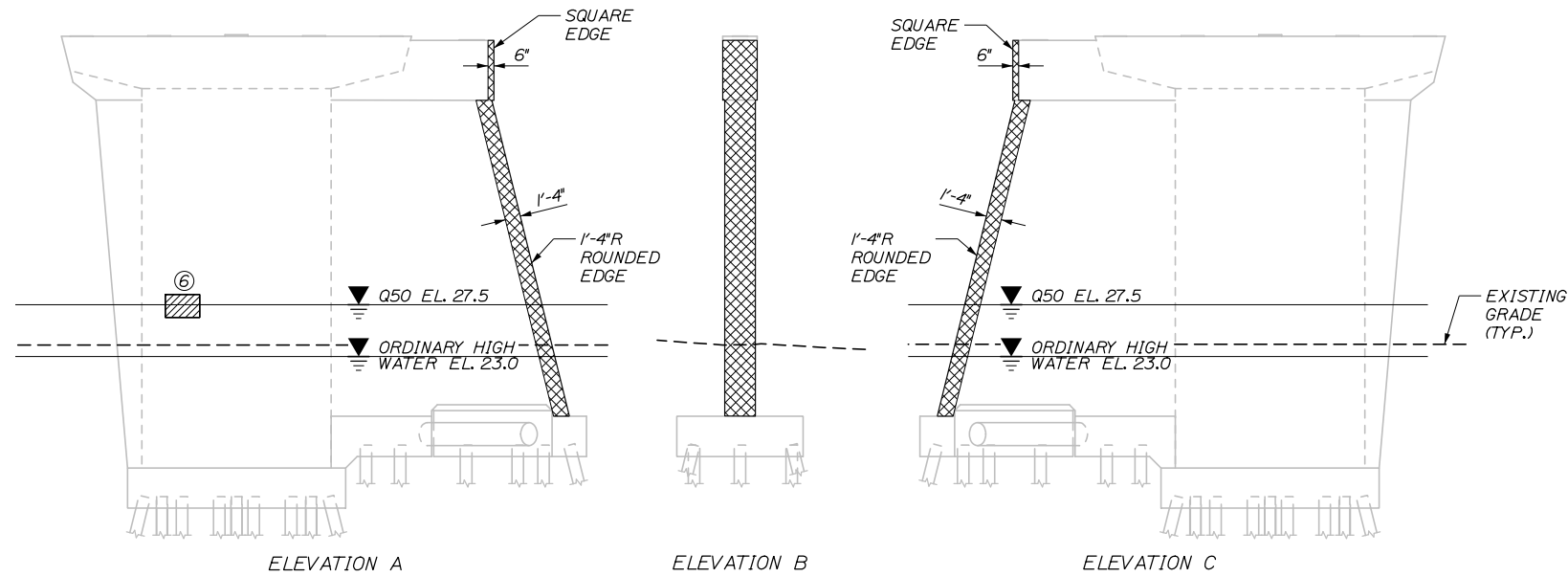
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
PIER 1**

SHEET NUMBER: S-14
CONTRACT: 2019.09
69 OF 121

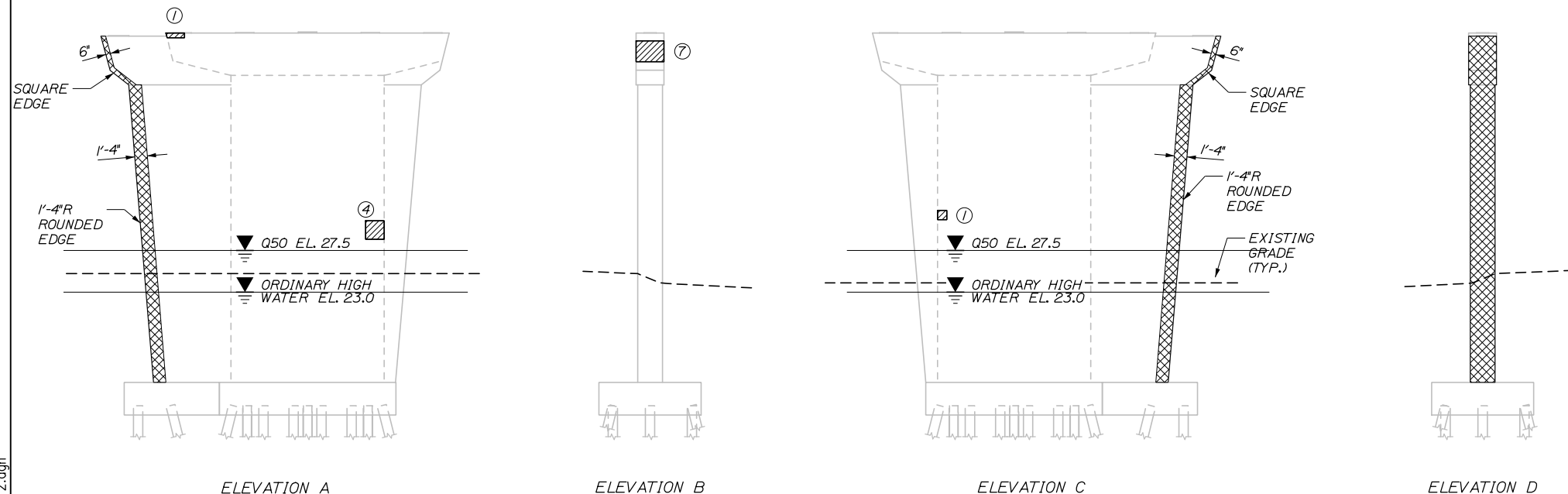
Date: 10/18/2018

Filename: 070_Substructure Repairs_Pier 2.dgn



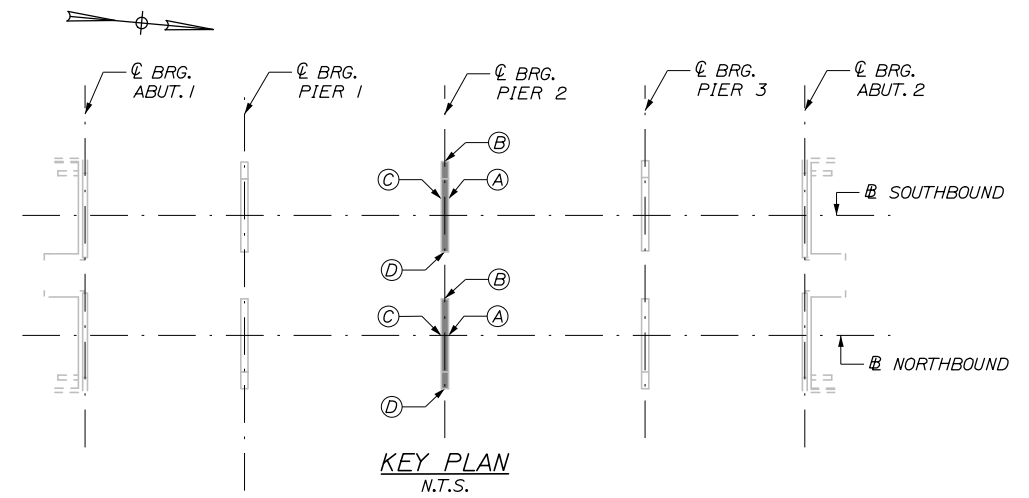
SOUTHBOUND BRIDGE - PIER 2

SCALE: 1/8"=1'-0"



NORTHBOUND BRIDGE - PIER 2

SCALE: 1/8"=1'-0"



KEY PLAN
N.T.S.

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES < 8 INCHES	7 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES	24 S.F.*
EPOXY INJECTION CRACK REPAIR	5 S.F.**
* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.	
** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR	

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEMS NOTED ON THIS SHEET.
2. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	JKB	10\18	Checked	JDW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

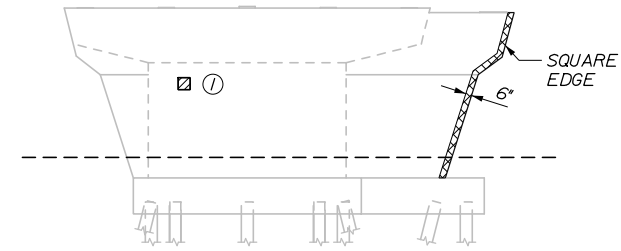
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
PIER 2

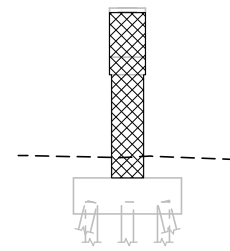
SHEET NUMBER: S-15
CONTRACT: 2019.09
70 OF 121

Date: 10/18/2018

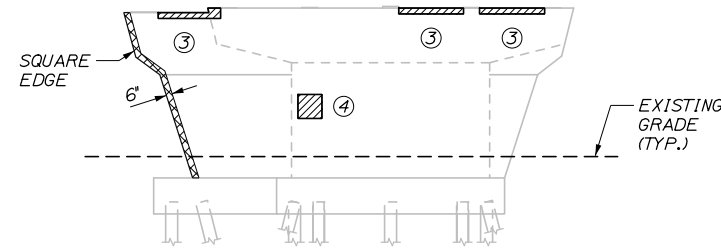
Filename: 071_Substructure Repairs_Pier_3.dgn



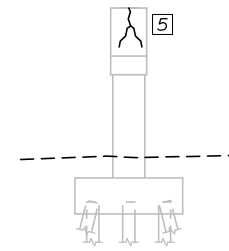
ELEVATION A



ELEVATION B



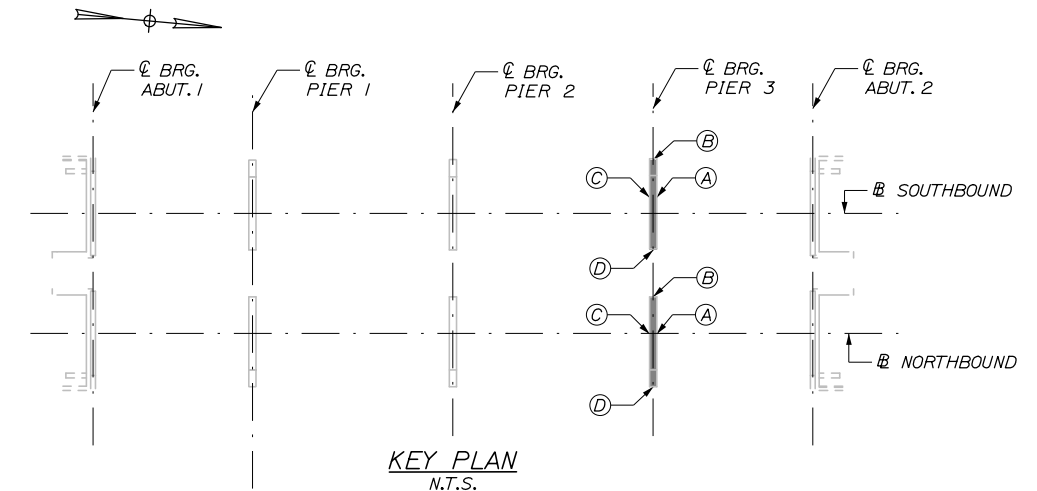
ELEVATION C



ELEVATION D



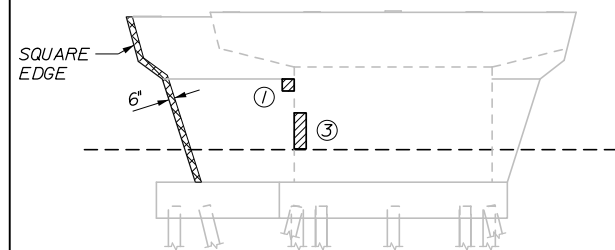
PLAN



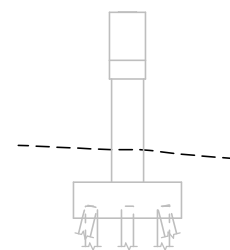
KEY PLAN
N.T.S.

SOUTHBOUND BRIDGE - PIER 3

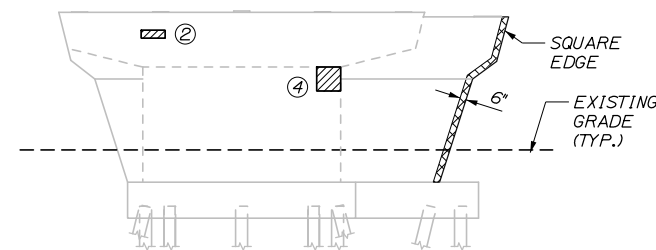
SCALE: 1/8"=1'-0"



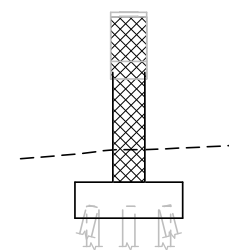
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D



PLAN

NORTHBOUND BRIDGE - PIER 3

SCALE: 1/8"=1'-0"

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES < 8 INCHES	5 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES	29 S.F.*
EPOXY INJECTION CRACK REPAIR	10 L.F.**

* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEMS NOTED ON THIS SHEET.
2. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.

Scale: AS NOTED

Designed by:



HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

**BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUBSTRUCTURE REPAIRS
PIER 3**

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
Designed	JKB	10\18	Checked	JDW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

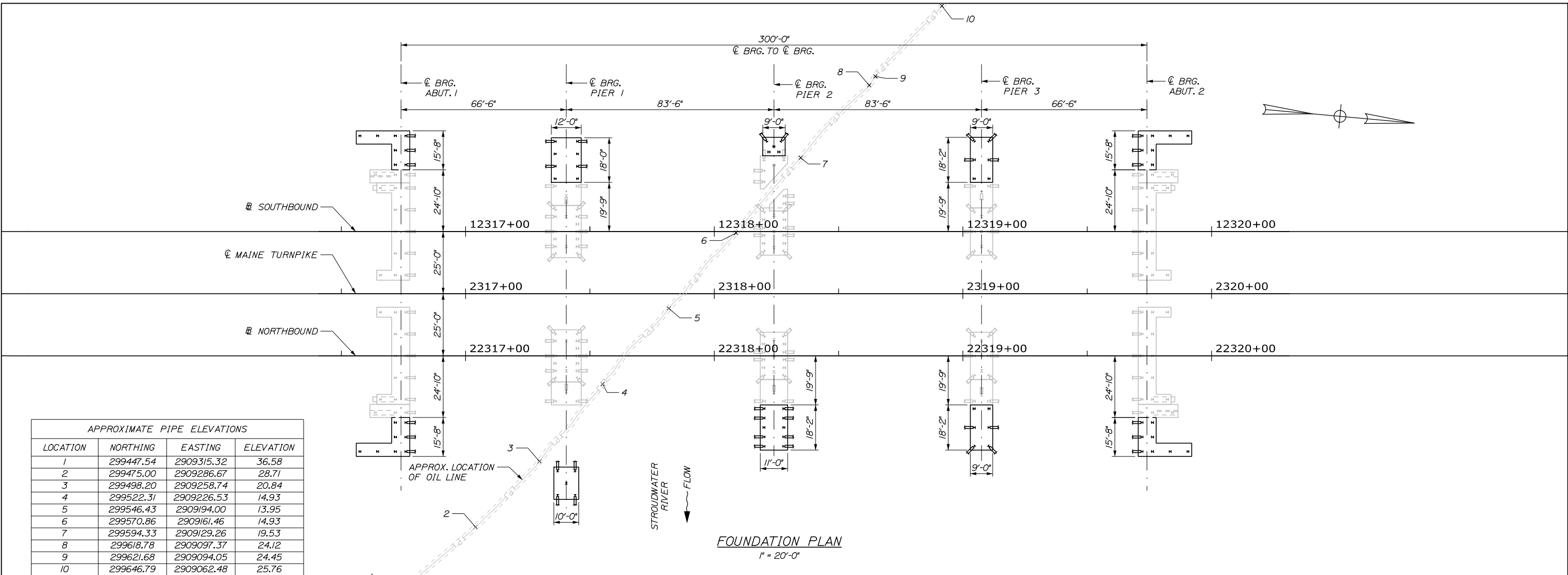
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: S-16

71 OF 121

Date: 10/18/2018



PILE NOTES:

- PILES MARKED THUS SHALL BE BATTERED 3" PER FOOT (1H:4V) AT THE ABUTMENTS AND PIER 1 AND 2" PER FOOT (1H:6V) AT PIERS 2 AND 3 IN THE DIRECTION SHOWN.
- THE CONTRACTOR SHALL PERFORM AND SUBMIT A WAVE EQUATION ANALYSIS FOR REVIEW AND ACCEPTANCE BY THE RESIDENT. THE MAXIMUM ALLOWABLE DRIVING STRESS IS 0.90 TIMES F_y. THE SUBMITTAL ANALYSES SHALL INCLUDE THE PROPOSED STOPPING CRITERIA BASED ON THE WAVE EQUATION ANALYSIS AND THE PROPOSED DRIVING SYSTEM. THE STOPPING CRITERIA SHALL INCLUDE THE BLOWS PER INCH AND THE NUMBER OF 1-IN. INTERVALS AT WHICH PILE INSTALLATION MAY BE TERMINATED. THE COST OF PERFORMING THE WAVE EQUATION ANALYSIS WILL BE CONSIDERED INCIDENTAL TO PAY ITEM 501.92.
- THE CONTRACTOR SHALL PERFORM 10 DYNAMIC LOAD TEST(S), ONE AT EACH SUBSTRUCTURE, TO CONFIRM THE NOMINAL DRIVING RESISTANCE OF THE PILES. THE DYNAMIC TEST SHALL BE PERFORMED ON THE FIRST PRODUCTION PILE DRIVEN AT EACH SUBSTRUCTURE. THE FIRST PRODUCTION PILE SHALL BE A PLUMB PILE.
- ESTIMATED PILE LENGTHS INCLUDE 5 FEET PER PILE AS CONTINGENCY TO THE LENGTH OF THE PILES REQUIRED.
- ALL PILES SHALL BE EQUIPPED WITH A PILE TIP IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 501.048, PREFABRICATED PILE TIPS.
- ELEVATIONS ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE ONLY.

COFFERDAM NOTES:

- THE CONTRACTOR SHALL SUBMIT PLANS AND CALCULATIONS OF THE PROPOSED COFFERDAMS FOR REVIEW BY THE ENGINEER. DESIGN CALCULATIONS AND PLANS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE.
- THE CONTRACTOR SHALL ANTICIPATE THE REMOVAL OF SOME EXISTING RIPRAP AS PART OF THE COFFERDAM CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL TO RELATED CONTRACT ITEMS.
- THE HEIGHT OF THE COFFERDAM ABOVE THE WATER LINE SHALL BE DETERMINED BY THE CONTRACTOR BASED UPON THE HYDROLOGY DATA SHOWN ON SHEET S-02.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING OR SEALING ANY CONCRETE VOIDS CREATED FROM THE USE OF TEMPORARY MECHANICAL ANCHORAGES DURING SUBSTRUCTURE MODIFICATIONS AND REPAIRS. MATERIALS TO BE USED SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 518. WORK RELATED TO PATCHING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.

PILE DATA						
LOCATION	PILE SIZE	NUMBER OF PILES	AXIAL COMPRESSION DEMAND (KIPS)	ESTIMATED PILE TIP ELEVATION	ESTIMATED PILE LENGTH (FT)	NOMINAL DRIVING RESISTANCE (KIPS)
			FACTORED			
ABUTMENT 1	HPI0x57	16	152	-12	65	234
PIER 1 NB	HPI4x117	5	280	-25	39	431
PIER 1 SB	HPI2x63	8	179	-25	39	275
PIER 2 NB & SB	HPI2x63	15	235	-25	41	362
PIER 3 NB & SB	HPI2x63	12	175	-33	72	269
ABUTMENT 2	HPI0x57	16	266	-42	89	499

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	Designed	BRG 10\18		Checked	TJP 10\18
	Drawn	ERB 10\18		In Charge of	RAL 10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

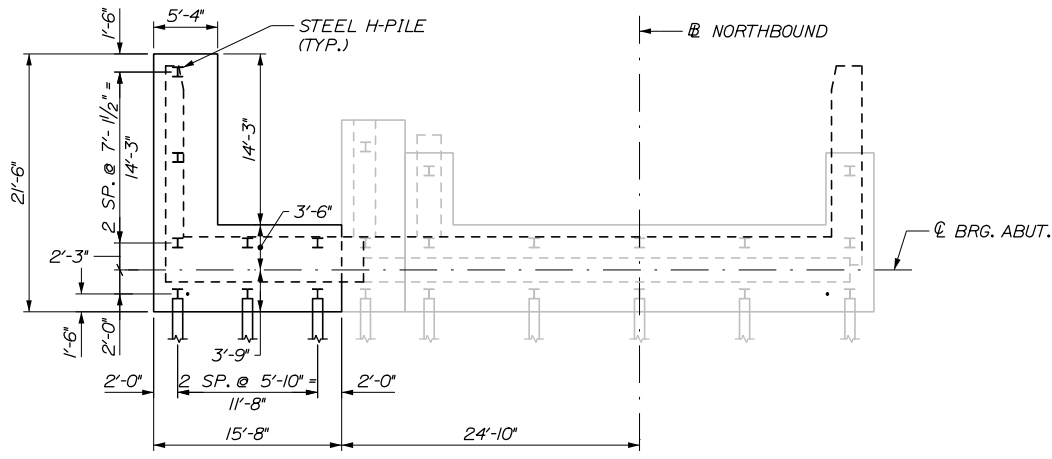
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

FOUNDATION PLAN I

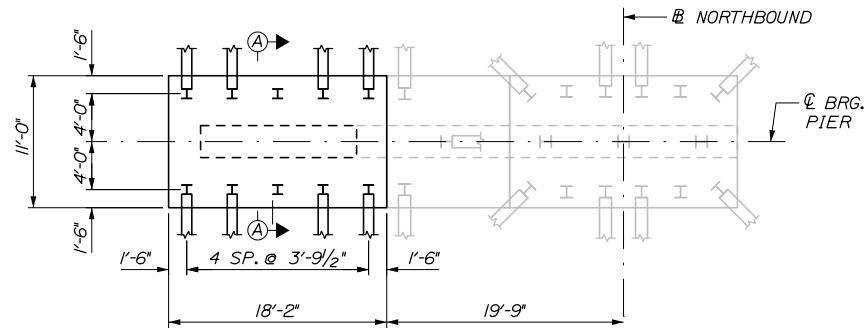
SHEET NUMBER: S-17
CONTRACT: 2019.09
72 OF 121

Filename: 072_Foundation Plan I.dgn

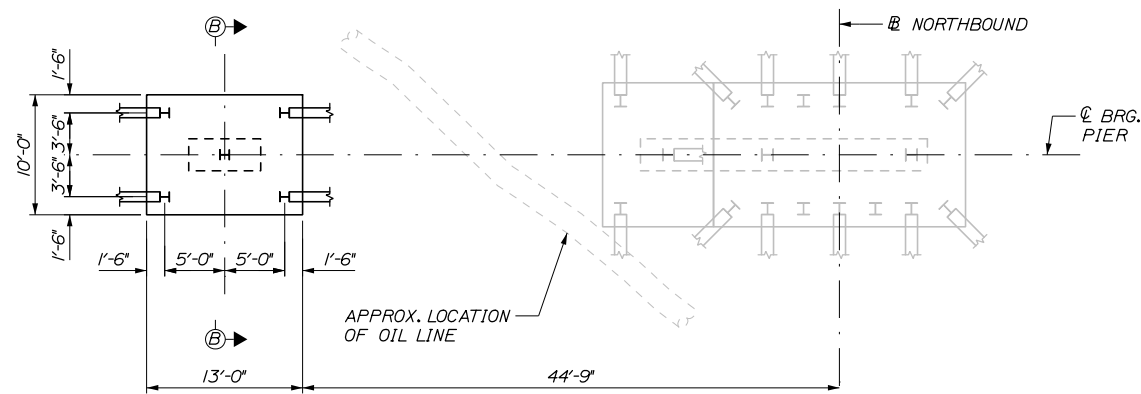
Date: 10/18/2018



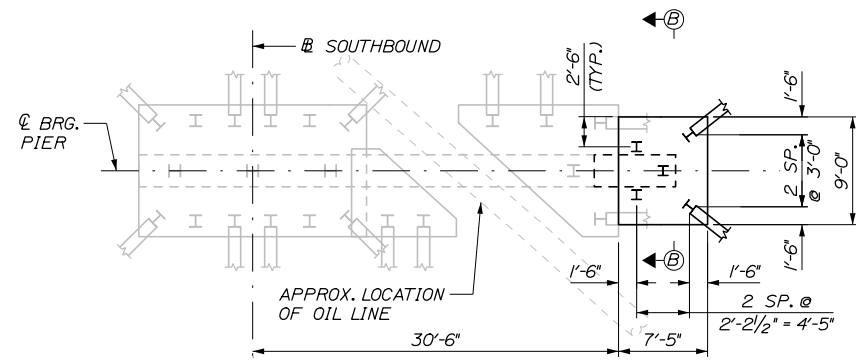
ABUTMENT FOOTING PLAN
 (NB ABUTMENT 1 SHOWN, SB ABUTMENT 2 SIMILAR)
 (NB ABUTMENT 2 AND SB ABUTMENT 1 SIM. OPP. HAND)
 1/8" = 1'-0"



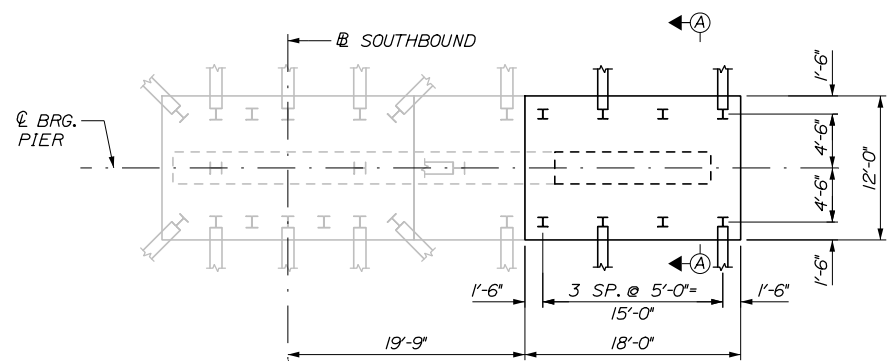
PIER 2 NB BRIDGE FOOTING PLAN
 1/8" = 1'-0"



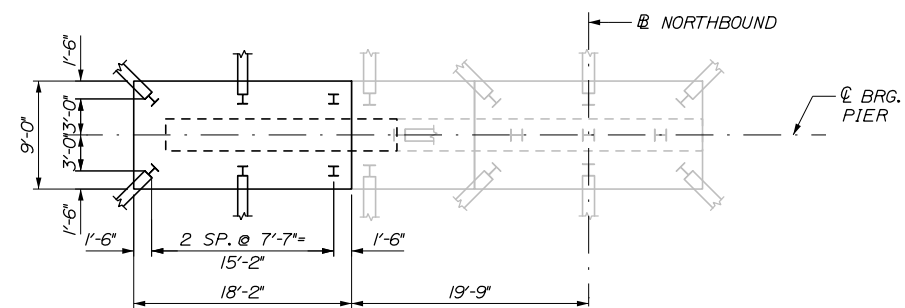
PIER 1 NB BRIDGE FOOTING PLAN
 1/8" = 1'-0"



PIER 2 SB BRIDGE FOOTING PLAN
 1/8" = 1'-0"



PIER 1 SB BRIDGE FOOTING PLAN
 1/8" = 1'-0"



PIER 3 BRIDGE FOOTING PLAN
 (NB PIER SHOWN, SB SIMILAR)
 1/8" = 1'-0"

NOTES:
 1. PILES DRIVEN CLOSEST TO THE EXISTING FOOTING MAY ENCOUNTER EXISTING SEAL CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF EXISTING SEAL CONCRETE IF INTERFERENCE WITH PILE DRIVING OCCURS. THIS WORK SHALL BE PAID UNDER ITEM 202.12 REMOVE EXISTING STRUCTURAL CONCRETE.

Filename: 073_Foundation Plan II.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18	Checked	TJP	10\18
	Drawn	ERB	In Charge of	RAL	10\18

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 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

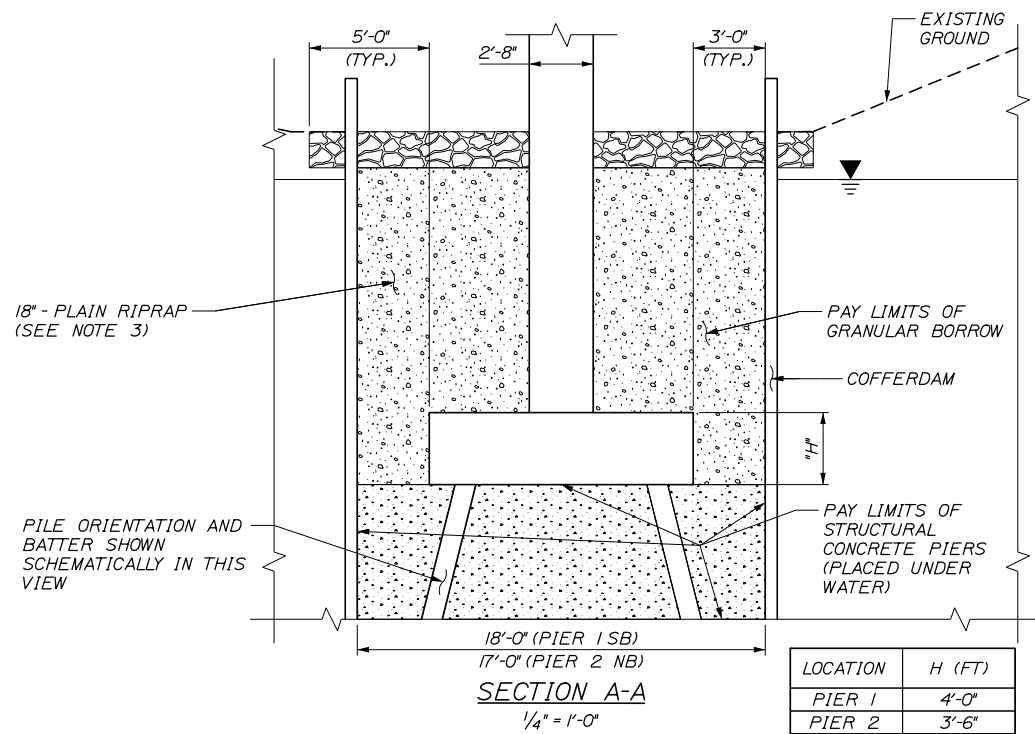
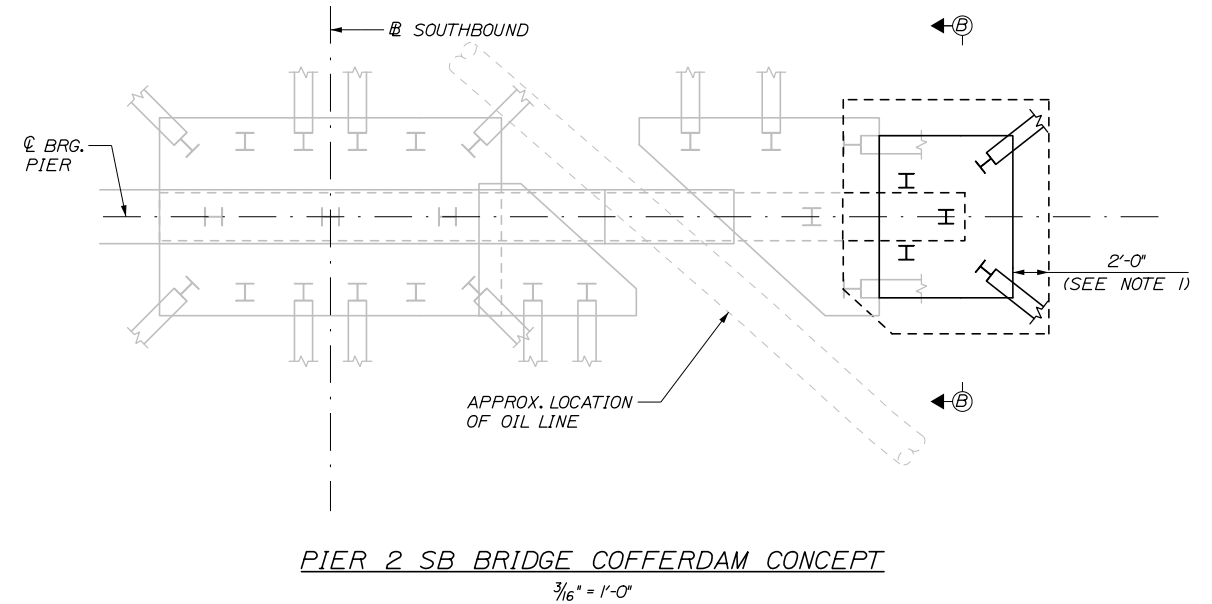
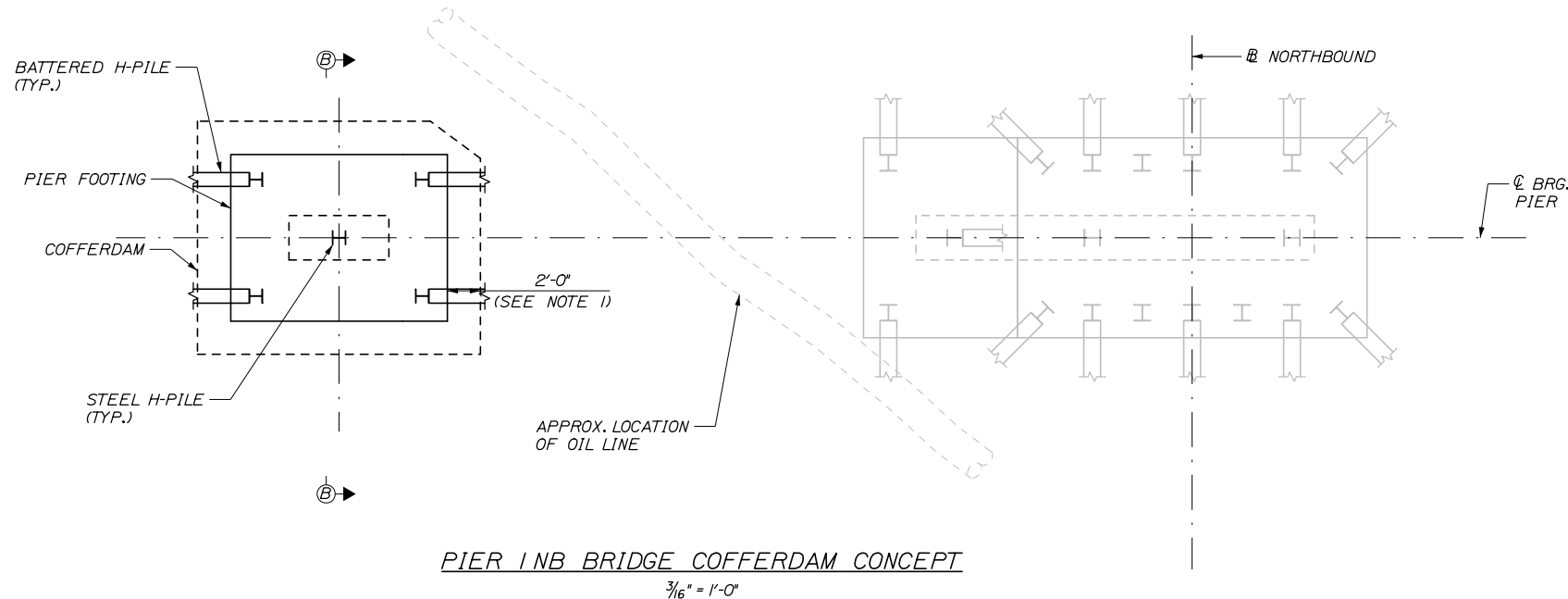
FOUNDATION PLAN II

SHEET NUMBER: S-18

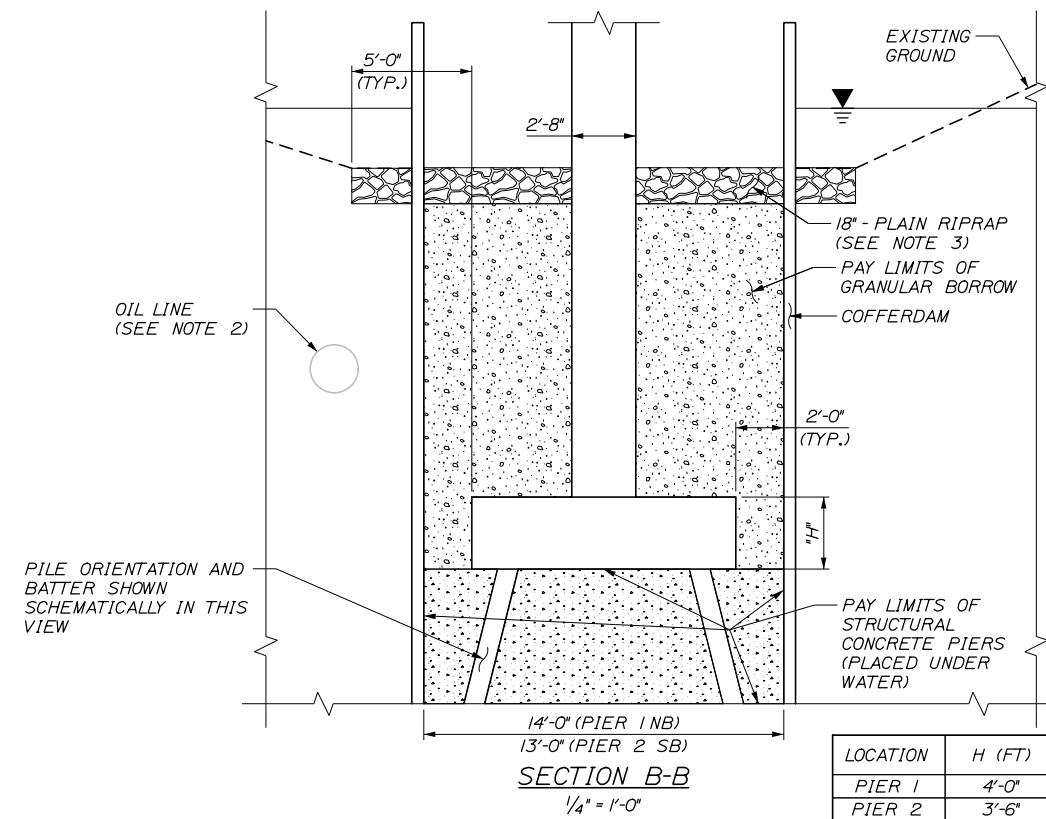
CONTRACT: 2019.09

73 OF 121

Date: 10/18/2018



LOCATION	H (FT)
PIER 1	4'-0"
PIER 2	3'-6"



LOCATION	H (FT)
PIER 1	4'-0"
PIER 2	3'-6"

- NOTES:**
- COFFERDAM SHEETING SHALL BE CONFIGURED IN SUCH A WAY TO AVOID CONFLICT WITH THE PROPOSED BATTERED PILES.
 - OIL LINE SHALL BE EXPOSED PRIOR TO DRIVING OF SHEETING. FOR ADDITIONAL INFORMATION, SEE SPECIAL PROVISION 104.
 - PLAIN RIPRAP SHALL BE PLACED AFTER COFFERDAMS HAVE BEEN REMOVED.

Filename: 074_Foundation Plan Ill.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
BRG	10\18	TJP	10\18
ERB	10\18	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

FOUNDATION PLAN III

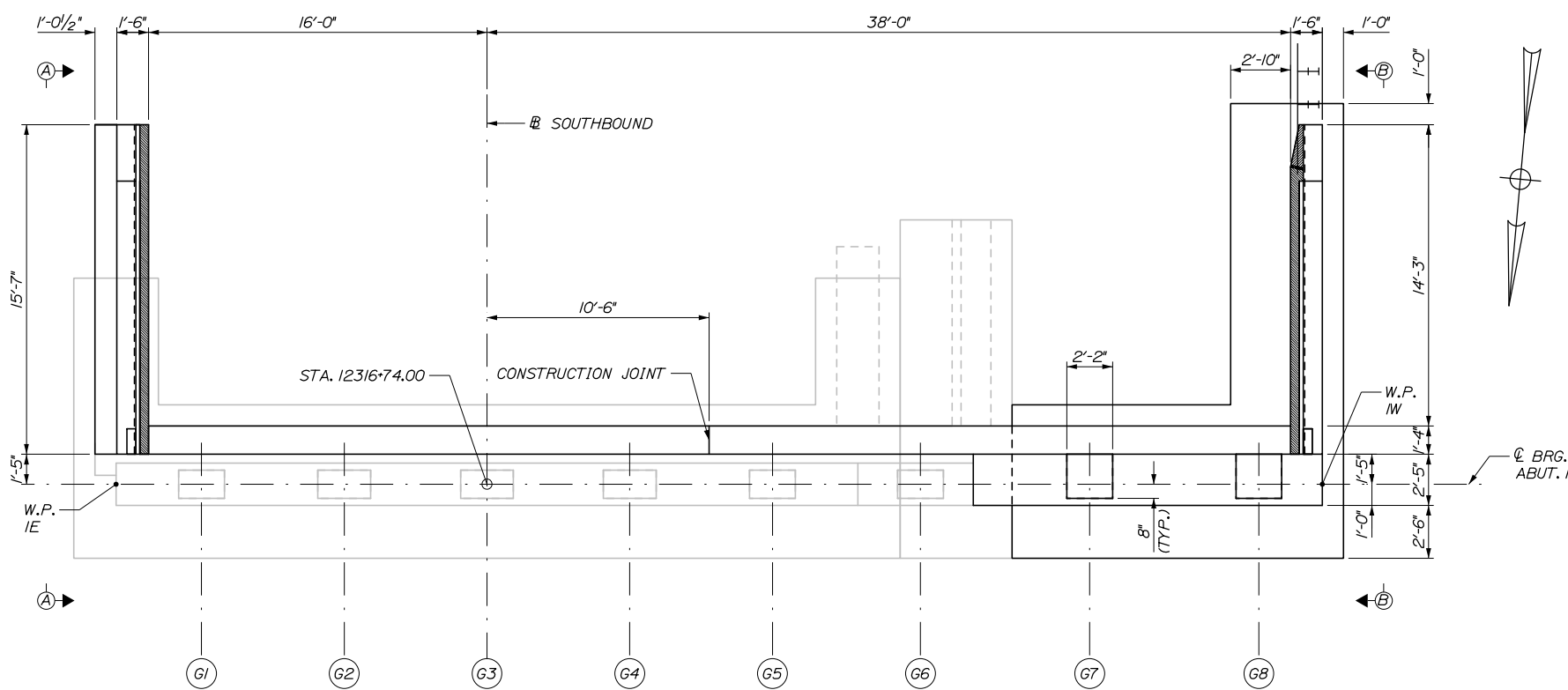
SHEET NUMBER: S-19

CONTRACT: 2019.09

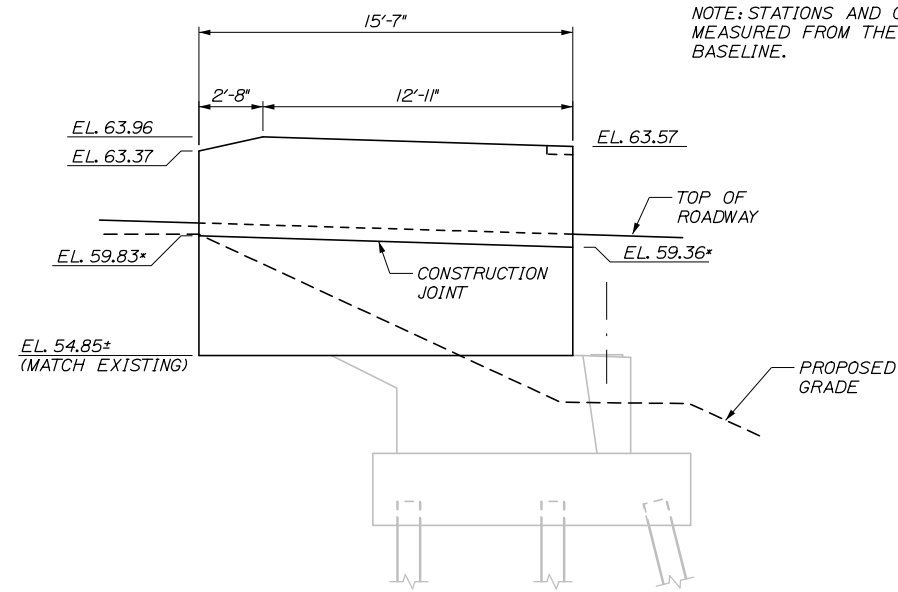
74 OF 121

WORKING POINT LOCATIONS - SOUTHBOUND	
W.P. 1E	STA. 12316+74.00 17'-6" RT
W.P. 1W	STA. 12316+74.00 39'-6" LT
W.P. 2E	STA. 12319+74.00 17'-6" RT
W.P. 2W	STA. 12319+74.00 39'-6" LT

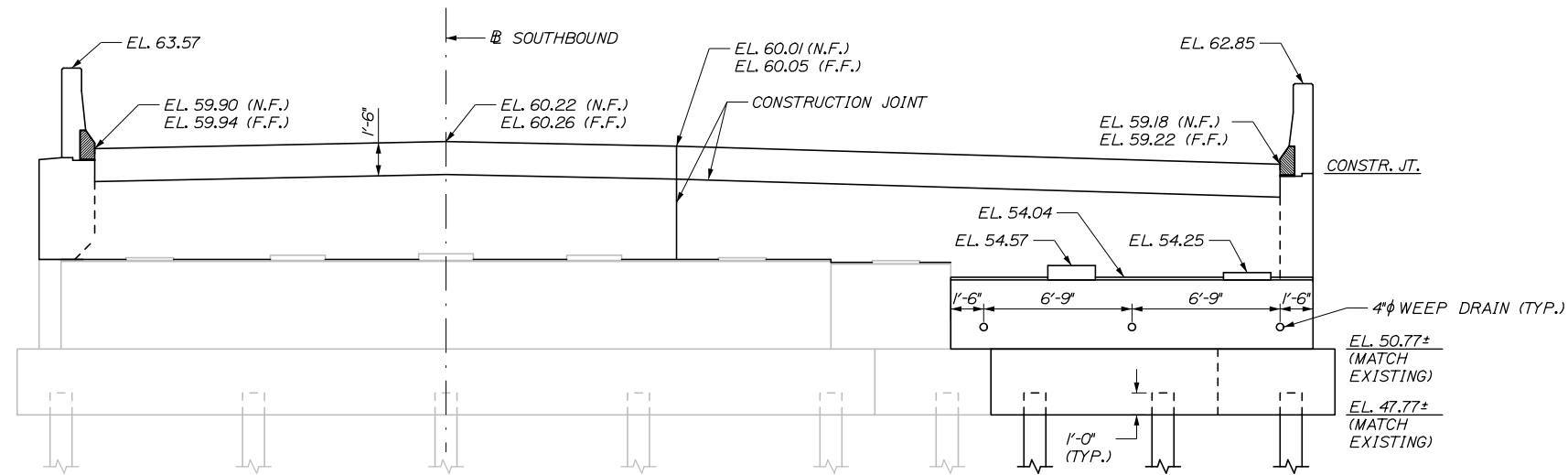
NOTE: STATIONS AND OFFSETS ARE MEASURED FROM THE SOUTHBOUND BASELINE.



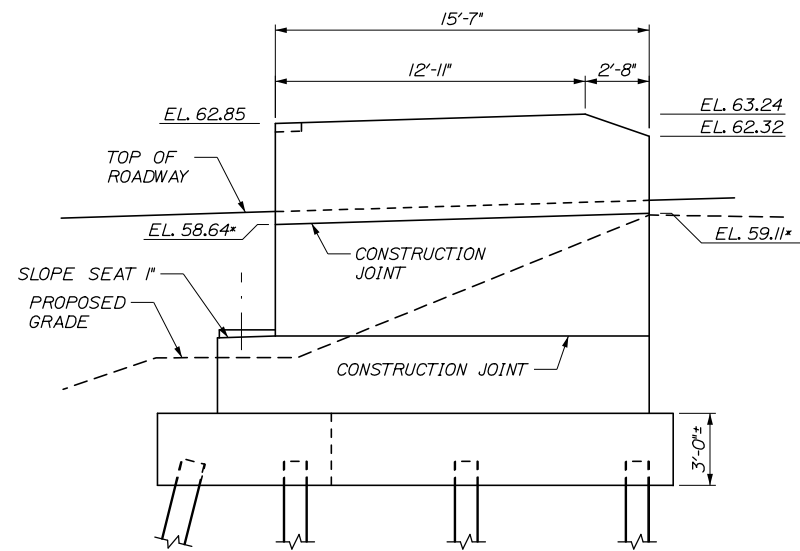
PLAN



SECTION A-A
1/4" = 1'-0"



ELEVATION



SECTION B-B
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE OF THE WINGWALL.

SOUTHBOUND BRIDGE - ABUTMENT 1
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"

Date: 10/18/2018

Filename: 075-Southbound Abutment 1_Plan and Elevation.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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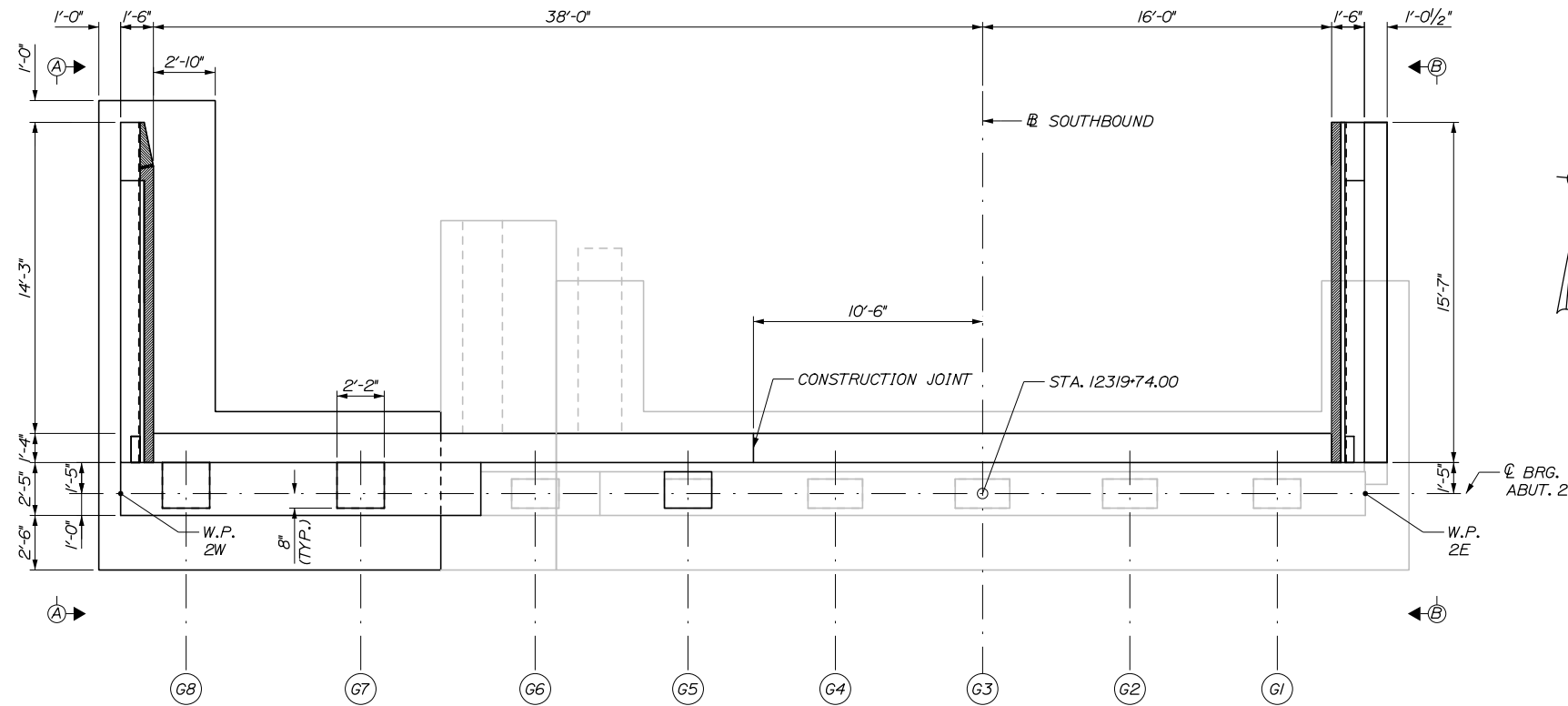
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

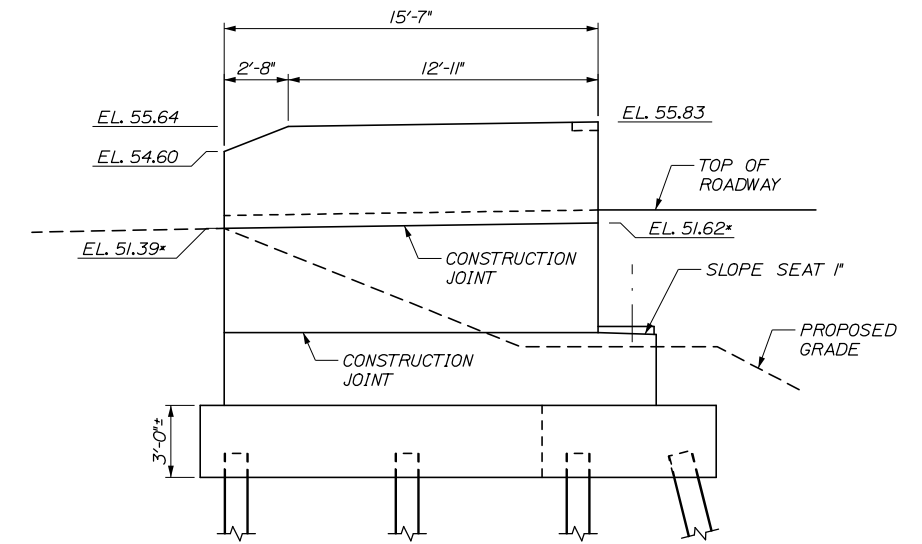
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SOUTHBOUND ABUTMENT 1
PLAN AND ELEVATION

SHEET NUMBER: S-20
CONTRACT: 2019.09
75 OF 121

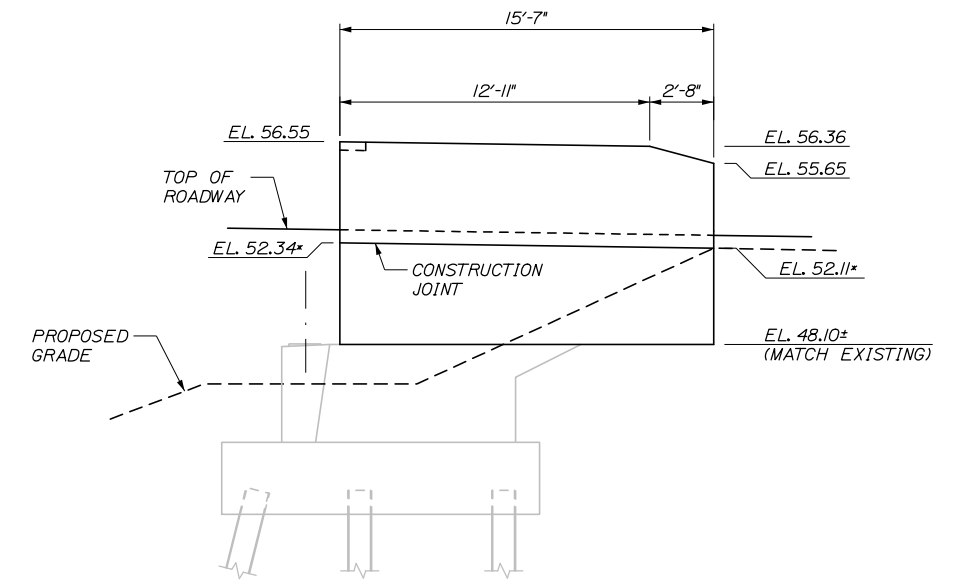
NOTES:
 1. FOR STATIONS AND OFFSETS OF WORKING POINTS W.P. 2W AND W.P. 2E SEE SHEET S-19.



PLAN

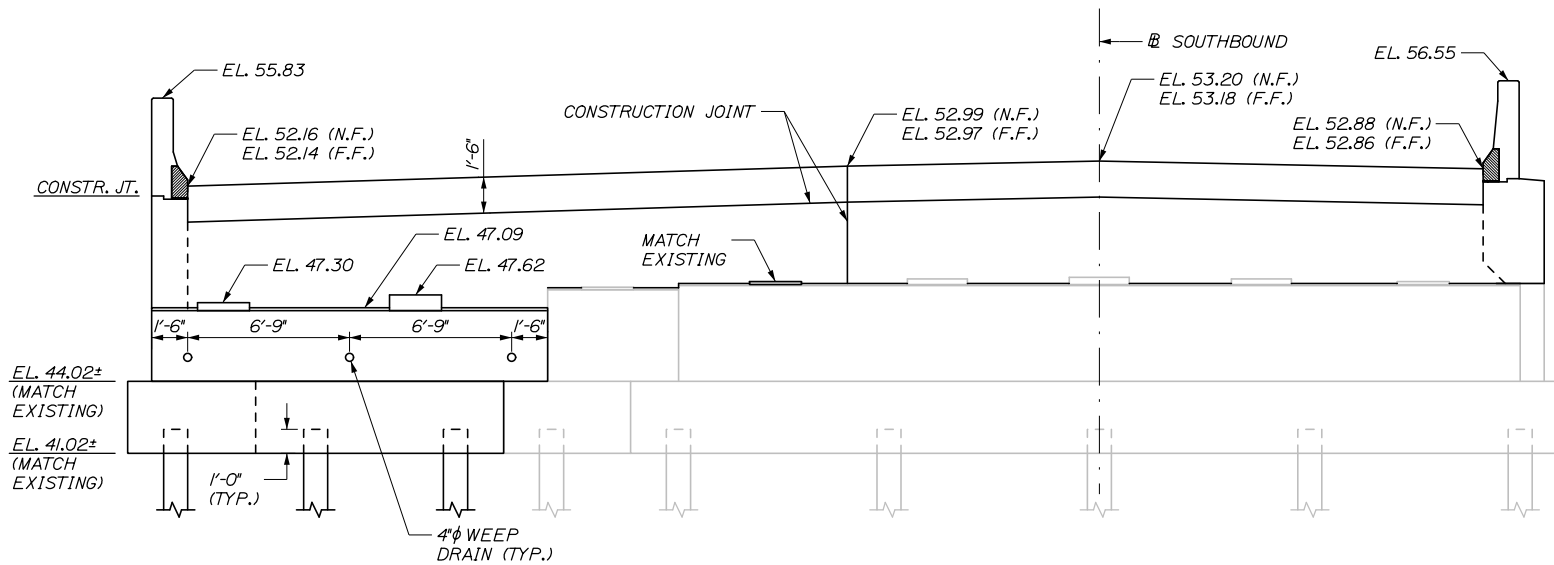


SECTION A-A
 1/4" = 1'-0"



SECTION B-B
 1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE OF THE WINGWALL.



ELEVATION

SOUTHBOUND BRIDGE - ABUTMENT 2
 (PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
 1/4" = 1'-0"

Date: 10/18/2018

Filename: 076_Southbound Abutment 2_Plan and Elevation.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	Designed	TJP	10\18	Checked	HJW	10\18
	Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 SOUTHBOUND ABUTMENT 2
 PLAN AND ELEVATION

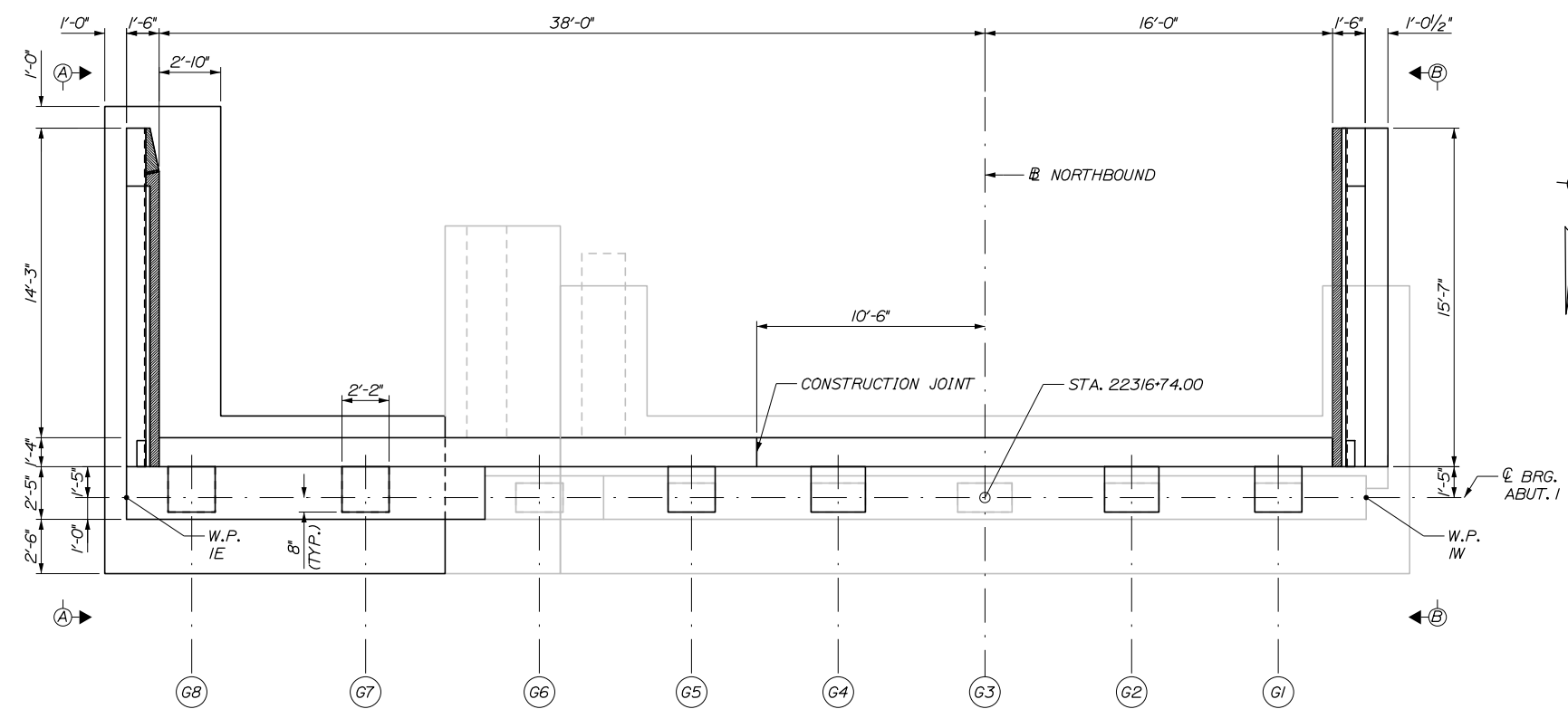
SHEET NUMBER: S-21
 CONTRACT: 2019.09
 76 OF 121

Date: 10/18/2018

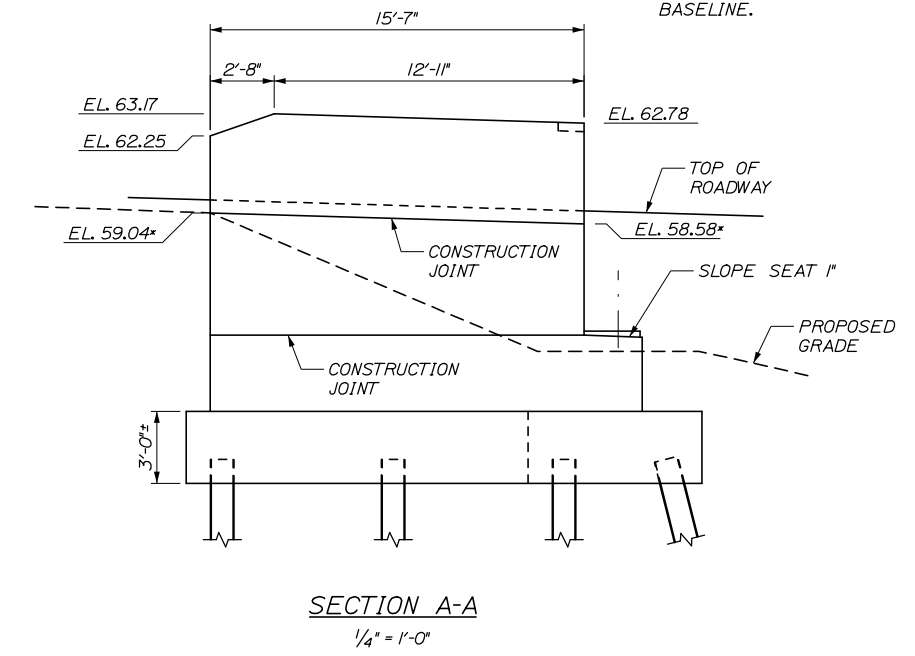
Filename: 077_Northbound Abutment 1_Plan and Elevation.dgn

WORKING POINT LOCATIONS - NORTHBOUND	
W.P. 1E	STA. 22316+74.00 39'-6" RT
W.P. 1W	STA. 22316+74.00 17'-6" LT
W.P. 2E	STA. 22319+74.00 39'-6" RT
W.P. 2W	STA. 22319+74.00 17'-6" LT

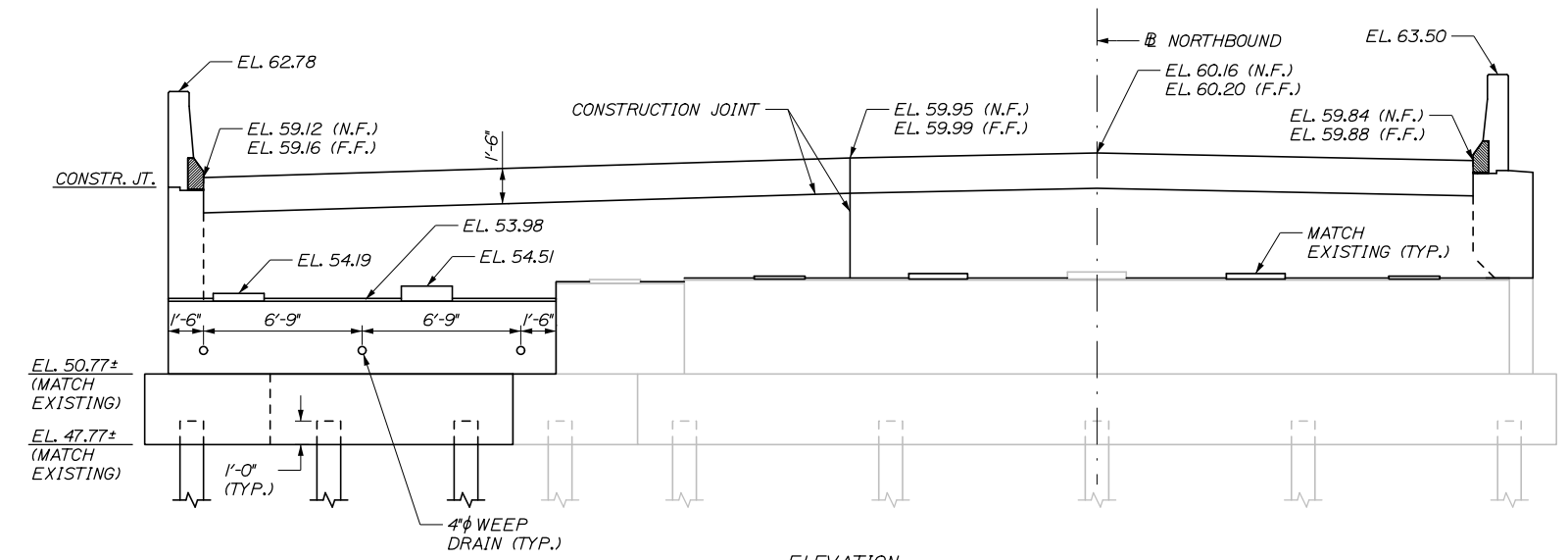
NOTE: STATIONS AND OFFSETS ARE MEASURED FROM THE NORTHBOUND BASELINE.



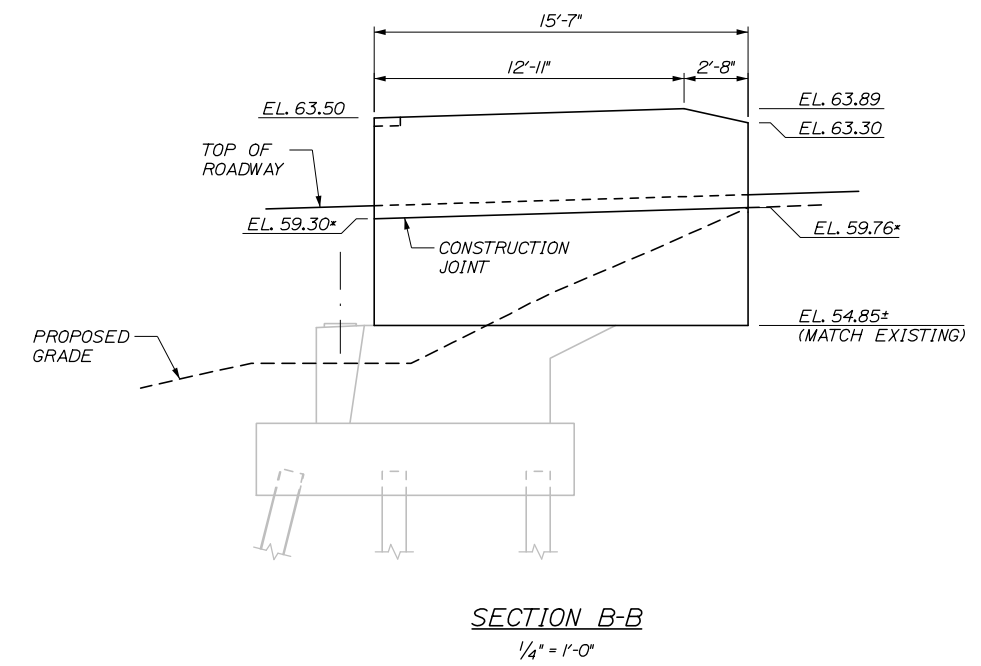
PLAN



SECTION A-A
1/4" = 1'-0"



NORTHBOUND BRIDGE - ABUTMENT 1
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"



SECTION B-B
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE OF THE WINGWALL.

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	Designed	TJP	10\18	Checked	HJW	10\18
	Drawn	ERB	10\18	In Charge of	RAL	10\18

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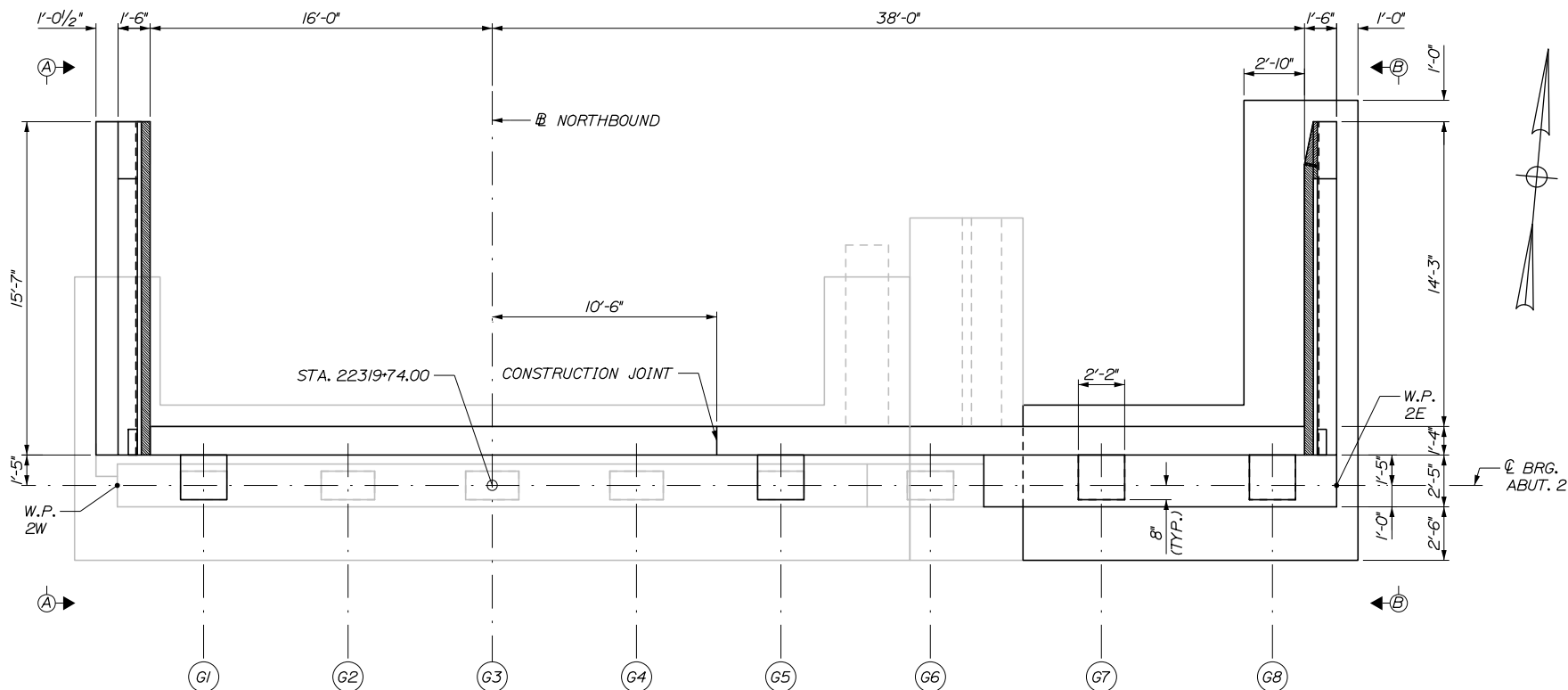
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
NORTHBOUND ABUTMENT 1
PLAN AND ELEVATION

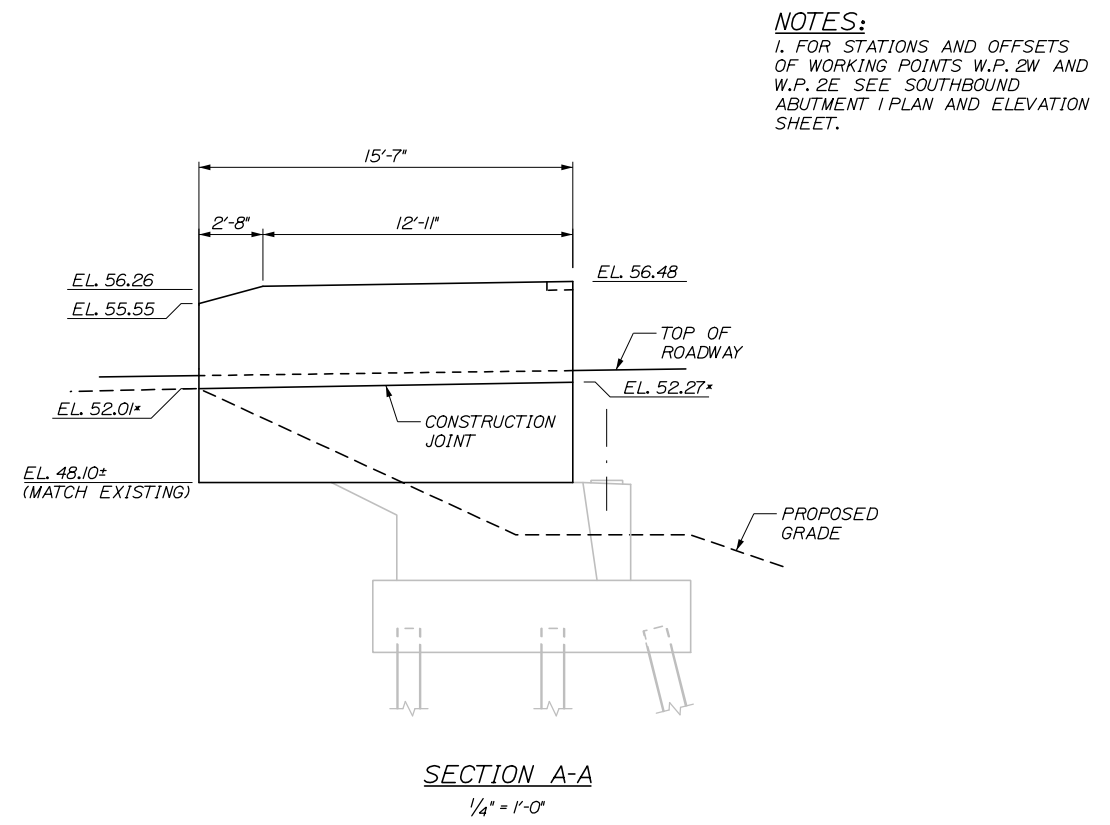
SHEET NUMBER: S-22
CONTRACT: 2019.09
77 OF 121

Date: 10/18/2018

Filename: 078_Northbound Abutment 2_Plan and Elevation.dgn

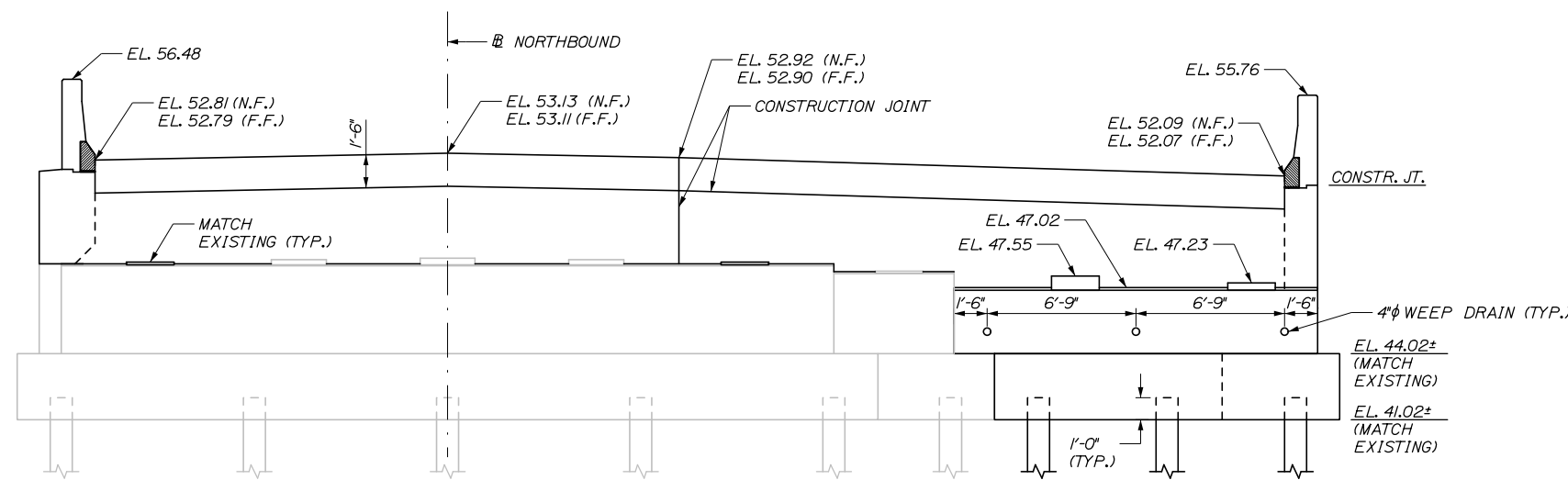


PLAN



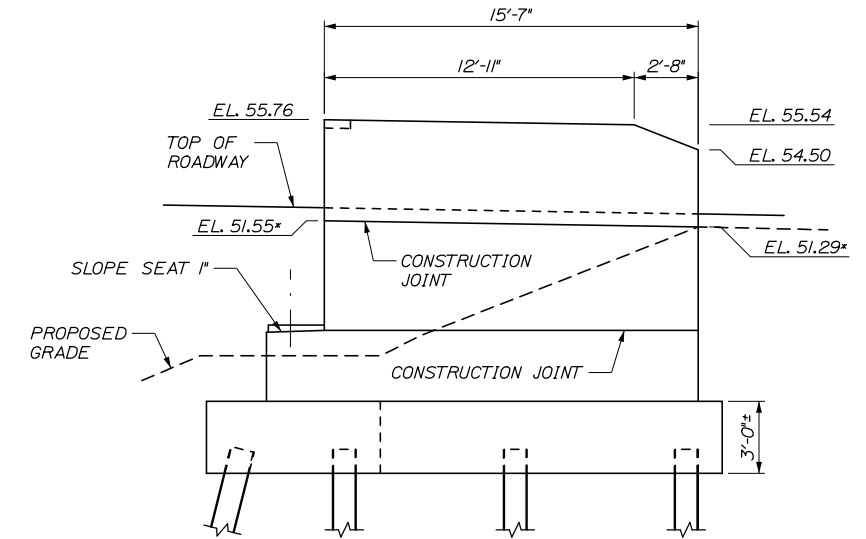
SECTION A-A
1/4" = 1'-0"

NOTES:
1. FOR STATIONS AND OFFSETS OF WORKING POINTS W.P. 2W AND W.P. 2E SEE SOUTHBOUND ABUTMENT 1 PLAN AND ELEVATION SHEET.



ELEVATION

NORTHBOUND BRIDGE - ABUTMENT 2
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"



SECTION B-B
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE OF THE WINGWALL.

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	TJP 10\18	Checked	HJW 10\18
				Drawn	ERB 10\18	In Charge of	RAL 10\18

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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.							

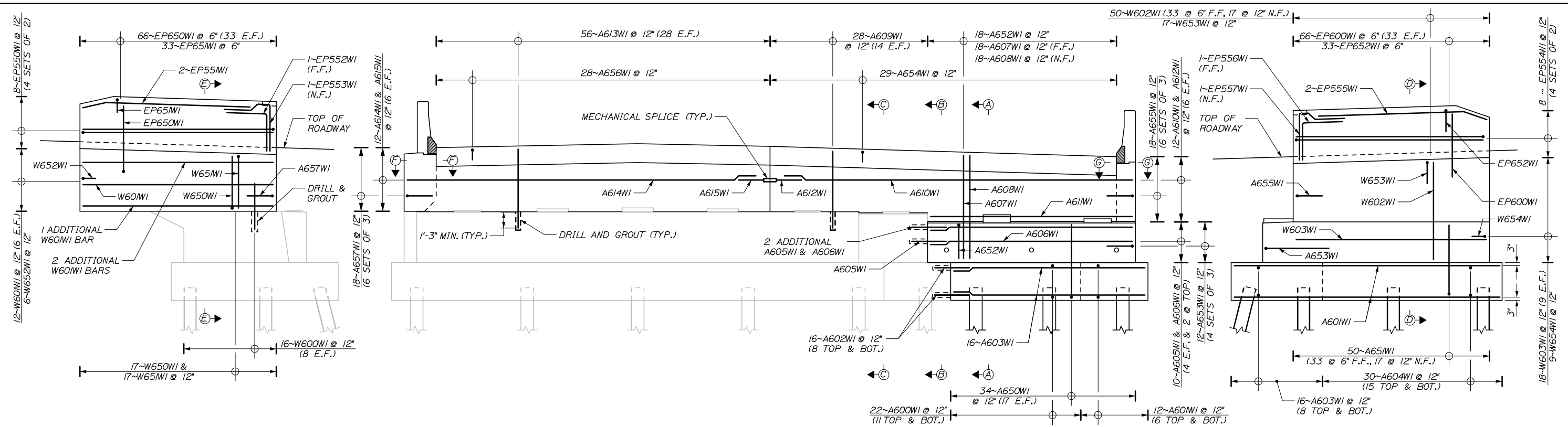
**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 NORTHBOUND ABUTMENT 2
 PLAN AND ELEVATION

SHEET NUMBER: S-23
 CONTRACT: 2019.09
 78 OF 121

Date: 10/18/2018

Filename: 079_Southbound Abutment 1_Reinforcing.dgn

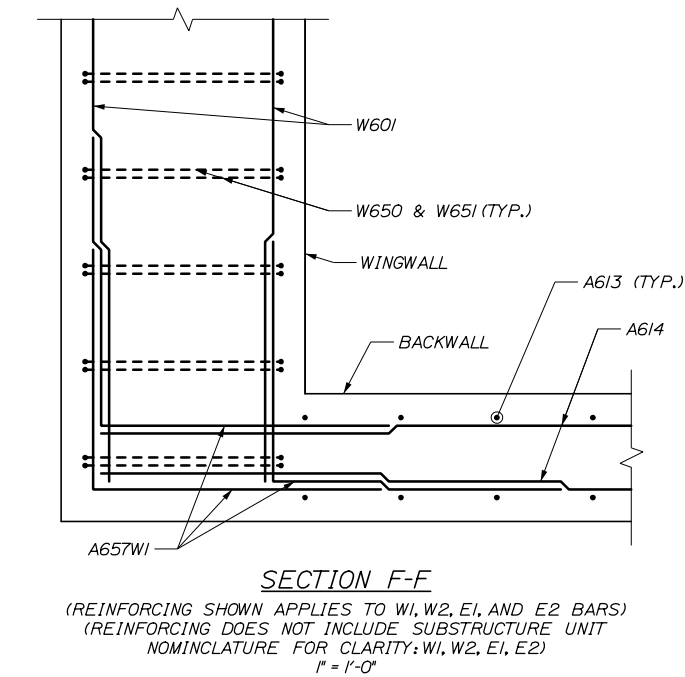
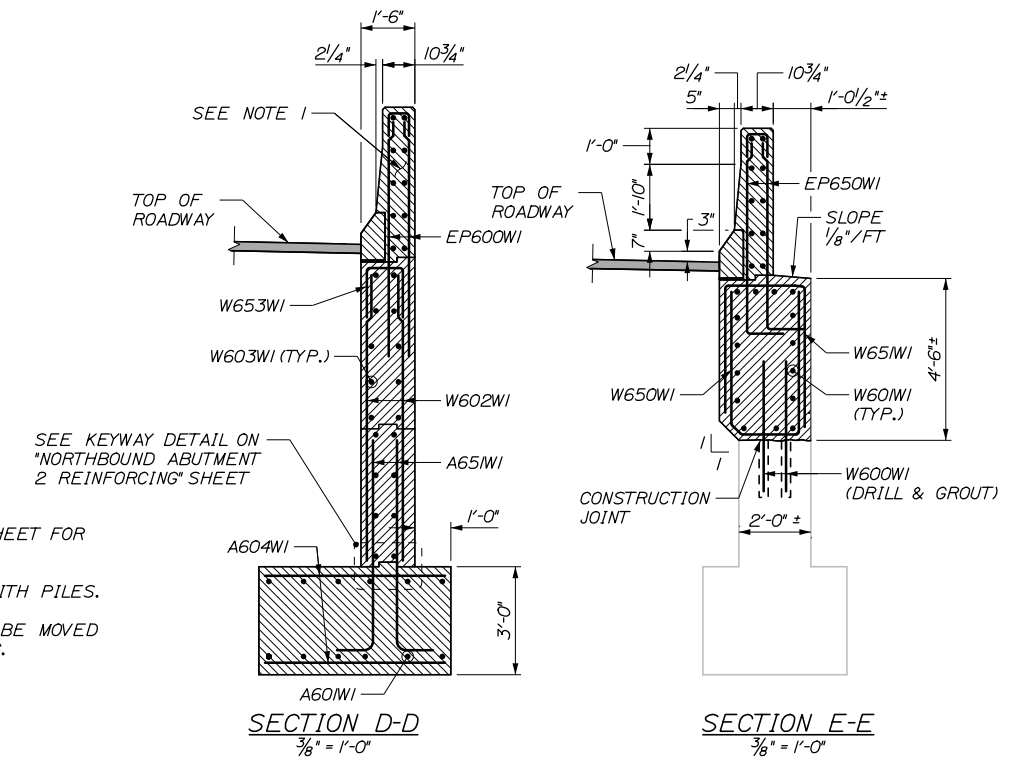
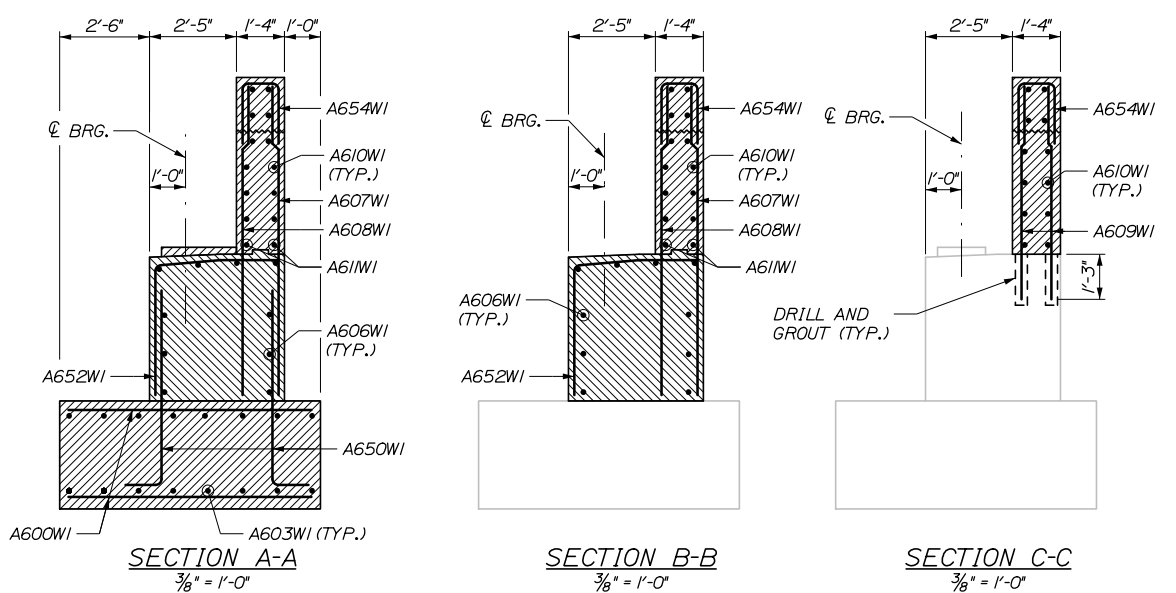


EAST WINGWALL

ELEVATION

WEST WINGWALL

SOUTHBOUND BRIDGE - ABUTMENT 1
 (EXISTING REINFORCING NOT SHOWN FOR CLARITY)
 1/4" = 1'-0"



NOTES:

- SEE "ENDPOST DETAILS II" SHEET FOR ADDITIONAL END POST REINFORCING SECTIONS.
- SUBSTRUCTURE NOMENCLATURE (W1, W2, E1, E2) REPRESENTS EAST OR WEST ABUTMENT 1 OR 2.
- MIN LAPS SHALL BE:
 *5 = 2'-3" (VERTICAL)
 *5 = 2'-11" (HORIZONTAL)
 *6 = 3'-4" (VERTICAL)
 *6 = 4'-4" (HORIZONTAL)
- SEE "SOUTHBOUND ABUTMENT 2 REINFORCING" SHEET FOR SECTION G-G.
- SEE "NORTHBOUND ABUTMENT 1 REINFORCING" SHEET FOR PEDESTAL REINFORCING.
- BARs SHALL BE MOVED TO AVOID CONFLICTS WITH PILES.
- BARs THAT ARE DRILLED AND GROUTED SHALL BE MOVED TO AVOID CONFLICTS WITH EXISTING REINFORCING.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

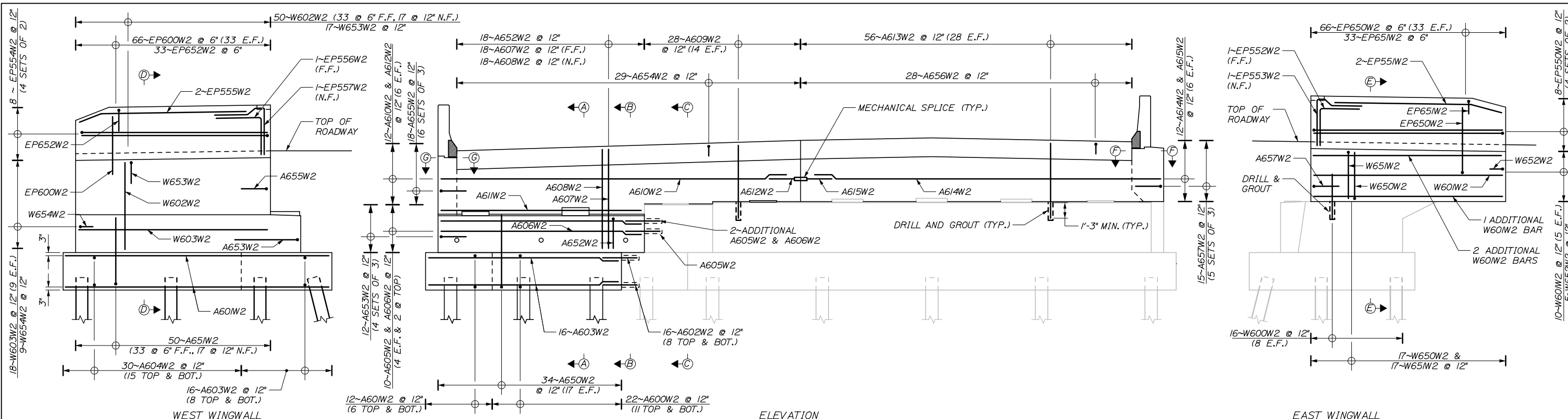
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 SOUTHBOUND ABUTMENT 1
 REINFORCING

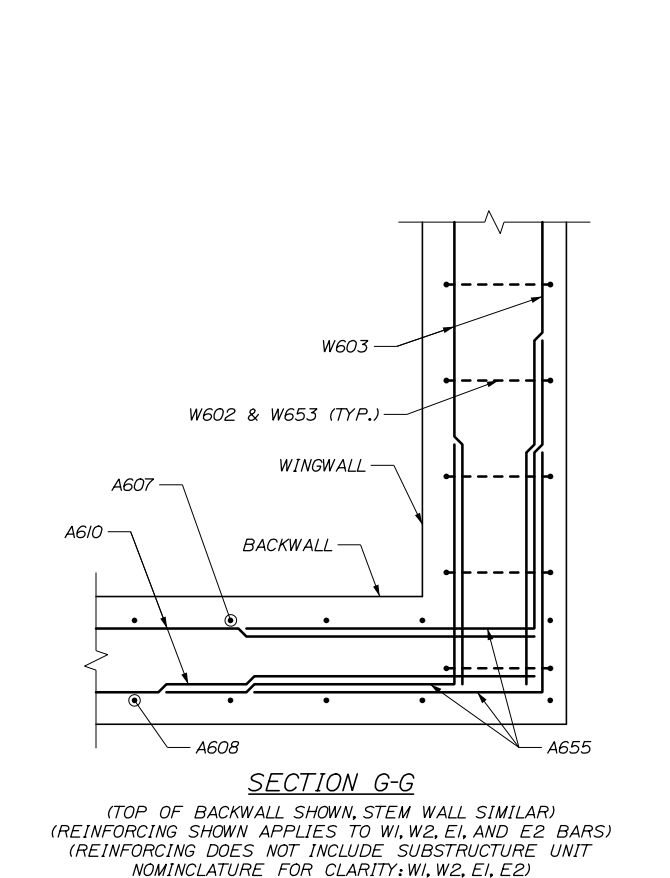
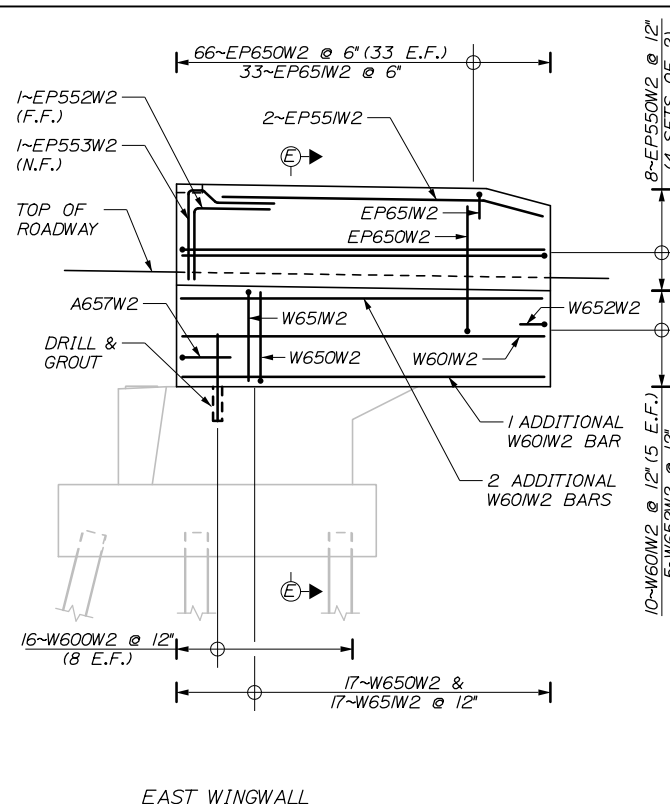
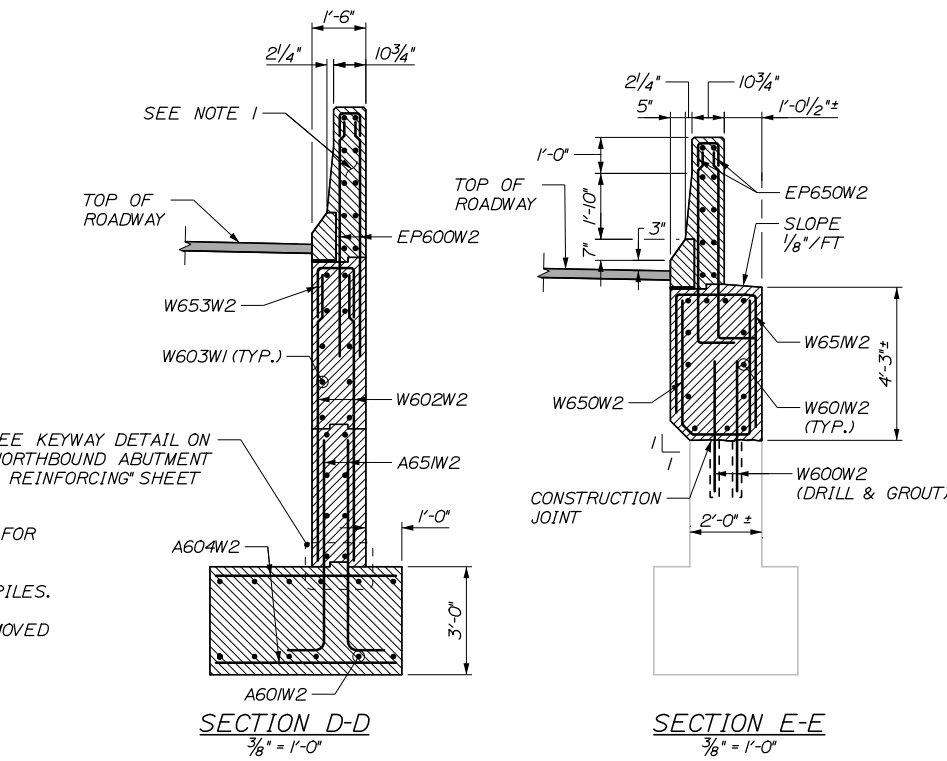
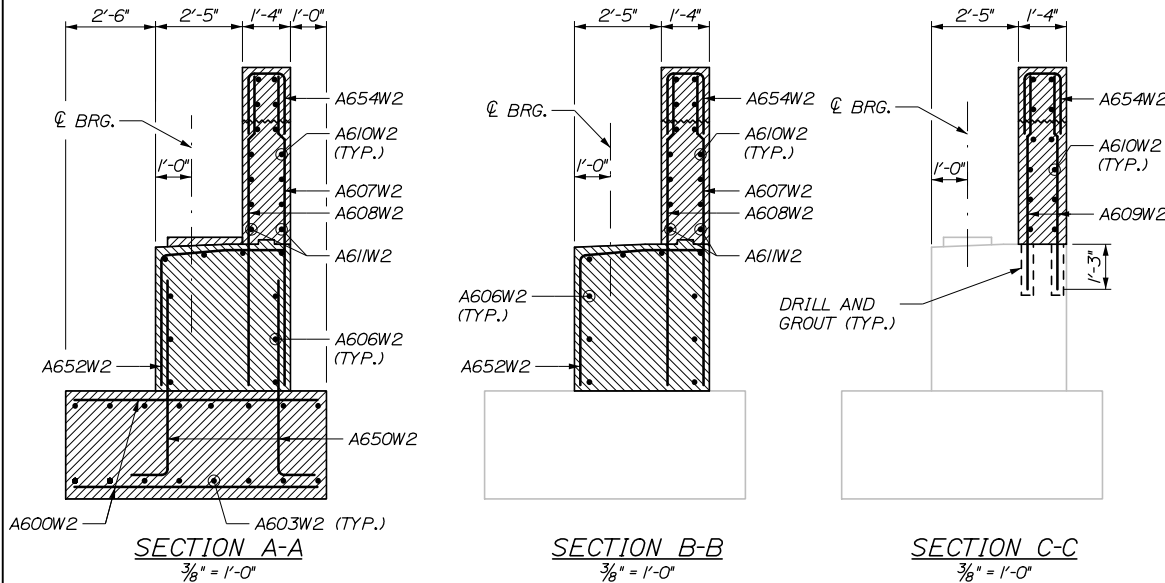
SHEET NUMBER: S-24
 CONTRACT: 2019.09
 79 OF 121

Date: 10/18/2018

Filename: 080_Southbound Abutment 2_Reinforcing.dgn



SOUTHBOUND BRIDGE - ABUTMENT 2
(EXISTING REINFORCING NOT SHOWN FOR CLARITY)
1/4" = 1'-0"



- NOTES:**
- SEE "ENDPOST DETAILS II" SHEET FOR ADDITIONAL END POST REINFORCING SECTIONS.
 - SUBSTRUCTURE NOMENCLATURE (W1, W2, E1, E2) REPRESENTS EAST OR WEST ABUTMENT 1 OR 2.
 - MIN LAPS SHALL BE:
*5 = 2'-3" (VERTICAL)
*5 = 2'-11" (HORIZONTAL)
*6 = 3'-4" (VERTICAL)
*6 = 4'-4" (HORIZONTAL)
 - SEE "SOUTHBOUND ABUTMENT 1 REINFORCING" SHEET FOR SECTION F-F.
 - SEE "NORTHBOUND ABUTMENT 1 REINFORCING" SHEET FOR PEDESTAL REINFORCING.
 - BARS SHALL BE MOVED TO AVOID CONFLICTS WITH PILES.
 - BARS THAT ARE DRILLED AND GROUTED SHALL BE MOVED TO AVOID CONFLICTS WITH EXISTING REINFORCING.

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	TJP	10\18	Checked	HJW	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

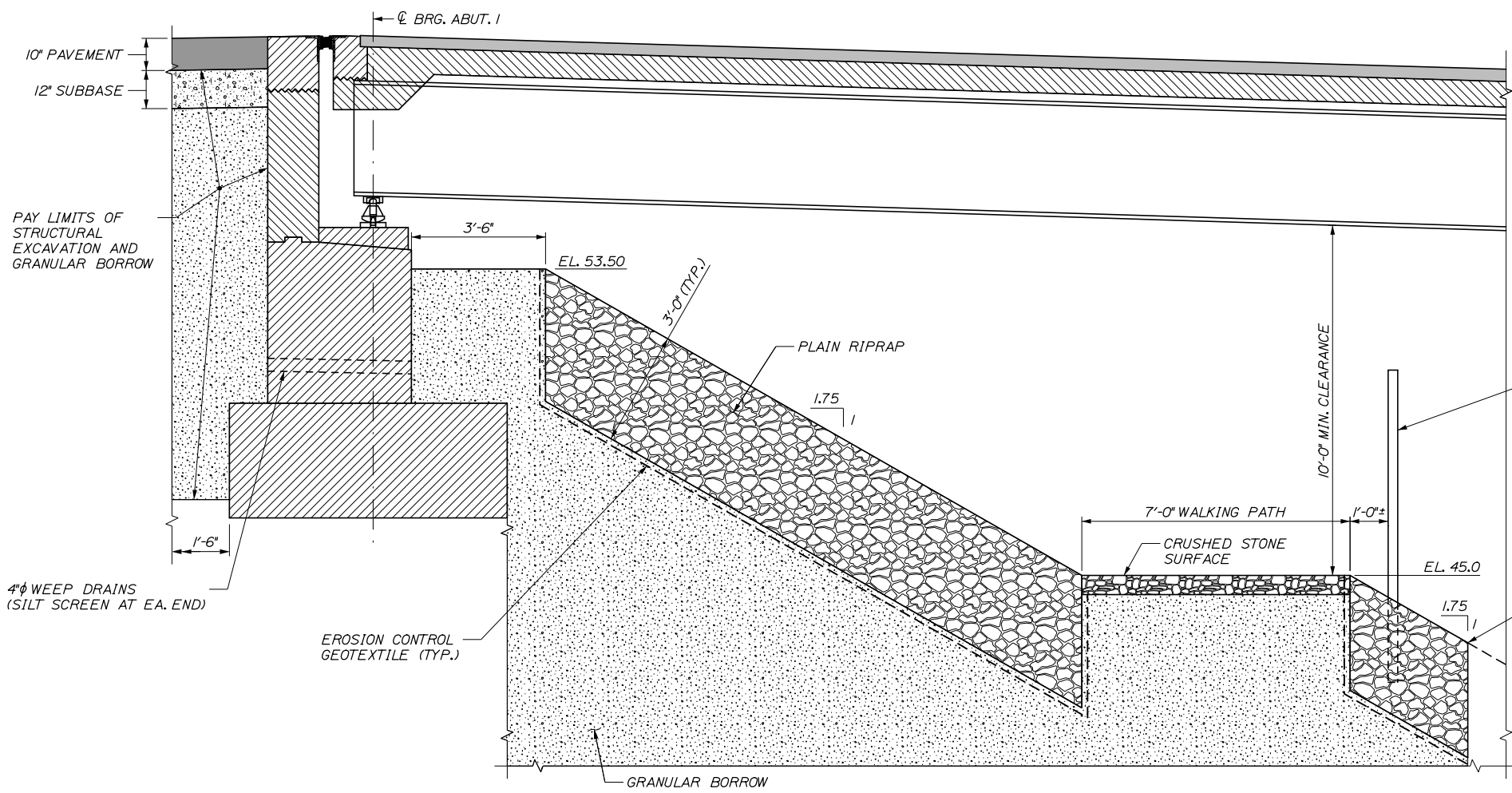
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SOUTHBOUND ABUTMENT 2
REINFORCING

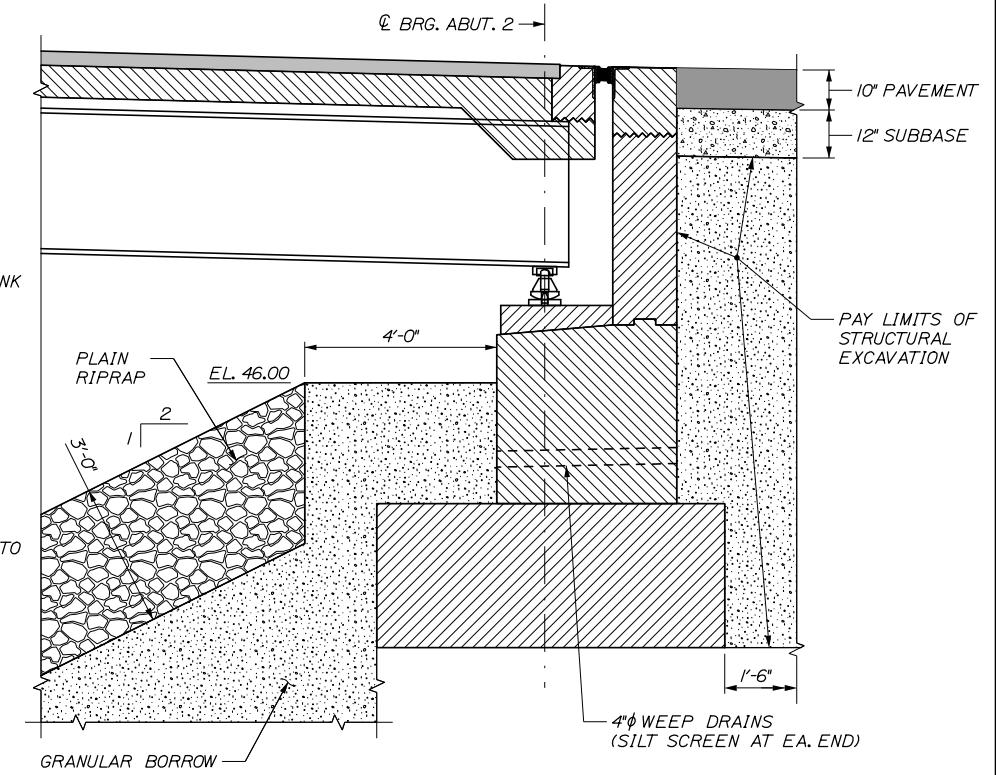
SHEET NUMBER: S-25
CONTRACT: 2019.09
80 OF 121

Date: 10/18/2018

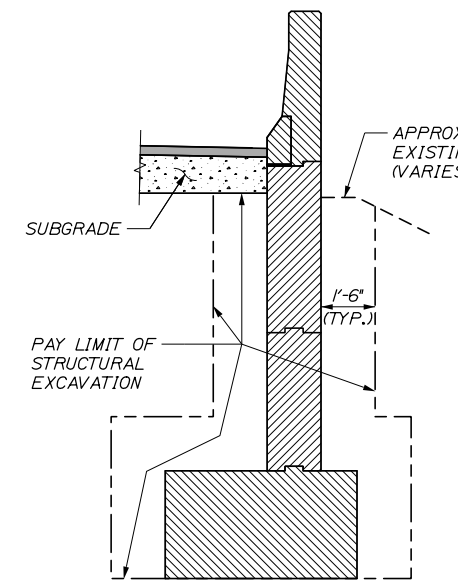
Filename: 083_Abument Modification Details.dgn



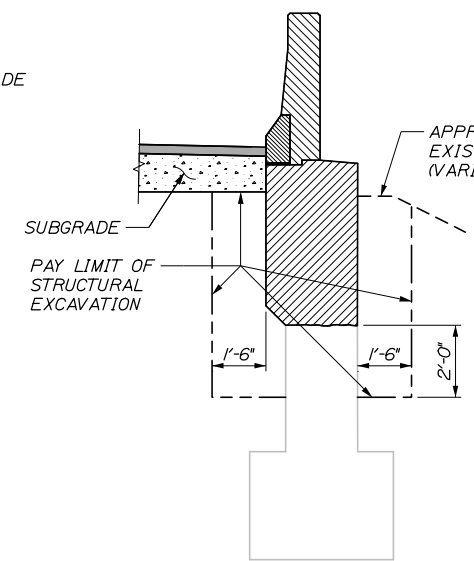
ABUTMENT 1 DETAIL
1/2" = 1'-0"



ABUTMENT 2 DETAIL
1/2" = 1'-0"



WINGWALL TYPICAL SECTION
3/8" = 1'-0"
(WIDENED SIDE)



WINGWALL TYPICAL SECTION
3/8" = 1'-0"
(MEDIAN SIDE)

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	Designed	TJP 10\18		Checked	HJW 10\18
	Drawn	ERB 10\18		In Charge of	RAL 10\18

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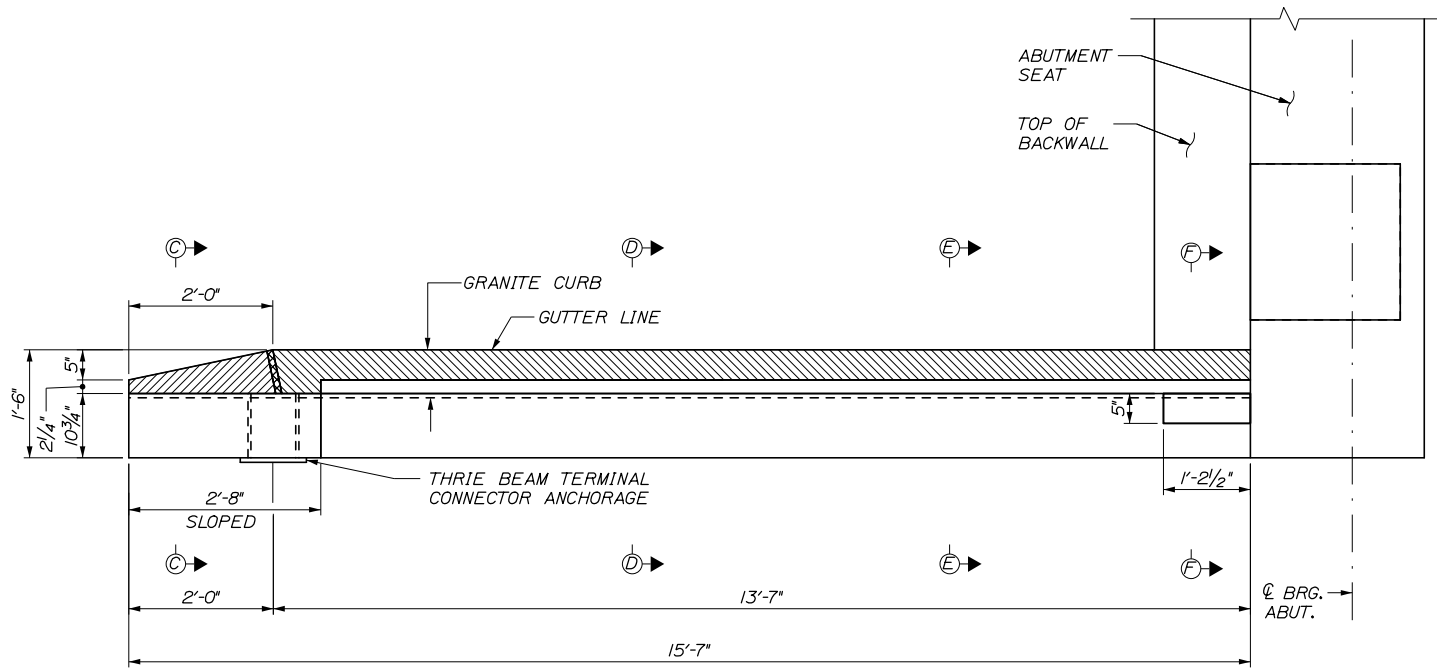
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

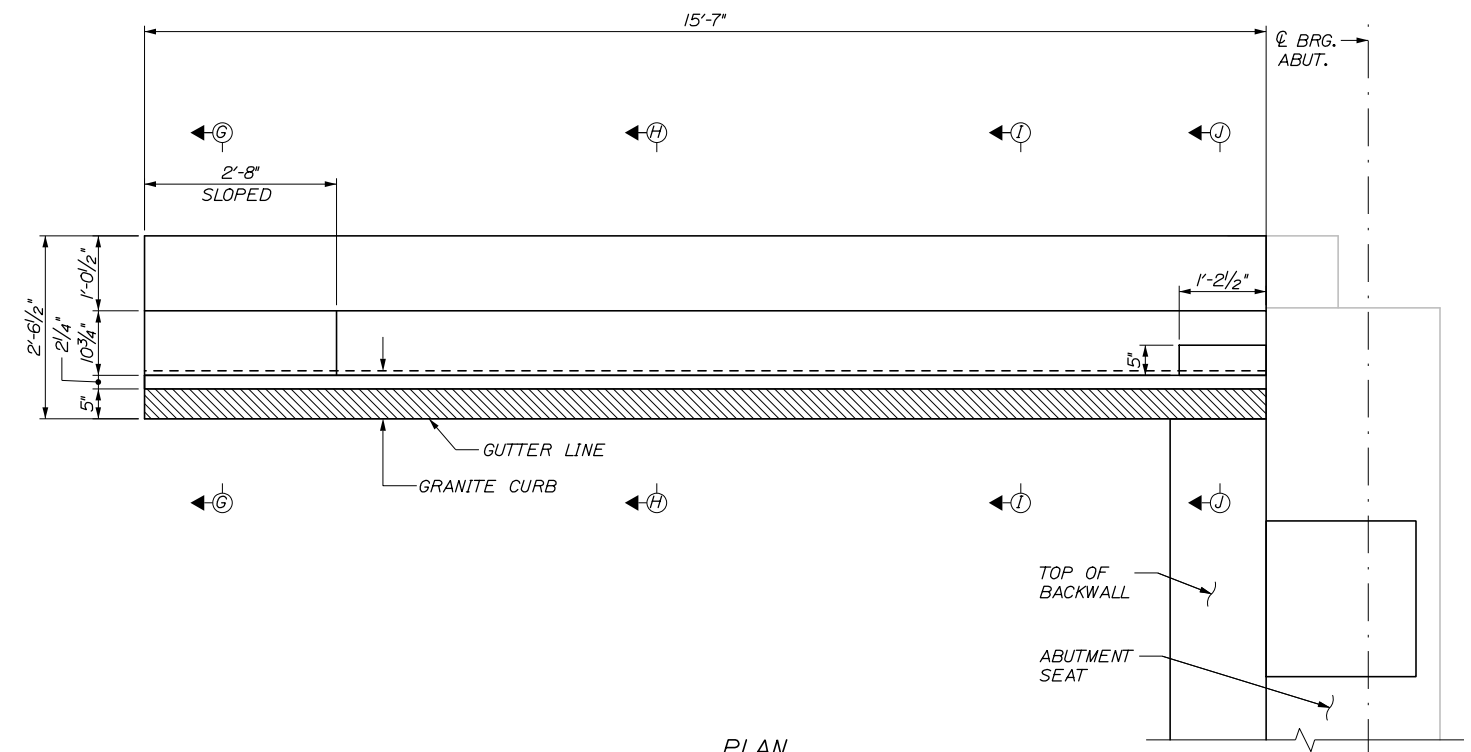
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
ABUTMENT MODIFICATION DETAILS

SHEET NUMBER: S-28
CONTRACT: 2019.09
83 OF 121

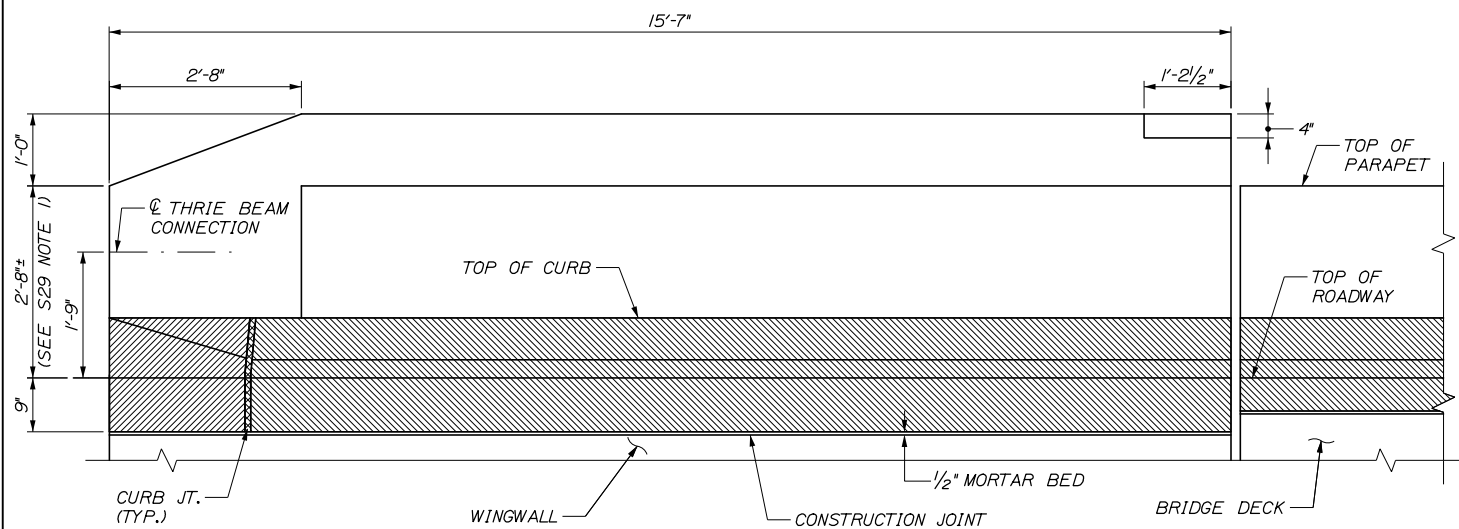
Date: 10/18/2018



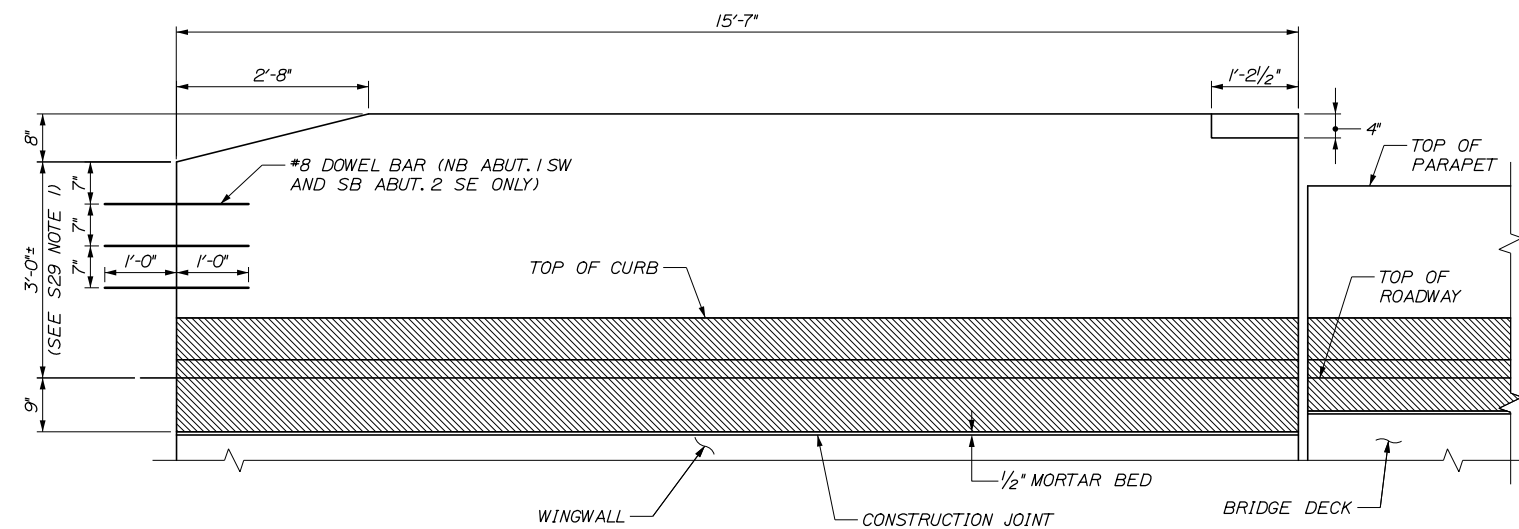
PLAN
 (ABUT. 1 NORTHBOUND, SOUTHEAST ENDPOST AND ABUT. 2 SOUTHBOUND, NORTHWEST SHOWN,
 ABUT. 2 NORTHBOUND, NORTHEAST ENDPOST AND ABUT. 1 SOUTHBOUND, SOUTHWEST SIMILAR)
 3/4" = 1'-0"



PLAN
 (ABUT. 1 NORTHBOUND, SOUTHWEST ENDPOST AND ABUT. 2 SOUTHBOUND, NORTHEAST SHOWN,
 ABUT. 2 NORTHBOUND, NORTHWEST ENDPOST AND ABUT. 1 SOUTHBOUND, SOUTHEAST SIMILAR)
 3/4" = 1'-0"



ELEVATION
 (ABUT. 2 NORTHBOUND, NORTHEAST ENDPOST AND ABUT. 1 SOUTHBOUND, SOUTHWEST SHOWN,
 ABUT. 1 NORTHBOUND, SOUTHEAST ENDPOST AND ABUT. 2 SOUTHBOUND, NORTHWEST SIMILAR)
 3/4" = 1'-0"



ELEVATION
 (ABUT. 1 NORTHBOUND, SOUTHWEST ENDPOST AND ABUT. 2 SOUTHBOUND, NORTHEAST SHOWN,
 ABUT. 2 NORTHBOUND, NORTHWEST ENDPOST AND ABUT. 1 SOUTHBOUND, SOUTHEAST SIMILAR)
 3/4" = 1'-0"

Filename: 084_Endpost Details 1.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
Designed	TJP 10\18	Checked	HJW 10\18
Drawn	ERB 10\18	In Charge of	RAL 10\18

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 340 County Road, Suite 6-C
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

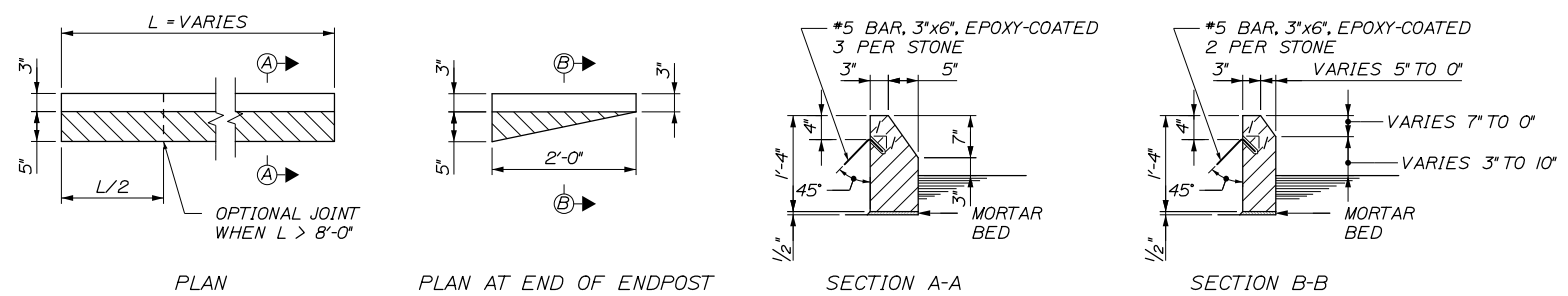
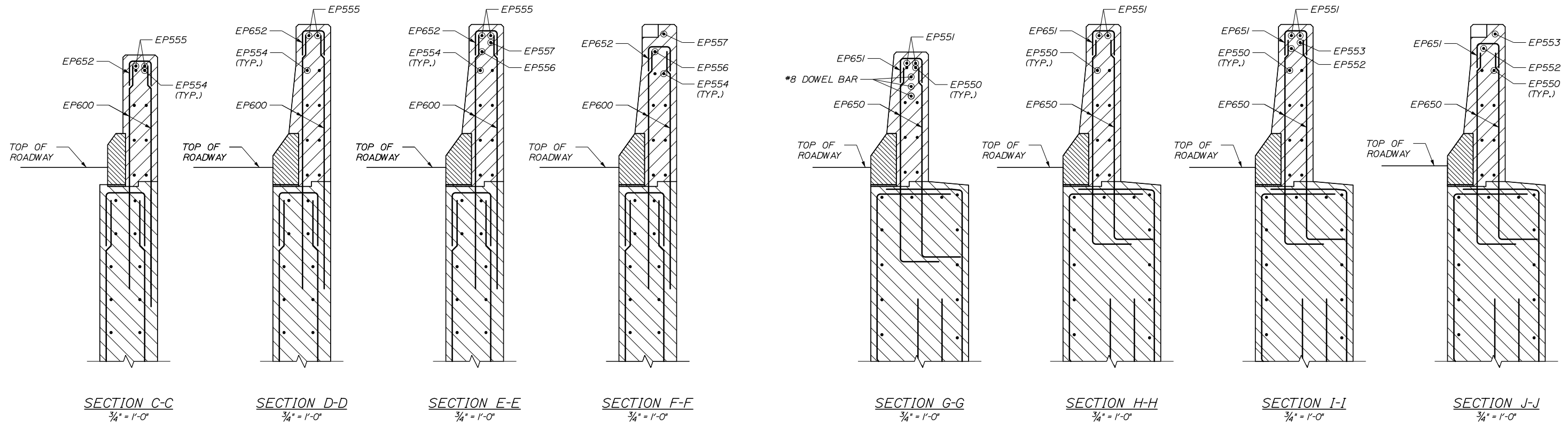
ENDPOST DETAILS I

SHEET NUMBER: S-29

CONTRACT: 2019.16

84 OF 121

Date:10/18/2018



ENDPOST GRANITE CURB DETAILS
3/4" = 1'-0"

NOTES:

1. THRIE BEAM CONNECTION PLATE SHALL BE SLEEVED THROUGH THE END POST. THE THRIE RAIL CONNECTION PLATE, THRIE RAIL TRANSITION AND INSTALLATION SHALL BE PAID UNDER ITEM 606.1723, "BRIDGE TRANSITION - TYPE III".
2. EXISTING CONCRETE END POST SHALL BE REMOVED AS SHOWN ON THE ABUTMENT DEMOLITION SHEETS. DEPTH TO BE FIELD VERIFIED BY THE CONTRACTOR. CONCRETE REMOVAL SHALL BE PAID UNDER ITEM 202.12, "REMOVING EXISTING STRUCTURAL CONCRETE".
3. PROPOSED END POST CONCRETE INSTALLATION AND MATERIALS SHALL BE PAID UNDER ITEM 502.21, "STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS".
4. GRANITE CURB INSTALLATION AND MATERIALS SHALL BE PAID UNDER ITEM 609.15, "SLOPED CURB TYPE I".
5. FOR ENDPOST NOTES SEE "END POST DETAILS I" SHEET.
6. FOR WINGWALL REINFORCING SEE ABUTMENT REINFORCING SHEETS.
7. ENDPOST REINFORCING SHOWN APPLIES TO W1, W2, E1, AND E2 BARS.
8. ENDPOST REINFORCING DOES NOT INCLUDE SUBSTRUCTURE UNIT NOMINCLATURE FOR CLARITY (W1, W2, E1, E2).

Filename: 085_Endpost Details 2.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	Designed	TJP	10\18	Checked	HJW	10\18
	Drawn	ERB	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

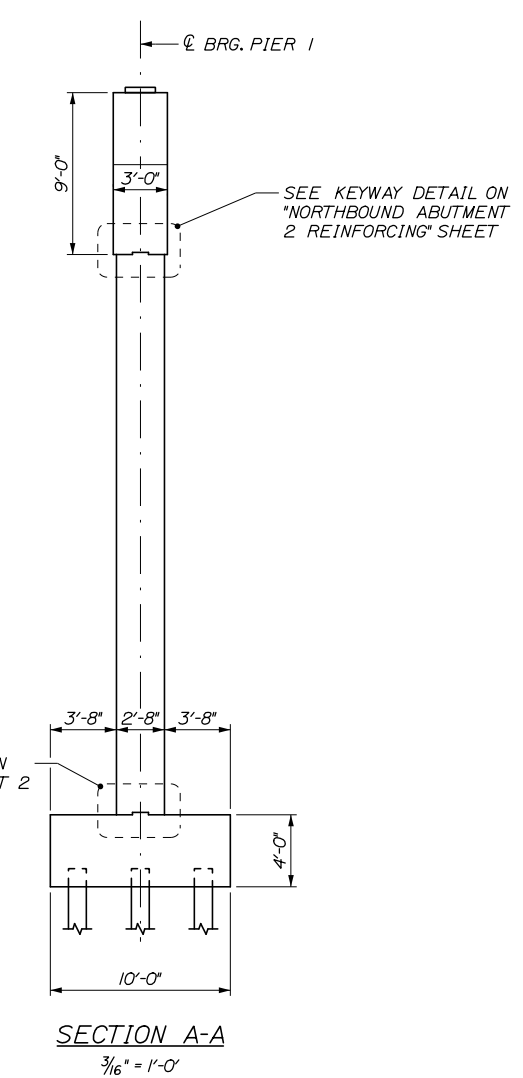
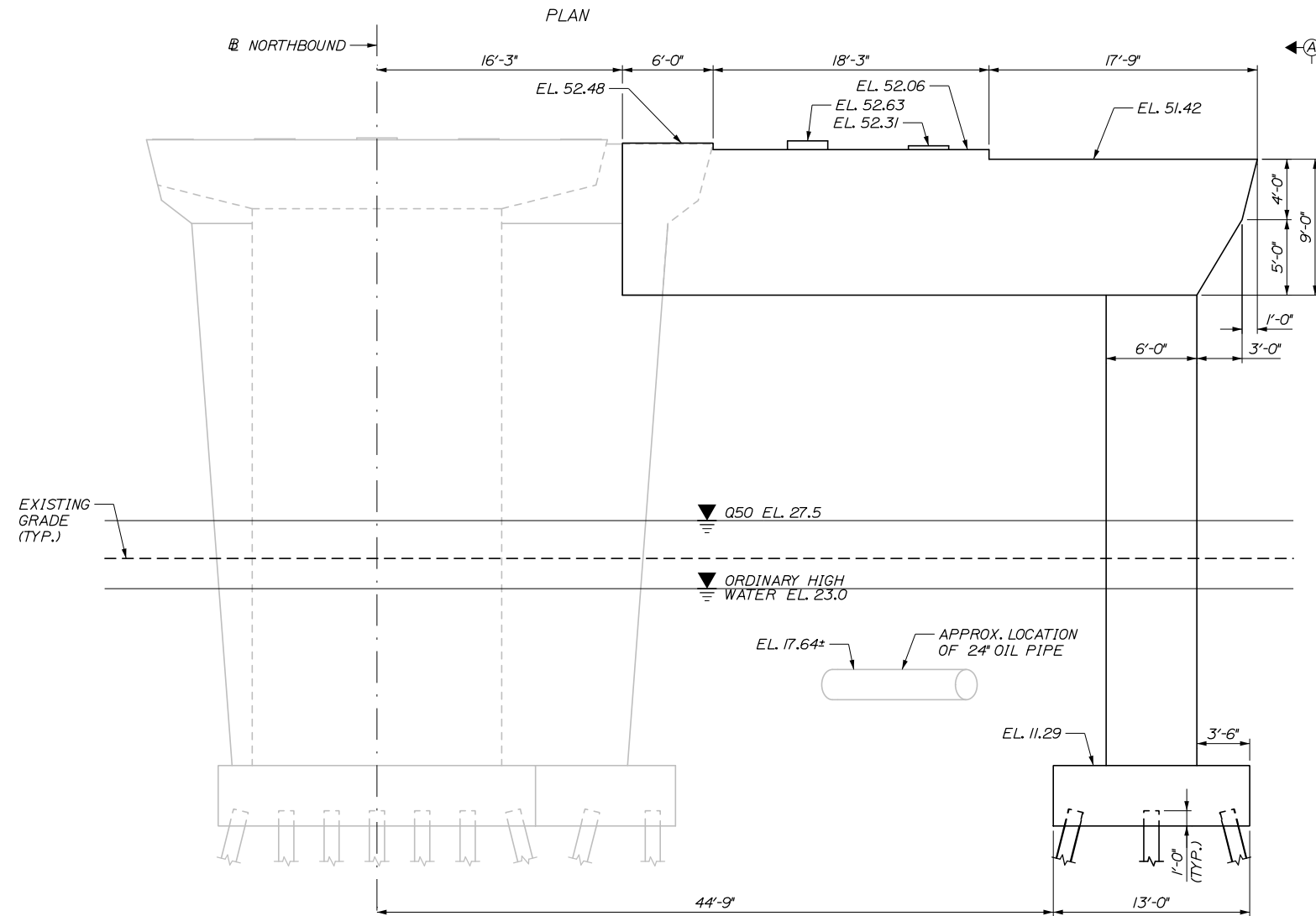
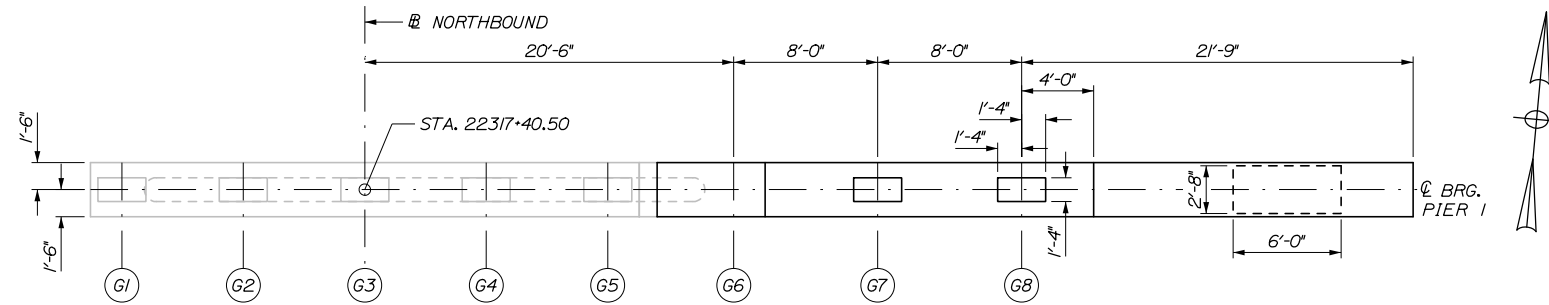
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

ENDPOST DETAILS II

SHEET NUMBER: S-30
CONTRACT: 2019.16
85 OF 121

Date: 10/18/2018

Filename: 087_Northbound Pier 1_Plan and Elevation.dgn



NOTE:
1. SEAL CONCRETE NOT SHOWN FOR CLARITY.

NORTHBOUND BRIDGE - PIER 1
3/16" = 1'-0"

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	JKB 10\18	Checked	BRG 10\18
				Drawn	ERB 10\18	In Charge of	RAL 10\18

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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.							

**THE GOLD STAR
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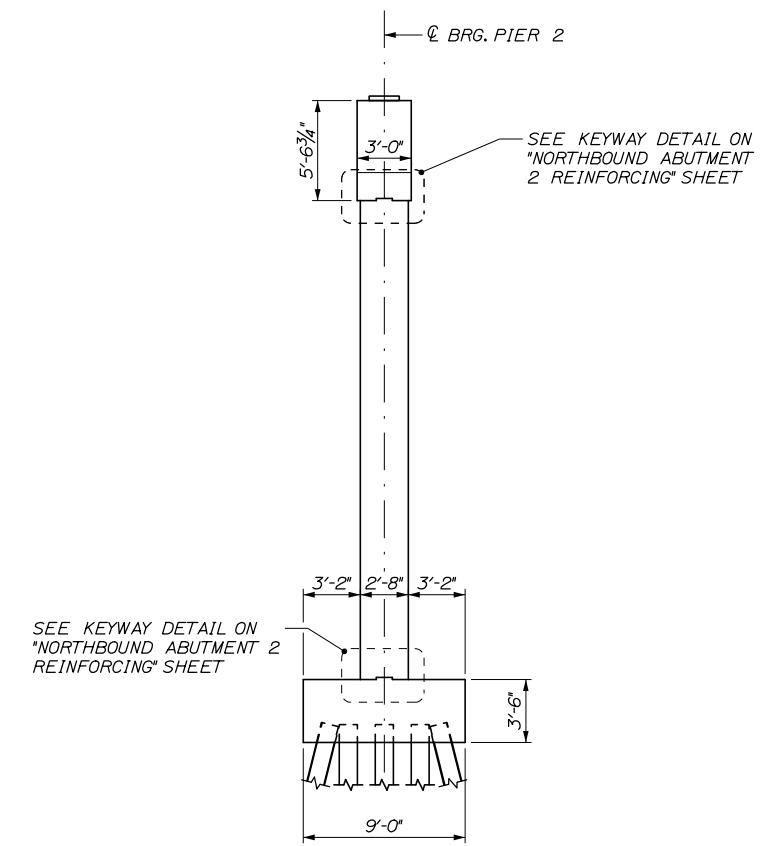
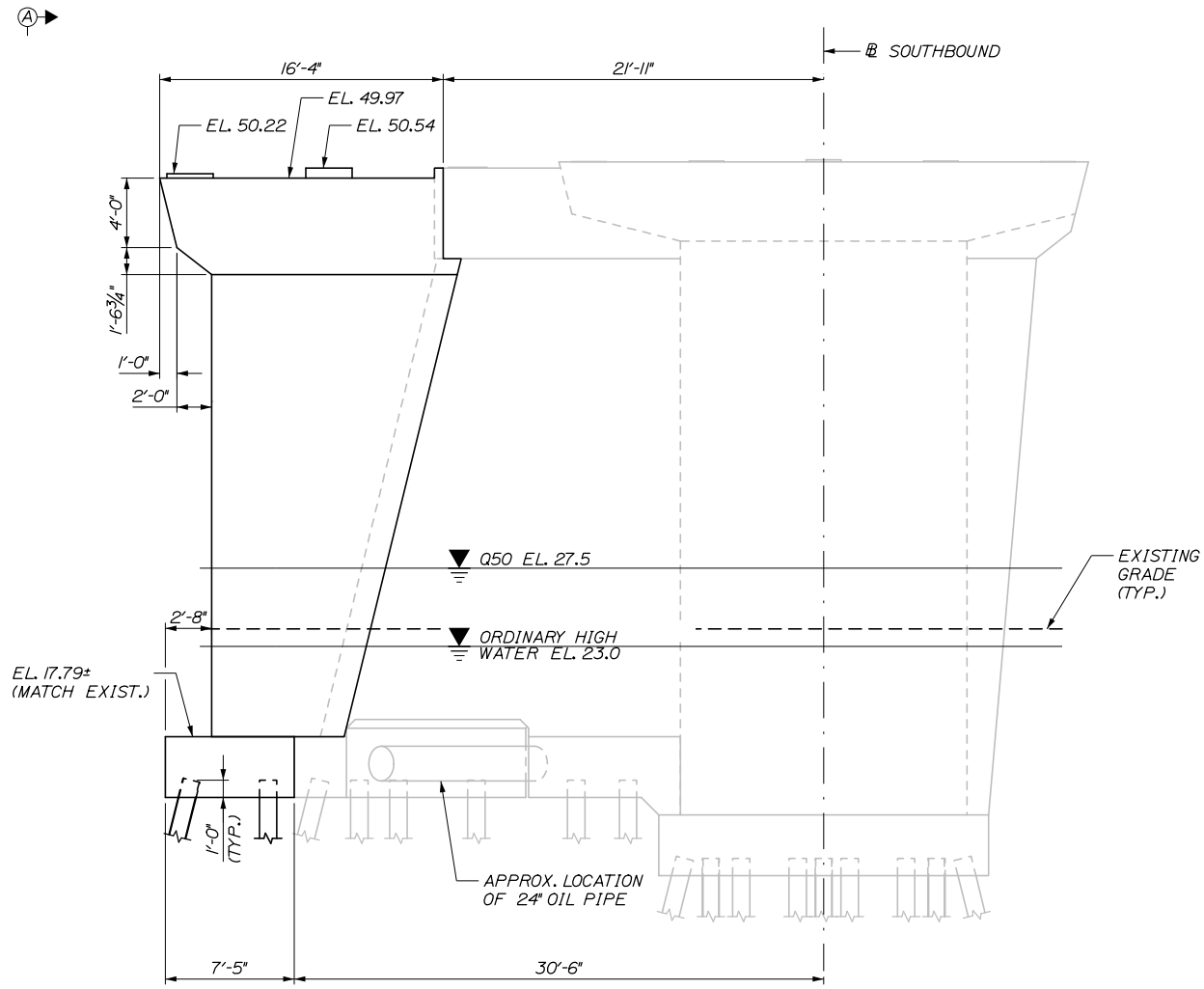
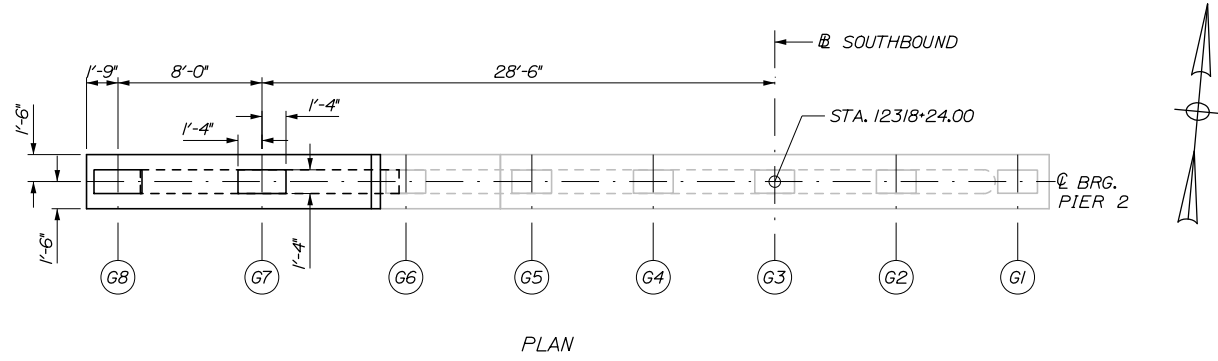
**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
NORTHBOUND PIER 1
PLAN AND ELEVATION

SHEET NUMBER: S-32
87 OF 121

Date: 10/18/2018

Filename: 088_Southbound Pier 2_Plan and Elevation.dgn



ELEVATION
SOUTHBOUND BRIDGE - PIER 2
3/16" = 1'-0"

NOTE:
1. SEAL CONCRETE NOT SHOWN FOR CLARITY.

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	JKB 10\18	Checked	BRG 10\18
				Drawn	ERB 10\18	In Charge of	RAL 10\18

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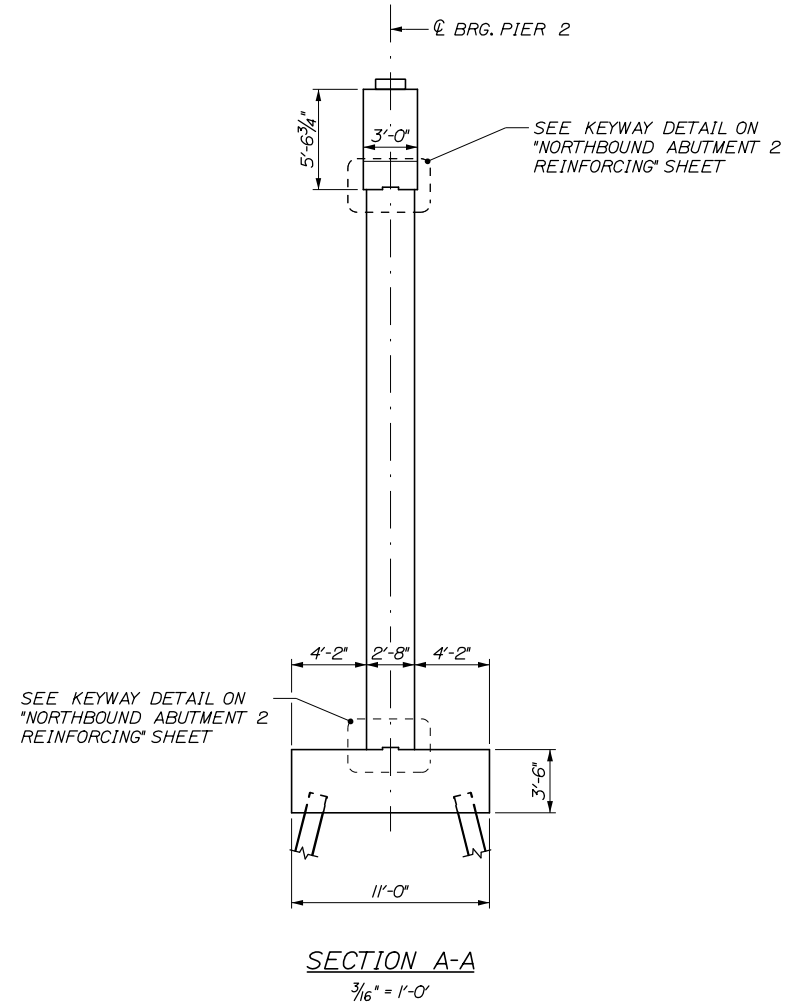
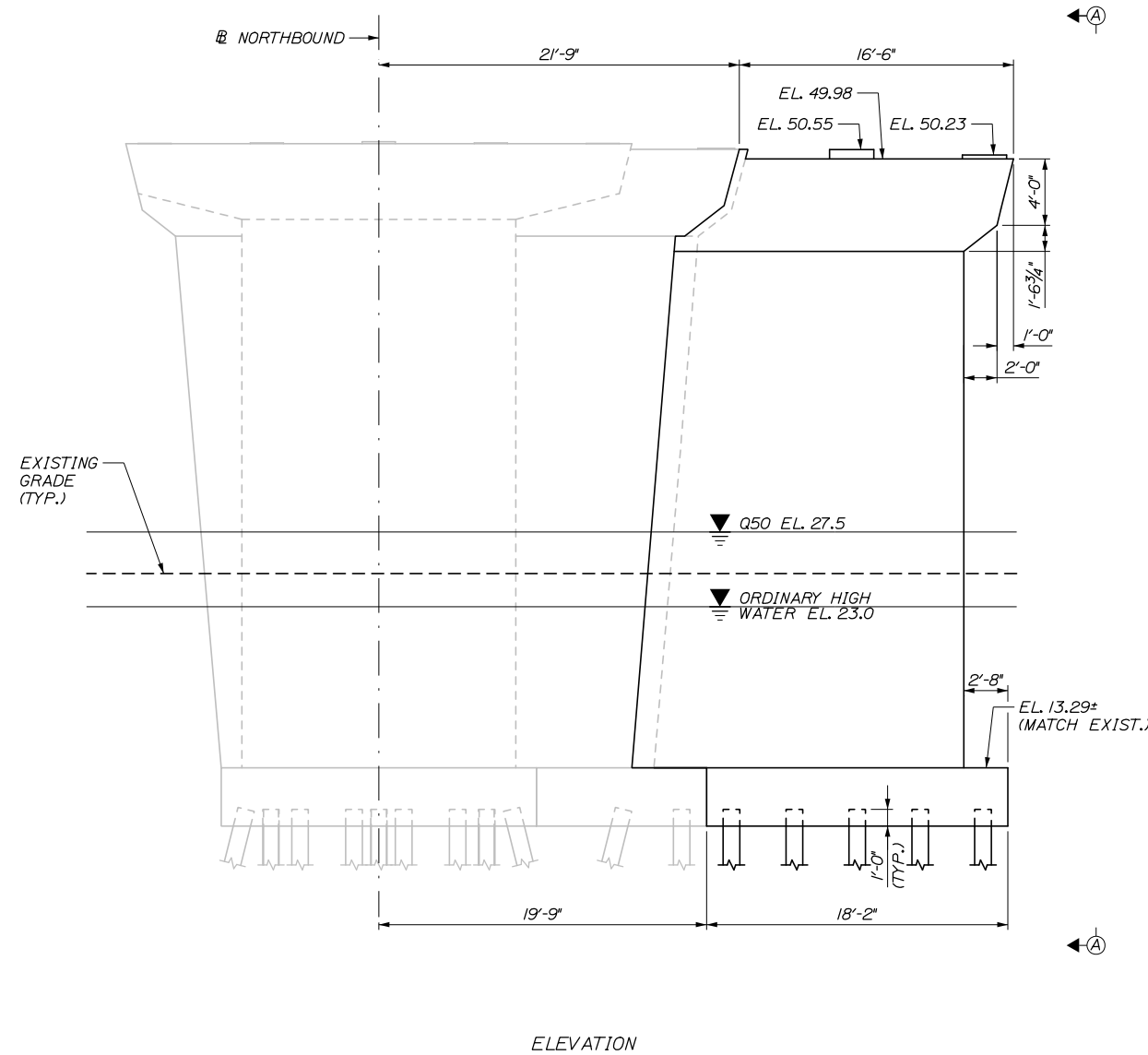
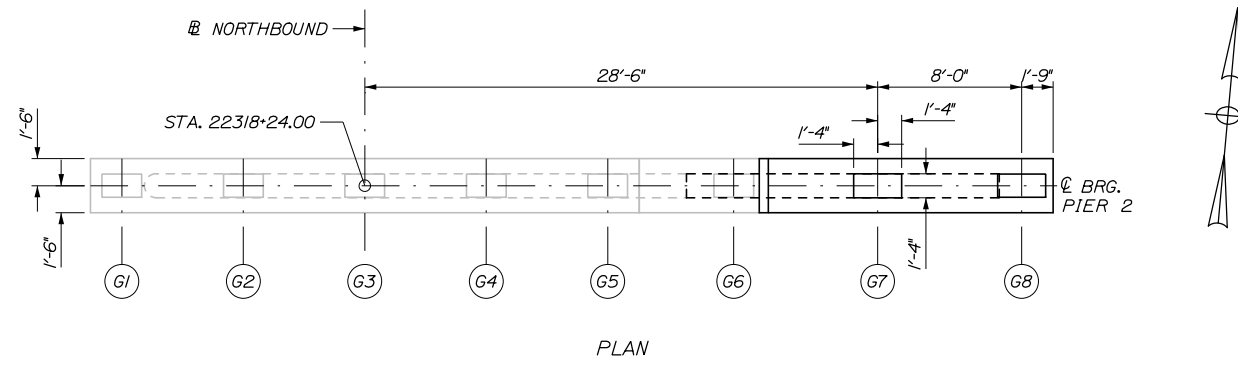
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SOUTHBOUND PIER 2
PLAN AND ELEVATION

SHEET NUMBER: S-33
CONTRACT: 2019.09
88 OF 121

Date: 10/18/2018

Filename: 089_Northbound Pier 2_Plan and Elevation.dgn



NORTHBOUND BRIDGE - PIER 2
3/16" = 1'-0"

NOTE:
1. SEAL CONCRETE NOT SHOWN FOR CLARITY.

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	JKB 10\18	Checked	BRG 10\18
				Drawn	ERB 10\18	In Charge of	RAL 10\18

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MAINE
TURNPIKE

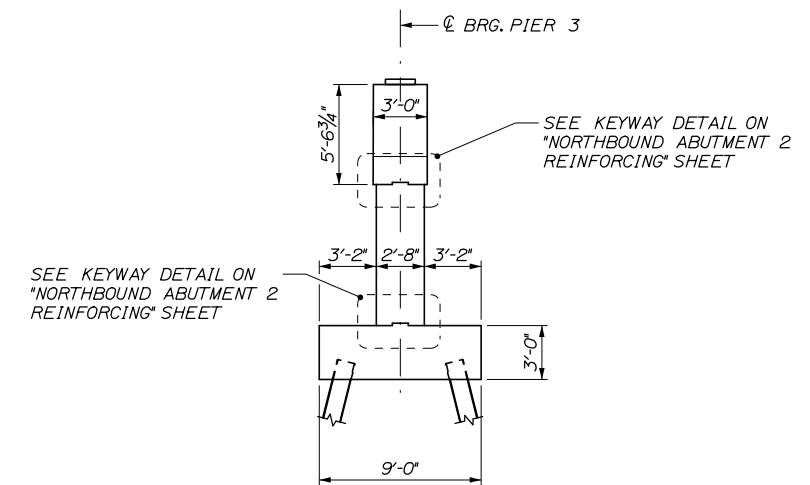
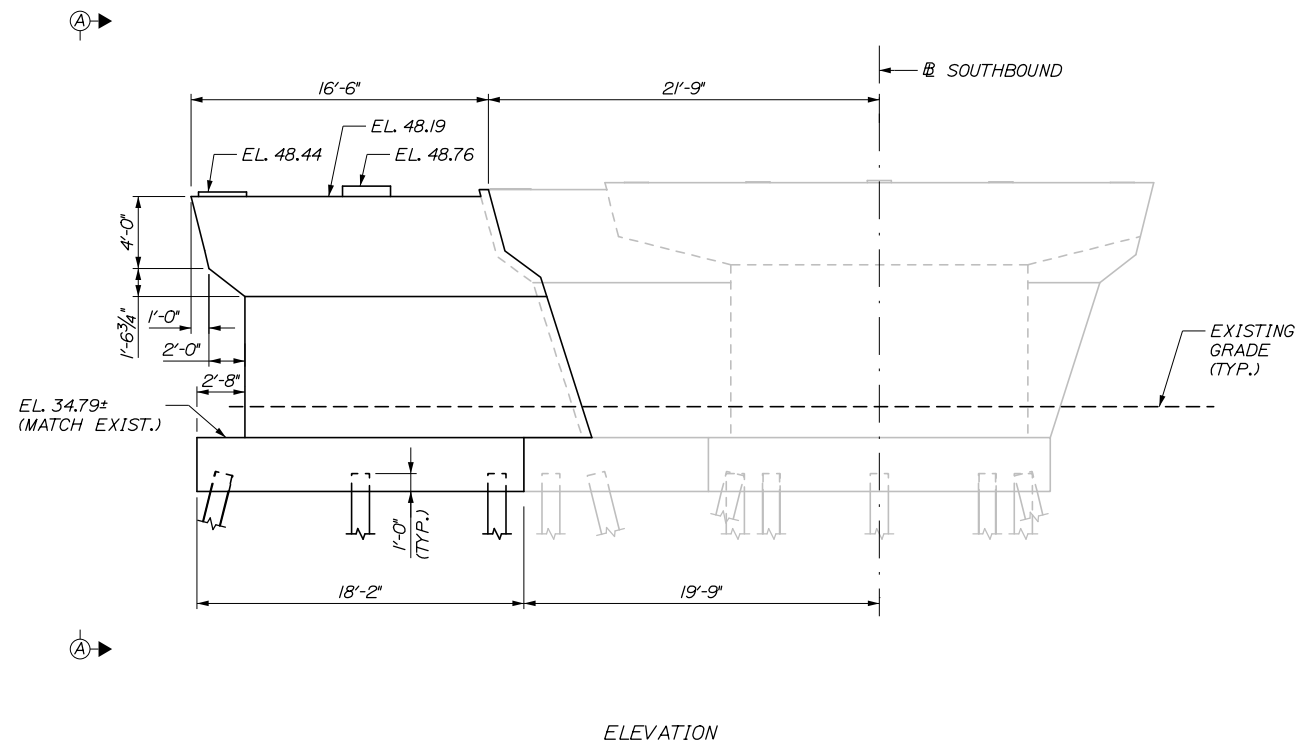
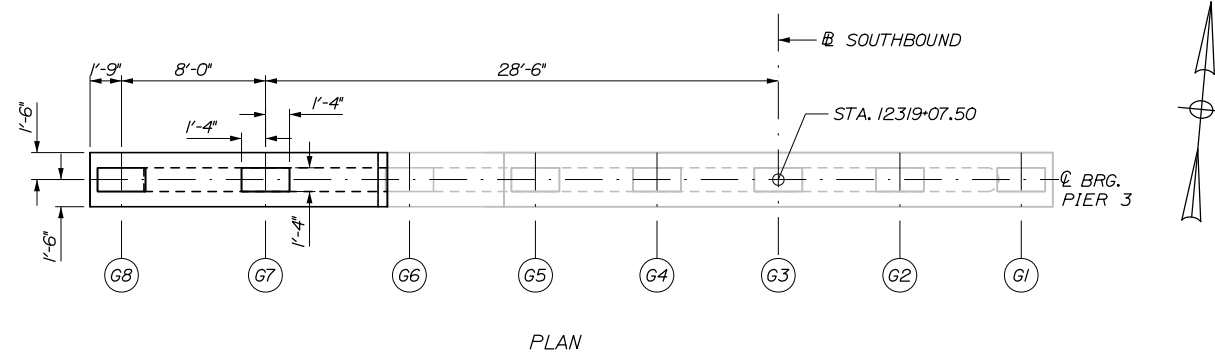
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
NORTHBOUND PIER 2
PLAN AND ELEVATION

SHEET NUMBER: S-34
CONTRACT: 2019.09
89 OF 121

Date: 10/18/2018



SOUTHBOUND BRIDGE - PIER 3
3/16" = 1'-0"

SECTION A-A
3/16" = 1'-0"

Filename: 090_Southbound Pier 3_Plan and Elevation.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	JKB	10\18	Checked	BRG	10\18
	ERB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

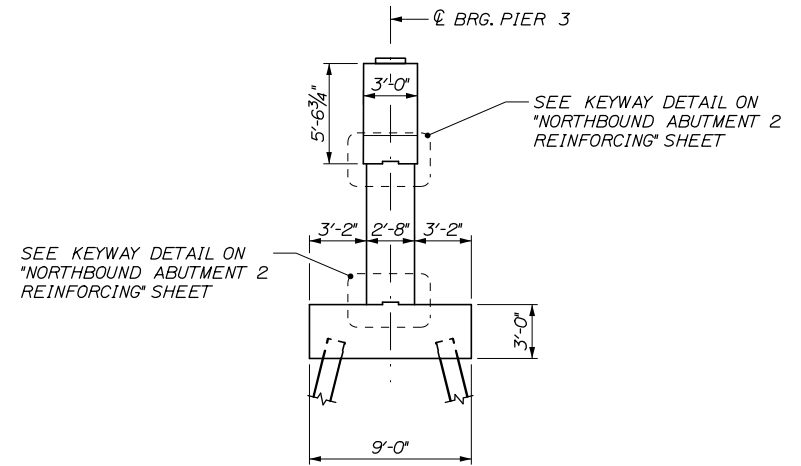
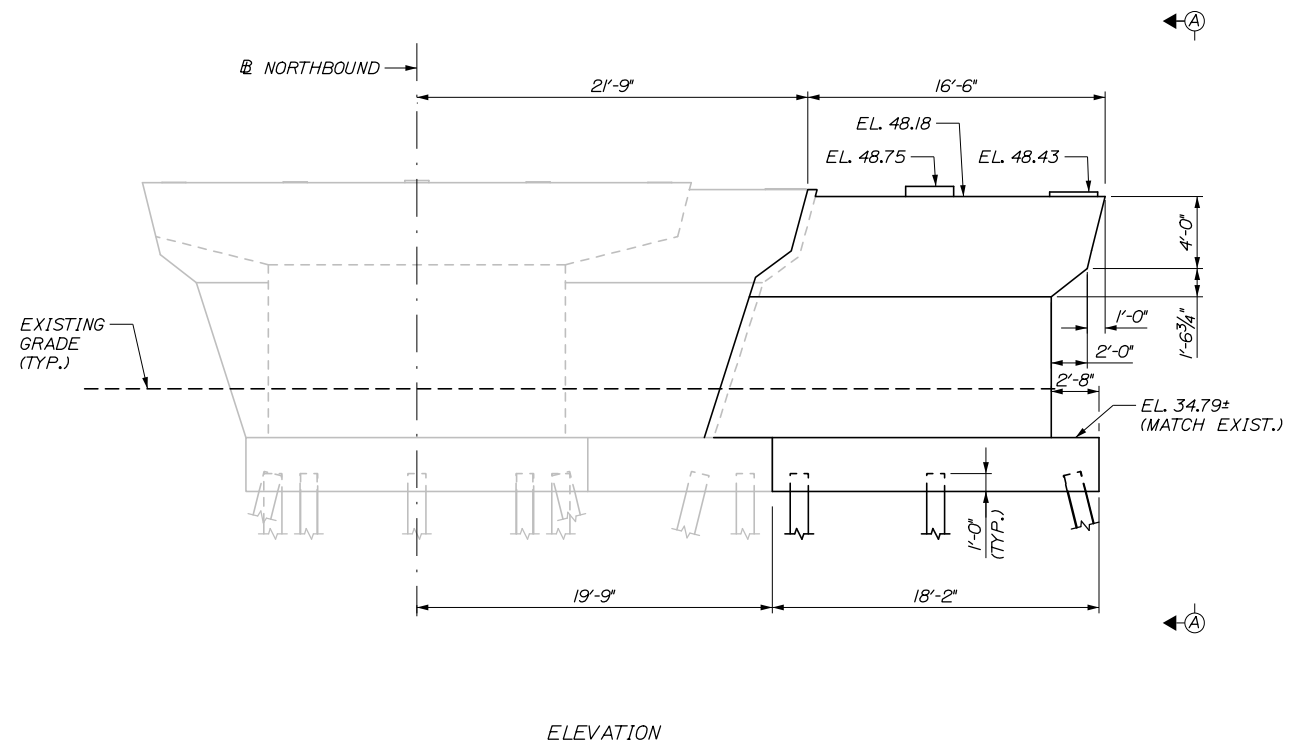
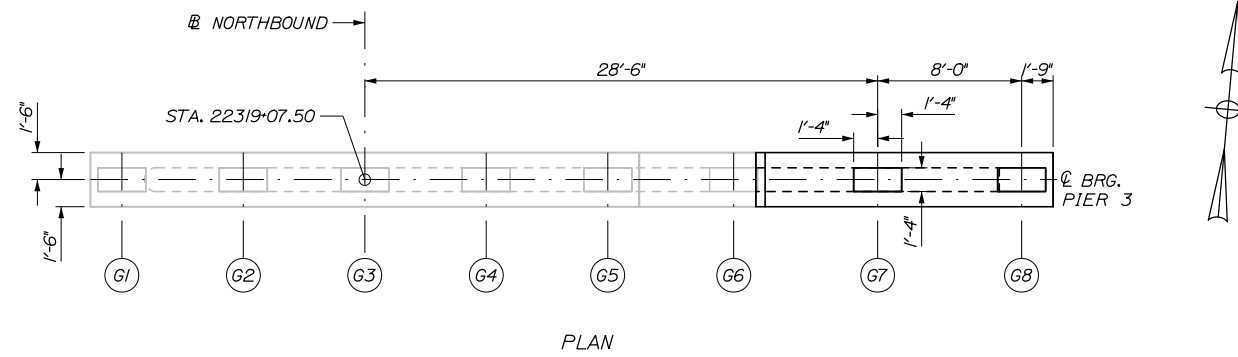
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SOUTHBOUND PIER 3
PLAN AND ELEVATION

SHEET NUMBER: S-35
CONTRACT: 2019.09
90 OF 121

Date:10/18/2018

Filename: 091_Northbound Pier 3_Plan and Elevation.dgn



NORTHBOUND BRIDGE - PIER 3
3/16" = 1'-0"

SECTION A-A
3/16" = 1'-0"

Scale: AS NOTED

Designed by:



CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

No.	Revision	By	Date	By	Date
Designed		JKB	10\18	Checked	BRG 10\18
Drawn		ERB	10\18	In Charge of	RAL 10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
NORTHBOUND PIER 3
PLAN AND ELEVATION**

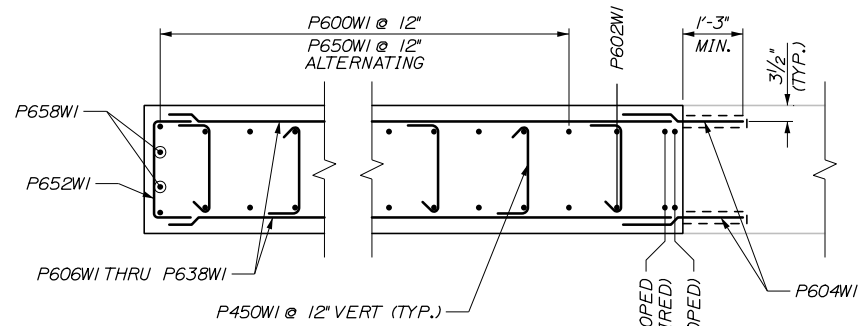
SHEET NUMBER: S-36

CONTRACT:2019.09

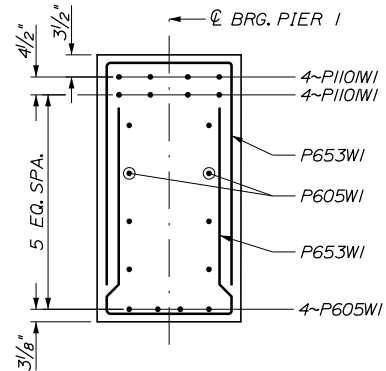
91 OF 121

Date: 10/18/2018

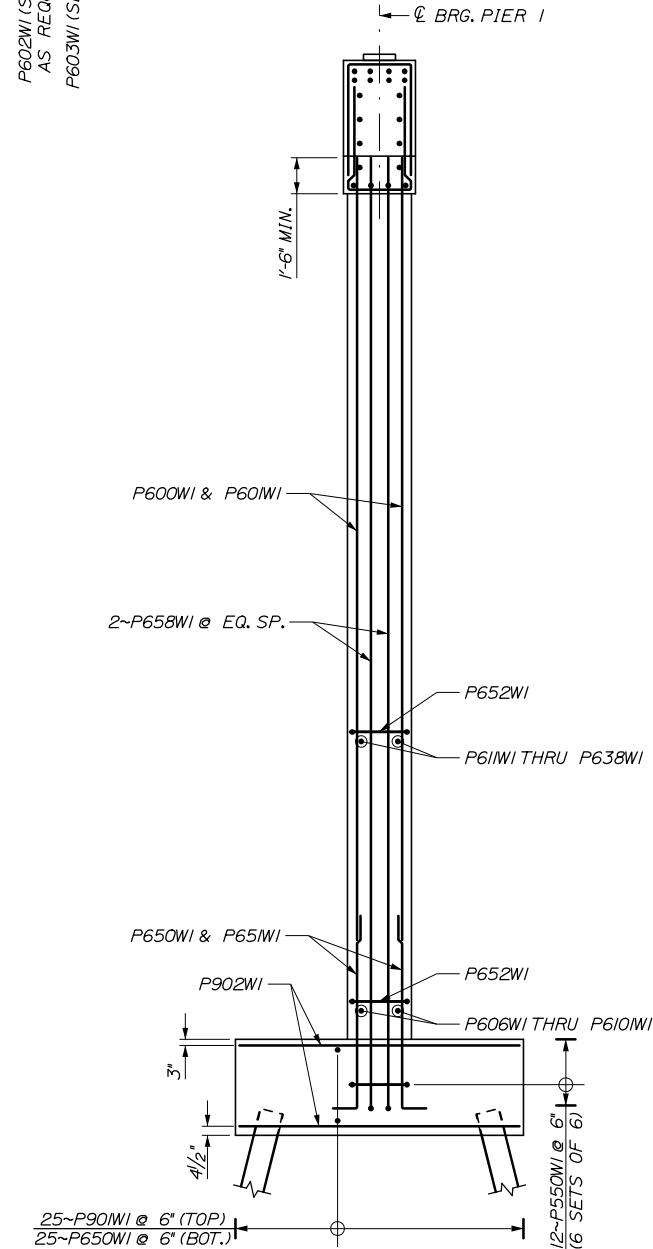
Filename: 092_Southbound Pier 1_Reinforcing.dgn



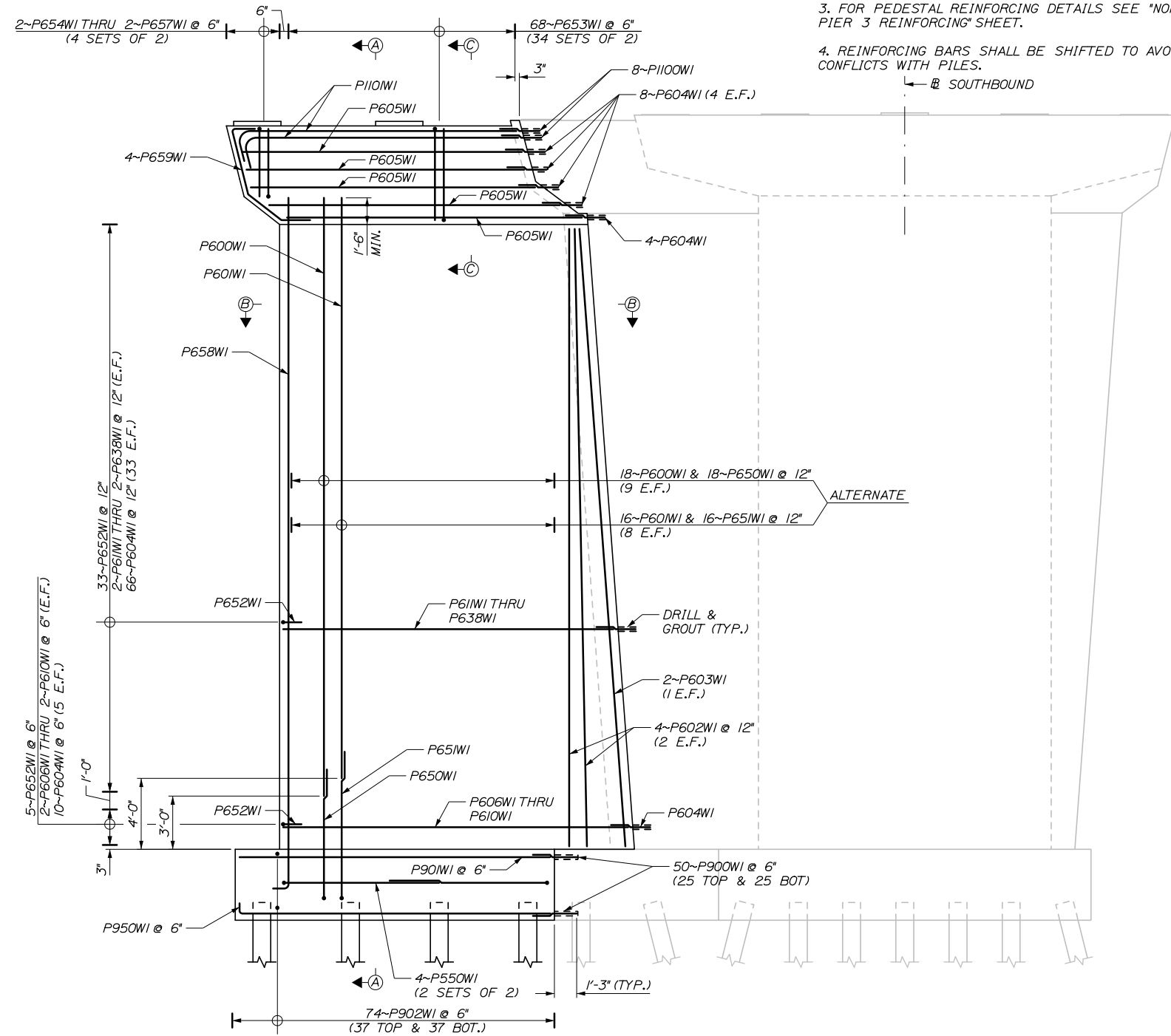
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



SECTION A-A
1/4" = 1'-0"



SOUTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"

NOTES:

1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:
 *5 BAR = 2'-11"
 *6 BAR = 4'-4"
 *7 BAR = 5'-6"
 *9 BAR = 6'-6"
 *11 BAR = 8'-2"
2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR, AS APPROVED BY THE RESIDENT.
3. FOR PEDESTAL REINFORCING DETAILS SEE "NORTHBOUND PIER 3 REINFORCING" SHEET.
4. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	JKB 10\18	Checked	BRG 10\18
				Drawn	ERB 10\18	In Charge of	RAL 10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SOUTHBOUND PIER 1
REINFORCING

SHEET NUMBER: S-37

CONTRACT: 2019.09

92 OF 121

NOTES:

1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:

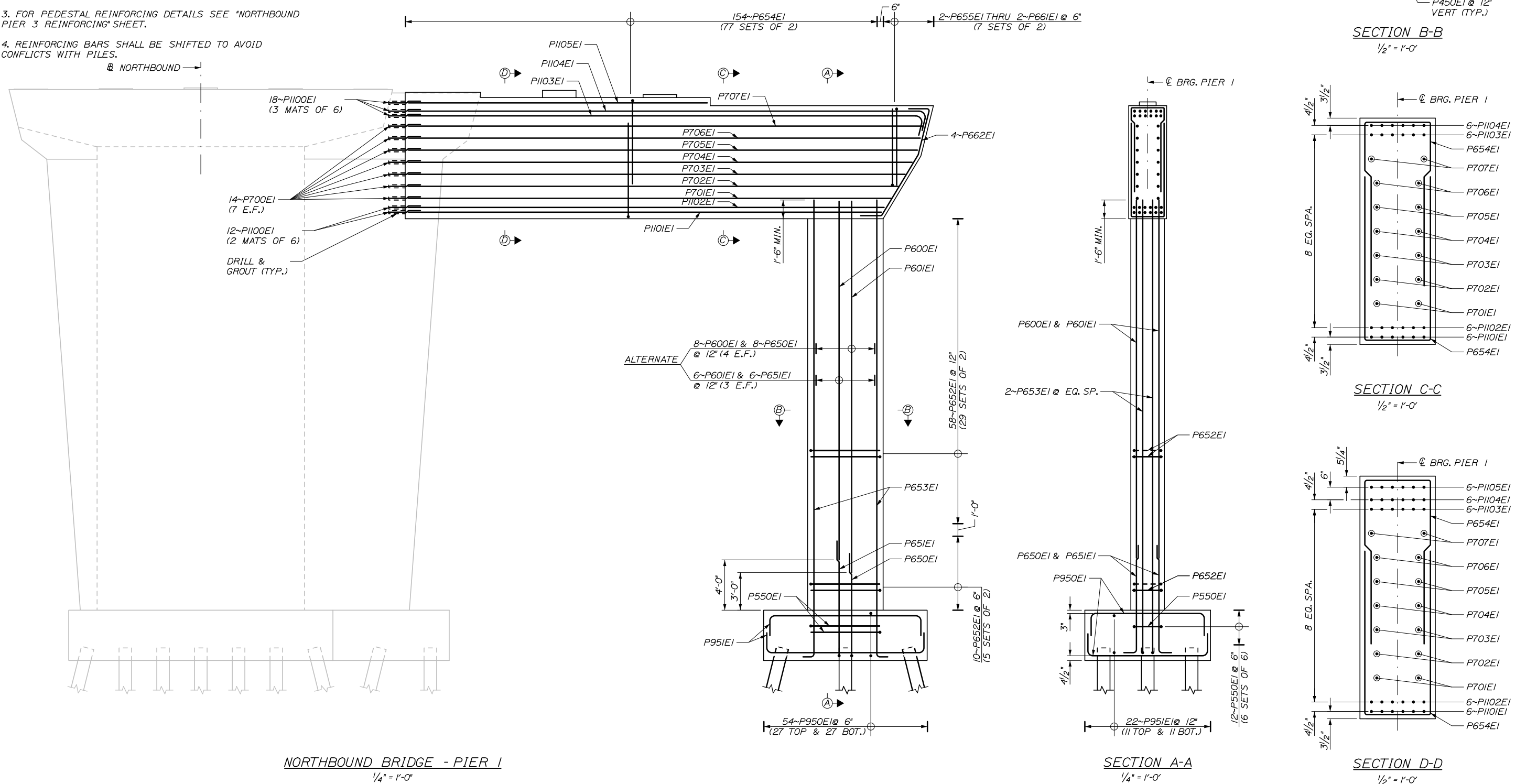
- *5 BAR = 2'-11"
- *6 BAR = 4'-4"
- *7 BAR = 5'-6"
- *9 BAR = 6'-6"
- *11 BAR = 8'-2"

2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR, AS APPROVED BY THE RESIDENT.

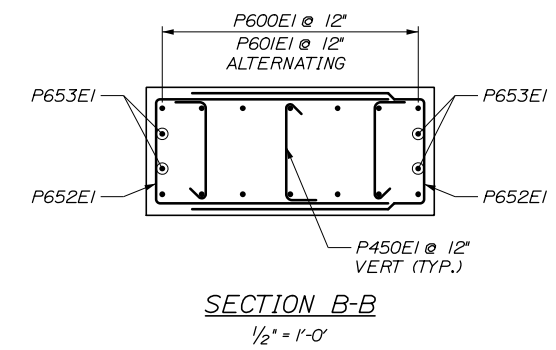
3. FOR PEDESTAL REINFORCING DETAILS SEE "NORTHBOUND PIER 3 REINFORCING" SHEET.

4. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.

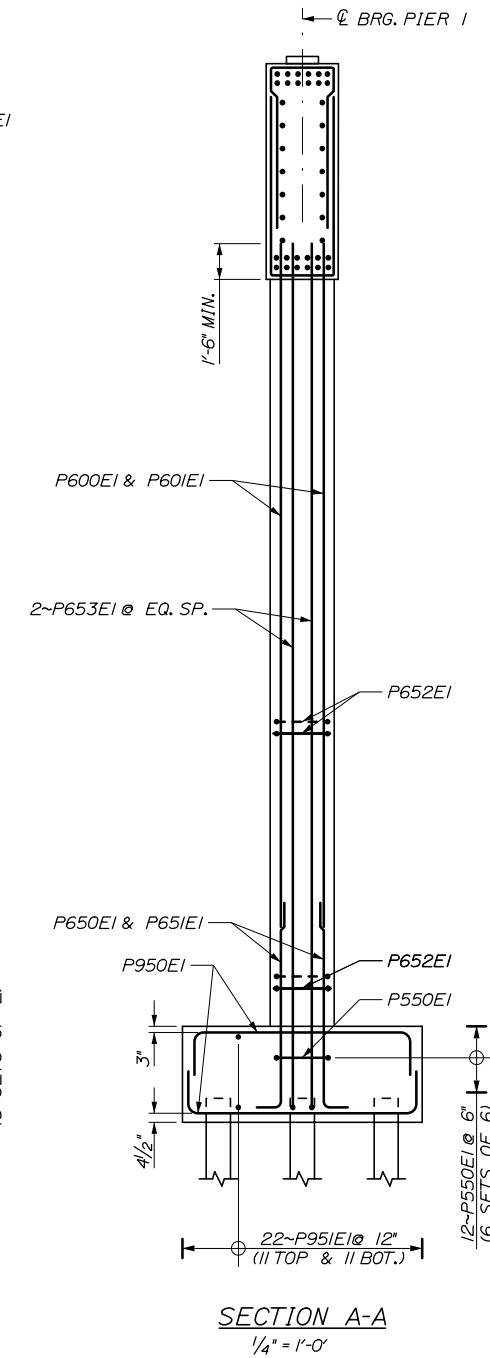
Date: 10/18/2018



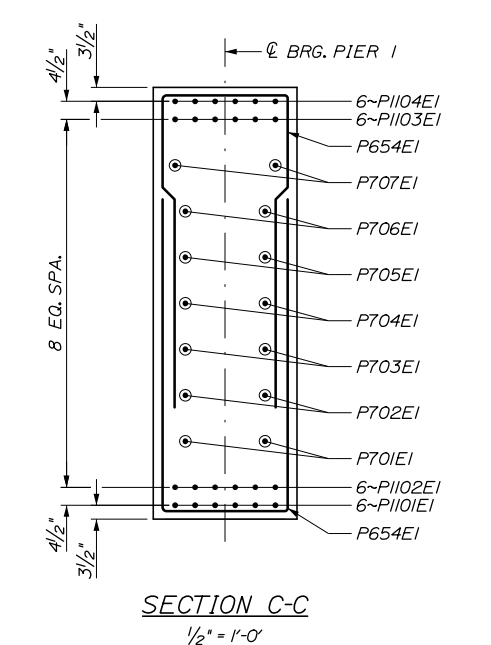
NORTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"



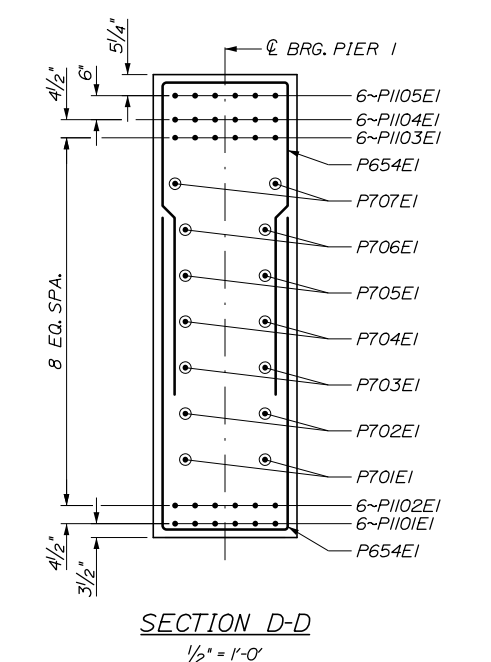
SECTION B-B
1/2" = 1'-0"



SECTION A-A
1/4" = 1'-0"



SECTION C-C
1/2" = 1'-0"



SECTION D-D
1/2" = 1'-0"

Filename: 093_Northbound Pier 1_Reinforcing.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
Designed	JKB 10\18	Checked	BRG 10\18
Drawn	ERB 10\18	In Charge of	RAL 10\18

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MEMORIAL HIGHWAY**

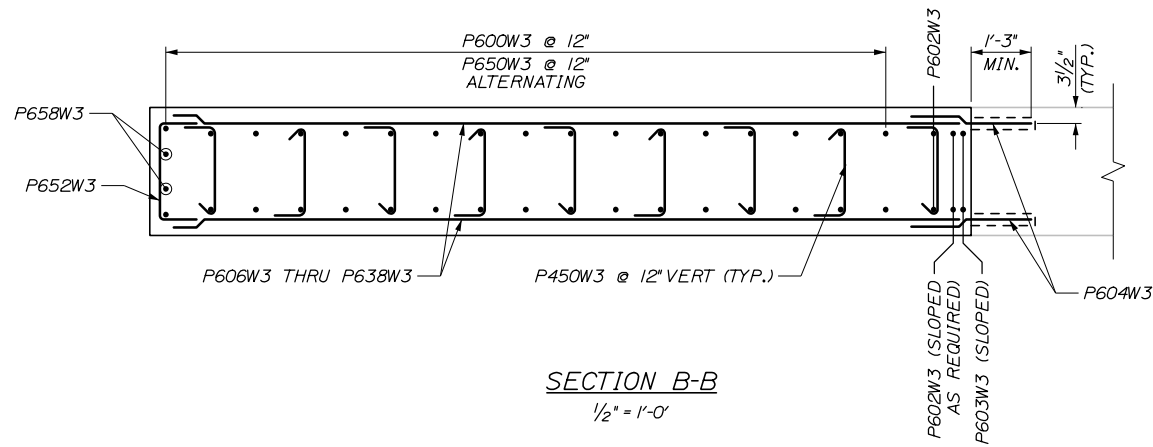
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
NORTHBOUND PIER 1
REINFORCING

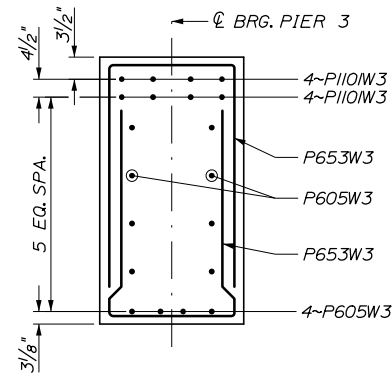
SHEET NUMBER: S-38
CONTRACT: 2019.09
93 OF 121

Date: 10/18/2018

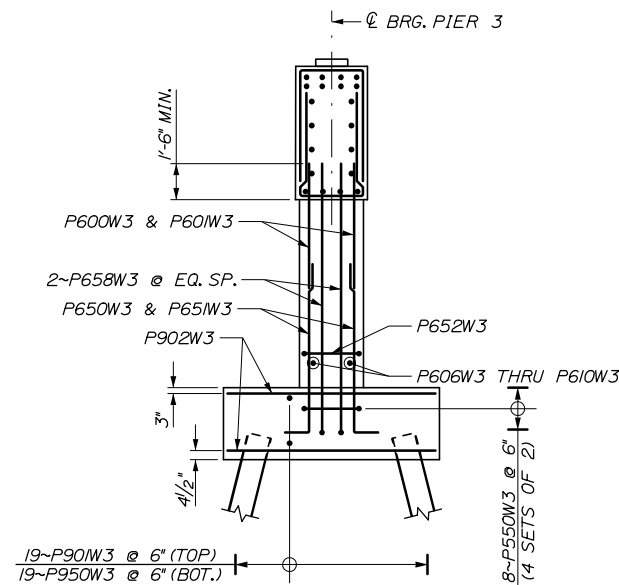
Filename: 096_Southbound Pier 3_Reinforcing.dgn



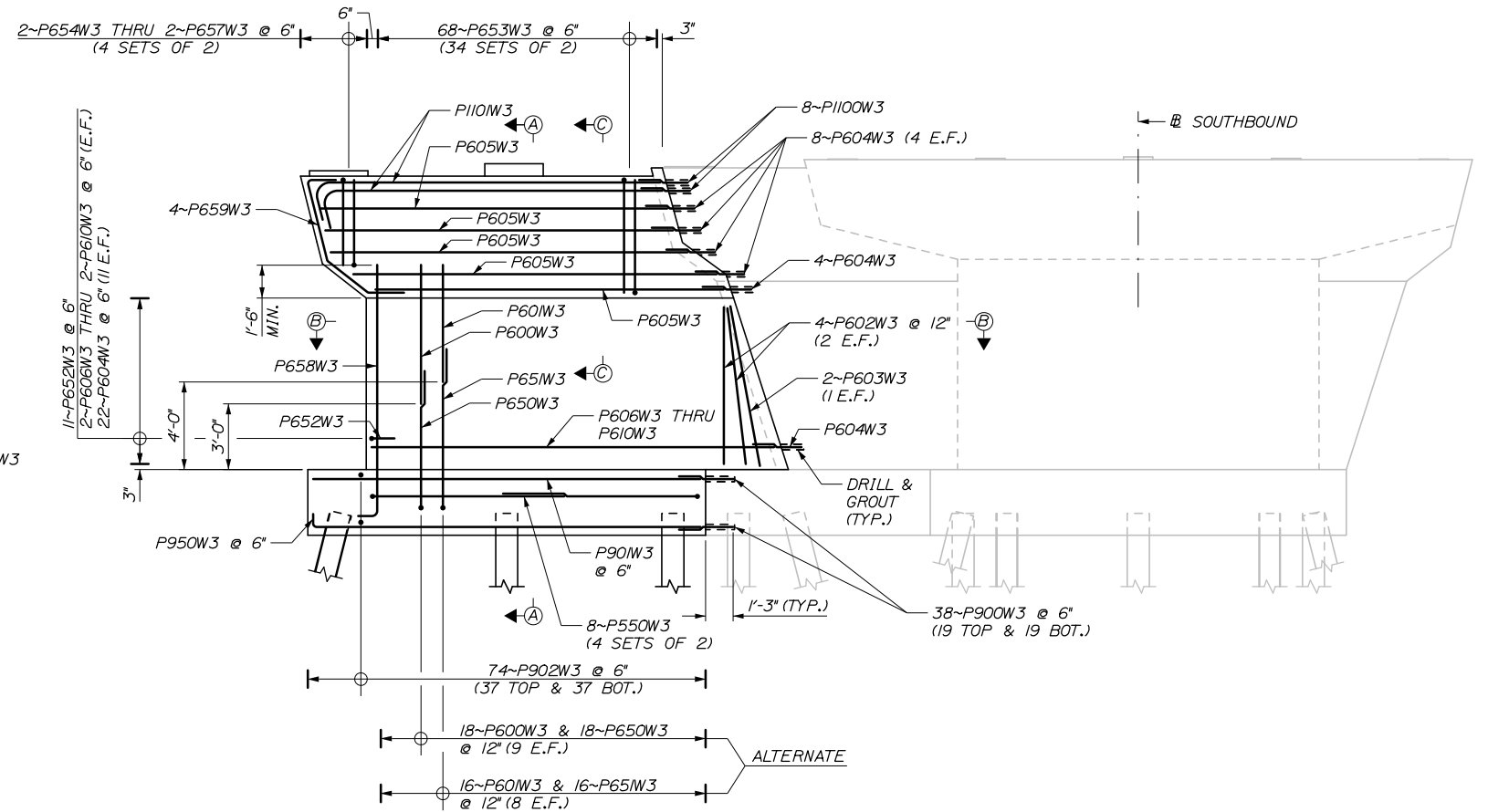
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



SECTION A-A
1/4" = 1'-0"



SOUTHBOUND BRIDGE - PIER 3
1/4" = 1'-0"

NOTES:

1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:
 #5 BAR = 2'-11"
 #6 BAR = 4'-4"
 #7 BAR = 5'-6"
 #9 BAR = 6'-6"
 #11 BAR = 8'-2"
2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR, AS APPROVED BY THE RESIDENT.
3. FOR PEDESTAL REINFORCING DETAILS SEE "NORTHBOUND PIER 3 REINFORCING" SHEET.
4. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.

Scale: AS NOTED				
No.	Revision	By	Date	

Designed by:				
HNTB				
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.				
	By	Date		By
	JKB	10\18		BRG
	ERB	10\18	In Charge of	RAL

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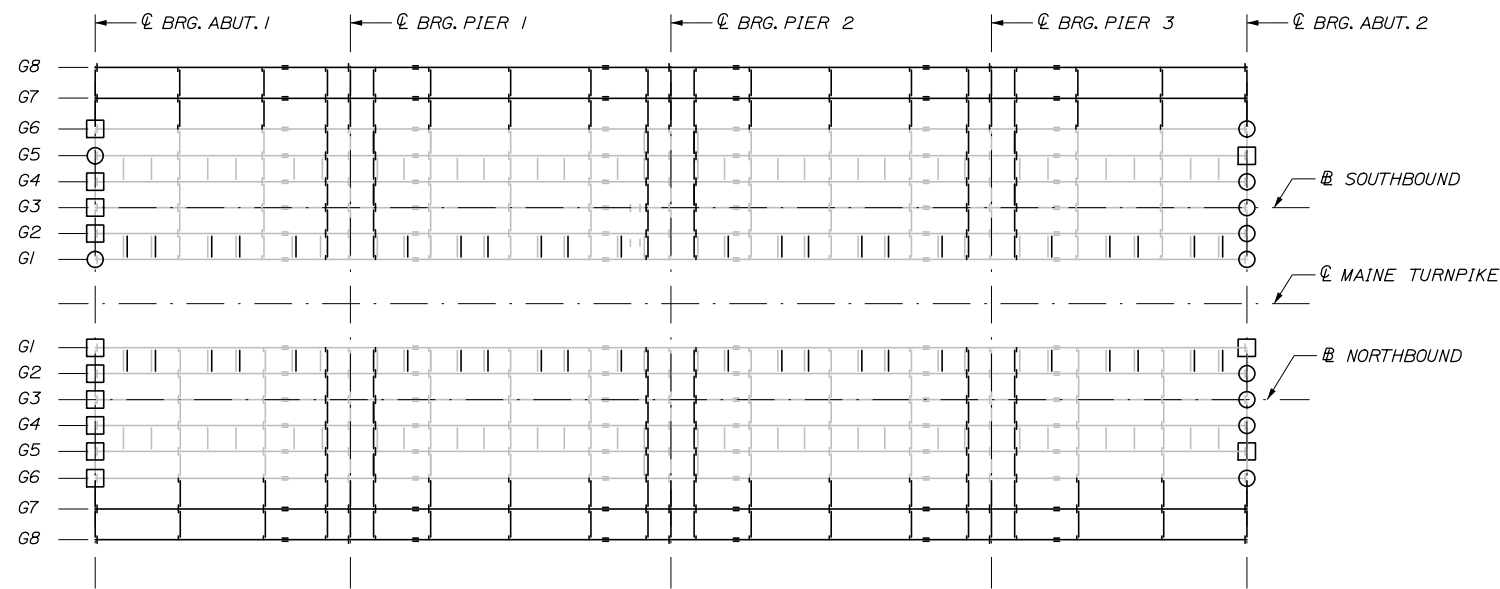
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 SOUTHBOUND PIER 3
 REINFORCING

SHEET NUMBER: S-41
 CONTRACT: 2019.09
 96 OF 121

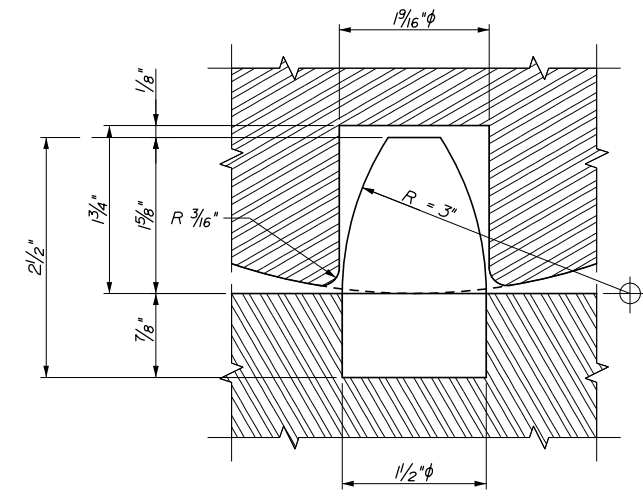
Date: 10/18/2018



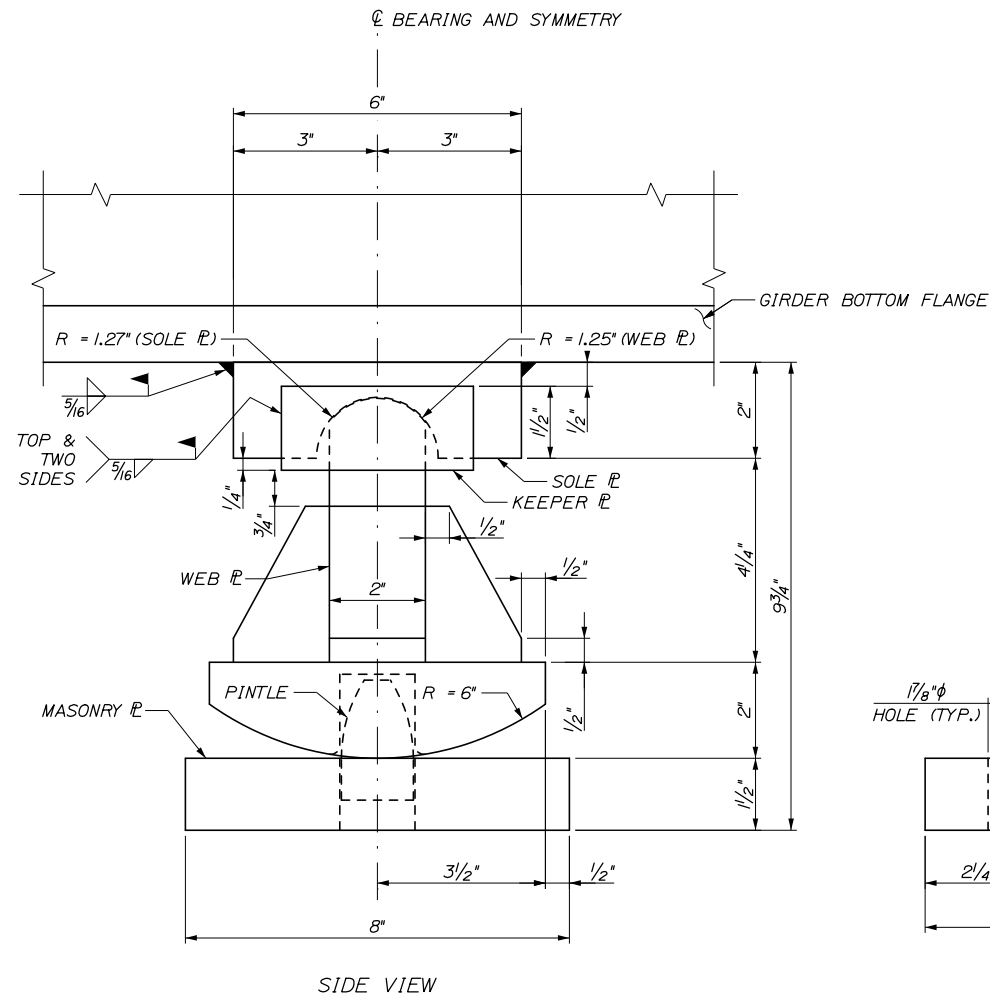
BEARING LAYOUT LEGEND
N.T.S.

LEGEND

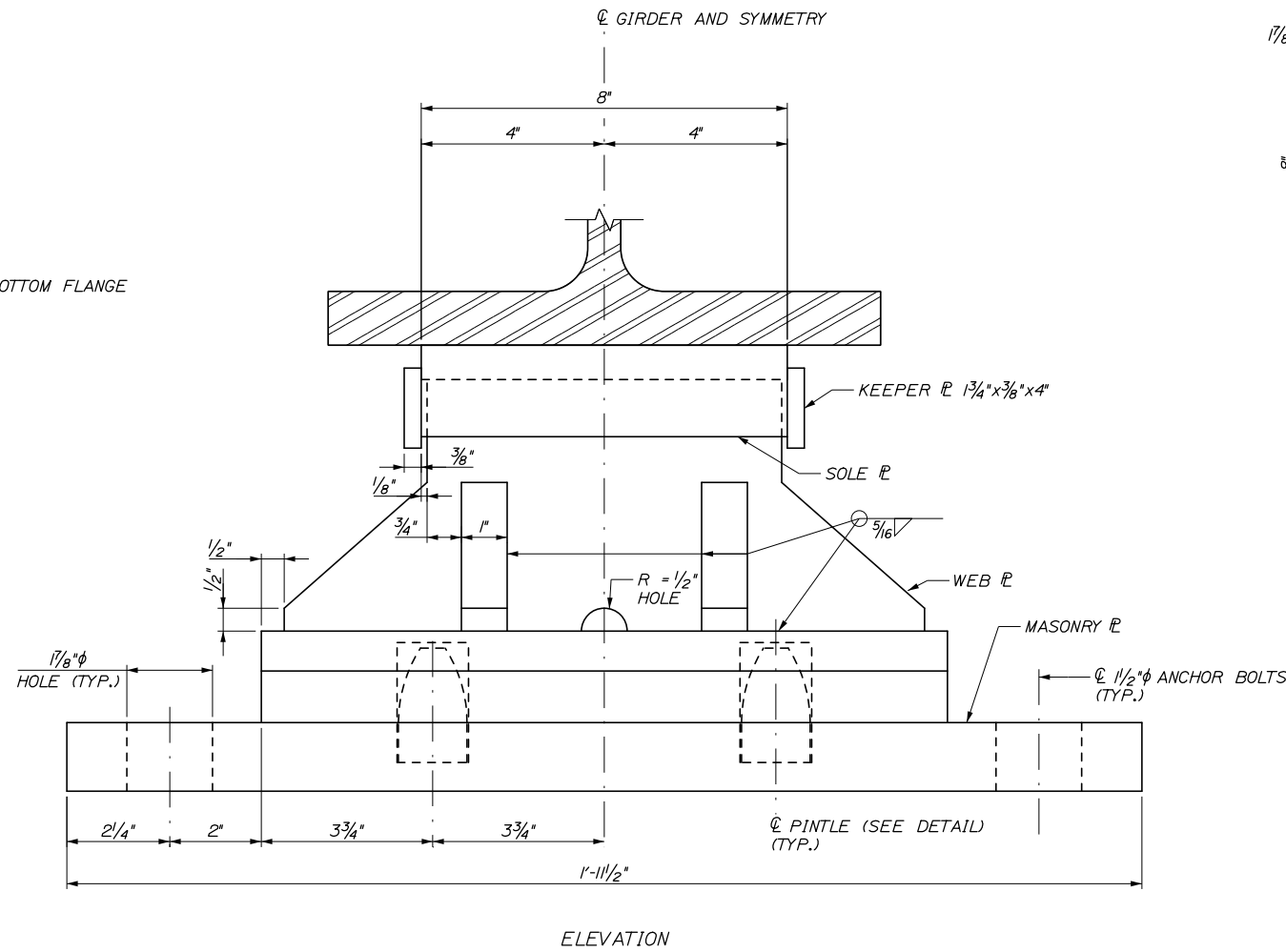
- CLEAN & PAINT BEARING (PAID UNDER ITEM 523.56)
- CLEAN, PAINT, AND RESET BEARING (PAID UNDER ITEM 523.561)



PINTLE DETAIL
1" = 1"

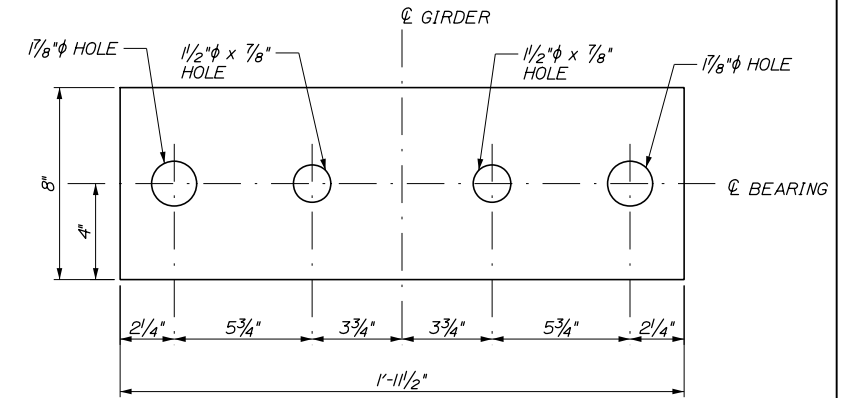


SIDE VIEW



ELEVATION

EXPANSION BEARING AT ABUTMENTS
(8 REQUIRED, PROPOSED GIRDER LOCATIONS)
6" = 1'-0"



MASONRY PLATE
3" = 1'-0"

NOTES:

1. PINTLES SHALL BE PRESS FIT.
2. UPSET THE THREADS OF THE ANCHOR RODS AFTER ASSEMBLY.
3. ALL STEEL FOR ROCKER BEARING ASSEMBLIES SHALL CONFORM TO ASTM A709, GRADE 50 AND SHALL BE GALVANIZED AFTER FABRICATION. CHARPY V-NOTCH TESTS ARE NOT REQUIRED FOR STEEL USED IN BEARINGS.
4. SEE "BEARING DETAILS II" FOR ANCHOR ROD DETAIL.
5. ANY DAMAGED OR CORRODED ANCHOR RODS ON BEARINGS BEING RESET SHALL BE REPLACED. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 523.561.

Filename: 098_Bearing Details I.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	Designed	BRG 10\18		Checked	TJP 10\18
	Drawn	ERB 10\18		In Charge of	RAL 10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

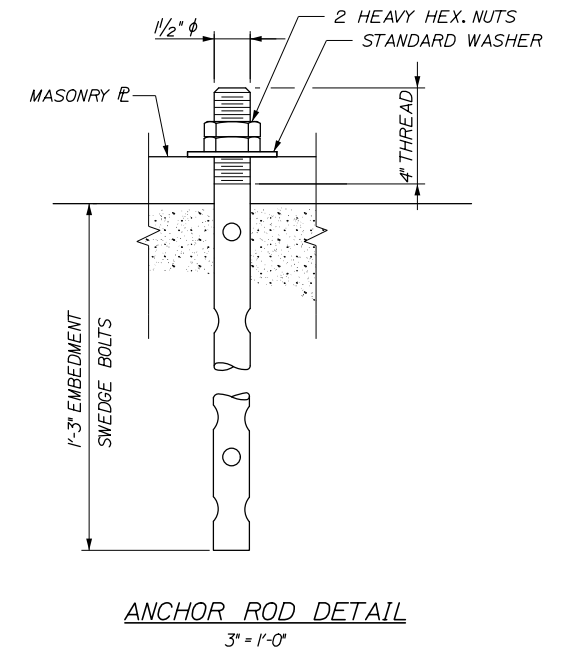
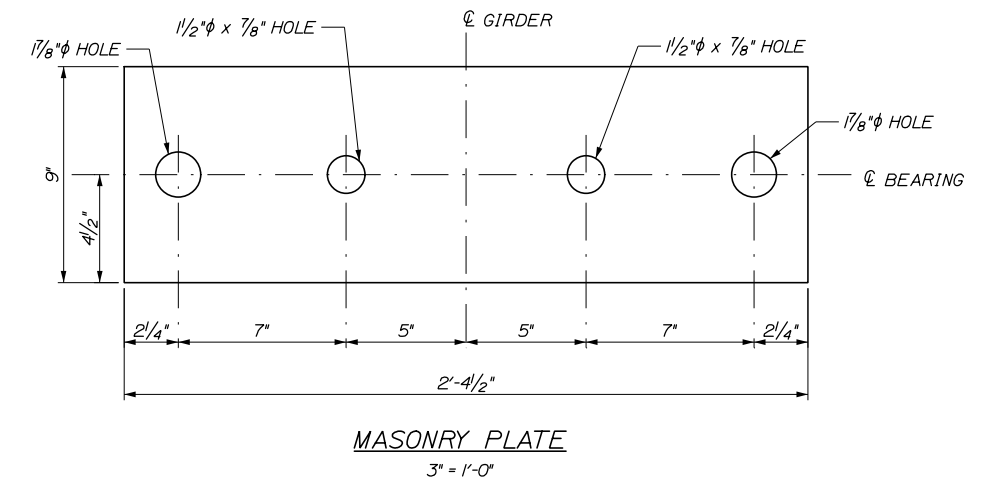
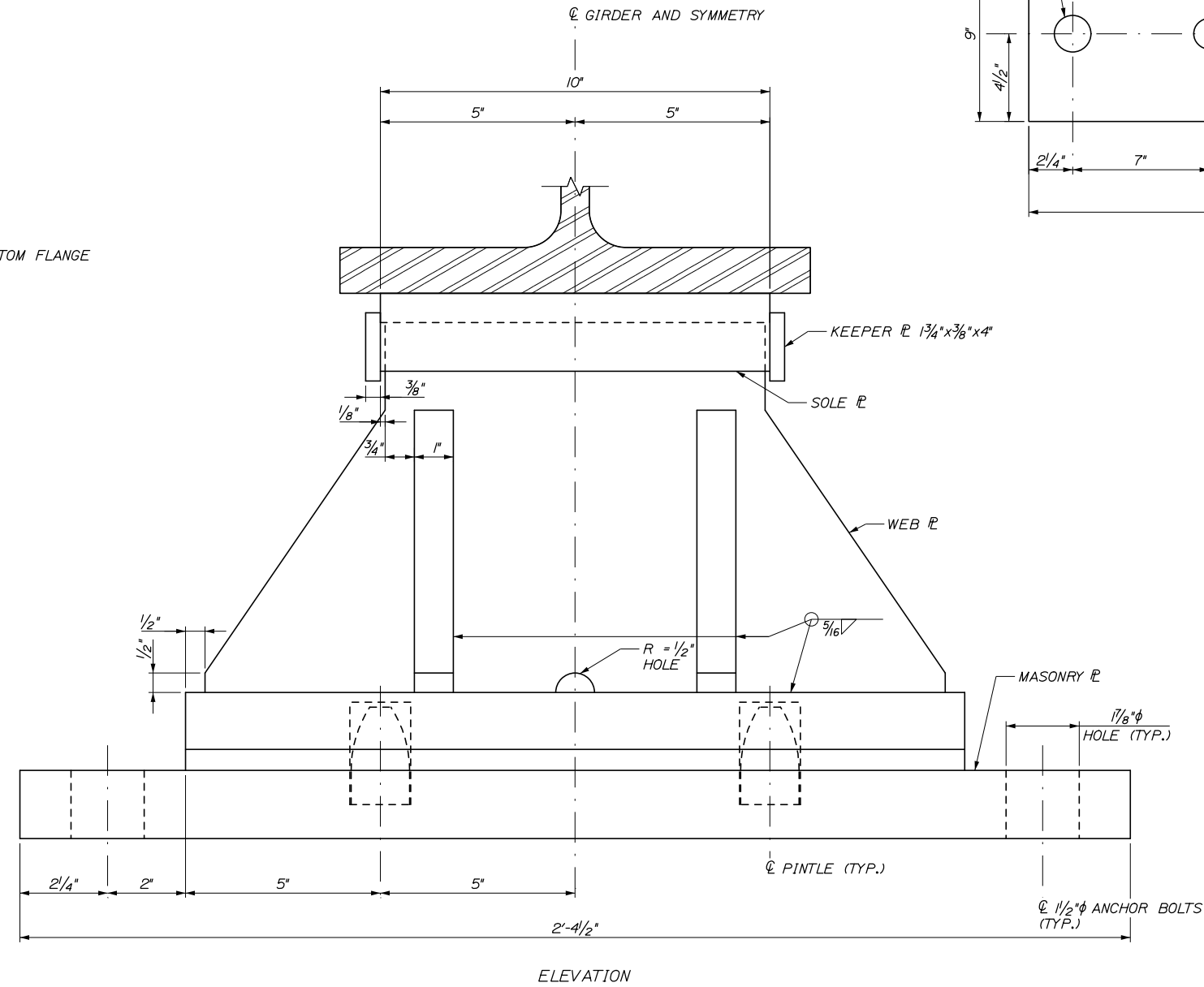
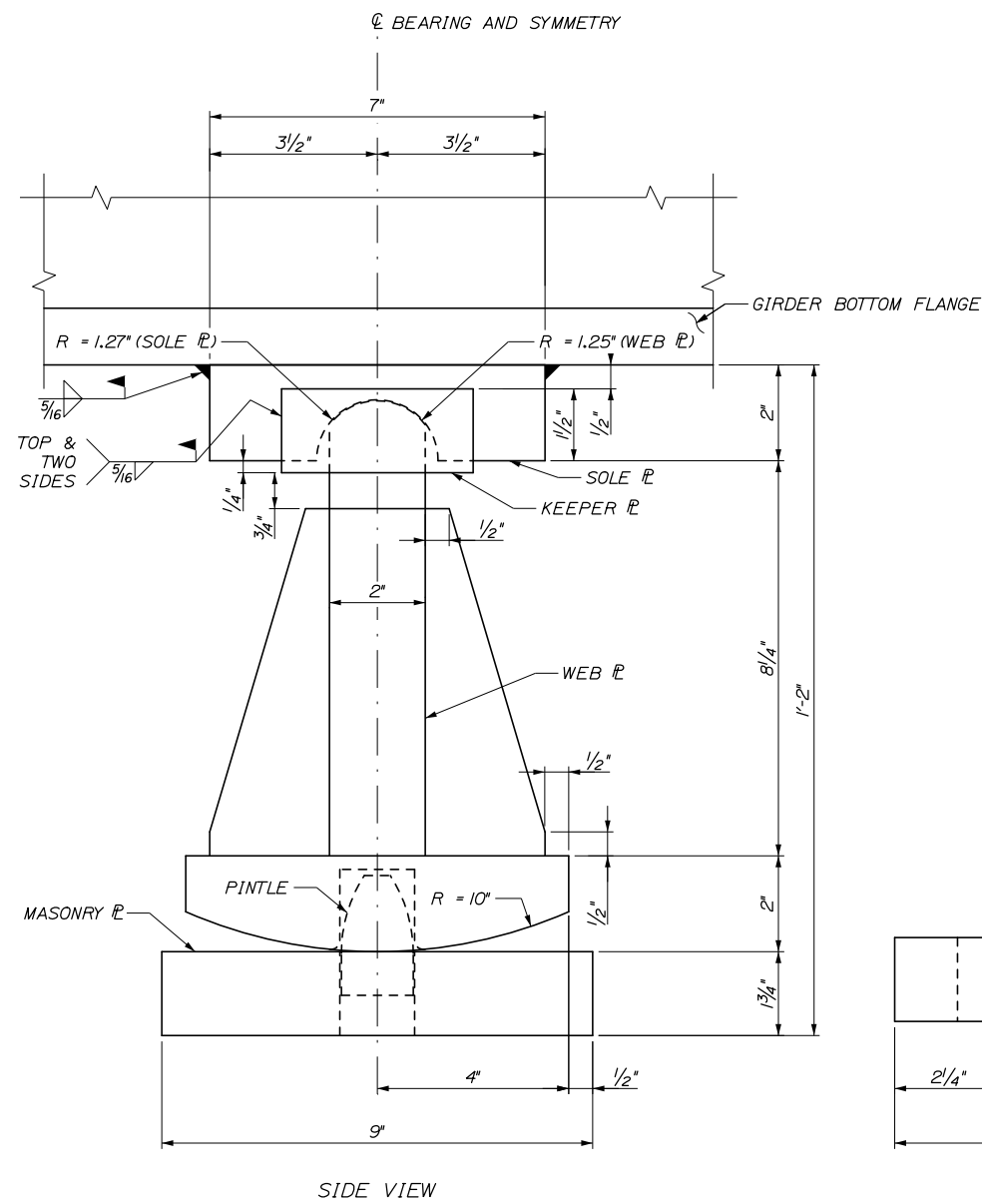
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

BEARING DETAILS I

SHEET NUMBER: S-43
CONTRACT: 2019.09
98 OF 121

NOTE:
 1. FOR NOTES AND PINTLE DETAIL SEE "BEARING DETAILS I."



EXPANSION BEARING AT PIERS 1 AND 3
 (8 REQUIRED, PROPOSED GIRDER LOCATIONS)
 6" = 1'-0"

Date: 10/18/2018

Filename: 099_Bearing_Details II.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

BEARING DETAILS II

SHEET NUMBER: S-44

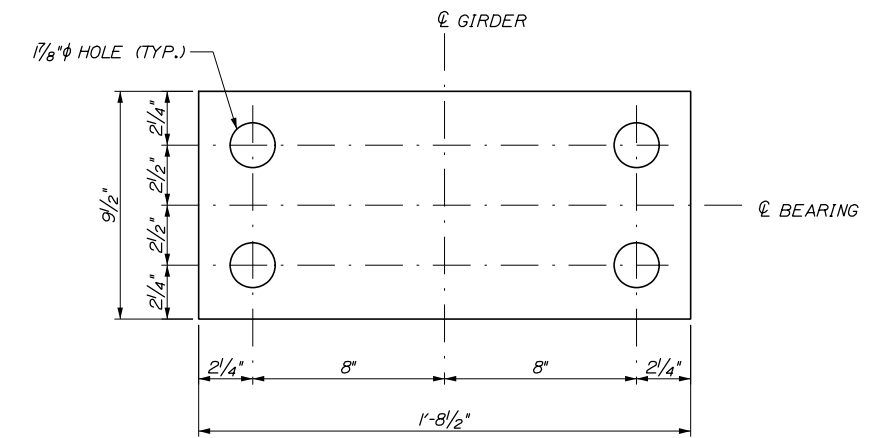
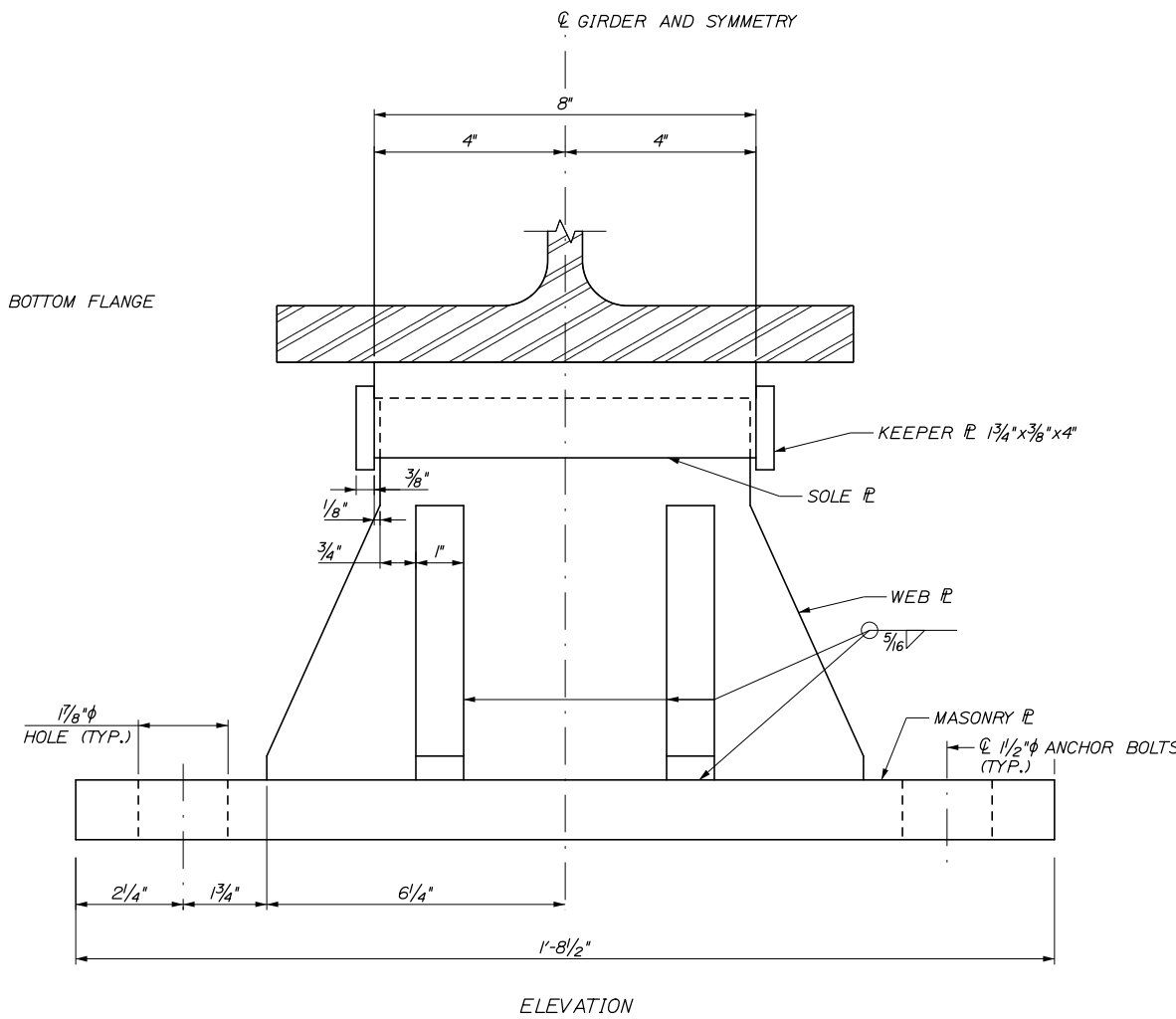
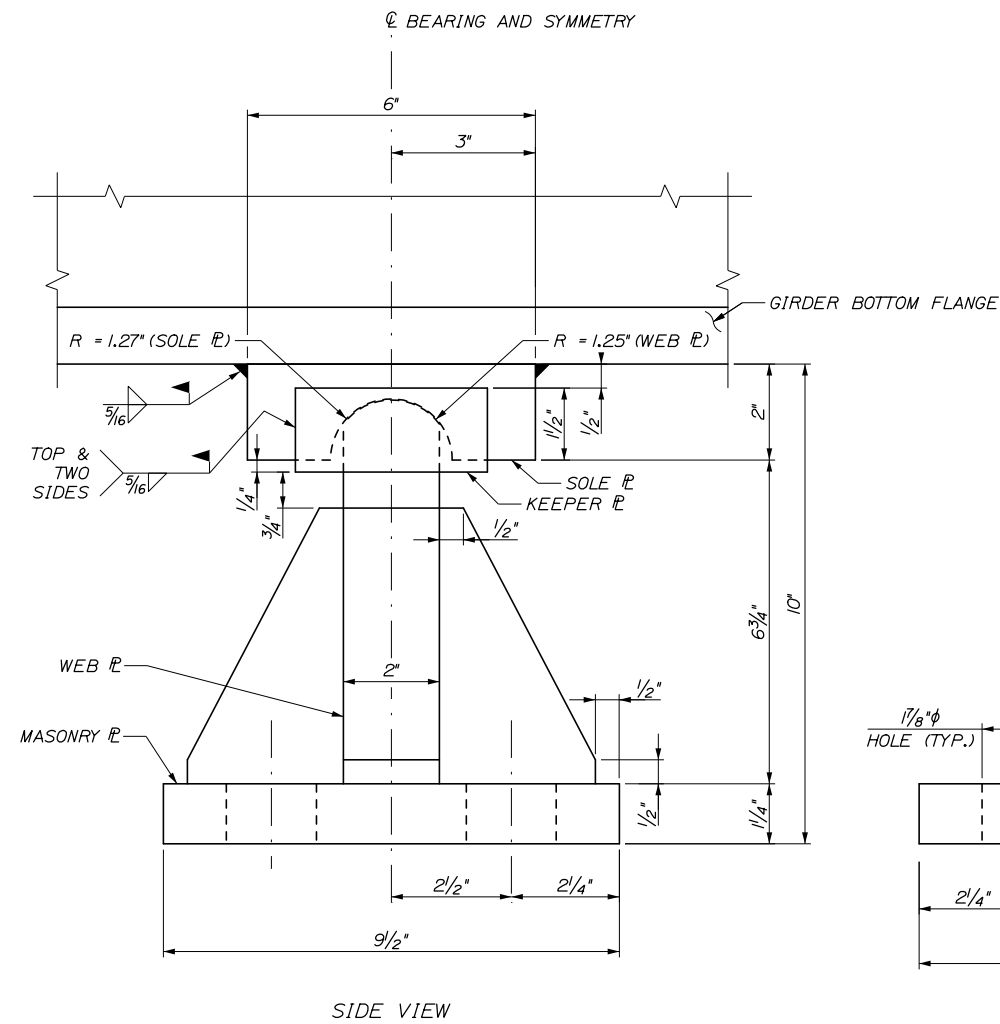
CONTRACT: 2019.09

99 OF 121

NOTES:

1. FOR NOTES SEE "BEARING DETAILS I".
2. SEE "BEARING DEATILS II" FOR ANCHOR ROD DETAIL.

Date:10/18/2018



FIXED BEARING AT PIER 2
(4 REQUIRED, PROPOSED GIRDER LOCATIONS)
6" = 1'-0"

Filename: 100_Bearing_Details III.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	BRG	10\18	Checked	TJP	10\18	
	Drawn	ERB	10\18	In Charge of	RAL	10\18

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**MAINE
TURNPIKE**

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

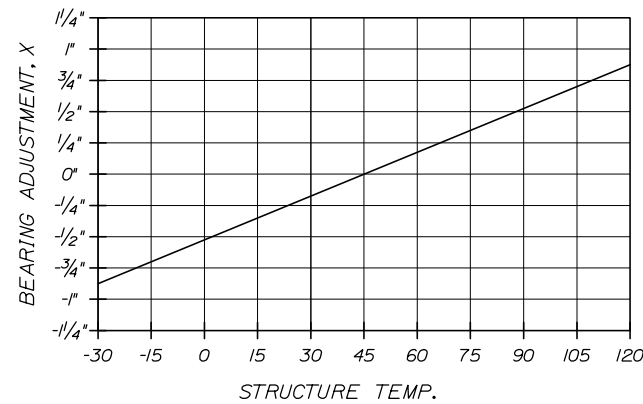
BEARING DETAILS III

SHEET NUMBER: S-45
CONTRACT: 2019.09
100 OF 121

BEARING RESETTING NOTES:

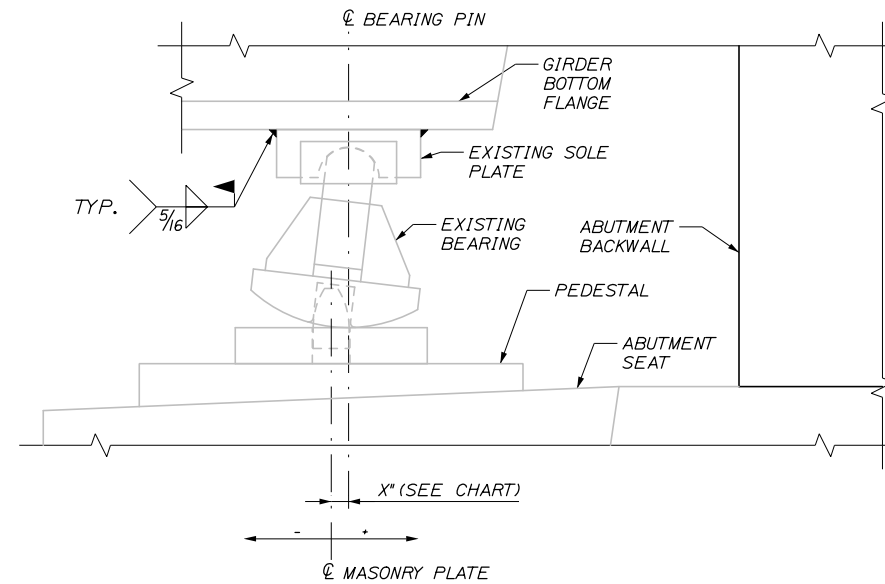
1. THE EXISTING BRIDGE SHALL BE JACKED TO ACCOMMODATE THE BEARING RESET. REFER TO SPECIAL PROVISION 524 FOR MORE INFORMATION.
2. THE CONTRACTOR SHALL INCLUDE ALL REQUIRED DETAILS TO RESTRAIN THE GIRDERS DURING JACKING OPERATIONS IN THE TEMPORARY STRUCTURAL SUPPORT SUBMITTAL.
3. TO RESET THE BEARING IN ACCORDANCE WITH THE SETTING CHART, THE ROCKER SHALL REMAIN CENTERED ON THE MASONRY PLATE AND THE SOLE PLATE SHALL BE DETACHED FROM THE GIRDER BOTTOM FLANGE AND THEN WELDED TO THE BOTTOM FLANGE IN ITS RESET POSITION. THE SOLE PLATE SHALL BE DETACHED FROM THE GIRDER BY REMOVING THE EXISTING RIVETS OR GRINDING THE EXISTING WELD.

JACKING LOAD TABLE (UNFACTORED)		
	ABUTMENTS	PIERS
DEAD LOAD	37 KIPS	125 KIPS
LIVE LOAD	62 KIPS	105 KIPS



• ADJUSTMENTS ARE AWAY FROM PIER 1 OR 3
 - ADJUSTMENTS ARE TOWARDS PIER 1 OR 3

BEARING SETTING CHART



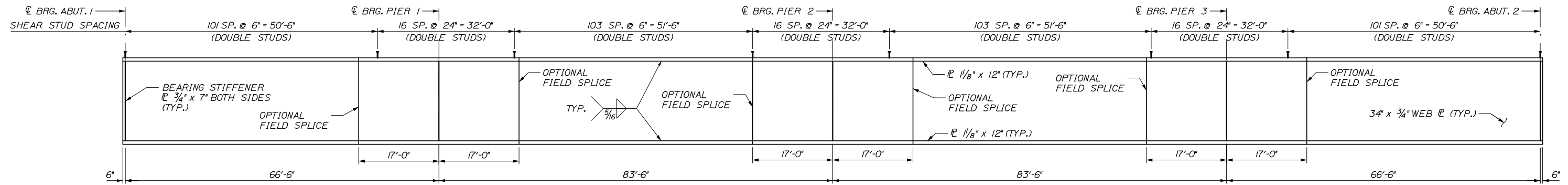
BEARING PLATE ALIGNMENT DETAIL
 3" = 1'-0"

Date: 10/18/2018

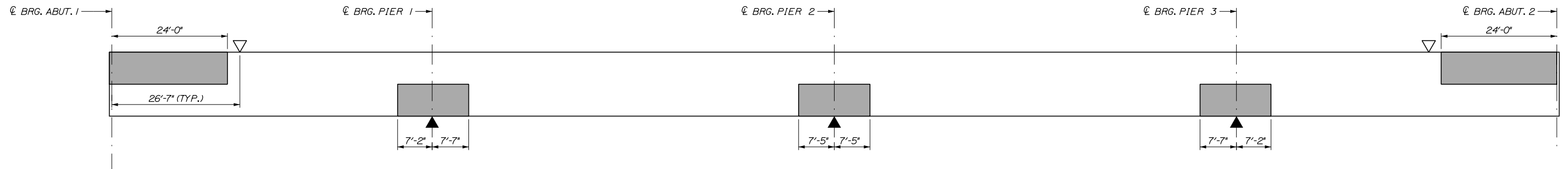
Filename: 101_Bearing_Details IV.dgn

Scale: AS NOTED		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS BEARING DETAILS IV																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision							By	Date													CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>BRG 10\18</td> <td>Checked</td> <td>TJP 10\18</td> </tr> <tr> <td>Drawn</td> <td>ERB 10\18</td> <td>In Charge of</td> <td>RAL 10\18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	BRG 10\18	Checked	TJP 10\18	Drawn	ERB 10\18
No.	Revision	By	Date																																		
By	Date	By	Date																																		
Designed	BRG 10\18	Checked	TJP 10\18																																		
Drawn	ERB 10\18	In Charge of	RAL 10\18																																		
										SHEET NUMBER: S-46 101 OF 121																											

Date: 10/18/2018



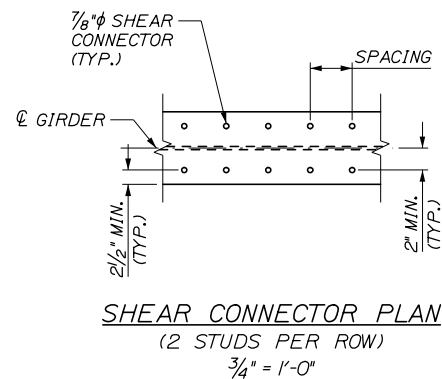
PROPOSED GIRDER ELEVATION
 (PROPOSED GIRDER SHOWN, EXISTING GIRDER SIMILAR)
 (456 STUDS PER GIRDER)
 N.T.S.



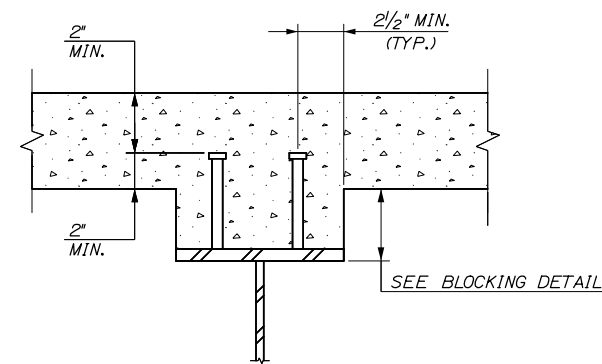
INDICATES AREA ALWAYS IN COMPRESSION. ALL OTHER AREAS ARE IN TENSION OR HAVE STRESS REVERSALS.

GIRDER STRESS DIAGRAM
 N.T.S.

▽ POINT OF MAXIMUM POSITIVE MOMENT
 ▲ POINT OF MAXIMUM NEGATIVE MOMENT



SHEAR CONNECTOR PLAN
 (2 STUDS PER ROW)
 $\frac{3}{4}'' = 1'-0''$



NOTE:
 SHEAR CONNECTOR LAYOUT SHOWN ON THE PROPOSED GIRDER ELEVATION APPLIES TO EXISTING GIRDERS ALSO.

SHEAR CONNECTOR DETAIL
 N.T.S.

NOTE:
 CONTRACTOR MAY USE EQUIVALENT ROLLED SECTION IN PLACE OF PLATE GIRDER IF AVAILABLE AT NO ADDITIONAL COST.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	JKB	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

STRUCTURAL STEEL DETAILS I

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

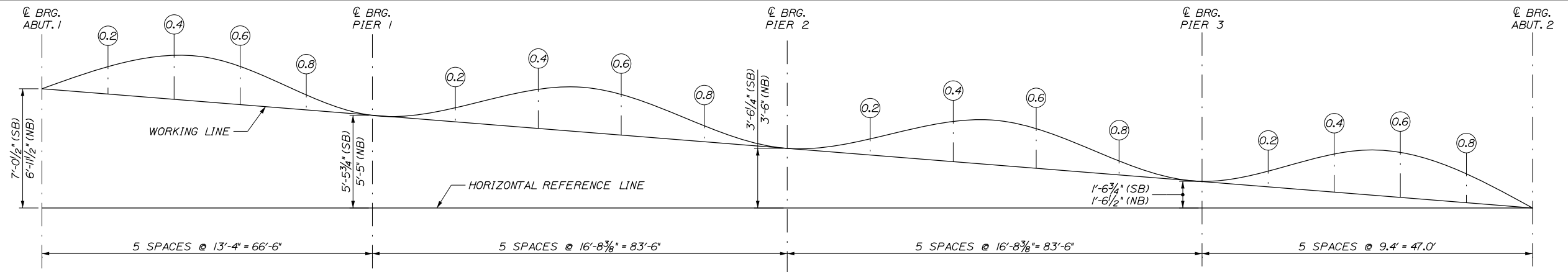
CONTRACT: 2019.09

SHEET NUMBER: S-48

103 OF 121

Filename: 103_StructuralDetails 1.dgn

Date: 10/18/2018



		TOTAL NORTHBOUND CAMBER VALUES (IN)																				
		CL BRG. ABUT. 1	SPAN 1 = 66.5'				CL BRG. PIER 1	SPAN 2 = 83.5'				CL BRG. PIER 2	SPAN 3 = 83.5'				CL BRG. PIER 3	SPAN 4 = 66.5'				CL BRG. ABUT. 2
			0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8	
G7	DISTANCE FROM ABUT. 1 (FT)	0.00	13.30	26.60	39.90	53.20	66.50	83.20	99.90	116.60	133.30	150.00	166.70	183.40	200.10	216.80	233.50	246.80	260.10	273.40	286.70	300.00
	STEEL DEAD LOAD	0.00	0.08	0.11	0.10	0.04	0.00	0.06	0.13	0.13	0.06	0.00	0.06	0.13	0.13	0.06	0.00	0.04	0.10	0.11	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.32	0.47	0.37	0.16	0.00	0.25	0.54	0.53	0.24	0.00	0.24	0.53	0.54	0.25	0.00	0.16	0.37	0.47	0.32	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.10	0.13	0.11	0.04	0.00	0.10	0.18	0.18	0.10	0.00	0.10	0.18	0.18	0.10	0.00	0.04	0.11	0.13	0.10	0.00
	VERTICAL CURVE ORDINATES	0.00	-0.19	-0.28	-0.28	-0.19	0.00	-0.29	-0.44	-0.44	-0.29	0.00	-0.29	-0.44	-0.44	-0.29	0.00	-0.19	-0.28	-0.28	-0.19	0.00
	TOTAL	0.00	0.32	0.43	0.30	0.04	0.00	0.12	0.41	0.40	0.10	0.00	0.10	0.40	0.41	0.12	0.00	0.04	0.30	0.43	0.32	0.00
G8	DISTANCE FROM ABUT. 1 (FT)	0.00	13.30	26.60	39.90	53.20	66.50	83.20	99.90	116.60	133.30	150.00	166.70	183.40	200.10	216.80	233.50	246.80	260.10	273.40	286.70	300.00
	STEEL DEAD LOAD	0.00	0.08	0.12	0.10	0.04	0.00	0.06	0.14	0.13	0.06	0.00	0.06	0.13	0.14	0.06	0.00	0.04	0.10	0.12	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.31	0.46	0.37	0.14	0.00	0.25	0.54	0.54	0.24	0.00	0.24	0.54	0.54	0.25	0.00	0.14	0.37	0.46	0.31	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.10	0.13	0.11	0.04	0.00	0.10	0.20	0.19	0.10	0.00	0.10	0.19	0.20	0.10	0.00	0.04	0.11	0.13	0.10	0.00
	VERTICAL CURVE ORDINATES	0.00	-0.19	-0.28	-0.28	-0.19	0.00	-0.29	-0.44	-0.44	-0.29	0.00	-0.29	-0.44	-0.44	-0.29	0.00	-0.19	-0.28	-0.28	-0.19	0.00
	TOTAL	0.00	0.31	0.43	0.30	0.03	0.00	0.12	0.45	0.43	0.10	0.00	0.10	0.43	0.45	0.12	0.00	0.03	0.30	0.43	0.31	0.00

		TOTAL SOUTHBOUND CAMBER VALUES (IN)																				
		CL BRG. ABUT. 1	SPAN 1 = 66.5'				CL BRG. PIER 1	SPAN 2 = 83.5'				CL BRG. PIER 2	SPAN 3 = 83.5'				CL BRG. PIER 3	SPAN 4 = 66.5'				CL BRG. ABUT. 2
			0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8	
G7	DISTANCE FROM ABUT. 1 (FT)	0.00	13.30	26.60	39.90	53.20	66.50	83.20	99.90	116.60	133.30	150.00	166.70	183.40	200.10	216.80	233.50	246.80	260.10	273.40	286.70	300.00
	STEEL DEAD LOAD	0.00	0.08	0.11	0.10	0.04	0.00	0.06	0.13	0.13	0.06	0.00	0.06	0.13	0.13	0.06	0.00	0.04	0.10	0.11	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.32	0.47	0.37	0.16	0.00	0.25	0.54	0.53	0.24	0.00	0.24	0.53	0.54	0.25	0.00	0.16	0.37	0.47	0.32	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.10	0.13	0.11	0.04	0.00	0.10	0.18	0.18	0.10	0.00	0.10	0.18	0.18	0.10	0.00	0.04	0.11	0.13	0.10	0.00
	VERTICAL CURVE ORDINATES	0.00	-0.23	-0.34	-0.34	-0.23	0.00	-0.36	-0.54	-0.54	-0.36	0.00	-0.36	-0.54	-0.54	-0.36	0.00	-0.23	-0.34	-0.34	-0.23	0.00
	TOTAL	0.00	0.28	0.37	0.23	0.00	0.00	0.05	0.31	0.30	0.04	0.00	0.04	0.30	0.31	0.05	0.00	0.00	0.23	0.37	0.28	0.00
G8	DISTANCE FROM ABUT. 1 (FT)	0.00	13.30	26.60	39.90	53.20	66.50	83.20	99.90	116.60	133.30	150.00	166.70	183.40	200.10	216.80	233.50	246.80	260.10	273.40	286.70	300.00
	STEEL DEAD LOAD	0.00	0.08	0.12	0.10	0.04	0.00	0.06	0.14	0.13	0.06	0.00	0.06	0.13	0.14	0.06	0.00	0.04	0.10	0.12	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.31	0.46	0.37	0.14	0.00	0.25	0.54	0.54	0.24	0.00	0.24	0.54	0.54	0.25	0.00	0.14	0.37	0.46	0.31	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.10	0.13	0.11	0.04	0.00	0.10	0.20	0.19	0.10	0.00	0.10	0.19	0.20	0.10	0.00	0.04	0.11	0.13	0.10	0.00
	VERTICAL CURVE ORDINATES	0.00	-0.23	-0.34	-0.34	-0.23	0.00	-0.36	-0.54	-0.54	-0.36	0.00	-0.36	-0.54	-0.54	-0.36	0.00	-0.23	-0.34	-0.34	-0.23	0.00
	TOTAL	0.00	0.26	0.37	0.23	-0.01	0.00	0.05	0.35	0.33	0.04	0.00	0.04	0.33	0.35	0.05	0.00	-0.01	0.23	0.37	0.26	0.00

Filename: 105_StructuralDetails_3.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
By	Date	By	Date
Designed	JKB 10\18	Checked	JKB 10\18
Drawn	ERB 10\18	In Charge of	RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

STRUCTURAL STEEL DETAILS III

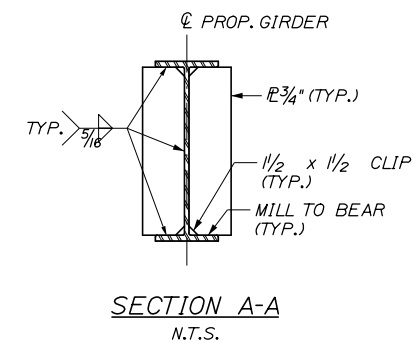
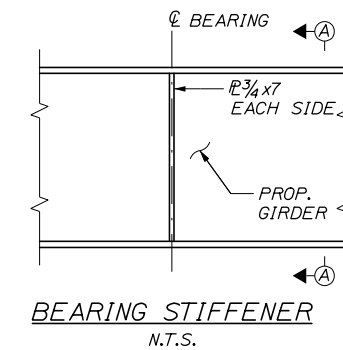
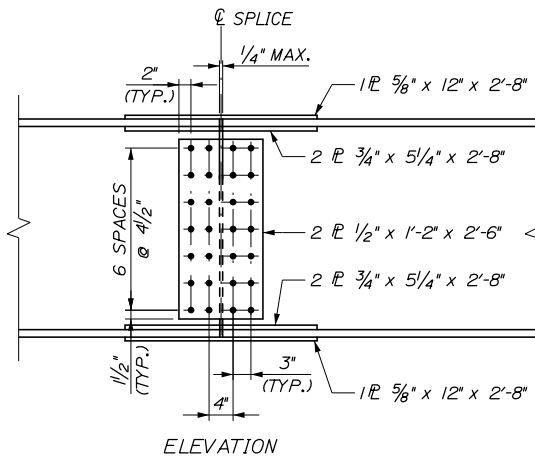
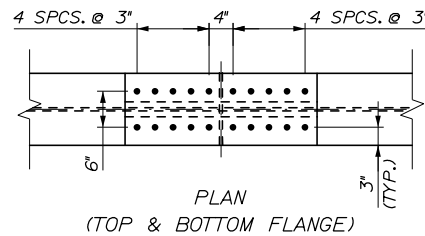
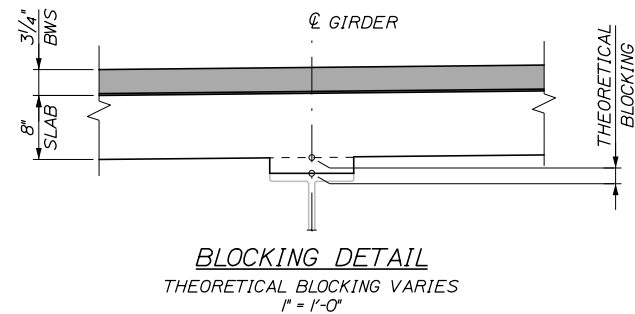
SHEET NUMBER: S-50
105 OF 121

CONTRACT: 2019.09

Date:10/18/2018

NORTHBOUND BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS																					
GIRDER	CL BRG. ABUT. 1	SPAN 1 = 66.5'				CL BRG. PIER 1	SPAN 2 = 83.5'				CL BRG. PIER 2	SPAN 3 = 83.5'				CL BRG. PIER 3	SPAN 4 = 66.5'				CL BRG. ABUT. 2
		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8	
G1	58.91	58.52	58.13	57.76	57.39	57.03	56.59	56.16	55.74	55.33	54.94	54.56	54.19	53.83	53.48	53.15	52.90	52.65	52.41	52.17	51.95
G2	59.05	58.65	58.27	57.89	57.52	57.16	56.72	56.29	55.87	55.47	55.07	54.69	54.32	53.96	53.62	53.29	53.03	52.78	52.54	52.31	52.08
G3	59.18	58.79	58.40	58.03	57.66	57.30	56.86	56.43	56.01	55.60	55.21	54.83	54.46	54.10	53.75	53.42	53.17	52.92	52.68	52.44	52.22
G4	59.05	58.65	58.27	57.89	57.52	57.16	56.72	56.29	55.87	55.47	55.07	54.69	54.32	53.96	53.62	53.29	53.03	52.78	52.54	52.31	52.08
G5	58.91	58.52	58.13	57.76	57.39	57.03	56.59	56.16	55.74	55.33	54.94	54.56	54.19	53.83	53.48	53.15	52.90	52.65	52.41	52.17	51.95
G6	58.77	58.38	57.99	57.62	57.25	56.89	56.45	56.02	55.60	55.19	54.80	54.42	54.05	53.69	53.34	53.01	52.76	52.51	52.27	52.03	51.81
G7	58.52	58.13	57.74	57.37	57.00	56.64	56.20	55.77	55.35	54.94	54.55	54.17	53.80	53.44	53.09	52.76	52.51	52.26	52.02	51.78	51.56
G8	58.20	57.81	57.42	57.05	56.68	56.32	55.88	55.45	55.03	54.62	54.23	53.85	53.48	53.12	52.77	52.44	52.19	51.94	51.70	51.46	51.24

SOUTHBOUND BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS																					
GIRDER	CL BRG. ABUT. 1	SPAN 1 = 66.5'				CL BRG. PIER 1	SPAN 2 = 83.5'				CL BRG. PIER 2	SPAN 3 = 83.5'				CL BRG. PIER 3	SPAN 4 = 66.5'				CL BRG. ABUT. 2
		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8	
G1	59.05	58.64	58.23	57.84	57.45	57.08	56.62	56.17	55.74	55.33	54.93	54.55	54.18	53.82	53.48	53.16	52.91	52.67	52.44	52.22	52.01
G2	59.19	58.77	58.37	57.97	57.59	57.21	56.75	56.31	55.88	55.46	55.07	54.68	54.31	53.96	53.62	53.29	53.05	52.81	52.58	52.36	52.15
G3	59.32	58.91	58.50	58.11	57.72	57.35	56.89	56.44	56.01	55.60	55.20	54.82	54.45	54.09	53.75	53.43	53.18	52.94	52.71	52.49	52.28
G4	59.19	58.77	58.37	57.97	57.59	57.21	56.75	56.31	55.88	55.46	55.07	54.68	54.31	53.96	53.62	53.29	53.05	52.81	52.58	52.36	52.15
G5	59.05	58.64	58.23	57.84	57.45	57.08	56.62	56.17	55.74	55.33	54.93	54.55	54.18	53.82	53.48	53.16	52.91	52.67	52.44	52.22	52.01
G6	58.91	58.50	58.09	57.70	57.31	56.94	56.48	56.03	55.60	55.19	54.79	54.41	54.04	53.68	53.34	53.02	52.77	52.53	52.30	52.08	51.87
G7	58.66	58.25	57.84	57.45	57.06	56.69	56.23	55.78	55.35	54.94	54.54	54.16	53.79	53.43	53.09	52.77	52.52	52.28	52.05	51.83	51.62
G8	58.34	57.93	57.52	57.13	56.74	56.37	55.91	55.46	55.03	54.62	54.22	53.84	53.47	53.11	52.77	52.45	52.20	51.96	51.73	51.51	51.30



NOTES:

- PRIOR TO PROFILING OF THE GIRDERS THE CONTRACTOR SHALL HAVE SET THE GIRDERS TO THEIR FINAL ELEVATION AND INSTALLED ALL NECESSARY DIAPHRAGMS AND/OR TEMPORARY BRACES NECESSARY TO HOLD THE GIRDERS IN THEIR FINAL PLUMB POSITION.
- THE CONTRACTOR SHALL INSTALL PROTECTIVE SHIELDING AND ACCEPTABLE SAFETY LINES OR SHIELDING PRIOR TO PROFILING THE GIRDERS.
- THEORETICAL BLOCKING HEIGHTS ARE TAKEN FROM BOTTOM OF SLAB TO TOP OF TOP FLANGE ALONG THE CENTERLINE OF GIRDER FOR ALL GIRDERS, INCLUDING THE NEW PLATE GIRDERS.

Filename: 106_Structural Details 4.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	JKB	10\18		TJP	10\18
	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

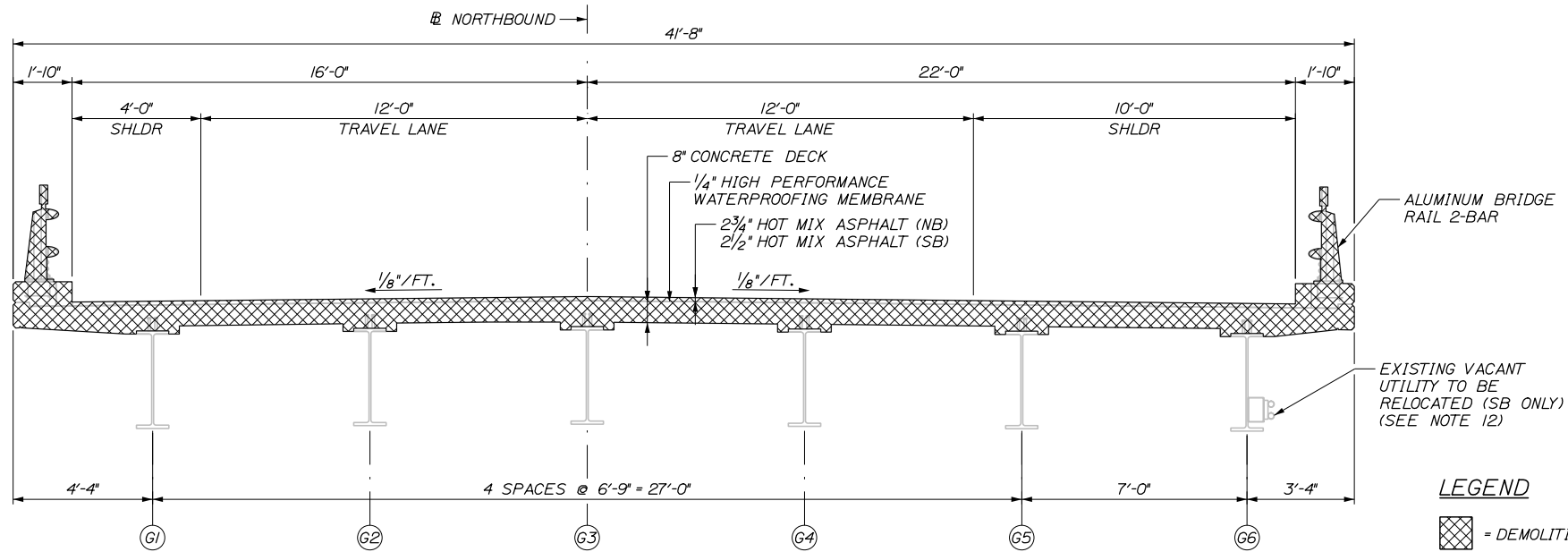
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
STRUCTURAL STEEL DETAILS IV

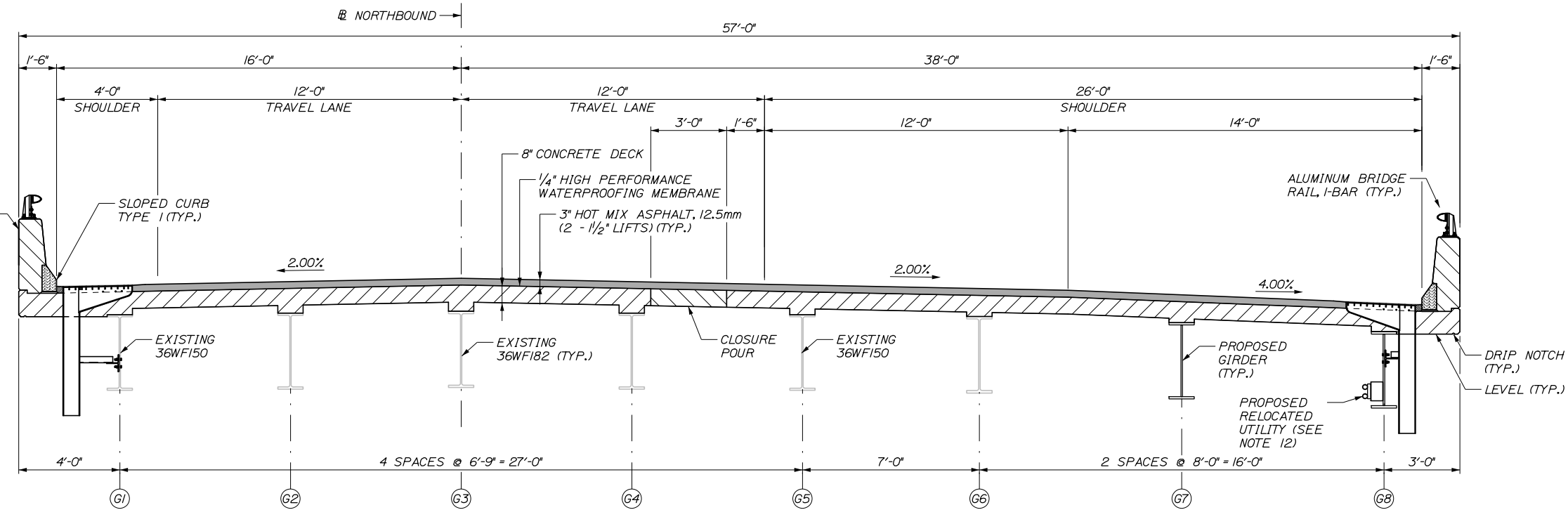
SHEET NUMBER: S-51
CONTRACT: 2019.09
106 OF 121

Date: 10/18/2018



EXISTING SECTION

(NB LOOKING UPSTATION SHOWN, SB LOOKING UPSTATION OPPOSITE HAND)
 $\frac{3}{8}'' = 1'-0''$



TRANSVERSE SECTION

(NB LOOKING UPSTATION SHOWN, SB LOOKING UPSTATION OPP. HAND)
 $\frac{3}{8}'' = 1'-0''$

SUPERSTRUCTURE NOTES:

1. THE USE OF PRECAST DECK PANELS IS PROHIBITED.
2. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS: PARAPET SURFACES, VERTICAL FACES OF THE DECK, FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE, AND ALL EXPOSED CONCRETE SURFACES ON THE END POSTS.
3. ALL BRIDGE PARAPET CONCRETE, INCLUDING INSIDE FACE, TOP FACE AND END POSTS SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE.
4. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
5. GRANITE CURB JOINTS SHALL LINE UP WITH PARAFFIN AND DUMMY JOINTS.
6. SHOP DRAWINGS FOR BAR CHAIRS USED WITH REINFORCING STEEL IN SLAB CONSTRUCTION SHALL BE SUBMITTED WITH REQUIRED SPACING TO THE RESIDENT FOR APPROVAL. BAR CHAIRS SHALL BE EPOXY-COATED OR PLASTIC PROTECTED.
7. PRIOR TO INSTALLING THE PROPOSED SHEAR CONNECTORS THE CONTRACTOR SHALL CLEAN THE GIRDER TOP FLANGE SO THAT IT IS FREE OF PAINT, INCLUDING LEAD BASED, CONCRETE DEBRIS, RUST, SCALE, OIL AND OTHER CONTAMINATES THAT WOULD ADVERSELY AFFECT THE WELDING OPERATION. ALL GRINDING SHALL BE PERFORMED IN THE LONGITUDINAL DIRECTION OF THE BEAM. PAYMENT FOR PREPARING GIRDER TOP FLANGE FOR INSTALLATION OF PROPOSED SHEAR CONNECTORS SHALL BE INCIDENTAL TO ITEM 505.08 SHEAR CONNECTORS. REMOVAL OF THE LEAD BASED PAINT SHALL BE IN ACCORDANCE WITH SP 105.2.4.2.
8. FORM 1" V-GROOVE ON THE FASCIA AT THE HORIZONTAL JOINT BETWEEN THE PARAPET AND SLAB.
9. ADJUST REINFORCEMENT TO FIT AROUND BRIDGE DRAINS IN A MANNER APPROVED BY THE RESIDENT. DO NOT CUT TRANSVERSE REINFORCEMENT.
10. CONCRETE USED IN THE LONGITUDINAL CLOSURE POUR SHALL UTILIZE A TYPE III PORTLAND CEMENT AND INCORPORATE A SHRINKAGE-REDUCING ADMIXTURE FROM THE MAINEDOT QUALIFIED PRODUCTS LIST.
11. THE SUPERSTRUCTURE SLAB CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION AND THE CONCRETE SHALL BE KEPT PLASTIC ONE COMPLETE SPAN BEHIND THE SPAN BEING PLACED.
12. RELOCATION OF EXISTING VACANT UTILITY SHALL BE INCIDENTAL TO CONTRACT ITEMS. HARDWARE AND BOLT SPACING SHALL MATCH EXISTING. PROPOSED GIRDER HOLES SHALL BE SHOP DRILLED TO ACCOMMODATE RELOCATION OF VACANT UTILITY.

Filename: 107_Typical Section.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	Designed	JKB 10\18		Checked	TJP 10\18
	Drawn	ERB 10\18		In Charge of	RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

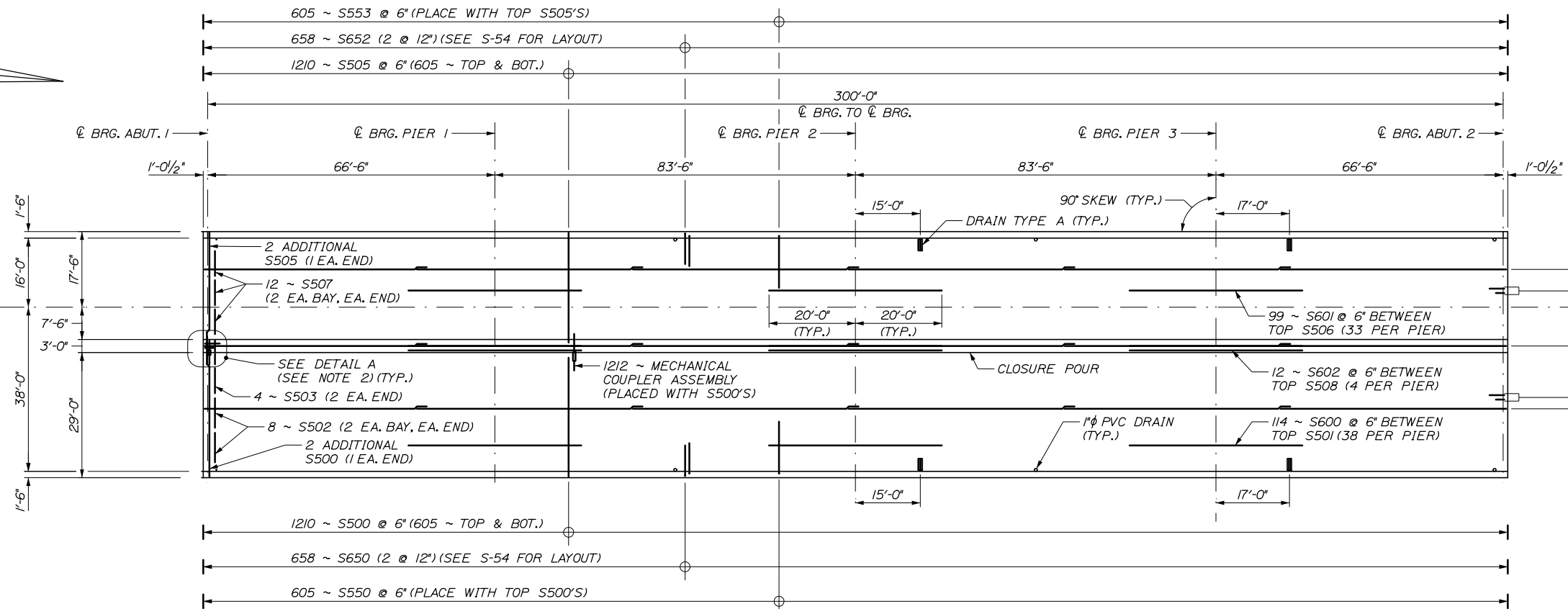
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

TYPICAL SECTION

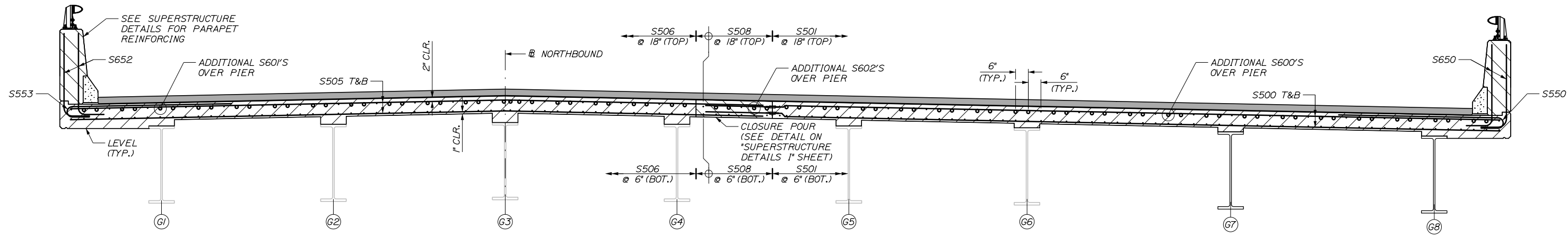
SHEET NUMBER: S-52
CONTRACT: 2019.09
107 OF 121

Date: 10/18/2018

NORTHBOUND



DECK PLAN
 (NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
 1/16" = 1'-0"



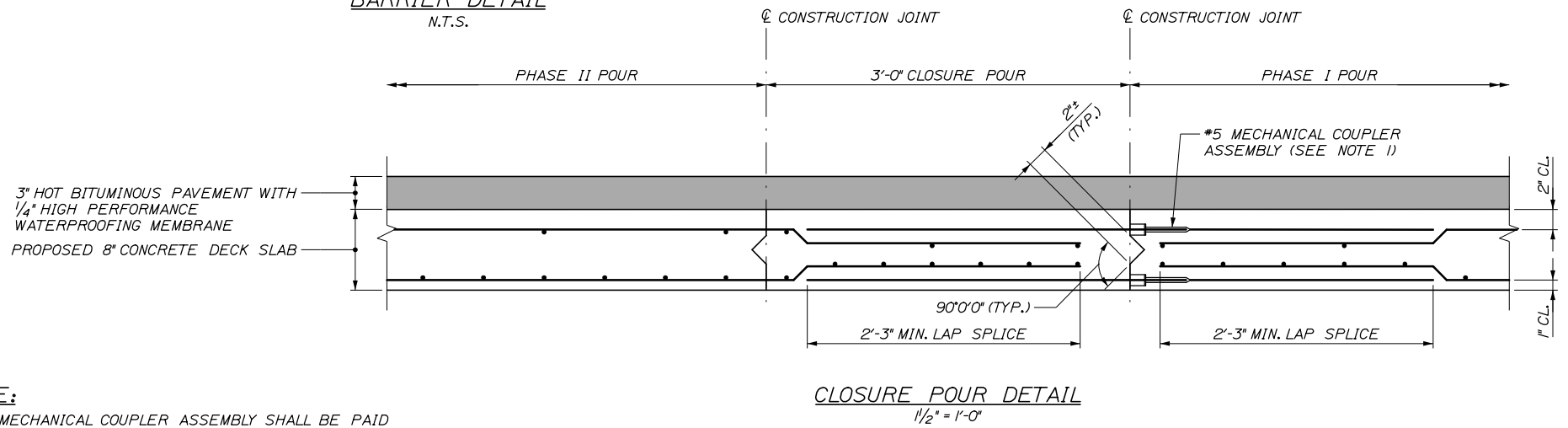
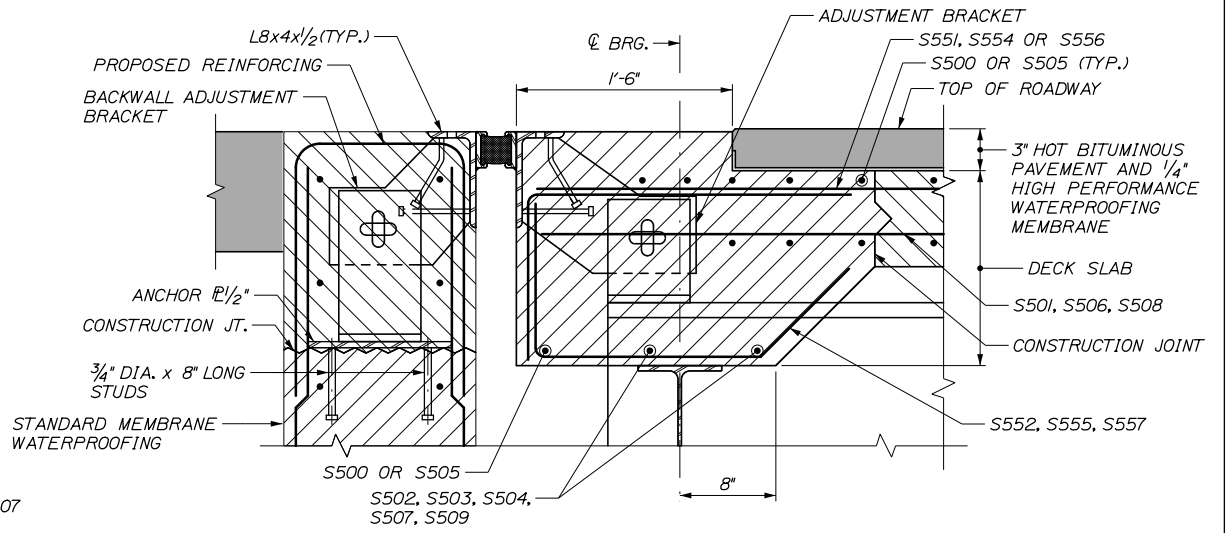
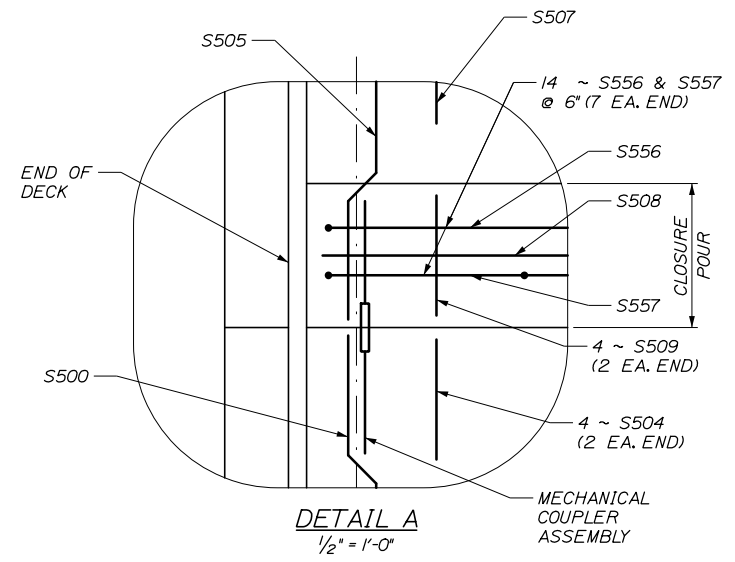
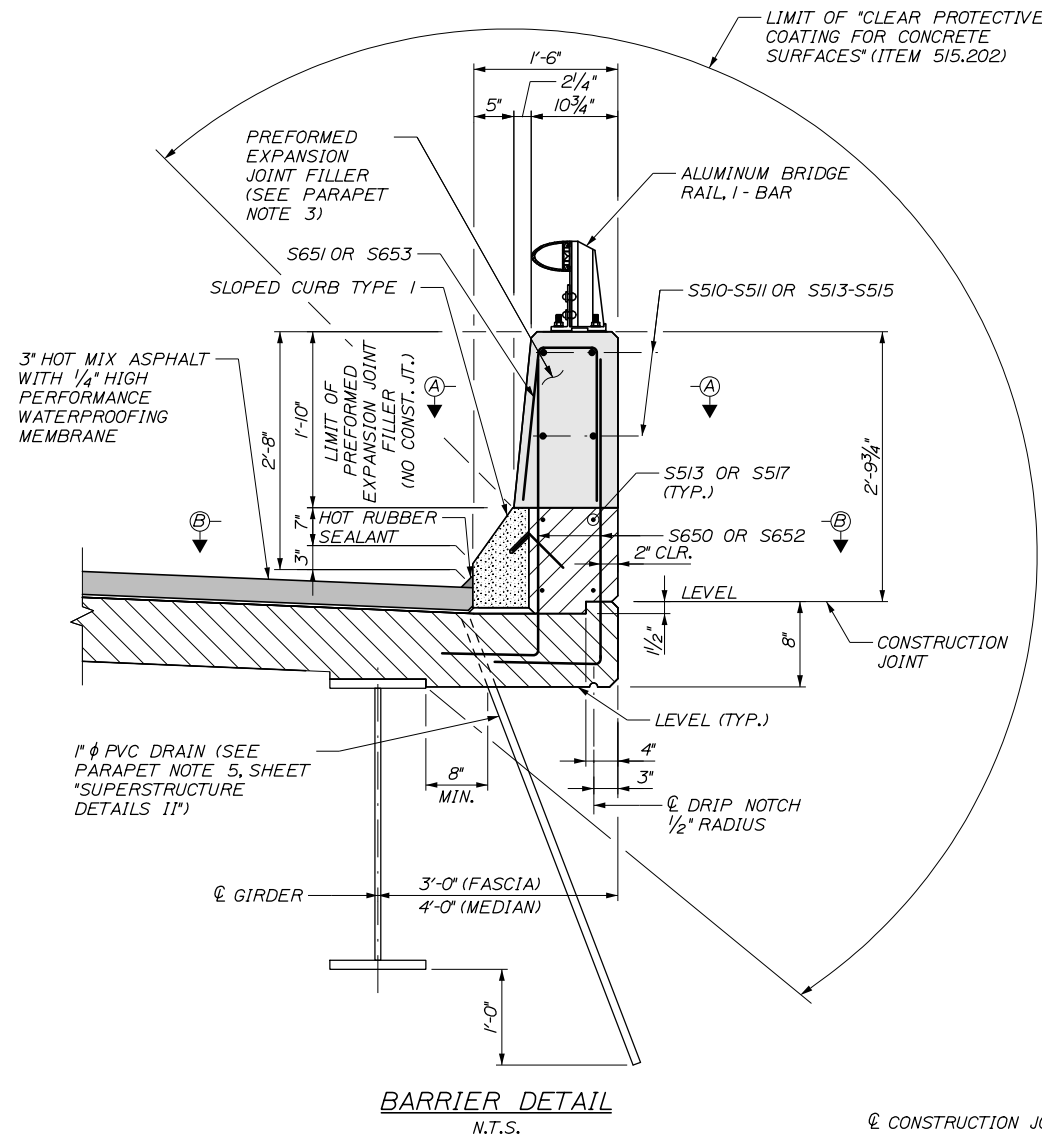
REINFORCEMENT SECTION
 (NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
 1/2" = 1'-0"

- DECK PLAN NOTE:**
- LAP LENGTH SHALL BE 2'-3" MIN. FOR A #5 BAR.
 - FOR DETAIL A, SEE "SUPERSTRUCTURE DETAILS 1" SHEET.
 - #5 MECHANICAL COUPLER ASSEMBLY WILL BE PAID UNDER ITEM 503.171 "MECHANICAL/WELDED SPLICE".

Scale: AS NOTED		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS SUPERSTRUCTURE PLAN	
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						SHEET NUMBER: S-53		CONTRACT: 2019.09	
				Designed	JKB	10\18	Checked	TJP	10\18	MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.		SHEET # OF 121	
				Drawn	ERB	10\18	In Charge of	RAL	10\18				

Filename: 108_Superstructure Plan.dgn

Date: 10/18/2018



NOTE:
1. #5 MECHANICAL COUPLER ASSEMBLY SHALL BE PAID FOR UNDER ITEM 503.171 "MECHANICAL/WELDED SPLICE".

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	JKB	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

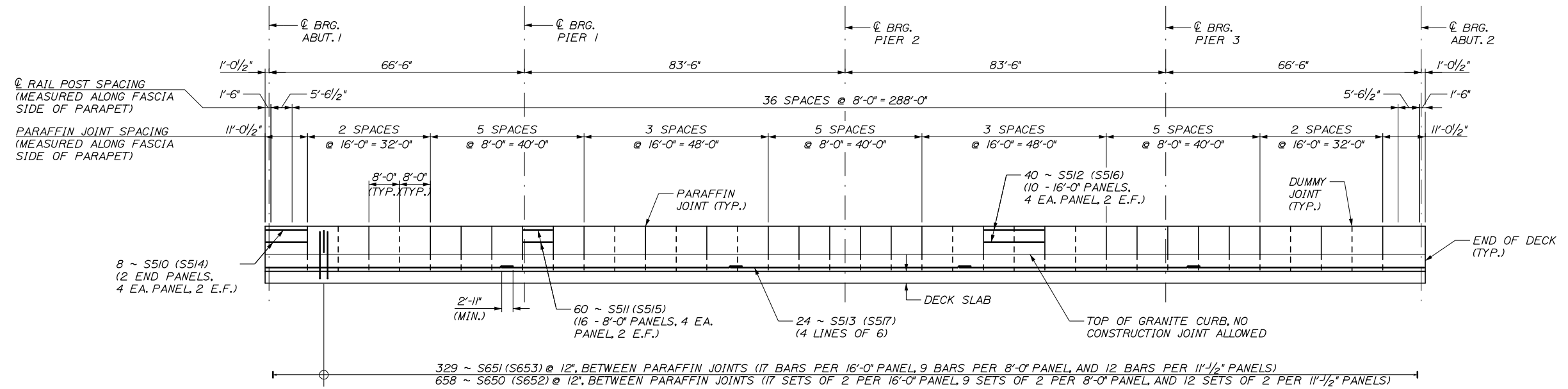
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
SUPERSTRUCTURE DETAILS I

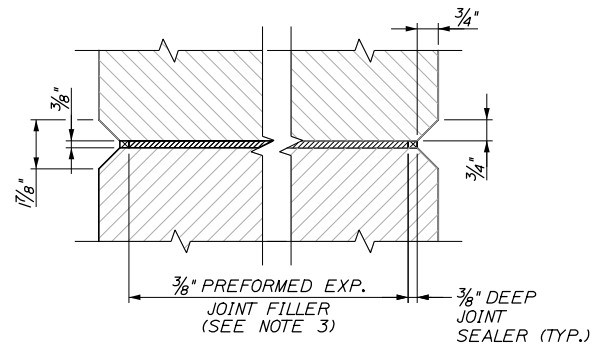
SHEET NUMBER: S-54
109 OF 121

CONTRACT: 2019.09

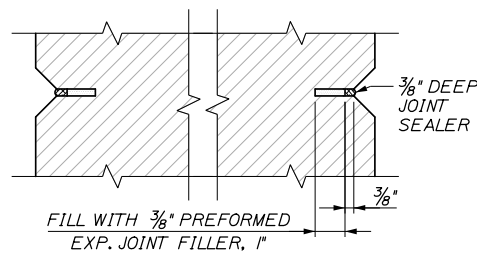
Date: 10/18/2018



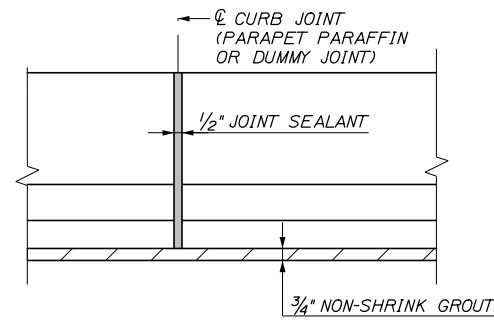
PARAPET ELEVATION - TYPICAL
 (PHASE 1 PARAPET REINFORCEMENT SHOWN WITH PHASE 2 IN PARANTHESIS)
 HORIZ. 1/16" = 1'-0"
 VERT. 1/4" = 1'-0"



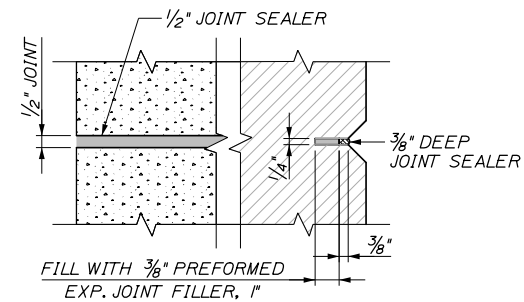
SECTION A-A
 (AT PARAFFIN JOINT)
 3" = 1'-0"



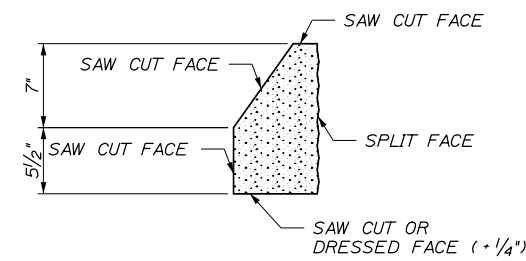
SECTION A-A
 (AT DUMMY JOINT)
 3" = 1'-0"



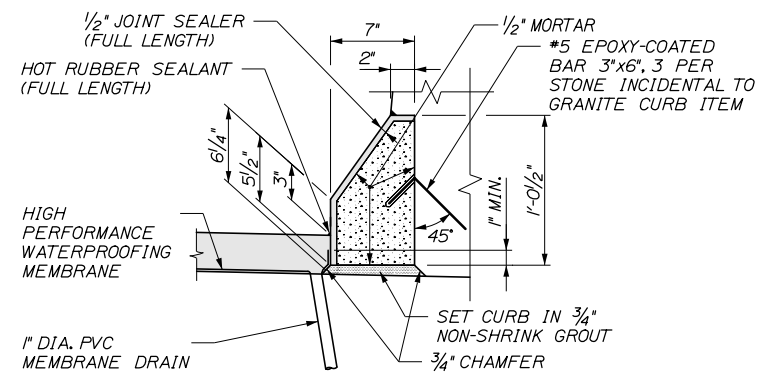
BRIDGE CURB ELEVATION
 2" = 1'-0"



SECTION B-B
 (AT DUMMY AND PARAFFIN JOINT LOCATIONS)
 3" = 1'-0"



SLOPED CURB TYPE 1 - CUT DETAIL
 1/2" = 1'-0"



SLOPED CURB TYPE 1
 1/2" = 1'-0"

SUPERSTRUCTURE NOTE:

1. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANITE CURB SHALL CONTAIN A NON-SHRINK ADDITIVE.

PARAPET NOTES

- CONSTRUCTION OF PARAFFIN AND DUMMY JOINTS, INCLUDING PREFORMED EXPANSION JOINT FILLER, SHALL BE INCIDENTAL TO RELATED STRUCTURAL CONCRETE PAY ITEM.
- CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE JOINT. THE JOINTS SHALL REMAIN PLUMB AND STRAIGHT. A THIN STEEL PLATE MAY BE USED TO SUPPORT THE JOINT DURING CONCRETE PLACEMENT. THE PLATE SHALL BE CAREFULLY REMOVED WHILE THE CONCRETE IS PLASTIC.
- PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1752, TYPE 1 OR ASTM D5249, TYPE 2. PREFORMED JOINT FILLER SHALL BE A NON STAINING, NON BLEEDING TYPE. PRODUCTS SUCH AS 'CERAMAR', MANUFACTURED BY W. R. MEADOWS, OR AN APPROVED EQUAL WILL BE ACCEPTABLE. CORK IS NOT AN ACCEPTABLE JOINT FILLER MATERIAL.
- JOINT SEALER SHALL CONFORM WITH SUBSECTION 714.04 OF THE SPECIFICATIONS AND SHALL BE INCIDENTAL TO RELATED CONTRACT PAY ITEMS.
- PVC DRAINS SHALL BE PLACED AT APPROXIMATE LOCATIONS SHOWN ON "SUPERSTRUCTURE PLAN", OR AS DIRECTED BY THE RESIDENT. DRAINS SHALL EXTEND 1FT BELOW THE BOTTOM OF THE GIRDER. PAYMENT FOR THE PVC DRAINS WILL BE MADE UNDER ITEM 502.26, STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES.

Filename: 110_Superstructure_Details II.dgn

Scale: AS NOTED

Designed by:



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS

SUPERSTRUCTURE DETAILS II

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	JKB	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

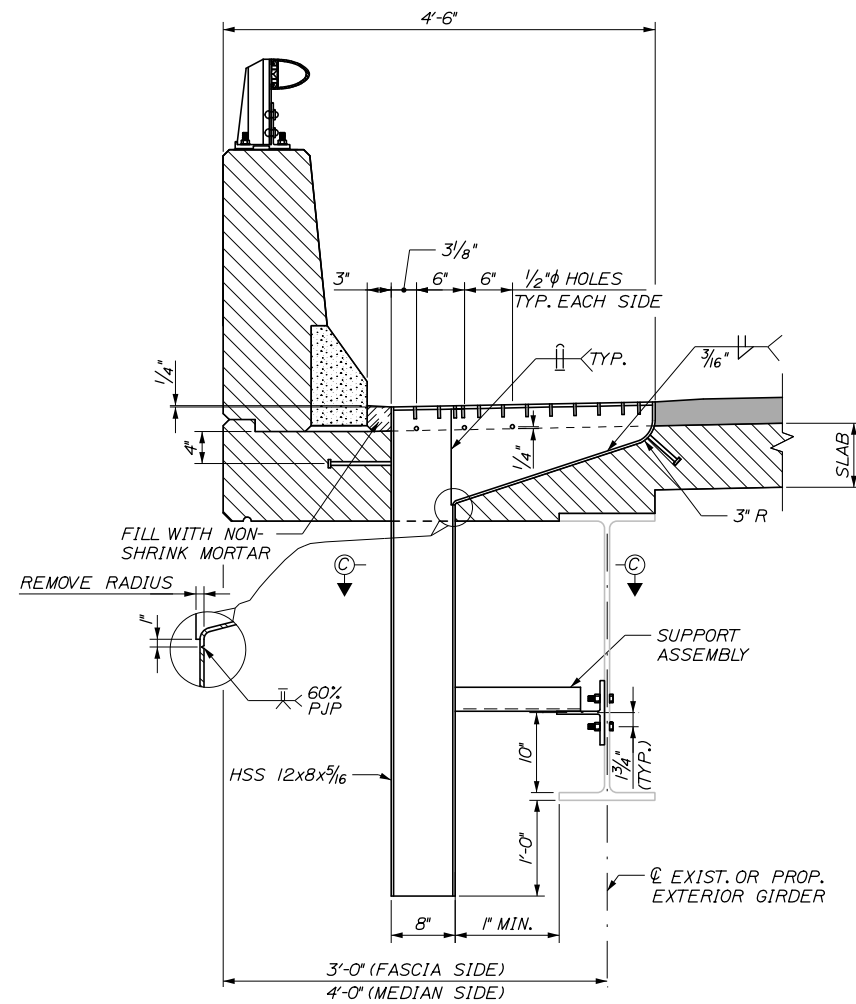
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

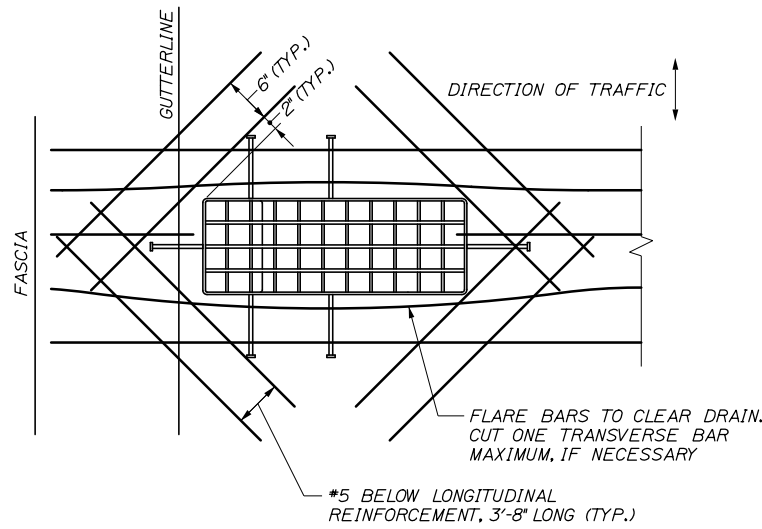
SHEET NUMBER: S-55

110 OF 121

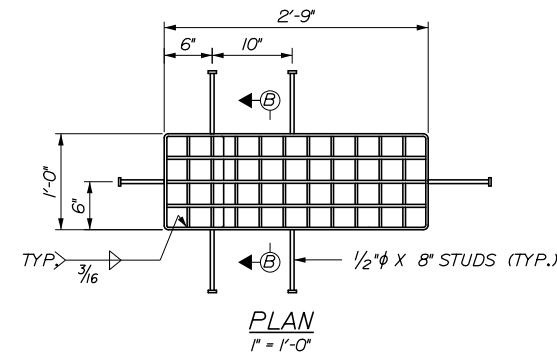
Date:10/18/2018



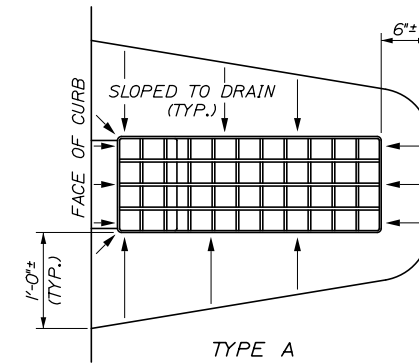
BRIDGE DRAIN TYPE A
1" = 1'-0"



SLAB REINFORCEMENT AT BRIDGE DRAINS
1" = 1'-0"

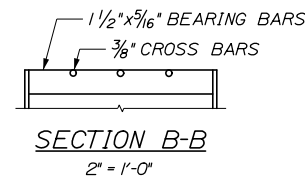


PLAN
1" = 1'-0"

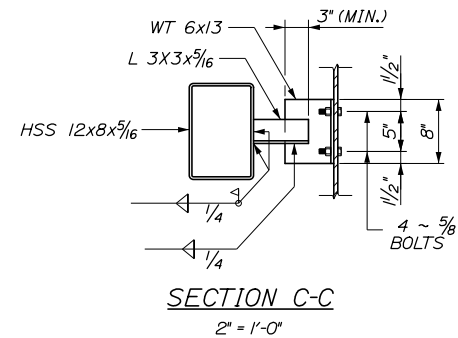


TYPE A

PAVEMENT DEPRESSION AROUND BRIDGE DRAINS
1" = 1'-0"



SECTION B-B
2' = 1'-0"



SECTION C-C
2' = 1'-0"

BRIDGE DRAIN NOTES:

1. ALL PLATES, IF ANY, SHALL BE 1/4" THICK AND SHALL CONFORM TO AASHTO M270, GRADE 50.
2. DOWNSPOUTS SHALL CONFORM TO ASTM A500, GRADE B.
3. GRATING SHALL BE A COMMERCIAL HEAVY-DUTY GRATING WITH 1/2" X 5/16" BEARING BARS SPACED AT 2 3/8" AND 3/8" φ CROSS BARS SPACED AT 4". GRATING SHALL BE CENTERED IN THE DRAIN TOP.
4. SHEAR CONNECTORS WELDED TO TOP FLANGE OF BEAM MAY NEED TO BE BENT OUT OF THE WAY SHOULD AN INTERFERENCE WITH THE BRIDGE DRAIN OCCUR.
5. ALL DRAIN COMPONENTS SHALL BE BLAST CLEANED TO THE REQUIREMENTS OF SSPC-SP6/NACE 3 AND HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL ASSOCIATED FASTENERS SHALL BE HOT DIP GALVANIZED.
6. THE ADDITIONAL REINFORCING STEEL AROUND EACH BRIDGE DRAIN WILL NOT BE PAID FOR DIRECTLY. PAYMENT WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS.

Filename: 111_Miscellaneous Details.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	JKB	10\18		TJP	10\18
	ERB	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
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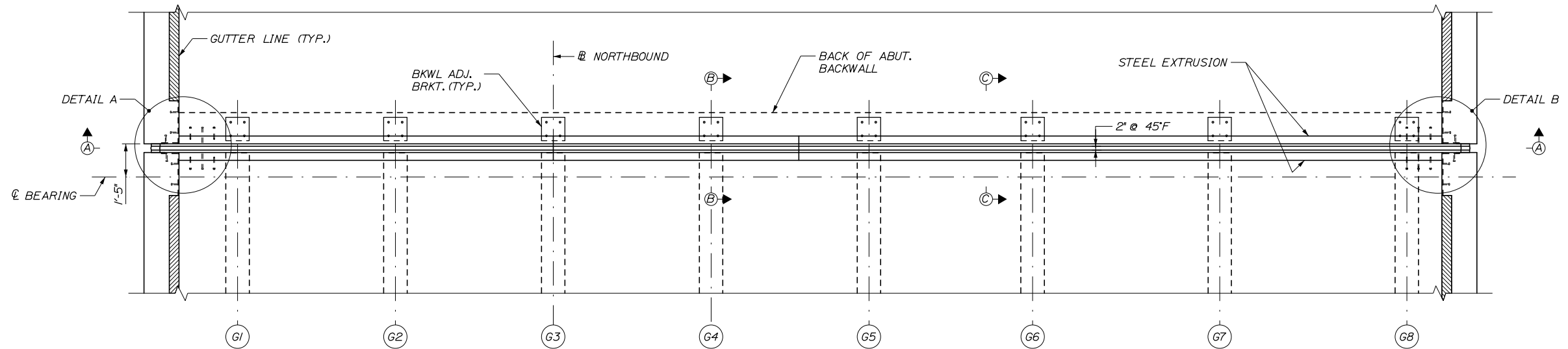
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

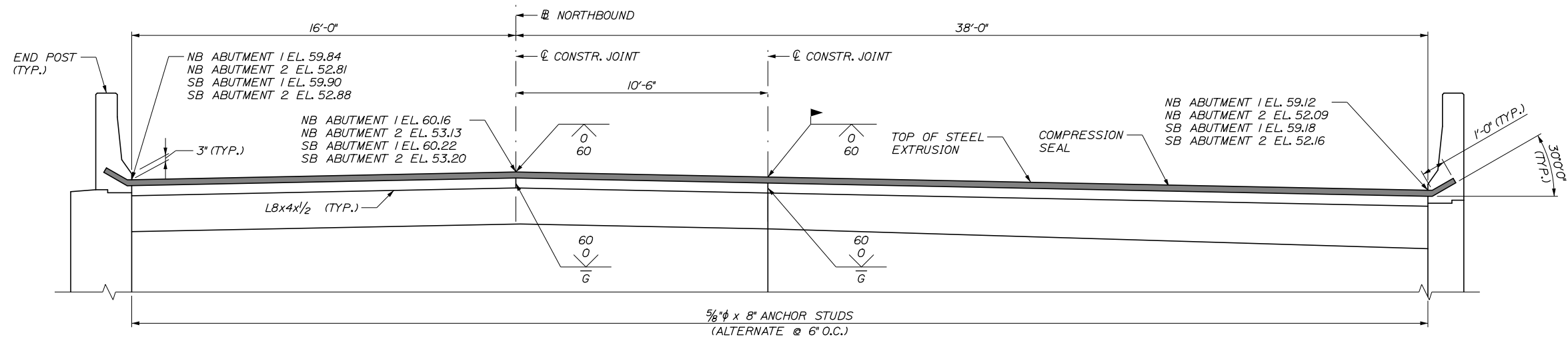
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MISCELLANEOUS DETAILS

SHEET NUMBER: S-56
CONTRACT: 2019.09
111 OF 121

Date: 10/18/2018



PLAN
(ABUTMENT 2 NB SHOWN, ALL OTHER ABUTMENTS SIMILAR)
3/8" = 1'-0"



SECTION A-A
(ABUTMENT 2 NB SHOWN, ALL OTHER ABUTMENTS SIMILAR)
3/8" = 1'-0"

EXPANSION JOINT NOTES:

1. SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR APPROVAL BY THE RESIDENT
2. THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF 2 INCHES IN THE FABRICATION SHOP AND SHALL BE SECURED TO THE GIRDER AND/OR ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 50°F AND 90°F. THE OPENING SHALL BE ADJUSTED TO REFLECT THE TEMPERATURE OF THE STRUCTURE AT THE TIME OF INSTALLATION. SEE TABLE FOR THE OPENING DIMENSIONS. JOINT OPENING SHALL BE MEASURED NORMAL TO THE CENTERLINE OF BEARING.
3. THE CONTRACTOR SHALL APPLY AN EPOXY BONDING AGENT SELECTED FROM MAINEDOT'S QUALIFIED PRODUCTS LIST TO ALL STEEL SURFACES OF THE EXPANSION JOINT THAT WILL BE EMBEDDED IN THE CONCRETE BEFORE PLACING THE DECK AND BACKWALL CONCRETE.
4. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36, UNLESS OTHERWISE NOTED. THE EXPANSION JOINT ASSEMBLY AND ASSOCIATED HARDWARE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. ALL WELDS ARE 5/16" CONTINUOUS FILLETS, EXCEPT AS NOTED.
6. FOR CLARITY, NOT ALL REINFORCING STEEL HAS BEEN SHOWN IN ALL DETAILS.
7. THE NEOPRENE LOCKING COMPRESSION SEALS TO BE FURNISHED SHALL HAVE A MINIMUM MOVEMENT RANGE OF 3 INCHES. SEALS AND EDGE BEAM SHALL BE "WABO D SERIES" AS MANUFACTURED BY WATSON BOWMAN ACME OR APPROVED EQUAL.
8. FOR SECTIONS B-B, C-C, AND DETAILS A AND B SEE EXPANSION DETAIL II SHEET.
9. COMPRESSION SEALS SHALL BE INSTALLED IN THE FIELD AS ONE CONTINUOUS PIECE DURING PHASE II.

Filename: 113_Expansion Joint Details I.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18		TJP	10\18

HNTB CORPORATION
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Westbrook, ME 04092
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

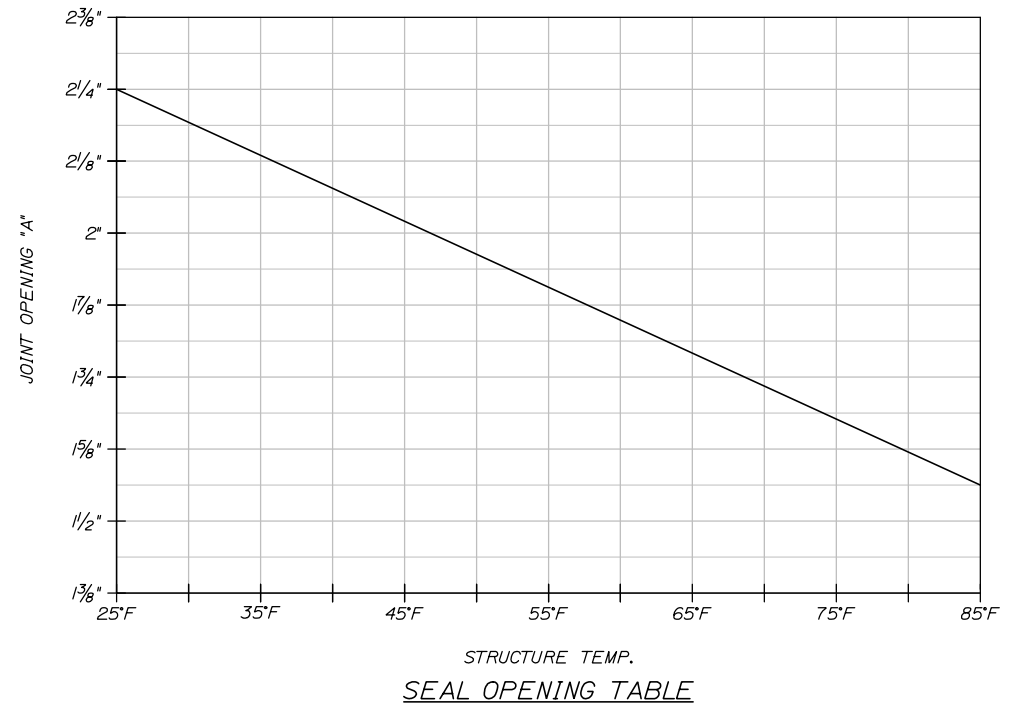
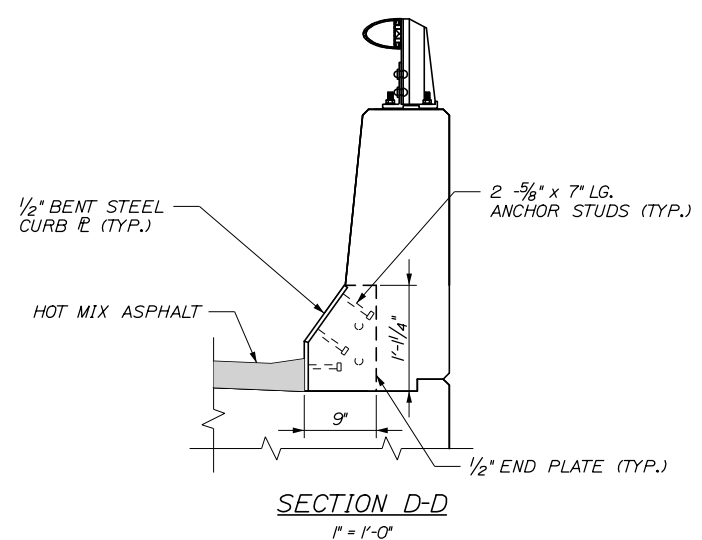
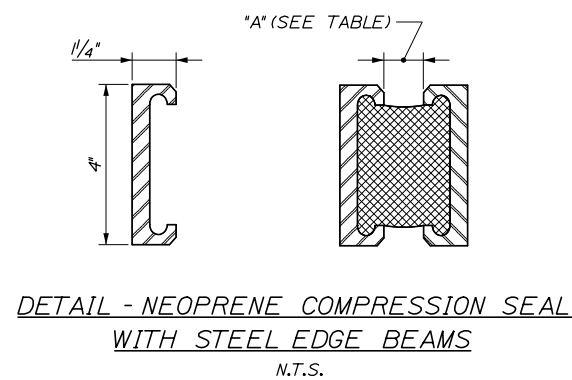
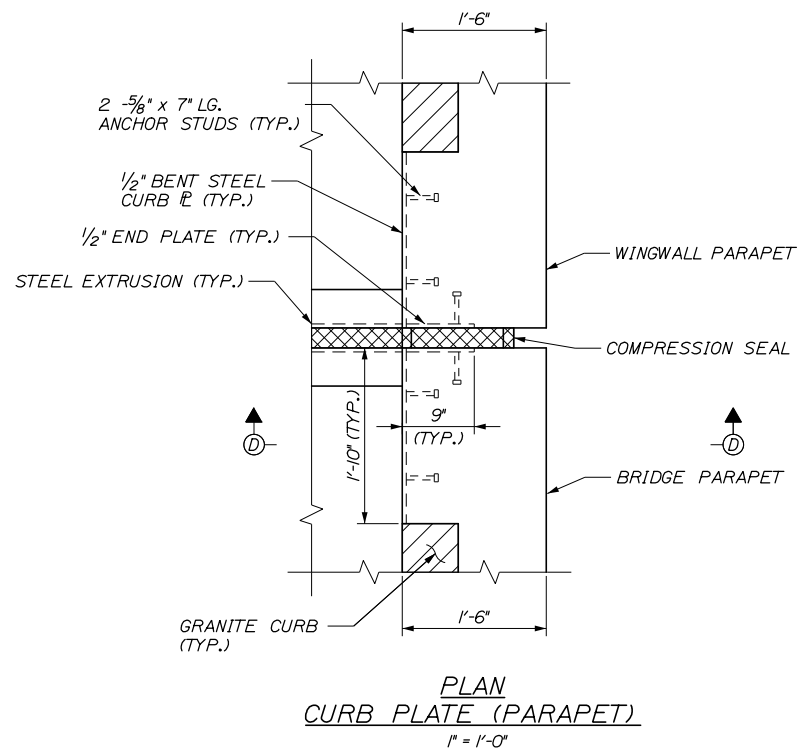
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

EXPANSION JOINT DETAILS I

SHEET NUMBER: S-58
CONTRACT: 2019.09
113 OF 121

Date:10/18/2018

Filename: 115_Expansion Joint Details III.dgn



Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	JKB	10\18	Checked	KEB	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

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 Westbrook, ME 04092
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 FAX (207) 228-0909

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 EXPANSION JOINT DETAILS III

SHEET NUMBER: S-60
 CONTRACT:2019.09
 115 OF 121

Date:10/18/2018

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1											
A550	5	20	5' - 1"	118	3'-4"	1'-9"					Pedestal
A551	5	20	5' - 2"	118	3'-4"	1'-10"					Pedestal
A600	6	22	6' - 11"	STR							Footing Longitudinal (Abutment)
A601	6	12	21' - 2"	STR							Footing Longitudinal (Wingwall)
A602	6	16	5' - 9"	STR							Footing (D&G)
A603	6	16	15' - 4"	STR							Footing Transverse (Abutment)
A604	6	30	5' - 0"	STR							Footing Transverse (Wingwall)
A605	6	10	5' - 9"	STR							Seat Horizontal (D&G)
A606	6	10	16' - 2"	STR							Seat Horizontal
A607	6	18	8' - 1"	STR							Backwall Vertical (FF)
A608	6	18	8' - 1"	STR							Backwall Vertical (NF)
A609	6	28	5' - 9"	STR							Backwall Vertical (D&G) (NF and FF)
A610	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A611	6	2	16' - 2"	STR							Backwall Horizontal (Proposed Seat) (NF and FF)
A612	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A613	6	56	6' - 2"	STR							Backwall Vertical (D&G) (NF and FF)
A614	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A615	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A650	6	34	7' - 4"	118	6'-4"	1'-0"					Footing to Seat Vertical
A651	6	50	7' - 10"	118	6'-10"	1'-0"					Footing to Wingwall Vertical
A652	6	18	5' - 0"	118	2'-11"	2'-1"					Seat (NF)
A653	6	12	11' - 1"	118	4'-4"	6'-9"					Seat to Wingwall
A654	6	29	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A655	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall Horizontal
A656	6	28	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A657	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall
W600	6	16	5' - 9"	STR							Wingwall Vertical (D+G) (Rehab)
W601	6	15	15' - 3"	STR							Wingwall Horizontal (Rehab)
W602	6	50	7' - 6"	STR							Wingwall Vertical (New)
W603	6	18	15' - 3"	STR							Wingwall Horizontal (New)
W650	6	17	10' - 2.5"	122	4'-2"	1'-8"	0'-9"	3'-7.5"	0'-6.5"	0'-6.5"	Wingwall Vertical (Rehab)
W651	6	17	9' - 5.5"	129	2'-2.5"	3'-7.5"					Wingwall Vertical (New)
W652	6	6	4' - 2.5"	129	2'-2.5"	1'-0"					Wingwall End Stirrup (Rehab)
W653	6	17	8' - 10"	129	1'-2"	3'-10"					Wingwall Top Stirrup (New)
W654	6	9	3' - 2"	129	1'-2"	1'-0"					Wingwall End Stirrup (New)
EP550	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (Rehab)
EP551	5	2	14' - 1.5"	119	11'-6.5"	2'-7"	2'-6"				Endpost Top Horizontal (Rehab)
EP552	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (Rehab) (FF)
EP553	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (Rehab) (NF)
EP554	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (New)
EP555	5	2	14' - 2.5"	119	11'-6.5"	2'-8"	2'-6"				Endpost Top Horizontal (New)
EP556	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (New) (FF)
EP557	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (New) (NF)
EP600	6	66	7' - 4"	STR							Wingwall to Endpost Vertical (New) (NF and FF)
EP650	6	66	6' - 6"	118	5'-6"	1'-0"					Wingwall to Endpost Vertical (Rehab) (NF and FF)
EP651	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup
EP652	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2											
A550	5	20	5' - 1"	118	3'-4"	1'-9"					Pedestal
A551	5	20	5' - 2"	118	3'-4"	1'-10"					Pedestal
A552	5	10	3' - 3"	118	1'-6"	1'-9"					Reconstructed pedestal
A553	5	10	3' - 4"	118	1'-6"	1'-10"					Reconstructed pedestal
A600	6	22	6' - 11"	STR							Footing Longitudinal (Abutment)
A601	6	12	21' - 2"	STR							Footing Longitudinal (Wingwall)
A602	6	16	5' - 9"	STR							Footing (D&G)
A603	6	16	15' - 4"	STR							Footing Transverse (Abutment)
A604	6	30	5' - 0"	STR							Footing Transverse (Wingwall)
A605	6	10	5' - 9"	STR							Seat Horizontal (D&G)
A606	6	10	16' - 2"	STR							Seat Horizontal
A607	6	18	7' - 9"	STR							Backwall Vertical (FF)
A608	6	18	7' - 9"	STR							Backwall Vertical (NF)
A609	6	28	5' - 5"	STR							Backwall Vertical (D&G) (NF and FF)
A610	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A611	6	2	16' - 2"	STR							Backwall Horizontal (Proposed Seat) (NF and FF)
A612	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A613	6	56	5' - 10"	STR							Backwall Vertical (D&G) (NF and FF)
A614	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A615	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A650	6	34	7' - 4"	118	6'-4"	1'-0"					Footing to Seat Vertical
A651	6	50	7' - 10"	118	6'-10"	1'-0"					Footing to Wingwall Vertical
A652	6	18	4' - 9"	118	2'-8"	2'-1"					Seat (NF)
A653	6	12	11' - 1"	118	4'-4"	6'-9"					Seat to Wingwall
A654	6	29	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A655	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall Horizontal
A656	6	28	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A657	6	15	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall
W600	6	16	5' - 9"	STR							Wingwall Vertical (D+G) (Rehab)
W601	6	13	15' - 3"	STR							Wingwall Horizontal (Rehab)
W602	6	50	7' - 0"	STR							Wingwall Vertical (New)
W603	6	18	15' - 3"	STR							Wingwall Horizontal (New)
W650	6	17	9' - 2.5"	122	3'-8"	1'-8"	0'-9"	3'-1.5"	0'-6.5"	0'-6.5"	Wingwall Vertical (Rehab)
W651	6	17	8' - 5.5"	129	2'-2.5"	3'-2"					Wingwall Vertical (New)
W652	6	5	4' - 2.5"	129	2'-2.5"	1'-0"					Wingwall End Stirrup (Rehab)
W653	6	17	8' - 10"	129	1'-2"	3'-10"					Wingwall Top Stirrup (New)
W654	6	9	3' - 2"	129	1'-2"	1'-0"					Wingwall End Stirrup (New)
EP550	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (Rehab)
EP551	5	2	14' - 1.5"	119	11'-6.5"	2'-7"	2'-6"				Endpost Top Horizontal (Rehab)
EP552	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (Rehab) (FF)
EP553	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (Rehab) (NF)
EP554	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (New)
EP555	5	2	14' - 2.5"	119	11'-6.5"	2'-8"	2'-6"				Endpost Top Horizontal (New)
EP556	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (New) (FF)
EP557	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (New) (NF)
EP600	6	66	7' - 4"	STR							Wingwall to Endpost Vertical (New) (NF and FF)
EP650	6	66	6' - 6"	118	5'-6"	1'-0"					Wingwall to Endpost Vertical (Rehab) (NF and FF)
EP651	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup
EP652	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup

Filename: 116_ Reinforcing Steel Schedule I.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 REINFORCING STEEL SCHEDULE I

SHEET NUMBER: S-61
 CONTRACT: 2019.09
 116 OF 121

Date: 10/18/2018

Filename: 117_Reinforcing Steel Schedule II.dgn

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE											
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 1											
P450	4	152	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	12	20' - 6"	129	2'-4"	9'-1"					Footing Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P650	6	18	11' - 1"	118	10'-1"	1'-0"					Pier Vertical Hook
P651	6	16	12' - 1"	118	11'-1"	1'-0"					Pier Vertical Hook
P652	6	38	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal End Stirrups
P653	6	68	13' - 2"	129	2'-8"	5'-3"					Hammerhead Vertical Stirrups
P654	6	2	12' - 0"	129	2'-8"	4'-8"					Hammerhead Vertical Stirrups (Taper)
P655	6	2	11' - 3"	129	2'-8"	4'-3"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	10' - 6"	129	2'-8"	3'-11"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	40' - 6"	118	39'-6"	1'-0"					Stem Vertical (Exposed Face)
P659	6	4	7' - 11"	143	1'-0"	2'-4"	3'-7"	1'-5"	1'-0"		Hammerhead End Bars
P950	9	25	19' - 3"	118	17'-8"	1'-7"					Pier Footing Transverse Bottom
P900	9	50	7' - 11"	STR							Pier Footing Transverse
P901	9	25	17' - 8"	STR							Pier Footing Transverse Top
P902	9	74	11' - 8"	STR							Pier Footing Longitudinal
P600	6	18	33' - 9"	STR							Stem Vertical
P601	6	16	32' - 9"	STR							Stem Vertical
P602	6	4	34' - 11"	STR							Stem Vertical
P603	6	2	35' - 0"	STR							Stem Vertical
P604	6	88	5' - 9"	STR							Cap Horizontal Dowel
P605	6	12	16' - 2"	STR							Hammerhead Cap Horizontal
P606	6	2	19' - 8"	STR							Stem Horizontal
P607	6	2	19' - 7"	STR							Stem Horizontal
P608	6	2	19' - 7"	STR							Stem Horizontal
P609	6	2	19' - 6"	STR							Stem Horizontal
P610	6	2	19' - 6"	STR							Stem Horizontal
P611	6	2	19' - 5"	STR							Stem Horizontal
P612	6	2	19' - 4"	STR							Stem Horizontal
P613	6	2	19' - 3"	STR							Stem Horizontal
P614	6	2	19' - 2"	STR							Stem Horizontal
P615	6	2	19' - 1"	STR							Stem Horizontal
P616	6	2	19' - 0"	STR							Stem Horizontal
P617	6	2	19' - 0"	STR							Stem Horizontal
P618	6	2	18' - 11"	STR							Stem Horizontal
P619	6	2	18' - 10"	STR							Stem Horizontal
P620	6	2	18' - 9"	STR							Stem Horizontal
P621	6	2	18' - 8"	STR							Stem Horizontal
P622	6	2	18' - 7"	STR							Stem Horizontal
P623	6	2	18' - 6"	STR							Stem Horizontal
P624	6	2	18' - 5"	STR							Stem Horizontal
P625	6	2	18' - 4"	STR							Stem Horizontal
P626	6	2	18' - 3"	STR							Stem Horizontal
P627	6	2	18' - 2"	STR							Stem Horizontal
P628	6	2	18' - 1"	STR							Stem Horizontal
P629	6	2	18' - 1"	STR							Stem Horizontal
P630	6	2	18' - 0"	STR							Stem Horizontal
P631	6	2	17' - 11"	STR							Stem Horizontal
P632	6	2	17' - 10"	STR							Stem Horizontal
P633	6	2	17' - 9"	STR							Stem Horizontal
P634	6	2	17' - 8"	STR							Stem Horizontal
P635	6	2	17' - 7"	STR							Stem Horizontal
P636	6	2	17' - 6"	STR							Stem Horizontal
P637	6	2	17' - 5"	STR							Stem Horizontal
P638	6	2	17' - 4"	STR							Stem Horizontal
P639	6	2	17' - 3"	STR							Stem Horizontal
P640	6	2	17' - 3"	STR							Stem Horizontal
P641	6	2	17' - 2"	STR							Stem Horizontal
P642	6	2	17' - 1"	STR							Stem Horizontal
P643	6	2	17' - 0"	STR							Stem Horizontal
P1100	11	8	9' - 7"	STR							Cap Horizontal Dowel
P1101	11	8	18' - 2"	111	16'-2"	2'-0"	0'-6"				Hammerhead Horizontal

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE											
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 2											
P450	4	203	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	10	9' - 8"	129	2'-4"	3'-8"					Footing Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P650	6	8	10' - 7"	118	9'-7"	1'-0"					Pier Vertical Hook
P651	6	6	11' - 7"	118	10'-7"	1'-0"					Pier Vertical Hook
P652	6	30	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal End Stirrups
P653	6	68	13' - 2"	129	2'-8"	5'-3"					Hammerhead Vertical Stirrups
P654	6	2	12' - 0"	129	2'-8"	4'-8"					Hammerhead Vertical Stirrups (Taper)
P655	6	2	11' - 2"	129	2'-8"	4'-3"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	10' - 5"	129	2'-8"	3'-10"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	31' - 4"	118	30'-4"	1'-0"					Stem Vertical (Exposed Face)
P659	6	4	8' - 2"	143	1'-0"	2'-3"	3'-11"	1'-5"	1'-0"		Hammerhead End Bars
P950	9	19	8' - 8"	118	7'-1"	1'-7"					Pier Footing Transverse Bottom
P900	9	38	7' - 11"	STR							Pier Footing Transverse
P901	9	19	7' - 1"	STR							Pier Footing Transverse Top
P902	9	32	8' - 8"	STR							Pier Footing Longitudinal
P600	6	16	25' - 1"	STR							Stem Vertical
P601	6	12	24' - 1"	STR							Stem Vertical
P602	6	3	26' - 3"	STR							Stem Vertical
P603	6	2	23' - 8"	STR							Stem Vertical
P604	6	2	19' - 7"	STR							Stem Vertical
P605	6	2	15' - 6"	STR							Stem Vertical
P606	6	2	11' - 5"	STR							Stem Vertical
P607	6	2	7' - 4"	STR							Stem Vertical
P608	6	2	3' - 3"	STR							Stem Vertical
P609	6	70	5' - 9"	STR							Cap and Stem Horizontal Dowel
P610	6	4	15' - 2"	STR							Hammerhead Cap Horizontal
P611	6	2	15' - 4"	STR							Hammerhead Cap Horizontal
P612	6	2	16' - 0"	STR							Hammerhead Cap Horizontal
P613	6	2	16' - 2"	STR							Hammerhead Cap Horizontal
P614	6	2	16' - 5"	STR							Hammerhead Cap Horizontal
P615	6	2	7' - 3"	STR							Stem Horizontal
P616	6	2	7' - 5"	STR							Stem Horizontal
P617	6	2	7' - 6"	STR							Stem Horizontal
P618	6	2	7' - 8"	STR							Stem Horizontal
P619	6	2	7' - 9"	STR							Stem Horizontal
P620	6	2	8' - 0"	STR							Stem Horizontal
P621	6	2	8' - 3"	STR							Stem Horizontal
P622	6	2	8' - 6"	STR							Stem Horizontal
P623	6	2	8' - 9"	STR							Stem Horizontal
P624	6	2	9' - 0"	STR							Stem Horizontal
P625	6	2	9' - 3"	STR							Stem Horizontal
P626	6	2	9' - 6"	STR							Stem Horizontal
P627	6	2	9' - 9"	STR							Stem Horizontal
P628	6	2	10' - 0"	STR							Stem Horizontal
P629	6	2	10' - 3"	STR							Stem Horizontal
P630	6	2	10' - 5"	STR							Stem Horizontal
P631	6	2	10' - 8"	STR							Stem Horizontal
P632	6	2	10' - 11"	STR							Stem Horizontal
P633	6	2	11' - 2"	STR							Stem Horizontal
P634	6	2	11' - 5"	STR							Stem Horizontal
P635	6	2	11' - 8"	STR							Stem Horizontal
P636	6	2	11' - 11"	STR							Stem Horizontal
P637	6	2	12' - 2"	STR							Stem Horizontal
P638	6	2	12' - 5"	STR							Stem Horizontal
P639	6	2	12' - 8"	STR							Stem Horizontal
P640	6	2	12' - 11"	STR							Stem Horizontal
P641	6	2	13' - 2"	STR							Stem Horizontal
P642	6	2	13' - 5"	STR							Stem Horizontal
P643	6	2	13' - 8"	STR							Stem Horizontal
P1100	11	8	9' - 7"	STR							Cap Horizontal Dowel
P1101	11	8	18' - 0"	111	16'-0"	2'-0"	0'-6"				Hammerhead Horizontal

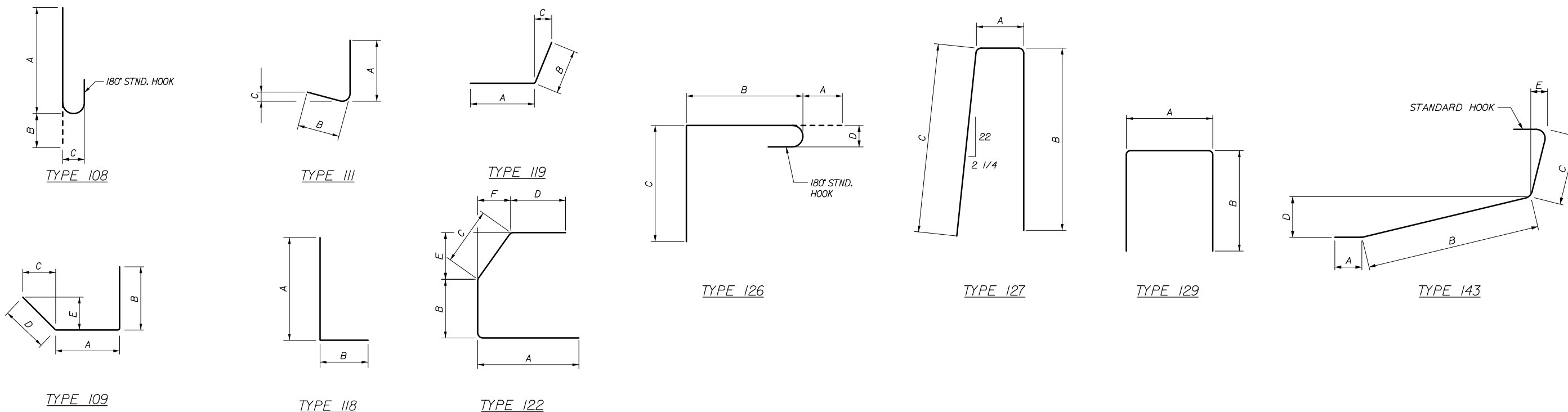
Scale: AS NOTED			
No.	Revision	By	Date

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 3											
P450	4	99	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	8	20' - 6"	129	2'-4"	9'-1"					Footings Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P650	6	18	10' - 1"	118	9'-1"	1'-0"					Pier Vertical Hook
P651	6	16	11' - 1"	118	10'-1"	1'-0"					Pier Vertical Hook
P652	6	11	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal End Stirrups
P653	6	68	13' - 2"	129	2'-8"	5'-3"					Hammerhead Vertical Stirrups
P654	6	2	12' - 0"	129	2'-8"	4'-8"					Hammerhead Vertical Stirrups (Taper)
P655	6	2	11' - 2"	129	2'-8"	4'-3"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	10' - 6"	129	2'-8"	3'-11"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	12' - 1"	118	11'-1"	1'-0"					Stem Vertical (Exposed Face)
P659	6	4	8' - 2"	143	1'-0"	2'-3"	3'-11"	1'-5"	1'-0"		Hammerhead End Bars
P950	9	19	19' - 5"	118	17'-10"	1'-7"					Pier Footing Transverse Bottom
P900	9	38	7' - 11"	STR							Pier Footing Transverse
P901	9	19	17' - 10"	STR							Pier Footing Transverse Top
P902	9	74	8' - 8"	STR							Pier Footing Longitudinal
P600	6	18	6' - 4"	STR							Stem Vertical
P601	6	16	5' - 4"	STR							Stem Vertical
P602	6	4	7' - 6"	STR							Stem Vertical
P603	6	2	7' - 11"	STR							Stem Vertical
P604	6	34	5' - 9"	STR							Cap Horizontal Dowel
P605	6	12	16' - 2"	STR							Hammerhead Cap Horizontal
P606	6	2	18' - 11"	STR							Stem Horizontal
P607	6	2	18' - 9"	STR							Stem Horizontal
P608	6	2	18' - 7"	STR							Stem Horizontal
P609	6	2	18' - 5"	STR							Stem Horizontal
P610	6	2	18' - 3"	STR							Stem Horizontal
P1100	11	8	9' - 10"	STR							Cap Horizontal Dowel
P1101	11	8	18' - 2"	111	16'-2"	2'-0"	0'-6"				Hammerhead Horizontal

STROUDWATER RIVER OVERPASS - SOUTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
SUPERSTRUCTURE											
S500	5	1212	28' - 8"	STR							Phase 1, Transverse
S501	5	480	52' - 3"	STR							Phase 1, Deck Longitudinal
S502	5	8	6' - 10"	STR							Thickened Slab, Transverse Btwn Girders (New Bays)
S503	5	4	5' - 10"	STR							Thickened Slab, Transverse Btwn Girders (Girders 5-6 Bay)
S504	5	4	2' - 3"	STR							Thickened Slab, Transverse Btwn Girder 5 and Closure Pour
S505	5	1212	27' - 8"	STR							Phase 2, Deck Transverse
S506	5	414	52' - 3"	STR							Phase 2, Deck Longitudinal
S507	5	12	5' - 7"	STR							Thickened Slab, Transverse Btwn Girders (Existing bays)
S508	5	60	52' - 3"	STR							Closure Pour, Deck Longitudinal
S509	5	4	2' - 10"	STR							Thickened Slab, Closure Pour
S510	5	8	10' - 8"	STR							Phase 1, End Parapet Longitudinal Reinforcing
S511	5	60	7' - 8"	STR							Phase 1, 8' Parapet Longitudinal Reinforcing
S512	5	40	15' - 8"	STR							Phase 1, 16' Parapet Longitudinal Reinforcing
S513	5	24	52' - 9"	STR							Phase 1, Curb Longitudinal Reinforcing
S514	5	8	10' - 8"	STR							Phase 2, End Parapet Longitudinal Reinforcing
S515	5	60	7' - 8"	STR							Phase 2, 8' Parapet Longitudinal Reinforcing
S516	5	40	15' - 8"	STR							Phase 2, 16' Parapet Longitudinal Reinforcing
S517	5	24	52' - 9"	STR							Phase 2, Curb Longitudinal Reinforcing
S550	5	605	7' - 7"	108	7'-0"	0'-7"	0'-6"				Phase 1, Overhang Bars
S551	5	118	3' - 11"	118	3'-3"	0'-8"					Phase 1, Thickened Slab Bars
S552	5	118	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Phase 1, Thickened Slab Bars
S553	5	605	7' - 7"	108	7'-0"	0'-7"	0'-6"				Phase 2, Overhang Bars
S554	5	102	3' - 11"	118	3'-3"	0'-8"					Phase 2, Thickened Slab Bars
S555	5	102	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Phase 2, Thickened Slab Bars
S556	5	14	3' - 11"	118	3'-3"	0'-8"					Closure Pour, Thickened Slab Bars
S557	5	14	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Closure Pour, Thickened Slab Bars
S600	6	114	40' - 0"	STR							Phase 1, Deck Longitudinal over Pier
S601	6	99	40' - 0"	STR							Phase 2, Deck Longitudinal over Pier
S602	6	12	40' - 0"	STR							Closure Pour, Deck Longitudinal over Pier
S650	6	658	4' - 4"	118	3'-4"	1'-0"					Phase 1, Parapet Vertical
S651	6	329	3' - 6"	127	0'-6"	1'-6"	1'-6"				Phase 1, Parapet Top Reinforcing
S652	6	658	4' - 4"	118	3'-4"	1'-0"					Phase 2, Parapet Vertical
S653	6	329	3' - 6"	127	0'-6"	1'-6"	1'-6"				Phase 2, Parapet Top Reinforcing



Date: 10/18/2018

Filename: 118_Reinforcing Steel Schedule III.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18	Checked	TJP	10\18
	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

REINFORCING STEEL SCHEDULE III

SHEET NUMBER: S-63
CONTRACT: 2019.09
118 OF 121

Date: 10/18/2018

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1											
A550	5	20	5' - 1"	118	3'-4"	1'-9"					Pedestal
A551	5	20	5' - 2"	118	3'-4"	1'-10"					Pedestal
A552	5	40	3' - 3"	118	1'-6"	1'-9"					Reconstructed Pedestal
A553	5	40	3' - 4"	118	1'-6"	1'-10"					Reconstructed Pedestal
A600	6	22	6' - 11"	STR							Footing Longitudinal (Abutment)
A601	6	12	21' - 2"	STR							Footing Longitudinal (Wingwall)
A602	6	16	5' - 9"	STR							Footing (D&G)
A603	6	16	15' - 4"	STR							Footing Transverse (Abutment)
A604	6	30	5' - 0"	STR							Footing Transverse (Wingwall)
A605	6	10	5' - 9"	STR							Seat Horizontal (D&G)
A606	6	10	16' - 2"	STR							Seat Horizontal
A607	6	18	8' - 1"	STR							Backwall Vertical (FF)
A608	6	18	8' - 1"	STR							Backwall Vertical (NF)
A609	6	28	5' - 8"	STR							Backwall Vertical (D&G) (NF and FF)
A610	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A611	6	2	16' - 2"	STR							Backwall Horizontal (Proposed Seat) (NF and FF)
A612	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A613	6	56	6' - 1"	STR							Backwall Vertical (D&G) (NF and FF)
A614	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A615	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A650	6	34	7' - 4"	118	6'-4"	1'-0"					Footing to Seat Vertical
A651	6	50	7' - 10"	118	6'-10"	1'-0"					Footing to Wingwall Vertical
A652	6	18	4' - 11"	118	2'-10"	2'-1"					Seat (NF)
A653	6	12	11' - 1"	118	4'-4"	6'-9"					Seat to Wingwall
A654	6	29	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A655	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall Horizontal
A656	6	28	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A657	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall
W600	6	16	5' - 9"	STR							Wingwall Vertical (D+G) (Rehab)
W601	6	15	15' - 3"	STR							Wingwall Horizontal (Rehab)
W602	6	50	7' - 6"	STR							Wingwall Vertical (New)
W603	6	18	15' - 3"	STR							Wingwall Horizontal (New)
W650	6	17	10' - 2.5"	122	4'-2"	1'-8"	0'-9"	3'-7.5"	0'-6.5"	0'-3.5"	Wingwall Vertical (Rehab)
W651	6	17	9' - 5.5"	129	2'-2.5"	3'-7.5"					Wingwall Vertical (New)
W652	6	6	4' - 2.5"	129	2'-2.5"	1'-0"					Wingwall End Stirrup (Rehab)
W653	6	17	8' - 10"	129	1'-2"	3'-10"					Wingwall Top Stirrup (New)
W654	6	9	3' - 2"	129	1'-2"	1'-0"					Wingwall End Stirrup (New)
EP550	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (Rehab)
EP551	5	2	14' - 1.5"	119	11'-6.5"	2'-7"	2'-6"				Endpost Top Horizontal (Rehab)
EP552	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (Rehab) (FF)
EP553	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (Rehab) (NF)
EP554	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (New)
EP555	5	2	14' - 2.5"	119	11'-6.5"	2'-8"	2'-6"				Endpost Top Horizontal (New)
EP556	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (New) (FF)
EP557	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (New) (NF)
EP600	6	66	7' - 4"	STR							Wingwall to Endpost Vertical (New) (NF and FF)
EP650	6	66	6' - 6"	118	5'-6"	1'-0"					Wingwall to Endpost Vertical (Rehab) (NF and FF)
EP651	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup
EP652	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE


MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2											
A550	5	20	5' - 1"	118	3'-4"	1'-9"					Pedestal
A551	5	20	5' - 2"	118	3'-4"	1'-10"					Pedestal
A552	5	40	3' - 3"	118	1'-6"	1'-9"					Reconstructed Pedestal
A553	5	40	3' - 4"	118	1'-6"	1'-10"					Reconstructed Pedestal
A600	6	22	6' - 11"	STR							Footing Longitudinal (Abutment)
A601	6	12	21' - 2"	STR							Footing Longitudinal (Wingwall)
A602	6	16	5' - 9"	STR							Footing (D&G)
A603	6	16	15' - 4"	STR							Footing Transverse (Abutment)
A604	6	30	5' - 0"	STR							Footing Transverse (Wingwall)
A605	6	10	5' - 9"	STR							Seat Horizontal (D&G)
A606	6	10	16' - 2"	STR							Seat Horizontal
A607	6	18	7' - 8"	STR							Backwall Vertical (FF)
A608	6	18	7' - 8"	STR							Backwall Vertical (NF)
A609	6	28	5' - 4"	STR							Backwall Vertical (D&G) (NF and FF)
A610	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A611	6	2	16' - 2"	STR							Backwall Horizontal (Proposed Seat) (NF and FF)
A612	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A613	6	56	5' - 9"	STR							Backwall Vertical (D&G) (NF and FF)
A614	6	12	28' - 8"	STR							Backwall Horizontal (NF and FF)
A615	6	12	4' - 6"	STR							Backwall Horizontal (NF and FF)
A650	6	34	7' - 4"	118	6'-4"	1'-0"					Footing to Seat Vertical
A651	6	50	7' - 10"	118	6'-10"	1'-0"					Footing to Wingwall Vertical
A652	6	18	4' - 8"	118	2'-7"	2'-1"					Seat (NF)
A653	6	12	11' - 1"	118	4'-4"	6'-9"					Seat to Wingwall
A654	6	29	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A655	6	18	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall Horizontal
A656	6	28	8' - 8"	129	1'-0"	3'-10"					Backwall Vertical Stirrup
A657	6	15	8' - 8"	118	4'-4"	4'-4"					Backwall to Wingwall
W600	6	16	5' - 9"	STR							Wingwall Vertical (D+G) (Rehab)
W601	6	13	15' - 3"	STR							Wingwall Horizontal (Rehab)
W602	6	50	6' - 11"	STR							Wingwall Vertical (New)
W603	6	18	15' - 3"	STR							Wingwall Horizontal (New)
W650	6	17	9' - 0.5"	122	3'-7"	1'-8"	0'-9"	3'-0.5"	0'-6.5"	0'-6.5"	Wingwall Vertical (Rehab)
W651	6	17	8' - 2.5"	129	2'-2.5"	3'-0"					Wingwall Vertical (New)
W652	6	5	4' - 2.5"	129	2'-2.5"	1'-0"					Wingwall End Stirrup (Rehab)
W653	6	17	8' - 10"	129	1'-2"	3'-10"					Wingwall Top Stirrup (New)
W654	6	9	3' - 2"	129	1'-2"	1'-0"					Wingwall End Stirrup (New)
EP550	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (Rehab)
EP551	5	2	14' - 1.5"	119	11'-6.5"	2'-7"	2'-6"				Endpost Top Horizontal (Rehab)
EP552	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (Rehab) (FF)
EP553	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (Rehab) (NF)
EP554	5	8	16' - 4.5"	129	15'-3"	0'-6.75"					Endpost Horizontal Stirrup (New)
EP555	5	2	14' - 2.5"	119	11'-6.5"	2'-8"	2'-6"				Endpost Top Horizontal (New)
EP556	5	1	7' - 8"	118	4'-2"	3'-6"					Endpost Top Horizontal (New) (FF)
EP557	5	1	8' - 0"	118	4'-2"	3'-10"					Endpost Top Horizontal (New) (NF)
EP600	6	66	7' - 4"	STR							Wingwall to Endpost Vertical (New) (NF and FF)
EP650	6	66	6' - 6"	118	5'-6"	1'-0"					Wingwall to Endpost Vertical (Rehab) (NF and FF)
EP651	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup
EP652	6	33	7' - 6.75"	129	0'-6.75"	3'-6"					Endpost Top Stirrup

Filename: 119_Reinforcing Steel Schedule IV.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	By	Date	
Designed	BRG	10\18	Checked	TJP	10\18
Drawn	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 REINFORCING STEEL SCHEDULE IV

SHEET NUMBER: S-64
 CONTRACT: 2019.09
 119 OF 121

Date: 10/18/2018

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 1											
P450	4	102	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	12	10' - 10"	129	2'-4"	4'-3"					Footing Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P600	6	8	29' - 8"	STR							Stem Vertical
P601	6	6	28' - 8"	STR							Stem Vertical
P650	6	8	11' - 1"	118	10'-1"	1'-0"					Pier Vertical Hook
P651	6	6	12' - 1"	118	11'-1"	1'-0"					Pier Vertical Hook
P652	6	68	13' - 8"	129	2'-4"	5'-8"					Stem Horizontal End Stirrups
P653	6	4	37' - 4"	118	36'-4"	1'-0"					Stem Vertical (Exposed Face)
P654	6	154	17' - 8"	129	2'-8"	7'-6"					Hammerhead Vertical Stirrups
P655	6	2	17' - 6"	129	2'-8"	7'-5"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	16' - 4"	129	2'-8"	6'-10"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	14' - 8"	129	2'-8"	6'-0"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	13' - 0"	129	2'-8"	5'-2"					Hammerhead Vertical Stirrups (Taper)
P659	6	2	11' - 4"	129	2'-8"	4'-4"					Hammerhead Vertical Stirrups (Taper)
P660	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P661	6	2	9' - 2"	129	2'-8"	3'-3"					Hammerhead Vertical Stirrups (Taper)
P662	6	4	11' - 3"	143	1'-0"	5'-8"	3'-7"	1'-2 1/2"	1'-0"		Hammerhead End Bars
P700	7	14	6' - 11"	STR							Cap Horizontal Dowel
P701	7	2	38' - 10"	STR							Cap Horizontal
P702	7	2	39' - 5"	STR							Cap Horizontal
P703	7	2	39' - 11"	STR							Cap Horizontal
P704	7	2	40' - 6"	STR							Cap Horizontal
P705	7	2	40' - 10"	STR							Cap Horizontal
P706	7	2	41' - 0"	STR							Cap Horizontal
P707	7	2	41' - 3"	STR							Cap Horizontal
P950	9	54	12' - 10"	129	9'-8"	1'-7"					Pier Footing Longitudinal
P951	9	22	15' - 10"	129	12'-8"	1'-7"					Pier Footing Transverse
P1100	11	30	9' - 7"	STR							Cap Horizontal Dowel
P1101	11	6	37' - 10"	STR							Cap Horizontal
P1102	11	6	38' - 4"	STR							Cap Horizontal
P1103	11	6	43' - 6"	111	41'-6"	2'-0"	0'-6"				Cap Horizontal
P1104	11	6	43' - 7"	111	41'-7"	2'-0"	0'-6"				Cap Horizontal
P1105	11	6	23' - 11"	STR							Cap Horizontal

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 2											
P450	4	306	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	10	20' - 5"	129	2'-4"	9'-1/2"					Footing Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P650	6	18	10' - 7"	118	9'-7"	1'-0"					Pier Vertical Hook
P651	6	16	11' - 7"	118	10'-7"	1'-0"					Pier Vertical Hook
P652	6	34	4' - 4"	129	2'-4"	1'-0"					Stem Horizontal End Stirrups
P653	6	68	13' - 0"	129	2'-8"	5'-2"					Hammerhead Vertical Stirrups
P654	6	2	12' - 0"	129	2'-8"	4'-8"					Hammerhead Vertical Stirrups (Taper)
P655	6	2	11' - 2"	129	2'-8"	4'-3"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	10' - 4"	129	2'-8"	3'-10"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	35' - 10"	118	34'-10"	1'-0"					Stem Vertical (Exposed Face)
P659	6	4	8' - 2"	143	1'-0"	2'-3"	3'-11"	1'-5"	1'-0"		Hammerhead End Bars
P950	9	23	19' - 5"	118	17'-10"	1'-7"					Pier Footing Transverse Bottom
P900	9	38	7' - 11"	STR							Pier Footing Transverse
P901	9	23	17' - 10"	STR							Pier Footing Transverse Top
P902	9	74	10' - 8"	STR							Pier Footing Longitudinal
P600	6	18	29' - 6"	STR							Stem Vertical
P601	6	16	28' - 6"	STR							Stem Vertical
P602	6	4	30' - 8"	STR							Stem Vertical
P603	6	2	30' - 9"	STR							Stem Vertical
P604	6	80	5' - 9"	STR							Cap and Stem Horizontal Dowel
P605	6	12	16' - 2"	STR							Hammerhead Cap Horizontal
P606	6	2	19' - 8"	STR							Stem Horizontal
P607	6	2	19' - 7"	STR							Stem Horizontal
P608	6	2	19' - 7"	STR							Stem Horizontal
P609	6	2	19' - 6"	STR							Stem Horizontal
P610	6	2	19' - 6"	STR							Stem Horizontal
P611	6	2	19' - 5"	STR							Stem Horizontal
P612	6	2	19' - 4"	STR							Stem Horizontal
P613	6	2	19' - 3"	STR							Stem Horizontal
P614	6	2	19' - 2"	STR							Stem Horizontal
P615	6	2	19' - 1"	STR							Stem Horizontal
P616	6	2	19' - 0"	STR							Stem Horizontal
P617	6	2	18' - 11"	STR							Stem Horizontal
P618	6	2	18' - 10"	STR							Stem Horizontal
P619	6	2	18' - 9"	STR							Stem Horizontal
P620	6	2	18' - 8"	STR							Stem Horizontal
P621	6	2	18' - 7"	STR							Stem Horizontal
P622	6	2	18' - 6"	STR							Stem Horizontal
P623	6	2	18' - 5"	STR							Stem Horizontal
P624	6	2	18' - 4"	STR							Stem Horizontal
P625	6	2	18' - 3"	STR							Stem Horizontal
P626	6	2	18' - 2"	STR							Stem Horizontal
P627	6	2	18' - 1"	STR							Stem Horizontal
P628	6	2	18' - 0"	STR							Stem Horizontal
P629	6	2	17' - 11"	STR							Stem Horizontal
P630	6	2	17' - 10"	STR							Stem Horizontal
P631	6	2	17' - 9"	STR							Stem Horizontal
P632	6	2	17' - 8"	STR							Stem Horizontal
P633	6	2	17' - 7"	STR							Stem Horizontal
P634	6	2	17' - 6"	STR							Stem Horizontal
P635	6	2	17' - 5"	STR							Stem Horizontal
P636	6	2	17' - 4"	STR							Stem Horizontal
P637	6	2	17' - 3"	STR							Stem Horizontal
P638	6	2	17' - 2"	STR							Stem Horizontal
P1100	11	8	9' - 10"	STR							Cap Horizontal Dowel
P1101	11	8	18' - 2"	111	16'-2"	2'-0"					Hammerhead Horizontal

Filename: 120_Reinforcing_Steel_Schedule_V.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	BRG	10\18	Checked	TJP	10\18
	ERB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 STROUDWATER RIVER OVERPASS
 REINFORCING STEEL SCHEDULE V

SHEET NUMBER: S-65
 CONTRACT: 2019.09
 120 OF 121

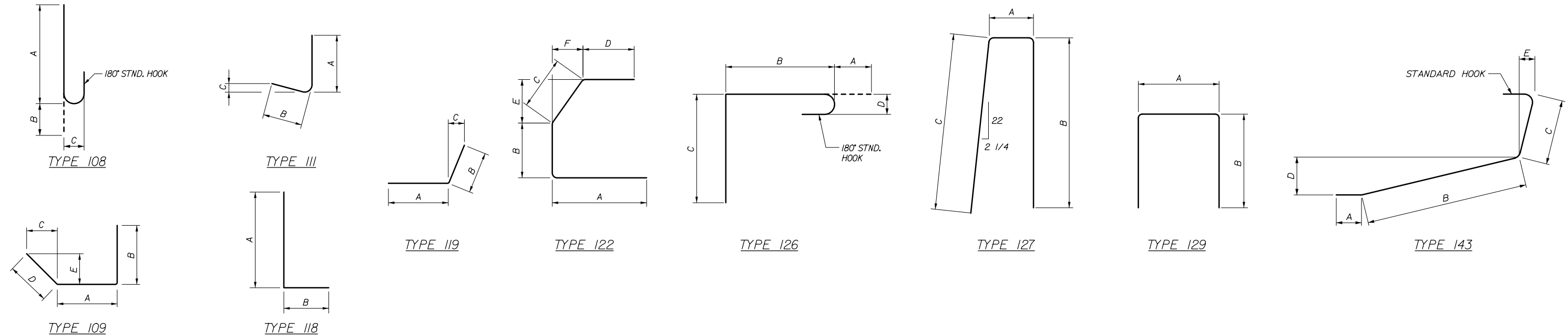
Date: 10/18/2018

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 3											
P450	4	99	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550	5	8	20' - 4"	129	2'-4"	9'-0"					Footing Horizontal Stirrups
P551	5	12	5' - 1"	118	2'-9"	2'-4"					Pedestal Reinforcing
P552	5	24	3' - 9"	118	2'-9"	1'-0"					Pedestal Reinforcing
P650	6	18	10' - 1"	118	9'-1"	1'-0"					Pier Vertical Hook
P651	6	16	11' - 1"	118	10'-1"	1'-0"					Pier Vertical Hook
P652	6	11	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal End Stirrups
P653	6	68	13' - 2"	129	2'-8"	5'-3"					Hammerhead Vertical Stirrups
P654	6	2	12' - 0"	129	2'-8"	4'-8"					Hammerhead Vertical Stirrups (Taper)
P655	6	2	11' - 2"	129	2'-8"	4'-3"					Hammerhead Vertical Stirrups (Taper)
P656	6	2	10' - 4"	129	2'-8"	3'-10"					Hammerhead Vertical Stirrups (Taper)
P657	6	2	9' - 8"	129	2'-8"	3'-6"					Hammerhead Vertical Stirrups (Taper)
P658	6	2	12' - 1"	118	11'-1"	1'-0"					Stem Vertical (Exposed Face)
P659	6	4	8' - 2"	143	1'-0"	2'-3"	3'-11"	1'-5"	1'-0"		Hammerhead End Bars
P950	9	19	19' - 5"	118	17'-10"	1'-7"					Pier Footing Transverse Bottom
P900	9	38	7' - 11"	STR							Pier Footing Transverse
P901	9	19	17' - 10"	STR							Pier Footing Transverse Top
P902	9	74	8' - 8"	STR							Pier Footing Longitudinal
P600	6	18	6' - 4"	STR							Stem Vertical
P601	6	16	5' - 4"	STR							Stem Vertical
P602	6	4	7' - 6"	STR							Stem Vertical
P603	6	2	7' - 10"	STR							Stem Vertical
P604	6	34	5' - 9"	STR							Cap Horizontal Dowel
P605	6	12	16' - 2"	STR							Hammerhead Cap Horizontal
P606	6	2	18' - 11"	STR							Stem Horizontal
P607	6	2	18' - 9"	STR							Stem Horizontal
P608	6	2	18' - 7"	STR							Stem Horizontal
P609	6	2	18' - 5"	STR							Stem Horizontal
P610	6	2	18' - 3"	STR							Stem Horizontal
P611	6	2	17' - 11"	STR							Stem Horizontal
P612	6	2	17' - 8"	STR							Stem Horizontal
P613	6	2	17' - 4"	STR							Stem Horizontal
P614	6	2	17' - 0"	STR							Stem Horizontal
P615	6	2	16' - 8"	STR							Stem Horizontal
P616	6	2	16' - 4"	STR							Stem Horizontal
P1100	11	8	9' - 10"	STR							Cap Horizontal Dowel
P1101	11	8	18' - 2"	111	16'-2"	2'-0"	0'-6"				Hammerhead Horizontal

STROUDWATER RIVER OVERPASS - NORTHBOUND BRIDGE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
SUPERSTRUCTURE											
S500	5	1212	28' - 8"	STR							Phase 1, Transverse
S501	5	480	52' - 3"	STR							Phase 1, Deck Longitudinal
S502	5	8	6' - 10"	STR							Thickened Slab, Transverse Btwn Girders (New Bays)
S503	5	4	5' - 10"	STR							Thickened Slab, Transverse Btwn Girders (Girders 5-6 Bay)
S504	5	4	2' - 3"	STR							Thickened Slab, Transverse Btwn Girder 5 and Closure Pour
S505	5	1212	27' - 8"	STR							Phase 2, Deck Transverse
S506	5	414	52' - 3"	STR							Phase 2, Deck Longitudinal
S507	5	12	5' - 7"	STR							Thickened Slab, Transverse Btwn Girders (Existing bays)
S508	5	60	52' - 3"	STR							Closure Pour, Deck Longitudinal
S509	5	4	2' - 10"	STR							Thickened Slab, Closure Pour
S510	5	8	10' - 8"	STR							Phase 1, End Parapet Longitudinal Reinforcing
S511	5	60	7' - 8"	STR							Phase 1, 8' Parapet Longitudinal Reinforcing
S512	5	40	15' - 8"	STR							Phase 1, 16' Parapet Longitudinal Reinforcing
S513	5	24	52' - 9"	STR							Phase 1, Curb Longitudinal Reinforcing
S514	5	8	10' - 8"	STR							Phase 2, End Parapet Longitudinal Reinforcing
S515	5	60	7' - 8"	STR							Phase 2, 8' Parapet Longitudinal Reinforcing
S516	5	40	15' - 8"	STR							Phase 2, 16' Parapet Longitudinal Reinforcing
S517	5	24	52' - 9"	STR							Phase 2, Curb Longitudinal Reinforcing
S550	5	605	7' - 7"	108	7'-0"	0'-7"	0'-6"				Phase 1, Overhang Bars
S551	5	118	3' - 11"	118	3'-3"	0'-8"					Phase 1, Thickened Slab Bars
S552	5	118	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Phase 1, Thickened Slab Bars
S553	5	605	7' - 7"	108	7'-0"	0'-7"	0'-6"				Phase 2, Overhang Bars
S554	5	102	3' - 11"	118	3'-3"	0'-8"					Phase 2, Thickened Slab Bars
S555	5	102	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Phase 2, Thickened Slab Bars
S556	5	14	3' - 11"	118	3'-3"	0'-8"					Closure Pour, Thickened Slab Bars
S557	5	14	2' - 10"	109	1'-4"	0'-8"	0'-7"	0'-10"	0'-7"		Closure Pour, Thickened Slab Bars
S600	6	114	40' - 0"	STR							Phase 1, Deck Longitudinal over Pier
S601	6	99	40' - 0"	STR							Phase 2, Deck Longitudinal over Pier
S602	6	12	40' - 0"	STR							Closure Pour, Deck Longitudinal over Pier
S650	6	658	4' - 4"	118	3'-4"	1'-0"					Phase 1, Parapet Vertical
S651	6	329	3' - 6"	127	0'-6"	1'-6"	1'-6"				Phase 1, Parapet Top Reinforcing
S652	6	658	4' - 4"	118	3'-4"	1'-0"					Phase 2, Parapet Vertical
S653	6	329	3' - 6"	127	0'-6"	1'-6"	1'-6"				Phase 2, Parapet Top Reinforcing



Filename: 121_Reinforcing Steel Schedule VI.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
BRG	10\18	TJP	10\18
ERB	10\18	RAL	10\18

Designed: BRG 10\18
Checked: TJP 10\18
Drawn: ERB 10\18
In Charge of: RAL 10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
REINFORCING STEEL SCHEDULE VI

SHEET NUMBER: S-66
CONTRACT: 2019.09
121 OF 121



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
ROBERT D. STONE, VICE CHAIR
MICHAEL J. CIANCHETTE, MEMBER
JOHN E. DORITY, MEMBER
ANN R. ROBINSON, MEMBER
THOMAS J. ZUKE, MEMBER
KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

PART II BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS MILE 47.9

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	PART II - TITLE SHEET
2	ESTIMATED QUANTITIES
3	GENERAL NOTES AND EARTHWORK SUMMARY
4	TYPICAL SECTIONS
5-12	MAINTENANCE OF TRAFFIC
13-22	MISCELLANEOUS DETAILS
23	UNDERDRAIN SOIL FILTER DETAILS
24	BMP GRADING PLAN
25-27	GENERAL PLANS
28-31	PROFILES
32	LIMITS OF DISTURBANCE
33-51	CROSS SECTIONS
52-116	STRUCTURAL PLANS

Date:10/18/2018

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS		1	1
202.12	Removing Existing Structural Concrete		CY		135	135
202.13	Removing Existing Railings Retained by Authority		LF		968	968
202.202	Removing Pavement Surface		SY	3150		3150
202.206	Removing Rumble Strips		LF	600		600
203.20	Common Excavation		CY	7450		7450
203.21	Rock Excavation		CY	50		50
203.24	Common Borrow		CY	17200		17200
203.25	Granular Borrow		CY	4450		4450
203.45	Clay Borrow		CY	95		95
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY		680	680
206.10	Structural Earth Excavation - Piers		CY		240	240
206.07	Structural Rock Excavation - Drainage & Minor Structures		CY	20		20
304.10	Aggregate Subbase Course - Gravel		CY	2050		2050
304.14	Aggregate Base Course - Type A		CY	1600		1600
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size		Ton	3900		3900
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	1100	230	1330
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size		Ton	160		160
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	1000	460	1460
409.15	Bituminous Tack Coat, Applied		GAL	2000	180	2180
419.30	Sawing Bituminous Pavement		LF	3200		3200
470.08	Berm Dropoff Correction - Grindings		Ton	87		87
470.081	Berm Correction		LF	100		100
501.231	Dynamic Loading Test		EA		8	8
501.301	Steel Sheet Piling - MCRR		LS		1	1
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF		1744	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF		1744	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF		1168	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF		1168	1168
501.90	Pile Tips		EA		64	64
501.91	Pile Splices		EA		5	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS		1	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS		1	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS		1	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS		1	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS		1	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB		336000	336000
503.15	Epoxy-Coated Reinforcing Steel, Plcing		LB		336000	336000
503.17	Mechanical/Welded Splice		EA		2040	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS		1	1
504.71	Structural steel erection - MCRR	334000 LB	LS		1	1
504.7111	Peening Cover Plate Welds		EA		64	64
505.08	Shear Connectors - MCRR	15036 EA	LS		1	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS		1	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS		1	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS		1	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS		1	1
511.091	Temporary Earth Support Systems - MCRR		LS		1	1
514.06	Curing Box for Concrete Cylinders		EA		1	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1130		1,130
515.23	Anti-Graffiti Coating		SY	1180		1,180
518.30	Abutment Seat Refacing		CY	7		7
518.40	Epoxy Injection Crack Repair		LF	44		44
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	66		66
518.60	Repair of Vertical Surfaces < 8 inches		SF	114		114
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	2		2
520.23	Asphaltic Plug Joint		LF	116		116
523.52	Bearing Installation		EA	16		16
523.5303	Steel Bearings, Fixed, Rocker		EA	4		4
523.5304	Steel Bearings, Expansion, Rocker		EA	12		12
523.56	Clean and Paint Bearing		EA	38		38
523.561	Clean, Paint, and Reset Bearing		EA	10		10
524.301	Temporary Structural Support - Jacking		LS		1	1
524.303	Temporary Structural Support - Braces		LS		1	1
524.40	Protective Shielding - Steel Girders		SY		3140	3140
526.301	Temporary Concrete Barrier, Type 1 - MCRR	4034 LF	LS	1		1
526.3011	Temporary Concrete Barrier, Type 1: To Remain - MCRR	380 LF	LS	1		1
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS		1	1
526.307	Concrete Barrier Type 1 - Stormwater Filter		LF	40		40
527.341	Work Zone Crash Cushion - TL3		UNIT	2		2


ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
603.155	12" Reinforced Concrete Pipe Class III		LF	150		150
603.28	Concrete Collar		EA	1		1
604.09	Catch Basin Type B1		EA	3		3
604.40	Secure Catch Basin Grate		EA	3		3
605.016	6 Inch PVC Underdrain		LF	590		590
605.018	8 Inch PVC Underdrain		LF	240		240
605.09	6" Underdrain Type B		LF	420		420
606.1301	31" W-Beam Guardrail - Mid-way Splice (7" Steel Posts, 8" Offset Blocks, Single Faced)		LF	2237.5		2237.5
606.1305	31" W-Beam Guardrail - Mid-way Splice Flared Terminal (31" Height)		EA	1		1
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail		EA	1		1
606.1723	Bridge Transition - Type III		EA		4	4
606.353	Reflectorized Flexible Guardrail Marker		EA	2		2
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker		EA	4		4
606.3622	Guardrail Adjust - Double Rail		LF	340		340
607.09	Woven Wire Fence - Metal Posts		LF	1500		1500
607.17	Chain Link Fence - 6 Foot		LF	1540		1540
607.32	Bracing Assembly Type I - Metal Posts		EA	2		2
607.33	Bracing Assembly Type II - Metal Posts		EA	10		10
609.15	Sloped Curb Type I		LF		250	250
610.08	Plain Riprap		CY	42	224	266
610.18	Stone Ditch Protection		CY	165	45	210
610.181	Temporary Stone Check Dam		CY	20		20
613.319	Erosion Control Blanket		SY	12550		12550
615.07	Loam		CY	2000		2000
618.14	Seeding Method Number 2		UNIT	160		160
618.143	Special Seeding		UNIT	6		6
619.1201	Mulch - Plan Quantity		UNIT	170		170
619.1202	Temporary Mulch		LS	1		1
620.58	Erosion Control Geotextile		SY	1360	143	1503
627.712	White or Yellow Pavement Marking Line		LF	25800		25800
627.73	Temporary 6 Inch Pavement Marking Tape		LF	1500		1500
627.77	Removing Existing Pavement Marking		SF	11500		11500
627.78	Temporary Pavement Marking Line, White or Yellow		LF	29800		29800
629.05	Hand Labor, Straight Time		HR	20		20
631.10	Air Compressor (Including Operator)		HR	20		20
631.11	Air Tool (Including Operator)		HR	20		20
631.12	All Purpose Excavator (Including Operator)		HR	20		20
631.172	Truck - Large (Including Operator)		HR	20		20
631.32	Culvert Cleaner (Including Operator)		HR	20		20
631.36	Foreman		HR	20		20
645.272	Regulatory, Warning And Bridge Number Signs, Type 1 - Supplied By Authority		EA	2		2
645.509	Remove and Reset Mainline Sign No. 9		LS	1		1
645.510	Remove and Reset Mainline Sign No. 10		LS	1		1
645.511	Remove and Reset Mainline Sign No. 11		LS	1		1
645.512	Remove and Reset Mainline Sign No. 12		LS	1		1
645.513	Remove and Reset Mainline Sign No. 13		LS	1		1
645.514	Remove and Reset Mainline Sign No. 14		LS	1		1
645.515	Remove and Reset Mainline Sign No. 15		LS	1		1
652.30	Flashing Arrow		EA	2		2
652.33	Drum		EA	260		260
652.34	Cone		EA	260		260
652.35	Construction Signs		SF	1100		1100
652.361	Maintenance of Traffic Control Devices		LS	0.5	0.5	1
652.41	Portable Changeable Message Sign		EA	2		2
652.45	Truck Mounted Attenuator		CD	65		65
652.451	Automated Trailer Mounted Speed Limit Sign		CD	65		65
656.50	Baled Hay, In Place		EA	20		20
656.60	Temporary Berms		LF	500		500
656.62	Temporary Slope Drains		LF	100		100
656.632	30 Inch Temporary Silt Fence		LF	3950		3950
659.10	Mobilization		LS	0.50	0.50	1
673.01	Stormwater Filter Bed		CY	170		170

Filename: 002_Quantities.dgn

Scale: **NOT TO SCALE**

No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	KEB	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 ESTIMATED QUANTITIES

SHEET NUMBER: EQ-01
 CONTRACT:2019.09
 2 OF 116

Date: 10/18/2018

GENERAL NOTES:

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MaineDOT) STANDARD DETAILS HIGHWAYS AND BRIDGES LATEST REVISION AND MDT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INCLUDED IN THESE PLANS.
2. ALL EXISTING DELINEATOR AND MILE MARKER POSTS SHALL BE REMOVED AND RESET UPON COMPLETION OF THE CONTRACT. PAYMENT FOR RESETTING GUARDRAIL DELINEATOR POSTS WILL BE MADE UNDER ITEM 606.354. DELINEATOR POSTS SUPPLIED BY THE CONTRACTOR SHALL BE PAID FOR UNDER ITEM 606.353.
3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.
4. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE BIDDER'S AND CONTRACTOR'S USE. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION. THE AUTHORITY SHALL NOT BE RESPONSIBLE FOR THE BIDDER'S AND CONTRACTOR'S INTERPRETATIONS OF, OR CONCLUSIONS DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS CONTAINED IN THE PLAN SET PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.
5. CLEARING LIMITS SHOWN ON THE PLANS ARE APPROXIMATE. CLEARING IS ESTIMATED TO BE LESS THAN 0.5 ACRES IS INCIDENTAL TO THE CONTRACT. FINAL CLEARING LIMITS WILL BE APPROVED BY THE RESIDENT.
6. RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

EARTHWORK NOTES:

1. THE NORMAL GRUBBING WIDTH IN THE FILLS WHEN SUBGRADE IS LESS THAN 5 FEET ABOVE EXISTING GROUND SHALL BE VARIABLE LEFT OR RIGHT. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6 INCHES AND 12 INCHES IN WOODED AREAS.
2. WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE AND IN ACCORDANCE WITH ALL ENVIRONMENTAL REGULATIONS.
3. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 192.6.65D-652 (CONSTRUCTION STANDARDS FOR EXCAVATION).
4. REMOVAL OF EXISTING PAVEMENT, WITHIN THE AREAS OF FULL DEPTH PAVEMENT AND FULL DEPTH RECONSTRUCTION, SHALL BE PAID FOR AS COMMON EXCAVATION. EXISTING PAVEMENT THICKNESS HAS BEEN ESTIMATED TO BE 10 INCHES.
5. FILL/BORROW SHALL BE COMPACTED TO 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 98% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR FOR AREAS OF BACKFILL MATERIAL BEHIND ABUTMENTS AND RETAINING WALLS, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 95% IN ALL OTHER LOCATIONS.

LIST OF ABBREVIATIONS

ABUT. - ABUTMENT	EQ. - EQUAL	P.S.I. - POUNDS per
ADDL. - ADDITIONAL	EXIST. - EXISTING	SQUARE INCH
ALT. - ALTERNATE	EXP. - EXPANSION	RDWY. - ROADWAY
APPROX. - APPROXIMATELY	F.F. - FAR FACE	SHLDR. - SHOULDER
BOT. - BOTTOM	JT. - JOINT	SB - SOUTHBOUND
BRG. - BEARING	MAX. - MAXIMUM	SF - SQUARE FEET
CL - CLEAR	MEDOT - MAINE DEPARTMENT	SP. - SPACES
CL - CENTERLINE	OF TRANSPORTATION	STA. - STATION
CONC. - CONCRETE	MIN. - MINIMUM	T.&B. - TOP & BOTTOM
CONSTR. - CONSTRUCTION	MTA - MAINE TURNPIKE AUTHORITY	TPKE. - TURNPIKE
C.Y. - CUBIC YARD	NB - NORTHBOUND	TYP. - TYPICAL
DEMO. - DEMOLITION	N.F. - NEAR FACE	U.O.N. - UNLESS
DIA. - DIAMETER	N.T.S. - NOT TO SCALE	OTHERWISE NOTED
EA. - EACH	PED. - PEDESTAL	VERT. - VERTICAL
EB - EASTBOUND	PGL - PROFILE GRADE LINE	WB - WESTBOUND
E.F. - EACH FACE	PL - PLATE	W.P. - WORKING POINT
EL. - ELEVATION	PROP. - PROPOSED	WW - WINGWALL

DRAINAGE NOTES:

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT. ABANDONED STRUCTURES TO REMAIN SHALL BE PLUGGED WITH BRICK AND MORTAR. THIS WORK SHALL BE INCIDENTAL TO SECTION 604 ITEMS.
2. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
3. ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.

UTILITY NOTES:

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 PRIOR TO THE START OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT MAY COORDINATE WITH DIG SMART.
2. SEE SPECIFICATIONS FOR REQUIRED UTILITY COORDINATION.

GUARDRAIL NOTES:

1. AT THE END OF EACH DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.
2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS, UNLESS NOTED OTHERWISE.
3. ALL GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE STRUCTURES.
4. SEE DOWNSPOUT DETAILS, SHEET CD-02 FOR THE SHOULDER PAVEMENT LIMITS FROM THE BRIDGE JOINT TO THE STONE DOWNSPOUT.
5. GUARDRAIL REMOVED AND NOT RESET OR STACKED SHALL BE INCIDENTAL TO CONTRACT ITEMS AND INCLUDE ALL REMOVAL, DISPOSAL, EQUIPMENT, AND LABOR NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
6. HOLES CREATED BY GUARDRAIL REMOVAL WILL BE FILLED AND COMPACTED WITH APPROVED MATERIALS AS DIRECTED BY THE RESIDENT. PAYMENT TO BE INCIDENTAL TO THE GUARDRAIL ITEMS.

SIGN NOTES:

1. BRIDGE NO. SIGNS SHALL BE SUPPLIED BY THE MAINE TURNPIKE AUTHORITY. THE CONTRACTOR SHALL SUPPLY THE U-CHANNEL POST AND SHALL INSTALL THE SIGNS. PAYMENT SHALL BE UNDER ITEM 645.272.

MAINTENANCE OF TRAFFIC NOTES:



1. EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION WORK ZONE SIGNS SHALL BE COVERED UP.
2. IF THE WORK ZONE FOR STROUDWATER BRIDGE IS NOT IN PLACE AT THE SAME TIME AS THE MAINE CENTRAL RAILROAD BRIDGE WORKZONE, APPROPRIATE APPROACH SIGNING SHALL BE TEMPORARILY INSTALLED AS DIRECTED BY THE RESIDENT.
3. CONTRACTOR MAY USE TEMPORARY PAVEMENT MARKING TAPE IN PLACE OF TEMPORARY PAVEMENT MARKINGS DURING ALL PHASES OF CONSTRUCTION.
4. PRIOR TO PHASE 1A, ANY DROPOFF FROM THE EXISTING MEDIAN SHOULDER GREATER THAN OR EQUAL TO 1/2" SHALL BE CORRECTED USING ITEM 470.08 - BERM DROP OFF CORRECTION - GRINDINGS OR ITEM 403.212 HOT - MIX ASPHALT, 4.75 mm NOMINAL MAXIMUM SIZE WHEN ADJACENT TO A PAVED MEDIAN CROSSOVER.

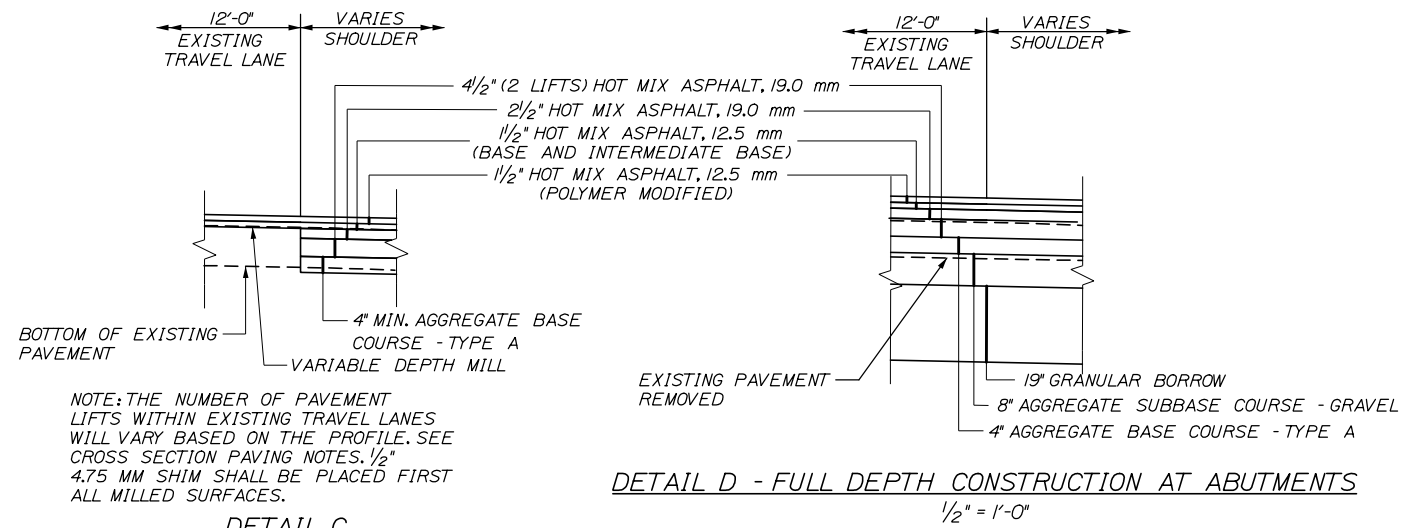
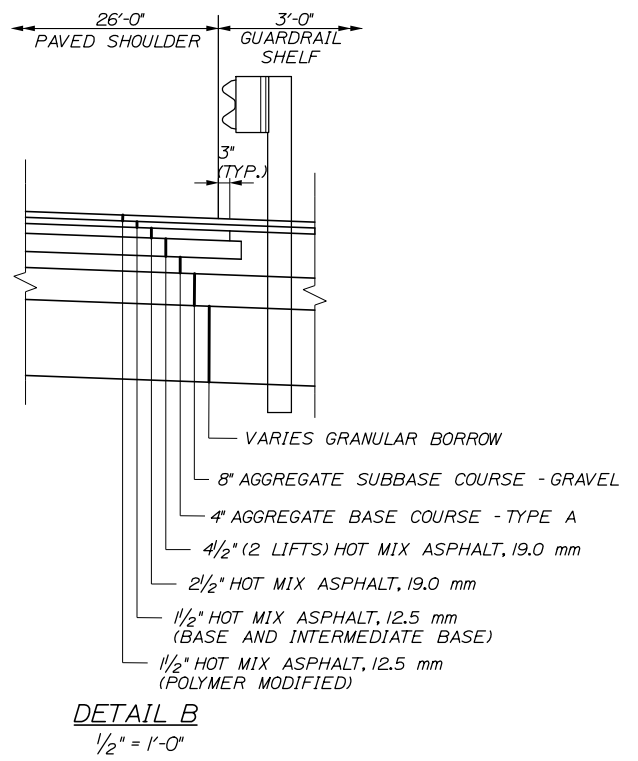
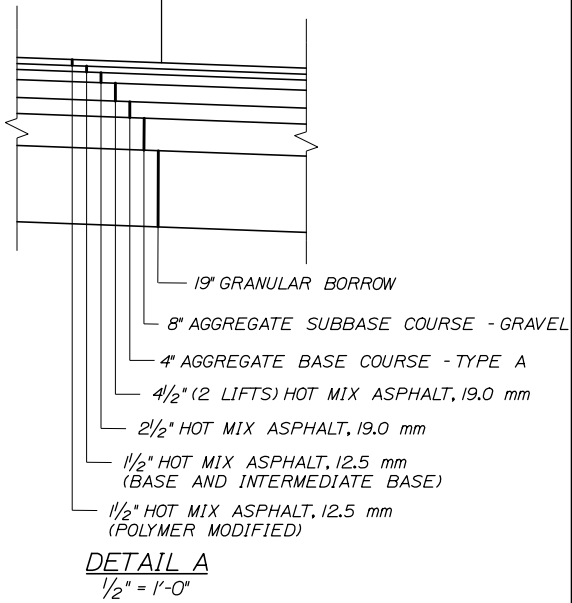
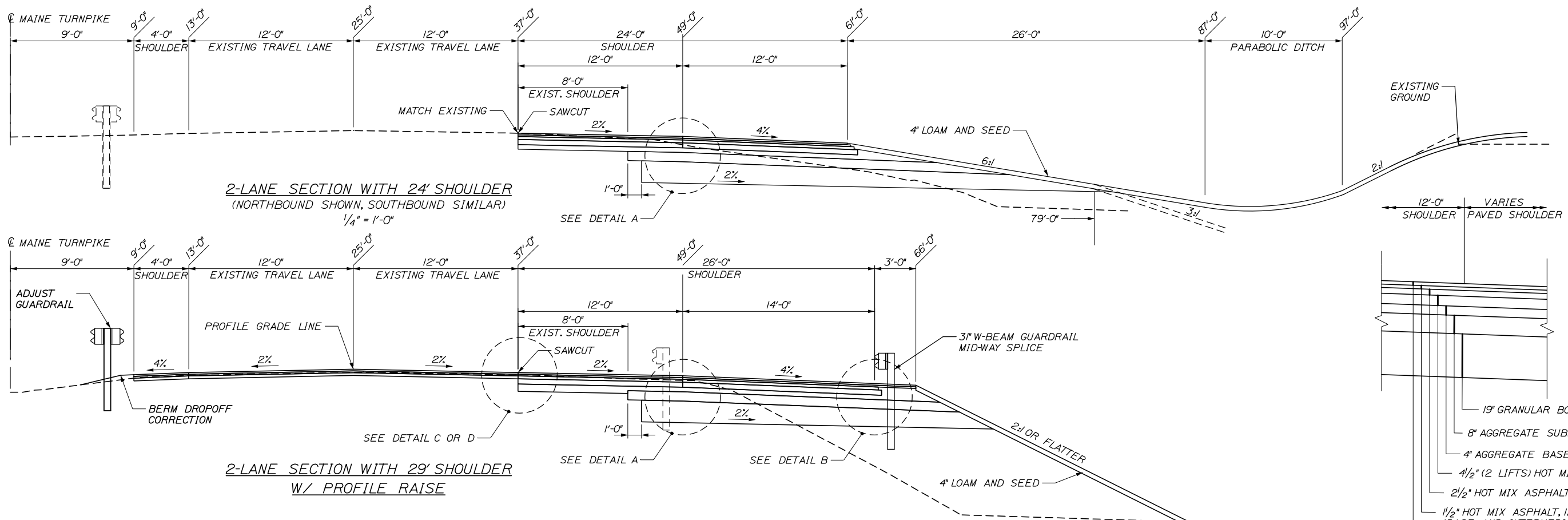
EROSION CONTROL NOTES:

1. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT UNDER THE APPROPRIATE BID ITEMS.
2. 4" LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.
3. ALL SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO. 2.
4. MULCH SHALL BE APPLIED IN SEEDED AREAS, EXCEPT WHERE EROSION CONTROL BLANKET IS SPECIFIED.
5. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.
6. TEMPORARY BERMS AND TEMPORARY SLOPE DRAINS ARE ANTICIPATED AT ALL STONE DOWNSPOUT LOCATIONS WHILE GROWTH IS BEING ESTABLISHED ON SIDE SLOPES AND PRIOR TO RIPRAP INSTALLATION.
7. TEMPORARY EROSION CONTROL BLANKET, ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND 2:1 SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. LIMITS OF THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.
8. PLACE A TWO FOOT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ON THE SIDE SLOPES ALONG THE TOP OF THE RIPRAP AND BEHIND THE WINGWALLS.

COMMON EXCAVATION FOR ESTIMATE	Northbound	Southbound	Total
COMMON EXCAVATION (FROM CROSS SECTIONS)	2,718	3,264	
EXCAVATION IN PHASE II	184	194	
GRUBBING IN FILL	473	555	
TOTAL COMMON EXCAVATION (for estimate)	3,375	4,013	7,388
FILL FOR BORROW CALCULATIONS			
COMMON FILL (FROM CROSS SECTIONS)	8,671	10,937	
GRUBBING IN FILL	473	555	
TOTAL FILL	9,144	11,492	20,636
AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS			
(1) TOTAL COMMON EXCAVATION	3,375	4,013	7,388
DEDUCTIONS:			
GRUBBING IN CUT	631	713	
GRUBBING IN FILL	488	555	
EXCAVATION IN PHASE II	184	194	
PAVEMENT SALVAGE (CUT & FILL)	400	415	
(2) TOTAL DEDUCTIONS	1,703	1,877	3,580
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	1,672	2,136	
TOTAL AVAILABLE STRUCT. EXCAVATIONS	43	0	
RIPRAP EXCAVATION	0	0	
TOTAL AVAILABLE NON-ROCK EXCAVATION	1,715	2,136	3,851
COMPUTATION FOR COMMON BORROW FOR ESTIMATE			
(3) TOTAL FILL	9,144	11,492	20,636
TOTAL AVAIL. NON-ROCK EXCAV.	1,715 x 0.90 = 1,544		
(4) TOTAL AVAILABLE EXCAVATION	x 1.00 = 1,544	1,922	3,466
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION	7,601	9,570	17,170
IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED			
	-7,601	-9,570	-17,170
BORROW NEEDED MINUS REQUIRED GRAN. BORR. WITHIN FILL			
	7,601	9,570	17,170
COMMON BORROW (for estimate) =	x 1.00 = 7,601	9,570	17,171

Filename: 003_GeneralNotes.dgn

Scale: NOT TO SCALE		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS GENERAL NOTES AND EARTHWORK SUMMARY	
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.				MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.		CONTRACT: 2019.09		SHEET NUMBER: GN-01	
				By	Date	By	Date						
				Designed	BRG 10\18	Checked	KEB 10\18						
				Drawn	PEB 10\18	In Charge of	RAL 10\18						



NOTE: THE NUMBER OF PAVEMENT LIFTS WITHIN EXISTING TRAVEL LANES WILL VARY BASED ON THE PROFILE. SEE CROSS SECTION PAVING NOTES. 1/2" 4.75 MM SHIM SHALL BE PLACED FIRST ALL MILLED SURFACES.

- TYPICAL SECTION NOTES:**
1. A COATING OF HOT RUBBERIZED ASPHALT (ASTM D6690 TYPE IV) SHALL BE APPLIED ON THE SURFACE LIFT AT TRANSVERSE BUTT JOINTS AND LONGITUDINAL JOINTS EXCEPT WHERE THE NOTCH WEDGE IS USED.
 2. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LAYERS OF PAVEMENT AND ALL LONGITUDINAL AND TRANSVERSE JOINTS, EXCEPT IN THE SURFACE LIFT.
 3. FOR BENCHING DETAIL SEE EROSION CONTROL DETAILS II.

Filename: 004_Typical Section.dgn

Scale:		AS NOTED	
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	PEM	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

TYPICAL SECTIONS

SHEET NUMBER: TYP-01

CONTRACT: 2019.09

4 OF 116

PHASE IA QUANTITIES

LEGEND

BWLL - BROKEN WHITE LANE LINE
 SWEL - SOLID WHITE EDGE LINE
 SYEL - SOLID YELLOW EDGE LINE
 TSSW - TEMPORARY SINGLE SOLID WHITE LINE
 TSSY - TEMPORARY SINGLE SOLID YELLOW LINE

ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW
 NORTHBOUND
 TSSY - STA. 2371+10 RT. TO STA. 2390+75 RT. 1965
 TSSW - STA. 2371+10 RT. TO STA. 2390+75 RT. (2 LINES) SOUTHBOUND 3930
 TSSW - STA. 2364+15 LT. TO STA. 2390+75 LT. 2660
 TSSY - STA. 2365+75 LT. TO STA. 2390+75 LT. 2500
 TSSW - STA. 2365+75 LT. TO STA. 2390+75 LT. 2500

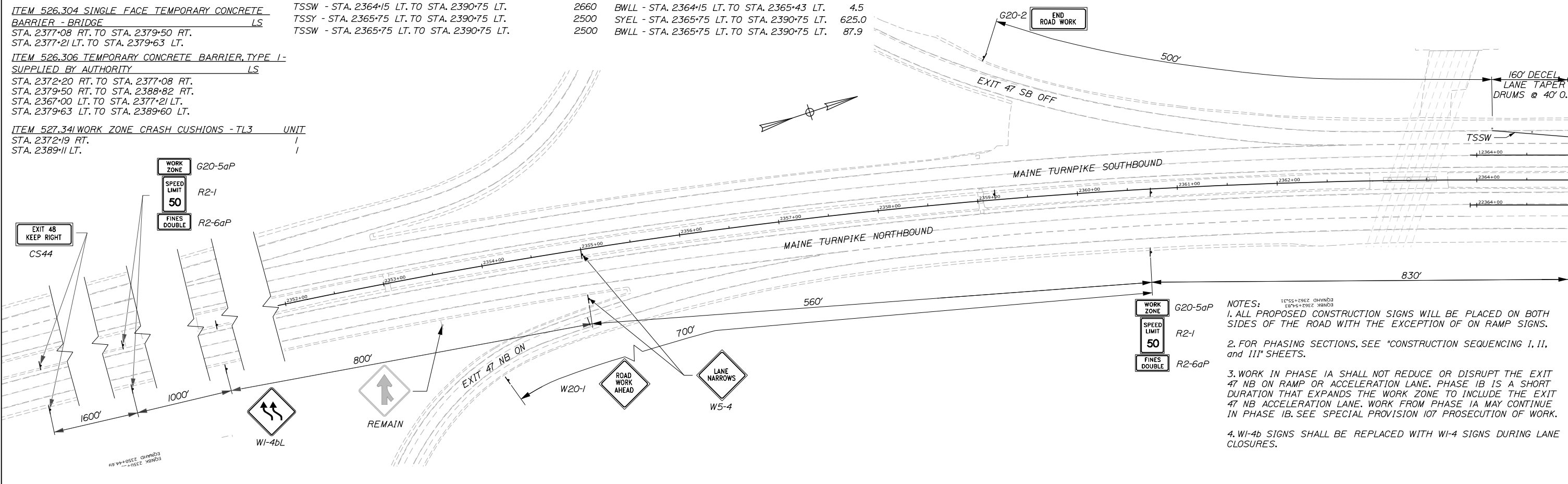
ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS
 NORTHBOUND
 SYEL - STA. 2371+10 RT. TO STA. 2390+75 RT. 491.5
 BWLL - STA. 2371+10 RT. TO STA. 2390+75 RT. SOUTHBOUND 69.2
 BWLL - STA. 2364+15 LT. TO STA. 2365+43 LT. 4.5
 SYEL - STA. 2365+75 LT. TO STA. 2390+75 LT. 625.0
 BWLL - STA. 2365+75 LT. TO STA. 2390+75 LT. 87.9

ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE
 STA. 2377+08 RT. TO STA. 2379+50 RT.
 STA. 2377+21 LT. TO STA. 2379+63 LT.

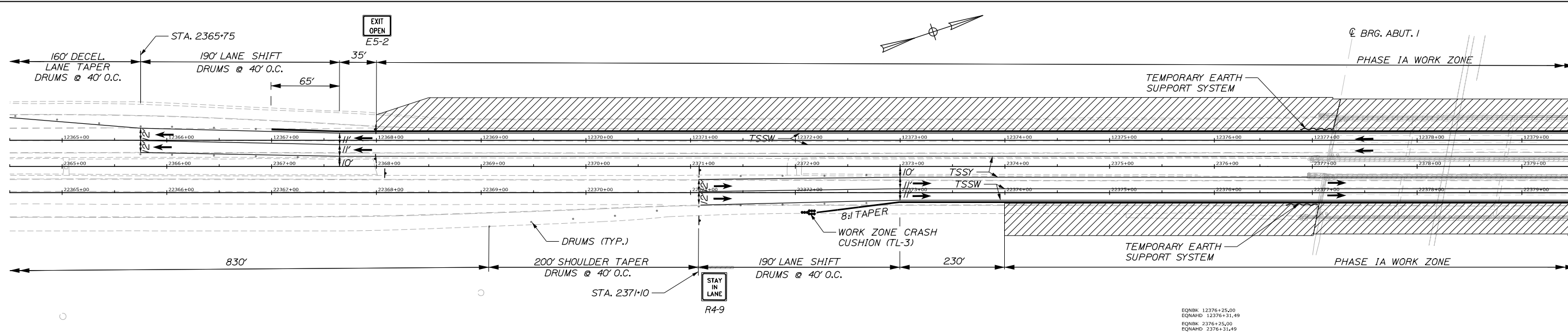
ITEM 526.306 TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY
 STA. 2372+20 RT. TO STA. 2377+08 RT.
 STA. 2379+50 RT. TO STA. 2388+82 RT.
 STA. 2367+00 LT. TO STA. 2377+21 LT.
 STA. 2379+63 LT. TO STA. 2389+60 LT.

ITEM 527.341 WORK ZONE CRASH CUSHIONS - TL3
 STA. 2372+19 RT.
 STA. 2389+11 LT.

Date: 10/18/2018

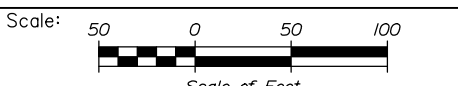


- NOTES:**
1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 47 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXPANDS THE WORK ZONE TO INCLUDE THE EXIT 47 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
 4. W1-4b SIGNS SHALL BE REPLACED WITH W1-4 SIGNS DURING LANE CLOSURES.



EQNBK 12376+25.00
 EQNAHD 12376+31.49
 EQNBK 2376+25.00
 EQNAHD 2376+31.49
 EQNBK 22376+25.00
 EQNAHD 22376+31.49

Filename: 005_MOTPhase IA 1.dgn



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

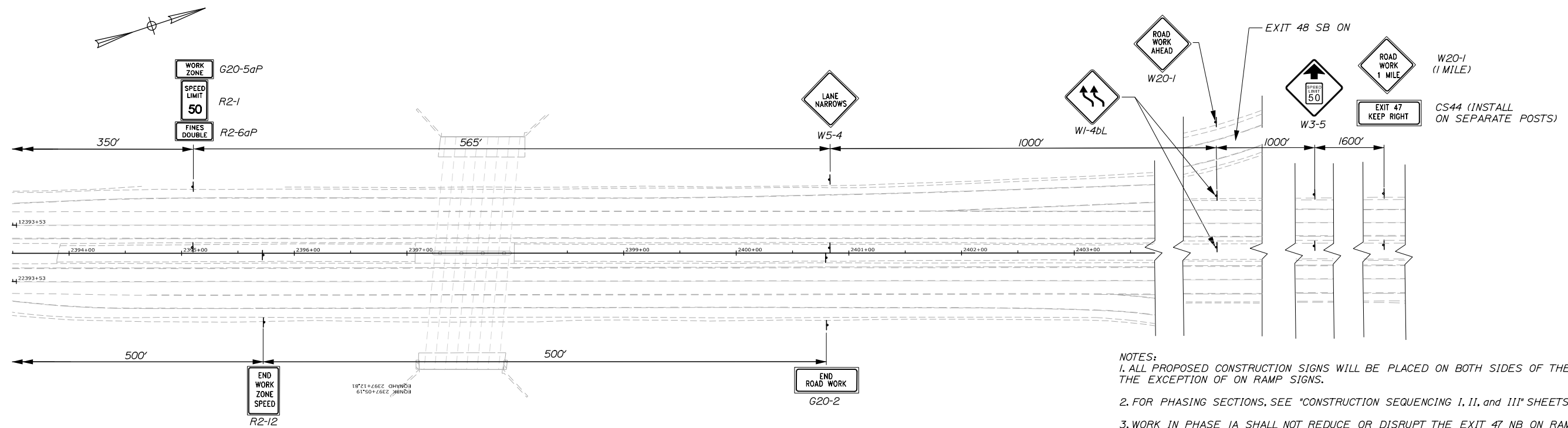
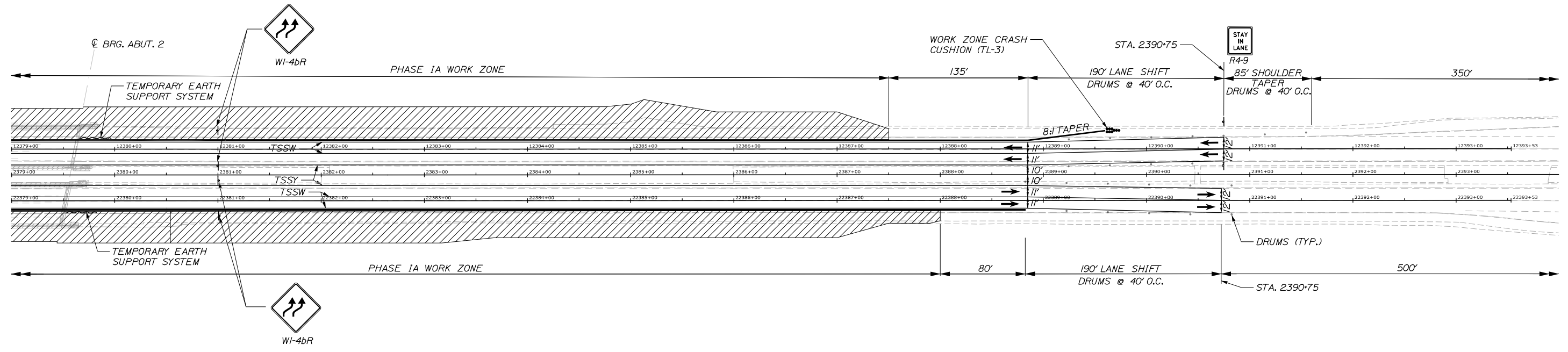
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IA

SHEET NUMBER: MOT-01
 5 OF 116

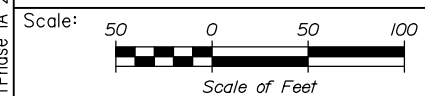
CONTRACT: 2019.09

Date: 10/18/2018



NOTES:
 1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 47 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXPANDS THE WORK ZONE TO INCLUDE THE EXIT 47 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
 4. WI-4b SIGNS SHALL BE REPLACED WITH WI-4 SIGNS DURING LANE CLOSURES.

Filename: 006_MOTPhase IA 2.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IA

CONTRACT: 2019.09

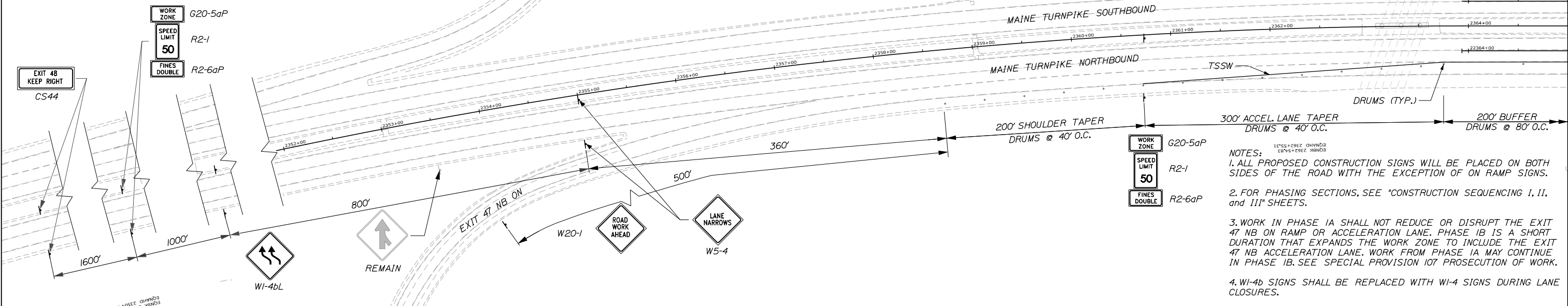
SHEET NUMBER: MOT-02

6 OF 116

PHASE IB QUANTITIES

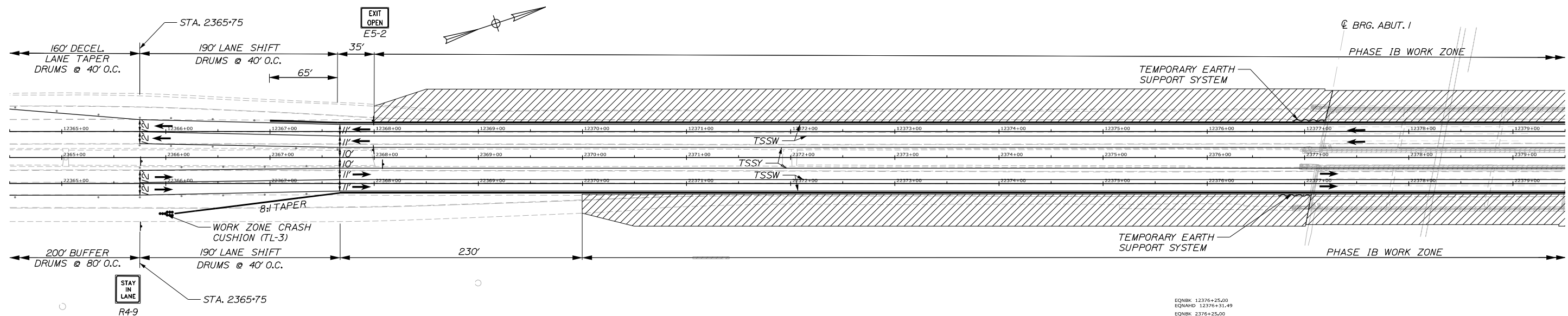
LEGEND			
BWLL - BROKEN WHITE LANE LINE	ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	LF	
SWEL - SOLID WHITE EDGE LINE	NORTHBOUND		
SYEL - SOLID YELLOW EDGE LINE	TSSW - STA. 2360+75 RT. TO STA. 2373+00 RT.	1225	
TSSW - TEMPORARY SINGLE SOLID WHITE LINE	TSSY - STA. 2365+75 RT. TO STA. 2373+00 RT.	725	
TSSY - TEMPORARY SINGLE SOLID YELLOW LINE	TSSW - STA. 2365+75 RT. TO STA. 2373+00 RT.	725	
ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE	ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS	SF	
LS	NORTHBOUND		
STA. 2377+08 RT. TO STA. 2379+50 RT.	TSSY - STA. 2371+10 RT. TO STA. 2373+00 RT.	47.5	
STA. 2377+21 LT. TO STA. 2379+63 LT.	TSSW - STA. 2371+10 RT. TO STA. 2373+00 RT. (2 LINES)	190	
ITEM 526.306 TEMPORARY CONCRETE BARRIER	BWLL - STA. 2360+75 RT. TO STA. 2363+75 RT.	10.5	
TYPE I - SUPPLIED BY AUTHORITY	SYEL - STA. 2365+75 RT. TO STA. 2371+10 RT.	262.5	
LS	BWLL - STA. 2365+75 RT. TO STA. 2371+10 RT.	100	
STA. 2366+08 RT. TO STA. 2377+08 RT.			
STA. 2379+50 RT. TO STA. 2388+82 RT.			
STA. 2367+00 LT. TO STA. 2377+21 LT.			
STA. 2379+63 LT. TO STA. 2389+60 LT.			
ITEM 527.341 WORK ZONE CRASH CUSHIONS - TL3	UNIT		
STA. 2366+07 RT.	/		
STA. 2389+11 LT.	/		

Date: 10/18/2018



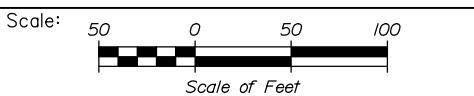
NOTES:

1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 47 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXPANDS THE WORK ZONE TO INCLUDE THE EXIT 47 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
4. WI-4b SIGNS SHALL BE REPLACED WITH WI-4 SIGNS DURING LANE CLOSURES.



EONBK 12376+25.00
EQNAHD 12376+31.49
EONBK 2376+25.00
EQNAHD 2376+31.49
EONBK 22376+25.00
EQNAHD 22376+31.49

Filename: 007_MOTPhase IB 1.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

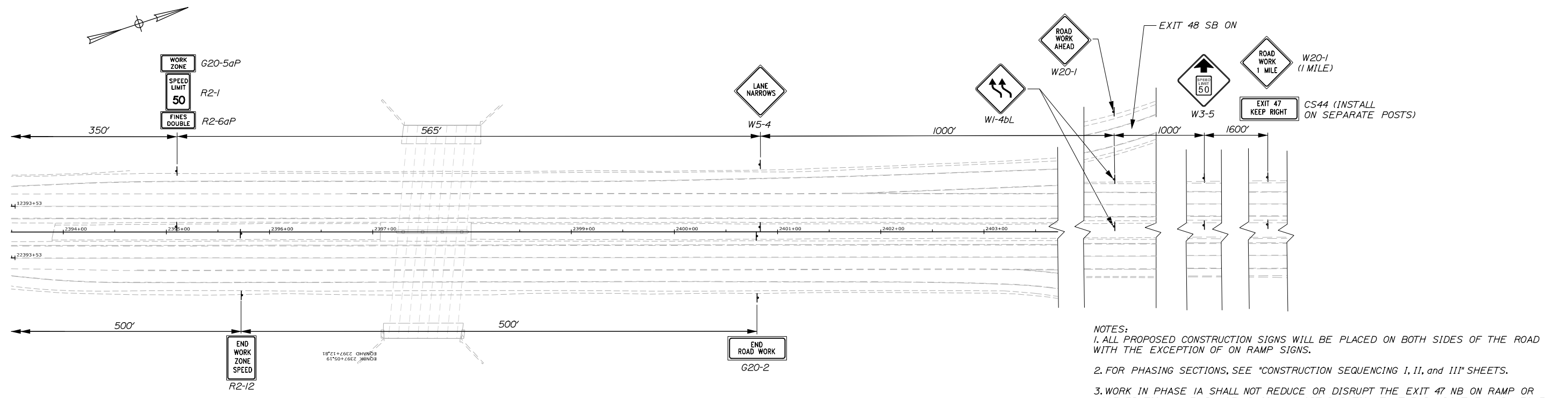
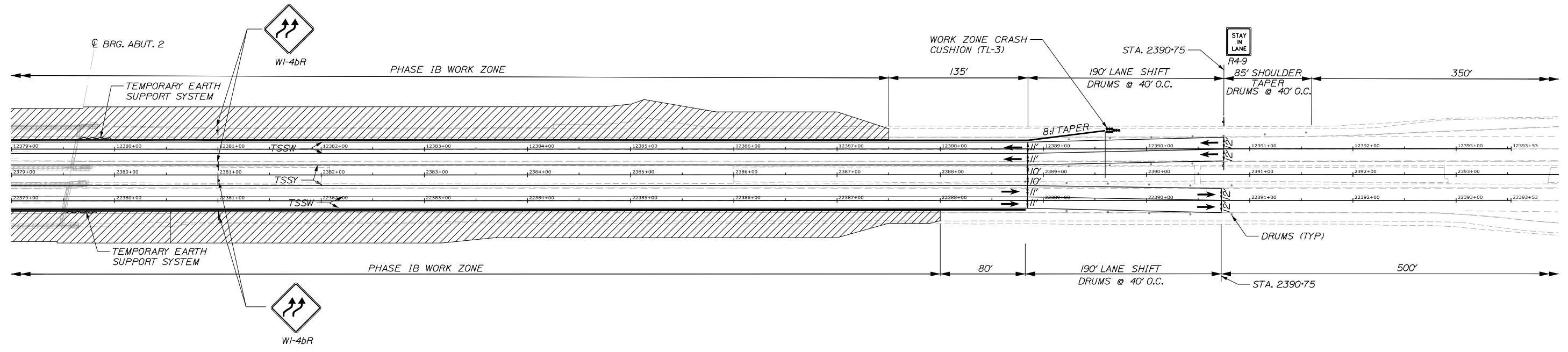
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MAINTENANCE OF TRAFFIC
PHASE IB

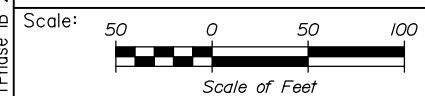
SHEET NUMBER: MOT-03
CONTRACT: 2019.09
7 OF 116

Date: 10/18/2018



NOTES:
 1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, and III" SHEETS.
 3. WORK IN PHASE IA SHALL NOT REDUCE OR DISRUPT THE EXIT 47 NB ON RAMP OR ACCELERATION LANE. PHASE IB IS A SHORT DURATION THAT EXPANDS THE WORK ZONE TO INCLUDE THE EXIT 47 NB ACCELERATION LANE. WORK FROM PHASE IA MAY CONTINUE IN PHASE IB. SEE SPECIAL PROVISION 107 PROSECUTION OF WORK.
 4. WI-4b SIGNS SHALL BE REPLACED WITH WI-4 SIGNS DURING LANE CLOSURES.

Filename: 008_MOTPhase IB 2.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IB

CONTRACT: 2019.09

SHEET NUMBER: MOT-04

8 OF 116

PHASE IIA QUANTITIES

LEGEND

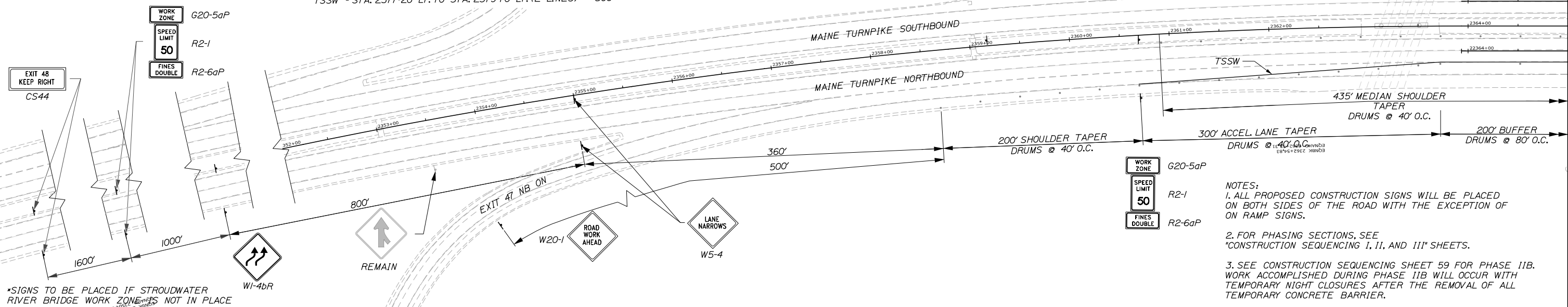
BWLL - BROKEN WHITE LANE LINE
 SWEL - SOLID WHITE EDGE LINE
 SYEL - SOLID YELLOW EDGE LINE
 TSSW - TEMPORARY SINGLE SOLID WHITE LINE
 TSSY - TEMPORARY SINGLE SOLID YELLOW LINE
 ITEM 526.304 SINGLE FACE TEMPORARY CONCRETE BARRIER - BRIDGE LS
 STA. 2377+08 RT. TO STA. 2379+50 RT.
 STA. 2377+21 LT. TO STA. 2379+64 LT.
 ITEM 526.306 TEMPORARY CONCRETE BARRIER TYPE 1 - SUPPLIED BY AUTHORITY LS
 STA. 2373+69 RT. TO STA. 2377+08 RT.
 STA. 2379+50 RT. TO STA. 2381+00 RT.
 STA. 2375+50 LT. TO STA. 2377+21 LT.
 STA. 2379+64 LT. TO STA. 2382+54 LT.

ITEM 627.78 TEMPORARY PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW LF
 NORTHBOUND
 TSSY - STA. 2365+75 RT. TO STA. 2377+00 RT. 1125
 TSSW - STA. 2365+75 RT. TO STA. 2377+00 RT. (2 LINES) 2250
 TSSY - STA. 2379+50 RT. TO STA. 2390+75 RT. 1125
 TSSW - STA. 2379+50 RT. TO STA. 2390+75 RT. (2 LINES) 2250
 SOUTHBOUND
 TSSY - STA. 2365+75 LT. TO STA. 2377+20 LT. 1145
 TSSW - STA. 2365+75 LT. TO STA. 2377+20 LT. (2 LINES) 2290
 TSSY - STA. 2379+70 LT. TO STA. 2390+75 LT. 1105
 TSSW - STA. 2379+70 LT. TO STA. 2390+75 LT. (2 LINES) 2210
 ITEM 627.73 TEMPORARY 6 INCH PAVEMENT MARKING TAPE LF
 NORTHBOUND
 TSSY - STA. 2377+00 RT. TO STA. 2379+50 RT. 250
 TSSW - STA. 2377+00 RT. TO STA. 2379+50 RT. (2 LINES) 500
 SOUTHBOUND
 TSSY - STA. 2377+20 LT. TO STA. 2379+70 LT. 250
 TSSW - STA. 2377+20 LT. TO STA. 2379+70 LT. (2 LINES) 500

ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS SF
 NORTHBOUND
 SWEL - STA. 2368+00 RT. TO STA. 2370+00 RT. 50
 TSSW - STA. 2365+75 RT. TO STA. 2375+50 RT. (2 LINES) 975
 TSSY - STA. 2365+75 RT. TO STA. 2375+50 RT. 244
 TSSW - STA. 2381+00 RT. TO STA. 2390+75 RT. (2 LINES) 975
 TSSY - STA. 2381+00 RT. TO STA. 2390+75 RT. 244
 SOUTHBOUND
 TSSW - STA. 2365+75 LT. TO STA. 2375+50 LT. (2 LINES) 975
 TSSY - STA. 2365+75 LT. TO STA. 2375+50 LT. 244
 TSSW - STA. 2381+00 LT. TO STA. 2390+75 LT. (2 LINES) 975
 TSSY - STA. 2381+00 LT. TO STA. 2390+75 LT. 244

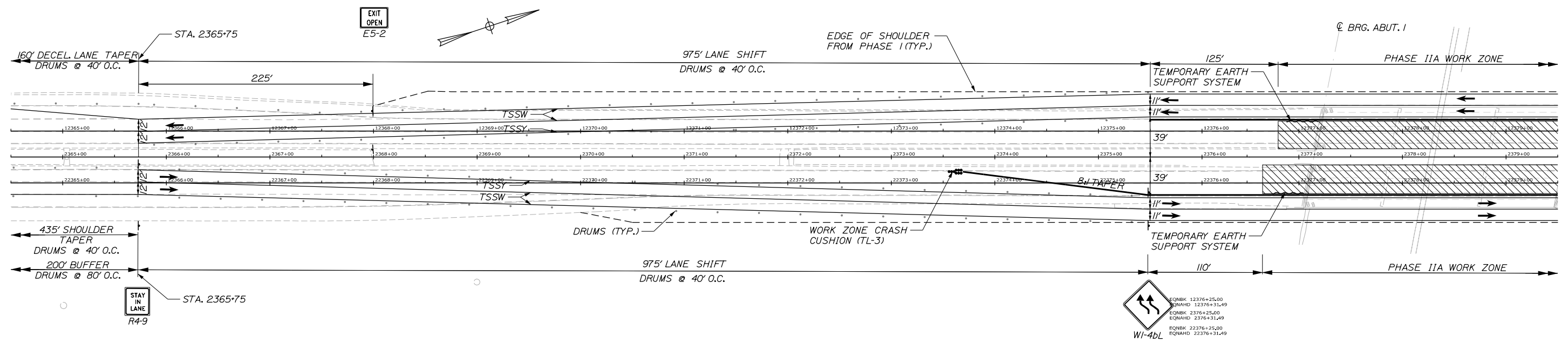
ITEM 202.206 REMOVING RUMBLE STRIPS LF
 NORTHBOUND
 STA. 2388+00 RT. TO STA. 2390+75 RT. 275
 SOUTHBOUND
 STA. 2387+50 LT. TO STA. 2390+75 LT. 325

Date: 10/18/2018

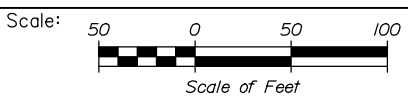


*SIGNS TO BE PLACED IF STROUDWATER RIVER BRIDGE WORK ZONE IS NOT IN PLACE

NOTES:
 1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
 2. FOR PHASING SECTIONS, SEE "CONSTRUCTION SEQUENCING I, II, AND III" SHEETS.
 3. SEE CONSTRUCTION SEQUENCING SHEET 59 FOR PHASE IIB. WORK ACCOMPLISHED DURING PHASE IIB WILL OCCUR WITH TEMPORARY NIGHT CLOSURES AFTER THE REMOVAL OF ALL TEMPORARY CONCRETE BARRIER.



Filename: 009_MOTPhase II.dgn



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

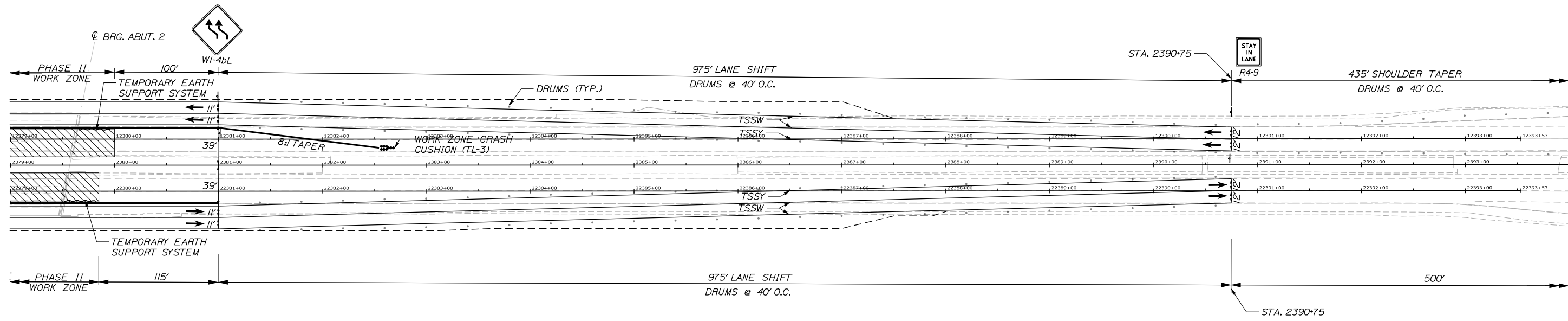
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

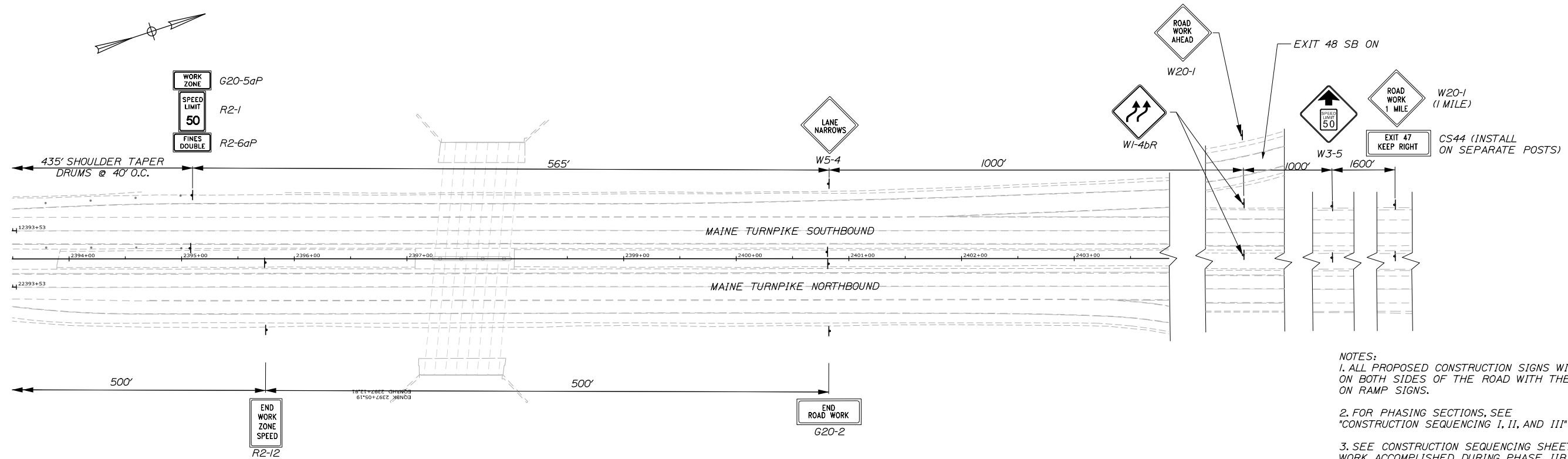
BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IIA

SHEET NUMBER: MOT-05
 9 OF 116

CONTRACT: 2019.09



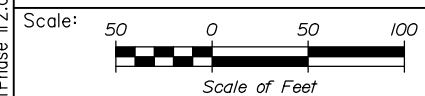
Date: 10/18/2018



NOTES:

1. ALL PROPOSED CONSTRUCTION SIGNS WILL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS.
2. FOR PHASING SECTIONS, SEE CONSTRUCTION SEQUENCING 1, II, AND III SHEETS.
3. SEE CONSTRUCTION SEQUENCING SHEET 59 FOR PHASE IIB. WORK ACCOMPLISHED DURING PHASE IIB WILL OCCUR WITH TEMPORARY NIGHT CLOSURES AFTER THE REMOVAL OF ALL TEMPORARY CONCRETE BARRIER.

Filename: 010_MOTPhase II.2.dgn



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
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THE GOLD STAR MEMORIAL HIGHWAY

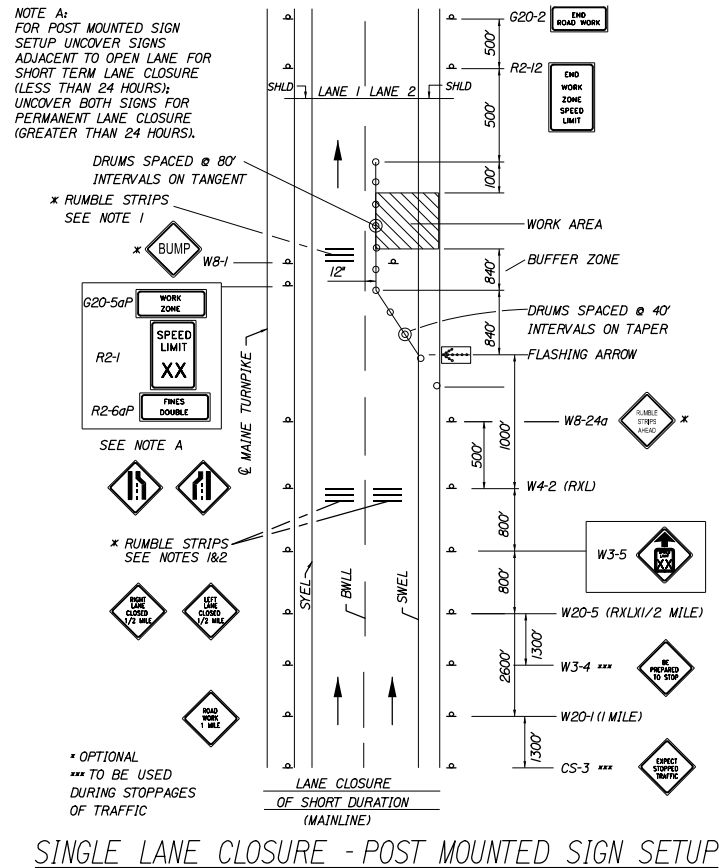
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE IIA

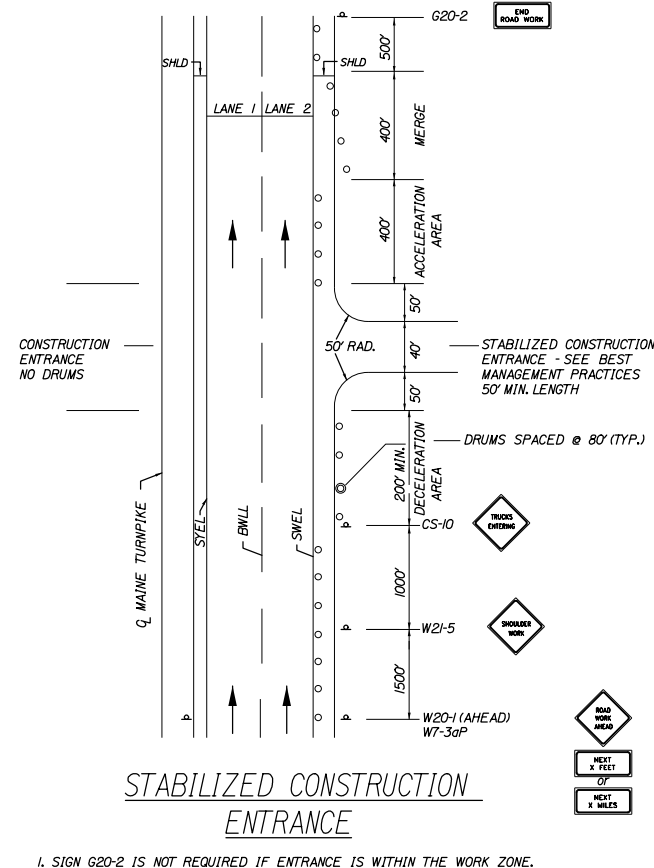
SHEET NUMBER: MOT-06
 10 OF 116

CONTRACT: 2019.09

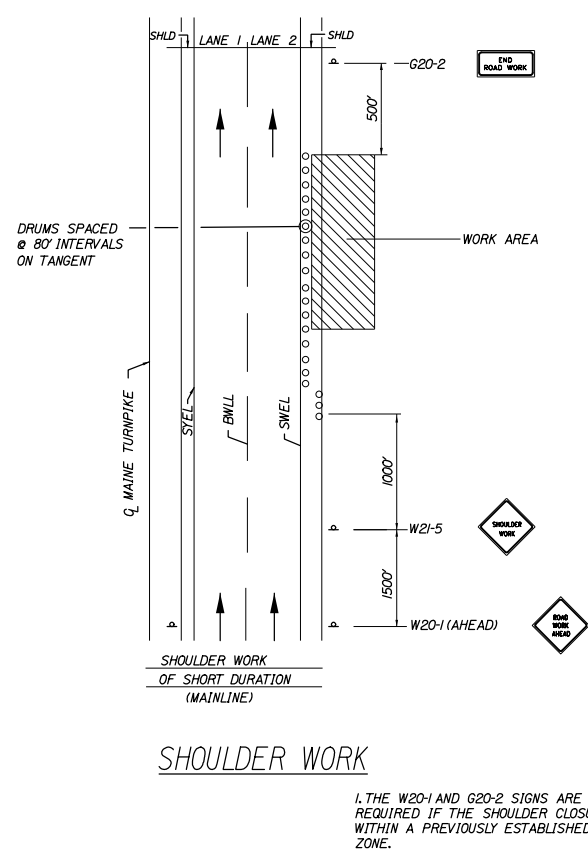
Date:10/18/2018



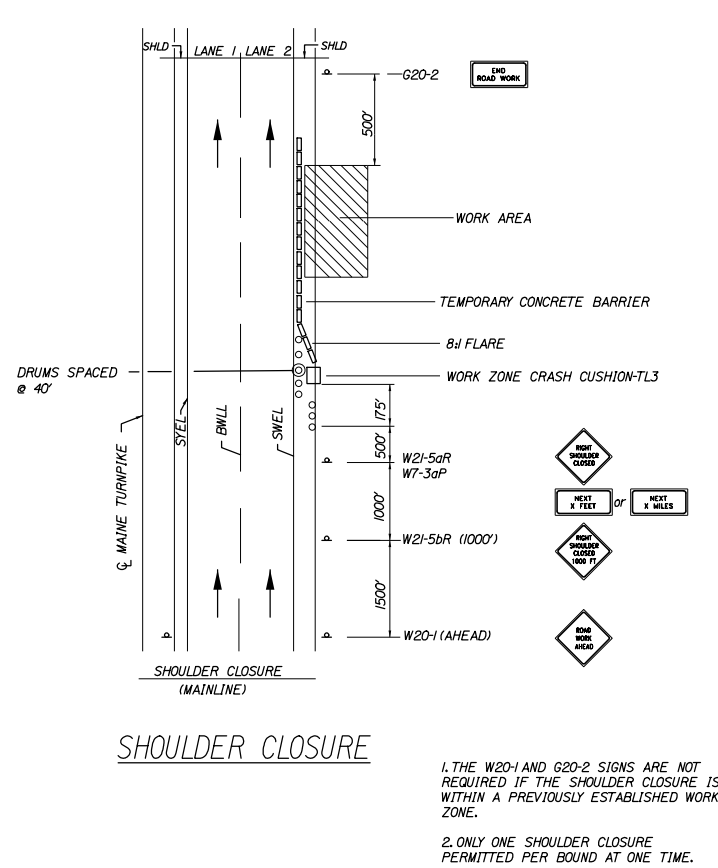
SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP



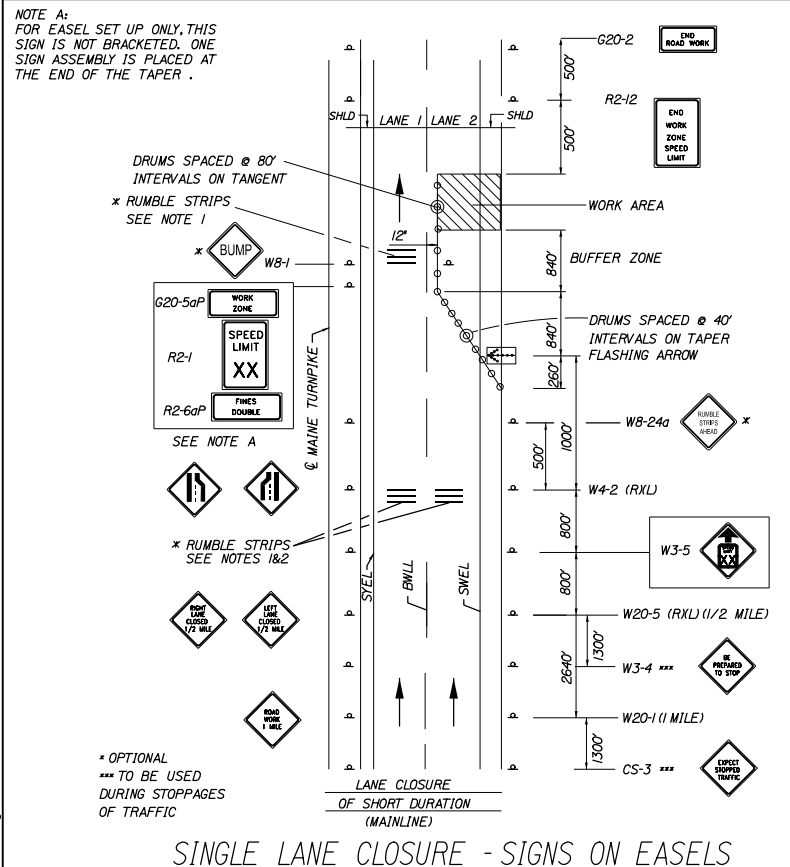
STABILIZED CONSTRUCTION ENTRANCE



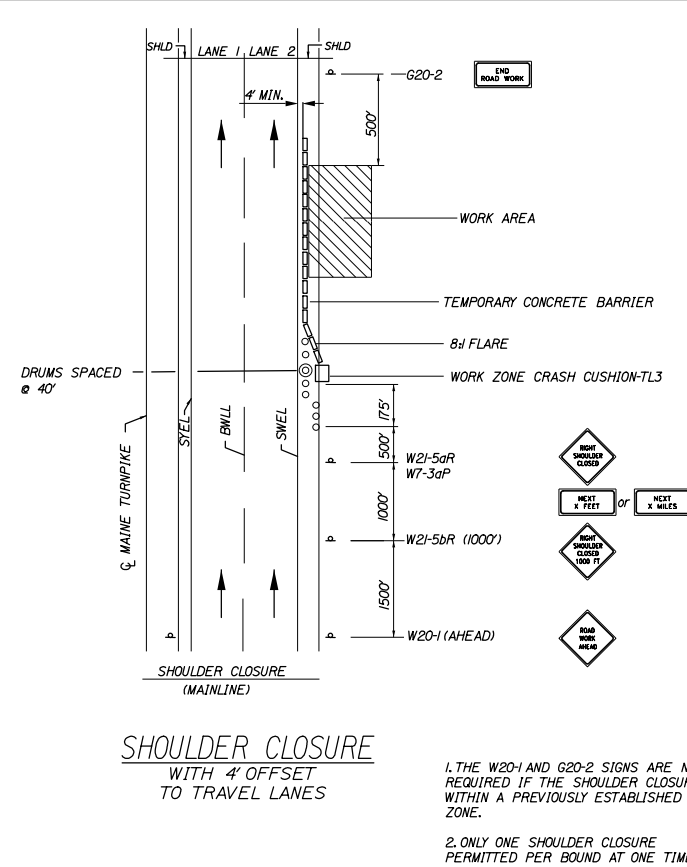
SHOULDER WORK



SHOULDER CLOSURE



SINGLE LANE CLOSURE - SIGNS ON EASELS



SHOULDER CLOSURE WITH 4' OFFSET TO TRAVEL LANES

TEMPORARY RUMBLE STRIP NOTES

- IF RUMBLE STRIPS ARE USED THEY SHALL BE PLACED IN ONE OF THE FOLLOWING CONFIGURATIONS:
 - ADJACENT TO THE WORK ZONE (1 UNIT)
 - UPSTREAM FROM THE TAPER FOR THE WORKZONE (2 UNITS)
 - BOTH ADJACENT TO THE WORKZONE AND PRIOR TO THE TAPER (3 UNITS)
 W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST RUMBLE STRIP AT ANY LOCATION. ONLY ONE SET OF W8-24a SIGNS ARE REQUIRED FOR ANY OF THE ABOVE CONFIGURATIONS.
- RUMBLE STRIPS MAY BE PLACED UPSTREAM OF THE TAPER BETWEEN THE W3-5 SIGNS AND THE W4-2 SIGNS. IF RUMBLE STRIPS ARE INSTALLED PRIOR TO TAPER, W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST STRIP AND THE W8-24a SIGNS SHALL BE MOVED TO 400' AFTER THE W20-5 SIGNS.

- GENERAL MAINTENANCE OF TRAFFIC NOTES:
- ALL PAVEMENT STRIPING & SIGNING SHALL BE IN ACCORDANCE WITH THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES', U.S.D.O.T., F.H.W.A., LATEST EDITION.
 - THESE PLANS SHOW THE GENERAL CONDITION FOR TURNPIKE MAINLINE TRAFFIC CONTROL DURING CONSTRUCTION, SLIGHT MODIFICATIONS IN CONSTRUCTION PROCEDURE MAY OCCUR AND MAY REQUIRE SOME MINOR ADJUSTMENTS TO BE MADE IN THE FIELD, ALL PROCEDURES MUST BE APPROVED BY THE RESIDENT.
 - THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND MUTCD. PAYMENT SHALL BE MADE UNDER ITEM 627.77 - REMOVING PAVEMENT MARKINGS.
 - EXPOSED BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.341 - WORK ZONE CRASH CUSHION - TL-3.
 - GEOMETRIC INFORMATION FOR THE TRAFFIC PHASES SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
 - SPEED LIMIT, STOP, EXIT AND YIELD SIGNS SHALL BE A MINIMUM OF 5' ABOVE THE PAVEMENT.

ABBREVIATIONS FOR ALL M.O.T. PLANS
 BWLL = BROKEN WHITE LANE LINE
 SWLL = SOLID WHITE LANE LINE
 SYLL = SOLID YELLOW LANE LINE
 TBWLL = TEMPORARY BROKEN WHITE LANE LINE
 TSWLL = TEMPORARY SOLID WHITE LANE LINE
 TSYLL = TEMPORARY SOLID YELLOW LANE LINE

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 MAINTENANCE OF TRAFFIC
 STANDARD DETAILS

SHEET NUMBER: MOT-07
 CONTRACT: 2019.09
 11 OF 116

Filename: 011_MOT Standard Dets...dgn

CONSTRUCTION SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND BORDER		
G20-2	48"	24"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			3	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			8.00 (24)
G20-5aP	48"	24"					6				8.00 (48)
R2-1 (50)	48"	60"					6				20.00 (120)
R2-6aP	48"	24"					6				8.00 (48)
R2-12	48"	60"					2				20.00 (40)
R4-9	36"	48"					4				12.00 (48)
W1-4L	48"	48"					4				16.00 (64.00)
W1-4R	48"	48"					4				16.00 (64.00)
W1-4bL	48"	48"					4				16.00 (64)
W1-4bR	48"	48"					4				16.00 (64)
W4-2L	48"	48"					4				16.00 (64)
W4-2R	48"	48"					4				16.00 (64)

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND BORDER		
W3-5 (50)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			2	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (32)
W5-4	48"	48"					4				16.00 (64)
W20-1 (AHEAD) (1 MILE)	48"	48"					2				16.00 (32)
W20-5L (1/2 MILE)	48"	48"					4				16.00 (64)
W20-5R (1/2 MILE)	48"	48"					4				16.00 (64)
CS-44 (EXIT 47) (EXIT 48)	72"	36"		8" C	7"		2				18.00 (36)
				8" C	6"		2				18.00 (36)
					7"						
E5-2	48"	36"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			2	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			12.00 (24)

Date:10/18/2018

Filename: 012_MOT_SignSummary.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
By	Date	By	Date
Designed	CDH 10\18	Checked	JRH 10\18
Drawn	SLS 10\18	In Charge of	RAL 10\18

MAINE TURNPIKE AUTHORITY
2360 Congress Street
Portland, ME 04102
TEL (207) 871-7771
FAX (207) 879-5567

THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

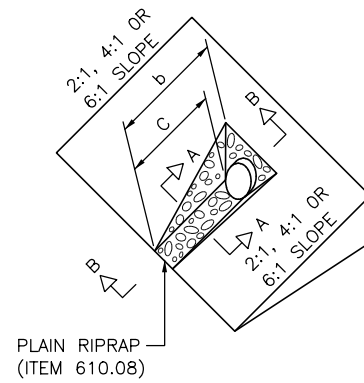
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MAINTENANCE OF TRAFFIC
SIGN SUMMARY

SHEET NUMBER: MOT-08
CONTRACT:2019.09
12 OF 116

Date: 10/18/2018

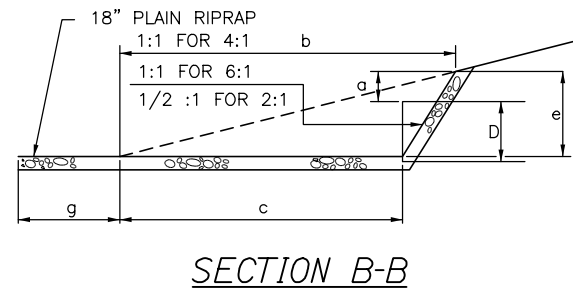
DIMENSIONS FOR SLOPE OF 2:1

D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	1.00	4.00	3.00	2.00	6.00	1.00	1.50	1.30
15"	1.00	4.50	3.37	2.25	6.75	1.63	1.50	1.70
18"	1.00	5.00	3.75	2.50	7.50	2.25	1.50	2.09
21"	1.00	5.50	4.13	2.75	8.25	2.88	1.50	2.58
24"	1.00	6.00	4.50	3.00	9.00	3.50	1.50	3.12
30"	1.00	7.00	5.25	3.50	10.50	4.75	1.50	4.33
36"	1.00	8.00	6.00	4.00	12.00	6.00	1.50	5.75
42"	1.00	9.00	6.75	4.50	13.50	7.25	1.50	7.37
48"	1.00	10.00	7.50	5.00	15.00	8.50	1.50	9.18
54"	1.00	11.00	8.25	5.50	16.50	9.75	1.50	11.19
60"	1.00	12.00	9.00	6.00	18.00	11.00	1.50	13.40
66"	1.00	13.00	9.75	6.50	19.50	12.25	1.50	15.81
72"	1.00	14.00	10.50	7.00	21.00	13.50	1.50	18.41
84"	1.00	16.00	12.00	8.00	24.00	16.00	1.50	24.22



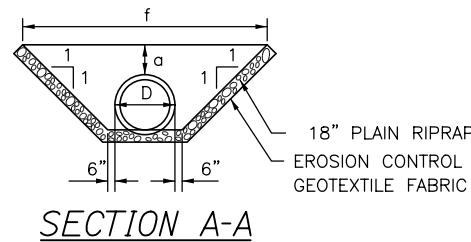
DIMENSIONS FOR SLOPE OF 4:1

D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	1.00	8.00	6.00	2.00	6.00	0.00	1.50	2.20
15"	1.00	9.00	6.75	2.25	6.75	0.00	1.50	2.80
18"	1.00	10.00	7.50	2.50	7.50	0.00	1.50	3.40
21"	1.00	11.00	8.25	2.75	8.25	0.00	1.50	4.10
24"	1.00	12.00	9.00	3.00	9.00	0.00	1.50	4.86
30"	1.00	14.00	10.50	3.50	10.50	0.00	1.50	6.58
36"	1.00	16.00	12.00	4.00	12.00	0.00	1.50	8.56
42"	1.00	18.00	13.50	4.50	13.50	0.50	1.50	10.92
48"	1.00	20.00	15.00	5.00	15.00	1.00	1.50	13.57
54"	1.00	22.00	16.50	5.50	16.50	1.50	1.50	16.50
60"	1.00	24.00	18.00	6.00	18.00	2.00	1.50	19.72
66"	1.00	26.00	19.50	6.50	19.50	2.50	1.50	23.22
72"	1.00	28.00	21.00	7.00	21.00	3.00	1.50	27.01
84"	1.00	32.00	24.00	8.00	24.00	4.00	1.50	35.45



DIMENSIONS FOR SLOPE OF 6:1

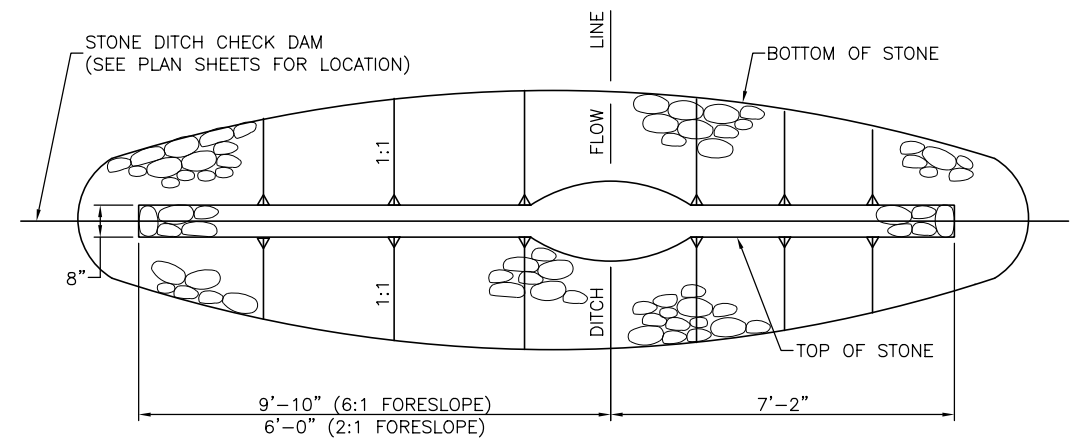
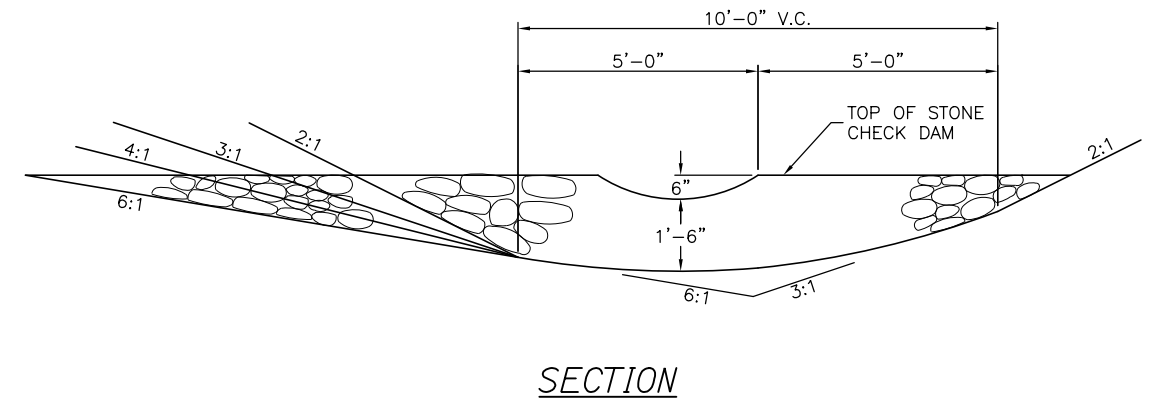
D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	0.50	9.00	7.50	1.50	4.50	0.00	1.50	2.30
15"	0.50	10.50	8.75	1.75	5.50	0.00	1.50	2.93
18"	0.50	12.00	10.00	2.00	6.50	0.00	1.50	3.57
21"	0.50	13.50	11.25	2.25	7.25	0.00	1.50	4.46
24"	0.50	15.00	12.50	2.50	8.00	0.00	1.50	5.44
30"	0.50	18.00	15.00	3.00	9.50	0.00	1.50	7.71
36"	0.50	21.00	17.50	3.50	11.00	0.00	1.50	10.37
42"	0.50	24.00	20.00	4.00	12.50	0.00	1.50	13.42
48"	0.50	27.00	22.50	4.50	14.00	0.00	1.50	16.87
54"	0.50	30.00	25.00	5.00	15.50	0.00	1.50	20.70
60"	0.50	33.00	27.50	5.50	17.00	0.00	1.50	24.93
66"	0.50	36.00	30.00	6.00	18.50	0.00	1.50	29.55
72"	0.50	39.00	32.50	6.50	20.00	0.00	1.50	34.56
84"	0.50	45.00	37.50	7.50	23.00	0.00	1.50	45.76



ROADWAY CULVERT END SLOPE TREATMENT

NOTES:

1. THE DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE MODIFIED BY THE RESIDENT.
2. STONE QUANTITIES ARE FOR ONE END OF THE PIPE.



STONE CHECK DAM
1" = 2'-0"

FORESLOPE	BACKSLOPE	QUANTITY C.Y. STONE
6:1	3:1	2.5
4:1	3:1	2.5
3:1	3:1	2.0
2:1	3:1	2.0

NOTES:

1. STONE FOR TEMPORARY AND PERMANENT STONE CHECK DAMS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29, STONE DITCH PROTECTION.
2. TEMPORARY STONE CHECK DAMS WILL BE PAID FOR UNDER ITEM 610.181.

Filename: 013_Erosion ControlDetails.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

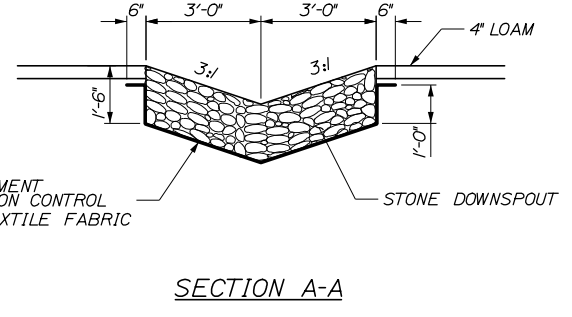
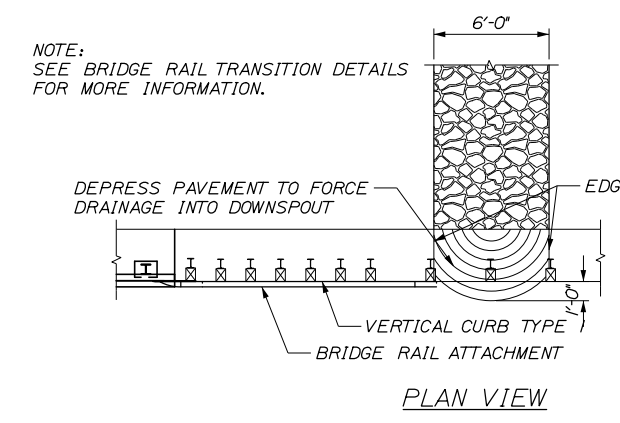
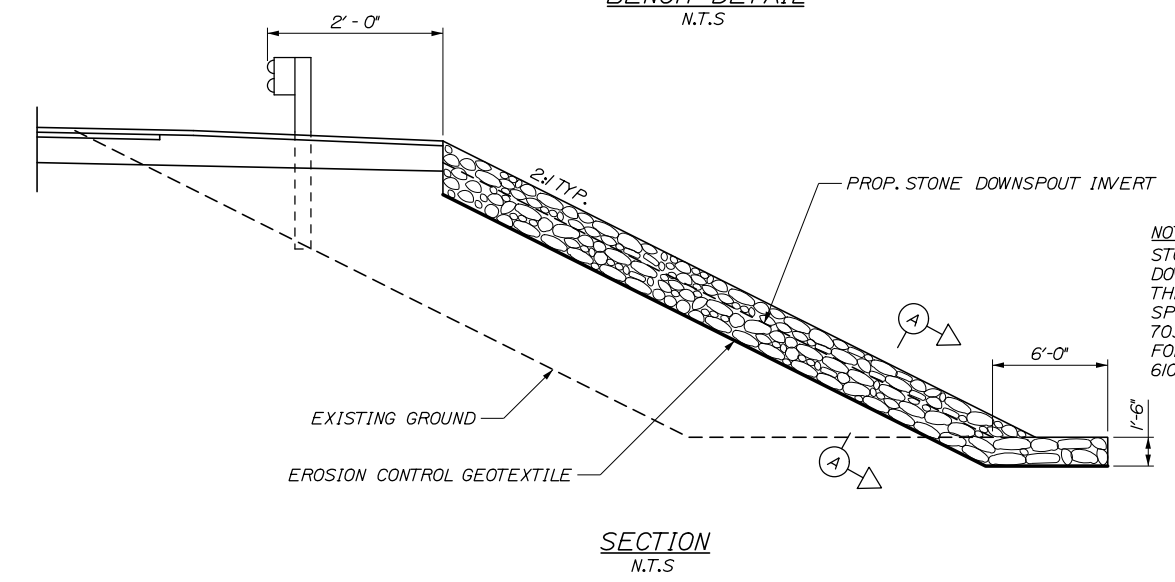
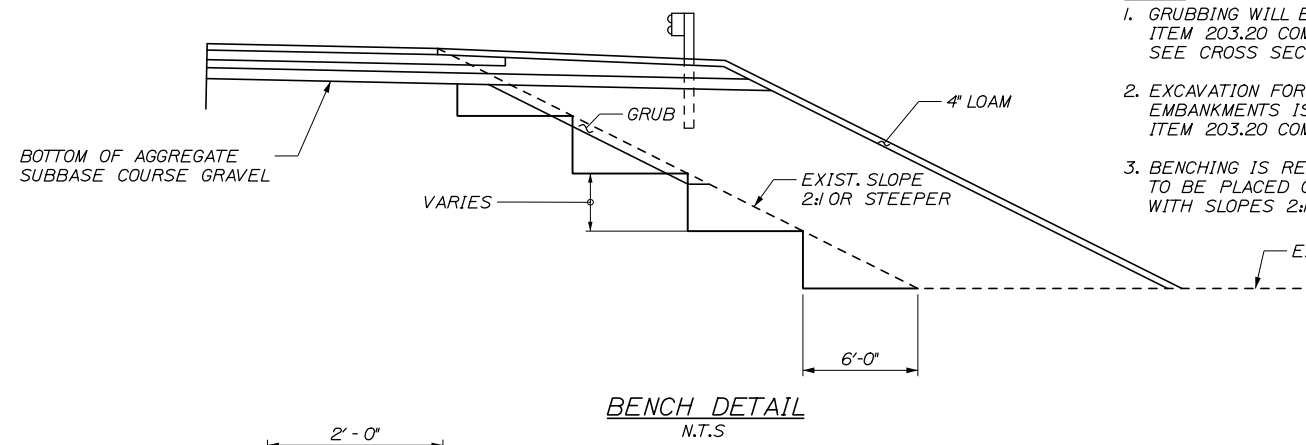
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
EROSION CONTROL DETAILS I

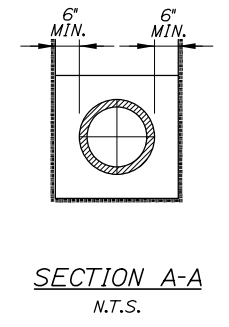
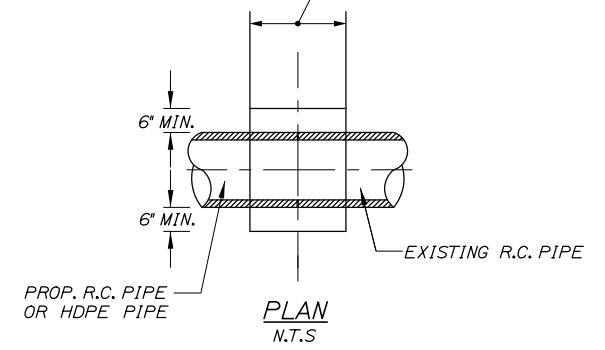
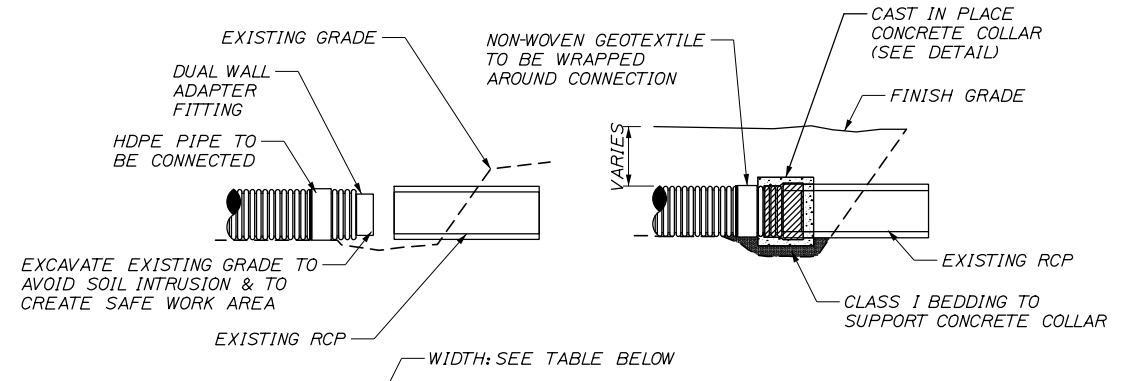
SHEET NUMBER: CD-01
CONTRACT: 2019.09
13 OF 116

- NOTES:**
- GRUBBING WILL BE PAID FOR UNDER ITEM 203.20 COMMON EXCAVATION. SEE CROSS SECTIONS FOR ACTUAL LIMITS.
 - EXCAVATION FOR BENCHING TO RECEIVE EMBANKMENTS IS INCIDENTAL TO ITEM 203.20 COMMON EXCAVATION.
 - BENCHING IS REQUIRED WHERE FILL IS TO BE PLACED ON EXISTING EMBANKMENTS WITH SLOPES 2:1 OR STEEPER.

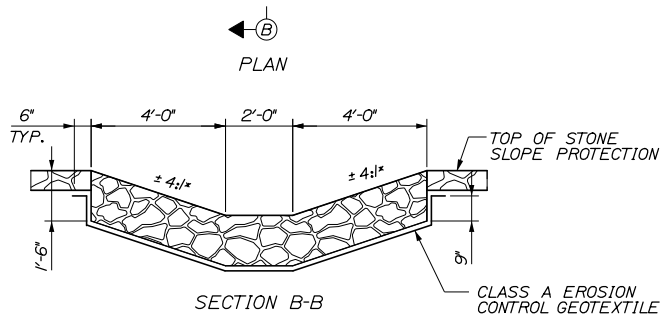
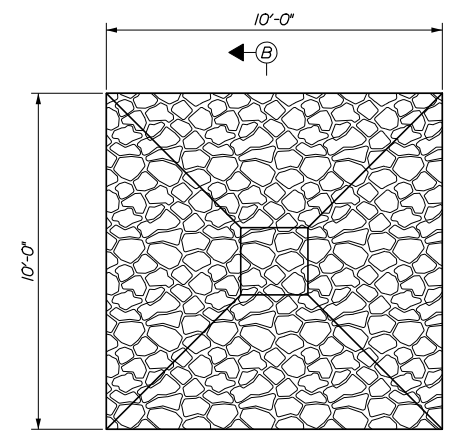


DOWNSPOUT DETAILS
N.T.S.

1 LF of Downspout = .33 CY of Plain Riprap
1 LF of Downspout = 1.04 SY of Erosion Control Geotextile Fabric



- NOTES:**
- CONNECTION AND PIPE TO BE BACKFILL PER ASTM D2321 (CRUSHED STONE)
 - CONCRETE SHALL BE CLASS A FIBER REINFORCED.
 - SEE CONCRETE COLLAR WIDTH SCHEDULE FOR DIMENSIONS.



- NOTES:**
- STONE FOR STONE DOWNSPOUTS, APRONS, AND STONE SPLASH PADS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29 AND WILL BE PAID FOR UNDER ITEM 610.08, PLAIN RIPRAP.
 - EROSION CONTROL GEOTEXTILE FABRIC WILL BE PAID UNDER ITEM 620.58.

STONE SPLASH PAD AND DOWNSPOUT DETAIL
 $\frac{3}{8}'' = 1'-0''$

CONCRETE COLLAR WIDTH SCHEDULE	
PIPE DIA. (INCHES)	WIDTH OF CONC. (INCHES)
12	24
15	24
18	24
24	24
30	30
36	36
42	48
48	48
54	60

Date: 10/18/2018

Filename: 014_Erosion ControlDetails 2.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

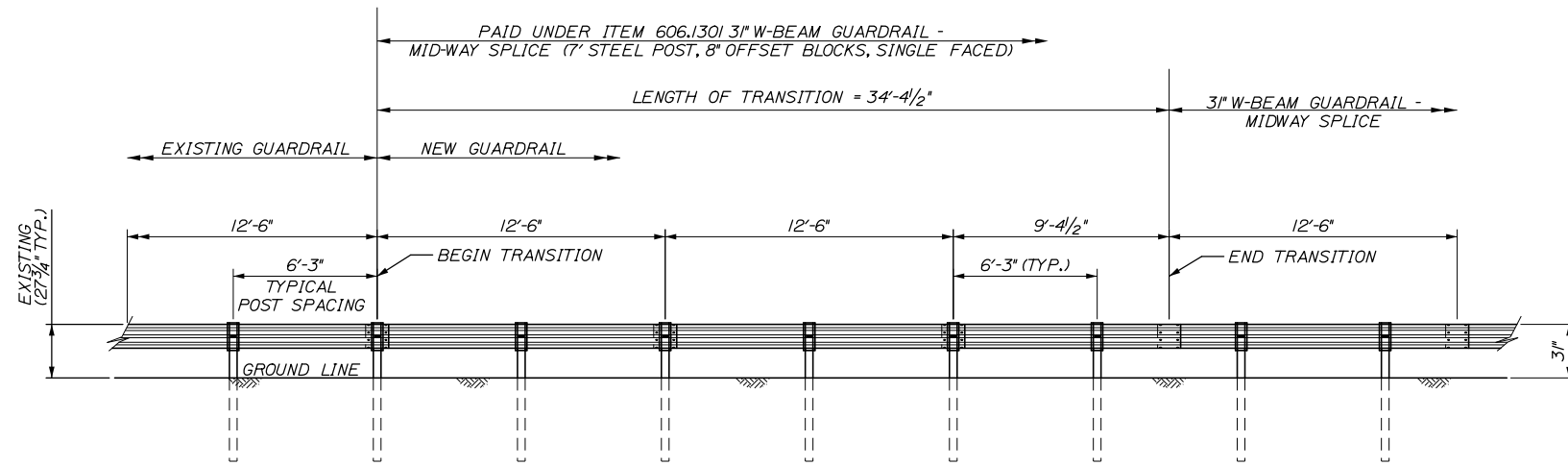
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
EROSION CONTROL DETAILS II

SHEET NUMBER: CD-02
CONTRACT: 2019.09
14 OF 116

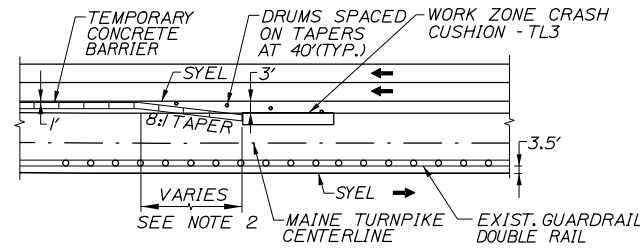
Date: 10/18/2018



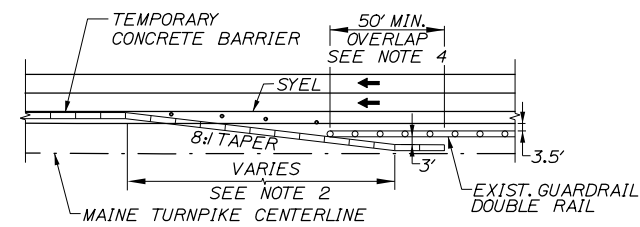
TRANSITION FROM EXISTING GUARDRAIL NOTES:

1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
3. ALL NEW POSTS SHALL BE 84" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

TRANSITION FROM EXISTING GUARDRAIL TO 3" MID-WAY SPLICED GUARDRAIL
NOT TO SCALE



EXIST. GUARDRAIL ON FAR SIDE OF MEDIAN



EXIST. GUARDRAIL ON NEAR SIDE OF MEDIAN

CONCRETE BARRIER / GUARDRAIL OVERLAP DETAIL
NOT TO SCALE

CONCRETE BARRIER/GUARDRAIL OVERLAP NOTES:

1. BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION (TL-3), OR LAPPED BEHIND GUARDRAIL SEE DETAILS THIS SHEET.
2. 8:1 TAPERED BARRIER LENGTH DEPENDENT ON LOCATION OF BARRIER RELATIVE TO MAINE TURNPIKE SHOULDERS OR LANES.
3. IF A WORK ZONE CRASH CUSHION - TL3 IS USED FOR A MEDIAN SHOULDER CLOSURE, THE CRASH CUSHION SYSTEM MUST BE FOUNDED ON A LEVEL SURFACE. ANY WORK NECESSARY TO PROVIDE A LEVEL SURFACE WILL BE INCIDENTAL TO THE CRASH CUSHION ITEM.
4. IF THE 50' MIN. LENGTH OF OVERLAP CANNOT BE MET, THEN THE EXISTING GUARDRAIL END MUST BE ANCHORED IN ACCORDANCE WITH DRAWING SEW02a IN THE AASHTO-AGC-ARBTA JOINT COMMITTEE TASK FORCE 13 REPORT, DRAFTED MAY 1995.

Filename: 015_Guardrail Details 1.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	CDH	10\18	Checked	JRH	10\18
	Drawn	SLS	10\18	In Charge of	RAL

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

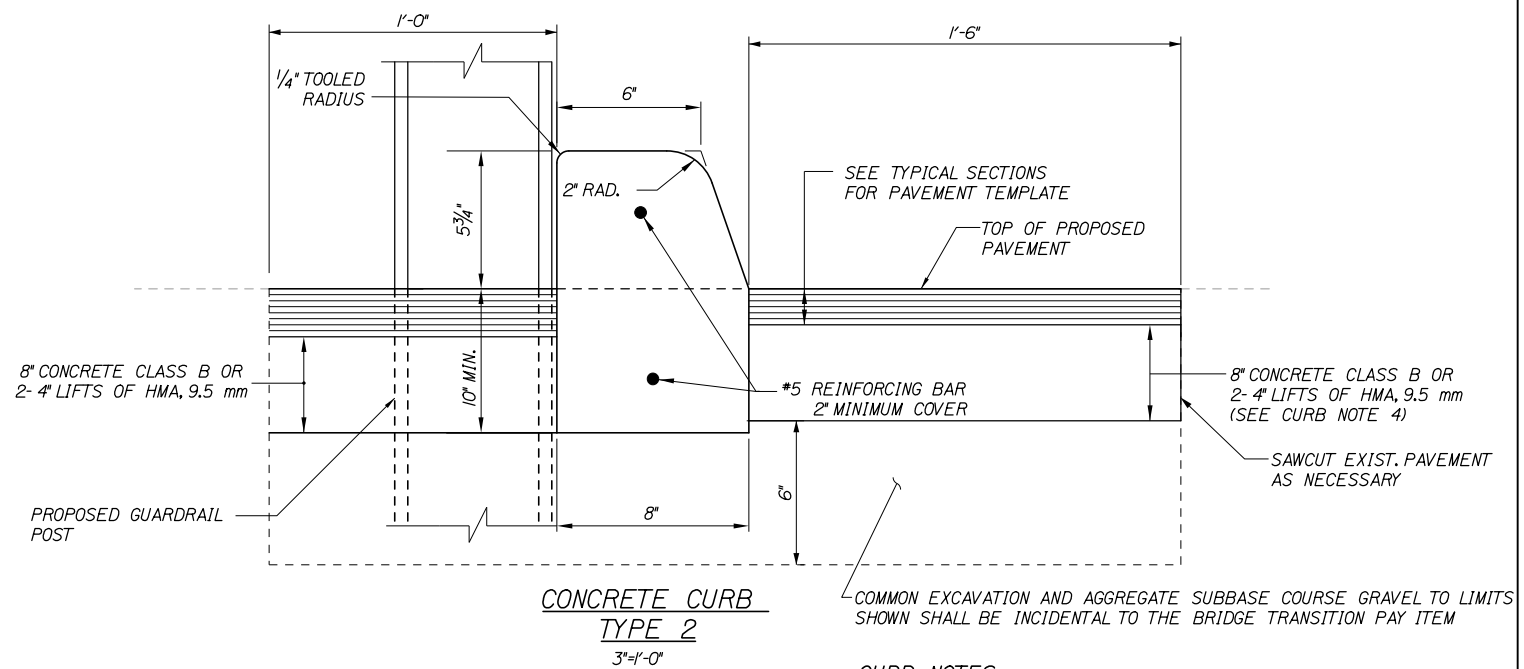
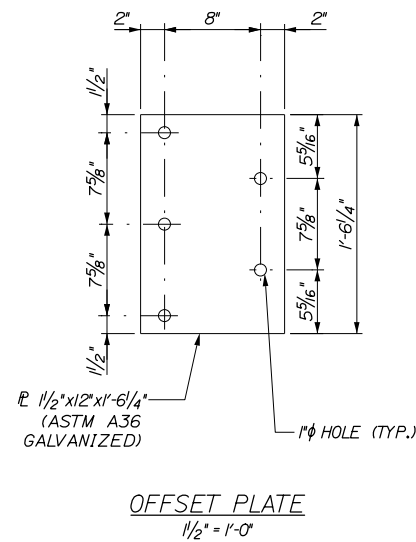
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
GUARDRAIL DETAILS

SHEET NUMBER: CD-03
CONTRACT: 2019.09
15 OF 116

Date:10/18/2018

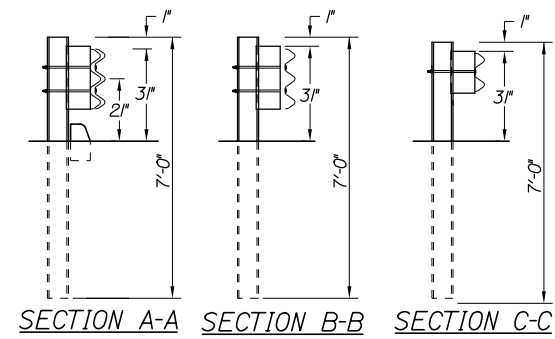
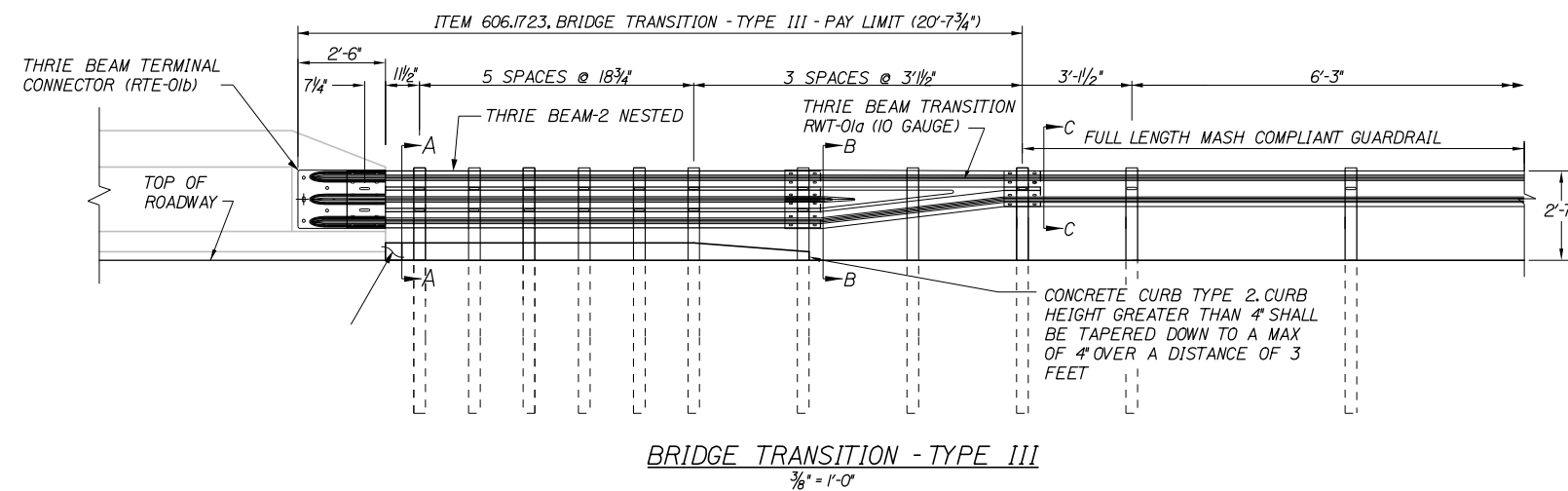
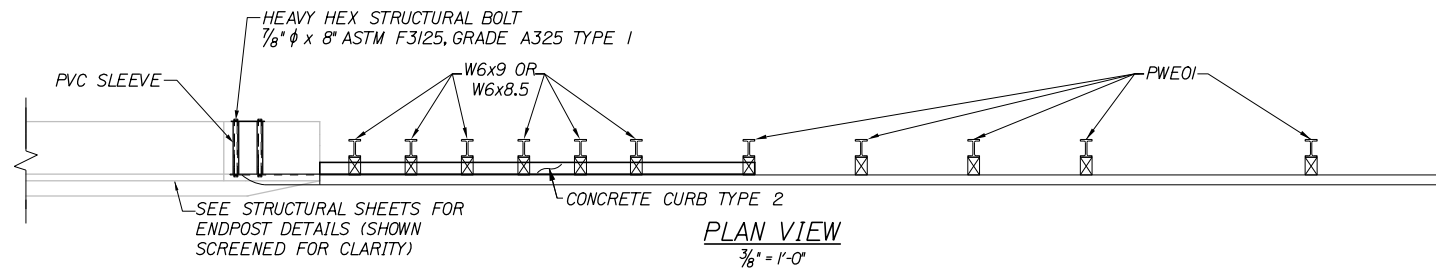


CURB NOTES:

1. CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS.
2. CONCRETE CURBS USED IN CONJUNCTION WITH THRIE-BEAM BRIDGE TRANSITION SHALL BE TYPE 2. SEE DETAILS THIS SHEET. CONCRETE CURBS SHALL BE SET TO FORM A CONTINUOUS GUTTERLINE WITHOUT ANY DRAINAGE OPENINGS.
3. CURB TRANSITION SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.
4. SAWCUTTING EXISTING PAVEMENT, CONCRETE FILL AND PAVEMENT TO LIMITS SHOWN SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.

GUARDRAIL NOTES:

1. ADDITIONAL HOLES MAY BE MADE IN THE THRIE-BEAM PANELS BY DRILLING, PUNCHING, OR OTHER MEANS THAT PRODUCE A NEAT, CLEAN HOLE. BURNING HOLES WILL NOT BE ALLOWED.
2. THRIE BEAM SHALL BE PLACED WITH THE COMPOSITE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE.
3. RAIL ELEMENT SHALL MEET ALL REQUIREMENTS OF AASHTO M-180 EXCEPT AS MODIFIED ON THE PLANS. THE THRIE BEAM TRANSITION TO W-BEAM SHALL BE OF THE SAME MATERIAL, BUT SHALL NOT BE LESS THAN 10 GAUGE.
4. AFTER INSTALLATION IS COMPLETE, UPSET THE THREAD ON THE ANCHOR BOLTS IN THREE PLACES AROUND EACH BOLT, AT THE JUNCTION OF THE NUT AND THE EXPOSED THREAD, WITH A CENTER PUNCH OR SIMILAR TOOL.
5. STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THESE GUARDRAIL ATTACHMENTS. DESIGNATIONS PROVIDED IN PARENTHESES RELATE TO STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED BARRIER RAIL HARDWARE," 1979. AASHTO-AGC-ARTBA JOINT COOPERATE COMMITTEE.
6. 1" HOLE IN CONCRETE SHALL BE FORMED BY A 1" I.D. PVC SLEEVE AS APPROVED BY THE ENGINEER.
7. GUARDRAIL HEIGHT SHALL BE ADJUSTED UNIFORMLY BETWEEN SECTION CALLOUTS.



Filename: 016_Guardrail Details II.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

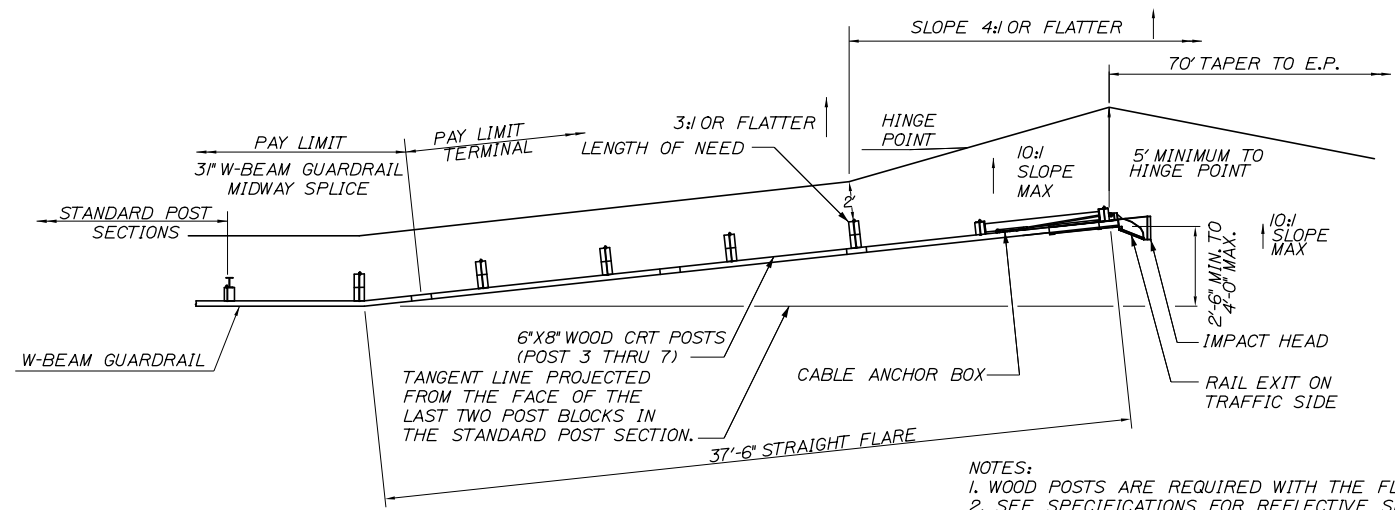
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

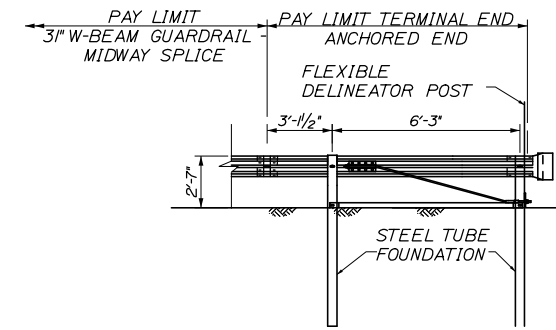
GUARDRAIL DETAILS
BRIDGE TRANSITION

SHEET NUMBER: CD-04
CONTRACT: 2019.09
16 OF 116

Date: 10/18/2018



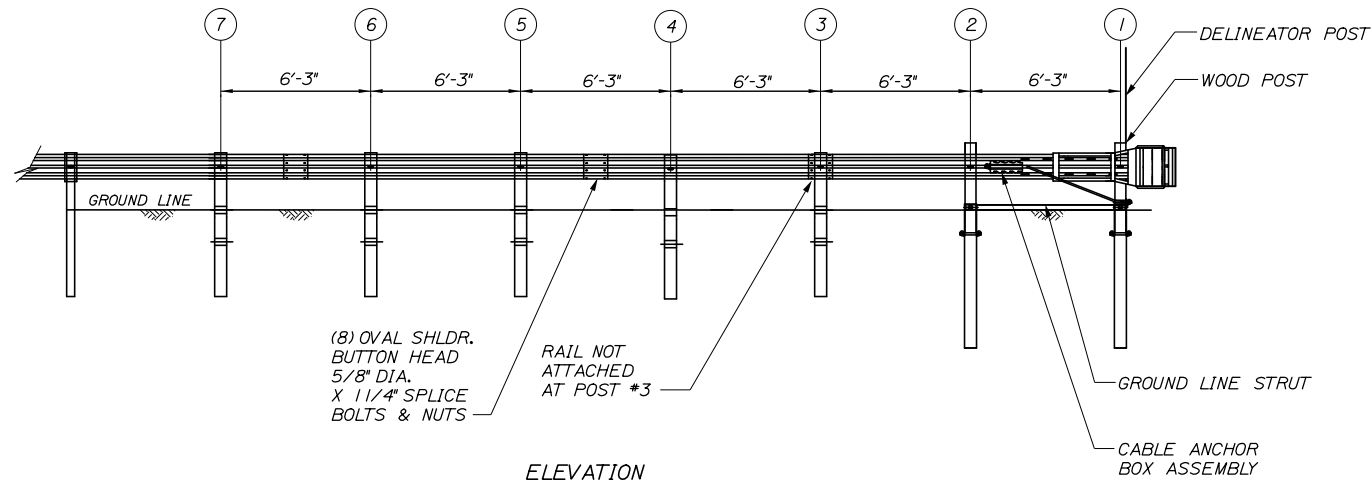
NOTES:
 1. WOOD POSTS ARE REQUIRED WITH THE FLAT.
 2. SEE SPECIFICATIONS FOR REFLECTIVE SHEETING REQUIREMENTS.



TERMINAL END - ANCHORED END - 3" W-BEAM GUARDRAIL
 (ITEM 606.1351)

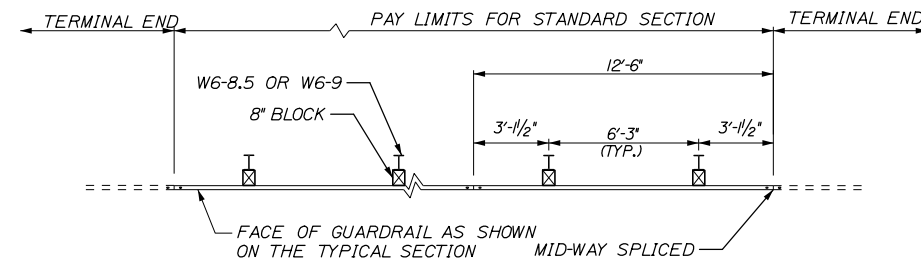
NOT TO SCALE

NOTES:
 1. THIS DETAIL MODIFIES THE SEW31 DRAWING SUCH THAT W-BEAM DOES NOT EXTEND BEYOND THE LAST GUARDRAIL POST. THE RWM140 W-BEAM PANEL SHALL HAVE A LENGTH OF 9'-4 1/2" MEASURED FROM THE CENTER OF THE MIDWAY SPLICE TO THE CENTER OF THE LAST GUARDRAIL POST.

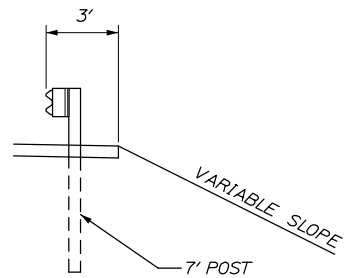


ELEVATION

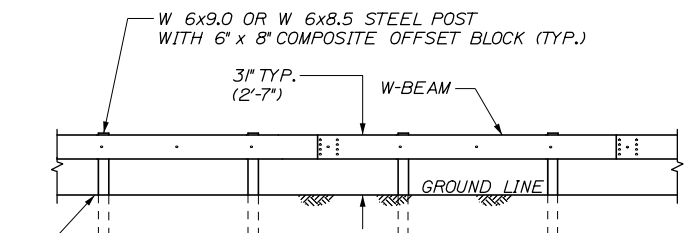
GUARDRAIL 350 FLARED TERMINAL - 3" W-BEAM GUARDRAIL
 NOT TO SCALE



PLAN - SINGLE FACED



CROSS-SECTION



ELEVATION

3" W-BEAM GUARDRAIL - MID-WAY SPLICE (8" OFFSET BLOCKS)

(ITEM 606.1301)

NOT TO SCALE

GENERAL GUARDRAIL INSTALLATION NOTE:

1. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLATION OF ALL GUARDRAIL COMPONENTS TO BE INSTALLED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY CONFLICTS OR IRREGULARITIES BETWEEN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASH END TREATMENT ON ALL GUARDRAIL ENDS PRIOR TO THE REMOVAL OF ANY MOT FEATURES.
3. GUARDRAIL HEIGHT SHALL BE 3" ± 1/2". GUARDRAIL HEIGHT SHALL BE MEASURED FROM AT GROUND ELEVATION ADJACENT TO EACH POST.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CUT BOLTS, DISCARD PARTS, TRASH, PAVEMENT DEBRIS, ETC., AFTER COMPLETING THE GUARDRAIL INSTALLATION.
5. CONNECTION FOR PROPOSED RAIL TO EXISTING RAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.

Filename: 017_Guardrail Details Ill.dgn

Scale:				Designed by:					
NOT TO SCALE									
No.	Revision	By	Date					CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.	
				By	Date	By	Date		
				Designed	CDH	10\18	Checked	JRH	10\18
				Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
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THE GOLD STAR
 MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

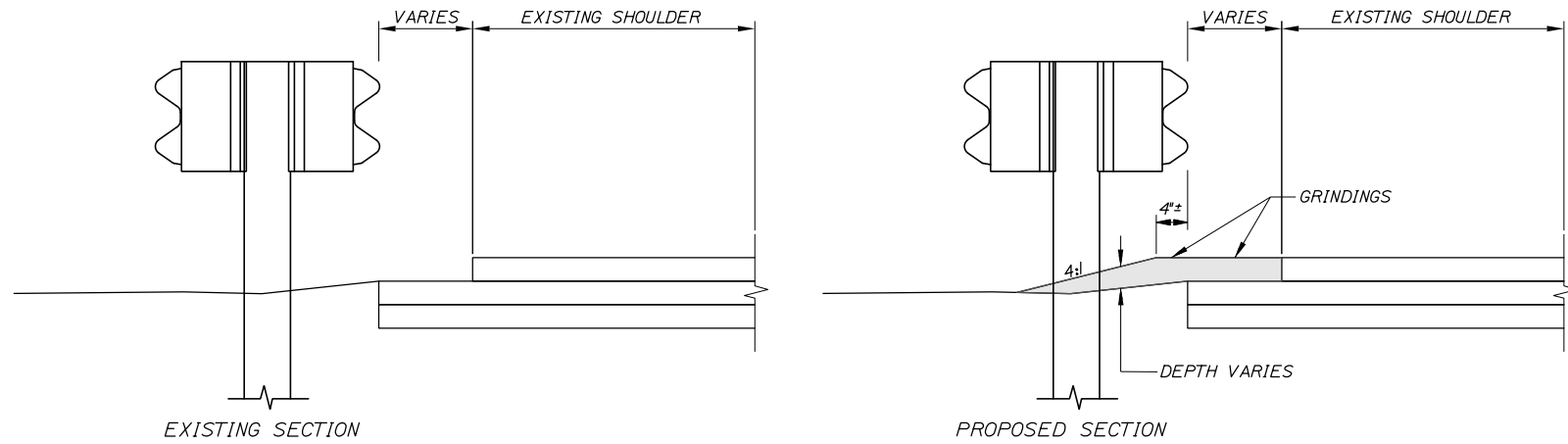
BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 GUARDRAIL DETAILS
 MIDWAY SPLICE

CONTRACT: 2019.09

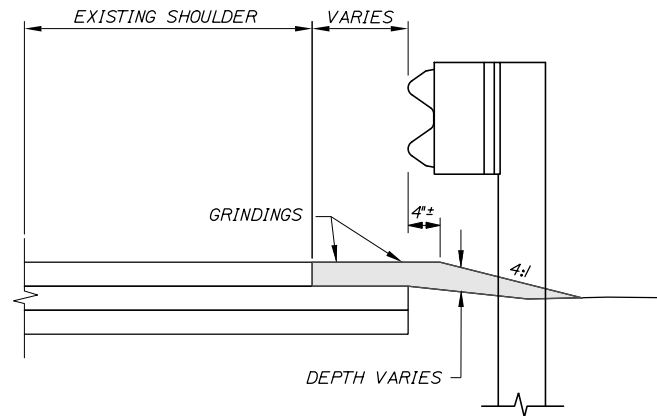
SHEET NUMBER: CD-05

17 OF 116

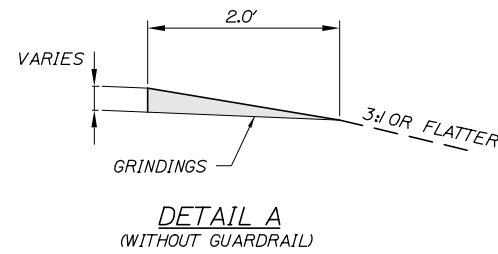
Date: 10/18/2018



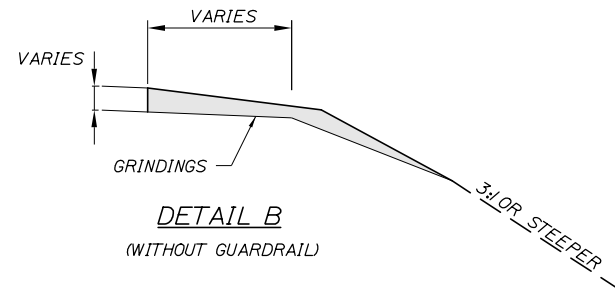
BERM DROPOFF CORRECTION WITH GUARDRAIL
MEDIAN GUARDRAIL
 N.T.S.



BERM DROPOFF CORRECTION WITH GUARDRAIL
RIGHT OUTSIDE SHOULDER
 N.T.S.



DETAIL A
 (WITHOUT GUARDRAIL)



DETAIL B
 (WITHOUT GUARDRAIL)

Filename: 018_Berm_Details.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	Designed	CDH 10\18		Checked	JRH 10\18
	Drawn	SLS 10\18		In Charge of	RAL 10\18

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 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS

BERM DETAILS

SHEET NUMBER: CD-06
 CONTRACT: 2019.09
 18 OF 116

REMOVE AND RESET SIGN SUMMARY

DESCRIPTION	EXISTING						PROPOSED									
	SIGN SIZE			NUMBER AND TYPE OF POSTS	DIRECTION (NB - NORTHBOUND) (SB - SOUTHBOUND)	STATION	NUMBER AND TYPE OF POSTS	POST SIZE	HEIGHT OF POST			FOUNDATION SIZE AND TYPE (REINFORCEMENT)	FOUNDATION DEPTH (FEET)	BREAKAWAY DEVICE	STATION	PAY ITEM
	WIDTH (FEET)	HEIGHT (FEET)	AREA IN (SQ. FT.)						LEFT (FEET)	CENTER (FEET)	RIGHT (FEET)					
<p>MAINLINE SIGN #9</p>	9.5	2.5	23.8	3 STEEL	SB	2369+14	3 STEEL	W 14X30	23	26.5	30	30" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	NO	2369+18	645.509
<p>MAINLINE SIGN #10</p>	9.5	2.5	23.8	3 STEEL	NB	2370+29	3 STEEL	W 14X30	30	33	36	30" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	NO	2370+54	645.510
<p>MAINLINE SIGN #11</p>	2	1	2	1 STEEL	NB	2375+93	1 STEEL	W 8X18	-	14	-	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2375+93	645.511
<p>MAINLINE SIGN #12</p>	14.5	12	174	2 STEEL	NB	2382+97	2 STEEL	W 12X26	23	-	21	30" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	NO	2382+90	645.512
<p>MAINLINE SIGN #13</p>	4	5	20	1 WOOD	SB	2383+68	1 STEEL	W 8X18	-	17	-	24" DIAMETER CONCRETE (PER STD DETAIL 626(02))	PER STD. DETAIL 626(02)	NO	2383+40	645.513
<p>MAINLINE SIGN #14</p>	9.5	2.5	23.8	3 STEEL	SB	2384+38	3 STEEL	W 14X30	25.5	22.5	25	30" DIAMETER CONCRETE (PER STD DETAIL 626(03) & (04) CHART S600-3)	12	NO	2384+28	645.514
<p>MAINLINE SIGN #15</p>	4	5	20	1 STEEL	SB	2385+07	1 STEEL	W 8X18	-	17.5	-	30" DIAMETER CONCRETE (PER STD DETAIL 626(02)) (SEE NOTE 1)	PER STD. DETAIL 626(02)	YES	2385+13	645.515

NOTES
 1. DIAMETER OF FOUNDATION INCREASED TO AVOID KNOWN ISSUE WITH STANDARD DETAIL 626(02). REINFORCING SIZE AND LAYOUT SHALL MATCH 626(02) DETAIL REQUIREMENTS.

Date: 10/18/2018

Filename: 019_Remove and Reset Sign Summary.dgn

Scale: NOT TO SCALE

Designed by:



MAINE TURNPIKE AUTHORITY
 2360 Congress Street
 Portland, ME 04102
 TEL (207) 871-7771
 FAX (207) 879-5567



THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 REMOVE AND RESET
 SIGN SUMMARY

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
By	Date	By	Date
Designed	CDH 10\18	Checked	JRH 10\18
Drawn	SLS 10\18	In Charge of	RAL 10\18

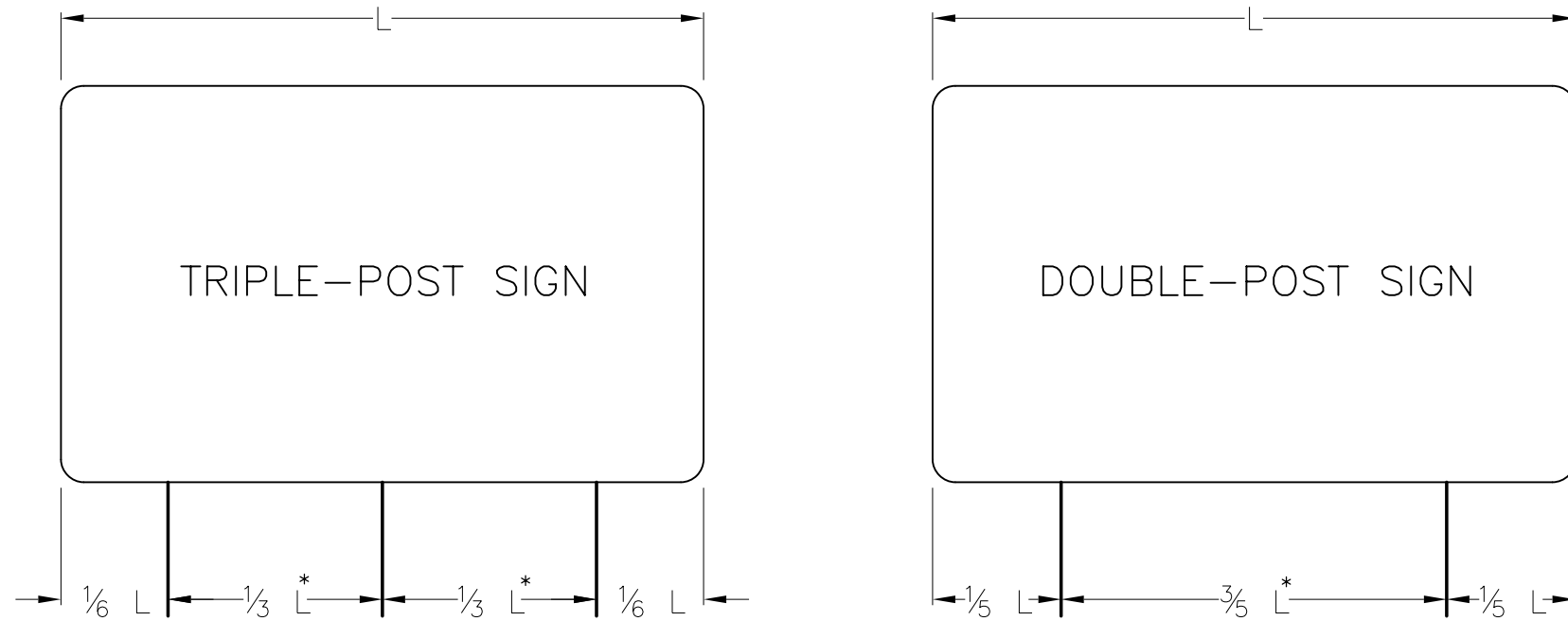
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: CD-07

19 OF 116

Date:10/18/2018



POLE SPACING DETAIL
N.T.S.

* - A MINIMUM 7 FEET REQUIRED WHEN INSTALLED ON BREAKAWAY DEVICES

SINGLE SUPPORT SIGNS								
FOUNDATION DIAMETER	SIGN AREA (A)	SIGN WIDTH (W)	POST SIZE	BASE PLATE (1) (3)	MATERIAL	ANCHOR BOLTS (2)	BOLT CIRCLE	MAXIMUM MOUNTING HEIGHT
	$A < 4 FT^2$		U CHANNEL POST					12 FEET TO SIGN CENTER
	$4 < A \leq 10 FT^2$		WOOD POST 6"X6"					
18"	$10 < A \leq 16 FT^2$	W=4'-0" MAX. BUT INCLUDES 5'-0" YIELD SIGN	W6X9	12"X12"X1" 41 LBS.	A36	1" ϕ X 3'-0"	12"	
18"	$16 < A \leq 25 FT^2$	W=5'-0" MAX	W6X15	12"X12"X1" 41 LBS.	A36	1" ϕ X 3'-0"	12"	
24"	$25 < A \leq 42 FT^2$	W=7'-0" MAX	W8X24	14"X14"X1" 55 LBS.	A36	1-1/4" ϕ X 3'-6"	14"	

MULTIPLE SUPPORT SIGNS								
FOUNDATION DIAMETER	SIGN AREA (A)	SIGN WIDTH (W)	POST SIZE	BASE PLATE (1) (3)	MATERIAL	ANCHOR BOLTS (2)	BOLT CIRCLE	MAXIMUM MOUNTING HEIGHT
24"	TO 60 FT ² /POST		W8X18	14"X14"X1" 55 LBS.	A36	1-1/4" ϕ X 3'-6"	14"	20 FEET TO SIGN CENTER
24"	60-85 FT ² /POST		W10X22	12"X17"X1-1/4" 72 LBS.	A36	1-1/4" ϕ X 3'-6"	15"	
30"	85-110 FT ² /POST		W12X26	13"X19"X1-1/4" 87 LBS.	A36	1-1/2" ϕ X 4'-0"	17"	
30"	110-135 FT ² /POST		W14X30	14"X21"X1-1/4" 104 LBS.	A36	1-1/2" ϕ X 4'-0"	19"	

GENERAL NOTES

- BOLTS TO BE 50,000 PSI MINIMUM YIELD STRENGTH.
- POST TO BASE PLATE WELD SHALL BE 5/16" FILLET WELD.
- BASE PLATES AND H-BEAMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 720.06.

BREAKAWAY NOTES

- ON 6"X6" WOOD POSTS, DRILL 3/4" DIAMETER HOLES AT RIGHT ANGLES TO ONE ANOTHER 4 INCHES ABOVE GROUND LEVEL TO MEET BREAKAWAY STANDARDS.
- ON BREAKAWAY SUPPORTS, THE HINGE SHOULD BE A MINIMUM OF 7 FEET ABOVE THE FOUNDATION. NO PERMANENT SUPPLEMENTARY SIGNS SHALL BE ATTACHED BELOW THE HINGE.
- A SINGLE POSTED SIGN REQUIRING A BREAKAWAY DEVICE SHALL NOT HAVE A HINGE.

REMOVE AND RESET GUIDE SIGN NOTES

- EXISTING SIGN POST LENGTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR IF THE POSTS ARE TO BE REUSED.
- THE CONTRACTOR MAY REUSE EXISTING POLES, FOUNDATIONS AND BREAKAWAY DEVICES AT ANY SIGN LOCATION WHERE FEASIBLE.
- PROPOSED POLE LENGTHS ARE MEASURED FROM THE TOP OF THE FOUNDATION TO THE TOP OF SIGN AND ARE APPROXIMATE. FINAL POST LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR ONCE FOUNDATIONS ARE PLACED. SEE REMOVE AND RESET SIGN SUMMARY.

Filename: 020_Sign_Details.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
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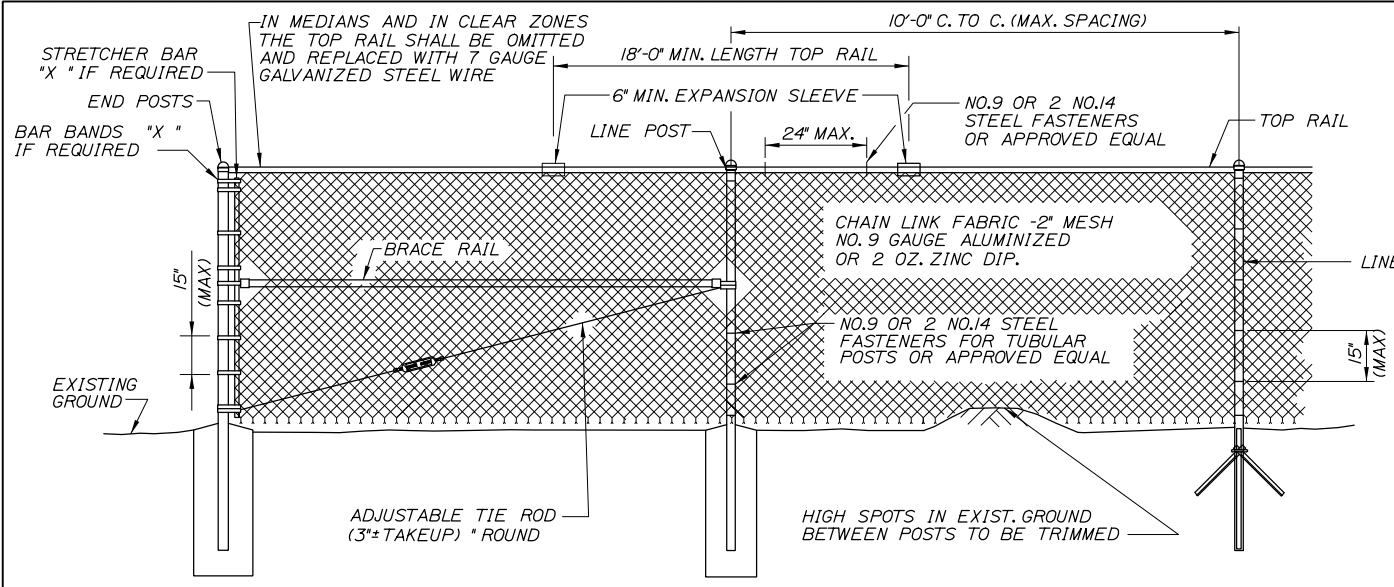
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

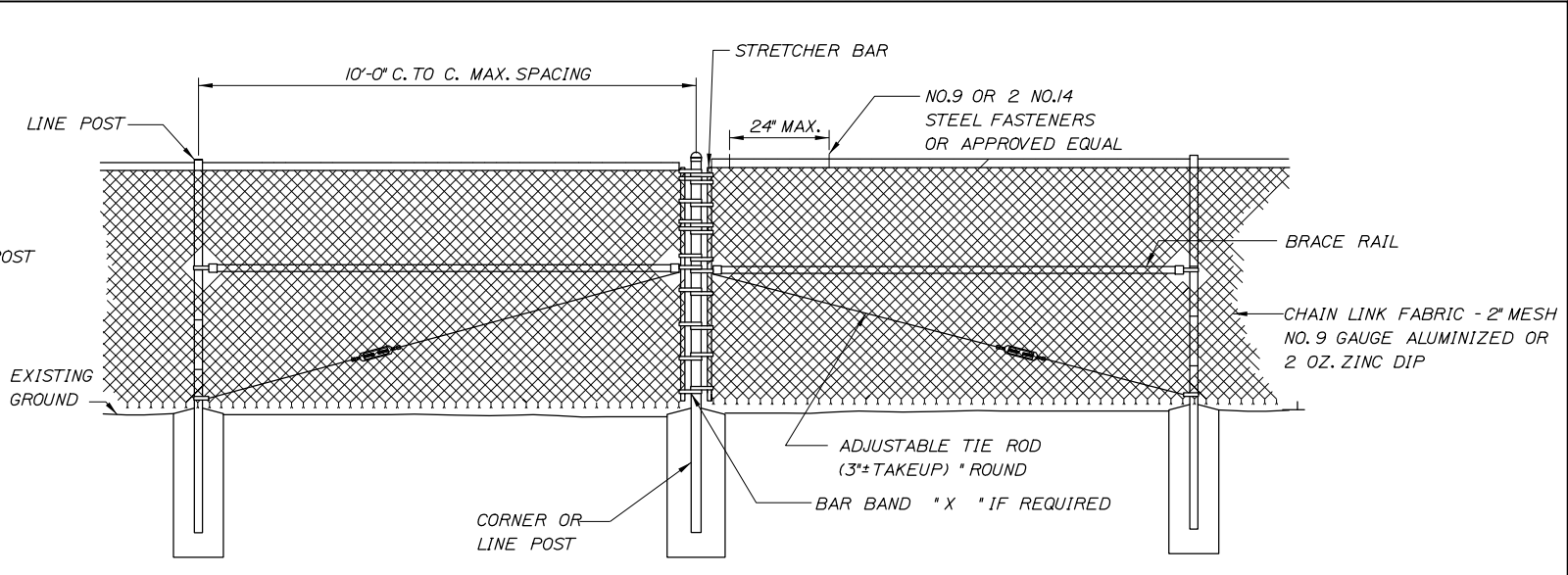
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
TYPE 1 SIGN DETAILS

SHEET NUMBER: CD-08
CONTRACT:2019.09
20 OF 116

Date: 10/18/2018

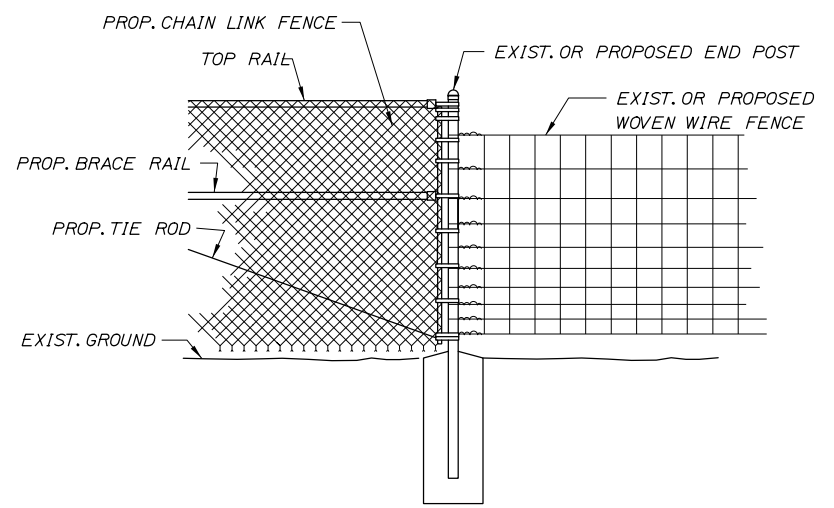


TYPICAL TYPE I END PANEL
N.T.S.

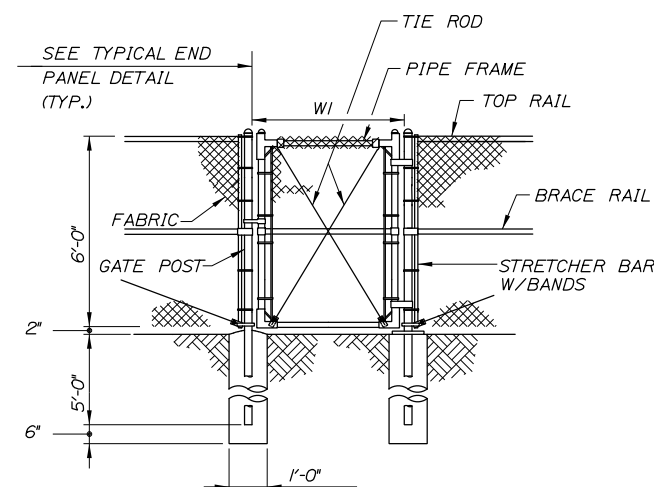


TYPICAL TYPE II BRACE PANEL
N.T.S.

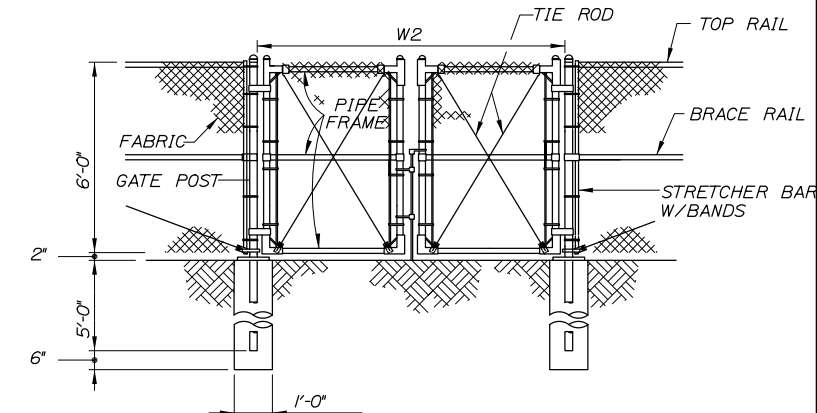
TYPICAL INTERMEDIATE PANEL
N.T.S.



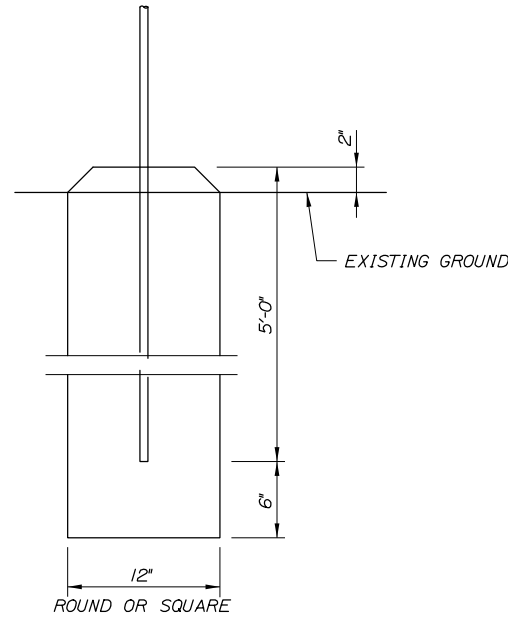
METHOD OF ATTACHING CHAIN LINK FENCE TO WOVEN WIRE FENCE
N.T.S.



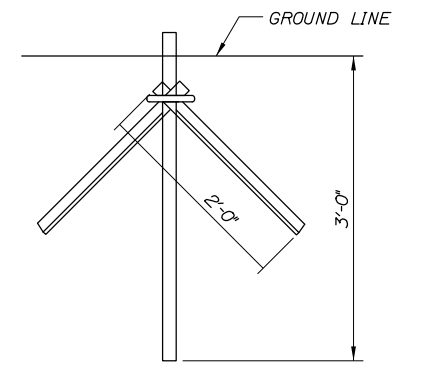
SINGLE GATE



DOUBLE GATE



BRACE, GATE AND END POST BASE DETAIL
N.T.S.



LINE POST DRIVE ANCHOR DETAIL
N.T.S.

GATE WIDTH		GATE POST O.D.
W1	W2	
TO 6'	TO 12'	3"
6' TO 12'	12' TO 24'	4"
12' TO 18'	24' TO 36'	6"

BENDING MOMENTS BASED ON GRADE 1 (SCHEDULE 40 STEEL)

CHAIN LINK FENCE	SHAPE	NOMINAL SIZE (INCHES)	BENDING MOMENT* (LBS.-IN.)
END & CORNER POSTS	Ø	2 I.D.	14,025
LINE POSTS	Ø	1-1/2 I.D.	8,150
TOP & BRACE RAILS	Ø	1-1/4 I.D.	5,875

* MATERIAL FOR GRADE 2 END, CORNER & LINE POSTS AND TOP & BRACE RAILS MUST MEET OR EXCEED BENDING MOMENTS FOR GRADE 1 STEEL AS NOTED ABOVE.

NOTES:

- BRACE PANELS SHALL BE INSTALLED WHERE THE CHANGE IN GRADE BETWEEN ANY THREE POSTS EXCEEDS 15 PERCENT.
- NO ADDITIONAL PAYMENT WILL BE MADE FOR LONGER POSTS NECESSITATED BY LARGE GRADE DIFFERENTIAL.
- TYPE I BRACING WILL BE USED AT FENCE ENDS. TYPE II BRACING WILL BE USED AT CORNER POSTS.
- WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12" DEEP UNLESS THE POSTS PENETRATE THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
- CONCRETE FOR POST FOUNDATION SHALL BE CLASS B.
- BRACE, GATE AND END POSTS SHALL BE SET IN CONCRETE.
- CHAIN LINK FENCE SHALL BE INSTALLED WITH BARBS DOWN.
- ALL COMPONENTS OF CHAIN LINK FENCE SHALL BE IN ACCORDANCE WITH AASHTO M181.

Filename: 021_Fence_Details.dgn

Scale: **NOT TO SCALE**

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

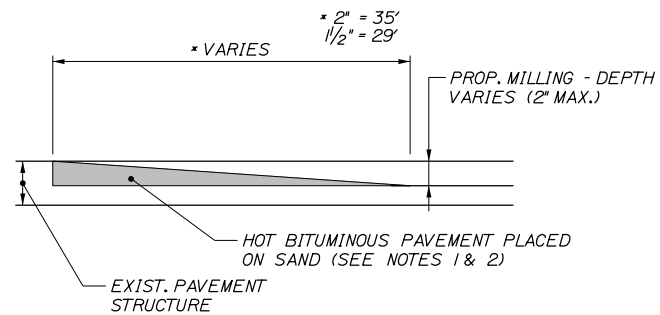
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
CHAIN LINK FENCE DETAILS

SHEET NUMBER: CD-09
CONTRACT: 2019.09
21 OF 116

Date: 10/18/2018



TEMPORARY BITUMINOUS RAMP
N.T.S

NOTES:

1. HOT MIX ASPHALT FOR TEMPORARY RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5 MM.
2. REMOVAL OF TEMP. BITUMINOUS RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5 MM.

Filename: 022_Miscellaneous_Details.dgn

Scale:			
<i>NOT TO SCALE</i>			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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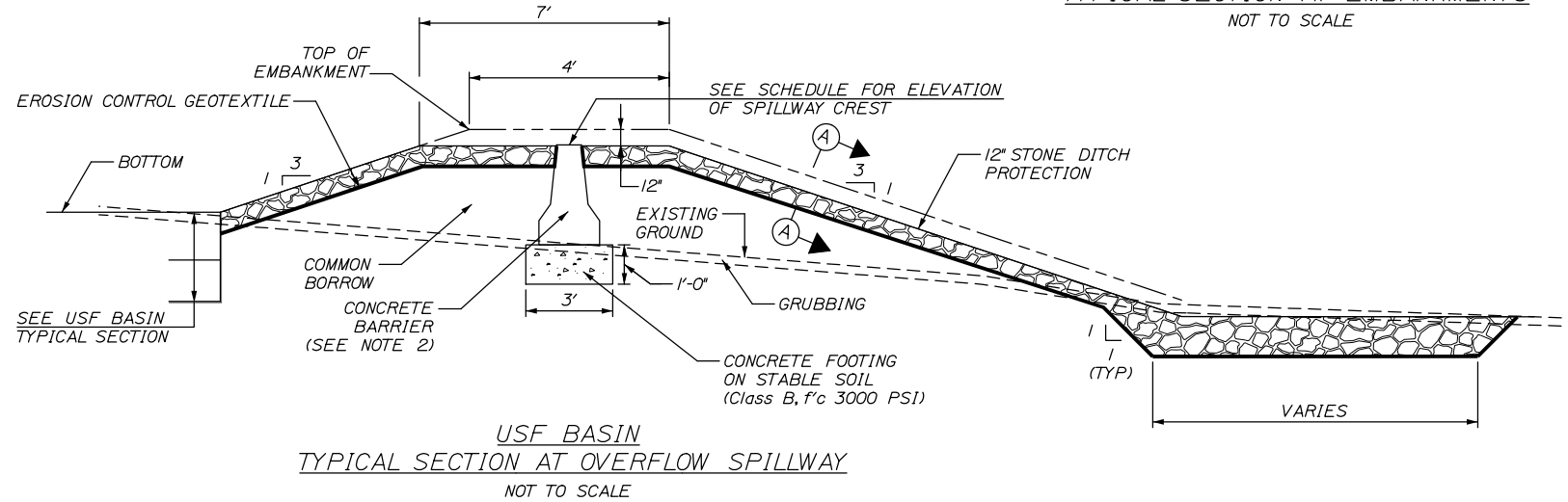
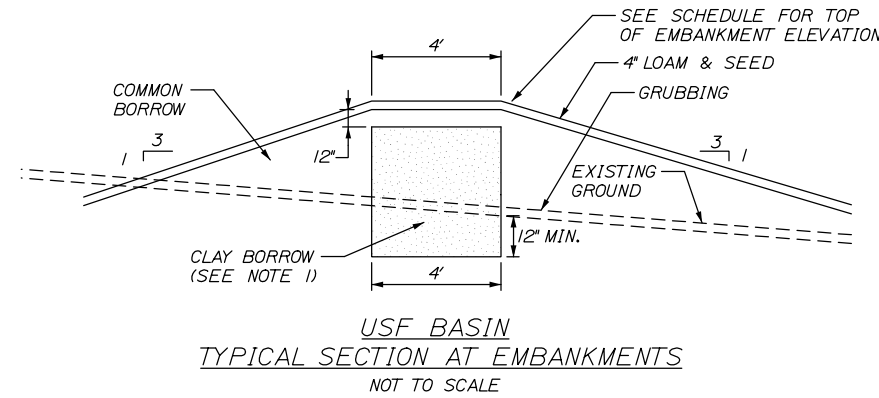
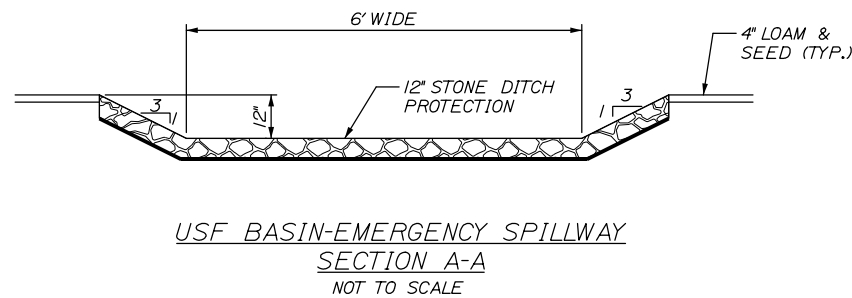
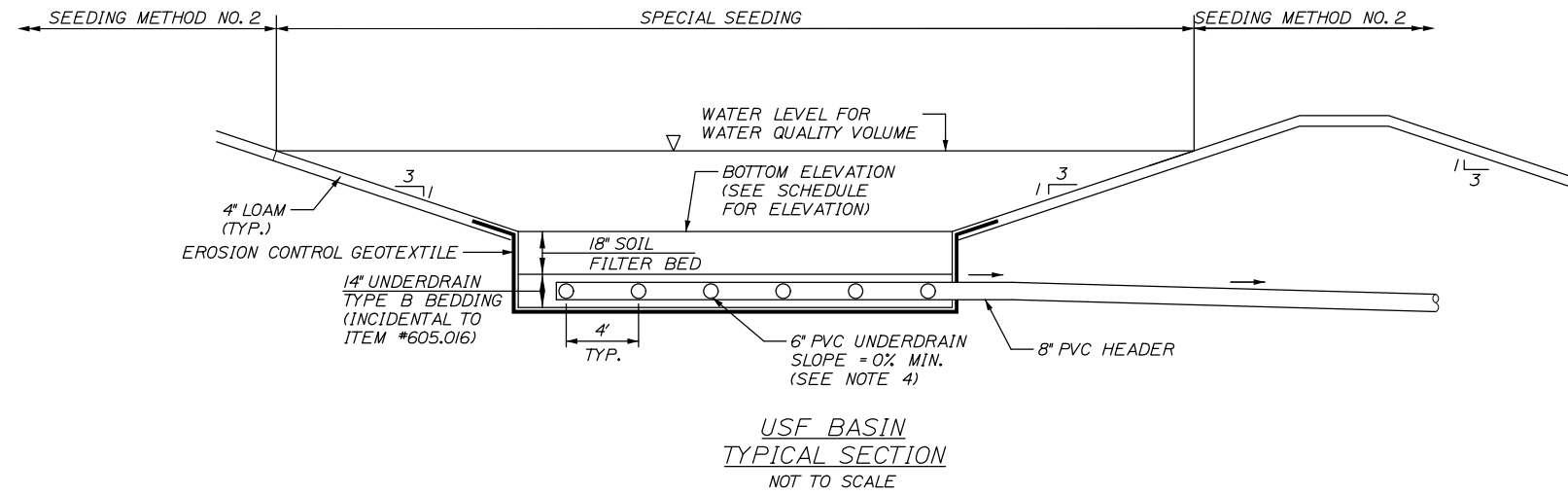
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MISCELLANEOUS DETAILS

SHEET NUMBER: CD-10
CONTRACT: 2019.09
22 OF 116

Date: 10/18/2018



NOTES:

1. AT EMERGENCY SPILLWAY, IMPERMEABLE SOIL (EMBANKMENT CORE) SHALL TIE INTO CONCRETE BARRIER AND EXTEND 3 FEET ALONG EACH END OF CONCRETE BARRIER.
2. SET TOP OF CONCRETE BARRIER LEVEL AT THE DESIGNATED ELEVATION OF SPILLWAY CREST. PAYMENT WILL BE MADE UNDER ITEM 526.307 CONCRETE BARRIER TYPE 1- STORMWATER FILTER.
3. FOR LAYOUT OF UNDERDRAIN SOIL FILTER (USF BASINS) AND PIPE, SEE BMP GRADING PLAN.
4. 8" PVC UNDERDRAIN HEADER/OUTLET SHALL NOT BE SLOTTED.
5. SURFACE OF SOIL FILTER SHALL BE SEEDED WITH WETLAND SEED "NEW ENGLAND EROSION CONTROL/RESTORATION MIX" AS SPECIFIED IN THE 618 SPEC. PAYMENT WILL BE MADE UNDER ITEM 618.143 - SPECIAL SEEDING.
6. THE UNDERDRAINED SOIL FILTER SHALL BE CONSTRUCTED TO THE LIMITS AND DETAILS SHOWN ON THE PLANS AND SPECIFICATIONS UNLESS OTHERWISE APPROVED BY THE RESIDENT.
7. THE FILTER BED MATERIAL SHALL NOT BE PLACED IN USF BASINS UNTIL THE TRIBUTARY DRAINAGE AREA IS PERMANENTLY STABILIZED AGAINST EROSION.
8. EROSION CONTROL BLANKETS SHALL BE PROVIDED ON ALL USF BASIN EMBANKMENT SLOPES, BOTH INTERIOR AND EXTERIOR AND THE SURFACE OF THE SOIL FILTER.

USF BASIN SCHEDULE						
USF Basin	Basin Elevations			Peak Water Surface Elevation		
	Bottom	Top of Embankment	Spillway Crest	2-year	10-year	25-year
	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)
#1	80.75	83.50	82.50	82.06	82.64	82.93
#2	92.75	95.25	94.25	93.58	94.29	94.44

Filename: 023_Soil Filter Details.dgn

Scale: AS NOTED				
No.	Revision	By	Date	

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	CDH	10\18		RWH	10\18
	Drawn	PEM	10\18	In Charge of	RAL

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
UNDERDRAIN SOIL FILTER DETAIL

SHEET NUMBER: BMP-1
CONTRACT: 2019.09
23 OF 116

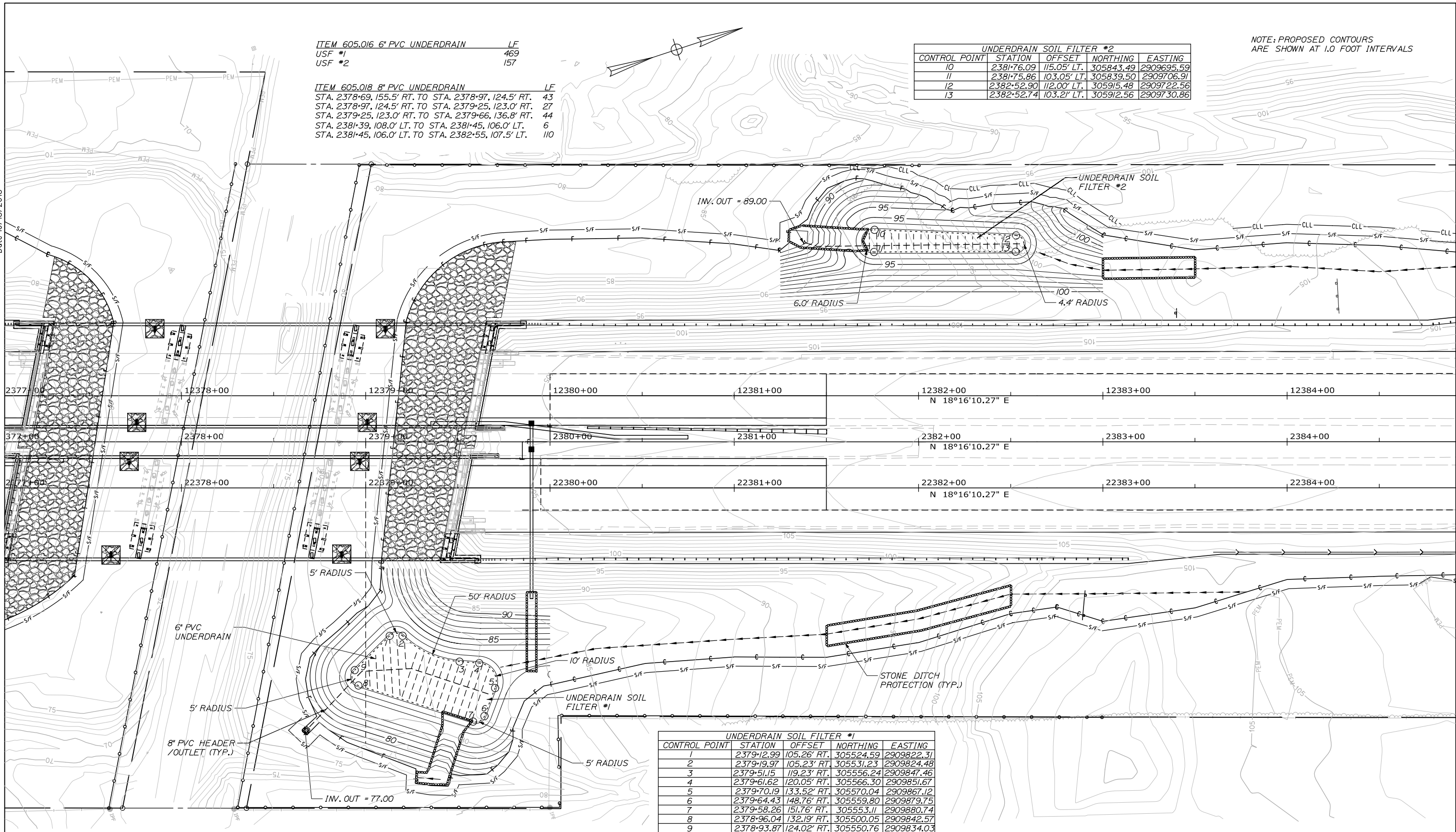
Date: 10/18/2018

ITEM 605.016 6" PVC UNDERDRAIN LF
 USF #1 469
 USF #2 157

ITEM 605.018 8" PVC UNDERDRAIN LF
 STA. 2378+69, 155.5' RT. TO STA. 2378+97, 124.5' RT. 43
 STA. 2378+97, 124.5' RT. TO STA. 2379+25, 123.0' RT. 27
 STA. 2379+25, 123.0' RT. TO STA. 2379+66, 136.8' RT. 44
 STA. 2381+39, 108.0' LT. TO STA. 2381+45, 106.0' LT. 6
 STA. 2381+45, 106.0' LT. TO STA. 2382+55, 107.5' LT. 110

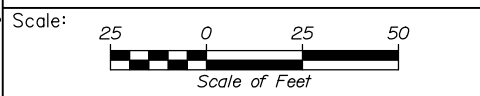
UNDERDRAIN SOIL FILTER #2				
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING
10	2381+76.09	115.05' LT.	305843.49	2909695.59
11	2381+75.86	103.05' LT.	305839.50	2909706.91
12	2382+52.90	112.00' LT.	305915.48	2909722.56
13	2382+52.74	103.21' LT.	305912.56	2909730.86

NOTE: PROPOSED CONTOURS ARE SHOWN AT 1.0 FOOT INTERVALS



UNDERDRAIN SOIL FILTER #1				
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING
1	2379+12.99	105.26' RT.	305524.59	2909822.31
2	2379+19.97	105.23' RT.	305531.23	2909824.48
3	2379+51.15	119.23' RT.	305556.24	2909847.46
4	2379+61.62	120.05' RT.	305566.30	2909851.67
5	2379+70.19	133.52' RT.	305570.04	2909867.12
6	2379+64.43	148.76' RT.	305559.80	2909879.75
7	2379+58.26	151.76' RT.	305553.11	2909880.74
8	2378+96.04	132.19' RT.	305500.05	2909842.57
9	2378+93.87	124.02' RT.	305550.76	2909834.03

Filename: 024_BMP_Grading.dgn



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	By	Date	
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	PEM	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 BMP GRADING PLAN

SHEET NUMBER: BMP-2
 24 OF 116

CONTRACT: 2019.09

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

ITEM 526.3061 TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY TO REMAIN LS STA. 22370+00, 29.45' RT. TO STA. 22371+00, 26.47' RT.

ITEM 606.1301 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED) LF STA. 12368+61, 38.35' LT. TO 12376+92, 38.33' LT. STA. 22370+48, 38.00' RT. TO 22376+67, 38.33' RT.

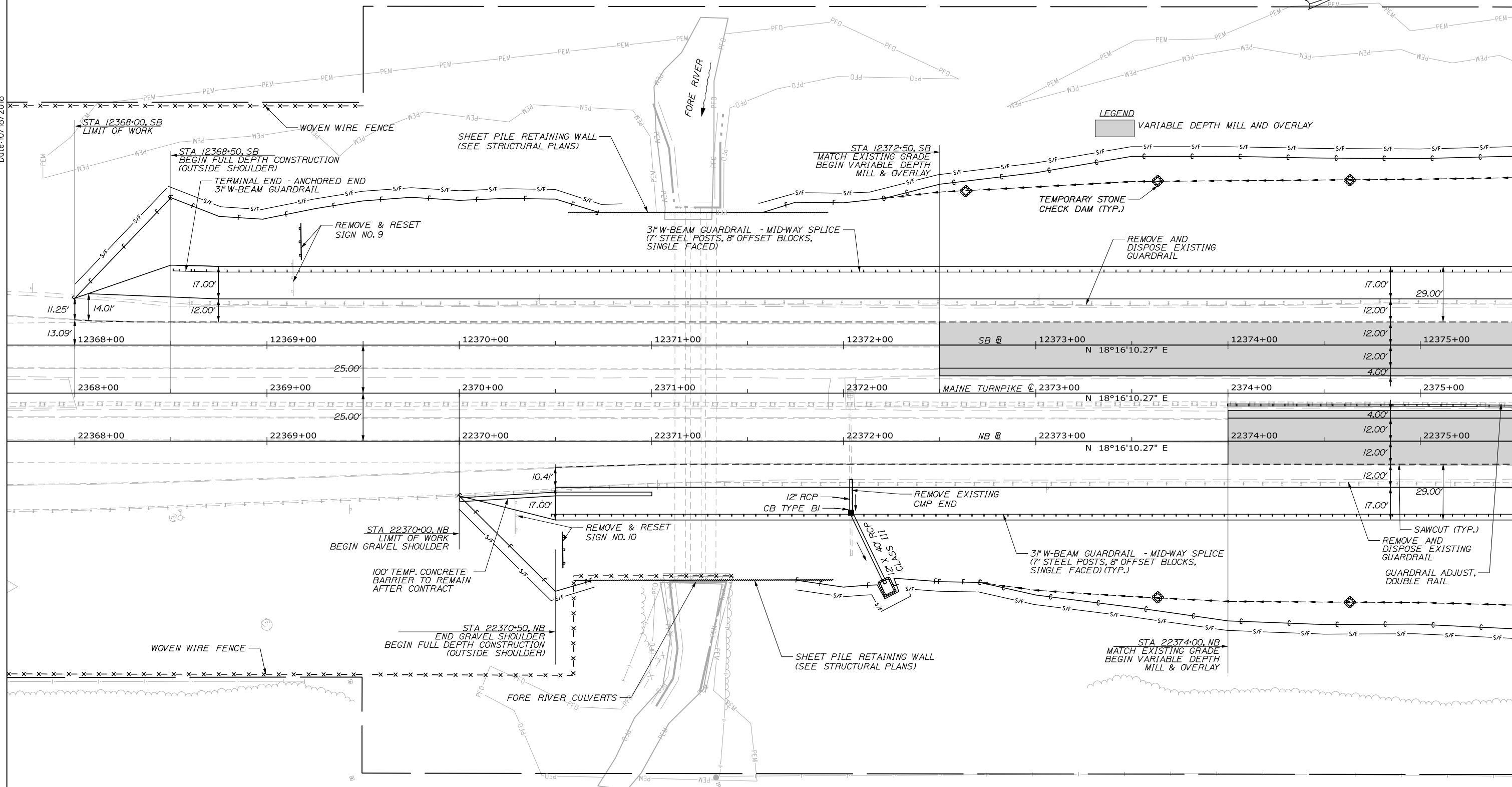
ITEM 606.1351 TERMINAL END - ANCHORED END 31" W-BEAM GUARDRAIL EA STA. 12368+51, 38.59' LT. TO STA. 12368+61, 38.35' LT.

ITEM 607.09 WOVEN WIRE FENCE - METAL POSTS LF STA. 2363+03, 197.75' RT. TO STA. 2371+42, 45.00' RT. STA. 2364+08, 124.88' LT. TO STA. 2369+50, 124.46' LT.

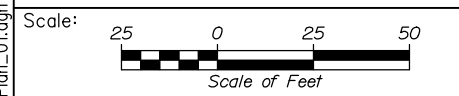
ITEM 610.08 PLAIN RIPRAP CY STA. 2372+23 RT.

ITEM 656.632 30 INCH TEMPORARY SILT FENCE LF STA. 2368+00 LT. TO STA. 2370+83 LT. STA. 2370+00 RT. TO STA. 2370+71 RT. STA. 2371+55 LT. TO STA. 2377+68 LT. STA. 2371+74 RT. TO STA. 2377+47 RT.

Date: 10/18/2018



LEGEND
 [Symbol] VARIABLE DEPTH MILL AND OVERLAY



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS

GENERAL PLAN 1

SHEET NUMBER: GP-01
 25 OF 116

CONTRACT: 2019.09

Filename: 025_BDPlan_01.dgn

ITEM 526.3061 TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY TO REMAIN LS
 STA. 2375+90 2.56' RT. TO STA. 2377+36, 10.00' RT.
 STA. 2379+35, 10.00' LT. TO STA. 2380+75, 2.56' LT.

ITEM 606.1301 3" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED) LF
 STA. 12380+04, 38.33' LT. TO 12384+80, 38.00' RT. 475
 STA. 22379+79, 38.33' RT. TO 22383+05, 38.00' RT. 325

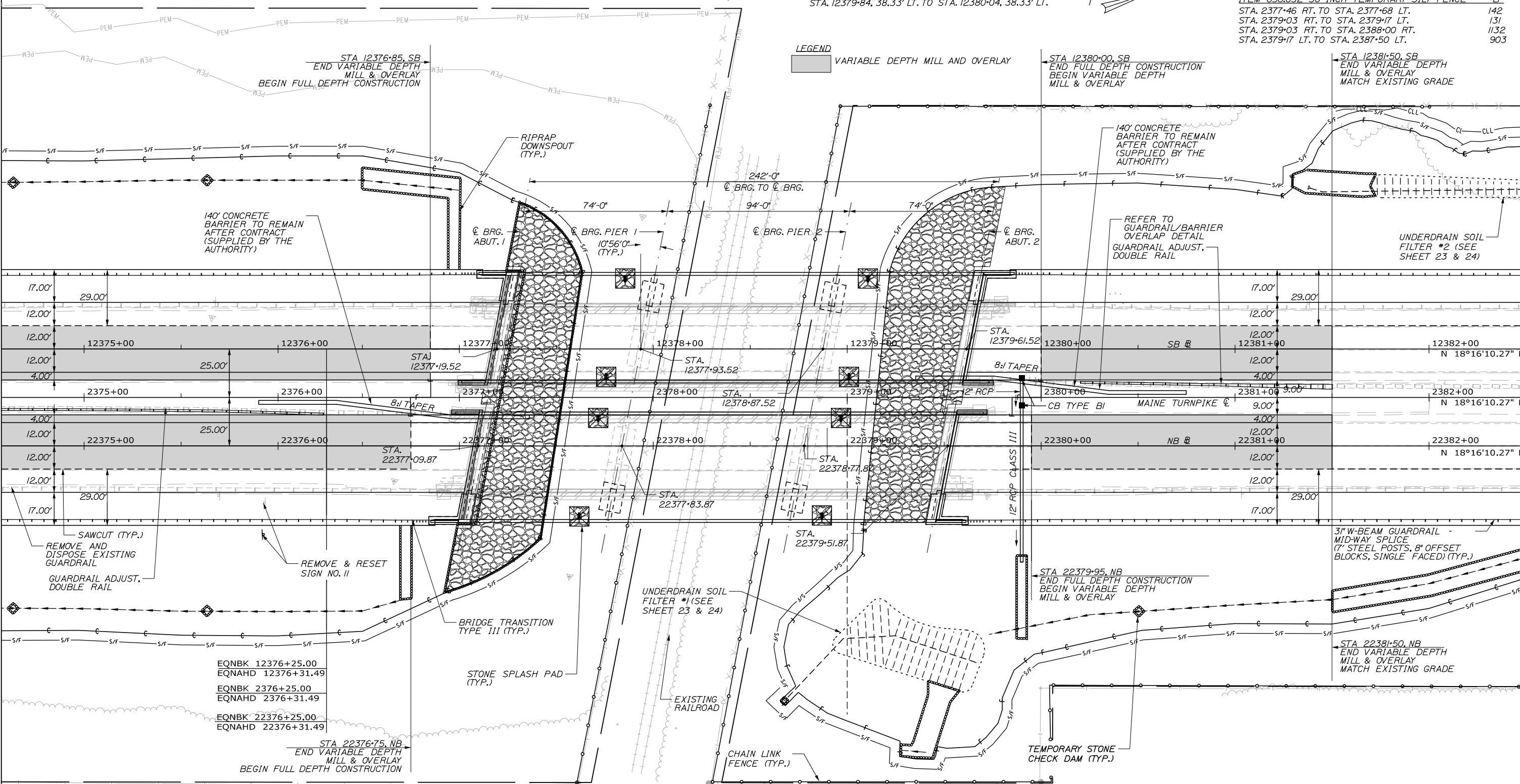
ITEM 610.08 PLAIN RIPRAP CY
 STA. 2376+72 RT. 12.7
 STA. 2376+97 LT. 12.6
 STA. 2378+65 RT. 0.5
 STA. 2379+90 RT. 12.9

ITEM 607.17 CHAIN LINK FENCE - 6 FOOT LF
 STA. 2377+61, 198.69' RT. TO STA. 2378+29, 150.77' LT. 356
 STA. 2378+31, 198.36' RT. TO STA. 2378+96, 150.26' LT. 355
 STA. 2378+31, 198.36' RT. TO STA. 2383+00, 149.40' RT. 520
 STA. 2378+96, 150.26' LT. TO STA. 2382+00 150.02' LT. 304

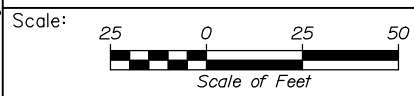
ITEM 606.1723 BRIDGE TRANSITION - TYPE III EA
 STA. 22376+67, 38.33' RT. TO STA. 22376+88, 38.33' RT. /
 STA. 12376+91, 38.33' LT. TO STA. 12377+12, 38.33' LT. /
 STA. 22379+59 38.33' RT. TO STA. 22379+79, 38.33' RT. /
 STA. 12379+84, 38.33' LT. TO STA. 12380+04, 38.33' LT. /

ITEM 610.18 STONE DITCH PROTECTION CY
 STA. 2376+50 LT. TO STA. 2377+00 LT. 31.1
 STA. 2379+45 RT. (USF #1) 22.7
 STA. 2381+50 RT. TO STA. 2382+50 RT. 62.6
 STA. 2381+30 LT. TO STA. 2381+69 LT. (USF #2) 17.7

ITEM 656.632 30 INCH TEMPORARY SILT FENCE LF
 STA. 2377+46 RT. TO STA. 2377+68 LT. 142
 STA. 2379+03 RT. TO STA. 2379+17 LT. 131
 STA. 2379+03 RT. TO STA. 2388+00 RT. 1132
 STA. 2379+17 LT. TO STA. 2387+50 LT. 903



Date: 10/18/2018



No.	Revision	By	Date

Designed by:
HNTB
 CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS**
 GENERAL PLAN 2

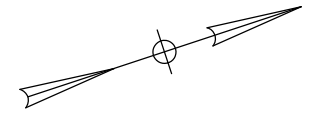
CONTRACT: 2019.09
 SHEET NUMBER: GP-02
 26 OF 116

ITEM 606.1305 3" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL (3" HEIGHT) EA 1
 STA. 12384+80, 38.00' LT. TO STA. 12385+14, 42.00' LT.

ITEM 610.18 STONE DITCH PROTECTION CY 30.7
 STA. 2383+00 LT. TO STA. 2383+50 LT.

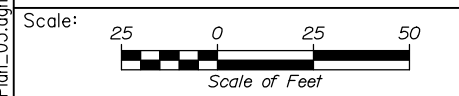
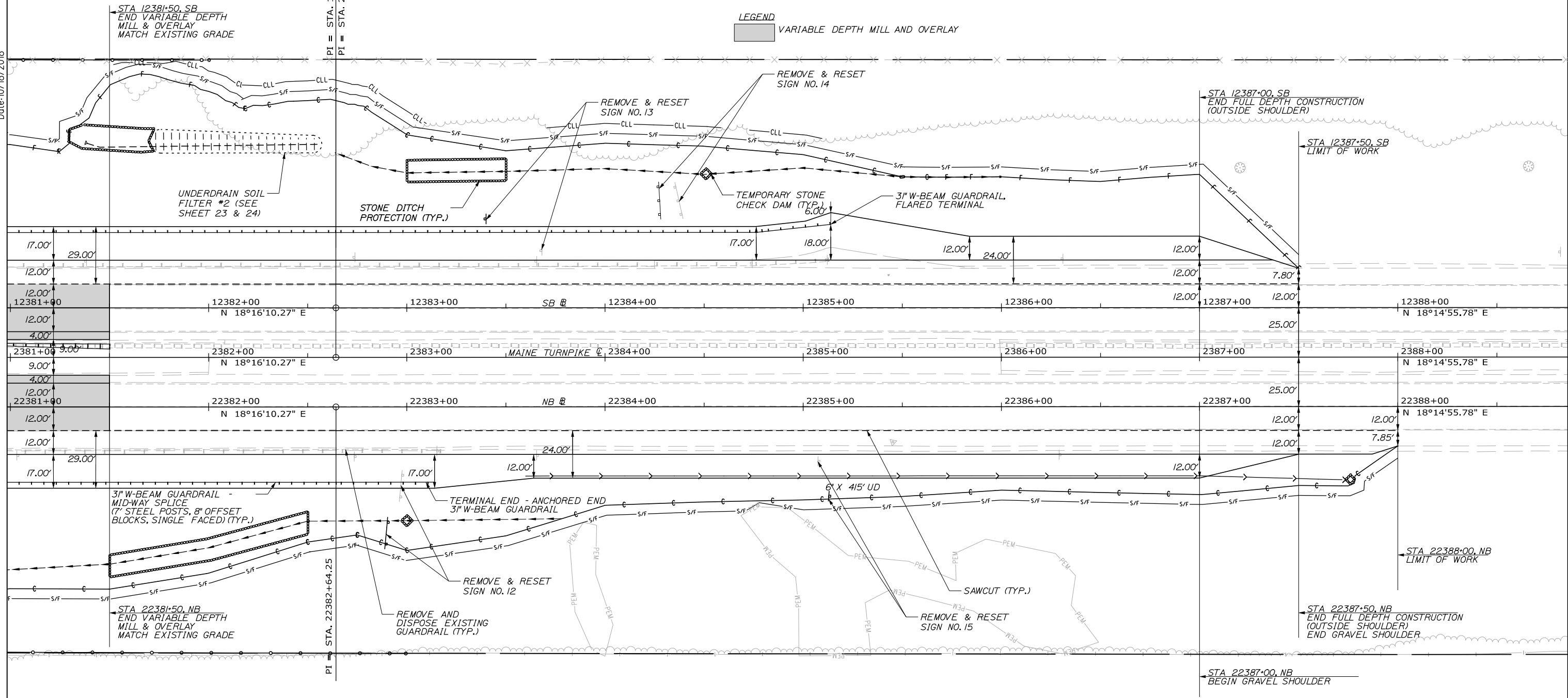
ITEM 606.1351 TERMINAL END - ANCHORED END 3" W-BEAM GUARDRAIL EA 1
 STA. 22383+05, 38.00' RT. TO STA. 22383+14, 38.00' RT.

ITEM 610.08 PLAIN RIPRAP CY 0.5
 STA. 2387+75 RT.



LEGEND
 [Hatched Box] VARIABLE DEPTH MILL AND OVERLAY

Date: 10/18/2018



No.	Revision	By	Date

Designed by:
HNTB
 CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

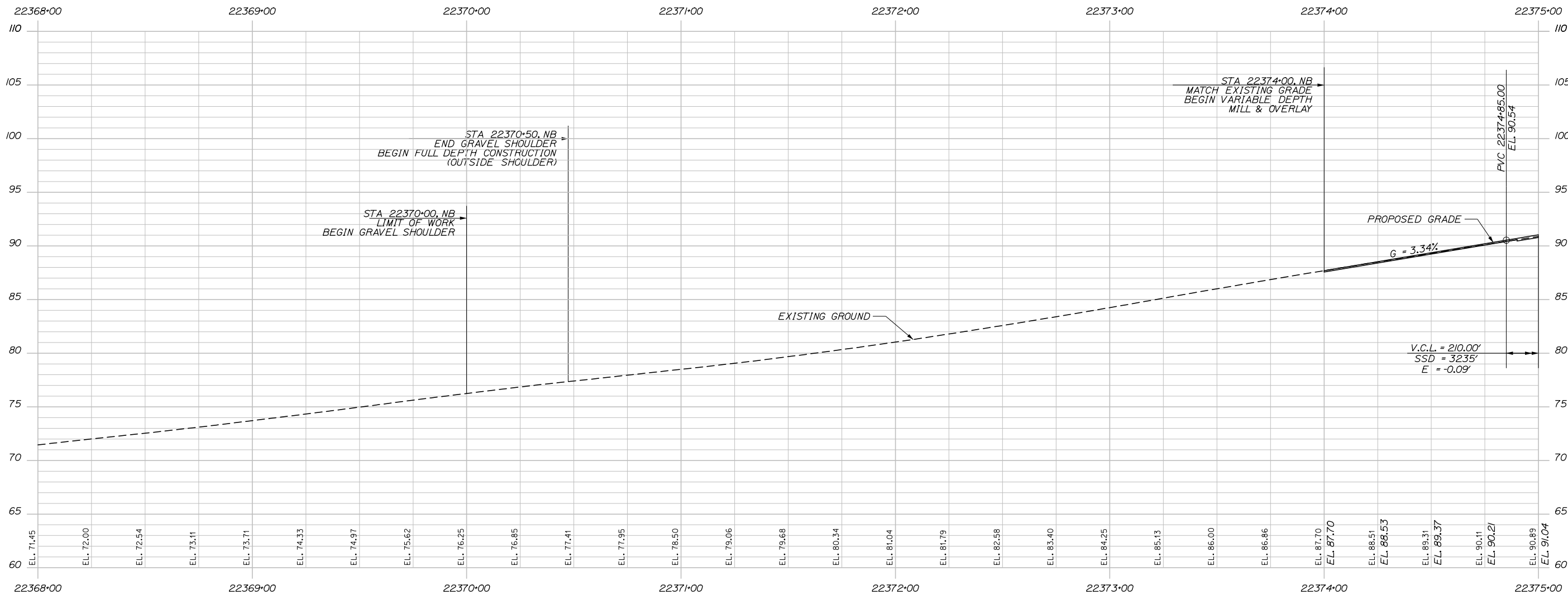
BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 GENERAL PLAN 3

SHEET NUMBER: GP-03
 27 OF 116

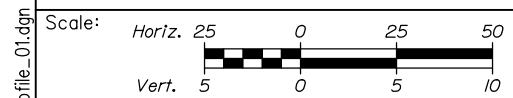
CONTRACT: 2019.09

Filename: 027_BDPlan_03.dgn

NOTE: EXISTING GROUND SHOWN WAS SURVEYED PRIOR TO A 3/4" OVERLAY AND MAY NOT REPRESENT EXACT GROUND ELEVATIONS ENCOUNTERED DURING THIS CONTRACT.



Date: 10/18/2018



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

PROFILE - NORTHBOUND 1

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

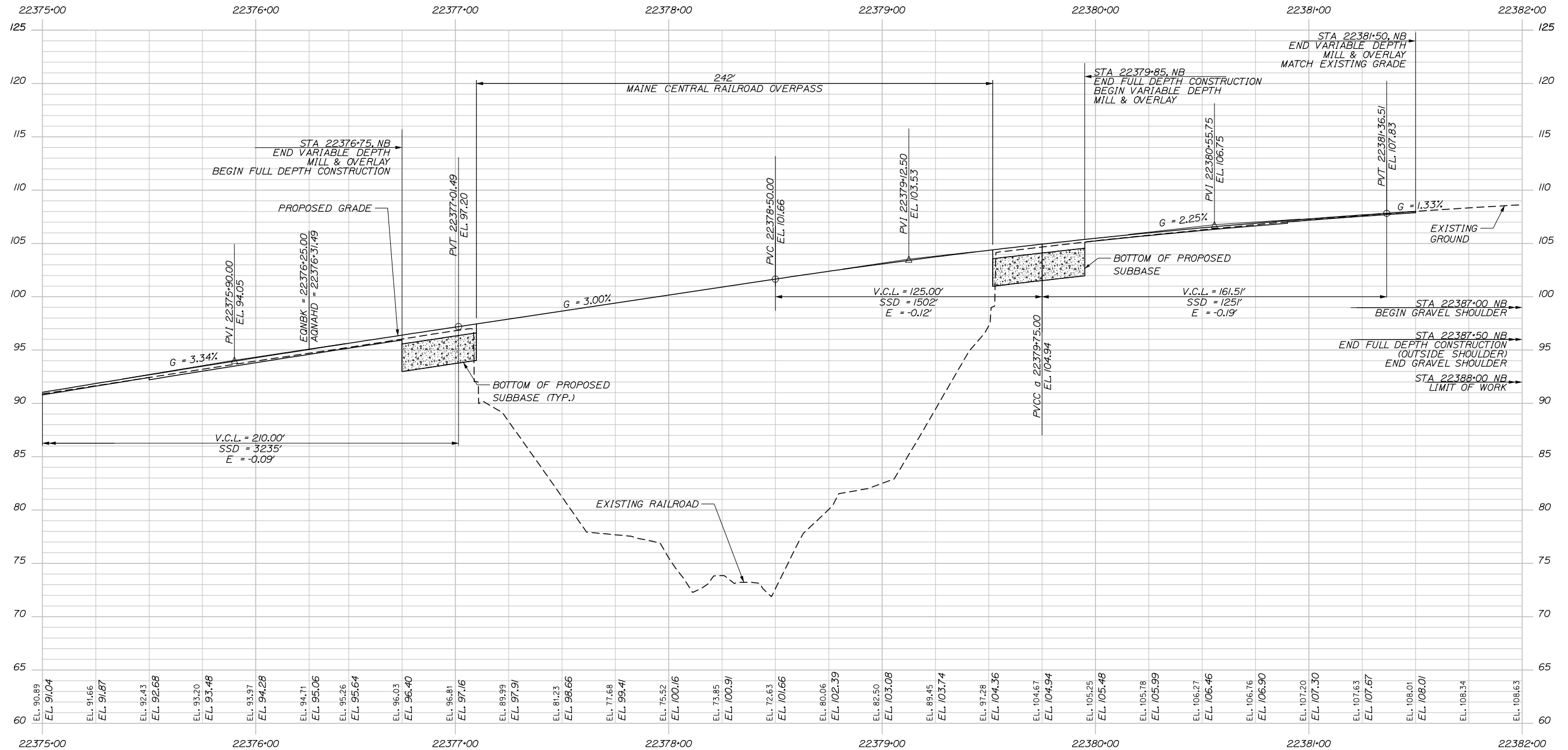
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

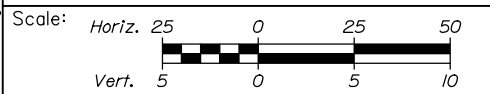
SHEET NUMBER: PR-01

28 OF 116

Date: 10/18/2018



Filename: 029_Profile_02.dgn



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

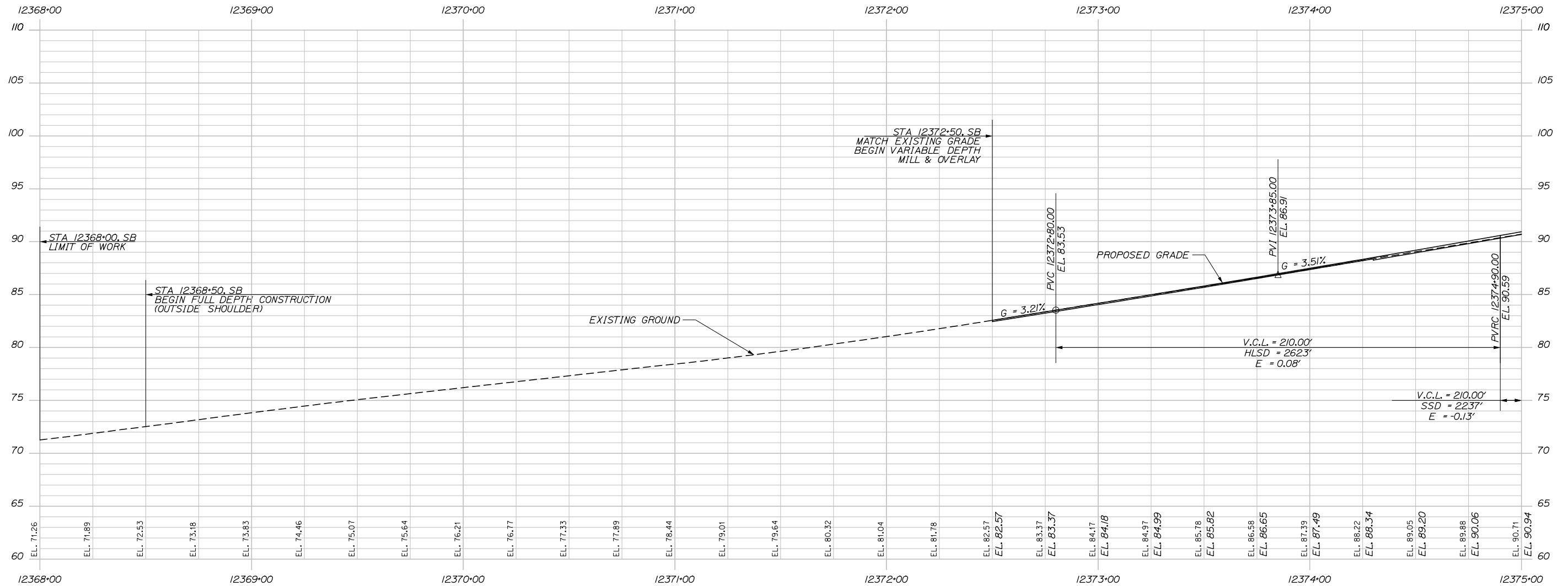
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
PROFILE - NORTHBOUND 2

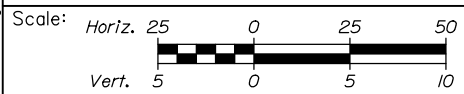
SHEET NUMBER: PR-02
CONTRACT: 2019.09
29 OF 116

NOTE: EXISTING GROUND SHOWN WAS SURVEYED PRIOR TO A 3/4" OVERLAY AND MAY NOT REPRESENT EXACT GROUND ELEVATIONS ENCOUNTERED DURING THIS CONTRACT.



Date: 10/18/2018

Filename: 030_Profile_03.dgn



Designed by:



CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	By	Date	
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

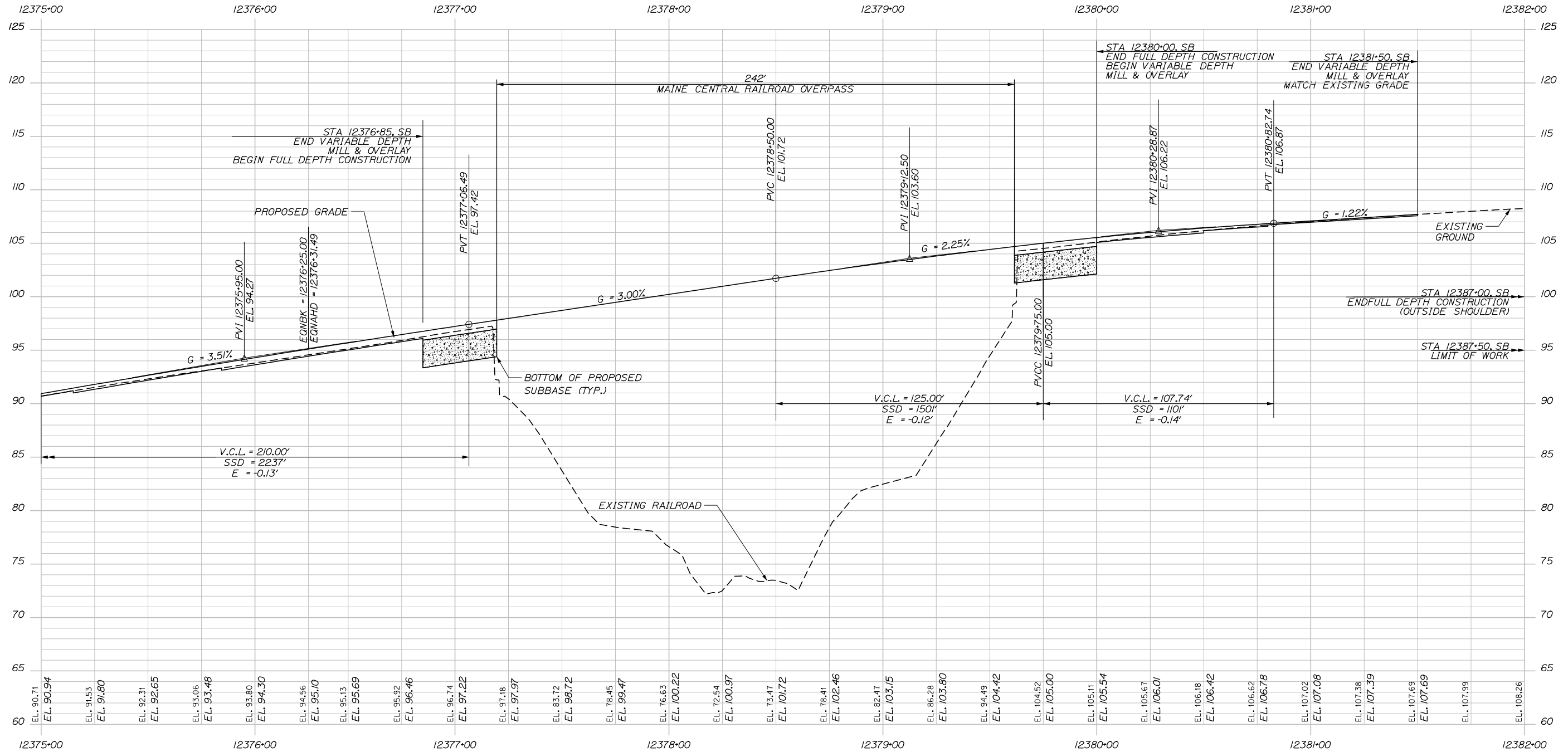
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
PROFILE - SOUTHBOUND 1

CONTRACT: 2019.09

SHEET NUMBER: PR-03

30 OF 116

Date: 10/18/2018



Scale: Horiz. 25 0 25 50
Vert. 5 0 5 10

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

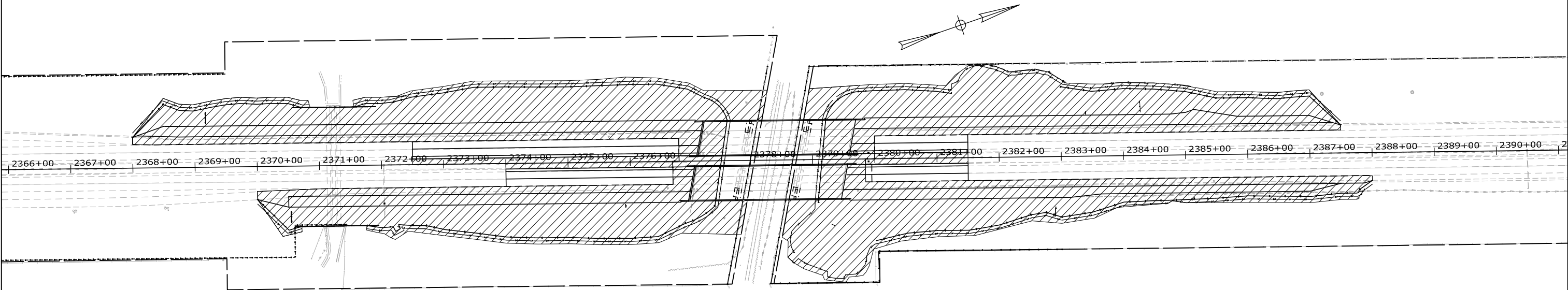
THE GOLD STAR MEMORIAL HIGHWAY


MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
PROFILE - SOUTHBOUND 2

SHEET NUMBER: PR-04
CONTRACT: 2019.09
31 OF 116

Date: 10/18/2018



 LIMIT OF DISTURBANCE
315,599 SF (7.25 ACRES)

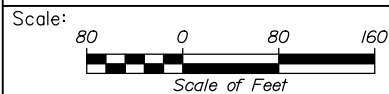
NOTES

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

3. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS

Filename: 032_Limits of Disturbance.dgn



Designed by:



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**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

LIMIT OF DISTURBANCE

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

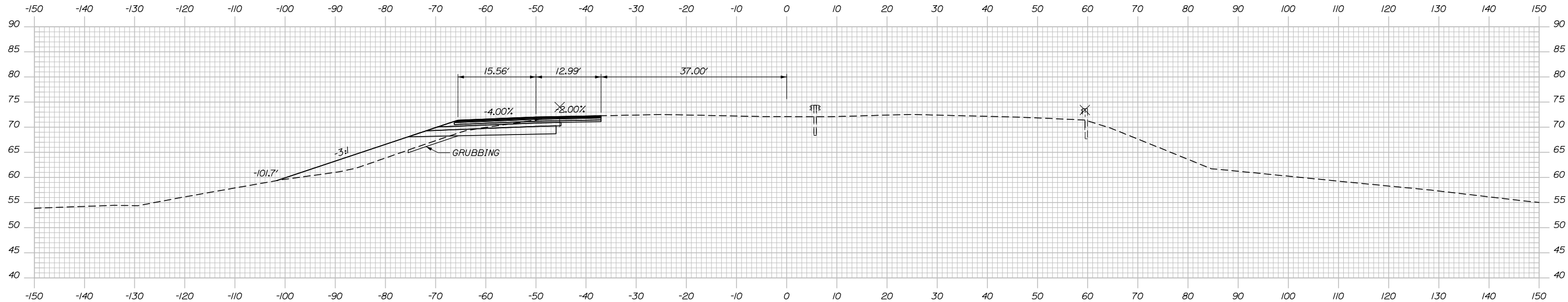
SHEET NUMBER: LOD-01

32 OF 116

Date: 10/18/2018

C = 79 CY
F = 142 CY
G = 12 CY

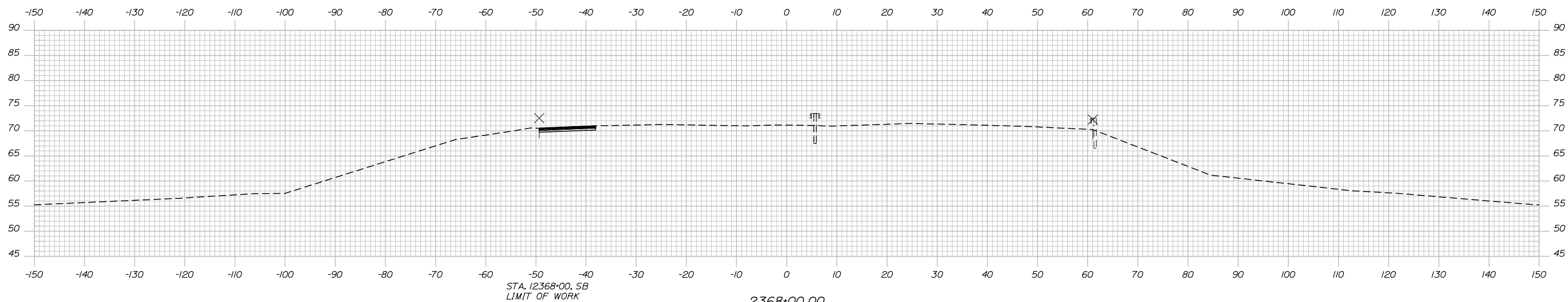
STA. 12368+61, 38.35' LT. TO STA. 12376+92, 38.33' LT.
INSTALL 825' 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS)
STA. 12368+51, 38.59' LT. TO STA. 12368+61, 38.35' LT.
INSTALL TERMINAL END - ANCHORED END, 3" W-BEAM GUARDRAIL



C = 57 CY
F = 58 CY
G = 5 CY

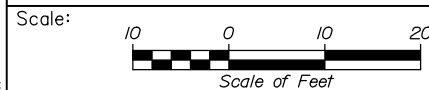
STA. 12368+53.08, SB
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

2368+50.00



STA. 12368+00, SB
LIMIT OF WORK

2368+00.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2368+00 TO STA. 2368+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

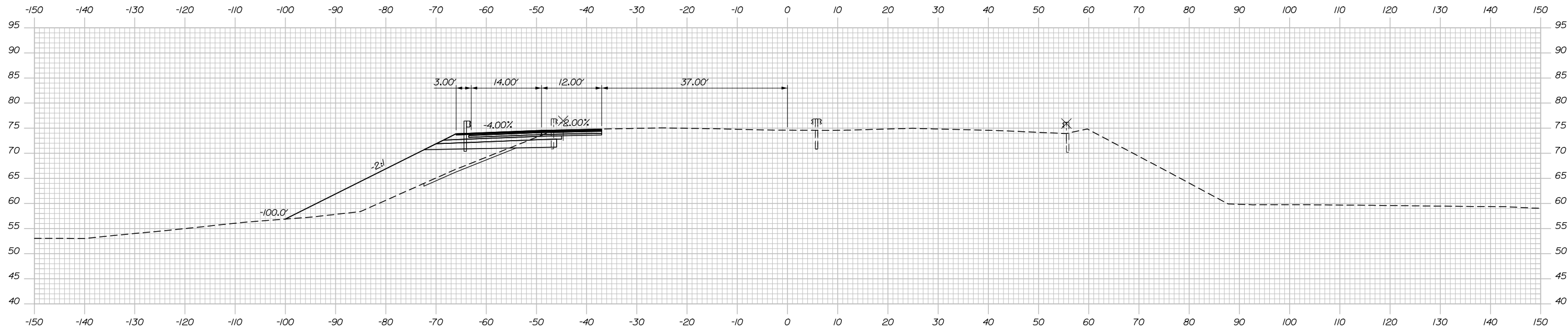
SHEET NUMBER: XS-01

33 OF 116

Filename: Xsect.dgn

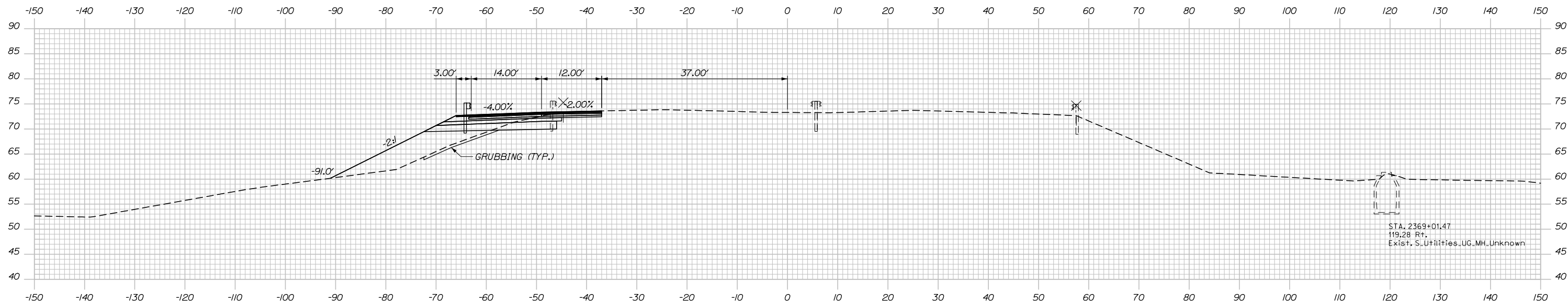
Date: 10/18/2018

C = 51 CY
 F = 339 CY
 G = 18 CY



C = 56 CY
 F = 252 CY
 G = 16 CY

2369+50.00



2369+00.00



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS

STA. 2369+00 TO STA. 2369+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-02

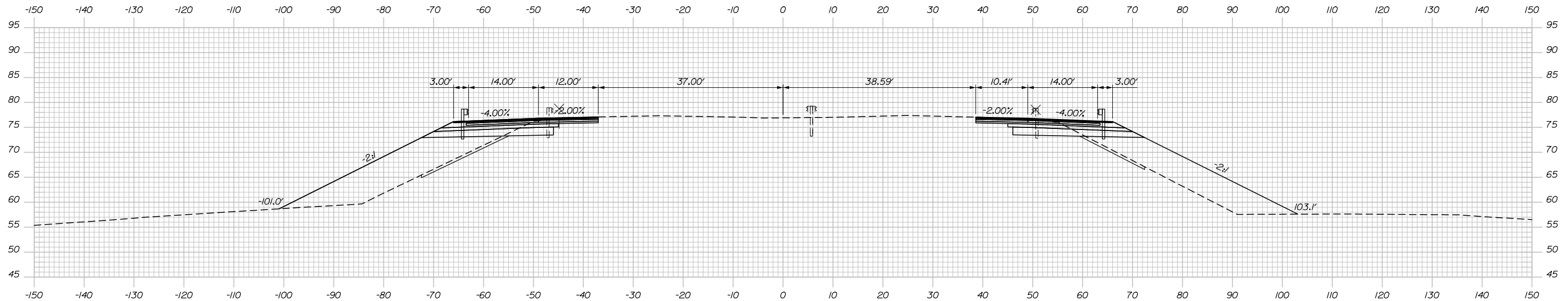
34 OF 116

Filename: Xsect.dgn

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F = 433 CY
G = 18 CY

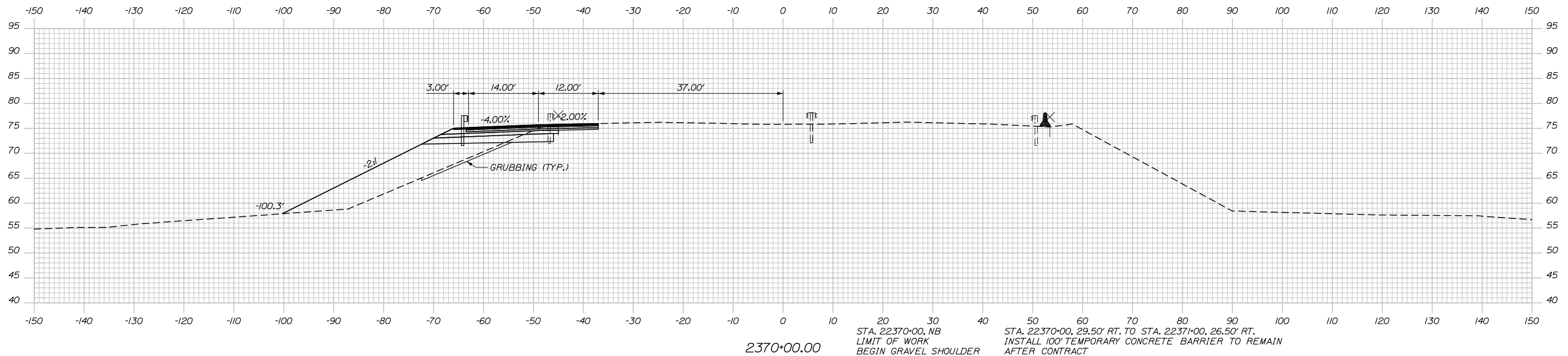
C = 65 CY
F = 396 CY
G = 16 CY

Date: 10/18/2018



C = 54 CY
F = 366 CY
G = 17 CY

C = 41 CY
F = 169 CY
G = 6 CY



2370+50.00

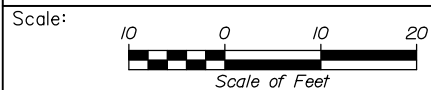
STA. 22370+50, NB
END GRAVEL SHOULDER
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

STA. 22370+48, 38.00' RT. TO STA. 22376+67, 38.33' RT.
INSTALL 612.5' 3" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)

2370+00.00

STA. 22370+00, NB
LIMIT OF WORK
BEGIN GRAVEL SHOULDER

STA. 22370+00, 29.50' RT. TO STA. 22371+00, 26.50' RT.
INSTALL 100' TEMPORARY CONCRETE BARRIER TO REMAIN
AFTER CONTRACT



Designed by:



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2370+00 TO STA. 2370+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

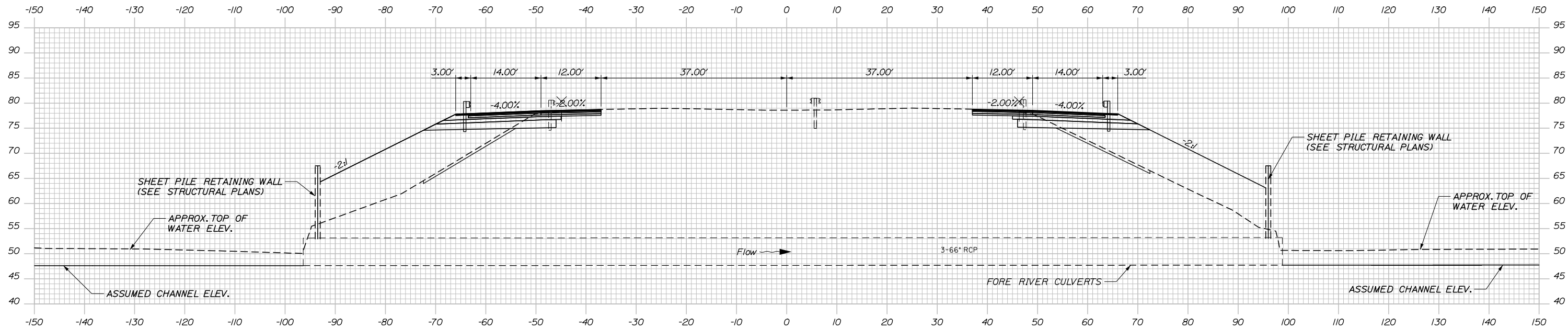
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-03

35 OF 116

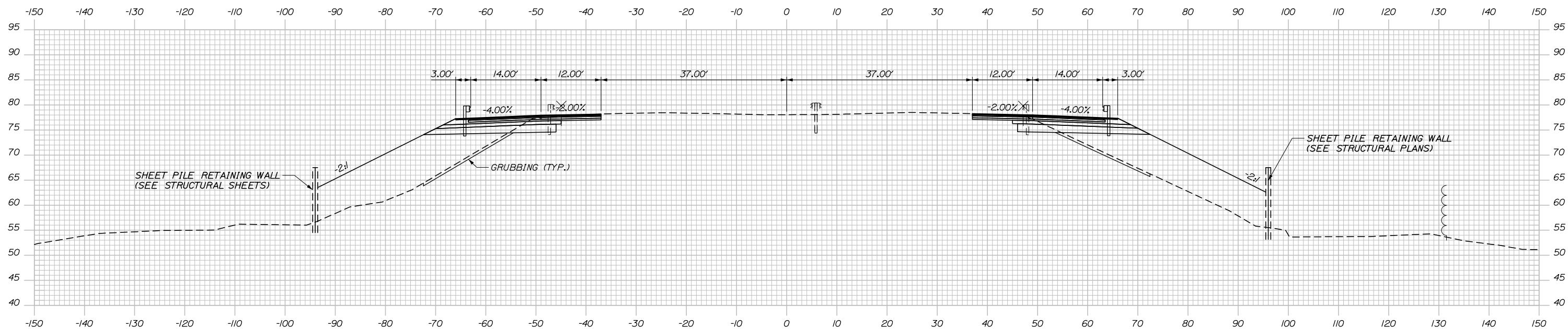
Date: 10/18/2018



C = 54 CY
F = 475 CY
G = 19 CY

C = 50 CY
F = 459 CY
G = 18 CY

2371+23.07



2371+00.00



Designed by:



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2371+00 TO STA. 2371+23

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-04

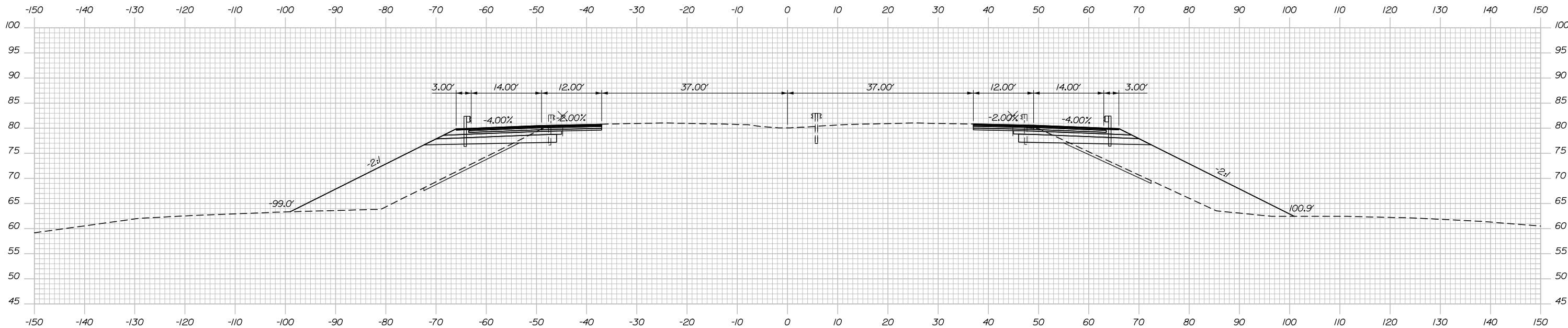
36 OF 116

Filename: Xsect.dgn

Date: 10/18/2018

C = 52 CY
F = 410 CY
G = 19 CY

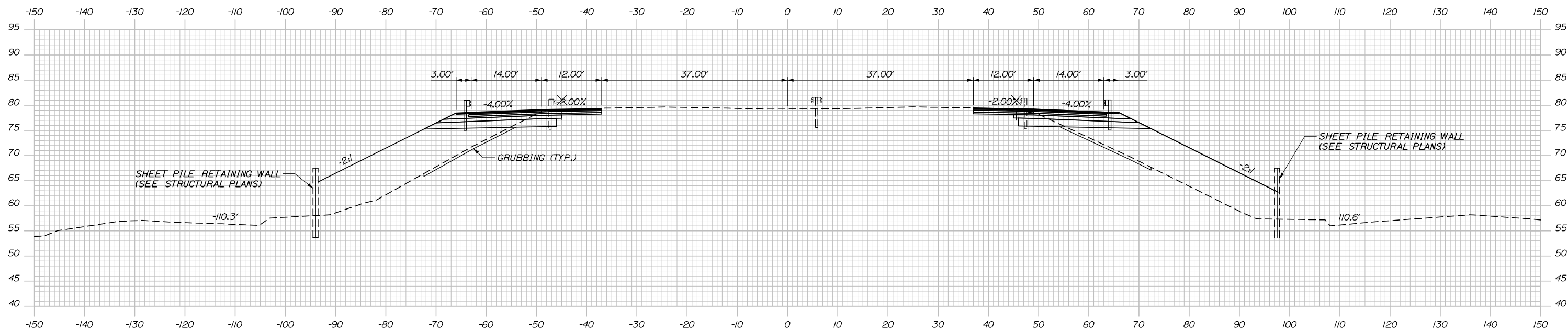
C = 56 CY
F = 350 CY
G = 17 CY



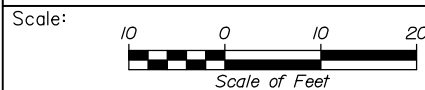
2372+00.00

C = 51 CY
F = 446 CY
G = 19 CY

C = 53 CY
F = 420 CY
G = 18 CY



2371+50.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2371+50 TO STA. 2372+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-05

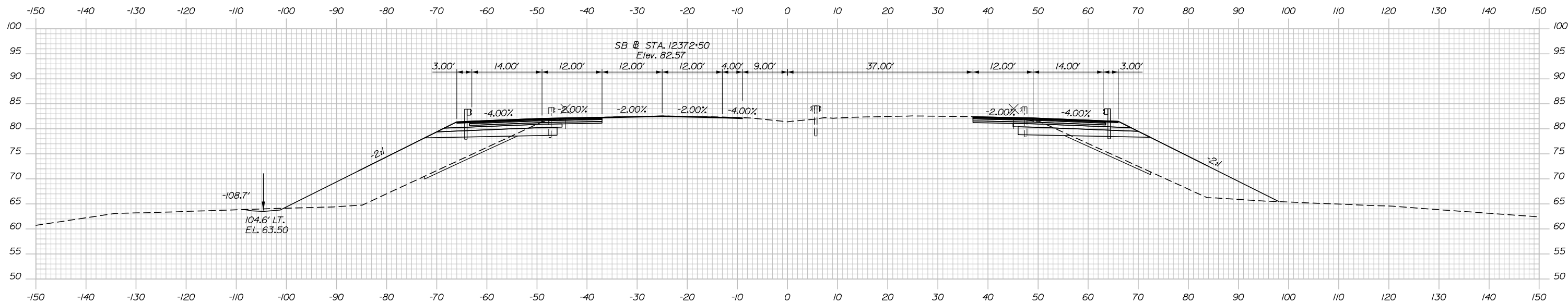
37 OF 116

Filename: Xsect.dgn

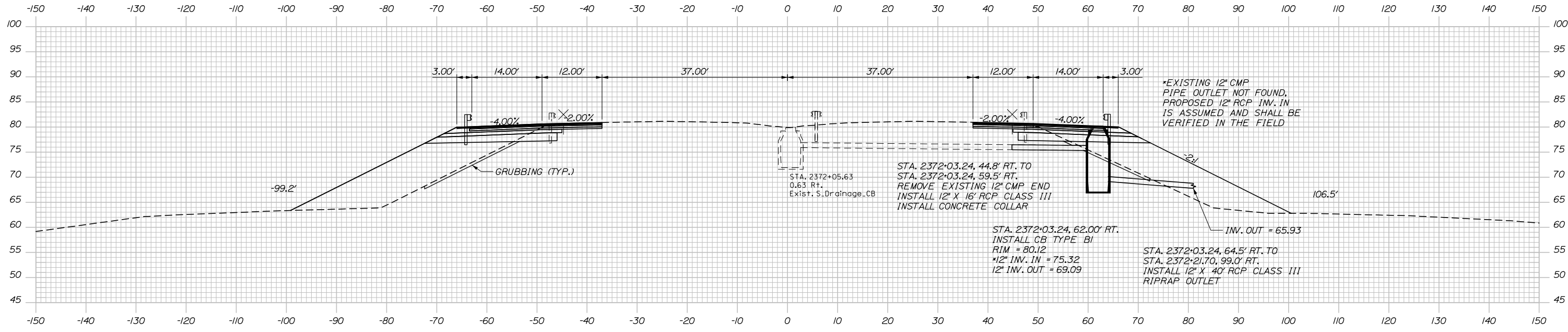
Date: 10/18/2018

C = 64 CY
F = 405 CY
G = 18 CY

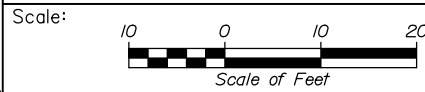
C = 59 CY
F = 314 CY
G = 16 CY



STA. 12372+50, SB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH MILL AND OVERLAY
BEGIN 1/2" HMA GRADING 12.5 MM (SURFACE)
2372+50.00



2372+03.24



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2372+03.24 TO STA. 2372+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-06

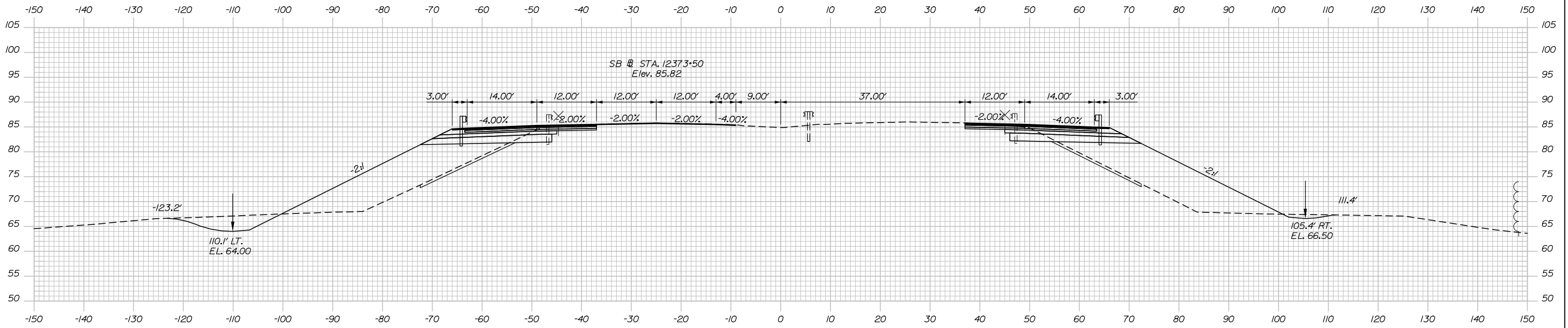
38 OF 116

Filename: Xsect.dgn

Date: 10/18/2018

C = 125 CY
F = 399 CY
G = 18 CY

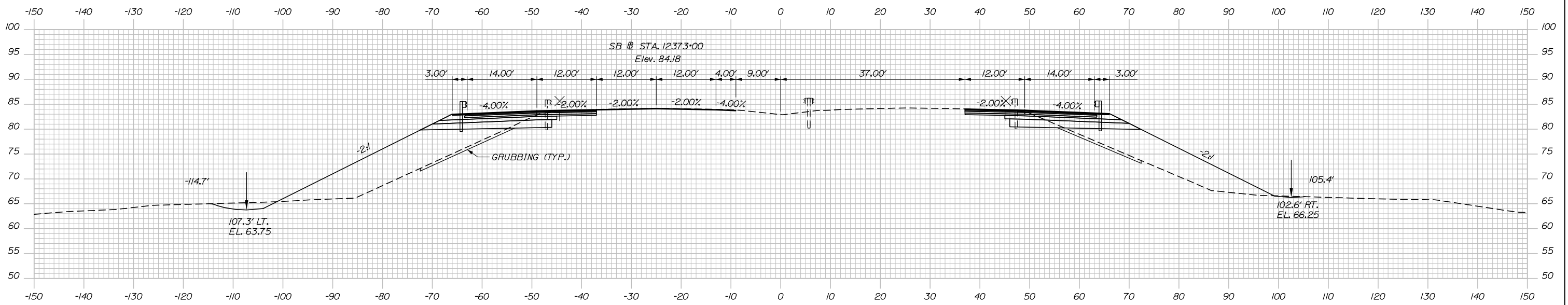
C = 83 CY
F = 421 CY
G = 18 CY



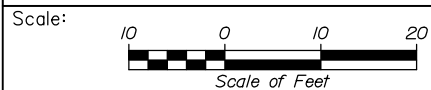
2373+50.00

C = 99 CY
F = 413 CY
G = 19 CY

C = 62 CY
F = 365 CY
G = 17 CY



2373+00.00



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THE GOLD STAR
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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2373+00 TO STA. 2373+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-07

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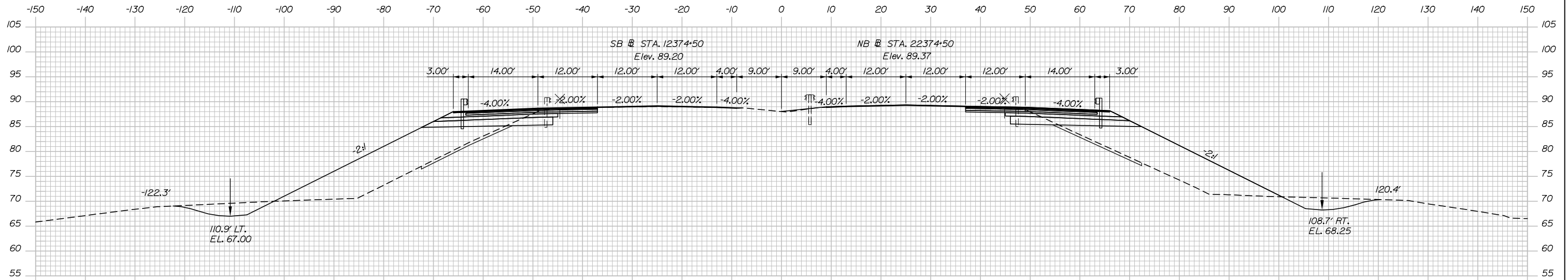
Filename: Xsect.dgn

Date: 10/18/2018

C = 101 CY
F = 479 CY
G = 19 CY

STA. 22374+85, NB
BEGIN 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)

C = 102 CY
F = 419 CY
G = 18 CY

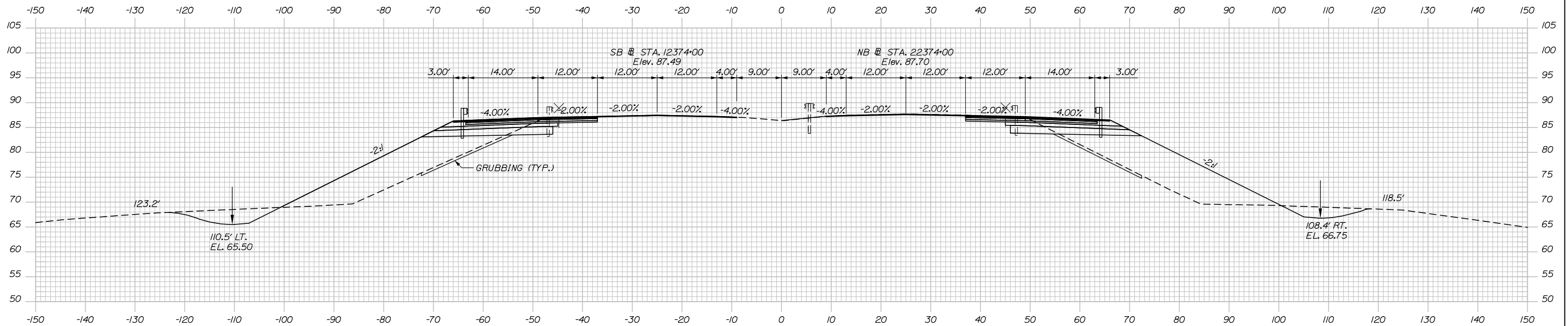


C = 116 CY
F = 403 CY
G = 18 CY

2374+50.00

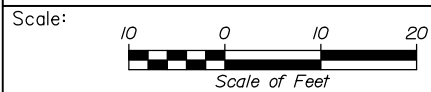
STA. 12374+30 SB
BEGIN 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)

C = 104 CY
F = 397 CY
G = 18 CY



2374+00.00

STA. 22374+00, NB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH MILL & OVERLAY
BEGIN 1/2" HMA GRADING 12.5 MM (SURFACE)



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2374+00 TO STA. 2374+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
	Designed	EDD 10\18		Checked	RWH 10\18
	Drawn	SLS 10\18		In Charge of	RAL 10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-08

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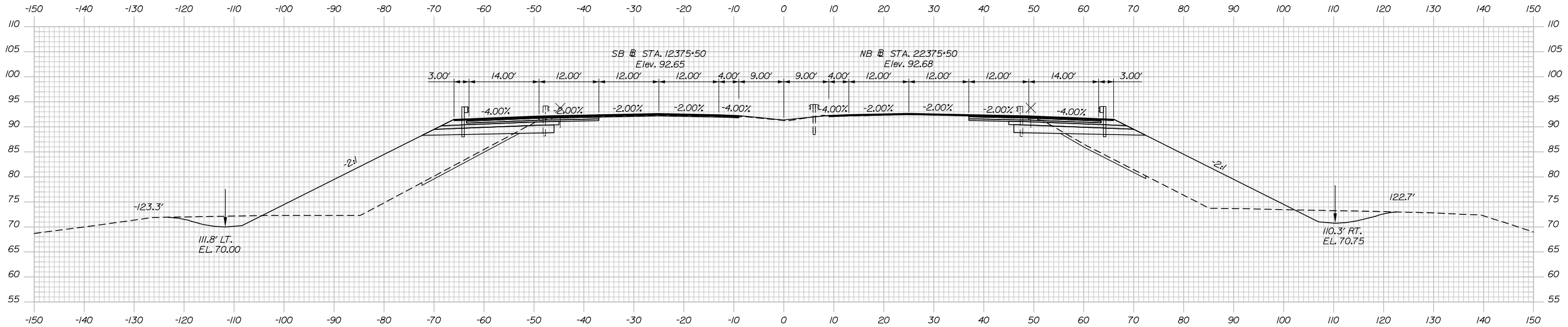
Filename: Xsect.dgn

Date: 10/18/2018

STA. 12375+85 SB
 BEGIN 2/4" HMA GRADING 19 MM (BASE)
 CONTINUE VARIABLE DEPTH MILL & OVERLAY
 CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
 CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)
 CONTINUE 2/2" HMA GRADING 19 MM (BASE)

C = 85 CY
 F = 556 CY
 G = 20 CY

C = 113 CY
 F = 447 CY
 G = 17 CY

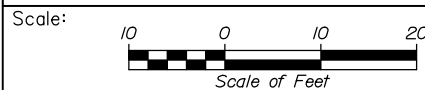
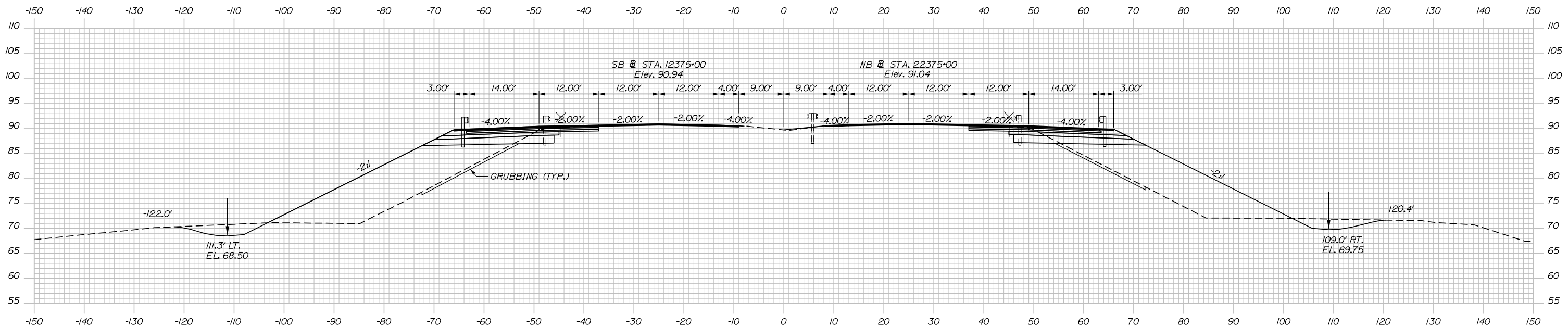


STA. 12375+15 SB
 BEGIN 2/2" HMA GRADING 19 MM (BASE)
 CONTINUE VARIABLE DEPTH MILL & OVERLAY
 CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
 CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)

C = 89 CY
 F = 545 CY
 G = 20 CY

STA. 22375+50, NB
 BEGIN 2/2" HMA GRADING 19 MM (BASE)
 CONTINUE VARIABLE DEPTH MILL & OVERLAY
 CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
 CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)

C = 106 CY
 F = 451 CY
 G = 18 CY



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CONSULTANT PROJECT MANAGER: Timothy Cote, PE

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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 Westbrook, ME 04092
 TEL (207) 774-5155
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THE GOLD STAR
 MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 STA. 2375+00 TO STA. 2375+50

CONTRACT: 2019.09

SHEET NUMBER: XS-09

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Filename: Xsect.dgn

Date: 10/18/2018

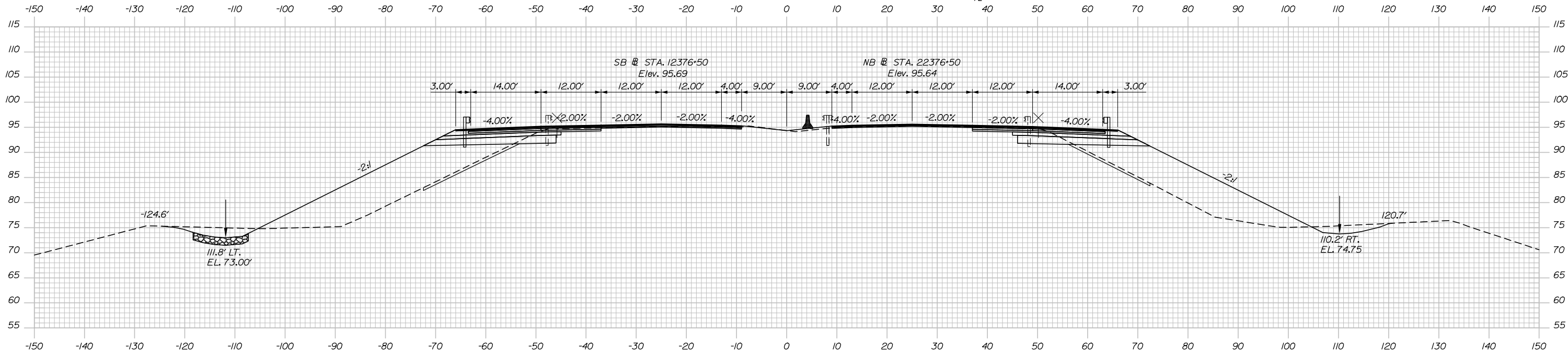
C = 50 CY
F = 461 CY
G = 20 CY

STA. 12376+85, SB
END VARIABLE DEPTH MILL & OVERLAY
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN FULL DEPTH CONSTRUCTION
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 2 1/4" HMA GRADING 19 MM (BASE)

STA. 2375+90, 2.56' RT. TO STA. 2377+36, 10.00' RT.
INSTALL 140' TEMPORARY CONCRETE BARRIER TO
REMAIN AFTER CONTRACT

STA. 22376+75, NB
END VARIABLE DEPTH MILL & OVERLAY
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN 2 1/4" HMA GRADING 19 MM (BASE)
BEGIN FULL DEPTH CONSTRUCTION
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE 2 1/2" HMA GRADING 19 MM (BASE)

C = 46 CY
F = 494 CY
G = 8 CY

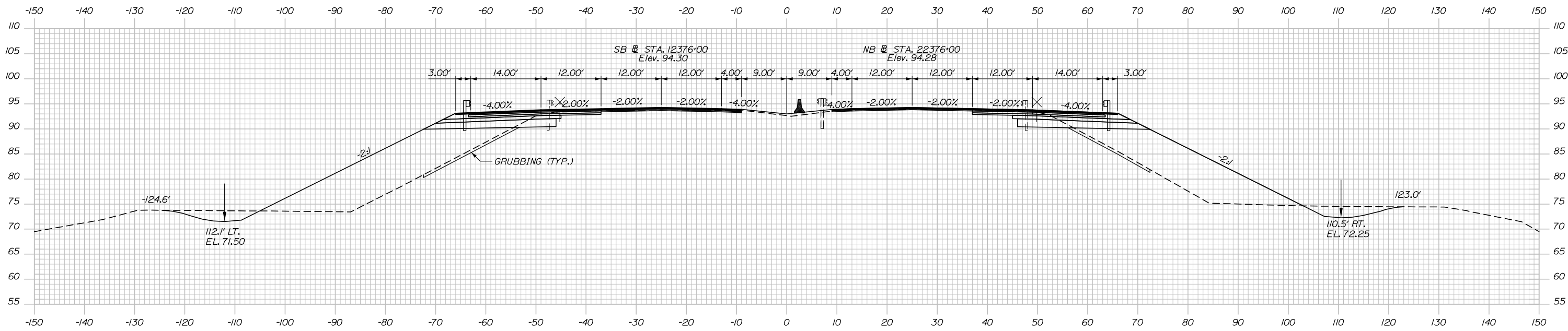


2376+50.00

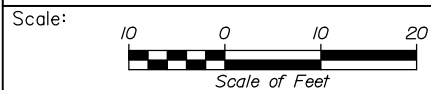
C = 83 CY
F = 532 CY
G = 19 CY

EQNBK = 2376+25.00
EQNAHD = 2376+31.49

C = 101 CY
F = 443 CY
G = 16 CY



2376+00.00



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2376+00 TO STA. 2376+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
	EDD	10\18		RWH	10\18
Drawn	By	Date	In Charge of	By	Date
	SLS	10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

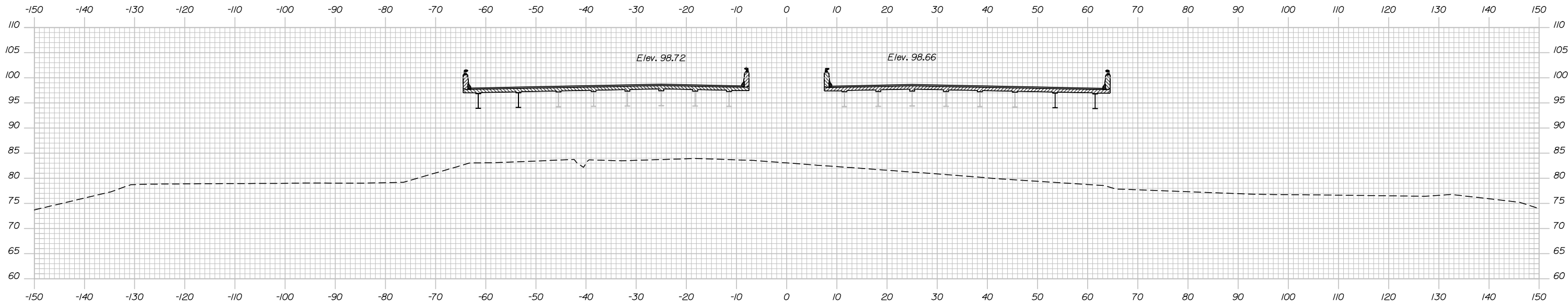
CONTRACT: 2019.09

SHEET NUMBER: XS-10

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Filename: Xsect.dgn

Date: 10/18/2018



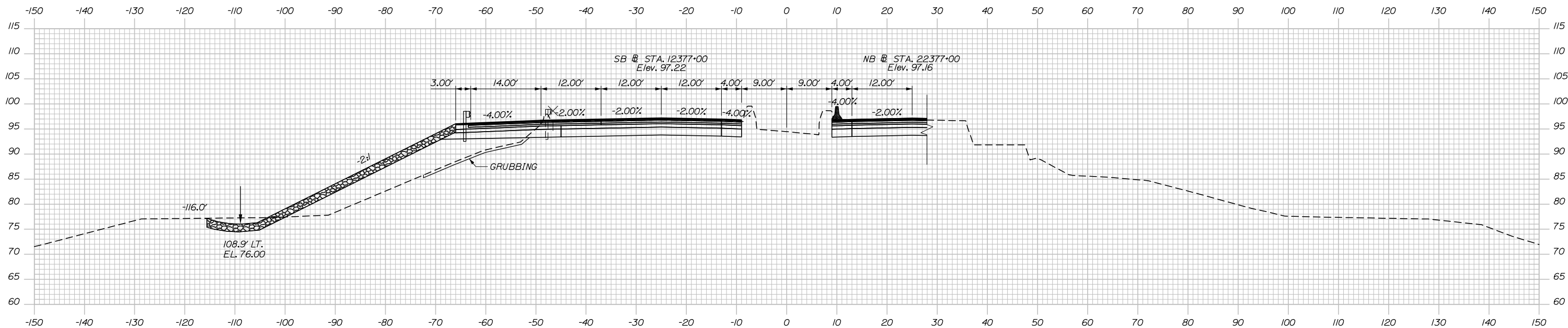
C = 6 CY
F = 121 CY
G = 3 CY

STA. 12377+19.52, SB
END FULL DEPTH CONSTRUCTION
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)

2377+50.00

STA. 22377+09.87, NB
END FULL DEPTH CONSTRUCTION
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/4" HMA GRADING 19 MM (BASE)
END 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1 1/2" HMA GRADING 12.5 MM (BINDER)

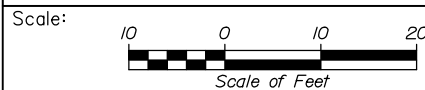
C = 0 CY
F = 162 CY
G = 0 CY



STA. 12376+92.11, 38.33' LT. TO STA. 12377+12.46, 38.33' LT.
INSTALL BRIDGE TRANSITION - TYPE III

2377+00.00

STA. 22376+67, 38.33' RT. TO STA. 22376+88, 38.33' RT.
INSTALL BRIDGE TRANSITION TYPE III



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2377+00 TO STA. 2377+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
	Designed	EDD 10\18		Checked	RWH 10\18
	Drawn	SLS 10\18		In Charge of	RAL 10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-11

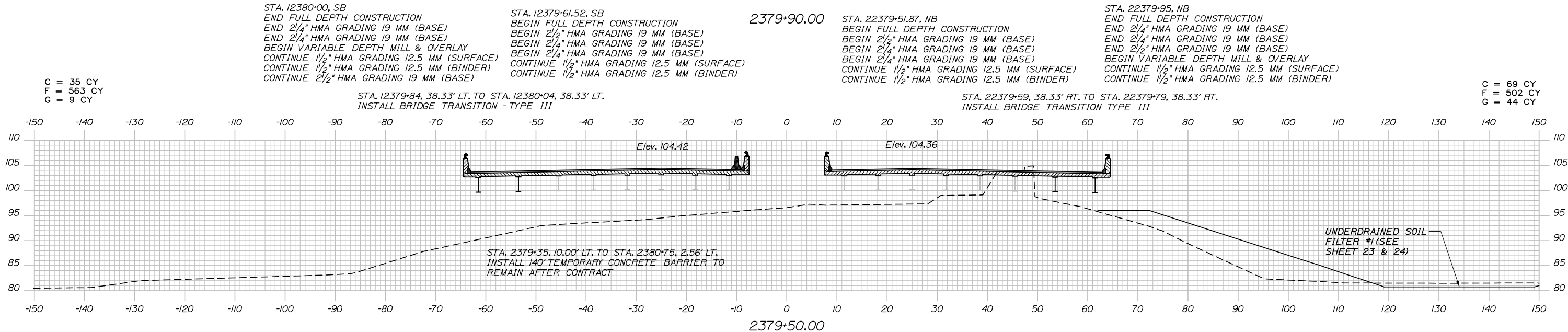
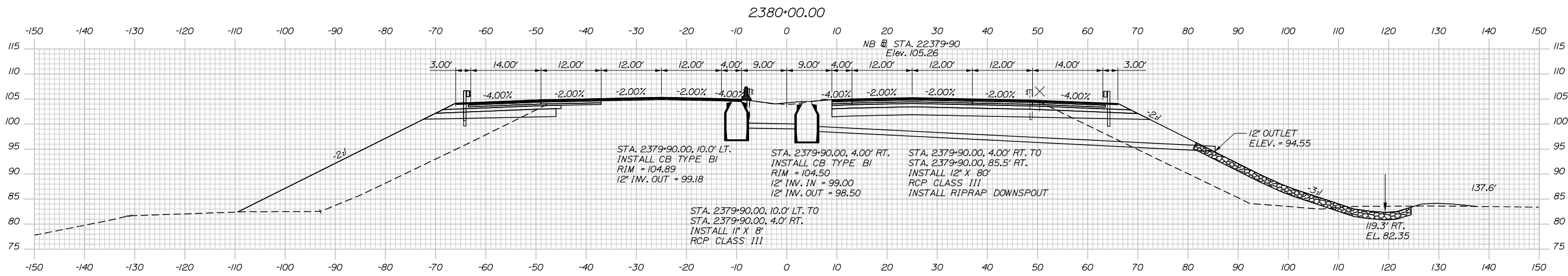
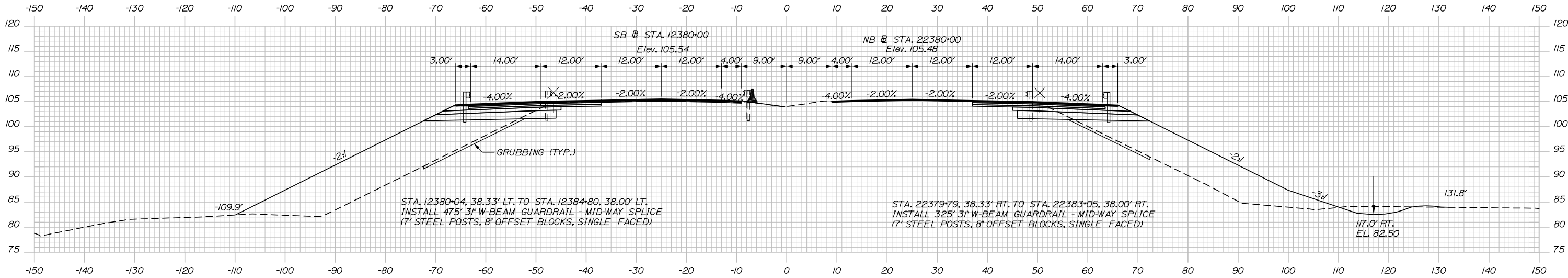
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Filename: Xsect.dgn

Date: 10/18/2018

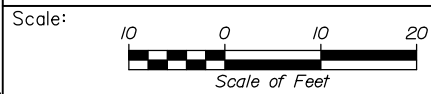
C = 44 CY
F = 647 CY
G = 20 CY

C = 98 CY
F = 477 CY
G = 17 CY



C = 35 CY
F = 563 CY
G = 9 CY

C = 69 CY
F = 502 CY
G = 44 CY



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2379+50 TO STA. 2380+00

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-12

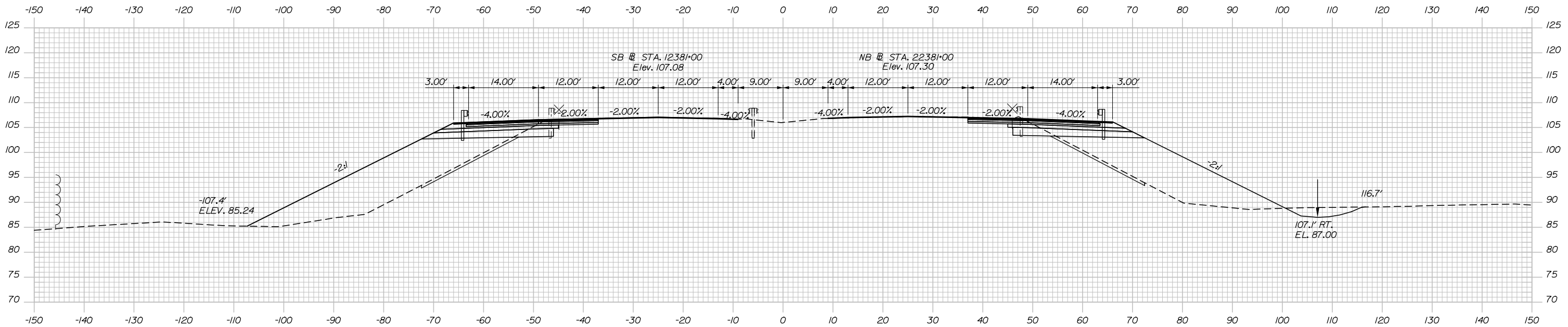
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Filename: Xsect.dgn

Date: 10/18/2018

C = 49 CY
F = 596 CY
G = 20 CY

C = 99 CY
F = 436 CY
G = 20 CY



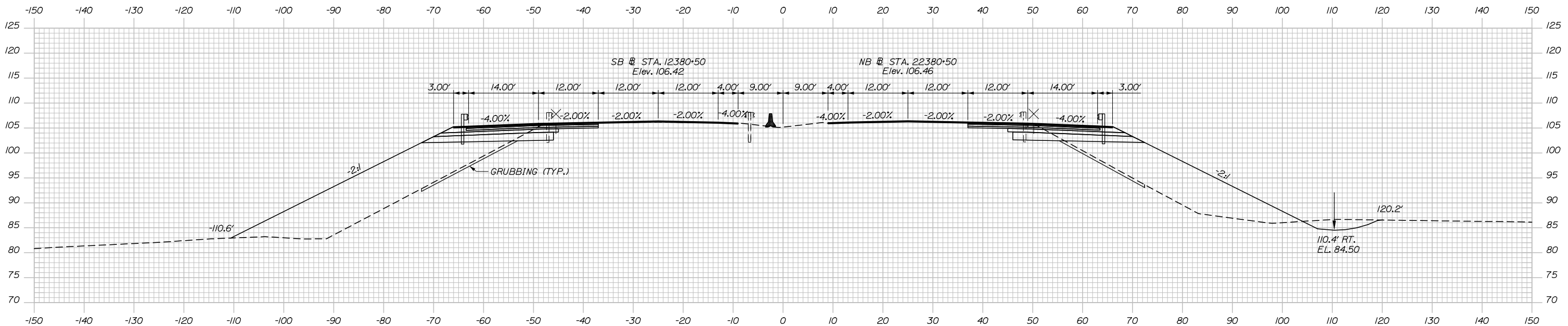
C = 48 CY
F = 617 CY
G = 20 CY

STA. 12380+80, SB
END 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)

2381+00.00

STA. 22379+90, NB
END 1/2" HMA GRADING 12.5 MM (BINDER)
CONTINUE VARIABLE DEPTH MILL & OVERLAY
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)

C = 98 CY
F = 475 CY
G = 18 CY



STA. 12380+50, SB
CONTINUE VARIABLE DEPTH MILL & OVERLAY
END 2 1/2" HMA GRADING 19 MM (BASE)
CONTINUE 1/2" HMA GRADING 12.5 MM (SURFACE)
CONTINUE 1/2" HMA GRADING 12.5 MM (BINDER)

2380+50.00



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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2380+50 TO STA. 2381+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-13

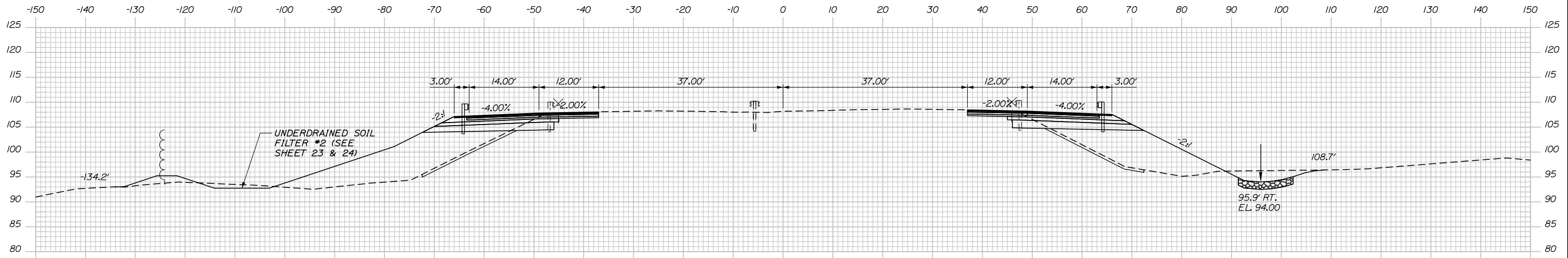
45 OF 116

Filename: Xsect.dgn

Date: 10/18/2018

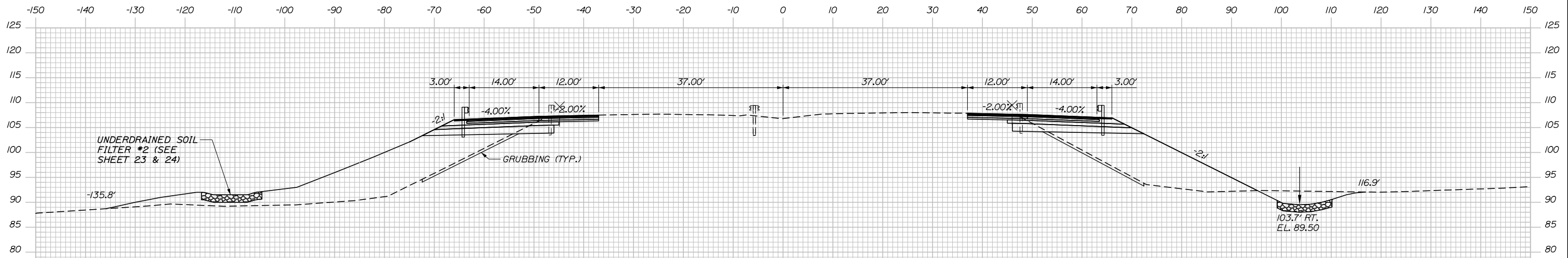
C = 231 CY
F = 354 CY
G = 19 CY

C = 82 CY
F = 213 CY
G = 19 CY



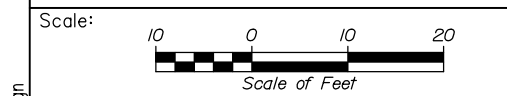
C = 58 CY
F = 519 CY
G = 19 CY

C = 100 CY
F = 350 CY
G = 20 CY



STA. 12385+50, SB
END VARIABLE DEPTH MILL & OVERLAY
MATCH EXISTING GRADE
END 1/2" HMA GRADING 12.5 MM (SURFACE)

STA. 22381+50, NB
END VARIABLE DEPTH MILL & OVERLAY
MATCH EXISTING GRADE
END 1/2" HMA GRADING 12.5 MM (SURFACE)



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date	Checked	By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
STA. 2381+50 TO STA. 2382+00
SHEET NUMBER: XS-14
CONTRACT: 2019.09
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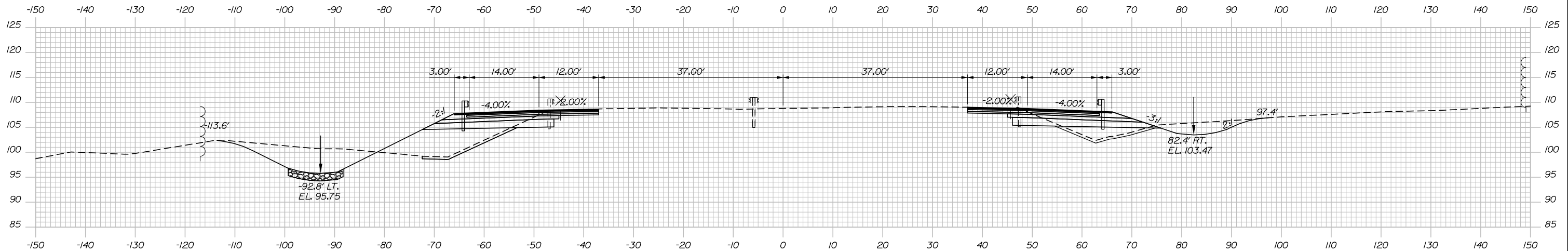
Filename: Xsect.dgn

Date: 10/18/2018

C = 201 CY
 F = 100 CY
 G = 19 CY

STA. 22383+05, 38.00' RT. TO STA. 22383+14, 38.00' RT.
 INSTALL TERMINAL END - ANCHORED END, 31"W-BEAM GUARDRAIL

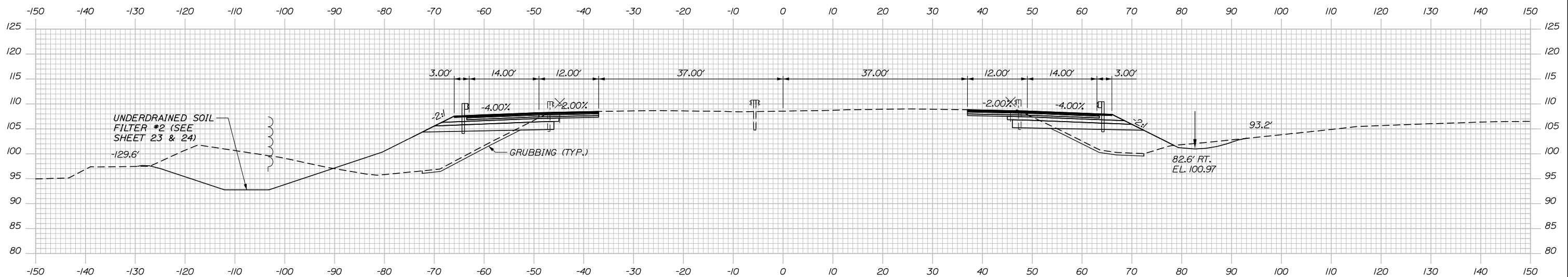
C = 110 CY
 F = 23 CY
 G = 13 CY



C = 306 CY
 F = 225 CY
 G = 19 CY

2383+00.00

C = 92 CY
 F = 88 CY
 G = 18 CY



2382+50.00



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THE GOLD STAR
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BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS

STA. 2382+50 TO STA. 2383+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-15

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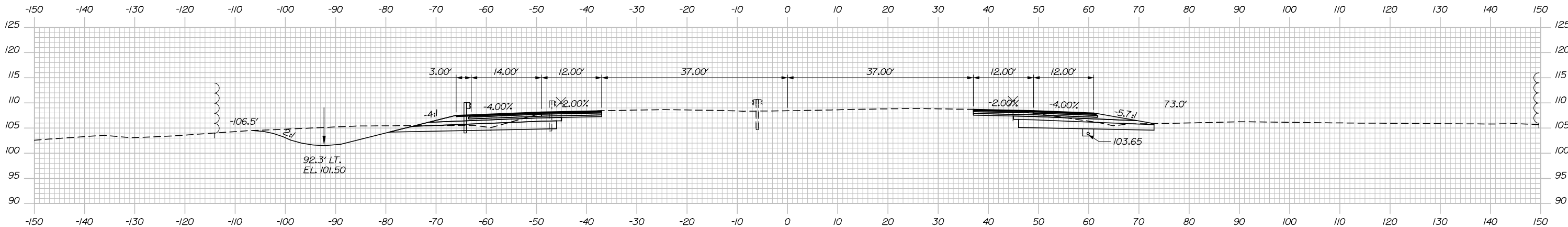
Filename: Xsect.dgn

Date: 10/18/2018

C = 176 CY
F = 2 CY
G = 7 CY

STA. 12384+80, 38.00' LT. TO STA. 12385+14, 42.00' LT.
INSTALL 3" W-BEAM GUARDRAIL, FLARED TERMINAL

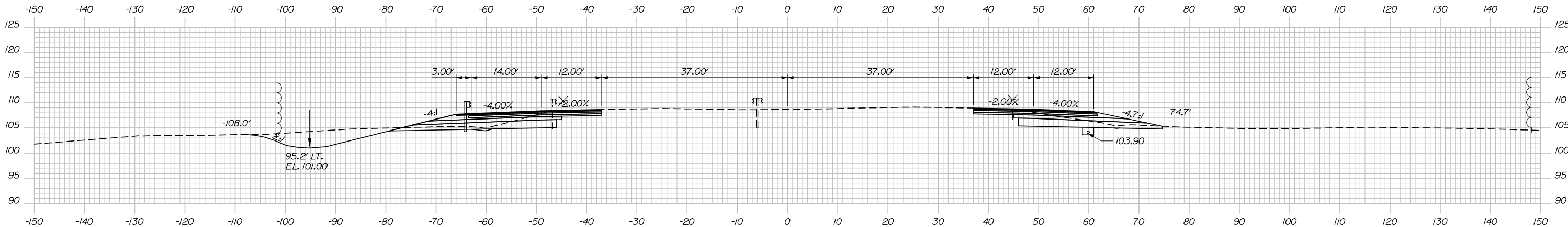
C = 111 CY
F = 0 CY
G = 0 CY



C = 208 CY
F = 0 CY
G = 1 CY

2384+50.00

C = 102 CY
F = 0 CY
G = 0 CY

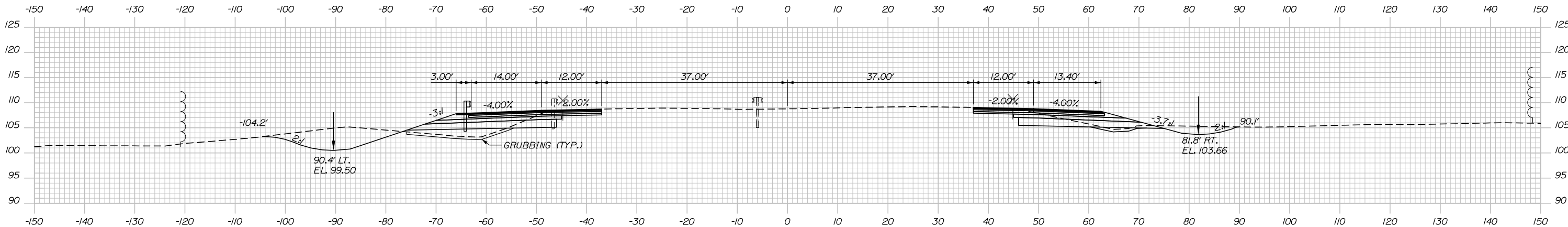


C = 187 CY
F = 19 CY
G = 11 CY

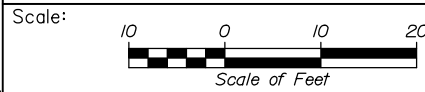
2384+00.00

STA. 2383+60.00, 59.9' RT.
TO STA. 2387+75.00, 62.0' RT.
INSTALL 6" X 415' UD TYPE B

C = 101 CY
F = 1 CY
G = 4 CY



2383+50.00



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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2383+50 TO STA. 2384+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
	EDD	10\18	Checked	RWH	10\18
	Drawn	SLS	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-16

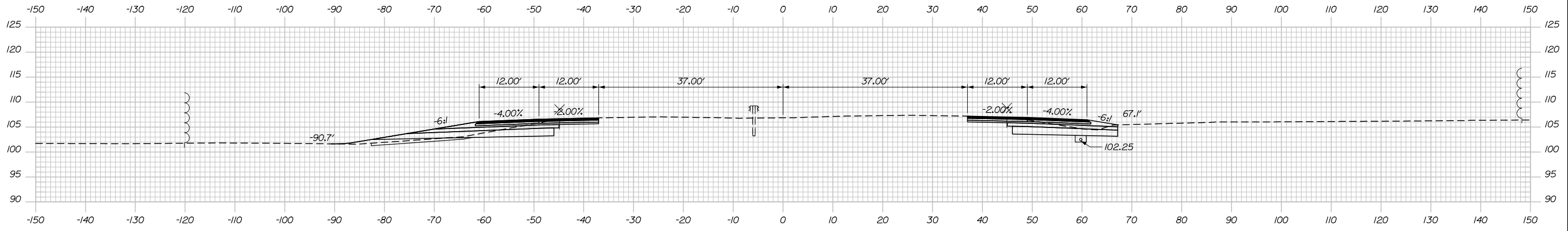
48 OF 116

Filename: Xsect.dgn

Date: 10/18/2018

C = 79 CY
F = 13 CY
G = 17 CY

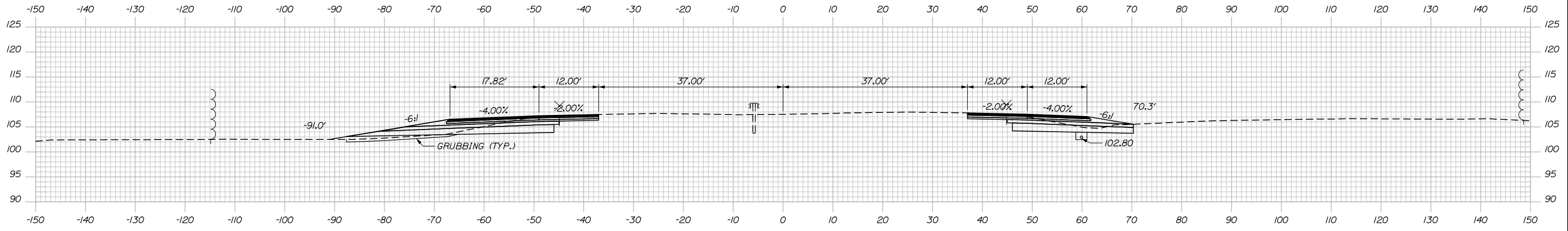
C = 97 CY
F = 0 CY
G = 0 CY



C = 87 CY
F = 9 CY
G = 17 CY

2386+00.00

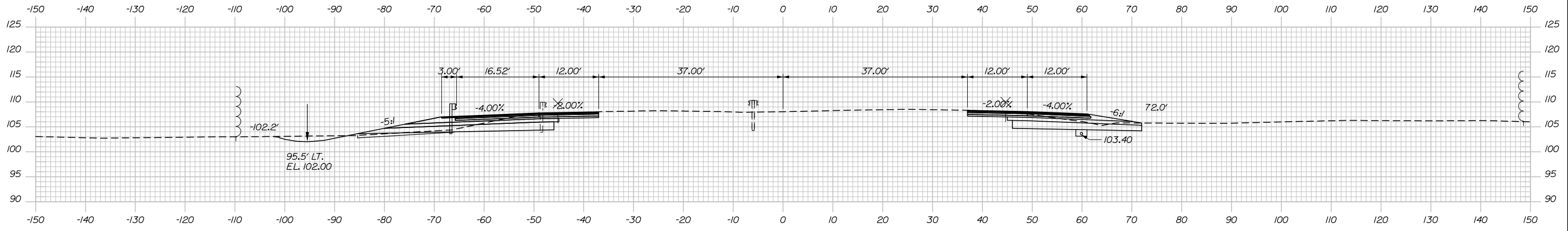
C = 100 CY
F = 0 CY
G = 0 CY



C = 112 CY
F = 9 CY
G = 17 CY

2385+50.00

C = 107 CY
F = 0 CY
G = 0 CY



2385+00.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2385+00 TO STA. 2386+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
Designed	By	Date	Checked	By	Date
	EDD	10\18		RWH	10\18
Drawn	By	Date	In Charge of	By	Date
	SLS	10\18		RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2019.09

SHEET NUMBER: XS-17

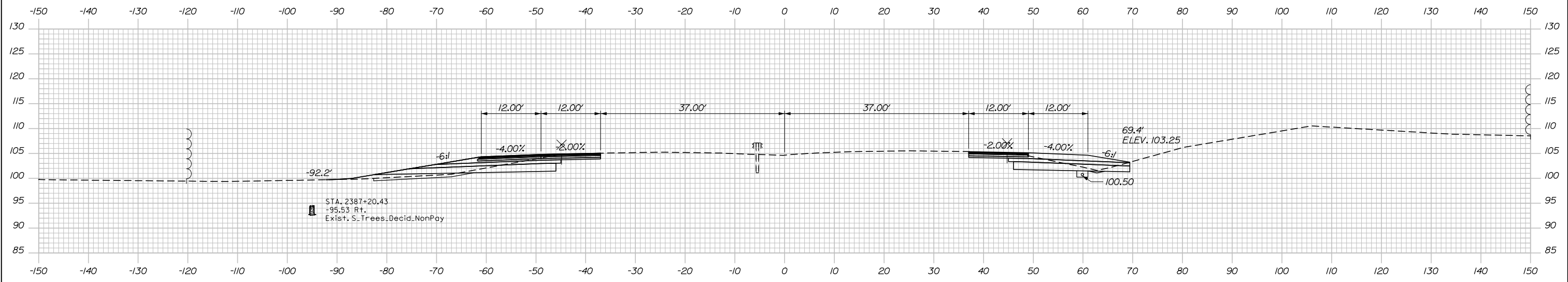
49 OF 116

Filename: Xsect.dgn

Date: 10/18/2018

C = 39 CY
F = 9 CY
G = 9 CY

C = 75 CY
F = 0 CY
G = 2 CY



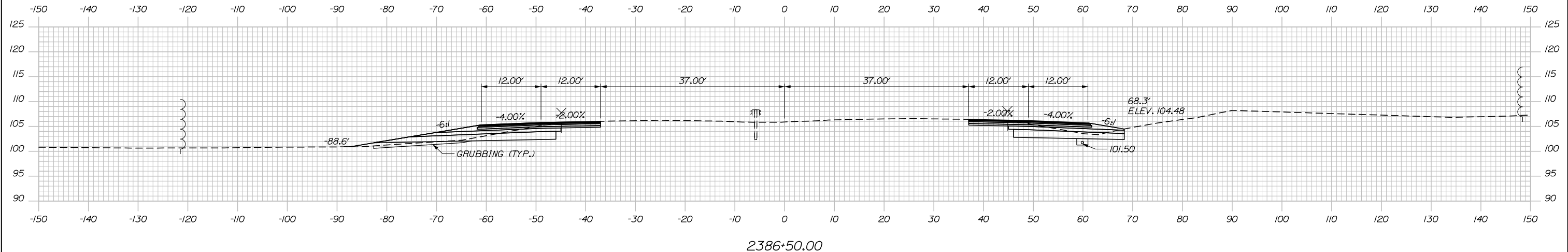
C = 79 CY
F = 14 CY
G = 17 CY

STA. 12387+00, SB
END FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

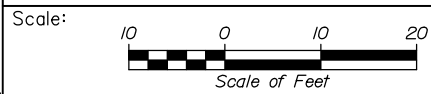
2387+00.00

STA. 22387+00, NB
BEGIN GRAVEL SHOULDER

C = 90 CY
F = 0 CY
G = 1 CY



2386+50.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2386+50 TO STA. 2387+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE					
	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

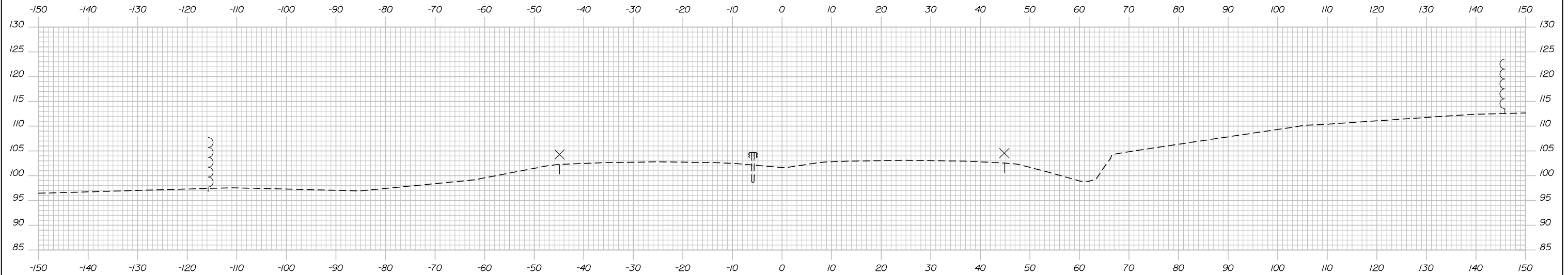
CONTRACT: 2019.09

SHEET NUMBER: XS-18

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Filename: Xsect.dgn

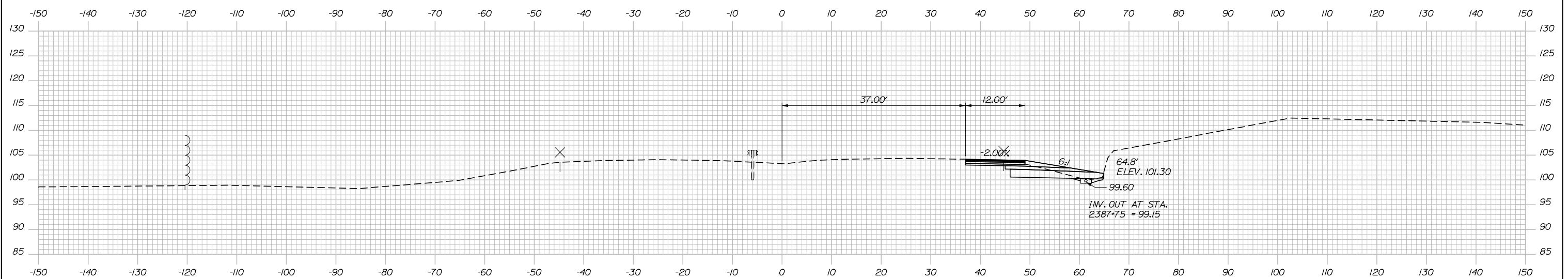
Date: 10/18/2018



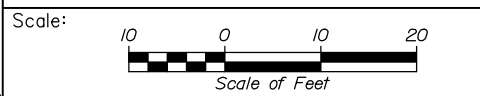
C = 0 CY
F = 0 CY
G = 0 CY

2388+00.00
STA. 22388+00, NB
LIMIT OF WORK

C = 32 CY
F = 0 CY
G = 1 CY



2387+50.00
STA. 12387+50, SB
LIMIT OF WORK
STA. 22387+50, NB
END FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)
END GRAVEL SHOULDER



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date	Checked	By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
STA. 2387+50 TO STA. 2388+00
SHEET NUMBER: XS-19
CONTRACT: 2019.09
51 OF 116

Filename: Xsect.dgn

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 8TH EDITION.

CONSTRUCTION

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

DECK CONCRETE - CLASS AAA - DECK
ALL OTHER CONCRETE SHALL BE CLASS AAA.

REINFORCING STEEL

AASHTO M31, GRADE 60 EPOXY COATED

ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

STRUCTURAL STEEL

GIRDERS: FLANGES, WEBS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS, CONNECTION PLATES, AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

STEEL H-PILES SHALL BE ASTM A572, GRADE 50.

ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36, OR APPROVED EQUAL.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM F3125, GRADE A325, TYPE 1). BOLTS SHALL BE HOT DIPPED GALVANIZED TYPE 1.

PROTECTIVE COATING

ALL NEW STRUCTURAL STEEL EXCEPT DIAPHRAGMS SHALL BE SHOP COATED WITH NEPCOAT QUALIFIED PRODUCT FROM LIST A. PAINT COLOR SHALL BE SELECTED TO MATCH EXISTING GIRDERS.

DIAPHRAGMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

BASIC DESIGN STRESSES

CONCRETE - CLASS AAA, f'c = 4,500 P.S.I.
- CLASS AAA - DECK f'c = 4,500 P.S.I.

REINFORCING STEEL - fy = 60,000 P.S.I.

STRUCTURAL STEEL AASHTO M270 (ASTM A709) GRADE 36, Fy = 36,000 P.S.I.
AASHTO M270 (ASTM A709) GRADE 50, Fy = 50,000 P.S.I.
AASHTO M270 (ASTM A572) GRADE 50, Fy = 50,000 P.S.I.

GENERAL NOTES:

- THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.
- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.
- ALL BRIDGE PARAPET, BARRIER, WINGWALL AND ENDPPOST CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.
- THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF THE BRIDGE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS.
- CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
- EXPOSED SURFACES OF THE PARAPETS, AND ENDPPOSTS;
- VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE;
- PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS, AND PIERS.
- WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DOT PREQUALIFIED LIST OF CHEMICAL ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED.
- DIMENSIONS WITH RESPECT TO THE EXISTING BRIDGE ARE APPROXIMATE AND PROVIDED FOR REFERENCE. IF FIELD CONDITIONS VARY BY MORE THAN 1" FROM DIMENSIONS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED.

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	BRIDGE QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS	1
202.12	Removing Existing Structural Concrete		CY	135
202.13	Removing Existing Railings Retained by Authority		LF	968
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY	680
206.10	Structural Earth Excavation - Piers		CY	240
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	230
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	460
409.15	Bituminous Tack Coat, Applied		GAL	180
501.231	Dynamic Loading Test		EA	8
501.301	Steel Sheet Piling - MCRR		LS	1
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF	1168
501.90	Pile Tips		EA	64
501.91	Pile Splices		EA	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB	336000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	336000
503.17	Mechanical/Welded Splice		EA	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS	1
504.71	Structural steel erection - MCRR	334000 LB	LS	1
504.7111	Peening Cover Plate Welds		EA	64
505.08	Shear Connectors - MCRR - MCRR	15036 EA	LS	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS	1
511.091	Temporary Earth Support Systems - MCRR		LS	1
514.06	Curing Box for Concrete Cylinders		EA	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1130
515.23	Anti-Graffiti Coating		SY	1180
518.30	Abutment Seat Refacing		CY	7
518.40	Epoxy Injection Crack Repair		LF	34
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	56
518.60	Repair of Vertical Surfaces < 8 inches		SF	104
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	2
520.23	Asphaltic Plug Joint		LF	116
523.52	Bearing Installation		EA	16
523.5303	Steel Bearings, Fixed, Rocker		EA	4
523.5304	Steel Bearings, Expansion, Rocker		EA	12
523.56	Clean and Paint Bearing		EA	38
523.561	Clean, Paint, and Reset Bearing		EA	10
524.301	Temporary Structural Support - Jacking		LS	1
524.303	Temporary Structural Support - Braces		LS	1
524.40	Protective Shielding - Steel Girders		SY	3140
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS	1
606.1723	Bridge Transition - Type III		EA	4
609.15	Sloped Curb Type I		LF	250
610.08	Plain Riprap		CY	224
610.18	Stone Ditch Protection		CY	45
620.58	Erosion Control Geotextile		SY	143
652.361	Maintenance of Traffic Control Devices - MCRR		LS	0.5

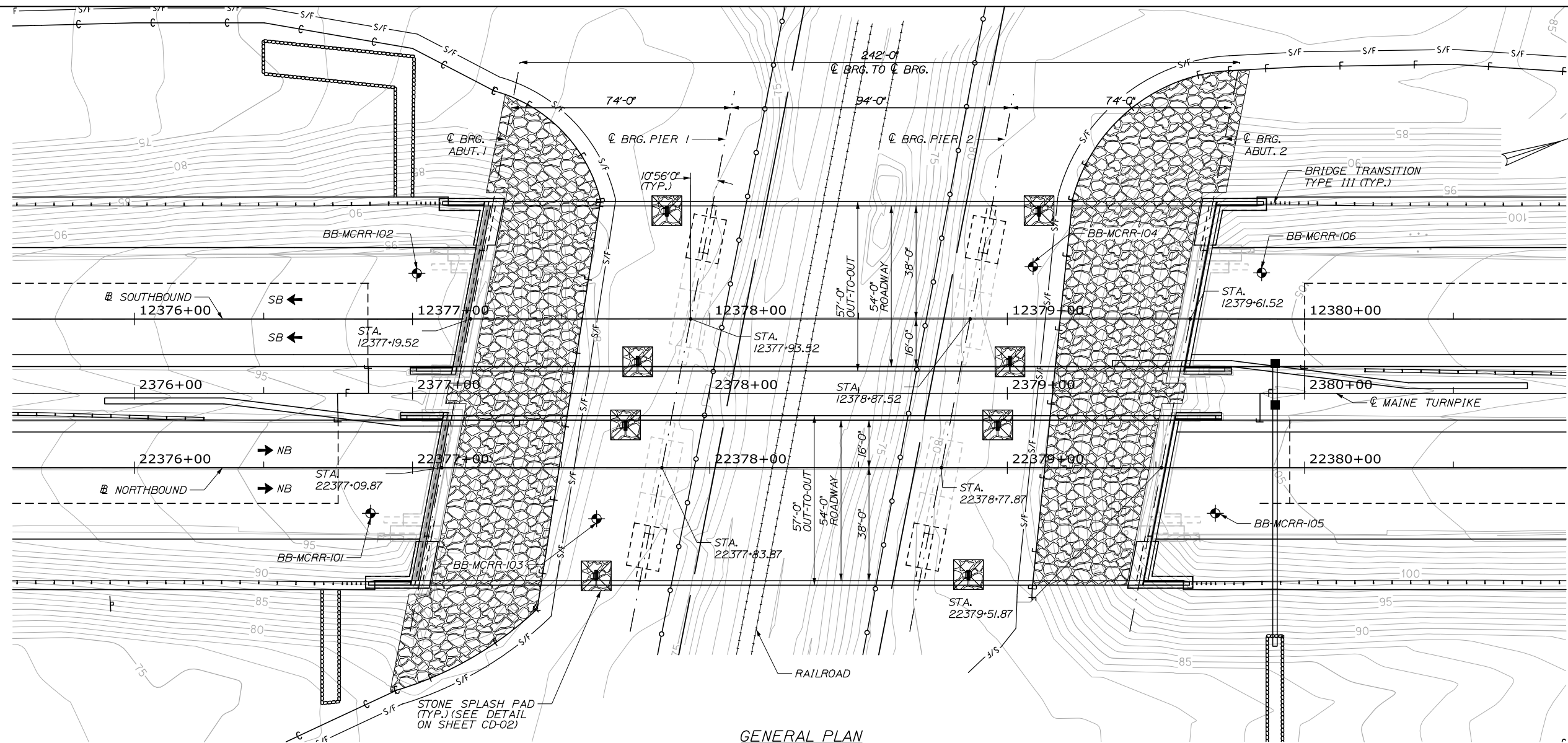
INDEX OF DRAWINGS		
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53	GENERAL PLAN AND ELEVATION	S-02
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55	BORING LOGS II	S-04
56	BORING LOGS III	S-05
57	CONSTRUCTION SEQUENCE I	S-06
58	CONSTRUCTION SEQUENCE II	S-07
59	CONSTRUCTION SEQUENCE III	S-08
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63	SUBSTRUCTURE REPAIRS NORTHBOUND ABUTMENT 1	S-12
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81	ENDPOST DETAILS II	S-30
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114	REINFORCING STEEL SCHEDULE II	S-63
115	REINFORCING STEEL SCHEDULE III	S-64
116	REINFORCING STEEL SCHEDULE IV	S-65

Date: 10/18/2018

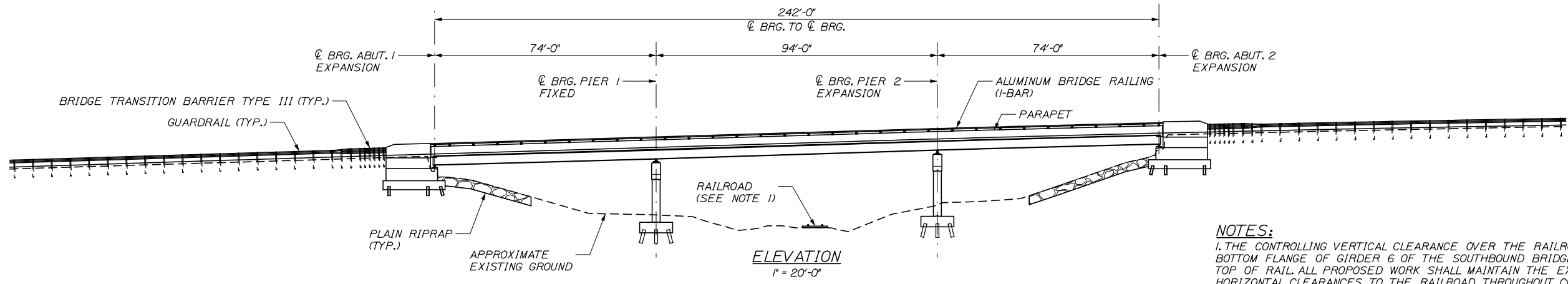
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Scale: AS NOTED		Designed by:	
HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		THE GOLD STAR MEMORIAL HIGHWAY	
BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS GENERAL NOTES, INDEX, AND QUANTITIES		SHEET NUMBER: S-01 CONTRACT: 2019.09 52 OF 116	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	By
	EMC	10\18	HCH
	Checked	10\18	Date
	Drawn	PEB	10\18
	In Charge of	RAL	Date
	10\18		

Date: 10/18/2018



GENERAL PLAN
1" = 20'-0"



ELEVATION
1" = 20'-0"

NOTES:
1. THE CONTROLLING VERTICAL CLEARANCE OVER THE RAILROAD OCCURS AT THE BOTTOM FLANGE OF GIRDER 6 OF THE SOUTHBOUND BRIDGE AND IS 22'-4 1/2" FROM TOP OF RAIL. ALL PROPOSED WORK SHALL MAINTAIN THE EXISTING VERTICAL AND HORIZONTAL CLEARANCES TO THE RAILROAD THROUGHOUT CONSTRUCTION.

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
GENERAL PLAN AND ELEVATION

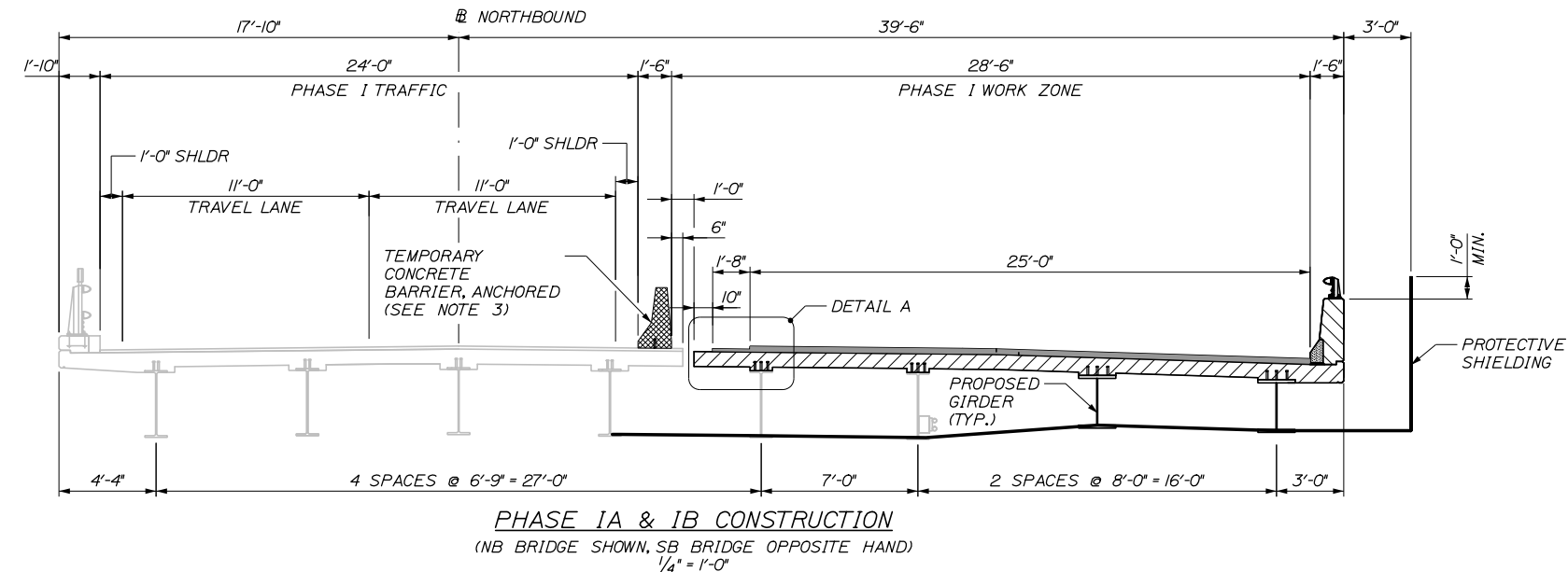
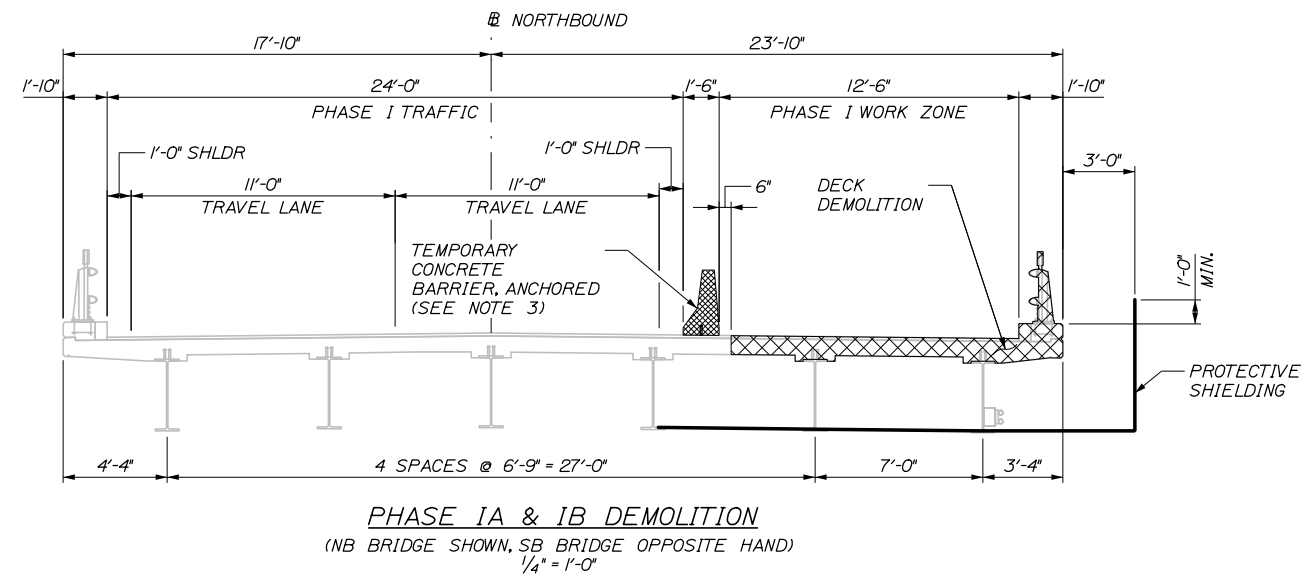
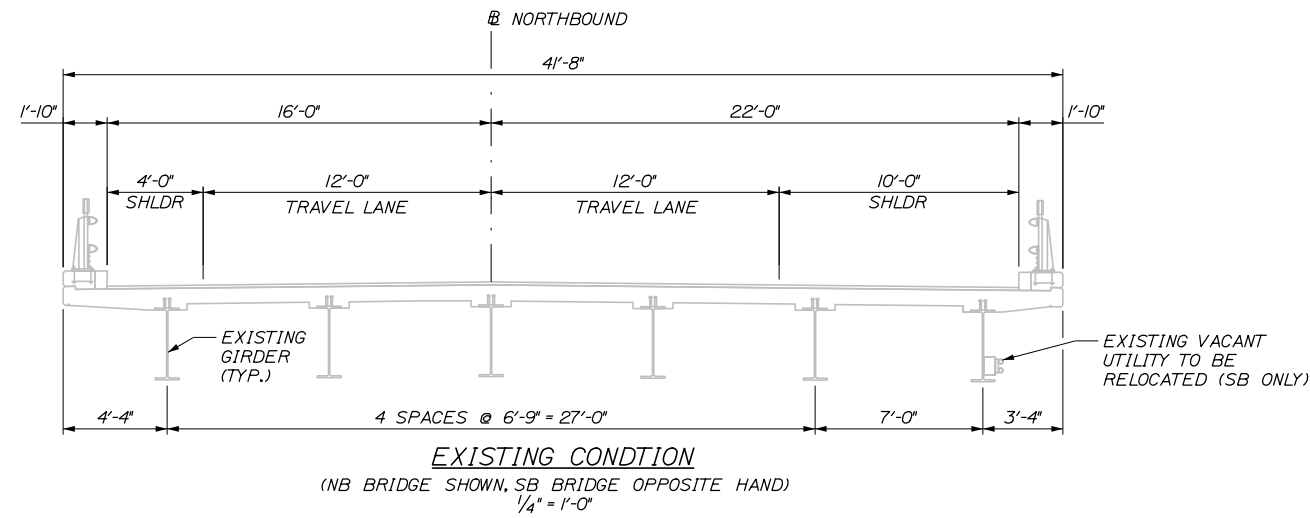
SHEET NUMBER: S-02
CONTRACT: 2019.09
95 OF 116

Date: 10/18/2018

SCHENWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike (I-95) over Maine Central RR (MM47.9)		LOCATION: Portland, Maine		Boring No.: BB-MCRR-102		Proj. No.: 18-004		
Operator:	Enos / Share	Date:	NAV08	Sampler:	standard split-spoon	Core Barrel:	NQ2			
Logged By:	Schoneveld	Rig Type:	Mobile Drill B-53	Hammer Wt./Fall:	140 lbs / 30 in (auto hammer)	Hammer Type:	auto hammer			
Date Start/Finish:	3/7/18; 0250-3/16/18; 0325	Drilling Method:	cased wash boring	Hammer Efficiency:	677	Water Level:	28 +/-			
Boring Location:	per plan	Casing ID/D:	HW to 35 ft, NW to 65.8 ft	Hammer Efficiency:	677	Water Level:	28 +/-			
TESTS/SAMPLING AND TESTING: D = Split Spoon Sample M = Unconsolidated Split Spoon Sample attempt U = Thin Wall Tube Sample M+ = Unconsolidated Thin Wall Tube Sample attempt V = In-situ Vane Shear Test M+ = Unconsolidated Thin Wall Tube Sample attempt		ADDITIONAL DEFINITIONS: N = Not recorded H = High L = Low S = Slight M = Moderate F = Fair P = Poor V = Very Poor U = Unusable N/A = Not Applicable		LABORATORY TEST RESULTS: AASHTO USCS soil classification 4000 = percent fines WC = water content (%) CONSOL = 1-D consolidation test LI = Liquid Limit PI = Plasticity Index SHAN = Shear Strength UCT = Unconfined Compressive Strength		ADDITIONAL DEFINITIONS: N = Not recorded H = High L = Low S = Slight M = Moderate F = Fair P = Poor V = Very Poor U = Unusable N/A = Not Applicable		LABORATORY TEST RESULTS: AASHTO USCS soil classification 4000 = percent fines WC = water content (%) CONSOL = 1-D consolidation test LI = Liquid Limit PI = Plasticity Index SHAN = Shear Strength UCT = Unconfined Compressive Strength		
Depth (ft.)	Sample No.	Pen (ft.)	Sample Depth (ft.)	Blows (6 in.)	Strength (psi)	W (%)	LI (%)	PI (%)	Visual Description and Remarks	Lab. Testing Results
50	110	2404	88.0-88.2	100	110	23			V1: Tur-24.5 / Tr=1 R-bbs (65 mm x 130 mm vane)	
55	114	2404	91.0-91.0	100	110	23			V4: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
60	112	2404	85.0-87.0	140	110	23			U2: Dark grey black, Silty CLAY.	CONSOL (20, 20) WC=33.7% LI=22.4 PI=11.3
65	115	2404	87.0-88.0	140	110	23			V5: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	WC=25.6% LI=22.1 PI=6.5
70	113	2418	65.0-65.0	140	110	23			U3: Dark grey, v. soft, Silty CLAY, with multiple layers Silty fine to medium SAND, changing at 61.8 ft.	
75	117	2418	61.8-61.8	140	110	23			Grey GRAVEL, some SILT, little fine to medium Sand, TLL	
80	116	2418	61.8-61.8	140	110	23			V3: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
85	118	2418	61.8-61.8	140	110	23			V4: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
90	119	2418	61.8-61.8	140	110	23			V5: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
95	120	2418	61.8-61.8	140	110	23			V6: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
100	121	2418	61.8-61.8	140	110	23			V7: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
105	122	2418	61.8-61.8	140	110	23			V8: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
110	123	2418	61.8-61.8	140	110	23			V9: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
115	124	2418	61.8-61.8	140	110	23			V10: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
120	125	2418	61.8-61.8	140	110	23			V11: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
125	126	2418	61.8-61.8	140	110	23			V12: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
130	127	2418	61.8-61.8	140	110	23			V13: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
135	128	2418	61.8-61.8	140	110	23			V14: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
140	129	2418	61.8-61.8	140	110	23			V15: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
145	130	2418	61.8-61.8	140	110	23			V16: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
150	131	2418	61.8-61.8	140	110	23			V17: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
155	132	2418	61.8-61.8	140	110	23			V18: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
160	133	2418	61.8-61.8	140	110	23			V19: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
165	134	2418	61.8-61.8	140	110	23			V20: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
170	135	2418	61.8-61.8	140	110	23			V21: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
175	136	2418	61.8-61.8	140	110	23			V22: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
180	137	2418	61.8-61.8	140	110	23			V23: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
185	138	2418	61.8-61.8	140	110	23			V24: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
190	139	2418	61.8-61.8	140	110	23			V25: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
195	140	2418	61.8-61.8	140	110	23			V26: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
200	141	2418	61.8-61.8	140	110	23			V27: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
205	142	2418	61.8-61.8	140	110	23			V28: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
210	143	2418	61.8-61.8	140	110	23			V29: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
215	144	2418	61.8-61.8	140	110	23			V30: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
220	145	2418	61.8-61.8	140	110	23			V31: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
225	146	2418	61.8-61.8	140	110	23			V32: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
230	147	2418	61.8-61.8	140	110	23			V33: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
235	148	2418	61.8-61.8	140	110	23			V34: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
240	149	2418	61.8-61.8	140	110	23			V35: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
245	150	2418	61.8-61.8	140	110	23			V36: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
250	151	2418	61.8-61.8	140	110	23			V37: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
255	152	2418	61.8-61.8	140	110	23			V38: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
260	153	2418	61.8-61.8	140	110	23			V39: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
265	154	2418	61.8-61.8	140	110	23			V40: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
270	155	2418	61.8-61.8	140	110	23			V41: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
275	156	2418	61.8-61.8	140	110	23			V42: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
280	157	2418	61.8-61.8	140	110	23			V43: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
285	158	2418	61.8-61.8	140	110	23			V44: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
290	159	2418	61.8-61.8	140	110	23			V45: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
295	160	2418	61.8-61.8	140	110	23			V46: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
300	161	2418	61.8-61.8	140	110	23			V47: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
305	162	2418	61.8-61.8	140	110	23			V48: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
310	163	2418	61.8-61.8	140	110	23			V49: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
315	164	2418	61.8-61.8	140	110	23			V50: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
320	165	2418	61.8-61.8	140	110	23			V51: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
325	166	2418	61.8-61.8	140	110	23			V52: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
330	167	2418	61.8-61.8	140	110	23			V53: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
335	168	2418	61.8-61.8	140	110	23			V54: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
340	169	2418	61.8-61.8	140	110	23			V55: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
345	170	2418	61.8-61.8	140	110	23			V56: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
350	171	2418	61.8-61.8	140	110	23			V57: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
355	172	2418	61.8-61.8	140	110	23			V58: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
360	173	2418	61.8-61.8	140	110	23			V59: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
365	174	2418	61.8-61.8	140	110	23			V60: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
370	175	2418	61.8-61.8	140	110	23			V61: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
375	176	2418	61.8-61.8	140	110	23			V62: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
380	177	2418	61.8-61.8	140	110	23			V63: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
385	178	2418	61.8-61.8	140	110	23			V64: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
390	179	2418	61.8-61.8	140	110	23			V65: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
395	180	2418	61.8-61.8	140	110	23			V66: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
400	181	2418	61.8-61.8	140	110	23			V67: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
405	182	2418	61.8-61.8	140	110	23			V68: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
410	183	2418	61.8-61.8	140	110	23			V69: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
415	184	2418	61.8-61.8	140	110	23			V70: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
420	185	2418	61.8-61.8	140	110	23			V71: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
425	186	2418	61.8-61.8	140	110	23			V72: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
430	187	2418	61.8-61.8	140	110	23			V73: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
435	188	2418	61.8-61.8	140	110	23			V74: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
440	189	2418	61.8-61.8	140	110	23			V75: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
445	190	2418	61.8-61.8	140	110	23			V76: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
450	191	2418	61.8-61.8	140	110	23			V77: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
455	192	2418	61.8-61.8	140	110	23			V78: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
460	193	2418	61.8-61.8	140	110	23			V79: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
465	194	2418	61.8-61.8	140	110	23			V80: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
470	195	2418	61.8-61.8	140	110	23			V81: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
475	196	2418	61.8-61.8	140	110	23			V82: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
480	197	2418	61.8-61.8	140	110	23			V83: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
485	198	2418	61.8-61.8	140	110	23			V84: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	
490	199	2418	61.8-61.8	140	110	23			V85: Tur-28 / Tr=2.5 R-bbs (65 mm x 130 mm vane)	
495	200	2418	61.8-61.8	140	110	23			V86: Tur-25 / Tr=5 R-bbs (65 mm x 130 mm vane)	

Date: 10/18/2018

Filename: 057_Construction Sequencing 1.dgn

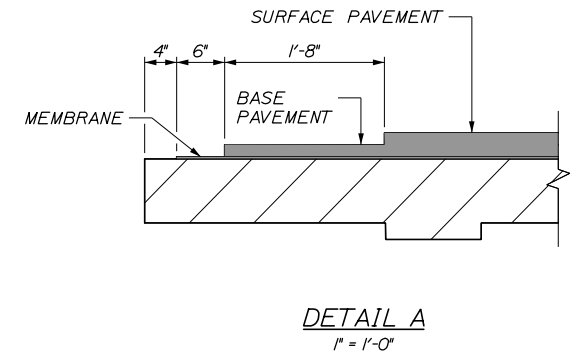


NOTES:

1. PROTECTIVE SHIELDING SHALL EXTEND LONGITUDINALLY BETWEEN PIER 1 AND PIER 2. THE WIDTH OF THIS SHIELDING SHALL BE AS SHOWN IN EACH PHASE.
2. THE APPROXIMATE SHIELDING QUANTITIES REPRESENT THE TOTAL QUANTITY OF SHIELDING REQUIRED TO COMPLETE THE WORK, INCLUDING INITIAL INSTALLATION, REMOVAL, AND RESETTING OF SHIELDING.
3. USE OF THRU-BOLTING WILL NOT BE PERMITTED.
4. STAGING, FALSEWORK, OR FORMS WITHIN THE RAILROAD ROW SHALL AT ALL TIMES MAINTAIN THE EXISTING VERTICAL CLEARANCE OF THE BRIDGE OVER THE RAILROAD. AT NO TIME SHALL A COMPONENT OF THE SHIELDING PROJECT BELOW THE GIRDER BOTTOM FLANGES.

APPROXIMATE SHIELDING QUANTITIES*			
	DEMOLITION	CONSTRUCTION	TOTAL
APPROX. WIDTH OF NEW SHIELDING INSTALLED (FT)**	65.4 FT	84.5 FT	149.9 FT
APPROX. AREA OF SHIELDING INSTALLED (SY)	1370 SY	1770 SY	3140 SY

* SEE NOTES 1 AND 2
 ** ACCOUNTS FOR PHASES 1 AND 2



Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

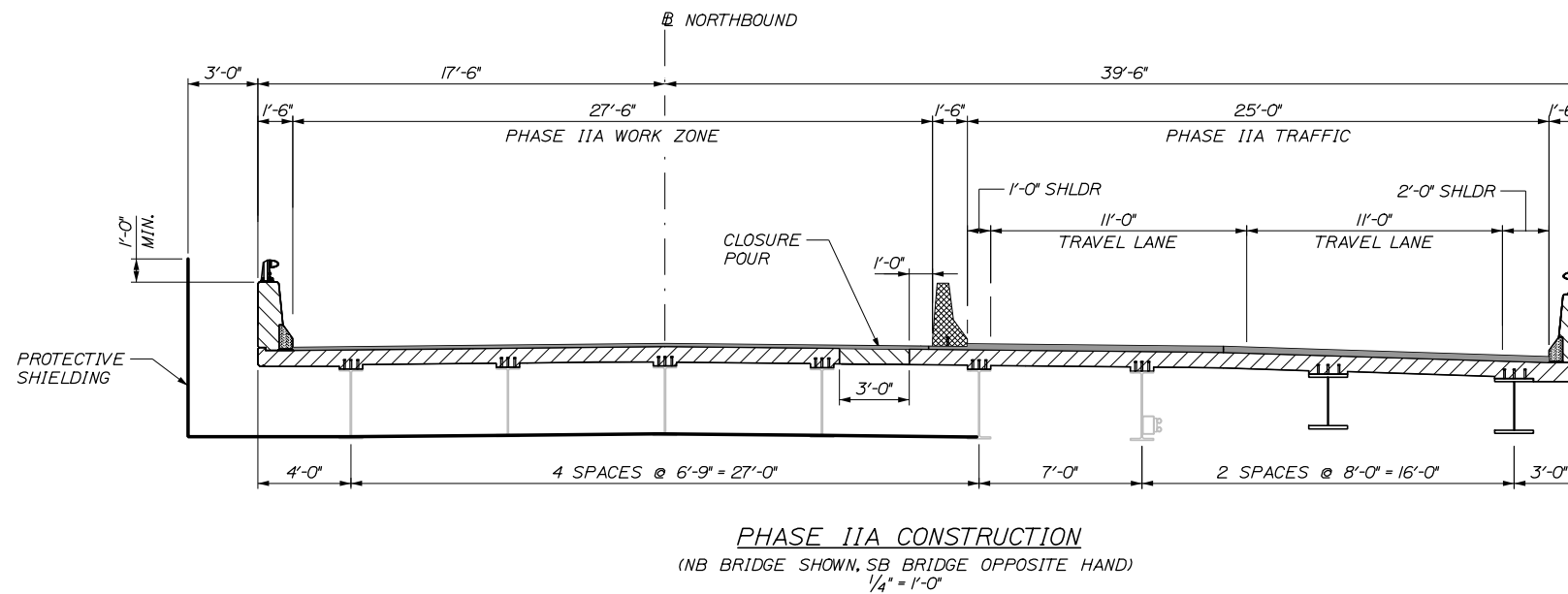
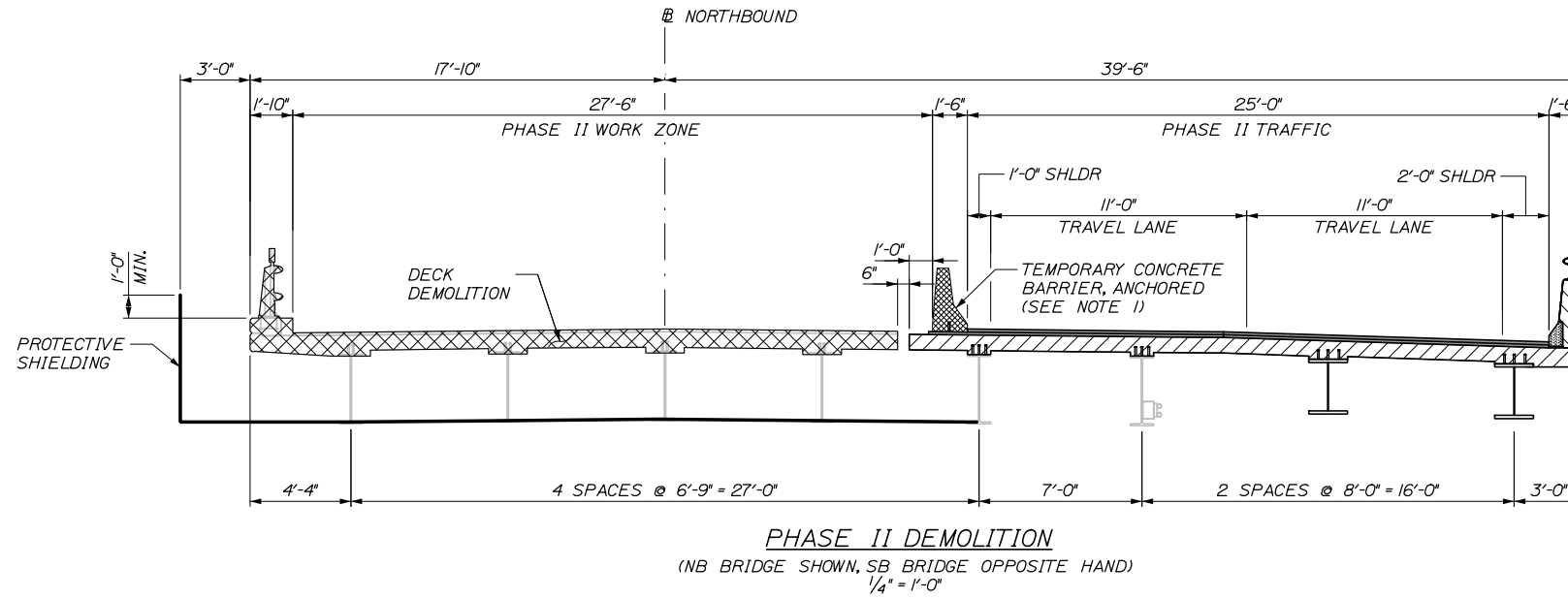
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 CONSTRUCTION SEQUENCE I

SHEET NUMBER: S-06
 CONTRACT: 2019.09
 57 OF 116

NOTES:

1. BASE PAVEMENT UNDER BARRIER SHALL BE REMOVED AND REPLACED DURING PHASE IIB TO FACILITATE MEMBRANE OVERLAP AND REPAIR OF HOLES IN DECK.



Date: 10/18/2018

Filename: 058_Construction Sequencing 2.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	EMC	10\18	Checked	HCH	10\18
	Drawn	PEB	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

THE GOLD STAR
MEMORIAL HIGHWAY

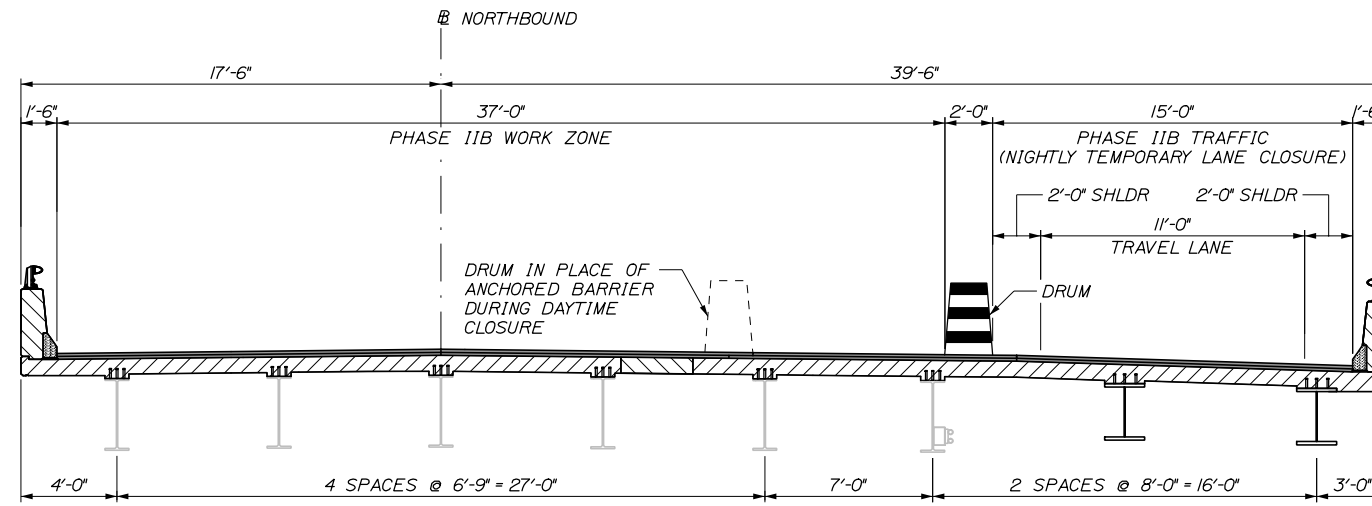
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
CONSTRUCTION SEQUENCE II

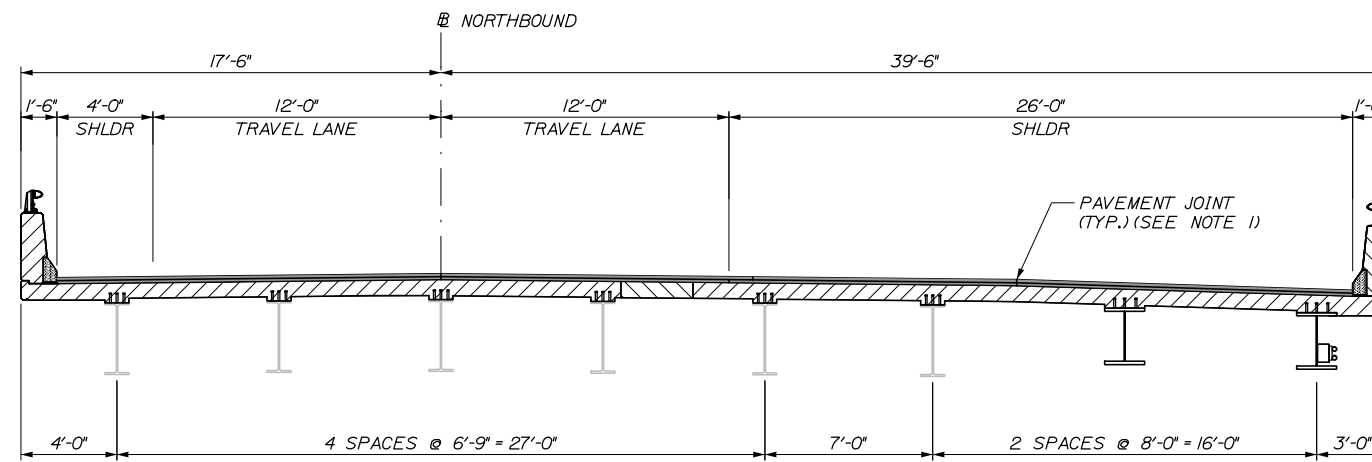
SHEET NUMBER: S-07
CONTRACT: 2019.09
58 OF 116

NOTES:

1. CONTRACTOR SHALL MAKE REASONABLE EFFORT TO LOCATE PAVED JOINTS AT LOCATIONS SHOWN.



PHASE IIB CONSTRUCTION
(NB BRIDGE SHOWN, SB BRIDGE OPPOSITE HAND)
1/4" = 1'-0"



FINAL PROPOSED CONDITION
(NB BRIDGE SHOWN, SB BRIDGE OPPOSITE HAND)
1/4" = 1'-0"

Date: 10/18/2018

Filename: 059_Construction Sequencing 3.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
CONSTRUCTION SEQUENCE III

SHEET NUMBER: S-08
CONTRACT: 2019.09
59 OF 116

Date:10/18/2018

ABUTMENT NOTES:

1. ABUTMENT REPAIR WORK SHALL INCLUDE: ABUTMENT SURFACE REPAIRS, EPOXY INJECTION CRACK REPAIR AND SEALING EXISTING CONSTRUCTION JOINTS.
2. WHERE ABUTMENT SURFACE REPAIRS ARE SPECIFIED THE WORK SHALL INCLUDE REMOVAL OF UNSOUND CONCRETE AND PLACEMENT AND CURING OF REPAIR MATERIALS. REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES" AND 518.51 "REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES".
3. WHERE EPOXY INJECTION CRACK REPAIR IS SPECIFIED THE WORK SHALL INCLUDE PRESSURE INJECTION OF CRACKS 1/8" OR MORE IN WIDTH. WORK SHALL BE PAID UNDER PAY ITEM 518.40, "EPOXY INJECTION CRACK REPAIR".
4. FOR APPROXIMATE LOCATIONS OF ABUTMENT REPAIRS, SEE SUBSTRUCTURE REPAIRS SOUTHBOUND ABUTMENTS AND SUBSTRUCTURE REPAIRS NORTHBOUND ABUTMENTS SHEETS. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
5. ALL EXCAVATION REQUIRED TO COMPLETE THE ABUTMENT REPAIRS WILL NOT BE MEASURED FOR PAYMENT SEPARATELY, BUT SHALL BE INCIDENTAL TO PAY ITEM 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES".
6. ELEVATIONS SHOWN WITH (+) ARE FOR CONTRACTOR REFERENCE AND ARE BASED ON AS-BUILT CONDITIONS WHICH MAY VARY FROM ACTUAL SITE CONDITIONS.

PIER NOTES:

1. PIER REPAIR WORK SHALL INCLUDE: PROVIDING ACCESS FOR PIER INSPECTION, PIER SURFACE REPAIRS AND EPOXY INJECTION CRACK REPAIR.
2. WHERE PIER SURFACE REPAIRS ARE SPECIFIED THE WORK SHALL INCLUDE REMOVAL OF UNSOUND CONCRETE AND PLACEMENT AND CURING OF REPAIR MATERIALS. REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 518.60, "REPAIR OF VERTICAL SURFACES < 8 INCHES", AND PAY ITEM 518.601, "REPAIR OF VERTICAL SURFACES < 8 INCHES".
3. WHERE EPOXY INJECTION CRACK REPAIR IS SPECIFIED THE WORK SHALL INCLUDE PRESSURE INJECTION OF CRACKS 1/8" OR MORE IN WIDTH. WORK SHALL BE PAID UNDER PAY ITEM 518.40, "EPOXY INJECTION CRACK REPAIR".
4. THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS ARE BASED ON A VISUAL INSPECTION COMPLETED IN MAY 2017.
5. FOR APPROXIMATE LOCATIONS OF REPAIR SEE SUBSTRUCTURE REPAIRS PIER 1, PIER 2 AND PIER 3 SHEETS. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION. THE RESIDENT SHALL COORDINATE DIRECTLY WITH THE CONTRACTOR'S DIVE TEAMS TO AGREE ON UNDERWATER REPAIR LIMITS.
6. IF PIER SURFACE PATCH REPAIRS ARE REQUIRED TO EXTEND MORE THAN 1/3 THE WIDTH OF THE COLUMN STEM THE WORK SHALL BE SEQUENCED SUCH THAT REMOVAL OF THE COLUMN CONCRETE IS LIMITED TO NO MORE THAN 1/3 OF THE COLUMN WIDTH AT ANY ONE TIME.
7. ELEVATIONS SHOWN WITH (+) ARE FOR CONTRACTOR REFERENCE AND ARE BASED ON AS-BUILT CONDITIONS WHICH MAY VARY FROM ACTUAL SITE CONDITIONS.

ABUTMENT AND PIER CONCRETE REPAIR PROCEDURE:

1. PRIOR TO THE START OF CONCRETE REPAIRS THE RESIDENT AND THE CONTRACTOR SHALL SOUND ALL ABUTMENT AND PIER SURFACES AND AGREE ON THE REPAIR LIMITS.
2. PERFORM 1" DEEP SAW CUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO THE DEPTH SPECIFIED IN SPECIAL PROVISION 518. IF THE REMOVAL LIMITS CHANGE DURING THE DEMOLITION PROCESS THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVALS.
4. PREPARE AND PATCH REPAIR AREAS. SEE SPECIFICATIONS FOR SURFACE PREPARATION, MATERIALS, PLACEMENT AND CURING REQUIREMENTS.
5. PERFORM GENERAL FINISHING.

DEMOLITION NOTES:

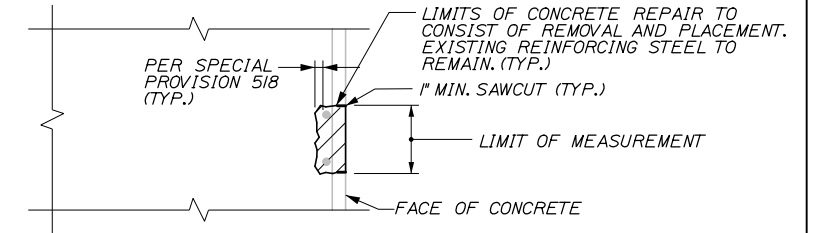
1. ALL LIMITS OF DEMOLITION SHALL BE SAWCUT 1" DEEP.
2. FOR AREAS OF ABUTMENT AND PIER REPAIRS, SEE SUBSTRUCTURE REPAIRS SHEETS.
3. DIMENSIONS OF EXISTING ABUTMENT AND PIER ELEMENTS ARE BASED ON AS-BUILT INFORMATION AND LIMITED FIELD SURVEYS.
4. ALL EXPOSED SURFACES SHALL BE COATED WITH A PROTECTIVE COATING FOR CONCRETE SURFACES AFTER RECONSTRUCTION IS COMPLETE AND MATERIALS HAVE CURED.
5. REMOVE CONCRETE AND REINFORCEMENT AS NOTED WITHIN DEMOLITION LIMITS.
6. EXISTING REINFORCEMENT TO REMAIN AT ABUTMENTS OR PIERS SHALL BE SANDBLASTED. THE RESIDENT SHALL INSPECT THE CONDITION OF THE REINFORCEMENT AND DETERMINE WHETHER INDIVIDUAL BARS ARE DETERIORATED BEYOND REUSE. IF DETERIORATION IS DEEMED EXCESSIVE BY THE RESIDENT, A REINFORCEMENT REHABILITATION DETAIL WILL BE PROVIDED BY THE ENGINEER. PAYMENT SHALL BE MADE UNDER 503.14 AND 503.15.

EPOXY INJECTION CRACK REPAIR:

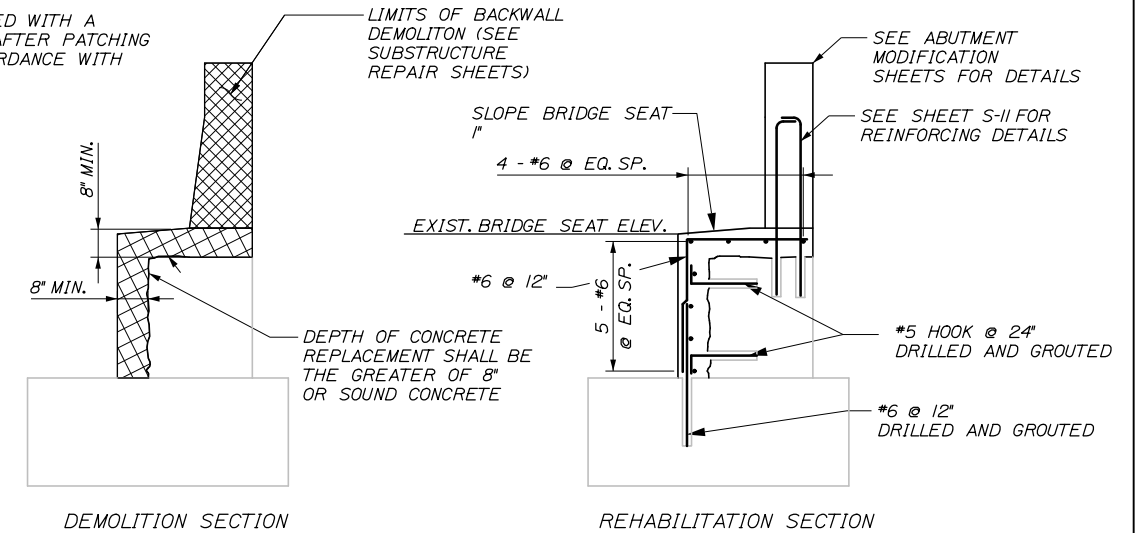
1. ALL CRACK REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH SPECIAL PROVISION 518.
2. PREPARE CONCRETE SURFACE AND CRACK AREA BY CLEANING SUBSTRATE WITH WIRE BRUSH TO REMOVE LAITANCE AND CONTAMINANTS. BLAST CLEAN THE CRACK AND CONCRETE SURFACE; DO NOT USE WATER.
3. SET INJECTION PORTS ALONG THE LENGTH OF THE CRACK USING A HIGH-MODULUS, LOW VISCOSITY EPOXY SUCH AS SIKADUR 35, SIKADUR 55, OR APPROVED EQUAL. ONCE SET SEAL PORTS AND CRACK WITH THE SAME EPOXY ADHESIVE. EPOXY SEAL AROUND PORTS SHALL BE ALLOWED TO CURE PRIOR TO CRACK INJECTION.

GENERAL FINISHING:

1. CONTRACTOR SHALL REMOVE GRAFFITI AND TECTYL COATING WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIAL PROVISION 518.
2. ALL EXPOSED SUBSTRUCTURE SURFACES SHALL BE COATED WITH A PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETE AND PATCH MATERIALS HAVE CURED IN ACCORDANCE WITH SPECIAL PROVISION 515.

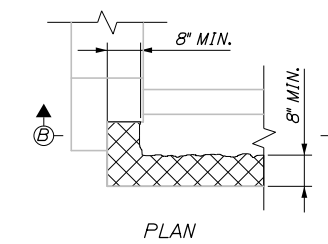


CONCRETE SURFACE REPAIR DETAIL
N.T.S.

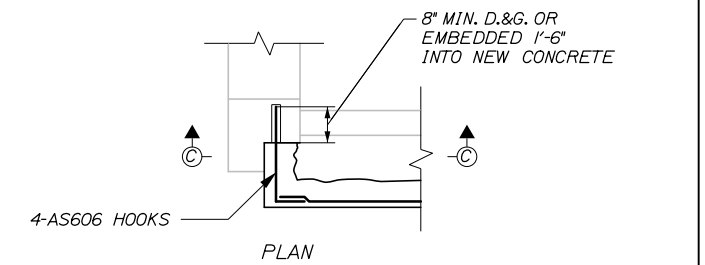


DEMOLITION SECTION

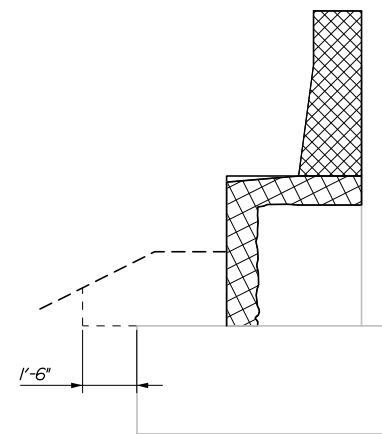
REHABILITATION SECTION



PLAN



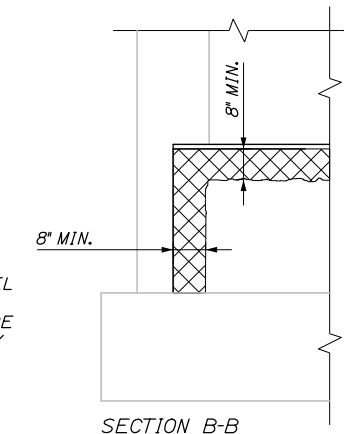
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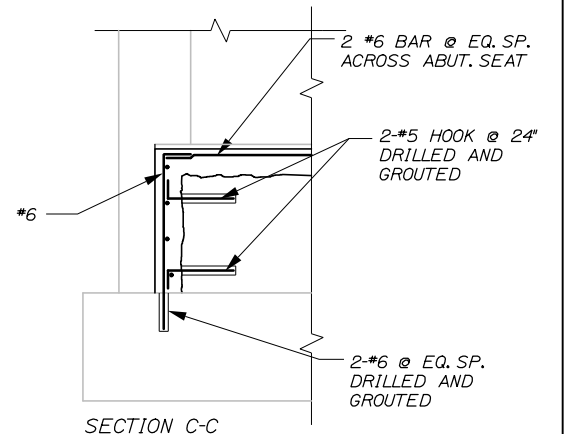
ABUTMENT EXCAVATION AND
BACKFILL SECTION

3/8" = 1'-0"

NOTE:
ALL REINFORCING STEEL SHALL BE EPOXY COATED. REINFORCING STEEL FOR ABUTMENT REFACING SHALL BE INCIDENTAL TO PAY ITEM 518.30



SECTION B-B
END OF SEAT DEMOLITION



SECTION C-C
END OF SEAT REHABILITATION

ABUTMENT REFACING DETAILS

3/8" = 1'-0"

Filename: 060_Substructure Notes.dgn

Scale:		AS NOTED		Designed by:		HNTB	
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	EMC 10\18	Checked	HCH 10\18
				Drawn	PEB 10\18	In Charge of	RAL 10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
CONCRETE REPAIR NOTES AND DETAILS






CONTRACT: 2019.09

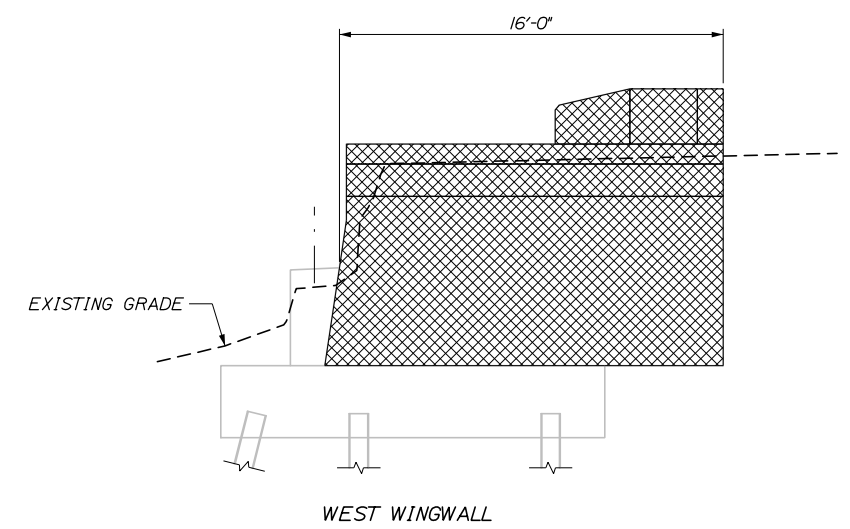
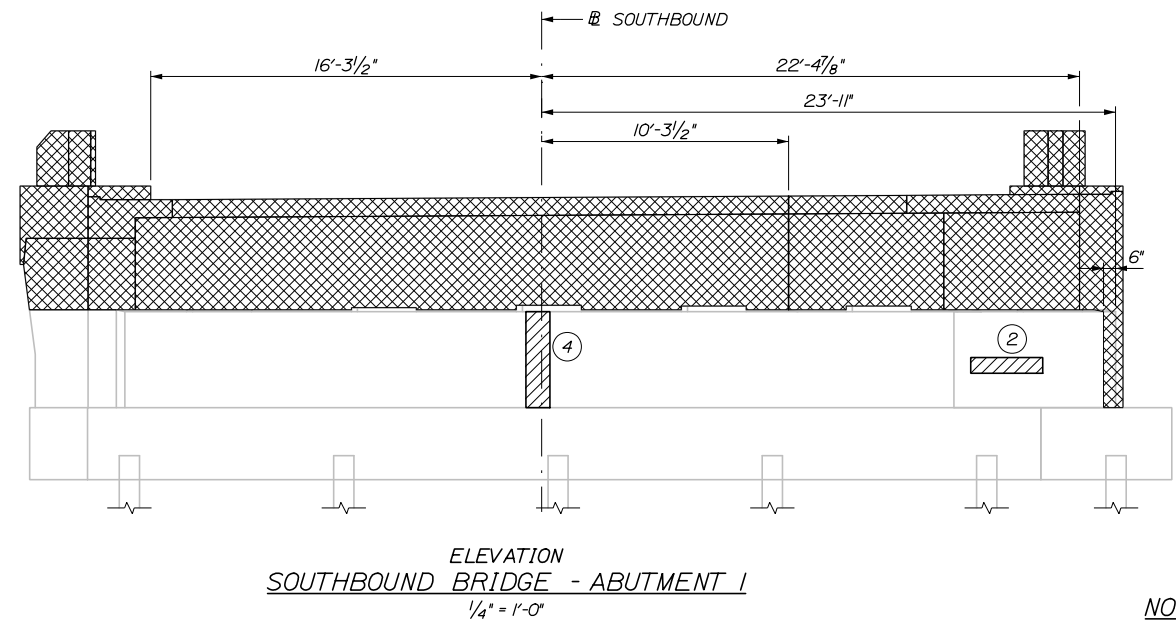
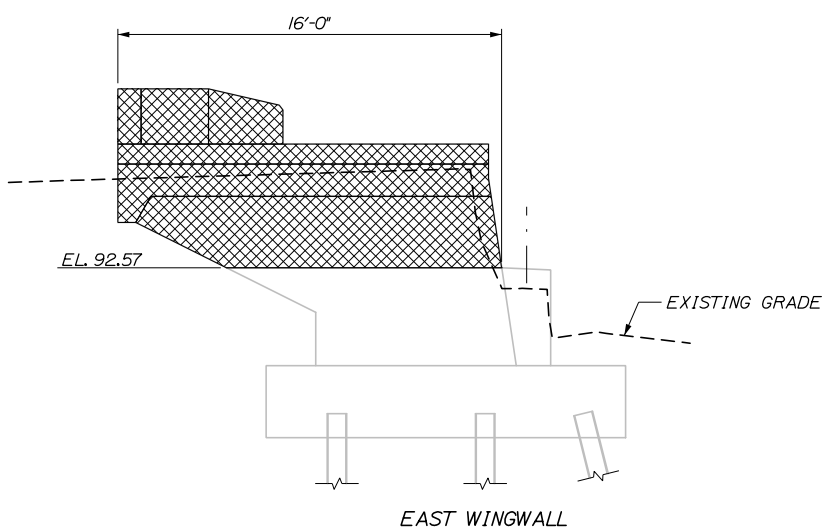
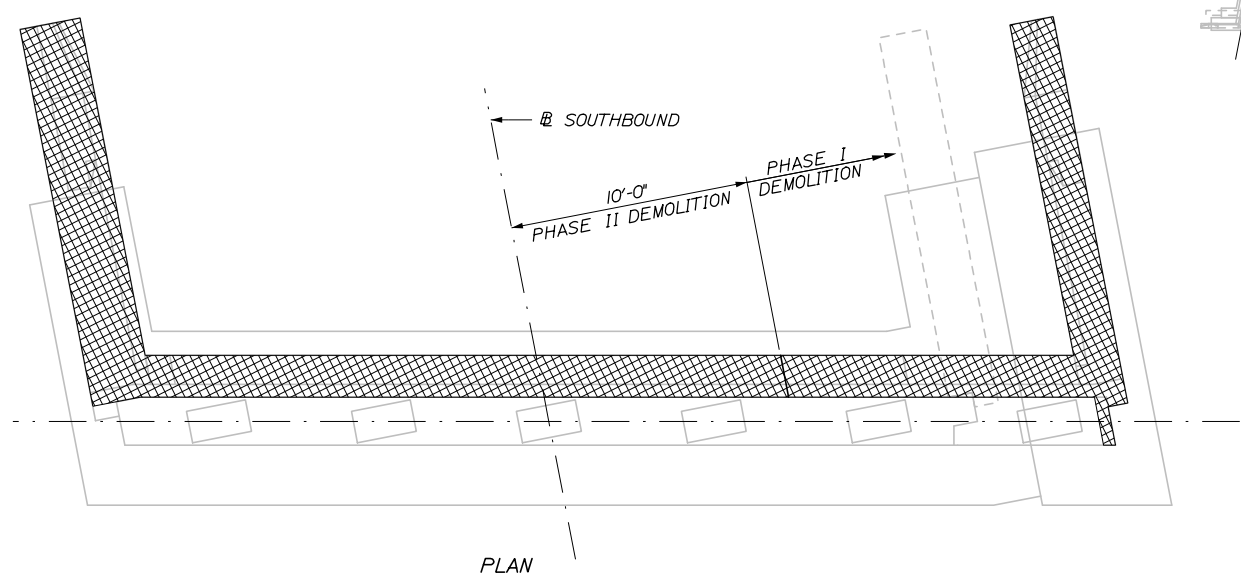
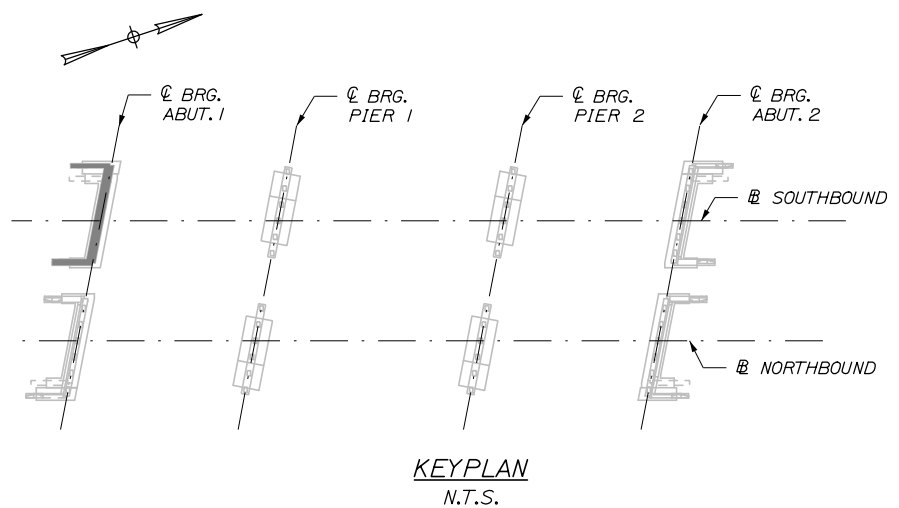
60 OF 116

REPAIR QUANTITIES

- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 5 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 11 S.F.*
- EPOXY INJECTION CRACK REPAIR 5 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



NOTE:
1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

Date: 10/18/2018
Filename: 061_Southbound Abutment 1 Repairs.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
SOUTHBOUND ABUTMENT 1

SHEET NUMBER: S-10
CONTRACT: 2019.09
61 OF 116

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES
< 8 INCHES 16 S.F.*






REPAIR OF VERTICAL SURFACES
< 8 INCHES 27 S.F.*

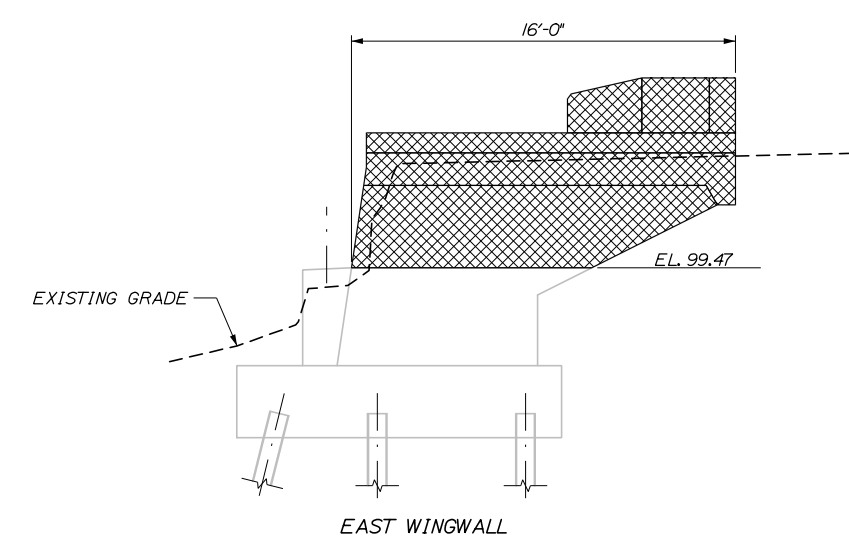
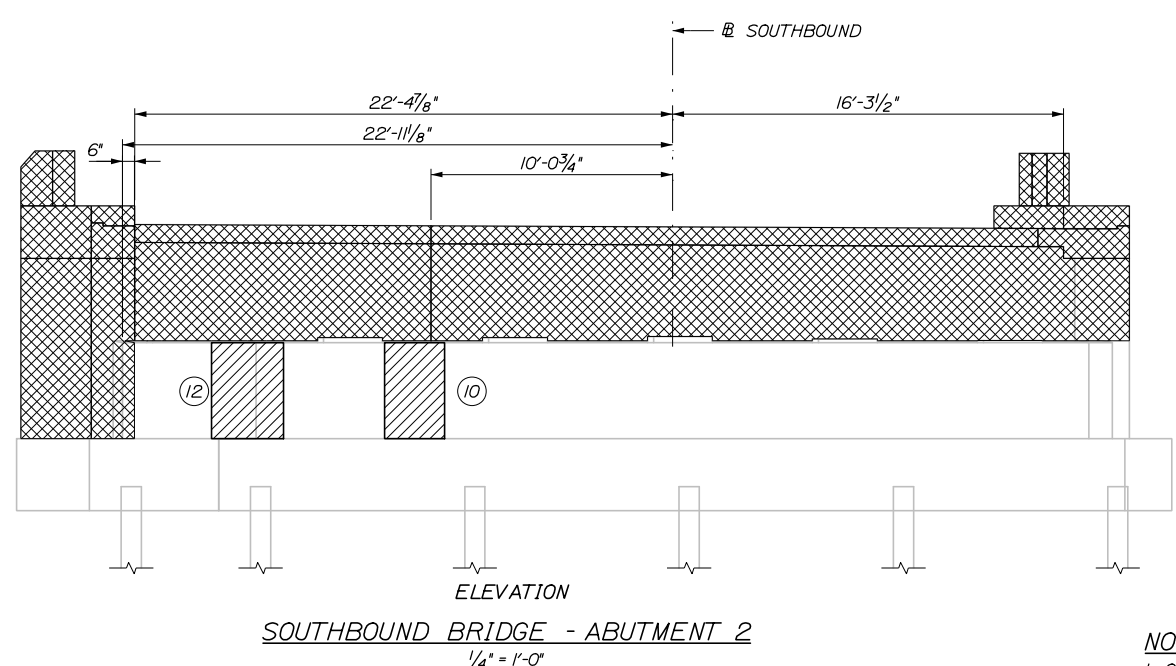
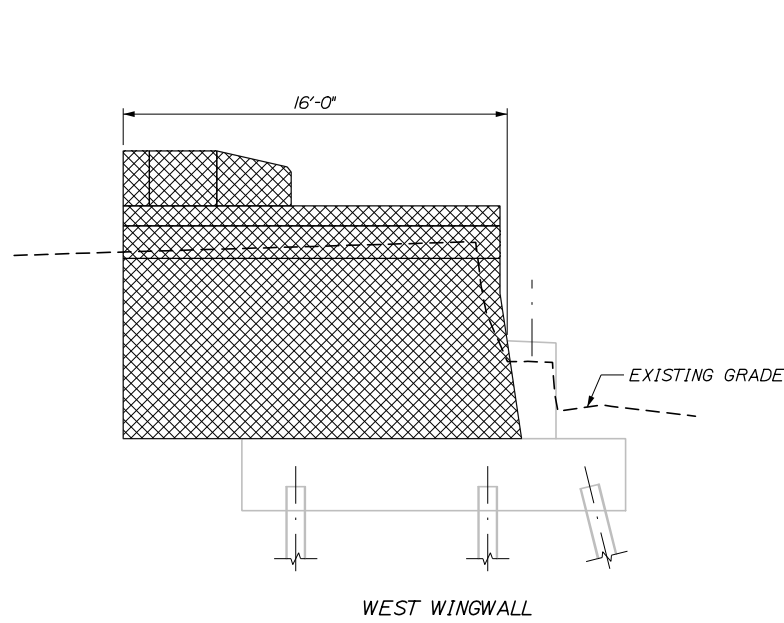
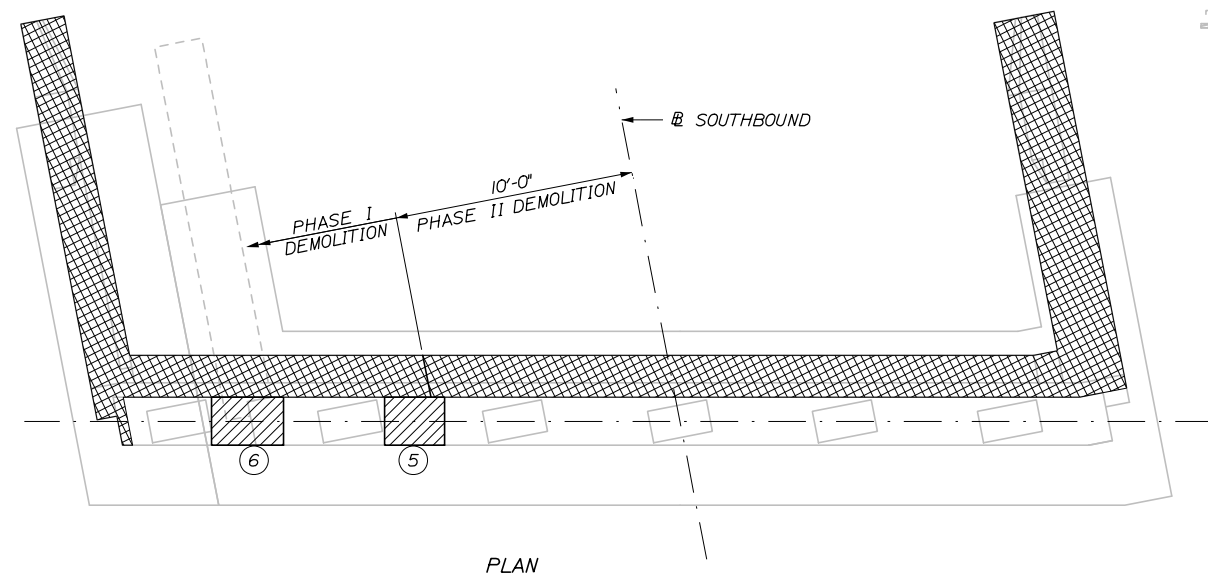
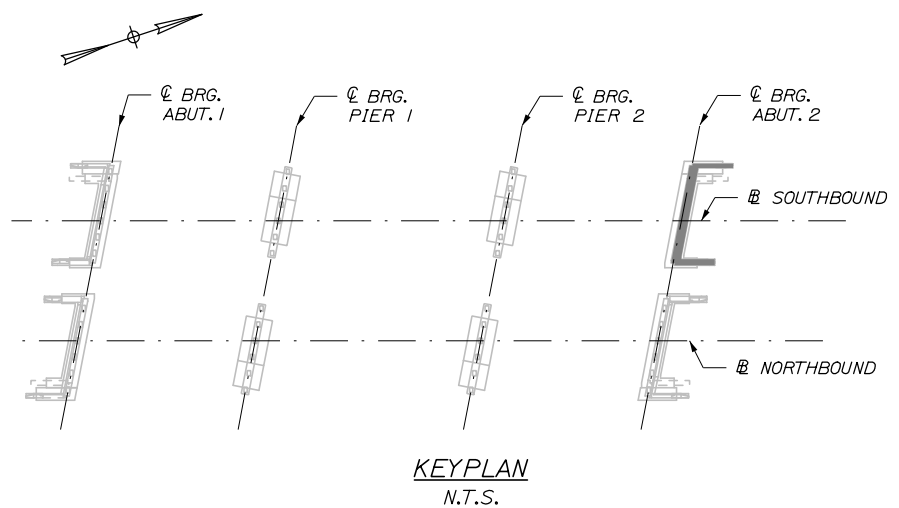
EPOXY INJECTION CRACK REPAIR 5 L.F.**

* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



NOTE:
1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

Date: 10/18/2018
Filename: 062_Southbound Abutment 2_Repairs.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

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340 County Road, Suite 6-C
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.






BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
SOUTHBOUND ABUTMENT 2

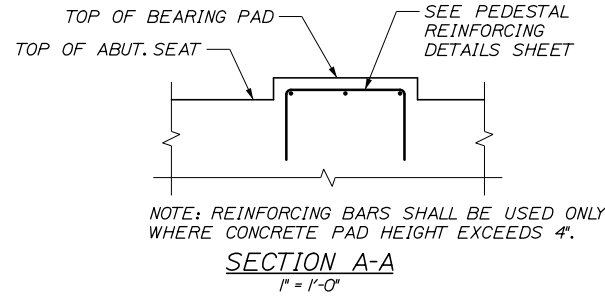
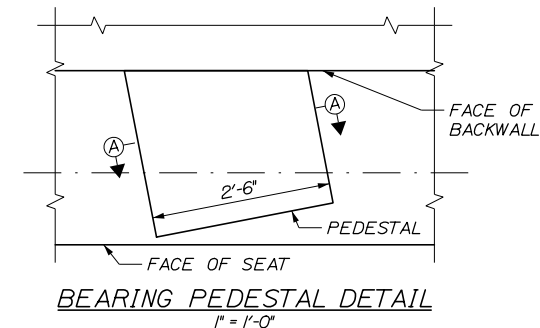
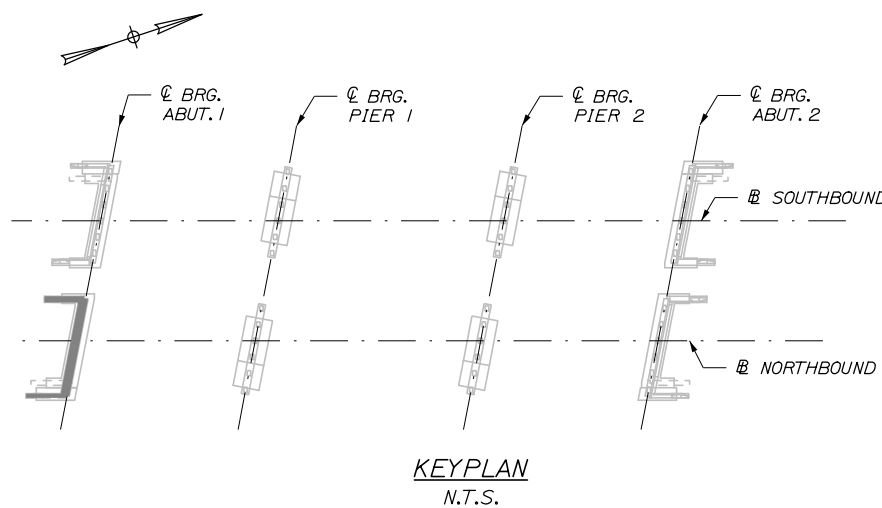
SHEET NUMBER: S-11
CONTRACT: 2019.09
62 OF 116

REPAIR QUANTITIES

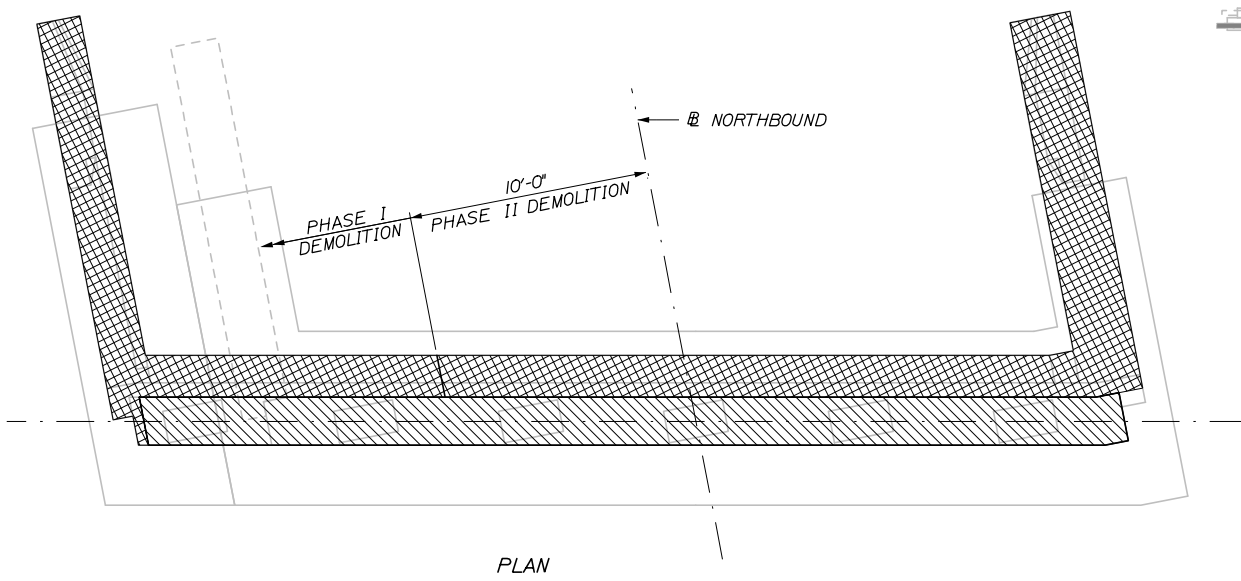
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 5 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 5 S.F.*
- EPOXY INJECTION CRACK REPAIR 5 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY. DOES NOT INCLUDE ABUTMENT 1 REFACING, WHICH IS CONSIDERED IN THE ITEM "ABUTMENT SEAT REFACING"
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

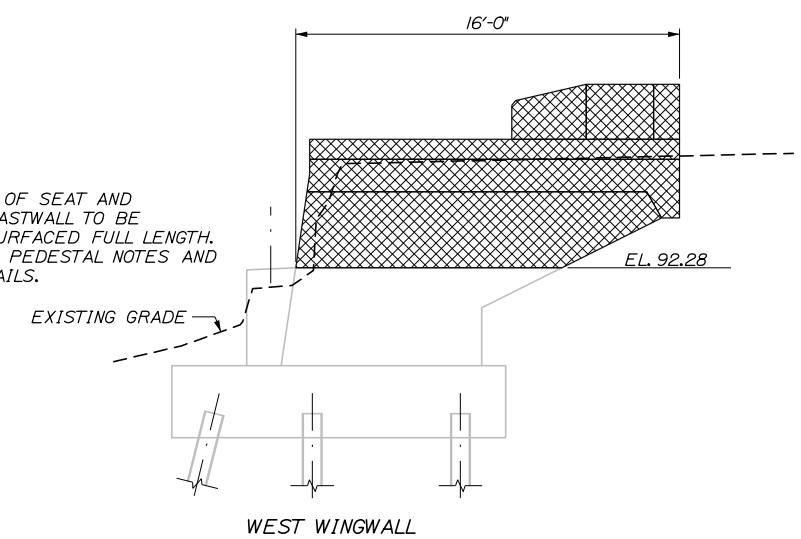
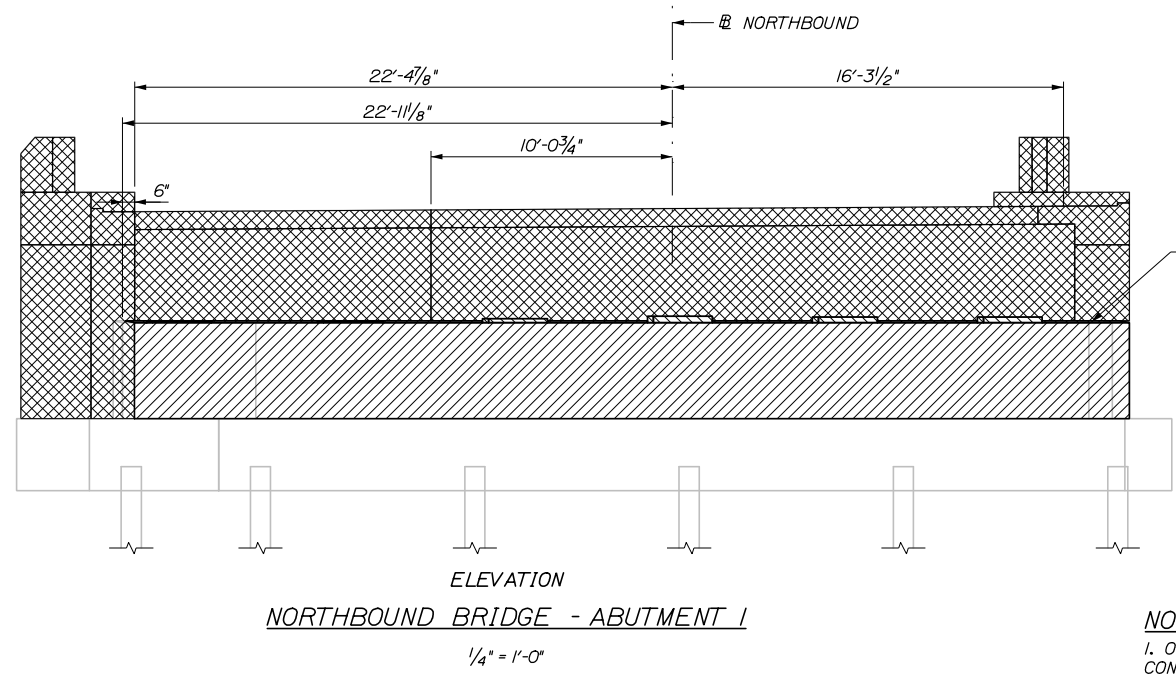
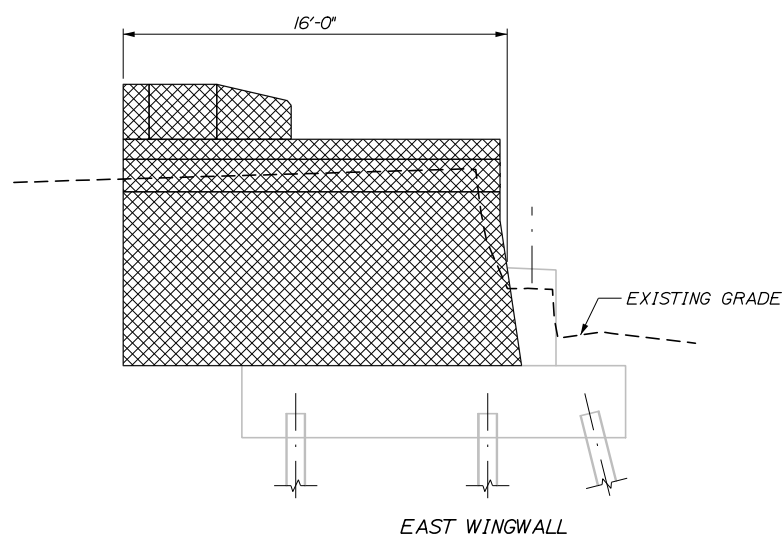
-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



NOTE: REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 4'.



- PEDESTAL RECONSTRUCTION NOTES:**
1. THE CONTRACTOR SHALL MEASURE THE EXISTING BEARING IN FIELD TO DETERMINE PEDESTAL HEIGHT.
 2. REINFORCING SHALL BE INCIDENTAL TO ITEM 518.30 "ABUTMENT REFACING".
 3. JACKING REQUIRED FOR PEDESTAL RECONSTRUCTION SHALL BE PAID UNDER ITEM 524.301 "TEMPORARY STRUCTURAL SUPPORT - JACKING".



NOTE:
1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

Date: 10/18/2018
Filename: 063_Northbound Abutment 1 Repairs.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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Westbrook, ME 04092
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.






BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
NORTHBOUND ABUTMENT 1

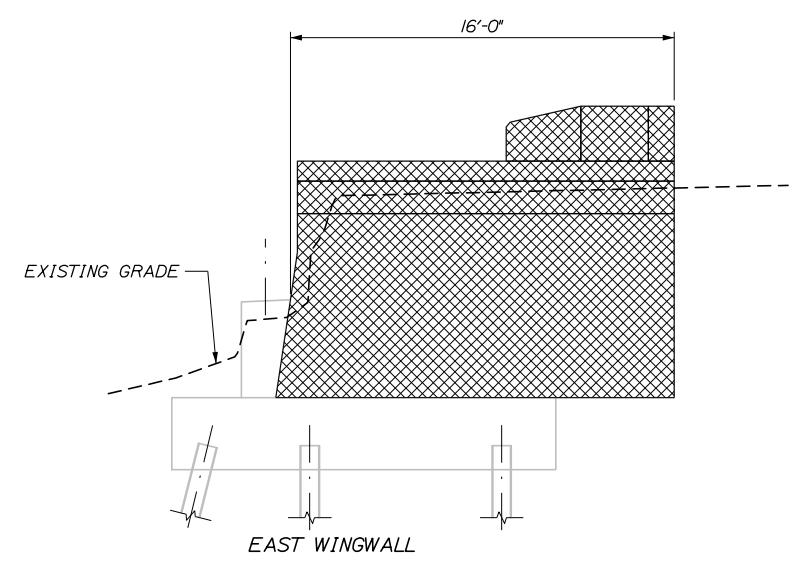
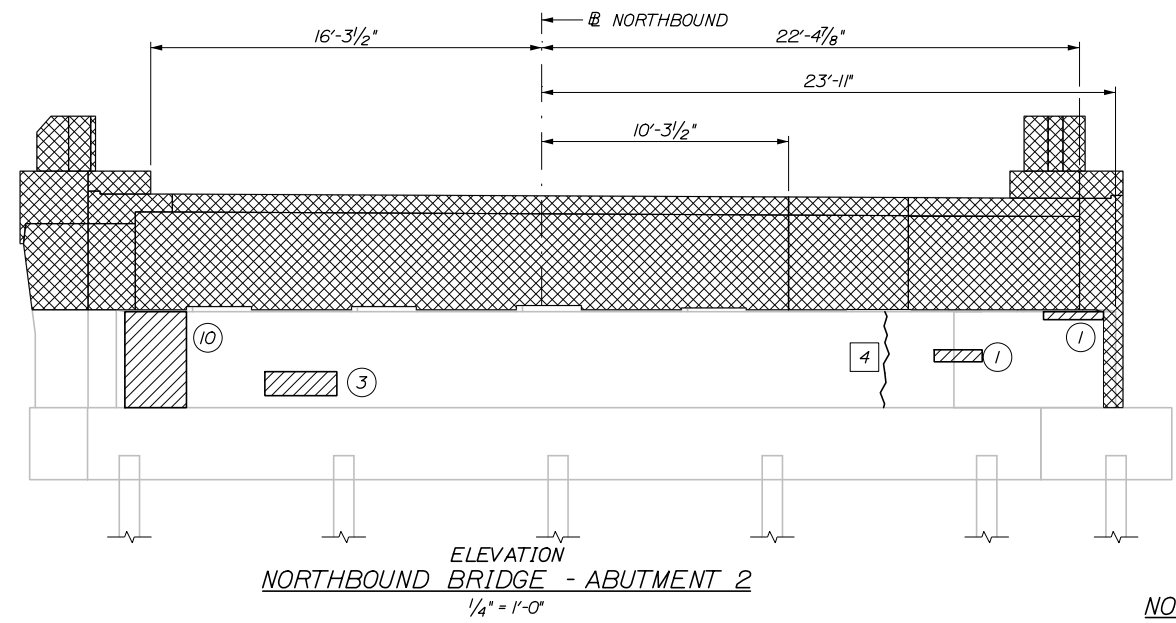
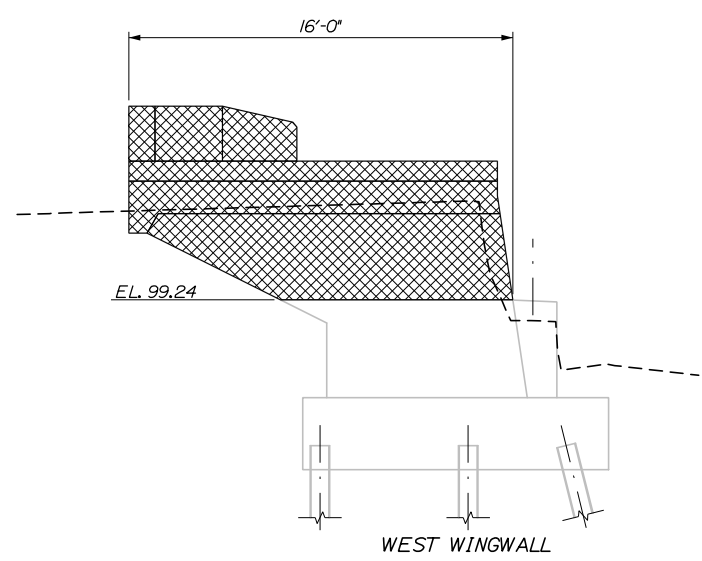
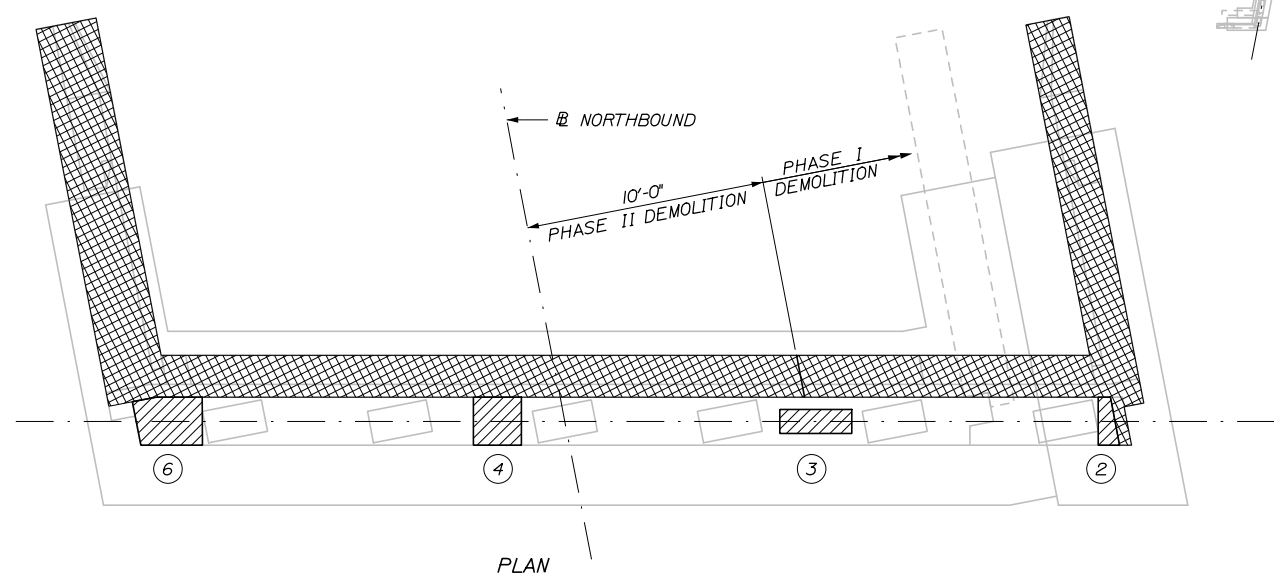
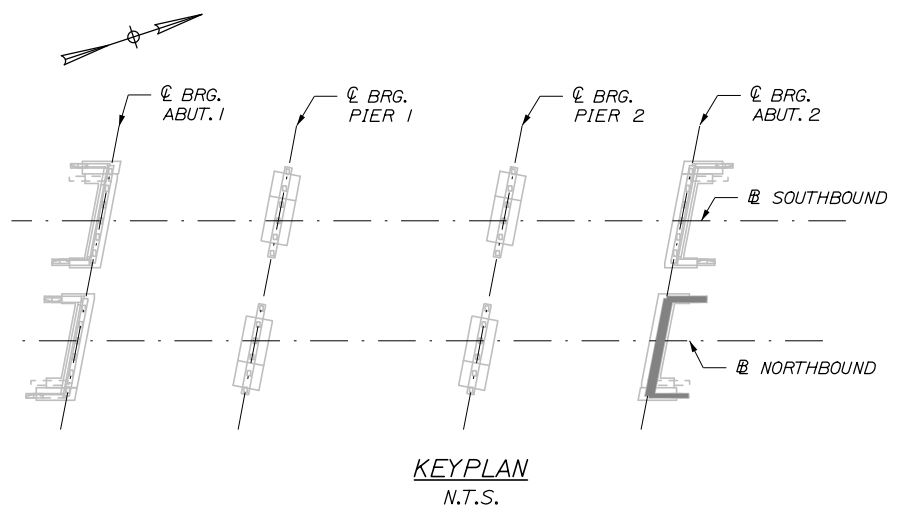
SHEET NUMBER: S-12
CONTRACT: 2019.09
63 OF 116

REPAIR QUANTITIES

- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 20 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 20 S.F.*
- EPOXY INJECTION CRACK REPAIR 9 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

-  LIMIT OF DEMOLITION
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR



NOTE:
1. ONLY ABUTMENT REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

Date: 10/18/2018
Filename: 064_Northbound Abutment 2_Repairs.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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TEL (207) 774-5155
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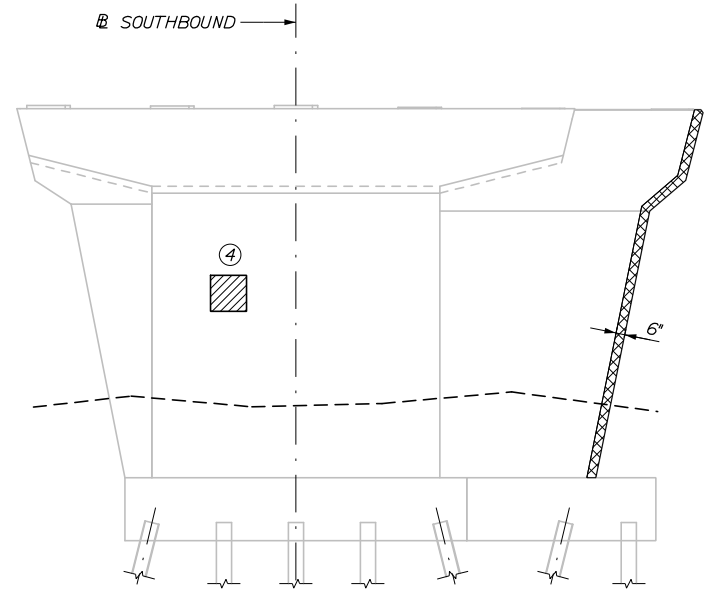
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

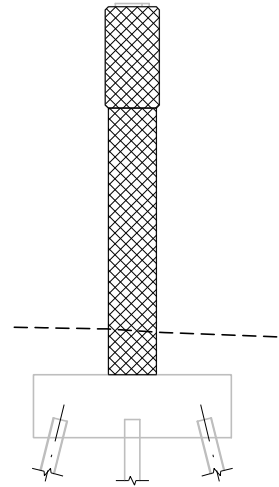
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
NORTHBOUND ABUTMENT 2

SHEET NUMBER: S-13
CONTRACT: 2019.09
64 OF 116

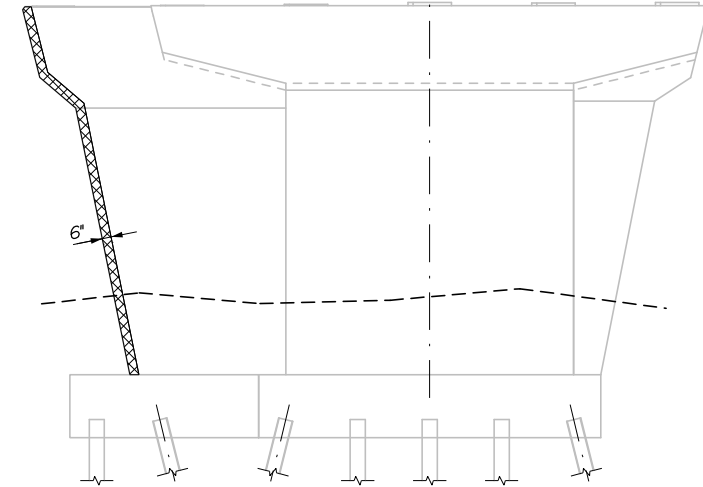
Date: 10/18/2018



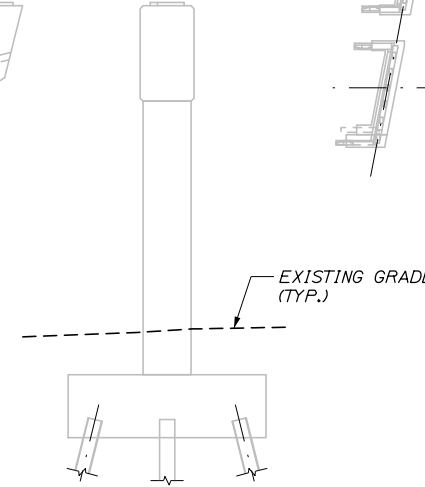
ELEVATION A



ELEVATION B



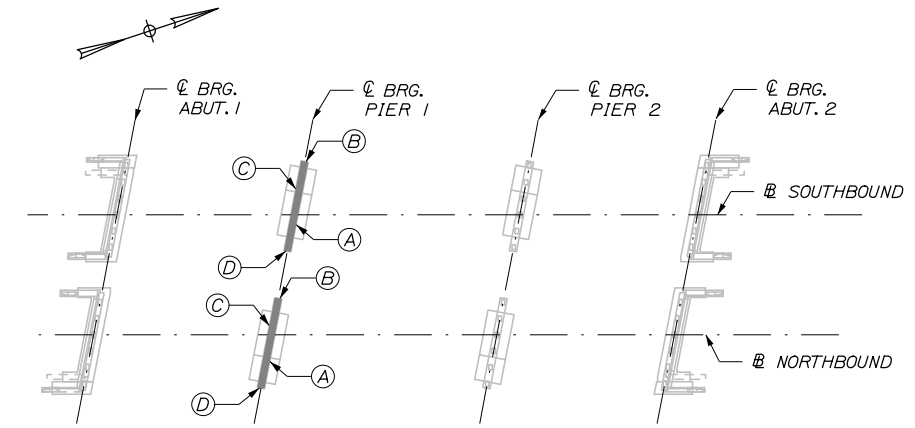
ELEVATION C



ELEVATION D



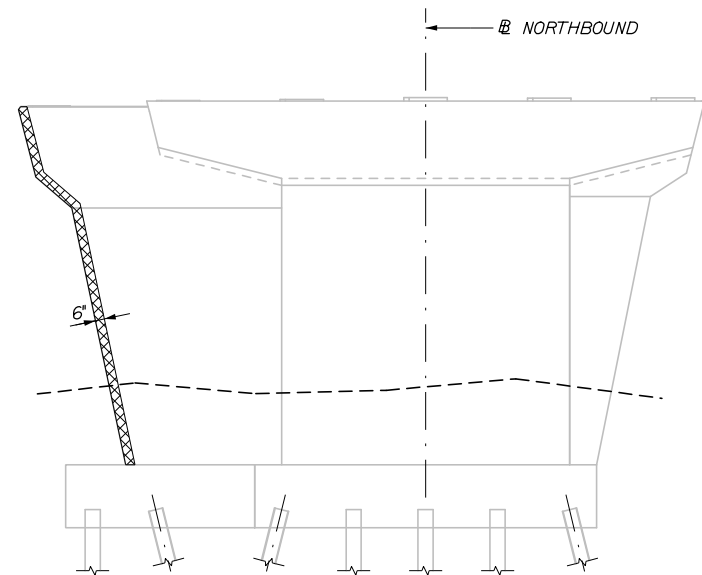
PLAN



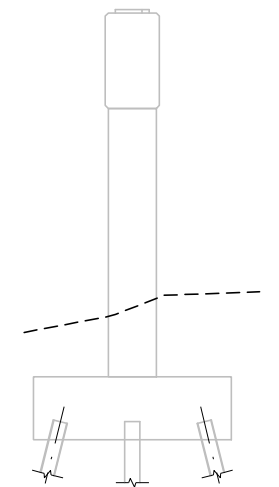
KEYPLAN
N.T.S.

SOUTHBOUND BRIDGE - PIER 1

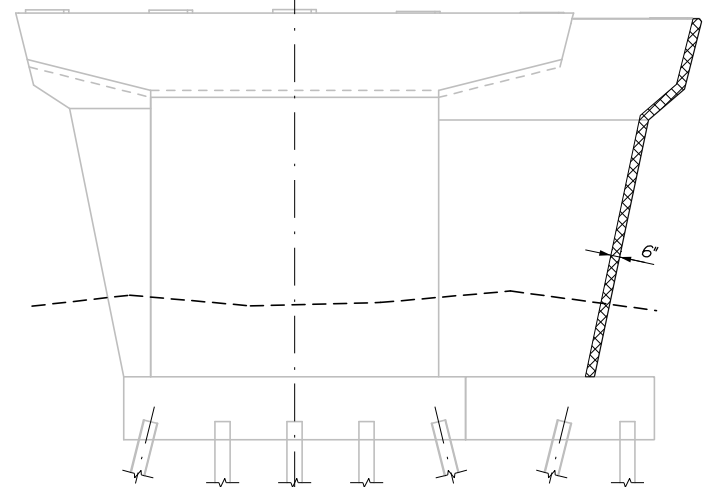
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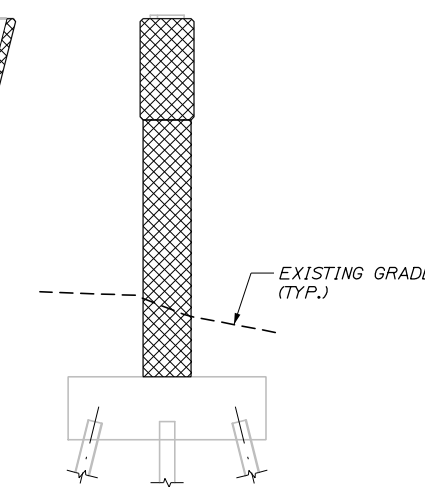
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D



PLAN

NORTHBOUND BRIDGE - PIER 1

SCALE: 3/16"=1'-0"

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES < 8 INCHES	5 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES	9 S.F.*
EPOXY INJECTION CRACK REPAIR	5 L.F.**

* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

2. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES, SEE CONCRETE REPAIRS NOTES AND DETAILS SHEET.

Filename: 065_Pier 1 Repairs.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C
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TEL (207) 774-5155
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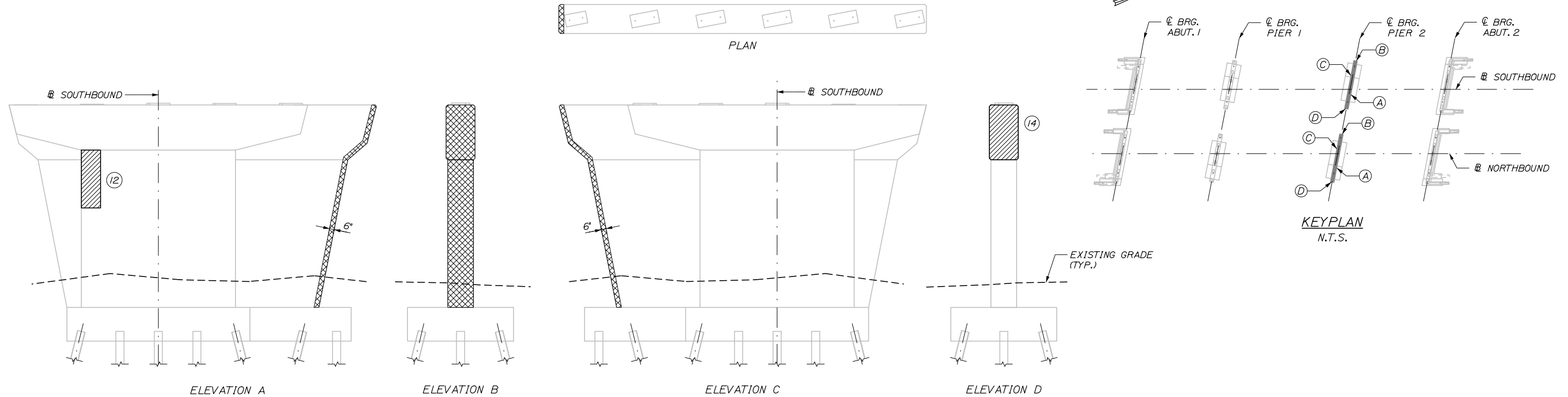
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUBSTRUCTURE REPAIRS
PIER 1

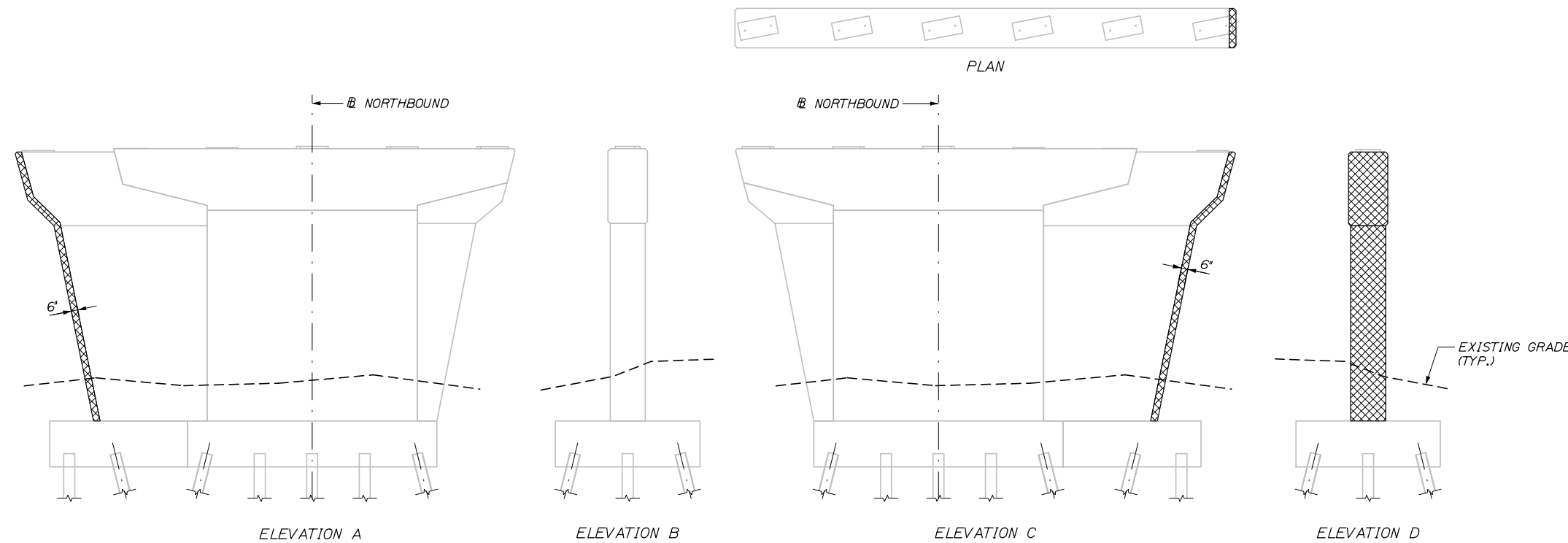
SHEET NUMBER: S-14
CONTRACT: 2019.09
65 OF 116

Date: 10/18/2018



SOUTHBOUND BRIDGE - PIER 2

SCALE: 3/16"=1'-0"



NORTHBOUND BRIDGE - PIER 2

SCALE: 3/16"=1'-0"

REPAIR QUANTITIES

REPAIR OF UPWARD FACING SURFACES < 8 INCHES	5 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES	31 S.F.*
EPOXY INJECTION CRACK REPAIR	5 L.F.**

* INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.

2. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES, SEE CONCRETE REPAIRS NOTES AND DETAILS SHEET.

Filename: 066_Pier 2_Repairs.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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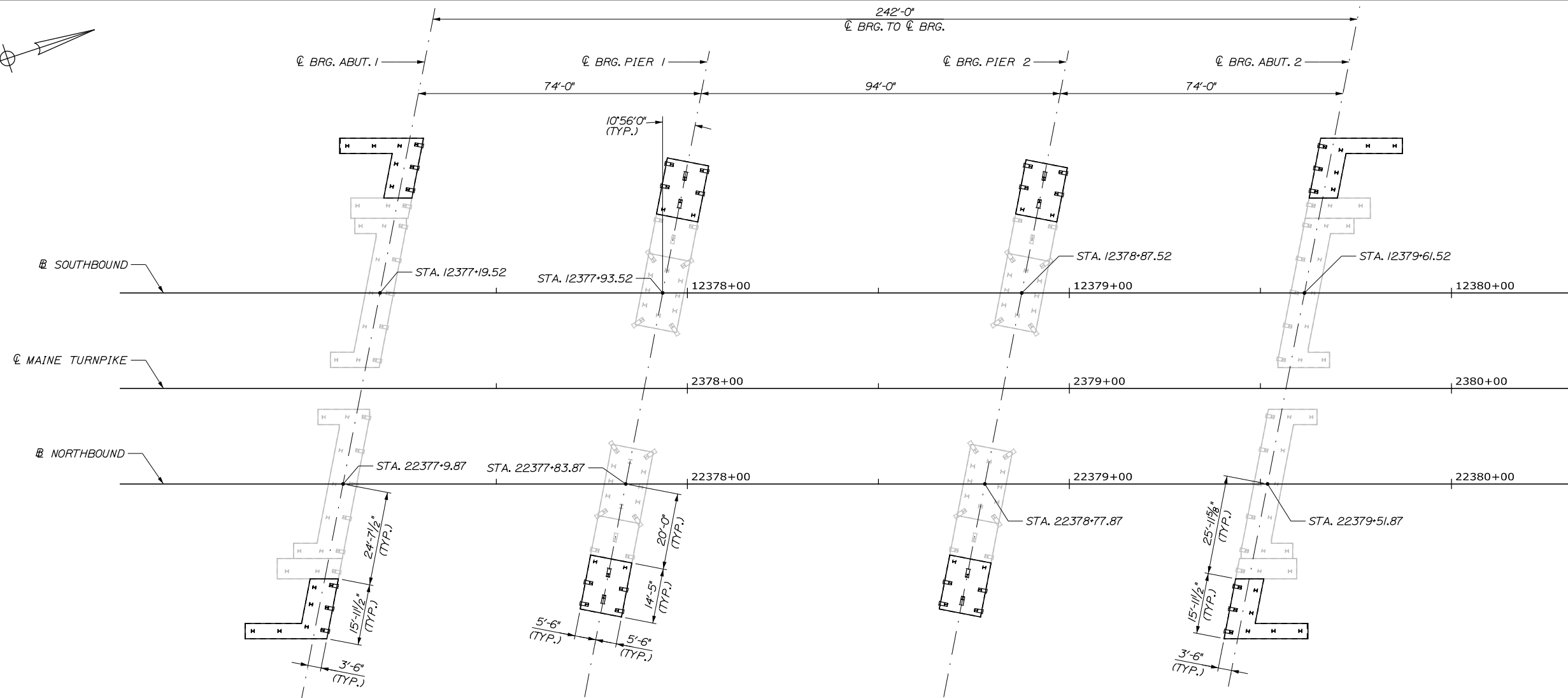
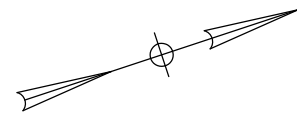
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 SUBSTRUCTURE REPAIRS
 PIER 2

SHEET NUMBER: S-15
 CONTRACT: 2019.09
 66 OF 116

Date: 10/18/2018



FOUNDATION PLAN

1/16" = 1'-0"

PILE NOTES:

1. PILES MARKED THUS , BATTER SHALL BE 3" PER FOOT (1H:4V) AT THE ABUTMENTS AND 2" PER FOOT (1H:6V) AT THE PIERS IN THE DIRECTION SHOWN.
2. THE CONTRACTOR SHALL PERFORM AND SUBMIT A WAVE EQUATION ANALYSIS FOR REVIEW AND ACCEPTANCE BY THE RESIDENT. THE MAXIMUM ALLOWABLE DRIVING STRESS IS 0.90 TIMES FY. THE SUBMITTAL ANALYSES SHALL INCLUDE THE PROPOSED STOPPING CRITERIA BASED ON THE WAVE EQUATION ANALYSIS AND THE PROPOSED DRIVING SYSTEM. THE STOPPING CRITERIA SHALL INCLUDE THE BLOWS PER INCH AND THE NUMBER OF 1-IN. INTERVALS AT WHICH PILE INSTALLATION MAY BE TERMINATED. THE COST OF PERFORMING THE WAVE EQUATION ANALYSIS WILL BE CONSIDERED INCIDENTAL TO PAY ITEM 501.92.
3. THE CONTRACTOR SHALL PERFORM 8 DYNAMIC LOAD TESTS, ONE AT EACH ABUTMENT AND ONE AT EACH PIER, TO CONFIRM THE NOMINAL DRIVING RESISTANCE OF THE PILES. THE DYNAMIC TEST SHALL BE PERFORMED ON THE FIRST PRODUCTION PILE DRIVEN AT EACH SUBSTRUCTURE. THE FIRST PRODUCTION PILE SHALL BE A PLUMB PILE.
4. ESTIMATED PILE LENGTHS INCLUDE 5 FEET PER PILE AS CONTINGENCY TO THE LENGTHS OF PILES REQUIRED.
5. ALL PILES SHALL BE EQUIPPED WITH A PILE TIP IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 501.048, PREFABRICATED PILE TIPS.

PILE DATA						
LOCATION	PILE SIZE	NUMBER OF PILES	AXIAL COMPRESSION DEMAND (KIPS)	ESTIMATED PILE TIP ELEVATION	ESTIMATED PILE LENGTH (FT)	NOMINAL DRIVING RESISTANCE (KIPS)
			FACTORED			
ABUTMENT 1	HP10x57	16	289	25	67	550
PIER 1	HP12x63	16	247	38	41	380
PIER 2	HP12x63	16	247	49	32	380
ABUTMENT 2	HP10x57	16	125	57	42	195

Filename: 067_Foundation Plan 1.dgn

Scale:		AS NOTED		Designed by:			
				HNTB			
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	EMC 10\18	Checked	HCH 10\18
				Drawn	PEB 10\18	In Charge of	RAL 10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

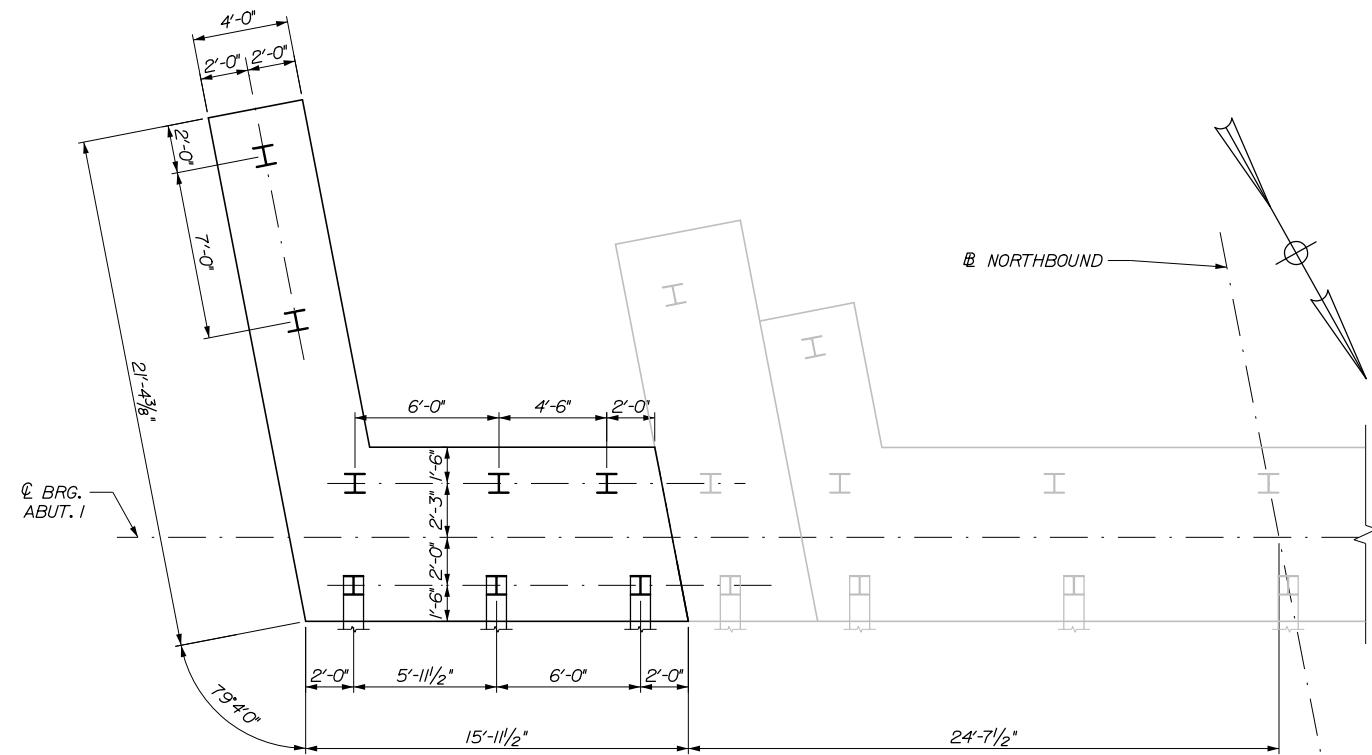
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

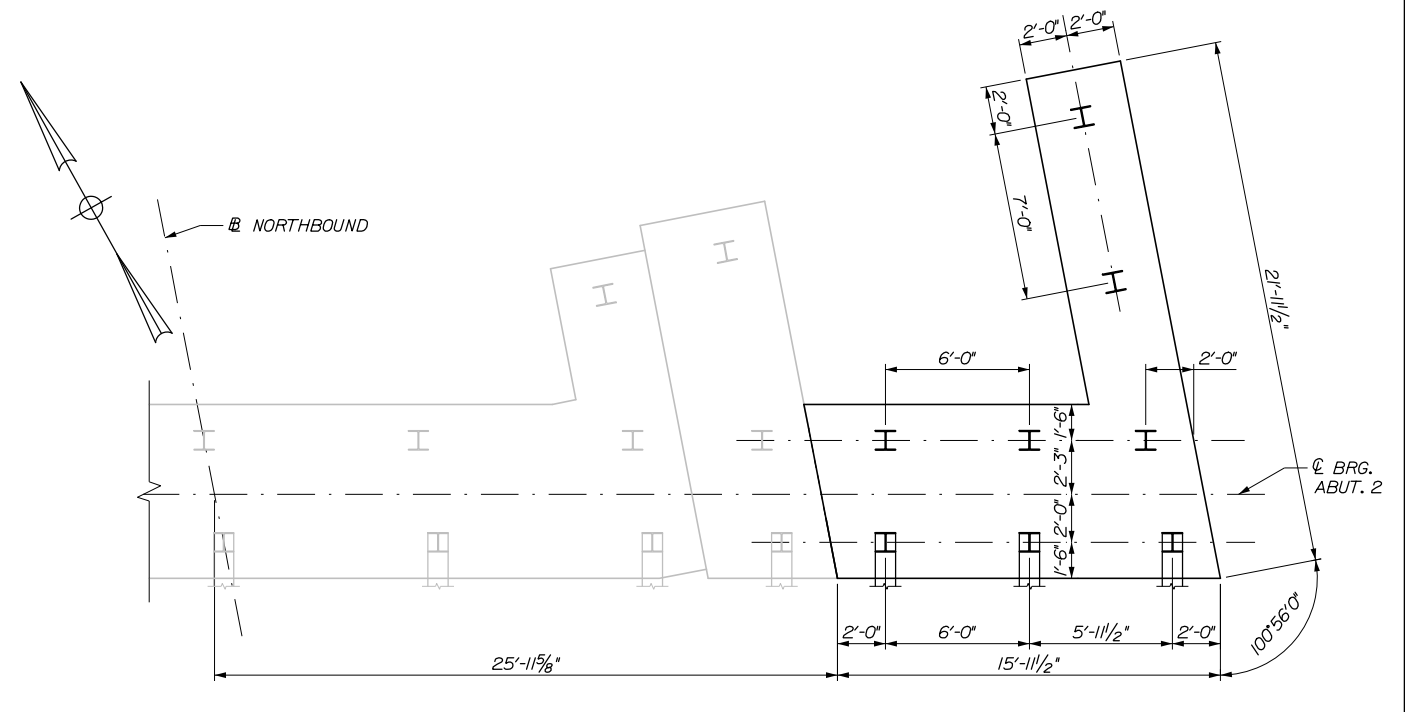
FOUNDATION PLAN I

SHEET NUMBER: S-16
CONTRACT: 2019.09
9 OF 116

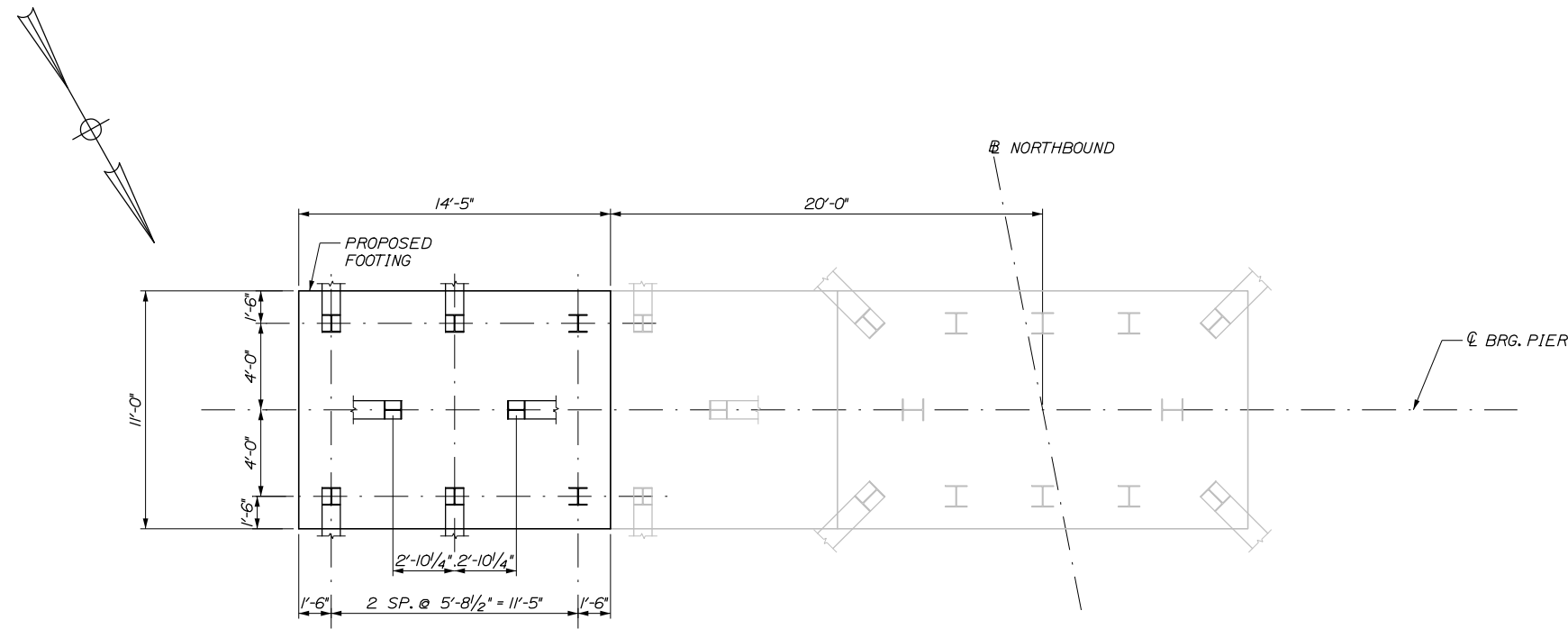
Date: 10/18/2018



PARTIAL ABUTMENT FOOTING PLAN
 (NB ABUTMENT 1 SHOWN, SB ABUTMENT 2 SIMILAR)
 1/4" = 1'-0"



PARTIAL ABUTMENT FOOTING PLAN
 (NB ABUTMENT 2 SHOWN, SB ABUTMENT 1 SIMILAR)
 1/4" = 1'-0"



PIER FOOTING PLAN
 (NB BRIDGE SHOWN, SB BRIDGE SIM. OPP. HAND)
 1/4" = 1'-0"

Filename: 068_Foundation Plan 2.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
	EMC	10\18	
	Checked	HCH	10\18
	By	Date	
	Drawn	PEB	10\18
	In Charge of	RAL	10\18

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**MAINE
TURNPIKE**

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 FOUNDATION PLAN II

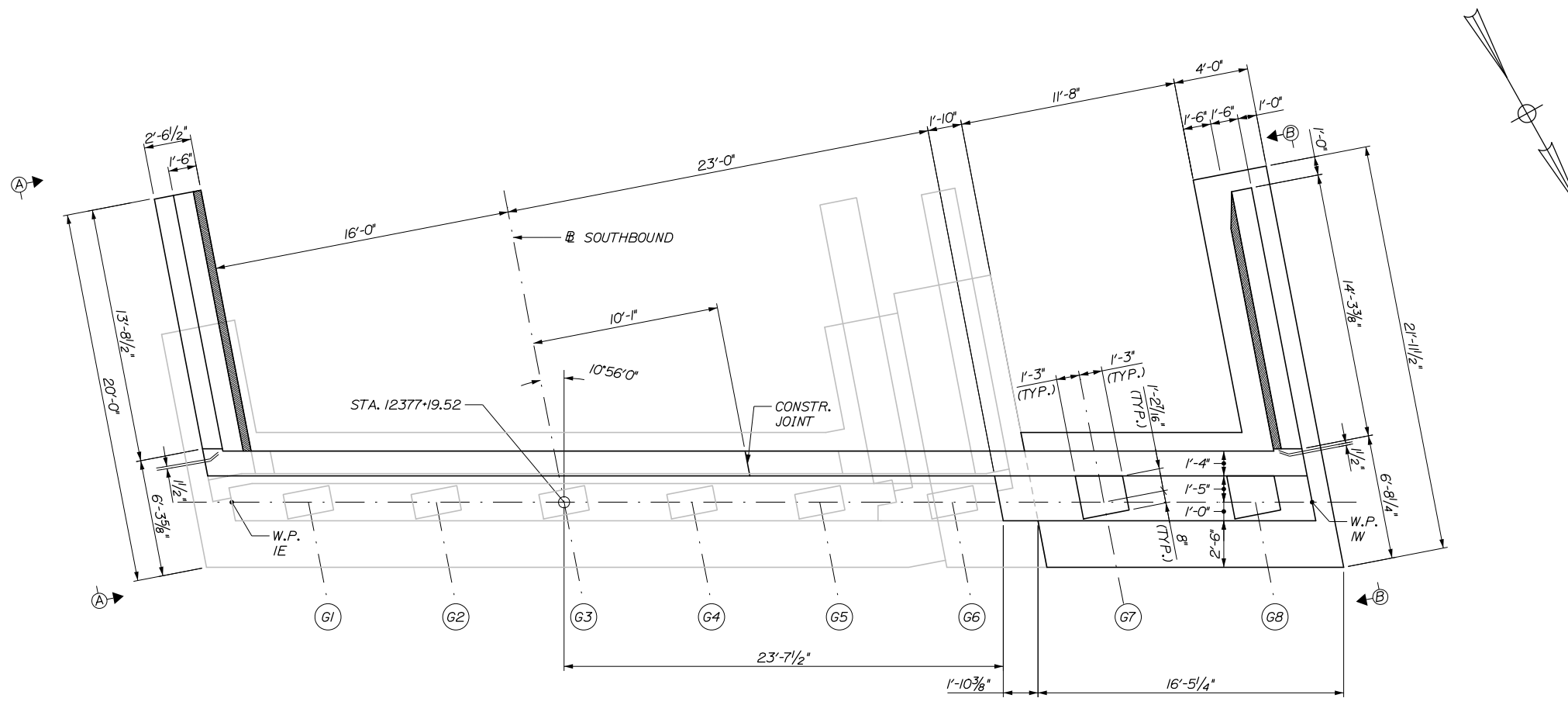
SHEET NUMBER: S-17
 CONTRACT: 2019.09
 68 OF 116

Date: 10/18/2018

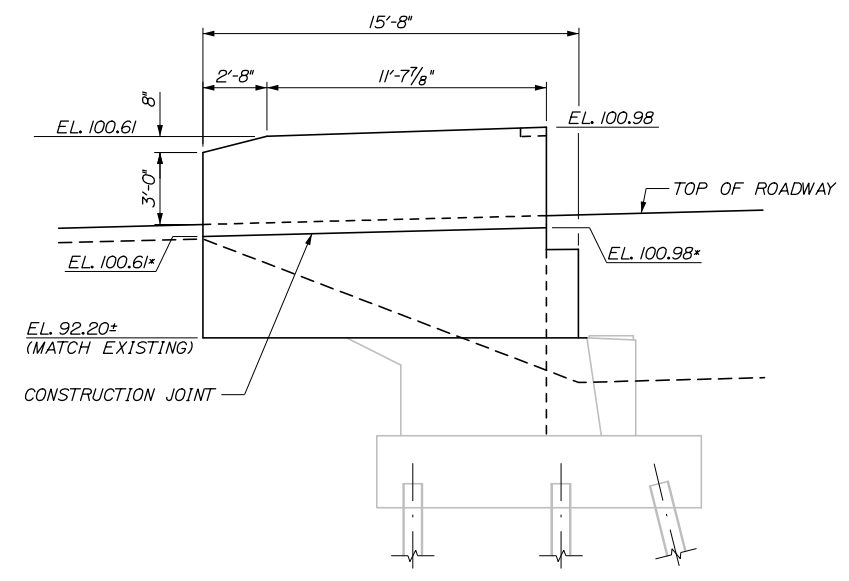
Filename: 069_Southbound Abutment 1 Plan and Elevation.dgn

WORKING POINT LOCATIONS - NORTHBOUND	
W.P. 1E	STA. 12377+19.52 17'-6" LT
W.P. 1W	STA. 12377+19.52 39'-6" RT
W.P. 2E	STA. 12379+61.52 17'-6" LT
W.P. 2W	STA. 12379+61.52 39'-6" RT

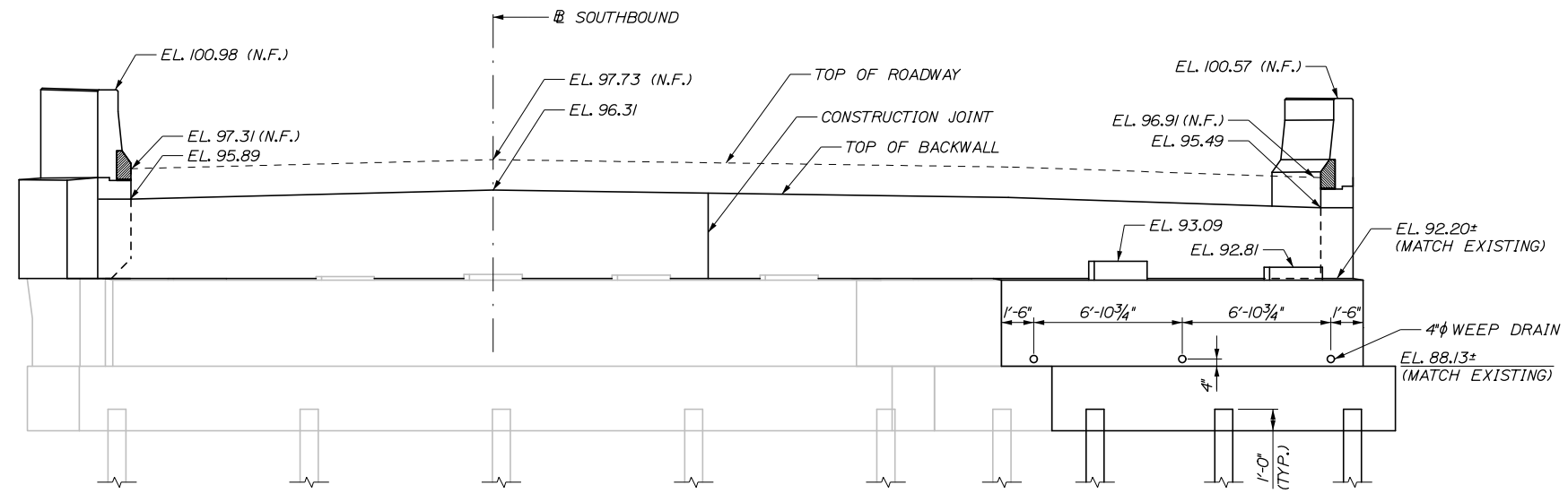
NOTE: STATIONS AND OFFSETS ARE MEASURED FROM THE NORTHBOUND BASELINE.



PLAN

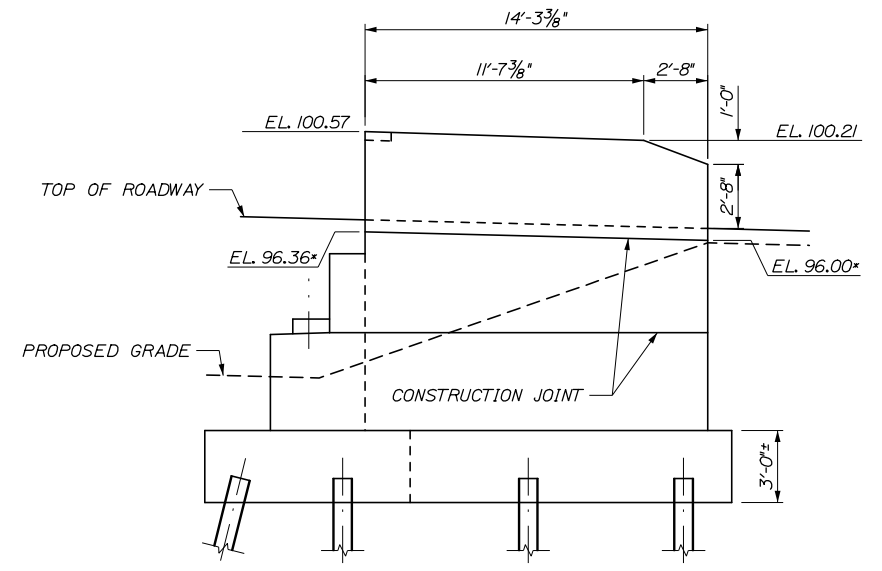


SECTION A-A
1/4" = 1'-0"



ELEVATION

SOUTHBOUND BRIDGE - ABUTMENT 1
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"



SECTION B-B
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE TO THE WINGWALL.

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	EMC 10\18	Checked	HCH 10\18
				Drawn	PEB 10\18	In Charge of	RAL 10\18

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**THE GOLD STAR
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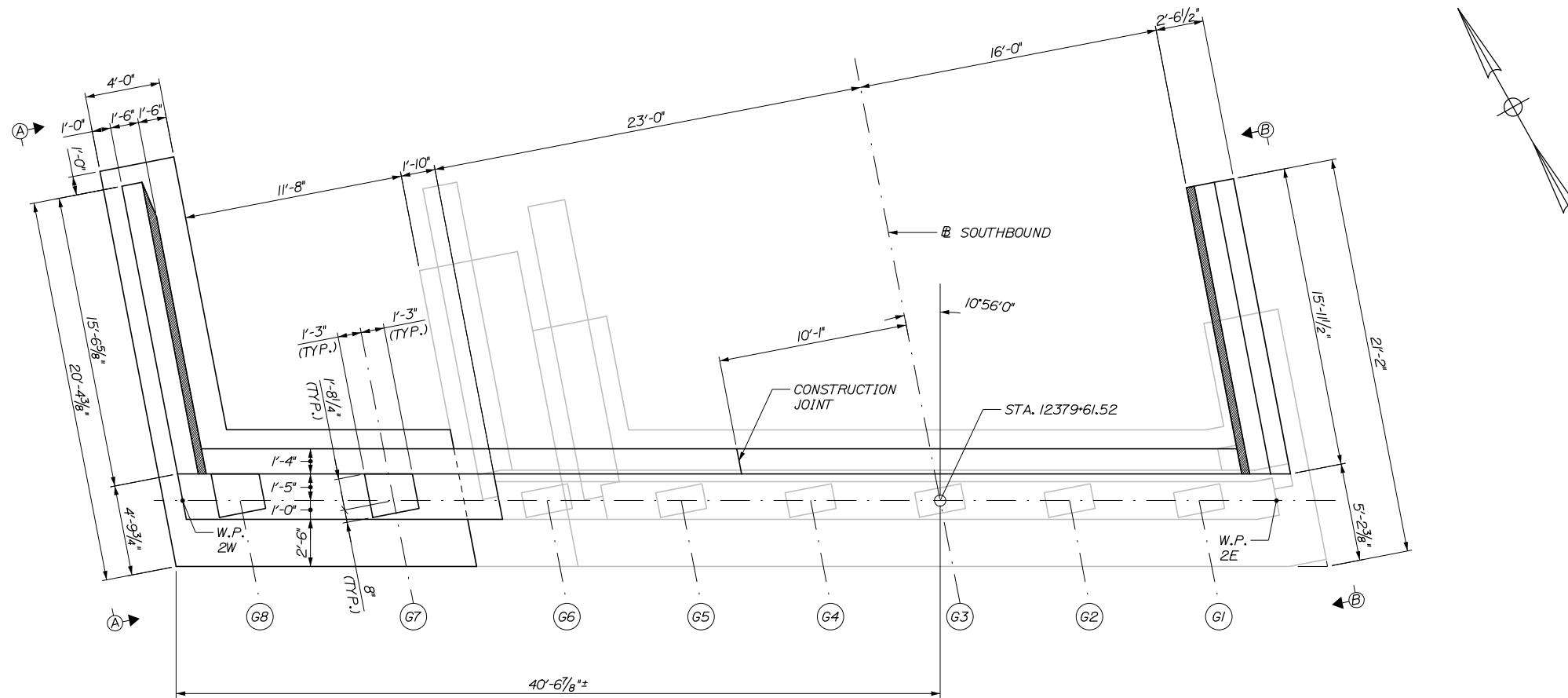
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SOUTHBOUND ABUTMENT 1
PLAN AND ELEVATION

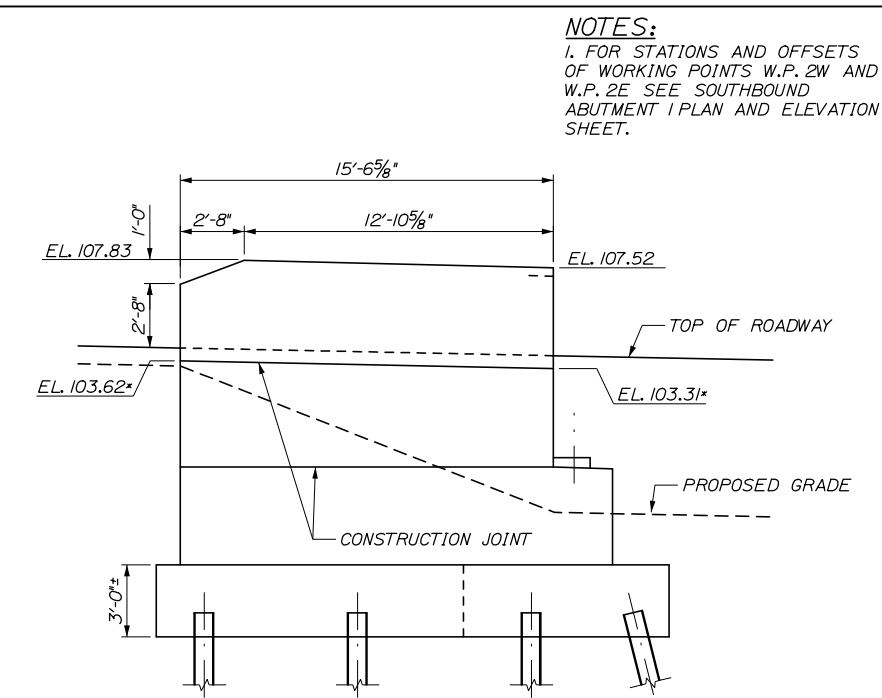
SHEET NUMBER: S-18
CONTRACT: 2019.09
9 OF 116

Date: 10/18/2018

Filename: 070_Southbound Abutment 2 Plan and Elevation.dgn

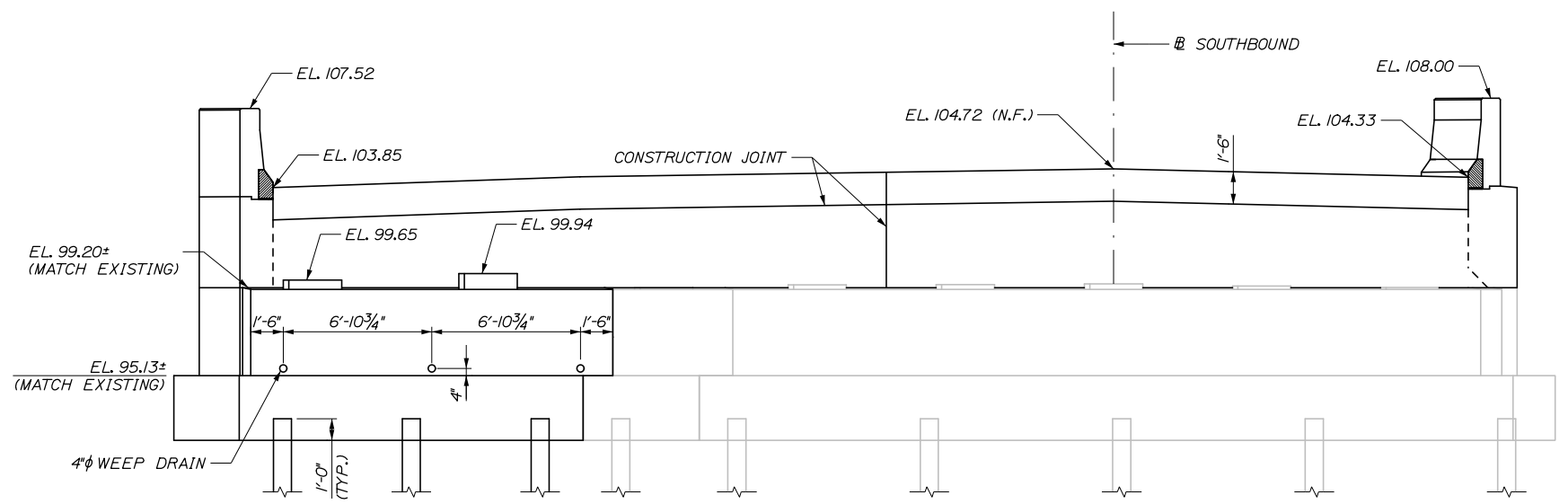


PLAN

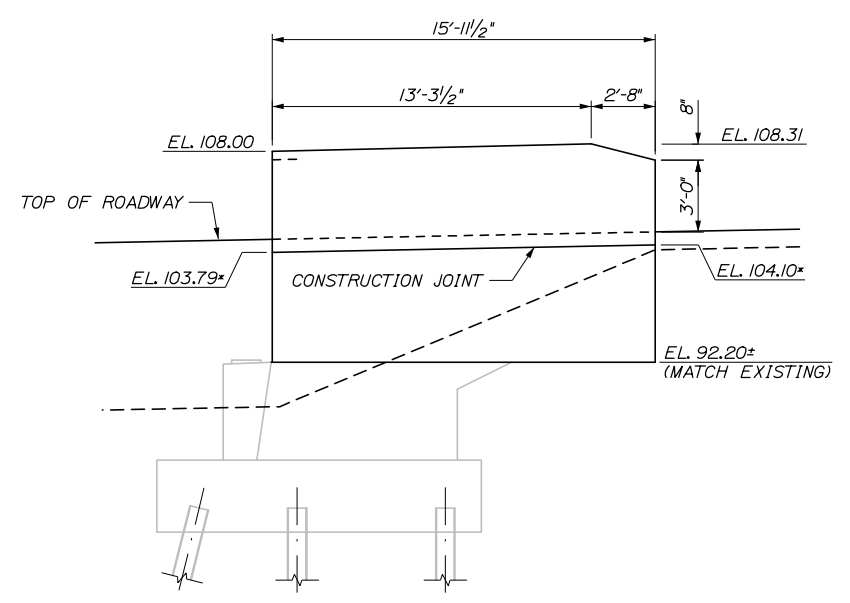


SECTION A-A
1/4" = 1'-0"

NOTES:
1. FOR STATIONS AND OFFSETS OF WORKING POINTS W.P. 2W AND W.P. 2E SEE SOUTHBOUND ABUTMENT 1 PLAN AND ELEVATION SHEET.



ELEVATION



SECTION B-B
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE TO THE WINGWALL.

SOUTHBOUND BRIDGE - ABUTMENT 2
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	EMC	10\18	Checked	HCH	10\18
	Drawn	PEB	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

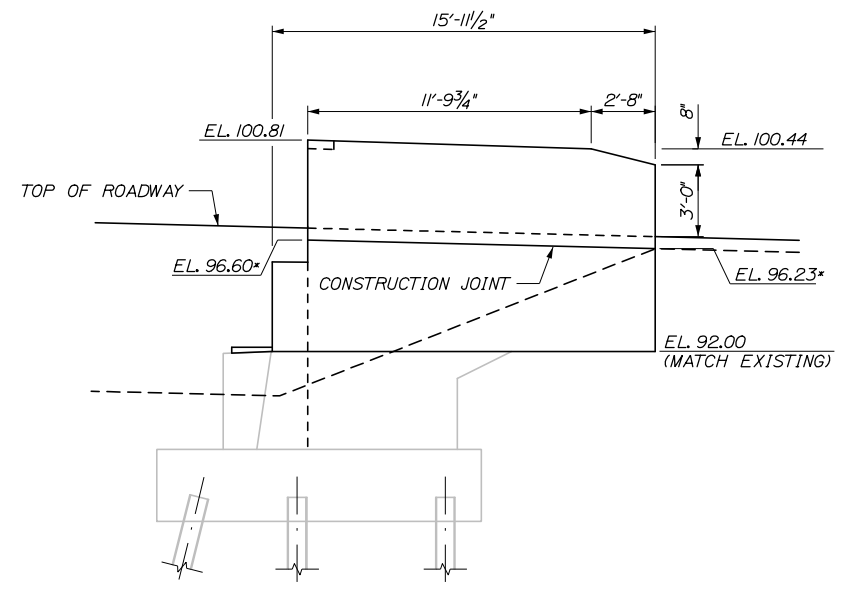
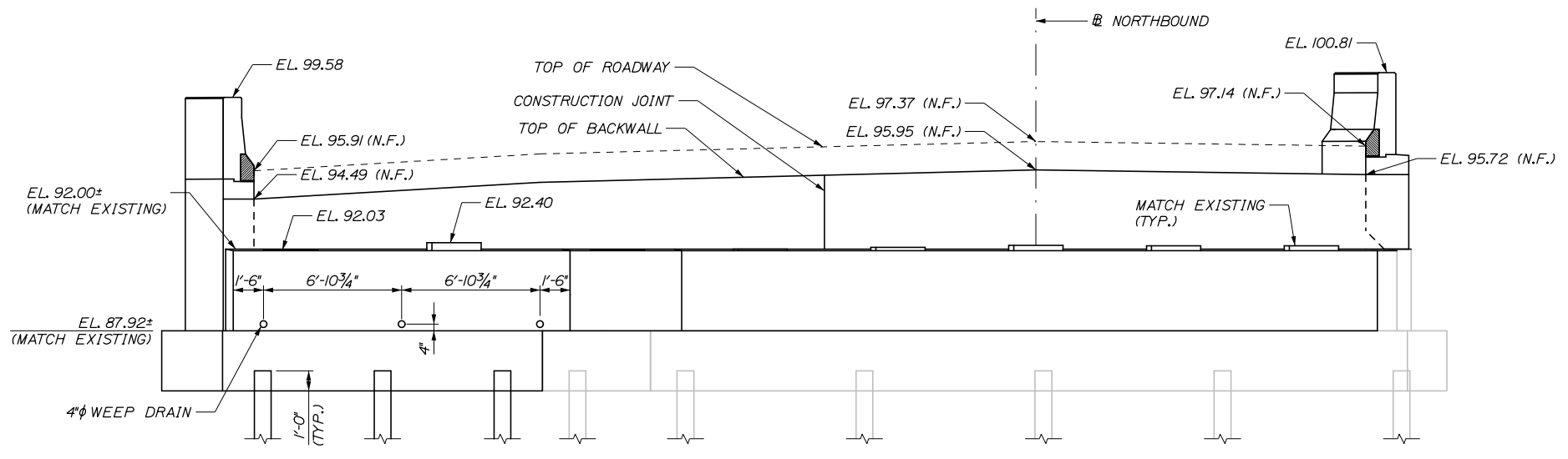
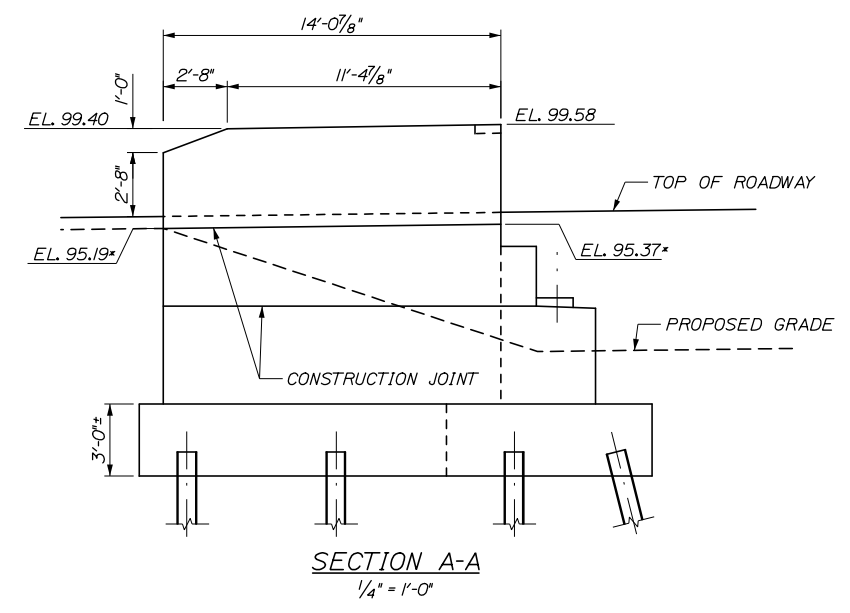
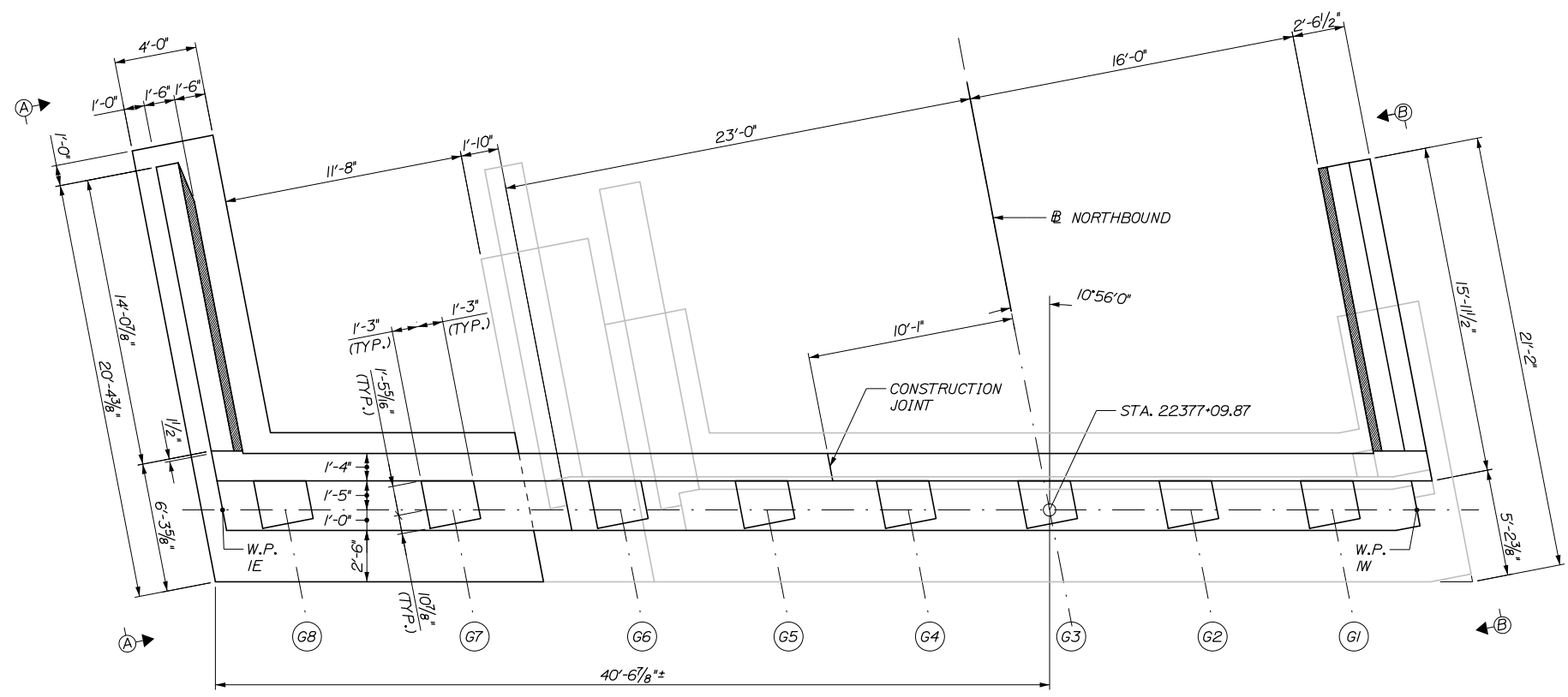
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SOUTHBOUND ABUTMENT 2
PLAN AND ELEVATION

SHEET NUMBER: S-19
70 OF 116

CONTRACT: 2019.09

WORKING POINT LOCATIONS - SOUTHBOUND			
W.P. 1E	STA. 22377+09.87	39'-6" LT	
W.P. 1W	STA. 22377+09.87	17'-6" RT	
W.P. 2E	STA. 22379+51.87	39'-6" LT	
W.P. 2W	STA. 22379+51.87	17'-6" RT	

NOTE: STATIONS AND OFFSETS ARE MEASURED FROM THE SOUTHBOUND BASELINE.



NORTHBOUND BRIDGE - ABUTMENT I
(PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE TO THE WINGWALL.

Date: 10/18/2018

Filename: 071_Northbound Abutment 1 Plan and Elevation.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
By	Date	By	Date
Designed	EMC 10\18	Checked	HCH 10\18
Drawn	PEB 10\18	In Charge of	RAL 10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

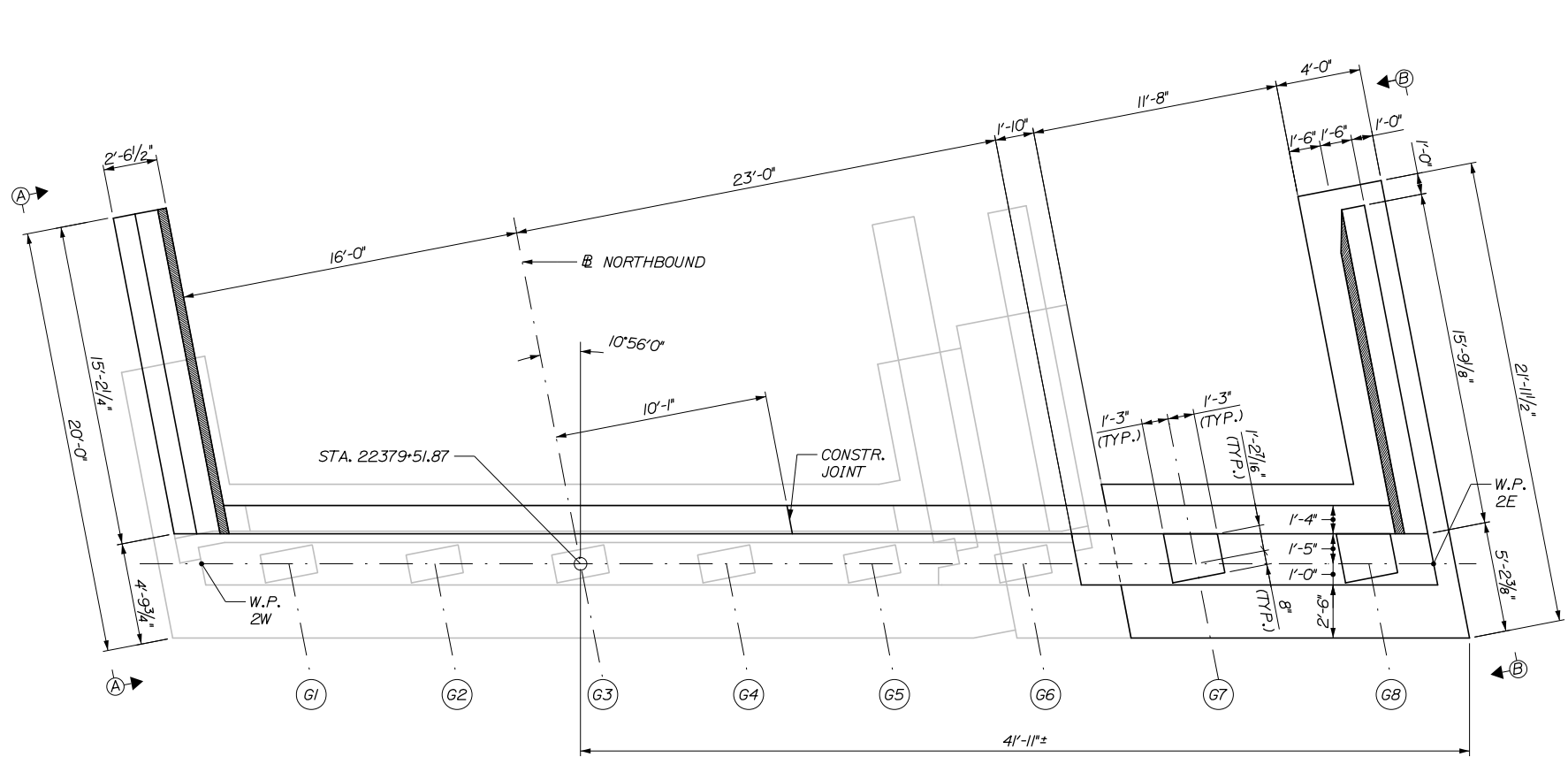
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
NORTHBOUND ABUTMENT 1
PLAN AND ELEVATION

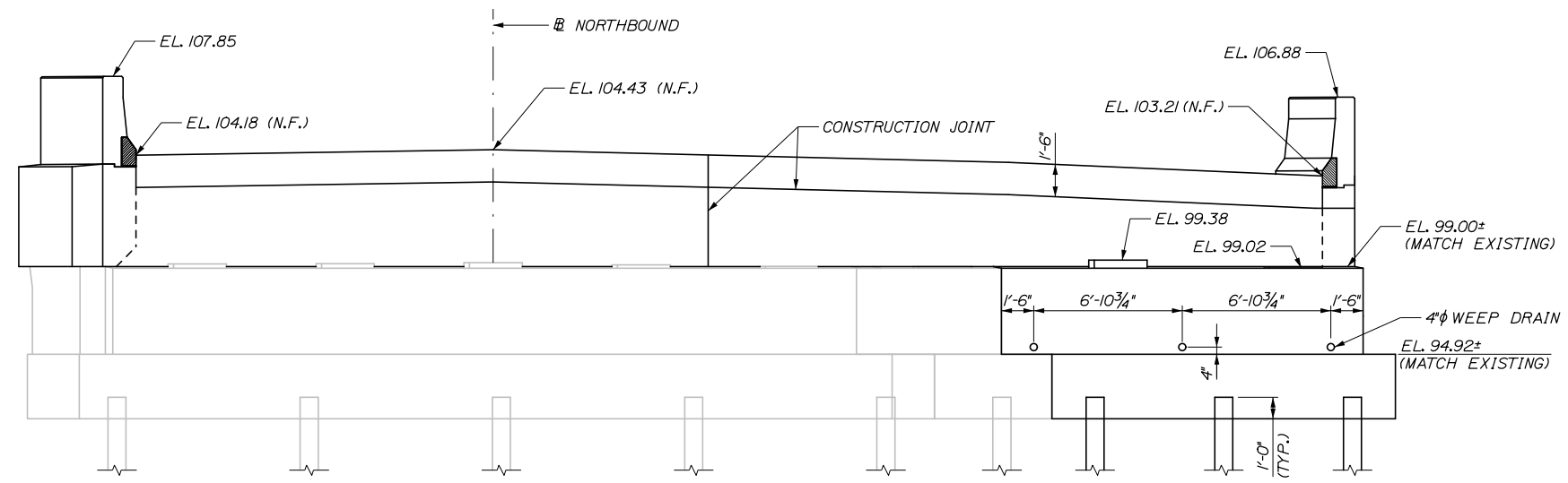
SHEET NUMBER: S-20
CONTRACT: 2019.09
71 OF 116

Date: 10/18/2018

Filename: 072_Northbound Abutment 2 Plan and Elevation.dgn

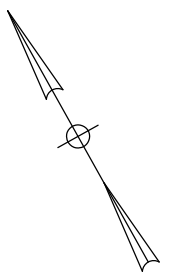


PLAN

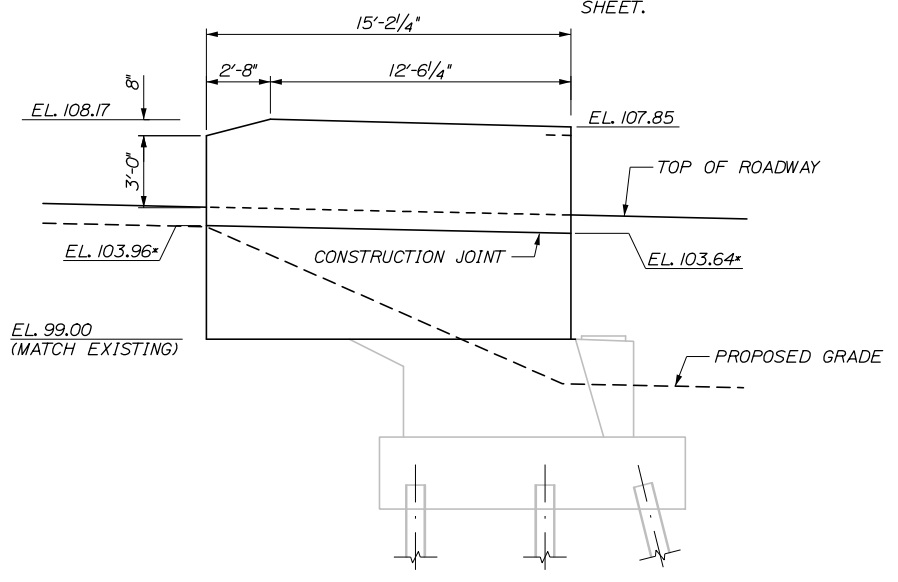


ELEVATION

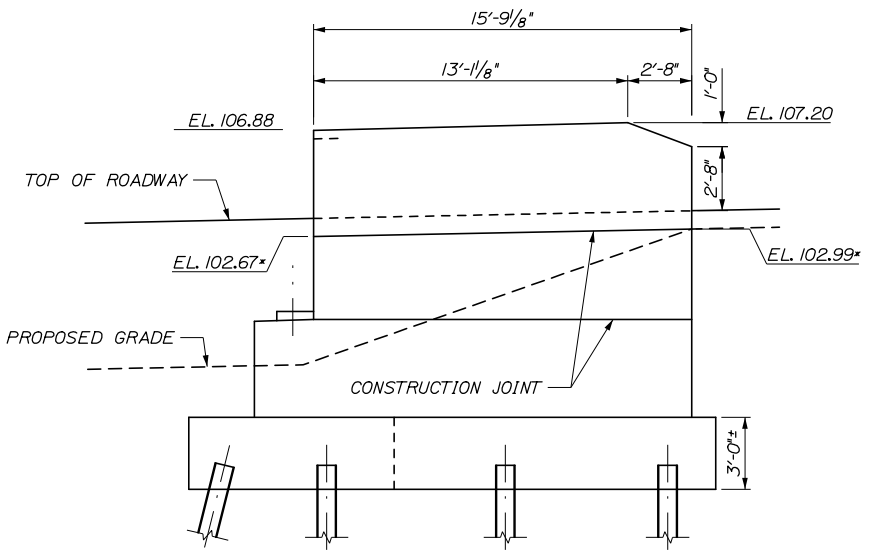
NORTHBOUND BRIDGE - ABUTMENT 2
 (PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)
 1/4" = 1'-0"



NOTES:
 1. FOR STATIONS AND OFFSETS OF WORKING POINTS W.P. 2W AND W.P. 2E SEE NORTHBOUND ABUTMENT 1 PLAN AND ELEVATION SHEET.



SECTION A-A
 1/4" = 1'-0"



SECTION B-B
 1/4" = 1'-0"

* CONSTRUCTION JOINT ELEVATIONS PROVIDED ARE TO THE INSIDE FACE TO THE WINGWALL.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
	EMC	10\18	
	Checked	HCH	10\18
	By	Date	
	PEB	10\18	
	In Charge of	RAL	10\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

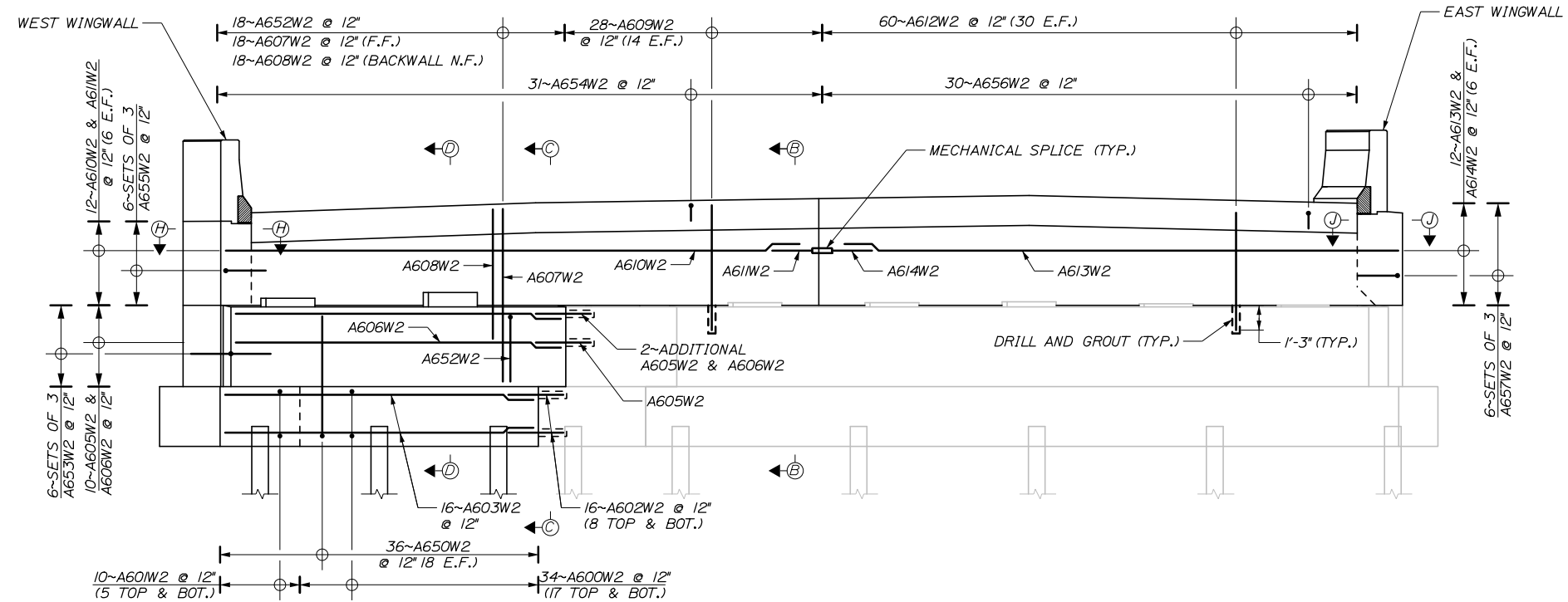
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 NORTHBOUND ABUTMENT 2
 PLAN AND ELEVATION

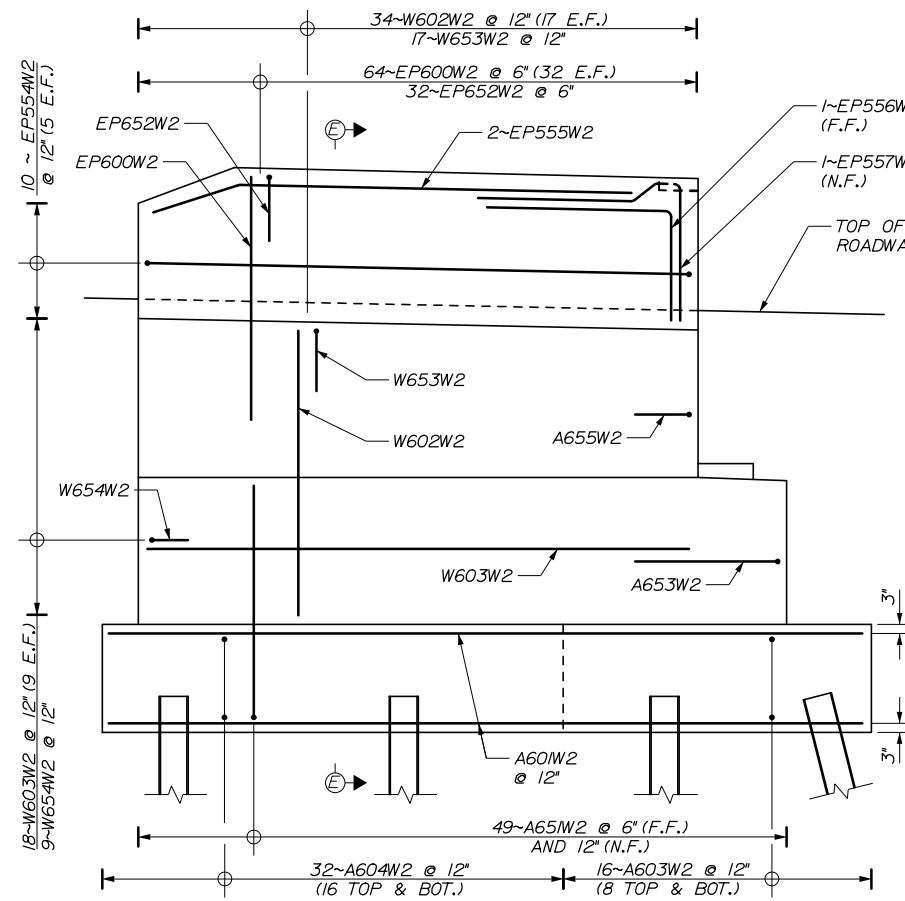
SHEET NUMBER: S-21
 CONTRACT: 2019.09
 72 OF 116

NOTES:

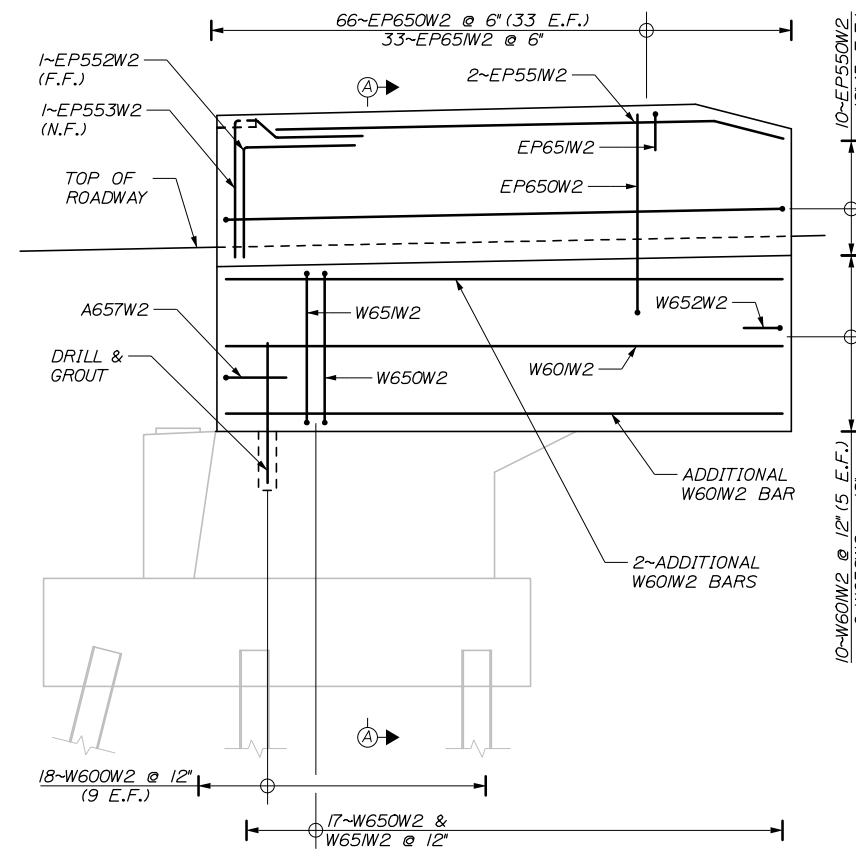
- SEE "ENDPOST DETAILS III" SHEET FOR END POST REINFORCING SECTIONS.
- SUBSTRUCTURE NOMENCLATURE (W1, W2, E1, E2) REPRESENTS EAST OR WEST ABUTMENT 1 OR 2.
- MIN LAPS SHALL BE:
*5 = 2'-3"
*6 = 2'-8"
- SEE "ABUTMENT REINFORCING DETAILS COMPRESSION JOINT" SHEET FOR SECTIONS A-A THROUGH E-E, H-H AND J-J.
- SEE "ABUTMENT REINFORCING DETAILS SLAB OVER BACKWALL" SHEET FOR PEDESTAL REINFORCING.
- BAR THAT ARE DRILLED AND GROUTED SHALL BE MOVED TO AVOID CONFLICTS WITH EXISTING REBAR IN CONCRETE.
- BAR SHALL BE MOVED TO AVOID CONFLICT WITH PILES.



SOUTHBOUND BRIDGE - ABUTMENT 2
(EXISTING REINFORCING NOT SHOWN FOR CLARITY)
1/4" = 1'-0"



WEST WINGWALL
3/8" = 1'-0"



EAST WINGWALL
3/8" = 1'-0"

Filename: 074-Southbound Abutment 2 Reinforcing.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
	By	Date		By	Date	
	EMC	10\18		HGH	10\18	
	Drawn	PEB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

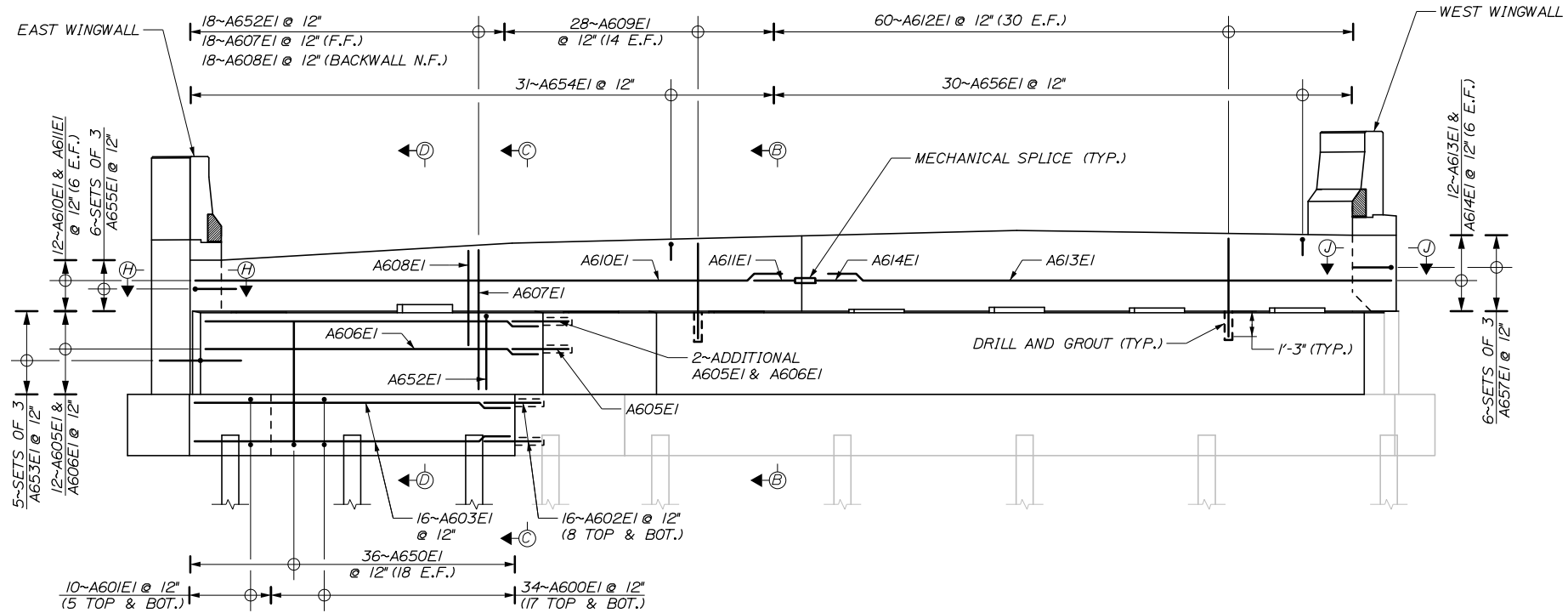
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SOUTHBOUND ABUTMENT 2
REINFORCING

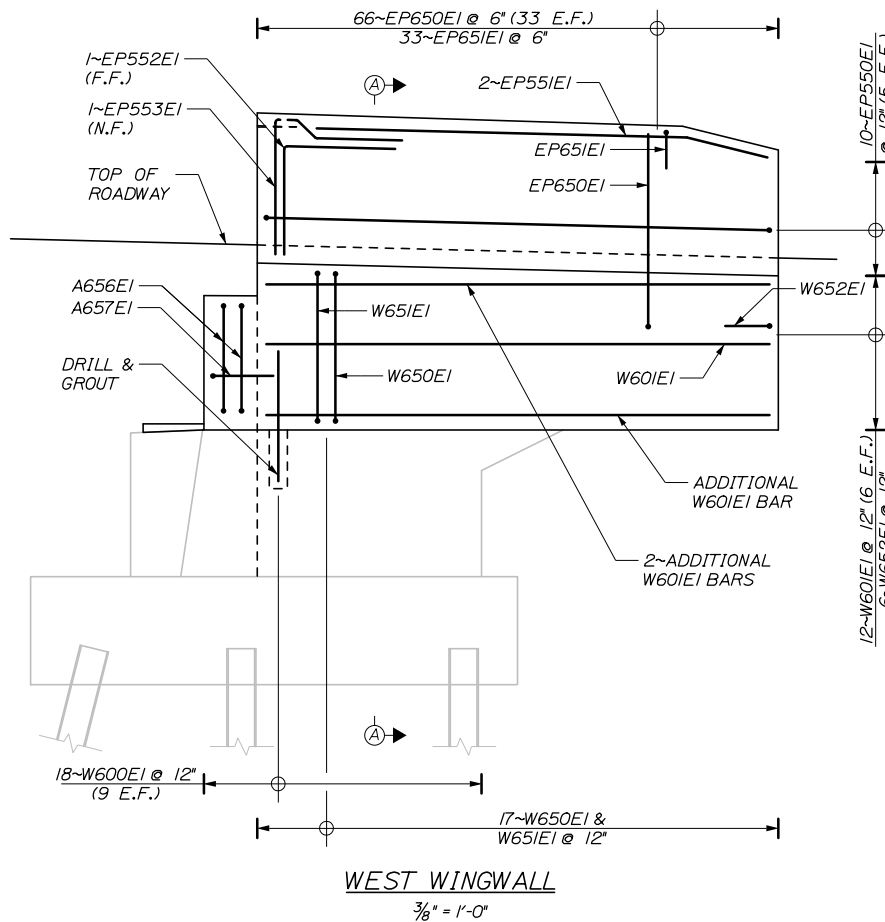
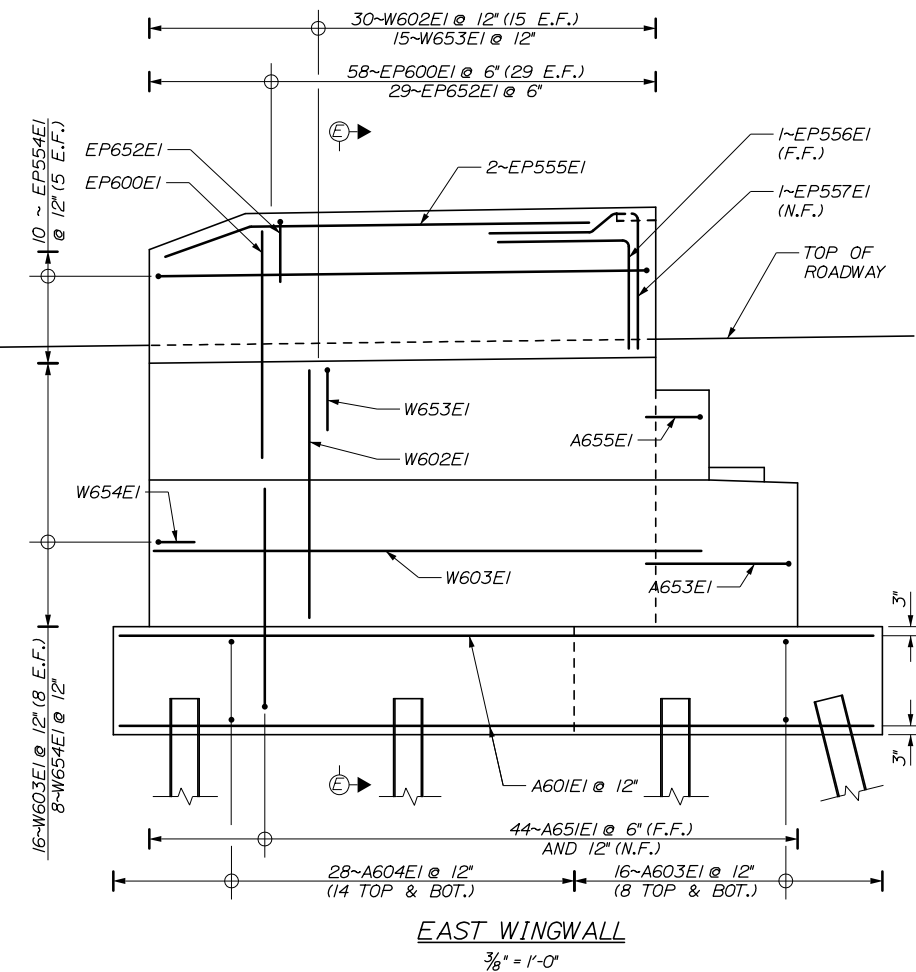
SHEET NUMBER: S-23
CONTRACT: 2019.09
74 OF 116

NOTES:

- SEE "ENDPOST DETAILS III" SHEET FOR END POST REINFORCING SECTIONS.
- SUBSTRUCTURE NOMENCLATURE (W1, W2, E1, E2) REPRESENTS EAST OR WEST ABUTMENT 1 OR 2.
- MIN LAPS SHALL BE:
*5 = 2'-3"
*6 = 2'-8"
- SEE "ABUTMENT REINFORCING DETAILS SLAB OVER BACKWALL" SHEET FOR SECTIONS A-A THROUGH E-E, H-H AND J-J.
- SEE "ABUTMENT REINFORCING DETAILS SLAB OVER BACKWALL" SHEET FOR PEDESTAL REINFORCING.
- BAR THAT ARE DRILLED AND GROUTED SHALL BE MOVED TO AVOID CONFLICTS WITH EXISTING REBAR IN CONCRETE.
- BAR SHALL BE MOVED TO AVOID CONFLICTS WITH PILES.



NORTHBOUND BRIDGE - ABUTMENT 1
(EXISTING REINFORCING NOT SHOWN FOR CLARITY)
1/4" = 1'-0"



Date: 10/18/2018

Filename: 075_Northbound Abutment 1 Reinforcing.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
Designed	EMC	10\18	Checked HCH 10\18
Drawn	PEB	10\18	In Charge of RAL 10\18

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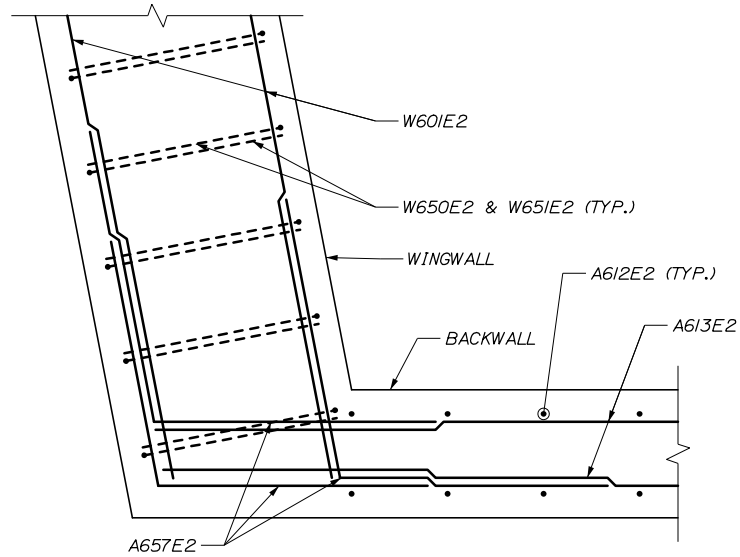
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

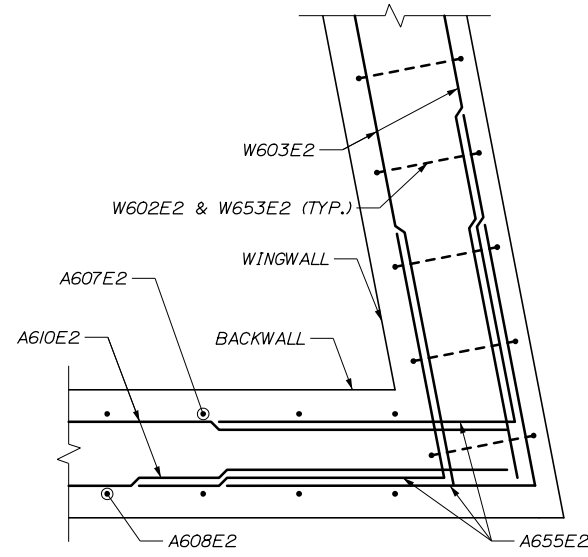
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
NORTHBOUND ABUTMENT 1
REINFORCING

SHEET NUMBER: S-24
CONTRACT: 2019.09
75 OF 116

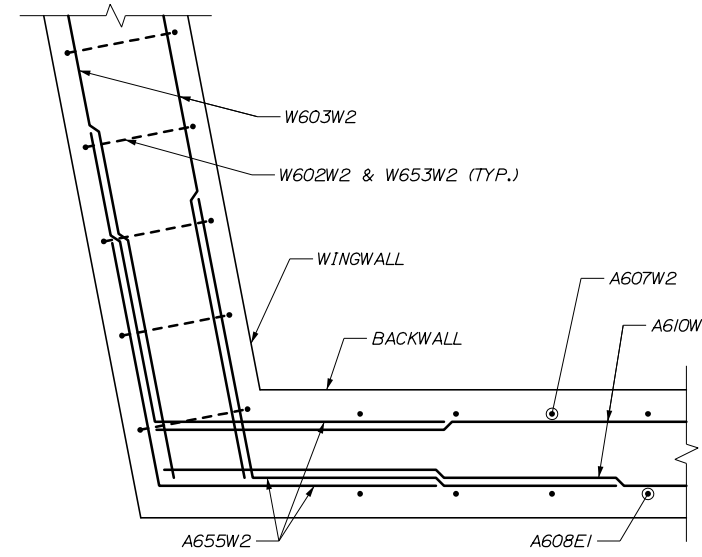
NOTES:
 1. BAR NAMES APPLY TO ABUTMENTS W2 AND E2.



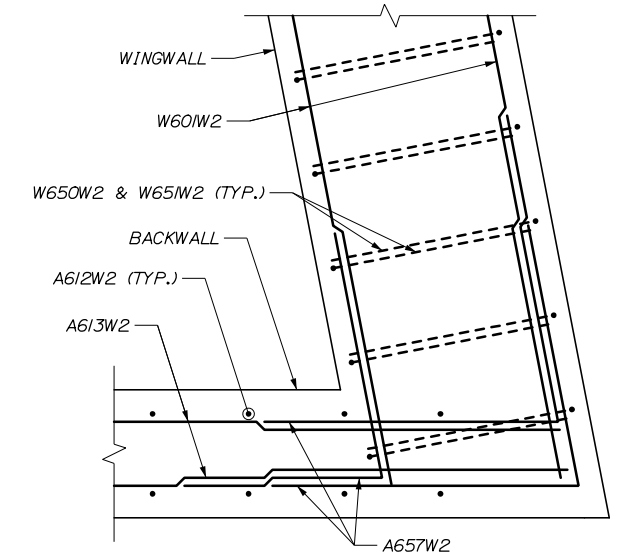
SECTION F-F
 1" = 1'-0"



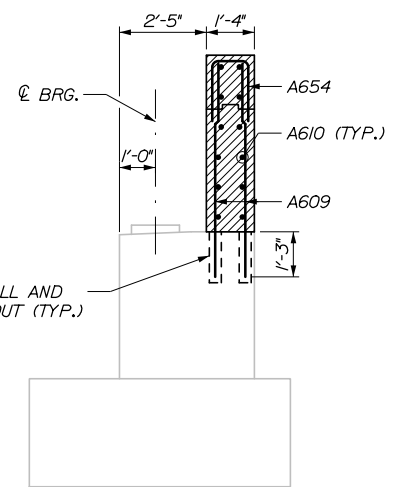
SECTION G-G
 (TOP OF BACKWALL SHOWN, STEM WALL SIMILAR)
 1" = 1'-0"



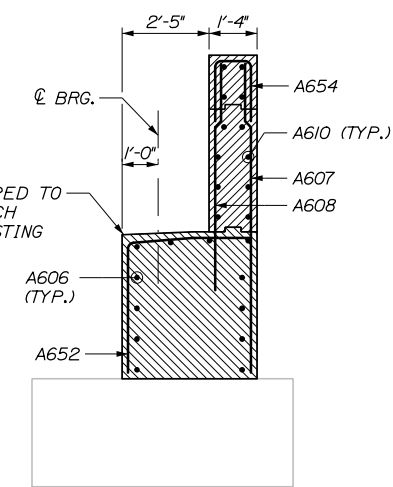
SECTION H-H
 (TOP OF BACKWALL SHOWN, STEM WALL SIMILAR)
 1" = 1'-0"



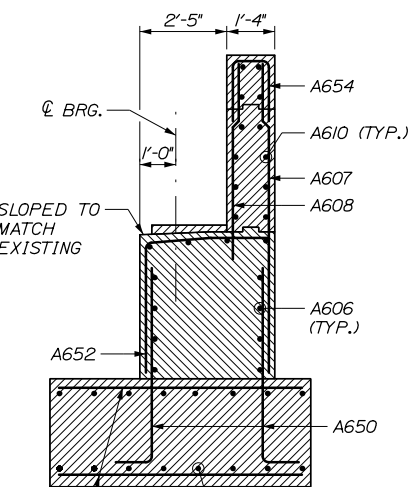
SECTION J-J
 1" = 1'-0"



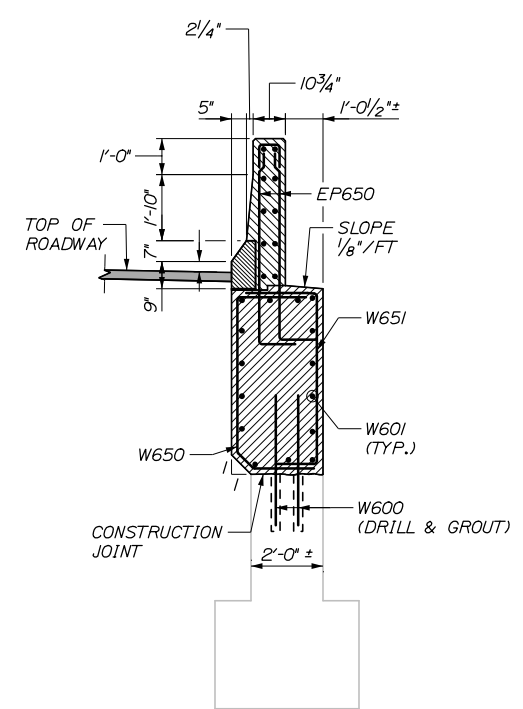
SECTION B-B
 $\frac{3}{8}$ " = 1'-0"



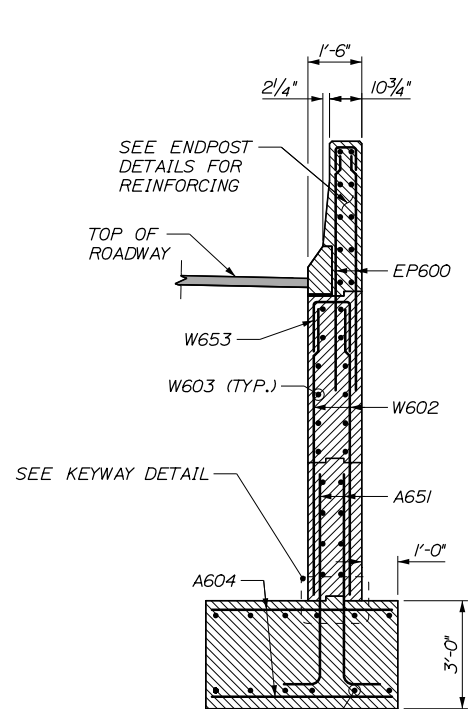
SECTION C-C
 $\frac{3}{8}$ " = 1'-0"



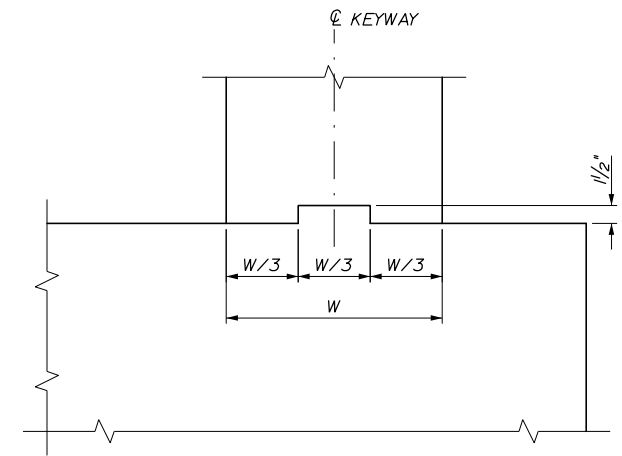
SECTION D-D
 $\frac{3}{8}$ " = 1'-0"



SECTION A-A
 $\frac{3}{8}$ " = 1'-0"



SECTION E-E
 $\frac{3}{8}$ " = 1'-0"



KEYWAY DETAIL
 (REINFORCING NOT SHOWN FOR CLARITY)
 1/2" = 1'-0"

Date: 10/18/2018

Filename: 077-Abutment Reinforcing Details - C.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
Designed	EMC 10\18	Checked	HCH 10\18
Drawn	PEB 10\18	In Charge of	RAL 10\18

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MAINE TURNPIKE

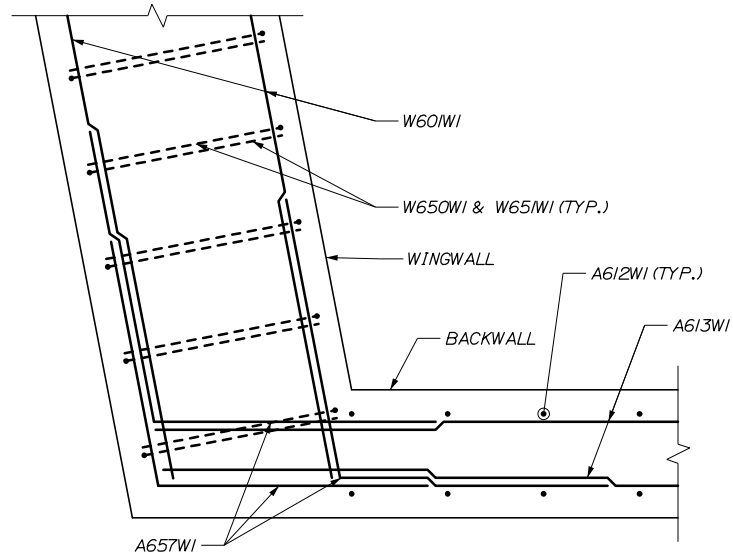
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

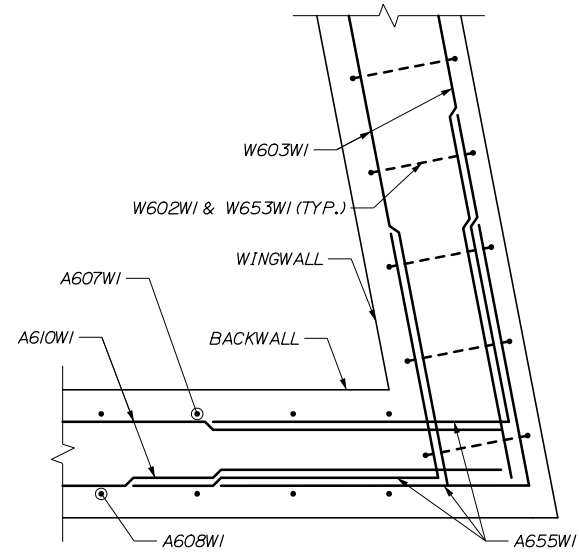
BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 ABUTMENT REINFORCING DETAILS
 COMPRESSION JOINT

SHEET NUMBER: S-26
 CONTRACT: 2019.09
 77 OF 116

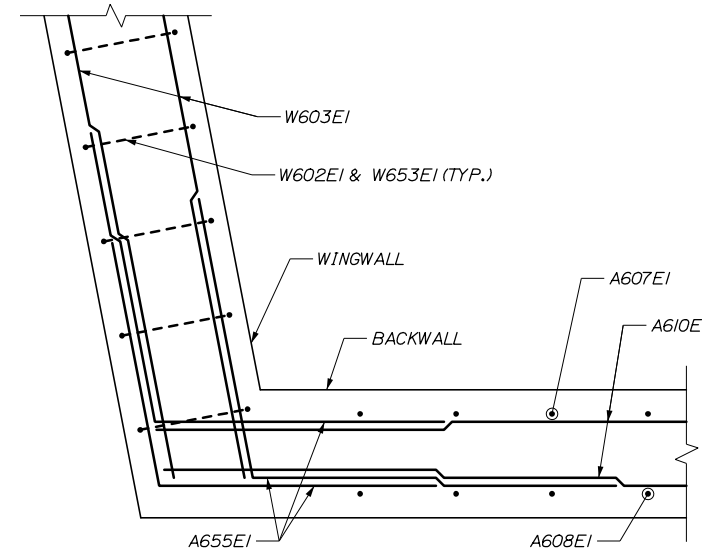
NOTES:
 1. BAR NAMES APPLY TO ABUTMENTS W1 AND E1.



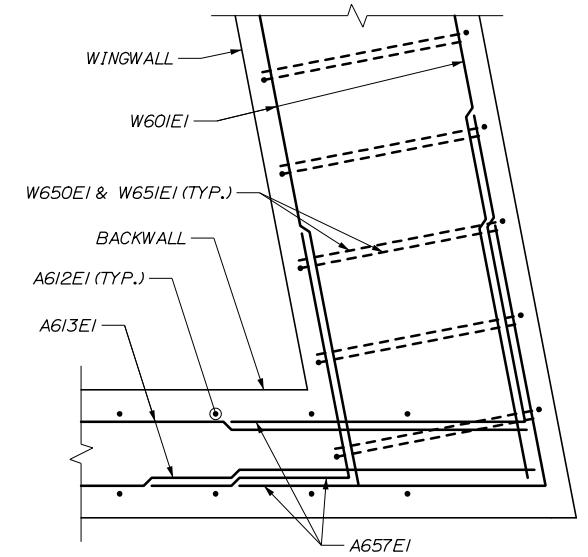
SECTION F-F
 1' = 1'-0"



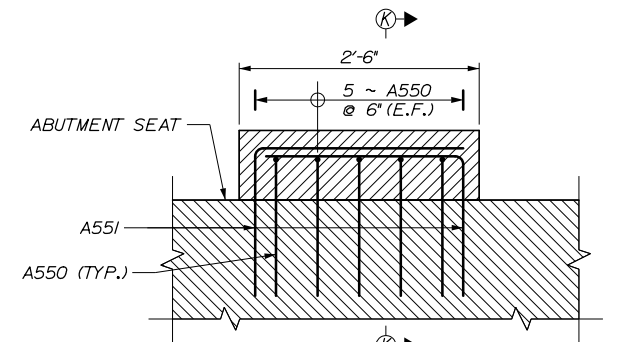
SECTION G-G
 (TOP OF BACKWALL SHOWN, STEM WALL SIMILAR)
 1' = 1'-0"



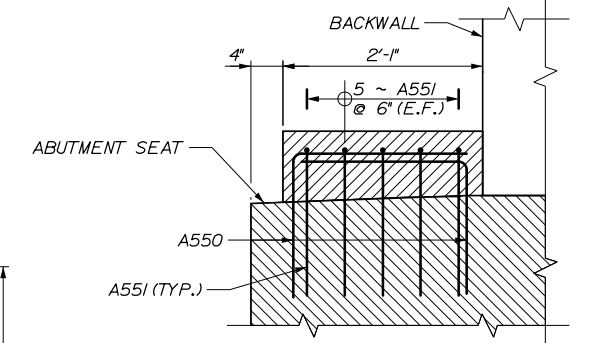
SECTION H-H
 (TOP OF BACKWALL SHOWN, STEM WALL SIMILAR)
 1' = 1'-0"



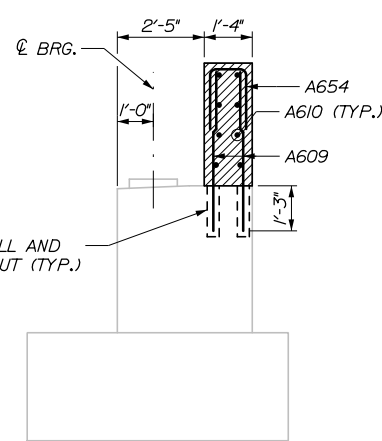
SECTION J-J
 1' = 1'-0"



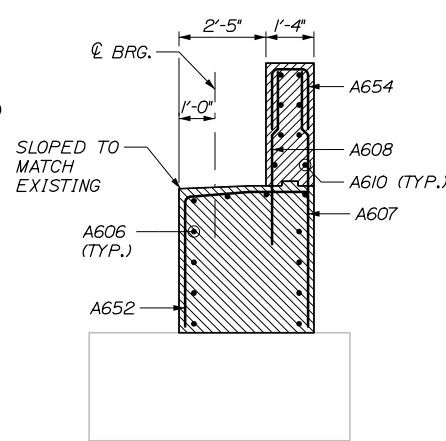
ABUTMENT PEDESTAL REINFORCING ELEVATION
 (REINFORCING SHOWN APPLIES TO W1, W2, E1, AND E2 BARS)
 (REINFORCING DOES NOT INCLUDE SUBSTRUCTURE UNIT NOMINCLATURE FOR CLARITY: W1, W2, E1, E2)
 1' = 1'-0"



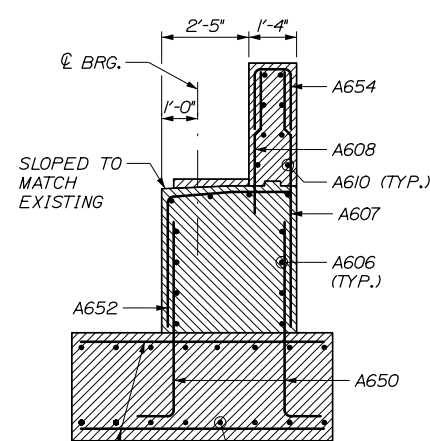
SECTION K-K
 (REINFORCING SHOWN APPLIES TO W1, W2, E1, AND E2 BARS)
 (REINFORCING DOES NOT INCLUDE SUBSTRUCTURE UNIT NOMINCLATURE FOR CLARITY: W1, W2, E1, E2)
 1' = 1'-0"



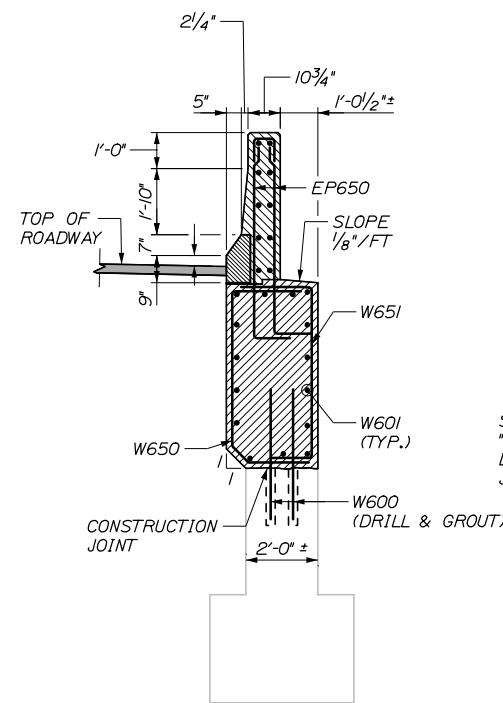
SECTION B-B
 3/8" = 1'-0"



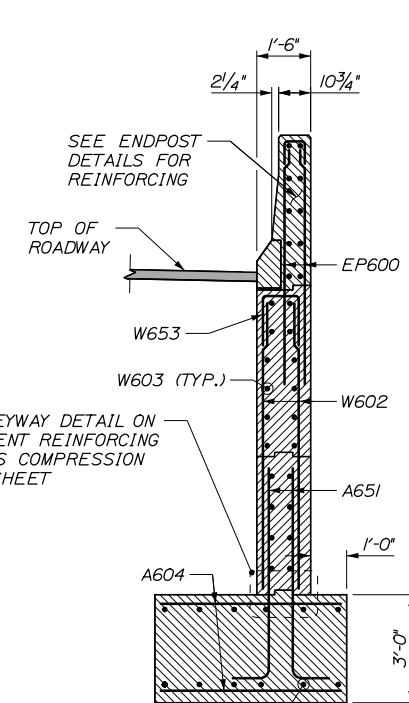
SECTION C-C
 3/8" = 1'-0"



SECTION D-D
 3/8" = 1'-0"



SECTION A-A
 3/8" = 1'-0"



SECTION E-E
 3/8" = 1'-0"

Date: 10/18/2018

Filename: 078-Abutment Reinforcing Details - SOB.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
By	Date	By	Date
Designed	EMC 10\18	Checked	HCH 10\18
Drawn	PEB 10\18	In Charge of	RAL 10\18

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 Westbrook, ME 04092
 TEL (207) 774-5155
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**THE GOLD STAR
 MEMORIAL HIGHWAY**

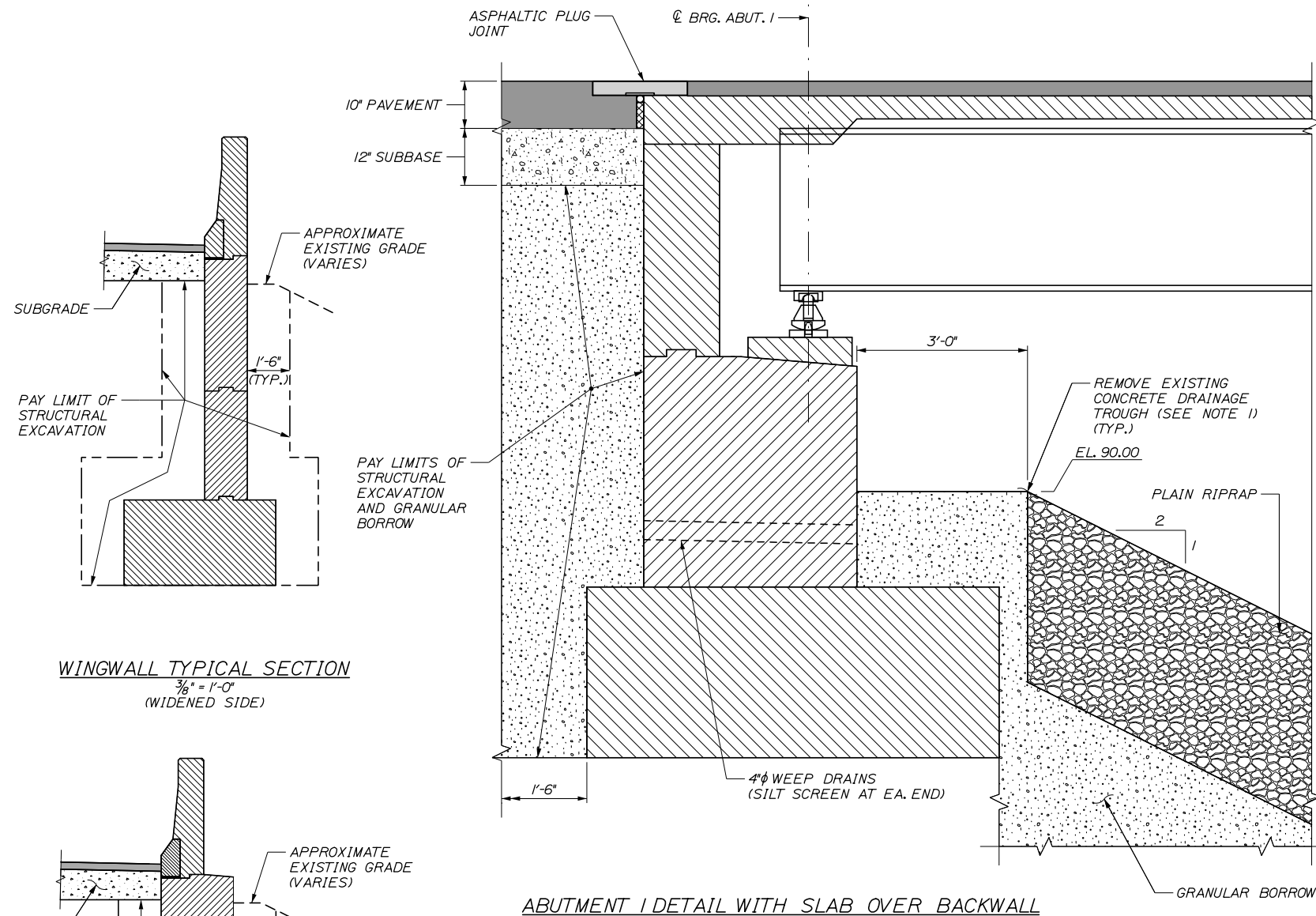
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 ABUTMENT REINFORCING DETAILS
 SLAB OVER BACKWALL

SHEET NUMBER: S-27
 CONTRACT: 2019.09
 78 OF 116

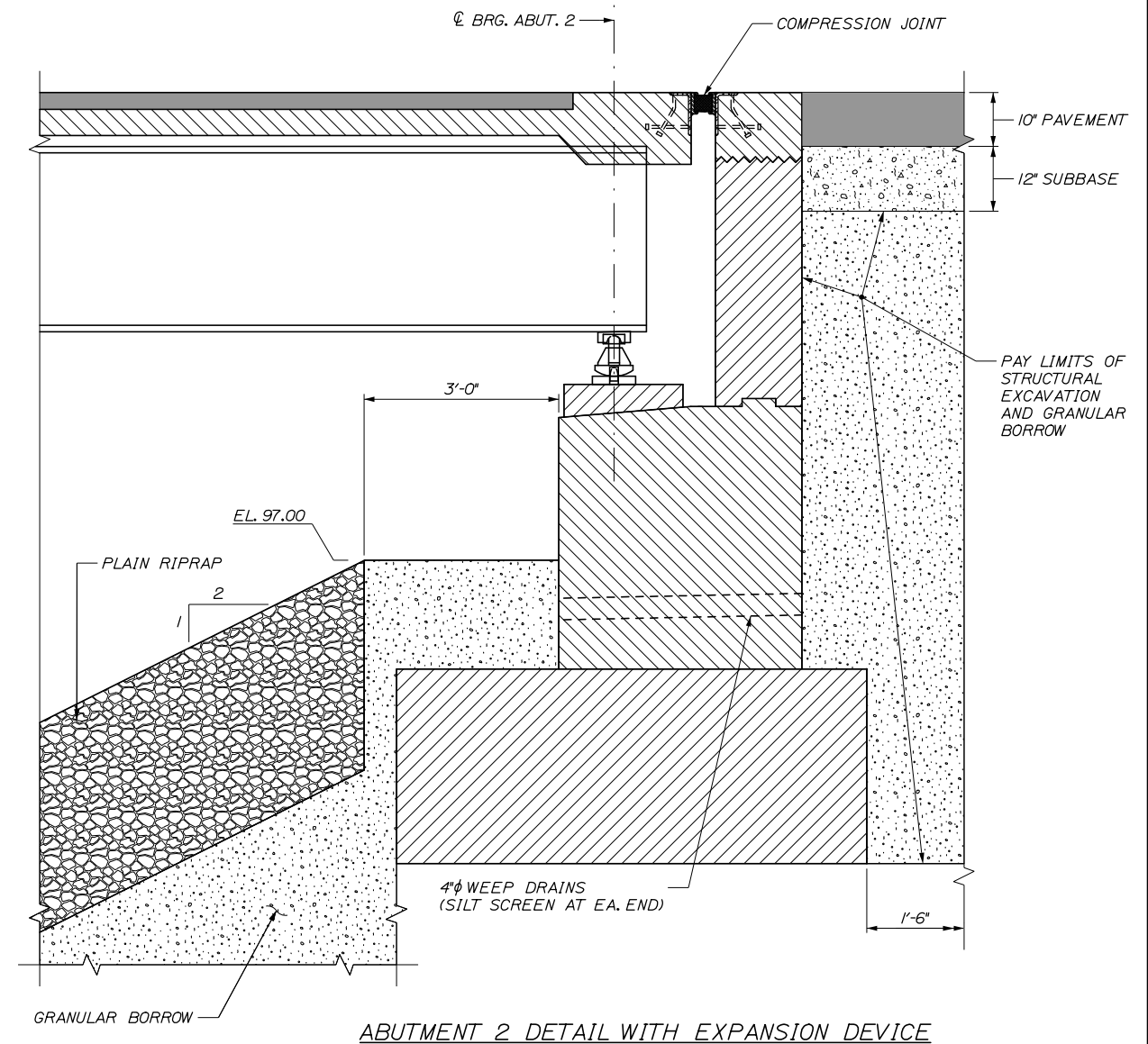
Date: 10/18/2018

Filename: 079_Abument Modification Details.dgn



ABUTMENT 1 DETAIL WITH SLAB OVER BACKWALL

3/4" = 1'-0"



ABUTMENT 2 DETAIL WITH EXPANSION DEVICE

3/4" = 1'-0"

NOTE:

1. REMOVAL OF EXISTING CONCRETE DRAINAGE TROUGH SHALL BE CONSIDERED INCIDENTAL TO CONTRACT ITEMS.

WINGWALL TYPICAL SECTION

3/8" = 1'-0"
(WIDENED SIDE)

WINGWALL TYPICAL SECTION

3/8" = 1'-0"
(MEDIAN SIDE)

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

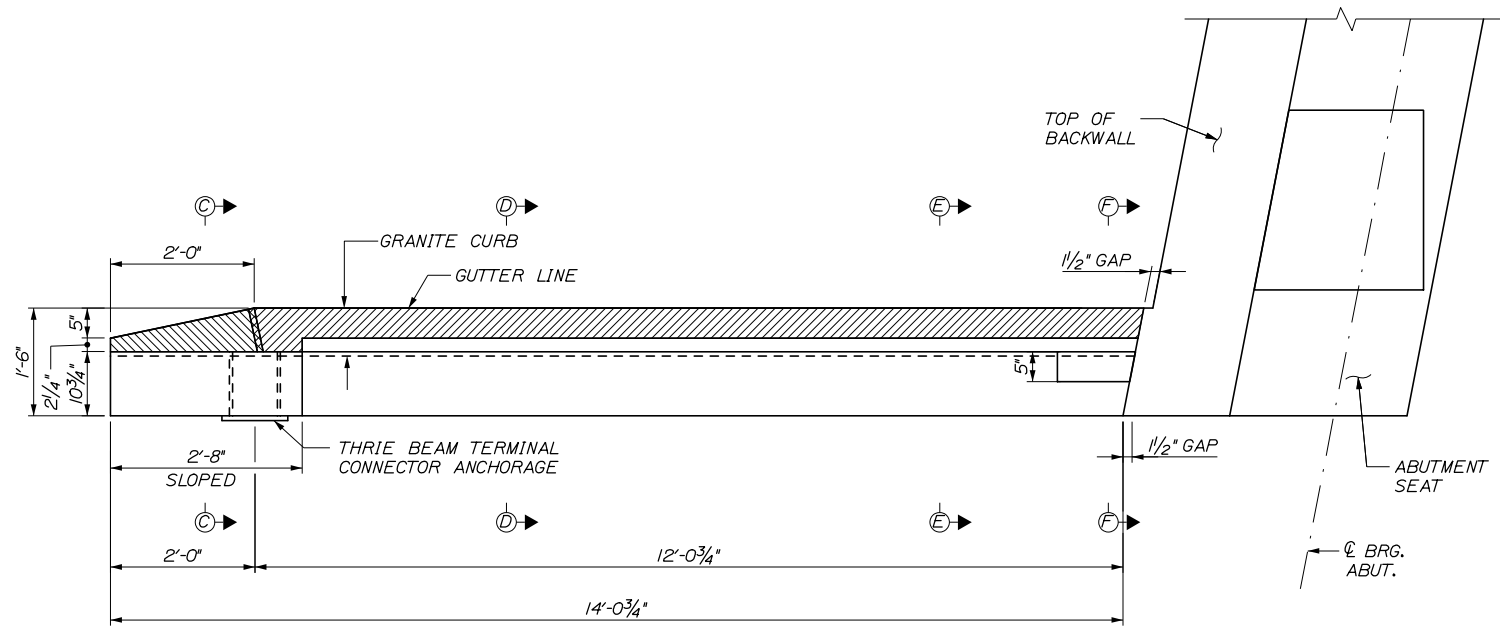
HNTB				HNTB CORPORATION			
				340 County Road, Suite 6-C			
				Westbrook, ME 04092			
				TEL (207) 774-5155			
				FAX (207) 228-0909			

HNTB CORPORATION				MAINE TURNPIKE			
340 County Road, Suite 6-C							
Westbrook, ME 04092							
TEL (207) 774-5155				THE GOLD STAR MEMORIAL HIGHWAY			
FAX (207) 228-0909							

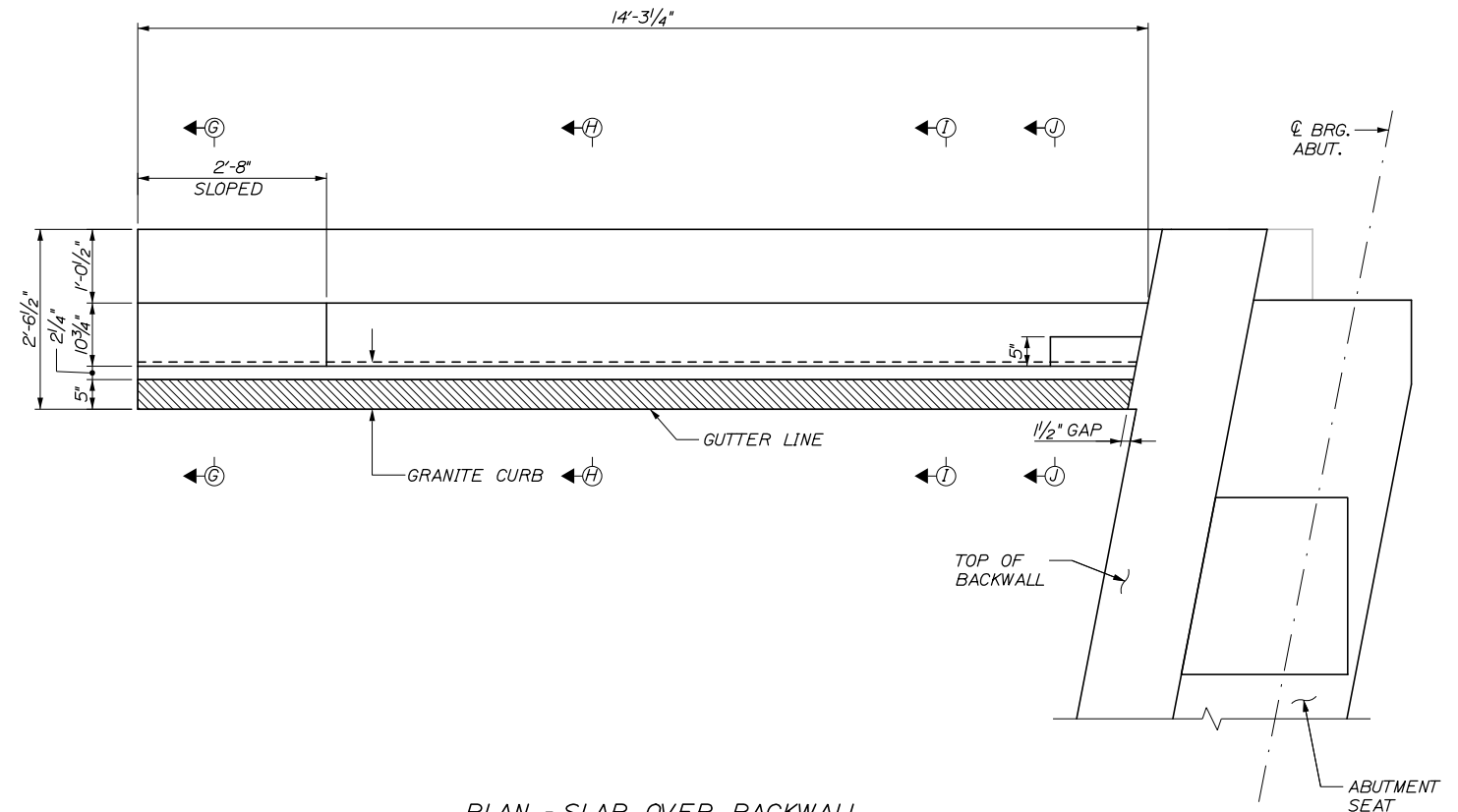
HNTB CORPORATION				MAINE TURNPIKE			
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Westbrook, ME 04092							
TEL (207) 774-5155				THE GOLD STAR MEMORIAL HIGHWAY			
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BRIDGE IMPROVEMENTS				MAINE CENTRAL RAILROAD OVERPASS			
ABUTMENT MODIFICATION DETAILS				SHEET NUMBER: S-28			
CONTRACT: 2019.09				97 OF 116			

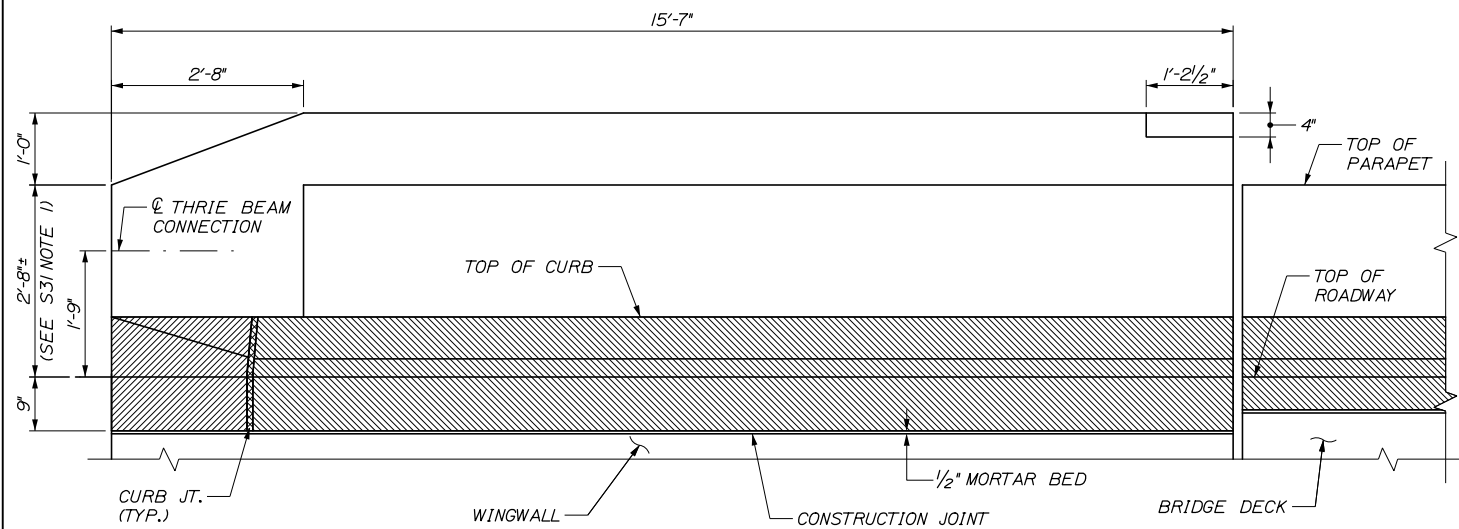
Date: 10/18/2018



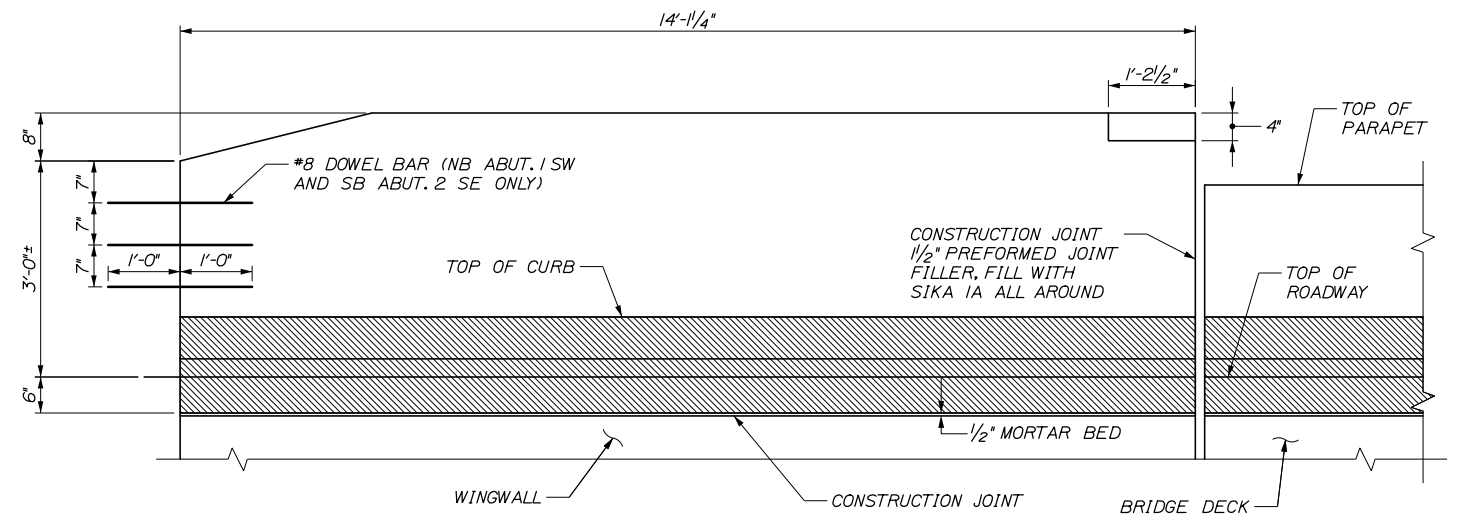
PLAN - SLAB OVER BACKWALL
 (ABUT. 1 NORTHBOUND, SOUTHEAST ENDPOST SHOWN,
 ABUT. 1 SOUTHBOUND, SOUTHWEST ENDPOST SIMILAR)
 3/4" = 1'-0"



PLAN - SLAB OVER BACKWALL
 (ABUT. 1 NORTHBOUND, SOUTHWEST ENDPOST SHOWN,
 ABUT. 1 SOUTHBOUND, SOUTHEAST ENDPOST SIMILAR)
 3/4" = 1'-0"



ELEVATION
 (ABUT. 1 SOUTHBOUND, SOUTHWEST ENDPOST SHOWN,
 ABUT. 1 NORTHBOUND, SOUTHEAST ENDPOST SIMILAR)
 3/4" = 1'-0"



ELEVATION
 (ABUT. 1 NORTHBOUND, SOUTHWEST ENDPOST SHOWN,
 ABUT. 1 SOUTHBOUND, SOUTHEAST ENDPOST SIMILAR)
 3/4" = 1'-0"

NOTE:
 1. FOR SECTIONS C-C THRU J-J,
 SEE SHEET S-31.

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

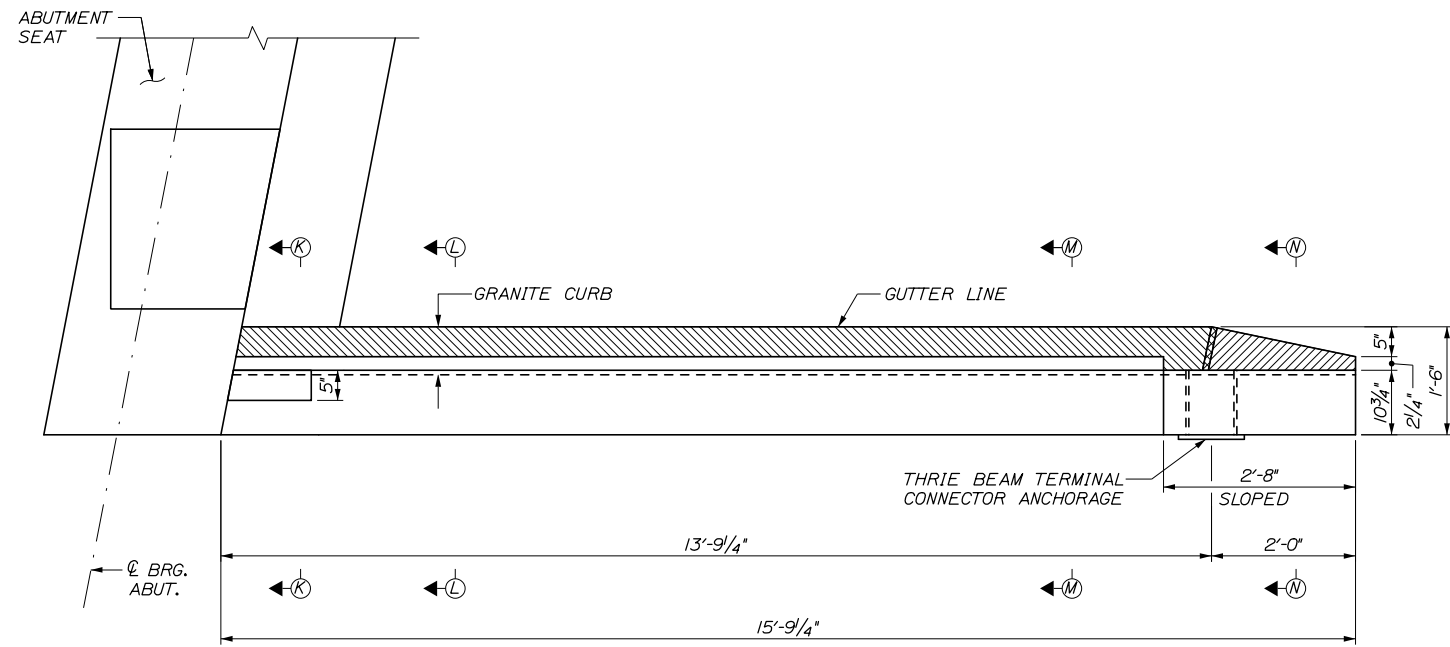
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

ENDPOST DETAILS I

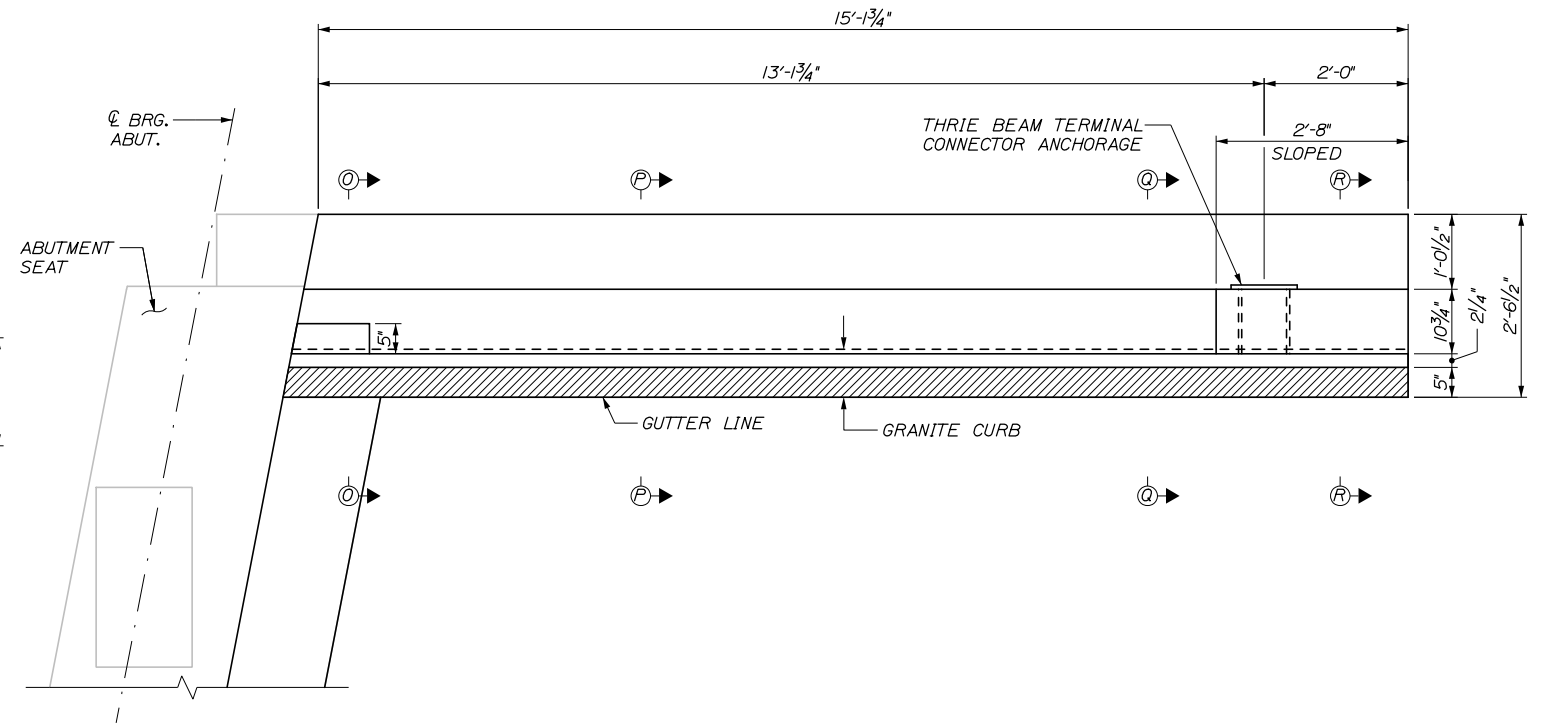
SHEET NUMBER: S-29
CONTRACT: 2019.09
80 OF 116

Filename: 080_Endpost Details 1.dgn

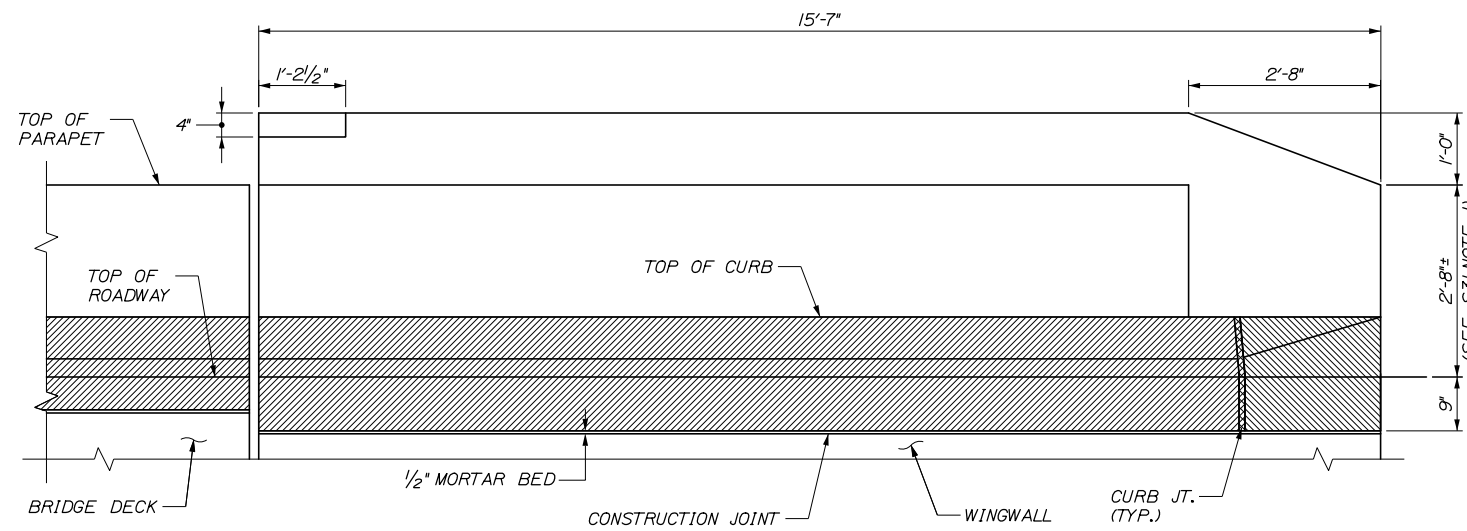
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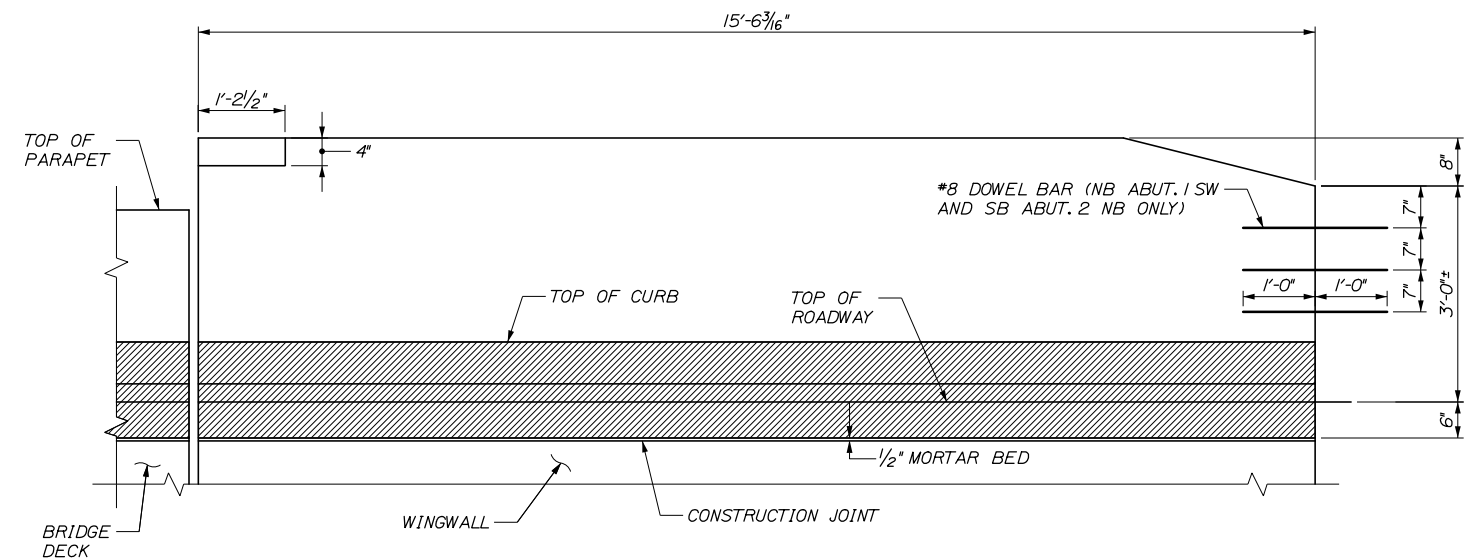
PLAN - EXPANSION JOINT
 (ABUT. 2 NORTHBOUND, NORTHEAST ENDPOST SHOWN,
 ABUT. 2 SOUTHBOUND, NORTHWEST ENDPOST SIMILAR)
 $\frac{3}{4}'' = 1'-0''$



PLAN - EXPANSION JOINT
 (ABUT. 2 NORTHBOUND, NORTHWEST ENDPOST SHOWN,
 ABUT. 2 SOUTHBOUND, NORTHEAST ENDPOST SIMILAR)
 $\frac{3}{4}'' = 1'-0''$



ELEVATION
 (ABUT. 2 SOUTHBOUND, NORTHWEST ENDPOST SHOWN,
 ABUT. 2 NORTHBOUND, NORTHEAST ENDPOST SIMILAR)
 $\frac{3}{4}'' = 1'-0''$



ELEVATION
 (ABUT. 2 NORTHBOUND, NORTHWEST ENDPOST SHOWN,
 ABUT. 2 SOUTHBOUND, NORTHEAST ENDPOST SIMILAR)
 $\frac{3}{4}'' = 1'-0''$

NOTE:
 1. FOR ENDPOST NOTES,
 SEE ENDPOST DETAILS III.

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	EMC	10\18	Checked	HCH	10\18
	Drawn	PEB	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

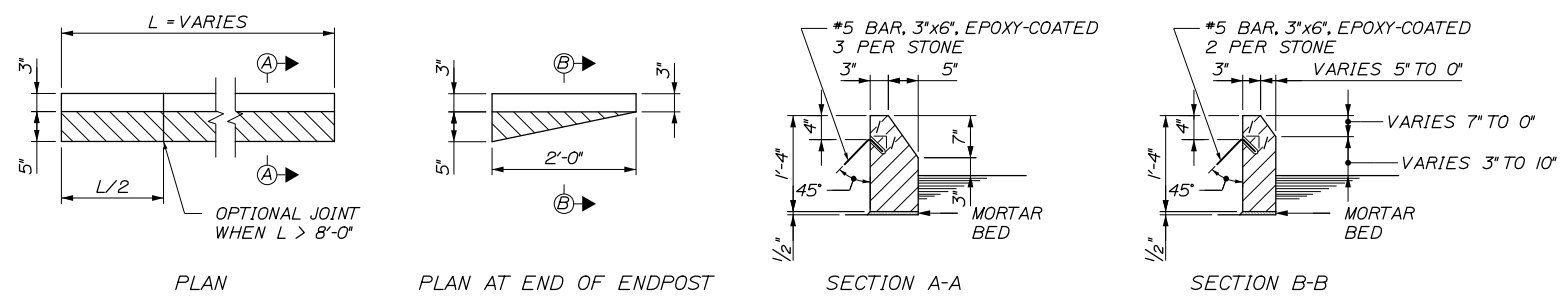
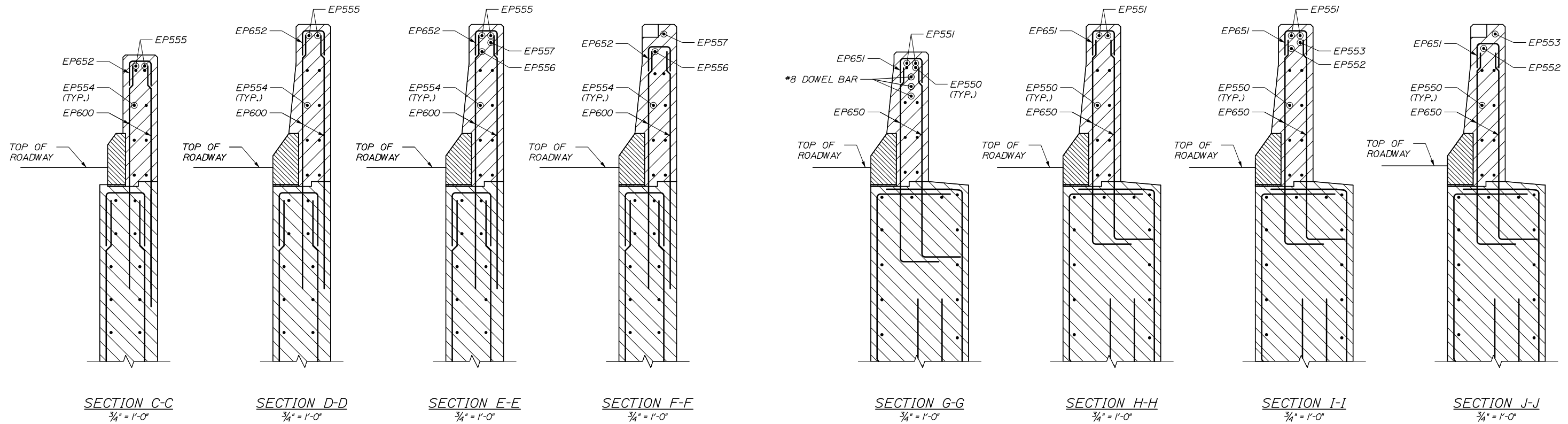
BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 ENDPOST DETAILS II

SHEET NUMBER: S-30
 81 OF 116

CONTRACT: 2019.09

Filename: 081_Endpost_Details 2.dgn

Date: 10/18/2018



ENDPOST GRANITE CURB DETAILS
3/4\" = 1'-0\"

NOTES:

1. THRIE BEAM CONNECTION PLATE SHALL BE SLEEVED THROUGH THE END POST. THE THRIE RAIL CONNECTION PLATE, THRIE RAIL TRANSITION AND INSTALLATION SHALL BE PAID UNDER ITEM 606.1723, "BRIDGE TRANSITION - TYPE III".
2. EXISTING CONCRETE END POST SHALL BE REMOVED AS SHOWN ON THE ABUTMENT DEMOLITION SHEETS. DEPTH TO BE FIELD VERIFIED BY THE CONTRACTOR. CONCRETE REMOVAL SHALL BE PAID UNDER ITEM 202.12, REMOVING EXISTING STRUCTURAL CONCRETE.
3. PROPOSED END POST CONCRETE INSTALLATION AND MATERIALS SHALL BE PAID UNDER ITEM 502.21, "STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS".
4. GRANITE CURB INSTALLATION AND MATERIALS SHALL BE PAID UNDER ITEM 609.15, "SLOPED CURB TYPE I".
5. FOR ENDPOST NOTES SEE "END POST DETAILS I" SHEET.
6. FOR WINGWALL REINFORCING SEE ABUTMENT REINFORCING SHEETS.
7. ENDPOST REINFORCING SHOWN APPLIES TO W1, W2, E1, AND E2 BARS.
8. ENDPOST REINFORCING DOES NOT INCLUDE SUBSTRUCTURE UNIT NOMINCLATURE FOR CLARITY (W1, W2, E1, E2).

Filename: 082_Endpost Details_3.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
Designed	EMC 10\18	Checked	HCH 10\18
Drawn	PEB 10\18	In Charge of	RAL 10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

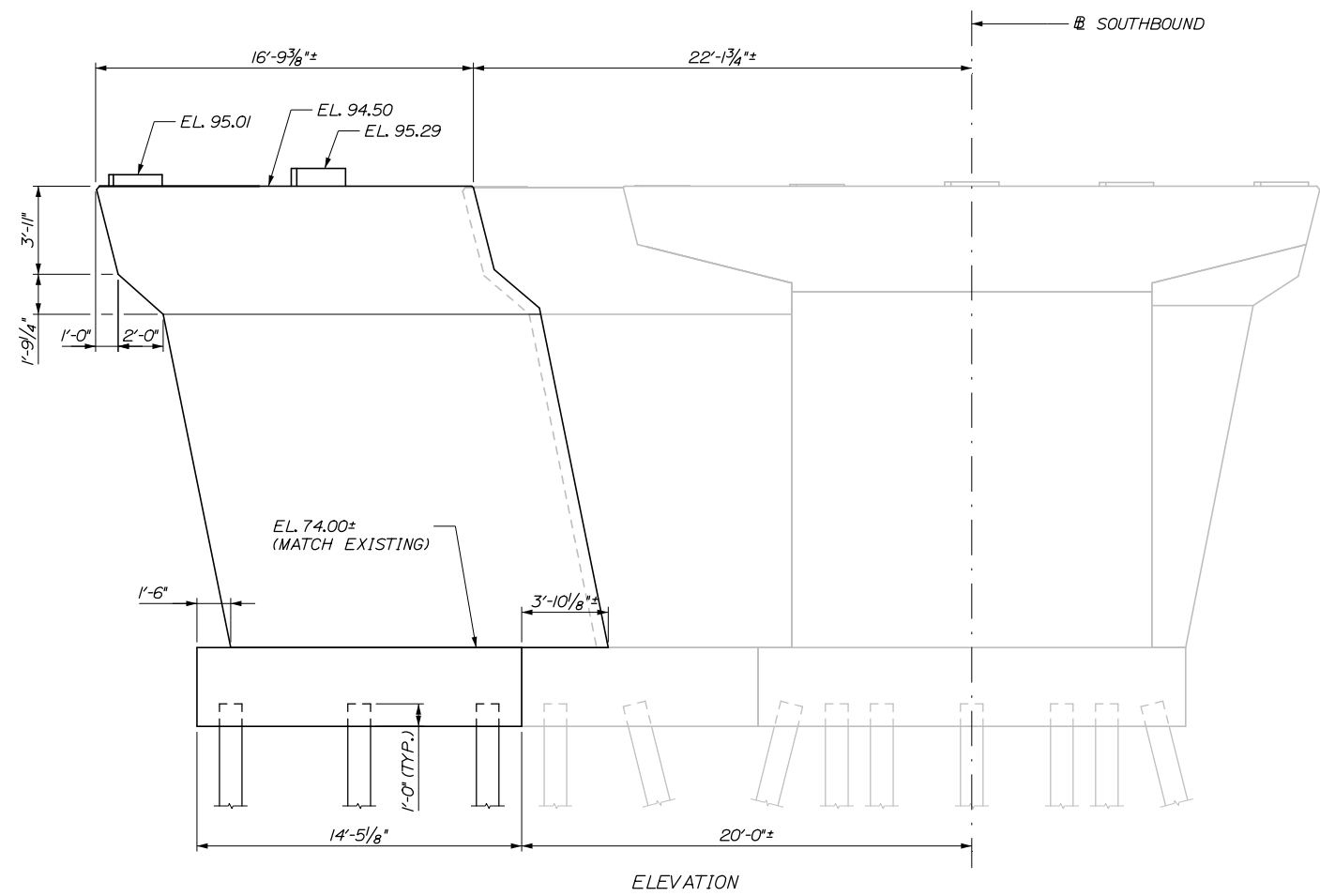
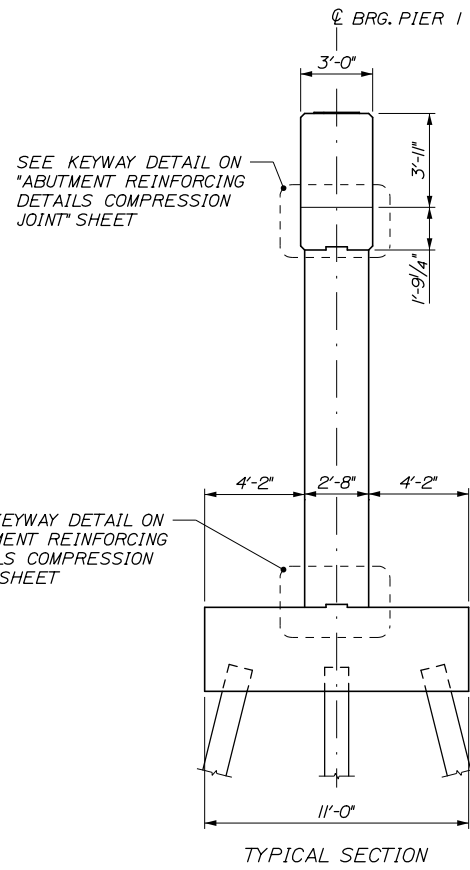
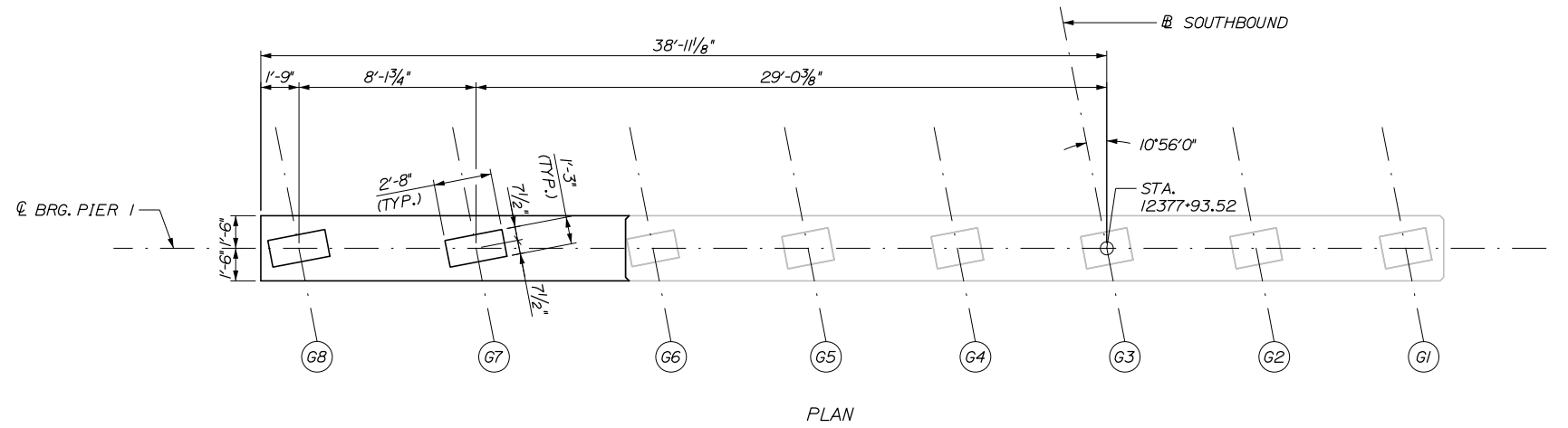
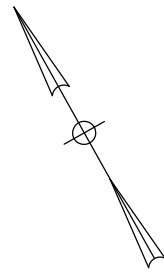
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

ENDPOST DETAILS III

SHEET NUMBER: S-31
CONTRACT: 2019.09
82 OF 116

Date: 10/18/2018

Filename: 083_Southbound Pier 1 Plan and Elevation.dgn




SOUTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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THE GOLD STAR
MEMORIAL HIGHWAY

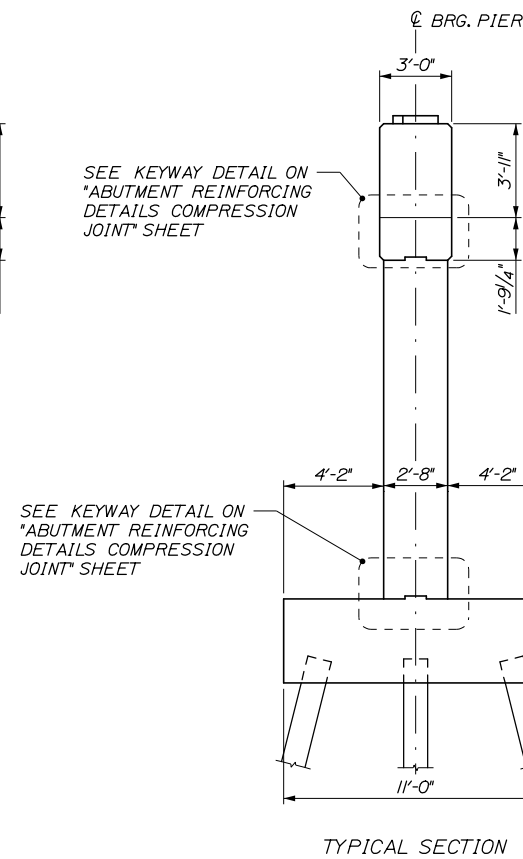
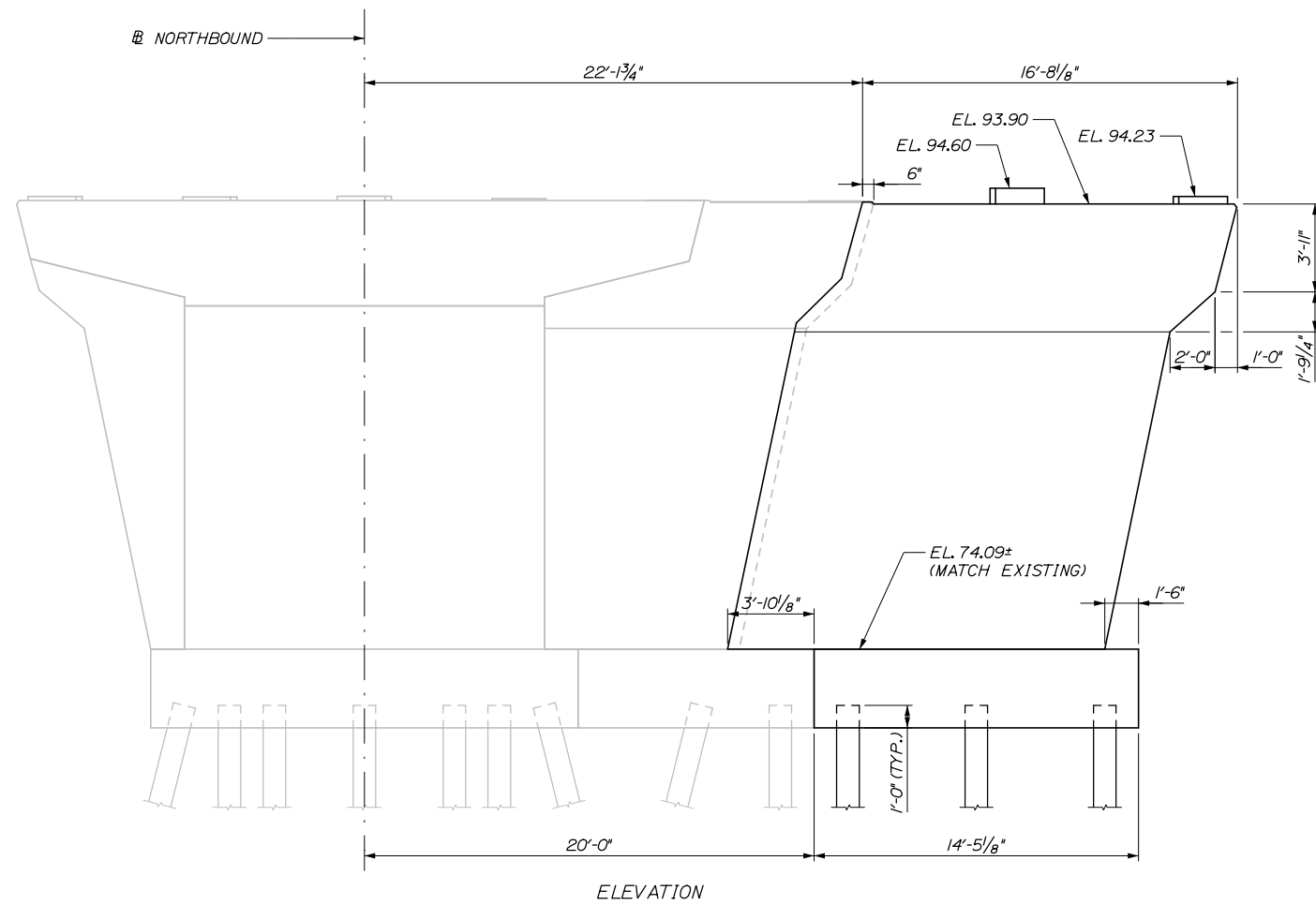
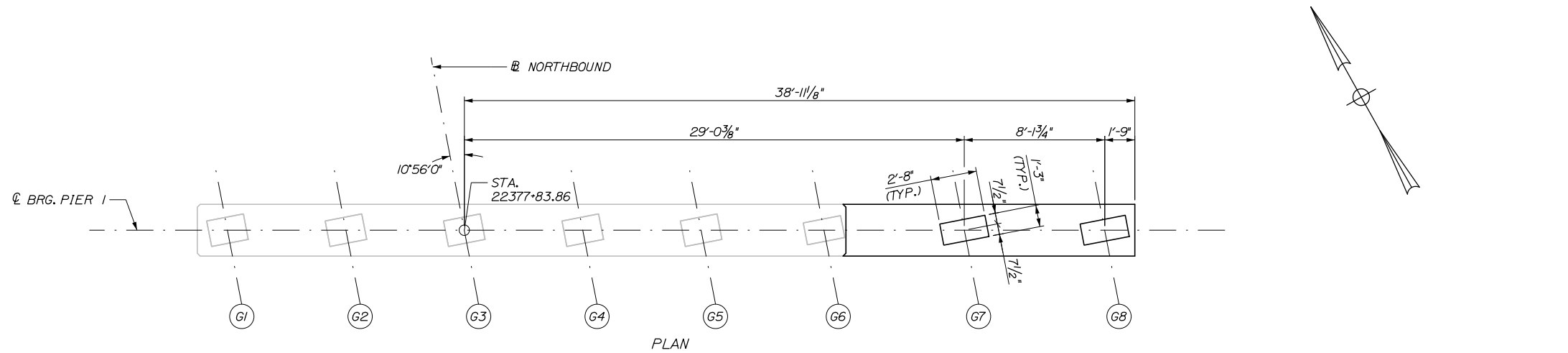
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SOUTHBOUND PIER 1
PLAN AND ELEVATION

SHEET NUMBER: S-32
CONTRACT: 2019.09
83 OF 116

Date: 10/18/2018

Filename: 084_Northbound Pier 1 Plan and Elevation.dgn



NORTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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FAX (207) 228-0909

**THE GOLD STAR
MEMORIAL HIGHWAY**

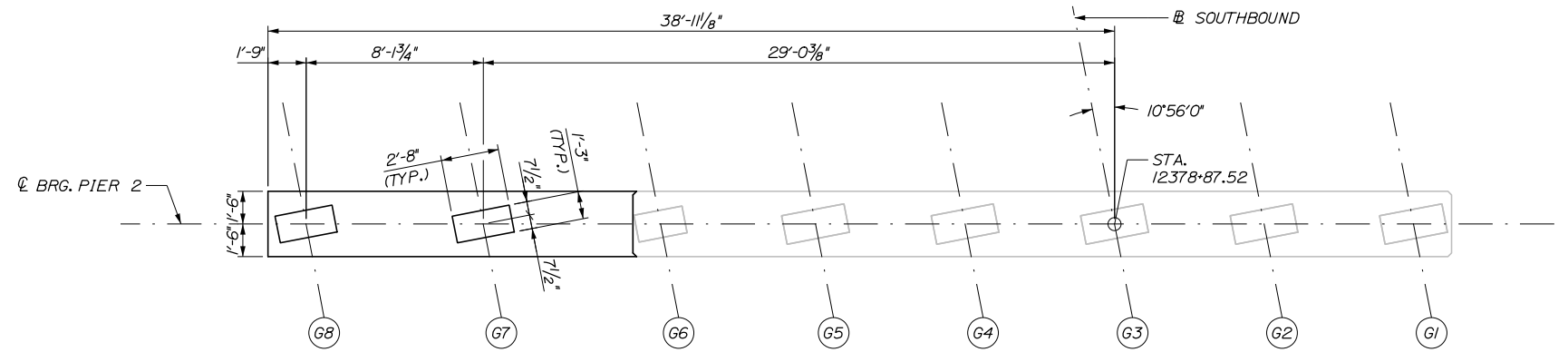
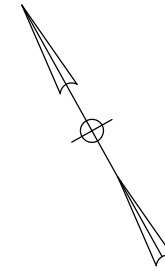
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
NORTHBOUND PIER 1
PLAN AND ELEVATION

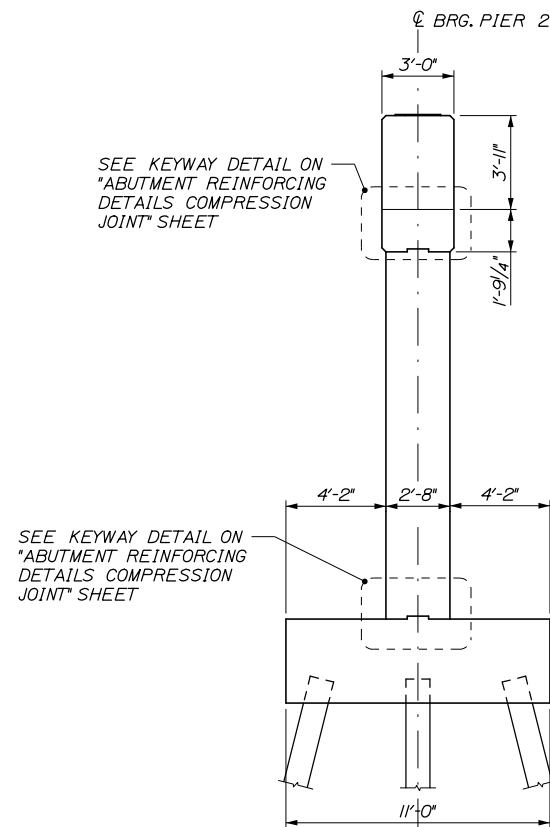
SHEET NUMBER: S-33
CONTRACT: 2019.09
84 OF 116

Date: 10/18/2018

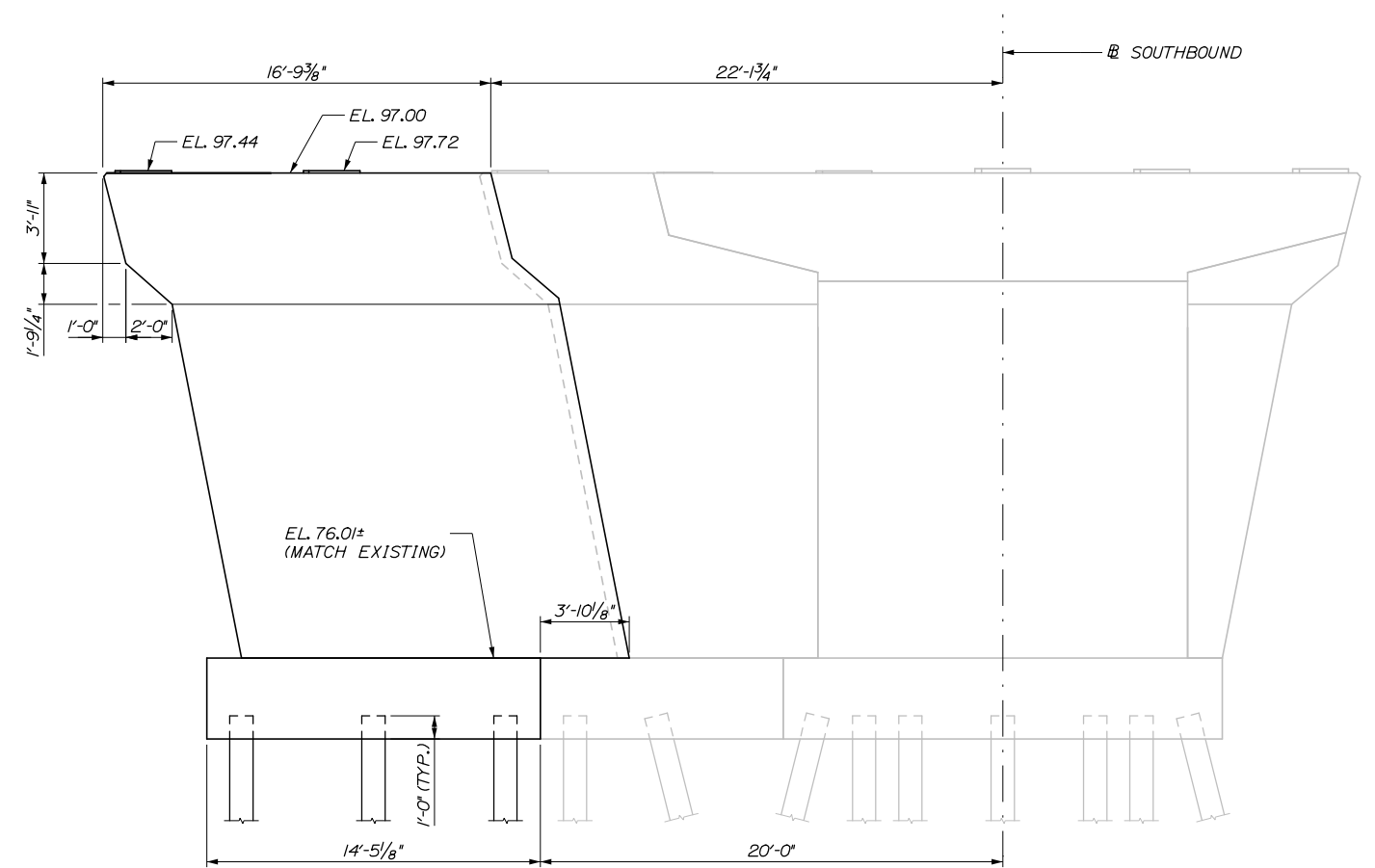
Filename: 085_Southbound Pier 2_Plan and Elevation.dgn



PLAN



TYPICAL SECTION



ELEVATION

SOUTHBOUND BRIDGE - PIER 2

1/4" = 1'-0"

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
By	Date	By	Date		
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

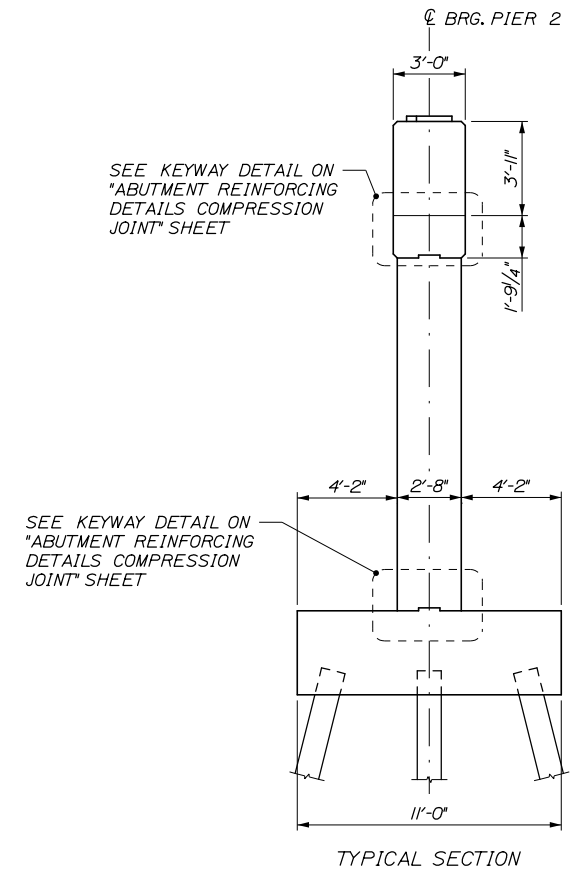
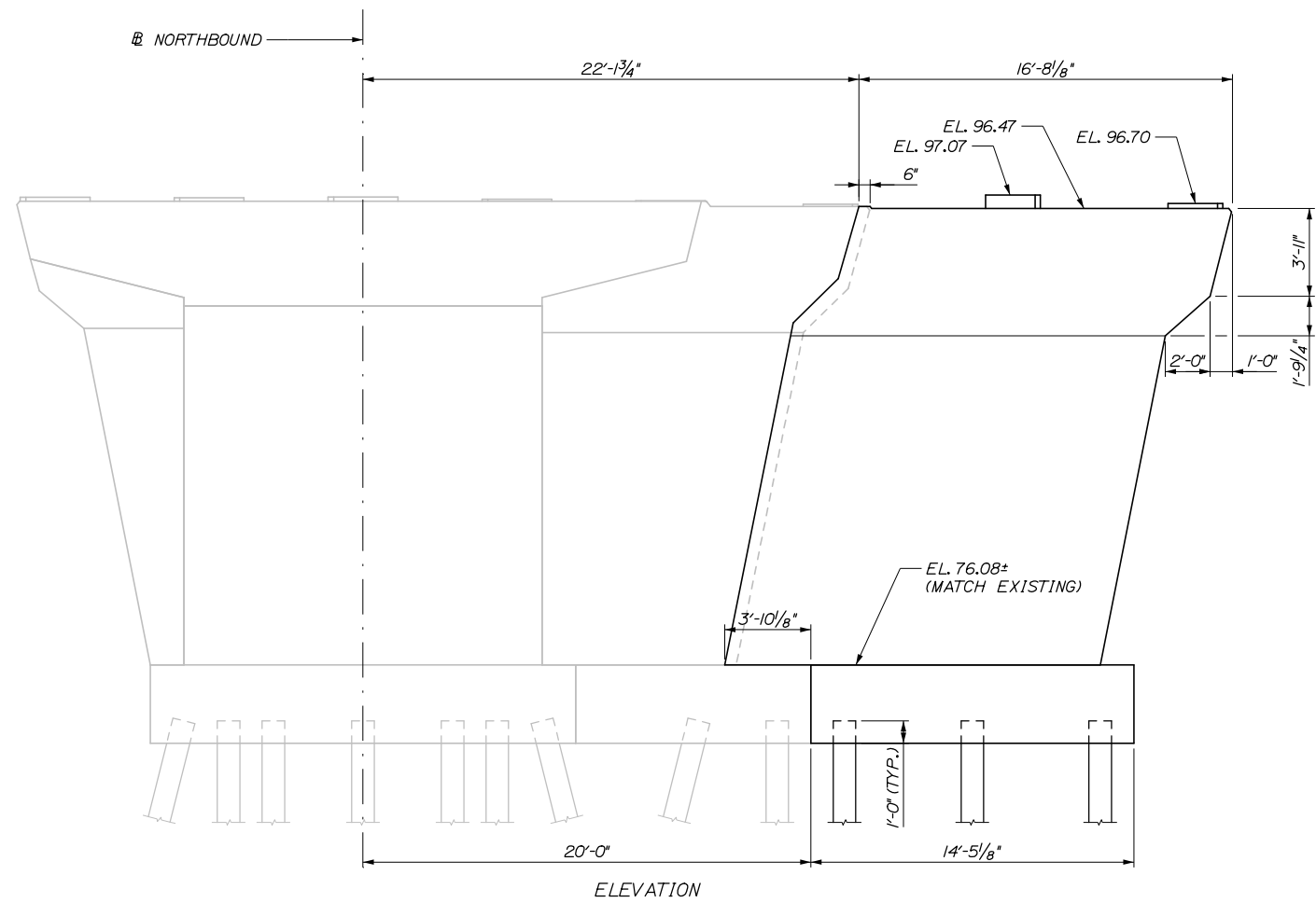
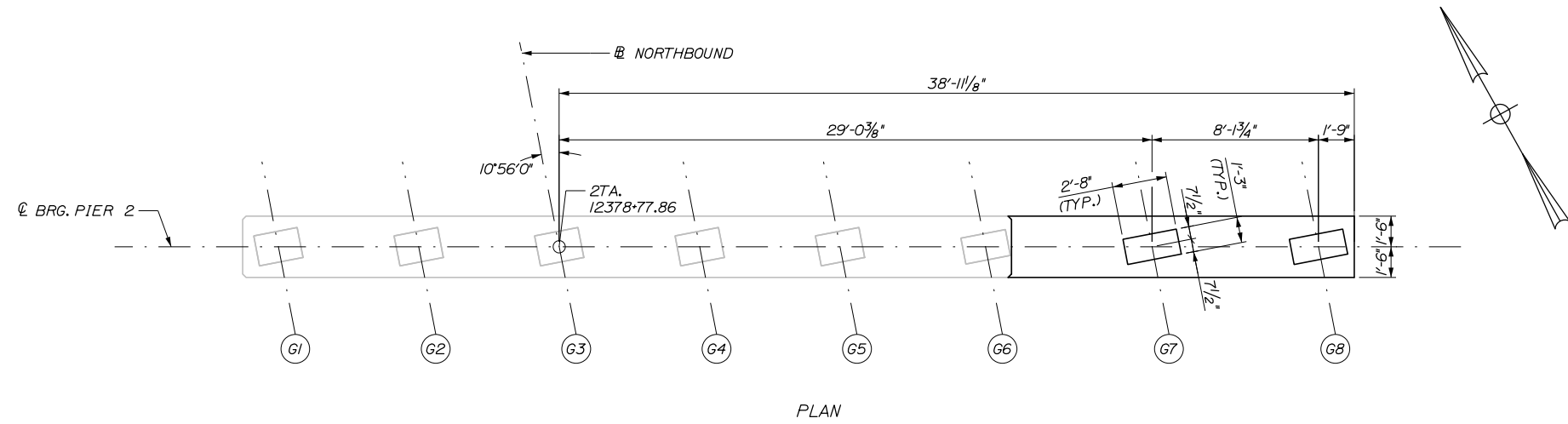
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 SOUTHBOUND PIER 2
 PLAN AND ELEVATION

SHEET NUMBER: S-34
 CONTRACT: 2019.09
 85 OF 116

Date: 10/18/2018

Filename: 086_Northbound Pier 2_Plan and Elevation.dgn



NORTHBOUND BRIDGE - PIER 2
1/4" = 1'-0"

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

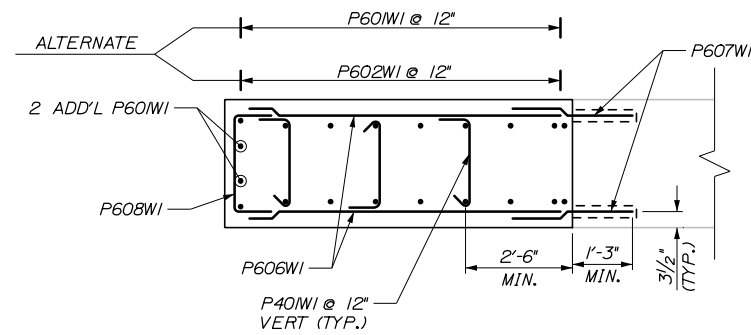
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
NORTHBOUND PIER 2
PLAN AND ELEVATION

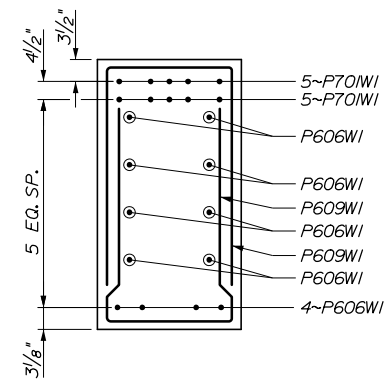
SHEET NUMBER: S-35
CONTRACT: 2019.09
86 OF 116

Date: 10/18/2018

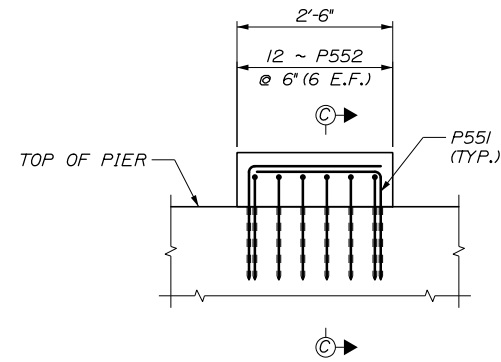
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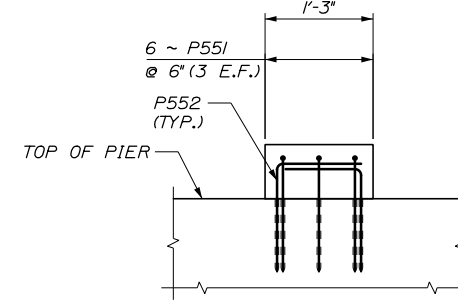
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



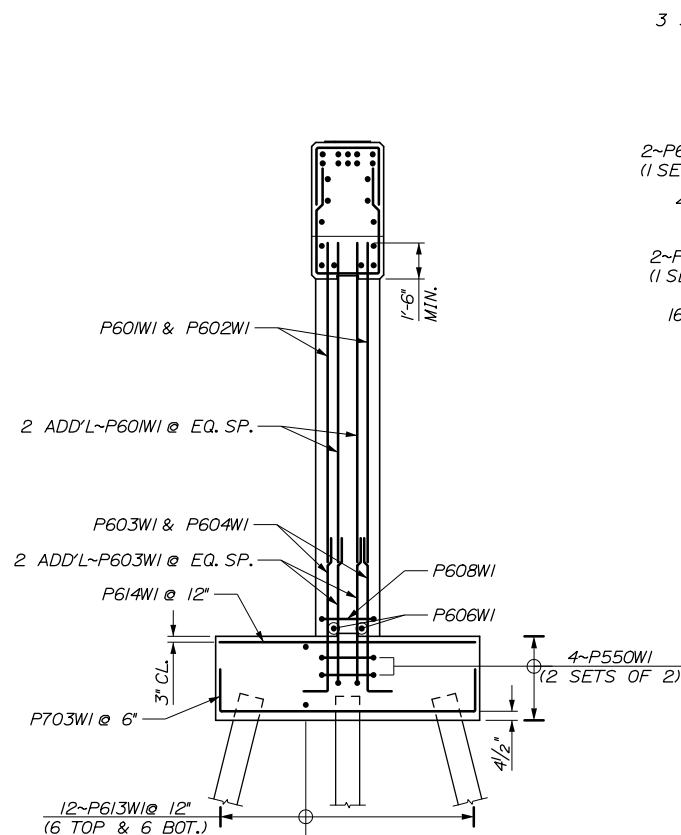
PIER REINFORCING ELEVATION
N.T.S.



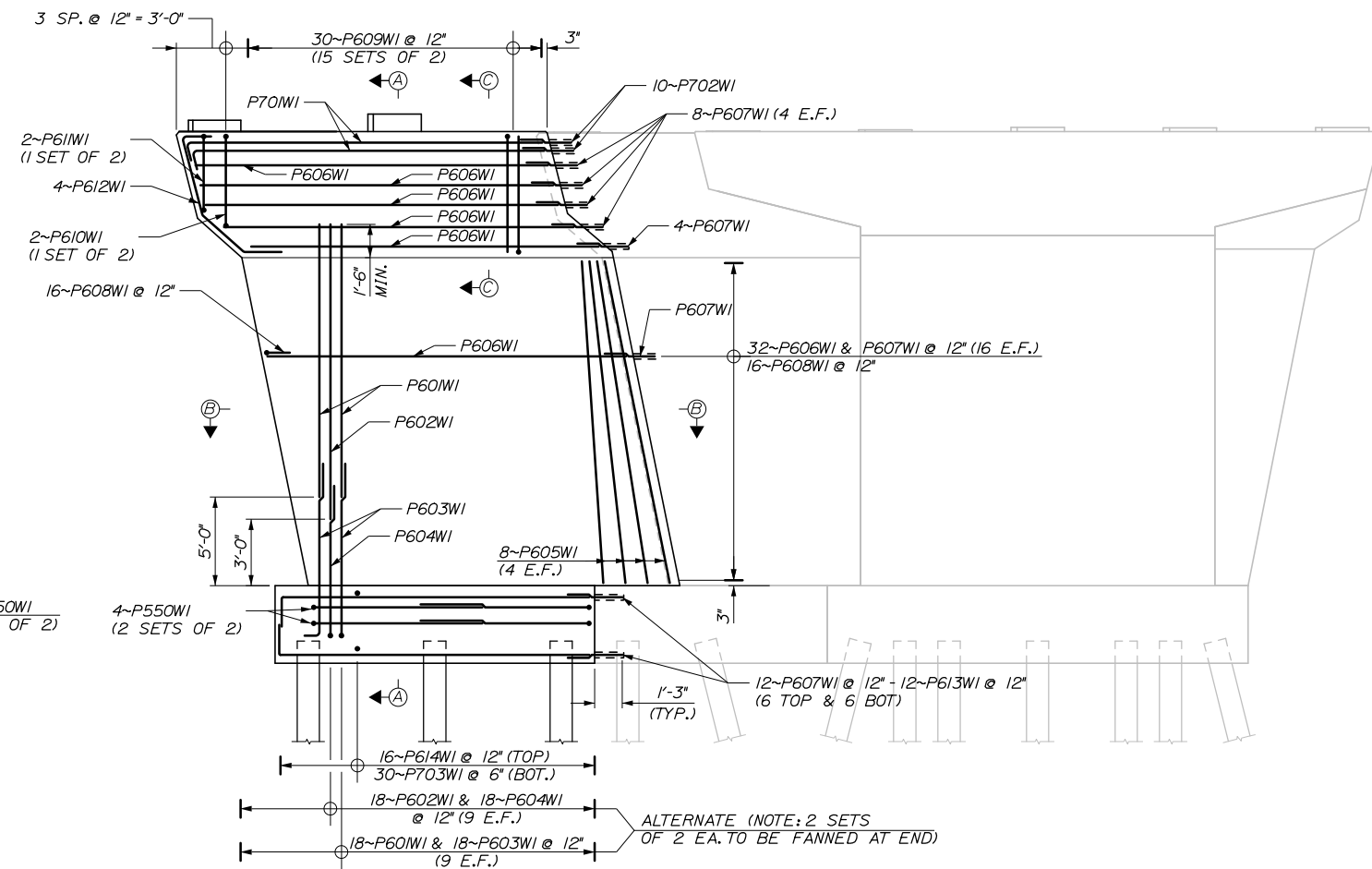
SECTION C-C
N.T.S.

NOTES:

1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:
 *6 BAR = 4'-4"
 *7 BAR = 5'-6"
2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR.
3. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.



SECTION A-A
1/4" = 1'-0"



SOUTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	EMC	10\18	Checked	HCH	10\18
	Drawn	PEB	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 SOUTHBOUND PIER 1
 REINFORCING

SHEET NUMBER: S-36
 CONTRACT: 2019.09
 87 OF 116

NOTES:

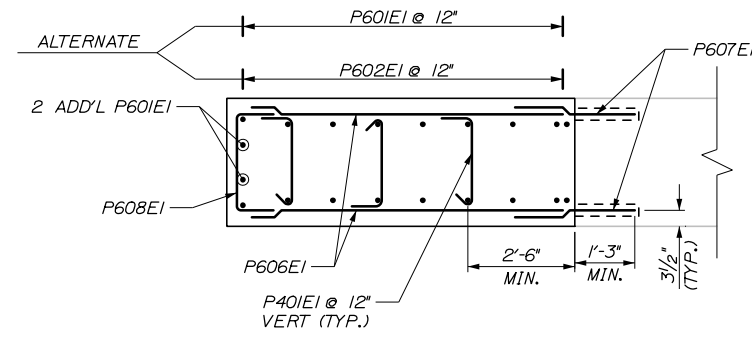
1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:

- *6 BAR = 4'-4"
- *7 BAR = 5'-6"

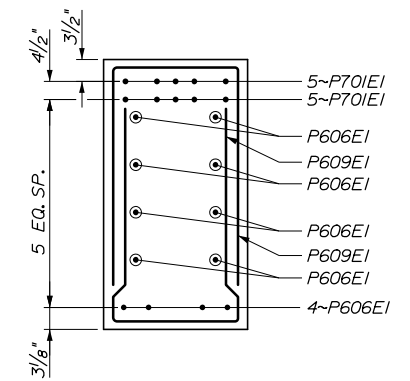
2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR, AS APPROVED BY THE RESIDENT.

3. FOR PEDESTAL REINFORCING DETAILS SEE "SOUTHBOUND PIER 1 REINFORCING".

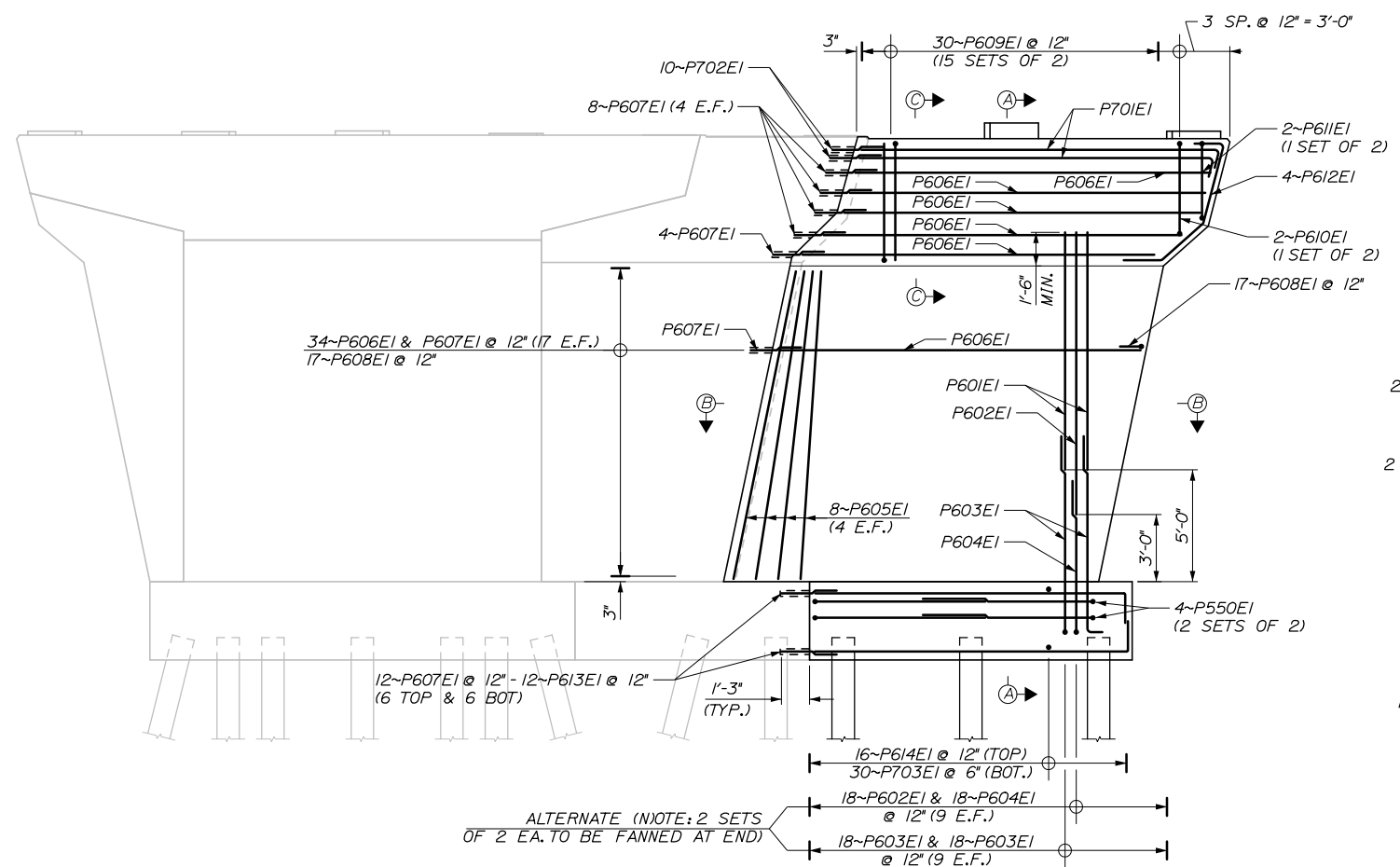
4. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.



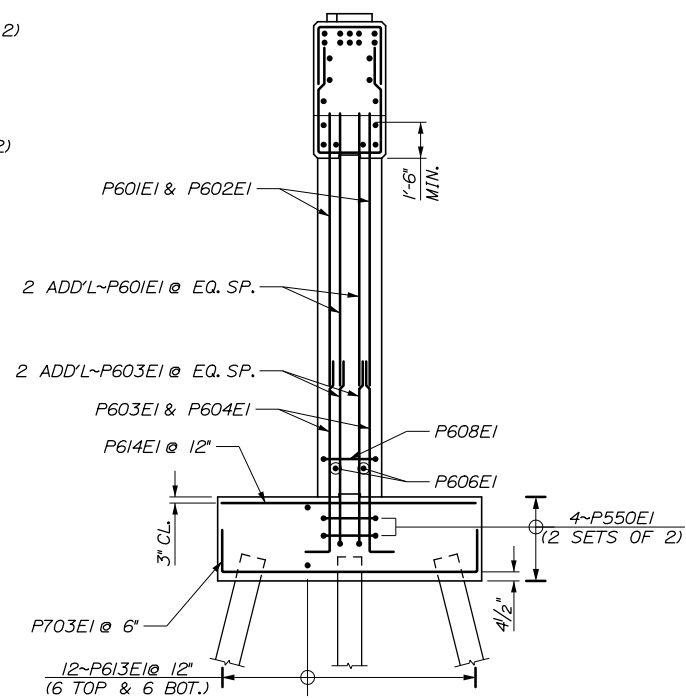
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



NORTHBOUND BRIDGE - PIER 1
1/4" = 1'-0"



SECTION A-A
1/4" = 1'-0"

Date: 10/18/2018
Filename: 088_Northbound Pier 1 Reinforcing.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

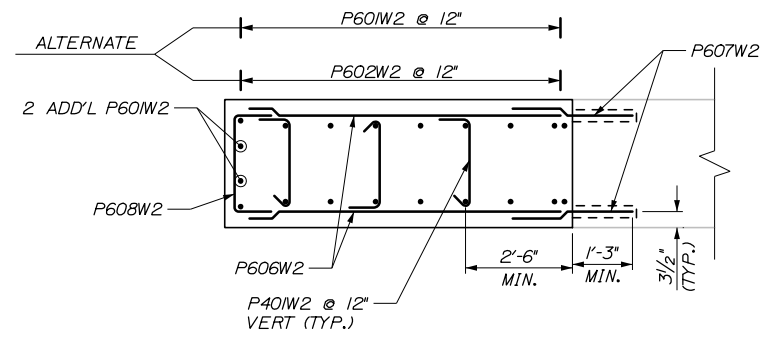
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
NORTHBOUND PIER 1
REINFORCING

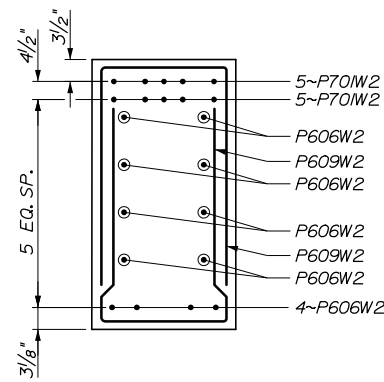
SHEET NUMBER: S-37
CONTRACT: 2019.09
88 OF 116

Date: 10/18/2018

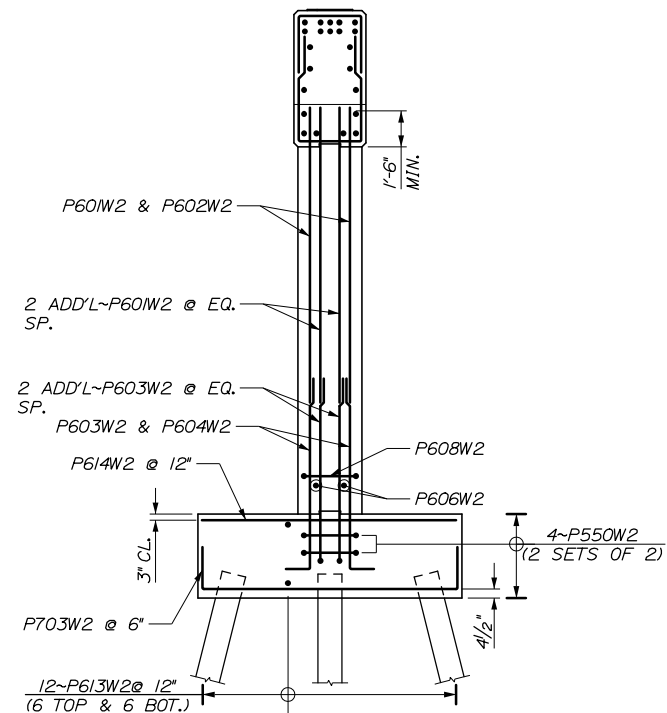
Filename: 089_Southbound Pier 2_Reinforcing.dgn



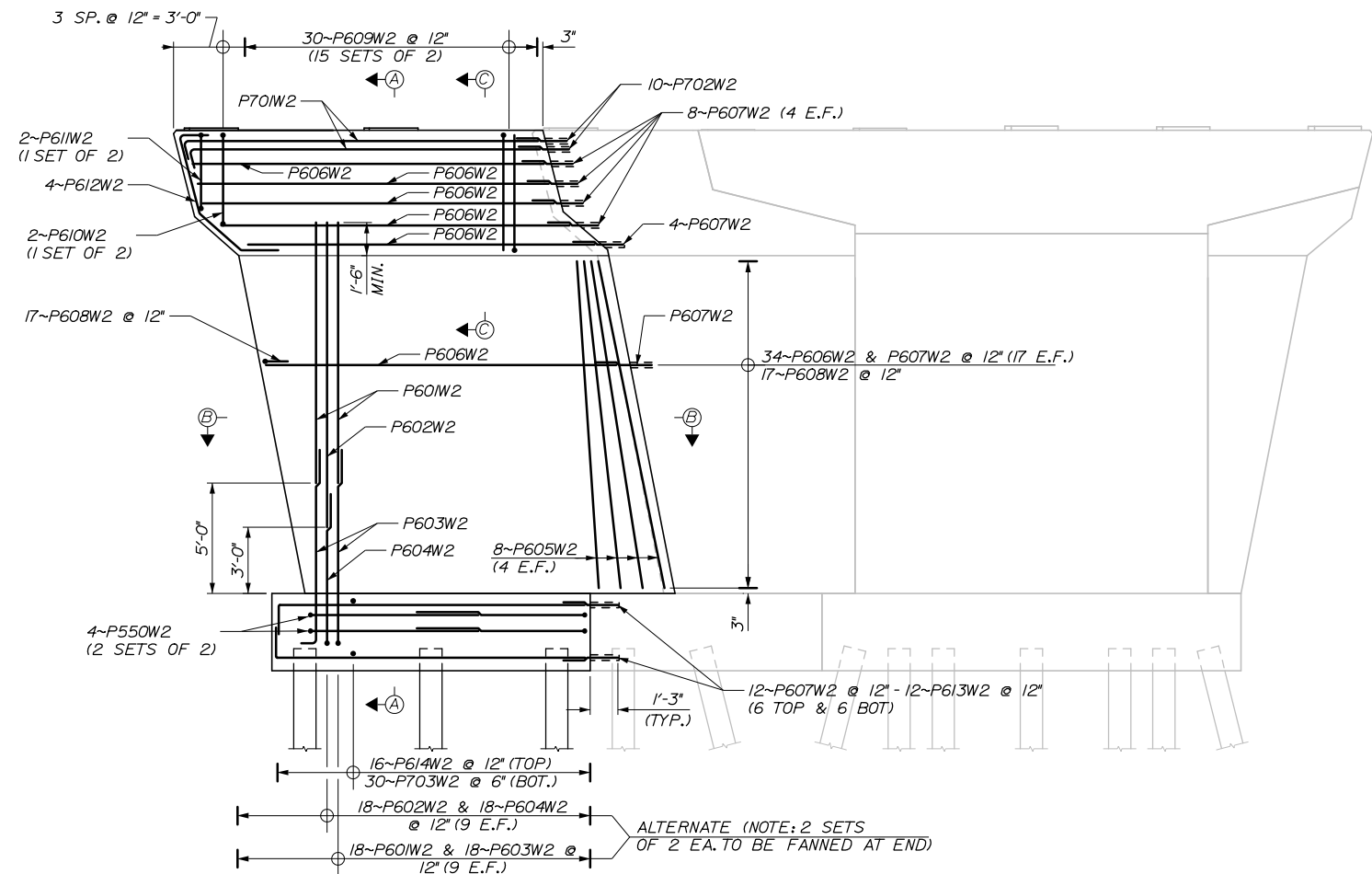
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



SECTION A-A
1/4" = 1'-0"



SOUTHBOUND BRIDGE - PIER 2
1/4" = 1'-0"

NOTES:

1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:
*6 BAR = 4'-4"
*7 BAR = 5'-6"
2. ADJUST PIER CAP BARS TO AVOID CONFLICTS WITH BEARING ANCHOR, AS APPROVED BY THE RESIDENT.
3. FOR PEDESTAL REINFORCING DETAILS SEE "SOUTHBOUND PIER 1 REINFORCING".
4. REINFORCING BARS SHALL BE SHIFTED TO AVOID CONFLICTS WITH PILES.

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

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				Westbrook, ME 04092			
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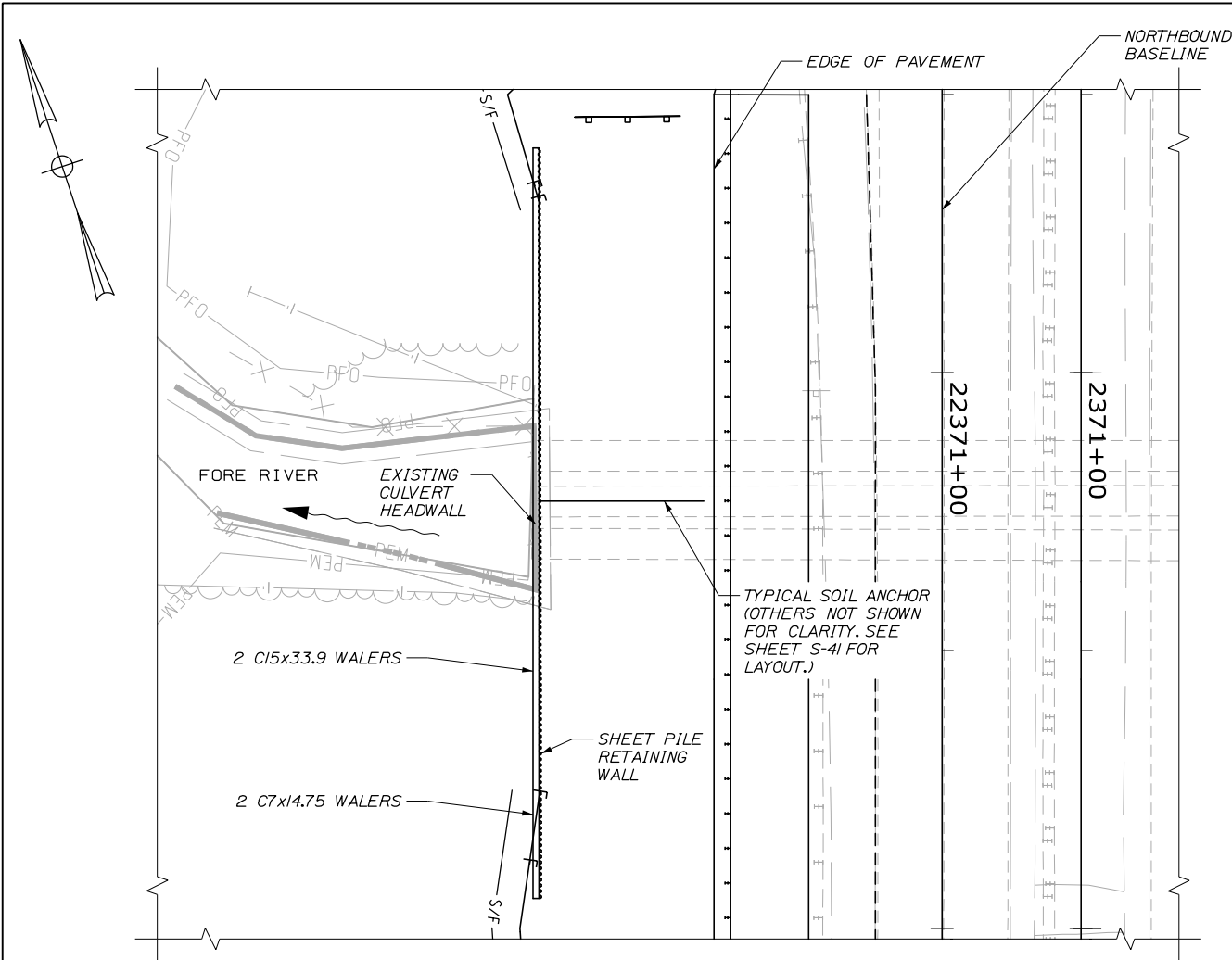
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SOUTHBOUND PIER 2
REINFORCING

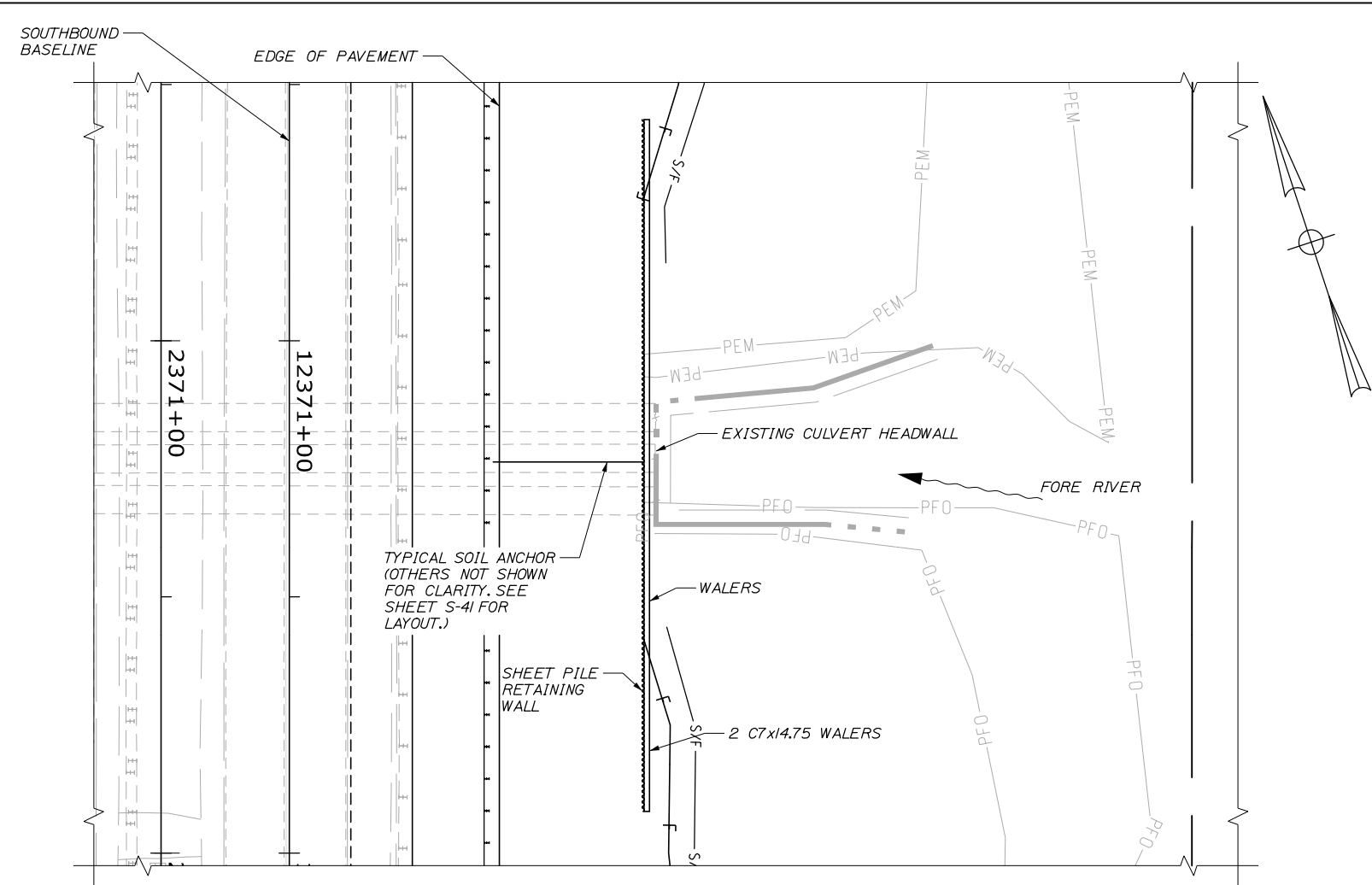
SHEET NUMBER: S-38
CONTRACT: 2019.09
89 OF 116

Date: 10/18/2018



PLAN - EAST CULVERT END

1/16" = 1'-0"



PLAN - WEST CULVERT END

1/16" = 1'-0"

NOTES:

1. STEEL SHEETING TO BE PAID UNDER ITEM 501.301 - STEEL SHEET PILING. COST AND INSTALLATION OF WALERS, ANCHORS, AND CONNECTION TO CULVERT HEADWALL ARE INCIDENTAL TO THIS ITEM. SEE SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND FOUNDATIONS.
3. THE CONTRACTOR SHALL IMPLEMENT THE APPROVED VIBRATION AND DISPLACEMENT MONITORING PROGRAM PRIOR TO STARTING WORK.
4. THE CONTRACTOR SHALL FURNISH STEEL SHEETPILE IN ACCORDANCE WITH ASTM A572 GRADE 50.
5. THE CONTRACTOR SHALL FURNISH WALERS IN ACCORDANCE WITH ASTM A572 GRADE 50.
6. THE CONTRACTOR SHALL FURNISH TIEBACKS IN ACCORDANCE WITH ASTM A615 GRADE 75 WITH DOUBLE CORROSION PROTECTION ENCAPSULATION.
7. THE CONTRACTOR SHALL FURNISH GROUT WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5 KSI.
8. THE CONTRACTOR SHALL PERFORM PERFORMANCE LOAD TESTING TO 0.8 TIMES THE NOMINAL RESISTANCE REQUIRED ON FIVE PERCENT OF GROUND ANCHORS OR A MINIMUM OF THREE GROUND ANCHORS, WHICHEVER IS GREATER.
9. THE CONTRACTOR SHALL PERFORM PROOF LOAD TESTING ON THE REMAINING ANCHORS THAT ARE NOT PERFORMANCE LOAD TESTED TO 0.65 TIMES THE NOMINAL RESISTANCE REQUIRED.
10. AFTER THE COMPLETION OF PERFORMANCE AND PROOF LOAD TESTS, THE CONTRACTOR SHALL LOCK OFF GROUND ANCHORS TO 0.6 TIMES THE NOMINAL RESISTANCE.
11. THE CONTRACTOR SHALL USE COMPACTION EQUIPMENT ADJACENT TO THE WALL WITH A MAXIMUM 240 PSF SURCHARGE.

Filename: 091_Fore River Culvert 1.dgn

Scale:				Designed by:					
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No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE
TURNPIKE

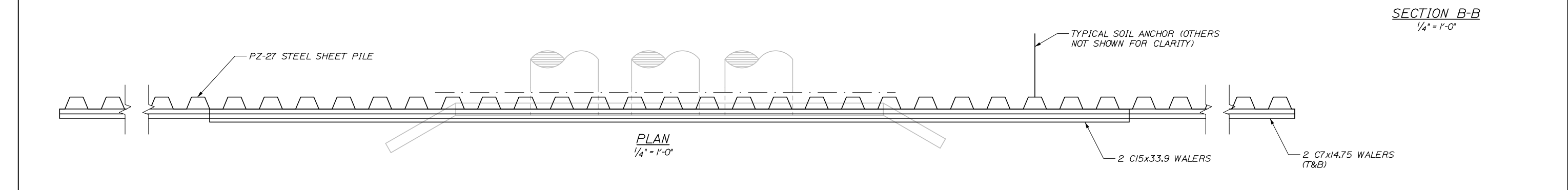
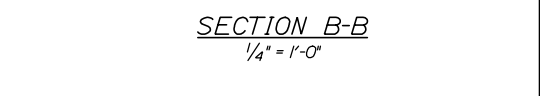
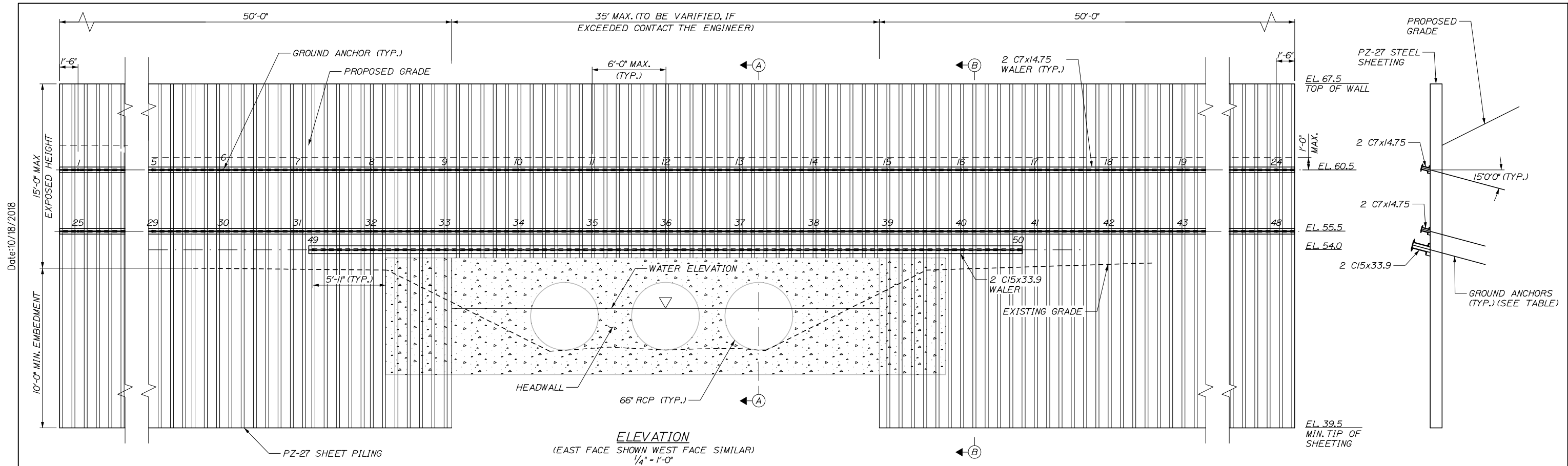
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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
FORE RIVER CULVERT I

SHEET NUMBER: S-40
CONTRACT: 2019.09
91 OF 116



- NOTES:**
- FOR SECTION A-A SEE SHEET S-42
 - WATER ELEVATION SHOWN AS APPROXIMATE AND REFLECTS WATER LEVEL AT TIME OF THE INSPECTION IN JULY 2016.
 - THE CONTRACTOR SHALL INSTALL GROUND ANCHORS AT 5 DEGREES BELOW HORIZONTAL AT LOCATIONS ABOVE THE EXISTING CULVERT.

SEQUENCE OF CONSTRUCTION

- INSTALL SHEETPILE THAT IS NOT LOCATED ABOVE THE CULVERT.
- BACKFILL BEHIND SHEETING UP TO 1 FOOT ABOVE THE MIDDLE ROW GROUND ANCHOR ELEVATION, AND INSTALL MIDDLE WALER.
- INSTALL, TEST, AND LOCKOFF MIDDLE ROW OF GROUND ANCHORS, WHICH ARE NOT LOCATED OVER THE CULVERT.
- INSTALL REMAINING SEGMENT OF SHEETPILE LOCATED OVER CULVERT, INTERLOCKED INTO BOTH PREVIOUSLY INSTALLED SEGMENTS OF SHEETPILE.
- INSTALL BOTTOM WALER. INSTALL, TEST, AND LOCKOFF BOTTOM ROW OF GROUND ANCHORS.
- BACKFILL BEHIND SHEETING UP TO 1 FOOT ABOVE THE MIDDLE ROW GROUND ANCHOR ELEVATION ALONG THE REMAINING SEGMENT OVER THE CULVERT AND INSTALL MIDDLE WALER.
- INSTALL MIDDLE ROW OF GROUND ANCHORS REMAINING OVER THE CULVERT.
- BACKFILL BEHIND SHEETING UP TO 1 FOOT ABOVE THE TOP ROW GROUND ANCHOR ELEVATION AND INSTALL TOP WALER.
- INSTALL, TEST, AND LOCKOFF TOP ROW OF GROUND ANCHORS.
- COMPLETE FINAL GRADING.

ROW	NO. OF ANCHORS	MAXIMUM ANCHOR SPACING (FT.)	INCLINATION BELOW HORIZONTAL (SEE NOTE 13) (DEGREES)	UNBONDED LENGTH (FT)	BONDED LENGTH (FT)	NOMINAL RESISTANCE REQUIRED (kips)	FACTORED RESISTANCE REQUIRED (kips)	LOCK OFF LOAD REQUIRED (SEE NOTE 12) (kips)
1 (TOP)	24	6	15	15	35	110	72	66
2 (MIDDLE)	24	6	15	15	40	126	82	76
3 (BOTTOM)	2	46.5	15	15	30	94	61	56

Filename: 092_Fore River Culvert 2.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

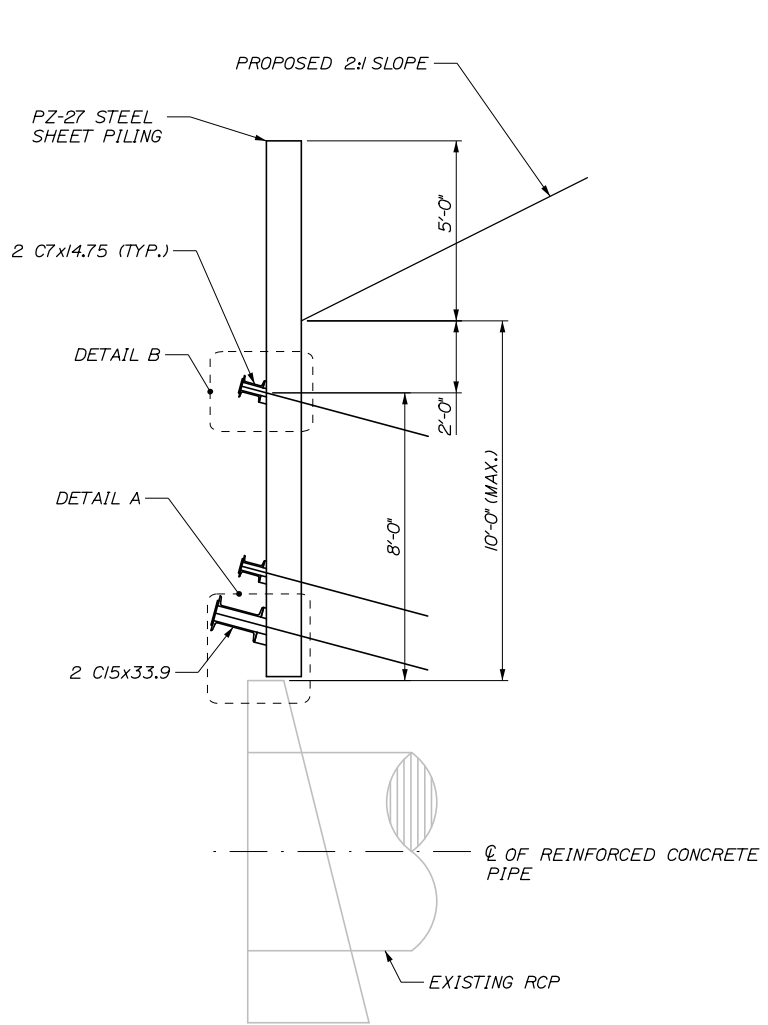
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 FORE RIVER CULVERT II

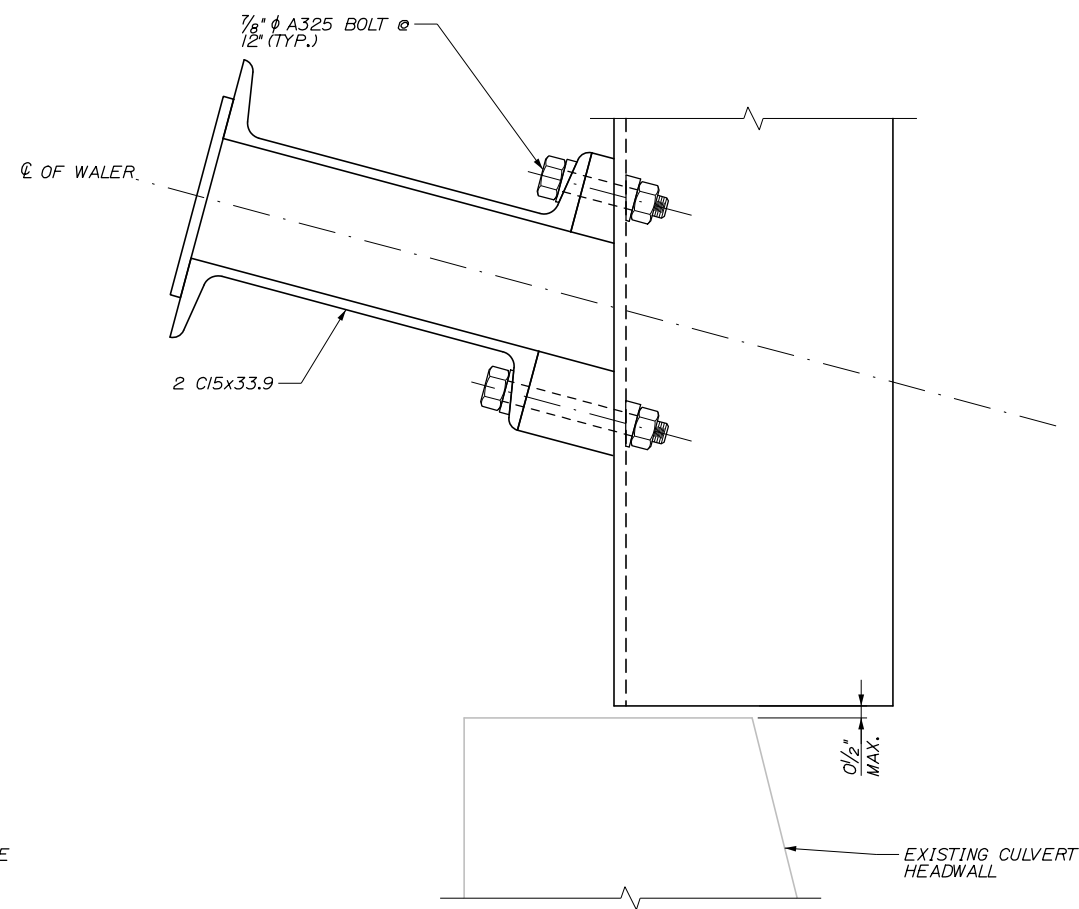
SHEET NUMBER: S-41
 CONTRACT: 2019.09
 92 OF 116

Date: 10/18/2018

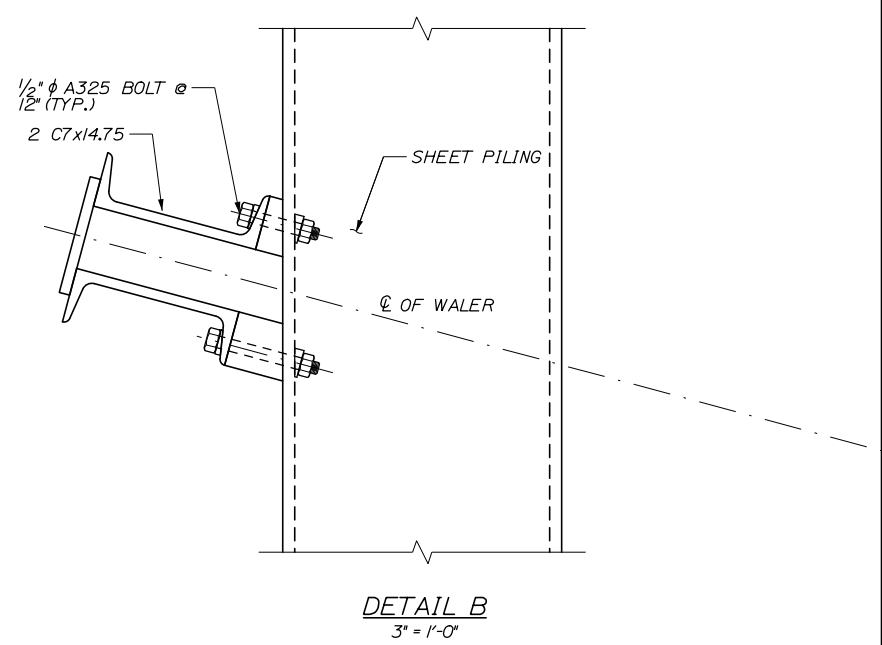
Filename: 093_Fore River Culvert 3.dgn



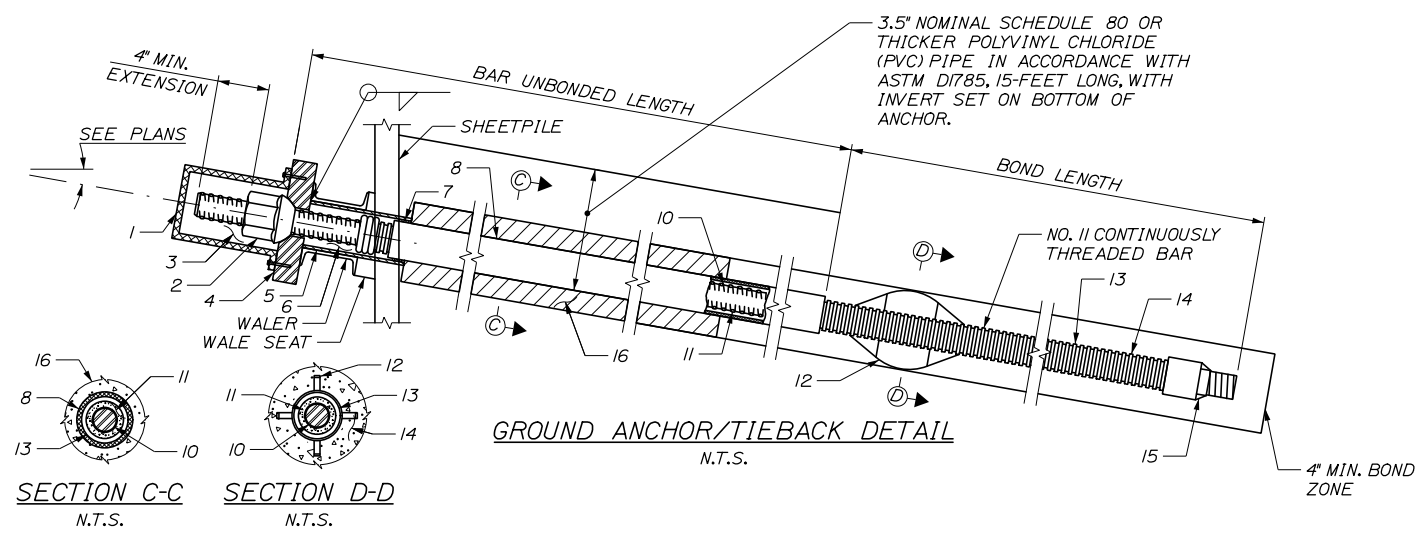
SECTION A-A
3/8" = 1'-0"



DETAIL A
3" = 1'-0"



DETAIL B
3" = 1'-0"



GROUND ANCHOR/TIEBACK DETAIL
N.T.S.

1. ANCHORAGE COVER
2. NUT
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. ANTICORROSION GREASE
7. SEAL
8. SMOOTH PVC BOND BREAKER
9. PROTECTED BAR COUPLER
10. BAR TENDON
11. ENCAPSULATION GROUT
12. CENTRALIZERS
13. CORRUGATED PVC
14. ANCHOR GROUT
15. END CAP
16. NONSTRUCTURAL FILLER

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
	EMC	10\18	
	Checked	HCH	10\18
	By	Date	
	Drawn	PEB	10\18
	In Charge of	RAL	10\18

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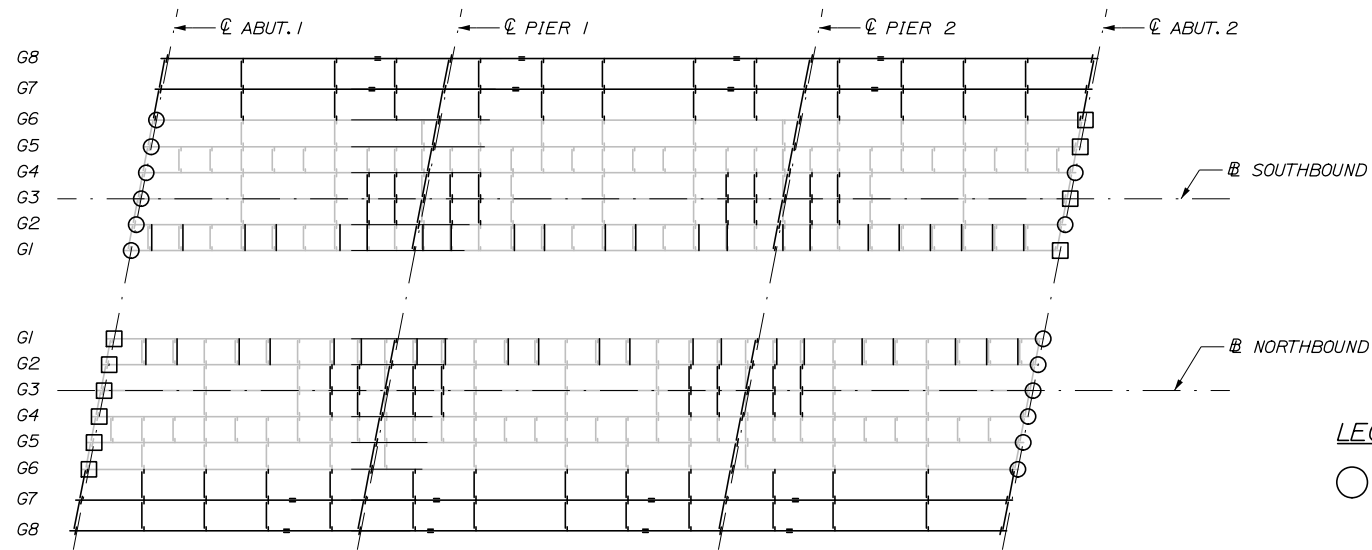
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
FORE RIVER CULVERT III

SHEET NUMBER: S-42
CONTRACT: 2019.09
93 OF 116

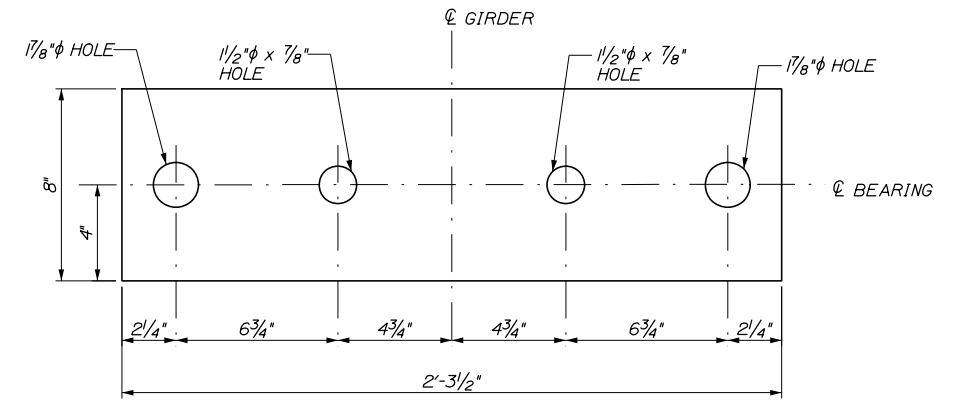
Date: 10/18/2018



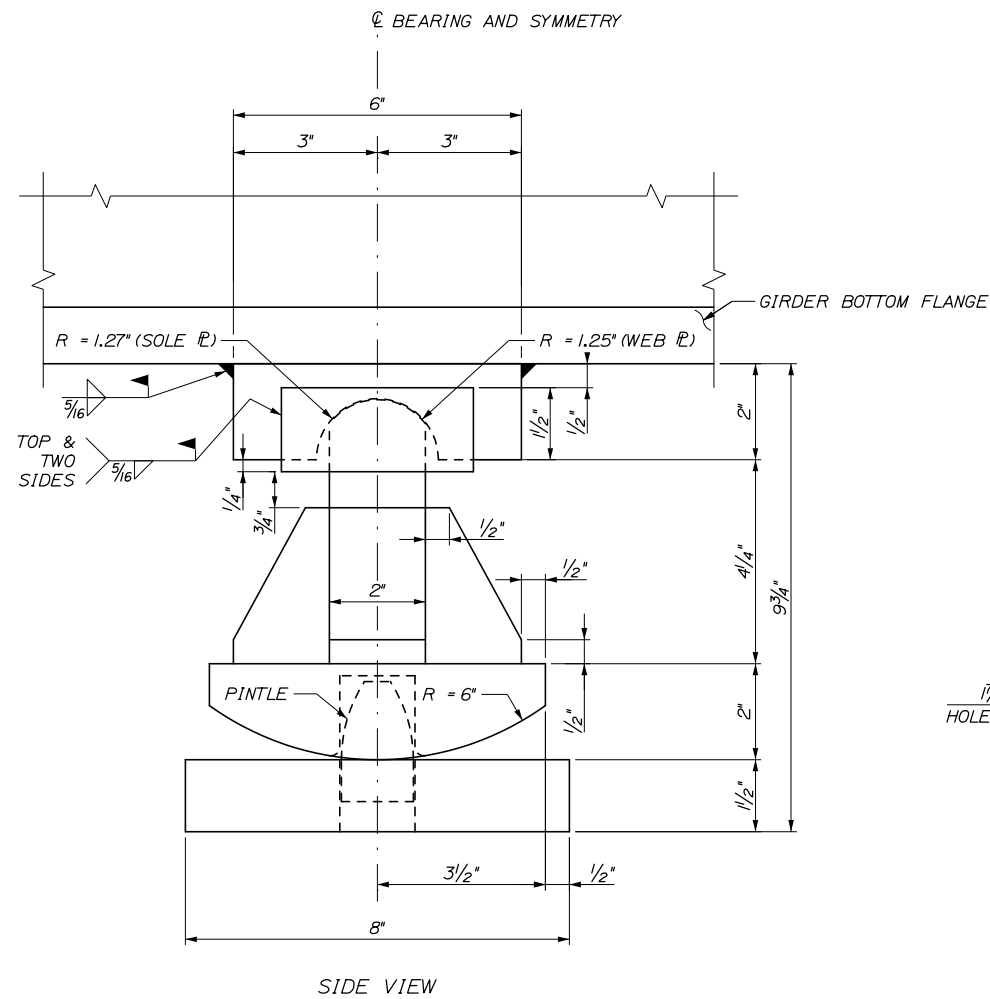
BEARING LAYOUT LEGEND
N.T.S.

LEGEND

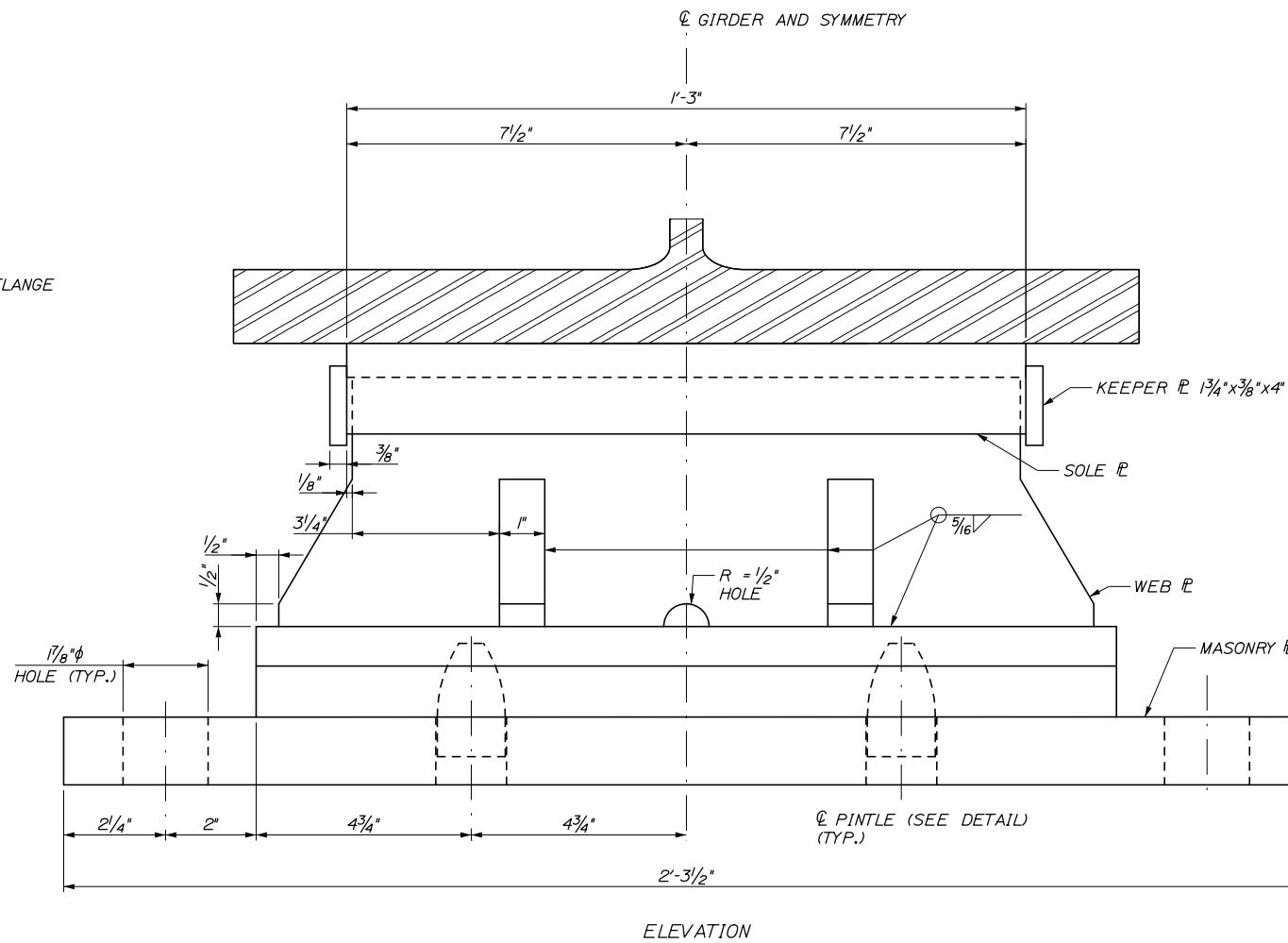
- CLEAN & PAINT BEARING (PAID UNDER ITEM 523.56)
- CLEAN, PAINT, AND RESET BEARING (PAID UNDER ITEM 523.561)



MASONRY PLATE
3' = 1'-0"

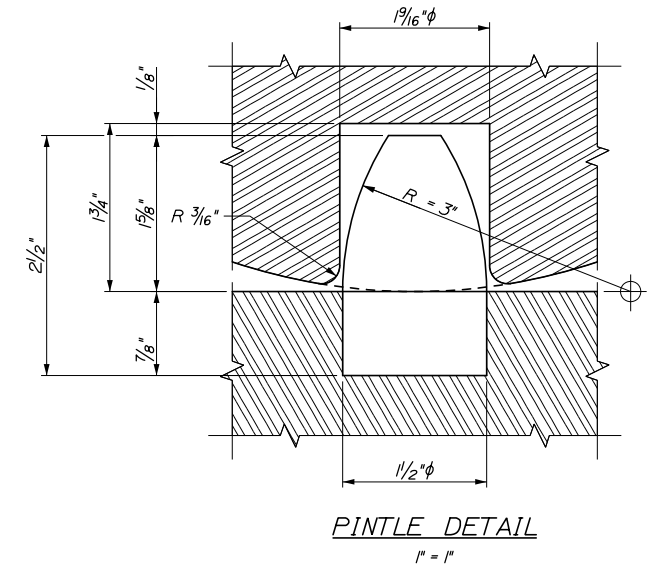


SIDE VIEW



ELEVATION

EXPANSION BEARING AT ABUTMENTS
(8 REQUIRED, PROPOSED GIRDER LOCATIONS)
6' = 1'-0"



PINTLE DETAIL
1" = 1"

NOTES:

1. PINTLES SHALL BE PRESS FIT.
2. UPSET THE THREADS OF THE ANCHOR RODS AFTER ASSEMBLY.
3. ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED ON THE EMBEDDED PORTION OF THE ROD.
4. ALL STEEL FOR ROCKER BEARING ASSEMBLIES SHALL CONFORM TO ASTM A709, GRADE 50 AND SHALL BE GALVANIZED AFTER FABRICATION. CHARPY V-NOTCH TESTS ARE NOT REQUIRED FOR STEEL USED IN BEARINGS.

Filename: 094_Bearing Details 1.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

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HNTB			
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	By	Date	
	EMC	10\18	
	Checked	HCH	10\18
	By	Date	
	Drawn	PEB	10\18
	In Charge of	RAL	10\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

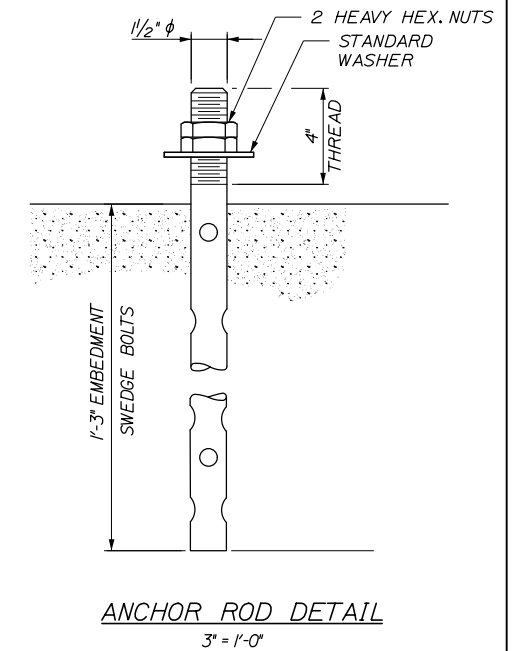
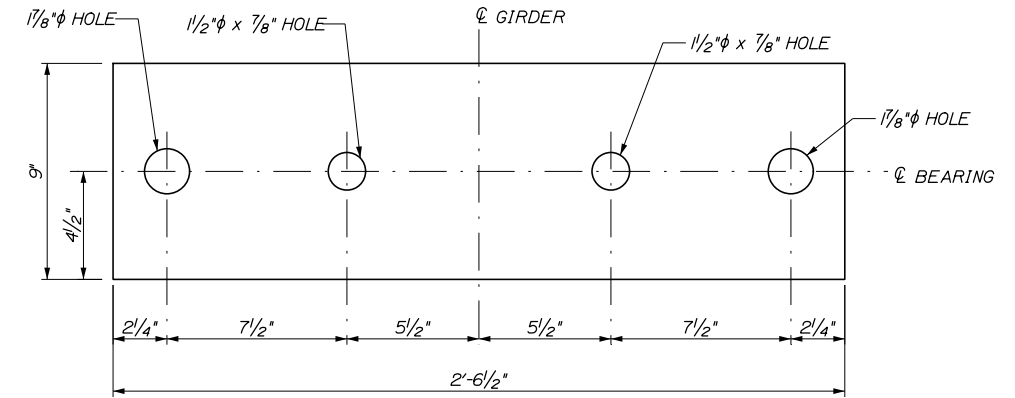
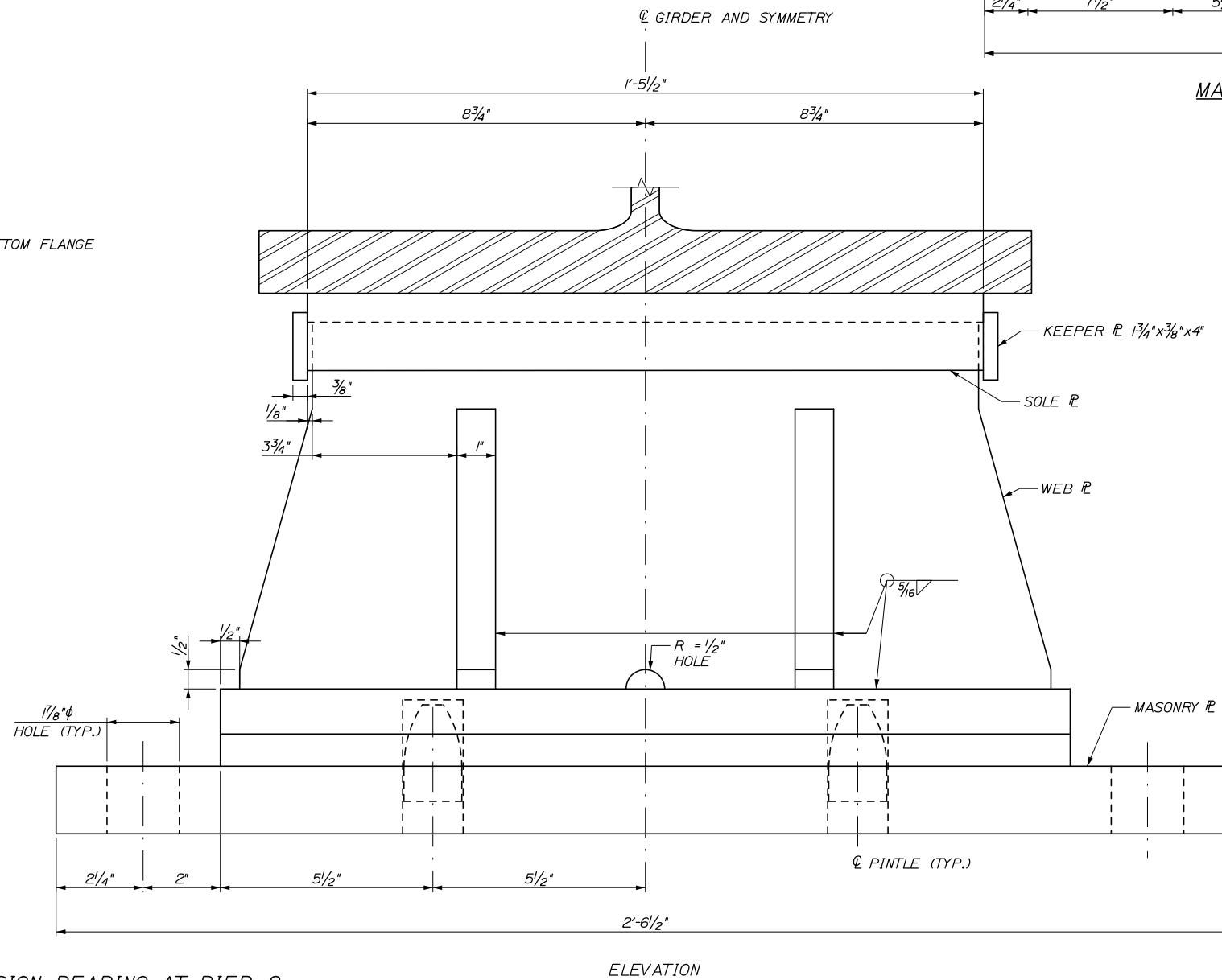
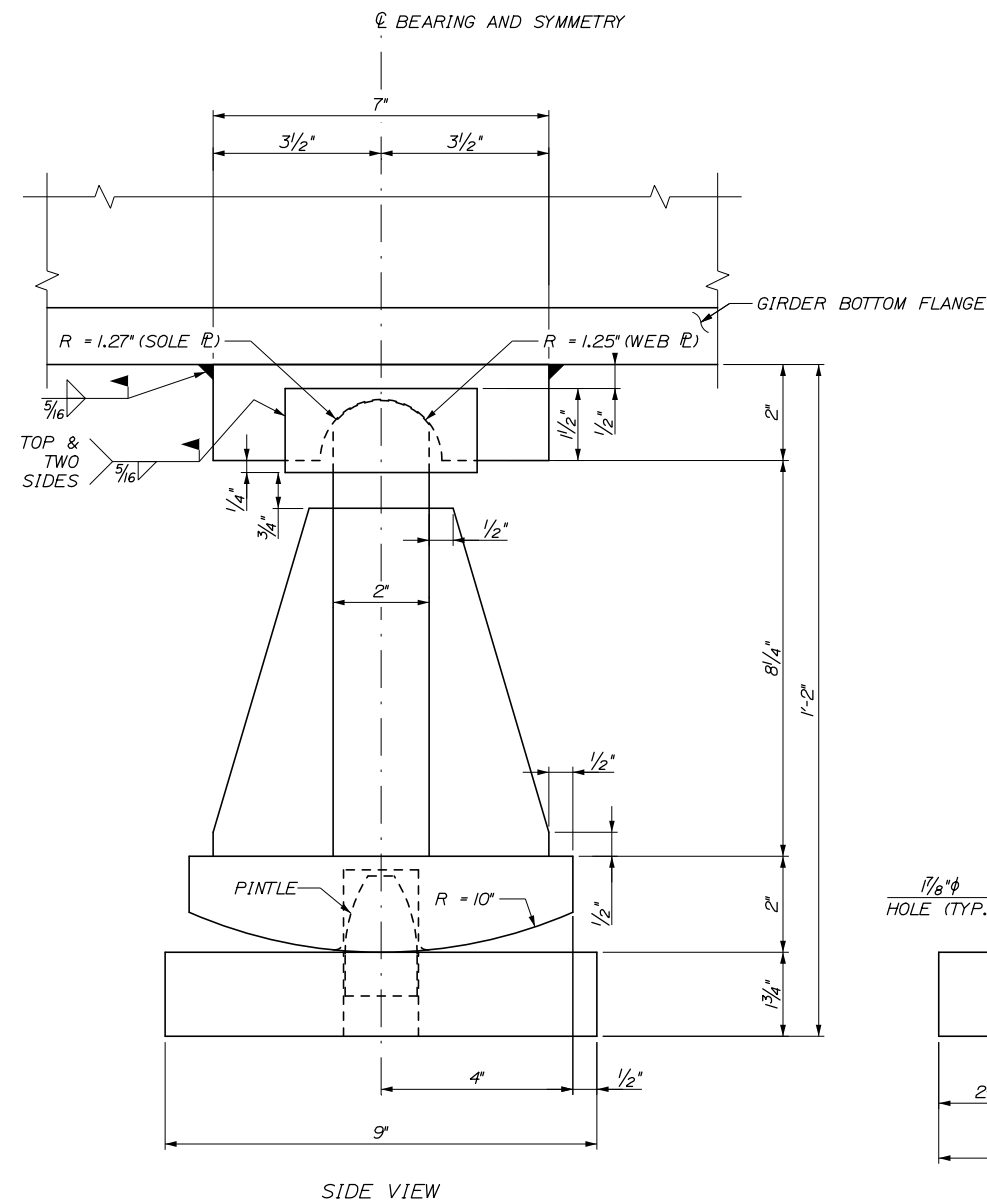
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
BEARING DETAILS I

SHEET NUMBER: S-43
CONTRACT: 2019.09
94 OF 116

Date: 10/18/2018

NOTES:
 1. FOR NOTES AND PINTLE DETAIL SEE BEARING DETAILS I.



EXPANSION BEARING AT PIER 2
 (4 REQUIRED, PROPOSED GIRDER LOCATIONS)
 6" = 1'-0"

Filename: 095_Bearing Details 2.dgn

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

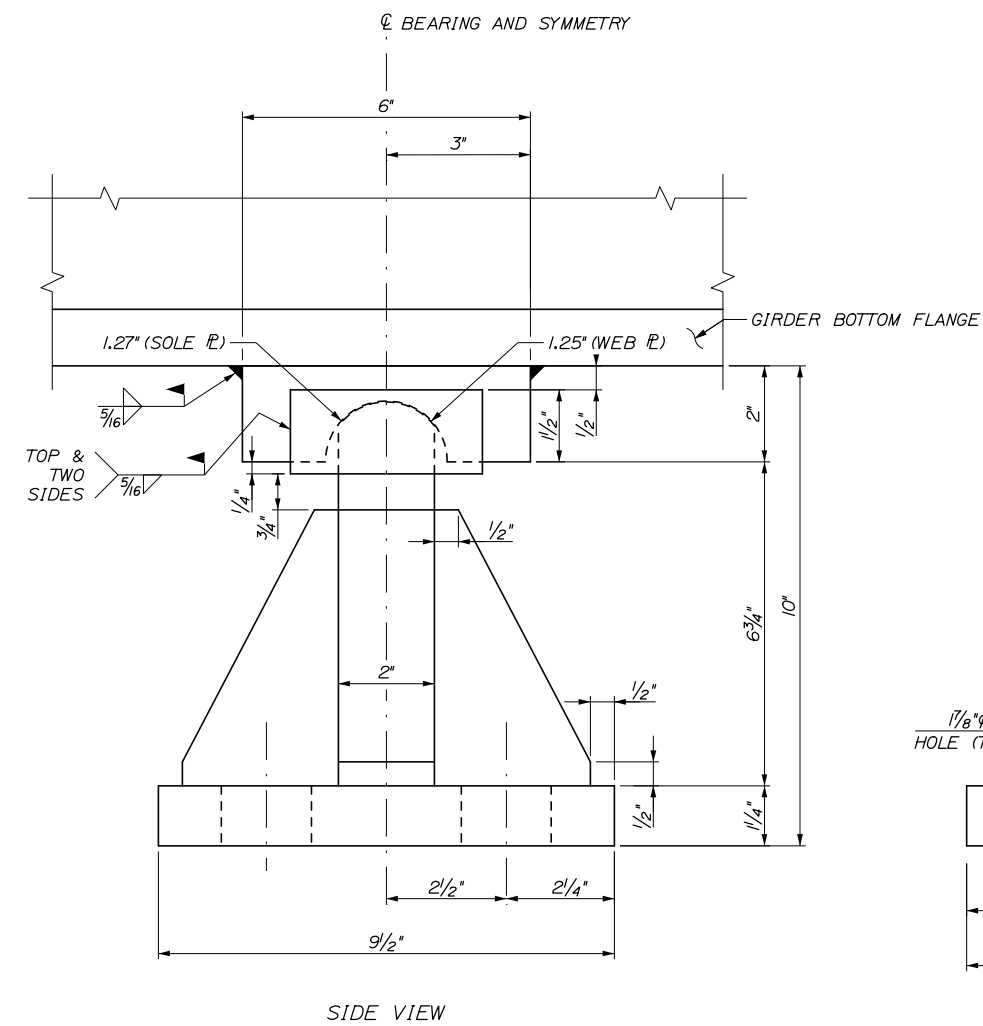
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 BEARING DETAILS II

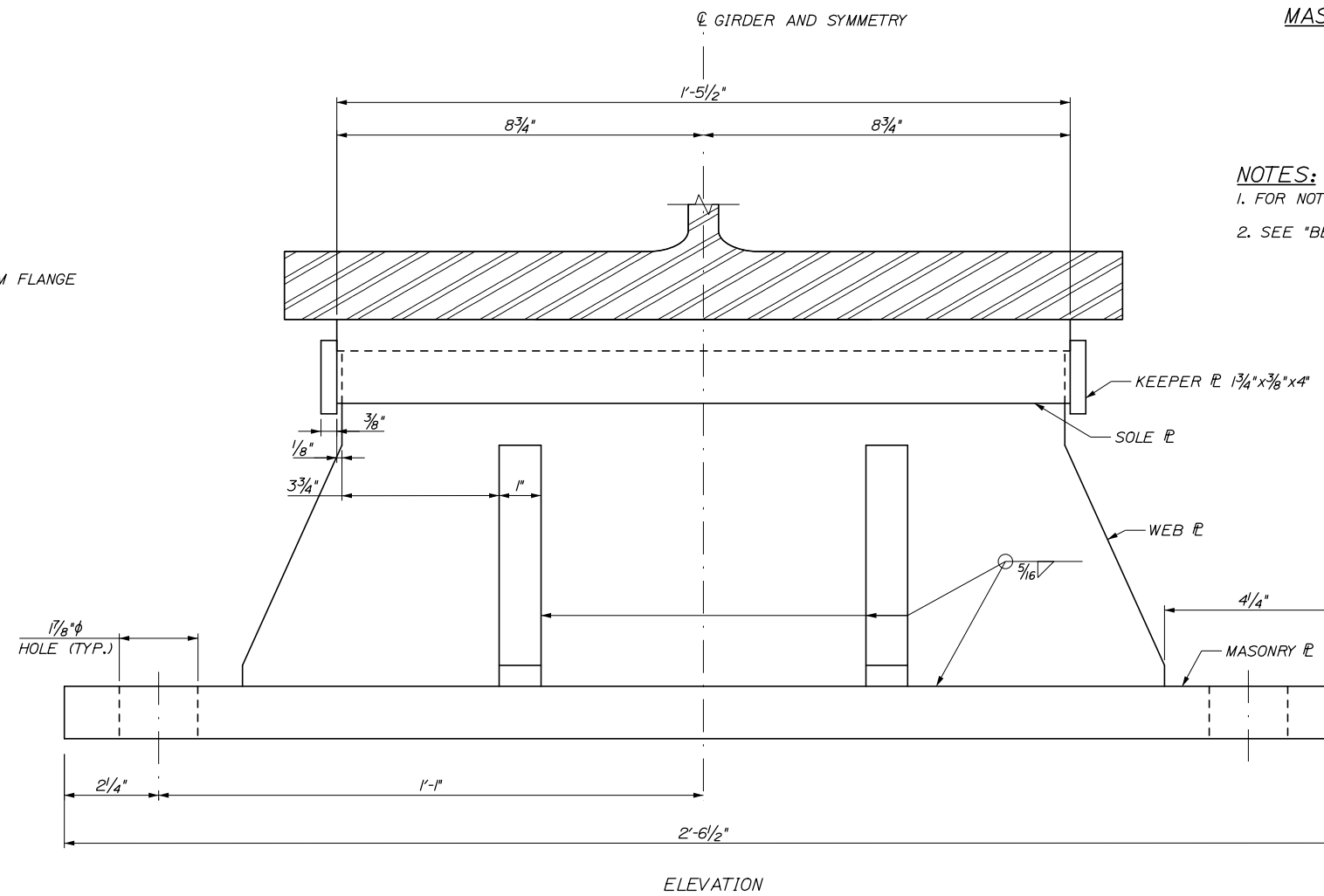
SHEET NUMBER: S-44
 CONTRACT: 2019.09
 95 OF 116

Date: 10/18/2018

Filename: 096_Bearing Details 3.dgn

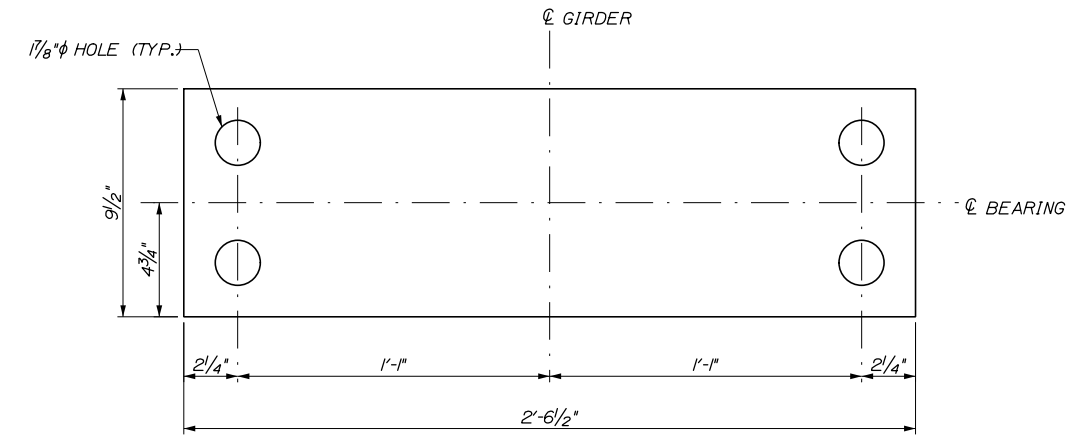


SIDE VIEW



ELEVATION

FIXED BEARING AT PIER 1
(4 REQUIRED, PROPOSED GIRDER LOCATIONS)
6" = 1'-0"



MASONRY PLATE
3' = 1'-0"

- NOTES:**
1. FOR NOTES AND PINTLE DETAIL SEE BEARING DETAILS I.
 2. SEE "BEARING DETAILS II" FOR ANCHOR ROD DETAIL.

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.			

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
BEARING DETAILS III

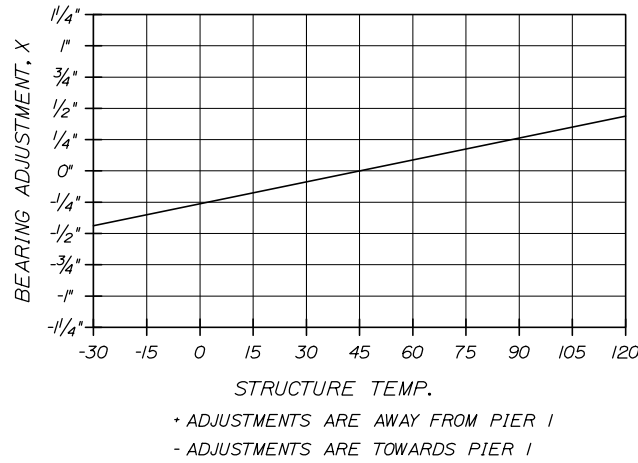
THE GOLD STAR MEMORIAL HIGHWAY

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
BEARING DETAILS III

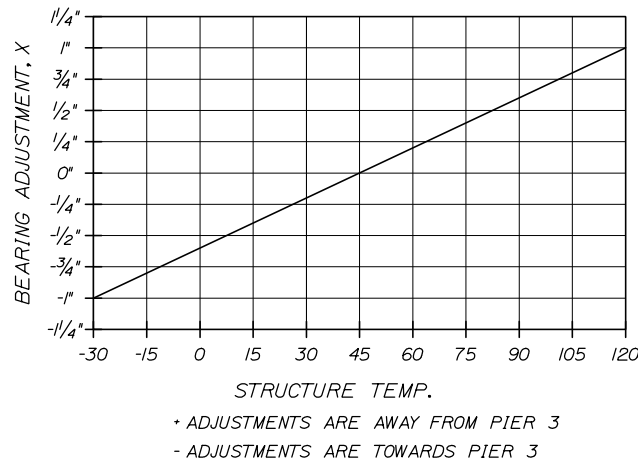
SHEET NUMBER: S-45
CONTRACT: 2019.09
96 OF 116

BEARING RESETTING NOTES:

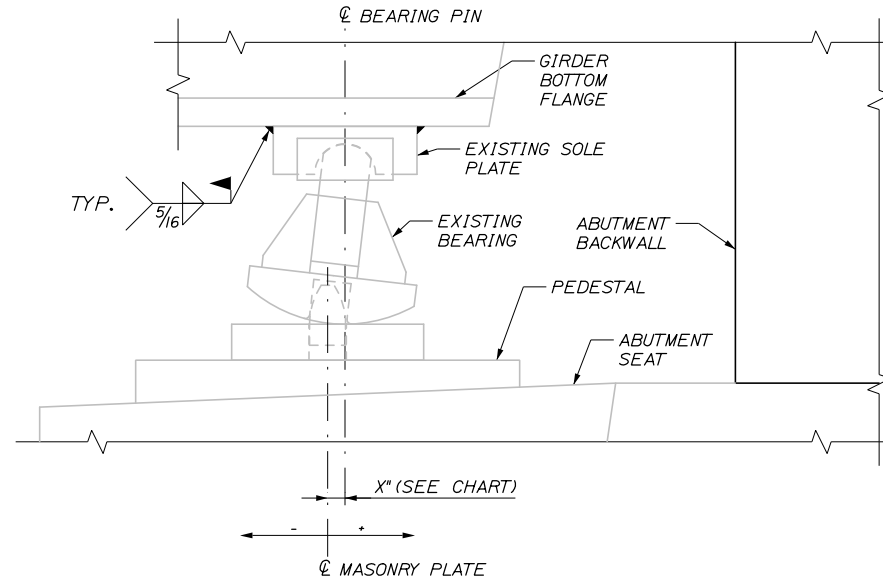
1. THE EXISTING BRIDGE SHALL BE JACKED TO ACCOMMODATE THE BEARING RESET. REFER TO SPECIAL PROVISION 524 FOR MORE INFORMATION.
2. THE CONTRACTOR SHALL INCLUDE ALL REQUIRED DETAILS TO RESTRAIN THE GIRDERS DURING JACKING OPERATIONS IN THE TEMPORARY STRUCTURAL SUPPORT SUBMITTAL.
3. TO RESET THE BEARING IN ACCORDANCE WITH THE SETTING CHART, THE ROCKER SHALL REMAIN CENTERED ON THE MASONRY PLATE AND THE SOLE PLATE SHALL BE DETACHED FROM THE GIRDER BOTTOM FLANGE AND THEN WELDED TO THE BOTTOM FLANGE IN ITS RESET POSITION. THE SOLE PLATE SHALL BE DETACHED FROM THE GIRDER BY REMOVING THE EXISTING RIVETS OR GRINDING THE EXISTING WELD.



BEARING SETTING CHART - ABUTMENT 1



BEARING SETTING CHART - ABUTMENT 2



JACKING LOAD TABLE (UNFACTORED)		
	ABUTMENTS	PIERS
DEAD LOAD	37 KIPS	125 KIPS
LIVE LOAD	62 KIPS	105 KIPS

Date:10/18/2018

Filename: 097_Bearing Details 4 .dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
	By	Date		By	Date
	EMC	10\18	Checked	HCH	10\18
	Drawn	PEB	In Charge of	RAL	10\18

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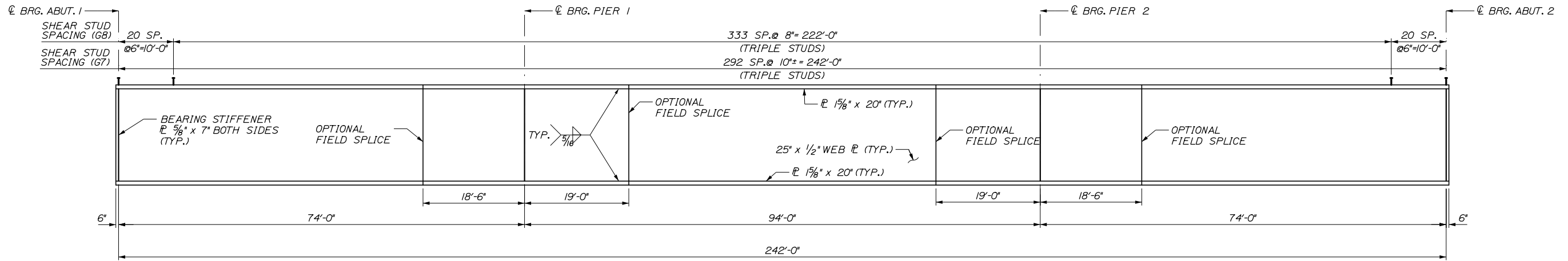
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

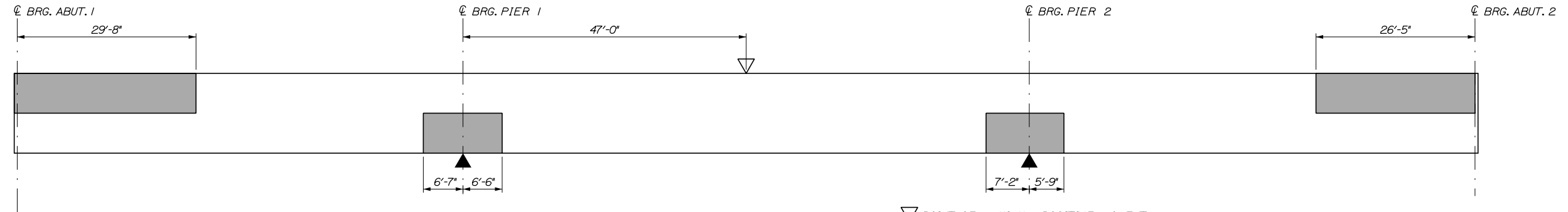
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
BEARING DETAILS IV

SHEET NUMBER: S-46
CONTRACT: 2019.09
97 OF 116

Date: 10/18/2018

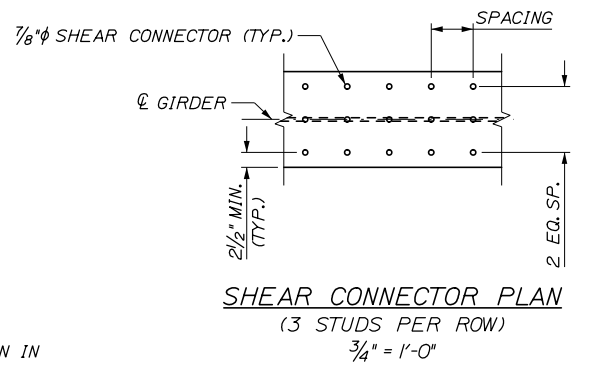


PROPOSED GIRDER ELEVATION
 (PROPOSED GIRDER SHOWN, EXISTING GIRDER SIMILAR)
 (1122 STUDS PER GIRDER G8,
 879 STUDS PER GIRDER G7)
 N.T.S.

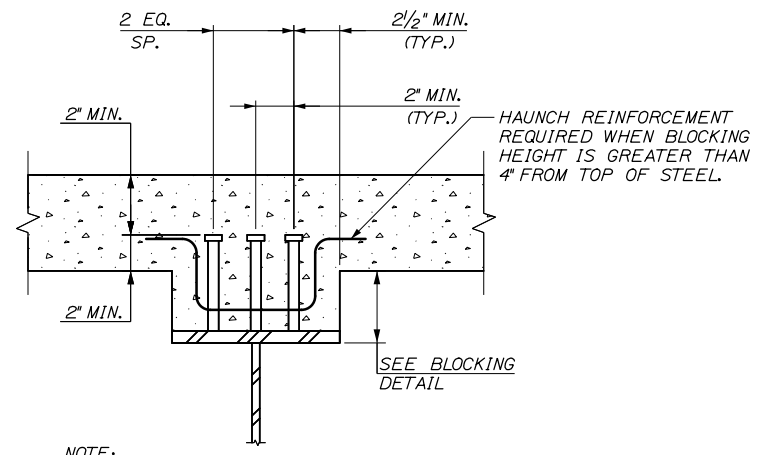


GIRDER STRESS DIAGRAM
 N.T.S.

∇ POINT OF MAXIMUM POSITIVE MOMENT
 \blacktriangle POINT OF MAXIMUM NEGATIVE MOMENT



NOTE:
 CONTRACTOR MAY USE EQUIVALENT ROLLED SECTION IN PLACE OF PLATE GIRDER IF AVAILABLE AT NO ADDITIONAL COST.



NOTE:
 SHEAR CONNECTOR LAYOUT SHOWN ON THE PROPOSED GIRDER ELEVATION APPLIES TO EXISTING GIRDERS ALSO.

SHEAR CONNECTOR DETAIL
 N.T.S.

Filename: 099_SteelDetails 1.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

**THE GOLD STAR
 MEMORIAL HIGHWAY**

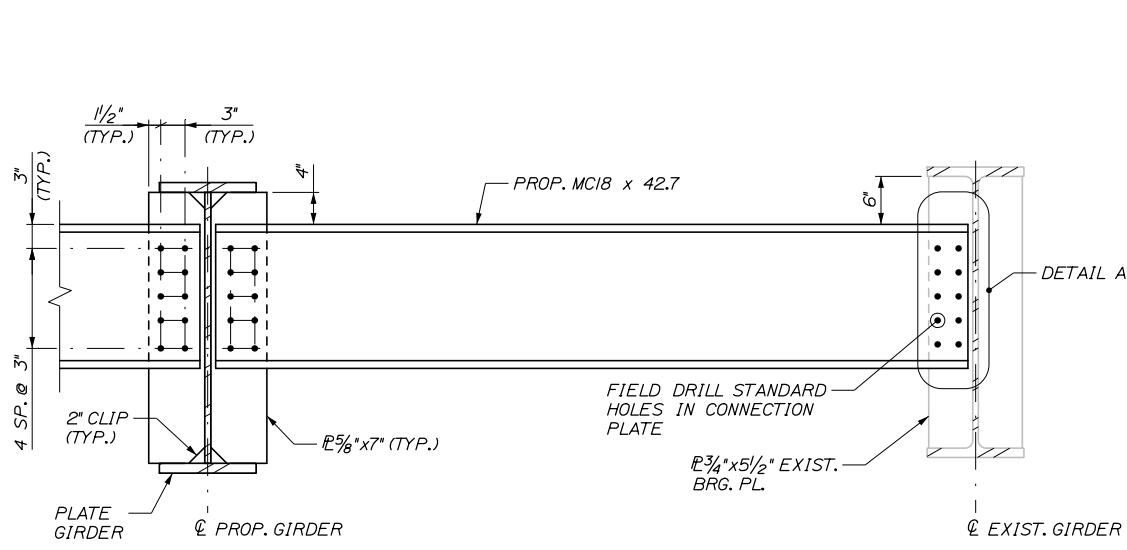
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 STRUCTURAL STEEL DETAILS I

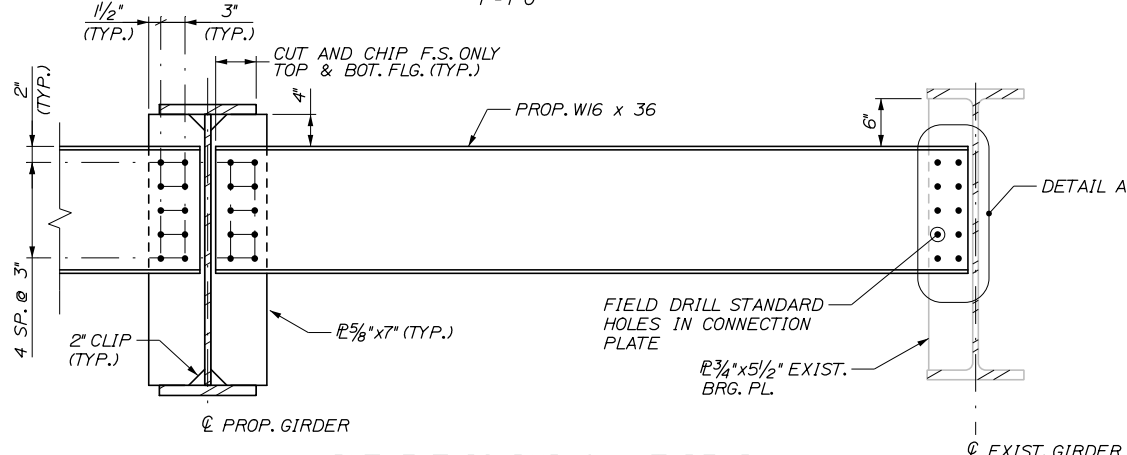
SHEET NUMBER: S-48
 CONTRACT: 2019.09
 99 OF 116

Date: 10/18/2018

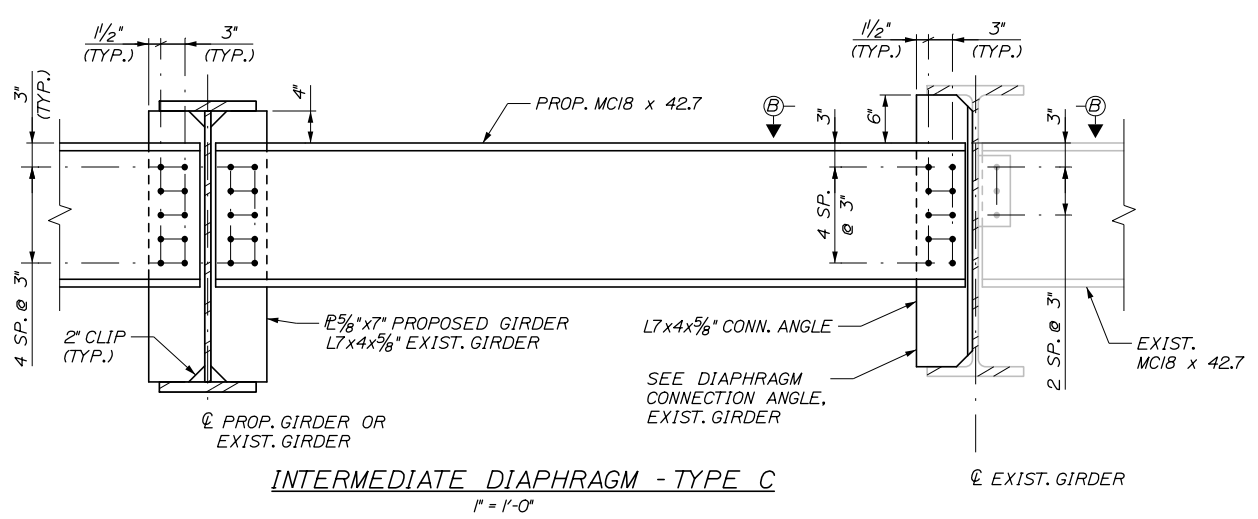
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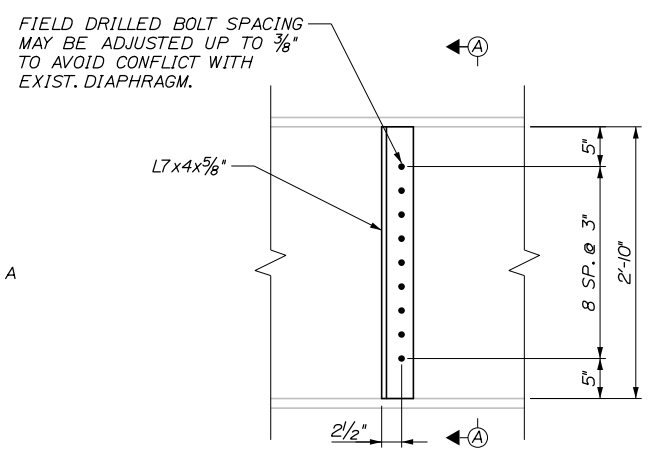
PIER DIAPHRAGM - TYPE A
1" = 1'-0"



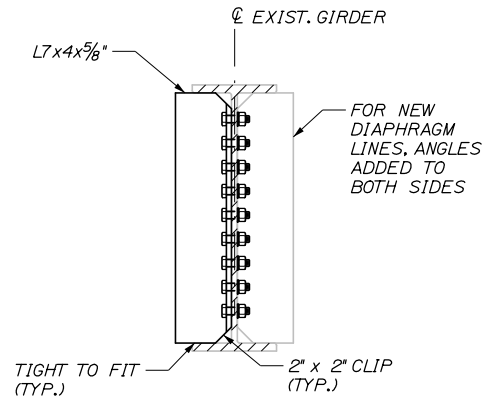
ABUTMENT DIAPHRAGM - TYPE B
1" = 1'-0"



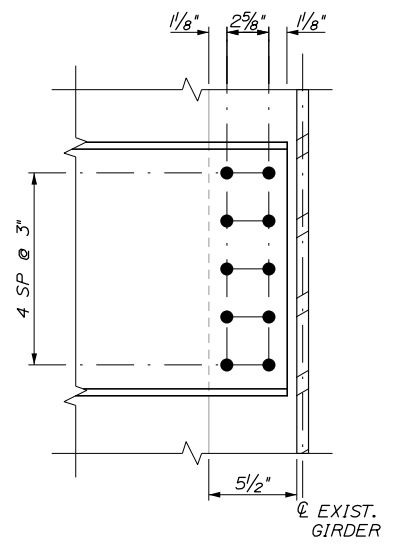
INTERMEDIATE DIAPHRAGM - TYPE C
1" = 1'-0"



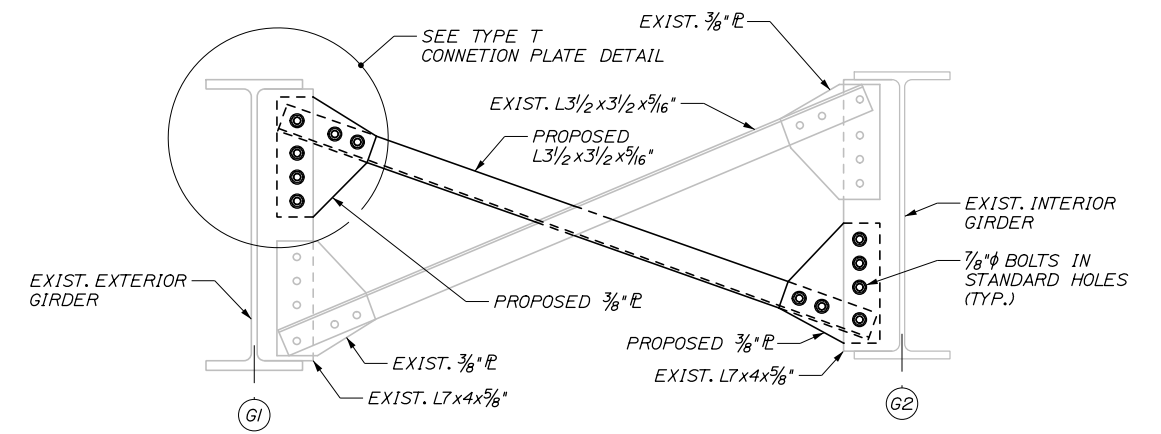
DIAPHRAGM CONNECTION ANGLE, EXISTING GIRDER
N.T.S.



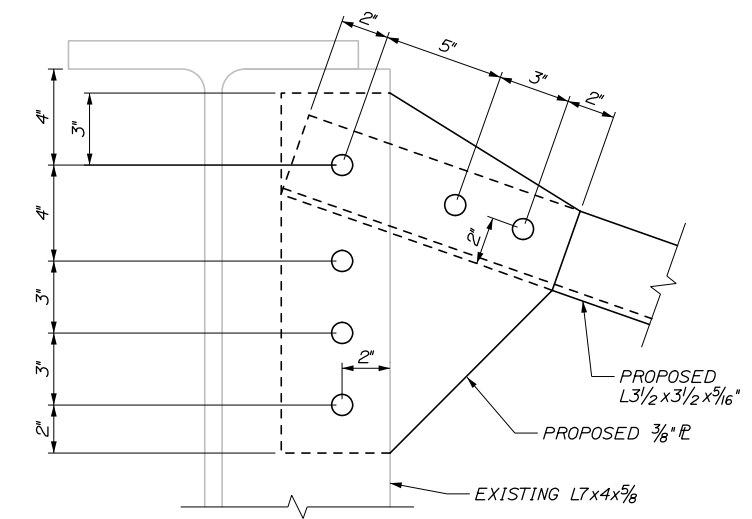
SECTION A-A
N.T.S.



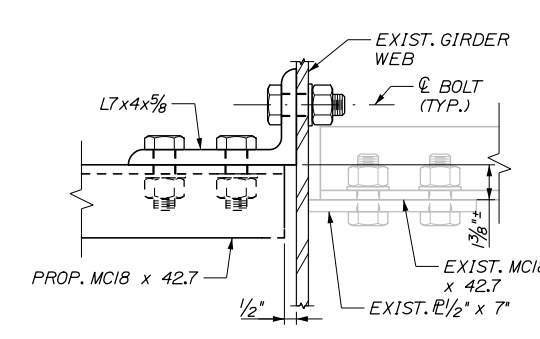
DETAIL A
1/2" = 1'-0"



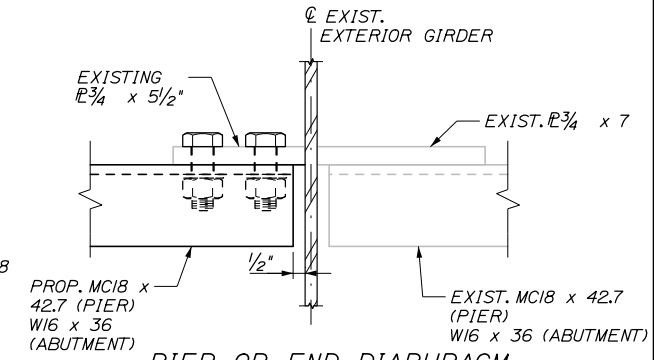
TENSION BRACE - TYPE T
1" = 1'-0"



TYPE T CONNECTION PLATE DETAIL
3" = 1'-0"



SECTION B-B
3" = 1'-0"



PIER OR END DIAPHRAGM TO GIRDER CONNECTION
3" = 1'-0"

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
By	Date	By	Date		
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
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THE GOLD STAR MEMORIAL HIGHWAY

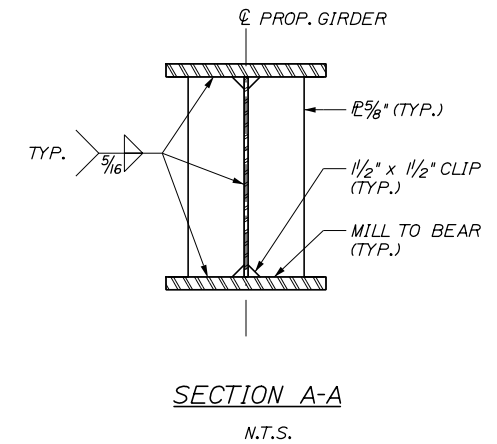
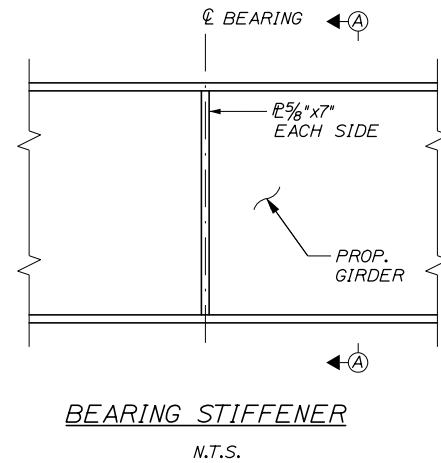
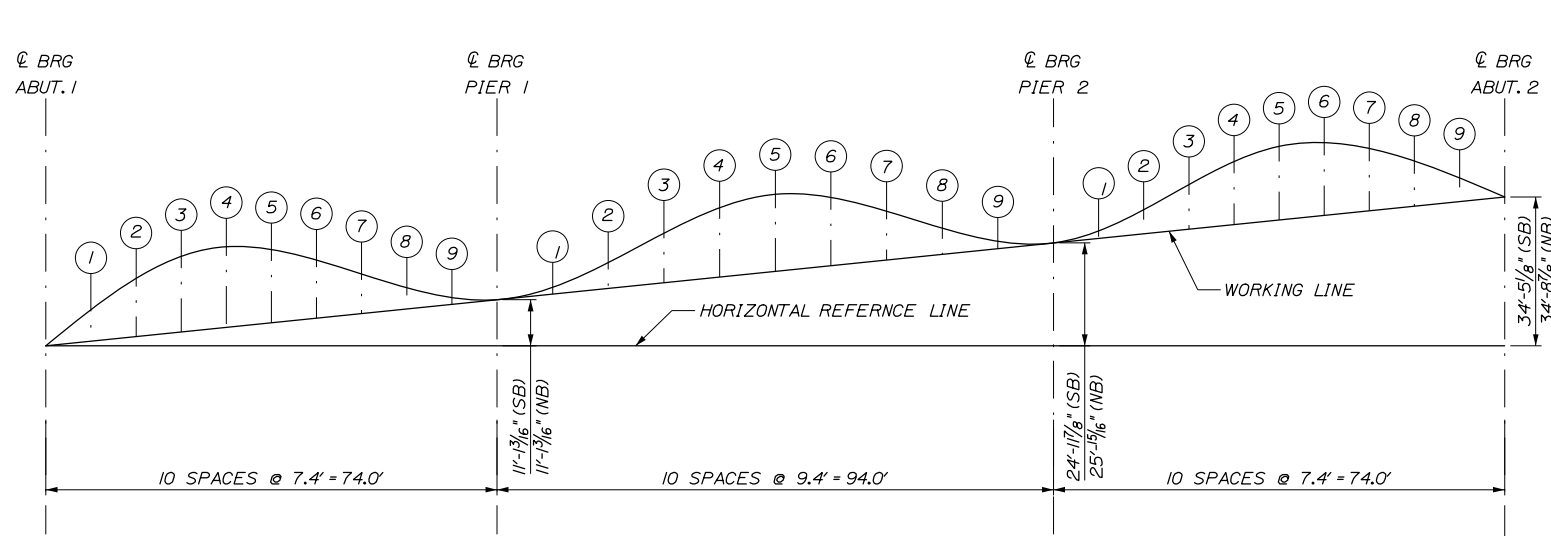
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
STRUCTURAL STEEL DETAILS II

SHEET NUMBER: S-49
100 OF 116

CONTRACT: 2019.09

Date: 10/18/2018



		TOTAL NORTHBOUND CAMBER VALUES (IN)																														
		SPAN 1 = 74.0'									SPAN 2 = 94.0'									SPAN 3 = 74.0'									CL BRG ABUT. 2			
		CL BRG ABUT. 1	1	2	3	4	5	6	7	8	9	CL BRG PIER 1	1	2	3	4	5	6	7	8	9	CL BRG PIER 2	1	2	3	4	5	6	7	8	9	CL BRG ABUT. 2
G7	DISTANCE FROM ABUT. 1 (FT)	0.00	7.40	14.80	22.20	29.60	37.00	44.40	51.80	59.20	66.60	74.00	83.40	92.80	102.20	111.60	121.00	130.40	139.80	149.20	158.60	168.00	175.40	182.80	190.20	197.60	205.00	212.40	219.80	227.20	234.60	242.00
	STEEL DEAD LOAD	0.00	0.08	0.15	0.19	0.21	0.20	0.17	0.12	0.06	0.01	0.00	0.05	0.13	0.22	0.29	0.31	0.29	0.22	0.13	0.05	0.00	0.01	0.06	0.12	0.17	0.20	0.21	0.19	0.15	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.23	0.41	0.54	0.59	0.57	0.47	0.33	0.17	0.04	0.00	0.13	0.38	0.63	0.81	0.87	0.81	0.63	0.38	0.13	0.00	0.04	0.17	0.33	0.47	0.57	0.59	0.54	0.41	0.23	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.06	0.10	0.14	0.15	0.14	0.12	0.09	0.05	0.02	0.00	0.05	0.11	0.16	0.21	0.22	0.20	0.16	0.10	0.04	0.00	0.03	0.05	0.09	0.12	0.14	0.15	0.13	0.10	0.06	0.00
	VERTICAL CURVE ORDINATES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.28	0.36	0.46	0.54	0.64	0.70	0.50	0.00	0.89	1.57	2.08	2.36	2.46	2.36	2.06	1.57	0.89	0.00
TOTAL	0.00	0.36	0.66	0.87	0.95	0.91	0.76	0.53	0.28	0.07	0.00	0.32	0.80	1.29	1.66	1.86	1.84	1.65	1.31	0.72	0.00	0.97	1.86	2.61	3.12	3.37	3.31	2.93	2.23	1.25	0.00	
G8	DISTANCE FROM ABUT. 1 (FT)	0.00	7.40	14.80	22.20	29.60	37.00	44.40	51.80	59.20	66.60	74.00	83.40	92.80	102.20	111.60	121.00	130.40	139.80	149.20	158.60	168.00	175.40	182.80	190.20	197.60	205.00	212.40	219.80	227.20	234.60	242.00
	STEEL DEAD LOAD	0.00	0.08	0.14	0.19	0.20	0.19	0.16	0.11	0.06	0.01	0.00	0.04	0.13	0.21	0.28	0.30	0.28	0.21	0.13	0.04	0.00	0.01	0.06	0.11	0.16	0.19	0.20	0.19	0.14	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.20	0.36	0.47	0.52	0.49	0.41	0.29	0.15	0.04	0.00	0.11	0.33	0.55	0.71	0.76	0.71	0.55	0.33	0.11	0.00	0.04	0.15	0.29	0.41	0.49	0.52	0.47	0.36	0.20	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.05	0.10	0.13	0.15	0.14	0.12	0.09	0.05	0.02	0.00	0.05	0.11	0.17	0.21	0.22	0.21	0.17	0.11	0.04	0.00	0.03	0.06	0.09	0.12	0.14	0.14	0.13	0.10	0.05	0.00
	VERTICAL CURVE ORDINATES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.16	0.23	0.31	0.38	0.47	0.54	0.61	0.47	0.00	0.89	1.57	2.06	2.36	2.46	2.36	2.06	1.57	0.89	0.00
TOTAL	0.00	0.33	0.60	0.79	0.87	0.83	0.69	0.49	0.26	0.07	0.00	0.28	0.72	1.16	1.50	1.67	1.66	1.47	1.18	0.67	0.00	0.97	1.83	2.55	3.06	3.29	3.23	2.85	2.17	1.22	0.00	

		TOTAL SOUTHBOUND CAMBER VALUES (IN)																														
		SPAN 1 = 74.0'									SPAN 2 = 94.0'									SPAN 3 = 74.0'									CL BRG ABUT. 2			
		CL BRG ABUT. 1	1	2	3	4	5	6	7	8	9	CL BRG PIER 1	1	2	3	4	5	6	7	8	9	CL BRG PIER 2	1	2	3	4	5	6	7	8	9	CL BRG ABUT. 2
G7	DISTANCE FROM ABUT. 1 (FT)	0.00	7.40	14.80	22.20	29.60	37.00	44.40	51.80	59.20	66.60	74.00	83.40	92.80	102.20	111.60	121.00	130.40	139.80	149.20	158.60	168.00	175.40	182.80	190.20	197.60	205.00	212.40	219.80	227.20	234.60	242.00
	STEEL DEAD LOAD	0.00	0.08	0.15	0.19	0.21	0.20	0.17	0.12	0.06	0.01	0.00	0.05	0.13	0.22	0.29	0.31	0.29	0.22	0.13	0.05	0.00	0.01	0.06	0.12	0.17	0.20	0.21	0.19	0.15	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.23	0.41	0.54	0.59	0.57	0.47	0.33	0.17	0.04	0.00	0.13	0.38	0.63	0.81	0.87	0.81	0.63	0.38	0.13	0.00	0.04	0.17	0.33	0.47	0.57	0.59	0.54	0.41	0.23	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.06	0.10	0.14	0.15	0.14	0.12	0.09	0.05	0.02	0.00	0.05	0.11	0.16	0.21	0.22	0.20	0.16	0.10	0.04	0.00	0.03	0.05	0.09	0.12	0.14	0.15	0.13	0.10	0.06	0.00
	VERTICAL CURVE ORDINATES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.51	0.76	1.02	1.27	1.52	1.62	1.40	0.86	0.00	0.89	1.58	2.07	2.37	2.46	2.37	2.07	1.58	0.89	0.00
TOTAL	0.00	0.36	0.66	0.87	0.95	0.91	0.76	0.53	0.28	0.07	0.00	0.48	1.12	1.78	2.32	2.67	2.82	2.63	2.01	1.08	0.00	0.97	1.86	2.60	3.13	3.37	3.32	2.94	2.24	1.25	0.00	
G8	DISTANCE FROM ABUT. 1 (FT)	0.00	7.40	14.80	22.20	29.60	37.00	44.40	51.80	59.20	66.60	74.00	83.40	92.80	102.20	111.60	121.00	130.40	139.80	149.20	158.60	168.00	175.40	182.80	190.20	197.60	205.00	212.40	219.80	227.20	234.60	242.00
	STEEL DEAD LOAD	0.00	0.08	0.14	0.19	0.20	0.19	0.16	0.11	0.06	0.01	0.00	0.04	0.13	0.21	0.28	0.30	0.28	0.21	0.13	0.04	0.00	0.01	0.06	0.11	0.16	0.19	0.20	0.19	0.14	0.08	0.00
	CONCRETE DEAD LOAD	0.00	0.20	0.36	0.47	0.52	0.49	0.41	0.29	0.15	0.04	0.00	0.11	0.33	0.55	0.71	0.76	0.71	0.55	0.33	0.11	0.00	0.04	0.15	0.29	0.41	0.49	0.52	0.47	0.36	0.20	0.00
	SUPERIMPOSED DEAD LOAD	0.00	0.05	0.10	0.13	0.15	0.14	0.12	0.09	0.05	0.02	0.00	0.05	0.11	0.17	0.21	0.22	0.21	0.17	0.11	0.04	0.00	0.03	0.06	0.09	0.12	0.14	0.14	0.13	0.10	0.05	0.00
	VERTICAL CURVE ORDINATES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.72	1.07	1.43	1.79	2.05	2.02	1.66	0.99	0.00	0.89	1.57	2.07	2.36	2.46	2.36	2.07	1.58	0.89	0.00
TOTAL	0.00	0.33	0.60	0.79	0.87	0.83	0.69	0.49	0.26	0.07	0.00	0.57	1.28	2.00	2.62	3.07	3.24	2.95	2.23	1.19	0.00	0.96	1.83	2.56	3.06	3.29	3.23	2.86	2.18	1.22	0.00	

Filename: 101_SteelDetails_3.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

By	Date	By	Date
EMC	10\18	HCH	10\18
Drawn	PEB	In Charge of	RAL
	10\18		10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909

MAINE TURNPIKE

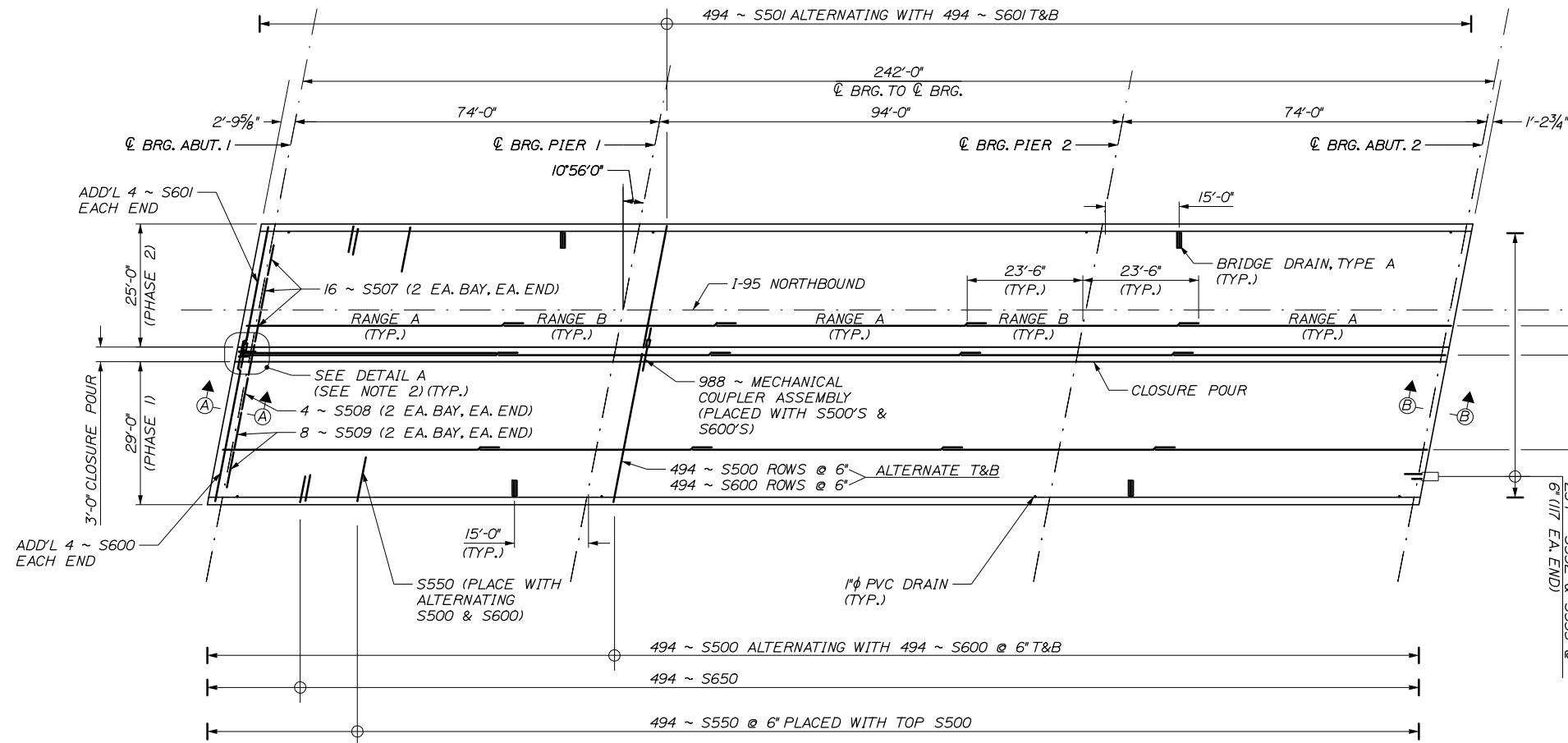
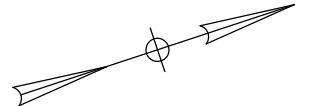
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 STRUCTURAL STEEL DETAILS III

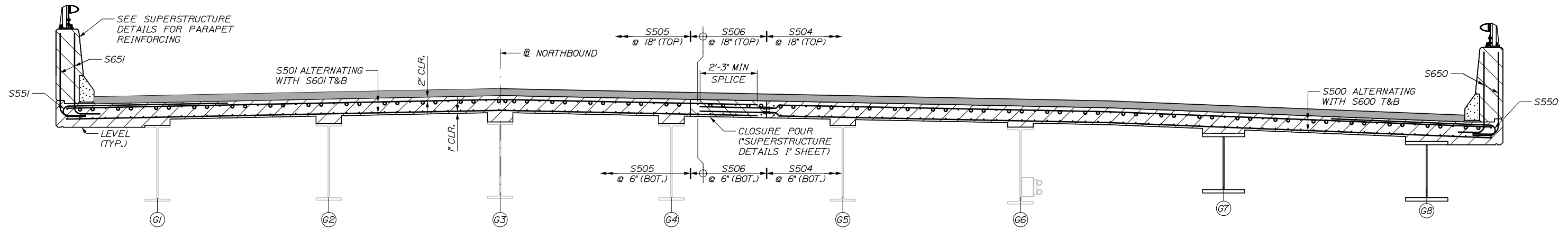
SHEET NUMBER: S-50
 CONTRACT: 2019.09
 101 OF 116

Date: 10/18/2018



RANGE A	54 ~ S505 @ 18" TOP (3 SECTIONS @ 18 ROWS EA.)
	153 ~ S505 @ 6" BOT. (3 SECTIONS @ 51 ROWS EA.)
RANGE B	102 ~ S603 @ 6" TOP (2 SECTIONS @ 51 ROWS EA.)
	102 ~ S603 @ 6" BOT. (2 SECTIONS @ 51 ROWS EA.)
RANGE A	14 ~ S604 @ 6" TOP (2 SECTIONS @ 7 ROWS EA.)
	14 ~ S604 @ 6" BOT. (2 SECTIONS @ 7 ROWS EA.)
RANGE B	9 ~ S506 @ 18" TOP (3 SECTIONS @ 3 ROWS EA.)
	21 ~ S504 @ 6" BOT. (3 SECTIONS @ 7 ROWS EA.)
RANGE A	63 ~ S504 @ 18" TOP (3 SECTIONS @ 21 ROWS EA.)
	177 ~ S504 @ 6" BOT. (3 SECTIONS @ 59 ROWS EA.)
RANGE B	118 ~ S602 @ 6" TOP (2 SECTIONS @ 59 ROWS EA.)
	118 ~ S602 @ 6" BOT. (2 SECTIONS @ 59 ROWS EA.)

DECK PLAN
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
1/16" = 1'-0"



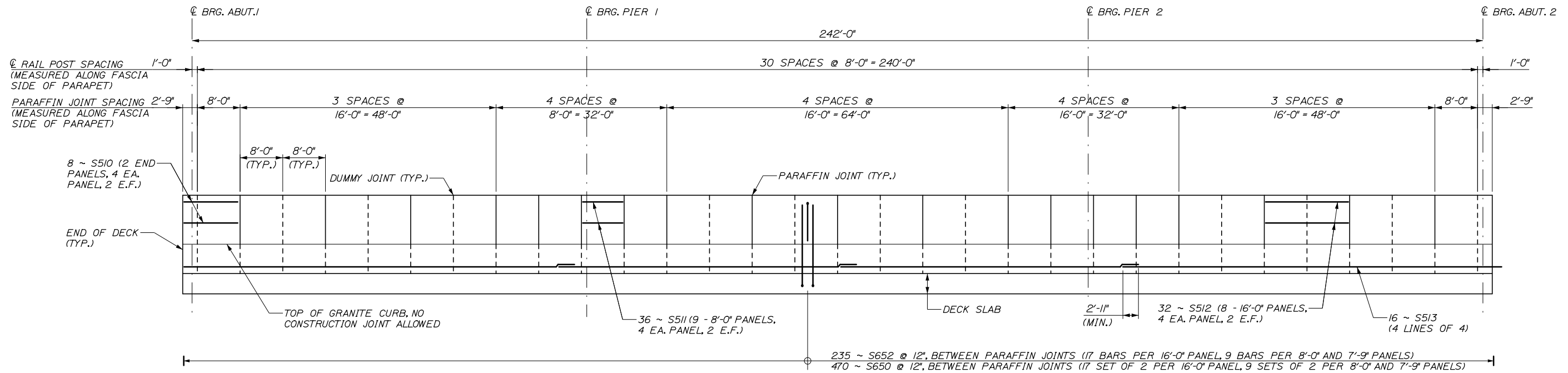
REINFORCING SECTION
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
1/2" = 1'-0"

DECK PLAN NOTE:
1. LAP LENGTH SHALL BE 2'-3" MIN. FOR A #5 BAR.
2. FOR DETAIL A, SEE "SUPERSTRUCTURE DETAILS 1" SHEET.

Filename: 105_Superstructure Plan.dgn

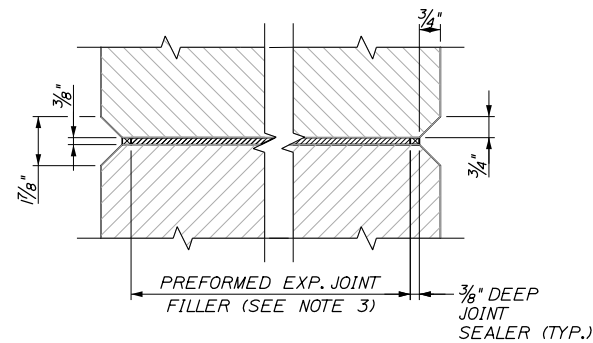
Scale: AS NOTED		Designed by: HNTB		HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		 THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS SUPERSTRUCTURE PLAN																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision	By	Date													CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>EMC 10\18</td> <td>Checked</td> <td>HCH 10\18</td> </tr> <tr> <td>Drawn</td> <td>PEB 10\18</td> <td>In Charge of</td> <td>RAL 10\18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	EMC 10\18	Checked	HCH 10\18	Drawn	PEB 10\18	In Charge of	RAL 10\18	MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.		CONTRACT: 2019.09 SHEET NUMBER: S-54 105 OF 116	
No.	Revision	By	Date																																		
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Designed	EMC 10\18	Checked	HCH 10\18																																		
Drawn	PEB 10\18	In Charge of	RAL 10\18																																		

Date: 10/18/2018

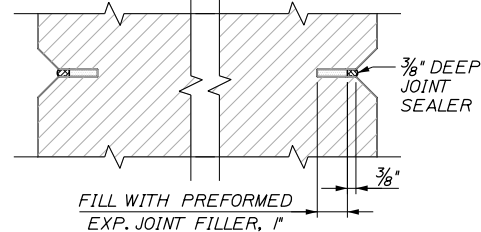


PARAPET ELEVATION - TYPICAL

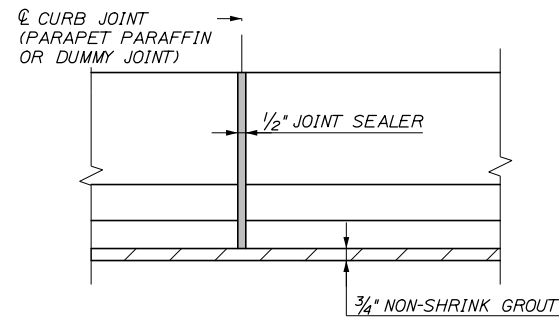
HORIZ. 1" = 10'-0"
VERT. 1/2" = 1'-0"



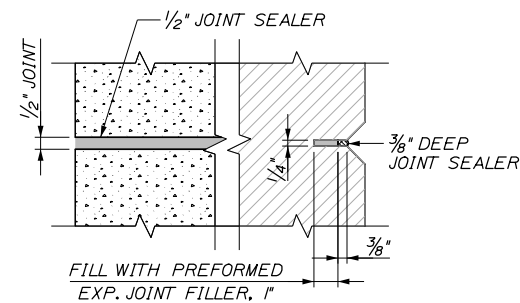
SECTION A-A
(AT PARAFFIN JOINT)
3'-1'-0"



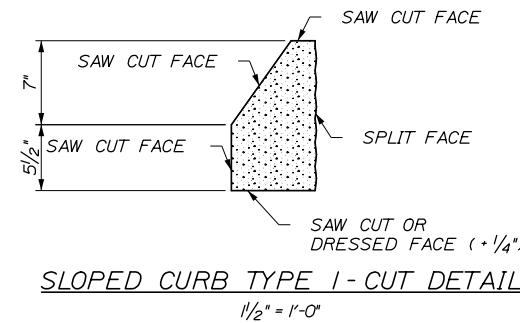
SECTION A-A
(AT DUMMY JOINT)
3'-1'-0"



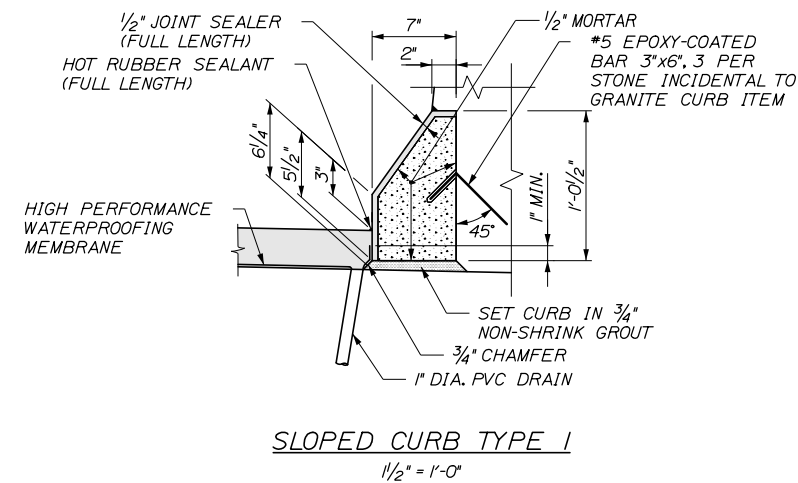
BRIDGE CURB ELEVATION
2'-1'-0"



SECTION B-B
(AT DUMMY AND PARAFFIN JOINT LOCATIONS)
3'-1'-0"



SLOPED CURB TYPE I - CUT DETAIL
1/2" = 1'-0"



SLOPED CURB TYPE I
1/2" = 1'-0"

SUPERSTRUCTURE NOTES:

1. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANITE CURB SHALL CONTAIN A NON-SHRINK ADDITIVE.

PARAPET NOTES:

- CONSTRUCTION OF PARAFFIN AND DUMMY JOINTS, INCLUDING JOINT FILLER, SHALL BE INCIDENTAL TO RELATED STRUCTURAL CONCRETE PAY ITEM.
- CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE JOINT. THE JOINTS SHALL REMAIN PLUMB AND STRAIGHT. A THIN STEEL PLATE MAY BE USED TO SUPPORT THE JOINT DURING CONCRETE PLACEMENT. THE PLATE SHALL BE CAREFULLY REMOVED WHILE THE CONCRETE IS PLASTIC.
- PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1752, TYPE 1 OR ASTM D5249, TYPE 2. PREFORMED JOINT FILLER SHALL BE A NON STAINING, NON BLEEDING TYPE. PRODUCTS SUCH AS 'CERAMAR', MANUFACTURED BY W. R. MEADOWS, OR AN APPROVED EQUAL WILL BE ACCEPTABLE. CORK IS NOT AN ACCEPTABLE JOINT FILLER MATERIAL.
- JOINT SEALER SHALL CONFORM WITH SUBSECTION 714.04 OF THE SPECIFICATIONS AND SHALL BE INCIDENTAL TO RELATED CONTRACT PAY ITEMS.
- PVC DRAINS SHALL BE PLACED AT APPROXIMATE LOCATIONS SHOWN ON 'SUPERSTRUCTURE PLAN', OR AS DIRECTED BY THE RESIDENT. DRAINS SHALL EXTEND 1 FT BELOW THE BOTTOM OF THE GIRDER. PAYMENT FOR THE PVC DRAINS WILL BE MADE UNDER ITEM 502.26, STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES.

Filename: 107_Superstructure Dets 2.dgn

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	EMC 10\18	Checked	HCH 10\18
				Drawn	PEB 10\18	In Charge of	RAL 10\18

Designed by:			
By	Date	By	Date
Designed	EMC 10\18	Checked	HCH 10\18
Drawn	PEB 10\18	In Charge of	RAL 10\18

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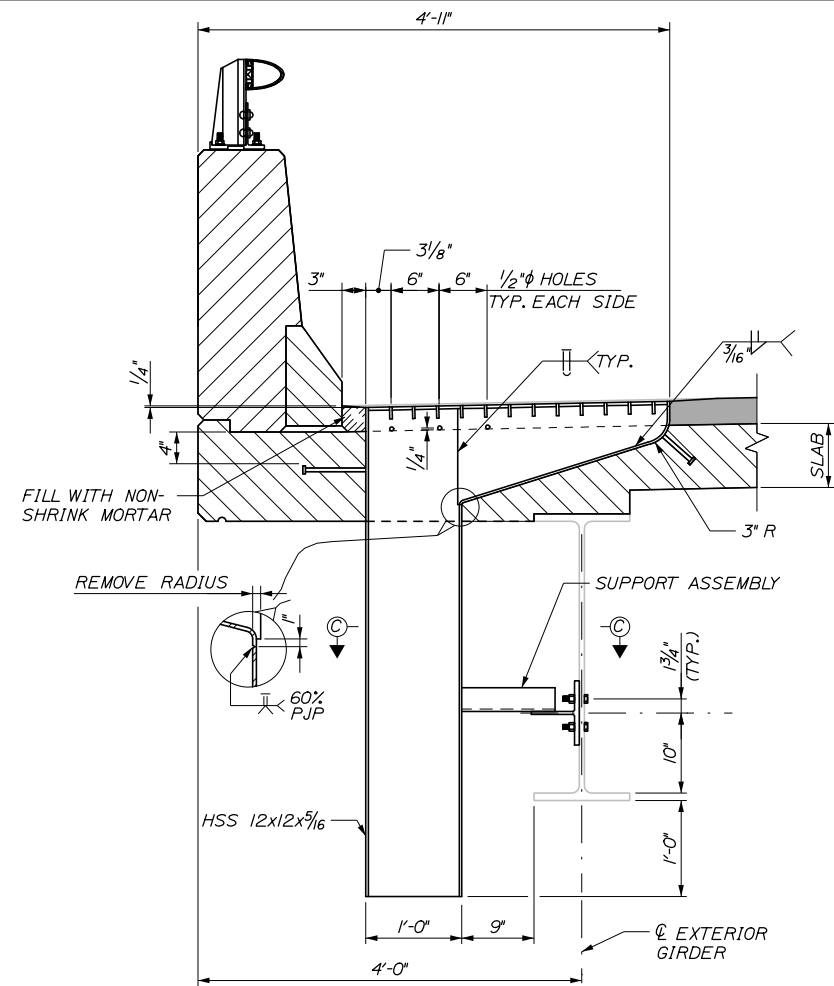
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

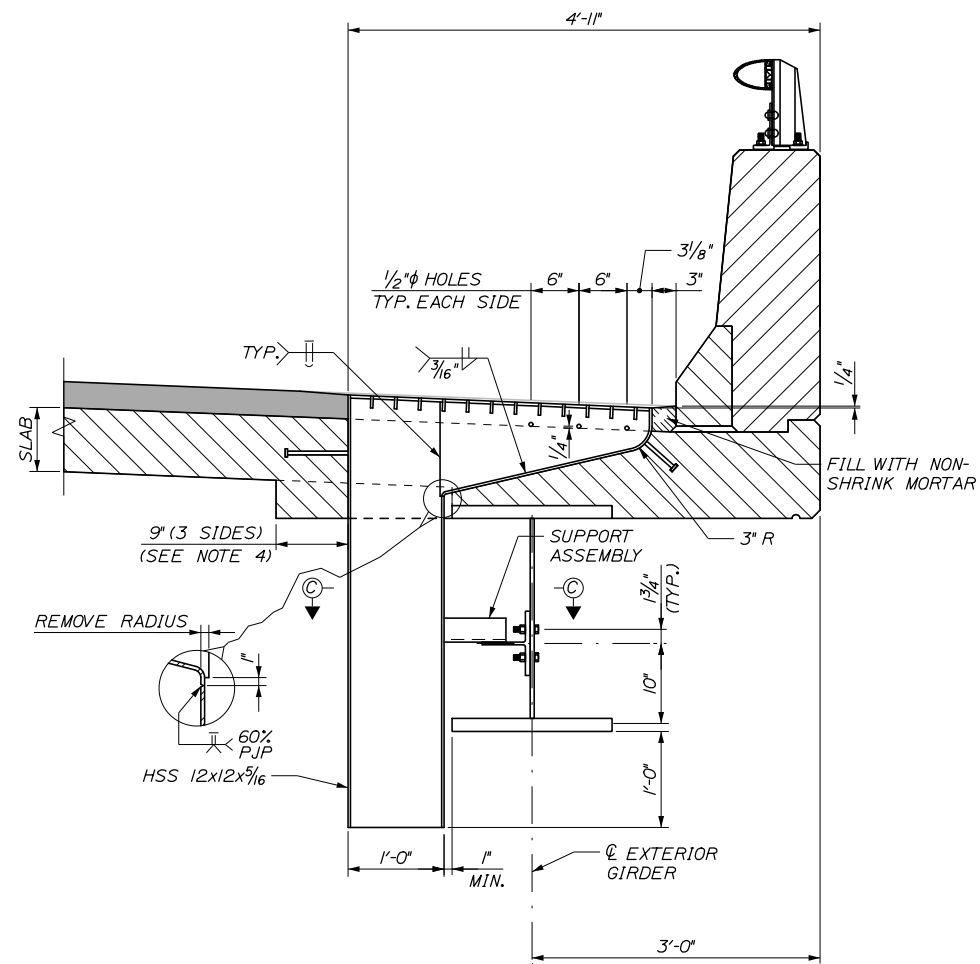
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
SUPERSTRUCTURE DETAILS II

SHEET NUMBER: S-56
CONTRACT: 2019.09
107 OF 116

Date: 10/18/2018



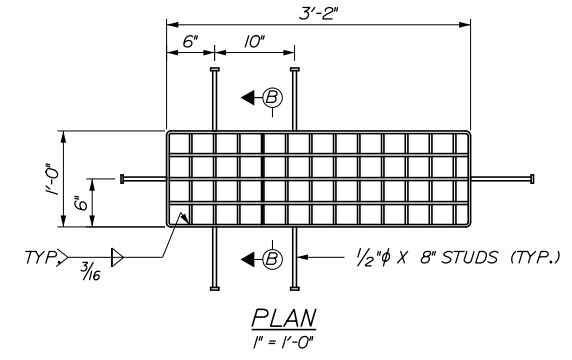
BRIDGE DRAIN TYPE A AT MEDIAN
1" = 1'-0"



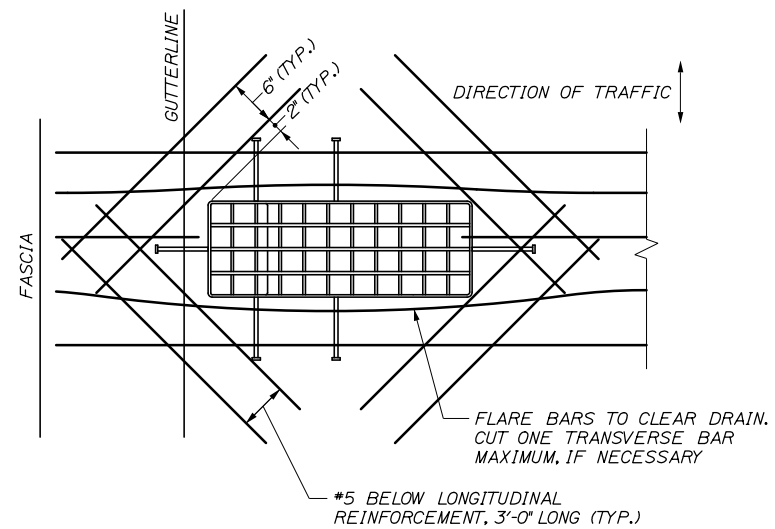
BRIDGE DRAIN TYPE A AT FASCIA
1" = 1'-0"

BRIDGE DRAIN NOTES:

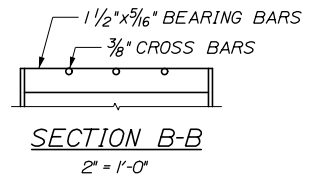
1. ALL PLATES, IF ANY, SHALL BE 1/4" THICK AND SHALL CONFORM TO AASHTO M270, GRADE 50.
2. DOWNSPOUTS SHALL CONFORM TO ASTM A500, GRADE B.
3. GRATING SHALL BE A COMMERCIAL HEAVY-DUTY GRATING WITH 1/2" X 3/16" BEARING BARS SPACED AT 2 3/8" AND 3/8" CROSS BARS SPACED AT 4". GRATING SHALL BE CENTERED IN THE DRAIN TOP.
4. SHEAR CONNECTORS WELDED TO TOP FLANGE OF BEAM MAY NEED TO BE BENT OUT OF THE WAY SHOULD AN INTERFERENCE WITH THE BRIDGE DRAIN OCCUR.
5. ALL DRAIN COMPONENTS SHALL BE BLAST CLEANED TO THE REQUIREMENTS OF SSPC-SP6/NACE 3 AND HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL ASSOCIATED FASTENERS SHALL BE HOT DIP GALVANIZED.
6. THE ADDITIONAL REINFORCING STEEL AROUND EACH BRIDGE DRAIN WILL NOT BE PAID FOR DIRECTLY. PAYMENT WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS.



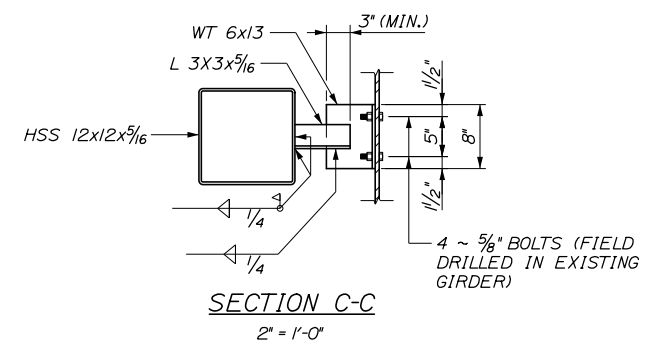
PLAN
1" = 1'-0"



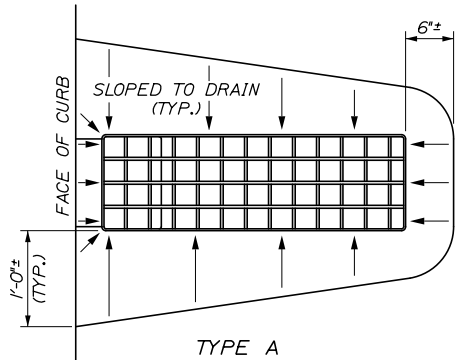
SLAB REINFORCEMENT AT BRIDGE DRAINS
1" = 1'-0"



SECTION B-B
2" = 1'-0"



SECTION C-C
2" = 1'-0"



PAVEMENT DEPRESSION AROUND BRIDGE DRAINS
1" = 1'-0"

Filename: 108_Miscellaneous Details.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
	By	Date	
	EMC	10\18	
	Checked	HCH	10\18
	By	Date	
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**THE GOLD STAR
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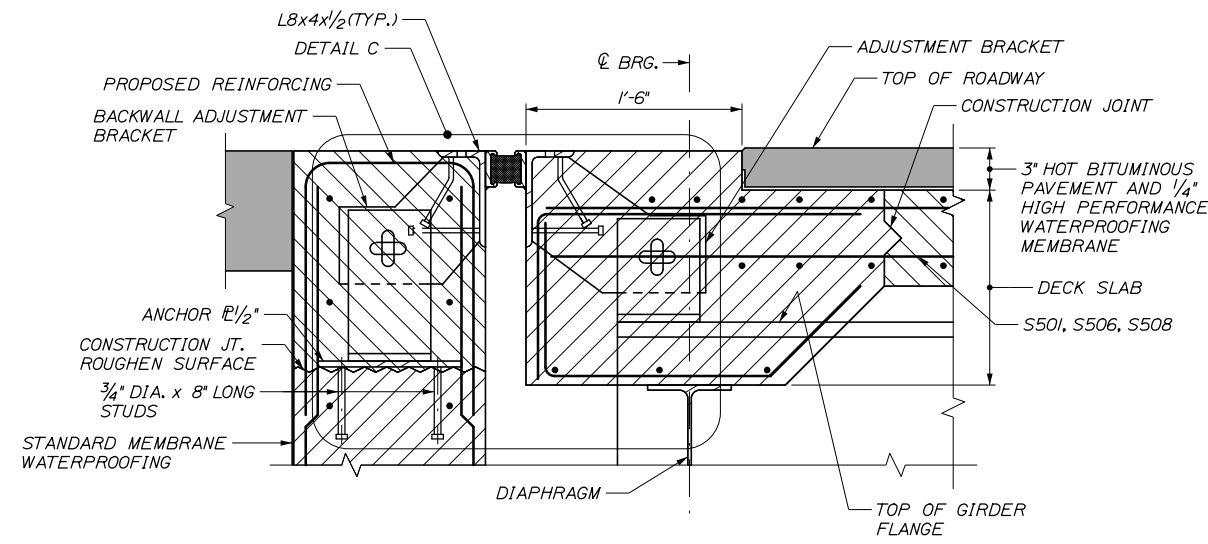
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MISCELLANEOUS DETAILS

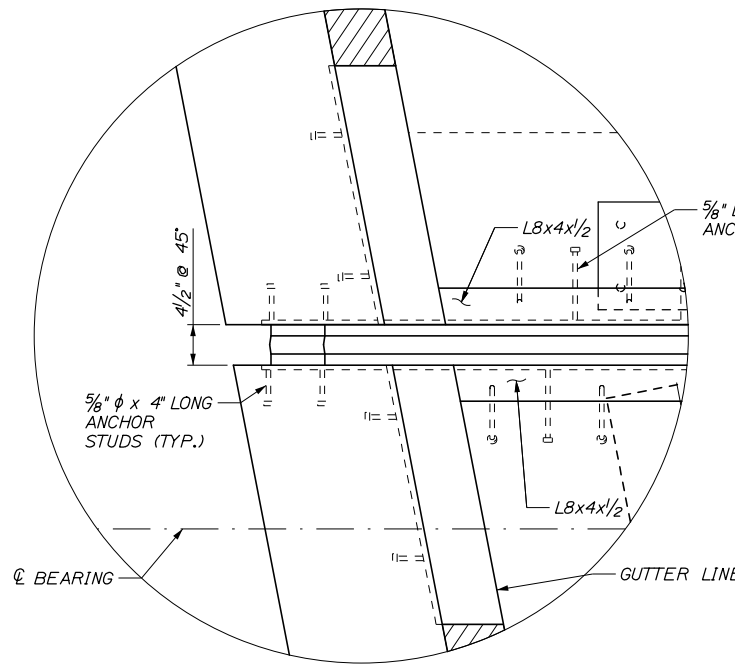
SHEET NUMBER: S-57
CONTRACT: 2019.09
108 OF 116

Date:10/18/2018

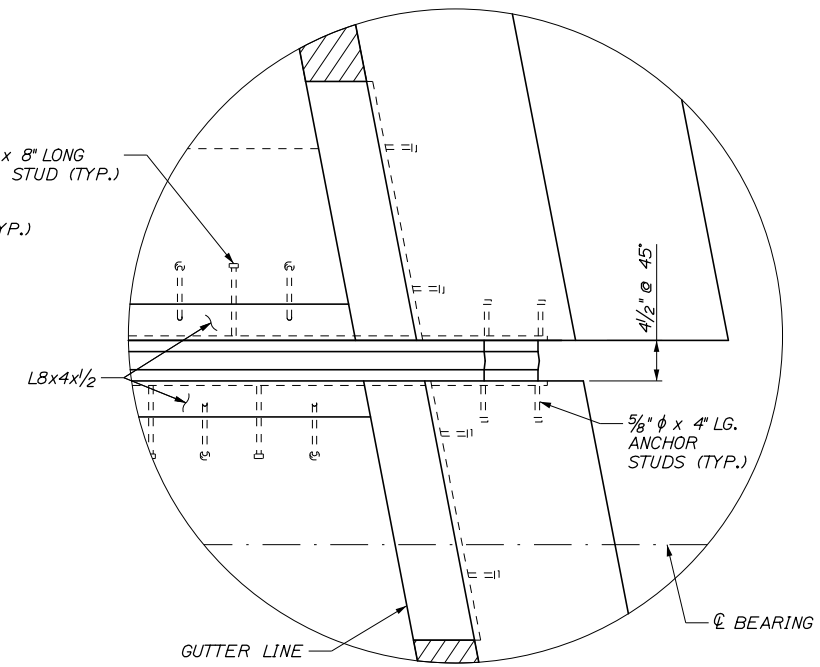
Filename: 111_Expansion Joint Details 2.dgn



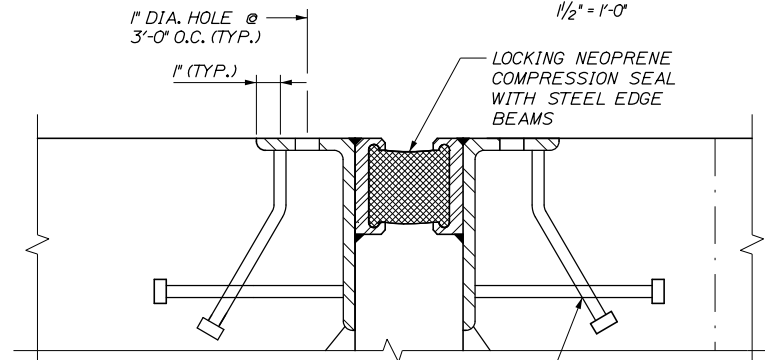
SECTION B-B
1/2" = 1'-0"



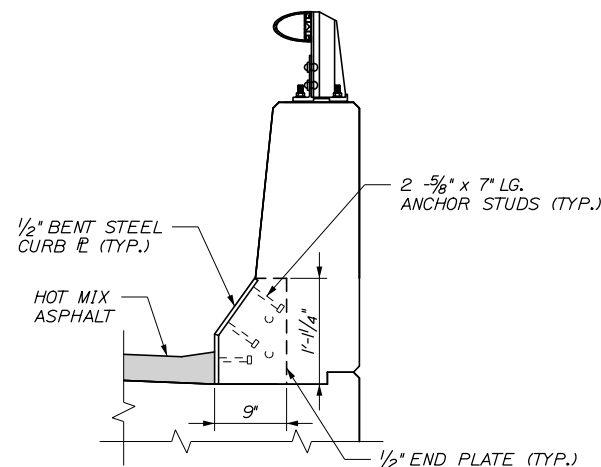
DETAIL A
1/2" = 1'-0"



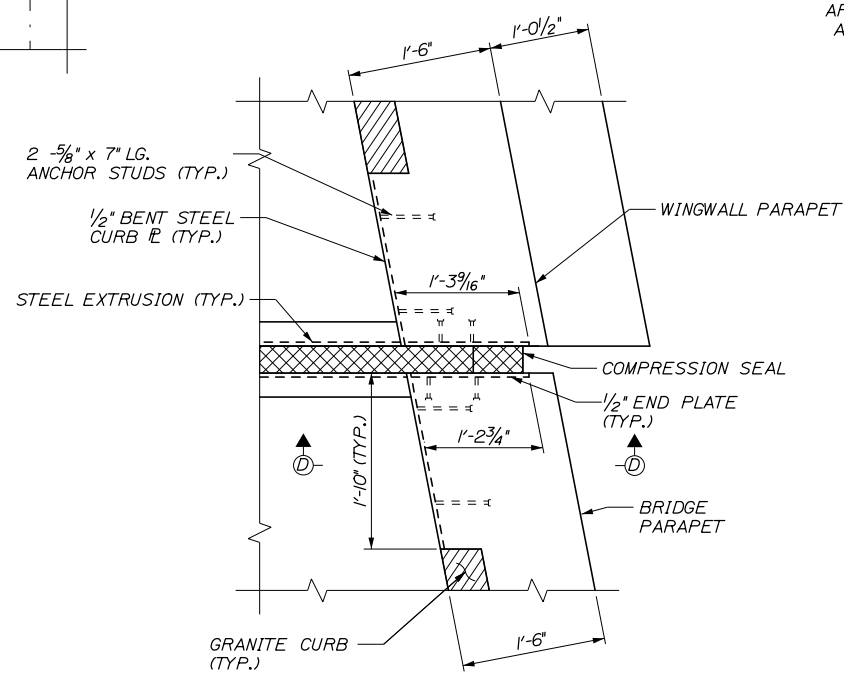
DETAIL B
1/2" = 1'-0"



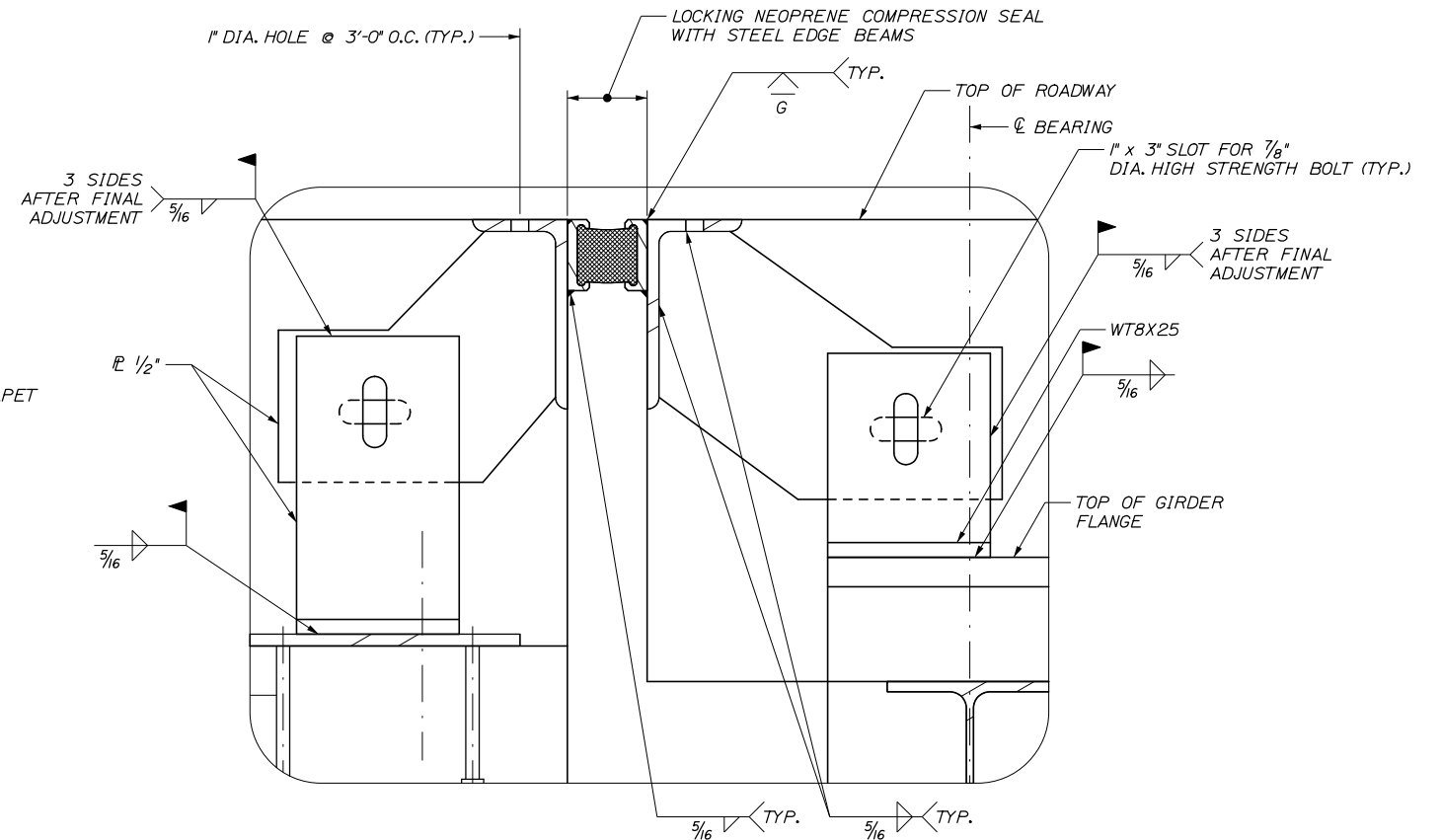
SECTION C-C
3" = 1'-0"



SECTION D-D
1" = 1'-0"



PLAN CURB PLATE (PARAPET)
1" = 1'-0"



DETAIL C
3" = 1'-0"

Scale: AS NOTED

Designed by:



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**THE GOLD STAR
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BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

EXPANSION JOINT DETAILS II

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date	By	Date
Designed	EMC	10\18	Checked	HCH 10\18
Drawn	PEB	10\18	In Charge of	RAL 10\18

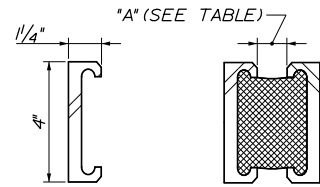
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT:2019.09

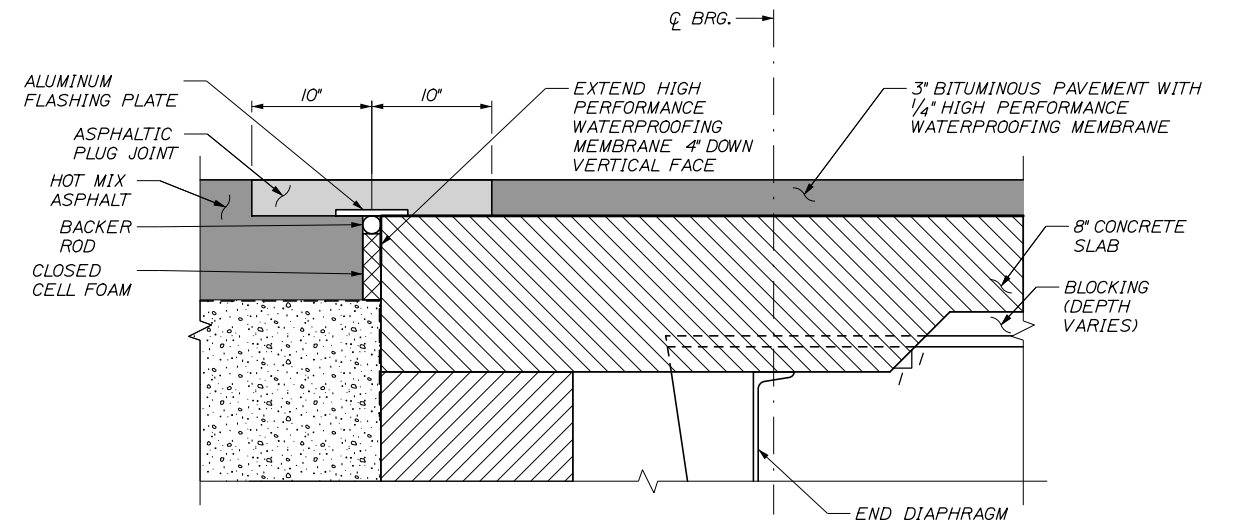
SHEET NUMBER: S-60

111 OF 116

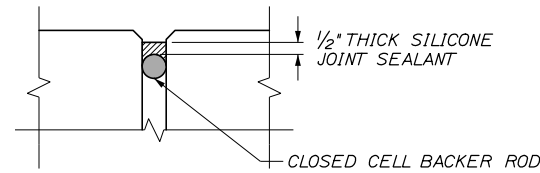
Date:10/18/2018



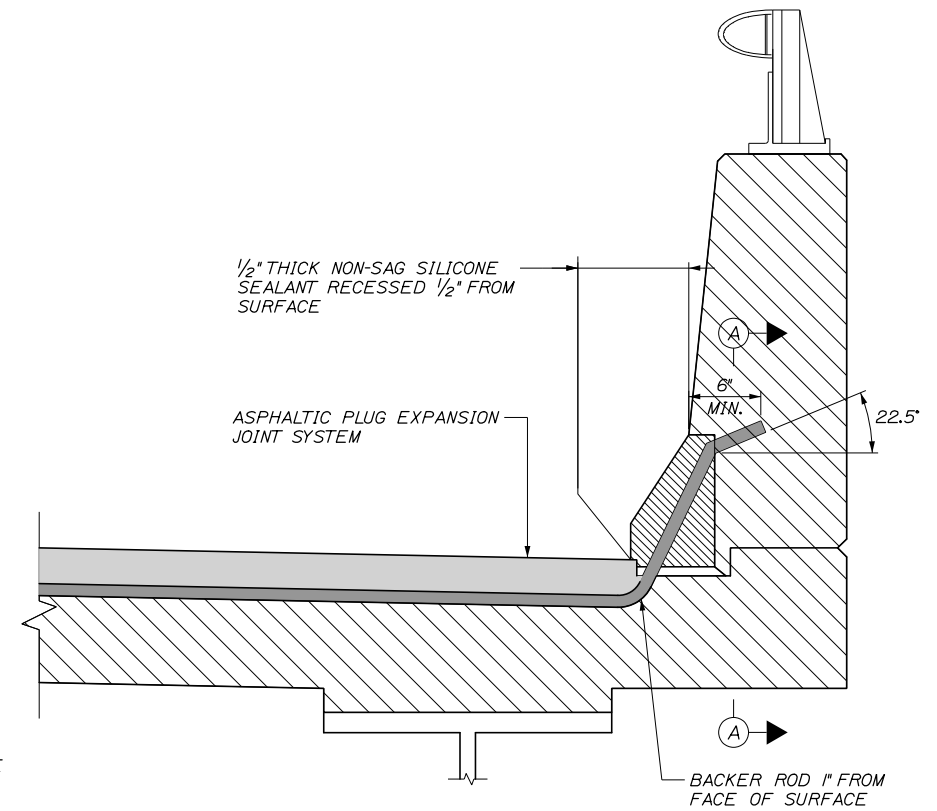
DETAIL - NEOPRENE COMPRESSION SEAL WITH STEEL EDGE BEAMS
N.T.S.



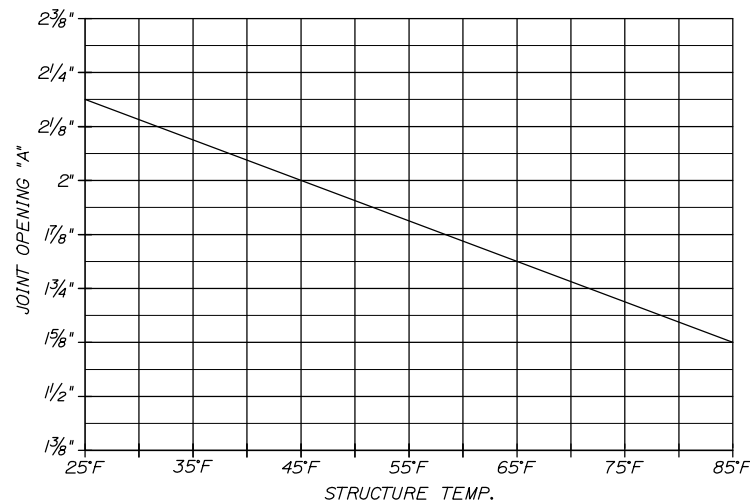
ASPHALTIC PLUG JOINT DETAIL
1/2" = 1'-0"



SECTION A-A



JOINT TREATMENT AT BRIDGE CURB
1/2" = 1'-0"



SEAL OPENING TABLE

NOTES:

1. ASPHALTIC PLUG JOINTS SHALL BE INSTALLED AFTER THE SURFACE PAVEMENT ON THE BRIDGE AND THE APPROACHES IS COMPLETE.
2. THE ASPHALTIC PLUG JOINT SHALL BE INSTALLED AT AN AIR TEMPERATURE BETWEEN 40°F AND 60°F.
3. DECK AND BACKWALL REINFORCING NOT SHOWN FOR CLARITY.
4. THE ASPHALTIC PLUG JOINTS SHALL BE ONE OF THE SYSTEMS LISTED IN THE PROJECT SPECIFICATIONS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. EQUIVALENT JOINT SYSTEMS MAY BE USED WITH APPROVAL OF THE ENGINEER.
5. 16D GALVANIZED CENTERING NAILS SHALL BE SPACED AT 12" O.C. MAXIMUM AND PLACED 2" FROM JOINTS IN THE ALUMINUM FLASHING PLATE.

Filename: 112_Expansion Joint Details 3.dgn

Scale:				Designed by:			
AS NOTED							
No.	Revision	By	Date				
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
				By	Date	By	Date
				Designed	EMC 10\18	Checked	HCH 10\18
				Drawn	PEB 10\18	In Charge of	RAL 10\18

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THE GOLD STAR MEMORIAL HIGHWAY			
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.			

BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS EXPANSION JOINT DETAILS III			
SHEET NUMBER: S-61			
CONTRACT:2019.09			
112 OF 116			


BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS EXPANSION JOINT DETAILS III			
SHEET NUMBER: S-61			
CONTRACT:2019.09			
112 OF 116			

Date: 10/18/2018

Filename: 113_Reinforcing Steel Schedule 1.dgn

MAINE CENTRAL RAILROAD OVERPASS - SOUTHBOUND BRIDGE												
MARK	SIZE	NO.	LENGTH		TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1												
A550W1	5	20	4' - 9"		118	3'-0"	3'-0"					Pedestal Reinforcing
A551W1	5	20	5' - 2"		118	1'-9"	2'-2"					Pedestal Reinforcing
A600W1	6	34	6' - 11"		STR							Footing Transverse
A601W1	6	10	21' - 7.5"		STR							Wingwall Footing Transverse
A602W1	6	16	5' - 9"		STR							Footing Drill and Grout
A603W1	6	16	15' - 7.5"		STR							Footing Longitudinal
A604W1	6	32	3' - 8"		STR							Wingwall Footing Transverse
A605W1	6	12	5' - 9"		STR							Stem Drill and Grout
A606W1	6	13	16' - 5.5"		STR							Stem Horizontal
A607W1	6	18	8' - 10.5"		STR							Stem to Backwall Vertical (FF)
A608W1	6	18	8' - 3"		STR							Stem to Backwall Vertical (NF)
A609W1	6	28	6' - 3"		STR							Backwall Vertical Drill and Grout
A610W1	6	12	29' - 7.5"		STR							Backwall Horizontal
A611W1	6	12	5' - 4"		STR							Backwall Horizontal Splice
A612W1	6	60	6' - 3"		STR							Backwall Vertical Drill and Grout
A613W1	6	12	28' - 10"		STR							Backwall Horizontal
A614W1	6	12	5' - 4"		STR							Backwall Horizontal
A650W1	6	36	8' - 3"		118	7'-3"	1'-0"					Footing to Stem L
A651W1	6	44	8' - 3"		118	7'-3"	1'-0"					Footing to Stem L
A652W1	6	44	7' - 2"		118	3'-9"	3'-5"					Seat Vertical (FF)
A653W1	6	15	8' - 8"		111	4'-4"	4'-4"	0'-9.5"				Seat to WW Connection
A654W1	6	31	5' - 0"		129	1'-0"	2'-0"					Backwall Top Stirrup
A655W1	6	18	8' - 8"		111	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
A656W1	6	30	5' - 0"		129	1'-0"	2'-0"					Backwall Top Stirrup
A657W1	6	18	8' - 8"		119	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
W600W1	6	18	4' - 6"		STR							Wingwall Vertical Drill and Grout
W601W1	6	10	13' - 4.5"		STR							Wingwall Horizontal
W602W1	6	30	7' - 10"		STR							Wingwall Vertical
W603W1	6	18	13' - 11"		STR							Wingwall Horizontal
W650W1	6	15	8' - 1"		122	2'-3"	3'-4"	0'-10"	1'-8"	0'-7"	0'-7"	Wingwall Corbel
W651W1	6	15	7' - 3"		129	3'-11"	1'-8"					Wingwall Stirrup (Relab)
W652W1	6	5	4' - 3"		129	2'-3"	1'-0"					Wingwall Horizontal End Stirrup
W653W1	6	15	3' - 2"		129	1'-2"	1'-0"					Wingwall Vertical End Stirrup
W654W1	6	9	3' - 2"		129	1'-2"	1'-0"					Wingwall Horizontal End Stirrup
EP550W1	5	10	15' - 0.5"		129	13'-4.5"	0'-10"					Endpost Horizontal Stirrup
EP551W1	5	2	12' - 4.5"		119	9'-9.5"	2'-7"					Endpost Horizontal Top
EP552W1	5	1	7' - 4"		118	3'-6"	3'-10"					Endpost Vertical L
EP553W1	5	1	6' - 7"		118	3'-10"	2'-9"					Endpost Vertical L
EP554W1	5	10	15' - 7.5"		129	13'-11.5"	0'-10"					Endpost Horizontal Stirrup
EP555W1	5	2	13' - 0.5"		119	10'-4"	2'-8.5"					Endpost Horizontal Top
EP556W1	5	1	7' - 4"		118	3'-6"	3'-10"					Endpost Vertical L
EP557W1	5	1	6' - 7"		118	3'-10"	2'-9"					Endpost Vertical L
EP600W1	6	58	7' - 3"		STR							Endpost Vertical
EP650W1	6	56	6' - 6.5"		118	5'-6.5"	1'-0"					Endpost Vertical
EP651W1	6	28	2' - 6.5"		129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP652W1	6	29	2' - 6.5"		129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup

MAINE CENTRAL RAILROAD OVERPASS - SOUTHBOUND BRIDGE												
MARK	SIZE	NO.	LENGTH		TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2												
A550W2	5	20	4' - 9"		118	3'-0"	3'-0"					Pedestal Reinforcing
A551W2	5	20	5' - 2"		118	1'-9"	2'-2"					Pedestal Reinforcing
A600W2	6	34	6' - 11"		STR							Footing Transverse
A601W2	6	10	21' - 0.5"		STR							Wingwall Footing Transverse
A602W2	6	16	5' - 9"		STR							Footing Drill and Grout
A603W2	6	16	15' - 7.5"		STR							Footing Longitudinal
A604W2	6	30	3' - 8"		STR							Wingwall Footing Transverse
A605W2	6	12	5' - 9"		STR							Stem Drill and Grout
A606W2	6	13	16' - 5.5"		STR							Stem Horizontal
A607W2	6	18	9' - 0"		STR							Stem to Backwall Vertical (FF)
A608W2	6	18	8' - 4"		STR							Stem to Backwall Vertical (NF)
A609W2	6	28	6' - 4"		STR							Backwall Vertical Drill and Grout
A610W2	6	12	29' - 9.5"		STR							Backwall Horizontal
A611W2	6	12	5' - 4"		STR							Backwall Horizontal Splice
A612W2	6	12	28' - 8"		STR							Backwall Vertical Drill and Grout
A613W2	6	60	6' - 4"		STR							Backwall Horizontal
A614W2	6	12	5' - 4"		STR							Backwall Horizontal
A650W2	6	36	8' - 3"		118	7'-3"	1'-0"					Footing to Stem L
A651W2	6	49	8' - 3"		118	7'-3"	1'-0"					Footing to Stem L
A652W2	6	18	7' - 2"		118	3'-9"	3'-5"					Seat Vertical (FF)
A653W2	6	15	8' - 8"		111	4'-4"	4'-4"	0'-9.5"				Seat to WW Connection
A654W2	6	31	5' - 0"		129	1'-0"	2'-0"					Backwall Top Stirrup
A655W2	6	21	8' - 8"		111	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
A656W2	6	30	5' - 0"		129	1'-0"	2'-0"					Backwall Top Stirrup
A657W2	6	21	8' - 8"		119	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
W600W2	6	18	4' - 6"		STR							Wingwall Vertical Drill and Grout
W601W2	6	10	15' - 7.5"		STR							Wingwall Horizontal
W602W2	6	34	7' - 7.5"		STR							Wingwall Vertical
W603W2	6	18	15' - 2.5"		STR							Wingwall Horizontal
W650W2	6	17	8' - 1.5"		122	2'-3"	3'-4.5"	0'-10"	1'-8"	0'-7"	0'-7"	Wingwall Corbel
W651W2	6	17	7' - 4.5"		129	4'-0.5"	1'-8"					Wingwall Stirrup (Relab)
W652W2	6	6	4' - 3"		129	2'-3"	1'-0"					Wingwall Horizontal End Stirrup
W653W2	6	17	3' - 2"		129	1'-2"	1'-0"					Wingwall Vertical End Stirrup
W654W2	6	9	3' - 2"		129	1'-2"	1'-0"					Wingwall Horizontal End Stirrup
EP550W2	5	10	17' - 3.5"		129	15'-7.5"	0'-10"					Endpost Horizontal Stirrup
EP551W2	5	2	14' - 7.5"		119	12'-0.5"	2'-7"	2'-6"				Endpost Horizontal Top
EP552W2	5	1	7' - 4"		118	3'-6"	3'-10"					Endpost Vertical L
EP553W2	5	1	6' - 7"		118	3'-10"	2'-9"					Endpost Vertical L
EP554W2	5	10	16' - 10.5"		129	15'-2.5"	0'-10"					Endpost Horizontal Stirrup
EP555W2	5	2	14' - 4"		119	11'-7.5"	2'-8.5"	2'-6"				Endpost Horizontal Top
EP556W2	5	1	7' - 4"		118	3'-6"	3'-10"					Endpost Vertical L
EP557W2	5	1	6' - 7"		118	3'-10"	2'-9"					Endpost Vertical L
EP600W2	6	64	7' - 3"		STR							Endpost Vertical
EP650W2	6	66	6' - 11"		118	5'-11"	1'-0"					Endpost Vertical
EP651W2	6	33	2' - 6.5"		129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP652W2	6	32	2' - 6.5"		129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP801W2	8	3	2' - 0"		STR							Endpost Dowel

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

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340 County Road, Suite 6-C			
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FAX (207) 228-0909			

			
THE GOLD STAR MEMORIAL HIGHWAY			
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.			

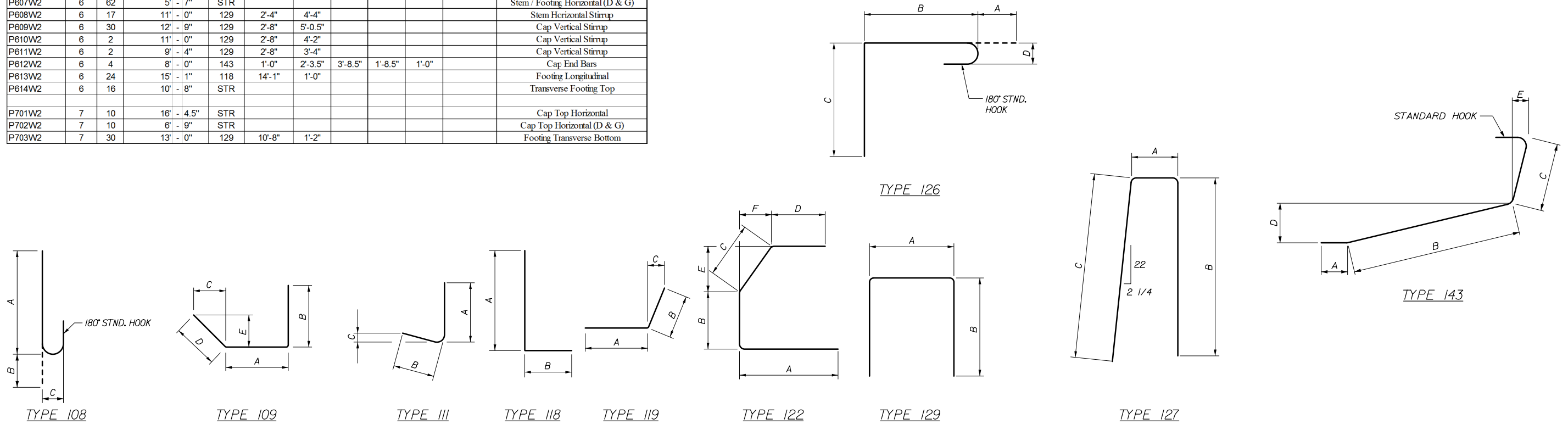
BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS REINFORCING STEEL SCHEDULE 1			
SHEET NUMBER: S-64			
CONTRACT: 2019.09			
113 OF 116			

Date: 10/18/2018

Filename: 114_ Reinforcing Steel Schedule 2.dgn

MAINE CENTRAL RAILROAD OVERPASS - SOUTHBOUND BRIDGE												
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS	
PIER 1												
P401W1	4	72	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties	
P550W1	5	4	18' - 2"	129	2'-4"	7'-11"					Footing Horizontal Stirrup	
P551W1	5	12	5' - 0.5"	118	2'-10.5"	2'-2"					Pedestal Reinforcing	
P552W1	5	24	3' - 9.5"	118	2'-10.5"	0'-11"					Pedestal Reinforcing	
P601W1	6	36	11' - 4.5"	STR							Stem Vertical	
P602W1	6	34	12' - 4.5"	STR							Stem Vertical	
P603W1	6	36	13' - 8"	118	12'-6"	1'-2"					Footing to Stem L	
P604W1	6	34	12' - 8"	118	11'-5"	1'-2"					Footing to Stem L	
P605W1	6	8	14' - 6.5"	STR							Stem Vertical	
P606W1	6	48	16' - 5.5"	STR							Stem Horizontal	
P607W1	6	60	5' - 7"	STR							Stem / Footing Horizontal (D & G)	
P608W1	6	16	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal Stirrup	
P609W1	6	30	12' - 9"	129	2'-8"	5'-0.5"					Cap Vertical Stirrup	
P610W1	6	2	11' - 0"	129	2'-8"	4'-2"					Cap Vertical Stirrup	
P611W1	6	2	9' - 4"	129	2'-8"	3'-4"					Cap Vertical Stirrup	
P612W1	6	4	8' - 0"	143	1'-0"	2'-3.5"	3'-8.5"	1'-8.5"	1'-0"		Cap End Bars	
P613W1	6	24	15' - 1"	118	14'-1"	1'-0"					Footing Longitudinal	
P614W1	6	16	10' - 8"	STR							Transverse Footing Top	
P701W1	7	10	16' - 4.5"	STR							Cap Top Horizontal	
P702W1	7	10	6' - 9"	STR							Cap Top Horizontal (D & G)	
P703W1	7	30	13' - 0"	129	10'-8"	1'-2"					Footing Transverse Bottom	
PIER 2												
P401W2	4	72	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties	
P550W2	5	4	18' - 2"	129	2'-4"	7'-11"					Footing Horizontal Stirrup	
P551W2	5	12	5' - 0.5"	118	2'-10.5"	2'-2"					Pedestal Reinforcing	
P552W2	5	24	3' - 9.5"	118	2'-10.5"	0'-11"					Pedestal Reinforcing	
P601W2	6	36	11' - 10.5"	STR							Stem Vertical	
P602W2	6	34	12' - 10.5"	STR							Stem Vertical	
P603W2	6	36	13' - 8"	118	12'-6"	1'-2"					Footing to Stem L	
P604W2	6	34	12' - 8"	118	11'-5"	1'-2"					Footing to Stem L	
P605W2	6	8	15' - 0.5"	STR							Stem Vertical	
P606W2	6	50	16' - 5.5"	STR							Stem Horizontal	
P607W2	6	62	5' - 7"	STR							Stem / Footing Horizontal (D & G)	
P608W2	6	17	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal Stirrup	
P609W2	6	30	12' - 9"	129	2'-8"	5'-0.5"					Cap Vertical Stirrup	
P610W2	6	2	11' - 0"	129	2'-8"	4'-2"					Cap Vertical Stirrup	
P611W2	6	2	9' - 4"	129	2'-8"	3'-4"					Cap Vertical Stirrup	
P612W2	6	4	8' - 0"	143	1'-0"	2'-3.5"	3'-8.5"	1'-8.5"	1'-0"		Cap End Bars	
P613W2	6	24	15' - 1"	118	14'-1"	1'-0"					Footing Longitudinal	
P614W2	6	16	10' - 8"	STR							Transverse Footing Top	
P701W2	7	10	16' - 4.5"	STR							Cap Top Horizontal	
P702W2	7	10	6' - 9"	STR							Cap Top Horizontal (D & G)	
P703W2	7	30	13' - 0"	129	10'-8"	1'-2"					Footing Transverse Bottom	

MAINE CENTRAL RAILROAD OVERPASS - SOUTHBOUND BRIDGE												
MARK	SIZE	NO.	ENGTH	TYPE	A	B	C	D	E	F	REMARKS	
SUPERSTRUCTURE												
S500W	5	494	31' - 8"	STR							Deck Transverse	
S501W	5	494	27' - 8"	STR							Deck Transverse	
S502W	5	996	2' - 7"	STR							Deck Transverse Closure Pour	
S503W	5	996	2' - 7"	STR							Deck Transverse Closure Pour	
S504W	5	240	55' - 10"	STR							Deck Longitudinal	
S505W	5	207	55' - 10"	STR							Deck Longitudinal	
S506W	5	30	55' - 10"	STR							Deck Longitudinal	
S507W	5	16	5' - 5"	STR							Deck End Reinforcing, Thickened Slab	
S508W	5	4	5' - 8"	STR							Deck End Reinforcing, Thickened Slab	
S509W	5	8	6' - 0"	STR							Deck End Reinforcing, Thickened Slab	
S510W	5	16	10' - 5"	STR							End Parapet Longitudinal	
S511W	5	32	7' - 8"	STR							8' Parapet Longitudinal	
S512W	5	40	15' - 8"	STR							16' Parapet Longitudinal	
S513W	5	20	52' - 1.5"	STR							Curb Longitudinal Reinforcing	
S514W	5	32	7' - 8"	STR							8' Parapet Longitudinal	
S515W	5	40	15' - 8"	STR							16' Parapet Longitudinal	
S516W	5	40	52' - 1.5"	STR							Curb Longitudinal	
S550W	5	493	8' - 2"	108	7'-7"	0'-7"	0'-5"				Deck Transverse	
S551W	5	493	8' - 2"	108	7'-7"	0'-7"	0'-5"				Deck Transverse	
S552W	5	59	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab	
S553W	5	51	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab	
S554W	5	7	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab	
S555W	5	59	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup	
S556W	5	51	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup	
S557W	5	7	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup	
S600W	6	502	31' - 8"	STR							Deck Transverse	
S601W	6	502	27' - 8"	STR							Deck Transverse	
S602W	6	236	47' - 0"	STR							Deck Negative Moment	
S603W	6	204	47' - 0"	STR							Deck Negative Moment	
S604W	6	28	47' - 0"	STR							Deck Negative Moment	
S650W	6	494	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical	
S651W	6	494	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical	
S652W	6	247	3' - 6.5"	127	0'-6.5"	1'-6"	1'-6"				Parapet Top	
S653W	6	247	3' - 6.5"	127	0'-6.5"	1'-6"	1'-6"				Parapet Top	



Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
Designed	EMC	10\18	Checked HCH 10\18
Drawn	PEB	10\18	In Charge of RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 REINFORCING STEEL SCHEDULE II


SHEET NUMBER: S-63
 CONTRACT: 2019.09
 114 OF 116

Date:10/18/2018

Filename: 115_Reinforcing Steel Schedule 3.dgn

MAINE CENTRAL RAILROAD OVERPASS - NORTHBOUND BRIDGE											
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1											
A550E1	5	20	4' - 9"	118	3'-0"	3'-0"					Pedestal Reinforcing
A551E1	5	20	5' - 2"	118	1'-9"	2'-2"					Pedestal Reinforcing
A600E1	6	34	6' - 11"	STR							Footing Transverse
A601E1	6	10	20' - 0.5"	STR							Wingwall Footing Transverse
A602E1	6	16	5' - 9"	STR							Footing Drill and Grout
A603E1	6	16	15' - 7.5"	STR							Footing Longitudinal
A604E1	6	28	3' - 8"	STR							Wingwall Footing Transverse
A605E1	6	12	5' - 9"	STR							Stem Drill and Grout
A606E1	6	13	16' - 5.5"	STR							Stem Horizontal
A607E1	6	18	8' - 10"	STR							Stem to Backwall Vertical (FF)
A608E1	6	18	8' - 2"	STR							Stem to Backwall Vertical (NF)
A609E1	6	28	6' - 2"	STR							Backwall Vertical Drill and Grout
A610E1	6	12	29' - 9.5"	STR							Backwall Horizontal
A611E1	6	12	5' - 4"	STR							Backwall Horizontal Splice
A612E1	6	60	6' - 2"	STR							Backwall Vertical Drill and Grout
A613E1	6	12	28' - 8"	STR							Backwall Horizontal
A614E1	6	12	5' - 4"	STR							Backwall Horizontal
A650E1	6	36	8' - 3"	118	7'-3"	1'-0"					Footing to Stem L
A651E1	6	44	8' - 3"	118	7'-3"	1'-0"					Footing to Stem L
A652E1	6	18	7' - 2"	118	3'-9"	3'-5"					Seat Vertical (FF)
A653E1	6	15	8' - 8"	111	4'-4"	4'-4"	0'-9.5"				Seat to WW Connection
A654E1	6	31	5' - 0"	129	1'-0"	2'-0"					Backwall Top Stirrup
A655E1	6	18	8' - 8"	111	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
A656E1	6	30	5' - 0"	129	1'-0"	2'-0"					Backwall Top Stirrup
A657E1	6	18	8' - 8"	119	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
W600E1	6	18	4' - 6"	STR							Wingwall Vertical Drill and Grout
W601E1	6	12	15' - 7.5"	STR							Wingwall Horizontal
W602E1	6	30	6' - 8.5"	STR							Wingwall Vertical
W603E1	6	16	13' - 9"	STR							Wingwall Horizontal
W650E1	6	17	8' - 2.5"	122	2'-3"	3'-5.5"	0'-10"	1'-8"	0'-7"	0'-7"	Wingwall Corbel
W651E1	6	17	7' - 4.5"	129	4'-0.5"	1'-8"					Wingwall Stirrup (Rehab)
W652E1	6	6	4' - 3"	129	2'-3"	1'-0"					Wingwall Horizontal End Stirrup
W653E1	6	15	3' - 2"	129	1'-2"	1'-0"					Wingwall Vertical End Stirrup
W654E1	6	8	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stirrup
EP550E1	5	10	17' - 3.5"	129	15'-7.5"	1'-0"					Endpost Horizontal Stirrup
EP551E1	5	2	14' - 7.5"	119	12'-0.5"	2'-7"	2'-6"				Endpost Horizontal Top
EP552E1	5	1	7' - 4"	118	3'-6"	3'-10"					Endpost Vertical L
EP553E1	5	1	6' - 7"	118	3'-10"	2'-9"					Endpost Vertical L
EP554E1	5	10	15' - 5"	129	13'-9"	0'-10"					Endpost Horizontal Stirrup
EP555E1	5	2	12' - 10.5"	119	10'-2"	2'-8.5"	2'-6"				Endpost Horizontal Top
EP556E1	5	1	7' - 4"	118	3'-6"	3'-10"					Endpost Vertical L
EP557E1	5	1	6' - 7"	118	3'-10"	2'-9"					Endpost Vertical L
EP600E1	6	58	7' - 3"	STR							Endpost Vertical
EP650E1	6	66	7' - 8"	118	6'-8"	1'-0"					Endpost Vertical
EP651E1	6	33	2' - 6.5"	129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP652E1	6	29	2' - 6.5"	129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP801E1	8	3	2' - 0"	STR							Endpost Dowel

MAINE CENTRAL RAILROAD OVERPASS - NORTHBOUND BRIDGE											
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2											
A550E2	5	20	4' - 9"	118	3'-0"	3'-0"					Pedestal Reinforcing
A551E2	5	20	5' - 2"	118	1'-9"	2'-2"					Pedestal Reinforcing
A600E2	6	34	6' - 11"	STR							Footing Transverse
A601E2	6	10	21' - 7.5"	STR							Wingwall Footing Transverse
A602E2	6	16	5' - 9"	STR							Footing Drill and Grout
A603E2	6	16	15' - 7.5"	STR							Footing Longitudinal
A604E2	6	32	3' - 8"	STR							Wingwall Footing Transverse
A605E2	6	12	5' - 9"	STR							Stem Drill and Grout
A606E2	6	13	16' - 4.5"	STR							Stem Horizontal
A607E2	6	18	8' - 11"	STR							Stem to Backwall Vertical (FF)
A608E2	6	18	8' - 3"	STR							Stem to Backwall Vertical (NF)
A609E2	6	28	6' - 9"	STR							Backwall Vertical Drill and Grout
A610E2	6	12	29' - 7.5"	STR							Backwall Horizontal
A611E2	6	12	5' - 4"	STR							Backwall Horizontal Splice
A612E2	6	60	6' - 3"	STR							Backwall Vertical Drill and Grout
A613E2	6	12	28' - 7.5"	STR							Backwall Horizontal
A614E2	6	12	5' - 3"	STR							Backwall Horizontal
A650E2	6	36	8' - 3"	118	7'-3"	1'-0"					Footing to Stem L
A651E2	6	49	8' - 3"	118	7'-3"	1'-0"					Footing to Stem L
A652E2	6	18	7' - 2"	118	3'-9"	3'-5"					Seat Vertical (FF)
A653E2	6	15	8' - 8"	111	4'-4"	4'-4"	0'-9.5"				Seat to WW Connection
A654E2	6	31	5' - 0"	129	1'-0"	2'-0"					Backwall Top Stirrup
A655E2	6	21	8' - 8"	111	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
A656E2	6	30	5' - 0"	129	1'-0"	2'-0"					Backwall Top Stirrup
A657E2	6	21	8' - 8"	119	4'-4"	4'-4"	0'-9.5"				Backwall to WW Connection
W600E2	6	18	4' - 6"	STR							Wingwall Vertical Drill and Grout
W601E2	6	12	14' - 10"	STR							Wingwall Horizontal
W602E2	6	34	7' - 2.5"	STR							Wingwall Vertical
W603E2	6	18	15' - 5"	STR							Wingwall Horizontal
W650E2	6	16	8' - 3"	122	2'-3"	3'-6"	0'-10"	1'-8"	0'-7"	0'-7"	Wingwall Corbel
W651E2	6	16	7' - 5"	129	4'-1"	1'-8"					Wingwall Stirrup (Rehab)
W652E2	6	6	4' - 3"	129	2'-3"	1'-0"					Wingwall Horizontal End Stirrup
W653E2	6	17	3' - 2"	129	1'-2"	1'-0"					Wingwall Vertical End Stirrup
W654E2	6	9	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stirrup
EP550E2	5	10	16' - 6"	129	14'-10"	0'-10"					Endpost Horizontal Stirrup
EP551E2	5	2	13' - 10"	119	11'-3"	2'-7"	2'-6"				Endpost Horizontal Top
EP552E2	5	1	7' - 4"	118	3'-6"	3'-10"					Endpost Vertical L
EP553E2	5	1	6' - 7"	118	3'-10"	2'-9"					Endpost Vertical L
EP554E2	5	10	17' - 1"	129	15'-5"	0'-10"					Endpost Horizontal Stirrup
EP555E2	5	2	14' - 6.5"	119	11'-10"	2'-8.5"	2'-6"				Endpost Horizontal Top
EP556E2	5	1	7' - 4"	118	3'-6"	3'-10"					Endpost Vertical L
EP557E2	5	1	6' - 7"	118	3'-10"	2'-9"					Endpost Vertical L
EP600E2	6	64	7' - 3"	STR							Endpost Vertical
EP650E2	6	62	7' - 4.5"	118	6'-4.5"	1'-0"					Endpost Vertical
EP651E2	6	31	2' - 6.5"	129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup
EP652E2	6	32	2' - 6.5"	129	0'-6.5"	1'-0"					Endpost Vertical End Stirrup

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.					
				By	Date	By	Date		
				Designed	EMC	10\18	Checked	HCH	10\18
				Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION			
340 County Road, Suite 6-C			
Westbrook, ME 04092			
TEL (207) 774-5155			
FAX (207) 228-0909			

			
THE GOLD STAR MEMORIAL HIGHWAY			
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.			

BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS REINFORCING STEEL SCHEDULE III			
SHEET NUMBER: S-64			
CONTRACT:2019.09			
115 OF 116			

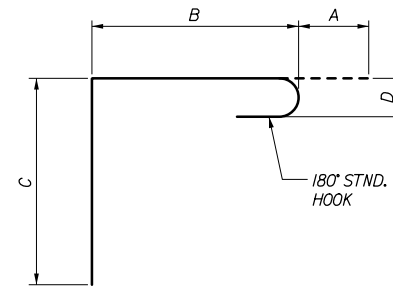
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MAINE CENTRAL RAILROAD OVERPASS - NORTHBOUND BRIDGE

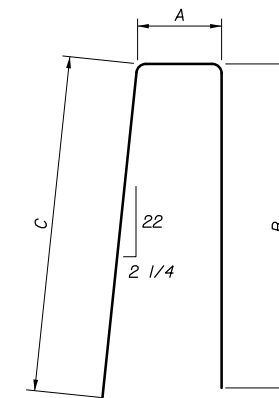
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
PIER 1											
P401E1	4	72	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550E1	5	4	18' - 2"	129	2'-4"	7'-11"					Footing Horizontal Stirrup
P551E1	5	12	5' - 0.5"	118	2'-10.5"	2'-2"					Pedestal Reinforcing
P552E1	5	24	3' - 9.5"	118	2'-10.5"	0'-11"					Pedestal Reinforcing
P601E1	6	36	11' - 1"	STR							Stem Vertical
P602E1	6	34	12' - 1"	STR							Stem Vertical
P603E1	6	36	13' - 8"	118	12'-6"	1'-2"					Footing to Stem L
P604E1	6	34	12' - 8"	118	11'-5"	1'-2"					Footing to Stem L
P605E1	6	8	14' - 3"	STR							Stem Vertical
P606E1	6	48	16' - 5.5"	STR							Stem Horizontal
P607E1	6	60	5' - 7"	STR							Stem / Footing Horizontal (D & G)
P608E1	6	16	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal Stirrup
P609E1	6	30	12' - 9"	129	2'-8"	5'-0.5"					Cap Vertical Stirrup
P610E1	6	2	11' - 0"	129	2'-8"	4'-2"					Cap Vertical Stirrup
P611E1	6	2	9' - 4"	129	2'-8"	3'-4"					Cap Vertical Stirrup
P612E1	6	4	8' - 0"	143	1'-0"	2'-3.5"	3'-8.5"	1'-8.5"	1'-0"		Cap End Bars
P613E1	6	24	15' - 1"	118	14'-1"	1'-0"					Footing Longitudinal
P614E1	6	16	10' - 8"	STR							Transverse Footing Top
P701E1	7	10	16' - 4.5"	STR							Cap Top Horizontal
P702E1	7	10	8' - 9"	STR							Cap Top Horizontal (D & G)
P703E1	7	30	13' - 0"	129	10'-8"	1'-2"					Footing Transverse Bottom
PIER 2											
P401E2	4	72	3' - 6"	126	0'-6"	2'-4"	0'-8"				Stem Horizontal Ties
P550E2	5	4	18' - 2"	129	2'-4"	7'-11"					Footing Horizontal Stirrup
P551E2	5	12	5' - 0.5"	118	2'-10.5"	2'-2"					Pedestal Reinforcing
P552E2	5	24	3' - 9.5"	118	2'-10.5"	0'-11"					Pedestal Reinforcing
P601E2	6	36	11' - 7"	STR							Stem Vertical
P602E2	6	34	12' - 7"	STR							Stem Vertical
P603E2	6	36	13' - 8"	118	12'-6"	1'-2"					Footing to Stem L
P604E2	6	34	12' - 8"	118	11'-5"	1'-2"					Footing to Stem L
P605E2	6	8	14' - 9"	STR							Stem Vertical
P606E2	6	48	16' - 5.5"	STR							Stem Horizontal
P607E2	6	60	5' - 7"	STR							Stem / Footing Horizontal (D & G)
P608E2	6	16	11' - 0"	129	2'-4"	4'-4"					Stem Horizontal Stirrup
P609E2	6	30	12' - 9"	129	2'-8"	5'-0.5"					Cap Vertical Stirrup
P610E2	6	2	11' - 0"	129	2'-8"	4'-2"					Cap Vertical Stirrup
P611E2	6	2	9' - 4"	129	2'-8"	3'-4"					Cap Vertical Stirrup
P612E2	6	4	8' - 0"	143	1'-0"	2'-3.5"	3'-8.5"	1'-8.5"	1'-0"		Cap End Bars
P613E2	6	24	15' - 1"	118	14'-1"	1'-0"					Footing Longitudinal
P614E2	6	16	10' - 8"	STR							Transverse Footing Top
P701E2	7	10	16' - 4.5"	STR							Cap Top Horizontal
P702E2	7	10	8' - 9"	STR							Cap Top Horizontal (D & G)
P703E2	7	30	13' - 0"	129	10'-8"	1'-2"					Footing Transverse Bottom

MAINE CENTRAL RAILROAD OVERPASS - NORTHBOUND BRIDGE

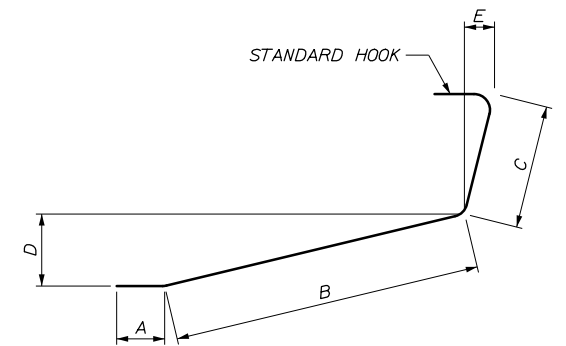
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
SUPERSTRUCTURE											
S500E	5	494	31' - 8"	STR							Deck Transverse
S501E	5	494	27' - 8"	STR							Deck Transverse
S502E	5	996	2' - 7"	STR							Deck Transverse Closure Pour
S503E	5	996	2' - 7"	STR							Deck Transverse Closure Pour
S504E	5	240	55' - 10"	STR							Deck Longitudinal
S505E	5	207	55' - 10"	STR							Deck Longitudinal
S506E	5	30	55' - 10"	STR							Deck Longitudinal
S507E	5	16	5' - 5"	STR							Deck End Reinforcing, Thickened Slab
S508E	5	4	5' - 8"	STR							Deck End Reinforcing, Thickened Slab
S509E	5	8	6' - 0"	STR							Deck End Reinforcing, Thickened Slab
S510E	5	16	10' - 5"	STR							End Parapet Longitudinal
S511E	5	32	7' - 8"	STR							8' Parapet Longitudinal
S512E	5	40	15' - 8"	STR							16' Parapet Longitudinal
S513E	5	20	52' - 1.5"	STR							Curb Longitudinal Reinforcing
S514E	5	32	7' - 8"	STR							8' Parapet Longitudinal
S515E	5	40	15' - 8"	STR							16' Parapet Longitudinal
S516E	5	40	52' - 1.5"	STR							Curb Longitudinal
S550E	5	493	8' - 2"	108	7'-7"	0'-7"	0'-5"				Deck Transverse
S551E	5	493	8' - 2"	108	7'-7"	0'-7"	0'-5"				Deck Transverse
S552E	5	59	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab
S553E	5	51	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab
S554E	5	7	6' - 7"	118	5'-8"	0'-11"					Deck Thickened Slab
S555E	5	59	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup
S556E	5	51	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup
S557E	5	7	5' - 3.5"	109	3'-1"	0'-11"	0'-11"	1'-3.5"	0'-11"		Deck Thickened Slab Stirrup
S600E	6	502	31' - 8"	STR							Deck Transverse
S601E	6	502	27' - 8"	STR							Deck Transverse
S602E	6	236	47' - 0"	STR							Deck Negative Moment
S603E	6	204	47' - 0"	STR							Deck Negative Moment
S604E	6	28	47' - 0"	STR							Deck Negative Moment
S650E	6	494	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical
S651E	6	494	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical
S652E	6	247	3' - 6.5"	127	0'-6.5"	1'-6"	1'-6"				Parapet Top
S653E	6	247	3' - 6.5"	127	0'-6.5"	1'-6"	1'-6"				Parapet Top



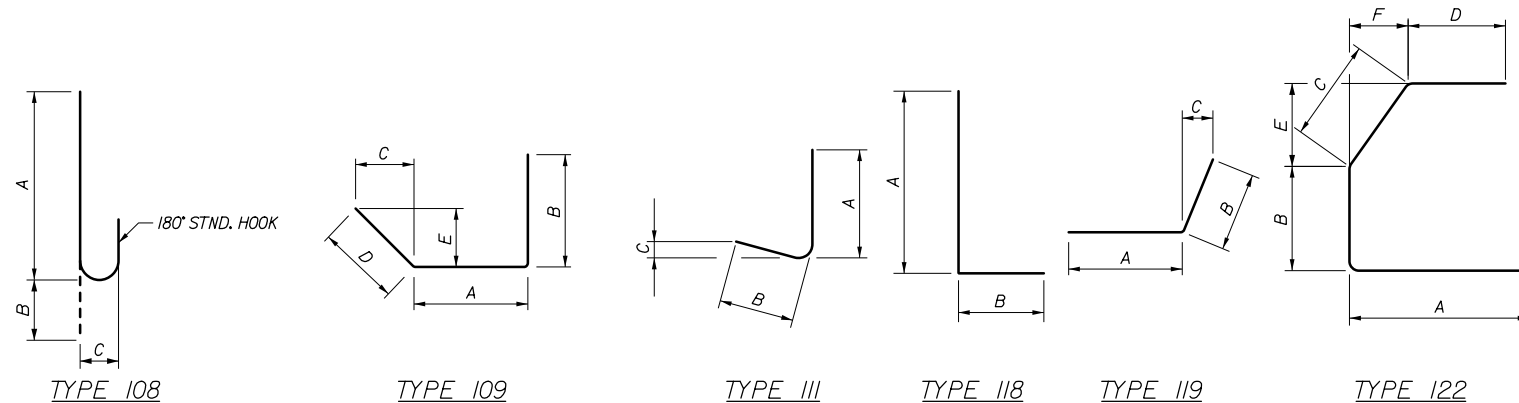
TYPE 126



TYPE 127



TYPE 143



Filename: 116_Reinforcing Steel Schedule 4.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.			
Designed	EMC	10\18	Checked HCH 10\18
Drawn	PEB	10\18	In Charge of RAL 10\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
 MAINE CENTRAL RAILROAD OVERPASS
 REINFORCING STEEL SCHEDULE IV

SHEET NUMBER: S-65
 CONTRACT: 2019.09
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