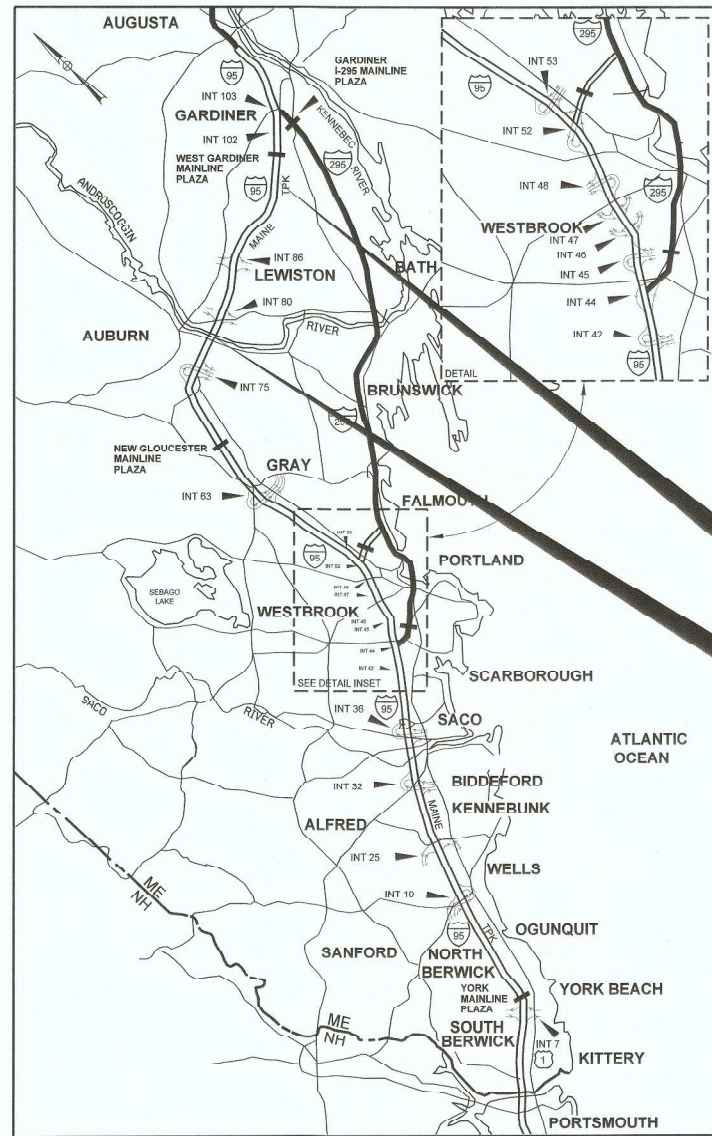


Date: 7/9/2018

Filename: 001_Title_Sheet.dgn



LOCATION MAP



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

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 MILE 99.2

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MILE 78.9

CONTRACT 2018.15 BRIDGE REHABILITATION COBBOSSECONTEE STREAM OVERPASS MILE 99.2

BRIDGE REPAIRS ANDROSCOGGIN RIVER OVERPASS MILE 78.9

INDEX OF SHEETS

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4	GENERAL NOTES AND EARTHWORK SUMMARY
5	TYPICAL SECTIONS
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11-17	MISCELLANEOUS DETAILS
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20	LIMIT OF DISTURBANCE
21-24	PROFILE
25-36	CROSS SECTIONS
37-91	STRUCTURAL PLANS
92-115	ANDROSCOGGIN RIVER OVERPASS PLANS

APPROVED: MAINE TURNPIKE AUTHORITY

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

7/13/18

Stephen R. Fartre
 STEPHEN R. FARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE

7/16/18



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



7/9/18

CONTRACT 2018.15

Date: 7/27/2018

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	COBB. STRUCTURAL QUANTITY	COBB. CIVIL QUANTITY	ANDRO. QUANTITY	TOTAL QUANTITY	ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	COBB. STRUCTURAL QUANTITY	COBB. CIVIL QUANTITY	ANDRO. QUANTITY	TOTAL QUANTITY
201.31	Removal of Debris		LS			1	1	507.091	Aluminum Bridge Railing, 1 Bar	872 LF	LS	1			1
202.202	Removing Pavement Surface		SY		12550		12,550	508.14	High Performance Waterproofing Membrane	1820 SY	LS	1			1
202.2026	Removing Pavement Surface - Drainage Paths		SF		22		22	511.071	Cofferdam Pier 1 - NB		LS	1			1
202.206	Removing Rumble Strips		LF		100		100	511.072	Cofferdam Pier 1 - SB		LS	1			1
202.10	Removing Existing Superstructure Property of Contractor	420 CY	LS	1			1	511.073	Cofferdam Pier 2 - NB		LS	1			1
202.12	Removing Existing Structural Concrete		CY	140			140	511.074	Cofferdam Pier 2 - SB		LS	1			1
202.13	Removing Existing Railings Retained by Authority		LF	980			980	511.075	Cofferdam Pier 3 - NB		LS	1			1
203.20	Common Excavation		CY		931		931	511.076	Cofferdam Pier 3 - SB		LS	1			1
203.25	Granular Borrow		CY		500		500	514.06	Curing Box for Concrete Cylinders		EA	1		1	2
203.43	Geofoam Lightweight Fill		CY	280			280	515.201	Pigmented Protective Coating for Concrete Surfaces		SY	1,400			1,400
203.45	Leveling Sand		CY	69			69	515.202	Clear Protective Coating for Concrete Surfaces		SY	1,050		3,250	4,300
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY	420			420	515.23	Anti-Graffiti Coating		SY			900	900
206.10	Structural Earth Excavation - Piers		CY	700			700	518.40	Epoxy Injection Crack Repair		LF	45		310	355
304.10	Aggregate Subbase Course - Gravel		CY		250		250	518.401	Epoxy Injection Crack Repair - Below Waterline		LF	15		470	485
304.14	Aggregate Base Course - Type A		CY		230		230	518.51	Repair of Upward Facing Surfaces - Below Reinforcing Steel < 8 inches		SF	24		43	67
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size		Ton		700		700	518.60	Repair of Vertical Surfaces < 8 inches		SF	43		2,950	2,993
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size		Ton		130		130	518.601	Repair of Vertical Surfaces < 8 inches - Below Waterline		SF	37		18	55
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	150	1,150		1,300	518.70	Repair of Overhead Surfaces < 8 inches		SF			91	91
403.2084	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)		Ton		80		80	520.23	Asphaltic Plug Joint		LF	160			160
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size		Ton		210		210	520.224	Joint Armor Repair		LS	1			1
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course)		Ton	150	470		620	523.52	Bearing Installation		EA	60			60
409.15	Bituminous Tack Coat - Applied		Gal	110	1,325		1,435	523.5401	Laminated Elastomeric Bearings, Fixed		EA	12			12
419.30	Sawing Bituminous Pavement		LF		1,980		1,980	523.54021	PTFE Elastomeric Bearings, Expansion		EA	48			48
470.08	Berm Dropoff Correction - Grindings		Ton		16		16	523.56	Cleaning and Painting Bearing		EA			42	42
470.081	Berm Correction		LF		1,350		1,350	523.561	Repair Bearing		EA			1	1
501.231	Dynamic Loading Test		EA	4			4	523.562	Repair Bearing Keeper Strap		EA			10	10
501.38	Steel H-beam Piles 42 lb/ft, delivered		LF	510			510	524.301	Temporary Structural Support - Androscooggin Jacking		LS			1	1
501.381	Steel H-beam Piles 42 lb/ft, in place		LF	510			510	524.302	Temporary Structural Support - Cobbosseecontee Girders		LS	1			1
501.90	Pile Tips		EA	16			16	524.303	Temporary Structural Support - Cobbosseecontee Braces		LS	1			1
501.91	Pile Splices		EA	5			5	524.40	Protective Shielding - Steel Girders		SY	2,250			2,250
501.92	Pile Driving Equipment Mobilization		LS	1			1	524.60	Temporary Access Platforms for Pier Inspection and Repair		LS			1	1
502.219	Structural Concrete, Abutments and Retaining Walls	160 CY	LS	1			1	526.306	Temporary Concrete Barrier, Type I - Supplied by Authority	5210 LF	LS		0.5	0.5	1
502.239	Structural Concrete Piers	170 CY	LS	1			1	527.301	Energy Absorbing System (CAT) - New		EA		3		3
502.24	Structural Concrete Piers (placed under water)		CY	310			310	527.341	Work Zone Crash Cushions - TL-3		Unit		1	2	3
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges	460 CY	LS	1			1	603.159	12 inch Culvert Pipe Option III		LF		148		148
502.264	Structural Concrete Parapets	110 CY	LS	1			1	603.179	18 inch Culvert Pipe Option III		LF		65		65
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	24 CY	LS	1			1	603.28	Concrete Collar		EA		3		3
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	243,000			243,000	604.184	Rebuild Catch Basin to Grade - Type II		EA		9		9
504.702	Structural steel, fabricated and delivered, welded	80,400 LB	LS	1			1	604.242	Catch Basin Type F3		EA		1		1
504.71	Structural steel erection	80,400 LB	LS	1			1	604.40	Secure Catch Basin Grate		EA		2		2
504.885	Post-Tensioning Sleeve Repair		EA			13	13	606.13	31" W-Beam Guardrail - Mid-Way Splice (7 Steel Post, 8" Offset Blocks, Single Faced)		LF		1,038		1,038
505.08	Shear Connectors	7,548 EA	LS	1			1	606.1723	Bridge Transition - Type III		EA	4			4
506.9102	Zinc Rich Coating System (Shop Applied)	80,400 LB	LS	1			1	606.1724	Bridge Transition - Type III, Modified		EA	2			2
506.9105	Field Touch-Up of Existing Steel	33,000 LB	LS	1			1	606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail		EA		1		1
								606.279	Terminal End - Anchored End, Thrie Beam		EA		1		1

Filename: 002_Quantities.dgn

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 REHABILITATION COBBOSSECONTEE STREAM OVERPASS ESTIMATED QUANTITIES			
No.	Revision	By	Date												
				Designed	By	Date	Checked	By	Date						
				Drawn	By	Date	In Charge of	By	Date						
					SLS	07\18		RAL	07\18						

Date: 7/27/2018

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	COBB. STRUCTURAL QUANTITY	COBB. CIVIL QUANTITY	ANDRO. QUANTITY	TOTAL QUANTITY
606.353	ReflectORIZED Flexible Guardrail Marker		EA		3		3
606.354	Remove and Reset ReflectORIZED Flexible Guardrail Marker		EA		3		3
606.64	Guardrail Thrie Beam - Double Rail		LF		1,225		1,225
606.65	Guardrail Thrie Beam - Single Rail		LF		115		115
606.791	Guardrail - Flared Terminal - 31" W-Beam Guardrail		EA		1		1
607.09	Woven Wire Fence - Metal Posts		LF		120		120
607.33	Bracing Assembly, Type II - Metal Post		EA		2		2
607.4311	Snow Drift Fence		LF		280		280
609.15	Sloped Curb Type 1		LF	970			970
610.08	Plain Riprap		CY	1,100	8		1,108
610.18	Stone Ditch Protection		CY		17		17
613.319	Erosion Control Blanket		SY		160		160
615.07	Loam		CY		310		310
618.141	Seeding Method Number 3		Unit		25		25
619.1201	Mulch - Plan Quantity		Unit		25		25
619.1202	Temporary Mulch		LS		1		1
620.58	Erosion Control Geotextile		SY		85		85
620.70	HDPE Geomembrane		SY	700			700
627.712	White or Yellow Pavement Marking Line		LF		21,600		21,600
627.73	Temporary 6 Inch Pavement Marking Tape		LF		4,950	9,700	14,650
627.731	Temporary 6 Inch Black Pavement Marking Tape		LF		3,850	2,800	6,650
627.77	Removing Existing Pavement Marking		SF		7,850		7,850
627.94	Pavement Marking Tape		LF		140		140
629.05	Hand Labor, Straight Time		HR		20	20	40
631.10	Air Compressor (including operator)		HR		20	10	30
631.11	Air Tool (including operator)		HR		20	10	30
631.12	All Purpose Excavator (including operator)		HR		20		20
631.172	Truck - Large (including operator)		HR		20	20	40
631.36	Foreman		HR		10	10	20
644.10	Glare Screen - Supplied by Authority		LF		1,100		1,100
652.30	Flashing Arrow		EA		2	2	4
652.312	Type III Barricade		EA		1		1
652.33	Drum		EA		120	86	206
652.34	Cone		EA		120	50	170
652.35	Construction Signs		SF		680	830	1,510
652.361	Maintenance of Traffic Control Devices		LS		0.9	0.1	1
652.38	Flaggers		HR			10	10
652.41	Portable-Changeable Message Sign		EA		2	2	4
652.45	Truck Mounted Attenuator		CD		28	20	48
652.451	Automated Trailer Mounted Speed Limit Sign		CD		28	20	48
652.46	Temporary Portable Rumble Strip		Unit		28	20	48
656.50	Baled Hay, in place		EA		20		20
656.632	30 inch Temporary Silt Fence		LF		960		960
656.64	Boom Supported Floating Silt Fence		LF	116		302	418
659.10	Mobilization		LS	0.6	0.2	0.2	1

COMMON EXCAVATION FOR ESTIMATE

COMMON EXCAVATION (FROM CROSS SECTIONS)	832
GRUBBING IN FILL	43
FULL DEPTH PAVEMENT REMOVAL AT ABUTMENTS	56
TOTAL COMMON EXCAVATION (for estimate)	931

FILL FOR BORROW CALCULATIONS

COMMON FILL (FROM CROSS SECTIONS)	99
GRUBBING IN FILL	43
TOTAL FILL	142

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION	931
DEDUCTIONS:	
GRUBBING IN CUT	184
GRUBBING IN FILL	43
PAVEMENT SALVAGE (CUT & FILL)	81
(2) TOTAL DEDUCTIONS	308
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	623
TOTAL AVAILABLE NON-ROCK EXCAVATION	623

COMPUTATION FOR COMMON BORROW FOR ESTIMATE

(3) TOTAL FILL	142
TOTAL AVAIL. NON-ROCK EXCAV.	623 x 0.90 = 561
(4) TOTAL AVAILABLE EXCAVATION	= 561
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION	-419

IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED

COMMON BORROW (for estimate) =	419 x 1.00	419
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Filename: 003_Quantities.dgn

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 REHABILITATION COBBOSSEECONTEE STREAM OVERPASS ESTIMATED QUANTITIES																									
<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> </tbody> </table>	No.	Revision	By	Date									CONSULTANT PROJECT MANAGER: Craig R. Morin, 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>EDD 07\18</td> <td>Checked</td> <td>CDH 07\18</td> </tr> <tr> <td>Drawn</td> <td>SLS 07\18</td> <td>In Charge of</td> <td>RAL 07\18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	EDD 07\18	Checked	CDH 07\18	Drawn	SLS 07\18	In Charge of	RAL 07\18		MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.	CONTRACT: 2018.15
No.	Revision	By	Date																												
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Drawn	SLS 07\18	In Charge of	RAL 07\18																												
						SHEET NUMBER: EQ-02 3 OF 115																									

Date: 7/27/2018

GENERAL NOTES:

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD DETAILS HIGHWAYS AND BRIDGES LATEST REVISION AND MDOT 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 EXISTING WIRE FENCE AT THE ABUTMENTS, SHALL BE REMOVED AND DISPOSED. REPLACEMENT WOVEN WIRE FENCE AND POSTS SHALL BE INSTALLED BY THE CONTRACTOR. REMOVAL OF THE EXISTING FENCE AND POSTS SHALL BE INCIDENTAL TO THE SECTION 203, EARTHWORK PAY ITEMS.
4. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.
5. 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.
6. THE CONTRACTOR SHALL TAKE NOTE THAT THE COBBOSSEECONTEE STREAM WATER ELEVATION FLUCTUATE BY SEVERAL FEET DUE TO THE RELEASE OF WATER FROM UPSTREAM DAMS, AS WELL AS THE SENSITIVITY OF THE RIVER ELEVATIONS DUE TO RAINFALL. THE CONTRACTOR SHALL PLAN AND COMPLETE THE WORK IN A MANNER WHICH ACCOUNTS FOR THESE VARIATIONS. HYDROLOGIC DATA IS SHOWN ON SHEET S-02.
7. CLEARING LIMITS SHOWN ON THE PLANS ARE APPROXIMATE. CLEARING COMPLETED BY OTHERS PRIOR TO THE START OF THIS CONTRACT.
8. EXISTING CROSSOVER AT MM 98.0 SHALL BE OPENED FROM NOV. 1 TO APRIL 15 AND TEMPORARILY CLOSED ALL OTHER TIMES DURING CONSTRUCTION. EXISTING CROSSOVER AT MM 98.0 SHALL BE PERMANENTLY CLOSED AT PROJECT COMPLETION. PAYMENT SHALL BE MADE UNDER 202.202, 403.2081, 409.15, 527.301, 527.306, 606.354 AND 606.3606 ITEMS.
9. THE U.S. ARMY CORPS OF ENGINEERS AND THE STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMIT FOR THE COBBOSSEECONTEE STREAM OVERPASS PROJECT ARE INCLUDED AS PART OF THIS CONTRACT (SEE SPECIFICATIONS). THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THESE PERMITS.
10. RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. ADDITIONAL INFORMATION IS AVAILABLE FROM THE MAINE TURNPIKE AUTHORITY UPON REQUEST.
11. THE EXISTING PAVED MEDIAN SOUTH OF THE COBBOSSEECONTEE STREAM OVERPASS, USED FOR MOT SHALL BE 1/2" MILL AND PAVED TO BE OPENED TO TRAFFIC DURING CONSTRUCTION. PAYMENT SHALL BE MADE UNDER 202.202, 403.2081, AND 409.15.
12. THE EXISTING PAVED MEDIAN, NORTH OF THE COBBOSSEECONTEE STREAM OVERPASS, USED FOR MOT, SHALL BE RECONSTRUCTED AS SHOWN ON SHEET MOT-01.

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.
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 AND AGGREGATE SHALL BE COMPACTED TO 95% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, EXCEPT AS AMENDED BY SPECIAL PROVISION 203.

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.
4. ANY NECESSARY CORING OF EXISTING CATCH BASINS TO TAKE A PROPOSED PIPE WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCIDENTAL TO THE PROPOSED CULVERT ITEMS.

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 MD-01 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 CONSIDERED 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.
2. EXISTING E-ZPASS GUIDE SIGN MOUNTED ON LUNTS HILL ROAD UNDERPASS BRIDGE SHALL BE FULLY COVERED FOR THE DURATION OF THE PROJECT AND UNCOVERED AT PROJECT COMPLETION. CARE SHALL BE TAKEN TO AVOID DAMAGING THE SIGN WHILE COVERING, UNCOVERING, AND THROUGHOUT CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION SIGNS ITEM.
3. EXISTING PAY TOLL 1 MILE GUIDE SIGN MOUNTED ON LUNTS HILL ROAD UNDERPASS BRIDGE SHALL HAVE THE ARROW COVERED BY RIVETED TEMPORARY PANELS FOR THE DURATION OF THE PROJECT AND UNCOVERED AT PROJECT COMPLETION. CARE SHALL BE TAKEN TO AVOID DAMAGING THE SIGN WHILE COVERING, UNCOVERING, AND THROUGHOUT CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION SIGNS ITEM.

LIST OF ABBREVIATIONS

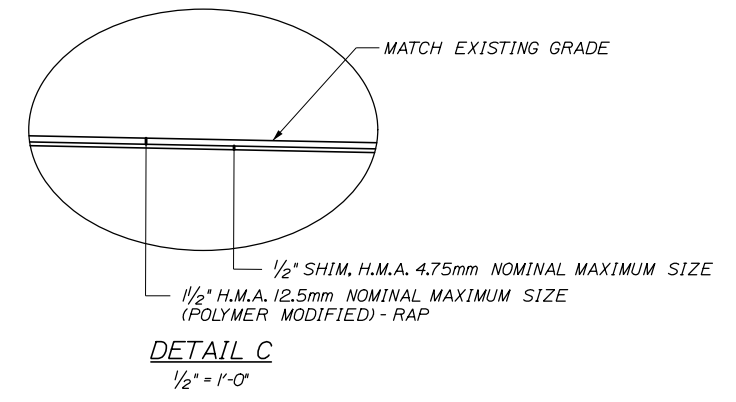
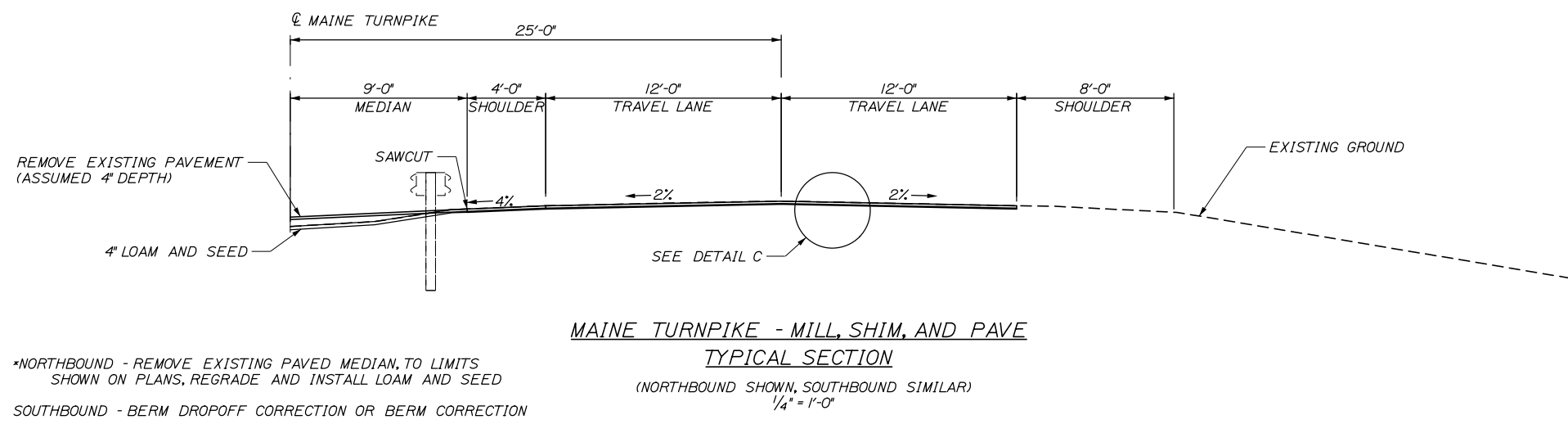
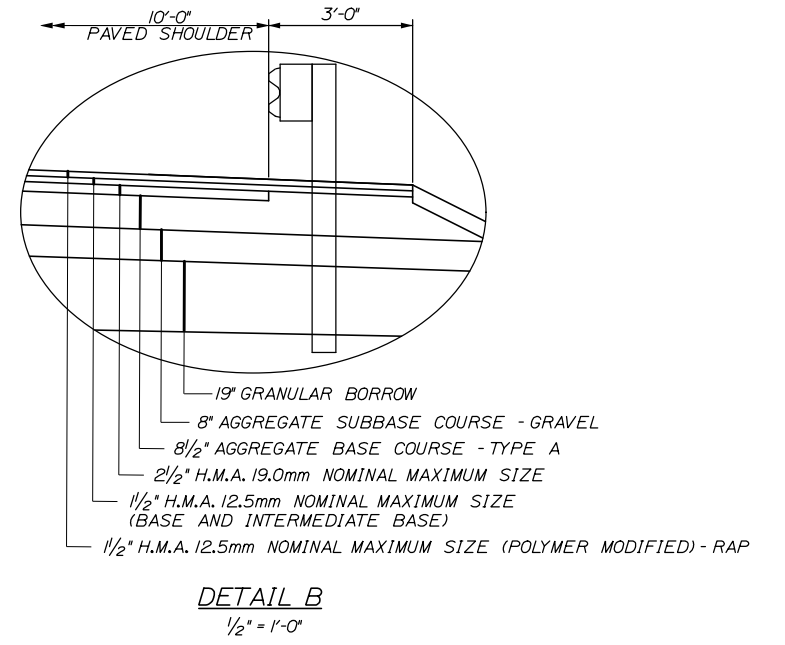
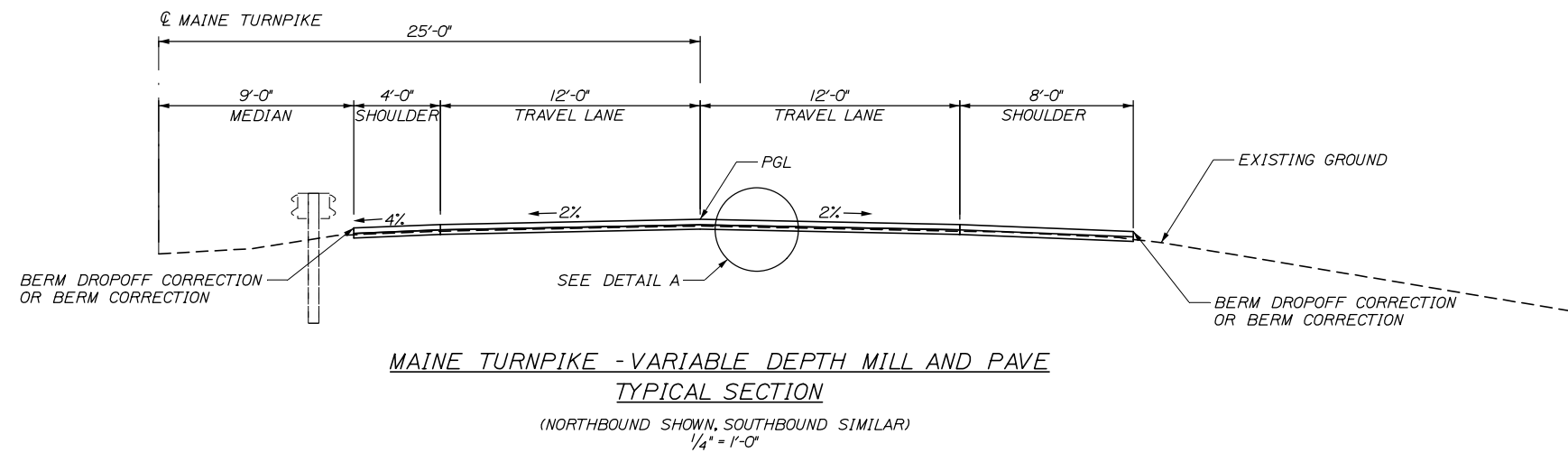
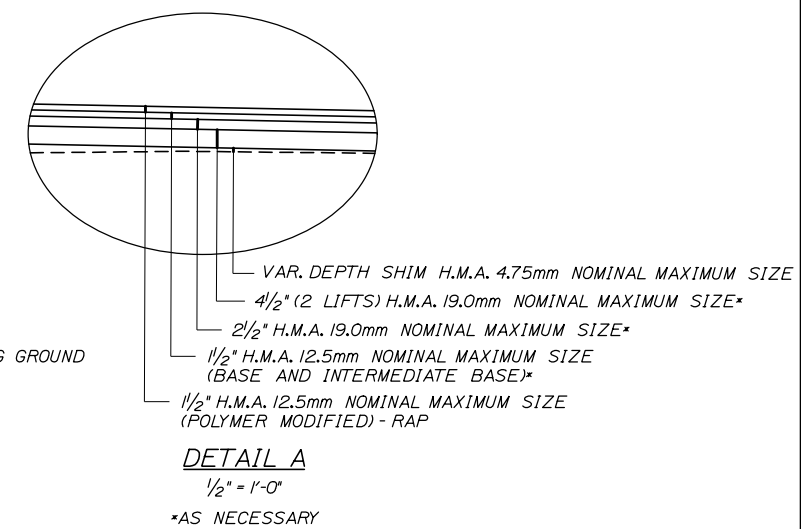
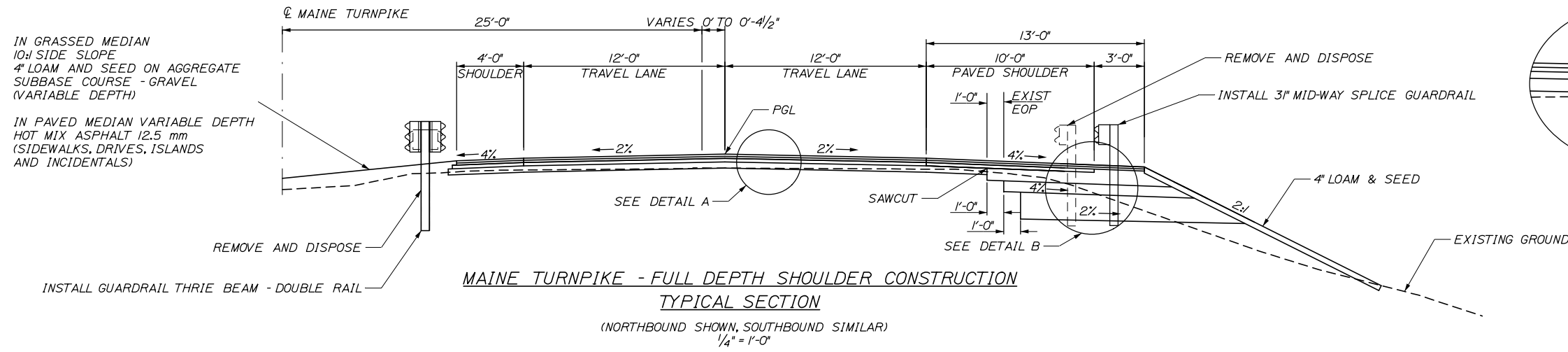
ABUT. - ABUTMENT	EQ. - EQUAL	P.S.I. - POUNDS per
ADDL. - ADDITIONAL	EXIST. - EXISTING	SQUARE INCH
ALT. - ALTERNATE	EXP. - EXPANSION	RDWY. - ROADWAY
APPROX. - APPROXIMATELY	F.F. - FAR FACE	SHLDR. - SHOULDER
BOT. - BOTTOM	JT. - JOINT	SB - SOUTHBOUND
BRG. - BEARING	MAX. - MAXIMUM	SF - SQUARE FEET
CL - CLEAR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

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. 1, 2, OR 3. UNLESS OTHERWISE NOTED, SEEDING METHOD NO. 1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS; SEEDING METHOD NO. 2 SHALL BE UTILIZED ON ALL NON-GUARDRAIL FORESLOPES, FROM THE EDGE OF FORESLOPE TO THE DITCH LINE OR TOE OF FILL; SEEDING METHOD NO. 3 SHALL BE UTILIZED ON ALL BACKSLOPES AND ON ALL GUARDRAIL FORESLOPES.
4. MULCH SHALL BE APPLIED IN AREAS SEEDED BY SEEDING METHODS NO. 1, 2, AND 3 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.
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 FOUR FOOT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ON THE SIDE SLOPES ALONG THE TOP OF THE RIPRAP AND BEHIND THE WINGWALLS.

Filename: 004_GeneralNotes.dgn

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 REHABILITATION COBBOSSEECONTEE STREAM OVERPASS GENERAL NOTES AND EARTHWORK SUMMARY																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">No.</th> <th style="width: 60%;">Revision</th> <th style="width: 10%;">By</th> <th style="width: 25%;">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													<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="6" style="text-align: center;">CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.</td> </tr> <tr> <td> </td> <td style="text-align: center;">By</td> <td style="text-align: center;">Date</td> <td> </td> <td style="text-align: center;">By</td> <td style="text-align: center;">Date</td> </tr> <tr> <td> </td> <td style="text-align: center;">LZD</td> <td style="text-align: center;">07\18</td> <td>Checked</td> <td style="text-align: center;">CDH</td> <td style="text-align: center;">07\18</td> </tr> <tr> <td> </td> <td style="text-align: center;">SLS</td> <td style="text-align: center;">07\18</td> <td>In Charge of</td> <td style="text-align: center;">RAL</td> <td style="text-align: center;">07\18</td> </tr> </table>	CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.							By	Date		By	Date		LZD	07\18	Checked	CDH	07\18		SLS	07\18	In Charge of	RAL	07\18	MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.	CONTRACT: 2018.15	SHEET NUMBER: GN-01 4 OF 115
No.	Revision	By	Date																																									
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	LZD	07\18	Checked	CDH	07\18																																							
	SLS	07\18	In Charge of	RAL	07\18																																							



Filename: 005_Typical Section.dgn

Scale:				AS NOTED			
No.	Revision	By	Date				

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	SAZ	07\18		CDH	07\18
	SAZ	07\18	In Charge of	RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

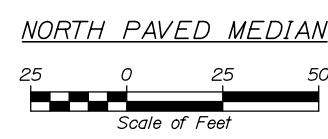
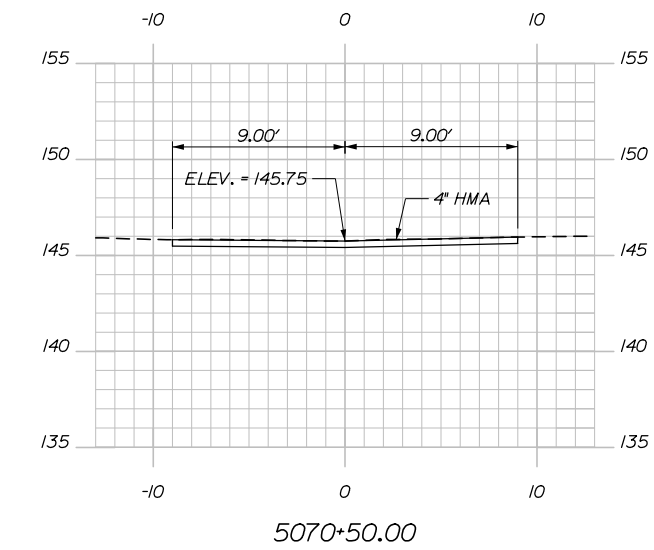
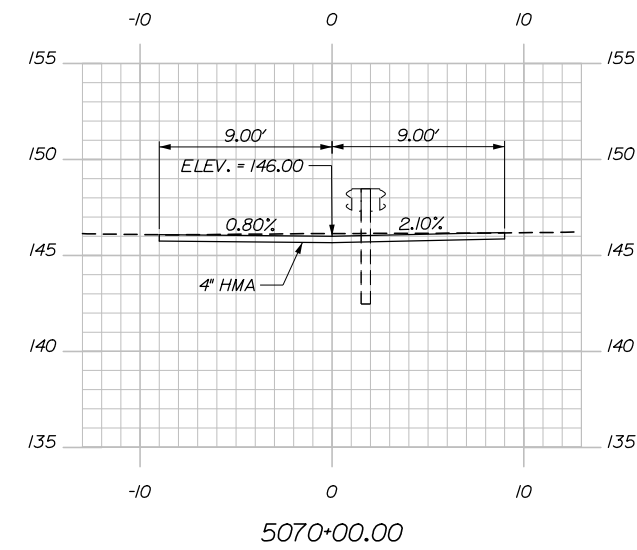
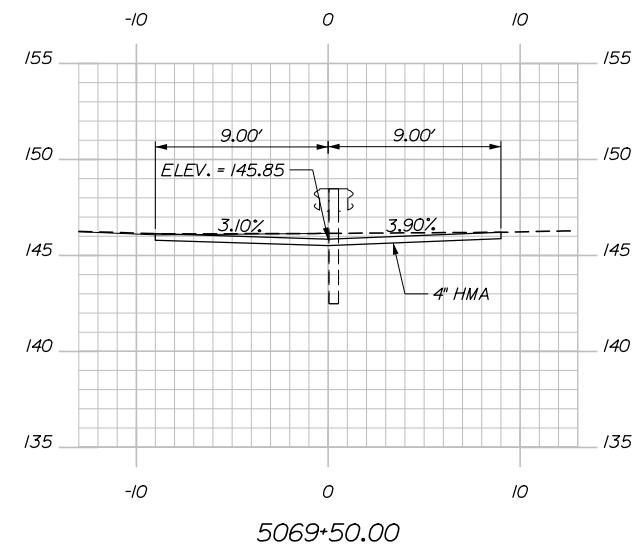
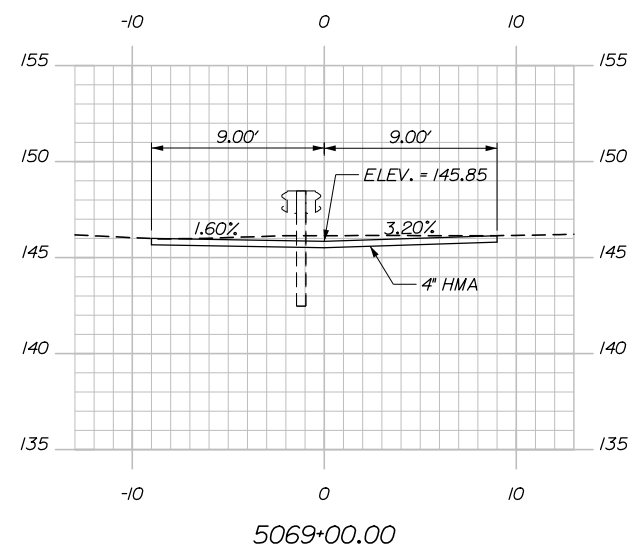
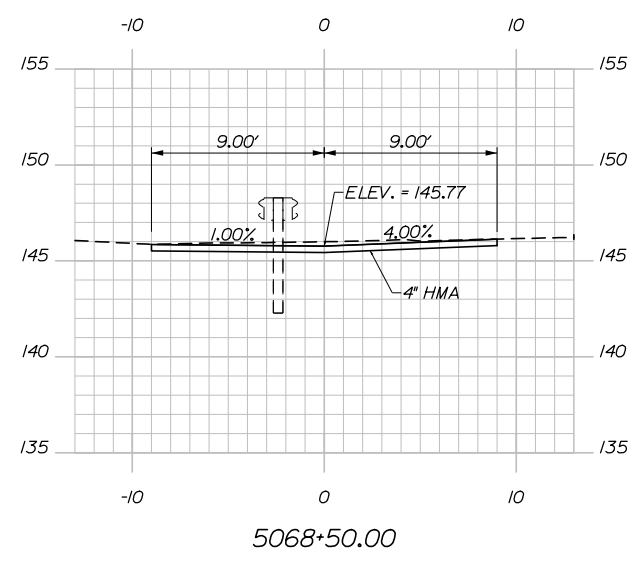
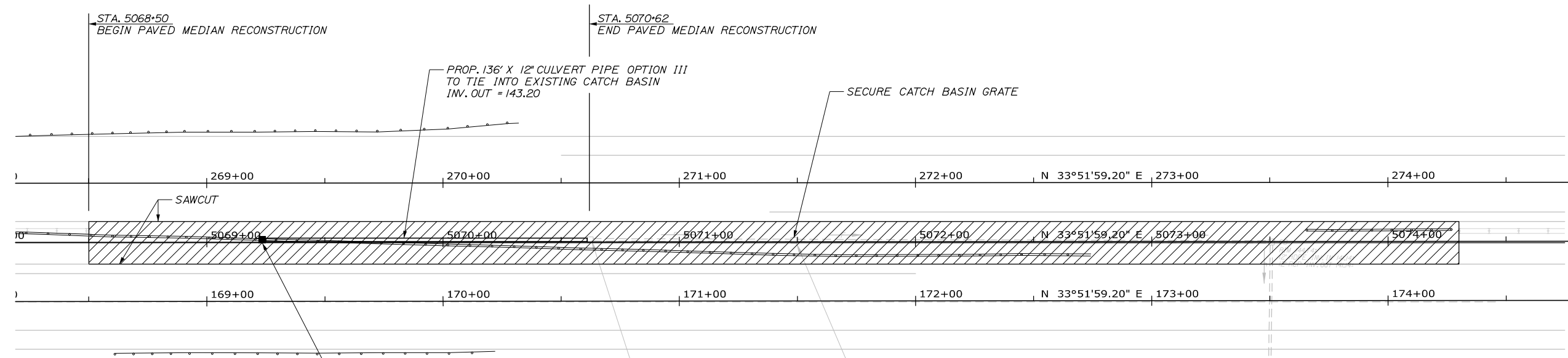
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

TYPICAL SECTIONS

SHEET NUMBER: TYP-1
CONTRACT: 2018.15
5 OF 115

Date: 7/27/2018



PHASE 1A NOTES:

- PRIOR TO INSTALLING PHASE I TRAFFIC CONTROL DEVICES, THE NORTH PAVED MEDIAN SHALL BE RECONSTRUCTED AS SHOWN.
 - EXISTING PAVEMENT AND GRAVEL SHALL BE EXCAVATED TO THE DEPTHS SHOWN ON THE CROSS SECTIONS
 - GRAVEL SHALL BE GRADED AS SHOWN AND 4" OF HMA (2" OF 12.5MM SURFACE ON 2" OF 12.5MM BASE)
- PRIOR TO INSTALLING PHASE I TRAFFIC CONTROL DEVICES, THE FOLLOWING MEDIAN CATCH BASINS SHALL BE RECONSTRUCTED TO LOWER THE RIM ELEVATION BY 1/2":
 - STA. 5061+34
 - STA. 5070+61

Filename: 006_MOT_Phase 1A.dgn

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

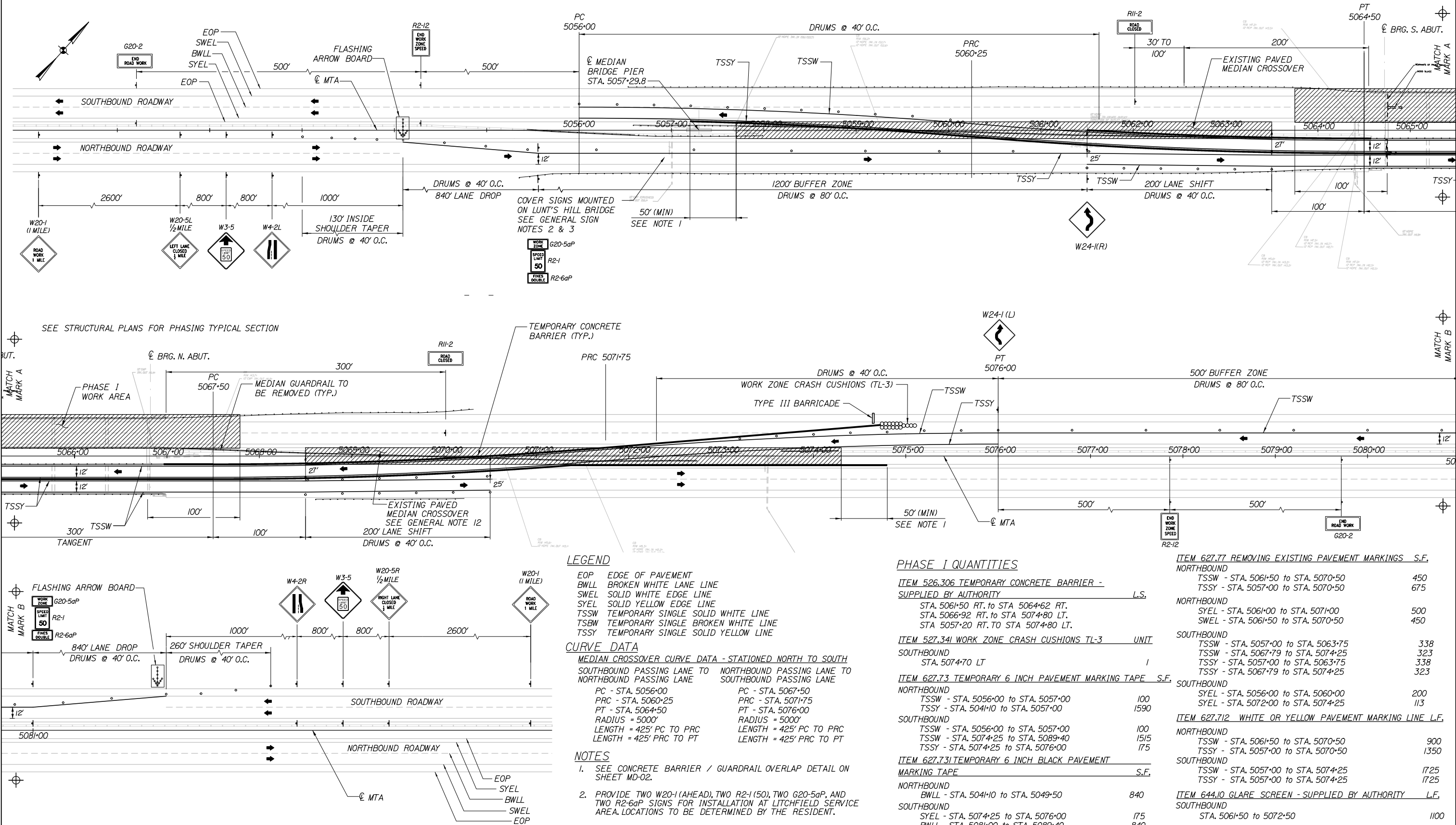
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE 1A

SHEET NUMBER: MOT-01
 6 OF 115

CONTRACT: 2018.15

Date: 7/27/2018



LEGEND

- EOP EDGE OF PAVEMENT
- BWLL BROKEN WHITE LANE LINE
- SWEL SOLID WHITE EDGE LINE
- SYEL SOLID YELLOW EDGE LINE
- TSSW TEMPORARY SINGLE SOLID WHITE LINE
- TSBW TEMPORARY SINGLE BROKEN WHITE LINE
- TSSY TEMPORARY SINGLE SOLID YELLOW LINE

CURVE DATA

MEDIAN CROSSOVER CURVE DATA - STATIONED NORTH TO SOUTH

SOUTHBOUND PASSING LANE TO NORTHBOUND PASSING LANE	NORTHBOUND PASSING LANE TO SOUTHBOUND PASSING LANE
PC - STA. 5056+00	PC - STA. 5067+50
PRC - STA. 5060+25	PRC - STA. 5071+75
PT - STA. 5064+50	PT - STA. 5076+00
RADIUS = 5000'	RADIUS = 5000'
LENGTH = 425' PC TO PRC	LENGTH = 425' PC TO PRC
LENGTH = 425' PRC TO PT	LENGTH = 425' PRC TO PT

NOTES

1. SEE CONCRETE BARRIER / GUARDRAIL OVERLAP DETAIL ON SHEET MD-02.
2. PROVIDE TWO W20-1(AHEAD), TWO R2-1(50), TWO G20-5aP, AND TWO R2-6aP SIGNS FOR INSTALLATION AT LITCHFIELD SERVICE AREA. LOCATIONS TO BE DETERMINED BY THE RESIDENT.

PHASE I QUANTITIES

ITEM 526.306 TEMPORARY CONCRETE BARRIER - SUPPLIED BY AUTHORITY		L.S.
STA. 5061+50 RT. TO STA. 5064+62 RT.		
STA. 5066+92 RT. TO STA. 5074+80 LT.		
STA. 5057+20 RT. TO STA. 5074+80 LT.		
ITEM 527.341 WORK ZONE CRASH CUSHIONS TL-3		UNIT
SOUTHBOUND		
STA. 5074+70 LT		1
ITEM 627.73 TEMPORARY 6 INCH PAVEMENT MARKING TAPE		S.F.
NORTHBOUND		
TSSW - STA. 5056+00 TO STA. 5057+00		100
TSSY - STA. 5041+10 TO STA. 5057+00		1590
SOUTHBOUND		
TSSW - STA. 5056+00 TO STA. 5057+00		100
TSSW - STA. 5074+25 TO STA. 5089+40		1515
TSSY - STA. 5074+25 TO STA. 5076+00		175
ITEM 627.731 TEMPORARY 6 INCH BLACK PAVEMENT MARKING TAPE		S.F.
NORTHBOUND		
BWLL - STA. 5041+10 TO STA. 5049+50		840
SOUTHBOUND		
SYEL - STA. 5074+25 TO STA. 5076+00		175
BWLL - STA. 5081+00 TO STA. 5089+40		840
ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS		S.F.
NORTHBOUND		
TSSW - STA. 5061+50 TO STA. 5070+50		450
TSSY - STA. 5057+00 TO STA. 5070+50		675
NORTHBOUND		
SYEL - STA. 5061+00 TO STA. 5071+00		500
SWEL - STA. 5061+50 TO STA. 5070+50		450
SOUTHBOUND		
TSSW - STA. 5057+00 TO STA. 5063+75		338
TSSW - STA. 5067+79 TO STA. 5074+25		323
TSSY - STA. 5057+00 TO STA. 5063+75		338
TSSY - STA. 5067+79 TO STA. 5074+25		323
SOUTHBOUND		
SYEL - STA. 5056+00 TO STA. 5060+00		200
SYEL - STA. 5072+00 TO STA. 5074+25		113
ITEM 627.712 WHITE OR YELLOW PAVEMENT MARKING LINE		L.F.
NORTHBOUND		
TSSW - STA. 5061+50 TO STA. 5070+50		900
TSSY - STA. 5057+00 TO STA. 5070+50		1350
SOUTHBOUND		
TSSW - STA. 5057+00 TO STA. 5074+25		1725
TSSY - STA. 5057+00 TO STA. 5074+25		1725
ITEM 644.10 GLARE SCREEN - SUPPLIED BY AUTHORITY		L.F.
SOUTHBOUND		
STA. 5061+50 TO 5072+50		1100

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

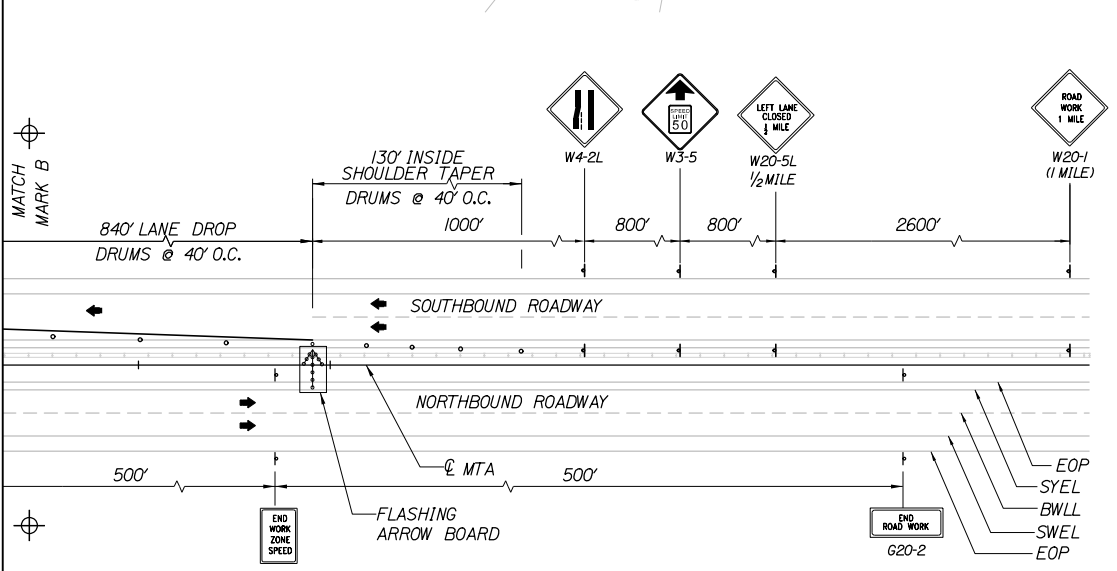
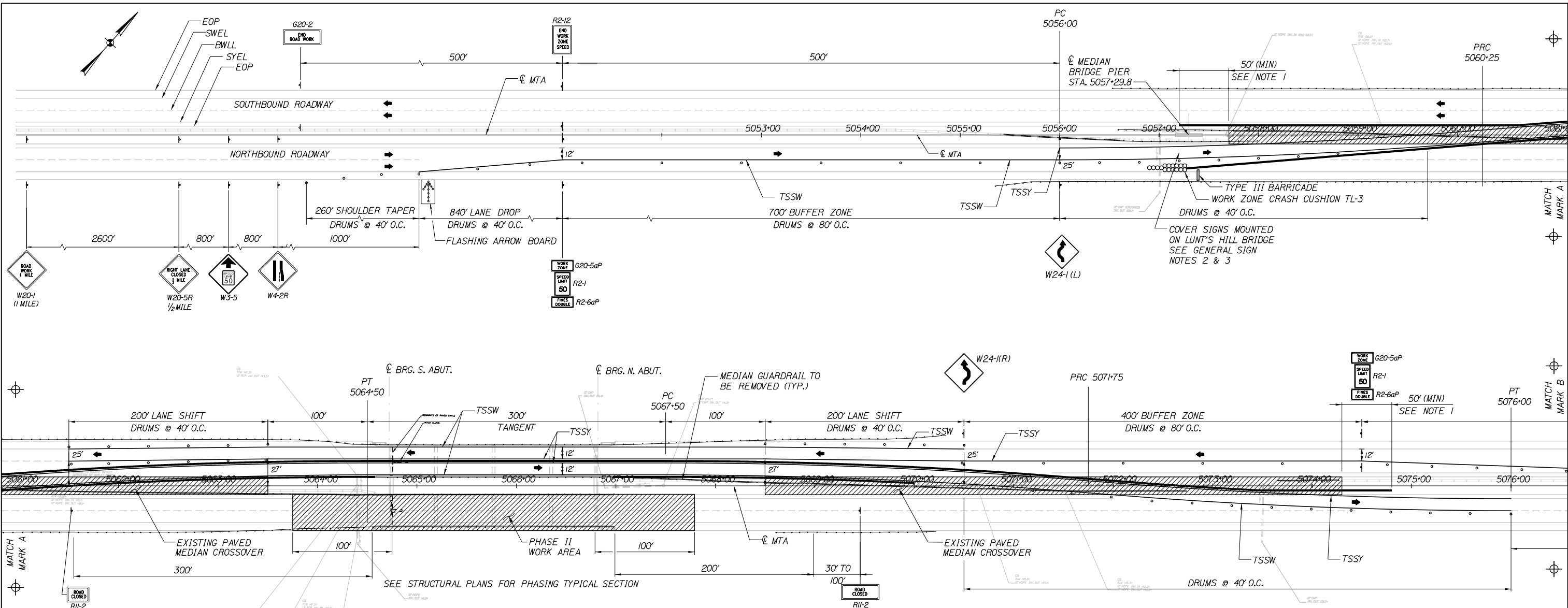
**BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE 1**

SHEET NUMBER: MOT-02
 7 OF 115

CONTRACT: 2018.15

Filename: 007_MOT_Phase 1.dgn

Date: 7/27/2018



LEGEND

- EOP EDGE OF PAVEMENT
- BWLL BROKEN WHITE LANE LINE
- SWEL SOLID WHITE EDGE LINE
- SYEL SOLID YELLOW EDGE LINE
- TSSW TEMPORARY SINGLE SOLID WHITE LINE
- TSBW TEMPORARY SINGLE BROKEN WHITE LINE
- TSSY TEMPORARY SINGLE SOLID YELLOW LINE

CURVE DATA

MEDIAN CROSSOVER CURVE DATA - STATIONED NORTH TO SOUTH

NORTHBOUND PASSING LANE TO SOUTHBOUND PASSING LANE	SOUTHBOUND PASSING LANE TO NORTHBOUND PASSING LANE
PC - STA. 5056+00	PC - STA. 5067+50
PRC - STA. 5060+25	PRC - STA. 5071+75
PT - STA. 5064+50	PT - STA. 5076+00
RADIUS = 5000'	RADIUS = 5000'
LENGTH = 425' PC TO PRC	LENGTH = 425' PC TO PRC
LENGTH = 425' PRC TO PT	LENGTH = 425' PRC TO PT

NOTES

1. SEE CONCRETE BARRIER / GUARDRAIL OVERLAP DETAIL ON SHEET MD-02.
2. PROVIDE TWO W20-1 (AHEAD), TWO R2-1 (50), TWO G20-5aP, AND TWO R2-6aP SIGNS FOR INSTALLATION AT LITCHFIELD SERVICE AREA. LOCATIONS TO BE DETERMINED BY THE RESIDENT.

PHASE II QUANTITIES

ITEM 526.306 TEMPORARY CONCRETE BARRIER - SUPPLIED BY AUTHORITY	L.S.
STA. 5057+30 RT. to 5064+62 LT.	
STA. 5066+92 LT. to 5070+00 LT.	
STA. 5057+20 LT. to 5074+80 RT.	
ITEM 527.341 WORK ZONE CRASH CUSHIONS TL-3	UNIT
NORTHBOUND	
STA. 5057+30 RT	1
ITEM 627.73 TEMPORARY 6 INCH PAVEMENT MARKING TAPE S.F.	
NORTHBOUND	
TSSW - STA. 5040+60 to STA. 5057+00	1640
TSSW - STA. 5074+25 to STA. 5076+00	175
TSSY - STA. 5056+00 to STA. 5057+00	100
TSSY - STA. 5074+25 to STA. 5076+00	175
SOUTHBOUND	
TSSY - STA. 5074+25 to STA. 5082+90	865
ITEM 627.731 TEMPORARY 6 INCH BLACK PAVEMENT MARKING TAPE	S.F.
NORTHBOUND	
BWLL - STA. 5040+60 to STA. 5049+00	840
SYEL - STA. 5056+00 to STA. 5057+00	100
SYEL - STA. 5074+25 to STA. 5076+00	175
SOUTHBOUND	
BWLL - STA. 5074+50 to STA. 5082+90	840

ITEM 627.77 REMOVING EXISTING PAVEMENT MARKINGS S.F.

NORTHBOUND	
TSSW - STA. 5057+00 to STA. 5074+25	863
TSSY - STA. 5057+00 to STA. 5074+25	863
NORTHBOUND	
SYEL - STA. 5057+00 to STA. 5061+00	200
SYEL - STA. 5072+00 to STA. 5074+25	113
SOUTHBOUND	
TSSW - STA. 5061+50 to STA. 5070+50	450
TSSY - STA. 5061+50 to STA. 5074+25	638
SOUTHBOUND	
SWEL - STA. 5061+50 to STA. 5070+50	450
SYEL - STA. 5060+75 to STA. 5071+50	538

ITEM 627.712 WHITE OR YELLOW PAVEMENT MARKING LINE L.F.

NORTHBOUND	
TSSW - STA. 5057+50 to STA. 5074+25	1675
TSSY - STA. 5057+50 to STA. 5074+25	1675
SOUTHBOUND	
TSSW - STA. 5061+50 to STA. 5070+50	900
TSSY - STA. 5061+50 to STA. 5074+25	1275

ITEM 644.10 GLARE SCREEN - SUPPLIED BY AUTHORITY L.F.

NORTHBOUND	
STA. 5059+50 to 5070+50	1100

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	CDH	07\18
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

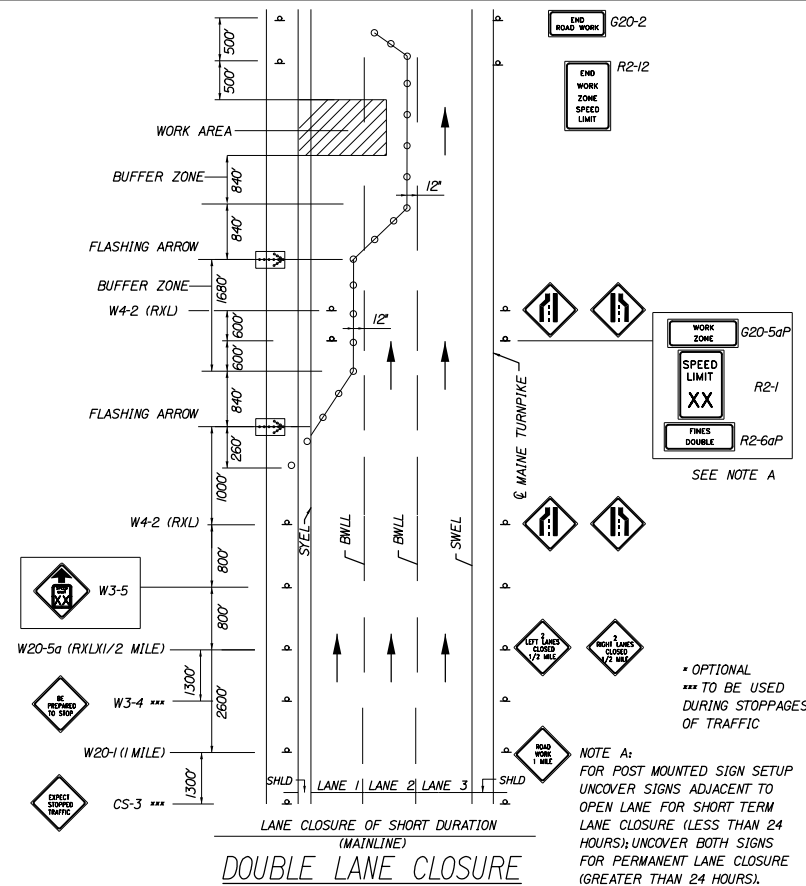
BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
 MAINTENANCE OF TRAFFIC
 PHASE 2

SHEET NUMBER: MOT-03
 8 OF 115

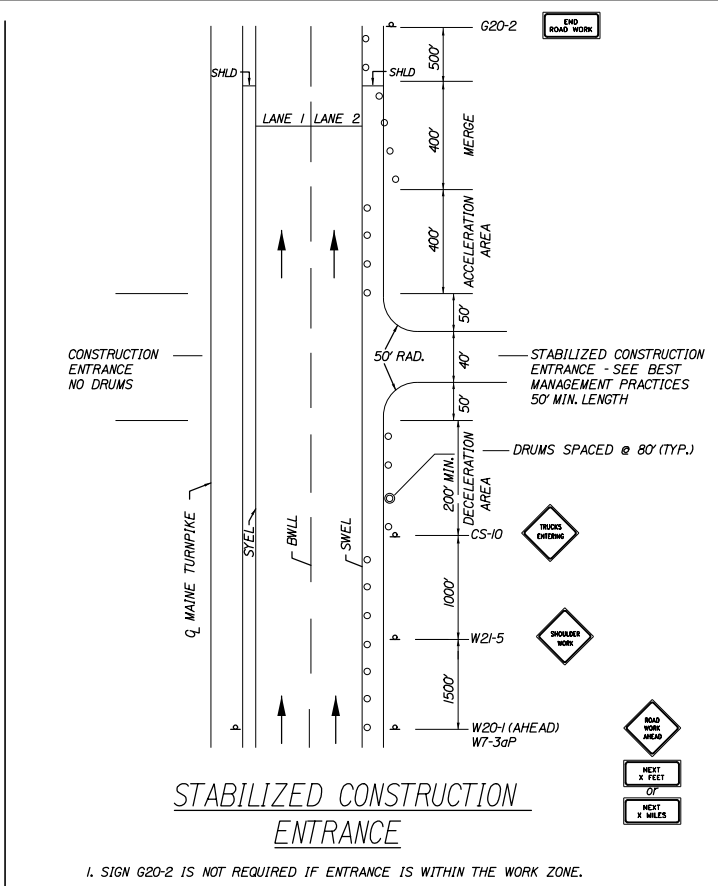
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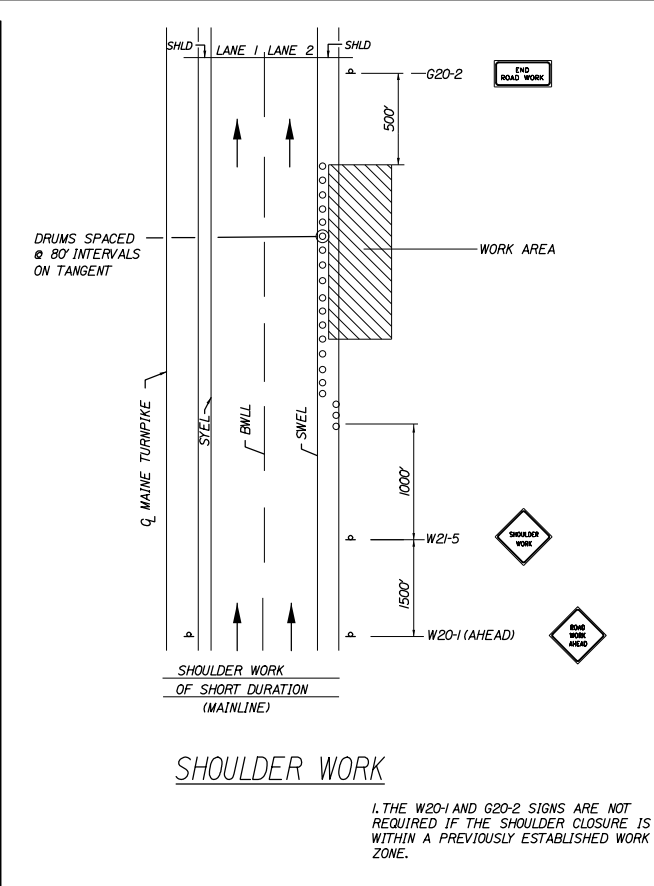
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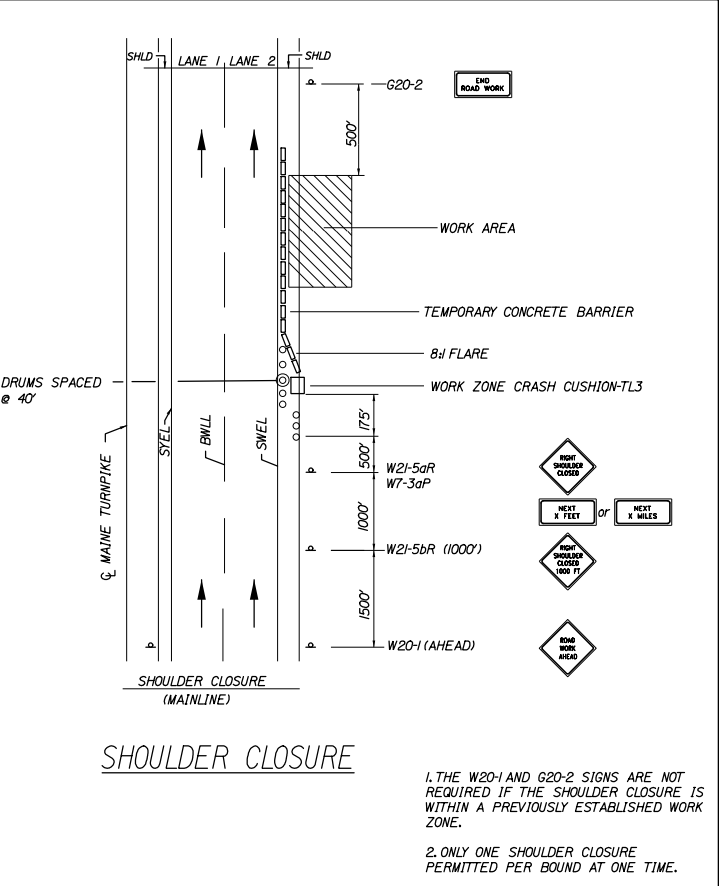
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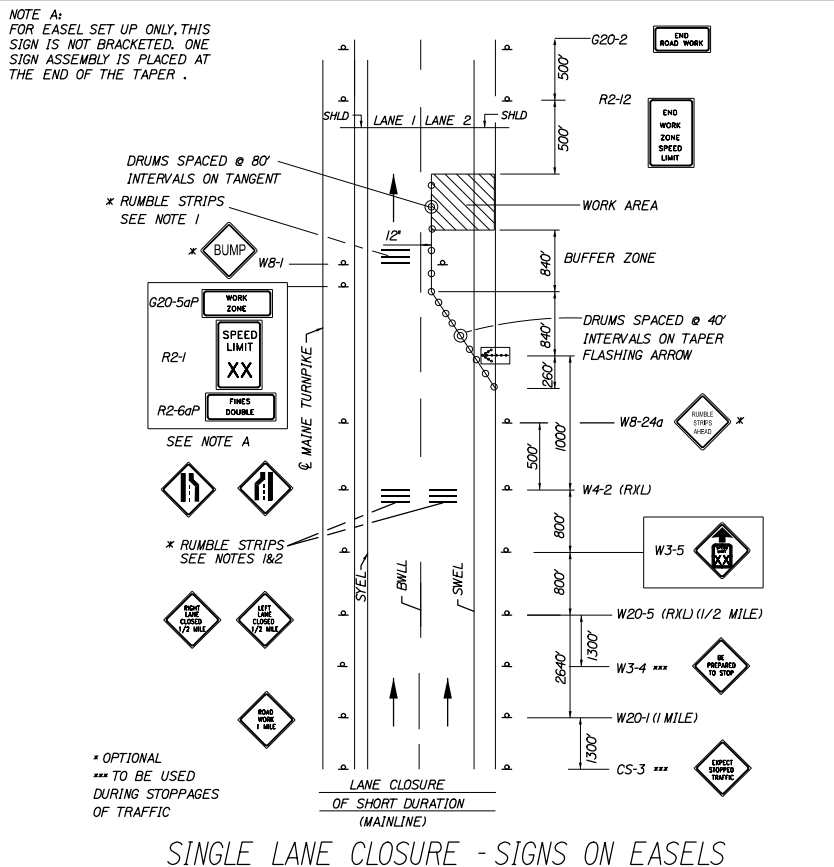
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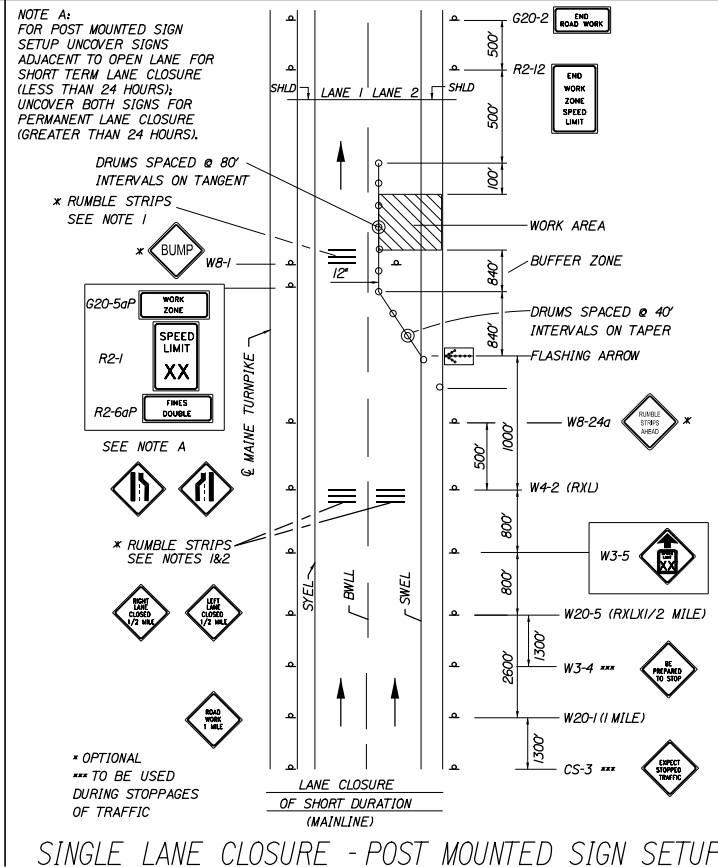
SHOULDER WORK



SHOULDER CLOSURE



SINGLE LANE CLOSURE - SIGNS ON EASELS



SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP

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)
- 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 TRAFFIC SIGNS SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
 - SPEED LIMIT, STOP 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: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\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 REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 MAINTENANCE OF TRAFFIC
 STANDARD DETAILS

SHEET NUMBER: MOT-04
 CONTRACT: 2018.15
 9 OF 115

Filename: 009_MOT_Details.dgn

Date: 7/27/2018

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"	END ROAD WORK	TEXT DIMENSIONS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			4	COLORS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			8.00 (32)
G20-5aP	48"	24"	WORK ZONE				6				8.00 (48)
R2-1 (50)	48"	60"	SPEED LIMIT 50				6				20.00 (120)
R2-6aP	48"	24"	FINES DOUBLED				6				8.00 (48)
R2-12	48"	60"	END WORK ZONE SPEED				4				20 (80)
R11-2	48"	30"	ROAD CLOSED				2				10.00 (20)
W3-5 (50)	48"	48"					4				16.00 (64)
W4-2L	48"	48"					2				16.00 (32)
W4-2R	48"	48"					2				16.00 (32)
W20-1 (1 MILE)	48"	48"	ROAD WORK 1 MILE				6				16.00 (96)

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		
W20-5L (1/2 MILE)	48"	48"	LEFT LANE CLOSED 1/2 MILE				2				16.00 (32)
W20-5R (1/2 MILE)	48"	48"	RIGHT LANE CLOSED 1/2 MILE				2				16.00 (32)
W24-1L	48"	48"					1				16.00 (16)
W24-1R	48"	48"					1				16.00 (16)

Filename: 010_SignSummary.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	EDD	07\18	In Charge of	RAL	07\18

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THE GOLD STAR MEMORIAL HIGHWAY

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

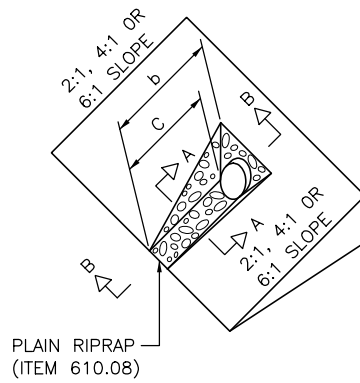
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY

SHEET NUMBER: MOT-05
 CONTRACT: 2018.15
 10 OF 115

Date: 7/27/2018

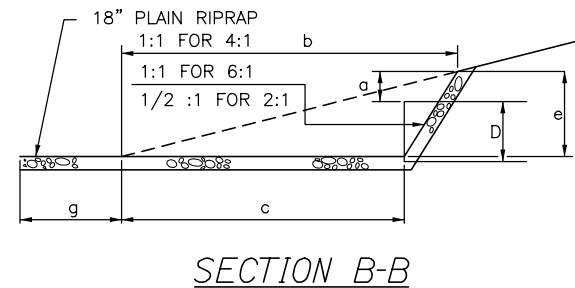
DIMENSIONS FOR SLOPE OF 2:1

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



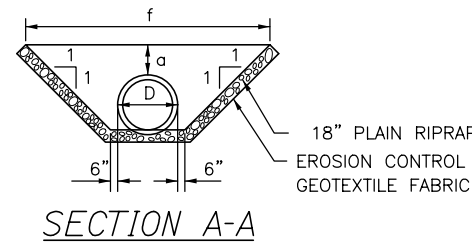
DIMENSIONS FOR SLOPE OF 4:1

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

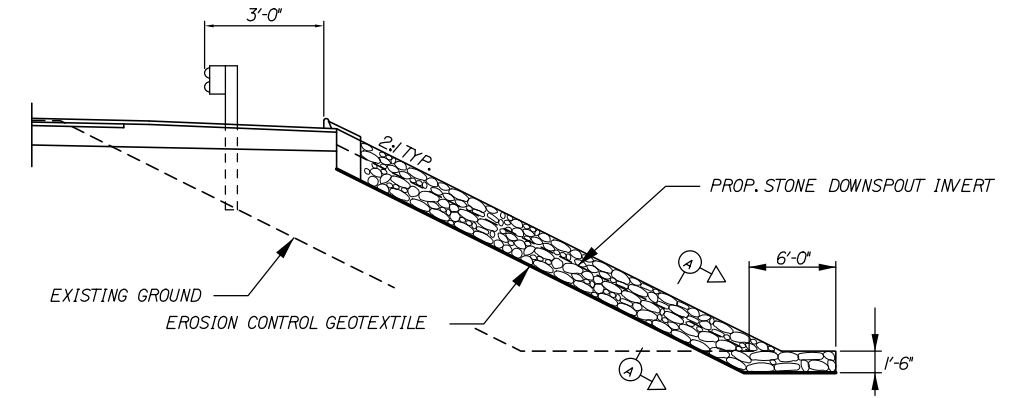
D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	0.50	9.00	7.50	1.50	4.50	0.00	1.50	2.30
15"	0.50	10.50	8.75	1.75	5.50	0.00	1.50	2.93
18"	0.50	12.00	10.00	2.00	6.50	0.00	1.50	3.57
21"	0.50	13.50	11.25	2.25	7.25	0.00	1.50	4.46
24"	0.50	15.00	12.50	2.50	8.00	0.00	1.50	5.44
30"	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



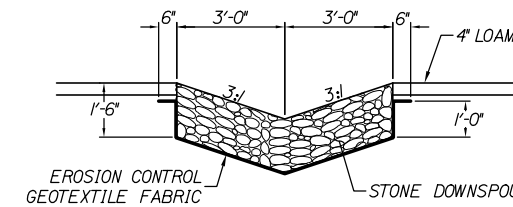
ROADWAY CULVERT END SLOPE TREATMENT

NOTES:

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



SECTION NTS

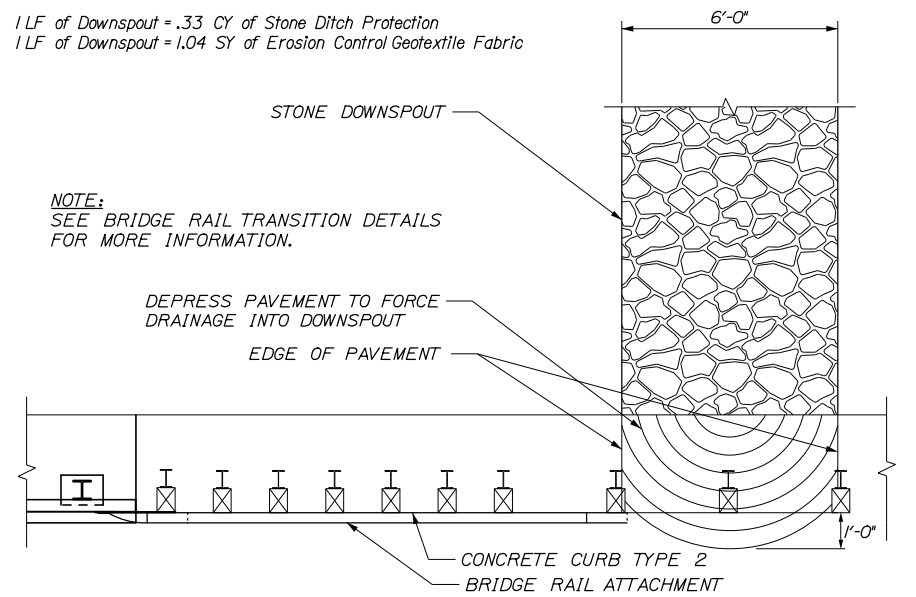


SECTION A-A NTS

1 LF of Downspout = .33 CY of Stone Ditch Protection
1 LF of Downspout = 1.04 SY of Erosion Control Geotextile Fabric

NOTE:

1. STONE FOR STONE DOWNSPOUTS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29, AND WILL BE PAID FOR UNDER ITEM 610.18, STONE DITCH PROTECTION.



PLAN VIEW NTS

DOWNSPOUT DETAIL

Filename: 011_Erosion_Con_Det1.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date
Designed	EDD	07\18	Checked	CDH 07\18
Drawn	SLS	07\18	In Charge of	RAL 07\18

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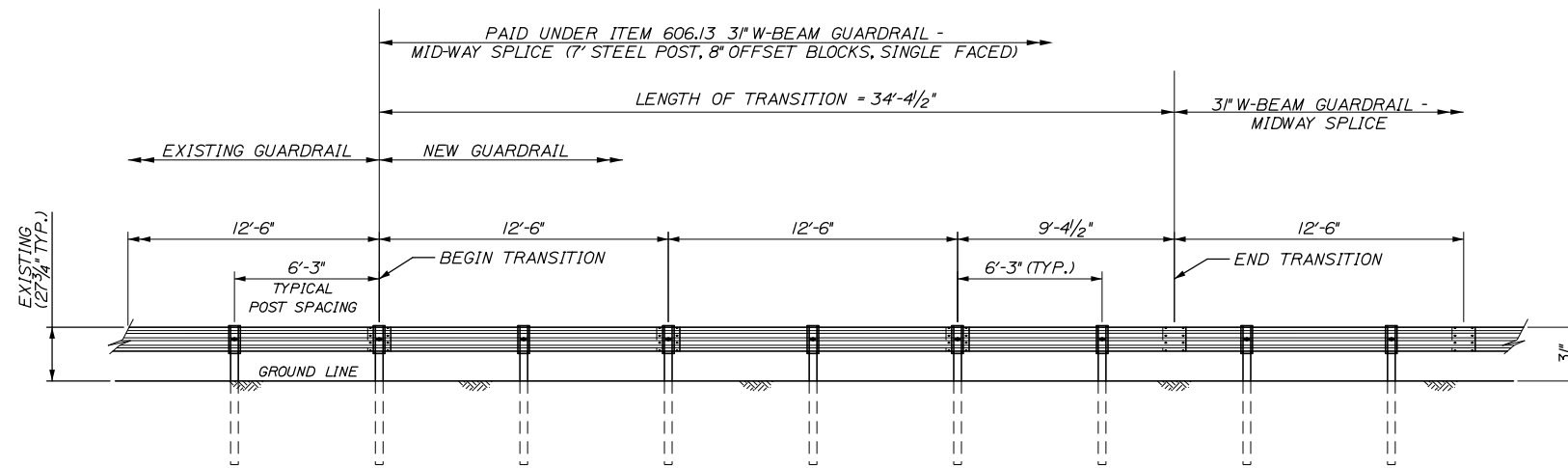

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
EROSION CONTROL DETAILS

SHEET NUMBER: MD-01
CONTRACT: 2018.15
11 OF 115

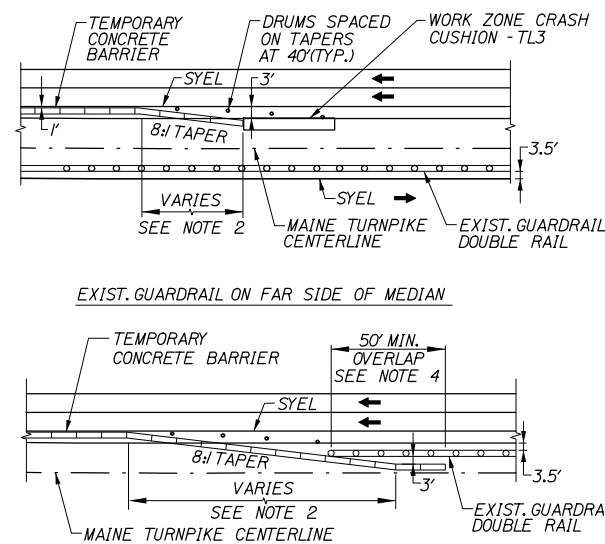
Date: 7/27/2018



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

NOTES:

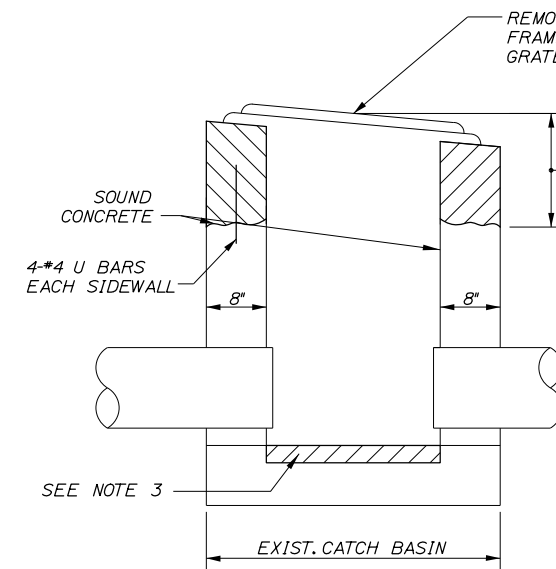
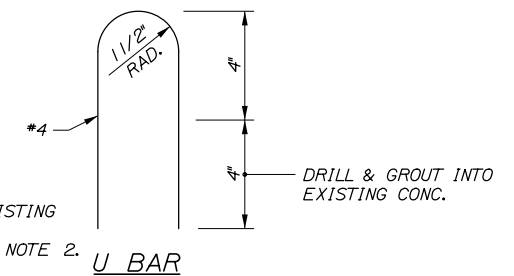
1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
3. ALL NEW POSTS SHALL BE 84" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.



CONCRETE BARRIER / GUARDRAIL OVERLAP DETAIL
NOT TO SCALE

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.



REBUILD CATCH BASIN TO GRADE - TYPE II
NOT TO SCALE

REMOVE EXISTING FRAME, CONCRETE AND ANCHOR RODS TO SOUND CONCRETE. REFORM BASIN TO GRADE USING CLASS "AAA" CONCRETE. EXISTING FRAME MAY BE ENCASED IN CONCRETE.

NOTES:

1. ALL EXISTING CATCH BASINS SHALL BE REBUILT WITH THE FRAME AND GRATE SET, AND CONCRETE FINISHED, TO THE FINAL PAVEMENT GRADE.
2. RESET EXISTING FRAME AND GRATE. IF ANY FRAMES OR GRATES ARE NOT REUSABLE OR DO NOT MEET SPECIFICATIONS, THEN NEW GRATES OR FRAMES SHALL BE SUPPLIED BY THE CONTRACTOR, AND SHALL BE CONSIDERED INCIDENTAL TO ITEM 604.184
3. REMOVE UNSOUND CONCRETE (2" MIN.) AND REPLACE WITH NEW CONCRETE IF DIRECTED BY THE RESIDENT.

Filename: 012_GRD_Detail.dgn

Scale: NOT TO SCALE				Designed by: HNTB			
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
				By	Date	By	Date
				Designed	CDH 07\18	Checked	CDH 07\18
				Drawn	EDD 07\18	In Charge of	RAL 07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
GUARDRAIL AND CATCH BASIN DETAILS

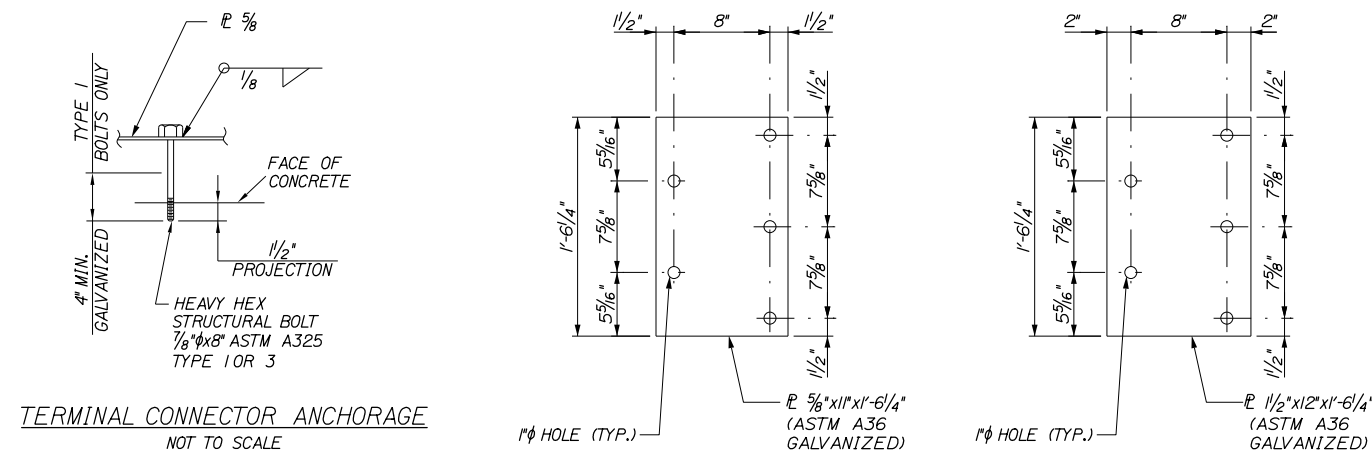
CONTRACT: 2018.15

SHEET NUMBER: MD-02

12 OF 115

Date: 7/27/2018

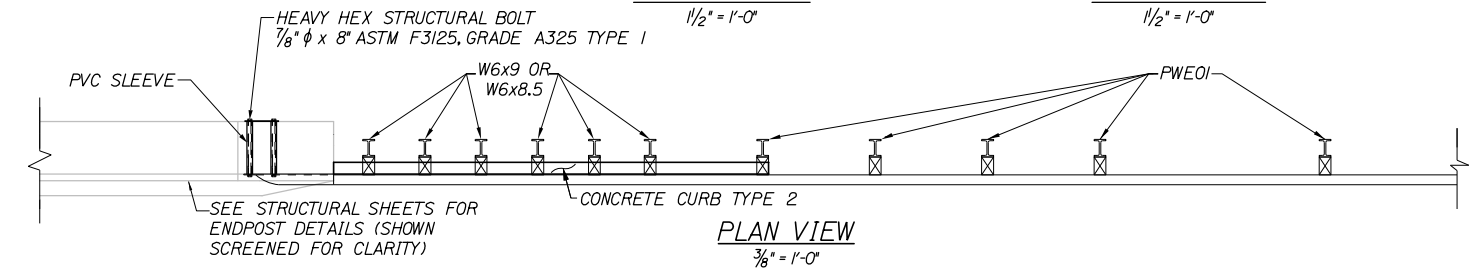
Filename: 013-GUARDRAIL DETAILS II.dgn



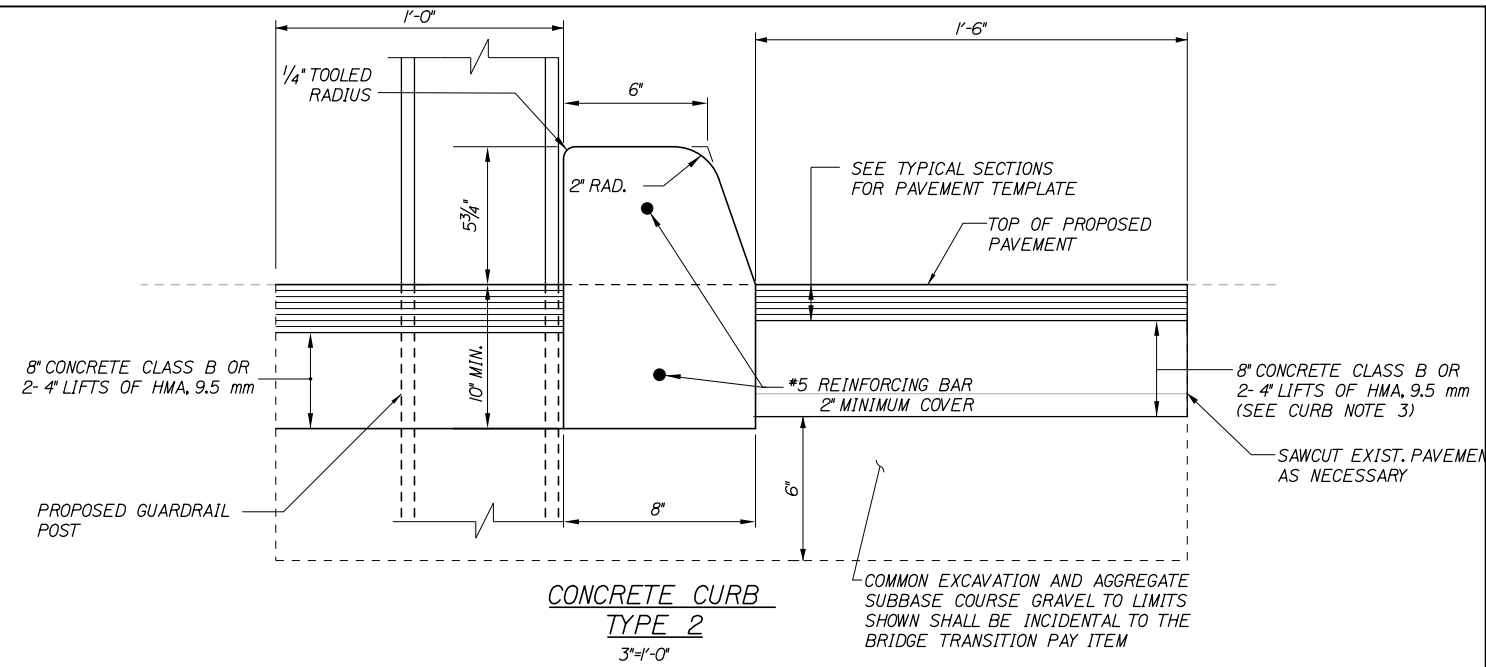
TERMINAL CONNECTOR ANCHORAGE
NOT TO SCALE

ANCHOR PLATE
1/2" x 1'-0"

OFFSET PLATE
1 1/2" x 1'-0"



PLAN VIEW
3/8" x 1'-0"



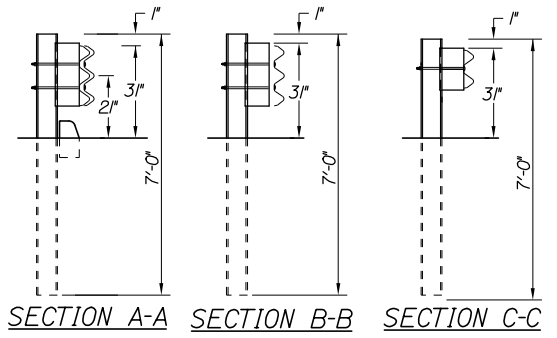
CONCRETE CURB
TYPE 2
3" x 1'-0"

CURB NOTES:

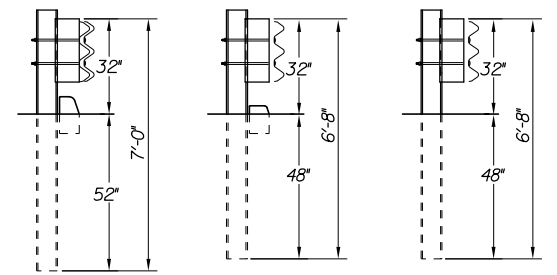
- CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS.
- CONCRETE CURBS USED IN CONJUNCTION WITH THRIE-BEAM BRIDGE TRANSITION SHALL BE TYPE 2. SEE DETAILS THIS SHEET. CONCRETE CURBS SHALL BE SET TO FORM A CONTINUOUS GUTTERLINE WITHOUT ANY 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.

GENERAL NOTES:

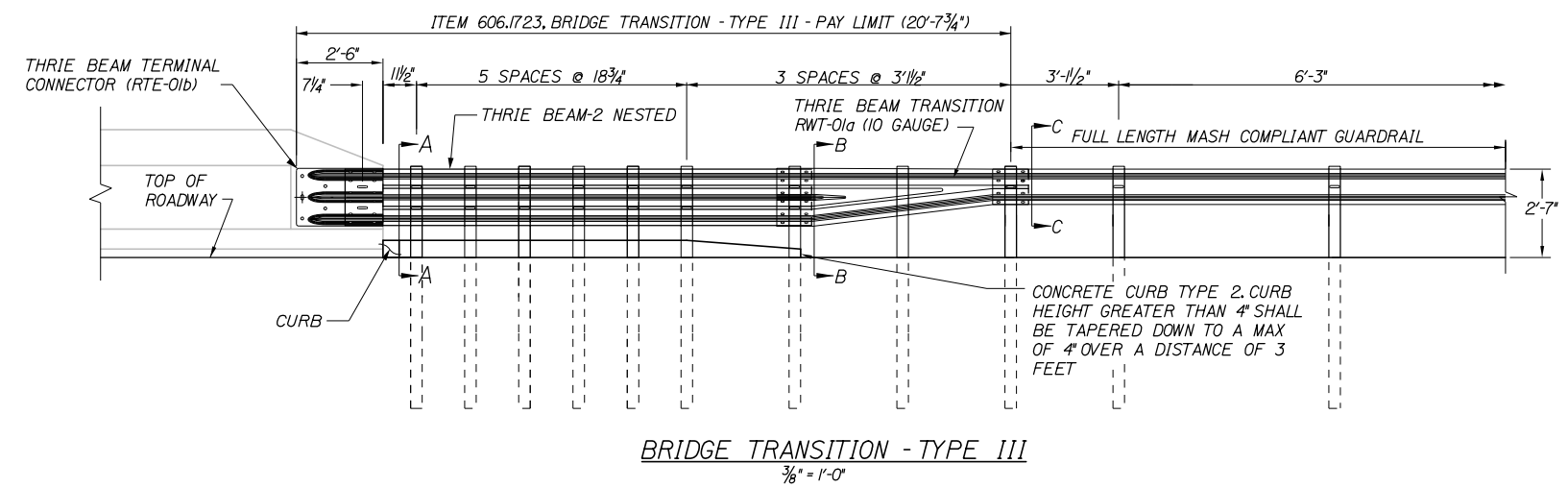
- ADDITIONAL HOLES MAY BE MADE IN THE THRIE-BEAM PANELS BY DRILLING, PUNCHING, OR OTHER MEANS THAT PRODUCE A NEAT, CLEAN HOLE. BURNING HOLES WILL NOT BE ALLOWED.
- THRIE BEAM SHALL BE PLACED WITH THE COMPOSITE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE.
- RAIL ELEMENT SHALL MEET ALL REQUIREMENTS 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.



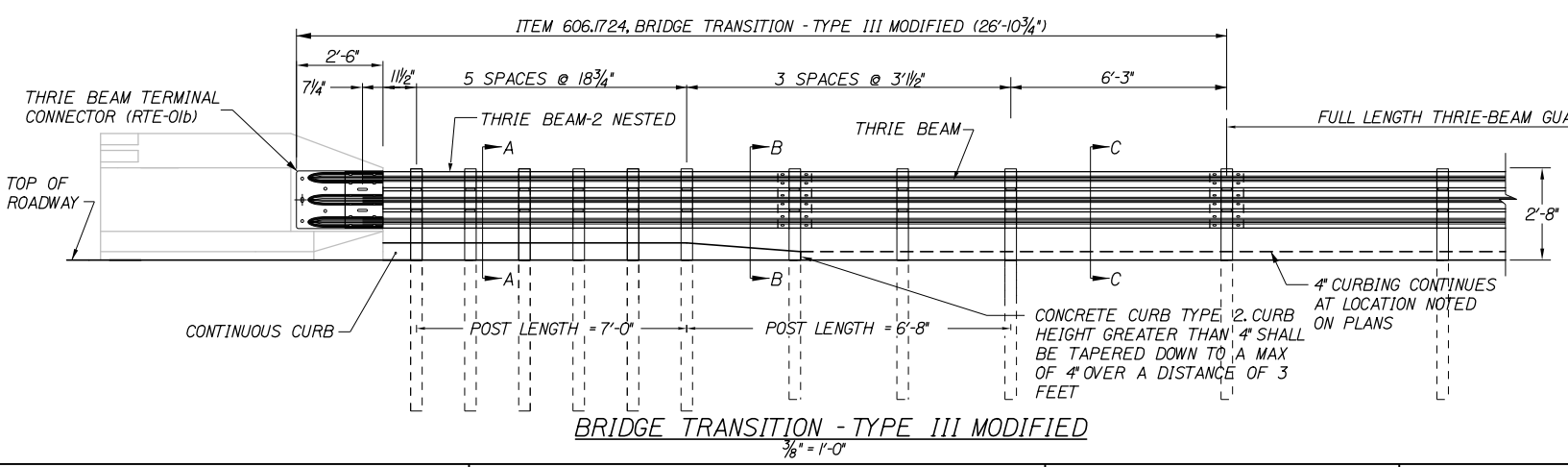
SECTION A-A SECTION B-B SECTION C-C



SECTION A-A SECTION B-B SECTION C-C



BRIDGE TRANSITION - TYPE III
3/8" x 1'-0"



BRIDGE TRANSITION - TYPE III MODIFIED
3/8" x 1'-0"

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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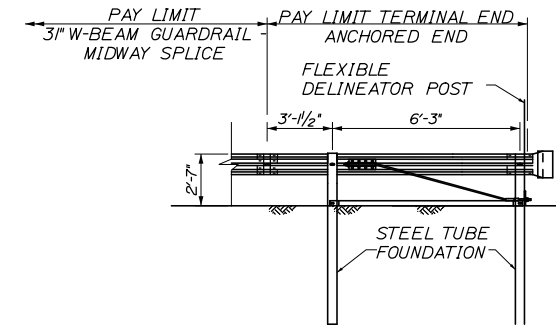
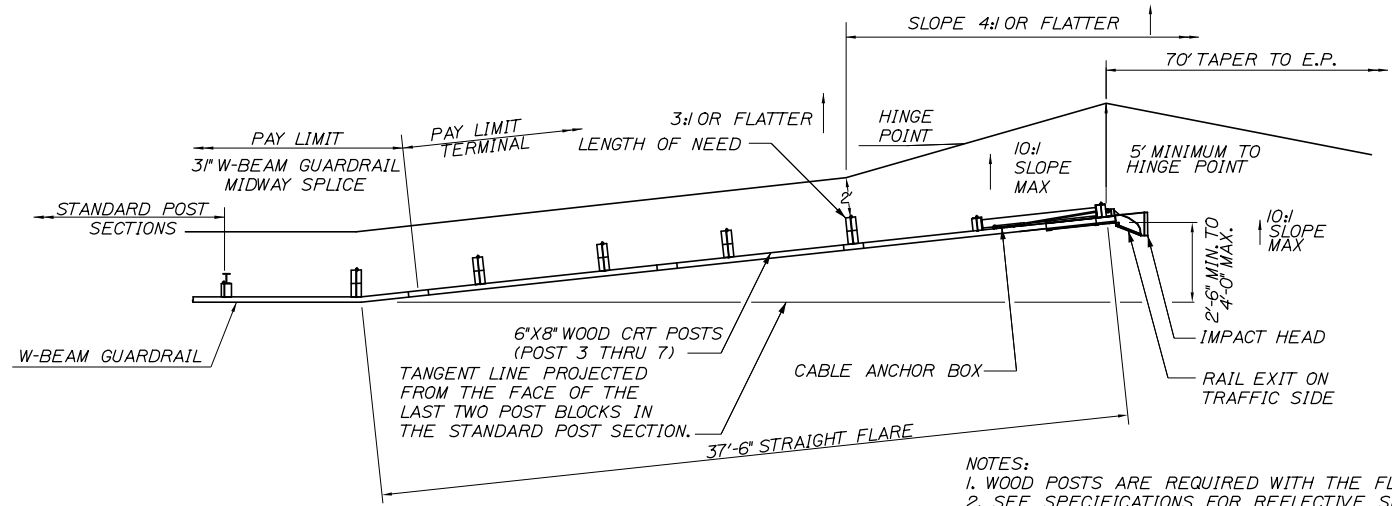
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
GUARDRAIL DETAILS: BRIDGE TRANSITION

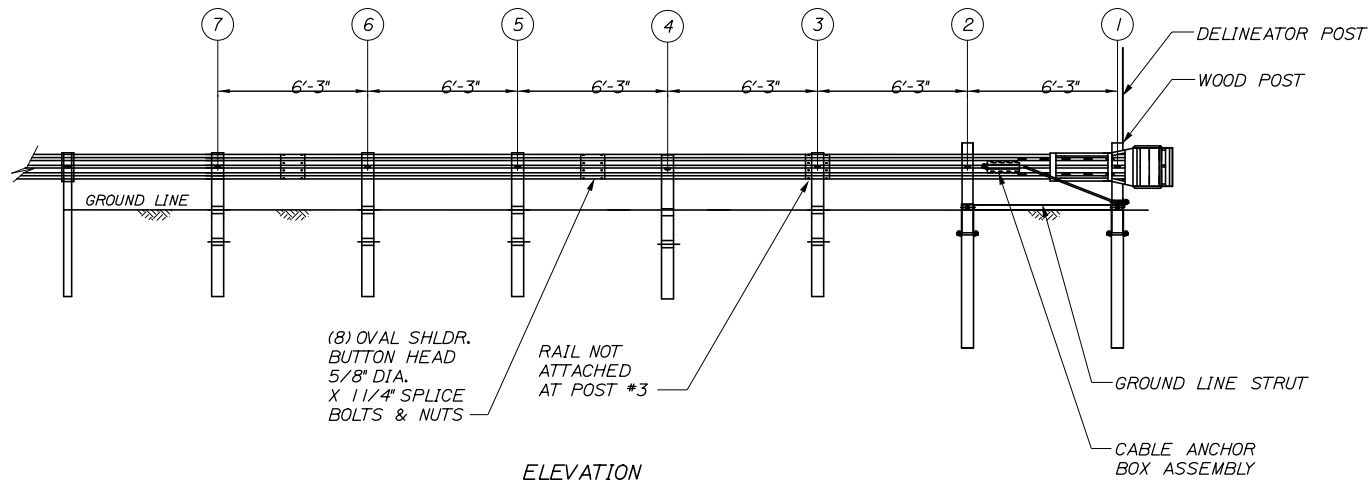
SHEET NUMBER: MD-03
CONTRACT: 2018.15
13 OF 115

Date: 7/27/2018

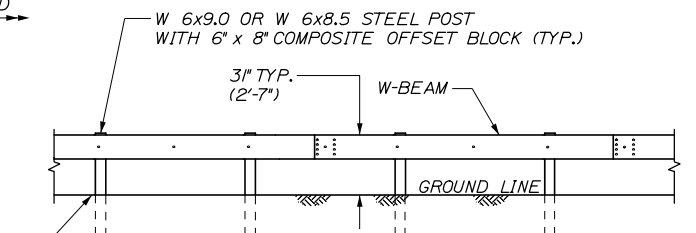
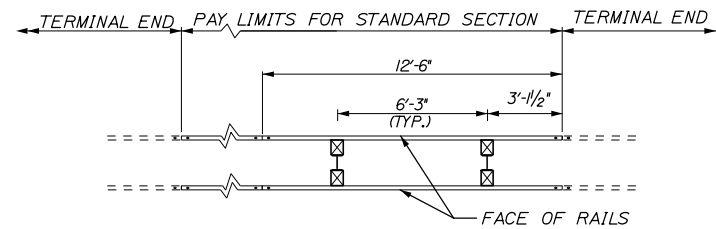
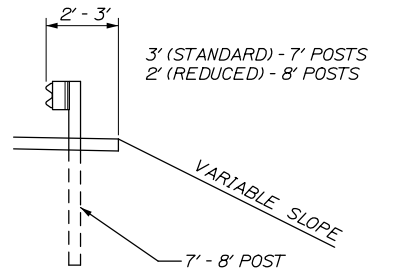
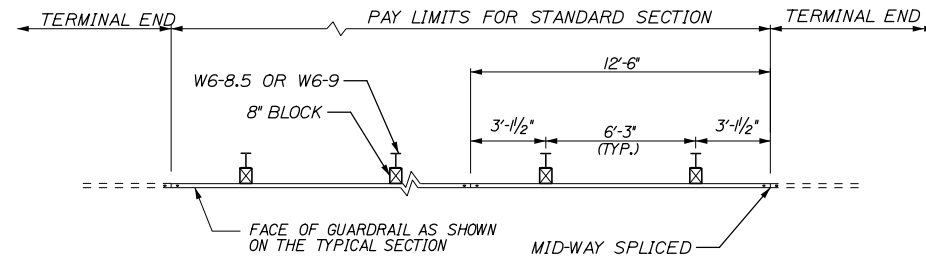


TERMINAL END - ANCHORED END - 3" W-BEAM GUARDRAIL
 (ITEM 606.1351)
 NOT TO SCALE

NOTES:
 1. THIS DETAIL MODIFIES THE SEW31 DRAWING SUCH THAT W-BEAM DOES NOT EXTEND BEYOND THE LAST GUARDRAIL POST. THE RWMI40 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.



GUARDRAIL 350 FLARED TERMINAL - 3" W-BEAM GUARDRAIL
 NOT TO SCALE



3" W-BEAM GUARDRAIL - MID-WAY SPLICE (8" OFFSET BLOCKS)
 (ITEMS 606.13, 606.132)
 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: 014_MidwaySpliceDetails.dgn

Scale: NOT TO SCALE

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
No.	Revision	By	Date		

HNTB CORPORATION
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**THE GOLD STAR
MEMORIAL HIGHWAY**

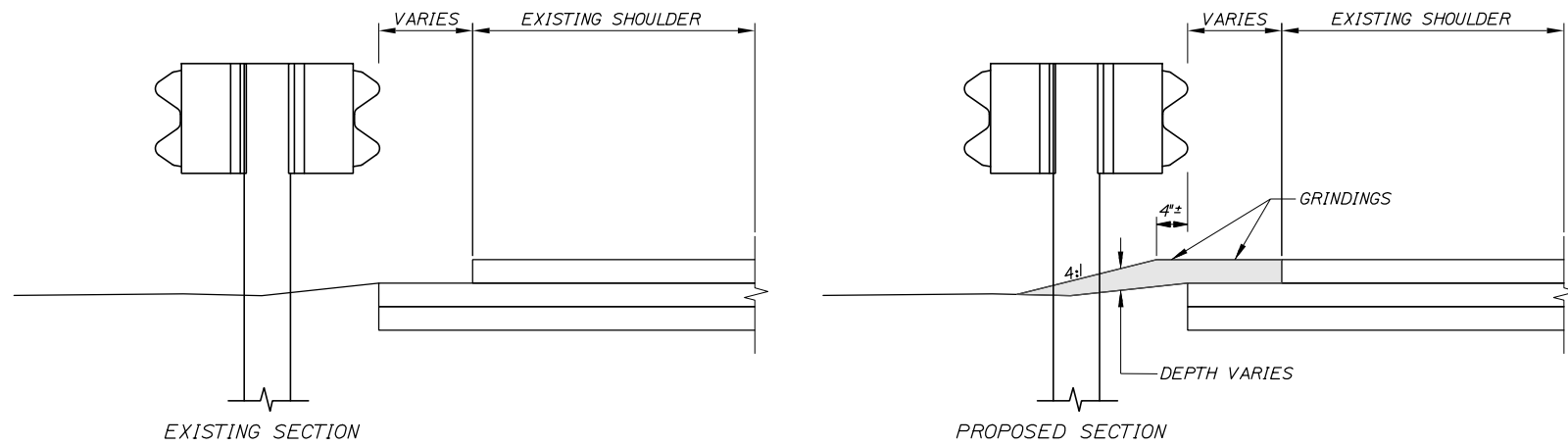
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 MISCELLANEOUS DETAILS
 GUARDRAIL DETAILS: MIDWAY SPLICE

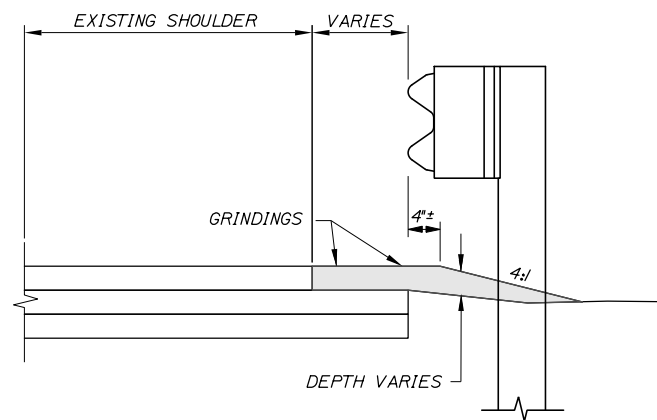
SHEET NUMBER: MD-04
 14 OF 115

CONTRACT: 2018.15

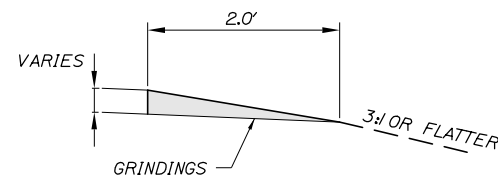
Date: 7/27/2018



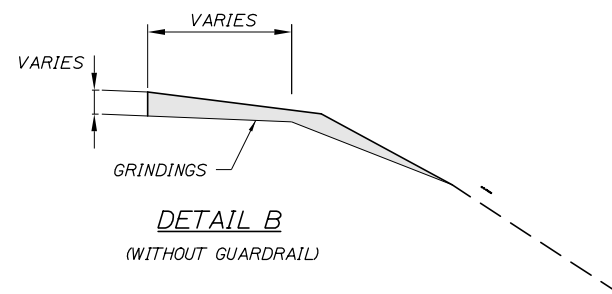
**BERM DROPOFF CORRECTION WITH GUARDRAIL
MEDIAN GUARDRAIL**
N.T.S.



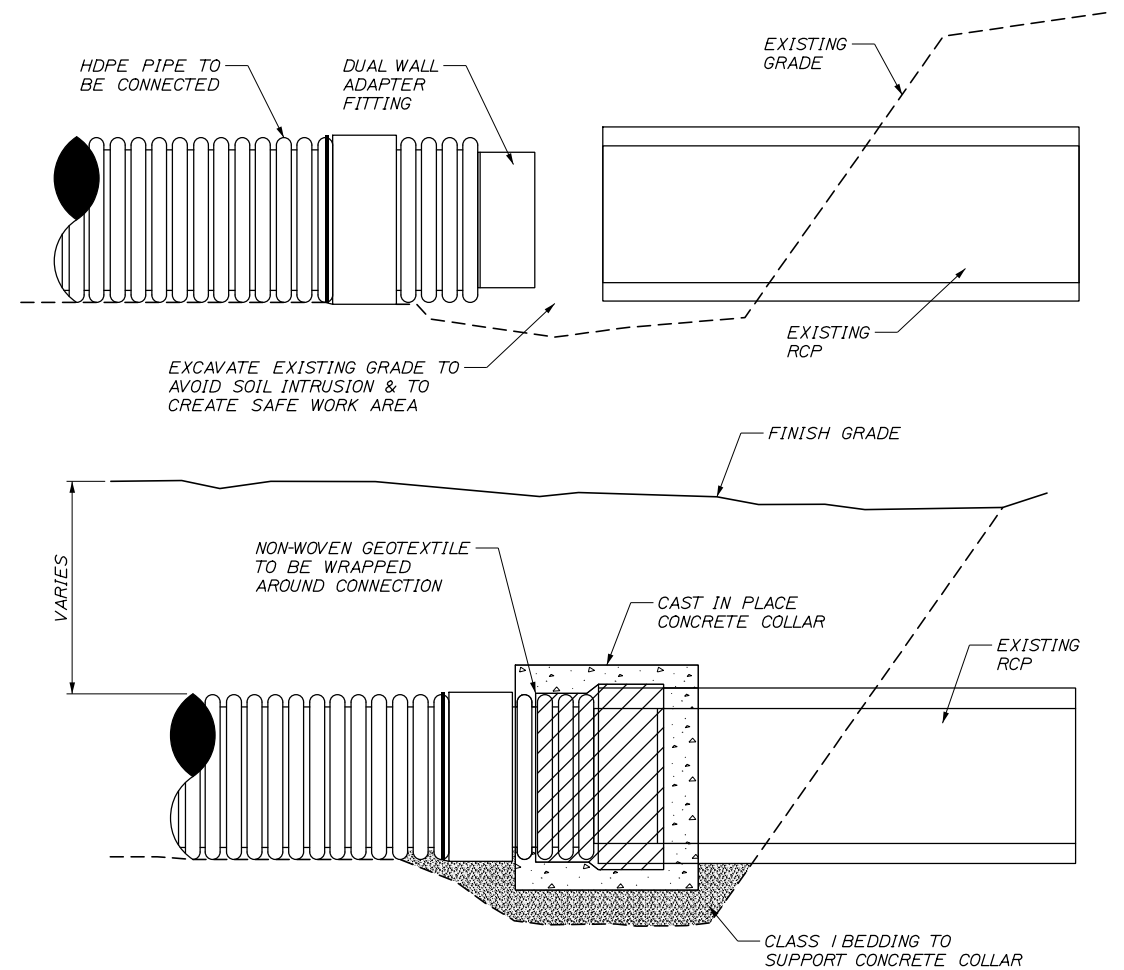
**BERM DROPOFF CORRECTION WITH GUARDRAIL
RIGHT OUTSIDE SHOULDER**
N.T.S.



**DETAIL A
(WITHOUT GUARDRAIL)**



**DETAIL B
(WITHOUT GUARDRAIL)**



HDPE ADAPTER DETAIL
NOT TO SCALE

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

NOTES:

1. PAVEMENT FOR HDPE ADAPTER AND CONCRETE COLLAR SHALL BE AS NOTED IN SPECIAL PROVISION 603.
2. CONCRETE SHALL BE CLASS A FIBER REINFORCED.
3. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321.

CONCRETE COLLAR
NOT TO SCALE

Scale: NOT TO SCALE

Designed by:



CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date
Designed	EDD	07\18	Checked	CDH 07\18
Drawn	EDD	07\18	In Charge of	RAL 07\18

HNTB CORPORATION
340 County Road, Suite 6-C
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 REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
BERM AND HDPE ADAPTER DETAILS

SHEET NUMBER: MD-05

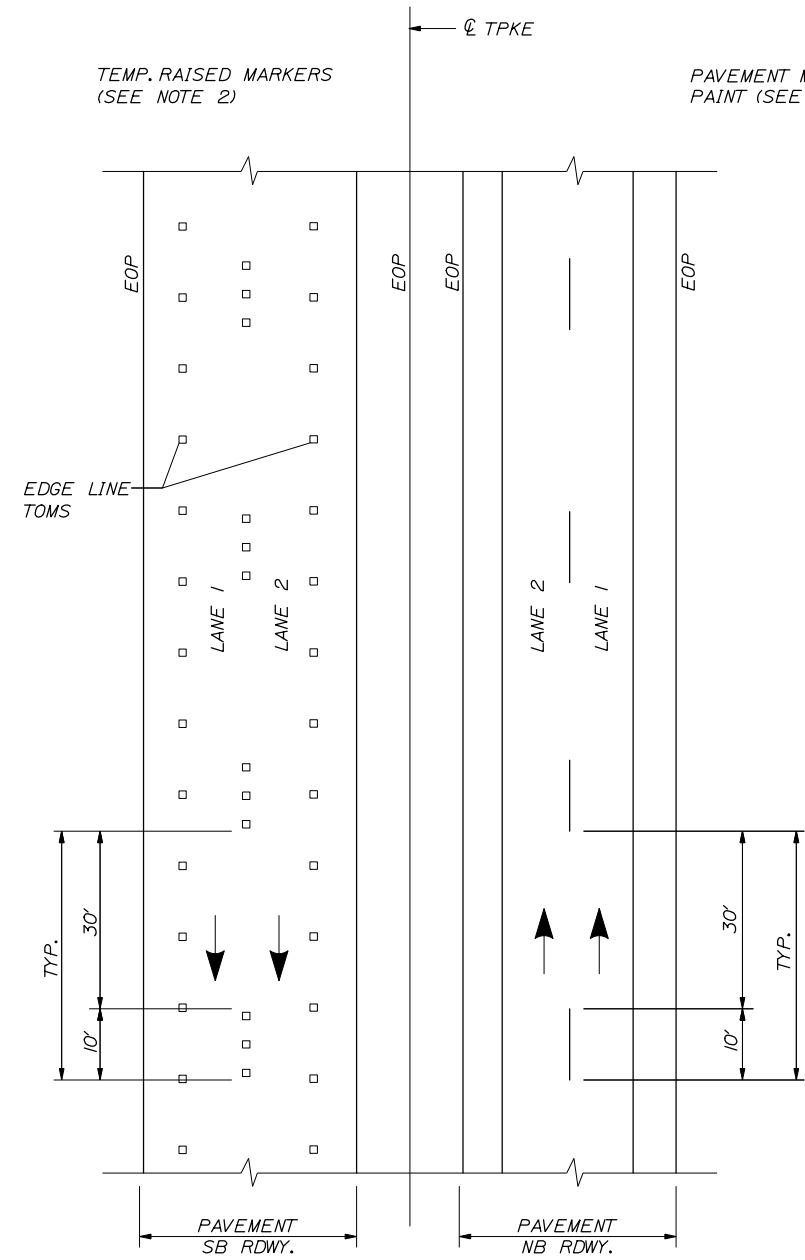
CONTRACT: 2018.15

15 OF 115

Filename: 015_Misc_Details.dgn

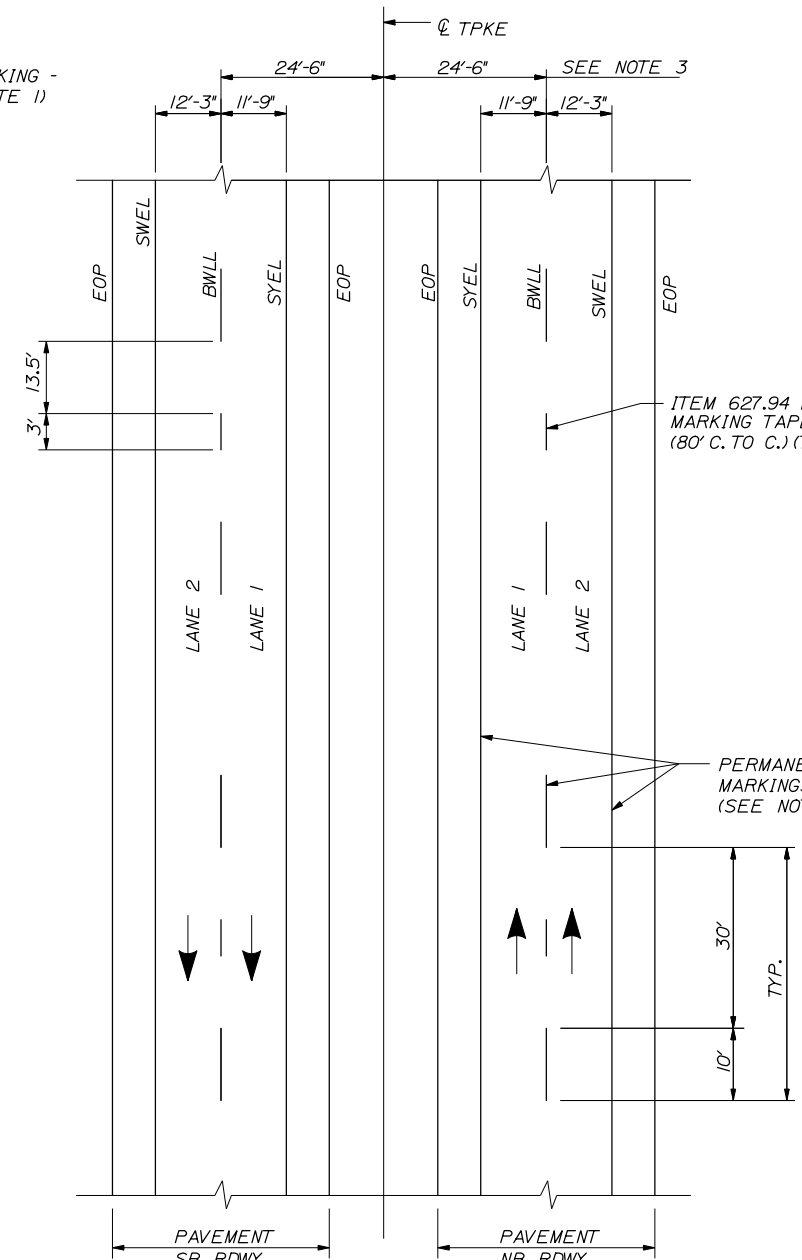
Date: 7/27/2018

Filename: 016_Misc_Details_Striping.dgn

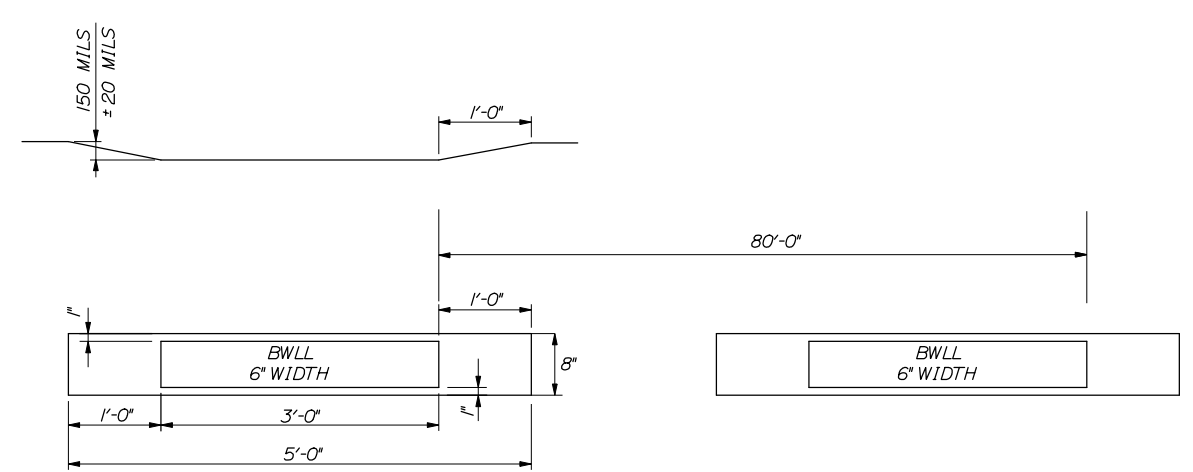


TEMP. PAVEMENT MARKINGS
2 LANE ROADWAY

NOTES:



PERMANENT PAVEMENT MARKINGS
2 LANE ROADWAY



ITEM 627.94
PERMANENT PAVEMENT
MARKINGS WITH TAPE
GROOVING DETAIL
N.T.S.

- LEGEND**
- SYEL = SOLID YELLOW EDGE LINE (6" PAINT)
 - SWEL = SOLID WHITE EDGE LINE (6" PAINT)
 - BWLL = BROKEN WHITE LANE LINE (6" PAINT)
 - EOP = EDGE OF PAVEMENT

NOTES:

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	EDD	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

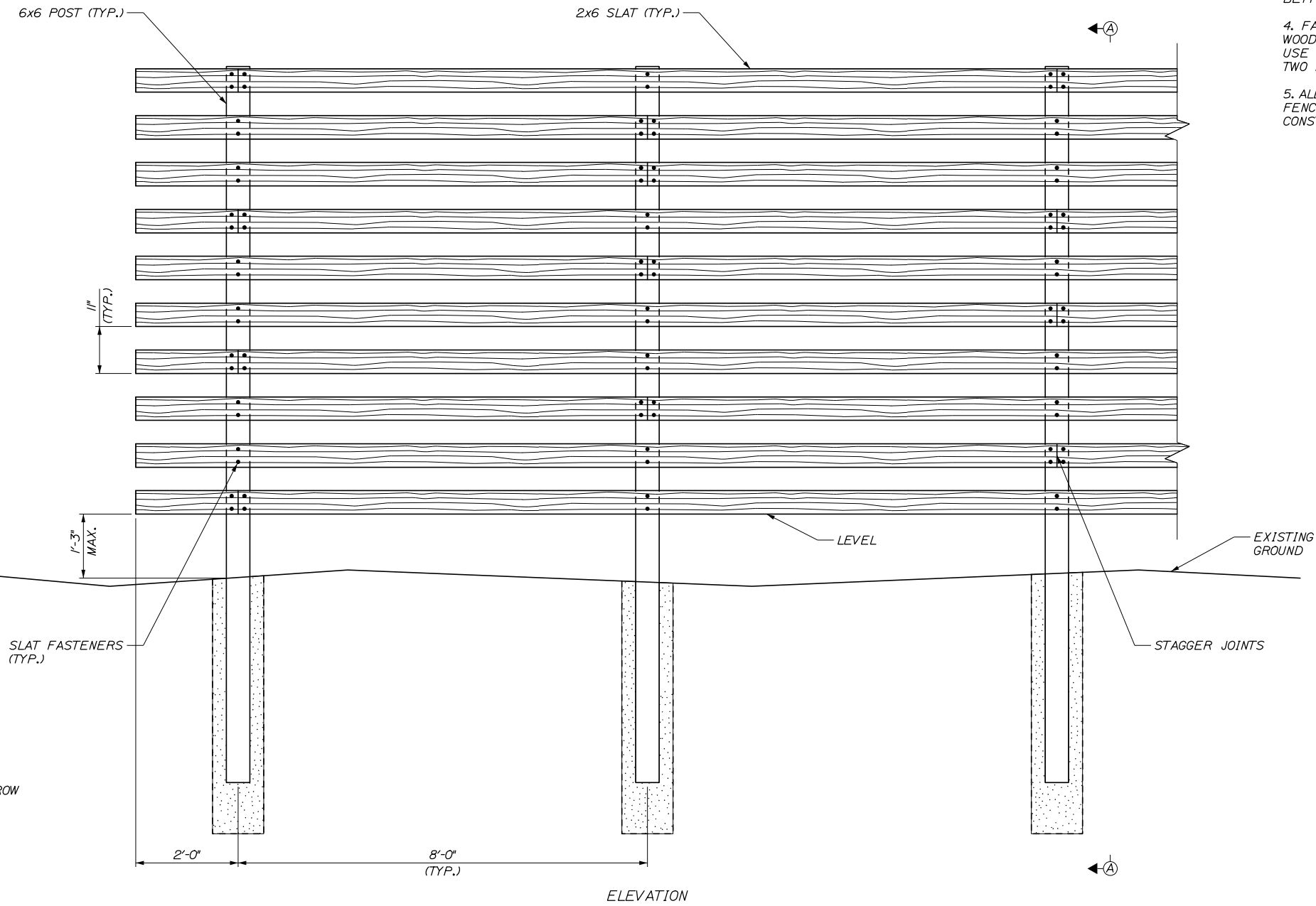
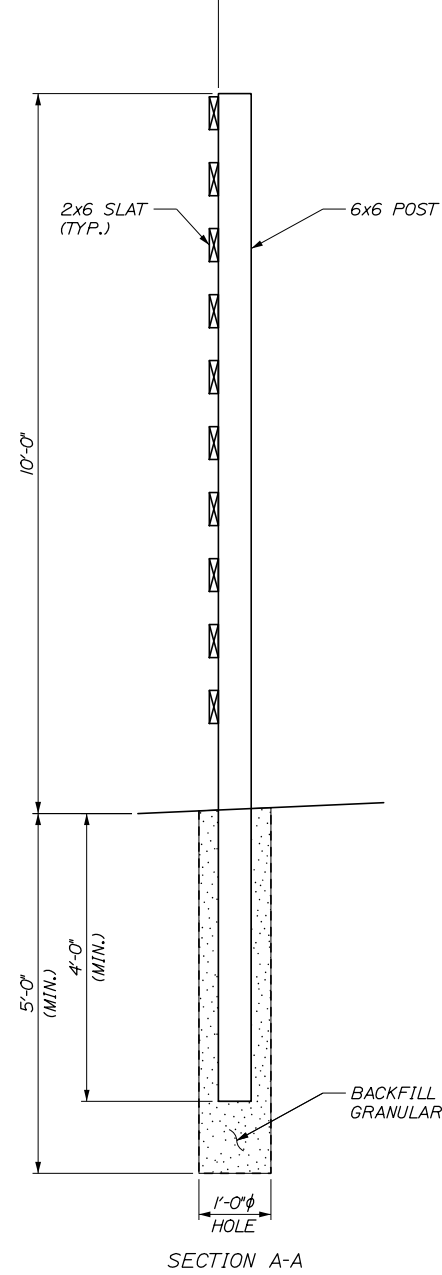
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
STRIPING DETAILS

SHEET NUMBER: MD-06
CONTRACT: 2018.15
16 OF 115

Date: 7/27/2018

TOWARDS TURNPIKE



SNOW DRIFT FENCE DETAIL
3/4" = 1'-0"

- NOTES:**
1. ALL TIMBER DIMENSIONS ARE NOMINAL DIMENSIONS PRIOR TO SURFACING UNLESS OTHERWISE NOTED.
 2. POST SHALL BE SOUTHERN YELLOW PINE, NO. 1 OR BETTER, PRESSURE TREATED FOR GROUND CONTACT.
 3. SLATS SHALL BE SOUTHERN YELLOW PINE, NO. 1 OR BETTER, PRESSURE TREATED FOR GROUND CONTACT.
 4. FASTENERS SHALL BE TIMBERLOK STRUCTURAL WOOD SCREWS, OR APPROVED EQUAL, PRE-DRILLED FOR USE WITH PRESSURE TREATED LUMBER. A MINIMUM TWO FASTENERS PER CONNECTION IS REQUIRED.
 5. ALL WORK REQUIRED TO INSTALL THE SNOW DRIFT FENCE SHALL BE COMPLETED DURING PHASE I CONSTRUCTION.

Filename: 017_Snow Fence.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	BRG	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

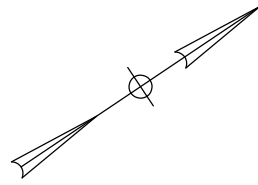
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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS
SNOW DRIFT FENCE DETAILS

SHEET NUMBER: MD-07
CONTRACT: 2018.15
17 OF 115



ITEM 606.13 31" W-BEAM GUARDRAIL - MID-WAY SPLICE LF
 STA. 264+37.71, LT. TO STA. 261+75.21, LT. 262.5
 STA. 164+37.67, RT. TO STA. 162+37.66, RT. 200

ITEM 606.65 GUARDRAIL THRIE BEAM - SINGLE RAIL LF
 STA. 5056+59.00, LT. TO STA. 5057+74.66, LT. 115

ITEM 606.64 GUARDRAIL THRIE BEAM - DOUBLE RAIL LF
 STA. 5057+74.66, LT. TO STA. 5064+37.67, RT. 660

ITEM 606.279 TERMINAL END - ANCHORED END, THRIE BEAM EA
 STA. 5057+74.66, LT. 1

ITEM 610.08 PLAIN RIPRAP CY
 STA. 5060+50, RT. 3.5
 STA. 5061+85, LT. 3.5

ITEM 610.18 STONE DITCH PROTECTION CY
 STA. 5064+41, RT. 4.4
 STA. 5064+41, LT. 4.7

STA. 264+69 SOUTHBOUND @
 END FULL DEPTH PAVEMENT REMOVAL

STA. 264+57 SOUTHBOUND @
 END VARIABLE DEPTH MILL AND PAVE
 END FULL DEPTH CONSTRUCTION
 (OUTSIDE SHOULDER)

STA. 264+57 SOUTHBOUND @
 BEGIN FULL DEPTH PAVEMENT REMOVAL

210'-0" BRIDGE

ABUT. NO. 1
 STA. 264+72.00

GEOFOAM (TYP.)
 SEE SHEET S-22

BRIDGE TRANSITION
 TYPE III (TYP.)

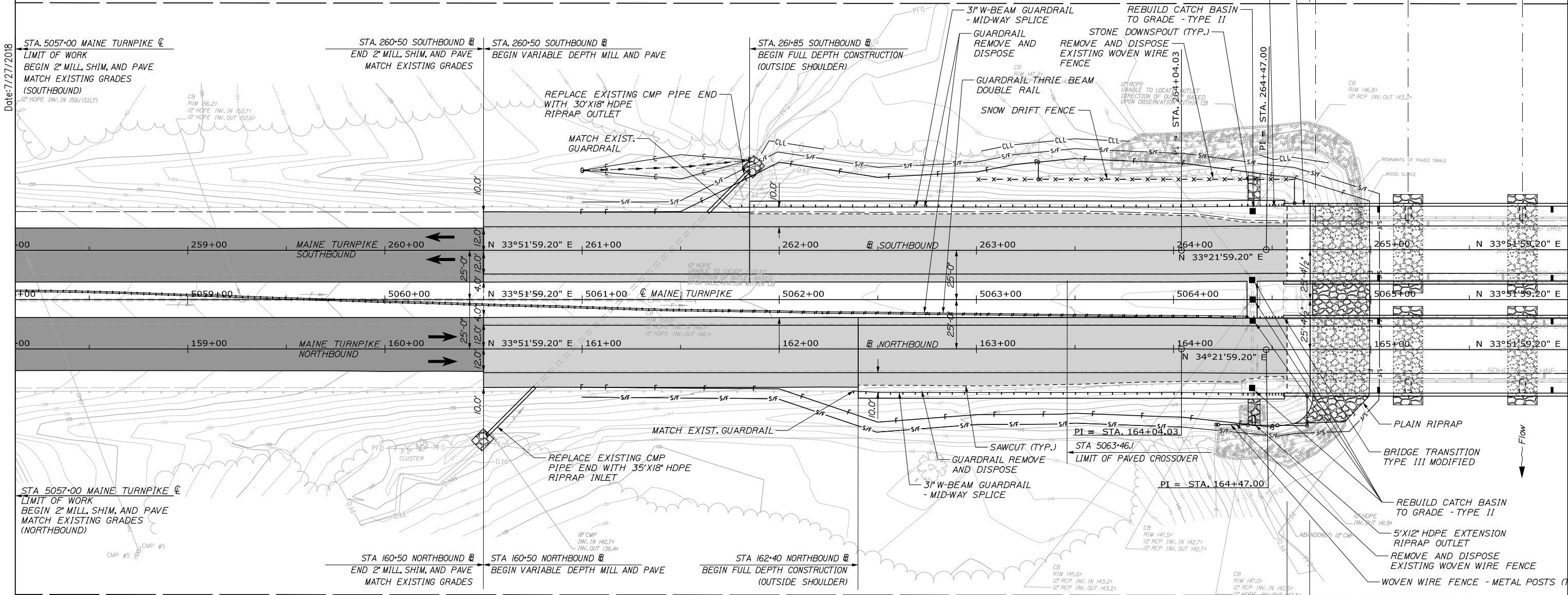
PIER 1
 STA. 265+19.00

PIER 2
 STA. 265+77.00

47'-0" 58'-0" 58'-0"

APPROXIMATE ROW LINE

Date: 7/27/2018



APPROXIMATE ROW LINE

ITEM 607.09 WOVEN WIRE FENCE - METAL POST LF
 STA. 5063+31.43, LT. TO STA. 5063+31.43, LT. 8
 STA. 5064+61.33, LT. TO STA. 5064+61.33, LT. 12
 STA. 5064+21.62, RT. TO STA. 5064+67.70, RT. 61

ITEM 607.4311 SNOW DRIFT FENCE LF
 STA. 5063+00.00, LT. TO STA. 5064+61.33, LT. 162

ITEM 606.1723 BRIDGE TRANSITION - TYPE III EA
 STA. 264+37.71, LT. 1
 STA. 164+37.67, RT. 1

ITEM 606.1724 BRIDGE TRANSITION - TYPE III, MODIFIED EA
 STA. 5064+37.67, RT. 1

STA. 164+57 NORTHBOUND @
 END VARIABLE DEPTH MILL AND PAVE

STA. 164+57 NORTHBOUND @
 BEGIN FULL DEPTH PAVEMENT REMOVAL

STA. 164+69 NORTHBOUND @
 END FULL DEPTH PAVEMENT REMOVAL
 END FULL DEPTH CONSTRUCTION
 (OUTSIDE SHOULDER)



Designed by:

HNTB			
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
By	Date	By	Date
Designed	EDD 07\18	Checked	CDH 07\18
Drawn	SLS 07\18	In Charge of	RAL 07\18

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THE GOLD STAR
 MEMORIAL HIGHWAY

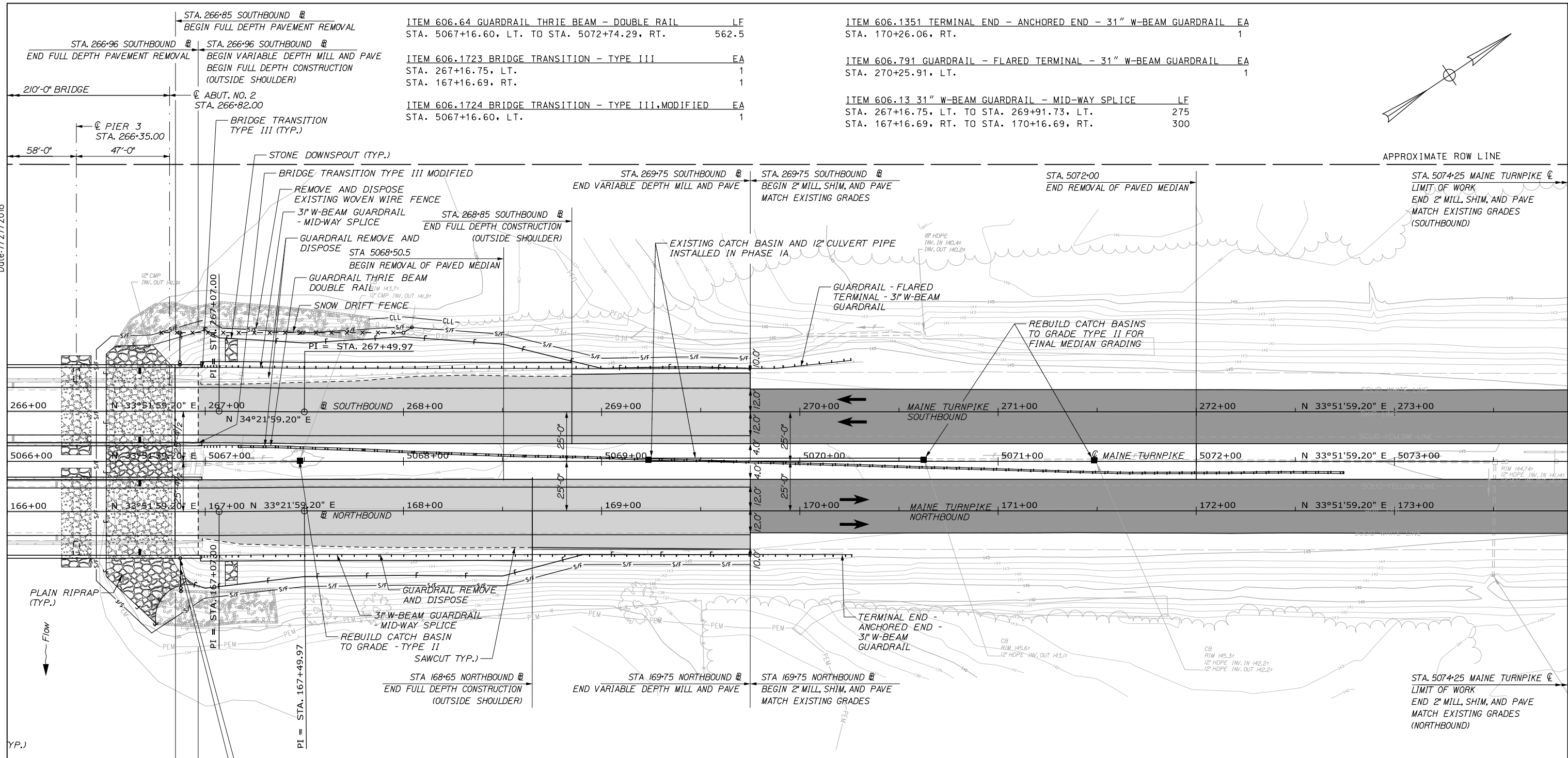
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 GENERAL PLAN I

Filename: 018_Plan1.dgn

CONTRACT: 2018.15

SHEET NUMBER: GP-01
 18 OF 115

Date: 7/27/2018



<p>STA. 266+85 SOUTHBOUND BEGIN FULL DEPTH PAVEMENT REMOVAL</p> <p>STA. 266+96 SOUTHBOUND END FULL DEPTH PAVEMENT REMOVAL</p> <p>STA. 266+96 SOUTHBOUND BEGIN VARIABLE DEPTH MILL AND PAVE BEGIN FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)</p> <p>ABUT. NO. 2 STA. 266+82.00</p> <p>BRIDGE TRANSITION TYPE III (TYP.)</p> <p>STONE DOWNSPOUT (TYP.)</p> <p>BRIDGE TRANSITION TYPE III MODIFIED</p> <p>REMOVE AND DISPOSE EXISTING WOVEN WIRE FENCE</p> <p>3' W-BEAM GUARDRAIL - MID-WAY SPLICE</p> <p>GUARDRAIL REMOVE AND DISPOSE</p> <p>BEGIN REMOVAL OF PAVED MEDIAN</p> <p>GUARDRAIL THRIE BEAM DOUBLE RAIL</p> <p>SNOW DRIFT FENCE</p> <p>EXISTING CATCH BASIN AND 12" CULVERT PIPE INSTALLED IN PHASE 1A</p> <p>GUARDRAIL - FLARED TERMINAL - 3' W-BEAM GUARDRAIL</p> <p>REBUILD CATCH BASINS TO GRADE TYPE II FOR FINAL MEDIAN GRADING</p> <p>STA. 268+85 SOUTHBOUND END FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)</p> <p>STA. 269+75 SOUTHBOUND END VARIABLE DEPTH MILL AND PAVE</p> <p>STA. 269+75 SOUTHBOUND BEGIN 2" MILL, SHIM, AND PAVE MATCH EXISTING GRADES</p> <p>STA. 5072+00 END REMOVAL OF PAVED MEDIAN</p> <p>STA. 5074+25 MAINE TURNPIKE LIMIT OF WORK END 2" MILL, SHIM, AND PAVE MATCH EXISTING GRADES (SOUTHBOUND)</p>	<p>ITEM 606.64 GUARDRAIL THRIE BEAM - DOUBLE RAIL Lf STA. 5067+16.60, LT. TO STA. 5072+74.29, RT. 562.5</p> <p>ITEM 606.1723 BRIDGE TRANSITION - TYPE III EA STA. 267+16.75, LT. 1 STA. 167+16.69, RT. 1</p> <p>ITEM 606.1724 BRIDGE TRANSITION - TYPE III, MODIFIED EA STA. 5067+16.60, LT. 1</p> <p>ITEM 606.1351 TERMINAL END - ANCHORED END - 31" W-BEAM GUARDRAIL EA STA. 170+26.06, RT. 1</p> <p>ITEM 606.791 GUARDRAIL - FLARED TERMINAL - 31" W-BEAM GUARDRAIL EA STA. 270+25.91, LT. 1</p> <p>ITEM 606.13 31" W-BEAM GUARDRAIL - MID-WAY SPLICE Lf STA. 267+16.75, LT. TO STA. 269+91.73, LT. 275 STA. 167+16.69, RT. TO STA. 170+16.69, RT. 300</p>
<p>PLAIN RIPRAP (TYP.)</p> <p>GUARDRAIL REMOVE AND DISPOSE</p> <p>3' W-BEAM GUARDRAIL - MID-WAY SPLICE</p> <p>REBUILD CATCH BASIN TO GRADE - TYPE II (SAWCUT TYP.)</p> <p>STA. 168+65 NORTHBOUND END FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)</p> <p>STA. 169+75 NORTHBOUND END VARIABLE DEPTH MILL AND PAVE</p> <p>STA. 169+75 NORTHBOUND BEGIN 2" MILL, SHIM, AND PAVE MATCH EXISTING GRADES</p> <p>TERMINAL END - ANCHORED END - 3' W-BEAM GUARDRAIL</p> <p>REMOVE AND DISPOSE EXISTING WOVEN WIRE FENCE WOVEN WIRE FENCE - METAL POSTS (TYP.)</p> <p>STA. 166+85 NORTHBOUND BEGIN FULL DEPTH PAVEMENT REMOVAL</p> <p>STA. 166+96 NORTHBOUND END FULL DEPTH PAVEMENT REMOVAL</p> <p>STA. 166+96 NORTHBOUND BEGIN VARIABLE DEPTH MILL AND PAVE BEGIN FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)</p>	<p>ITEM 610.18 STONE DITCH PROTECTION Cy STA. 5067+13, RT. 4.1 STA. 5067+13, LT. 3.9</p> <p>ITEM 607.4311 SNOW DRIFT FENCE Lf STA. 5066+76.82, LT. TO STA. 5068+00.00 LT 124</p> <p>ITEM 607.09 WOVEN WIRE FENCE - METAL POST Lf STA. 5066+87.42, RT. TO STA. 5066+87.42, RT. 17 STA. 5066+87.20, LT. TO STA. 5066+87.20, LT. 17 STA. 5068+00.00, LT. TO STA. 5068+04.27, LT. 5</p>



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSSEECONTEE STREAM OVERPASS

GENERAL PLAN II

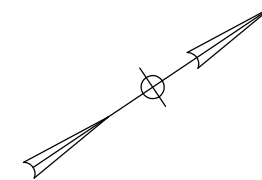
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CONTRACT: 2018.15

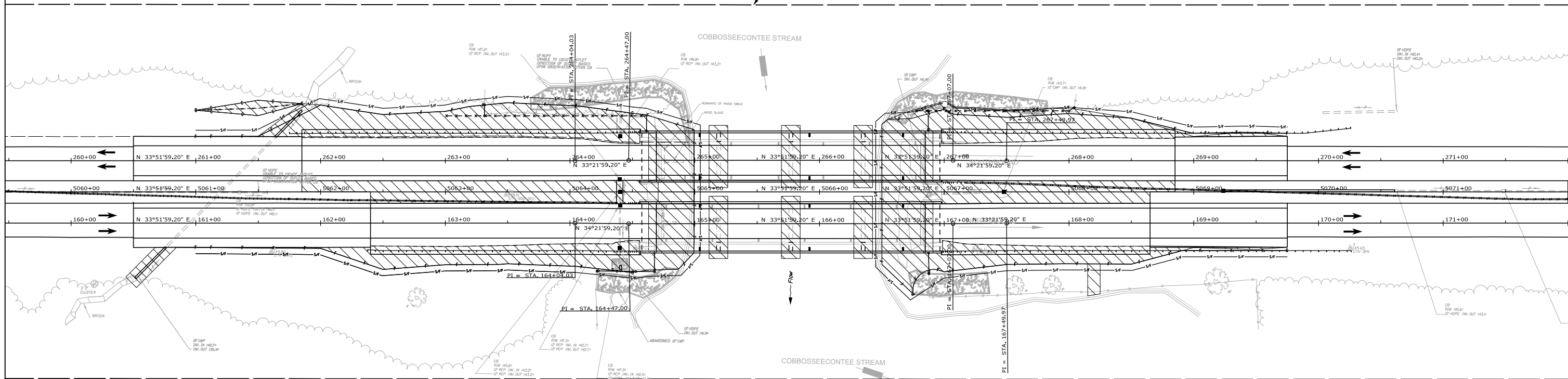
19 OF 115

Filename: 019_Plan2.dgn

Date: 7/27/2018



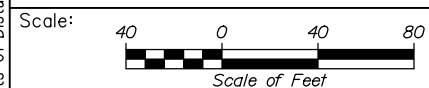
EXISTING RIGHT OF WAY (TYP.)



NOTES:

1. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR THE CONTRACTORS ACCESS LOCATIONS AND STORAGE AREAS.
2. TOTAL LIMIT OF DISTURBANCE FOR THIS PROJECT HAS BEEN ESTIMATED TO BE 1.46 ACRES.

LEGEND
 CONTRACT LIMIT OF DISTURBANCE (0.96 ACRES)



Designed by:



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE REHABILITATION
 COBBOSSEECONTEE STREAM OVERPASS

LIMITS OF DISTURBANCE

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	EDD	07\18	In Charge of	RAL	07\18

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

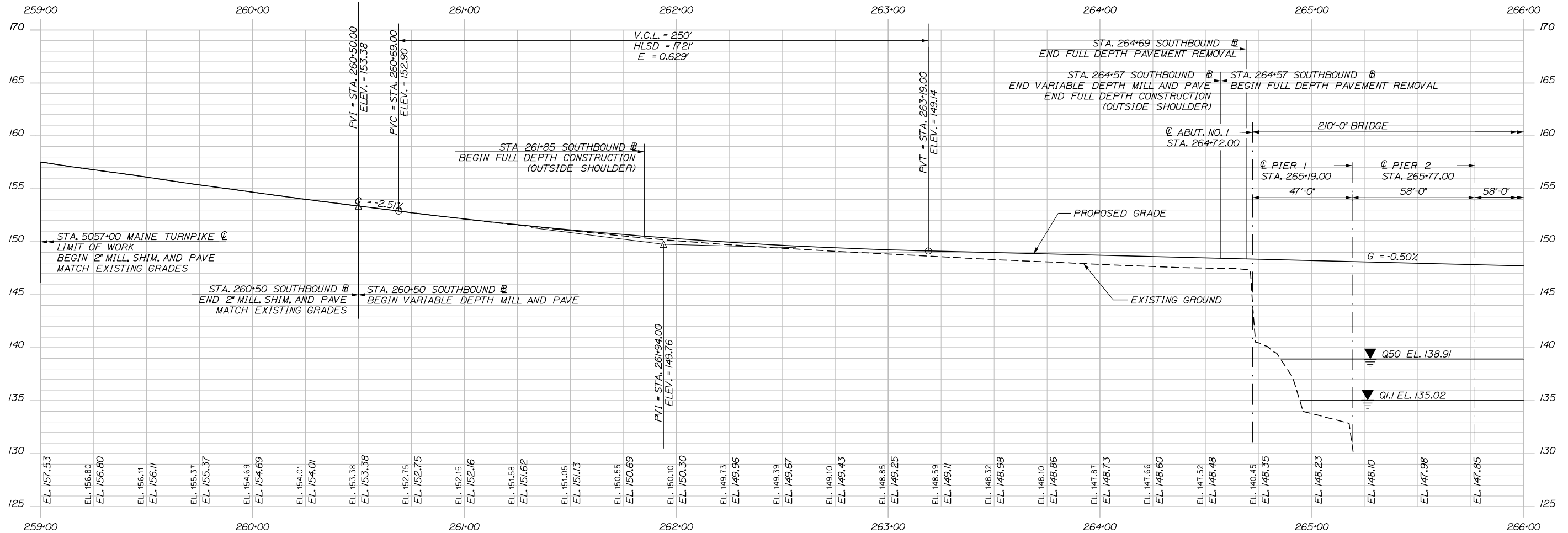
CONTRACT: 2018.15

SHEET NUMBER: LOD-01

20 OF 115

Filename: 020_Limits of Disturbance.dgn

Date: 7/27/2018



SOUTHBOUND PROFILE

Scale: Horiz. 25 0 25 50
Vert. 5 0 5 10

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	Checked	By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	EDD	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

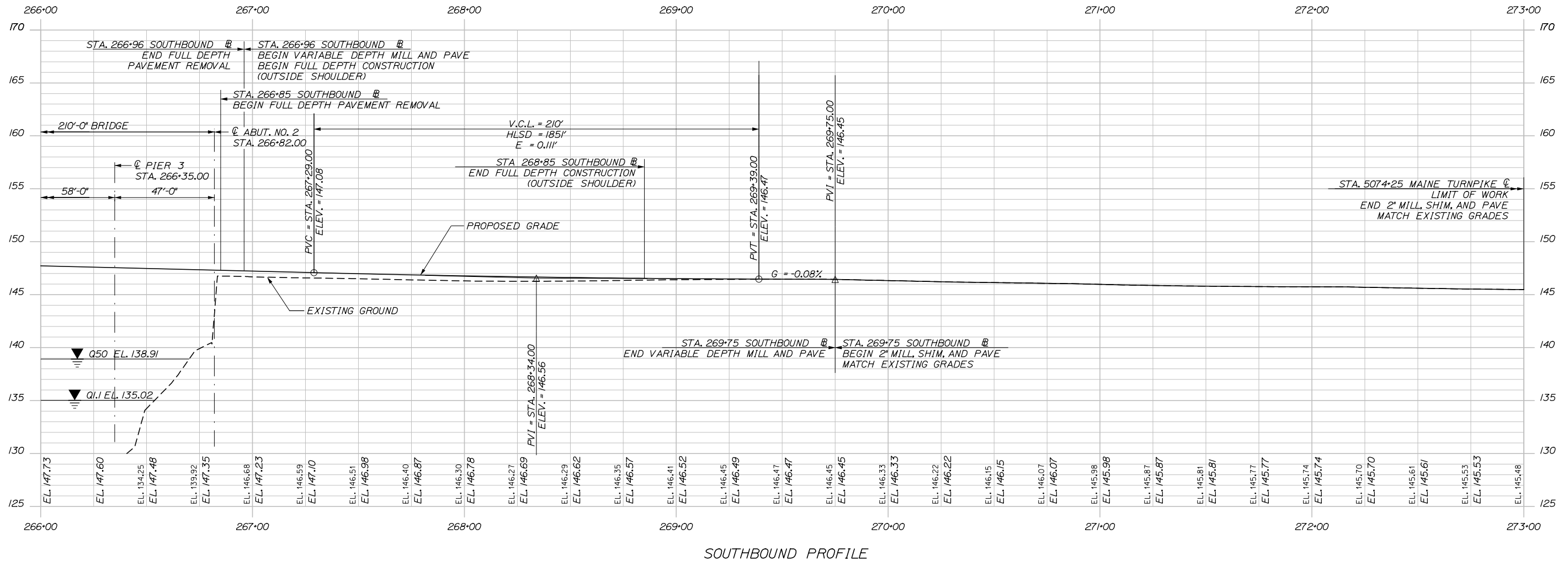
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS
SOUTHBOUND PROFILE I

SHEET NUMBER: PR-01
21 OF 115

CONTRACT: 2018.15

Date: 7/27/2018



SOUTHBOUND PROFILE

Scale: Horiz. 25 0 25 50
Vert. 5 0 5 10

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
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MAINE TURNPIKE

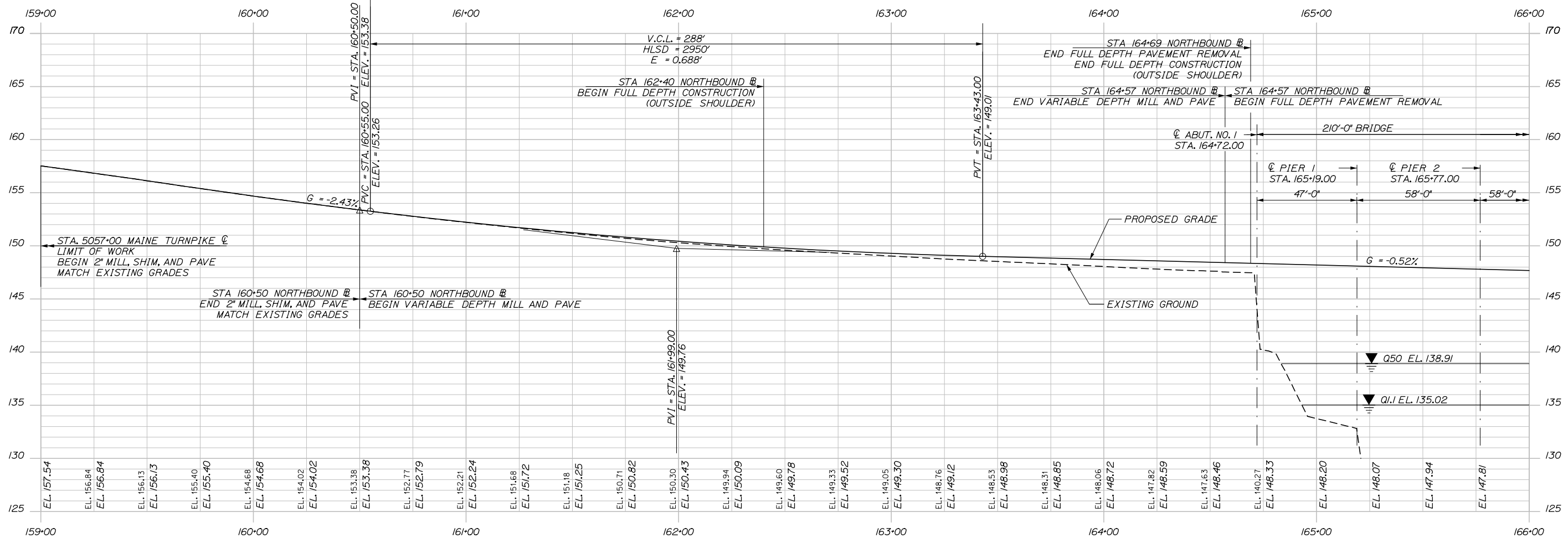
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS
SOUTHBOUND PROFILE II

SHEET NUMBER: PR-02
CONTRACT: 2018.15
22 OF 115

Date: 7/27/2018



NORTHBOUND PROFILE

Scale: Horiz. 25 0 25 50
Vert. 5 0 5 10

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	EDD	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

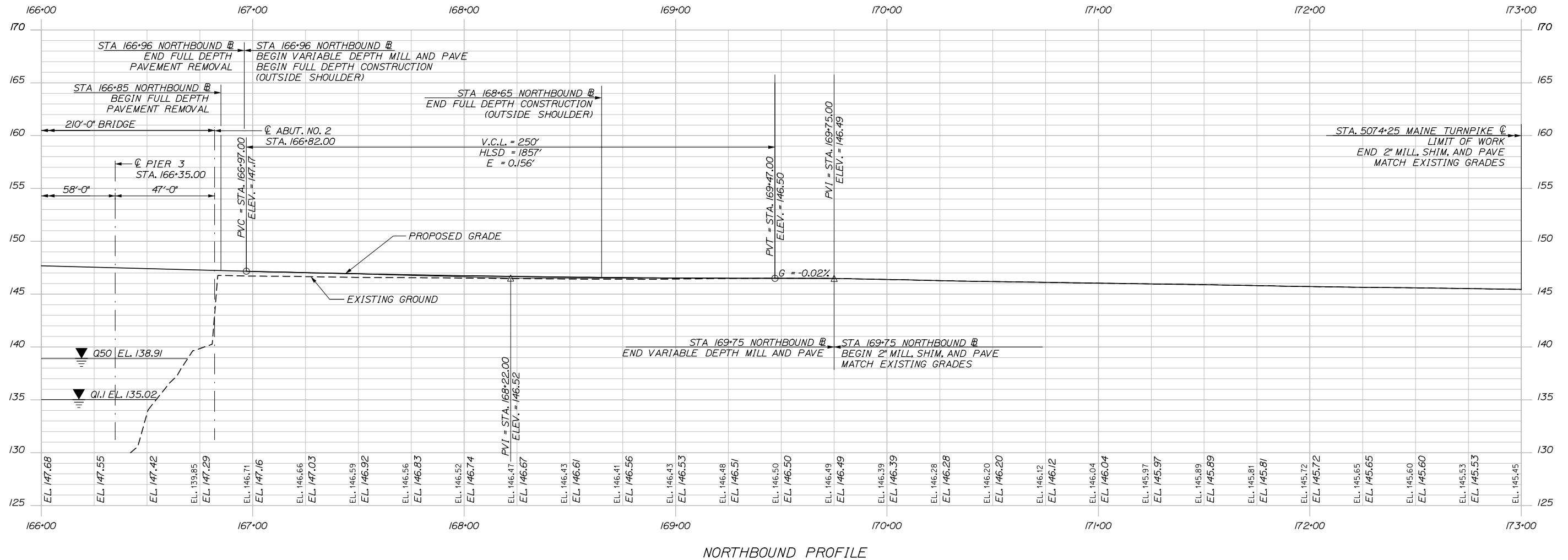
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSSÉECONTEE STREAM OVERPASS
NORTHBOUND PROFILE I

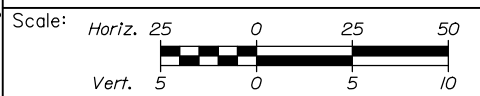
SHEET NUMBER: PR-03
CONTRACT: 2018.15
23 OF 115

Date: 7/27/2018



NORTHBOUND PROFILE

Filename: 024_ProfileNB2.dgn



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THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

NORTHBOUND PROFILE II

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	EDD 07\18	Checked	CDH	07\18
	Drawn	EDD 07\18	In Charge of	RAL	07\18

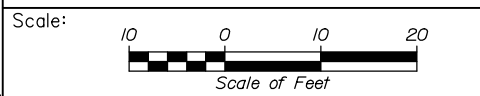
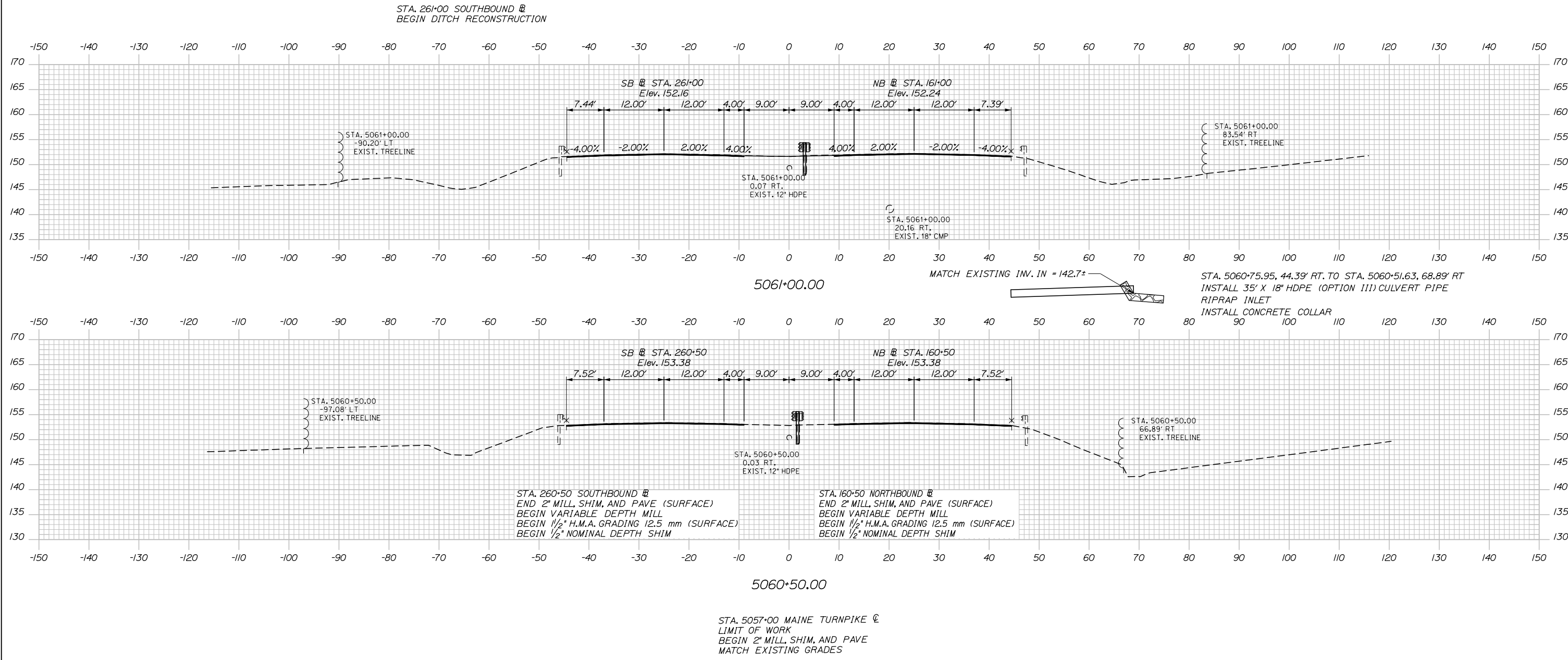
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2018.15

SHEET NUMBER: PR-04

24 OF 115

Date: 7/27/2018



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
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Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

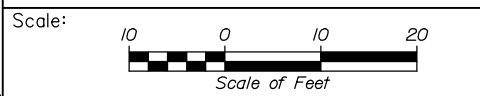
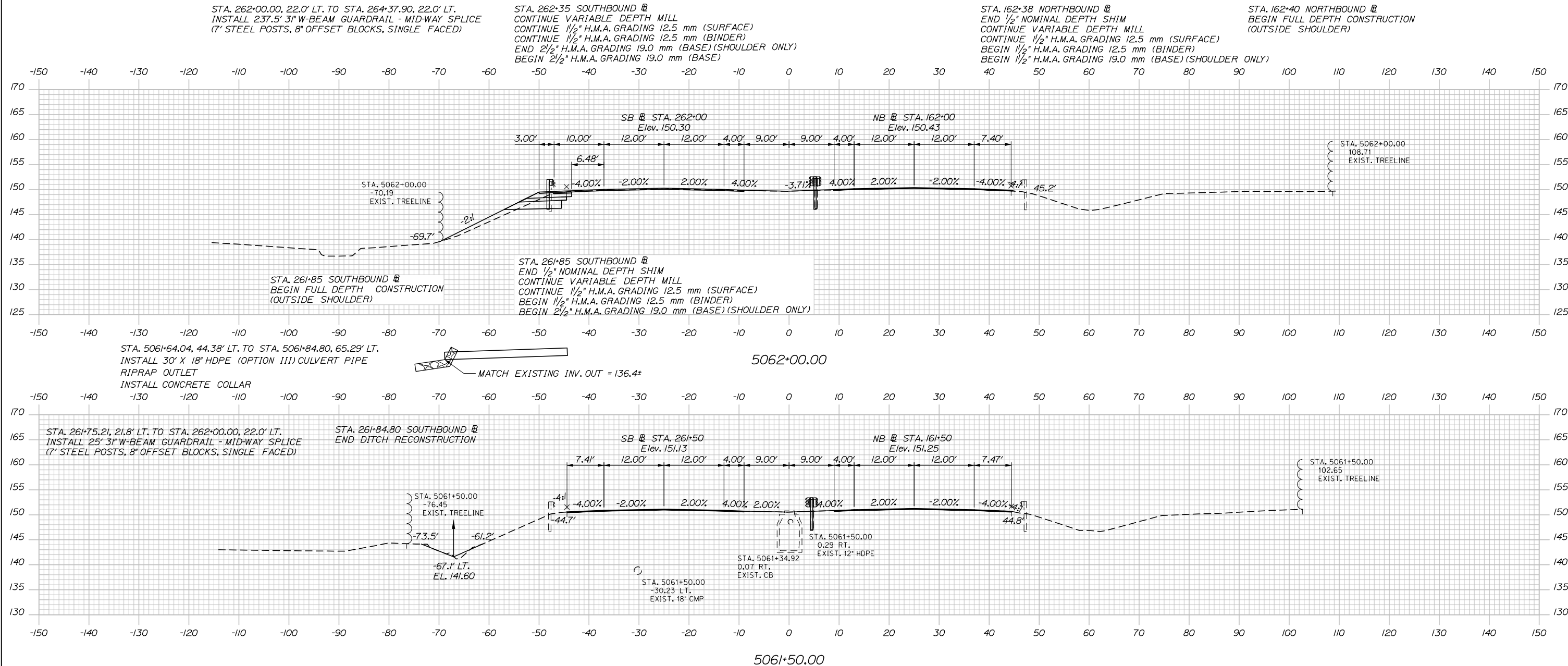
BRIDGE REHABILITATION
COBBOSSÉECONTEE STREAM OVERPASS

CROSS SECTIONS
STA. 5060+50 TO STA. 5061+00

SHEET NUMBER: XS-01
CONTRACT: 2018.15
25 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

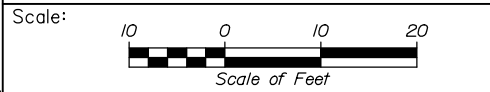
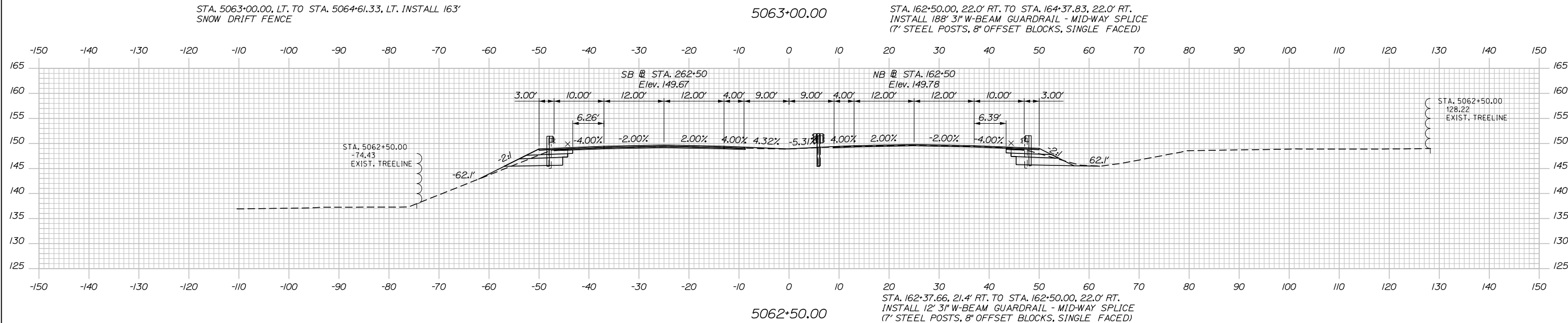
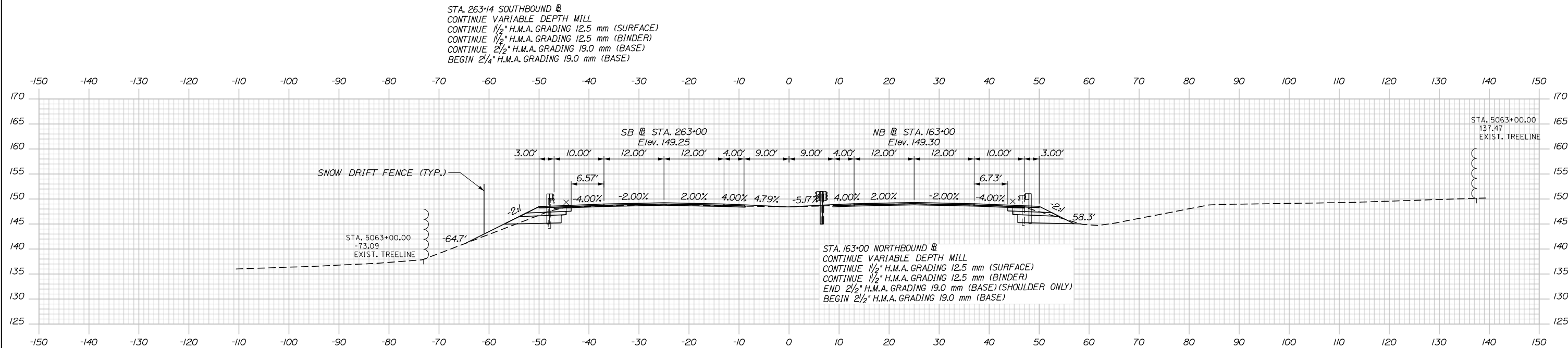
BRIDGE REHABILITATION
 COBBOSSEECONTEE STREAM OVERPASS

CROSS SECTIONS
 STA. 5061+50 TO STA.5062+00

SHEET NUMBER: XS-02
 CONTRACT: 2018.15
 26 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

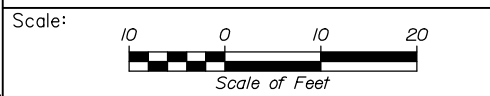
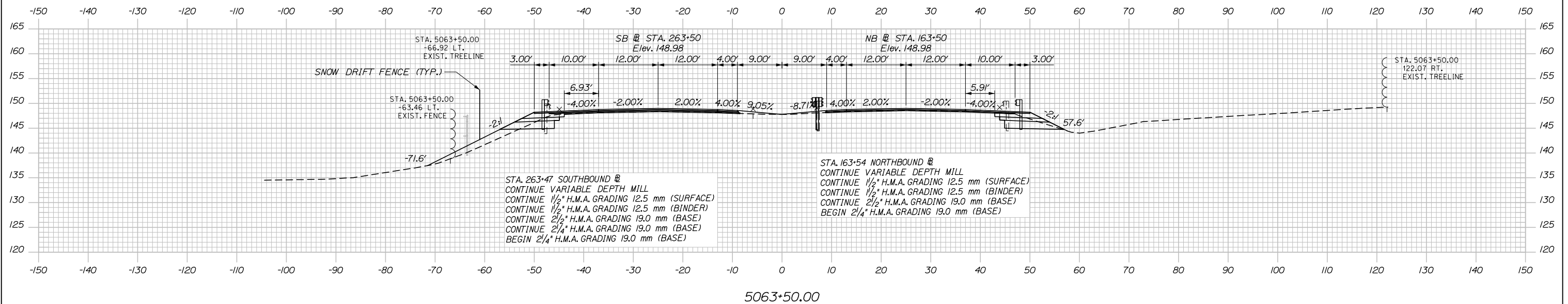
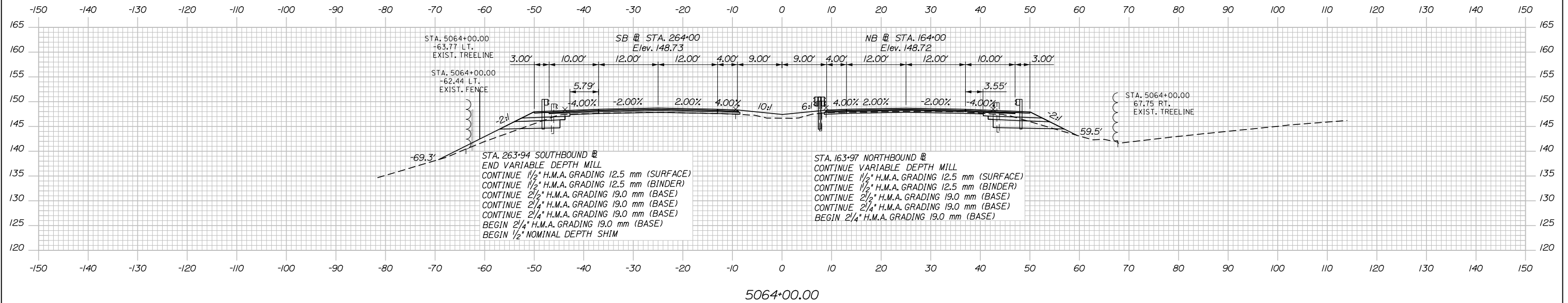
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

CROSS SECTIONS
 STA. 5062+50 TO STA. 5063+00

SHEET NUMBER: XS-03
 CONTRACT: 2018.15
 27 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

No.	Revision	By	Date

	By	Date		By	Date
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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

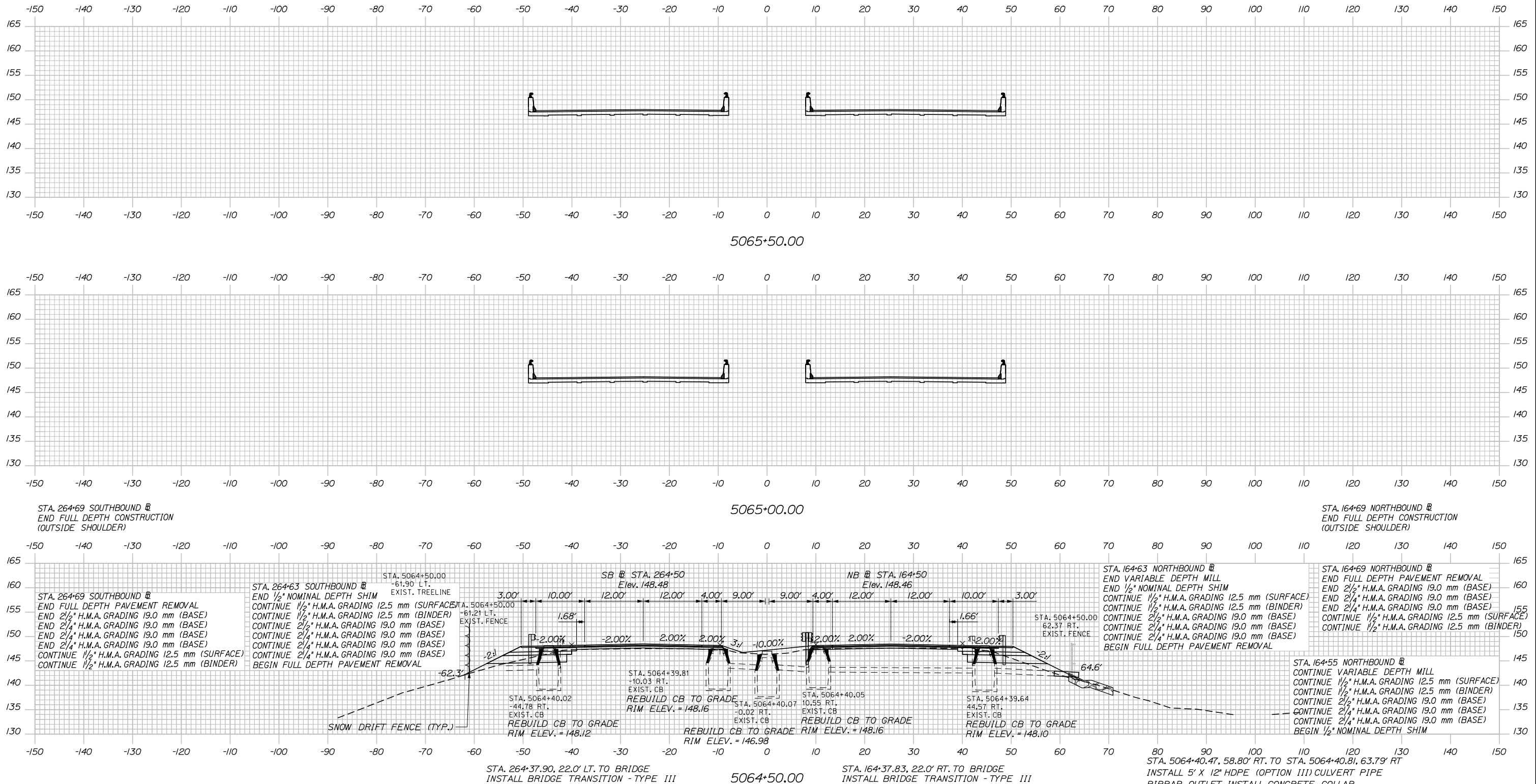
CROSS SECTIONS
 STA. 5063+50 TO STA. 5064+00

SHEET NUMBER: XS-04
 28 OF 115

CONTRACT: 2018.15

Filename: Xsect.dgn

Date: 7/27/2018



STA. 264+69 SOUTHBOUND
END FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)

STA. 264+69 SOUTHBOUND
END FULL DEPTH PAVEMENT REMOVAL
END 2 1/2" H.M.A. GRADING 19.0 mm (BASE)
END 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
END 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
END 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)

STA. 264+63 SOUTHBOUND
END 1/2" NOMINAL DEPTH SHIM
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)
CONTINUE 2 1/2" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
BEGIN FULL DEPTH PAVEMENT REMOVAL

STA. 5064+50.00
-61.90' LT. EXIST. TREE LINE
-61.21' LT. EXIST. FENCE

SB STA. 264+50 Elev. 148.48
NB STA. 164+50 Elev. 148.46

STA. 5064+40.02
-44.78' RT. EXIST. CB
REBUILD CB TO GRADE RIM ELEV. = 148.12

STA. 5064+39.81
-10.03' RT. EXIST. CB
REBUILD CB TO GRADE RIM ELEV. = 148.16

STA. 5064+40.07
-0.02' RT. EXIST. CB
REBUILD CB TO GRADE RIM ELEV. = 146.98

STA. 5064+40.05
10.55' RT. EXIST. CB
REBUILD CB TO GRADE RIM ELEV. = 148.16

STA. 5064+39.64
44.57' RT. EXIST. CB
REBUILD CB TO GRADE RIM ELEV. = 148.10

STA. 5064+50.00
62.37' RT. EXIST. FENCE

SNOW DRIFT FENCE (TYP.)

STA. 264+37.90, 22.0' LT. TO BRIDGE
INSTALL BRIDGE TRANSITION - TYPE III

STA. 164+37.83, 22.0' RT. TO BRIDGE
INSTALL BRIDGE TRANSITION - TYPE III

STA. 164+63 NORTHBOUND
END VARIABLE DEPTH MILL
END 1/2" NOMINAL DEPTH SHIM
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)
CONTINUE 2 1/2" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
BEGIN FULL DEPTH PAVEMENT REMOVAL

STA. 164+69 NORTHBOUND
END FULL DEPTH CONSTRUCTION (OUTSIDE SHOULDER)

STA. 164+69 NORTHBOUND
END FULL DEPTH PAVEMENT REMOVAL
END 2 1/2" H.M.A. GRADING 19.0 mm (BASE)
END 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
END 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)

STA. 164+55 NORTHBOUND
CONTINUE VARIABLE DEPTH MILL
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)
CONTINUE 2 1/2" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 2 1/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1 1/2" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1 1/2" H.M.A. GRADING 12.5 mm (BINDER)

STA. 5064+40.47, 58.80' RT. TO STA. 5064+40.81, 63.79' RT
INSTALL 5' X 12" HDPE (OPTION III) CULVERT PIPE
RIPRAP OUTLET, INSTALL CONCRETE COLLAR

Scale: 1" = 20'

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

CROSS SECTIONS
STA. 5064+50 TO STA. 5065+50

SHEET NUMBER: XS-05
CONTRACT: 2018.15
29 OF 115

Date: 7/27/2018

STA. 266+85 SOUTHBOUND
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

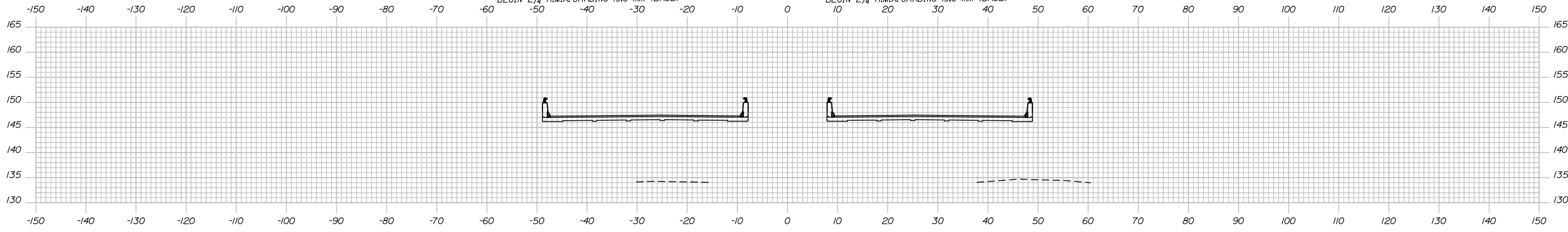
STA. 266+91 SOUTHBOUND
END FULL DEPTH PAVEMENT REMOVAL
END 2/4" H.M.A. GRADING 19.0 mm (BASE)
END 2/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (BINDER)
CONTINUE 2/2" H.M.A. GRADING 19.0 mm (BASE)
BEGIN 1/2" NOMINAL DEPTH SHIM

STA. 266+85 SOUTHBOUND
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (BINDER)
BEGIN FULL DEPTH PAVEMENT REMOVAL
BEGIN 2/2" H.M.A. GRADING 19.0 mm (BASE)
BEGIN 2/4" H.M.A. GRADING 19.0 mm (BASE)
BEGIN 2/4" H.M.A. GRADING 19.0 mm (BASE)

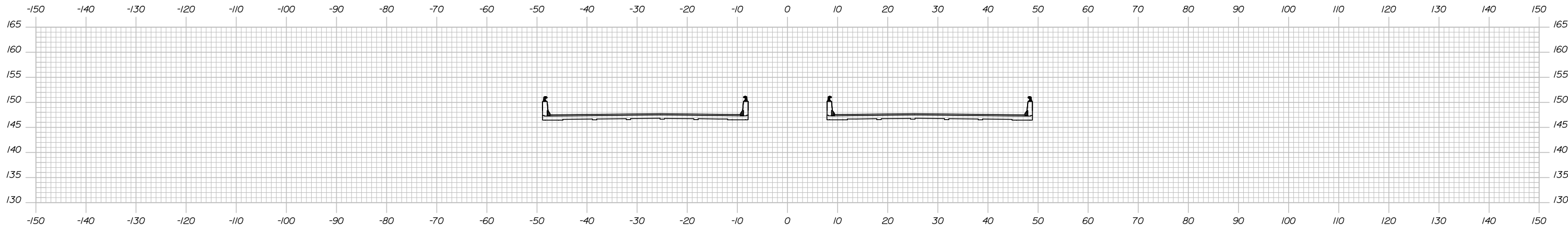
STA. 166+91 NORTHBOUND
END 2/4" H.M.A. GRADING 19.0 mm (BASE)
END 2/4" H.M.A. GRADING 19.0 mm (BASE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (BINDER)
CONTINUE 2/2" H.M.A. GRADING 19.0 mm (BASE)
BEGIN VARIABLE DEPTH MILL

STA. 166+85 NORTHBOUND
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (SURFACE)
CONTINUE 1/2" H.M.A. GRADING 12.5 mm (BINDER)
BEGIN FULL DEPTH PAVEMENT REMOVAL
BEGIN 2/2" H.M.A. GRADING 19.0 mm (BASE)
BEGIN 2/4" H.M.A. GRADING 19.0 mm (BASE)
BEGIN 2/4" H.M.A. GRADING 19.0 mm (BASE)

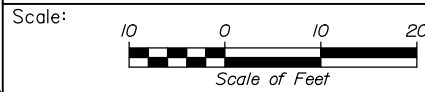
STA. 166+85 NORTHBOUND
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)



5066+50.00



5066+00.00



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

CROSS SECTIONS
STA. 5066+00 TO STA. 5066+50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	EDD	07\18	Checked	CDH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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

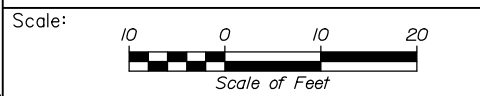
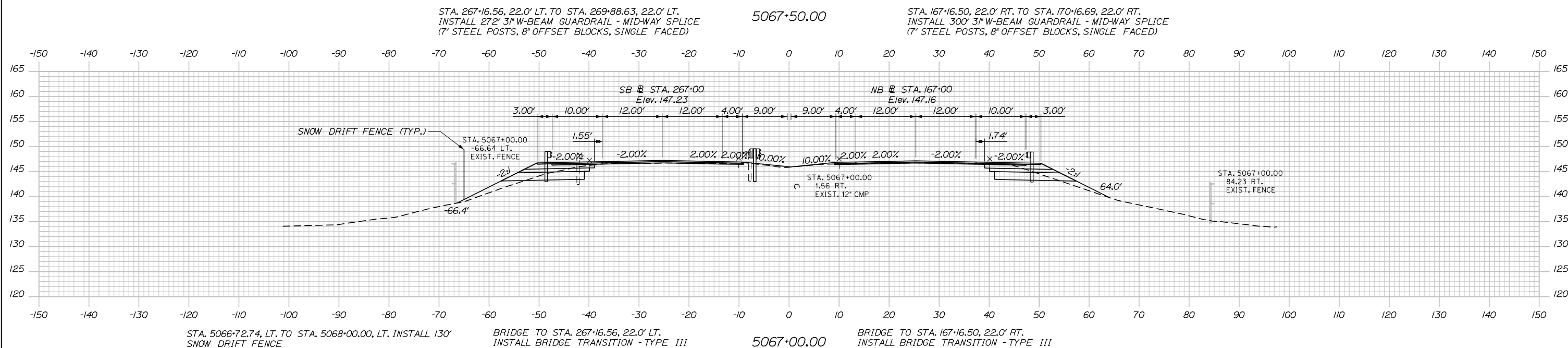
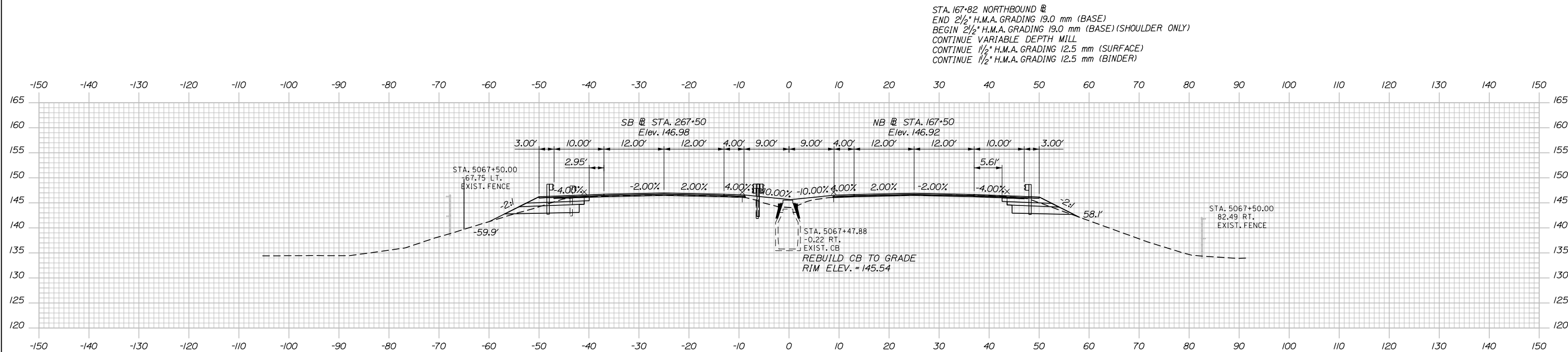
CONTRACT: 2018.15

SHEET NUMBER: XS-06

30 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



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No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
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Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

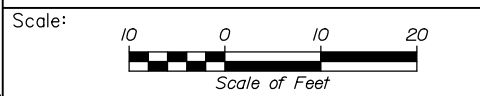
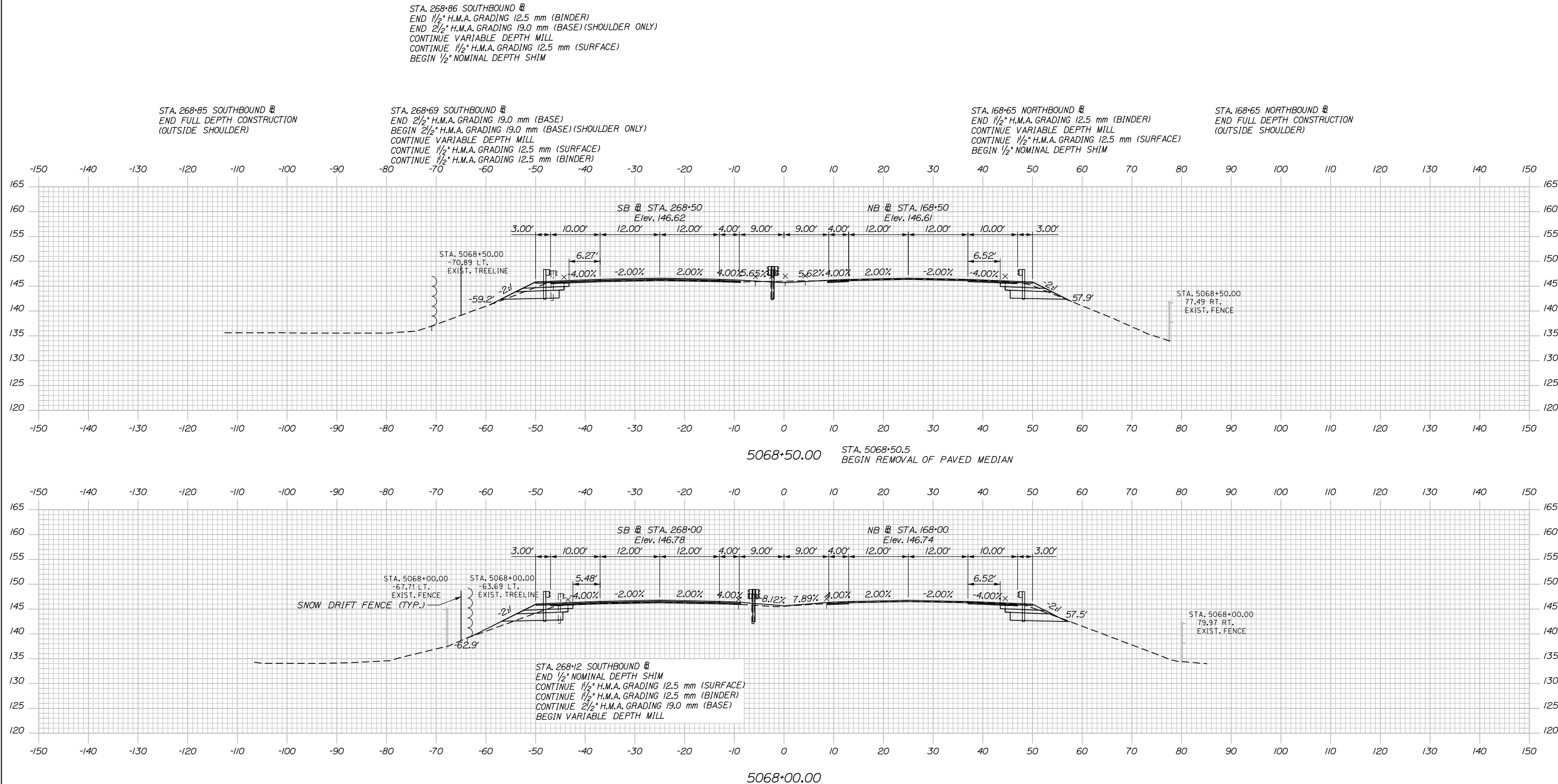
CROSS SECTIONS
 STA. 5067+00 TO STA. 5067+50

SHEET NUMBER: XS-07
 31 OF 115

CONTRACT: 2018.15

Filename: Xsect.dgn

Date: 7/27/2018



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No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

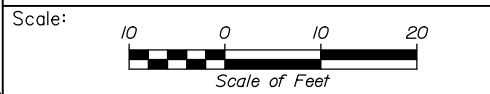
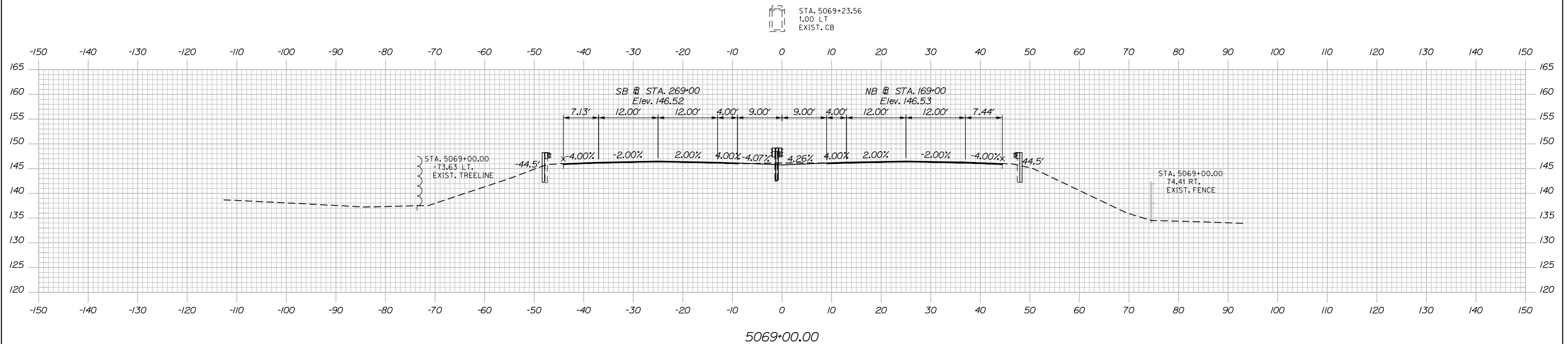
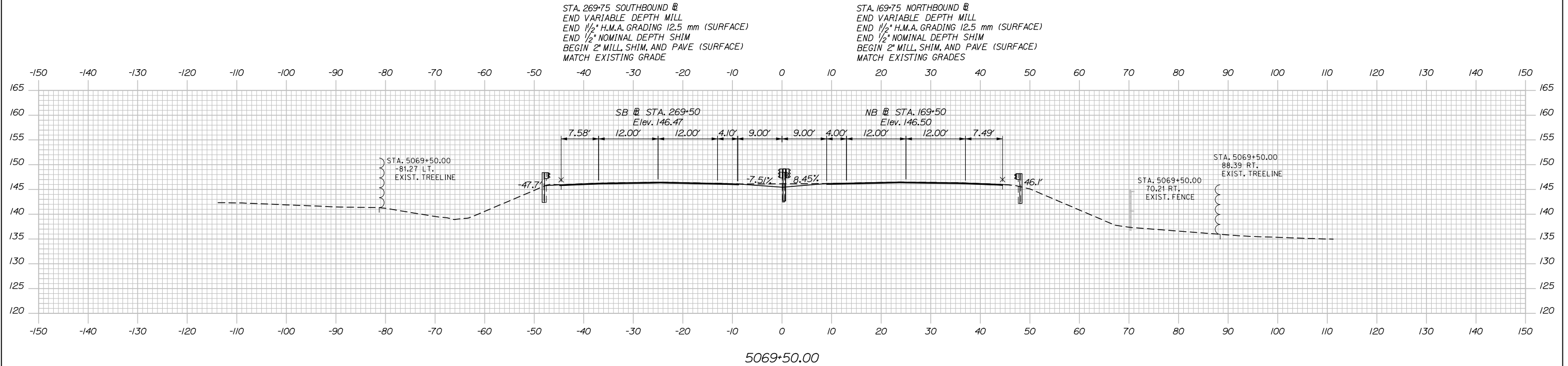
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

CROSS SECTIONS
 STA. 5068+00 TO STA.5068+50

SHEET NUMBER: XS-08
 CONTRACT: 2018.15
 32 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

No.	Revision	By	Date

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS

CROSS SECTIONS
 STA. 5069+00 TO STA.5069+50

SHEET NUMBER: XS-09
 33 OF 115

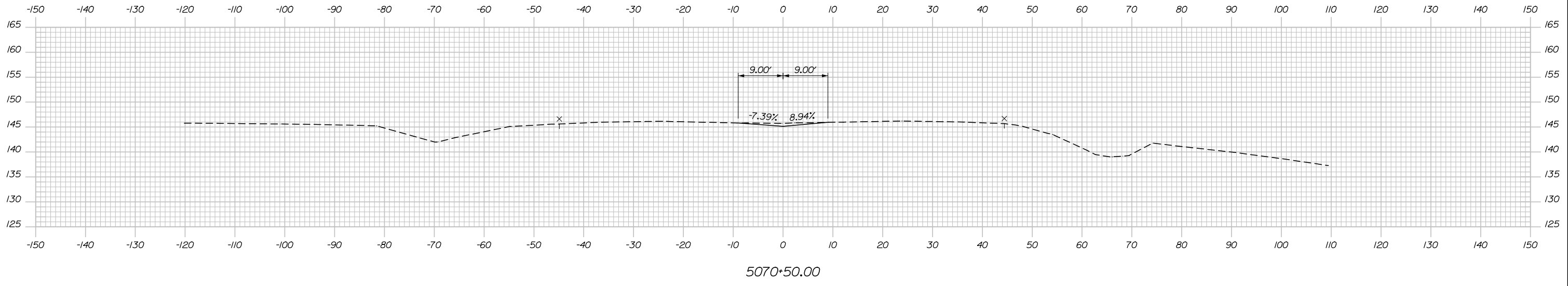
CONTRACT: 2018.15

Filename: Xsect.dgn

Date: 7/27/2018

STA. 5070+63.96
0.95 LT.
EXIST. 12" HDPE

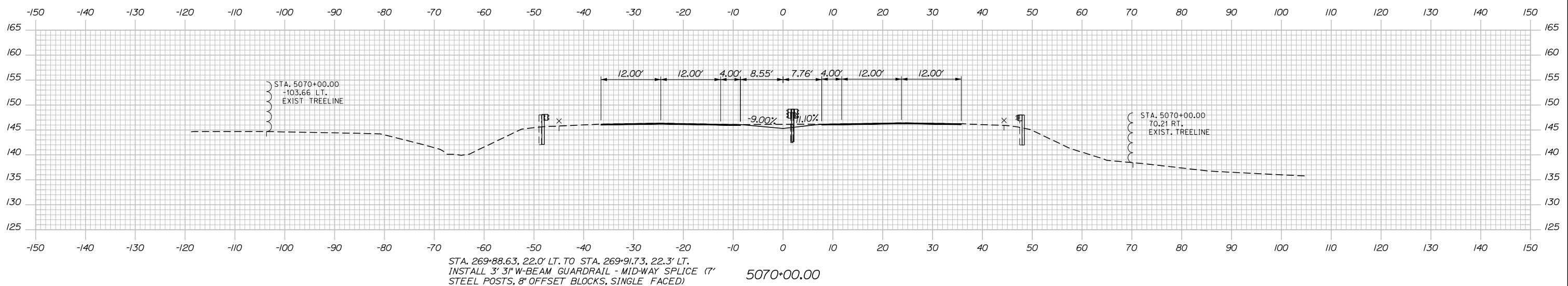
STA. 5070+62.31
0.93 LT.
EXIST. CB



STA. 269+91.73, 22.3' LT. TO STA. 270+25.91, 26.0' LT.
INSTALL GUARDRAIL - FLARED TERMINAL - 31" W-BEAM
GUARDRAIL

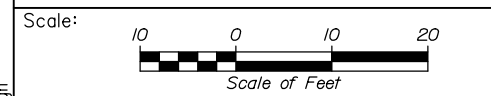
STA. 5074+25 MAINE TURNPIKE CL
LIMIT OF WORK
END 2" MILL, SHIM, AND PAVE (SURFACE)
MATCH EXISTING GRADES

STA. 170+16.69, 22.0' RT TO STA. 170+26.06, 22.0' RT. TO
STA. INSTALL TERMINAL END - ANCHORED END - 31"
W-BEAM GUARDRAIL



STA. 269+88.63, 22.0' LT. TO STA. 269+91.73, 22.3' LT.
INSTALL 3' 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (7'
STEEL POSTS, 8' OFFSET BLOCKS, SINGLE FACED)

5070+00.00



Designed by:

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

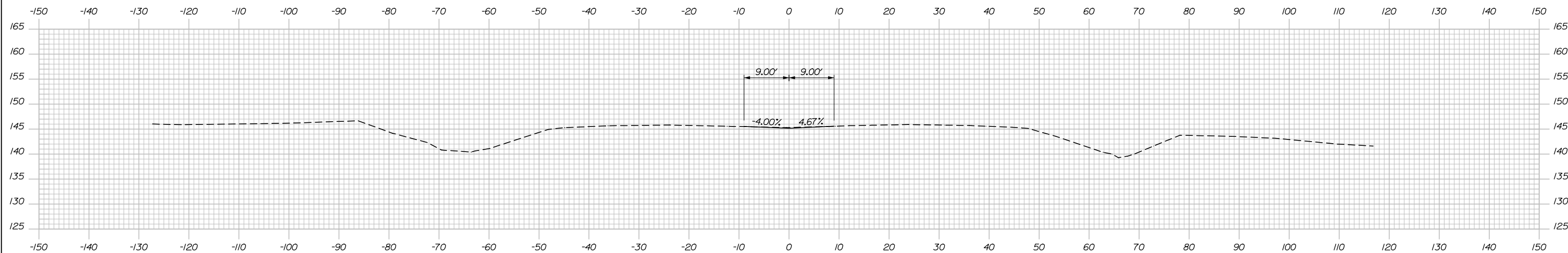
**BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS**

CROSS SECTIONS
STA. 5070+00 TO STA. 5070+50

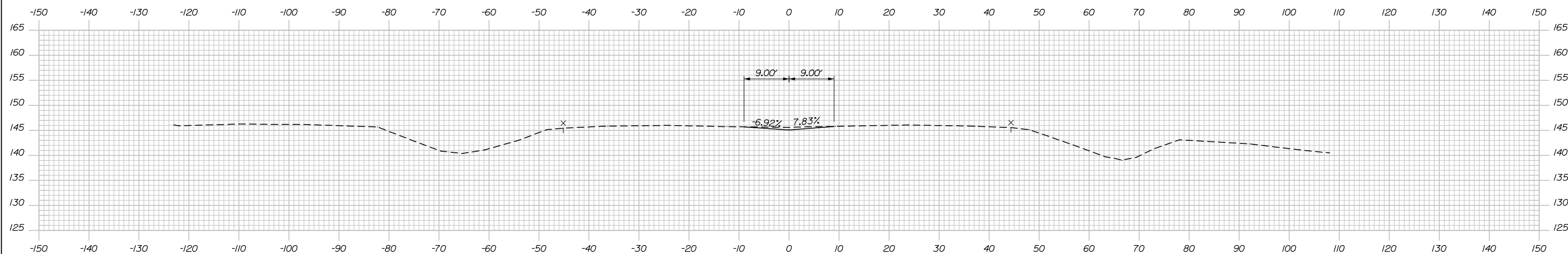
SHEET NUMBER: XS-10
CONTRACT: 2018.15
34 OF 115

Filename: Xsect.dgn

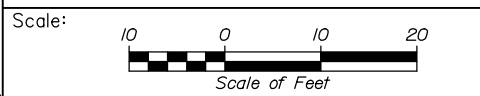
Date: 7/27/2018



5071+50.00



5071+00.00



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**THE GOLD STAR
MEMORIAL HIGHWAY**

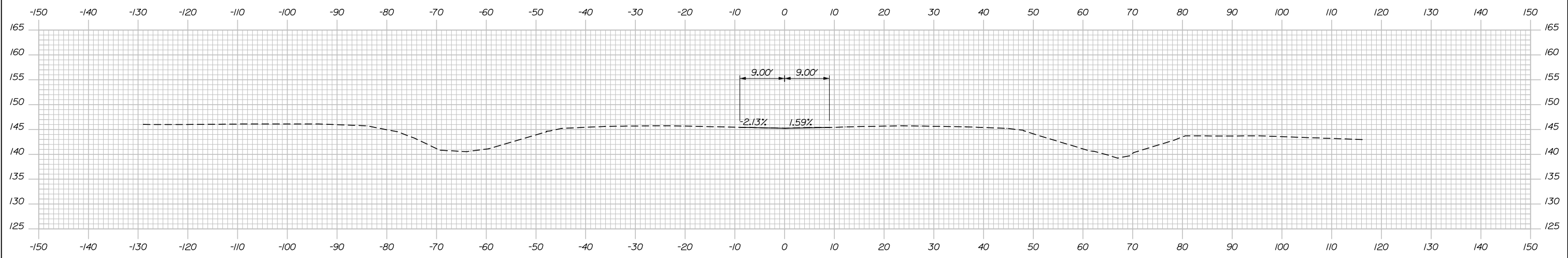
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS
STA.. 5071+00 TO STA.5071+50

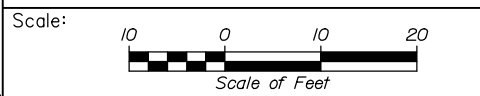
SHEET NUMBER: XS-11
CONTRACT: 2018.15
35 OF 115

Filename: Xsect.dgn

Date: 7/27/2018



5072+00.00 STA. 5072+00
END REMOVAL OF PAVED MEDIAN



Designed by:

HNTB

No.	Revision	By	Date

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THE GOLD STAR
MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS

STA.. 5072+00 TO STA.5072+00

SHEET NUMBER: XS-12
CONTRACT: 2018.15
36 OF 115

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, DECEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, THIRD EDITION WITH 2017 INTERIMS.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

DECK CONCRETE - CLASS AAA - DECK
SEAL CONCRETE - 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, AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

STEEL H-PILES INCLUDING PILE TIPS 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:

- 1. THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.
2. 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.
3. COPIES OF THE AS-BUILT PLANS ARE POSTED ON THE MAINE TURNPIKE AUTHORITY WEBSITE AT WWW.MAINETURNPIKE.COM/PROJECT-AND-PLANNING/CONSTRUCTION-CONTRACTS.ASPX. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.
5. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.
6. ALL BRIDGE PARAPET, BARRIER, WINGWALL AND ENDPOST CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.
7. THE EXISTING GIRDERS SHALL BE JACKED IN-PLACE TO FACILITATE PEDESTAL RECONSTRUCTION, AND BEARING REPLACEMENT. THIS WORK SHALL BE PAID FOR UNDER ITEM 523.52, INSTALLATION. THE EXISTING EXTERIOR GIRDERS SHALL BE TEMPORARILY SUPPORTED TO FACILITATE SUBSTRUCTURE WIDENING. THIS WORK SHALL BE PAID FOR UNDER ITEM 524.302, TEMPORARY STRUCTURAL SUPPORT.
8. 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.
9. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
- EXPOSED SURFACES OF THE PARAPETS, AND ENDPOSTS;
- VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE.
10. PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS AND PIERS.
11. WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINEDOT 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.

Table with 5 columns: ITEM NO., ITEM DESCRIPTION, REFERENCE QUANTITY, UNIT, COBB. STRUCTURAL QUANTITY. Rows include items like 'Removing Existing Superstructure Property of Contractor', 'Structural Earth Excavation - Major Structures', etc.

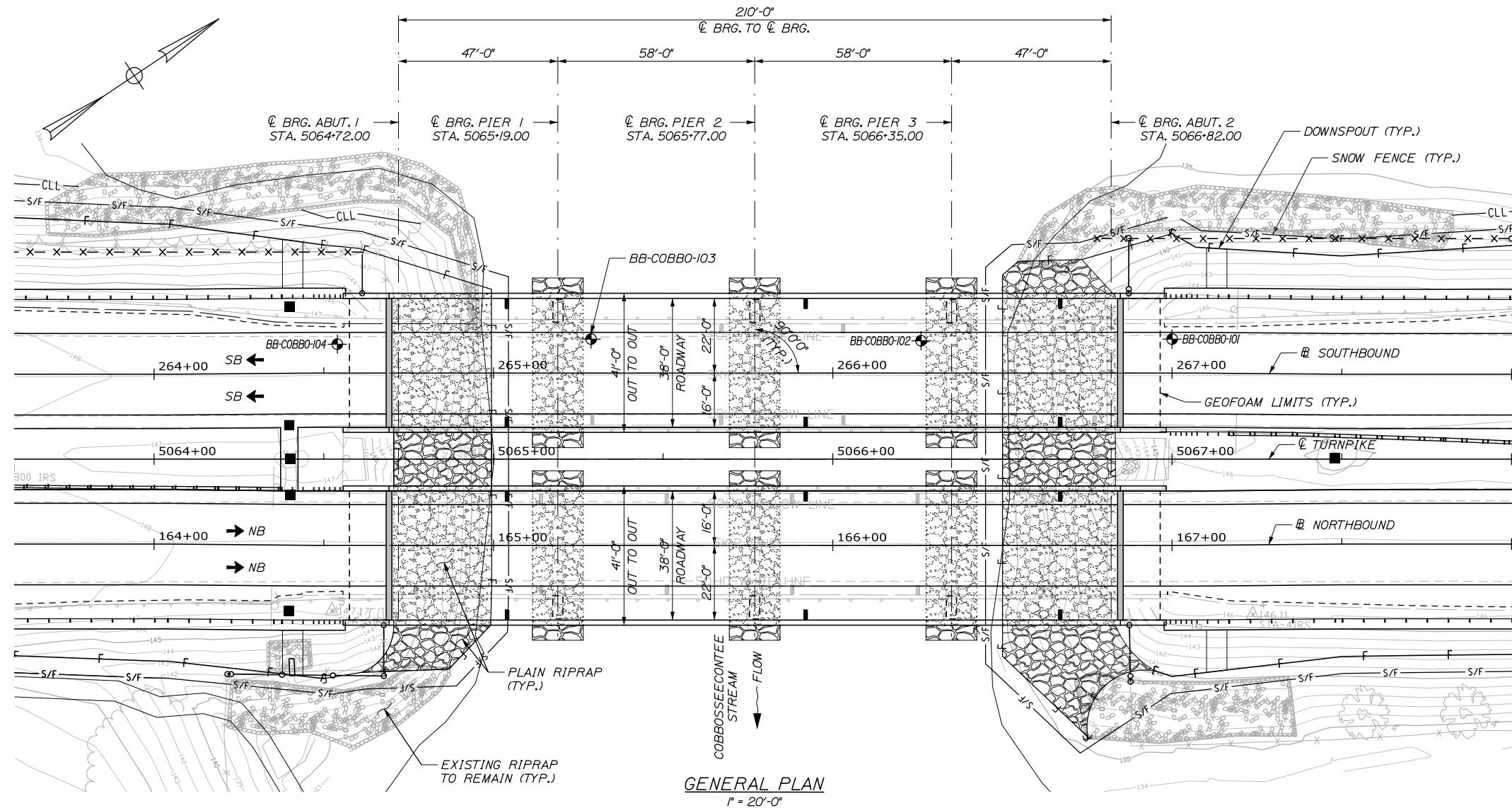
INDEX OF DRAWINGS table with columns: PAGE NO., TITLE, SHEET NO. Includes entries like 'GENERAL NOTES, INDEX, AND QUANTITIES S-01', 'STRUCTURAL STEEL DETAILS I S-42', etc.

Bottom section containing HNTB logo, company address (HNTB CORPORATION, 340 County Road, Suite 6-C, Westbrook, ME), project name (THE GOLD STAR MEMORIAL HIGHWAY), and sheet information (BRIDGE REHABILITATION COBBOSSEECONTEE STREAM OVERPASS, GENERAL NOTES, INDEX, AND QUANTITIES, SHEET NUMBER: S-01, CONTRACT: 2018.15, 37 OF 115).

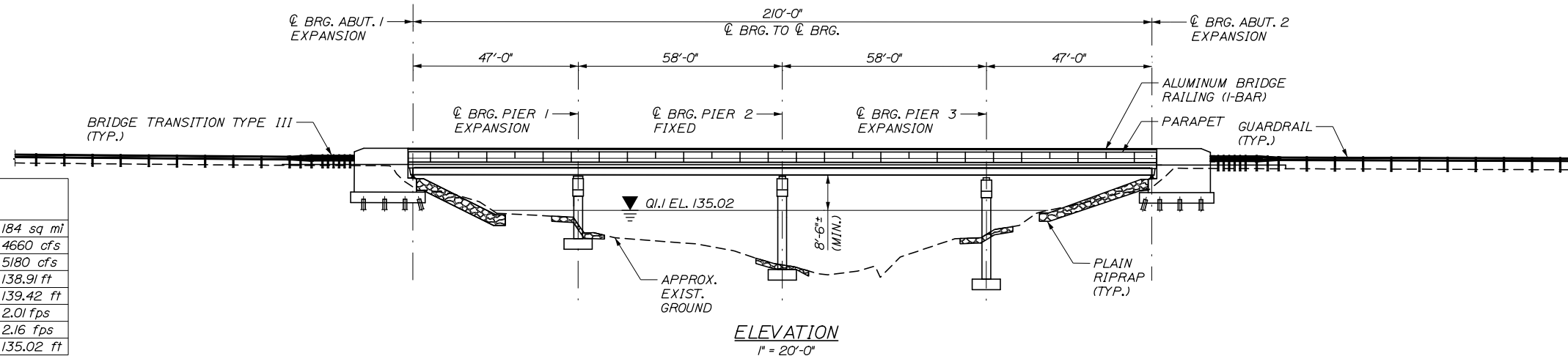
Date: 7/27/2018

Filename: 037_Index and Quantities.dgn

Date: 7/27/2018



GENERAL PLAN
1" = 20'-0"



ELEVATION
1" = 20'-0"

HYDROLOGIC DATA	
DISCHARGE AREA	184 sq mi
DESIGN DISCHARGE (Q50)	4660 cfs
CHECK DISCHARGE (Q100)	5180 cfs
HEADWATER ELEVATION (Q50)	138.91 ft
HEADWATER ELEVATION (Q100)	139.42 ft
DISCHARGE VELOCITY (Q50)	2.01 fps
DISCHARGE VELOCITY (Q100)	2.16 fps
ORDINARY HIGH WATER ELEVATION (Q1.1)	135.02 ft

NOTE:
SEE HIGHWAY PLAN SHEETS FOR FULL PROJECT LIMITS.

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\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 REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
GENERAL PLAN AND ELEVATION

SHEET NUMBER: S-02
CONTRACT: 2018.15
38 OF 115



Date: 7/27/2018

SCHONEWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation		Boring No.: BB-COBBO-101																																																																																																					
LOCATION: West Gardiner, Maine		Elevation (ft.) 147 ft. (est'd)		Proj. No.: 17-035																																																																																																					
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V4		36.6 - 37.0	Su=484 / 69 psf			54																																																																																																																					
							39.5 ft: Drilling behavior suggests stratum change. 8D: Dark grey, loose, fine to medium SAND, little Silt, trace coarse Sand, with gravelly seam at top of sample. TILL																																																																																																																				
8D	2412	40.0 - 42.0	8-5-5-0	10	10	58																																																																																																																					
							44 ft: HW casing drives hard. 44.8 ft: HW casing bounces; spin NW casing to 45.5 ft. R1: Hard, typically fresh, fine to medium grained, light brown and light and medium grey, METASANDSTONE with abundant mica (biotite and phlogopite) and quartzite and calcilic veins. Close to moderately spaced, typically high angle breaks; undulating, rough, fresh to slightly weathered, and open, with occasional sand infilling. Highly fractured from 45.5 to 46.7 ft. Core times: ~1:40/1:45/1:50/1:45 min.sec/ft POOR ROCK QUALITY	UCT _{sp} = 11.85 ksi																																																																																																																			
R1	6055	45.5 - 50.5	RQD 24" = 40%			102.2																																																																																																																					

SCHONEWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation		Boring No.: BB-COBBO-101																													
LOCATION: West Gardiner, Maine		Elevation (ft.) 147 ft. (est'd)		Proj. No.: 17-035																													
Driller: New England Boring Contractors		Core Barrel: NQ2		Operator: Schaefer / Titus																													
Operator: Schaefer / Titus		Datum:		Sampler: standard split spoon																													
Logged By: Schonewald		Rig Type: Mobile Drill B-51		Hammer Wt./Fall: 140 lbs/30 inches																													
Date Start/Finish: 11/8/17, 0825 - 11/9/17, noon		Drilling Method: cased wash boring		Hammer Type: rope & cathead																													
Boring Location: 287+00; 10 ft LT (SB mainline, northerly abutment)		Casing ID/OD: HW(4") to 44 ft, NW(3") to 45.5 ft		Hammer Efficiency: 0.6																													
Auger ID/OD: SSA (4.5") to 5 ft		Water Level ¹ :																															
IN-SITU SAMPLING AND TESTING: D = Split Spoon Sample MC = Unsuccessful Split Spoon Sample attempt LI = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample attempt V = Insitu Vane Shear Test MV = Unsuccessful Insitu Vane Shear Test attempt		ADDITIONAL DEFINITIONS: N = uncorrected = N value Ngp = N value corrected for hammer efficiency hammer efficiency = calculated hammer efficiency Su = Insitu Field Vane Shear Strength (psf) R = Rock Core Sample RQD = Rock Quality Designation (%)		LABORATORY TEST RESULTS: AASHTO / USCS soil classifications -#200 = percent fines WC = water content (%) CONSOL = 1-D consolidation test BOREHOLE ADVANCEMENT METHODS: UU=Unconsolidated undrained triaxial test SBA/HSA=solid/hollow stem auger RCP=rotor cone/PCPN/PS=hydraulic push UCT _{sp} = peak compressive strength of rock																													
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Sample Information		Blows (6 in.) Strength (psf) or RQD (%)	N-unconnected									N-60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Lab. Testing Results																
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Filename: 039_Boring_Logs_1.dgn

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 REHABILITATION COBBOSSEECONTEE STREAM OVERPASS BORING LOGS I		SHEET NUMBER: S-03 CONTRACT: 2018.15 39 OF 115	
No.	Revision	By	Date												
				Designed	HJW	07\18	Checked	KEB	07\18						
				Drawn	ERB	07\18	In Charge of	RAL	07\18						

Date: 7/27/2018

SCHONEWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation LOCATION: West Gardiner, Maine		Boring No.: BB-COBBO-102 Proj. No.: 17-035																																																																																																																										
Driller: New England Boring Contractors		Elevation (ft.): 129 ft. (mudline, est'd)		Core Barrel: NQ2																																																																																																																										
Operator: Schaefer / Titus		Datum:		Sampler: standard split spoon																																																																																																																										
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SCHONEWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation LOCATION: West Gardiner, Maine		Boring No.: BB-COBBO-102 Proj. No.: 17-035																																		
Driller: New England Boring Contractors		Elevation (ft.): 129 ft. (mudline, est'd)		Core Barrel: NQ2																																		
Operator: Schaefer / Titus		Datum:		Sampler: standard split spoon																																		
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SCHONEWALD ENGINEERING ASSOCIATES, INC.		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation LOCATION: West Gardiner, Maine		Boring No.: BB-COBBO-103 Proj. No.: 17-035																																																																														
Driller: New England Boring Contractors		Elevation (ft.): 122.5 ft. (mudline, est'd)		Core Barrel: NQ2																																																																														
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Filename: 040_Boring_Logs_2.dgn

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date
Designed	HJW	07\18	Checked	KEB 07\18
Drawn	ERB	07\18	In Charge of	RAL 07\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 REHABILITATION COBBOSSECONTEE STREAM OVERPASS

BORING LOGS II

SHEET NUMBER: S-04
 CONTRACT: 2018.15
 40 OF 115

Date: 7/27/2018

		PROJECT: Maine Turnpike MM99.2 Cobbosseecontee Bridges Rehabilitation LOCATION: West Gardiner, Maine		Boring No.: BB-COBBO-104 Proj. No.: 17-035																																																																																																																			
Driller: New England Boring Contractors	Elevation (ft.): 148 ft. (est'd)	Core Barrel: NQ2		Sampler: standard split spoon																																																																																																																			
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Page 2 of 2 Boring No.: BB-COBBO-104																																																						

Filename: 041_Boring_Logs_3.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

By	Date	By	Date
Designed	HJW 07\18	Checked	KEB 07\18
Drawn	ERB 07\18	In Charge of	RAL 07\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.

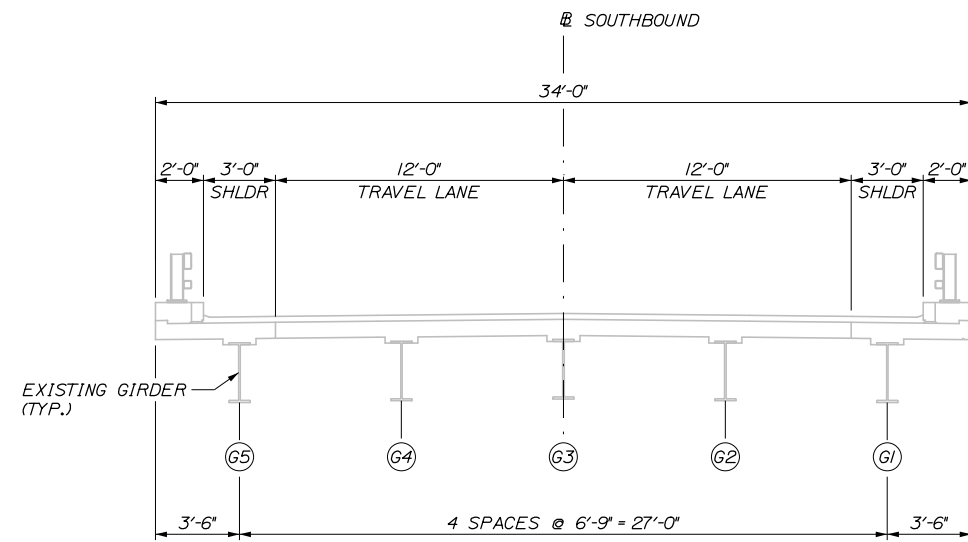
BRIDGE REHABILITATION
 COBBOSSEECONTEE STREAM OVERPASS

BORING LOGS III

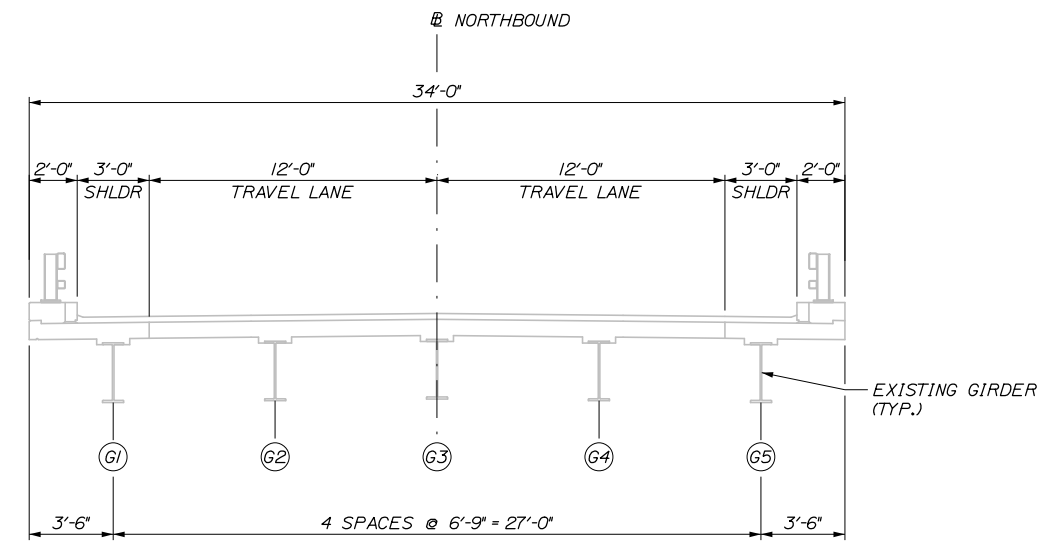
SHEET NUMBER: S-05
 41 OF 115

CONTRACT: 2018.15

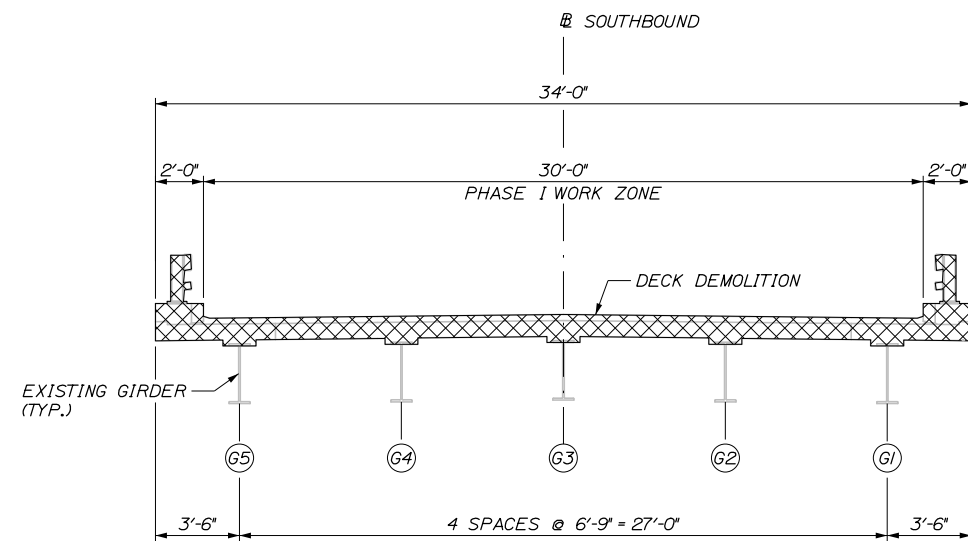
Date: 7/27/2018



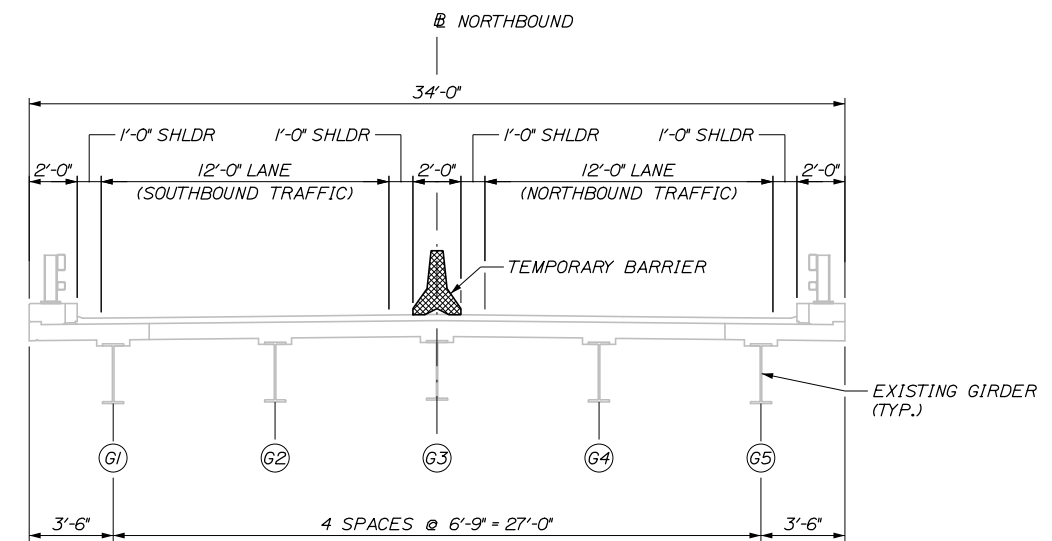
TURNPIKE



EXISTING CONDITION
1/4" = 1'-0"



TURNPIKE



PHASE I DEMOLITION
1/4" = 1'-0"

Filename: 042_Construction Phasing 1.dgn

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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

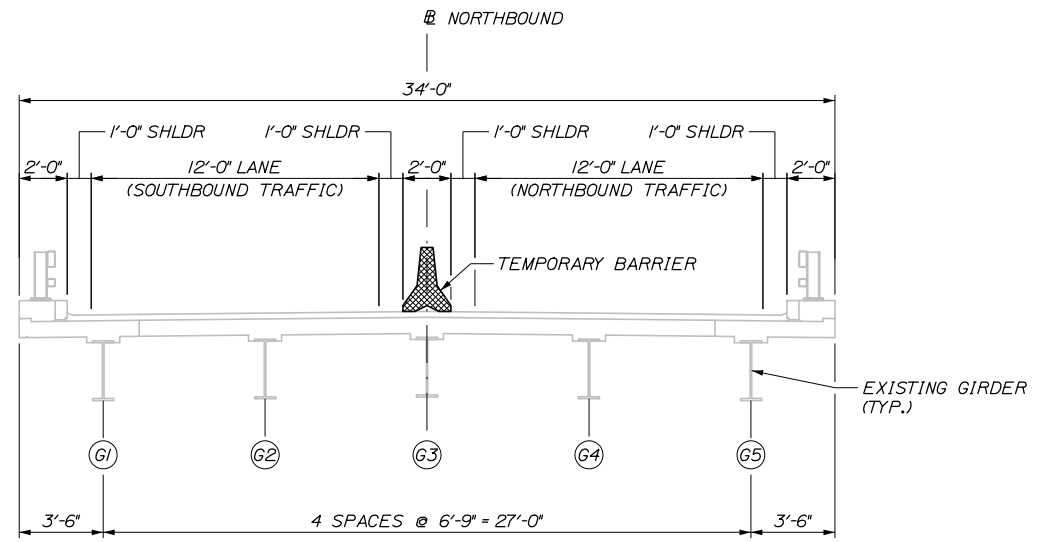
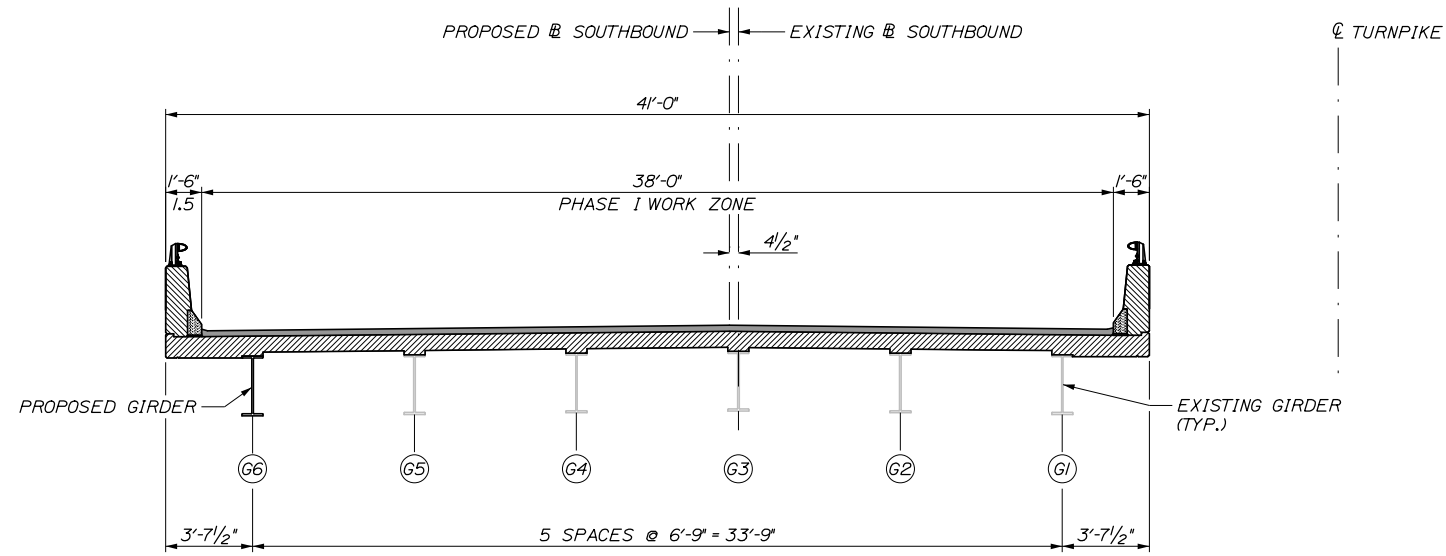
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

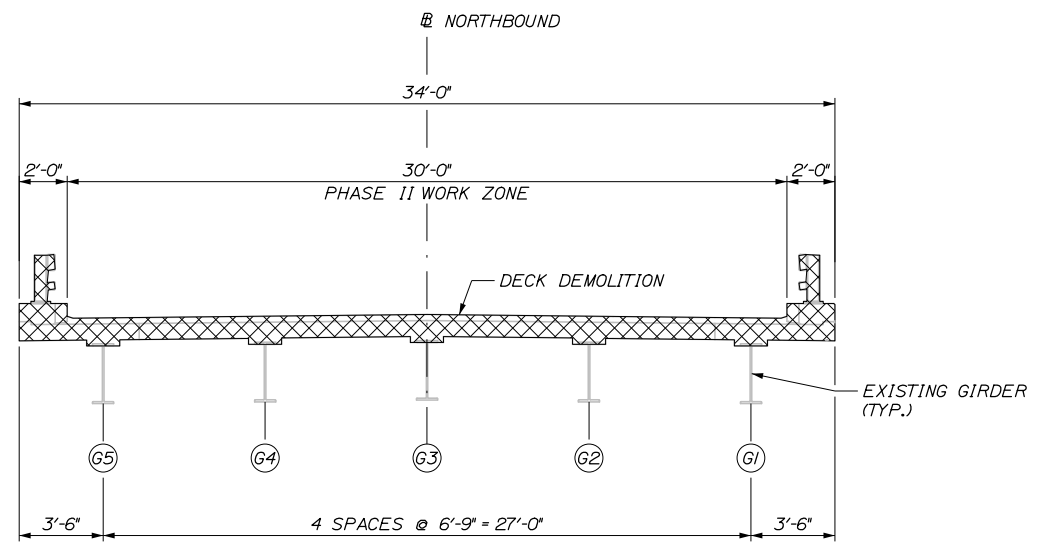
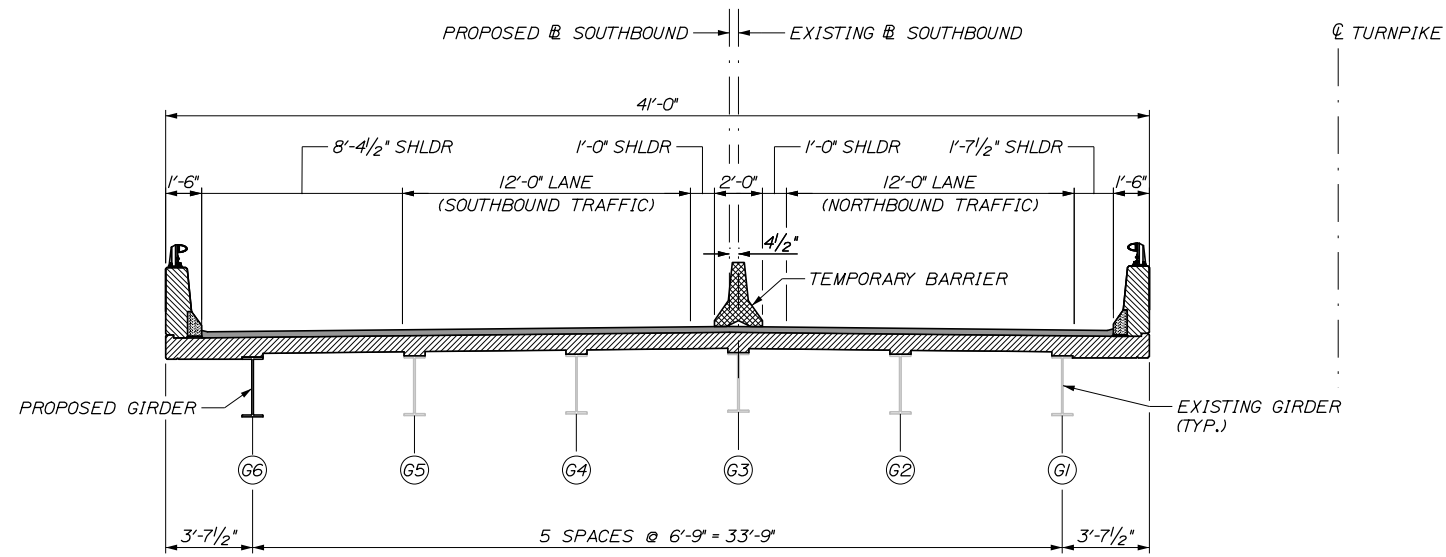
CONSTRUCTION SEQUENCING I

SHEET NUMBER: S-06
CONTRACT: 2018.15
42 OF 115

Date: 7/27/2018



PHASE I CONSTRUCTION
1/4" = 1'-0"



PHASE II DEMOLITION
1/4" = 1'-0"

Filename: 043_Construction Phasing 2.dgn

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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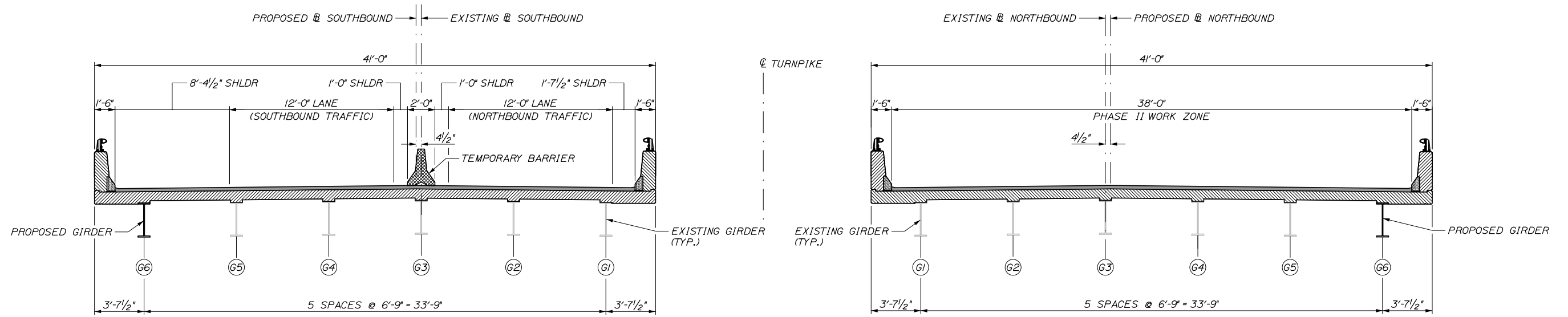
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

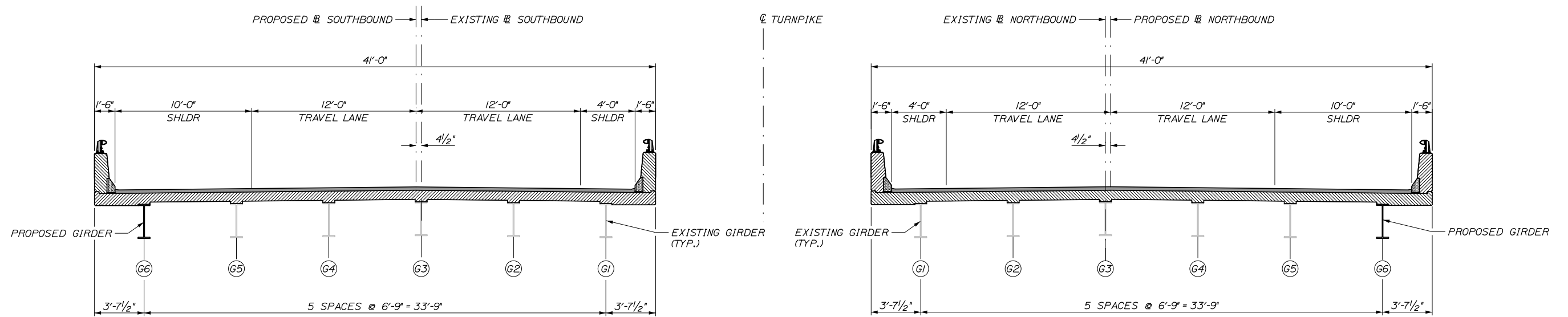
BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
CONSTRUCTION SEQUENCING II

SHEET NUMBER: S-07
CONTRACT: 2018.15
43 OF 115

Date: 7/27/2018



PHASE II CONSTRUCTION
1/4" = 1'-0"



FINAL PROPOSED CONDITION
1/4" = 1'-0"

Filename: 044_Construction Phasing 3.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18	Checked	KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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MAINE
TURNPIKE

THE GOLD STAR
MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
CONSTRUCTION SEQUENCING III

SHEET NUMBER: S-08
CONTRACT: 2018.15
44 OF 115

Date: 7/27/2018

Filename: 045_Substructure Notes.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 Q.I. ELEVATION.
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. THE ESTIMATED REPAIR QUANTITIES ARE BASED ON AN ANNUAL INSPECTION COMPLETED IN MARCH 2017 AND AN UNDERWATER INSPECTION IN MAY 2016.

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 - BELOW WATERLINE".
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" AND 518.401, "EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE".
4. THE CONTRACTOR SHALL PROVIDE AN ACCEPTABLE MEANS OF ACCESS AT ALL PIER LOCATIONS THAT WILL ALLOW THE RESIDENT TO SAFELY PERFORM A DETAILED CONCRETE INSPECTION OF ALL PIER SURFACES LOCATED ABOVE THE WATERLINE. PROVIDING ACCESS AT PIER LOCATIONS SHALL BE COMPLETED IN ACCORDANCE WITH SPECIAL PROVISION 524, "TEMPORARY ACCESS PLATFORMS FOR PIER INSPECTION AND REPAIR".
5. THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS ARE BASED ON BOTH AN UNDERWATER INSPECTION AND A VISUAL INSPECTION. BELOW WATER REPAIRS ARE BASED ON THE WATER LEVEL AT THE TIME OF INSPECTION. IF DIFFERENCES IN UNDERWATER REPAIR QUANTITIES ARE EXPERIENCED THE RESIDENT SHOULD BE NOTIFIED.
6. FOR APPROXIMATE LOCATIONS OF REPAIR SEE SUBSTRUCTURE REPAIRS PIER 1, SUBSTRUCTURE REPAIRS PIER 2, AND SUBSTRUCTURE REPAIRS 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.

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:

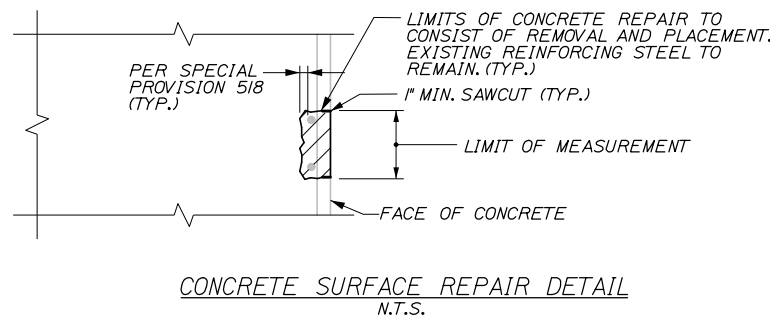
1. ALL CRACK REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH SPECIAL PROVISION 518.
2. THE SELECTED REPAIR MATERIAL FOR UNDERWATER CRACK REPAIR SHALL BE APPROVED BY THE MANUFACTURER FOR PLACEMENT UNDERWATER.
3. PREPARE CONCRETE SURFACE AND CRACK AREA BY CLEANING SUBSTRATE WITH WIRE BRUSH TO REMOVE LAITANCE 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 CLEAR 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.



CONCRETE SURFACE REPAIR DETAIL
N.T.S.

Scale:		Designed by:	
No.	Revision	By	Date

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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






BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUBSTRUCTURE REPAIRS
CONCRETE REPAIR NOTES AND DETAILS

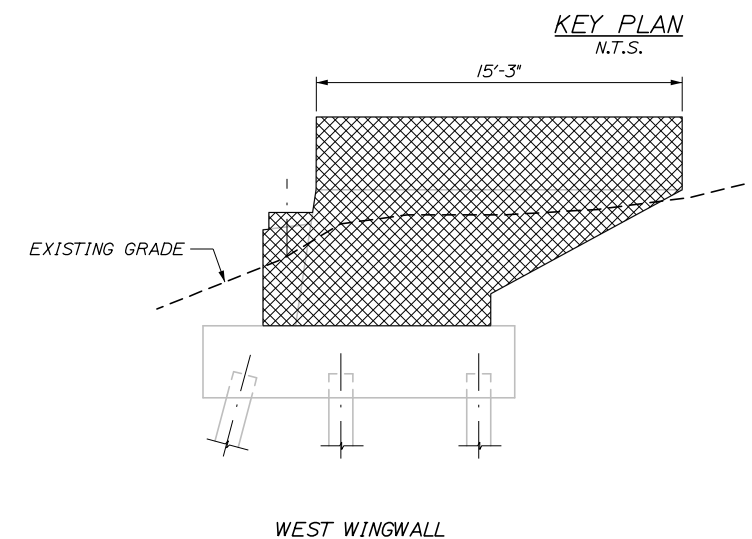
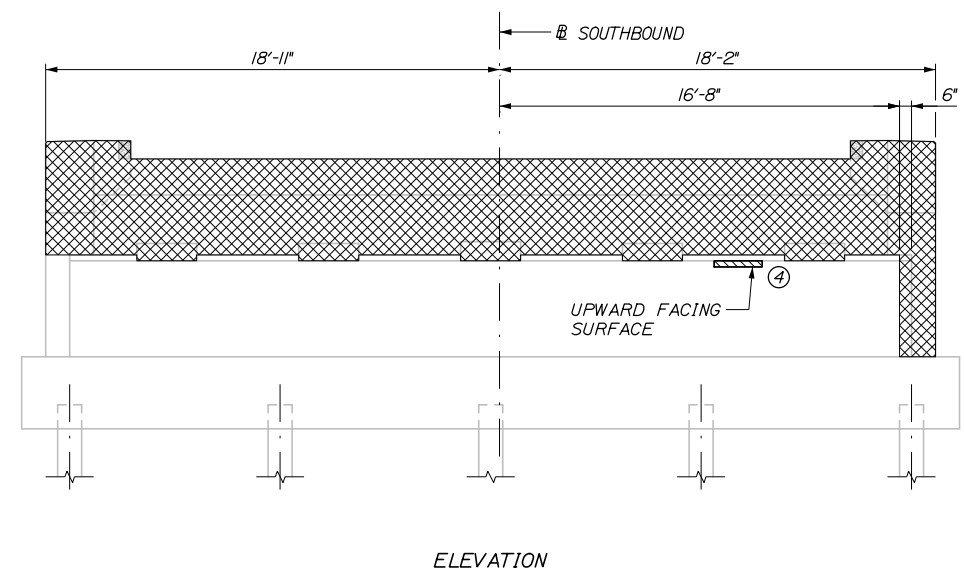
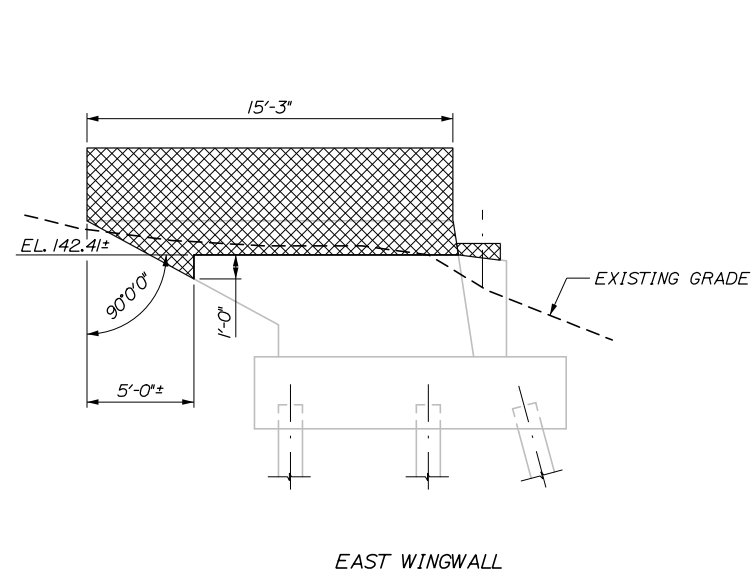
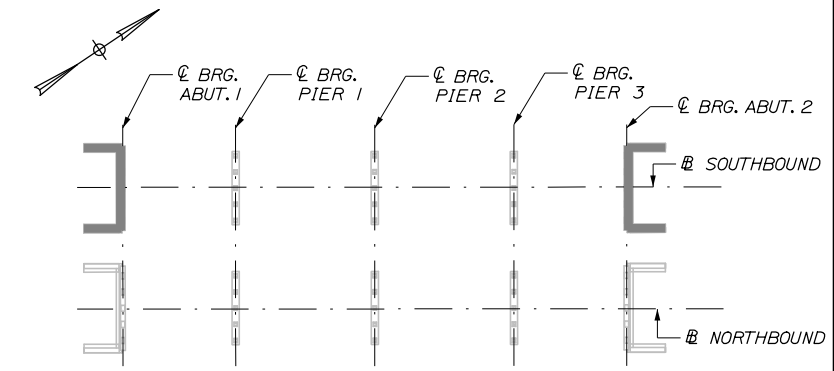
SHEET NUMBER: S-09
CONTRACT: 2018.15
45 OF 115

REPAIR QUANTITIES

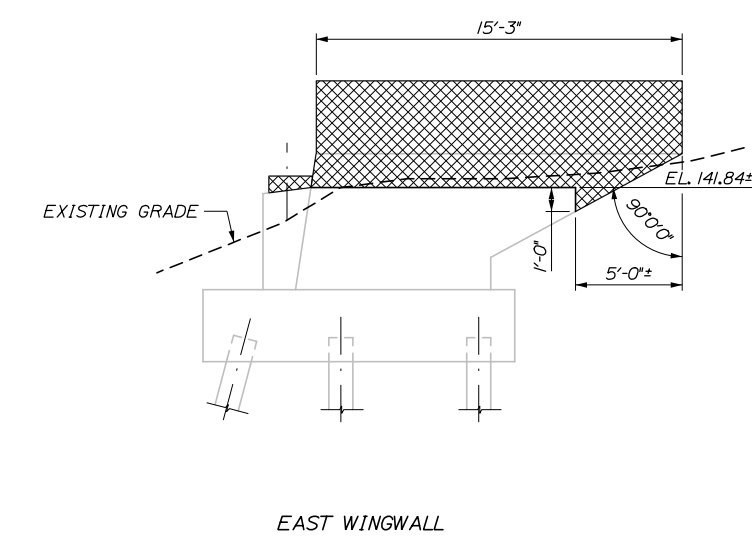
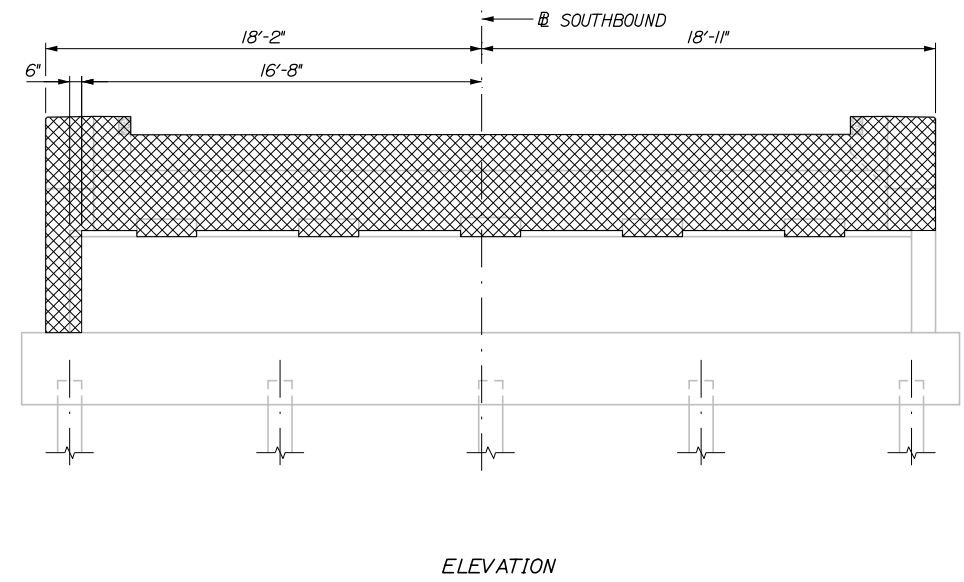
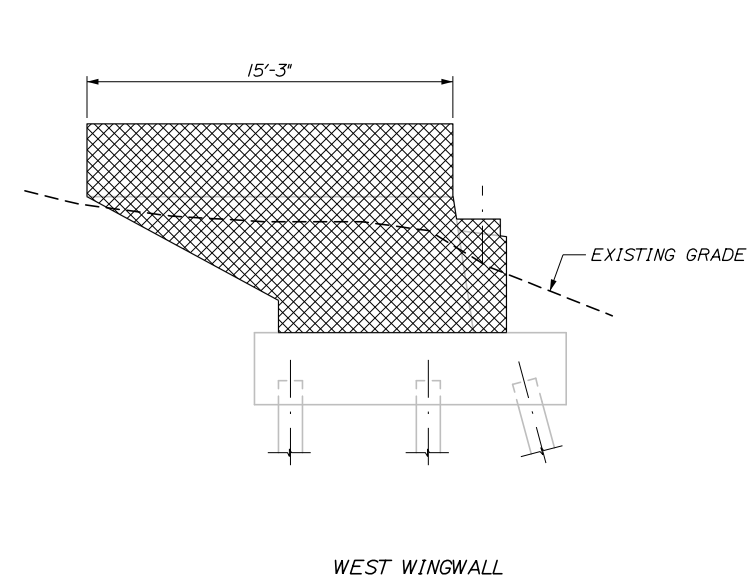
- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 9 S.F.*
- REPAIR OF VERTICAL SURFACES < 8 INCHES 5 S.F.*
- EPOXY INJECTION CRACK REPAIR 5 L.F.**
- * INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
- ** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

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"



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

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

Date: 7/27/2018

Filename: 046_Southbound Abutment Repairs.dgn

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\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 REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUBSTRUCTURE REPAIRS
SOUTHBOUND ABUTMENTS

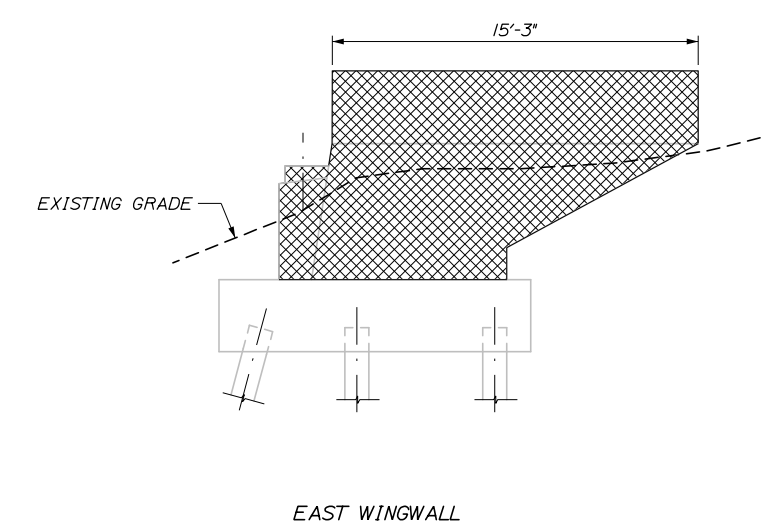
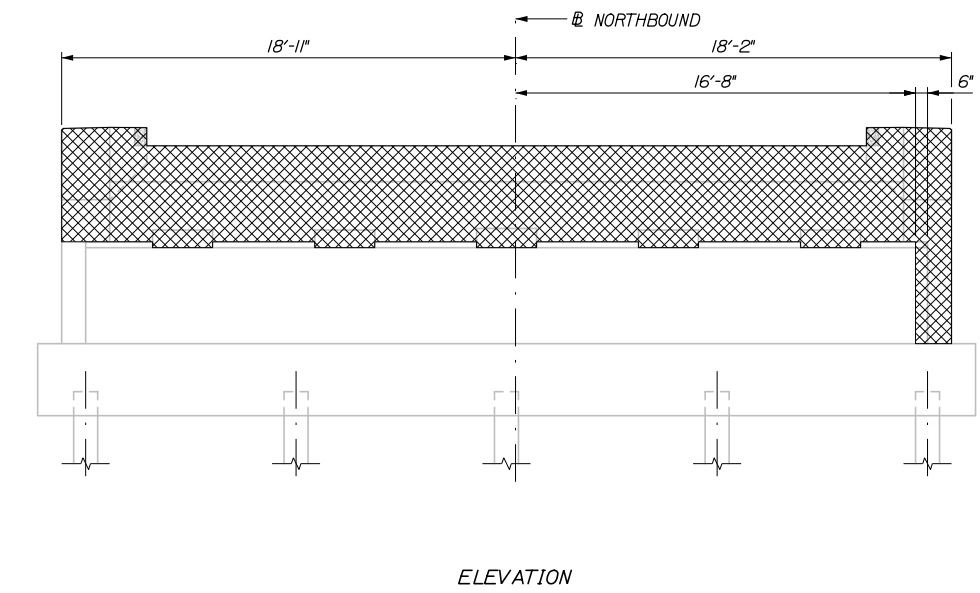
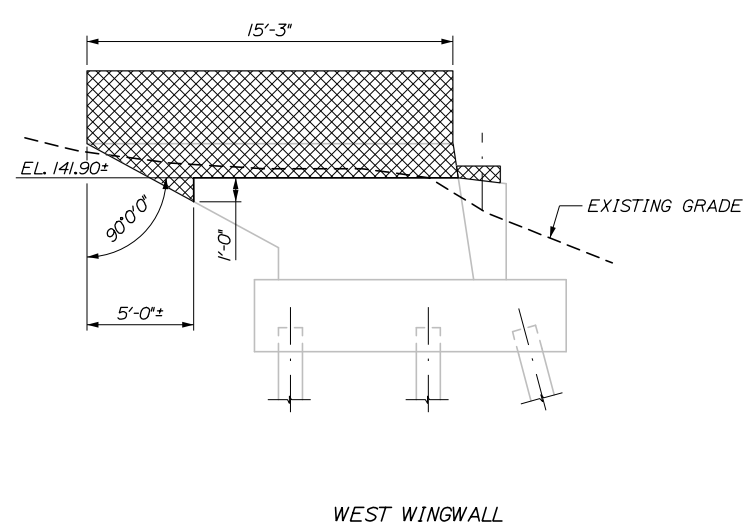
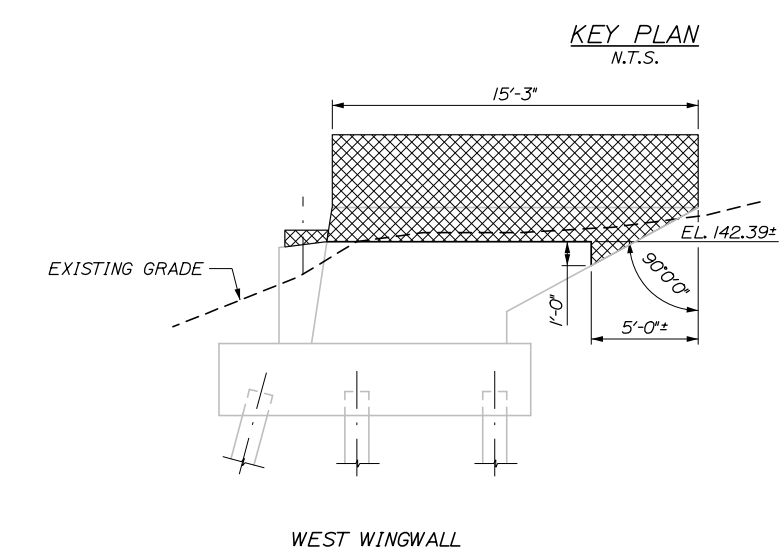
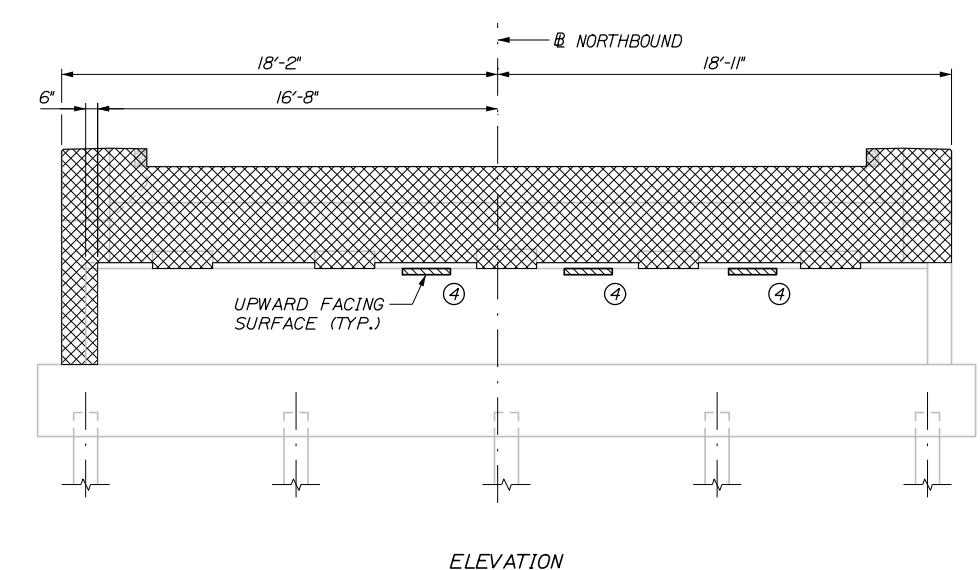
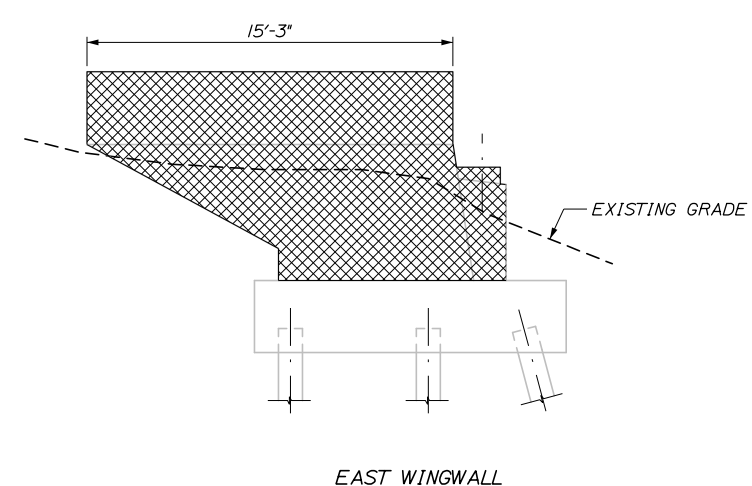
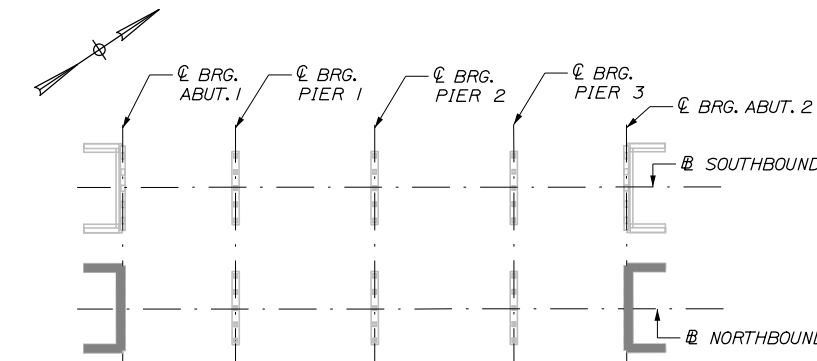
SHEET NUMBER: S-10
CONTRACT: 2018.15
46 OF 115

REPAIR QUANTITIES

- REPAIR OF UPWARD FACING SURFACES < 8 INCHES 15 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

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

Date: 7/27/2018
Filename: 047_Northbound Abutment Repairs.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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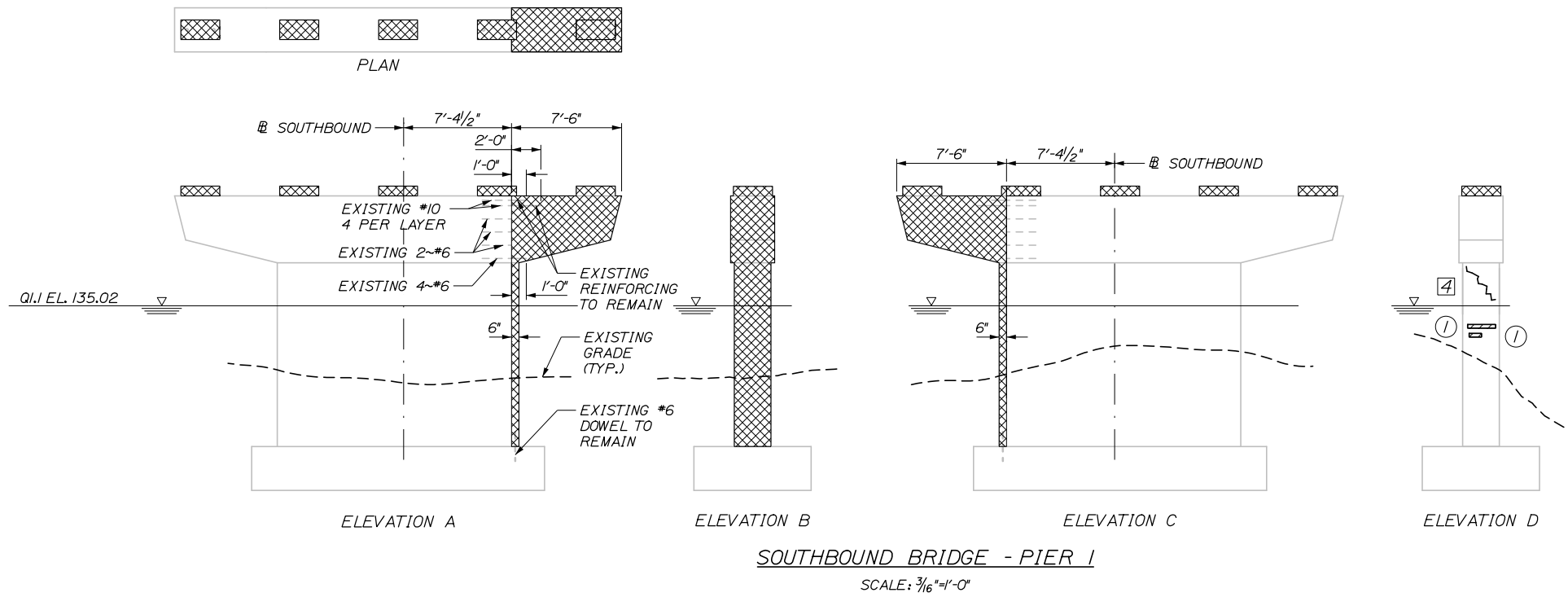
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 SUBSTRUCTURE REPAIRS
 NORTHBOUND ABUTMENTS

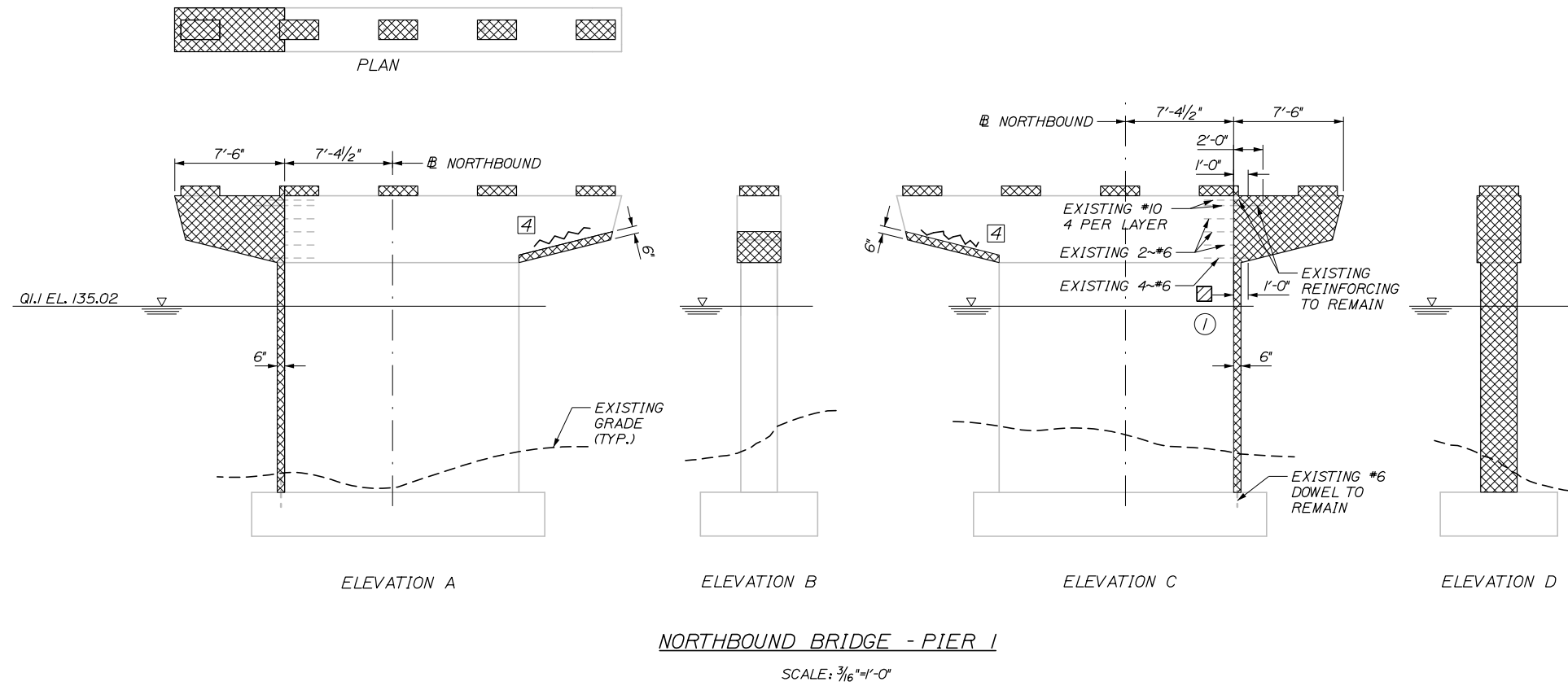
SHEET NUMBER: S-11
 CONTRACT: 2018.15
 47 OF 115

Date: 7/27/2018



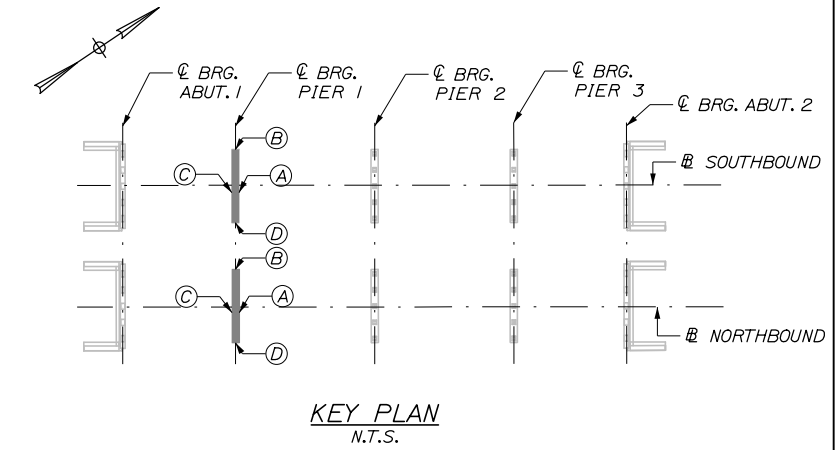
SOUTHBOUND BRIDGE - PIER 1

SCALE: 3/16"=1'-0"



NORTHBOUND BRIDGE - PIER 1

SCALE: 3/16"=1'-0"



REPAIR QUANTITIES

REPAIR OF VERTICAL SURFACES < 8 INCHES	11 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE	12 S.F.*
EPOXY INJECTION CRACK REPAIR	17 L.F.**
EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE	5 L.F.**

* INCLUDES 10 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 FOR UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. EXISTING STEEL GIRDERS TO REMAIN SHALL BE JACKED OR TEMPORARILY REMOVED TO FACILITATE DEMOLITION.
3. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.
4. REINFORCEMENT WITHIN THE DEMOLITION AREA THAT IS NOT CALLED OUT TO REMAIN MAY BE CUT THROUGH, REINFORCING TO REMAIN SHALL BE EXPOSED, LOCATED AND PROTECTED BEFORE FURTHER DEMOLITION OCCURS.

Filename: 048_Pier 1 Repairs.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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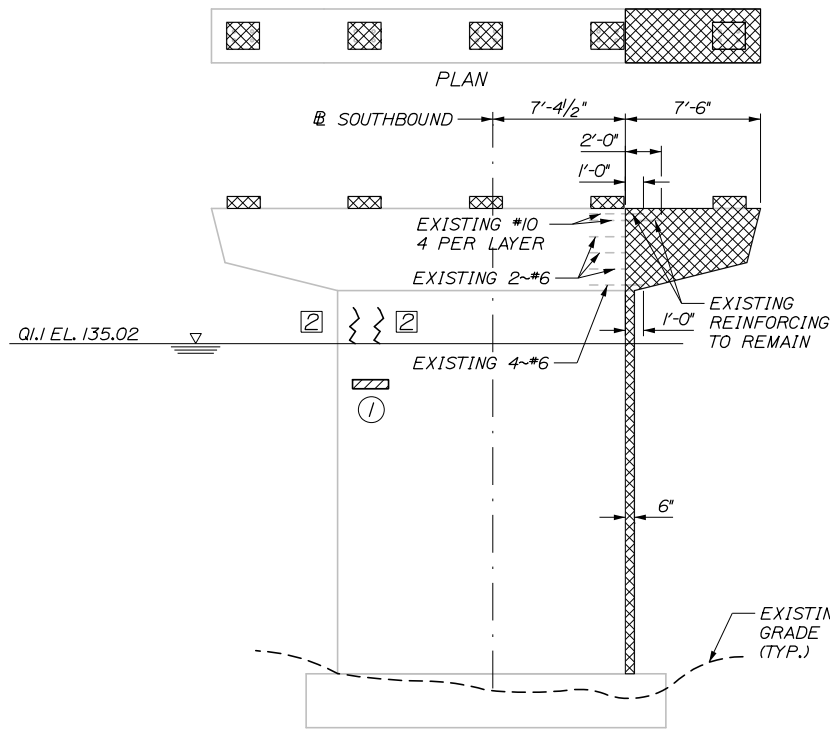
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

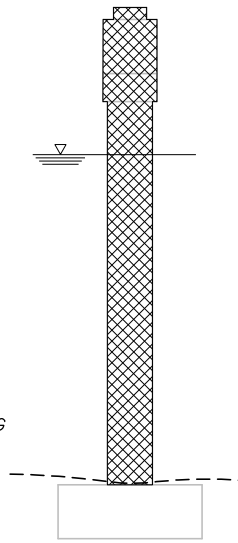
**BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUBSTRUCTURE REPAIRS
PIER 1**

SHEET NUMBER: S-12
CONTRACT: 2018.15
48 OF 115

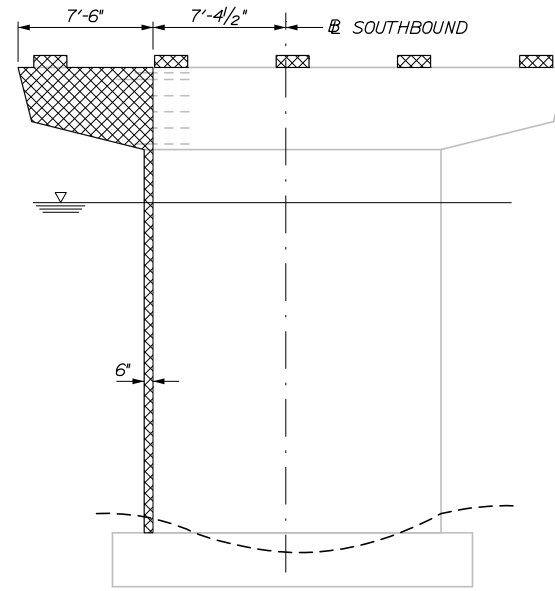
Date: 7/27/2018



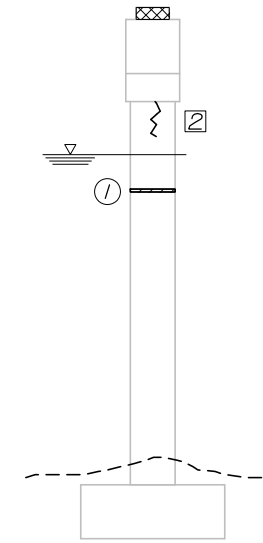
ELEVATION A



ELEVATION B



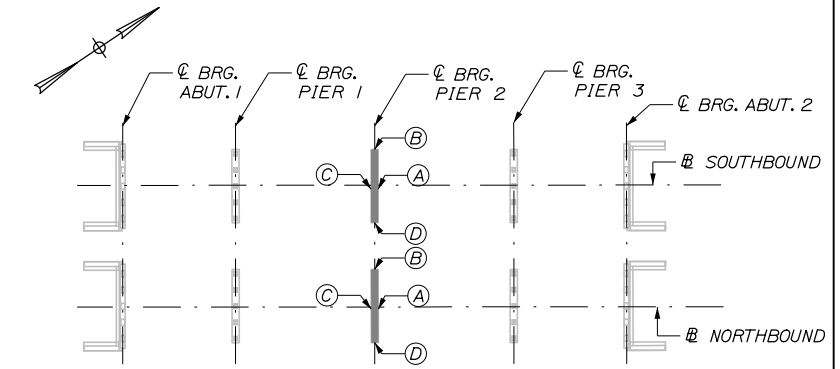
ELEVATION C



ELEVATION D

SOUTHBOUND BRIDGE - PIER 2

SCALE: 3/16"=1'-0"



KEY PLAN
N.T.S.

REPAIR QUANTITIES

REPAIR OF VERTICAL SURFACES < 8 INCHES	11 S.F.*
REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE	15 S.F.*
EPOXY INJECTION CRACK REPAIR	13 L.F.**
EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE	5 L.F.**

* INCLUDES 10 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

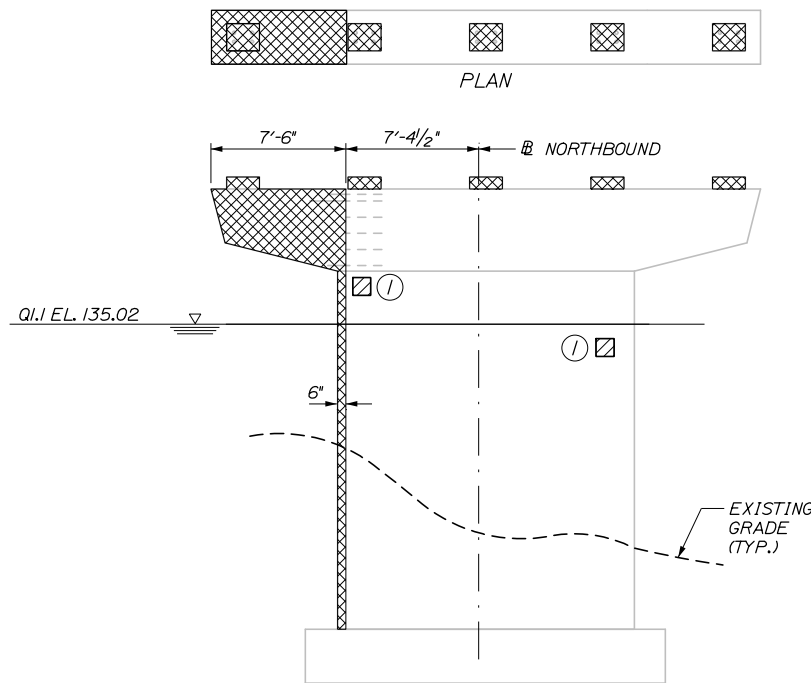
** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR

LEGEND

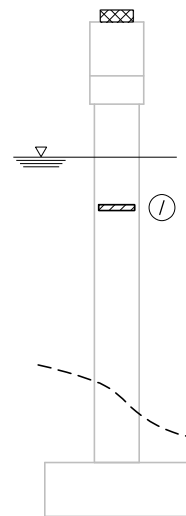
- LIMIT OF DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- LINEAR FOOT LENGTH OF CRACK
- EPOXY INJECTION CRACK REPAIR

NOTES:

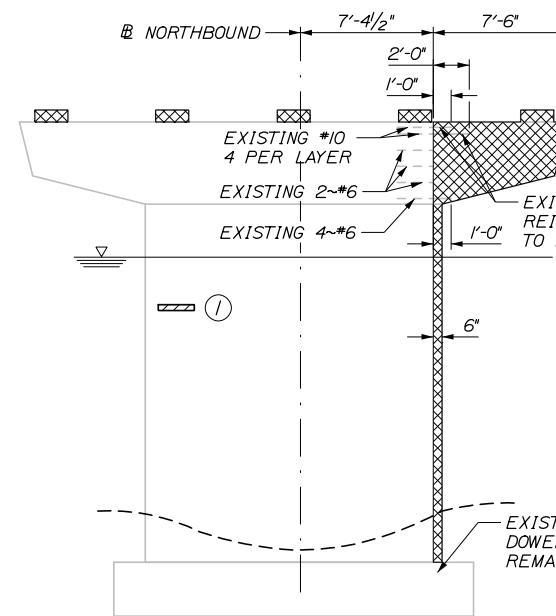
1. ONLY PIER REPAIRS BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID FOR UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. EXISTING STEEL GIRDERS TO REMAIN SHALL BE JACKED OR TEMPORARILY REMOVED TO FACILITATE DEMOLITION.
3. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.
4. REINFORCEMENT WITHIN THE DEMOLITION AREA THAT IS NOT CALLED OUT TO REMAIN MAY BE CUT THROUGH. REINFORCING TO REMAIN SHALL BE EXPOSED, LOCATED AND PROTECTED BEFORE FURTHER DEMOLITION OCCURS.



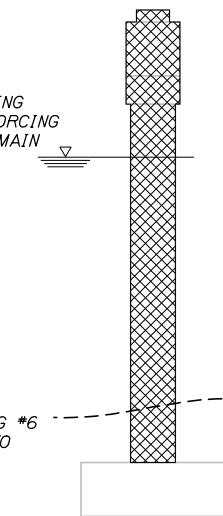
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

NORTHBOUND BRIDGE - PIER 2


SCALE: 3/16"=1'-0"

Filename: 049_Pier 2_Repairs.dgn

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18	Checked	KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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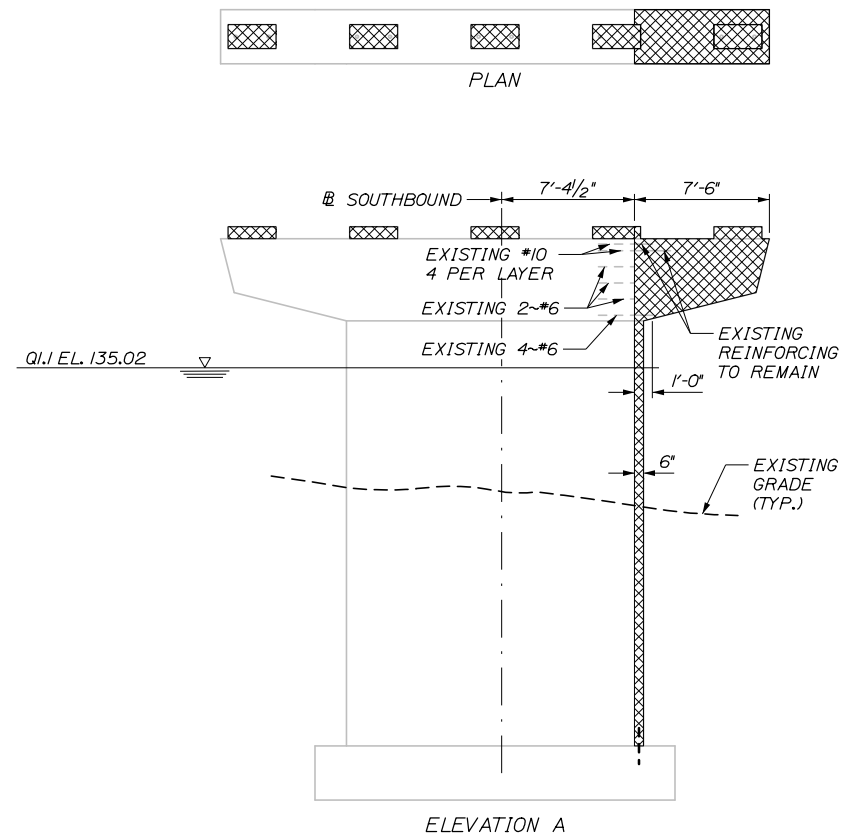
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

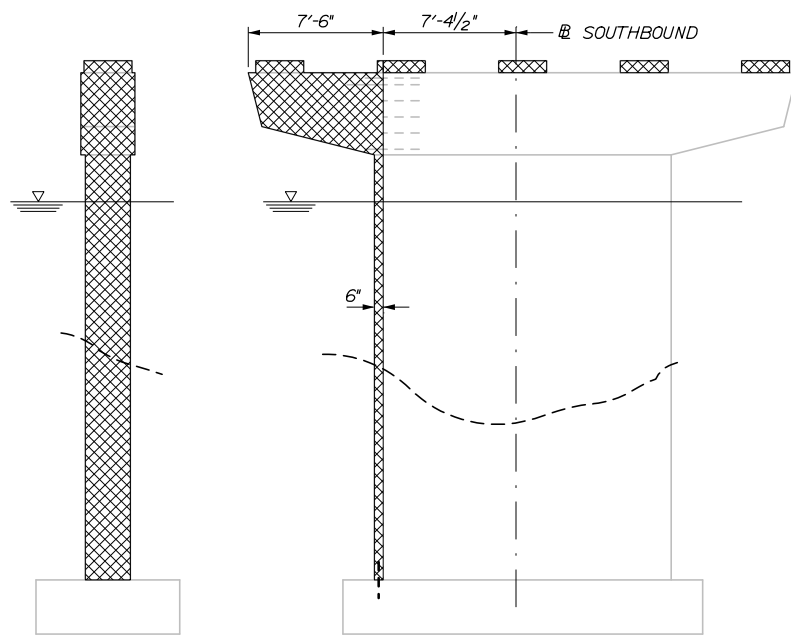
**BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUBSTRUCTURE REPAIRS
PIER 2**

SHEET NUMBER: S-13
CONTRACT: 2018.15
49 OF 115

Date: 7/27/2018



ELEVATION A

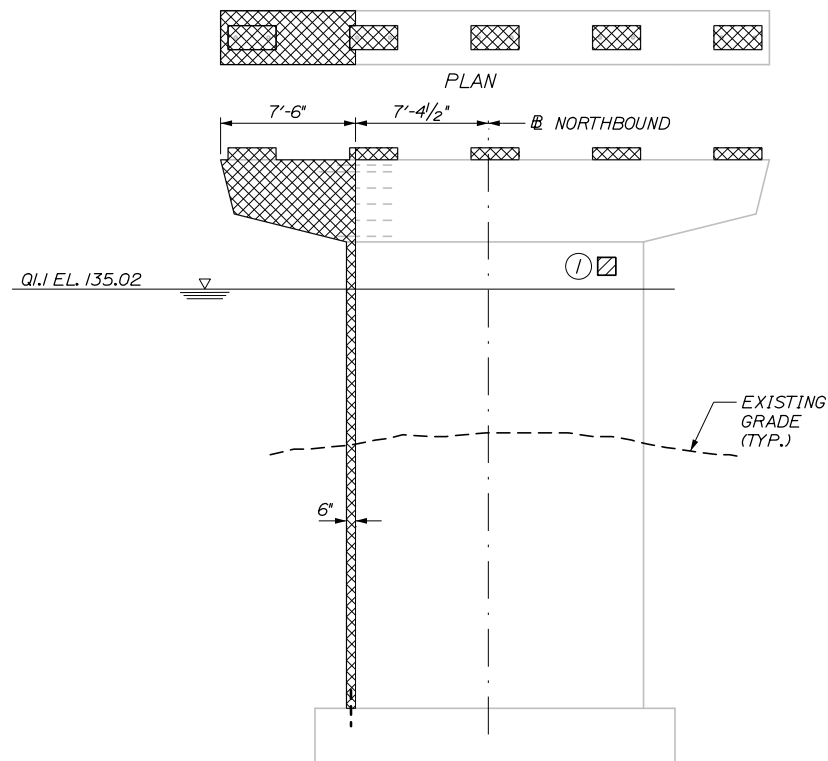


ELEVATION B

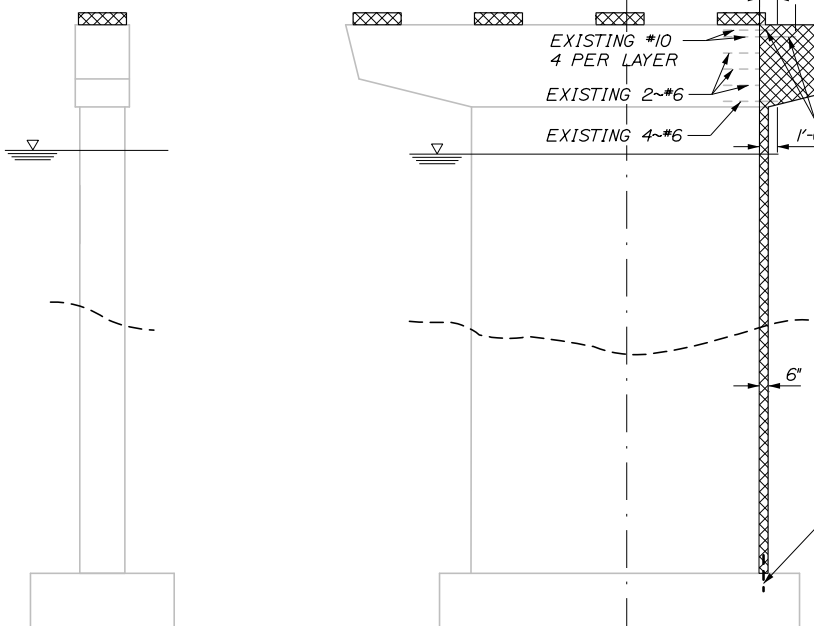
ELEVATION C

SOUTHBOUND BRIDGE - PIER 3

SCALE: 3/16"=1'-0"



ELEVATION A

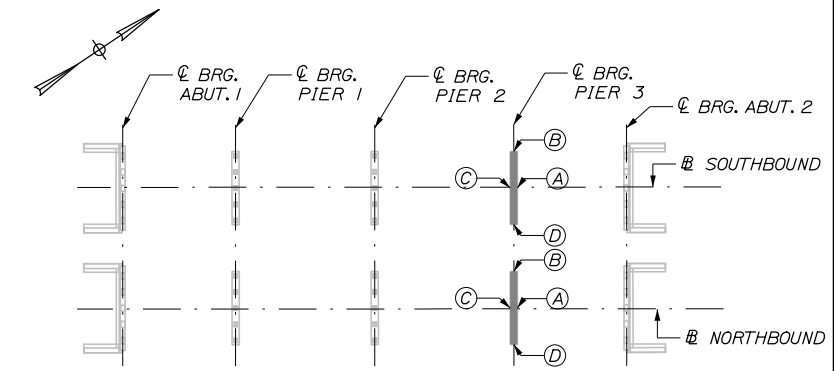


ELEVATION B

ELEVATION C

NORTHBOUND BRIDGE - PIER 3

SCALE: 3/16"=1'-0"



KEY PLAN
N.T.S.

REPAIR QUANTITIES

REPAIR OF VERTICAL SURFACES < 8 INCHES 11 S.F.*

REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE 10 S.F.*

EPOXY INJECTION CRACK REPAIR 5 L.F.**

EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE 5 L.F.**

* INCLUDES 10 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 FOR UNDER CONCRETE REPAIR ITEMS NOTED ON THIS SHEET.
2. EXISTING STEEL GIRDERS TO REMAIN SHALL BE JACKED OR TEMPORARILY REMOVED TO FACILITATE DEMOLITION.
3. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE CONCRETE REPAIR NOTES AND DETAILS SHEET.
4. REINFORCEMENT WITHIN THE DEMOLITION AREA THAT IS NOT CALLED OUT TO REMAIN MAY BE CUT THROUGH. REINFORCING TO REMAIN SHALL BE EXPOSED, LOCATED AND PROTECTED BEFORE FURTHER DEMOLITION OCCURS.

Filename: 050_Pier 3 Repairs.dgn

No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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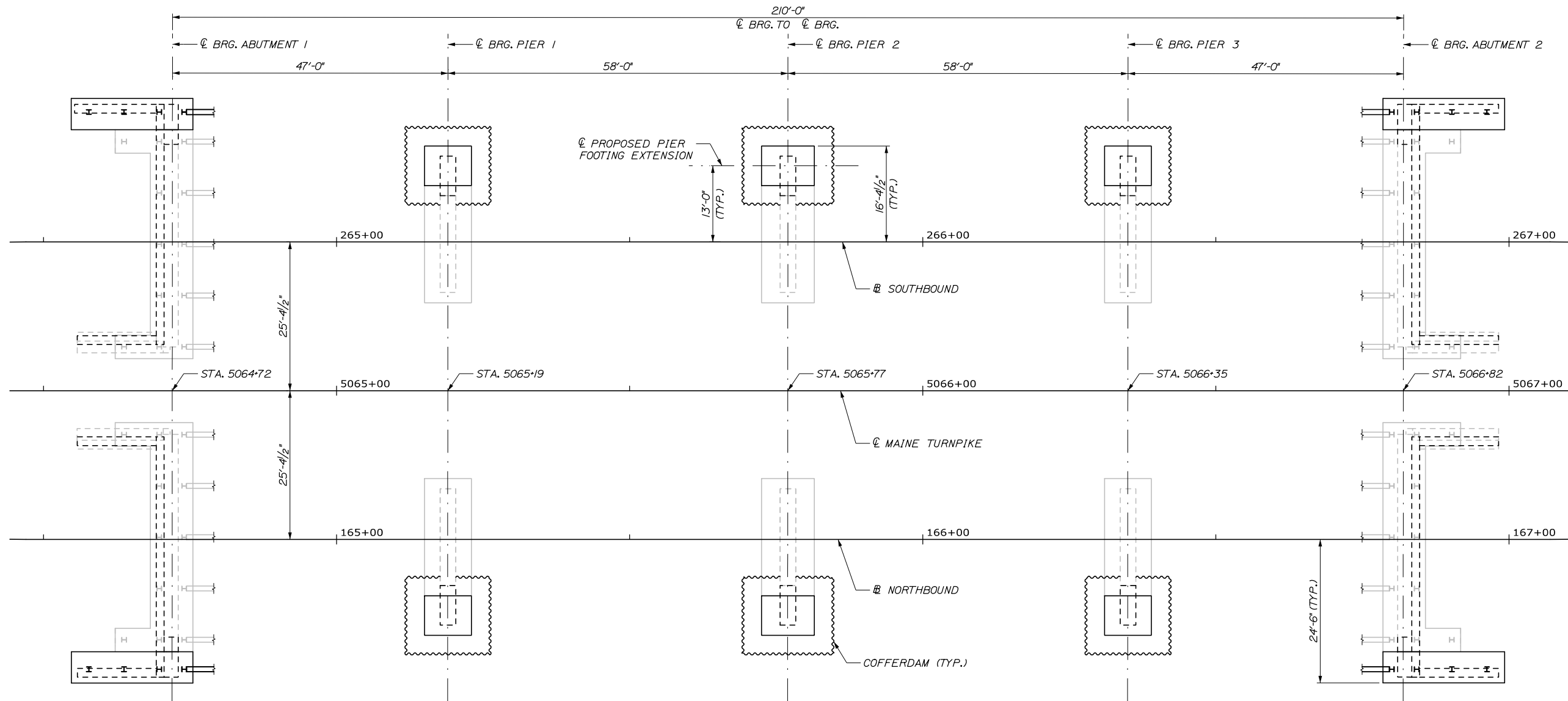
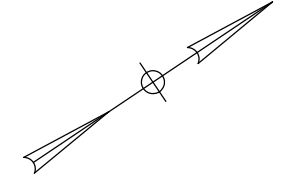
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

**BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUBSTRUCTURE REPAIRS
PIER 3**

SHEET NUMBER: S-14
CONTRACT: 2018.15
50 OF 115

Date: 7/27/2018



FOUNDATION PLAN
1" = 10'-0"

PILE NOTES:

- PILES MARKED THUS , SHALL BE BATTERED 3" PER FOOT (H:V) IN THE DIRECTION SHOWN.
- NOMINAL RESISTANCE OF PILES:
AT ABUTMENTS: PILES SHALL BE DRIVEN TO A NOMINAL COMPRESSIVE GEOTECHNICAL RESISTANCE OF 280 KIPS. THE TOTAL FACTORED COMPRESSION RESISTANCE IS 167 KIPS, OF WHICH 22 KIPS WILL BE USED TO RESIST DOWNDRAW.
- ALL PILES SHALL BE HP10x42, ASTM 572, GRADE 50, STEEL H-PILES,.
- PROPOSED PILES SHALL NOT BE OUT OF POSITION SHOWN BY MORE THAN 2 INCHES IN ANY DIRECTION.
- 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 4 DYNAMIC LOAD TEST(S), ONE AT EACH ABUTMENT, TO CONFIRM THE ULTIMATE CAPACITY OF THE PILES. THE REQUIRED NOMINAL RESISTANCE FOR THE PILE IS THE FACTORED AXIAL PILE LOAD DIVIDED BY A RESISTANCE FACTOR OF 0.65 PER LRFD SPECIFICATIONS. THE DYNAMIC TEST SHALL BE PERFORMED ON THE FIRST PRODUCTION PILE DRIVEN AT EACH ABUTMENT. THE FIRST PRODUCTION PILE SHALL BE A PLUMB PILE.
- ESTIMATE OF PILES REQUIRED PER BRIDGE (INCLUDES EXTRA 5 FEET PER PILE AS CONTINGENCY):
ABUTMENT NO. 1: 4 ~ HP 10X42 @ 23 FEET
ABUTMENT NO. 2: 4 ~ HP 10X42 @ 40 FEET
- ALL PILES SHALL BE EQUIPPED WITH A PILE TIP IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 501.048, PREFABRICATED PILE TIPS.

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.
- 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 TAKE NOTE OF THE DAILY FLUCTUATIONS OF THE RIVER ELEVATIONS DUE TO THE PRESENCE OF THE HYDRO-ELECTRIC DAM UPSTREAM OF THE PROJECT SITE, AS WELL AS THE SENSITIVITY OF THE RIVER ELEVATIONS DUE TO RAIN FALL.
- SEAL CONCRETE SHALL BE INSTALLED FROM TOP OF BEDROCK TO THE BOTTOM OF THE PROPOSED FOOTING ELEVATION. ESTIMATED TOP OF BEDROCK ELEVATION IS PROVIDED IN THE BEDROCK ELEVATION TABLE. THE ELEVATIONS PROVIDED ARE APPROXIMATE BASED ON THE SUBSURFACE INVESTIGATION PERFORMED AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE RESIDENT TO CONFIRM THE TOP OF ROCK.
- SEAL CONCRETE SHALL BE PAID UNDER ITEM 502.249, STRUCTURAL CONCRETE PIERS - SEAL CONCRETE (PLACED UNDER WATER).
- IF THE BEDROCK SLOPE AT ANY PIER IS FOUND TO HAVE GREATER THAN A 1:6 SLOPE, THE SEAL CONCRETE SHALL BE BENCHED TO AVOID SLIDING. THIS WORK SHALL BE INCIDENTAL TO 502.249, STRUCTURAL CONCRETE PIER - SEAL CONCRETE.

BEDROCK ELEVATION TABLE	
STRUCTURE	ESTIMATED TOP OF BEDROCK ELEVATION
PIER 1	111
PIER 2	108
PIER 3	107

Filename: 051_Foundation Plan 1.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
Designed	HJW	07\18	Checked
Drawn	ERB	07\18	In Charge of

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MAINE TURNPIKE

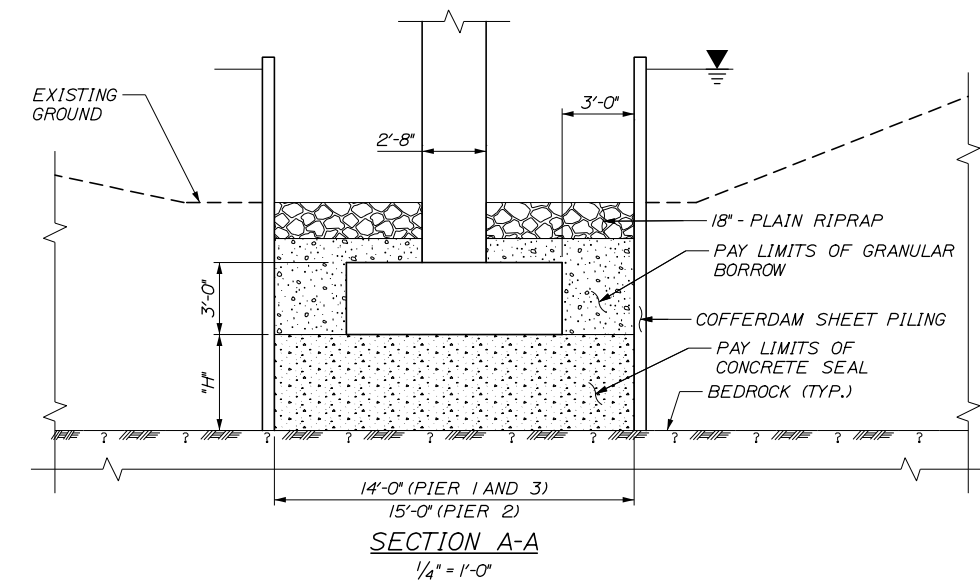
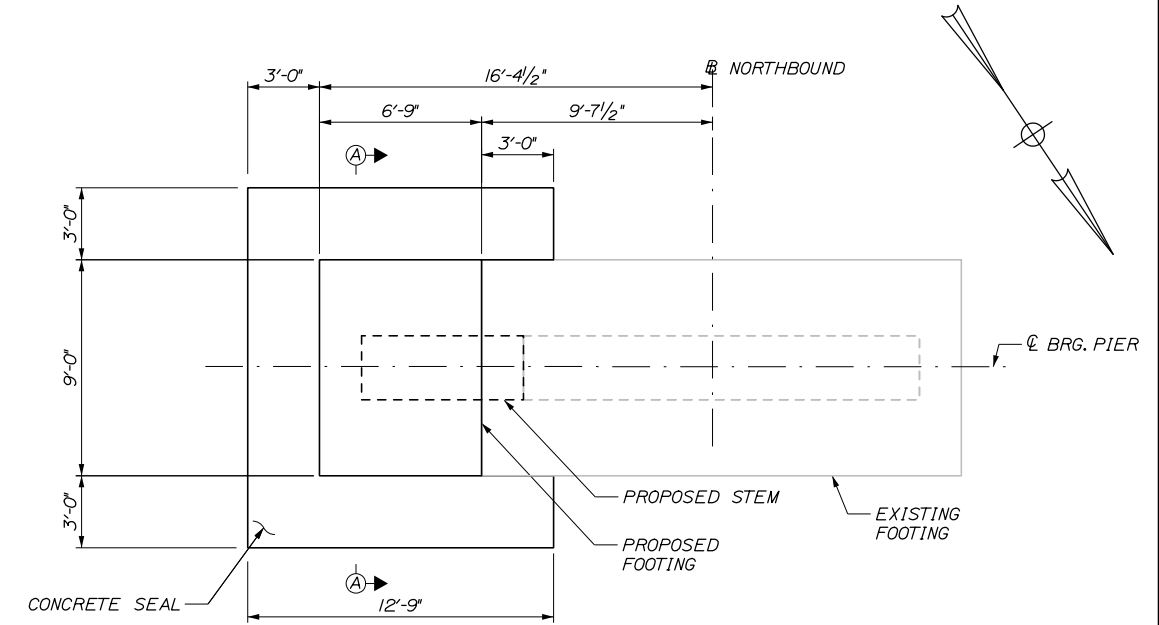
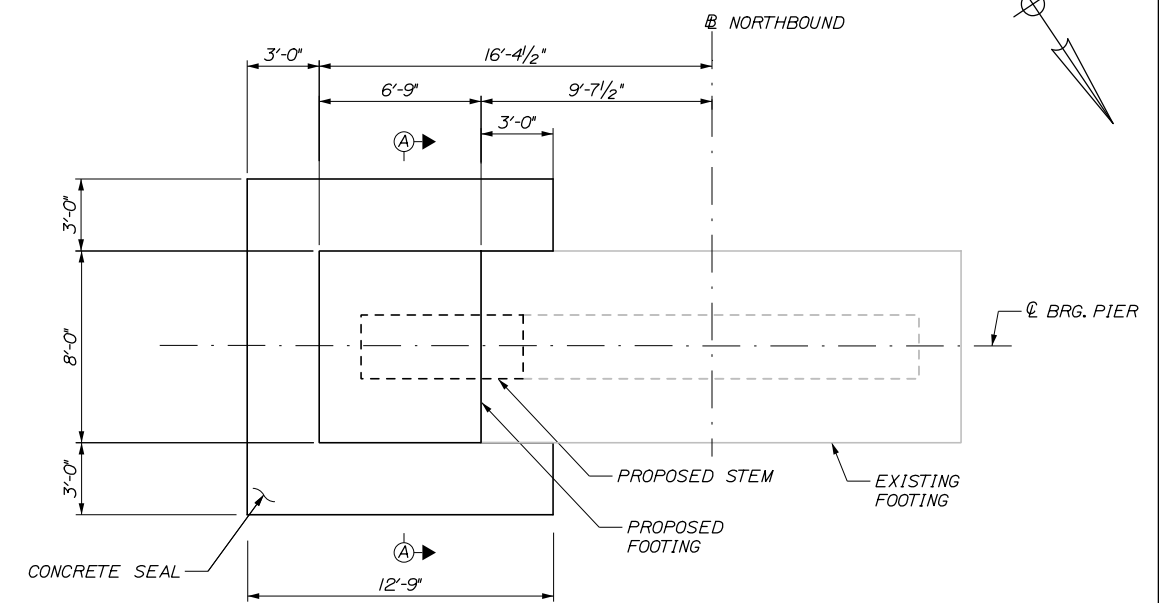
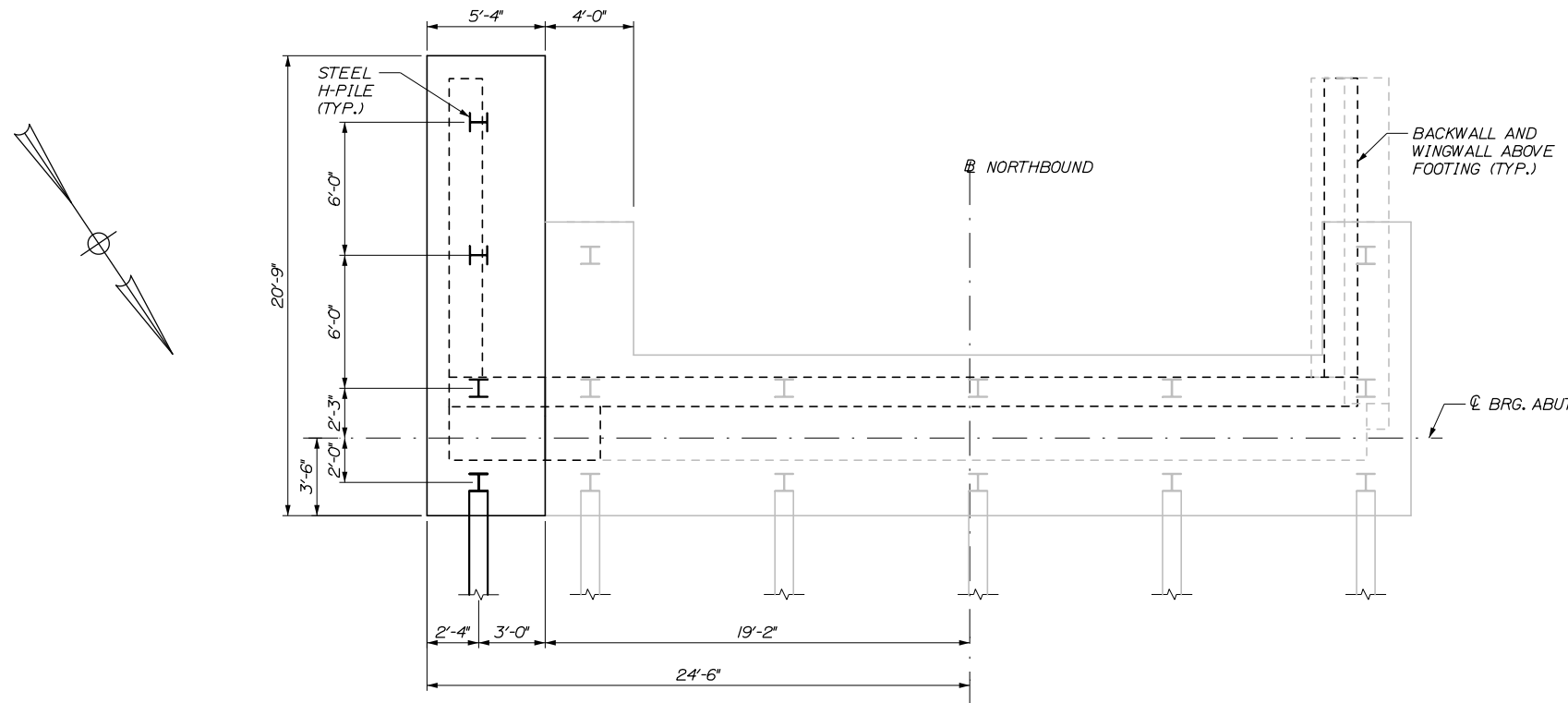
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
FOUNDATION PLAN I

SHEET NUMBER: S-15
CONTRACT: 2018.15
15 OF 15

Date: 7/27/2018



LOCATION	H (FT)
PIER 1	8
PIER 2	7
PIER 3	4

APPROXIMATE VALUES. CONTRACTOR TO DETERMINE ACTUAL VALUES AND PROVIDE WITH COFFERDAM SUBMITTAL.

Filename: 052_Foundation Plan 2.dgn

No.	Revision	By	Date

Scale:

Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date	
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

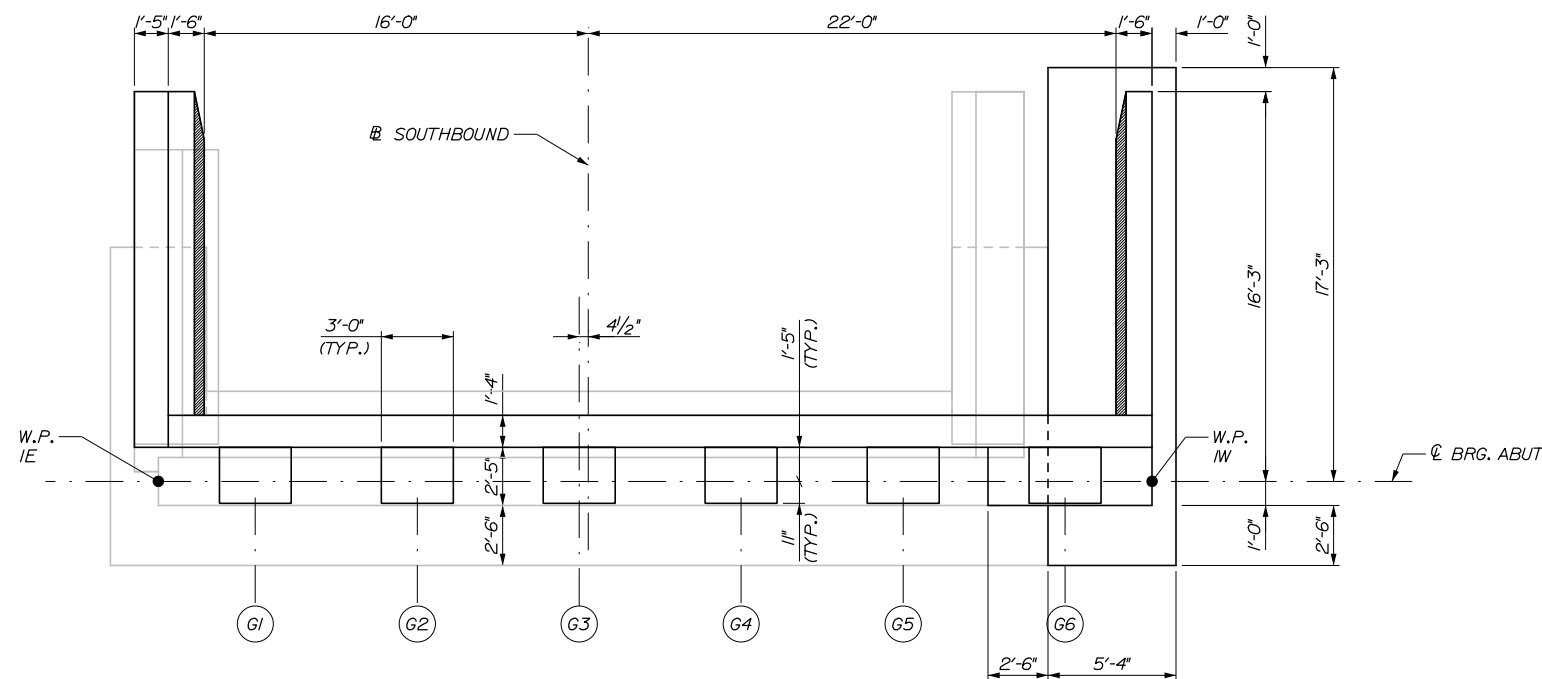
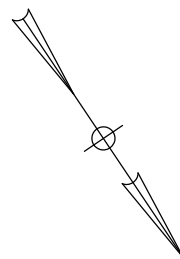
THE GOLD STAR MEMORIAL HIGHWAY

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

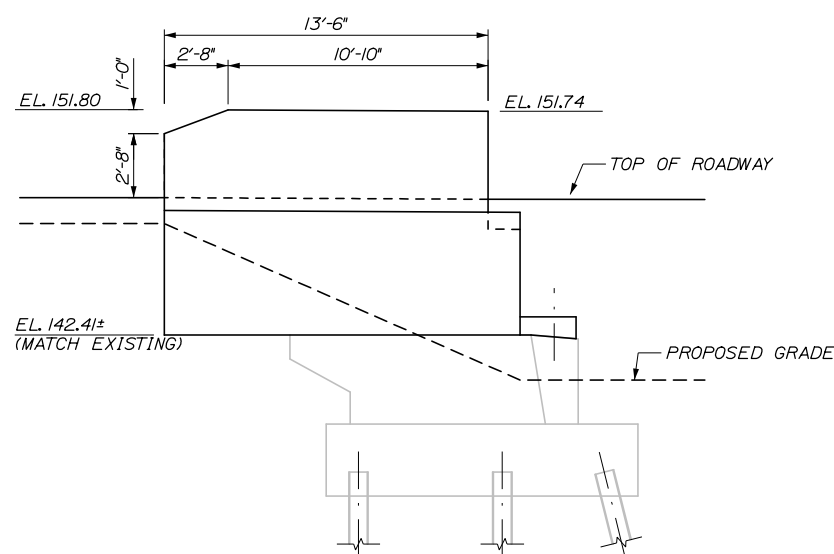
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 FOUNDATION PLAN II

SHEET NUMBER: S-16
 CONTRACT: 2018.15
 52 OF 115

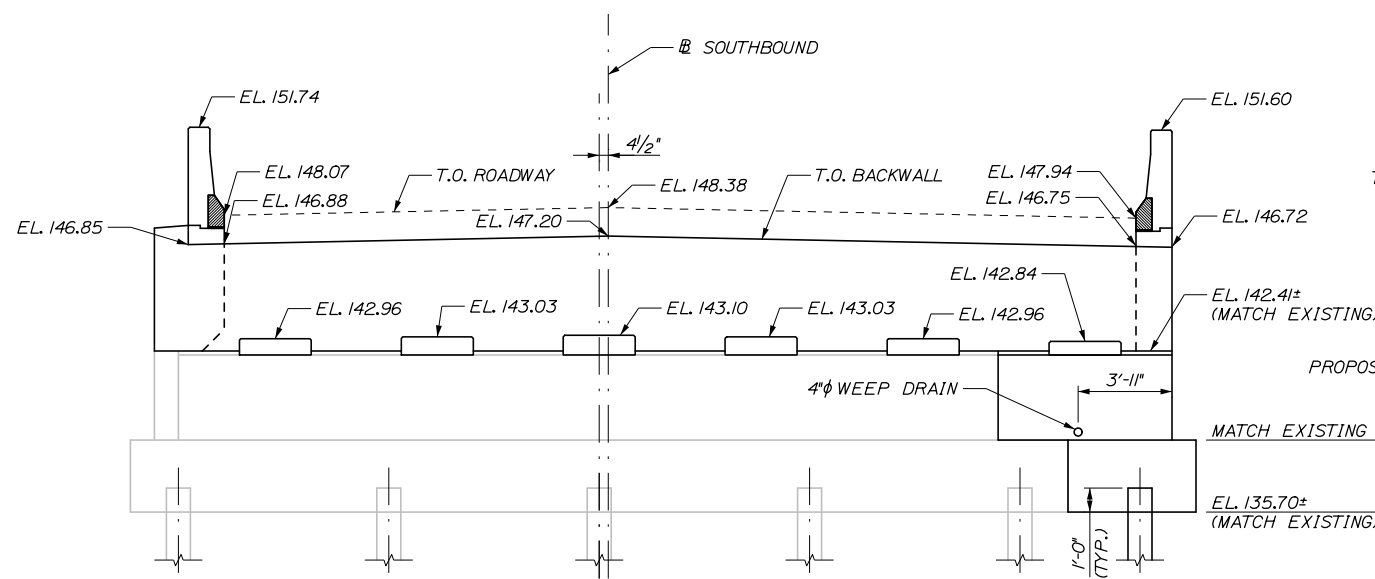
WORKING POINT LOCATIONS - SOUTHBOUND	
W.P. 1E	STA. 264+72.00 17'-9" RT
W.P. 1W	STA. 264+72.00 23'-6" LT
W.P. 2E	STA. 266+82.00 17'-9" RT
W.P. 2W	STA. 266+82.00 23'-6" LT



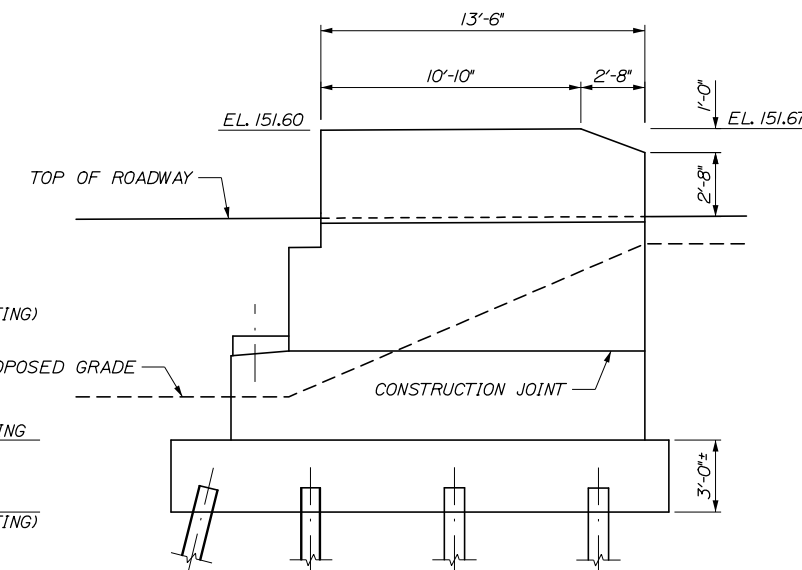
PLAN



EAST WINGWALL



ELEVATION



WEST WINGWALL

SOUTHBOUND BRIDGE - ABUTMENT 1

1/4" = 1'-0"

Date: 7/27/2018

Filename: 053_SB Abutment 1 Plan and Elevation.dgn

No.	Revision	By	Date

Designed by:					
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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
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Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

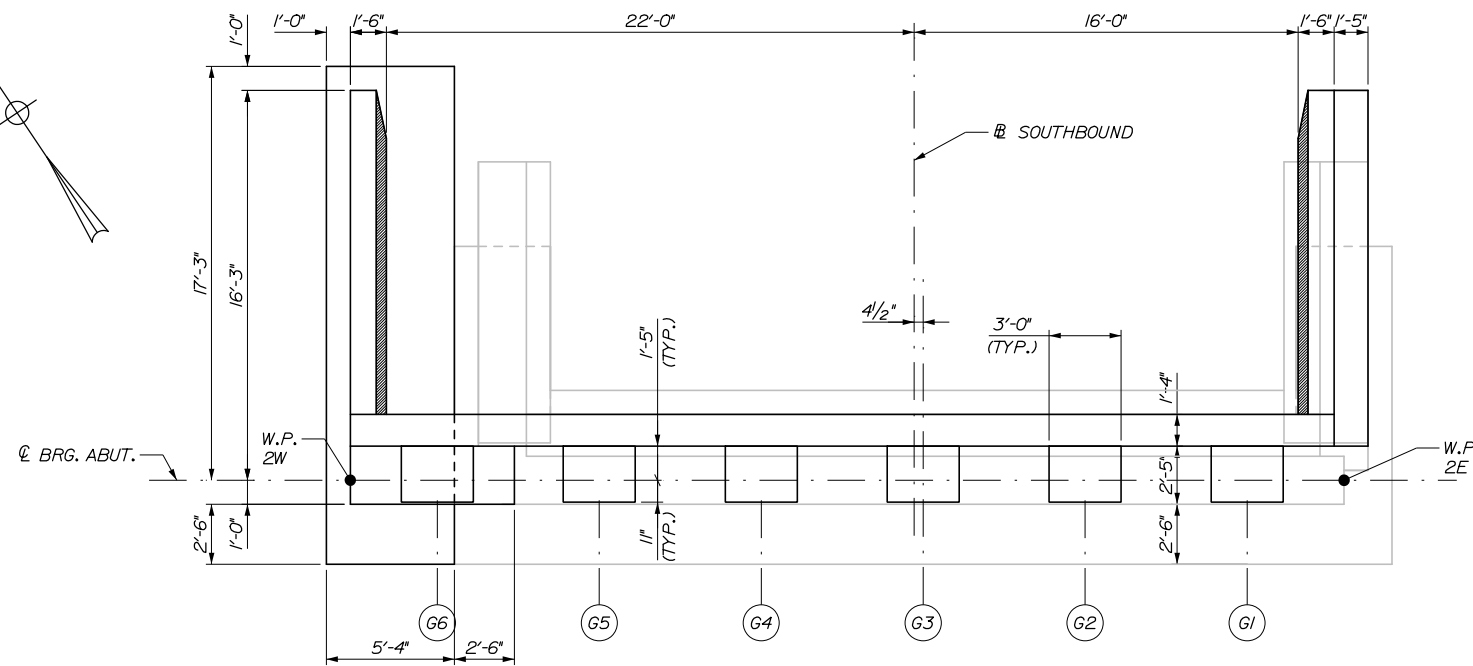
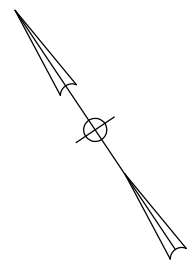
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 SOUTHBOUND ABUTMENT 1
 PLAN AND ELEVATION

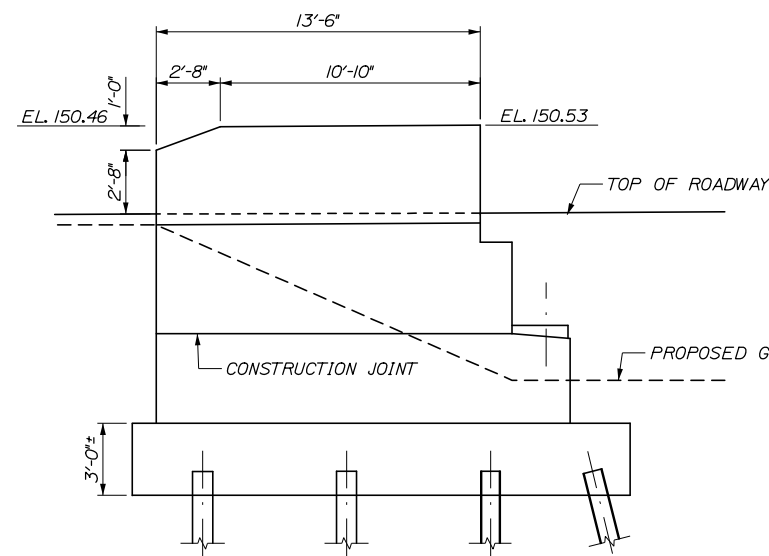
SHEET NUMBER: S-17
 CONTRACT: 2018.15
 53 OF 115

Date: 7/27/2018

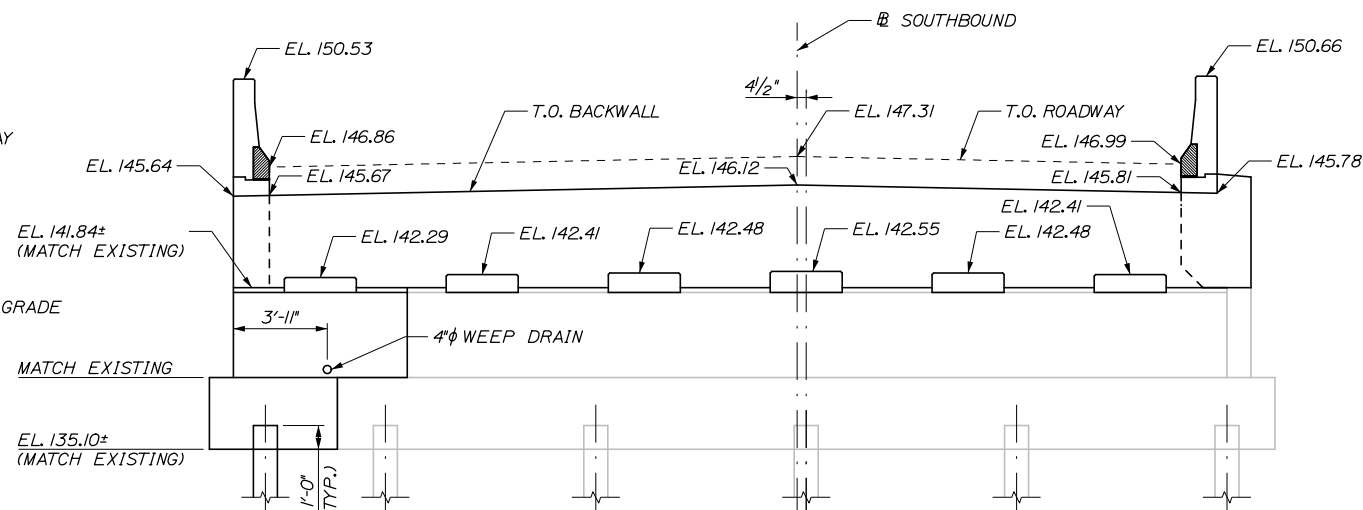
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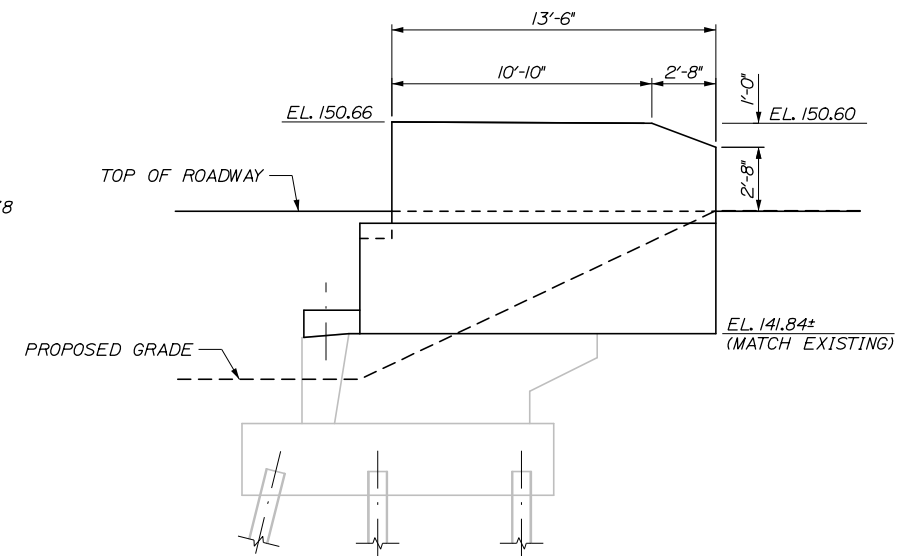
PLAN



WEST WINGWALL



ELEVATION



EAST WINGWALL

SOUTHBOUND BRIDGE - ABUTMENT 2

1/4" = 1'-0"

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
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Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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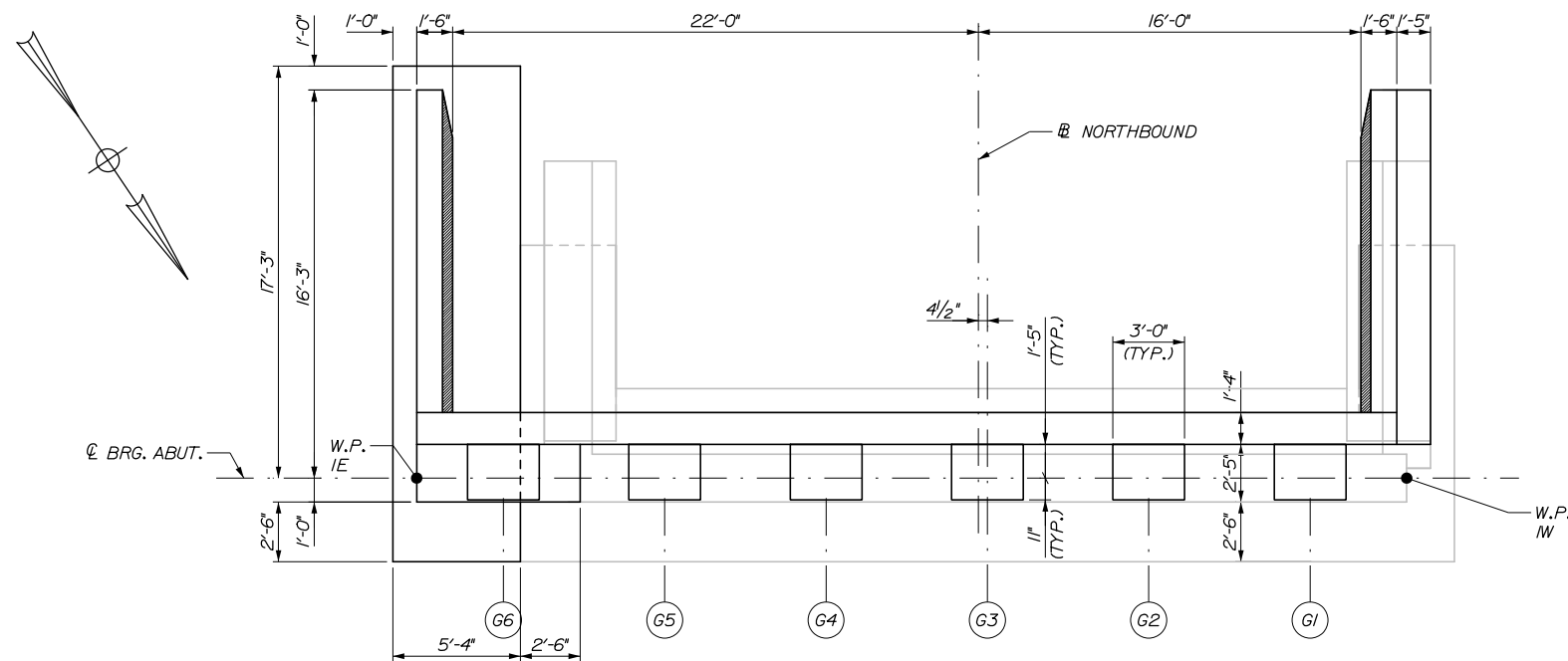
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

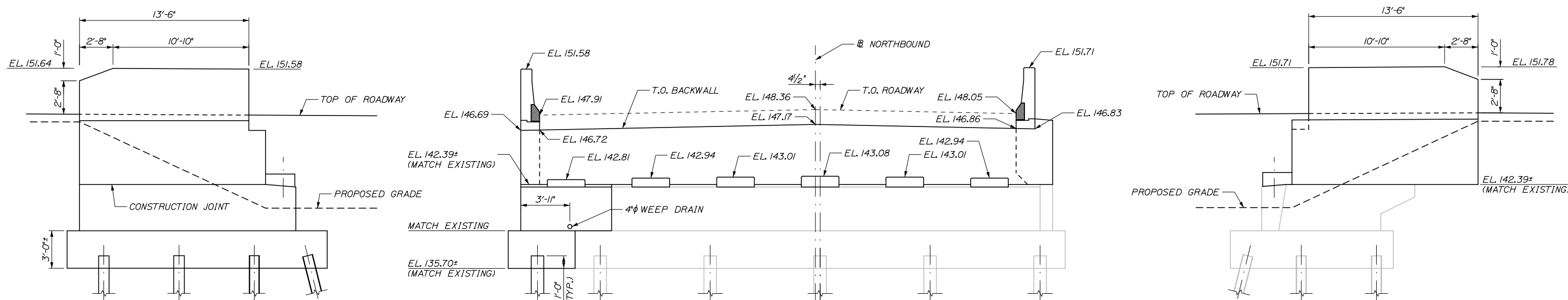
BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 SOUTHBOUND ABUTMENT 2
 PLAN AND ELEVATION

SHEET NUMBER: S-18
 CONTRACT: 2018.15
 54 OF 115

WORKING POINT LOCATIONS - SOUTHBOUND	
W.P. 1E	STA. 164+72.00 23'-6" RT
W.P. 1W	STA. 164+72.00 17'-9" LT
W.P. 2E	STA. 166+82.00 23'-6" RT
W.P. 2W	STA. 166+82.00 17'-9" LT



PLAN



NORTHBOUND BRIDGE - ABUTMENT 1

1/4" = 1'-0"

Date: 7/27/2018

Filename: 055_NB_Abutment 1 Plan and Elevation.dgn

No.	Revision	By	Date

Designed by:					
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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
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Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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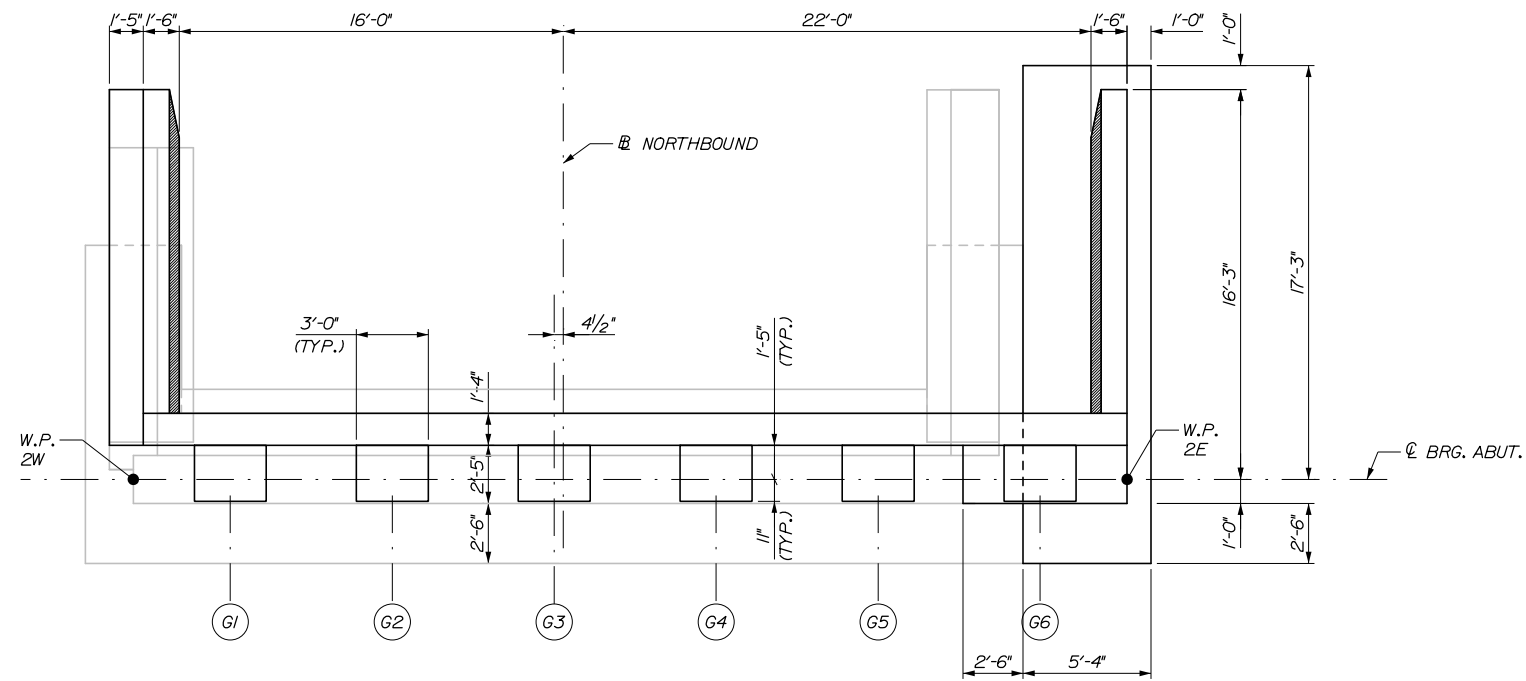
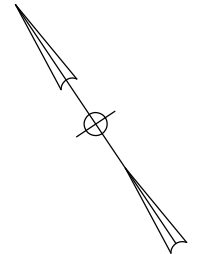
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

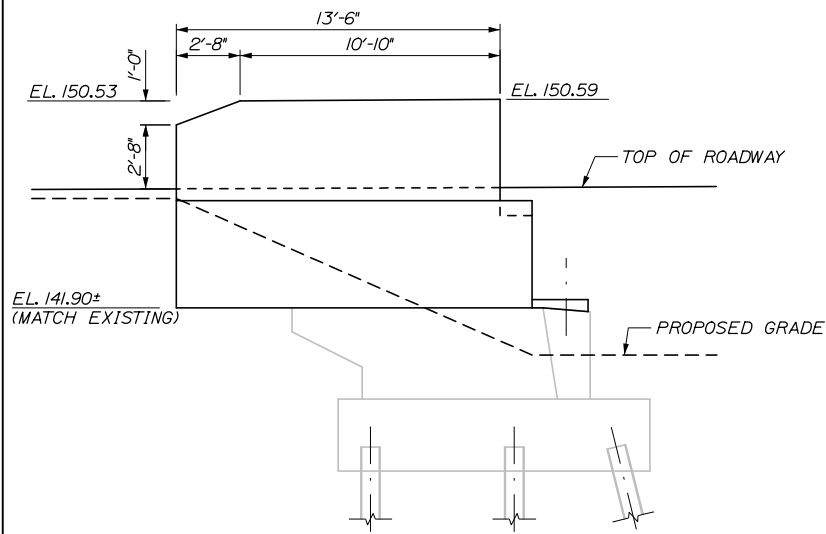
BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 NORTHBOUND ABUTMENT 1
 PLAN AND ELEVATION

SHEET NUMBER: S-19
 CONTRACT: 2018.15
 55 OF 115

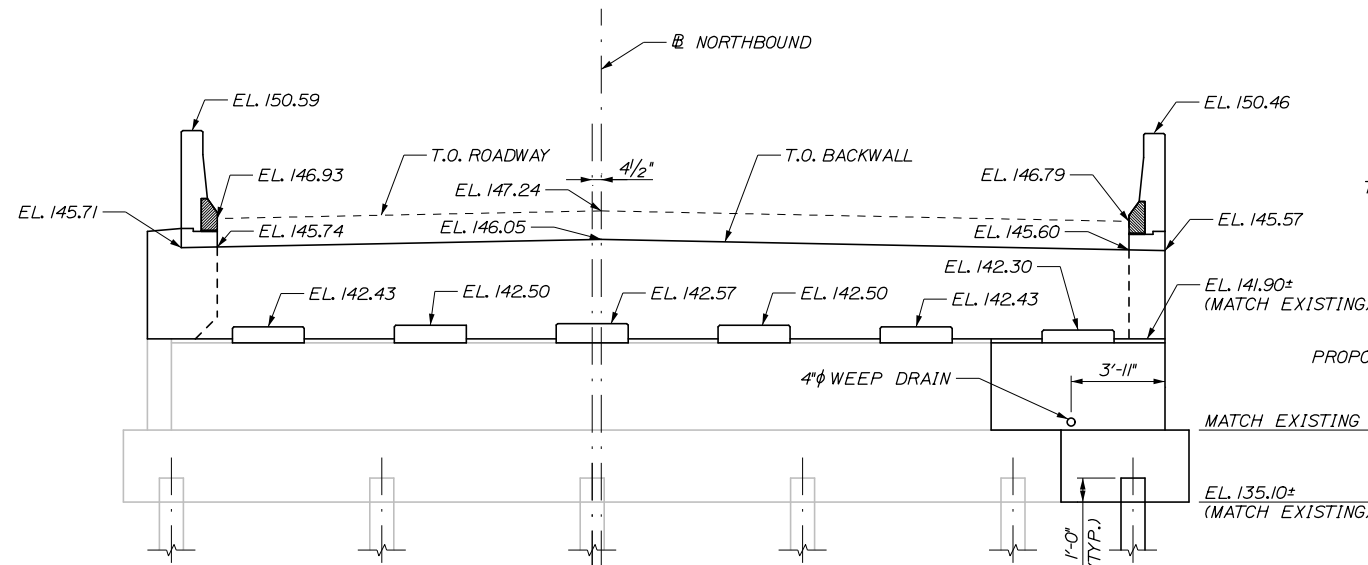
Date: 7/27/2018



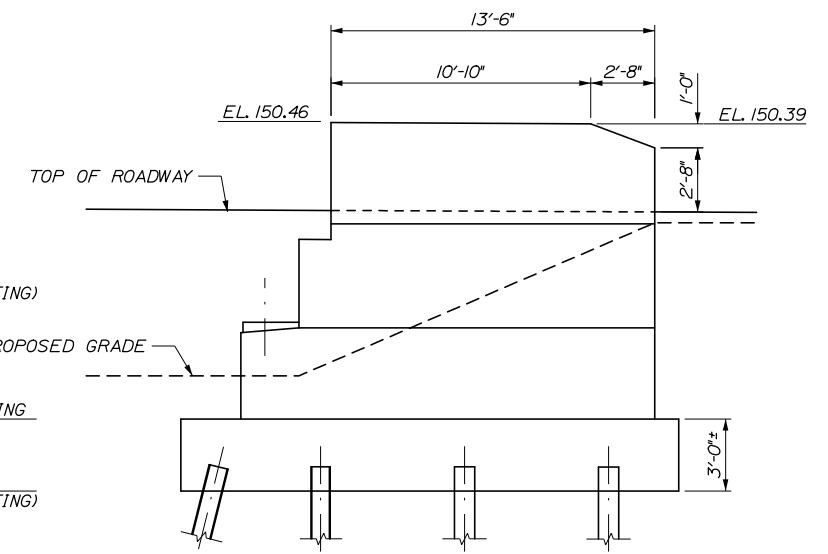
PLAN



WEST WINGWALL



ELEVATION



EAST WINGWALL

NORTHBOUND BRIDGE - ABUTMENT 2

1/4" = 1'-0"

Filename: 056_NB Abutment 2 Plan and Elevation.dgn

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
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Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

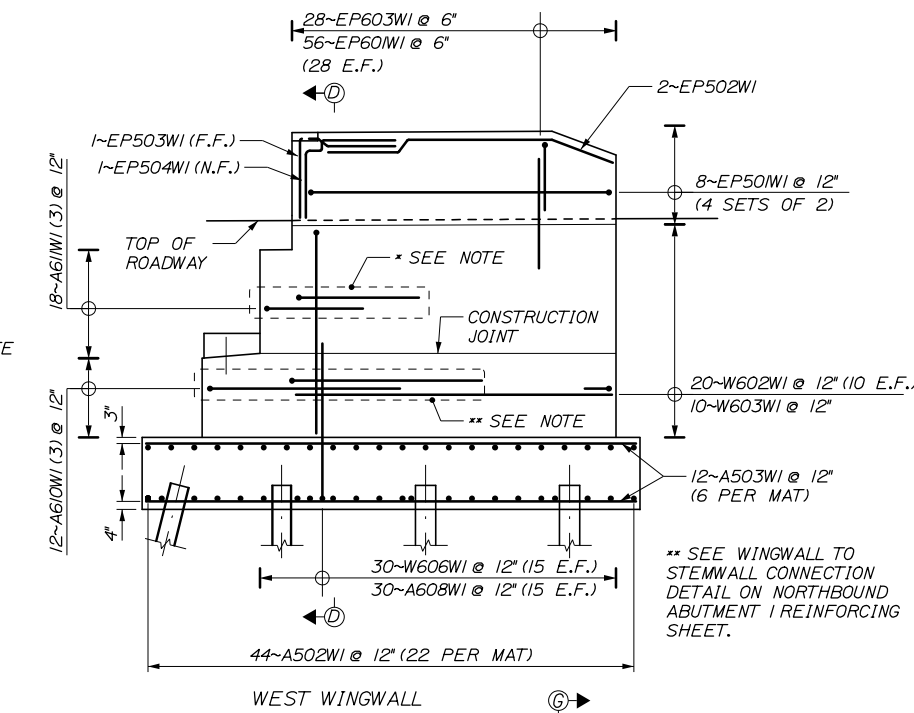
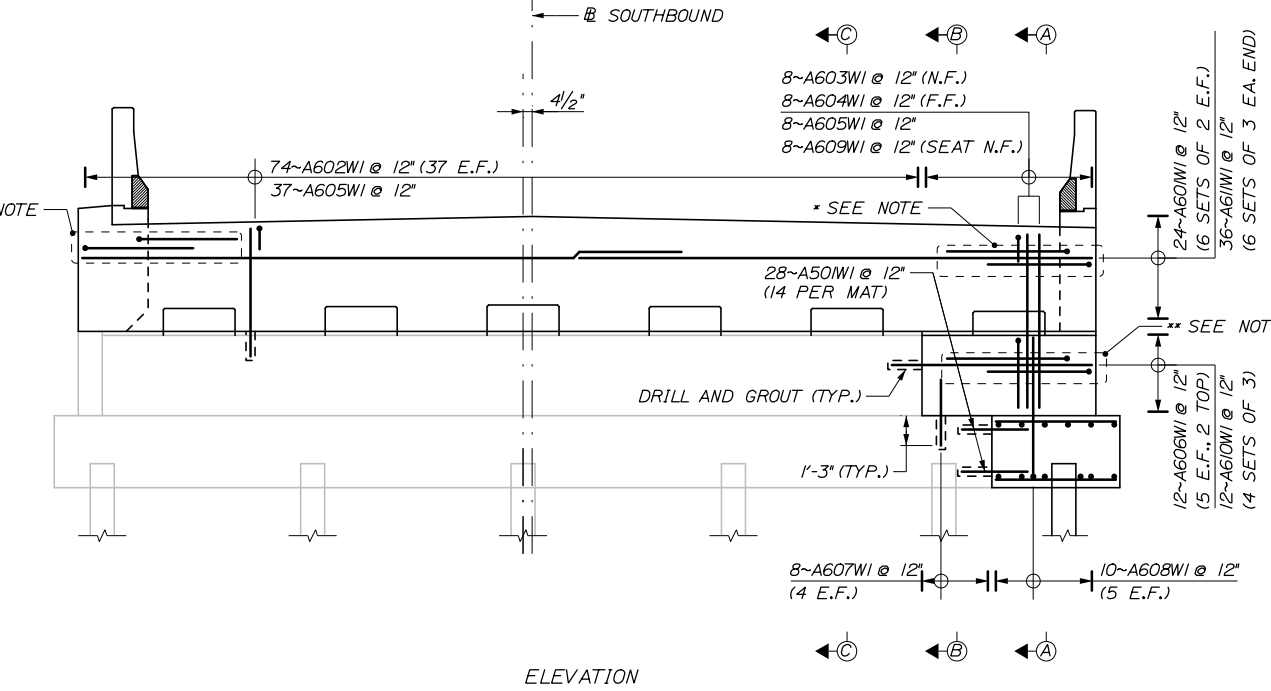
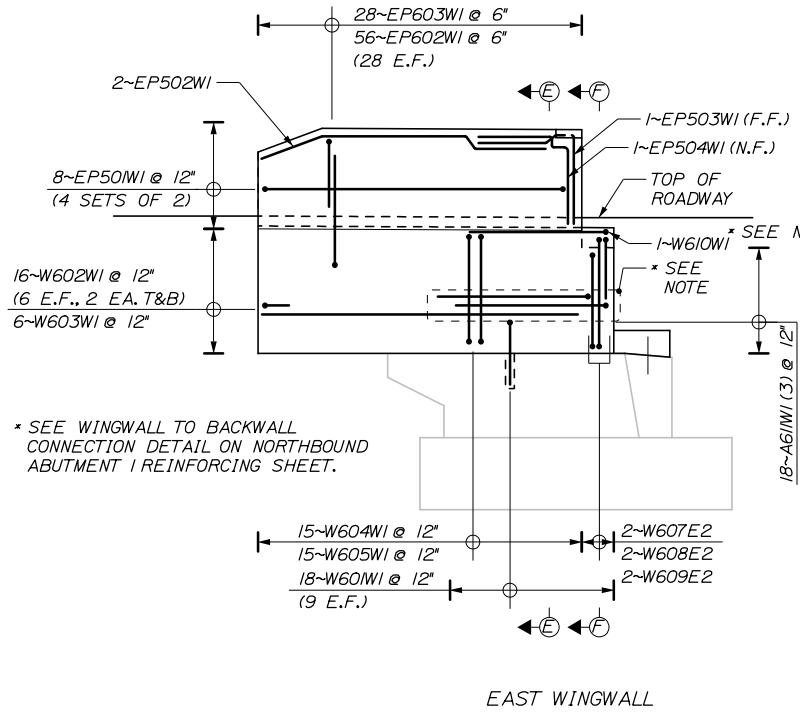
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 NORTHBOUND ABUTMENT 2
 PLAN AND ELEVATION

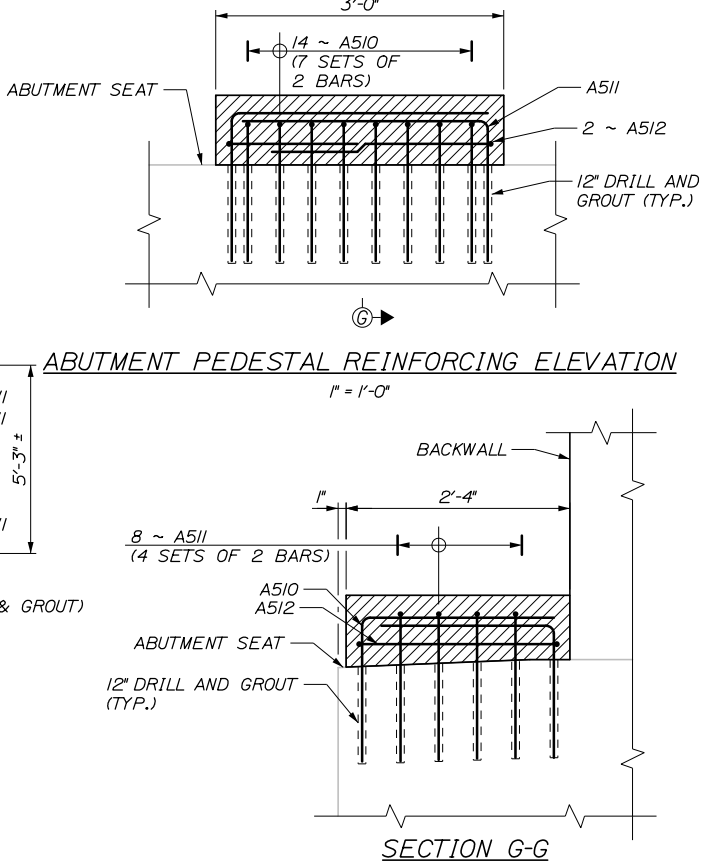
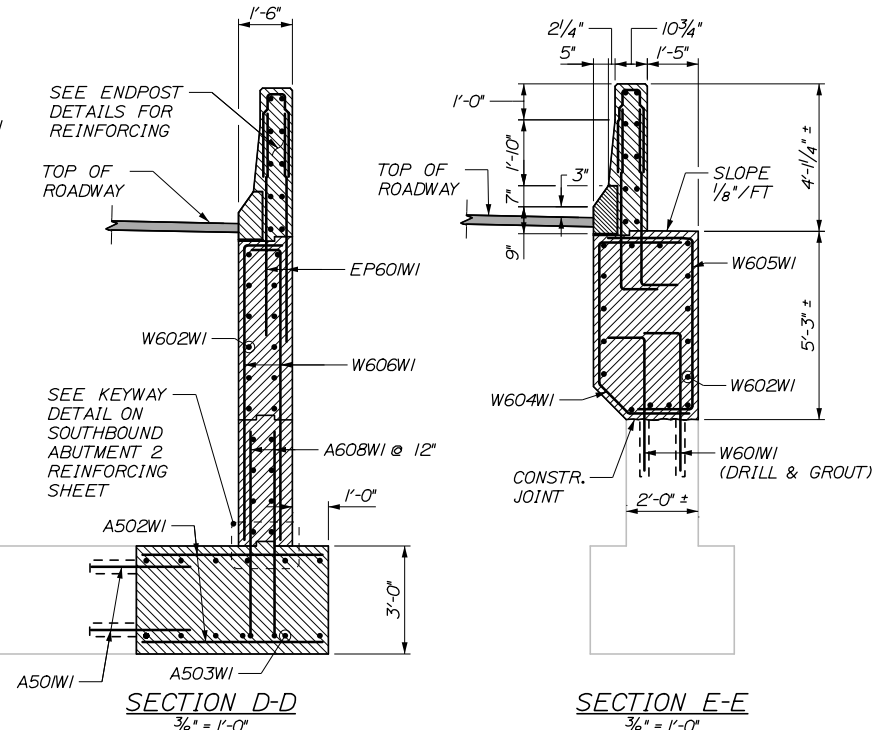
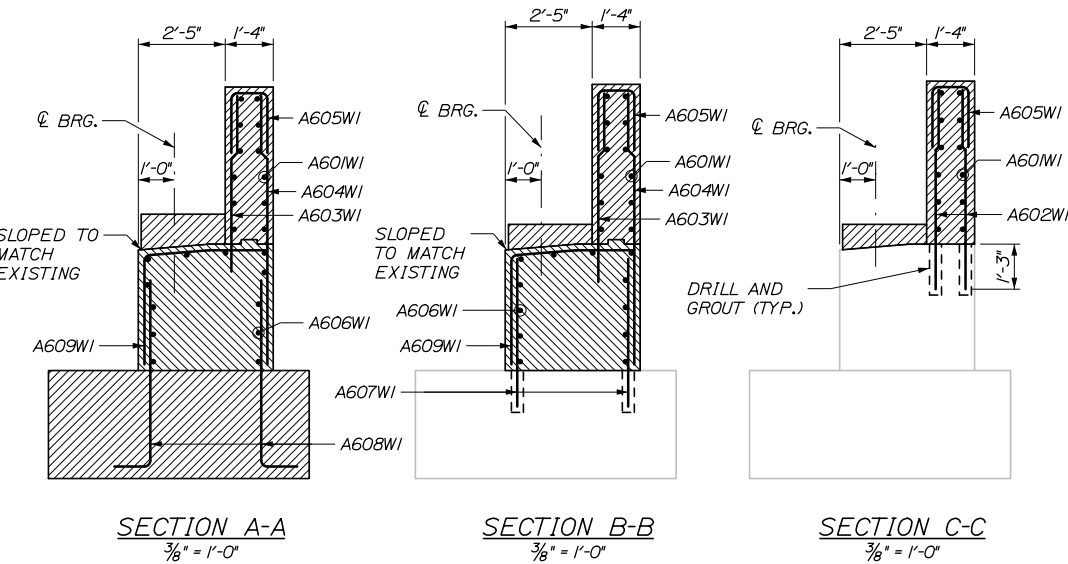
SHEET NUMBER: S-20
 CONTRACT: 2018.15
 56 OF 115

Date: 7/27/2018

Filename: 057_SB_Abument 1.Reinforcing.dgn



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



PEDESTAL REINFORCING NOTES:

- NORTHBOUND AND SOUTHBOUND ABUTMENT PEDESTAL REINFORCING WI, W2, EI, E2 ALL SIMILAR.
- DRILL AND GROUT APPLICABLE FOR EXISTING SEAT ONLY.

NOTES:

- FOR MORE INFORMATION SEE ENDPOST DETAILS.
- SUBSTRUCTURE NOMENCLATURE (WI, W2, EI, E2) REPRESENTS EAST OR WEST ABUTMENT 1 OR 2.
- MINIMUM BAR SPLICES FOR ALL ABUTMENTS SHALL BE AS FOLLOWS:
 *5 BAR = 2'-11"
 *6 BAR, VERTICAL LAP = 3'-4"
 *6 BAR, HORIZONTAL LAP = 4'-4"

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date	
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

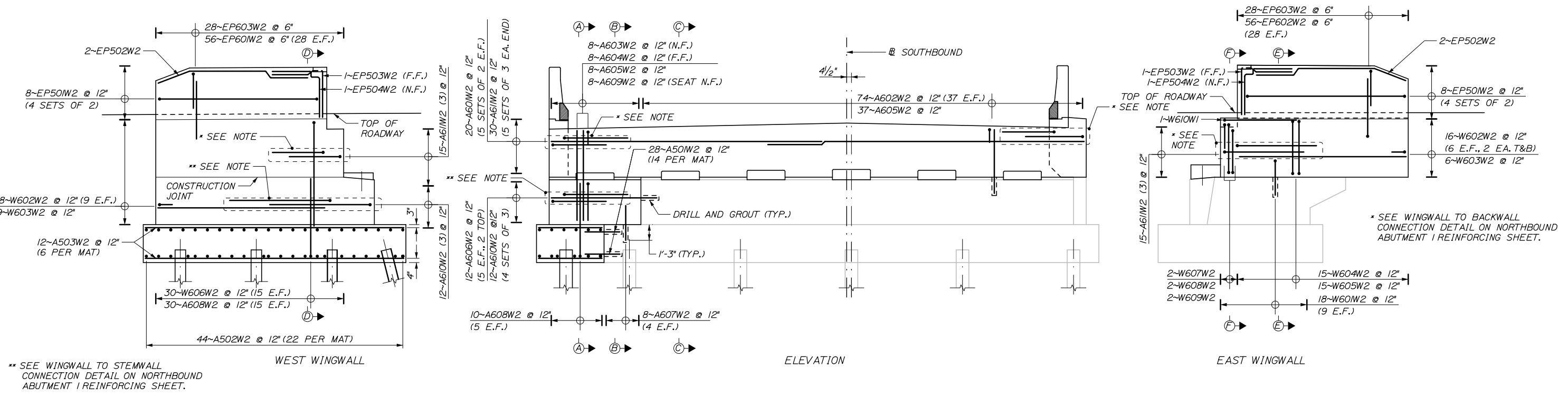
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SOUTHBOUND ABUTMENT 1
REINFORCING

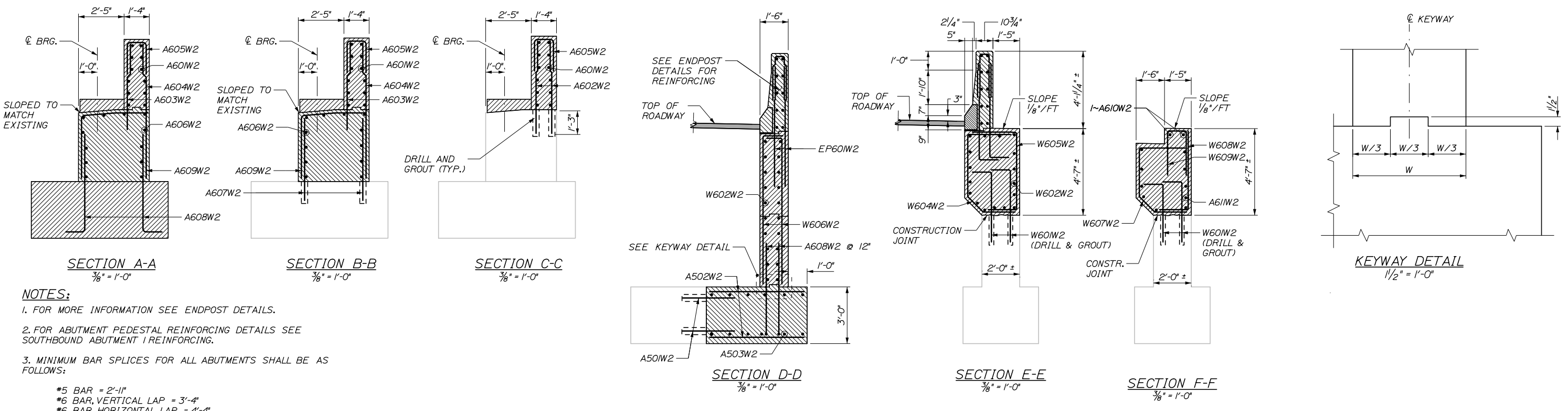
SHEET NUMBER: S-21
CONTRACT: 2018.15
57 OF 115

Date: 7/27/2018

Filename: 058_SB Abutment 2 Reinforcing.dgn



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

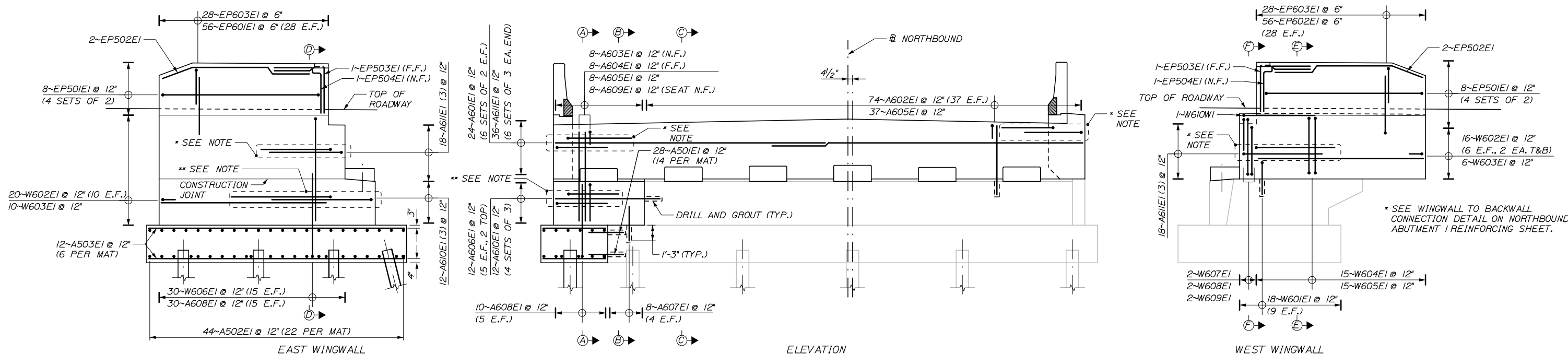


- NOTES:**
- FOR MORE INFORMATION SEE ENDPOST DETAILS.
 - FOR ABUTMENT PEDESTAL REINFORCING DETAILS SEE SOUTHBOUND ABUTMENT 1 REINFORCING.
 - MINIMUM BAR SPLICES FOR ALL ABUTMENTS SHALL BE AS FOLLOWS:
 - *5 BAR = 2'-11"
 - *6 BAR, VERTICAL LAP = 3'-4"
 - *6 BAR, HORIZONTAL LAP = 4'-4"

Scale:		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 REHABILITATION COBBOSEECONTEE STREAM OVERPASS SOUTHBOUND ABUTMENT 2 REINFORCING																											
<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: Craig R. Morin, 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>HJW 07\18</td> <td>Checked</td> <td>KEB 07\18</td> </tr> <tr> <td>Drawn</td> <td>ERB 07\18</td> <td>In Charge of</td> <td>RAL 07\18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	HJW 07\18	Checked	KEB 07\18
No.	Revision	By	Date																																		
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Designed	HJW 07\18	Checked	KEB 07\18																																		
Drawn	ERB 07\18	In Charge of	RAL 07\18																																		

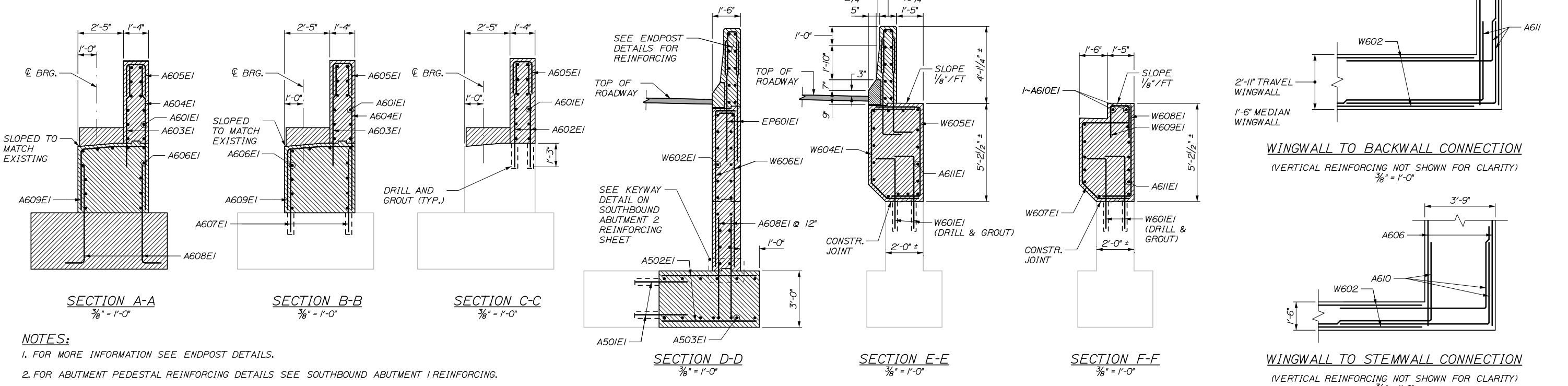
Date: 7/27/2018

Filename: 059_NB Abutment 1 Reinforcing.dgn



** SEE WINGWALL TO STEMWALL CONNECTION DETAIL ON NORTHBOUND ABUTMENT 1 REINFORCING SHEET.

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

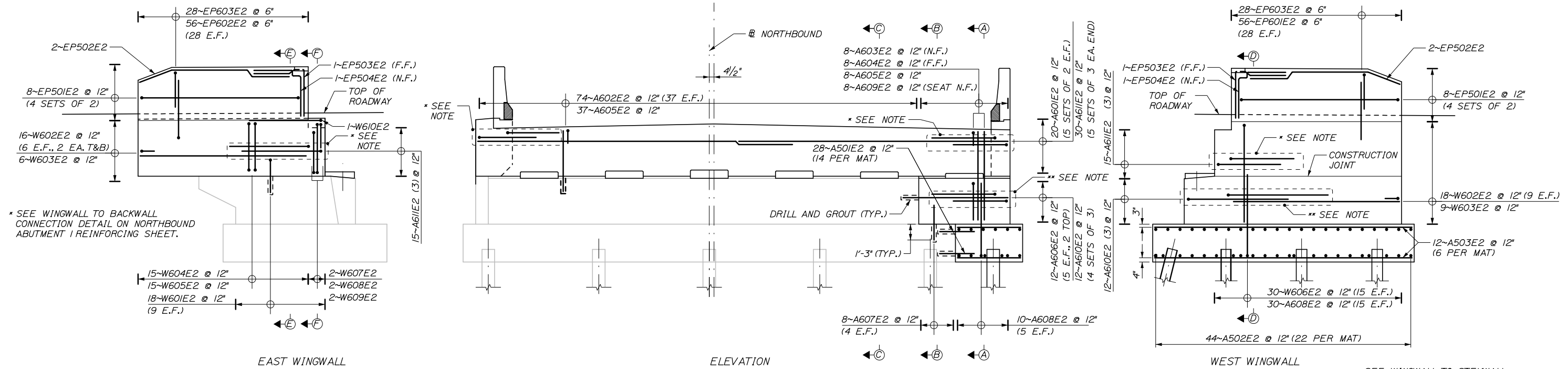


- NOTES:**
- FOR MORE INFORMATION SEE ENDPPOST DETAILS.
 - FOR ABUTMENT PEDESTAL REINFORCING DETAILS SEE SOUTHBOUND ABUTMENT 1 REINFORCING.
 - MINIMUM BAR SPLICES FOR ALL ABUTMENTS SHALL BE AS FOLLOWS:
 - *5 BAR = 2'-11"
 - *6 BAR, VERTICAL LAP = 3'-4"
 - *6 BAR, HORIZONTAL LAP = 4'-4"

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 REHABILITATION COBBOSEECONTEE STREAM OVERPASS NORTHBOUND ABUTMENT 1 REINFORCING		SHEET NUMBER: S-23 CONTRACT: 2018.15	
No.	Revision	By	Date												
				Designed	HJW	07\18	Checked	KEB	07\18	Drawn	ERB	07\18	In Charge of	RAL	07\18

Date: 7/27/2018

Filename: 060_NB Abutment 2 Reinforcing.dgn



* SEE WINGWALL TO BACKWALL CONNECTION DETAIL ON NORTHBOUND ABUTMENT 1 REINFORCING SHEET.

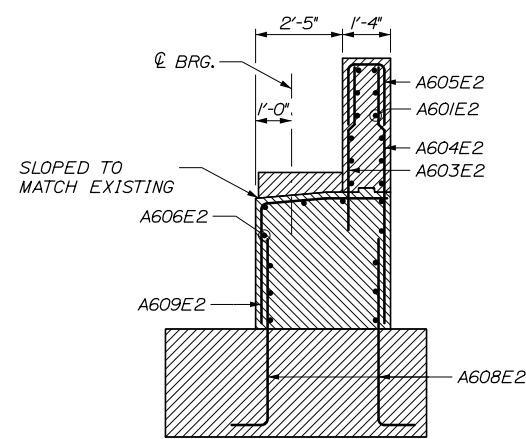
* SEE NOTE

** SEE NOTE

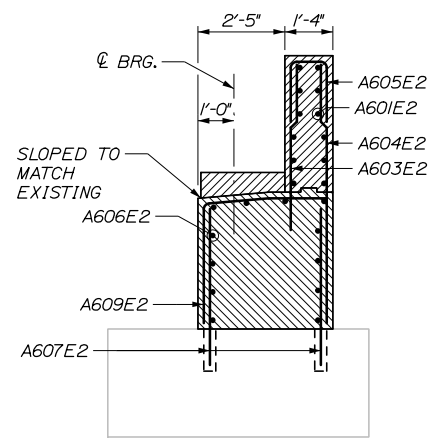
** SEE WINGWALL TO STEMWALL CONNECTION DETAIL ON NORTHBOUND ABUTMENT 1 REINFORCING SHEET.

NORTHBOUND BRIDGE - ABUTMENT 2

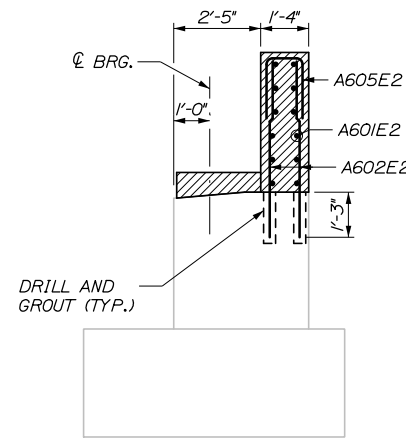
1/4" = 1'-0"



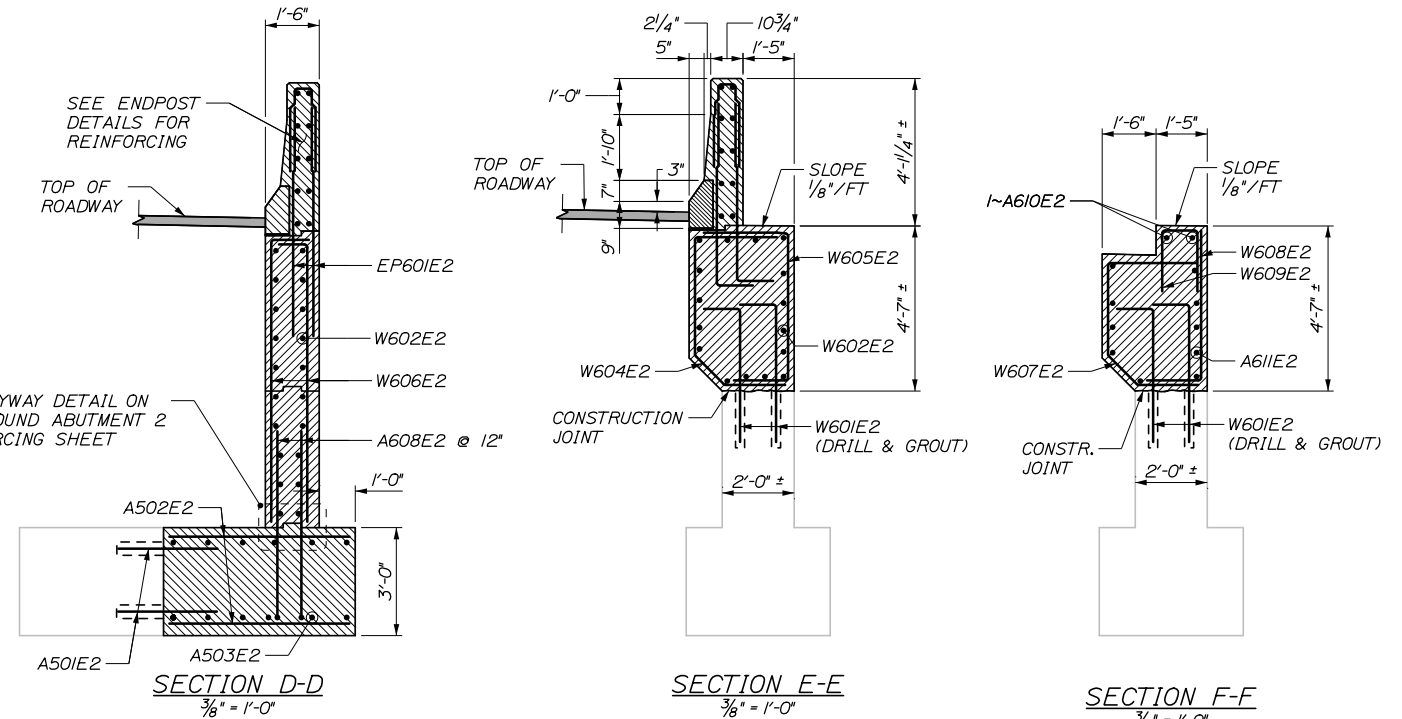
SECTION A-A
3/8" = 1'-0"



SECTION B-B
3/8" = 1'-0"



SECTION C-C
3/8" = 1'-0"



SECTION D-D
3/8" = 1'-0"

SECTION E-E
3/8" = 1'-0"

SECTION F-F
3/8" = 1'-0"

NOTES:

1. FOR MORE INFORMATION SEE ENDPOST DETAILS.
2. FOR ABUTMENT PEDESTAL REINFORCING DETAILS SEE SOUTHBOUND ABUTMENT 1 REINFORCING.
3. MINIMUM BAR SPLICES FOR ALL ABUTMENTS SHALL BE AS FOLLOWS:

- *5 BAR = 2'-11"
- *6 BAR, VERTICAL LAP = 3'-4"
- *6 BAR, HORIZONTAL LAP = 4'-4"

No.	Revision	By	Date

Scale:						Designed by:					
HNTB											
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.											
	By	Date		By	Date						
	Designed	HJW	07\18	Checked	KEB	07\18					
	Drawn	ERB	07\18	In Charge of	RAL	07\18					

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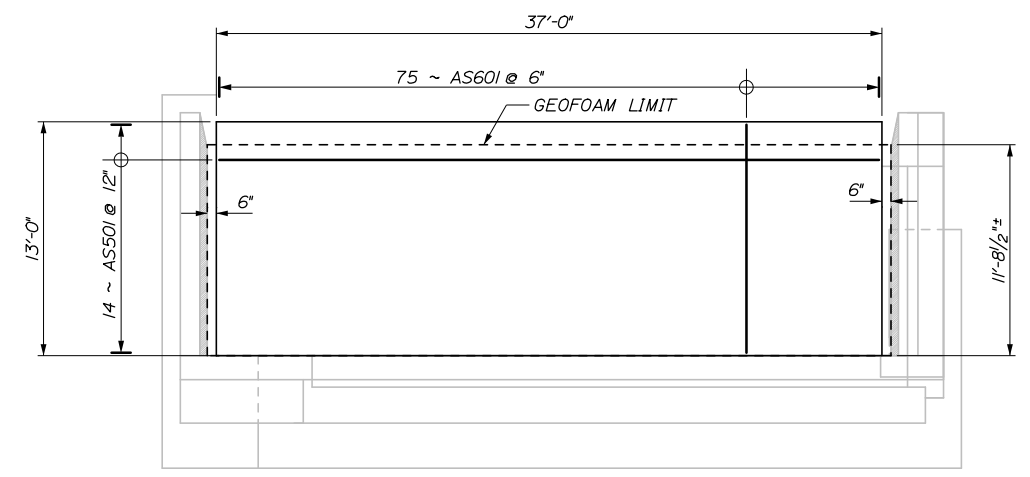
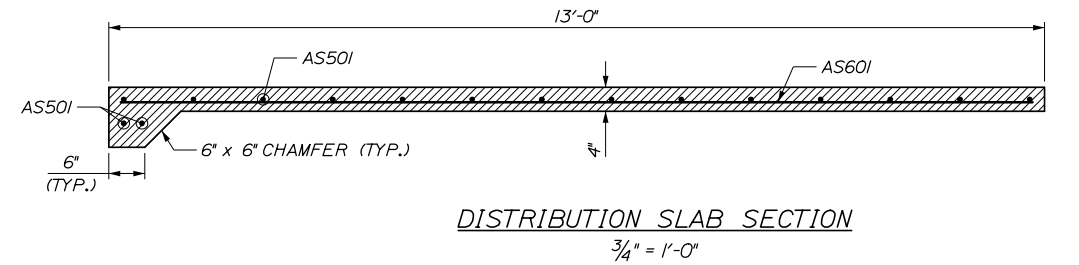
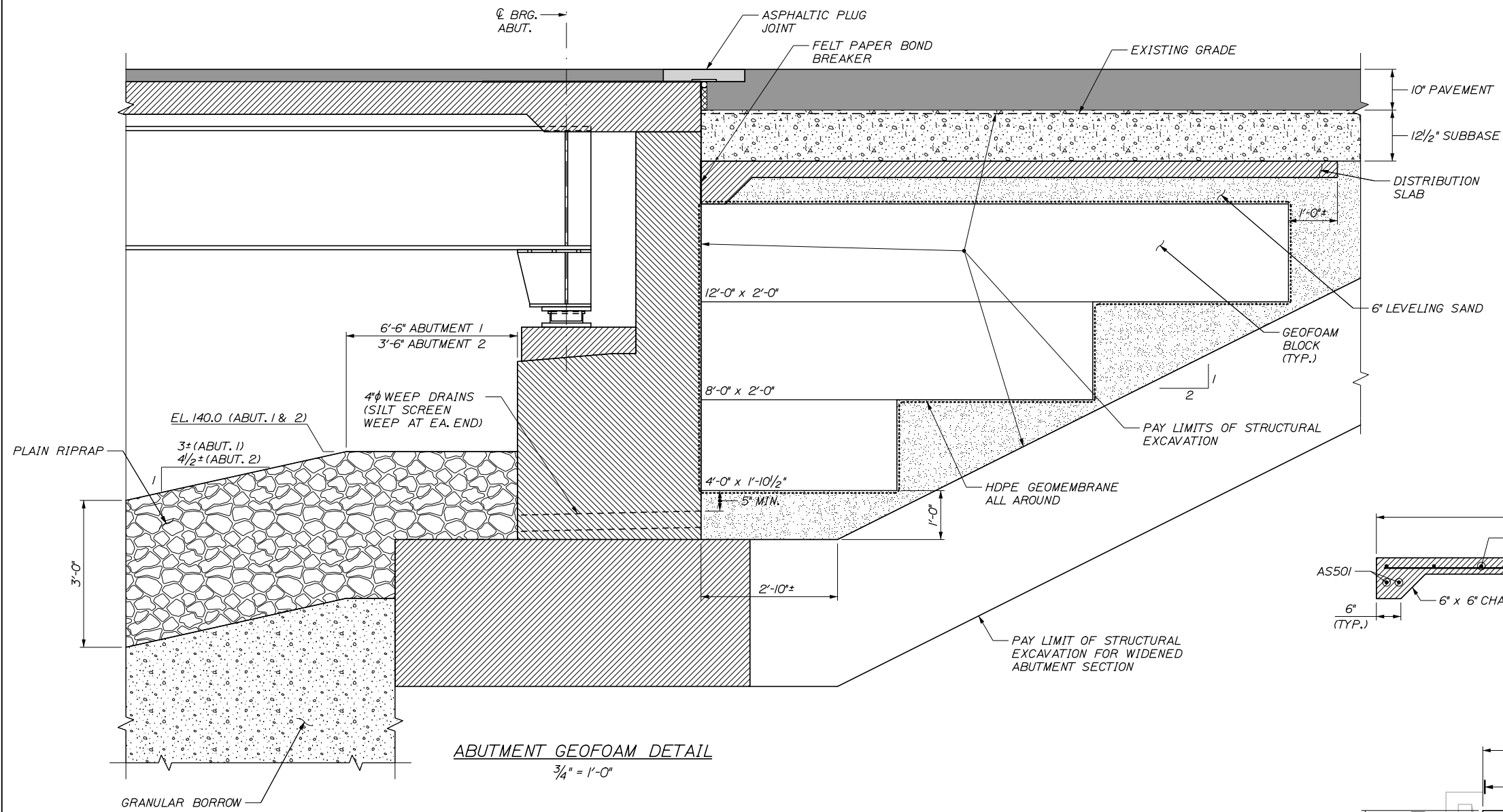
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
COBBOSSÉECONTEE STREAM OVERPASS
NORTHBOUND ABUTMENT 2
REINFORCING

SHEET NUMBER: S-24
CONTRACT: 2018.15
60 OF 115

Date: 7/27/2018



NOTES:

- CLEAN EXISTING WEEP DRAINS, IF THEY EXIST, PRIOR TO BACKFILLING ABUTMENT.
- DISTRIBUTION SLAB SHALL BE PAID FOR UNDER ITEM 502.31 STRUCTURAL CONCRETE APPROACH SLAB.

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18	Checked	KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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MEMORIAL HIGHWAY**

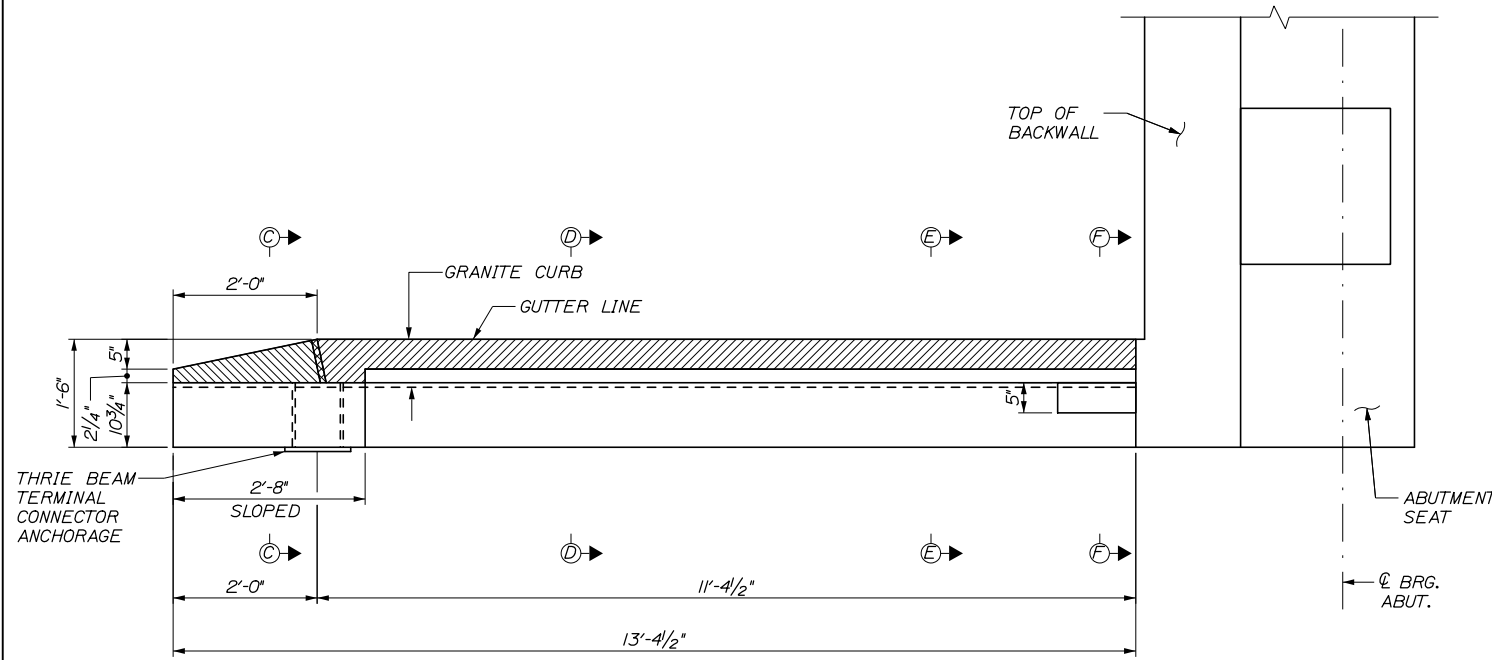
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 ABUTMENT MODIFICATION DETAILS

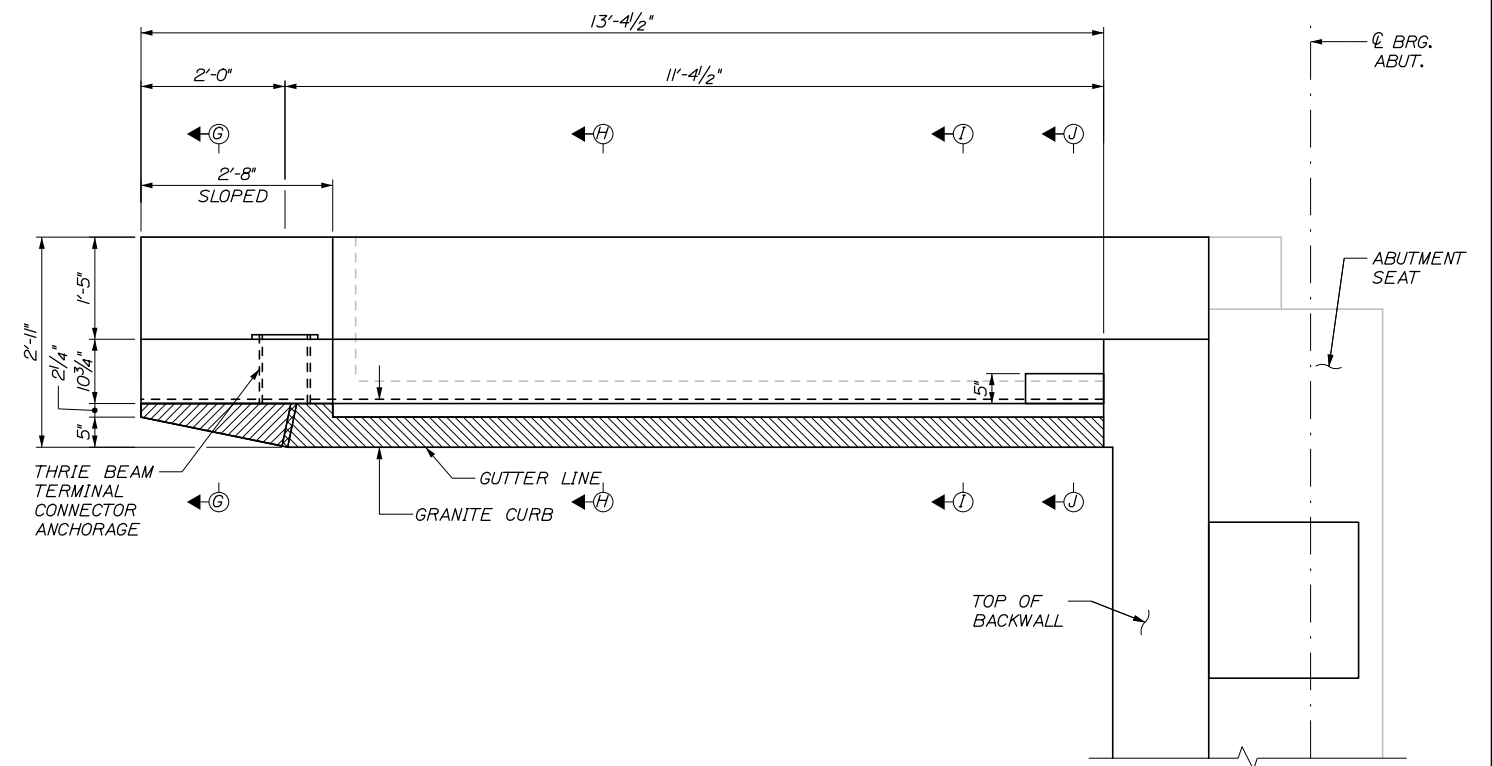
SHEET NUMBER: S-25
 CONTRACT: 2018.15
 61 OF 115

Filename: 061-Abutment Modification Details.dgn

Date: 7/27/2018



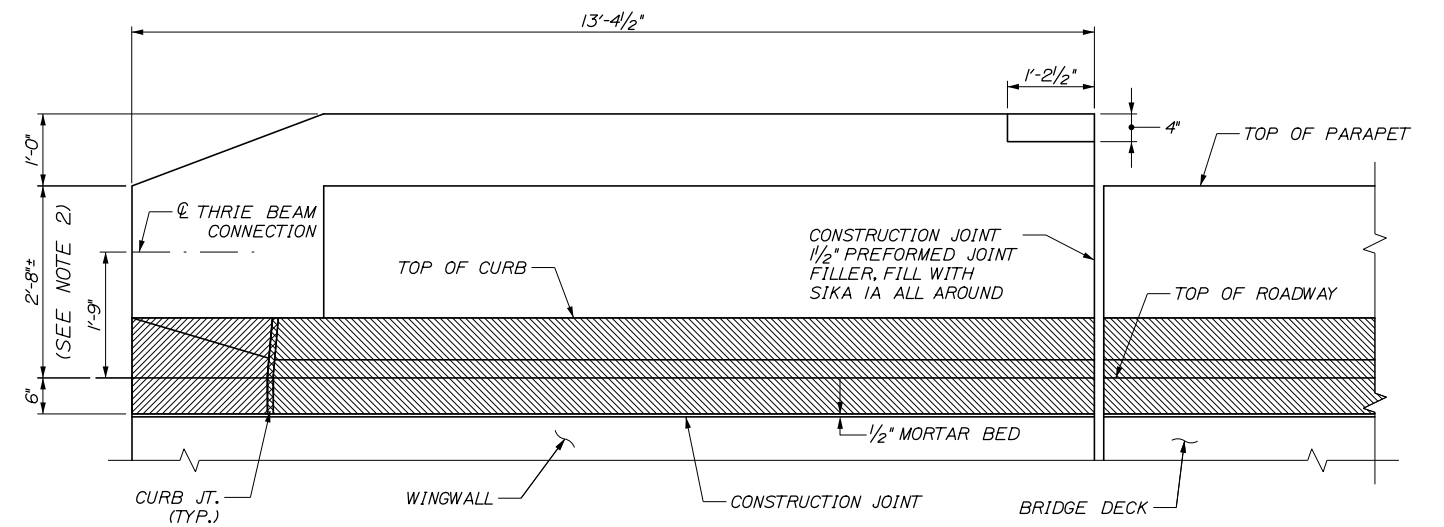
PLAN
 (NORTHBOUND ABUT. 1 EAST ENDPOST SHOWN)
 (NORTHBOUND ABUT. 2 WEST ENDPOST SIM. OPP. HAND)
 (SOUTHBOUND ABUT. 1 WEST ENDPOST SIM. OPP. HAND)
 (SOUTHBOUND ABUT. 2 WEST ENDPOST SIM.)
 3/4" = 1'-0"



PLAN
 (NORTHBOUND ABUT. 1 WEST ENDPOST SHOWN)
 (NORTHBOUND ABUT. 2 WEST ENDPOST SIM. OPP. HAND)
 (SOUTHBOUND ABUT. 1 EAST ENDPOST SIM. OPP. HAND)
 (SOUTHBOUND ABUT. 2 EAST ENDPOST SIM.)
 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 TO THE EXISTING BOTTOM OF CURB MORTAR ELEVATION. 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 WINGWALL REINFORCING ELEVATIONS, SEE SHEETS S-18 - S-21.
6. FOR SECTIONS C-C THRU H-H, SEE SHEET S-25.



ELEVATION
 (NORTHBOUND ABUT. 1, NORTHWEST ENDPOST SHOWN, OTHERS SIMILAR)
 3/4" = 1'-0"

Filename: 062_Endpost Details 1.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
	By	Date	By
	HJW	07\18	Checked
	ERB	07\18	In Charge of

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MAINE TURNPIKE

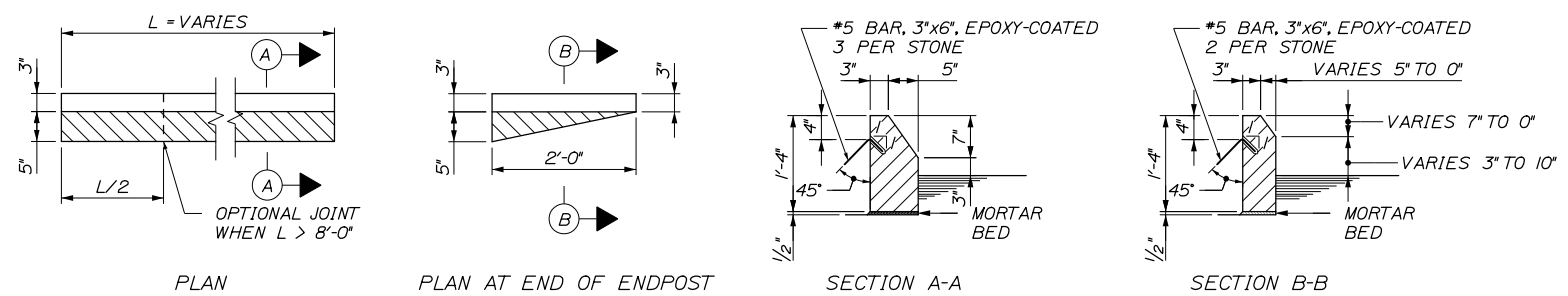
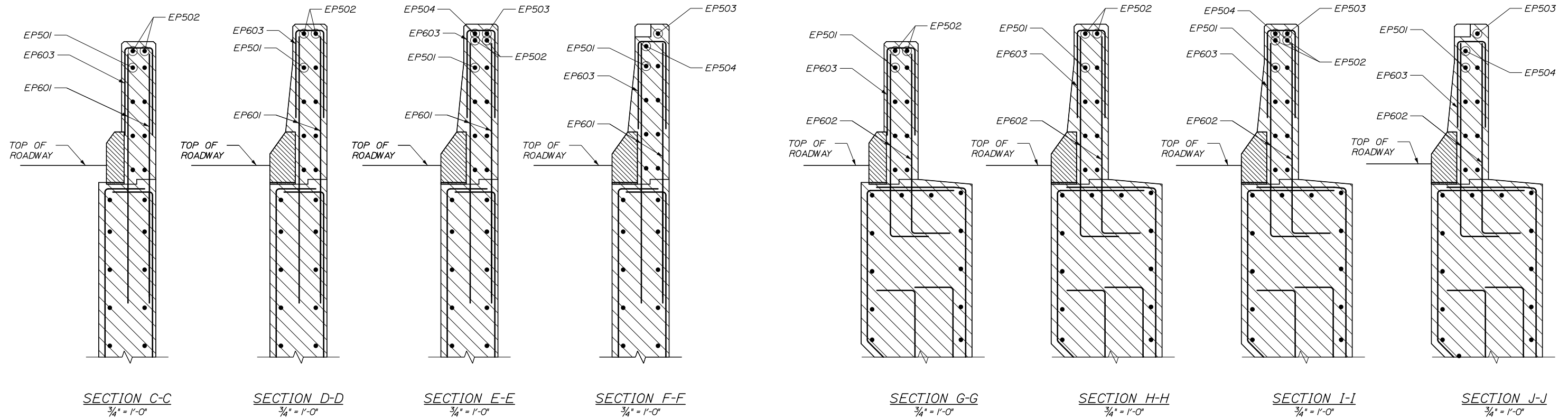
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 ENDPOST DETAILS I

SHEET NUMBER: S-26
 CONTRACT: 2018.15
 62 OF 115

Date: 7/27/2018



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

- NOTES:**
1. FOR ENDPOST NOTES SEE END POST DETAILS I SHEET.
 2. FOR WINGWALL REINFORCING SEE ABUTMENT REINFORCING SHEETS.
 3. ENDPOST REINFORCING SHOWN APPLIES TO W1, W2, E1, AND E2 BARS.
 4. ENDPOST REINFORCING DOES NOT INCLUDE SUBSTRUCTURE UNIT NOMENCLATURE FOR CLARITY (W1, W2, E1, E2).

Filename: 063_Endpost Details 2.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

By	Date	By	Date
Designed HJW	07\18	Checked KEB	07\18
Drawn ERB	07\18	In Charge of RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

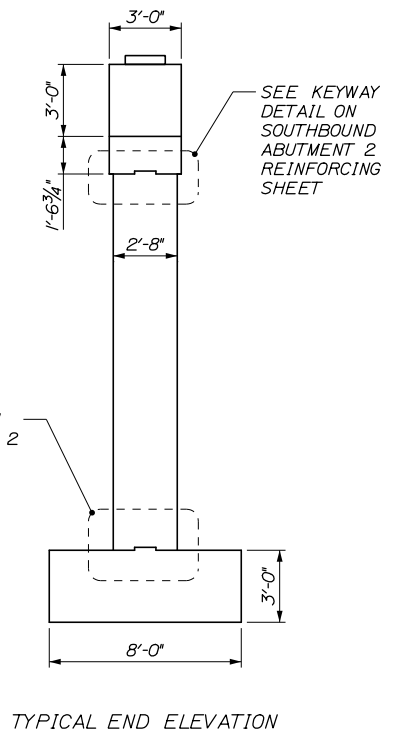
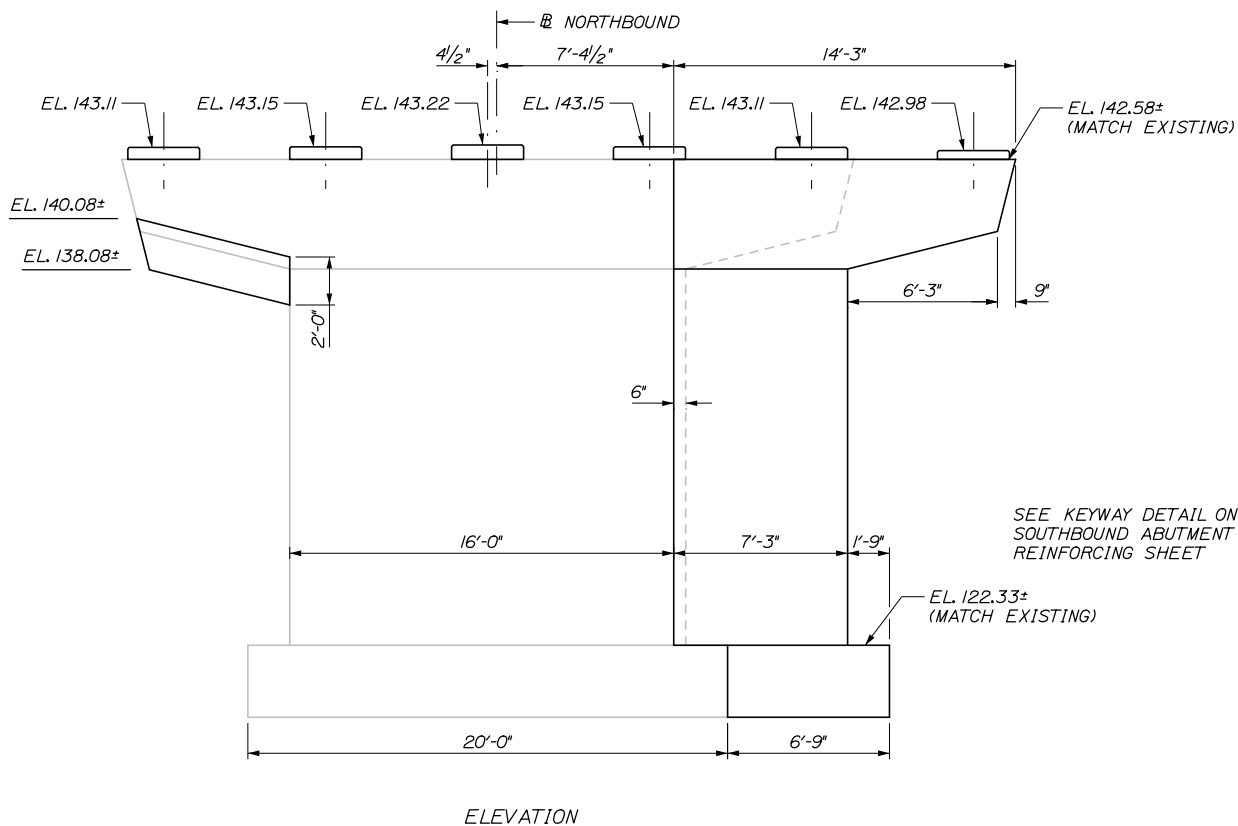
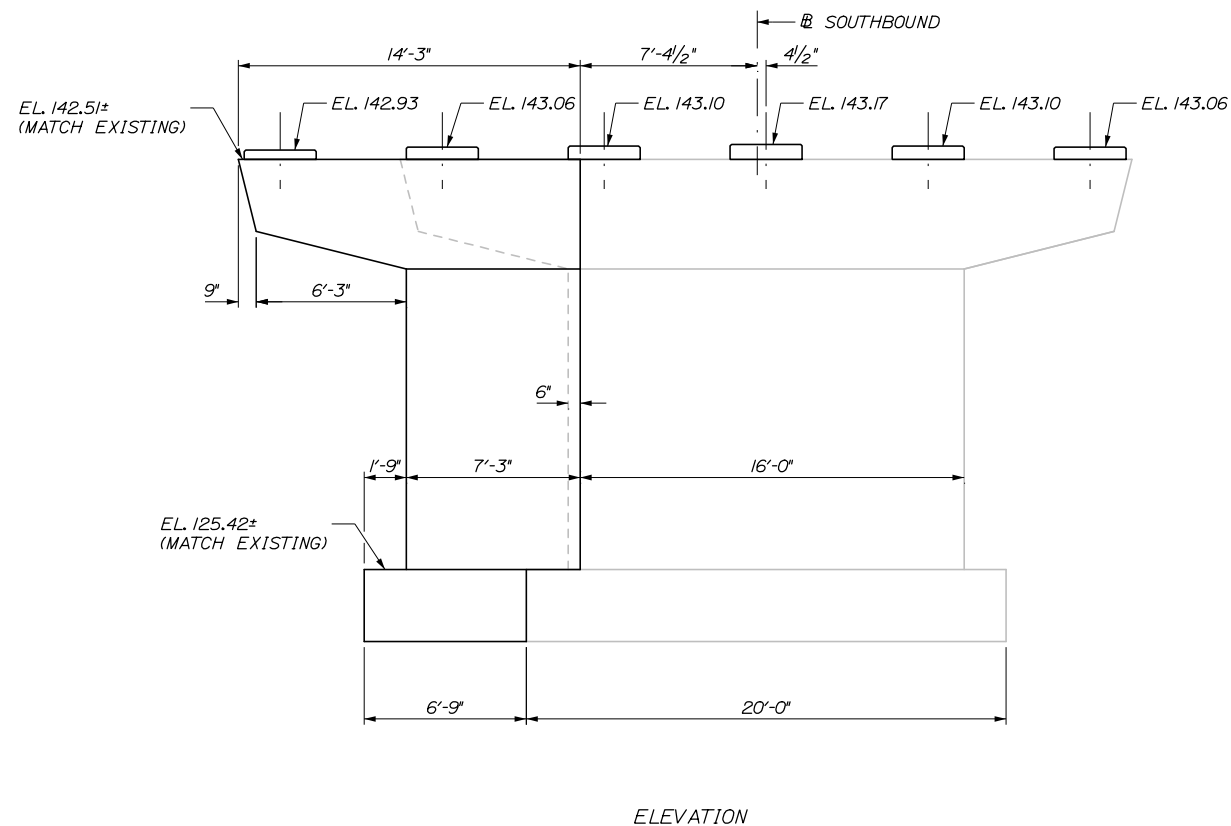
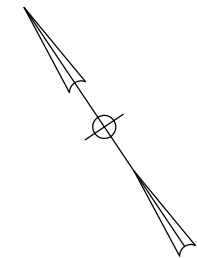
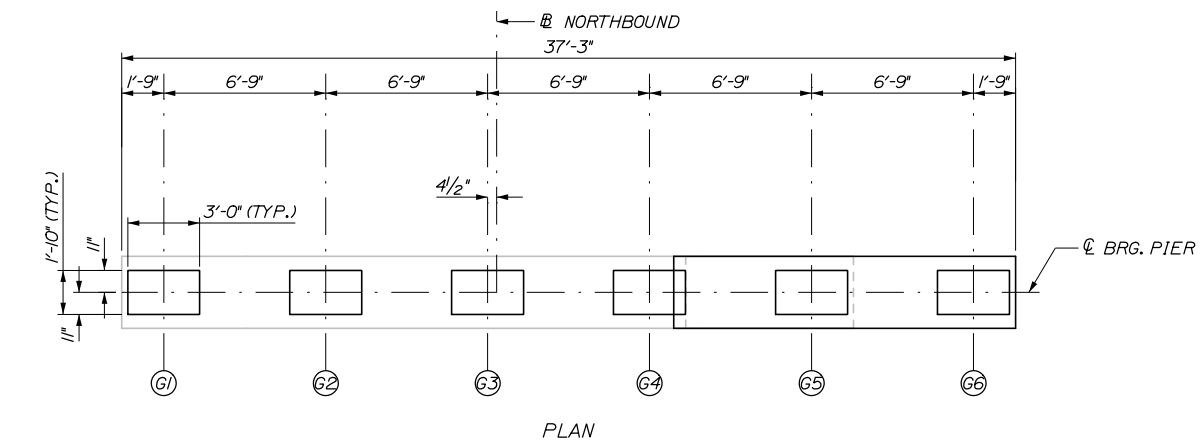
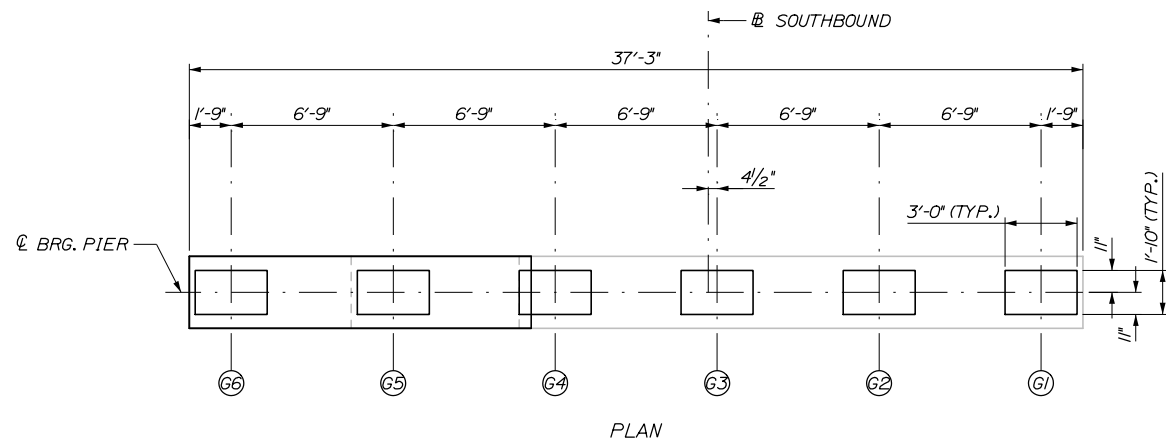
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
ENDPOST DETAILS II

SHEET NUMBER: S-27
CONTRACT: 2018.15
63 OF 115

Date: 7/27/2018

Filename: 064_Pier 1 Plan and Elevation.dgn



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

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

NOTES:

- EXISTING FOUNDATIONS ARE BELIEVED TO BE FOUNDED ON CONCRETE SEALS DOWN TO BEDROCK. CONTRACTOR SHALL CONFIRM THAT THE SEAL CONCRETE BENEATH EXISTING FOOTING EXTENDS TO BEDROCK DURING CONSTRUCTION. IF SEAL CONCRETE DOES NOT EXTEND TO BEDROCK THE CONTRACTOR SHALL STOP CONSTRUCTION AND NOTIFY THE AUTHORITY.
- SEAL CONCRETE NOT SHOWN FOR CLARITY.

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	HJW 07\18		Checked	KEB 07\18
	Drawn	ERB 07\18		In Charge of	RAL 07\18

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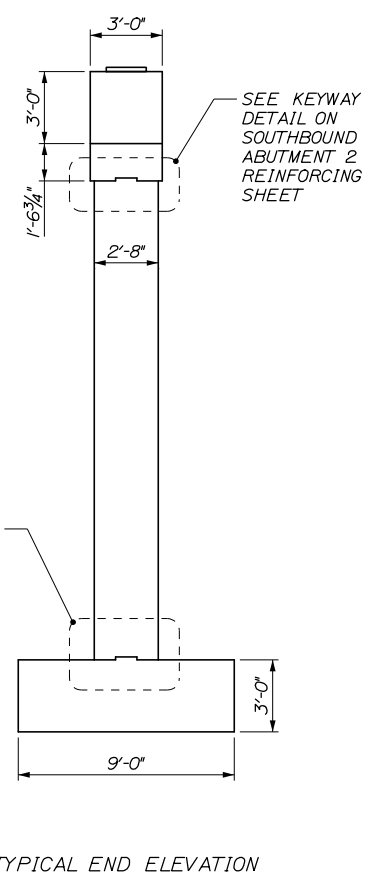
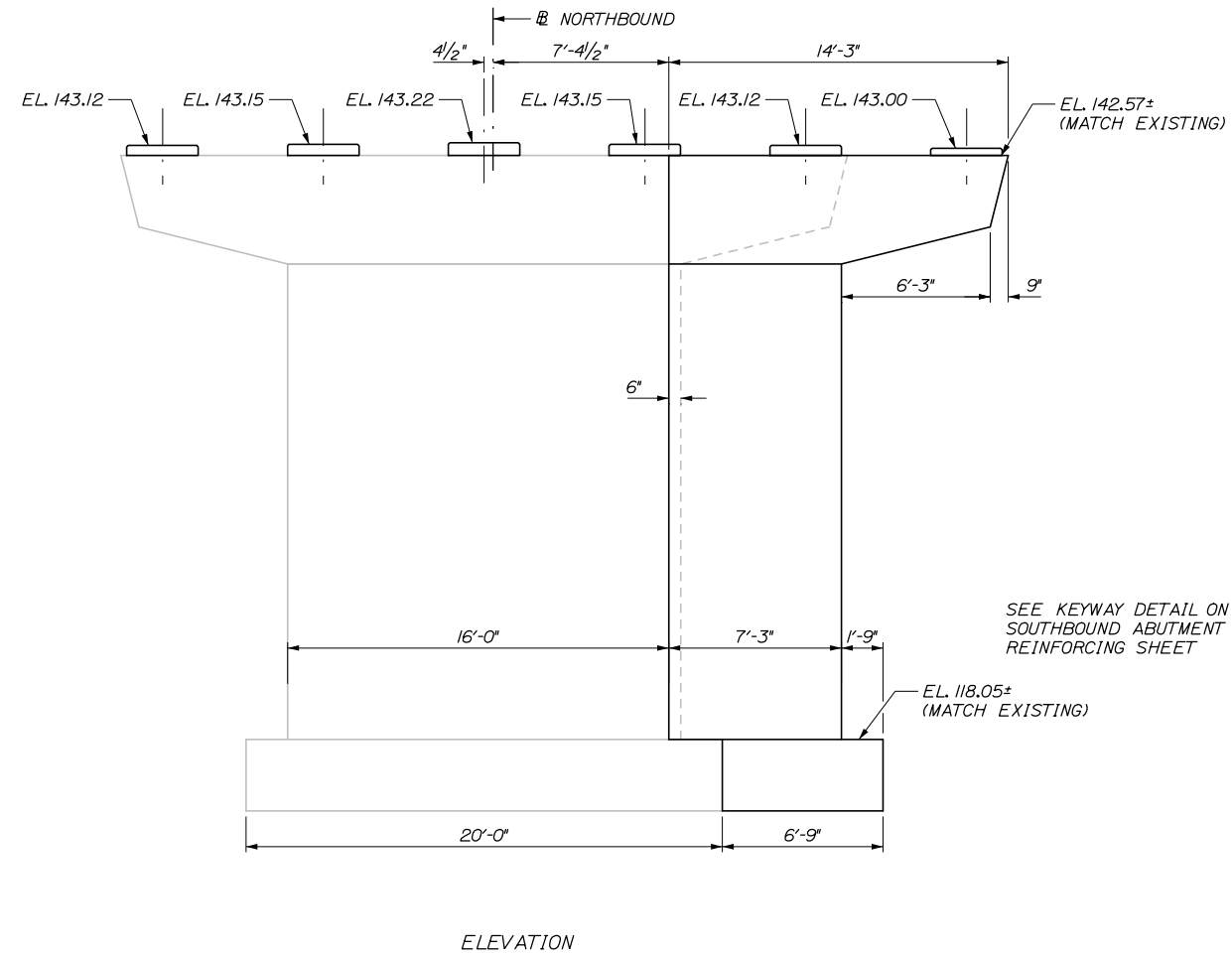
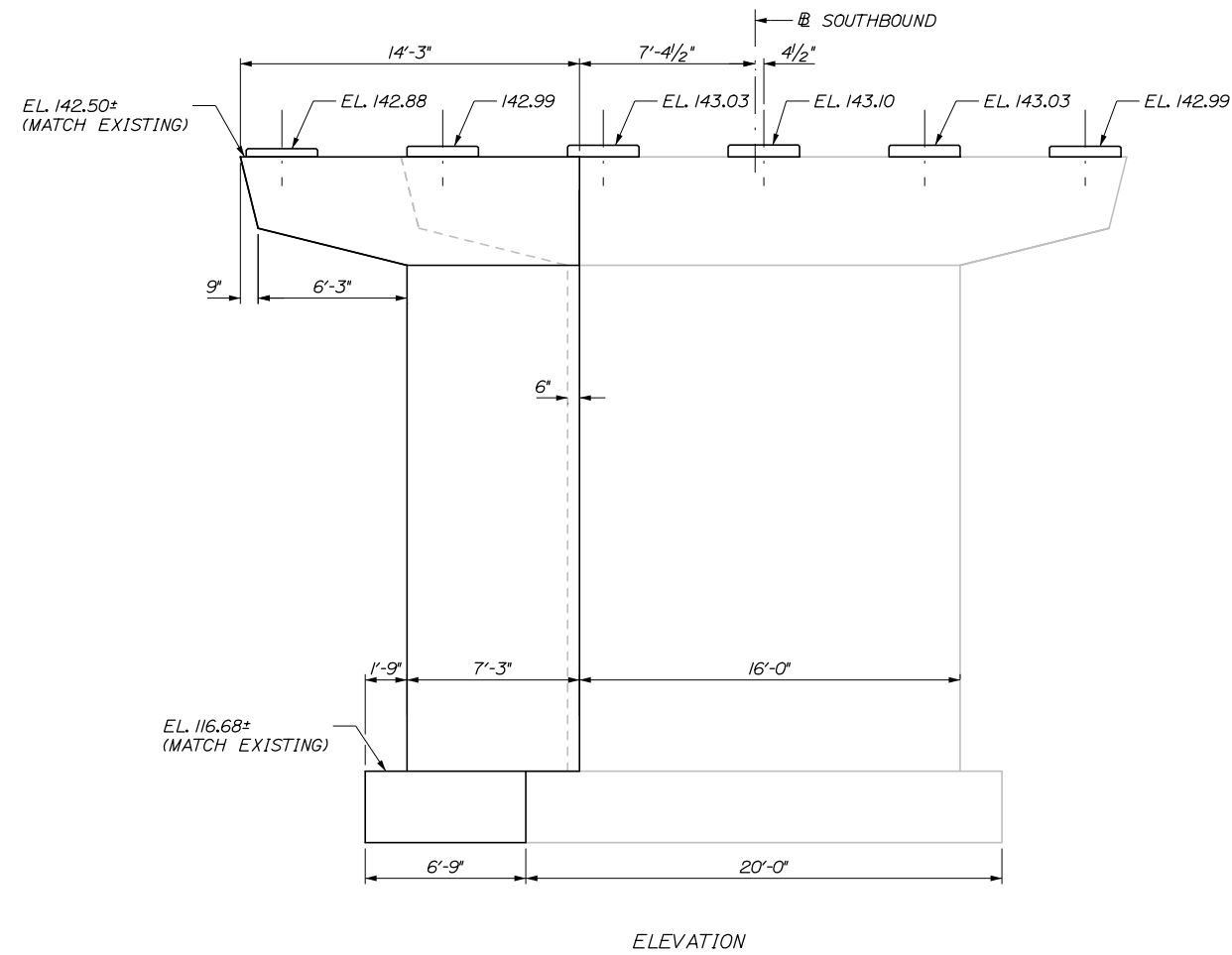
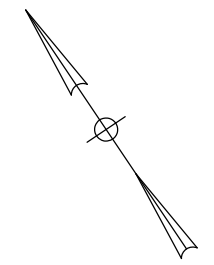
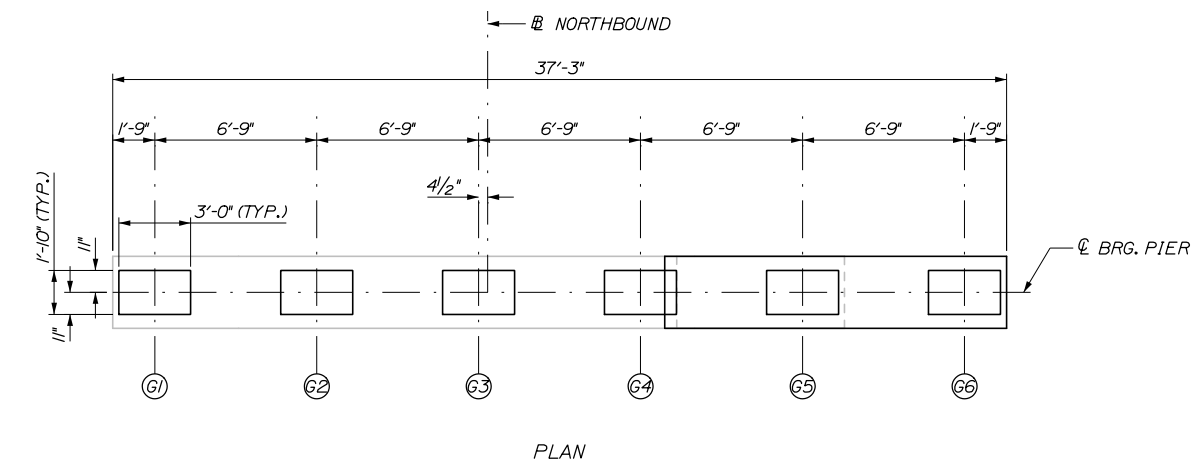
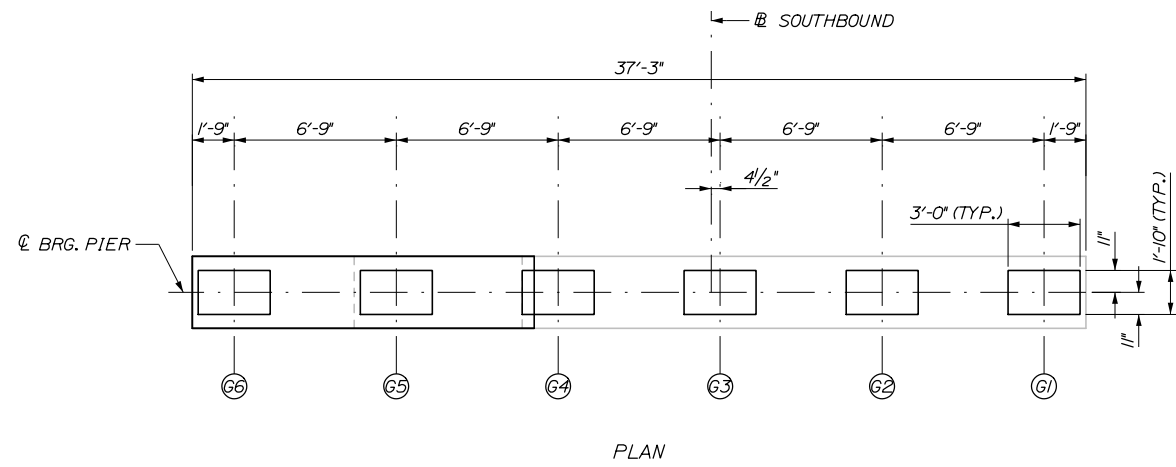
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 1
PLAN AND ELEVATION

SHEET NUMBER: S-28
CONTRACT: 2018.15
64 OF 115

Date: 7/27/2018

Filename: 065_Pier 2_Plan and Elevation.dgn



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

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

NOTES:
 1. EXISTING FOUNDATIONS ARE BELIEVED TO BE FOUNDED ON CONCRETE SEALS DOWN TO BEDROCK. CONTRACTOR SHALL CONFIRM THAT THE SEAL CONCRETE BENEATH EXISTING FOOTING EXTENDS TO BEDROCK DURING CONSTRUCTION. IF SEAL CONCRETE DOES NOT EXTEND TO BEDROCK THE CONTRACTOR SHALL STOP CONSTRUCTION AND NOTIFY THE AUTHORITY.
 2. SEAL CONCRETE NOT SHOWN FOR CLARITY.

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

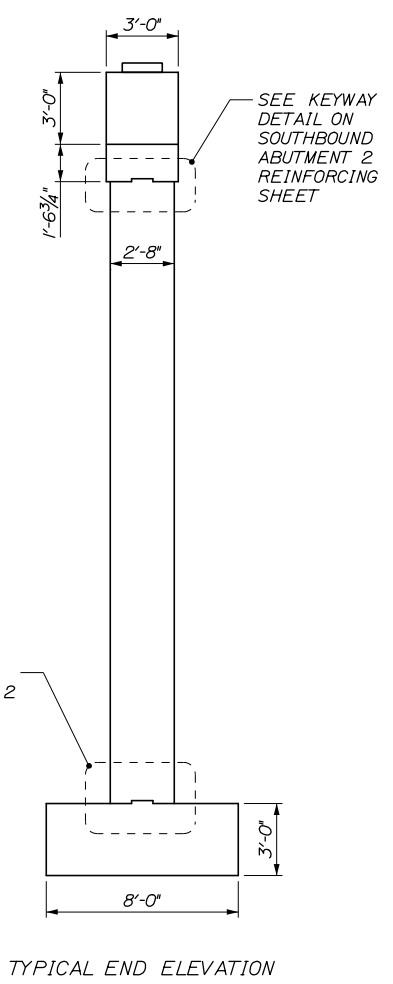
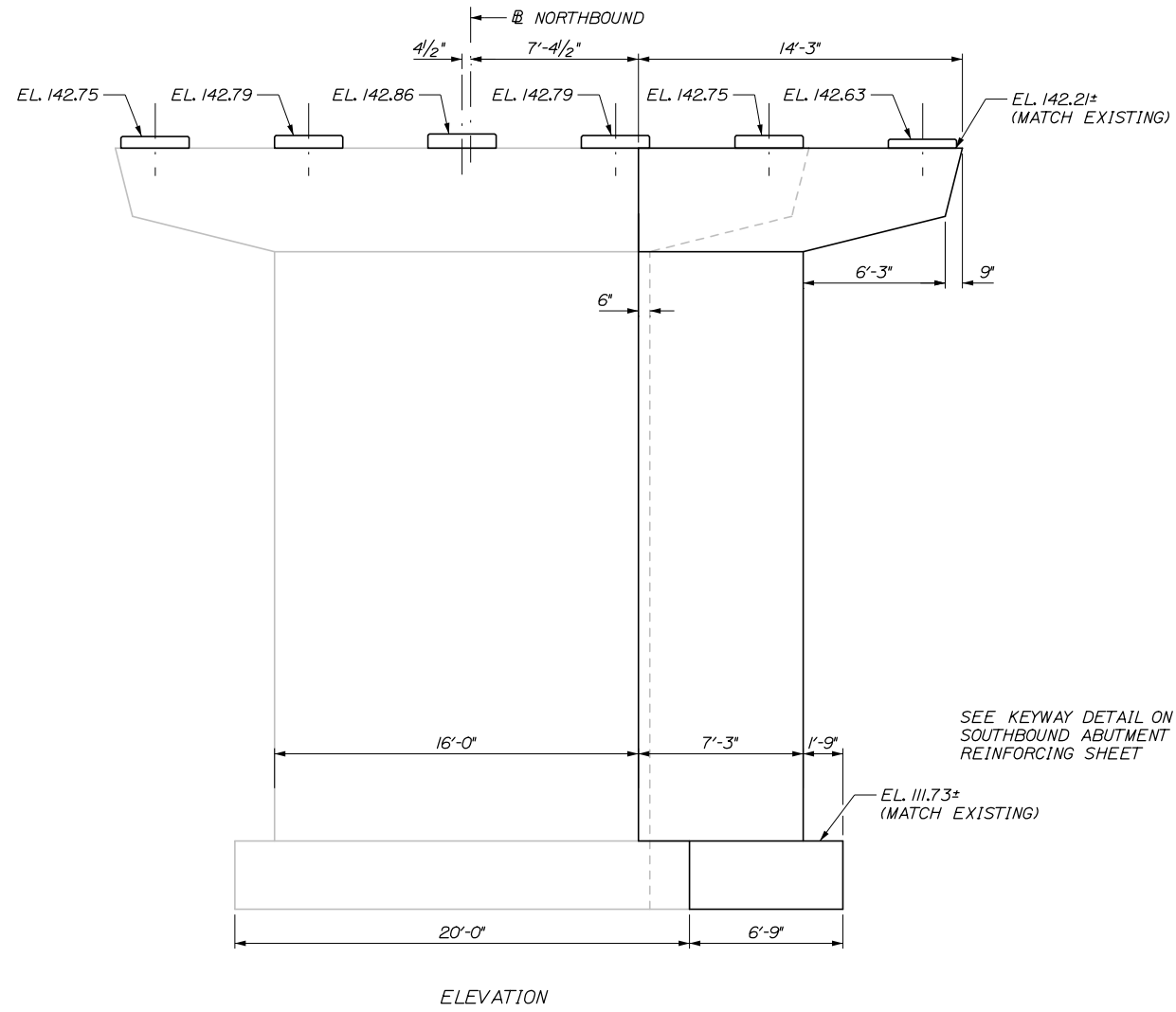
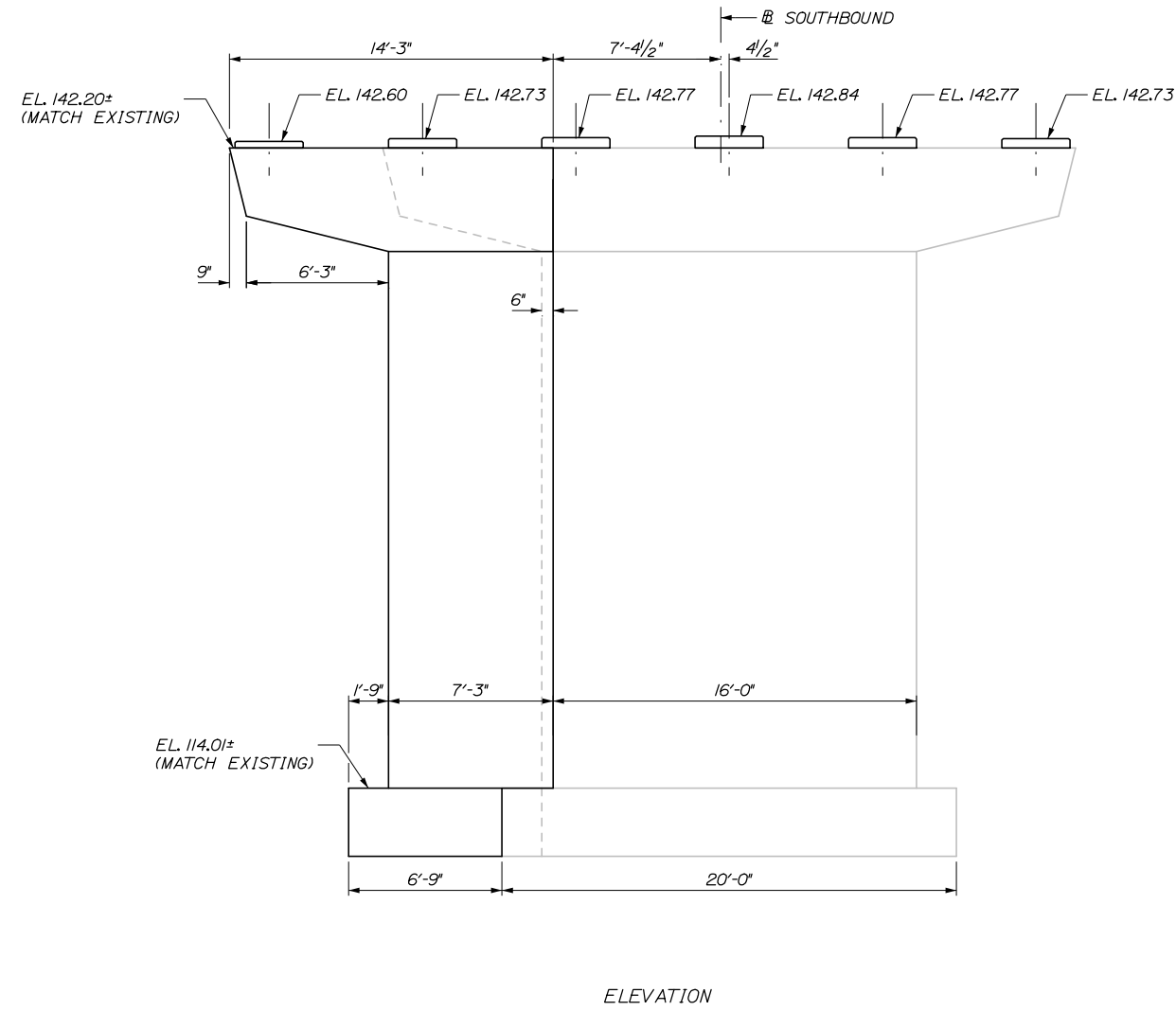
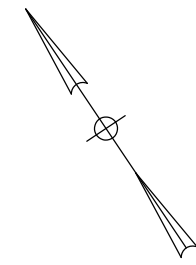
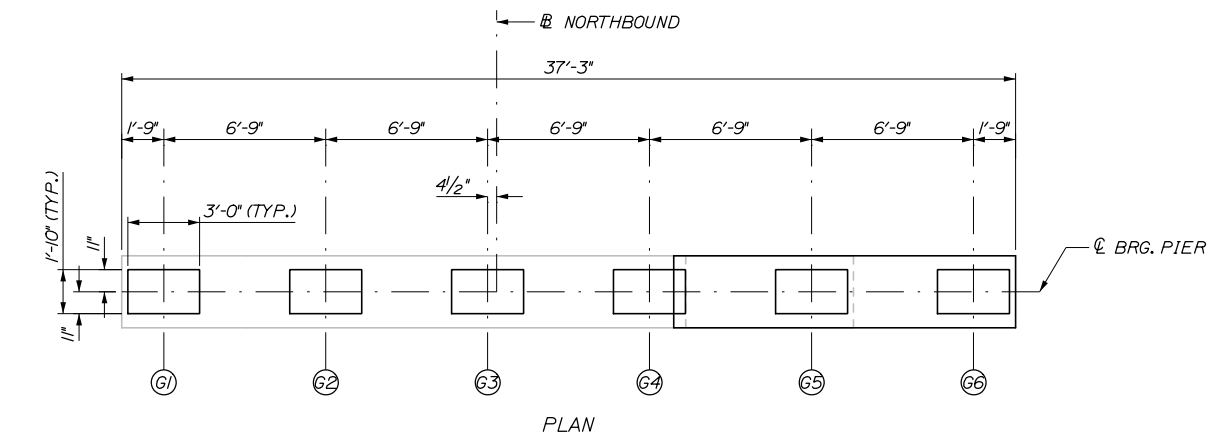
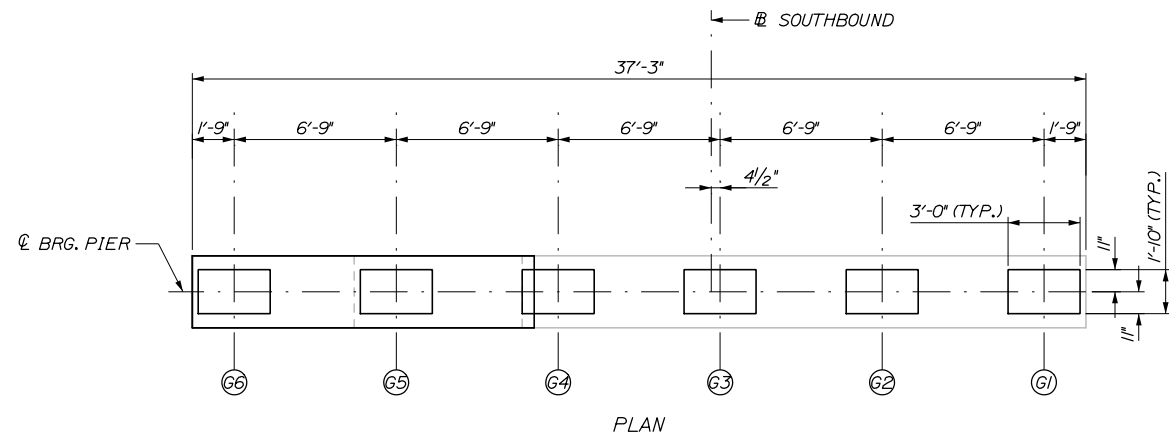
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 PIER 2
 PLAN AND ELEVATION

SHEET NUMBER: S-29
 CONTRACT: 2018.15
 65 OF 115

Date: 7/27/2018

Filename: 066_Pier 3 Plan and Elevation.dgn



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

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

NOTES:
 1. EXISTING FOUNDATIONS ARE BELIEVED TO BE FOUNDED ON CONCRETE SEALS DOWN TO BEDROCK. CONTRACTOR SHALL CONFIRM THAT THE SEAL CONCRETE BENEATH EXISTING FOOTING EXTENDS TO BEDROCK DURING CONSTRUCTION. IF SEAL CONCRETE DOES NOT EXTEND TO BEDROCK THE CONTRACTOR SHALL STOP CONSTRUCTION AND NOTIFY THE AUTHORITY.
 2. SEAL CONCRETE NOT SHOWN FOR CLARITY.

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
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	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 PIER 3
 PLAN AND ELEVATION

SHEET NUMBER: S-30
 CONTRACT: 2018.15
 66 OF 115

Date: 7/27/2018

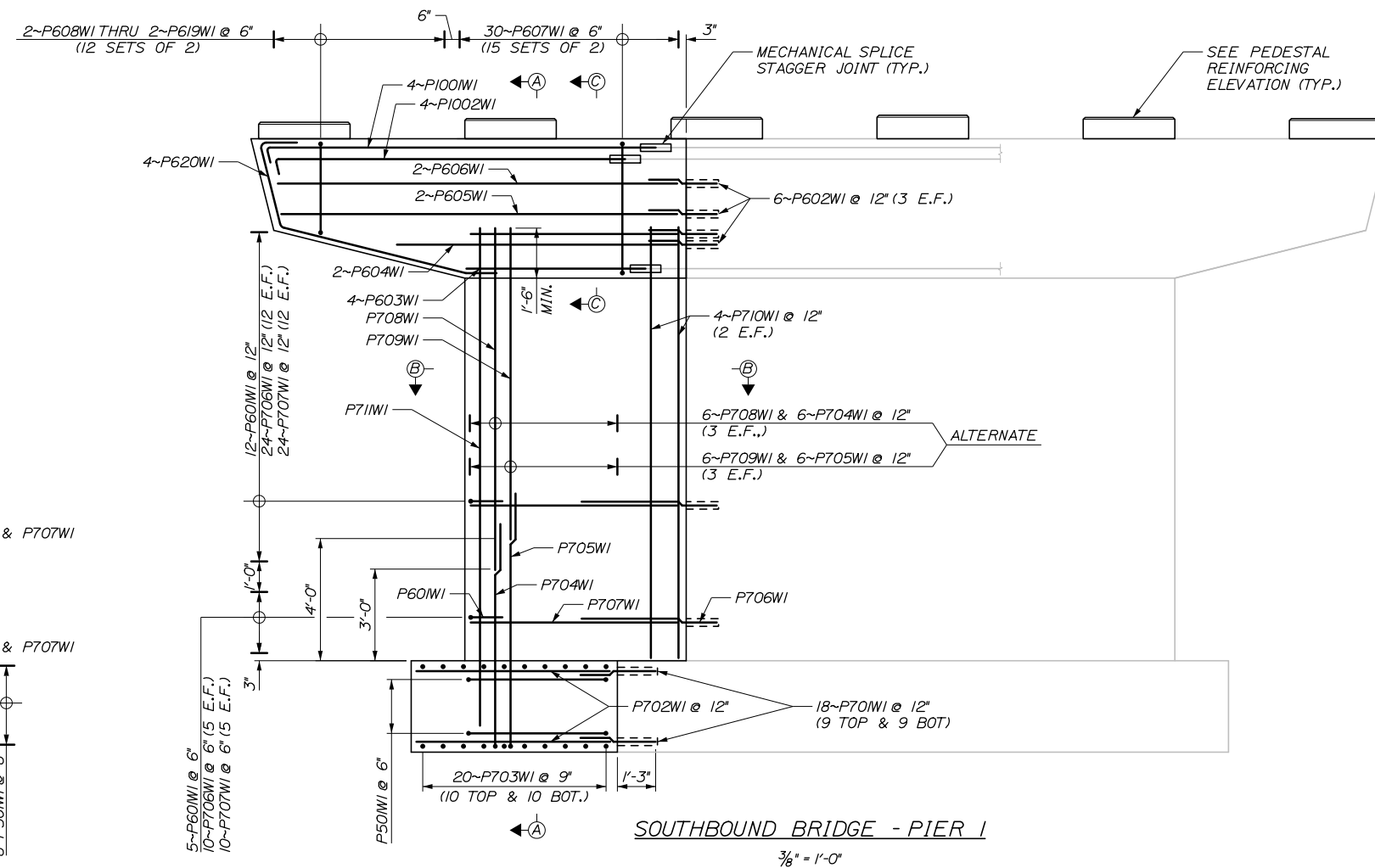
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NOTES:

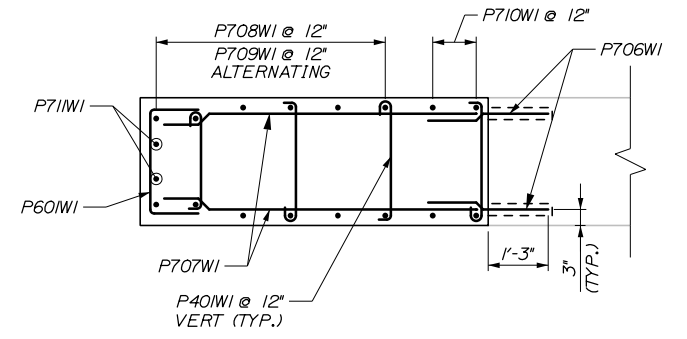
1. MINIMUM BAR LAP LENGTHS SHALL BE AS FOLLOWS:

- *6 BAR = 4'-4"
- *7 BAR = 5'-6"

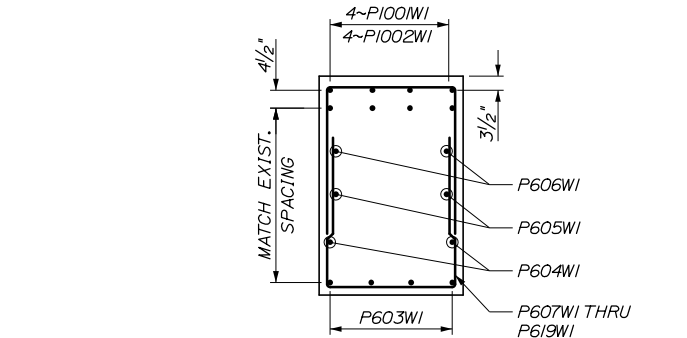
2. REINFORCING SHALL HAVE A 2" CLEAR COVER UNLESS NOTED OTHERWISE.



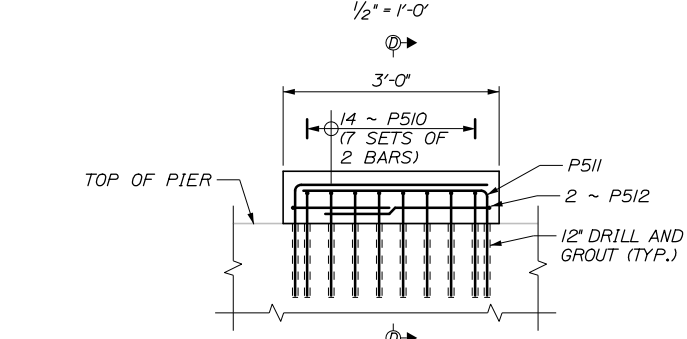
SECTION A-A
3/8" = 1'-0"



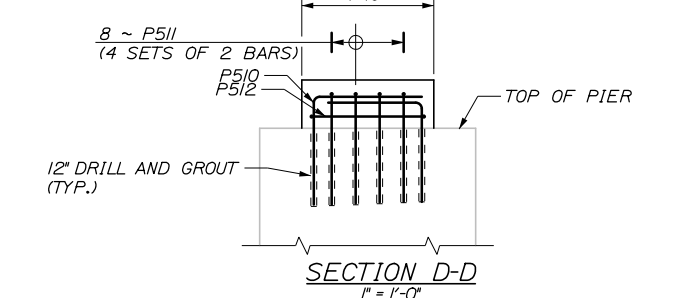
SECTION B-B
1/2" = 1'-0"



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



PIER PEDESTAL REINFORCING ELEVATION
1" = 1'-0"



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

PEDESTAL REINFORCING NOTES:
1. NORTHBOUND AND SOUTHBOUND PIER PEDESTAL REINFORCING W1, W2, E1, E2 ALL SIMILAR.
2. DRILL AND GROUT APPLICABLE FOR EXISTING SEAT ONLY.

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18		KEB	07\18
	ERB	07\18			
			In Charge of		

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**THE GOLD STAR
MEMORIAL HIGHWAY**

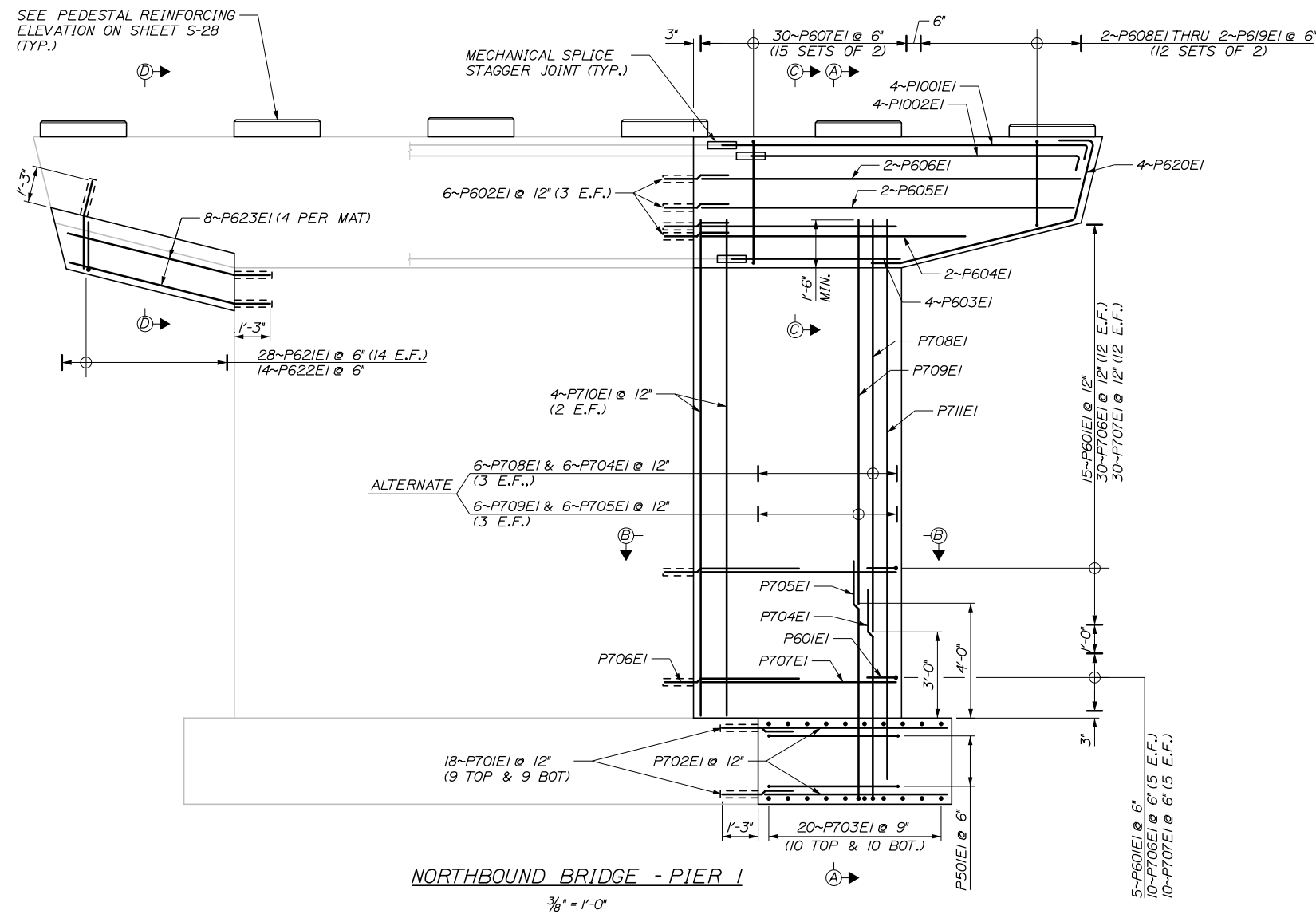
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 1 SOUTHBOUND
REINFORCING

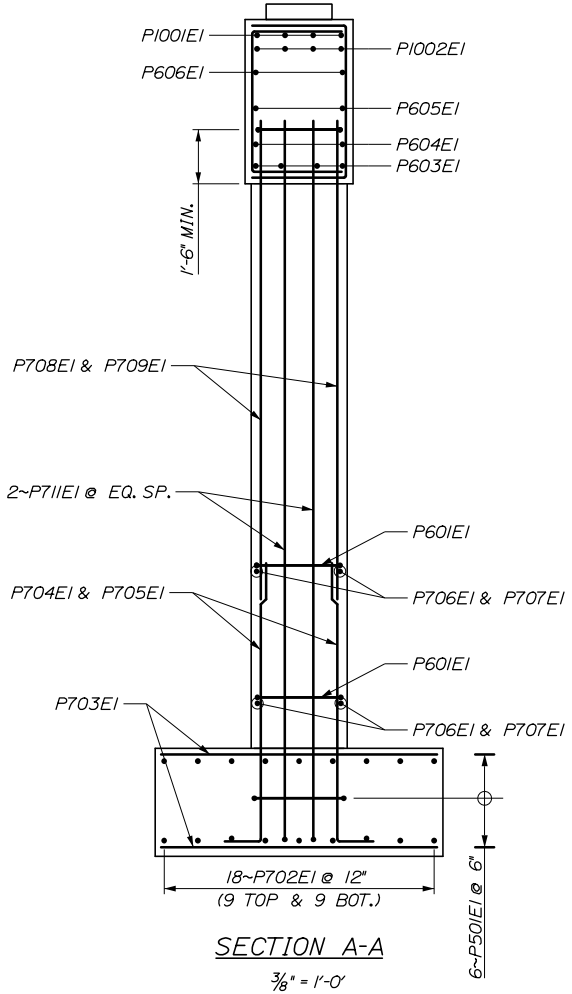
SHEET NUMBER: S-31
CONTRACT: 2018.15
67 OF 115

Date: 7/27/2018

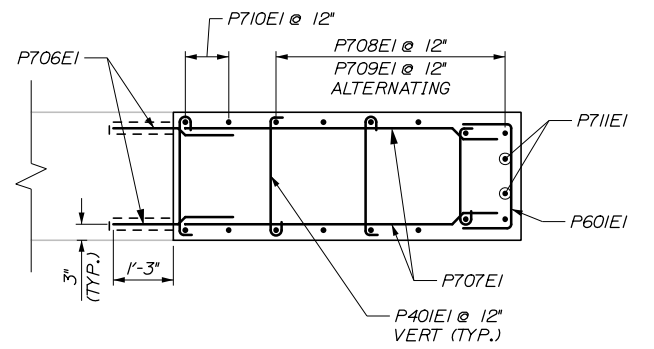
Filename: 068_Pier 1 Reinforcing_NB.dgn



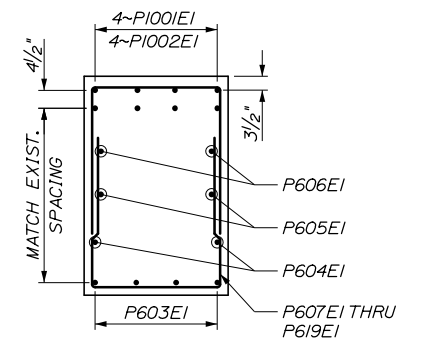
NORTHBOUND BRIDGE - PIER 1
3/8" = 1'-0"



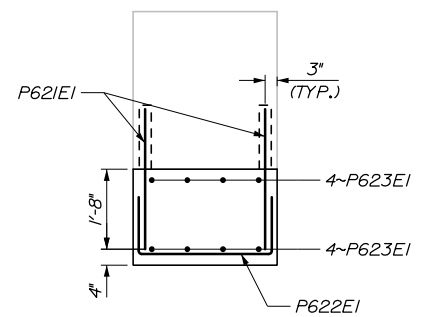
SECTION A-A
3/8" = 1'-0"



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



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



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

NOTES:

1. FOR PIER PEDESTAL REINFORCING DETAILS AND BAR LAP LENGTHS SEE PIER 1 SOUTHBOUND REINFORCING.

Scale:		Designed by:	
No.	Revision	By	Date

HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	HJW 07\18		Checked	KEB 07\18
	Drawn	ERB 07\18		In Charge of	RAL 07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

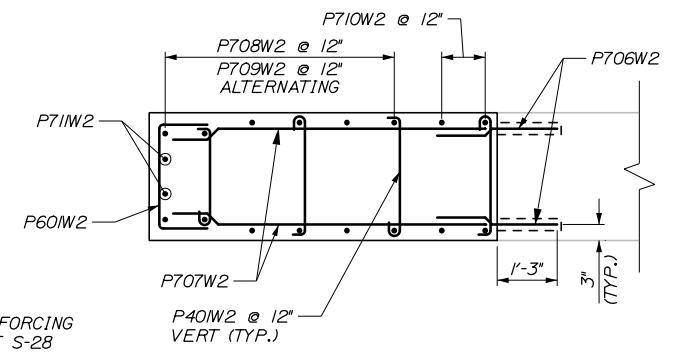
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 1 NORTHBOUND
REINFORCING

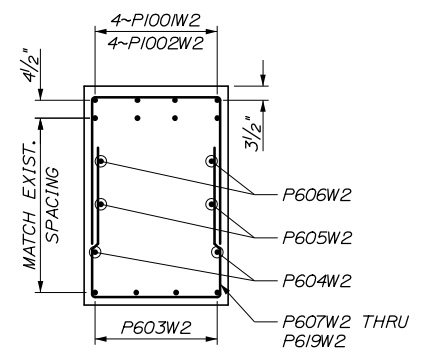
SHEET NUMBER: S-32
CONTRACT: 2018.15
68 OF 115

Date: 7/27/2018

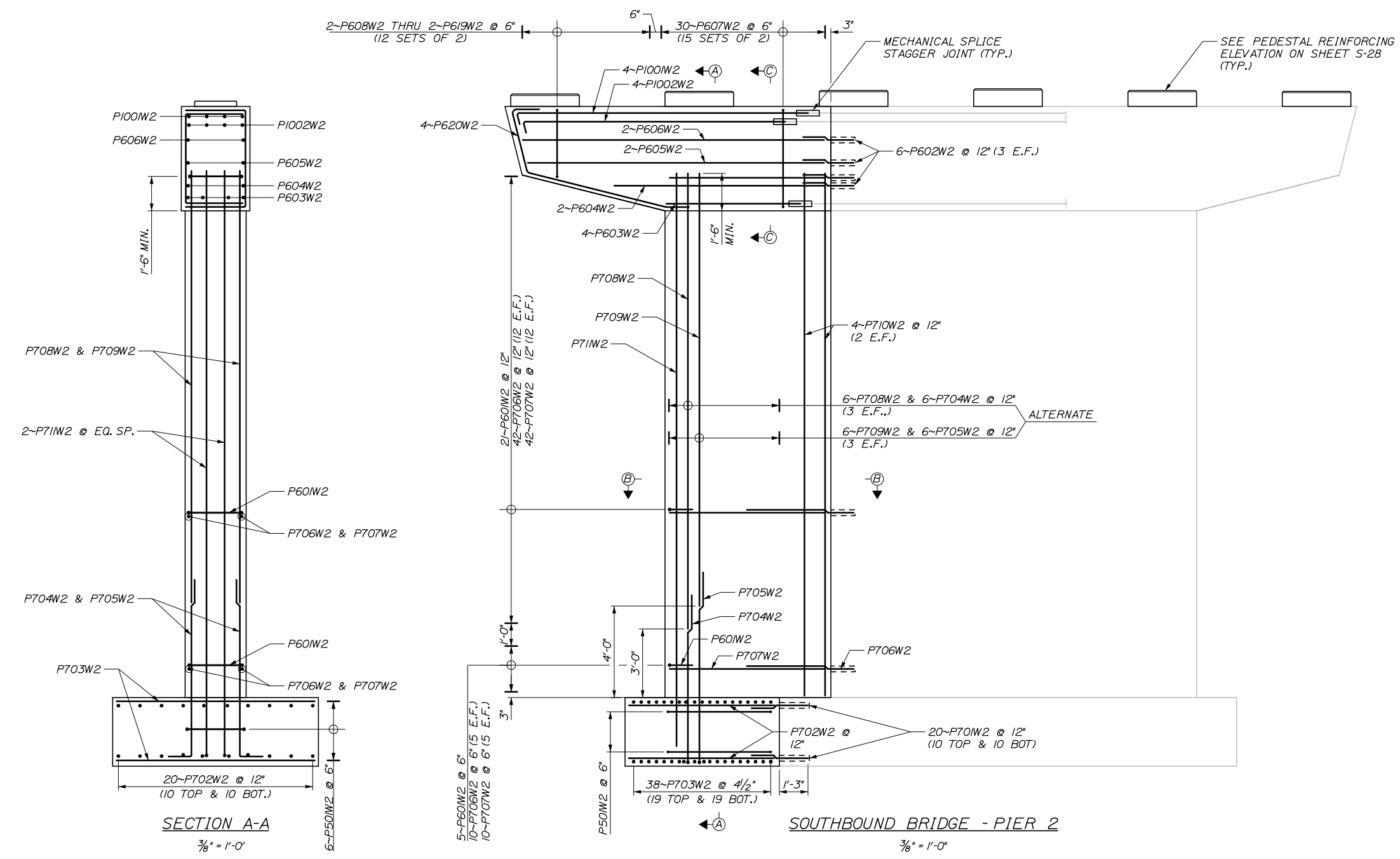
Filename: 069_Pier 2_Reinforcing_SB.dgn



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



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



SECTION A-A
3/8" = 1'-0"

SOUTHBOUND BRIDGE - PIER 2
3/8" = 1'-0"

NOTES:

1. FOR PIER PEDESTAL REINFORCING DETAILS AND BAR LAP LENGTHS SEE PIER 1 SOUTHBOUND REINFORCING.

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18	Checked	KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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

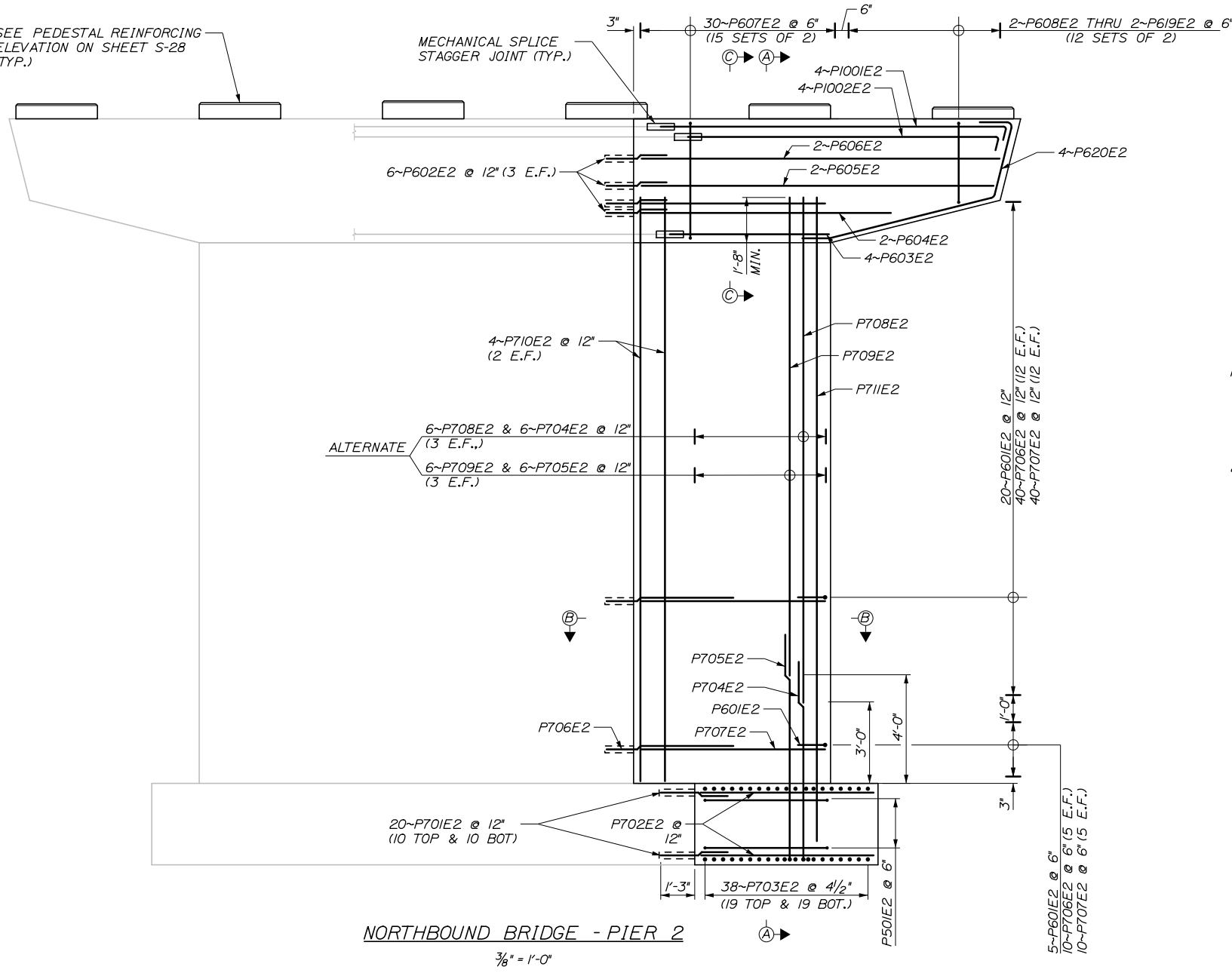
BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 2 SOUTHBOUND
REINFORCING

SHEET NUMBER: S-33
CONTRACT: 2018.15
9 OF 115

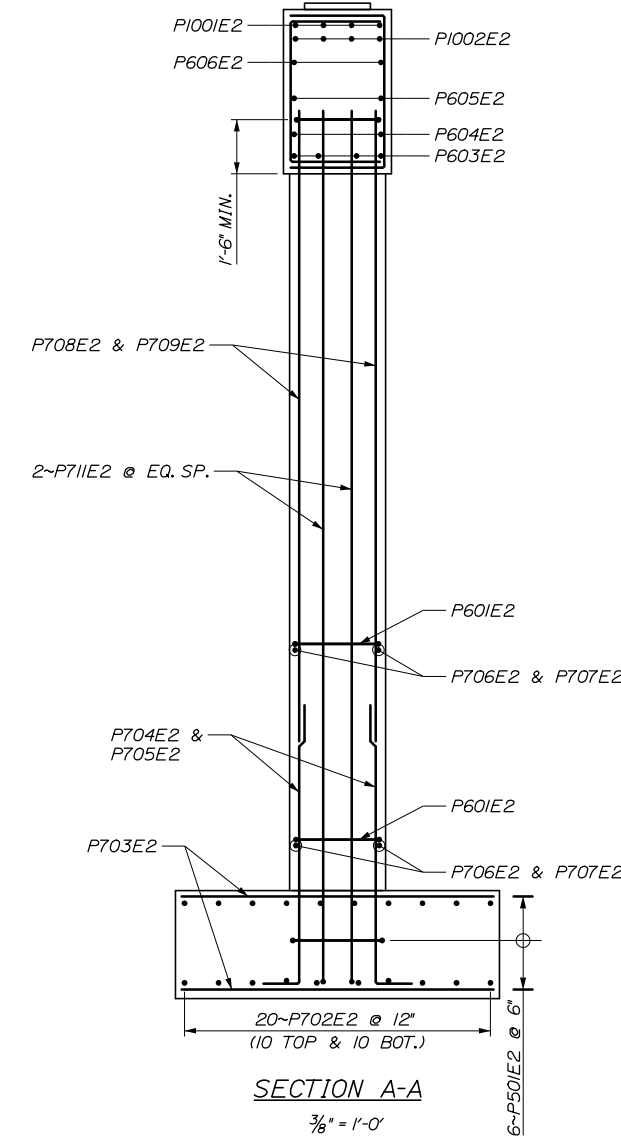
Date: 7/27/2018

SEE PEDESTAL REINFORCING ELEVATION ON SHEET S-28 (TYP.)

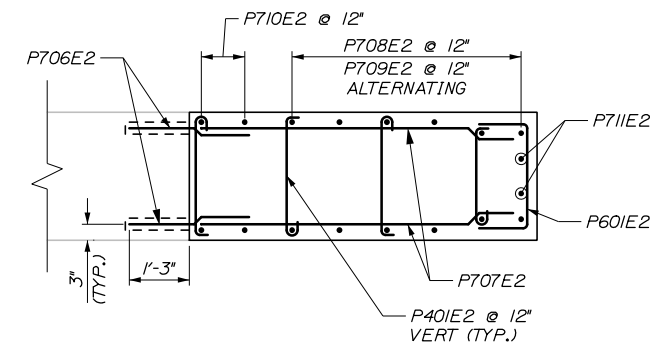
MECHANICAL SPLICE STAGGER JOINT (TYP.)



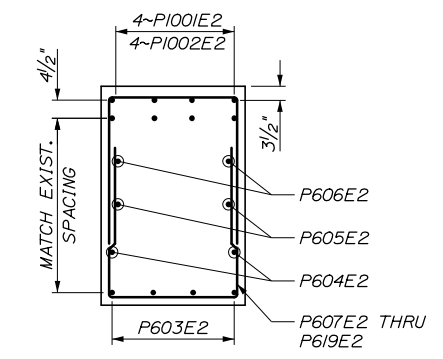
NORTHBOUND BRIDGE - PIER 2
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"



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



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

NOTES:

1. FOR PIER PEDESTAL REINFORCING DETAILS AND BAR LAP LENGTHS SEE PIER 1 SOUTHBOUND REINFORCING.

Filename: 070_Pier 2_Reinforcing_NB.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
	By	Date	By
	Designed	HJW 07\18	Checked
			KEB 07\18
	Drawn	ERB 07\18	In Charge of
			RAL 07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

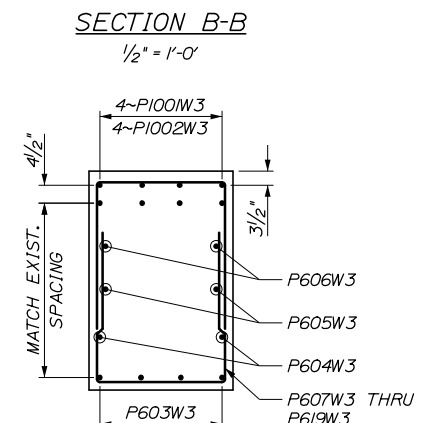
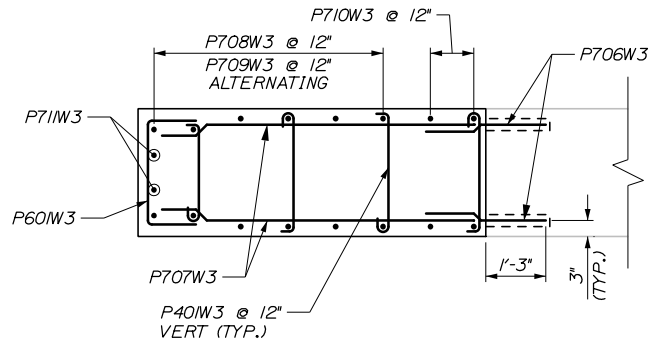
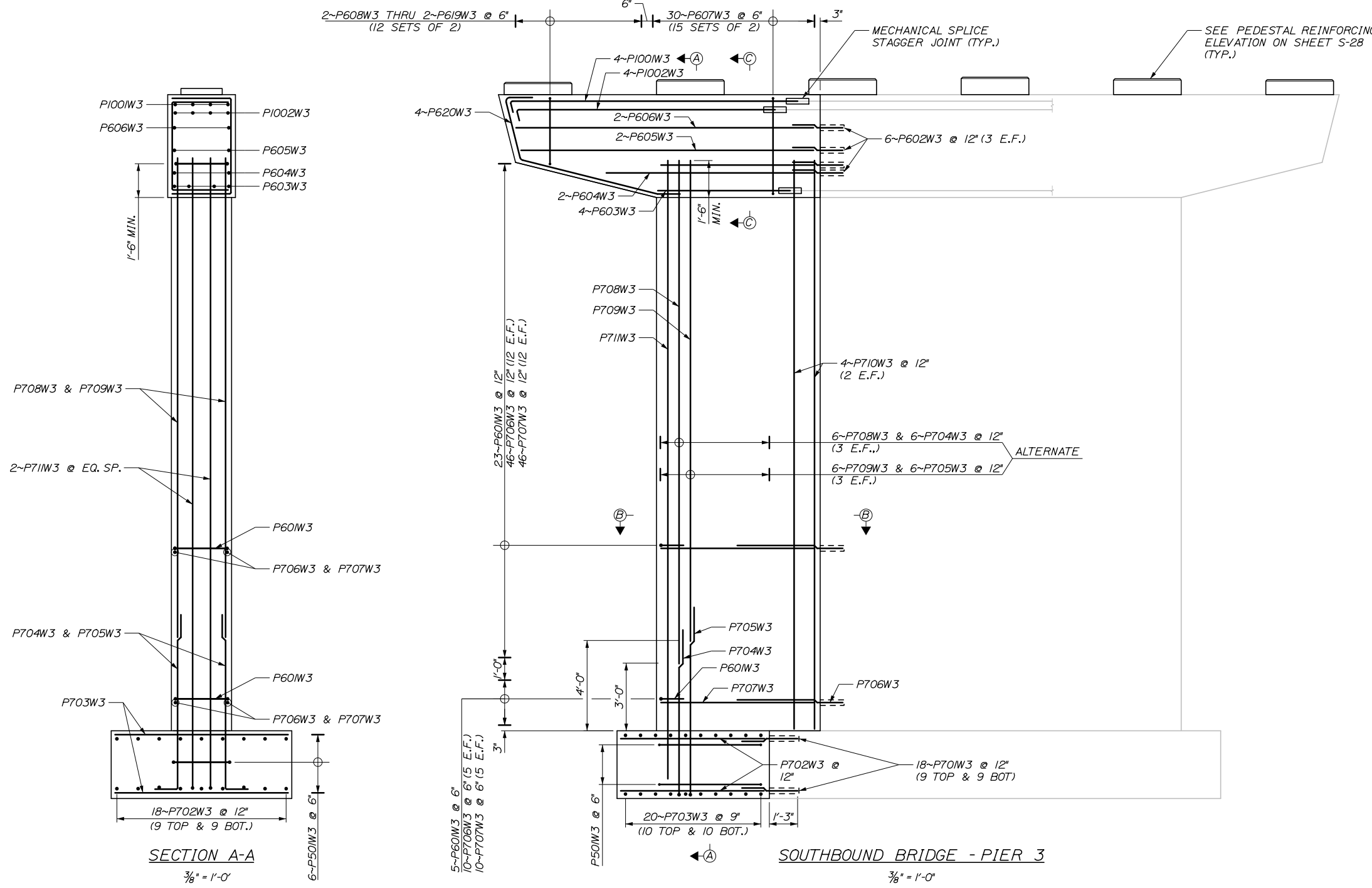
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 2 NORTHBOUND REINFORCING

SHEET NUMBER: S-34
CONTRACT: 2018.15
70 OF 115

Date: 7/27/2018

Filename: 071_Pier 3 Reinforcing SB.dgn



NOTES:

1. FOR PIER PEDESTAL REINFORCING DETAILS AND BAR LAP LENGTHS SEE PIER 1 SOUTHBOUND REINFORCING.

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18		KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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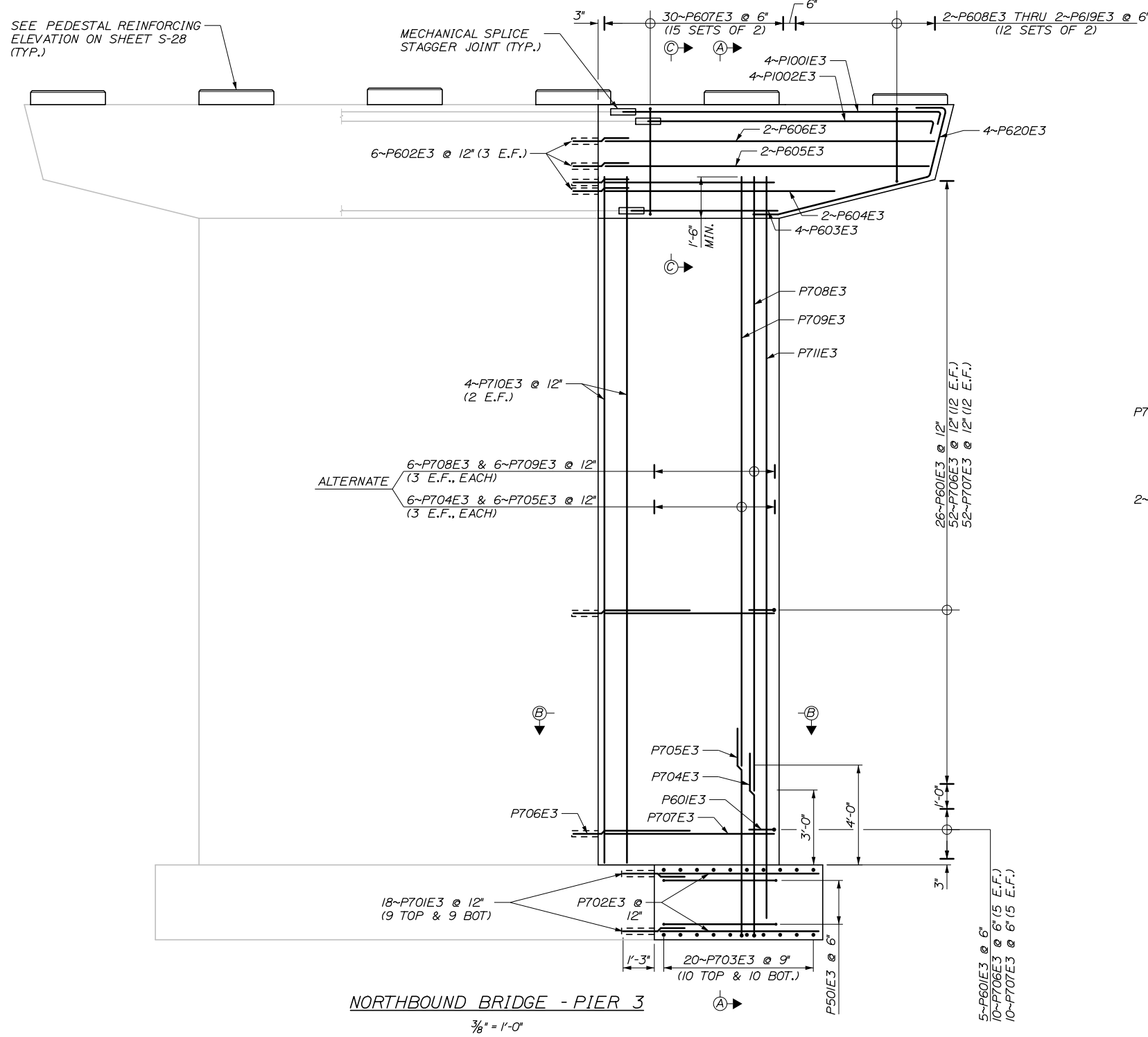
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

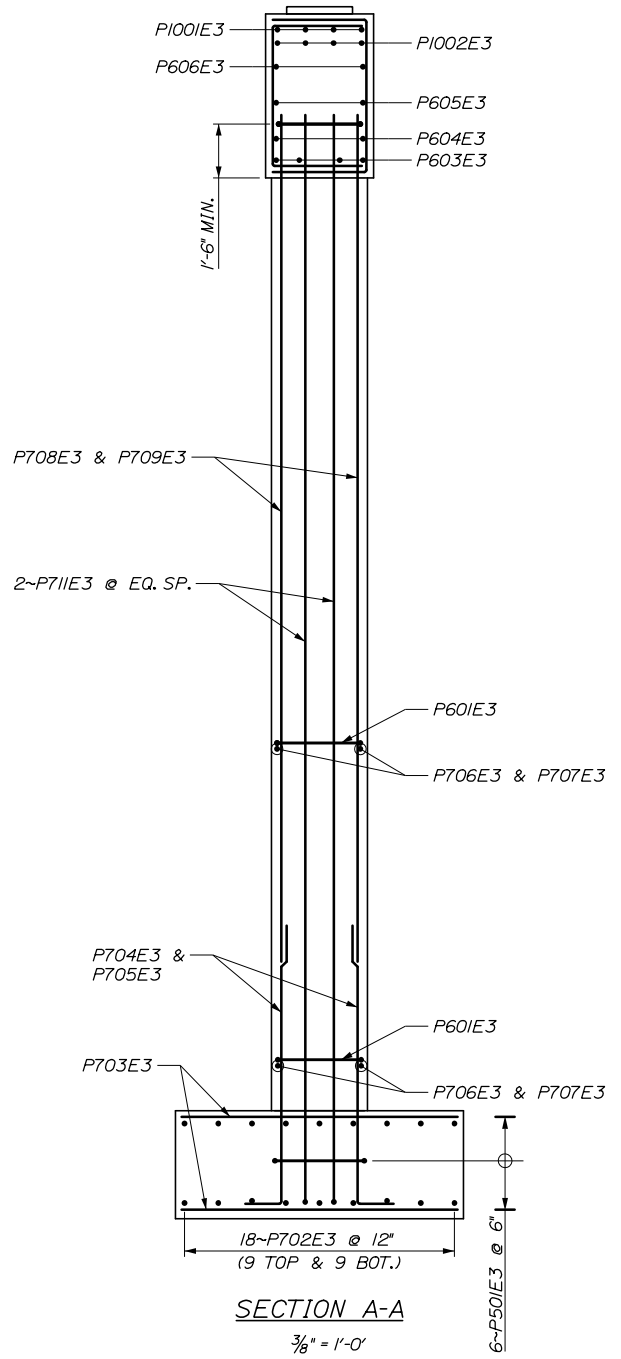
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 PIER 3 SOUTHBOUND
 REINFORCING

SHEET NUMBER: S-35
 CONTRACT: 2018.15
 71 OF 115

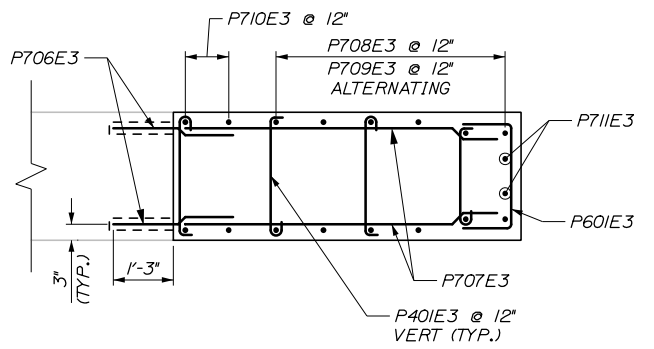
Date: 7/27/2018



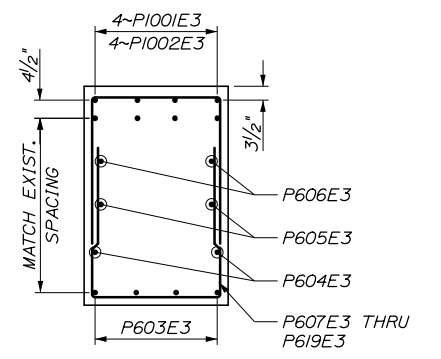
NORTHBOUND BRIDGE - PIER 3
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"



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



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

NOTES:

1. FOR PIER PEDESTAL REINFORCING DETAILS AND BAR LAP LENGTHS SEE PIER 1 SOUTHBOUND REINFORCING.

Filename: 072_Pier 3 Reinforcing NB.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
	By	Date	By
	Designed	HJW 07\18	Checked
			KEB 07\18
	Drawn	ERB 07\18	In Charge of
			RAL 07\18

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MAINE TURNPIKE

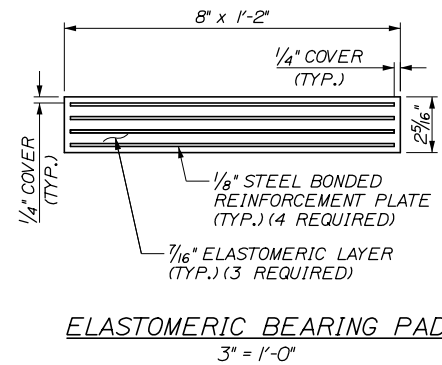
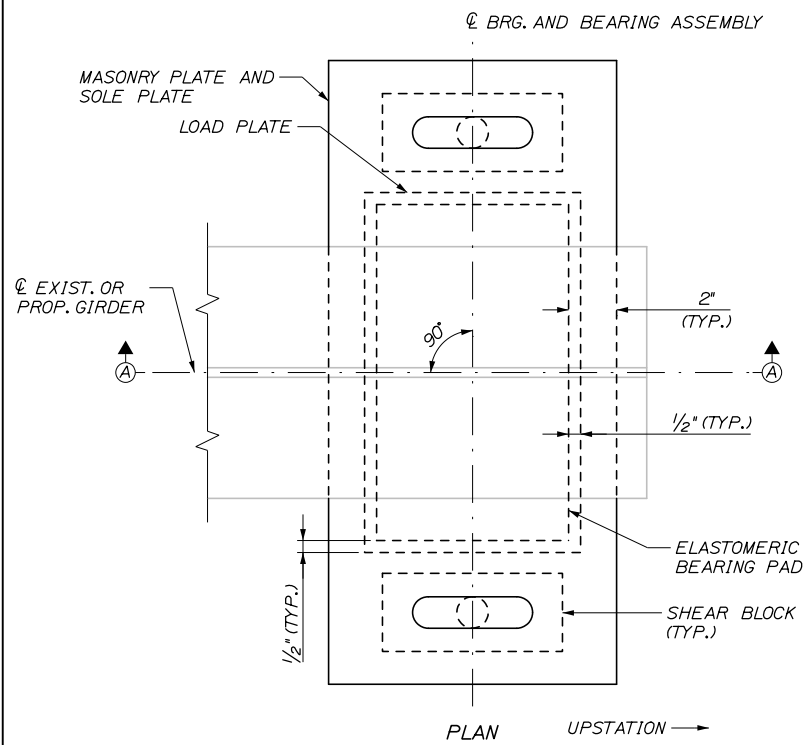
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
PIER 3 NORTHBOUND
REINFORCING

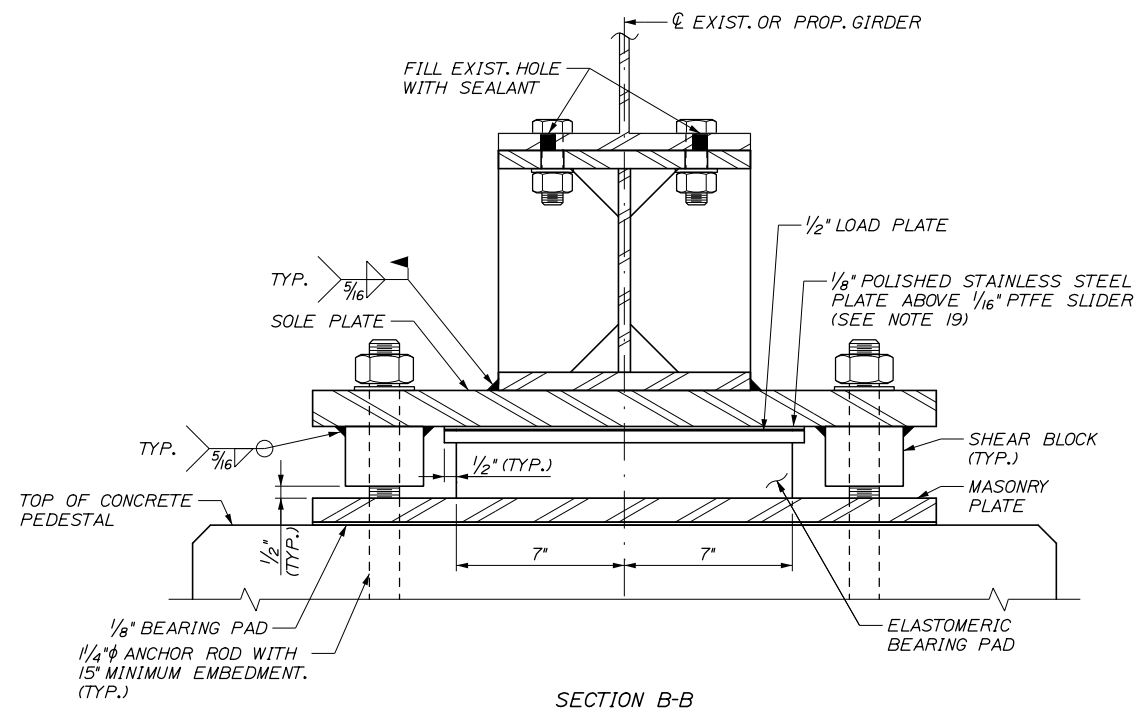
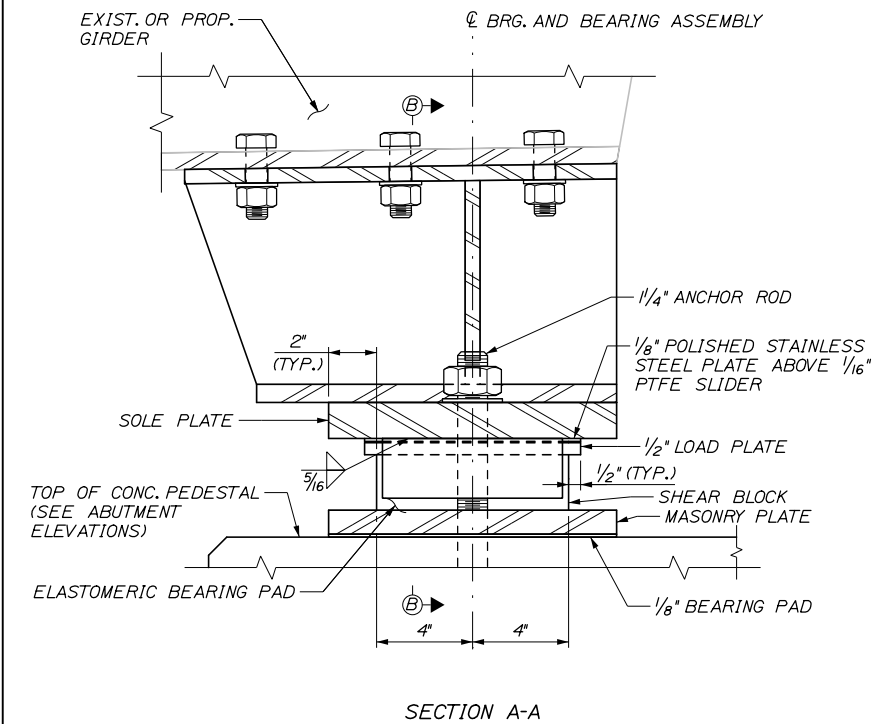
SHEET NUMBER: S-36
CONTRACT: 2018.15
72 OF 115

Date: 7/27/2018



BEARING NOTES:

1. ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE) WITH DUROMETER HARDNESS OF 50. THE SHEAR MODULUS OF THE ELASTOMER SHALL BE BETWEEN 95 AND 135 PSI.
2. SOLE PLATE, MASONRY PLATE AND SHEAR BLOCK SHALL BE AASHTO M270 GRADE 36, WASHERS SHALL BE AASHTO F436, NUTS SHALL BE AASHTO A563. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 AND A123 AS APPLICABLE.
3. CONTRACTOR SHALL RE-FINISH GALVANIZING AND GIRDER PAINT, AS DIRECTED BY ENGINEER, IN ACCORDANCE WITH ASTM A780 AFTER WELDING.
4. BEARINGS SHALL MEET THE REQUIREMENTS OF THE AASHTO M251 SPECIFICATIONS.
5. BEARING ASSEMBLIES FOR EXISTING GIRDERS SHOWN. BEARING ASSEMBLIES FOR PROPOSED GIRDER SIMILAR.
6. VULCANIZING OF THE ELASTOMER TO THE SOLE PLATE OR LOAD PLATE, AND MASONRY PLATE, SHALL BE DONE DURING THE PRIMARY MOLD PROCESS.
7. ANCHOR RODS SHALL BE SET BEFORE INSTALLING STRUCTURAL STEEL.
8. UPSET THE THREADS ON THE ANCHOR RODS AFTER ASSEMBLY.
9. BEARINGS SHALL BE COVERED DURING TRANSIT.
10. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND SHALL BE VISIBLE AFTER THE BEARING IS INSTALLED.
11. ALL PRECAUTIONS NECESSARY SHALL BE TAKEN TO PROTECT BEARING COMPONENTS FROM FIELD WELD FLASH AND SPATTER. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE OF STEEL ADJACENT TO THE ELASTOMER TO 200°F THROUGH USE OF TEMPERATURE INDICATING CRAYONS OR OTHER SUITABLE MEANS.
12. BEARING PADS WERE DESIGNED USING "METHOD A".
13. ALL STEEL REINFORCEMENT PLATES SHALL MEET THE REQUIREMENTS OF ASTM A36 UNLESS OTHERWISE NOTED AND SHALL BE DEBURRED PRIOR TO MOLDING THE BEARING.
14. ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55, AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.
15. ANCHOR ROD EMBEDMENT SHALL BE MEASURED FROM TOP OF PIER CAP OR ABUTMENT SEAT, NOT INCLUDING DEPTH OF PEDESTAL.
16. THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 30°F AND 90°F.
17. CONTRACTOR SHALL AVOID DAMAGING EXISTING REINFORCING DURING INSTALLATION OF ANCHOR RODS.
18. FOR BOLSTER DETAILS SEE S-42.
19. PTFE SLIDER SHALL BE RECESSED 1/4" FROM THE EDGE OF THE LOAD PLATE ON ALL EDGES.



EXPANSION BEARING ASSEMBLY - ABUTMENT 1 & 2
(ABUTMENT 2 SHOWN, ABUTMENT 1 SIMILAR)
(24 REQUIRED)
3" = 1'-0"

BEARING DESIGN CRITERIA			
CRITERIA	ABUTMENTS	PIERS 1 & 3	PIER 2
UNFACTORED DEAD LOAD	26 KIPS	80 KIPS	80 KIPS
UNFACTORED LIVE LOAD	52 KIPS	80 KIPS	81 KIPS
MAX. LONGITUDINAL DISPL.	1.18 INCHES	0.65 INCHES	0.00 INCHES

Filename: 073_Bearing Details 1.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

By	Date	By	Date
Designed HJW	07\18	Checked KEB	07\18
Drawn ERB	07\18	In Charge of RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

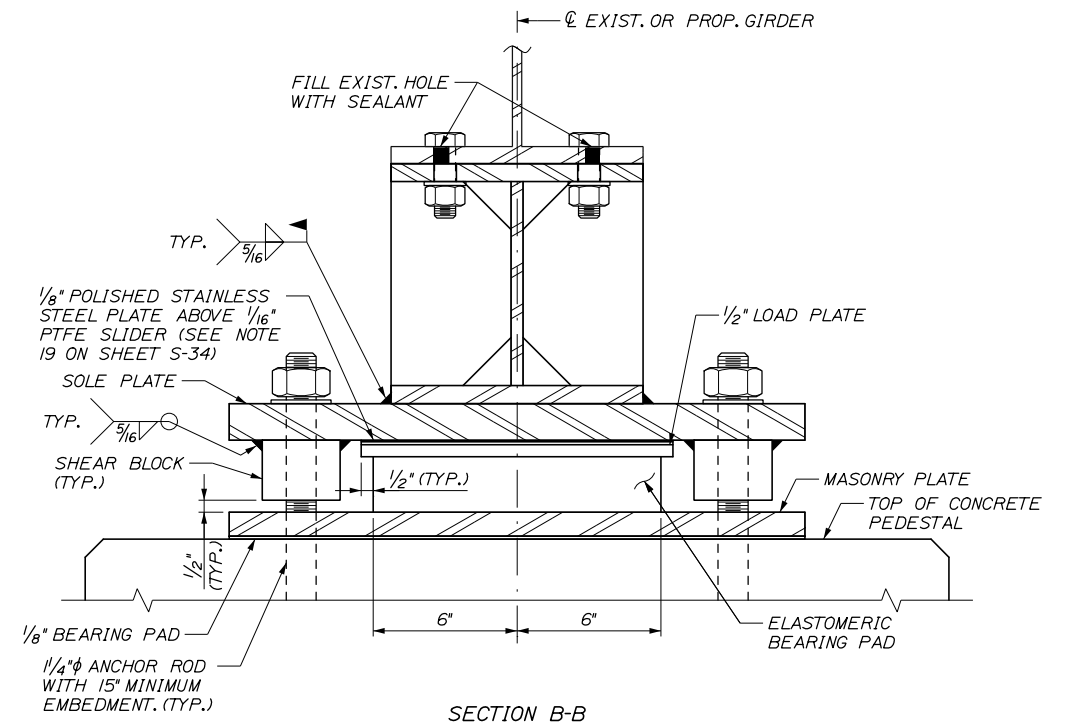
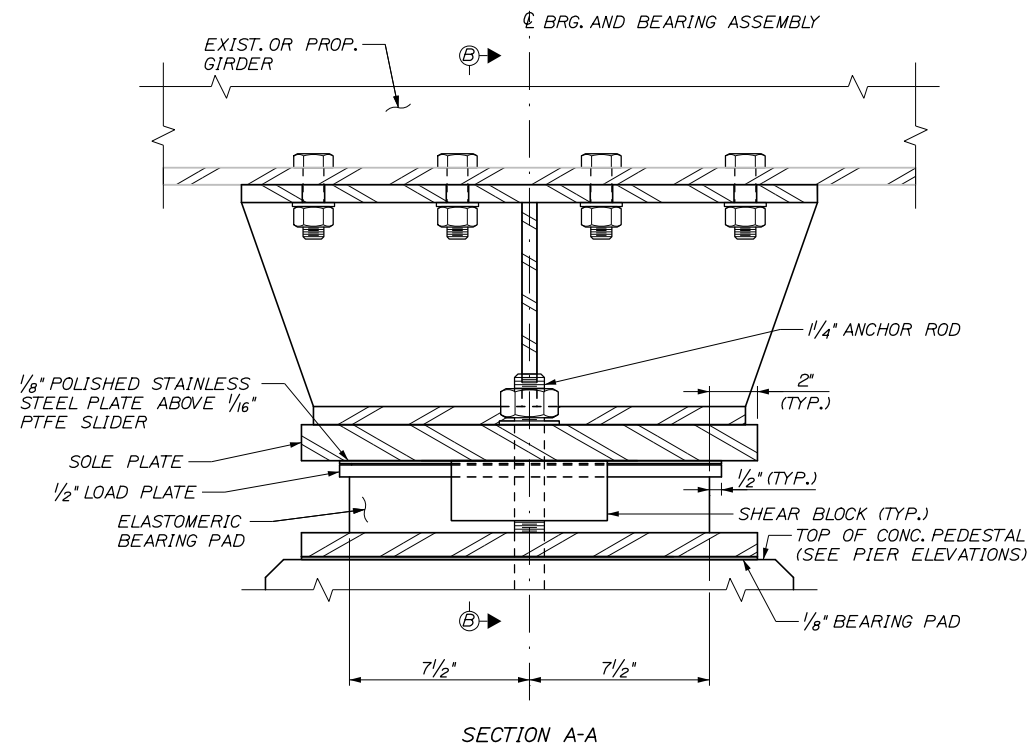
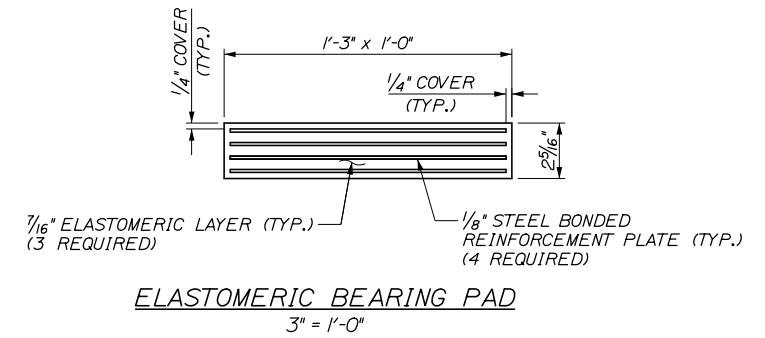
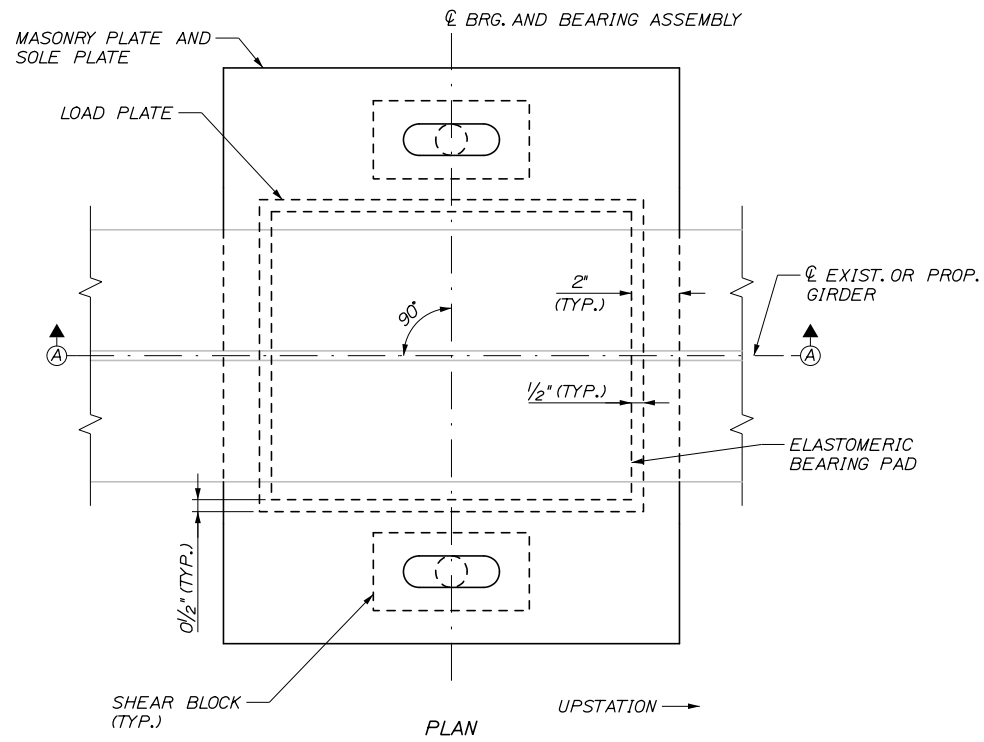
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

BEARING DETAILS I

SHEET NUMBER: S-37
CONTRACT: 2018.15
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Date: 7/27/2018



EXPANSION BEARING ASSEMBLY - PIERS 1 & 3
(24 REQUIRED)
3" = 1'-0"

Filename: 074_Bearing Details 2.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	HJW	07\18	Checked	KEB	07\18
	ERB	07\18	In Charge of	RAL	07\18

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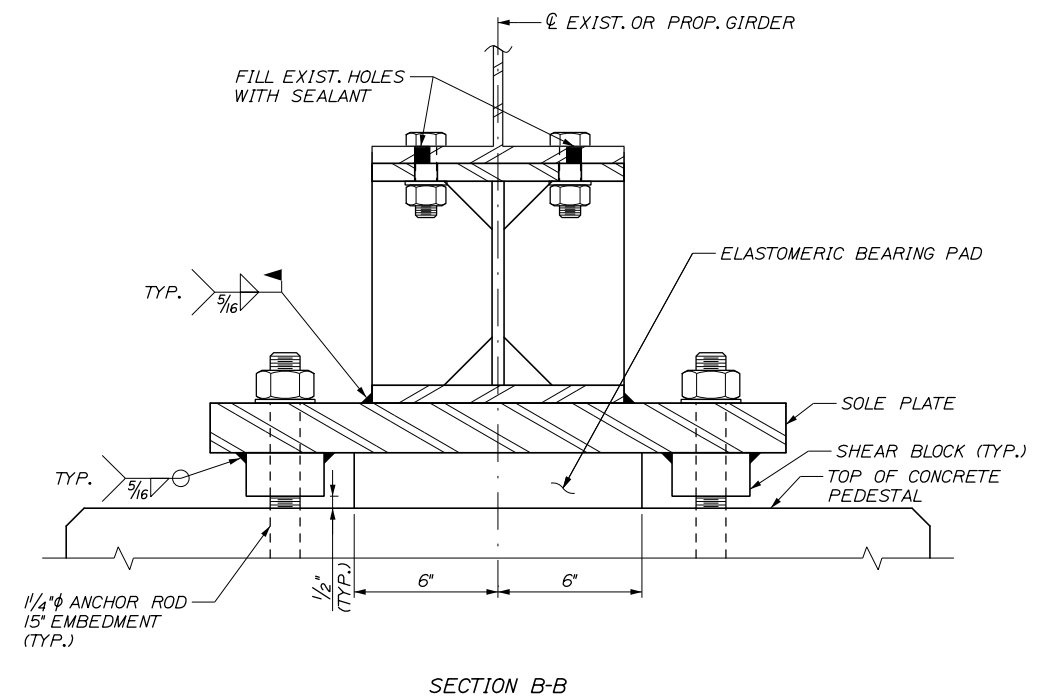
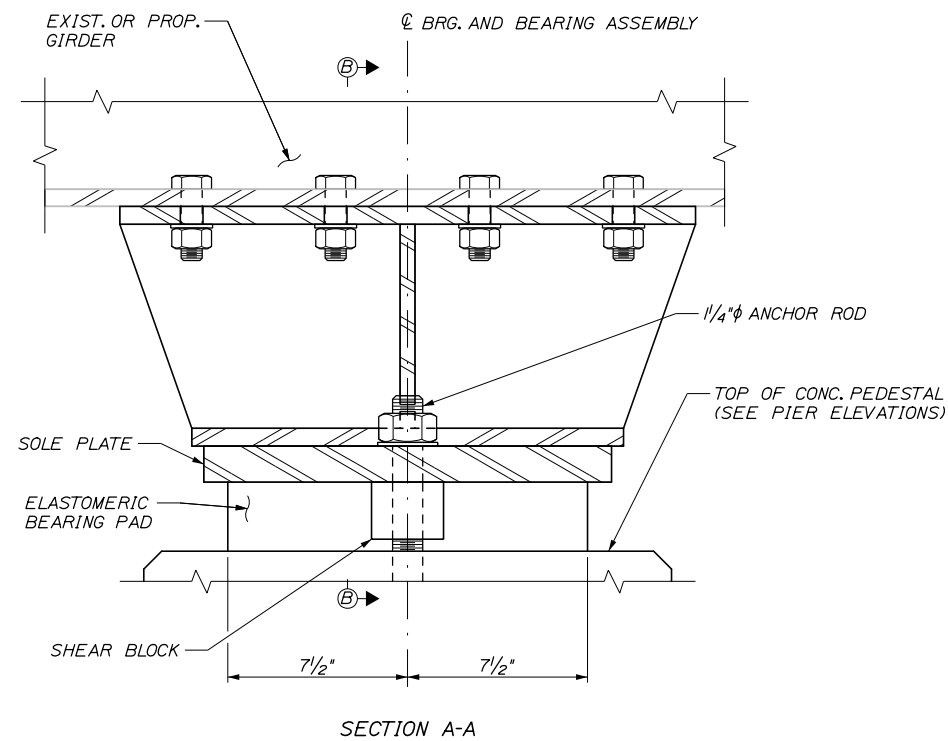
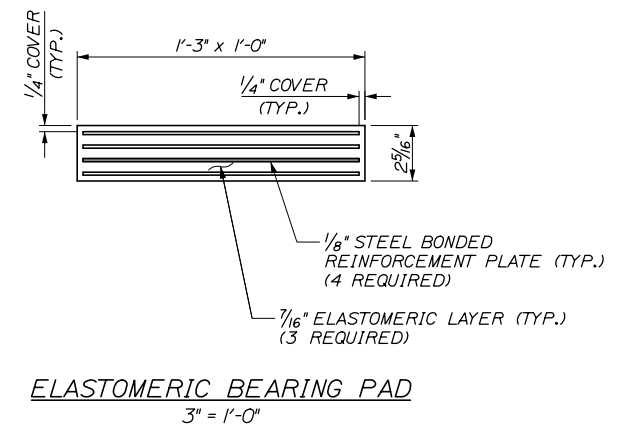
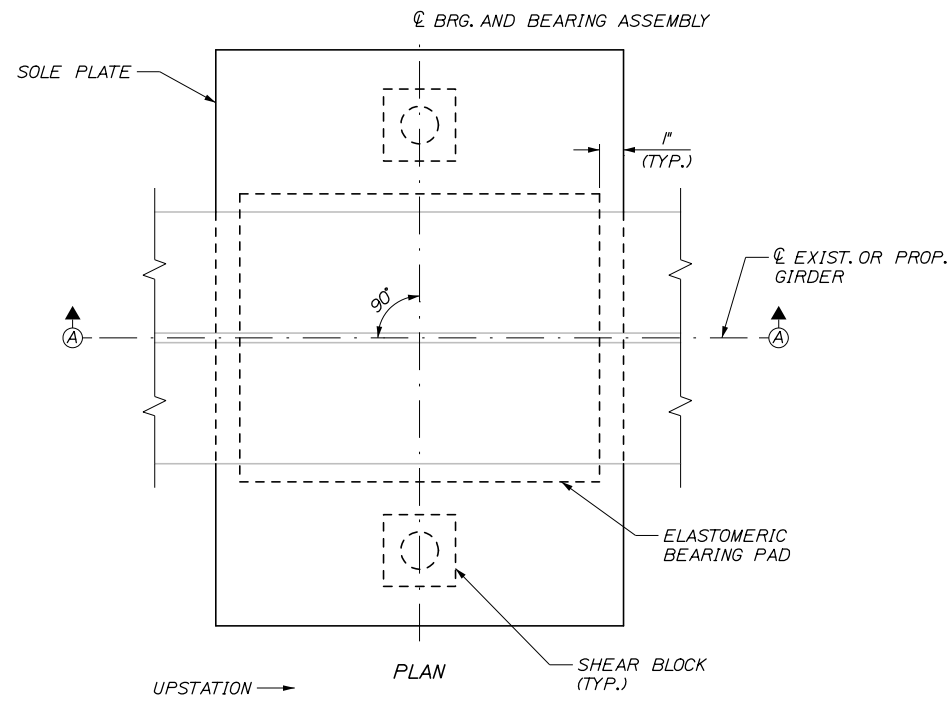
THE GOLD STAR
MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
BEARING DETAILS II

SHEET NUMBER: S-38
CONTRACT: 2018.15
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Date: 7/27/2018



EXPANSION BEARING ASSEMBLY - PIER 2
(12 REQUIRED)
3" = 1'-0"

Filename: 075_Bearing Details 3.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	HJW 07\18		Checked	KEB 07\18
	Drawn	ERB 07\18		In Charge of	RAL 07\18

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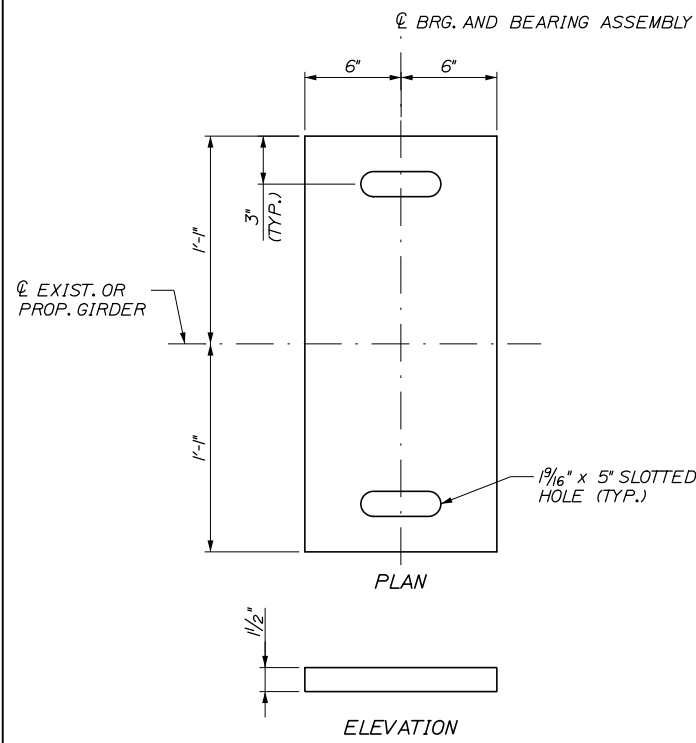
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

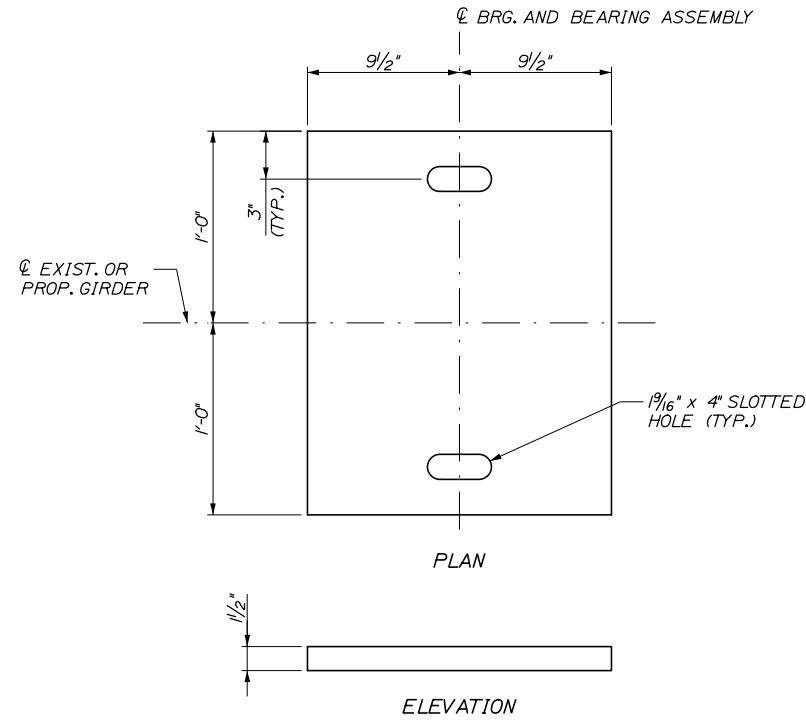
BEARING DETAILS III

SHEET NUMBER: S-39
CONTRACT: 2018.15
75 OF 115

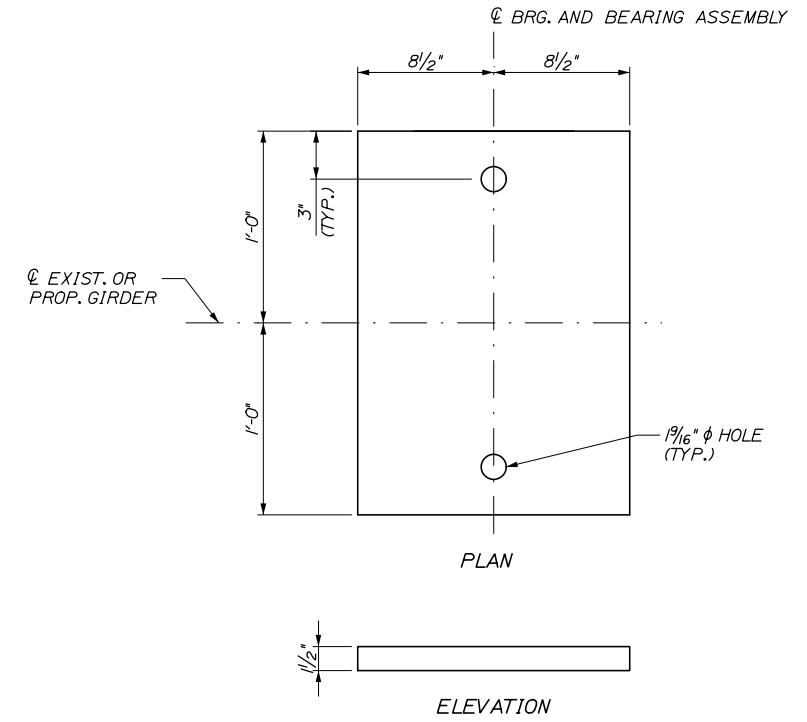
Date: 7/27/2018



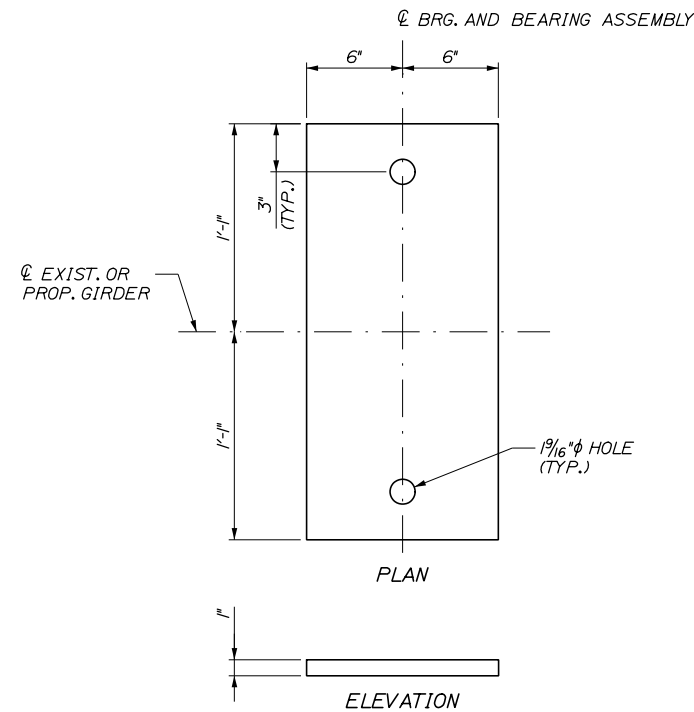
SOLE PLATE - DETAIL
(ABUTMENT)
3" = 1'-0"



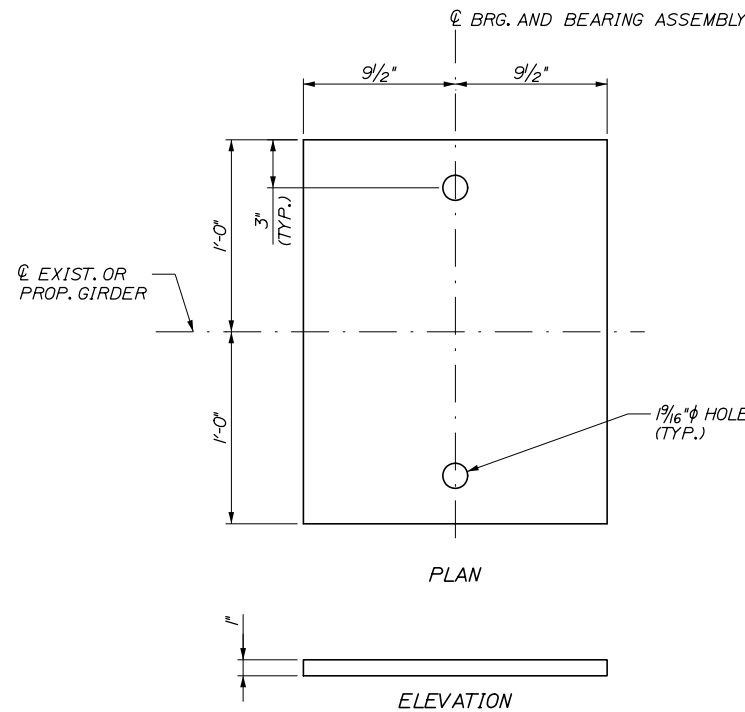
SOLE PLATE - DETAIL
(PIERS 1 & 3)
3" = 1'-0"



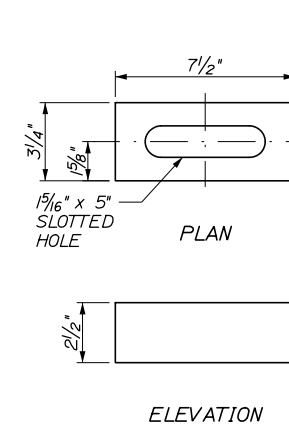
SOLE PLATE - DETAIL
(PIER 2)
3" = 1'-0"



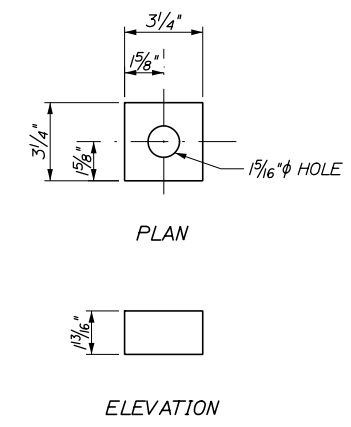
MASONRY PLATE - DETAIL
(ABUTMENTS)
3" = 1'-0"



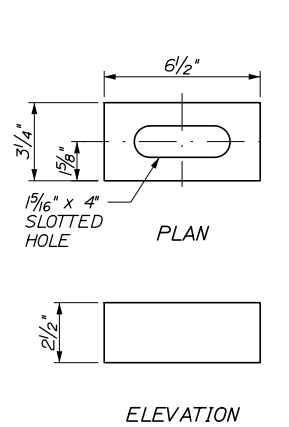
MASONRY PLATE - DETAIL
(PIERS 1 & 3)
3" = 1'-0"



SHEAR BLOCK DETAIL
(ABUTMENTS)
3" = 1'-0"



SHEAR BLOCK DETAIL
(PIER 2)
3" = 1'-0"



SHEAR BLOCK DETAIL
(PIERS 1 & 3)
3" = 1'-0"

Filename: 076_Bearing Details 4.dgn

Scale:			
No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18



**THE GOLD STAR
MEMORIAL HIGHWAY**

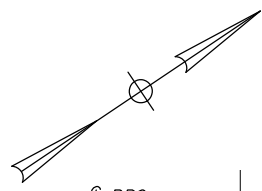
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
BEARING DETAILS IV

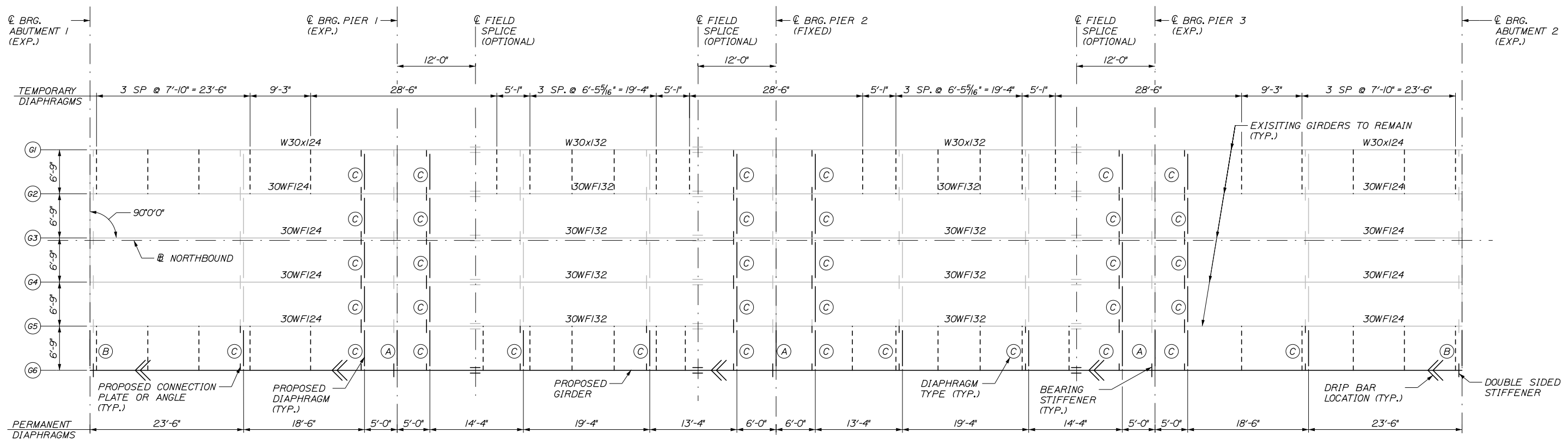
CONTRACT: 2018.15

SHEET NUMBER: S-40

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Date: 7/27/2018

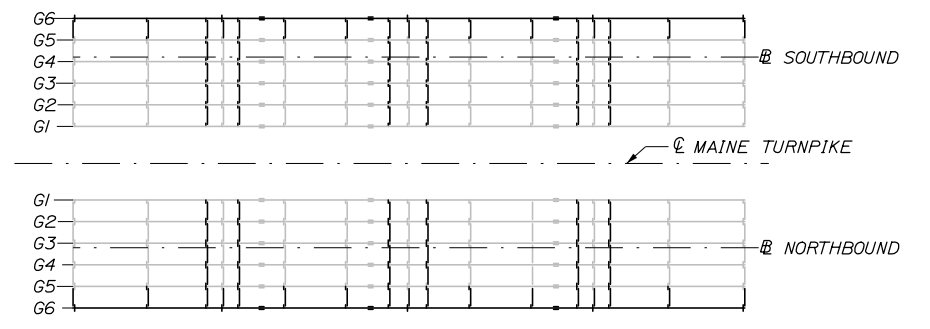


FRAMING PLAN
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
1/8" = 1'-0"

NOTES:

1. CAMBER ORDINATES ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS.
2. NO TRANSVERSE BUTT-WELD SPLICES WILL BE ALLOWED IN THE FLANGE PLATES OR WEB PLATES WITHIN 10 FEET OR 10% OF THE SPAN LENGTH (WHICHEVER IS GREATER) FROM THE POINTS OF MAXIMUM NEGATIVE MOMENT OR MAXIMUM POSITIVE MOMENT. BUTT-WELD SPLICES IN FLANGES SHALL BE NOT LESS THAN 1 FOOT FROM TRANSVERSE BUTT-WELDS IN THE WEB PLATES AND NO TRANSVERSE WEB OR FLANGE BUTT-WELDS SHALL BE LOCATED WITHIN 6 INCHES OF OTHER TRANSVERSE WELDS (E.G. CONNECTION PLATES TO WEB WELDS) ON EITHER FLANGE OR WEB.
3. SECTIONS OF FLANGE PLATES OR WEB PLATES BETWEEN TRANSVERSE SHOP SPLICES OR BETWEEN A TRANSVERSE SHOP SPLICE AND A FIELD SPLICE SHALL BE NOT LESS THAN 20 FEET IN LENGTH UNLESS OTHERWISE SHOWN ON THE PLANS.
4. BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE.
5. ALL BOLTS SHALL BE 7/8" HIGH STRENGTH BOLTS. HOLES SHALL BE 15/16" UNLESS OTHERWISE NOTED. BOLTS SHALL BE INSTALLED WITH HEADS DOWN AT ALL BOTTOM FLANGE CONNECTIONS AND HEADS UP AT ALL TOP FLANGE CONNECTIONS.
6. DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE.
7. BUTT WELDS AT WEB SPLICES AND FLANGE SPLICES SHALL BE GROUND FLUSH IN LONGITUDINAL DIRECTION OF GIRDER.
8. SHEAR STUDS SHALL EXTEND A MINIMUM OF 2" INTO THE SLAB. SEE "SHEAR CONNECTOR DETAIL" ON STEEL DETAILS 1 SHEET.
9. ALL FAYING SURFACES SHALL BE PAINTED OR SEALED IN ACCORDANCE WITH FHWA TECHNICAL ADVISORY T540.22, SECTION 4.c.2.c. TO PREVENT THE FORMATION OF PACK RUST.
10. PRIOR TO ERECTION OF STRUCTURAL STEEL THE CONTRACTOR SHALL SUBMIT A DETAILED ERECTION PLAN FOR APPROVAL.

11. WHERE PROPOSED DIAPHRAGMS ARE TO BE CONNECTED TO EXISTING GIRDERS, DIAPHRAGM SPACING, CONNECTION PLATE BOLT LAYOUT, BOLT PATTERN, ETC. SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
12. USE A SINGLE ROW OF SHEAR STUDS ON SPLICE PLATES TO AVOID INTERFERENCE WITH SPLICE BOLTS.
13. CONNECTION PLATES ON PROPOSED GIRDER SHALL BE FULL WEB DEPTH AND WELDED TO THE WEB AND FLANGES ON BOTH SIDES OF THE PLATES. WELDS SHALL TERMINATE 1/2" ± 1/8" FROM THE ENDS OF THE PLATES.
14. BEARING STIFFENERS SHALL BE MILL-TO-BEAR ON THE BOTTOM FLANGE AND TIGHT FIT TO THE TOP FLANGE. BEARING STIFFENERS USED AS CONNECTION PLATES SHALL BE DETAILED AS CONNECTION PLATES. BEARING STIFFENERS USED ON BOLSTERS SHALL BE MILL-TO-BEAR ON THE TOP AND BOTTOM FLANGE.
15. ALL EXISTING BEARINGS SHALL BE REMOVED AND REPLACED WITH ELASTOMERIC BEARINGS. EXISTING STEEL BEARINGS IN SATISFACTORY CONDITION SHALL BE SALVAGED AS DESCRIBED IN SPECIAL PROVISION 202. BEARINGS NOT SALVAGED SHALL BE INCIDENTAL TO ITEM 202.19, REMOVING EXISTING STRUCTURE. FOR ESTIMATING PURPOSES IT IS ASSUMED THE BEARINGS UNDER INTERIOR BEAMS WILL BE SALVAGED AND THOSE UNDER FASCIA BEAMS WILL NOT.
16. TEMPORARY DIAPHRAGMS SHALL BE INSTALLED BETWEEN G1-G2 AND G5-G6 ON BOTH NORTHBOUND AND SOUTHBOUND BRIDGES PRIOR TO PLACING CONCRETE DECK. FOR TEMPORARY DIAPHRAGM DETAILS, SEE SHEET S-39. APPROXIMATE TEMPORARY DIAPHRAGM LOCATIONS SHOWN ON THE FRAMING PLAN. A TEMPORARY DIAPHRAGM IS REQUIRED AT EACH PERMANENT DIAPHRAGM LOCATION AND MAY BE OFFSET UP TO 1'-0" IN EITHER DIRECTION TO AVOID INTERFERENCE.
17. CONTRACTOR SHALL SUBMIT A TEMPORARY DIAPHRAGM INSTALLATION PROCEDURE AND SHOP DRAWINGS FOR REVIEW. RESIDENT ENGINEER SHALL INSPECT TEMPORARY DIAPHRAGM INSTALLATION PRIOR TO PLACING THE DECK.



GIRDER LAYOUT
1" = 30'-0"

Filename: 077_Framing Plan.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
	By	Date	
	HJW	07\18	
	Checked		
	KEB	07\18	
	Drawn		
	ERB	07\18	
	In Charge of		
	RAL	07\18	

HNTB

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 REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

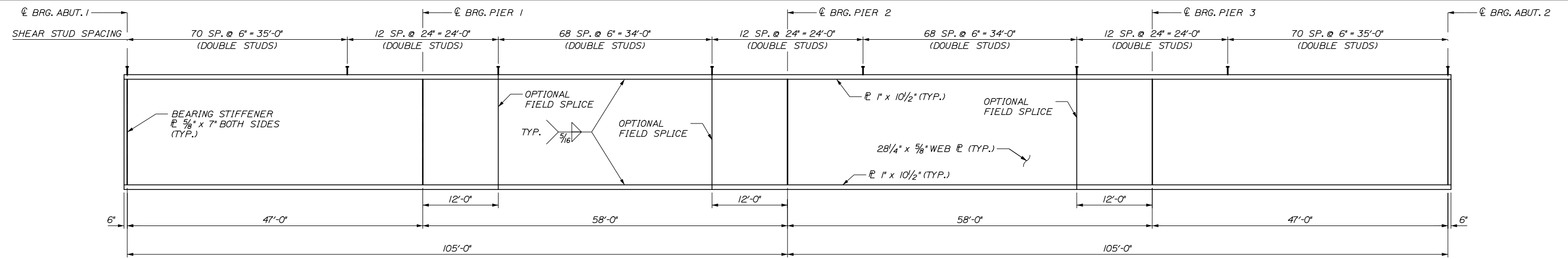
FRAMING PLAN

SHEET NUMBER: S-41

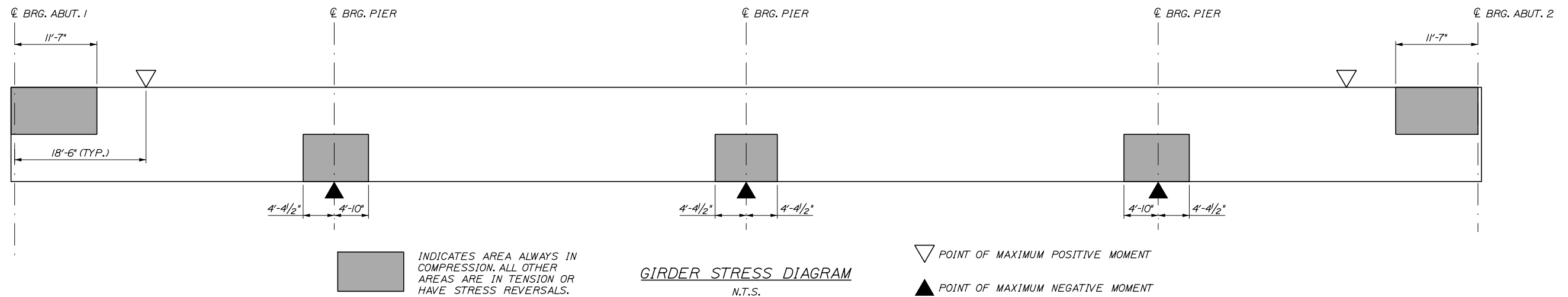
CONTRACT: 2018.15

77 OF 115

Date: 7/27/2018



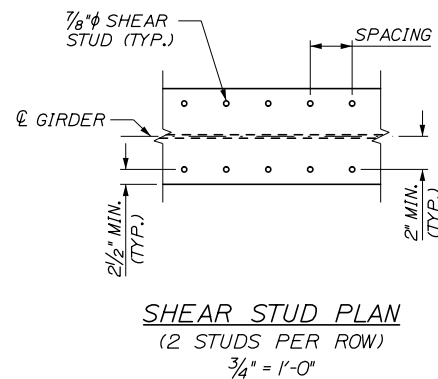
PROPOSED GIRDER ELEVATION
 (PROPOSED GIRDER SHOWN, EXISTING GIRDER SIMILAR)
 (629 STUDS PER GIRDER)
 N.T.S.



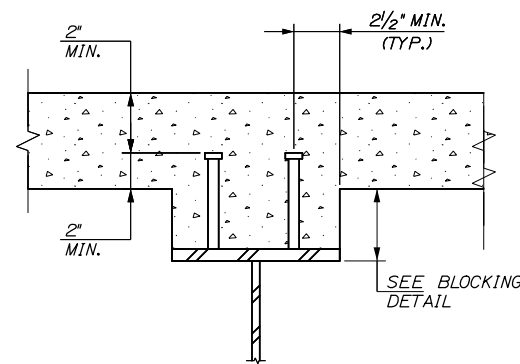
INDICATES AREA ALWAYS IN COMPRESSION. ALL OTHER AREAS ARE IN TENSION OR HAVE STRESS REVERSALS.

GIRDER STRESS DIAGRAM
 N.T.S.

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



SHEAR STUD PLAN
 (2 STUDS PER ROW)
 3/4" = 1'-0"



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

SHEAR CONNECTOR DETAIL
 N.T.S.

NOTE:
 CONTRACTOR MAY USE W30x132 ROLLED SECTION IN PLACE OF PLATE GIRDER IF AVAILABLE AT NO ADDITIONAL COST.

Filename: 078_SteelDetails 1.dgn

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

HNTB CORPORATION
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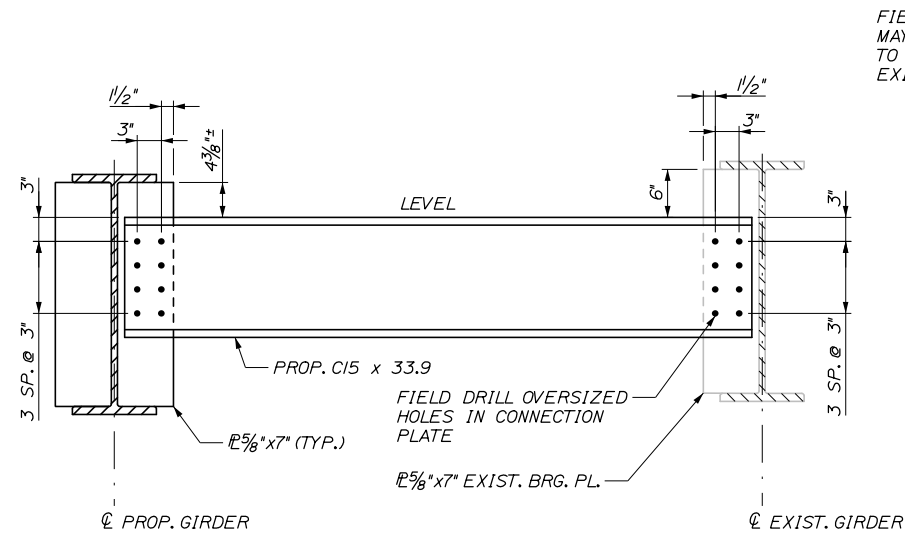

**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

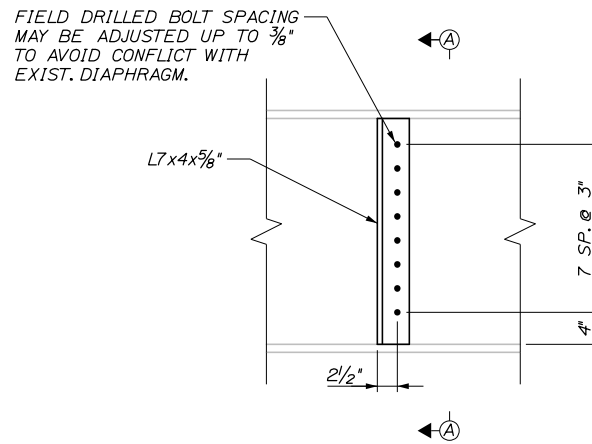
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 STRUCTURAL STEEL DETAILS I

SHEET NUMBER: S-42
 CONTRACT: 2018.15
 78 OF 115

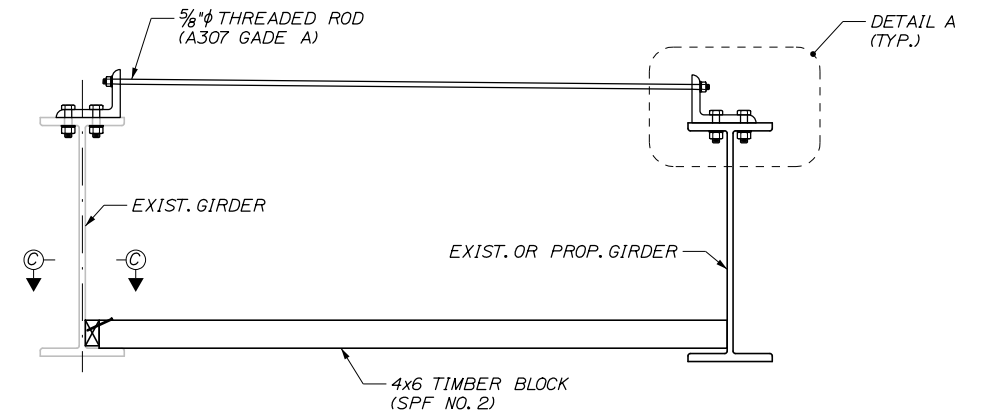
Date: 7/27/2018



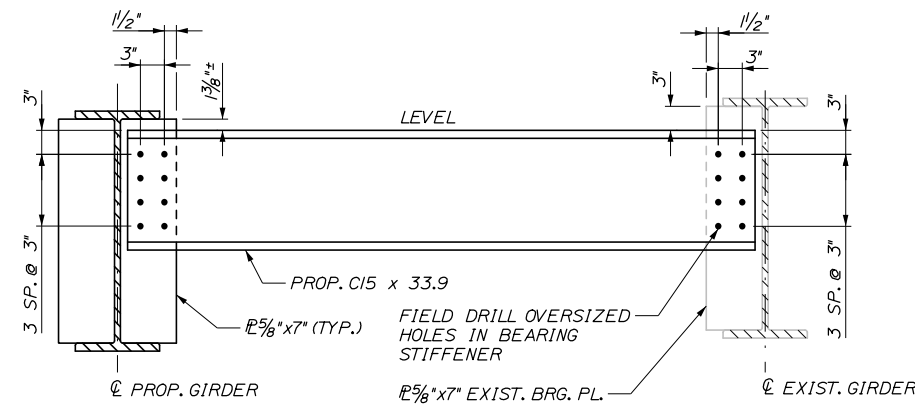
PIER DIAPHRAGM - TYPE A
1" = 1'-0"



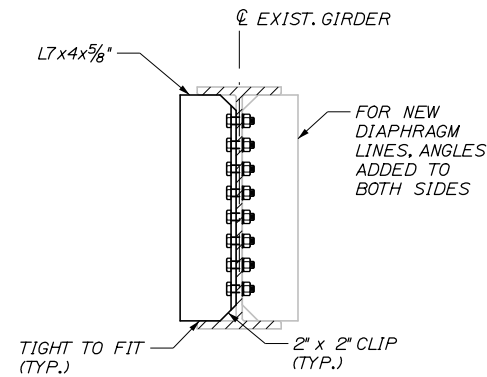
DIAPHRAGM CONNECTION ANGLE, EXISTING GIRDER
N.T.S.



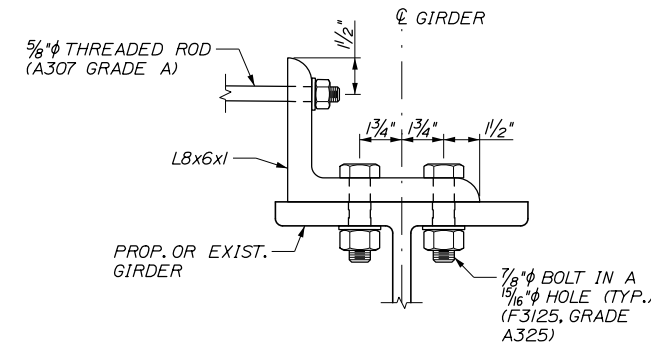
TEMPORARY DIAPHRAGM
1" = 1'-0"



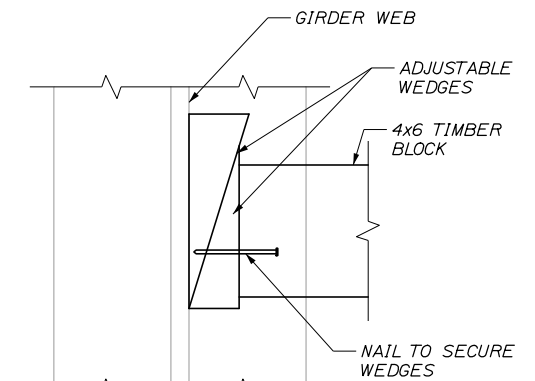
ABUTMENT DIAPHRAGM - TYPE B
1" = 1'-0"



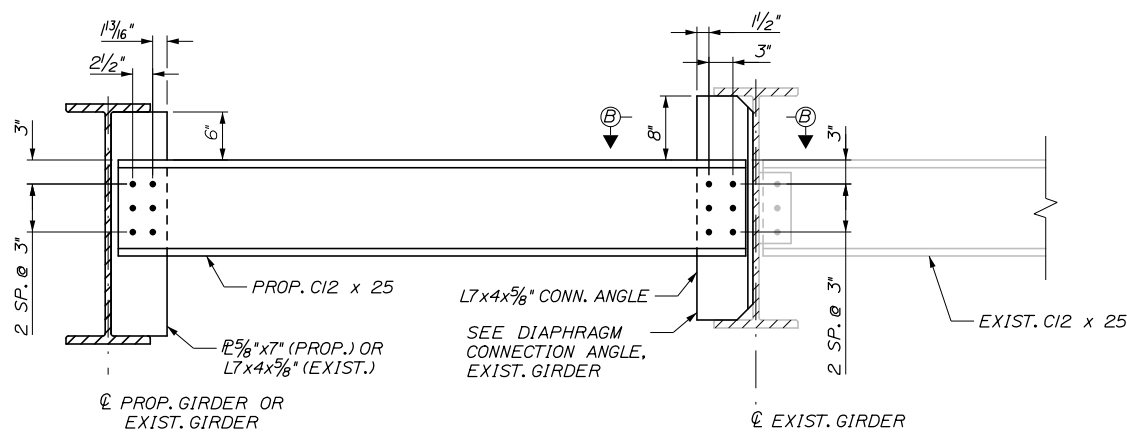
SECTION A-A
N.T.S.



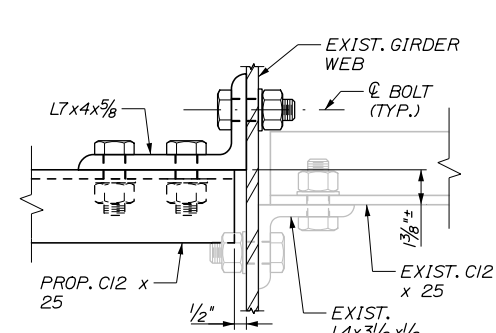
DETAIL A
3" = 1'-0"



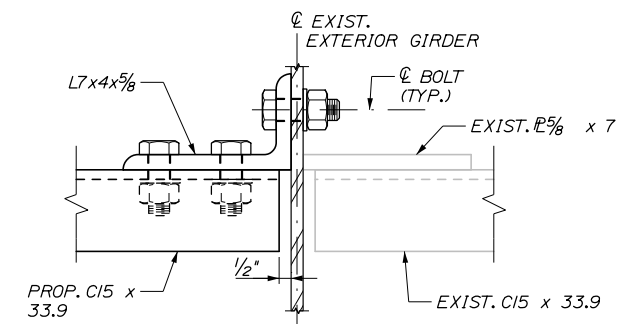
SECTION C-C
3" = 1'-0"



INTERMEDIATE DIAPHRAGM - TYPE C
1" = 1'-0"



SECTION B-B
3" = 1'-0"



PIER OR END DIAPHRAGM TO GIRDER CONNECTION
3" = 1'-0"

NOTE:

1. TEMPORARY DIAPHRAGM LOCATIONS ARE SHOWN ON THE FRAMING PLAN.
2. THE TEMPORARY LATERAL SUPPORTS SHALL BE INSTALLED PRIOR TO CONCRETE DECK PLACEMENT AND REMAIN UNTIL THE DECK HAS CURED. THE TIMBER BLOCKS SHALL BE REMOVED AFTER DECK HAS CURED. THE TIE BAR AND CLIP SHALL REMAIN.

Filename: 079_ SteelDetails 2.dgn

Scale:		Designed by:	
No.	Revision	By	Date

HNTB			
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
Designed	HJW	07\18	Checked
Drawn	ERB	07\18	In Charge of

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



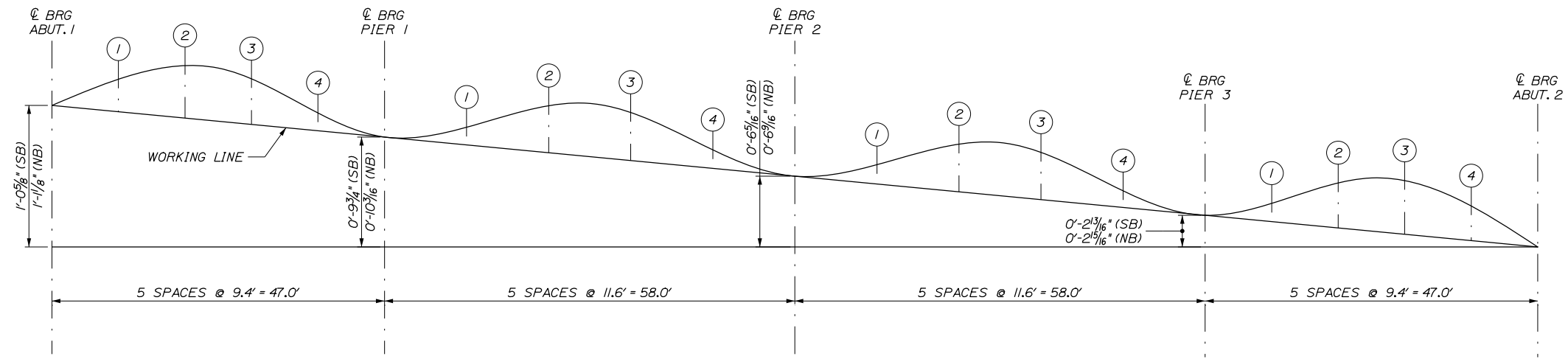
THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
STRUCTURAL STEEL DETAILS II

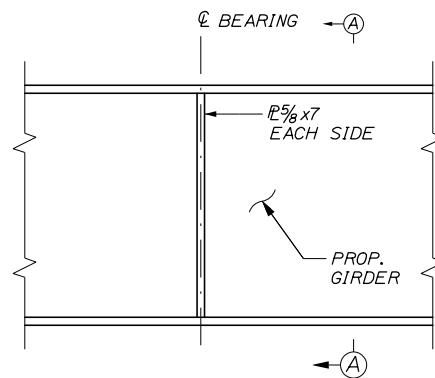
SHEET NUMBER: S-43
CONTRACT: 2018.15
79 OF 115

Date: 7/27/2018



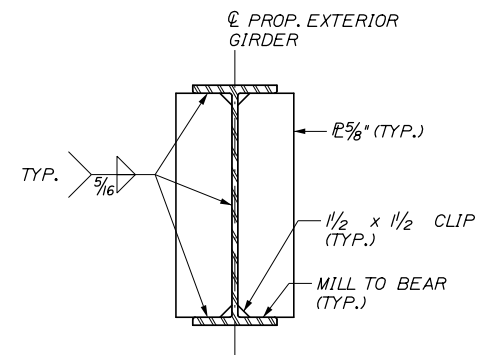
TOTAL NORTHBOUND CAMBER VALUES (IN)																						
		CL BRG ABUT. 1	SPAN 1 = 47.0'				CL BRG PIER 1	SPAN 2 = 58.0'				CL BRG PIER 2	SPAN 3 = 58.0'				CL BRG PIER 3	SPAN 4 = 47.0'				CL BRG ABUT. 2
			1	2	3	4		1	2	3	4		1	2	3	4		1	2	3	4	
G6	DISTANCE FROM ABUT. 1 (FT)	0.000	9.400	18.800	28.200	37.600	47.000	58.600	70.200	81.800	93.400	105.000	116.600	128.200	139.800	151.400	163.000	172.400	181.800	191.200	200.600	210.000
	STEEL DEAD LOAD	0.000	-0.020	-0.040	-0.040	-0.010	0.000	-0.020	-0.050	-0.050	-0.020	0.000	-0.020	-0.05	-0.050	-0.020	0.000	-0.010	-0.040	-0.040	-0.020	0.000
	CONCRETE DEAD LOAD	0.000	-0.170	-0.250	-0.200	-0.080	0.000	-0.120	-0.250	-0.240	-0.110	0.000	-0.110	-0.240	-0.250	-0.120	0.000	-0.080	-0.200	-0.250	-0.170	0.000
	SUPERIMPOSED DEAD LOAD	0.000	-0.040	-0.060	-0.050	-0.020	0.000	-0.020	-0.060	-0.060	-0.020	0.000	-0.020	-0.060	-0.060	-0.020	0.000	-0.020	-0.050	-0.000	-0.040	0.000
	TOTAL	0.000	0.227	0.345	0.284	0.114	0.000	0.165	0.360	0.340	0.152	0.000	0.148	.0344	0.360	0.159	0.000	0.114	0.280	0.339	0.229	0.000

TOTAL SOUTHBOUND CAMBER VALUES (IN)																						
		CL BRG ABUT. 1	SPAN 1 = 47.0'				CL BRG PIER 1	SPAN 2 = 58.0'				CL BRG PIER 2	SPAN 3 = 58.0'				CL BRG PIER 3	SPAN 4 = 47.0'				CL BRG ABUT. 2
			1	2	3	4		1	2	3	4		1	2	3	4		1	2	3	4	
G6	DISTANCE FROM ABUT. 1 (FT)	0.000	9.400	18.800	28.200	37.600	47.000	58.600	70.200	81.800	93.400	105.000	116.600	128.200	139.800	151.400	163.000	172.400	181.800	191.200	200.600	210.000
	STEEL DEAD LOAD	0.000	-0.020	-0.040	-0.040	-0.010	0.000	-0.020	-0.050	-0.050	-0.020	0.000	-0.020	-0.05	-0.050	-0.020	0.000	-0.010	-0.040	-0.040	-0.020	0.000
	CONCRETE DEAD LOAD	0.000	-0.170	-0.250	-0.200	-0.080	0.000	-0.120	-0.250	-0.240	-0.110	0.000	-0.110	-0.240	-0.250	-0.120	0.000	-0.080	-0.200	-0.250	-0.170	0.000
	SUPERIMPOSED DEAD LOAD	0.000	-0.040	-0.060	-0.050	-0.020	0.000	-0.020	-0.060	-0.060	-0.020	0.000	-0.020	-0.060	-0.060	-0.020	0.000	-0.020	-0.050	-0.000	-0.040	0.000
	TOTAL	0.000	0.228	0.348	0.288	0.120	0.000	0.168	0.360	0.348	0.156	0.000	0.156	0.348	0.360	0.168	0.000	0.120	0.288	0.348	0.228	0.000



BEARING STIFFENER

N.T.S.



SECTION A-A

N.T.S.

Filename: 080_SteelDetails_3.dgn

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	HJW 07\18		Checked	KEB 07\18
	Drawn	ERB 07\18		In Charge of	RAL 07\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.

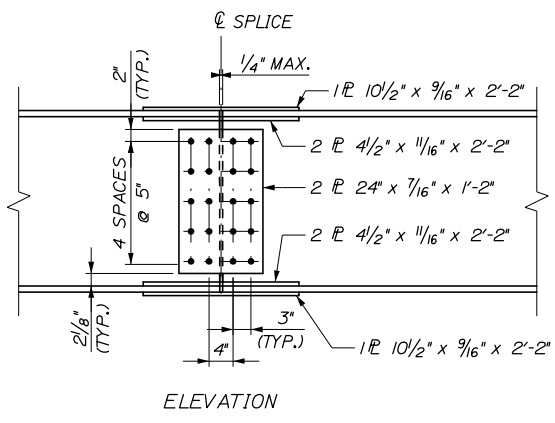
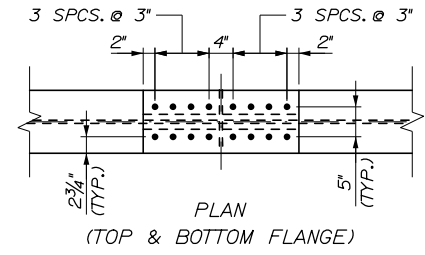
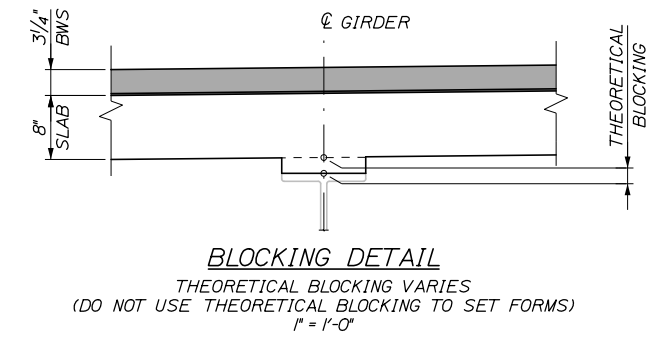
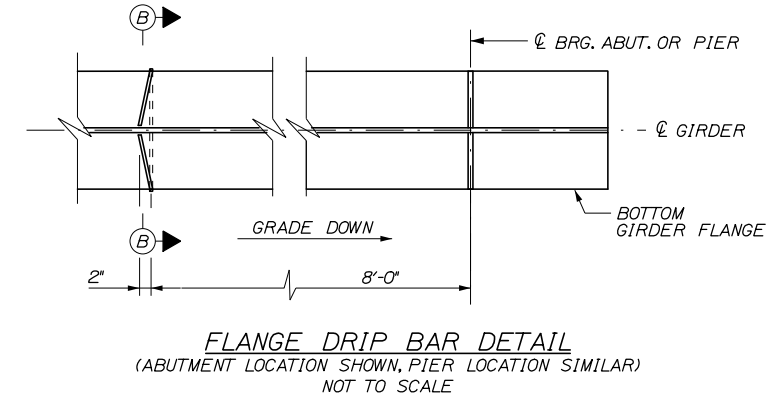
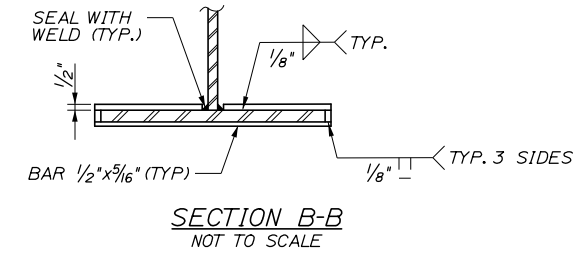
BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 STRUCTURAL STEEL DETAILS III

SHEET NUMBER: S-44
 CONTRACT: 2018.15
 80 OF 115

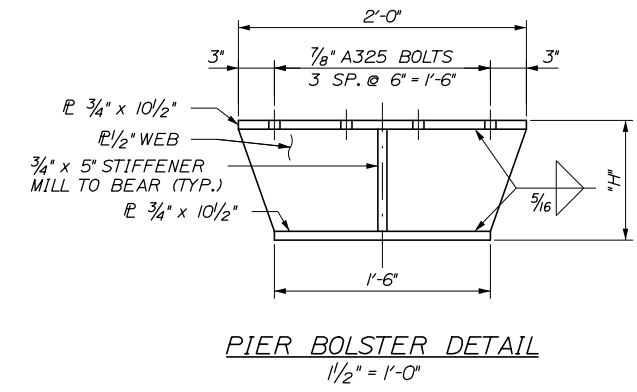
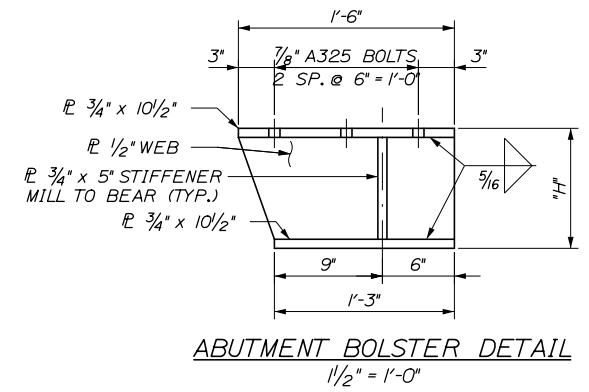
Date: 7/27/2018

NORTHBOUND BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS																					
GIRDER	CL BRG ABUT. 1	SPAN 1 = 47.0'				CL BRG PIER 1	SPAN 2 = 58.0'				CL BRG PIER 2	SPAN 3 = 58.0'				CL BRG PIER 3	SPAN 4 = 47.0'				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	147.13	147.10	147.06	147.00	146.94	146.88	146.84	146.79	146.73	146.65	146.58	146.53	146.49	146.43	146.35	146.28	146.24	146.20	146.16	146.10	146.04
G2	147.26	147.23	147.19	147.14	147.08	147.02	146.97	146.92	146.86	146.79	146.72	146.67	146.62	146.56	146.49	146.42	146.38	146.34	146.29	146.24	146.17
G3	147.40	147.37	147.32	147.27	147.21	147.15	147.10	147.06	147.00	146.92	146.85	146.80	146.75	146.69	146.62	146.55	146.51	146.47	146.43	146.37	146.31
G4	147.28	147.25	147.20	147.15	147.09	147.03	146.98	146.94	146.88	146.80	146.73	146.68	146.63	146.57	146.50	146.43	146.39	146.35	146.31	146.25	146.19
G5	147.14	147.11	147.07	147.02	146.96	146.90	146.85	146.80	146.74	146.67	146.60	146.55	146.50	146.44	146.37	146.30	146.26	146.22	146.17	146.12	146.05
G6	147.01	146.98	146.94	146.88	146.82	146.76	146.72	146.67	146.61	146.53	146.46	146.41	146.37	146.31	146.23	146.16	146.12	146.08	146.04	145.98	145.92

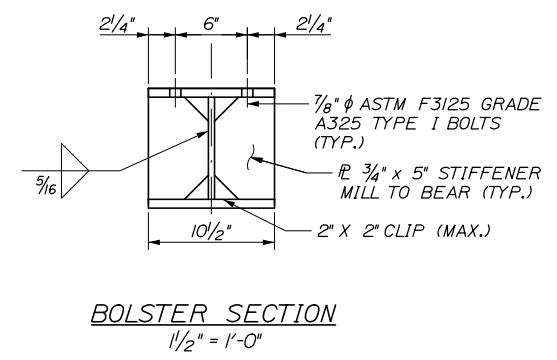
SOUTHBOUND BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS																					
GIRDER	CL BRG ABUT. 1	SPAN 1 = 47.0'				CL BRG PIER 1	SPAN 2 = 58.0'				CL BRG PIER 2	SPAN 3 = 58.0'				CL BRG PIER 3	SPAN 4 = 47.0'				CL BRG ABUT. 2
		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8		0.2	0.4	0.6	0.8	
G1	147.15	147.12	147.09	147.03	146.98	146.92	146.87	146.83	146.77	146.70	146.63	146.58	146.54	146.48	146.41	146.34	146.30	146.27	146.22	146.17	146.11
G2	147.29	147.26	147.22	147.17	147.11	147.06	147.01	146.96	146.90	146.83	146.76	146.72	146.67	146.61	146.54	146.47	146.44	146.40	146.36	146.30	146.24
G3	147.42	147.39	147.35	147.30	147.24	147.19	147.14	147.10	147.04	146.97	146.90	146.85	146.81	146.75	146.68	146.61	146.57	146.53	146.49	146.44	146.38
G4	147.30	147.27	147.23	147.18	147.12	147.07	147.02	146.98	146.92	146.85	146.78	146.73	146.69	146.63	146.56	146.49	146.45	146.41	146.37	146.32	146.25
G5	147.17	147.14	147.10	147.05	146.99	146.93	146.89	146.84	146.78	146.71	146.64	146.60	146.55	146.49	146.42	146.35	146.32	146.28	146.24	146.18	146.12
G6	147.03	147.00	146.97	146.91	146.86	146.80	146.75	146.71	146.65	146.58	146.51	146.46	146.42	146.36	146.29	146.22	146.18	146.15	146.10	146.05	145.98



OPTIONAL FIELD SPLICE
3/4\"/>



BOLSTER HEIGHT TABLE						
NORTHBOUND BRIDGE (\"/>						
GIRDER	ABUT. 1	PIER 1	PIER 2	PIER 3	ABUT. 2	
G1	13	8	6	5	6	
G2	13	8	6	5	6	
G3	13	8	6	5	6	
G4	13	8	6	5	6	
G5	13	8	6	5	6	
G6	13	8	6	5	6	
SOUTHBOUND BRIDGE (\"/>						
GIRDER	ABUT. 1	PIER 1	PIER 2	PIER 3	ABUT. 2	
G1	13	9	8	6	7	
G2	13	9	8	6	7	
G3	13	9	8	6	7	
G4	13	9	8	6	7	
G5	13	9	8	6	7	
G6	13	9	8	6	7	



NOTES:
 1. 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.
 2. THE CONTRACTOR SHALL INSTALL PROTECTIVE SHIELDING AND ACCEPTABLE SAFETY LINES OR SHIELDING PRIOR TO PROFILING THE GIRDERS.
 3. 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: 081_SteelDetails 4.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
Designed	HJW	07\18	Checked KEB 07\18
Drawn	ERB	07\18	In Charge of RAL 07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

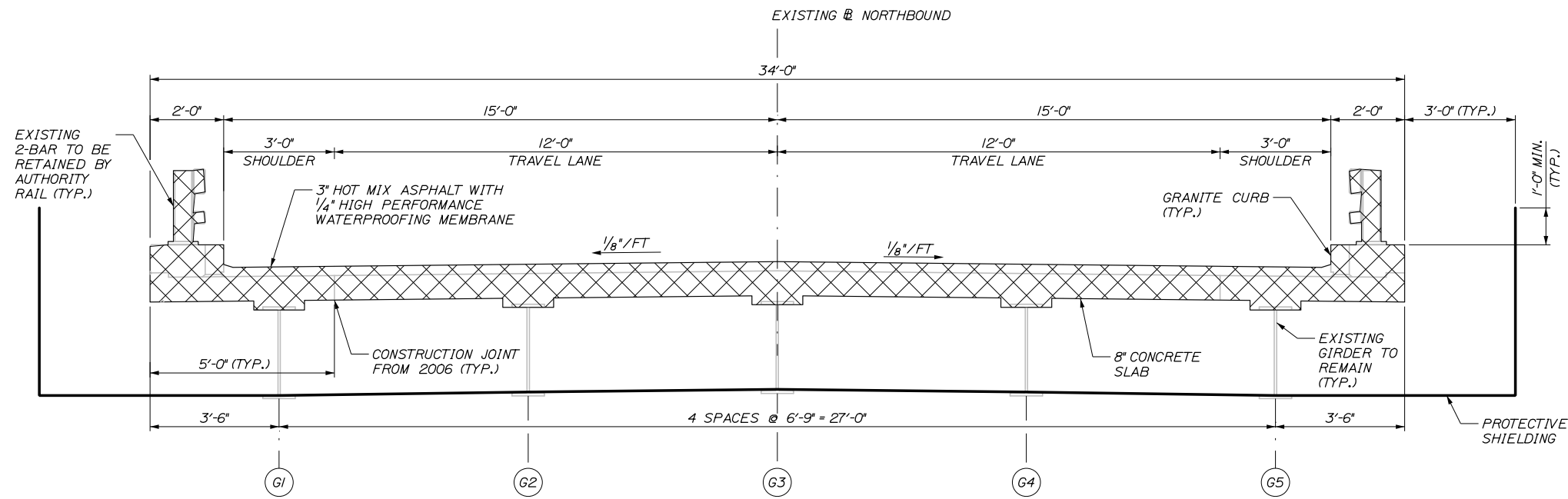
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 STRUCTURAL STEEL DETAILS IV

SHEET NUMBER: S-45
 81 OF 115

CONTRACT: 2018.15

Date: 7/27/2018



EXISTING TYPICAL SECTION

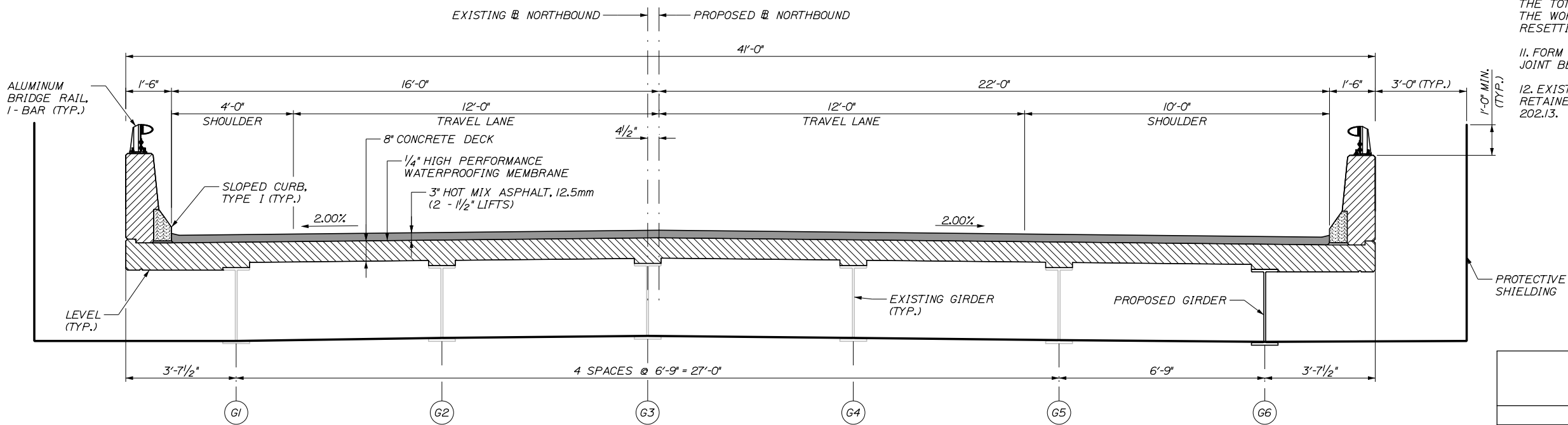
(NORTHBOUND, LOOKING UPSTATION, SHOWN, SOUTHBOUND, LOOKING DOWNSTATION, SIMILAR)
1/2" = 1'-0"

LEGEND

= DEMOLITION

SUPERSTRUCTURE NOTES:

1. THE USE OF PRECAST DECK PANELS IS PROHIBITED.
2. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANITE CURB SHALL CONTAIN A NON-SHRINK ADDITIVE.
3. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE SHALL BE APPLIED TO THE FOLLOWING AREAS: PARAPET SURFACES, FASCIA DOWN TO DRIP NOTCH AND ALL EXPOSED CONCRETE SURFACES ON THE END POSTS.
4. 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.
5. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
6. GRANITE CURB JOINTS SHALL LINE UP WITH PARAFFIN AND DUMMY JOINTS.
7. 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.
8. PROTECTIVE SHIELDING SHALL EXTEND LONGITUDINALLY FOR THE FULL LENGTH OF THE STRUCTURE. THE WIDTH OF THIS SHIELDING SHALL BE EQUAL TO THE TOTAL WIDTH OF THE NEW STRUCTURE PLUS THREE FEET BEYOND THE FASCIA LINES ON EACH SIDE OF THE STRUCTURE.
9. PRIOR TO INSTALLING THE PROPOSED SHEAR STUDS 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 STUDS 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.
10. THE APPROXIMATE SHIELDING QUANTITIES REPRESENT THE TOTAL QUANTITY OF SHIELDING REQUIRED TO COMPLETE THE WORK, INCLUDING INITIAL INSTALLATION, REMOVAL, AND RESETTING OF SHIELDING.
11. FORM V-GROOVE ON THE FASCIA AT THE HORIZONTAL JOINT BETWEEN THE PARAPET AND SLAB.
12. EXISTING 2-BAR RAIL SHALL BE SALVAGED AND RETAINED BY THE AUTHORITY PER SPECIAL PROVISION 202.13.



PROPOSED TYPICAL SECTION

(NORTHBOUND, LOOKING UPSTATION, SHOWN, SOUTHBOUND, LOOKING DOWNSTATION, SIMILAR)
1/2" = 1'-0"

APPROXIMATE SHIELDING QUANTITIES*			
	DEMOLITION	CONSTRUCTION	TOTAL
APPROX. WIDTH OF NEW SHIELDING INSTALLED (FT)	40 FT	47 FT	87 FT
APPROX. AREA OF SHIELDING INSTALLED (SY)	1035 SY	1215 SY	2250 SY

* SEE NOTES 8 AND 10

Filename: 082_Typical Section.dgn

No.	Revision	By	Date

Scale:

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date	By	Date	
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS

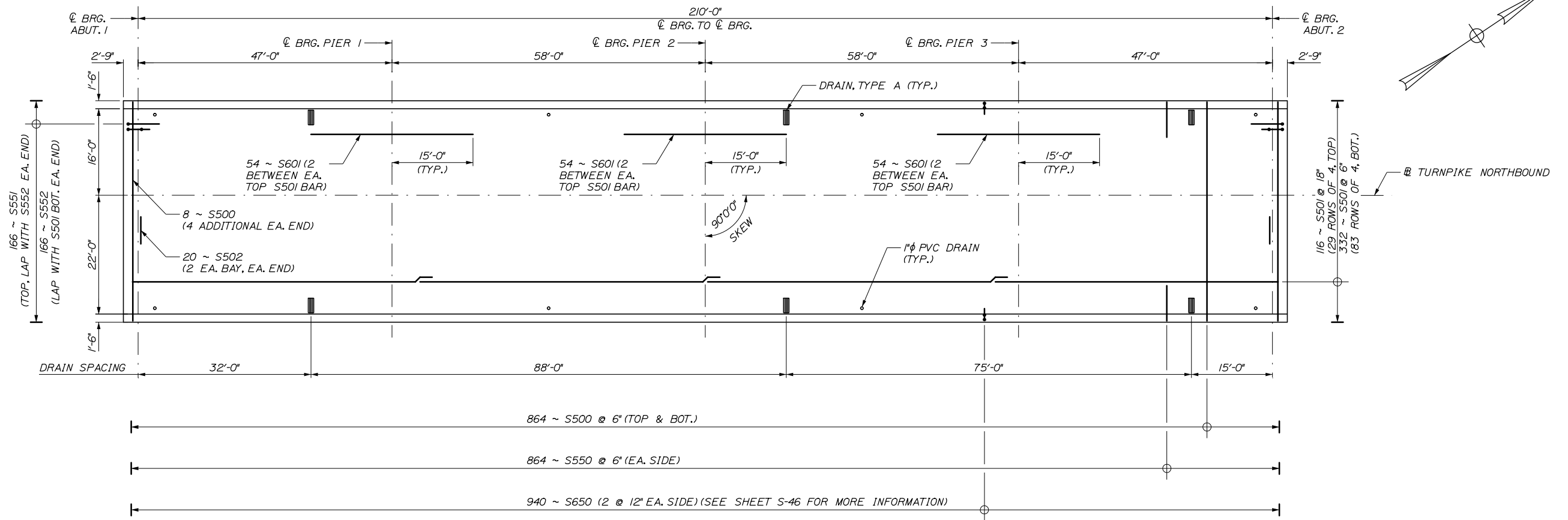
TYPICAL SECTION

SHEET NUMBER: S-46

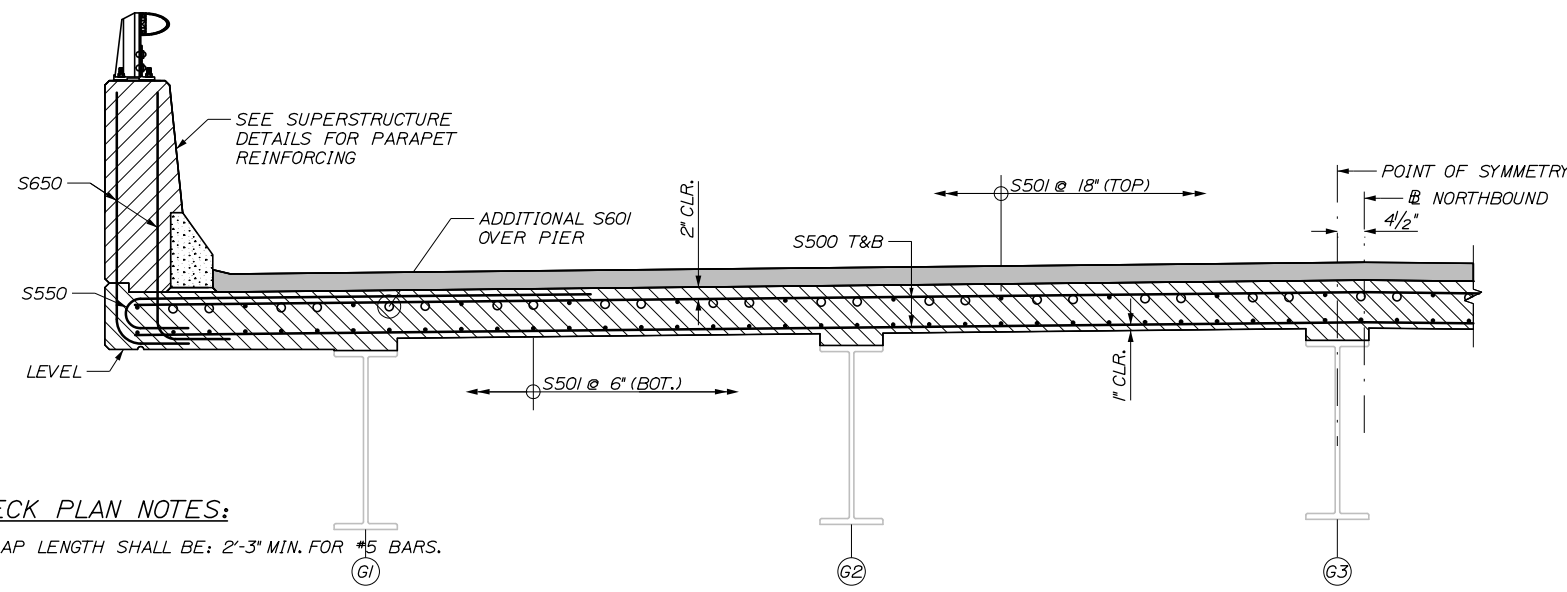
CONTRACT: 2018.15

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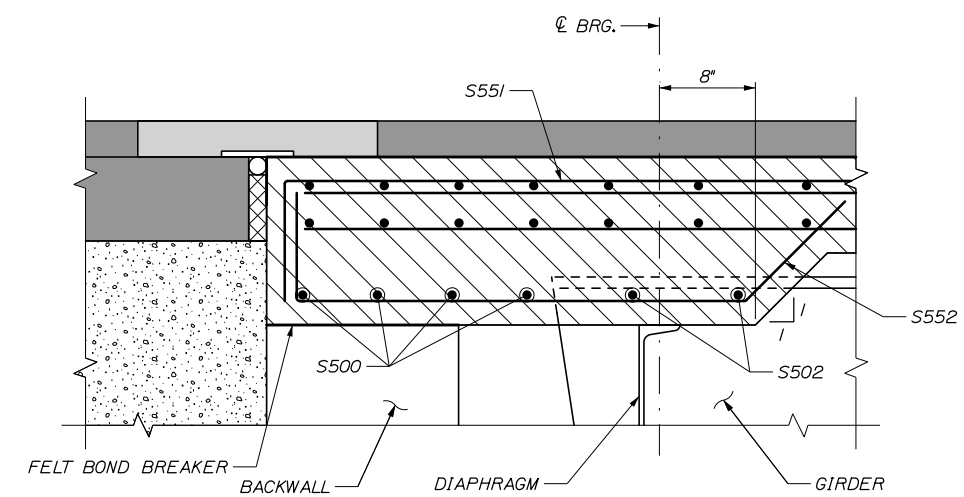
Date: 7/27/2018



DECK PLAN
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
1/32" = 1'-0"



HALF REINFORCING SECTION
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
1" = 1'-0"



END SLAB DETAIL
1/2" = 1'-0"

DECK PLAN NOTES:
1. LAP LENGTH SHALL BE: 2'-3" MIN. FOR #5 BARS.

Filename: 083-Superstructure Plan.dgn

No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

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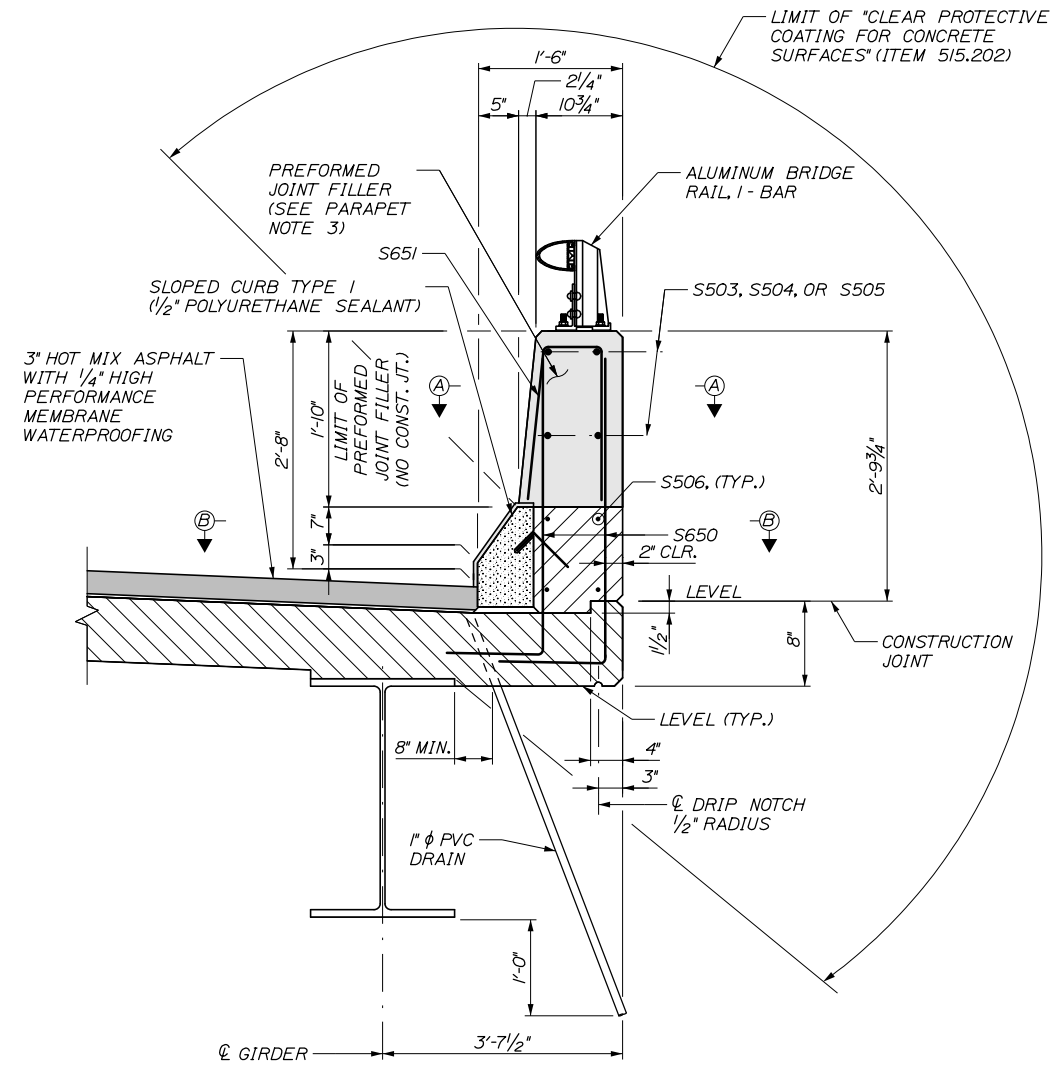
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

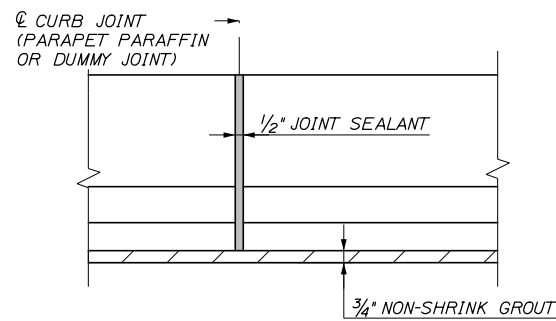
BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
SUPERSTRUCTURE PLAN

SHEET NUMBER: S-47
CONTRACT: 2018.15
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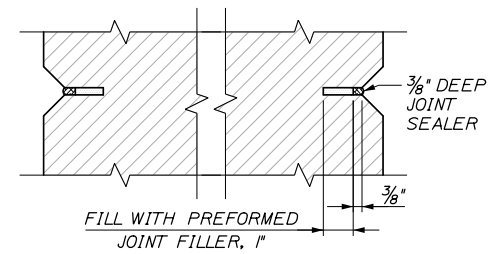
Date: 7/27/2018



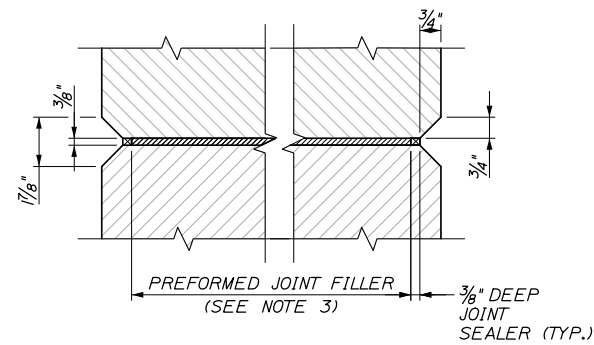
BARRIER DETAIL
N.T.S.



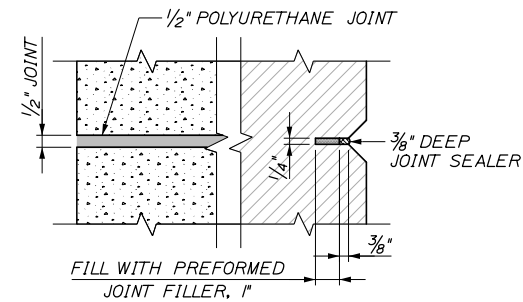
BRIDGE CURB ELEVATION
2" = 1'-0"



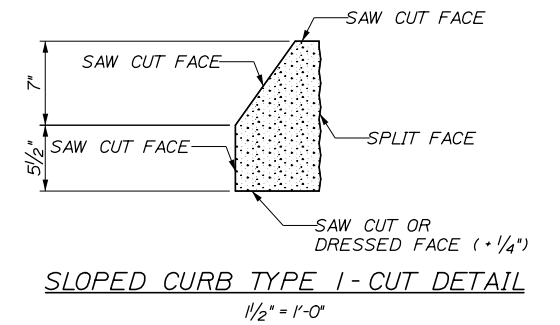
SECTION A-A
(AT DUMMY JOINT)
3" = 1'-0"



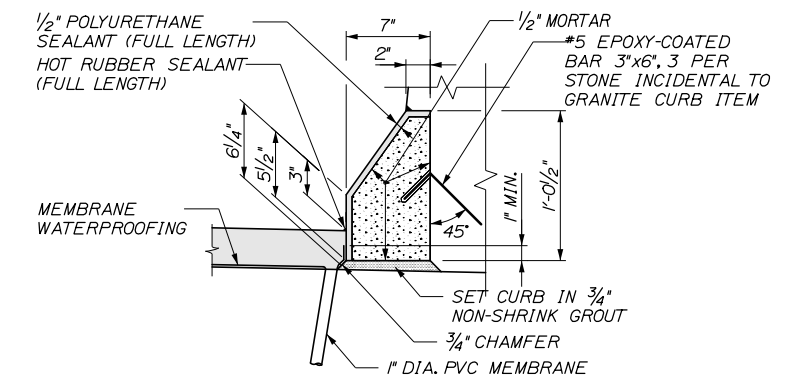
SECTION A-A
(AT PARAFFIN JOINT)
3" = 1'-0"



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"

PARAPET NOTES

1. CONSTRUCTION OF PARAFFIN AND DUMMY JOINTS, INCLUDING JOINT FILLER, SHALL BE INCIDENTAL TO RELATED STRUCTURAL CONCRETE PAY ITEM.
2. 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.
3. 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.
4. JOINT SEALER SHALL CONFORM WITH SUBSECTION 714.04 OF THE SPECIFICATIONS AND SHALL BE INCIDENTAL TO RELATED CONTRACT PAY ITEMS.

Filename: 084_Superstructure Dets 1.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
	Designed	HJW 07\18		Checked	KEB 07\18
	Drawn	ERB 07\18		In Charge of	RAL 07\18

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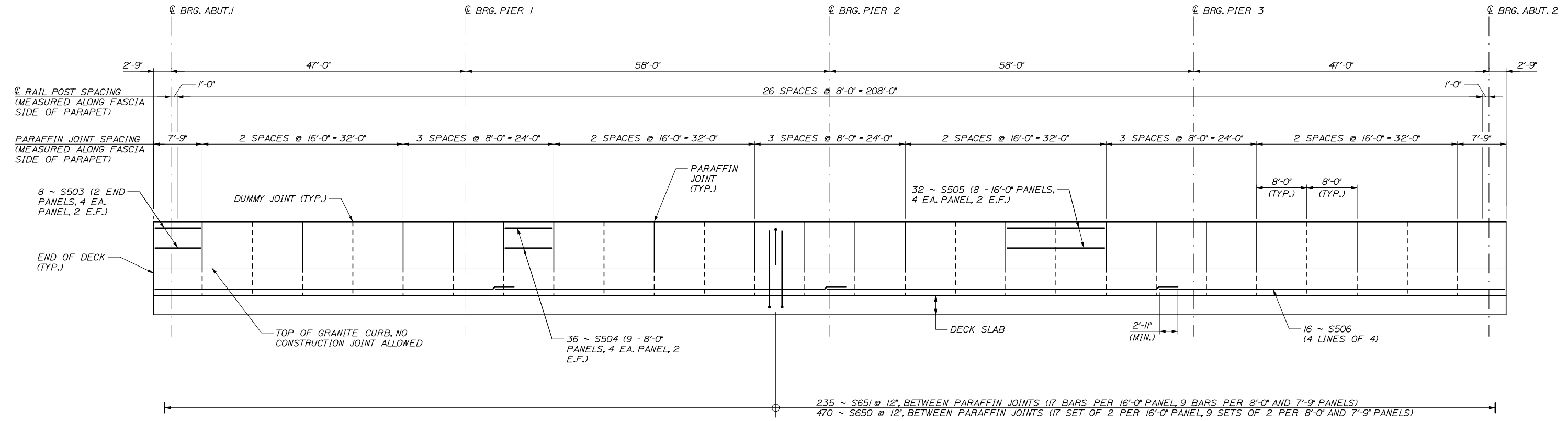
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSSÉECONTEE STREAM OVERPASS
SUPERSTRUCTURE DETAILS I

SHEET NUMBER: S-48
CONTRACT: 2018.15
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Date: 7/27/2018

Filename: 085_Superstructure Dets 2.dgn



PARAPET ELEVATION - TYPICAL
 HORIZ. 1/8" = 1'-0"
 VERT. 1/2" = 1'-0"

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.					
	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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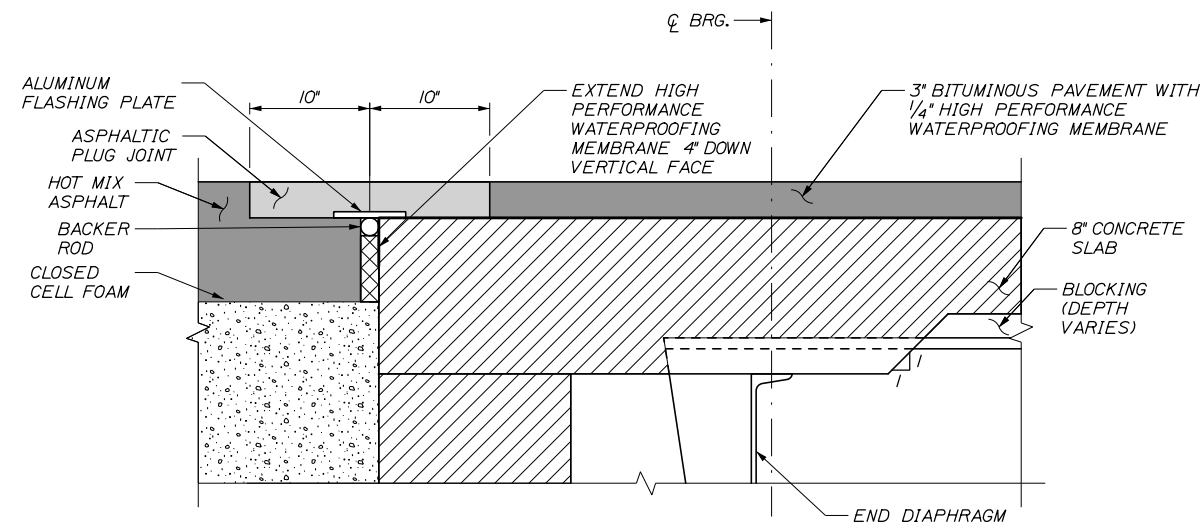
**THE GOLD STAR
MEMORIAL HIGHWAY**

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

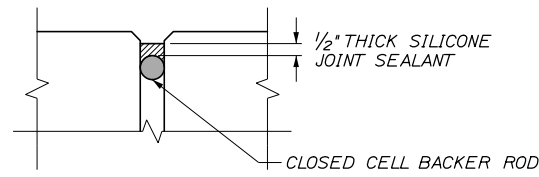
BRIDGE REHABILITATION
 COBBOSSECONTEE STREAM OVERPASS
 SUPERSTRUCTURE DETAILS II

SHEET NUMBER: S-49
 CONTRACT: 2018.15
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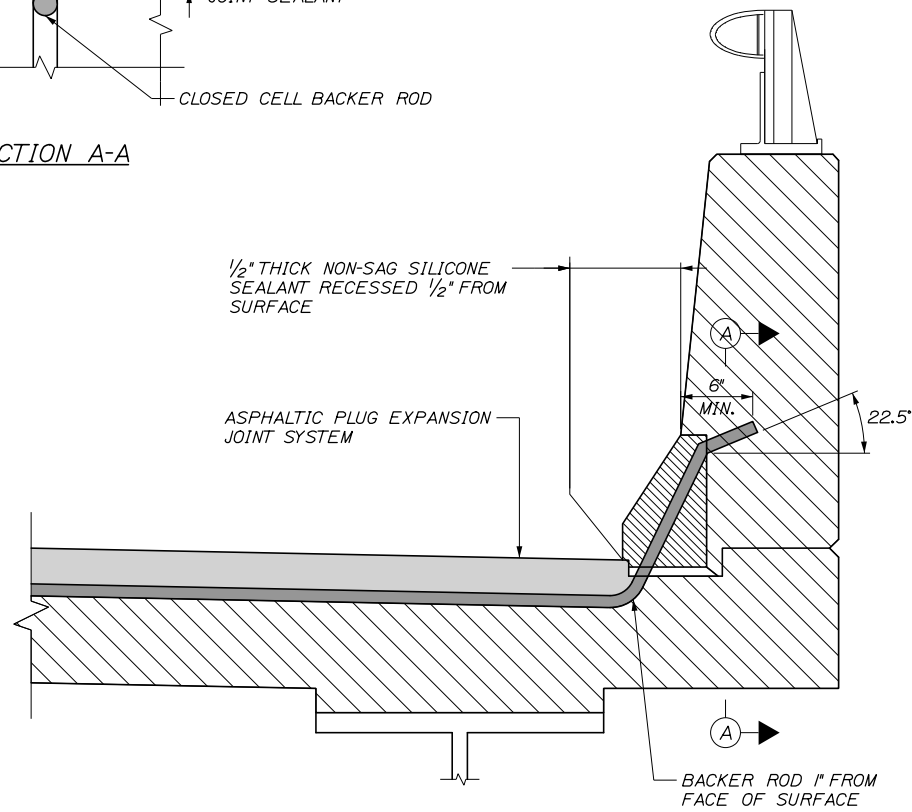
Date: 7/27/2018



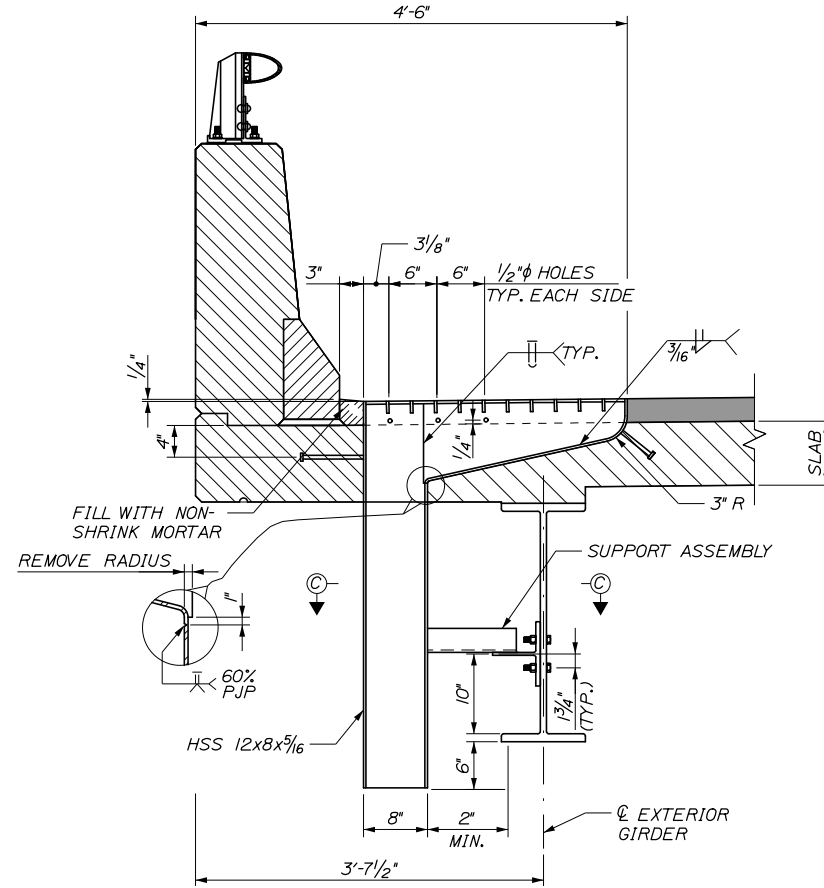
ASPHALTIC PLUG JOINT DETAIL
1/2" = 1'-0"



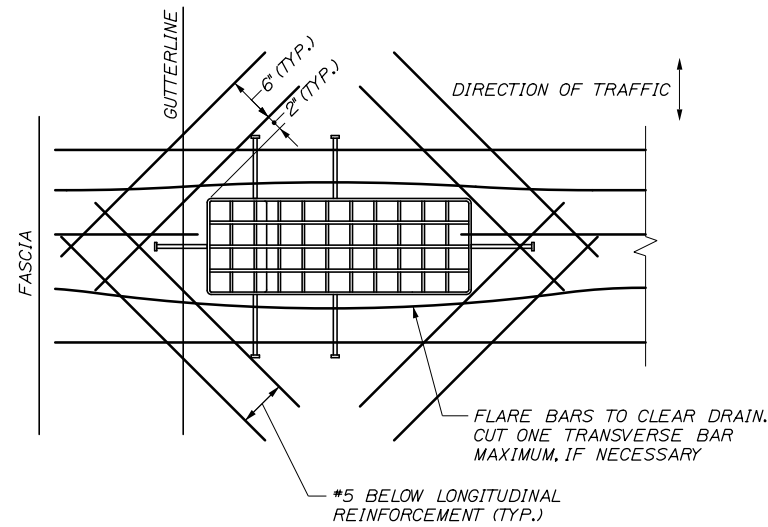
SECTION A-A



JOINT TREATMENT AT BRIDGE CURB
1/2" = 1'-0"



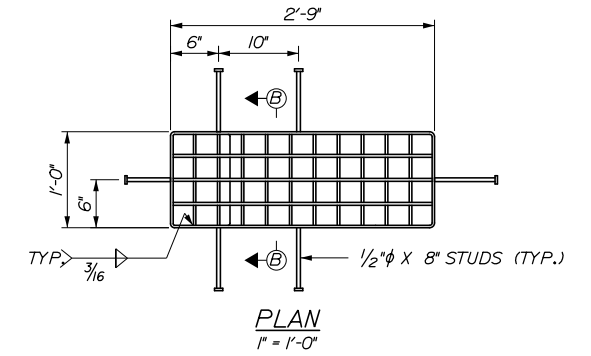
BRIDGE DRAIN TYPE A
1" = 1'-0"



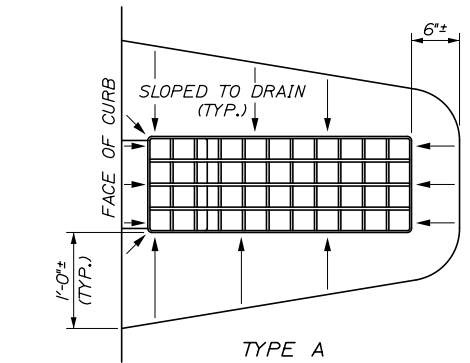
SLAB REINFORCEMENT AT BRIDGE DRAINS
1" = 1'-0"

NOTES:

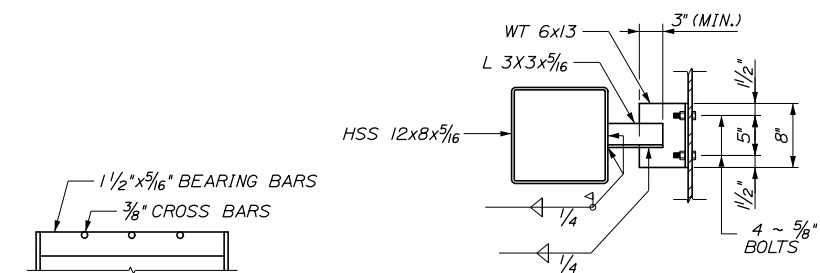
1. ASPHALTIC PLUG JOINTS SHALL BE INSTALLED AFTER THE SURFACE PAVEMENT ON THE BRIDGE AND THE APPROACHES IS COMPLETE.
2. THE ASPHALTIC PLUG JOINT SHALL BE INSTALLED AT AN AIR TEMPERATURE BETWEEN 40°F AND 60°F.
3. DECK AND BACKWALL REINFORCING NOT SHOWN FOR CLARITY.
4. THE ASPHALTIC PLUG JOINTS SHALL BE 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.



PLAN
1" = 1'-0"



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



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

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

Filename: 086_Miscellaneous Details.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.			
	By	Date	By
	Designed	HJW 07\18	Checked
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			RAL 07\18

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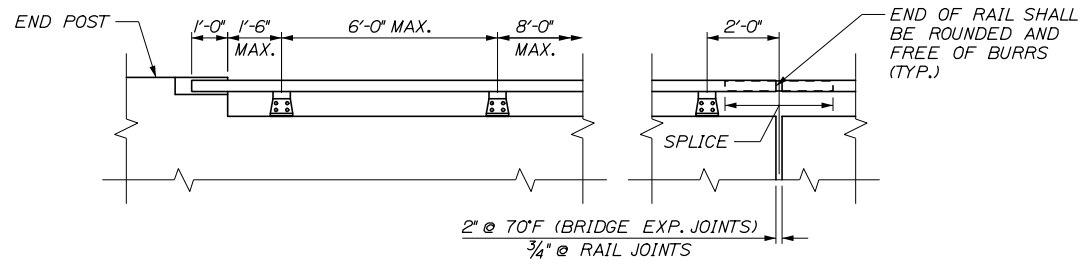
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

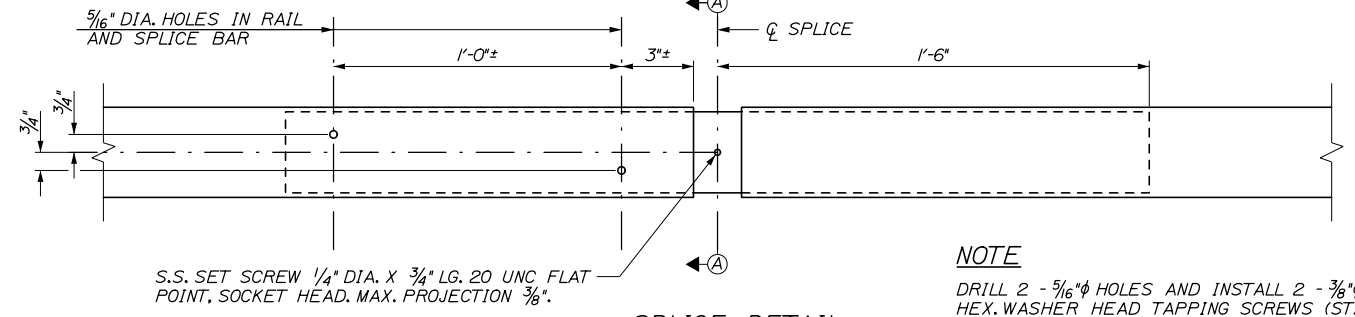
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
MISCELLANEOUS DETAILS

SHEET NUMBER: S-50
CONTRACT: 2018.15
86 OF 115

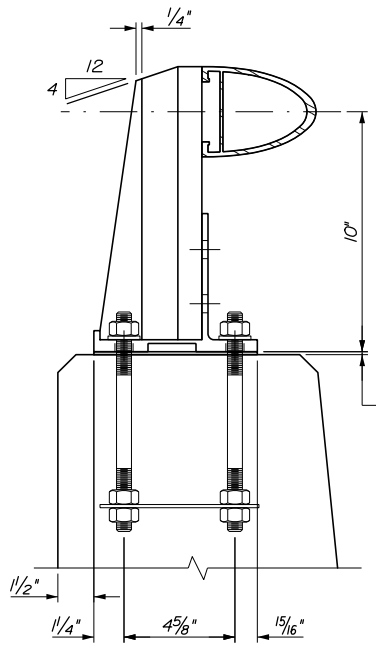


RAILING ELEVATION
3/8" = 1'-0"

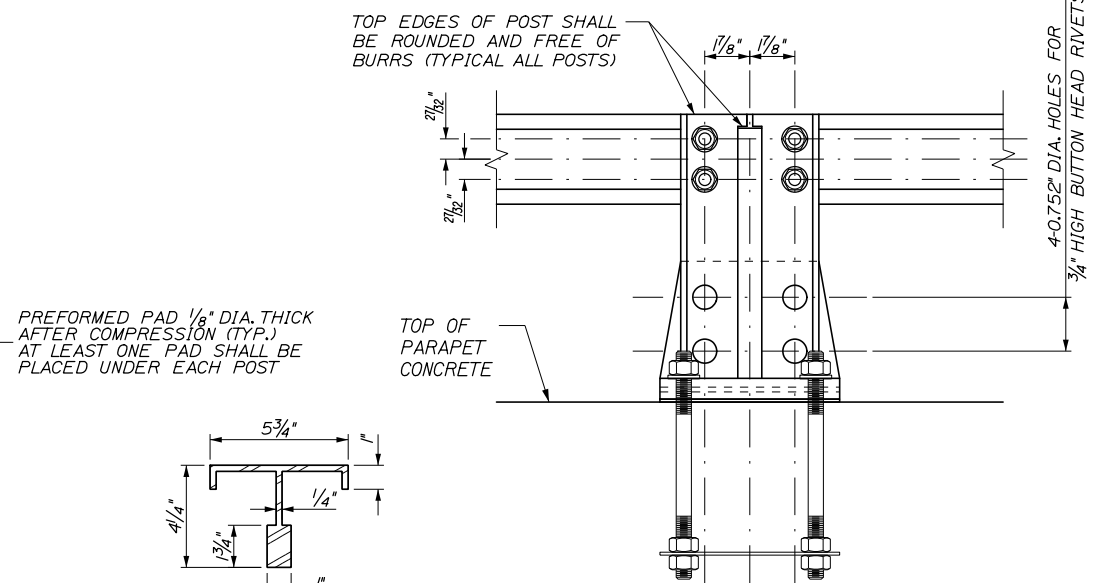


SPLICE DETAIL
3" = 1'-0"

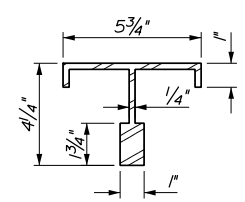
NOTE
DRILL 2 - 5/16" φ HOLES AND INSTALL 2 - 3/8" φ X 1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).



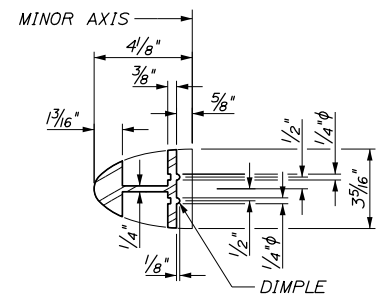
BRIDGE RAILING ASSEMBLY
3" = 1'-0"



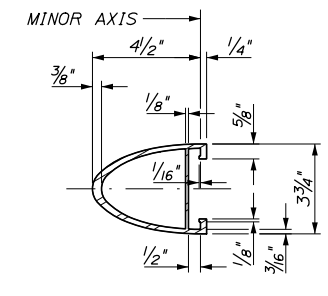
OUTSIDE ELEVATION OF POST
3" = 1'-0"



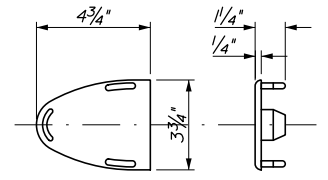
POST SECTION
3" = 1'-0"



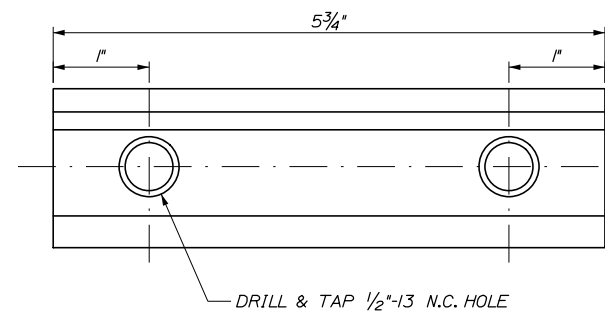
SECTION A-A
3" = 1'-0"



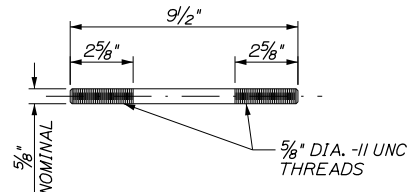
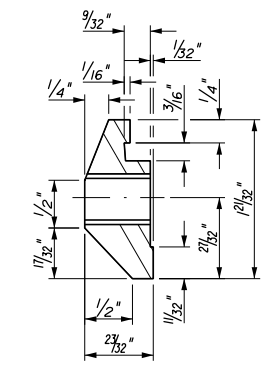
RAIL MEMBER
3" = 1'-0"



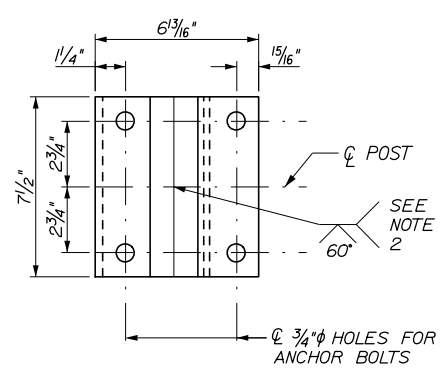
CAST ALUMINUM DRIVE FIT RAIL CAP
3" = 1'-0"



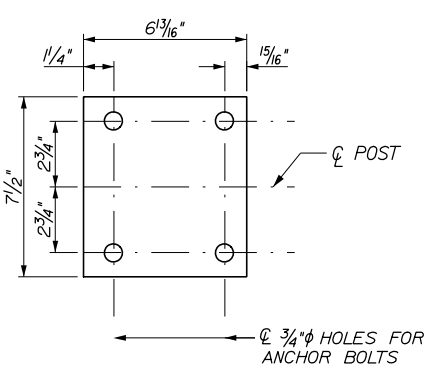
CLAMP BAR DETAILS
1'-0" = 1'-0"



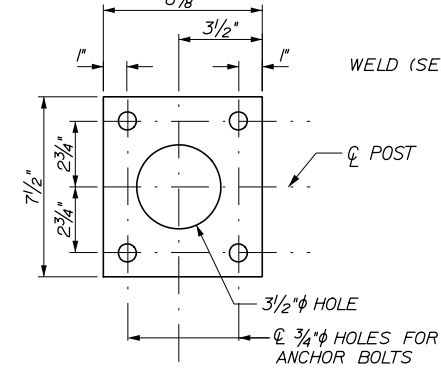
ANCHOR BOLT
(SEE NOTES 3 AND 4)
3" = 1'-0"



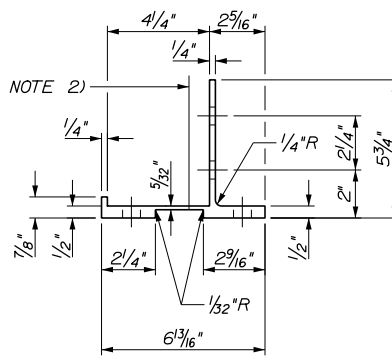
POST BASE (BOTTOM VIEW)
3" = 1'-0"



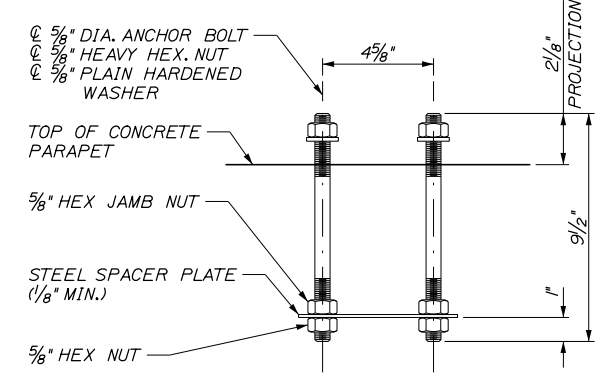
PREFORMED PAD
3" = 1'-0"



STEEL SPACER PLATE (FOR ANCHORAGE)
3" = 1'-0"



POST BASE SECTION
3" = 1'-0"



RAIL POST ANCHORAGE (ASSEMBLY)
3" = 1'-0"

- NOTES:**
- LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POSTS WHENEVER POSSIBLE AND, IN ANY CASE, NEVER LESS THAN TWO (2). RAIL POSTS ARE TO BE SET NORMAL TO GRADE, UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.
 - ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE.
 - IF CUT THREADS ARE USED TO FABRICATE ANCHOR BOLTS, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.
 - FOUR (4) BOLT, NUT, AND WASHER SETS ARE REQUIRED PER ASSEMBLY. ALL HARDWARE SHALL BE GALVANIZED.

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

By	Date	By	Date
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Drawn ERB	07\18	In Charge of RAL	07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSEECONTEE STREAM OVERPASS
ALUMINUM BRIDGE RAILING (1 BAR)

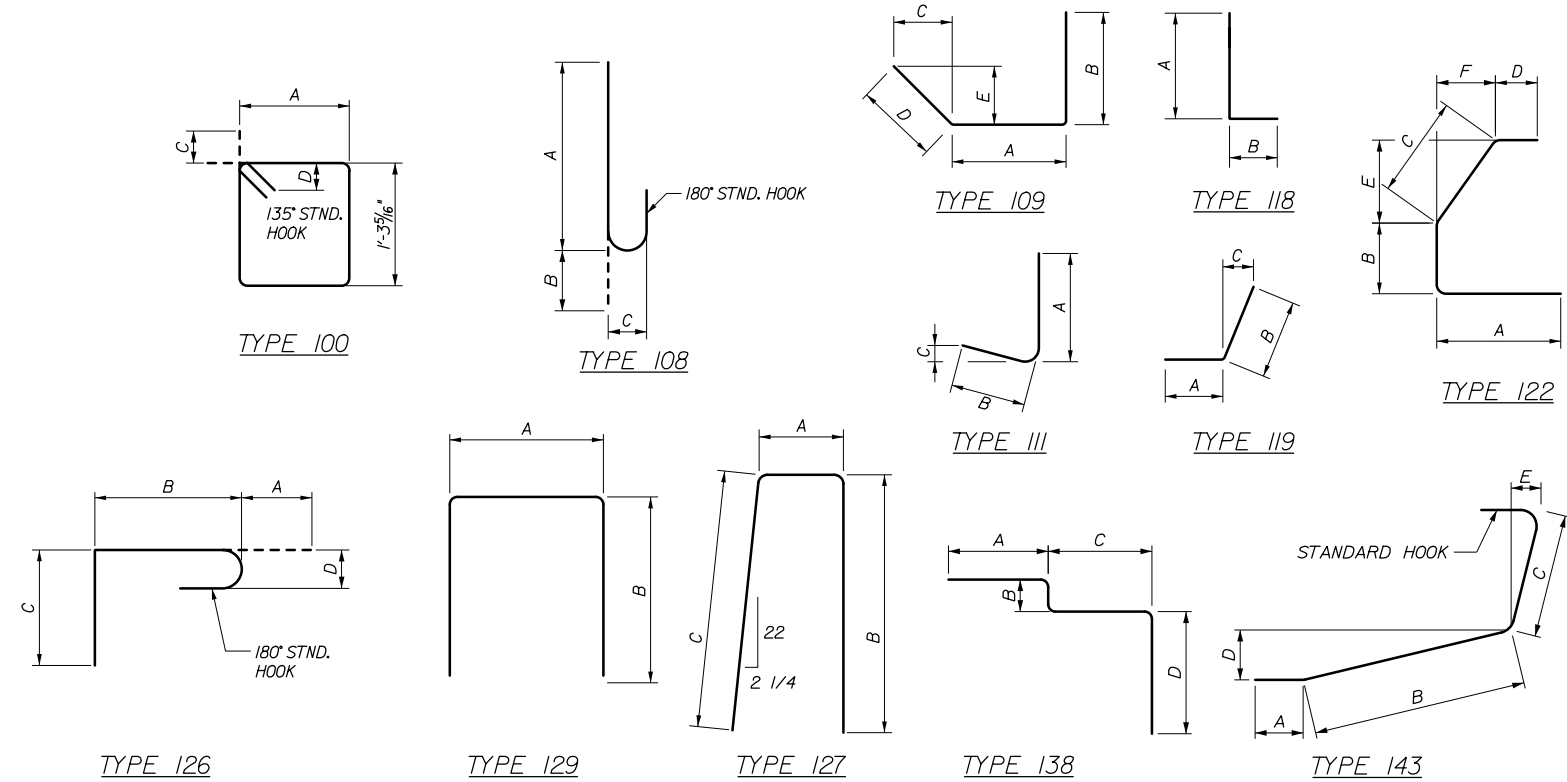
SHEET NUMBER: S-51
CONTRACT: 2018.15
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COBBOSSECONTEE SB BRIDGE WIN# 2018.15

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1											
A501W1	5	28	4' - 4"	STR							Abutment Footing (D+G)
A502W1	5	44	5' - 0"	STR							Abutment Footing Transverse
A503W1	5	12	20' - 5"	STR							Abutment Footing Longitudinal
A510W1	5	84	2' - 8.5"	118	1'-6"	1'-2.5"					Pedestal Longitudinal (D+G)
A511W1	5	48	3' - 10.5"	118	2'-8"	1'-2.5"					Pedestal Transverse (D+G)
A512W1	5	12	5' - 10"	129	2'-0"	2'-2"					Pedestal Stairup
ABUTMENT NO. 2											
A601W1	6	24	23' - 3"	STR							Abutment Backwall Horizontal
A602W1	6	74	5' - 5"	STR							Abutment Backwall Vertical (D+G)
A603W1	6	8	7' - 11"	STR							Abutment Backwall Vertical
A604W1	6	8	7' - 9"	STR							Abutment Backwall Vertical
A605W1	6	45	5' - 0"	129	1'-0"	2'-0"					Abutment Backwall Top Stairup
A606W1	6	12	7' - 11"	STR							Abutment Seat Horizontal (D+G)
A607W1	6	8	4' - 9"	STR							Abutment Wingwall and Seat Vertical (D+G)
A608W1	6	40	7' - 3"	118	6'-3"	1'-0"					Abutment Wingwall and Seat Vertical
A609W1	6	8	6' - 9"	118	3'-4"	3'-5"					Abutment Seat Vertical & Top
A610W1	6	12	12' - 5"	118	8'-1"	4'-4"					Abutment Seat to Wingwall Horizontal
A611W1	6	36	10' - 0"	118	5'-8"	4'-4"					Abutment Backwall to Wingwall Horizontal
APPROACH SLAB											
AS501W1	5	16	36' - 8"	STR							Approach Slab Transverse
AS601W1	6	75	12' - 8"	STR							Approach Slab Longitudinal
WINGWALL CORBELS											
W601W1	6	18	3' - 8"	118	2'-8"	1'-0"					Wingwall Vertical (D+G)
W602W1	6	36	13' - 2"	STR							Wingwall Horizontal
W603W1	6	16	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stirrups
W604W1	6	15	9' - 5"	122	2'-7"	3'-10.5"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W605W1	6	15	8' - 1"	129	4'-9"	1'-8"					Wingwall Vertical Stairup
W606W1	6	30	9' - 6"	118	8'-4"	1'-2"					Wingwall Vertical
W607W1	6	2	8' - 7"	122	2'-7"	3'-0.5"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W608W1	6	2	6' - 5.5"	118	1'-8"	4'-9.5"					Wingwall Corbel
W609W1	6	2	4' - 9"	129	1'-1"	1'-10"					Wingwall Corbel
W610W1	6	1	12' - 5"	129	1'-1"	5'-8"					Wingwall Top Horizontal
ENDPOSTS											
EP501W1	5	16	14' - 10"	129	13'-2"	0'-10"					Endpost Horizontal Stairup
EP502W1	5	4	12' - 3"	119	9'-7"	2'-8.25"	2'-6"				Endpost Horizontal, Top
EP503W1	5	2	7' - 10"	118	4'-0"	3'-10"					Endpost Horizontal, Top
EP504W1	5	2	7' - 10"	138	2'-11"	0'-4"	1'-1"	3'-6"			Endpost Horizontal, Top
ENDPOSTS - VERTICAL											
EP601W1	6	56	7' - 3"	STR							Endpost Vertical
EP602W1	6	56	6' - 6"	118	5'-6"	1'-0"					Endpost Vertical
EP603W1	6	56	5' - 6.75"	129	0'-6.75"	2'-6"					Endpost Top Stairup
ABUTMENT NO. 2											
A501W2	5	28	4' - 4"	STR							Abutment Footing (D+G)
A502W2	5	44	5' - 0"	STR							Abutment Footing Transverse
A503W2	5	12	20' - 5"	STR							Abutment Footing Longitudinal
A510W2	5	84	2' - 8.5"	118	1'-6"	1'-2.5"					Pedestal Longitudinal (D+G)
A511W2	5	48	3' - 10.5"	118	2'-8"	1'-2.5"					Pedestal Transverse (D+G)
A512W2	5	12	5' - 10"	129	2'-0"	2'-2"					Pedestal Stairup
ABUTMENT NO. 2											
A601W2	6	20	23' - 3"	STR							Abutment Backwall Horizontal
A602W2	6	74	4' - 11"	STR							Abutment Backwall Vertical (D+G)
A603W2	6	8	7' - 4"	STR							Abutment Backwall Vertical
A604W2	6	8	7' - 3"	STR							Abutment Backwall Vertical
A605W2	6	45	5' - 0"	129	1'-0"	2'-0"					Abutment Backwall Top Stairup
A606W2	6	12	7' - 11"	STR							Abutment Seat Horizontal (D+G)
A607W2	6	8	4' - 9"	STR							Abutment Wingwall and Seat Vertical (D+G)
A608W2	6	40	7' - 3"	118	6'-3"	1'-0"					Abutment Wingwall and Seat Vertical
A609W2	6	8	6' - 9"	118	3'-4"	3'-5"					Abutment Seat Vertical & Top
A610W2	6	12	12' - 5"	118	8'-1"	4'-4"					Abutment Seat to Wingwall Horizontal
A611W2	6	30	10' - 0"	118	5'-8"	4'-4"					Abutment Backwall to Wingwall Horizontal
APPROACH SLAB											
AS501W2	5	16	36' - 8"	STR							Approach Slab Transverse
AS601W2	6	75	12' - 8"	STR							Approach Slab Longitudinal

COBBOSSECONTEE SB BRIDGE WIN# 2018.15

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2											
W601W2	6	18	3' - 8"	118	2'-8"	1'-0"					Wingwall Vertical (D+G)
W602W2	6	34	13' - 2"	STR							Wingwall Horizontal
W603W2	6	15	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stirrups
W604W2	6	15	8' - 10.5"	122	2'-7"	3'-4"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W605W2	6	15	7' - 7"	129	4'-3"	1'-8"					Wingwall Vertical Stairup
W606W2	6	30	9' - 1"	118	7'-11"	1'-2"					Wingwall Vertical
W607W2	6	2	8' - 0.5"	122	2'-7"	2'-6"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W608W2	6	2	5' - 11"	118	1'-8"	4'-3"					Wingwall Corbel
W609W2	6	2	4' - 9"	129	1'-1"	1'-10"					Wingwall Corbel
W610W2	6	1	12' - 5"	129	1'-1"	5'-8"					Wingwall Top Horizontal
ENDPOSTS											
EP501W2	5	16	14' - 10"	129	13'-2"	0'-10"					Endpost Horizontal Stairup
EP502W2	5	4	12' - 3"	119	9'-7"	2'-8.25"	2'-6"				Endpost Horizontal, Top
EP503W2	5	2	7' - 10"	118	4'-0"	3'-10"					Endpost Horizontal, Top
EP504W2	5	2	7' - 10"	138	2'-11"	0'-4"	1'-1"	3'-6"			Endpost Horizontal, Top
ENDPOSTS - VERTICAL											
EP601W2	6	56	7' - 3"	STR							Endpost Vertical
EP602W2	6	56	6' - 6"	118	5'-6"	1'-0"					Endpost Vertical
EP603W2	6	56	5' - 6.75"	129	0'-6.75"	2'-6"					Endpost Top Stairup
SUPERSTRUCTURE											
S500W	5	872	40' - 8"	STR							Deck Transverse Reinforcing
S501W	5	448	55' - 6"	STR							Deck Longitudinal Reinforcing
S502W	5	20	5' - 7"	STR							Deck End Transverse Reinforcing, Thickened Slab
S503W	5	16	7' - 5"	STR							End Parapet Longitudinal Reinforcing
S504W	5	72	7' - 8"	STR							8' Parapet Longitudinal Reinforcing
S505W	5	64	15' - 8"	STR							16' Parapet Longitudinal Reinforcing
S506W	5	32	56' - 0"	STR							Deck Curb Longitudinal Reinforcing
S550W	5	864	7' - 1"	108	6'-6"	0'-7"	0'-5"				Deck Transverse Reinforcing
S551W	5	166	3' - 10"	118	3'-3"	0'-7"					Deck Thickened Slab Reinforcing
S552W	5	166	4' - 6"	109	3'-1"	0'-7"	0'-7"	0'-10"	0'-7"		Deck Thickened Slab Reinforcing
DECK REINFORCING											
S601W	6	162	30' - 0"	STR							Deck Longitudinal Reinforcing
S650W	6	940	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical Reinforcing
S651W	6	470	3' - 6"	127	1'-6"	0'-6"	1'-6"				Parapet Top Reinforcing



Date: 7/27/2018

Filename: 088_Reinforcing Steel Schedule 1.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

By	Date	By	Date
Designed HJW	07\18	Checked KEB	07\18
Drawn ERB	07\18	In Charge of RAL	07\18

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THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REHABILITATION
COBBOSSECONTEE STREAM OVERPASS
REINFORCING STEEL SCHEDULE I

SHEET NUMBER: S-52
 CONTRACT: 2018.15
 88 OF 115

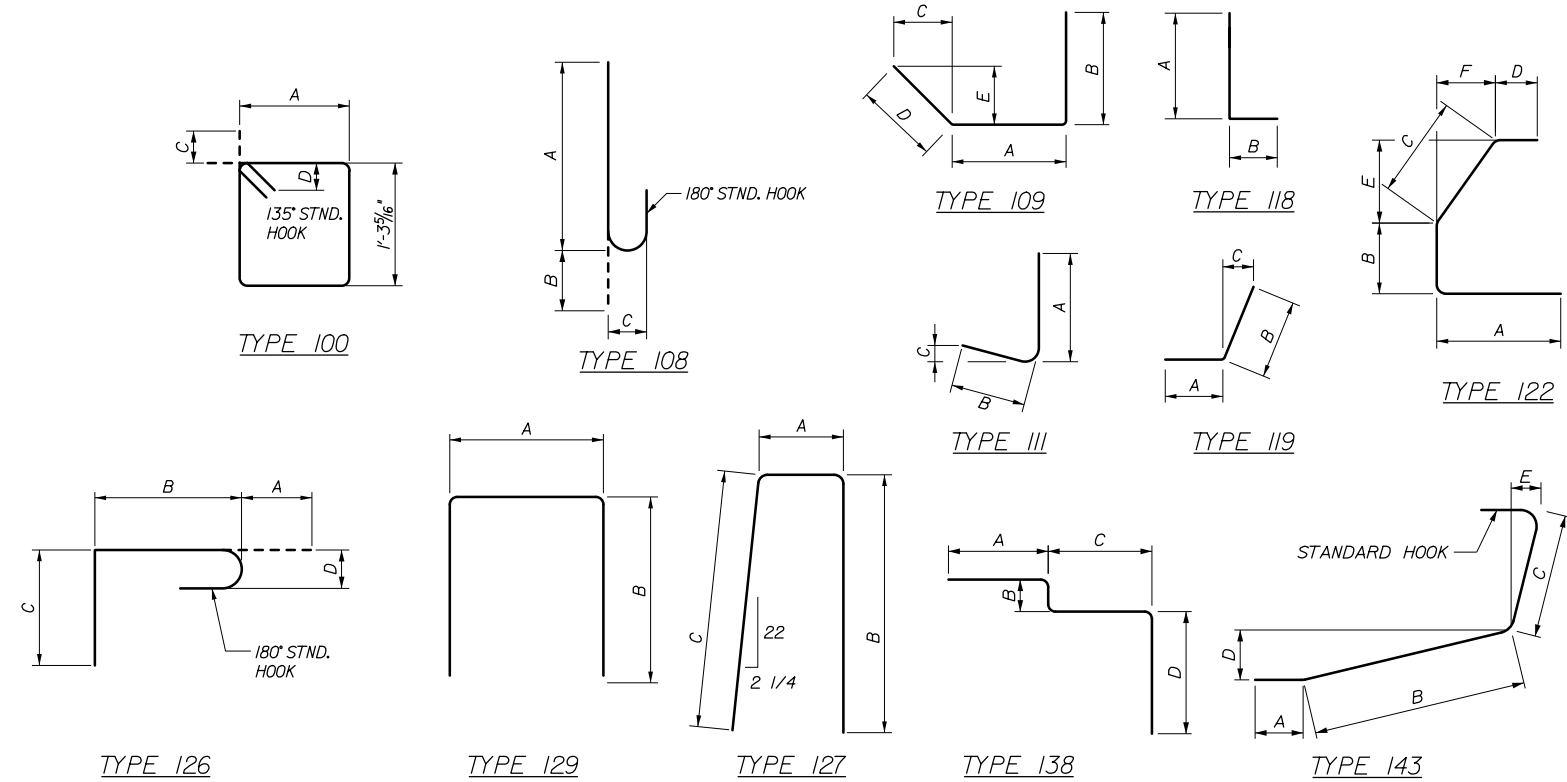
Date: 7/27/2018

COBBOSEECONTEE NB BRIDGE WIN# 2018.15

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 1											
A501E1	5	28	4' - 4"	STR							Abutment Footing (D+G)
A502E1	5	44	5' - 0"	STR							Abutment Footing Transverse
A503E1	5	12	20' - 5"	STR							Abutment Footing Longitudinal
A510E1	5	84	2' - 8.5"	118	1'-6"	1'-2.5"					Pedestal Longitudinal (D+G)
A511E1	5	48	3' - 10.5"	118	2'-8"	1'-2.5"					Pedestal Transverse (D+G)
A512E1	5	12	5' - 10"	129	2'-0"	2'-2"					Pedestal Stairup
ABUTMENT NO. 2											
A601E1	6	24	23' - 3"	STR							Abutment Backwall Horizontal
A602E1	6	74	4' - 9"	STR							Abutment Backwall Vertical (D+G)
A603E1	6	8	7' - 11"	STR							Abutment Backwall Vertical
A604E1	6	8	7' - 9"	STR							Abutment Backwall Vertical
A605E1	6	45	5' - 0"	129	1'-0"	2'-0"					Abutment Backwall Top Stairup
A606E1	6	12	7' - 11"	STR							Abutment Seat Horizontal (D+G)
A607E1	6	8	4' - 9"	STR							Abutment Wingwall and Seat Vertical (D+G)
A608E1	6	40	7' - 3"	118	6'-3"	1'-0"					Abutment Wingwall and Seat Vertical
A609E1	6	8	6' - 10"	118	3'-5"	3'-5"					Abutment Seat Vertical & Top
A610E1	6	12	12' - 5"	118	8'-1"	4'-4"					Abutment Seat to Wingwall Horizontal
A611E1	6	36	10' - 0"	118	5'-8"	4'-4"					Abutment Backwall to Wingwall Horizontal
APPROACH SLAB											
AS501E1	5	16	36' - 8"	STR							Approach Slab Transverse
AS601E1	6	75	12' - 8"	STR							Approach Slab Longitudinal
WINGWALL											
W601E1	6	18	3' - 8"	118	2'-8"	1'-0"					Wingwall Vertical (D+G)
W602E1	6	36	13' - 2"	STR							Wingwall Horizontal
W603E1	6	16	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stairups
W604E1	6	15	9' - 5"	122	2'-7"	3'-10.5"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W605E1	6	15	8' - 1"	129	4'-9"	1'-8"					Wingwall Vertical Stairup
W606E1	6	30	9' - 6"	118	8'-4"	1'-2"					Wingwall Vertical
W607E1	6	2	8' - 7"	122	2'-7"	3'-0.5"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W608E1	6	2	6' - 5.5"	118	1'-8"	4'-9.5"					Wingwall Corbel
W609E1	6	2	4' - 9"	129	1'-1"	1'-10"					Wingwall Corbel
W610E1	6	1	12' - 5"	129	1'-1"	5'-8"					Wingwall Top Horizontal
ENDPOST											
EP501E1	5	16	14' - 10"	129	13'-2"	0'-10"					Endpost Horizontal Stairup
EP502E1	5	4	12' - 3"	119	9'-7"	2'-8.25"	2'-6"				Endpost Horizontal, Top
EP503E1	5	2	7' - 10"	118	4'-0"	3'-10"					Endpost Horizontal, Top
EP504E1	5	2	7' - 10"	138	2'-11"	0'-4"	1'-1"	3'-6"			Endpost Horizontal, Top
ENDPOST VERTICAL											
EP601E1	6	56	7' - 3"	STR							Endpost Vertical
EP602E1	6	56	6' - 6"	118	5'-6"	1'-0"					Endpost Vertical
EP603E1	6	56	5' - 6.75"	129	0'-6.75"	2'-6"					Endpost Top Stairup

COBBOSEECONTEE NB BRIDGE WIN# 2018.15

MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	REMARKS
ABUTMENT NO. 2											
W601E2	6	18	3' - 8"	118	2'-8"	1'-0"					Wingwall Vertical (D+G)
W602E2	6	34	13' - 2"	STR							Wingwall Horizontal
W603E2	6	15	3' - 2"	129	1'-2"	1'-0"					Wingwall Horizontal End Stairups
W604E2	6	15	8' - 9.5"	122	2'-7"	3'-3"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W605E2	6	15	7' - 6"	129	4'-2"	1'-8"					Wingwall Vertical Stairup
W606E2	6	30	9' - 0"	118	7'-10"	1'-2"					Wingwall Vertical
W607E2	6	2	7' - 11.5"	122	2'-7"	2'-5"	1'-3.5"	1'-8"	0'-11"	0'-11"	Wingwall Corbel
W608E2	6	2	5' - 10"	118	1'-8"	4'-2"					Wingwall Corbel
W609E2	6	2	4' - 9"	129	1'-1"	1'-10"					Wingwall Corbel
W610E2	6	1	12' - 5"	129	1'-1"	5'-8"					Wingwall Top Horizontal
SUPERSTRUCTURE											
S500E	5	872	40' - 8"	STR							Deck Transverse Reinforcing
S501E	5	448	55' - 6"	STR							Deck Longitudinal Reinforcing
S502E	5	20	5' - 7"	STR							Deck End Transverse Reinforcing, Thickened Slab
S503E	5	16	7' - 5"	STR							End Parapet Longitudinal Reinforcing
S504E	5	72	7' - 8"	STR							8' Parapet Longitudinal Reinforcing
S505E	5	64	15' - 8"	STR							16' Parapet Longitudinal Reinforcing
S506E	5	32	56' - 0"	STR							Deck Curb Longitudinal Reinforcing
S550E	5	864	7' - 1"	108	6'-6"	0'-7"	0'-5"				Deck Transverse Reinforcing
S551E	5	166	3' - 10"	118	3'-3"	0'-7"					Deck Thickened Slab Reinforcing
S552E	5	166	4' - 6"	109	3'-1"	0'-7"	0'-7"	0'-10"	0'-7"		Deck Thickened Slab Reinforcing
DECK REINFORCING											
S601E	6	162	30' - 0"	STR							Deck Longitudinal Reinforcing
S650E	6	940	4' - 4"	118	3'-4"	1'-0"					Parapet Vertical Reinforcing
S651E	6	470	3' - 6"	127	1'-6"	0'-6"	1'-6"				Parapet Top Reinforcing



Filename: 090_Reinforcing Steel Schedule 3.dgn

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	HJW	07\18	Checked	KEB	07\18
Drawn	ERB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

BRIDGE REHABILITATION
 COBBOSEECONTEE STREAM OVERPASS
 REINFORCING STEEL SCHEDULE III

SHEET NUMBER: S-54
 CONTRACT: 2018.15
 90 OF 115

GENERAL NOTES

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS HIGHWAY AND BRIDGES 2014 LATEST REVISIONS AND MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INCLUDED IN THESE PLANS.

2. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.

3. THERE ARE NO PERMANENT OR TEMPORARY EASEMENTS ASSOCIATED WITH THIS PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING RIGHT OF WAY.

4. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) TO THE RESIDENT PRIOR TO STARTING WORK.

5. COPIES OF AS-BUILT PLANS ARE POSTED ON THE MAINE TURNPIKE AUTHORITY WEBSITE AT WWW.MAINETURNPIKE.COM/PROJECT-AND-PLANNING/CONSTRUCTION-CONTRACTS.ASPX. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.

6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT TOOLS, VEHICLES, EQUIPMENT, MATERIALS AND PERSONNEL FROM MARRING THE PAVEMENT SURFACE ON THE BRIDGE DECK AND APPROACHES WHILE THE WORK IS BEING COMPLETED.

7. THE CONTRACTOR SHALL SET, MAINTAIN AND REMOVE NAVIGATIONAL AIDS IN THE RIVER. BOAT TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION, NO LONG TERM STOPPAGES ARE PERMITTED. THE NAVIGATIONAL AIDS, FURNISHED BY THE STATE OF MAINE TO THE AUTHORITY, SHALL BE POSITIONED TO ADVISE BOATERS OF THE CONSTRUCTION HAZARDS AHEAD. ADDITIONAL NAVIGATIONAL AIDS MAY BE NEEDED DEPENDING ON CONTRACTOR ACTIVITIES. PAYMENT FOR OBTAINING, SETTING, MAINTAINING AND REMOVING THE NAVIGATIONAL AIDS SHALL BE INCIDENTAL TO THE CONTRACT.

8. BOOM SUPPORTED FLOATING SILT FENCE SHALL ONLY BE USED BETWEEN NO MORE THAN TWO PIERS AT ONE TIME ON THE ANDROSCOGGIN RIVER.

9. CONTRACTOR SHALL PROVIDE RESIDENT ACCESS TO ALL AREAS UNDER CONSTRUCTION FOR INSPECTION PURPOSES. THIS SHALL BE INCIDENTAL TO PAY ITEM 524, TEMPORARY ACCESS PLATFORMS FOR PIER INSPECTION AND REPAIR.

MATERIALS

CONCRETE

SUBSTRUCTURE CONCRETE REPAIRS SHALL BE PER SPECIAL PROVISION 518.

REINFORCING STEEL

AASHTO M31, GRADE 60. ALL REINFORCING SHALL BE EPOXY-COATED.

STRUCTURAL STEEL

PLATES AND BARS SHALL CONFORM TO ASTM A36

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM A325) HOT DIP GALVANIZED IN STANDARD HOLES.

LIST OF ABBREVIATIONS

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

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	ANDRO. QUANTITY
201.31	Removal of Debris		LS	1
504.885	Post-Tensioning Sleeve Repair		EA	13
514.06	Curing Box for Concrete Cylinders		EA	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	3,250
515.23	Anti-Graffiti Coating		SY	900
518.40	Epoxy Injection Crack Repair		LF	310
518.401	Epoxy Injection Crack Repair - Below Waterline		LF	470
518.51	Repair of Upward Facing Surfaces - Below Reinforcing Steel < 8 inches		SF	43
518.60	Repair of Vertical Surfaces < 8 inches		SF	2,950
518.601	Repair of Vertical Surfaces < 8 inches - Below Waterline		SF	18
518.70	Repair of Overhead Surfaces < 8 inches		SF	91
523.56	Cleaning and Painting Bearing		EA	42
523.561	Repair Bearing		EA	1
523.562	Repair Bearing Keeper Strap		EA	10
524.301	Temporary Structural Support - Androscoggin Jacking		LS	1
524.60	Temporary Access Platforms for Pier Inspection and Repair		LS	1
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority	5210 LF	LS	0.5
527.341	Work Zone Crash Cushions - TL-3		Unit	2
627.73	Temporary 6 Inch Pavement Marking Tape		LF	9,700
627.731	Temporary 6 Inch Black Pavement Marking Tape		LF	2,800
629.05	Hand Labor, Straight Time		HR	20
631.10	Air Compressor (including operator)		HR	10
631.11	Air Tool (including operator)		HR	10
631.172	Truck - Large (including operator)		HR	20
631.36	Foreman		HR	10
652.30	Flashing Arrow		EA	2
652.33	Drum		EA	86
652.34	Cone		EA	50
652.35	Construction Signs		SF	830
652.361	Maintenance of Traffic Control Devices		LS	0.1
652.38	Flaggers		HR	10
652.41	Portable-Changeable Message Sign		EA	2
652.45	Truck Mounted Attenuator		CD	20
652.451	Automated Trailer Mounted Speed Limit Sign		CD	20
652.46	Temporary Portable Rumble Strip		Unit	20
656.50	Baled Hay, in place		EA	
656.632	30 inch Temporary Silt Fence		LF	
656.64	Boom Supported Floating Silt Fence		LF	302

SCOPE OF WORK

THE PROPOSED REPAIR PROJECT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING WORK:

- SUBSTRUCTURE REPAIRS
- BEARING REPAIRS
- POST-TENSIONING SLEEVE REPAIRS
- ASSOCIATED MOT ACTIVITIES TO COMPLETE WORK

Date: 7/27/2018

Filename: 092_GeneralNotes and Estimated Quantities.dgn

Scale:		Designed by:			
		HNTB			
No.	Revision	By	Date		
				CONSULTANT PROJECT MANAGER: Craig Morin, P.E.	
		By	Date	By	Date
		Designed	NMW 07\18	Checked	BRG 07\18
		Drawn	PEB 07\18	In Charge of	RAL 07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

**BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS**

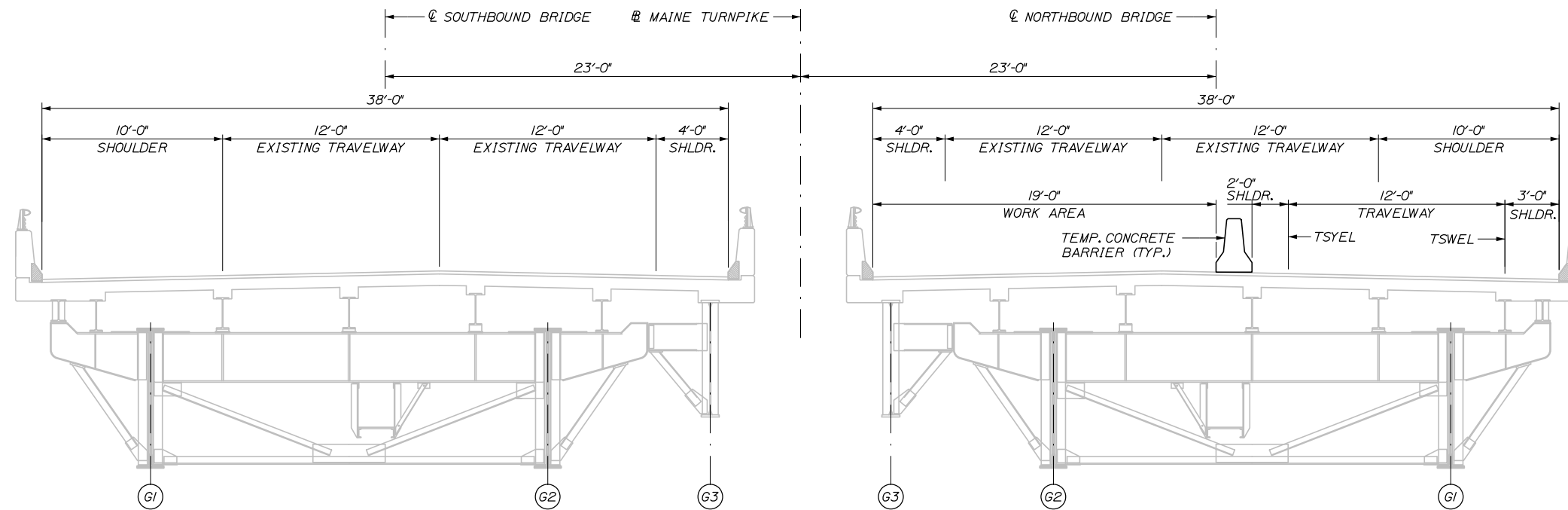
**GENERAL NOTES AND
ESTIMATED QUANTITIES**

SHEET NUMBER: AR-01

CONTRACT: 2018.15

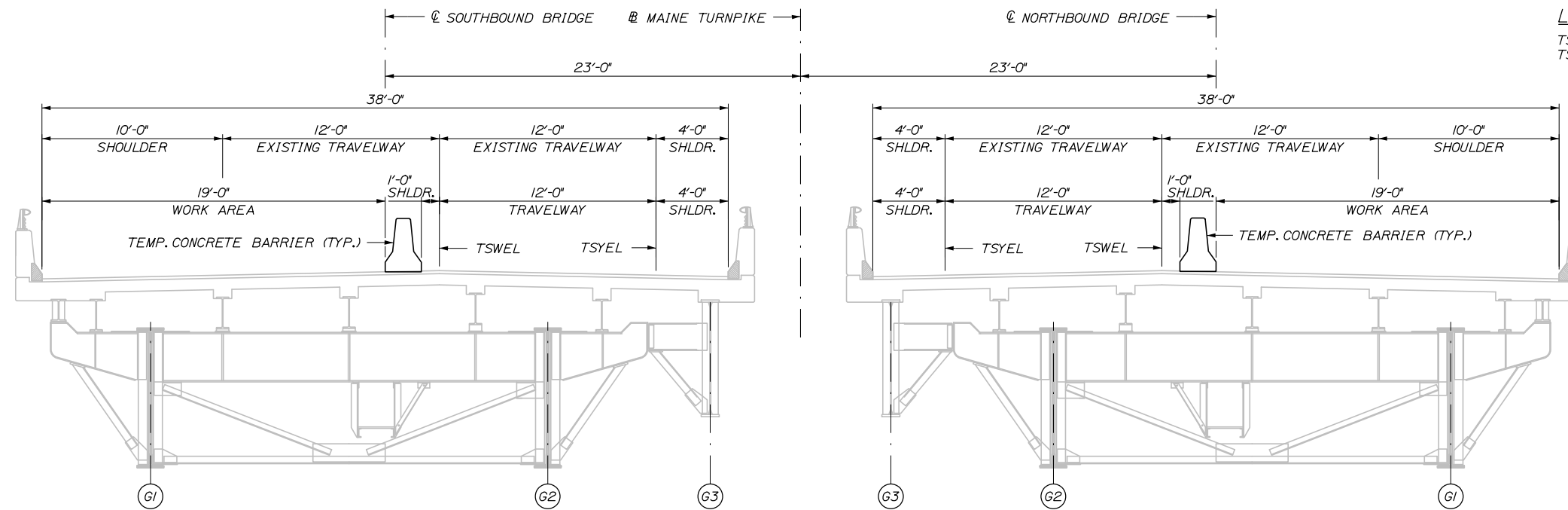
92 OF 115

Date: 7/27/2018



STAGE I CONSTRUCTION - FOR NB JOINT REPAIR WORK

1/4" = 1'-0"



STAGE II CONSTRUCTION - FOR SUBSTRUCTURE REPAIR WORK ACCESS

1/4" = 1'-0"

LEGEND

TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
TSWEL - TEMPORARY SOLID WHITE EDGE LINE

No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
	By	Date		By	Date
Designed	NMW	07\18	Checked	LZD	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

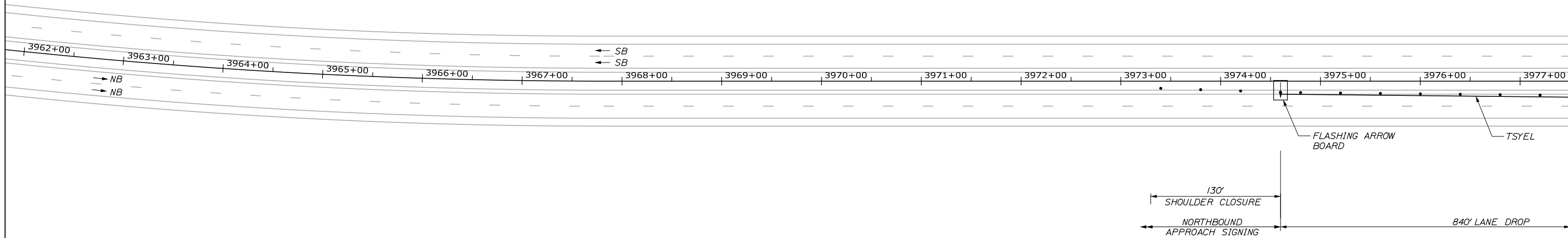
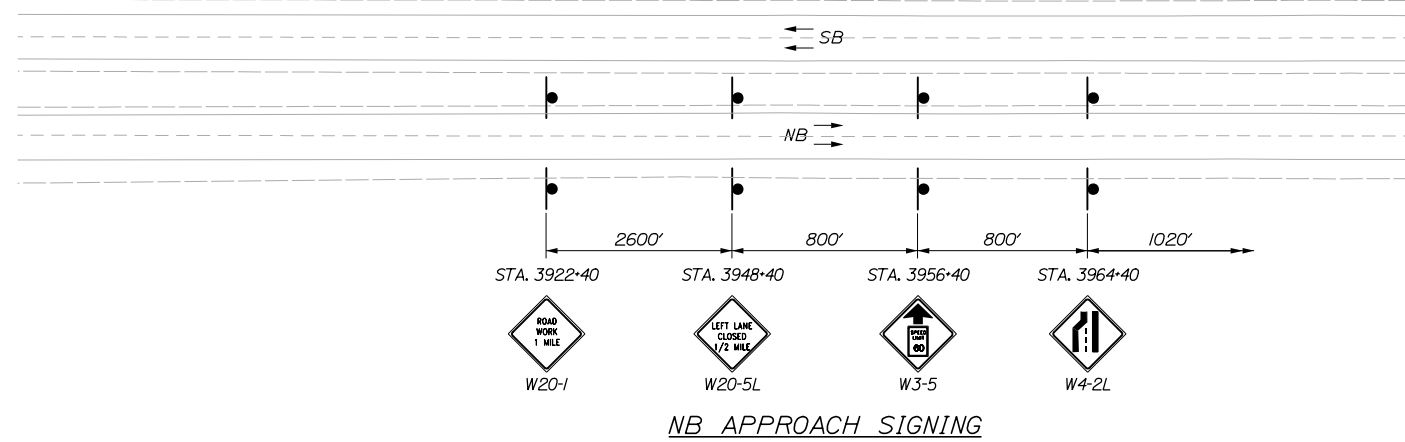
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS
MAINTENANCE OF TRAFFIC
TYPICAL SECTION

SHEET NUMBER: AR-02
CONTRACT: 2018.15
93 OF 115

Filename: 093_MOT_1.dgn

Date: 7/27/2018



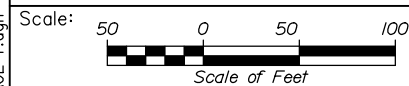
LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

1. ALL PAVEMENT MARKINGS AND PAVEMENT MARKING REMOVAL ON THE NORTHBOUND AND SOUTHBOUND ROADWAYS AND THE NORTHBOUND AND SOUTHBOUND BRIDGES SHALL BE COMPLETED WITH TAPE.
2. TEMPORARY CONCRETE BARRIER ON NEW PAVEMENT SHALL BE INSTALLED IN A MANNER THAT PREVENTS DAMAGE TO NEW PAVEMENT. SEE SPECIAL PROVISION 107.4.7 LIMITATIONS OF OPERATIONS FOR ADDITIONAL INFORMATION

Filename: 094_STAGE 1.dgn



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**THE GOLD STAR
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**BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE I (1 OF 4)**

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

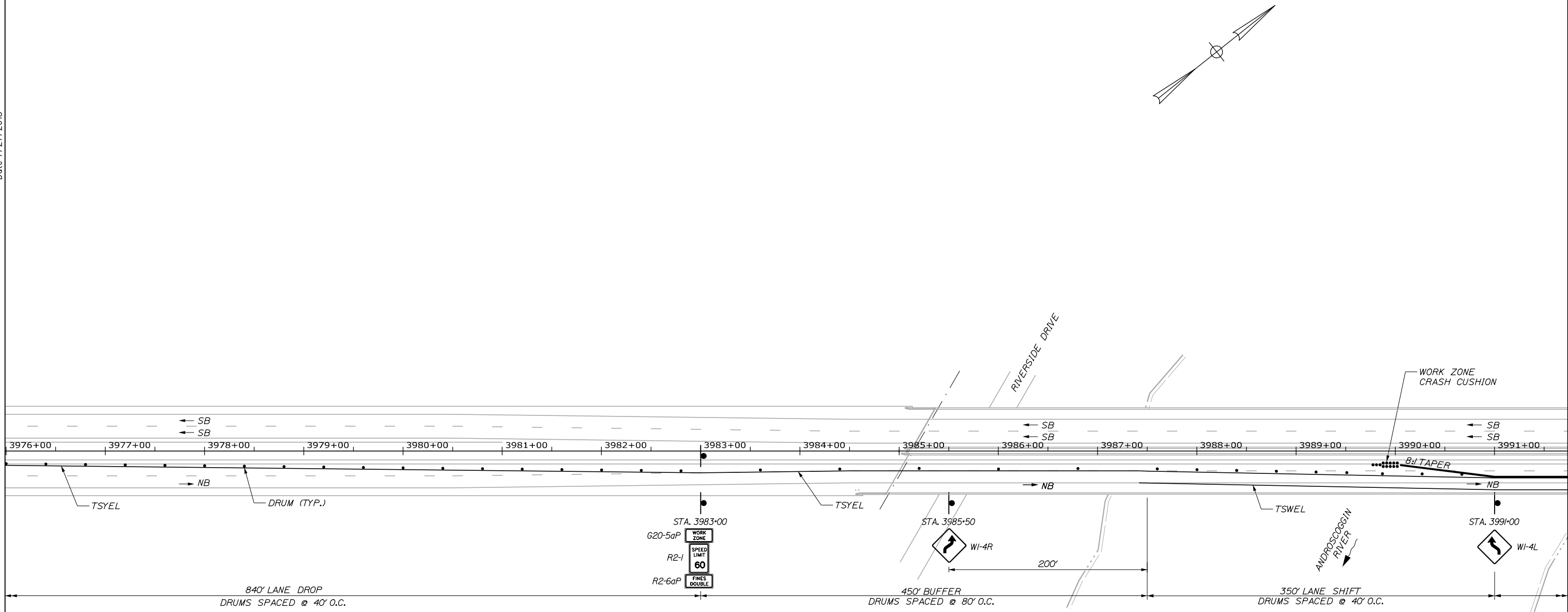
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2018.15

SHEET NUMBER: AR-03

94 OF 115

Date: 7/27/2018



LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

1. ALL PAVEMENT MARKINGS AND PAVEMENT MARKING REMOVAL ON THE NORTHBOUND AND SOUTHBOUND ROADWAYS AND THE NORTHBOUND AND SOUTHBOUND BRIDGES SHALL BE COMPLETED WITH TAPE.
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Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

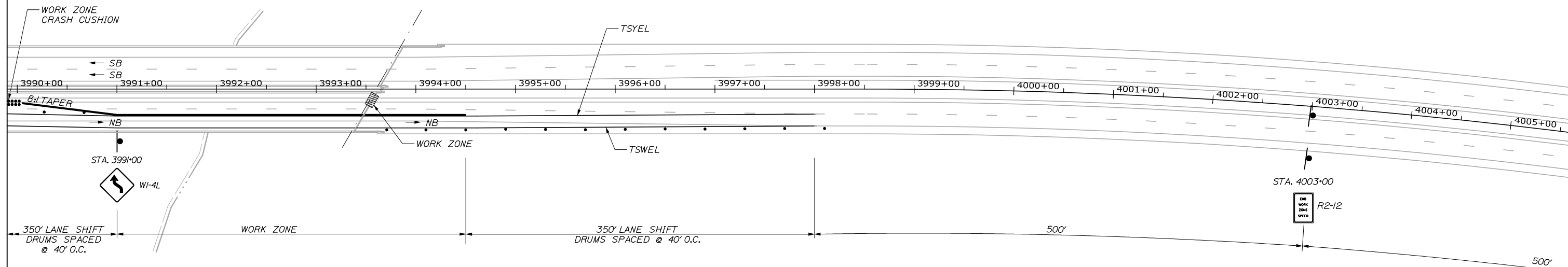
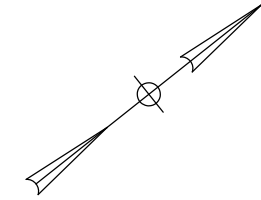
**BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE 1 (2 OF 4)**

SHEET NUMBER: AR-04
 95 OF 115

CONTRACT: 2018.15

Filename: 095_STAGE_1.dgn

Date: 7/27/2018



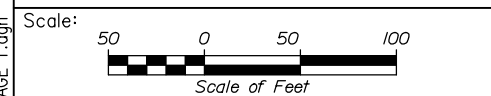
LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

1. ALL PAVEMENT MARKINGS AND PAVEMENT MARKING REMOVAL ON THE NORTHBOUND AND SOUTHBOUND ROADWAYS AND THE NORTHBOUND AND SOUTHBOUND BRIDGES SHALL BE COMPLETED WITH TAPE.
2. TEMPORARY CONCRETE BARRIER ON NEW PAVEMENT SHALL BE INSTALLED IN A MANNER THAT PREVENTS DAMAGE TO NEW PAVEMENT. SEE SPECIAL PROVISION 107.4.7 LIMITATIONS OF OPERATIONS FOR ADDITIONAL INFORMATION

Filename: 096_STAGE_1.dgn



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

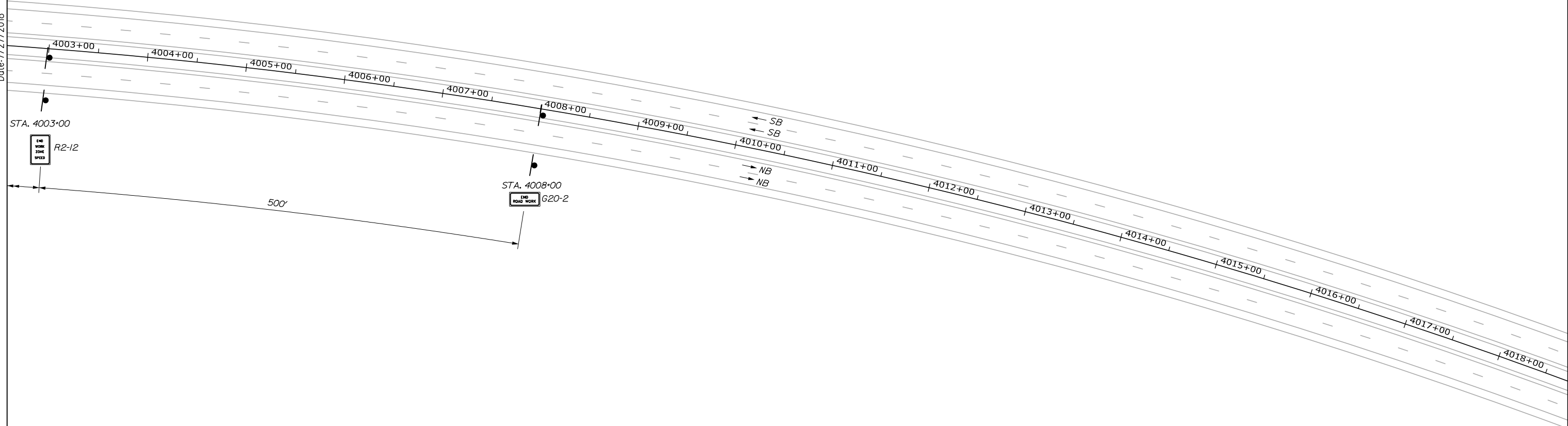
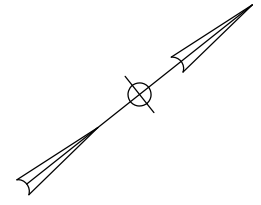
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE 1 (3 OF 4)

SHEET NUMBER: AR-05
 96 OF 115

CONTRACT: 2018.15

Date: 7/27/2018



LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

1. ALL PAVEMENT MARKINGS AND PAVEMENT MARKING REMOVAL ON THE NORTHBOUND AND SOUTHBOUND ROADWAYS AND THE NORTHBOUND AND SOUTHBOUND BRIDGES SHALL BE COMPLETED WITH TAPE.
2. TEMPORARY CONCRETE BARRIER ON NEW PAVEMENT SHALL BE INSTALLED IN A MANNER THAT PREVENTS DAMAGE TO NEW PAVEMENT. SEE SPECIAL PROVISION 107.4.7 LIMITATIONS OF OPERATIONS FOR ADDITIONAL INFORMATION

Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MEMORIAL HIGHWAY

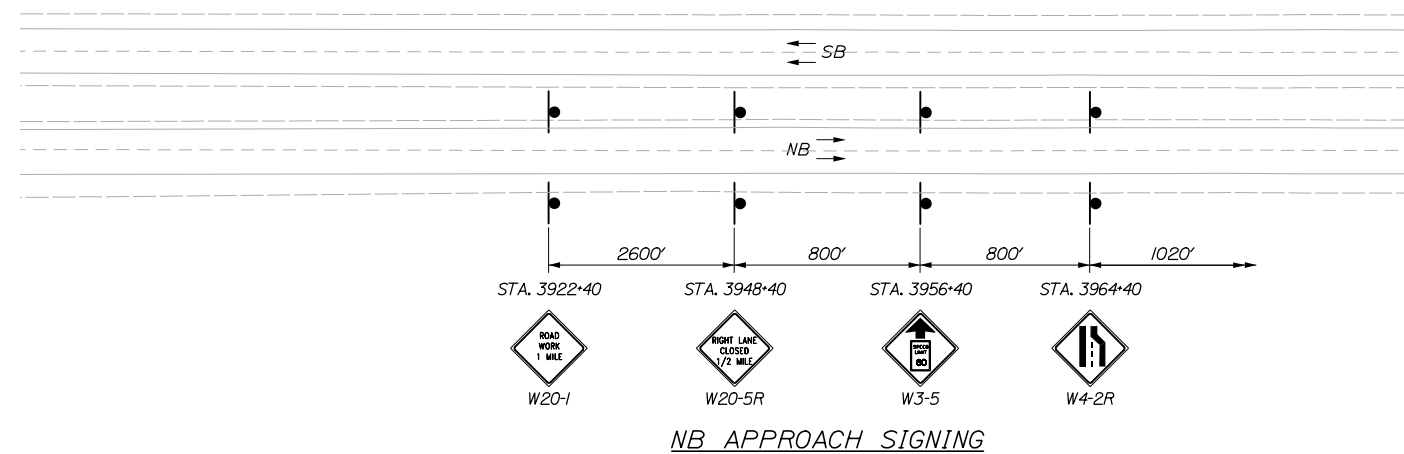
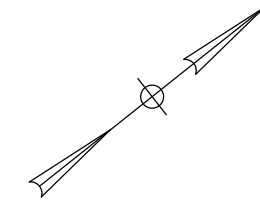
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE 1 (4 OF 4)

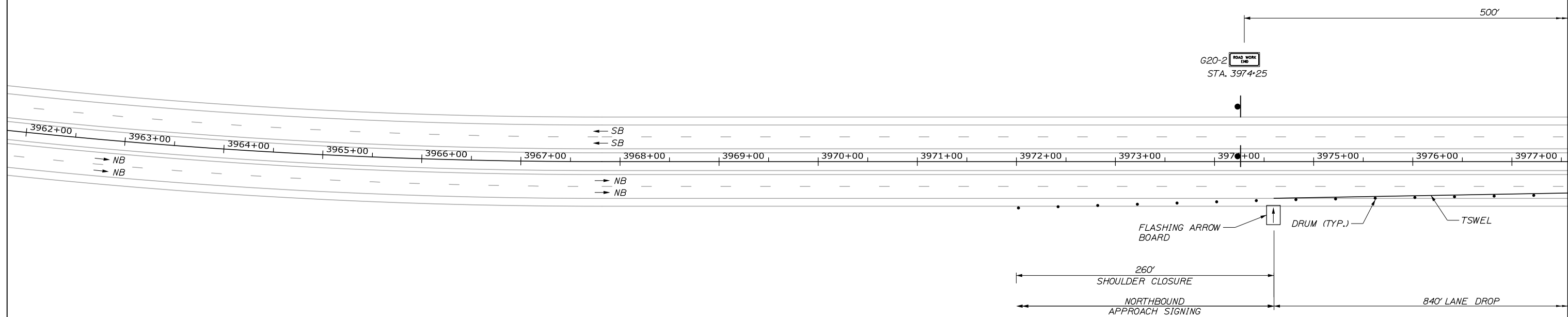
SHEET NUMBER: AR-06
 CONTRACT: 2018.15
 97 OF 115

Filename: 097_STAGE_1.dgn

Date: 7/27/2018



NB APPROACH SIGNING

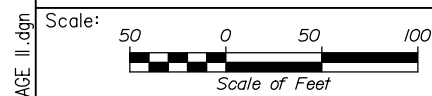


LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

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Designed by:

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No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE II (1 OF 4)

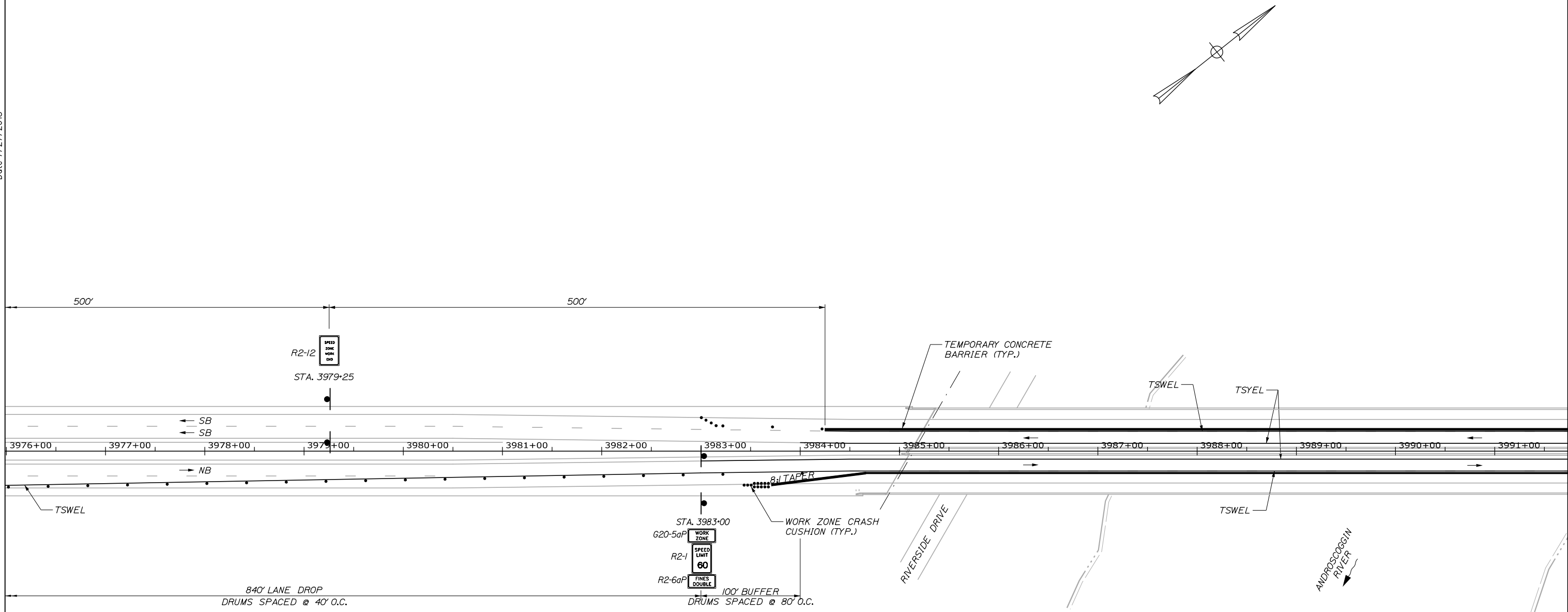
CONTRACT: 2018.15

SHEET NUMBER: AR-07

98 OF 115

Filename: 098_STAGE II.dgn

Date: 7/27/2018

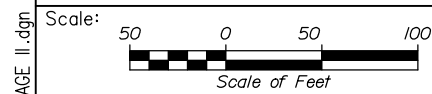


LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

**BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE II (2 OF 4)**

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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

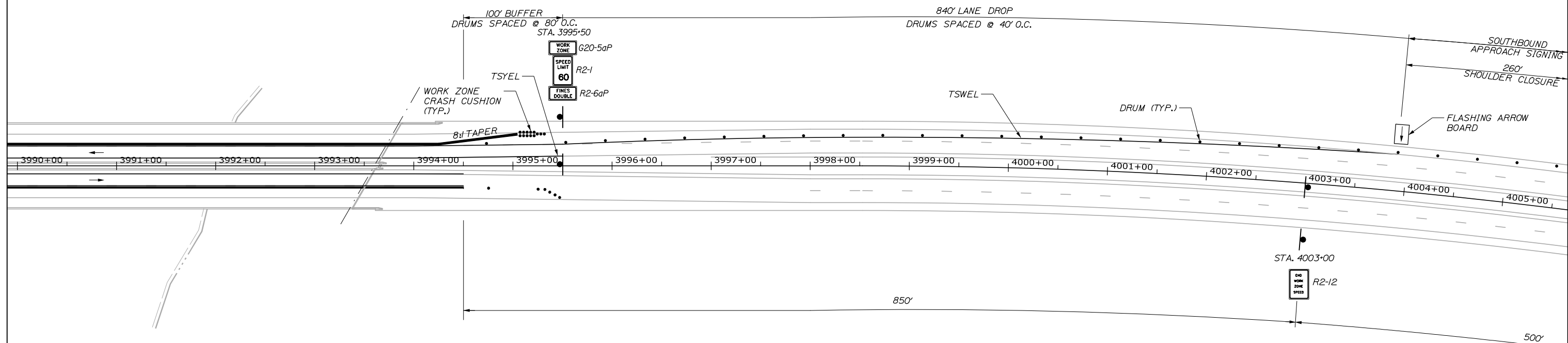
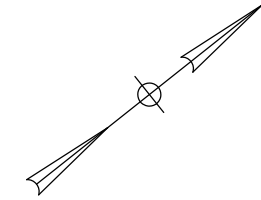
CONTRACT: 2018.15

SHEET NUMBER: AR-08

99 OF 115

Filename: 099_STAGE II.dgn

Date: 7/27/2018



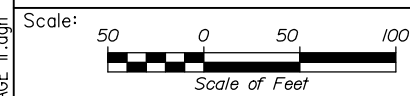
LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

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Filename: 100_STAGE II.dgn



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

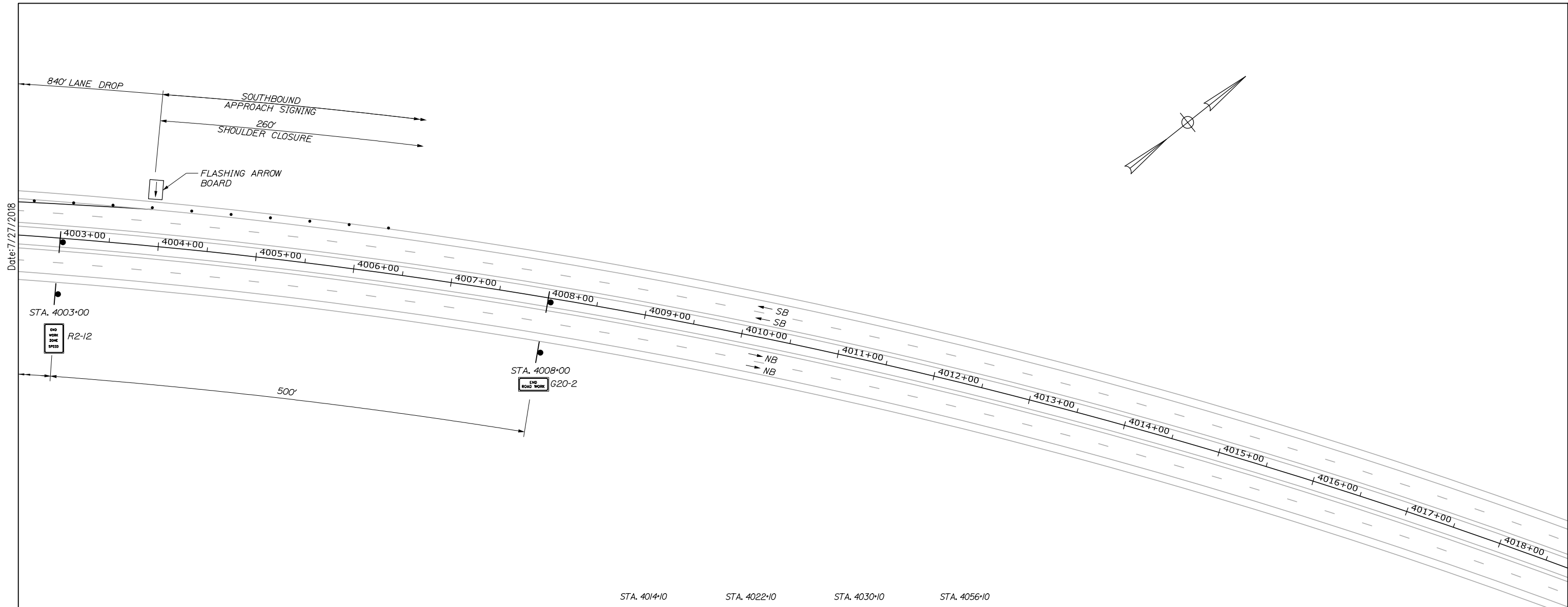
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS

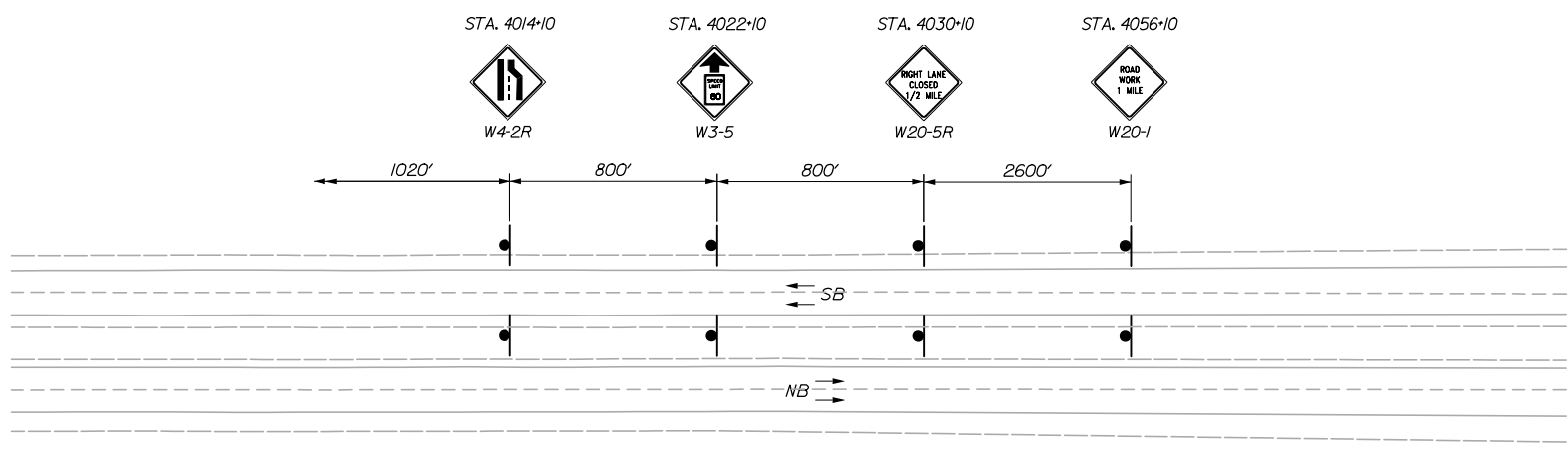
MAINTENANCE OF TRAFFIC
STAGE II (3 OF 4)

SHEET NUMBER: AR-09
100 OF 115

CONTRACT: 2018.15



Date: 7/27/2018



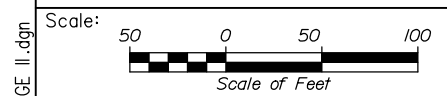
SB APPROACH SIGNING

LEGEND

TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 TSYEL - TEMPORARY SOLID YELLOW EDGE LINE

NOTES:

1. ALL PAVEMENT MARKINGS AND PAVEMENT MARKING REMOVAL ON THE NORTHBOUND AND SOUTHBOUND ROADWAYS AND THE NORTHBOUND AND SOUTHBOUND BRIDGES SHALL BE COMPLETED WITH TAPE.
2. TEMPORARY CONCRETE BARRIER ON NEW PAVEMENT SHALL BE INSTALLED IN A MANNER THAT PREVENTS DAMAGE TO NEW PAVEMENT. SEE SPECIAL PROVISION 107.4.7 LIMITATIONS OF OPERATIONS FOR ADDITIONAL INFORMATION
4. W20-1 "ROAD WORK 1 MILE" SIGN NEEDED ON THE EXIT 80 SOUTHBOUND ON RAMP.



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

**BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 STAGE II (4 OF 4)**

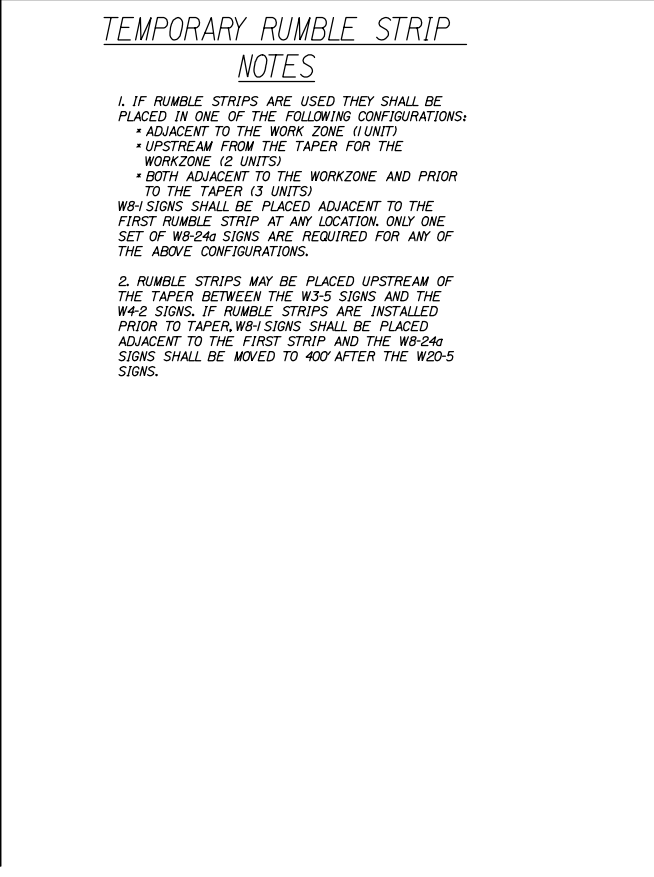
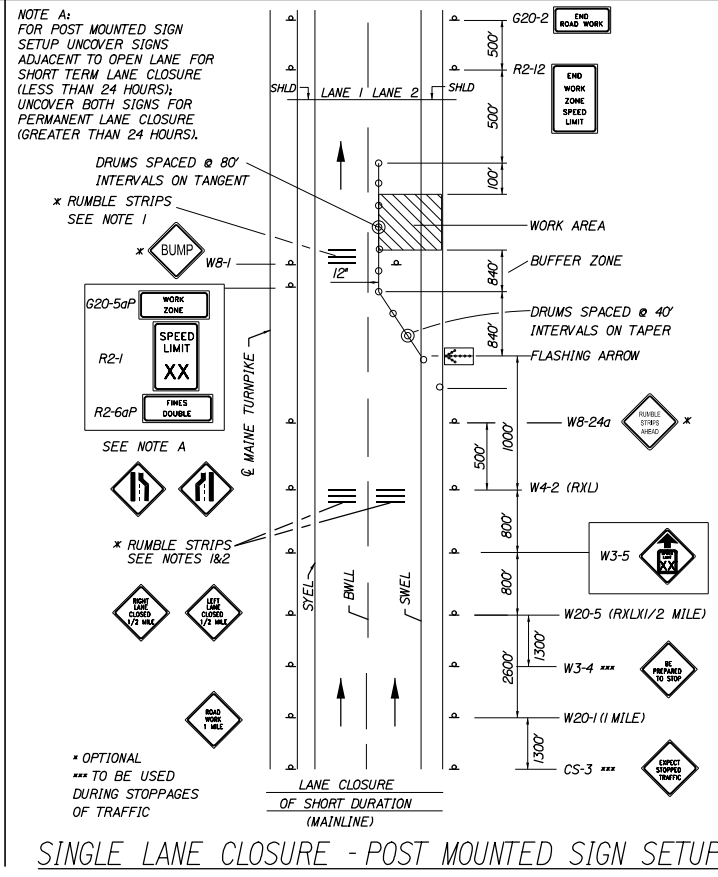
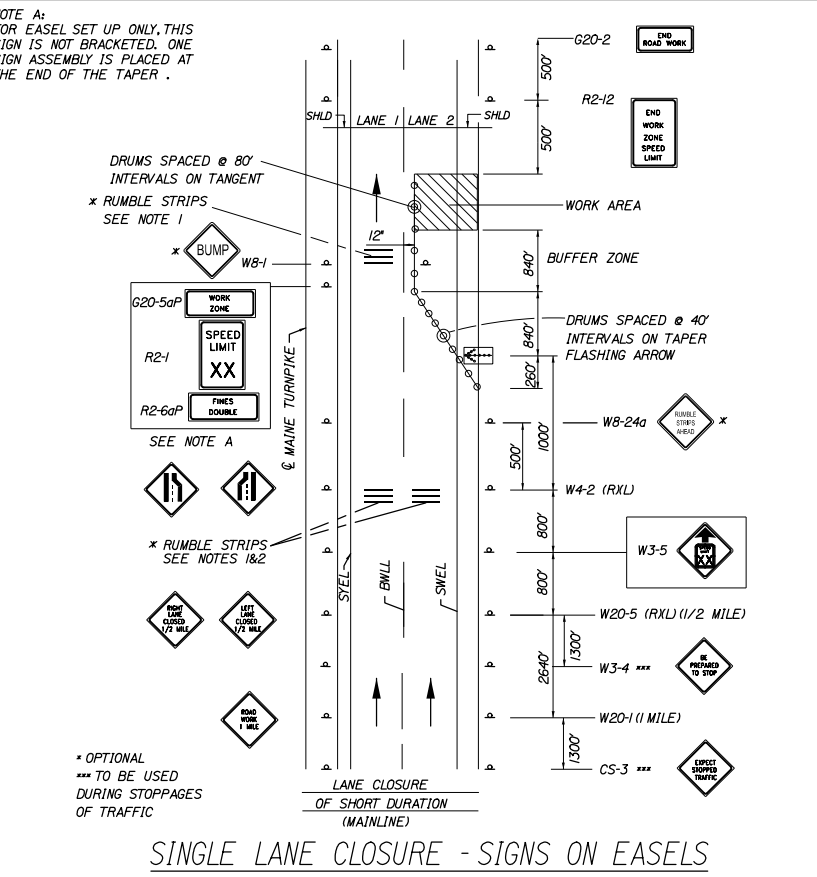
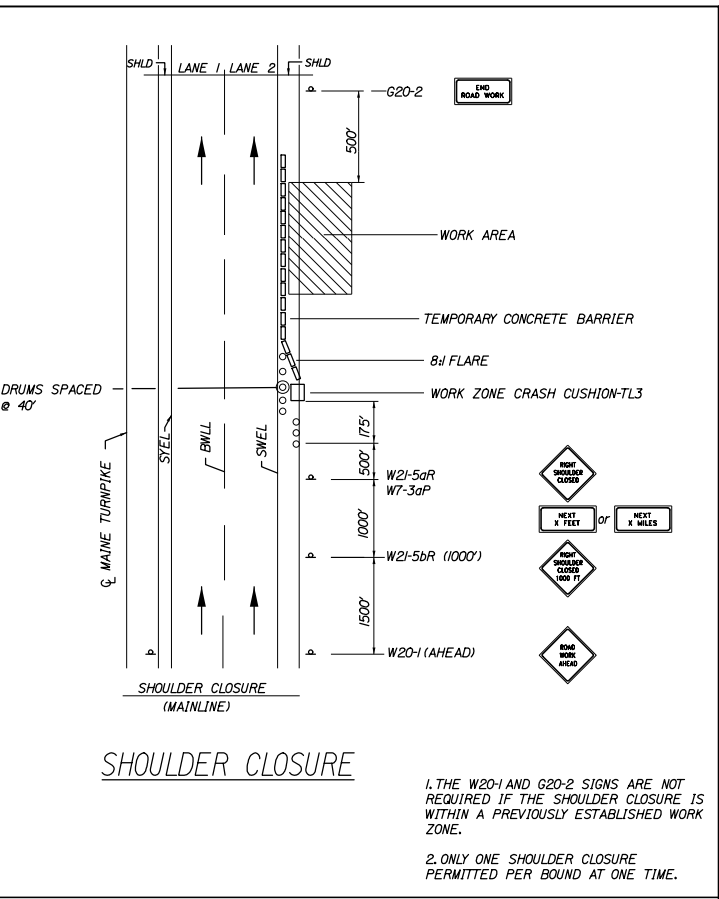
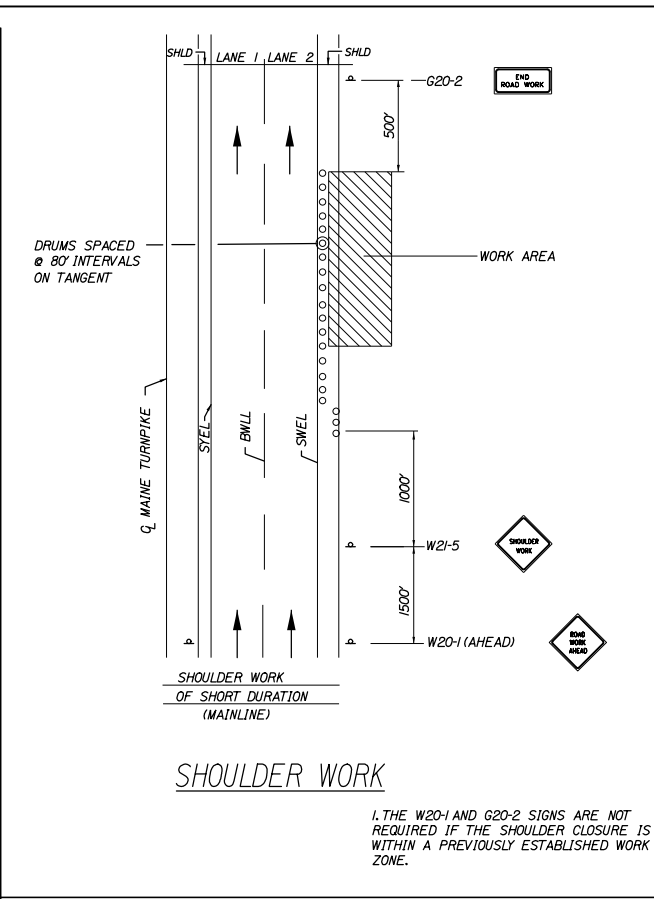
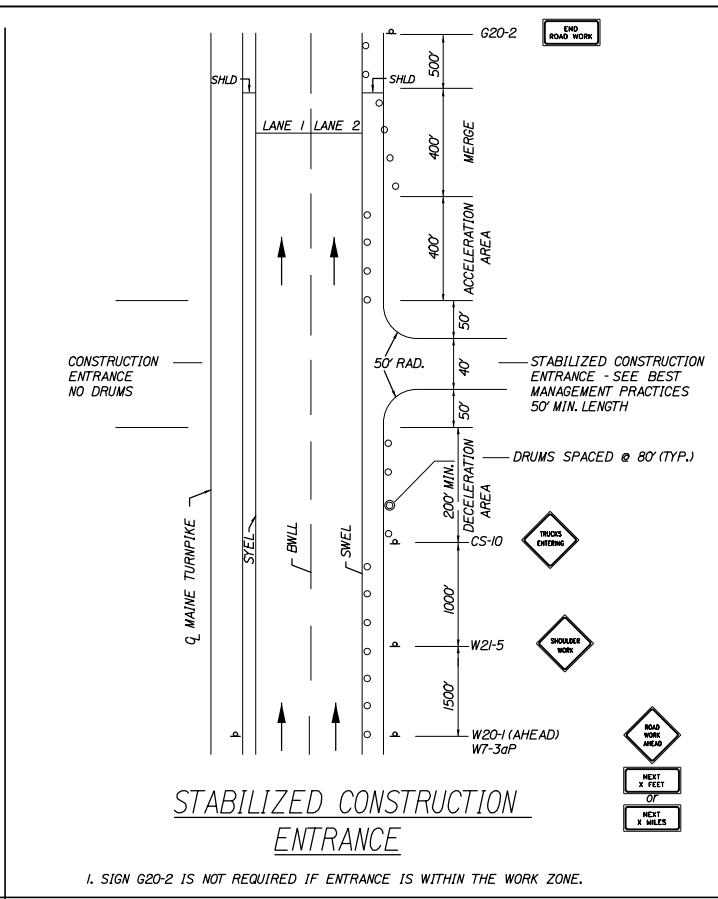
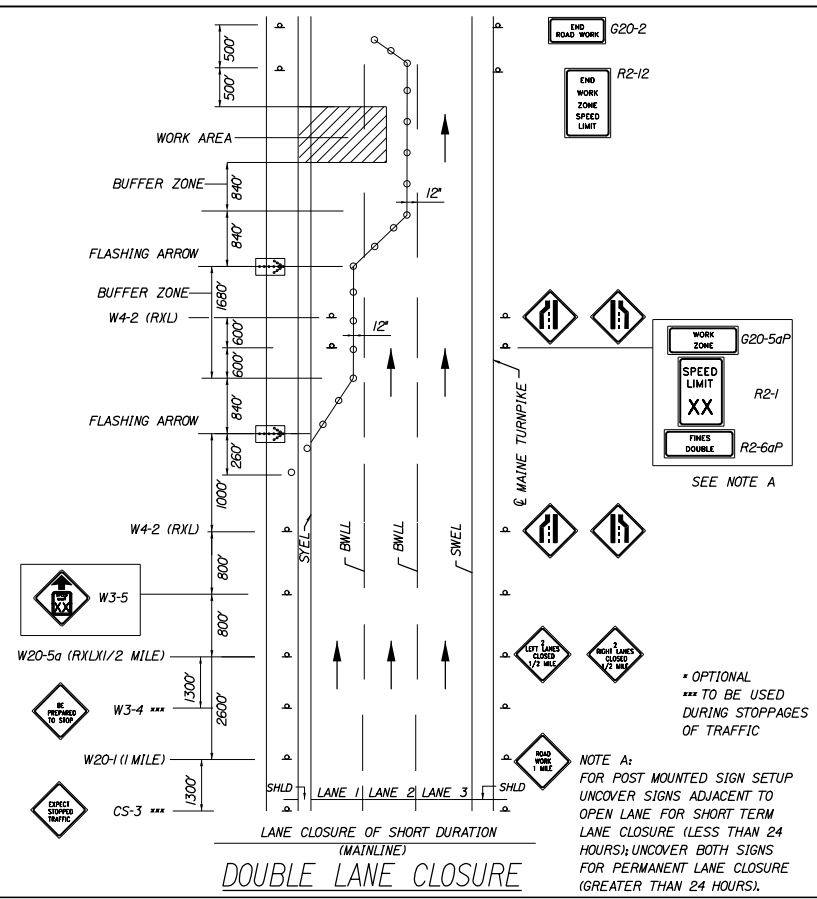
SHEET NUMBER: AR-10

CONTRACT: 2018.15

101 OF 115

Filename: 101_STAGE II.dgn

Date: 7/27/2018



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 TRAFFIC PHASES SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
- SPEED LIMIT, STOP 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:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	LZD	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

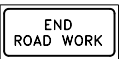









THE GOLD STAR MEMORIAL HIGHWAY






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

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 DETAILS

SHEET NUMBER: AR-11
 CONTRACT: 2018.15
 102 OF 115

Date: 7/27/2018


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"			4	ORANGE	BLACK		8.00 (32)
G20-5aP	48"	24"					4				8.00 (32)
R2-1 (60)	48"	60"					4	WHITE	BLACK		20.00 (80)
R2-6aP	48"	24"					4				8.00 (32)
R2-12	48"	60"					4				20.00 (80)
W1-4L	48"	48"					1	ORANGE	BLACK		16.00 (16)
W1-4R	48"	48"					1				16.00 (16)
W3-5 (60)	48"	48"					4				16.00 (64)
W4-2L	48"	48"					2				16.00 (32)
W4-2R	48"	48"					4				16.00 (64)

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		
W8-1	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			4	ORANGE	BLACK		16.00 (64)
W8-24a	48"	48"					4				16.00 (64)
W20-1 (1 MILE)	48"	48"					5				16.00 (80)
W20-5L (1/2 MILE)	48"	48"					2				16.00 (32)
W20-5R (1/2 MILE)	48"	48"					4				16.00 (64)

Filename: 103_Sign_Summary 1.dgn

Scale:				Designed by:			
				HNTB			
				CONSULTANT PROJECT MANAGER: Craig Morin, P.E.			
No.	Revision		By	Date	By	Date	

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THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY

SHEET NUMBER: AR-12
 103 OF 115

CONTRACT: 2018.15

Date: 7/27/2018

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 WATER ELEVATION.
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. EXISTING ABUTMENT CONSTRUCTION JOINTS SHALL BE CLEANED AND SEALED WITH BACKER ROD AND A HIGH-PERFORMANCE POLYURETHANE SEALANT FOLLOWING COMPLETION OF THE ABUTMENT REPAIRS. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCIDENTAL TO THE RELATED CONTRACT ITEMS.
5. FOR APPROXIMATE LOCATIONS OF ABUTMENT REPAIRS, SEE SHEETS S-02 TO S-03. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
6. 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".
7. THE ESTIMATED REPAIR QUANTITIES ARE BASED ON AN INSPECTION COMPLETED IN MAY 2016.

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", PAY ITEM 518.601, "REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE" AND PAY ITEM 518.70, "REPAIR OF OVERHEAD 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" AND 518.401, "EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE".
4. THE CONTRACTOR SHALL PROVIDE AN ACCEPTABLE MEANS OF ACCESS AT ALL PIER LOCATIONS THAT WILL ALLOW THE RESIDENT TO SAFELY PERFORM A DETAILED CONCRETE INSPECTION OF ALL PIER SURFACES LOCATED ABOVE THE WATERLINE. PROVIDING ACCESS AT PIER LOCATIONS SHALL BE COMPLETED IN ACCORDANCE WITH SPECIAL PROVISION 524, "TEMPORARY ACCESS PLATFORMS FOR PIER INSPECTION AND REPAIR".
5. THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS ARE BASED ON BOTH AN UNDERWATER INSPECTION AND A VISUAL INSPECTION. BELOW WATER REPAIRS ARE BASED ON THE ORDINARY WATER LEVEL AT THE TIME OF INSPECTION. IF DIFFERENCES ARE EXPERIENCED THE RESIDENT SHOULD BE NOTIFIED AND QUANTITIES CAN BE ADJUSTED ACCORDINGLY.
6. FOR APPROXIMATE LOCATIONS OF REPAIR SEE SHEETS S-04 TO S-08. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.

ABUTMENT AND PIER CONCRETE REPAIR PROCEDURE:

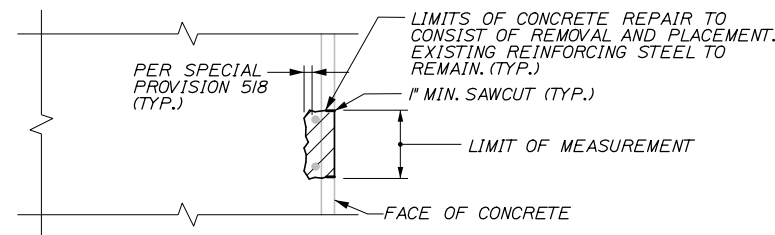
1. PRIOR TO THE START OF CONCRETE REPAIRS THE RESIDENT AND THE CONTRACTOR SHALL SOUND ALL ABUTMENT AND PIER SURFACES AND AGREE ON THE REPAIR LIMITS.
2. PERFORM 1" DEEP SAW CUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO THE DEPTH SPECIFIED IN SPECIAL PROVISION 518. IF THE REMOVAL LIMITS CHANGE DURING 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 TECTYL COATING AND GRAFFITI WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIFICATION 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. ALL EXPOSED SURFACES FACING ROADWAY ON ABUTMENT I AND PIER I SHALL BE COATED WITH A PIGMENTED ANTI-GRAFFITI COATING.



CONCRETE SURFACE REPAIR DETAIL
N.T.S.

Filename: 104_Substructure Notes.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
	By	Date		By	Date
	Designed	NMW 07\18	Checked	BRG 07\18	
	Drawn	PEB 07\18	In Charge of	RAL 07\18	

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THE GOLD STAR
MEMORIAL HIGHWAY

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

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS

SUBSTRUCTURE REPAIRS
CONCRETE REPAIR NOTES AND DETAILS

SHEET NUMBER: AR-13

CONTRACT: 2018.15

104 OF 115





REPAIR QUANTITIES

REPAIR OF VERTICAL SURFACES < 8 INCHES 29 S.F.*
 REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 5 S.F.*
 EPOXY INJECTION CRACK REPAIR 5 L.F.**

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

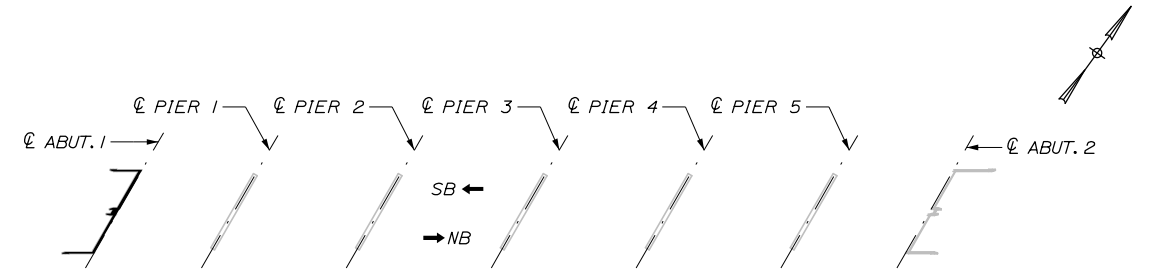
** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

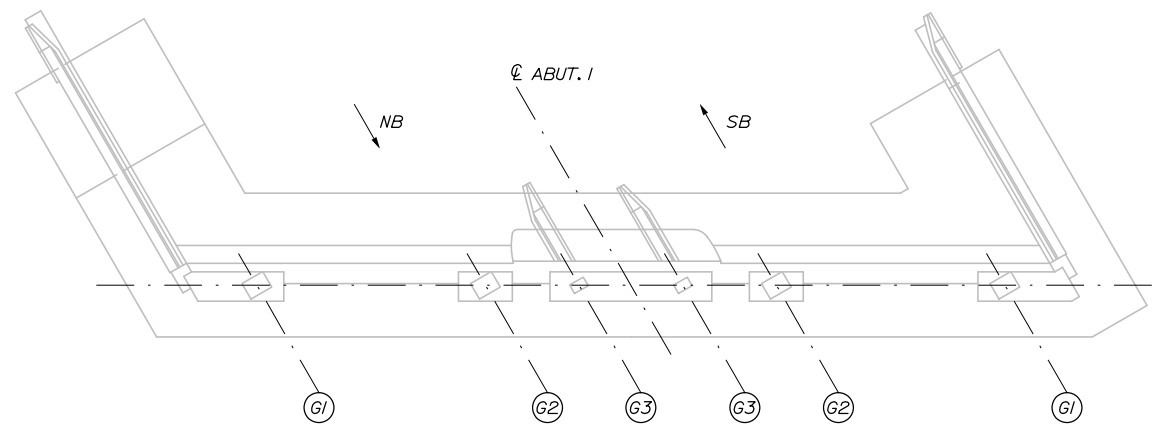
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

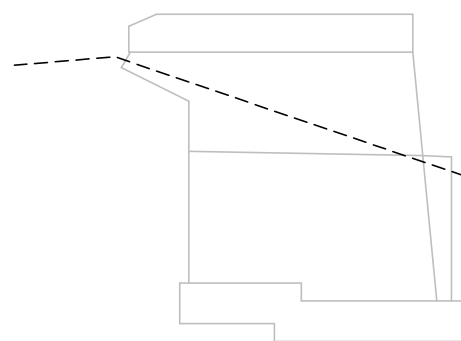
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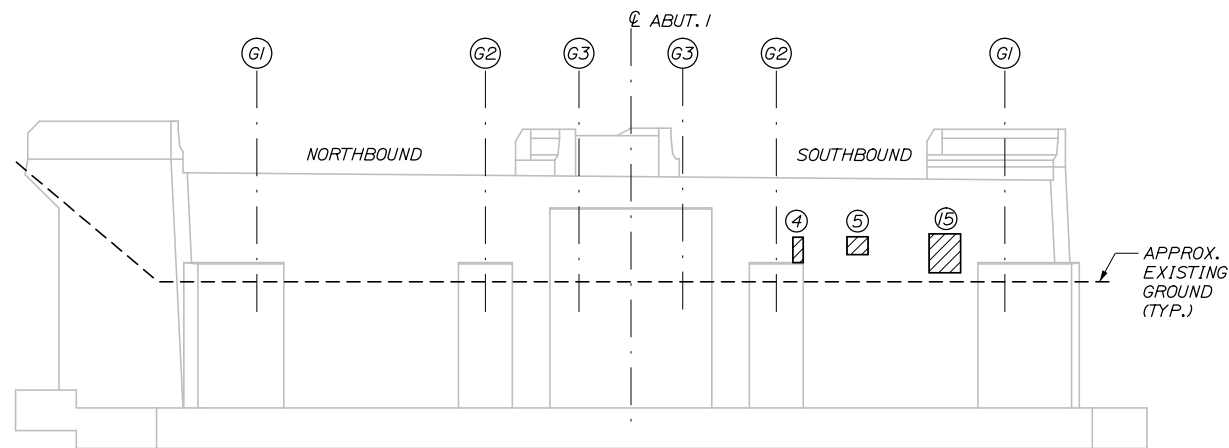
KEY PLAN



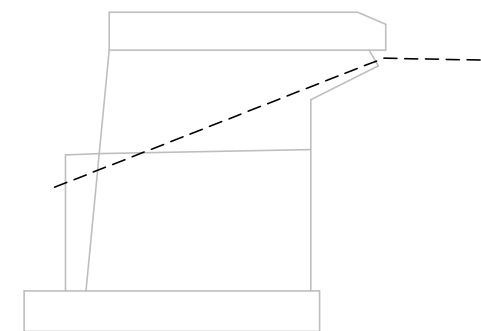
PLAN



SOUTH WINGWALL




**ELEVATION
 ABUTMENT 1
 3/32" = 1'-0"**





NORTH WINGWALL

Date: 7/27/2018

Filename: 105_Abument_1 Repairs.dgn

Scale:				Designed by:					
No.	Revision	By	Date	 CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
				By	Date	By	Date		
				Designed	BRG	07\18	Checked	NMW	07\18
				Drawn	PEB	07\18	In Charge of	RAL	07\18

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



**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 ABUTMENT 1

SHEET NUMBER: AR-14
 105 OF 115

CONTRACT: 2018.15





REPAIR QUANTITIES

REPAIR OF VERTICAL SURFACES < 8 INCHES 30 S.F.*
 REPAIR OF UPWARD FACING SURFACES 5 S.F.*
 - BELOW REINFORCING STEEL < 8 INCHES
 EPOXY INJECTION CRACK REPAIR 27 L.F.**

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

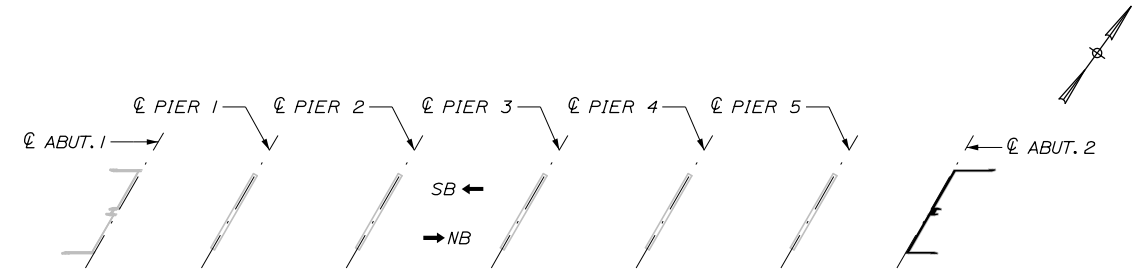
** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

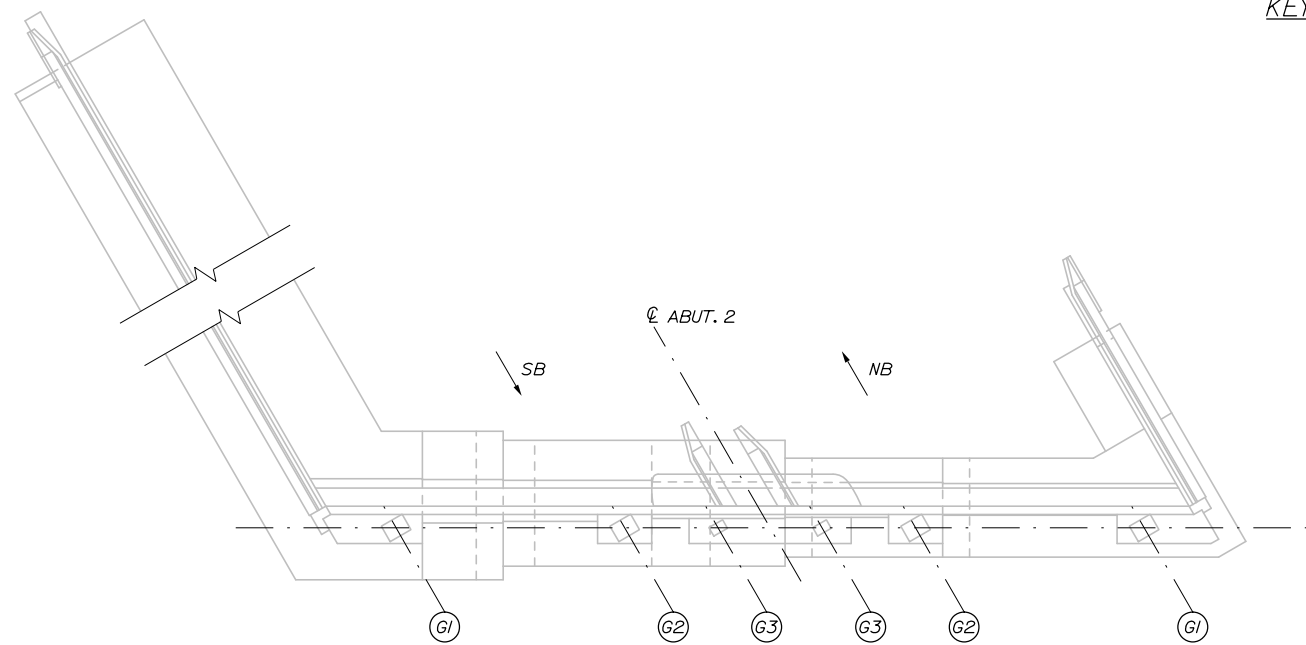
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

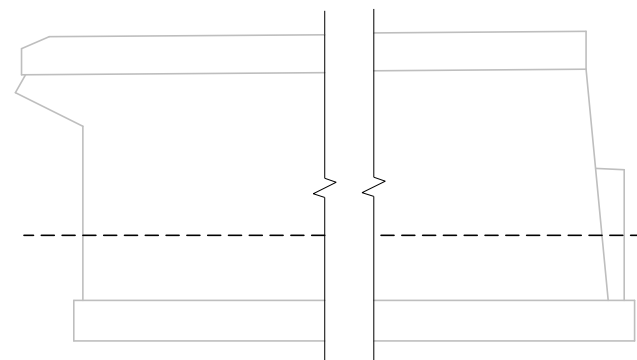
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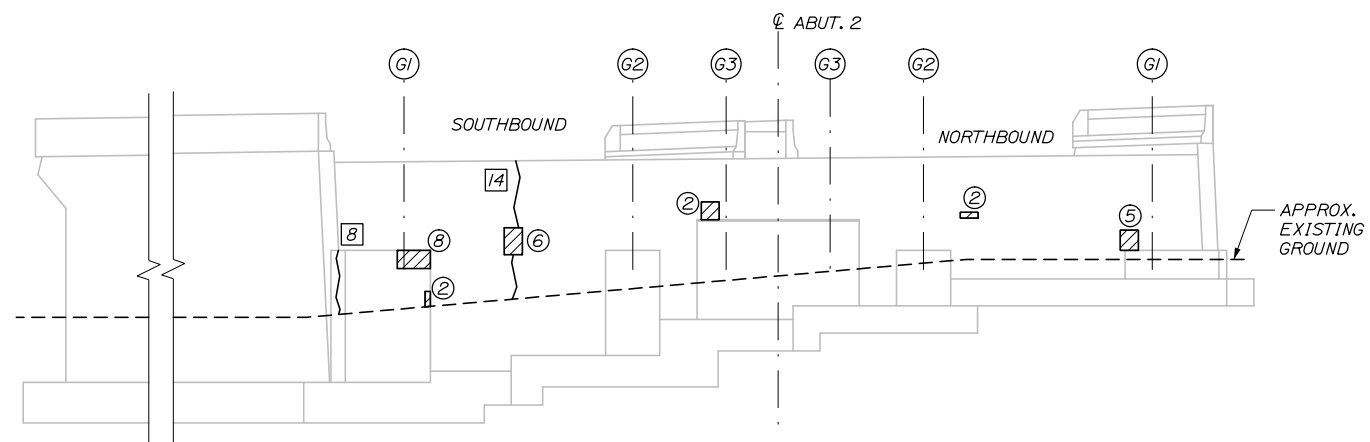
KEY PLAN



PLAN



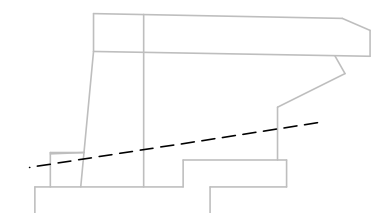
NORTH WINGWALL



ELEVATION

ABUTMENT 2

3/32" = 1'-0"



SOUTH WINGWALL

Date: 7/27/2018

Filename: 106_Abutment 2_Repairs.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

	By	Date		By	Date
Designed	BRG	07\18	Checked	NMW	07\18
Drawn	PEB	07\18	In Charge of	RAL	07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

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

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 ABUTMENT 2

SHEET NUMBER: AR-15
 106 OF 115

CONTRACT: 2018.15

REPAIR QUANTITIES





REPAIR OF VERTICAL SURFACES < 8 INCHES 438 S.F.*
 REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 5 S.F.**
 REPAIR OF OVERHEAD SURFACES < 8 INCHES 21 S.F.**
 EPOXY INJECTION CRACK REPAIR 23 L.F.***

* INCLUDES 50 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

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

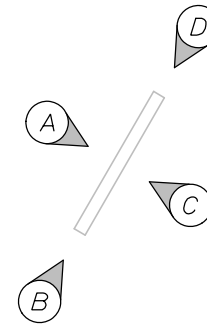
*** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

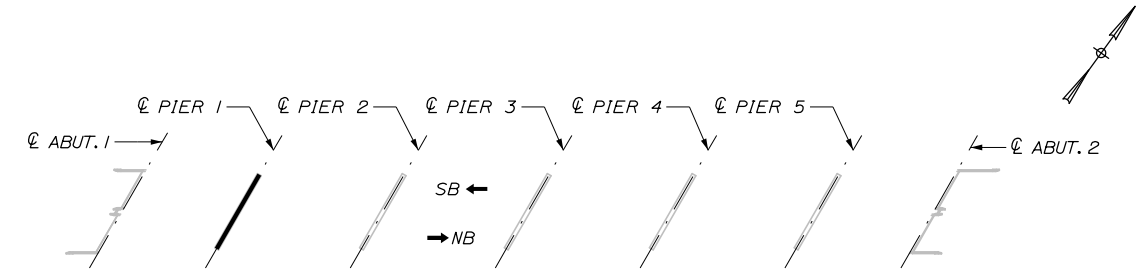
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

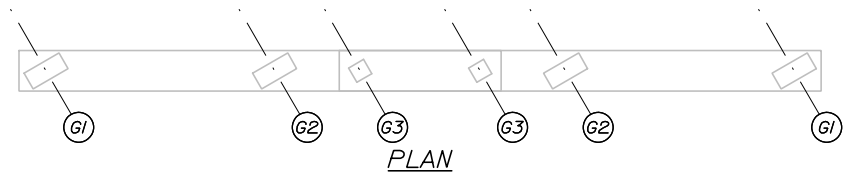
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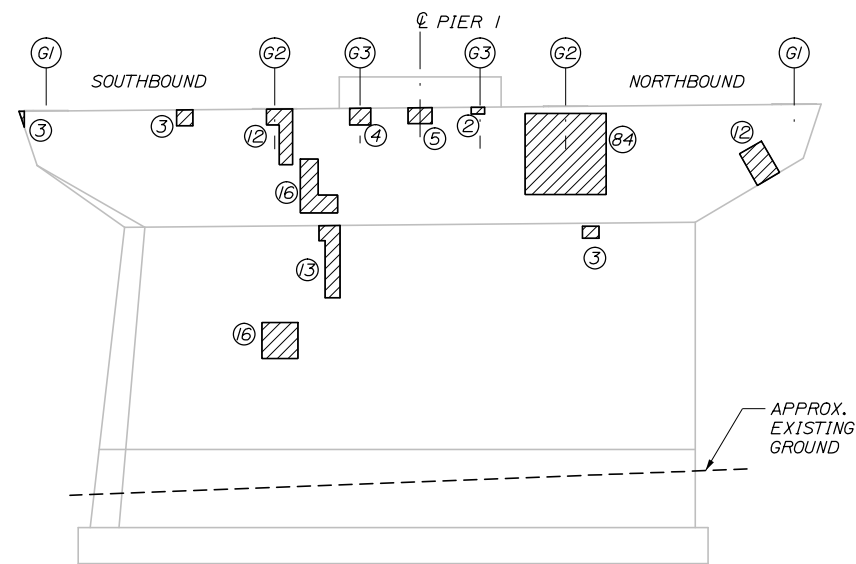
PIER ELEVATION KEY
N.T.S.



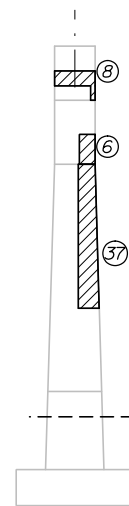
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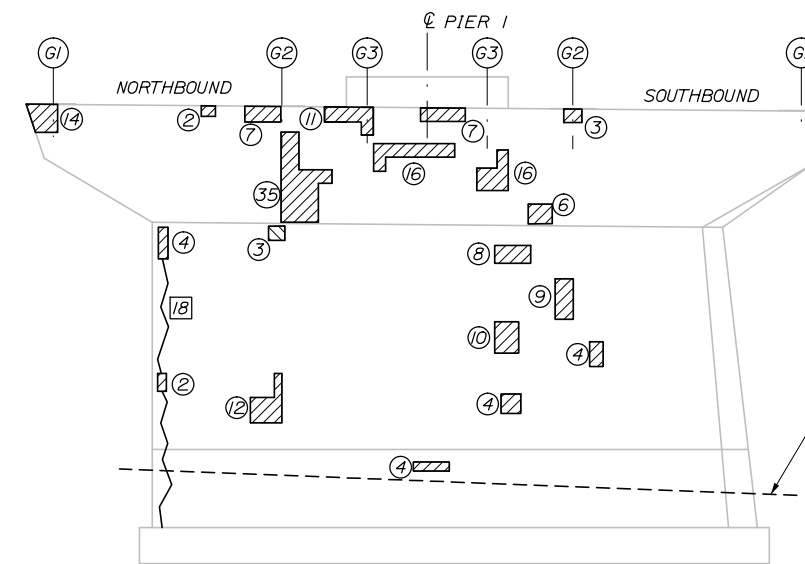
PLAN



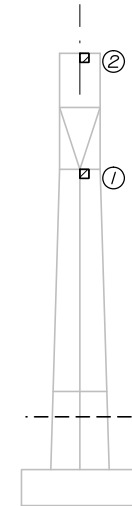
ELEVATION A



ELEVATION B



ELEVATION C





ELEVATION D

PIER 1
3/32" = 1'-0"

Date: 7/27/2018

Filename: 107_Pier 1 Repairs.dgn

Scale:				Designed by:					
No.	Revision	By	Date	 CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
				By	Date	By	Date		
				Designed	BRG	07\18	Checked	NMW	07\18
				Drawn	PEB	07\18	In Charge of	RAL	07\18

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

BRIDGE REPAIRS ANDROSCOGGIN RIVER OVERPASS SUBSTRUCTURE REPAIRS PIER 1			
SHEET NUMBER: AR-16 107 OF 115			

CONTRACT: 2018.15	
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CONTRACT: 2018.15	
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REPAIR QUANTITIES

ABOVE WATER





REPAIR OF VERTICAL SURFACES < 8 INCHES	580 S.F.*
REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES	5 S.F.**
REPAIR OF OVERHEAD SURFACES < 8 INCHES	13 S.F.**
EPOXY INJECTION CRACK REPAIR	41 L.F.***

BELOW WATER

REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE	7 S.F.**
EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE	360 L.F.***

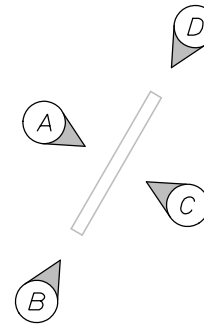
* INCLUDES 50 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
 ** INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
 *** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

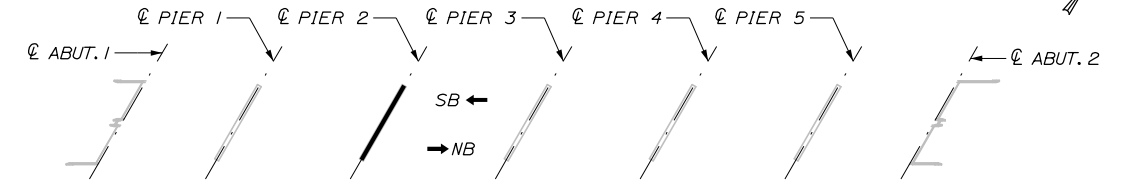
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

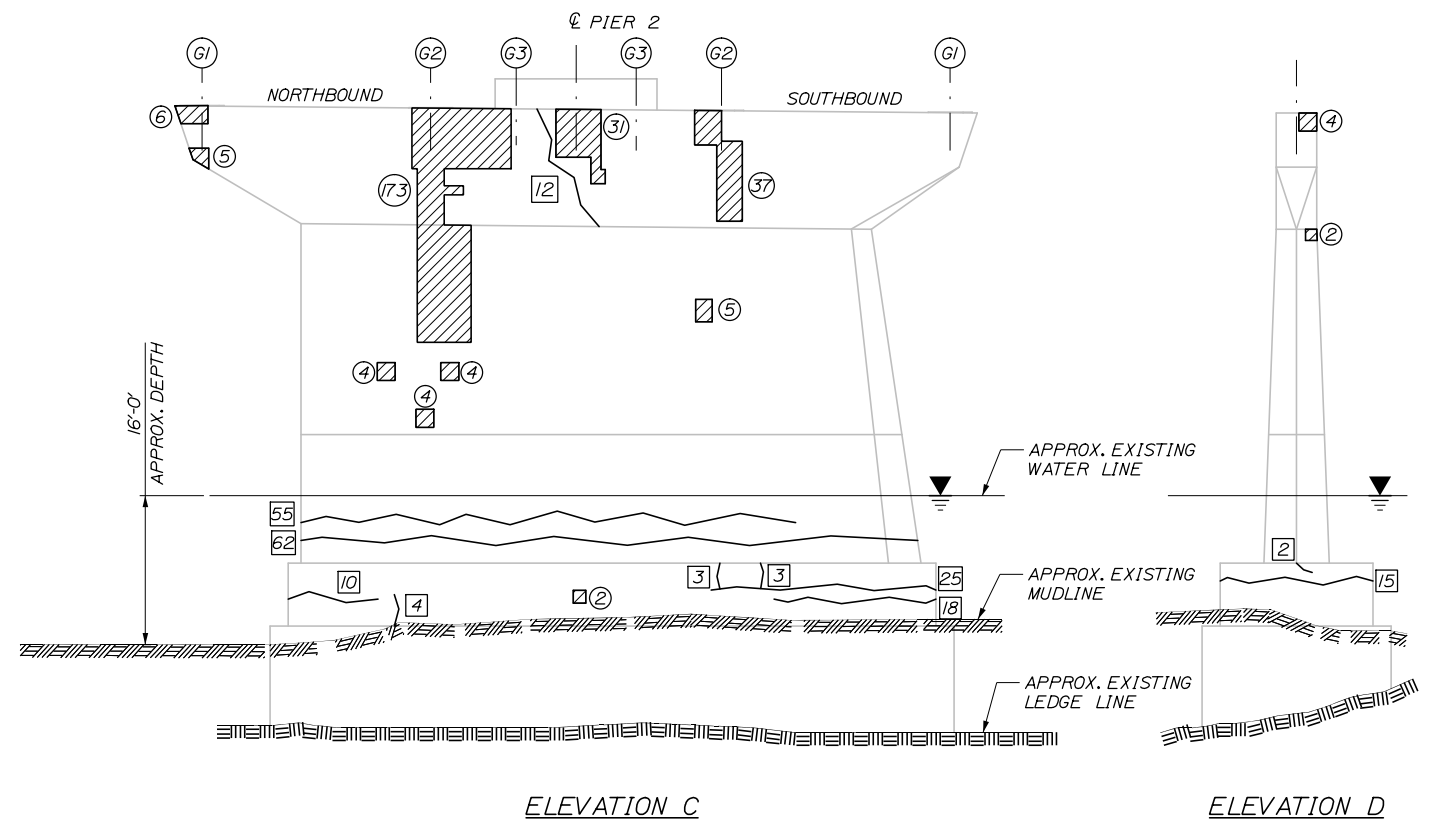
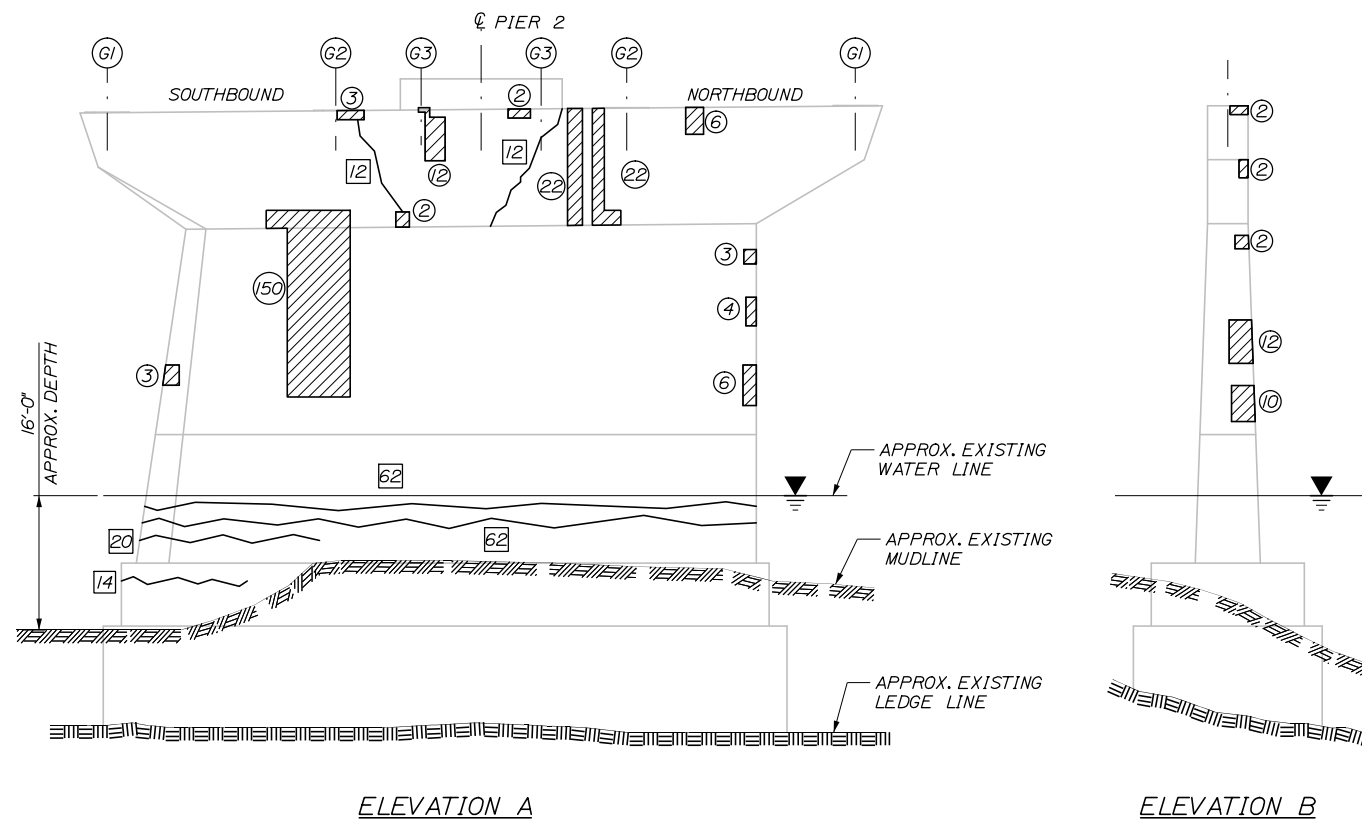
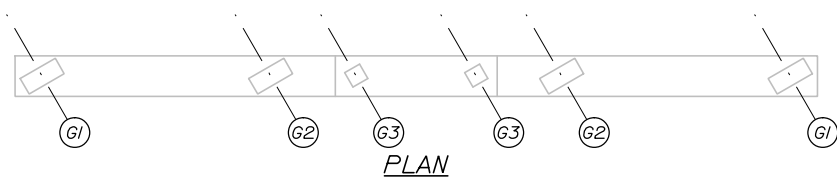
1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-01.



PIER ELEVATION KEY
N.T.S.



KEY PLAN



PIER 2
3/32" = 1'-0"

Date: 7/27/2018

Filename: 108_Pier 2 Repairs.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Craig Morin, P.E.			
	By	Date	By
	BRG	07\18	Checked
	PEB	07\18	In Charge of

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 PIER 2

SHEET NUMBER: AR-17
 108 OF 115

CONTRACT: 2018.15

REPAIR QUANTITIES

ABOVE WATER

REPAIR OF VERTICAL SURFACES < 8 INCHES 1277 S.F.*
 REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 12 S.F.**
 REPAIR OF OVERHEAD SURFACES < 8 INCHES 20 L.F.***
 EPOXY INJECTION CRACK REPAIR 25 S.F.**

BELOW WATER





REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE 5 S.F.**
 EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE 44 L.F.***

* INCLUDES 50 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

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

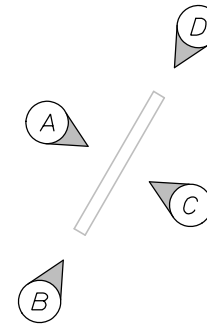
*** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

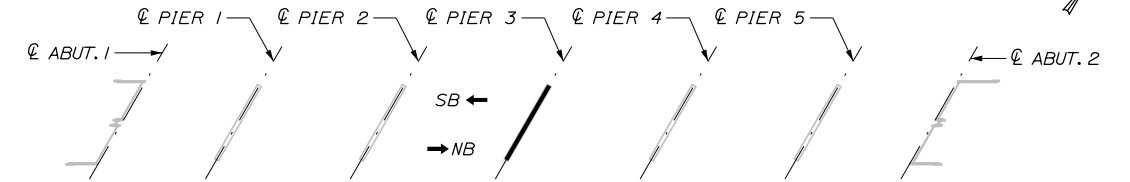
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

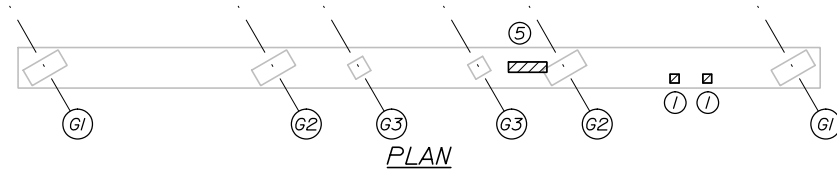
1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-01.



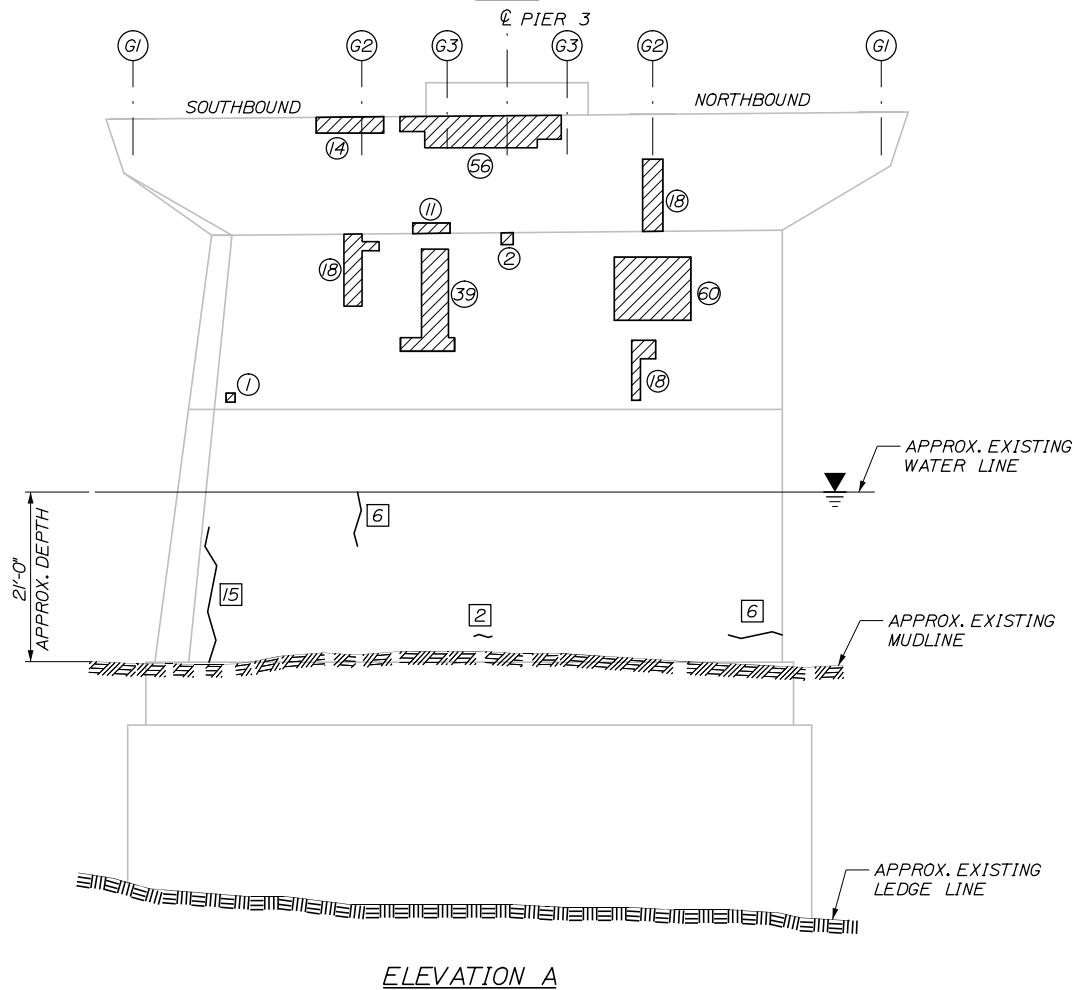
PIER ELEVATION KEY
N.T.S.



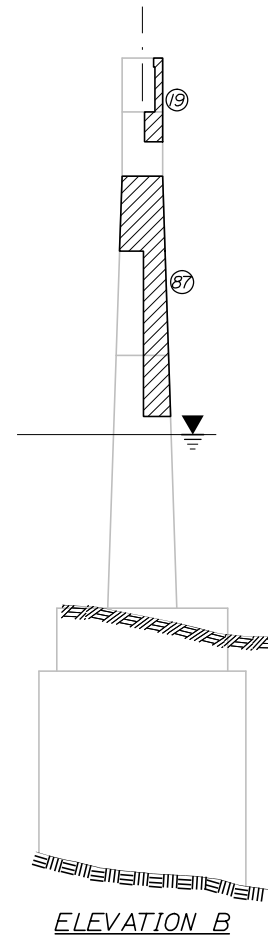
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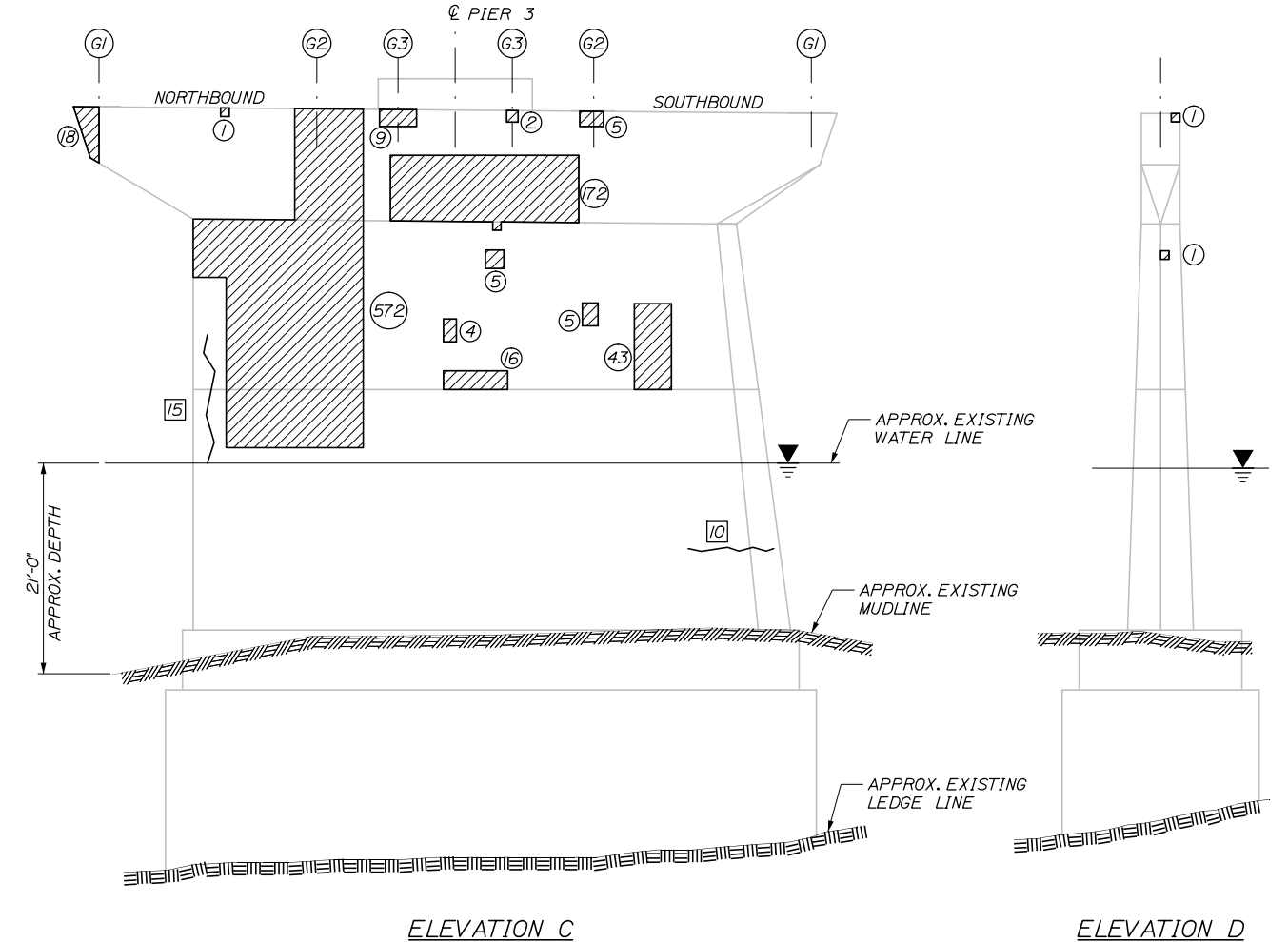
PLAN



ELEVATION A



ELEVATION B



ELEVATION C

ELEVATION D

PIER 3
3/32" = 1'-0"

Date: 7/27/2018

Filename: 109_Pier 3 Repairs.dgn

Scale:			
Designed by:			
No.	Revision	By	Date

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

By	Date	By	Date
Designed BRG	07\18	Checked NMW	07\18
Drawn PEB	07\18	In Charge of RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

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

**BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 PIER 3**

SHEET NUMBER: AR-18
 109 OF 115

CONTRACT: 2018.15

REPAIR QUANTITIES

ABOVE WATER





REPAIR OF VERTICAL SURFACES < 8 INCHES	430 S.F.*
REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES	6 S.F.**
REPAIR OF OVERHEAD SURFACES < 8 INCHES	23 S.F.**
EPOXY INJECTION CRACK REPAIR	114 L.F.***

BELOW WATER

REPAIR OF VERTICAL SURFACES < 8 INCHES - BELOW WATERLINE	6 S.F.**
EPOXY INJECTION CRACK REPAIR - BELOW WATERLINE	62 L.F.***

* INCLUDES 50 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
 ** INCLUDES 5 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.
 *** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

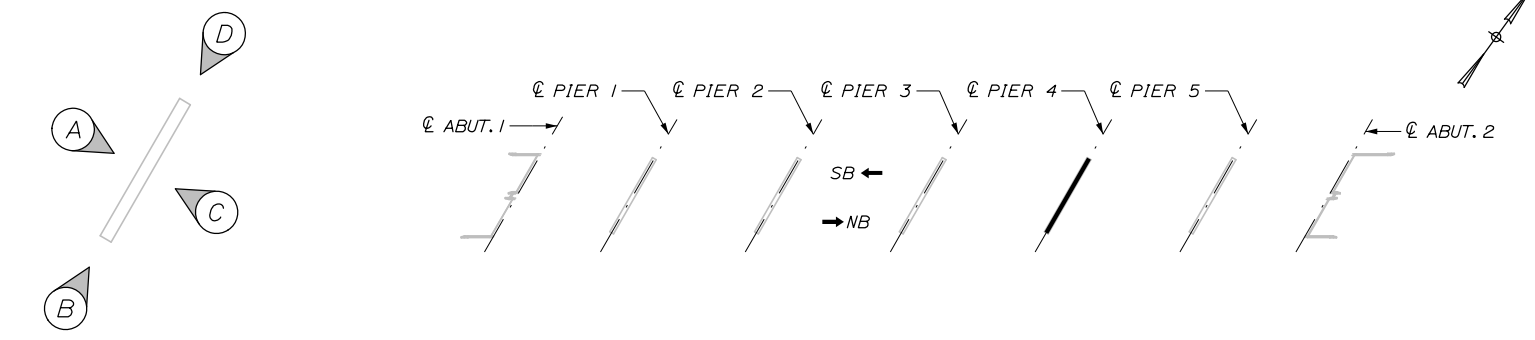
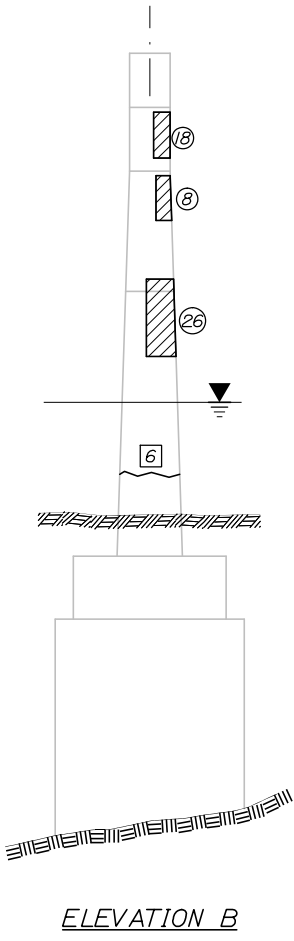
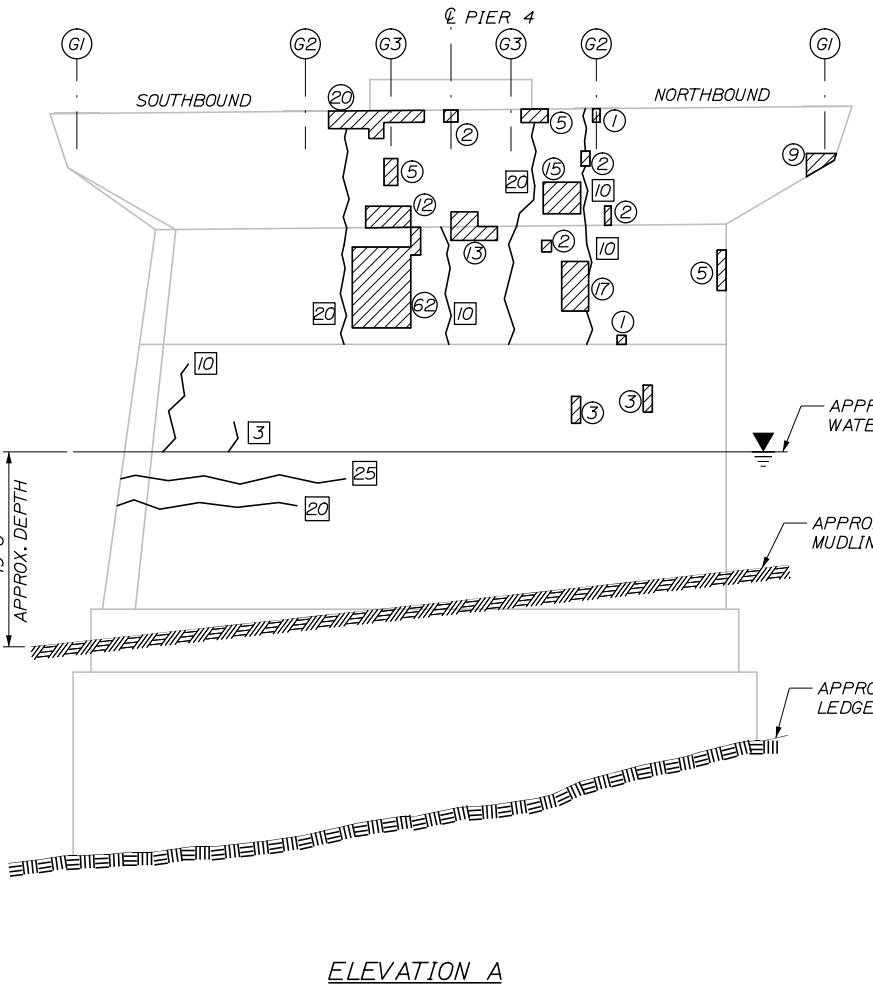
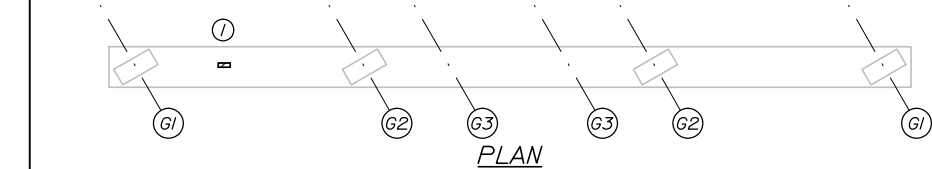
LEGEND

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

NOTES:

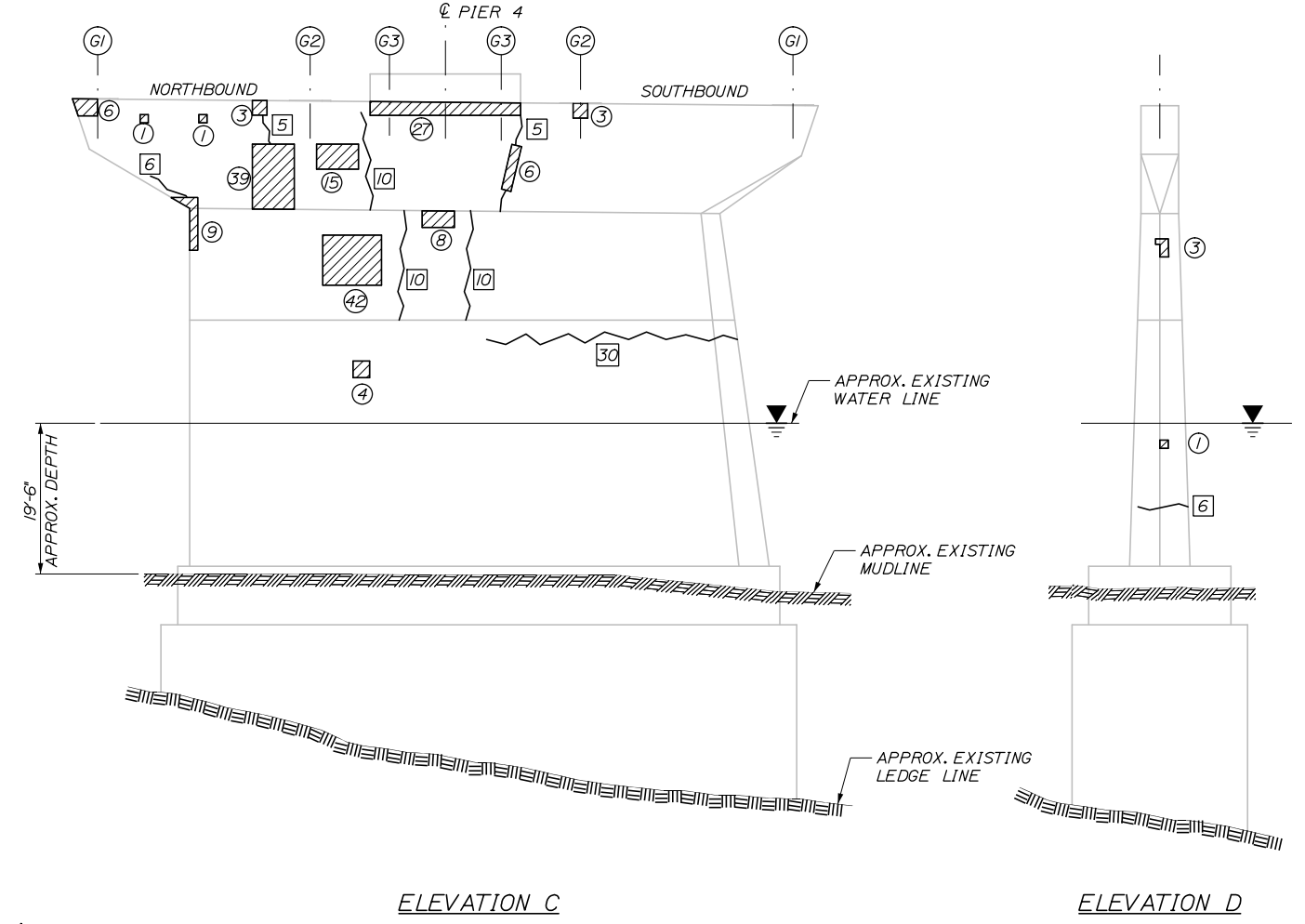
1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-01.

Date: 7/27/2018



PIER ELEVATION KEY
N.T.S.

KEY PLAN



PIER 4
3/32" = 1'-0"

Filename: 110_Pier 4_Repairs.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

By	Date	By	Date
Designed	BRG 07\18	Checked	NMW 07\18
Drawn	PEB 07\18	In Charge of	RAL 07\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 REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 PIER 4

SHEET NUMBER: AR-19
 CONTRACT: 2018.15
 110 OF 115

REPAIR QUANTITIES





REPAIR OF VERTICAL SURFACES < 8 INCHES	163 S.F.*
REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES	5 S.F.**
REPAIR OF OVERHEAD SURFACES < 8"	14 S.F.**
EPOXY INJECTION CRACK REPAIR	69 L.F.***

* INCLUDES 15 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

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

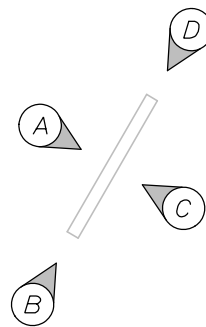
*** ASSUMES 5 L.F. OF ADDITIONAL CRACK REPAIR QUANTITY AS A CONTINGENCY.

LEGEND

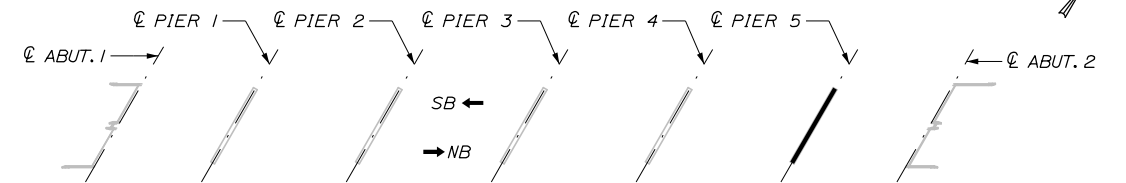
-  LIMIT OF SURFACE PATCH REPAIR
-  SQUARE FOOT AREA OF REPAIR
-  LINEAR FOOT LENGTH OF CRACK
-  EPOXY INJECTION CRACK REPAIR

NOTES:

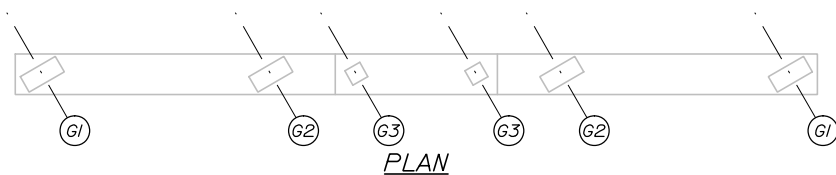
1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-01.



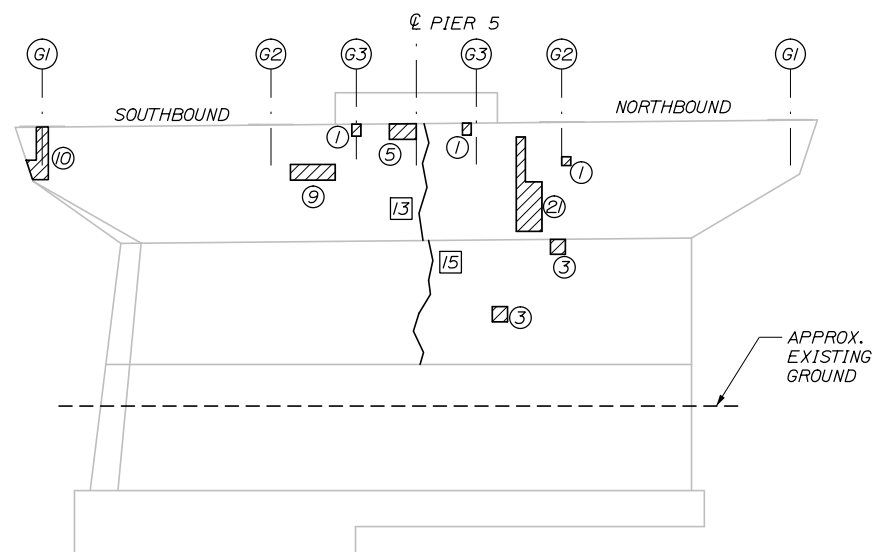
PIER ELEVATION KEY
N.T.S.



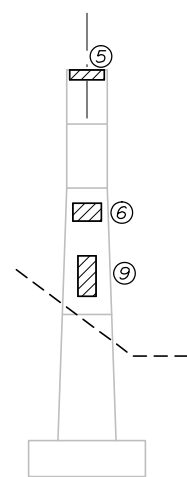
KEY PLAN



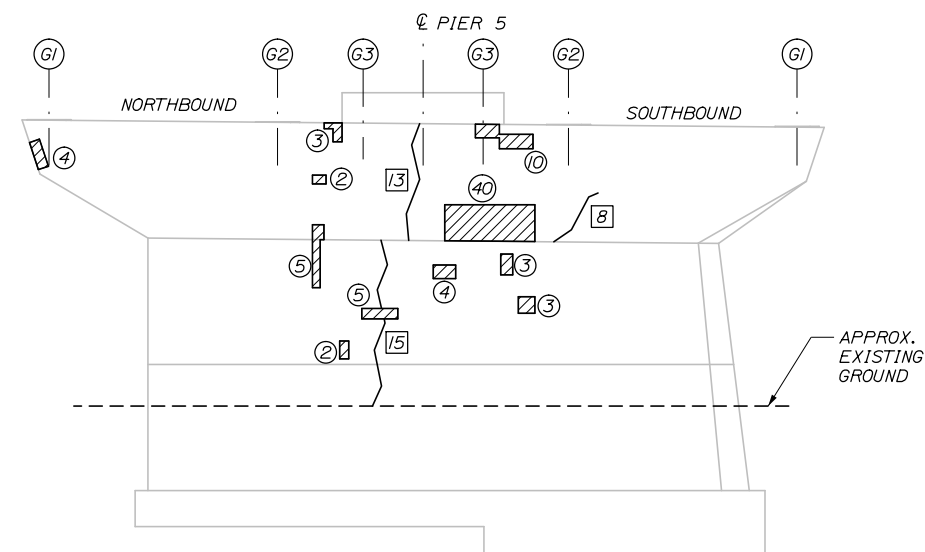
PLAN



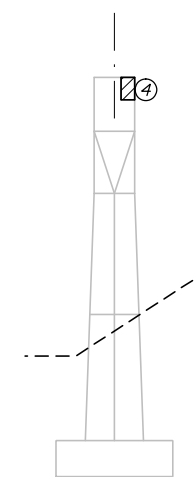
ELEVATION A



ELEVATION B



ELEVATION C




ELEVATION D

PIER 5
3/32" = 1'-0"


Date: 7/27/2018

Filename: 111_Pier 5_Repairs.dgn

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CONSULTANT PROJECT MANAGER: Craig Morin, P.E.					
	By	Date		By	Date
	BRG	07\18	Checked	NMW	07\18
	PEB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

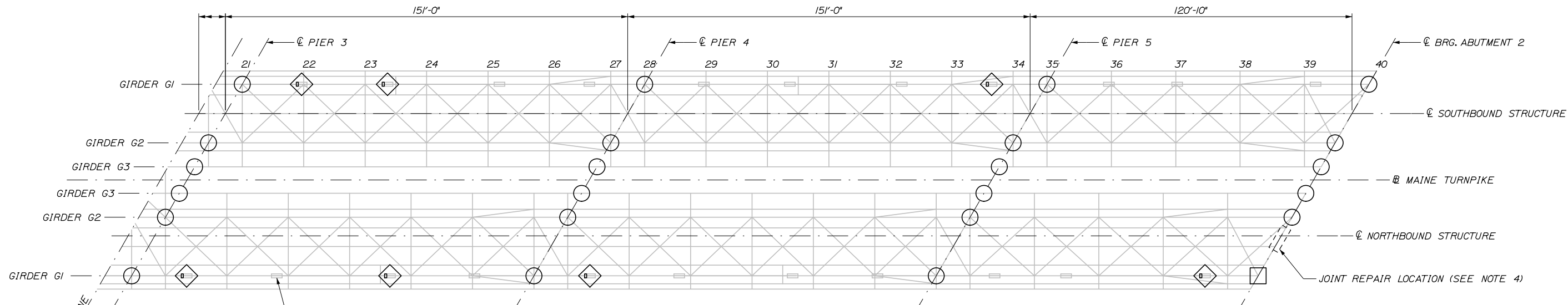
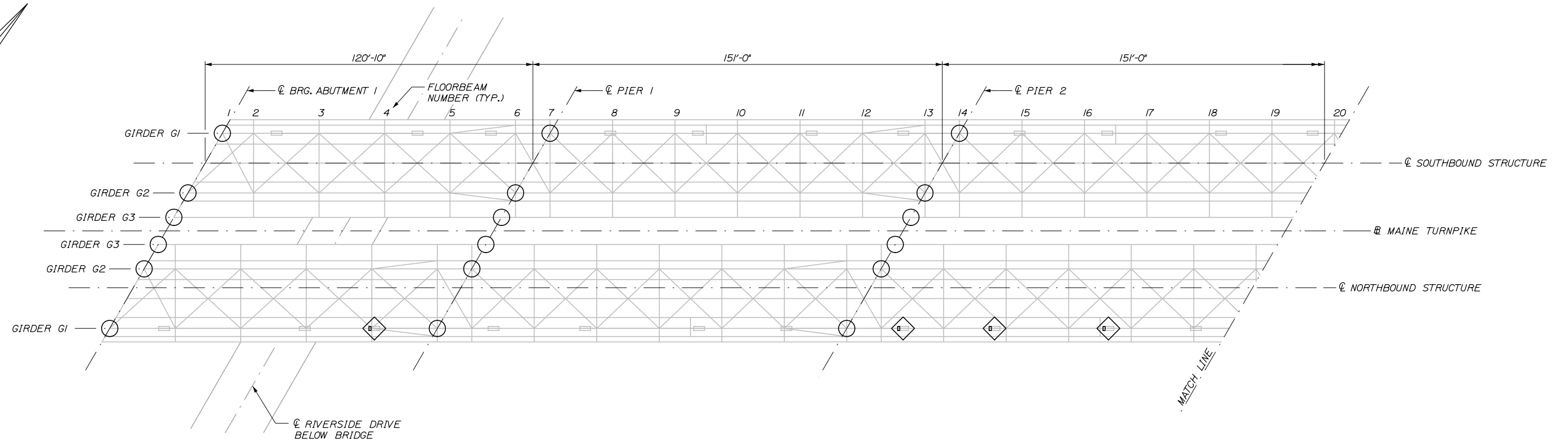
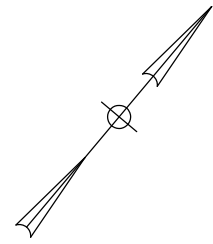
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
 ANDROSCOGGIN RIVER OVERPASS
 SUBSTRUCTURE REPAIRS
 PIER 5

SHEET NUMBER: AR-20
 111 OF 115

CONTRACT: 2018.15

Date: 7/27/2018



LEGEND

- CLEAN & PAINT BEARING (PAID UNDER ITEM 523.56)
- REPAIR BEARING (PAID UNDER ITEM 523.56)
- REPAIR POST-TENSIONING SLEEVE (PAID UNDER ITEM 504.885)

NOTES:

1. SEE "BEARING REPAIR DETAILS" SHEET FOR ADDITIONAL BEARING REPAIR INFORMATION.
2. CONTRACTOR TO VERIFY ALL POST-TENSIONING WATERPROOF SLEEVES ARE ATTACHED TO PREVENT MOISTURE PENETRATION. POST-TENSIONING SLEEVES NOT PROPERLY ATTACHED SHALL BE REMOVED AND REPLACED. REPAIR LOCATIONS SHOWN ARE BASED ON 2017 INSPECTION. TWO ADDITIONAL LOCATIONS HAVE BEEN ASSUMED AS CONTINGENCY.
3. SEE "MISCELLANEOUS DETAILS" SHEET FOR ADDITIONAL INFORMATION ON POST-TENSIONING SLEEVE REPAIR.
4. SEE "JOINT REPAIR DETAILS" SHEET FOR ADDITIONAL INFORMATION.

FRAMING PLAN
1" = 20'

No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Craig Morin, P.E.			
Designed	By	Date	Checked
Drawn	By	Date	In Charge of
	NMW	07\18	BRG 07\18
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**THE GOLD STAR
MEMORIAL HIGHWAY**

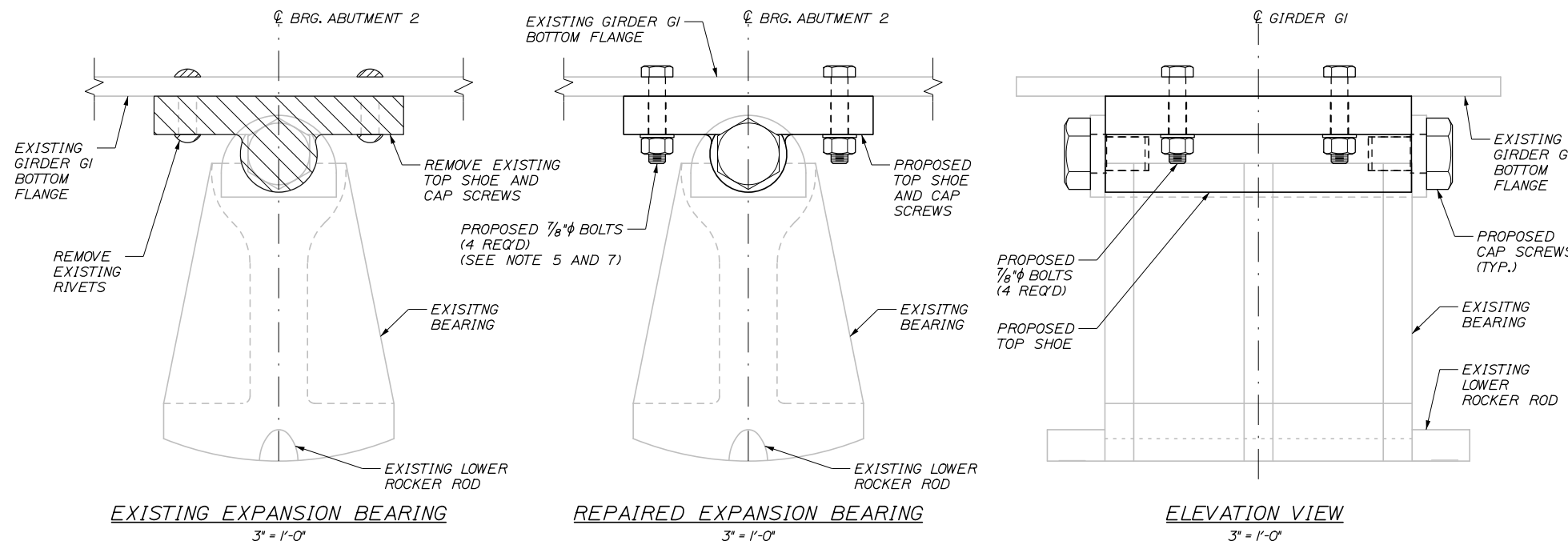
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS
FRAMING PLAN

SHEET NUMBER: AR-21
CONTRACT: 2018.15
112 OF 115

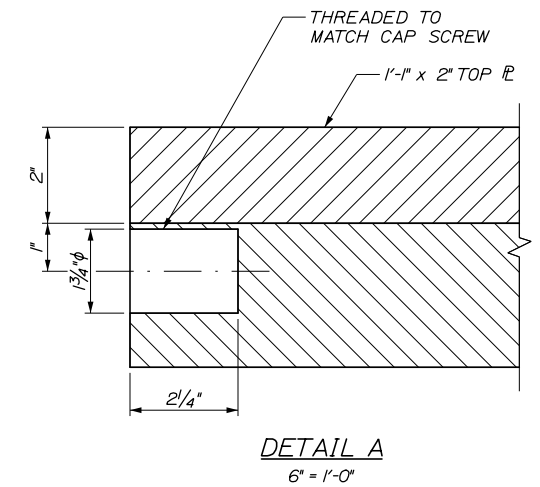
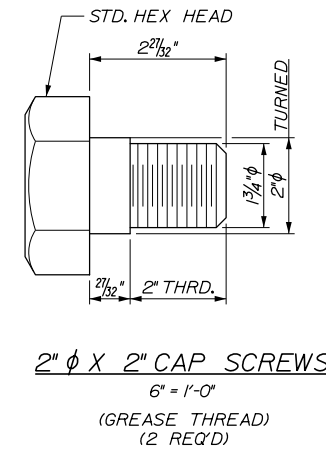
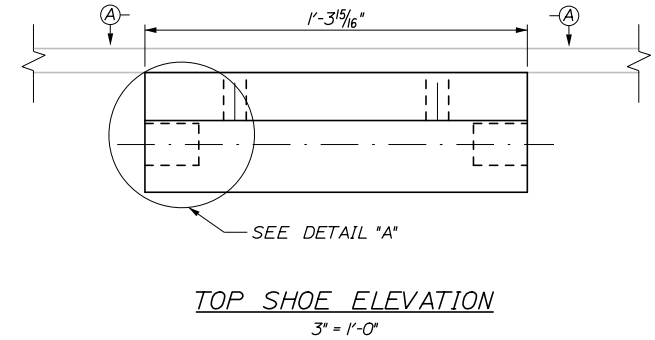
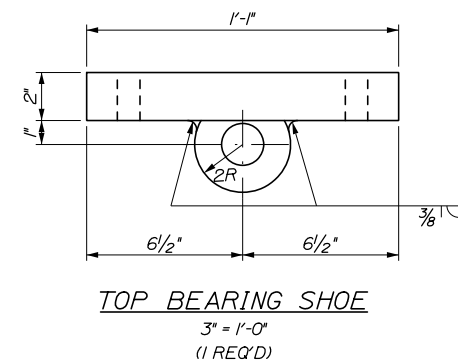
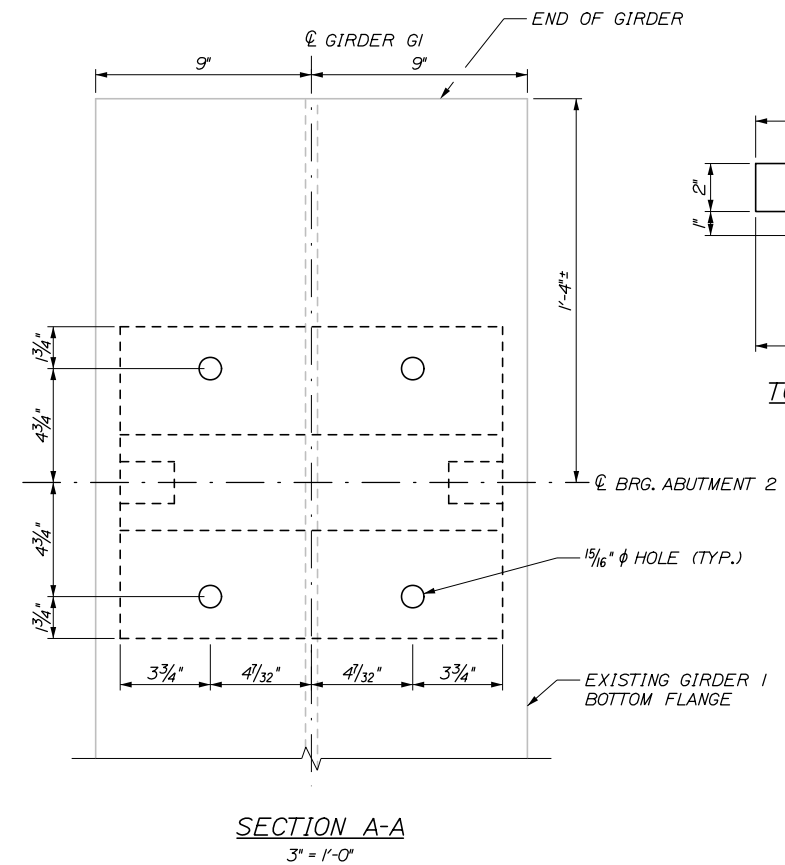
Filename: 112_Framing_Plan.dgn

Date: 7/27/2018



BEARING REPAIR NOTES:

1. BEARING REPAIR DETAILS SHOWN ONLY APPLY TO ONE LOCATION, G1 AT ABUTMENT 2, AS SHOWN ON THE FRAMING PLAN.
2. JACKING AND TEMPORARY SUPPORT FOR BEARING REPAIR SHALL BE PERFORMED IN ACCORDANCE WITH SPECIAL PROVISION 524.301, "TEMPORARY STRUCTURAL SUPPORT".
3. ALL EXISTING DIMENSIONS AND INFORMATION SHOWN ON THE PLANS ARE BASED ON AS-BUILT AND STANDARD DETAIL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL RELEVANT DIMENSIONS PRIOR TO SUBMISSION OF SHOP DRAWINGS.
4. SEE "MISCELLANEOUS DETAILS" SHEET FOR MORE INFORMATION ON JACKING AND TEMPORARY SUPPORT.
5. REMOVE RIVETS ATTACHING THE EXISTING ROCKER BEARING TOP SHOE PLATE TO BOTTOM FLANGE. EXISTING RIVETS SHALL BE DRIVEN OUT. EXISTING STEEL ROCKER BEARING SOLE PLATES SHALL BE REMOVED BY GRINDING OR MECHANICAL CUTTING METHODS. PACK RUST BETWEEN THE EXISTING SOLE PLATE AND INTERFACE OF THE EXISTING GIRDER SHALL BE REMOVED BY MECHANICAL METHODS ONLY.
6. REMOVE EXISTING ROCKER BEARING TOP SHOE PLATE AND CAP SCREWS AS NOTED ON THE PLANS. SOLE PLATE AND CAP SCREWS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. DISPOSAL SHALL BE INCIDENTAL TO ITEM 523.561, "REPAIR BEARING".
7. IF REAMING OF HOLES REQUIRED, BOLTS SHALL BE UPSIZED TO 1" ϕ AND HOLES TO 1 1/16" ϕ .
8. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE TO PORTIONS OF EXISTING BEARING TO REMAIN.
9. FABRICATE AND INSTALL NEW BEARING TOP SHOE PLATE AND CAP SCREWS AS IDENTIFIED IN THE FRAMING PLAN AND DETAILED ON THIS SHEET.
10. REFER TO "MISCELLANEOUS DETAILS" SHEET FOR INFORMATION PERTAINING TO CLEANING AND PAINTING BEARINGS.



Filename: 113_Bearing_Details_1.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

By	Date	By	Date
Designed	NMW 07\18	Checked	BRG 07\18
Drawn	PEB 07\18	In Charge of	RAL 07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

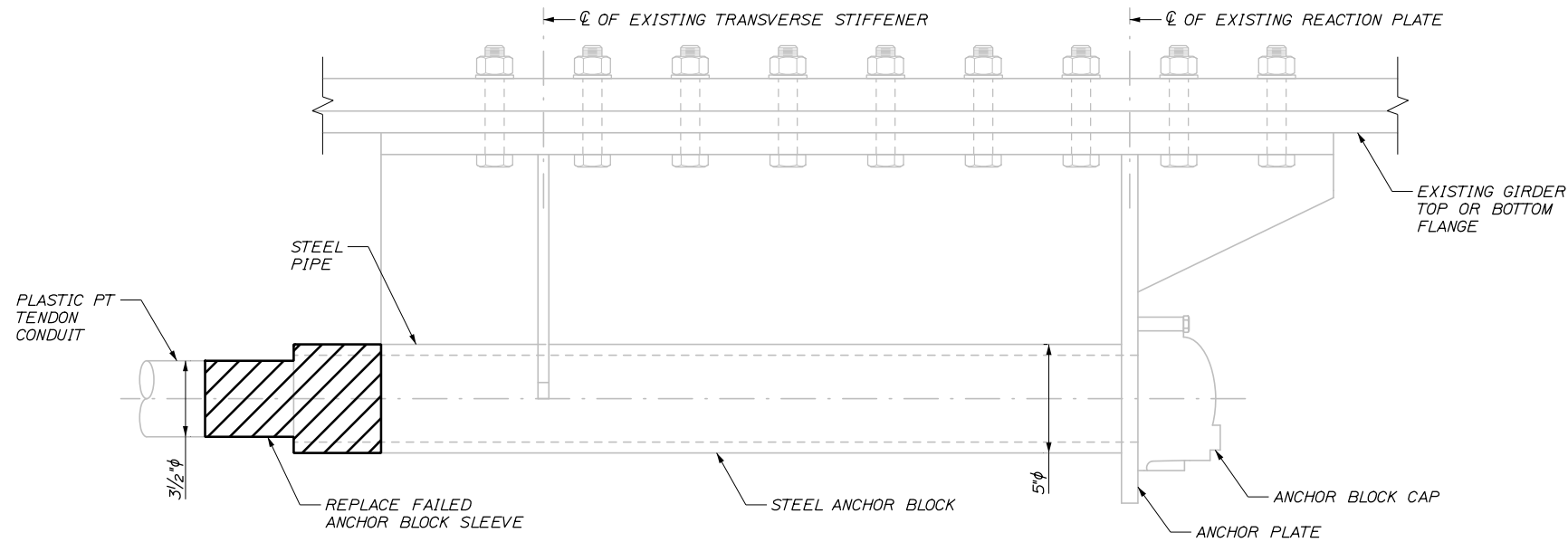
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS**

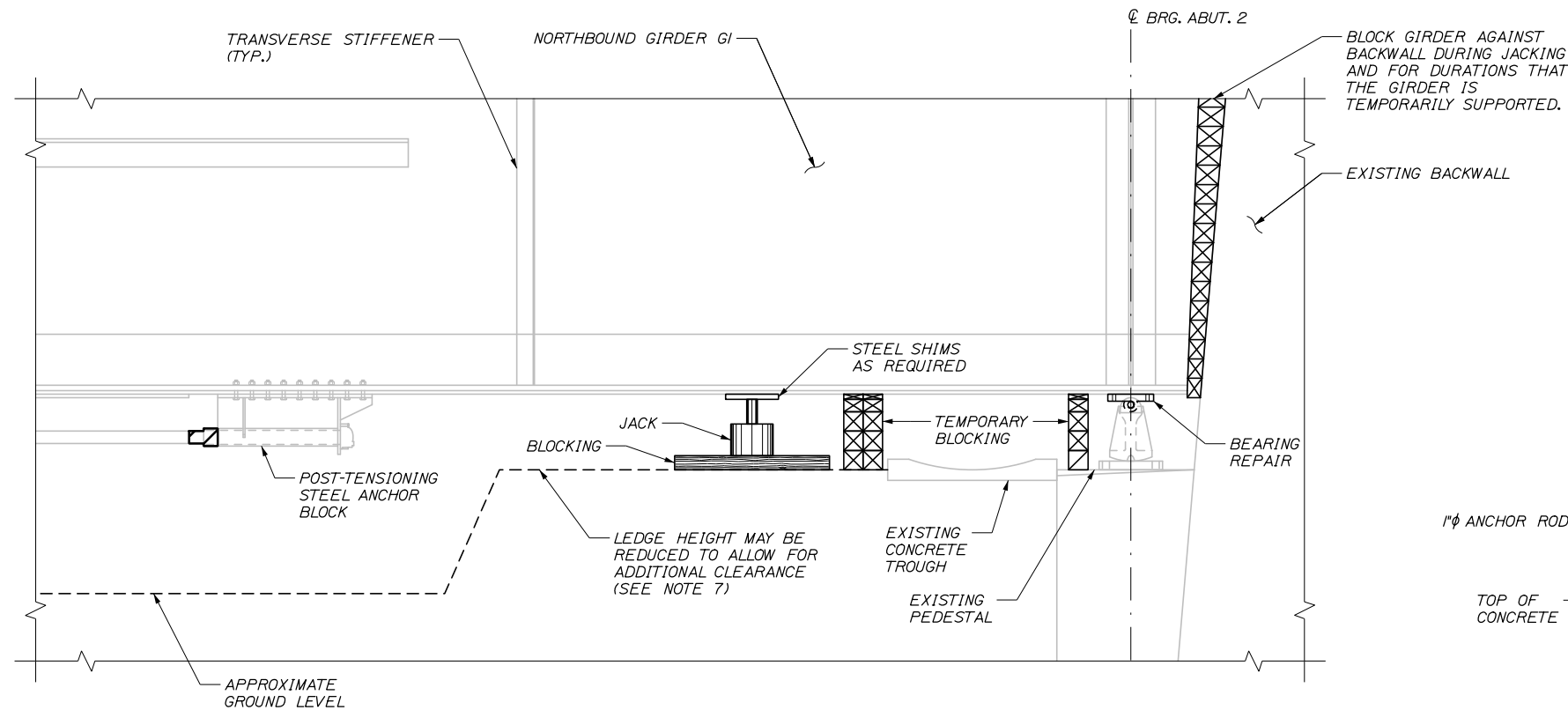
BEARING REPAIR DETAILS

SHEET NUMBER: AR-22
CONTRACT: 2018.15
113 OF 115

Date: 7/27/2018



POST-TENSIONING SLEEVE REPAIR
N.T.S.



JACKING CONCEPT
1/2" = 1'-0"

UNFACTORED BEARING REACTION TABLE		
LOCATION	DEAD LOAD (KIPS)	LIVE LOAD (KIPS)
EXTERIOR GIRDER GI ABUTMENT 2 (NB)	105	100

POST-TENSIONING SLEEVE REPAIR NOTES:

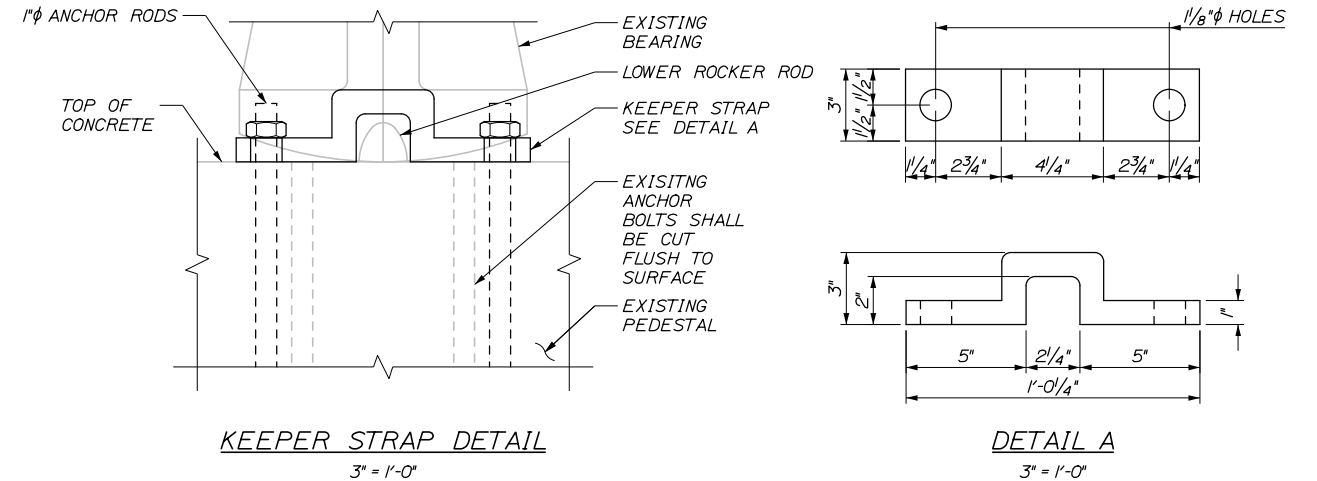
1. FOR ANCHOR BLOCK SLEEVE REPAIR LOCATIONS SEE FRAMING PLAN. CONTRACTOR SHALL INSPECT EACH ANCHOR BLOCK SLEEVE IN FIELD TO DETERMINE IF ADDITIONAL REPAIR LOCATIONS ARE REQUIRED. FLAGGERS SHALL BE USED FOR LOCATIONS OVER RIVERSIDE DRIVE.
2. REMOVE FAILED ANCHOR BLOCK SLEEVE SEAL AND INSTALL NEW FLEXIBLE SLEEVE. THE STEEL ANCHOR BLOCK PIPE AND PLASTIC POST-TENSIONING TENDON CONDUIT SURFACES SHALL BE CLEANED SUCH THAT NO DEBRIS OR ADHESIVE FROM PREVIOUS REPAIR SHALL REMAIN PRIOR TO INSTALLATION OF NEW FLEXIBLE SEAL.
3. NEW SLEEVES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE SPECIAL PROVISION 504.885 POST-TENSIONING SLEEVE REPAIR.

TEMPORARY SUPPORT AND JACKING SYSTEM NOTES:

1. THE EXISTING BRIDGE SHALL BE RAISED TO ACCOMMODATE THE REPAIR OF GI BEARING AT ABUTMENT 2.
2. THE TEMPORARY SUPPORT AND JACKING SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF DESIGN CALCULATIONS AND DRAWINGS FOR THE TEMPORARY SUPPORT, JACKING SYSTEM, AND BEARING REPAIR PROCEDURE. THE CALCULATIONS AND DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE. SEE SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.
3. THE TEMPORARY SUPPORT AND JACKING SYSTEM ARRANGEMENTS SHOWN ARE SCHEMATIC FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY SUPPORT JACKING LOCATIONS AND REQUIRED DETAILS AS PART OF THE SUBMITTAL.
4. TEMPORARY SUPPORT AND JACKING LOADS SHALL BE BASED ON THE BEARING REACTIONS SHOWN IN THE TABLE AND SPECIAL PROVISION 524, TEMPORARY STRUCTURAL SUPPORT.
5. THE CONTRACTOR SHALL MAKE PROVISIONS TO PREVENT THE LONGITUDINAL AND TRANSVERSE MOVEMENT OF THE SUPERSTRUCTURE AND TWISTING OF THE GIRDERS DURING JACKING AND WHILE THE DECK IS TEMPORARILY SUPPORTED.
6. RIGID VERTICAL SUPPORT OF SUPERSTRUCTURE IN THE JACKED POSITION SHALL BE PROVIDED BY LOCKING THE JACK RAMS OR BY FURNISHING AND INSTALLING AN INDEPENDENT SUPPORT SYSTEM. EXCEPT FOR DURING JACKING OPERATIONS, THE SUPERSTRUCTURE SHALL NOT BE HYDRAULICALLY SUPPORTED.
7. LEDGE HEIGHT MAY BE REDUCED TO ALLOW FOR ADDITIONAL CLEARANCE FOR JACKING. EXCAVATION AND SOIL REMOVAL SHALL BE INCIDENTAL TO ITEM 524.301, "TEMPORARY STRUCTURAL SUPPORT" PAY ITEM.

CLEANING AND PAINTING BEARING NOTES:

1. ALL EXISTING BEARINGS SHALL BE CLEANED AND PAINTED, AS SHOWN ON THE FRAMING PLAN, IN ACCORDANCE WITH SPECIAL PROVISION 523 AND PAID UNDER ITEM 523.56, "CLEANING AND PAINTING BEARINGS".
2. THE EXISTING BEARINGS ARE TO REMAIN IN PLACE, NO JACKING IS REQUIRED AS PART OF THE CLEANING PROCESS.
3. CLEANING EXPANSION BEARINGS SHALL INCLUDE REMOVAL OF PACK RUST AND DEBRIS LODGED WITHIN THE KEEPER STRAP THAT IS PREVENTING THE LOWER ROCKER ROD FROM ROTATING DURING BEARING MOVEMENT. IF SUFFICIENT REMOVAL OF MATERIAL CANNOT BE ACHIEVED TO RESTORE THE FREE RANGE OF MOVEMENT FOR THE LOWER ROCKER ROD THE KEEPER STRAP SHALL BE REPLACED. THE REPLACEMENT OF THE KEEPER STRAP IN SELECT LOCATIONS SHALL BE PAID UNDER ITEM 523.562, "REPAIR BEARING KEEPER STRAP".



Filename: 114_Miscellaneous Details 1.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Craig Morin, P.E.

By	Date	By	Date
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Drawn	PEB 07\18	In Charge of	RAL 07\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

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

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS

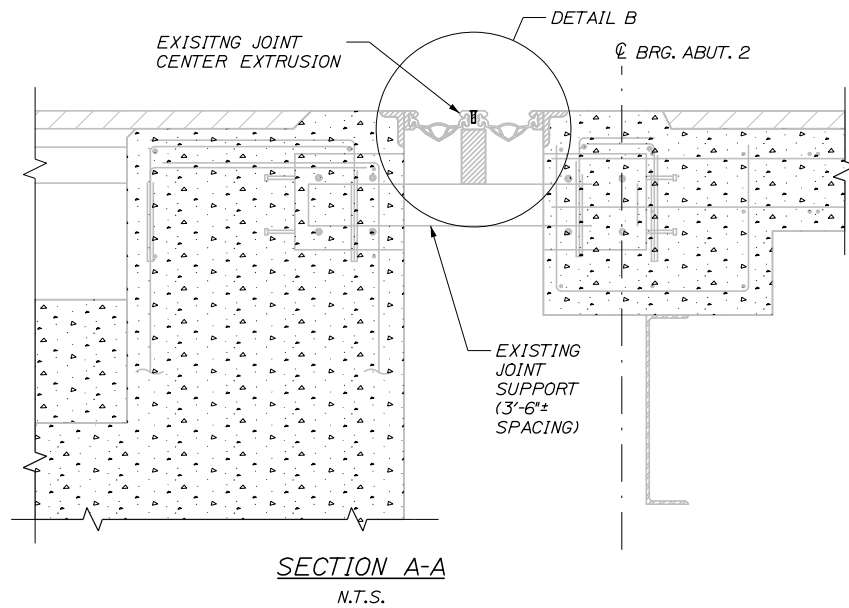
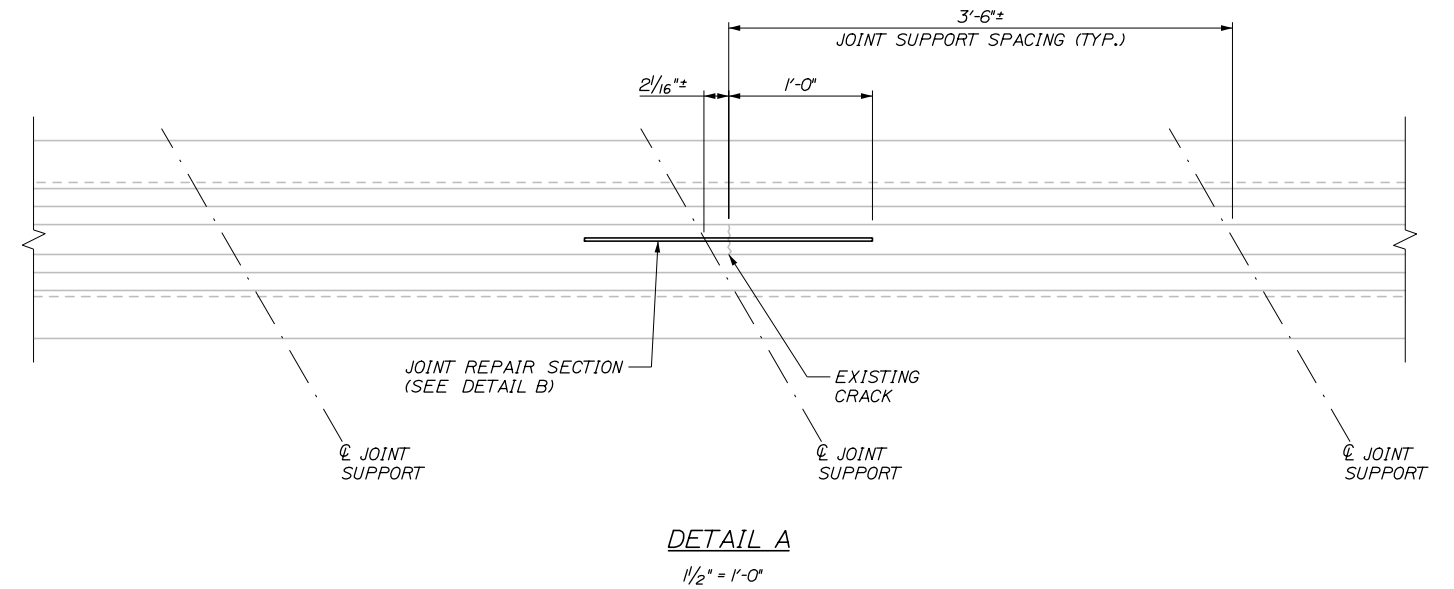
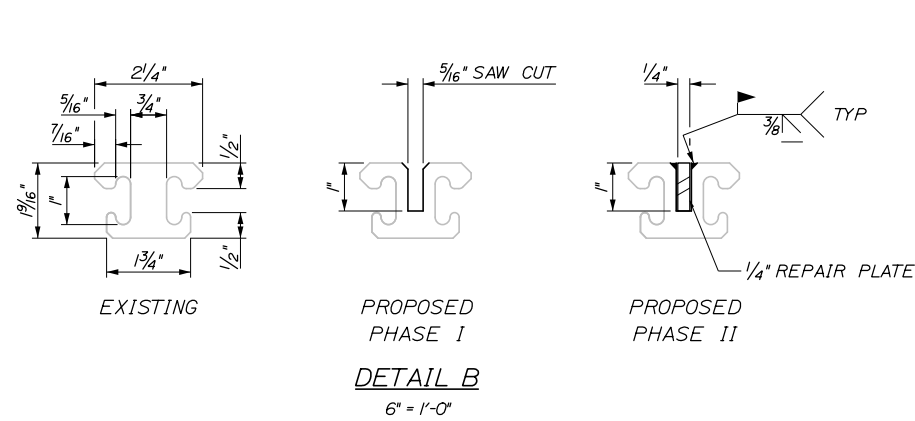
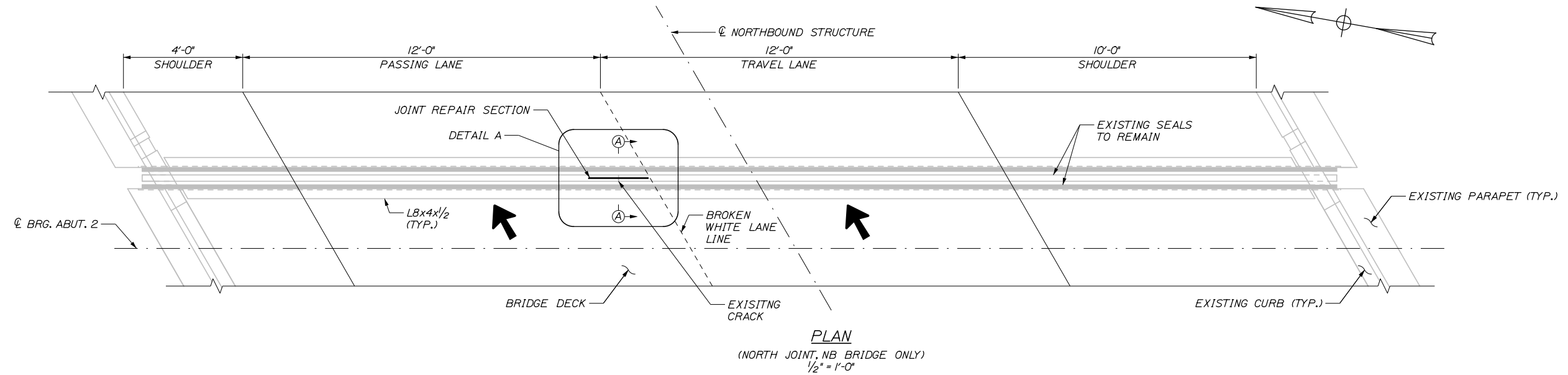
MISCELLANEOUS DETAILS

SHEET NUMBER: AR-23

CONTRACT: 2018.15

114 OF 115

Date: 7/27/2018



NOTES:

1. A 5/16" SAW CUT SHALL BE MADE TO THE JOINT CENTER RAIL FOR THE LENGTH OF THE JOINT REPAIR SECTION, AS SHOWN IN DETAIL A.
2. THE CONTRACTOR SHALL AVOID CUTTING INTO THE SEAL INSERT VOIDS WHILE MAKING SAW CUT IN JOINT CENTER RAIL.
3. THE CONTRACTOR SHALL MONITOR THE HEAL OF THE CENTER RAIL TO AVOID MELTING THE JOINT SEALS.
4. JOINT SHALL BE STABILIZED TO PREVENT MOVEMENT DURING SAW CUTTING AND REPAIR PLATE INSTALLATION.
5. THE REPAIRED SECTION SHALL BE GROUND FLUSH TO THE EXISTING JOINT.
6. ALL JOINT REPAIR WORK SHALL BE PAID UNDER ITEM 520.224 JOINT ARMOR REPAIR.

Filename: 115_Exp_Jt_Details.dgn

No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Craig Morin, P.E.			
	By	Date	
	NMW	07\18	
	Checked	BRG	07\18
	By	Date	
	PEB	07\18	
	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

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

BRIDGE REPAIRS
ANDROSCOGGIN RIVER OVERPASS
JOINT REPAIR DETAILS

SHEET NUMBER: AR-24
CONTRACT: 2018.15
115 OF 115