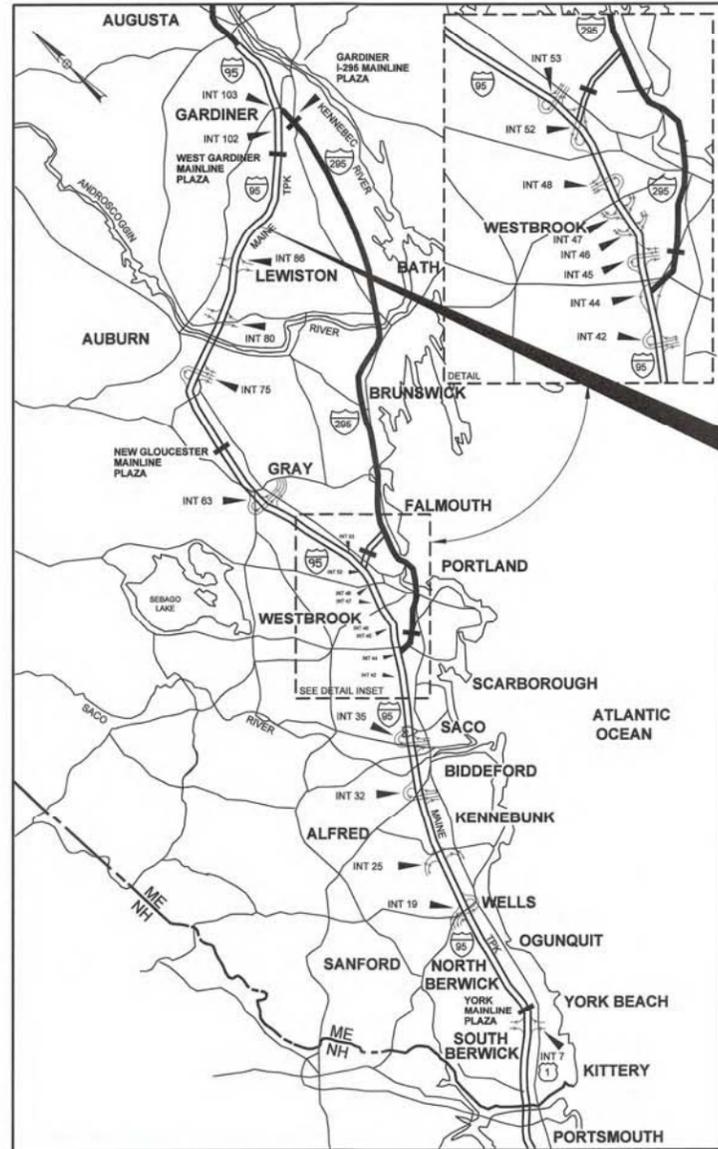


Date: 12/10/2013



LOCATION MAP



THE GOLD STAR MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
 DIANE M. DOYLE, VICE CHAIR
 GERARD P. CONLEY, SR., MEMBER
 JAMES F. CLOUTIER, MEMBER
 JOHN E. DORITY, MEMBER
 ROBERT D. STONE, MEMBER
 BRUCE A. VAN NOTE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2014.06 BRIDGE SUPERSTRUCTURE REPLACEMENT WEST ROAD UNDERPASS MILE 91.0

INDEX OF SHEETS

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11-12	PLANS & PROFILES
13	LIMIT OF DISTURBANCE PLAN
14-24	CROSS SECTIONS
25-50	STRUCTURAL PLANS
51-53	AS-BUILT STRUCTURAL PLANS

APPROVED: MAINE TURNPIKE AUTHORITY

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

12/11/13
DATE

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

12/11/13
DATE

HNTB



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

12/19/13
DATE

Filename: 001_MTA>Title.dgn

GENERAL

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. EXISTING AND PROPOSED ELEVATIONS ARE BASED ON A LOCAL PROJECT BENCHMARK. THE BENCHMARK IS A PK NAIL IN CMP POLE #16 AT STA. 34+27, OFFSET 26' LEFT WITH ELEVATION 428.11. AS-BUILT ELEVATIONS ARE BASED ON NGVD 29 DATUM.

3. CHAIN LINK FENCE GATES SHALL BE 4' WIDE SINGLE GATES. A GATE SHALL BE LOCATED ON EACH SIDE OF THE TURNPIKE ROADWAY. EXACT LOCATION OF THE GATE SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT.

4. CONNECTIONS FOR EXISTING FENCE TO PROPOSED FENCE SHALL BE INCIDENTAL TO THE PROPOSED FENCE ITEMS.

5. EXISTING ROW FENCE WITHIN THE LIMITS OF WORK, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT, SHALL BE REMOVED AND DISPOSED. THIS WORK SHALL BE INCIDENTAL TO SECTION 607.

6. CONTRACTOR IS REQUIRED TO MAINTAIN ACCESS TO ALL DRIVEWAYS AND SIDE ROADS DURING CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.

7. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.

8. NO WETLANDS SHALL BE IMPACTED.

9. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO START OF WORK.

10. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT CAN ARRANGE FOR MAINE TURNPIKE UNDERGROUND UTILITY LOCATION. ALL PROPOSED SIGN LOCATIONS AND EXCAVATION LOCATIONS SHALL BE MARKED AT THE NOTIFICATION TIME. EXCAVATING WILL NOT BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED ITS UNDERGROUND UTILITIES, OR NOTIFIED THE RESIDENT THERE ARE NO UNDERGROUND UTILITIES IN THE MARKED AREAS.

THE AUTHORITY HAS PROGRAMMED TWO FIELD VISITS FOR MAINE TURNPIKE UTILITY COORDINATION ON THIS PROJECT. SHOULD THE CONTRACTOR NEED ADDITIONAL SIGN LOCATIONS AND/OR ADDITIONAL EXCAVATION LOCATIONS MARKED, OR SHOULD THE CONTRACTOR FAIL TO MAINTAIN THE AUTHORITY'S PREVIOUSLY ESTABLISHED DIG SAFE MARKS, THE AUTHORITY SHALL DEDUCT THE ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS.

11. REMOVE AND RESET THE FOUR HAZARD MARKERS LOCATED AT EACH END POST. PAYMENT SHALL BE UNDER 645.109. REMOVE AND RESET SIGN.

EARTHWORK

1. CLEARING LIMITS SHALL BE 5' BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT. THE ACTUAL CLEARING LINES SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND SHALL BE APPROVED BY THE RESIDENT PRIOR TO ANY CLEARING TAKING PLACE. CLEARING SHALL BE INCIDENTAL TO THE CONTRACT. NOTE ACTUAL TREE LINE MAY VARY DUE TO CLEARING EFFORTS BY THE TOWN AND THE AUTHORITY.

2. INDIVIDUAL TREES WITHIN THE SLOPE LIMIT LINES OR CALLED TO BE REMOVED ON THE PLANS, SHALL BE REMOVED AND DISPOSED. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

3. THE NORMAL GRUBBING WIDTH IN FILLS SHALL BE VARIABLE LEFT OR RIGHT, WHEN SUBGRADE IS LESS THAN 5' ABOVE OLD GROUND. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6' IN FIELD AREAS AND 12' IN WOODED AREAS.

4. WASTE MATERIALS SHALL BE DISPOSED OFF THE PROJECT SITE, IN ACCORDANCE WITH ALL ENVIRONMENTAL REGULATIONS.

5. REMOVAL OF EXISTING PAVEMENT SHALL BE PAID FOR AS COMMON EXCAVATION. EXISTING PAVEMENT THICKNESS HAS BEEN ESTIMATED TO BE 6".

EROSION CONTROL

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 OR DIRECTED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT.

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. NEWLY DISTURBED EARTH SHALL BE MULCHED BY THE END OF EACH WORK DAY. MULCH SHALL BE MAINTAINED ON A DAILY BASIS. THIS WORK SHALL BE PAID FOR UNDER ITEM 619J202 TEMPORARY MULCH.

4. TEMPORARY SEED SHALL BE APPLIED TO ALL DISTURBED AREAS THAT WILL NOT BE COMPLETED WITHIN 30 DAYS.

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

6. TEMPORARY STONE CHECK DAMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MDOT BEST MANAGEMENT PRACTICES.

7. TEMPORARY BERMS AND TEMPORARY SLOPE DRAINS ARE ANTICIPATED AT ALL STONE DOWNSPOUT LOCATIONS AND TOP OF EMBANKMENTS WHILE GROWTH IS BEING ESTABLISHED ON SIDE SLOPES.

8. TEMPORARY EROSION CONTROL BLANKET, ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND SLOPES 2:1 AND STEEPER 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 UNLESS OTHERWISE SPECIFIED ON THE PLANS OR AS DESIGNATED BY THE RESIDENT.

LOCAL ROAD

1. PAVED ENTRANCES SHALL BE CONSTRUCTED WITH:
2" HOT MIX ASPHALT, 9.5 MM
12" AGGREGATE SUBBASE COURSE GRAVEL.

2. UNPAVED ENTRANCES SHALL BE CONSTRUCTED WITH:
12" AGGREGATE SUBBASE COURSE GRAVEL.

3. A 3' PAVED LIP SHALL BE PLACED AT ALL GRAVEL ENTRANCES EXCEPT WOODS AND FIELD ENTRANCES UNLESS OTHERWISE DIRECTED BY THE RESIDENT.

GUARDRAIL

1. STEEL CABLE GUARDRAIL EXISTS ON THE PROJECT SITE. THE GUARDRAIL IS MOSTLY LAYING ON THE GROUND, TWISTED AMONGST THE TREES AND BRUSH. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING STEEL CABLE GUARDRAIL. PAYMENT SHALL BE INCIDENTAL TO ITEM 203.20 COMMON EXCAVATION.

2. AT THE END OF EACH WORK DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.

3. SEE SHEET MD-01 FOR THE SHOULDER PAVEMENT LIMITS FROM THE BRIDGE JOINT TO THE STONE DOWNSPOUT.

4. PROPOSED MAIL BOX POSTS SHALL BE A 4x4 WOOD POST SET 45" HIGH WITH A 2 FOOT EMBEDMENT. OFFSET SHALL BE A MINIMUM OF 1 FOOT BEYOND THE EDGE OF SHOULDER OR SIMILAR TO EXISTING WHICHEVER IS GREATER. PAYMENT SHALL BE UNDER ITEM 606.47 SINGLE WOOD POST.

Date: 12/17/2013

Filename: 003_GeneralNotes.dgn

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:						
HNTB						
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.						
	By	Date		By	Date	
	Designed	LZD	12/13	Checked	GAB	12/13
	Drawn	MPC	12/13	In Charge of	RAL	12/13

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: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

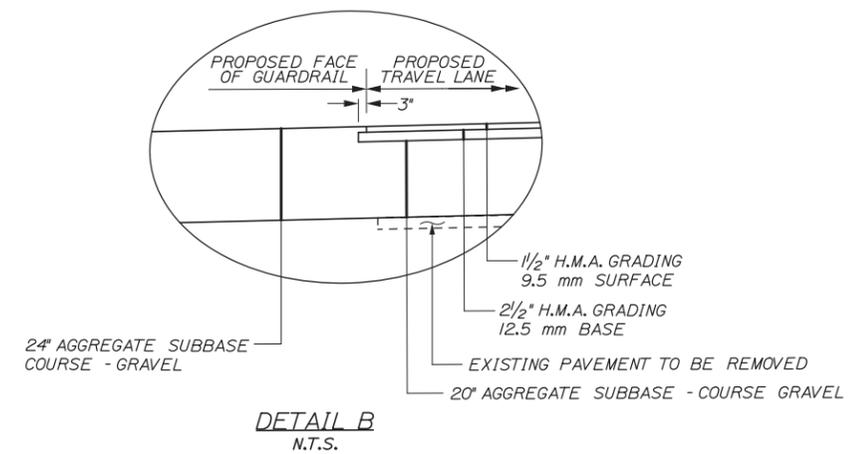
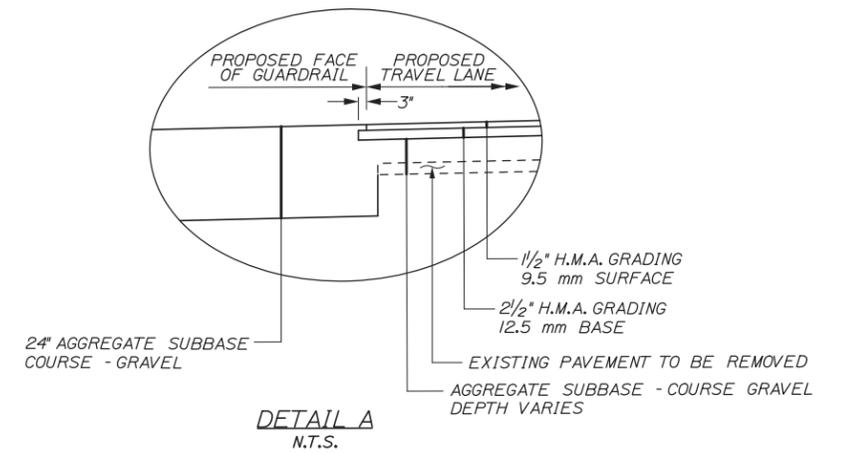
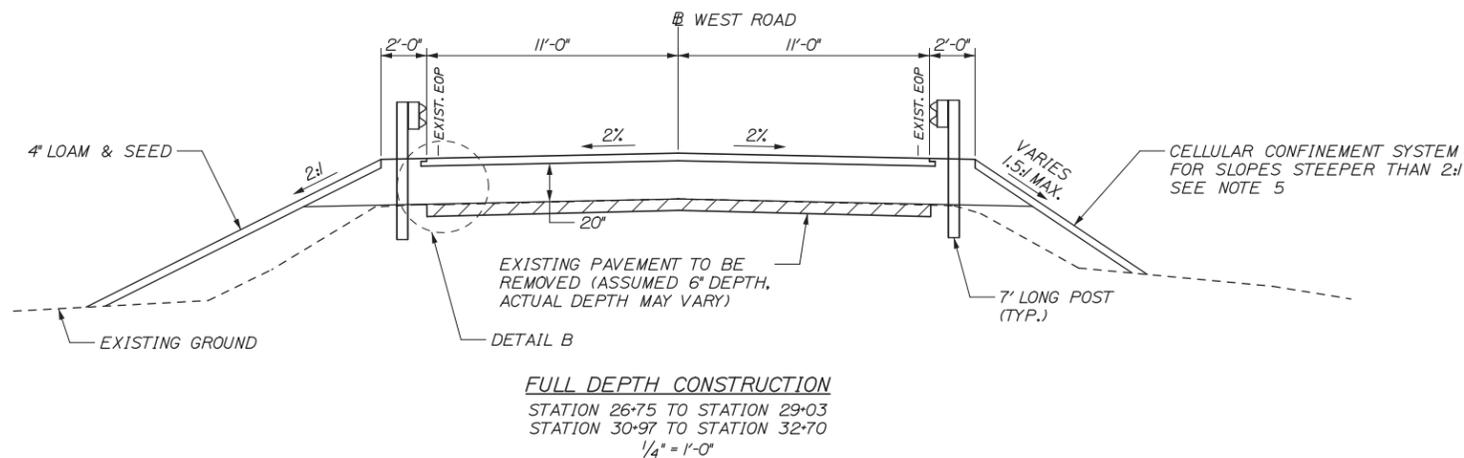
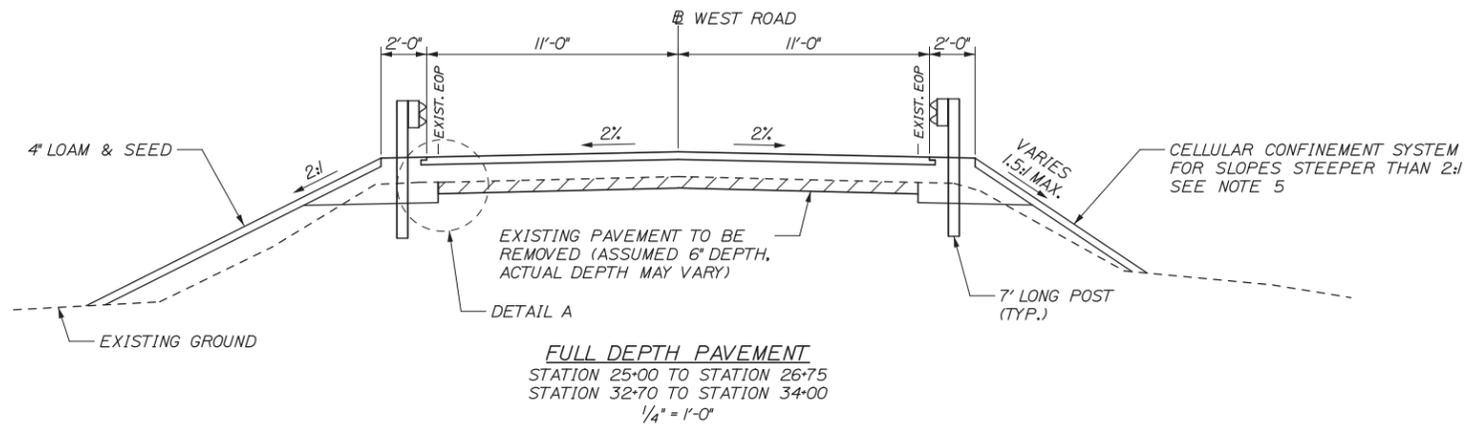
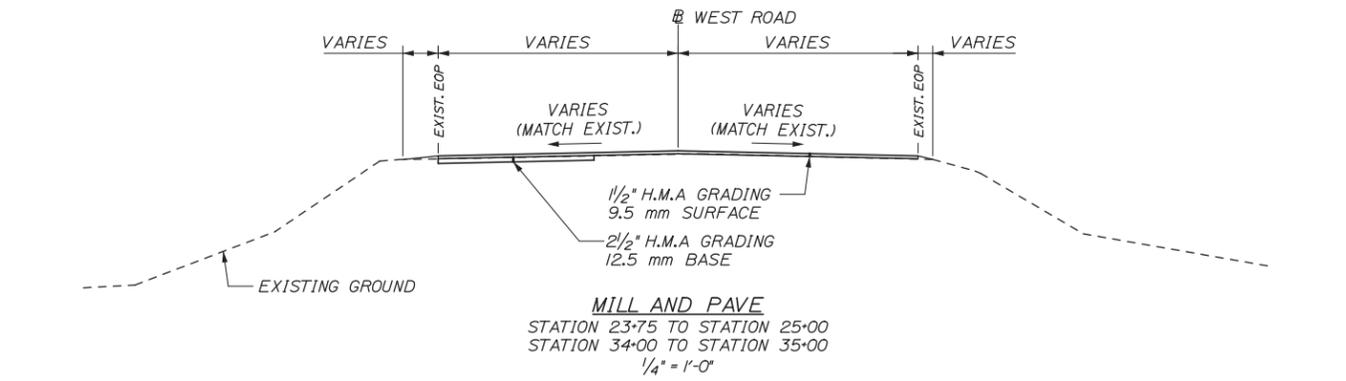
GENERAL NOTES

SHEET NUMBER: GN-01

CONTRACT: 2014.06

3 OF 53

Date: 12/17/2013



NOTES

1. THE PAVEMENT, BASE AND SUBBASE DEPTHS, AS SHOWN ON THE PLANS, ARE INTENDED TO BE NOMINAL.
2. CROWNS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.
3. ALL NECESSARY PAVEMENT CUTTING SHALL BE SAWCUT AND DONE IN SUCH A MANNER AS TO LEAVE A CLEAN, VERTICAL FACE.
4. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF PAVEMENT AND ON ALL EXISTING PAVED OR MILLED SURFACES PRIOR TO PLACING PROPOSED PAVEMENT OR AS DIRECTED BY THE RESIDENT.
5. CELLULAR CONFINEMENT SYSTEM SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 2:1. SLOPES SHALL BE GRUBBED, BACKFILLED AND COMPACTED PRIOR TO CELLULAR CONFINEMENT SYSTEM INSTALLATION. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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


**THE GOLD STAR
 MEMORIAL HIGHWAY**

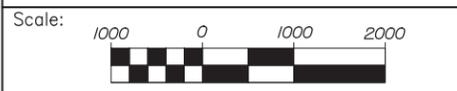
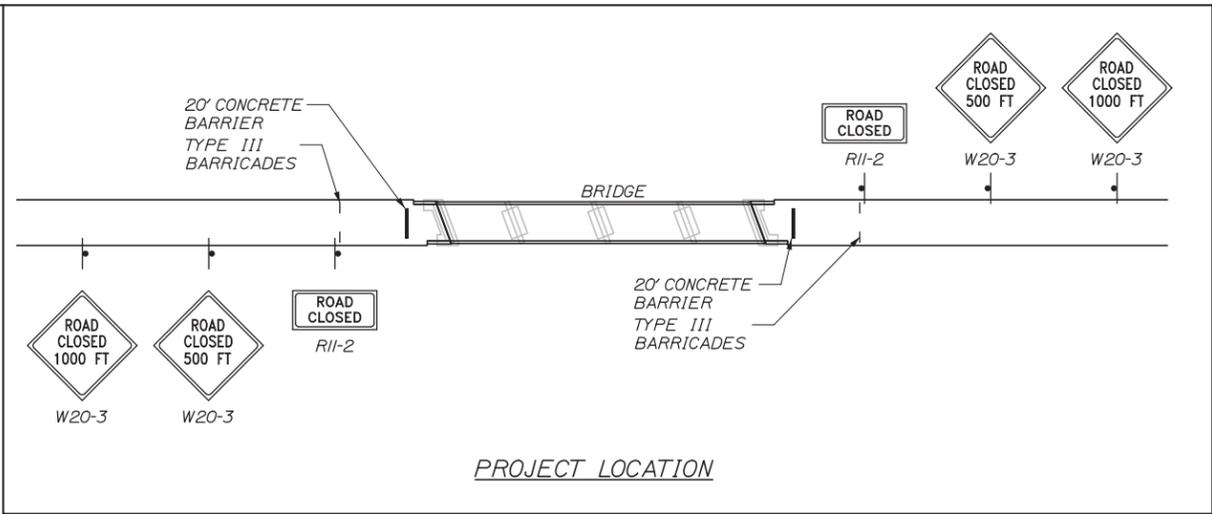
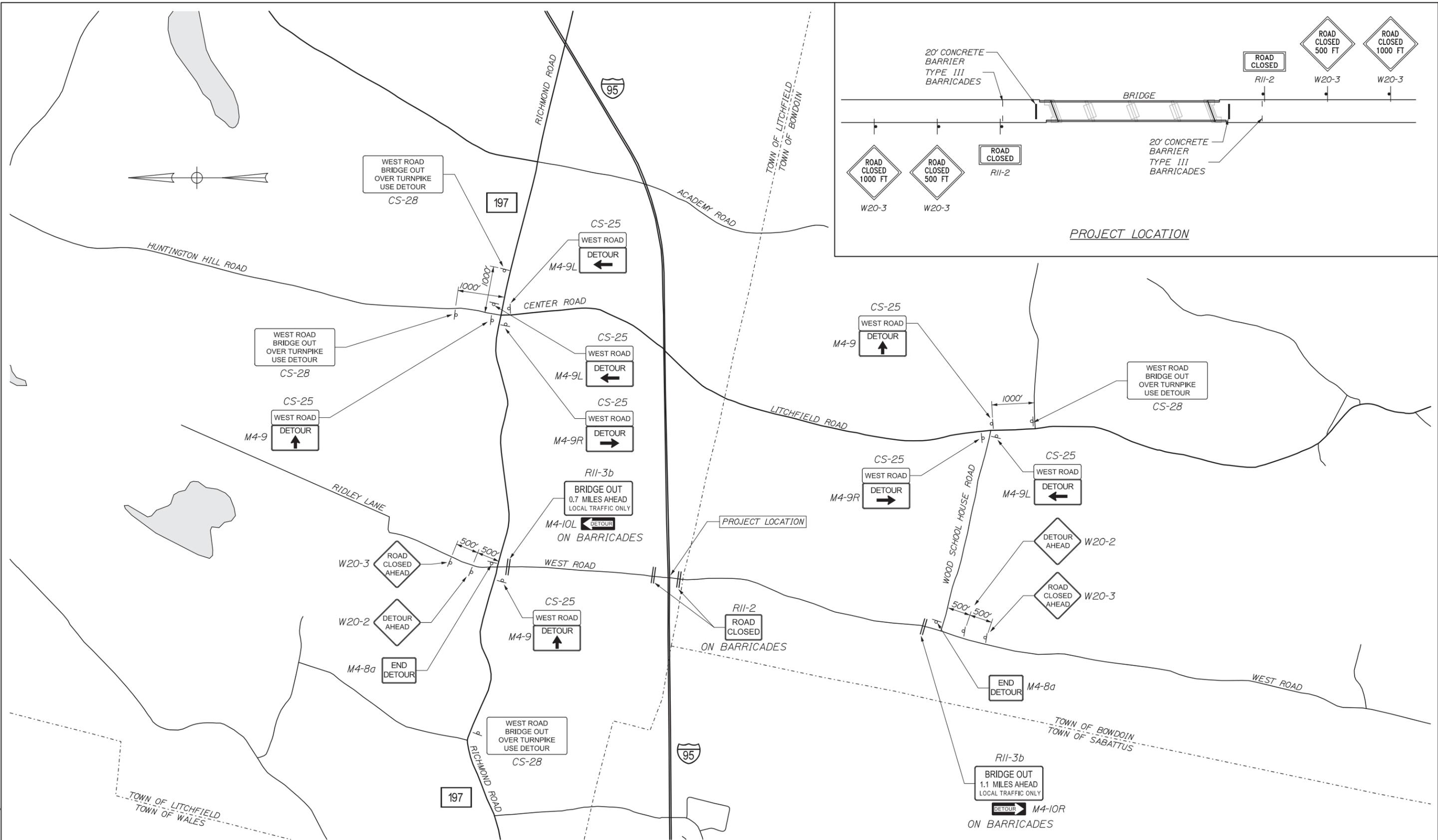
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 TYPICAL SECTIONS

SHEET NUMBER: TS-01
 CONTRACT: 2014.06
 4 OF 53

Date: 12/17/2013

Filename: 005_WestRoadDetourPlan.dgn



Designed by:



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



THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 WEST ROAD DETOUR PLAN

No.	Revision	By	Date

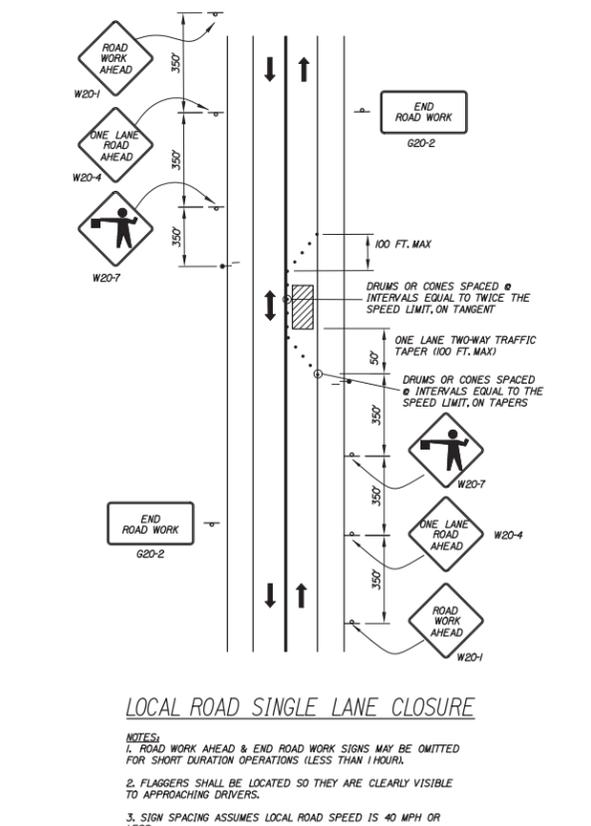
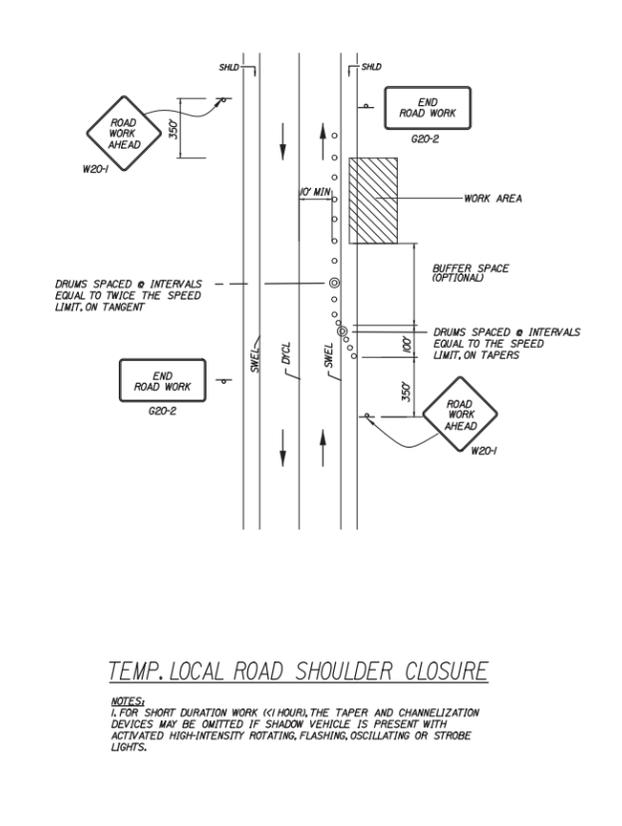
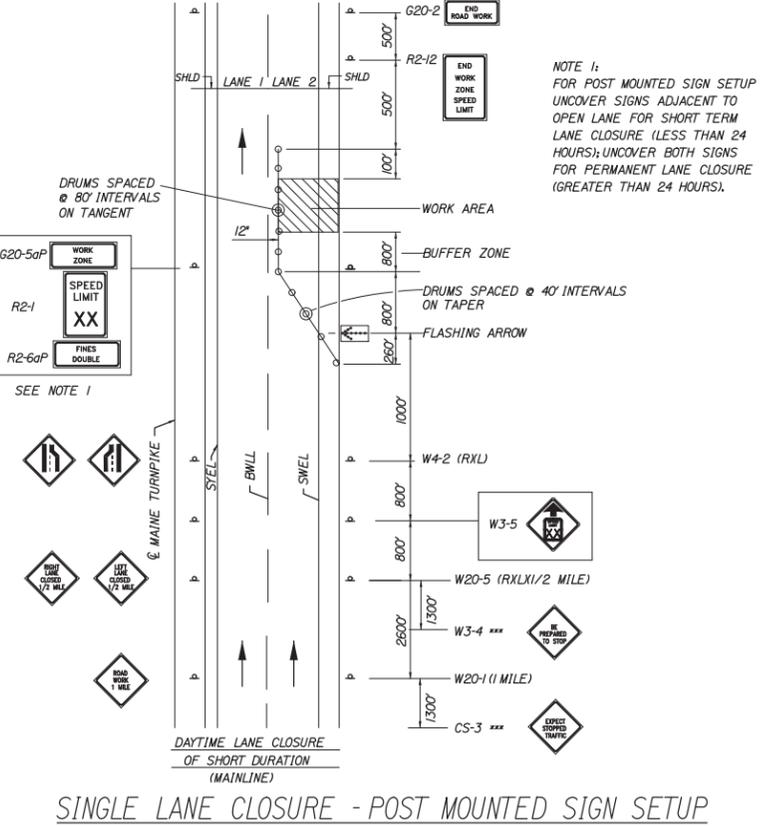
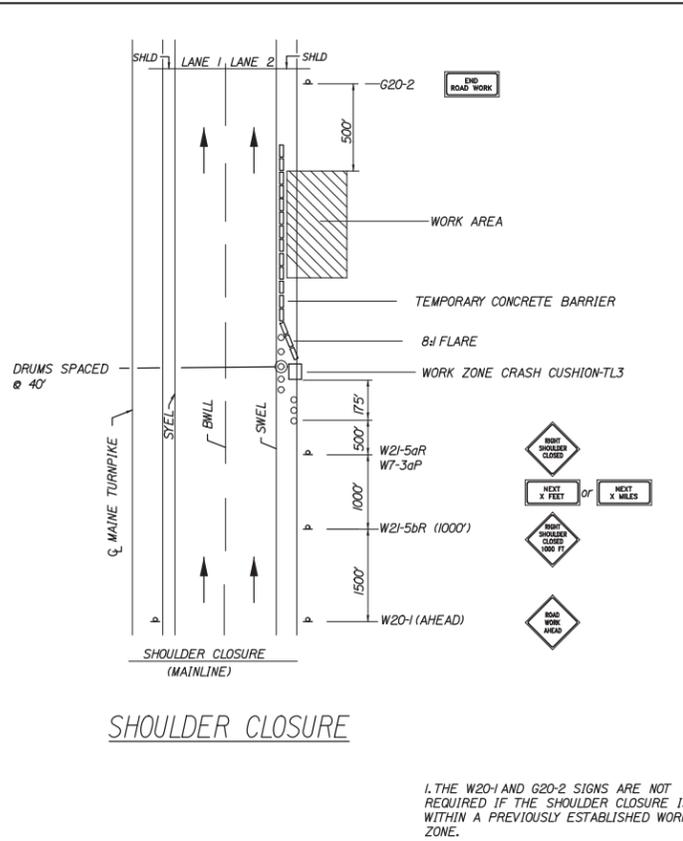
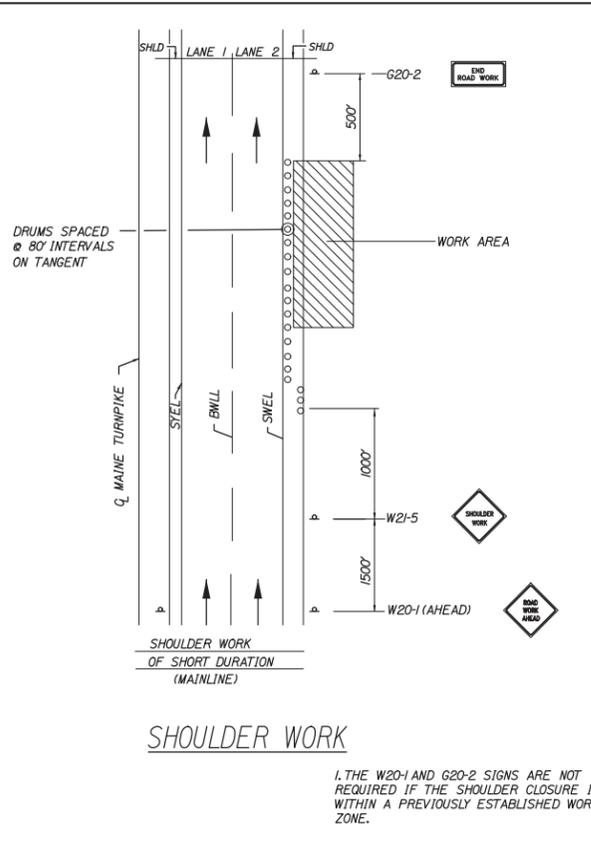
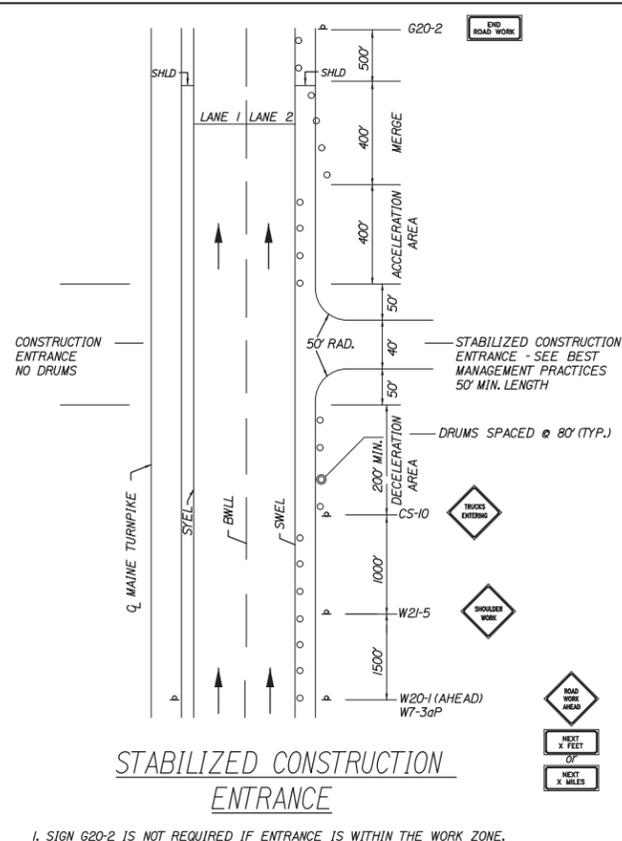
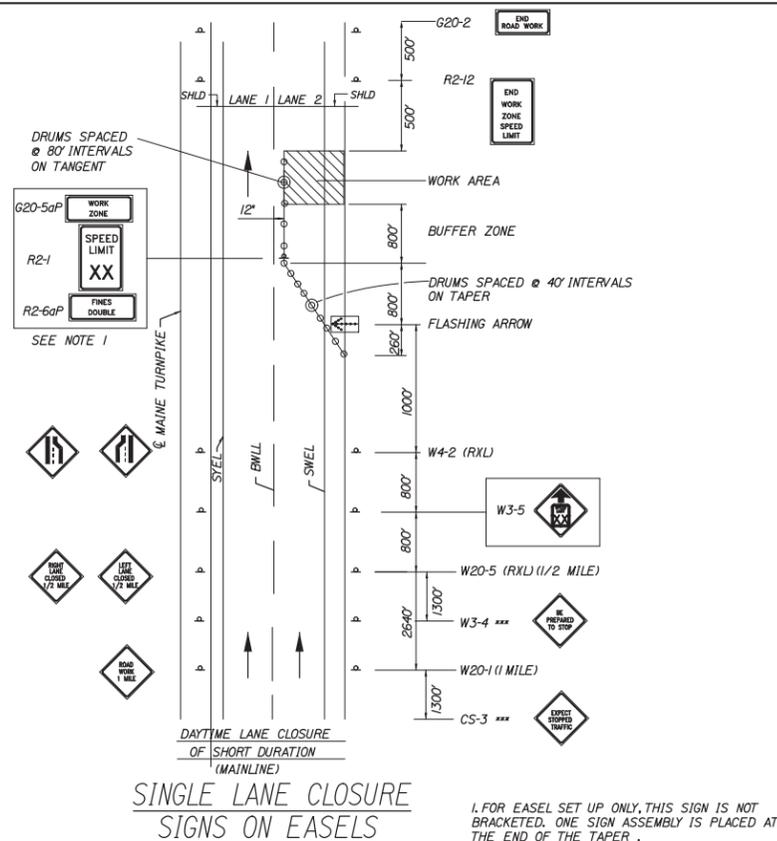
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	LZD	12/13	Checked CAH 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.T., P.T.O.E.

CONTRACT: 2014.06

SHEET NUMBER: MT-01
 5 OF 53

Date: 12/17/2013



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.

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: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	LZD	12/13	Checked	-	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

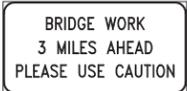
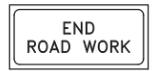
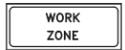
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 MAINTENANCE OF TRAFFIC
 DETAILS I

SHEET NUMBER: MT-02
 CONTRACT: 2014.06
 6 OF 53

Filename: 006_MOT_Details.dgn

CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
CS-3	48"	48"		6" 6" 6"	4" 4"		4	ORANGE	BLACK		16.00 (64)	
CS-10	48"	48"		6" 6"	4"		2				16.00 (32)	
CS-25	30"	12"		5"			8				2.50 (22.5)	
CS-28	60"	36"		5" 5" 5" 5"	4" 4" 4"		4				15.00 (60)	
CS-29	96"	48"		8" 8" 8"	6" 6" 6"		2				32.00 (64)	
G20-2	48"	24"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2004			4				8.00 (48)	
G20-5aP	48"	24"					4				8.00 (32)	
M4-8a	24"	18"					2				3.00 (6)	

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
M4-9	30"	24"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2004			3	ORANGE	BLACK		5.00 (15)	
M4-9L	30"	24"					3				5.00 (20)	
M4-9R	30"	24"					2				5.00 (10)	
M4-10R M4-10L	48"	18"	 R-SHOWN, L-OPPOSITE				1 1				6.00 (6) (6)	
R2-1 (50)	48"	60"					4	WHITE	BLACK		20.00 (80)	
R2-6aP	48"	24"					4				8.00 (32)	
R2-12	36"	54"					4				13.50 (54)	
R11-2	48"	30"					2				10.00 (20)	
R11-3b (1.1) (0.7)	60"	30"					1 1				12.50 (12.5) (12.5)	

Date: 12/17/2013

Filename: 007_MOT_Sign_Summary_01.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
	LZD	12/13			12/13
			In Charge of	RAL	12/13

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: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY I

SHEET NUMBER: MT-03
 CONTRACT: 2014.06
 7 OF 53

CONSTRUCTION SIGN SUMMARY (CONTINUED)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
W3-4	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2004			4	ORANGE	BLACK		16.00 (64)	
W3-5 (50)	48"	48"					4				16.00 (64)	
W4-2L	48"	48"					4				16.00 (64)	
W4-2R	48"	48"					4				16.00 (64)	
W20-1 (1 MILE) (AHEAD)	48"	48"					4 2				16.00 (64) (32)	
W20-2 (AHEAD)	36"	36"					2				9.00 (18)	
W20-3 (500 FT) (1000 FT) (AHEAD)	36"	36"					2 2 2				9.00 (18) 9.00 (18) 9.00 (18)	

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
W20-5L (1/2 MILE)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2004			4	ORANGE	BLACK		16.00 (64)	
W20-5R (1/2 MILE)	48"	48"					4				16.00 (64)	
W21-5	48"	48"					2				16.00 (32)	
W21-5bR	48"	48"					2				16.00 (32)	
W21-5bR (1000 FT)	48"	48"					2				16.00 (32)	

Date: 12/17/2013

Filename: 008_MOT_Sign_Summary_02.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

By	Date	By	Date
Designed	LZD 12/13	Checked	- 12/13
Drawn	MPC 12/13	In Charge of	RAL 12/13

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



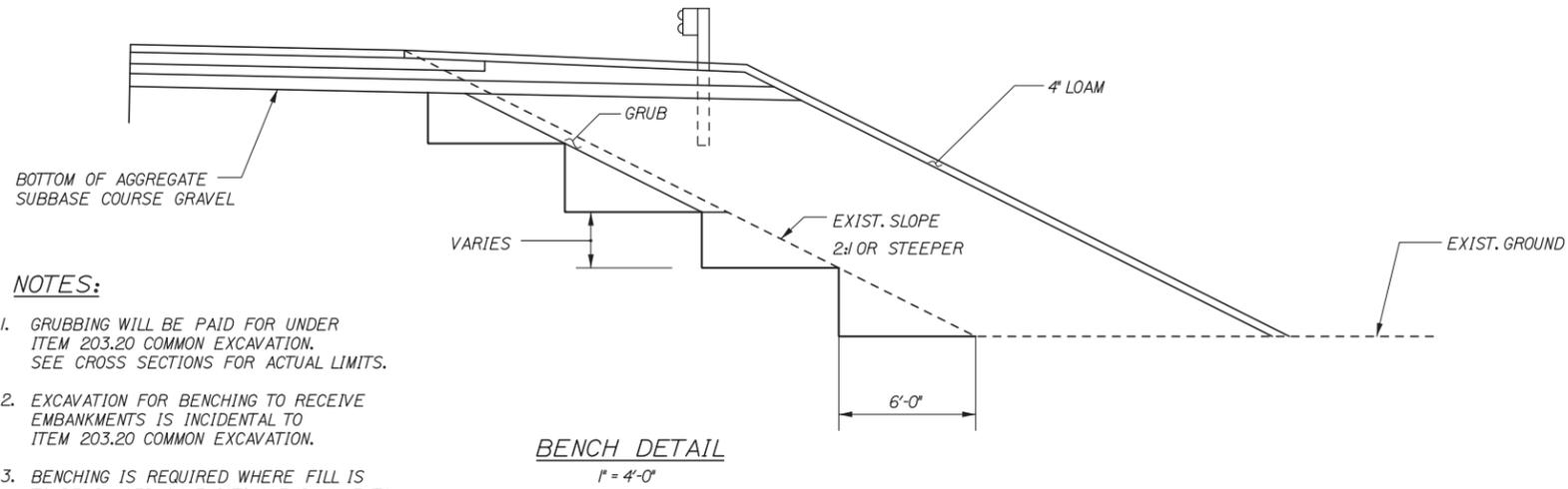
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY 2

SHEET NUMBER: MT-04
 CONTRACT: 2014.06
 8 OF 53

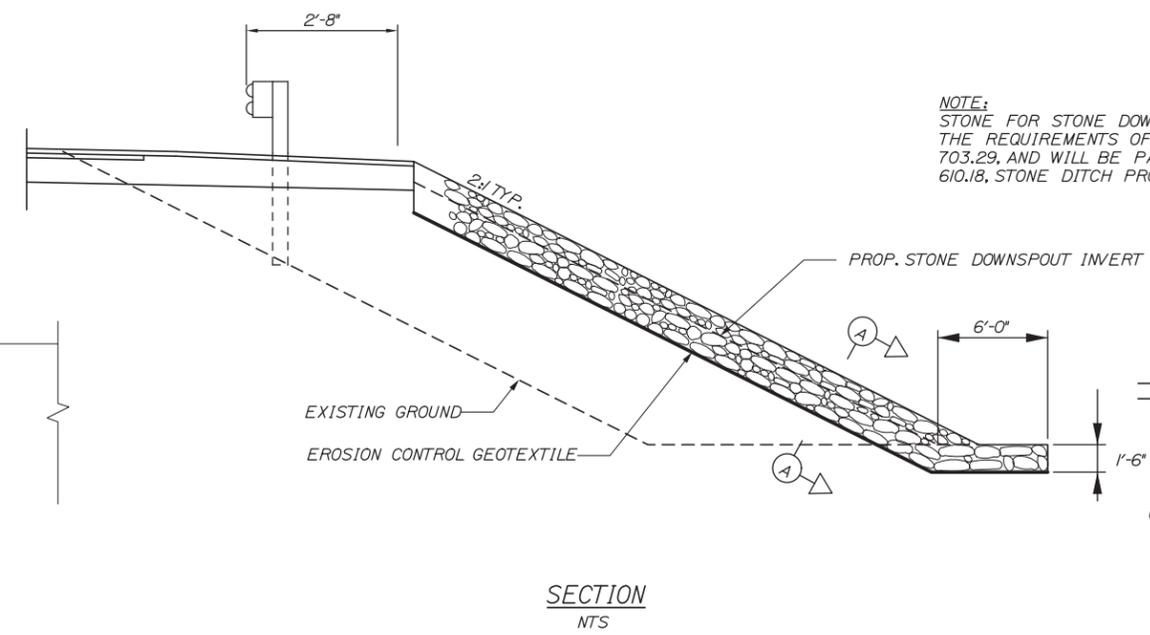
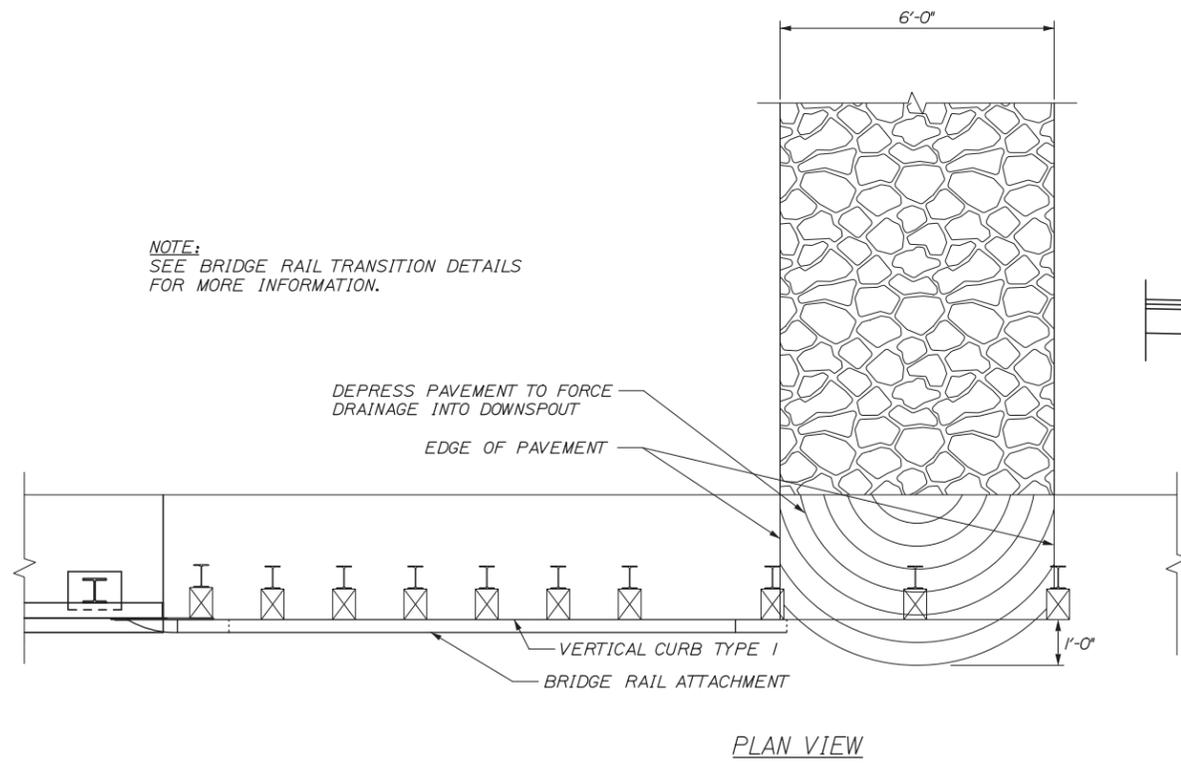
Date: 12/17/2013



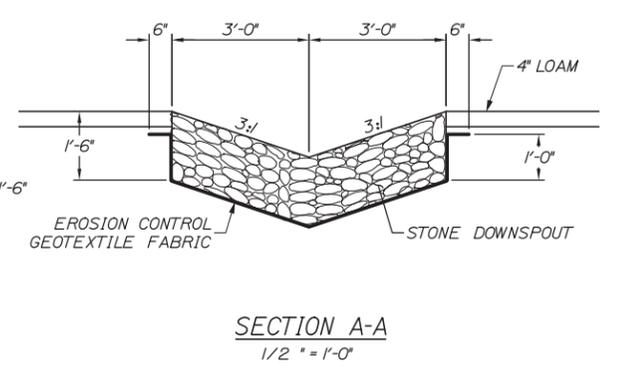
NOTES:

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

NOTE:
SEE BRIDGE RAIL TRANSITION DETAILS FOR MORE INFORMATION.



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



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

STONE DOWNSPOUT

Scale:			
AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
Designed	LZD	12/13	Checked	GAB	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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THE GOLD STAR MEMORIAL HIGHWAY

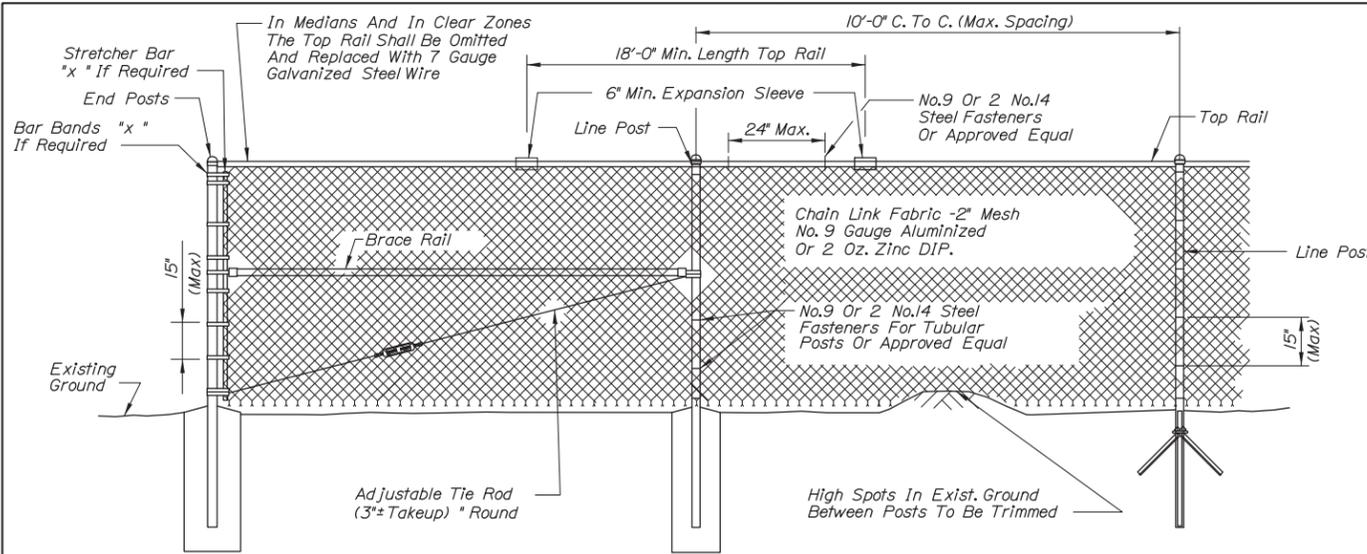
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
MISCELLANEOUS DETAILS

SHEET NUMBER: MD-01
CONTRACT: 2014.06
9 OF 53

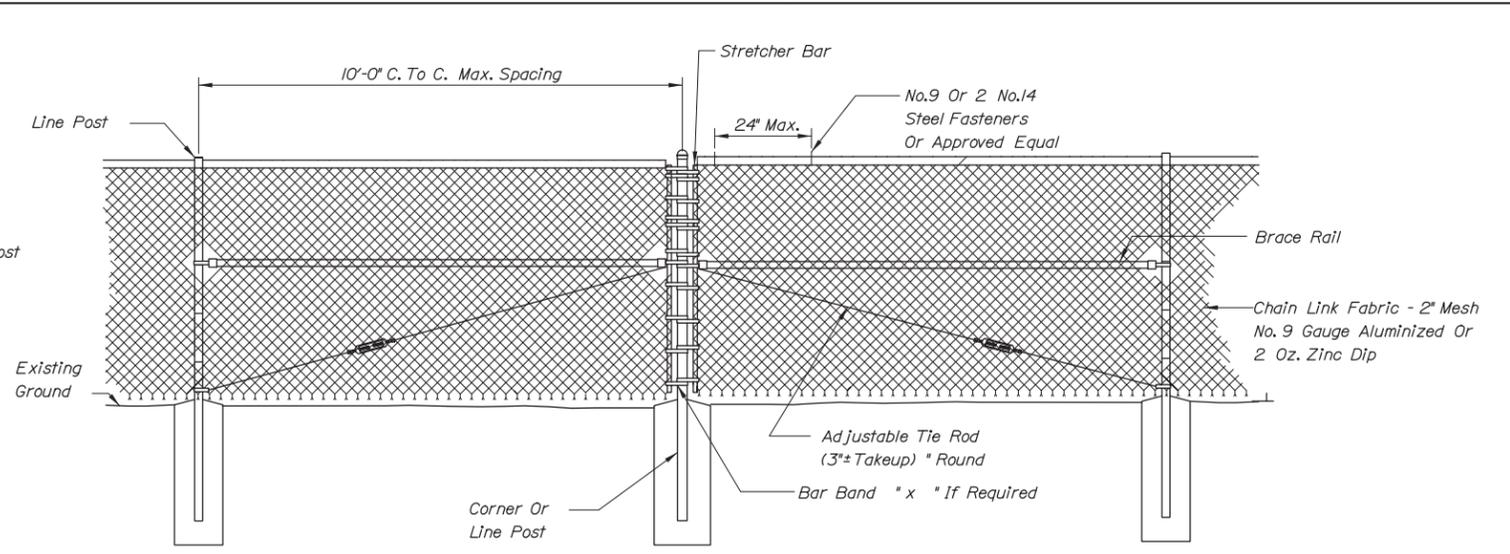
Filename: 009_Erosion ControlDetails 01.dgn

Date: 12/17/2013

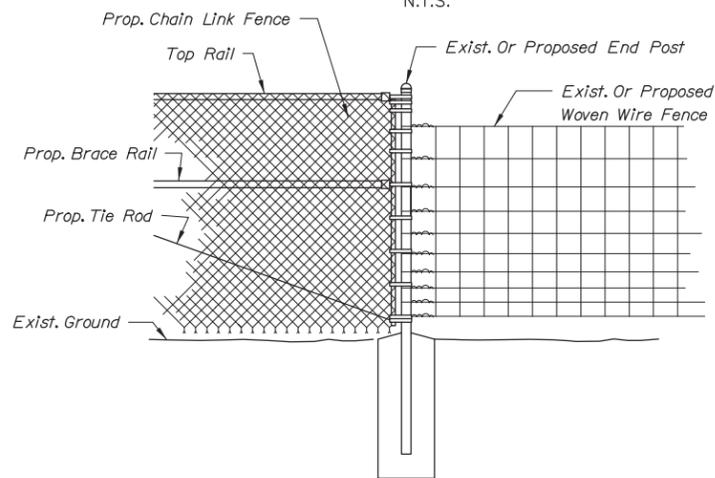


TYPICAL TYPE I END PANEL
N.T.S.

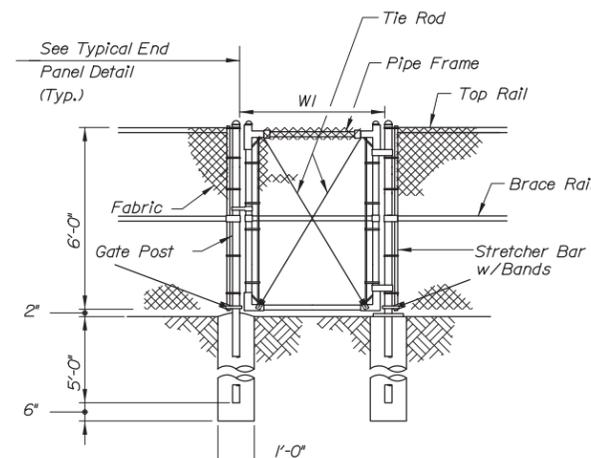
TYPICAL INTERMEDIATE PANEL
N.T.S.



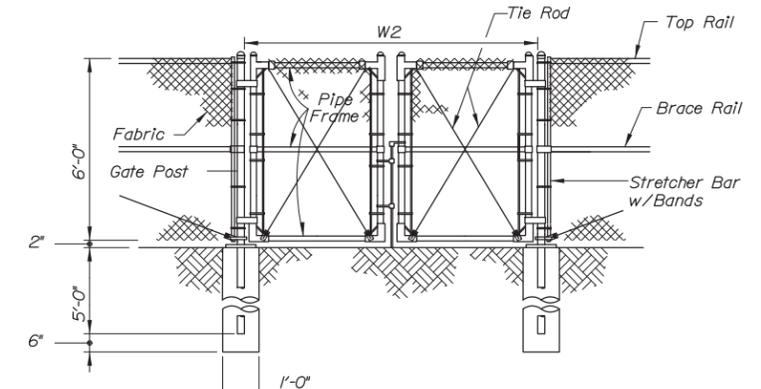
TYPICAL TYPE II BRACE PANEL
N.T.S.



METHOD OF ATTACHING CHAIN LINK FENCE TO WOVEN WIRE FENCE
N.T.S.



SINGLE GATE



DOUBLE GATE

Gate Width		Gate Post O.D.
W1	W2	
to 6'	to 12'	3"
6' to 12'	12' to 24'	4"
12' to 18'	24' to 36'	6"

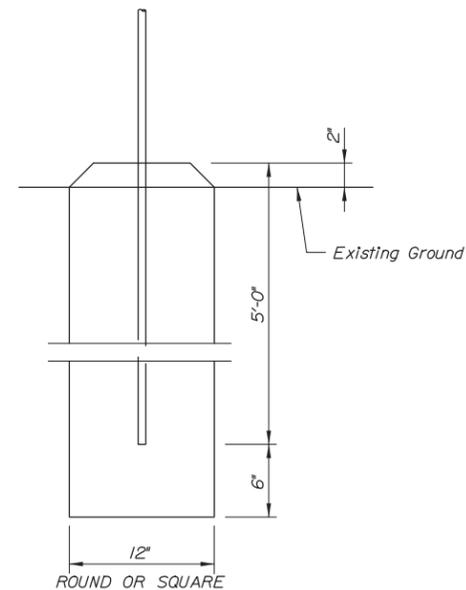
BENDING MOMENTS BASED ON GRADE 1 (SCHEDULE 40 STEEL)

CHAIN LINK FENCE	SHAPE	NOMINAL SIZE (INCHES)	BENDING MOMENT* (LBS.-IN.)
END & CORNER POSTS	φ	2 I.D.	14,025
LINE POSTS	φ	1-1/2 I.D.	8,150
TOP & BRACE RAILS	φ	1-1/4 I.D.	5,875

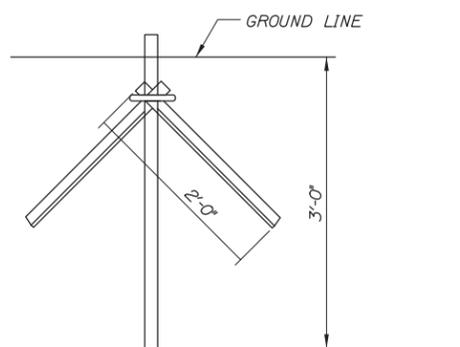
* MATERIAL FOR GRADE 2 END, CORNER & LINE POSTS AND TOP & BRACE RAILS MUST MEET OR EXCEED BENDING MOMENTS FOR GRADE 1 STEEL AS NOTED ABOVE.

NOTES:

- BRACE PANELS SHALL BE INSTALLED WHERE THE CHANGE IN GRADE BETWEEN ANY THREE POSTS EXCEEDS 15 PERCENT.
- NO ADDITIONAL PAYMENT WILL BE MADE FOR LONGER POSTS NECESSITATED BY LARGE GRADE DIFFERENTIAL.
- TYPE I BRACING WILL BE USED AT FENCE ENDS. TYPE II BRACING WILL BE USED AT CORNER POSTS.
- WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12" DEEP UNLESS THE POSTS PENETRATE THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
- CONCRETE FOR POST FOUNDATION SHALL BE CLASS B.
- BRACE, GATE AND END POSTS SHALL BE SET IN CONCRETE.
- CHAIN LINK FENCE SHALL BE INSTALLED WITH BARBS DOWN.
- ALL COMPONENTS OF CHAIN LINK FENCE SHALL BE IN ACCORDANCE WITH AASHTO M181.



BRACE, GATE AND END POST BASE DETAIL
N.T.S.



LINE POST DRIVE ANCHOR DETAIL
N.T.S.

Filename: 010 Fence Details.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by: HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	LZD	12/13	Checked GAB 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

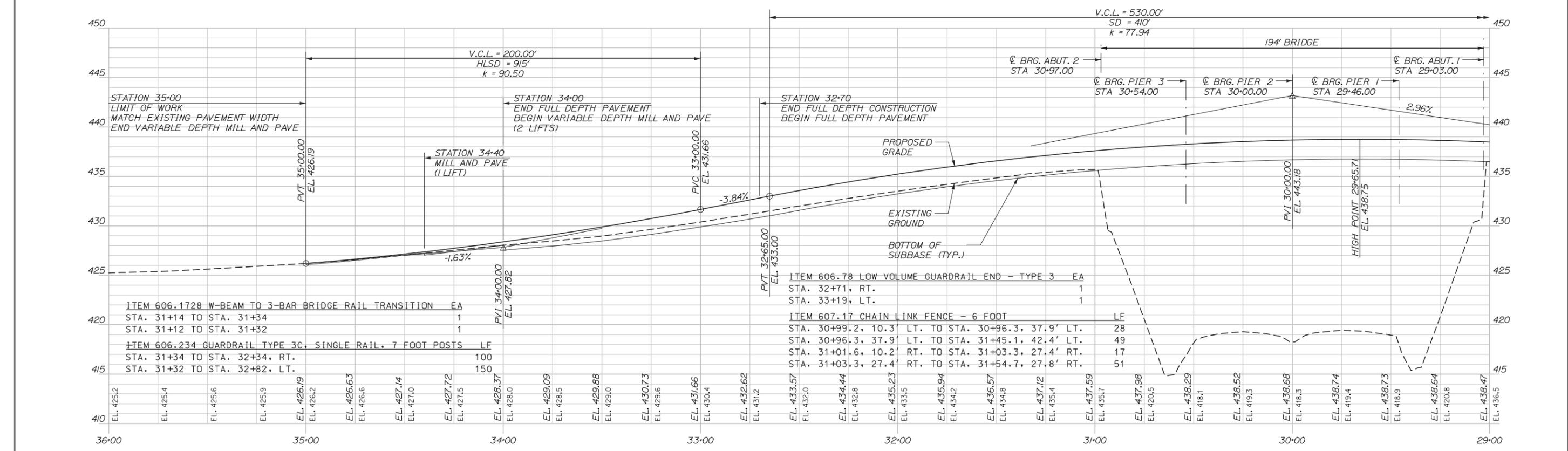
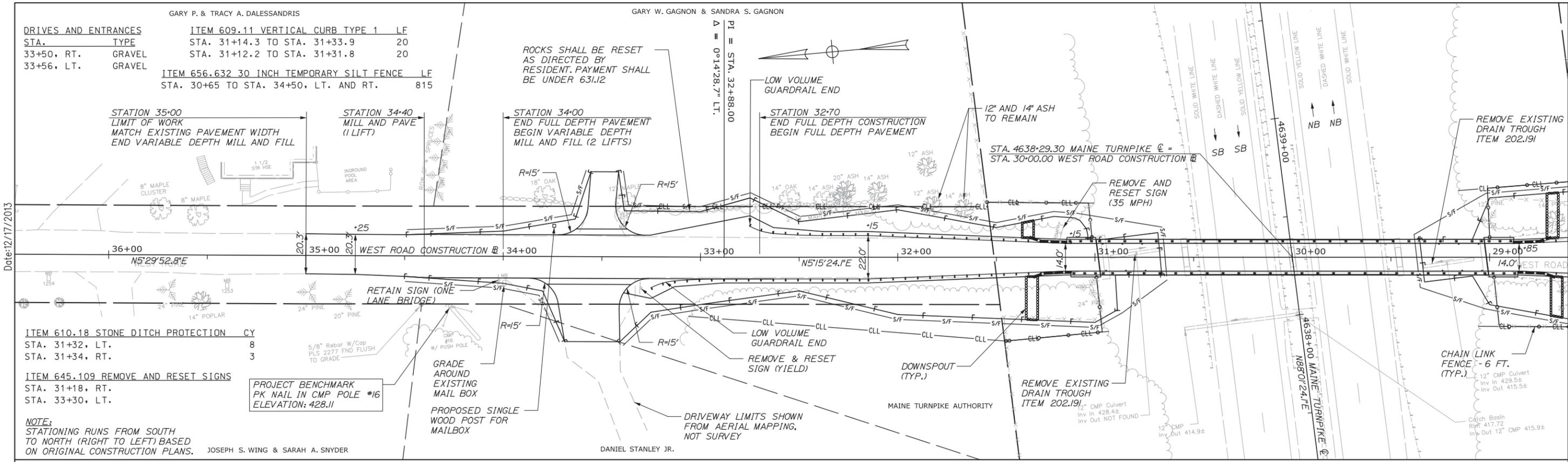
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MAINE TURNPIKE
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
CHAIN LINK FENCE DETAILS

SHEET NUMBER: MD-02
CONTRACT: 2014.06
10 OF 53



Scale: HORIZ: 25 0 25 50
VERT: 5 0 5 10

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

**BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS**

PLAN AND PROFILE 1

SHEET NUMBER: H-01

CONTRACT: 2014.06

11 OF 53

Date: 12/17/2013
Filename: 011_HDPLAN01.dgn

JULI M. BROWN

THERESA A. HALL & LARRY W. HALL

STEPHANIE J. TRENHOLM & DAVID N. TRENHOLM, II

DRIVES AND ENTRANCES

STA.	TYPE
24+20, RT.	GRAVEL - TO BE PAVED

CURVE DATA

PI = 24+89.87
 D = 3° - 49' - 11.0"
 Δ = 9° - 33' - 23.1" RT.
 R = 1500.00'
 L = 250.19'
 E = 125.38'
 T = 5.23'

ITEM 609.11 VERTICAL CURB TYPE 1	LF
STA. 28+66.2 TO STA. 28+85.7	20
STA. 28+68.2 TO STA. 28+87.7	20

STATION 23+75
 LIMIT OF WORK
 MATCH EXISTING PAVEMENT WIDTH
 BEGIN VARIABLE DEPTH MILL AND FILL
 (1 LIFT)

STATION 25+00
 END VARIABLE DEPTH MILL AND FILL
 BEGIN FULL DEPTH PAVEMENT

STATION 24+50
 MILL AND PAVE
 (2 LIFTS)

ITEM 645.109 REMOVE AND RESET SIGNS	EA
STA. 24+60, RT.	1
STA. 26+75, RT.	1

ITEM 656.632 30 INCH TEMPORARY SILT FENCE	LF
STA. 23+75 TO STA. 29+50, LT. AND RT.	1188

ITEM 610.18 STONE DITCH PROTECTION	CY
STA. 25+46, RT.	6
STA. 25+46, LT.	6
STA. 28+66, LT.	7
STA. 28+68, RT.	8

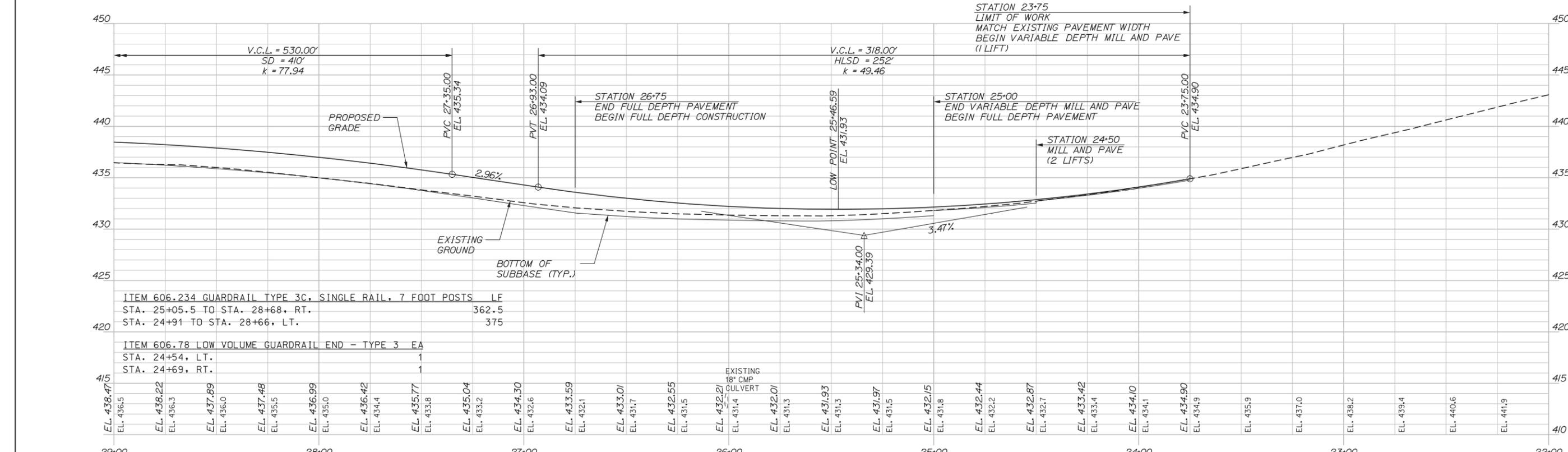
NOTE:
 STATIONING RUNS FROM SOUTH
 TO NORTH (RIGHT TO LEFT) BASED
 ON ORIGINAL CONSTRUCTION PLANS.

STATION 26+75
 END FULL DEPTH PAVEMENT
 BEGIN FULL DEPTH CONSTRUCTION

ITEM 606.1728 W-BEAM TO 3-BAR BRIDGE RAIL TRANSITION	EA
STA. 28+66 TO STA. 28+86	1
STA. 28+68 TO STA. 28+88	1

ITEM 607.17 CHAIN LINK FENCE - 6 FOOT	LF
STA. 28+44.7, 35.3' LT. TO STA. 28+95.1, 35.0' LT.	50
STA. 28+95.1, 35.0' LT. TO STA. 28+97.7, 10.3' LT.	25
STA. 28+53.7, 38.7' RT. TO STA. 29+01.1, 34.9' RT.	48
STA. 29+01.1, 34.9' RT. TO STA. 29+00.0, 10.2' RT.	25

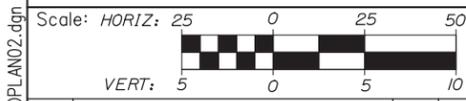
Date: 12/17/2013



ITEM 606.234 GUARDRAIL TYPE 3C, SINGLE RAIL, 7 FOOT POSTS	LF
STA. 25+05.5 TO STA. 28+68, RT.	362.5
STA. 24+91 TO STA. 28+66, LT.	375

ITEM 606.78 LOW VOLUME GUARDRAIL END - TYPE 3	EA
STA. 24+54, LT.	1
STA. 24+69, RT.	1

Station	Elevation
29+00	EL. 438.47
	EL. 436.5
	EL. 436.3
	EL. 437.89
	EL. 436.0
	EL. 437.48
	EL. 435.5
	EL. 436.99
	EL. 435.0
	EL. 436.42
	EL. 434.4
	EL. 435.77
	EL. 433.8
	EL. 435.04
	EL. 433.2
	EL. 434.30
	EL. 432.6
	EL. 433.59
	EL. 432.1
	EL. 433.01
	EL. 431.7
	EL. 432.55
	EL. 431.5
	EL. 432.21
	EL. 431.4
	EL. 432.01
	EL. 431.3
	EL. 431.93
	EL. 431.3
	EL. 431.97
	EL. 431.5
	EL. 432.15
	EL. 431.8
	EL. 432.44
	EL. 432.2
	EL. 432.87
	EL. 432.7
	EL. 433.42
	EL. 433.4
	EL. 434.0
	EL. 434.1
	EL. 434.90
	EL. 434.9
	EL. 435.9
	EL. 437.0
	EL. 438.2
	EL. 439.4
	EL. 440.6
	EL. 441.9
23+00	
22+00	



Designed by:

HNTB

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT WEST ROAD UNDERPASS

PLAN AND PROFILE 2

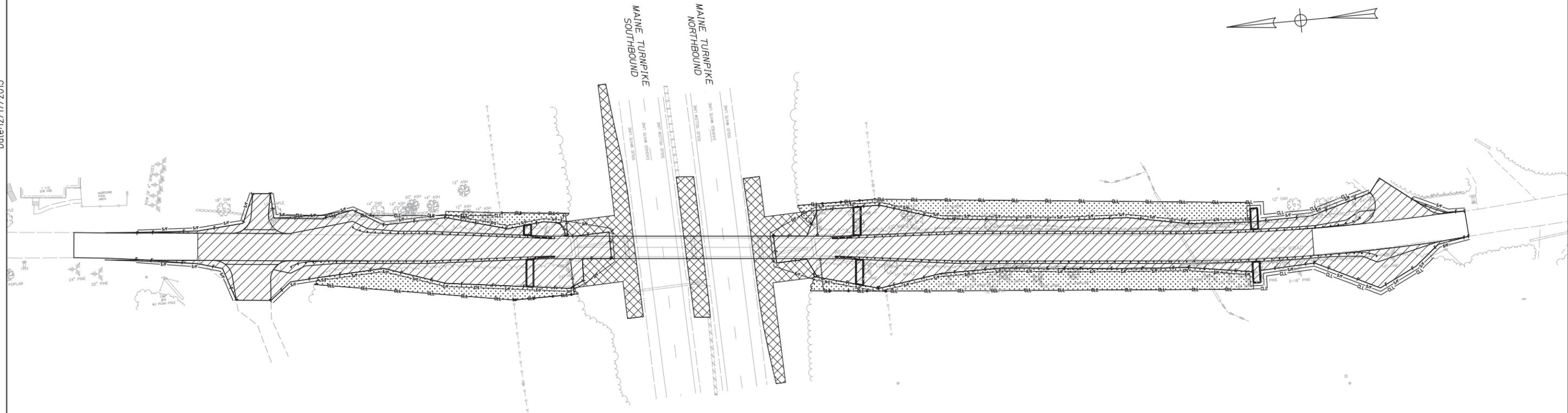
CONTRACT: 2014.06

SHEET NUMBER: H-02

12 OF 53

Filename: 012_HDPLAN02.dgn

Date: 12/17/2013

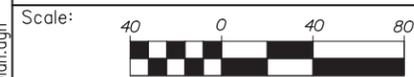


LEGEND

-  CONTRACT LIMIT OF DISTURBANCE
38,357 SF (0.9 ACRES)
-  CONTRACT ADDITIONAL CLEARING
LIMIT OF DISTURBANCE
12,887 SF (0.3 ACRES)
-  CONTRACTOR'S LIMIT OF DISTURBANCE
AREA FOR ACCESS AND STORAGE
8,369 SF (0.2 ACRES)

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. THE CONTRACTOR WILL BE ALLOWED TO STORE MATERIALS AND EQUIPMENT ON GRAVEL IN THE CLOSED WEST ROAD TEMPLATES. THESE AREAS ARE EITHER INCLUDED IN THE LIMITS OF DISTURBANCE, OR HAVE BEEN PREVIOUSLY SURFACED AND DO NOT ADD TO THE LIMITS OF DISTURBANCE.
3. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.
4. AN ADDITIONAL ONE ACRE HAS BEEN ESTIMATED FOR CONTRACTOR ACCESS LOCATIONS AND STORAGE AREAS.
5. TOTAL LIMIT OF DISTURBANCE FOR THIS PROJECT HAS BEEN ESTIMATED TO BE 2.4 ACRES.



Designed by:



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**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

LIMIT OF DISTURBANCE PLAN

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

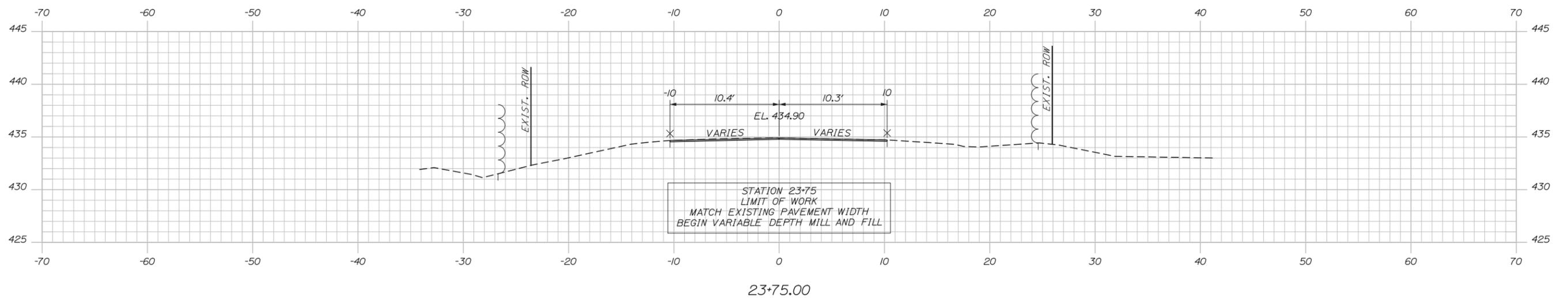
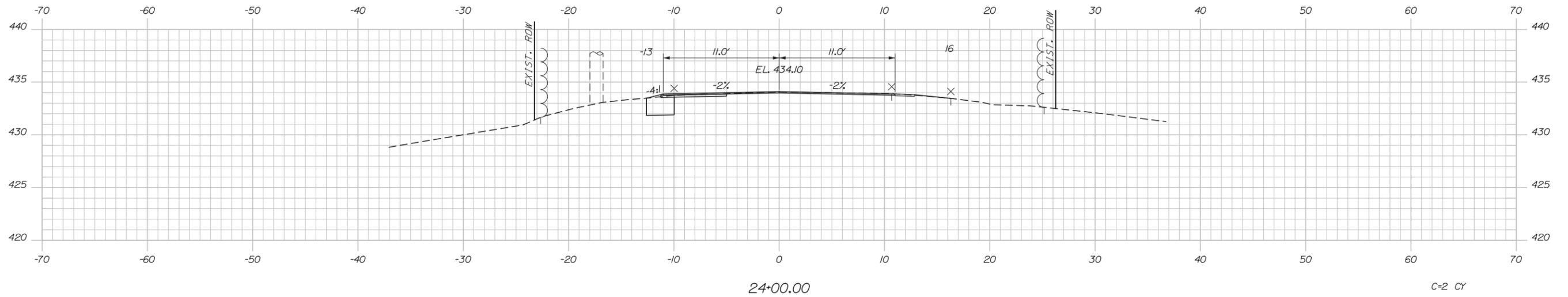
CONTRACT: 2014.06

SHEET NUMBER: H-03

13 OF 53

Filename: 013_L10Dplan.dgn

Date: 12/17/2013



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 CROSS SECTIONS
 STA. 23+75 TO STA. 24+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

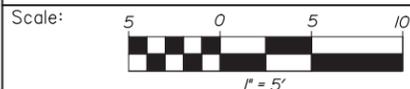
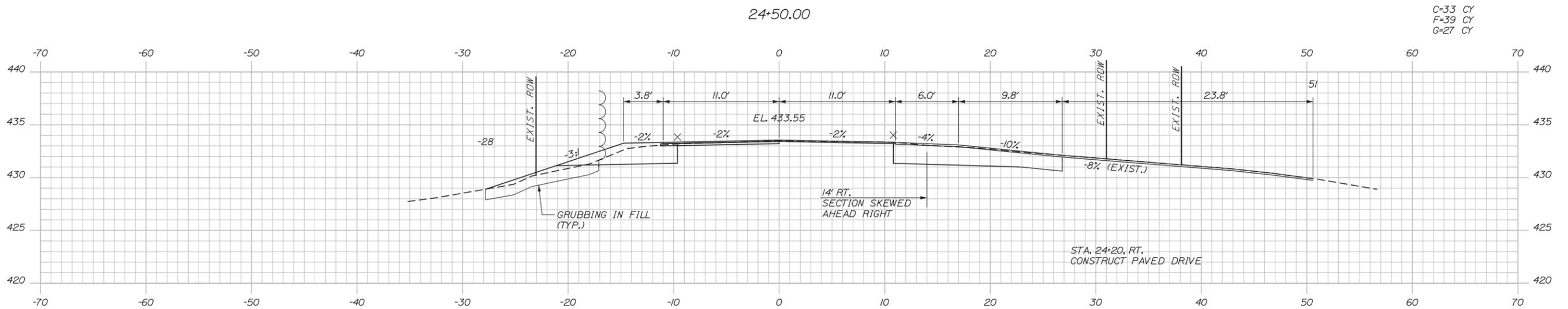
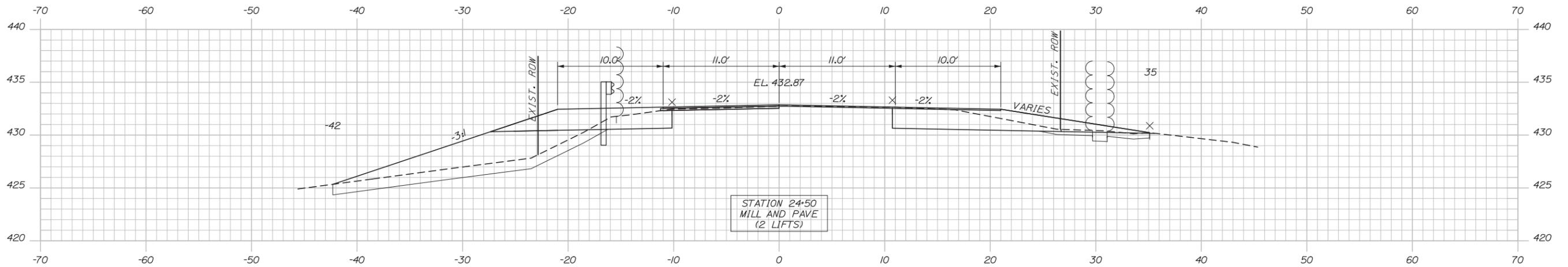
CONTRACT: 2014.06

SHEET NUMBER: XS-01

14 OF 53

Filename: xssect.dgn

Date: 12/17/2013



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No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

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MEMORIAL HIGHWAY**

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BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
CROSS SECTIONS
STA. 24+20 TO STA. 24+50

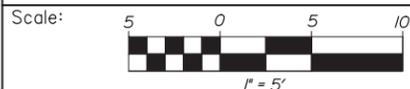
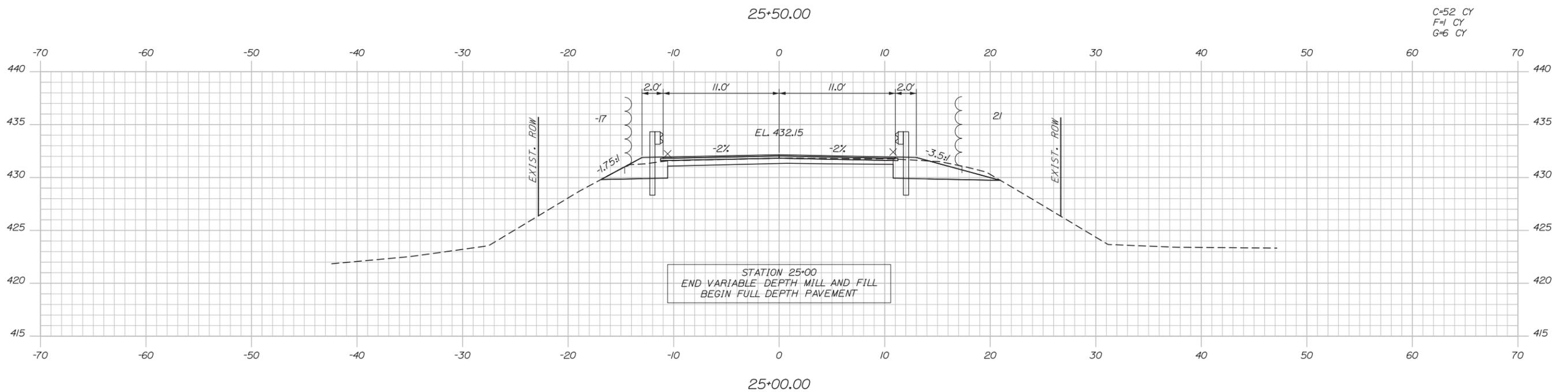
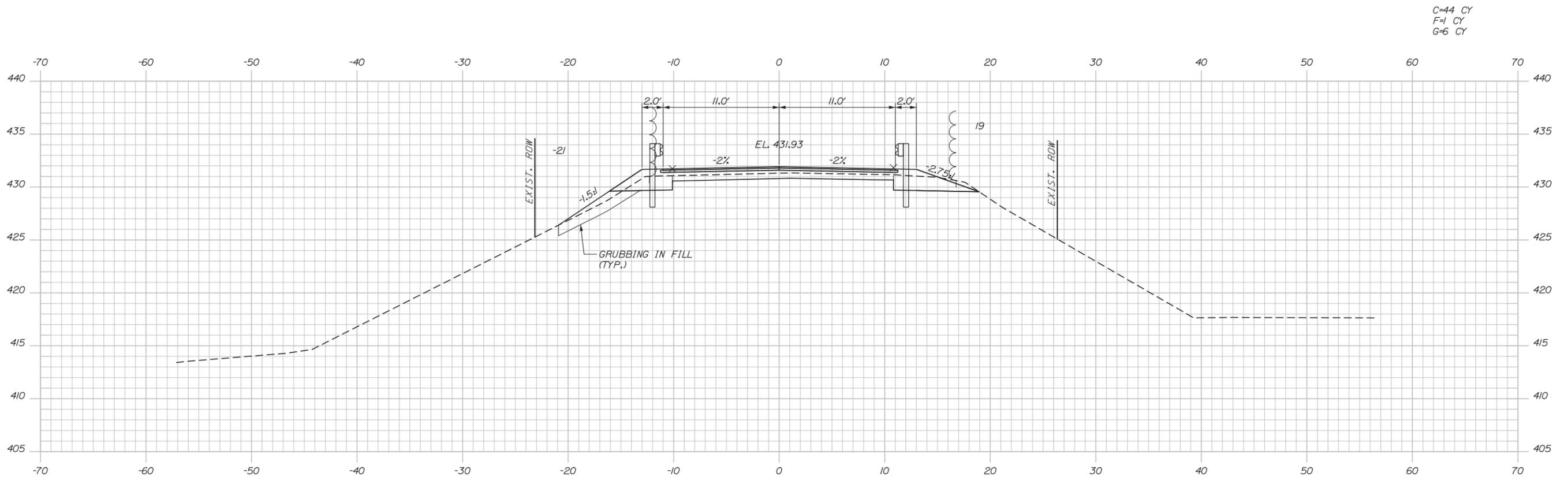
CONTRACT: 2014.06

SHEET NUMBER: XS-02

15 OF 53

Filename: xssect.dgn

Date: 12/17/2013



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**THE GOLD STAR
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BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

CROSS SECTIONS
STA. 25+00 TO STA. 25+50

SHEET NUMBER: XS-03

No.	Revision	By	Date

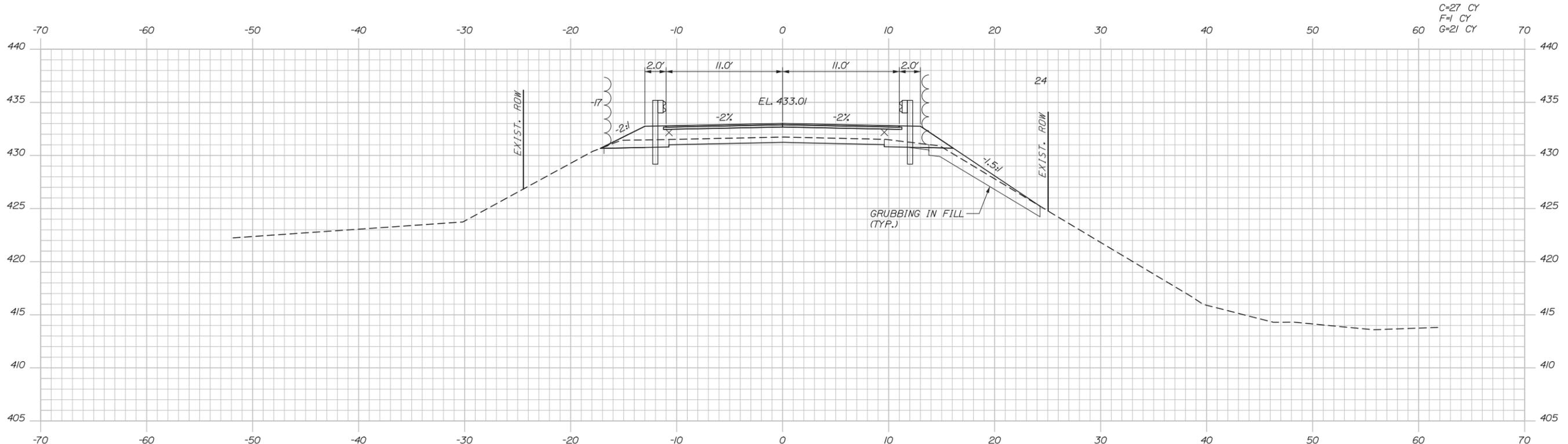
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
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MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

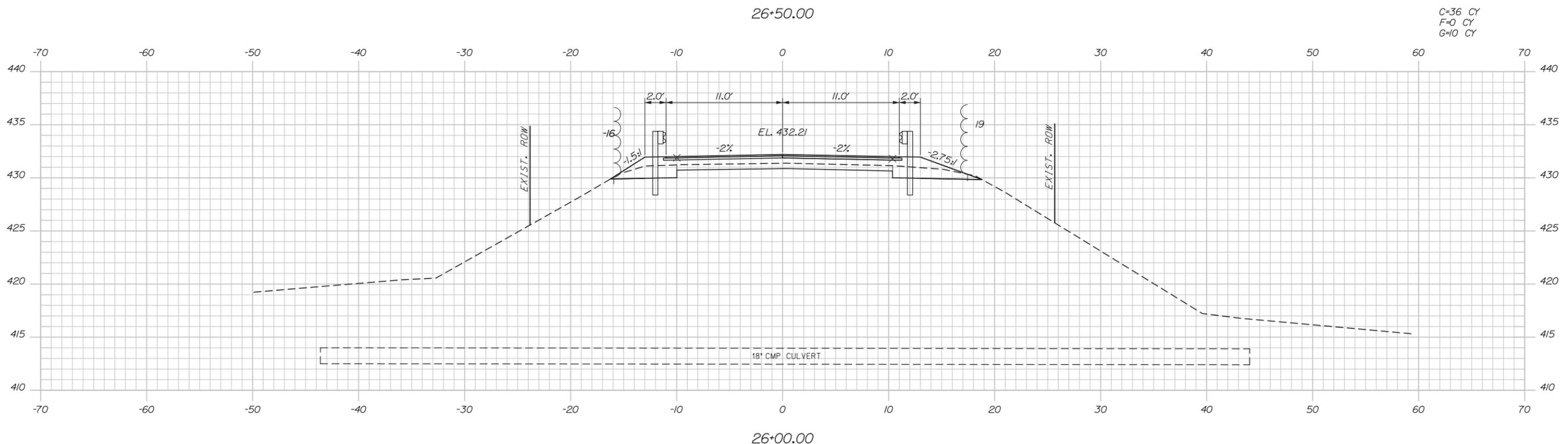
CONTRACT: 2014.06

16 OF 53

Date: 12/17/2013



26+50.00



26+00.00



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CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

No.	Revision	By	Date

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MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 CROSS SECTIONS
 STA. 26+00 TO STA. 26+50

CONTRACT: 2014.06

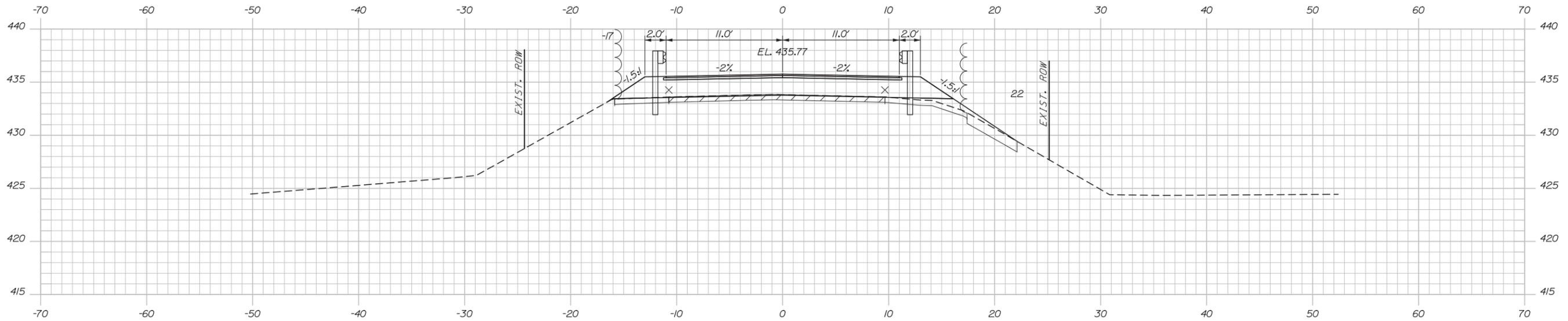
SHEET NUMBER: XS-04

17 OF 53

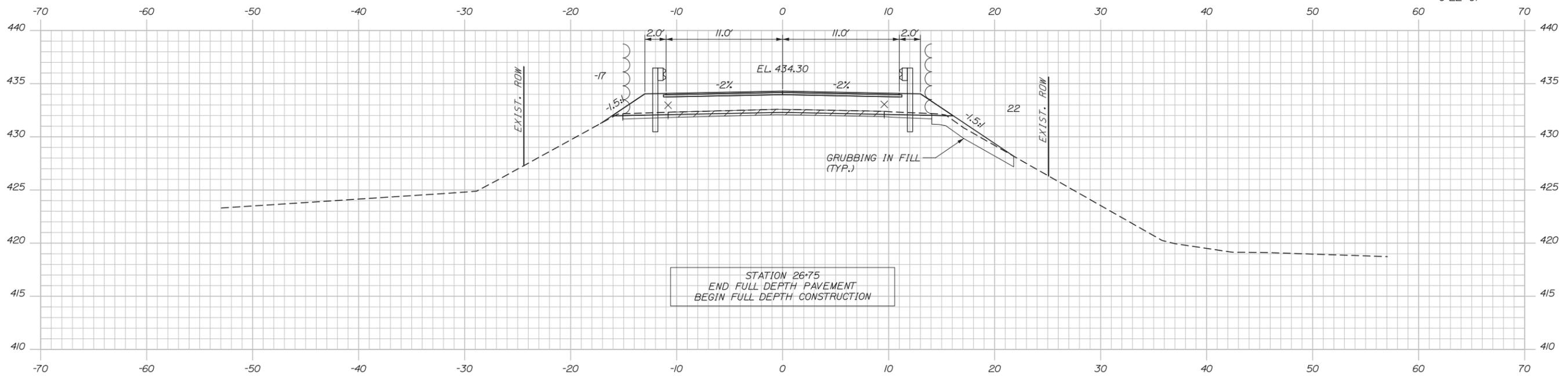
Filename: xssect.dgn

Date: 12/17/2013

C=19 CY
F=4 CY
G=28 CY



C=21 CY
F=2 CY
G=22 CY



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THE GOLD STAR
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BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

CROSS SECTIONS
STA. 27+00 TO STA. 27+50

SHEET NUMBER: XS-05

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

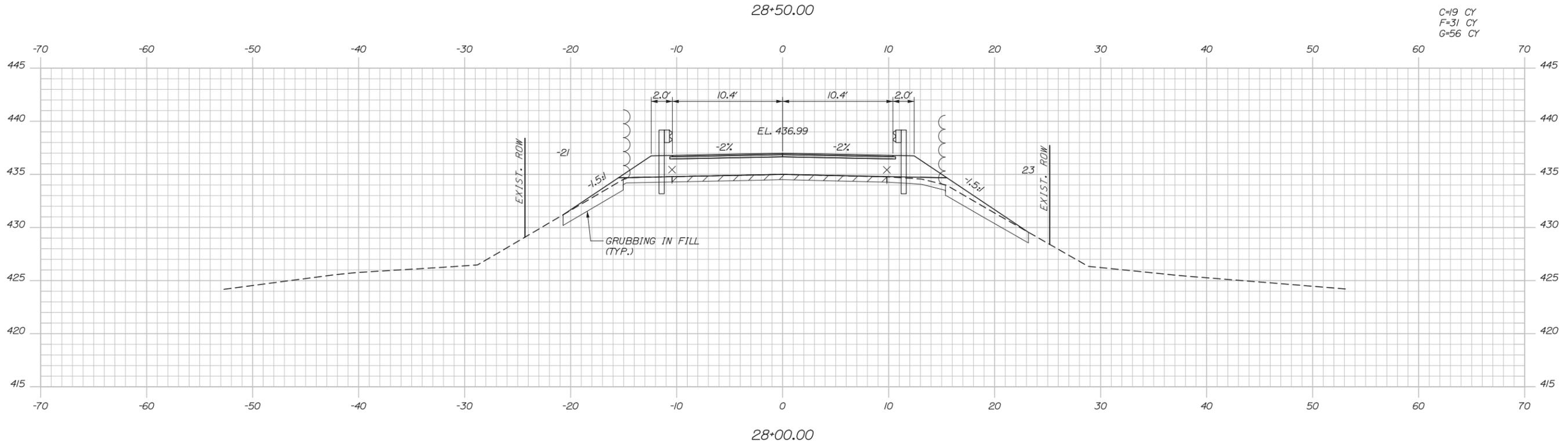
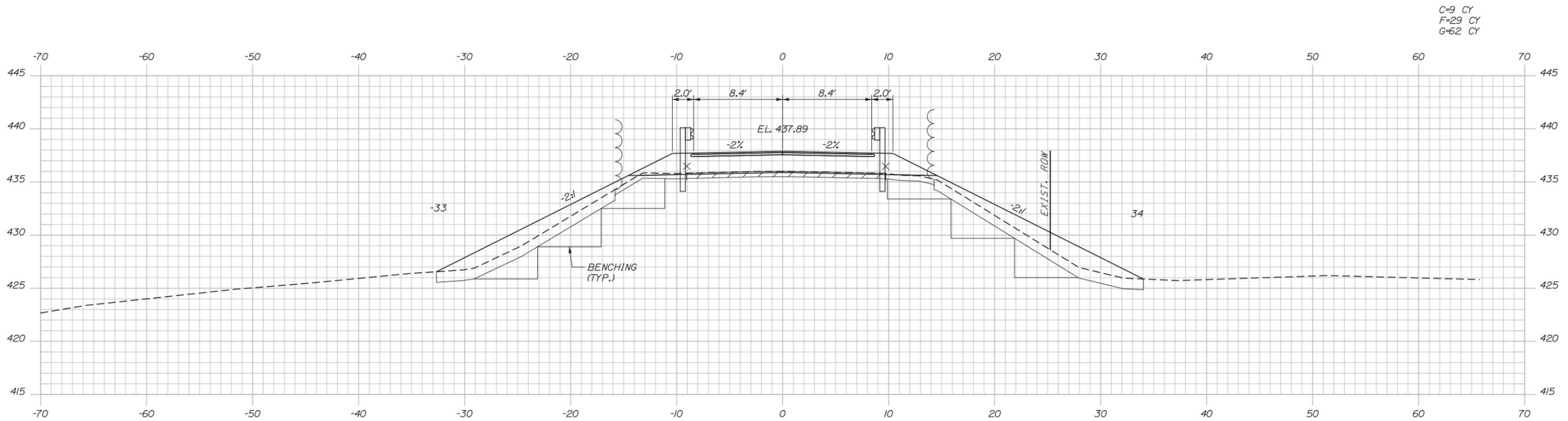
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

CONTRACT: 2014.06

18 OF 53

Filename: xsect.dgn

Date: 12/17/2013



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 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

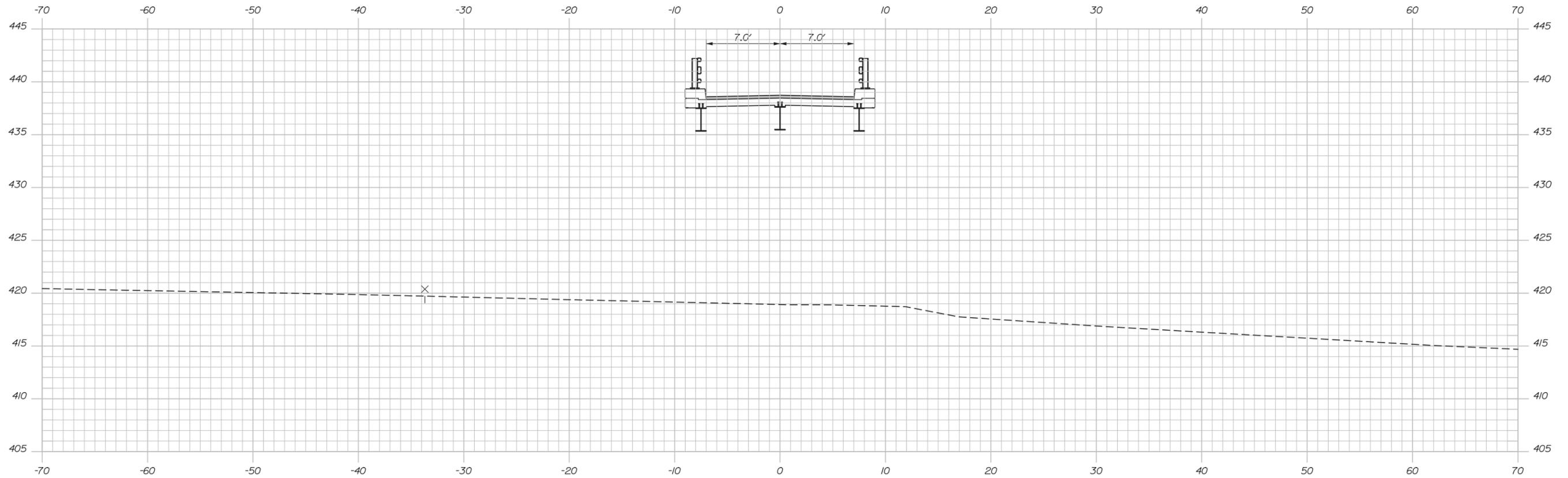
BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 CROSS SECTIONS
 STA. 28+00 TO STA. 28+50

SHEET NUMBER: XS-06
 19 OF 53

CONTRACT: 2014.06

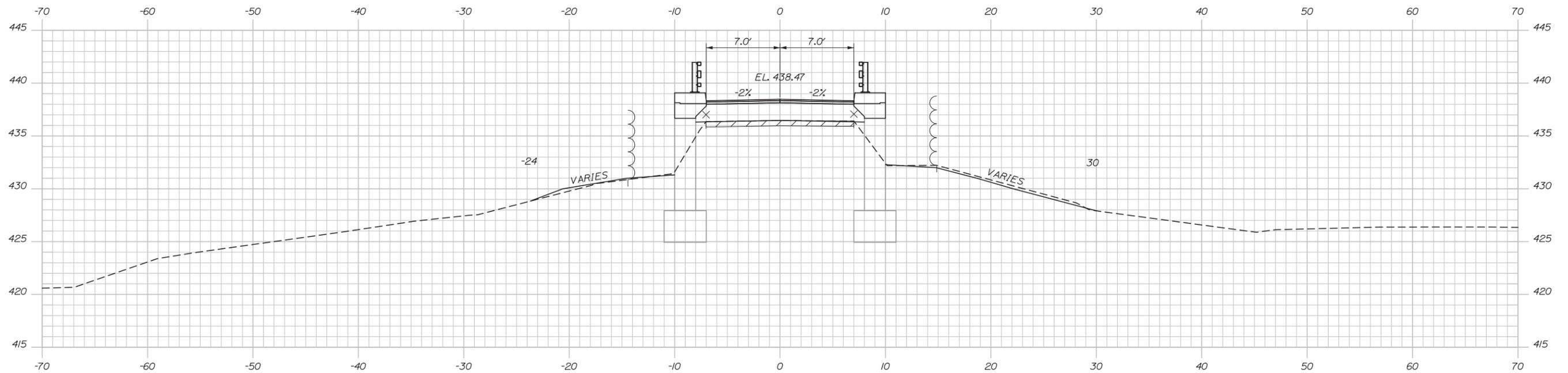
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Date: 12/17/2013

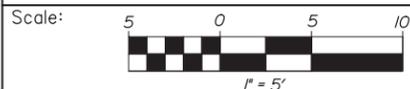


29+50.00

C=0 CY
F=0 CY
G=23 CY



29+00.00



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	Checked	By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

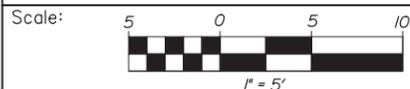
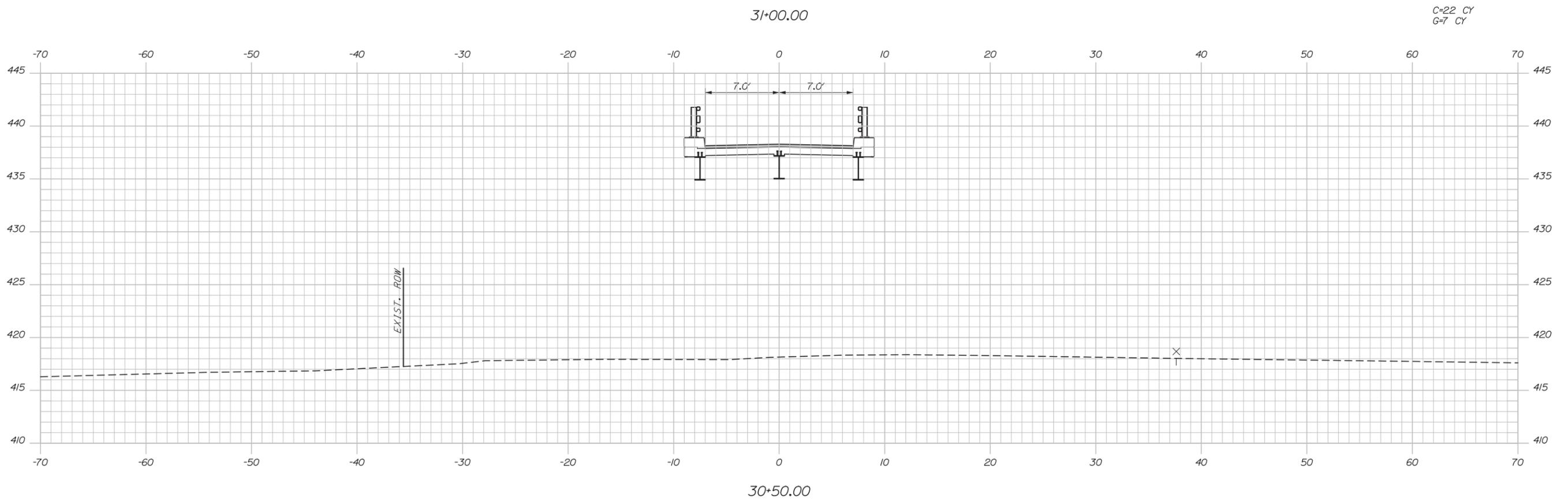
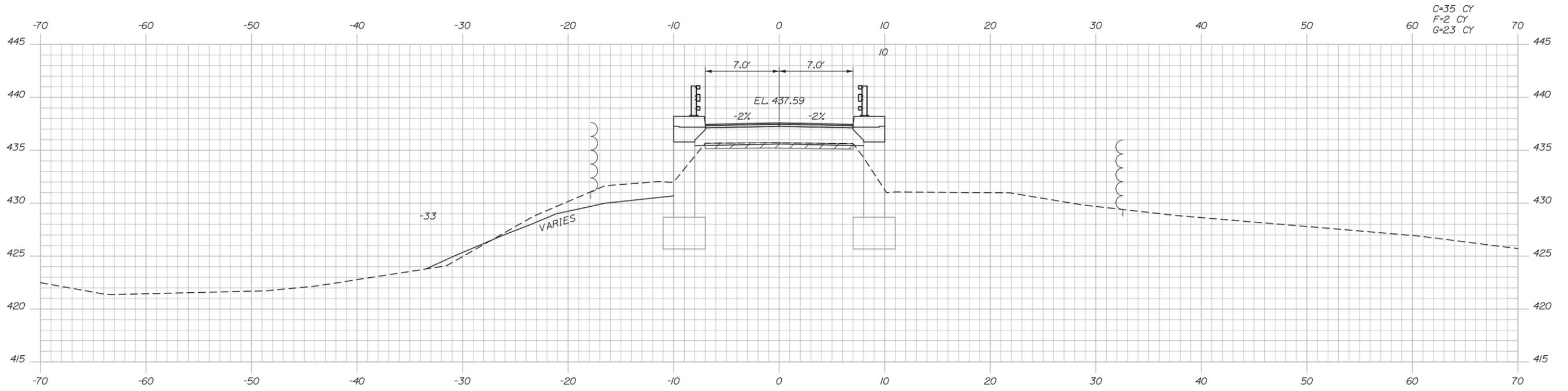
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
CROSS SECTIONS
STA. 29+00 TO STA. 29+50

CONTRACT: 2014.06

SHEET NUMBER: XS-07

20 OF 53

Date: 12/17/2013



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Westbrook, ME 04092
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THE GOLD STAR
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BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

CROSS SECTIONS
STA. 30+50 TO STA. 31+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	By	Date
Designed	LZD	12/13	Checked	CAH 12/13
Drawn	MPC	12/13	In Charge of	RAL 12/13

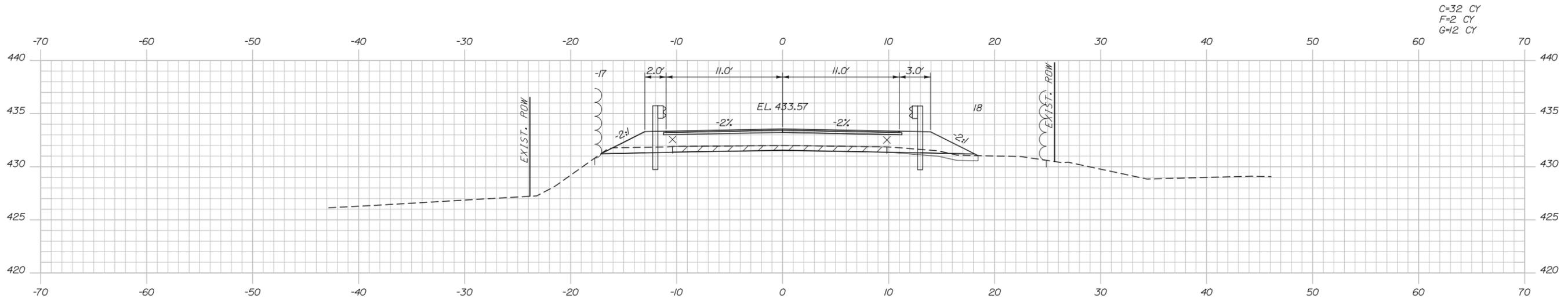
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

CONTRACT: 2014.06

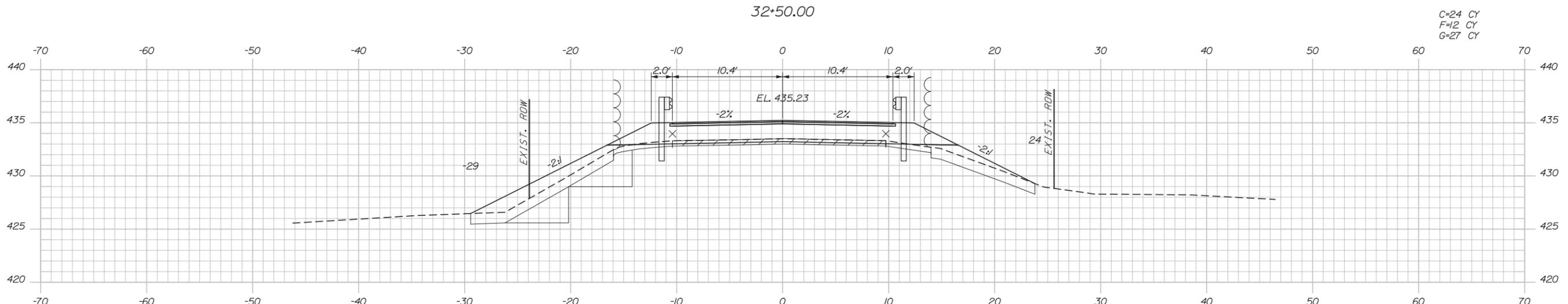
SHEET NUMBER: XS-08

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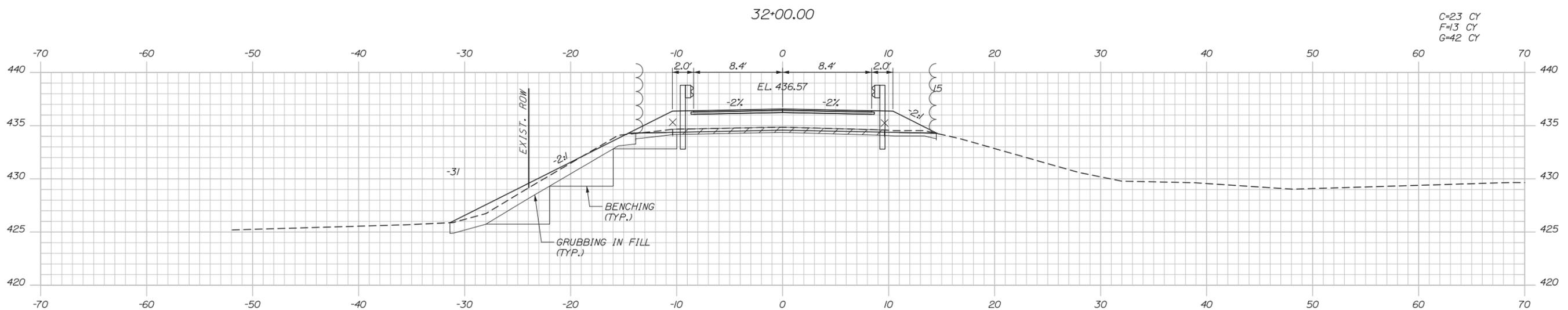
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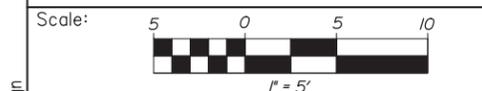
C=32 CY
F=2 CY
G=12 CY



C=24 CY
F=12 CY
G=27 CY



C=23 CY
F=13 CY
G=42 CY



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No.	Revision	By	Date

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Drawn	MPC	12/13	In Charge of	RAL	12/13

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TEL (207) 774-5155
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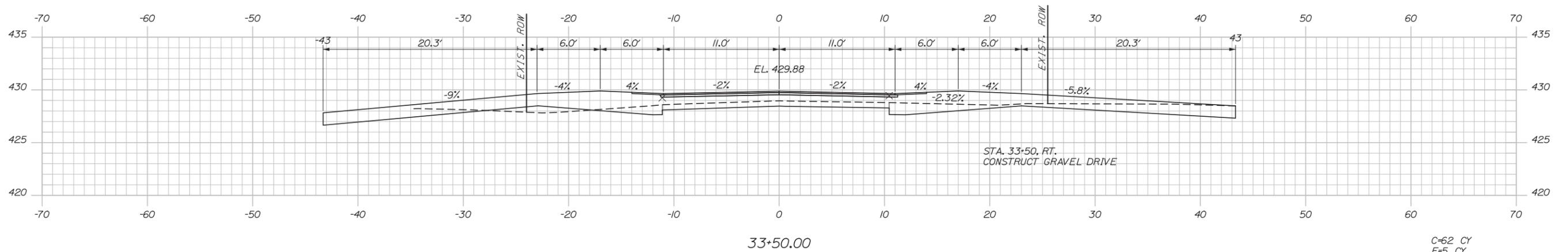
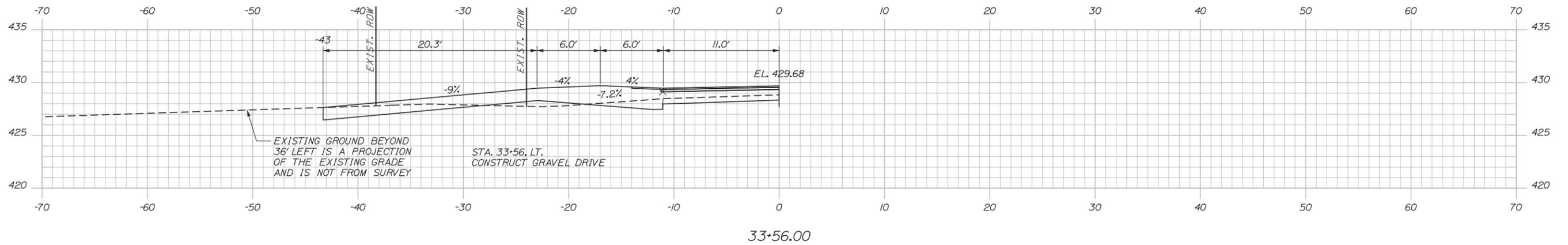
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
CROSS SECTIONS
STA. 31+50 TO STA. 32+50

SHEET NUMBER: XS-09
CONTRACT: 2014.06
22 OF 53

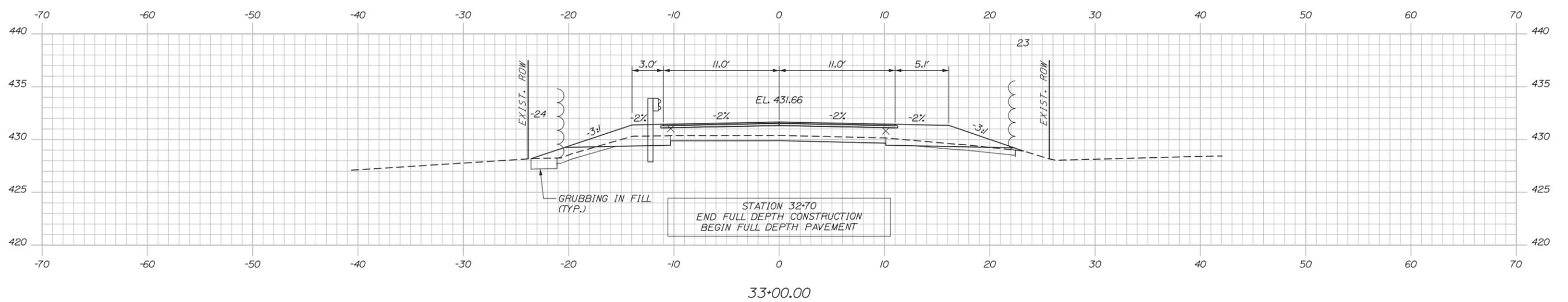
Filename: xssect.dgn

C=45 CY
F=3 CY

Date: 12/17/2013



C=62 CY
F=5 CY
G=10 CY



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No.	Revision	By	Date

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

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
CROSS SECTIONS
STA. 33+00 TO STA. 33+56

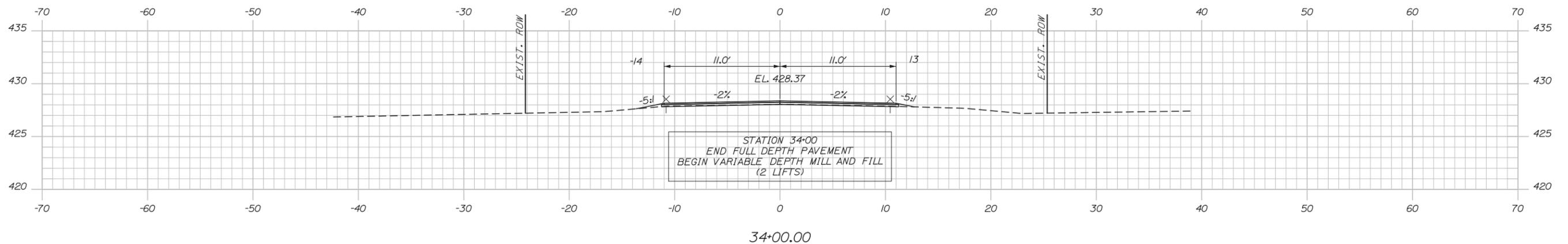
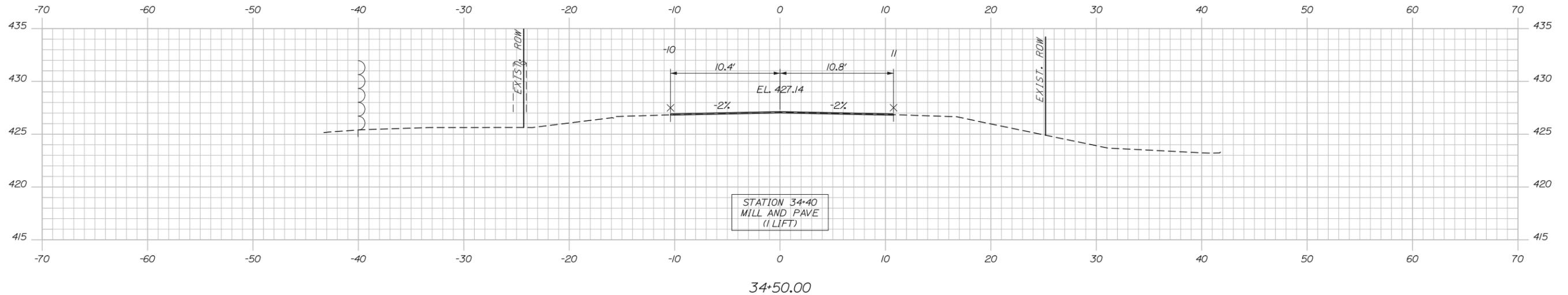
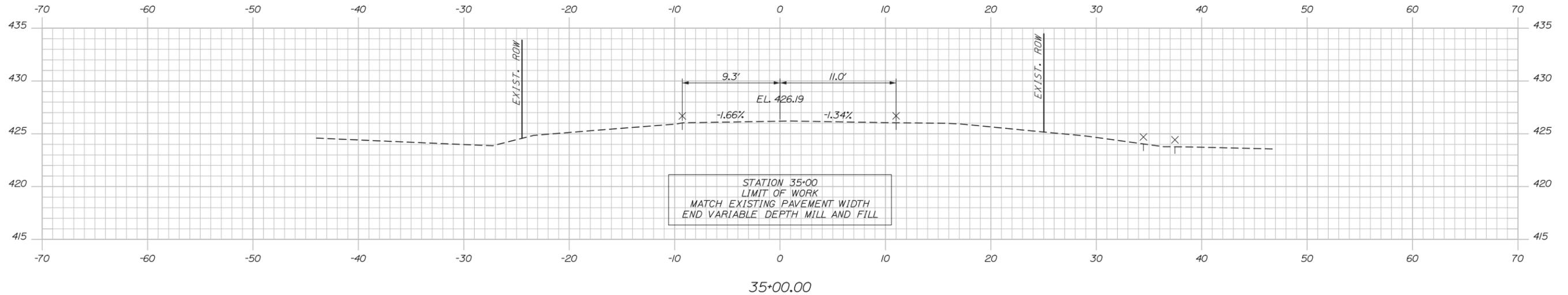
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

CONTRACT: 2014.06

SHEET NUMBER: XS-10
23 OF 53

Filename: xsect.dgn

Date: 12/17/2013



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS

CROSS SECTIONS
 STA. 34+00 TO STA. 35+00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	Checked	By	Date
Designed	LZD	12/13	Checked	CAH	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

CONTRACT: 2014.06

SHEET NUMBER: XS-11

24 OF 53

SPECIFICATIONS

DESIGN
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, WITH 2013 INTERIM REVISIONS

CONSTRUCTION
 STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF DECEMBER 2002.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, REVISION OF DECEMBER 2002, WITH ALL REVISIONS THERETO.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 3RD. EDITION WITH 2010 INTERIMS.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE
 DECK CONCRETE - CLASS AAA-DECK
 ALL OTHER CONCRETE SHALL BE CLASS AAA, U.O.N.

REINFORCING STEEL
 AASHTO M31, GRADE 60
 ALL REINFORCING SHALL BE 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
 WELDED GIRDERS: FLANGES, WEBS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS, BEARING STIFFENERS AND BEARING BOLSTERS SHALL BE AASHTO M270, GRADE 50W.
 ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM A325). BOLTS IN CONTACT WITH UNPAINTED WEATHERING STEEL SHALL BE TYPE 3. ALL OTHER BOLTS SHALL BE HOT DIPPED GALVANIZED TYPE 1.

PROTECTIVE COATING

GIRDER ENDS SHALL BE PAINTED TO A DISTANCE OF 10 FEET ALONG THE LENGTH OF GIRDER FROM THE CENTERLINE OF BEARING AT THE ABUTMENTS IN ACCORDANCE WITH SPECIAL PROVISION, SECTION 506, PROTECTIVE COATING - STEEL (ZINC-RICH SYSTEM). DIAPHRAGMS WITHIN THE PAINTED ZONE SHALL BE GALVANIZED. ALL BEARING BOLSTERS SHALL BE GALVANIZED.

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

STRUCTURAL STEEL
 AASHTO M270 (ASTM 709) GRADE 36, $F_y = 36,000$ P.S.I.
 AASHTO M270 (ASTM 709) GRADE 50W, $F_y = 50,000$ P.S.I.

PRESTRESSING STRANDS - $F_u = 270,000$ P.S.I.

PRECAST CONCRETE
 $f'c = 6,000$ P.S.I.
 $f'ci = 4,000$ P.S.I.

LIST OF ABBREVIATIONS

ABUT. - ABUTMENT
 ADDL. - ADDITIONAL
 ALT. - ALTERNATE
 APPROX. - APPROXIMATELY
 BOT. - BOTTOM
 BRG. - BEARING
 CL. - CLEAR
 CL. - CENTERLINE
 CONC. - CONCRETE
 CONSTR. - CONSTRUCTION
 C.Y. - CUBIC YARD
 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
 MEDOT - 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
 SF - SQUARE FEET
 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
 WW - WINGWALL

INDEX OF DRAWINGS		
PAGE NUMBER	TITLE	SHEET NUMBER
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26	BRIDGE GENERAL PLAN AND ELEVATION	S-02
27	ABUTMENT DEMOLITION AND REPAIRS	S-03
28	ABUTMENT 2 DEMOLITION AND REPAIRS	S-04
29	ABUTMENT REPAIR DETAILS	S-05
30	PIER 1 DEMOLITION AND REPAIRS	S-06
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32	PIER 3 DEMOLITION AND REPAIRS	S-08
33	ABUTMENT PLAN AND ELEVATION	S-09
34	ABUTMENT MODIFICATION DETAILS	S-10
35	WINGWALL MODIFICATION DETAILS I	S-11
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37	BEARING DETAILS I	S-13
38	BEARING DETAILS II	S-14
39	BEARING DETAILS III	S-15
40	FRAMING PLAN	S-16
41	STRUCTURAL STEEL DETAILS I	S-17
42	STRUCTURAL STEEL DETAILS II	S-18
43	STRUCTURAL STEEL DETAILS III	S-19
44	TYPICAL SECTION	S-20
45	SUPERSTRUCTURE PLAN	S-21
46	SUPERSTRUCTURE DETAILS	S-22
47	BRIDGE RAIL TRANSITION DETAILS	S-23
48	SNOW FENCE DETAILS	S-24
49	EXPANSION JOINT DETAILS	S-25
50	REINFORCING STEEL SCHEDULE	S-26

ORIGINAL CONSTRUCTION PLANS	
51 OF 53	AS-BUILT GENERAL PLAN AND ELEVATION
52 OF 53	AS-BUILT SUBSTRUCTURE
53 OF 53	AS-BUILT SUPERSTRUCTURE

ITEMNO.	ITEM DESCRIPTION	UNIT	BRIDGE QUANTITY
202.101	Removing Existing Superstructure (410 SY)	LS	1.0
202.12	Removing Existing Structural Concrete	CY	16.0
202.191	Removing Existing Drain Troughs	LS	1.0
206.081	Structural Earth Excavation - Major Structures	CY	24.0
304.10	Aggregate Subbase Course - Gravel	CY	24.0
403.210	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	Ton	52.0
502.219	Structural Concrete, Abutments and Retaining Walls (23 CY)	LS	1.0
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (95 CY)	LS	1.0
502.49	Structural Concrete Curbs and Sidewalks (30 CY)	LS	1.0
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	LB	40,400.0
503.15	Epoxy-Coated Reinforcing Steel, Placing	LB	40,400.0
504.702	Structural steel, fabricated and delivered welded (73,300 LB)	LS	1.0
504.71	Structural steel erection (73,300 LB)	LS	1.0
505.09	Stud Welded Shear Connectors (1764 EA)	LS	1.0
506.9102	Zinc Rich Coating System (Shop Applied)	LS	1.0
506.9103	Zinc Rich Coating System (Field Touch-Up)	LS	1.0
507.0821	Steel Bridge Railing, 3 Bar (448 LF)	LS	1.0
508.141	High Performance Waterproofing Membrane (322 SY)	LS	1.0
514.06	Curing Box for Concrete Cylinders	EA	1.0
515.201	Pigmented Protective Coating for Concrete Surfaces	SY	210.0
515.202	Clear Protective Coating for Concrete Surfaces	SY	280.0
518.10	Abutment Repairs	SF	76.0
518.20	Pier Repairs	SF	118.0
518.30	Abutment Seat Refacing	CY	6.0
520.23	Asphaltic Plug Joint	LF	37.0
523.521	Bearing Removal and Installation	EA	15.0
523.5401	Laminated Elastomeric Bearings, Fixed	EA	3.0
523.5402	Laminated Elastomeric Bearings, Expansion	EA	6.0
523.5404	PTFE Elastomeric Bearings, Expansion	EA	6.0
524.40	Protective Shielding - Steel Girders	SY	588.0
607.431	Snow Fence	LF	208.0
609.11	Vertical Curb Type 1	LF	80.0
619.1401	Erosion Control Mix	CY	15.0

NOTES

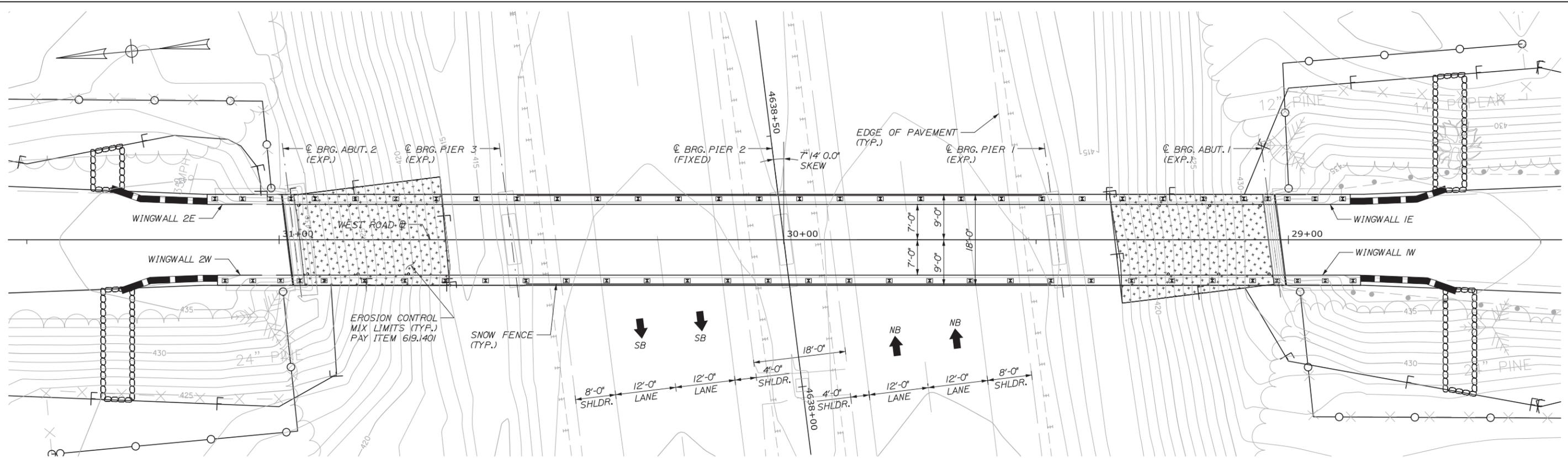
- THE PROPOSED ELEVATIONS ARE BASED ON PROJECT LOCAL DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM. PROJECT DATUM SHALL BE ESTABLISHED BASED ON BENCHMARK LOCATED AT STA. 34+27, 26' LT. WITH AN ELEVATION OF 428.11.
- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, DECEMBER 2002 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. A PORTION OF THESE PLANS ARE INCLUDED IN THIS CONTRACT FOR THE CONTRACTOR'S CONVENIENCE. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROFILE THE TOPS OF THE GIRDERS BEFORE THE FORMWORK IS STARTED AND SHALL SUBMIT TO THE RESIDENT THE FINAL BLOCKING ELEVATIONS FOR REVIEW. FIVE (5) WORKING DAYS SHALL BE ALLOWED FOR THE BLOCKING POINT TURN AROUND TIME.
- ALL BRIDGE CURB AND WINGWALL CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.
- WHERE DRILLING AND ANCHORING IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DEPARTMENT OF TRANSPORTATION QUALIFIED LIST OF CONCRETE ADHESIVE ANCHOR SYSTEMS. 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. WHERE MINIMUM EMBEDMENT DEPTHS HAVE NOT BEEN SPECIFIED BAR LENGTHS HAVE BEEN DEVELOPED BASED ON AN ASSUMED EMBEDMENT DEPTH OF 9" FOR #5 BARS AND 1'-0" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE REQUIRED BAR LENGTHS AS REQUIRED.
- ALL AREAS OF STRUCTURAL EXCAVATION SHALL BE BACKFILLED WITH AGGREGATE SUBBASE COURSE-GRAVEL. BACKFILL PLACED WITHIN THE STRUCTURAL EXCAVATION PAY LIMITS WILL BE MEASURED FOR PAYMENT UNDER PAY ITEM 304.10, AGGREGATE SUBBASE COURSE-GRAVEL.

Date: 12/18/2013

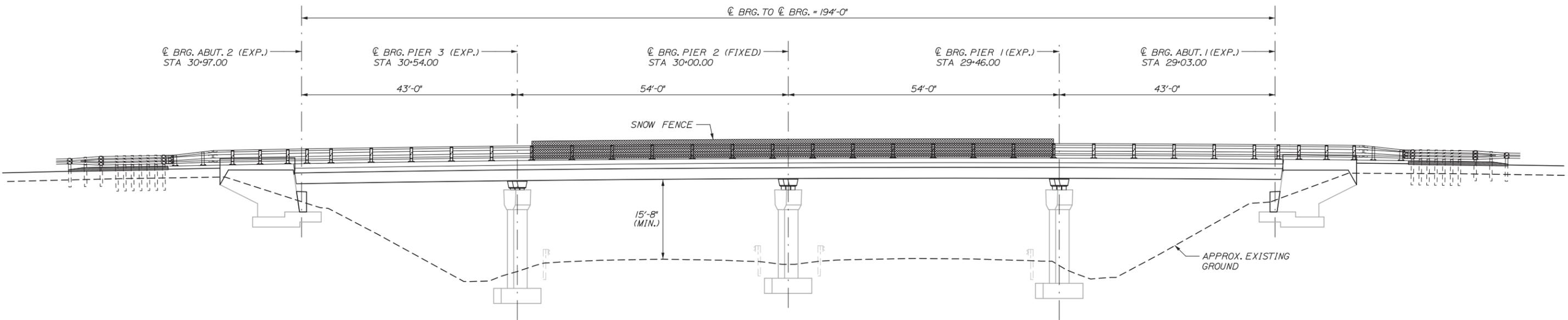
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Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE SUPERSTRUCTURE REPLACEMENT WEST ROAD UNDERPASS GENERAL NOTES, INDEX AND QUANTITIES	
No.	Revision	By	Date										
				By	Date	By	Date	MTA PROJECT MANAGER: Rapolh C. Norwood, IV, P.E., P.T.O.E.		CONTRACT: 2014.06		SHEET NUMBER: S-01	
				Designed	KEB	12/13	Checked	JDW	12/13			25 OF 53	
				Drawn	MPC	12/13	In Charge of	RAL	12/13				

Date: 12/17/2013



GENERAL PLAN
1" = 10'-0"



ELEVATION
1" = 10'-0"

Scale:

No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	Checked	By	Date
Designed	KEB	12/13	Checked	JDW	12/13
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340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
BRIDGE GENERAL PLAN
AND ELEVATION

SHEET NUMBER: S-02
CONTRACT: 2014.06
26 OF 53

GENERAL NOTES:

1. ABUTMENT CONCRETE REPAIRS, OUTSIDE OF THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEM 518.10, ABUTMENT REPAIRS.
2. BACKWALL REPAIRS, TO THE BACK SIDE UNDER THE APPROACH PAVEMENT (NOT SHOWN), IF REQUIRED, WILL BE PAID UNDER ITEM 518.10, ABUTMENT REPAIRS. AN ESTIMATED QUANTITY IS CARRIED UNDER THIS PAY ITEM.
3. FOR REPLACEMENT DETAILS FOR THE BEARING PEDESTALS, SEE SHEET S-05. CONCRETE SHALL BE CONSIDERED INCIDENTAL TO ITEM 518.30, ABUTMENT SEAT REFACING.
4. CONCRETE DEMOLITION, WHICH GENERALLY INCLUDES EXISTING WINGWALLS, APPROACH CURBS AND ABUTMENT BACKWALLS, WILL BE MEASURED FOR PAYMENT UNDER PAY ITEM 202.12, REMOVING EXISTING STRUCTURAL CONCRETE. THIS WORK SHALL INCLUDE SAWCUTTING AND REMOVING EXISTING CONCRETE AND REINFORCING STEEL TO THE LIMITS SHOWN ON THE PLANS.
5. EXCAVATION REQUIRED TO COMPLETE ABUTMENT REPAIRS AND MODIFICATIONS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 206.081, STRUCTURAL EARTH EXCAVATION-MAJOR STRUCTURES.
6. THE QUANTITIES OF ABUTMENT REPAIR NOTED ON THESE DRAWINGS HAVE BEEN DEVELOPED BASED PRIMARILY ON VISUAL AND TACTILE INSPECTION OF THE ABUTMENTS FROM THE GROUND LEVEL. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
7. WHERE ABUTMENT SEAT REFACING IS SPECIFIED, THE TOP, FRONT, AND END OF THE EXISTING ABUTMENT SEATS SHALL BE REMOVED AND REPLACED TO THE LIMITS SHOWN ON THE PLANS. THE WORK WILL BE MEASURED FOR PAYMENT UNDER PAY ITEM 518.30, ABUTMENT SEAT REFACING. THE FABRICATION AND PLACEMENT OF REINFORCING STEEL WILL NOT BE MEASURED FOR PAYMENT SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 518.30.
8. FOR ADDITIONAL REPAIR DETAILS, SEE SHEET S-05.

REMOVAL PROCEDURES:

1. PRIOR TO THE START OF THE CONCRETE REMOVALS, THE CONTRACTOR SHALL REMOVE TECTYL COATING, AND THEN THE RESIDENT AND THE CONTRACTOR SHALL SOUND THE CONCRETE AND AGREE ON THE REMOVAL LIMITS. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE REMOVAL 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. WORK SHALL BE INCIDENTAL TO THE SPECIFIED REPAIR ITEM IN SPECIAL PROVISION 518.
2. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL
3. CHIP CONCRETE TO DEPTH SHOWN.

ABUTMENT SEAT REFACING PROCEDURE:

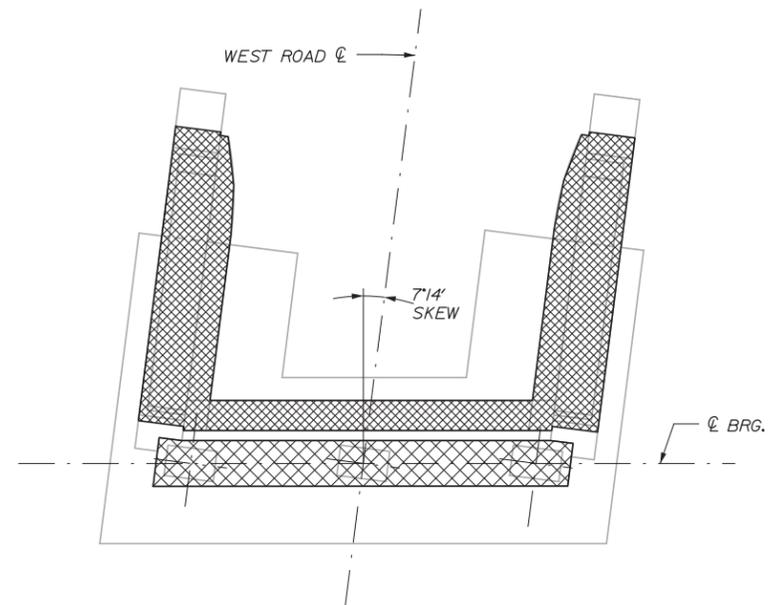
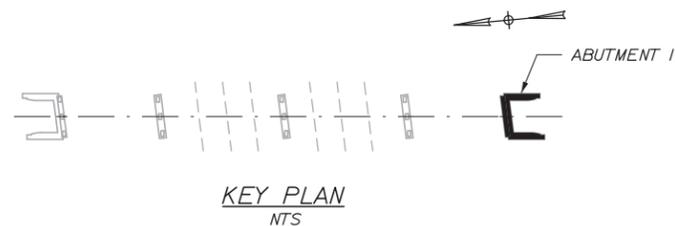
1. REMOVE ABUTMENT SEAT CONCRETE AND REINFORCING STEEL WITHIN THE LIMITS SHOWN.
2. INSTALL NEW REINFORCING STEEL DRILL AND GROUT BARS INTO EXISTING CONCRETE AS REQUIRED.
3. INSTALL FORMWORK, APPLY EPOXY BONDING AGENT, AND FILL FORMS WITH CLASS AAA CONCRETE. BEARING PADS SHALL BE CAST MONOLITHICALLY WITH THE ABUTMENT SEAT CONCRETE.
4. PERFORM GENERAL FINISHING.

CONCRETE SURFACE PATCH/REPAIR PROCEDURE:

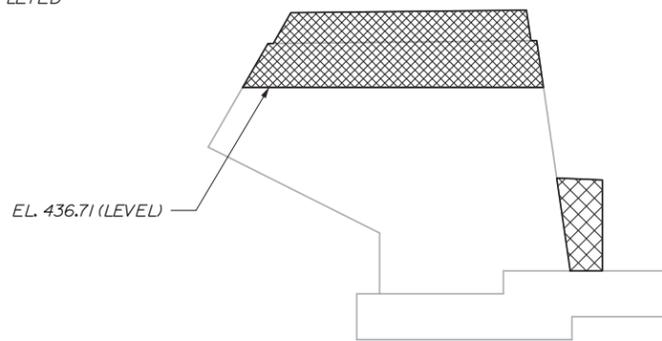
1. PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA MODIFIED CONCRETE OR OTHER APPROVED MATERIALS AS SPECIFIED IN SPECIAL PROVISION 518.
2. PERFORM GENERAL FINISHING (SEE BELOW).

GENERAL FINISHING:

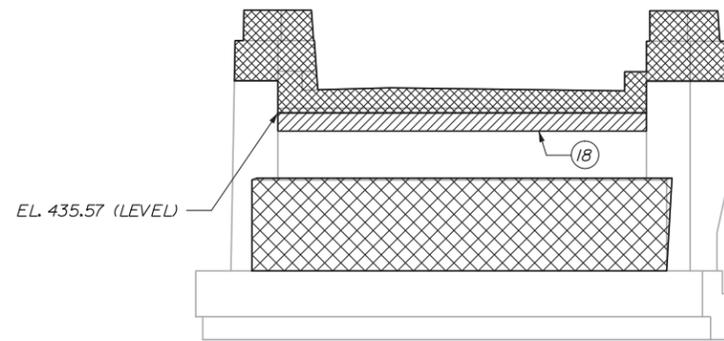
1. CONTRACTOR SHALL ENSURE ALL TECTYL COATING HAS BEEN REMOVED PRIOR TO APPLYING PIGMENTED PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED REPAIR ITEM IN SPECIAL PROVISION 518.
2. ALL EXPOSED SURFACES SHALL BE COATED WITH A PIGMENTED PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETED AND PATCH MATERIALS HAVE CURED.



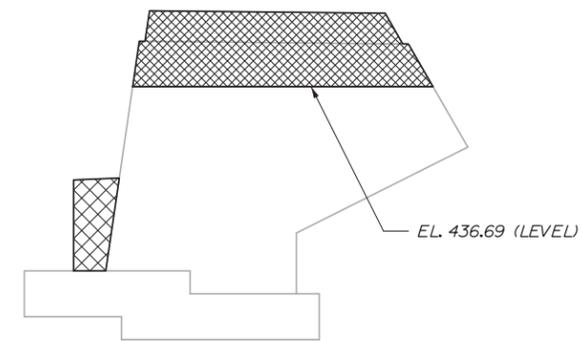
PLAN - ABUTMENT 1
1/4" = 1'-0"



WINGWALL IE
1/4" = 1'-0"



ELEVATION - ABUTMENT 1
1/4" = 1'-0"



WINGWALL IW
1/4" = 1'-0"

REPAIR QUANTITIES

ABUTMENT SEAT REFACING	3.5 C.Y.
ABUTMENT SURFACE PATCH REPAIR	38 S.F.*
* INCLUDES 20 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.	

DEMOLITION QUANTITIES

REMOVING EXISTING STRUCTURAL CONCRETE	8.0 C.Y.
---------------------------------------	----------

LEGEND

- LIMIT OF CONCRETE DEMOLITION
- LIMIT OF SURFACE PATCH REPAIR (FOR ESTIMATING PURPOSES ONLY)
- LIMIT OF ABUTMENT SEAT REFACING
- SQUARE FOOT AREA OF REPAIR

Date: 12/17/2013

Filename: 027_SubStruct03.dgn

Scale:		Designed by:											
<table border="1"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	Revision	By	Date								
		No.	Revision	By	Date								
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.		By		Date									
Designed	KEB	12/13	Checked	JDW	12/13								
Drawn	MPC	12/13	In Charge of	RAL	12/13								

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

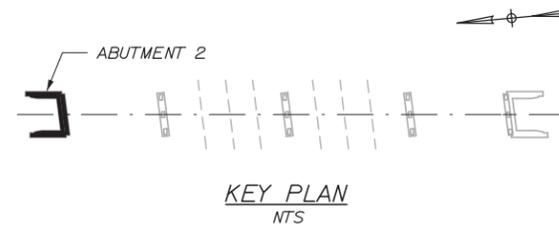
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

ABUTMENT 1 DEMOLITION AND REPAIRS

SHEET NUMBER: S-03
CONTRACT: 2014.06
27 OF 53

NOTES:
1. SEE SHEET S-03 FOR REPAIR NOTES.



REPAIR QUANTITIES

ABUTMENT SEAT REFACING	3.5 C.Y.
ABUTMENT SURFACE PATCH REPAIR	38 S.F.*

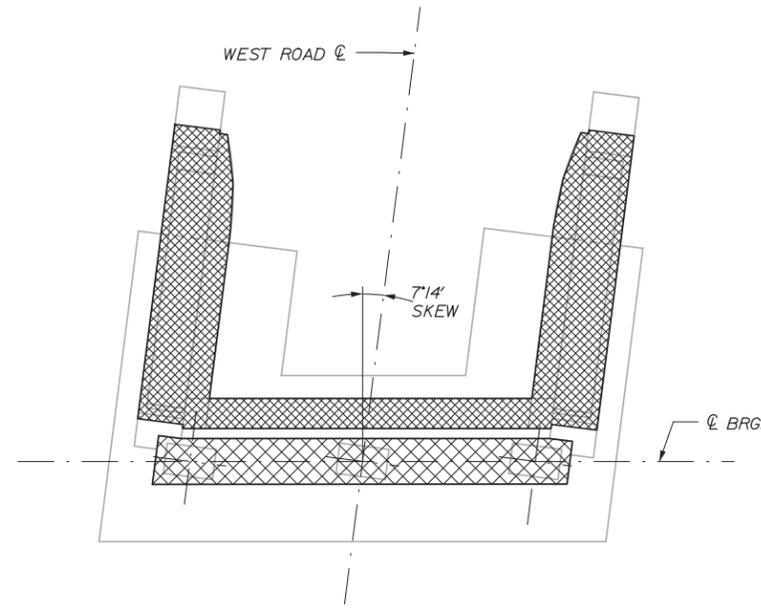
* INCLUDES 20 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

DEMOLITION QUANTITIES

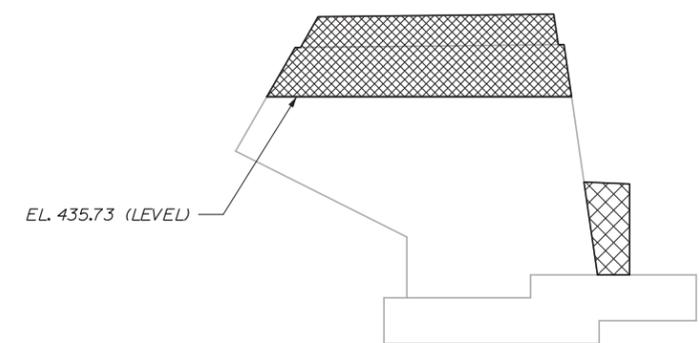
REMOVING EXISTING STRUCTURAL CONCRETE	8.0 C.Y.
---------------------------------------	----------

LEGEND

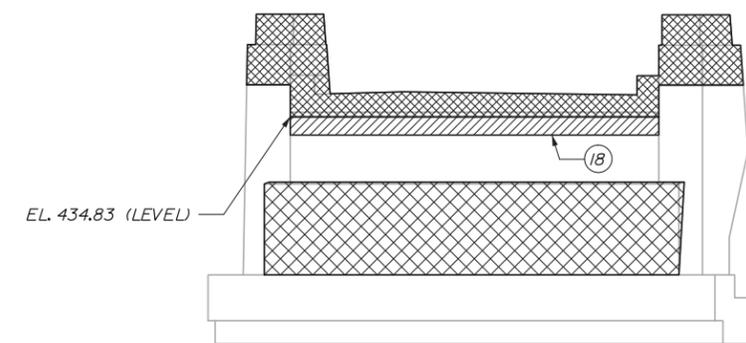
	LIMIT OF CONCRETE DEMOLITION
	LIMIT OF SURFACE PATCH REPAIR (FOR ESTIMATING PURPOSES ONLY)
	LIMIT OF ABUTMENT SEAT REFACING
	SQUARE FOOT AREA OF REPAIR



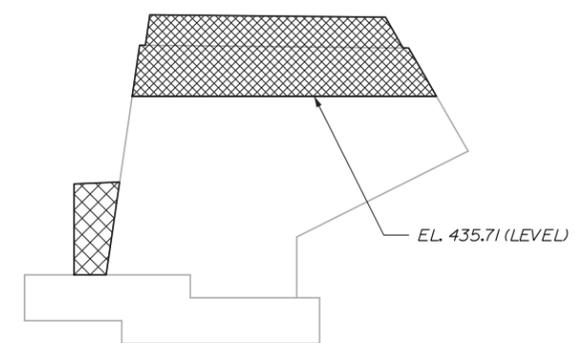
PLAN - ABUTMENT 2
1/4" = 1'-0"



WINGWALL 2W
1/4" = 1'-0"



ELEVATION - ABUTMENT 2
1/4" = 1'-0"



WINGWALL 2E
1/4" = 1'-0"

Date: 12/17/2013

Filename: 028_SubStruct04.dgn

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	Checked	By	Date
Designed	KEB	12/13	Checked	JDW	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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MAINE TURNPIKE

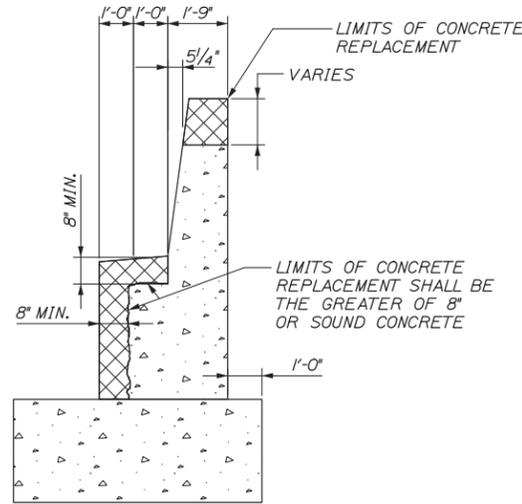
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

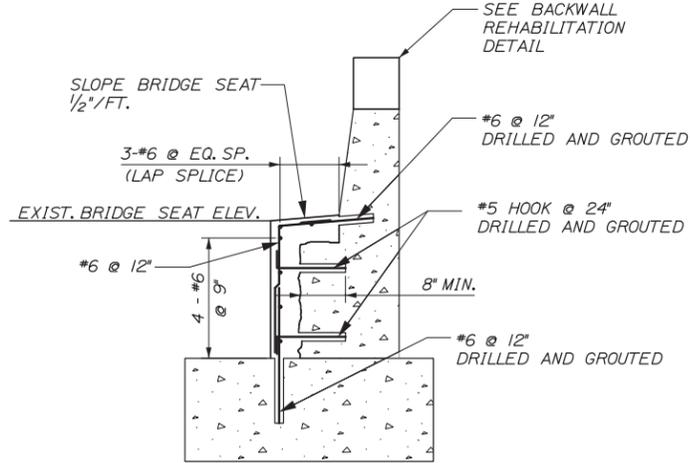
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
ABUTMENT 2 DEMOLITION AND REPAIRS

SHEET NUMBER: S-04
CONTRACT: 2014.06
28 OF 53

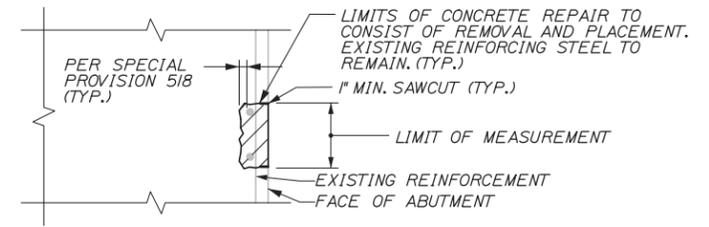
Date: 12/17/2013



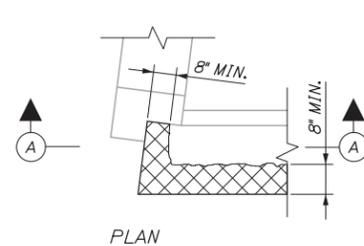
DEMOLITION SECTION



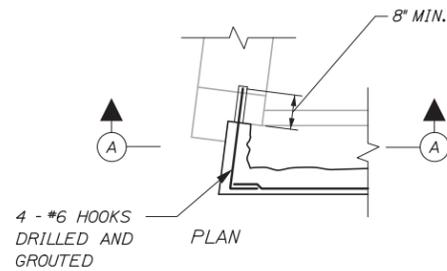
REHABILITATION SECTION



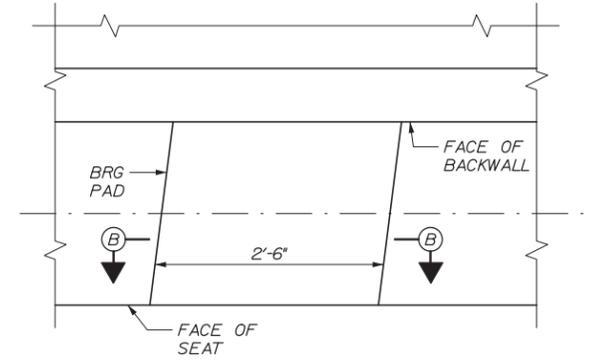
CONCRETE SURFACE PATCH/REPAIR DETAIL
1" = 1'-0"



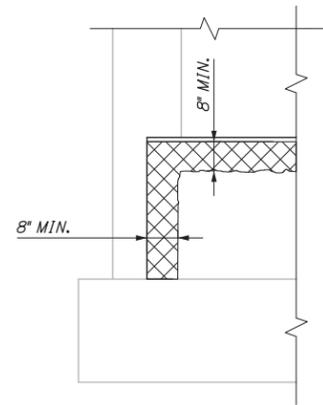
PLAN



PLAN

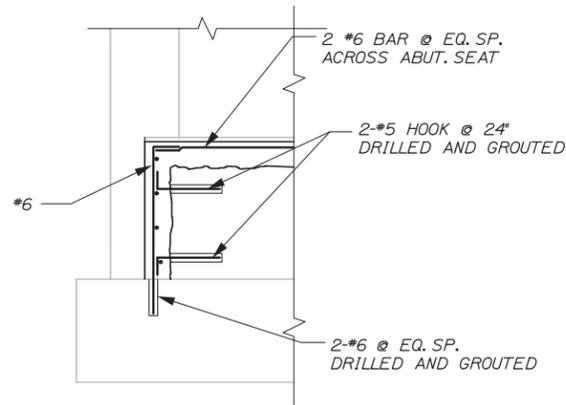


BEARING PAD DETAIL
1" = 1'-0"



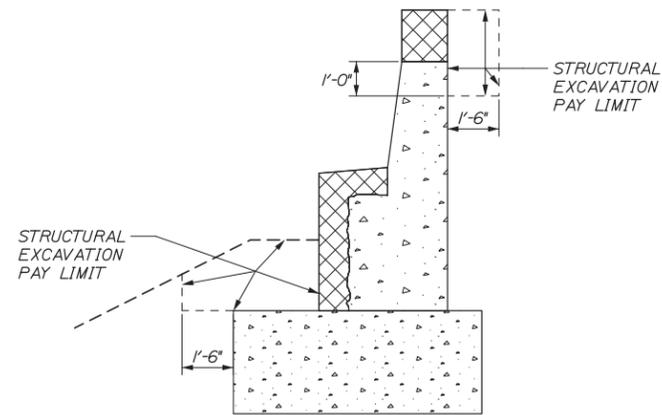
SECTION A-A

END OF SEAT DEMOLITION

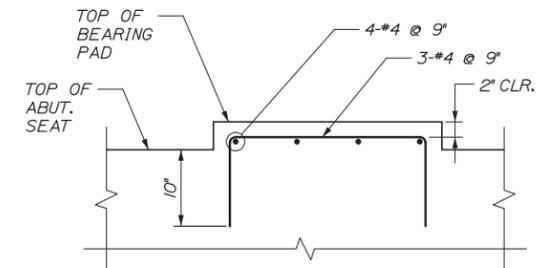


SECTION A-A

END OF SEAT REHABILITATION



ABUTMENT EXCAVATION AND BACKFILL SECTION
3/8" = 1'-0"



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

NOTE: REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 4".

NOTE:
REINFORCING STEEL FOR ABUTMENT REFACING SHALL BE INCIDENTAL TO PAY ITEM 518.30

ABUTMENT REFACING DETAILS
3/8" = 1'-0"

Filename: 029_SubStruct05.dgn

No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	KEB	12/13	Checked JDW 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

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Westbrook, ME 04092
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FAX (207) 228-0909

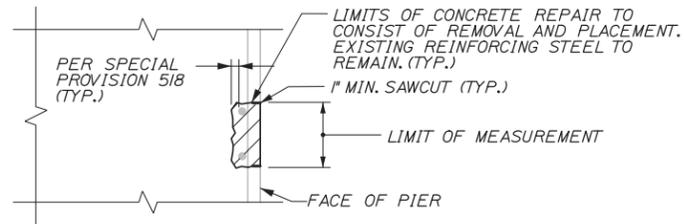
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

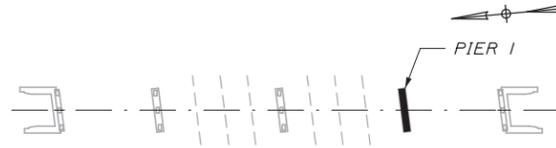
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
ABUTMENT REPAIR DETAILS

SHEET NUMBER: S-05
CONTRACT: 2014.06
29 OF 53

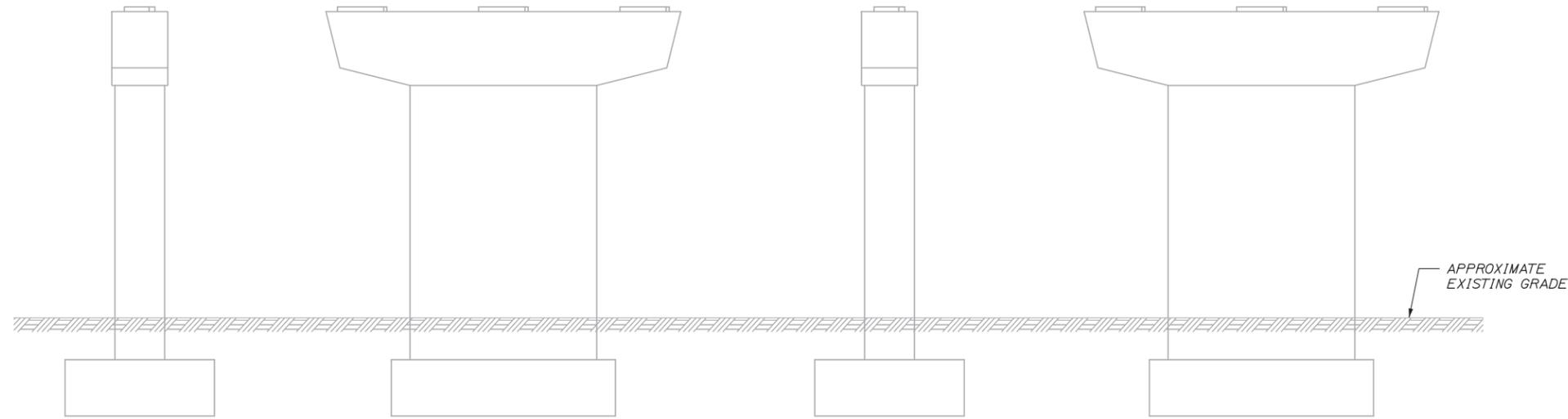
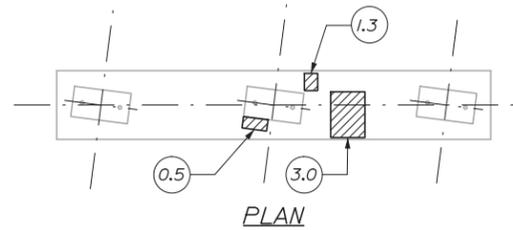
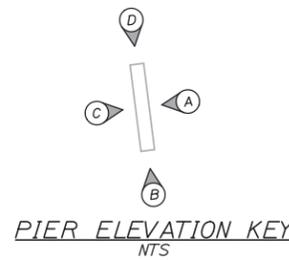
Date: 12/17/2013



CONCRETE SURFACE PATCH/REPAIR DETAIL
1" = 1'-0"



KEY PLAN
NTS



ELEVATION B

ELEVATION A

ELEVATION D

ELEVATION C

REPAIR QUANTITIES

PIER SURFACE PATCH REPAIR 25 S.F. *

* INCLUDES 20 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY

LEGEND

- LIMIT OF PIER SURFACE PATCH REPAIR (FOR ESTIMATING PURPOSES ONLY)
- SQUARE FOOT AREA OF REPAIR

GENERAL NOTES:

- PIER REPAIR WORK SHALL INCLUDE: PROVIDING ACCESS FOR PIER INSPECTION, PIER SURFACE PATCH REPAIRS, AND SURFICIAL EXCAVATION TO EXPOSE REPAIRS UP TO 6" BELOW GRADE.
- WHERE PIER SURFACE PATCH 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 518.20, PIER REPAIRS.
- THE CONTRACTOR SHALL PROVIDE STAGING, OR ANOTHER ACCEPTABLE MEANS OF ACCESS, AT ALL PIER LOCATIONS THAT WILL ALLOW THE RESIDENT TO SAFELY PERFORM A DETAILED CONCRETE INSPECTION OF ALL PIER SURFACES. THIS WORK SHALL BE INCIDENTAL TO PAY ITEM 518.20, PIER REPAIRS.
- THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS HAVE BEEN DEVELOPED BASED PRIMARILY ON VISUAL AND TACTILE INSPECTION OF THE PIERS FROM THE GROUND LEVEL. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
- EXCAVATION AND BACKFILLING REQUIRED TO COMPLETE PIER REPAIRS SHALL BE INCIDENTAL TO 518.20 PIER REPAIRS.

REMOVAL PROCEDURES:

- PRIOR TO THE START OF THE CONCRETE REMOVALS, THE RESIDENT AND THE CONTRACTOR SHALL SOUND THE CONCRETE AND AGREE ON THE REMOVAL LIMITS. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE SOUNDING 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.
- PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL
- CHIP CONCRETE TO DEPTH SHOWN.

CONCRETE SURFACE PATCH/REPAIR PROCEDURE:

- PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA MODIFIED CONCRETE. SEE SPECIFICATIONS FOR MATERIAL PREPARATION, PLACEMENT, AND CURING REQUIREMENTS.
- PERFORM GENERAL FINISHING (SEE BELOW).

GENERAL FINISHING:

- ALL EXPOSED SURFACES SHALL BE COATED WITH EITHER A PIGMENTED OR CLEAR PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETED AND PATCH MATERIALS HAVE CURED. THE SOUTH FACE OF PIER 1 AND THE NORTH FACE OF PIER 3 SHALL BE COATED WITH CLEAR PROTECTIVE COATING. ALL OTHER SURFACES SHALL RECEIVE PIGMENTED COATING.

Filename: 030_SubStruct06.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

By	Date	By	Date
Designed	KEB 12/13	Checked	JDW 12/13
Drawn	MPC 12/13	In Charge of	RAL 12/13

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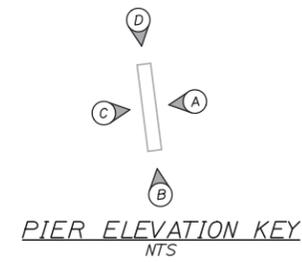
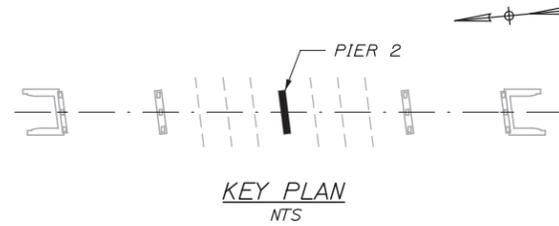
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
PIER 1 DEMOLITION AND REPAIRS

SHEET NUMBER: S-06
CONTRACT: 2014.06
30 OF 53

Date: 12/17/2013



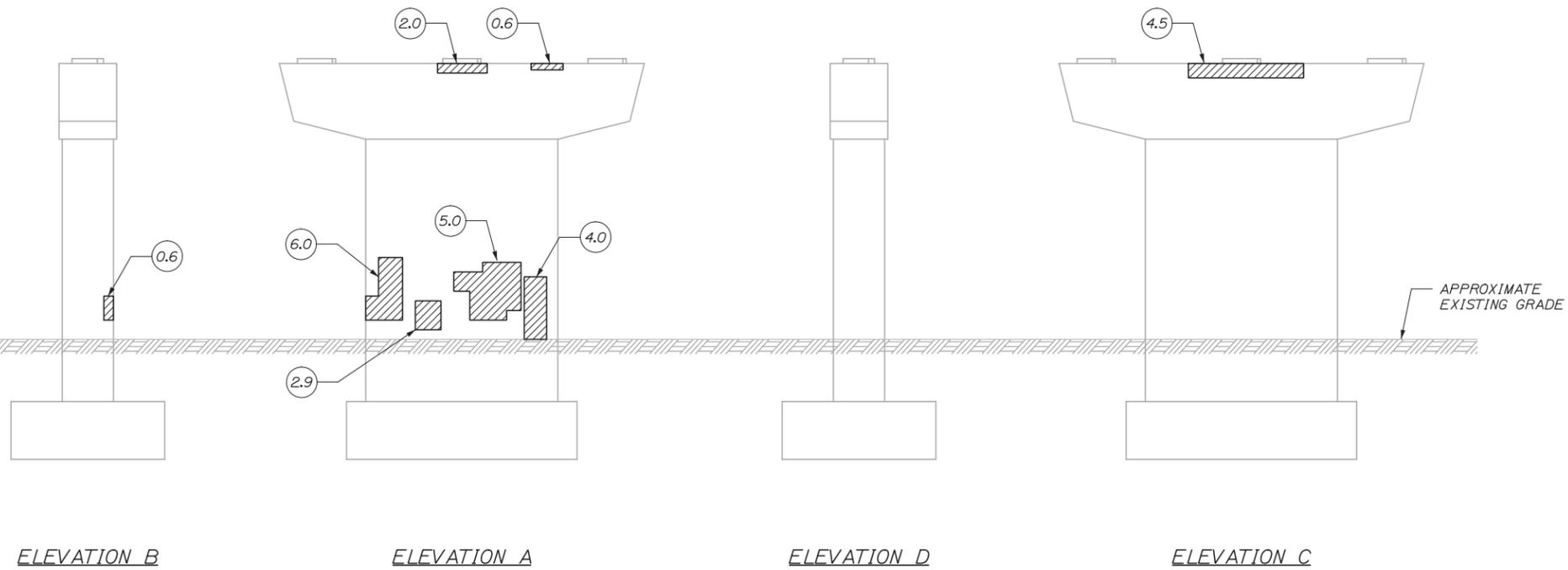
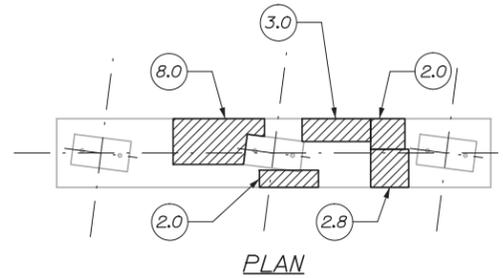
REPAIR QUANTITIES

PIER SURFACE PATCH REPAIR 64 S.F. *
 * INCLUDES 20 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY

LEGEND

- LIMIT OF PIER SURFACE PATCH REPAIR (FOR ESTIMATING PURPOSES ONLY)
- SQUARE FOOT AREA OF REPAIR

NOTES:
 1. SEE SHEET S-06 FOR REPAIR NOTES.



Filename: 031_SubStruct07.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	KEB	12/13	Checked JDW 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

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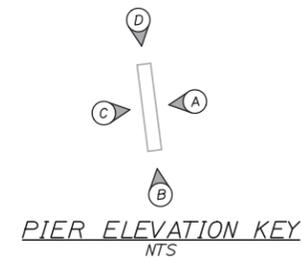
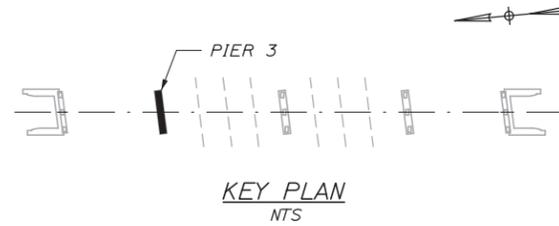
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 PIER 2 DEMOLITION AND REPAIRS

SHEET NUMBER: S-07
 CONTRACT: 2014.06 31 OF 53

Date: 12/17/2013



REPAIR QUANTITIES

PIER SURFACE PATCH REPAIR

29 S.F.*

* INCLUDES 20 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY

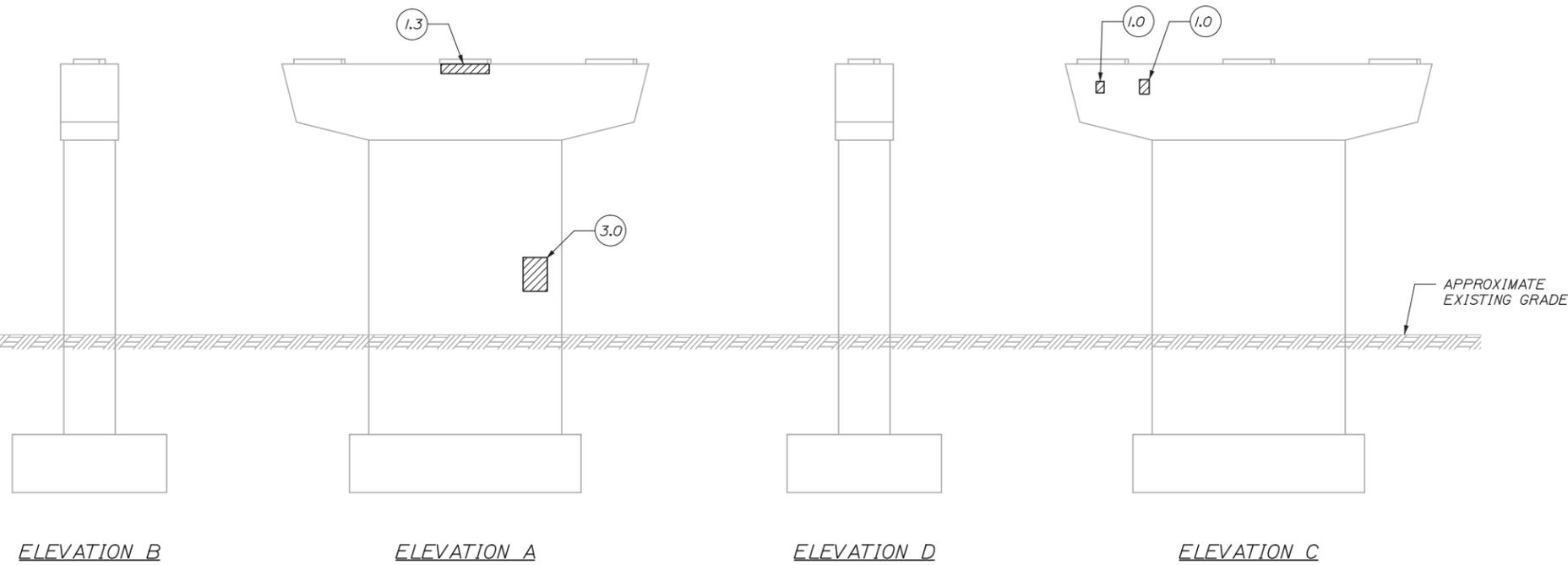
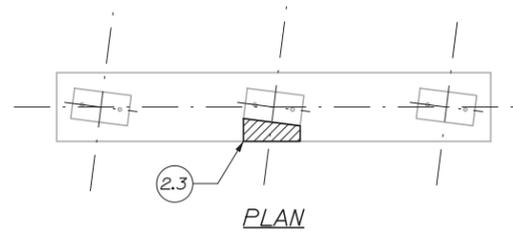
LEGEND

LIMIT OF PIER SURFACE PATCH REPAIR (FOR ESTIMATING PURPOSES ONLY)

SQUARE FOOT AREA OF REPAIR

NOTES:

1. SEE SHEET S-06 FOR REPAIR NOTES.



Filename: 032_SubStruct08.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date		By	Date
Designed	KEB	12/13	Checked	JDW	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

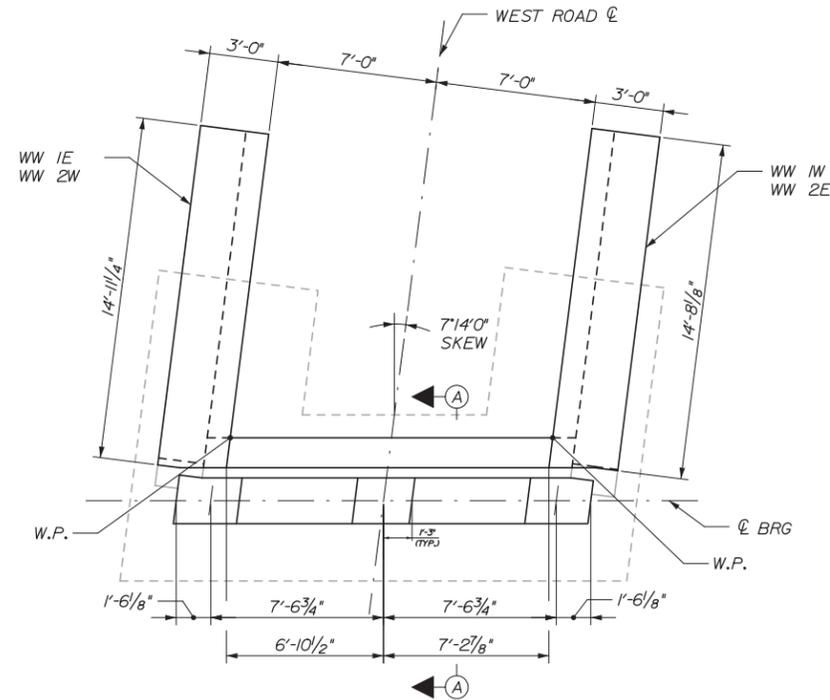
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
PIER 3 DEMOLITION AND REPAIRS

SHEET NUMBER: S-08

CONTRACT: 2014.06

32 OF 53

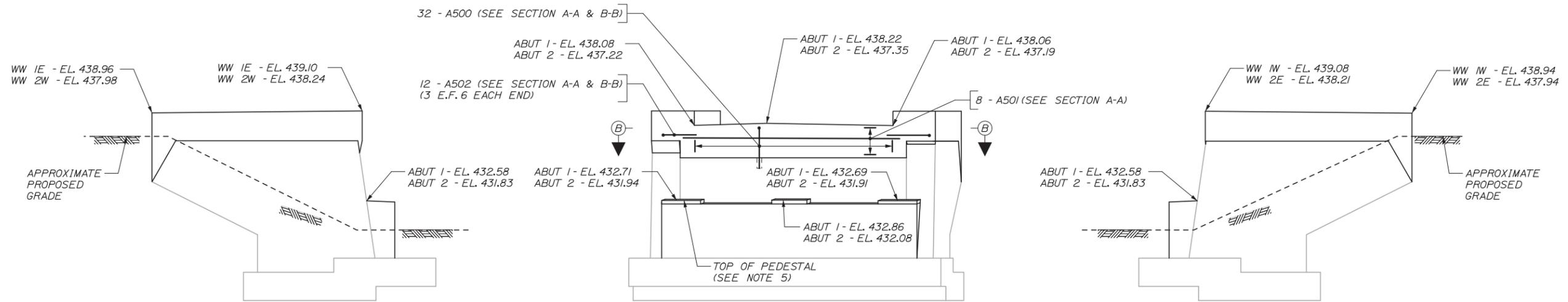
Date: 12/17/2013



ABUTMENT PLAN
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)
1/4" = 1'-0"

- ABUTMENT NOTES:**
1. ALL EXPOSED ABUTMENT SURFACES, EXCEPT FOR THE ROADWAY AND TOP FACES OF WINGWALL CURBS, SHALL BE COATED WITH PIGMENTED COATING FOR CONCRETE SURFACES AFTER RECONSTRUCTION IS COMPLETE AND MATERIAL HAS CURED.
 2. ALL EXISTING CONCRETE SURFACES AGAINST WHICH NEW CONCRETE SHALL BE PLACED SHALL BE ROUGHENED AND COATED WITH AN EPOXY BONDING COMPOUND. THIS WORK SHALL BE INCIDENTAL TO ITEM 502.219.
 3. FOR WINGWALL REINFORCING DETAILS SEE SHEET S-11 AND S-12.
 4. FOR SECTIONS A-A AND B-B SEE SHEET S-10.
 5. ALL CONCRETE BEARING PEDESTALS SHALL BE CAST MONOLITHICALLY WITH THE SURROUNDING CONCRETE.

WORKING POINT LOCATIONS	
WINGWALL *1E	STA. 29+01.12, 7' RT
WINGWALL *1W	STA. 28+99.34, 7' LT
WINGWALL *2E	STA. 31+00.66, 7' RT
WINGWALL *2W	STA. 30+98.88, 7' LT



WINGWALL ELEVATION
(WW 1E SHOWN, WW 2W SIMILAR)
1/4" = 1'-0"

ABUTMENT ELEVATION
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)
1/4" = 1'-0"

WINGWALL ELEVATION
(WW 1W SHOWN, WW 2E SIMILAR)
1/4" = 1'-0"

Filename: 0.33_SubStruct09.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	KEB	12/13	Checked JDW 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

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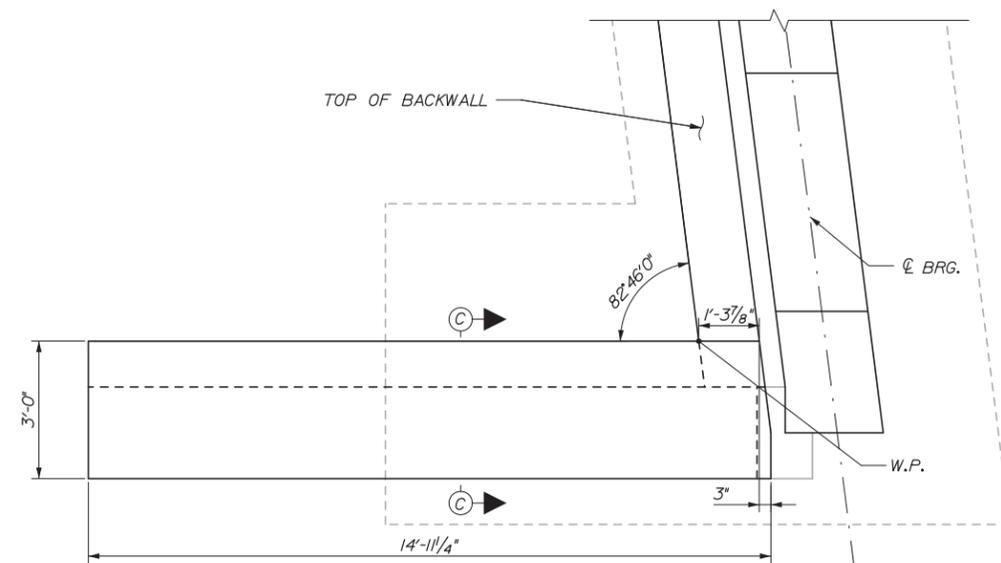
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

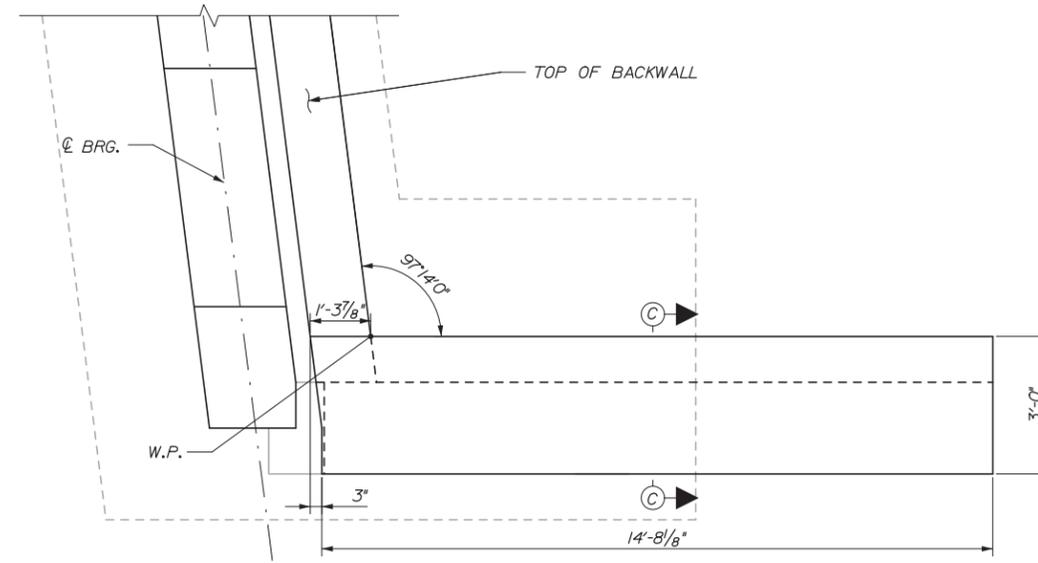
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
ABUTMENT PLAN AND ELEVATION

SHEET NUMBER: S-09
CONTRACT: 2014.06
33 OF 53

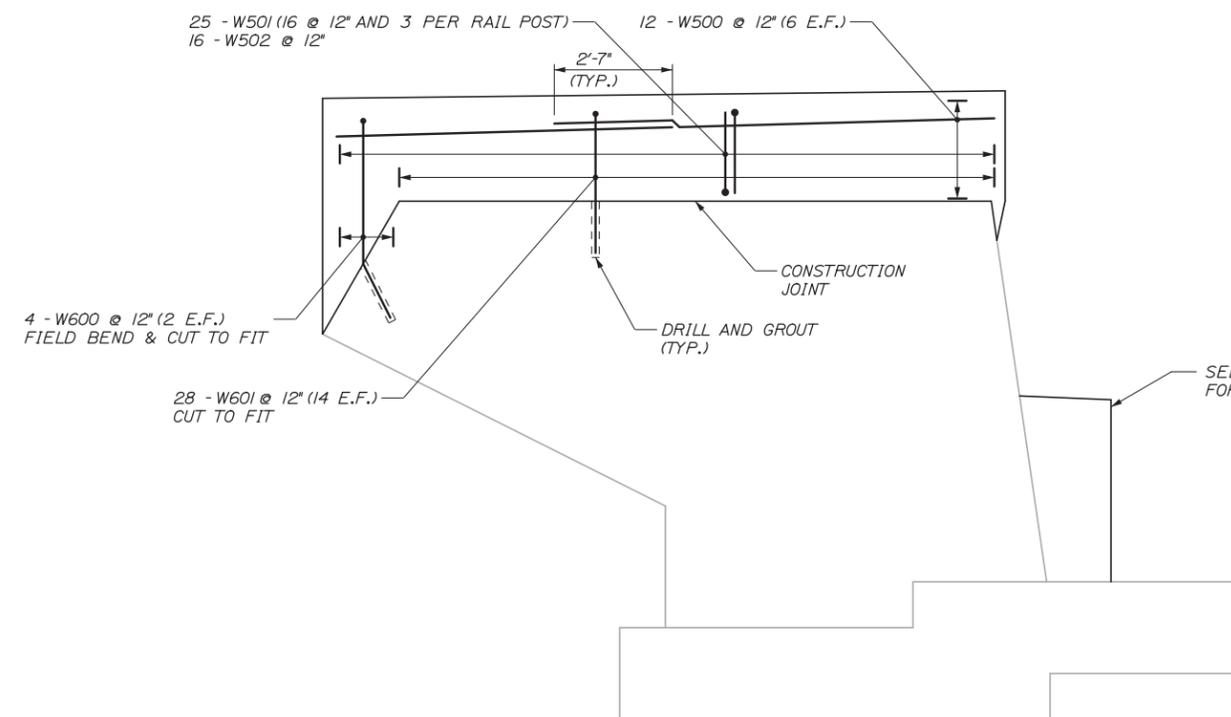
NOTES:
1. SEE SHEET S-12 FOR SECTION C-C



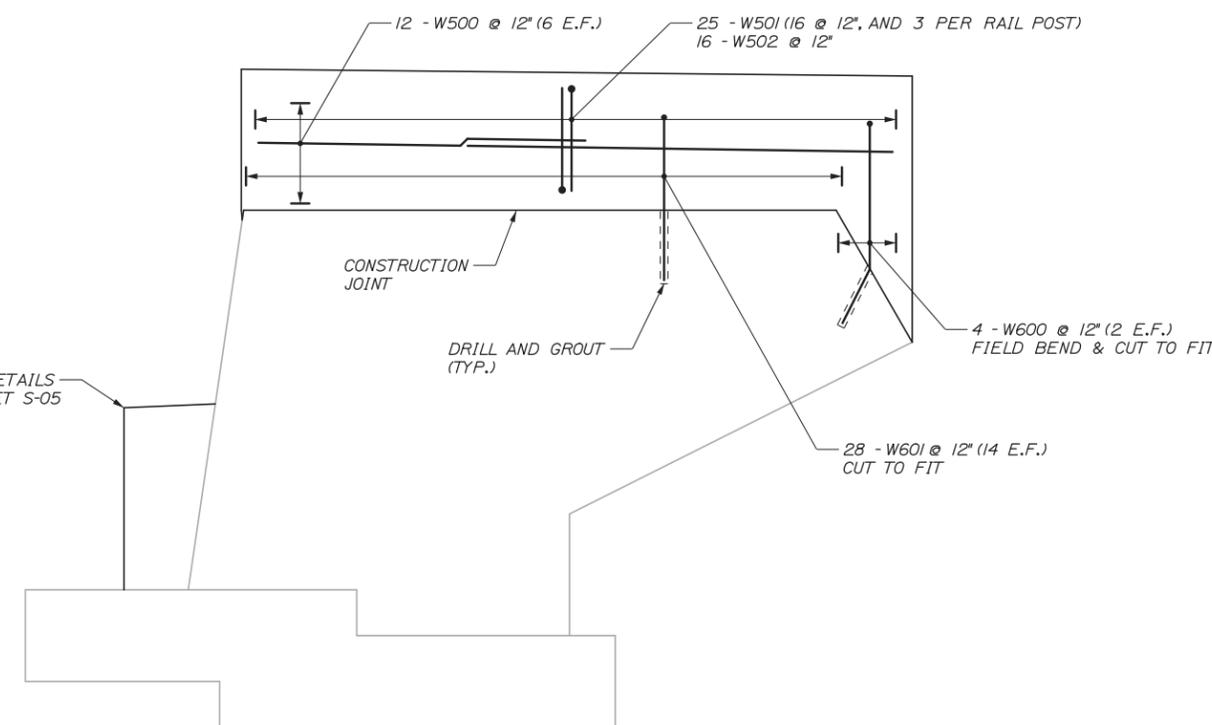
WINGWALL IE & 2W PLAN
1/2" = 1' - 0"



WINGWALL IW & 2E PLAN
1/2" = 1' - 0"



WINGWALL IE & 2W ELEVATION
1/2" = 1' - 0"



WINGWALL IW & 2E ELEVATION
1/2" = 1' - 0"

Date: 12/17/2013

Filename: 0.35_SubStruct11.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	
Designed	KEB	12/13	Checked JDW 12/13
Drawn	MPC	12/13	In Charge of RAL 12/13

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MAINE
TURNPIKE

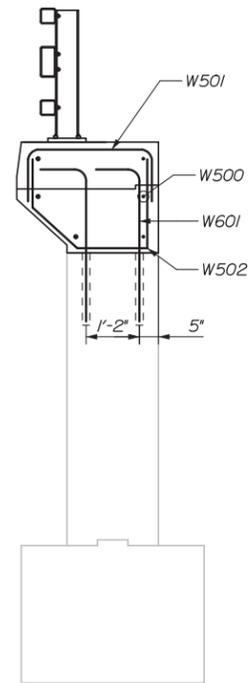
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

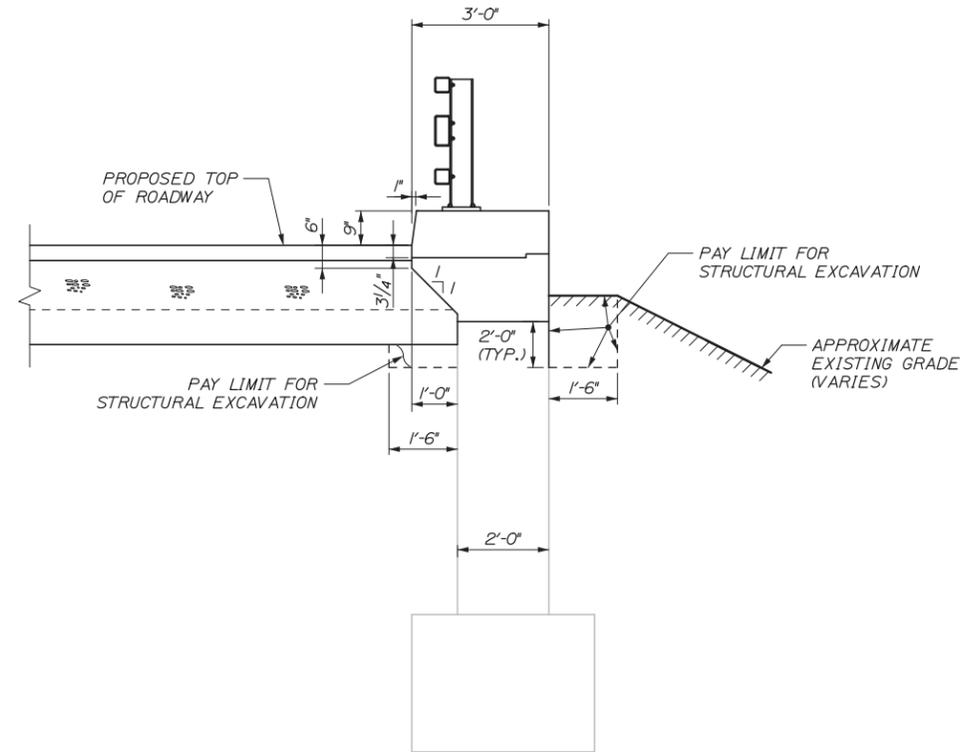
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
WINGWALL MODIFICATION DETAILS I

SHEET NUMBER: S-11
CONTRACT: 2014.06
35 OF 53

Date: 12/17/2013



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



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

Filename: 0.36_SubStruct12.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.					
	By	Date		By	Date
Designed	KEB	12/13	Checked	JDW	12/13
Drawn	MPC	12/13	In Charge of	RAL	12/13

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



**THE GOLD STAR
MEMORIAL HIGHWAY**

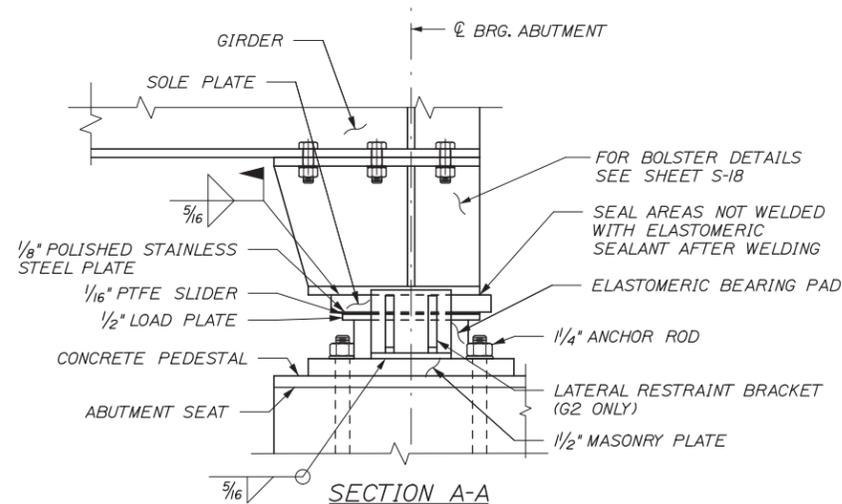
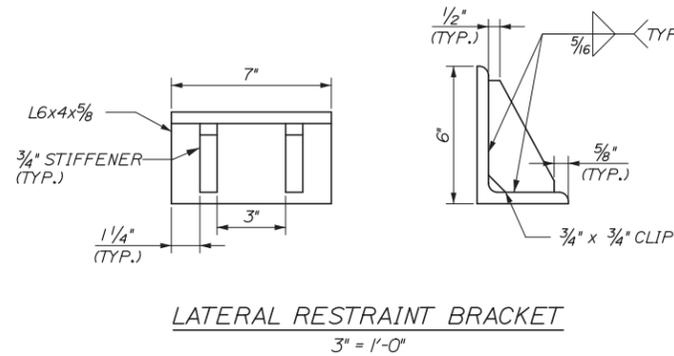
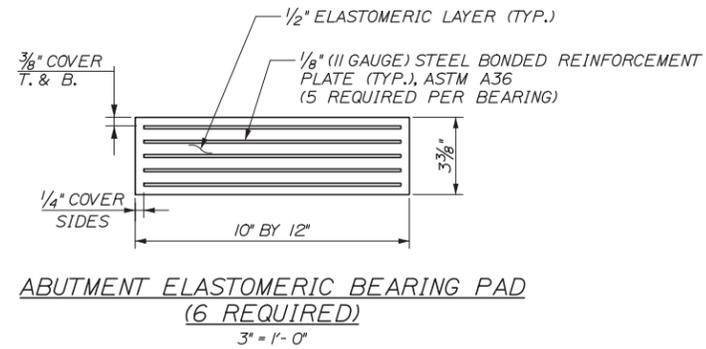
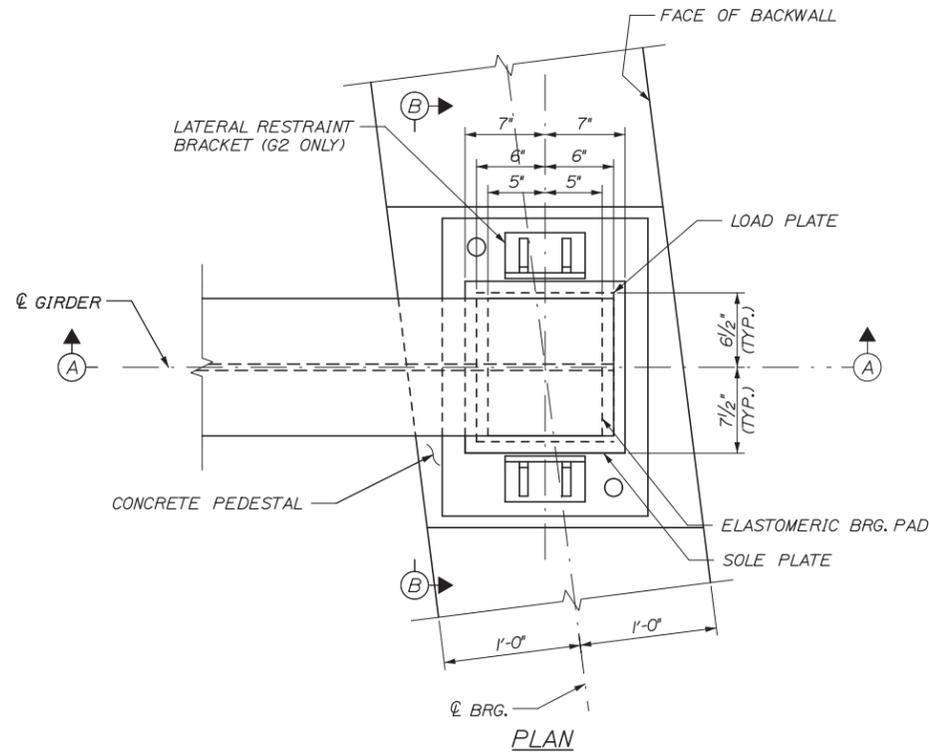
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
WINGWALL MODIFICATION DETAILS II

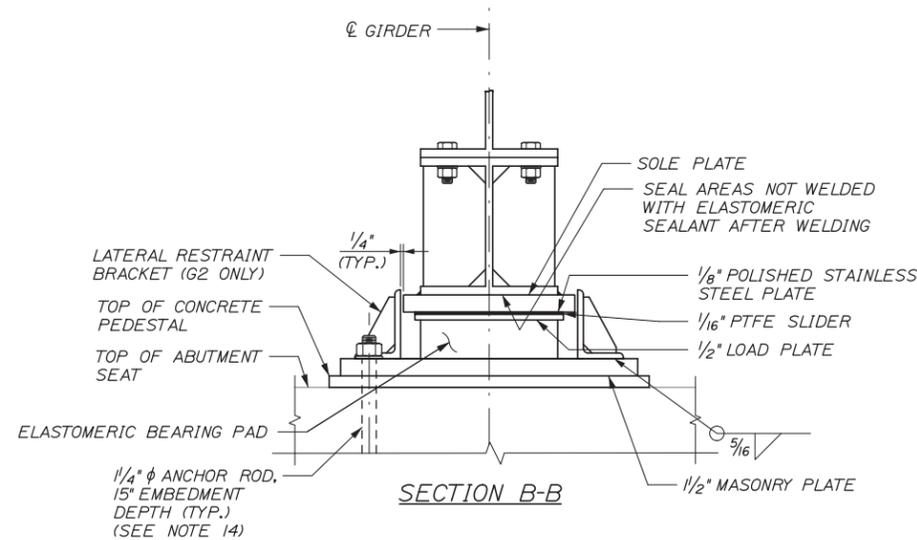
CONTRACT: 2014.06

SHEET NUMBER: S-12
36 OF 53

Date: 12/17/2013



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



BEARING NOTES:

- ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE), GRADE 3, MEETING THE REQUIREMENTS OF AASHTO M251. ANTIOZANANT ADDITIVES ARE PROHIBITED. THE ELASTOMER SHALL HAVE A SHEAR MODULUS OF 140 PSI.
- VULCANIZING OF THE ELASTOMER TO THE SOLE PLATE OR LOAD PLATE, AND MASONRY PLATE, SHALL BE DONE DURING THE PRIMARY MOLD PROCESS.
- ANCHOR RODS SHALL BE SET BEFORE INSTALLING STRUCTURAL STEEL.
- UPSET THE THREADS ON THE ANCHOR RODS AFTER ASSEMBLY.
- SOLE PLATES SHALL MEET THE REQUIREMENTS OF ASTM A 709, GRADE 50 OR 50W.
- BEARINGS SHALL BE COVERED DURING TRANSIT.
- ALL EXPOSED STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED AFTER STEEL FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A153 AS APPLICABLE.
- 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.
- 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.
- CONTRACTOR SHALL RE-FINISH GALVANIZING IN ACCORDANCE WITH ASTM A780 AFTER FIELD WELDING.
- BEARING PADS WERE DESIGNED USING "METHOD B" FROM THE AASHTO LRFD SPECIFICATION AND SHALL BE SUBSEQUENTLY TESTED IN ACCORDANCE WITH THE SPECIFICATION.
- ALL STEEL REINFORCEMENT PLATES SHALL MEET THE REQUIREMENTS OF ASTM A36 UNLESS OTHERWISE NOTED AND SHALL BE DEBURRED PRIOR TO MOLDING THE BEARING.
- ANCHOR RODS SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION.
- ANCHOR ROD EMBEDMENT SHALL BE MEASURED FROM TOP OF PIER CAP OR ABUTMENT SEAT, NOT INCLUDING DEPTH OF PEDESTAL.
- THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 35°F AND 80°F.
- THE CONTRACTOR MAY CORE EXISTING CONCRETE FOR THE INSTALLATION OF ANCHOR RODS ON GIRDER 2 AT ALL PIERS. CONTRACTOR SHALL AVOID DAMAGING EXISTING REINFORCING DURING INSTALLATION OF ANCHOR RODS ON GIRDERS 1 AND 3 AT PIER 2.
- ALL HEAVY ROOFING FELT SHALL BE SMOOTH SURFACED ASPHALT ROOFING (ORGANIC FELT) CONFORMING TO ASTM D6380, CLASS S, TYPE III (51.1 lb/100 ft²)

BEARING DESIGN CRITERIA		
CRITERIA	ABUTMENTS	PIERS
UNFACTORED DEAD LOAD	22.3 KIPS	73.7 KIPS
UNFACTORED LIVE LOAD	49.5 KIPS	76.9 KIPS
MAX. LONGITUDINAL DISPL.	0.75 INCHES	0.42 INCHES
ROTATIONAL TOLERANCE	0.005 RAD	0.005 RAD
DEAD LOAD ROTATION	0.0012 RAD	0.0027 RAD
MAX. LIVE LOAD ROTATION	0.0013 RAD	0.0011 RAD

PTFE ELASTOMERIC BEARING OFFSETS (INCHES)							
TEMPERATURE (°F)	25	35	45	55	65	75	85
ABUTMENT 1	-0.15	-0.08	0.00	0.08	0.15	0.23	0.30
ABUTMENT 2	-0.15	-0.08	0.00	0.08	0.15	0.23	0.30

NOTE: OFFSETS ARE MEASURED ALONG Q OF GIRDER.
(+) VALUES OFFSET TOWARD BACKWALL.

Filename: 037_BearingDetails.dgn

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

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

By	Date	By	Date
Designed	KEB 12/13	Checked	JDW 12/13
Drawn	MPC 12/13	In Charge of	RAL 12/13

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

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

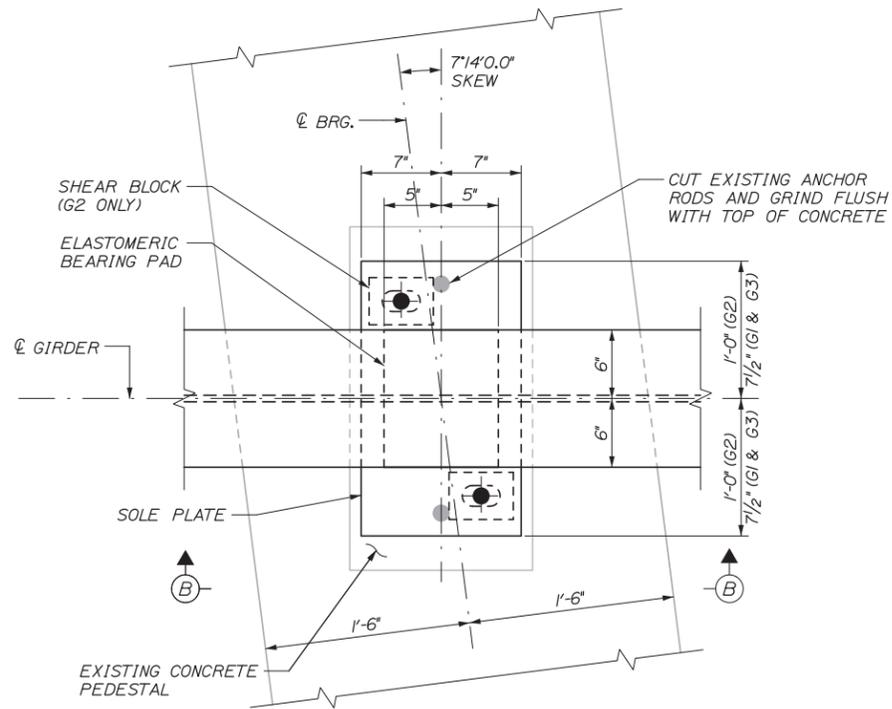
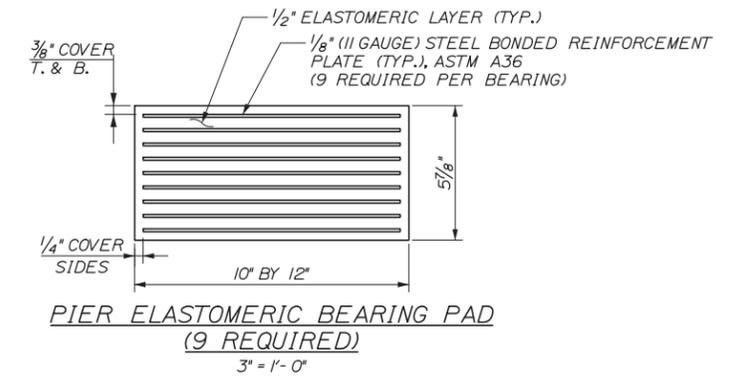
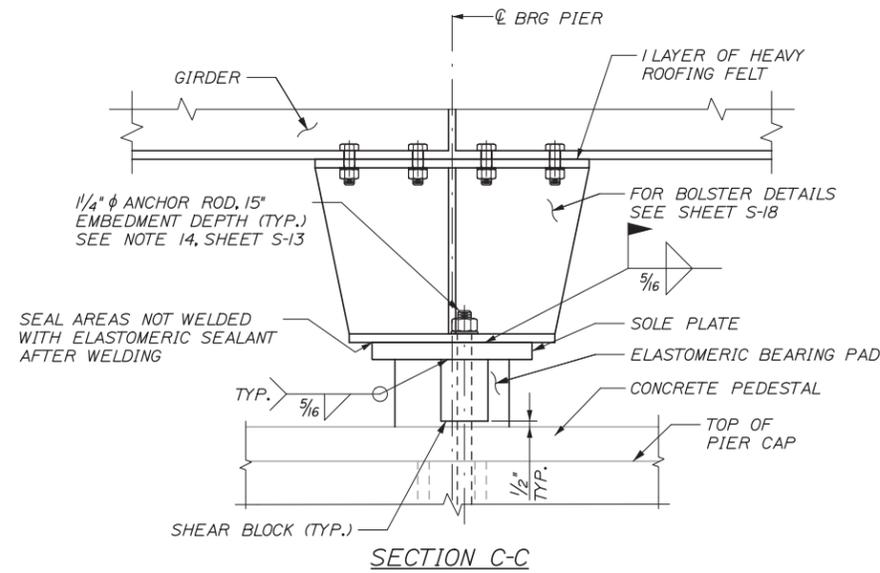
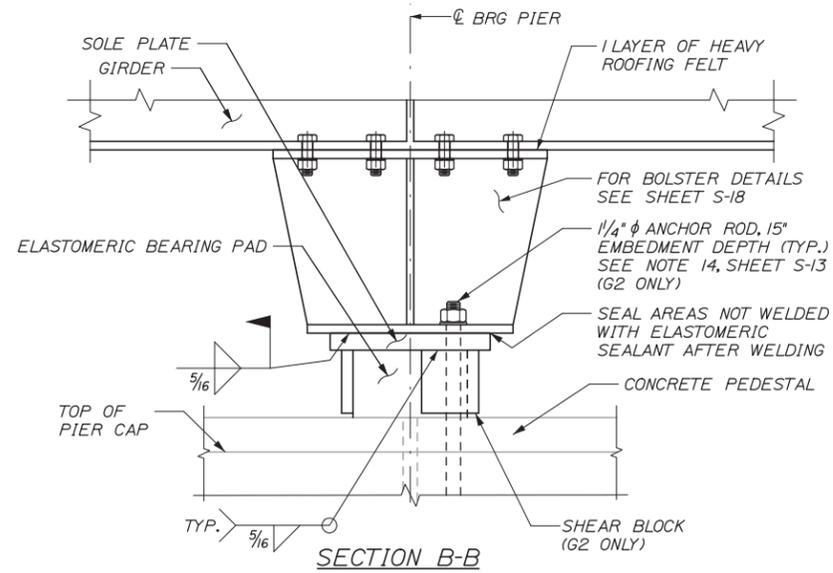
BEARING DETAILS I

SHEET NUMBER: S-13

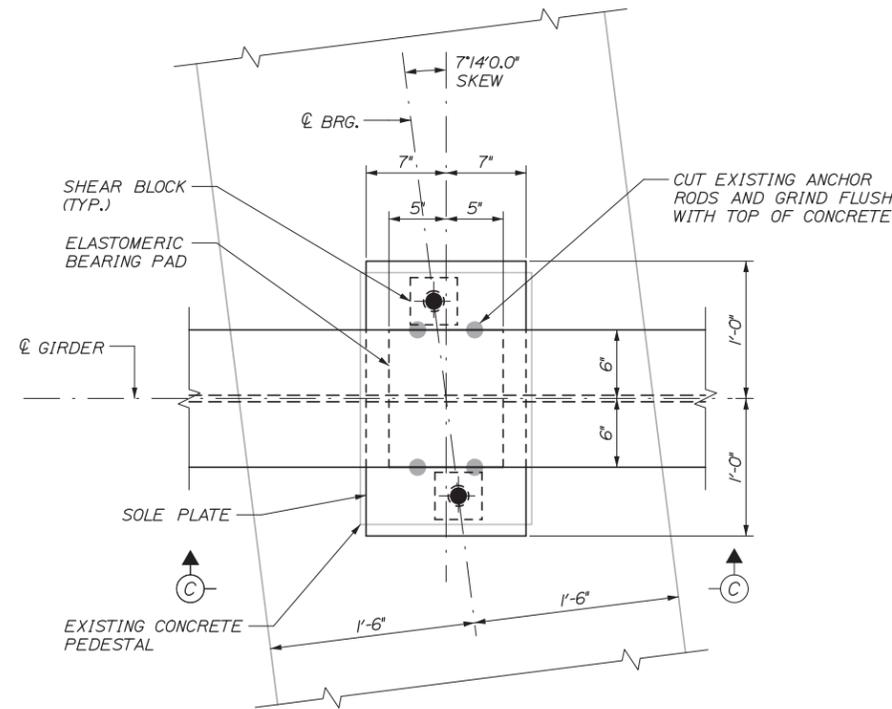
CONTRACT: 2014.06

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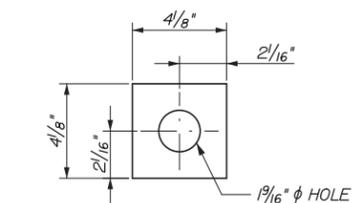
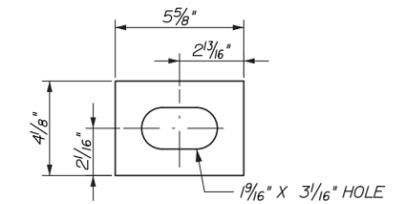
Date: 12/17/2013



EXPANSION BEARING ASSEMBLY - PIERS 1 & 3
(6 REQUIRED)
1/2" = 1'-0"



FIXED BEARING ASSEMBLY - PIER 2
(3 REQUIRED)
1/2" = 1'-0"



Filename: 038_BearingDets2.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
	By	Date	

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

THE GOLD STAR
MEMORIAL HIGHWAY

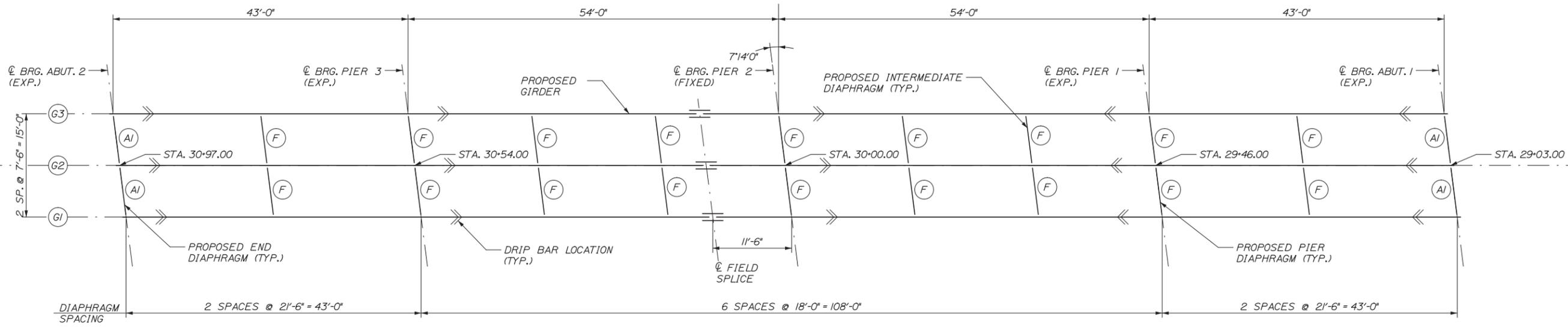
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
BEARING DETAILS II

SHEET NUMBER: S-14
CONTRACT: 2014.06
38 OF 53



Date: 12/17/2013



FRAMING PLAN
1/8" = 1'-0"

STRUCTURAL STEEL NOTES

1. CAMBER ORDINATES AS SHOWN ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND FOR THE CURVATURE OF THE FINISHED GRADE PROFILE.
2. NO TRANSVERSE BUTT-WELD SPLICES WILL BE ALLOWED IN THE FLANGE PLATES OR WEB PLATES WITHIN 10 FT 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 3 FEET FROM TRANSVERSE BUTT-WELDS IN THE WEB PLATES AND NO TRANSVERSE WEB OR FLANGE WELDS SHALL BE LOCATED WITHIN 3 FEET 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.

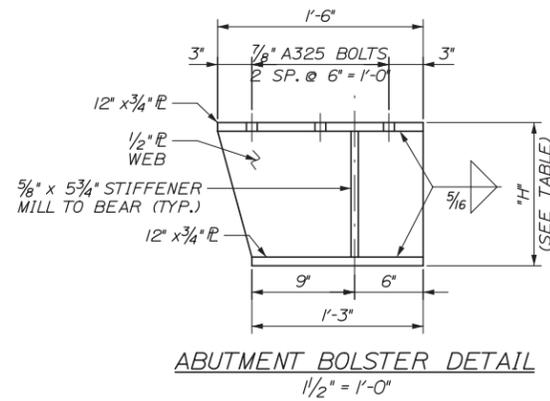
6. DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE.
7. BUTT WELDS AT WEB SPLICES AND FLANGE SPLICES SHALL BE GROUND FLUSH IN LONGITUDINAL DIRECTION OF GIRDER.
8. SHEAR STUDS SHALL EXTEND A MINIMUM OF 2" INTO THE SLAB. SEE "SHEAR CONNECTOR DETAIL" ON SHEET S-17.
9. USE A SINGLE ROW OF SHEAR STUDS ON SPLICE PLATES TO AVOID INTERFERENCE WITH SPLICE BOLTS.
10. CONNECTION PLATES 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.
11. PRIOR TO ERECTION OF STRUCTURAL STEEL THE CONTRACTOR SHALL SUBMIT A DETAILED ERECTION PLAN FOR APPROVAL.
12. 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.

13. FOR DETAILS OF DIAPHRAGMS TYPES (A1) & (F), SEE MAINEDOT STANDARD DETAILS, PAGES 504(15) AND 504(16).
14. ALL FAYING SURFACES, WITH THE EXCEPTION OF FIELD SPLICES, SHALL BE PAINTED OR SEALED IN ACCORDANCE WITH FHWA TECHNICAL ADVISORY T5140.22, SECTION 4.c.2.c. TO PREVENT THE FORMATION OF PACK RUST.
15. ALL PORTIONS OF THE STRUCTURAL STEEL THAT WILL REMAIN UNPAINTED SHALL BE BLAST-CLEANED TO SSPC SP-6/NACE NO. 3 AFTER FABRICATION AND PRIOR TO DELIVERY IN ORDER TO PRESENT A UNIFORM APPEARANCE FREE OF DIRT, OIL, OR OTHER FOREIGN MATERIALS.
16. CHANGES IN FIELD SPLICE FILLER PLATE THICKNESS TO COMPENSATE FOR FABRICATION TOLERANCES SHALL BE APPROVED BY THE ENGINEER.

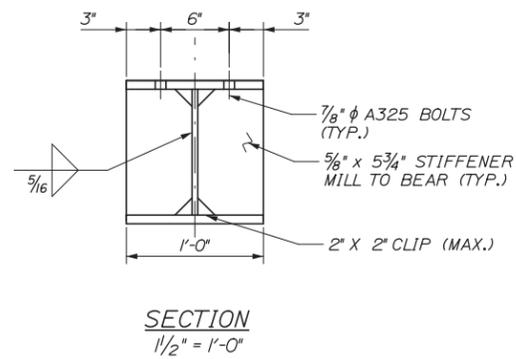
Filename: 040_FramingPlan.dgn

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 SUPERSTRUCTURE REPLACEMENT WEST ROAD UNDERPASS FRAMING PLAN																											
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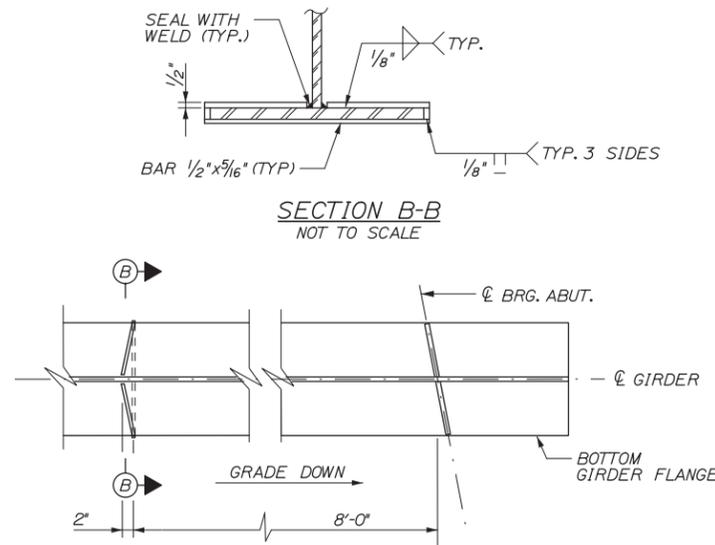
Date: 12/17/2013



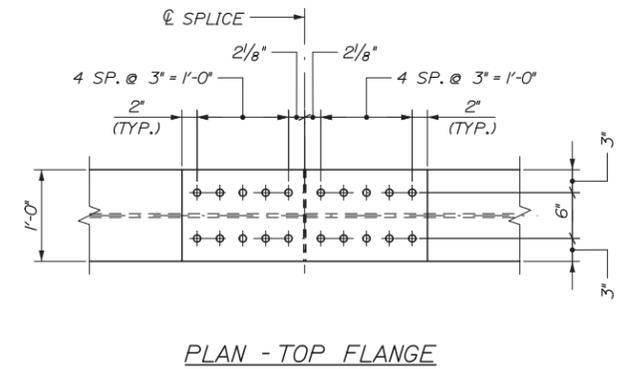
ABUTMENT BOLSTER DETAIL
1/2" = 1'-0"



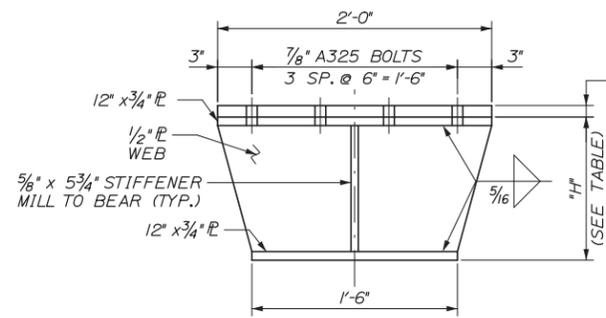
SECTION
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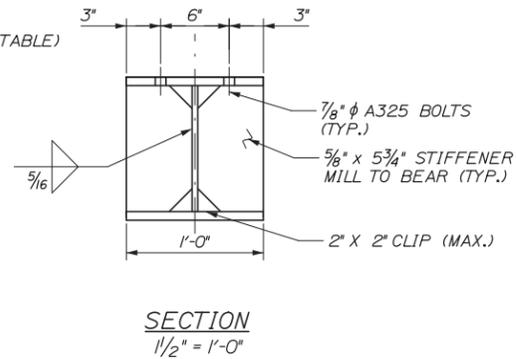
FLANGE DRIP BAR DETAIL
(ABUTMENT LOCATION SHOWN, PIER LOCATION SIMILAR)
NOT TO SCALE



PLAN - TOP FLANGE



PIER BOLSTER DETAIL
1/2" = 1'-0"



SECTION
1/2" = 1'-0"

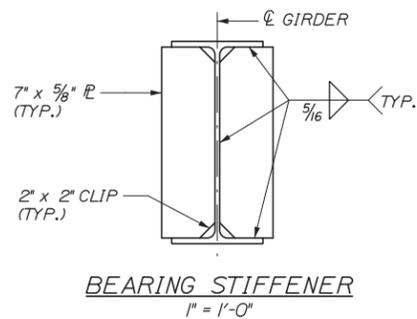
BOLSTER HEIGHT "H" (INCHES)					
GIRDER	ABUT. 2	PIER 3	PIER 2	PIER 1	ABUT. 1
G1	20.0	19.875	20.25	20.75	21.0
G2	20.0	19.875	20.25	20.75	21.0
G3	20.0	19.875	20.25	20.75	21.0

SHIM HEIGHT "S" (INCHES)			
GIRDER	PIER 3	PIER 2	PIER 1
G1	1/8"	1/4"	0
G2	3/8"	3/8"	1/4"
G3	0	0	0

BOLSTER NOTES:

1. CONTRACTOR SHALL PROVIDE SHIM PLATES IN THE FOLLOWING THICKNESSES AND SHALL MATCH THE TOP PLATE OF THE PIER BOLSTERS:

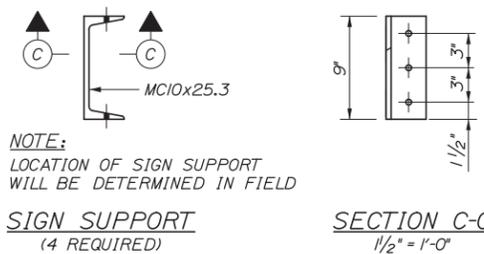
- 2 - 1"
- 1 - 1/2"
- 4 - 1/4"
- 5 - 1/8"



BEARING STIFFENER
1" = 1'-0"

NOTES:

1. FOR STRUCTURAL STEEL NOTES, SEE SHEET S-16.
2. BOLSTERS SHALL BE PAID FOR UNDER STRUCTURAL STEEL PAY ITEMS.



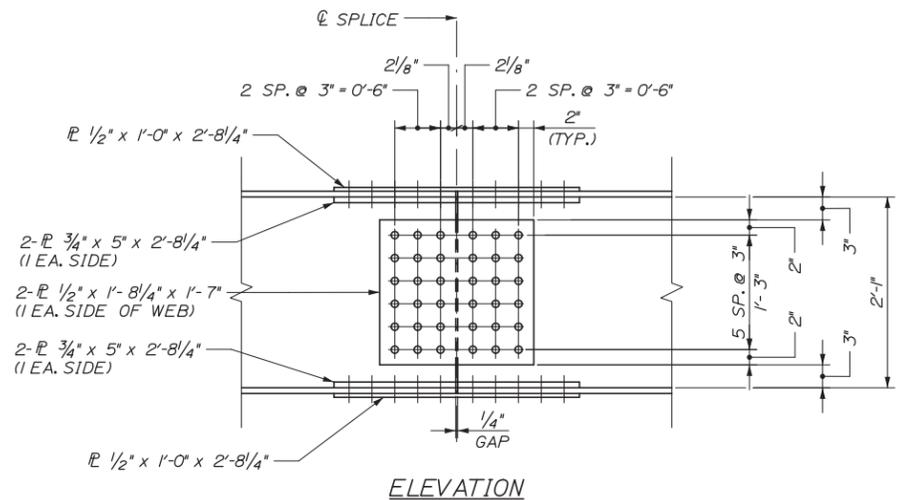
NOTE:
LOCATION OF SIGN SUPPORT
WILL BE DETERMINED IN FIELD

SIGN SUPPORT
(4 REQUIRED)
1/2" = 1'-0"

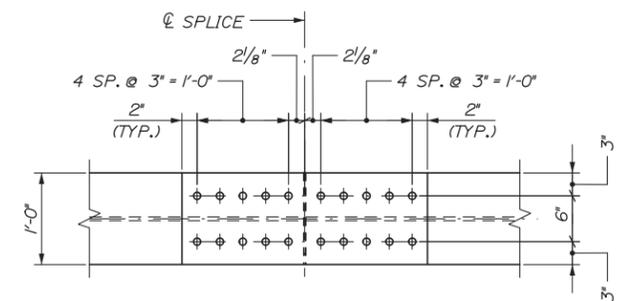
SIGN SUPPORT DETAILS
(4 REQUIRED)
1/2" = 1'-0"

SIGN SUPPORT NOTE:

1. LOCATION OF SIGN SUPPORT SHALL BE FIELD LOCATED BY THE RESIDENT.
2. BOLTS SHALL BE 1/2" DIAMETER A325 TYPE 3.
3. SIGN BRACKETS SHALL BE LOCATED WITHIN TWO FEET OF SIGN ENDS. BRACKET SPACING SHALL BE FIVE FEET ON CENTER MAXIMUM.
4. PRIOR TO INSTALLATION THE SIGN PANEL SHALL BE MOUNTED TO A FRAME OF SUFFICIENT RIGIDITY TO PREVENT EXCESSIVE SIGN DEFORMATIONS DUE TO WIND, ICE, AND OTHER LOADINGS THAT MAY OCCUR.
5. SIGNS SHALL BE PROVIDED BY OTHERS.
6. FABRICATION AND DELIVERY OF THE SIGN SUPPORTS SHALL BE INCIDENTAL TO PAY ITEM 504.702. REMOVAL AND INSTALLATION OF THE SIGN AND SIGN SUPPORT SHALL BE INCIDENTAL TO PAY ITEM 504.71.



ELEVATION



PLAN - BOTTOM FLANGE
BOLTED FIELD SPLICE
1" = 1'-0"

Filename: 042_SteelDets2.dgn

No.	Revision	By	Date

Designed by:		HNTB	
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
By	Date	By	Date
Designed	KEB 12/13	Checked	JDW 12/13
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HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
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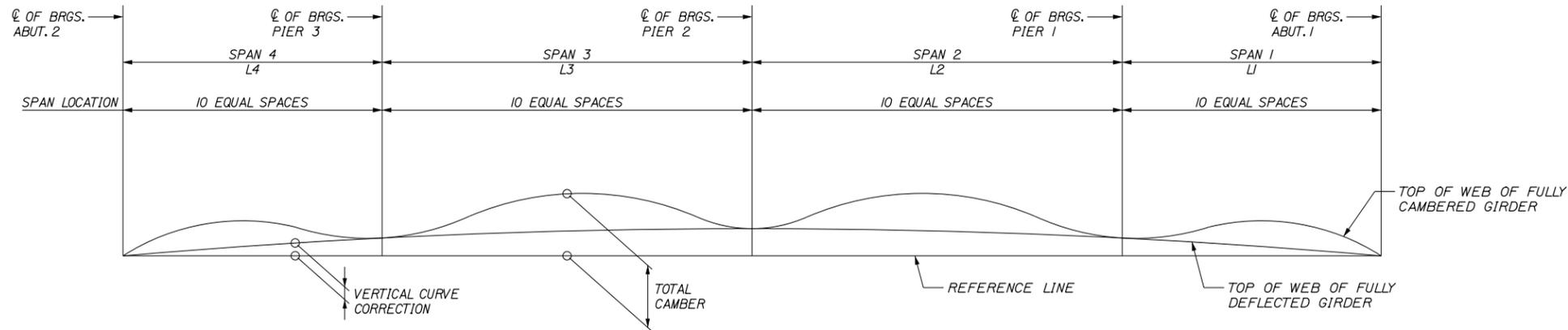
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
STRUCTURAL STEEL DETAILS II

SHEET NUMBER: S-18
CONTRACT: 2014.06
42 OF 53

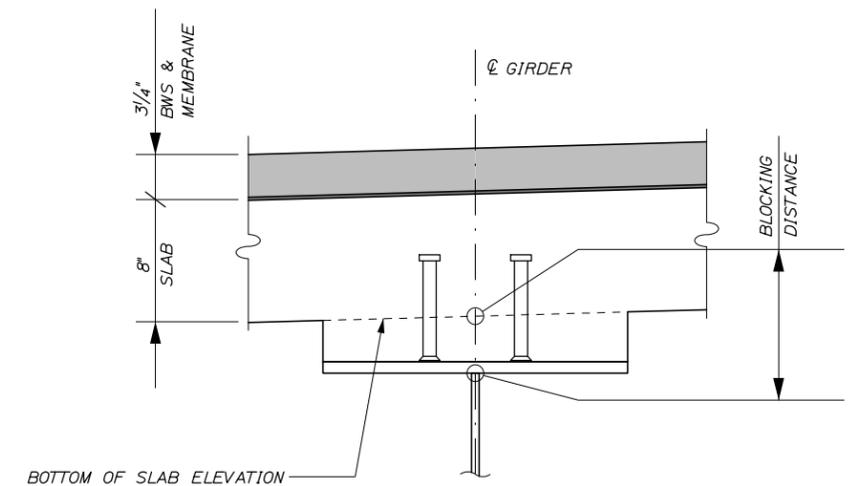
Date: 12/18/2013



CAMBER DIAGRAM
NOT TO SCALE

DESIGNATION	CL BRG. ABUT. 2	CAMBER ORDINATES (FEET)																		CL BRG. PIER 2		
		SPAN 4									SPAN 3											
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9			
STEEL D.L.	0.000	0.001	0.002	0.004	0.004	0.004	0.002	0.002	0.001	0.000	0.000	0.001	0.002	0.004	0.004	0.005	0.004	0.004	0.002	0.001	0.000	
CONCRETE D.L.	0.000	0.007	0.014	0.019	0.021	0.020	0.016	0.012	0.006	0.002	0.000	0.004	0.011	0.020	0.025	0.027	0.025	0.019	0.011	0.004	0.000	
SUPERIMPOSED D.L.	0.000	0.002	0.003	0.004	0.004	0.004	0.004	0.002	0.002	0.000	0.000	0.000	0.002	0.004	0.005	0.005	0.004	0.002	0.000	0.000	0.000	
VERTICAL CURVE	0.000	0.052	0.102	0.149	0.194	0.237	0.279	0.317	0.352	0.385	0.416	0.452	0.483	0.512	0.536	0.556	0.573	0.587	0.596	0.601	0.604	
TOTAL	0.000	0.062	0.121	0.176	0.223	0.265	0.301	0.333	0.361	0.387	0.416	0.457	0.498	0.540	0.570	0.593	0.607	0.614	0.611	0.606	0.604	

DESIGNATION	CL BRG. PIER 2	SPAN 2									CL BRG. PIER 1	SPAN 1									CL BRG. ABUT. 1	
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9		
STEEL D.L.	0.000	0.001	0.002	0.004	0.004	0.005	0.004	0.004	0.002	0.001	0.000	0.000	0.001	0.002	0.002	0.004	0.004	0.004	0.002	0.001	0.000	
CONCRETE D.L.	0.000	0.004	0.011	0.019	0.025	0.027	0.025	0.020	0.011	0.004	0.000	0.002	0.006	0.012	0.016	0.020	0.021	0.019	0.014	0.007	0.000	
SUPERIMPOSED D.L.	0.000	0.000	0.002	0.004	0.005	0.005	0.005	0.004	0.002	0.000	0.000	0.000	0.002	0.002	0.004	0.004	0.004	0.004	0.003	0.002	0.000	
VERTICAL CURVE	0.604	0.602	0.596	0.586	0.574	0.557	0.536	0.512	0.484	0.452	0.417	0.385	0.352	0.316	0.278	0.239	0.196	0.150	0.103	0.053	0.000	
TOTAL	0.604	0.607	0.611	0.613	0.608	0.594	0.570	0.540	0.499	0.457	0.417	0.387	0.361	0.332	0.300	0.267	0.225	0.177	0.122	0.063	0.000	



BLOCKING DETAIL

BLOCKING NOTES:

1. PRIOR TO PROFILING THE GIRDERS, THE CONTRACTOR SHALL HAVE LOWERED 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 THE PROTECTIVE SHIELDING AND ACCEPTABLE SAFETY LINES OR SHIELDING PRIOR TO PROFILING THE GIRDERS.

GIRDER NO.	CL BRG. ABUT. 2	BOTTOM OF SLAB ELEVATIONS (FEET)																		CL BRG. PIER 2		
		SPAN 4									SPAN 3											
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9			
GIRDER 1	436.57	436.64	436.72	436.79	436.86	436.92	436.97	437.02	437.07	437.12	437.17	437.23	437.29	437.35	437.40	437.45	437.49	437.52	437.54	437.56	437.59	
GIRDER 2	436.71	436.79	436.86	436.94	437.00	437.06	437.12	437.17	437.22	437.26	437.31	437.38	437.44	437.50	437.56	437.60	437.64	437.67	437.70	437.72	437.74	
GIRDER 3	436.53	436.61	436.69	436.76	436.83	436.89	436.95	437.00	437.05	437.10	437.15	437.21	437.27	437.33	437.39	437.43	437.47	437.50	437.53	437.55	437.58	

GIRDER NO.	CL BRG. PIER 2	SPAN 2									CL BRG. PIER 1	SPAN 1									CL BRG. ABUT. 1	
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9		
GIRDER 1	437.59	437.61	437.64	437.66	437.67	437.68	437.68	437.67	437.66	437.64	437.63	437.62	437.61	437.60	437.58	437.56	437.54	437.51	437.48	437.44	437.40	
GIRDER 2	437.74	437.76	437.79	437.81	437.83	437.84	437.84	437.82	437.80	437.79	437.79	437.78	437.77	437.76	437.75	437.73	437.71	437.68	437.64	437.60	437.56	
GIRDER 3	437.58	437.60	437.63	437.65	437.67	437.68	437.68	437.66	437.65	437.63	437.62	437.62	437.62	437.60	437.59	437.57	437.55	437.52	437.49	437.45	437.41	

Filename: 043_SteelDets3.dgn

Scale:			
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Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

By	Date	By	Date
Designed	KEB 12/13	Checked	JDW 12/13
Drawn	MPC 12/13	In Charge of	RAL 12/13

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

MAINE TURNPIKE

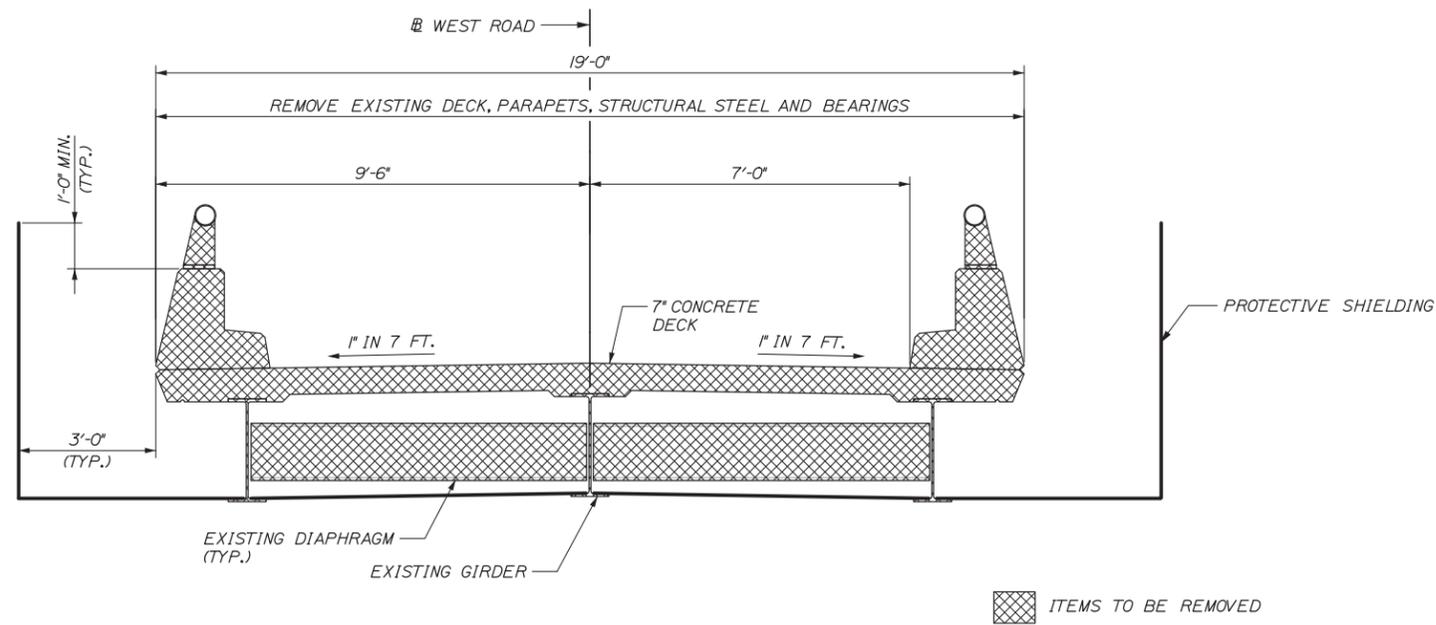
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
STRUCTURAL STEEL DETAILS III

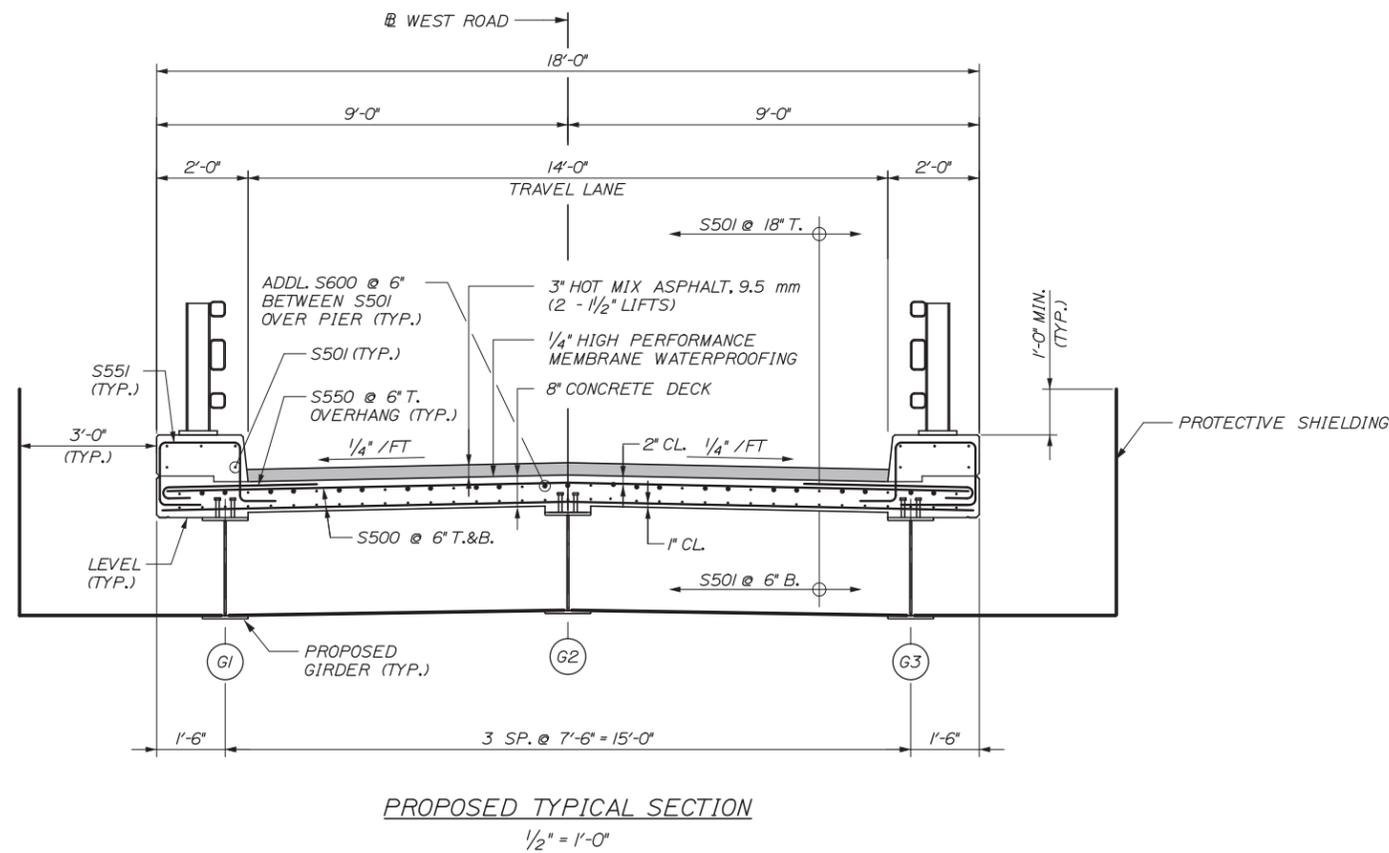
SHEET NUMBER: S-19
CONTRACT: 2014.06
43 OF 53

Date: 12/17/2013



SUPERSTRUCTURE REMOVAL LIMITS

1/2" = 1'-0"



PROPOSED TYPICAL SECTION

1/2" = 1'-0"

SUPERSTRUCTURE NOTES

1. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS, CURB SURFACES AND FASCIA OVERHANG TO DRIP NOTCH.
2. ALL BRIDGE CURB CONCRETE, INCLUDING INSIDE FACES, TOP AND OUTSIDE FACES, APPROACH CURB AND DECK FASCIA SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE.
3. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
4. 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.
5. PROTECTIVE SHIELDING SHALL EXTEND LONGITUDINALLY FROM ROADSIDE FACE PIER 1 TO ROADSIDE FACE PIER 3. 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.
6. CONTRACTOR SHALL HAVE THE OPTION OF USING PRECAST, PRESTRESSED CONCRETE DECK PANELS AS AN ALTERNATIVE TO THE CONCRETE SLAB DETAILS SHOWN ON THE CONTRACT PLANS. THE REQUIREMENT SHOWN ON PAGES 502(07)-502(12) OF THE MAINE DOT STANDARD DETAILS SHALL APPLY. ALL MILD REINFORCING WITHIN THE PRECAST PANELS SHALL BE EPOXY COATED.
7. THE SUPERSTRUCTURE SLAB CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION AND THE CONCRETE SLAB SHALL BE KEPT PLASTIC ONE COMPLETE SPAN BEHIND THE SPAN BEING PLACED.
8. FORM V-GROOVE ON THE FASCIA AT THE HORIZONTAL JOINT BETWEEN THE CURB AND SLAB.
9. DO NOT COVER DECK DRAINS WITH WATERPROOFING MEMBRANES. DEPRESS DRAINS 1/2" BELOW TOP OF SLAB. PROVIDE 23 GAUGE GALVANIZED SCREENS (1/4" MESH) OVER DRAINS.
10. THE APPROXIMATE SHIELDING QUANTITIES REPRESENT THE TOTAL QUANTITY OF SHIELDING REQUIRED TO COMPLETE THE WORK, INCLUDING INITIAL INSTALLATION, REMOVAL, AND RESETTling OF SHIELDING.

APPROXIMATE SHIELDING QUANTITIES*			
	DEMOLITION	CONSTRUCTION	TOTAL
APPROX. WIDTH OF NEW SHIELDING INSTALLED (FT)	25 FT	24 FT	X
APPROX. AREA OF SHIELDING INSTALLED (SY)	300 SY	288 SY	588 SY

* SEE NOTES 5 AND 10

Scale:

No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	By	Date
Designed	KEB	12/13	Checked	JDW 12/13
Drawn	MPC	12/13	In Charge of	RAL 12/13

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

**THE GOLD STAR
MEMORIAL HIGHWAY**

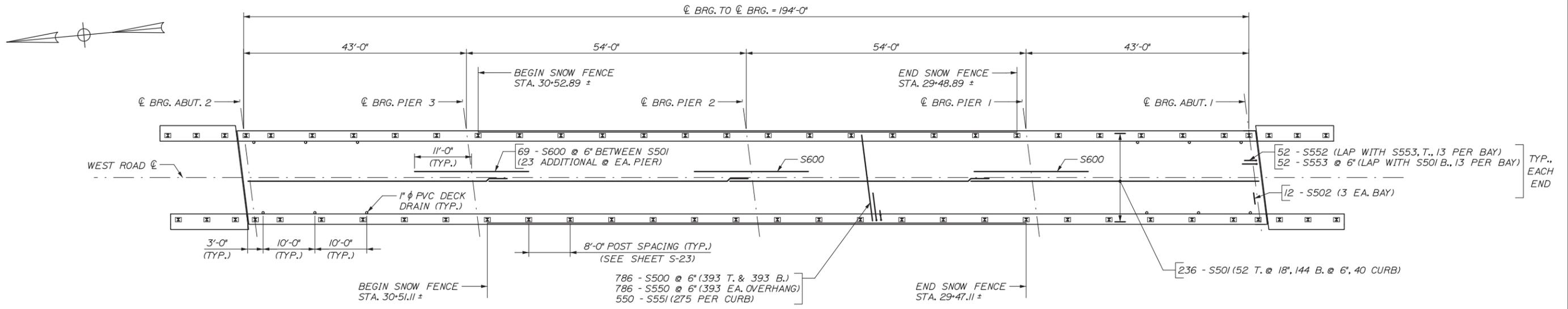
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS

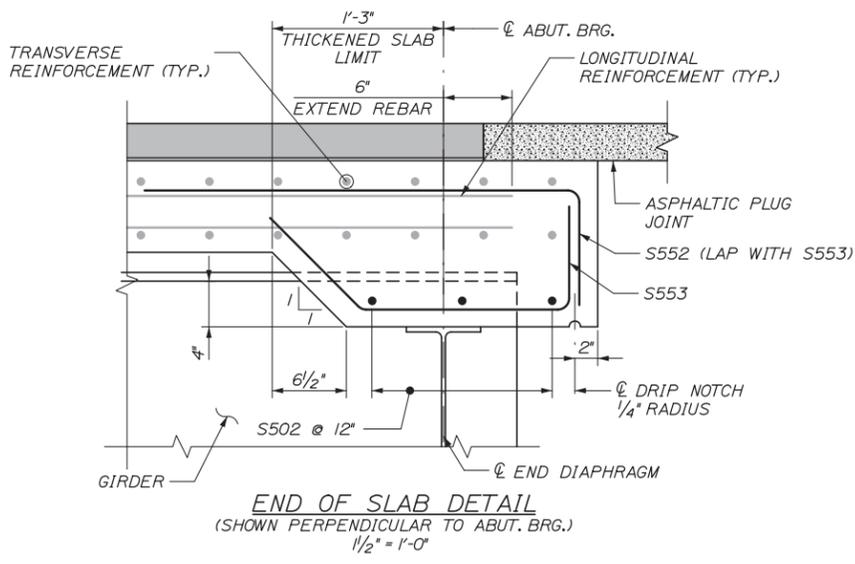
TYPICAL SECTION

SHEET NUMBER: S-20
 CONTRACT: 2014.06
 44 OF 53

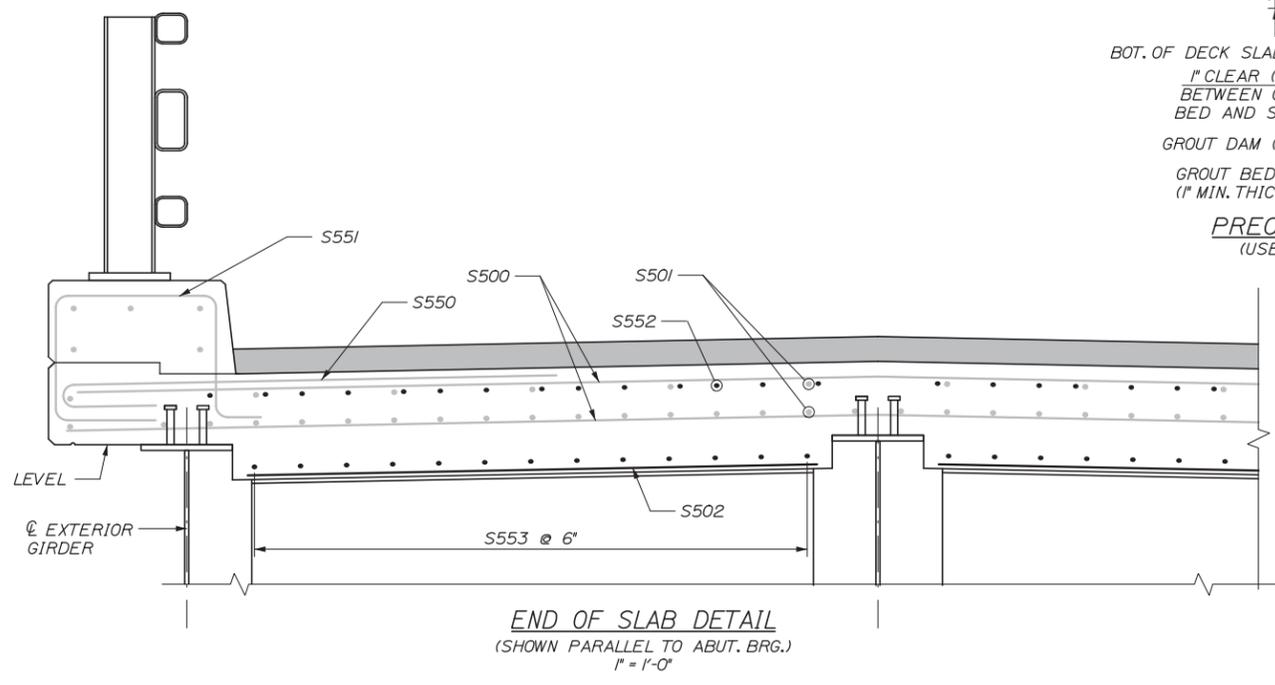
Date: 12/17/2013



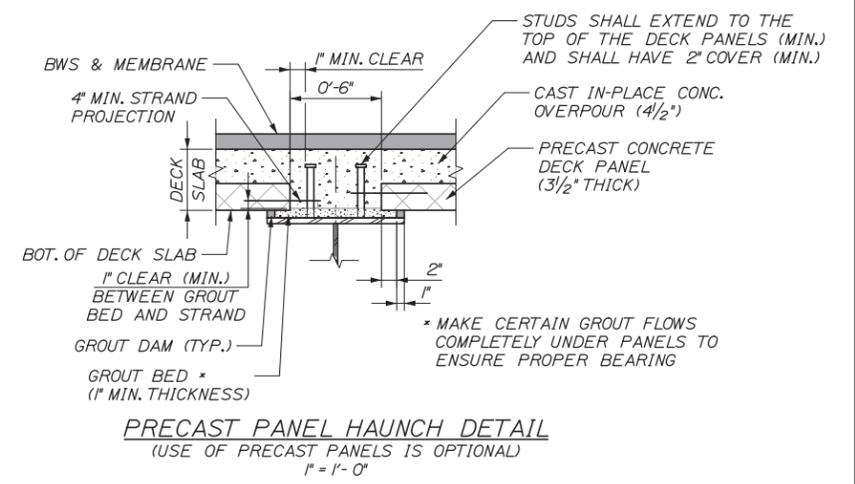
PLAN
1" = 10'-0"



END OF SLAB DETAIL
(SHOWN PERPENDICULAR TO ABUT. BRG.)
1/2" = 1'-0"



END OF SLAB DETAIL
(SHOWN PARALLEL TO ABUT. BRG.)
1" = 1'-0"



PRECAST PANEL HAUNCH DETAIL
(USE OF PRECAST PANELS IS OPTIONAL)
1" = 1'-0"

- DECK PLAN NOTES:**
- LAP LENGTH SHALL BE:
2'-7" MIN. FOR #5 BARS
3'-1" MIN. FOR #6 BARS
 - THE THEORETICAL BLOCKING USED FOR DESIGN OF THE STRUCTURE IS 2 1/2 INCHES AT THE CENTERLINE OF BEARING AT THE ABUTMENTS AND PIERS. REFER TO STANDARD DETAIL 502(02) FOR BLOCKING DETAILS.
 - THREE ADDITIONAL S551 BARS SHALL BE PLACED AT EACH RAILING POST LOCATION. SEE SHEET S-22 FOR DETAIL.
 - END OF SLAB DETAILS SHOW PRIMARY DECK REINFORCING SCREENED TO PROVIDE CLARITY.

Scale:

No.	Revision	By	Date

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HNTB

CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

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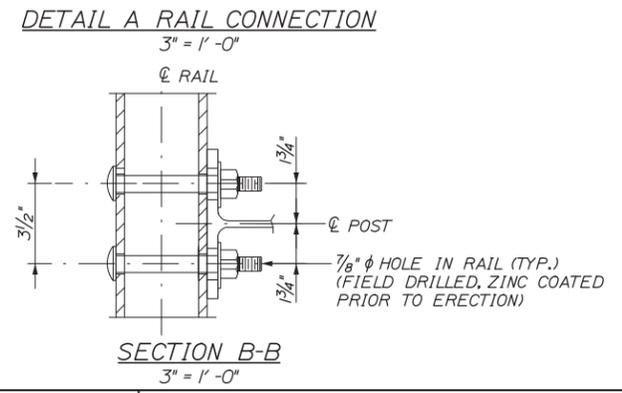
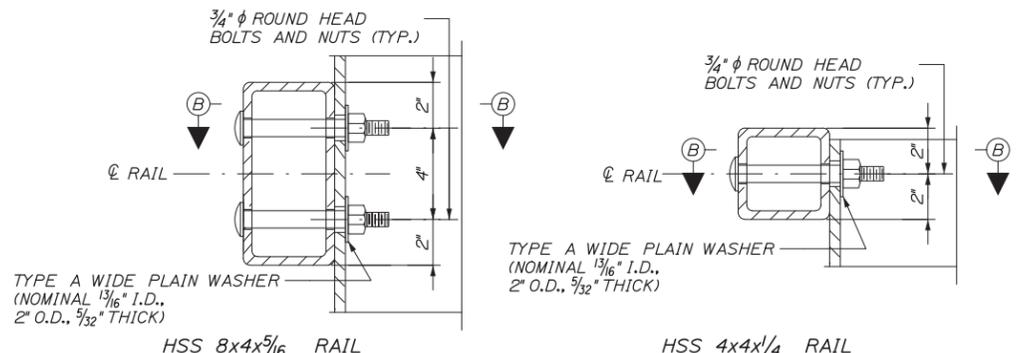
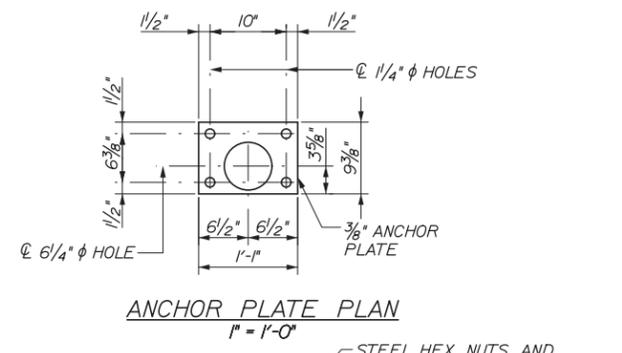
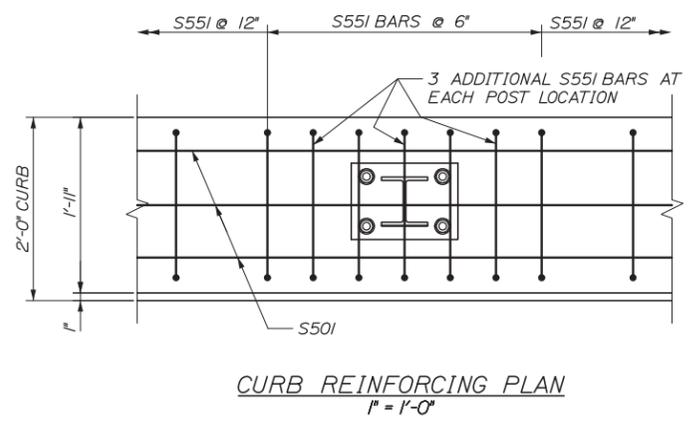
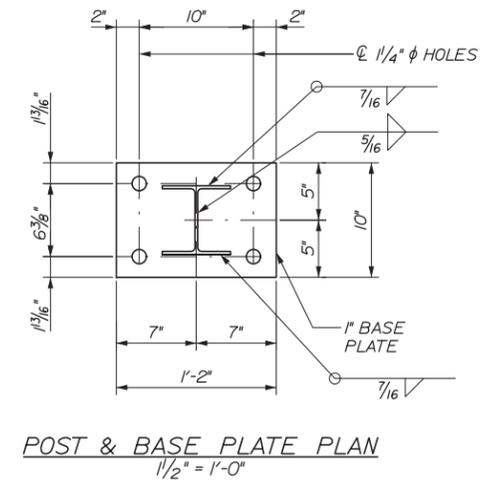
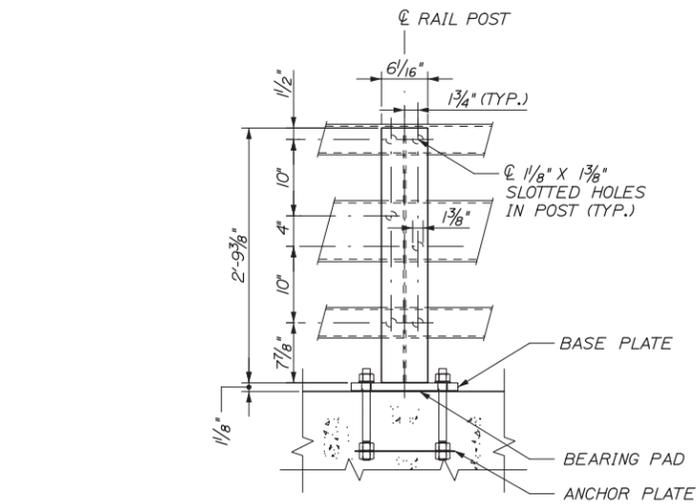
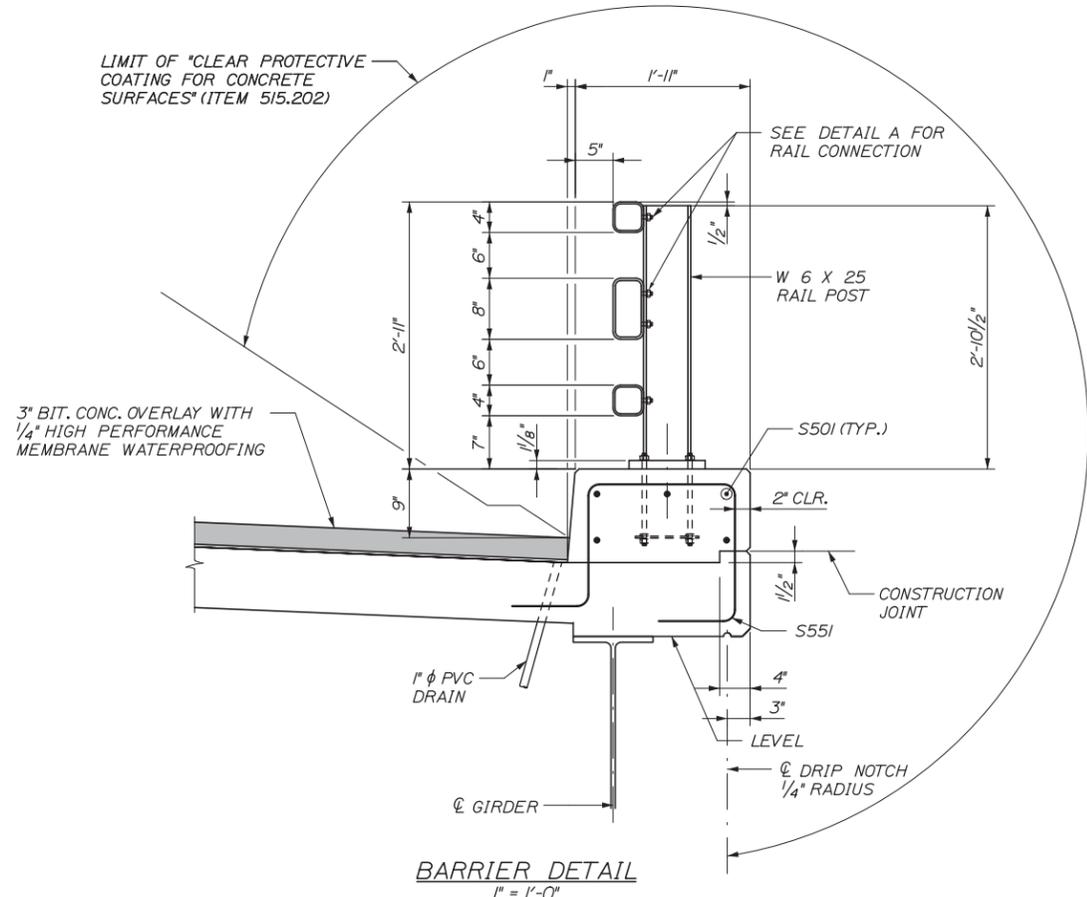
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
SUPERSTRUCTURE PLAN

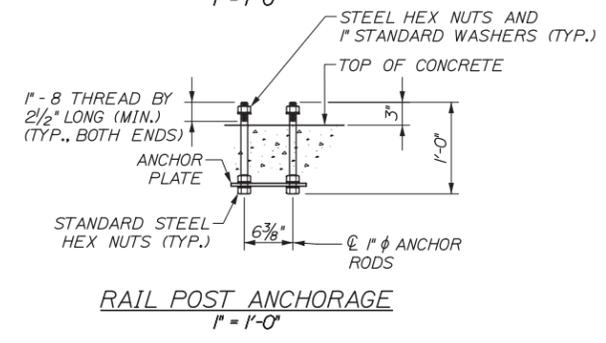
SHEET NUMBER: S-21
CONTRACT: 2014.06
45 OF 53

Date: 12/17/2013



BRIDGE RAIL MATERIAL NOTES:

1. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B. STRUCTURAL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT. LBS. AT 0 DEGREES F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES.
2. RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GRADE 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.
3. BOLTS AND MATCHING NUTS FOR RAIL-TO-POST ATTACHMENT SHALL CONFORM TO ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM 307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM F1554, Gr. 105.
4. ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE TO AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZING SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZING MATERIAL SHALL BE PROPERLY STORED.
5. PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.



Scale:

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CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.

	By	Date	By	Date
Designed	KEB	12/13	Checked	JDW 12/13
Drawn	MPC	12/13	In Charge of	RAL 12/13

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MAINE TURNPIKE

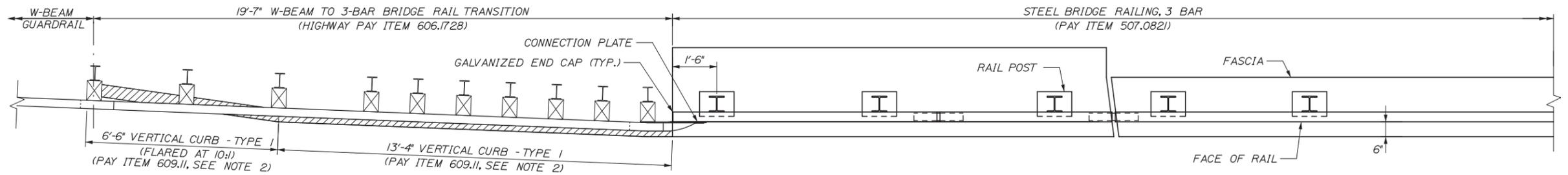
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS
SUPERSTRUCTURE DETAILS

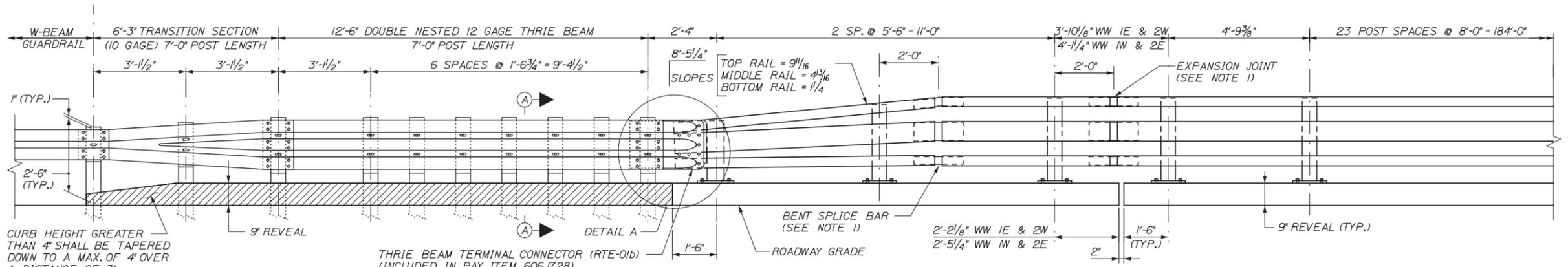
SHEET NUMBER: S-22
CONTRACT: 2014.06
46 OF 53

Date: 12/17/2013



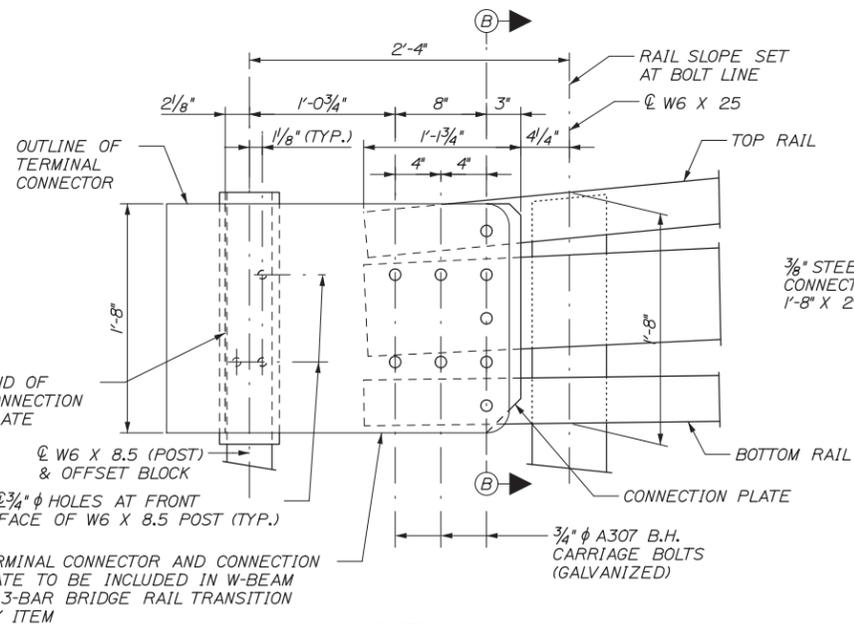
PLAN - W-BEAM TO 3-BAR BRIDGE RAIL TRANSITION

1/2" = 1'-0"



ELEVATION - W-BEAM TO 3-BAR BRIDGE RAIL TRANSITION

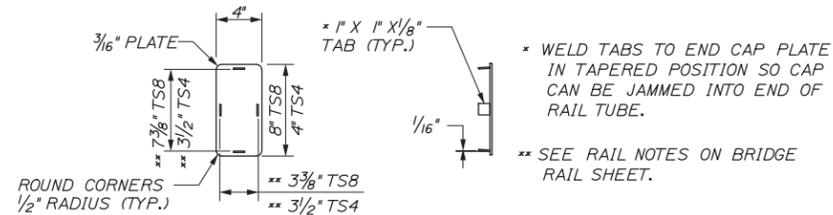
1/2" = 1'-0"



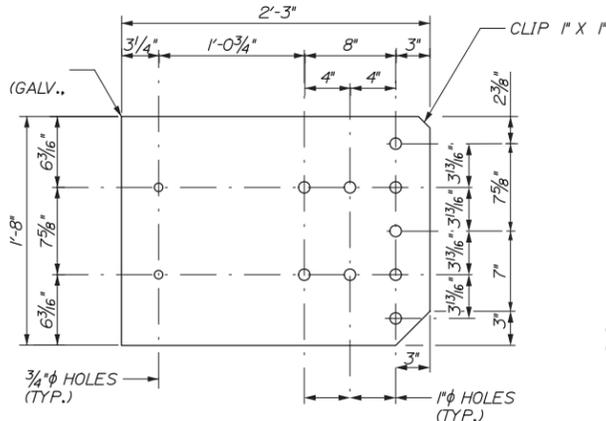
DETAIL A

(OVERLAPPING OF DOUBLE NESTED THRIE-BEAM NOT SHOWN FOR CLARITY)

1/2" = 1'-0"

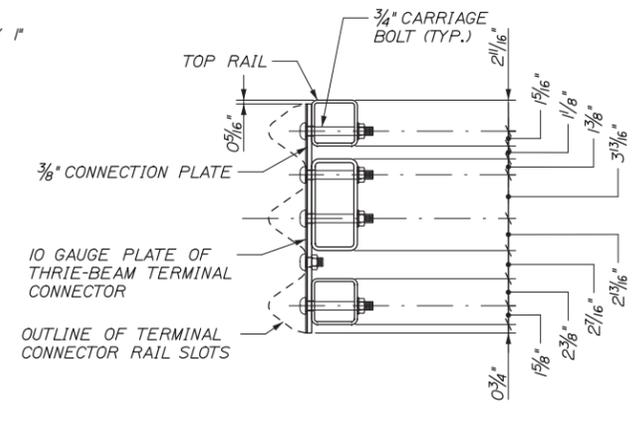


END CAP DETAILS



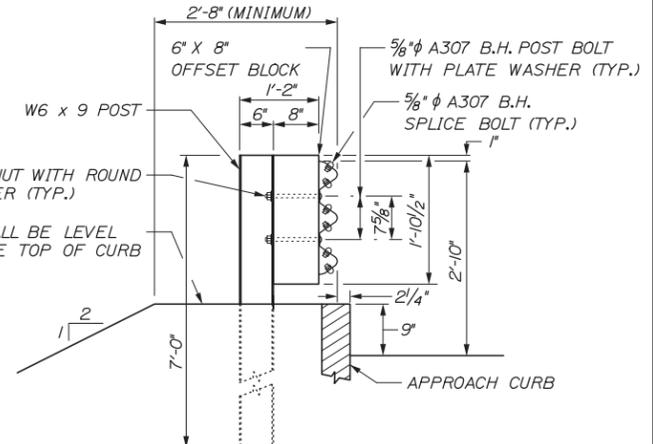
CONNECTION PLATE DETAIL

1/2" = 1'-0"



SECTION B-B (THROUGH CONNECTION PLATE)

1/2" = 1'-0"



SECTION A-A (POST RAIL ASSEMBLY)

TYPICAL AT 7'-0" DRIVEN POST LOCATIONS

3/4" = 1'-0"

NOTE

1. SEE MAINEDOT STANDARD DETAIL 507(10) FOR RAIL BAR EXPANSION JOINT DETAIL.
2. CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS. CURBING SHALL BE PAID UNDER ITEM 609.11 VERTICAL CURB-TYPE 1.

Filename: 047_BridgeRailTrans.dgn

No.	Revision	By	Date

Designed by:			
CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
By	Date	By	Date
Designed	KEB 12/13	Checked	JDW 12/13
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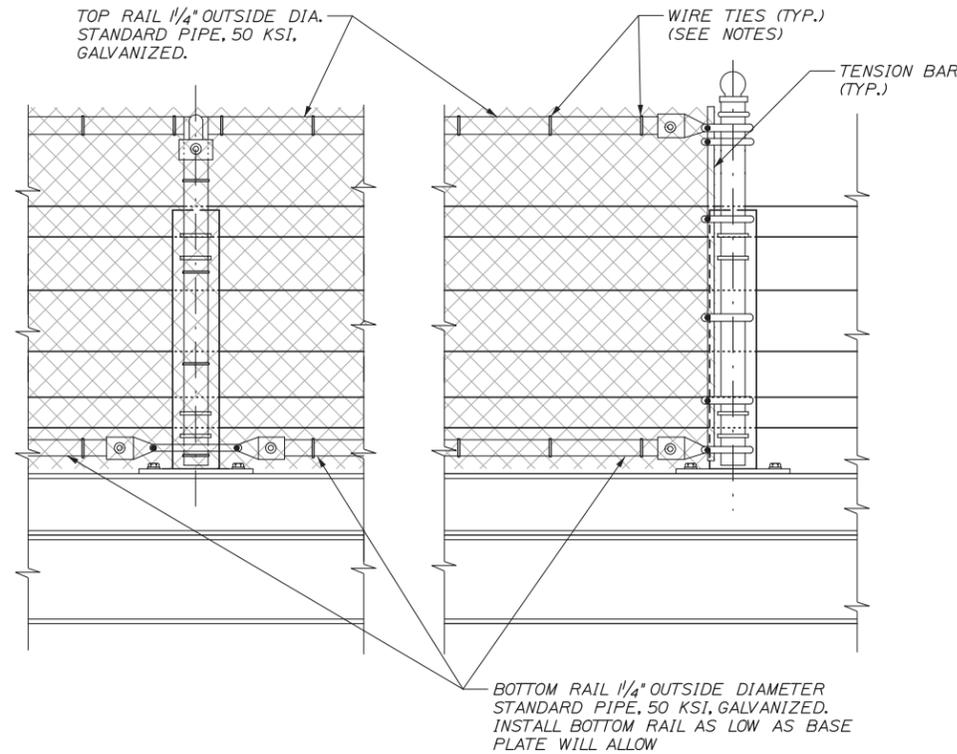
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE SUPERSTRUCTURE REPLACEMENT
 WEST ROAD UNDERPASS
 BRIDGE RAIL TRANSITION DETAILS

SHEET NUMBER: S-23
 CONTRACT: 2014.06
 47 OF 53

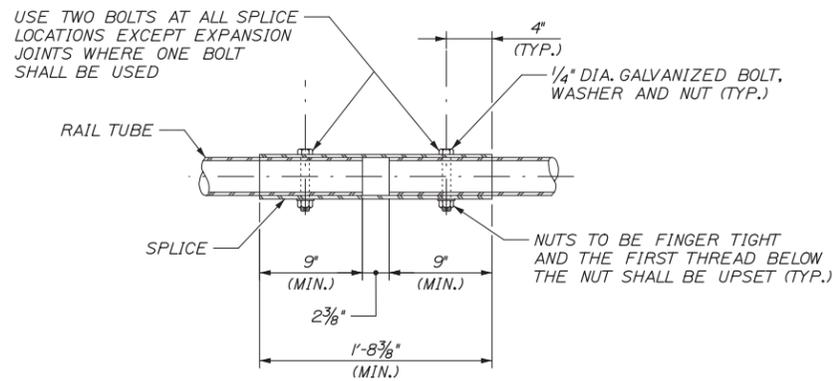
Date: 12/17/2013



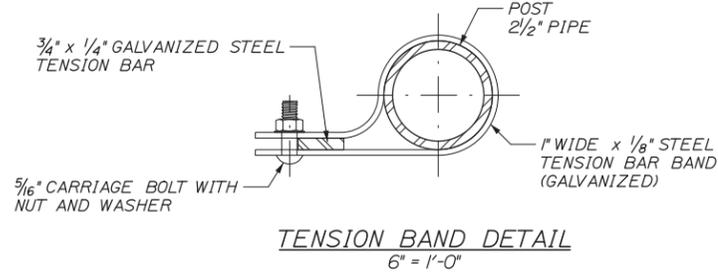
**ELEVATION
INTERIOR POST**

**ELEVATION
END POST**

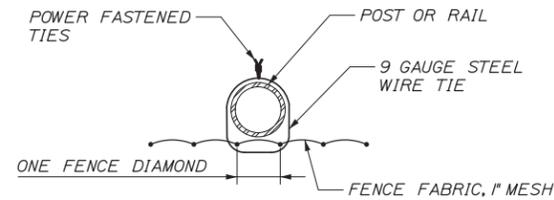
**SNOW FENCE POST ATTACHMENT
TO TWO-RAIL RAILING**
1" = 1'-0"



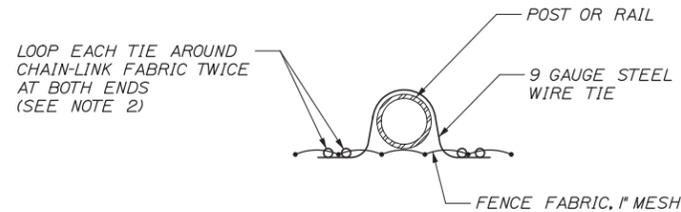
**TYPICAL RAIL SPLICE DETAIL
(TOP & BOTTOM RAIL)**
1/2" = 1'-0"



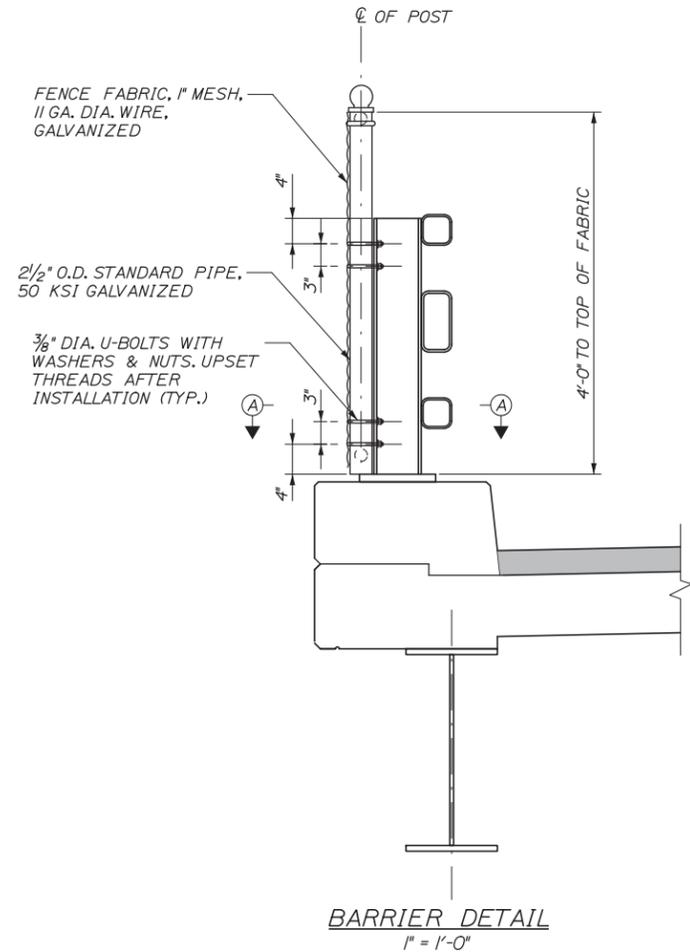
TENSION BAND DETAIL
6" = 1'-0"



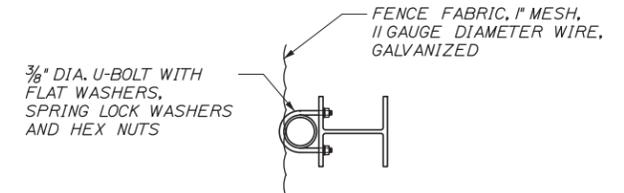
POWER FASTENED TIE
NOT TO SCALE



DOUBLE PIGTAILED TIE - ALTERNATE
NOT TO SCALE



BARRIER DETAIL
1" = 1'-0"



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

NOTES:

1. ROUND WIRE TIES SHALL BE 9 GAUGE ZINC-COATED STEEL PREFORMED TO THE RADIUS OF THE POST AND POWER-FASTENED TO WRAP 360 DEGREES AROUND THE POST AND ONE COMPLETE DIAMOND OF THE CHAIN-LINK FENCE. THE TWO ENDS SHALL BE TWISTED TOGETHER IN A CLOSE HELIX OF 1/2 MACHINE TURNS (3 FULL TWISTS) TIGHTLY AROUND THE POST AND CHAIN-LINK FABRIC. SPACE TIES @ 6' O.C. TO BOTTOM RAIL AND @ 12' O.C. TO ALL POSTS AND OTHER RAILS. TWISTED ENDS SHALL BE BENT DOWN UPON COMPLETION.
2. ALTERNATIVELY, WIRE TIES MAY BE STANDARD ROUND 9 GAUGE ZINC-COATED STEEL. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK FABRIC TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6' O.C. TO BOTTOM RAIL AND @ 12' O.C. TO ALL POSTS AND OTHER RAILS.
3. ALL BOLTS AND NUTS SHALL BE STEEL CONFORMING TO ASTM A 307 AND ASTM A 563 GRADE A RESPECTIVELY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF ANSI B18.22. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) OR AASHTO M 232 (ASTM A 153) AS APPLICABLE.
4. SEE SHEET S-21 FOR SNOW FENCE LIMITS.
5. POST CAPS SHALL BE SECURELY ATTACHED TO POSTS.

Filename: 048_SnowFence.dgn

Scale:		Designed by:	
No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Lori Z. Driscoll, P.E.			
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	MPC	12/13	RAL

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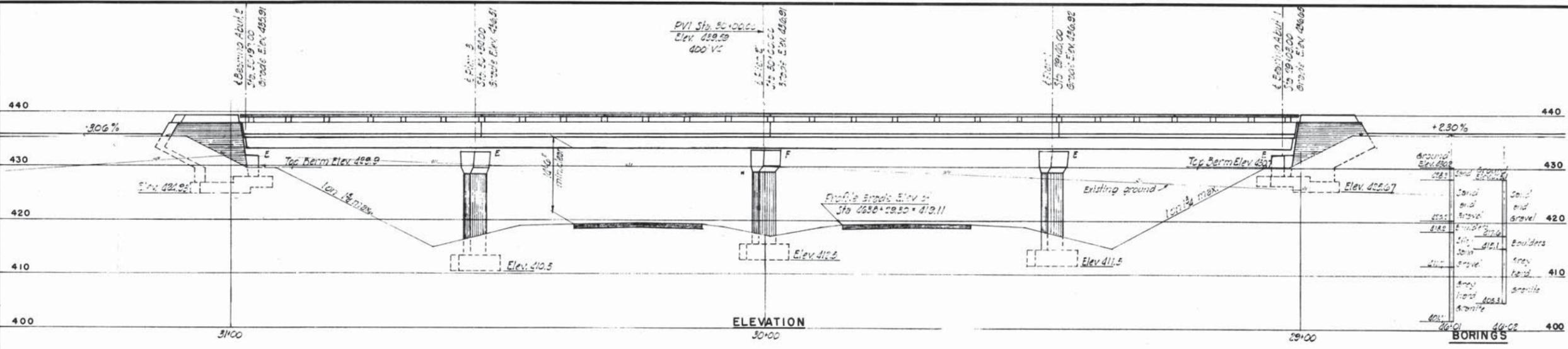
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

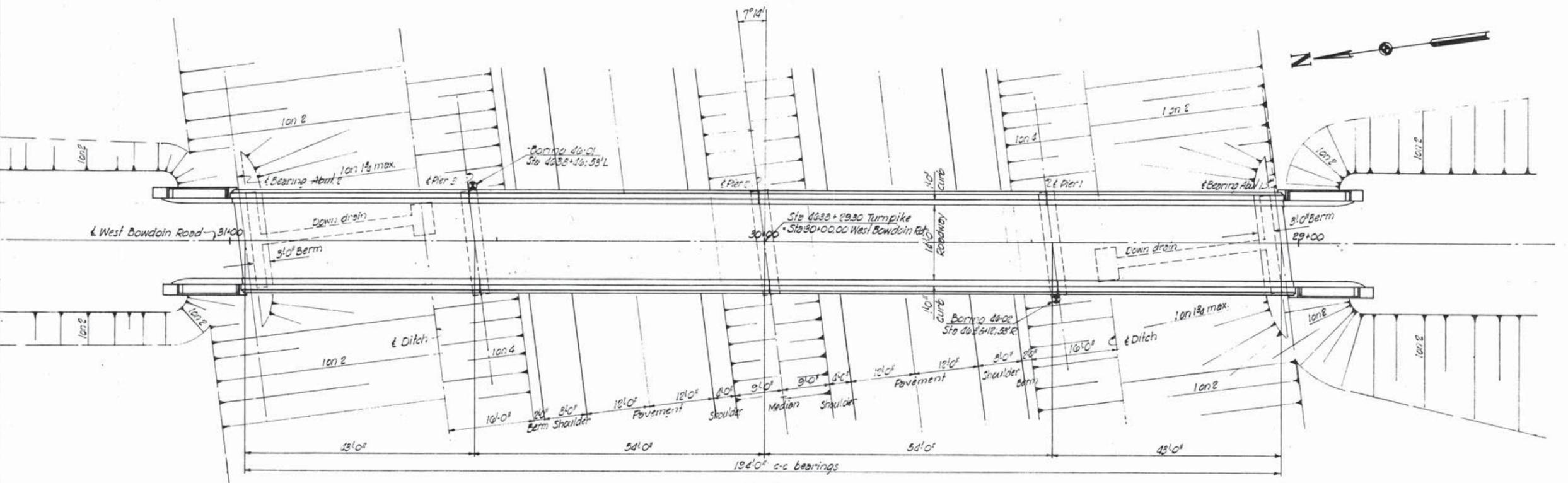
BRIDGE SUPERSTRUCTURE REPLACEMENT
WEST ROAD UNDERPASS

SNOW FENCE DETAILS

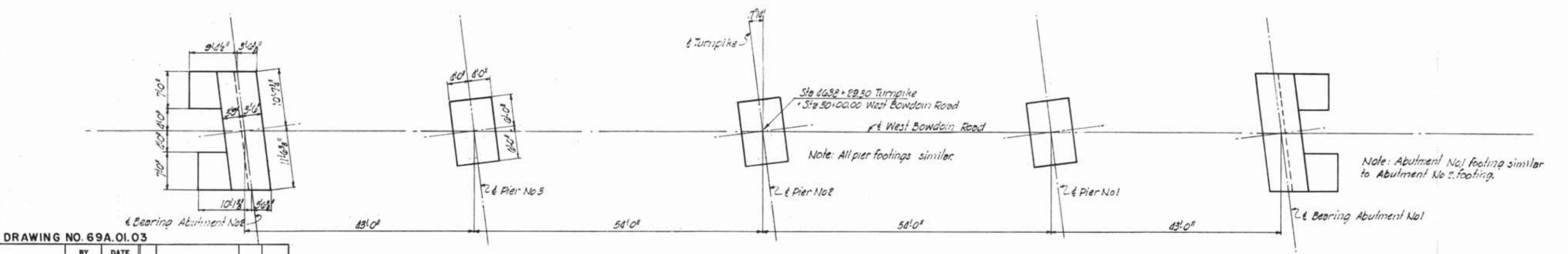
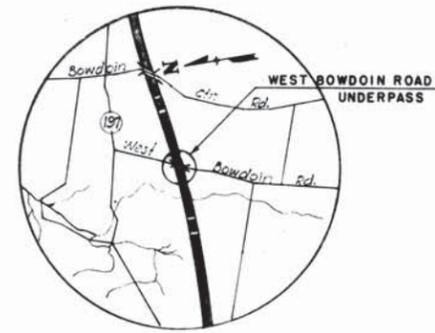
SHEET NUMBER: S-24
CONTRACT: 2014.06
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GENERAL NOTES
 Design Specifications: AASHTO (1959) with minor modifications.
 Design Live Load: H-15.
 Maximum Soil Pressure:
 Abutments: 1.1 tons/sq. ft.
 Piers: 4.5 tons/sq. ft.



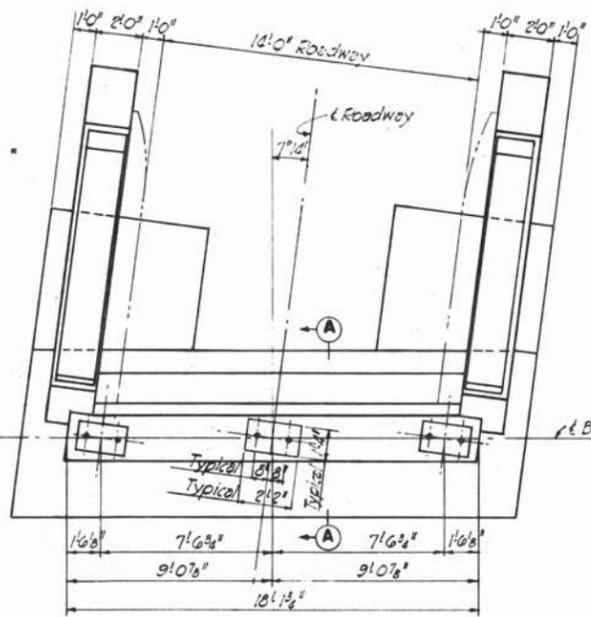
REFERENCES					
Drawing Number	TITLE	Substructure	Superstructure	Other	Notes
SD1A	Standard Abutment Details	✓	✓	✓	✓
SD2	Standard Pier Details	✓	✓	✓	✓
SD3	Abutment Drainage Details	✓			
SD4	Standard Handrail, Bearing Devices, and Miscellaneous Details	✓	✓	✓	✓
SD5	Standard Diaphragm Details	✓	✓	✓	✓
SD7	Standard Splices for STW Beams	✓	✓	✓	✓
SD11A	Type X and Y Expansion Joints	✓	✓	✓	✓
SD13	Standard Bridge Floor Cross Sections 14'0" and 30'0" Roadways	✓	✓	✓	✓



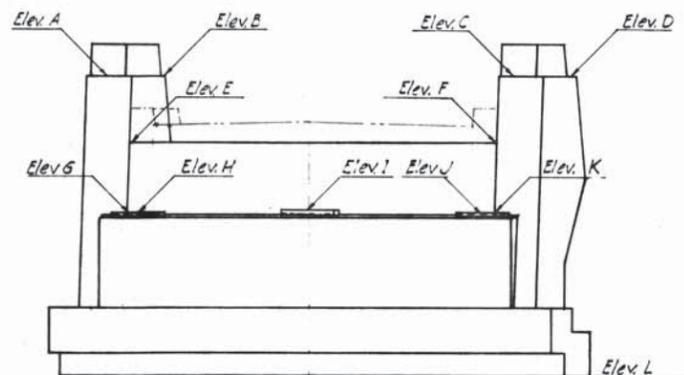
DRAWING NO. 69A.01.03

BY	DATE	REVISION	BY	DATE
DD6	6-30-59			
H.J.G.	5-5-54	1	As-Built	HBH 125-54
1DJK				

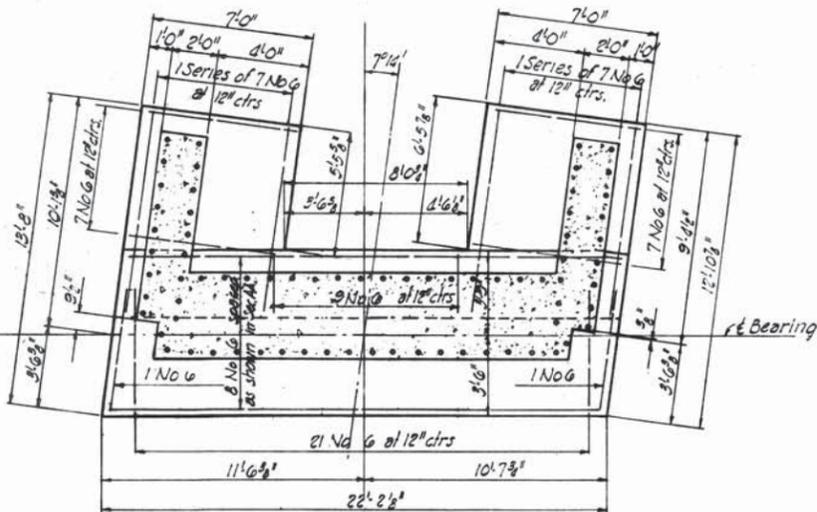
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA
 STRUCTURE NO. 69A TURNPIKE UNDER
 WEST BOWDOIN ROAD
 STATION 4638 + 29.30
GENERAL PLAN AND ELEVATION
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS
 SCALE: 3/8" = 1'-0" exact as noted
 CONTRACT NO. _____
 NEW YORK KANSAS CITY SHEET NO. 3/2 OF 282



PLAN



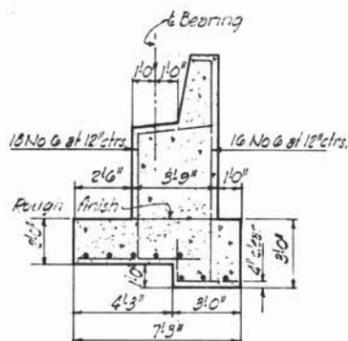
FRONT ELEVATION



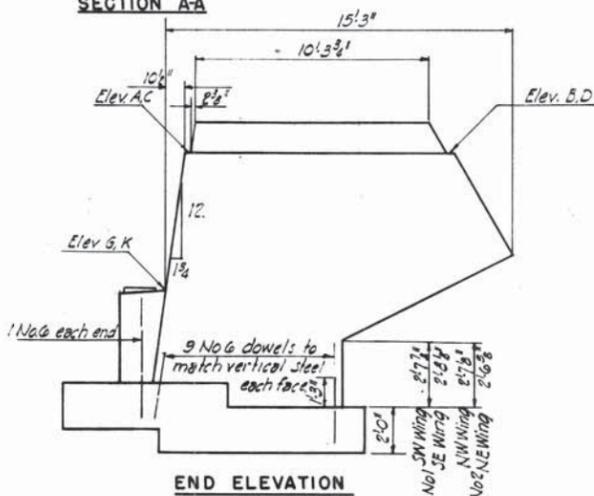
FOOTING PLAN

ABUTMENTS

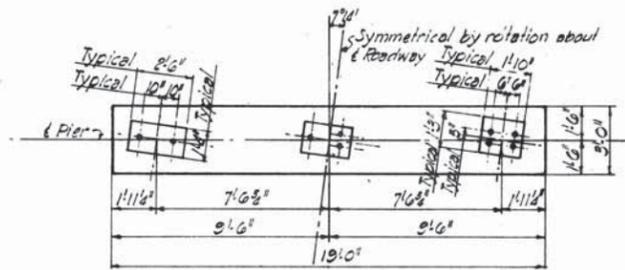
ELEVATIONS						
PI	Abut. 2	Abut. 1	PI	Pier 3	Pier 2	Pier 1
A	437.93	438.70	M	432.65	433.06	433.07
B	437.77	438.60	N	432.68	433.09	433.09
C	437.93	438.70	O	432.77	433.17	433.18
D	437.73	438.53	P	432.67	433.08	433.09
E	435.06	435.30	Q	432.65	433.06	433.07
F	435.02	435.28	R	410.5	412.5	411.5
G	432.01	432.76				
H	432.13	432.86				
I	432.20	432.94				
J	432.10	432.84				
K	432.01	432.76				
L	424.95	425.67				



SECTION AA



END ELEVATION

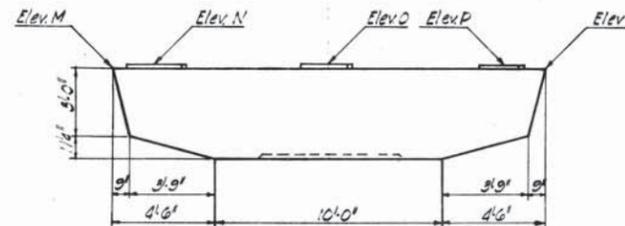


HALF CAP PLAN

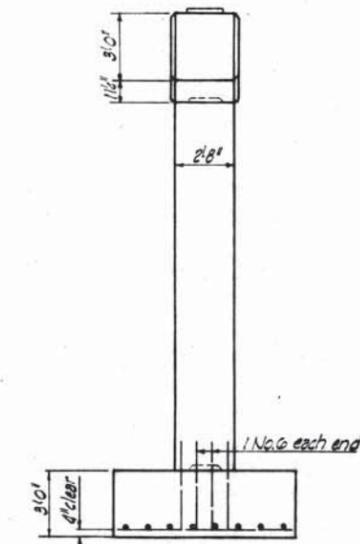
HALF CAP PLAN

PIERS 1&3

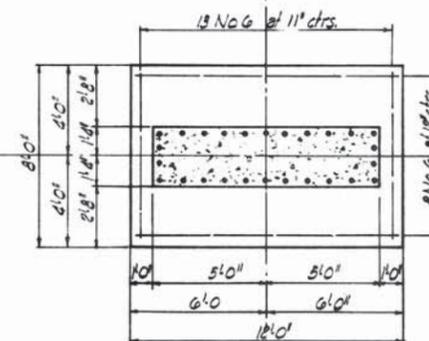
PIER 2



FRONT ELEVATION



END ELEVATION



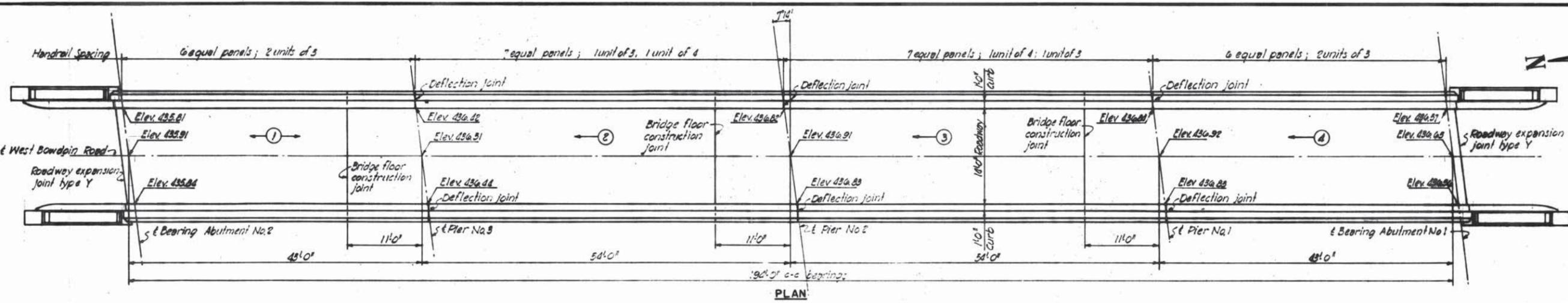
FOOTING PLAN

PIERS

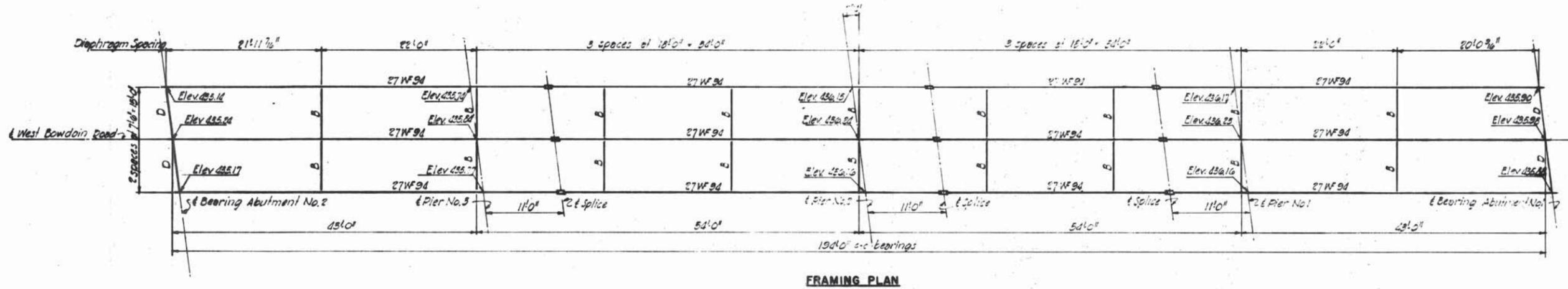
Note: Pier footing elevations shall be lowered as necessary to provide 6" minimum penetration into solid undisturbed rock.

MAINE TURNPIKE AUTHORITY	
SECTION 2 - PORTLAND TO AUGUSTA	
STRUCTURE NO. 69A	TURNPIKE UNDER
WEST BOWDOIN ROAD	4638 + 29.30
STATION	
ABUTMENTS AND PIERS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF	SCALE: 1/4" = 1'-0"
CONSULTING ENGINEERS	CONTRACT NO.
NEW YORK	KANSAS CITY
	SHEET NO. 313 OF 322

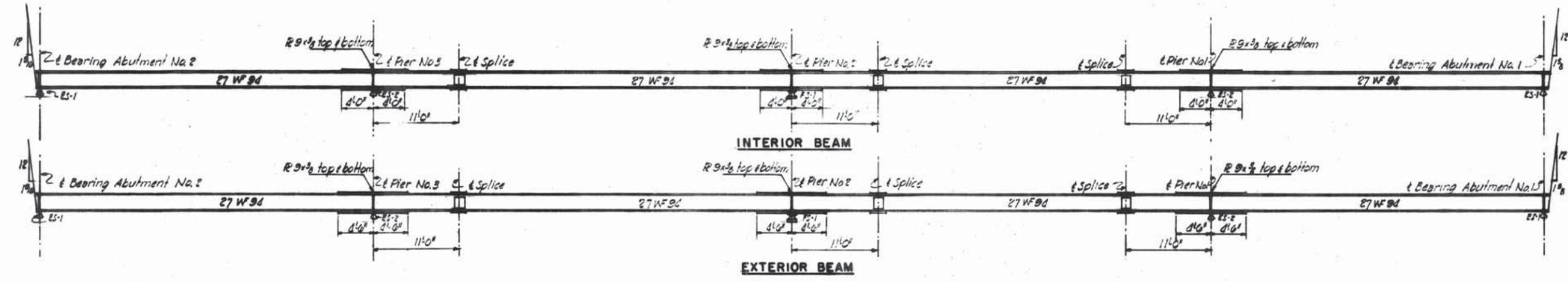
DRAWING NO. 69A.02.03			
BY	DATE		
MADE	DDG	4-28-54	
TRACED			
CHECKED	M.J.G.	5-5-54	1 As-Built MBH 12552
IN CHARGE OF	I.D.S.K.	No.	REVISION
			BY DATE



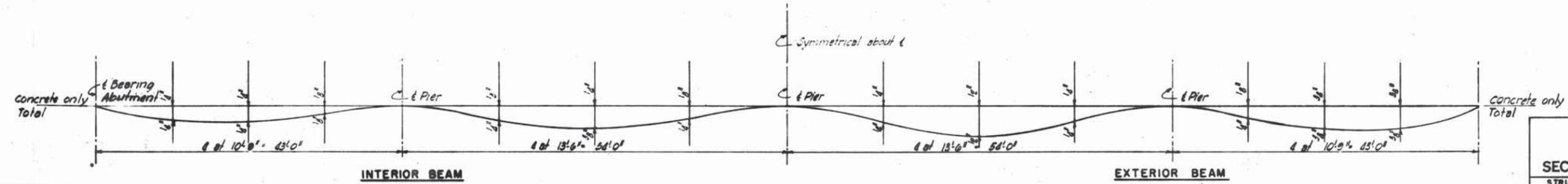
Note: Elevations shown on the plan are to top of floor. Slab is 7" noncomposite design as shown on Standard Drawing No. 13. Sequence and direction of placing concrete is noted by (2).



Note: Elevations shown on framing plan are to top of beam flanges. Marks B and D represent standard diaphragms B and D as shown on Standard Drawing No. 6.



Note: Bevels shown at ends of beams are with respect to beam axis. All bearing stiffeners are 2x 7x 4 x 3/8.



DEAD LOAD DEFLECTION DIAGRAMS
No Scale

DRAWING NO. 69A.03.03

BY	DATE			
MADE	DDG	4-19-54		
TRACED				
CHECKED	H.W.G.	5-5-54	As-Built	HBY 1/25/56
IN CHARGE OF	I.D.S.K.	No.	REVISION	BY DATE

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 2 - PORTLAND TO AUGUSTA
 STRUCTURE NO. 69A TURNPIKE UNDER
 WEST BOWDOIN ROAD
 STATION 4638+28.30
 SUPERSTRUCTURE
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY
 SCALE: 1/4" = 1'-0"
 CONTRACT NO. _____
 SHEET NO. 314 OF 322