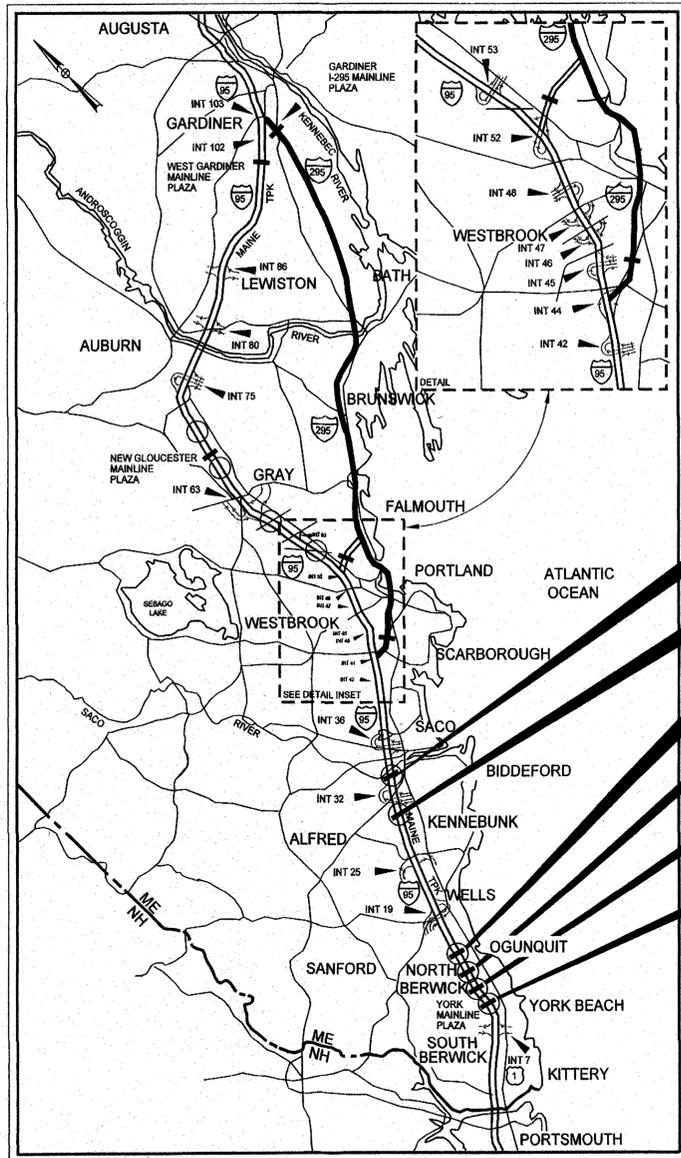


Date: 1/7/2019

Filename: \\vhb\d\bl\pro\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MF\Dot\MaineDOT\BRIDGE\MSTA\1-Mountain\_001\_title\_01.dgn



LOCATION MAP



THE GOLD STAR MEMORIAL HIGHWAY

# MAINE TURNPIKE AUTHORITY

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

## CONTRACT 2019.06

**BRIDGE REPAIRS**  
**MOUNTAIN ROAD UNDERPASS (MM 10.60)**  
**CLAY HILL ROAD UNDERPASS (MM 11.90)**  
**NORTH BERWICK ROAD UNDERPASS (MM 13.80)**

**CULVERT REPAIRS**  
**OGUNQUIT RIVER CULVERT (MM 15.20)**  
**SECOND THACHER BROOK CULVERT (MM 31.25)**  
**THIRD THACHER BROOK CULVERT (MM 32.20)**

Sheet No.	Description
1	Cover Sheet
2	Estimated Quantities
3	General Notes
4-6	Maintenance of Traffic Details (3 Sheets)
7-9	Mountain Road Underpass Maintenance of Traffic (3 Sheets)
10	Clay Hill Road Bridge Hit Maintenance of Traffic
11-14	North Berwick Underpass Maintenance of Traffic (4 Sheets)
15	Concrete Repair Typical Details
<b>Structure 1 Mountain Road Underpass</b>	
16	Bridge Plan and Elevation
17	Abutment Removal Details
18	Abutment No. 1 Repairs and Modifications
19	Abutment No. 2 Repairs and Modifications
20	Modified Backwall Details
21	Modified Backwall Reinforcing
22	Pier Repairs
23	Bridge Typical Section
24	Construction Phasing
25	Deck End Details
26	Deck End Reconstruction Details
27	Deck End Reinforcing Details
28	Concrete Transition Barrier Details and Reinforcing
29	Bridge Drain Grate Modification
30	Bridge Drain Replacement
31	Slope Protection Details
32	Reinforcing Steel Schedule
<b>Structure 2 Clay Hill Road Underpass</b>	
33	Cross Frame Replacement Details
<b>Structure 3 North Berwick Road Underpass</b>	
34	Bridge Plan and Elevation
35	Abutment No. 1 Repairs
36	Pier Repairs
37	Bridge Typical Section
38	Construction Phasing
39	Joint Repairs
<b>Structure 4 Ogunquit River Culvert</b>	
40	General Plan
41	Culvert Repairs
<b>Structure 5 Second Thacher Brook Culvert</b>	
42-43	Plan and Elevation (2 Sheets)
<b>Structure 6 Third Thacher Brook Culvert</b>	
44-45	Plan and Elevation (2 Sheets)

Contract 2019.06

APPROVED: MAINE TURNPIKE AUTHORITY

*Peter S. Merfeld*  
 PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER  
 01-16-19  
 DATE

*Stephen R. Tartre*  
 STEPHEN R. TARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE  
 01/16/19  
 DATE



*Gordon M. Edington*  
 Gordon M. Edington, P.E.  
 Consultant Project Manager

1/11/2019  
 DATE



*Roland A. Lavalley*  
 Roland A. Lavalley, P.E., PLS  
 Vice President  
 Director of Operations  
 Sheets 10 and 33

1/11/2019  
 DATE

Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\002\_qnty\_01.dgn

ESTIMATED QUANTITIES									
ITEM NO.	DESCRIPTION	UNIT	Mountain Road	Clay Hill Road	N. Berwick Road	Ogunquit River	Thacher Brook (2nd)	Thacher Brook (3rd)	Quantity Total
202.17	Removing Existing Structural Concrete (18 CY)*	LS	1						1
202.202	Removing Pavement Surface	SY	565		855				1,420
202.203	Pavement Butt Joints	SY	220						220
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	CY	25						25
304.10	Aggregate Subbase Course - Gravel	CY	20						20
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	TON	115		130				245
409.15	Bituminous Tack Coat, Applied	GAL	25		26				51
502.219	Structural Concrete, Abutments and Retaining Walls (5CY)*	LS	1						1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (15 CY)*	LS	1						1
502.701	Bridge Drain Grate Modification	EA	3						3
502.702	Replace Bridge Drain	EA	1						1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	LB	5,800						5,800
503.15	Epoxy-Coated Reinforcing Steel, Placing	LB	5,800						5,800
504.8	Structural Steel Repair	LS		1					1
508.14	High Performance Waterproofing Membrane (Mountain Road) (565 SY)*	LS	1						1
508.14	High Performance Waterproofing Membrane (N. Berwick Road) (680 SY)*	LS			1				1
508.15	Membrane Waterproofing (15 SY)*	LS	1						1
511.07	Cofferdam (Ogunquit River)	LS				1			1
511.07	Cofferdam (Second Thacher Brook)	LS					1		1
511.07	Cofferdam (Third Thacher Brook)	LS						1	1
515.201	Pigmented Protective Coating for Concrete Surfaces	SY	305		420				725
515.202	Clear Protective Coating for Concrete Surfaces	SY	220		23	475	25	58	801
518.10	Abutment Repairs	SF	280						280
518.17	Culvert Repairs	SF				30	10	20	60
518.171	Special Concrete Repair	LS				1			1
518.20	Pier Repairs	SF	150		10				160
518.391	Repairing Granite Curb Joint and Bedding Mortar	LF	11						11
518.4	Epoxy Injection Crack Repair	LF			5	160	50	150	365
518.43	Parapet Joint Repair	LF			130				130
518.48	Reseal Joints	LF	140		100	160			400
518.49	Repointing Wingwall Joints	LF					45	50	95
518.511	Full Depth Concrete Repair	SF					30		30
518.75	Fascia and Overhang Repairs	SF	18						18
518.80	Partial Depth Concrete Deck Repairs	SF	255		120				375
518.92	Slope Protection Repairs	SF	45						45
518.93	Parapet Repairs	SF			200				200
518.94	Curb Repairs	SF	10						10
518.98	Reset Coping Blocks	EA				4			4
520.23	Asphaltic Plug Joint	LF	54		33				87
520.234	Expansion Device - Silicone Coated and Pre-Compressed Seal	LF	15						15
520.2401	Bridge Joint Modification - Type I	LS			1				1
525.40	Repointing Coping Blocks	LF				74			74
526.34	Permanent Concrete Transition Barrier	EA	4						4
606.1721	Bridge Transition - Type I	EA	4						4
606.48	Single Galvanized Steel Post	EA	16						16
627.712	White or Yellow Pavement Marking Line	LF	260		240				500
629.05	Hand Labor, Straight Time	HR	40	10	20	20	10	10	110
631.10	Air Compressor (Including Operator)	HR	40		20	20	10	10	100
631.11	Air Tool (Including Operator)	HR	40	10	20	20	10	10	110
631.12	All Purpose Excavator (Including Operator)	HR	40		20				60
631.171	Truck - Small (Including Operator)	HR	40	10	20	20	10	10	110
631.36	Foreman	HR	40	10	20	20	10	10	110
639.18	Field Office, Type A	EA				1			1
652.3691	Maintenance of Traffic Control for Mountain Road Underpass	LS	1						1
652.3692	Maintenance of Traffic Control for Clay Hill Road Underpass	LS		1					1
652.3693	Maintenance of Traffic Control for N. Berwick Road Underpass	LS			1				1
652.3694	Maintenance of Traffic Control for Ogunquit River Culvert	LS				1			1
652.3695	Maintenance of Traffic Control for Second Thacher Brook Culvert	LS					1		1
652.3696	Maintenance of Traffic Control for Third Thacher Brook Culvert	LS						1	1
652.41	Portable-Changeable Message Sign	EA				4			4
656.75	Temporary Soil Erosion and Water Pollution Control (Mountain Road)	LS	1						1
656.75	Temporary Soil Erosion and Water Pollution Control (N. Berwick Road)	LS			1				1
656.75	Temporary Soil Erosion and Water Pollution Control (Ogunquit River)	LS				1			1
656.75	Temporary Soil Erosion and Water Pollution Control (Second Thacher Brook)	LS					1		1
656.75	Temporary Soil Erosion and Water Pollution Control (Third Thacher Brook)	LS						1	1
659.10	Mobilization	LS				1			1

\* Quantities are Estimated Only

Scale: AS NOTED

Designed by:



VANASSE HANGEN BRUSTLIN, INC.  
500 Southborough Dr.  
Suite 105B  
South Portland, ME 04106  
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FAX (207) 253-5596



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT NO. 2019.06  
2019 SOUTHERN BRIDGE REPAIRS  
ESTIMATED QUANTITIES

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 2  
2 OF 45

MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019  
Filename: \\vnb\qbl\proj\SPortland\55200.00 2019 Southern Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\003\_gen\_notes\_01.dgn

**SPECIFICATIONS**

Design: AASHTO LRFD Bridge Design Specifications, 2018.  
 Construction: State of Maine Department of Transportation Standard Specifications, Revision of December 2014.  
 State of Maine Department of Transportation Standard Details for Highways and Bridges, Revision of December of 2014, with all revisions thereto.  
 AASHTO LRFD Bridge Construction Specifications, Fourth Edition

**NEW MATERIALS**

Concrete (Unless noted otherwise) ..... Class AAA - Modified  
 Reinforcing Steel ..... ASTM A615/A615M, Grade 60  
 Structural Steel:  
 All Material (except as noted) ..... ASTM A709/A709M, Grade 36  
 High Strength Bolts (except as noted) ..... ASTM A325, Type 1

**BASIC DESIGN STRESSES (NEW MATERIALS)**

Concrete ..... f'c = 4,500 psi  
 Reinforcing Steel ..... fy = 60,000 psi  
 Structural Steel:  
 ASTM A 709/A 709M, Grade 36 ..... Fy = 36,000 psi  
 ASTM A 325 ..... Fu = 120,000 psi

**MOUNTAIN ROAD UNDERPASS BRIDGE**

Design Live Load (for existing components) ..... HS 20-44  
 AADT ..... 1,575  
 Design Speed (MPH) (for existing) ..... 35  
 Functional Class ..... Local

**CLAY HILL ROAD UNDERPASS**

Design Live Load (for existing components) ..... HS 20-44  
 AADT ..... 765  
 Design Speed (MPH) (for existing) ..... 35  
 Functional Class ..... Rural Local

**NORTH BERWICK ROAD UNDERPASS**

Design Live Load (for existing components) ..... HS 25  
 AADT ..... 860  
 Design Speed (MPH) (for existing) ..... 35  
 Functional Class ..... Local

**OGUNQUIT RIVER CULVERT**

Design Live Load (for existing components) ..... HS 25  
 AADT ..... 25,600 NB, 25,650 SB  
 Design Speed (MPH) (for existing) ..... 70  
 Functional Class ..... Principal Arterial Interstate

**SECOND THACHER BROOK CULVERT**

Design Live Load (for existing components) ..... HS 25  
 AADT ..... 24,550 NB, 27,680 SB  
 Design Speed (MPH) (for existing) ..... 70  
 Functional Class ..... Principal Arterial Interstate

**THIRD THACHER BROOK CULVERT**

Design Live Load (for existing components) ..... HS 25  
 AADT ..... 35,230 NB, 35,680 SB  
 Design Speed (MPH) (for existing) ..... 70  
 Functional Class ..... Principal Arterial Interstate

**GENERAL CONSTRUCTION NOTES**

- All details shall be in conformance with Maine Department of Transportation (MaineDOT) 2014 Standard Details for Highways and Bridges with all updates and MaineDOT Best Management Practices for Erosion and Sediment Control latest revision unless otherwise included in these plans.
- All dimensions, elevations, and other information shown in these plans are based on the original construction drawings and limited field measurements. Prior to starting work at any location, the Contractor shall field verify all required information. The Contractor shall be responsible for the accuracy and fit-up of all work.
- There are no permanent or temporary easements associated with this project. All work shall be completed within the existing Right of Way.
- The Contractor shall submit his proposed staging area(s) and field trailer location to the Resident for approval prior to starting work.
- Any portions of the existing bridges removed by the Contractor shall become the property of the Contractor. The steel portions of the existing bridges may be coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the work of this project.
- For additional details referenced or not shown in these drawings, see the State of Maine, Department of Transportation Standard Details, Highways and Bridges, December 2014 with updates.
- Copies of the As-Built plans are posted on the Maine Turnpike Authority website at [www.maineturnpike.com/project-and-planning/construction/contracts](http://www.maineturnpike.com/project-and-planning/construction/contracts). The completeness and accuracy of these plans is not guaranteed.
- Chamfer all exposed new concrete edges  $\frac{3}{4}$ " unless otherwise noted.

**EROSION CONTROL NOTES**

- All temporary and permanent erosion control devices shall be installed in accordance with the Maine Department of Transportation Best Management Practices.

**UTILITIES NOTES**

- Existing utilities on these plans were compiled from existing plans and various other sources. Locations are not guaranteed to be accurate nor is it guaranteed that all utilities are shown. No separate or additional compensation will be allowed to the Contractor due to any variance between the data shown on the plans and the actual field conditions encountered. No work shall be started until the owners of the various utilities are notified by the Contractor of the proposed construction. The Contractor is also required to call Dig Safe at 1-888-344-7233 at least 72 hours prior to the start of the work.
- 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. Excavation 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.
- Contractor shall protect all existing utilities from damage during construction as directed by the Resident and approved by the utility owners.

**SUPERSTRUCTURE NOTES**

- Mortar for bedding and for joints in granite curb on bridges where required shall be an approved non-shrink mortar.

Scale: AS NOTED

Designed by:



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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
 2019 SOUTHERN BRIDGE REPAIRS  
 GENERAL NOTES

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
 CONTRACT: 2019.06

SHEET NUMBER: 3  
 3 OF 45

**MAINTENANCE OF TRAFFIC GENERAL NOTES**

1. *Flagger may be used to set up and remove the temporary traffic signals along Mountain Road and North Berwick Road. Any additional use shall require approval of the Resident and shall be incidental to the Maintenance of Traffic Control item for that bridge.*
2. *All traffic control equipment and devices shall conform to the latest edition of the Maine Department of Transportation (MaineDOT) Standard Specifications, Maine Turnpike Authority (MTA) Supplemental Specifications, contract specifications and applicable traffic control standards and practices.*
3. *All traffic control equipment and layouts shall conform to the 2009 edition of the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), chapter 6. All traffic control signs, sign support structures, channelizing devices, flashing arrow panels (FAP), portable changeable message signs (PCMS), and other traffic control equipment along the roadside shall meet or exceed NCHRP 350 test level 3 (TL-3) requirements regardless of where implemented on the project.*
4. *All traffic control signs shall have ASTM 4956 Type IV, Type VIII or Type IX super high intensity or prismatic fluorescent retroreflective sheeting and shall be maintained in like-new condition. All orange construction signs shall be fluorescent orange with Type VIII, IX or XI sheeting. Placement of signs shall be adjusted to avoid obstructing existing signs and to ensure proper sight lines to the construction signs as determined by the Resident.*
5. *Any signs, equipment, or devices found to be damaged or unserviceable shall be replaced at the Contractor's expense.*
6. *During night operations, temporary work lighting shall be directed away from approaching lanes of traffic.*
7. *Temporary lane closures will be required, with advanced approval, whenever work will occur within four feet of the I-95 traveled way. Temporary lane closures shall be removed if no work is occurring. See Special Provisions for more information.*
8. *All lane closures shall require approval of the Resident a minimum of two working days in advance of the lane closure.*
9. *Contractor shall provide advanced notice of all changes in traffic patterns, to include lane closures, with PCMS at least seven working days prior to the implementation of the traffic pattern change. PCMS for bridge work shall be placed within 500 feet of the bridges. PCMS for turnpike mainline road work shall be placed at least 500 feet in advance of the work site at a location approved by the Resident.*
10. *In the event that lane closure(s) begin to cause back-ups in through traffic of more than five minutes, the Contractor shall deploy the additional signs as indicated in the single lane closure set-up details.*
11. *Approach ends of temporary concrete barrier shall be placed outside of the highway clear zone (minimum 34 feet from the traveled way along I-95) or protected by temporary impact attenuators or with guardrail overlaps as approved by the Resident.*
12. *At the completion of the work at each bridge, the temporary traffic controls shall be removed.*

**TURNPIKE SHOULDER CLOSURES**

CONSTRUCTION SIGN SUMMARY				
Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
G20-2		Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		4 - Black on Orange
W20-1 (AHEAD)				48"x48" 36"x36" 4 - Black on Orange 2 - Black on Orange (For Flagging)
W21-5aL				48"x48" 4 - Black on Orange
W21-5aR				48"x48" 4 - Black on Orange
W21-5bL				48"x48" 4 - Black on Orange
W21-5bR				48"x48" 4 - Black on Orange

**TEMPORARY SINGLE AND DOUBLE LANE CLOSURES**

CONSTRUCTION SIGN SUMMARY				
Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
CS-3		7" 7" 7"	4" 4"	48"x48" 4 - Black on Orange
G20-2		Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		48"x24" 4 - Black on Orange
G20-5aP				36"x24" 4 - Black on Orange
R2-11(60)				48"x60" 4 - Black on White
R2-6aP				36"x24" 4 - Black on White
R2-12				36"x54" 4 - Black on White

**TEMPORARY SINGLE AND DOUBLE LANE CLOSURES (CONT.)**

CONSTRUCTION SIGN SUMMARY				
Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
W3-4		Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		48"x48" 4 - Black on Orange
W3-5(60)				48"x48" 4 - Black on Orange
W4-2(L)				48"x48" 4 - Black on Orange
W4-2(R)				48"x48" 4 - Black on Orange
W20-1 (1 MILE)				48"x48" 4 - Black on Orange
W20-4				36"x36" 2 - Black on Orange
W20-5L				48"x48" 4 - Black on Orange
W20-5R				48"x48" 4 - Black on Orange
W20-5aL				48"x48" 2 - Black on Orange
W20-5aR				48"x48" 2 - Black on Orange
W20-7				36"x36" 2 - Black on Orange

**ABBREVIATIONS FOR ALL WORK ZONE PLANS**

BWLL = BROKEN WHITE LANE LINE  
 SWEL = SOLID WHITE EDGE LINE  
 SYEL = SOLID YELLOW EDGE LINE

Date: 1/11/2019

Filename: \\vib\proj\SPortland\55200.00 2019 Southern Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\004\_workzone\_01.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

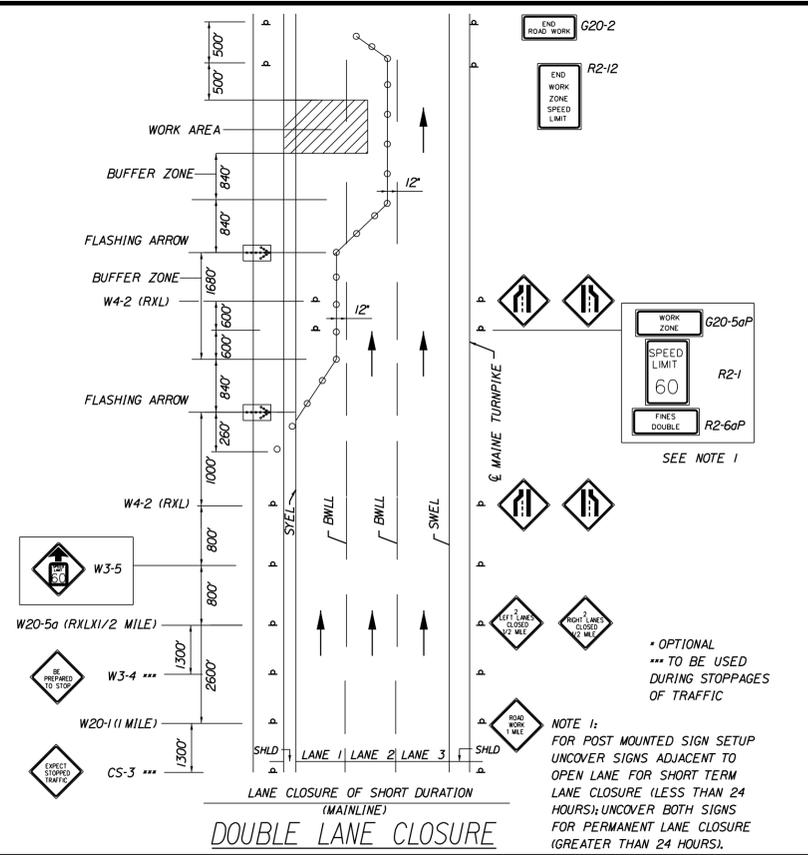
MTA PROJECT NO. 2019.06  
 2019 SOUTHERN BRIDGE REPAIRS  
 MAINTENANCE OF TRAFFIC DETAILS  
 (1 OF 3)

VHB: 55200.01  
 CONTRACT: 2019.06

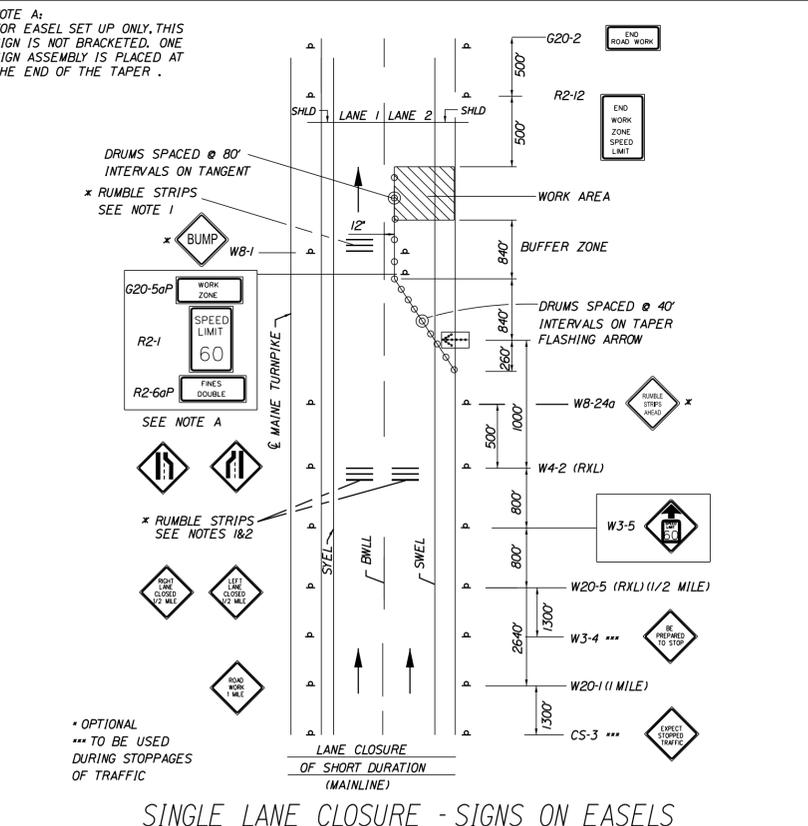
SHEET NUMBER: 4  
 4 OF 45

Date: 1/11/2019

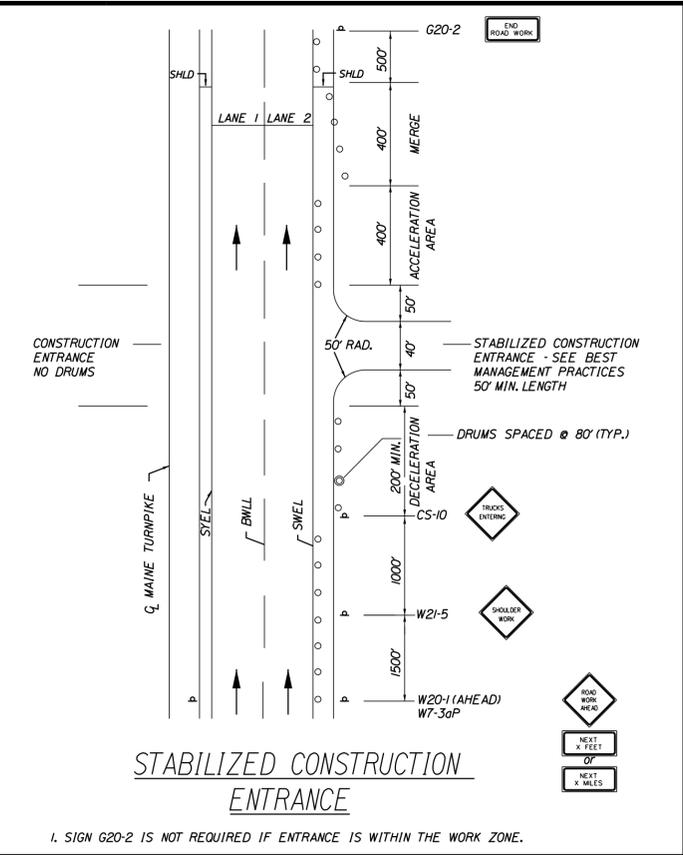
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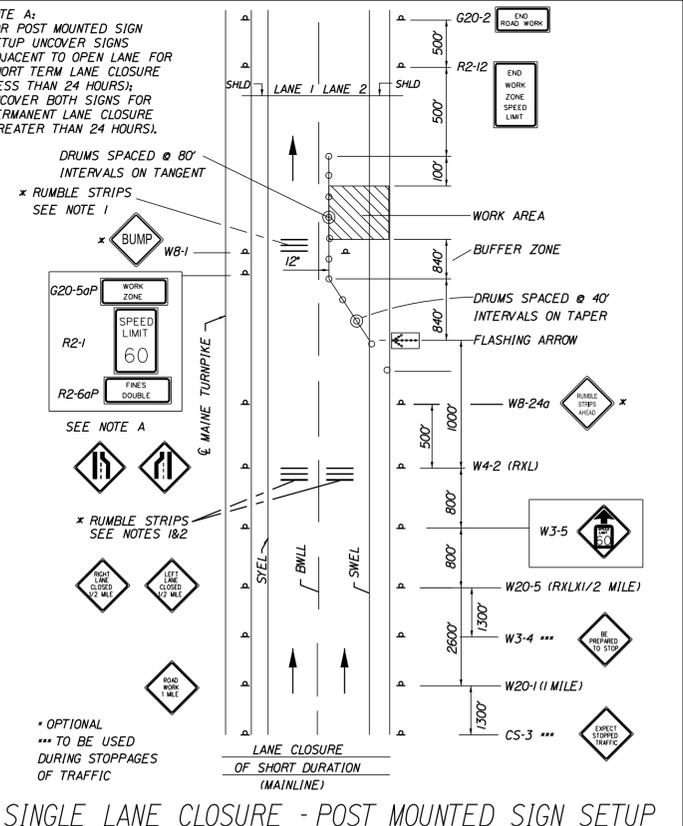
DOUBLE LANE CLOSURE



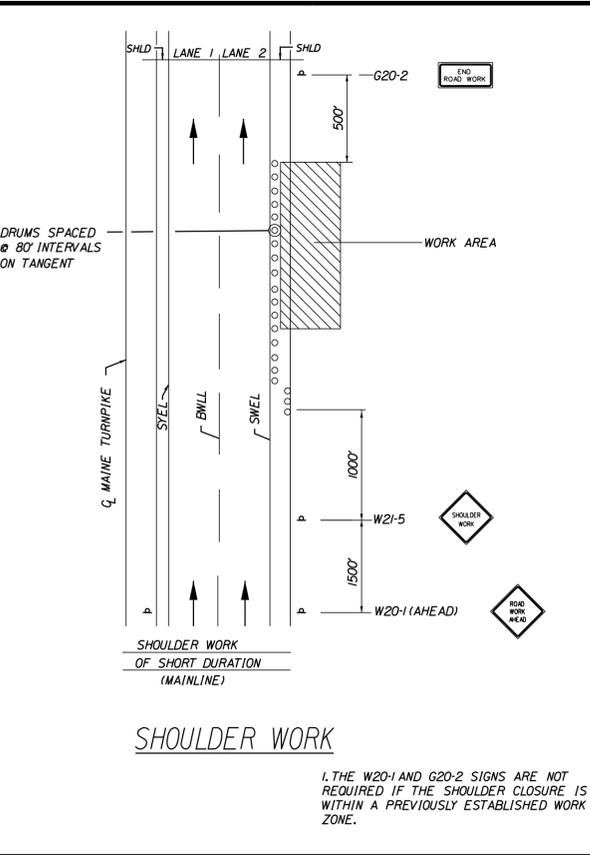
SINGLE LANE CLOSURE - SIGNS ON EASELS



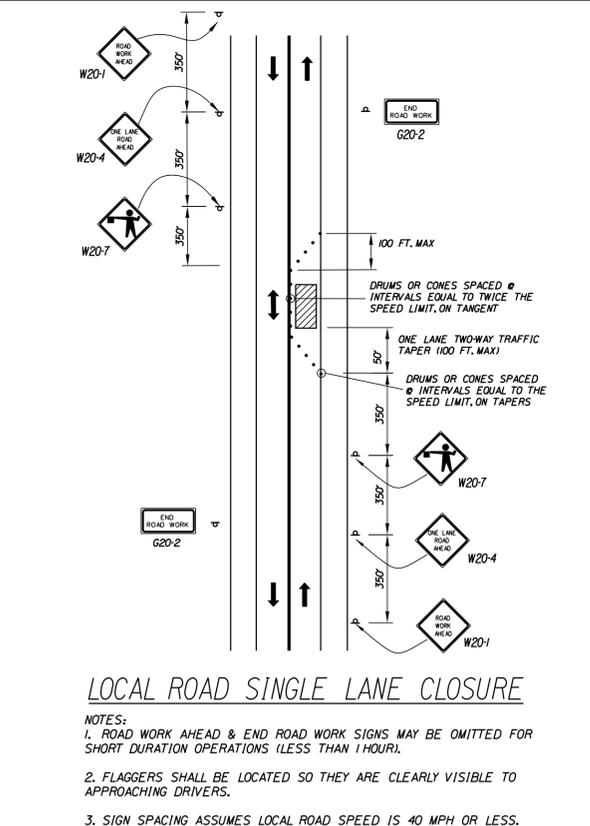
STABILIZED CONSTRUCTION ENTRANCE



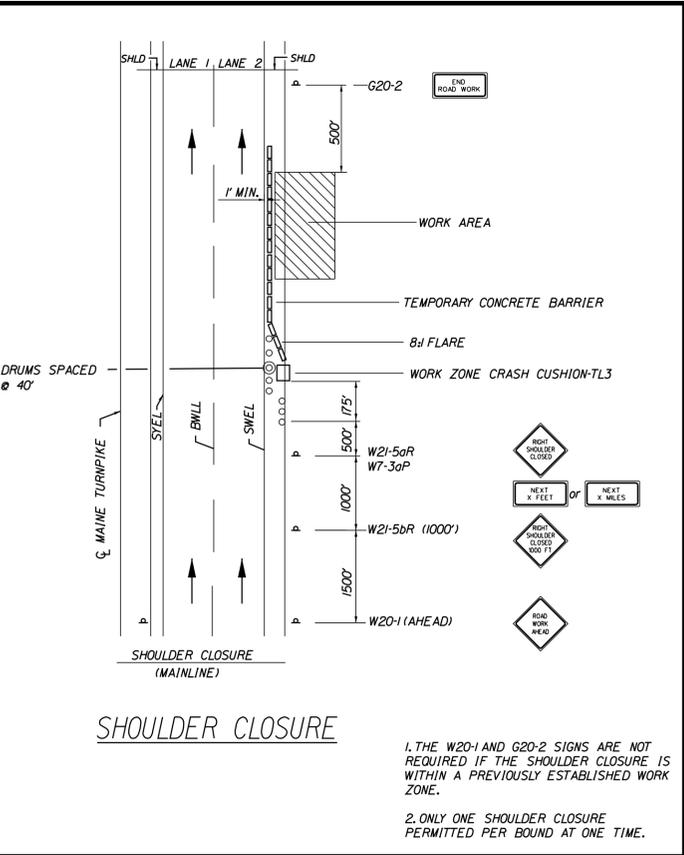
SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP



SHOULDER WORK



LOCAL ROAD SINGLE LANE CLOSURE



SHOULDER CLOSURE

**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 ON THE MAINE TURNPIKE SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.341 - WORK ZONE CRASH CUSHION - TL-3.
- SPEED LIMIT, STOP, YIELD AND EXIT SIGNS SHALL BE A MINIMUM OF 5' ABOVE THE PAVEMENT.
- WORK ZONE SPEED LIMIT ASSEMBLY MAY BE REPLACED WITH AN AUTOMATED WORK ZONE SPEED LIMIT SIGN (ITEM 652.451)

**ABBREVIATIONS FOR ALL M.O.T. PLANS**

BWLL = BROKEN WHITE LANE LINE  
 SWEL = SOLID WHITE LANE LINE  
 SYEL = SOLID YELLOW LANE LINE  
 TBWLL = TEMPORARY BROKEN WHITE LANE LINE  
 TDWEL = TEMPORARY DOTTED WHITE EDGE LINE  
 TSWEL = TEMPORARY SOLID WHITE EDGE LINE  
 TSWLL = TEMPORARY SOLID WHITE LANE LINE  
 TSYCL = TEMPORARY SOLID YELLOW CENTER LINE

**TEMPORARY RUMBLE STRIP NOTES**

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

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington				
Designed	By	Date	By	Date
Drawn	JAR	1/11/19	TSB	1/11/19

VANASSE HANGEN BRUSTLIN, INC.  
 500 Southborough Dr.  
 Suite 105B  
 South Portland, ME 04106  
 TEL (207) 889-3150  
 FAX (207) 253-5596

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
 2019 SOUTHERN BRIDGE REPAIRS  
 MAINTENANCE OF TRAFFIC DETAILS  
 (2 OF 3)

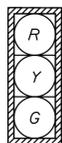
VHB: 55200.01 SHEET NUMBER: 5  
 CONTRACT: 2019.06 5 OF 45





Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\008\_TempSig\_02.dgn Date: 1/11/2019

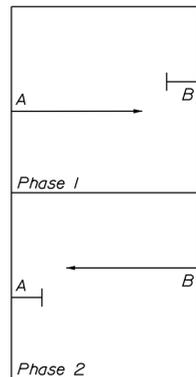
**PROPOSED TEMPORARY INDICATIONS**



A1, A2, B1, B2

Note:  
All indications shall be 12" light emitting diodes (LED's) with 5" louvered backplates

**DETECTOR SCHEDULE**



**PROPOSED POST MOUNTED SIGNS**



R10-6  
24" x 36"  
2-Proposed

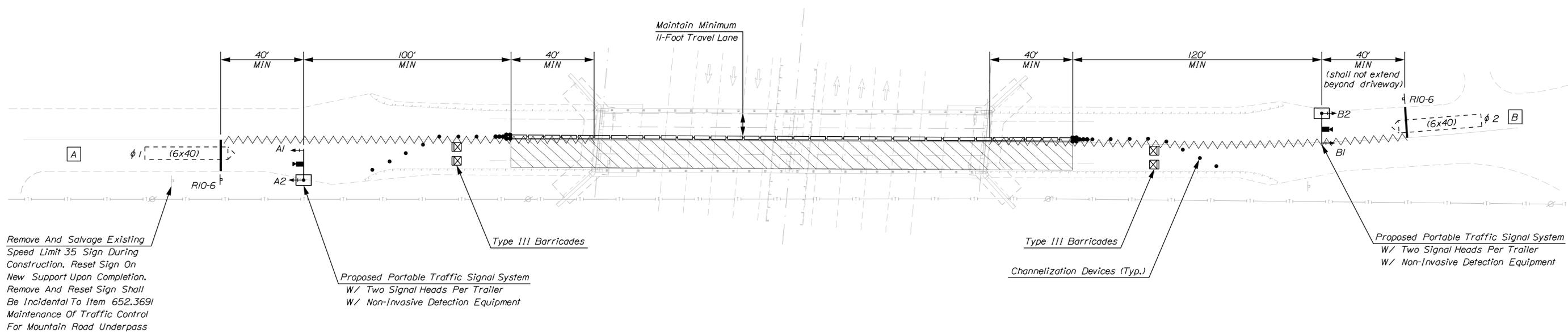
**PROPOSED TEMPORARY NEMA 4 PHASE SIGNAL PHASING AND TIMING**

ITEM / PHASE	1	2
Min Green	10	10
Extension	4	4
Maximum 1	24	24
Maximum 2	-	-
Vehicle Clear	4	4
Red Clear	14	14
Pedestrian Walk	-	-
Pedestrian Clearance	-	-
Flash	FR	FR
Recall	OFF	OFF
Detector	NL	NL

**Notes:**

L = Locking  
NL = Non-Locking  
FR = Flash Red

The contractor shall set timing of the temporary traffic signal per timing data provided. Signal timing adjustments shall be approved by the Resident and accomplished as directed by the Resident. Payment for all signal timing adjustments shall be incidental to the Maintenance of Traffic Control Item.



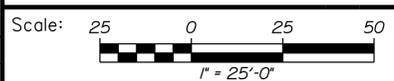
Remove And Salvage Existing Speed Limit 35 Sign During Construction. Reset Sign On New Support Upon Completion. Remove And Reset Sign Shall Be Incidental To Item 652.369I Maintenance Of Traffic Control For Mountain Road Underpass

Proposed Portable Traffic Signal System W/ Two Signal Heads Per Trailer W/ Non-Invasive Detection Equipment

2019 CONSTRUCTION DESIGN VOLUMES	
75 →	← 115

**Legend:**

	Construction Area		Portable Traffic Signal Trailer
	Portable Concrete Barrier		Detection Zone
	Channelization Devices		Detection Camera
	Traffic Attenuator		Black-Out Existing Pavement Marking
	Type 3 Barricade		



Designed by:

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

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South Portland, ME 04106  
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**THE GOLD STAR MEMORIAL HIGHWAY**

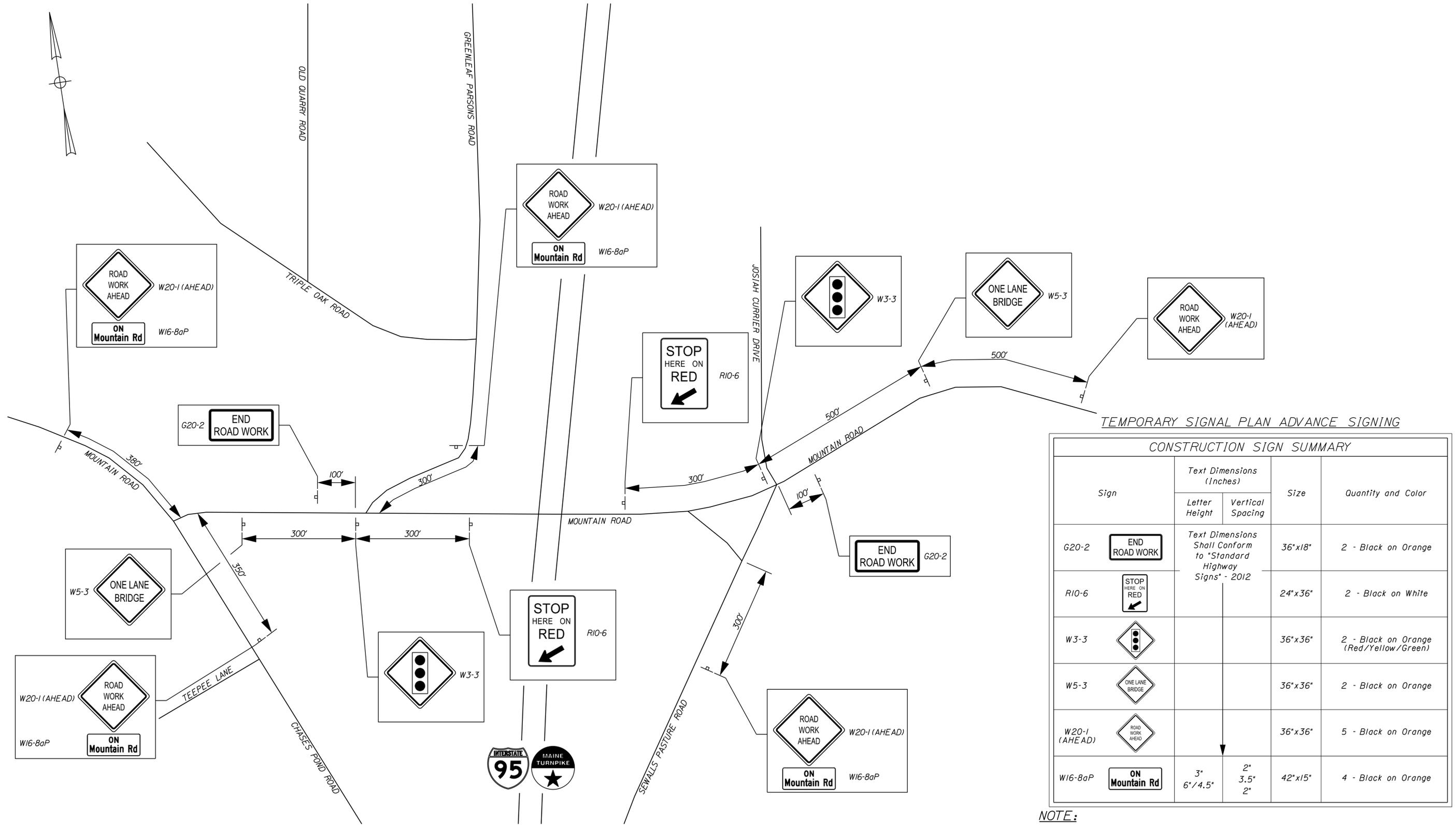
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
TEMPORARY SIGNAL PLAN  
PHASE 2

VHB: 55200.01 SHEET NUMBER: 8  
CONTRACT: 2019.06 8 OF 45

Date: 1/11/2019

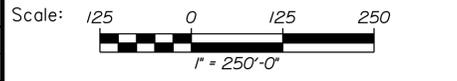
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**CONSTRUCTION SIGN SUMMARY**

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
G20-2 	Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		36"x18"	2 - Black on Orange
R10-6 			24"x36"	2 - Black on White
W3-3 			36"x36"	2 - Black on Orange (Red/Yellow/Green)
W5-3 			36"x36"	2 - Black on Orange
W20-1 (AHEAD) 			36"x36"	5 - Black on Orange
W16-8aP 	3" 6"/4.5"	2" 3.5" 2"	42"x15"	4 - Black on Orange

**NOTE:**  
Advance signing shall remain in place for both Phase 1 and Phase 2 Temporary Signal Plans.



Designed by:



No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
TEMPORARY SIGNAL PLAN  
ADVANCED SIGNING

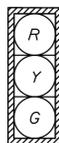
VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 9  
9 OF 45



Filename: \\vnb\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\2-NBerwick\011\_TempSig\_01.dgn Date: 1/11/2019

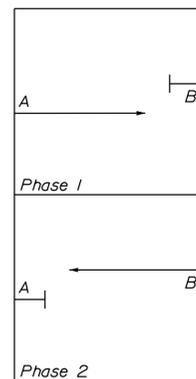
**PROPOSED TEMPORARY INDICATIONS**



A1, A2, B1, B2

Note:  
All indications shall be 12" light emitting diodes (LED's) with 5" louvered backplates

**DETECTOR SCHEDULE**



**PROPOSED POST MOUNTED SIGNS**



R10-6  
24"x36"  
2-Proposed

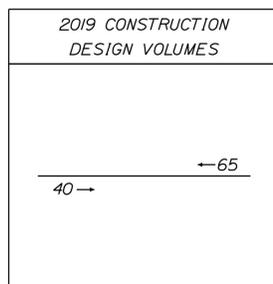
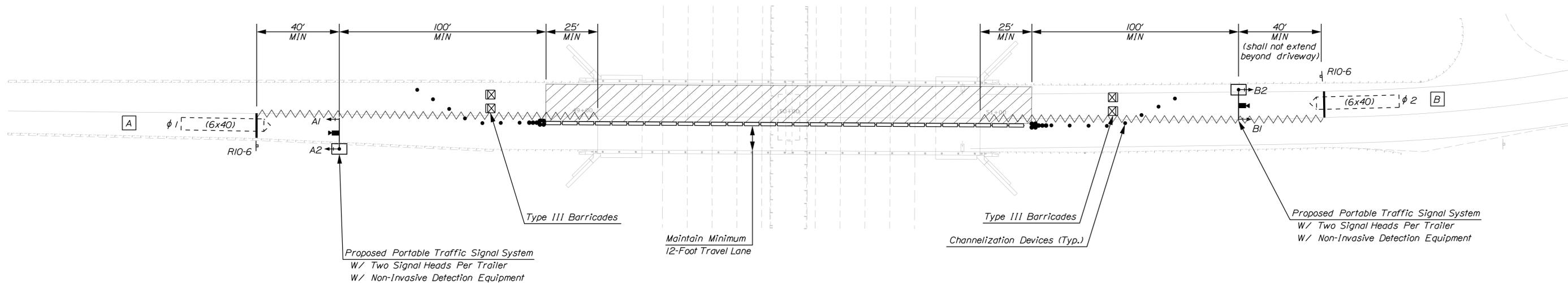
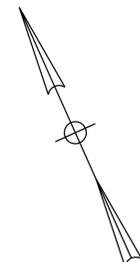
**PROPOSED TEMPORARY NEMA 4 PHASE SIGNAL PHASING AND TIMING**

ITEM / PHASE	1	2
Min Green	10	10
Extension	4	4
Maximum 1	22	22
Maximum 2	-	-
Vehicle Clear	4	4
Red Clear	13	13
Pedestrian Walk	-	-
Pedestrian Clearance	-	-
Flash	FR	FR
Recall	OFF	OFF
Detector	NL	NL

**Notes:**

L = Locking  
NL = Non-Locking  
FR = Flash Red

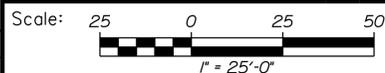
The contractor shall set timing of the temporary traffic signal per timing data provided. Signal timing adjustments shall be approved by the Resident and accomplished as directed by the Resident. Payment for all signal timing adjustments shall be incidental to the Maintenance of Traffic Control Item.



TEMPORARY TRAFFIC SIGNAL OPTION

**Legend:**

- Construction Area
- Portable Concrete Barrier
- Channelization Devices
- Traffic Attenuator
- Type 3 Barricade
- Portable Traffic Signal Trailer
- Detection Zone
- Detection Camera
- Black-Out Existing Pavement Marking



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
TEMPORARY SIGNAL PLAN  
PHASE 1

No.	Revision	By	Date

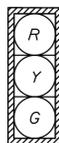
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date	Checked	By	Date
Designed	MLG	1/11/19		MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 11  
11 OF 45

MTA PROJECT MANAGER: Ralph Norwood, IV

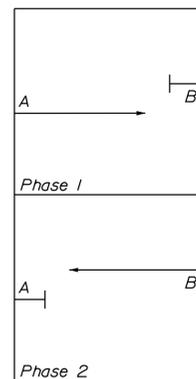
PROPOSED TEMPORARY INDICATIONS



A1,A2,B1,B2

Note:  
All indications shall be 12" light emitting diodes (LED's) with 5" louvered backplates

DETECTOR SCHEDULE



PROPOSED POST MOUNTED SIGNS



R10-6  
24"x36"  
2-Proposed

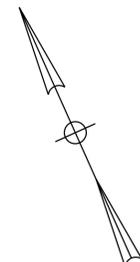
PROPOSED TEMPORARY NEMA 4 PHASE SIGNAL PHASING AND TIMING

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Extension	4	4
Maximum 1	22	22
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Vehicle Clear	4	4
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Pedestrian Walk	-	-
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Flash	FR	FR
Recall	OFF	OFF
Detector	NL	NL

Notes:

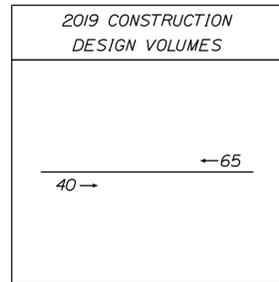
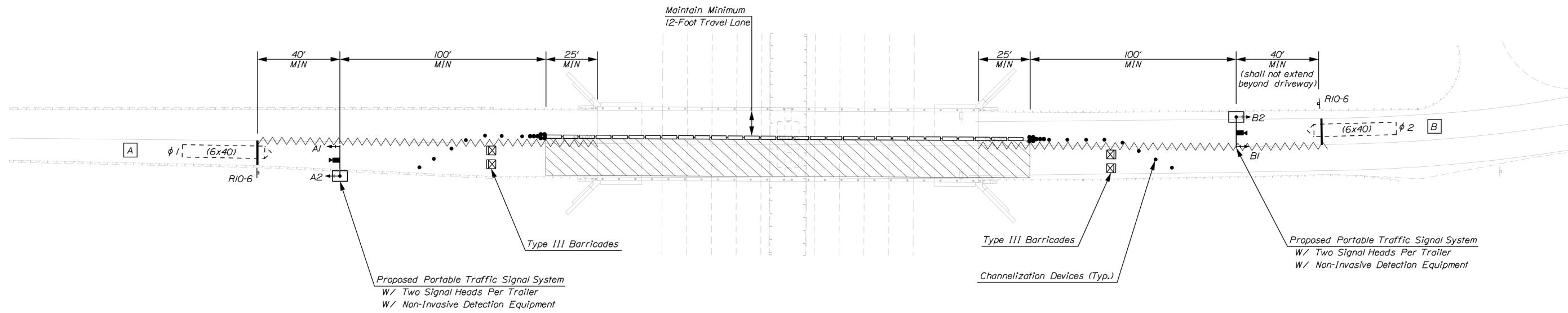
L = Locking  
NL = Non-Locking  
FR = Flash Red

The contractor shall set timing of the temporary traffic signal per timing data provided. Signal timing adjustments shall be approved by the Resident and accomplished as directed by the Resident. Payment for all signal timing adjustments shall be incidental to the Maintenance of Traffic Control Item.



Date: 1/11/2019

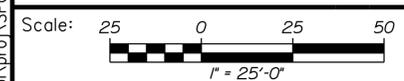
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TEMPORARY TRAFFIC SIGNAL OPTION

Legend:

- Construction Area
- Portable Concrete Barrier
- Channelization Devices
- Traffic Attenuator
- Type 3 Barricade
- Portable Traffic Signal Trailer
- Detection Zone
- Detection Camera
- Black-Out Existing Pavement Marking



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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
TEMPORARY SIGNAL PLAN  
PHASE 2

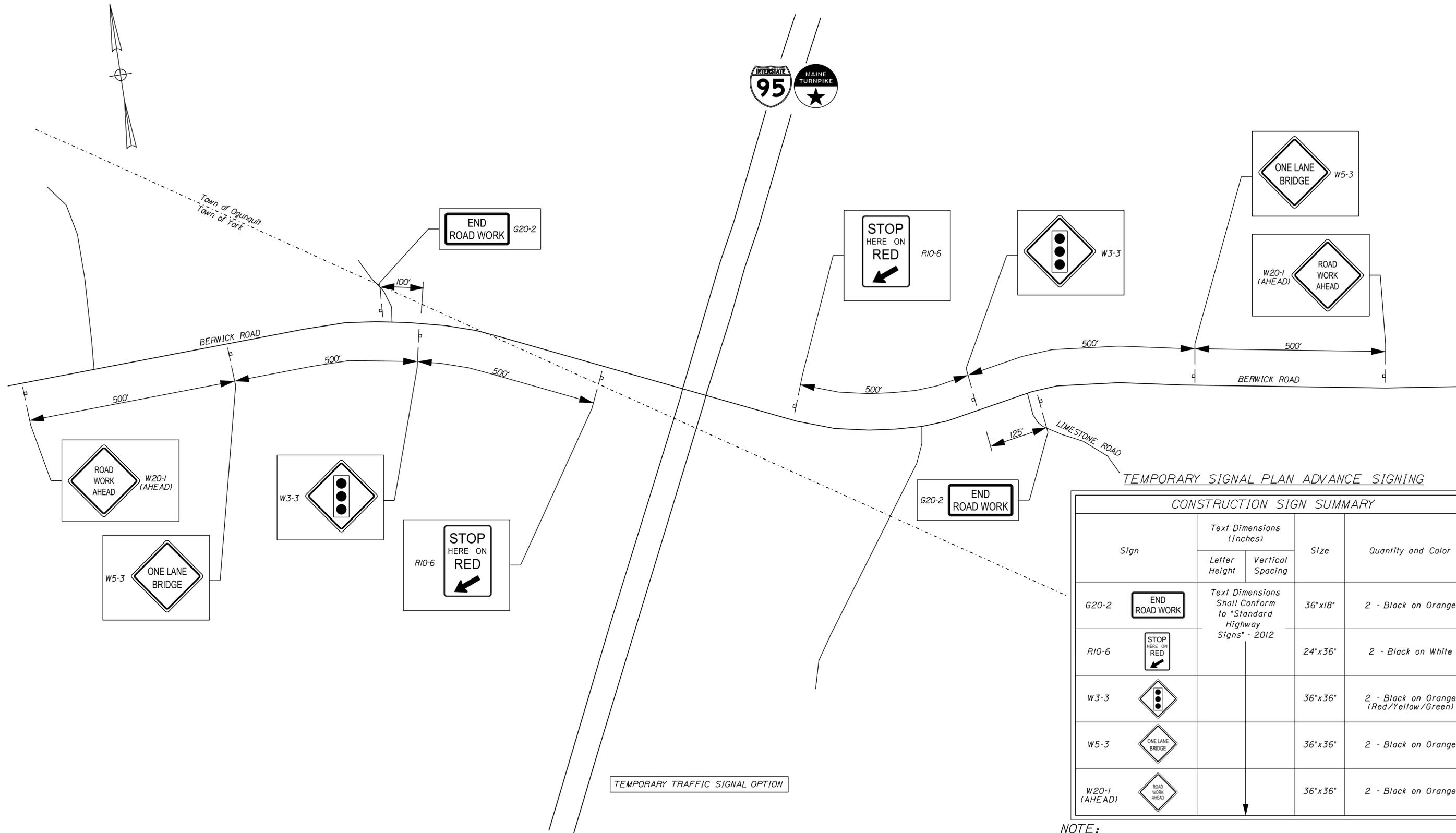
No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019

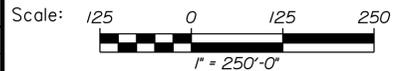
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**CONSTRUCTION SIGN SUMMARY**

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
G20-2 	Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		36"x18"	2 - Black on Orange
R10-6 			24"x36"	2 - Black on White
W3-3 			36"x36"	2 - Black on Orange (Red/Yellow/Green)
W5-3 			36"x36"	2 - Black on Orange
W20-1 (AHEAD) 			36"x36"	2 - Black on Orange

**NOTE:**  
Advance signing shall remain in place for both Phase 1 and Phase 2 Temporary Signal Plans.



Designed by:



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
TEMPORARY SIGNAL PLAN  
ADVANCED SIGNING

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

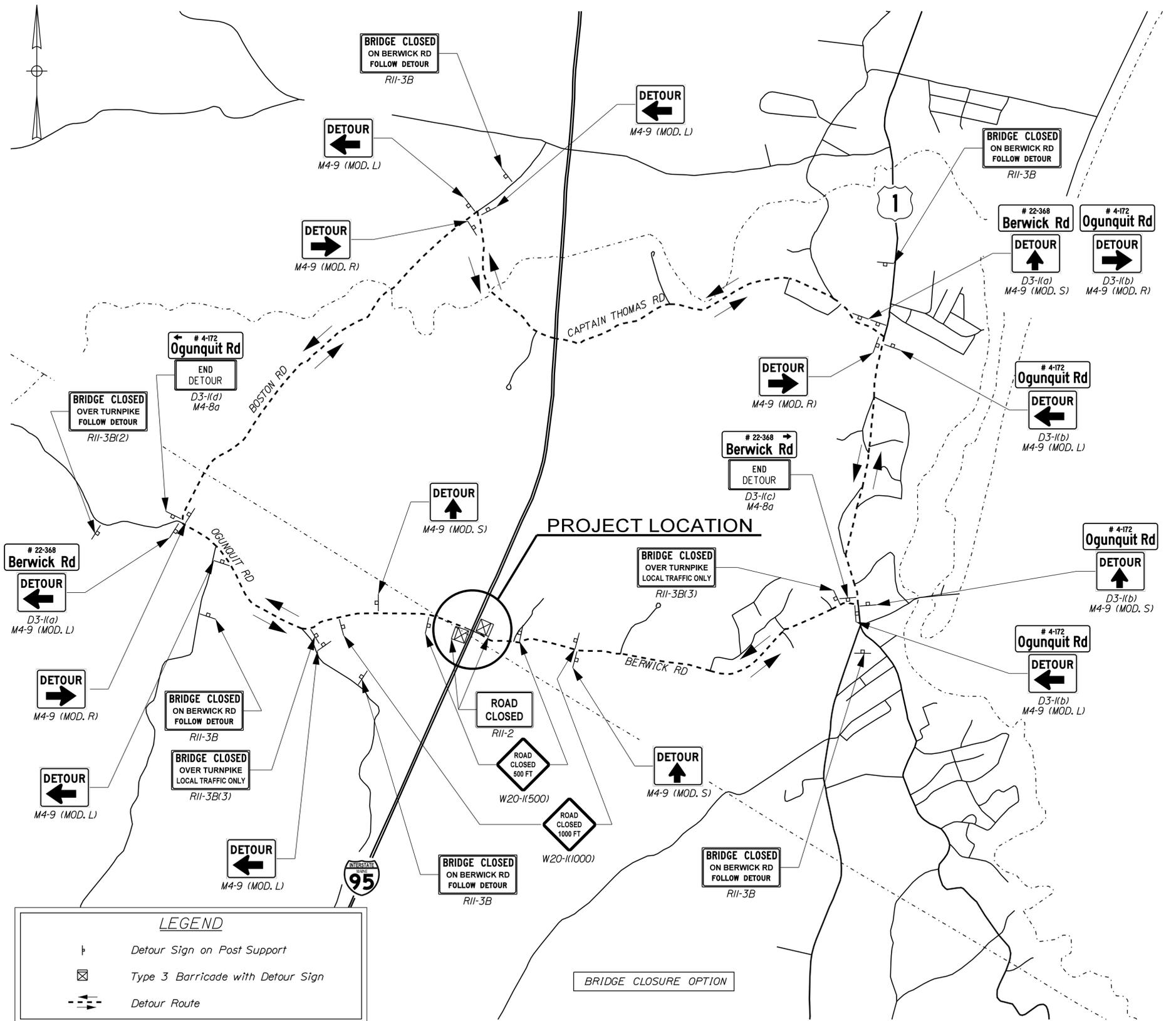
VHB: 55200.01 SHEET NUMBER: 13  
CONTRACT: 2019.06 13 OF 45

DETOUR FOR NORTH BERWICK ROAD BRIDGE CLOSURE

DETOUR SIGN SUMMARY

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
M4-8a END DETOUR	SHSB		24"x18"	2 - Black on Orange
M4-9 (MOD. L) DETOUR			30"x24"	7 - Black on Orange
M4-9 (MOD. R) DETOUR			30"x24"	4 - Black on Orange
M4-9 (MOD. S) DETOUR			30"x24"	4 - Black on Orange
W20-1 (1000) ROAD CLOSED 1000 FT			36"x36"	2 - Black on Orange
W20-1 (500) ROAD CLOSED 500 FT			36"x36"	2 - Black on Orange
D3-1(a) # 22-368 Berwick Rd	3"	2"	42"x15"	2 - Black on Orange
D3-1(b) # 4-172 Ogunquit Rd	3"	2"	42"x15"	4 - Black on Orange
D3-1(c) # 22-368 Berwick Rd	3"	2"	42"x15"	1 - Black on Orange
D3-1(d) # 4-172 Ogunquit Rd	3"	2"	42"x15"	1 - Black on Orange
R11-2 ROAD CLOSED	SHSB		48"x30"	2 - Black on White
R11-3b BRIDGE CLOSED ON BERWICK RD FOLLOW DETOUR	6" 5" 4"	3.38" 3.38"	60"x30"	5 - Black on White
R11-3b(2) BRIDGE CLOSED OVER TURNPIKE FOLLOW DETOUR	6" 5" 4"	3.38" 3.38"	60"x30"	1 - Black on White
R11-3b(3) BRIDGE CLOSED OVER TURNPIKE LOCAL TRAFFIC ONLY	6" 5" 4"	3.38" 3.38"	60"x30"	2 - Black on White

SHSB - Text Dimensions Shall Conform to "Standard Highway Signs Book" - 2012 Edition.

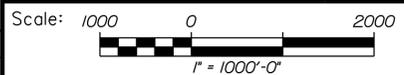


LEGEND

- Detour Sign on Post Support
- Type 3 Barricade with Detour Sign
- Detour Route

Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\2-NBerwick\014\_detour\_02.dgn



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THE GOLD STAR  
MEMORIAL HIGHWAY

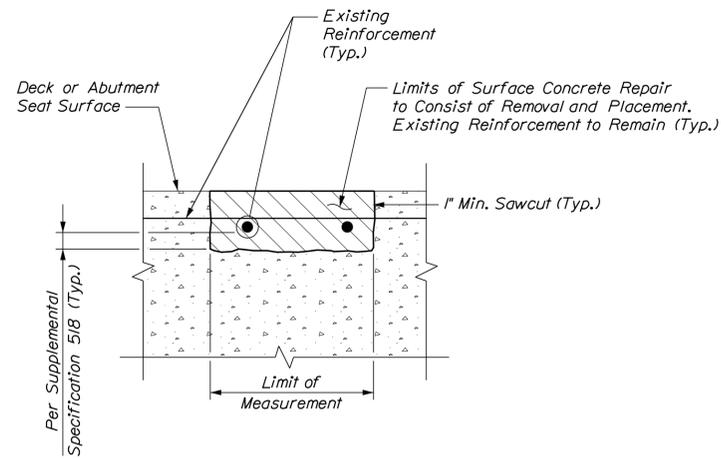
MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
NORTH BERWICK ROAD BRIDGE  
DETOUR PLAN

No.	Revision	By	Date

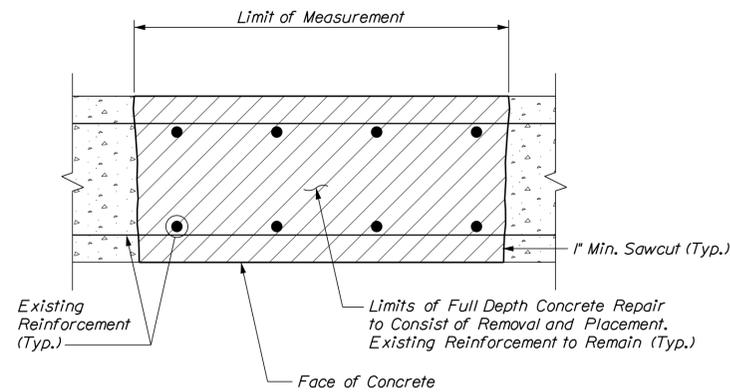
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MLG	1/11/19	Checked	MDS	1/11/19
Drawn	JAR	1/11/19	In Charge of	TSB	1/11/19

Date: 1/11/2019

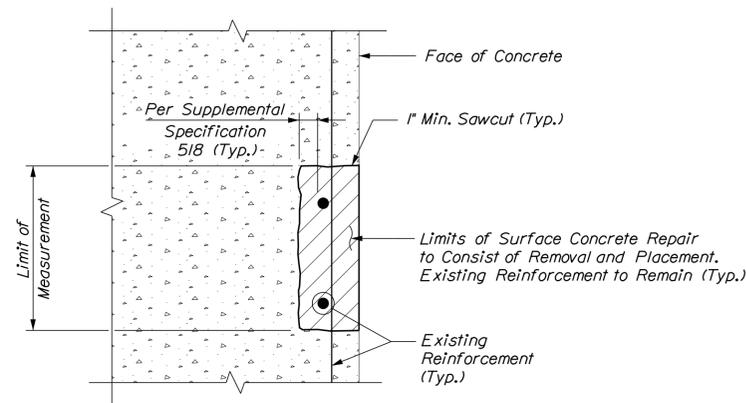
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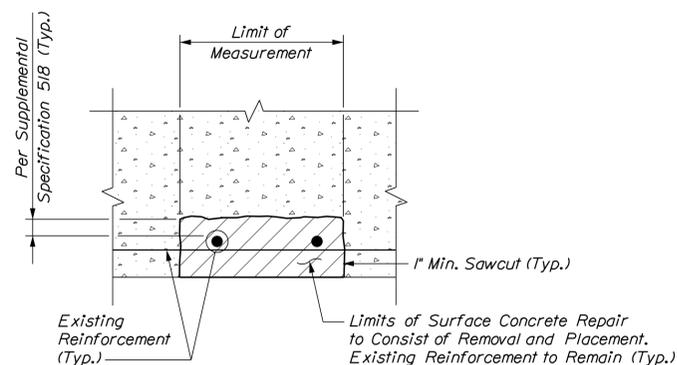
TYPICAL HORIZONTAL SURFACE CONCRETE REPAIR DETAILS



TYPICAL FULL DEPTH REPAIR DETAILS



TYPICAL VERTICAL SURFACE CONCRETE REPAIR DETAILS



TYPICAL OVERHEAD SURFACE CONCRETE REPAIR DETAILS

**KEY**

-  Existing Concrete
-  Proposed Concrete

CONCRETE REPAIR NOTES

1. Repair work shall include: surface concrete repairs, epoxy injection crack repair and providing access for inspection.
2. Where concrete 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 the appropriate 518 Item.
3. Where epoxy injection crack repair is specified the work shall include pressure injection of cracks 1/16" or more in width. Work shall be paid under Item 518.4 Epoxy Injection Crack Repair.
4. Prior to the start of any concrete repairs the Resident and the Contractor shall sound all concrete surfaces and agree on the repair limits. Estimated repair quantities may increase at the Resident's discretion.
5. The estimated repair quantities are based on inspections completed in May and November 2018.

CONCRETE SURFACE REPAIR NOTES

1. Perform 1" deep saw cuts along limits of removal.
2. Chip concrete to the depth specified in Supplemental Specification 518. If the removal limits change during the demolition process the Contractor shall notify the Resident. The Resident and Contractor shall agree on the revised pay limits prior to the Contractor continuing the removal.
3. Prepare and patch repair areas with Class AAA modified concrete.
4. Perform general finishing.

EPOXY INJECTION CRACK REPAIR NOTES

1. All crack repairs shall be completed by an individual qualified and experienced in the type of repairs proposed.
2. All crack repairs shall be completed in accordance with Supplemental Specification 518.

Scale: NOT TO SCALE

Designed by:



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South Portland, ME 04106  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT NO. 2019.06  
2019 SOUTHERN BRIDGE REPAIRS  
CONCRETE REPAIR TYPICAL DETAILS

No.	Revision	By	Date

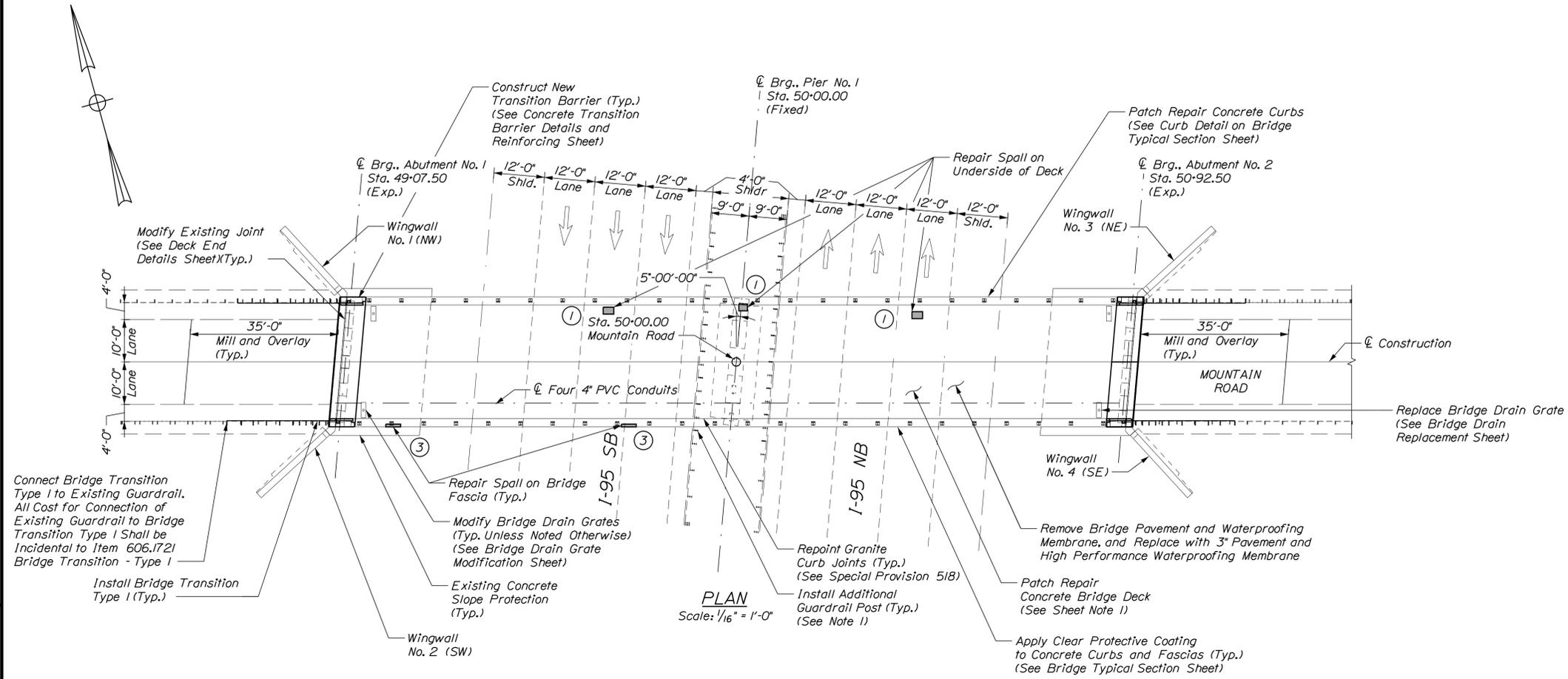
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VHB: 55200.01 SHEET NUMBER: 15  
CONTRACT: 2019.06 15 OF 45

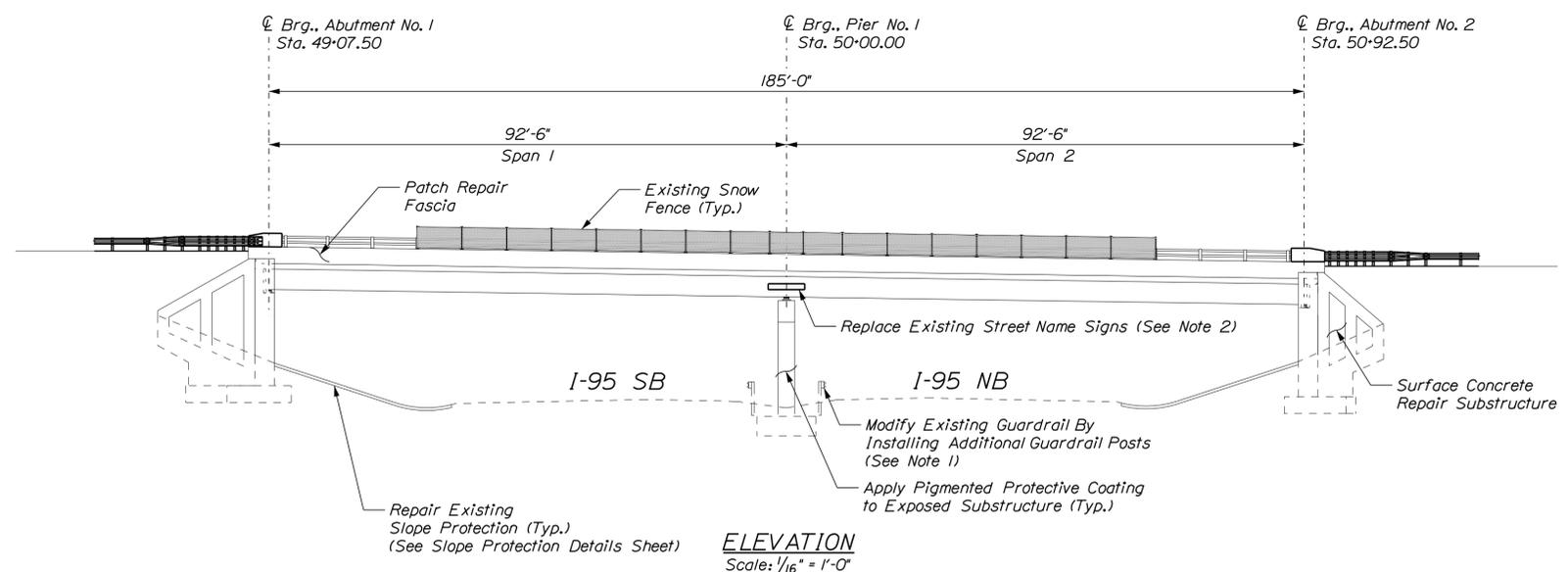
MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\016\_BDPlan.dgn



**PLAN**  
Scale: 1/16" = 1'-0"



**ELEVATION**  
Scale: 1/16" = 1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

Overhead Surface Repairs	8 *
* Includes 5 S.F. Additional Repair Quantity As A Contingency	
Fascia Surface Repairs	10 **
** Includes 4 S.F. Additional Repair Quantity As A Contingency	
Partial Depth Concrete Deck Repairs	255 ***
*** Assumes 5% of the Deck will require Partial Depth Concrete Repairs.	

**NOTES**

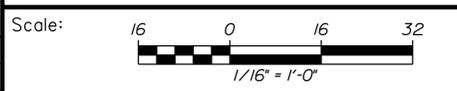
- All work for installing the proposed guardrail posts, including supplying and installing new offset blocks, modifications to the existing guardrail for the connection to the proposed guardrail posts, and other required adjustments shall be incidental to Item 606.4B, Single Galvanized Steel Post.
- The Authority will provide the new Street Name Signs to the Contractor at no cost. All costs for removing the existing signs and installing the new signs shall be incidental to the Related Contract Items.

**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Limit of Pavement Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

**SHEET NOTE**

- For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

No.	Revision	By	Date

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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TEL (207) 889-3150  
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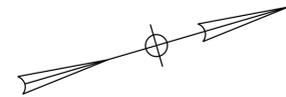
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

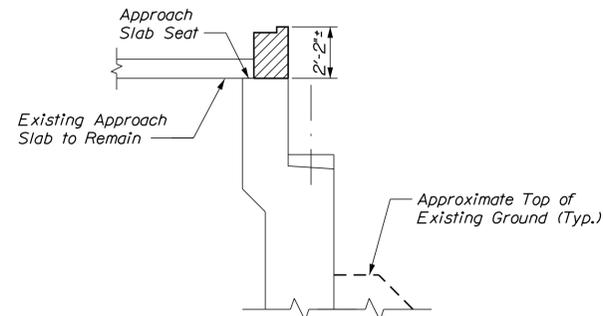
MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
BRIDGE PLAN AND ELEVATION

VHB: 55200.01  
CONTRACT: 2019.06

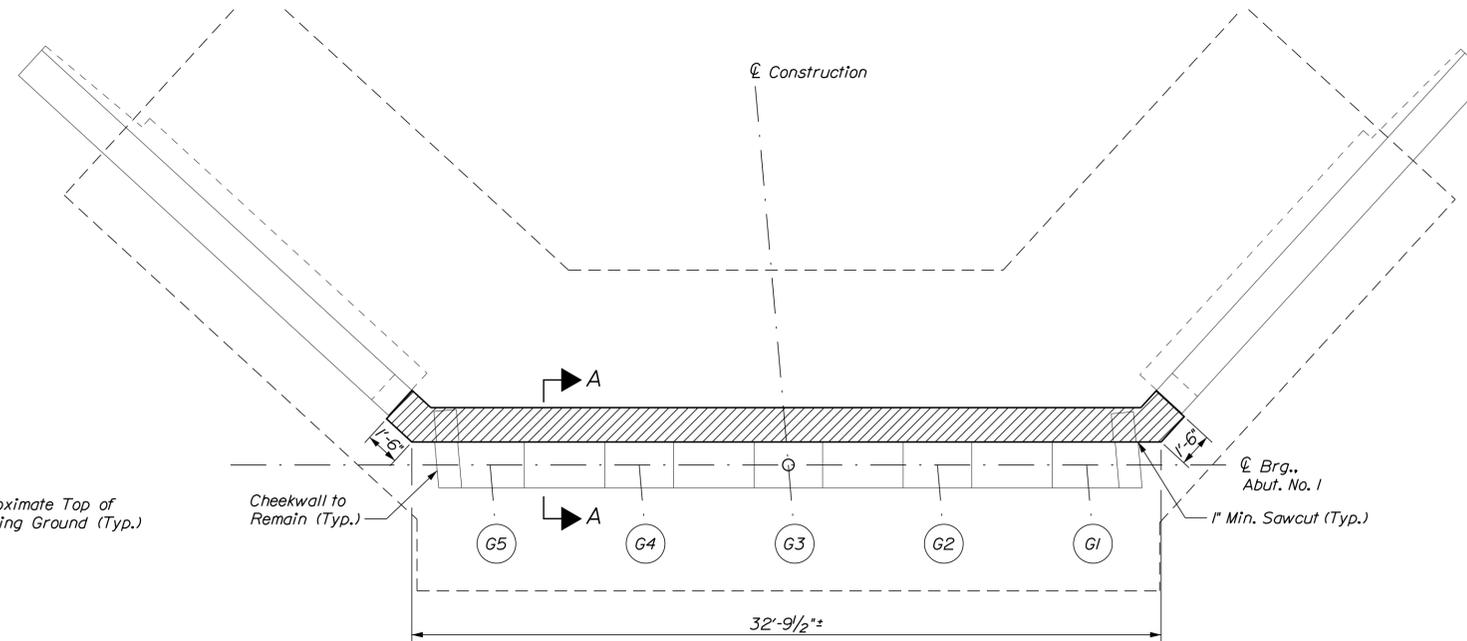
SHEET NUMBER: 16  
16 OF 45



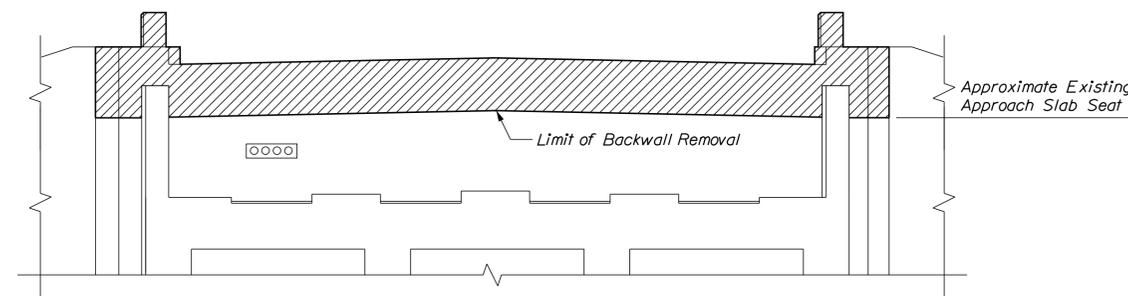
**KEY**  
 Limit of Concrete Removal



**SECTION A-A**  
 Not to Scale



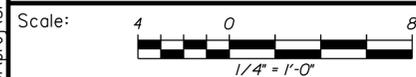
**PLAN**  
 (Abutment No. 1 Shown, Abutment No. 2 Similar)  
 Scale: 1/4" = 1'-0"



**ELEVATION**  
 (Abutment No. 1 Shown, Abutment No. 2 Similar)  
 Scale: 1/4" = 1'-0"

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\017\_Abut\_01\_Mod\_01.dgn



Designed by:



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 Suite 105B  
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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 ABUTMENT REMOVAL DETAILS

No.	Revision	By	Date

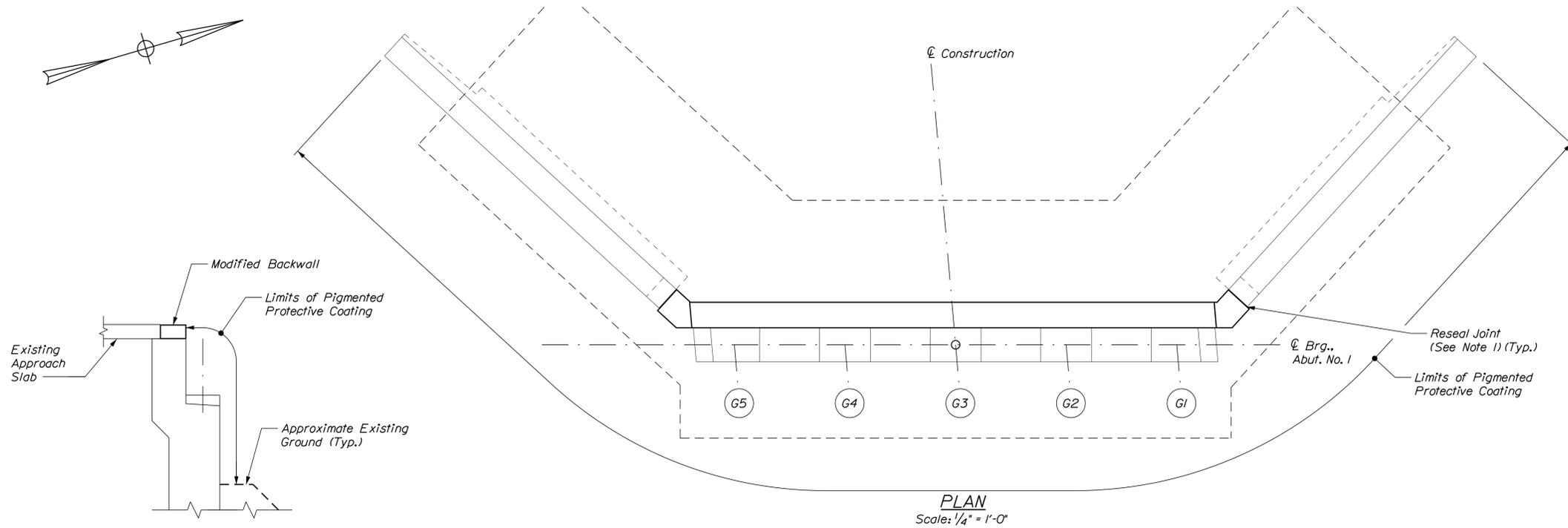
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VHB: 55200.01 SHEET NUMBER: 17  
 CONTRACT: 2019.06 17 OF 45

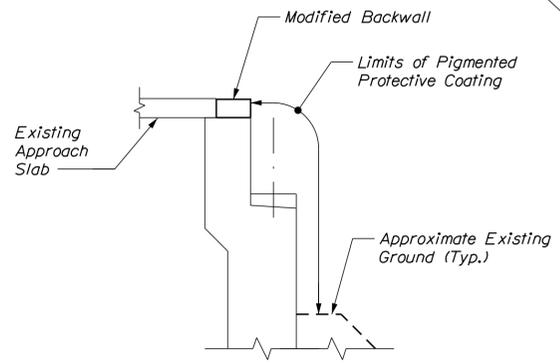
MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\2019 Southern Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\018\_Abut\_01.dgn



**PLAN**  
Scale: 1/4" = 1'-0"



**TYPICAL ABUTMENT SECTION**  
Not to Scale

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

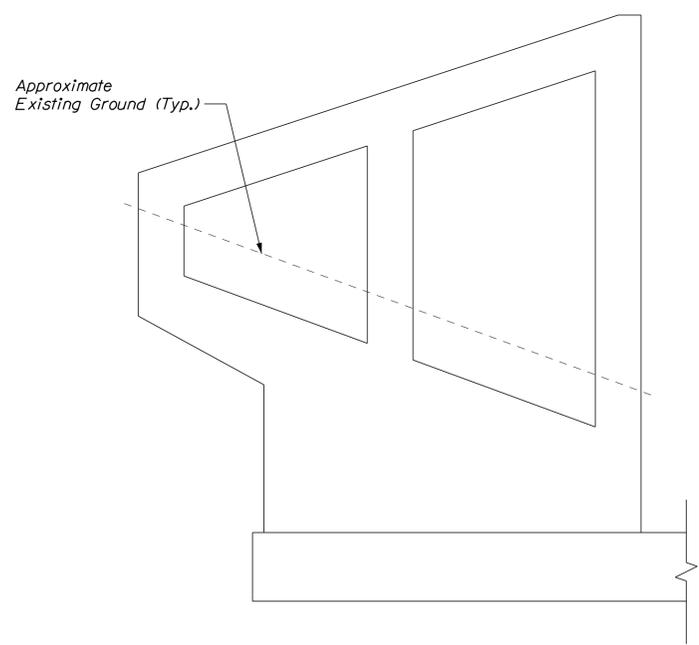
Surface Abutment Repairs 180\*  
\* Includes 47 S.F. Additional Repair Quantity As A Contingency

**NOTES**

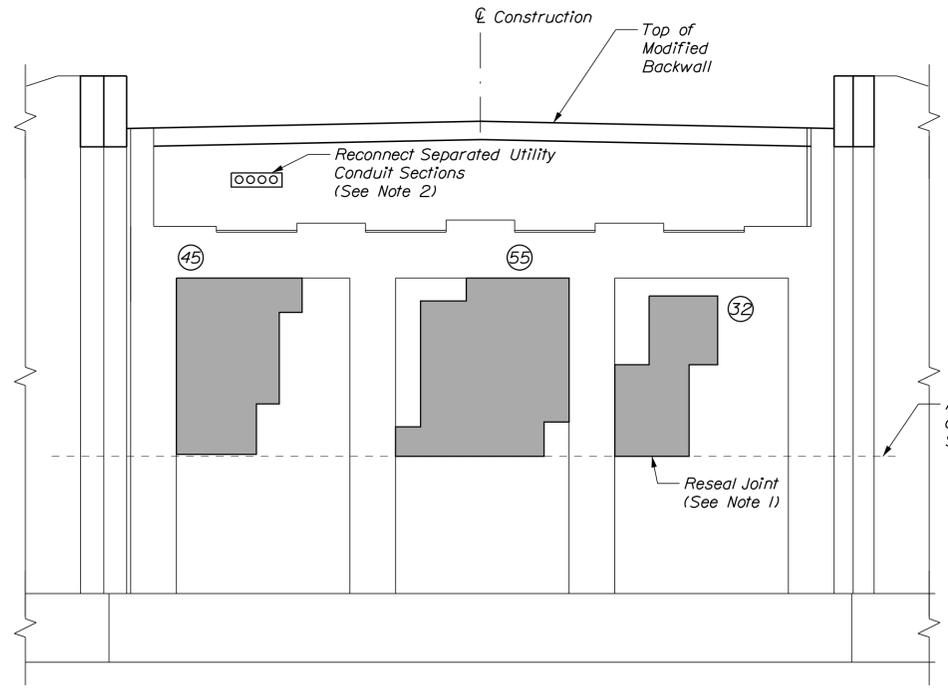
1. Reseal joint between wingwall and abutment and between the abutment and slope protection. Joint Sealant shall be from the Maine DOT Qualified Products List for Silicone and Polyurethane Joint Sealant.
2. Reconnect separated utility conduit sections connection as directed by the Resident. Labor and materials shall be incidental to Concrete Repair Items.

**KEY**

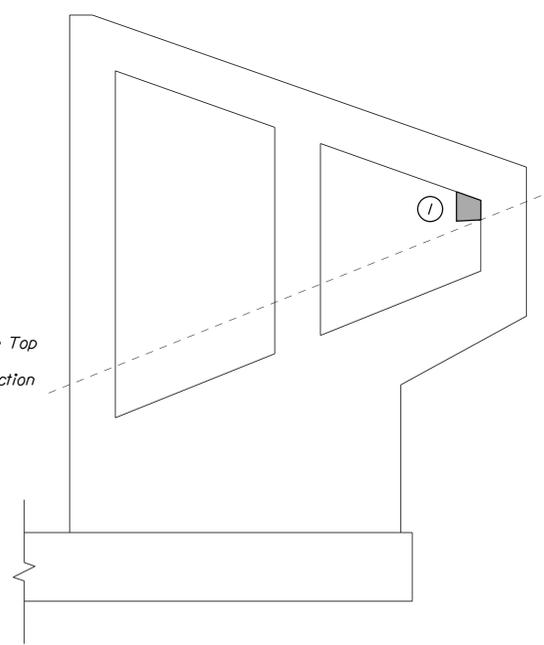
- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair



**ABUTMENT 1 SOUTHWEST WINGWALL**  
1/4" = 1'-0"



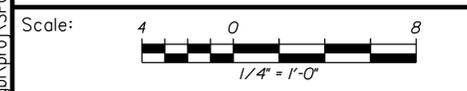
**ELEVATION**  
(Backwall Modifications Not Shown, See Deck End Details Sheet)  
Scale: 1/4" = 1'-0"



**ABUTMENT 1 NORTHWEST WINGWALL**  
1/4" = 1'-0"

**SHEET NOTE**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

	By	Date	By	Date	
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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FAX (207) 253-5596



**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

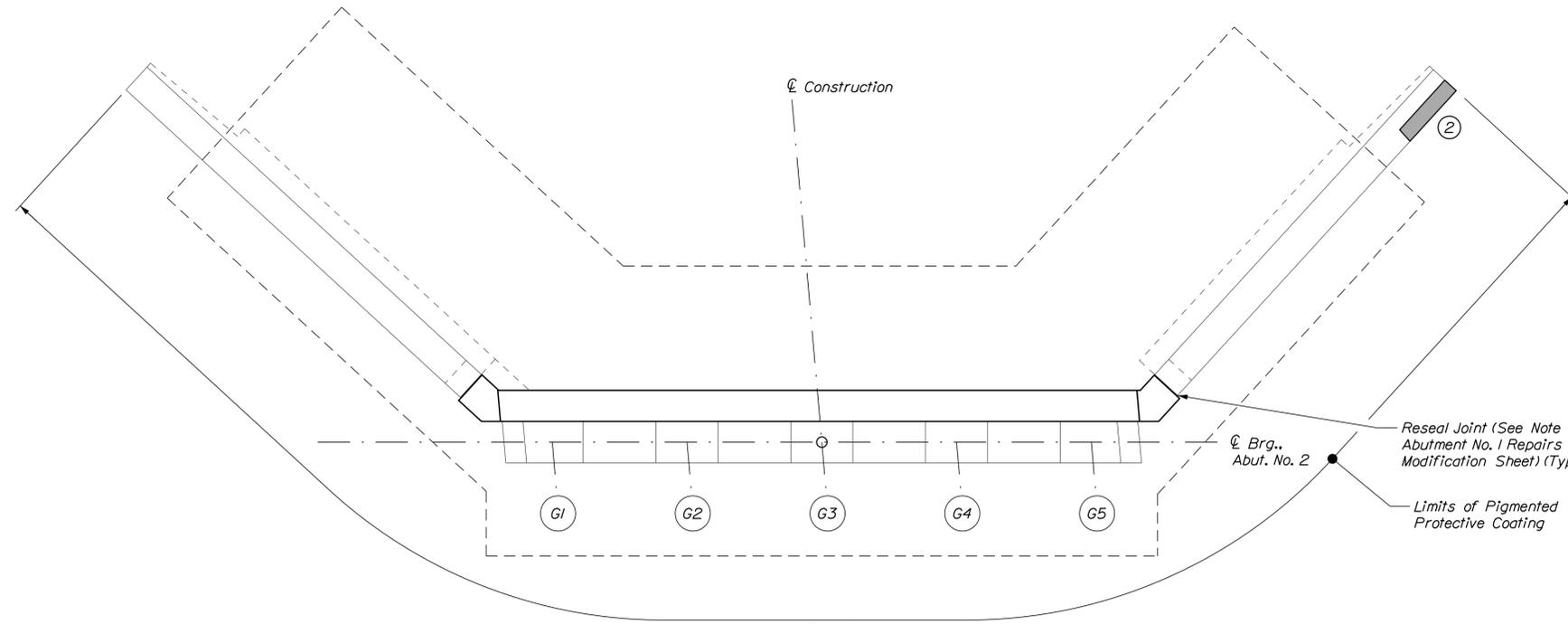
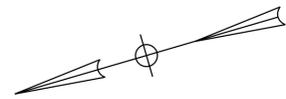
MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
ABUTMENT NO. 1 REPAIRS  
AND MODIFICATIONS

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 18  
18 OF 45

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\019\_Abut\_02.dgn



**PLAN**  
Scale: 1/4" = 1'-0"

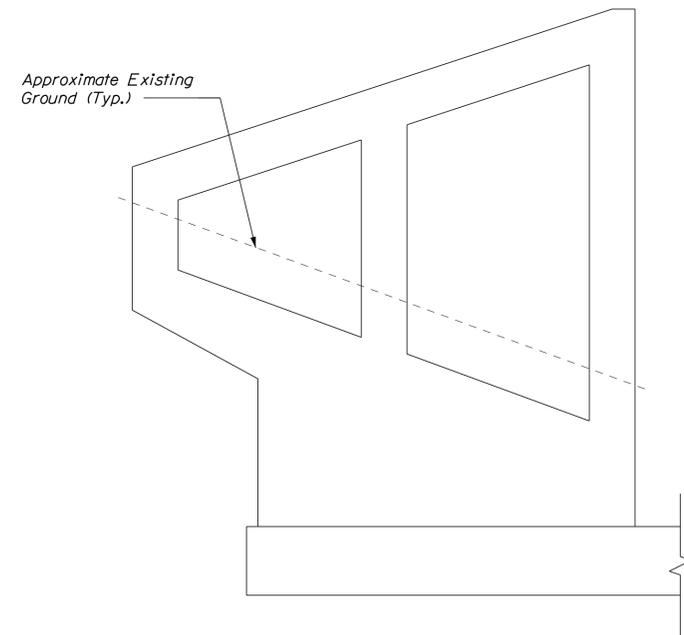
**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

Surface Abutment Repairs 100\*  
\* Includes 38 S.F. Additional Repair Quantity As A Contingency

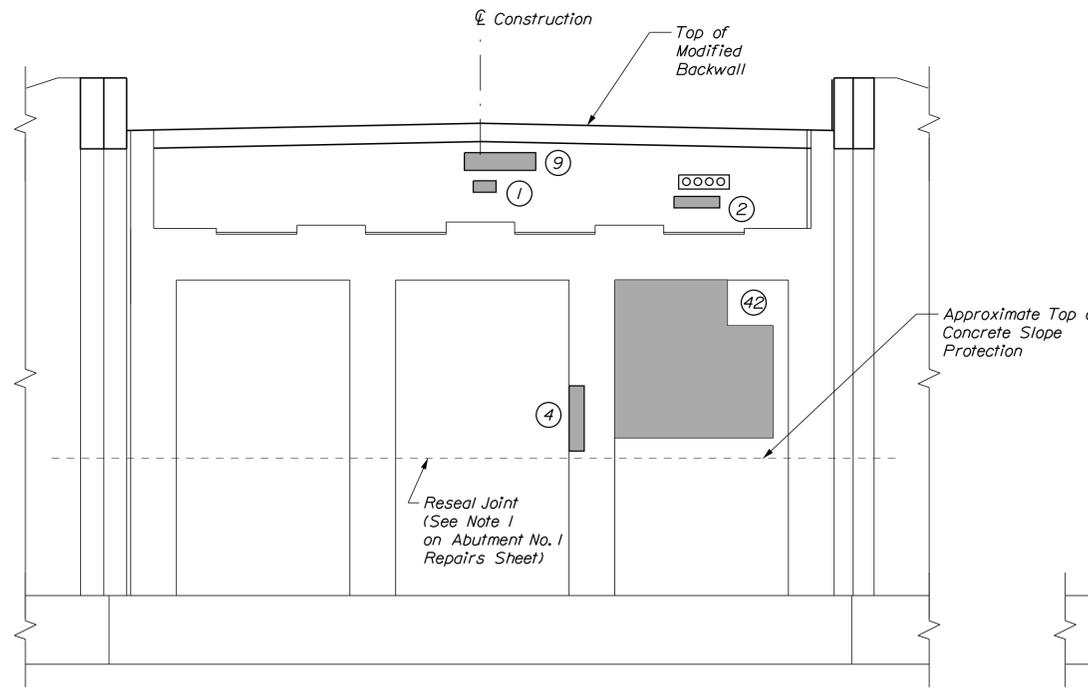
**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

Approximate Existing Ground (Typ.)

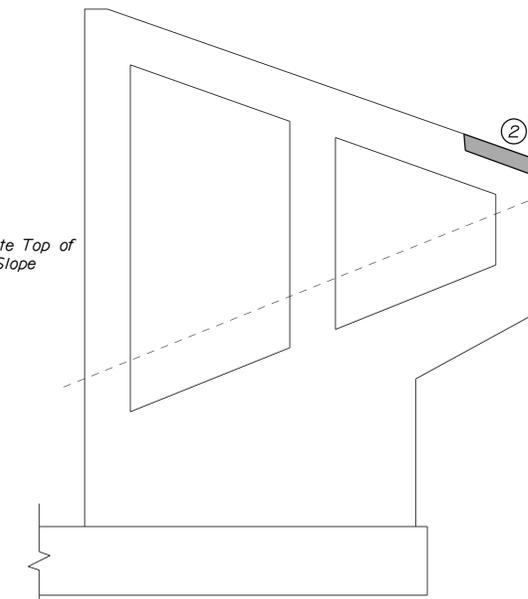


**ABUTMENT 2  
NORTHEAST WINGWALL**  
1/4" = 1'-0"



**ELEVATION**

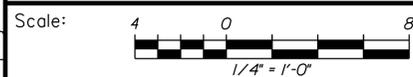
(Backwall Modifications Not Shown, See Deck End Details Sheet)  
Scale: 1/4" = 1'-0"



**ABUTMENT 2  
SOUTHEAST WINGWALL**  
1/4" = 1'-0"

**SHEET NOTES**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.
2. For Abutment Notes See Abutment No. 1 Repairs and Modification Sheet.



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
ABUTMENT NO. 2 REPAIRS  
AND MODIFICATIONS

No.	Revision	By	Date

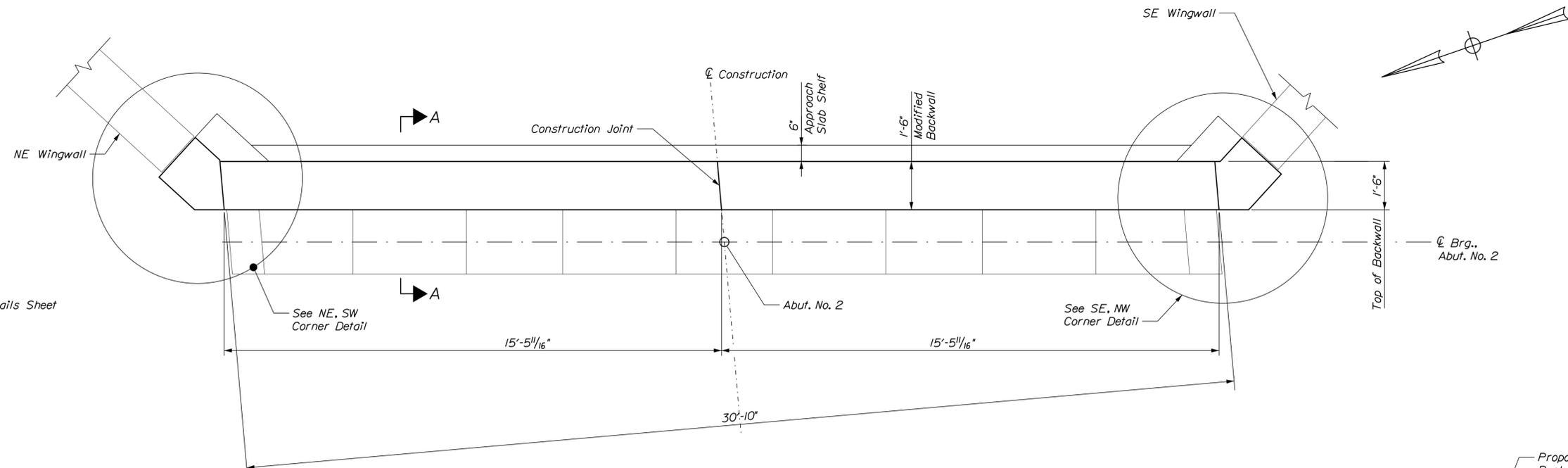
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date	Checked	By	Date
Designed	MED	1/11/19		GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 19  
19 OF 45

MTA PROJECT MANAGER: Ralph Norwood, IV

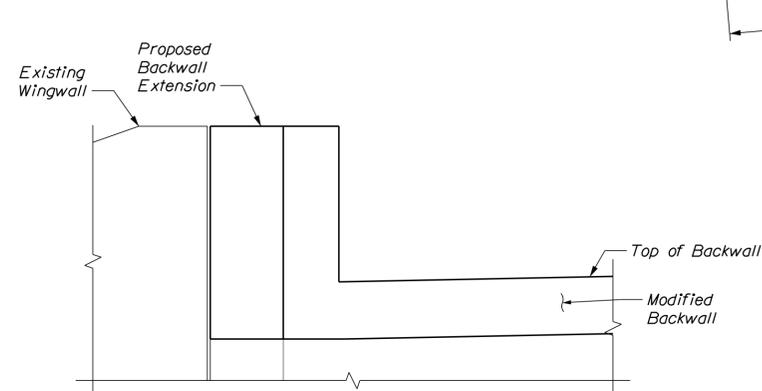
Date: 1/21/2019  
 Filename: \\vnb\qbl\proj\SPortland\55200.00\2019 Southern Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\020\_Backwall\_Recon\_01.dgn



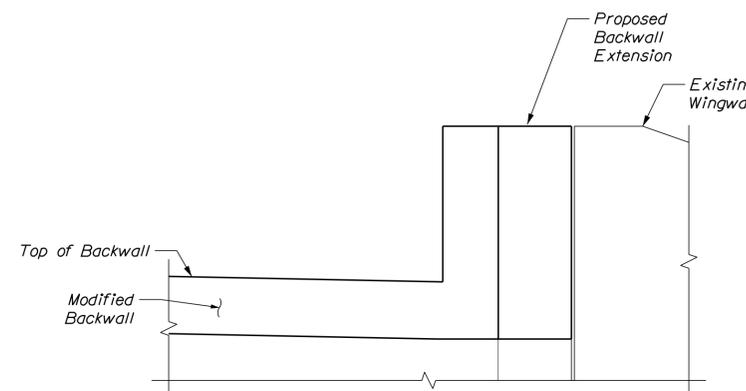
**SHEET NOTE**

1. See notes on Deck End Details Sheet for additional information.

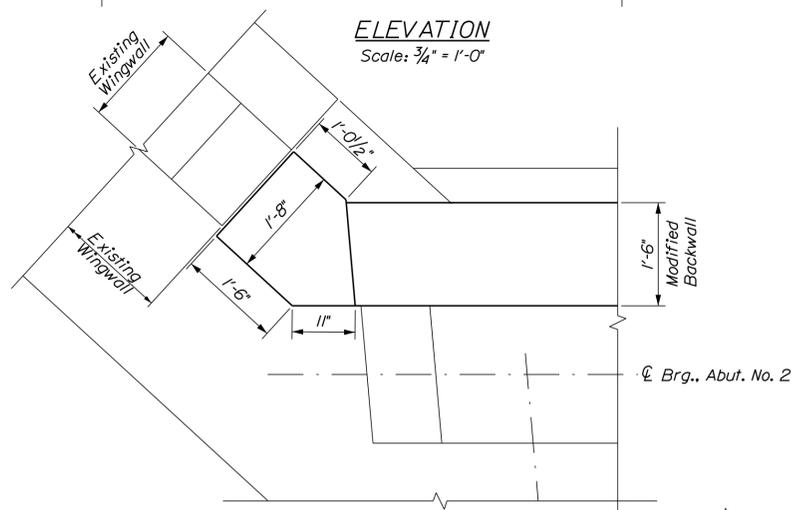
**BACKWALL RECONSTRUCTION PLAN**  
 (Abutment 2 Shown, Abutment 1 Similar, Opposite Hand)  
 Scale: 1/2" = 1'-0"



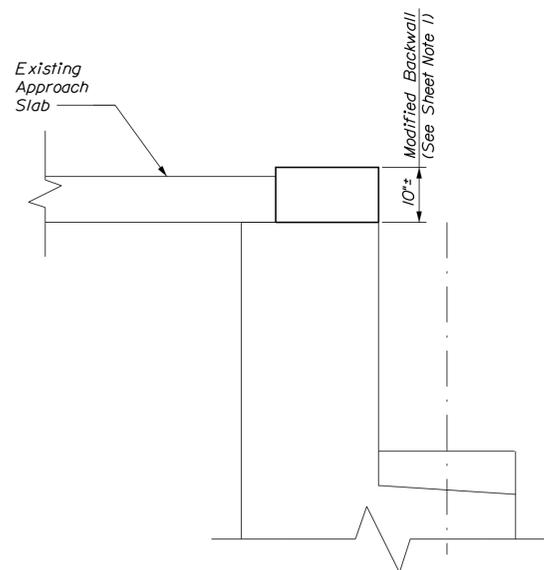
**ELEVATION**  
 Scale: 3/4" = 1'-0"



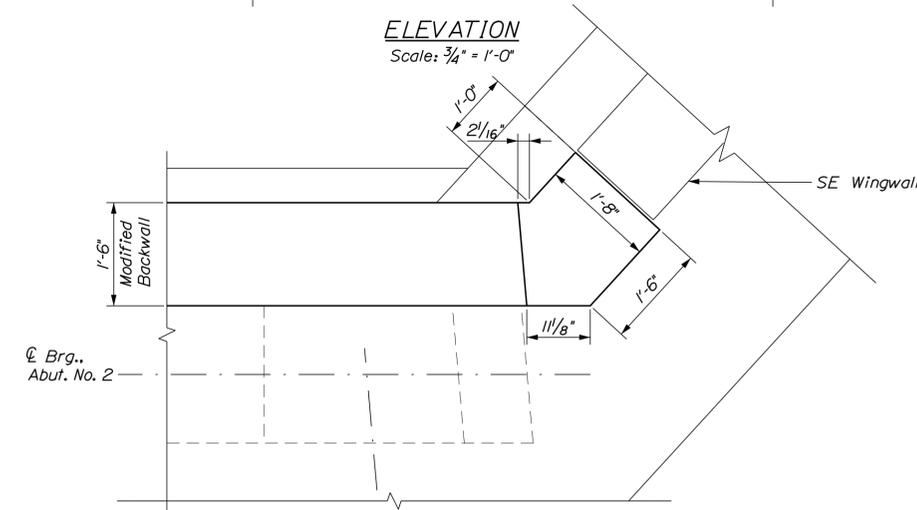
**ELEVATION**  
 Scale: 3/4" = 1'-0"



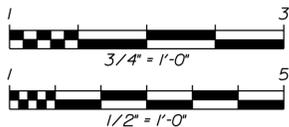
**NE and SW CORNER DETAIL**  
 (NE Corner Shown, SW Corner Similar)  
 Scale: 3/4" = 1'-0"



**SECTION A-A**  
 Scale: 3/4" = 1'-0"



**NW and SE CORNER DETAIL**  
 (SE Corner Shown, NW Corner Similar)  
 Scale: 3/4" = 1'-0"



No.	Revision	By	Date

Designed by: 

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

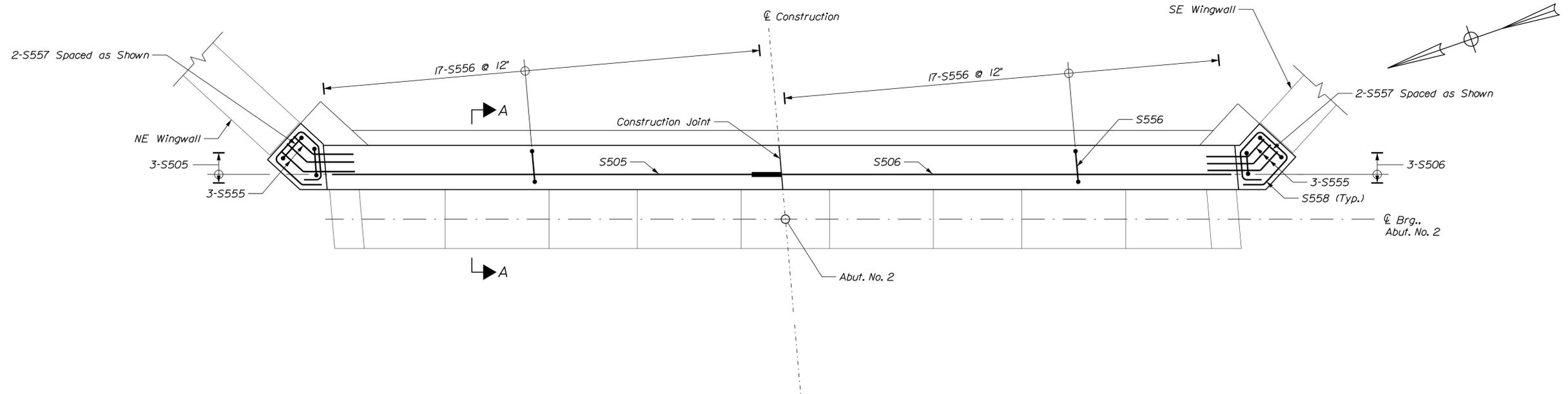
MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 MODIFIED BACKWALL DETAILS

VHB: 55200.01  
 CONTRACT: 2019.06

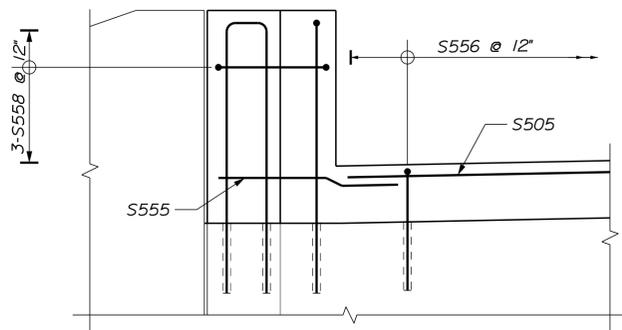
SHEET NUMBER: 20  
 20 OF 45

Date: 1/11/2019

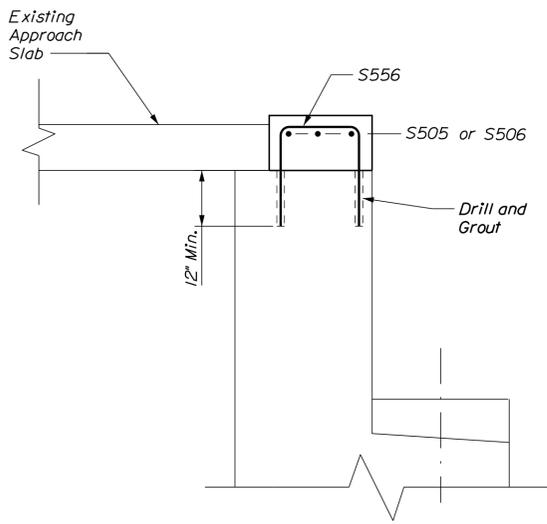
Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\021\_Backwall\_Reinf\_01.dgn



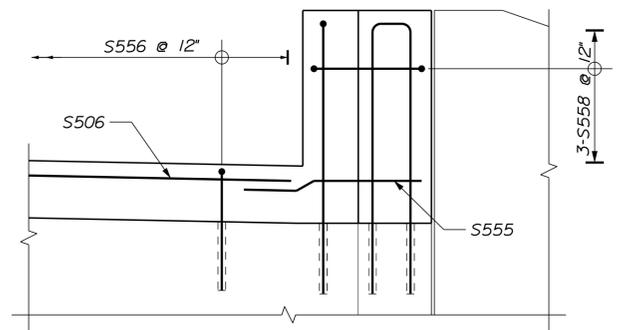
**BACKWALL REINFORCEMENT PLAN**  
 (Abutment 2 Shown, Abutment 1 Similar, Opposite Hand)  
 Scale: 1/2" = 1'-0"



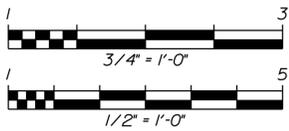
**NE WINGWALL ELEVATION**  
 Scale: 3/4" = 1'-0"



**SECTION A-A**  
 Scale: 3/4" = 1'-0"



**SE WINGWALL ELEVATION**  
 Scale: 3/4" = 1'-0"



**NOTES**

1. The mechanical connection at the construction joint shall be Dayton/Richmond Dowel Bar Splicer System or an approved equal. S505 shall be the female connector and S506 shall be the male connector.
2. At the Contractor's option, the dowel bar splices may be separate from bars S505 and S506 and lapped to those bars. The lap length shall be 3'-0" minimum.

No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

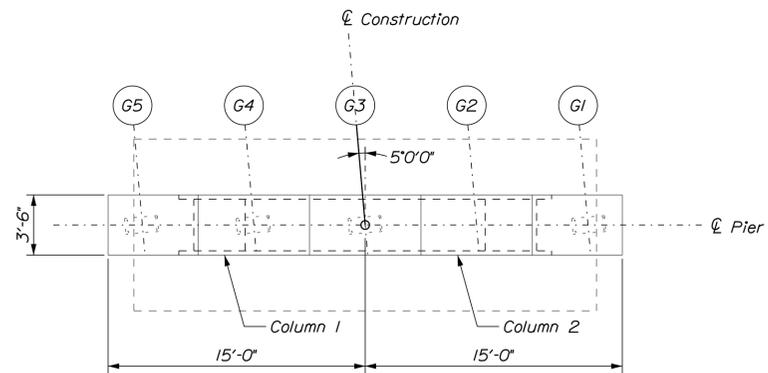
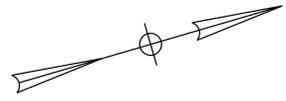
MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 MODIFIED BACKWALL REINFORCING

VHB: 55200.01  
 CONTRACT: 2019.06

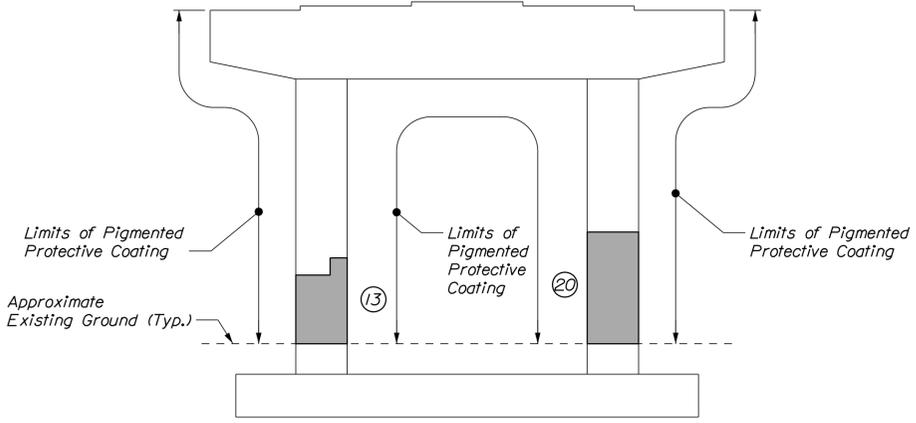
SHEET NUMBER: 21  
 21 OF 45

Date: 1/11/2019

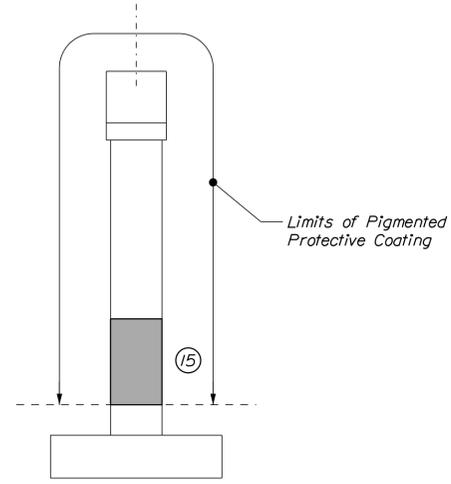
Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\022\_Pier\_Re\_01.dgn



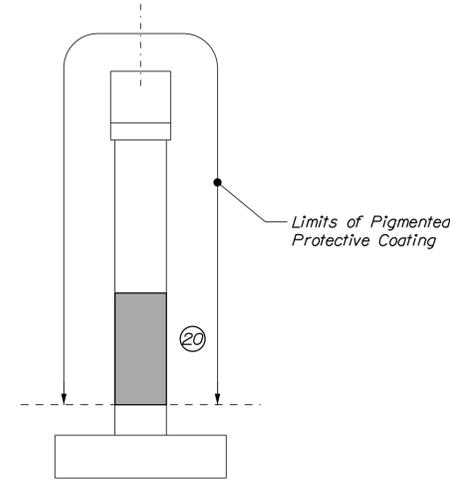
**PLAN**  
Scale: 3/16"=1'-0"



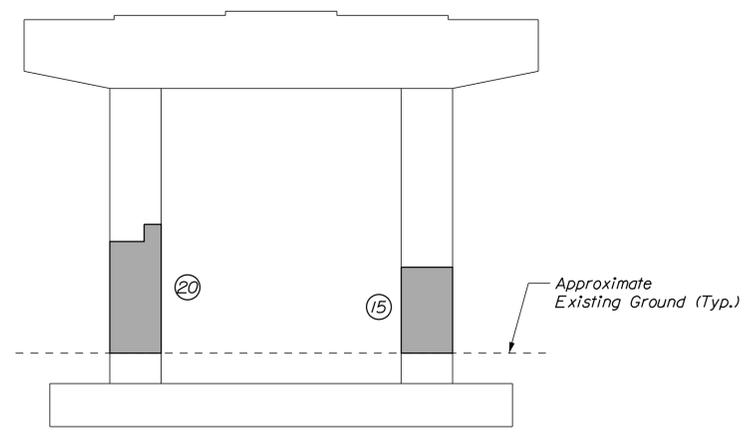
**EAST ELEVATION**  
Scale: 3/16"=1'-0"



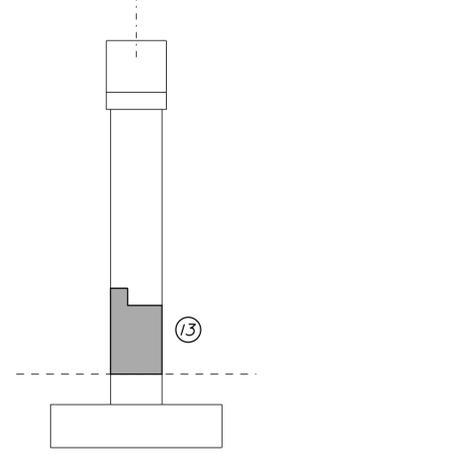
**NORTH END COLUMN 1**  
Scale: 3/16"=1'-0"



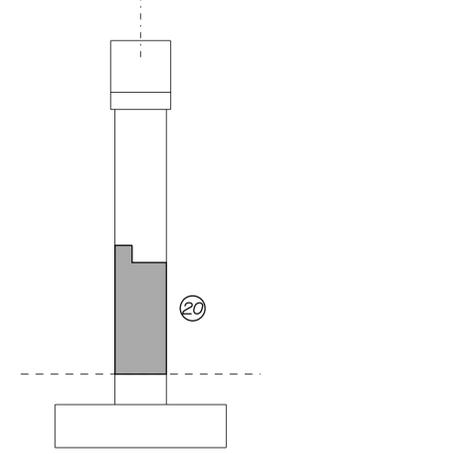
**NORTH END COLUMN 2**  
Scale: 3/16"=1'-0"



**WEST ELEVATION**  
Scale: 3/16"=1'-0"



**SOUTH END COLUMN 1**  
Scale: 3/16"=1'-0"



**SOUTH END COLUMN 2**  
Scale: 3/16"=1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

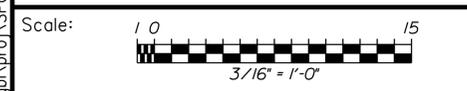
Surface Pier Repairs 150\*  
\* Includes 14 S.F. Additional Repair Quantity As A Contingency

**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

**SHEET NOTE**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

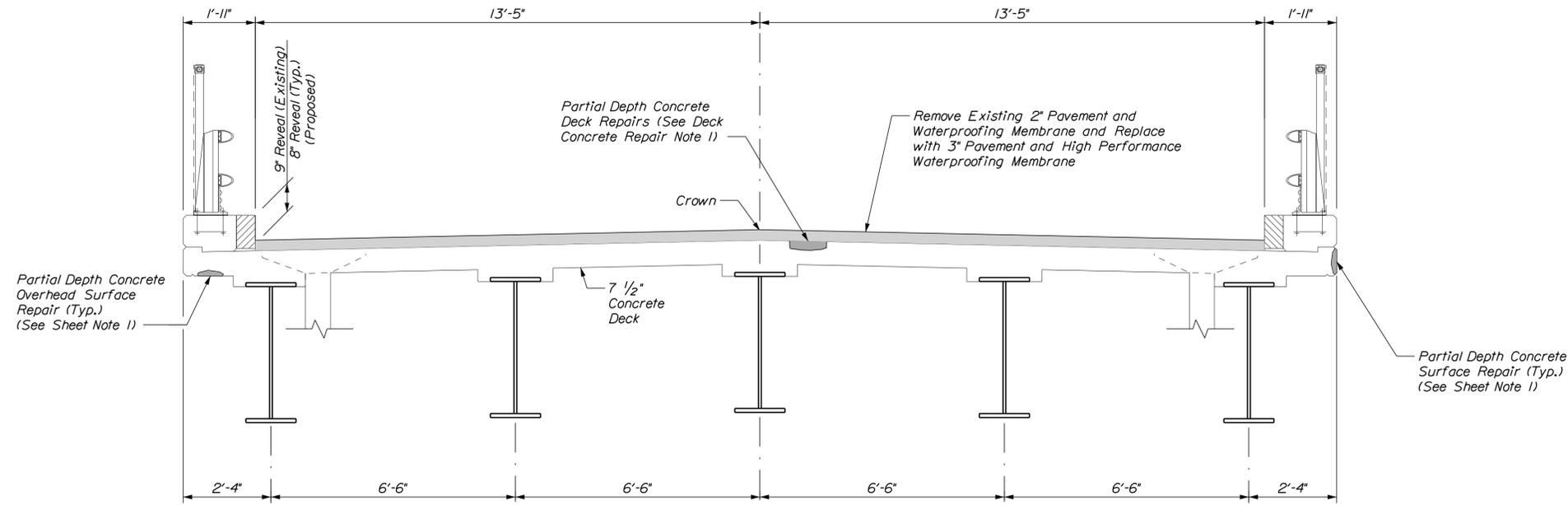
MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
PIER REPAIRS

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 22  
22 OF 45

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\_55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\023\_Typ\_01.dgn



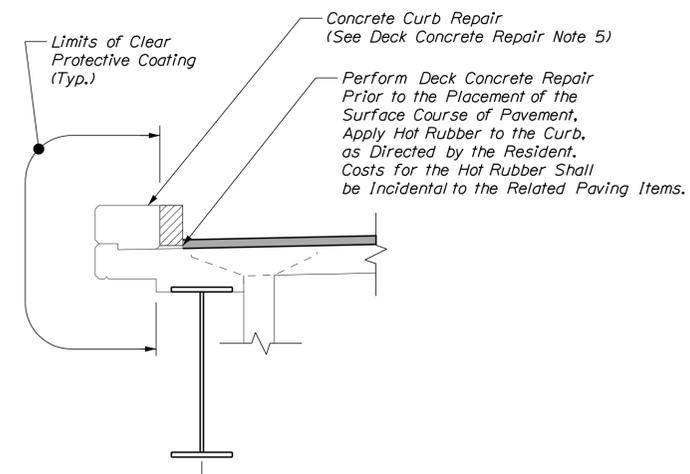
**SUPERSTRUCTURE TRANSVERSE SECTION**  
Scale: 1/2" = 1'-0"

**DECK CONCRETE REPAIR NOTES**

1. Prior to the start of deck concrete repairs, the Resident and the Contractor shall sound all deck concrete using a chain drag or other method approved by the Resident to determine the required repair limits. All costs for sounding the existing deck concrete shall be incidental to Item 518.80 Partial Depth Concrete Deck Repairs.
2. Sawcut 1" deep along all limits of removal.
3. Chip concrete to the depth specified in Supplemental Specification 518. If the removal limits change during the demolition process, the Contractor shall notify the Resident. The Resident and Contractor shall agree on the revised pay limits prior to the Contractor continuing the removals.
4. Prepare and patch repair areas. Install new reinforcing steel, as required. See Supplemental Specification 518.
5. Patch repair concrete curb surfaces as directed by the Resident. Sawcutting is not required for Curb Surface Patch Repairs unless directed by the Resident.

**KEY**

■ Limit of Surface Concrete Repair



**CURB DETAIL**  
(Bridge Rail not Shown for Clarity)  
Scale: 1/2" = 1'-0"

**SHEET NOTE**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
BRIDGE TYPICAL SECTION

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date	Checked	By	Date
Designed	MED	1/11/19		GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

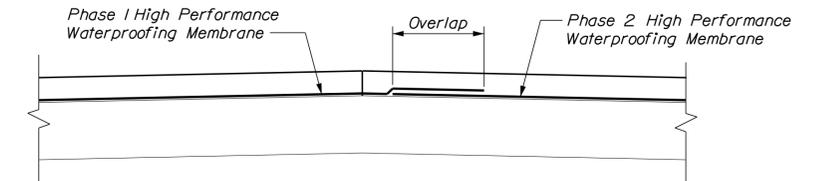
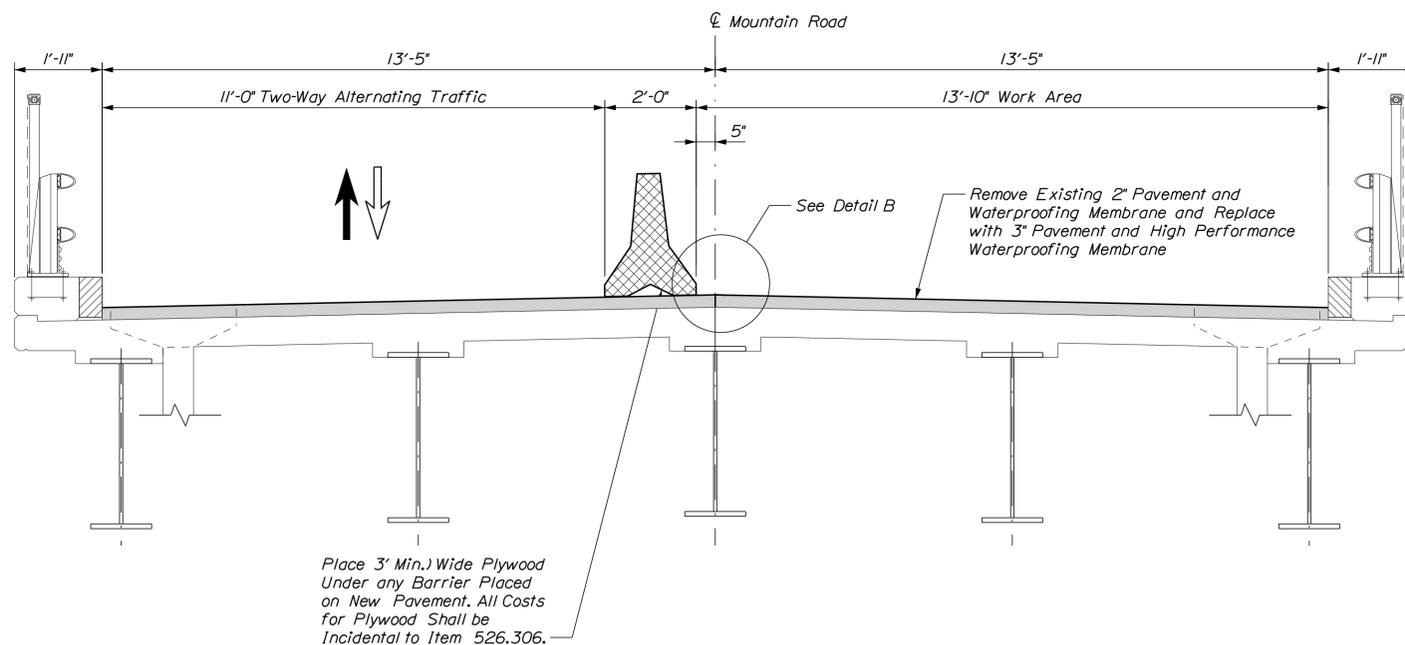
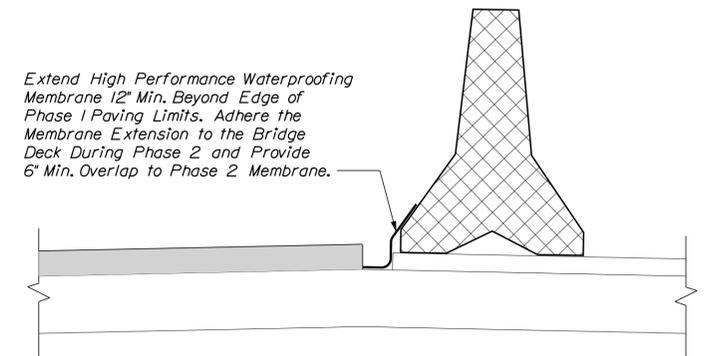
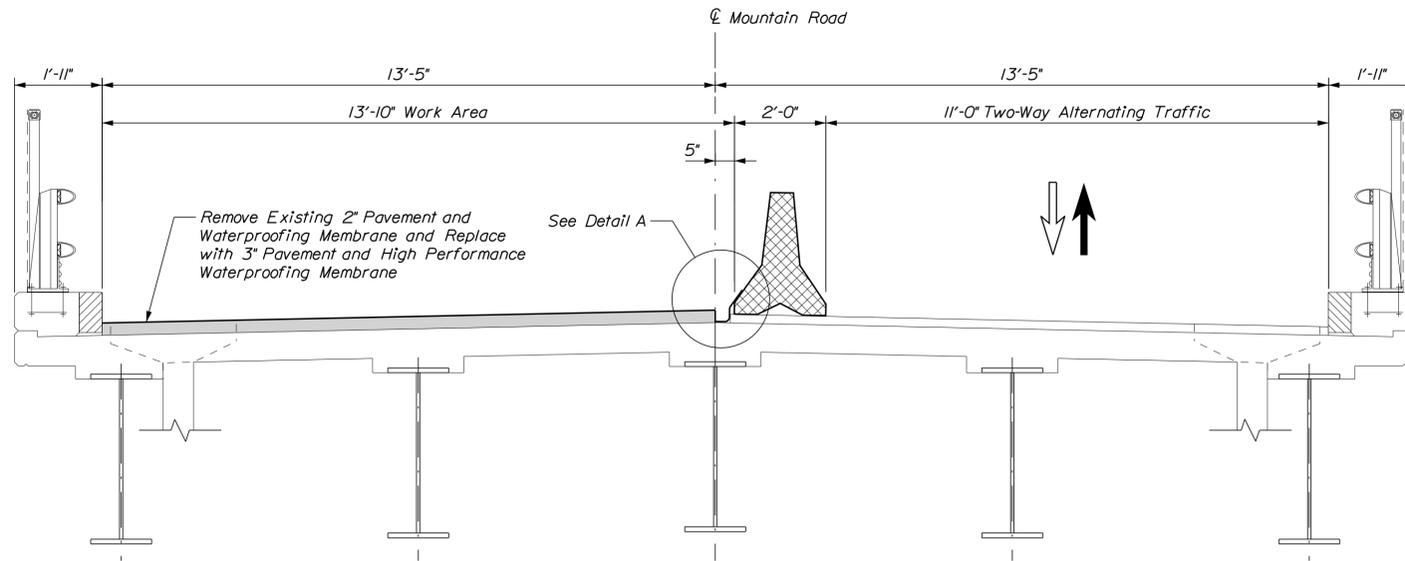
VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 23  
23 OF 45

MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019

Filename: \\vhb\proj\SP\Portland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\024\_Phasing\_01.dgn



**NOTES**

- The Contractor shall place the temporary concrete barrier such that there is no joint between adjacent sections of barrier at the location of deck removal.



Designed by:



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
CONSTRUCTION PHASING

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
CONTRACT: 2019.06

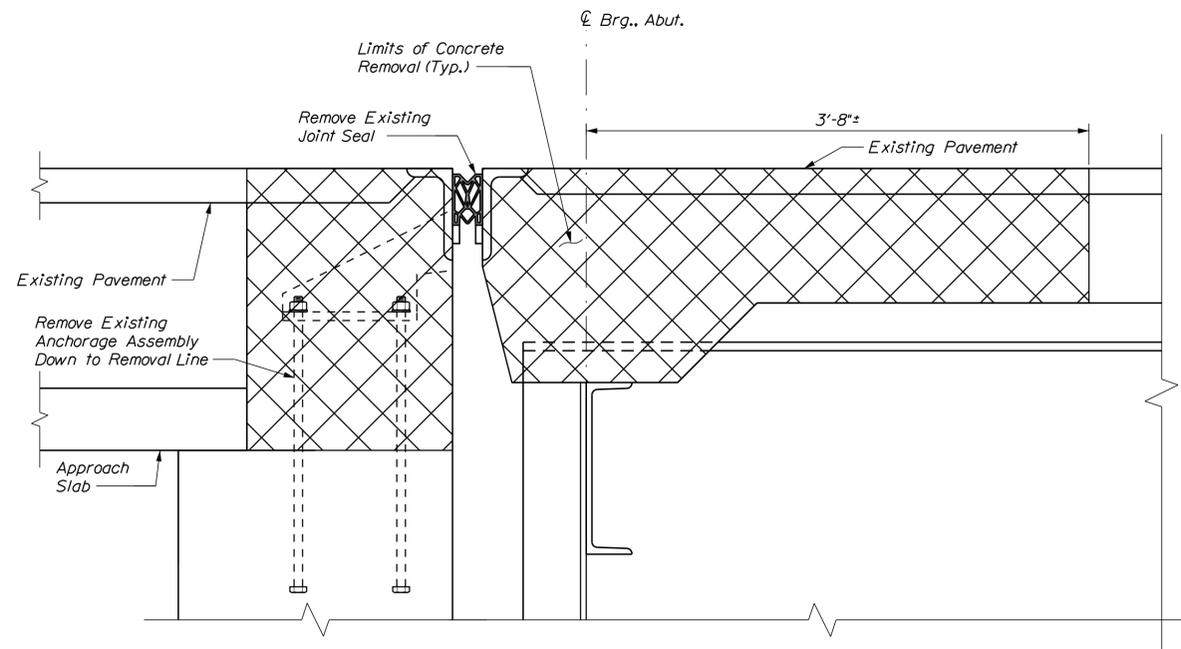
SHEET NUMBER: 24  
24 OF 45

Date: 1/21/2019

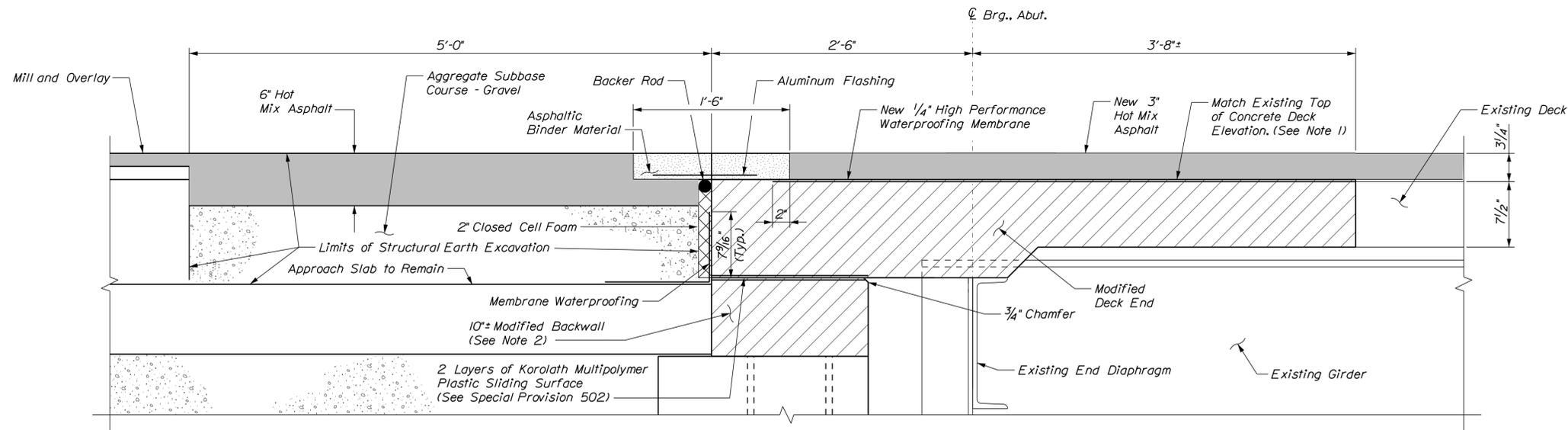
Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\025\_Misc\_DT\_01.dgn

**NOTES**

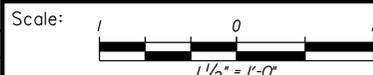
1. Topographic survey was not completed at this location. The limits and dimensions of backwall reconstruction are based on field inspection and other information available at the time of project development. Prior to any pavement removal, the Contractor shall establish the existing Finish Grade elevations. Actual field conditions may require modification to the details, dimensions, and quantities as directed by the Resident to ensure that the final Finish Grade is 1" higher than existing due to the placement of 1 additional inch of pavement on the bridge.
2. The modified backwall is anticipated to be approximately 10' tall. The final backwall height shall be determined in the field based on the elevation of the existing end diaphragm and required deck end haunch.



**EXISTING BRIDGE JOINT**  
Scale: 1 1/2" = 1'-0"



**PROPOSED TYPICAL SECTION**  
**SECTIONS AT EXPANSION JOINTS AT ABUTMENTS**  
Scale: 1 1/2" = 1'-0"



Designed by:



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
DECK END DETAILS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

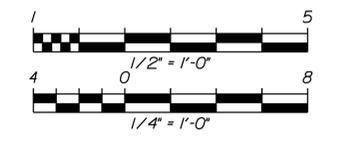
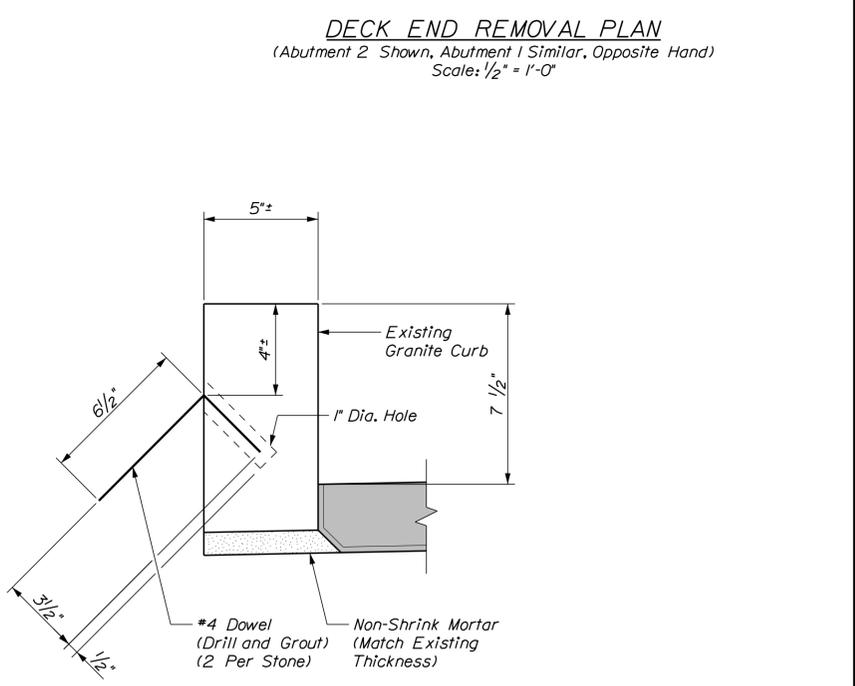
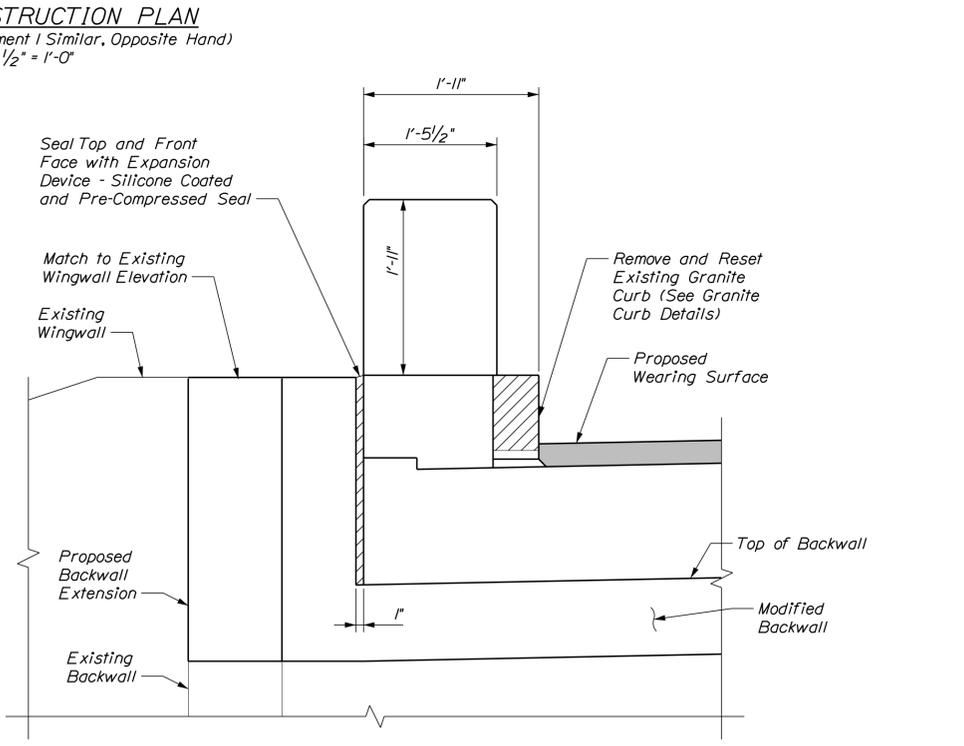
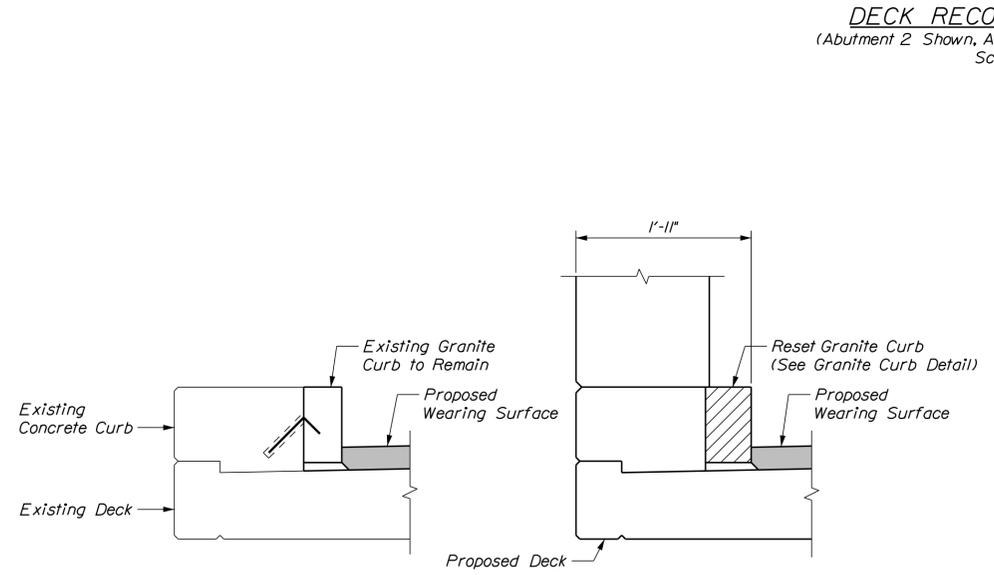
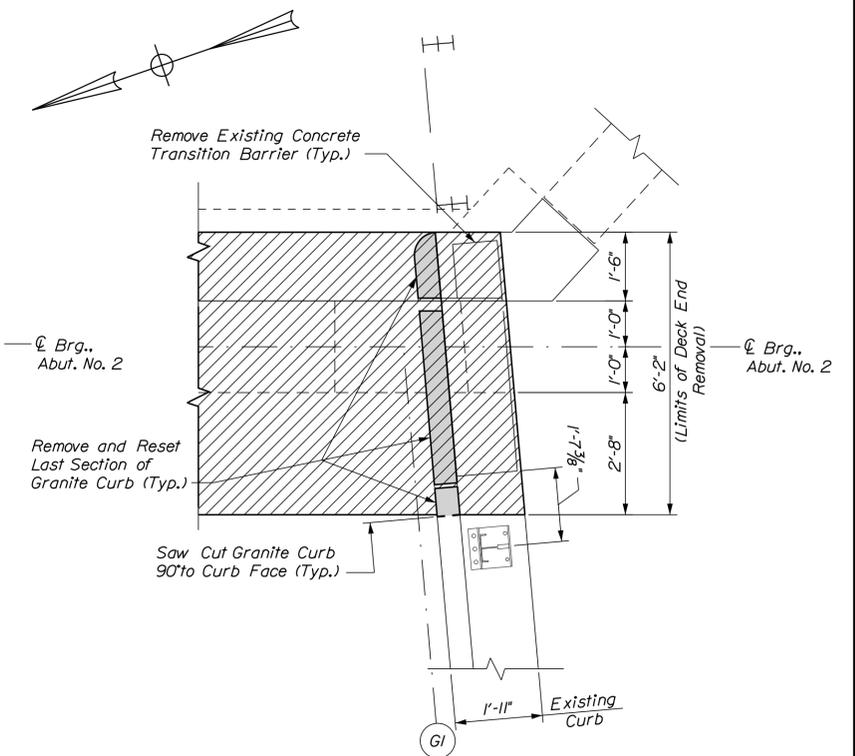
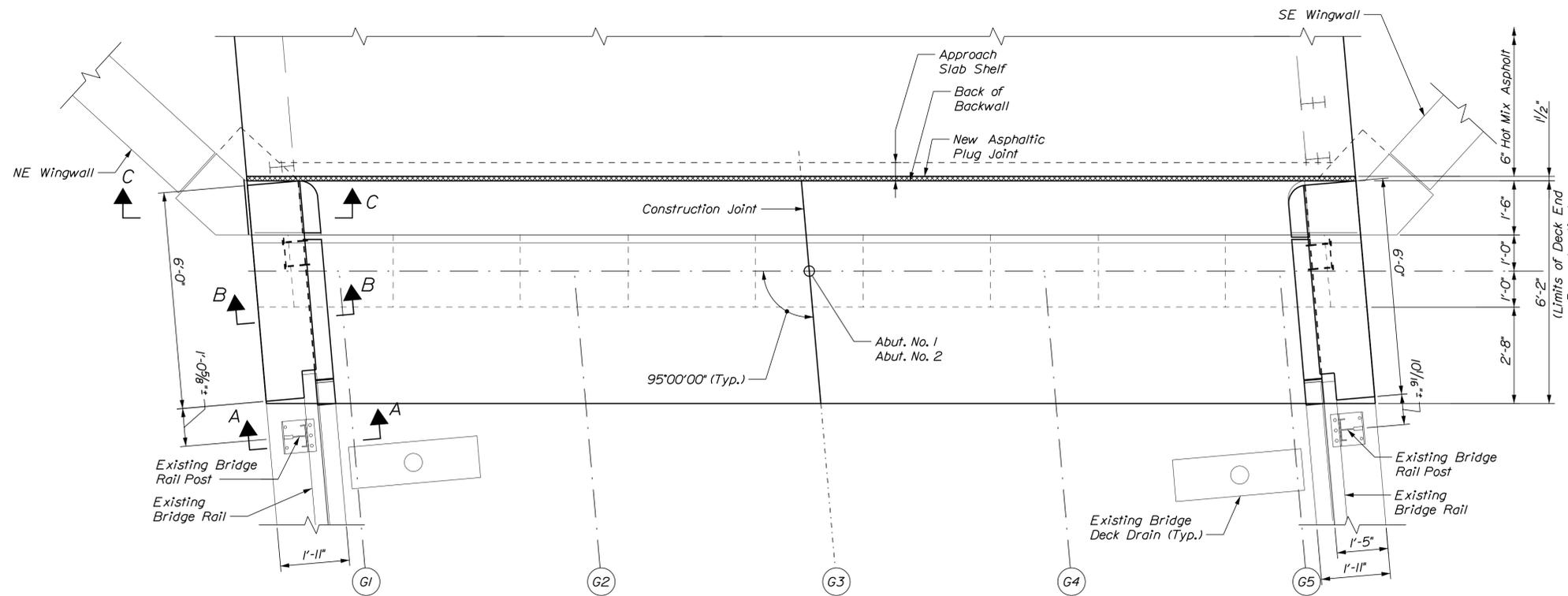
MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 25  
25 OF 45

Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\026\_Deck\_Rem\_01.dgn



No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date	By	Date	
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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THE GOLD STAR MEMORIAL HIGHWAY

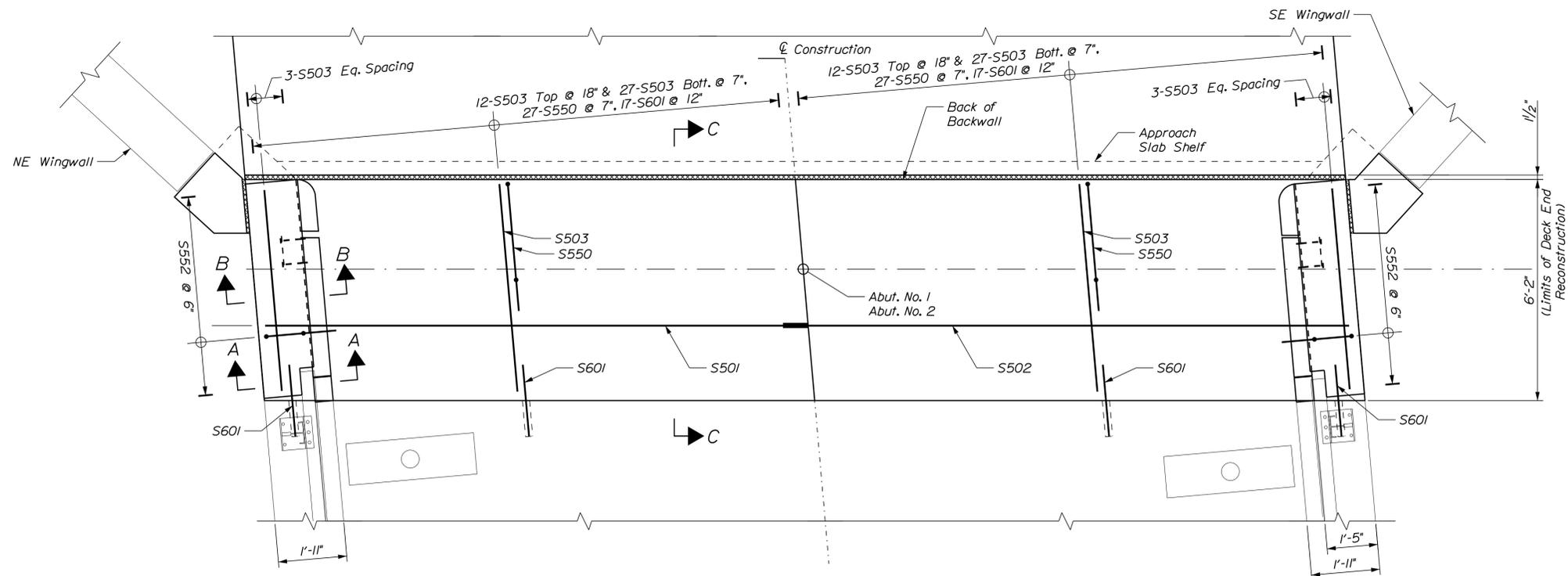
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
DECK END RECONSTRUCTION DETAILS

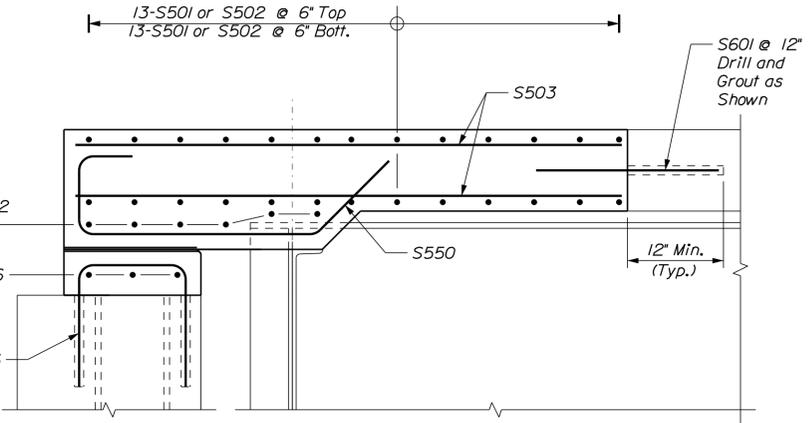
VHB: 55200.01 SHEET NUMBER: 26  
CONTRACT: 2019.06 26 OF 45

Date: 1/11/2019

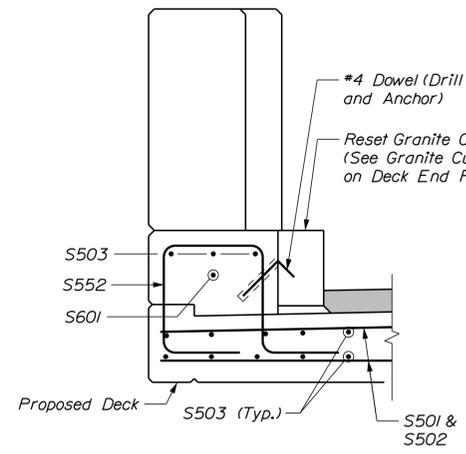
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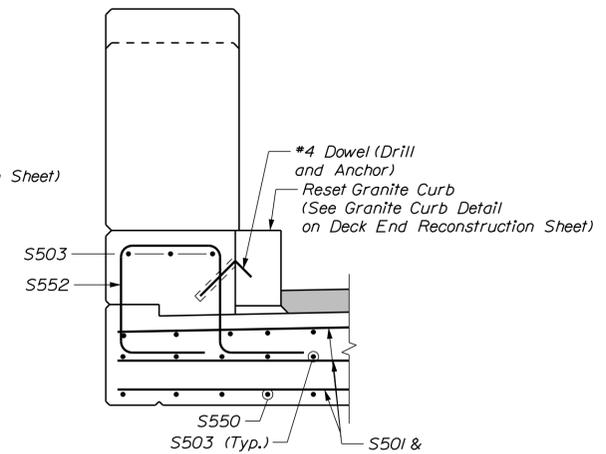
**DECK RECONSTRUCTION PLAN**  
 (Abutment 2 Shown, Abutment 1 Similar, Opposite Hand)  
 Scale: 1/2" = 1'-0"



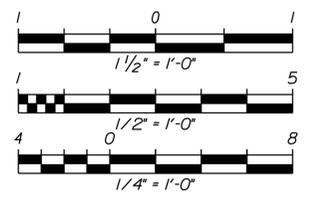
**SECTION C-C**  
 Scale: 1" = 1'-0"



**SECTION A-A**  
 (Bridge Rail not Shown for Clarity)  
 (North Fascia Shown, South Fascia Similar)  
 Scale: 1" = 1'-0"



**SECTION B-B**  
 (Bridge Rail not Shown for Clarity)  
 (North Fascia Shown, South Fascia Similar)  
 Scale: 1" = 1'-0"



**NOTES**

- The mechanical connection at the construction joint shall be Dayton/Richmond Dowel Bar Splicer System or an approved equal. S501 shall be the female connector and S502 shall be the male connector.
- At the Contractor's option, the dowel bar splices may be separate from bars S501 and S502 and lapped to those bars. The lap length shall be 3'-0" minimum.

No.	Revision	By	Date

Designed by:					
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

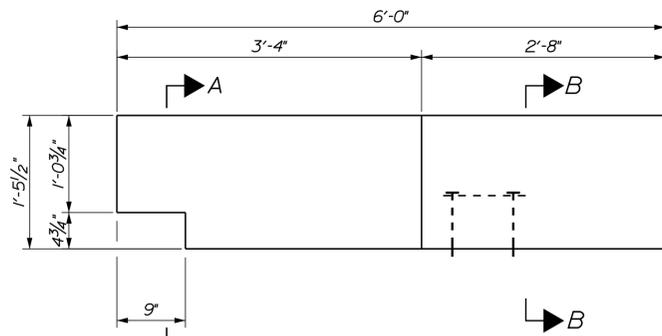
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 DECK END REINFORCING DETAILS

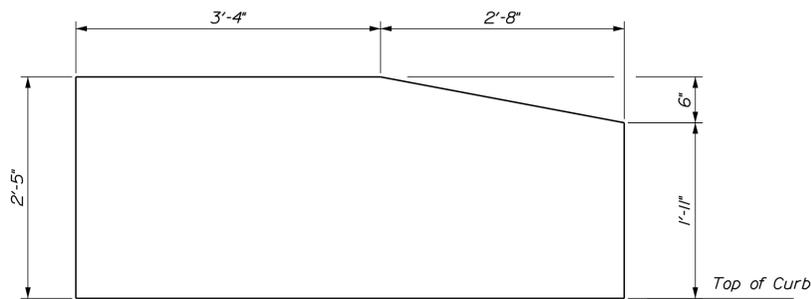
VHB: 55200.01      SHEET NUMBER: 27  
 CONTRACT: 2019.06      27 OF 45

Date: 1/11/2019

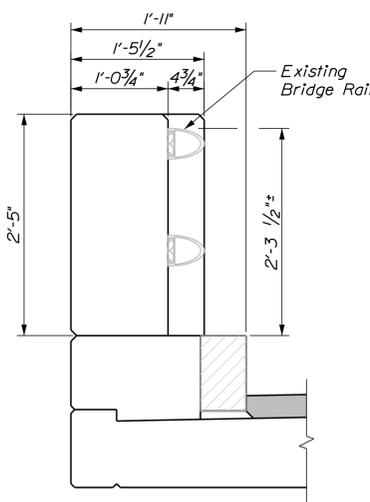
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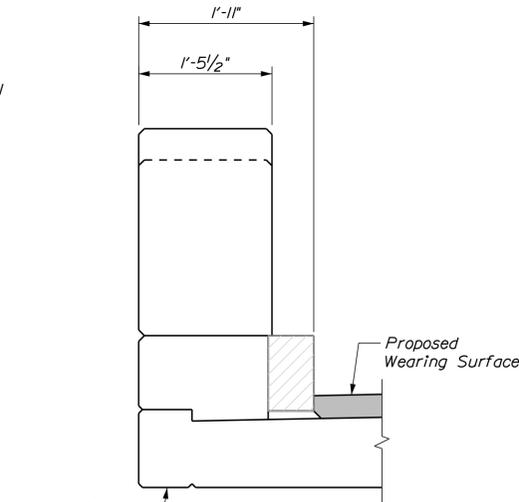
**PLAN**  
(NW Transition Barrier Shown, SW Similar)  
Scale: 1" = 1'-0"



**ELEVATION**  
(NW Transition Barrier Shown, SW Similar)  
Scale: 1" = 1'-0"

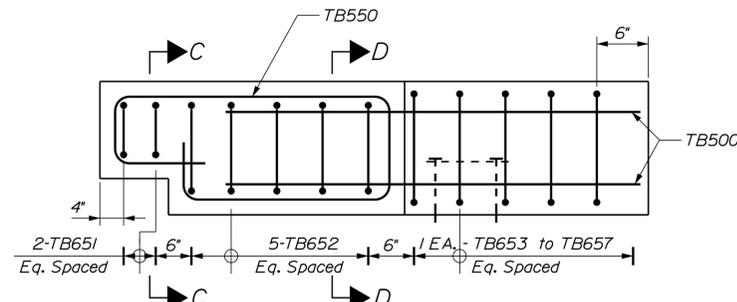


**SECTION A-A**  
(North Fascia Shown, South Fascia Similar)  
Scale: 1" = 1'-0"

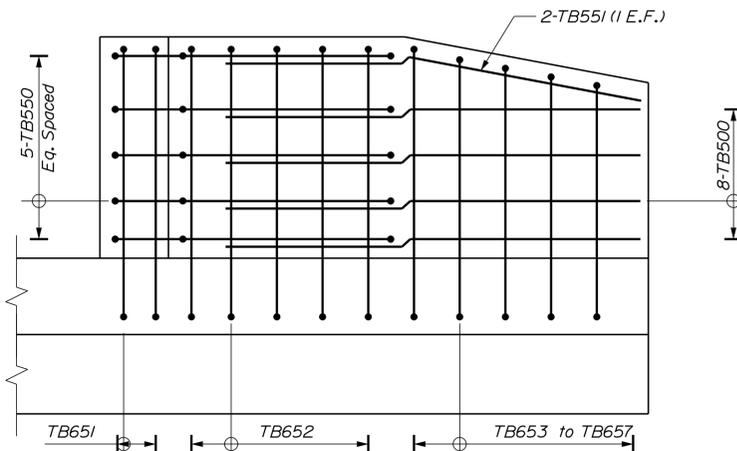


**SECTION B-B**  
(North Fascia Shown, South Fascia Similar)  
Scale: 1" = 1'-0"

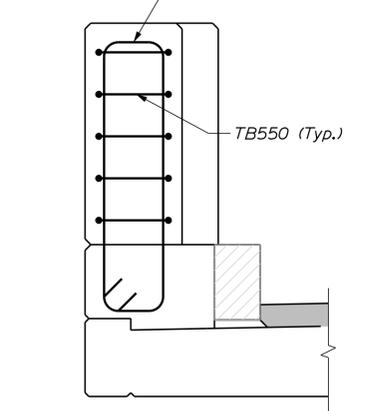
**CONCRETE BARRIER TRANSITION MODIFICATIONS**



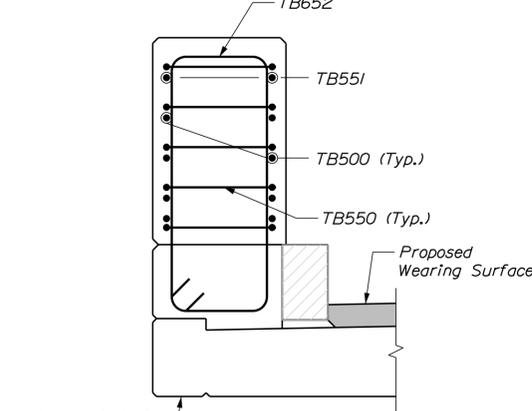
**PLAN**  
(NW Transition Barrier Shown, SW Similar)  
Scale: 1" = 1'-0"



**ELEVATION**  
(NW Transition Barrier Shown, SW Similar)  
Scale: 1" = 1'-0"



**SECTION C-C**  
(North Fascia Shown, South Fascia Similar)  
Scale: 1" = 1'-0"



**SECTION D-D**  
(North Fascia Shown, South Fascia Similar)  
Scale: 1" = 1'-0"

**CONCRETE BARRIER TRANSITION REINFORCING**



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
CONCRETE TRANSITION BARRIER  
DETAILS AND REINFORCING

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01

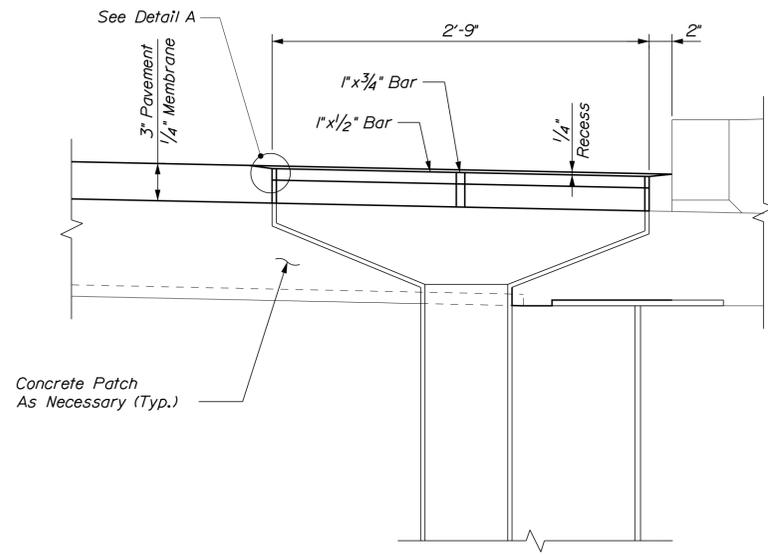
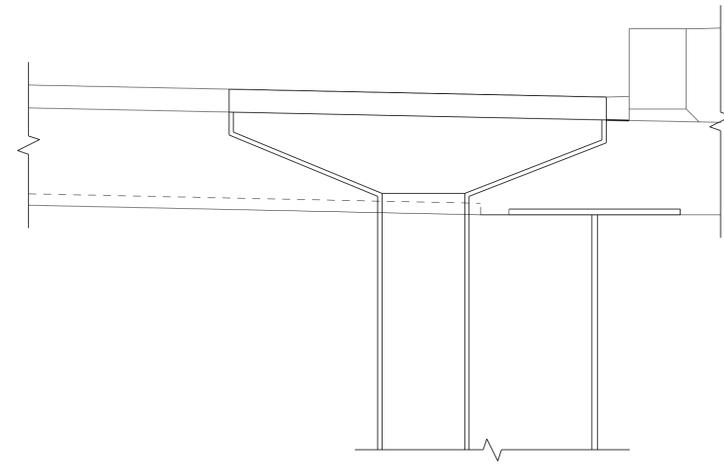
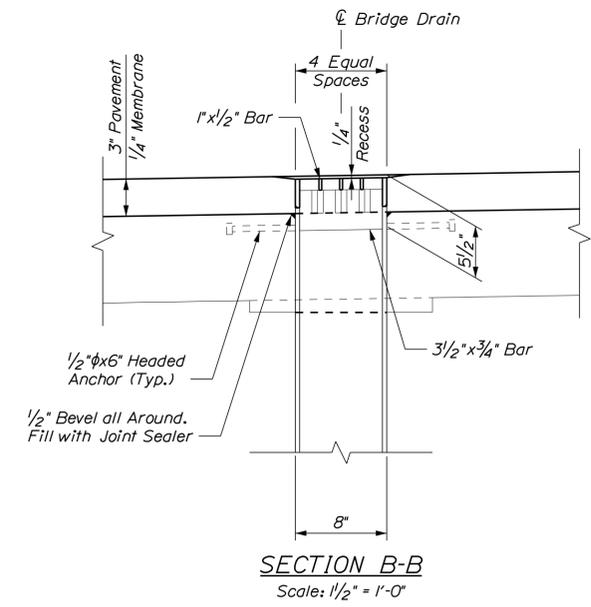
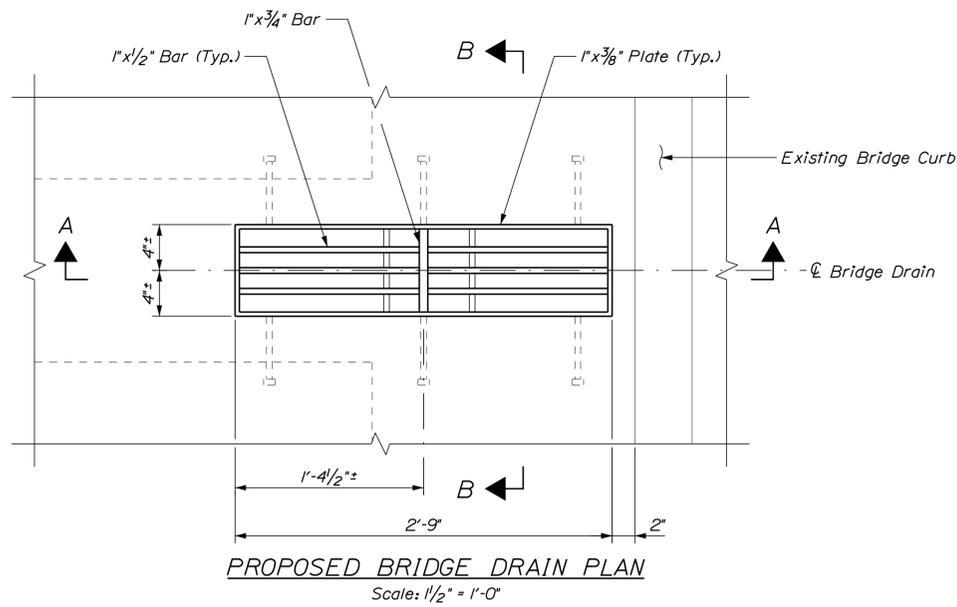
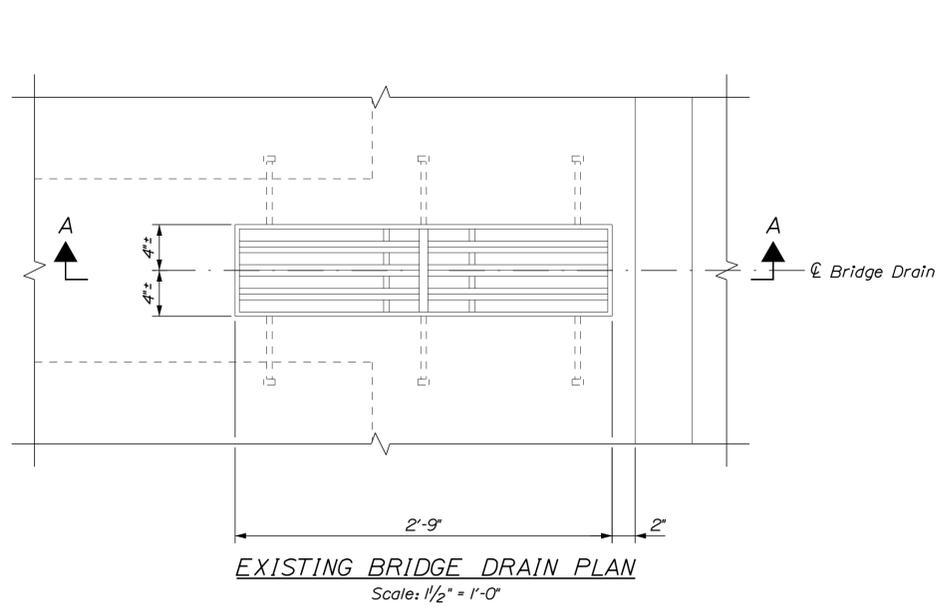
CONTRACT: 2019.06

SHEET NUMBER: 28

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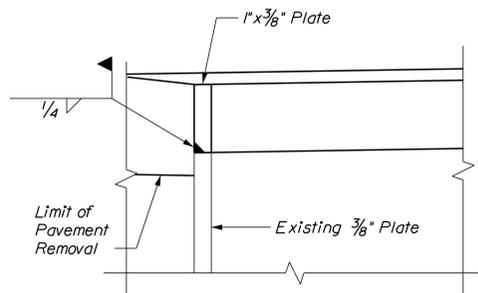
Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\_55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\029\_Typ\_Dt\_01.dgn



**BRIDGE DRAIN GRATE MODIFICATION NOTES**

1. Prior to starting the work, the Contractor shall field measure each drain. This information shall be used for fabrication of the drain grate extensions.
2. All plates shall conform to ASTM A 36. Drain grate extensions shall be hot dip galvanized after fabrication.
3. Prepare existing drain body and new drain top grate extension for field weld. Field weld the exterior perimeter joint between existing drain body and new top of drain. After welding, the exterior of the new top of drain shall be coated with an approved cold galvanizing compound.
4. In areas where the existing galvanizing has failed, grind and cold galvanize scupper steel as directed by the Resident.
5. Payment for all labor, equipment and materials associated with the bridge drain modification will be paid for under Item 502.701, Bridge Drain Grate Modification. See Special Provision 502.



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
BRIDGE DRAIN GRATE MODIFICATION

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

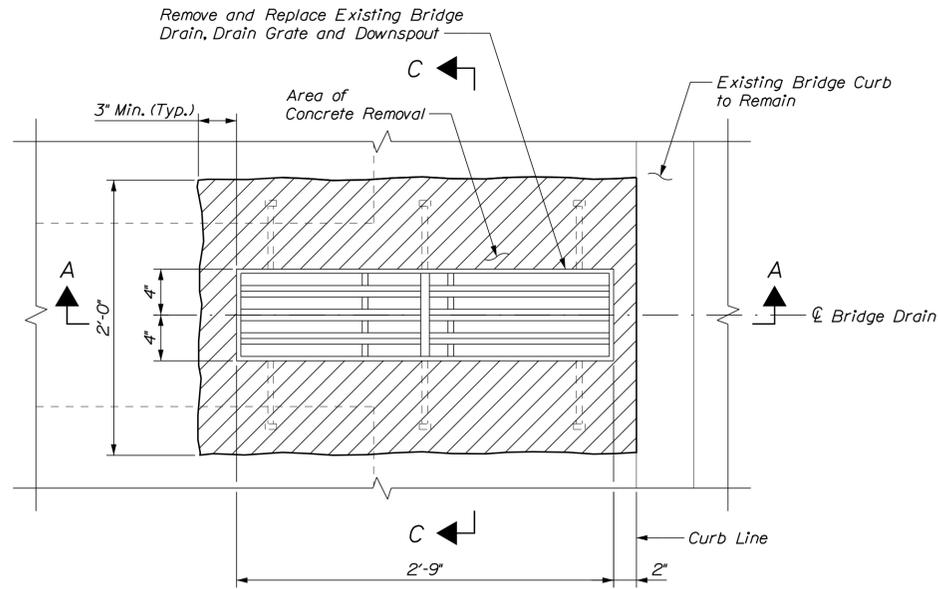
VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 29  
29 OF 45

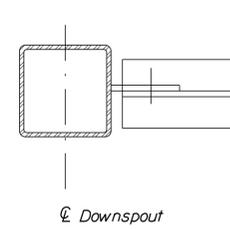
MTA PROJECT MANAGER: Ralph Norwood, IV

Date: 1/11/2019

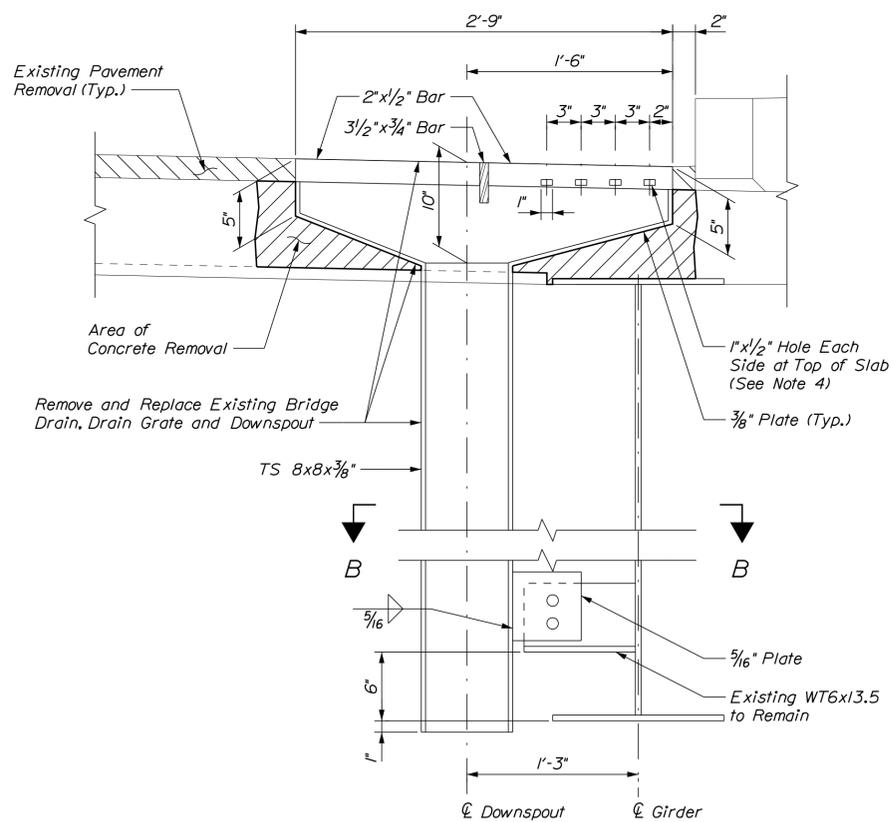
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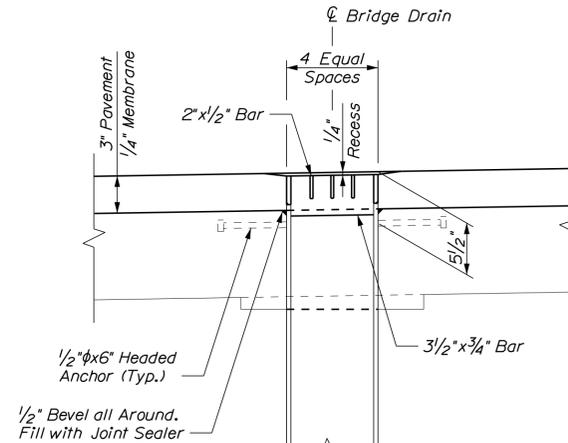
**BRIDGE DRAIN PLAN**  
Scale: 1/2" = 1'-0"



**SECTION B-B**  
Scale: 1/2" = 1'-0"



**BRIDGE DRAIN SECTION A-A**  
Scale: 1/2" = 1'-0"



**SECTION C-C**  
Scale: 1/2" = 1'-0"

**BRIDGE DRAIN REPLACEMENT NOTES**

1. All welds to be continuous 5/16" bead or fillet welds.
2. All steel shall conform to ASTM A36. All steel shall be galvanized after fabrication in accordance with ASTM A123.
3. Edge of bridge drain adjacent to curb to be depressed 1/2" below finished grade. Shape wearing surface to fit.
4. Do not cover with membrane waterproofing.
5. All removed concrete shall be replaced with Class AAA - Deck Concrete
6. Payment for all labor, equipment and materials associated with the bridge drain replacement will be paid for under Item 502.702, Replace Bridge Drain, including but not limited to removal of existing concrete installation of new bridge drain and placing of new concrete.



No.	Revision	By	Date

Designed by:



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
MOUNTAIN ROAD UNDERPASS  
BRIDGE DRAIN REPLACEMENT

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

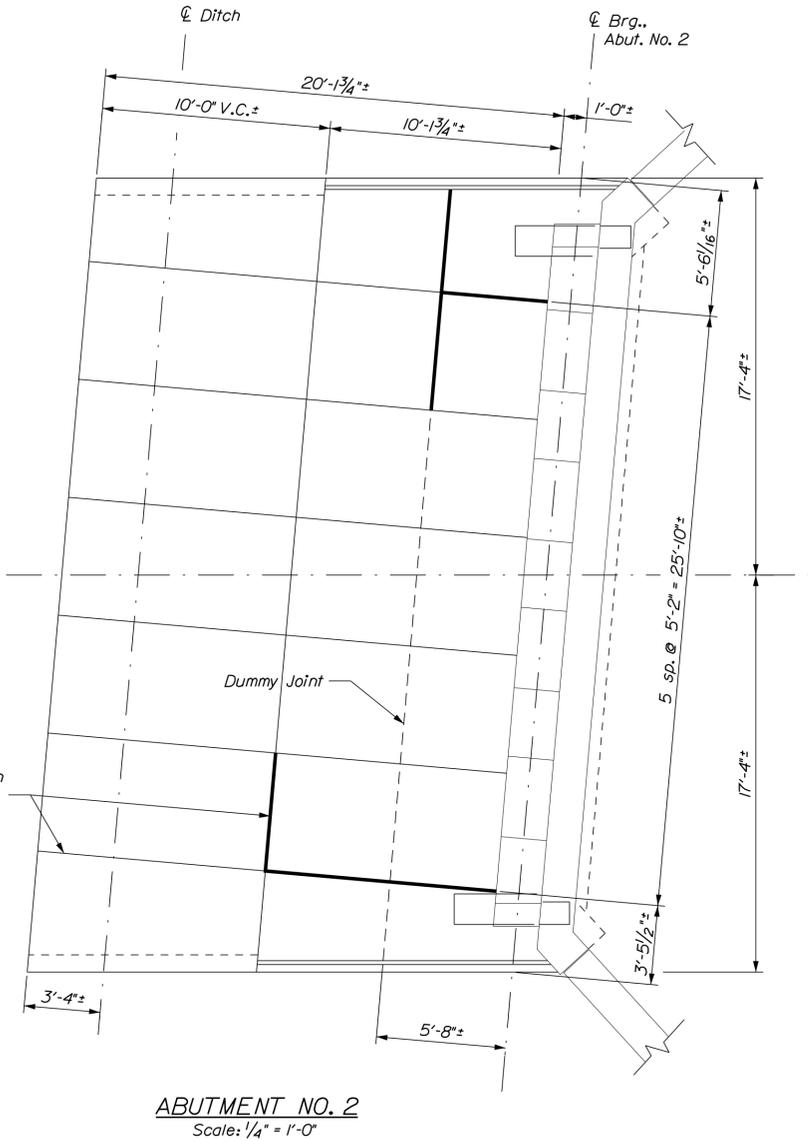
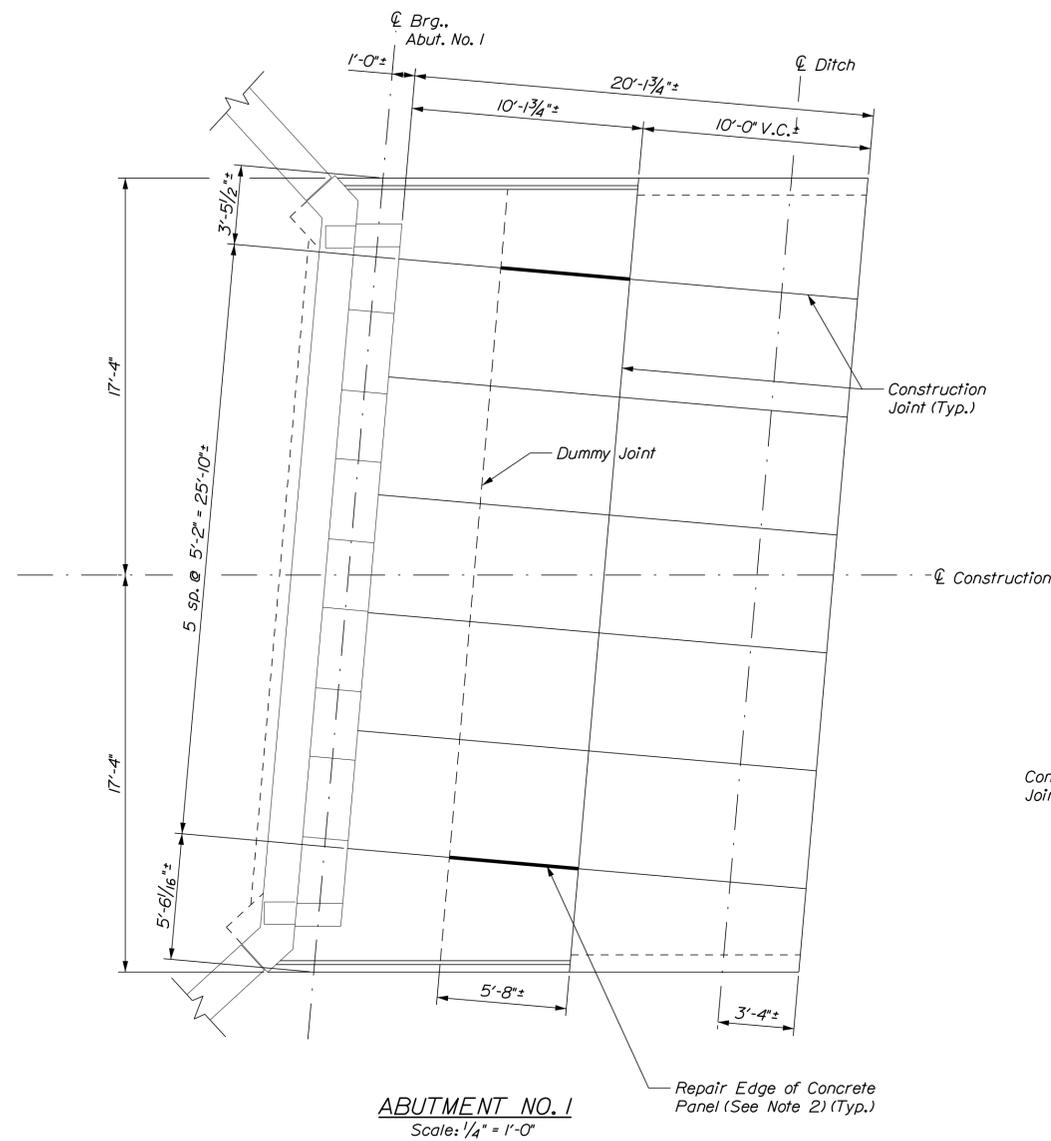
MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 30  
30 OF 45

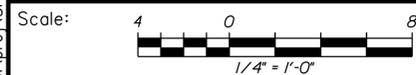
Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\031\_Slope\_01.dgn



**NOTES**

- Existing Slope Protection dimensions may vary. Contractor shall field verify dimension prior to panel replacement.
- Repair edges of concrete slope protection panels as directed by the resident. Repair Material shall be from the MaineDOT Qualified Products List for Rapid Setting Concrete Patching Materials.



No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: G. Edington					
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Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 SLOPE PROTECTION DETAILS

VHB: 55200.01  
 CONTRACT: 2019.06

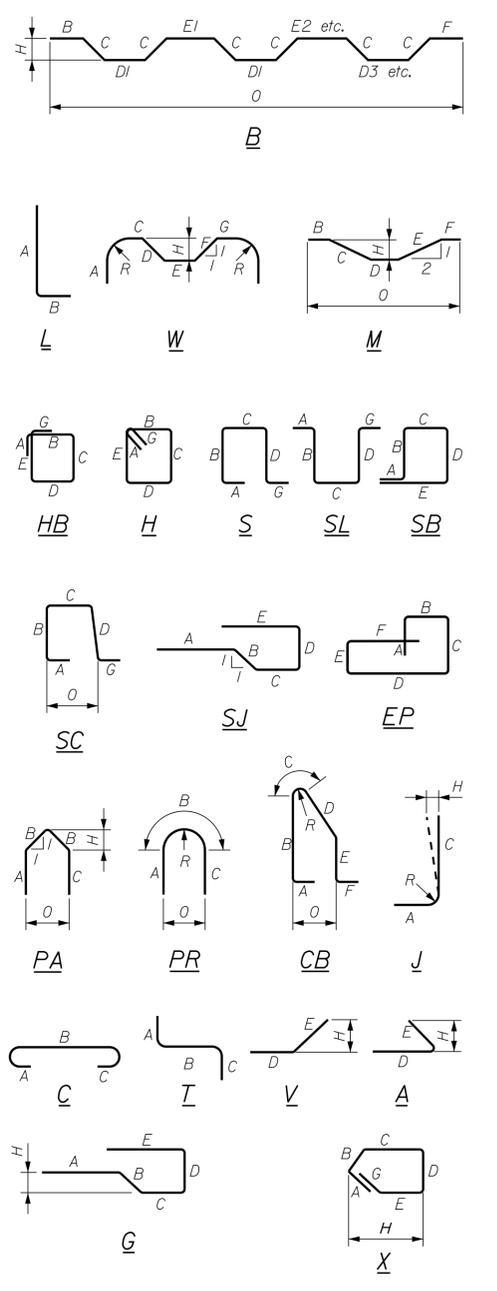
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Date: 1/11/2019

Filename: \\vnb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\1-Mountain\032\_Reinf\_Sch.dgn

STRAIGHT BARS				BENT BARS																			
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
S501	64	15'-1"	Deck Slab					S550	108	4'-0"	SJ	0'-0"	0'-6"	2'-5"	0'-7"	0'-6"							Deck Slab
S502	64	15'-1"						S552	52	4'-11"	SC	0'-10"	1'-1"	1'-1"	1'-1"			0'-10"					
S503	168	5'-10"						S555	12	4'-4"	V				3'-0"	1'-4"				0'-11"			Backwall
S601	72	2'-8"						S556	68	4'-8"	S	0'-0"	1'-9"	1'-2"	1'-9"			0'-0"					
S505	6	15'-3"	Backwall					S557	8	9'-2"	S	0'-0"	4'-0"	1'-2"	4'-0"			0'-0"					
S506	6	15'-3"						S558	12	6'-1"	X	1'-2"	0'-7"	1'-2"	1'-4"	0'-8"		1'-2"	17'-8.5"				
TB500	32	4'-6"	Transition Barrier					TB550	40	9'-5"	EP	0'-11"	2'-3"	1'-1"	3'-0"	0'-8"	1'-6"						Transition Barrier
								TB551	8	4'-6"	V				1'-10"	2'-8"			0'-6"	0'-6"			
								TB651	8	8'-2"	H	0'-6"	3'-0"	0'-7"	3'-0"	0'-7"		0'-6"					
								TB652	20	9'-0"	H	0'-6"	3'-0"	1'-0"	3'-0"	1'-0"		0'-6"					
								TB653	4	8'-8"	H	0'-6"	2'-10"	1'-0"	2'-10"	1'-0"		0'-6"					
								TB654	4	8'-6"	H	0'-6"	2'-9"	1'-0"	2'-9"	1'-0"		0'-6"					
								TB655	4	8'-4"	H	0'-6"	2'-8"	1'-0"	2'-8"	1'-0"		0'-6"					
								TB656	4	8'-2"	H	0'-6"	2'-7"	1'-0"	2'-7"	1'-0"		0'-6"					
								TB657	4	8'-0"	H	0'-6"	2'-6"	1'-0"	2'-6"	1'-0"		0'-6"					

TYPE - BENDING DIAGRAMS



All dimensions are out-to-out of bar.  
 Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.  
 Reinforcing Bar: ASTM A615/A615M, Grade 60

GENERAL NOTES

- The first digit following the letter(s) of the mark indicate the size of the bar:  
 Mark 'A502' = bar size #5  
 Mark 'P805' = bar size #8  
 Mark 'S650' = bar size #6

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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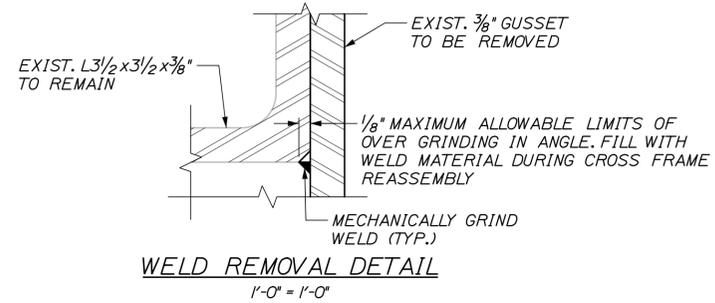
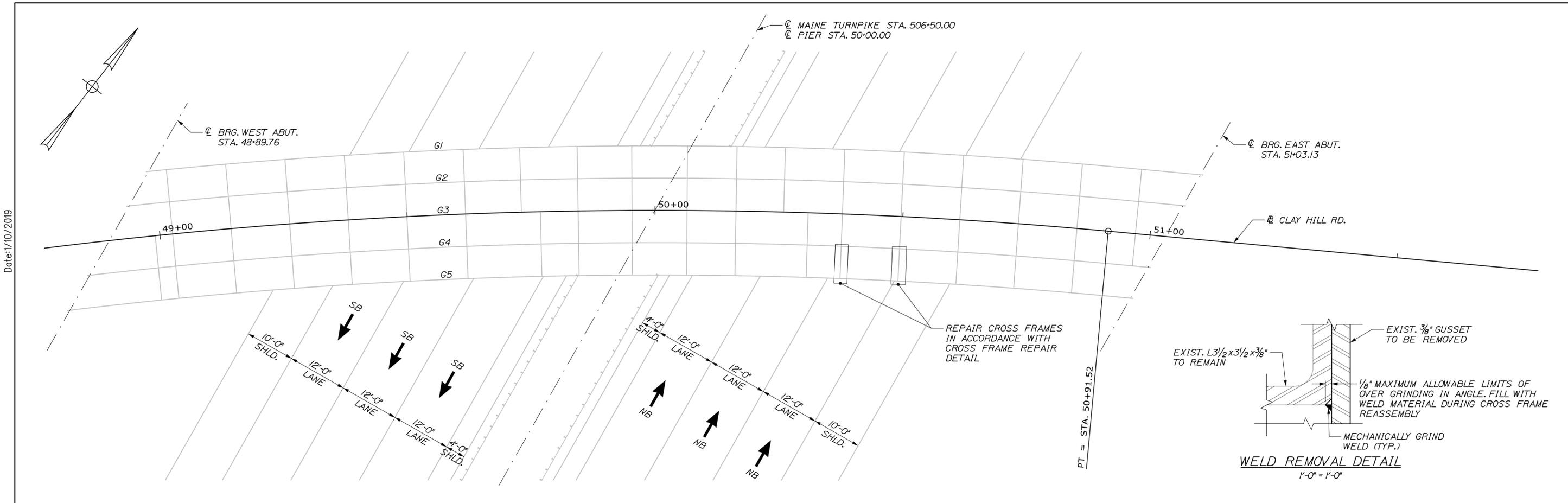
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
 MOUNTAIN ROAD UNDERPASS  
 REINFORCING STEEL SCHEDULE

VHB: 55200.01 SHEET NUMBER: 32  
 CONTRACT: 2019.06 32 OF 45

Date: 1/10/2019

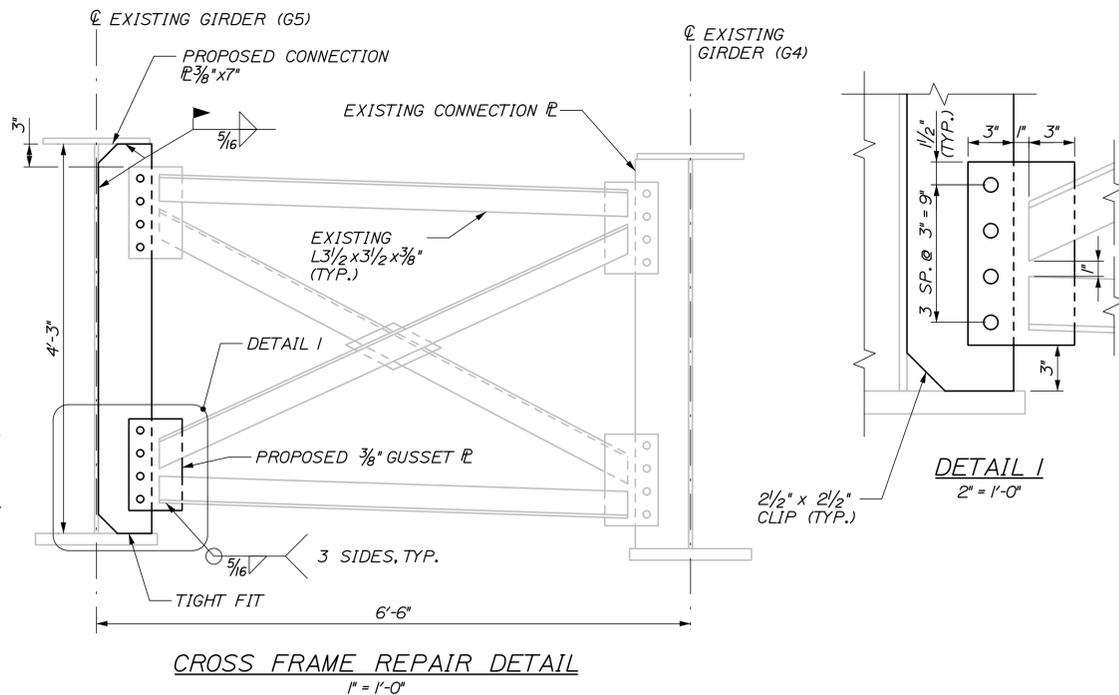


FRAMING PLAN  
1" = 10'-0"

**STRUCTURAL STEEL REPAIR NOTES:**

1. ALL REPAIR WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NOVEMBER 2014 MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, THE SUPPLEMENTAL SPECIFICATIONS, AND THE SPECIAL PROVISIONS.
2. DUE TO THE NATURE OF REPAIR PROJECTS, THE EXACT EXTENT OF REPAIR WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER INFORMATION AVAILABLE AT THE TIME OF CONTRACT DEVELOPMENT. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATION TO THE CONSTRUCTION DETAILS, DIMENSIONS, AND WORK QUANTITIES. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH FIELD CONDITIONS AND AS DIRECTED BY THE RESIDENT.
3. ALL DIMENSIONS, ELEVATIONS, AND OTHER INFORMATION SHOWN ON THESE DRAWINGS TO DEFINE THE STRUCTURE ARE BASED UPON THE ORIGINAL CONSTRUCTION DRAWINGS AND FIELD MEASUREMENTS AND ARE NOT GUARANTEED TO REPRESENT AS-BUILT DIMENSIONS. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD AS NECESSARY AND AS REQUIRED FOR THE COMPLETION OF THE WORK UNDER THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY AND FOR THE CORRECT FIT OF ALL CONSTRUCTION.
4. THE CONTRACTOR SHALL REPORT TO THE RESIDENT ANY DEVIATIONS OF THE ACTUAL CONDITIONS FROM THOSE DEPICTED ON THE DRAWINGS. SHOULD ANY DEVIATIONS BE FOUND, THE RESIDENT SHALL REVIEW AND PRESCRIBE CORRECTIVE ACTIONS TO BE TAKEN.
5. ALL WORK IS TO BE PERFORMED WITH CARE SO THAT MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE AUTHORITY, WILL NOT BE DAMAGED. IF ANY SUCH MATERIALS ARE DAMAGED, THE DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE RESIDENT, AT NO EXPENSE TO THE AUTHORITY.
6. THE CONTRACTOR IS ADVISED THAT THE EXISTING BRIDGE STEEL (BEAMS, SPLICE PLATES, DIAPHRAGMS, BEARINGS, NUTS, BOLTS, ETC.) ARE ASSUMED TO BE COATED WITH LEAD-BASED PAINT. SEE SPECIAL PROVISIONS SUBSECTION 105.2.4.2, LEAD PAINT, FOR ADDITIONAL INFORMATION.

7. ALL STRUCTURAL STEEL SUPPLIED BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 (ASTM A709) GRADE 36 OR HIGHER.
8. ALL NEW STRUCTURAL STEEL INCORPORATED INTO THE FINAL PROJECT SHALL BE COLD GALVANIZED IN ACCORDANCE WITH SPECIAL PROVISION 504.
9. WHERE GOUGE GRINDING IS REQUIRED, THE GIRDER SHALL BE COLD GALVANIZED 6" BEYOND GRINDING LIMITS. THE LIMITS OF COLD GALVANIZING COMPOUND APPLICATION SHALL BE TAPED OFF TO PROVIDE NEAT EDGE LINES AND TO PREVENT OVERRUN. FINAL GRINDING SHALL BE COMPLETED PARALLEL TO THE DIRECTION OF STRESS.
10. COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED, AND SHOULD NOT BE RELIED UPON WITHOUT VERIFICATION.
11. BOLTS SHALL BE 7/8" DIA. IN STANDARD HOLES AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M164 (ASTM F3125, GRADE A325, TYPE 1). BOLTS SHALL BE HOT DIP GALVANIZED PER AASHTO M232 (ASTM A153).
12. STEEL REPAIR REQUIRES A DOUBLE LANE CLOSURE ON THE MAINLINE AS SHOWN ON THE MAINTENANCE OF TRAFFIC STANDARD DETAILS SHEETS.
13. STEEL REPAIR REQUIRES A LANE SHIFT ON CLAY HILL ROAD AS SHOWN ON THE MAINTENANCE OF TRAFFIC DETAILS SHEETS.
14. ALL WELDS SHALL TERMINATE 5/16" ± 1/8" FROM THE ENDS OF THE PLATES. REFERENCE 2014 MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS 504(07) FOR TYPICAL WELD DETAILS.



CROSS FRAME REPAIR DETAIL  
1" = 1'-0"

Scale:		AS NOTED	
Designed by:			
CONSULTANT PROJECT MANAGER: Tim Cote, P.E.			
No.	Revision	By	Date

Designed	HJW	11/18	Checked	BRG	11/18
Drawn	PEB	11/18	In Charge of	RAL	11/18

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

**THE GOLD STAR MEMORIAL HIGHWAY**

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

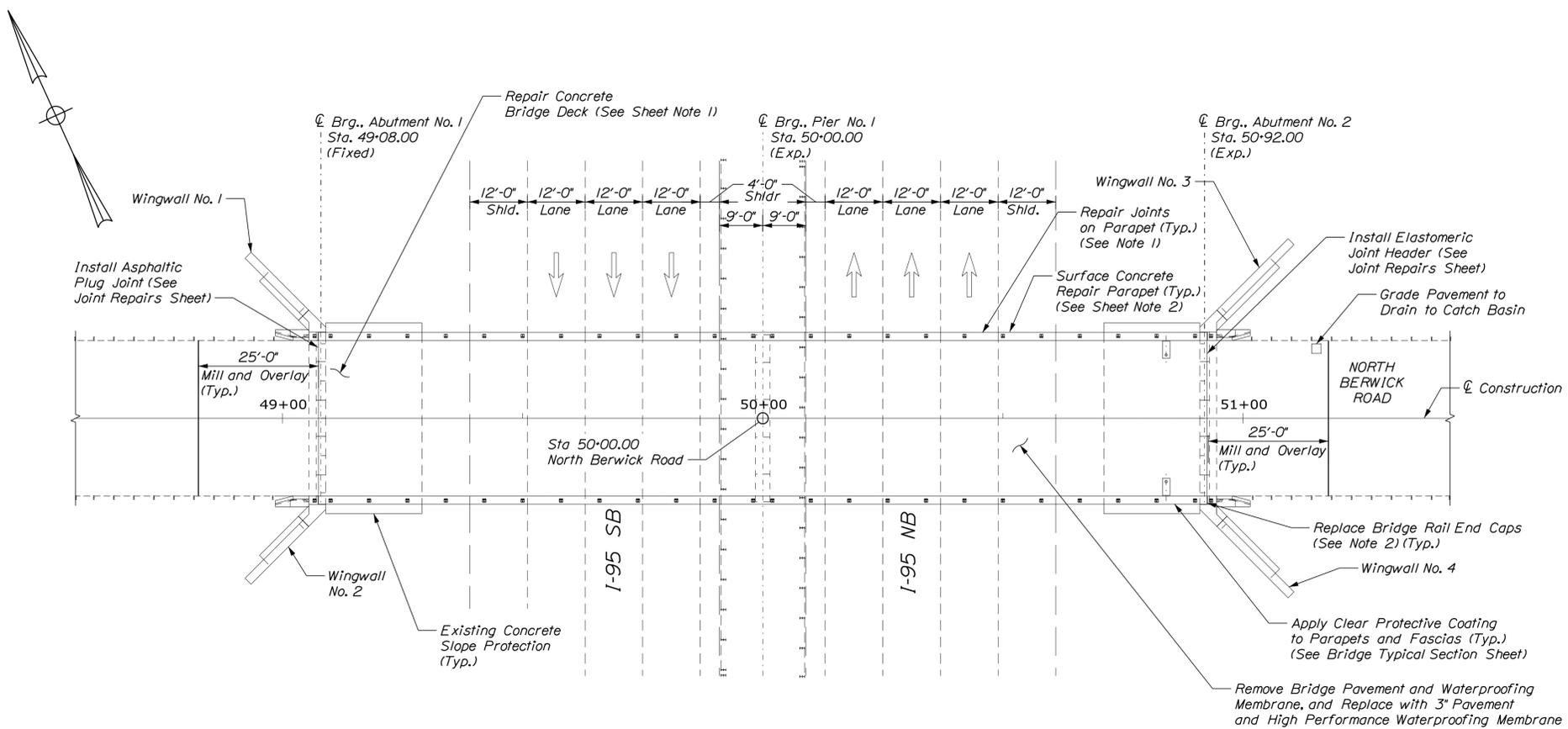
CLAY HILL ROAD BRIDGE HIT  
CROSS FRAME REPLACEMENT DETAILS

SHEET NUMBER: 33  
CONTRACT: 2019.06  
33 OF 45

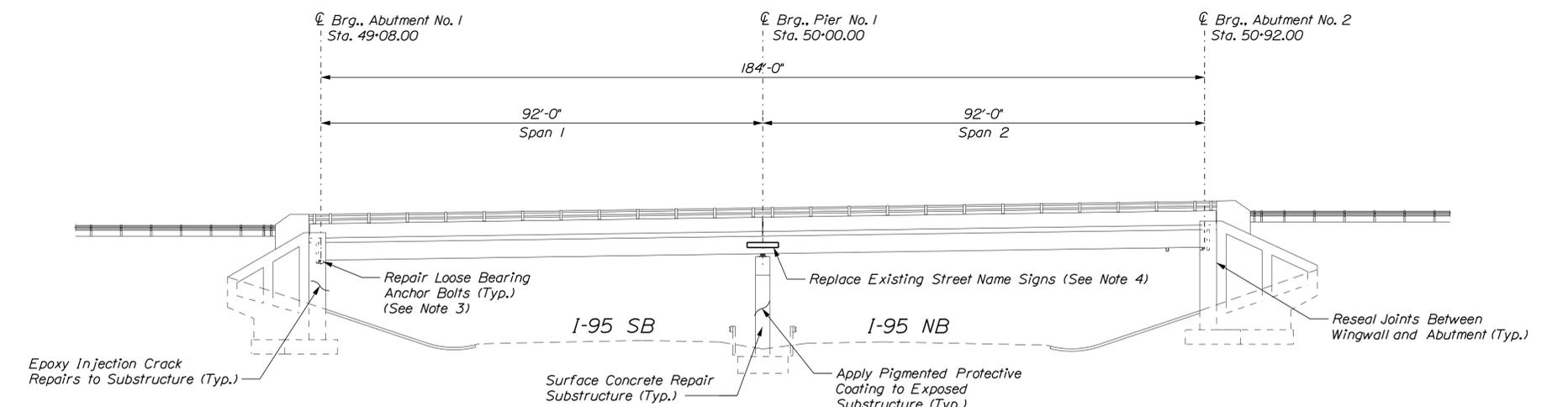
Filename: 033\_Framing Plan.dgn

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\2-NBerwick\034\_BDPlan.dgn



**PLAN**  
Scale: 1/16" = 1'-0"



**ELEVATION**  
Scale: 1/16" = 1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

Partial Depth Concrete Deck Repairs	120*
* Assumes 2% of the Deck will require Partial Depth Concrete Repairs.	
Parapet Surface Repairs	200**
** Includes 16 S.F. Additional Repair Quantity As A Contingency	

**NOTES**

1. Repair parapet joints as directed by the Resident. Joint sealant shall be from the MaineDOT Qualified Products List for Silicone and Polyurethane Joint Sealant.
2. Replace loose or missing Bridge Rail End Caps as directed by the Resident. Labor and materials shall be incidental to the related Contract Items.
3. Repair loose bearing anchor bolts as directed by the resident. Labor and materials shall be incidental to the related substructure repairs.
4. The Authority will provide the new Street Name Signs to the Contractor at no cost. All costs for removing the existing signs and installing the new signs shall be incidental to the Related Contract Items.

**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Limit of Pavement Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

**SHEET NOTES**

1. For Concrete Repair Notes and Details see Typical Details Sheet.
2. For North Parapet Repair Detail, See Bridge Typical Section Sheet.



Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

No.	Revision	By	Date

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VANASSE HANGEN BRUSTLIN, INC.  
500 Southborough Dr.  
Suite 105B  
South Portland, ME 04106  
TEL (207) 889-3150  
FAX (207) 253-5596



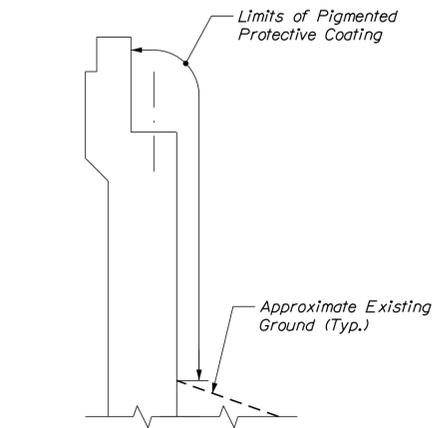
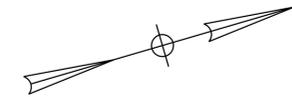
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

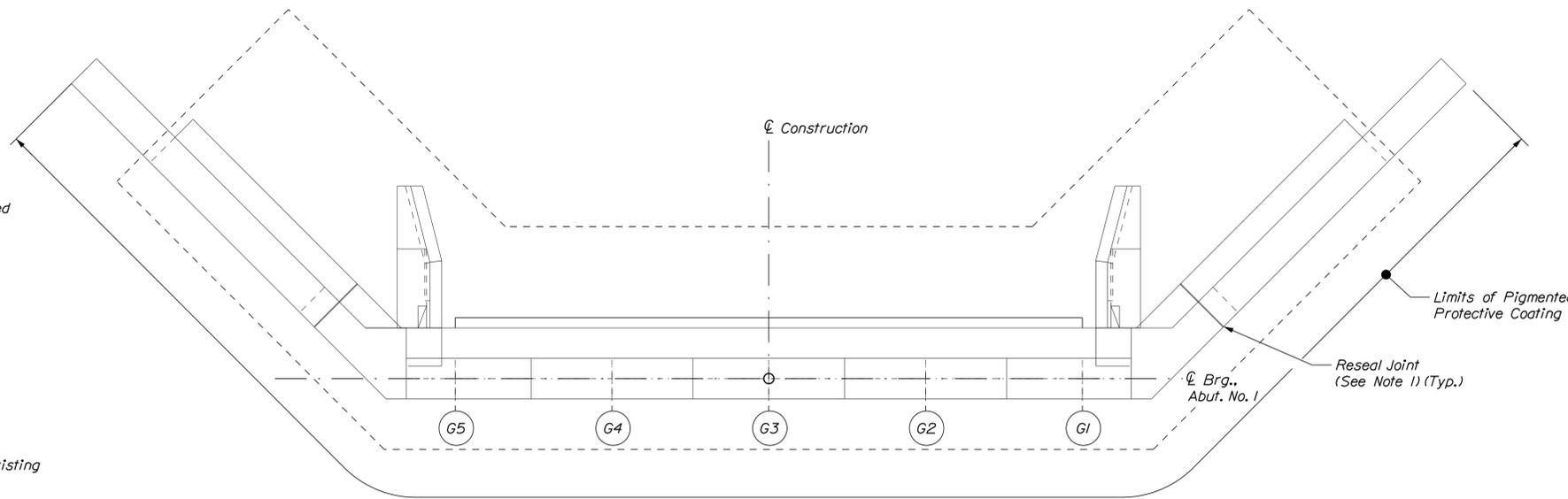
MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
BRIDGE PLAN AND ELEVATION

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 34  
34 OF 45



**TYPICAL ABUTMENT SECTION**  
Not to Scale



**PLAN**  
(Abutment 1 Shown, Abutment 2 Similar)  
Scale: 1/4" = 1'-0"

**KEY**

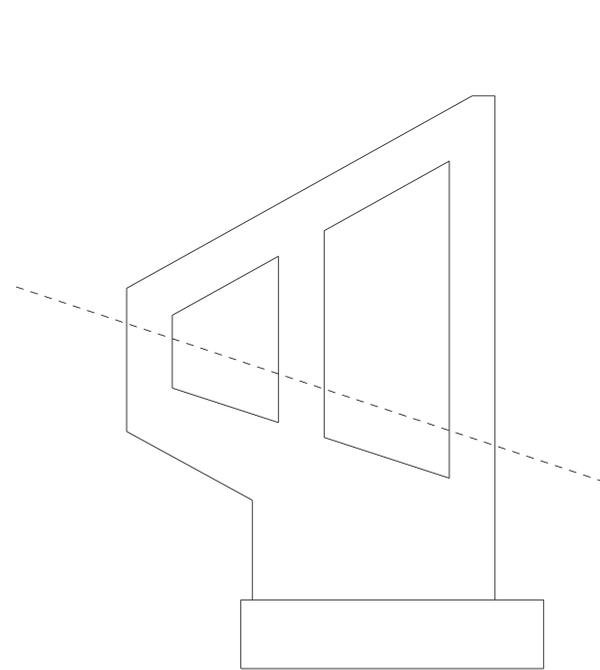
- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

**SHEET NOTES**

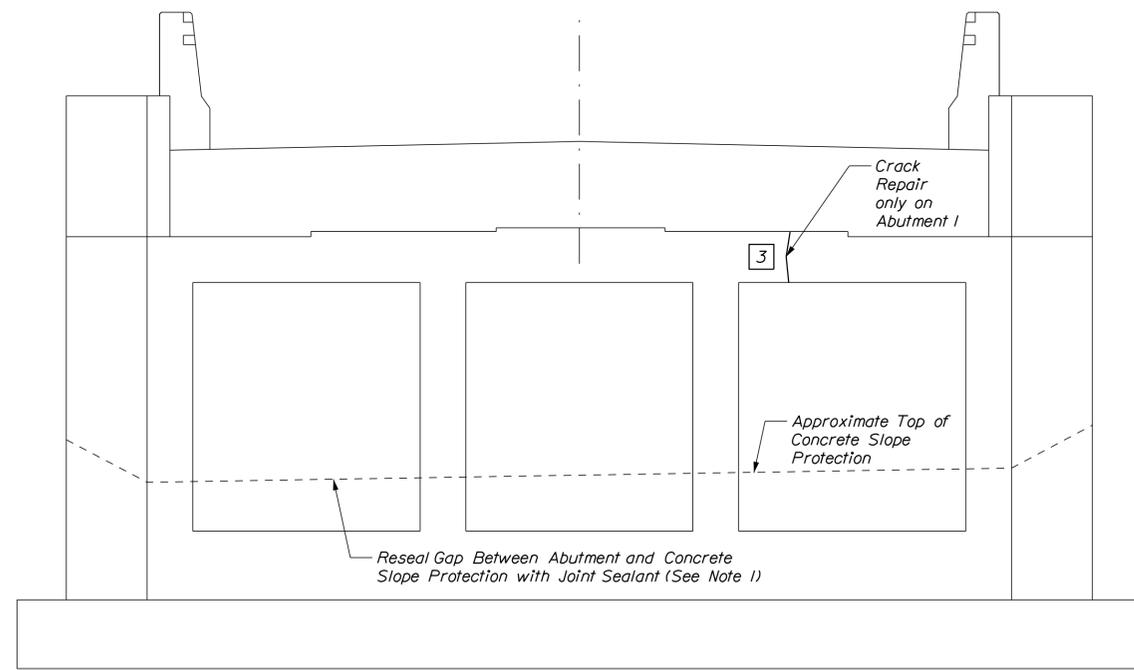
1. For Crack Repair Notes and Details see Concrete Repair Typical Details Sheet.
2. Abutment 1 is shown, Abutment 2 similar.

**NOTES**

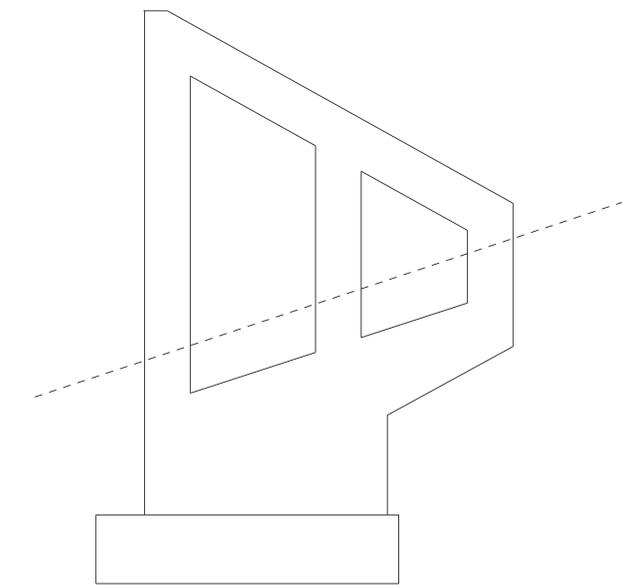
1. Reseal joint between wingwall and abutment and abutment and slope protection. Joint sealant shall be from the MaineDOT Qualified Products List for Silicone and Polyurethane Joint Sealant.



**ABUTMENT 1  
SOUTH WINGWALL**  
Scale: 1/4" = 1'-0"



**ELEVATION**  
(Abutment 1 Shown, Abutment 2 Similar)  
Scale: 1/4" = 1'-0"



**ABUTMENT 1  
NORTH WINGWALL**  
Scale: 1/4" = 1'-0"

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\_2019\_Southern\_Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\2-NBerwick\035-Abut\_01.dgn

Scale:			
No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VANASSE HANGEN BRUSTLIN, INC.  
500 Southborough Dr.  
Suite 105B  
South Portland, ME 04106  
TEL (207) 889-3150  
FAX (207) 253-5596



**THE GOLD STAR  
MEMORIAL HIGHWAY**

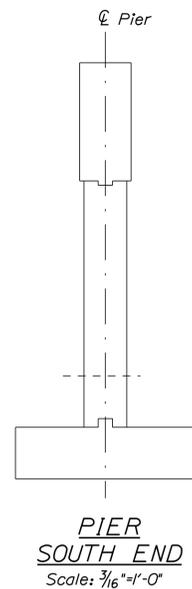
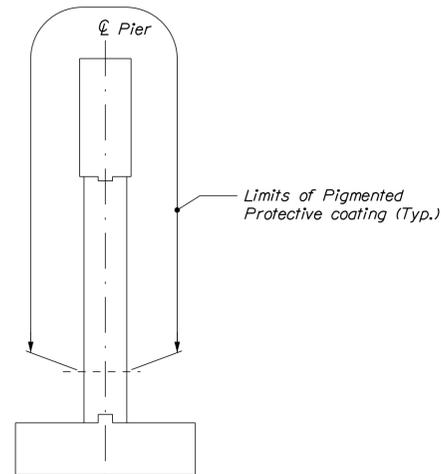
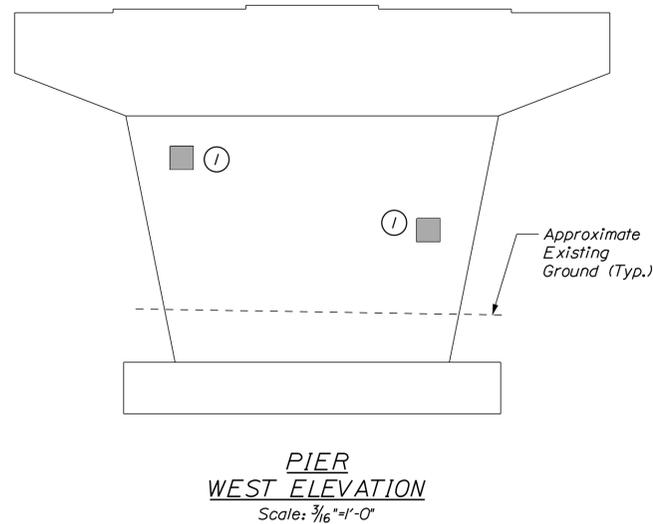
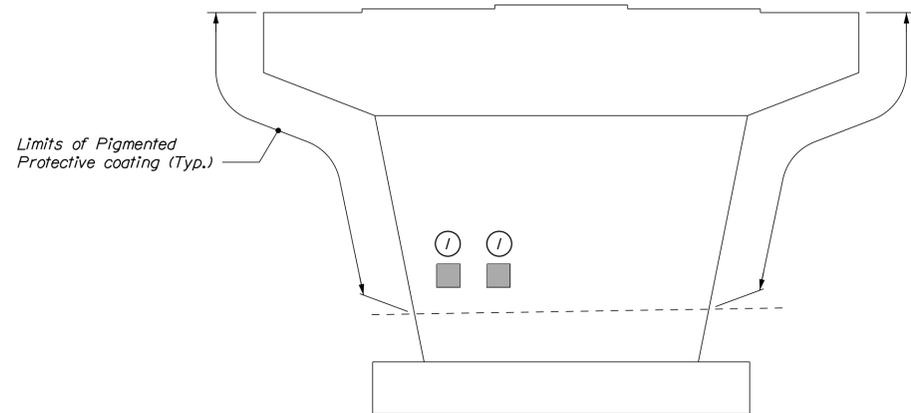
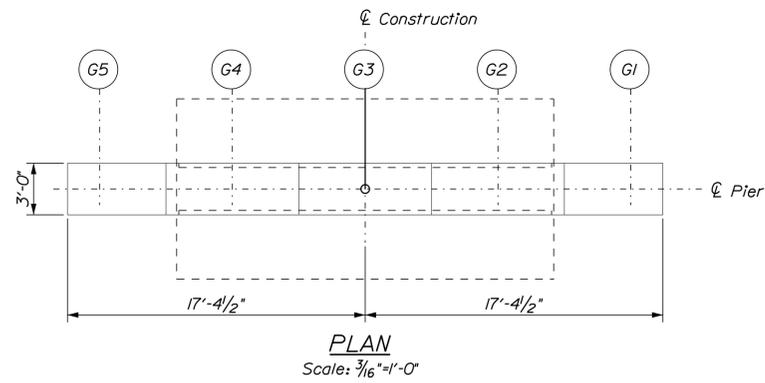
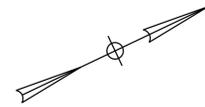
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
ABUTMENT NO. 1 REPAIRS

VHB: 55200.01	SHEET NUMBER: 35
CONTRACT: 2019.06	35 OF 45

Date: 1/11/2019

Filename: \\vhb\qbl\proj\SPortland\55200.00\2019 Southern Bridges\Cad\_MEDot\MaineDOT\BRIDGE\WSTA\2-NBerwick\036\_Pier1\_01.dgn



**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

Surface Pier Repairs 10 \*  
\* Includes 6 S.F. Additional Repair Quantity As A Contingency

**NOTE**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.

**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair



Designed by:



VANASSE HANGEN BRUSTLIN, INC.  
500 Southborough Dr.  
Suite 105B  
South Portland, ME 04106  
TEL (207) 889-3150  
FAX (207) 253-5596



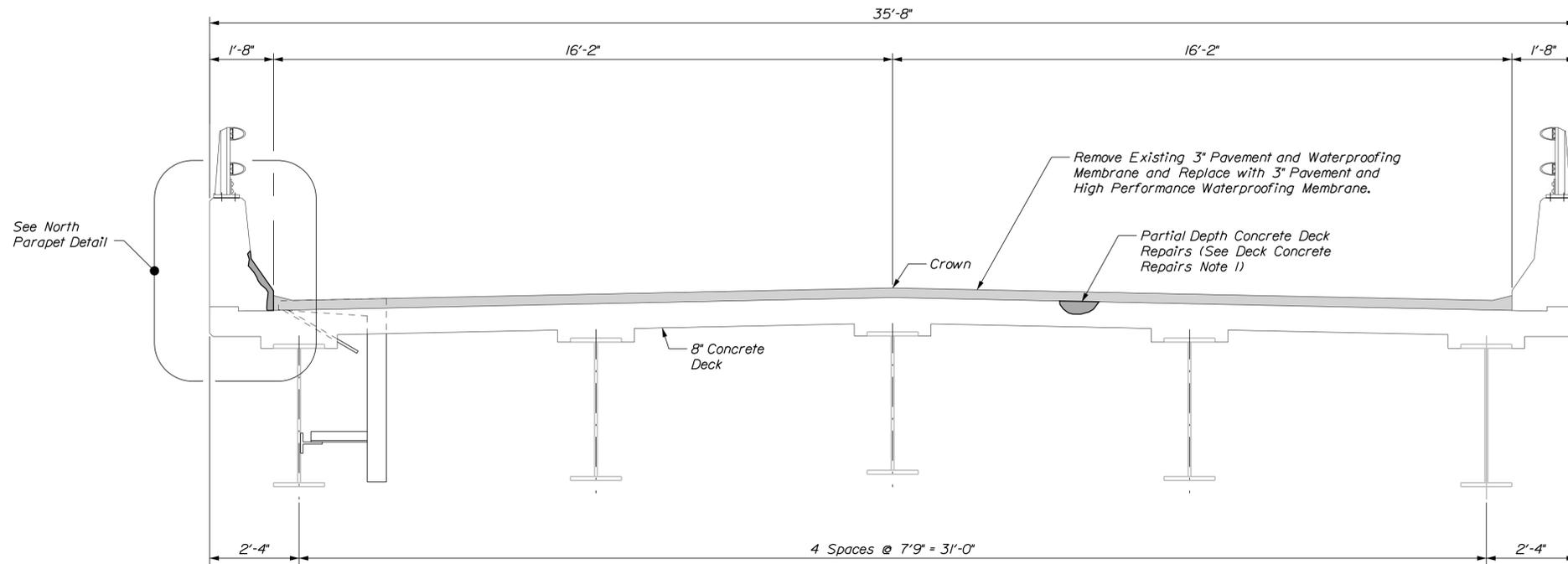
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
PIER REPAIRS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

Date: 1/11/2019



**SUPERSTRUCTURE TYPICAL SECTION**

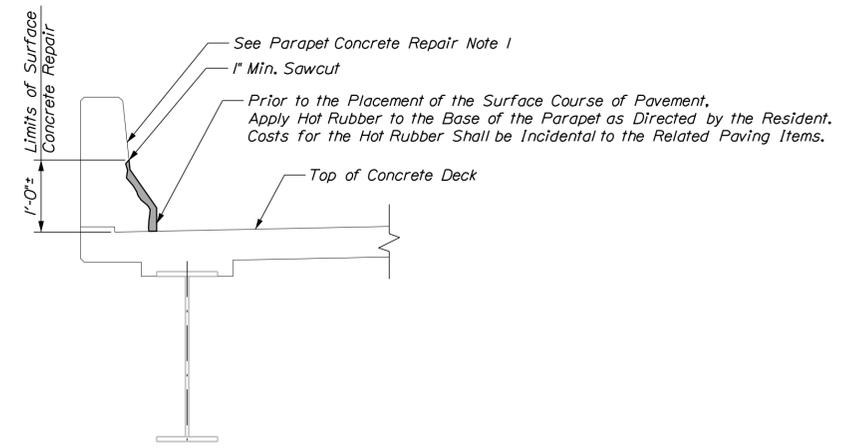
(Looking East)  
Scale: 1/2" = 1'-0"

**DECK CONCRETE REPAIR NOTES**

1. Prior to the start of deck concrete repairs, the Resident and the Contractor shall sound all deck concrete using a chain drag or other method approved by the Resident to determine the required repair limits. All costs for sounding the existing deck concrete shall be incidental to Item 518.80 Partial Depth Concrete Deck Repairs.
2. Sawcut 1" deep along all limits of removal.
3. Chip concrete to the depth specified in Supplemental Specification 518. If the removal limits change during the demolition process, the Contractor shall notify the Resident. The Resident and Contractor shall agree on the revised pay limits prior to the Contractor continuing the removals.
4. Prepare and patch repair areas. Install new reinforcing steel, as required. See Supplemental Specification 518.

**PARAPET CONCRETE REPAIR NOTE**

1. Prior to application of the clear protective coating the Contractor shall fill all honeycomb voids with an approved nonshrink grout. All costs for this work shall be incidental to Item 515.202 Clear Protective Coating for Concrete Surfaces. Clear protective coating shall only be applied to areas of new concrete.



**NORTH PARAPET DETAIL**

(Bridge Rail not Shown for Clarity)  
Scale: 1/2" = 1'-0"



Designed by:



VANASSE HANGEN BRUSTLIN, INC.  
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South Portland, ME 04106  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
BRIDGE TYPICAL SECTION

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

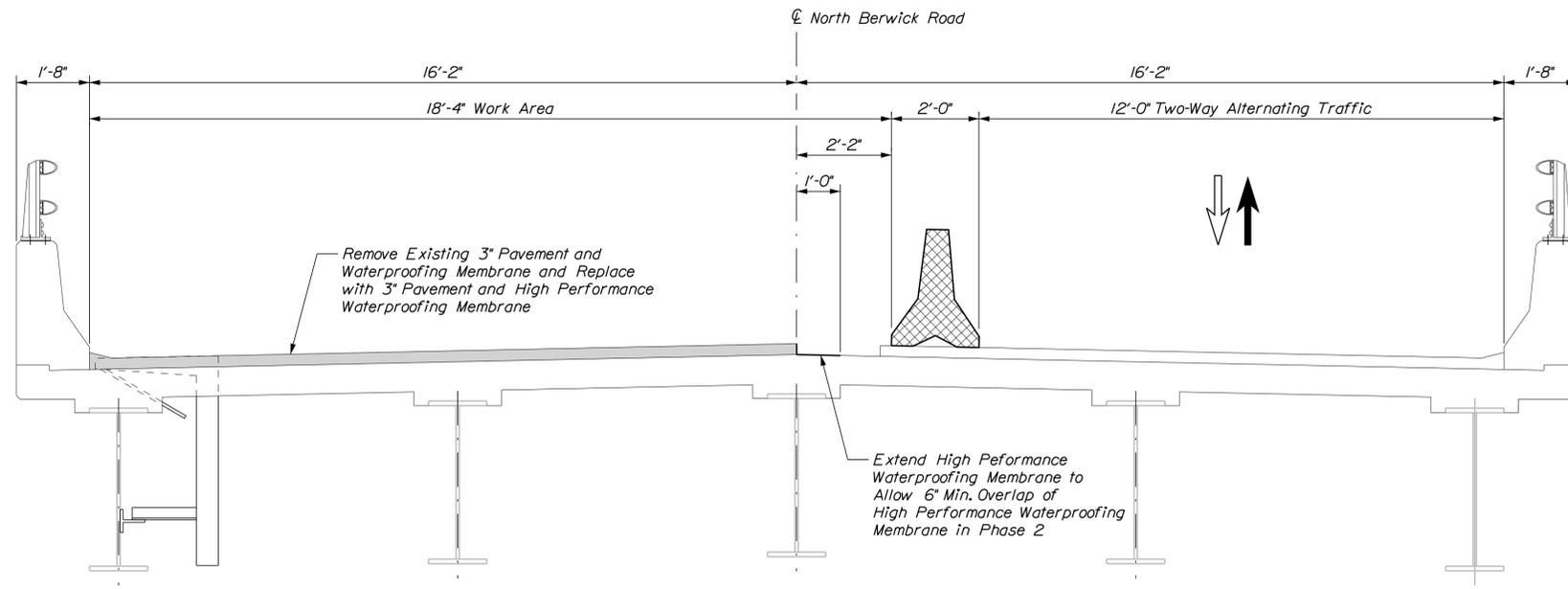
MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
CONTRACT: 2019.06

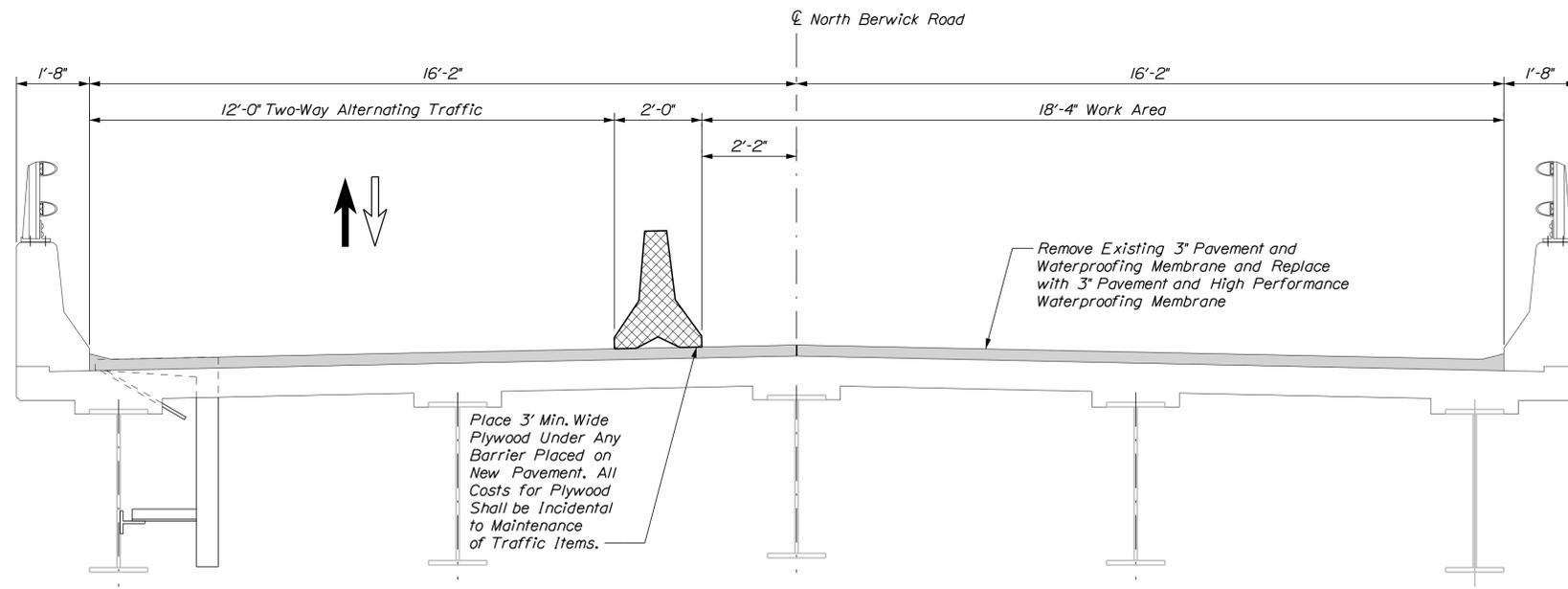
SHEET NUMBER: 37  
37 OF 45

Filename: ...MSTA2-NBerwick\037\_Typ\_01.dgn

Date: 1/11/2019



**PHASE 1 TYPICAL SECTION**  
Scale: 1/2" = 1'-0"



**PHASE 2 TYPICAL SECTION**  
Scale: 1/2" = 1'-0"

Filename: ...12-NBerwick\038\_Phasing\_01.dgn



Designed by:



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South Portland, ME 04106  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
CONSTRUCTION PHASING

No.	Revision	By	Date

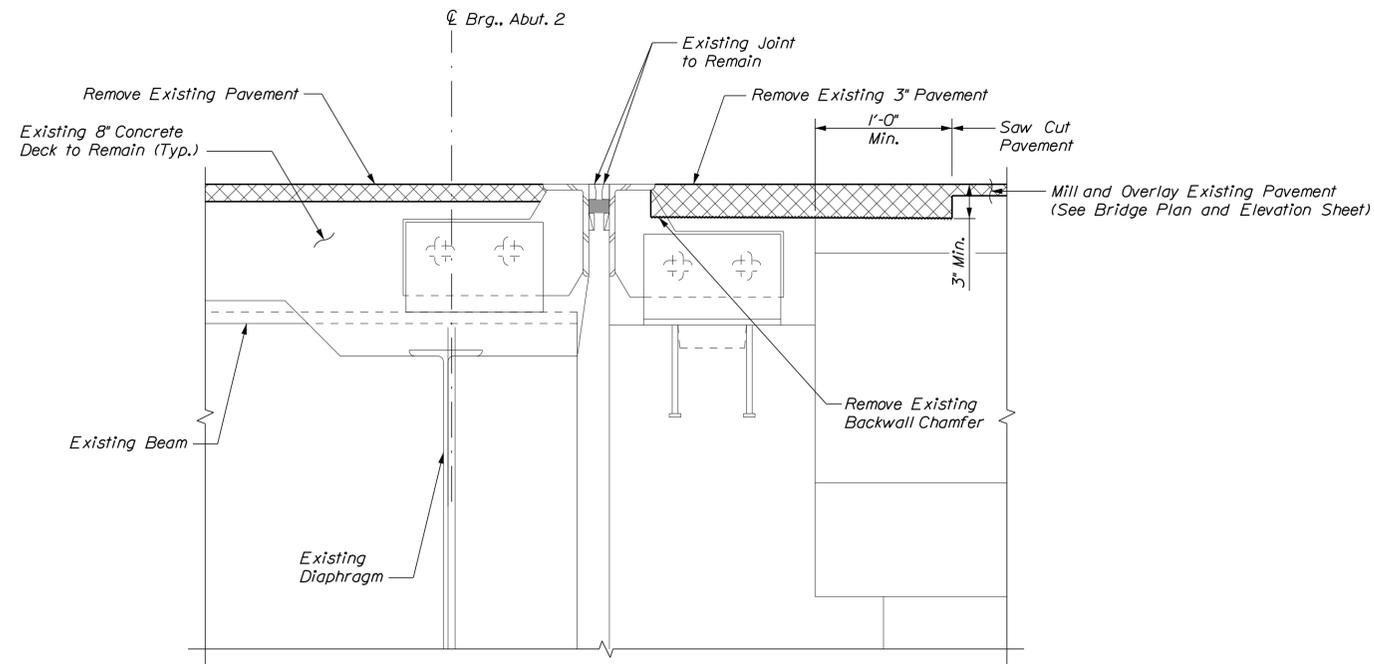
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

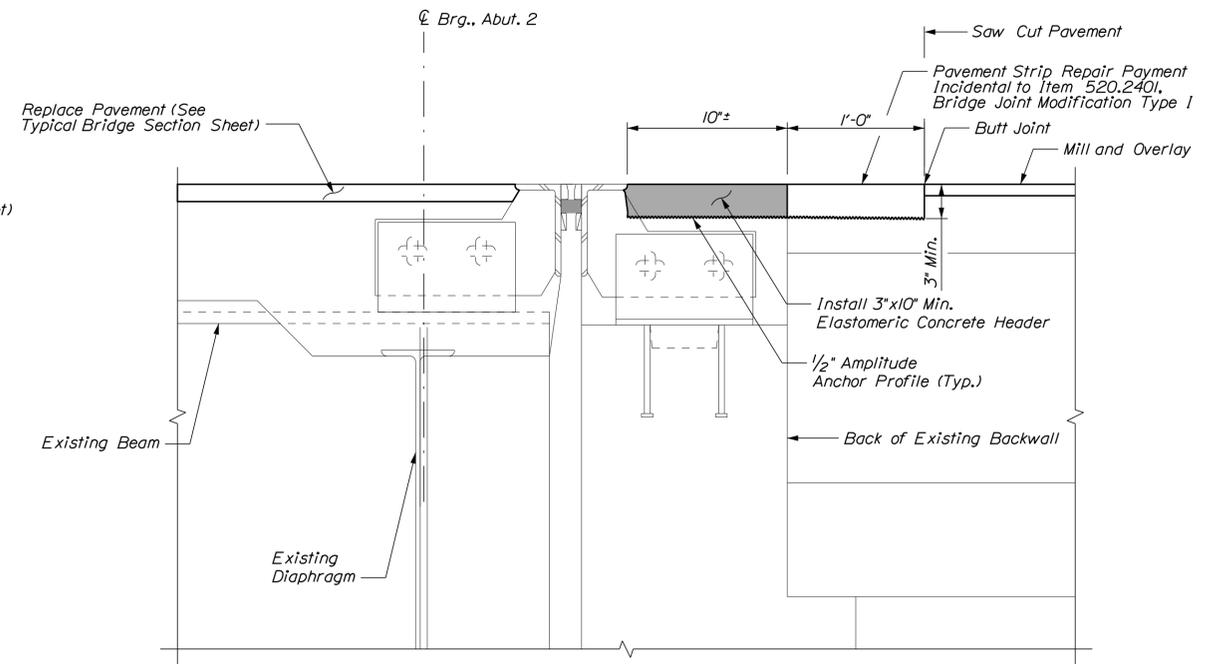
VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 38  
38 OF 45

Date: 1/11/2019

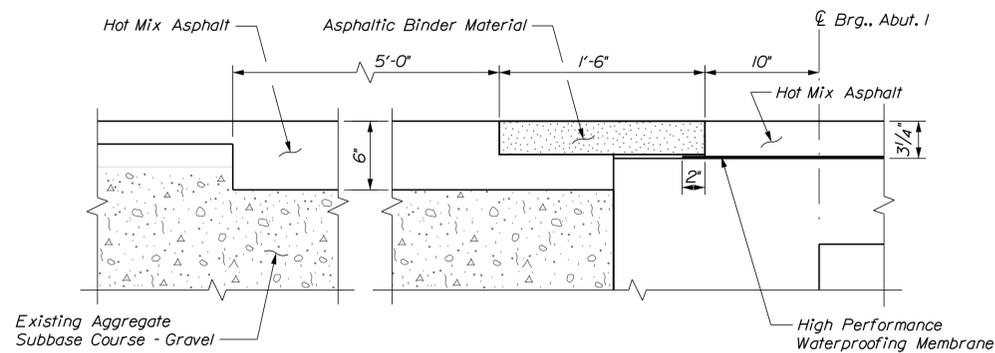


EXISTING EXPANSION JOINT SECTION



PROPOSED EXPANSION JOINT SECTION

SECTIONS AT EXPANSION JOINT AT ABUTMENT 2  
Not to Scale



FIXED ASPHALTIC PLUG JOINT DETAIL AT ABUTMENT 1  
Scale: 1/2" = 1'-0"

EXPANSION JOINT NOTES

1. Refer to MaineDOT Standard Details Section 520 for details and information not shown.
2. All concrete surfaces where elastomeric concrete is to be applied shall have a 1/2 inch minimum anchor profile or roughened surface as directed by the Resident.
3. Steel surfaces shall be prepped and elastomeric concrete shall be applied according to the manufacturers recommendations.
4. Expansion joint modifications shall be paid for under Item 520.240I Bridge Joint Modification Type I.

Filename: ...MSTA\2-NBerwick\039\_Joint.dgn

Scale: 3/8" = 1'-0"			
No.	Revision	By	Date

Designed by: 					
CONSULTANT PROJECT MANAGER: G. Edington					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

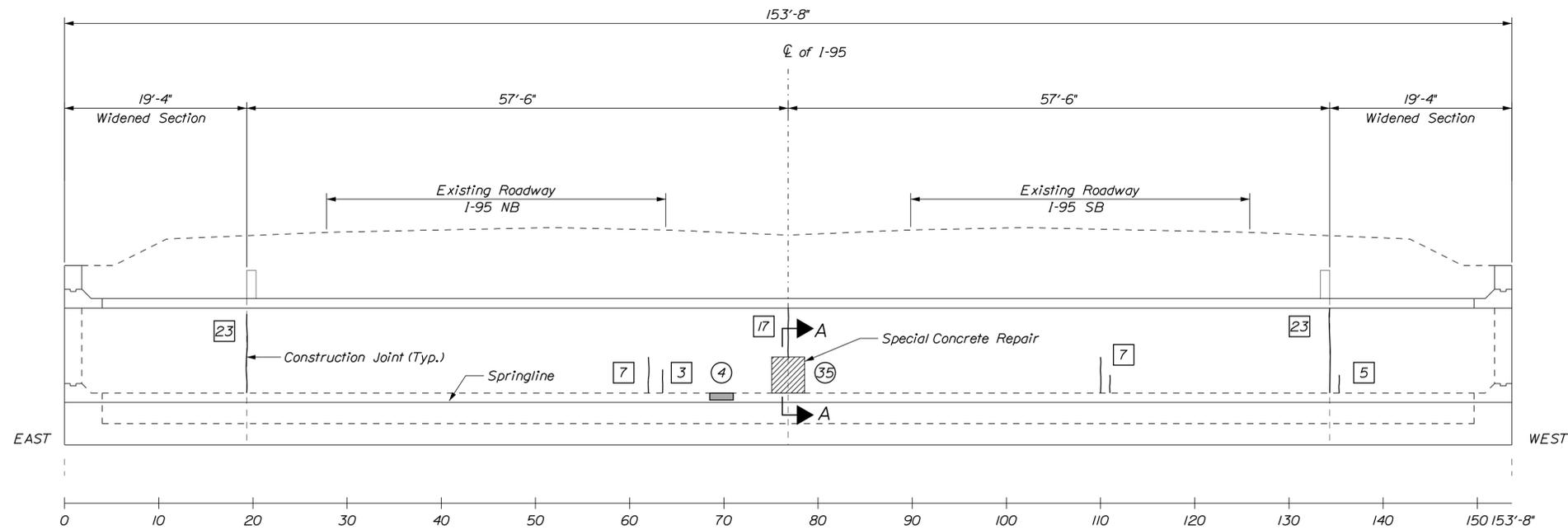
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
NORTH BERWICK ROAD UNDERPASS  
JOINT REPAIRS

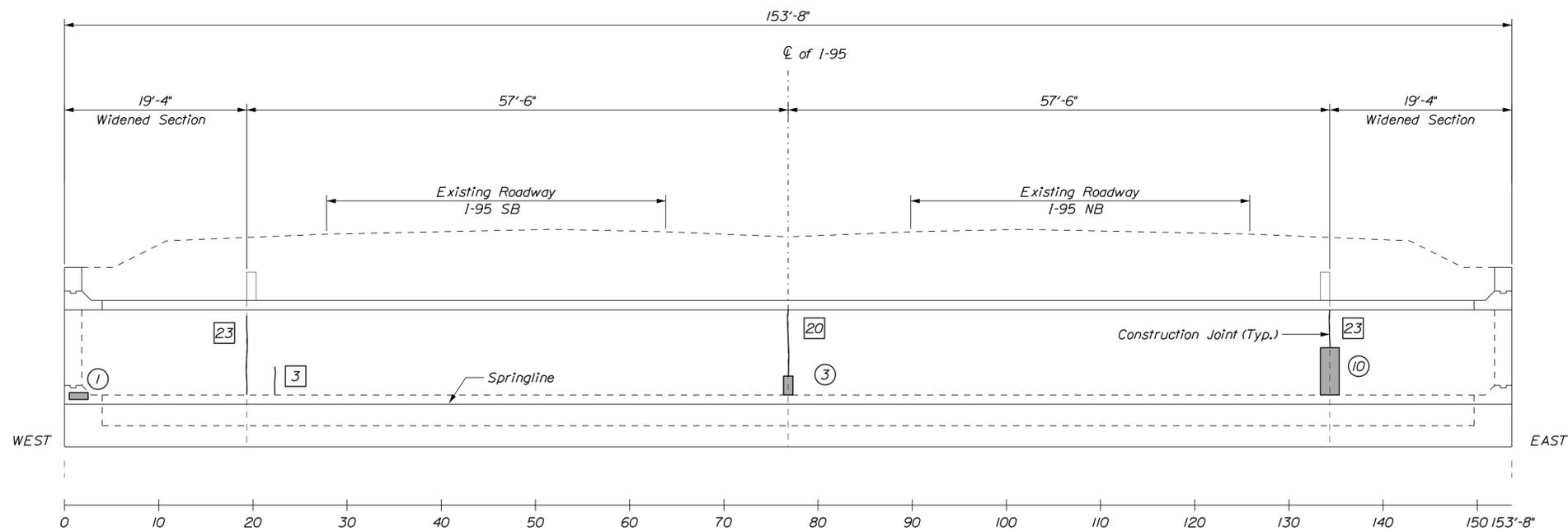
VHB: 55200.01      SHEET NUMBER: 39  
CONTRACT: 2019.06      39 OF 45



Date: 1/11/2019



SOUTH WALL



NORTH WALL

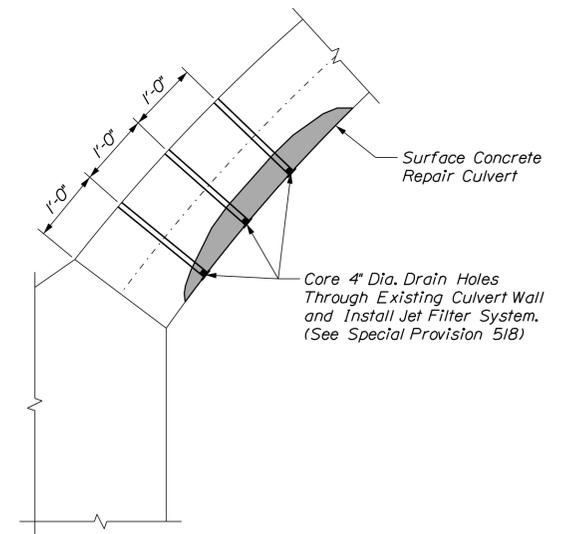
OGUNKIT RIVER CULVERT CONCRETE REPAIRS

ESTIMATED CONCRETE REPAIR QUANTITIES (SF)

Concrete Culvert Repairs 30\*  
 \* Includes 12 S.F. of Additional Repair Quantity As A Contingency.

KEY

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- Limit of Special Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair



SECTION A-A

SHEET NOTE

1. For Concrete Repair Notes and Details see Typical Details Sheet.

Filename: ...041\_BDP10n\_02.dgn



Designed by:



VANASSE HANGEN BRUSTLIN, INC.  
 500 Southborough Dr.  
 Suite 105B  
 South Portland, ME 04106  
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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT NO. 2019.06  
 OGUNKIT RIVER CULVERT  
 CULVERT REPAIRS

No.	Revision	By	Date

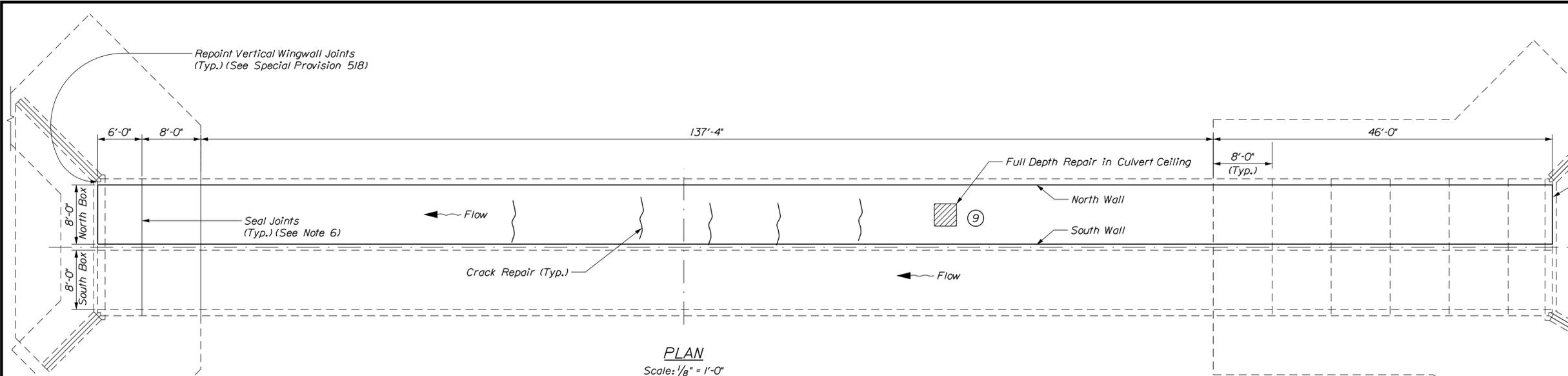
CONSULTANT PROJECT MANAGER: T. Bryant					
	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55200.01  
 CONTRACT: 2019.06

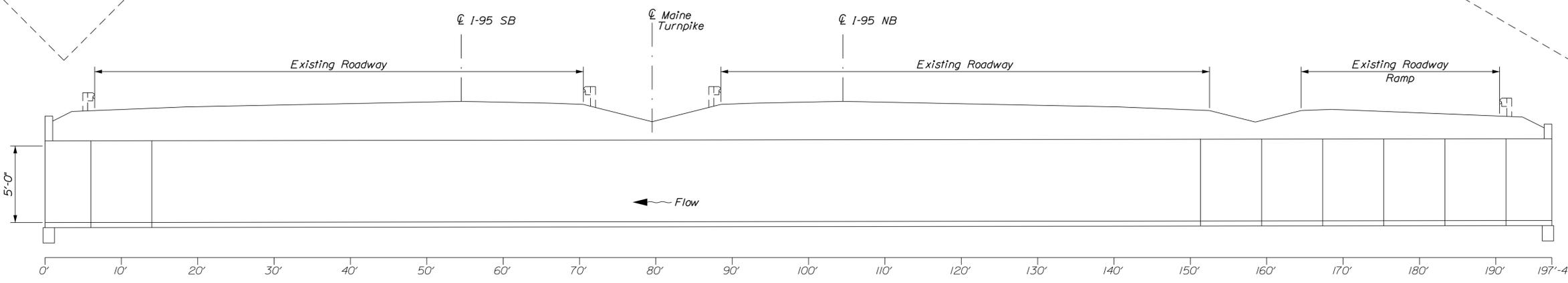
SHEET NUMBER: 41  
 41 OF 45

Date: 1/11/2019



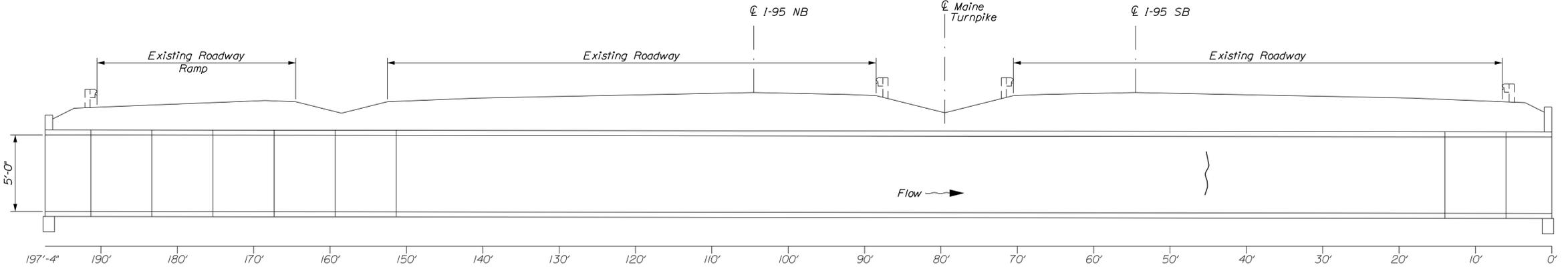
**CONSTRUCTION NOTES**

1. Rehabilitate existing culvert one box at a time. Use sand bags or other approved method to divert flow to one box so that concrete repairs may be performed in the dry.
2. Machinery shall not be located or operated in the water course.
3. Remove all cofferdam structures and turbidity controls from the culvert and water course once all concrete repairs are complete.
4. The work shall be conducted to minimize impacts and disturbance to wetlands and the water course.
5. No fill shall be placed in streams or wetlands other than that associated with the placement of cofferdams for water diversion during culvert repairs.
6. Reseal joint between construction joints inside the culvert as directed by the Resident. Joint Sealant Shall be Sikaflex 15 LM. All costs for resealing joints shall be incidental to Concrete Repair Items.



**ELEVATION NORTH BOX NORTH WALL**

Horizontal Scale: 1/8" = 1'-0"  
Vertical Scale: 1/16" = 1'-0"



**ELEVATION NORTH BOX SOUTH WALL**

Horizontal Scale: 1/8" = 1'-0"  
Vertical Scale: 1/16" = 1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF/LF)**

Full Depth Concrete Repairs 15\*  
\* Includes 6 S.F. Additional Repair Quantity As A Contingency

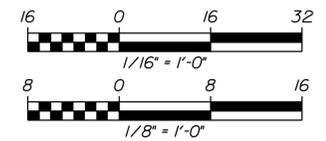
Estimated Crack Repair 25\*\*  
\*\* The Estimated Quantity and Location of Concrete Crack Repair is Based on Limited Field Observations

**KEY**

- Limit of Crack Repair
- Limit of Full Depth Repair
- Limit of Surface Concrete Repair
- Linear Feet of Crack Repair
- Square Footage of Repair

**SHEET NOTES**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



Filename: ...042\_Culvert\_03.dgn

No.	Revision	By	Date

Scale: \_\_\_\_\_

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

VANASSE HANGEN BRUSTLIN, INC.  
500 Southborough Dr.  
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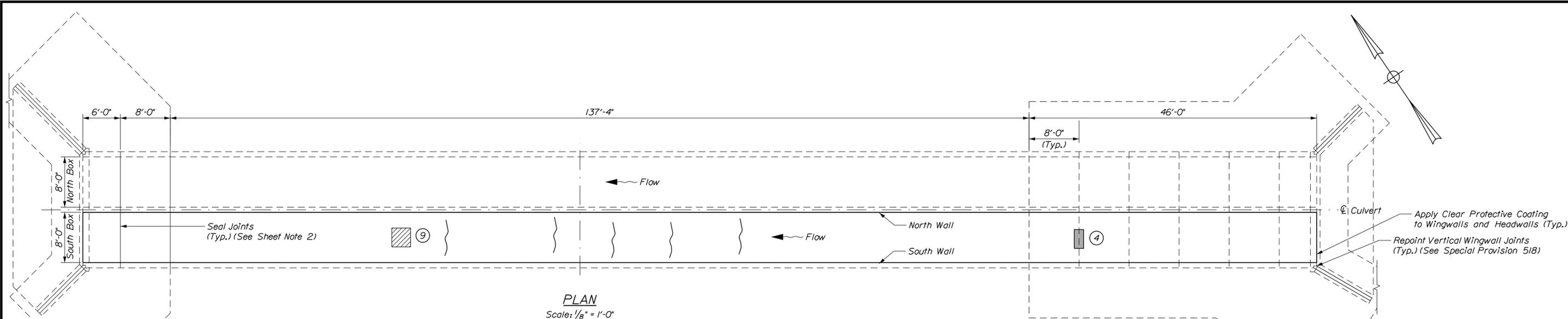
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
THACHER BROOK CULVERT (SECOND)  
PLAN AND ELEVATION (1 OF 2)

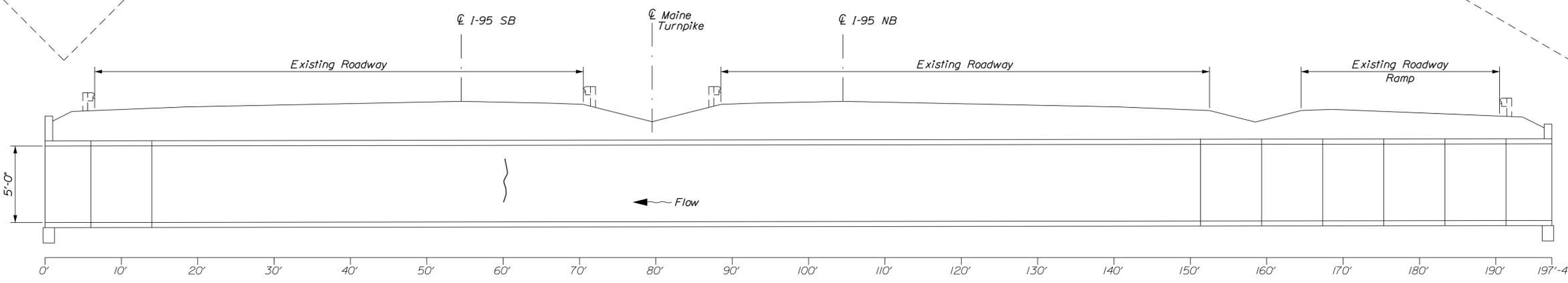
VHB: 55200.01      SHEET NUMBER: 42  
CONTRACT: 2019.06      42 OF 45

Date: 1/11/2019

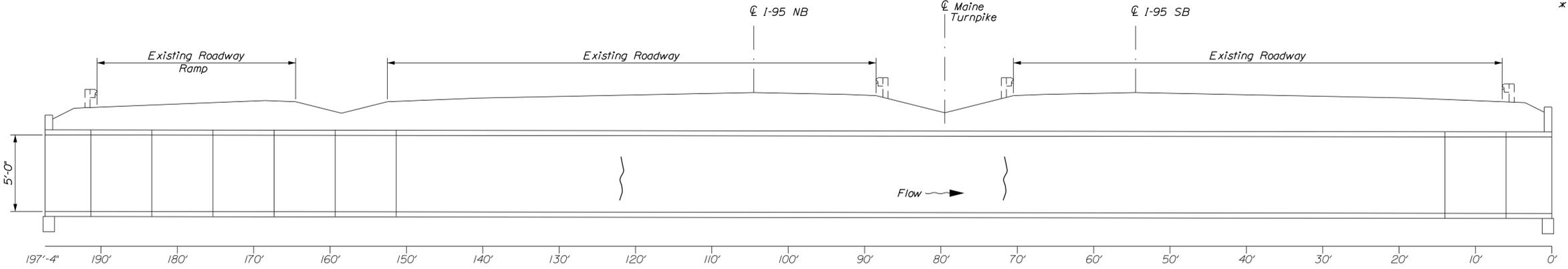


**PLAN**  
Scale: 1/8" = 1'-0"

Apply Clear Protective Coating to Wingwalls and Headwalls (Typ.)  
Repoint Vertical Wingwall Joints (Typ.) (See Special Provision 51B)



**ELEVATION SOUTH BOX NORTH WALL**  
Horizontal Scale: 1/8" = 1'-0"  
Vertical Scale: 1/16" = 1'-0"



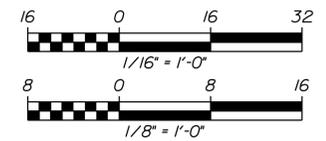
**ELEVATION SOUTH BOX SOUTH WALL**  
Horizontal Scale: 1/8" = 1'-0"  
Vertical Scale: 1/16" = 1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)**

Surface Culvert Repairs	10*
* Includes 6 S.F. Additional Repair Quantity As A Contingency	
Full Depth Concrete Repairs	15**
** Includes 6 S.F. Additional Repair Quantity As A Contingency	
Estimated Crack Repair	25***
*** The Estimated Quantity and Location of Concrete Crack Repair is Based on Limited Field Observations	

- KEY**
- Limit of Crack Repair
  - Limit of Full Depth Concrete Repair
  - Limit of Surface Concrete Repair
  - Linear Feet of Crack Repair
  - Square Footage of Repair

- SHEET NOTES**
- For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.
  - For Construction Notes See Thacher Brook Culvert (Second) Plan and Elevation (1 of 2)



Filename: ...043\_Culvert\_03.dgn

No.	Revision	By	Date

Scale: \_\_\_\_\_

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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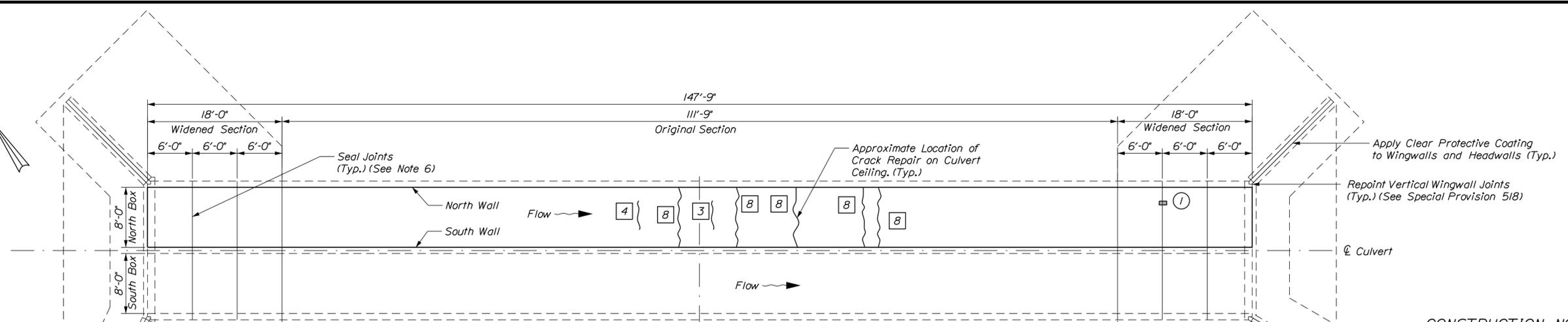
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

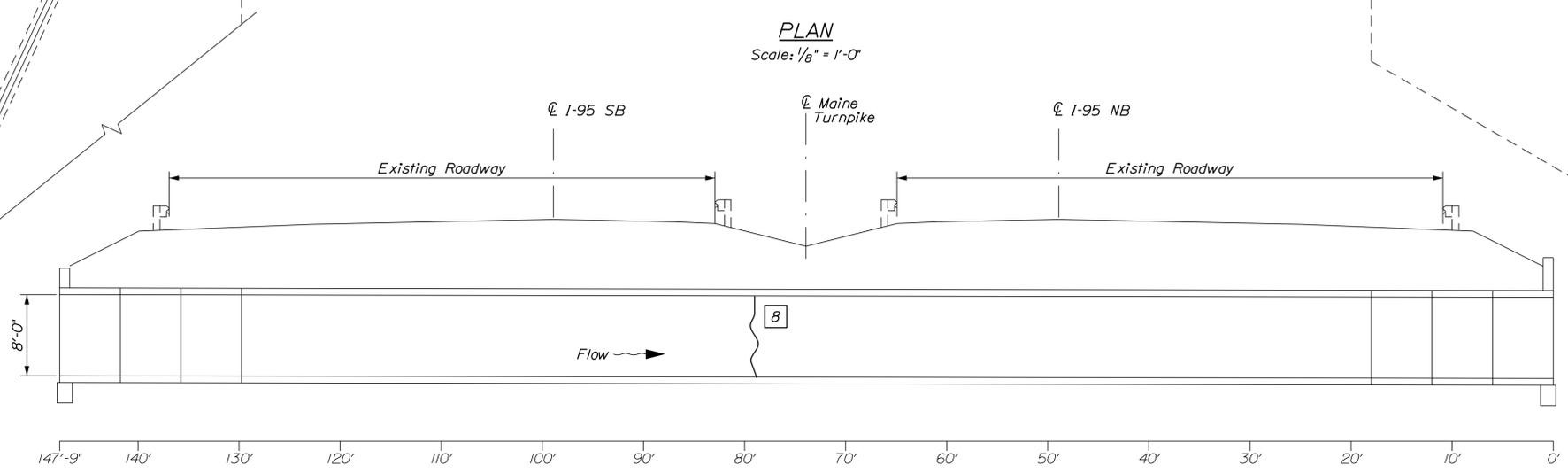
MTA PROJECT NO. 2019.06  
THACHER BROOK CULVERT (SECOND)  
PLAN AND ELEVATION (2 OF 2)

VHB: 55200.01      SHEET NUMBER: 43  
CONTRACT: 2019.06      43 OF 45

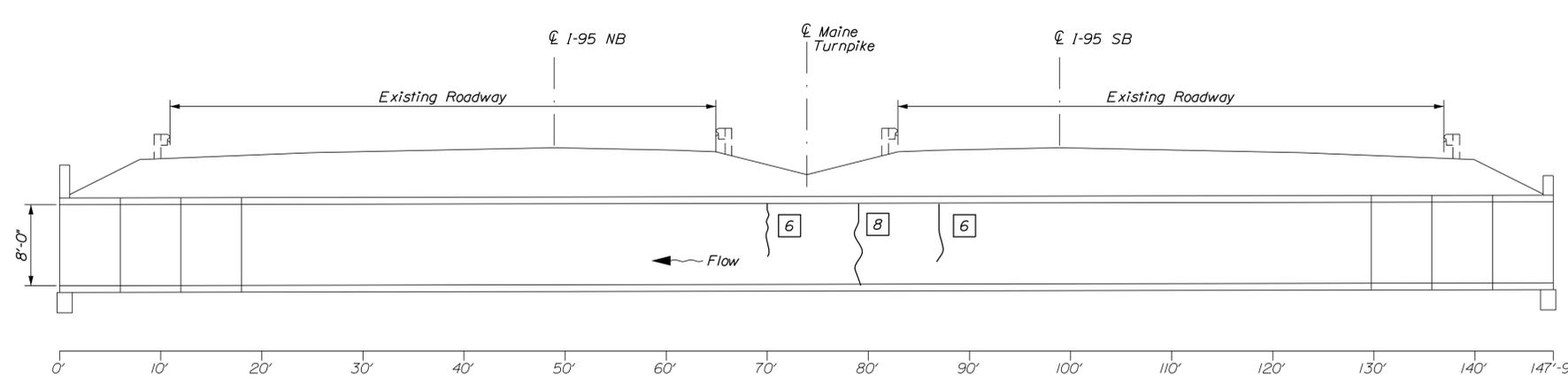
Date: 1/11/2019



**PLAN**  
Scale: 1/8" = 1'-0"



**ELEVATION**  
**NORTH BOX, NORTH WALL**  
Scale: 1/8" = 1'-0"



**ELEVATION**  
**NORTH BOX, SOUTH WALL**  
Scale: 1/8" = 1'-0"

**CONSTRUCTION NOTES**

1. Rehabilitate existing culvert one box at a time. Use sand bags or other approved method to divert flow to one box so that concrete repairs may be performed in the dry.
2. Machinery shall not be located or operated in the water course.
3. Remove all cofferdam structures and turbidity controls from the culvert and water course once all concrete repairs are complete.
4. The work shall be conducted to minimize impacts and disturbance to wetlands and the water course.
5. No fill shall be placed in streams or wetlands other than that associated with the placement of cofferdams for water diversion during culvert repairs.
6. Reseal leaking precast concrete culvert extension sections at both ends of culvert as directed by the Resident with Joint Sealant Sikaflex 15 LM. All costs for resealing joints shall be incidental to Concrete Repair Items.

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)/(LF)**

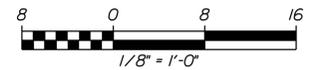
Surface Culvert Repairs	5 *
* Includes 4 S.F. Additional Repair Quantity As A Contingency	
Crack Repair	85 **
** Includes 10 S.F. Additional Repair Quantity As A Contingency	

**KEY**

- Limit of Crack Repair
- Limit of Surface Concrete Repair
- \* Linear Feet of Crack Repair
- ⊙ Square Footage of Repair

**SHEET NOTES**

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.



Filename: ...044\_Culvert\_02.dgn

Scale:			
No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

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Designed	MED	1/11/19	Checked	GME	1/11/19
Drawn	DPD	1/11/19	In Charge of	TSB	1/11/19

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**THE GOLD STAR MEMORIAL HIGHWAY**

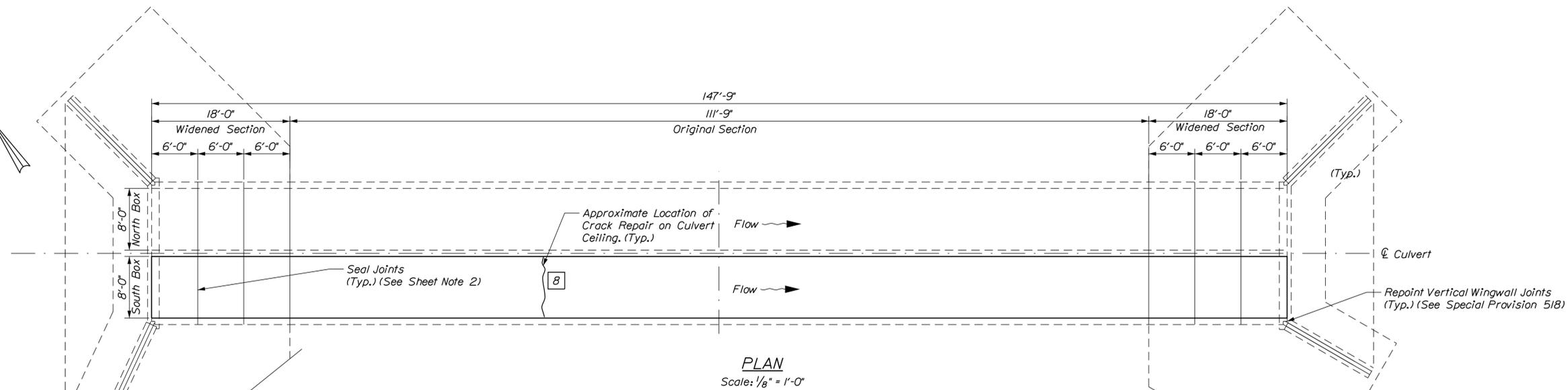
MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
THACHER BROOK CULVERT (THIRD)  
PLAN AND ELEVATION (1 OF 2)

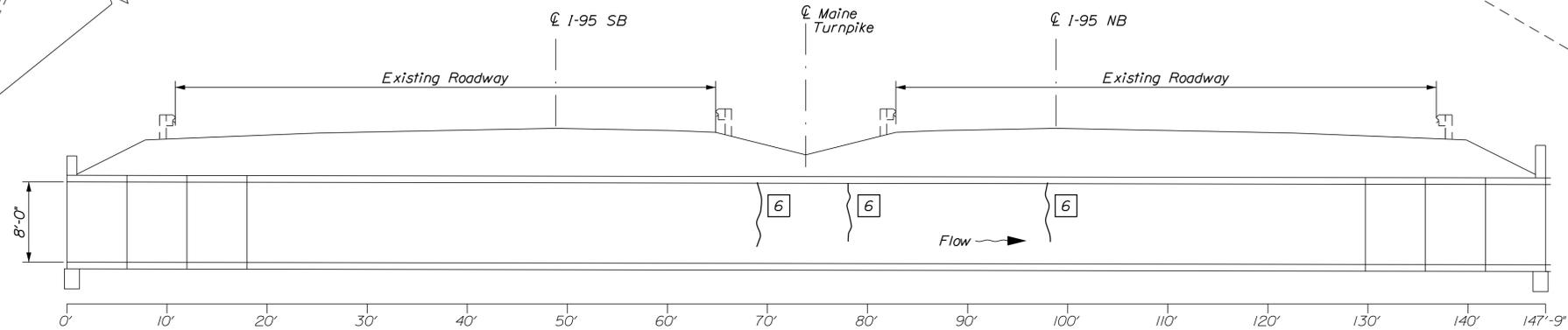
VHB: 55200.01  
CONTRACT: 2019.06

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44 OF 45

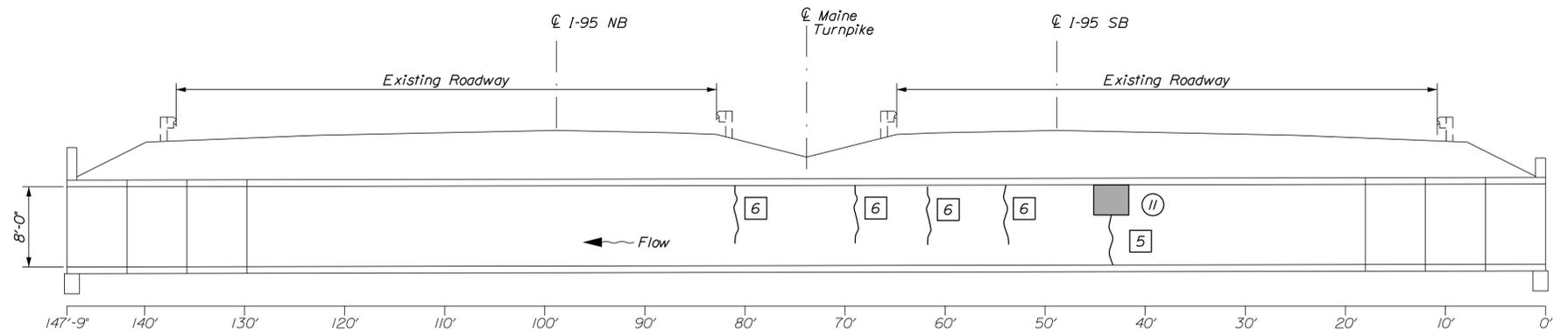
Date: 1/11/2019



**PLAN**  
Scale: 1/8" = 1'-0"



**ELEVATION**  
**SOUTH BOX, NORTH WALL**  
Scale: 1/8" = 1'-0"



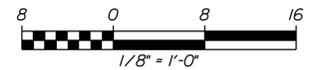
**ELEVATION**  
**SOUTH BOX, SOUTH WALL**  
Scale: 1/8" = 1'-0"

**ESTIMATED CONCRETE REPAIR QUANTITIES (SF)/(LF)**

Surface Culvert Repairs	15 *
* Includes 4 S.F. Additional Repair Quantity As A Contingency	
Crack Repair	65 **
** Includes 10 S.F. Additional Repair Quantity As A Contingency	

- KEY**
- Limit of Crack Repair
  - Limit of Surface Concrete Repair
  - Linear Feet of Crack Repair
  - Square Footage of Repair

- SHEET NOTES**
1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.
  2. For Construction Notes See Thacher Brook Culvert (Third) Plan and Elevation (1 of 2).



Filename: ...045\_Culvert\_02.dgn

Scale:

No.	Revision	By	Date

Designed by:



CONSULTANT PROJECT MANAGER: G. Edington

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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

MTA PROJECT NO. 2019.06  
THACHER BROOK CULVERT (THIRD)  
PLAN AND ELEVATION (2 OF 2)

VHB: 55200.01  
CONTRACT: 2019.06

SHEET NUMBER: 45  
45 OF 45