# STATE OF MAINE DEPARTMENT OF TRANSPORTATION

#### **SPECIFICATIONS**

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition 2020.



# HARPSWELL CUMBERLAND COUNTY EWING NARROWS BRIDGE

OVER

### EWING NARROWS

MOUNTAIN ROAD FEDERAL PROJECT NO. 2725800 STATE PROJECT NO. 027258.00 PROJECT LENGTH 0.13 mi. BRIDGE NO. 6217

#### LIST OF DRAWINGS

Title Sheet	1
Estimated Quantities & General Construction Notes	
General Plan	
Sections and Details	
Bridge Drain Grate Modification	5
Staged Construction Plans	

#### <u>UTILITIES</u>

Central Maine Power Consolidated Communications

#### TRAFFIC DATA

Current (2023) AADT	2240
Future (2043) AADT	
DHV - % of AADT	
Design Hour Volume	
Heavy Trucks (% of AADT)	
Heavy Trucks (% of DHV)	
Directional Distribution (% of DHV)	
18 kip Equivalent P 2.0	
18 kip Equivalent P 2.5	
Design Speed (mph)	4:

#### MAINTENANCE OF TRAFFIC

Maintain one lane of alternating one-way traffic using temporary traffic signals.

PROJECT LOCATION	Ewing Narrows Bridge #6217 over Ewing Narrows Located 0.16 of a mile west of Salty Lane Lat./Long. 43°48'59.02" N 69°57'11.2" W
PROGRAM AREA	Bridge Program
OUTLINE OF WORK	Bridge Wearing Surface Replacement

HARPSWELL
EWING NARROWS BRIDGE

SHEET NUMBER

	ESTIMATED QUANTITIES		
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.127	REMOVING OF EXISTING BITUMINOUS PAVEMENT (2,100 SY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	195	SY
403.2081	12.5 MM POLYMER MODIFIED HOT MIX ASPHALT SURFACE	250	T
403.2131	12.5 MM POLYMER MODIFIED HOT MIX ASPHALT BASE	<i>1</i> 5	T
409.15	BITUMINOUS TACK COAT - APPLIED	119	G
502.701	BRIDGE DRAIN GRATE MODIFICATION	<i>1</i> 6	EA
<i>502.</i> 75	PLUGGING EXISTING BRIDGE DRAINS	<i>1</i> 6	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	100	LB
503.13	REINFORCING STEEL, PLACING	100	LB
508 <b>.</b> 14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (2,150 SY)	1	LS
515 <b>.</b> 21	PROTECTIVE COATING FOR CONCRETE SURFACES (830 SY)	1	LS
518.391	REPAIRING GRANITE CURB JOINT & BEDDING MORTAR	200	LF
518.50	REPAIR OF UPWARD FACING SURFACES - TO REINFSTEEL < 8 IN	200	SF
518 <b>.</b> 51	REPAIR OF UPWARD FACING SURFACES - BELOW REINFSTEEL < 8 IN	750	SF
518.52	REPAIR OF UPWARD FACING SURFACES - BELOW REINFSTEEL > = 8 IN	200	SF
520,241	BRIDGE JOINT MODIFICATION TYPE I	/	EΑ
<i>520.243</i>	BRIDGE JOINT MODIFICATION TYPE 3	/	EΑ
526.301	PORTABLE CONCRETE BARRIER TYPE I (540 LF)	/	EΑ
<i>52</i> 7 <b>.</b> 34	WORK ZONE CRASH CUSHIONS	2	UN
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2,200	LF
627.77	REMOVING PAVEMENT MARKINGS	500	SF
627.78	TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	500	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EA
<i>643.72</i>	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	6	EA
<i>652.33</i>	DRUM	25	EΑ
652.34	CONE	25	EΑ
<i>652.35</i>	CONSTRUCTION SIGNS	300	SF
652 <b>.</b> 361	MAINTENANCE OF TRAFFIC CONTROL DEVICES		LS
652.38	FLAGGER	360	HR
652.41	PORTABLE CHANGABLE MESSAGE SIGN	2	EΑ
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	/	LS
659.10	MOBILIZATION	1	LS

#### GENERAL CONSTRUCTION NOTES

- I. Protective Coating for Concrete Surfaces shall be applied to the following areas:
  - All exposed surfaces of concrete curb, Fascias down to the drip notch,
  - All exposed surfaces of Concrete Transition Barriers.
- 2. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/contractors/
- 3. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- 4. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
  - a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
  - b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
  - c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

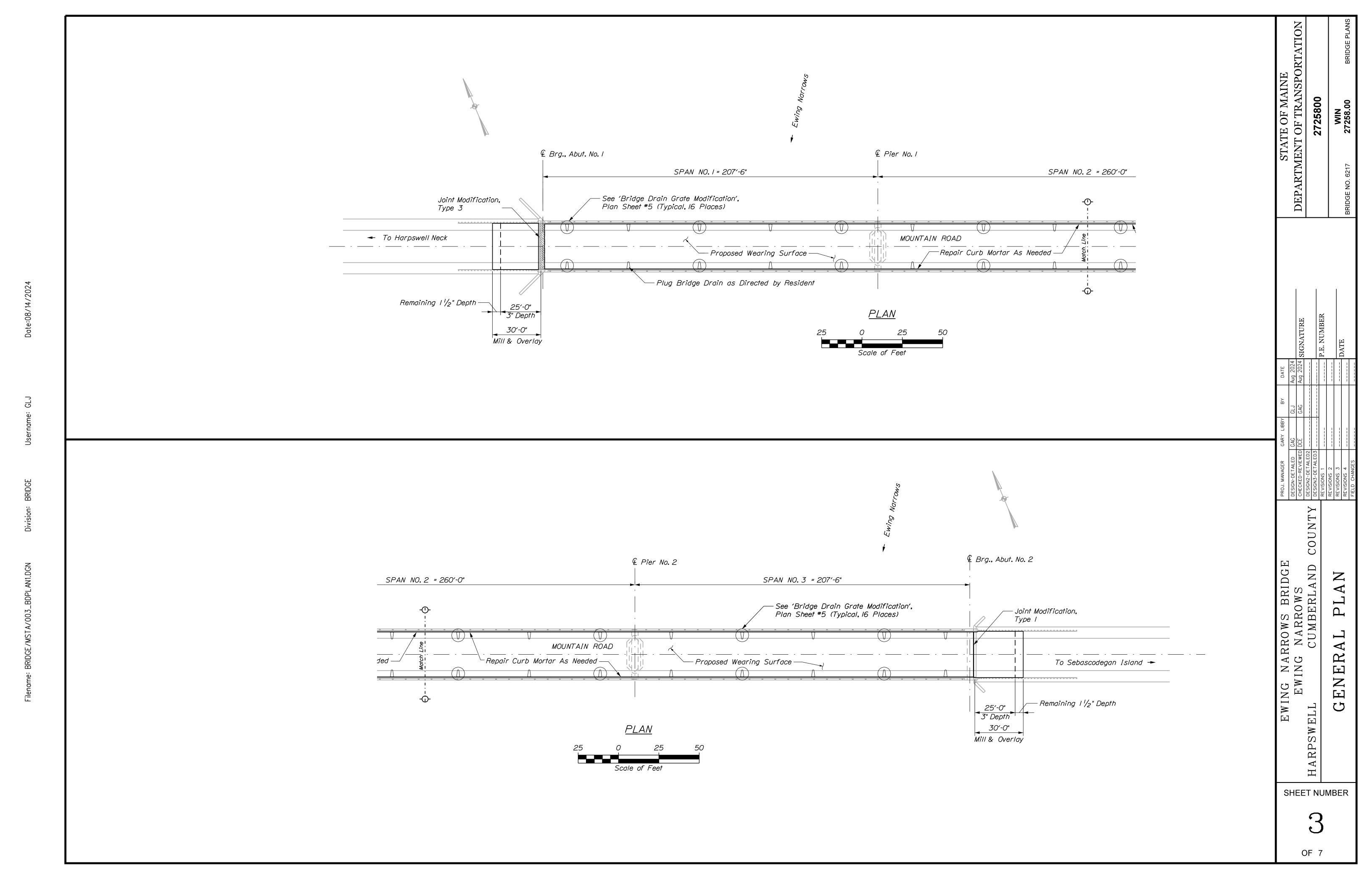
#### DECK REPAIR NOTES

- I. Contractor shall repair areas of concrete deck as directed by the Resident. Locations of deck repairs are undetermined for this contract. The Resident will identify and mark areas for deck repair after removing the wearing surface. Payment for the deck repair work shall be under the appropriate 518 pay item.
- 2. If the depth of deteriorated concrete extends to the reinforcing steel, remove concrete to a minimum of I" below the reinforcing steel.

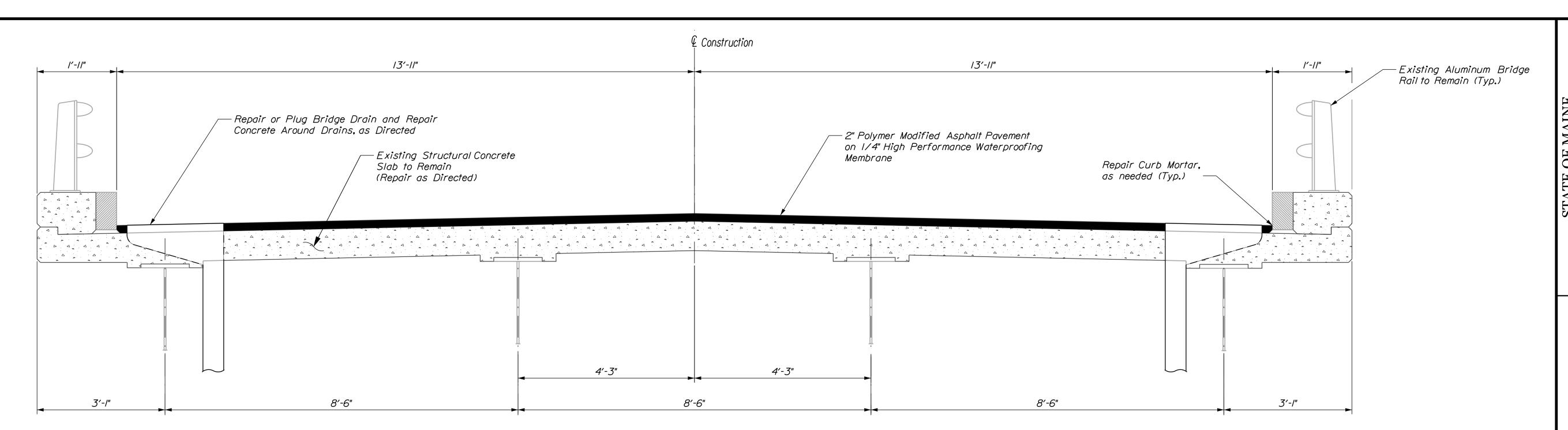
#### JOINT MODIFICATION NOTES

- I. The Contractor shall modify existing joints in accordance with the applicable Special Provisions and Details.
- 2. Compression seals provided shall have a movement rating of 0.5 inches.
- 3. New Reinforcing Steel furnished by the Contractor wil be paid for under Pay Item No. 503.12, Reinforcing Steel, Fabricated and Delivered, and Pay Item No. 503.13, Reinforcing Steel, Placing. Drilling and anchoring will not be paid for directly but will be considered incidental to the reinforcing items.
- 4. For drilling and anchoring, the anchoring material shall be chosen from the Maine DOT Qualified Products List and shall be submitted to the Resident for approval.

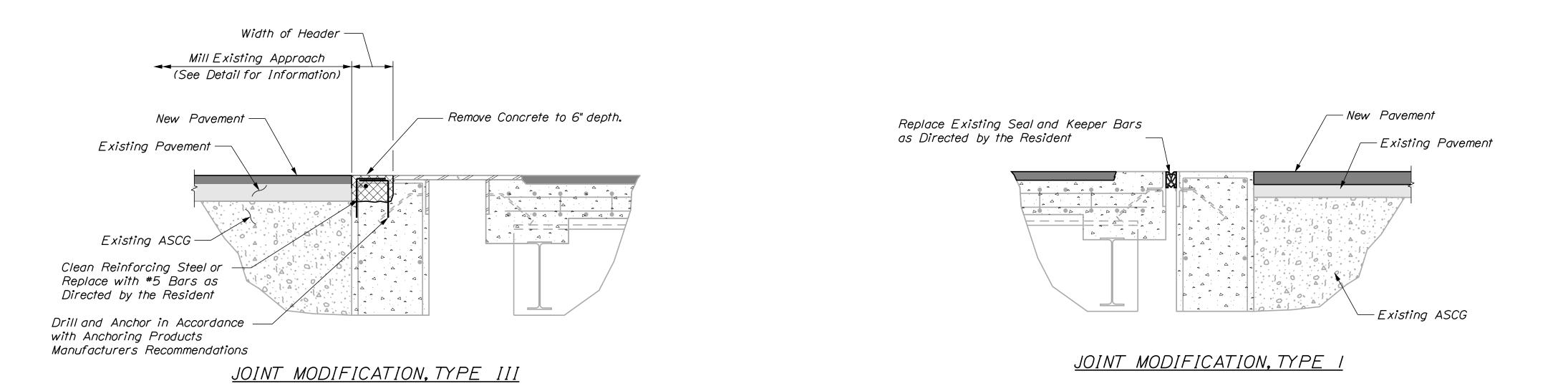
EWING NARROWS BRIDGE  EMING NARROWS  EWING NARROWS  HARPSWELL  CUMBERLAND COUNTY  ESTIMATED QUANTITIES  REVISIONS 2  REVISIONS 4  REVISIONS 4  REVISIONS 4  RELIGIOUS COUNTY CHORAGES  REVISIONS 4  REVISIONS 5  REVISIONS 5  REVISIONS 6  REVISIONS 7  REVI	STATE OF MAINE		DEFAKIMENI OF IKANSPOKIAI		STATE DRO IFCT NO 027258 0			NIM	RRIDGE NO 6217 27258 00 RRIDGE	
ING NARROWS BRIDGE  EWING NARROWS  CUMBERLAND COUNTY  MATED QUANTITIES  L CONSTRUCTION NOTES  FIELD CHANGES  CARCHEDE GAG  GLJ  CHECKED-REVIEWED GGG  GRO  CHECKED-REVIEWED GGG  CHECKED-REVIEWED GGG		)24	SIGNATURE		1				ı	
ING NARROWS BRIDGE EWING NARROWS CUMBERLAND COUNTY MATED QUANTITIES  L CONSTRUCTION NOTES FIELD CHANGES  REVISIONS 1  REVISIONS 2  REVISIONS 3  REVISIONS 4  FIELD CHANGES		Aug 20;	Aug 20:	$\neg$	-					-
ING NARROWS BRIDGE EWING NARROWS CUMBERLAND COUNTY MATED QUANTITIES  L CONSTRUCTION NOTES FIELD CHANGES  REVISIONS 1  REVISIONS 2  REVISIONS 3  REVISIONS 4  FIELD CHANGES										
ING NARROWS BRIDGE EWING NARROWS CUMBERLAND COUNTY MATED QUANTITIES L CONSTRUCTION NOTES		ETAILED GAG	-REVIEWED DCE						_	- 1
ING NARROWS BRIDGE EWING NARROWS CUMBERLAND C MATED QUANTITIES L CONSTRUCTION N	PROJ. MAN	DESIGN-DE	CHECKED-	DESIGN2-[	DESIGN3-[	REVISIONS	REVISIONS			
<b>~</b> 1	NARROWS BRIDG			C TIN I TOTAL STATE OF THE STAT	COMBEREAND C				A NOITUINESSACO I ARES	
<u> </u>				6		)				

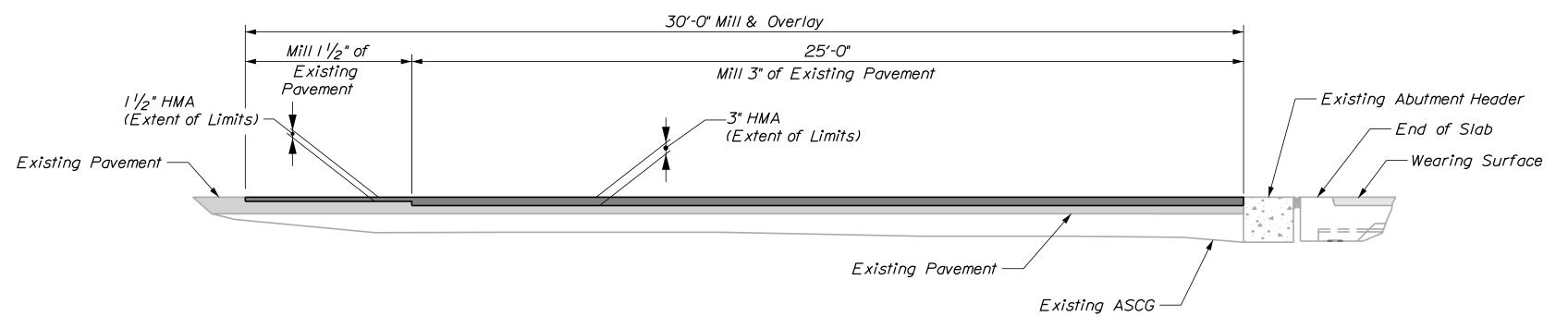






TYPICAL CROSS SECTION





DETAIL OF PAVEMENT AT APPROACHES

(West Shown; East - Similar)

SHEET NUMBER

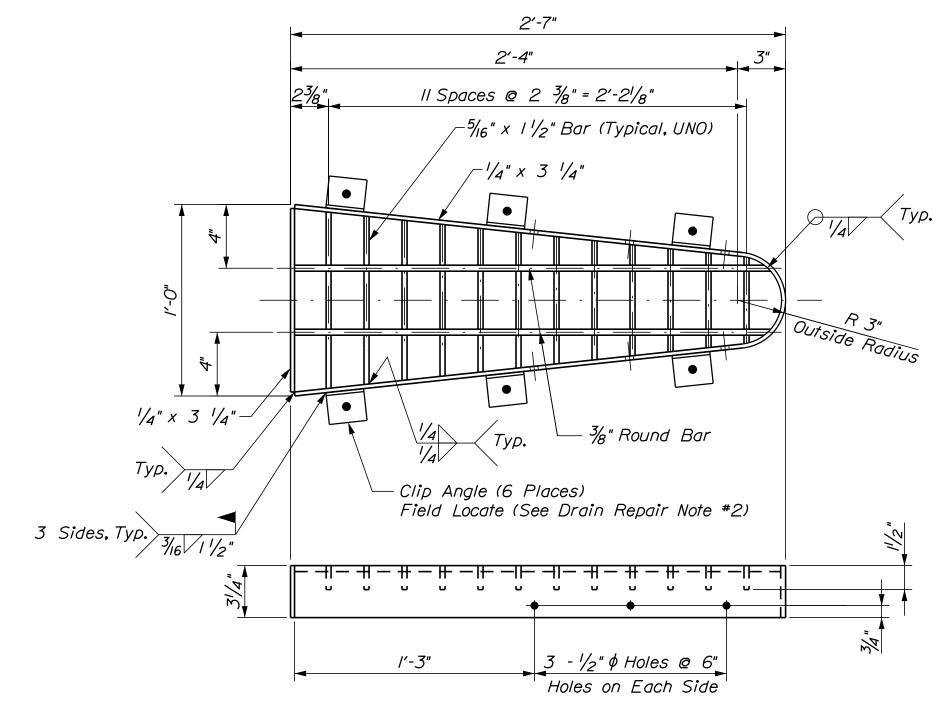
Η

ARPSWELL

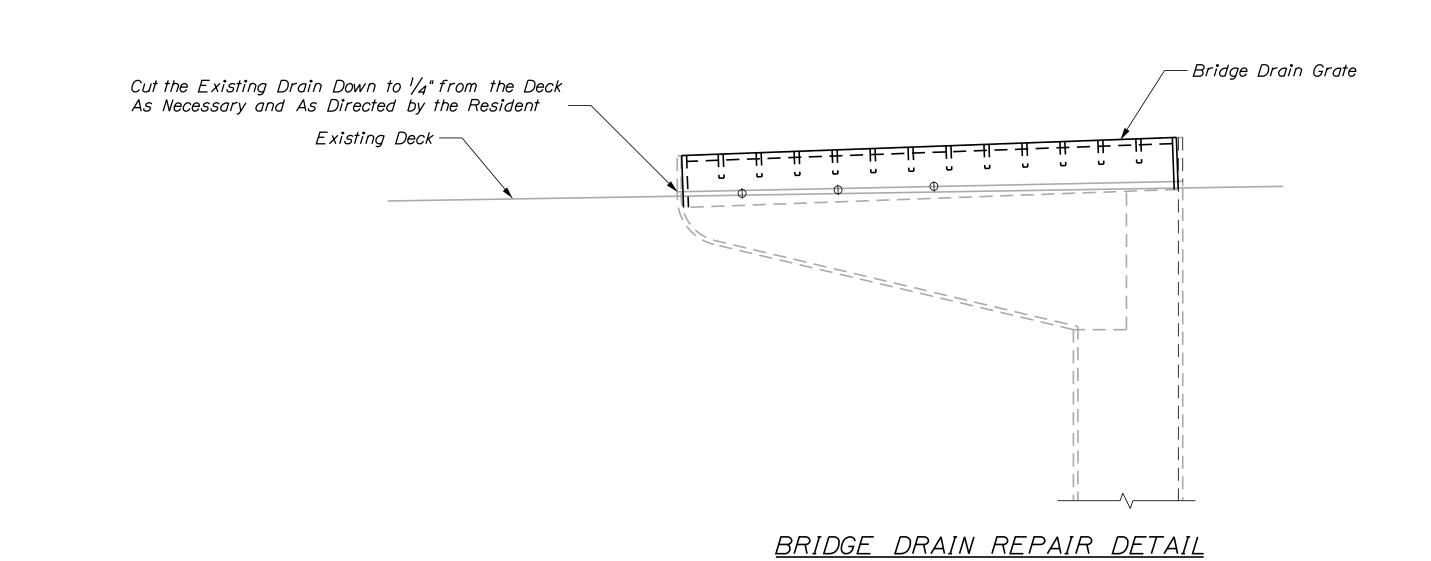
SECTIO

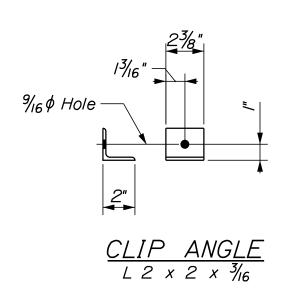
COUNTY

EWING NARROWS BRIDGE EWING NARROWS ELL CUMBERLAND



BRIDGE DRAIN GRATE



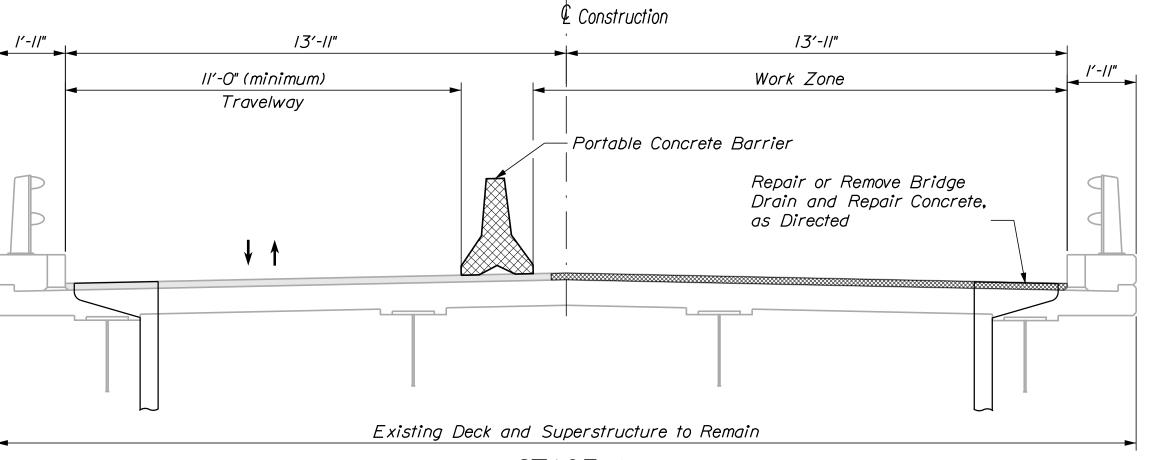


#### <u>DRAIN REPAIR NOTES</u>

I. Install  $\frac{1}{2}$ " Diameter wedge-bolts at a minimum embedment depth of 4".

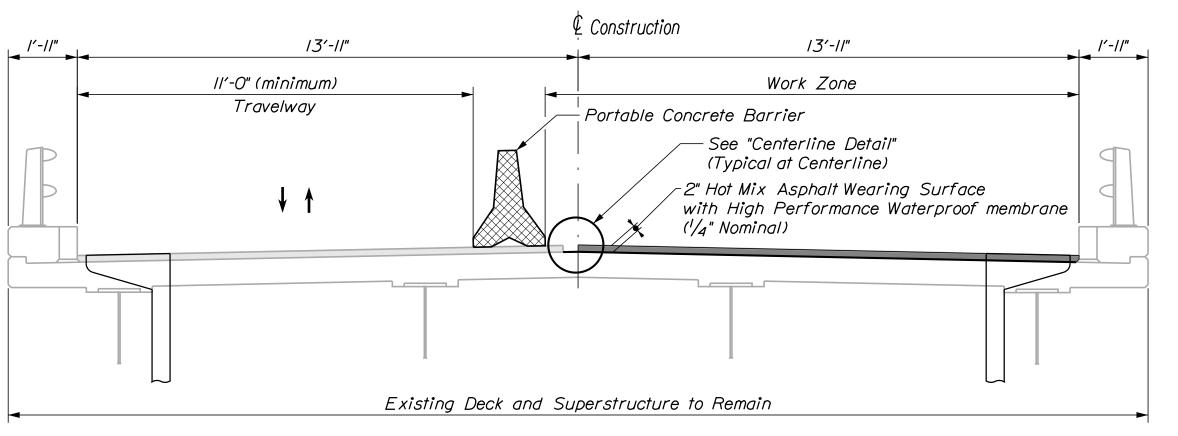
2. Install three (3) wedge-bolts on each side of each drain grate spaced a minimum of 6 inches apart. Space equally to the extent possible.

5	6 <b>7</b> 9	CAG							
בוסם ו									
	DESIGN-DETAILED GAG	CHECKED-REVIEWED DCE	DESIGN2-DETAILED2	DESIGN3-DETAILED3	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	SISNAHO CHILI
- EWING NAKKOWN BRIDGE	 	EWING NARROWS		HARFOWELL COMBERLAND COONII			HAKIDGE DKAIN GKAIE MODIFICATION		
S	HI	EE	ΞΤ	N	UI	VIE	3E	R	
			l		-				

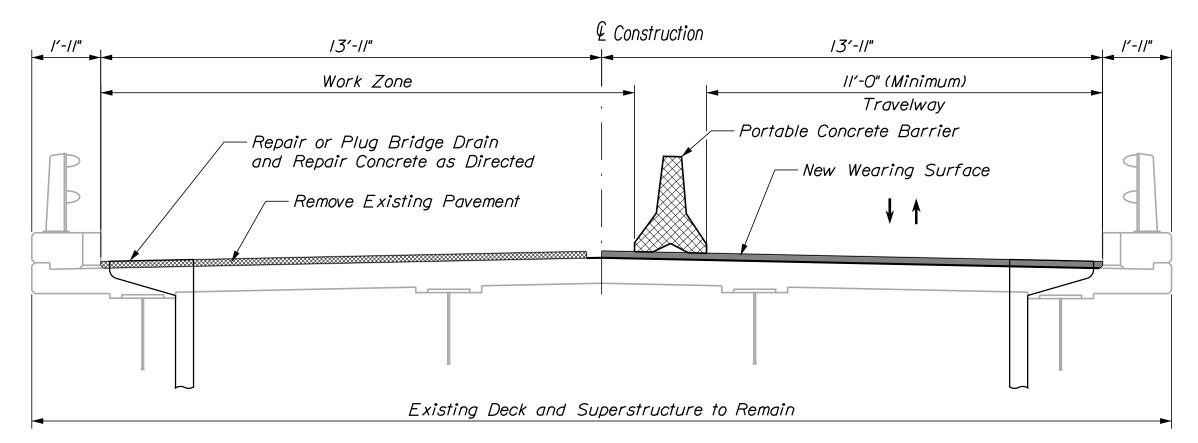


STAGE 1

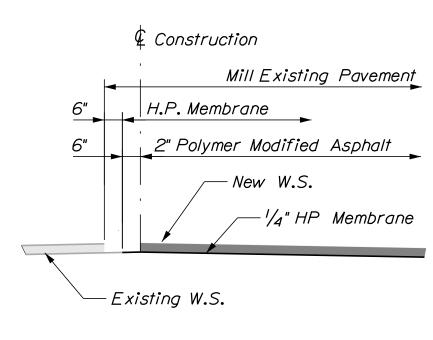
Set Barriers to Establish Work Zone
Shift Traffic to One Lane of Alternating One-Way Traffic on North Side
Remove Existing Wearing Surface in the Work Zone



<u>STAGE 2</u> Place Waterproof Membrane and 2" of Pavement in Work Area



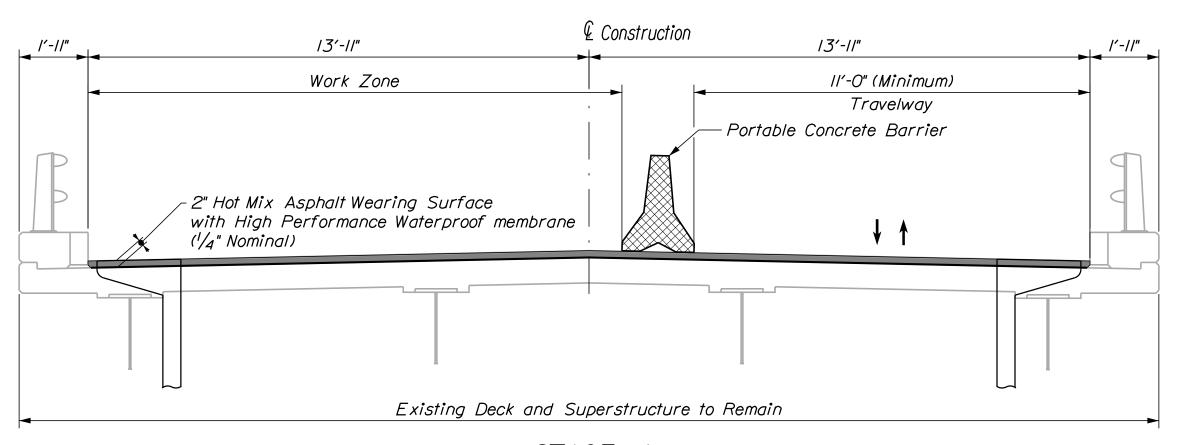
<u>STAGE 3</u>
Shift Traffic to One Lane of Alternating One-Way Traffic on South Side Remove existing Wearing Surface in the Work Zone



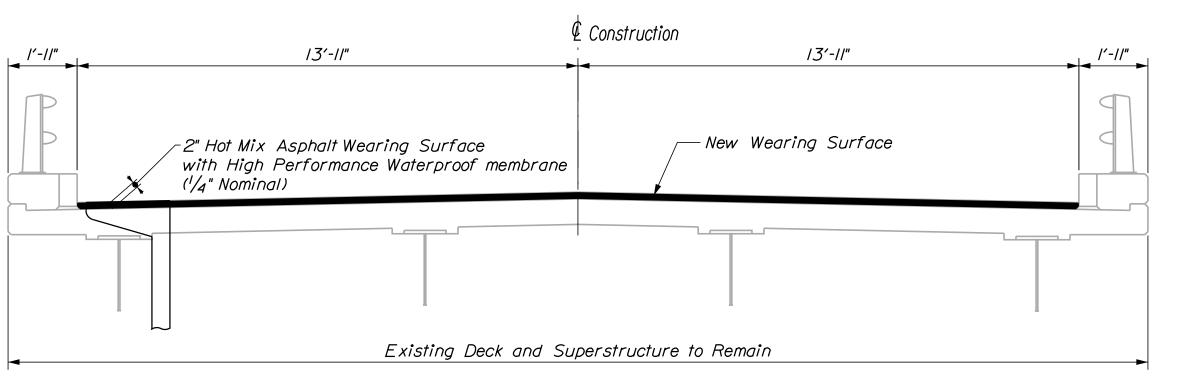
CENTERLINE DETAIL

COUNTY EWING NARROWS BRIDGE
EWING NARROWS
WELL CUMBERLAND C

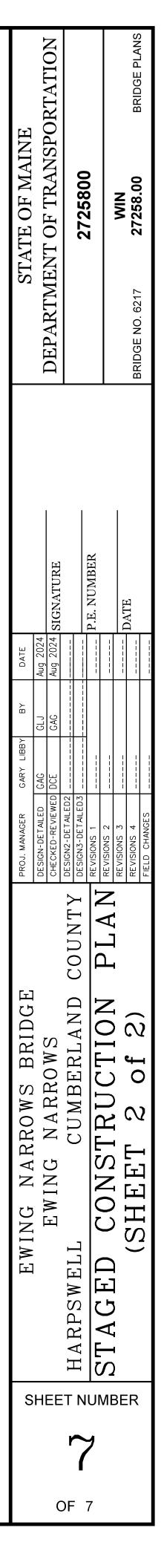
ED CONSTRUCTION
(SHEET 1 of 2) ELL HARPSWEL STAGED SHEET NUMBER



<u>STAGE 4</u> Place Waterproof membrane and 2" of Pavement on North Side



<u>STAGE 5</u> Remove Barriers and Open to Traffic



## STATE OF MAINE DEPARTMENT OF TRANSPORTATION

#### **SPECIFICATIONS**

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition 2020.



#### LIST OF DRAWINGS

Title Sheet	
Estimated Quantities & General Construction Notes	
General Plan	'
Typical Sections and Details	
Staging Plans	
Construction and Curtain Steel Details	

# WISCASSET, WESTPORT ISLAND LINCOLN COUNTY WESTPORT - WISCASSET BRIDGE

OVER

COWSEAGAN NARROWS WESTPORT BRIDGE RD. (ROUTE 144) FEDERAL PROJECT NO. 2726000 PROJECT LENGTH 0.13 mi. BRIDGE NO. 3180

#### <u>UTILITIES</u>

Central Maine Power Charter Communications (Spectrum) Consolidated Communications

#### TRAFFIC DATA

Current (2023) AADT	163
Future (2043) AADT	179
DHV - % of AADT	
Design Hour Volume	1
Heavy Trucks (% of AADT)	
Heavy Trucks (% of DHV)	
Directional Distribution (% of DHV)	
18 kip Equivalent P 2.0	• •
18 kip Equivalent P 2.5	4
Design Speed (mph)	4

#### MAINTENANCE OF TRAFFIC

Maintain one lane of alternating one-way traffic using temporary traffic signals.

PROJECT LOCATION	Westport-Wiscasset Bridge #3180 over Cowseagan Narrows. Located 0.10 of a mile west of Burnell Road Lat./Long. 43°58'22.9" N 69°40'25.9" W
PROGRAM AREA	Bridge Program
OUTLINE OF WORK	Bridge Wearing Surface Replacement

WESTPORT-Wiscasset B

SHEET NUMBER

202.202	ESTIMATED QUANTITIES  DESCRIPTION  REMOVING OF EXISTING BITUMINOUS PAVEMENT (2105 SY)	QUANTITY	UNIT
202.127 202.202		QUANTITY	UNIT
202.202	REMOVING OF EXISTING BITUMINOUS PAVEMENT (2105 SY)		$\overline{}$
		1	LS
107.000/	REMOVING PAVEMENT SURFACE	190	SY
407 0001			
403.2081	12.5 MM POLYMER MODIFIED HOT MIX ASPHALT SURFACE	250	T
403.2131	12.5 MM POLYMER MODIFIED HOT MIX ASPHALT BASE	<i>1</i> 5	T
409.15	BITUMINOUS TACK COAT - APPLIED	119	G
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (2150 SY)	1	LS
515 <b>.</b> 21	PROTECTIVE COATING FOR CONCRETE SURFACES (1300 SY)	1	LS
518 <b>.</b> 391	REPAIR GRANITE CURB JOINT & BEDDING MORTAR	200	LF
<i>518<b>.</b>50</i>	REPAIR OF UPWARD FACING SURFACES - TO REINFSTEEL < 8 IN	200	SF
518 <b>.</b> 51	REPAIR OF UPWARD FACING SURFACES - BELOW REINFSTEEL < 8 IN	750	SF
<i>518.52</i>	REPAIR OF UPWARD FACING SURFACES > = 8 IN	2	CY
520.241	BRIDGE JOINT MODIFICATION TYPE I	1	EΑ
<i>521.33</i>	FABRIC CURTAIN FOR FINGER JOINT	5	EΑ
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2,200	LF
<i>627.</i> 77	REMOVING PAVEMENT MARKINGS	500	SF
627.78	TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	500	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EΑ
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	25	EA
652.34	CONE	25	EA
652.35	CONSTRUCTION SIGNS	300	SF
	MAINTENANCE OF TRAFFIC CONTROL DEVICES	/	LS
	FLAGGER	360	HR
	PORTABLE CHANGABLE MESSAGE SIGN	2	EA
	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	/	LS
	MOBILIZATION	1	LS

#### GENERAL CONSTRUCTION NOTES

I. Protective Coating for Concrete Surfaces shall be applied to the following

All exposed surfaces of concrete barrier railing, Fascias down to the drip notch, All curbs and sidewalks, All exposed surfaces of Concrete Transition Barriers.

- 2. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/contractors/
- 3. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- 4. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
  - a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
  - b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
  - c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

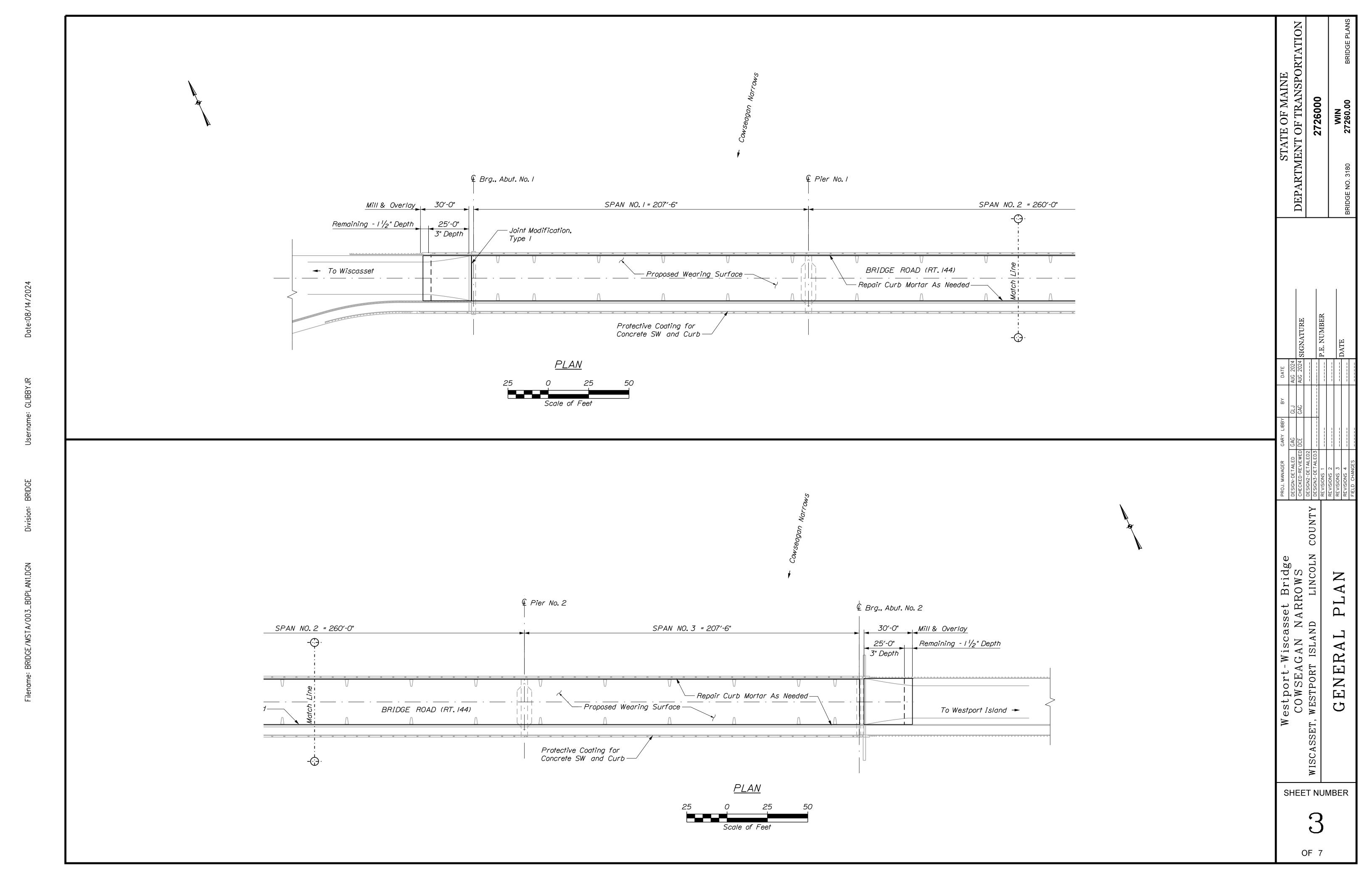
#### DECK REPAIR NOTES

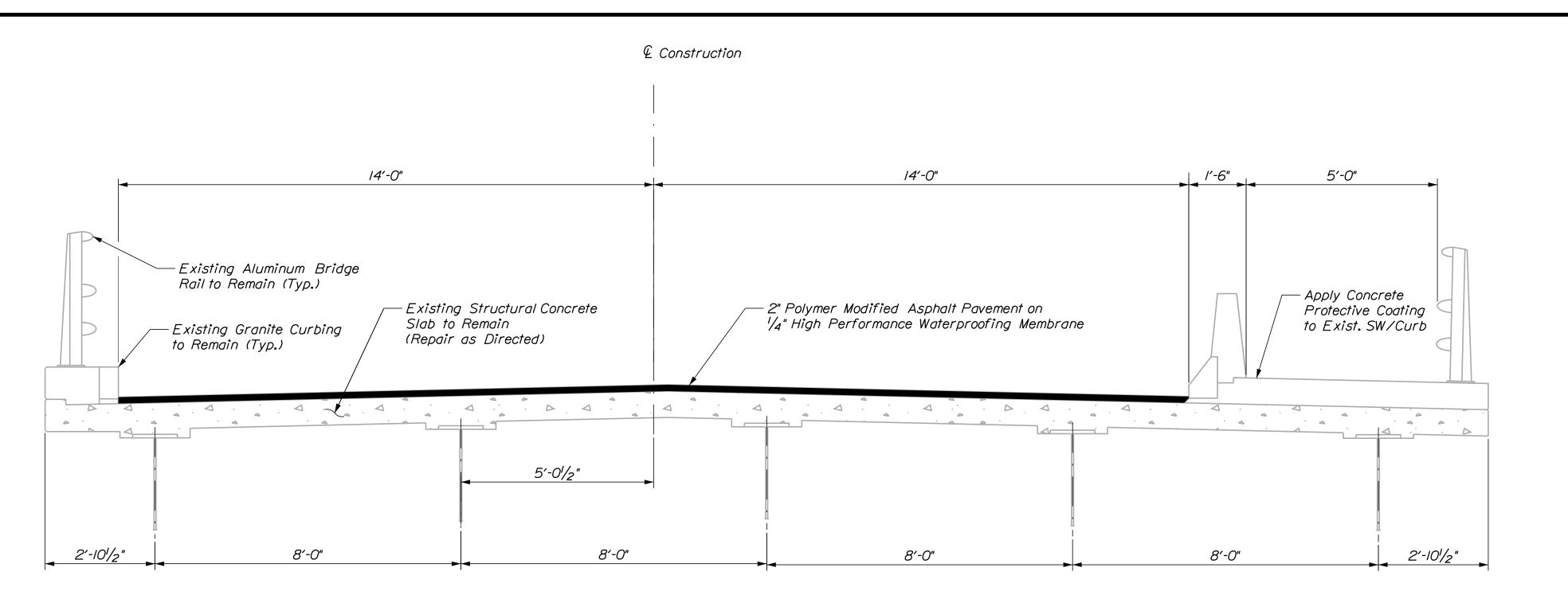
I. Contractor shall repair areas of concrete deck as directed by the Resident. Locations of deck repairs are undetermined for this contract. The Resident will identify and mark areas for deck repair after removing the wearing surface. Payment for the deck repair work shall be under the appropriate 518 pay item.

2. If the depth of deteriorated concrete extends to the reinforcing steel, remove concrete to a minimum of I" below the reinforcing steel.

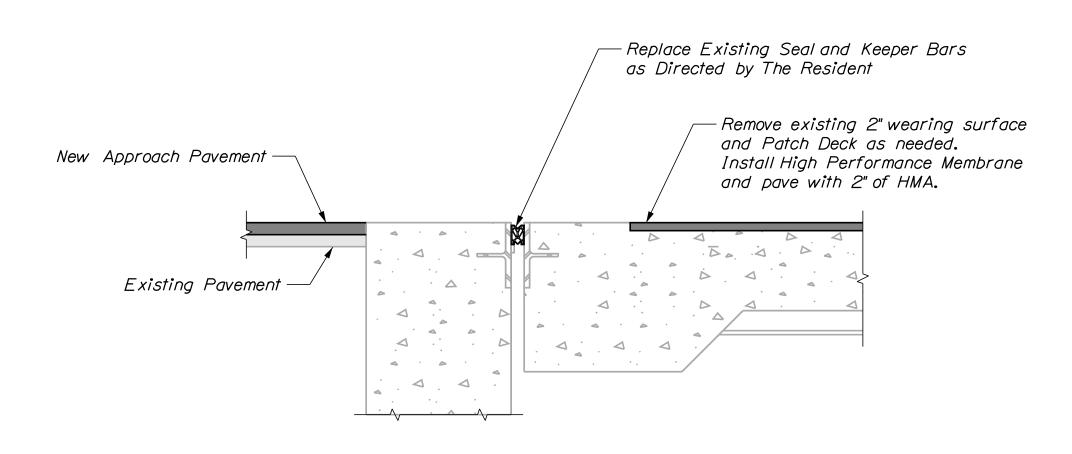
#### JOINT MODIFICATION NOTES

- I. The Contractor shall modify existing joints in accordance with the applicable Special Provisions and Details.
- 2. Compression seals furnished shall have a movement rating of 0.5 inches.

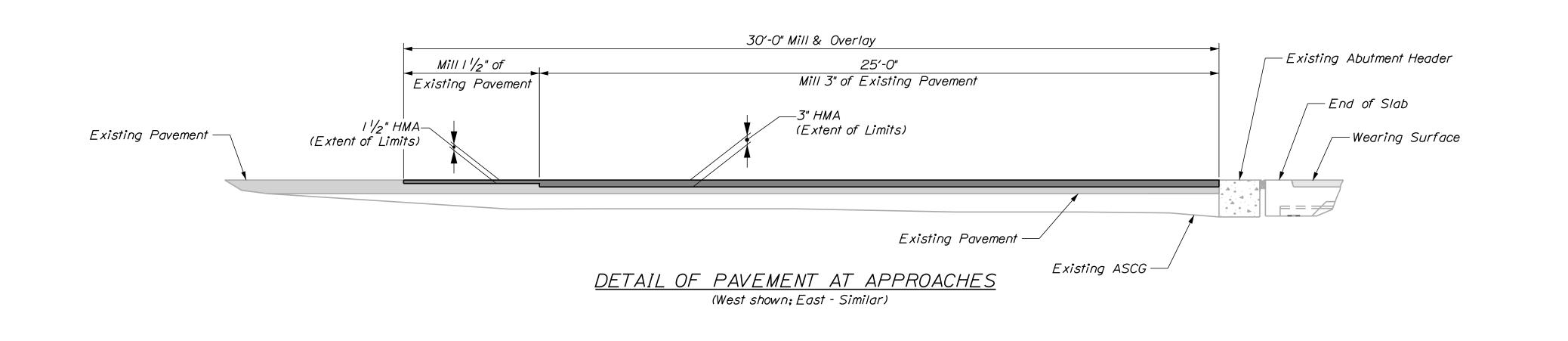




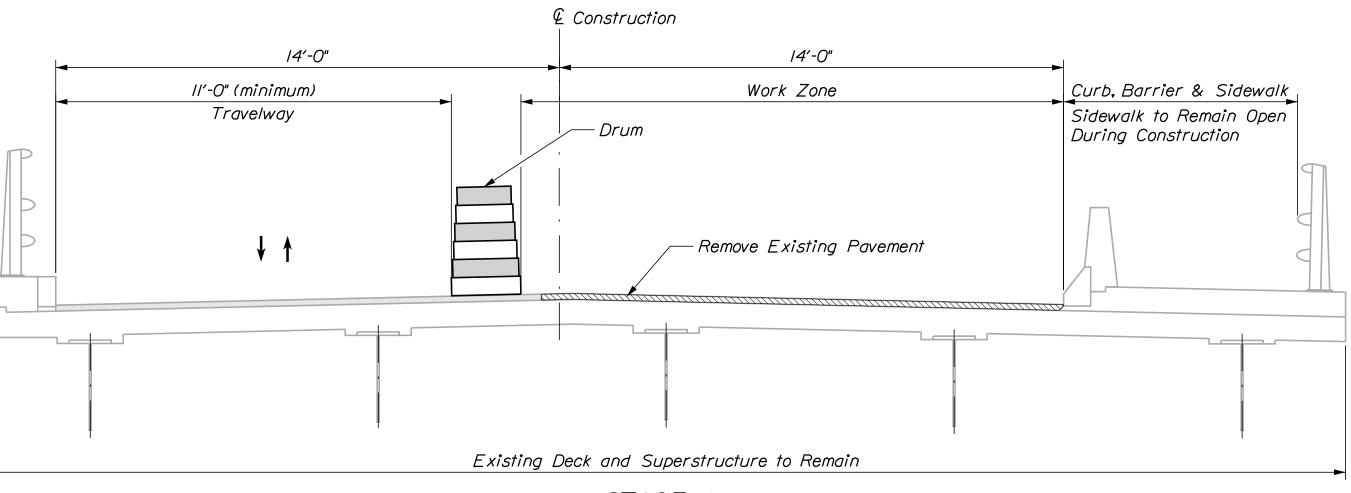
#### TYPICAL CROSS SECTION



JOINT MODIFICATION, TYPE I (SEAL REPLACEMENT)

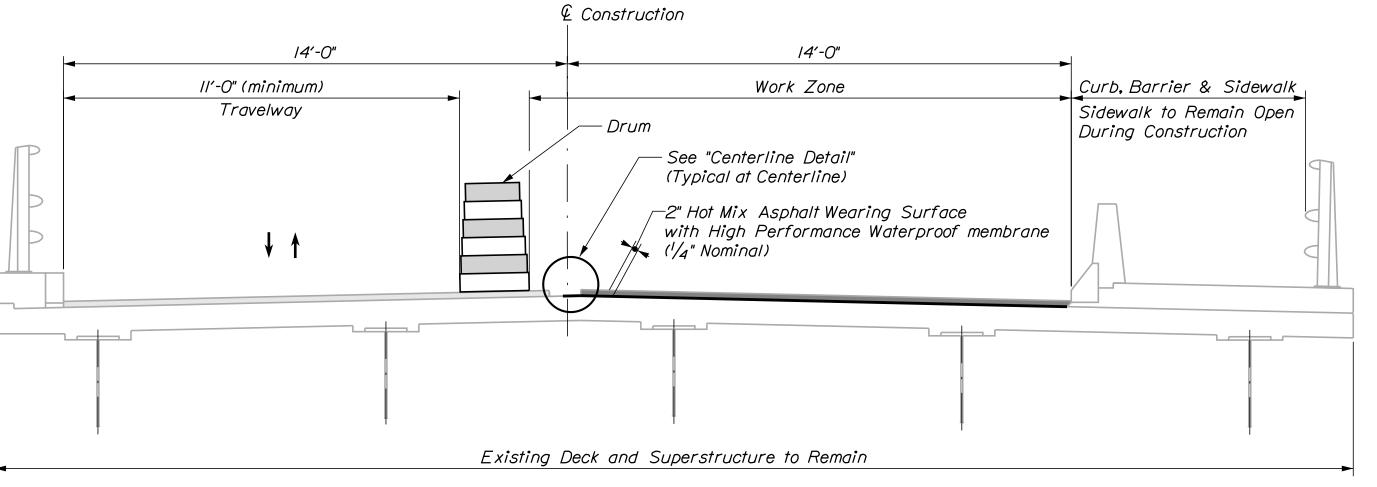


DETAILS Westport-Wiscasset Bridge COWSEAGAN NARROWS F, WESTPORT ISLAND LINCOLN SECTIONS A WISCASSET, TYPIC, SHEET NUMBER



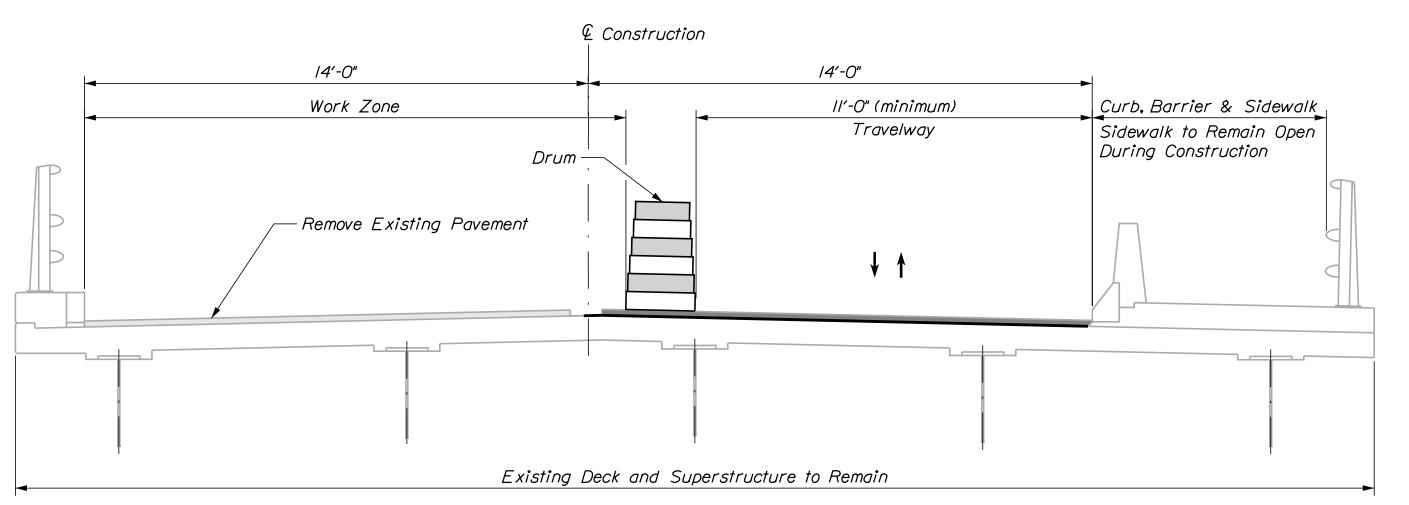
#### STAGE I

Set Barriers to Establish Work Zone Shift Traffic to One Lane of Alternating One-Way Traffic on North Side Remove Existing Wearing Surface in the Work Zone



STAGE 2

Place Waterproof Membrane and 2" of Pavement in Work Area



STAGE 3

Shift Traffic to One Lane of Alternating One-Way Traffic on South Side Remove existing Wearing Surface in the Work Zone

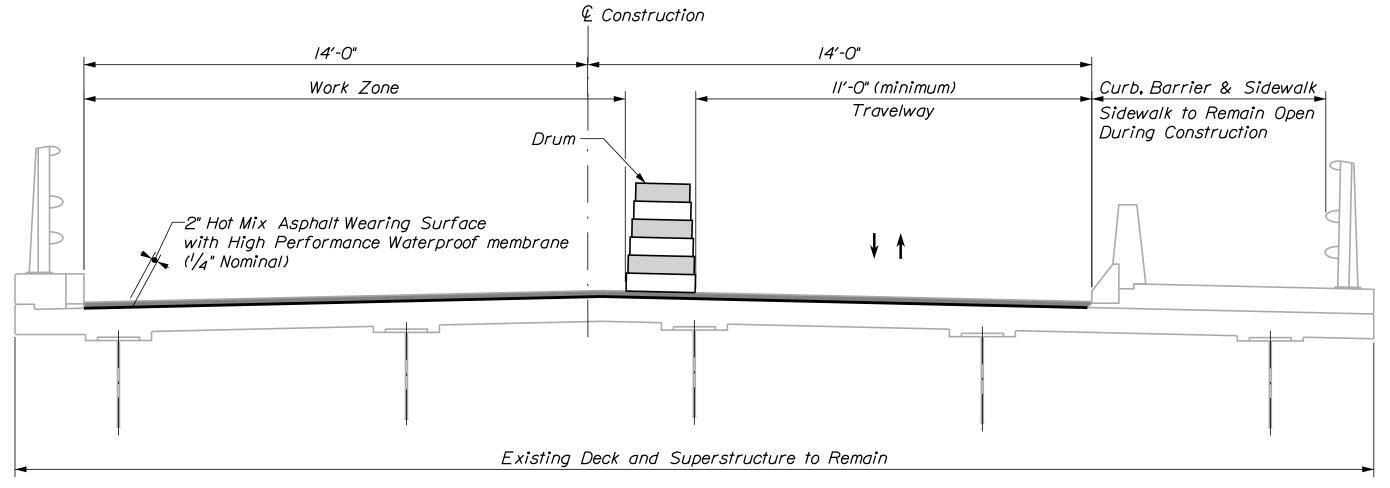
© Construction			SIGNATUI	 		DE MITMI
6" Edge of Existing Pavement  To Centerline of Construction	DATE	AUG 2024	AUG 2024			
6" H.P Membrane  2" Polymer Modified  41/2" Asphalt	B	CLJ	GAG			
New W.S.  — I/4" HP Membrane	GARY LIBBY	GAG	DCE			
Existing W.S.  NTERLINE DETAIL	PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN2-DETAILED2	DESIGN3-DETAILED3	7 070

COUNTY Westport-Wiscasset Bridge COWSEAGAN NARROWS , WESTPORT ISLAND LINCOLN

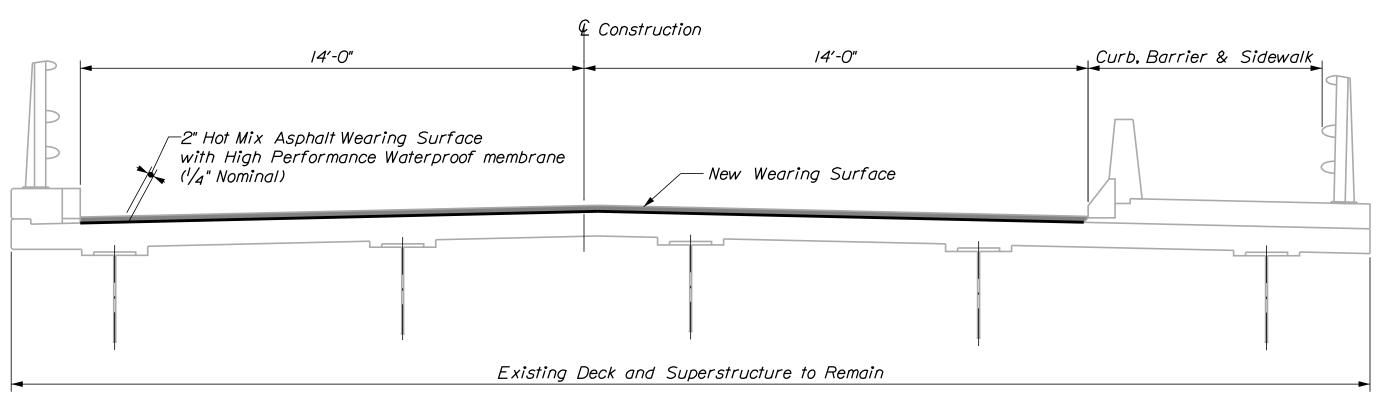
SHEET NUMBER

SHEET NUMBE

05



<u>STAGE 4</u> Place Waterproof membrane and 2" of Pavement on North Side



<u>STAGE 5</u> Remove Barriers and Open to Traffic

Westport-Wiscasset Bridge
COWSEAGAN NARROWS

WISCASSET, WESTPORT ISLAND

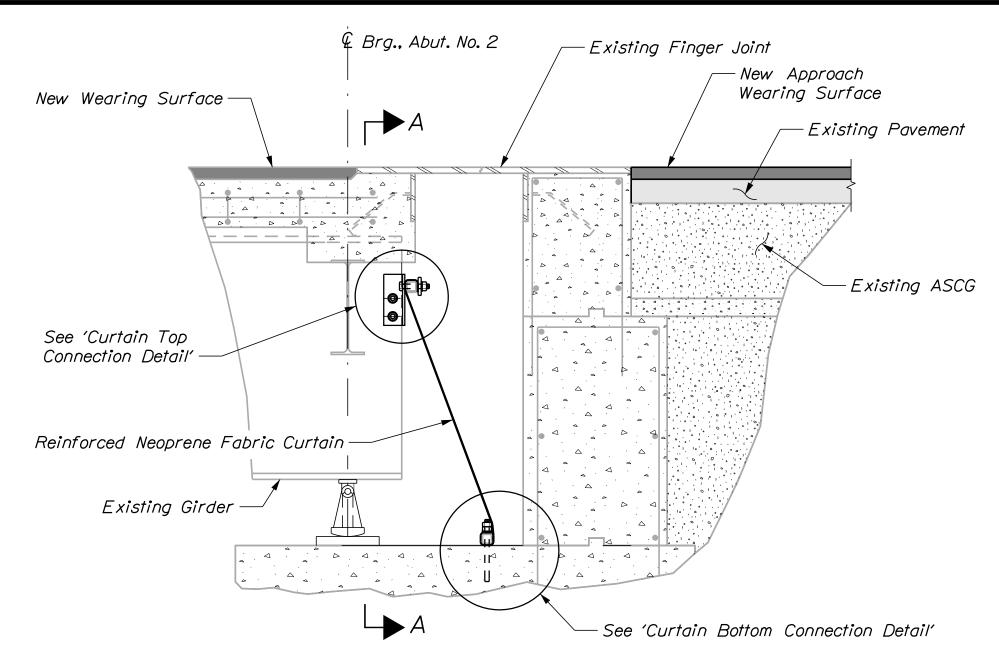
STAGING PLANS

Westport-Wiscasset Bridge
COWSEAGAN NARROWS

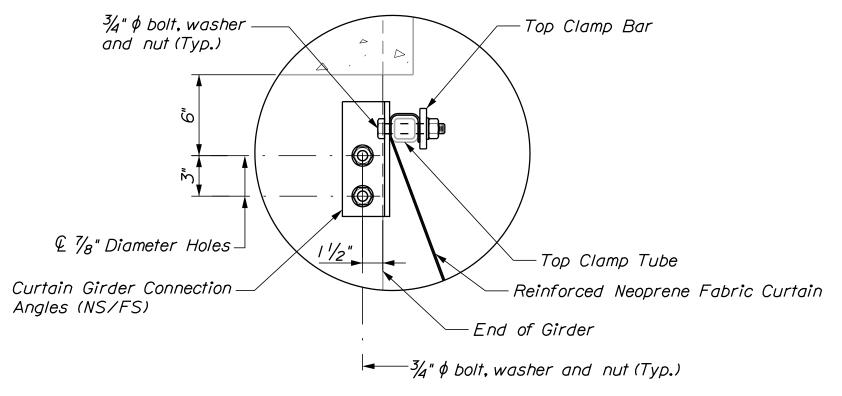
CHECKED-REVIEWED GAG

CHECKED-REVIEWED

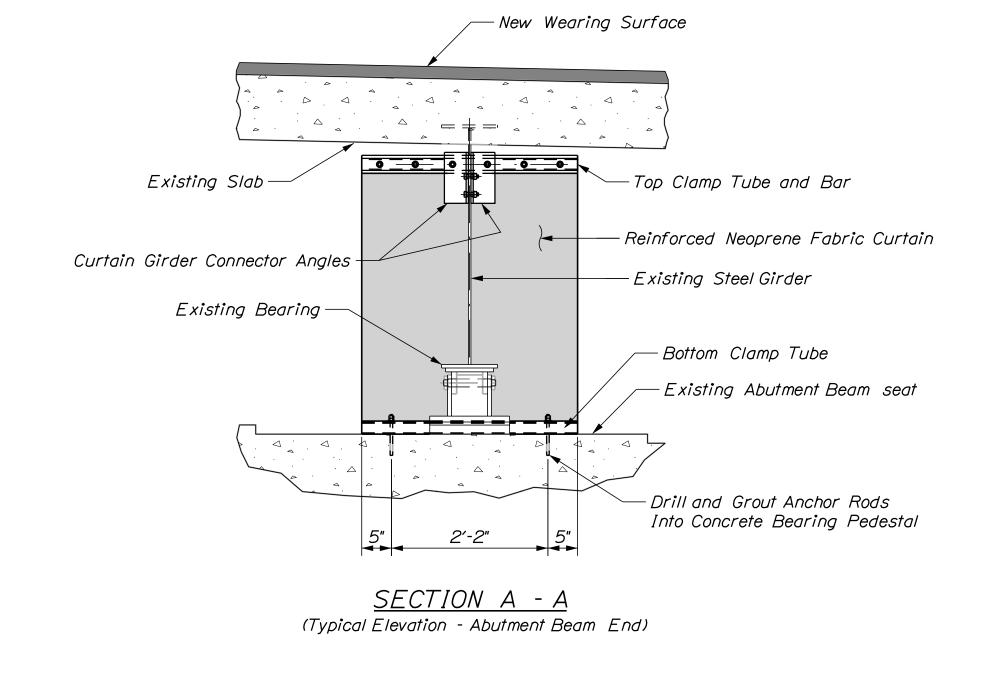
C

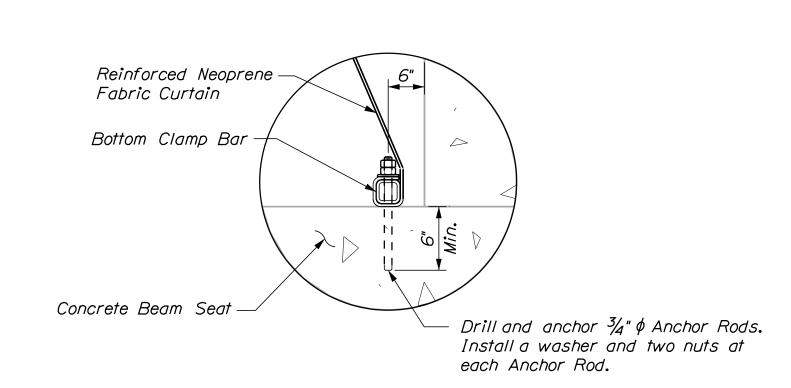


BEAM END CURTAIN
(Typ., 5 - Places)

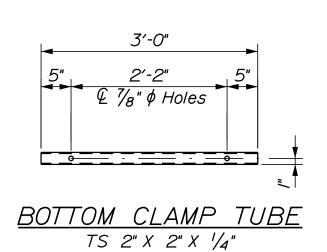


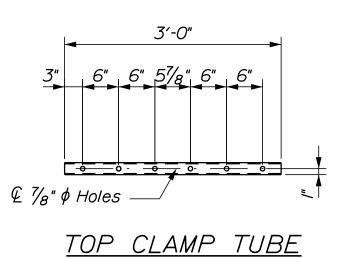
CURTAIN TOP CONNECTION DETAIL



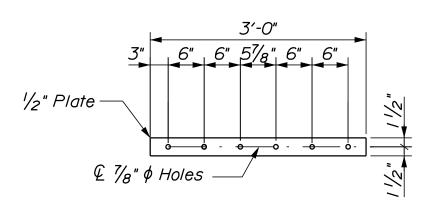


CURTAIN BOTTOM CONNECTION DETAIL

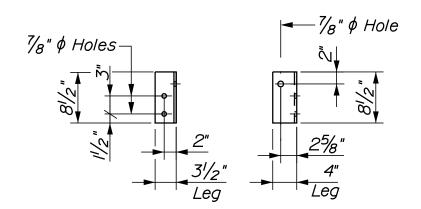




TS 2" X 2" X 1/4"



TOP CLAMP BAR



CURTAIN GIRDER CONNECTOR ANGLES

L 4 x 31/2 x3/8 ~ (5 - As Shown, 5 - Opposite Hand)

#### FABRIC CURTAIN FOR FINGER JOINT NOTES

I. All steel shall be ASTM A500 and be Galvanized in accordance with ASTM A123

2. All bolts shall be ASTM F3125, all nuts shall be ASTM A563, and all washers shall be ASTM F436. All Anchor Rods shall meet the requirements of ASTM F1554. All hardware and anchor rods shall be galvanized in accordance with ASTM A153.

- 3. For drilling and anchoring, the anchoring material shall be chosen from the MaineDOT Qualified Products List and shall be submitted to the Resident for approval.
- 4. Tighten nuts as directed by the Resident. Upset all threads after installation.

SHEET NUMBER

7

OF 7

WISCASSET,

Westport COWSE N and DETAI

CONSTRUCTI