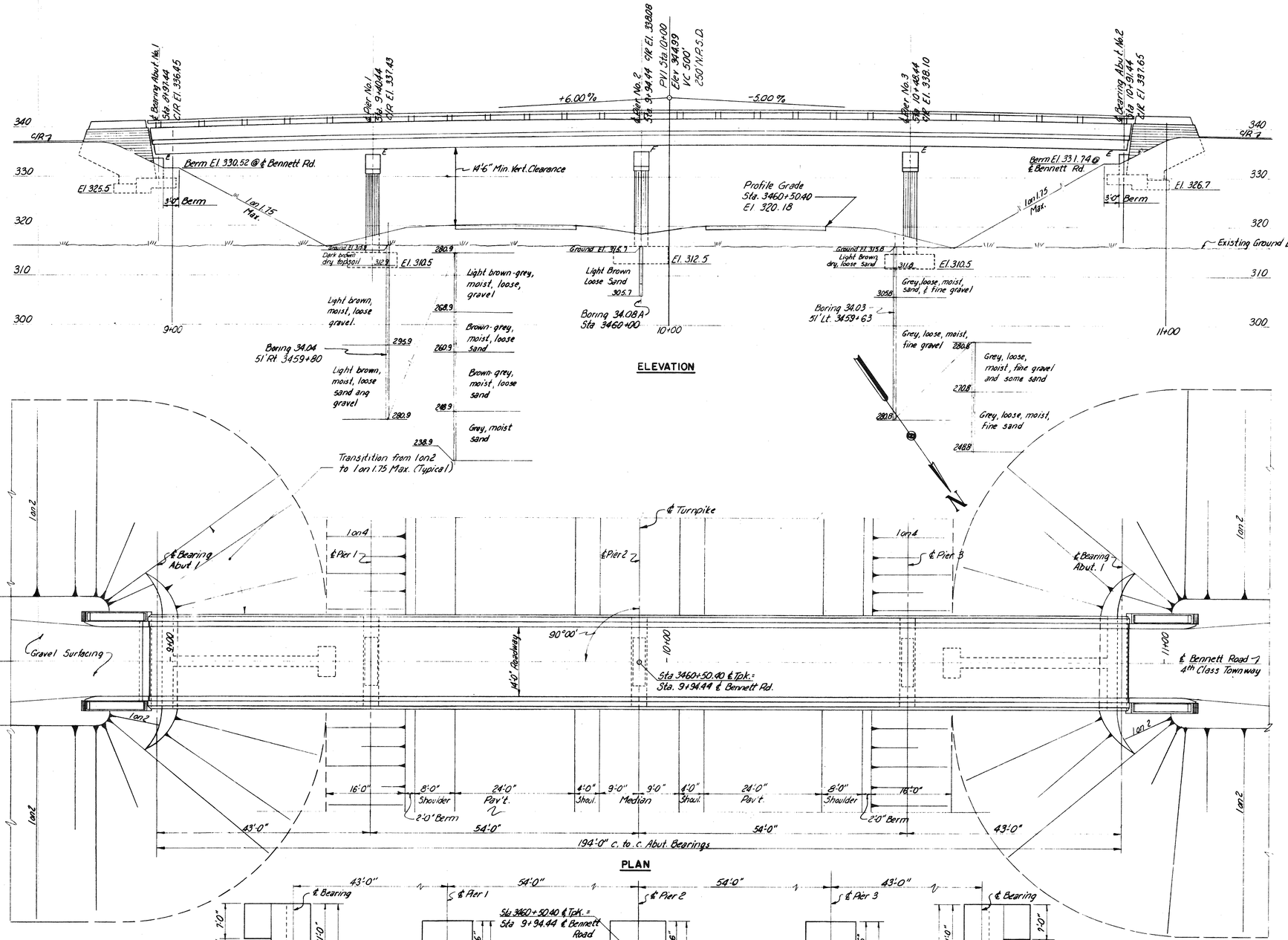
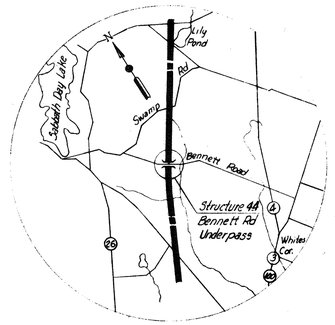


GENERAL NOTES

Design Specifications: AASHO (1953) with minor modifications.
Design Loading: H-15
Maximum Base Pressure at Abutments: 1.6 Tons/sq ft.
Maximum Base Pressure at Piers #1 and #3: 2.5 Tons/sq ft.
Maximum Base Pressure at Pier #2: 2.4 Tons/sq ft.

REFERENCES

Dwg. No.	Title	Sub-structure Contractor	Superstructure: Steel Fabricator	Superstructure: Steel Erector	Superstructure: Floor Contractor
501	Standard Abutment Details	✓	✓	✓	✓
502	Standard Pier Details	✓	✓	✓	
503	Abutment Drainage Details	✓			
505	Std. Handrail, Bearing Devices and Miscellaneous Details	✓	✓	✓	✓
506	Standard Diaphragm Details		✓	✓	✓
507	Standard Type A Splices for 27 WF Bms.		✓	✓	
511	Type "X" and "Y" Expansion Joints	✓	✓	✓	✓
513	Standard Bridge Floor Cross Sections 14'-0" & 30'-0" Roadway	✓	✓	✓	✓



VICINITY MAP
Scale: 1" = 1 Mile

DRAWING 44.01.03

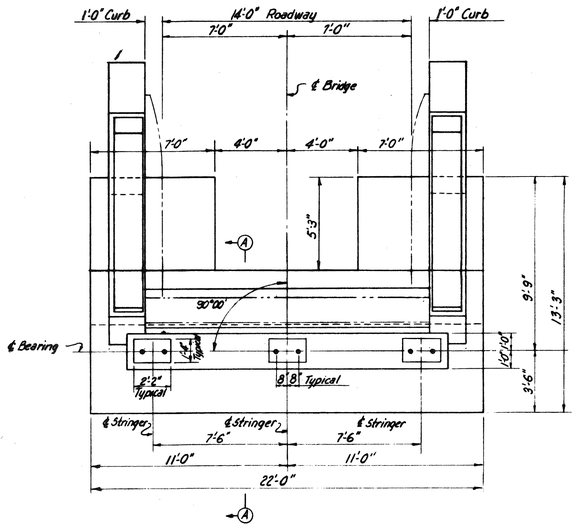
	BY	DATE	No.	REVISION	BY	DATE
MADE	HJG	11-10-53				
TRACED						
CHECKED	TKC	12-1-53	1	As-Built	HBH	1/18/56
IN CHARGE OF	IDSK					

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA

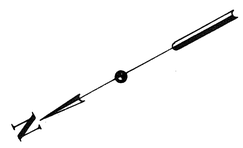
STRUCTURE NO. 44 TURNPIKE UNDER
BENNETT ROAD
STA. 3460+50.40
GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

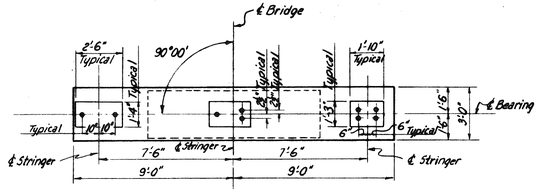
SCALE: 3/32" = 1'-0"
CONTRACT NO. ____
SHEET NO. 192 OF 382



PLAN

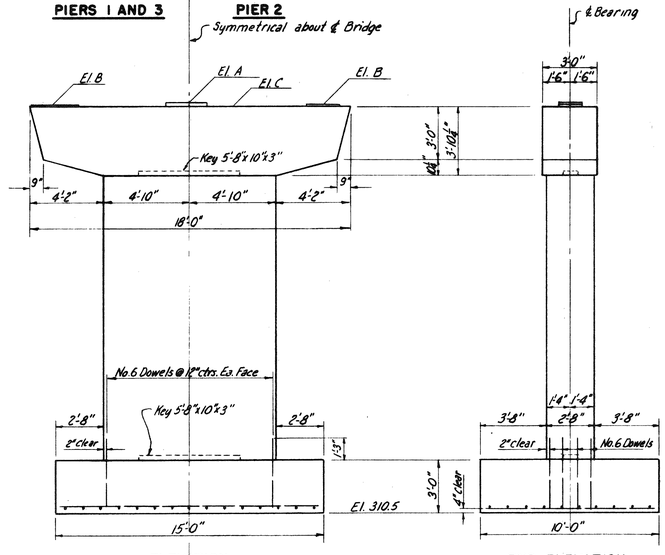


Note: Abutment 1 shown, Abutment 2 similar by rotation.



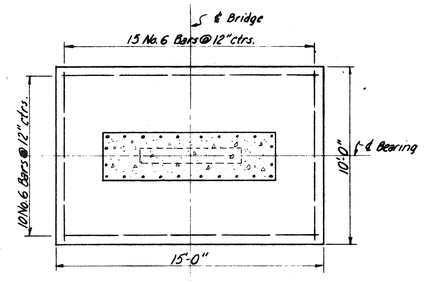
HALF CAP PLAN
PIERS 1 AND 3

HALF CAP PLAN
PIER 2

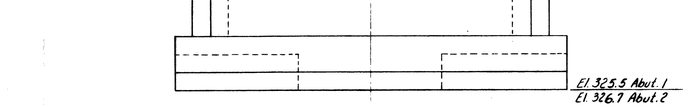


ELEVATION

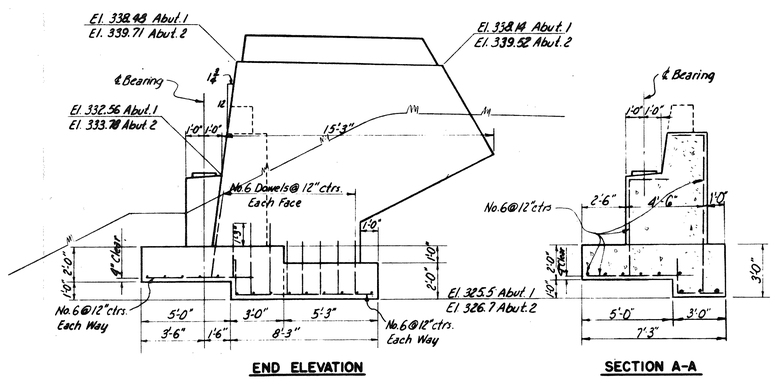
END ELEVATION
PIERS 1 AND 3



FOOTING PLAN
PIERS 1 AND 3

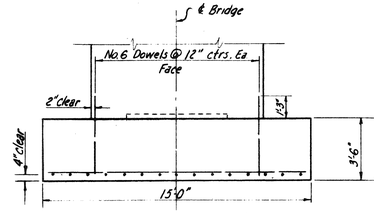


ELEVATION

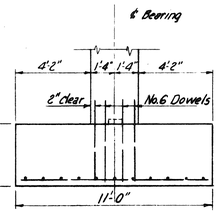


END ELEVATION

SECTION A-A

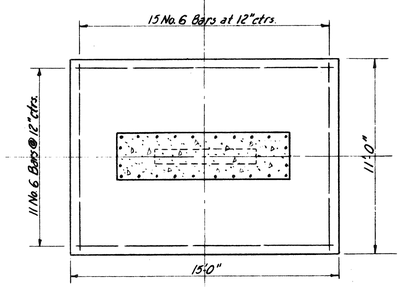


FOOTING ELEVATION
PIER 2



END ELEVATION
PIER 2

Pier Elevations			
Point	Pier 1	Pier 2	Pier 3
A	333.69	334.34	334.96
B	333.60	334.25	334.27
C	333.58	334.23	334.25



FOOTING PLAN
PIER 2

ABUTMENTS NO. 1 AND 2

PIERS NO. 1, 2, AND 3

DRAWING 44.02.03

	BY	DATE	No.	REVISION	BY	DATE
MADE	HJG	11-10-53				
TRACED			2	As-Built	HBH	1-18-56
CHECKED	TKC	12-1-53	1	Added clear distance to Abut. footing rebars	ACR	3-8-56
IN CHARGE OF	IDSK					

MAINE TURNPIKE AUTHORITY

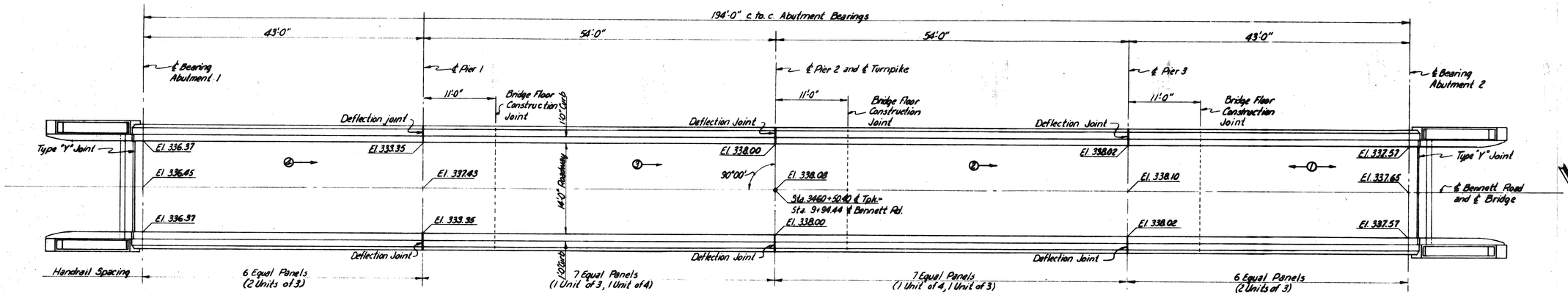
MAINE TURNPIKE

SECTION 2— PORTLAND TO AUGUSTA

STRUCTURE NO. 44 TURNPIKE UNDER
BENNETT ROAD
STA. 3460+50.40
ABUTMENTS AND PIERS

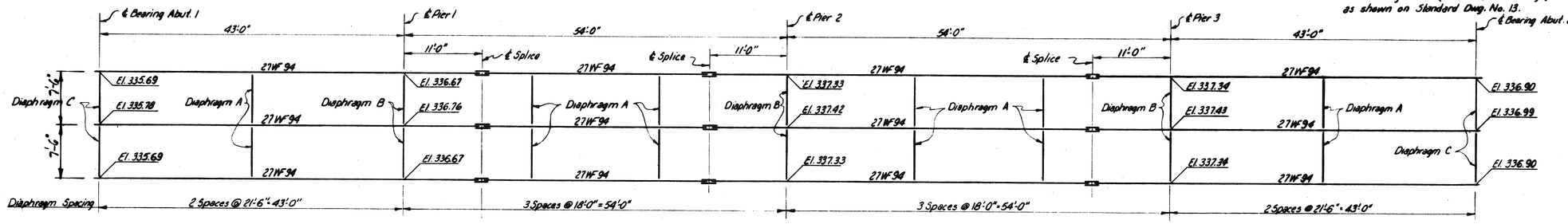
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: 1/4" = 1'-0"
CONTRACT NO. _____
SHEET NO. 193 OF 362



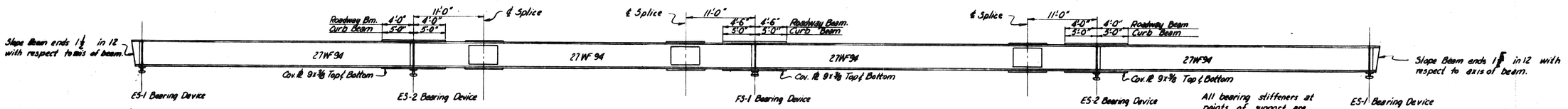
PLAN
Scale: 1/8" = 1'-0"

Note: Elevations shown are to top of Bridge Floor.
Concrete placing sequence and direction noted Thus ②→
Use 7" bridge floor (non-composite design) as shown on Standard Dwg. No. 13.

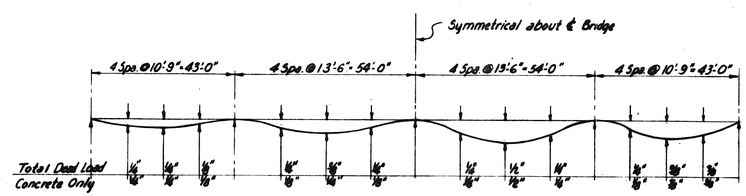


FRAMING PLAN
Scale: 1/8" = 1'-0"

Note: Elevations shown are to top of stringer flanges in place.



BEAM ELEVATION
(No Scale)



ROADWAY BEAM **CURB BEAM**

DEAD LOAD DEFLECTION DIAGRAM
(No Scale)

DRAWING 44.03.03

	BY	DATE	No.	REVISION	BY	DATE
MADE	HJG	11-11-53				
TRACED						
CHECKED	TKC	12-2-53	1	As-Built	WBW	1-18-54
IN CHARGE OF	JDSK					

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA

STRUCTURE NO. 44 TURNPIKE UNDER
BENNETT ROAD
STA. 3460+50.44
SUPERSTRUCTURE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK · KANSAS CITY

SCALE: As Shown
CONTRACT NO. _____
SHEET NO. 124 OF 382

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

, CHAIRMAN

ROBERT K. PACIOS, VICE CHAIRMAN

ABRAHAM LEIBOWITZ, MEMBER

SAMUEL L. COHEN , MEMBER

DANA F. CONNORS, MEMBER EX-OFFICIO

DAVID H. STEVENS, SECRETARY & TREASURER

INDEX OF SHEETS

TOTAL SHEETS - 20

CONTRACT 86.3

BENNETT ROAD BRIDGE REPLACEMENT

NEW GLOUCESTER

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER _____ _____

BUREAU DIRECTOR AND CHIEF ENGINEER _____ DATE _____

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ENGINEERS · ARCHITECTS · PLANNERS
BOSTON

Carl J. Mellea

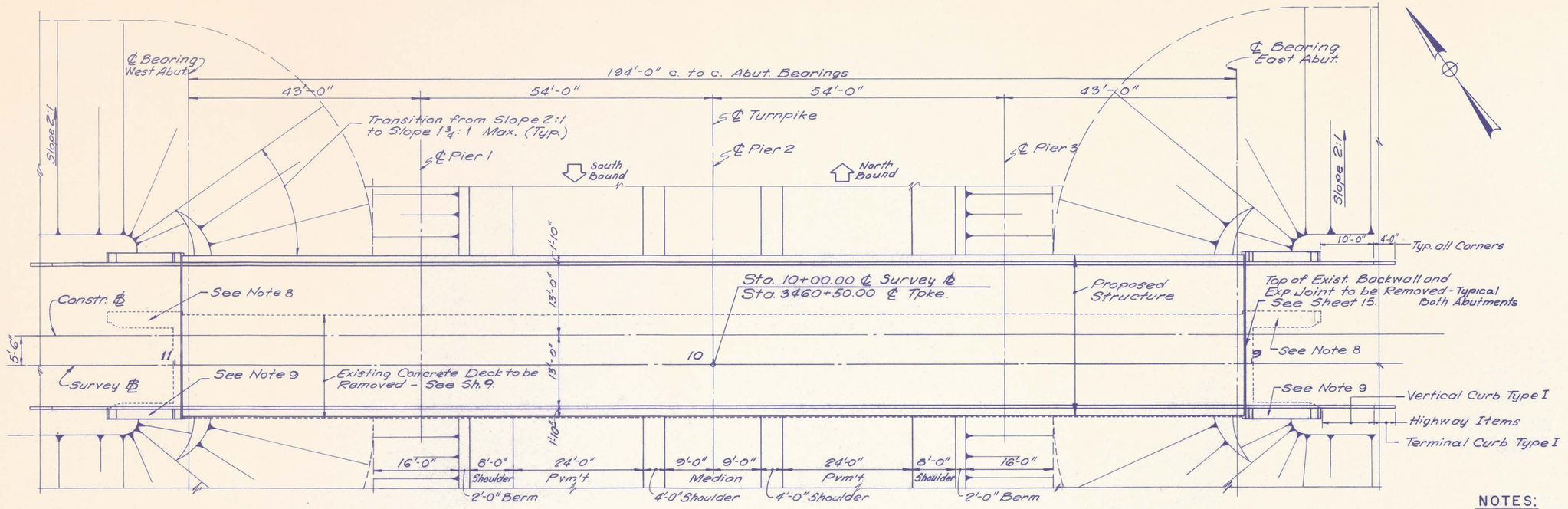
STATE OF MAINE
CARL J. MELLEA
1116
REGISTERED PROFESSIONAL ENGINEER

APPROVED:
MAINE TURNPIKE AUTHORITY

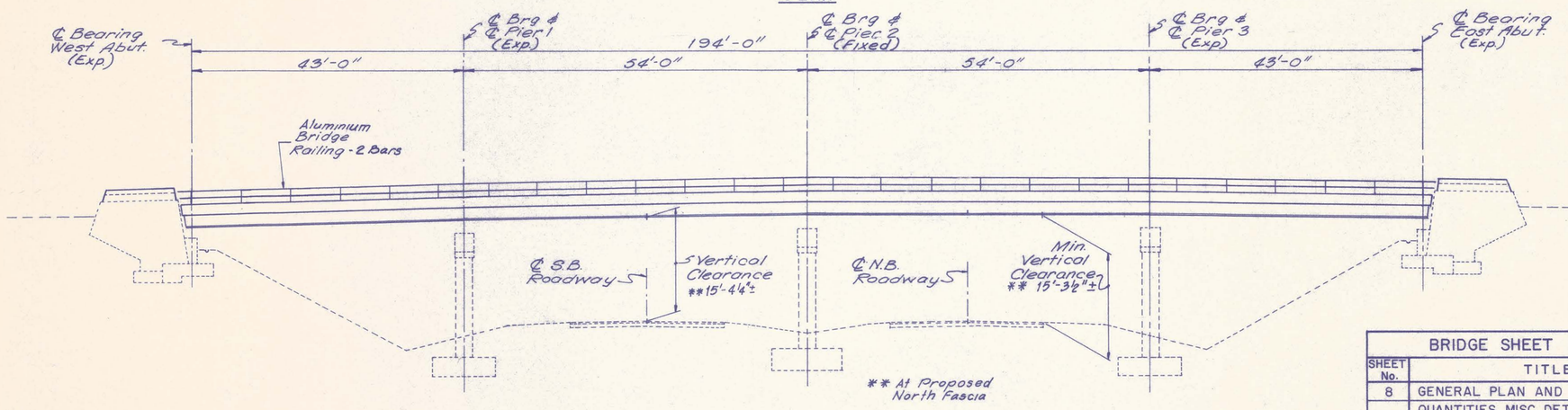
_____ CHAIRMAN

_____ EXECUTIVE DIRECTOR

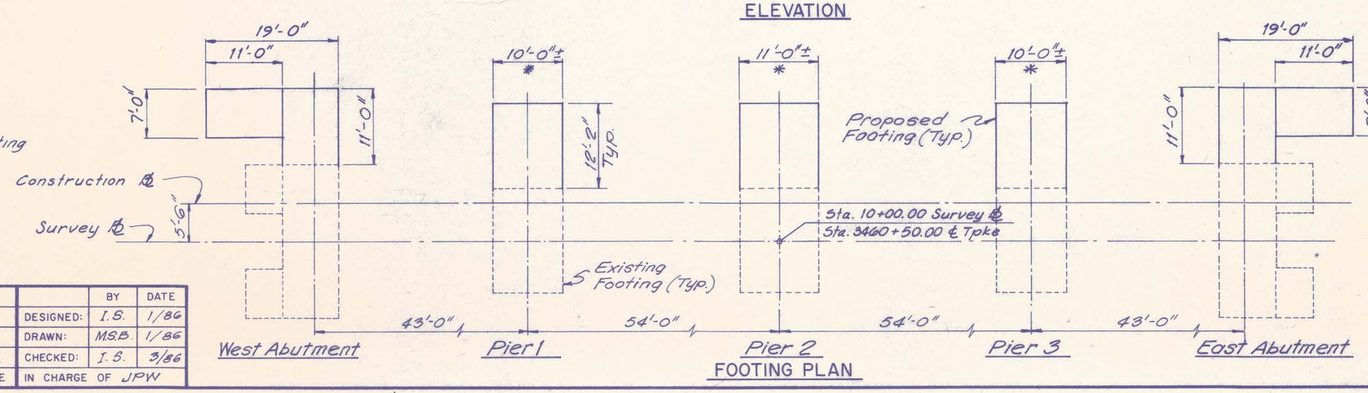
DATE _____



PLAN



ELEVATION



FOOTING PLAN

DESIGN
AASHTO Standard Specifications For Highway Bridges 1983 with All Interims.

CONTRACT
State of Maine, Department of Transportation, Standard Specifications, Highways & Bridges, Revision of January 1984.

LIVE LOAD
H15

MATERIALS

CONCRETE
All Concrete Shall be Class A f_c = 1,200 P.S.I, n=9

REINFORCING STEEL
ASTM A615 Grade 60 f_b = 24,000 P.S.I.

STRUCTURAL STEEL
ASTM A36 f_b = 20,000 P.S.I.

HIGH STRENGTH BOLTS
ASTM A325

NOTES:

1. Reinforcing Steel to Have a Clear Cover as Shown on the Plans.
2. Chamfer all Exposed Edges 1".
3. Plans of Existing Bridges are Available at the Authority's Office at 430 Riverside St., Portland, Maine.
4. Do not Break the Bond Between the Concrete Surfaces of Vertical Construction Joints in Superstructure Slab. Form a 1" V-Groove on the Outside Faces of Slab at Each Construction Joint. See Note "A" Sh.14.
5. Provide 23 Gauge Galvanized Screen Over 1"℄ Deck Drains, ⅛" Mesh.
6. The Authority's Personel Will Profile the Tops of All Stringers Before the Form Work is Started and Supply the Contractor With Final Bottom of Slab Elevation.
7. Shielding Required During Concrete Removal Shall not Project Below the Bottom Flanges of Stringers. The Estimated Quantity of Shielding is The Minimum Required and is Based on The Following Limits:
   a. Normal to ℄ Bridge: as Shown on Plans
   b. Parallel to ℄ Bridge: Pier 1 to Pier 3.
8. Northwest & Northeast Existing Wingwalls to be Partially Removed - See Sheet 10.
9. Southwest & Southeast Existing Wingwalls to be Modified - See Sheet 10.
10. Place the Concrete in Panels "A" and "B" Before the Expansion Device is Installed. Place the Concrete in Panels A Before Placing in Panels B. Place the Concrete in Panels C Last.

BRIDGE SHEET INDEX

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I.S.	1/86
DRAWN:	M.S.B.	1/86
CHECKED:	I.S.	3/86
IN CHARGE OF	JPW	

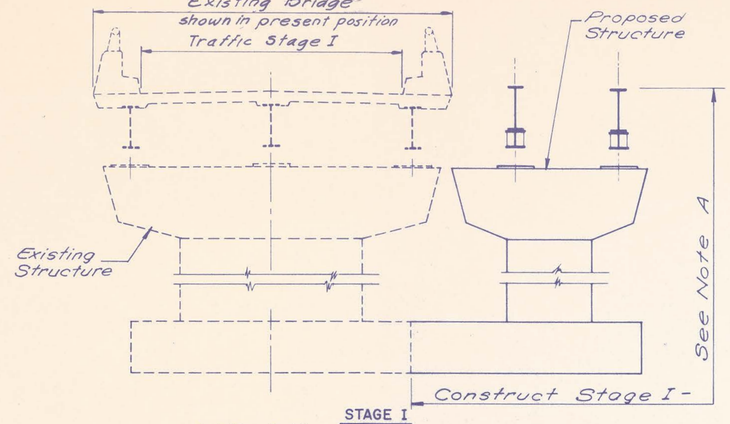
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

BENNETT ROAD BRIDGE REPLACEMENT.
GENERAL PLAN AND ELEVATION.

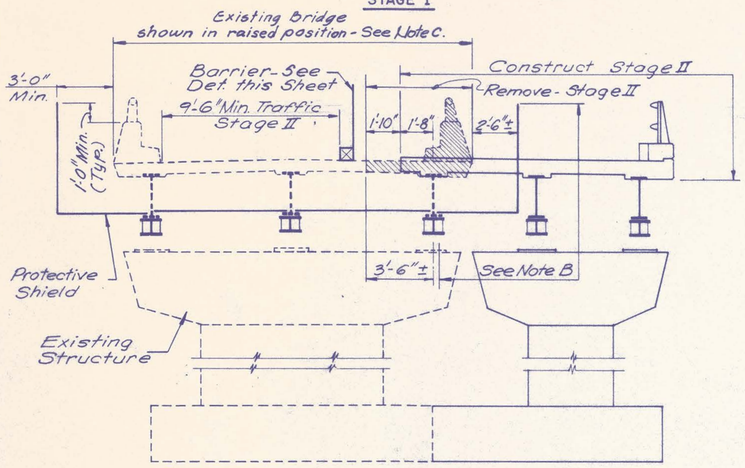
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

SCALE: 3/32"=1'-0"

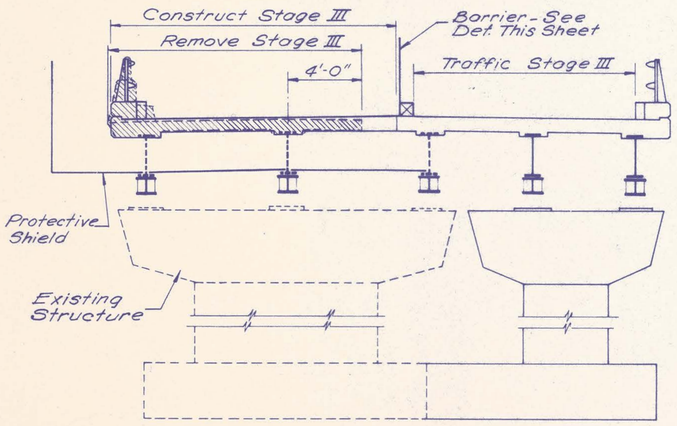
SHEET NO. 8 OF 23



STAGE I

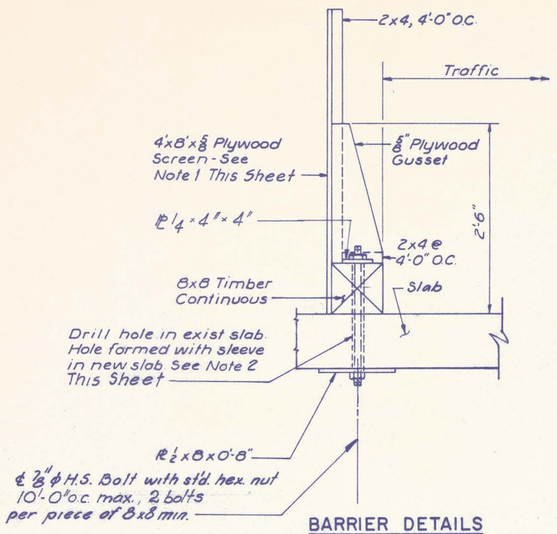


STAGE II



STAGE III

SEQUENCE OF CONSTRUCTION
(LOOK WEST)
1/4" = 1'-0"



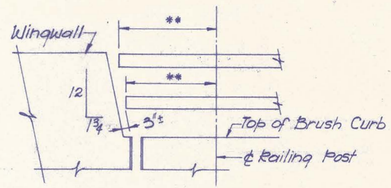
BARRIER DETAILS
1" = 1'-0"

NOTES

A. Construct Abutment Extensions and Wingwalls During Stage I.

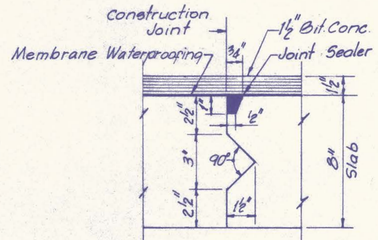
B. Protective Shield in Place During "Remove Stage II". Remove This Portion of Shield for "Construction Stage II."

C. Install Suggested Jacking Devices, as Shown on Sheet 12. Provide Bracing as Required to Maintain the Superstructure System in Stable Condition. Lift Superstructure to the Required Height. (See Special Provisions).



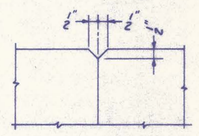
** Determine by Field Measurement Before Fabrication.

RAILING EXTENSION DETAIL
½" = 1'-0"

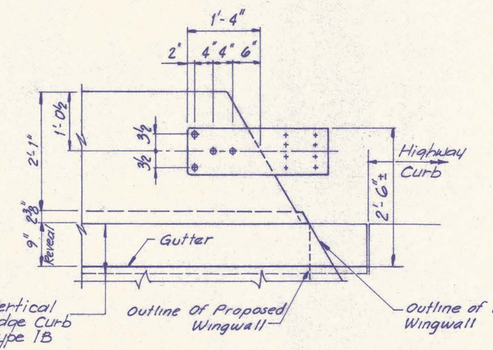


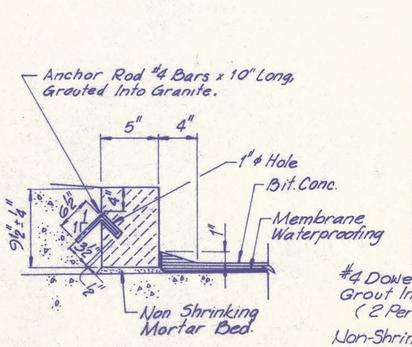
Reinforcement shall be continuous through the joint.

CONSTRUCTION JOINT DETAIL
3" = 1'-0"

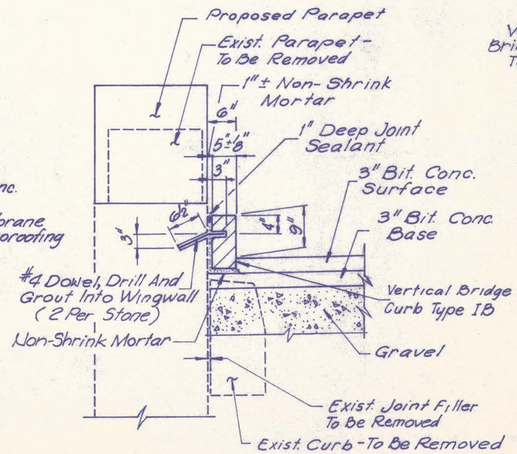


1" V-GROOVE
3" = 1'-0"

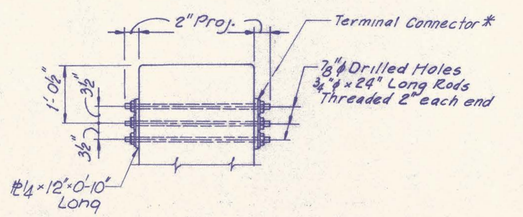




DETAIL A
1½" = 1'-0"



CURB DETAIL AT EXISTING WINGWALL
(SW & SE)



* Place parallel to Approach roadway.

DETAIL @ END OF WINGWALL

ITEM	DESCRIPTION	QUAN.	UNIT
202.12	Removing of Existing Structural Concrete	445	S.Y.
203.26	Gravel Borrow	25	C.Y.
206.081	Structural Earth Excavation - Abutments, Retaining Walls, Box Culverts and Structural Plate Units	100	C.Y.
206.10	Structural Earth Excavation - Piers	170	C.Y.
403.08	Hot Bituminous Pavement - Grading C	50	Ton
502.21	Structural Concrete Abutments and Retaining Walls	70	C.Y.
502.23	Structural Concrete Piers	80	C.Y.
502.26	Structural Concrete Roadway and Sidewalk Slabs on Steel Bridges (175 C.Y.)*	1	L.S.
502.71	Protective Shield	300	S.Y.
503.12	Reinforcing Steel Fabricated and Delivered	62,000	Lb.
503.13	Reinforcing Steel Placing	62,000	Lb.
504.70	Structural Steel Fabricated and Delivered (50,000 Lbs)*	1	L.S.
504.71	Structural Steel Erection (50,000 Lbs)*	1	L.S.
504.72	Jacking Existing Superstructure	1	L.S.
506.141	Field Painting New Structural Steel (25 Tons)*	1	L.S.
506.142	Field Painting Existing Structural Steel (35.3 Tons)*	1	L.S.
507.092	Aluminum Bridge Railing - 2 Bar	400	L.F.
508.10	Membrane Waterproofing	570	S.Y.
514.06	Curing Box for Concrete Cylinders	1	Each
515.20	Protective Coating for Concrete Surfaces	190	S.Y.
515.22	Thoroseal Coating for Concrete Surfaces	550	S.F.
520.20	Expansion Device	1	L.S.
609.131	Vertical Bridge Curb - Type IA (5"x9½")	400	L.F.
609.132	Vertical Bridge Curb - Type IB (5"x11")	70	L.F.

* Approximate Quantity for Estimating only.

NOTES

1. The entire Traffic side face of the plywood screen shall be painted with yellow Traffic paint.
2. Holes in new slab shall be filled in mortar after barrier is removed and before membrane waterproofing is applied.
3. Refer to Part 2, Special Provisions, Article 14, for alternate method of sequence of construction.

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I. S.	1/86
DRAWN:	M.S.B.	2/86
CHECKED:	I.S.	3/86
IN CHARGE OF	J.P.W	

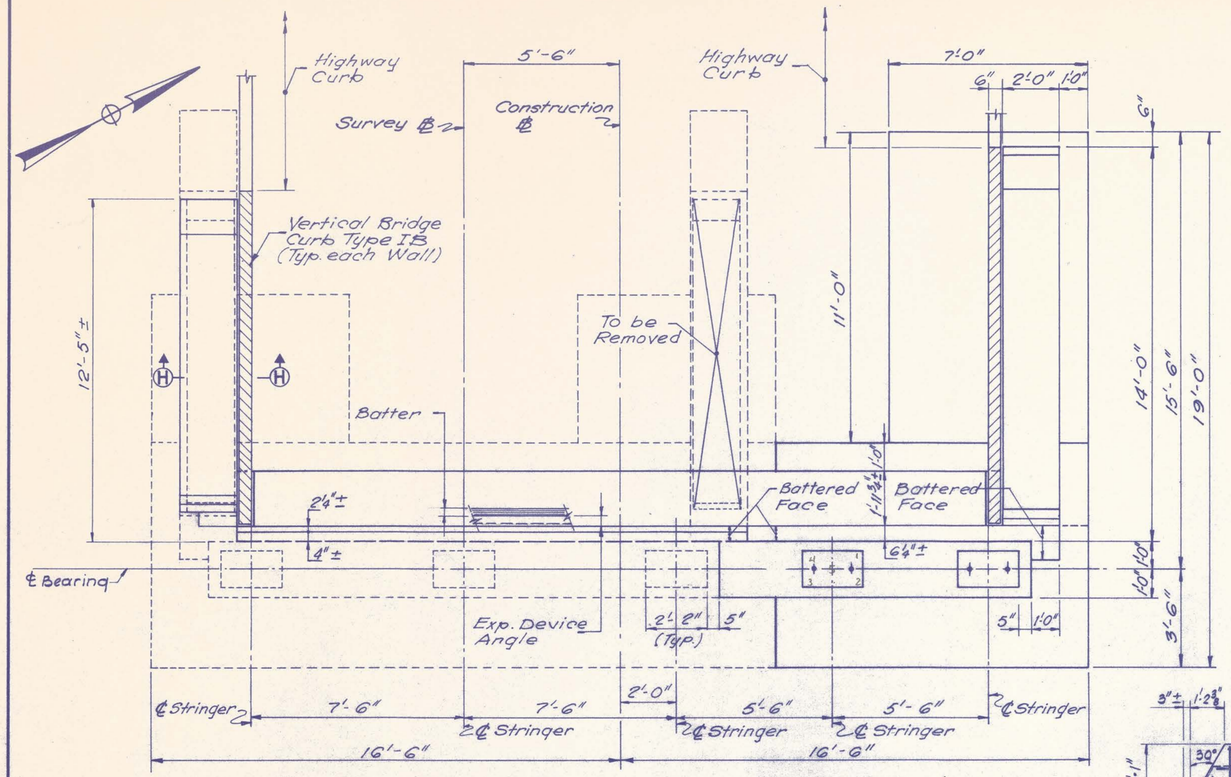
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

BENNETT ROAD BRIDGE REPLACEMENT
QUANTITIES, MISC.
DETAILS AND CONSTRUCTION SEQUENCE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

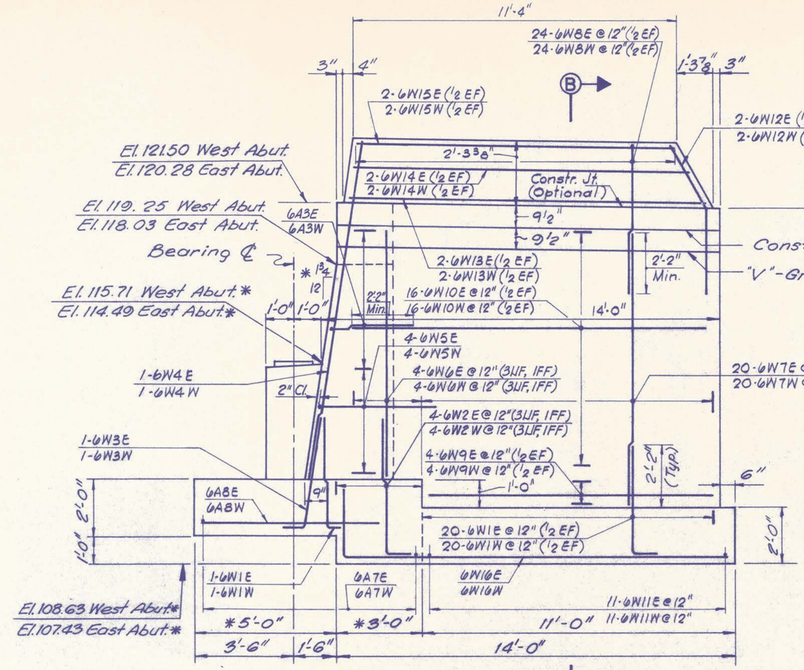
SCALE: AS NOTED

SHEET NO. 9 OF 23

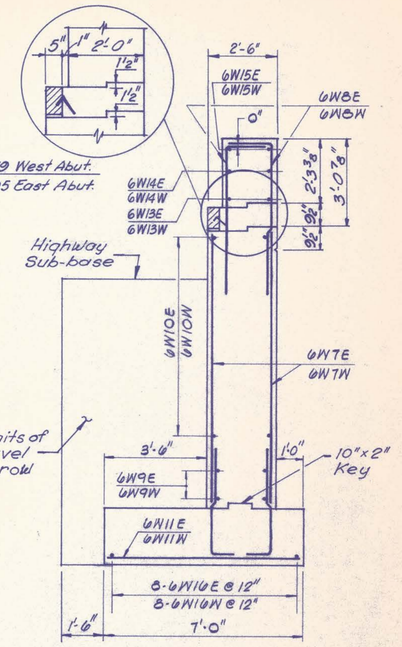


NOTE: West Abutment Shown
East Abutment Similar

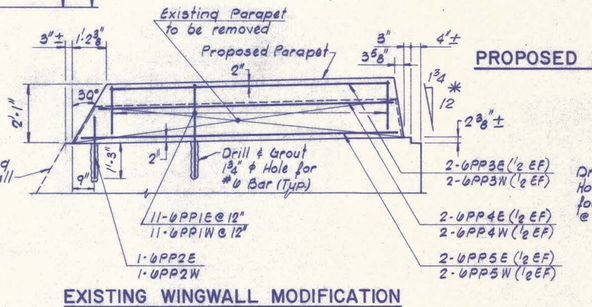
PLAN
3/8"=1'-0"



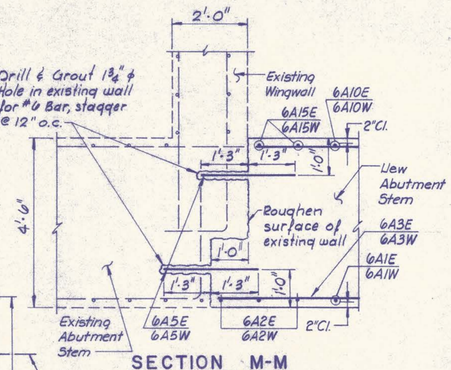
PROPOSED WINGWALL ELEVATION
3/8"=1'-0"



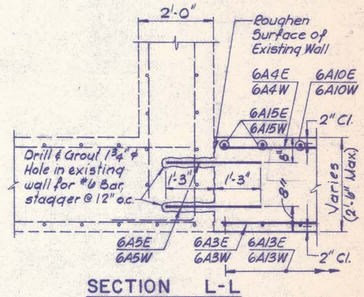
SECTION B-B
3/8"=1'-0"



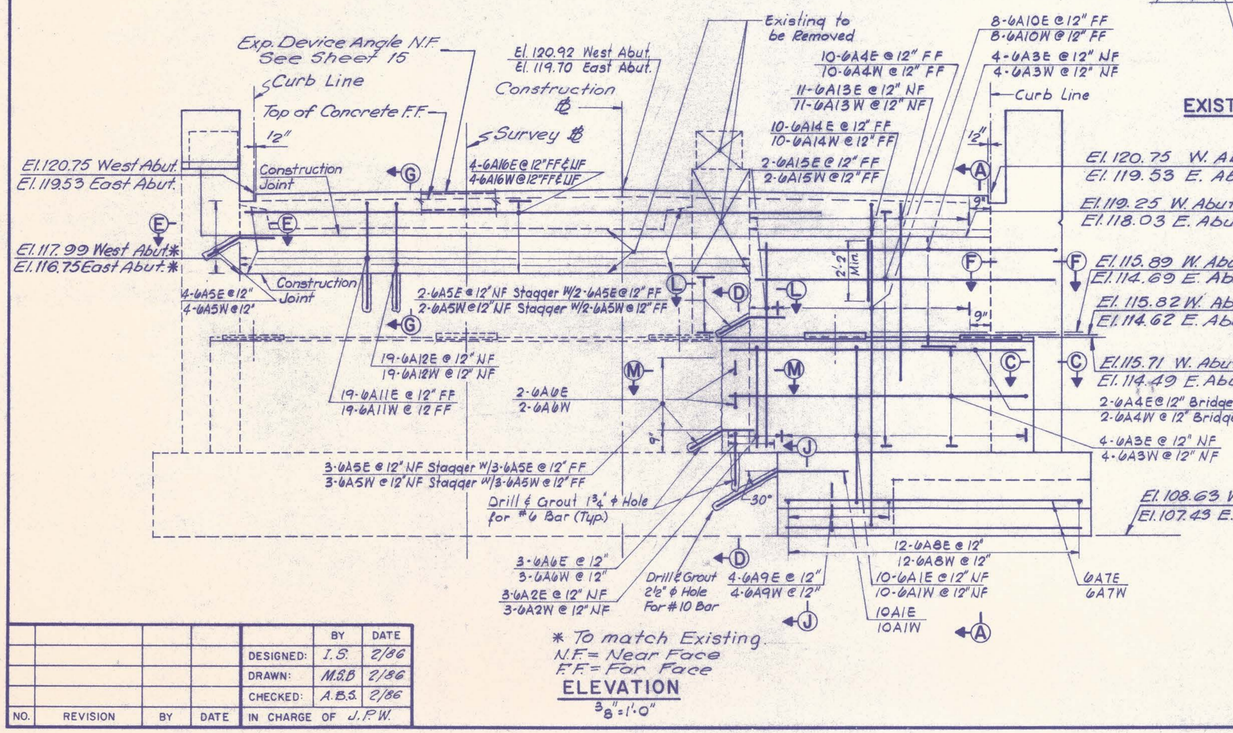
EXISTING WINGWALL MODIFICATION
3/8"=1'-0"



SECTION M-M
½"=1'-0"

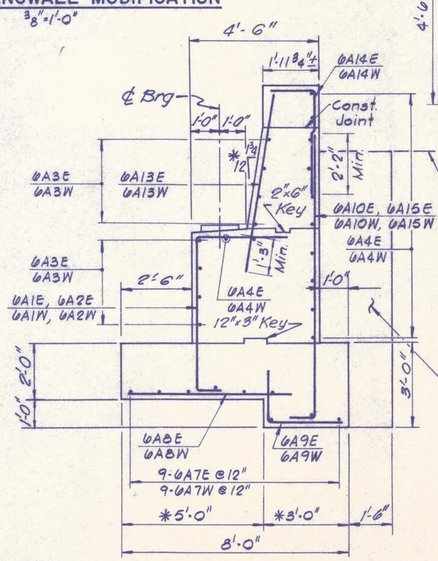


SECTION L-L
½"=1'-0"



* To match Existing.
N.F. = Near Face
F.F. = For Face

ELEVATION
3/8"=1'-0"



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

NOTES:

1. For Sections C-C, D-D, E-E, F-F, G-G, H-H & J-J, See Sheet 11.
2. For Reinforcing Bar List, See Sheet 17.

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I.S.	2/86
DRAWN:	M.S.B	2/86
CHECKED:	A.B.S.	2/86
IN CHARGE OF J.P.W.		

MAINE TURNPIKE AUTHORITY

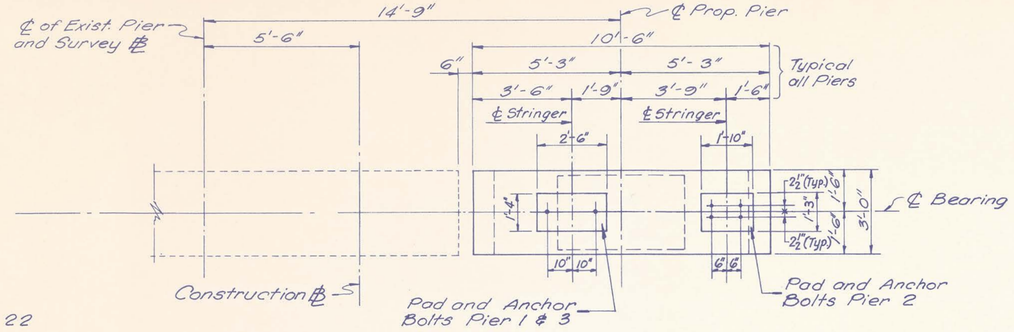
MAINE TURNPIKE

BENNETT ROAD BRIDGE REPLACEMENT
ABUTMENTS AND WINGWALLS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

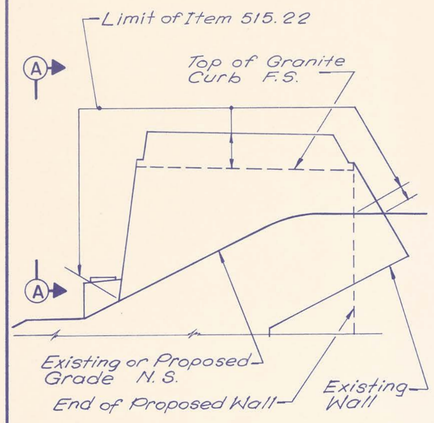
SCALE: AS NOTED

SHEET NO. 10 OF 23

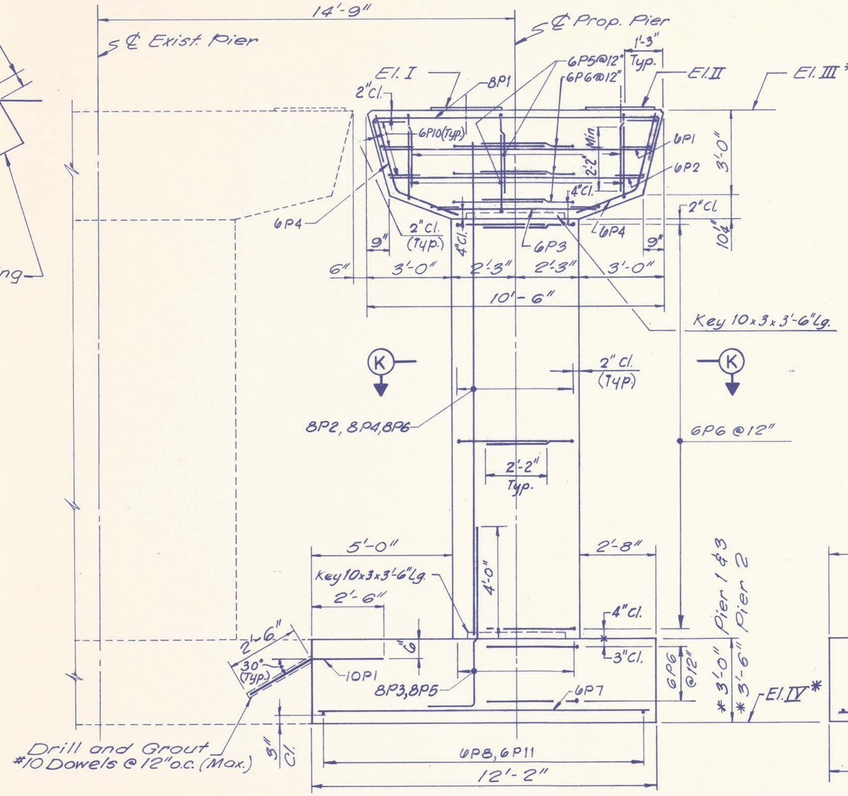


PLAN– PIER CAP

3/8" = 1'-0"

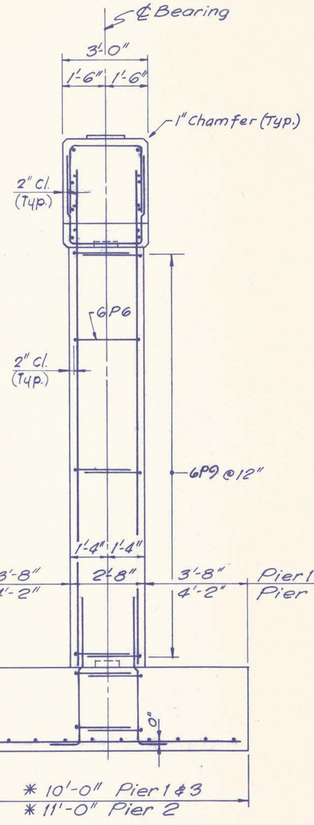


WINGWALL ELEVATION



ELEVATION

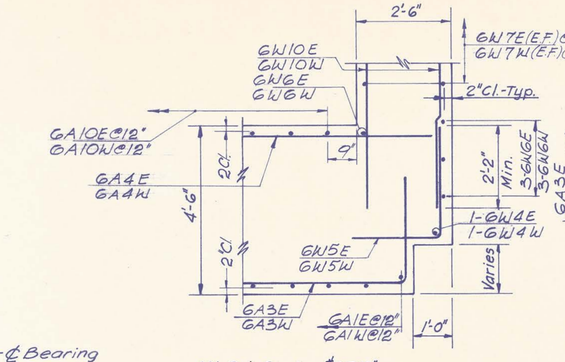
3/8" = 1'-0"



END ELEVATION

3/8" = 1'-0"

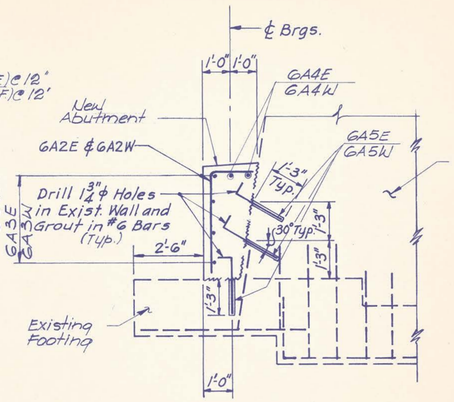
* To Match Existing.



All Reinforcing #6@12"

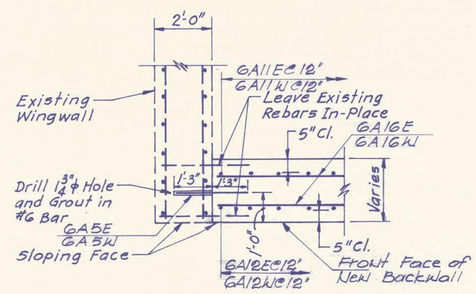
SECTION C-C

2" = 1'-0"



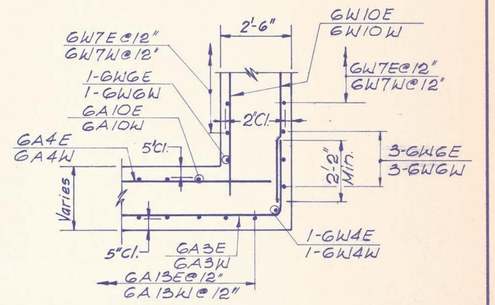
SECTION D-D

3/8" = 1'-0"



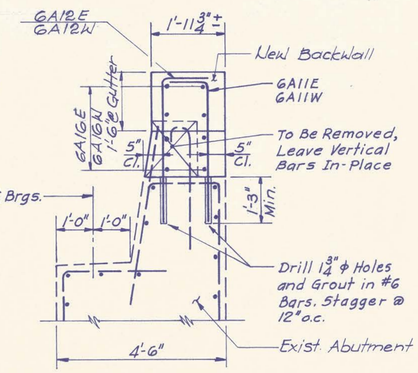
SECTION E-E

3/8" = 1'-0"



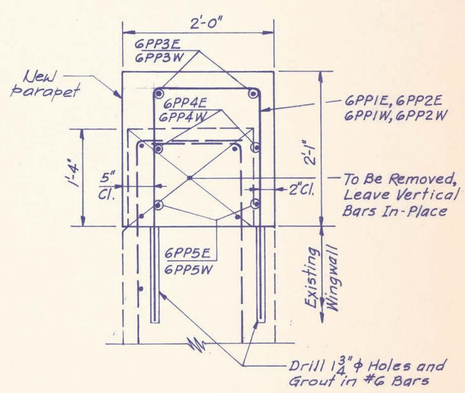
SECTION F-F

3/8" = 1'-0"



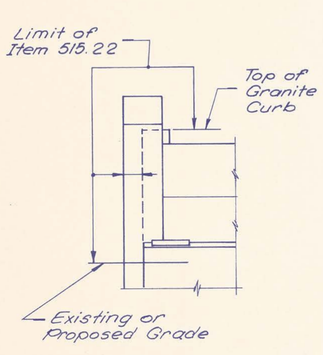
SECTION G-G

1" = 1'-0"



SECTION H-H

1" = 1'-0"

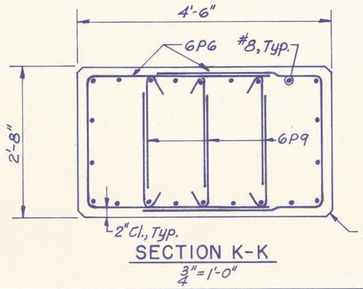


SECTION A-A

PAY LIMITS – ITEM 515.22

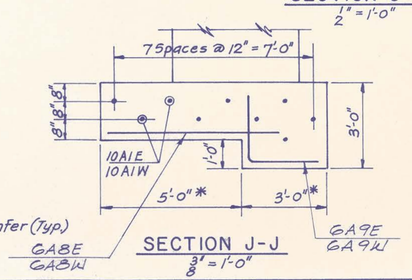
1/4" = 1'-0"

PIER ELEVATIONS				
PIER	I	II	III*	IV*
1	116.36	116.29	116.18	92.43
2	116.36	116.29	116.16	94.43
3	115.71	115.64	115.51	92.43



SECTION K-K

3/4" = 1'-0"



SECTION J-J

3/8" = 1'-0"

NOTES

1. Sections C-C, D-D, E-E, F-F, G-G, H-H and J-J, taken on Sh. 10.
2. For Reinforcing Schedule See Sheet 17.

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I.S.	1/86
DRAWN:	M.S.B.	1/86
CHECKED:	A.B.S.	3/86
IN CHARGE OF J.P.W.		

MAINE TURNPIKE AUTHORITY

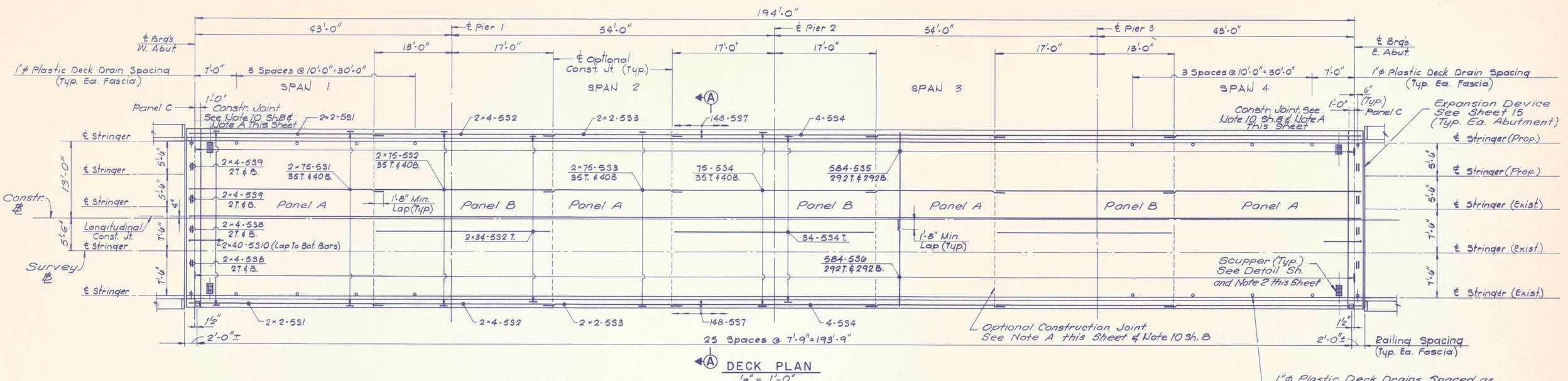
MAINE TURNPIKE

BENNETT ROAD BRIDGE REPLACEMENT PIER AND ABUTMENT DETAILS

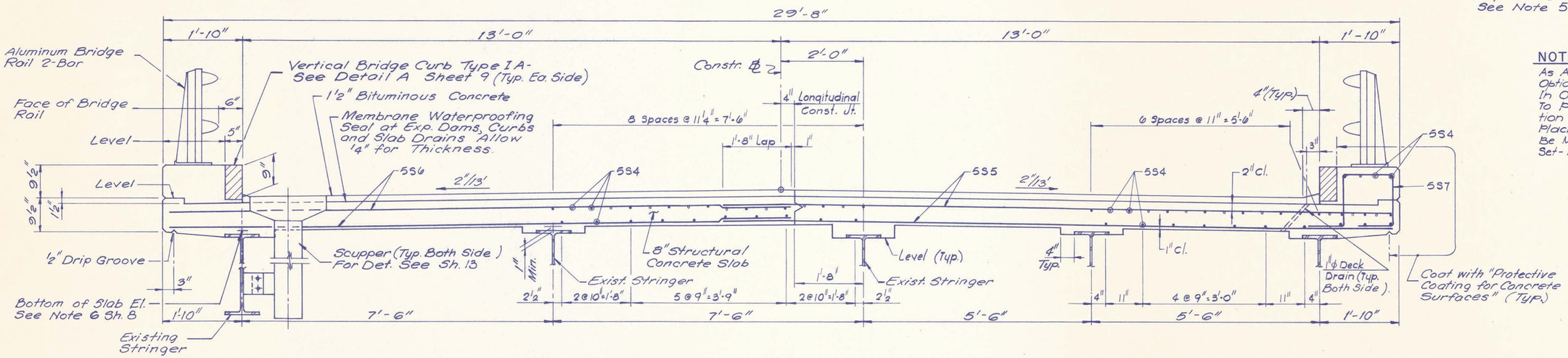
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

SCALE: AS NOTED

SHEET NO. 11 OF 23



A DECK PLAN
1/8" = 1'-0"



SECTION A-A
¾" = 1'-0"

NOTE A

As An Alternate And At The Contractors Option, The Deck Concrete May Be Placed In One Continuous Operation From Panel C To Panel C Thus Eliminating Slab Construction Joints At The Piers. Continuous Placing Of Concrete In The Deck Shall Be Made With The Use Of An Acceptable Set-Retarder.

NOTES:

1. For General Notes and Quantities, See Sheet 9.
2. Locate Scupper in Field to Discharge into Existing Trough. Cut Steel in Field at Scuppers as Required.
3. Length of Last Section of Curb to be Field Checked.
4. Place Longitudinal Steel as Shown in Section A-A.
5. For 1" V-Groove Details, See Sheet 9.
6. For Railing Details, See Sheet 9 and 16.

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I.S.	1/86
DRAWN:	M.S.B.	1/86
CHECKED:	S.F.L.	2/86
IN CHARGE OF J.P.W.		

MAINE TURNPIKE AUTHORITY

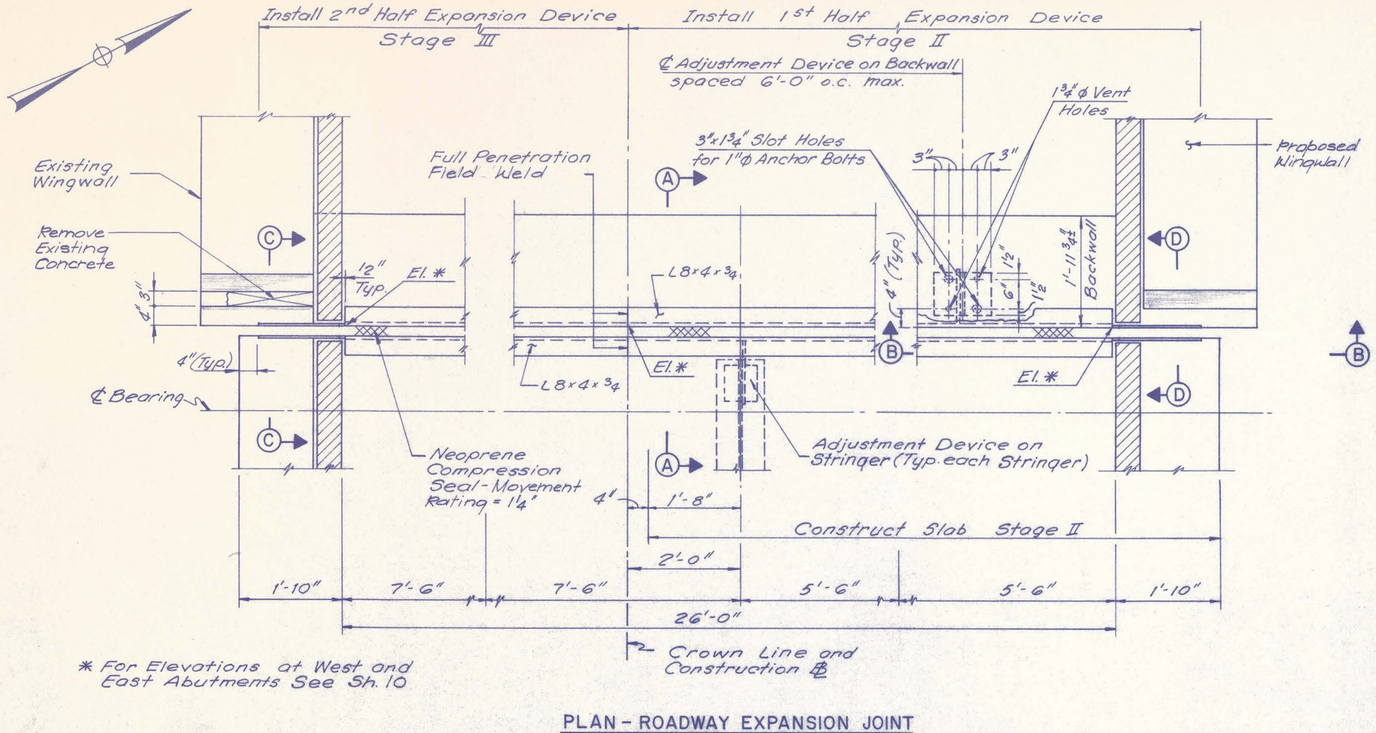
MAINE TURNPIKE

BENNETT ROAD BRIDGE REPLACEMENT.
DECK REINFORCEMENT

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

SCALE: AS NOTED

SHEET NO. 14 OF 23

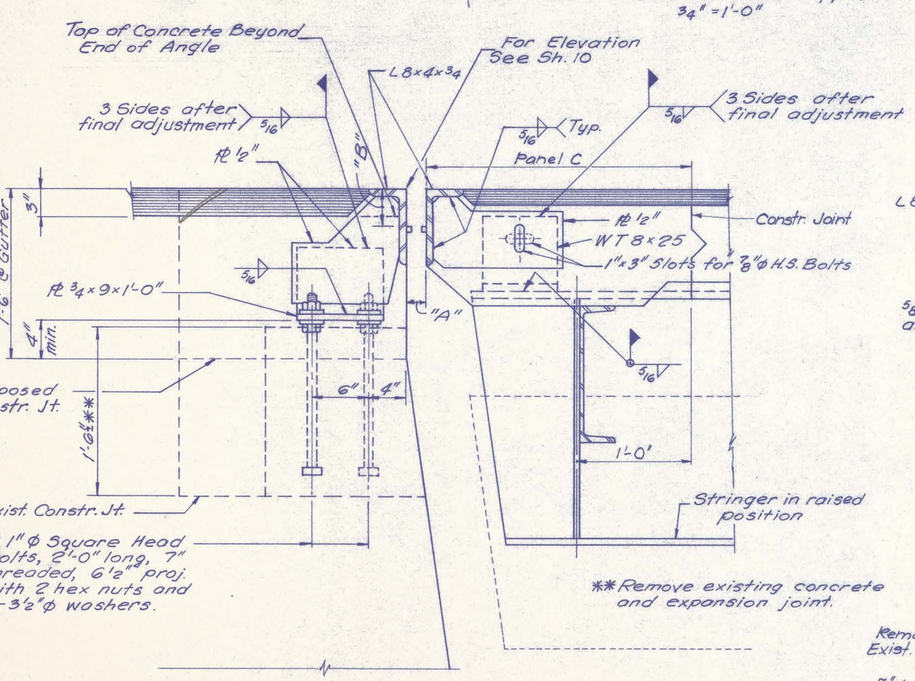


* For Elevations at West and East Abutments See Sh. 10

PLAN - ROADWAY EXPANSION JOINT

(West Abutment. East Abutment - opposite hand)

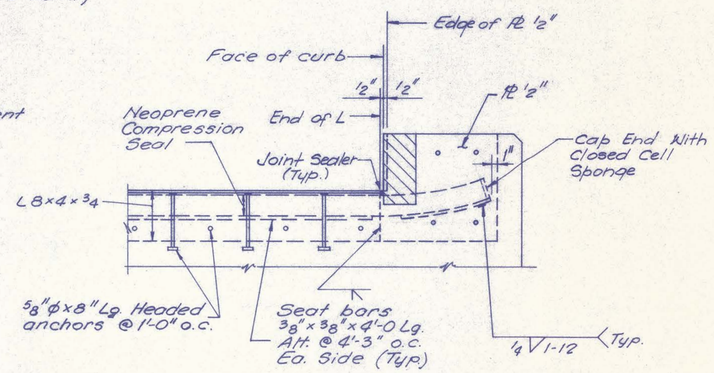
¾" = 1'-0"



** Remove existing concrete and expansion joint.

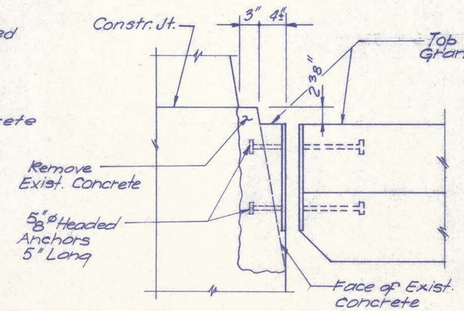
SECTION A-A

½" = 1'-0"



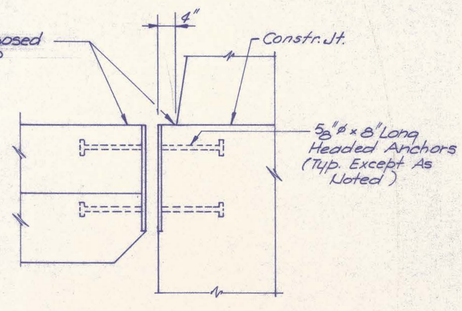
SECTION B-B

1" = 1'-0"



SECTION C-C

1" = 1'-0"



SECTION D-D

1" = 1'-0"

NOTES:

1. Shop Drawings Shall Be Submitted For Expansion Device.
2. Expansion Device Assembly Shall Be Secured To The Stringer And/Or Anchor Bolts When The Ambient Temperature Is Between 40°F And 80°F. Setting Schedule For Dim. A Shall Be Supplied By The Manufacturer Of The Seal.
3. Neoprene Compression Seal To Be Installed In One Piece.
4. Dimension "B" Shall Be Set Equal To Compressed Seal Height Plus ⅜".
5. Uncompressed Seal Height Shall Be Equal To Or Greater Than Uncompressed Width Of The Seal.
6. Roadway Surface Of The Armored Devices To Be Painted In The Field.
7. The Fabricators Attention Is Directed To The Necessity Of Fabricating And Installing The Device In Two Sections.
8. Welds In Contact With Compression Seal To Be Ground Smooth.
9. Provide 1"ø Vent Holes In Horizontal Leg Of 8x4 Angle At 3'-0" o.c. Max.

NO.	REVISION	BY	DATE

	BY	DATE
DESIGNED:	I.S.	1/86
DRAWN:	M.S.B.	2/86
CHECKED:	I.S.	3/86
IN CHARGE OF J.P.W.		

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

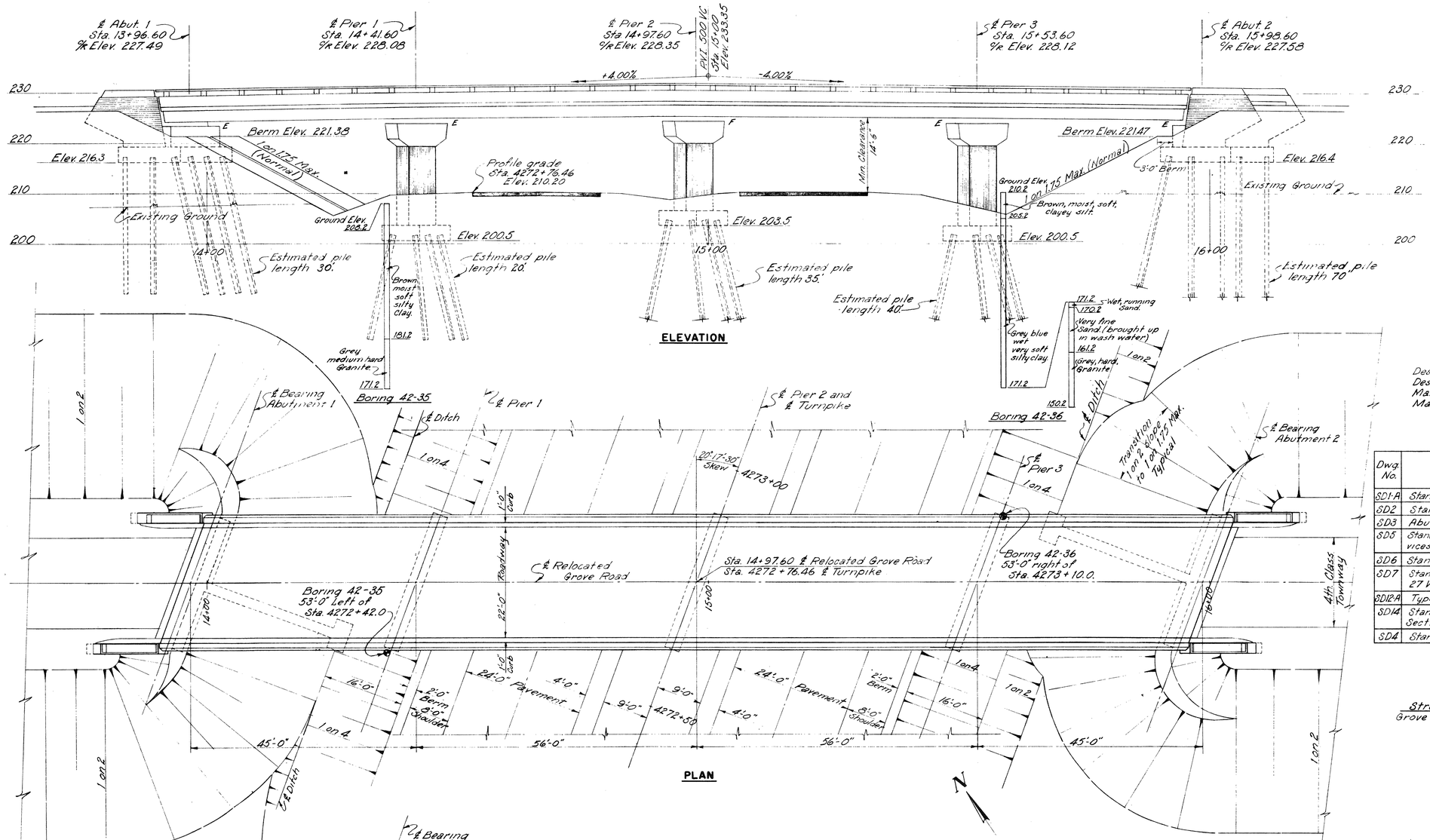
BENNETT ROAD BRIDGE REPLACEMENT

EXPANSION DEVICE DETAILS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
BOSTON

SCALE: AS NOTED

SHEET NO. 15 OF 23

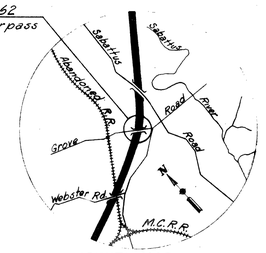


GENERAL NOTES

Design Specifications: AASHO (1953) with minor modifications.
Design Live Load: H 15-44.
Maximum Pile Load on Abutments is 34 Tons.
Maximum Pile Load on Piers is 57 Tons.

REFERENCES

Dwg. No.	Title	Sub-structure	Superstructure: Steel Fabricator	Superstructure: Steel Erector	Superstructure: Floor Contractor
SD1-A	Standard Abutment Details	✓	✓	✓	✓
SD2	Standard Pier Details	✓	✓	✓	
SD3	Abutment Drainage Details	✓			
SD5	Standard Handrail, Bearing Devices, and Miscellaneous Details	✓	✓	✓	✓
SD6	Standard Diaphragm Details		✓	✓	✓
SD7	Standard Type "A" Splices for 27 WF Beams.		✓	✓	
SD12A	Type "Z" Expansion joint.	✓	✓	✓	✓
SD14	Standard Bridge Floor Cross-Sections 20'-0" & 22'-0" Roadways	✓	✓	✓	✓
SD4	Standard Pile Details.	✓			

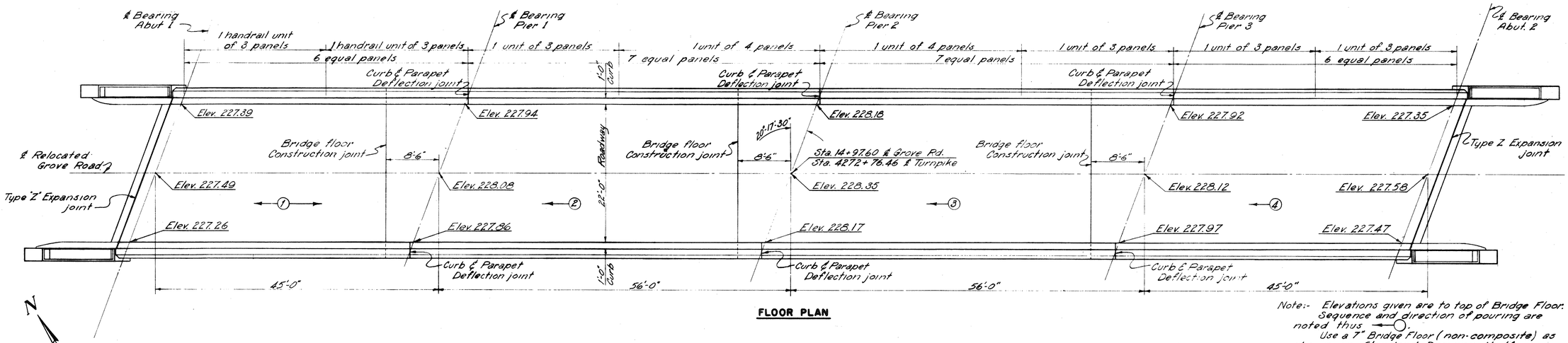


VICINITY MAP
Scale 1" = 1 mile

DRAWING 62.01.03	BY	DATE				
MADE	DHL	1-28-56				
TRACED						
CHECKED	DDS	2-24-56	1	As-Built	HSH	2-7-56
IN CHARGE OF	TDSK		No.	REVISION	BY	DATE

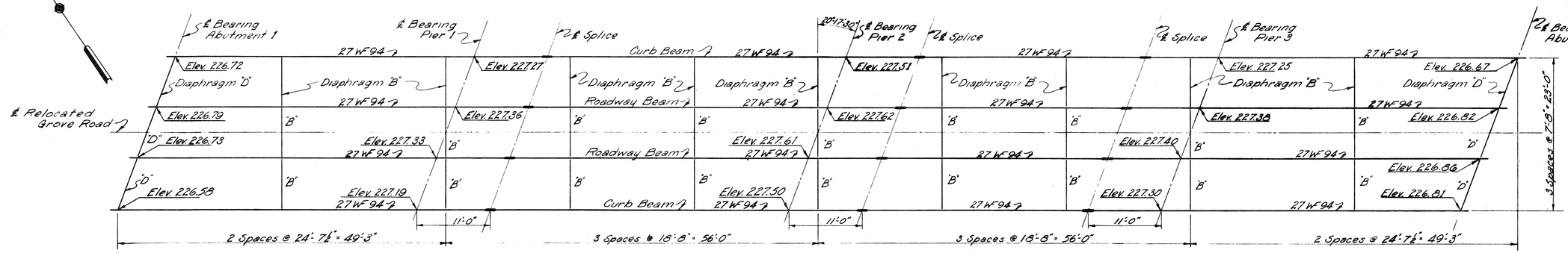
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA
STRUCTURE NO. 62 TURNPIKE UNDER
GROVE ROAD
STA. 4272+76.46
GENERAL PLAN AND ELEVATION
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY
SCALE: 3/32" = 1'-0"
CONTRACT NO.
SHEET NO. 287 OF 382

62.03.03



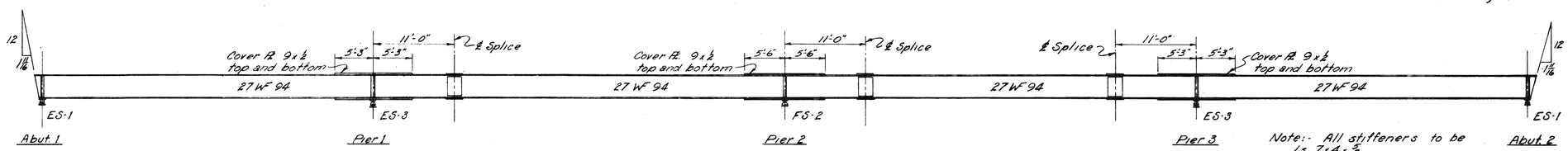
FLOOR PLAN

Note:- Elevations given are to top of Bridge Floor. Sequence and direction of pouring are noted thus ←○
Use a 7" Bridge Floor (non-composite) as shown on Standard Drawing No 14.



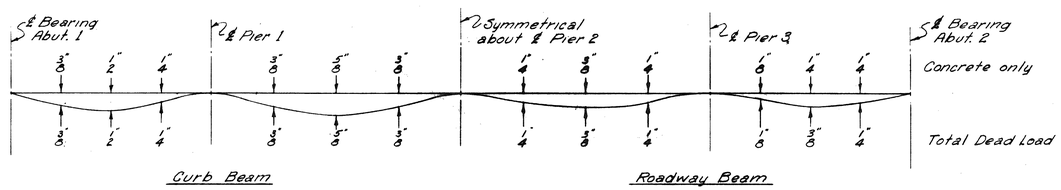
FRAMING PLAN

Note: Elevations given are to top of beam flanges.



TYPICAL BEAM ELEVATION

Note:- All stiffeners to be Ls. 7x4x⅜.
End slopes of beams are true with respect to the axis of the beam.



DEAD LOAD DEFLECTION DIAGRAM

Deflections shown at ¼ points of spans
No scale

DRAWING 62.03.03

	BY	DATE	No.	REVISION	BY	DATE
MADE	DWL	1-22-54				
TRACED						
CHECKED	DDG	2-20-54	1	As-Built	HBW	3-7-56
IN CHARGE OF	IDSK					

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA
STRUCTURE NO. 62 TURNPIKE UNDER
GROVE ROAD
STA. 4272+76.46
SUPERSTRUCTURE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK · KANSAS CITY

SCALE: ⅛"=1'-0"
CONTRACT NO. _____
SHEET NO. 282 OF 382

SPECIFICATIONS

DESIGN

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 1992 AND INTERIM SPECIFICATIONS 1994.

CONTRACT

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, REVISION OF OCTOBER 1990.

DESIGN LOADING

LIVE LOAD

H20, 500,000 CYCLES

DESIGN METHOD

LOAD FACTOR (SUPERSTRUCTURE ONLY)

MATERIALS

CONCRETE

SUPERSTRUCTURE SLAB CONCRETE SHALL BE CLASS AAA, f'c = 4,500 P.S.I.

ALL OTHER CONCRETE SHALL BE CLASS A, f'c = 4000 P.S.I.

REINFORCING STEEL

ASTM 615 GRADE 60, (ALL BARS EPOXY-COATED)

STRUCTURAL STEEL

EXISTING STRUCTURAL STEEL IS ASTM A7, GRADE 33

GENERAL NOTES

1. PLANS OF EXISTING BRIDGES ARE AVAILABLE AT THE AUTHORITY'S OFFICE AT 430 RIVERSIDE ST., PORTLAND, MAINE.
2. SHIELDING REQUIRED DURING CONCRETE REMOVAL SHALL NOT PROJECT BELOW THE BOTTOM FLANGES OF STRINGERS. THE ESTIMATED QUANTITY OF SHIELDING IS THE MINIMUM REQUIRED AND IS BASED ON THE FOLLOWING LIMITS:
   A. NORMAL TO ℄ BRIDGE: AS SHOWN ON THE PLANS
   B. PARALLEL TO ℄ BRIDGE: ABUTMENT TO ABUTMENT
3. THE AUTHORITY'S PERSONNEL WILL PROFILE THE TOPS OF ALL STRINGERS BEFORE THE FORM WORK IS STARTED AND SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS.
4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.
5. ALL STEEL REINFORCING SHALL BE EPOXY COATED. FOR STEEL REINFORCING SCHEDULE, SEE SHEET GR-17.
6. THE CONCRETE DECK SURFACE SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
7. CHAMFER ALL EXPOSED CONCRETE EDGES ¾", UNLESS OTHERWISE NOTED.
8. THE BEARING DIMENSIONS SHOWN ON THE BEARING DETAIL SHEET AND THE CORRESPONDING BRIDGE SEAT ELEVATIONS SHOWN ON THE ABUTMENT AND PIER SHEETS ARE BASED ON POT BEARINGS MANUFACTURED BY SAI/SPENSER OF TERRYVILLE CT. IF THE CONTRACTOR SELECTS A BEARING FROM ANOTHER APPROVED BEARING MANUFACTURER, AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS.

ITEM	DESCRIPTION	UNIT	QUANTITIES
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	C.Y.	25
202.122	REMOVING EXISTING SUPERSTRUCTURE CONCRETE	S.Y.	615
203.20	COMMON EXCAVATION	C.Y.	15
203.25	GRANULAR BORROW	C.Y.	15
403.13	DENSE GRADED BITUMINOUS PAVEMENT FOR BRIDGES	TON	55
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	C.Y.	30
502.231	STRUCTURAL CONCRETE PIERS-GROVE ROAD	C.Y.	15
502.262	STRUCTURAL CONCRETE ROADWAY AND PARAPETS ON STEEL BRIDGES-GROVE ROAD	L.S.	1
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB.	54,000
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB.	54,000
504.721	JACKING EXISTING SUPERSTRUCTURE-GROVE ROAD	L.S.	1
505.092	STUD WELDED SHEAR CONNECTORS-GROVE ROAD	L.S.	1
507.092	ALUMINUM BRIDGE RAILING, 2 BAR	L.F.	414
508.132	MEMBRANE WATERPROOFING-GROVE ROAD	L.S.	1
514.06	CURING BOX FOR CONCRETE CYLINDERS	EA.	1
515.20	PROTECTIVE COATING FOR CONCRETE SURFACE	S.Y.	380
515.201	PIGMENTED CONCRETE PROTECTIVE COATING	S.Y.	460
520.21	EXPANSION DEVICE - GLAND SEAL	EA.	2
523.103	POT BEARINGS	EA.	20
524.40	PROTECTIVE SHIELD	S.Y.	740
606.172	TEMPORARY STEEL GUARDRAIL	L.F.	230
609.15	SLOPED CURB TYPE 1	L.F.	466

INDEX OF DRAWINGS

STANDARD DETAIL SHEETS

SHEET NO.	TITLE
BD 201-89	2-BAR CONCRETE END POST

No.	Revision	By	Date
			By Date
			Designed SHR 2/95
			Drawn LMR 2/95
			Checked SHR 2/95
			In Charge Of. RAL

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
SPECIFICATIONS, GENERAL NOTES AND QUANTITIES

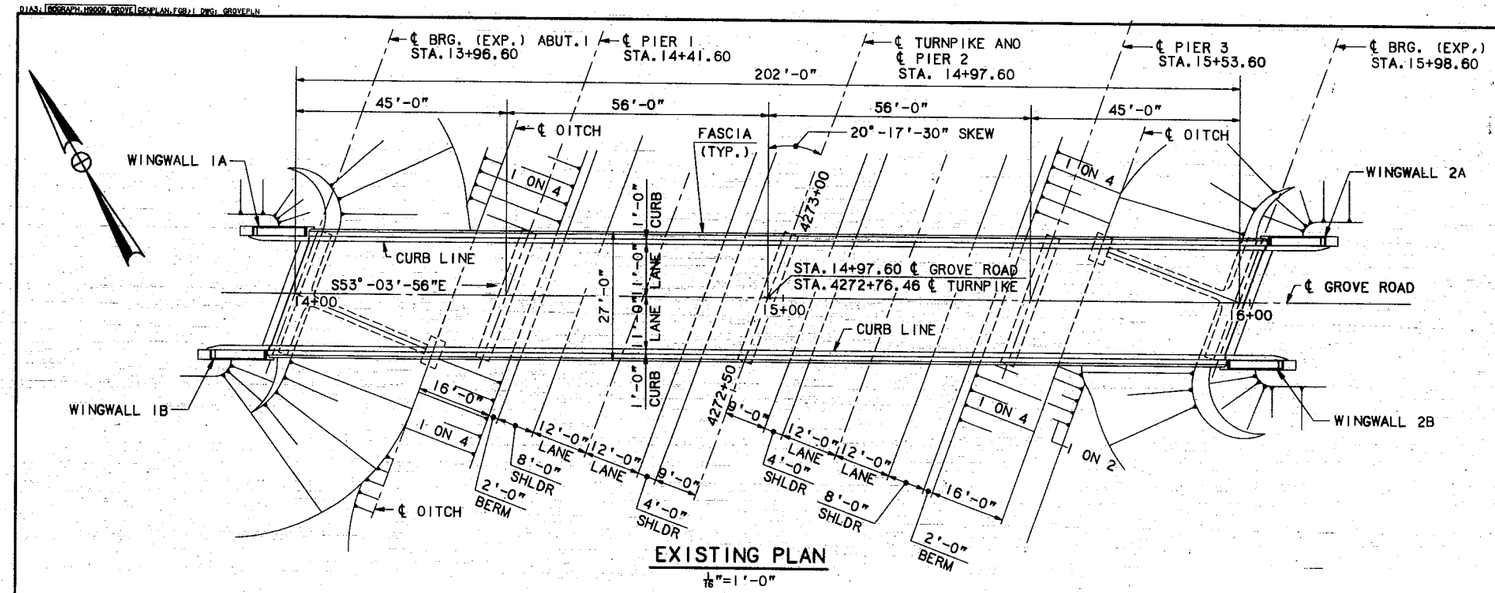
HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

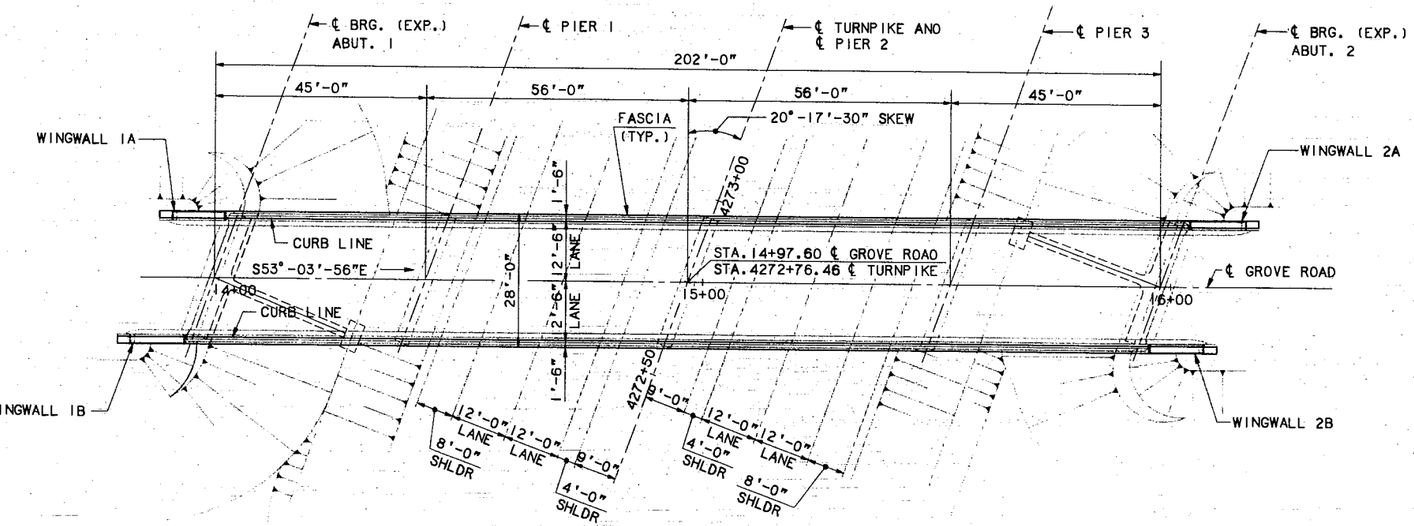
Sheet No. GR-1
48 of 65

(MAINE 11"X)

M:\ 899000\ CA\ DWGS\ GR-1 02/16/95 09:04



EXISTING PLAN
1/16"=1'-0"



PROPOSED PLAN
1/16"=10'-0"

PROPOSED PROFILE
HORIZ. 1" = 50'
VERT. 1" = 5'

ELEVATION
1/16"=1'-0"

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
GENERAL PLAN AND ELEVATION

HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:

	By:	Date:
Designed	GPM	1/95
Drawn	LS	1/95
Checked	HNL	1/95
In charge of:	RAL	

Contract 95.11

Sheet No. GR-2
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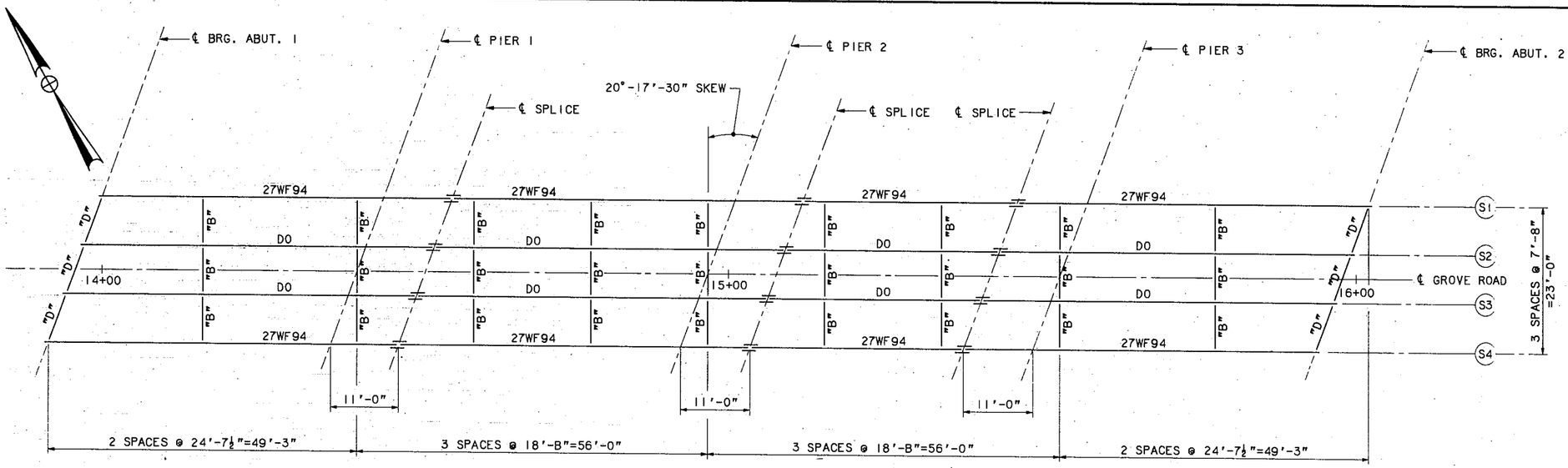
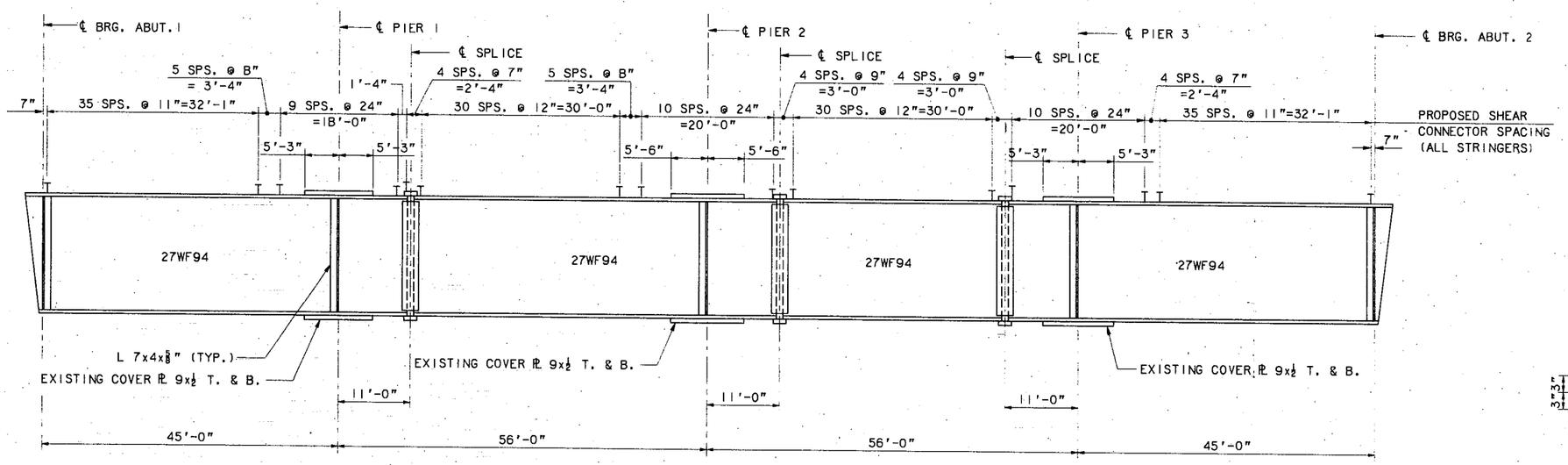


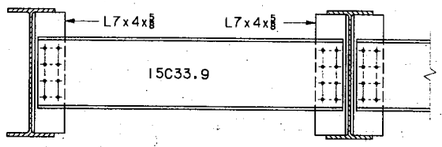
FRAMING PLAN (EXISTING)
1" = 10'-0"



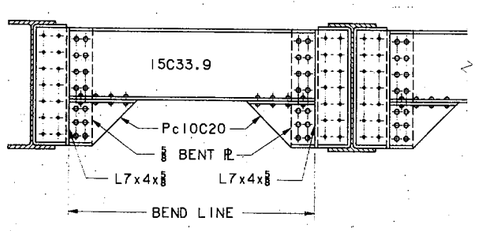
STRINGER ELEVATION (EXISTING)
NO SCALE

NOTES

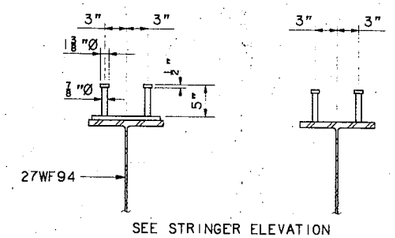
1. EXISTING DIAPHRAGMS ARE CONNECTED TO THE STRINGERS WITH THE USE OF BOLTS AND/OR RIVETS. ALL BOLTS AND RIVETS WHICH ARE REMOVED TO JACK THE SUPERSTRUCTURE SHALL BE REPLACED WITH NEW ¾"Ø A-325 BOLTS, H.S. NUTS AND WASHERS, WHICH SHALL BE INCIDENTAL TO ITEM 504.721.
2. PROPOSED SHEAR CONNECTORS ARE SHOWN ON THE EXISTING STRINGER ELEVATIONS. SHEAR CONNECTORS ARE PAID FOR UNDER ITEM 505.092.



DIAPHRAGM TYPE B (EXISTING)
¾" = 1'-0"

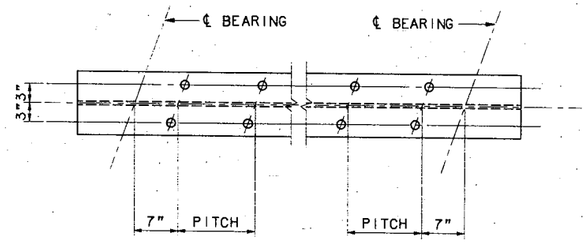


DIAPHRAGM TYPE D (EXISTING)
¾" = 1'-0"



SEE STRINGER ELEVATION FOR SHEAR CONNECTOR SPACING

PROPOSED SHEAR CONNECTOR DETAIL
1" = 1'-0"



SHEAR CONNECTOR LAYOUT
1" = 1'-0"

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
FRAMING PLAN AND STRINGER ELEVATION

HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:
		Designed	GPM 1/95
		Drawn	LS 1/95
		Checked	HNL 1/95
		In charge of:	RAL

Contract 95.11

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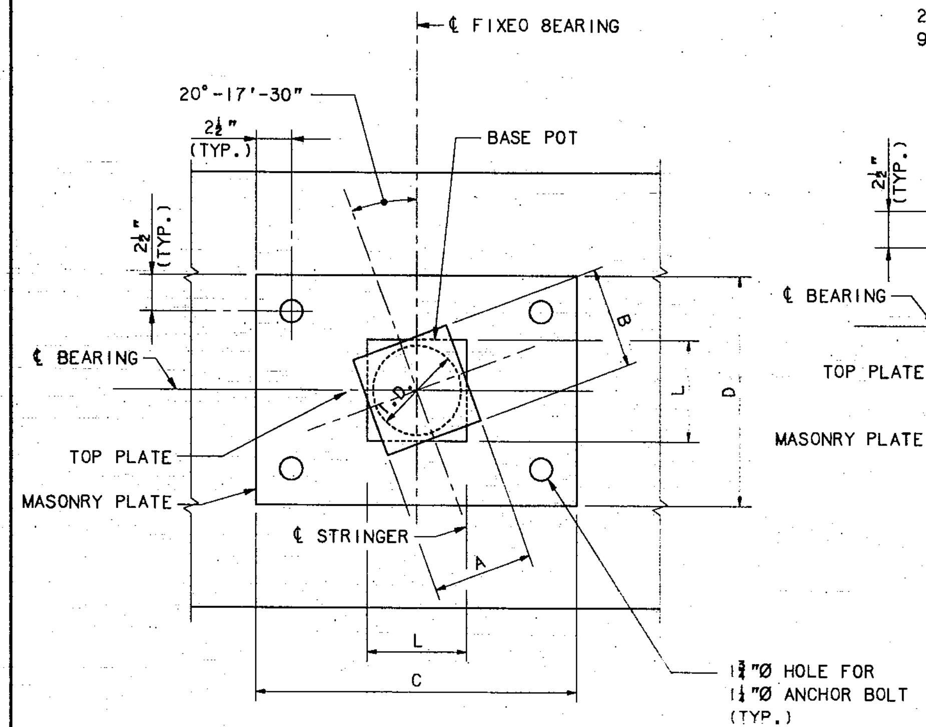
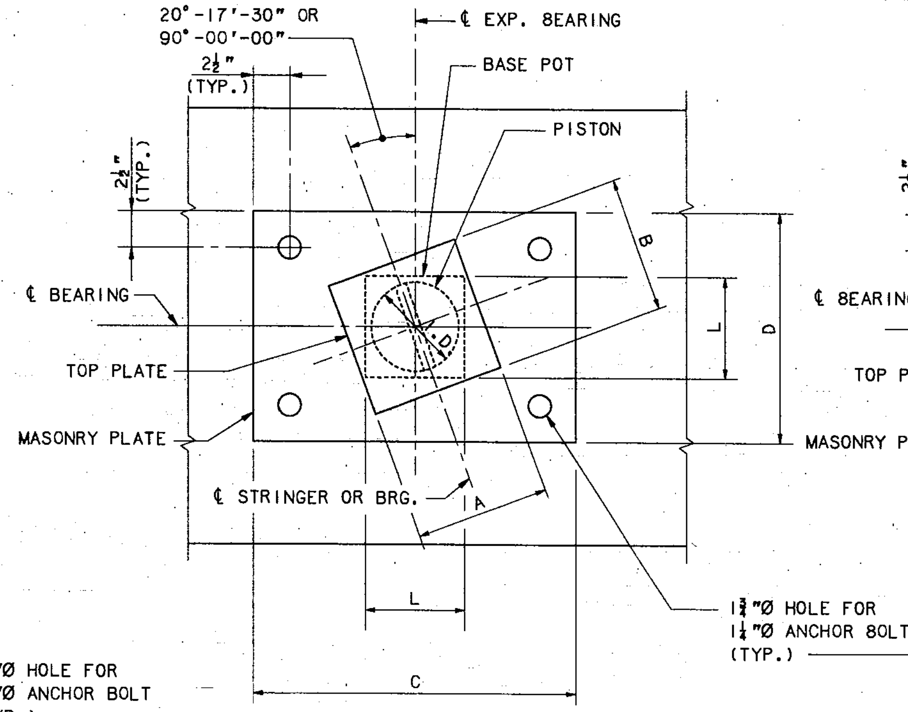
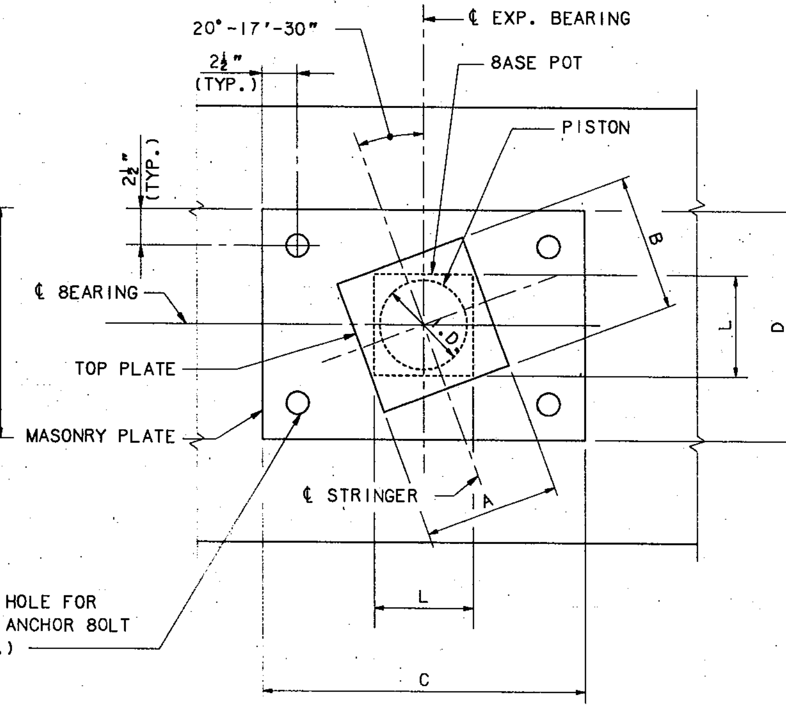


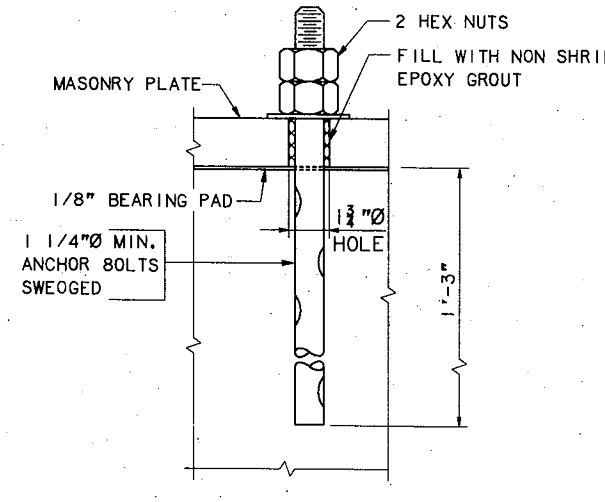
PLAN



PLAN



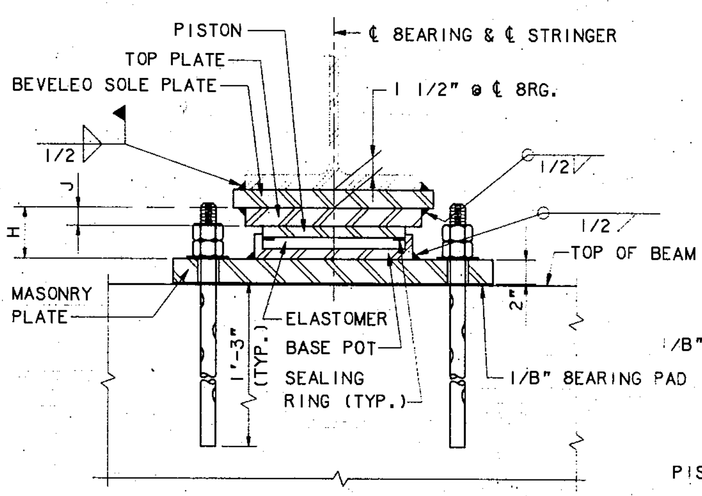
PLAN



ANCHOR BOLT DETAIL
3" = 1'-0"

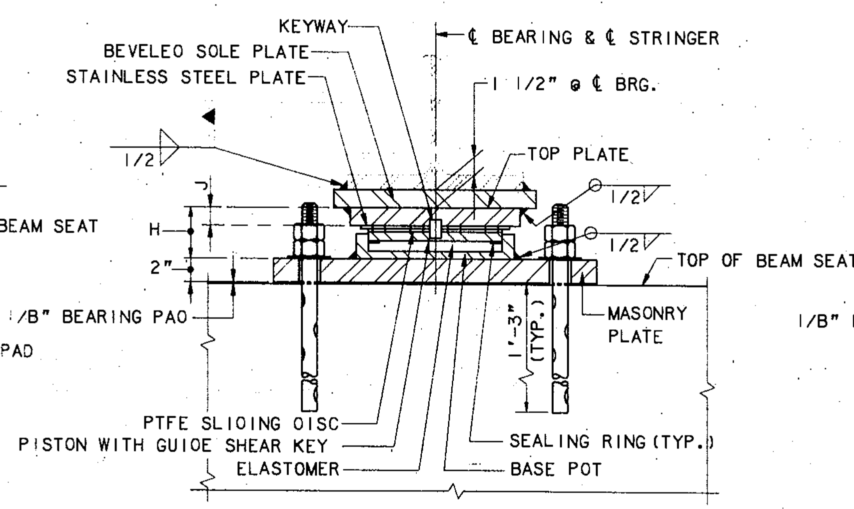
BEARING DEVICE NOTES

1. THE BEARING DIMENSIONS SHOWN ON THIS SHEET AND THE CORRESPONDING BRIDGE SEAT ELEVATIONS ARE BASED ON GUIDED EXPANSION & FIXED BEARINGS MANUFACTURED BY SAI/SPENCER OF TERRYVILLE CT. IF THE CONTRACTOR SELECTS A BEARING FROM ANOTHER APPROVED BEARING MANUFACTURER, AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS.
2. ALL DIMENSIONS ARE IN INCHES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
4. ALL STEEL FOR THE BEARING DEVICES ASSEMBLIES SHALL BE ASTM A709, GRADE 36, UNLESS NOTED OTHERWISE.
5. MASONRY BASE PLATES SHALL BE PLACED ON 1/8" PREFORMED FABRIC PAD.
6. TOP PLATES AND PISTONS SHALL HAVE MACHINED SURFACES TO FINISH ANSI 125.
7. STAINLESS STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 167, TYPE 317 OR ASTM A 240, TYPE 317. STAINLESS STEEL IN CONTACT WITH PTFE SHEET SHALL BE POLISHED TO A BRIGHT MIRROR FINISH (NO. 8), LESS THAN 5 MICRO-INCHES ROOT MEAN SQUARE.
8. THE 1¼"Ø ANCHOR BOLTS AND NUTS SHALL BE A307. WASHERS SHALL CONFORM TO REQUIREMENTS OF AASHTO M293 (ASTM F436I). WASHERS AND NUTS SHALL BE GALVANIZED.
9. PTFE INDICATES POLYTETRAFLUOROETHYLENE.
10. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.



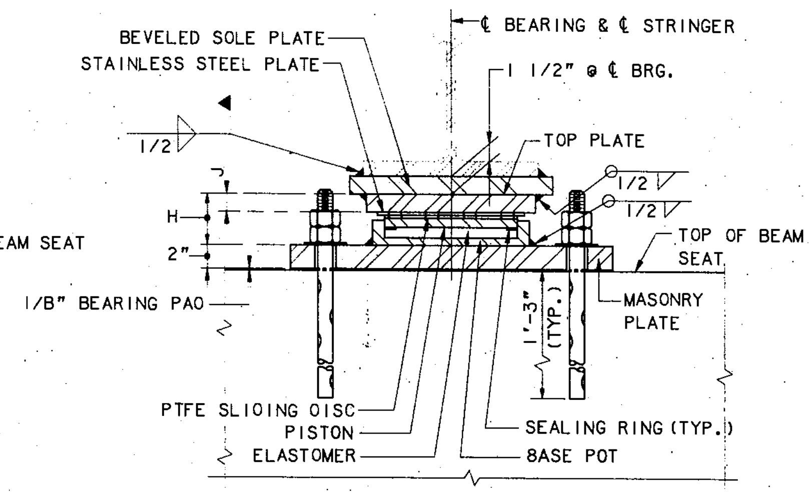
ELEVATION

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



ELEVATION

GUIDED EXPANSION BEARING
1 1/2" = 1'-0"

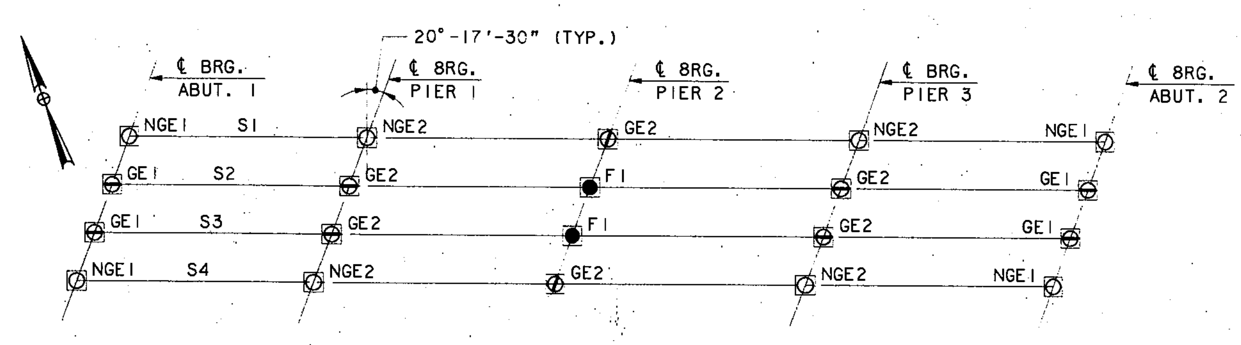


ELEVATION

NON-GUIDED EXPANSION BEARING
1 1/2" = 1'-0"

MAXIMUM LOADS ON EACH BEARING									
LOCATION	STRINGER	O.L. (KIPS)	L.L (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS)		MOVEMENT (IN)		BEARING
					LONG.	TRANS.	LONG.	TRANS.	TYPE
ABUTMENT 1	S1, S4	21	33	S4.	–	–	5/8	–	NGE1
	S2, S3	21	37	58	–	5	S/8	–	GE1
PIER 1	S1, S4	70	S3	123	–	–	3/B	–	NGE2
	S2, S3	70	58	12B	–	10	3/B	–	GE2
PIER 2	S1, S4	70	S4	124	4	–	–	–	GE2
	S2, S3	70	SB	128	4	11	–	–	F1
PIER 3	S1, S4	70	53	123	–	–	3/B	–	NGE2
	S2, S3	70	SB	12B	–	10	3/8	–	GE2
ABUTMENT 2	S1, S4	21	33	S4	–	–	5/B	–	NGE1
	S2, S3	21	37	SB	–	5	5/B	–	GE1

BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS						SOLE PLATE	MASONRY PLATE 2" THICK	
		I.D.	A	B	H	J	L		C	D
GE1	100	6.03	9.75	10.00	2.6S	0.7S	6.7S	14x14x1½	27	19
GE2	1S0	7.3B	11.2S	11.2S	2.63	0.75	B.3B	14x14x1½	27	17or19
F1	150	7.3B	8.3B	8.3B	2.S0	0.7S	8.3B	14x14x1½	27	17
NGE1	100	6.03	10.00	10.00	2.6S	0.7S	6.7S	14x14x1½	27	19
NGE2	150	7.38	11.2S	11.2S	2.63	0.7S	8.38	14x14x1½	27	19



POT BEARING ALIGNMENT PLAN
NO SCALE

LEGEND

- ● - FIXED
- ⊖ - GUIDED LONGITUDINAL EXP.
- ⦶ - GUIDED TRANSVERSE EXP.
- ○ - NON - GUIDED EXPANSION

No.	Revision	By:	Date:		By:	Date:
				Designed	GPM	1/95
				Drawn	LS	1/95
				Checked	HNL	1/95
				In charge of:	RAL	

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
POT BEARING DETAILS

HNTB
HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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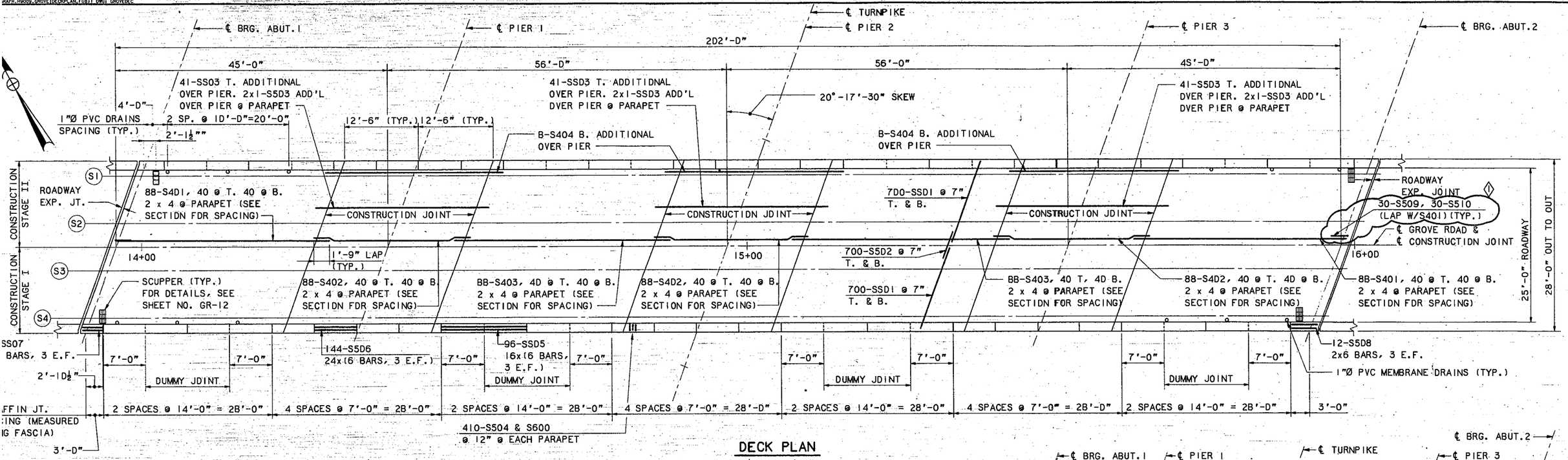
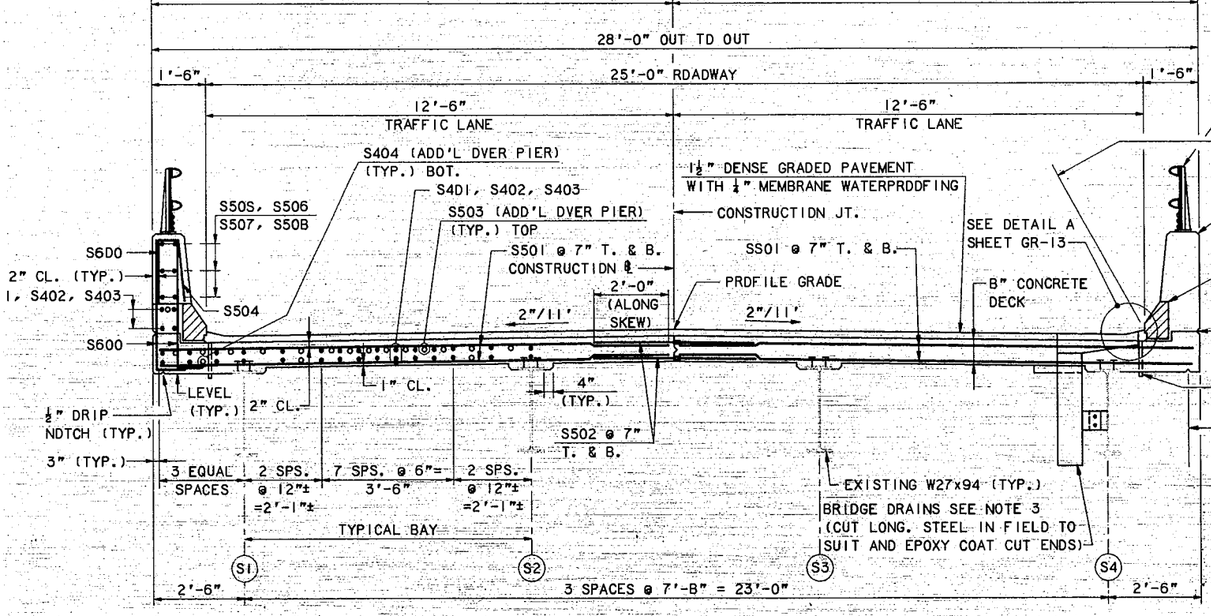
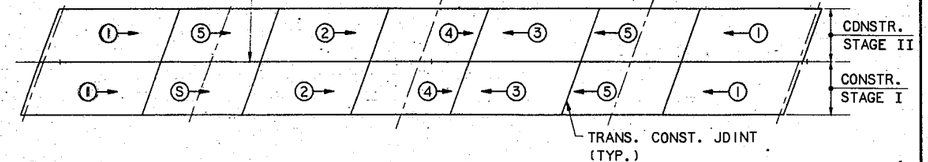


DECK PLAN
⅛" = 1'-0"



TYPICAL SECTION
(LOOKING UPSTATION)
½" = 1'-0"



DECK PLACEMENT SEQUENCE
1" = 20'

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE POURING SEQUENCE. POURS MAY BE MADE IN THE SAME DAY FDR 1, 2, 3 AND FOR POURS 4 AND 5. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN POURS 3 AND 4.
2. THE FORMWORK AND ITS SUPPORTS, OVER THE FULL WIDTH OF THE STRUCTURAL SLAB FDR STAGE I CONSTRUCTION, SHALL REMAIN IN PLACE UNTIL A MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT DF THE SLAB, AFTER WHICH, REMOVAL OF FORMWORK FOR SECTIONS MEETING THE REQUIREMENTS FDR FORM REMOVAL OF SECTION 502, STRUCTURAL CONCRETE, OF THE STANDARD SPECIFICATIONS, MAY PROCEED.

SUPERSTRUCTURE NOTES

1. ADJUST REINFORCING STEEL TO FIT AROUND THE DRAINS IN A MANNER APPRDVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS.
2. FOR STEEL REINFORCING SCHEDULE, SEE SHEET GR-17.
3. FOR SCUPPER AND DRAIN DETAILS SEE SHEET NO. GR-12.
4. FOR 2-BAR ALUMINUM BRIDGE RAILING DETAILS, SEE SHEET NO. GR-16.
5. FOR SLAB DETAILS, SEE SHEET NOS. GR-12 AND GR-13.
6. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. GR-14 GR-15.

No.	Revision	By:	Date:		By:	Date:
				Designed	GPM	1/95
				Drawn	LS	1/95
◊	DECK REINF.	GPM	4/14/95	Checked	HNL	1/95
				In charge of:	RAL	

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
DECK PLAN AND TYPICAL SECTION

HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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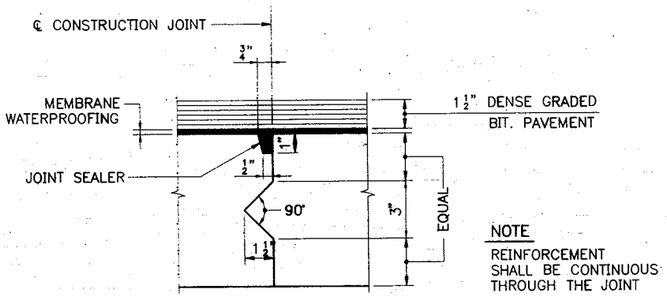
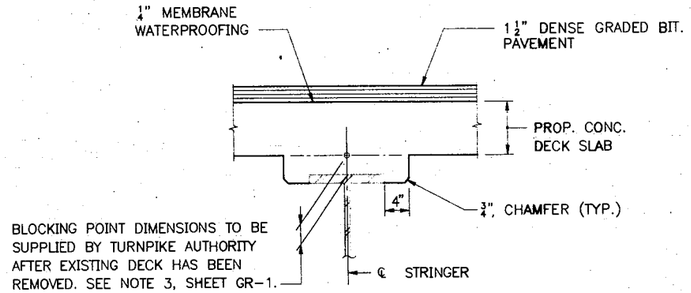
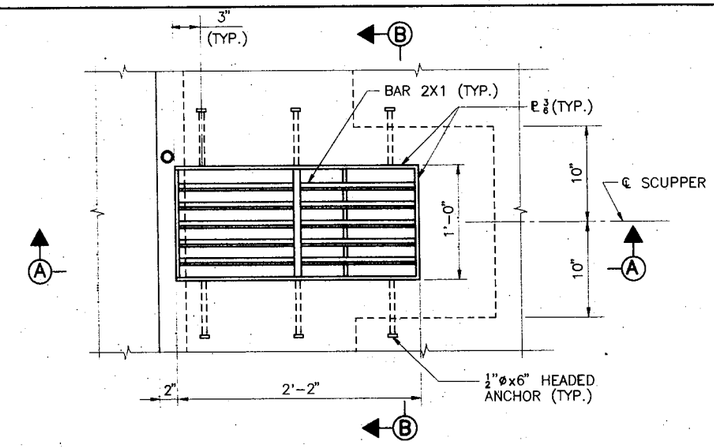


NOTE
REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT

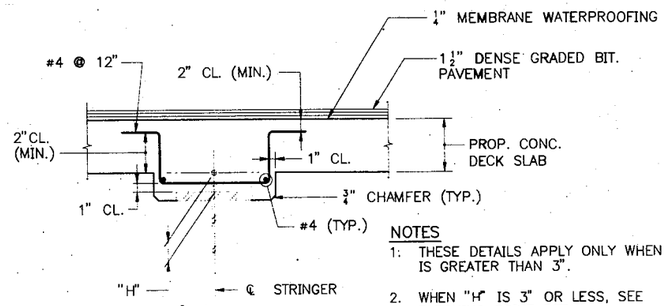
TRANSVERSE CONSTRUCTION JOINT DETAIL
3"=1'-0"



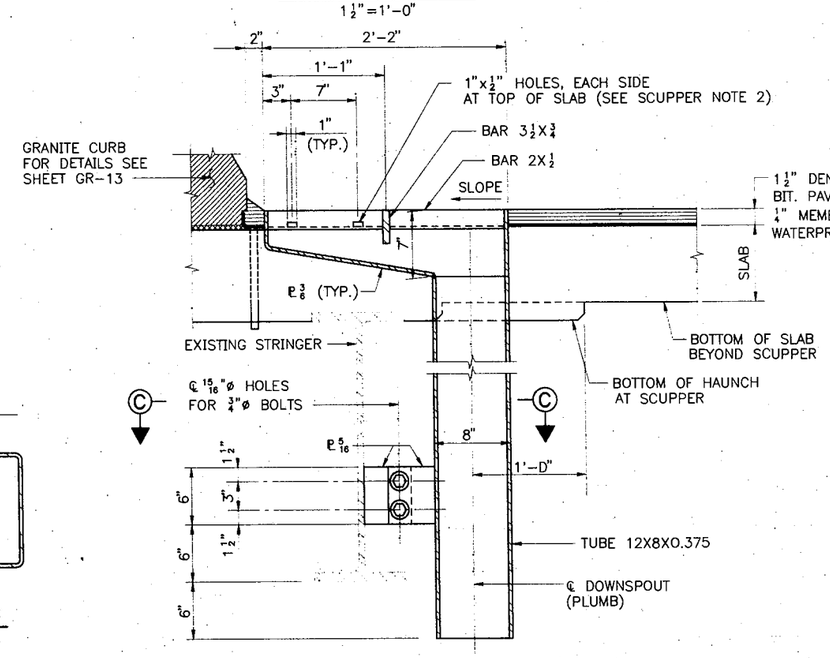
BLOCKING POINT DETAIL
1"=1'-0"



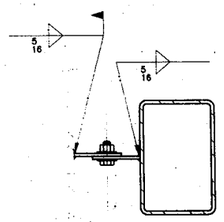
PLAN – SCUPPER
1 1/2"=1'-0"



NOTES
1. THESE DETAILS APPLY ONLY WHEN "H" IS GREATER THAN 3".
2. WHEN "H" IS 3" OR LESS, SEE BLDCKING POINT DETAIL.

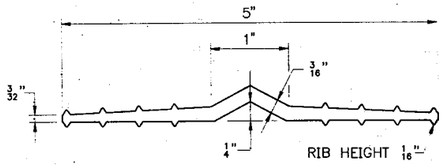


SECTION A–A
1 1/2"=1'-0"

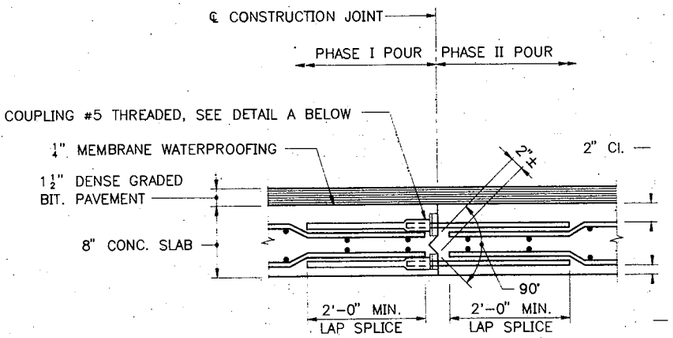


SECTION C–C
1 1/2"=1'-0"

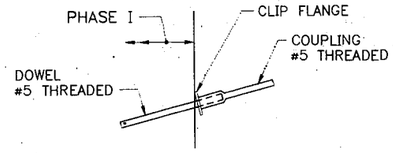
EXTRA DEPTH HAUNCH DETAILS
1"=1'-0"



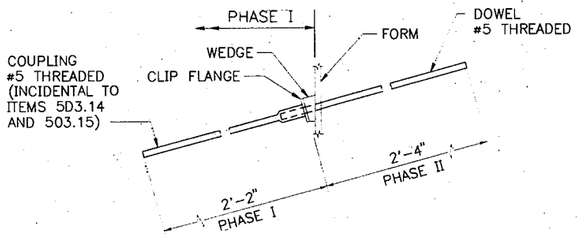
5" WATERSTOP
FULL SIZE



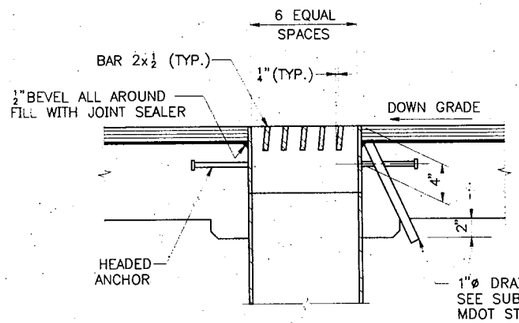
LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



OPTIONAL CONSTRUCTION



DETAIL A
NO SCALE



SECTION B–B
1 1/2"=1'-0"

SCUPPER NOTES

1. ALL WELDS TO BE CONTINUOUS 1/4" FILLET WELDS EXCEPT AS NOTED.
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS 1/2" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (1/4" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFORM TO ASTM A7D9, GRADE 36.
5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A5D1.
6. PAYMENT FOR SCUPPERS PVC DRAINS AND SCREENS INCIDENTAL TO CONTRACT ITEM 5D2.262.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET GR-11.

No	Revision	By	Date

	By	Date
Designed	SHR	12/94
Drawn	LMR	12/94
Checked	GPM	1/95
In Charge Of	RAL	

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
SLAB DETAILS I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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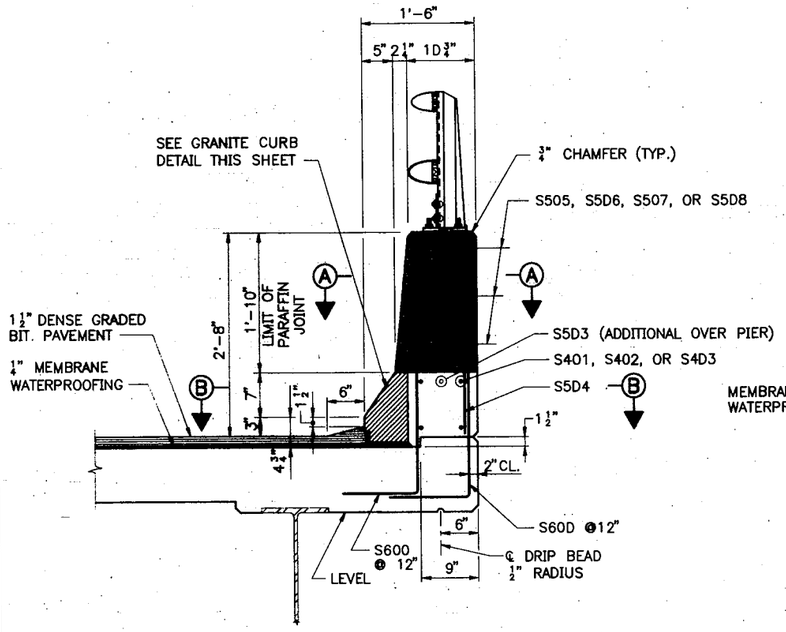
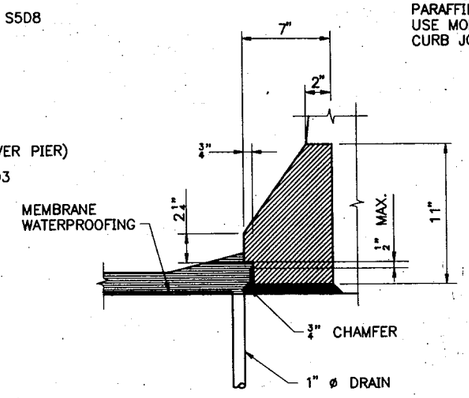
(MAINE.TPK)



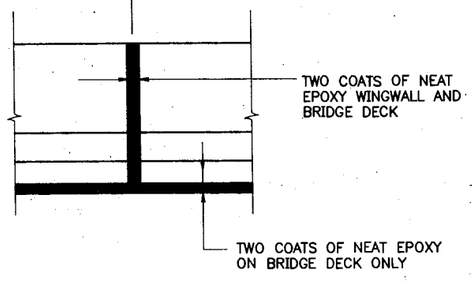
PARAPET DETAIL
1" = 1'-0"

NOTE
FOR GRANITE CURB DETAILS, SEE SHEET GR-7

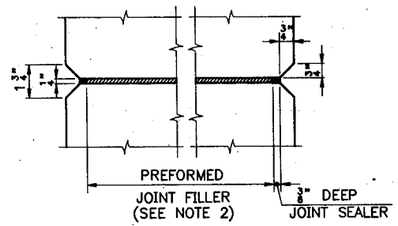


GRANITE CURB DETAIL
2" = 1'-0"

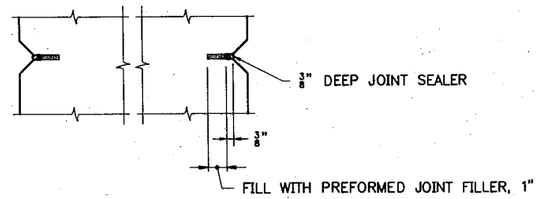
℄ CURB JOINT (PARAPET PARAFFIN OR DUMMY JOINT) POINT CURB JOINTS LOCATED AT PARAPET PARAFFIN JOINTS WITH JOINT SEALANT. USE MORTER AT ALL OTHER CURB JOINTS



BRIDGE CURB ELEVATION
2" = 1'-0"



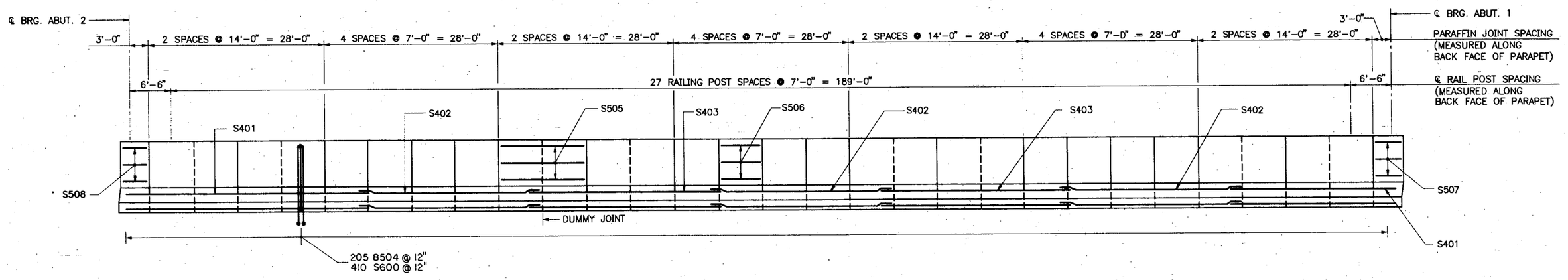
SECTION A-A
3" = 1'-0"



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

PARAFFIN AND DUMMY JOINT NOTES

1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1751 AND MAY BE SUPPORTED WITH A THIN STEEL PLATE. REMOVE PLATE CAREFULLY WHILE THE CONCRETE IS PLASTIC.
3. SECTION B-B ALSO APPLIES TO DUMMY JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKA FLEX 1A.
5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 5D2.262, STRUCTURAL CONCRETE ROADWAY AND PARAPET ON STEEL BRIDGES.



PARAPET ELEVATION
(LOOKING SOUTH)
HORZ. ⅛" = 1'-0"
VERT. ½" = 1'-0"

No.	Revision	By	Date		By	Date
				Designed	GPM	2/95
				Drawn	LMR	2/95
				Checked	HNL	2/95
				In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
SLAB DETAILS II

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

Sheet No. GR-13
60 of 65

(MAINETPK)

MAINE TURNPIKE
MODERNIZATION AND WIDENING PROJECT
MILES 12–42

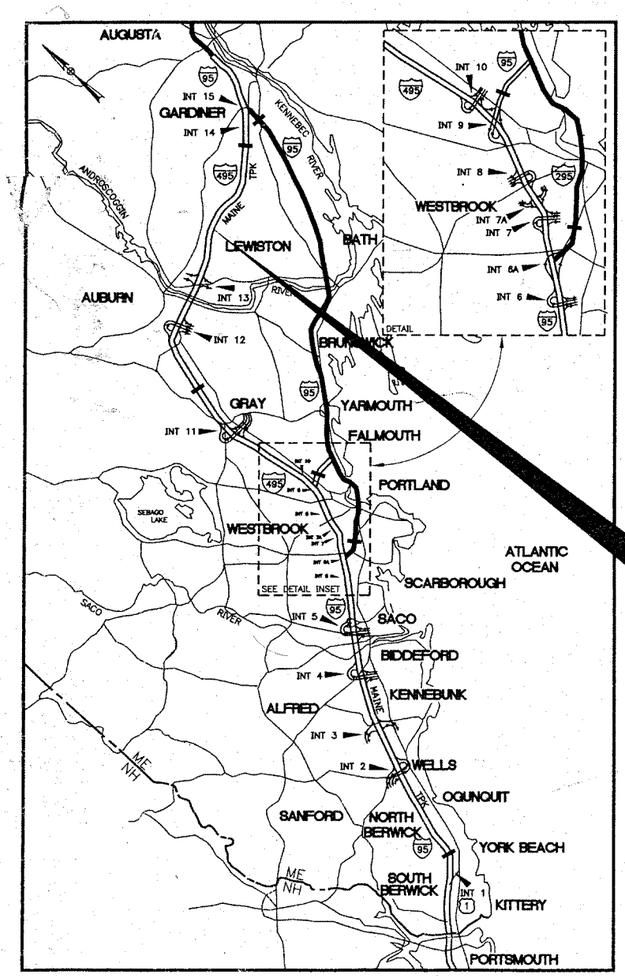
The Widening

MAINE TURNPIKE AUTHORITY

SAMUEL M. ZAITLIN, CHAIRMAN
LUCIEN B. GOSSELIN, VICE CHAIRMAN
EARL L. ADAMS, MEMBER
JANIS COHEN, MEMBER
HARLAND GOODWIN, MEMBER
JANE L. LINCOLN, MEMBER EX–OFFICIO

PAUL E. VIOLETTE, EXECUTIVE DIRECTOR

CLAYTON'S DESK COPY



CONTRACT 2002.25
ROUTE 9 ROADWAY
BRIDGE RECONSTRUCTION

LOCATION MAP

APPROVED:
MAINE TURNPIKE AUTHORITY

_____ CHAIRMAN

_____ EXECUTIVE DIRECTOR

_____ DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

_____ COMMISSIONER _____ DATE

_____ BUREAU DIRECTOR AND CHIEF ENGINEER _____ DATE

CONTRACT 2002.25
ROUTE 9 ROADWAY
AND
BRIDGE RECONSTRUCTION

THE FOLLOWING PAGES WERE DESIGNED BY TAYLOR ENGINEERING: 2 – 33

TAYLOR ENGINEERING ASSOCIATES

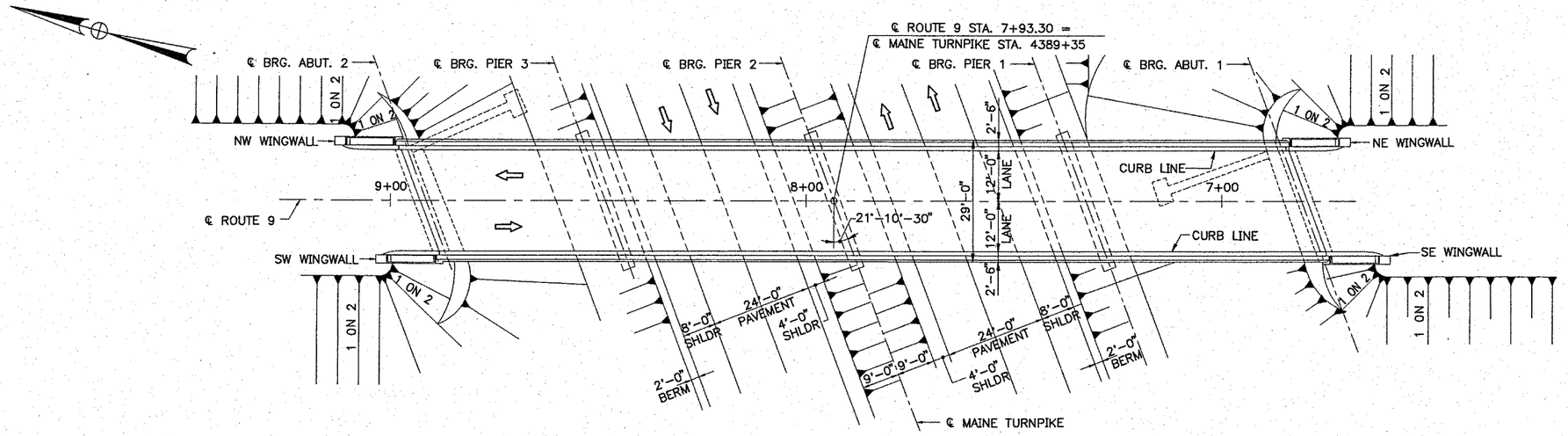
STATE OF MAINE · JOSEPH E. NORTON · 3486 · REGISTERED PROFESSIONAL ENGINEER

APPROVED BY: Joseph Norton

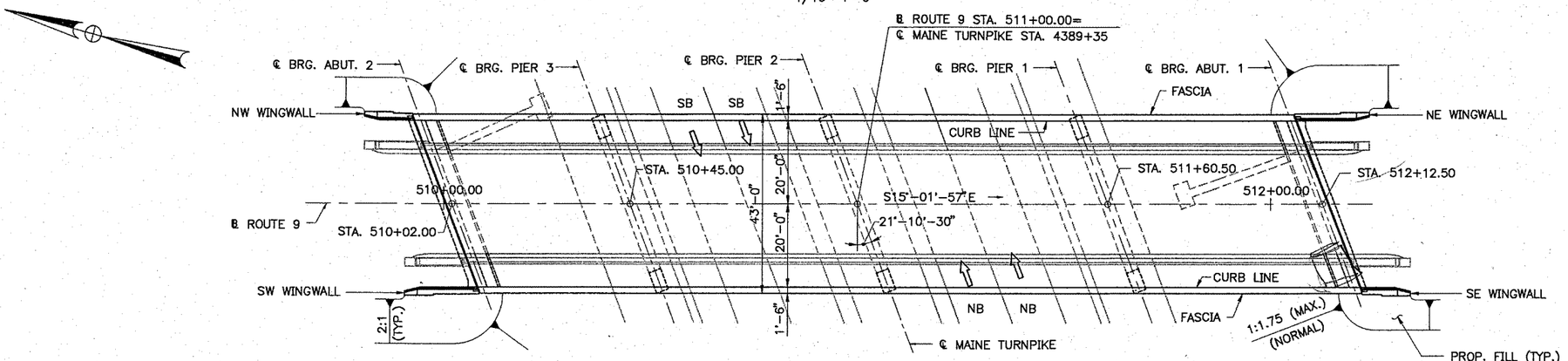
HNTB
ARCHITECTS ENGINEERS PLANNERS

STATE OF MAINE · ROLAND A. LAVALLEE · 6452 · REGISTERED PROFESSIONAL ENGINEER

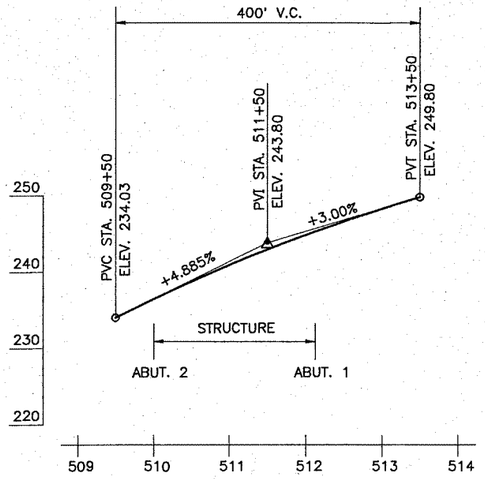
Roland A. Lavallee 3/28/02
ROLAND A. LAVALLEE P.E., PLS
VICE PRESIDENT,
DIRECTOR OF OPERATIONS
DATE



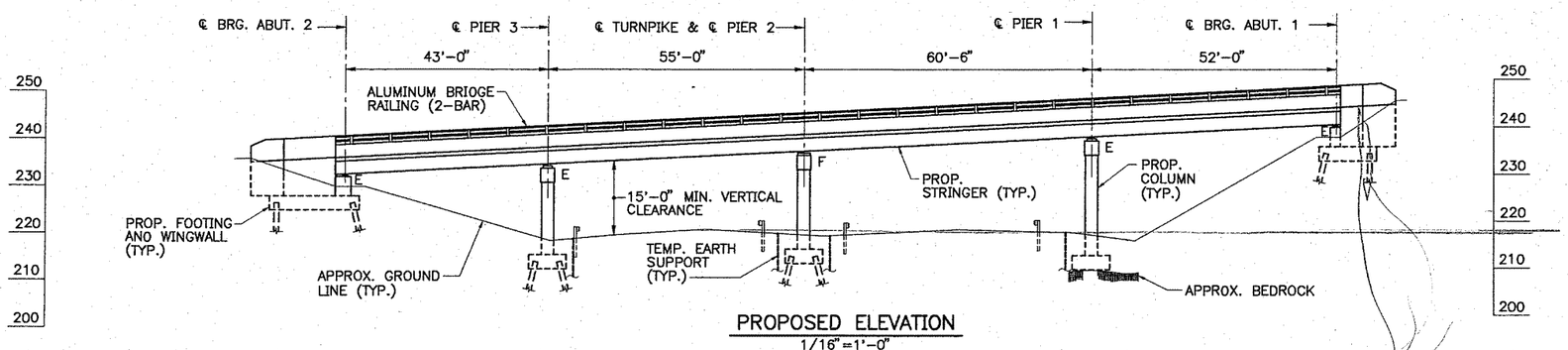
EXISTING PLAN
1/16"=1'-0"



PROPOSED PLAN
1/16"=1'-0"



PROPOSED PROFILE
HOR. 1"=100'
VERT. 1"=10'



PROPOSED ELEVATION
1/16"=1'-0"

Scale: AS NOTED	Designed by: HNTB ARCHITECTS ENGINEERS PLANNERS	HNTB CORPORATION 2 Thomas Drive Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 772-7410	**MAINE TURNPIKE AUTHORITY** MAINE TURNPIKE Trans pass	SABATTUS INTERCHANGE/ ROUTE 9 GENERAL PLAN AND ELEVATION

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	1/02	Checked	AAD	1/02
Drawn	AR	10/01	In Charge of	RAL	3/02

SHEET NUMBER: SI-2
CONTRACT: 2002.25
35 OF 63

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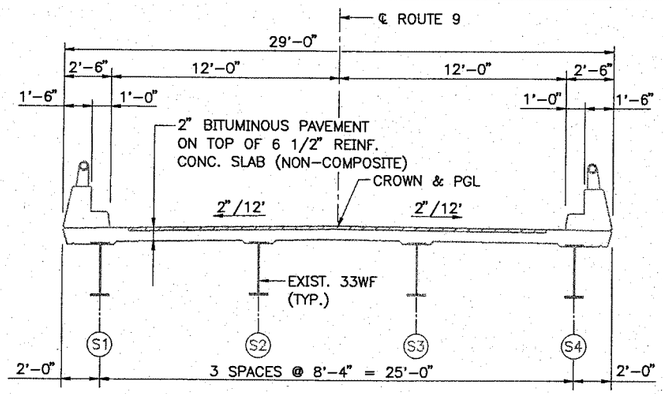

EXISTING CROSS SECTION
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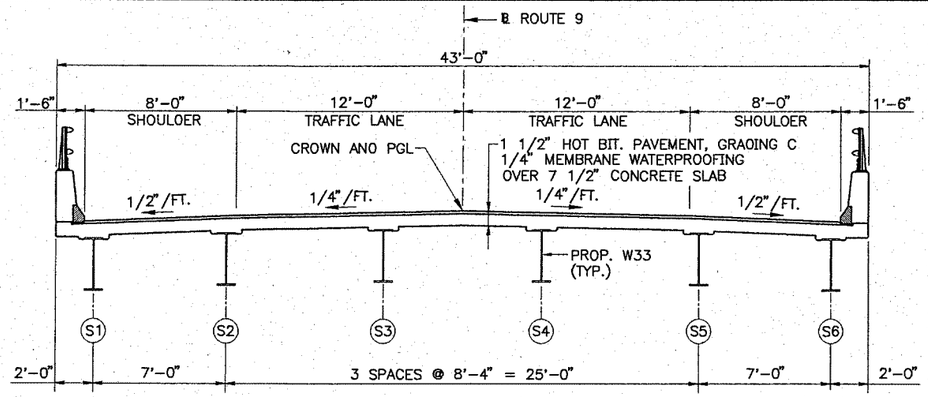
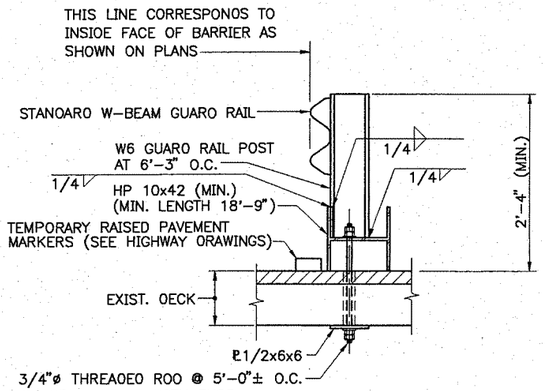
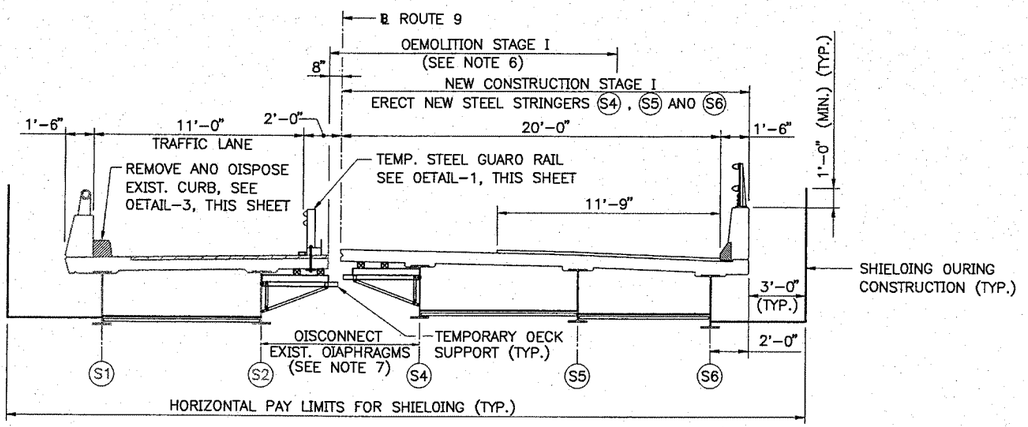


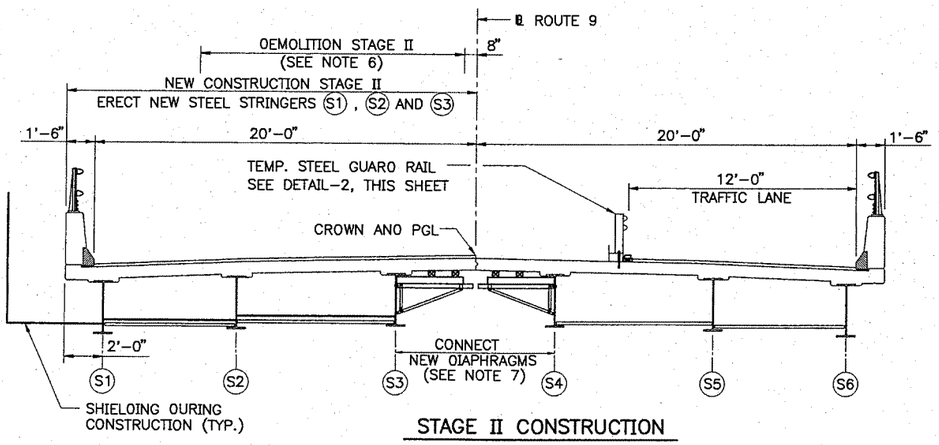
PROPOSED CROSS SECTION
1/4"=1'-0"



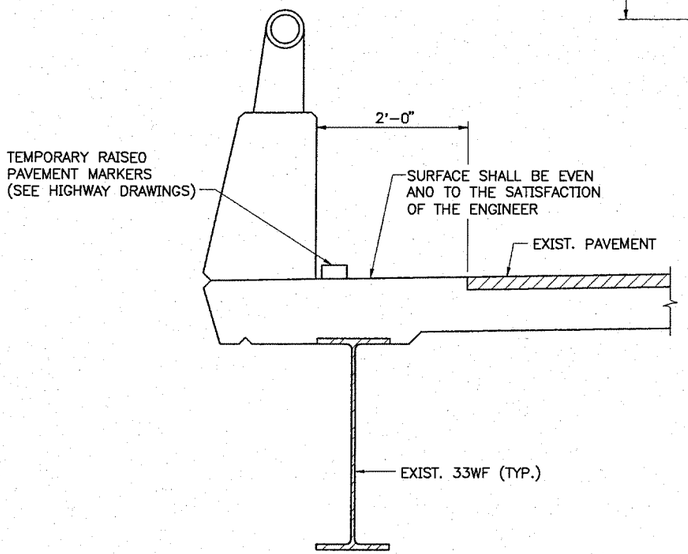
TEMPORARY STEEL GUARD RAIL DETAIL – 1
(EXISTING DECK SLAB)
1"=1'-0"



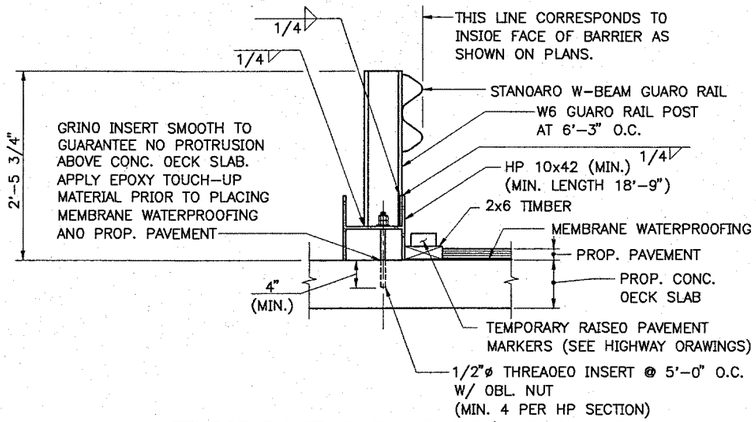
STAGE I CONSTRUCTION
1/4"=1'-0"



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



DETAIL–3
1"=1'-0"



TEMPORARY STEEL GUARD RAIL DETAIL – 2
(PROPOSED DECK SLAB)
1"=1'-0"

NOTES

1. ALL WORK NECESSARY TO FURNISH, ERECT, RESET AND REMOVE TEMPORARY STEEL GUARD RAIL SHALL BE PAID UNDER ITEM 606.172.
2. THE CONTRACTOR SHALL SUBMIT A TEMPORARY DECK SUPPORT DESIGN, STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MAINE, FOR REVIEW AND APPROVAL.
3. TEMPORARY DECK SUPPORTS SHALL BE DESIGNED FOR AN AASHTO HS20–44 LIVE LOAD.
4. ALL WORK NECESSARY TO FURNISH, ERECT AND REMOVE THE TEMPORARY DECK SUPPORTS SHALL BE PAID FOR UNDER ITEM 524.361.
5. ALL SECTIONS ARE LOOKING UPSTATION.
6. EXISTING DECK AND STRINGERS, FOR EACH STAGE, SHALL BE DEMOLISHED AND REMOVED BEFORE INSTALLING THE PROPOSED STRINGERS.
7. FOR NOTES ON CONNECTING NEW DIAPHRAGMS, SEE SHEET NO. SI–14.

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Scale: AS NOTED

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No.	Revision	By	Date

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Designed	AD	10/01	Checked	AAD	1/02
Drawn	LS	10/01	In Charge of	RAL	3/02

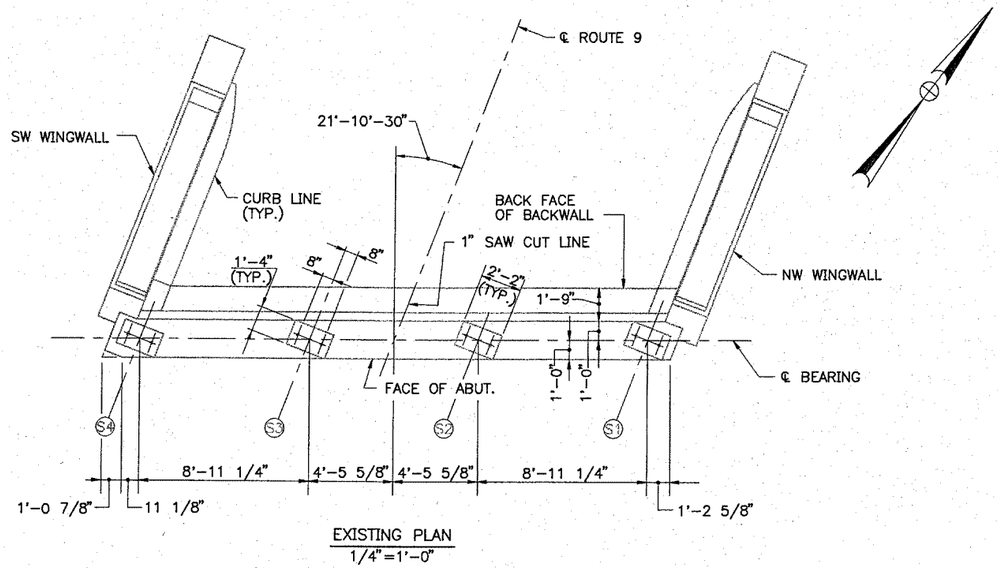
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774–5155
FAX (207) 772–7410

MAINE TURNPIKE AUTHORITY

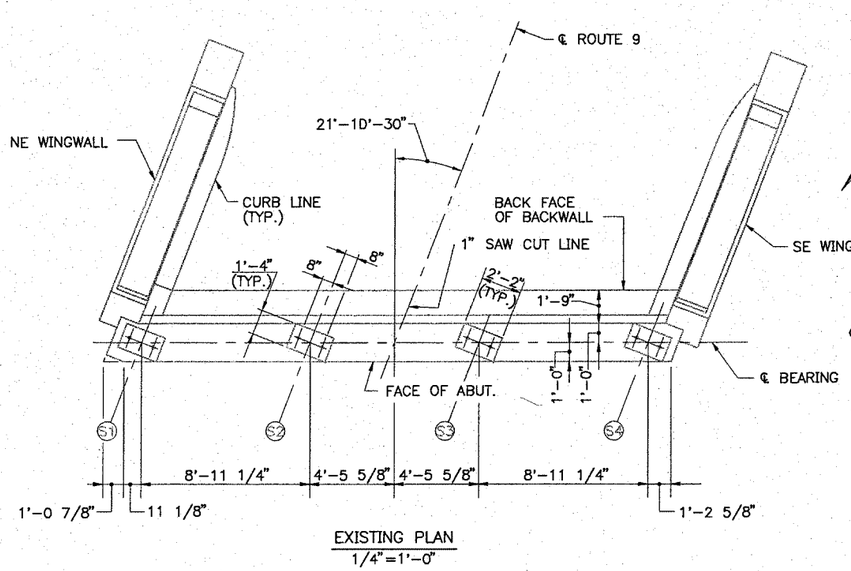
MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/ ROUTE 9
SEQUENCE OF CONSTRUCTION

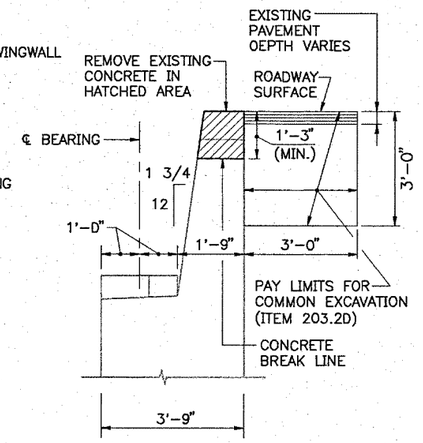
SHEET NUMBER: SI–3
CONTRACT: 2002.25
36 OF 63



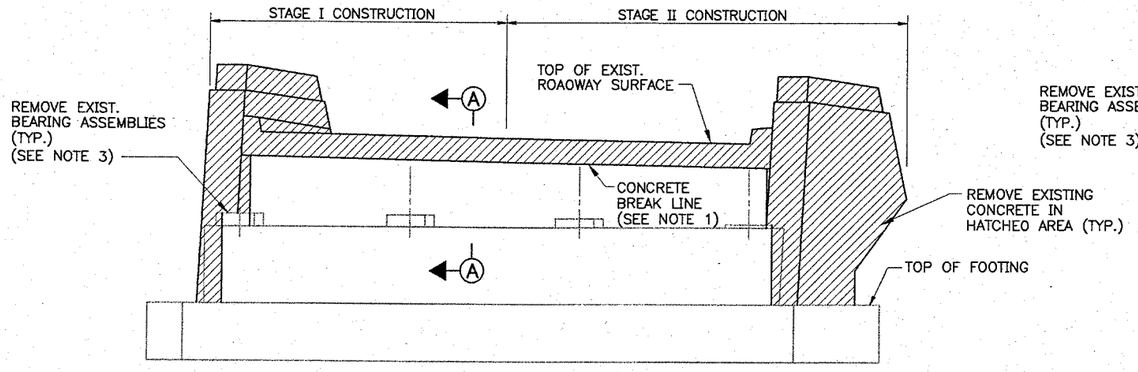
EXISTING PLAN
1/4"=1'-0"



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

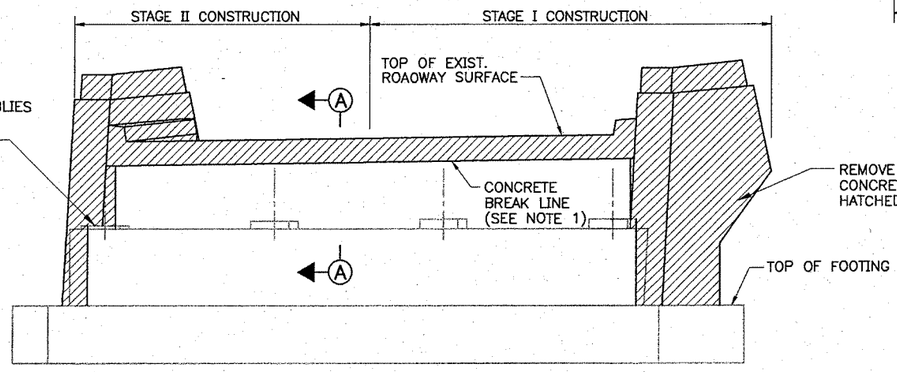


EXISTING SECTION A-A
1/2"=1'-0"



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

ABUTMENT 2



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

ABUTMENT 1

NOTES

1. SAW CUT 1-IN. (MIN.) DEEP BEFORE REMOVING EXISTING CONCRETE AT CONCRETE BREAK LINES.
2. REMOVAL OF THE EXISTING EXPANSION JOINT SHALL BE INCIDENTAL TO ITEM 202.1D.
3. EXISTING BEARING ASSEMBLIES SHALL BE REMOVED AND STACKED AT THE CROSBY MAINTENANCE AREA, MILE 44 SB OF MAINE TURNPIKE. THIS WORK WILL NOT BE MEASURED FOR PAYMENT, BUT WILL BE INCIDENTAL TO ITEM 202.1D.
4. EXCAVATION FOR BACKWALL MODIFICATION SHALL BE PAID FOR UNDER ITEM 203.2D TO THE LIMITS SHOWN.

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No.	Revision	By	Date

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Designed	AD	9/01	Checked	AAD	1/02
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2 Thomas Drive
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TEL (207) 774-5155
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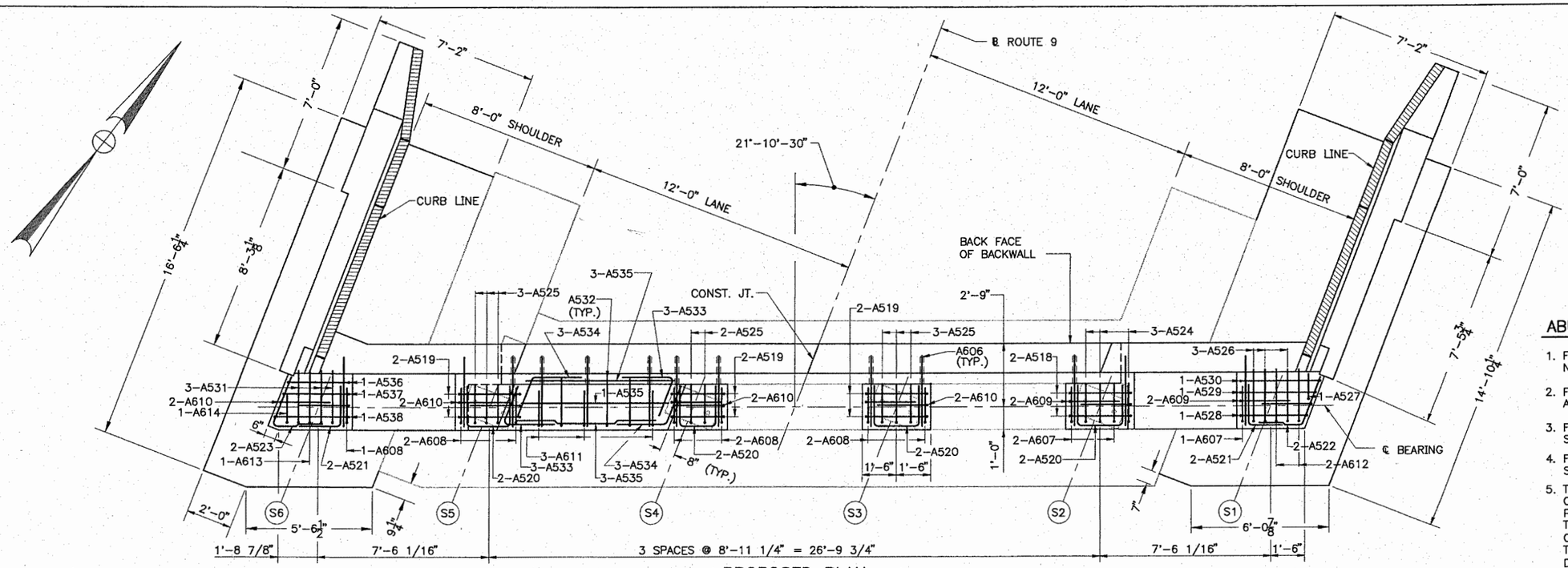
MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

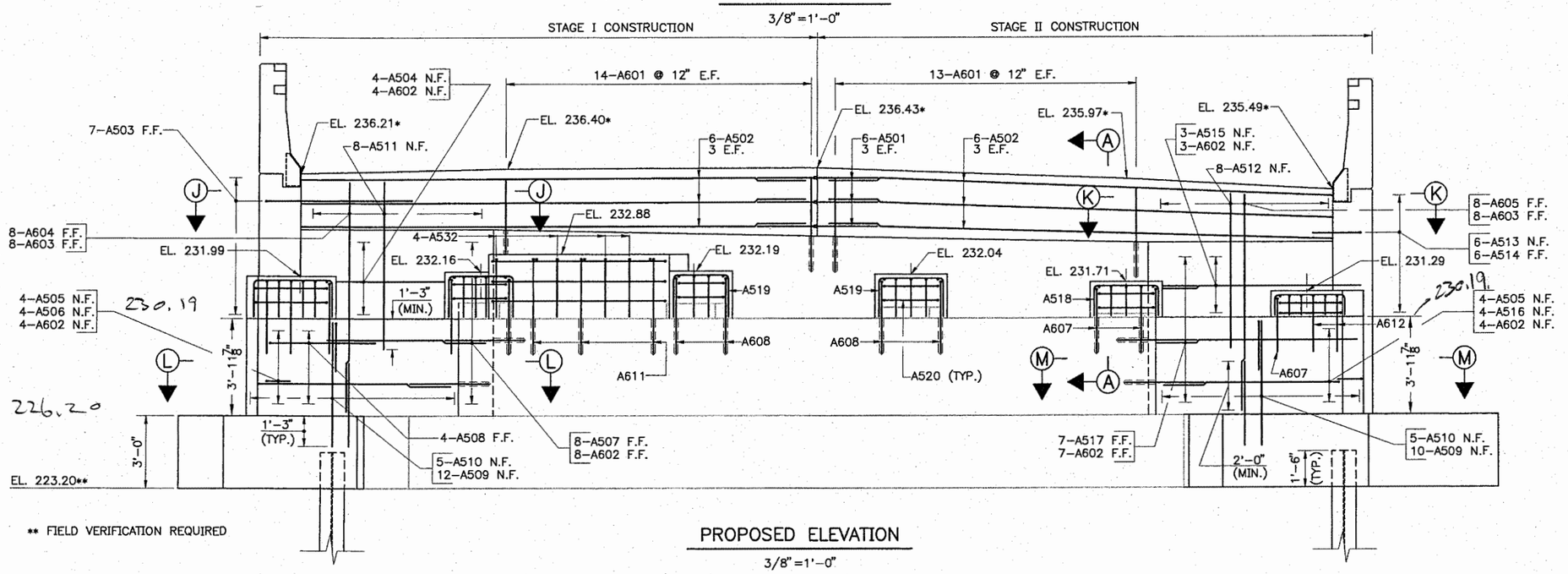
SABATTUS INTERCHANGE/
ROUTE 9
EXISTING ABUTMENTS

SHEET NUMBER: SI-4
CONTRACT: 2002.25
37 OF 63



PROPOSED PLAN

3/8"=1'-0"



** FIELD VERIFICATION REQUIRED

PROPOSED ELEVATION

3/8"=1'-0"

ABUTMENT NOTES

1. FOR REINFORCING STEEL SCHEDULE, SEE SHEET NO. SI-25.
2. FOR WINGWALL DETAILS, SEE SHEET NOS. SI-8 AND SI-9.
3. FOR ROAOWAY EXPANSION JOINT OETAILS, SEE SHEET NOS. SI-19, SI-20 AND SI-21.
4. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NO. SI-7.
5. THE CONTRACTOR SHALL EXPOSE THE TOP LAYER OF THE EXISTING ABUTMENT REINFORCING STEEL, PRIOR TO DRILLING ANO GROUTING ANY OOWELS. THE CONTRACTOR SHALL REPORT ANY INTERFERENCE OF DOWELS WITH EXISTING REINFORCING STEEL TO THE ENGINEER. CARE SHALL BE TAKEN NOT TO DAMAGE THE EXISTING REINFORCING STEEL. (DRILLING ANO GROUTING HOLES SHALL BE INCIDENTAL TO ITEM 502.2191).
6. REMOVE ALL DETERIORATEO OR LOOSE CONCRETE AT EACH OF THE EXISTING CONCRETE PEOESTALS. CLEAN ANO ROUGHEN ALL CONCRETE SURFACES TO ELIMINATE BONO INHIBITING MATERIALS, INCLUDING LOCATIONS WHERE EXPOSING THE TOP LAYER OF REINFORCING STEEL IS NOT REQUIRED. CLEAN ALL EXPOSED REINFORCING STEEL USING AN ACCEPTABLE METHOD APPROVED OF BY THE ENGINEER, THEN APPLY AN EPOXY COATING TO THE BARS. APPLY A BONDING AGENT TO THE EXISTING SUBSTRATE BY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND APPROVED OF BY THE ENGINEER, PRIOR TO PLACEMENT OF NEW CONCRETE. (PAYMENT SHALL BE INCIOENTAL TO ITEM NO. 502.2191).
7. * ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
8. SLOPE PROPOSEO BRIOGE SEAT 1/2" PER FT. OR MATCH EXISTING.
9. FOR SECTIONS J-J, K-K, L-L, M-M ANO FOUNDATION OETAILS, SEE SHEET NO. SI-7.
10. EXISTING PILES NOT SHOWN. REFER TO AS-BUILT PLANS FOR LOCATION.
11. PROPOSEO SECTION A-A, SHOWN ON SHEET NO. SI-7, REPRESENTS CONDITIONS AT ABUTMENT 2. PROPOSED SECTION A-A FOR ABUTMENT 1 IS SIMILAR, EXCEPT FOR THE MODIFIED HEIGHT OF BACKWALL AND CONCRETE BEARING PAD.
12. BAR MARKS A509 (B509) AND A603 (B603), WHICH ARE LOCATEO OVER THE EXISTING FOOTING, SHALL BE ORILLED ANO GROUTEO TO THE RESPECTIVE EMBEDMENT DEPTH PROVIOED.
13. BAR MARK A501 (B501) SHALL BE THE OOWEL BAR SPLICER SYSTEM, CONSISTING OF OOWEL BAR SPLICER (OB-SAE) ANO OOWEL-IN (DI), AS MANUFACTURED BY OAYTON/RICHMOND OR EQUIVALENT.
14. REINFORCING STEEL SHALL BE EQUALLY SPACEO, UNLESS OTHERWISE NOTEO.

Scale: AS NOTEO

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	1/02	Checked	AAD	3/02
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HNTB CORPORATION
2 Thomas Drive
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TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/ ROUTE 9
ABUTMENT 2 MODIFICATIONS

SHEET NUMBER: SI-5

CONTRACT: 2002.25

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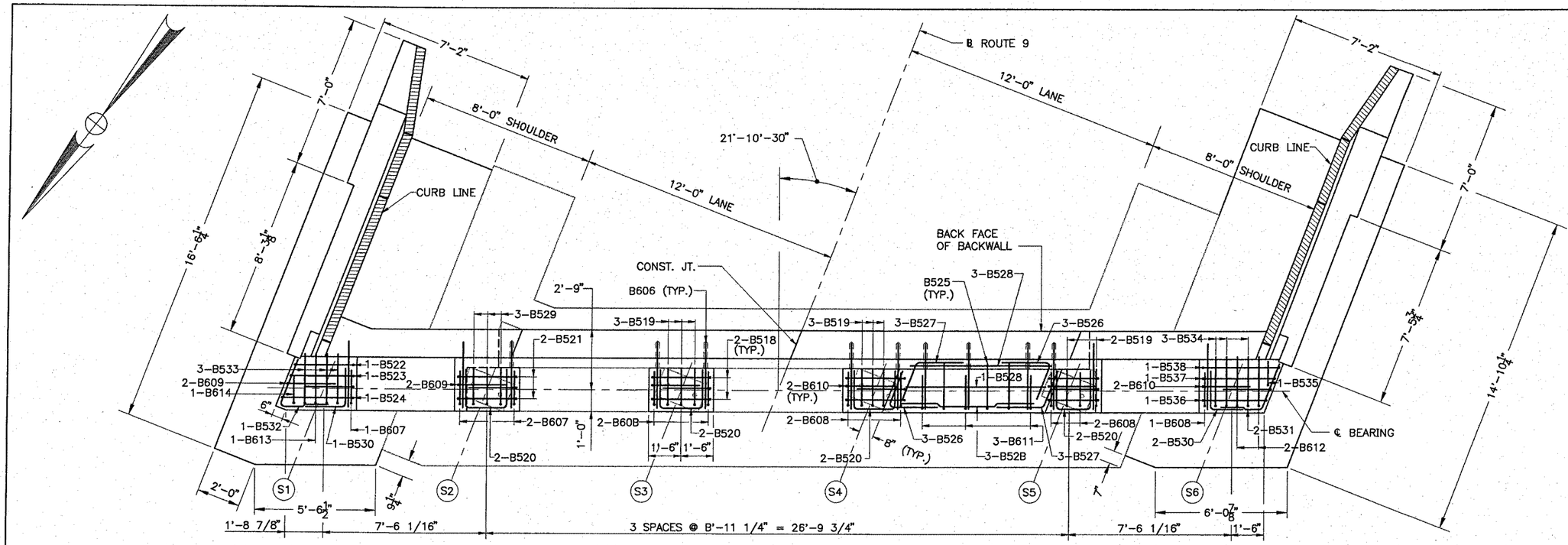
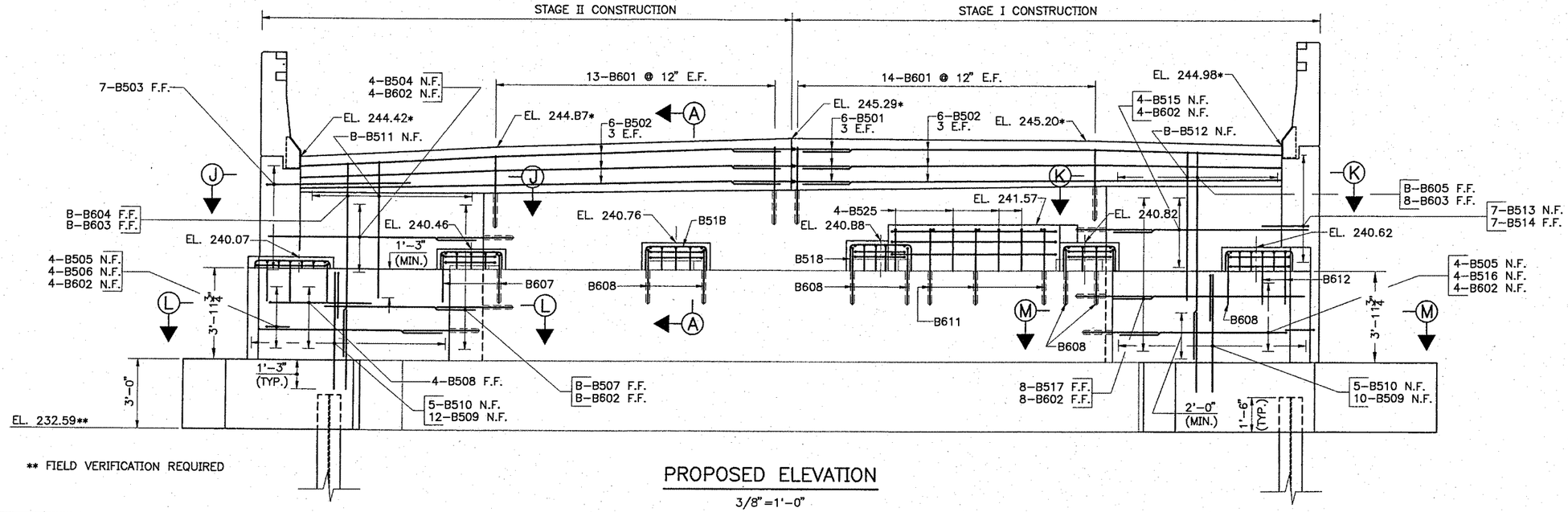


PROPOSED PLAN

3/8"=1'-0"



** FIELD VERIFICATION REQUIRED

PROPOSED ELEVATION

3/8"=1'-0"

NOTES

1. FOR ABUTMENT NOTES, SEE SHEET NO. SI-5.
2. FOR SECTIONS J-J, K-K, L-L AND M-M, SEE SHEET NO. SI-7.

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Designed	AD	11/01	Checked	AAD	3/02
Drawn	AD	11/01	In Charge of	RAL	3/02

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TEL (207) 774-5155
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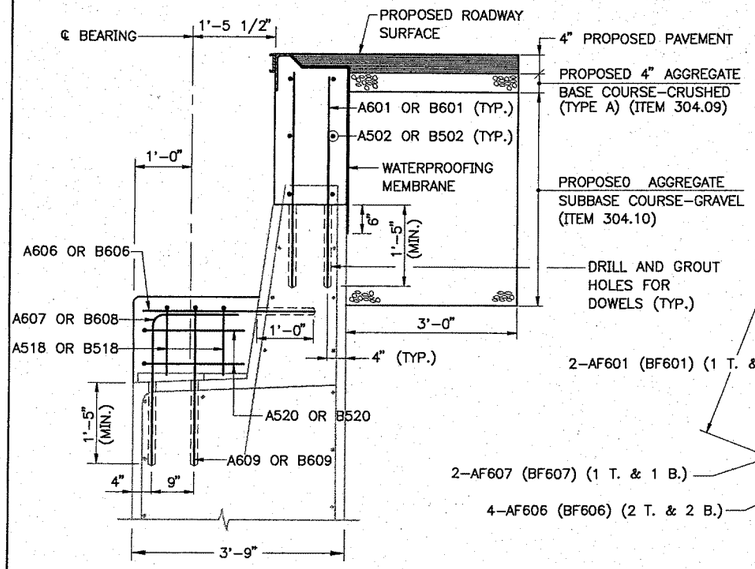
MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
ABUTMENT 1 MODIFICATIONS

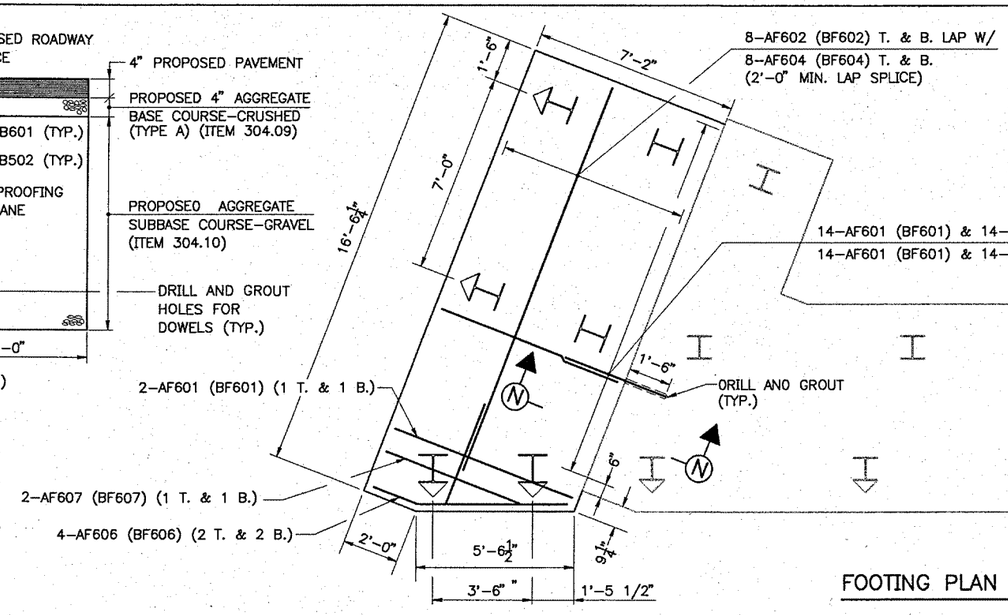
SHEET NUMBER: SI-6

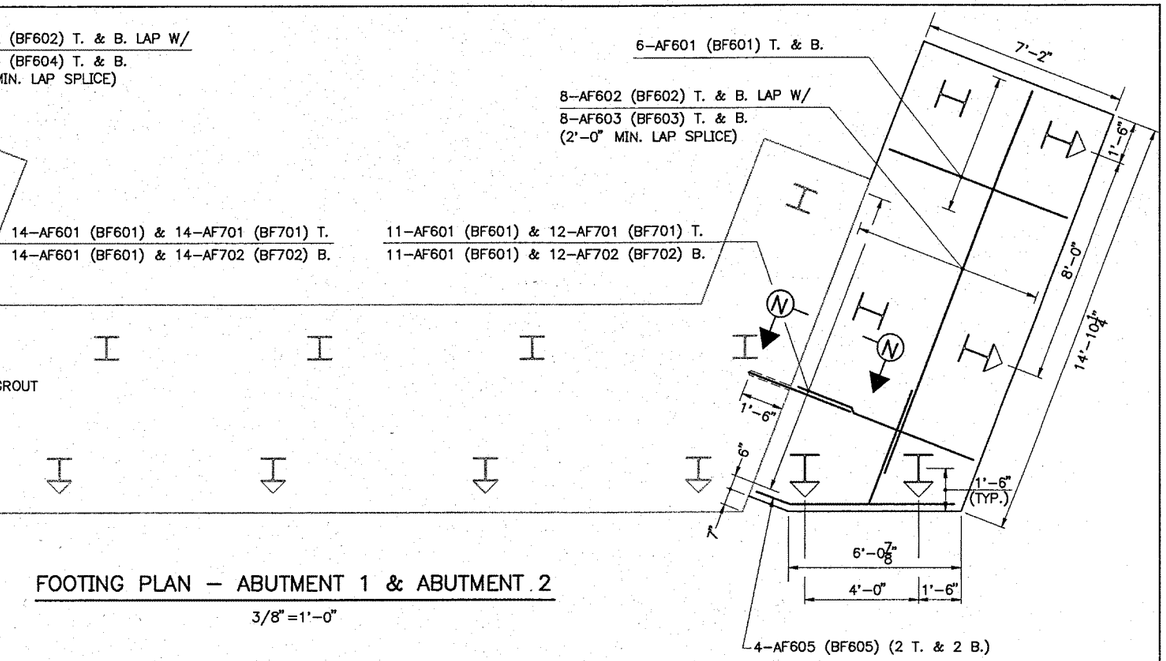
CONTRACT: 2002.25



PROPOSED SECTION A–A

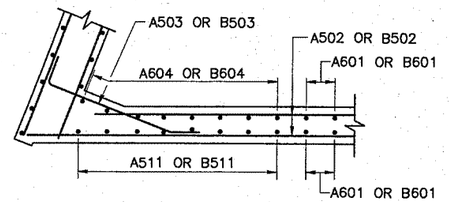
3/4"=1'-0"





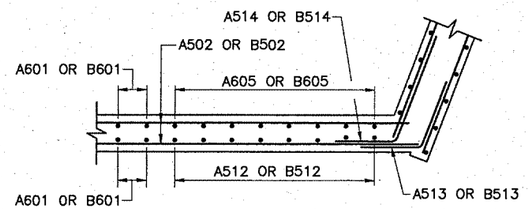
FOOTING PLAN – ABUTMENT 1 & ABUTMENT 2

3/8"=1'-0"



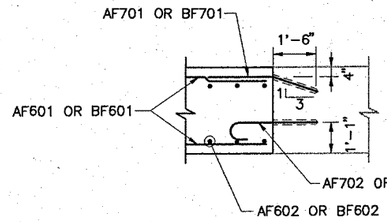
SECTION J–J

3/8"=1'-0"



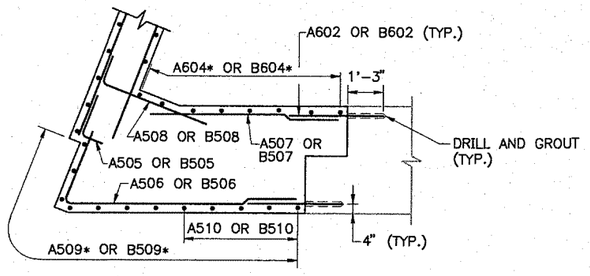
SECTION K–K

3/8"=1'-0"



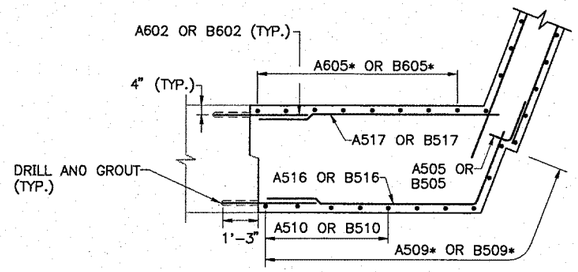
SECTION N–N

3/8"=1'-0"



SECTION L–L

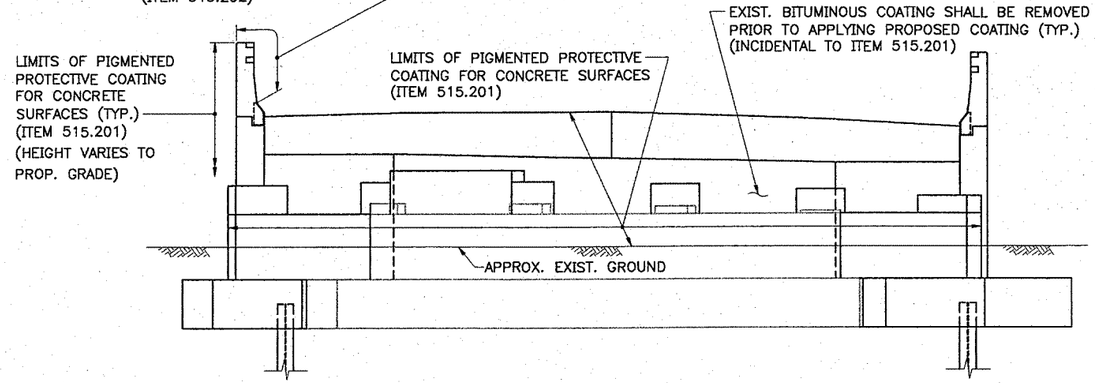
3/8"=1'-0"



*SEE ABUTMENT NOTE 12, SHEET NO. SI–5.

SECTION M–M

3/8"=1'-0"



LIMITS OF CONCRETE PROTECTIVE COATING AT ABUTMENTS AND WINGWALLS

NO SCALE

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Scale: AS NOTED

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	1/02	Checked	AAD	3/02
Drawn	AD	1/02	In Charge of	RAL	3/02

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TEL (207) 774-5155
FAX (207) 772-7410

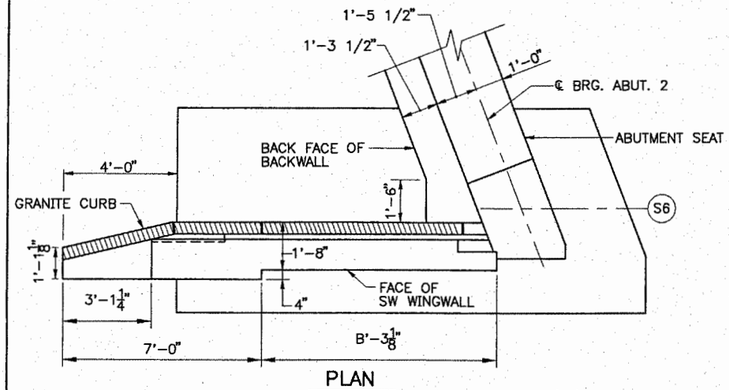
MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

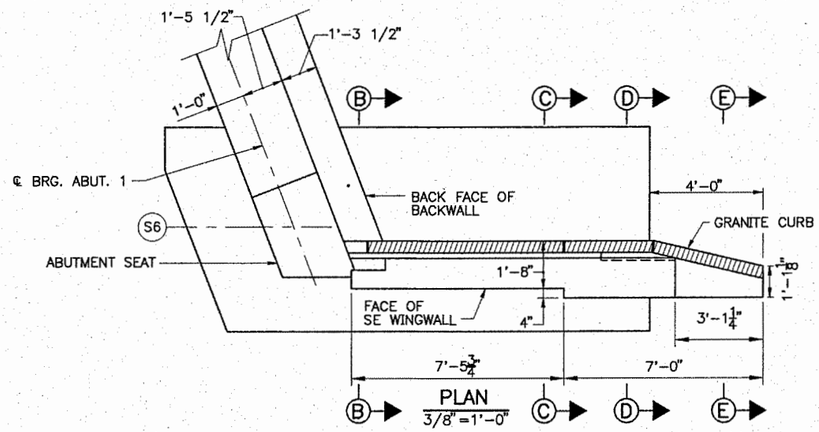
SABATTUS INTERCHANGE/
ROUTE 9
ABUTMENT DETAILS

SHEET NUMBER: SI–7

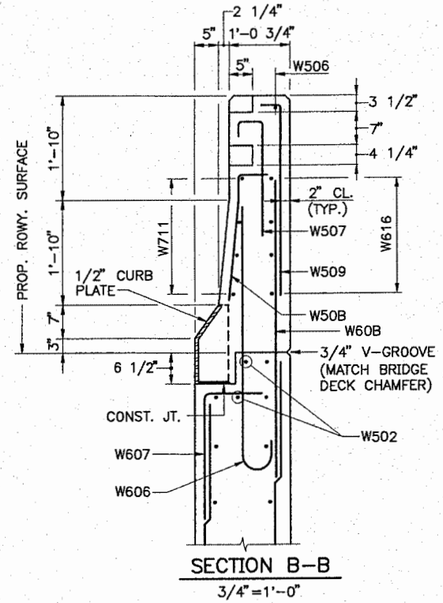
CONTRACT: 2002.25



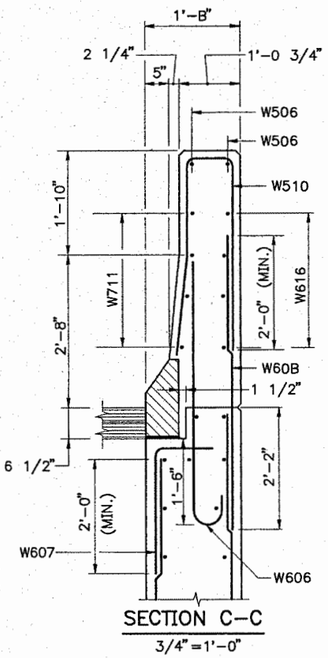
PLAN
3/8"=1'-0"



PLAN
3/8"=1'-0"

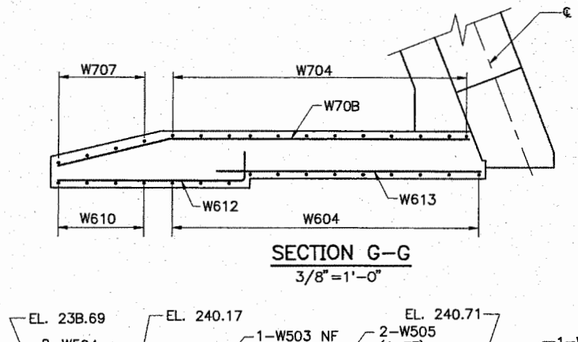


SECTION B-B
3/4"=1'-0"

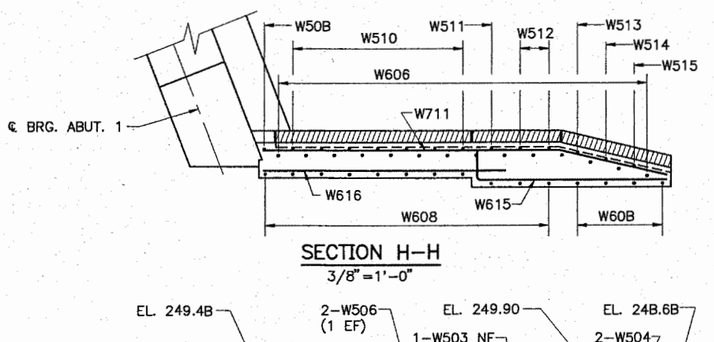


SECTION C-C
3/4"=1'-0"

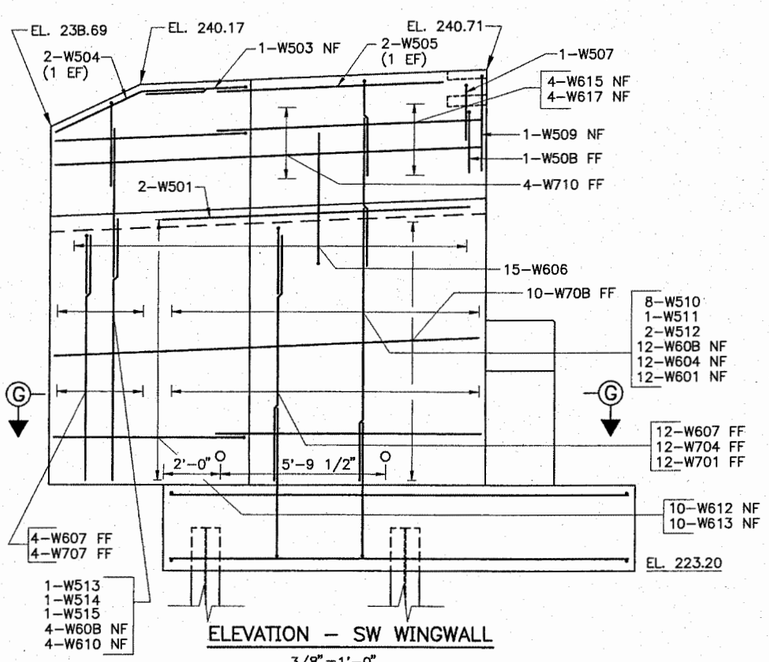
* TYP. FOR SECTIONS B, C, D & E



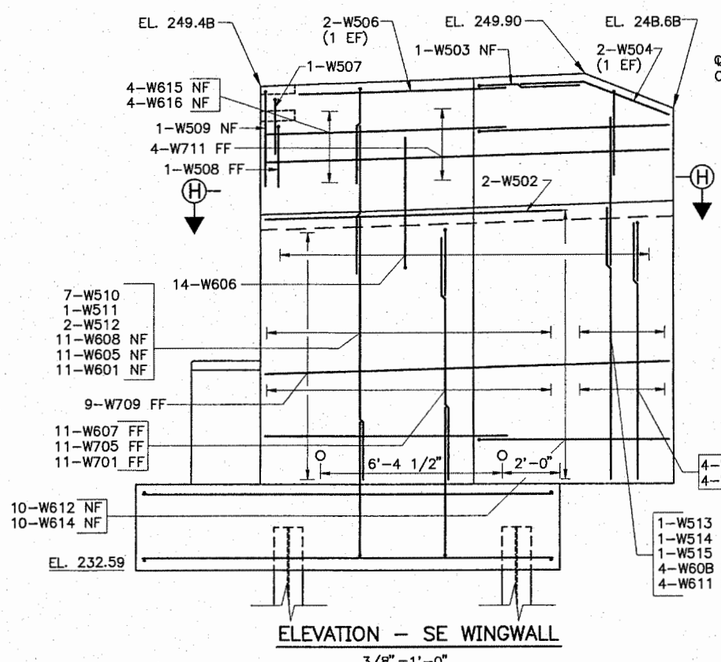
SECTION G-G
3/8"=1'-0"



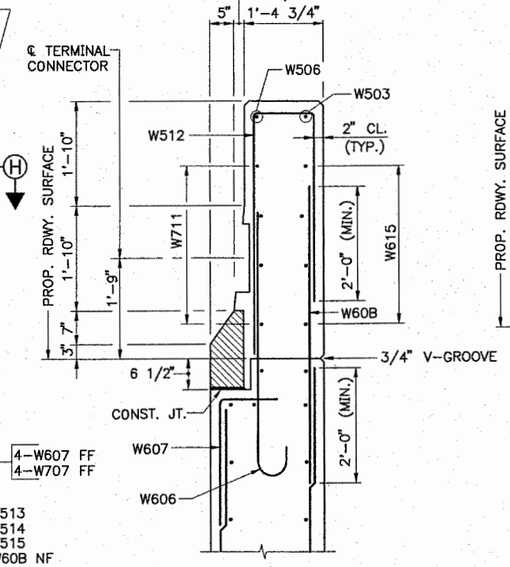
SECTION H-H
3/8"=1'-0"



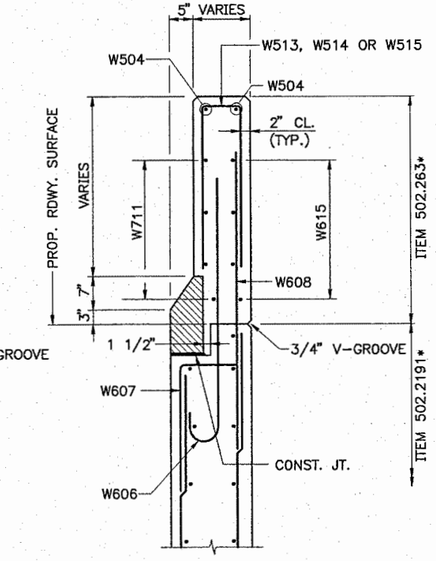
ELEVATION - SW WINGWALL
3/8"=1'-0"



ELEVATION - SE WINGWALL
3/8"=1'-0"



SECTION D-D
3/4"=1'-0"



SECTION E-E
3/4"=1'-0"

Scale: AS NOTED

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	1/02	Checked	AAD	3/02
Drawn	AD	1/02	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
WINGWALL DETAILS I

SHEET NUMBER: SI-8
41 OF 63

CONTRACT: 2002.25

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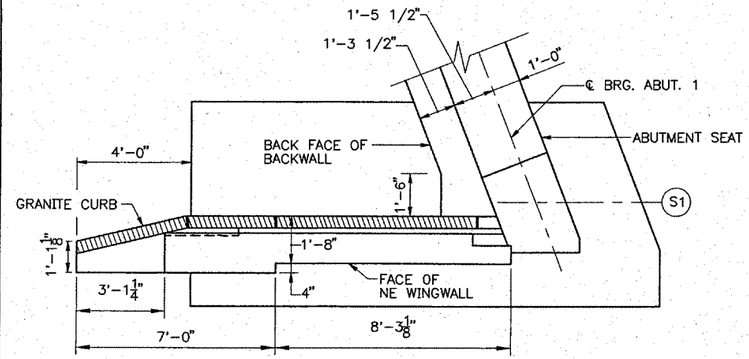
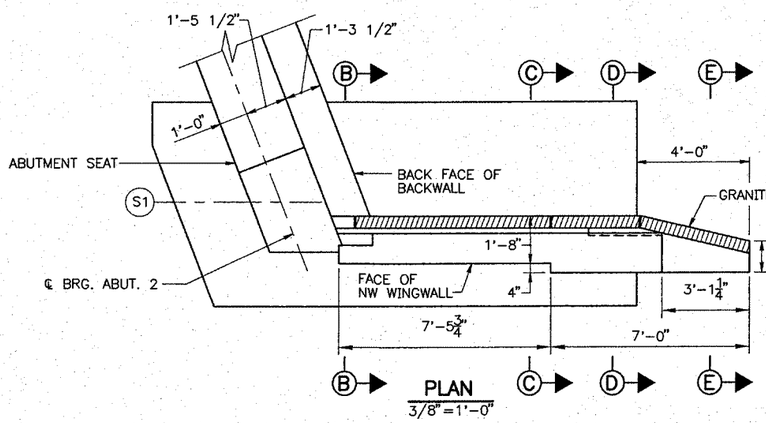
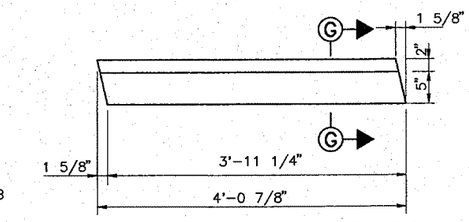


PLAN
3/8"=1'-0"

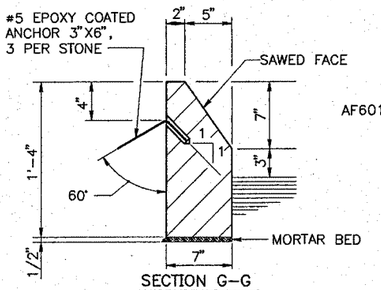


PLAN
3/8"=1'-0"

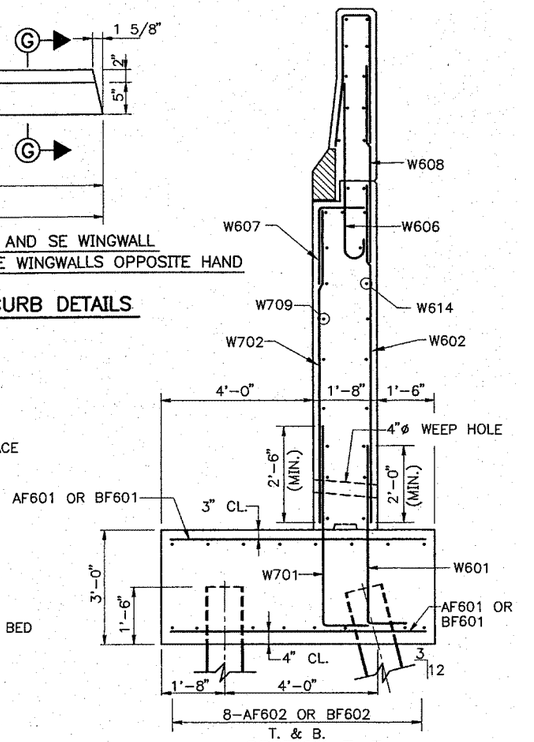


PLAN AT END POST FOR NW AND SE WINGWALL
GRANITE AT END POST FOR SW AND NE WINGWALLS OPPOSITE HAND
1"=1'-0"

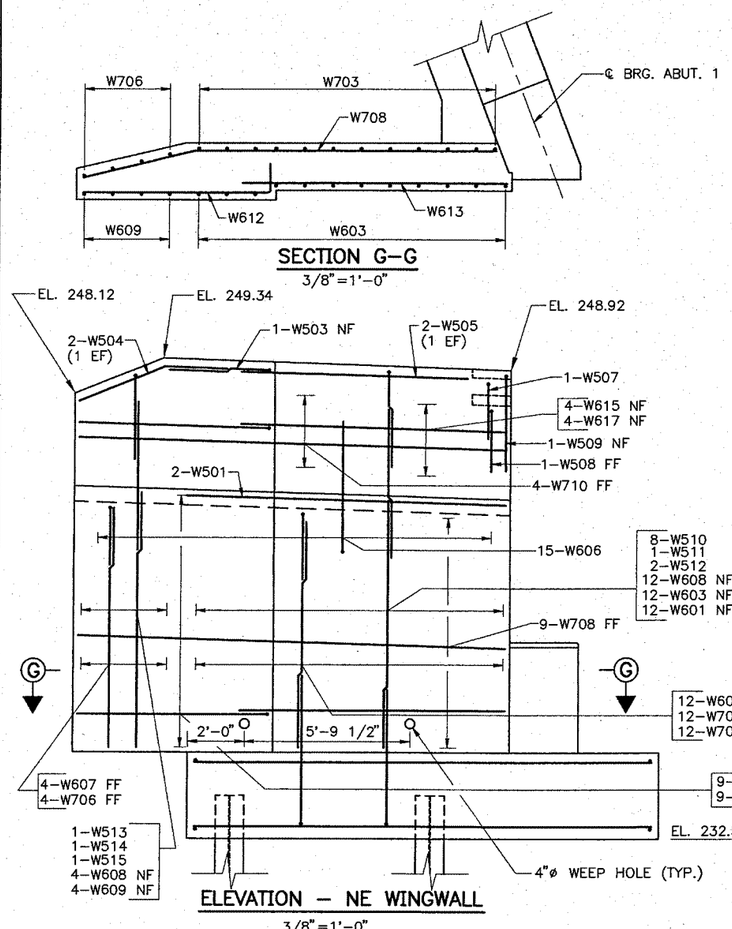
WINGWALL GRANITE CURB DETAILS
1"=1'-0"



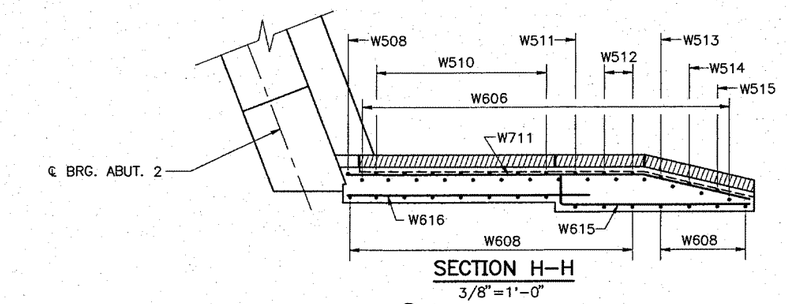
SECTION G–G
1 1/2"=1'-0"



SECTION F–F
1/2"=1'-0"

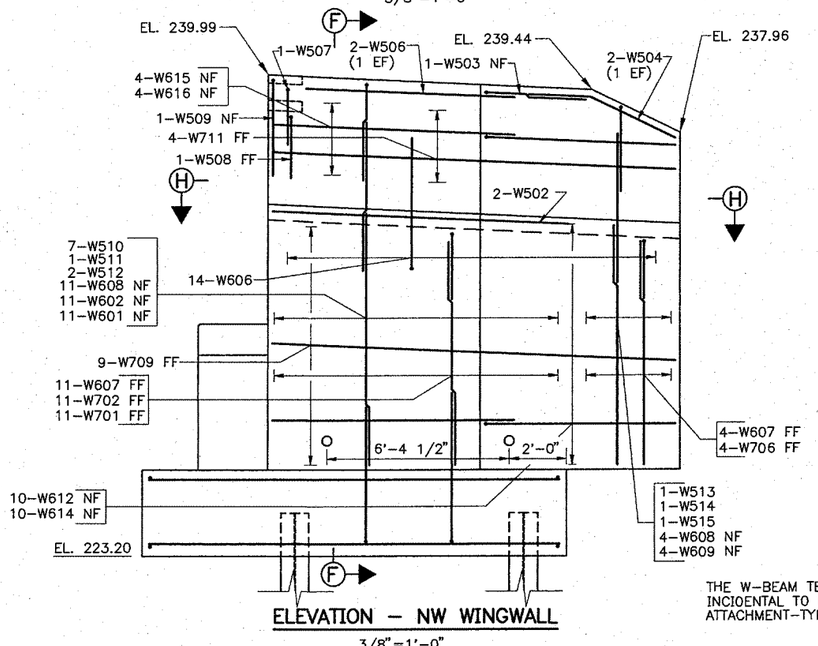


SECTION G–G
3/8"=1'-0"

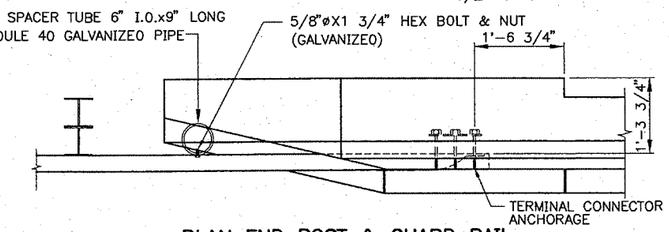


SECTION H–H
3/8"=1'-0"

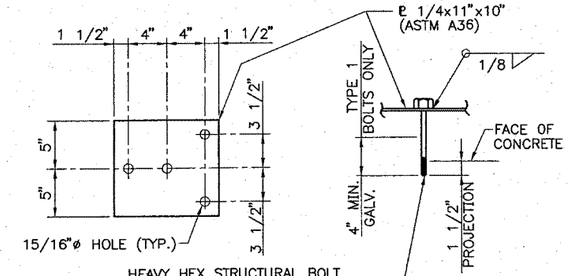
ELEVATION – NE WINGWALL
3/8"=1'-0"



ELEVATION – NW WINGWALL
3/8"=1'-0"



PLAN END POST & GUARD RAIL
3/4" = 1'-0"



THE W-BEAM TERMINAL CONNECTORS SHALL BE INCIOENTAL TO ITEM 606.1735, GUARD RAIL ATTACHMENT-TYPE A.

TERMINAL CONNECTOR ANCHORAGE
1 1/2" = 1'-0"

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Scale: AS NOTEO

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

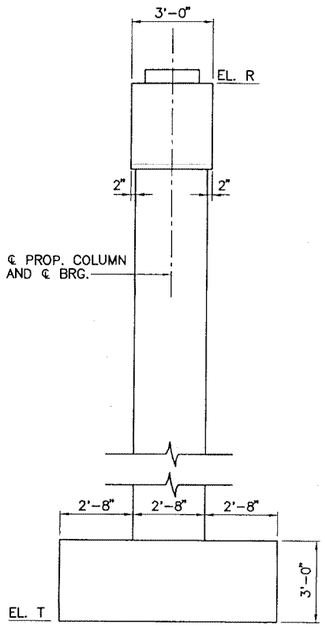
	By	Date		By	Date
Designed	AD	1/02	Checked	AAD	3/02
Drawn	AD	1/02	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
The Widening

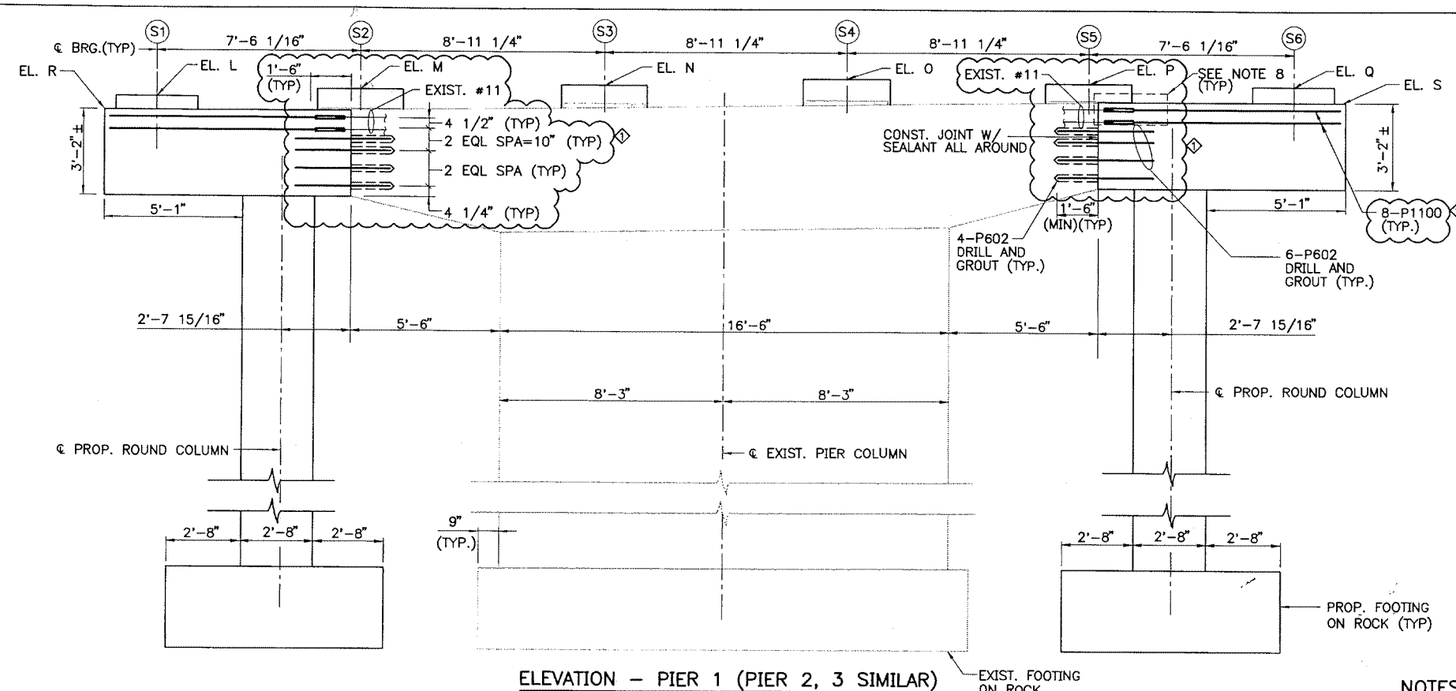
SABATTUS INTERCHANGE/ ROUTE 9
WINGWALL DETAILS II

SHEET NUMBER: SI-9
CONTRACT: 2002.25
42 OF 63



END ELEVATION – PIER 1

3/8"=1'-0"



ELEVATION – PIER 1 (PIER 2, 3 SIMILAR)

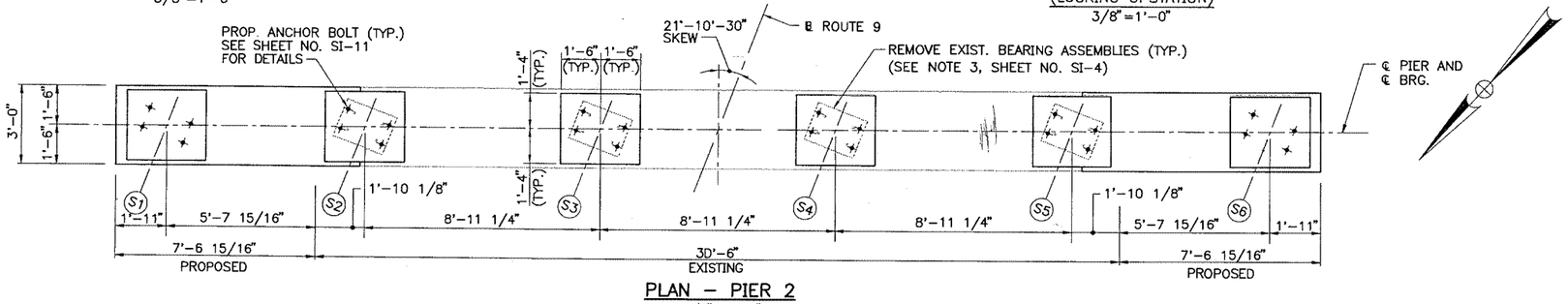
(LOOKING UPSTATION)

3/8"=1'-0"

PIER ELEVATIONS			
POINT	PIER 1	PIER 2	PIER 3
L	238.11	235.88	233.25
M	238.50	236.29	233.66
N	238.81	236.61	233.99
O	238.94	236.74	234.14
P	238.88	236.69	234.10
Q	238.69	236.51	233.92
R*	237.24	235.00	232.03
S*	237.88	235.58	232.86
T*	211.00	214.00	210.00

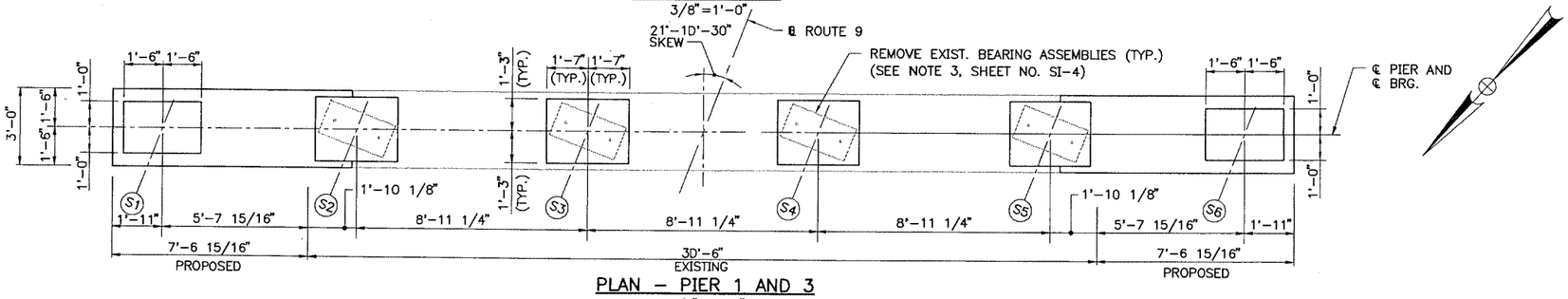
NOTE

* ELEVATIONS ARE APPROXIMATE. ACTUAL ELEVATION SHALL BE DETERMINED IN THE FIELD.



PLAN – PIER 2

3/8"=1'-0"



PLAN – PIER 1 AND 3

3/8"=1'-0"

NOTES

1. REINFORCING SHOWN IS TYPICAL FOR ALL PIERS, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL EXPOSE THE TOP LAYER OF THE EXISTING PIER CAP REINFORCING STEEL, PRIOR TO DRILLING AND GROUTING ANY DOWELS. THE CONTRACTOR SHALL REPORT INTERFERENCE OF DOWELS WITH EXISTING REINFORCING STEEL TO THE ENGINEER. CARE SHALL BE TAKEN NOT TO DAMAGE THE EXISTING REINFORCING STEEL. (DRILLING AND GROUTING HOLES SHALL BE INCIDENTAL TO ITEM 502.239).
3. THE CONTRACTOR SHALL SET THE ANCHOR BOLTS IN PLACE AT THE SAME TIME AS THE REINFORCEMENT IS SET FOR THE PEDESTALS. REINFORCEMENT SHALL BE PLACED TO AVOID REQUIRED ANCHOR BOLT LAYOUT.
4. SEE SHEET NO. SI-26 FOR REINFORCING STEEL SCHEDULE.
5. REMOVE ALL DETERIORATED OR LOOSE CONCRETE AT EACH OF THE EXISTING CONCRETE PEDESTALS. CLEAN AND ROUGHEN ALL CONCRETE SURFACES TO ELIMINATE BOND INHIBITING MATERIALS, INCLUDING LOCATIONS OF ALL BUILT-UP PEDESTAL AREAS ON TOP OF THE PIER CAPS. CLEAN ALL EXPOSED REINFORCING STEEL USING AN ACCEPTABLE METHOD APPROVED OF BY THE ENGINEER, THEN APPLY AN EPOXY COATING TO BARS. APPLY A BONDING AGENT TO THE EXISTING SUBSTRATE BY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND APPROVED OF BY THE ENGINEER, PRIOR TO PLACEMENT OF NEW CONCRETE. (PAYMENT SHALL BE INCIDENTAL TO ITEM 502.239).
6. LIMIT OF PIER EXCAVATION SHALL BE 1'-6" BEYOND THE EDGE OF THE PROPOSED PIER FOOTINGS AND BE PAID FOR UNDER ITEM 206.10.
7. ALL PROPOSED CONCRETE SURFACES, ABOVE FINISHED GRADE, SHALL BE COATED WITH PROTECTIVE COATING, ITEM 515.201, EXCEPT NON-TRAFFIC SIDE OF PIERS 1 AND 3 ONLY.
8. SELECT DEMOLITION METHOD SUCH THAT EXISTING #11 BARS ARE NOT DAMAGED.

Scale: AS NOTED

Designed by:

HNTB

ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date
1	REINFORCING STEEL DETAILS	AD	6/26/02

	By	Date		By	Date
Designed	AAD	12/01	Checked	ML	1/02
Drawn	AMR	1/02	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
PIER MODIFICATIONS I

SHEET NUMBER: SI-10

CONTRACT: 2002.25

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63

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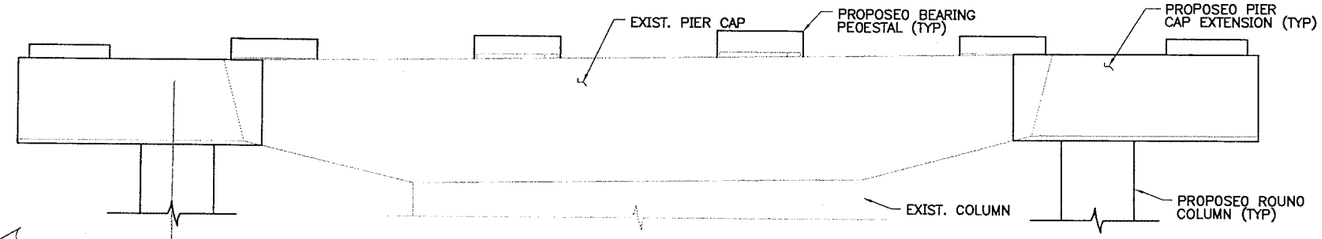
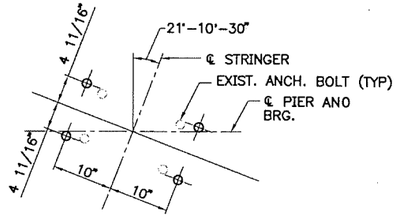
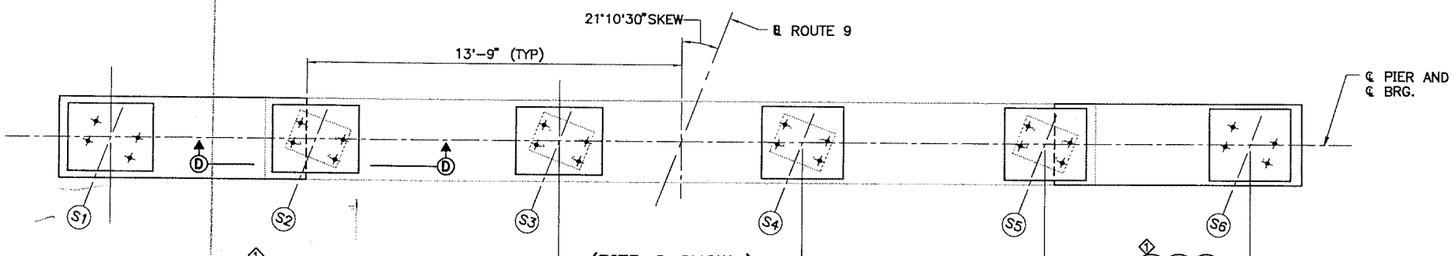


ELEVATION – PIER CAP
(LOOKING UPSTATION)
3/8"=1'-0"

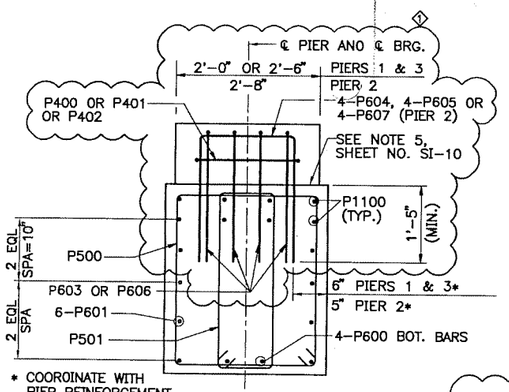


ANCHOR BOLT LAYOUT
(PIER 2)
1"=1'-0"



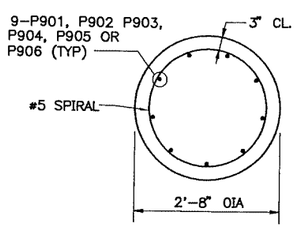
(PIER 2 SHOWN)

REINFORCEMENT PLAN – PIER 1, 2 AND 3
3/8"=1'-0"

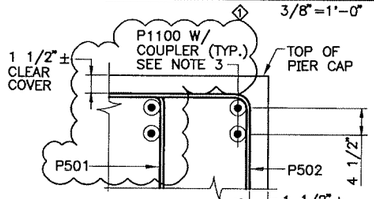


* COORDINATE WITH PIER REINFORCEMENT SCHEDULE

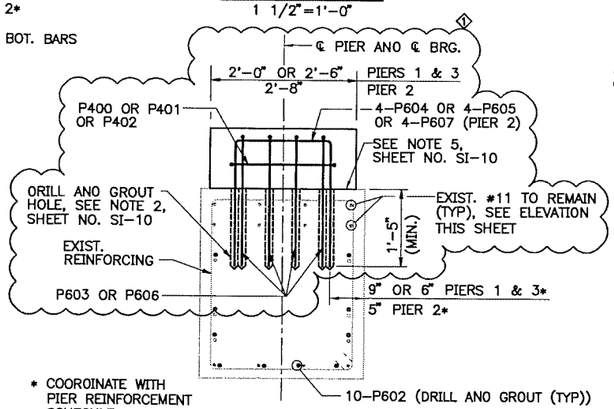
SECTION B–B
3/4"=1'-0"



SECTION C–C
3/4"=1'-0"

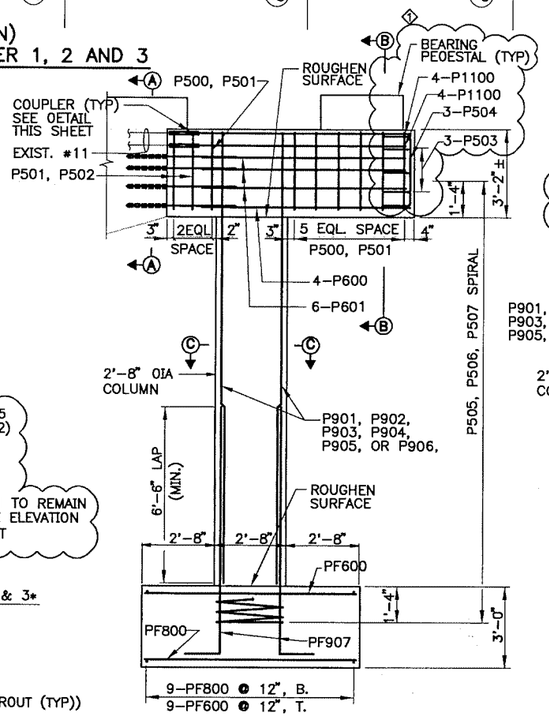


COUPLER DETAIL
1 1/2"=1'-0"



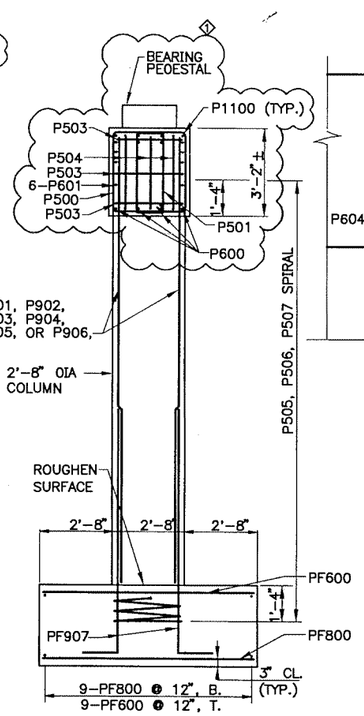
* COORDINATE WITH PIER REINFORCEMENT SCHEDULE

SECTION A–A
3/4"=1'-0"

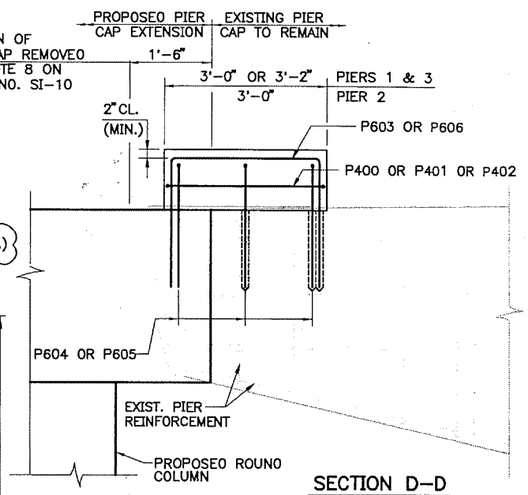


ELEVATION–REINFORCEMENT
3/8"=1'-0"

(PIER 1 REINFORCEMENT SHOWN)



END ELEVATION–REINFORCEMENT
3/8"=1'-0"



SECTION D–D
3/4"=1'-0"

NOTES

1. REINFORCING SHOWN IS TYPICAL FOR ALL PIERS, UNLESS OTHERWISE NOTED.
2. FOR PIERS 2 AND 3 PILE LAYOUT AND PILE CAP REINFORCEMENT, SEE SHEET SI-12.
3. USE ERICO CADWELD MECHANICAL SPLICE COUPLER OR APPROVED EQUAL. THE COUPLERS SHALL BE INCIDENTAL TO REINFORCING STEEL ITEM 503.12. THE #11 BARS AND COUPLERS SHALL BE EPOXY PAINTED AFTER INSTALLATION.

Scale: AS NOTED

No.	Revision	By	Date
1	REINFORCING STEEL DETAILS	AD	6/28/02

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

	By	Date		By	Date
Designed	AAD	12/01	Checked	ML	1/02
Drawn	LL	12/01	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
PIER MODIFICATIONS II

SHEET NUMBER: SI-11
CONTRACT: 2002.25
44 OF 63

Scale:

No.	

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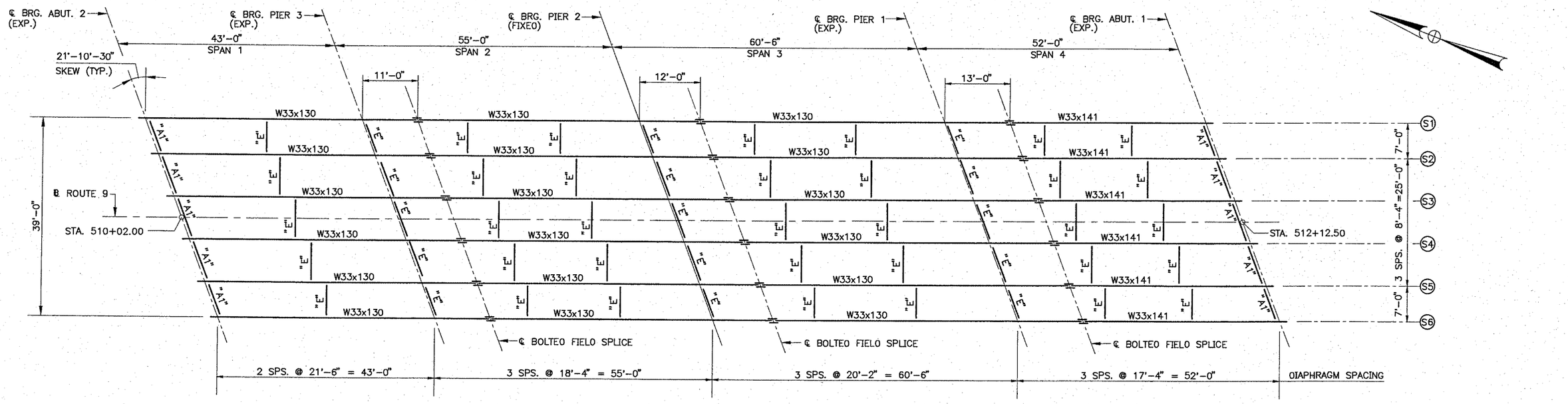
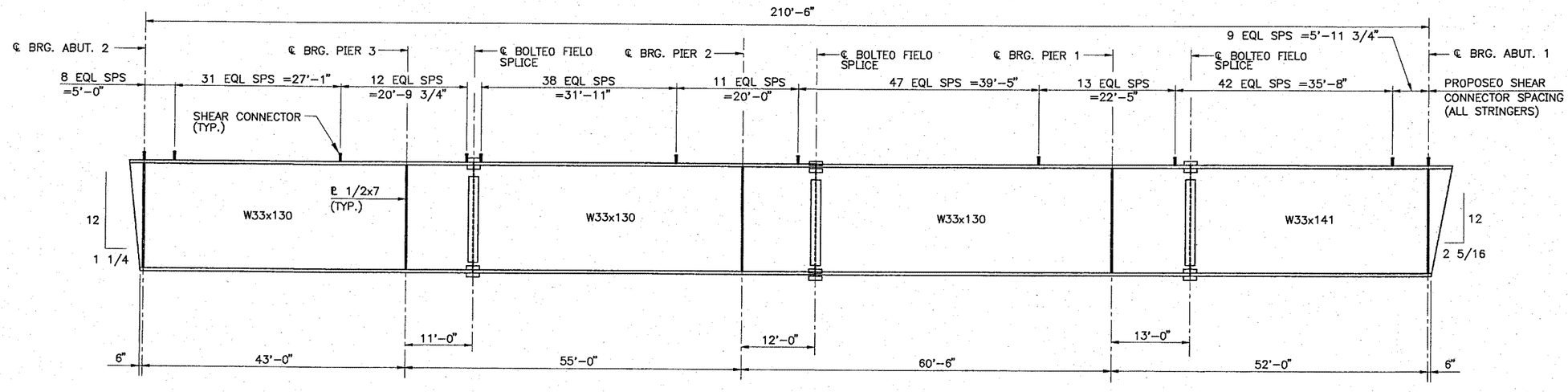


FRAMING PLAN
1"=10'

NOTE
THE CONNECTION PLATES AND DIAPHRAGM LENGTHS FOR TYPE "E" DIAPHRAGM (SKEWED) AT PIER LOCATIONS WILL BE DIFFERENT THAN TYPICAL TYPE "E" DIAPHRAGM ALONG SPAN WITH NO SKEW.



(S1) – (S6) STRINGER ELEVATION
1"=10' (HORIZONTAL)

NOTE
FOR NOTES, SEE SHEET NO. SI-14.

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Scale: AS NOTED

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	ML	11/01	Checked	AAD	12/01
Drawn	AR	11/01	In Charge of	RAL	3/02

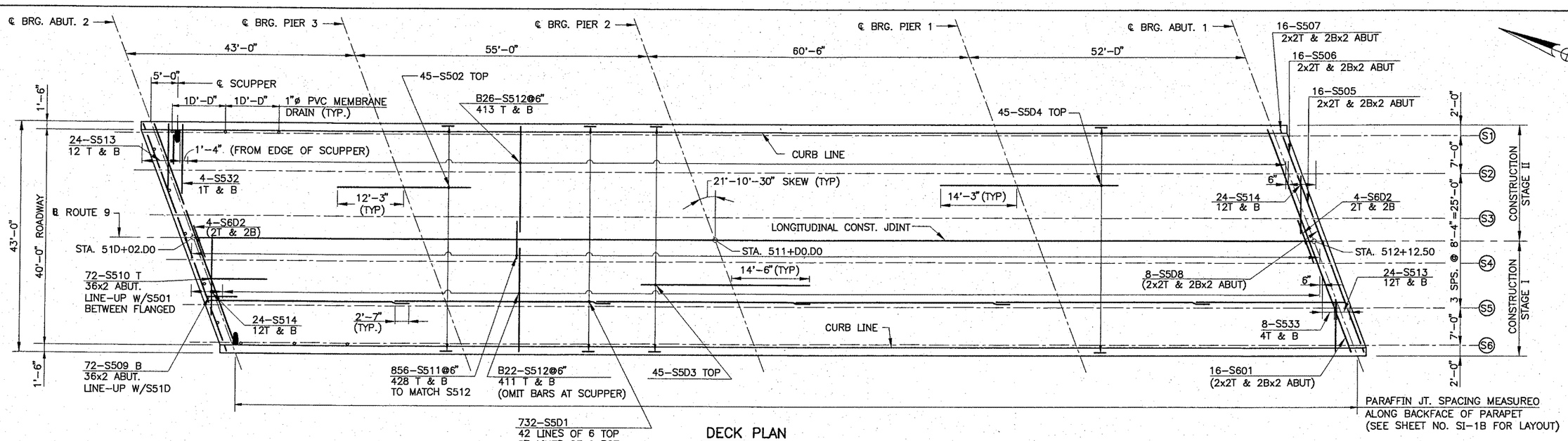
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

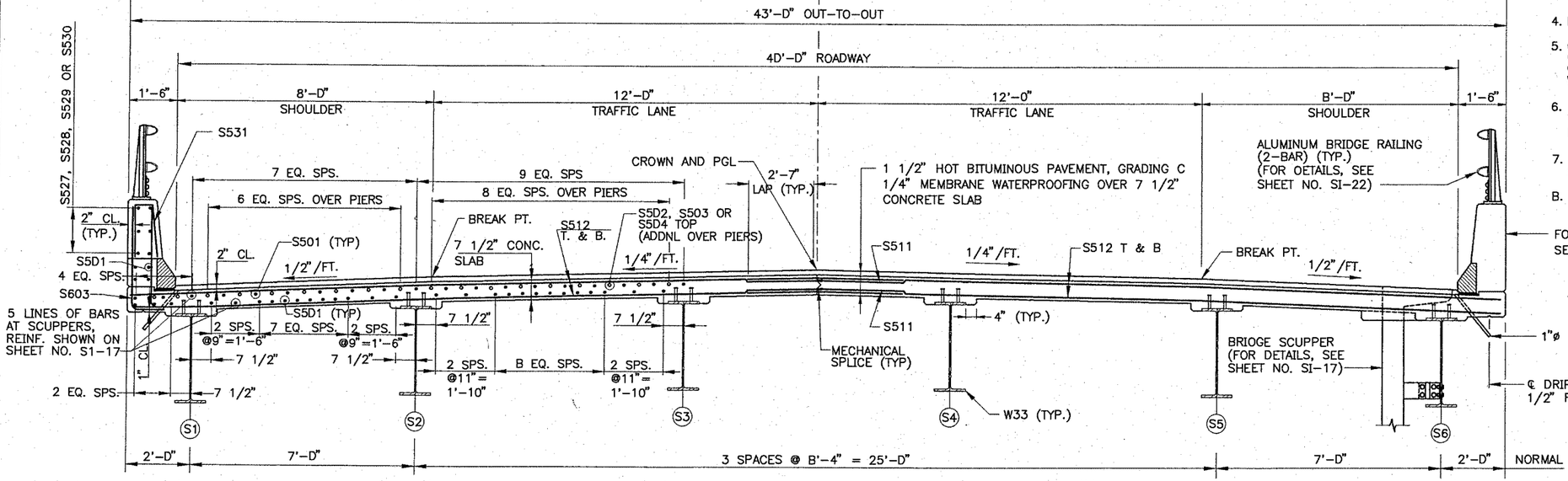
MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
FRAMING PLAN AND
STRINGER ELEVATION

SHEET NUMBER: SI-13
CONTRACT: 2002.25
46 OF 63



DECK PLAN
1"=1D'



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

SUPERSTRUCTURE NOTES

1. THE CONCRETE OECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WDOD FLOAT FINISH.
2. FOR SLAB OETAILS, SEE SHEET NOS. SI-17 AND SI-1B.
3. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. SI-19, SI-20 AND SI-21.
4. FOR REINFORCING STEEL SCHEOULE, SEE SHEET SI-26.
5. ONLY OOWEL BAR SPLICERS SHALL BE USEO WITHIN CONCRETE OECK SLAB FOR STAGE I CONSTRUCTION AT THE LONGITUOINAL CONSTRUCTION JOINT. OOWEL-IN BARS SHALL THEN BE USED WITHIN CONCRETE DECK SLAB FOR STAGE II CONSTRUCTION.
6. 1"ø PVC MEMBRANE DECK DRAINS SHALL BE INSTALLED SUCH THAT THEY OO NOT ORAIN ONTO A STRINGER FLANGE, DIAPHRAGMS OR BRIDGE SEAT.
7. FOR DECK SLAB REINFORCING STEEL AT SCUPPERS, SEE SHEET NO. SI-17.
8. FOR DECK PLACEMENT SEQUENCE, SEE SHEET NO. SI-18.

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Scale: AS NOTED

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Designed	ML	10/01	Checked	AAD	12/01
Drawn	AR	10/01	In Charge of	RAL	3/02

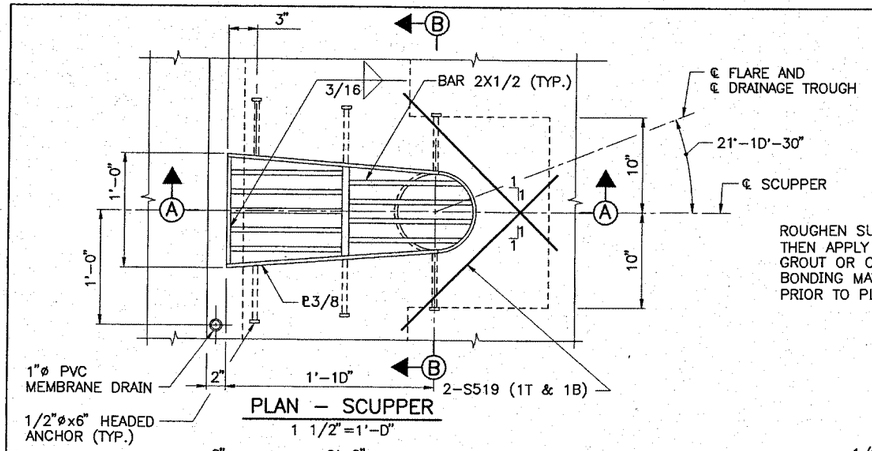
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

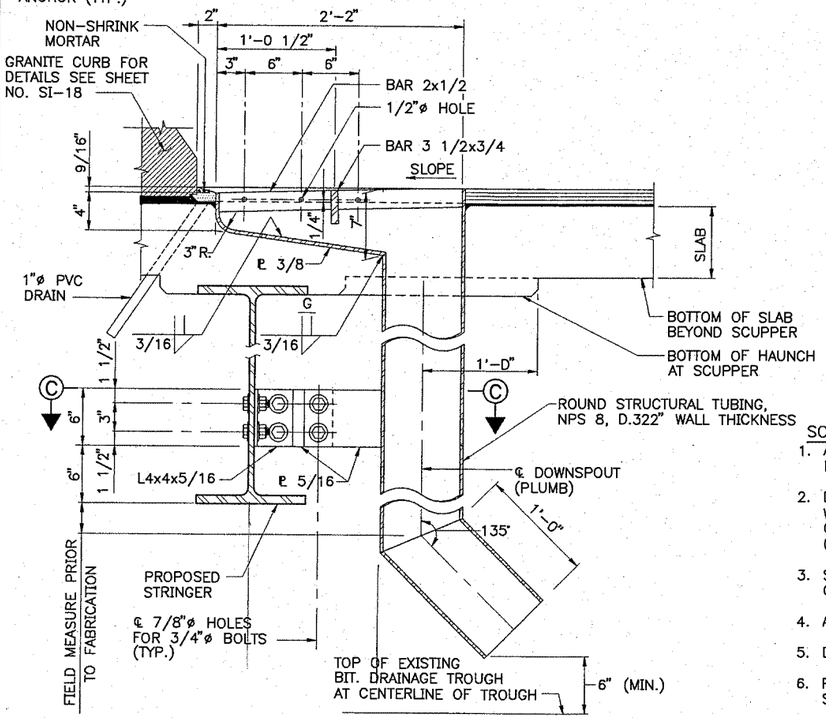
MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
DECK PLAN AND TYPICAL SECTION

SHEET NUMBER: SI-16
CONTRACT: 2002.25
49 OF 63

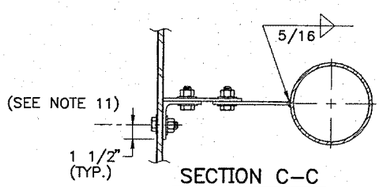


PLAN – SCUPPER
1 1/2"=1'-D"

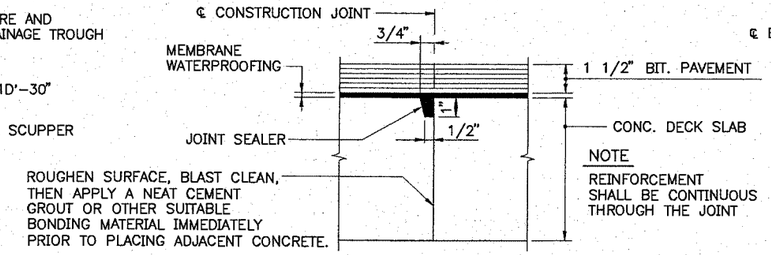


SECTION A–A
1 1/2"=1'-0"

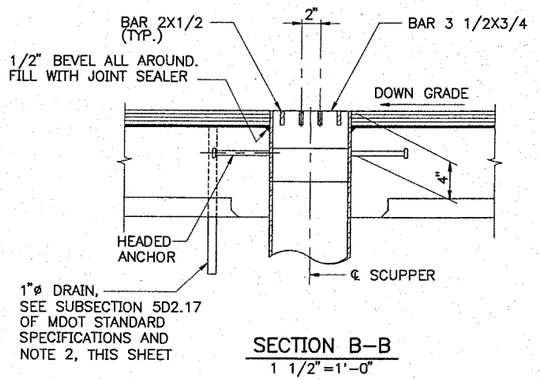
3/4 = 1'-0



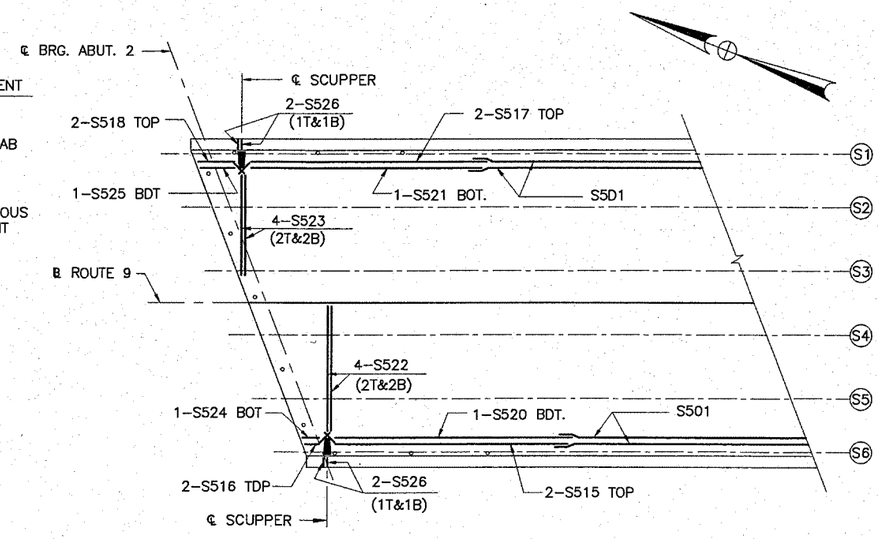
SECTION C–C
1 1/2"=1'-0"



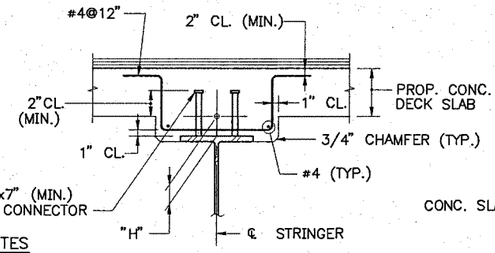
TRANSVERSE CONSTRUCTION JOINT DETAIL
3"=1'-D"



SECTION B–B
1 1/2"=1'-0"

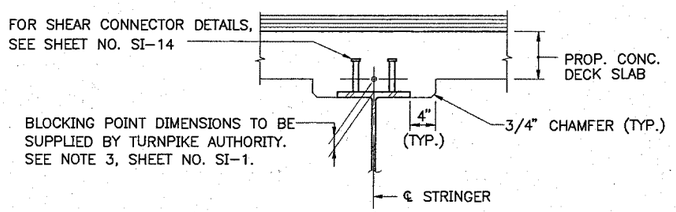


PARTIAL DECK PLAN
REINFORCING STEEL AT SCUPPERS
1"=10'

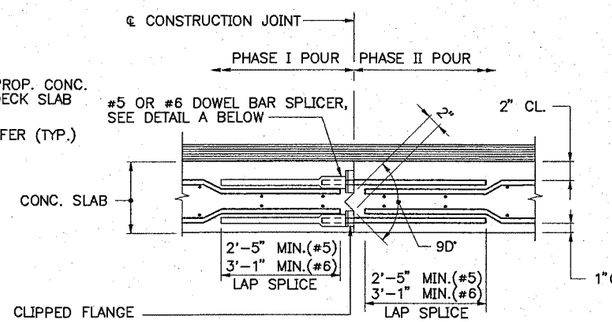


NOTES
1. THESE DETAILS APPLY ONLY WHEN "H" IS GREATER THAN 3".
2. WHEN "H" IS 3" OR LESS, SEE BLOCKING POINT DETAIL BELOW.

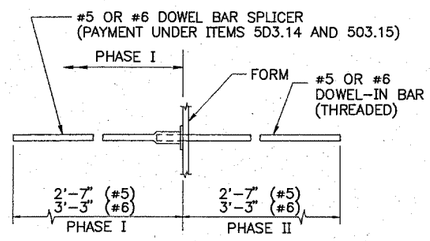
EXTRA DEPTH HAUNCH DETAILS
1"=1'-0"



BLOCKING POINT DETAIL
1"=1'-D"



LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



DETAIL A
NO SCALE

SCUPPER NOTES
1. ALL WELDS TO BE CONTINUOUS 1/4" FILLET WELDS EXCEPT AS NOTED.
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS 1/2" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (1/4" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFDRM TD ASTM A709, GRADE 36.
5. DDWNSPDUT AND FLARE SHALL CDNFDRM TD ASTM A501.
6. PAYMENT FOR SCUPPERS, PVC DRAINS AND SCREENS SHALL BE INCIDENTAL TO ITEM 5D2.263.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET NO. SI-16.
8. FIELD MEASUREMENT IS REQUIRED TO DETERMINE THE LENGTH OF DDWNSPOUT BEYOND THE BOTTDM FLANGE AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
9. FIELD REPAIR GALVANIZING WITH ZINC-RICH PAINT ACCORDING TO SECTION 5D6 OF THE SPECIAL PROVISIONS. (PAYMENT INCIDENTAL TO ITEM 5D2.263)
10. GRATING SHALL BE A COMMERCIAL HEAVY-DUTY GRATING.
11. HOLES THROUGH WEB SHALL BE FIELD DRILLED, THEN PAINTED TO THE SATISFACTION OF THE ENGINEER PRIOR TO INSTALLING BOLTS.

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HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

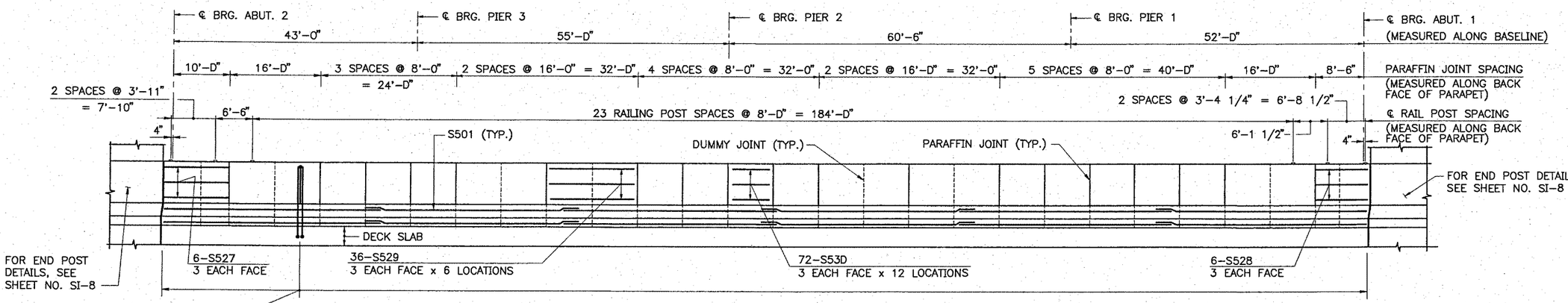
MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/ ROUTE 9
SLAB DETAILS I

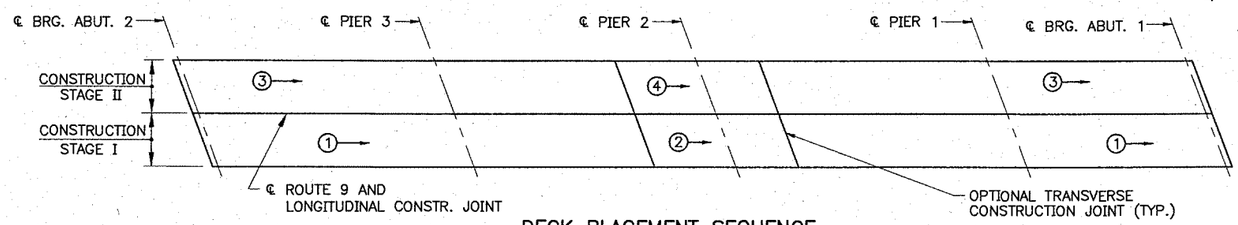
SHEET NUMBER: SI-17

CONTRACT: 2002.25

50 OF 63

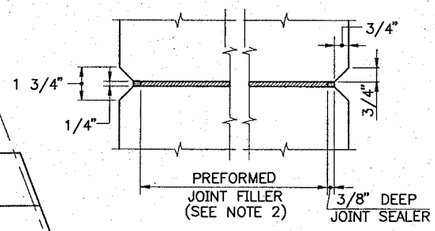


PARAPET ELEVATION
(SOUTH ELEVATION SHOWN, NORTH ELEVATION SIMILAR)
HORZ. 1"=1D'
VERT. 1"=2'-D"

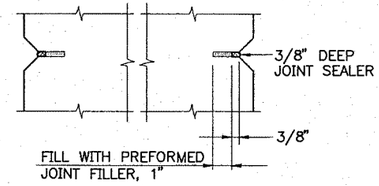


DECK PLACEMENT SEQUENCE
N.T.S.

PLACEMENT NOTES
1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
3. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB. AFTER WHICH, REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 5D2 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
4. PLACEMENTS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE PLACED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT POURS.
5. STAY-IN-PLACE FORMS SHALL NOT BE USED.
6. THE TRANSVERSE CONSTRUCTION JOINTS MAY BE OMITTED, IF APPROVED BY THE ENGINEER AND PROVIDED THAT THE CONCRETE OF THE ENTIRE DECK SLAB REMAINS PLASTIC UNTIL THE COMPLETION OF THE LAST PLACEMENT AND ALL OTHER SPECIFICATIONS ARE FOLLOWED. A WRITTEN REQUEST TO OMIT THE TRANSVERSE CONSTRUCTION JOINTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

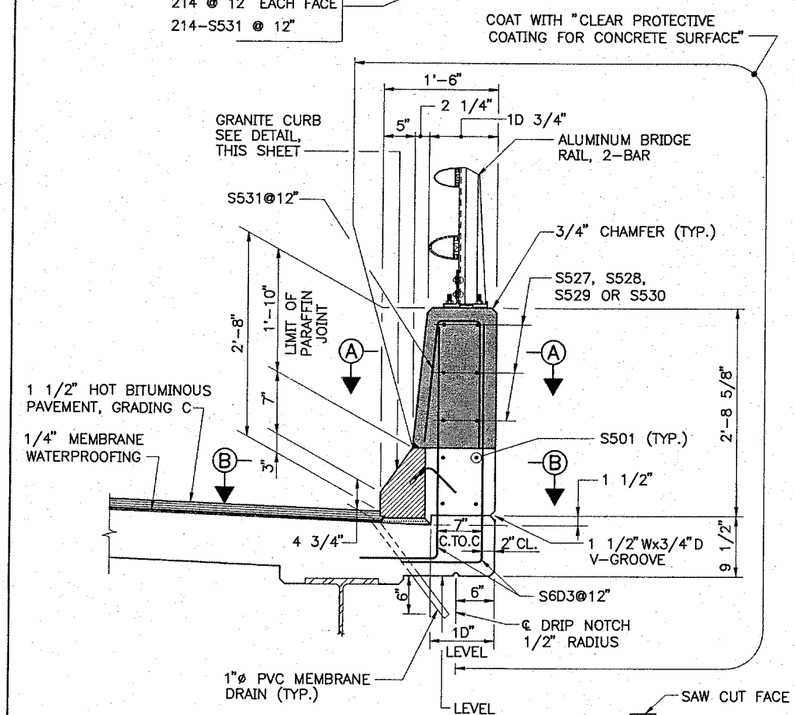


SECTION A-A
3"=1'-D"

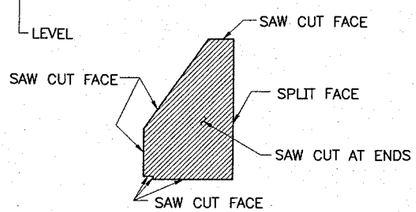


SECTION B-B
3"=1'-0"

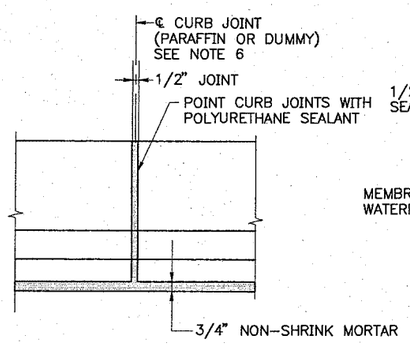
PARAFFIN AND DUMMY JOINT NOTES
1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT. ASPHALT TYPE JOINT FILLER SHALL NOT BE USED. ONLY CERAMAR OR CORK TYPE SHALL BE PERMITTED.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D 1752 AND MAY BE SUPPORTED WITH A THIN STEEL PLATE. REMOVE PLATE CAREFULLY WHILE CONCRETE IS PLASTIC.
3. SECTION B-B ALSO APPLIES TO DUMMY JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKAFLEX-1A.
5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.264, STRUCTURAL CONCRETE PARAPETS.
6. GRANITE CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN AND DUMMY JOINTS.



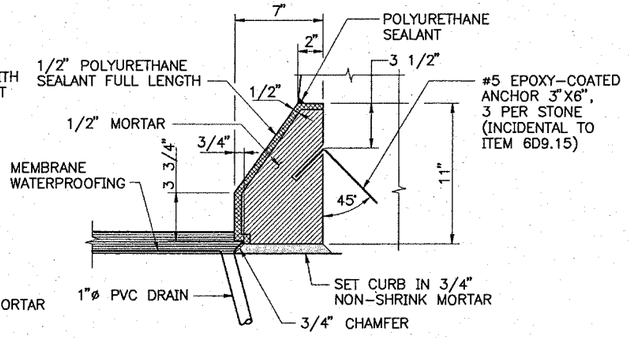
PARAPET DETAIL
1"=1'-0"



CURB CUT DETAIL
2"=1'-D"



BRIDGE CURB ELEVATION
2"=1'-0"



GRANITE CURB DETAIL
2"=1'-0"

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/ ROUTE 9
SLAB DETAILS II

SHEET NUMBER: SI-18
CONTRACT: 2002.25
51 OF 63

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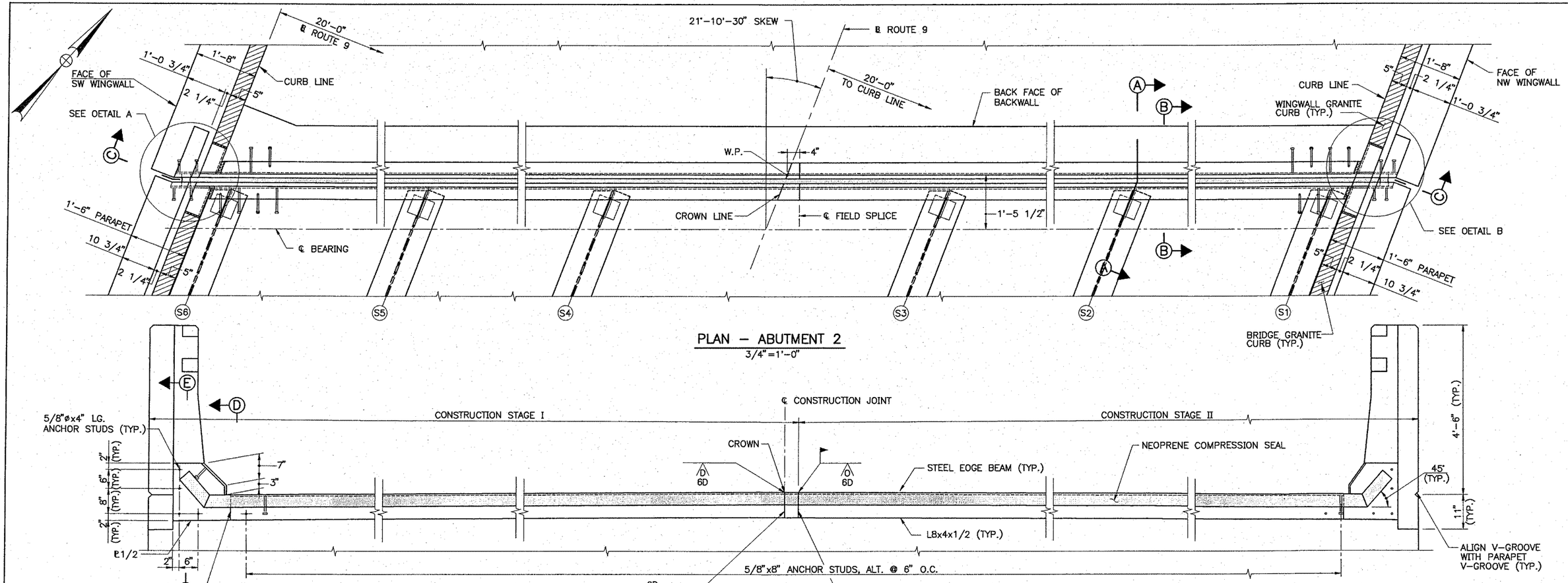
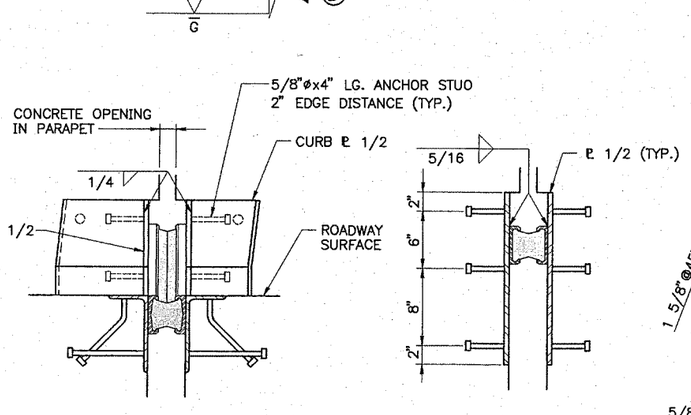


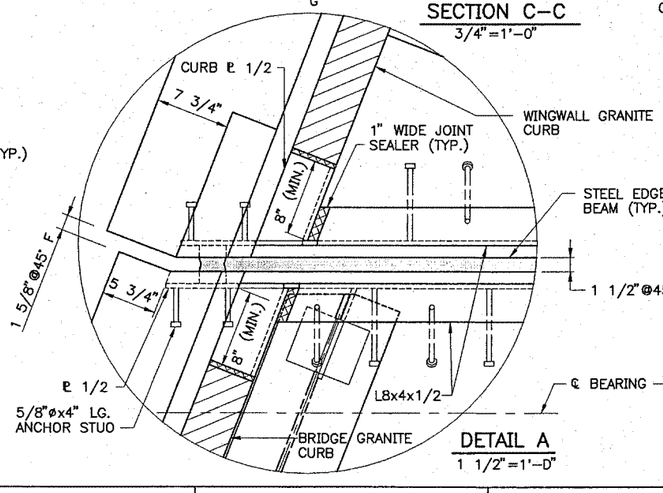
PLAN – ABUTMENT 2
3/4"=1'-0"



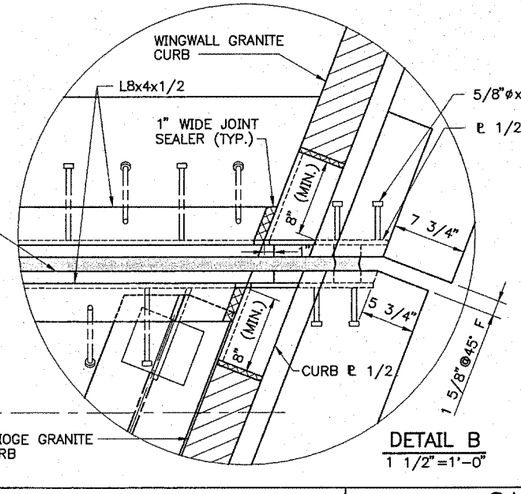
SECTION D–D
1 1/2"=1'–D"

SECTION E–E
1 1/2"=1'–0"

SECTION C–C
3/4"=1'–0"



DETAIL A
1 1/2"=1'–D"



DETAIL B
1 1/2"=1'–D"

NOTES

1. CONSTRUCTION STAGES, SHOWN, RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE OECK AND THE ABUTMENT BACKWALL SHALL BE CONSTRUCTEO ACCOROING TO THE STAGE CONSTRUCTION AS SHOWN ON SHEET NO. SI–3 ANO SI–5.
2. THE ANGLES, L8x4x1/2, ANO STEEL EDGE BEAMS SHALL BE FABRICATED BY CONFORMING TO THE TOP OF BACKWALL ELEVATIONS FOR ABUTMENT 2, WHICH ARE SHOWN ON SHEET NO. SI–5.
3. FOR SECTIONS A–A ANO B–B, SEE SHEET NO. SI–21.

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2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774–5155
FAX (207) 772–7410

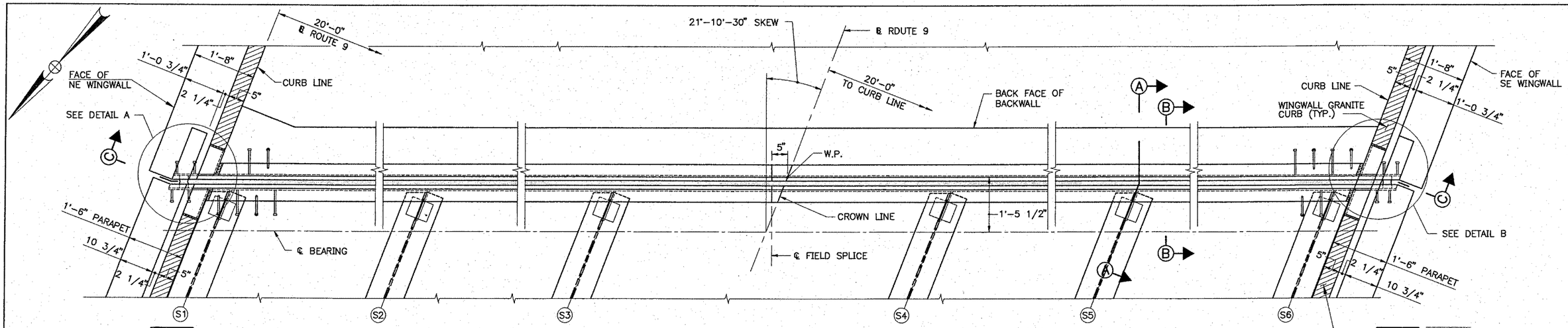
MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

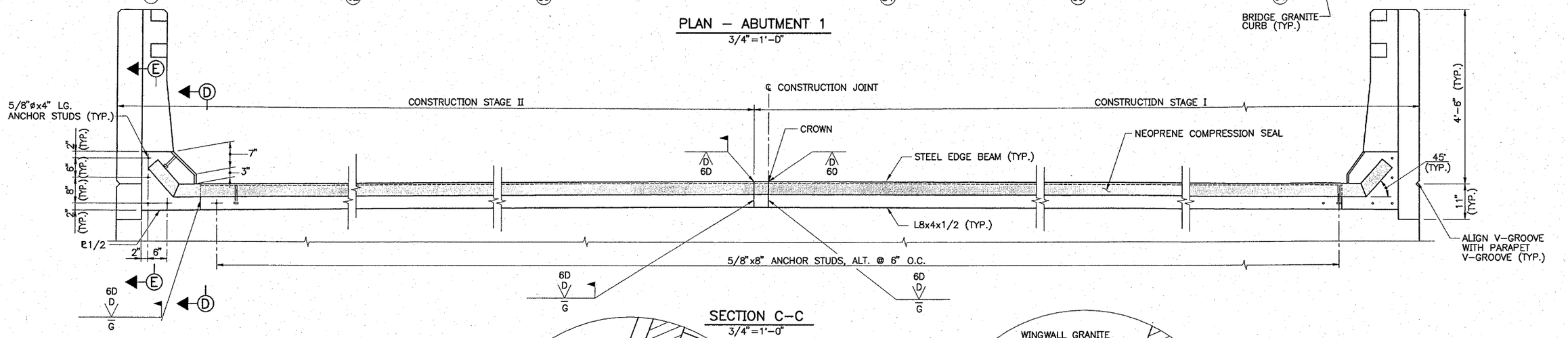
SABATTUS INTERCHANGE/ ROUTE 9
EXPANSION JOINT DETAILS I

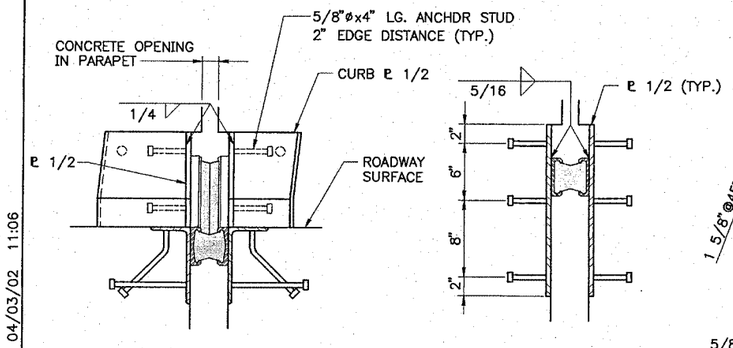
SHEET NUMBER: SI–19
52 OF 63

CONTRACT: 2002.25



PLAN – ABUTMENT 1
3/4"=1'-0"

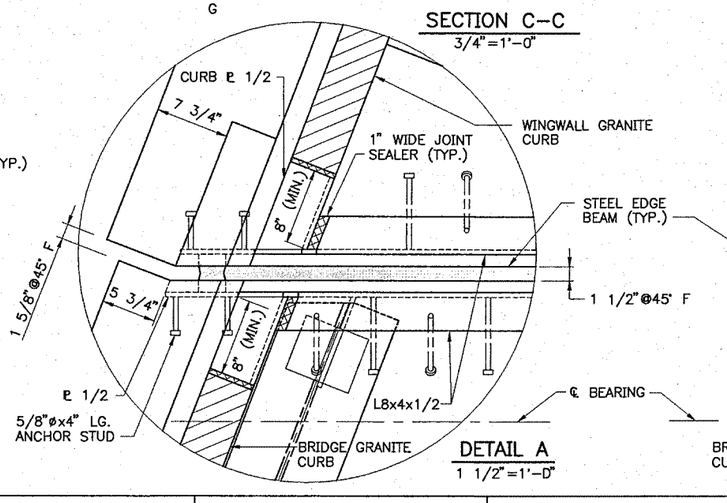




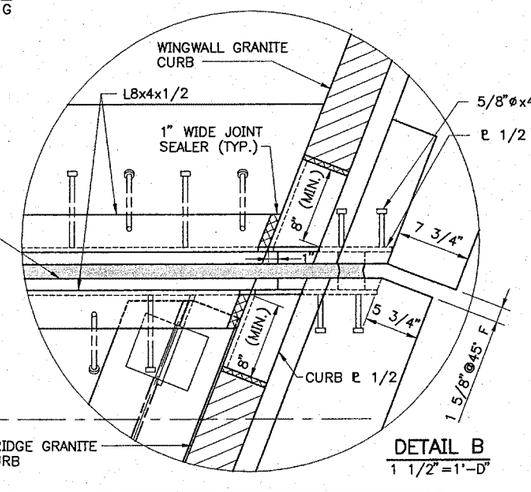
SECTION D–D
1 1/2"=1'-0"

SECTION E–E
1 1/2"=1'-0"

SECTION C–C
3/4"=1'-0"



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



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

NOTES

1. CDNSTRUCTION STAGES, SHOWN, RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE DECK AND THE ABUTMENT BACKWALL SHALL BE CONSTRUCTED ACCORDING TO THE STAGE CONSTRUCTIDN AS SHOWN ON SHEET NO. SI-3 AND SI-6.
2. THE ANGLES, L8x4x1/2, AND STEEL EDGE BEAMS SHALL BE FABRICATED BY CDNFORMING TO THE TOP OF BACKWALL ELEVATIONS FOR ABUTMENT 1, WHICH ARE SHOWN ON SHEET NO. SI-6.
3. FOR SECTIONS A–A AND B–B, SEE SHEET NO. SI-21.

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY

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SABATTUS INTERCHANGE/ ROUTE 9
EXPANSION JOINT DETAILS II

SHEET NUMBER: SI-20

CONTRACT: 2002.25

53 OF 63

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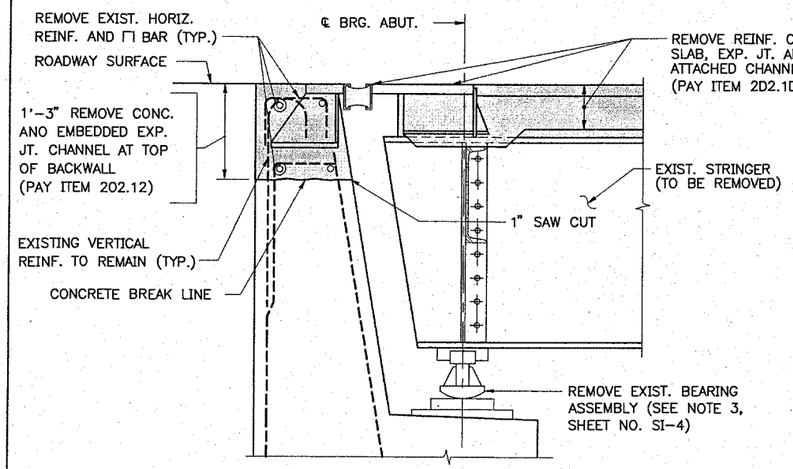
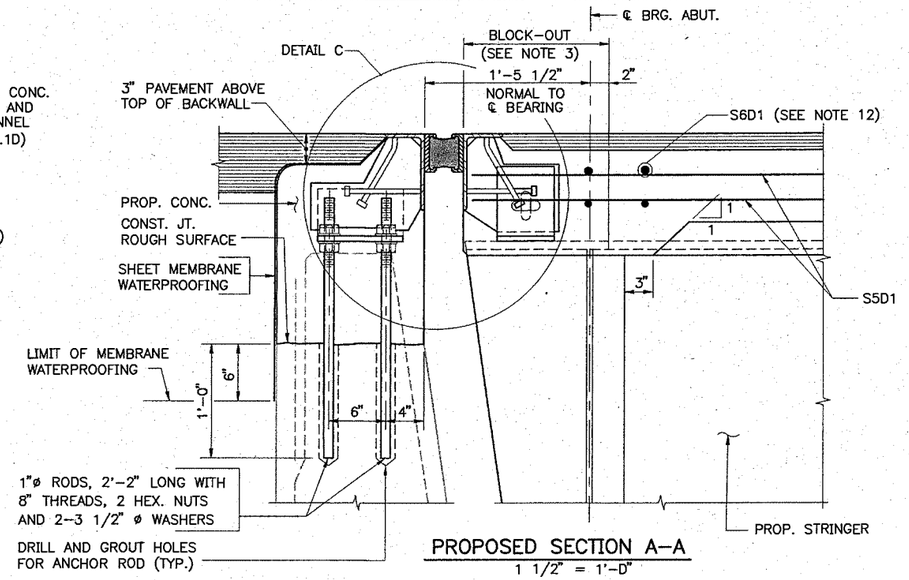


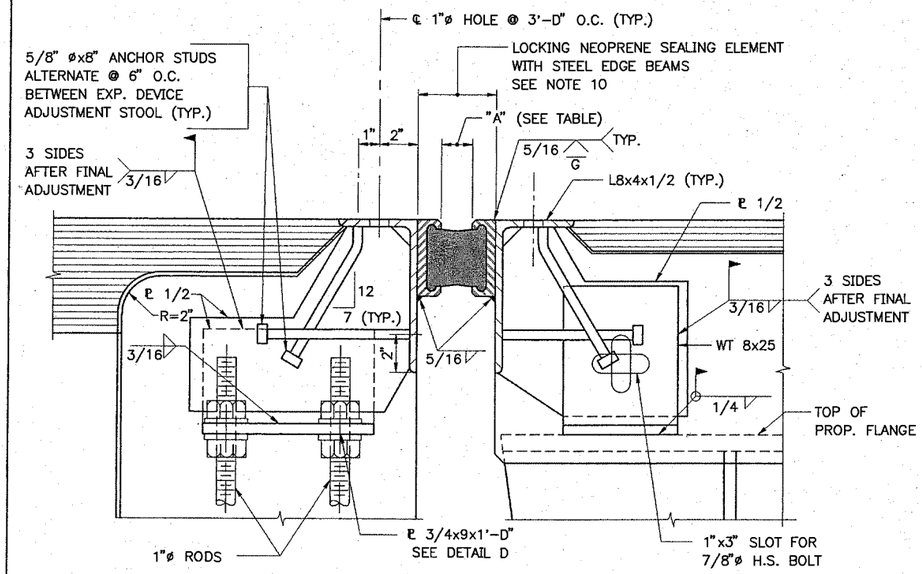
EXISTING SECTION A–A

1" = 1'-0"



PROPOSED SECTION A–A

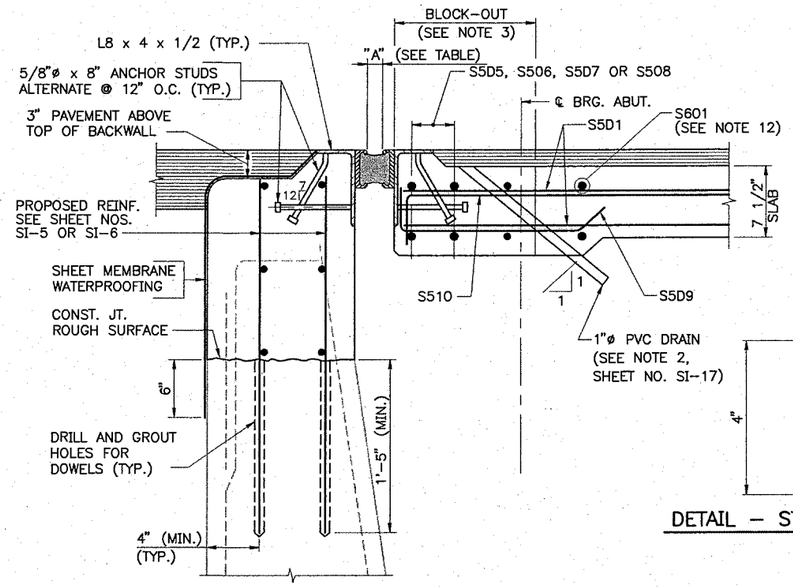
1 1/2" = 1'-0"



DETAIL C

3" = 1'-0"

SEAL OPENING TABLE (DIM. "A")								
TEMPERATURE	0°F	15°F	30°F	45°F	60°F	75°F	90°F	105°F
ABUTMENT 2	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1 1/16"
ABUTMENT 1	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"

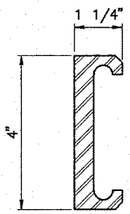


PROPOSED SECTION B–B

1 1/2" = 1'-0"

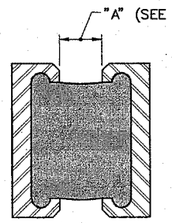
EXPANSION DEVICE NOTES

1. SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
2. THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF 1 1/2 INCHES IN THE FABRICATION SHOP AND SHALL BE SECURED TO THE STRINGER AND/OR ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND 80°F. THE OPENING SHALL BE ADJUSTED TO REFLECT THE TEMPERATURE OF THE STRUCTURE AT THE TIME OF INSTALLATION. SEE TABLE FOR OPENING DIMENSIONS. OPENING IS TO BE MEASURED PARALLEL TO THE CENTER LINE DF CONSTRUCTION.
3. THE SLAB CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY. CONTRACTOR SHALL APPLY AN EPOXY BONDING AGENT, APPROVED BY THE ENGINEER, TO ALL VERTICAL SURFACES OF THE BLOCK-OUT BEFORE THE CONCRETE IS PLACED. SEE SECTION 520.D6 OF THE STANDARD SPECIFICATIONS.
4. THE FABRICATOR'S ATTENTION IS OIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING EACH OEVICE IN TWO SECTIONS.
5. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.
6. ALL EXPOSED SURFACES OF ANGLES AND STEEL EDGE BEAMS SHALL BE FIELD PAINTED.
7. ALL STEEL COMPONENTS SHALL BE AASHTO M27D GRADE 36, UNLESS OTHERWISE NOTED.
8. ALL WELDS ARE 5/16" CONTINUOUS FILLETS, EXCEPT AS NOTED.
9. ALL STEEL SURFACES THAT WILL BE EMBEDDED IN CONCRETE SHALL BE COATED WITH AN EPOXY BONDING COMPOUND.
10. THE NEOPRENE COMPRESSION SEALS TO BE FURNISHED SHALL HAVE A MINIMUM MOVEMENT RATING OF:
    ABUTMENT 1 = 3 INCHES
    ABUTMENT 2 = 3 INCHES
11. FOR LOCATION OF SECTIONS A–A AND B–B, SEE SHEET NOS. SI-19 AND SI-2D.
12. ONLY BARS PARALLEL TO THE ABUTMENT ARE SHOWN. BARS PERPENDICULAR TO STRINGERS ARE NOT SHOWN FOR CLARITY.
13. CONCRETE USED FOR FILLING BLOCK-OUT SHALL BE OF THE SAME CLASS AND STRENGTH AS THAT USED FOR THE DECK.
14. NO REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE CUT TO CLEAR THE BRIDGE EXPANSION DEVICE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
15. END DIAPHRAGM, TYPE A1, NOT SHOWN IN SECTIONS.



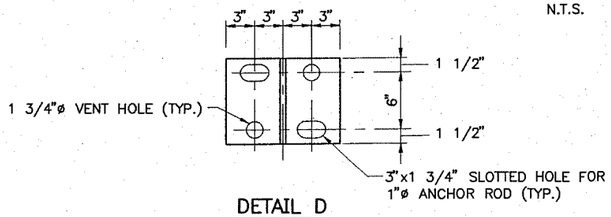
DETAIL – STEEL EDGE BEAM

N.T.S.



DETAIL – NEOPRENE COMPRESSION SEAL WITH STEEL EDGE BEAMS

N.T.S.



DETAIL D

1 1/2" = 1'-0"

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Scale: AS NOTED

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	10/01	Checked	AAD	1/02
Drawn	LS	10/01	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

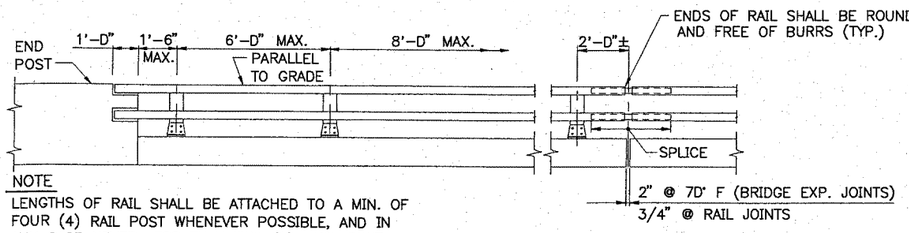
MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
EXPANSION JOINT DETAILS III

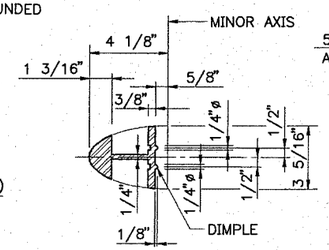
SHEET NUMBER: SI-21

CONTRACT: 2002.25

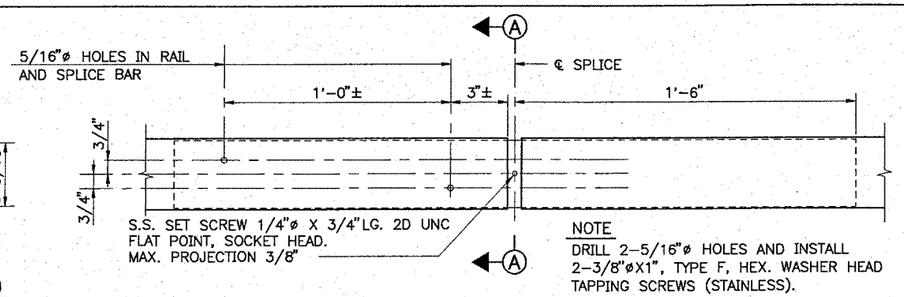


NOTE
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING – ELEVATION
3/8"=1'-0"

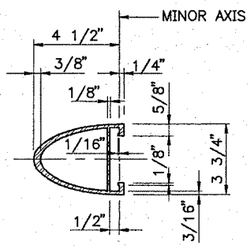


SECTION A–A (RAIL)
3"=1'-D"

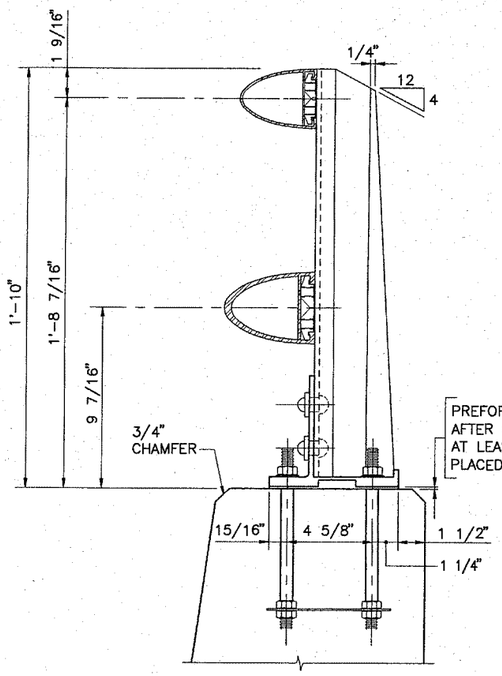


NOTE
DRILL 2–5/16"ø HOLES AND INSTALL 2–3/8"øX1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).

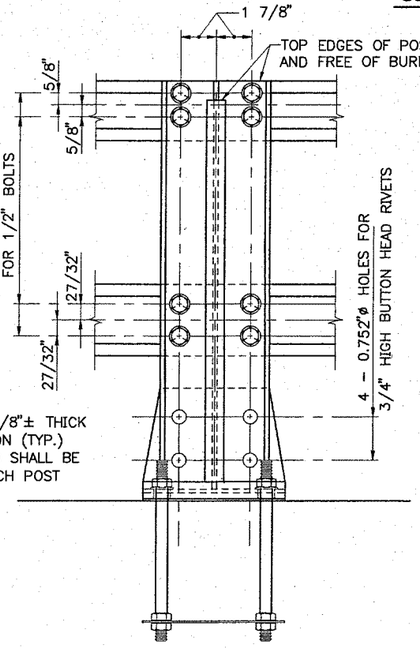
SPLICE DETAIL
3"=1'-D"



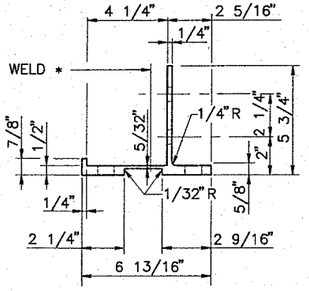
RAIL MEMBER
3"=1'-D"



BRIDGE RAILING (ASSEMBLY)
3"=1'-0"

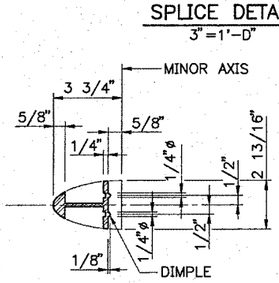


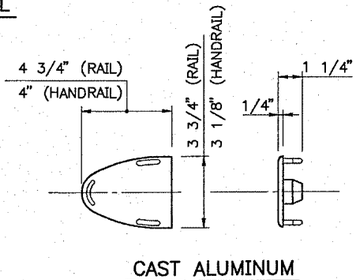
OUTSIDE ELEVATION OF POST
3"=1'-D"



POST BASE SECTION
3"=1'-D"

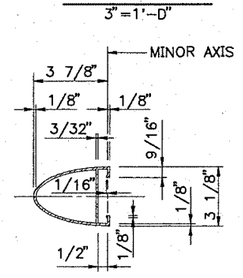
NOTE
* ONE–PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE–PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO–PIECE BASE PLATE.



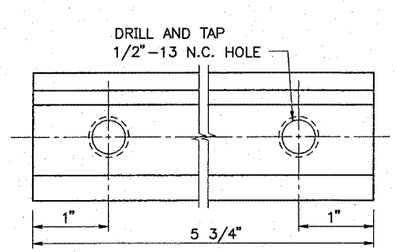


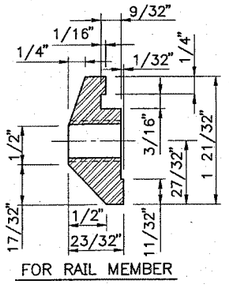
SECTION A–A (HANDRAIL)
3"=1'-D"

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

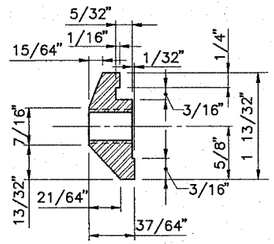


HANDRAIL MEMBER
3"=1'-0"

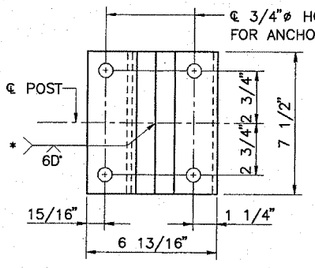




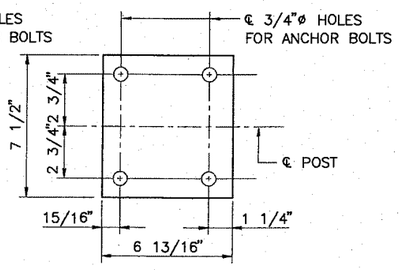
FOR RAIL MEMBER



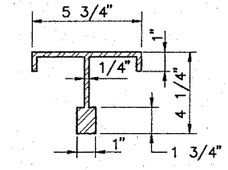
FOR HANDRAIL



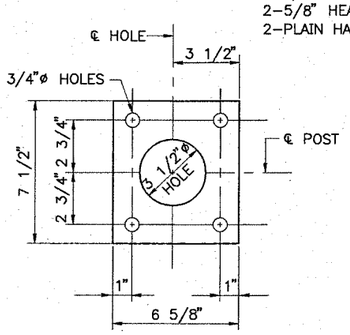
POST BASE (BOTTOM VIEW)
3"=1'-0"



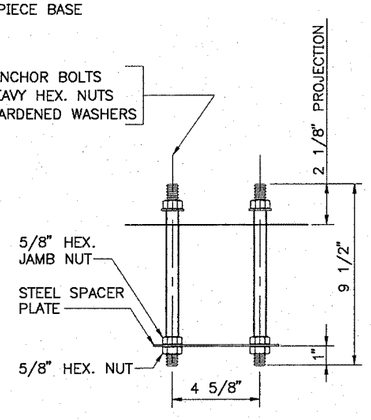
PREFORMED PAD
3"=1'-D"



POST SECTION
3"=1'-D"

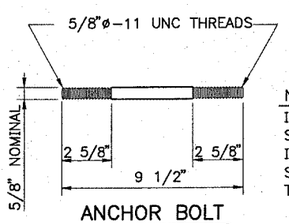


STEEL SPACER PLATE (FOR ANCHORAGE)
3"=1'-D"



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

CLAMP BAR DETAILS
FULL SIZE



ANCHOR BOLT
3"=1'-0"

NOTE
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.

NOTE
FOUR (4) BOLT, NUT AND WASHER SETS ARE REQUIRED PER ASSEMBLY. ALL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED.

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Scale: AS NOTED

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	AD	10/01	Checked	ML	1/02
Drawn	LS	10/01	In Charge of	RAL	3/02

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774–5155
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MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE Trans pass

SABATTUS INTERCHANGE/
ROUTE 9
ALUMINUM BRIDGE RAILING DETAILS

SHEET NUMBER: SI–22
55 OF 63

CONTRACT: 2002.25