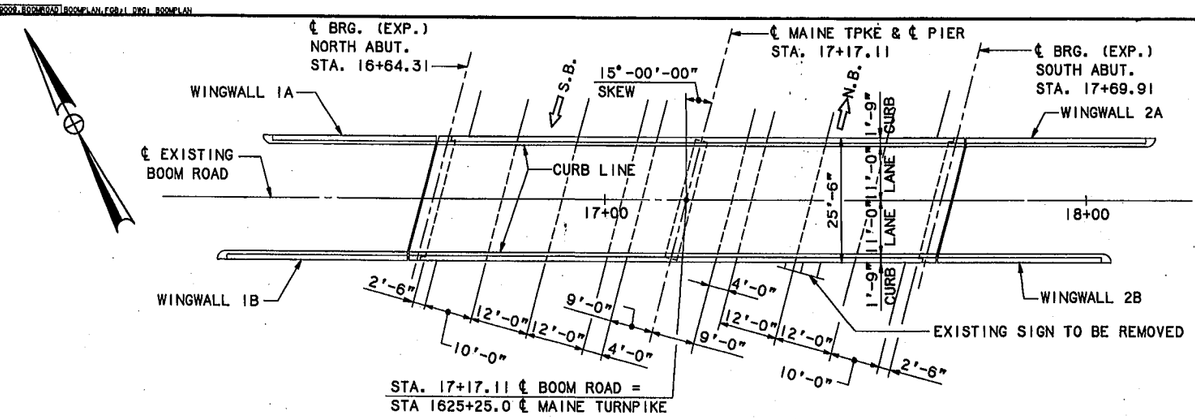
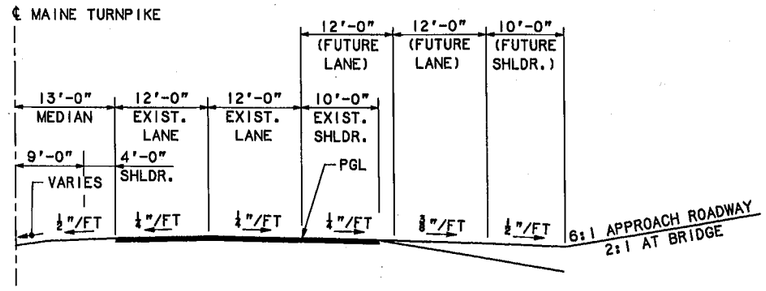
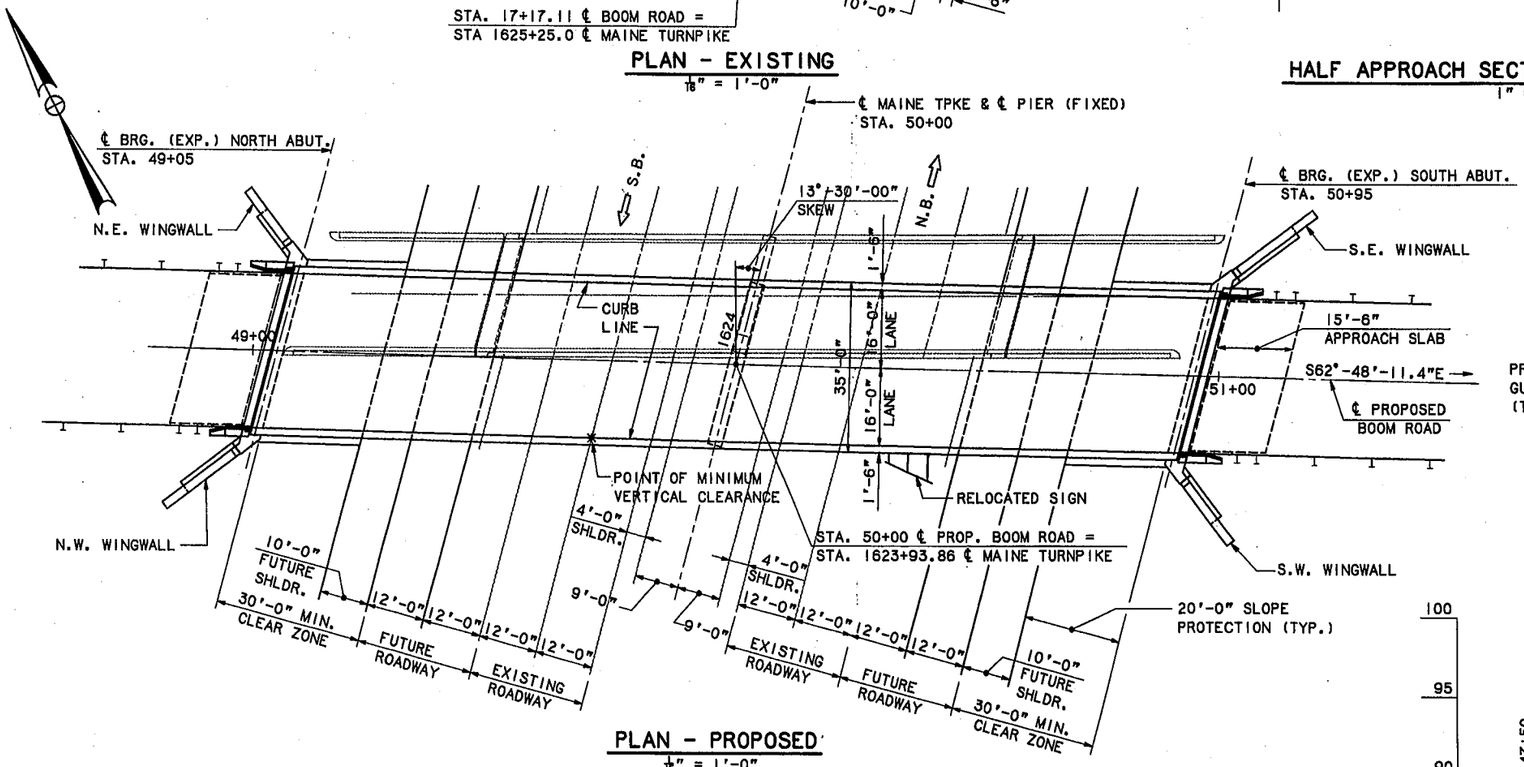


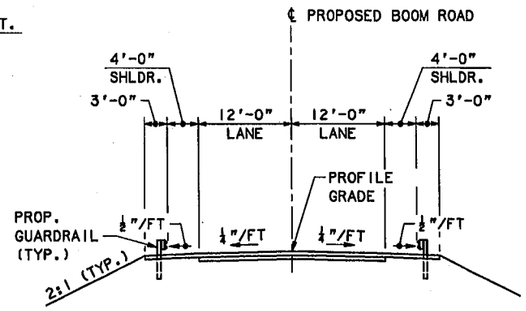
PLAN - EXISTING
1/16" = 1'-0"



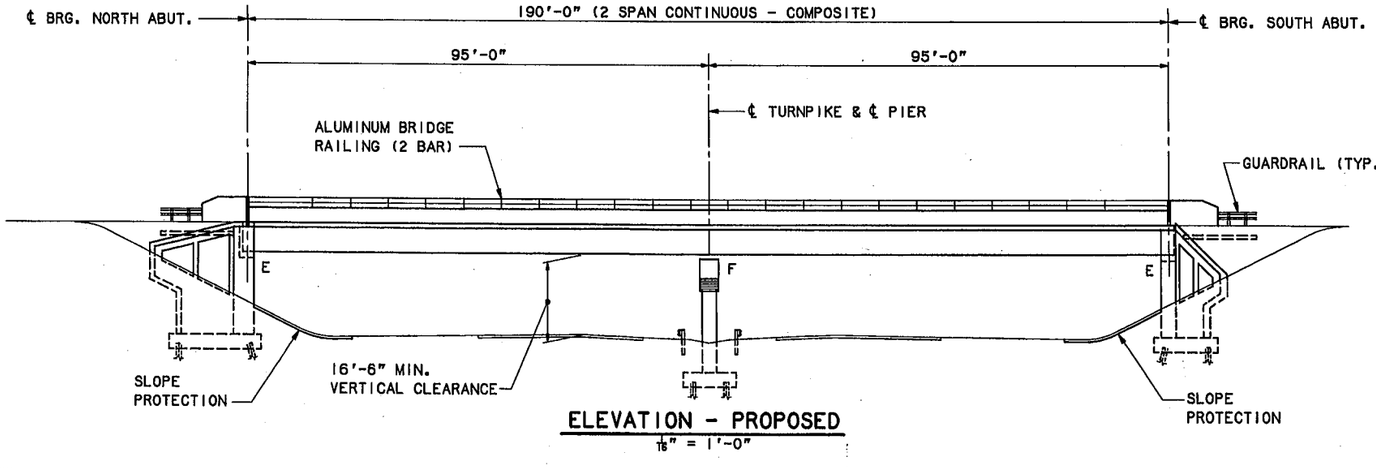
HALF APPROACH SECTION - MAINE TURNPIKE
1" = 10'-0"



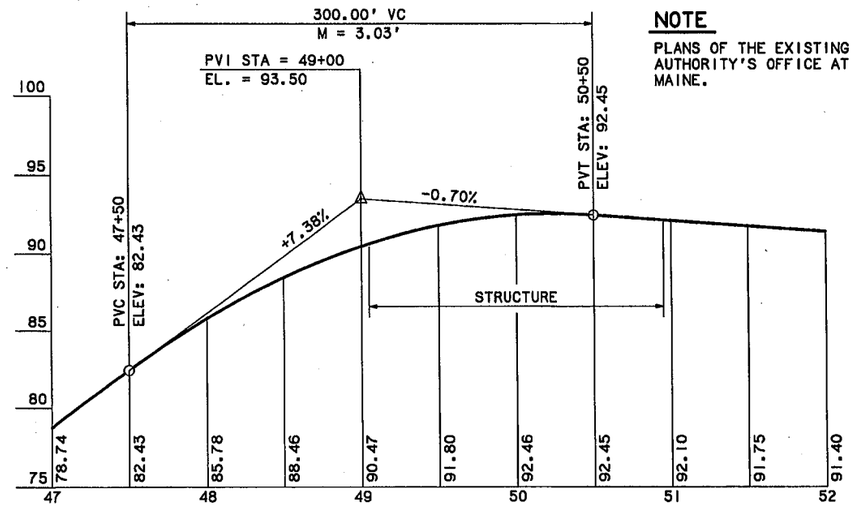
PLAN - PROPOSED
1/16" = 1'-0"



APPROACH SECTION - BOOM ROAD
1" = 10'-0"



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



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

GENERAL NOTES

SPECIFICATIONS

DESIGN
AASHTO STANDARD SPECIFICATIONS FOR HI 1992 AND INTERIM SPECIFICATIONS 1994.

CONTRACT
STATE OF MAINE, DEPARTMENT OF TRANSPO STANDARD SPECIFICATIONS, HIGHWAYS AND REVISION OF OCTOBER 1990.

DESIGN LOADING

LIVE LOAD
HS 25, 500,000 CYCLES

DESIGN METHOD
LOAD FACTOR DESIGN

MATERIALS

CONCRETE
SUPERSTRUCTURE SLAB CONCRETE SHALL BE
ALL OTHER CONCRETE SHALL BE CLASS A.

REINFORCING STEEL
ASTM A615 GRADE 60, (EPOXY-COATED AND BARS).

STRUCTURAL STEEL
WELDED GIRDERS: FLANGES, WEBS, SPLICE BEARING STIFFENERS AND BEARING SHOES ASTM A709, GRADE 50.
ALL OTHER STRUCTURAL STEEL SHALL BE A GRADE 36.
HIGH STRENGTH BOLTS SHALL BE ASTM A32

BASIC ALLOWABLE STRESSES

CONCRETE
f'c = 4,500 P.S.I. (SUPERSTRUCTURE SL
f'c = 4,000 P.S.I. (ALL OTHER)

REINFORCING STEEL
fy = 60,000 P.S.I.

STRUCTURAL STEEL
ASTM A709 GRADE 50 Fy = 50,000 P.S.I
ASTM A709 GRADE 36 Fy = 36,000 P.S.I

NOTE

PLANS OF THE EXISTING BRIDGE ARE AVAIL AUTHORITY'S OFFICE AT 430 RIVERSIDE ST MAINE.

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HNTB HOWARD NEEDLES ARCHITECTS

No.	Revision	By:	Date:		By:	Date:
				Designed	XPM	3/95
				Drawn	RJT	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

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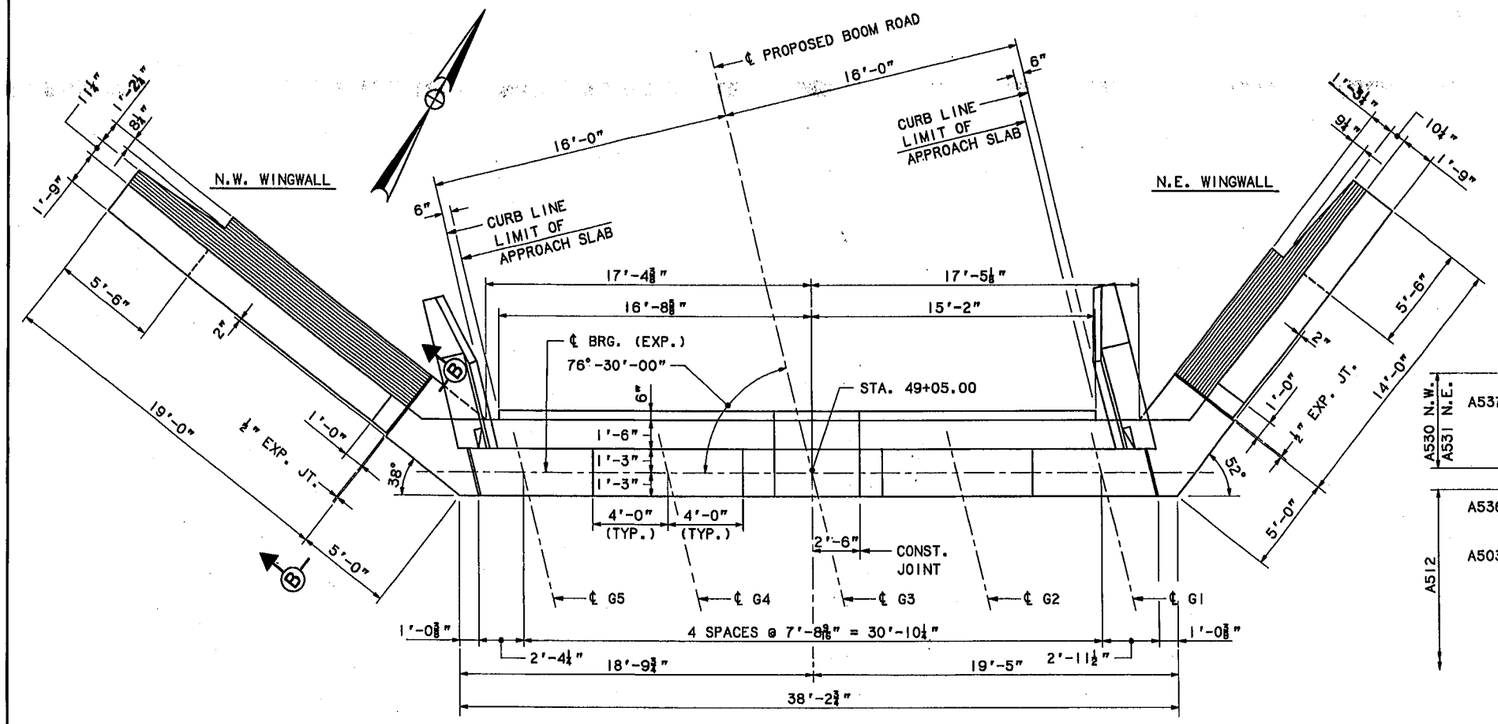
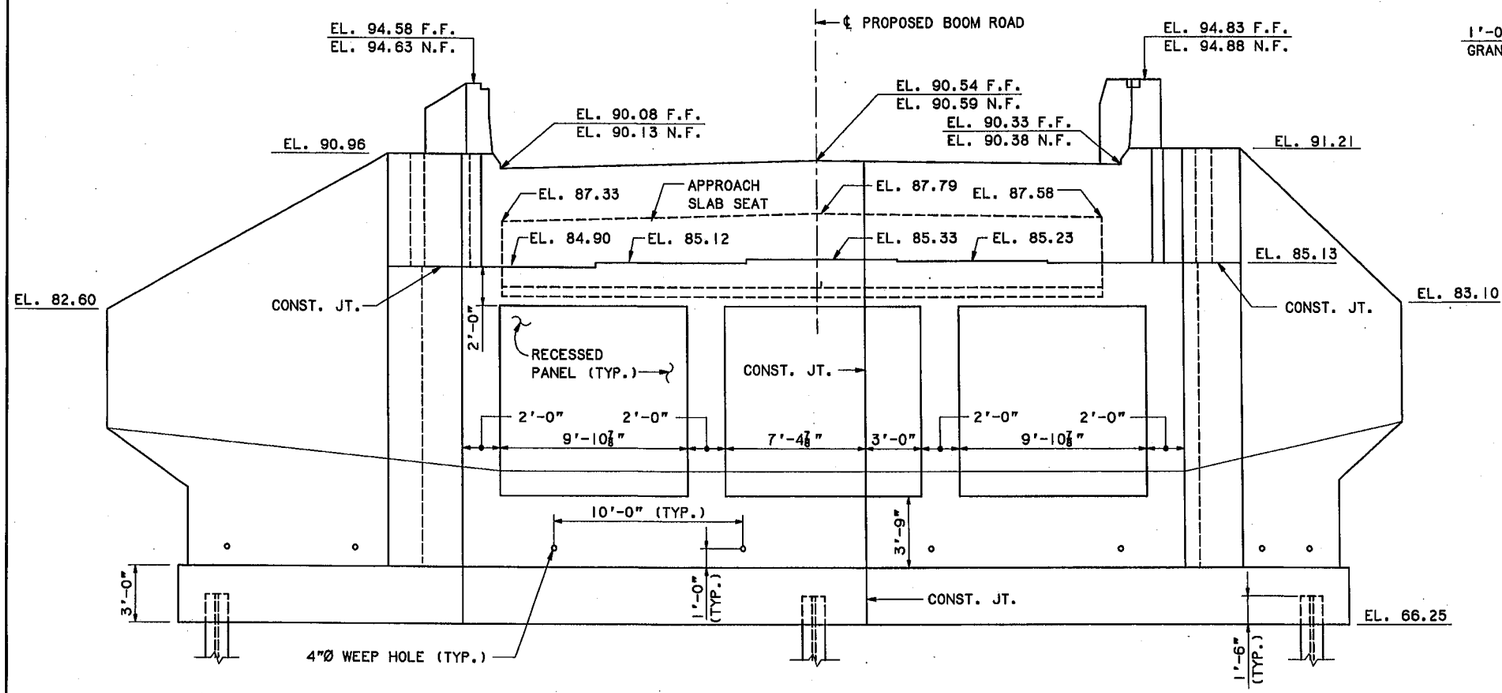
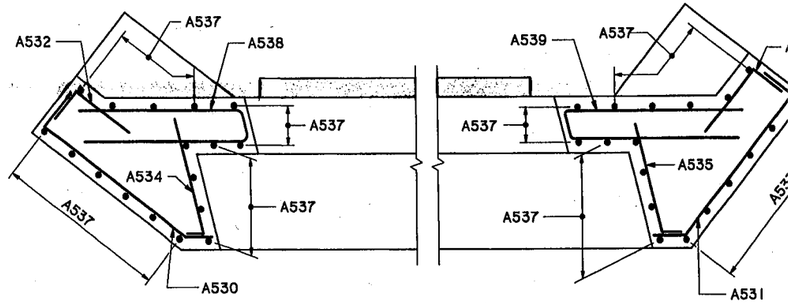


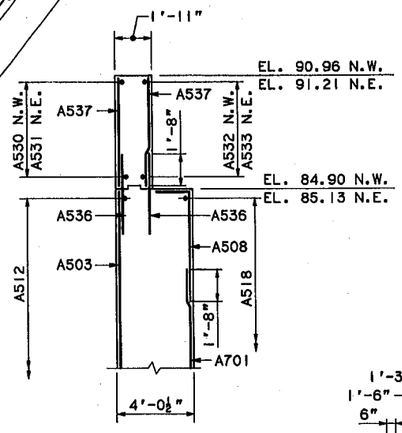
PLAN - NORTH ABUTMENT
¼" = 1'-0"



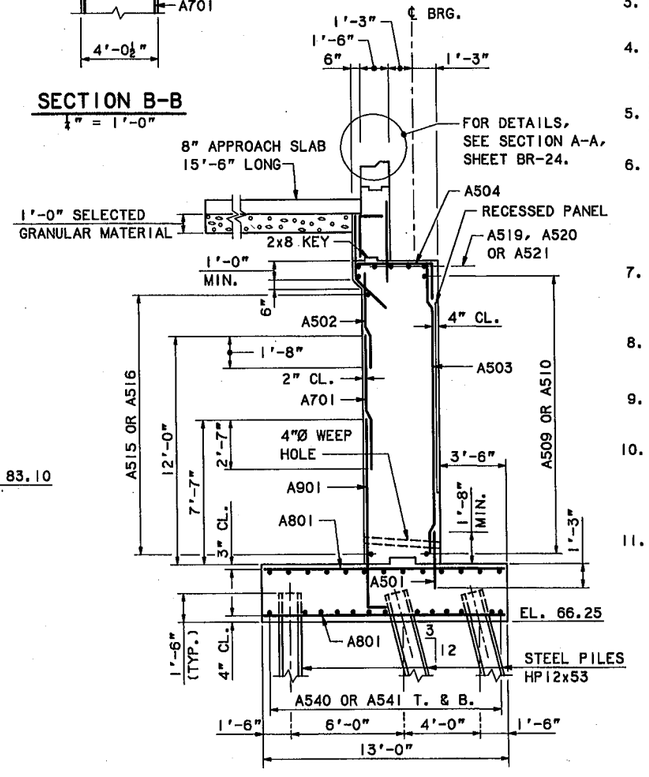
ELEVATION
¼" = 1'-0"



N.W. & N.E. CORNER DETAIL
½" = 1'-0"



SECTION B-B
¼" = 1'-0"



TYPICAL NORTH ABUTMENT SECTION
¼" = 1'-0"

ABUTMENT NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE INDICATED.
3. PLACE REINFORCING STEEL IN BRIDGE SEAT TO CLEAR ANCHOR BOLTS.
4. PVC WATERSTOPS, AS SHOWN ON SHEET BR-, SHALL BE PLACED IN ALL VERTICAL EXPANSION AND CONTRACTION JOINTS.
5. WATERSTOPS ARE NOT REQUIRED IN HORIZONTAL CONSTRUCTION JOINTS.
6. THE TOP PORTION OF THE NORTH ABUTMENT SOUTH ABUTMENT BACKWALL SHALL BE PLACED AFTER ALL SUPERSTRUCTURE STRUCTURAL CONCRETE IS IN PLACE AND AFTER ALL NECESSARY ADJUSTMENTS TO THE JOINT ARMOR HAVE
7. N.F. DENOTES NEAR FACE, F.F. DENOTES FAR FACE, E.F. DENOTES EACH FACE, T. & B. DENOTES TOP AND BOTTOM BARS.
8. BREAK BOND AT VERTICAL CONTRACTION JOINTS BY A METHOD TO BE APPROVED BY THE ENGINEER.
9. FOR BEARING DEVICES AND ANCHOR BOLTS, SEE SHEET BR-17.
10. FOR APPROACH SLAB DETAILS, RECESSED PANEL DETAILS, EXPANSION, CONTRACTION AND CONSTRUCTION JOINT DETAILS, AND FRENCH DRAIN DETAILS, SEE SHEET BR-11.
11. THE BRIDGE SEAT ELEVATIONS SHOWN ON THESE 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 ACCOMODATE THE SELECTED BEARINGS.

No.	Revision	By:	Date:		By:	Date:
				Designed	AD	3/95
				Drawn	LS	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

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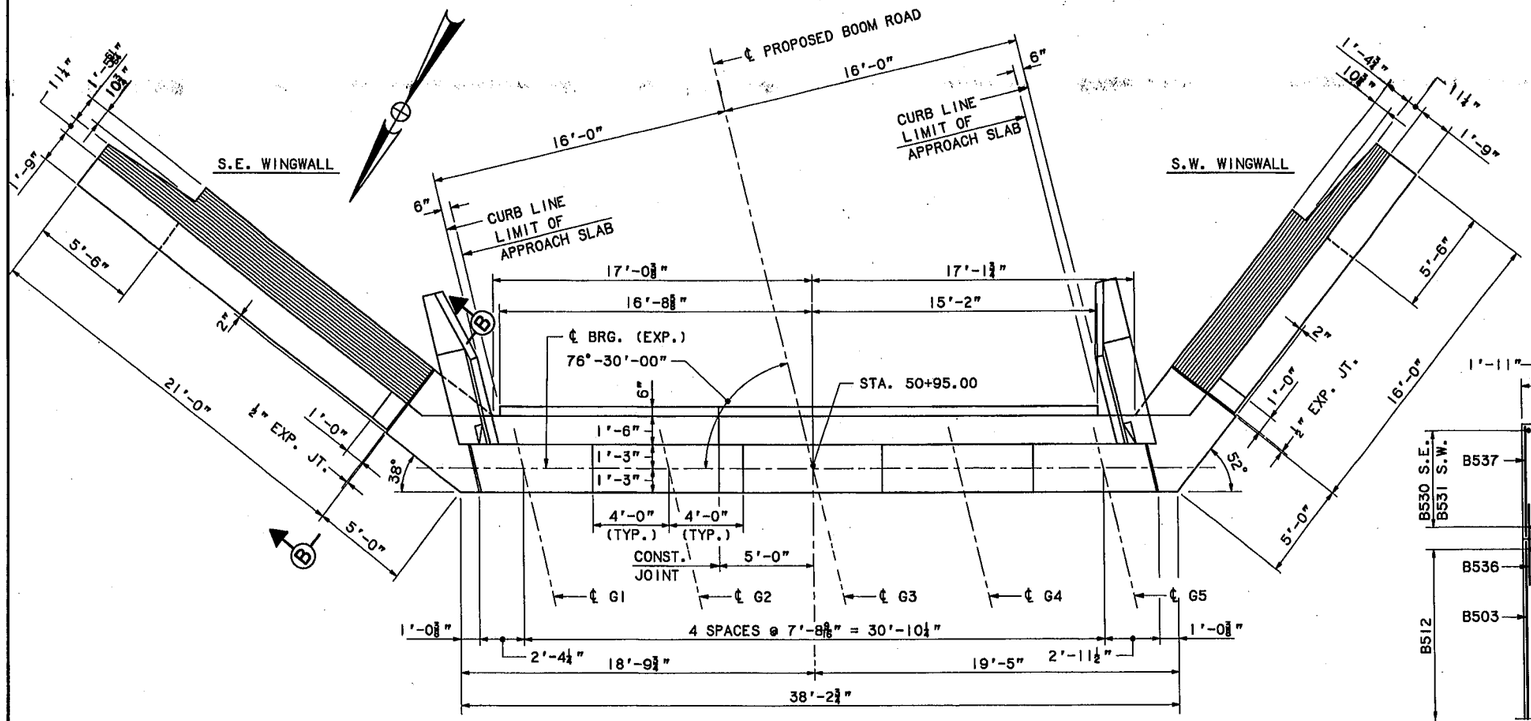
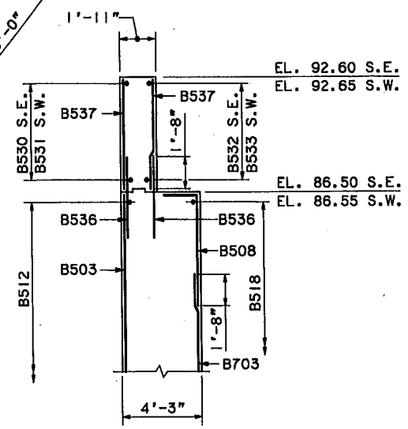
HNTB HOWARD NEEDLES TAMMEN & ARCHITECTS ENGINEER

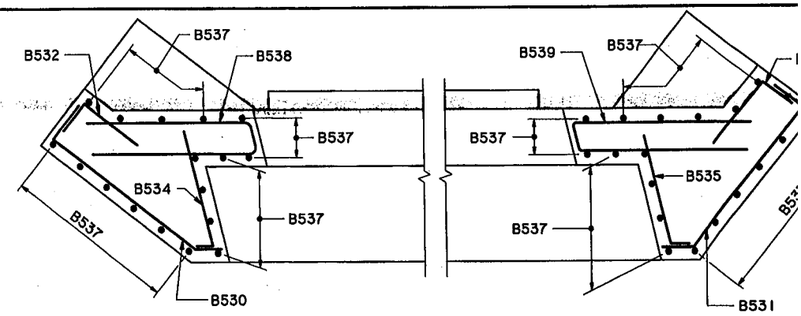
Contract 95.5 | Sheet No. 43



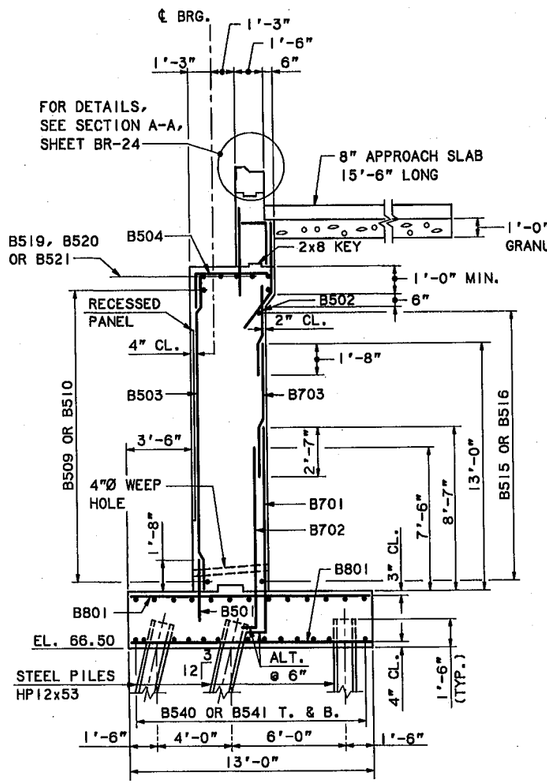
PLAN - SOUTH ABUTMENT
½" = 1'-0"



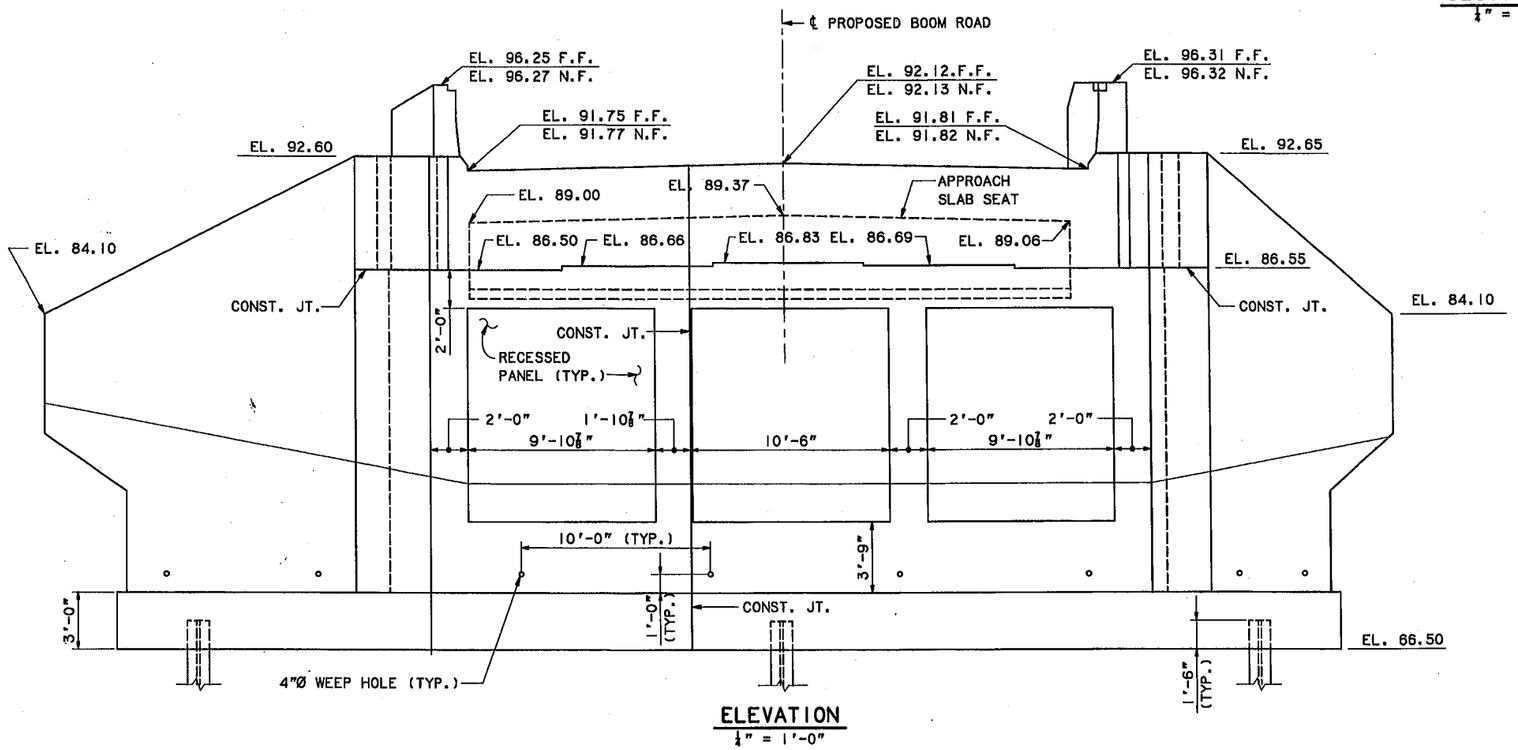
SECTION B-B
¼" = 1'-0"



S.E. & S.W. CORNER DETAIL
½" = 1'-0"



TYPICAL SOUTH ABUTMENT SECTION
¼" = 1'-0"



ELEVATION
¼" = 1'-0"

NOTE

1. FOR ABUTMENT NOTES, SEE SHEET BR-7.

No.	Revision	By:	Date:

	By:	Date:
Designed	AD	3/95
Drawn	LS	3/95
Checked	HNL	3/95
In charge of:	RAL	

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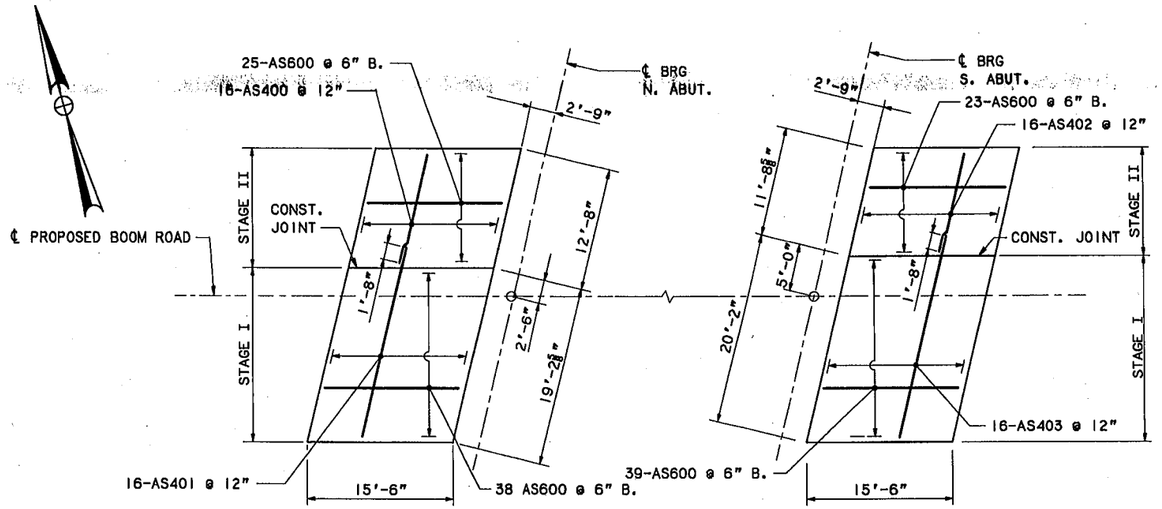
Contract 95.5

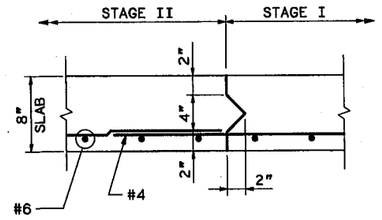
Sheet No. 44



NORTH APPROACH SLAB

SOUTH APPROACH SLAB

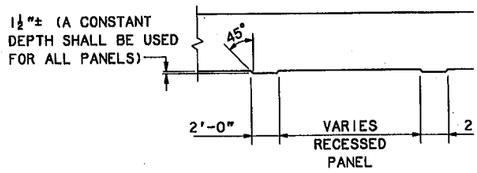
PLAN
⅛"=1'-0"



NOTE

FOR APPROACH SLAB DETAILS NOT SHOWN, SEE STANDARD DETAIL SHEET BD 501-89.

APPROACH SLAB
CONSTRUCTION JOINT DETAIL
NO SCALE

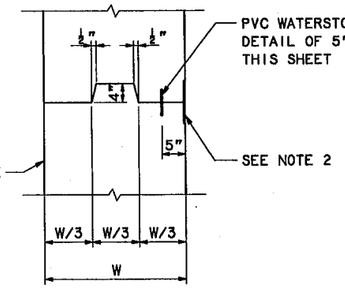


RECESSED PANEL DETAI
1/16" = 1'-0"

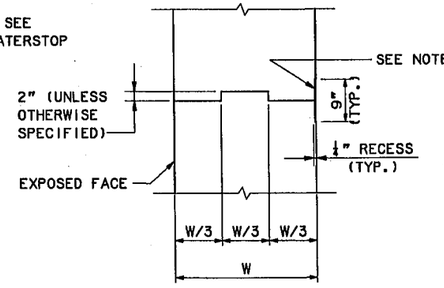
NOTE FOR RECESSED PANEL

FORMS USED FOR RECESSED PANEL SHALL BE SUFFICIENTL SECURELY BRACED, STRUTTED AND TIED TO PREVENT MOTI DISTORTION DUE TO THE PRESSURE OF THE CONCRETE AND LOADS INCIDENT TO THE CONSTRUCTION OPERATIONS, INC VIBRATION, AND SHALL BE SO CONSTRUCTED AS TO PRODU MORTAR-TIGHT JOINTS AND SMOOTH, EVEN CONCRETE SURF

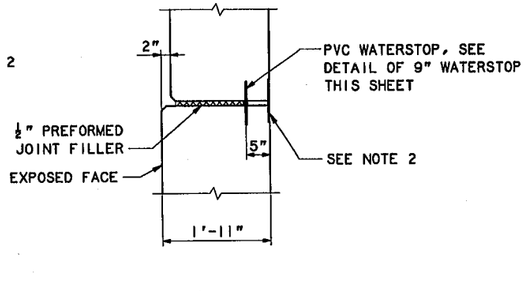
APPROACH SLAB DETAILS



CONTRACTION JOINT



CONSTRUCTION JOINT
(SIMILAR AT HORIZONTAL JOINTS)

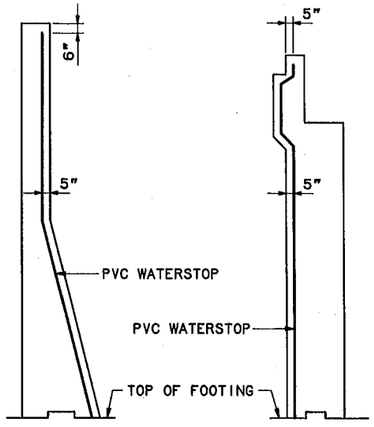


EXPANSION JOINT

VERTICAL JOINT DETAILS
¾"=1'-0"

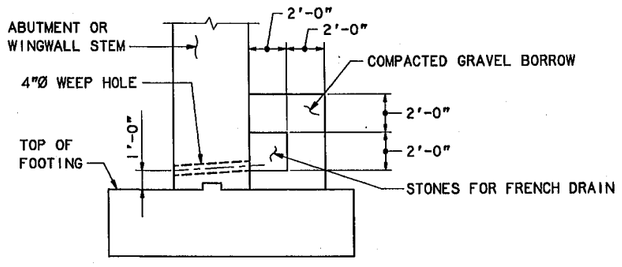
NOTE

1. APPLY TWO LAYERS OF HEAVY ROOFING FELT. COA CONCRETE AND EACH LAYER WITH PLASTIC ROOFIN (TYPICAL AT HORIZONTAL AND VERTICAL CONTRAC CONSTRUCTION AND EXPANSION JOINTS.)



WINGWALL ABUTMENT

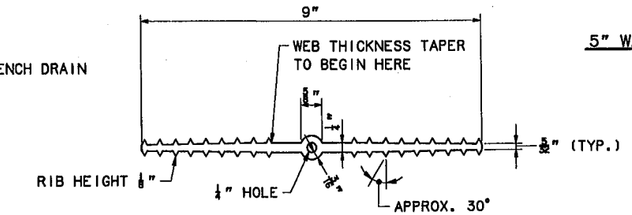
LIMITS OF PVC WATERSTOP
NO SCALE



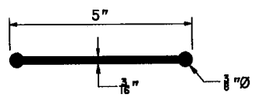
NOTE

THE FRENCH DRAIN SHALL EXTEND THE ENTIRE LENGTH OF THE STRUCTURE, NOT INCLUDING THE FLYING WINGWALL.

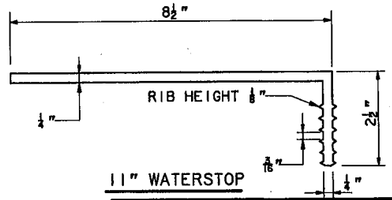
FRENCH DRAIN DETAIL
¼" = 1'-0"



9" WATERSTOP



5" WATERSTOP



11" WATERSTOP

WATERSTOP DETAILS
HALF SIZE

No.	Revision	By:	Date:

Designed	XPM	3/95
Drawn	RJT	3/95
Checked	HNL	3/95
In charge of:	RAL	

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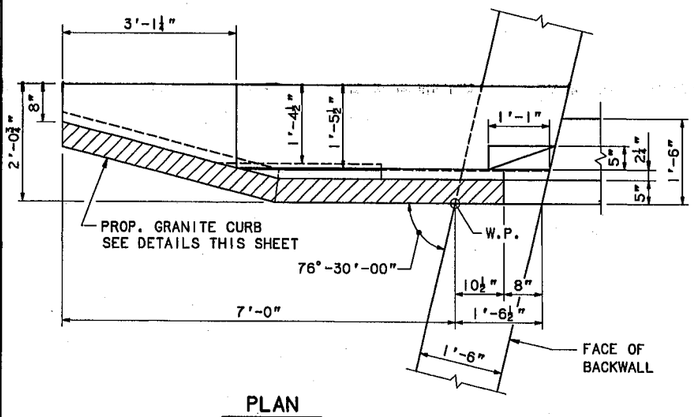
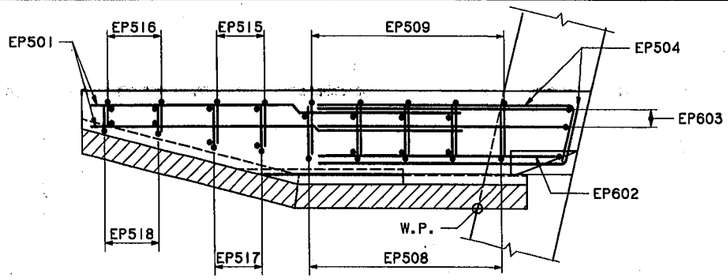
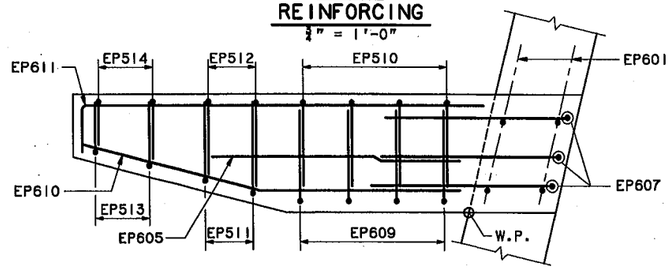


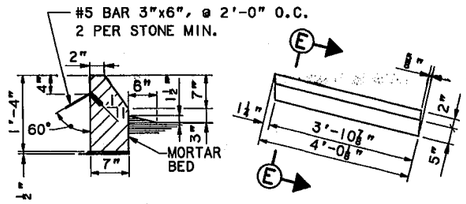
PLAN
¾" = 1'-0"



PLAN
REINFORCING
¾" = 1'-0"

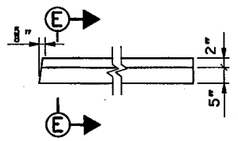


SECTION D-D
¾" = 1'-0"

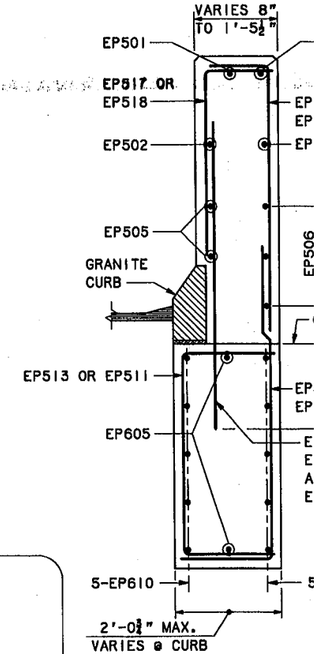


SECTION E-E
¾" = 1'-0"

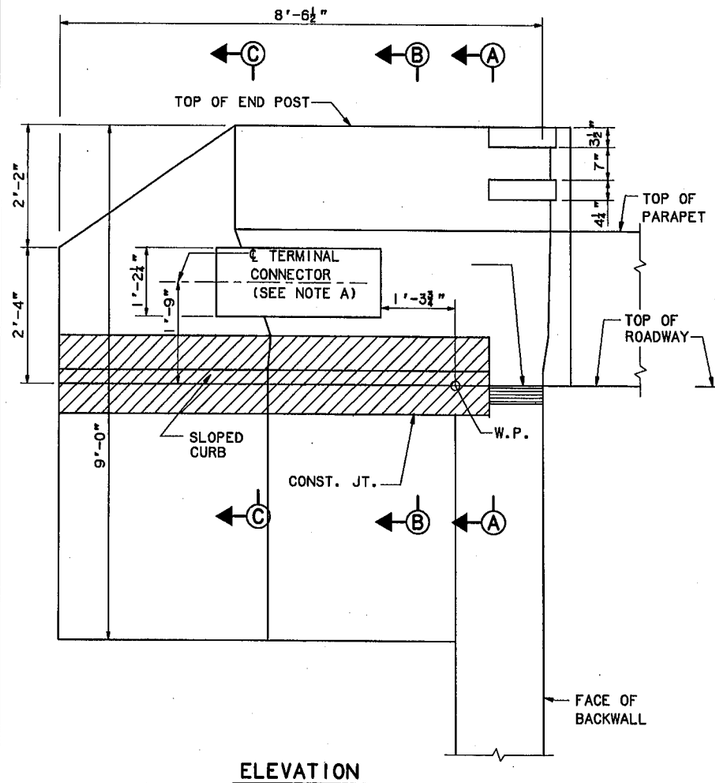
PLAN
½" = 1'-0"



PLAN
½" = 1'-0"

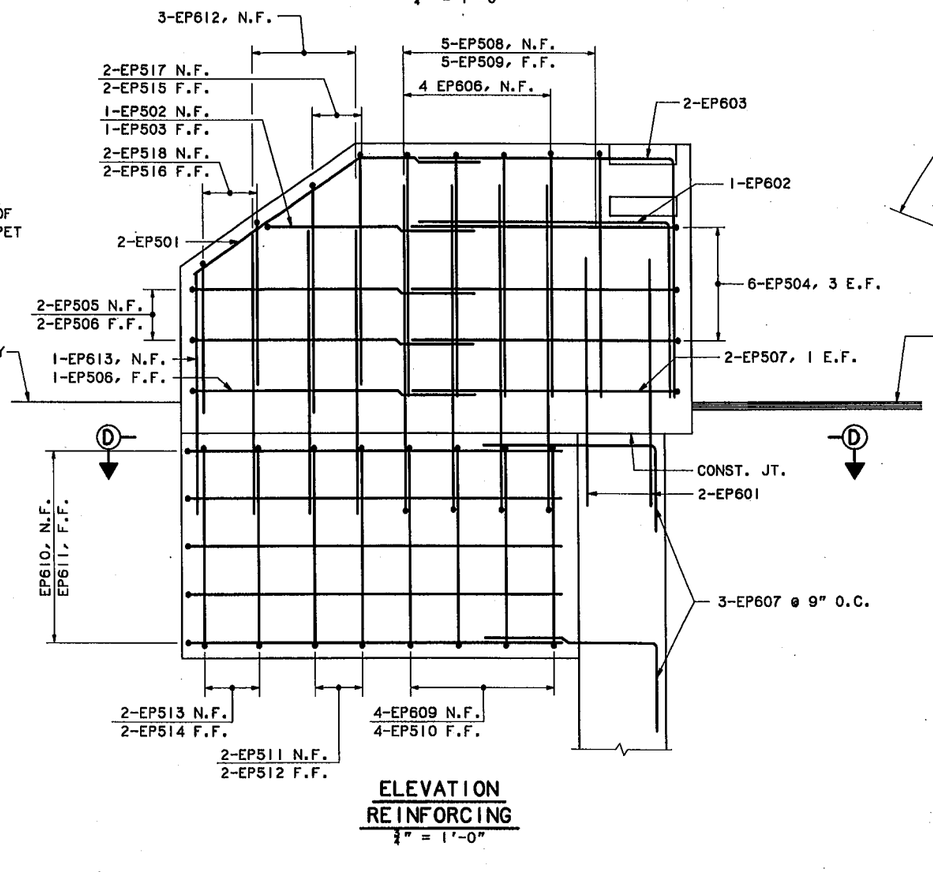


TYPICAL GRANITE CURB

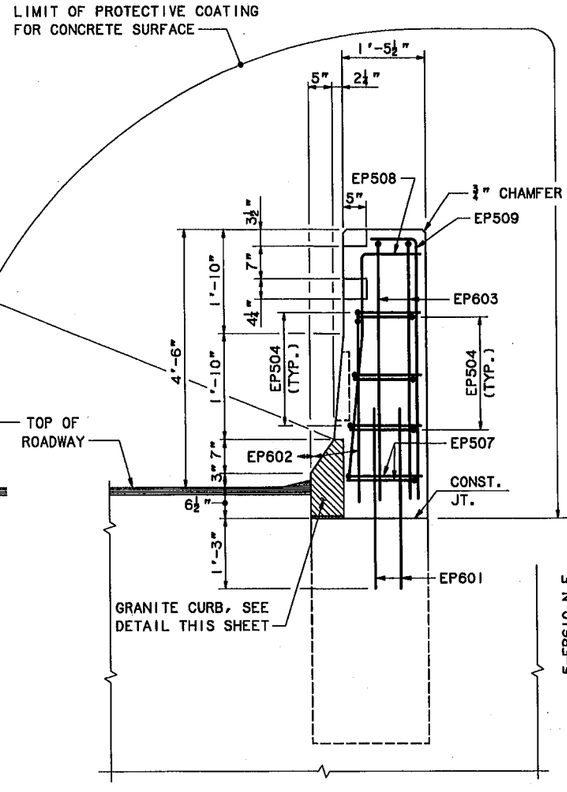


ELEVATION
¾" = 1'-0"

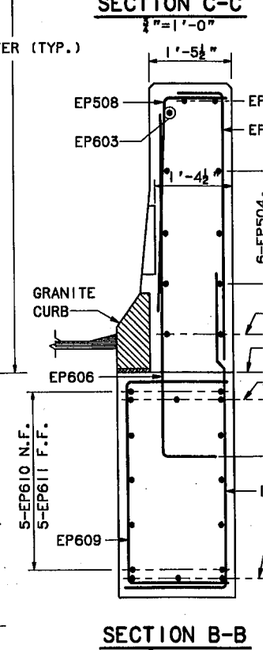
NOTE A
FOR TERMINAL CONNECTOR ANCHORAGE DETAIL, SEE STANDARD DETAIL SHEET NO. BD 201-89.



ELEVATION
REINFORCING
¾" = 1'-0"



SECTION A-A
¾"=1'-0"



SECTION B-B
¾"=1'-0"

No.	Revision	By:	Date:		By:	Date:
				Designed	DMD	3/95
				Drawn	LS	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

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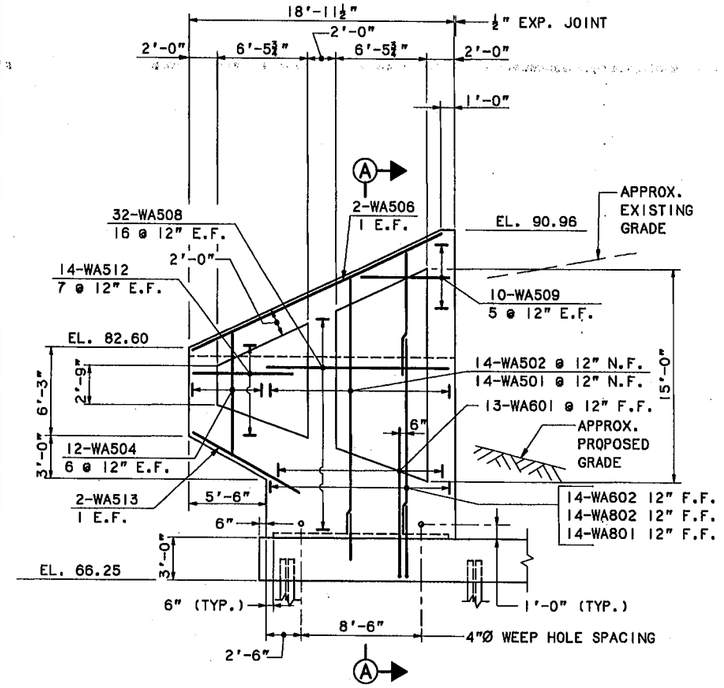
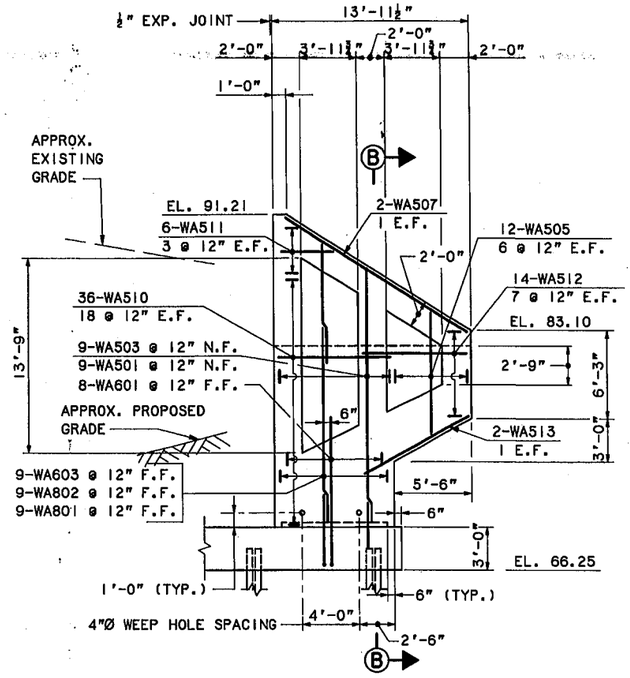
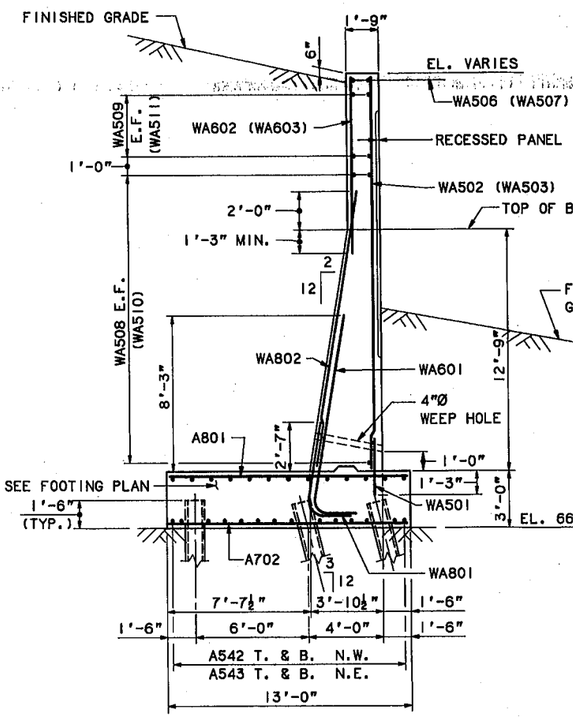


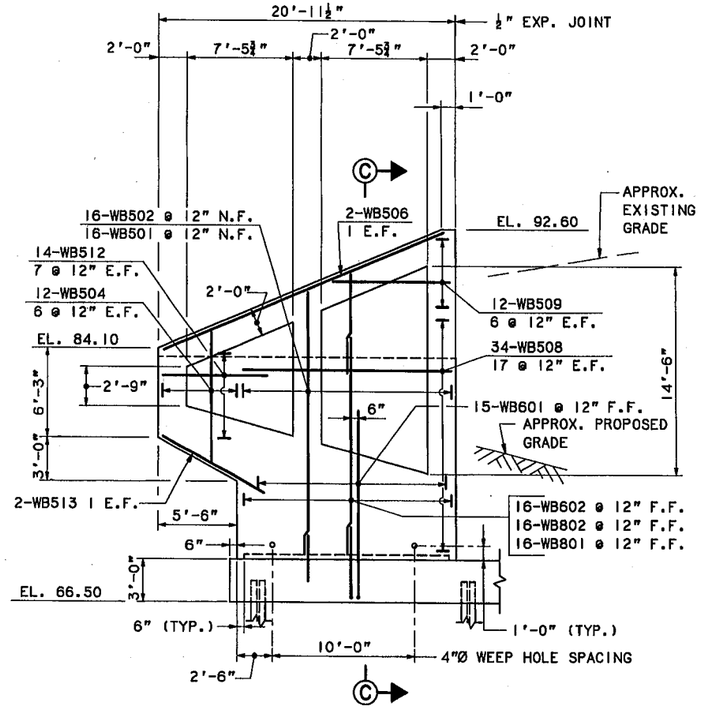
ELEVATION OF N.W. WINGWALL
3/16" = 1'-0"



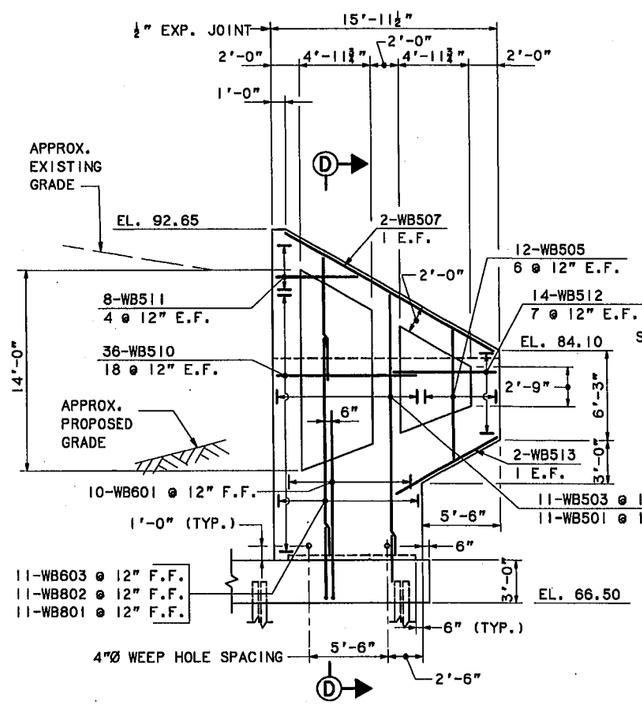
ELEVATION OF N.E. WINGWALL
3/16" = 1'-0"



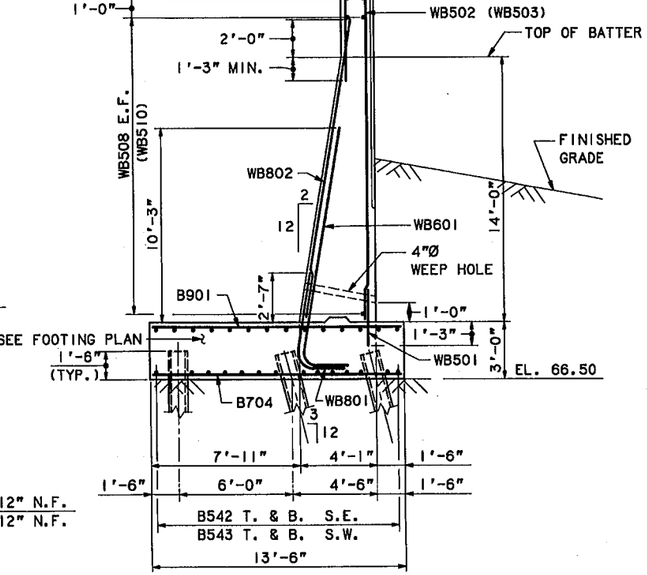
SECTION A-A
SECTION B-B SIMILAR
¼" = 1'-0"



ELEVATION OF S.E. WINGWALL
3/16" = 1'-0"



ELEVATION OF S.W. WINGWALL
3/16" = 1'-0"



SECTION C-C
SECTION D-D SIMILAR
¼" = 1'-0"

No.	Revision	By	Date

	By	Date
Designed	AD	3/95
Drawn	KML	3/95
Checked	HNL	3/95
In charge of: RAL		

Maine Turnpike Author
Maine Turnpi

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HNTB HOWARD NEEDLES TAMMEN & ARCHITECTS ENGINEE

Contract 95.5

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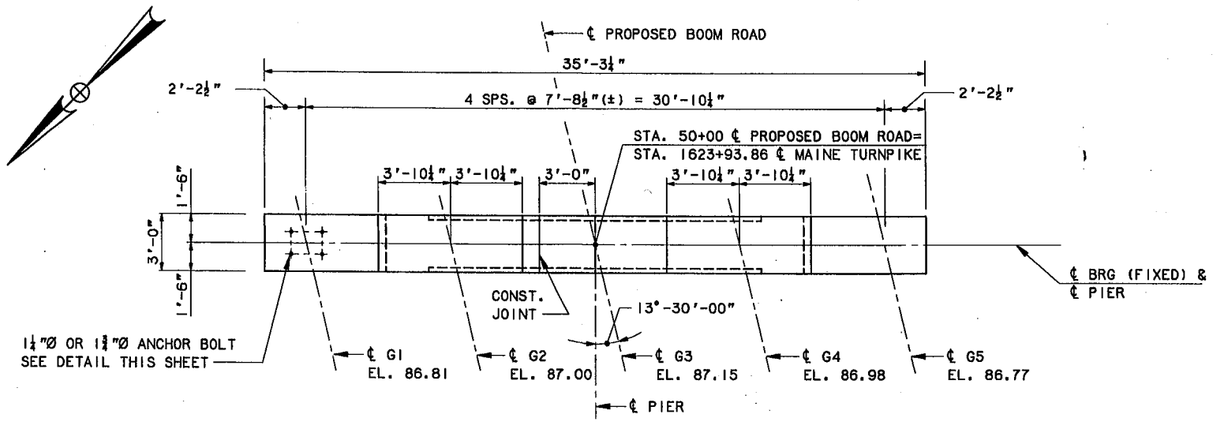
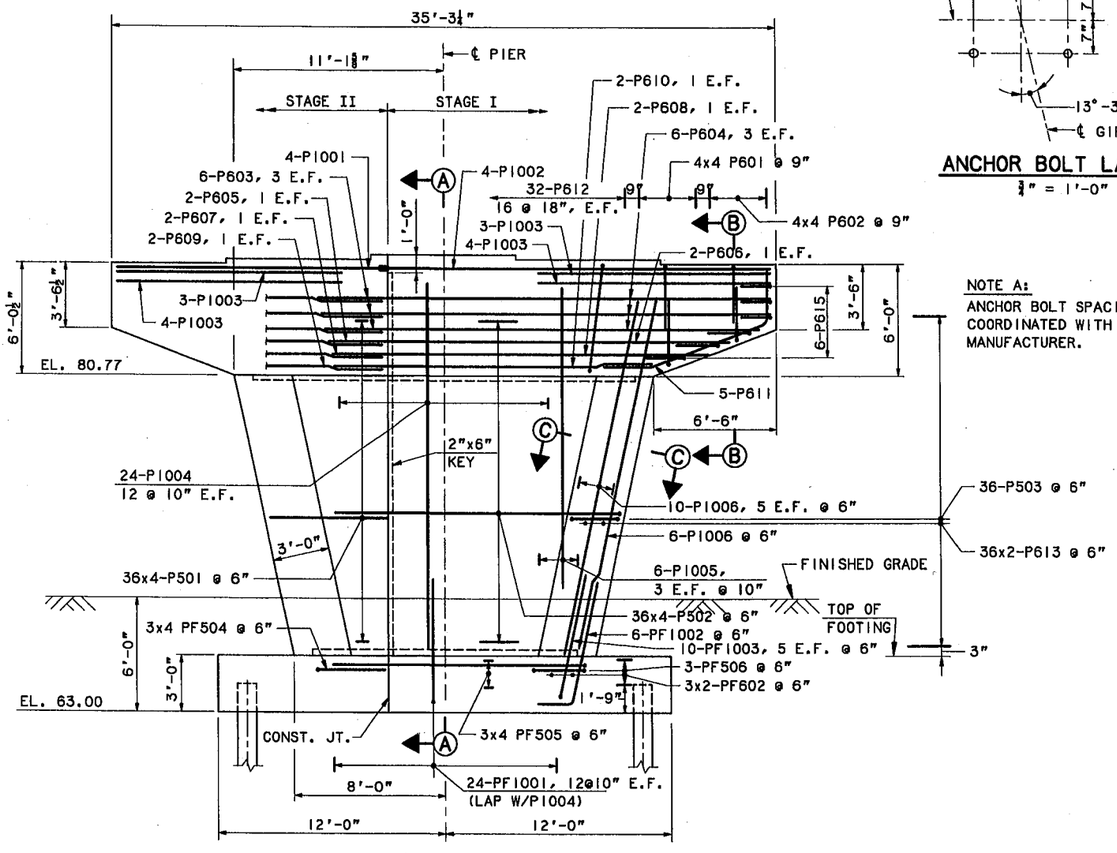
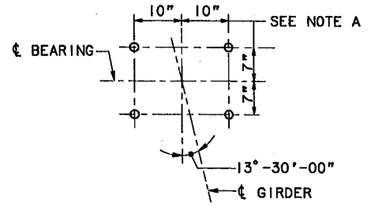


PLAN
¼" = 1'-0"

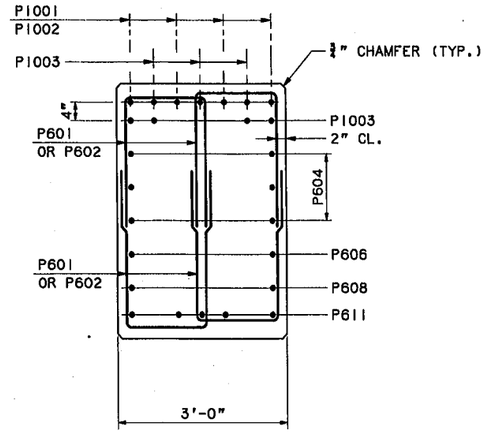


PIER ELEVATION
¼" = 1'-0"

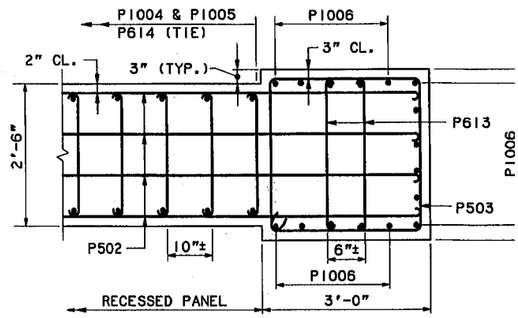
NOTE A:
ANCHOR BOLT SPACING SHOULD BE COORDINATED WITH BEARING MANUFACTURER.



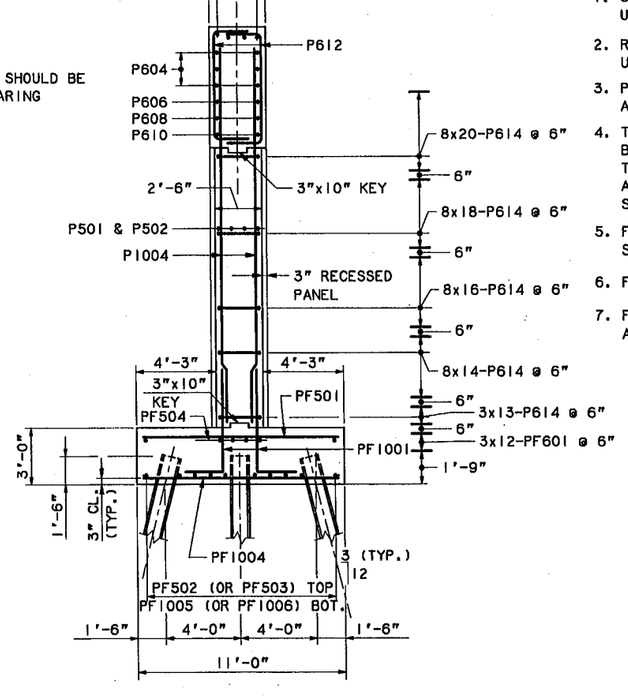
ANCHOR BOLT LAYOUT
¾" = 1'-0"



SECTION B-B
¾" = 1'-0"



SECTION C-C
¾" = 1'-0"



SECTION A-A
¼" = 1'-0"

NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE 2" MINIMUM COVER UNLESS OTHERWISE INDICATED.
3. PLACE REINFORCING STEEL ON BRIDGE SEATS TO CLEAR ANCHOR BOLTS.
4. THE BRIDGE SEAT ELEVATIONS SHOWN ON THE PIER SHE BASED ON POT BEARING MANUFACTURED BY SAI/SPENCER TERRYVILLE CT. IF THE CONTRACTOR SELECTS A BEARI ANOTHER APPROVED BEARING MANUFACTURER, AFFECTED SHALL BE ADJUSTED TO THE SELECTED BEARINGS.
5. FOR PILE LAYOUT PLAN AND FOOTING REINFORCEMENT, SEE SHEET BR-6.
6. FOR PIER CONSTRUCTION SEQUENCE, SEE SHEET BR-28.
7. FOR STEEL REINFORCING SCHEDULE, SEE SHEETS BR-31 AND BR-33.

No.	Revision	By:	Date:		By:	Date:
				Designed	XPM	3/95
				Drawn	RJT	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

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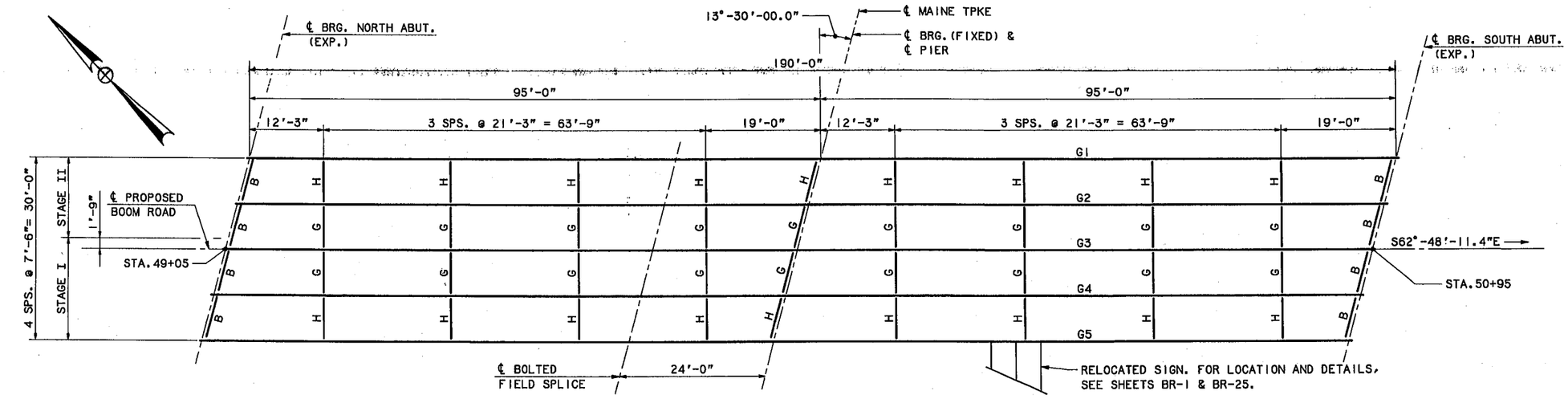
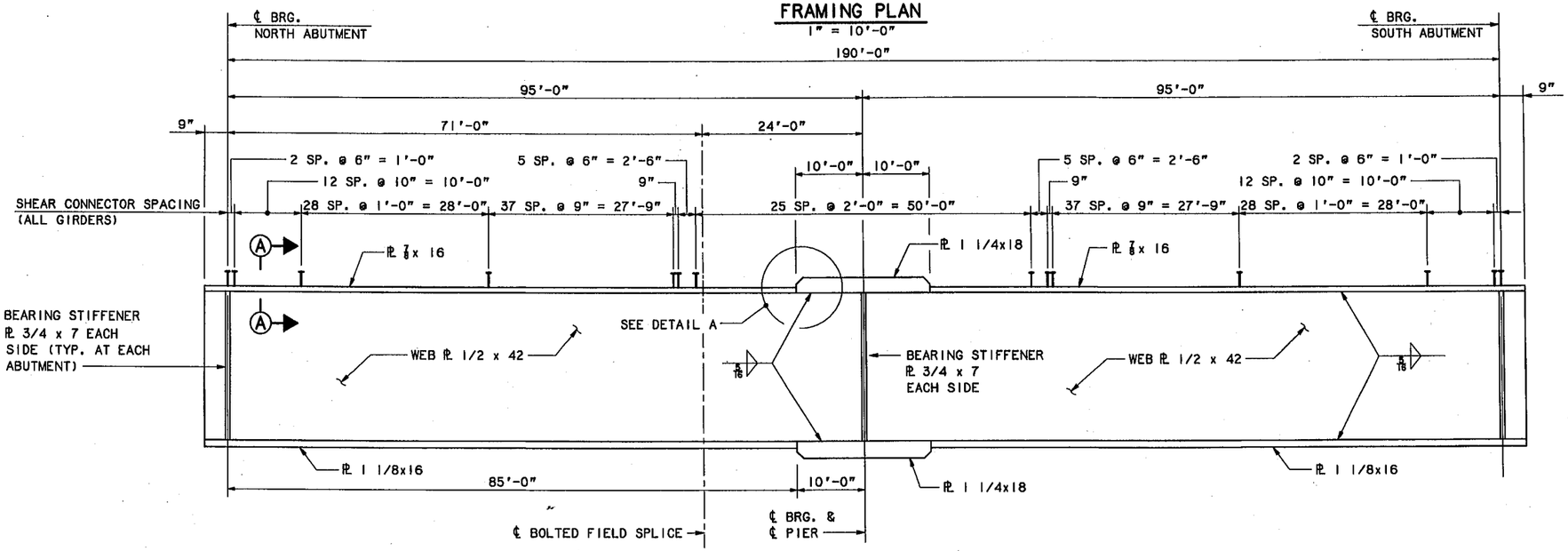
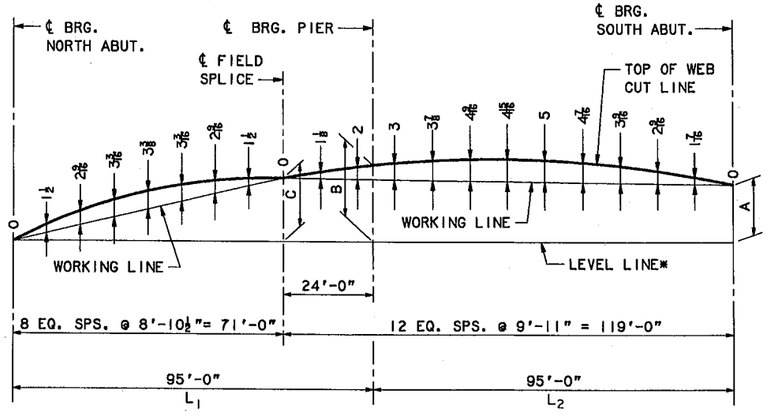
Contract 95.5
Sheet No 50



FRAMING PLAN
1" = 10'-0"



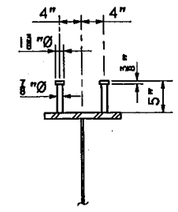


CAMBER DIAGRAM
NO SCALE

GIRDER ELEVATION
NO SCALE

* LEVEL LINE IS THE HORIZONTAL REFERENCE LINE THROUGH LOWEST POINT ON CUT LINE.

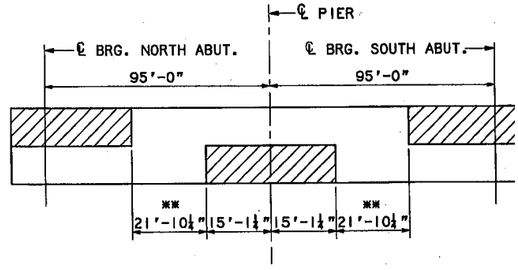
GIRDER NO.	DIMENSIONS IN FEET		
	A	B	C
G1	1.360	1.740	1.598
G2	1.430	1.790	1.628
G3	1.510	1.830	1.668
G4	1.570	1.870	1.698
G5	1.640	1.920	1.728



SECTION A-A
NO SCALE

STRUCTURAL STEEL NOTES

1. CAMBER ORDINATES AS SHOWN ARE COMPUTED T COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS EFFECT OF VERTICAL CURVATURE.
2. NO TRANSVERSE BUTT-WELD SPLICES WILL BE IN THE FLANGE OR WEB PLATES WITHIN 10' F POINTS OF MAXIMUM NEGATIVE MOMENT OR MAX POSITIVE MOMENT.
3. BUTT-WELD SPLICES IN FLANGES SHALL NOT B THAN THREE FEET FROM TRANSVERSE BUTT-WEL THE WEB PLATE OR CONNECTION PLATE TO WEB
4. BUTT WELDS AT WEB SPLICES AND FLANGE SPL GROUND FLUSH IN LONGITUDINAL DIRECTION O
5. BEARING STIFFENERS SHALL BE PLUMB AFTER AND DEAD LOADING OF THE STRUCTURE. INTE WEB STIFFENERS MAY BE EITHER PLUMB OR NO THE TOP FLANGE.
6. CROSS-FRAME OR DIAPHRAGM CONNECTION PLAT BE EITHER PLUMB OR NORMAL TO THE TOP FLA
7. FILLER PLATES SHALL CONFORM TO ASTM A709 MILL TESTS FOR FILLER PLATE MATERIAL WIL REQUIRED.
8. FOR DETAILS OF DIAPHRAGM & CROSS-FRAME T B, G AND H, SEE STANDARD DETAIL SHEET BD
9. WELDED GIRDERS: FLANGES, WEBS, SPLICE PL BEARING STIFFENERS, INTERMEDIATE STIFFEN AND CROSS-FRAME CONNECTION PLATES, SHALL ASTM A572, GRADE 50. BOLTS TO BE ASTM A3 ALL OTHER STRUCTURAL STEEL SHALL BE ASTM GRADE 36.
10. ALL FLANGE AND WEB PLATES SHALL BE DESIG "CVN" WITH THE MATERIAL MEETING SPECIFIE NOTCH TOUGHNESS REQUIREMENTS IN ACCORDAN WITH AASHTO SPECIFICATIONS (TEMPERATURE DESIGNATION).



GIRDER STRESS DIAGRAM
NO SCALE

AREAS OF GIRDER WHICH WILL ALWAYS BE IN CO ALL OTHER AREAS WILL BE IN TENSION OR ARE STRESS REVERSALS.

** STRESS REVERSALS.

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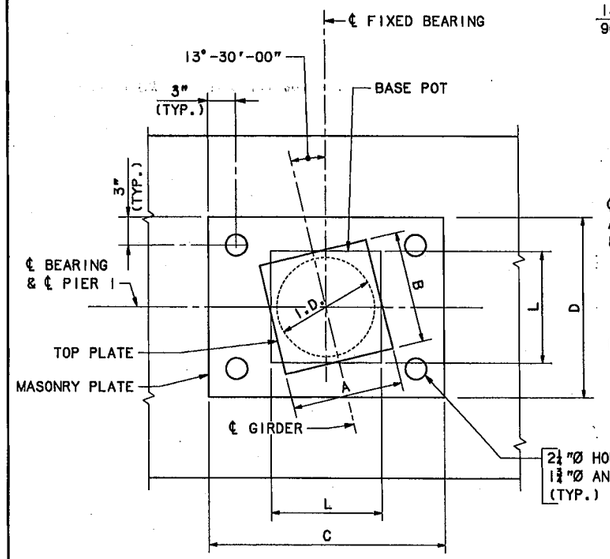
HNTB HOWARD NEEDLES TAMME ARCHITECTS ENGI

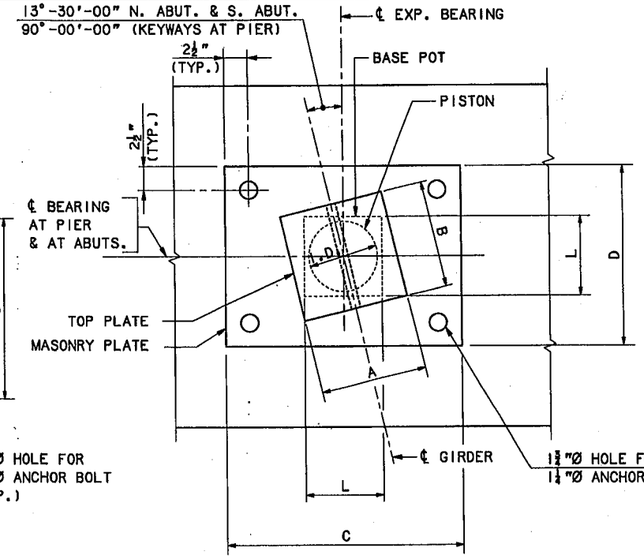
No.	Revision	By:	Date:
		Designed	XPM 3/95
		Drawn	RJT 3/95
		Checked	HNL 3/95
		In charge of:	RAL

Contract 95.5

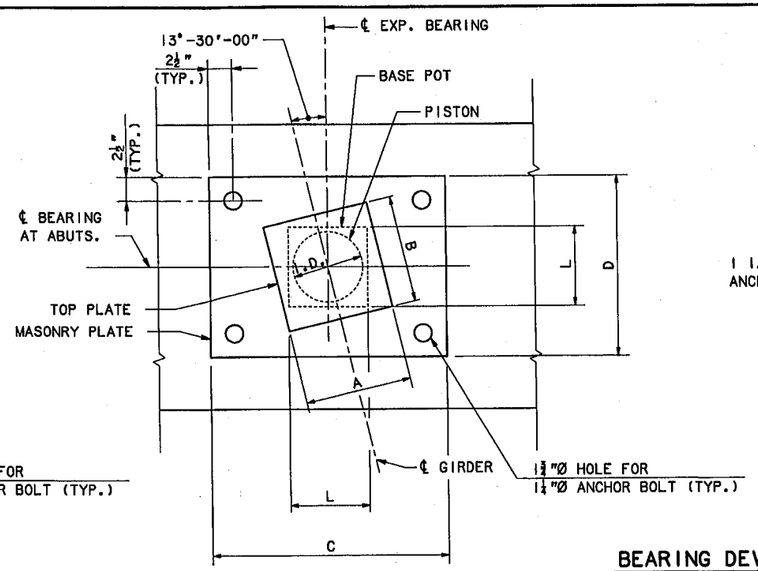
Sheet N 51



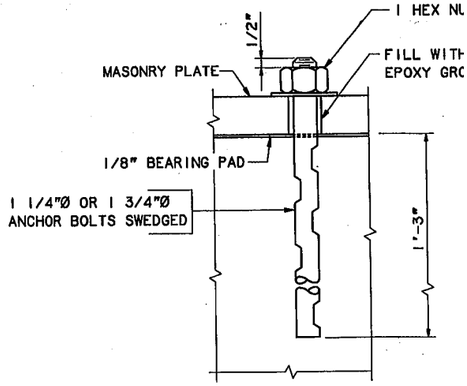
PLAN



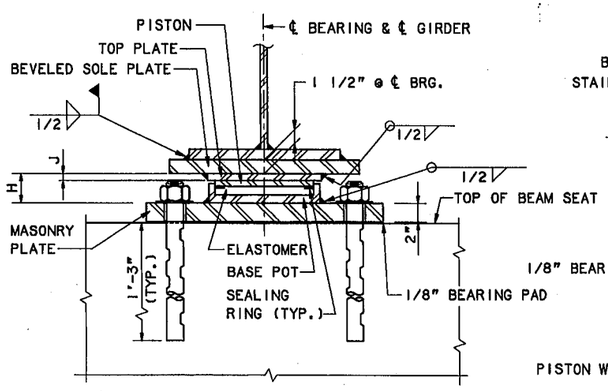
PLAN



PLAN

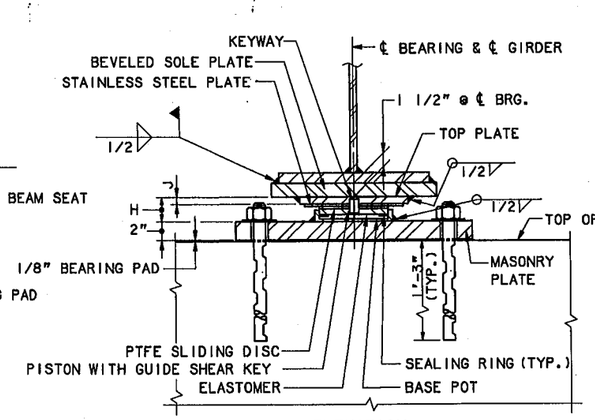


ANCHOR BOLT DETAIL
3" = 1'-0"



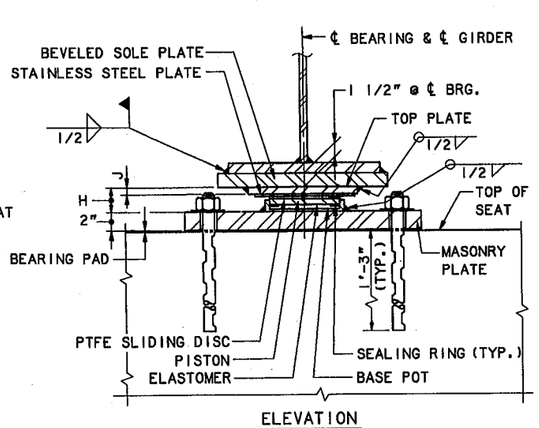
ELEVATION

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"

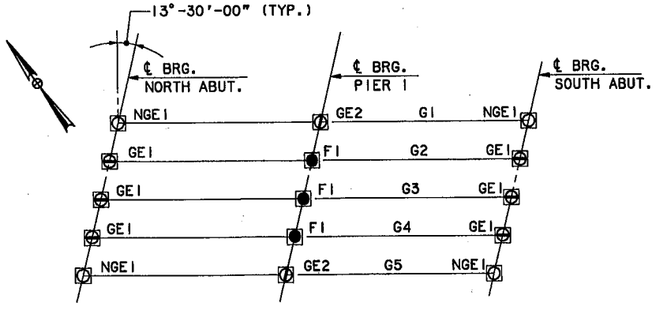
BEARING DEVICE NOTES

1. THE BEARING DIMENSIONS SHOWN ON THIS SHEET AND THE CORRESPO SEAT ELEVATIONS ARE BASED ON GUIDED EXPANSION & FIXED BEARI MANUFACTURED BY SAI/SPENCER OF TERRYVILLE CT. IF THE CONTRA SELECTS A BEARING FROM ANOTHER APPROVED BEARING MANUFACTURE AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMM 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 50, UNLESS NOTED OTHERWISE.
5. MASONRY BASE PLATES SHALL BE PLACED ON 1/8" PREFORMED FABRI
6. TOP PLATES AND PISTONS SHALL HAVE MACHINED SURFACES TO FINISH ANSI 125.
7. STAINLESS STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A TYPE 317 OR ASTM A 240, TYPE 317. STAINLESS STEEL IN CONTAC WITH PTFE SHEET SHALL BE POLISHED TO A BRIGHT MIRROR FINISH LESS THAN 0.5 MICRO-INCHES INCH ROOT MEAN SQUARE FINISH.
8. THE 1¼"Ø & 1¾"Ø ANCHOR BOLTS AND NUTS SHALL BE A307. WASHEI SHALL CONFORM TO REQUIREMENTS OF AASHTO M293 (ASTM F4361). WASHERS AND NUTS SHALL BE GALVANIZED.
9. PTFE INDICATES POLYTETRAFLUORETHYLENE.
10. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING I

MAXIMUM LOADS ON EACH BEARING

LOCATION	GIRDER	D.L. (KIPS)	L.L (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS)		MOVEMENT (IN)		BEARING TYPE
					LONG.	TRANS.	LONG.	TRANS.	
NORTH ABUTMENT	G1, G5	52	63	115	-	-	5/8	-	NGE1
	G2,G3,G4	53	67	120	-	19	5/8	-	GE1
PIER 1	G1, G5	173	98	271	24	-	0	-	GE2
	G2,G3,G4	176	104	280	24	61	0	-	F1
SOUTH ABUTMENT	G1, G5	52	63	115	-	-	5/8	-	NGE1
	G2,G3,G4	53	67	120	-	19	5/8	-	GE1

BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS						SOLE PLATE	MASONRY PLATE 2" THICK	
		I.D.	A	B	H	J	L		C	D
NGE1	150	7.387	11.25	11.25	2.63	.75	8.38	17½x17½x1½	25	19
GE1	150	7.387	11.25	11.25	2.63	.75	8.38	17½x17½x1½	25	19
GE2	300	10.447	14.25	14.25	3.69	1.13	11.75	19½x19½x1½	25	19
F1	300	10.447	11.75	11.75	3.19	.75	11.75	19½x19½x1½	25	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	JMH	3/95
				Drawn	RJT	3/95
				Checked	RJR	3/95
				In charge of:	RAL	

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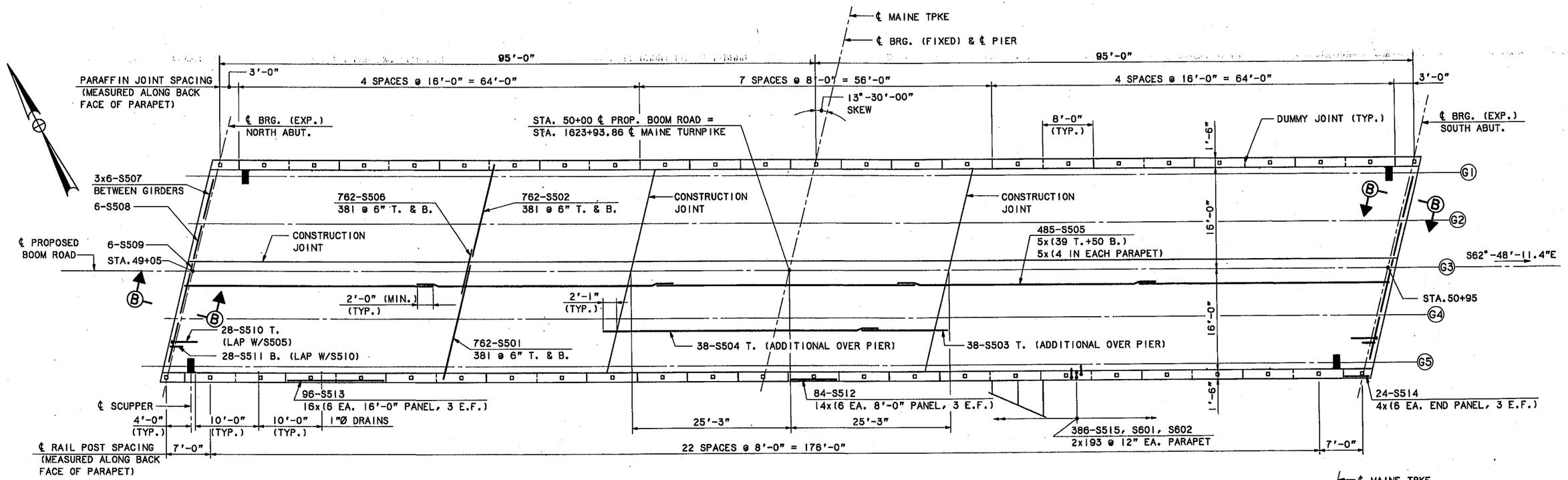
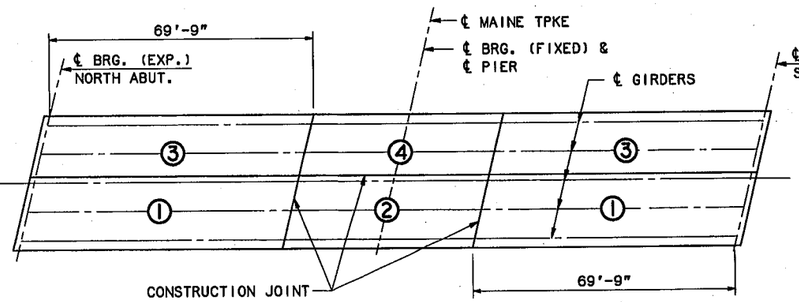
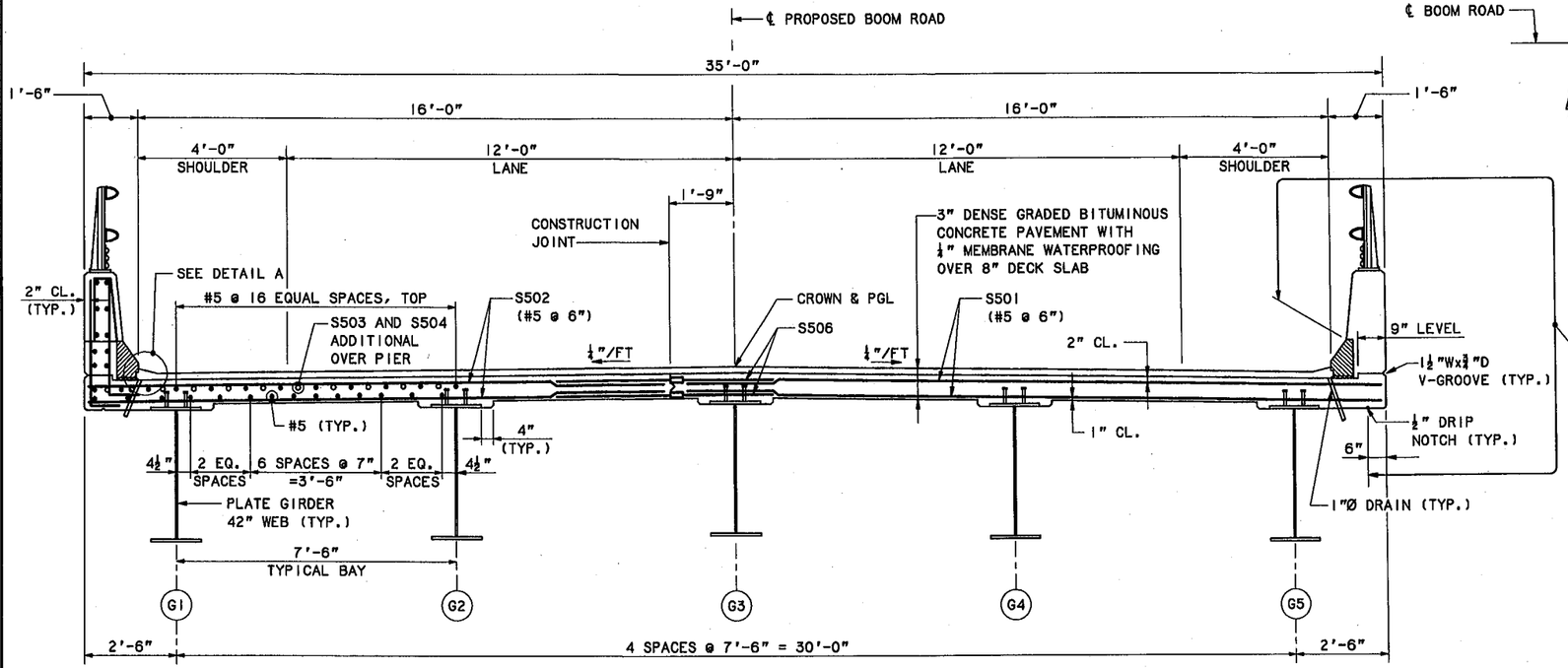
Contract 95.5
Sheet N 53



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



PLACING SEQUENCE
NO SCALE



TYPICAL SECTION
½" = 1'-0"

COAT WITH "PROTECTIVE COATING FOR CONCRETE SURFACE"(TYP.)

NOTES

1. FOR SUPERSTRUCTURE NOTES, SEE SHEE
2. FOR SECTION B-B, SEE SHEET BR-24.
3. FOR PARAPET DETAIL, SEE SHEET BR-
4. FOR SCUPPER DETAILS, SEE SHEET BR-

No.	Revision	By:	Date:

	By:	Date:
Designed	AD	3/95
Drawn	LS	3/95
Checked	HNL	3/95
In charge of:	RAL	

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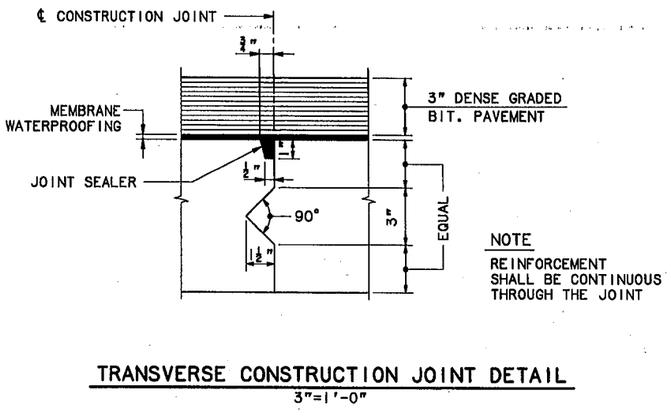
Sheet N 54

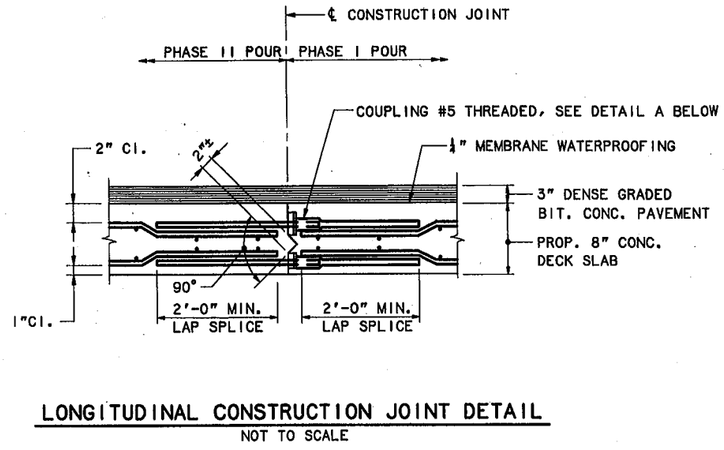


NOTE

REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT

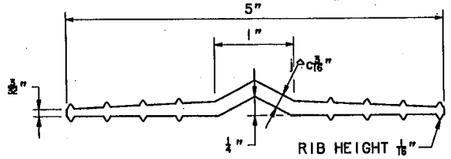
TRANSVERSE CONSTRUCTION JOINT DETAIL

3"=1'-0"



LONGITUDINAL CONSTRUCTION JOINT DETAIL

NOT TO SCALE

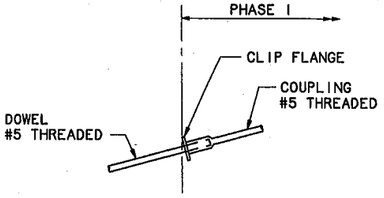


5" WATERSTOP

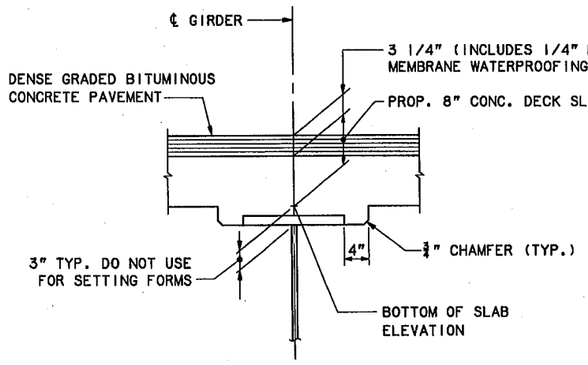
FULL SIZE

SUPERSTRUCTURE NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNL OTHERWISE NOTED.
2. REINFORCING STEEL TO HAVE A MINIMUM COVER OF 2" UNLESS OTHERWISE NOTED.
3. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANIT SHALL CONTAIN A NON-SHRINK ADDITIVE.
4. THE SUPERSTRUCTURE SLAB CONCRETE IN EACH STAGE BE PLACED IN ONE CONTINUOUS OPERATION AND KEPT UNTIL THE ENTIRE STAGE HAS BEEN PLACED. SET RE ADMIXTURE SHALL BE USED WHEN AUTHORIZED BY THE
5. ADJUST REINFORCING STEEL TO FIT AROUND THE DRAI MANNER APPROVED BY THE ENGINEER. DO NOT CUT TH REINFORCING.
6. PROTECTIVE COATING FOR CONCRETE SURFACES SHALL AT THE FOLLOWING AREAS: PARAPET SURFACES, FASC TO DRIP NOTCH AND ALL EXPOSED CONCRETE CONCRETE ON THE END POSTS.
7. FOR DRAIN DETAILS, SEE SHEET BR-20.
8. FOR 2-BAR ALUMINUM BRIDGE RAIL DETAILS, SEE SHE
9. FOR STEEL REINFORCEMENT SCHEDULE SEE SHEET BR-
10. IF THE SLAB PLACEMENT HAS TO BE TERMINATED, THE TERMINATION POINT MUST BE AT THE POINTS INDICA THE PLACEMENT DETAILS, SHOWN ON SHEET BR-18.

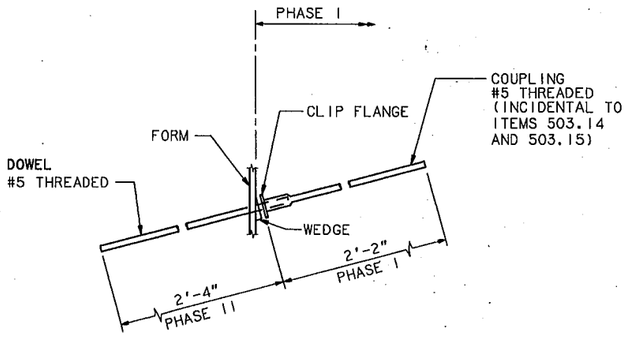


OPTIONAL CONSTRUCTION



BLOCKING POINT DETAIL

NO SCALE



DETAIL A

NO SCALE

NOTE

TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, AS WELL AS POSSIBLE IRREGULARITIES IN GIRDERS, SET THE BOTTOM OF SLAB ELEVATIONS AT THE POINTS INDICATED BEFORE ANY OF THE SLAB FORMWORK IS STARTED. SEE SUBSECTION 502.10(a) OF THE STANDARD SPECIFICATIONS. REVISION OF OCTOBER 1990.

BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS

GIRDER NO.	℄ BRG. N. ABUT.	SPAN 1									℄ PIER ℄ BRG.	SPAN 2									℄ BRG. S. ABUT.
		.1L_1	.2L_1	.3L_1	.4L_1	.5L_1	.6L_1	.7L_1	.8L_1	.9L_1		.1L_2	.2L_2	.3L_2	.4L_2	.5L_2	.6L_2	.7L_2	.8L_2	.9L_2	
G1	89.50	89.83	90.12	90.38	90.61	90.79	90.93	91.04	91.12	91.18	91.24	91.29	91.33	91.35	91.35	91.31	91.25	91.17	91.08	90.97	90.86
G2	89.60	89.93	90.23	90.50	90.73	90.91	91.06	91.17	91.26	91.32	91.38	91.44	91.48	91.51	91.51	91.48	91.42	91.35	91.25	91.14	91.03
G3	89.70	90.04	90.34	90.61	90.84	91.03	91.18	91.30	91.39	91.46	91.53	91.59	91.64	91.67	91.68	91.65	91.59	91.52	91.42	91.31	91.20
G4	89.48	89.83	90.14	90.41	90.65	90.84	91.00	91.12	91.21	91.29	91.36	91.42	91.48	91.52	91.53	91.50	91.44	91.37	91.27	91.17	91.05
G5	89.27	89.61	89.93	90.21	90.45	90.65	90.81	90.94	91.04	91.12	91.19	91.26	91.32	91.36	91.37	91.36	91.30	91.22	91.13	91.02	90.91

No.	Revision	By:	Date:

	By:	Date:
Designed	AD	3/95
Drawn	LS	3/95
Checked	HNL	3/95
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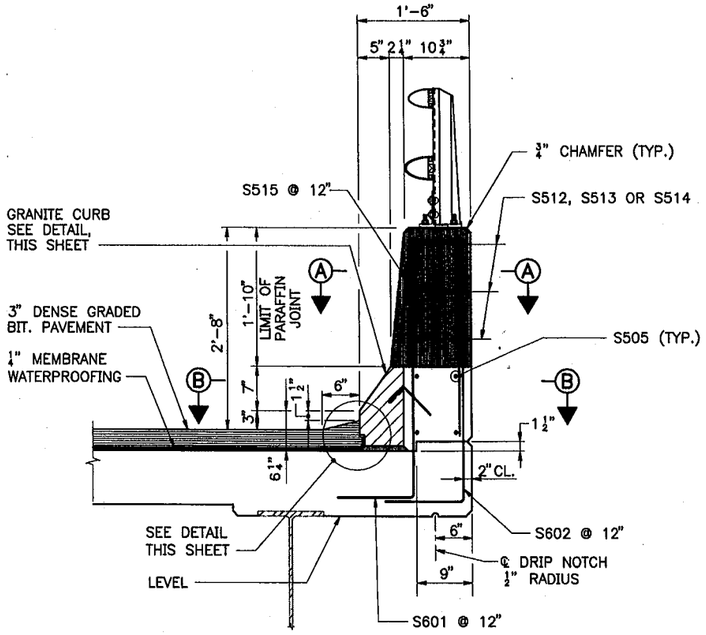
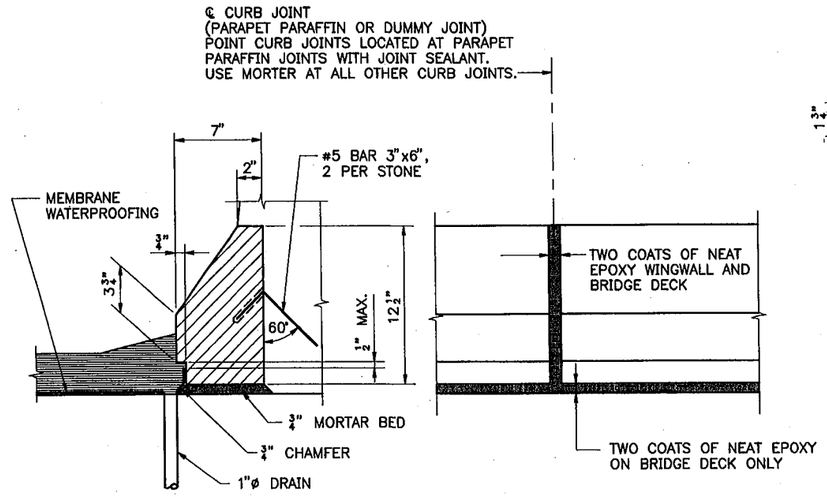
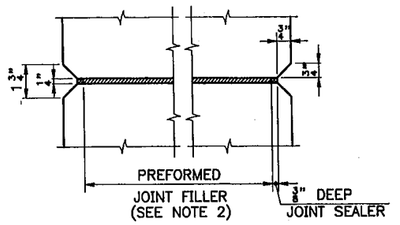


PARAPET DETAIL
1"=1'-0"

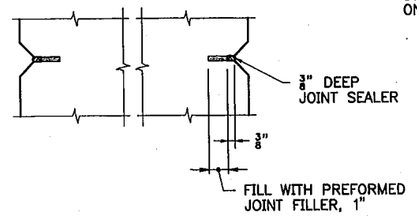


GRANITE CURB DETAIL
2"=1'-0"

BRIDGE CURB ELEVATION
2"=1'-0"



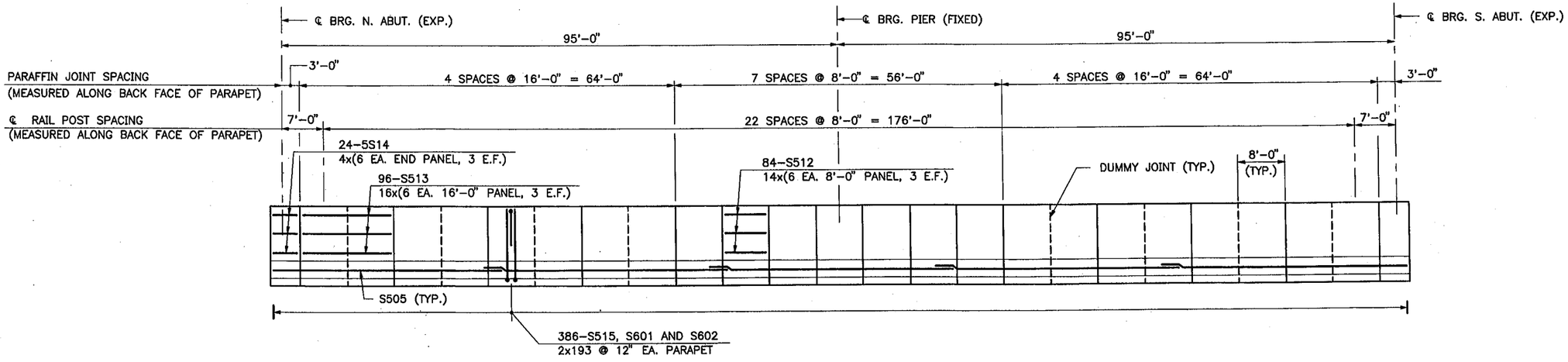
SECTION A-A
3"=1'-0"



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

PARAFFIN AND DUMMY JOINT NOTES

1. CONCRETE SHALL BE PLACED SIMULTA BOTH SIDES OF JOINT.
2. PREFORMED JOINT FILLER SHALL CON ASTM DESIGNATION D1751 AND MAY E WITH A THIN STEEL PLATE. REMOVE F CAREFULLY WHILE THE CONCRETE IS
3. SECTION B-B ALSO APPLIES TO DUMI JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKA FLEX 1
5. PREFORMED JOINT FILLER AND JOINT SHALL BE INCIDENTAL TO ITEM 502.2 STRUCTURAL CONCRETE ROADWAY AND ON STEEL BRIDGES.



PARAPET ELEVATION
HORIZ. 1"=10'
VERT. 1"=2'

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				Designed	DMD	3/95
				Drawn	LMR	3/95
				Checked	HNL	3/95

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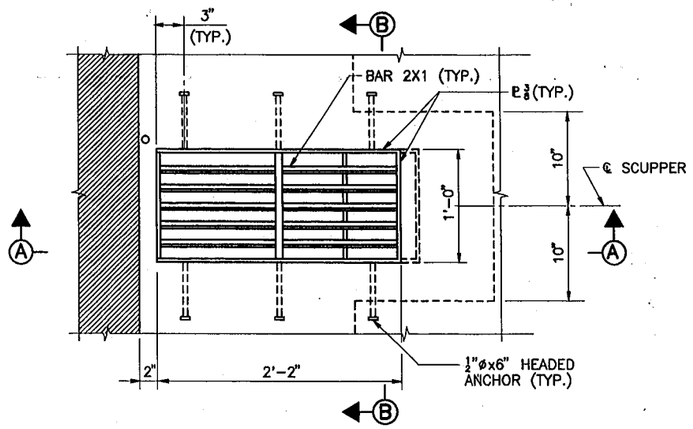
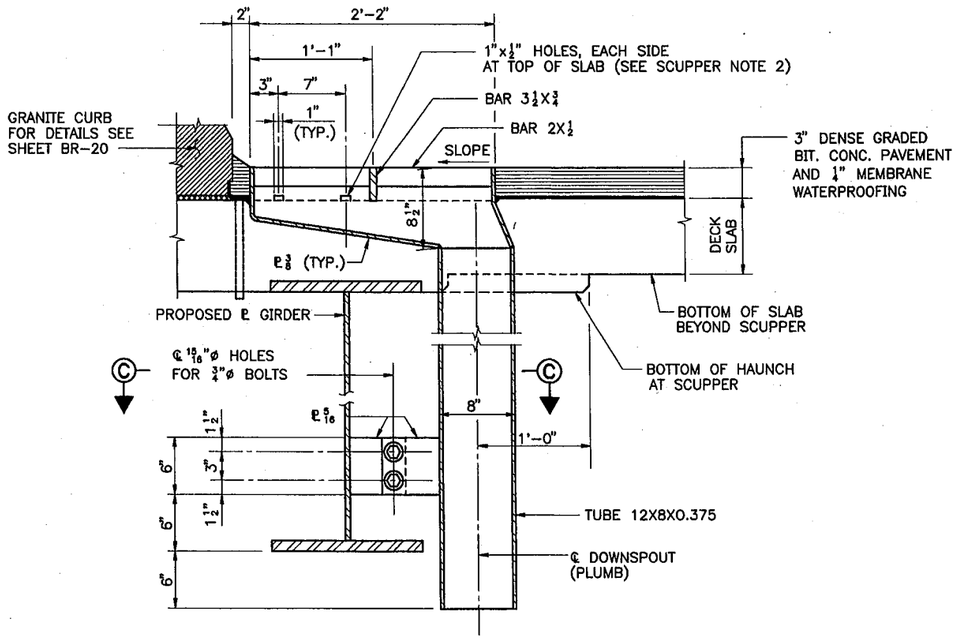
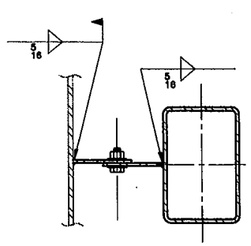


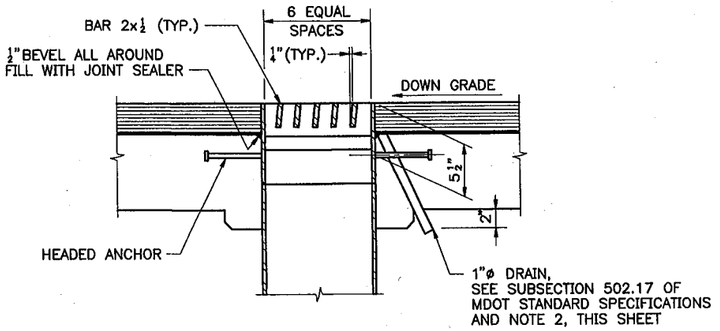
PLAN – SCUPPER
1½"=1'-0"



SECTION A–A
1½"=1'-0"



SECTION C–C
1½"=1'-0"



SECTION B–B
1½"=1'-0"

SCUPPER NOTES

1. ALL WELDS TO BE CONTINUOUS ¼" FILLET WELDS EXCEPT
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPRO DEPRESS DRAINS ½" BELOW TOP OF SLAB, PROVIDE 23 GALVANIZED SCREENS (¼" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVA SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFORM TO ASTM A709, GRADE 36.
5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
6. PAYMENT FOR SCUPPERS PVC DRAINS AND SCREENS INCIDENTAL TO CONTRACT ITEM 502.262.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET BR-18.

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				Designed	SHR	3/95
				Drawn	LMR	3/95
				Checked	GPM	3/95

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SCUPPER

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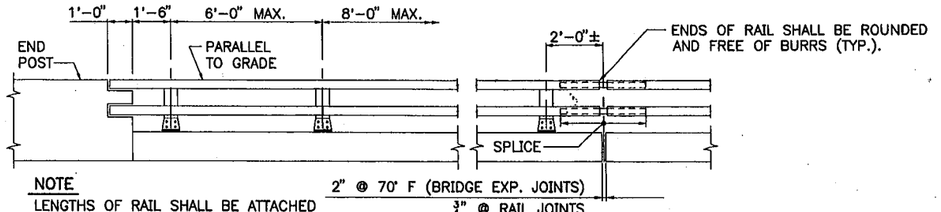
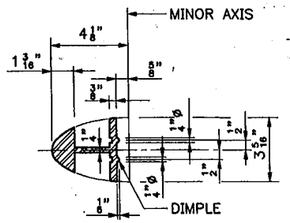
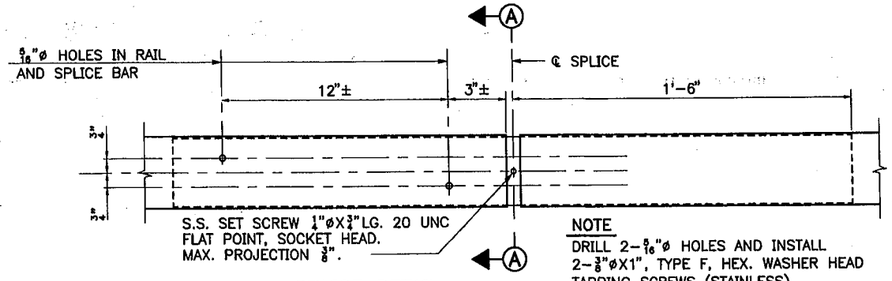


NOTE
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING – ELEVATION
3/8"=1'-0"

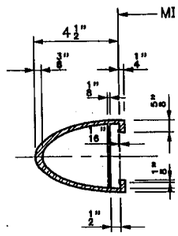


SECTION A–A (RAIL)
3"=1'-0"

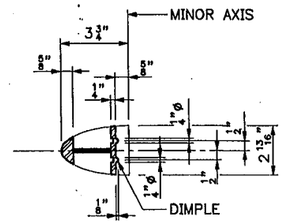


NOTE
DRILL 2–5/16"ø HOLES AND INSTALL 2–3/8"øX1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).

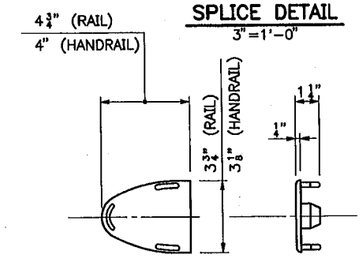
SPLICE DETAIL
3"=1'-0"



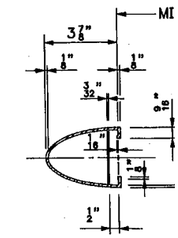
RAIL MEM
3"=1'-0



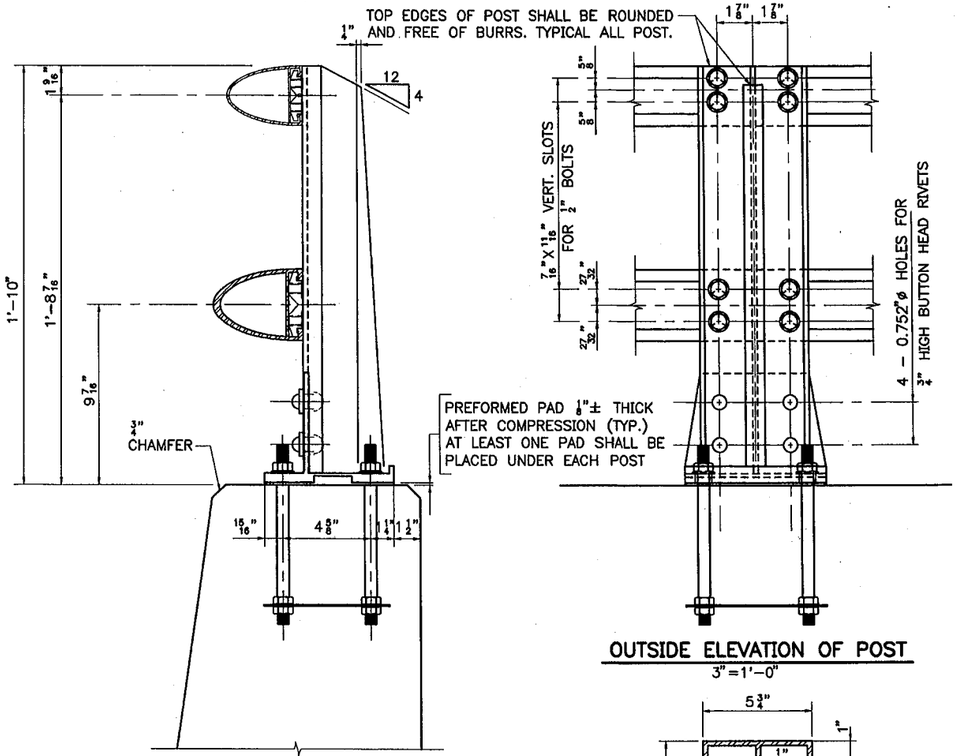
SECTION A–A (HANDRAIL)
3"=1'-0"



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

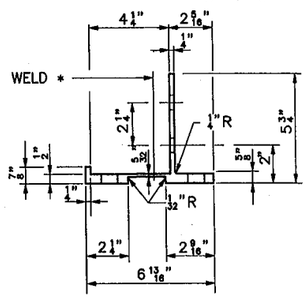


HANDRAIL ME
3"=1'-0



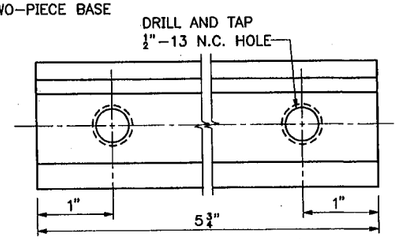
BRIDGE RAILING (ASSEMBLY)
3"=1'-0"

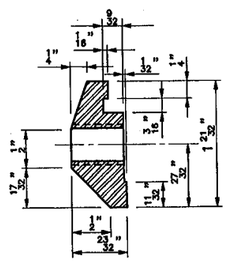
OUTSIDE ELEVATION OF POST
3"=1'-0"



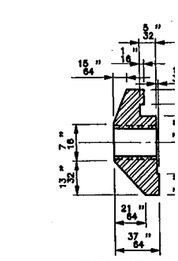
POST BASE SECTION
3"=1'-0"

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





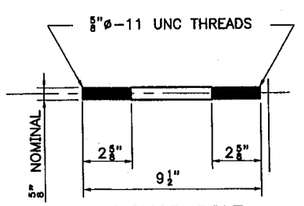
FOR RAIL MEMBER



FOR HANDR

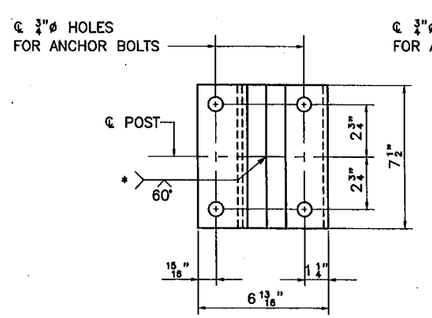
CLAMP BAR DETAILS
FULL SIZE

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

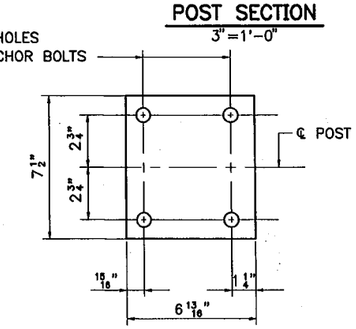


ANCHOR BOLT
3"=1'-0"

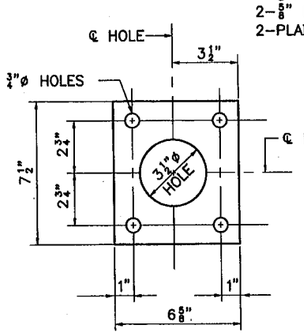
NOTE
IF CUT THREADS ARE USED, BODY SHALL BE NOT LESS THAN NOMINAL IF ROLLED THREADS ARE USED, BO SHALL BE NOT LESS THAN PITCH D THE THREADS.



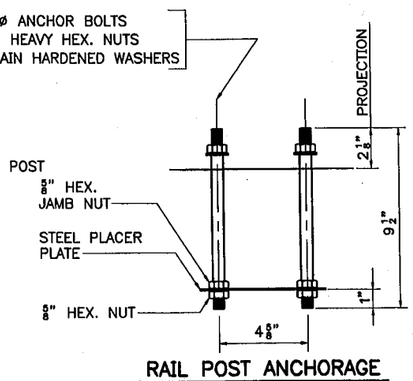
POST BASE (BOTTOM VIEW)
3"=1'-0"



PREFORMED PAD
3"=1'-0"



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



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

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

No.	Revision	By	Date

In Charge Of: RAL	By	Date
Designed	XPM	3/95
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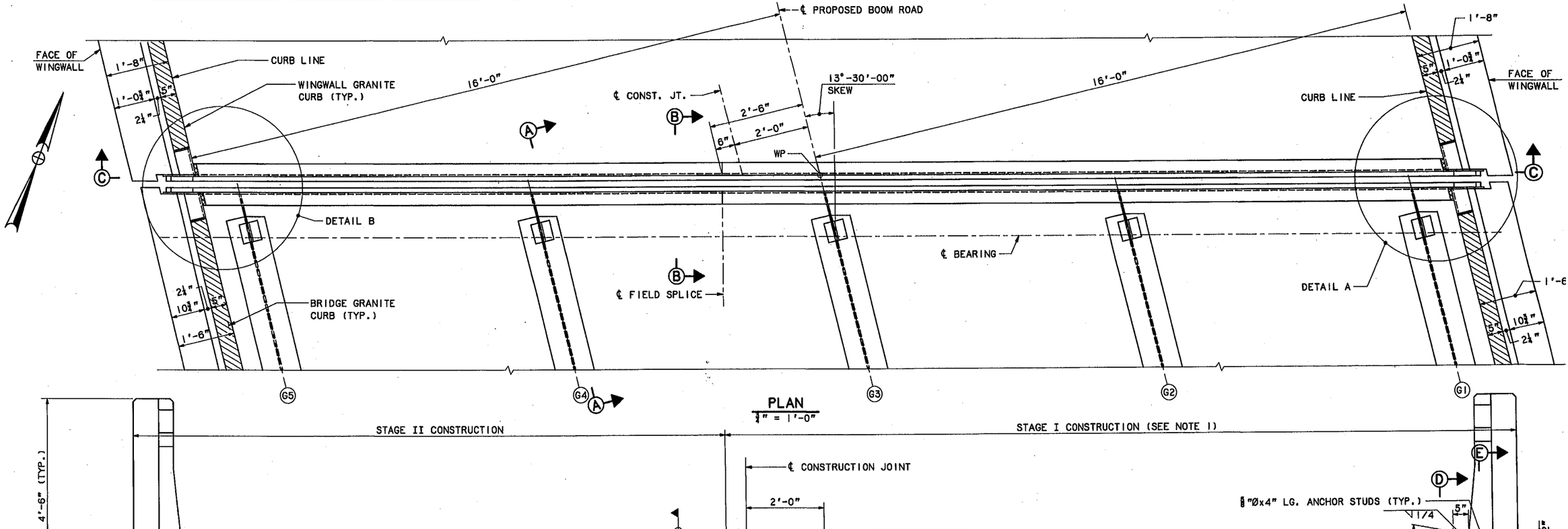
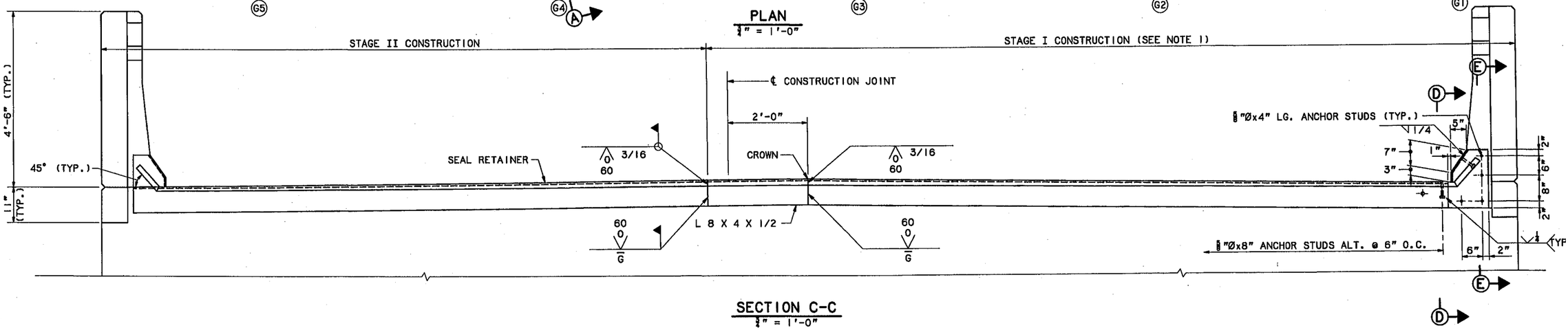
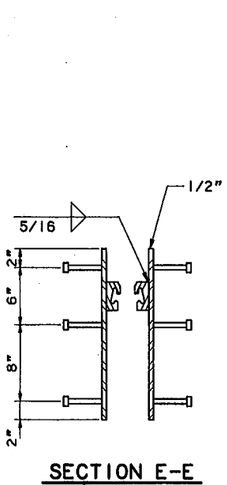


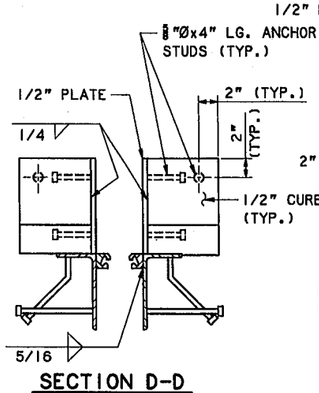
PLAN
¼" = 1'-0"



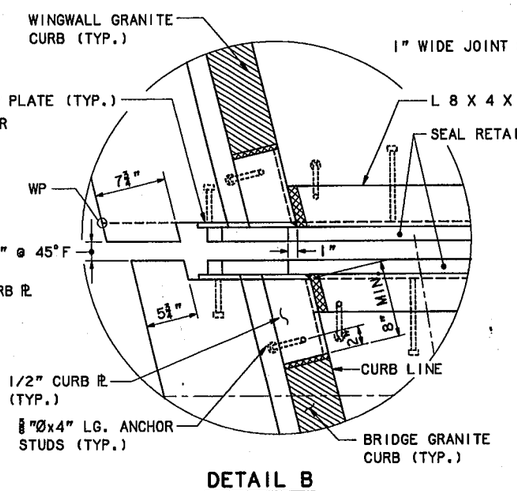
SECTION C-C
¼" = 1'-0"



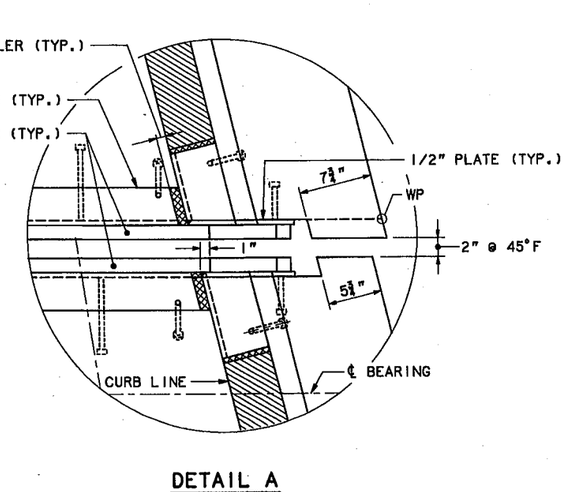
SECTION E-E
1½" = 1'-0"



SECTION D-D
1½" = 1'-0"



DETAIL B
1½" = 1'-0"



DETAIL A
1½" = 1'-0"

NOTES

1. CONSTRUCTION STAGES SHOWN RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE DECK SHALL BE CONSTRUCTED ACCORDING TO THE STAGE CONSTRUCTION AS SHOWN ON SHEET BR-18.
2. FOR SECTIONS A-A AND B-B SEE SHEET NO. BR-24.
3. EXPANSION JOINT AT NORTH ABUTMENT SHOWN, EXPANSION JOINT AT SOUTH ABUTMENT SIMILAR.

No.	Revision	By:	Date:	In charge of:	RAL
				Designed	GPM 3/95
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				Checked	HNL 3/95

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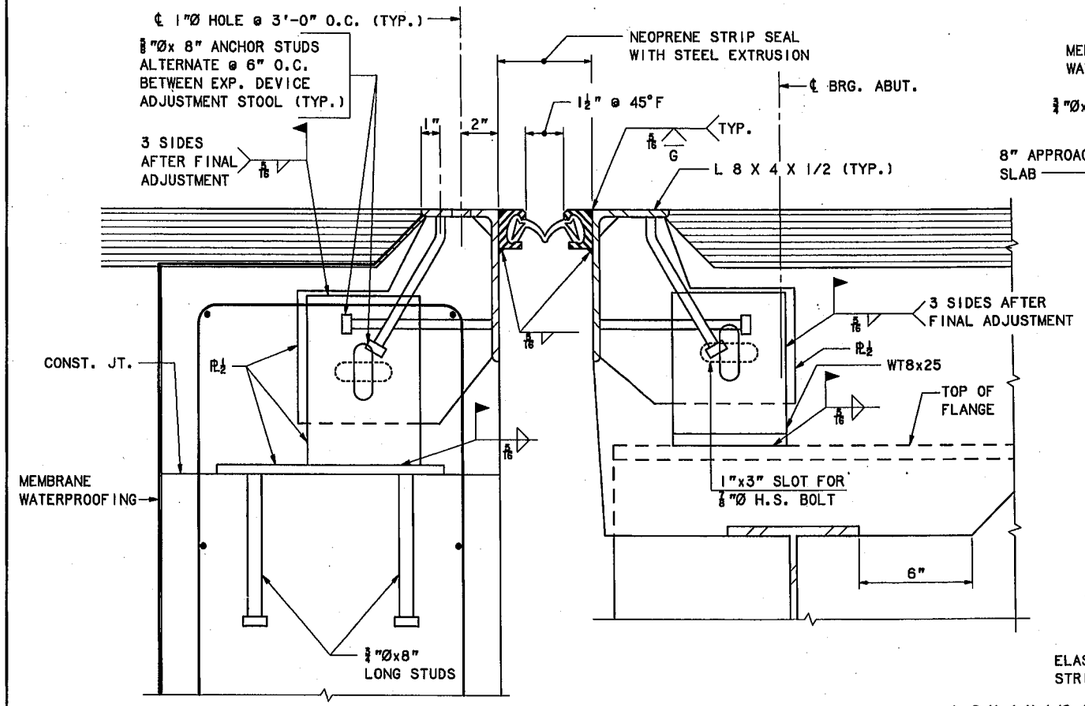
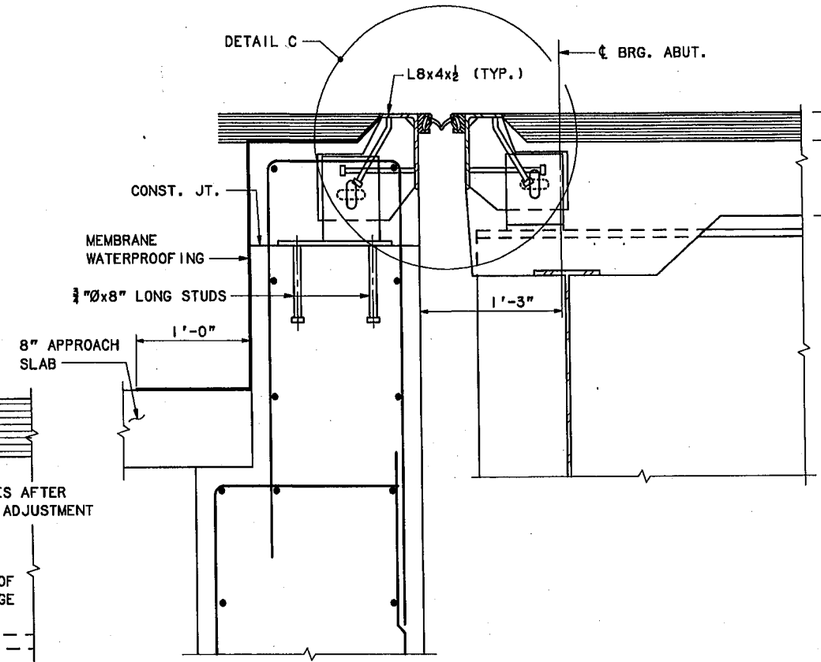
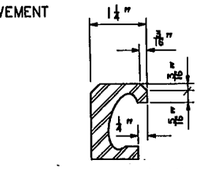


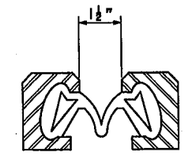
DETAIL C
3" = 1'-0"

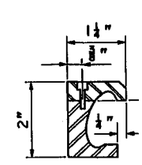


SECTION A-A
½" = 1'-0"

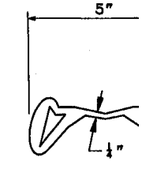


STEEL EXTRUSION FOR ROADWAY AREAS

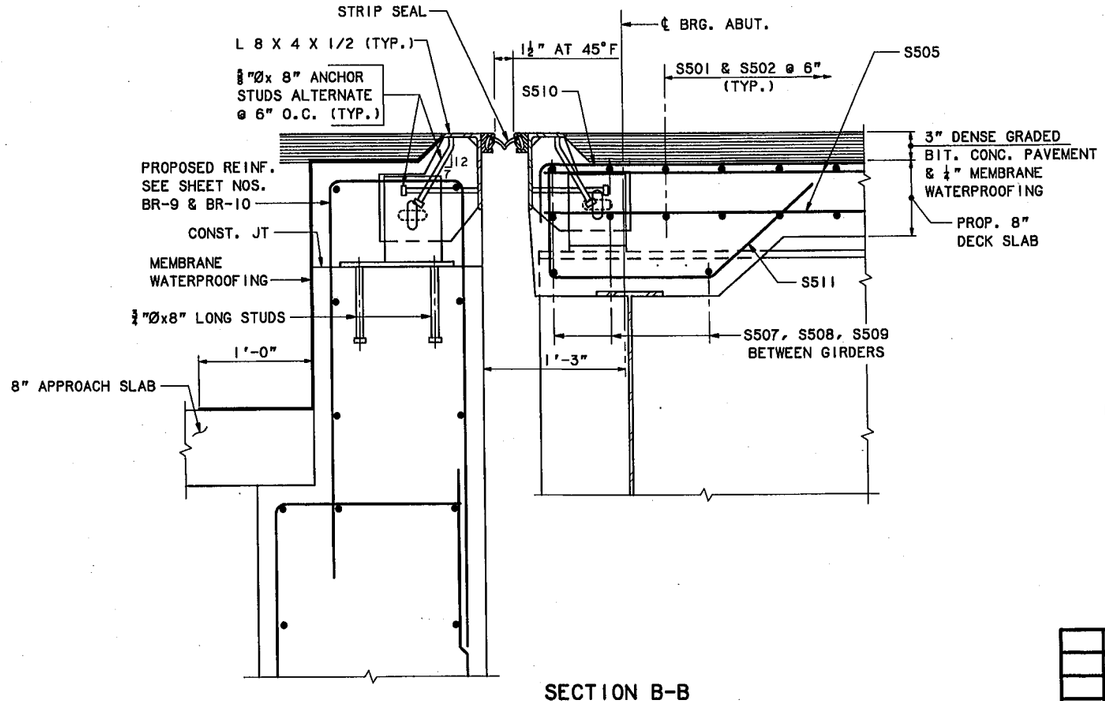




STEEL EXTR FOR OTHER



STRIP SEAL DETAILS
HALF SIZE



SECTION B-B
½" = 1'-0"

EXPANSION DEVICE NOTES

1. SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR A OF THE ENGINEER.
2. EXPANSION DEVICES SHALL BE INSTALLED NORMAL TO GRADE.
3. THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF TWO (2) IN IN THE FABRICATION SHOP AND SHALL BE SECURE TO THE STRINGER A ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND THE OPENING SHALL BE ADJUSTED TO REFLECT THE TEMPERATURE OF T STRUCTURE AT THE TIME OF INSTALLATION. SETTING SCHEDULE FOR T OPENING SHALL BE SUPPLIED BY THE MANUFACTURER OF THE SEAL.
4. THE SLAB AND BACKWALL CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY.
5. THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FAB AND INSTALLING THE DEVICE IN TWO SECTIONS.
6. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF RE TO FACILITATE CONSTRUCTION.
7. ALL EXPOSED SURFACES OF ANGLES TO BE FIELD PAINTED.
8. ALL STEEL COMPONENTS SHALL BE ASTM A709 GRADE 36 UNLESS OTHER
9. ALL WELDS ARE 5/16" CONTINUOUS FILLETS, EXCEPT AS NOTED.
10. ALL STEEL SURFACES THAT WILL BE IMBEDDED IN CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND.

No.	Revision	By:	Dates		By:	Dates
				Designed	AD	3/95
				Drawn	LS	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

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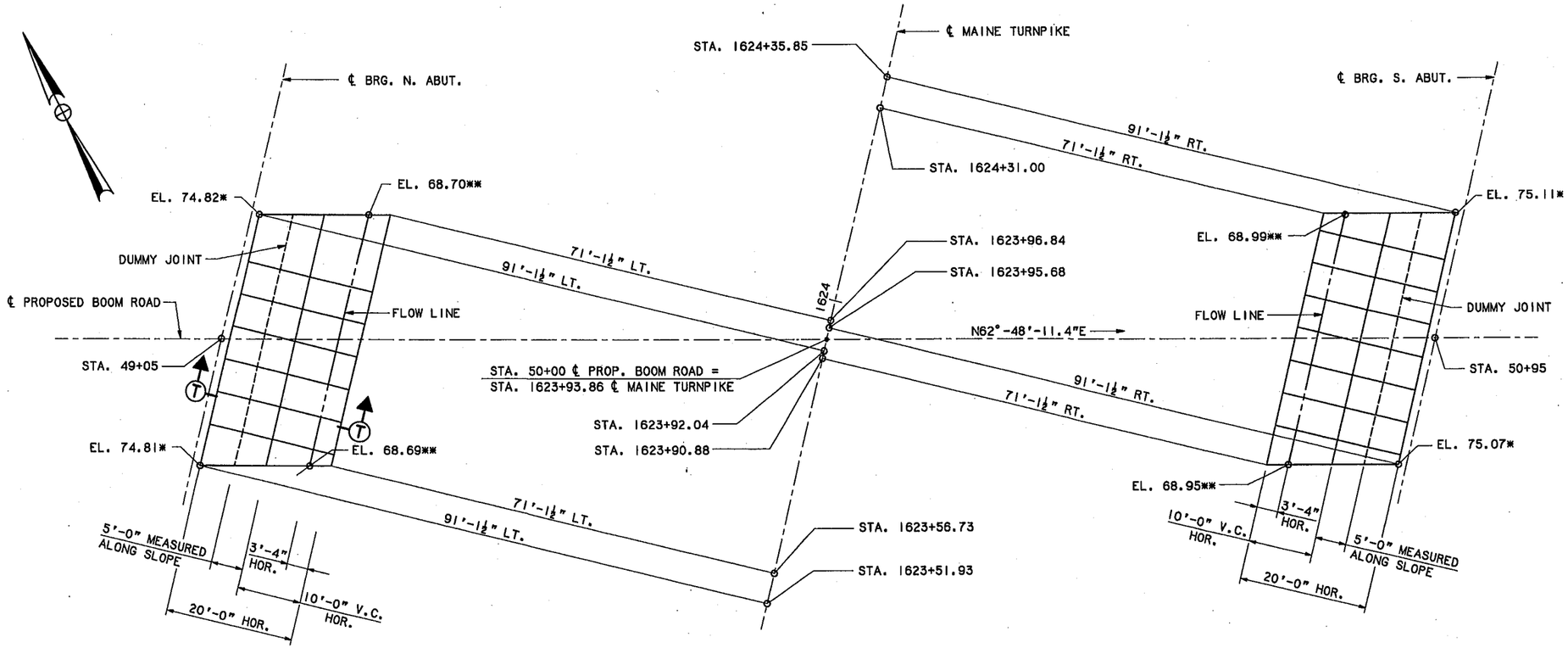
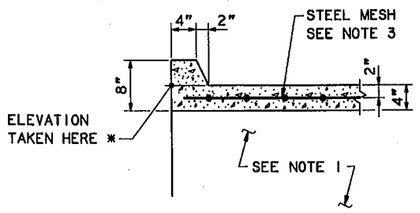
HNTB HOWARD NEEDLES TAMM ARCHITECTS ENGI
Contract 95.5
Sheet N 60



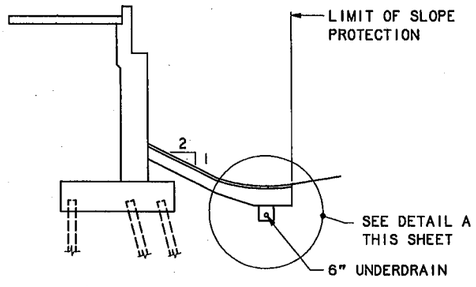
PLAN OF SLOPE PROTECTION
1" = 10'

SLOPE PROTECTION NOTES

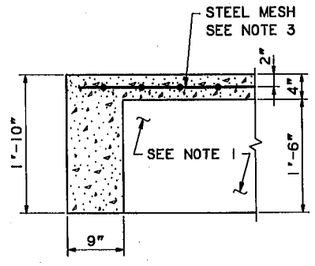
1. THE 18" OF GRAVEL BORROW UNDER SLOPE PROTECTION MAY B REDUCED OR OMITTED IF IN THE OPINION OF THE ENGINEER THE EXISTING MATERIAL IS SUITABLE.
2. BREAK BOND AT CONSTRUCTION JOINTS WITH A COAT OF ASPI
3. REINFORCE WITH EPOXY COATED WWF6X6-W2XW2, NOT TO PASS CONSTRUCTION JOINTS.
4. DUMMY JOINTS SHALL BE MADE WITH A GROOVER TO A DEPTH
5. EDGES OF CONSTRUCTION JOINTS SHALL BE FINISHED WITH SIDEWALK EDGING TOOL TO A DEPTH OF 1/4".
6. * ELEVATIONS TAKEN AT TOP OF 4" CONCRETE SLAB.
   ** ELEVATIONS TAKEN AT LOW POINT OF DITCH.



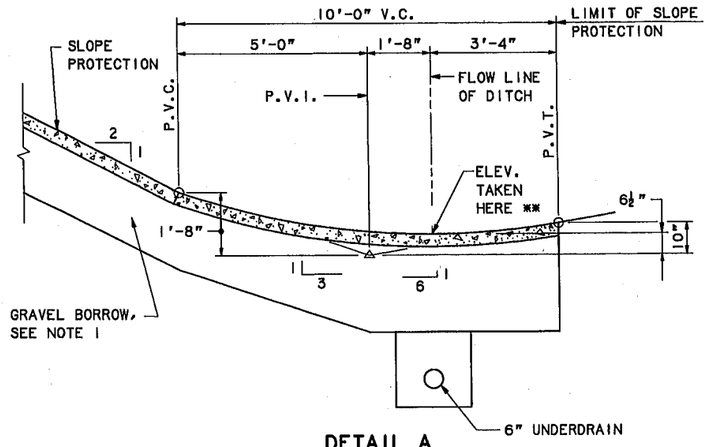
SECTION U-U
1" = 1'-0"



SECTION T-T
1" = 10'



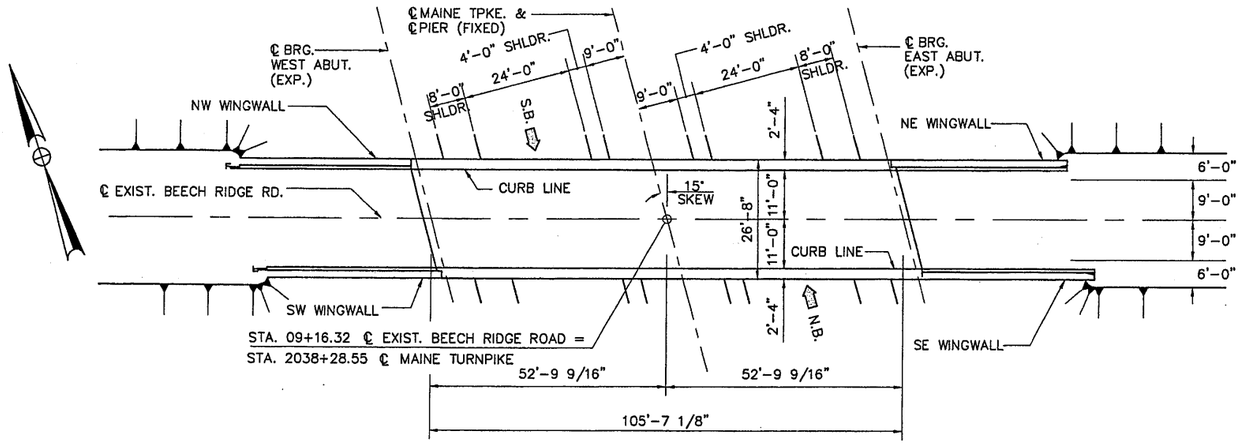
SECTION V-V
1" = 1'-0"



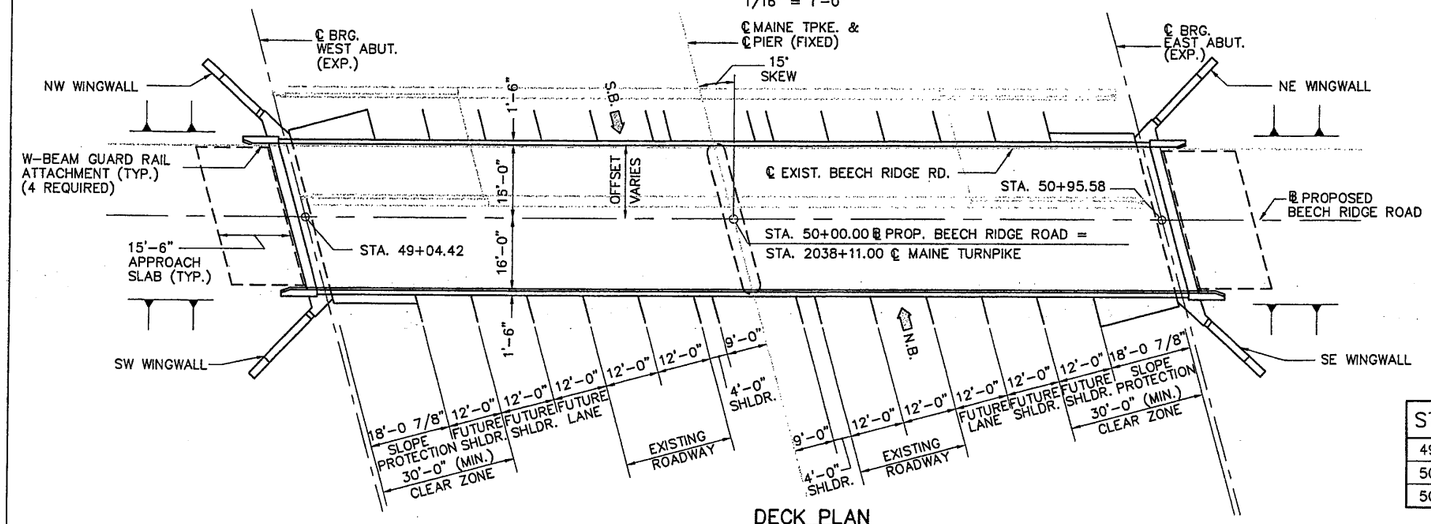
DETAIL A
1/2" = 1'-0"

No.	Revision	By:	Date:		By:	Date:
				Designed	AD	3/95
				Drawn	LS	3/95
				Checked	HNL	3/95
				In charge of:	RAL	

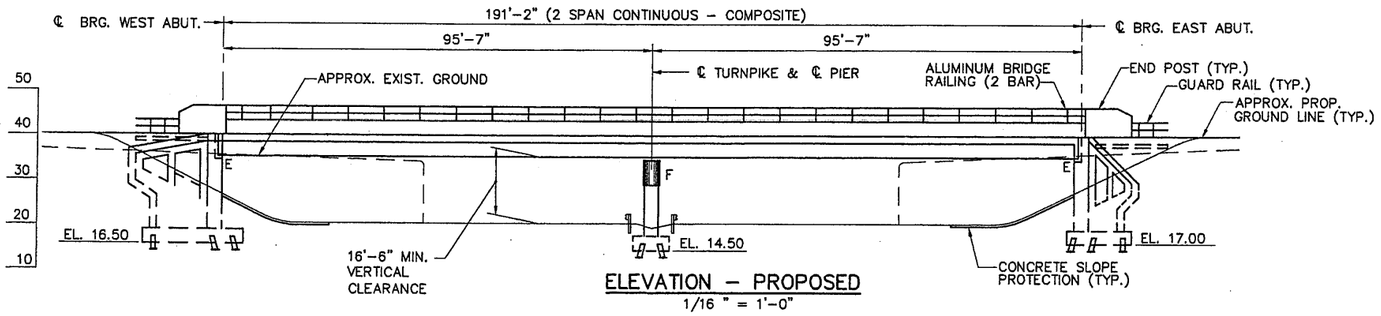
Maine Turnpike Auth
Maine Turnp
BOOM ROAD
SLOPE PR
HNTB HOWARD NEEDLES TAMM ARCHITECTS ENG
Contract 95.5
Sheet N 62



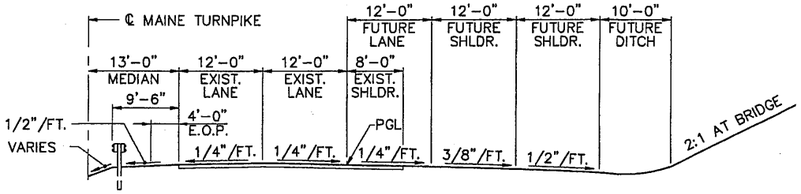
EXISTING PLAN
1/16" = 1'-0"



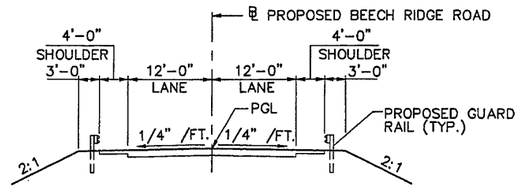
DECK PLAN
1/16' = 1'-0"



ELEVATION – PROPOSED
1/16 " = 1'-0"



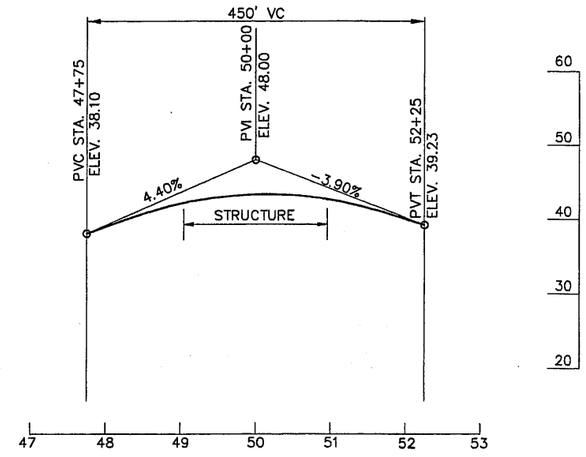
HALF APPROACH SECTION
MAINE TURNPIKE
3/32" = 1'-0"



APPROACH SECTION
BEECH RIDGE ROAD
3/32" = 1'-0"

STATION	OFFSET
49+04.42	16.85' LT. OF CENTER
50+00.00	16.95' LT. OF CENTER
50+95.58	17.06' LT. OF CENTER

EXIST. ℄ OFFSET FROM PROP. ℄
NO SCALE



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

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BPL01.DWG

Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	12/99	Checked	BSV	04/00
Drawn	CTJ	12/99	In Charge of	RAL	04/00

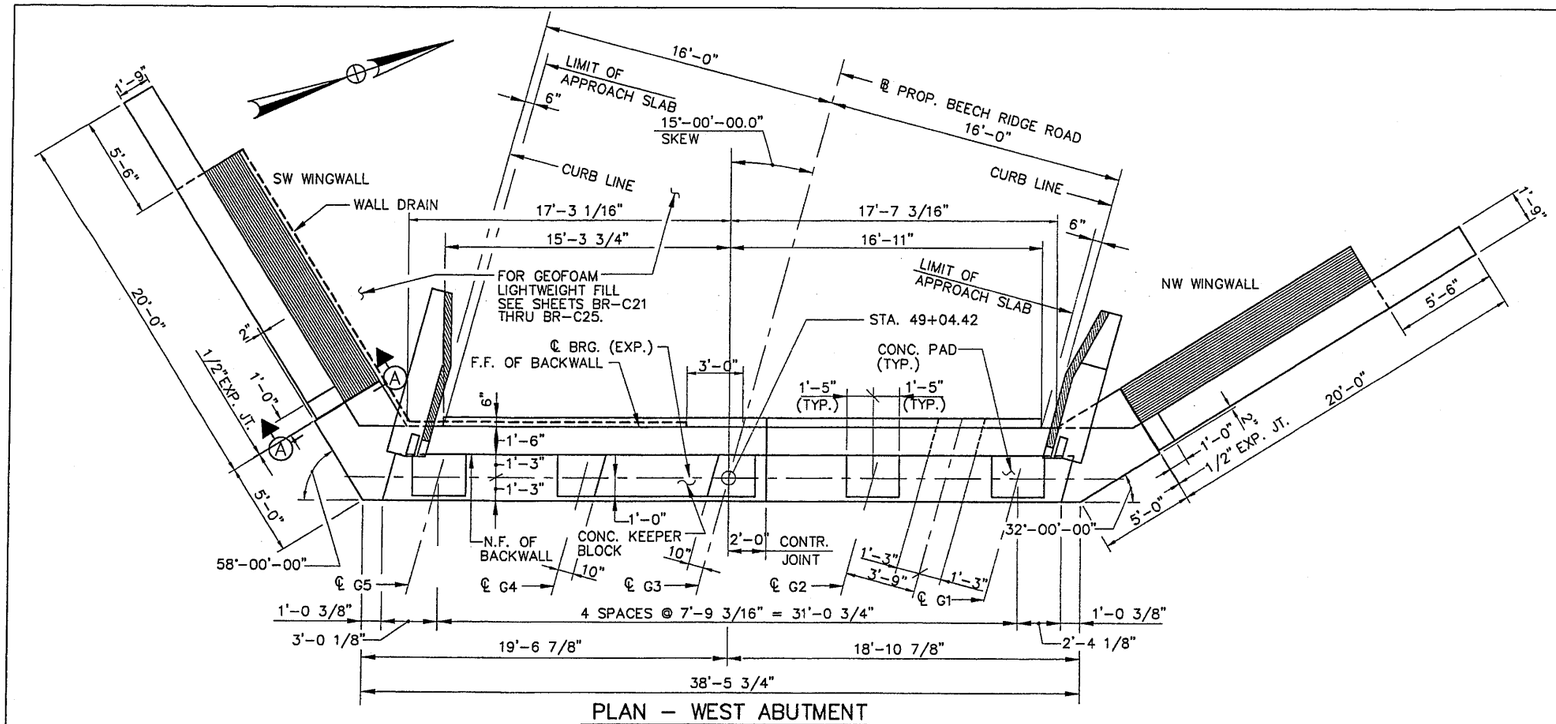
PE Stamp: STATE OF MAINE * BRUCE S. VERRILL * 8999 REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
THINKING AHEAD The Widening

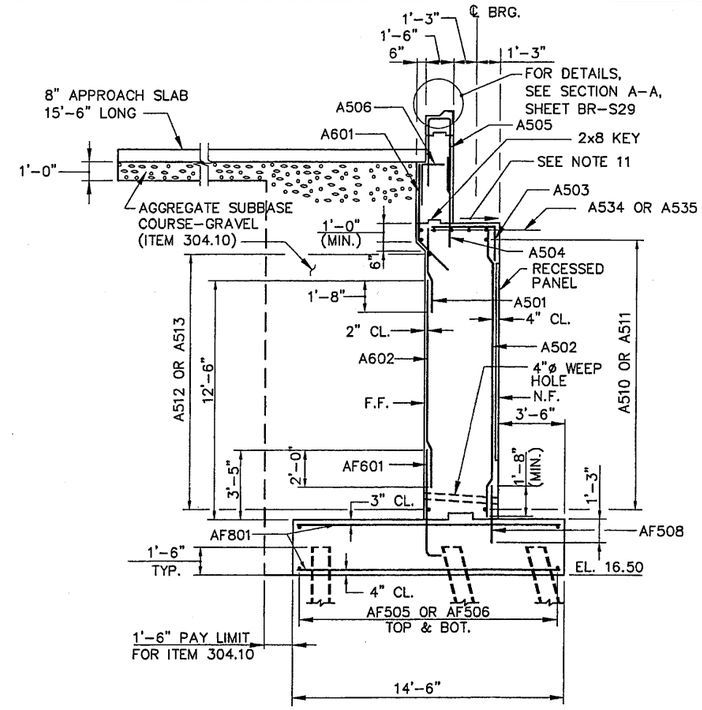
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
PLAN & ELEVATION

SHEET NUMBER: **BR-S1**
CONTRACT: **2000.05**
187 OF **229**



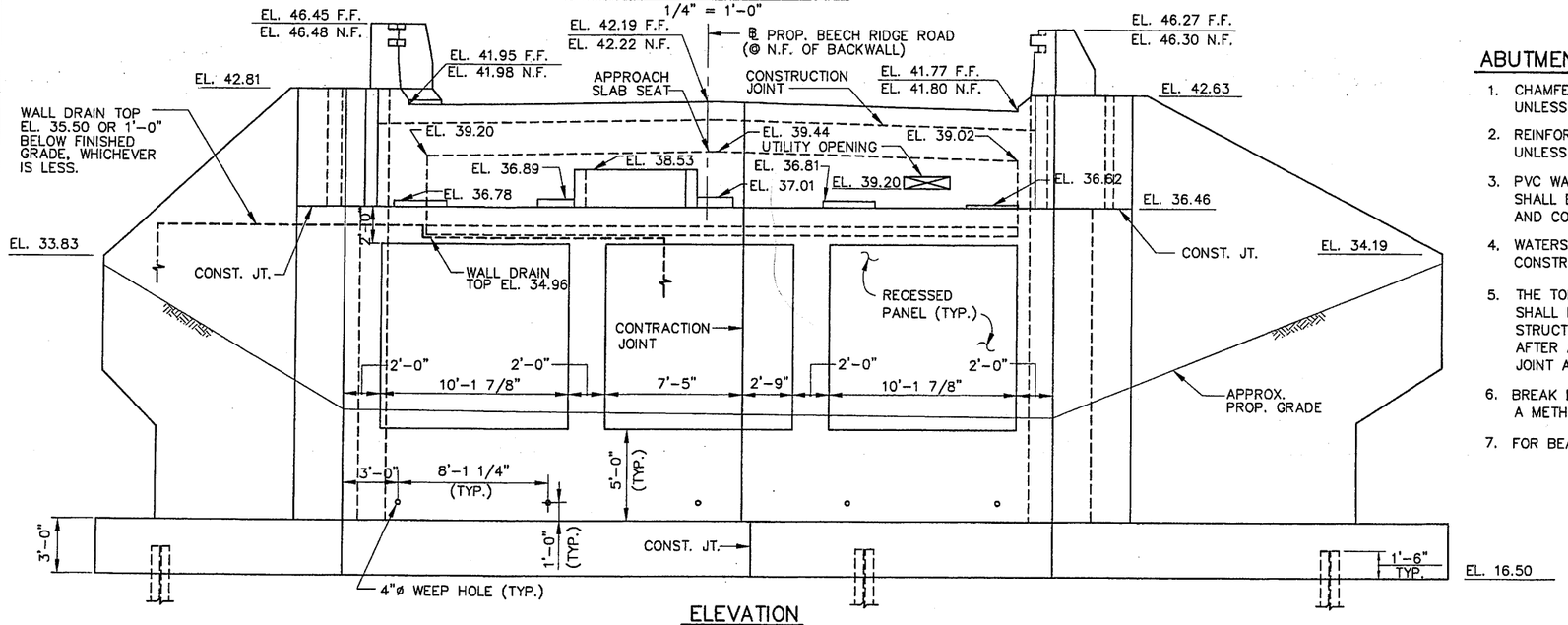
PLAN – WEST ABUTMENT

1/4" = 1'-0"



TYPICAL WEST ABUTMENT SECTION

1/4" = 1'-0"



ELEVATION

1/4" = 1'-0"

ABUTMENT NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE INDICATED.
3. PVC WATERSTOPS, AS SHOWN ON SHEET BR-S14, SHALL BE PLACED IN ALL VERTICAL EXPANSION AND CONTRACTION JOINTS.
4. WATERSTOPS ARE REQUIRED IN HORIZONTAL CONSTRUCTION JOINTS.
5. THE TOP PORTION OF THE ABUTMENT BACKWALLS SHALL BE PLACED AFTER ALL SUPERSTRUCTURE STRUCTURAL SLAB CONCRETE IS IN PLACE AND AFTER ALL NECESSARY ADJUSTMENTS TO THE JOINT ARMOR HAVE BEEN MADE.
6. BREAK BOND AT VERTICAL CONTRACTION JOINTS BY A METHOD TO BE APPROVED OF BY THE ENGINEER.
7. FOR BEARING DEVICES SEE SHEET BR-S21.
8. FOR APPROACH SLAB DETAILS, RECESSED PANEL DETAILS, EXPANSION, CONTRACTION AND CONSTRUCTION JOINT DETAILS, SEE SHEET BR-S14.
9. APPROACH SLAB SEATS SHALL HAVE A ROUGHENED SURFACE TO THE SATISFACTION OF THE ENGINEER.
10. ALL CONCRETE KEYS SHALL BE FORMED.
11. TOP OF ABUTMENT SEAT SHALL BE SLOPED 1/8" BETWEEN CONCRETE BEARING PADS.
12. SEE SHEET NO. BR-S14 FOR FRENCH DRAIN DETAILS TO BE LOCATED BEHIND ABUTMENT AND WINGWALL STEMS RESPECTIVELY.
13. FOR SECTION A-A, SEE SHEET NO. BR-S12.
14. FOR UTILITY SECTION SEE SHEET BR-S11.

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Scale: AS NOTED

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 86737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE D. SHARON WINN 12345 REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

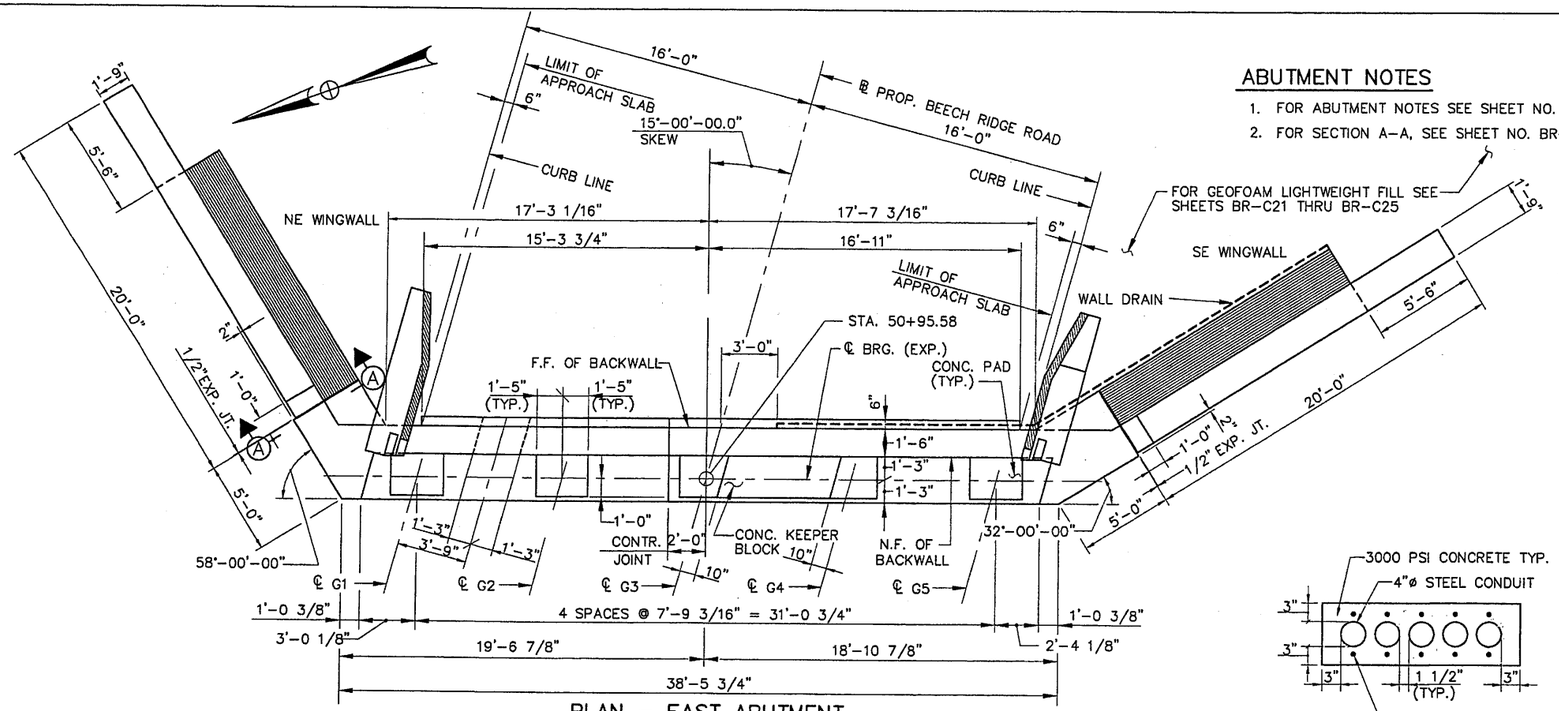
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
PROPOSED WEST ABUTMENT

SHEET NUMBER: BR-S10

CONTRACT: 2000.05

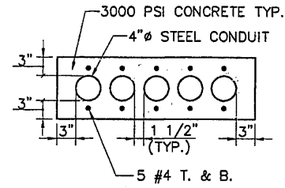
ABUTMENT NOTES

1. FOR ABUTMENT NOTES SEE SHEET NO. BR-S10.
2. FOR SECTION A-A, SEE SHEET NO. BR-S13.



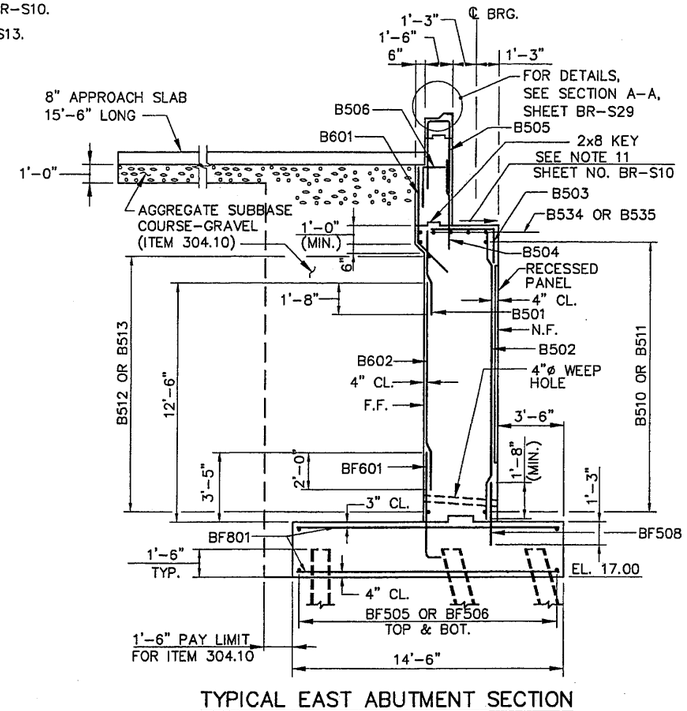
PLAN - EAST ABUTMENT

1/4" = 1'-0"



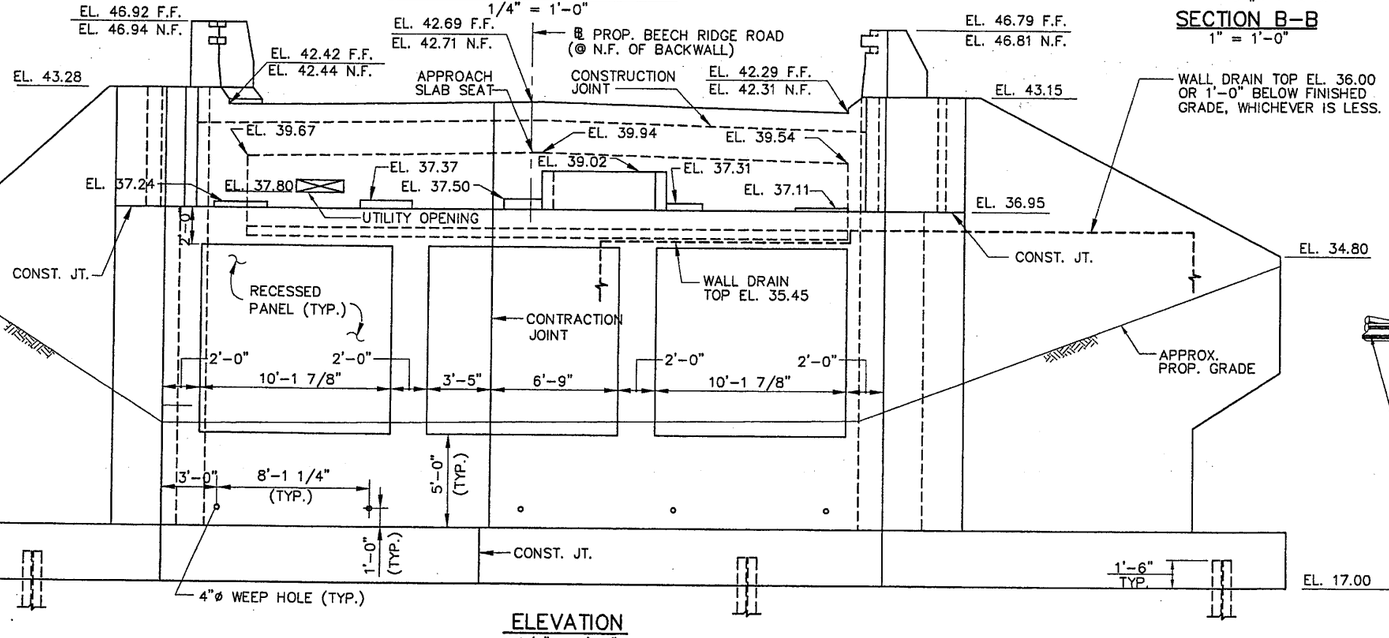
SECTION B-B

1" = 1'-0"



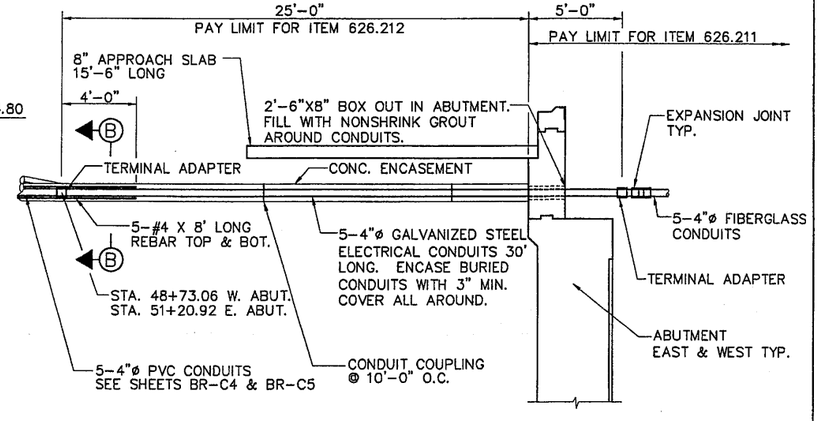
TYPICAL EAST ABUTMENT SECTION

1/4" = 1'-0"



ELEVATION

1/4" = 1'-0"



TYPICAL UTILITY CROSSING AT ABUTMENT

1/4" = 1'-0"

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEA01.DWG

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE — TIMOTHY J. WALSH — 12704 — REGISTERED PROFESSIONAL ENGINEER

Approved by:

HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

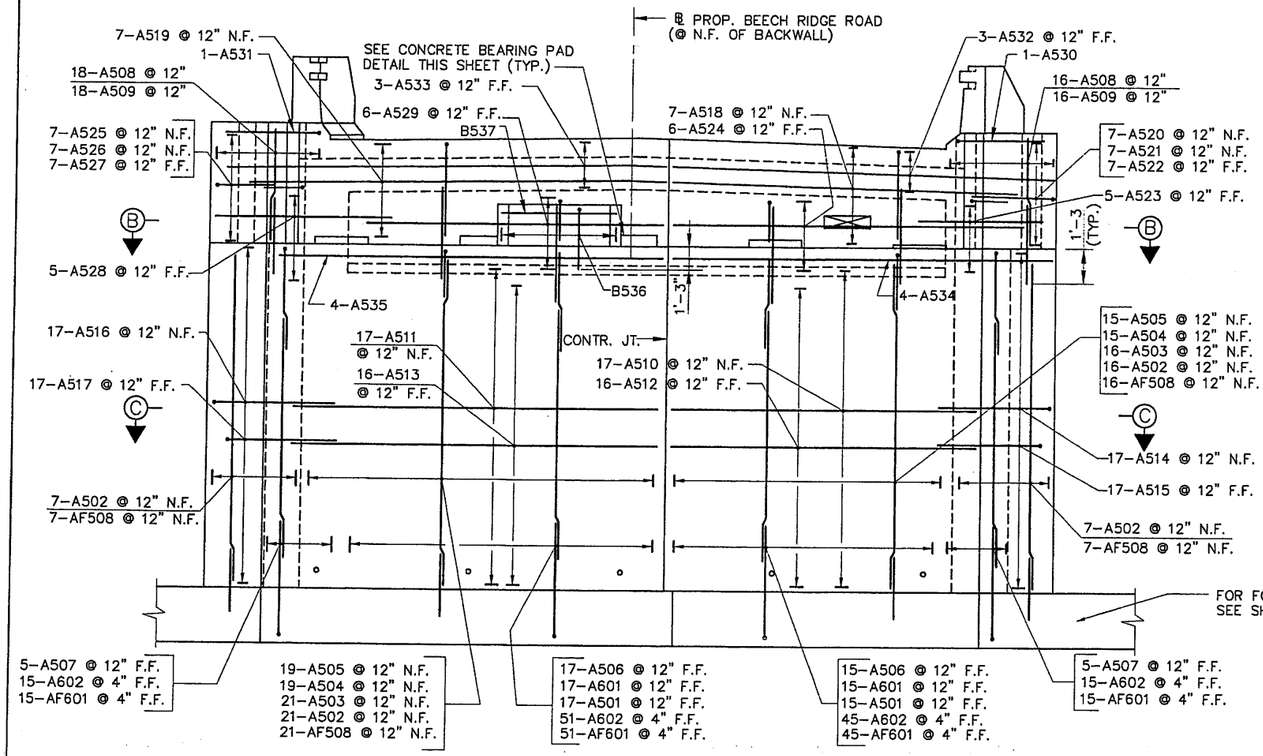
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

THINKING AHEAD The Widening

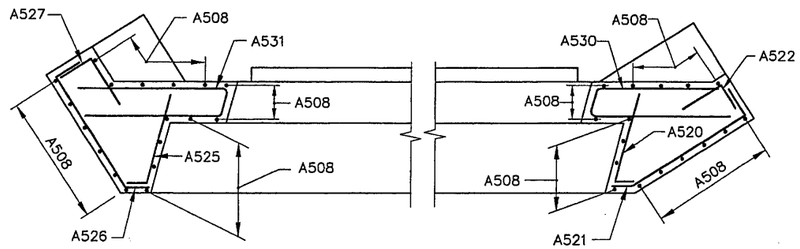
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
PROPOSED EAST ABUTMENT

SHEET NUMBER: BR-S11

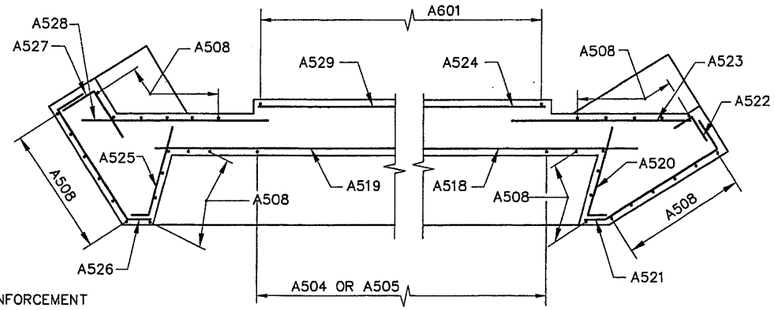
CONTRACT: 2000.05



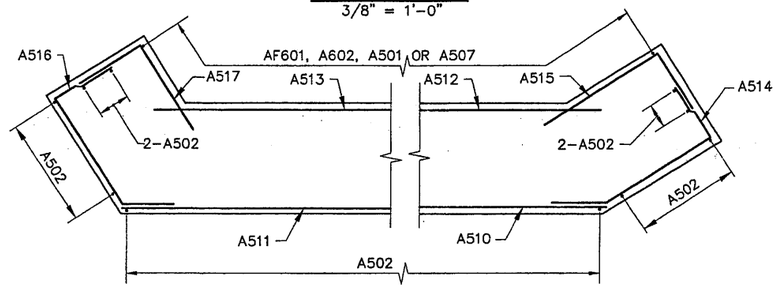
ELEVATION
1/4" = 1'-0"



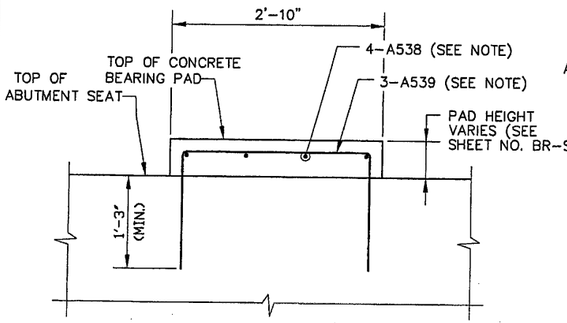
S.W. & N.W. CORNER DETAIL
3/8" = 1'-0"



SECTION B–B
3/8" = 1'-0"

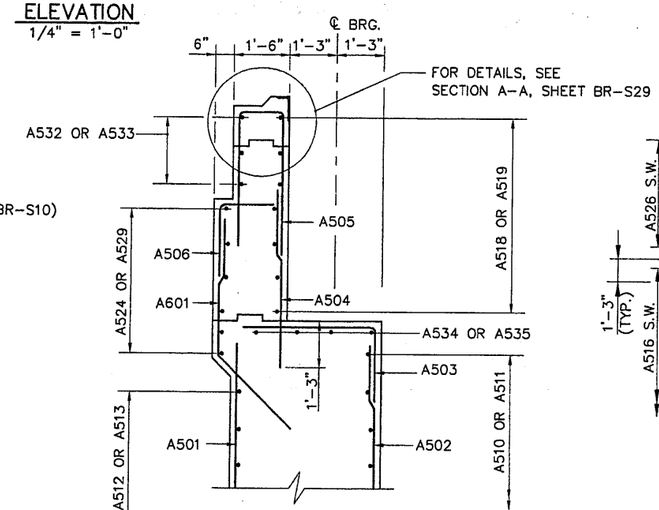


SECTION C–C
3/8" = 1'-0"

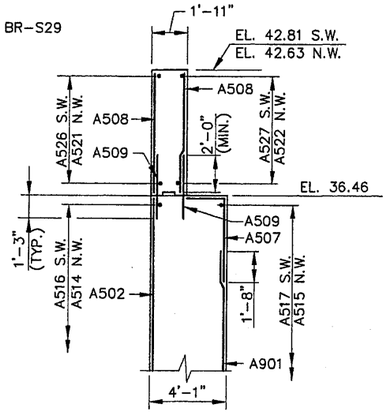


NOTE:
1. REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 3".

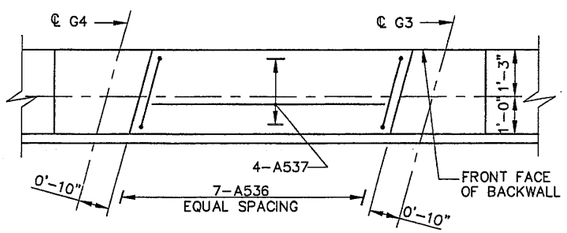
CONCRETE BEARING PAD DETAIL
1" = 1'-0"



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



SECTION A–A
1/4" = 1'-0"
FOR SECTION A–A LOCATION SEE SHEET NO. BR–S10



DETAIL – CONCRETE KEEPER BLOCK
3/8" = 1'-0"

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BWR01.DWG

Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781–5379 FAX: (207) 781–5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE · B. SHARON · REGISTERED PROFESSIONAL ENGINEER

Approved by:

HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

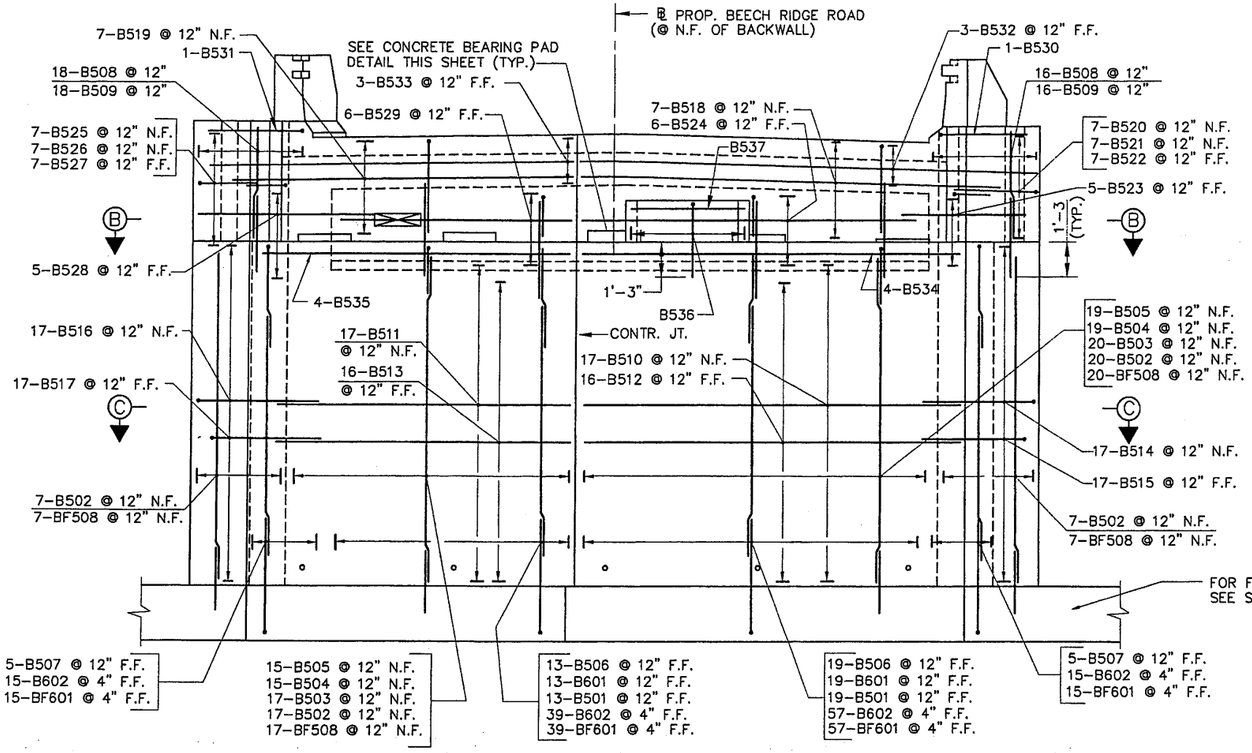
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

THINKING AHEAD The Widening

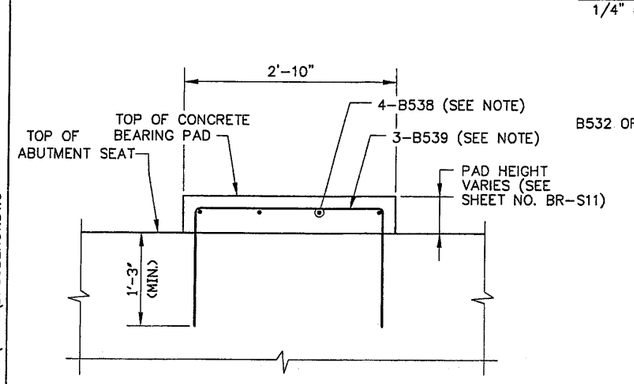
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
WEST ABUTMENT REINFORCEMENT

SHEET NUMBER: **BR–S12**

CONTRACT: **2000.05**

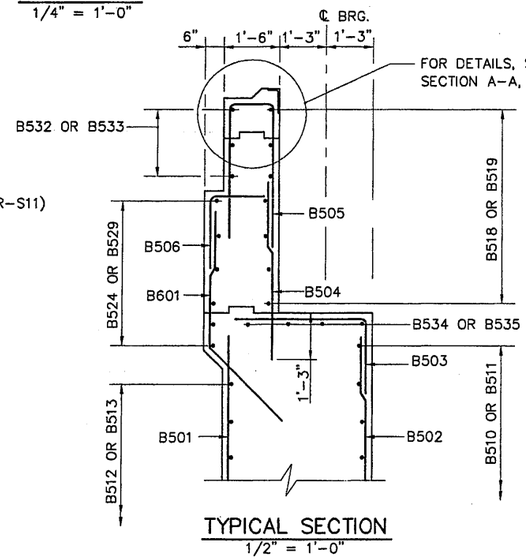


ELEVATION
1/4" = 1'–0"

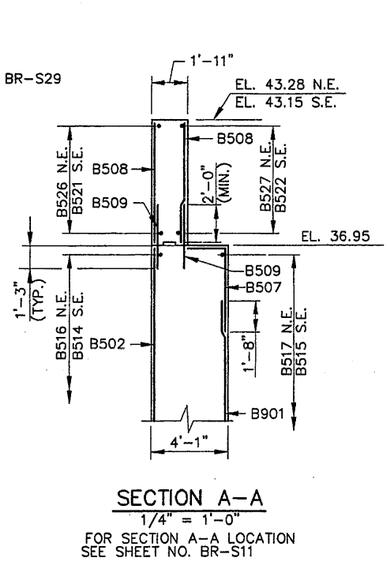


NOTE:
1. REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 3".

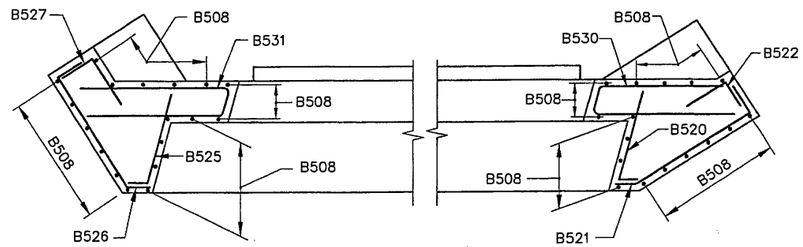
CONCRETE BEARING PAD DETAIL
1" = 1'–0"



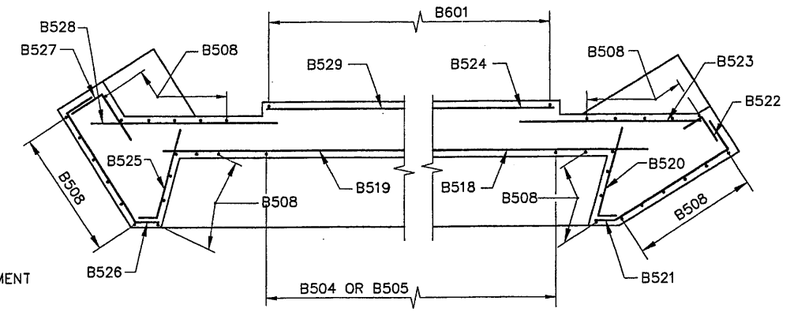
TYPICAL SECTION
1/2" = 1'–0"



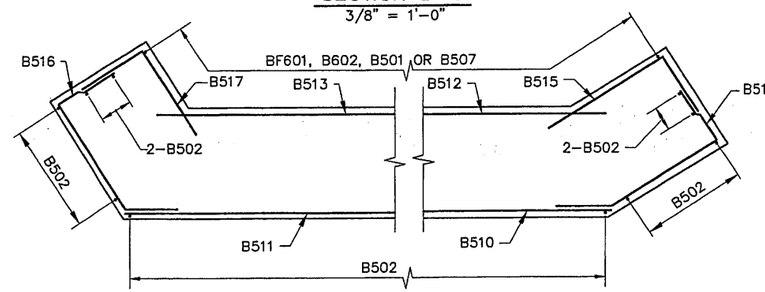
SECTION A–A
1/4" = 1'–0"
FOR SECTION A–A LOCATION SEE SHEET NO. BR–S11



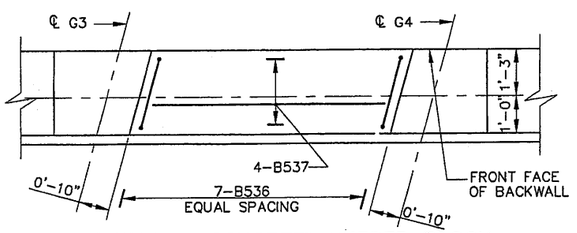
N.E. & S.E. CORNER DETAIL
3/8" = 1'–0"



SECTION B–B
3/8" = 1'–0"



SECTION C–C
3/8" = 1'–0"



DETAIL – CONCRETE KEEPER BLOCK
3/8" = 1'–0"

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BER01.DWG

Scale: AS NOTED

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 68737
FALMOUTH, MAINE 04105
PHONE: (207) 781–5379 FAX: (207) 781–5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

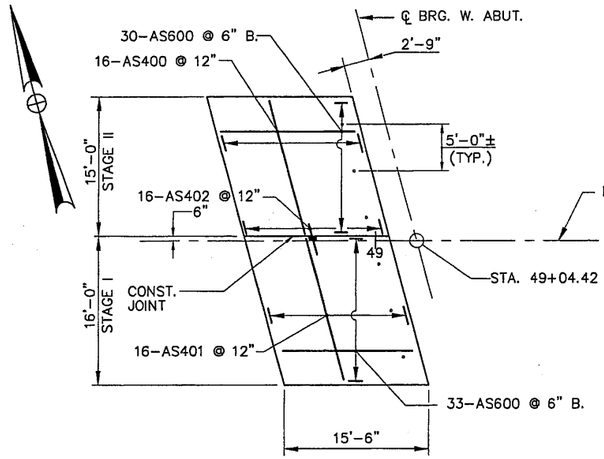
PE Stamp: STATE OF MAINE, JOHN S. PUTNAM, 3519, REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

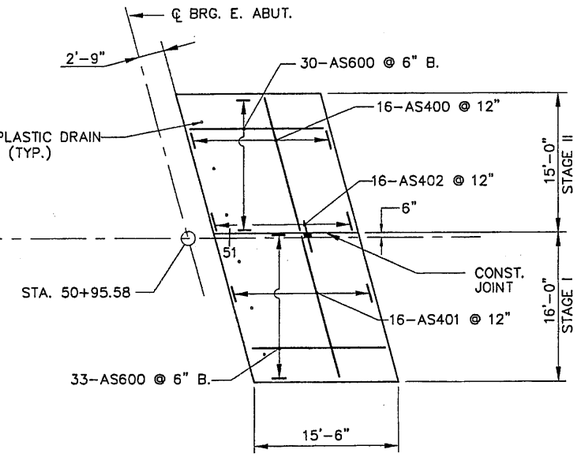
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
EAST ABUTMENT REINFORCEMENT

SHEET NUMBER: BR–S13
CONTRACT: 2000.05
199 OF 229

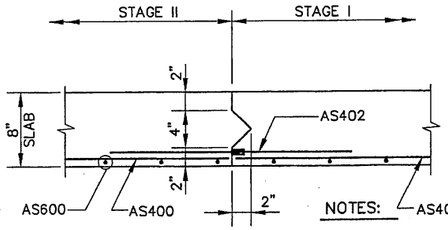


WEST APPROACH SLAB

PLAN
1/8"=1'-0"



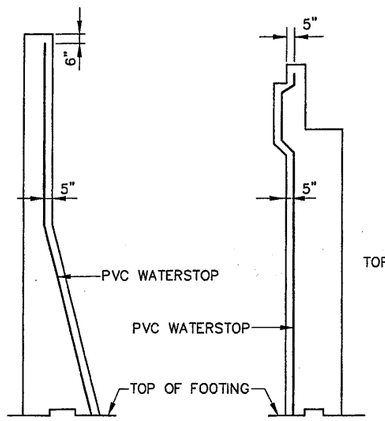
EAST APPROACH SLAB



APPROACH SLAB CONSTRUCTION JOINT DETAIL
NO SCALE

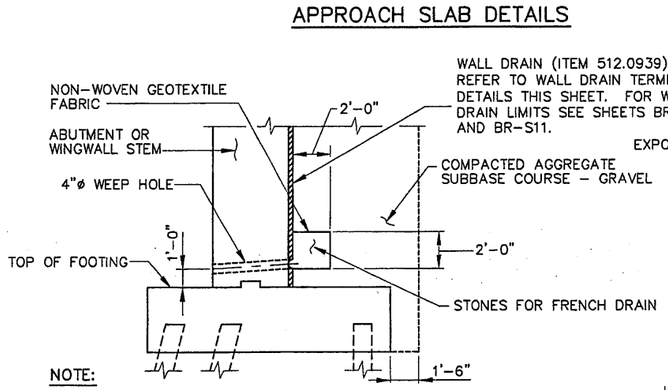
NOTES:
1. FOR APPROACH SLAB DETAILS NOT SHOWN, SEE STANDARD DETAILS CONCRETE APPROACH SLAB.
2. PLASTIC DRAIN TUBES SHALL BE INCIDENTAL TO ITEM 502.3139.

APPROACH SLAB DETAILS



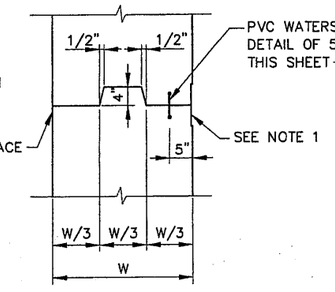
WINGWALL ABUTMENT

LIMITS OF PVC WATERSTOP
NO SCALE

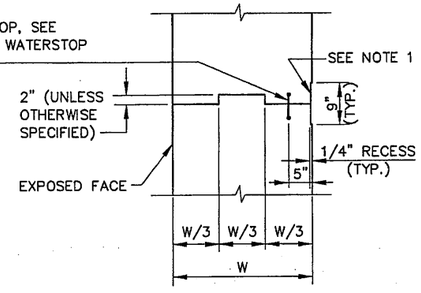


NOTE:
THE FRENCH DRAIN SHALL EXTEND THE ENTIRE LENGTH OF THE STRUCTURE, NOT INCLUDING THE FLYING WINGWALL. A NON–WOVEN GEOTEXTILE FABRIC SHALL BE PLACED AROUND THE FRENCH DRAIN STONE WITH A MINIMUM 2'–0" OVERLAP, SEPERATING THE STONE FROM THE AGGREGATE SUBBASE COURSE–GRAVEL AND THE WEEP HOLES.

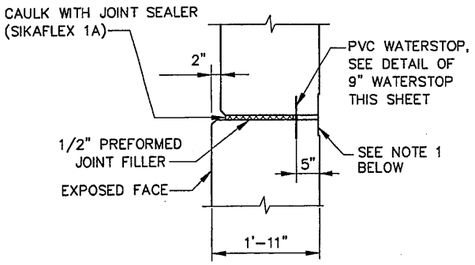
WALL AND FRENCH DRAIN DETAIL
1/4" = 1'–0"



CONTRACTION JOINT



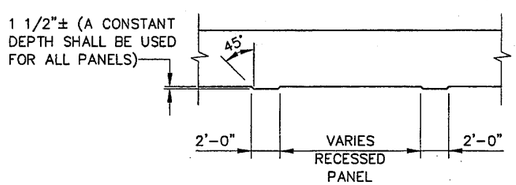
CONSTRUCTION JOINT
(SIMILAR AT HORIZONTAL JOINTS)



EXPANSION JOINT

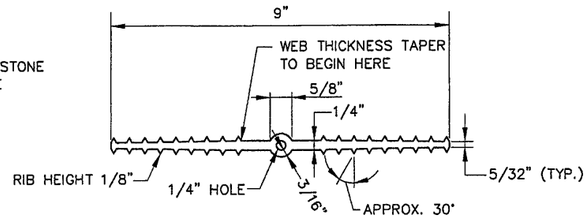
VERTICAL JOINT DETAILS
3/4"=1'–0"

NOTE:
1. APPLY TWO LAYERS OF HEAVY ROOFING FELT. COAT THE CONCRETE AND EACH LAYER WITH PLASTIC ROOFING CEMENT. (TYPICAL AT HORIZONTAL AND VERTICAL CONTRACTION, CONSTRUCTION AND EXPANSION JOINTS.)

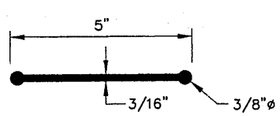


RECESSED PANEL DETAIL
3/16" = 1'–0"

NOTE FOR RECESSED PANEL:
RECESSED PANEL FORMS SHALL BE SUFFICIENTLY RIGID, SECURELY BRACED, STRUTTED AND TIED TO PREVENT MOTION PLUS DISTORTION DUE TO THE PRESSURE OF THE CONCRETE OR OTHER LOADS GENERATED BY THE CONSTRUCTION OPERATIONS, SUCH AS VIBRATION. RECESSED PANEL FORMS SHALL BE CONSTRUCTED TO PRODUCE MORTAR–TIGHT JOINTS AND SMOOTH EVEN CONCRETE SURFACES.

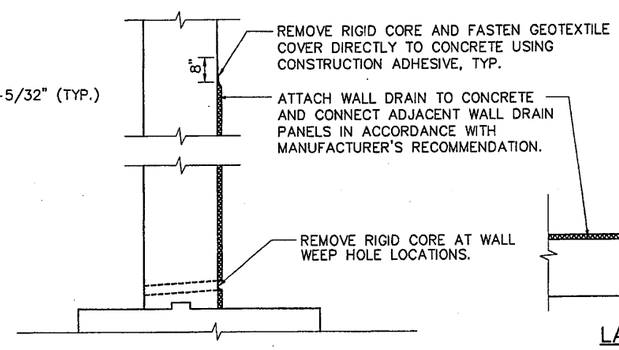


9" WATERSTOP

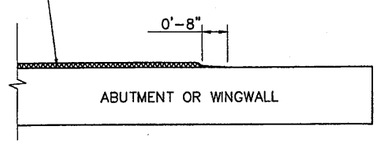


5" WATERSTOP

WATERSTOP DETAILS
NO SCALE



TOP TERMINATION OF WALL DRAIN DETAIL
NO SCALE



LATERAL TERMINATION OF WALL DRAIN DETAIL
NO SCALE

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BDT01.DWG

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INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781–5379 FAX: (207) 781–5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE — REGISTERED PROFESSIONAL ENGINEER

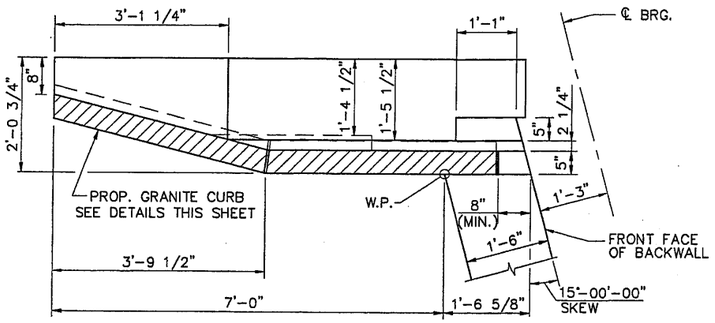
Approved by:

HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

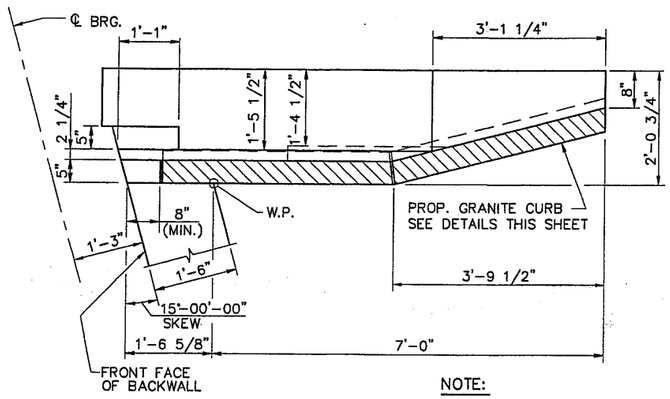
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
MISCELLANEOUS DETAILS

SHEET NUMBER: BR–S14
CONTRACT: 2000.05
200 OF 229



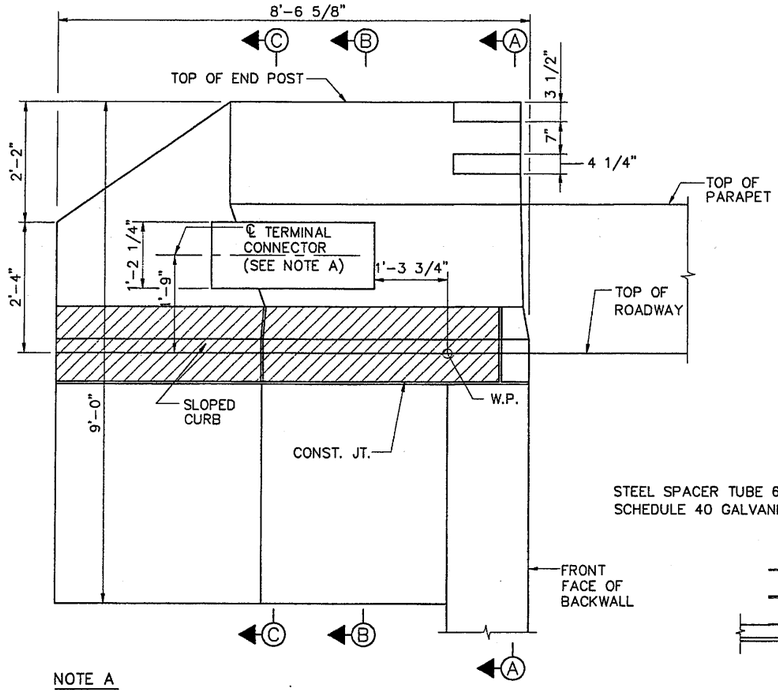
NOTE:
N.W. AND S.E. END POST SHOWN

PLAN
3/4" = 1'-0"



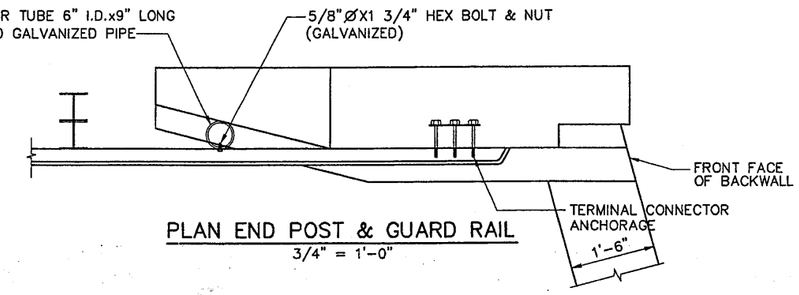
NOTE:
N.E. AND S.W. END POST SHOWN.

PLAN
3/4" = 1'-0"



NOTE A
FOR TERMINAL CONNECTOR ANCHORAGE, SEE THIS SHEET FOR DETAILS.

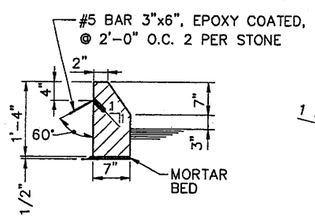
ELEVATION
3/4" = 1'-0"



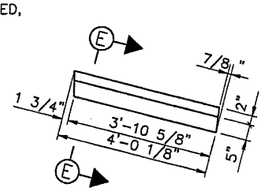
PLAN END POST & GUARD RAIL
3/4" = 1'-0"

NOTES:

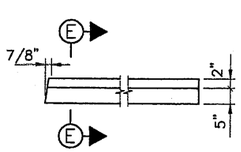
1. LIMITS FOR CONCRETE TYPE ARE SHOWN IN THE RESPECTIVE SECTIONS.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. BR-S16.
3. NUTS AND WASHERS FOR 7/8" Ø ANCHOR BOLTS SHALL BE INCIDENTAL TO GUARD RAIL PAY ITEMS. NUTS SHALL CONFORM TO ASTM A563, GRADE DH, GALVANIZED IN ACCORDANCE WITH ASTM A153, OR GRADE C3, PLAIN.
4. ADDITIONAL HOLES IN THE MODIFIED GUARD RAIL PANEL MAY BE MADE BY DRILLING, PUNCHING OR ANY OTHER METHOD THAT PRODUCES A NEAT, CLEAN HOLE OF THE REQUIRED SIZE. BURNING OF HOLES WILL NOT BE ALLOWED.
5. SPACER TUBE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A53, GALVANIZED, GRADE B TYPE E OR S. HEX BOLT AND NUT ON SPACER TUBE SHALL CONFORM TO ASTM A307. PAYMENT FOR SPACER TUBE, BOLT AND NUT SHALL BE INCIDENTAL TO THE GUARD RAIL PAY ITEM.
6. REINFORCING STEEL SHALL HAVE 2" MIN. CONCRETE COVER.
7. AFTER INSTALLATION OF GUARD RAIL IS COMPLETE, UPSET THE THREAD ON THE ANCHOR BOLTS IN THREE PLACES AROUND EACH BOLT, AT THE JUNCTION OF THE NUT AND THE EXPOSED THREAD, WITH A CENTER PUNCH OR SIMILAR TOOL.
8. TERMINAL CONNECTOR ANCHORAGE SHALL BE INCIDENTAL TO THE APPLICABLE CONCRETE PAY ITEM.
9. END POST SHALL BE CONSTRUCTED NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS.



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

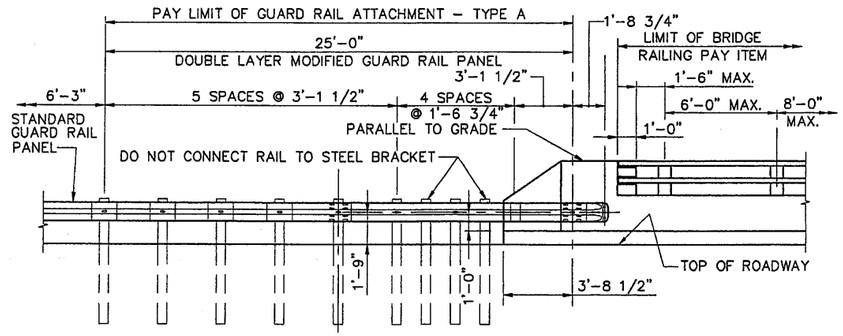


PLAN
1/2" = 1'-0"

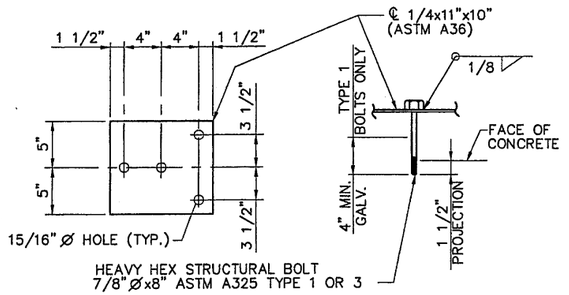


PLAN
1/2" = 1'-0"

TYPICAL GRANITE CURB



HIGHWAY GUARD RAIL ATTACHMENT TO BRIDGE END POST
1/4" = 1'-0"



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

RAIL NOTES:

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

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEP01.DWG

Scale: AS NOTED

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INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 68737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	12/99	Checked	BSV	04/00
Drawn	CTJ	12/99	In Charge of	RAL	04/00

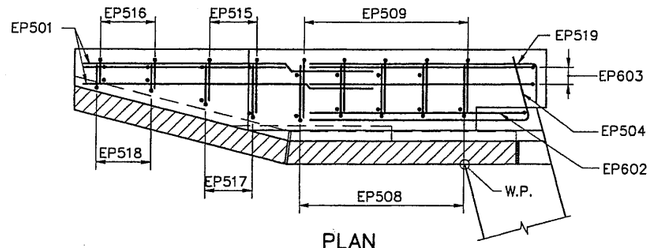
PE Stamp: STATE OF MAINE — REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

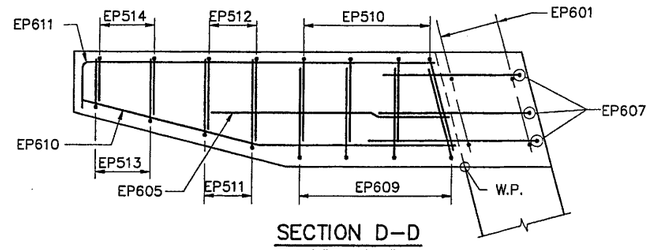
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
END POST DETAILS I

SHEET NUMBER: BR-S15
CONTRACT: 2000.05
201 OF 229

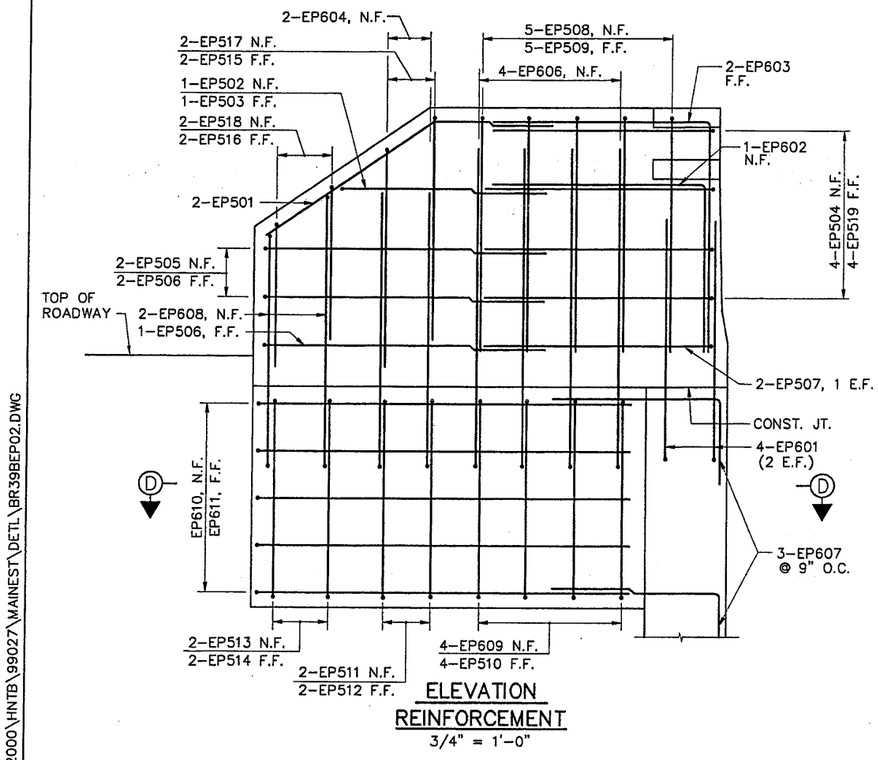


PLAN
REINFORCEMENT
3/4" = 1'-0"

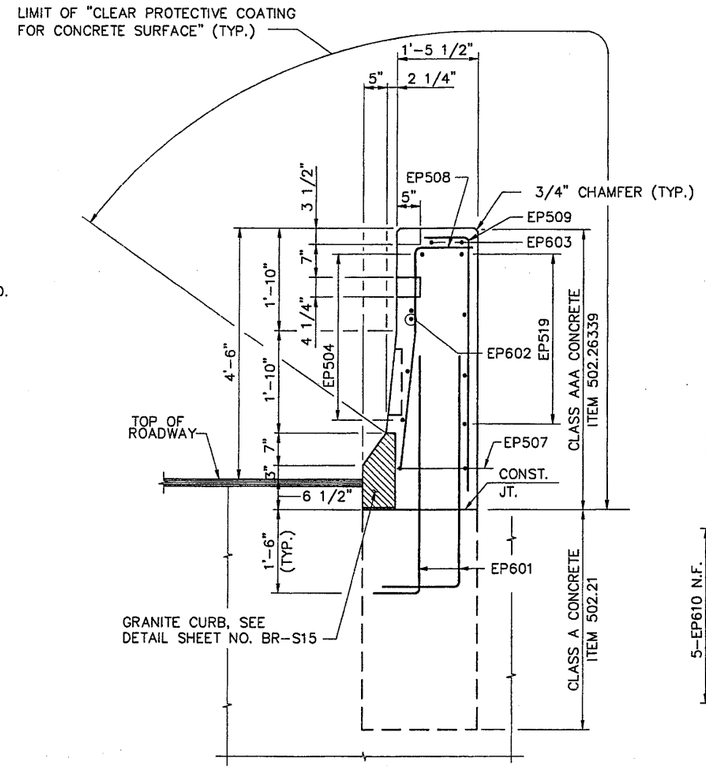
NOTE: N.W. & S.E. END POSTS AS SHOWN, N.E. & S.W. END POSTS OPPOSITE HAND.



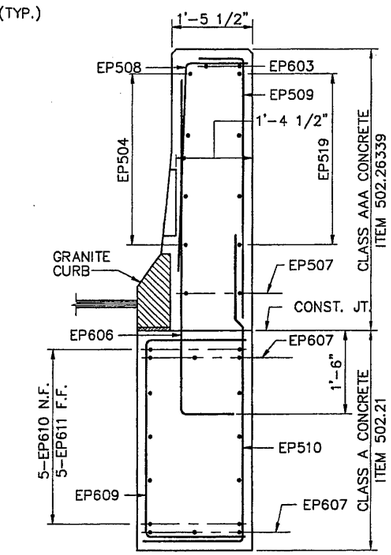
SECTION D–D
3/4" = 1'-0"



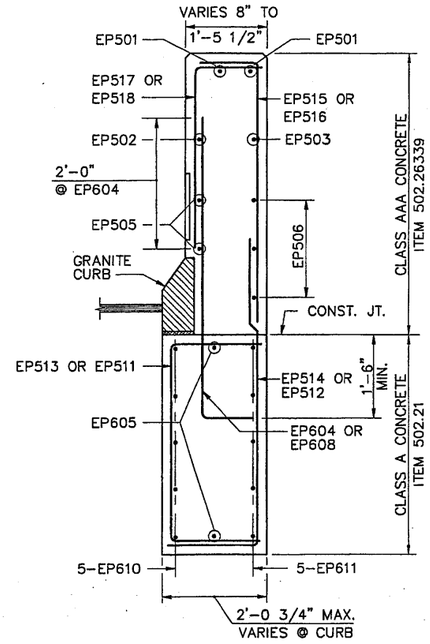
ELEVATION
REINFORCEMENT
3/4" = 1'-0"



SECTION A–A
3/4"=1'-0"



SECTION B–B
3/4"=1'-0"



SECTION C–C
3/4"=1'-0"

NOTES:

1. SEE END POST DETAILS I, SHEET NO. BR–S15, FOR NOTES.
2. FOR SECTION LOCATIONS A–A, B–B AND C–C, SEE SHEET NO. BR–S15.

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEP02.DWG

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INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	12/99	Checked	BSV	04/00
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HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

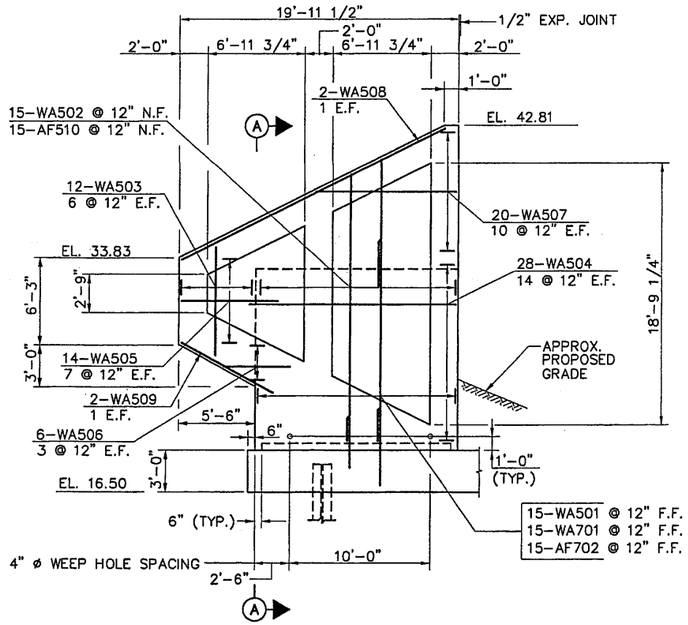
THINKING AHEAD The Widening

BRIDGE REPLACEMENT BEECH RIDGE ROAD UNDERPASS

END POST DETAILS II

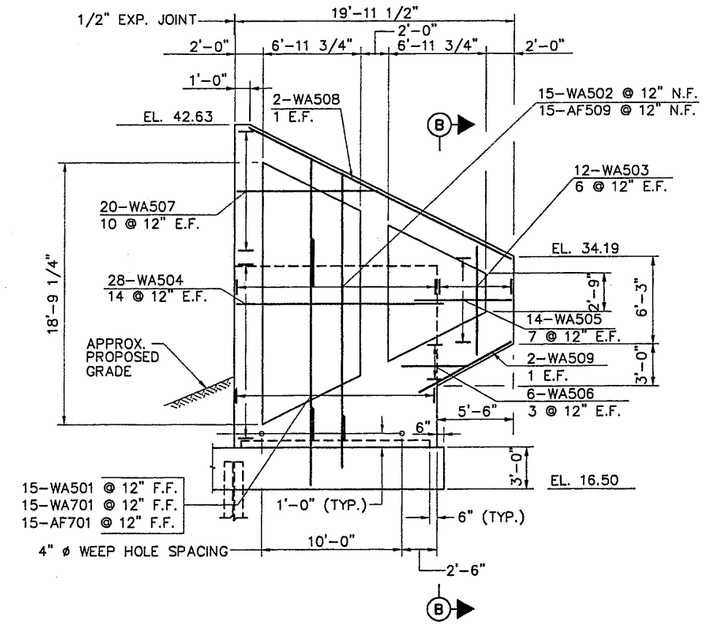
SHEET NUMBER: BR–S16

CONTRACT: 2000.05



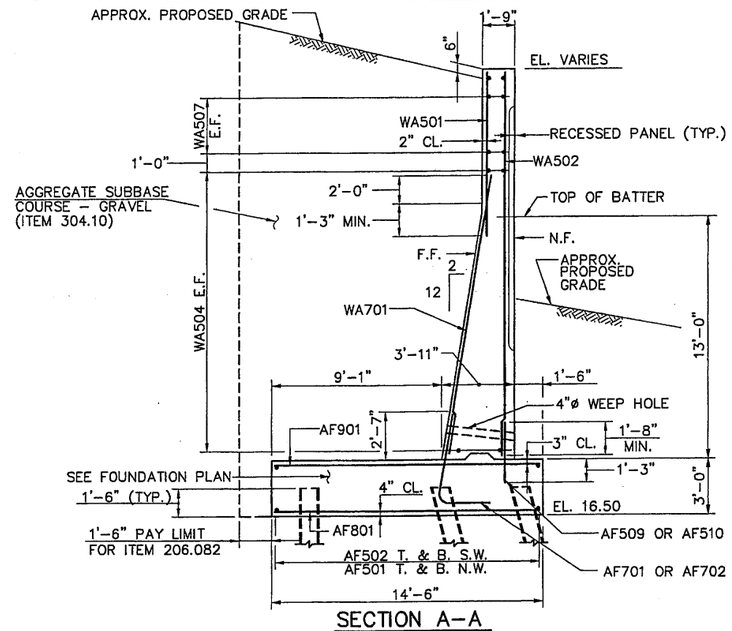
ELEVATION OF S.W. WINGWALL

3/16" = 1'-0"



ELEVATION OF N.W. WINGWALL

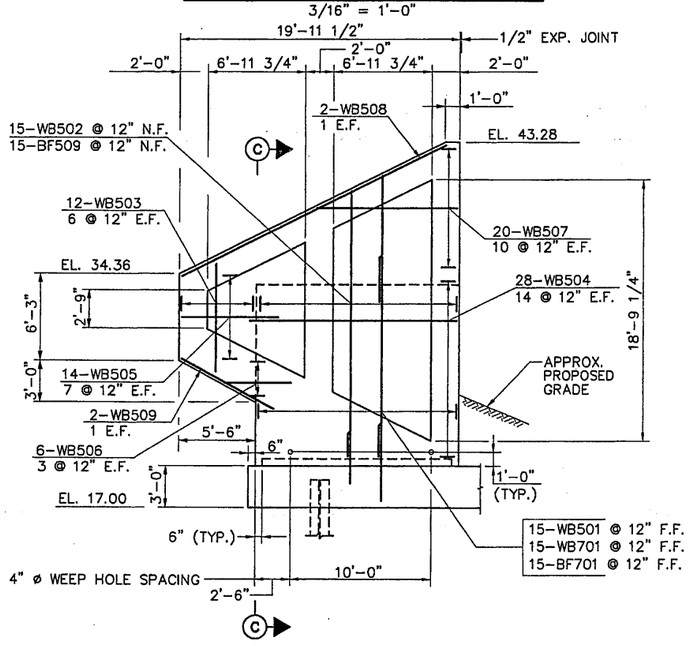
3/16" = 1'-0"



SECTION A-A

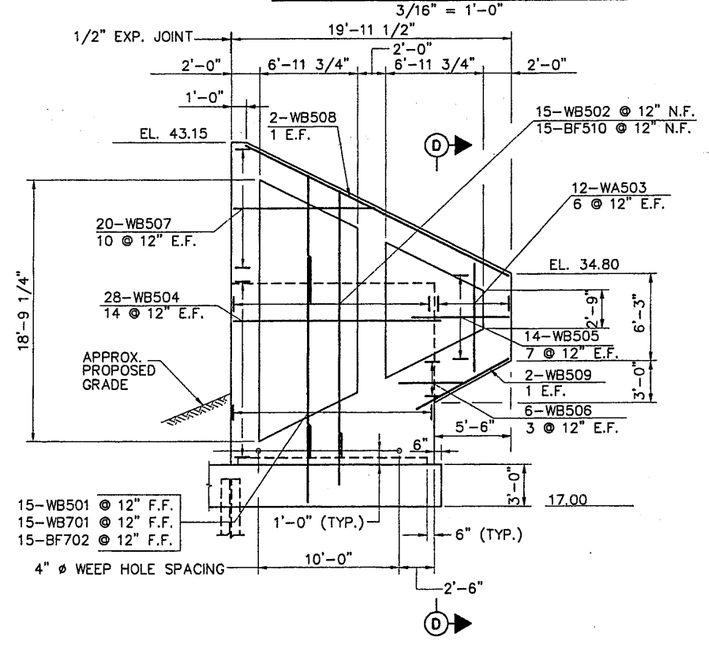
SECTION B-B SIMILAR

1/4" = 1'-0"



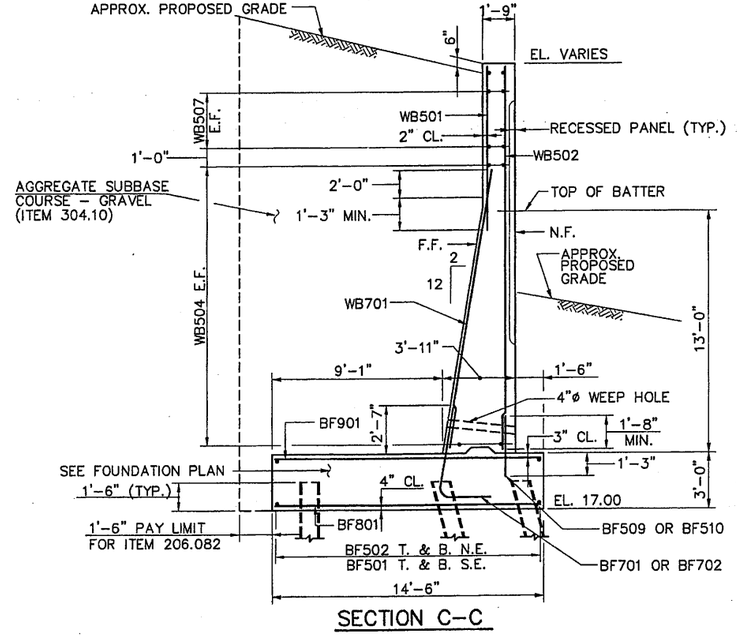
ELEVATION OF N.E. WINGWALL

3/16" = 1'-0"



ELEVATION OF S.E. WINGWALL

3/16" = 1'-0"



SECTION C-C

SECTION D-D SIMILAR

1/4" = 1'-0"

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Scale: AS NOTED

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INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
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PE Stamp: STATE OF MAINE · RYAN S. SIMPSON · 8141 · REGISTERED PROFESSIONAL ENGINEER

Approved by:

HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

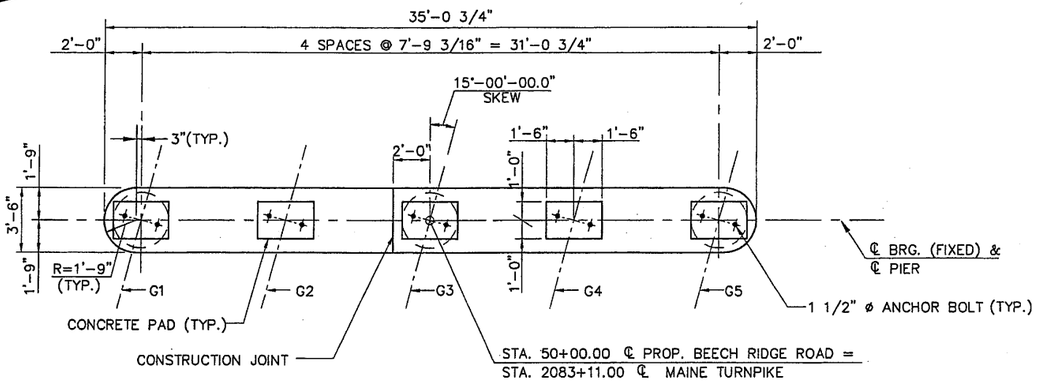
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

THINKING AHEAD The Widening

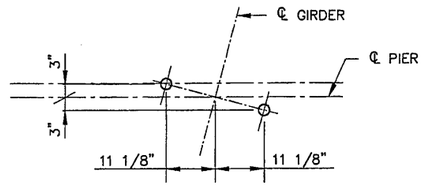
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
WINGWALL DETAILS

SHEET NUMBER: BR-S17

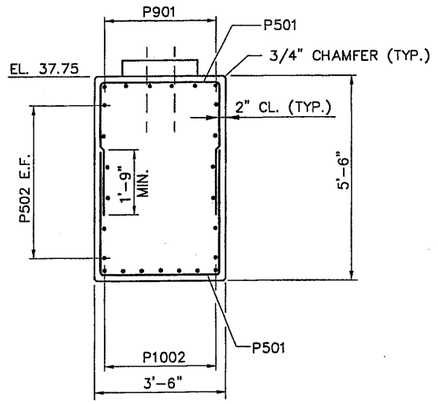
CONTRACT: 2000.05



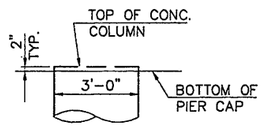
PLAN
1/4" = 1'-0"



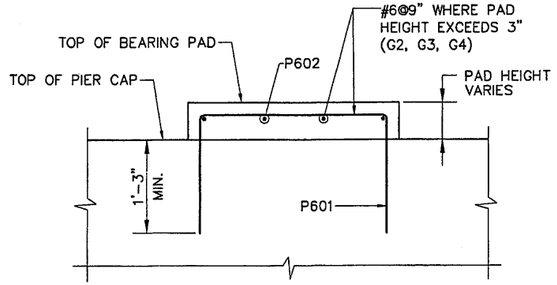
ANCHOR BOLT LAYOUT
3/4" = 1'-0"



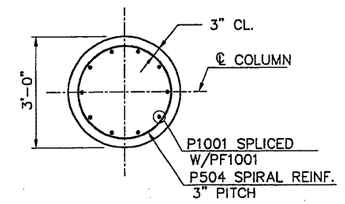
SECTION C–C
1/2" = 1'-0"



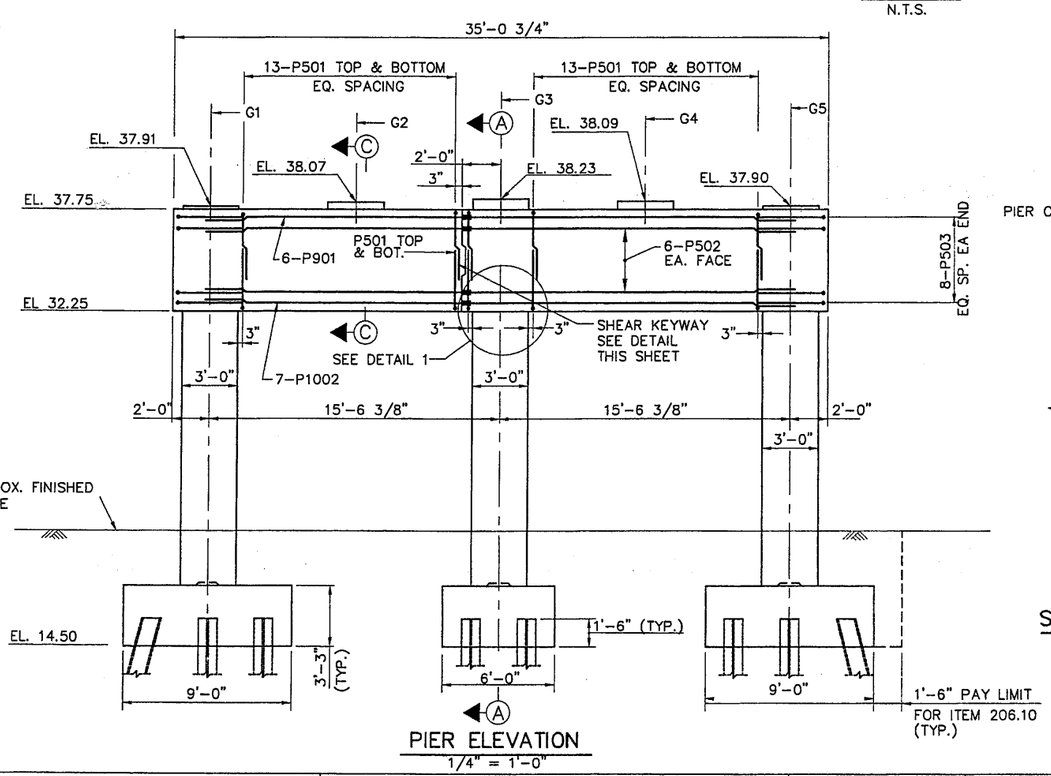
DETAIL 1
N.T.S.



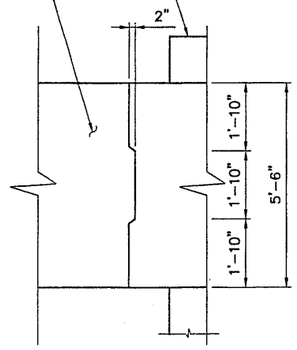
BEARING PAD DETAIL
1" = 1'-0"



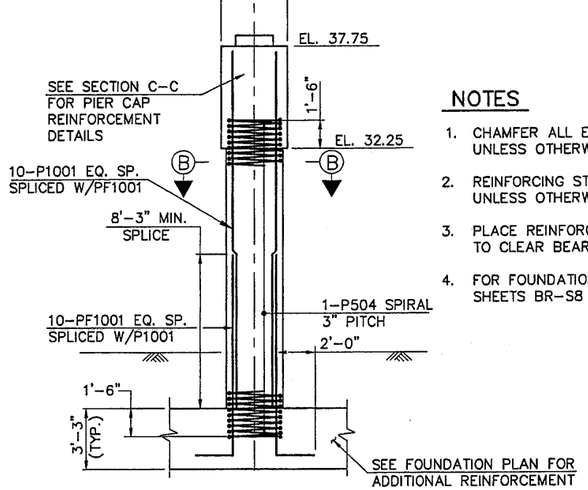
SECTION B–B
1/2" = 1'-0"



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



SHEAR KEYWAY DETAIL
1/2" = 1'-0"



SECTION A–A
1/4" = 1'-0"

NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE A 2" MINIMUM COVER UNLESS OTHERWISE INDICATED.
3. PLACE REINFORCING STEEL ON PIER CAP & BEARING PADS TO CLEAR BEARING ANCHOR BOLTS.
4. FOR FOUNDATION PLAN AND FOOTING REINFORCEMENT, SEE SHEETS BR-S8 AND BR-S9.

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BPD01.DWG

Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE · PROFESSIONAL ENGINEER

Approved by:

HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

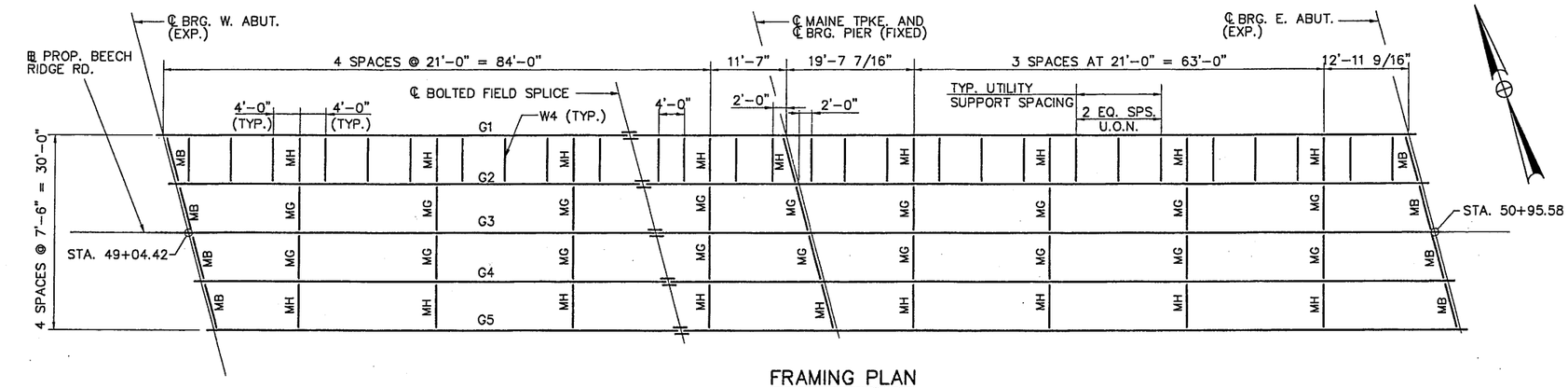
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
PIER DETAILS

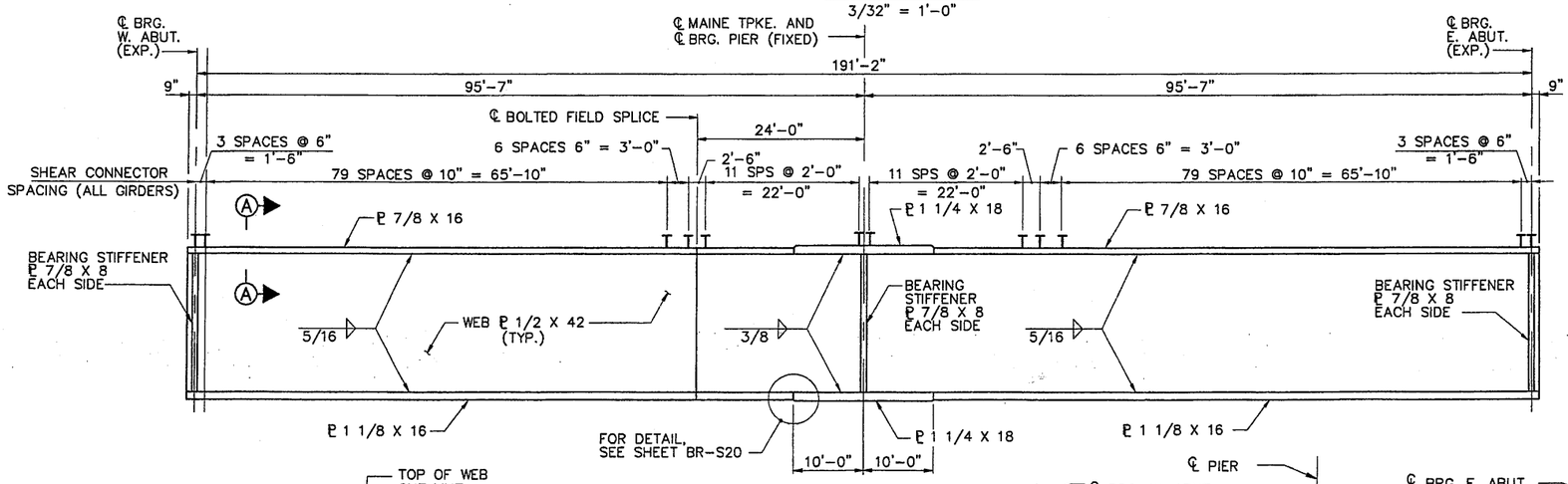
SHEET NUMBER: **BR-S18**

CONTRACT: **2000.05**



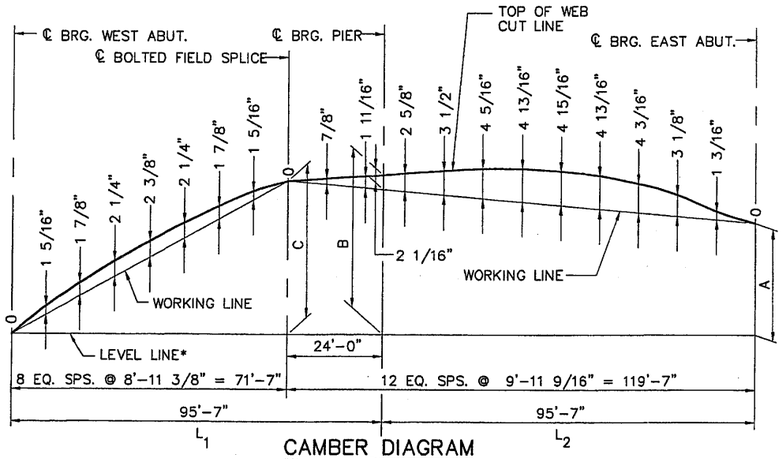
FRAMING PLAN

3/32" = 1'-0"



GIRDER ELEVATION

NO SCALE

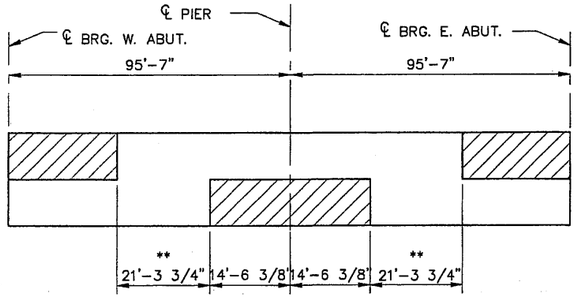


CAMBER DIAGRAM

NO SCALE

* LEVEL LINE IS THE HORIZONTAL REFERENCE LINE THROUGH LOWEST POINT ON CUT LINE.

GIRDER NO.	DIMENSIONS IN FEET		
	A	B	C
G1	0.62	1.15	1.07
G2	0.56	1.12	1.05
G3	0.48	1.08	1.02
G4	0.42	1.02	1.00
G5	0.34	0.98	0.96



GIRDER STRESS DIAGRAM

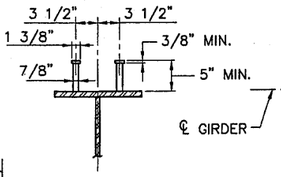
NO SCALE

AREAS OF GIRDER WHICH WILL ALWAYS BE IN COMPRESSION. ALL OTHER AREAS WILL BE IN TENSION OR ARE AREAS OF STRESS REVERSALS.

** STRESS REVERSALS

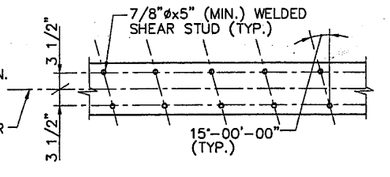
STRUCTURAL STEEL NOTES

1. CAMBER ORDINATES, AS SHOWN, ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND THE EFFECT OF VERTICAL CURVATURE.
2. NO TRANSVERSE BUTT WELD SPLICES WILL BE ALLOWED IN THE FLANGE OR WEB PLATES WITHIN 10' FROM THE POINTS OF MAXIMUM NEGATIVE OR MAXIMUM POSITIVE MOMENT. BUTT WELD SPLICES IN FLANGES SHALL NOT BE LESS THAN ONE FOOT FROM TRANSVERSE BUTT WELDS IN THE WEB PLATE OR CONNECTION PLATE TO WEB WELDS.
3. BUTT WELDS AT WEB SPLICES AND FLANGE SPLICES SHALL BE GROUND FLUSH IN LONGITUDINAL DIRECTION OF GIRDER.
4. BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE.
5. CROSSFRAME OR DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE FOR THE ENTIRE BRIDGE.
6. FILLER PLATES SHALL CONFORM TO AASHTO M270, GRADE 36. MILL TESTS FOR FILLER PLATE MATERIAL WILL NOT BE REQUIRED.
7. FOR DETAILS OF DIAPHRAGM & CROSSFRAME TYPES MB, MG AND MH, SEE STANDARD DETAILS, PAGES 504(15) AND 504(17). SEE NOTE 3 ON SHEET NO. BR-S2.
8. WELDED GIRDERS: FLANGES, WEBS, SPLICE PLATES AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50. BOLTS SHALL BE AASHTO M164. ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.
9. ALL FLANGE AND WEB PLATES SHALL BE DESIGNATED "CVN" WITH THE MATERIAL MEETING SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS IN ACCORDANCE WITH AASHTO SPECIFICATIONS (TEMPERATURE ZONE 2 DESIGNATION).
10. FOR TENSION FLANGE CONNECTION DETAIL FOR DIAPHRAGMS & CROSSFRAMES, SEE STANDARD DETAILS, PAGE 504(21). SEE NOTE 3 ON SHEET NO. BR-S2.
11. FOR SHEAR CONNECTOR LAYOUT AND SECTION A-A, SEE SHEET NO. BR-S20.
12. SIGN SUPPORTS SHALL BE GALVANIZED AND INCIDENTAL TO ITEM 504.70239, SEE SHEET BR-S20 FOR DETAILS.



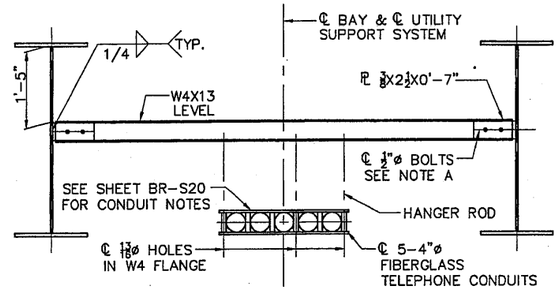
SECTION A-A

NO SCALE



SHEAR CONNECTOR LAYOUT

3/4" = 1'-0"



UTILITY SUPPORT DETAIL

NO SCALE

NOTE A
PROVIDE 5/16"X1" VERTICAL SLOTTED HOLES IN W4

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BFR01.DWG

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No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp:

Approved by:

HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

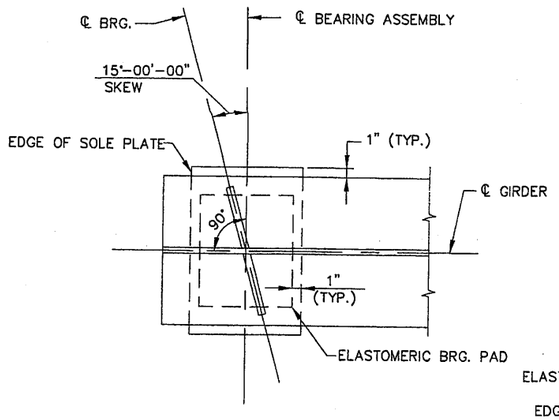
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

THINKING AHEAD The Widening

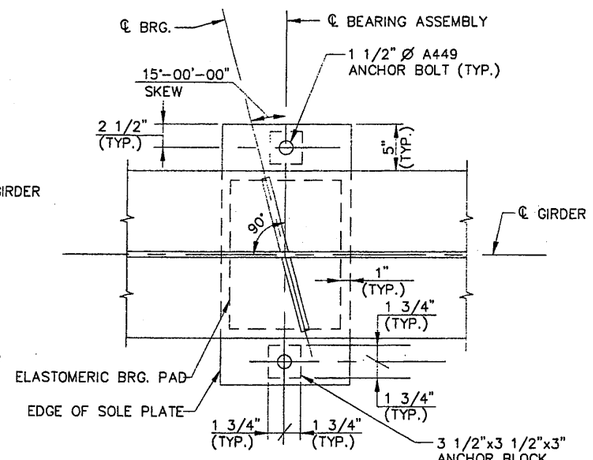
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
FRAMING PLAN

SHEET NUMBER: BR-S19

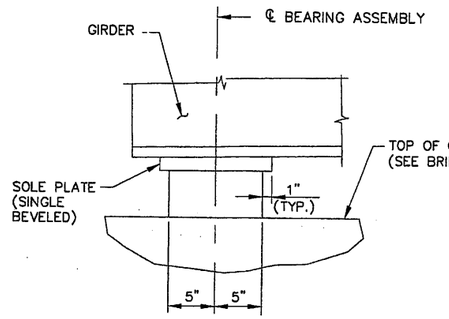
CONTRACT: 2000.05



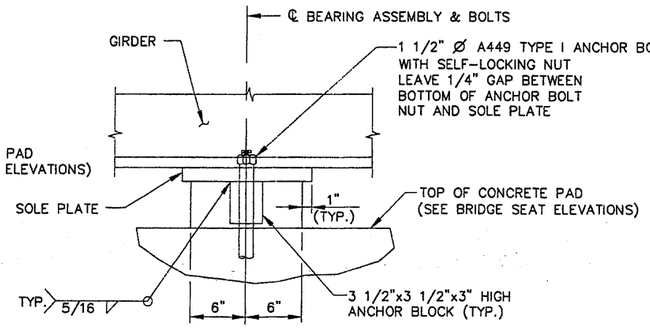
PLAN



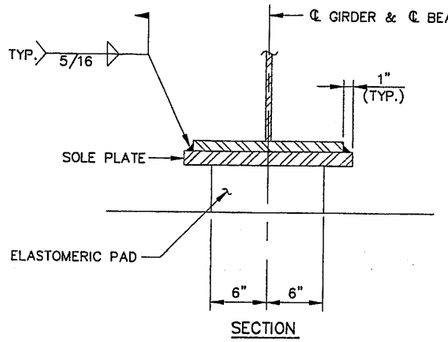
PLAN



ELEVATION

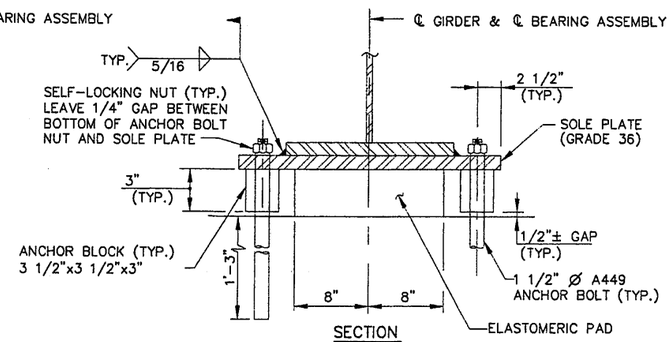


ELEVATION



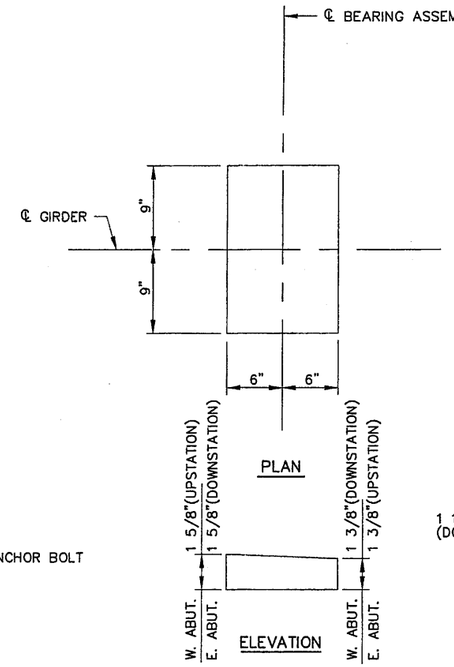
SECTION

BEARING ASSEMBLY – EXPANSION
WEST & EAST ABUTMENTS (10 REQUIRED)
1 1/2" = 1'-0"



SECTION

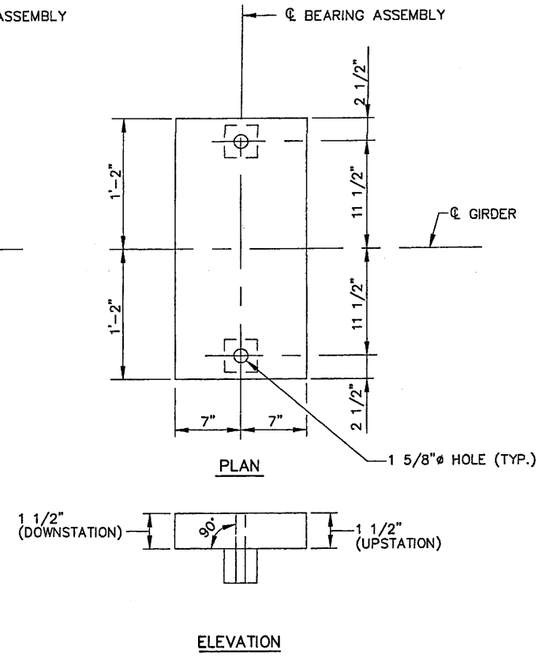
BEARING ASSEMBLY – FIXED
PIER (5 REQUIRED)
1 1/2" = 1'-0"



PLAN

ELEVATION

SOLE PLATE – EXPANSION
WEST & EAST ABUTMENTS
N.T.S.



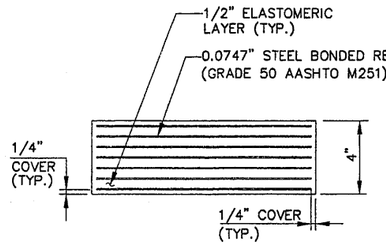
PLAN

ELEVATION

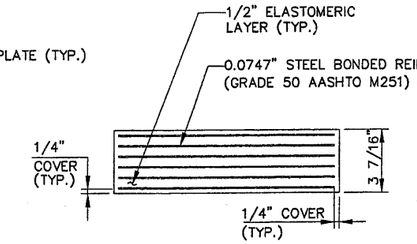
SOLE PLATE – FIXED
PIER
N.T.S.

NOTES:

1. ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE) WITH DUROMETER HARDNESS OF 60.
2. SOLE PLATE, ANCHOR BOLTS, WASHER AND NUTS SHALL BE GALVANIZED.
3. CONTRACTOR SHALL RE-FINISH GALVANIZING AS DIRECTED BY ENGINEER AFTER WELDING.



ELASTOMERIC BEARING PAD – EXPANSION
WEST AND EAST ABUTMENTS
N.T.S.



ELASTOMERIC BEARING PAD – FIXED
PIER
N.T.S.

ELASTOMERIC BEARING PAD
N.T.S.

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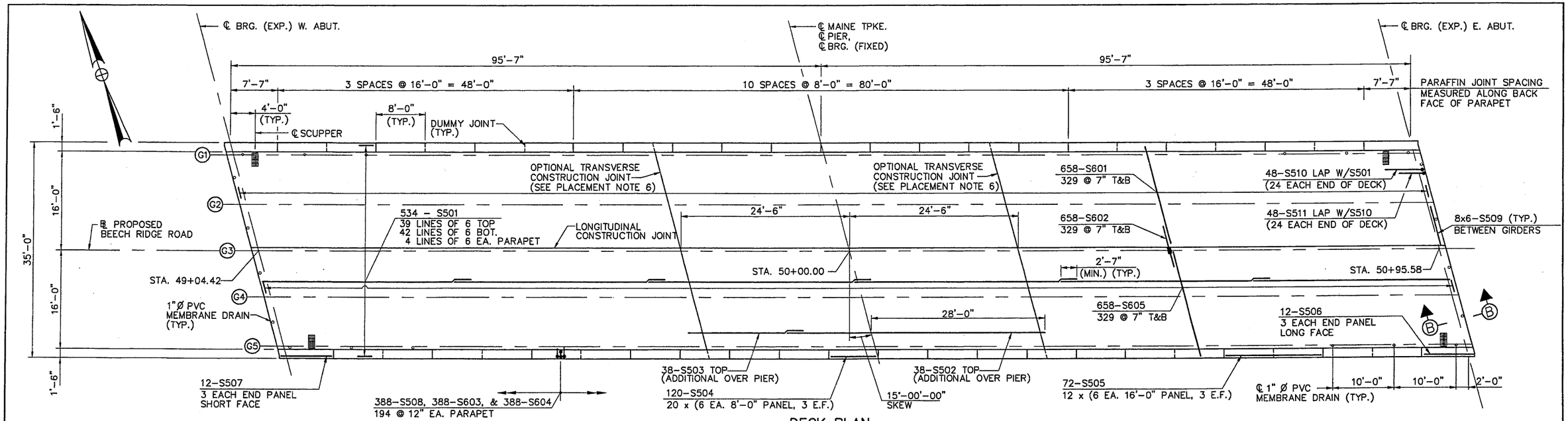
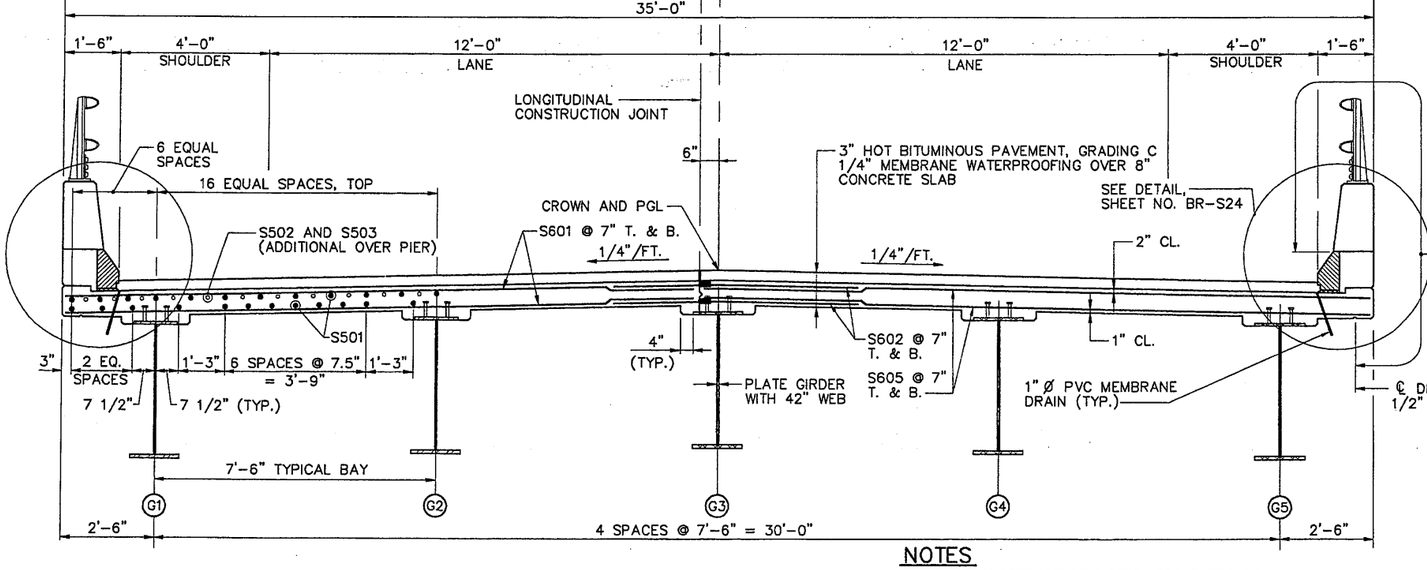
Scale: AS NOTED	Designed by: INDUS ENGINEERING	PE Stamp:	Approved by:	MAINE TURNPIKE AUTHORITY MODERNIZATION AND WIDENING PROJECT	BRIDGE REPLACEMENT BEECH RIDGE ROAD UNDERPASS BEARING DETAILS
	STRUCTURAL CONSULTANTS P.O. BOX 66737 FALMOUTH, MAINE 04105 PHONE: (207) 781-5379 FAX: (207) 781-5373		HNTB CORPORATION ARCHITECTS ENGINEERS PLANNERS 2 Thomas Drive Westbrook, ME 04092	THINKING AHEAD The Widening	SHEET NUMBER: BR-S21
					CONTRACT: 2000.05 207 OF 229

No.	Revision	By	Date

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

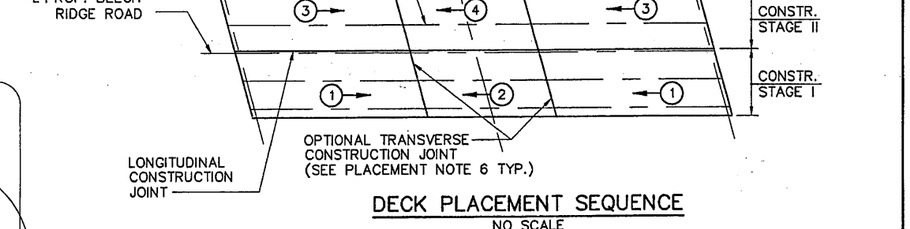


DECK PLAN
1/8" = 1'-0"



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

NOTES
1. FOR SUPERSTRUCTURE NOTES, SEE SHEET BR-S23.
2. FOR SECTION B-B, SEE SHEET BR-S29.
3. FOR PARAPET DETAILS, SEE SHEET BR-S24.



DECK PLACEMENT SEQUENCE
NO SCALE

PLACEMENT NOTES
1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL A MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB. AFTER WHICH, REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 502 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
3. 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 PLACEMENTS.
4. STAY IN PLACE FORMS ARE NOT ALLOWED TO BE USED.
5. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
6. THE OPTIONAL TRANSVERSE CONSTRUCTION JOINT MAY BE OMITTED PROVIDED THAT THE CONCRETE OF THE ENTIRE DECK SLAB REMAINS PLASTIC UNTIL THE COMPLETION OF THE LAST PLACEMENT AND ALL OTHER SPECIFICATIONS FOLLOWED.

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No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

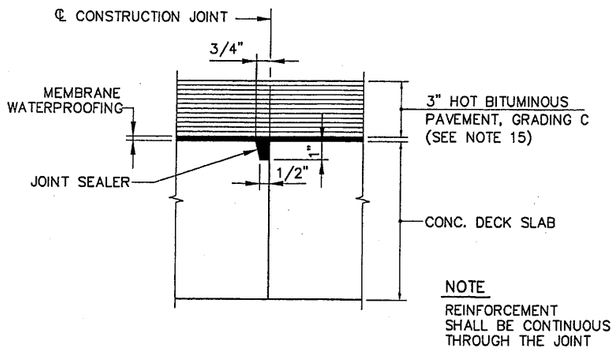
PE Stamp: STATE OF MAINE D. SCOTT ROSS 10116 REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

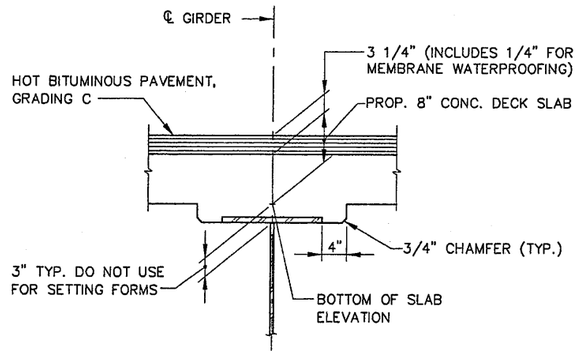
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
DECK REINFORCEMENT & TYPICAL SECTION

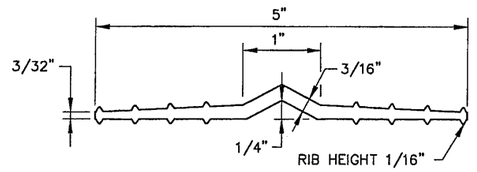
SHEET NUMBER: BR-S22
CONTRACT: 2000.05
208 OF 229



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



BLOCKING POINT DETAIL
NOT TO SCALE



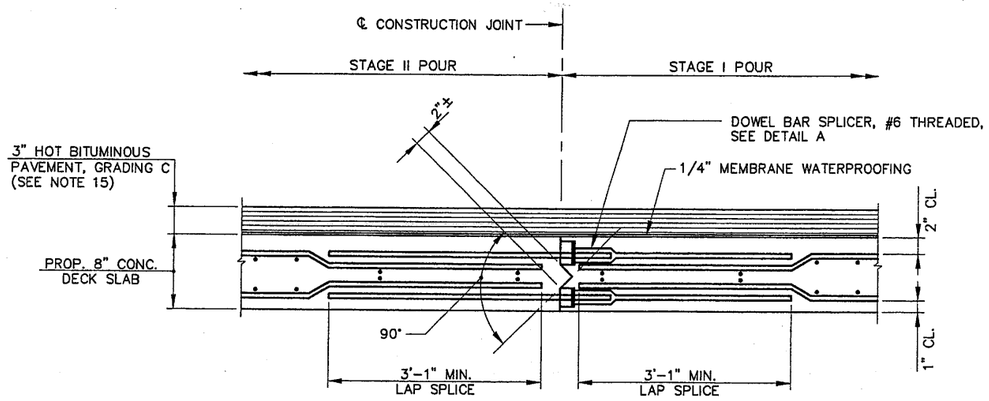
5" WATERSTOP
FULL SIZE

NOTE

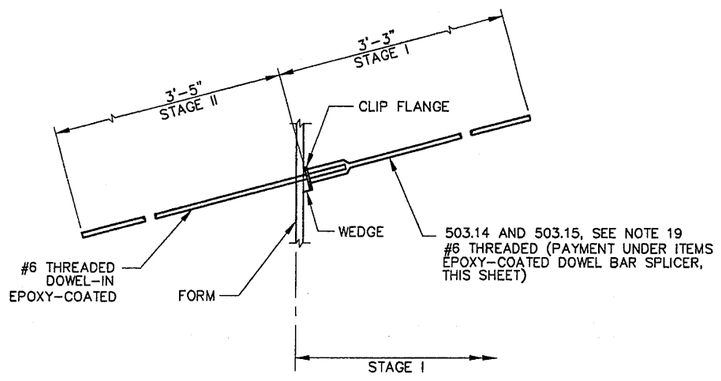
TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, AS WELL AS POSSIBLE IRREGULARITIES IN GIRDERS, SET THE BOTTOM OF SLAB ELEVATIONS AT THE POINTS INDICATED BEFORE ANY OF THE SLAB FORMWORK IS STARTED. SEE SUBSECTION 502.10(a) OF THE STANDARD SPECIFICATIONS.

BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS

GIRDER NO.	℄ BRG. W. ABUT.	SPAN 1									℄ PIER ℄ BRG.	SPAN 2									℄ BRG. E. ABUT.
		.1L1	.2L1	.3L1	.4L1	.5L1	.6L1	.7L1	.8L1	.9L1		.1L2	.2L2	.3L2	.4L2	.5L2	.6L2	.7L2	.8L2	.9L2	
G1	40.92	41.16	41.37	41.56	41.71	41.82	41.91	41.97	42.01	42.04	42.07	42.11	42.14	42.16	42.16	42.14	42.09	42.00	41.87	41.72	41.54
G2	41.11	41.35	41.56	41.75	41.89	42.00	42.09	42.14	42.18	42.20	42.23	42.26	42.30	42.31	42.31	42.28	42.23	42.13	42.01	41.85	41.67
G3	41.31	41.54	41.75	41.93	42.08	42.18	42.26	42.31	42.35	42.37	42.39	42.42	42.45	42.46	42.46	42.43	42.37	42.27	42.14	41.98	41.80
G4	41.19	41.42	41.63	41.80	41.94	42.05	42.12	42.17	42.21	42.22	42.25	42.27	42.29	42.30	42.29	42.26	42.19	42.09	41.96	41.80	41.61
G5	41.08	41.30	41.50	41.68	41.81	41.91	41.99	42.03	42.06	42.07	42.09	42.11	42.13	42.14	42.13	42.09	42.02	41.92	41.78	41.61	41.41



LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



DETAIL A
NOT TO SCALE

SUPERSTRUCTURE NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNLESS OTHERWISE NOTED.
2. REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2", UNLESS OTHERWISE NOTED.
3. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANITE CURB SHALL CONTAIN A NON-SHRINK ADDITIVE.
4. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE SHALL BE APPLIED TO THE FOLLOWING AREAS: PARAPET SURFACES, FASCIA DOWN TO DRIP NOTCH AND ALL EXPOSED CONCRETE SURFACES ON THE END POSTS.
5. FOR 2-BAR ALUMINUM BRIDGE RAIL DETAILS, SEE SHEET BR-S26.
6. IF THE SLAB PLACEMENT HAS TO BE TERMINATED, THE TERMINATION POINT MUST BE AT THE POINTS INDICATED IN THE PLACEMENT DETAILS, SHOWN ON SHEET BR-S22.
7. ADJUST REINFORCING STEEL TO FIT AROUND THE DRAINS IN A MANNER APPROVED OF BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS. CUT LONGITUDINAL REINFORCING STEEL IN THE FIELD TO SUIT, THEN EPOXY COAT CUT ENDS.
8. FOR REINFORCING STEEL SCHEDULE, SEE SHEET NO. BR-S37.
9. FOR PVC MEMBRANE DRAIN AND SCUPPER DETAILS, SEE SHEET NOS. BR-S24 AND BR-S25 RESPECTIVELY.
10. FOR SLAB DETAILS, SEE SHEET NOS. BR-S22, BRS-23 AND BR-S24.
11. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. BR-S27, BR-S28 AND BR-S29.
12. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
13. FOR SECTION B-B, (LOCATION SHOWN ON SHEET NO. BR-S22) SEE SHEET NO. BR-S29.
14. GRANITE CURB JOINTS SHALL LINE UP WITH PARAFFIN AND DUMMY JOINTS.
15. BITUMINOUS PAVEMENT SHALL BE PLACED IN TWO (2) 1 1/2 INCH "LIFTS".
16. FOR RAIL POST SPACING, SEE SHEET NO. BR-S24.
17. ALL BRIDGE PARAPET CONCRETE, INCLUDING INSIDE FACE, TOP AND OUTSIDE FACE, END POSTS AND DECK FASCIA SHALL HAVE A RUBBED FINISHED PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE.
18. THE AUTHORITY'S PERSONNEL SHALL PROFILE THE TOP OF ALL GIRDERS BEFORE THE FORMWORK IS STARTED AND SHALL SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS. TEN (10) DAYS SHALL BE ALLOWED FOR THE BLOCKING POINT TURN AROUND TIME.
19. ONLY DOWEL BAR SPLICERS SHALL BE USED WITHIN CONCRETE DECK SLAB FOR STAGE I CONSTRUCTION AT THE LONGITUDINAL CONSTRUCTION JOINT. DOWEL-IN BARS SHALL THEN BE USED WITHIN CONCRETE DECK SLAB FOR STAGE II CONSTRUCTION.

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Scale: AS NOTED

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

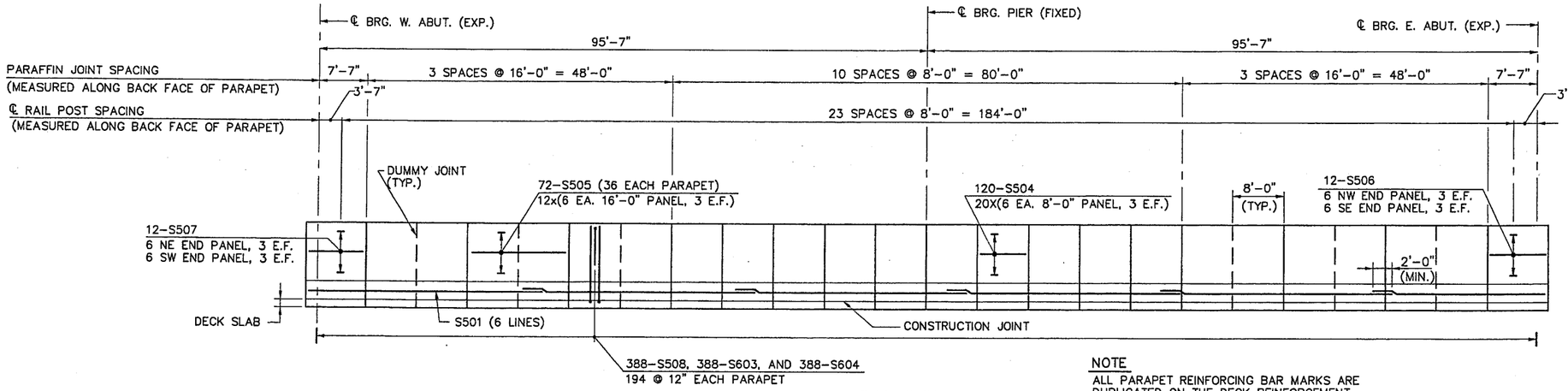
PE Stamp: STATE OF MAINE, B. SHARPLES, 9359, REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
SUPERSTRUCTURE DETAILS I

SHEET NUMBER: BR-S23
CONTRACT: 2000.05
209 OF 229

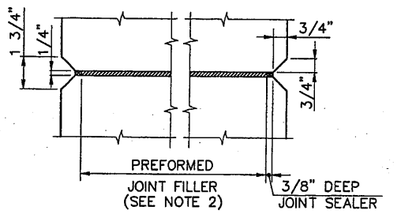


PARAPET ELEVATION
HORIZ. 1"=10'
VERT. 1"=2'

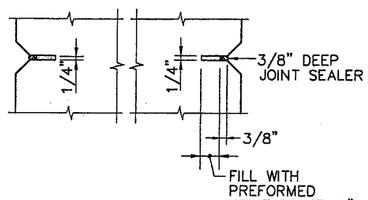
NOTE
ALL PARAPET REINFORCING BAR MARKS ARE DUPLICATED ON THE DECK REINFORCEMENT, SHEET BR-S22.

PARAFFIN AND DUMMY JOINT NOTES

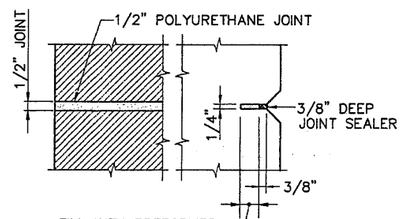
1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT. ASPHALT TYPE JOINT FILLER SHALL NOT BE USED. ONLY CERAMAR OR CORK TYPE SHALL BE PERMITTED.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D 1752 AND MAY BE SUPPORTED WITH A THIN STEEL PLATE. REMOVE PLATE CAREFULLY WHILE CONCRETE IS PLASTIC.
3. SECTION B-B APPLIES TO DUMMY AND PARAFFIN JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKAFLEX 1A.
5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.26439, STRUCTURAL CONCRETE PARAPETS.
6. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN AND DUMMY JOINTS.



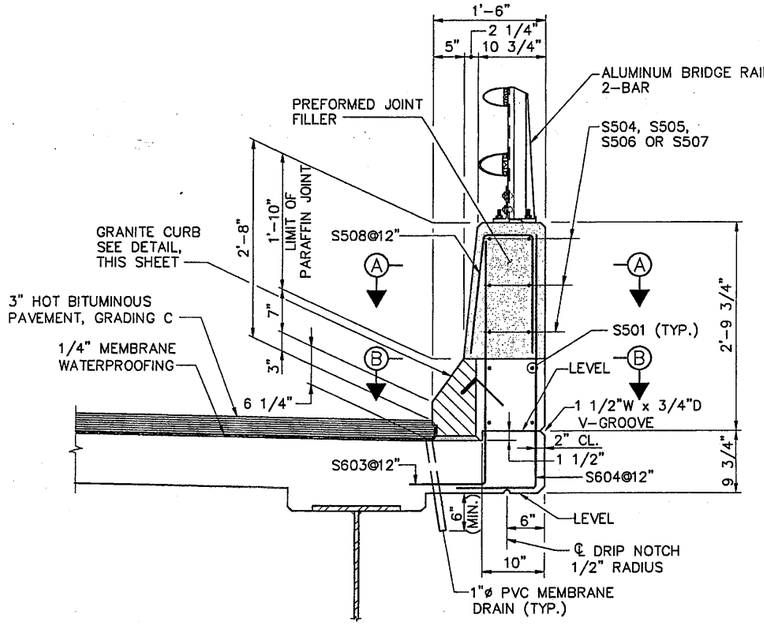
SECTION A-A
(PARAFFIN JOINT)
3"=1'-0"



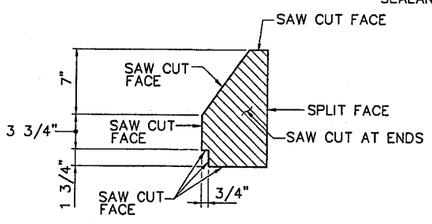
SECTION A-A
(DUMMY JOINT)
3"=1'-0"



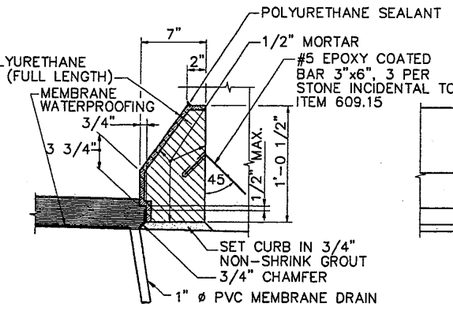
SECTION B-B
3"=1'-0"



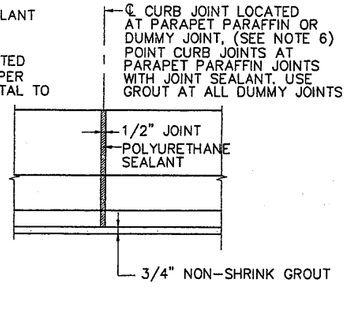
PARAPET DETAIL
1"=1'-0"



GRANITE CURB CUT DETAIL
1" = 8"



GRANITE CURB DETAIL
1" = 8"



BRIDGE CURB ELEVATION
1" = 8"

NOTE
ALL PARAPET REINFORCING BAR MARKS ARE DUPLICATED ON THE DECK REINFORCEMENT, SHEET BR-S22.

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No.	Revision	By	Date	STRUCTURAL CONSULTANTS P.O. BOX 66737 FALMOUTH, MAINE 04105 PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

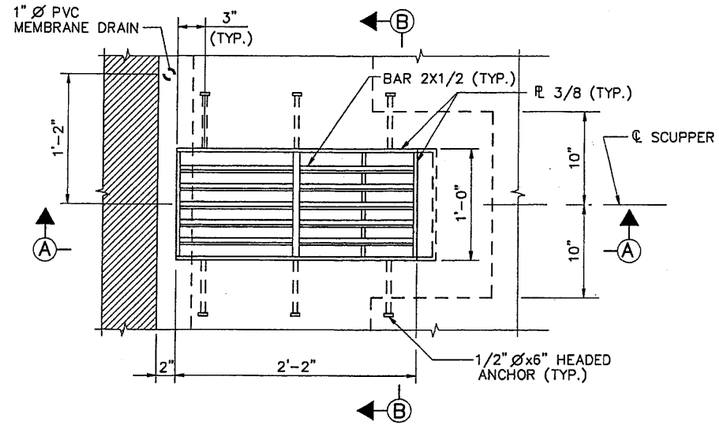
PE Stamp: STATE OF MAINE — JOHN A. SHAPPELL — 3559 — REGISTERED PROFESSIONAL ENGINEER — 4/13/00

Approved by: HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

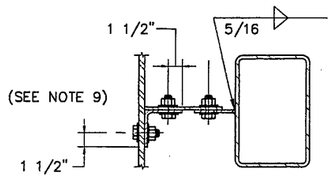
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
SUPERSTRUCTURE DETAILS II

SHEET NUMBER: BR-S24
CONTRACT: 2000.05
210 OF 229



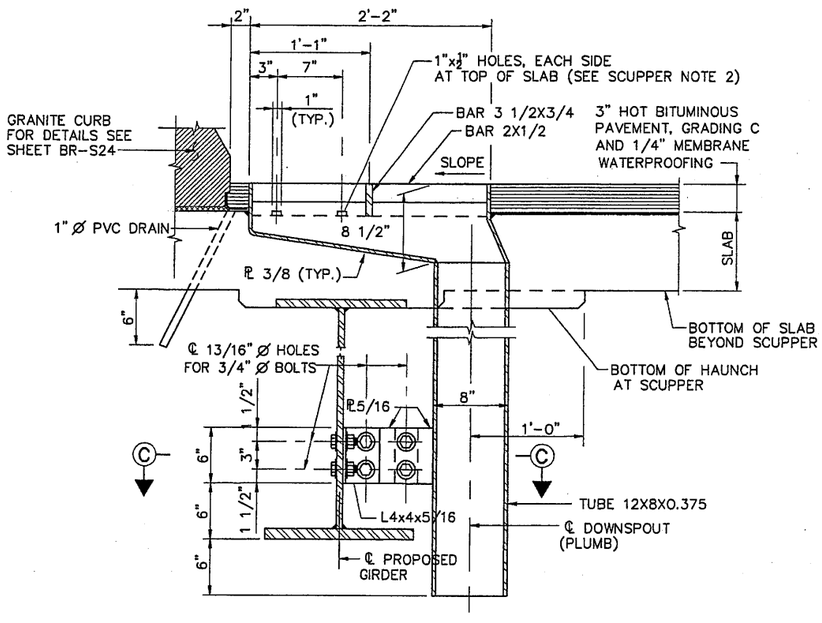
PLAN – SCUPPER
1 1/2"=1'-0"



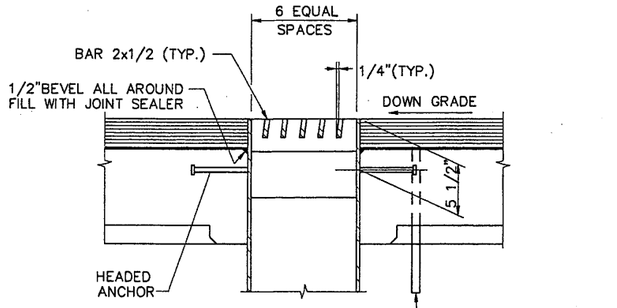
SECTION C–C
1 1/2"=1'-0"

SCUPPER NOTES

1. ALL WELDS SHALL 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 SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFORM TO AASHTO M270, GRADE 36.
5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
6. PAYMENT FOR SCUPPERS, PVC DRAINS AND SCREENS SHALL BE INCIDENTAL TO ITEM NO. 502.26339.
7. FOR LOCATION OF SCUPPERS AND 1" Ø DRAINS, SEE SHEET NO. BR–S22.
8. FIELD REPAIR GALVANIZING WITH ZINC RICH PAINT ACCORDING TO SECTION 506 OF THE SPECIAL PROVISIONS. (PAYMENT INCIDENTAL TO ITEM NO. 502.26339).
9. HOLES THROUGH WEB SHALL BE FIELD DRILLED, THEN PAINTED TO THE SATISFACTION OF THE ENGINEER PRIOR TO INSTALLING BOLTS.



SECTION A–A
1 1/2"=1'-0"



SECTION B–B
1 1/2"=1'-0"

1"ø PVC DRAIN,
SEE SUBSECTION 502.17
OF MDOT STANDARD
SPECIFICATIONS AND
NOTE 2, THIS SHEET

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Scale: AS NOTED

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 68737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	12/99	Checked	BSV	04/00
Drawn	CTJ	12/99	In Charge of	RAL	04/00

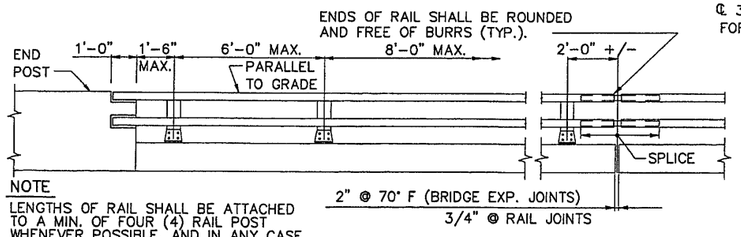
PE Stamp:
STATE OF MAINE
BRIAN S. VAUGHAN
REGISTERED PROFESSIONAL ENGINEER

Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
SCUPPER DETAILS

SHEET NUMBER: BR–S25
CONTRACT: 2000.05
211 OF 229

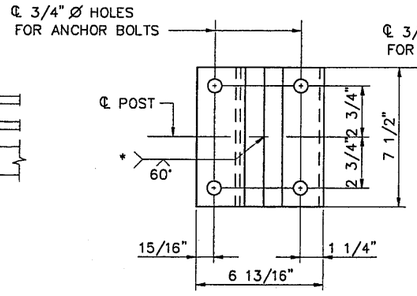


NOTE

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.

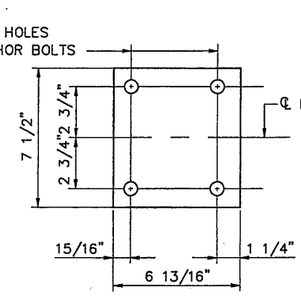
RAILING – ELEVATION

3/8"=1'-0"



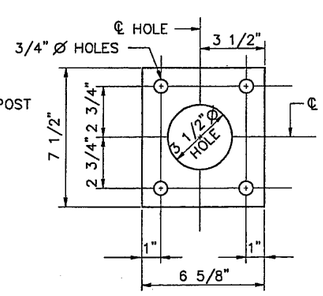
POST BASE (BOTTOM VIEW)

3"=1'-0"



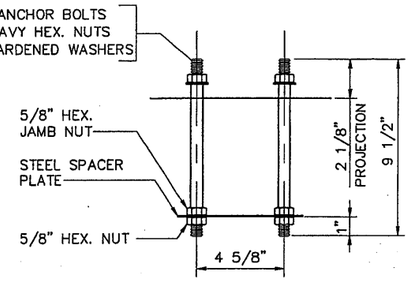
PREFORMED PAD

3"=1'-0"



STEEL SPACER PLATE (FOR ANCHORAGE)

3"=1'-0"

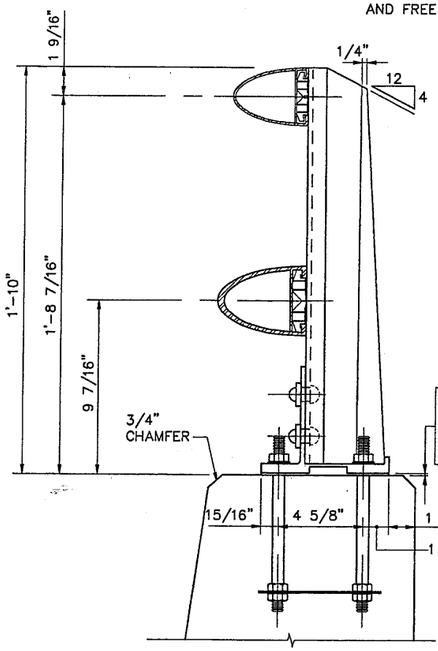


RAIL POST ANCHORAGE (ASSEMBLY)

3"=1'-0"

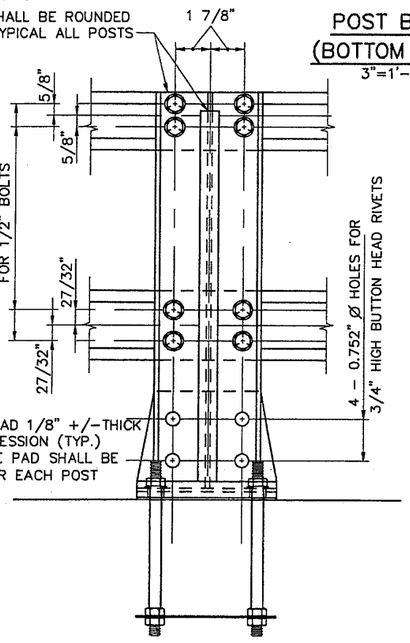
NOTE

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



BRIDGE RAILING (ASSEMBLY)

3"=1'-0"

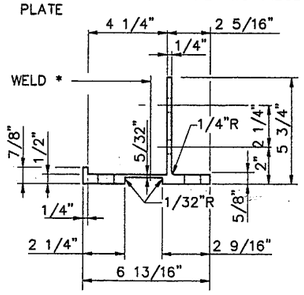


OUTSIDE ELEVATION OF POST

3"=1'-0"

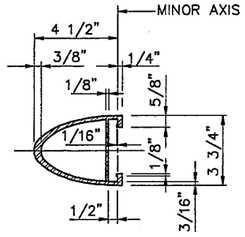
NOTE

* 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



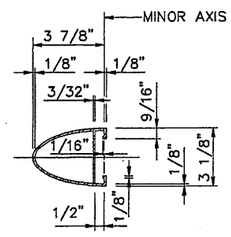
POST BASE SECTION

3"=1'-0"



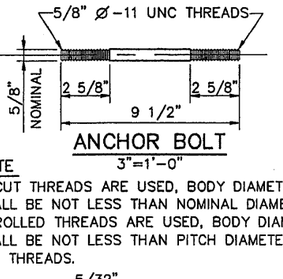
RAIL MEMBER

3"=1'-0"



HANDRAIL MEMBER

3"=1'-0"

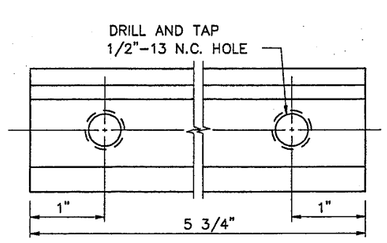


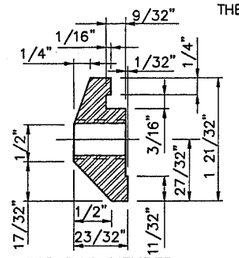
ANCHOR BOLT

3"=1'-0"

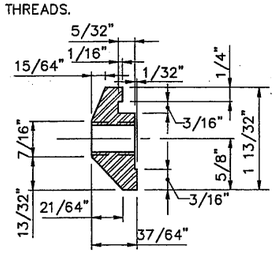
NOTE

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.





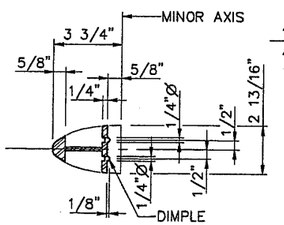
FOR RAIL MEMBER



FOR HANDRAIL

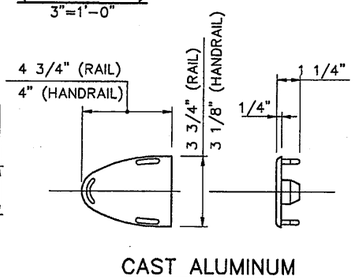
CLAMP BAR DETAILS

FULL SIZE



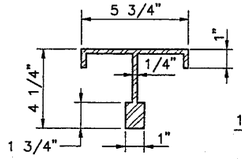
SECTION A–A (HANDRAIL)

3"=1'-0"



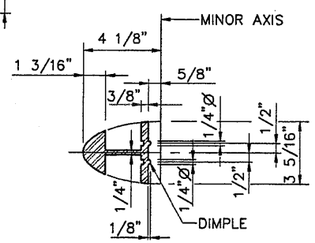
CAST ALUMINUM DRIVE FIT RAIL CAP

3"=1'-0"



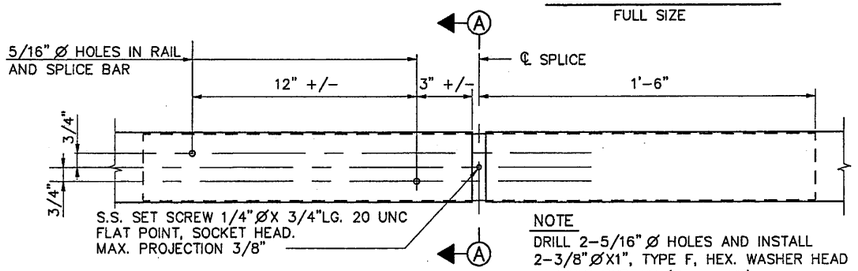
POST SECTION

3"=1'-0"



SECTION A–A (RAIL)

3"=1'-0"



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'-0"

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Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	12/99	Checked	BSV	04/00
Drawn	CTJ	12/99	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE — BRUCE S. WINN — 3559 — REGISTERED PROFESSIONAL ENGINEER

Approved by:

HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT

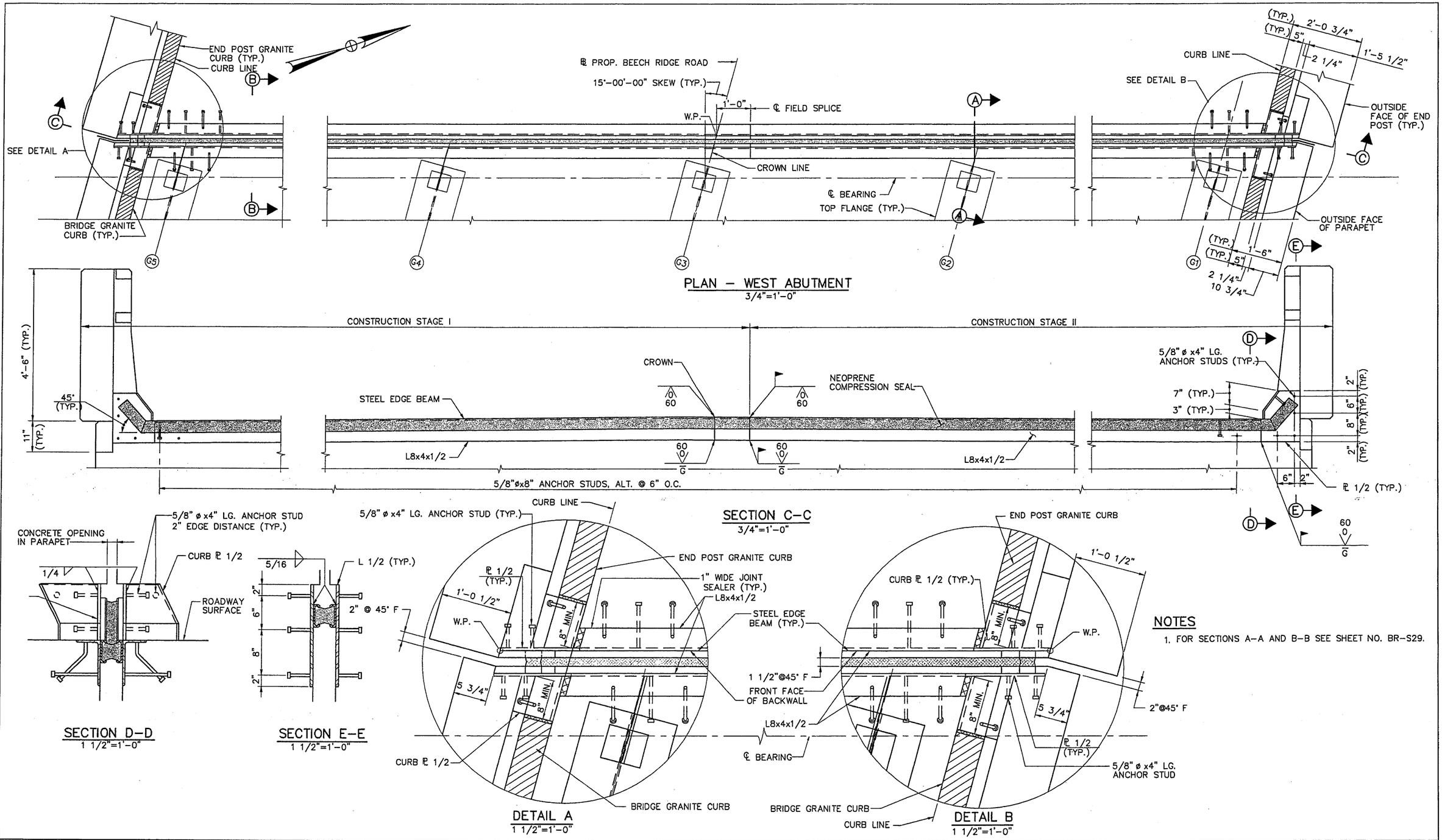
THINKING AHEAD The Widening

BRIDGE REPLACEMENT BEECH RIDGE ROAD UNDERPASS

ALUMINUM BRIDGE RAIL DETAILS

SHEET NUMBER: **BR-S26**

CONTRACT: **2000.05**



NOTES

1. FOR SECTIONS A-A AND B-B SEE SHEET NO. BR-S29.

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEJ01.DWG

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	INDUS ENGINEERING STRUCTURAL CONSULTANTS P.O. BOX 66737 FALMOUTH, MAINE 04105 PHONE: (207) 781-5379 FAX: (207) 781-5373	STATE OF MAINE 3559 REGISTERED PROFESSIONAL ENGINEER	HNTB HNTB CORPORATION ARCHITECTS ENGINEERS PLANNERS 2 Thomas Drive Westbrook, ME 04092	MAINE TURNPIKE AUTHORITY MODERNIZATION AND WIDENING PROJECT THINKING AHEAD The Widening

No.	Revision	By	Date

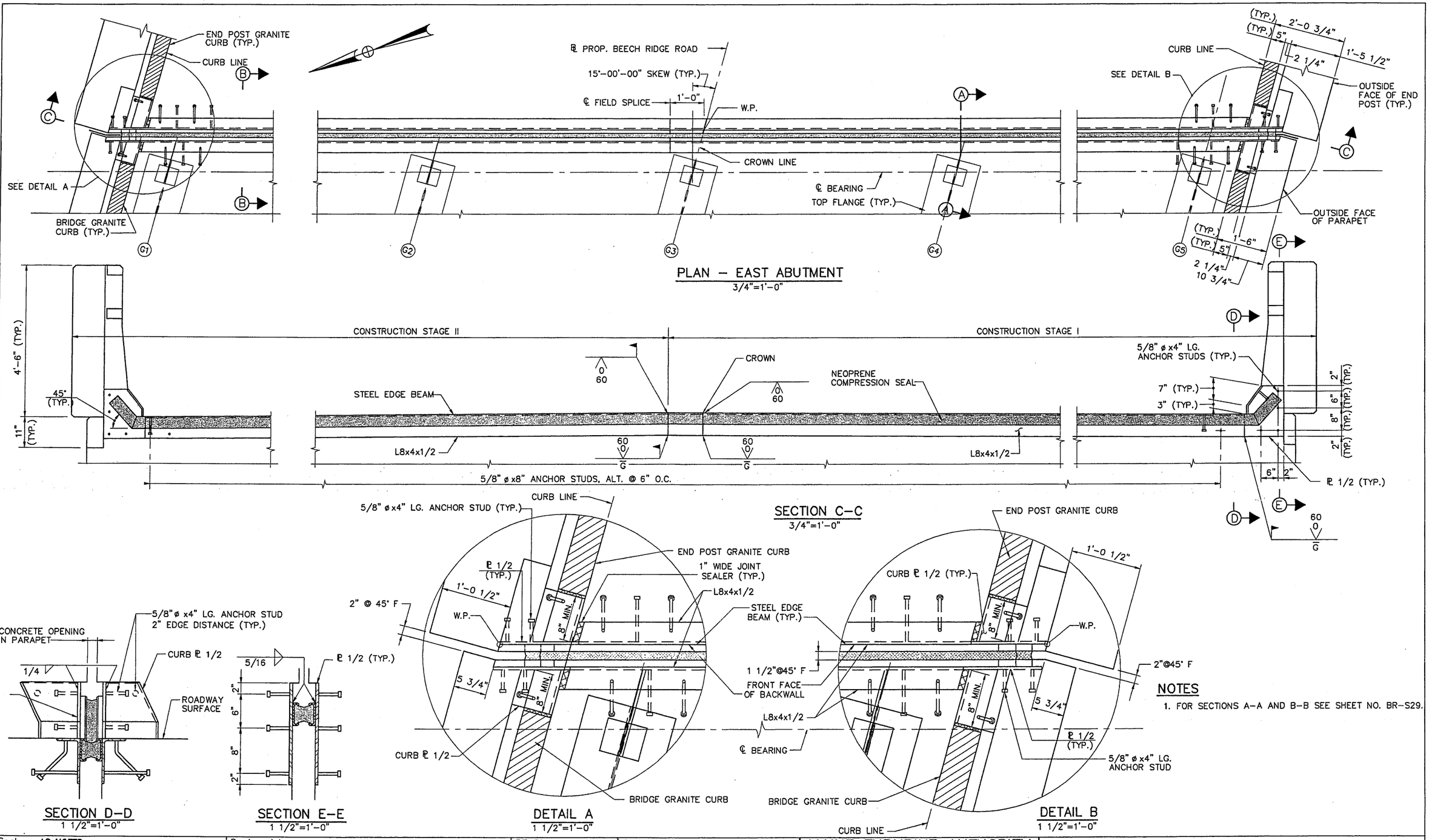
	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
EXPANSION JOINT DETAILS I

CONTRACT: 2000.05

SHEET NUMBER: BR-S27

213 OF 229



PLAN – EAST ABUTMENT
3/4"=1'-0"

SECTION D–D
1 1/2"=1'-0"

SECTION E–E
1 1/2"=1'-0"

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

SECTION C–C
3/4"=1'-0"

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

NOTES
1. FOR SECTIONS A–A AND B–B SEE SHEET NO. BR–S29.

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEJ02.DWG

Scale: **AS NOTED**

No.	Revision	By	Date

Designed by:

INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 86737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE * RALPH S. LIVINGSTON * 3559 * REGISTERED PROFESSIONAL ENGINEER

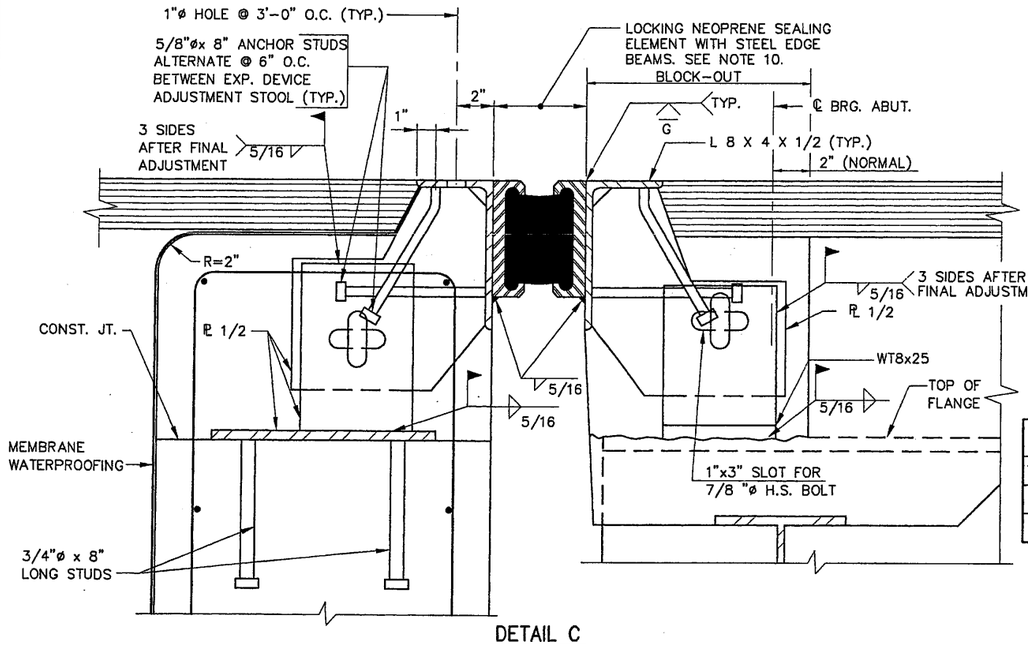
Approved by:

HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

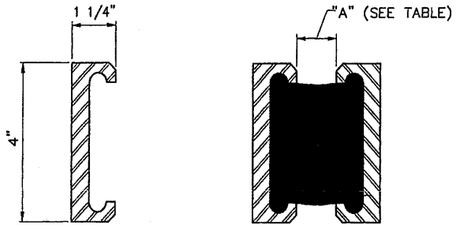
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
THINKING AHEAD The Widening

BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
EXPANSION JOINT DETAILS II

SHEET NUMBER: **BR–S28**
CONTRACT: **2000.05**
214 OF **229**



DETAIL C
3" = 1'-0"

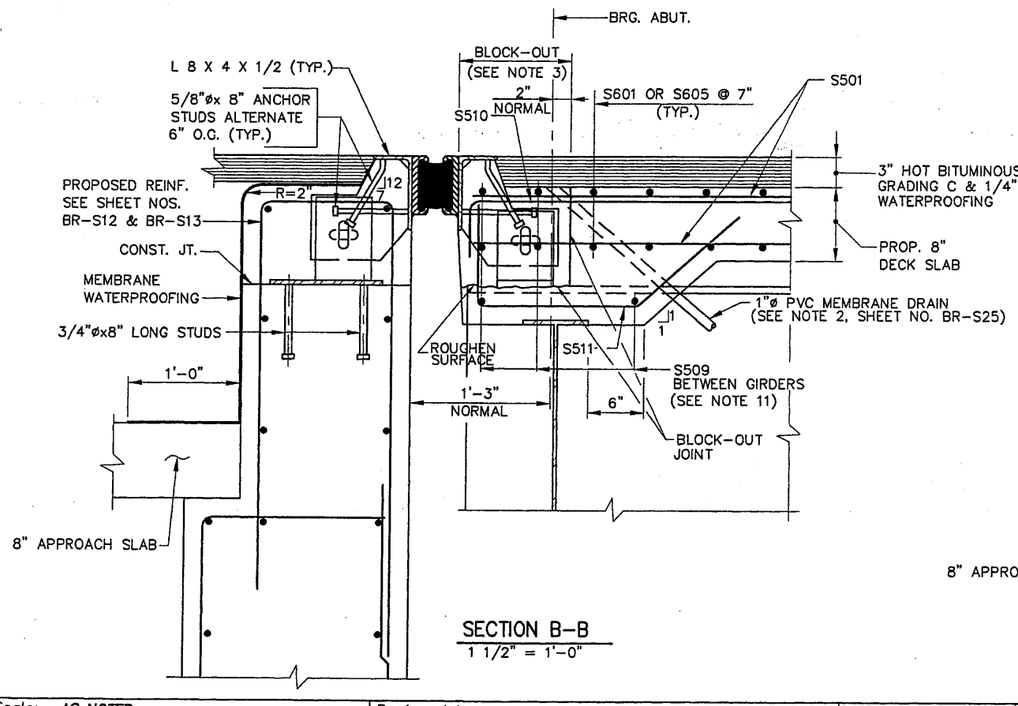


DETAIL – NEOPRENE COMPRESSION SEAL WITH STEEL EDGE BEAMS
N.T.S.

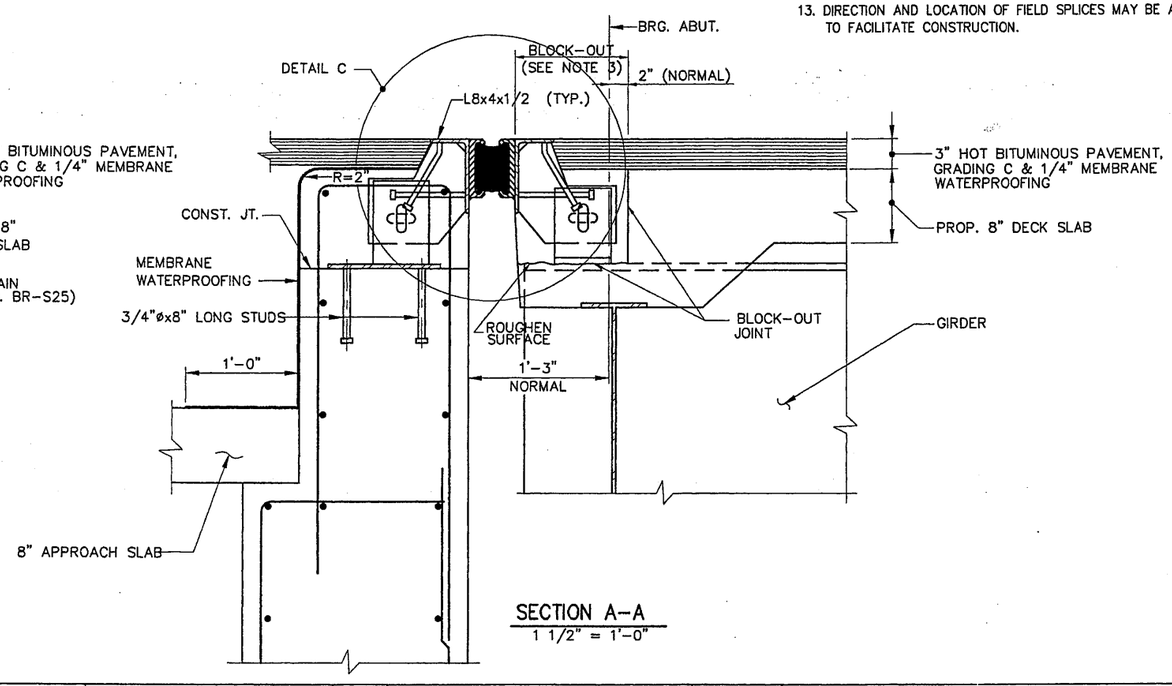
SEAL OPENING TABLE (DIM. "A")								
TEMPERATURE	0° F	15° F	30° F	45° F	60° F	75° F	90° F	105° F
W. ABUT.	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1 1/16"
E. ABUT.	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1 1/16"

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 GIRDER 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 OF CONSTRUCTION.
3. CONTRACTOR SHALL APPLY AN EPOXY BONDING AGENT, APPROVED OF BY THE ENGINEER, TO ALL VERTICAL SURFACES OF THE BLOCK-OUT BEFORE MAKING THE FINAL CONCRETE PLACEMENT AT THE END OF THE DECK SLAB.
4. ALL EXPOSED SURFACES OF ANGLES AND STEEL EDGE BEAMS SHALL BE FIELD PAINTED.
5. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36, UNLESS OTHERWISE NOTED.
6. ALL WELDS ARE 5/16" CONTINUOUS FILLETS, EXCEPT AS NOTED.
7. ALL STEEL SURFACES THAT WILL BE EMBEDDED IN CONCRETE SHALL BE COATED WITH AN EPOXY BONDING COMPOUND.
8. FOR LOCATION OF SECTIONS A-A AND B-B, SEE SH. NOS. BR-S27 AND BR-S28.
9. ONLY BARS PARALLEL TO THE ABUTMENT ARE SHOWN. BARS PERPENDICULAR TO GIRDERS ARE NOT SHOWN FOR CLARITY.
10. THE NEOPRENE COMPRESSION SEALS TO BE FURNISHED SHALL HAVE A MINIMUM MOVEMENT RATING OF:
    W. ABUTMENT = 3 INCHES
    E. ABUTMENT = 3 INCHES
11. FIELD CUT REINFORCING STEEL TO FIT AND EPOXY COAT THE CUT ENDS.
12. THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING THE DEVICE IN TWO SECTIONS.
13. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.



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



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

Scale: AS NOTED

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 66737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE — JOHN R. MAYO — 3559 — REGISTERED PROFESSIONAL ENGINEER

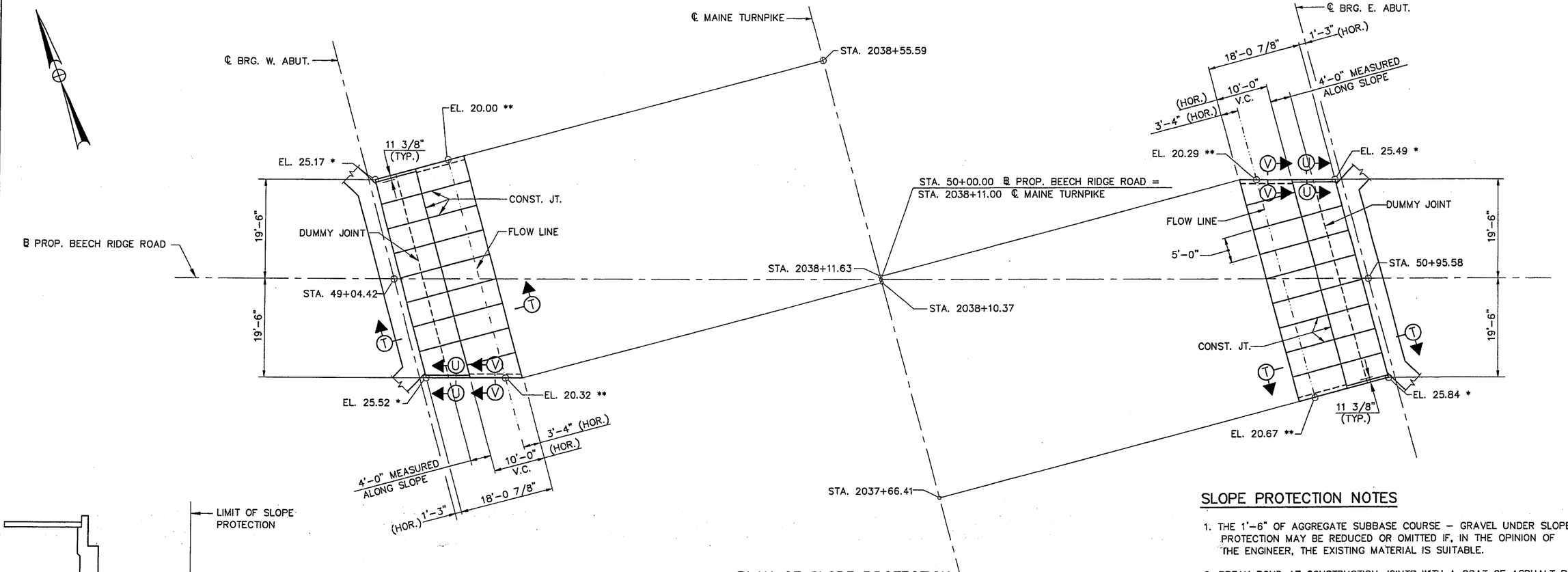
Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
THINKING AHEAD The Widening

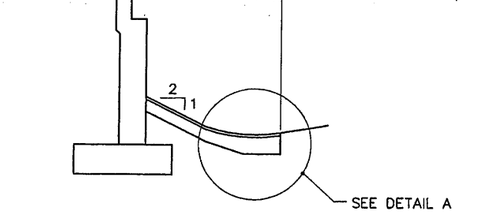
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
EXPANSION JOINT DETAILS III

SHEET NUMBER: BR-S29
CONTRACT: 2000.05
215 OF 229

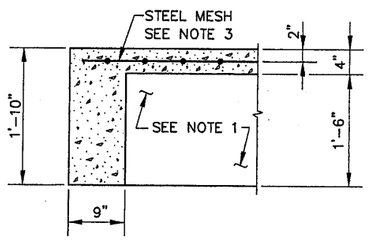
INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39BEJ03.DWG



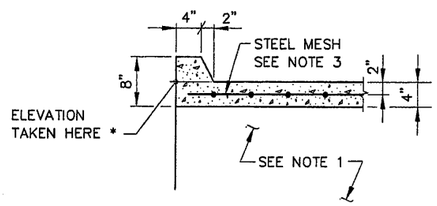
PLAN OF SLOPE PROTECTION
3/32" = 1'-0"



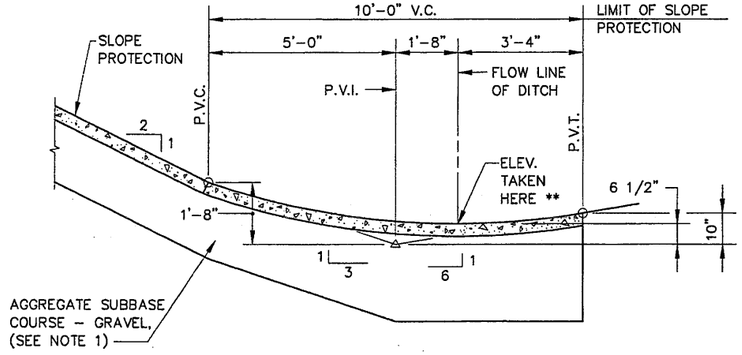
SECTION T–T
3/32" = 1'-0"



SECTION V–V
1" = 1'-0"



SECTION U–U
1" = 1'-0"



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

SLOPE PROTECTION NOTES

1. THE 1'–6" OF AGGREGATE SUBBASE COURSE – GRAVEL UNDER SLOPE PROTECTION MAY BE REDUCED OR OMITTED IF, IN THE OPINION OF THE ENGINEER, THE EXISTING MATERIAL IS SUITABLE.
2. BREAK BOND AT CONSTRUCTION JOINTS WITH A COAT OF ASPHALT PAINT.
3. REINFORCE WITH EPOXY COATED WWF6X6–W2XW2, NOT TO PASS THRU CONSTRUCTION JOINTS.
4. DUMMY JOINTS SHALL BE MADE WITH A GROOVER TO A DEPTH OF 1/4".
5. EDGES OF CONSTRUCTION JOINTS SHALL BE FINISHED WITH A SIDEWALK EDGING TOOL TO A DEPTH OF 1/4".
6. * ELEVATIONS TAKEN AT TOP OF 4" CONCRETE SLAB.
   ** ELEVATIONS TAKEN AT LOW POINT OF DITCH.

INDUSCAD: C:\ACAD2000\HNTB\99027\MAINEST\DETL\BR39SP01.DWG

Scale: AS NOTED

No.	Revision	By	Date

Designed by:
INDUS ENGINEERING
STRUCTURAL CONSULTANTS
P.O. BOX 68737
FALMOUTH, MAINE 04105
PHONE: (207) 781-5379 FAX: (207) 781-5373

	By	Date		By	Date
Designed	BSV	02/00	Checked	BSV	04/00
Drawn	CTJ	02/00	In Charge of	RAL	04/00

PE Stamp: STATE OF MAINE * RICHARD A. LIMA * 3559 REGISTERED PROFESSIONAL ENGINEER

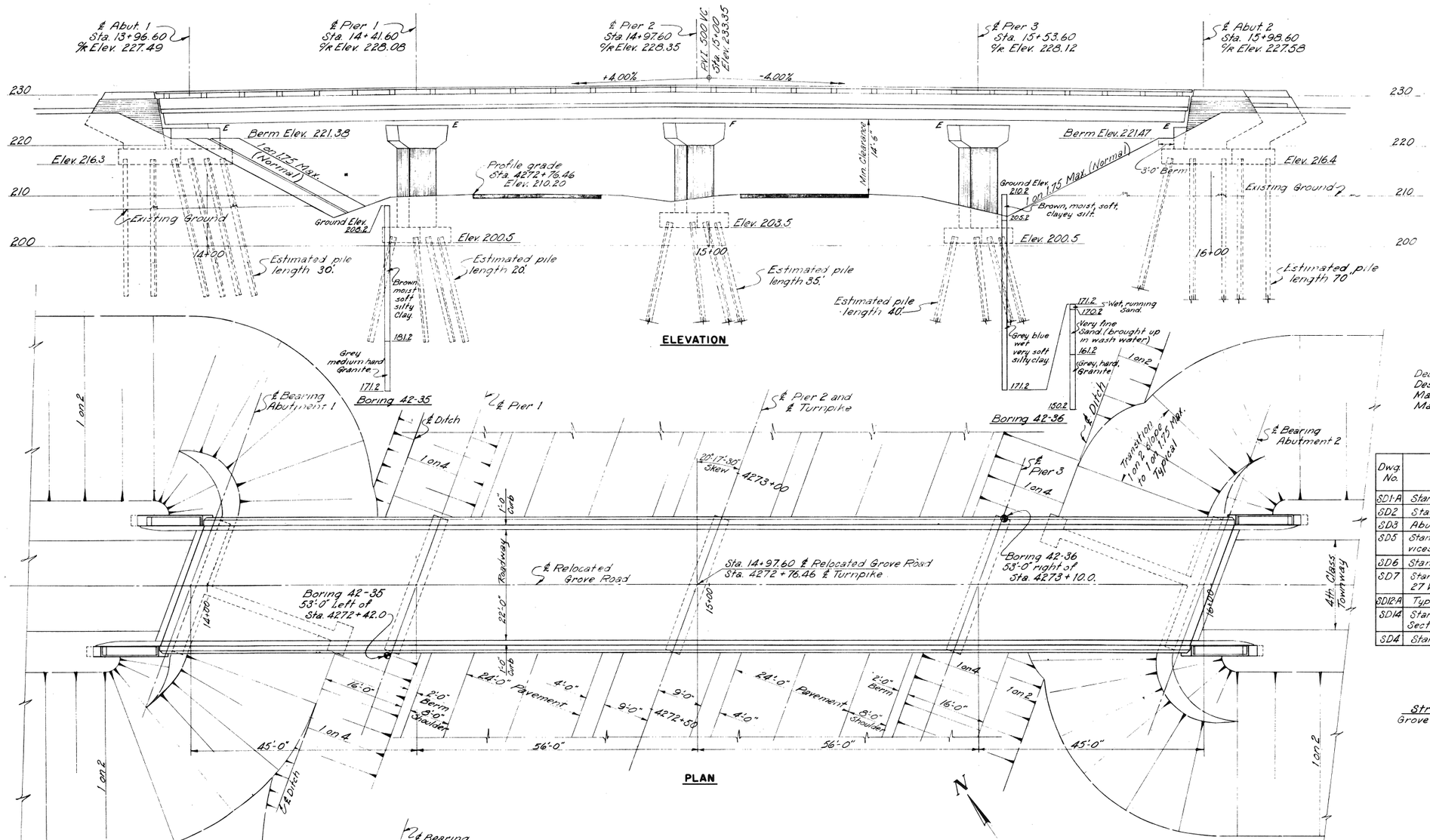
Approved by:
HNTB
HNTB CORPORATION
ARCHITECTS ENGINEERS PLANNERS
2 Thomas Drive
Westbrook, ME 04092

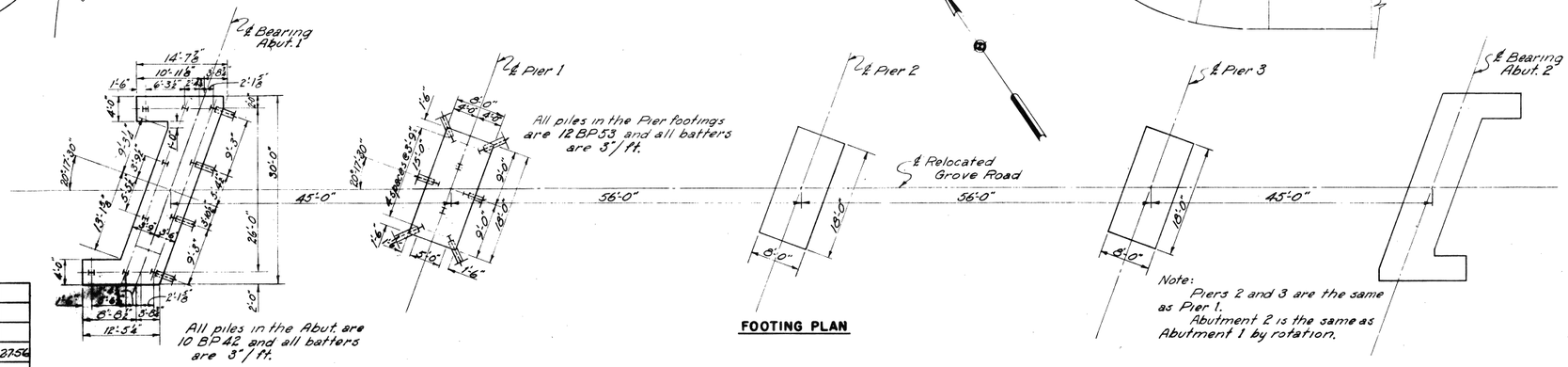
MAINE TURNPIKE AUTHORITY
MODERNIZATION
AND WIDENING PROJECT
THINKING AHEAD The Widening

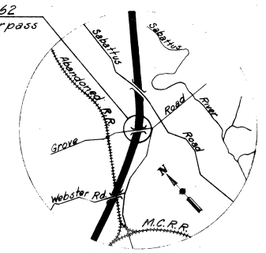
BRIDGE REPLACEMENT
BEECH RIDGE ROAD UNDERPASS
SLOPE PROTECTION

SHEET NUMBER: BR–S30
CONTRACT: 2000.05
216 OF 229

62.01.03







VICINITY MAP
Scale 1" = 1 mile

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	Steel Erector	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.	✓			

DRAWING 62.01.03

	BY	DATE				
MADE	DWL	1-28-56				
TRACED						
CHECKED	DDS	2-24-56	1	As-Built	WSH	2-7-56
IN CHARGE OF	DSK		No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

SECTION 2— PORTLAND TO AUGUSTA

STRUCTURE NO. 62 TURNPIKE UNDER

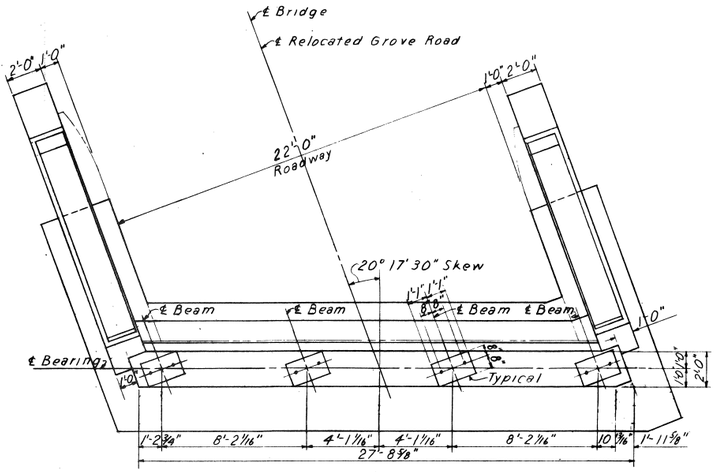
GROVE ROAD

STA. 4272+76.46

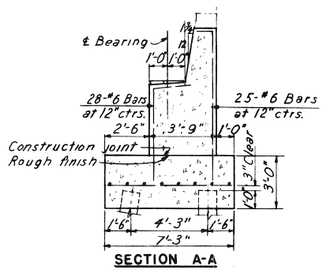
GENERAL PLAN AND ELEVATION

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

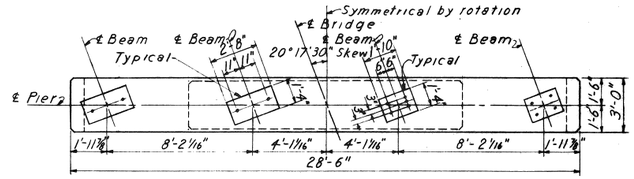
SCALE: 3/32" = 1'-0"
CONTRACT NO.
SHEET NO. 287 OF 382



PLAN

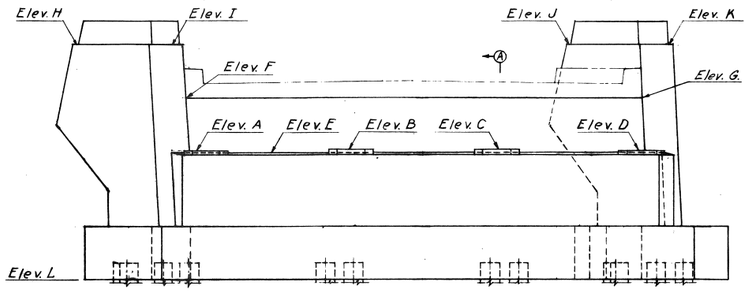


SECTION A-A

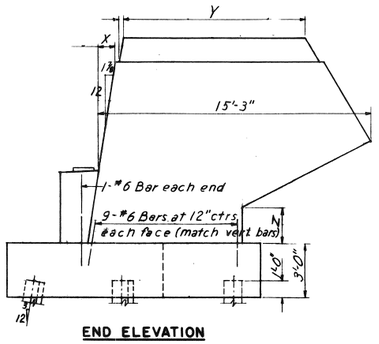


HALF PLAN OF CAP
PIERS 1 AND 3

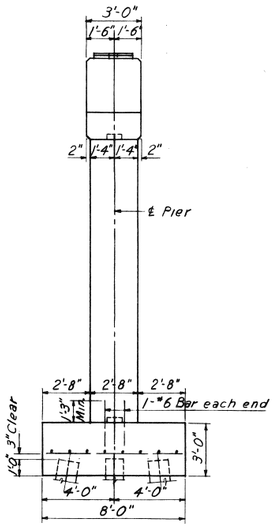
HALF PLAN OF CAP
PIER 2



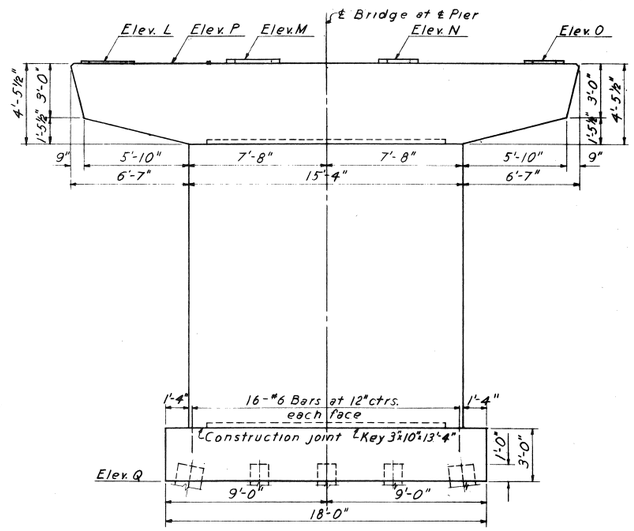
FRONT ELEVATION



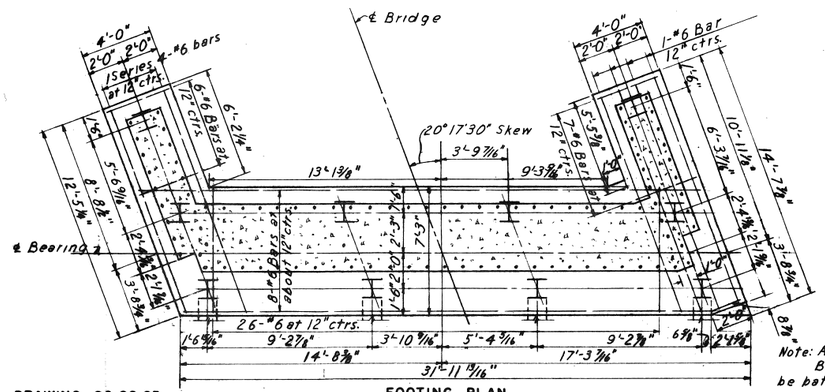
END ELEVATION



END ELEVATION



FRONT ELEVATION



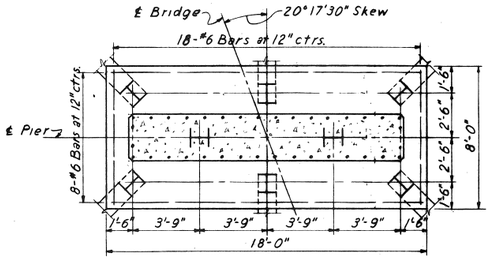
FOOTING PLAN

Note: All piles 10 BP42. Battered piles to be battered 3 in 12.

ABUTMENT ELEVATIONS		
Elev.	Abut. 1	Abut 2
A	223.54	223.62
B	223.70	223.78
C	223.75	223.82
D	223.68	223.76
E	223.48	223.54
F	226.48	226.56
G	226.61	226.70
H	229.17	229.26
I	229.38	229.47
J	229.33	229.42
K	229.53	229.61
L	216.3	216.4

WINGWALL DIMENSIONS				
Mark	Abutment 1		Abutment 2	
	S.W. Wing	N.W. Wing	S.E. Wing	N.E. Wing
X	11¼"	11½"	11½"	11¼"
Y	10'-2 7/8"	10'-2 7/8"	10'-2 7/8"	10'-2 7/8"
Z	1'-7 1/8"	1'-9 1/8"	1'-9 1/8"	1'-7 1/8"

PIER ELEVATIONS			
Elev.	Pier 1	Pier 2	Pier 3
L	223.95	224.43	224.06
M	224.08	224.54	224.15
N	224.11	224.54	224.13
O	224.02	224.43	223.99
P	223.93	224.41	223.97
Q	200.5	203.5	200.5



FOOTING PLAN

Note: All piles to be 12 BP 53. Battered piles to be battered 3 in 12.

DRAWING 62.02.03

	BY	DATE				
MADE	VPG	1-27-54				
TRACED						
CHECKED	DDG	2-21-54	1	As-Built	HBH	2-25-54
IN CHARGE OF IDSK			No.	REVISION	BY	DATE

ABUTMENTS 1 AND 2

Abutment 1 shown. Abutment 2 similar by rotation.

PIERS 1,2 AND 3

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

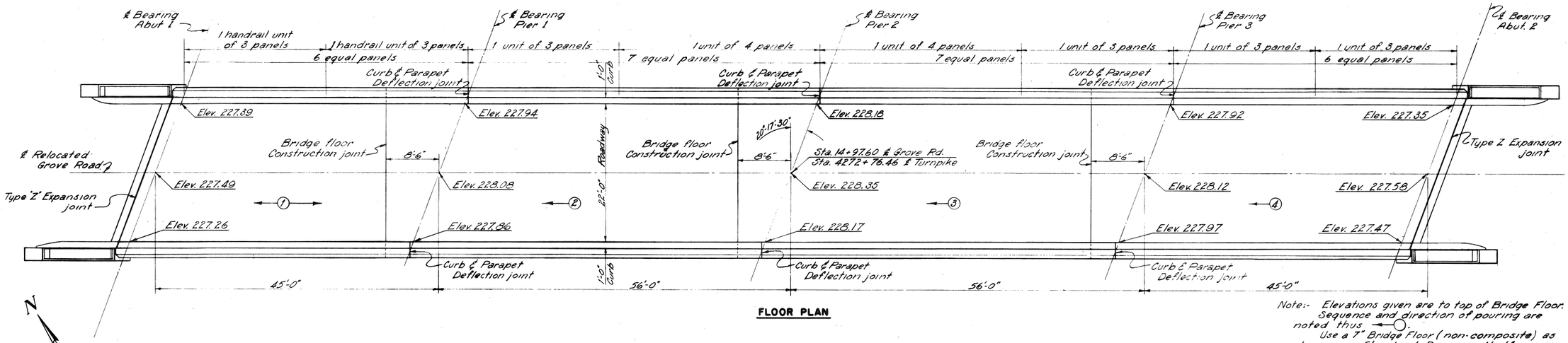
SECTION 2— PORTLAND TO AUGUSTA

STRUCTURE NO. 62 TURNPIKE UNDER
GROVE ROAD
STA. 4272 + 76.46
ABUTMENTS AND PIERS

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

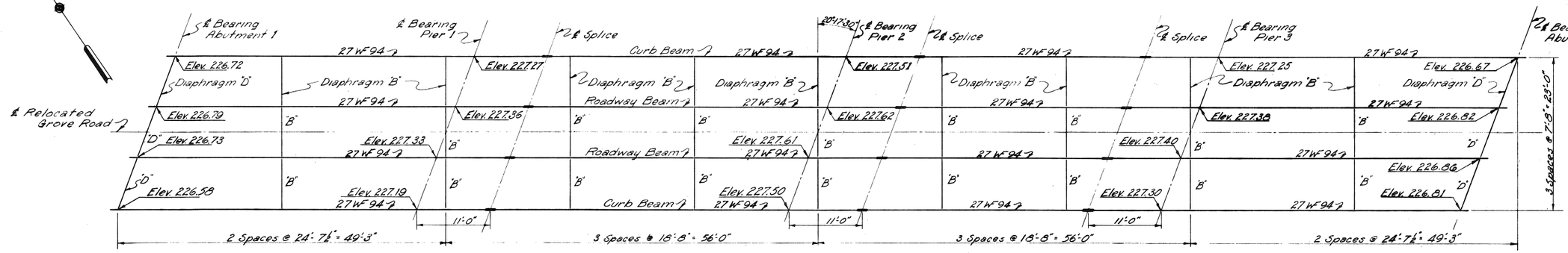
SCALE: 1/8"=1'-0"
CONTRACT NO. _____
SHEET NO. 282 OF 382

62.03.03



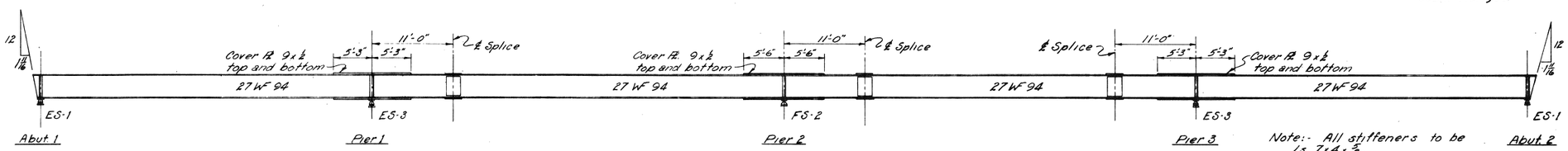
FLOOR PLAN

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.



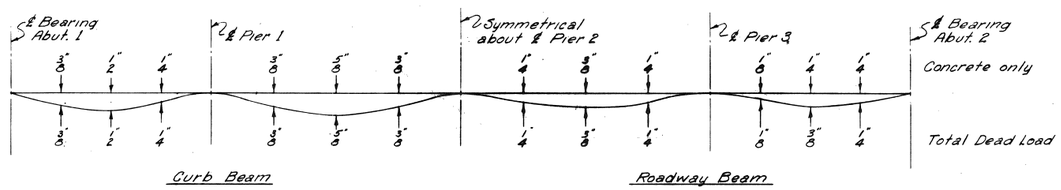
FRAMING PLAN

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

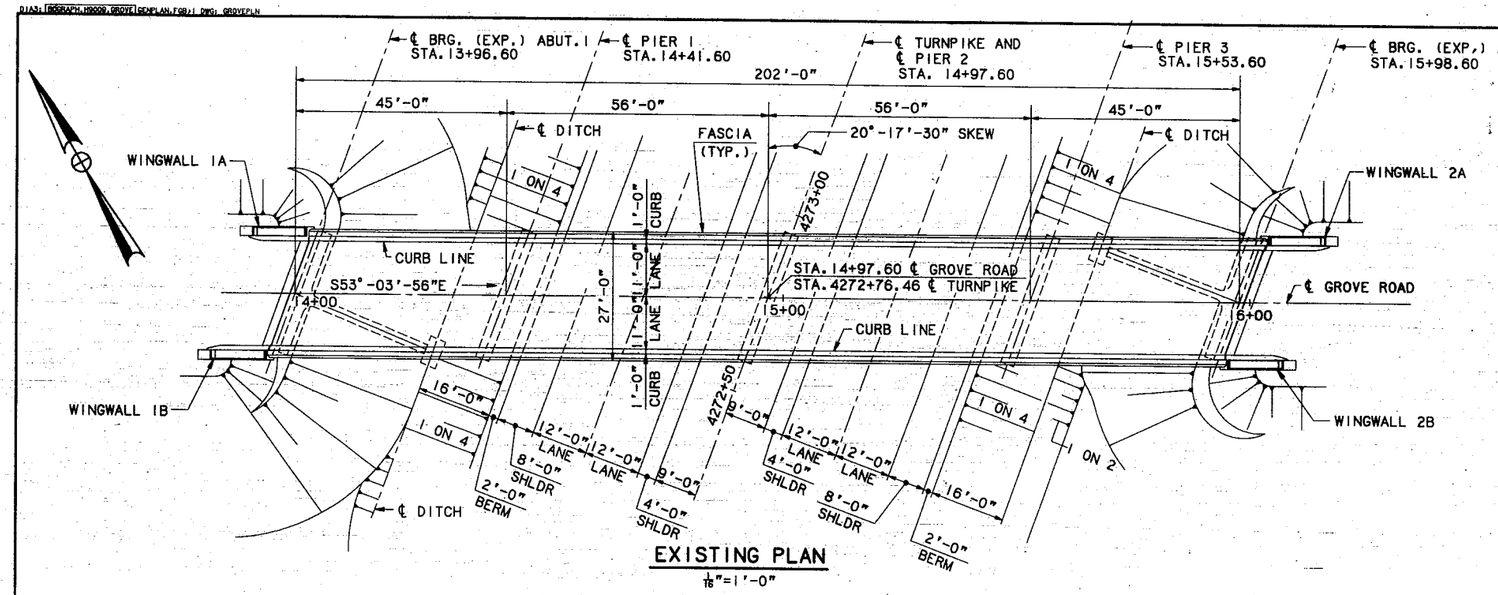
	BY	DATE				
MADE	DWL	1-22-54				
TRACED						
CHECKED	DDG	2-20-54	1	As-Built	HBW	3-7-56
IN CHARGE OF	IDSK		No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA
STRUCTURE NO. 62 TURNPIKE UNDER
GROVE ROAD
STA. 427.2+76.46
SUPERSTRUCTURE

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

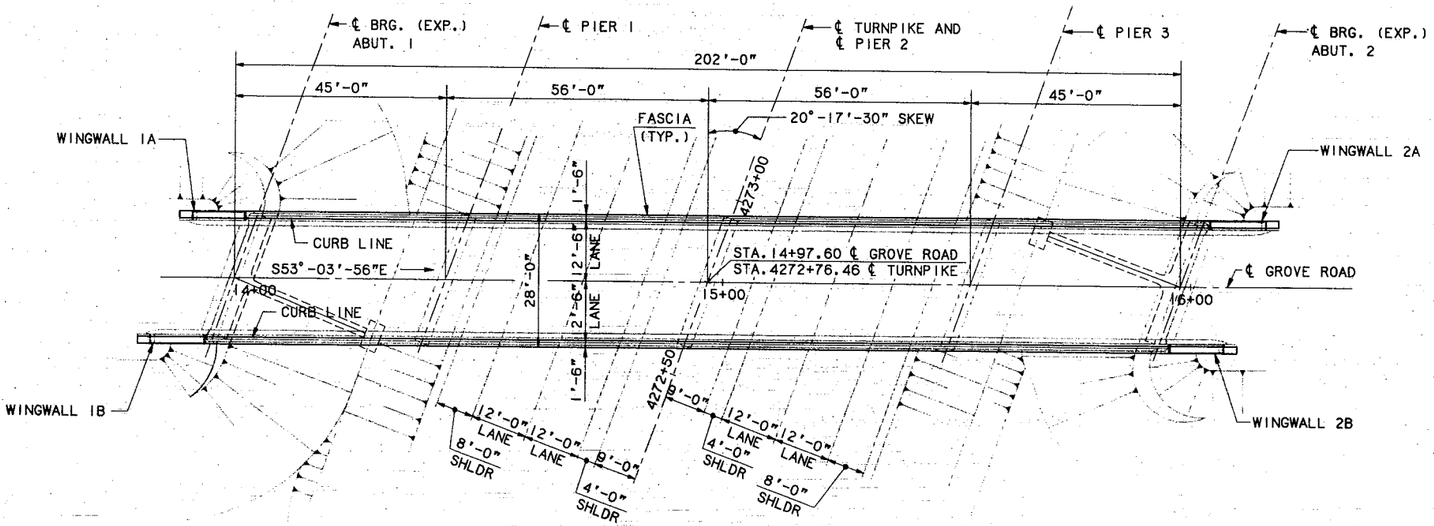
SCALE: 3/8" = 1'-0"
CONTRACT NO.
SHEET NO. 282 OF 382

D:\ASI\ROSGRAPH\MAINE\GROVE\GENPLAN.FGB\1 DWG: GROVEPLN



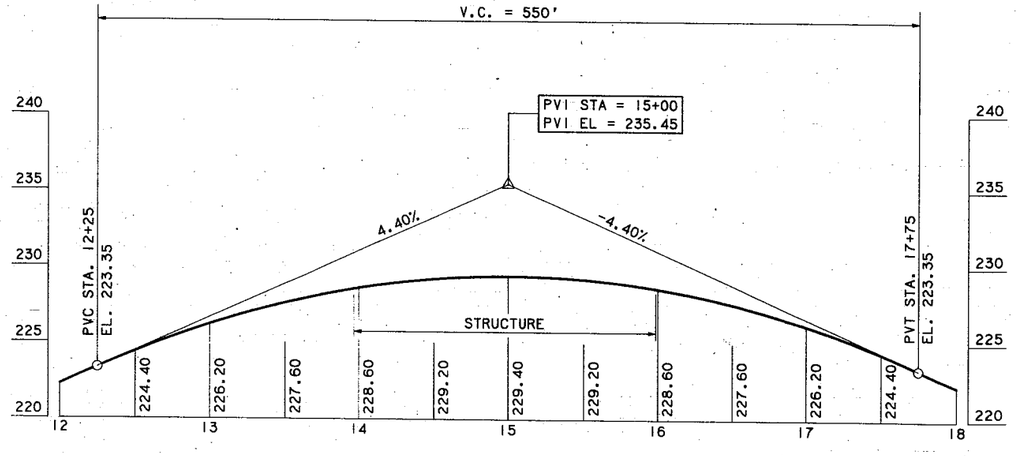
EXISTING PLAN

1/16"=1'-0"



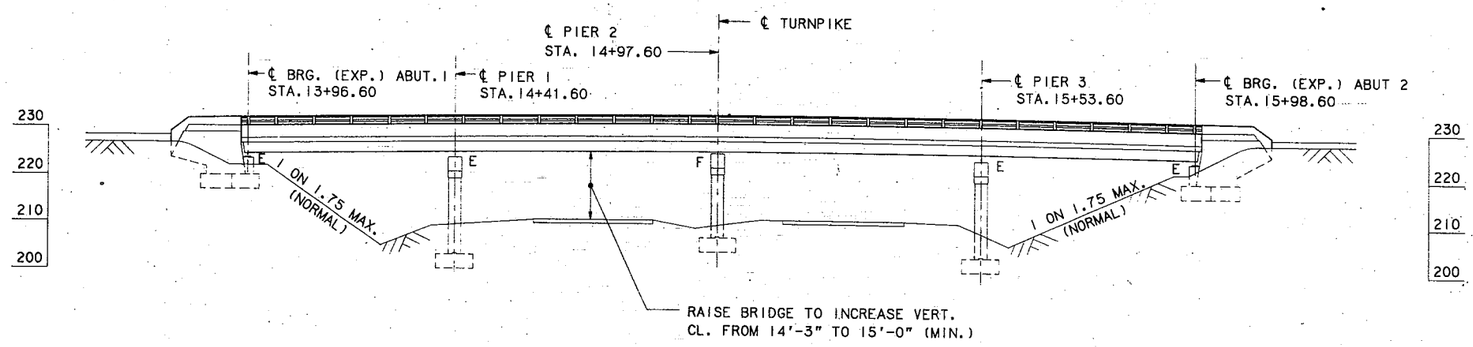
PROPOSED PLAN

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

HNTB — 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

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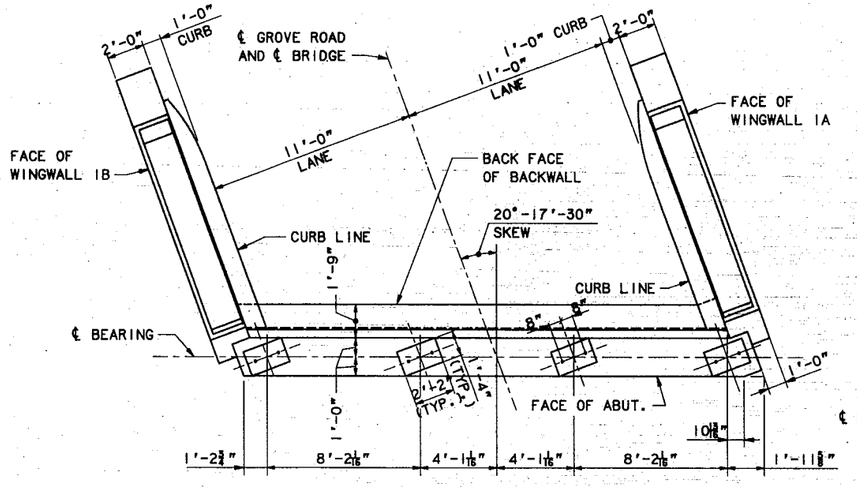
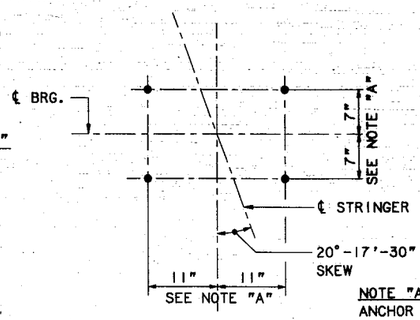
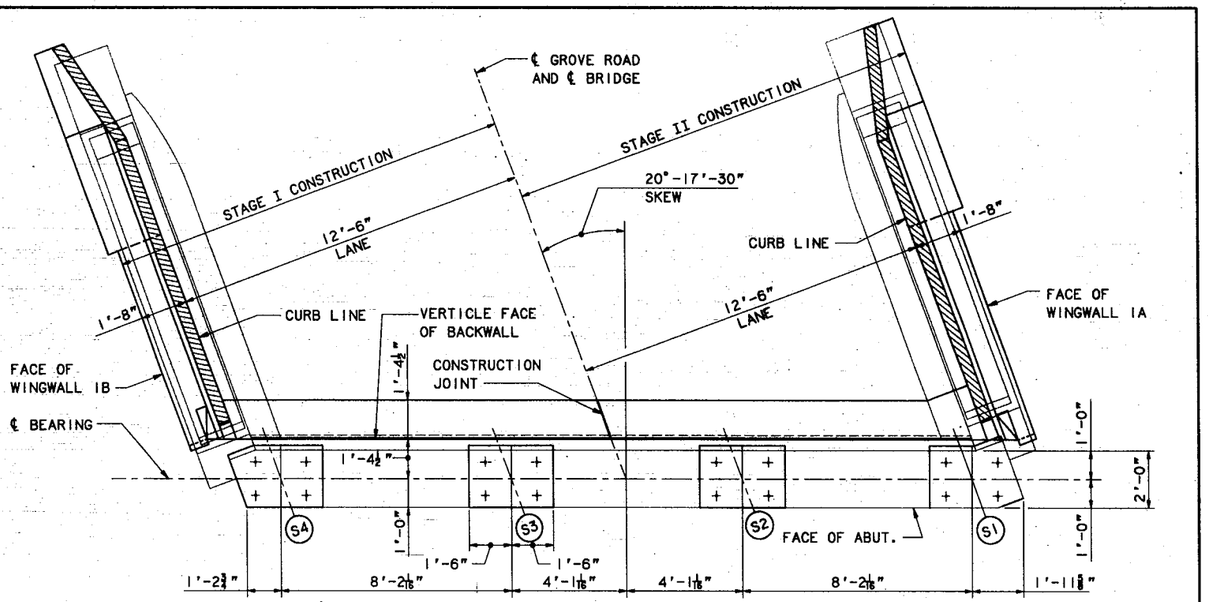


EXISTING PLAN
1/4" = 1'-0"

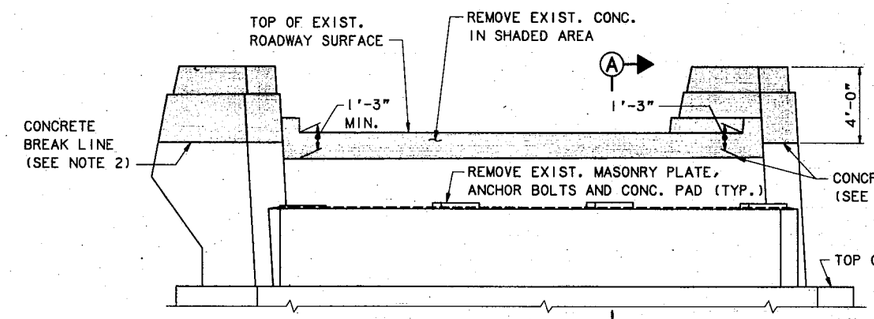


ANCHOR BOLT LAYOUT
1" = 1'-0"

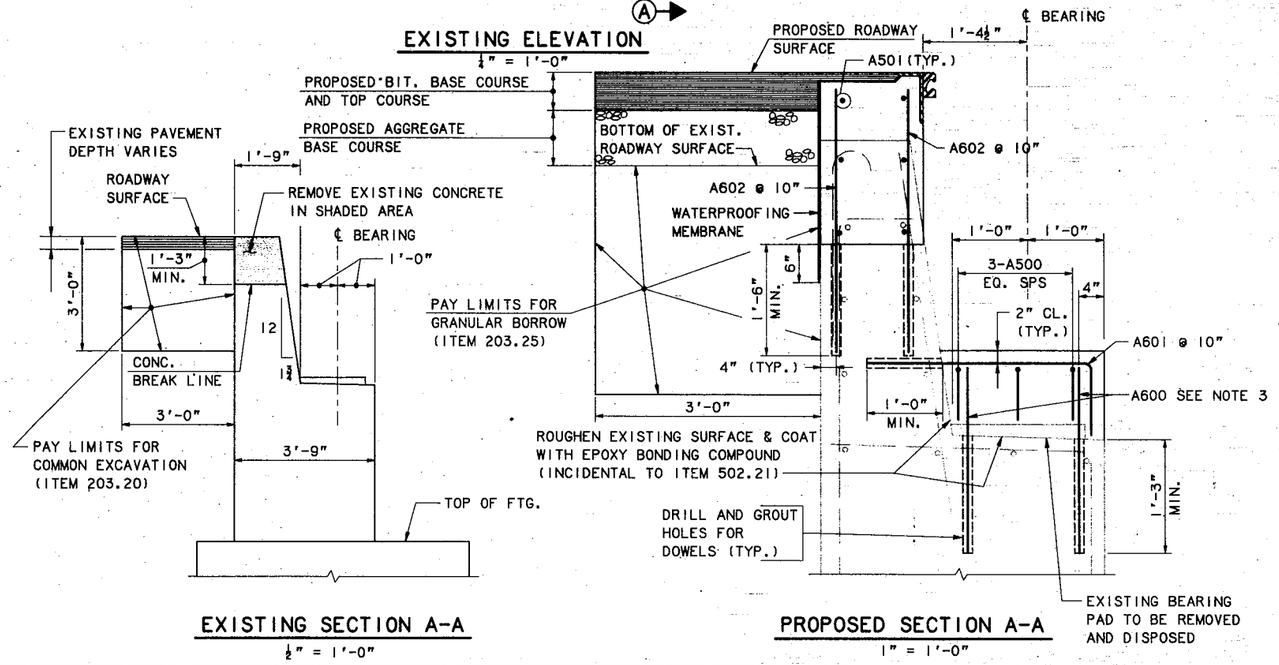
NOTE "A"
ANCHOR BOLT SPACING SHALL BE COORDINATED WITH BEARING MANUFACTURER.



PROPOSED PLAN
3/8" = 1'-0"

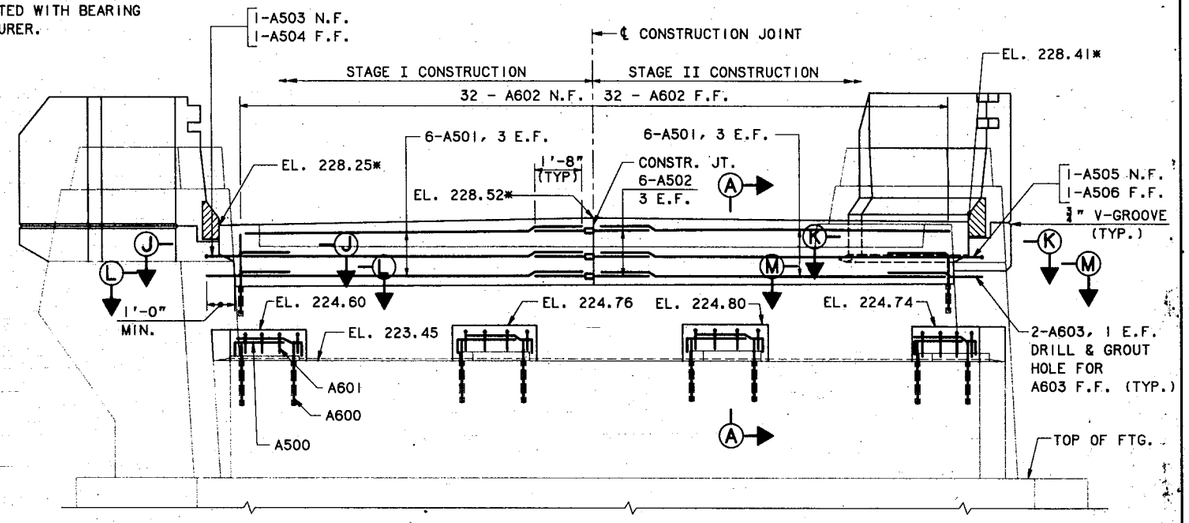


EXISTING ELEVATION
1/4" = 1'-0"



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

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



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

NOTES

1. FOR WINGWALL ELEVATIONS AND SECTIONS SEE SHEET NOS. GR-6 AND GR-7.
2. SAW CUT 1" MIN. DEEP BEFORE REMOVING EXISTING CONCRETE
3. A600 BARS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH THE PLACEMENT OF ANCHOR BOLTS FOR THE MASONRY PLATE
4. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NOS. GR-14 & GR-15.
5. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NO. GR-7.
6. FOR SECTION J-J, K-K, L-L & M-M, SEE SHEET GR-5.
7. EXCAVATION FOR BACKWALL MODIFICATION IS TO BE PAID FOR UNDER 203.20 TO THE LIMITS SHOWN.
8. * ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
9. REMOVAL OF THE EXISTING ARMOR JOINT SHALL BE INCIDENTAL TO ITEM 202.122.
10. REMOVAL OF THE EXISTING MASONRY PLATE, ANCHOR BOLTS AND BEARING ASSEMBLY SHALL BE INCIDENTAL TO ITEM 202.12.

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS

ABUTMENT 1 MODOIFICATIONS

HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:

	By:	Date:
Designed	GPM	1/95
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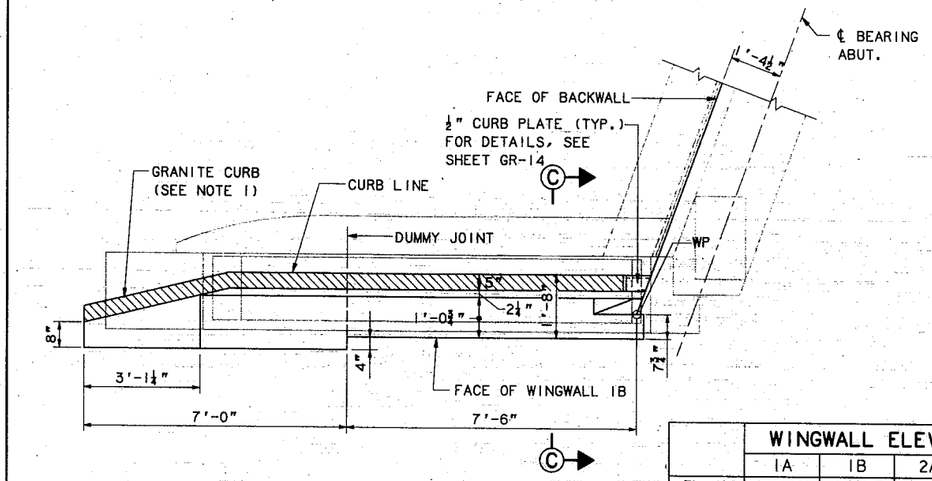
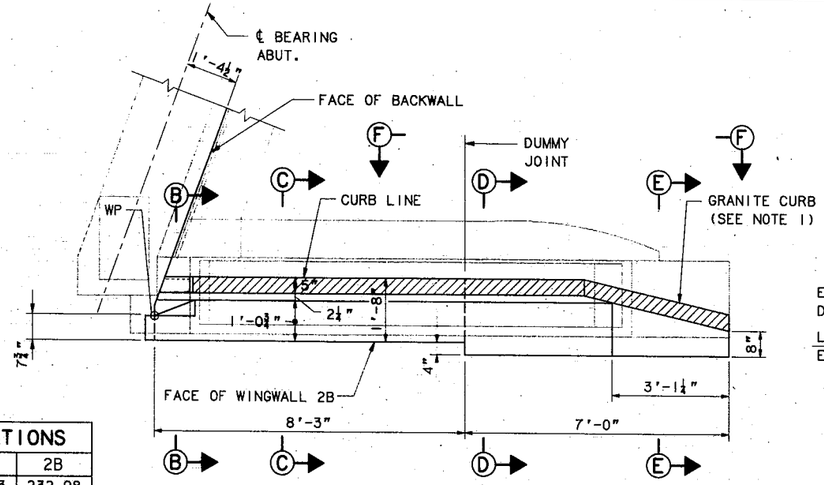
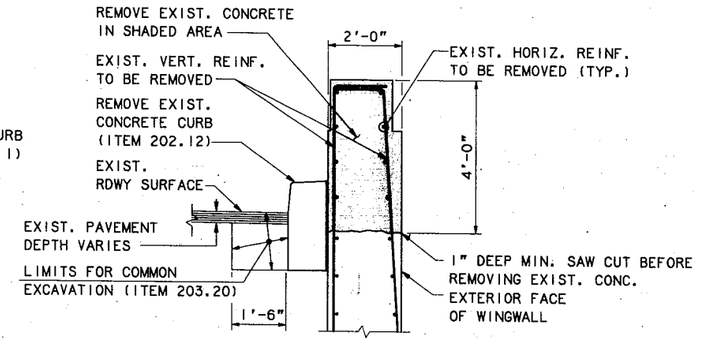




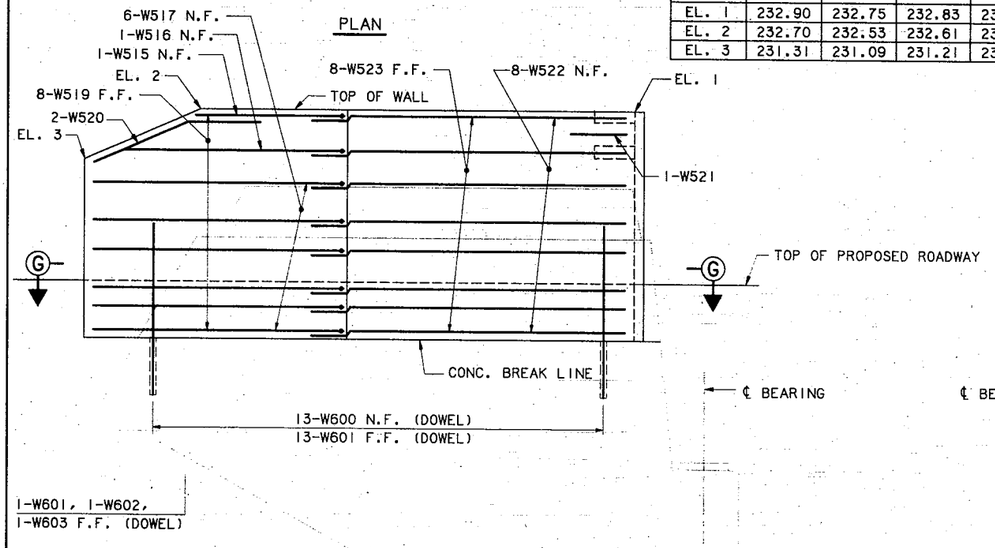


EXISTING SECTION C-C

½" = 1'-0"

	WINGWALL ELEVATIONS			
	1A	1B	2A	2B
EL. 1	232.90	232.75	232.83	232.98
EL. 2	232.70	232.53	232.61	232.79
EL. 3	231.31	231.09	231.21	231.40

PLAN

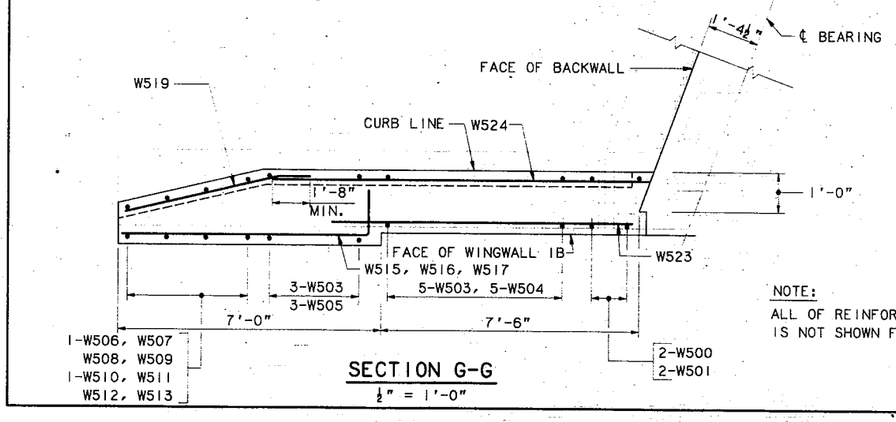


ELEVATION

WINGWALL 1B AND 2A

WINGWALL 1B SHOWN, WINGWALL 2A SIMILAR

½" = 1'-0"

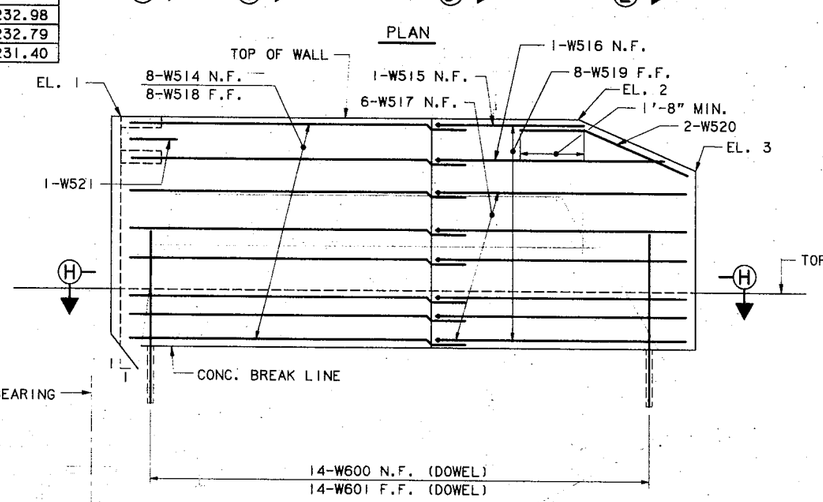


SECTION G-G

½" = 1'-0"

NOTE:
ALL OF REINFORCING STEEL IS NOT SHOWN FOR CLARITY.

PLAN

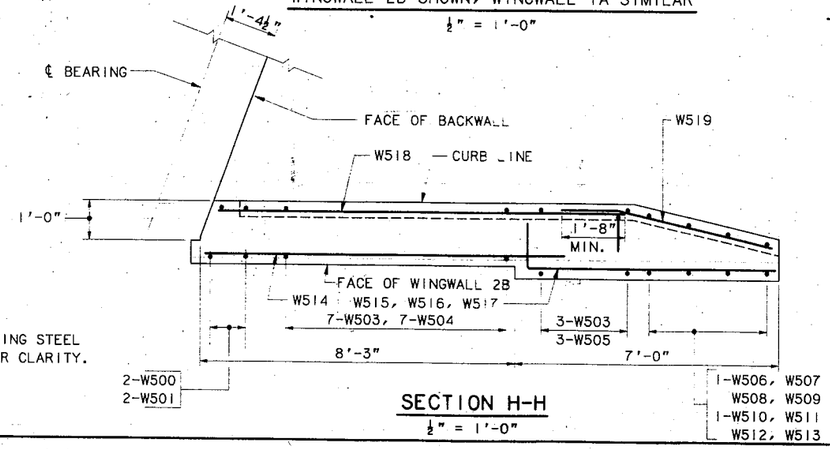


ELEVATION

WINGWALL 2B AND 1A

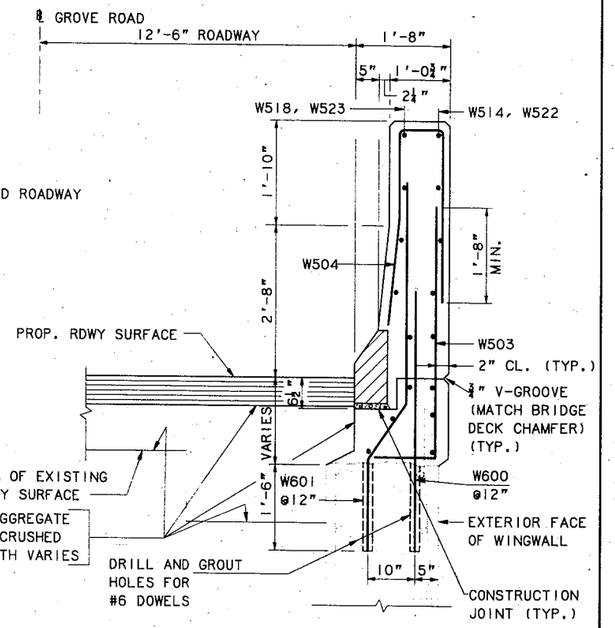
WINGWALL 2B SHOWN, WINGWALL 1A SIMILAR

½" = 1'-0"



SECTION H-H

½" = 1'-0"



PROPOSED SECTION C-C

¾" = 1'-0"

NOTES

1. FOR SECTIONS B-B, D-D, E-E, F-F AND GRANITE CURB DETAILS, SEE SHEET NO. GR-7

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

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
WINGWALL MODIFICATIONS - I

HNTB
HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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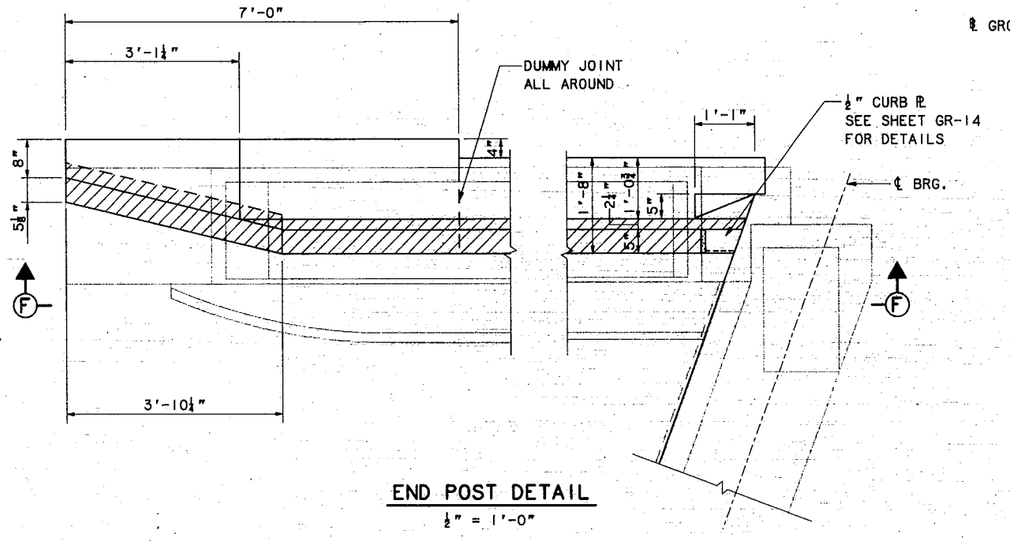
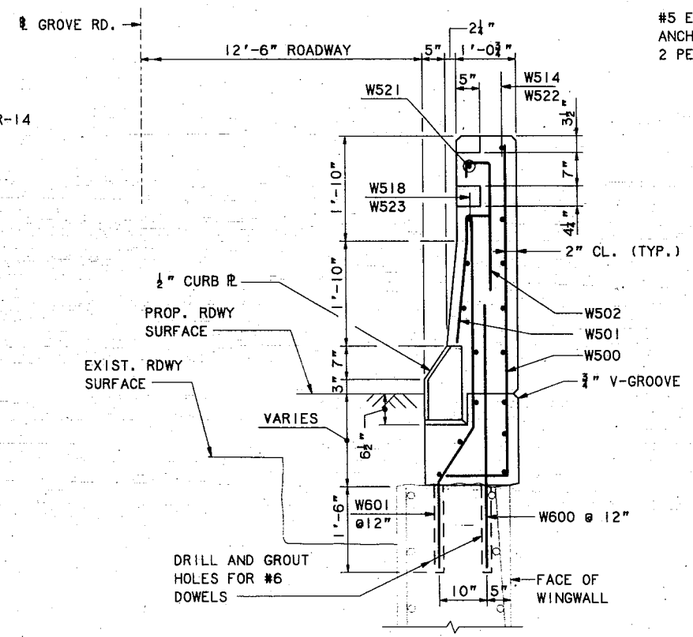
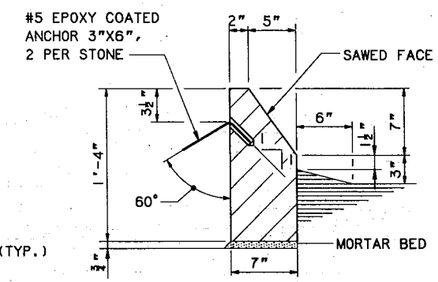


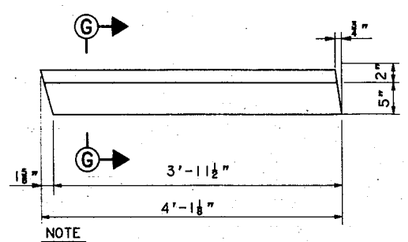
END POST DETAIL
½" = 1'-0"



SECTION B-B
¾" = 1'-0"



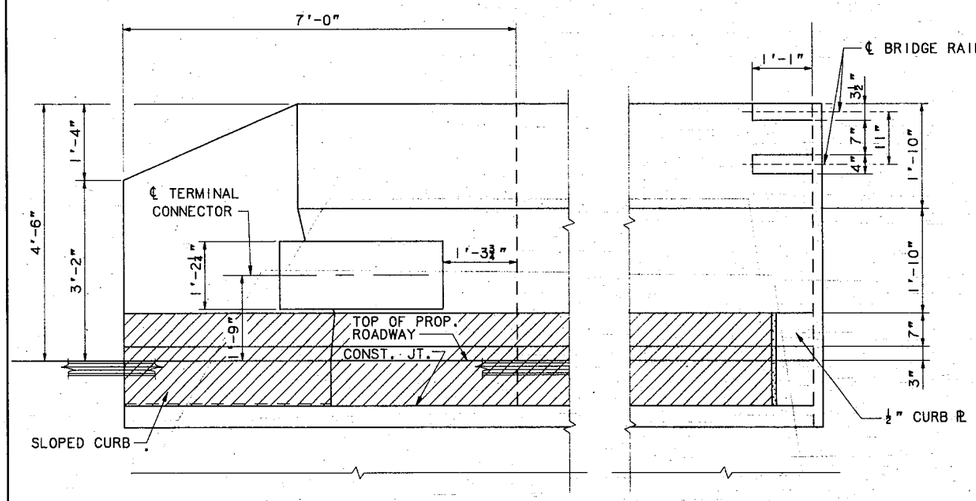
SECTION G-G
1½" = 1'-0"



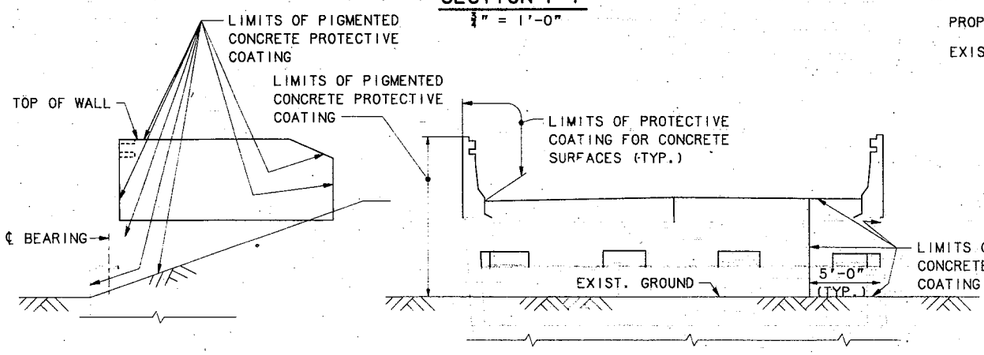
NOTE
(CURB FOR WINGWALLS 1A & 2B SHOWN
CURB FOR WINGWALLS 1B & 2A SIMILAR
BUT OPPOSITE HAND)

PLAN
1" = 1'-0"

TYPICAL WINGWALL GRANITE CURB



SECTION F-F
¾" = 1'-0"

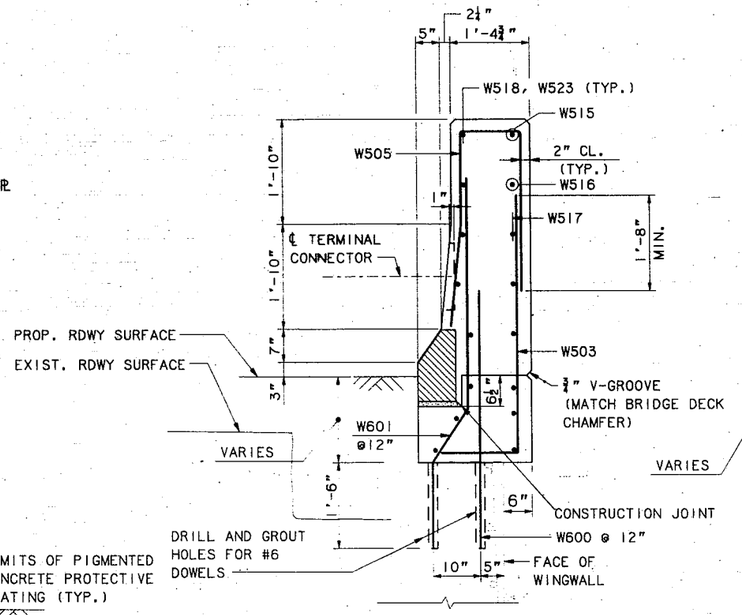


WINGWALL ABUTMENT

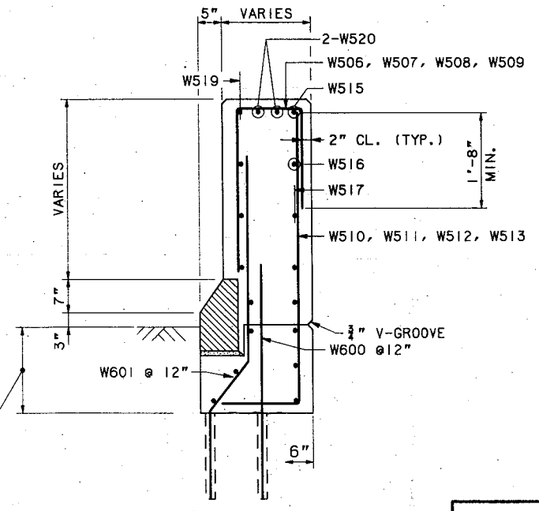
LIMITS OF CONCRETE PROTECTIVE COATING AT ABUTMENT AND WINGWALLS
¼" = 1'-0"

NOTE A
FOR LIMITS OF PROTECTIVE COATING AT PIERS SEE SHEET NO GR-8

NOTE
FOR TERMINAL CONNECTOR ANCHORAGE DETAIL SEE STANDARD DETAIL SHEET BD-201-89



SECTION D-D
¾" = 1'-0"



SECTION E-E
¾" = 1'-0"

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
WINGWALL MODIFICATIONS II

HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:

	By:	Date:
Designed	GPM	'95
Drawn	LS	'95
Checked	HNL	'95
In charge of:	RA	

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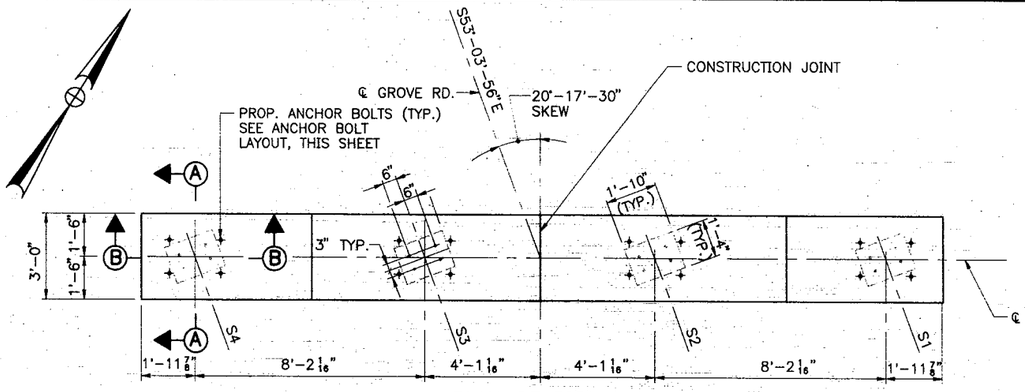
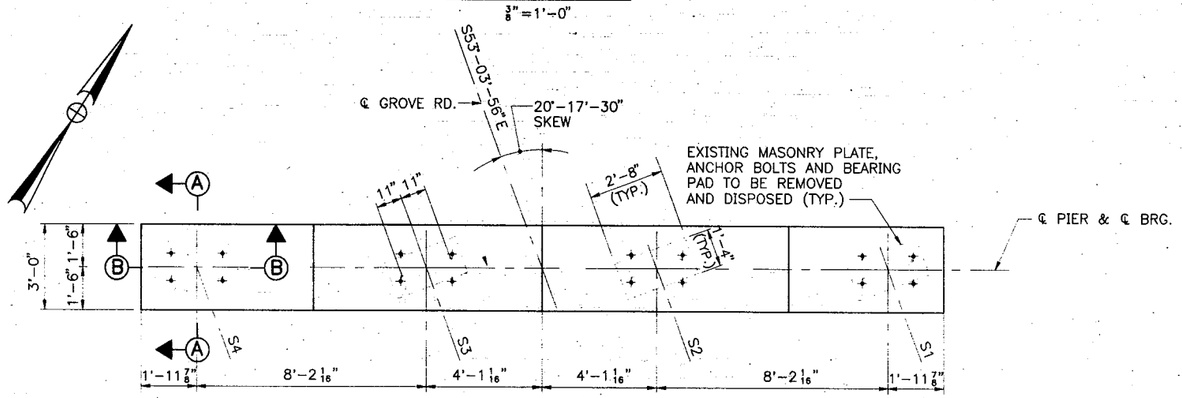


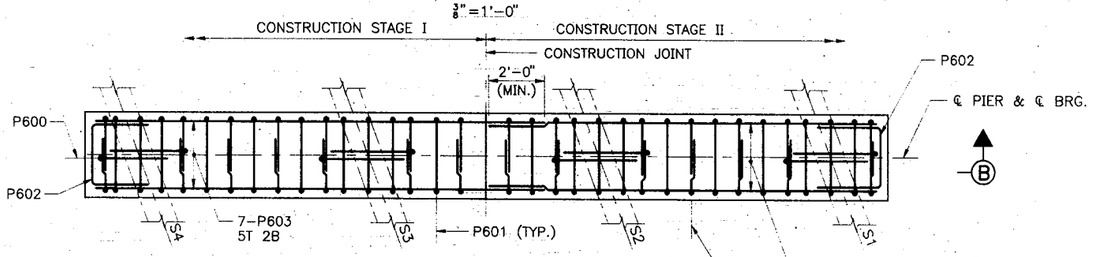
PLAN OF PIER 2

3/8" = 1'-0"



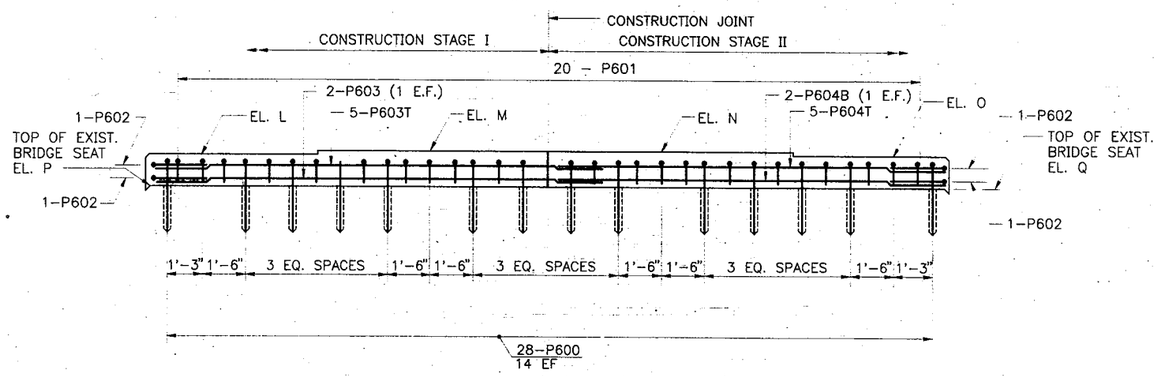
PLAN OF PIERS 1 AND 3

3/8" = 1'-0"



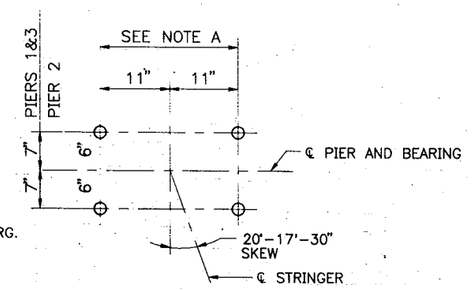
REINFORCEMENT PLAN – PIERS 1,2, & 3

3/8" = 1'-0"



ELEVATION – PIER CAP

3/8" = 1'-0"

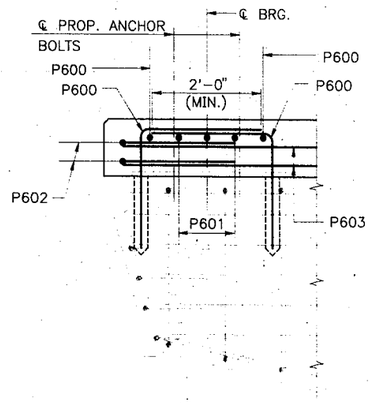


ANCHOR BOLT LAYOUT
PIERS 1, 2 & 3

1" = 1'-0"

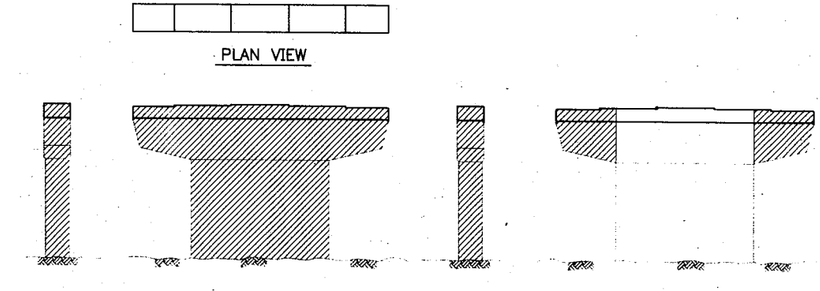
NOTE A

ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.



SECTION B–B

3/4" = 1'-0"

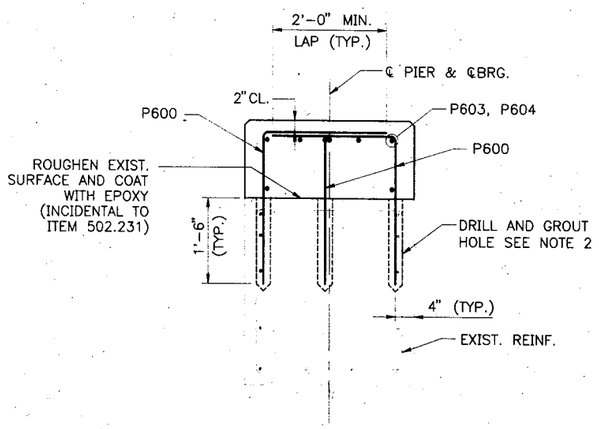


NOTE

ALL EXPOSED SURFACES ON PIER 2, EXCEPT TOP OF PIER CAP, WILL BE COATED WITH PROTECTIVE COATING.

LIMITS OF PROTECTIVE COATING FOR CONCRETE SURFACES
PIERS 1, 2, AND 3

NOT TO SCALE



SECTION A–A

3/4" = 1'-0"

PIER ELEVATIONS			
POINT	PIER 1	PIER 2	PIER 3
L	225.13	225.44	225.24
M	225.32	225.56	225.34
N	225.30	225.56	225.32
O	225.21	225.44	225.18
P	224.05	224.46	224.01
Q	224.03	224.45	223.99

NOTES

1. REINFORCING SHOWN IS TYPICAL FOR ALL PIERS, UNLESS OTHERWISE NOTED.
2. THE CONTRACROR SHALL EXPOSE THE TOP LAYER OF THE REINFORCING STEEL PRIOR TO ANY DRILLING. (INCIDENTAL TO ITEM 502.231)
3. REMOVAL OF THE EXISTING MASONRY PLATE, ANCHOR BOLTS AND BEARING ASSEMBLY, SHALL BE INCIDENTAL TO ITEM 202.12.

No.	Revision	By	Date

	By	Date
Designed	GPM	1/95
Drawn	RSJ	1/95
Checked	SHR	1/95
In Charge Of	RAL	

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
PIER MODIFICATIONS
PAD DETAILS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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(MAINE TPK)

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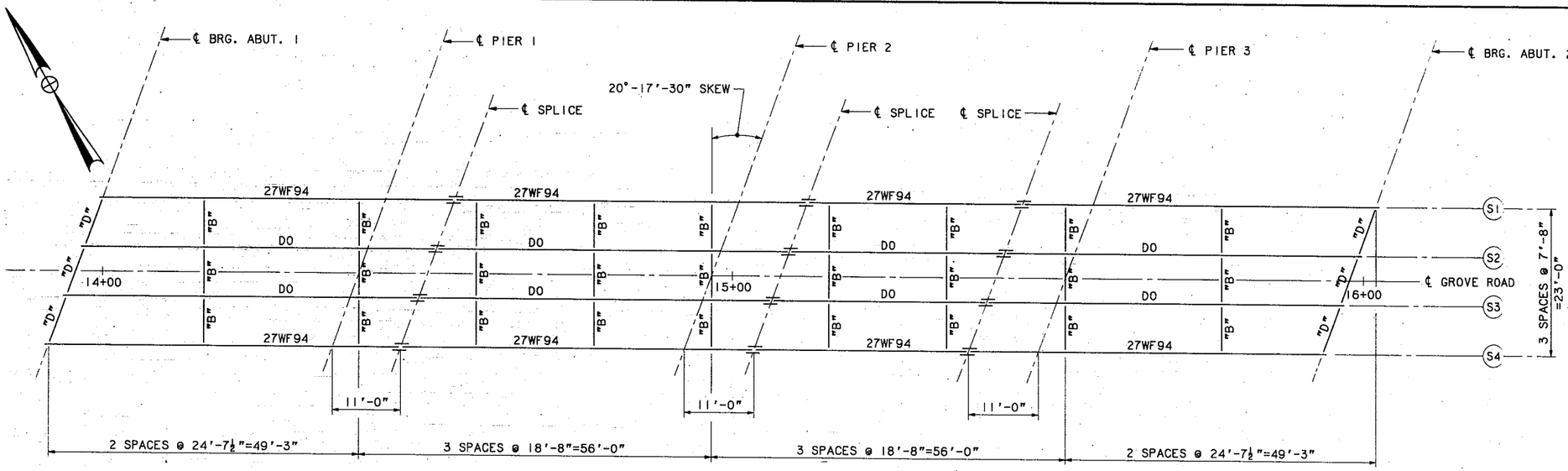
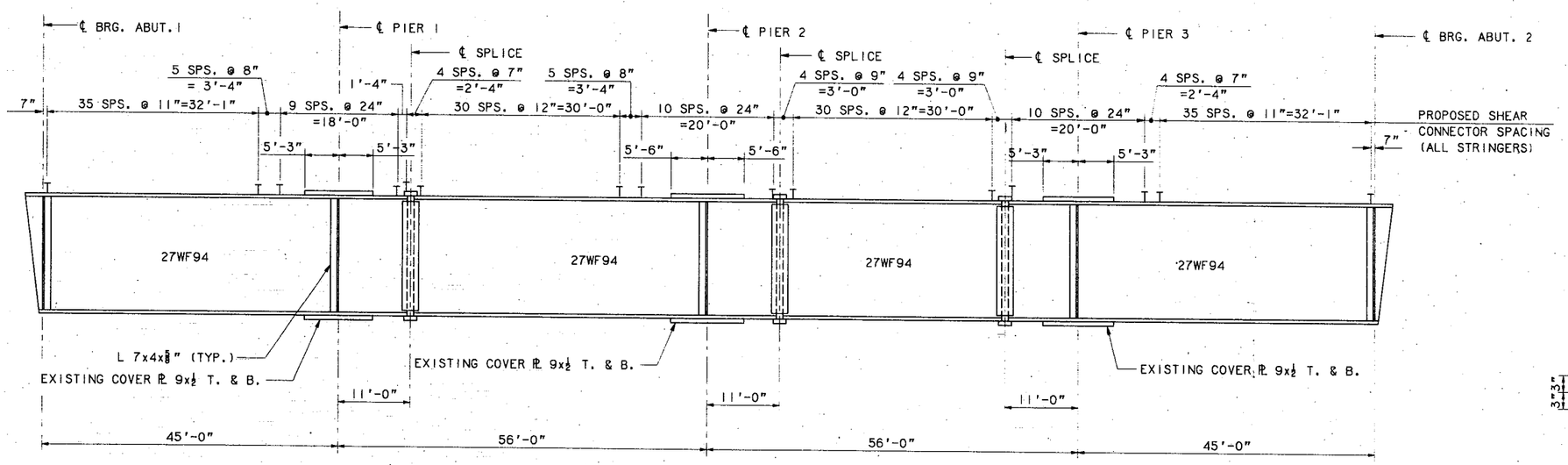


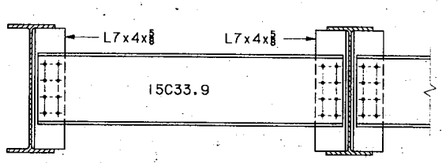
FRAMING PLAN (EXISTING)
1" = 10'-0"



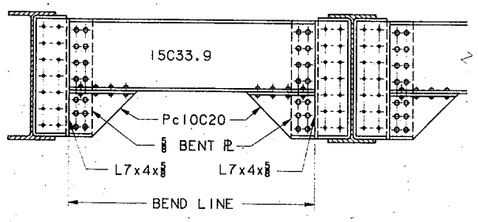
STRINGER ELEVATION (EXISTING)
NO SCALE

NOTES

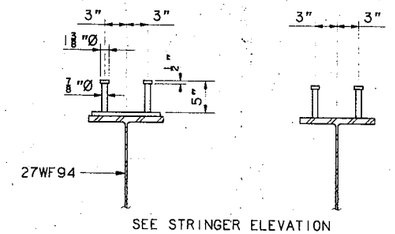
1. EXISTING DIAPHRAGMS ARE CONNECTED TO THE STRINGERS WITH THE USE OF BOLTS AND/OR RIVETS. ALL BOLTS AND RIVETS WHICH ARE REMOVED TO JACK THE SUPERSTRUCTURE SHALL BE REPLACED WITH NEW ¾"Ø A-325 BOLTS, H.S. NUTS AND WASHERS, WHICH SHALL BE INCIDENTAL TO ITEM 504.721.
2. PROPOSED SHEAR CONNECTORS ARE SHOWN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



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

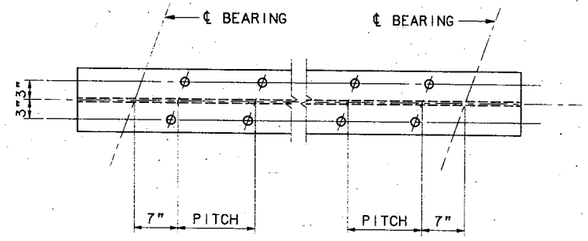


DIAPHRAGM TYPE D (EXISTING)
¾" = 1'-0"



SEE STRINGER ELEVATION FOR SHEAR CONNECTOR SPACING

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



SHEAR CONNECTOR LAYOUT
1" = 1'-0"

No.	Revision	By:	Date:

	By:	Date:
Designed	GPM	1/95
Drawn	LS	1/95
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Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
FRAMING PLAN AND STRINGER ELEVATION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

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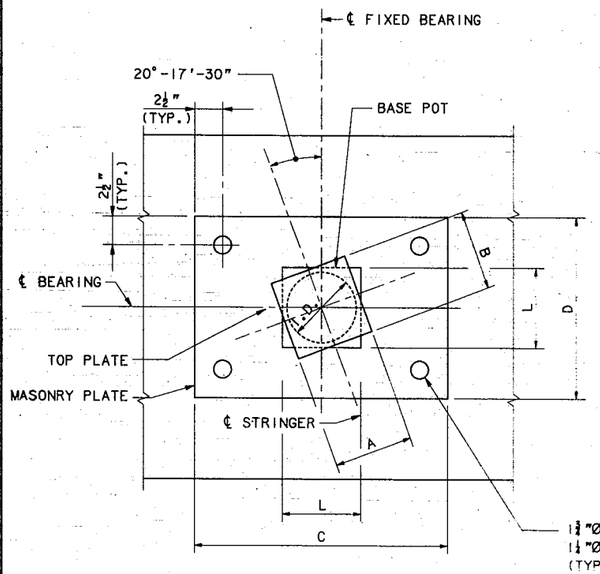
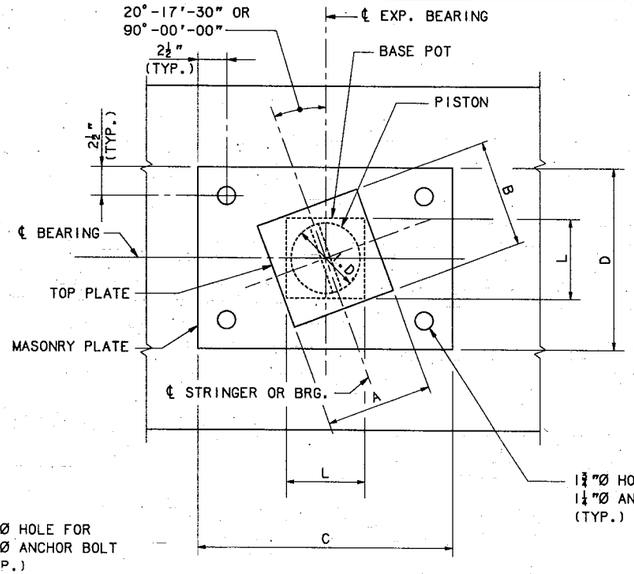
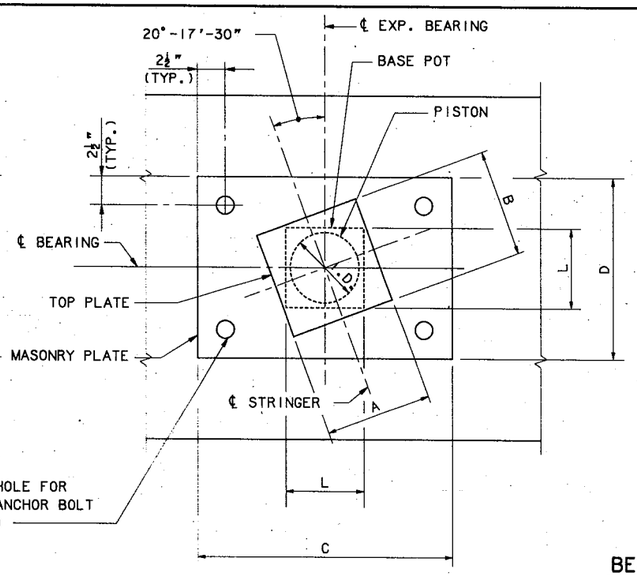


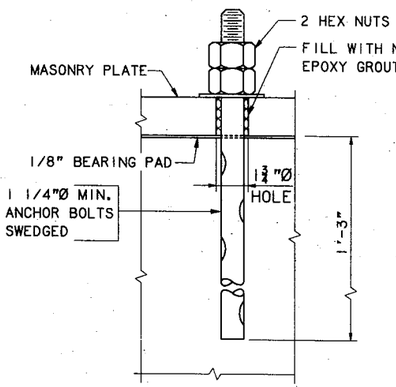
PLAN



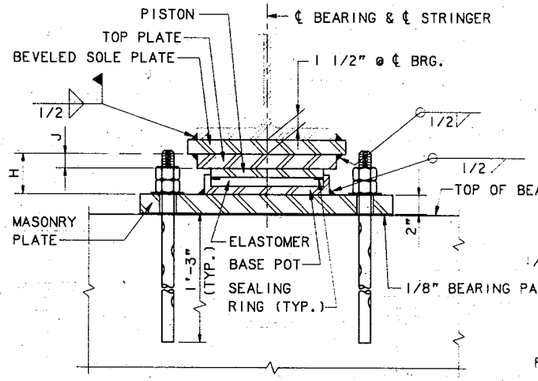
PLAN



PLAN

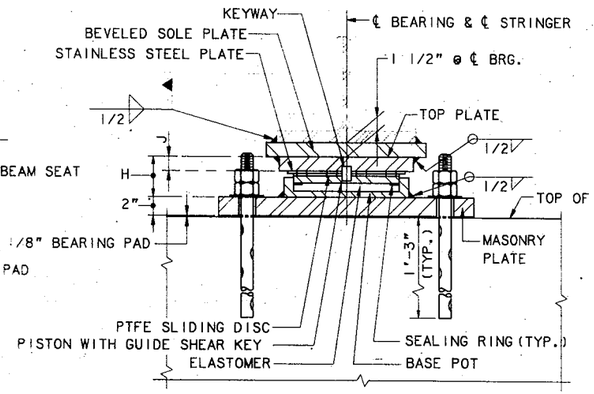


ANCHOR BOLT DETAIL
3" = 1'-0"



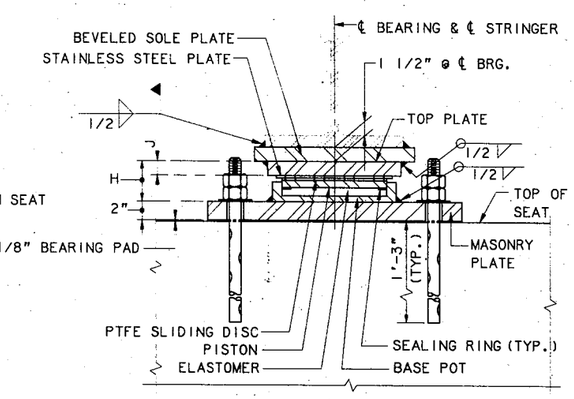
ELEVATION

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"

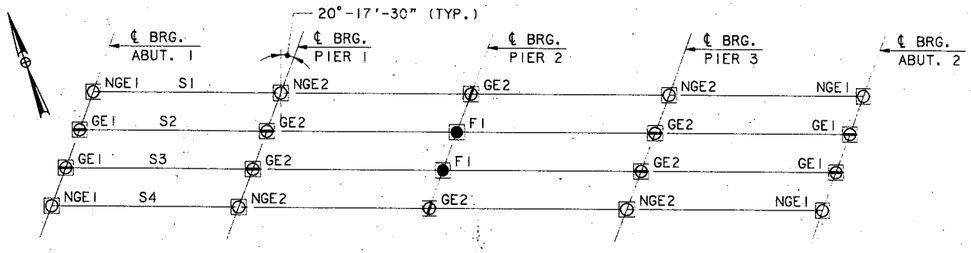
BEARING DEVICE NOTES

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 F436). WASHERS AND NUTS SHALL BE GALVANIZED.
9. PTFE INDICATES POLYTETRAFLUORETHYLENE.
10. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.

MAXIMUM LOADS ON EACH BEARING

LOCATION	STRINGER	D.L. (KIPS)	L.L (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS) LONG.	HORIZ. FORCE (KIPS) TRANS.	MOVEMENT (IN) LONG.	MOVEMENT (IN) TRANS.	BEARING TYPE
ABUTMENT 1	S1, S4	21	33	54.	-	-	5/8	-	NGE1
	S2, S3	21	37	58	-	5	5/8	-	GE1
PIER 1	S1, S4	70	53	123	-	-	3/8	-	NGE2
	S2, S3	70	58	128	-	10	3/8	-	GE2
PIER 2	S1, S4	70	54	124	4	-	-	-	GE2
	S2, S3	70	58	128	4	11	-	-	F1
PIER 3	S1, S4	70	53	123	-	-	3/8	-	NGE2
	S2, S3	70	58	128	-	10	3/8	-	GE2
ABUTMENT 2	S1, S4	21	33	54	-	-	5/8	-	NGE1
	S2, S3	21	37	58	-	5	5/8	-	GE1

BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS I.D.	A	B	H	J	L	SOLE PLATE	MASONRY PLATE 2" THICK C	D
GE1	100	6.03	9.75	10.00	2.65	0.75	6.75	14x14x1½	27	19
GE2	150	7.38	11.25	11.25	2.63	0.75	8.38	14x14x1½	27	17or19
F1	150	7.38	8.38	8.38	2.50	0.75	8.38	14x14x1½	27	17
NGE1	100	6.03	10.00	10.00	2.65	0.75	6.75	14x14x1½	27	19
NGE2	150	7.38	11.25	11.25	2.63	0.75	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

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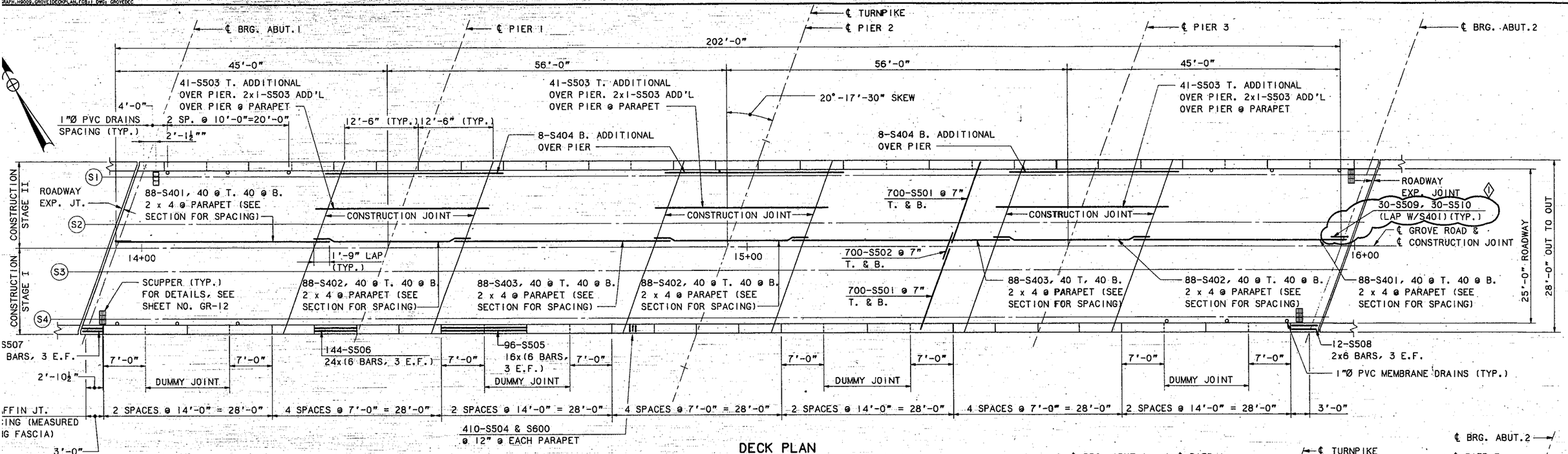
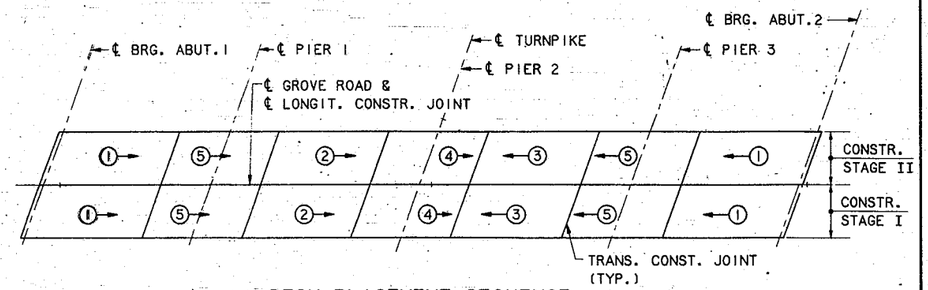
GRAPH.H9009_GROVE\DECKPLAN.FGB;1 DWG: GROVEDEC



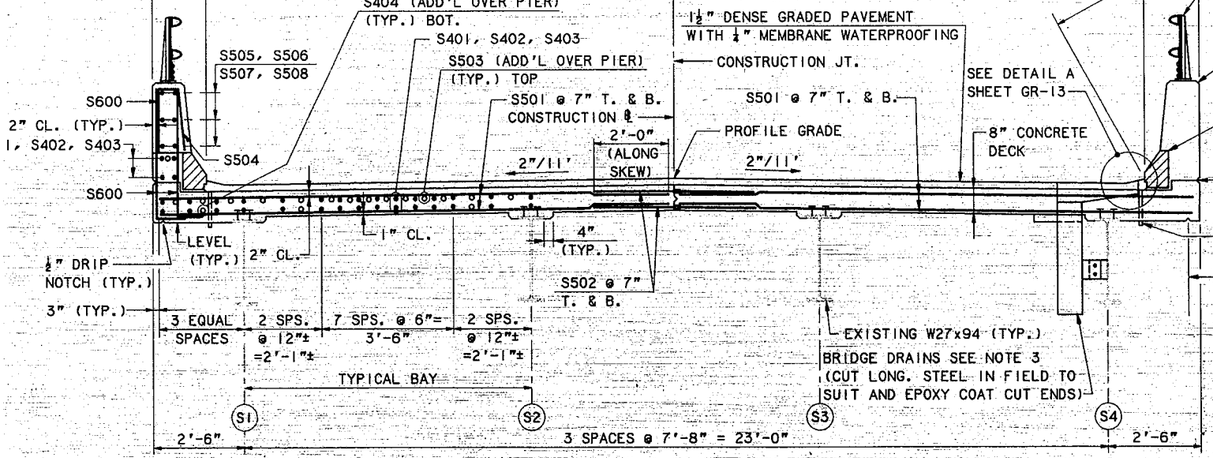
DECK PLAN

⅛" = 1'-0"



DECK PLACEMENT SEQUENCE

1" = 20'



TYPICAL SECTION

(LOOKING UPSTATION)

½" = 1'-0"

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE POURING SEQUENCE. POURS MAY BE MADE IN THE SAME DAY FOR 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 FOR STAGE I CONSTRUCTION, SHALL REMAIN IN PLACE UNTIL A MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB, AFTER WHICH, REMOVAL OF FORMWORK FOR SECTIONS MEETING THE REQUIREMENTS FOR 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 APPROVED 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:
◊	DECK REINF.	GPM	4/14/95

	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

DECK PLAN AND TYPICAL SECTION

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

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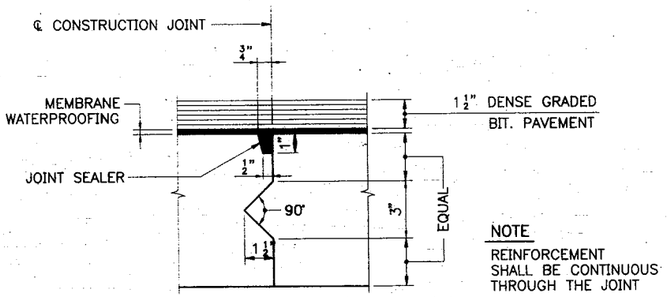
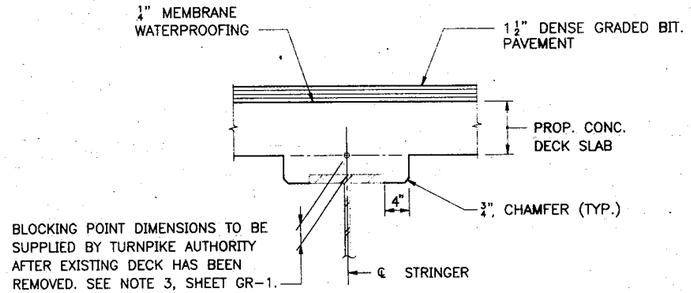


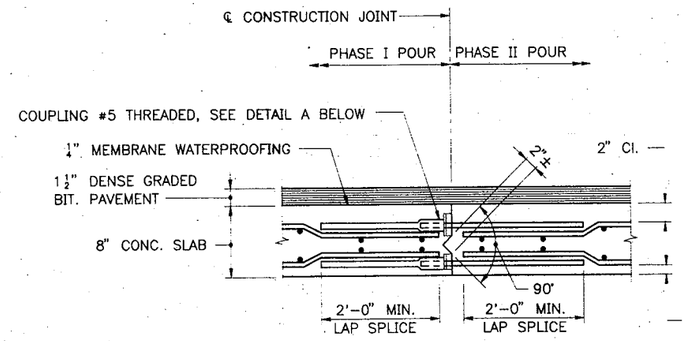
NOTE
REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT

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

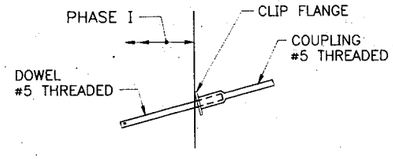


BLOCKING POINT DIMENSIONS TO BE SUPPLIED BY TURNPIKE AUTHORITY AFTER EXISTING DECK HAS BEEN REMOVED. SEE NOTE 3, SHEET GR-1.

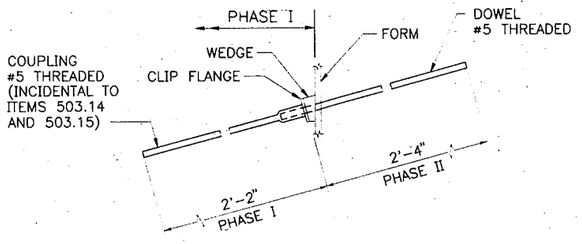
BLOCKING POINT DETAIL
1"=1'-0"



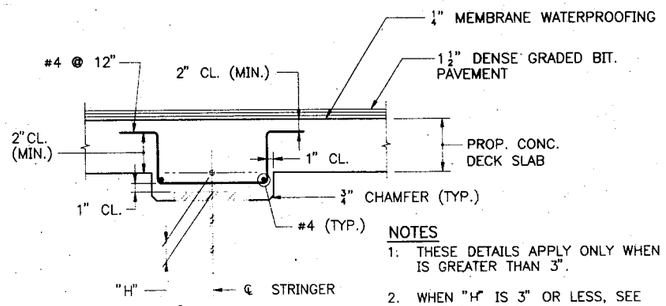
LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



OPTIONAL CONSTRUCTION

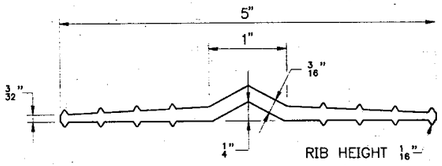


DETAIL A
NO SCALE

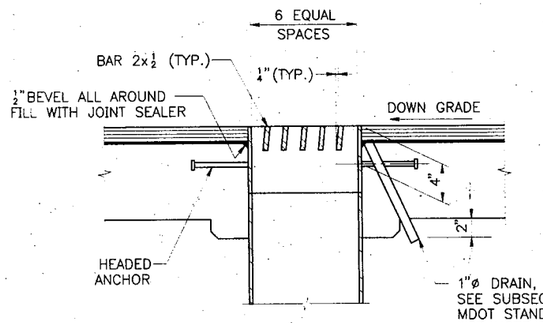


NOTES
1. THESE DETAILS APPLY ONLY WHEN "H" IS GREATER THAN 3".
2. WHEN "H" IS 3" OR LESS, SEE BLOCKING POINT DETAIL.

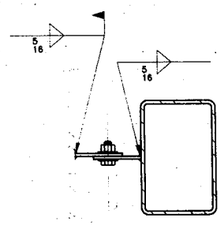
EXTRA DEPTH HAUNCH DETAILS
1"=1'-0"



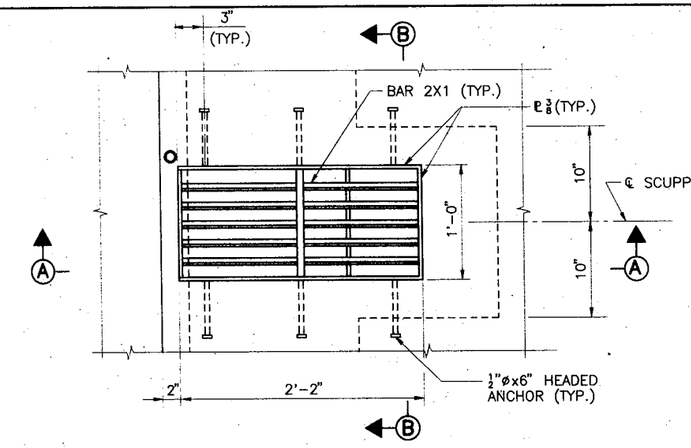
5" WATERSTOP
FULL SIZE



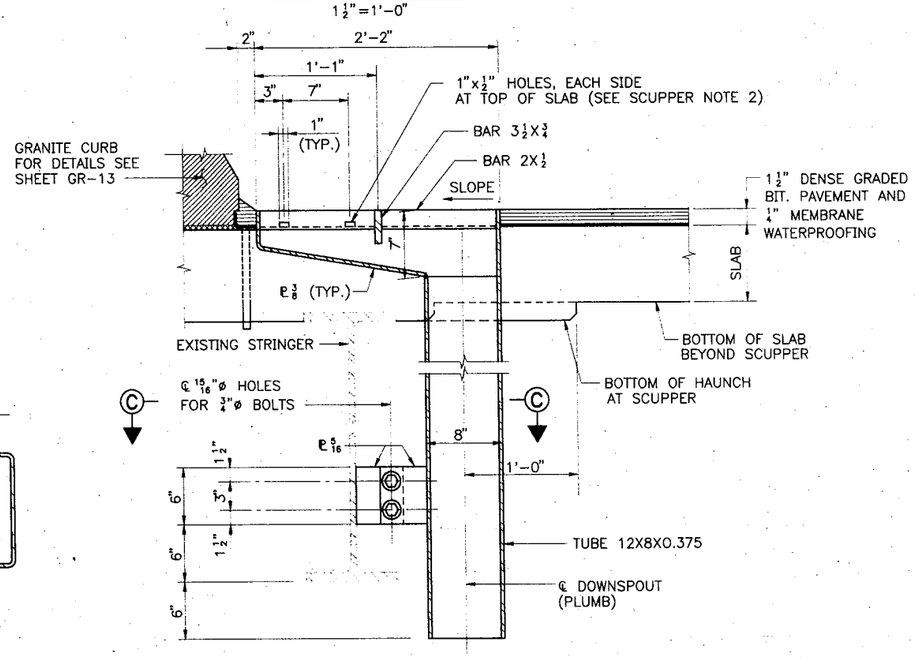
SECTION B-B
1½"=1'-0"



SECTION C-C
1½"=1'-0"



PLAN - SCUPPER
1½"=1'-0"



SECTION A-A
1½"=1'-0"

SCUPPER NOTES

1. ALL WELDS TO BE CONTINUOUS ¼" FILLET WELDS EXCEPT AS NOTED.
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS ½" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (¼" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFORM TO ASTM A709, GRADE 36.
5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
6. PAYMENT FOR SCUPPERS PVC DRAINS AND SCREENS INCIDENTAL TO CONTRACT ITEM 502.262.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET GR-11.

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
SLAB DETAILS I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

No	Revision	By	Date
		Designed	SHR 12/94
		Drawn	LMR 12/94
		Checked	GPM 1/95
		In Charge Of	RAL

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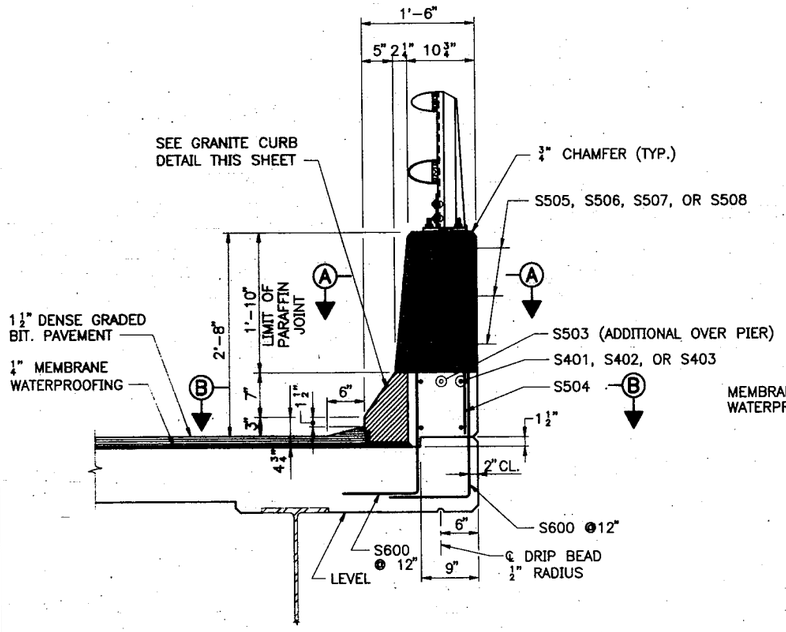
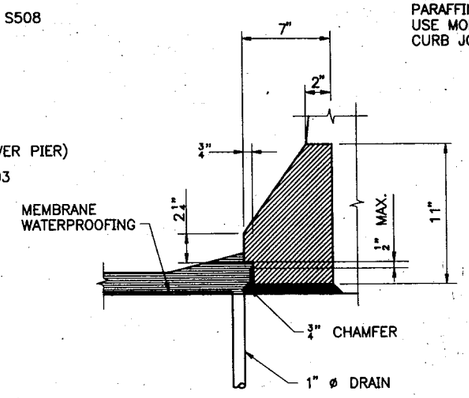
(MAINE TPK)



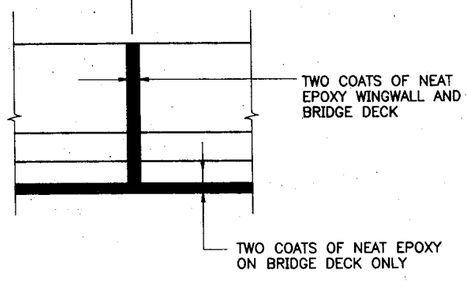
PARAPET DETAIL
1"=1'-0"

NOTE
FOR GRANITE CURB DETAILS, SEE SHEET GR-7

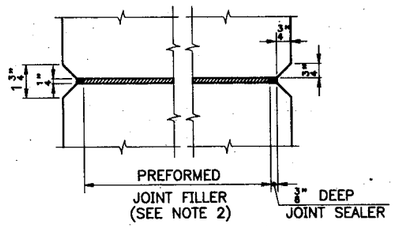


GRANITE CURB DETAIL
2"=1'-0"

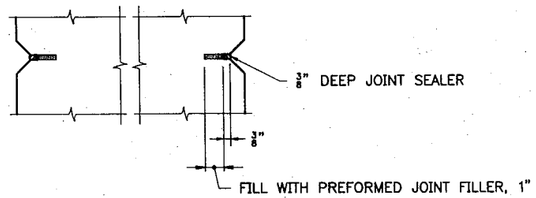
℄ CURB JOINT (PARAPET PARAFFIN OR DUMMY JOINT)
POINT CURB JOINTS LOCATED AT PARAPET PARAFFIN JOINTS WITH JOINT SEALANT.
USE MORTER AT ALL OTHER CURB JOINTS



BRIDGE CURB ELEVATION
2"=1'-0"



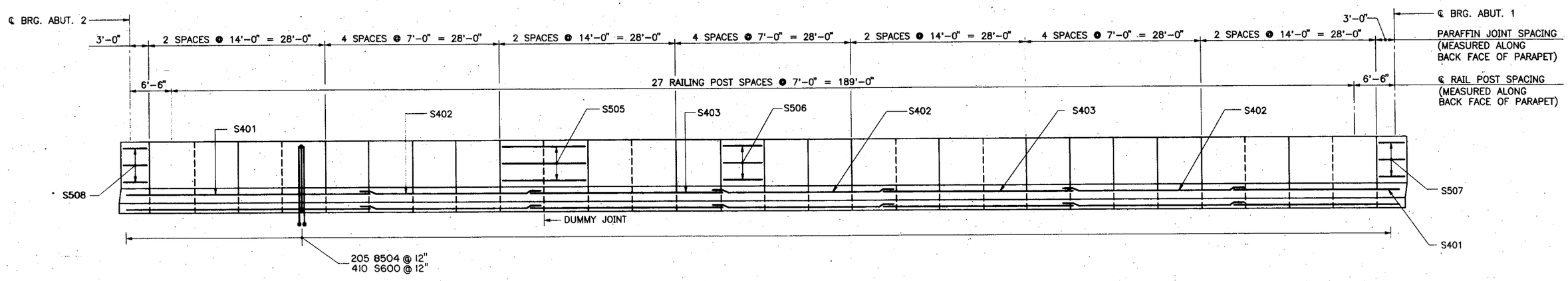
SECTION A-A
3"=1'-0"



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 502.262, STRUCTURAL CONCRETE ROADWAY AND PARAPET ON STEEL BRIDGES.



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

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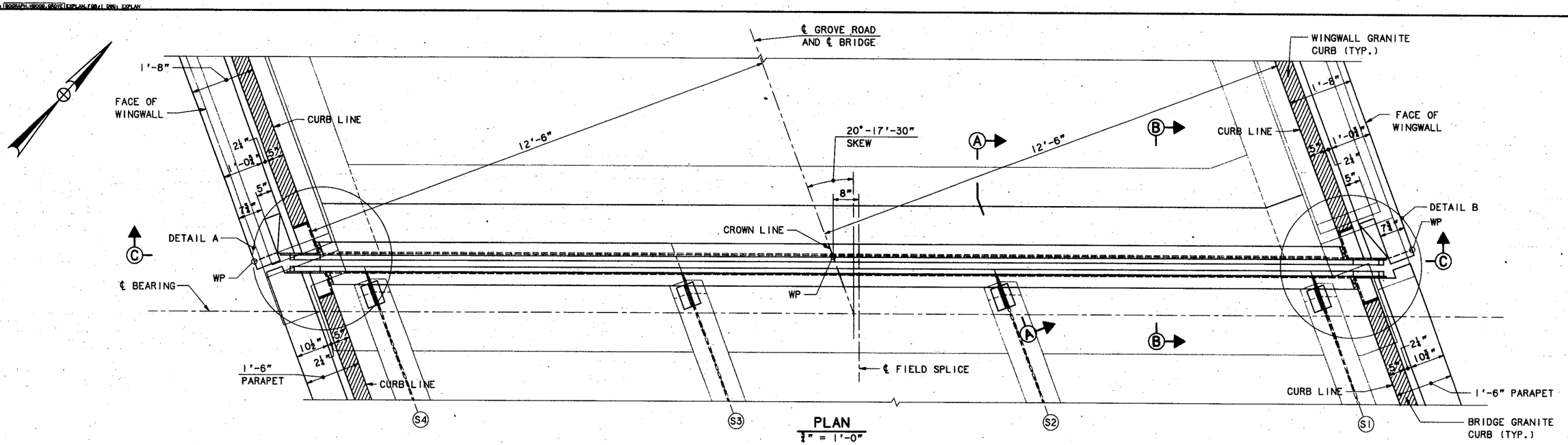
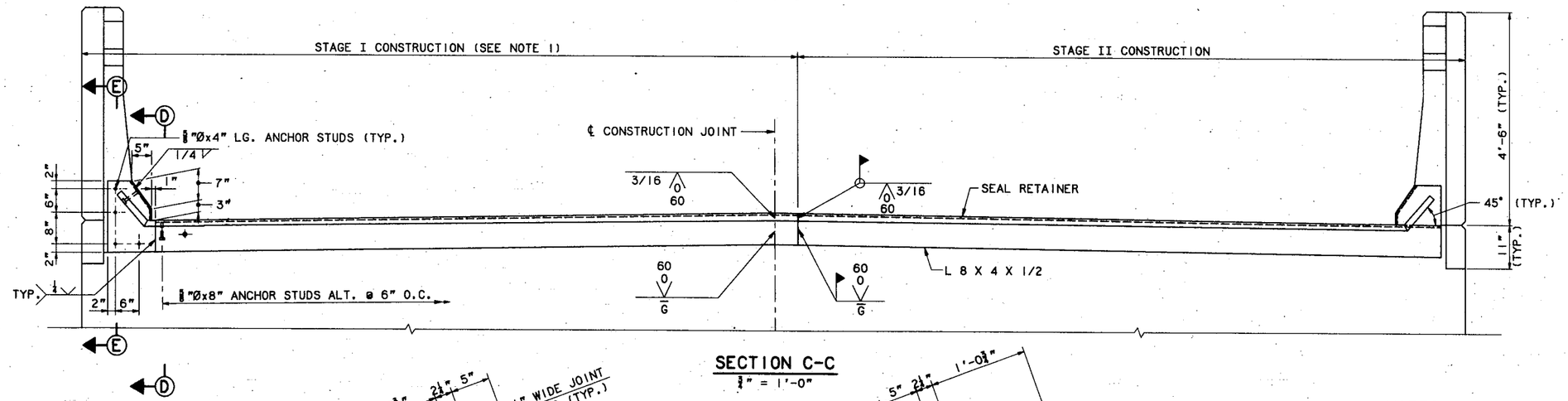
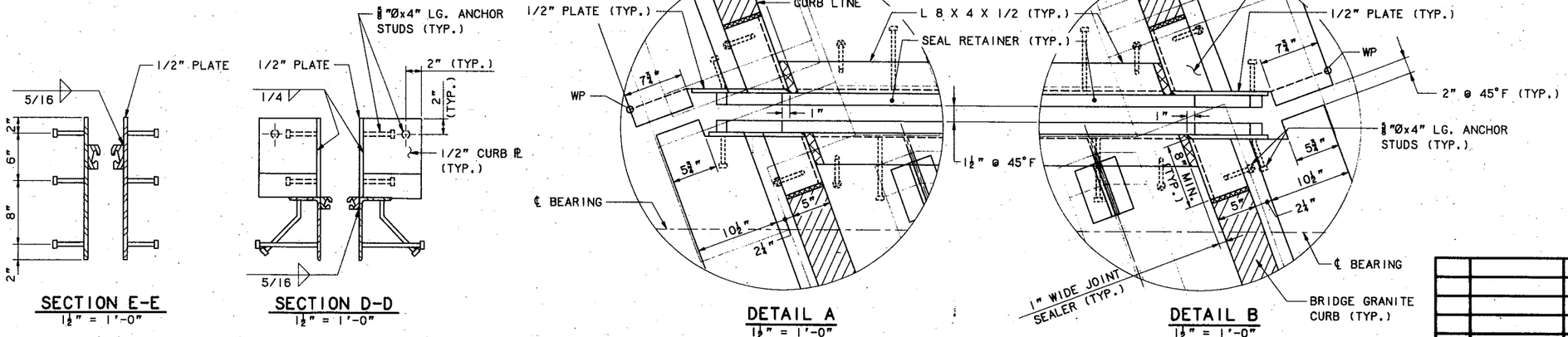
(MAINETPK)



PLAN
¾" = 1'-0"



SECTION C-C
¾" = 1'-0"



NOTES

1. CONSTRUCTION STAGES SHOWN RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE DECK SHALL BE CONSTRUCTED ACCORDING TO THE STAGE CONSTRUCTION AS SHOWN ON SHEET GR-3.
2. FOR SECTIONS A-A & B-B, SEE SHT. NO. GR-15
3. EXPANSION JOINT AT ABUTMENT NO. 1 SHOWN, EXPANSION JOINT AT ABUTMENT NO. 2 SIMILAR.

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

EXPANSION JOINT DETAILS I

HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Contract 95.11

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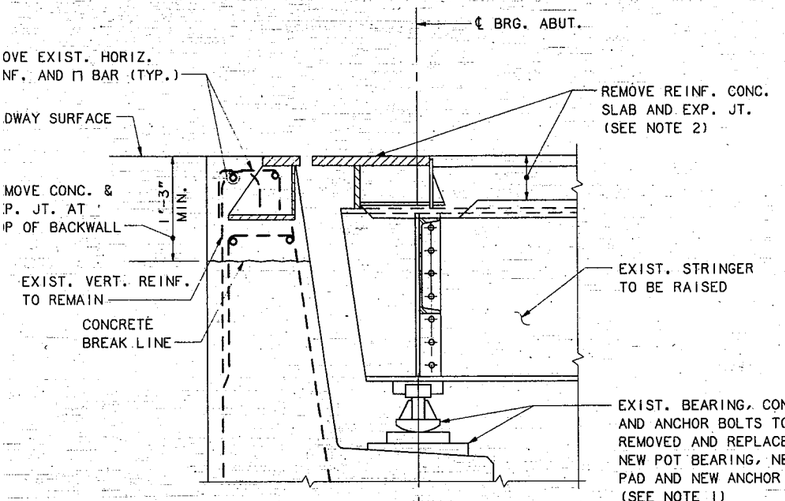
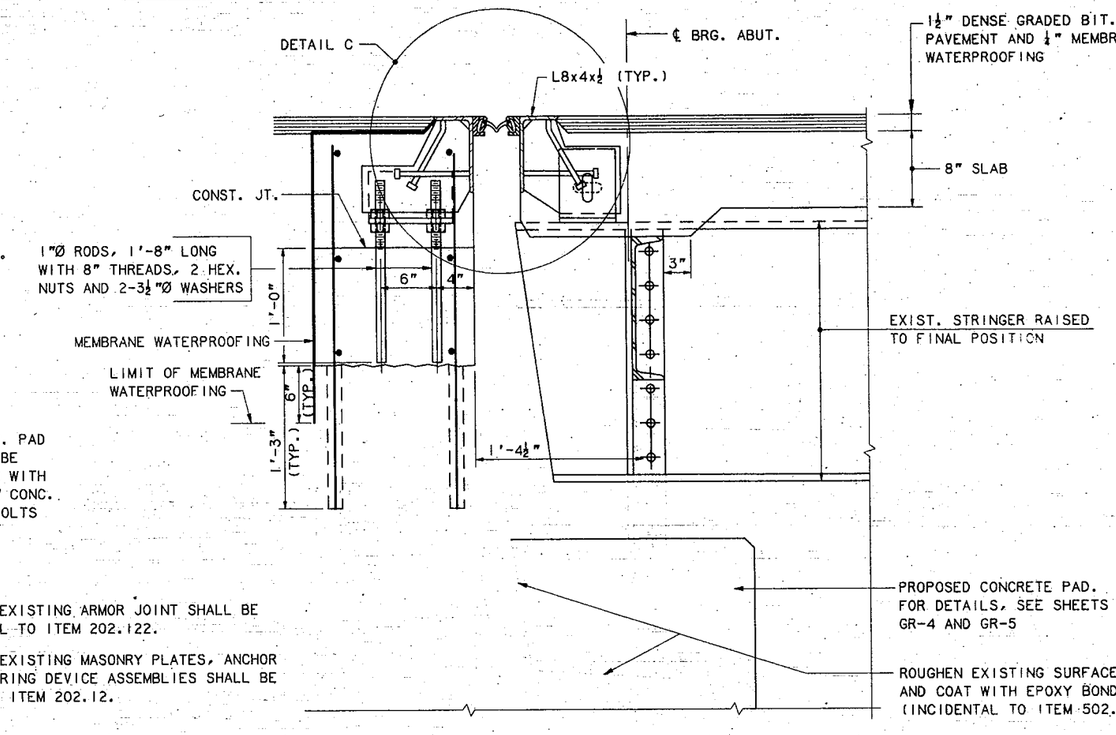


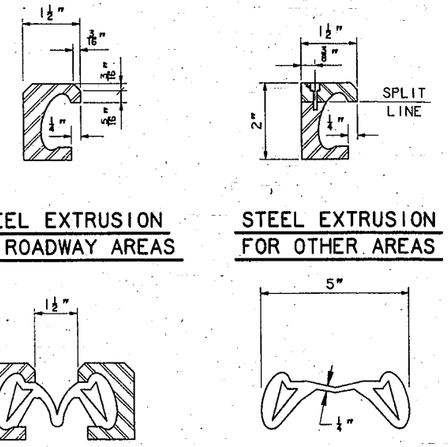
EXISTING SECTION A-A
1" = 1'-0"

NOTES:

1. REMOVING THE EXISTING ARMOR JOINT SHALL BE THE INCIDENTAL TO ITEM 202.122.
2. REMOVING THE EXISTING MASONRY PLATES, ANCHOR BOLTS AND BEARING DEVICE ASSEMBLIES SHALL BE INCIDENTAL TO ITEM 202.12.



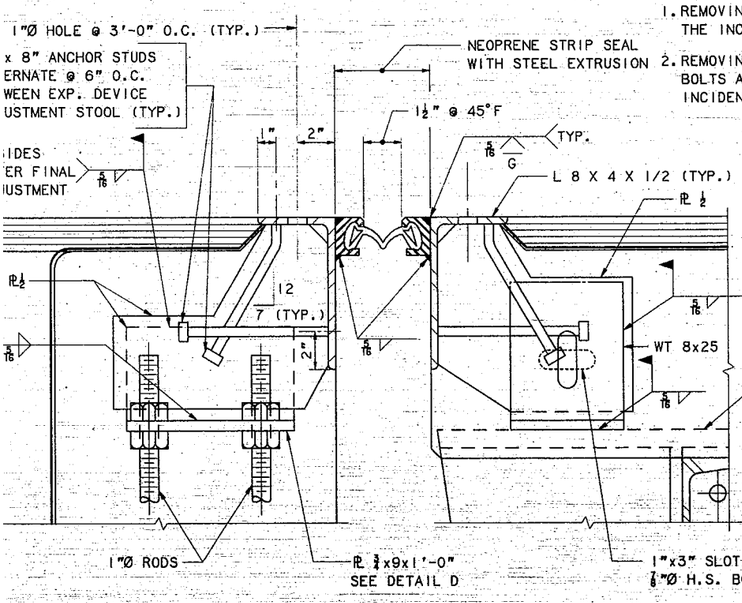
PROPOSED SECTION A-A
1½" = 1'-0"



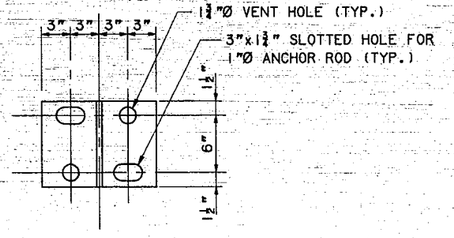
STEEL EXTRUSION FOR ROADWAY AREAS

STEEL EXTRUSION FOR OTHER AREAS

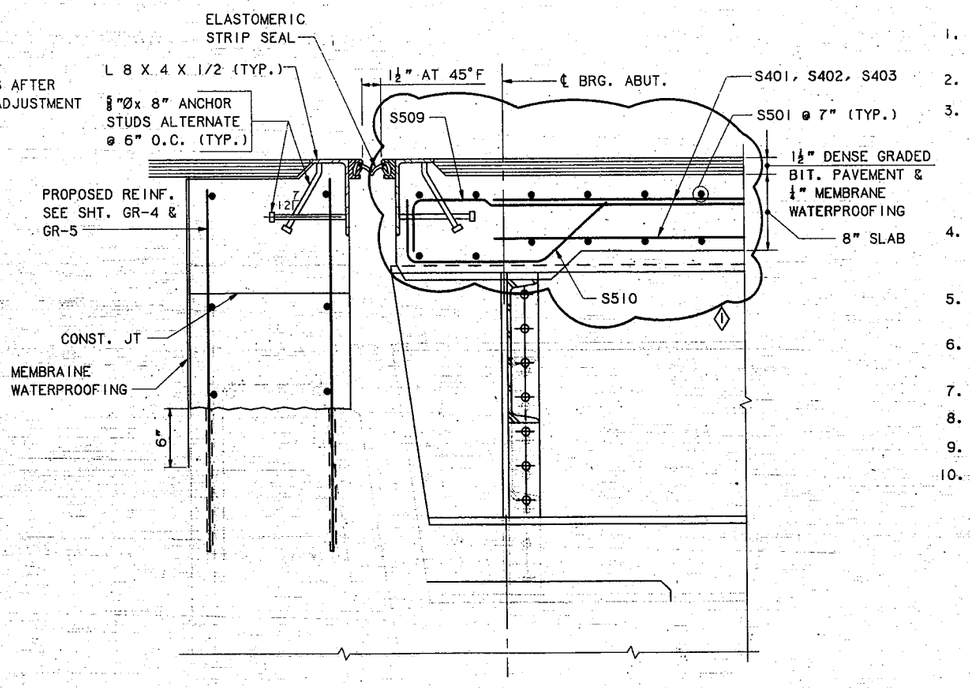
STRIP SEAL DETAILS
HALF SIZE



DETAIL C
3" = 1'-0"



DETAIL D
1½" = 1'-0"



PROPOSED SECTION B-B
1½" = 1'-0"

EXPANSION DEVICE NOTES

1. SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR APPROVAL OF THE ENGINEER.
2. EXPANSION DEVICES SHALL BE INSTALLED NORMAL TO GRADE.
3. THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF TWO (2) INCHES IN THE FABRICATION SHOP AND SHALL BE SECURE 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. SETTING SCHEDULE FOR THE OPENING SHALL BE SUPPLIED BY THE MANUFACTURER OF THE SEAL.
4. THE SLAB AND BACKWALL CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY.
5. THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING THE DEVICE IN TWO SECTIONS.
6. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.
7. ALL EXPOSED SURFACES OF ANGLES TO BE FIELD PAINTED.
8. ALL STEEL COMPONENTS SHALL BE ASTM A709 GRADE 36 UNLESS OTHERWISE NOTED.
9. ALL WELDS ARE ⅜" CONTINUOUS FILLETS, EXCEPT AS NOTED.
10. ALL STEEL SURFACES THAT WILL BE IMBEDDED IN CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND.

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

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS
EXPANSION JOINT DETAILS II

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

Contract 95.11

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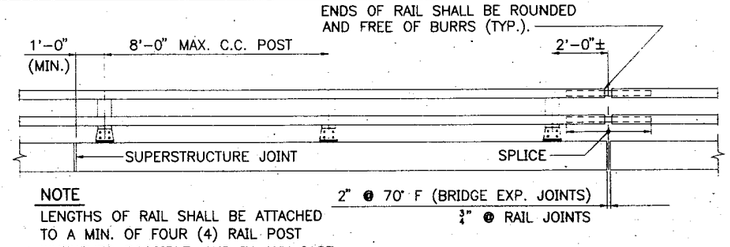
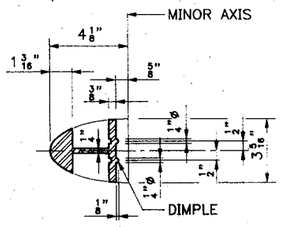
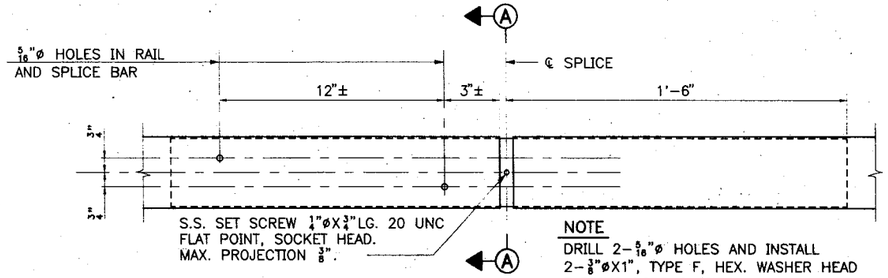


NOTE
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING – ELEVATION
3/8"=1'-0"

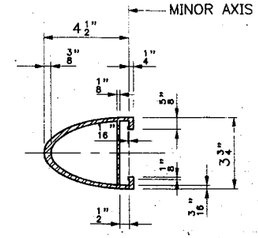


SECTION A–A (RAIL)
3"=1'-0"

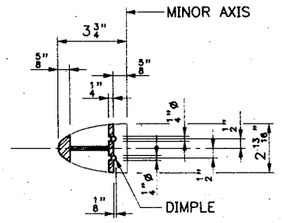


NOTE
DRILL 2–5/16"ø HOLES AND INSTALL 2–3/8"øX1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).

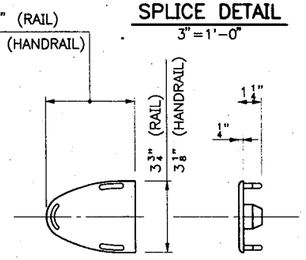
SPLICE DETAIL
3"=1'-0"



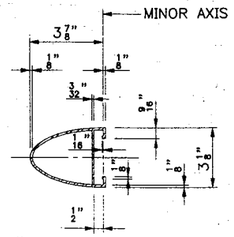
RAIL MEMBER
3"=1'-0"



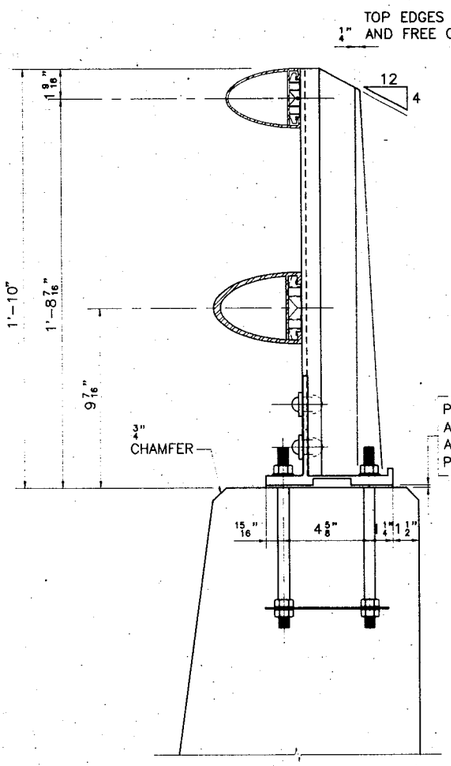
SECTION A–A (HANDRAIL)
3"=1'-0"



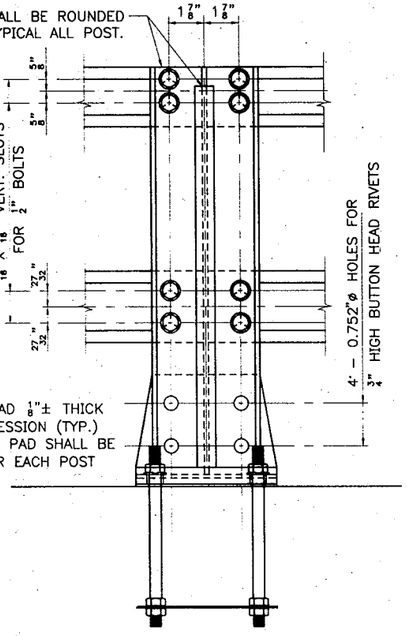
CAST ALUMINUM DRIVE FIT RAIL CAP
3"=1'-0"



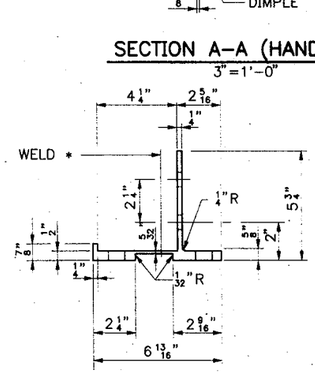
HANDRAIL MEMBER
3"=1'-0"



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

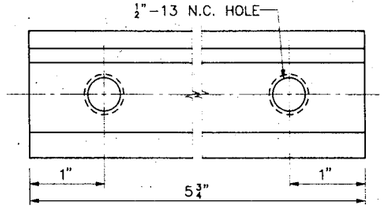


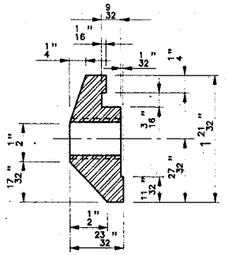
OUTSIDE ELEVATION OF POST
3"=1'-0"



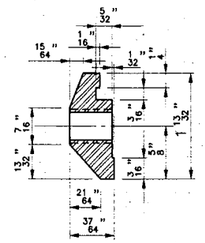
POST BASE SECTION
3"=1'-0"

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





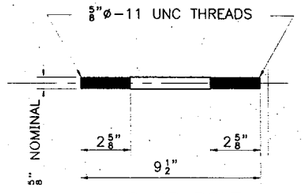
FOR RAIL MEMBER



FOR HANDRAIL

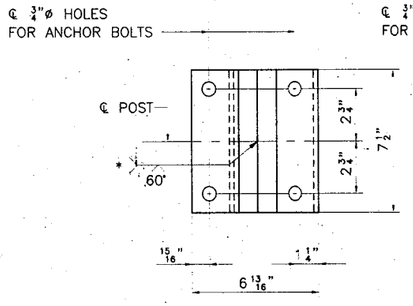
CLAMP BAR DETAILS
FULL SIZE

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

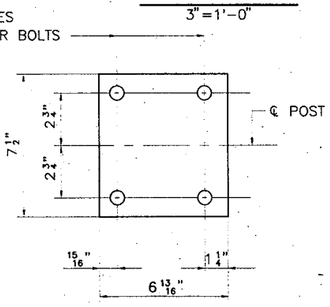


ANCHOR BOLT
3"=1'-0"

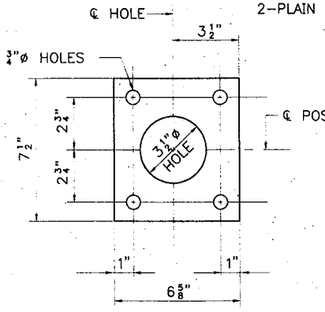
NOTE
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.



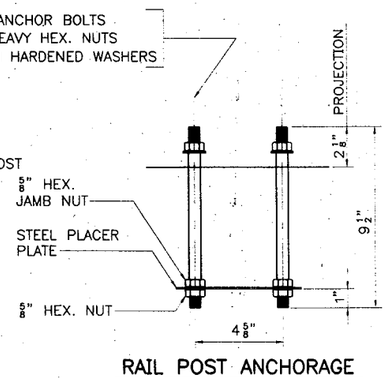
POST BASE (BOTTOM VIEW)
3"=1'-0"



PREFORMED PAD
3"=1'-0"



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



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

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

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

Maine Turnpike Authority
Maine Turnpike

GROVE ROAD UNDERPASS

ALUMINUM BRIDGE RAIL DETAILS

HNTB
HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS

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