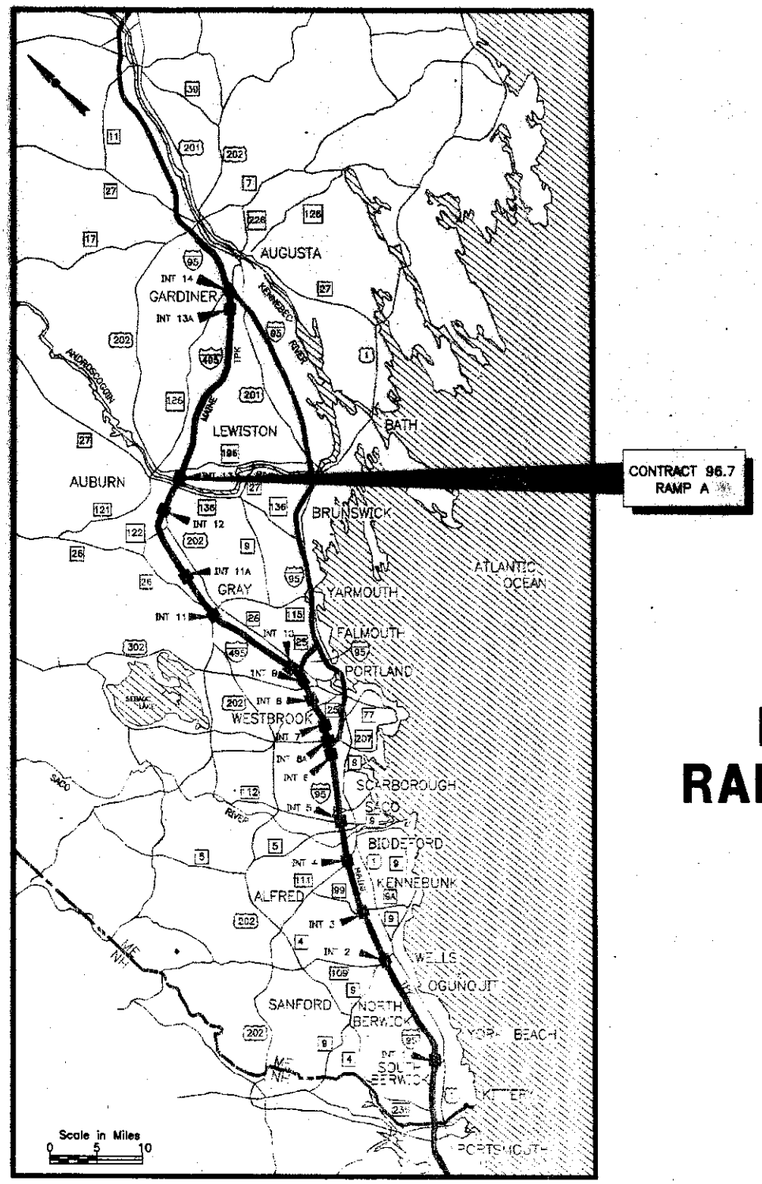


LOCATION MAP

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

JULIAN R. COLES, CHAIRMAN
DANIEL J. CALLAHAN, VICE CHAIRMAN
DEBORAH H.S. CIANCHETTE, MEMBER
PATRICK F. BUTLER, MEMBER
JOHN G. MELROSE, MEMBER EX-OFFICIO

PAUL E. VIOLETTE, EXECUTIVE DIRECTOR

CONTRACT 96.7
BRIDGE DECK REPLACEMENTS
RAMP A OVER MAINE CENTRAL R.R.
AND
RAMP A OVER ROUTE 196
MM 77.70

INDEX OF SHEETS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER _____ DATE _____

BUREAU DIRECTOR AND CHIEF ENGINEER _____ DATE _____

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

STATE OF MAINE
ROLAND A LAVALLEE 6452
REGISTERED PROFESSIONAL ENGINEER

ROLAND A. LAVALLEE P.E.
PROJECT MANAGER

DATE 2/9/96

APPROVED:
MAINE TURNPIKE AUTHORITY

_____ CHAIRMAN

_____ EXECUTIVE DIRECTOR

DATE _____

H:\ H09009\ HP\ DWGS\ TITLESHT 2-8-96 8:24:53 am EST

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
			MAINE CENTRAL R.R.	ROUTE 196	
202.12	Removing Existing Structural Concrete	CY	25	6	31
202.1221	Removing Existing Superstructure Concrete - Maine	LS	1	0	1
	Central Railroad				
202.1222	Removing Existing Superstructure Concrete - Route 196	LS	0	1	1
202.202	Removing Pavement Surface	SY	0	0	980
203.20	Common Excavation	CY	25	30	55
304.10	Aggregate Subbase Course - Gravel	CY	29	24	53
405.08	Hot Bituminous Pavement, Grading C	TON	0	0	90
405.13	Dense Graded Bituminous Pavement for Bridges	TON	30	57	87
419.20	Sawing Bituminous Pavement	LF	0	0	310
502.21	Structural Concrete, Abutments and Retaining Walls	CY	20	23	43
502.2302	Structural Concrete Piers - Route 196	LS	0	1	1
502.281	Structural Concrete Roadway and Parapets on	LS	1	0	1
	Steel Bridges - Maine Central Railroad				
502.282	Structural Concrete Roadway and Parapets on	LS	0	1	1
	Steel Bridges - Route 196				
502.6511	Backwall Repair - Surface Patch - Section 11	SF	10	48	58
502.6513	Abutment B Bridge Seat Repair - Section 11	SF	2	74	76
502.6514	Pier Repairs	SF	126	416	542
502.64	Patchrec 10-80 - Bridge Deck Repair (50 Lbs Bag)	EA	50	50	100
502.95	Precast Concrete Downspout	LF	128	144	272
503.14	Epoxy-Coated Reinforcing Steel, Fabricated	LB	35500	67000	102500
	And Delivered				
503.15	Epoxy-Coated Reinforcing Steel, Placing	LB	35500	67000	102500
504.722	Jacking Existing Superstructure - Route 196	LS	0	1	1
504.75	Bearing Shim Plate Modification	EA	2	0	2
505.091	Stud Welded Shear Connectors - Maine Central Railroad	LS	1	0	1
505.092	Stud Welded Shear Connectors - Route 196	LS	0	1	1
507.09221	Aluminum Bridge Railing, 2 Bar - Maine Central	LS	1	0	1
	Railroad				
507.09222	Aluminum Bridge Railing, 2 Bar - Route 196	LS	0	1	1
508.131	Membrane Waterproofing - Maine Central Railroad	LS	1	0	1
508.132	Membrane Waterproofing - Route 196	LS	0	1	1
514.06	Curing Box for Concrete Cylinders	EA	1	1	2
515.20	Protective Coating for Concrete Surfaces	SY	185	340	525
515.201	Pigmented Concrete Protective Coating	SY	65	122	187
520.21	Expansion Device - Gland Seal	EA	1	2	3
523.10	Pot Bearings	EA	0	20	20
524.361	Temporary Deck Support - Maine Central Railroad	LS	1	0	1
524.362	Temporary Deck Support - Route 196	LS	0	1	1
524.40	Protective Shield	SY	435	860	1295
526.305	Concrete Barrier - Supplied by Authority	LF	0	0	280
526.40	Resetting Temporary Concrete Barrier Type 1	LF	0	0	280
527.101	Temporary Impact Attenuator System	UNIT	0	0	3
606.172	Temporary Steel Guardrail	LF	100	200	300
606.1735	Guardrail Attachment - Type A	EA	4	4	8
606.3605	Guardrail Remove and Reset, Single Rail	LF	100	100	200
606.363	Guardrail Remove and Dispose	LF	100	100	200
606.46	Single Galvanized Steel Post	EA	0	0	10
609.15	Sloped Curb Type 1	LF	255	460	715
627.62	6 Inch White Pavement Marking Line	LF	0	0	1850
627.64	6 Inch Yellow Pavement Marking Line	LF	0	0	425
627.67	Removing Pavement Markings	SF	0	0	1350
627.73	6 Inch White Temporary Pavement Markings - Tape	LF	0	0	3450
627.86	Temporary Raised Pavement Markers	EA	0	0	320
629.05	Hand Labor, Straight Time	MH	0	0	200
631.171	Truck-small (including operator)	HR	0	0	80
631.36	Foreman	HR	0	0	200
639.19	Field Office Type B	EA	0	0	1
643.72	Temporary Traffic Signal System	LS	0	0	1
652.30	Flashing Arrow Board	EA	0	0	2
652.312	Type III Barricades	EA	0	0	7
652.33	Drum	EA	0	0	170
652.34	Cone	EA	0	0	50
652.35	Construction Signs	SF	0	0	550
652.361	Maintenance of Traffic Control Devices	LS	0	0	1
652.37	Warning Lights	GROUP	0	0	6
652.38	Flaggers	MH	0	0	200
659.10	Mobilization	LS	0	0	1

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
			MAINE CENTRAL R.R.	ROUTE 196	

NOTES:

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND ACTUAL FIELD CONDITIONS ENCOUNTERED.

   OVERHEAD UTILITY LINES WITH LESS THAN 20' CLEARANCE MAY EXIST. THESE OVERHEAD LINES WILL NOT BE RELOCATED OR RAISED TO FACILITATE THE CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING THE WORK SITE AND PLANNING HIS OPERATIONS BASED ON THE LOCATION OF THE OVERHEAD LINES.

   CENTRAL MAINE POWER (CMP) WILL COVER THE ELECTRICAL LINES IF REQUIRED. CMP REQUIRES 96 HOURS OF ADVANCE NOTIFICATION PRIOR TO THE INSTALLATION OF COVERS.

   NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS ALSO REQUIRED TO CALL DIG SAFE AT 1-800-322-4844 PRIOR TO THE START OF THE WORK.

   THE INSTALLATION OF THE TEMPORARY TRAFFIC SIGNALS SHALL BE COORDINATED WITH THE RESPECTIVE UTILITIES. THE ENGINEER WILL NOT APPROVE THE INSTALLATION OF THE SYSTEM UNTIL AFTER RECEIPT OF WRITTEN DOCUMENTATION FROM THE UTILITY APPROVING OF THE INSTALLATION.

2. REQUIRED EROSION AND SEDIMENTATION CONTROL SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSE ONLY. ACTUAL TYPE AND LOCATION OF DEVICES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

3. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WILL BE CONSIDERED INCIDENTAL TO SECTION 606.

4. EXCAVATION ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 1926.650-652 (CONSTRUCTION STANDARDS FOR EXCAVATIONS).

5. WASTE MATERIALS SHALL BE DISPOSED OFF THE PROJECT SITE, IN ACCORDANCE WITH CHAPTER 404, DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE MANAGEMENT RULES.

6. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS CONTAINED IN THE STATE OF MAINE'S NATURAL RESOURCES PROTECTION ACT PERMIT BY RULE - SECTION 11 STANDARDS AND WITH SECTION 404 AS PROMULGATED BY THE U.S. ARMY CORPS OF ENGINEERS.

No.	Revision	By:	Date:
		By:	Date:
		Designed	KJC 2/96
		Drawn	WLG 2/96
		Checked	RWB 2/96
		In charge of: RAL	

Maine Turnpike Authority
Maine Turnpike

Trans pass

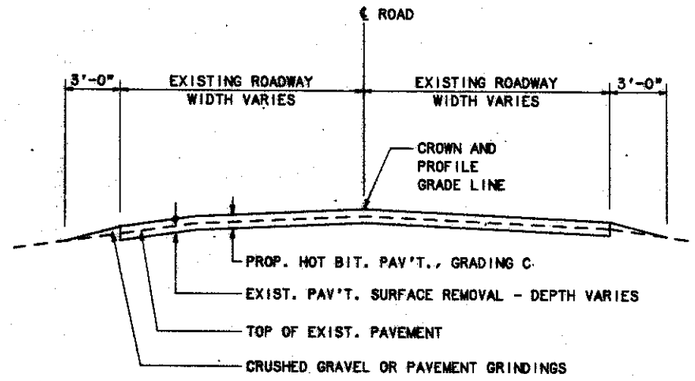
RAMP A OVER MCRR AND ROUTE 196
ESTIMATED QUANTITIES GENERAL NOTES

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. 2 of 44

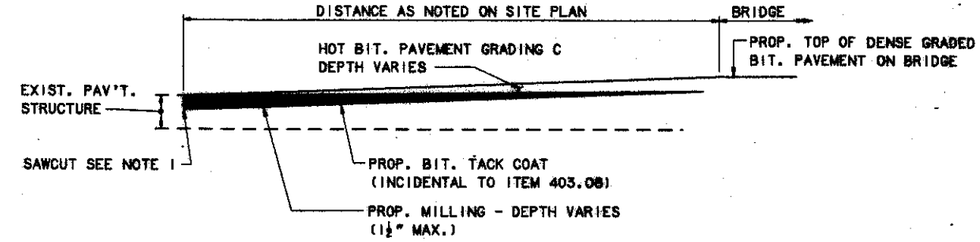
METPK04



BRIDGE APPROACH SECTION
NOT TO SCALE

NOTES:

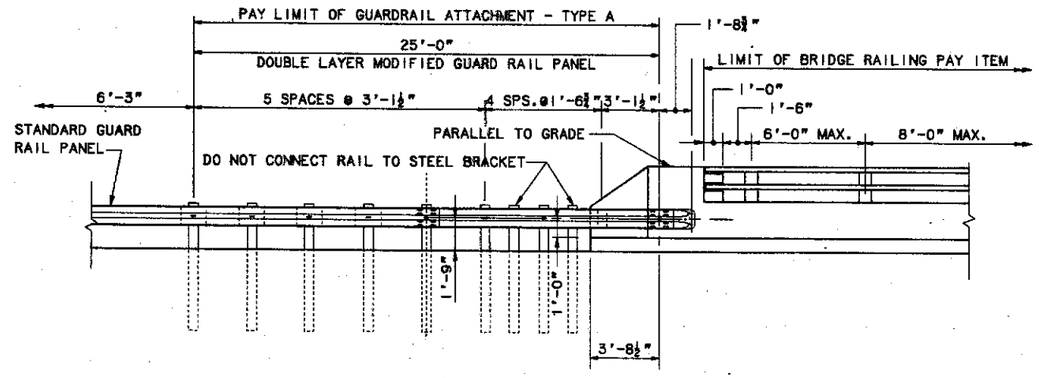
1. CRUSHED GRAVEL OR PAVEMENT GRINDINGS TO BE USED AS SLOPE CORRECTION SHALL BE PAID FOR AS AGGREGATE BASE COURSE-CRUSHED (TYPE A).
2. 3" HOT BITUMINOUS PAVEMENT, GRADING C SHALL BE USED UNDER GUARDRAIL ATTACHMENTS. LIMITS ARE AS SHOWN ON SITE PLAN.



PAVEMENT TRANSITION DETAIL
NOT TO SCALE

NOTE:

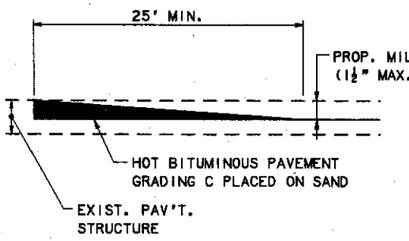
1. SATURATE VERTICAL FACE OF PAVEMENT WITH HOT RUBBERIZED ASPHALT CONFORMING TO FEDERAL SPECIFICATIONS SS-S-1401C. RUBBERIZED ASPHALT SHALL BE INCIDENTAL TO THE PAVEMENT ITEMS.



HIGHWAY GUARD ATTACHMENT TO BRIDGE END POST
¼"=1'-0"

NOTES:

1. FOR ADDITIONAL GUARDRAIL ATTACHMENT INFORMATION REFER TO STANDARD DETAIL BD201-93
2. THE COST OF FURNISHING AND INSTALLING THE W-BEAM TERMINAL CONNECTORS SHALL BE INCLUDED WITH THE UNIT BID PRICE OF ITEM 606.1735 GUARDRAIL ATTACHMENT TYPE A.



TEMPORARY BITUMINOUS RAMP
NOT TO SCALE

NOTES:

1. HOT BITUMINOUS PAVEMENT GRADING "C" WILL BE MEASURED FOR PAYMENT UNDER ITEM 403.08.
2. REMOVAL OF TEMP. BITUMINOUS RAMP WILL NOT BE MEASURED FOR PAYMENT AND WILL BE INCIDENTAL TO ITEM 403.08.

No.	Revision	By:	Date:

	By:	Date:
Designed	KJC	2/96
Drawn	CTW	2/96
Checked	RWB	2/96
In charge of: RAL		

Maine Turnpike Authority
Maine Turnpike

Trans pass

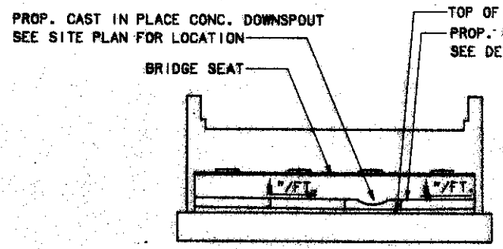
RAMP A OVER
MCRR AND ROUTE 196
TYPICAL SECTION
MISCELLANEOUS DETAILS

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

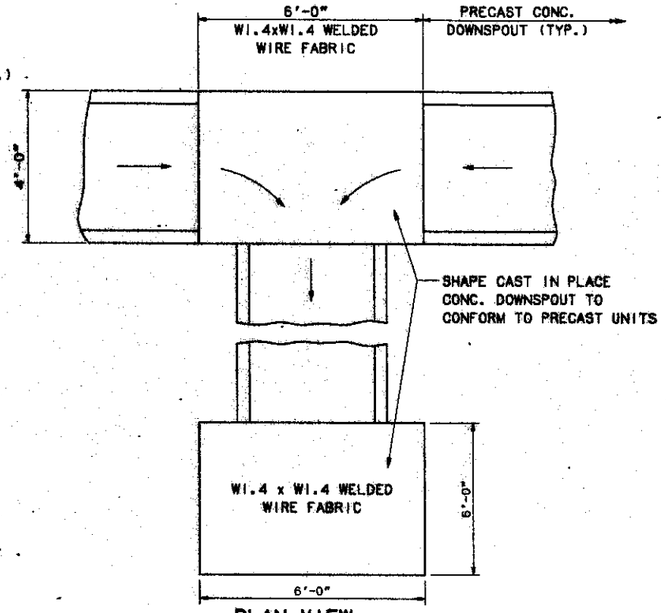
Contract 96.7

Sheet No. 3 of 44

METPK04

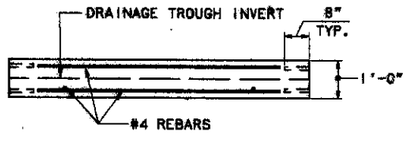


DOWNSPOUT AT BRIDGE ABUTMENT
NTS

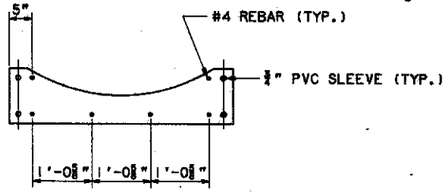


PLAN VIEW

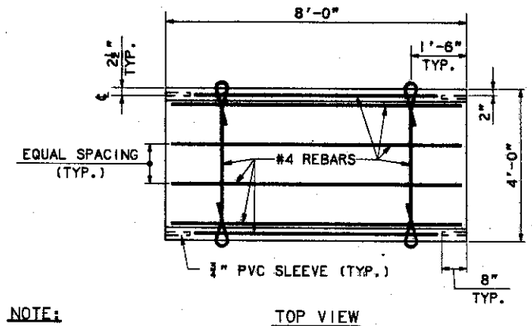
CAST IN PLACE CONCRETE DOWNSPOUT AT ABUTMENT AND OUTLET
$\frac{1}{2}$" = 1'-0"



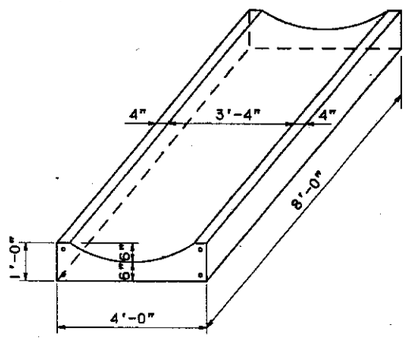
PROFILE ELEVATION



END VIEW



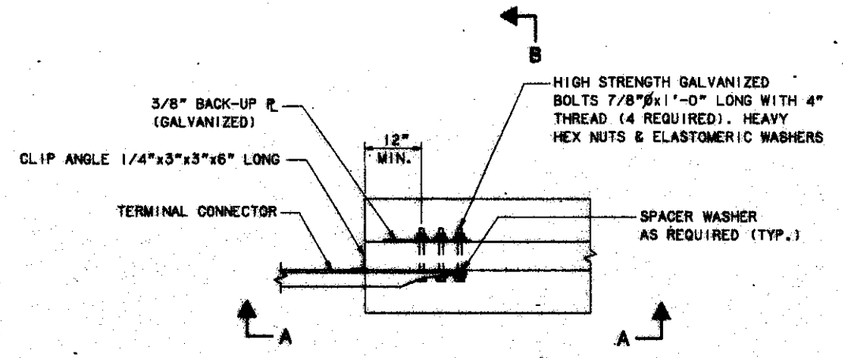
TOP VIEW



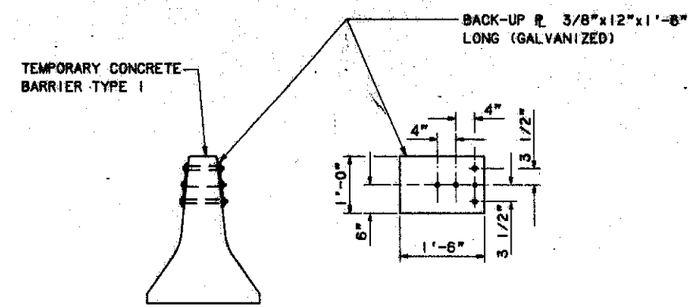
NOTE:

1. BOND DOWELS (REBARS) & END SURFACES OF DOWNSPOUT WITH SIKADUR LO-MOD GEL. REBAR USED AS DOWELS SHALL BE EPOXY COATED.
2. ALL REBARS 2" (TYP.) CLEARANCE. ALL REBARS SHALL BE EPOXY COATED (TYP.).
3. PAVEMENT FOR CAST-IN-PLACE CONCRETE DOWNSPOUT AT ABUTMENT AND OUTLET IS INCIDENTAL TO THE PRECAST CONCRETE DOWNSPOUT ITEM.
4. PRECAST AND CAST IN PLACE CONCRETE DOWNSPOUTS SHALL BE COATED W/PROTECTIVE COATING FOR CONCRETE SURFACES. COST SHALL BE INCIDENTAL TO THE PRECAST CONCRETE DOWNSPOUT ITEM.

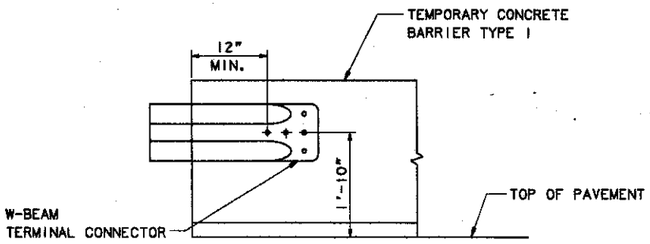
PRECAST CONCRETE DOWNSPOUT
CLASS AAA CONCRETE
NOT TO SCALE



PLAN



SECTION B-B



ELEVATION A-A

TEMPORARY BARRIER CONNECTION DETAIL
NOT TO SCALE

Maine Turnpike Authority
Maine Turnpike

Trans pass

RAMP A OVER
MCRR AND ROUTE 196
MISCELLANEOUS DETAILS

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

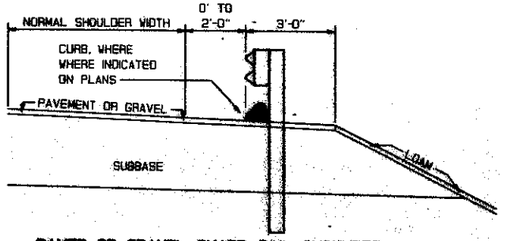
No.	Revision	By	Date

	By	Date
Designed	KJC	2/96
Drawn	CTW	2/96
Checked	RWB	2/96
In charge of: RAL		

Contract 96.7

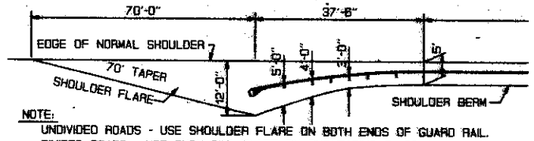
Sheet No. 4 of 44

METPK04



PAVED OR GRAVEL GUARD RAIL SHOULDER

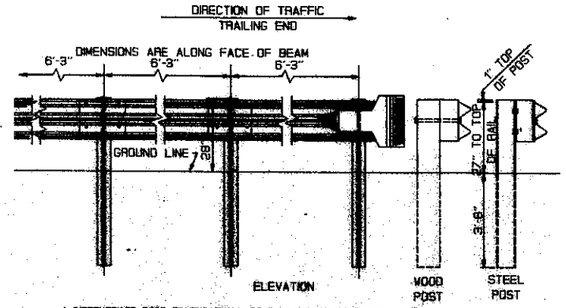
LOCATION OF GUARD RAIL TYPE 3



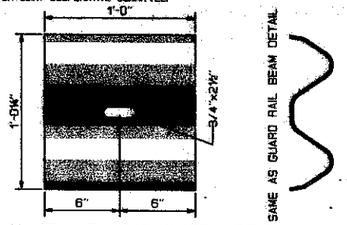
NOTE:
UNDIVIDED ROADS - USE SHOULDER FLARE ON BOTH ENDS OF GUARD RAIL.
DIVIDED ROADS - USE SHOULDER FLARE ON END FACING ON-COMING TRAFFIC.

SHOULDER WIDENING FOR BREAKAWAY CABLE TERMINAL SECTION

SPEC. 606 GR002

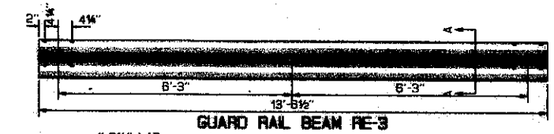


1. INTERMEDIATE POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE SHOWN.
2. WOOD POSTS FOR GUARD RAIL SHALL BE 6" NOM. (5⅛" MIN.) x8" NOM. (7⅛" MIN.) AND OFFSET BLOCKS FOR TYPE "3a" GUARD RAIL SHALL BE 6"x6" NOM. (5⅛"x5⅛" MIN.)
3. STEEL POSTS AND OFFSET BRACKETS FOR GUARD RAIL SHALL BE W6x8.5.
4. STEEL POSTS PUNCHED WITH HOLES IN ADDITION TO THOSE SPECIFIED, TO ACCOMODATE OTHER TYPES OF GUARD RAIL, WILL BE ACCEPTED SUBJECT TO THE APPROVAL OF THE ENGINEER.
5. "W" BEAM BACKUP PLATES SHALL BE PLACED BEHIND RAIL ELEMENTS AT INTERMEDIATE STEEL POSTS (NON SPLICE POSTS).
6. BEAM TYPE GUARD RAIL SET ON RADIUS OF 150' OR LESS SHALL BE CIRCULAR GUARD RAIL.
7. OFFSET BRACKET SHALL BE INSTALLED ON ALL POSTS, EXCEPT AT B.C.T. AND TWISTED END SECTIONS.
8. GUARD RAIL-TERMINAL END (RE-6) TO BE USED ONLY ON OFF-TRAFFIC END OF GUARD RAIL, ON DIVIDED HIGHWAY. WASHERS F-12 SHALL BE INSTALLED ON THE LAST 9 POSTS.
9. IDENTIFICATION LETTERS AND NUMBERS ON DRAWINGS REFER TO THE STANDARD DETAIL DRAWINGS SHOWN IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE" BY AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.

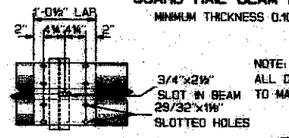


"W" BEAM BACKUP PLATE - RE-4

SPEC. 606 GR003

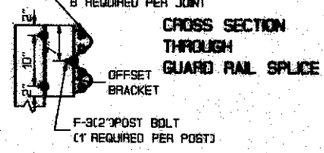


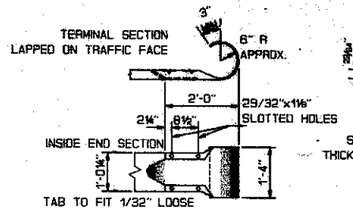
GUARD RAIL BEAM RE-3
MINIMUM THICKNESS 0.105



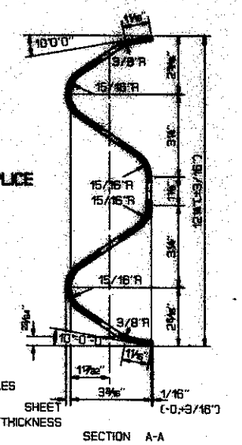
GUARD RAIL SPLICE AT POST

NOTE:
ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES





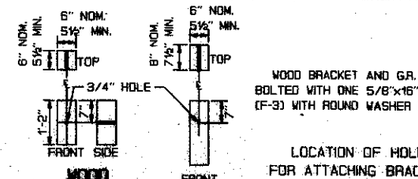
GUARD RAIL-TERMINAL END RE-6
NOT FOR USE WITH BCT'S



SECTION A-A

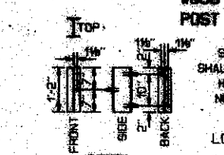
GUARD RAIL BEAM DETAIL RE-3

SPEC. 606 GR004



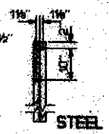
WOOD BRACKET AND G.R. BEAM SHALL BE BOLTED WITH ONE 5/8"x16" ROUND HEAD BOLT (F-3) WITH ROUND WASHER (F-19) ON NUT END.

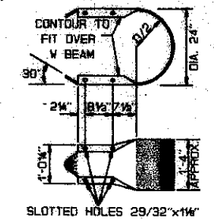
LOCATION OF HOLE FOR ATTACHING BRACKET TO WOOD POST



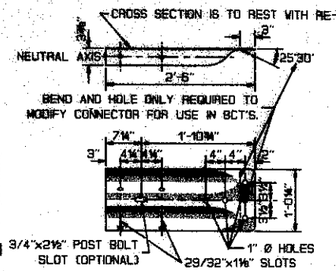
STEEL BRACKET AND POST SHALL BE BOLTED WITH 5/8"x1½" HEX HEAD BOLT (F-9) AND NUT. HOLES TO BE 13/16 Ø.

LOCATION OF HOLES FOR ATTACHING BRACKET TO STEEL POST





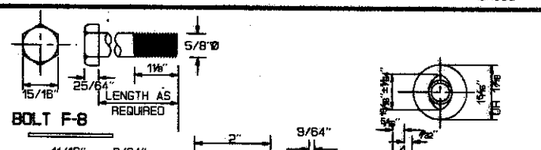
W-BEAM END SECTION (BUFFER) RE-7(24)

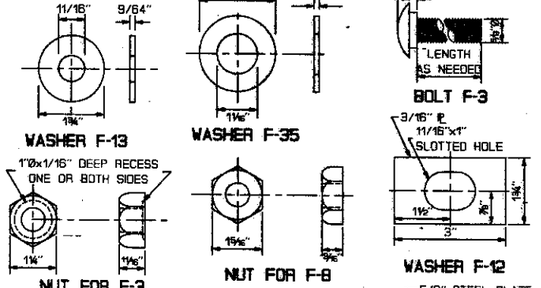


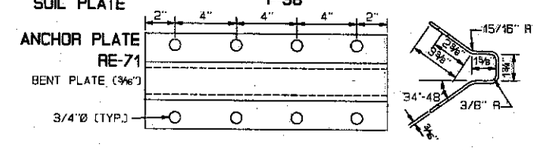
** TO OBTAIN BCT DETAILS, SHOW PART NUMBER AS RE-8(BCT)-79.

W-BEAM TERMINAL CONNECTOR RE-8

SPEC. 606 GR005

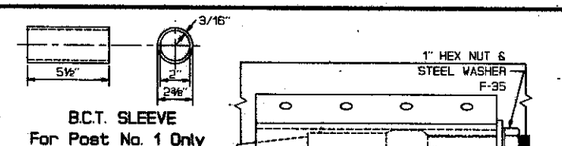


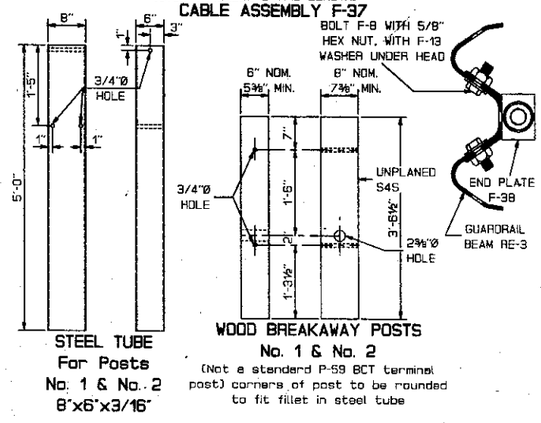




BREAKAWAY CABLE TERMINAL

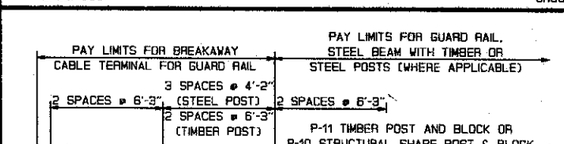
SPEC. 606 GR006

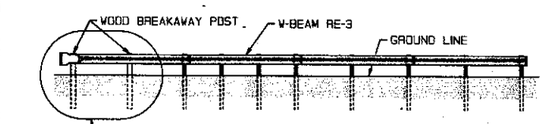




BREAKAWAY CABLE TERMINAL

SPEC. 606 GR007



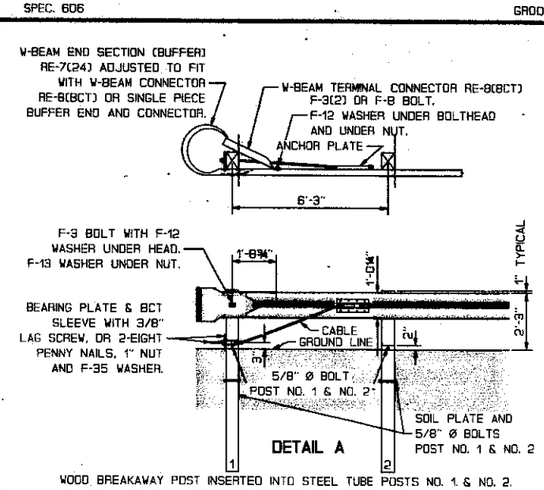


OFFSETS TO FACE OF POST FROM BACK OF RAIL ALIGNMENT		
POST NO.	STEEL	TIMBER
1	—	4'-0"
2	—	2'-9½"
3	2'-3½"	2'-3"
4	1'-9"	—
5	—	1'-5¾"
6	1'-3½"	—
7	0'-11½"	0'-11"
8	0'-7¾"	0'-6¾"
9	0'-6"	0'-5½"

TABLE OF OFFSETS

BREAKAWAY CABLE TERMINAL

SPEC. 606. GR008



BREAKAWAY CABLE TERMINAL

SPEC. 606 GR009

NOTE:
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No.	Revision	By:	Date:		By:	Date:
				Designed		
				Drawn		
				Checked		
				In charge of:		

Maine Turnpike Authority
Maine Turnpike

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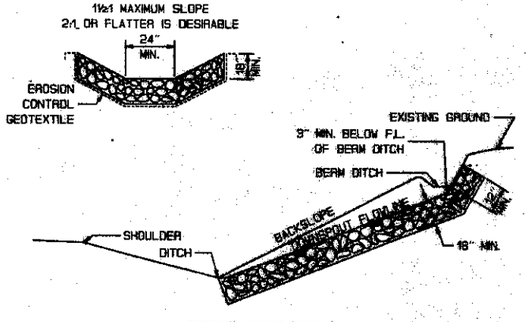
TYPE 3 GUARDRAIL BREAKAWAY CABLE TERMINAL (B.C.T.) STANDARD DETAILS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

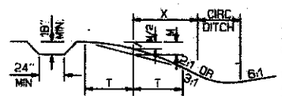
Contract 96.7

HD-6
Sheet No. 5 of 44

METPK04



RIPRAP DOWNSPOUT



BERM DITCH

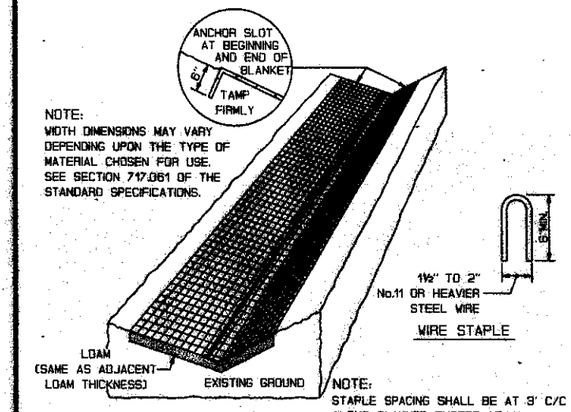
CONSTRUCT BERM DITCH AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. WHERE A 2:1 SLOPE IS NOT PRACTICAL, USE A 1-1/2:1 SLOPE.

WHERE "X"≤6 OR LESS, "T"=X, OTHERWISE "T"=6. TO AVOID PROPERTY DAMAGE AND TO SAVE SHADE TREES, THIS FORMULA MAY BE MODIFIED BY THE ENGINEER.

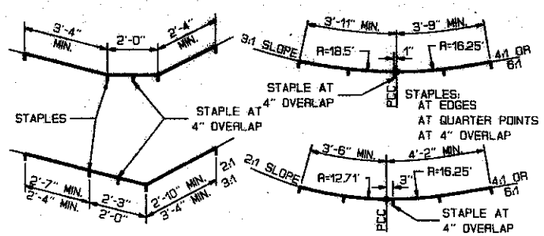
FOR ALL SECTIONS, THE DEPTH OF DITCH DEPENDS ON LOCAL CONDITIONS.

RIPRAP DOWNSPOUTS AND BERM DITCHES

SPEC. 610 ER001

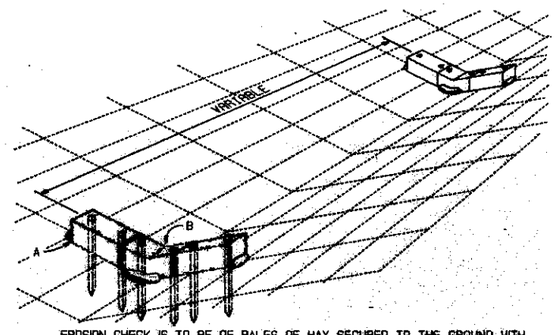


NOTE:
STAPLE SPACING SHALL BE AT 3' C/C ALONG BLANKET EXCEPT AT 4" OVERLAP WHICH SHALL BE AT 1½' C/C.



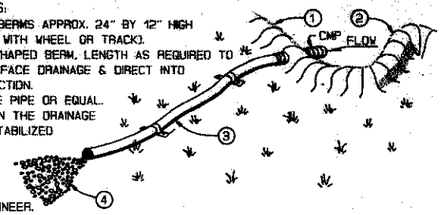
TEMPORARY EROSION CONTROL BLANKET

SPEC. 613 ER002



EROSION CHECK IS TO BE OF BALES OF HAY SECURED TO THE GROUND WITH 2-4' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT "A" AT LEAST 6" ABOVE OVERFLOW AT "B".

EROSION CHECK FOR DITCH

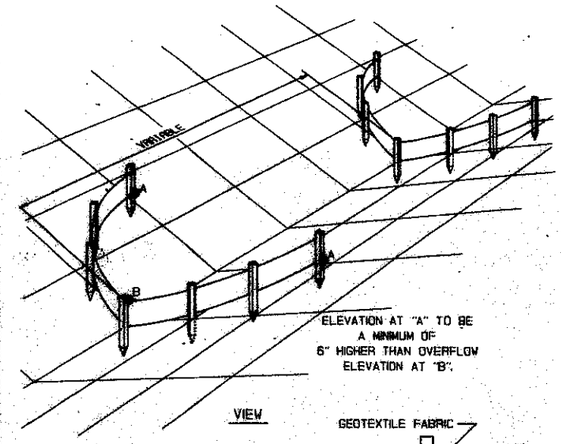


DESCRIPTIONS:
1. TEMPORARY BERMS APPROX. 24" BY 12" HIGH (COMPACTED WITH WHEEL OR TRACK).
2. CRESCENT SHAPED BERM, LENGTH AS REQUIRED TO CONTAIN SURFACE DRAINAGE & DIRECT INTO THE END SECTION.
3. COLLAPSIBLE PIPE OR EQUAL.
4. DISCHARGE IN THE DRAINAGE DITCH, ON STABILIZED AREA OR ON DUMPED STONE AS INDICATED BY THE ENGINEER.

TEMPORARY BERM AND SLOPE DRAIN

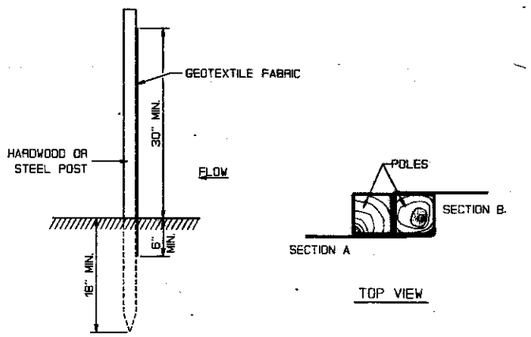
TEMPORARY EROSION CONTROL

SPEC. 656 ER003



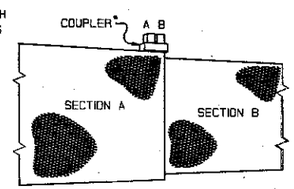
TEMPORARY SILT FENCE
EROSION CHECK FOR DITCH

SPEC. 656 ER004



DEPENDING UPON CONFIGURATION, ATTACH GEOTEXTILE TO WIRE MESH WITH HOG RINGS, TO STEEL POSTS WITH TIE WIRES, AND TO WOOD POSTS WITH STAPLES.

POSTS MAY BE WIRED TOGETHER WHEN JOINING SECTIONS.

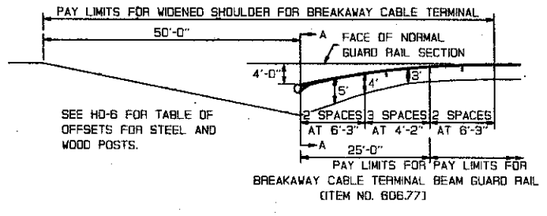


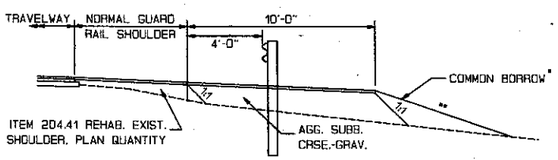
JOINING SECTIONS

*THE COUPLER CAN BE ANY ACCEPTABLE DEVICE USED TO TIE THE POLES TOGETHER.

TEMPORARY SILT FENCE

SPEC. 656 ER005





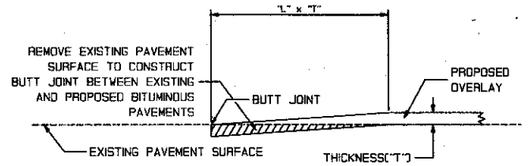
*ADJACENT OR AVAILABLE EXCAVATION SHALL BE USED INSTEAD OF COMMON BORROW UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

**THIS SHALL BE A 4:1 SLOPE IN AREAS THAT ARE PRESENTLY 6:1. THE STEEPEST SLOPE SHALL BE 3:1 IN ALL OTHER AREAS.

NOTE:
WIDENED SHOULDER FOR BREAKAWAY CABLE TERMINAL, WHEN REQUIRED, WILL BE PAID FOR UNDER ITEM 606.751 COMPLETE IN PLACE WHICH PRICE SHALL BE FULL PAYMENT FOR FURNISHING AND PLACING, GRADING AND COMPACTION OF AGGREGATE SUBBASE, COMMON BORROW, SEED AND MULCH. THE HOT BITUMINOUS PAVEMENT WILL BE PAID FOR UNDER THE APPLICABLE PAVEMENT ITEM.

ITEM NO. 606.751
DETAIL OF WIDENED SHOULDER FOR BREAKAWAY CABLE TERMINAL

SPEC. 606 GR001



DESIGN OR POSTED SPEED=	65	55	50	45	40	35	30	25
"L" IN FEET/INCH OF THICKNESS=	65	55	50	45	40	35	30	25

NOTES: 1. THE ABOVE LENGTHS ARE INTENDED FOR PROFILE GRADES OF 2% OR LESS. WHEN PROFILE GRADES ARE GREATER THAN 2% "L" MAY BE ADJUSTED TO SUIT FIELD CONDITIONS WHEN DIRECTED BY THE ENGINEER.

2. WHEN CONSTRUCTING BUTT JOINTS AT INTERSECTIONS OR RAMPS "L" SHALL BE 15'/INCH OF THICKNESS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

3. SPECIAL ATTENTION SHALL BE PAID TO CURB SECTIONS TO ASSURE PROPER DRAINAGE AND THAT THERE ARE NO FLAT AREAS. "L" MAY BE ADJUSTED TO SUIT FIELD CONDITIONS WHEN DIRECTED BY THE ENGINEER.

PAVEMENT OVERLAY
BUTT JOINT DETAIL (ROADWAYS)

SPEC. 202 PV001

NOTE:
THESE DETAILS COPIED FROM MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS SHEETS.

No.	Revision	By:	Date:	In charge of:
				Designed
				Drawn
				Checked

By: Date:

Maine Turnpike Authority
Maine Turnpike

Trans pass

EROSION CONTROL FOR DITCHES AND SLOPES, PAVEMENT BUTT JOINTS, & SHOULDER WIDENING FOR B.C.T.
STANDARD DETAILS

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

Contract 96.7

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Sheet No. 6 of 44

METPK04

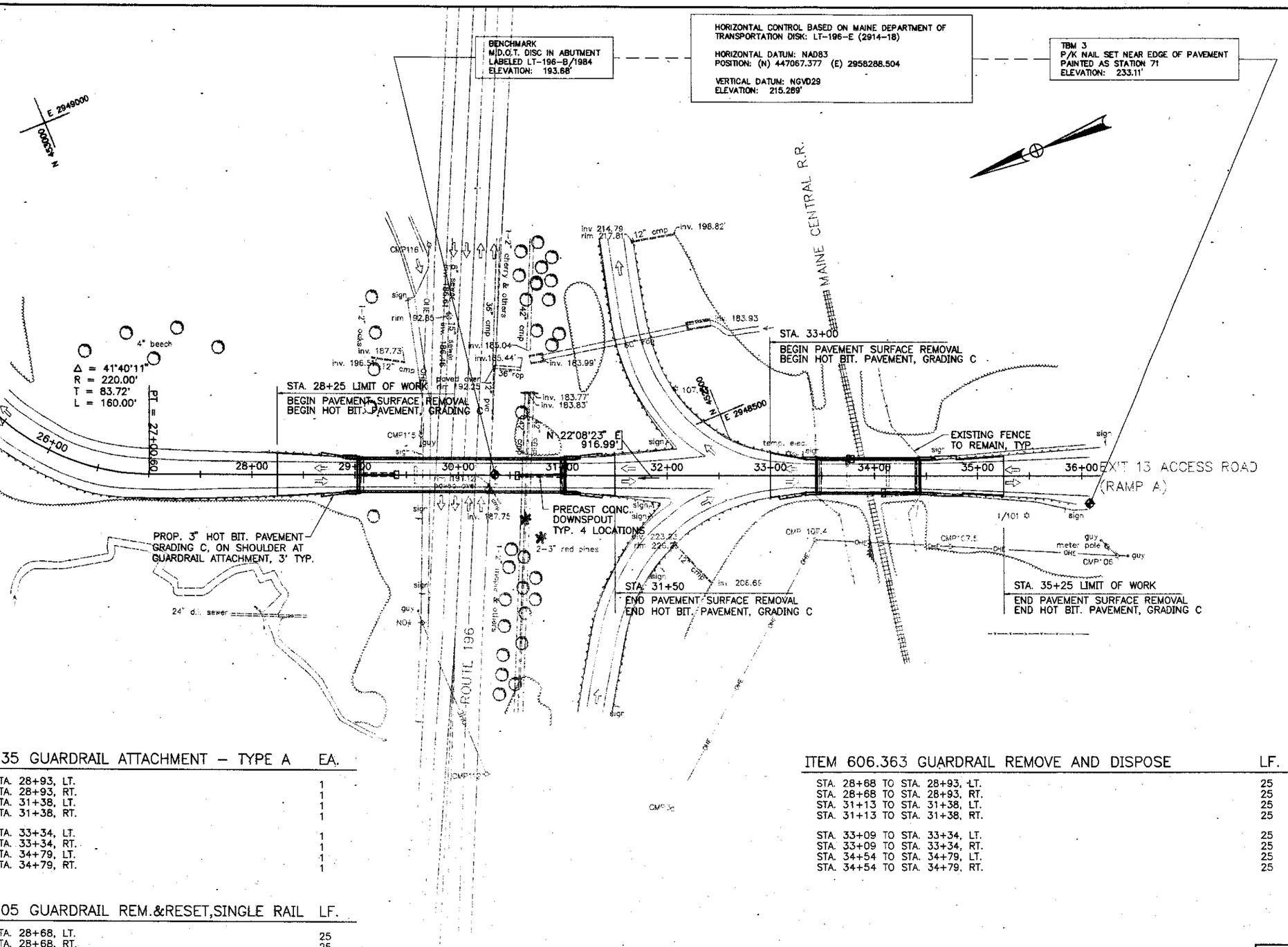
BENCHMARK
M.D.O.T. DISC IN ABUTMENT
LABELED LT-196-B/1984
ELEVATION: 193.88'

HORIZONTAL CONTROL BASED ON MAINE DEPARTMENT OF TRANSPORTATION DISK: LT-196-E (2914-18)

HORIZONTAL DATUM: NAD83
POSITION: (N) 447067.377 (E) 2958288.504

VERTICAL DATUM: NGVD29
ELEVATION: 215.289'

TBM 3
P/K NAIL SET NEAR EDGE OF PAVEMENT
PAINTED AS STATION 71
ELEVATION: 233.11'



ITEM 606.1735 GUARDRAIL ATTACHMENT – TYPE A — EA.

STA. 28+68 TO STA. 28+93, LT.	1
STA. 28+68 TO STA. 28+93, RT.	1
STA. 31+13 TO STA. 31+38, LT.	1
STA. 31+13 TO STA. 31+38, RT.	1
STA. 33+09 TO STA. 33+34, LT.	1
STA. 33+09 TO STA. 33+34, RT.	1
STA. 34+54 TO STA. 34+79, LT.	1
STA. 34+54 TO STA. 34+79, RT.	1

ITEM 606.3605 GUARDRAIL REM.&RESET,SINGLE RAIL — LF.

STA. 28+43 TO STA. 28+68, LT.	25
STA. 28+43 TO STA. 28+68, RT.	25
STA. 31+38 TO STA. 31+63, LT.	25
STA. 31+38 TO STA. 31+63, RT.	25
STA. 32+84 TO STA. 33+09, LT.	25
STA. 32+84 TO STA. 33+09, RT.	25
STA. 34+79 TO STA. 35+04, LT.	25
STA. 34+79 TO STA. 35+04, RT.	25

ITEM 606.363 GUARDRAIL REMOVE AND DISPOSE — LF.

STA. 28+68 TO STA. 28+93, LT.	25
STA. 28+68 TO STA. 28+93, RT.	25
STA. 31+13 TO STA. 31+38, LT.	25
STA. 31+13 TO STA. 31+38, RT.	25
STA. 33+09 TO STA. 33+34, LT.	25
STA. 33+09 TO STA. 33+34, RT.	25
STA. 34+54 TO STA. 34+79, LT.	25
STA. 34+54 TO STA. 34+79, RT.	25

50 0 50 100 150 200
SCALE: 1" = 50'

(ME1PK08)

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Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER
MCRR AND ROUTE 196
SITE PLAN

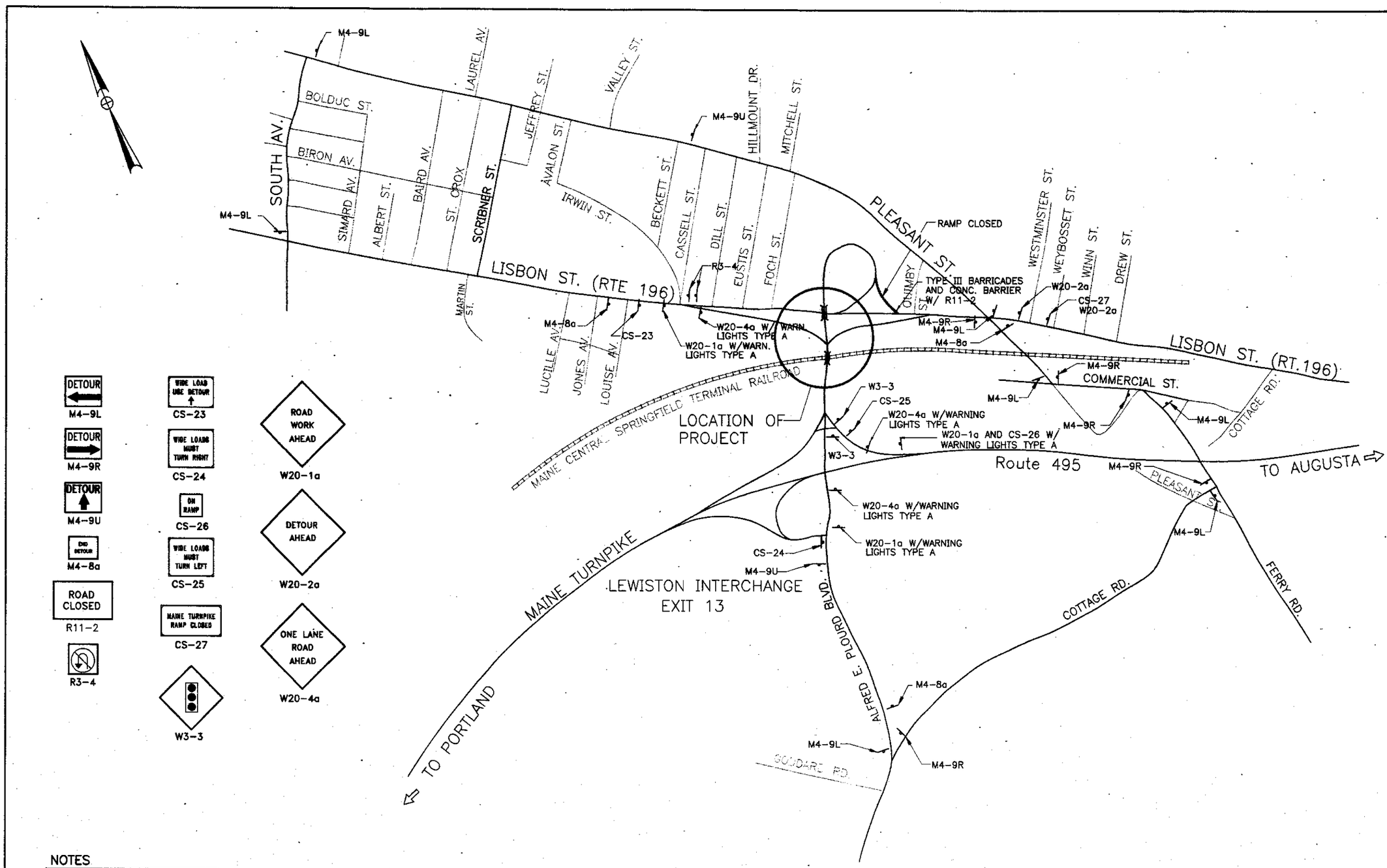
HNTB — HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

	By	Date
Designed	KJC	2/96
Drawn	KJC	2/96
Checked	RWB	2/96
In Charge Of:	RAL	

Revision	By	Date

Contract 96.7

Sheet No. 7 of 44



NOTES

1. LOCATIONS OF DETOUR SIGNS SHOWN ARE APPROXIMATE. FINAL LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. FOR TRAFFIC CONTROL REQUIREMENTS IN PROJECT AREA SEE TRAFFIC CONTROL PLANS STAGE I AND STAGE II.
3. FOR SIGN DETAILS SEE CONSTRUCTION SIGN SUMMARY SHEET.

GRAPHIC SCALE

400 0 200 400 800 1600

(IN FEET)
1 inch = 400 ft.

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER MCRR AND ROUTE 196
DETOUR PLAN

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Revision	By	Date		By	Date
			Designed	KJC	2/96
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			Checked	RWB	2/96
			In Charge Of:	RAL	

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Sheet No. 8 of 44

(METRIC08)

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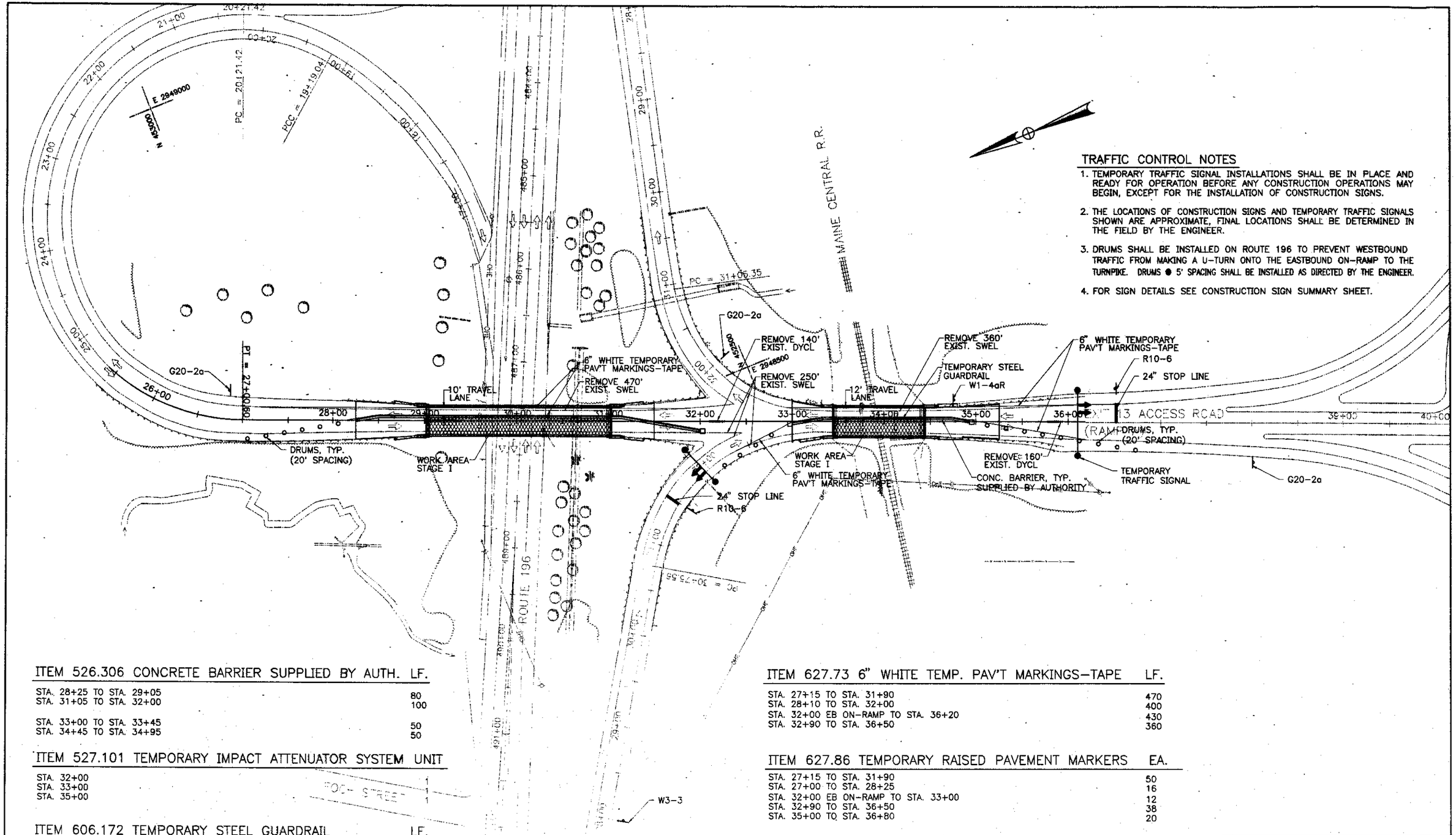

ITEM 526.306 CONCRETE BARRIER SUPPLIED BY AUTH. LF.

STA. 28+25 TO STA. 29+05	80
STA. 31+05 TO STA. 32+00	100
STA. 33+00 TO STA. 33+45	50
STA. 34+45 TO STA. 34+95	50

ITEM 527.101 TEMPORARY IMPACT ATTENUATOR SYSTEM UNIT

STA. 32+00	1
STA. 33+00	1
STA. 35+00	1

ITEM 606.172 TEMPORARY STEEL GUARDRAIL LF.

STA. 29+05 TO STA. 31+05	200
STA. 33+45 TO STA. 34+45	100

ITEM 627.67 REMOVING PAVEMENT MARKINGS SF.

STA. 27+15 TO STA. 31+90, LT. SWEL	235
STA. 31+50 TO STA. 32+50, EB ON-RAMP LT. & RT.	125
STA. 31+00 TO STA. 33+50, DYCL	250
STA. 33+00 TO STA. 36+50, SWEL	180
STA. 34+90 TO STA. 36+50, DYCL	160

ITEM 627.73 6" WHITE TEMP. PAV'T MARKINGS-TAPE LF.

STA. 27+15 TO STA. 31+90	470
STA. 28+10 TO STA. 32+00	400
STA. 32+00 EB ON-RAMP TO STA. 36+20	430
STA. 32+90 TO STA. 36+50	360

ITEM 627.86 TEMPORARY RAISED PAVEMENT MARKERS EA.

STA. 27+15 TO STA. 31+90	50
STA. 27+00 TO STA. 28+25	16
STA. 32+00 EB ON-RAMP TO STA. 33+00	12
STA. 32+90 TO STA. 36+50	38
STA. 35+00 TO STA. 36+80	20

ITEM 652.33 DRUM EA.

STA. 27+00 TO STA. 28+25	8
STA. 32+00 EB ON-RAMP TO STA. 33+00	6
STA. 35+00 TO STA. 36+80	10

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER MCRR AND ROUTE 196
TRAFFIC CONTROL STAGE I

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

Revision	By	Date		By	Date
			Designed	KJC	2/96
			Drawn	KJC	2/96
			Checked	RWB	2/96
			In Charge Of:	RAL	

Contract 96.7

Sheet No. 9 of 44

(MEIPK08)

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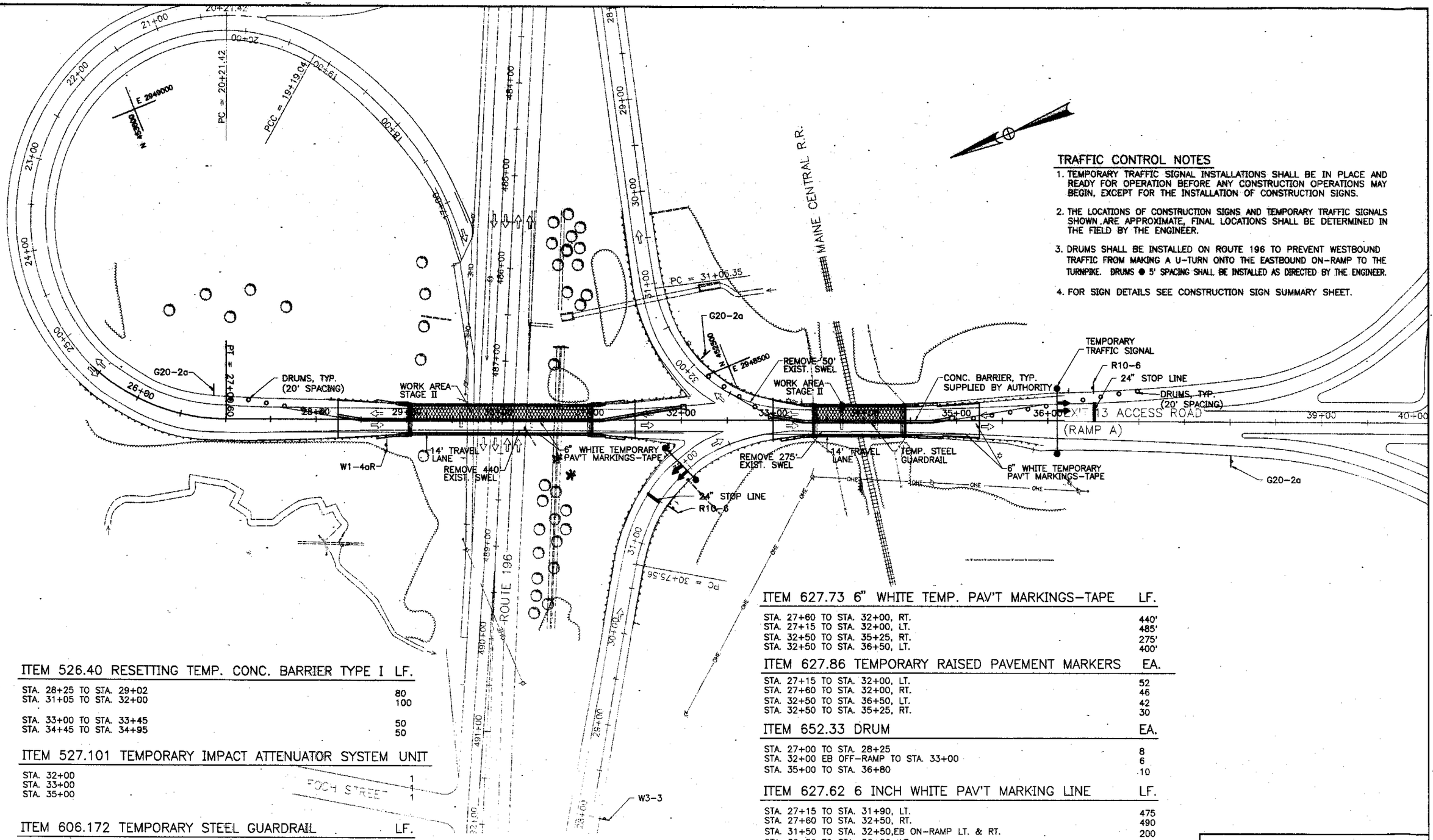

ITEM 526.40 RESETTING TEMP. CONC. BARRIER TYPE I LF.

STA. 28+25 TO STA. 29+02	80
STA. 31+05 TO STA. 32+00	100
STA. 33+00 TO STA. 33+45	50
STA. 34+45 TO STA. 34+95	50

ITEM 527.101 TEMPORARY IMPACT ATTENUATOR SYSTEM UNIT

STA. 32+00	1
STA. 33+00	1
STA. 35+00	1

ITEM 606.172 TEMPORARY STEEL GUARDRAIL LF.

STA. 29+05 TO STA. 31+05	200
STA. 33+45 TO STA. 34+45	100

ITEM 627.67 REMOVING PAVEMENT MARKINGS SF.

STA. 27+60 TO STA. 32+00, RT. SWEL	220
STA. 32+50 TO STA. 35+25, RT. SWEL	137.5
STA. 32+50 TO STA. 33+00, LT. SWEL	25

ITEM 627.73 6" WHITE TEMP. PAV'T MARKINGS-TAPE LF.

STA. 27+60 TO STA. 32+00, RT.	440'
STA. 27+15 TO STA. 32+00, LT.	485'
STA. 32+50 TO STA. 35+25, RT.	275'
STA. 32+50 TO STA. 36+50, LT.	400'

ITEM 627.86 TEMPORARY RAISED PAVEMENT MARKERS EA.

STA. 27+15 TO STA. 32+00, LT.	52
STA. 27+60 TO STA. 32+00, RT.	46
STA. 32+50 TO STA. 36+50, LT.	42
STA. 32+50 TO STA. 35+25, RT.	30

ITEM 652.33 DRUM EA.

STA. 27+00 TO STA. 28+25	8
STA. 32+00 EB OFF-RAMP TO STA. 33+00	6
STA. 35+00 TO STA. 36+80	10

ITEM 627.62 6 INCH WHITE PAV'T MARKING LINE LF.

STA. 27+15 TO STA. 31+90, LT.	475
STA. 27+60 TO STA. 32+50, RT.	490
STA. 31+50 TO STA. 32+50,EB ON-RAMP LT. & RT.	200
STA. 32+50 TO STA. 36+50, LT.	400
STA. 32+50 TO STA. 35+25, RT.	275

ITEM 627.64 6 INCH YELLOW PAV'T MARKING LINE LF.

STA. 31+00 TO STA. 33+50, DYCL	250
STA. 34+90 TO STA. 36+50, DYCL	160

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER MCRR AND ROUTE 196
TRAFFIC CONTROL STAGE II

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Revision	By	Date		By	Date
			Designed	KJC	2/96
			Drawn	KJC	2/96
			Checked	RWB	2/96
			In Charge Of:	RAL	

Contract 96.7

Sheet No. 10 of 44

(METPK08)

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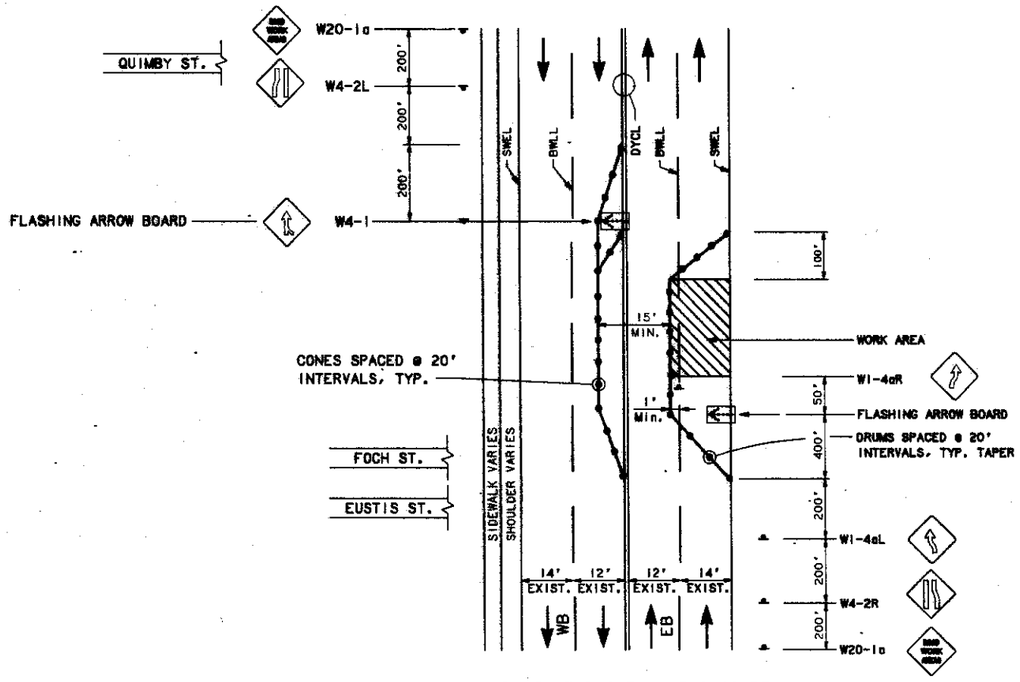


DAYTIME RIGHT LANE CLOSURE
OF SHORT DURATION

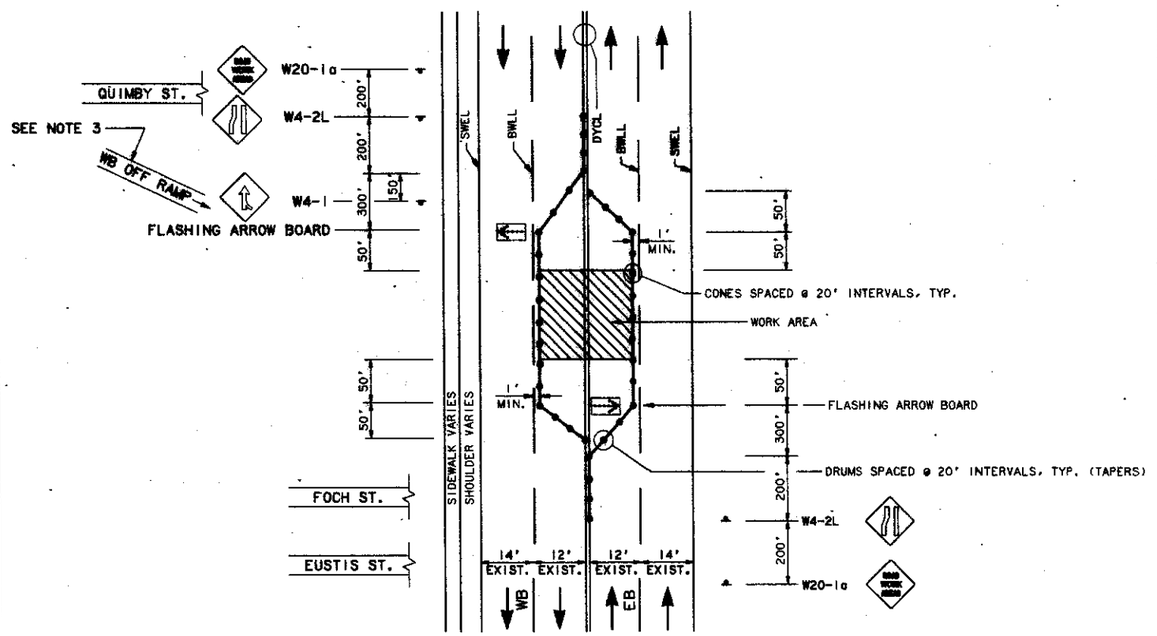
ROUTE 196

NOTE:

1. FOR SIGN DETAILS, SEE SIGN SUMMARY SHEET.
2. ONE W20-1a SIGN SHALL BE INSTALLED AT THE FOLLOWING INTERSECTIONS OF ROUTE 196:
   - FOCH STREET
   - EUSTIS STREET
   - QUIMBY STREET
3. SIGNS TO BE INSTALLED ON THE WESTBOUND OFF RAMP ARE AS FOLLOWS:

STA. 20+50	W20-1a	
STA. 18+50	W3-2a	
STA. 16+50	R1-2	

4. RIGHT LANE CLOSURE ON WESTBOUND ROADWAY IS SIMILAR.



DAYTIME LEFT LANE CLOSURE
OF SHORT DURATION

ROUTE 196

NOTE:

1. FOR SIGN DETAILS, SEE SIGN SUMMARY SHEET.
2. ONE W20-1a SIGN SHALL BE INSTALLED AT THE FOLLOWING INTERSECTIONS OF ROUTE 196:
   - FOCH STREET
   - EUSTIS STREET
   - QUIMBY STREET
3. SIGNS TO BE INSTALLED ON THE WESTBOUND OFF RAMP ARE AS FOLLOWS:

STA. 20+50	W20-1a	
STA. 18+50	W3-2a	
STA. 16+50	R1-2	

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER
MCRR AND ROUTE 196
MISCELLANEOUS DETAILS

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:		By:	Date:
				Designed	KJC	2/96
				Drawn	CTW	2/96
				Checked	RWB	2/96
				In charge of: RAL		

Contract 96.7

Sheet No. 11 of 44

METPK04

PROPOSED TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN * WIDTH	SIZE OF SIGN * HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND BORDER	TOTAL AREA IN SQUARE FEET/SIGN
G20-2A	48	24	END ROAD WORK	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 1979			3	ORANGE	BLACK	8.00
M4-8a	24	18	END DETOUR				3			3.00
M4-9L	30	24	DETOUR ←				7			5.00
M4-9R	30	24	DETOUR →				5			5.00
M4-9U	30	24	DETOUR ↑				2			5.00
R1-2	36	36	YIELD				1	COLOR SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 1979		3.90
R3-4	24	24					2			4.00
R10-6	24	36	STOP HERE ON RED				2			6.00
R11-2	48	30	ROAD CLOSED				1	ORANGE	BLACK	10.00
W1-4aL	48	48					1			16.00
W1-4aR	48	48					2			16.00

IDENTIFICATION NUMBER	SIZE OF SIGN * WIDTH	SIZE OF SIGN * HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND BORDER	TOTAL AREA IN SQUARE FEET/SIGN
W3-2a	48	48		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 1979			1	COLOR SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 1979		16.00
W3-3	36	36					3	ORANGE	BLACK	9.00
W4-1	48	48					1			16.00
W4-2R	48	48					1			16.00
W4-2L	48	48					2			16.00
W20-1a	48	48	ROAD WORK AHEAD				9			16.00
W20-2a	48	48	DETOUR AHEAD				2			16.00

* DIMENSIONS IN INCHES

NOTE:

1. SIGN TEXT SHALL CONFORM TO M.U.T.C.D.

No.	Revision	By:	Date:
		Designed	KJC 2/96
		Drawn	CTW 2/96
		Checked	RWB 2/96
		In charge of:	RA

Maine Turnpike Authority
Maine Turnpike

Transpass

RAMP A OVER
MCRR AND ROUTE 196
CONSTRUCTION
SIGN SUMMARY I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. 12 of 44

METPK04

PROPOSED TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN * WIDTH	SIZE OF SIGN * HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND BORDER	TOTAL AREA IN SQUARE FEET/SIGN
W20-4a	48	48	ONE LANE ROAD AHEAD	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 1979			3	ORANGE	BLACK	16.00
SEE NOTE 2 W20-7a	48	48					2			16.00
CS-23	36	24	WIDE LOAD USE DETOUR 	4"C 4"C	3"	6.3"	1			6.00
CS-24	36	30	WIDE LOADS MUST TURN RIGHT	4"C 4"C 4"C	3" 3"		1			7.50
CS-25	36	30	WIDE LOADS MUST TURN LEFT	4"C 4"C 4"C	3" 3"		1			7.50
CS-26	18	18	ON RAMP	4"C 4"C	3"		1			2.25
CS-27	48	24	MAINE TURNPIKE RAMP CLOSED	4"C 4"C	3"		1			8.00

* DIMENSIONS IN INCHES

NOTE:

1. SIGN TEXT SHALL CONFORM TO M.U.T.C.D.

2. TO BE USED IN CONJUNCTION WITH FLAGGERS. SIGN SHALL BE MOUNTED ON EASELS.

No.	Revision	By:	Date:	In charge of: RA_
				Designed KJC 2/96
				Drawn CTW 2/96
				Checked RWB 2/96

Maine Turnpike Authority
Maine Turnpike

Trans pass

RAMP A OVER MCRR AND ROUTE 195
CONSTRUCTION
SIGN SUMMARY II

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

Contract 96.7

Sheet No. 13 of 44

METPK04

SPECIFICATIONS

DESIGN

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 1992 AND INTERIM SPECIFICATIONS 1995.

CONTRACT

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, REVISION OF APRIL 1995.

DESIGN LOADING

LIVE LOAD

HS20, 500,000 CYCLES

DESIGN METHOD

LOAD FACTOR (SUPERSTRUCTURE ONLY)

MATERIALS

CONCRETE

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

REINFORCING STEEL

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

STRUCTURAL STEEL

EXISTING STRUCTURAL STEEL IS ASTM A7, GRADE 33

GENERAL NOTES

1. PLANS OF EXISTING BRIDGE ARE AVAILABLE AT THE AUTHORITY'S OFFICE AT 430 RIVERSIDE ST., PORTLAND, MAINE.
2. SHIELDING REQUIRED DURING CONCRETE REMOVAL SHALL NOT PROJECT BELOW THE BOTTOM FLANGES OF STRINGERS. THE ESTIMATED QUANTITY OF SHIELDING IS THE MINIMUM REQUIRED AND IS BASED ON THE FOLLOWING LIMITS:
   A. NORMAL TO ℄ BRIDGE: AS SHOWN ON THE PLANS
   B. PARALLEL TO ℄ BRIDGE: ABUTMENT TO ABUTMENT
3. THE AUTHORITY'S PERSONNEL WILL PROFILE THE TOPS OF ALL STRINGERS BEFORE THE FORM WORK IS STARTED AND SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS.
4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.
5. CHAMFER ALL EXPOSED CONCRETE EDGES ¾", UNLESS OTHERWISE NOTED.
6. PREFORMED JOINT FILLER AND JOINT SEALER CALLED FOR ON THE PLANS WILL BE INCIDENTAL TO ITEMS 502.21 AND 502.261.
7. ALL BRIDGE PARAPET AND END POST CONCRETE (INCLUDING INSIDE FACE, TOP AND OUTSIDE FACE) TO HAVE A RUBBED FINISH.
8. PLACE ALL REINFORCEMENT STEEL TO CLEAR ANCHOR BOLTS.

ITEM	DESCRIPTION	UNIT	QUANTITIES
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	C.Y.	25
202.1221	REMOVING EXIST. SUPERSTRUCTURE CONC.-MAINE CENTRAL R.R.(382 CY)	L.S.	1
203.20	COMMON EXCAVATION	C.Y.	25
304.10	AGGREGATE SUBBASE COURSE-GRAVEL	C.Y.	29
403.13	DENSE GRADED BITUMINOUS PAVEMENT FOR BRIDGES	TON	30
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	C.Y.	20
502.261	STRUCTURAL CONCRETE ROADWAY AND PARAPETS ON STEEL BRIDGES-MAINE CENTRAL R.R. (111 C.Y.)*	L.S.	1
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB.	35,500
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB.	35,500
504.75	BEARING SHIM PLATE MODIFICATION	EA.	2
505.091	STUD WELDED SHEAR CONNECTORS-MAINE CENTRAL R.R. (1050 EA)*	L.S.	1
507.09221	ALUMINUM BRIDGE RAILING, 2 BAR - MAINE CENTRAL R.R. (204 L.F.)*	L.S.	1
508.131	MEMBRANE WATERPROOFING-MAINE CENTRAL R.R. (372 S.Y.)*	L.S.	1
514.06	CURING BOX FOR CONCRETE CYLINDERS	EA.	1
515.20	PROTECTIVE COATING FOR CONCRETE SURFACE	S.Y.	185
515.201	PIGMENTED CONCRETE PROTECTIVE COATING	S.Y.	65
520.21	EXPANSION DEVICE - GLAND SEAL (32 L.F.)*	EA.	1
524.361	TEMPORARY DECK SUPPORT-MAINE CENTRAL R.R.	L.S.	1
524.40	PROTECTIVE SHIELD	S.Y.	435
606.172	TEMPORARY STEEL GUARDRAIL	L.F.	100
609.15	SLOPED CURB TYPE 1	L.F.	255

*QUANTITIES FOR ESTIMATING PURPOSES ONLY

INDEX OF DRAWINGS

Revision	By	Date		By	Date
			Designed	JFW	2/96
			Drawn	CSL	2/96
			Checked	DMD	2/96
			In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

Transpass

RAMP A OVER MAINE CENTRAL RAILROAD
SPECIFICATIONS, GENERAL NOTES AND QUANTITIES

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. MC-1
14 of 44

(METPKDR)

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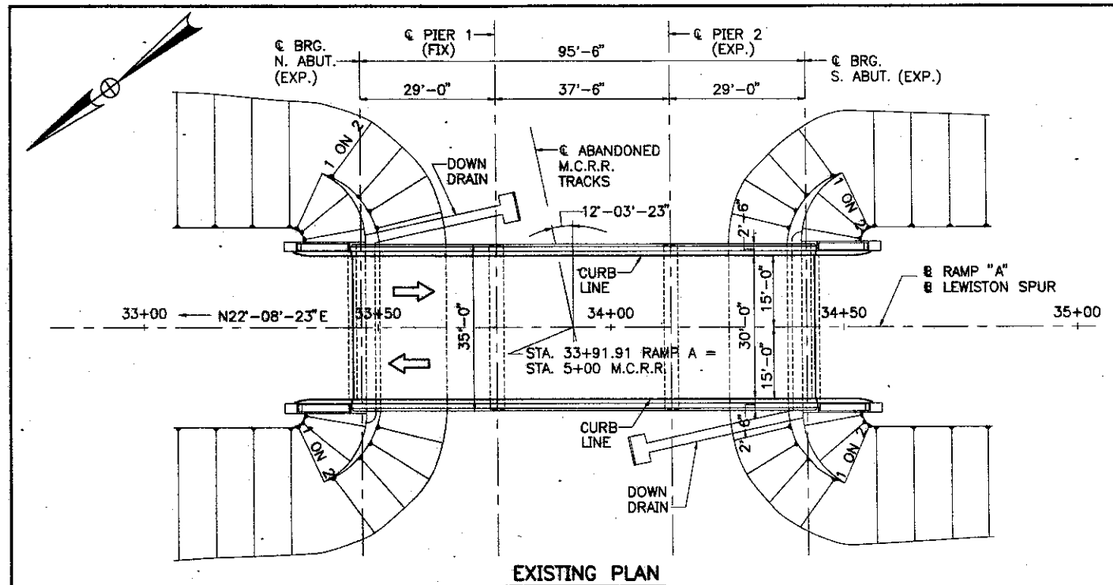
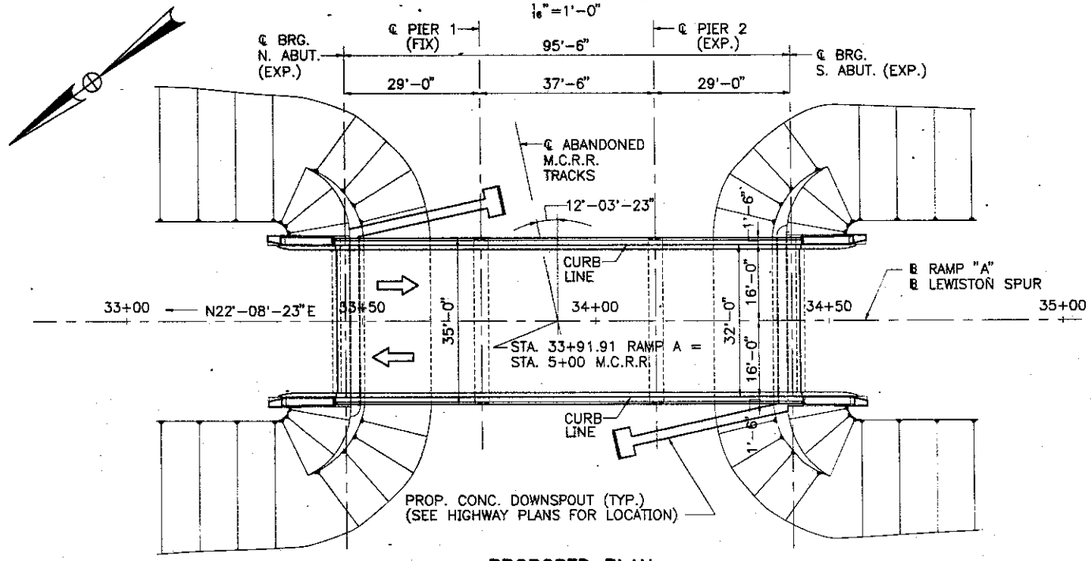


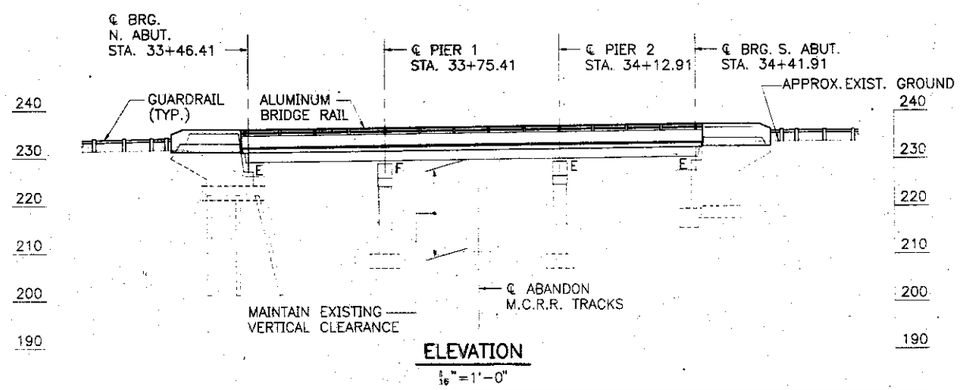
EXISTING PLAN

1/16" = 1'-0"



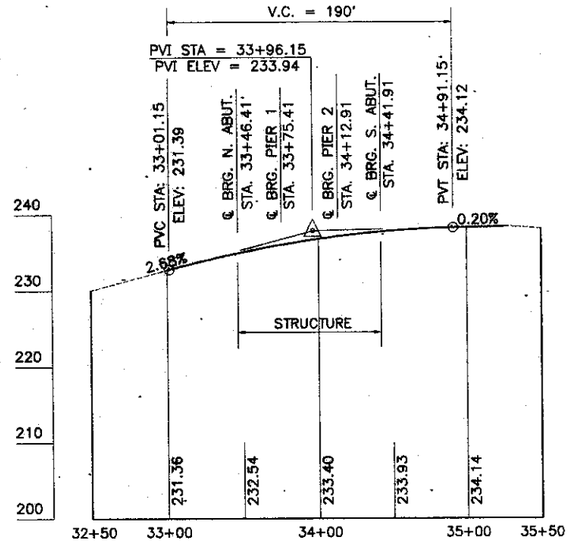
PROPOSED PLAN

1/16" = 1'-0"



ELEVATION

1/16" = 1'-0"



PROPOSED PROFILE

HOR. 1"=50'
VERT 1"=10'

	By	Date
Designed:	JFW	1/96
Drawn:	RSJ	1/96
Checked:	XPM	2/96
In Charge Of:	RAL	

Revision | By | Date

Maine Turnpike Authority

Maine Turnpike

Trans pass

RAMP A OVER MAINE CENTRAL RAILROAD GENERAL PLAN AND ELEVATION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. MC-2 15 of 44

(METRIC)

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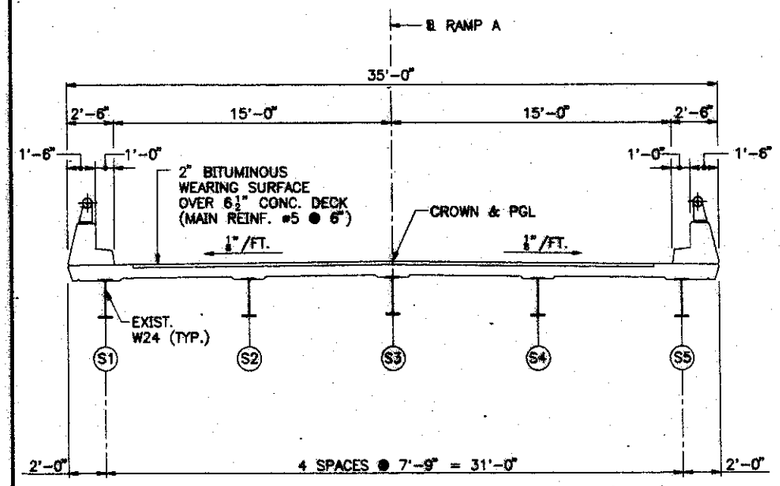
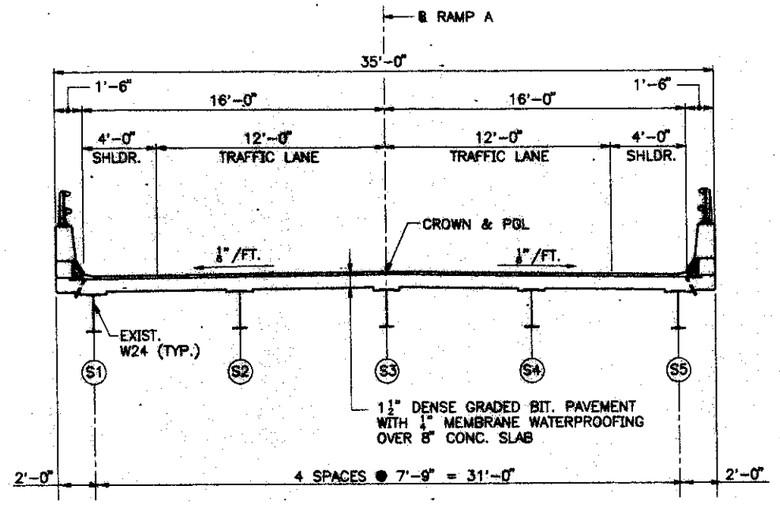


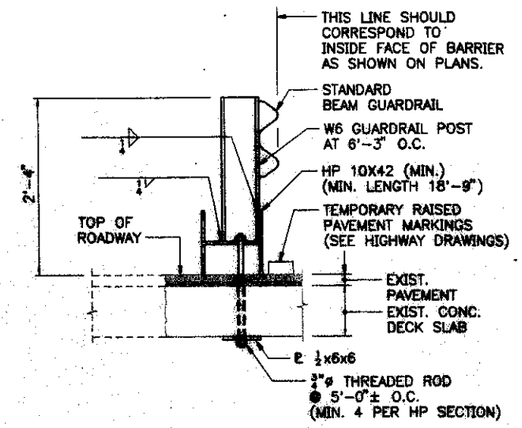
EXISTING CROSS SECTION

⅛"=1'-0"



PROPOSED CROSS SECTION

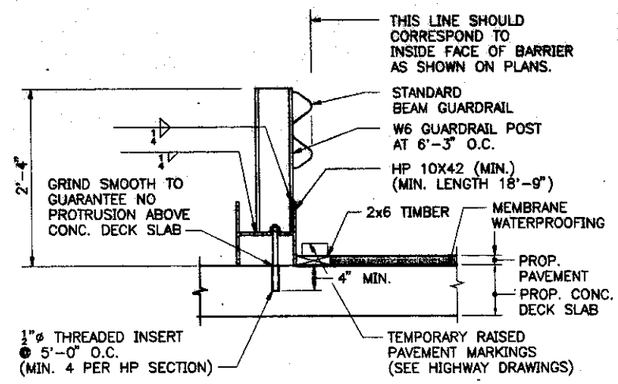
⅛"=1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL – 1

(EXISTING DECK SLAB)

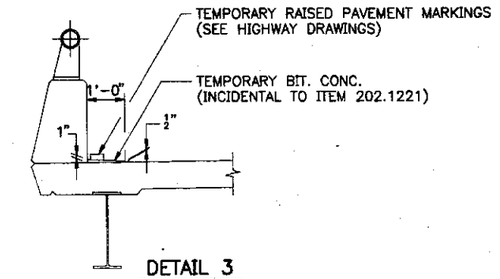
1"=1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL – 2

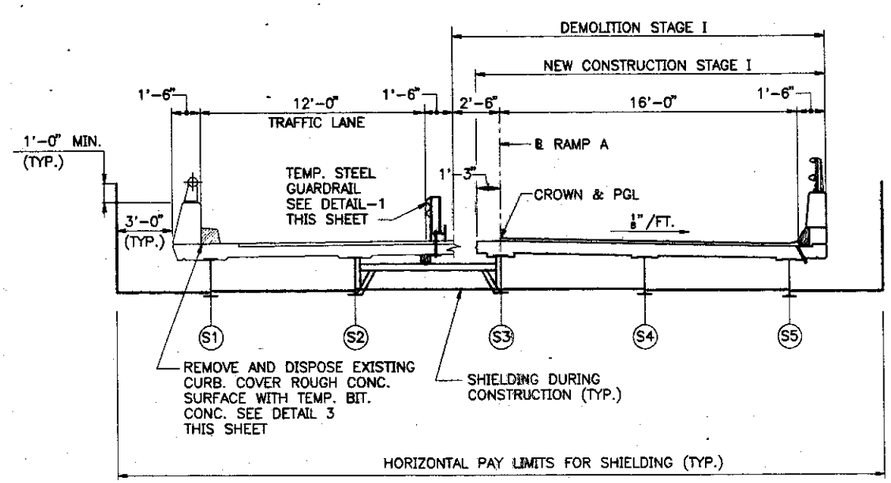
(PROPOSED DECK SLAB)

1"=1'-0"



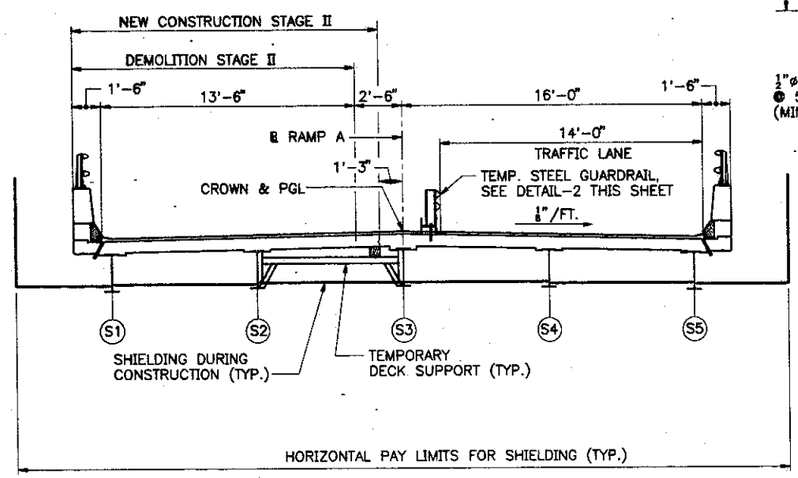
DETAIL 3

½" = 1'-0"



STAGE I CONSTRUCTION

¼"=1'-0"



STAGE II CONSTRUCTION

¼"=1'-0"

NOTES

1. ALL WORK NECESSARY TO ERECT, REMOVE AND RESET TEMPORARY STEEL GUARDRAIL SHALL BE PAID UNDER ITEM 606.172.
2. THE CONTRACTOR SHALL SUBMIT THE TERMPORARY DECK SUPPORT DESIGN FOR REVIEW AND APPROVAL.
3. THE TEMPORARY DECK SUPPORT SHALL BE DESIGNED FOR H20 LIVE LOAD.
4. ALL WORK NECESSARY TO ERECT AND REMOVE THE TEMPORARY DECK SUPPORTS SHALL BE PAYED FOR UNDER ITEM 524.361.
5. ALL CROSS SECTIONS ARE LOOKING SOUTH (UP STATION).
6. TEMPORARY RAISED PAVEMENT MARKINGS SHALL BE INCIDENTAL TO ITEM 202.1221.

Revision	By	Date		By	Date
			Designed	JFW	2/96
			Drawn	RSJ	2/96
			Checked	XPM	2/96
			In Charge Of.	RAL	

Maine Turnpike Authority
Maine Turnpike

Trans pass

RAMP A OVER MAINE CENTRAL RAILROAD
SEQUENCE OF CONSTRUCTION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. MC-3
16 of 44

(METPK08)

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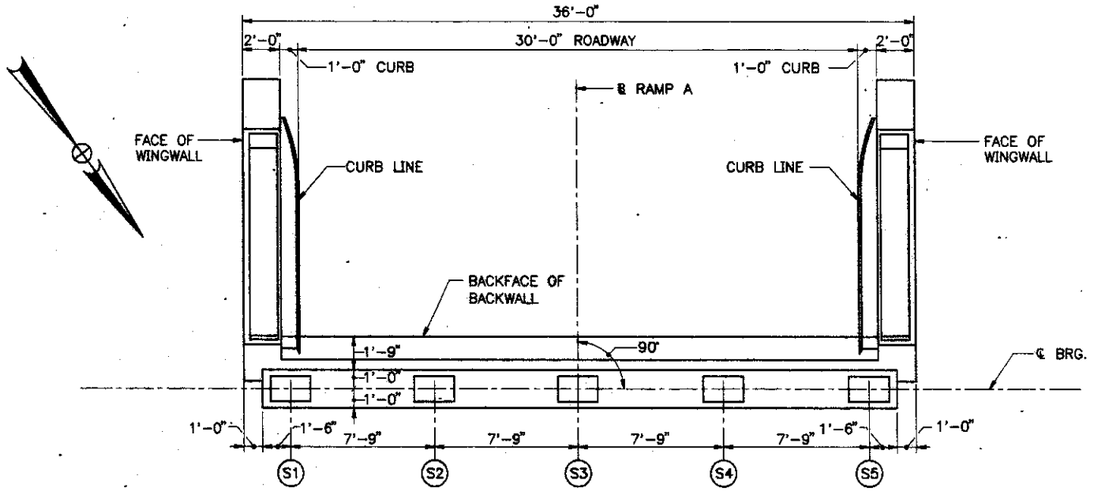
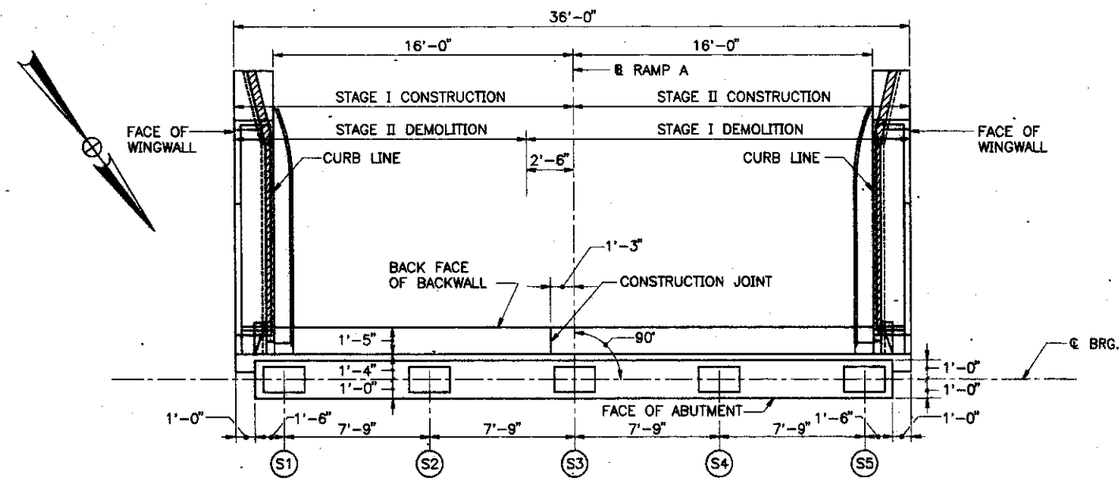
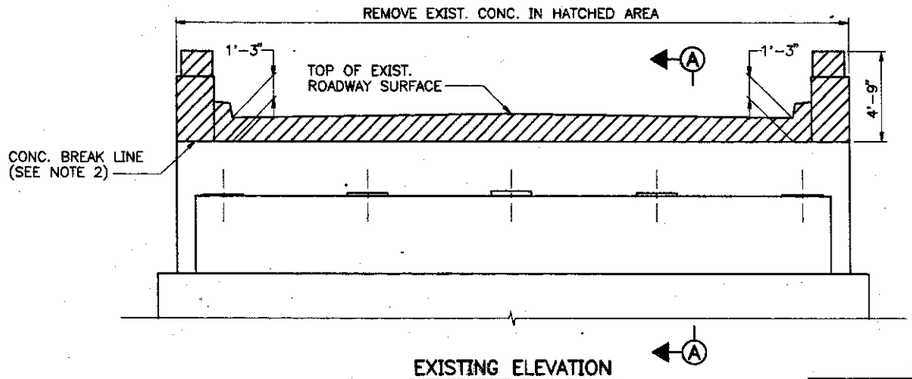


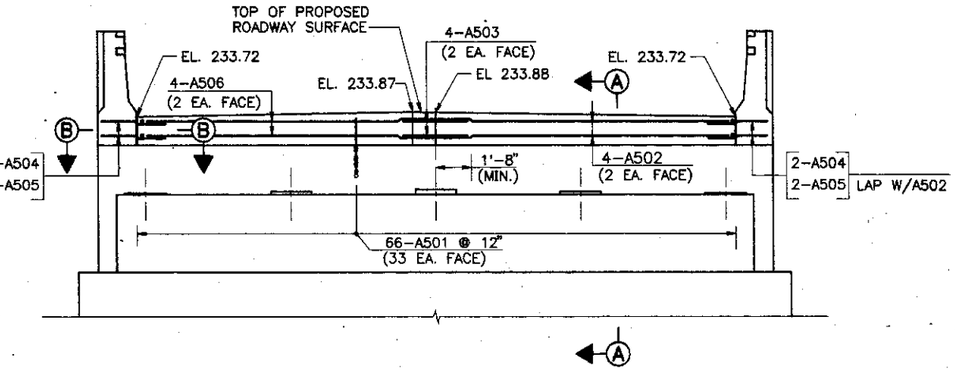
EXISTING PLAN
1/4"=1'-0"



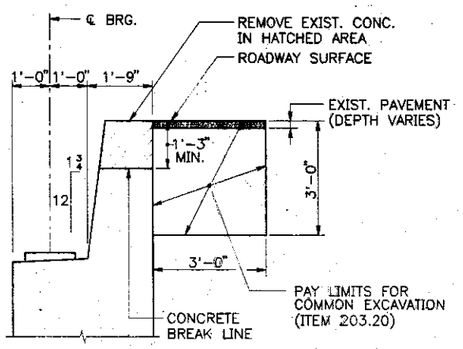
PROPOSED PLAN
1/4"=1'-0"



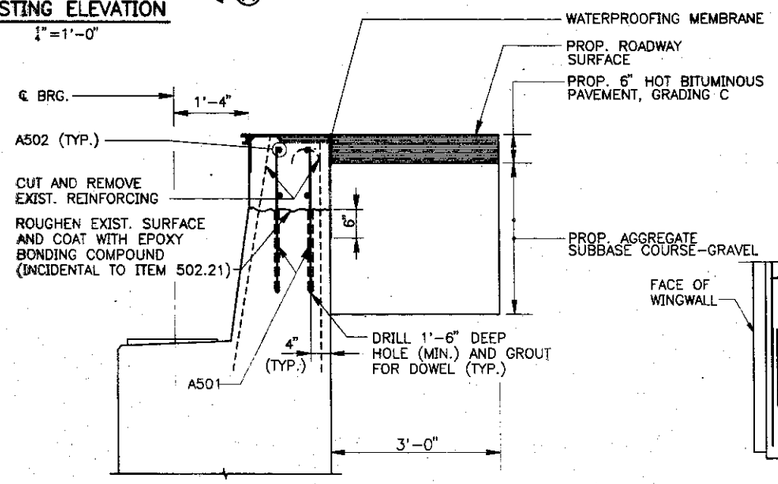
EXISTING ELEVATION
1/4"=1'-0"



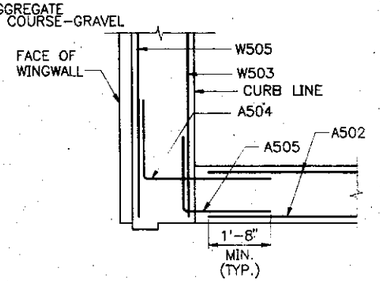
PROPOSED ELEVATION
(SOUTH ABUTMENT ONLY)
1/4"=1'-0"



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



PROPOSED SECTION A-A
(SOUTH ABUTMENT ONLY)
3/4"=1'-0"



SECTION B-B
(SE CORNER SHOWN, SW CORNER SIMILAR)
1/2"=1'-0"

NOTES

1. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET NUMBERS MC-5 AND MC-6.
2. SAW CUT 1" MINIMUM DEEP BEFORE REMOVING EXISTING CONCRETE.
3. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NUMBERS MC-11 AND MC-12.
4. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NUMBER MC-6.
5. EXCAVATION FOR BACKFILL MODIFICATION IS TO BE PAID FOR UNDER 203.20 TO THE LIMITS SHOWN.
6. ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
7. REMOVAL OF THE EXISTING ARMOR JOINT SHALL BE INCIDENTAL TO ITEM 202.1221.
8. FOR NORTH ABUTMENT DETAIL SEE SHEET NUMBER MC-8.

Revision	By	Date

	By	Date
Designed	JFW	1/96
Drawn	CAS	1/96
Checked	DMD	2/96
In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

Transpass

RAMP A OVER MAINE CENTRAL RAILROAD
ABUTMENT MODIFICATIONS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. MC-4
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(MLTPK08)

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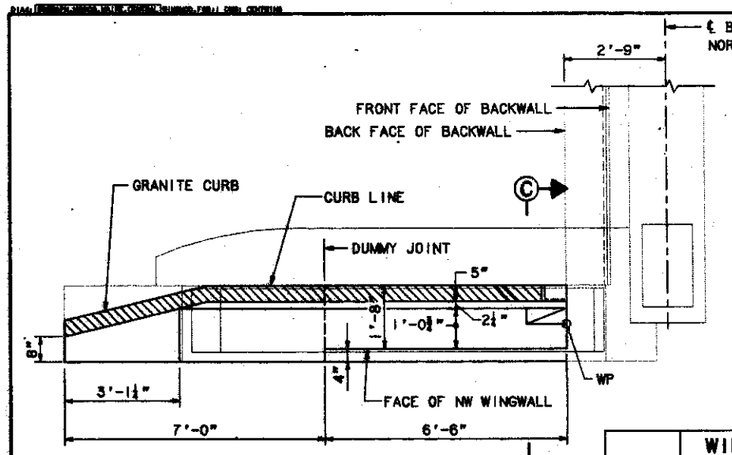
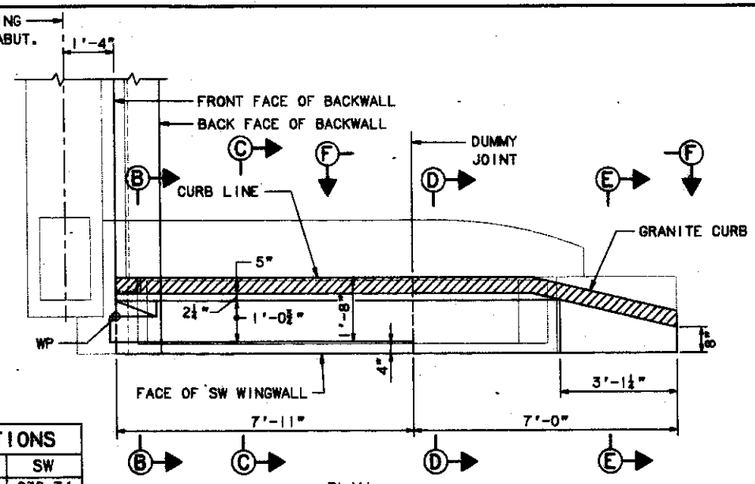
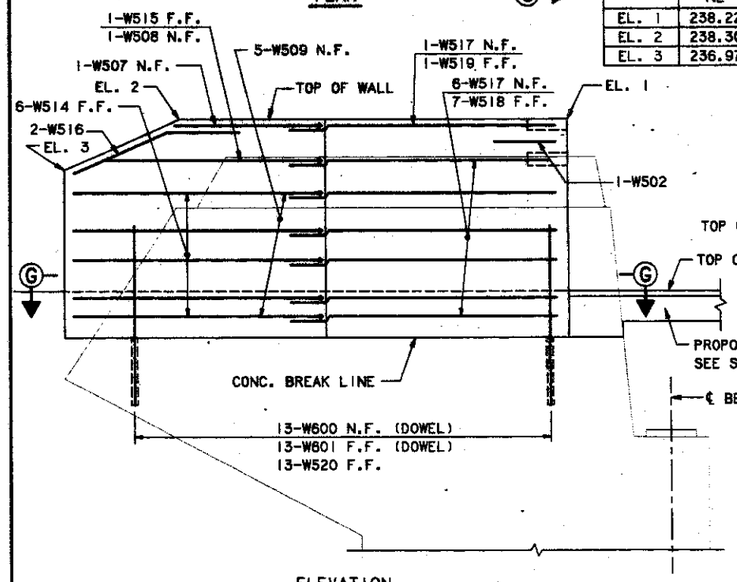




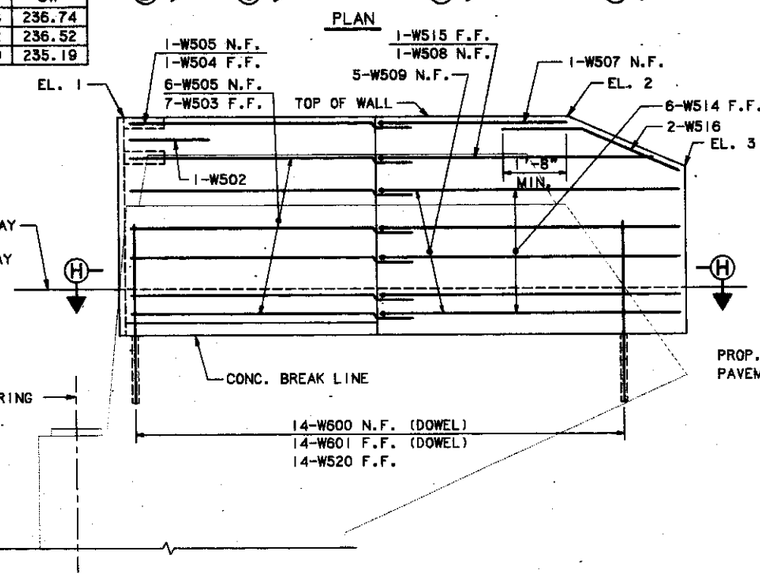
	WINGWALL ELEVATIONS			
	NE	NW	SE	SW
EL. 1	238.22	238.22	236.74	236.74
EL. 2	238.30	238.30	236.52	236.52
EL. 3	236.97	236.97	235.19	235.19



NW AND NE WINGWALL

NW WINGWALL SHOWN, NE WINGWALL SIMILAR

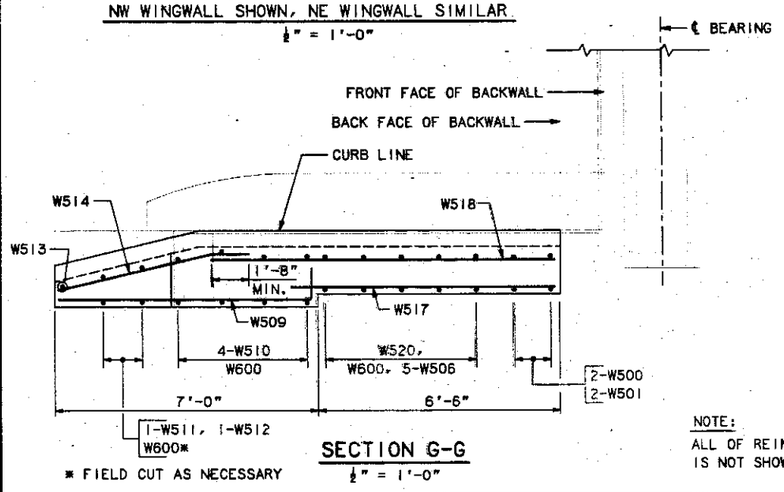
½" = 1'-0"



SW AND SE WINGWALL

SW WINGWALL SHOWN, SE WINGWALL SIMILAR

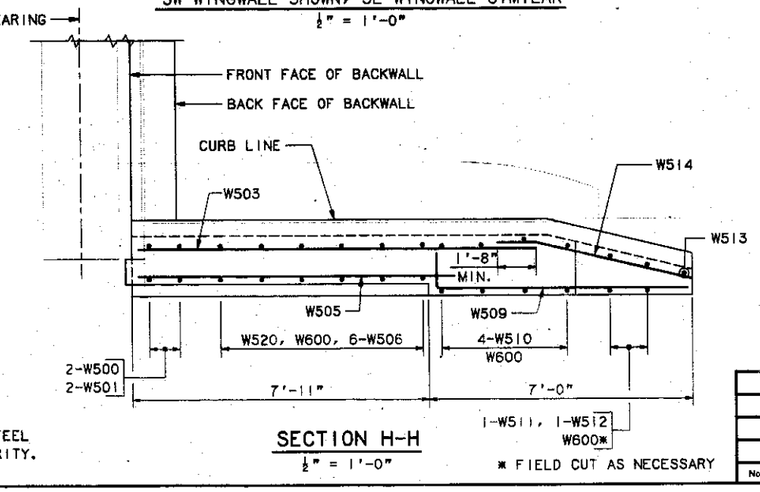
½" = 1'-0"



SECTION G-G

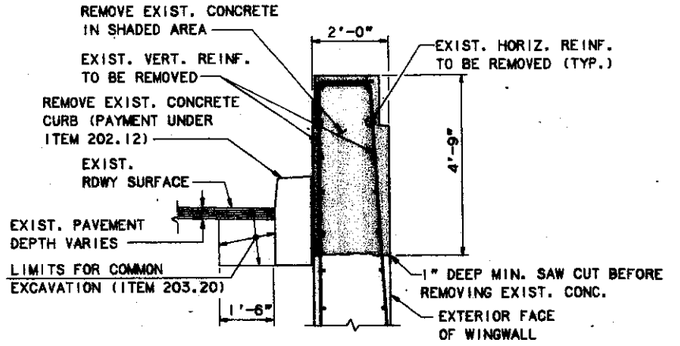
½" = 1'-0"

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



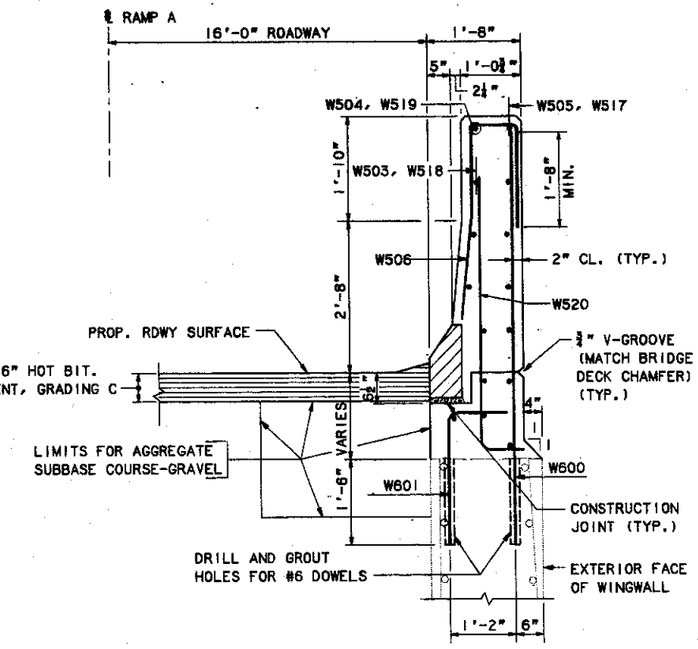
SECTION H-H

½" = 1'-0"



EXISTING SECTION C-C

½" = 1'-0"



PROPOSED SECTION C-C

¾" = 1'-0"

NOTE

1. FOR SECTIONS B-B, D-D, E-E, F-F AND GRANITE CURB DETAILS, SEE SHEET NO. MC-6

No.	Revision	By:	Date:		By:	Date:
				Designed	JFW	1/96
				Drawn	LS	1/96
				Checked	DMD	1/96
				In charge of:	RAL	

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER
MAINE CENTRAL RAILROAD
WINGWALL
MODIFICATIONS I

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. MC-5
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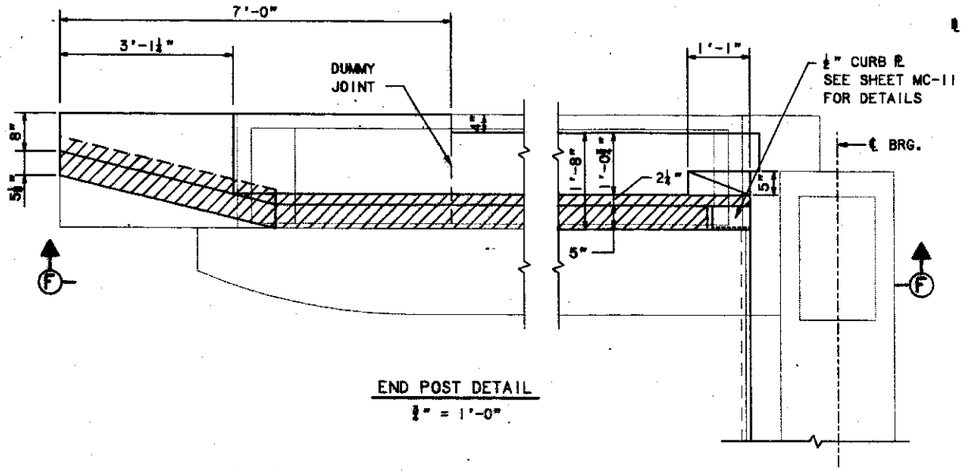
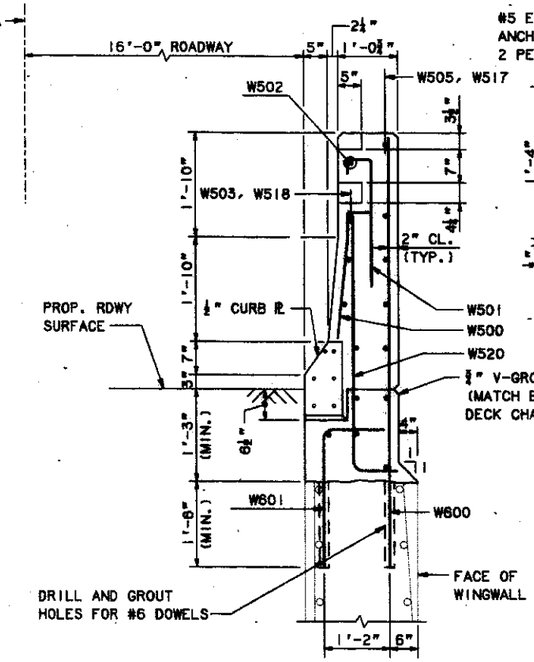
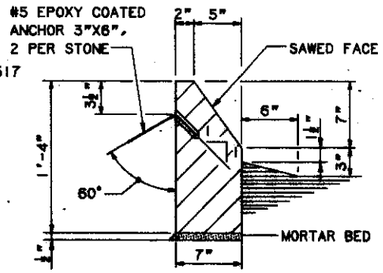
METPK04



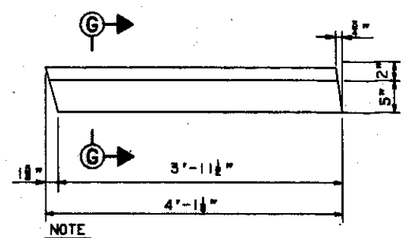
END POST DETAIL
¾" = 1'-0"



SECTION B-B
¾" = 1'-0"



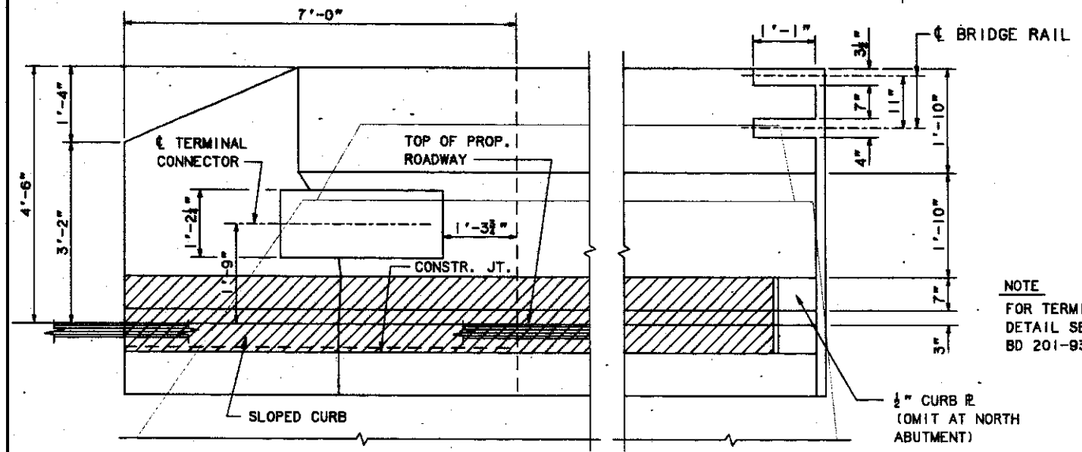
SECTION G-G
1½" = 1'-0"



NOTE
(CURB FOR N.E. & S.W. WINGWALLS SHOWN CURB FOR N.W. & S.E. WINGWALLS SIMILAR BUT OPPOSITE HAND)

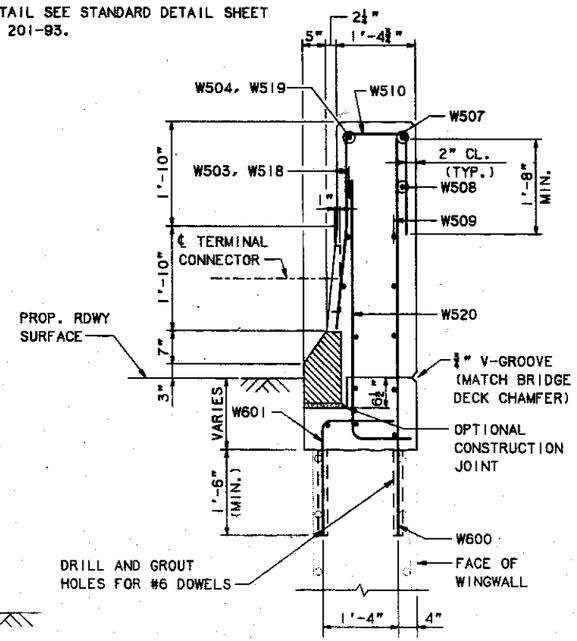
PLAN AT END POST
1" = 1'-0"

TYPICAL WINGWALL GRANITE CURB

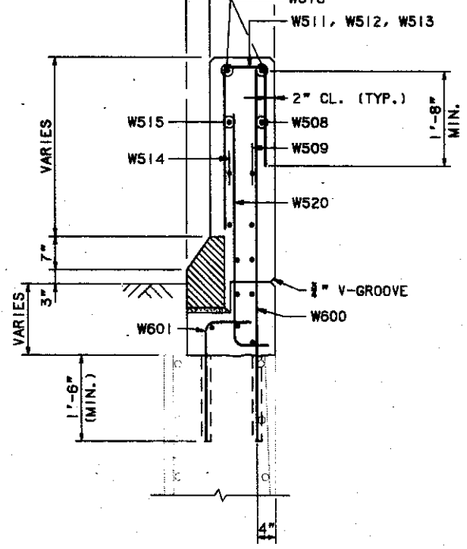


SECTION F-F
¾" = 1'-0"

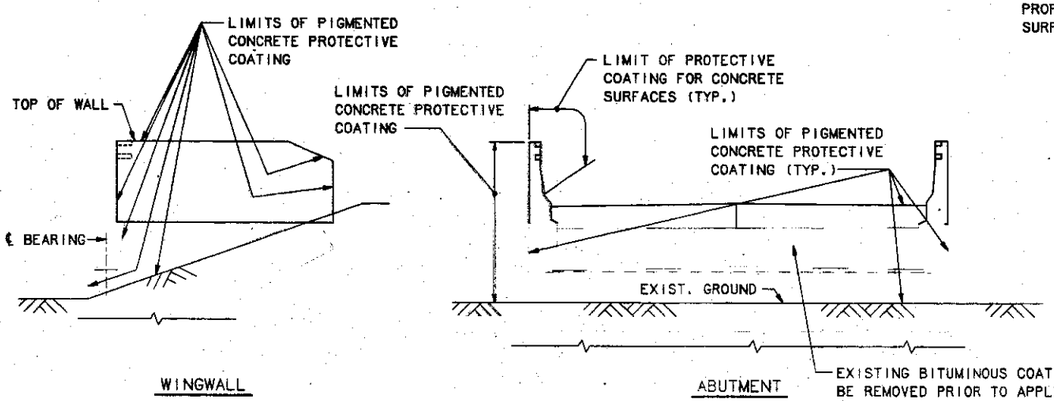
NOTE
FOR TERMINAL CONNECTOR ANCHORAGE DETAIL SEE STANDARD DETAIL SHEET BD 201-93.



SECTION D-D
¾" = 1'-0"



SECTION E-E
¾" = 1'-0"



WINGWALL ABUTMENT

LIMITS OF CONCRETE PROTECTIVE COATING AT ABUTMENT AND WINGWALLS

NO SCALE

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER
MAINE CENTRAL RAILROAD
WINGWALL
MODIFICATIONS II

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:
			By: Date:
			Designed JFW 1/96
			Drawn LS 1/96
			Checked DMD 1/96
			In charge of: RAL

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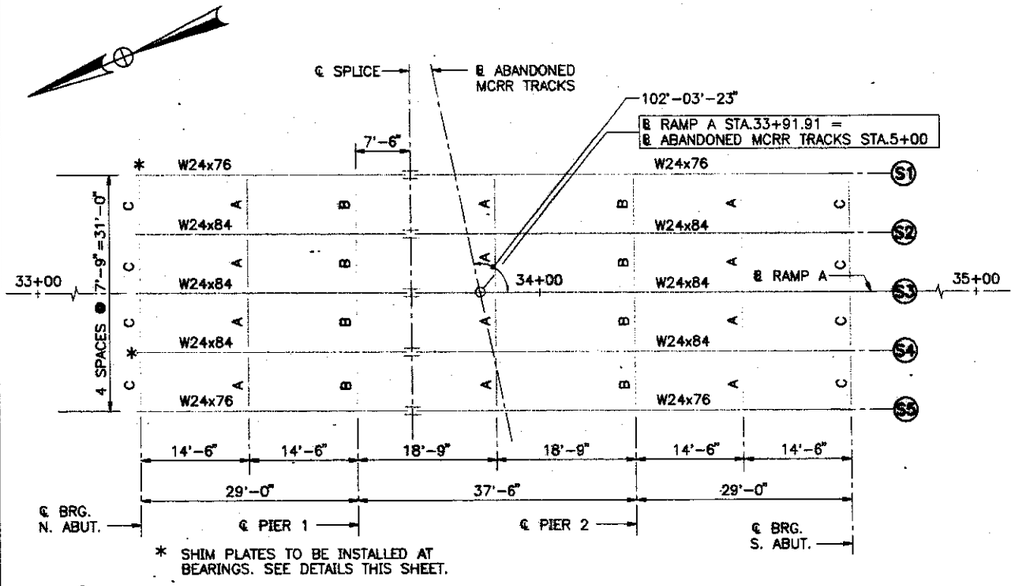
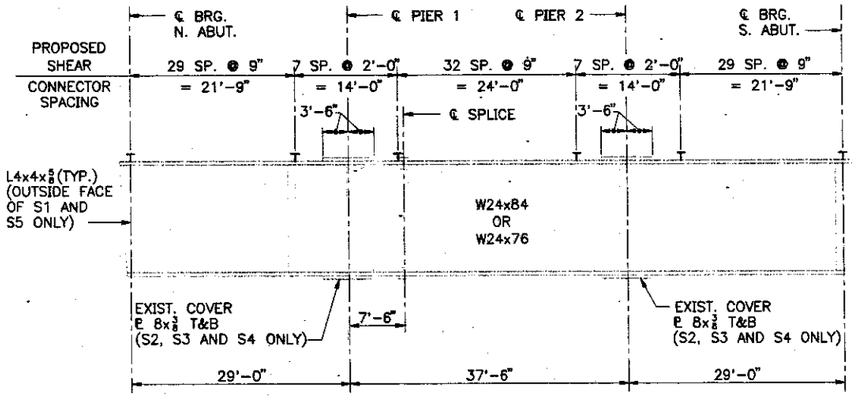
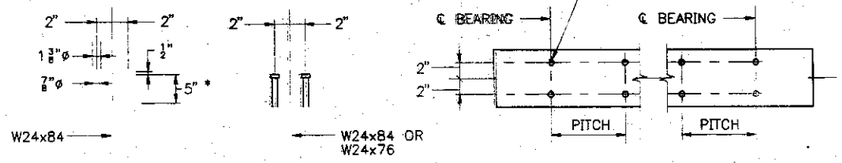


FRAMING PLAN
1"=10'



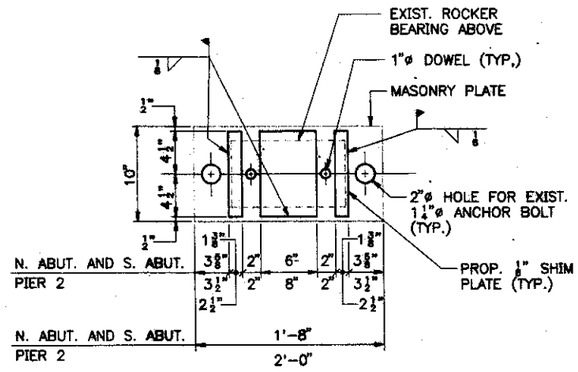
STRINGER ELEVATION
HORIZ: 1"=10'
VERT: NO SCALE

NOTES
1. SEE STRINGER ELEVATION FOR PROPOSED SHEAR CONNECTOR SPACING.
2. * 7" FOR EXTRA DEPTH HAUNCH, SEE SHEET MC-9.

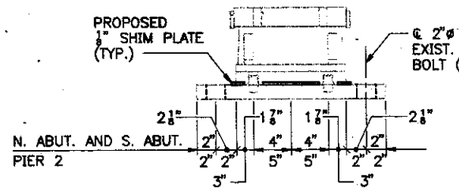


PROPOSED SHEAR CONNECTOR DETAIL
1"=1'-0"

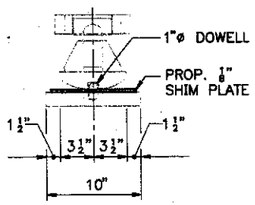
SHEAR CONNECTOR LAYOUT
1"=1'-0"



PLAN

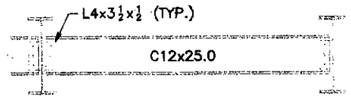


FRONT ELEVATION

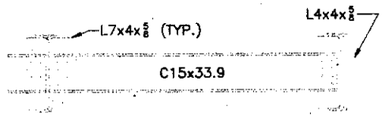


SIDE ELEVATION

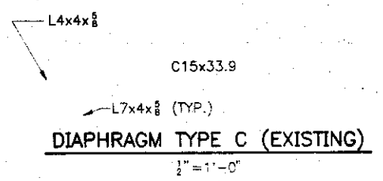
BEARING SHIM PLATE DETAILS
1½"=1'-0"



DIAPHRAGM TYPE A (EXISTING)
½"=1'-0"



DIAPHRAGM TYPE B (EXISTING)
½"=1'-0"



DIAPHRAGM TYPE C (EXISTING)
½"=1'-0"

NOTES
1. THE ACTUAL LOCATION OF BEARING SHIM PLATE MODIFICATIONS SHALL BE DETERMINED BY THE ENGINEER.
2. ALL SHIM PLATES SHALL CONFORM TO ASTM A709, GRADE 36 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

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RAMP A OVER MAINE CENTRAL RAILROAD
FRAMING PLAN AND STRINGER EVALUATION

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

Revision	By	Date

	By	Date
Designed	JFW	1/96
Drawn	CAS	1/96
Checked	HNL	2/96
In Charge Of:	RAL	

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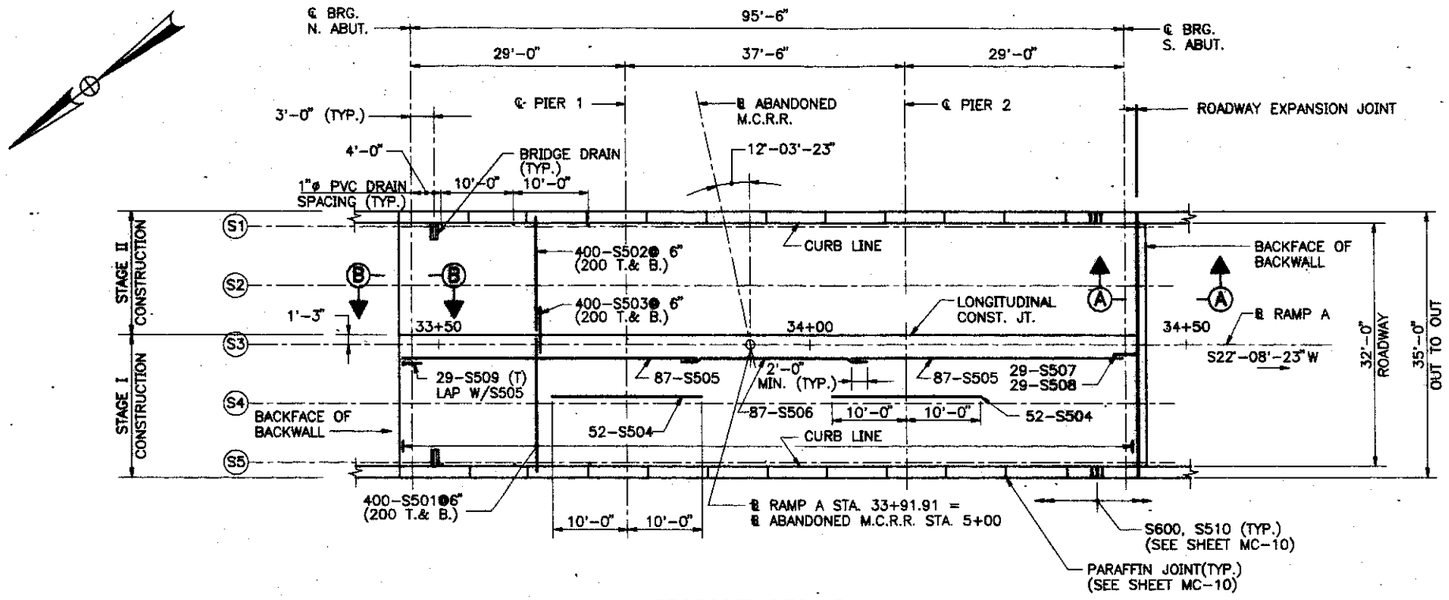
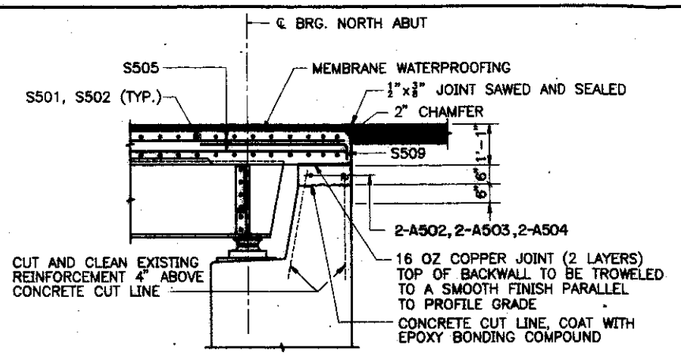
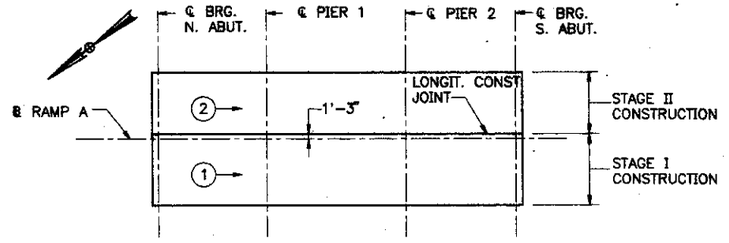


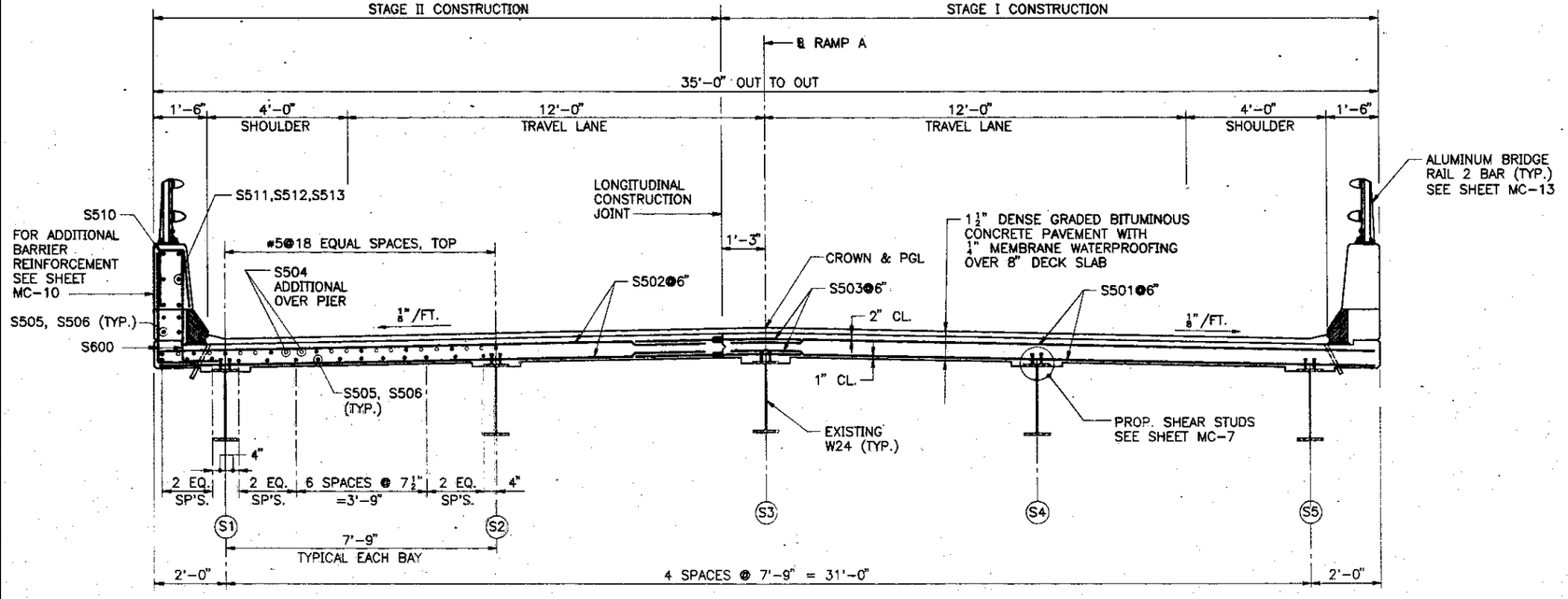
PROPOSED DECK PLAN
(SEE CROSS SECTION FOR SPACING)
1"=10'



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



DECK PLACEMENT SEQUENCE
1"=20'



PROPOSED CROSS SECTION
(LOOKING UP STATION)
1/2"=1'-0"

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE SUPERSTRUCTURE SLAB CONCRETE FOR EACH PLACEMENT SHALL BE PLACED IN ONE CONTINUOUS OPERATION. CONCRETE IN A PLACEMENT SHALL BE KEPT PLASTIC DURING THE PLACEMENT OPERATION. THE PLACEMENT RATE AND PROCEDURE OF THE SUPERSTRUCTURE SLAB CONCRETE SHALL BE APPROVED BY THE ENGINEER.
3. STAY IN PLACE FORMS ARE NOT ALLOWED TO BE USED.
4. BEGINNING PLACEMENT AT THE LOW END OF THE BLOCK.

SUPERSTRUCTURE NOTES

1. ADJUST REINFORCING STEEL TO FIT AROUND DRAINS IN A MANNER APPROVED APPROVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS.
2. FOR STEEL REINFORCING SCHEDULE, SEE SHEET NO. MC-14.
3. FOR SCUPPER AND DRAIN DETAILS SEE SHEET NO. MC-9.
4. FOR SLAB DETAILS, SEE SHEET NO. MC-9 AND MC-10.
5. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NO. MC-11 AND MC-12.
6. FOR PARAFFIN JOINT AND RAIL POST SPACING, SEE SHEET NO. MC-10.
7. FOR SECTION A-A SEE SHEET NO. MC-12.
8. THE CONCRETE DECK SURFACE SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.

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RAMP A OVER MAINE CENTRAL RAILROAD
DECK PLAN AND SECTION

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

Revision	By	Date		By	Date
			Designed	JFW	1/96
			Drawn	RSJ	1/96
			Checked	DMD	2/96
			In Charge Of	RAL	

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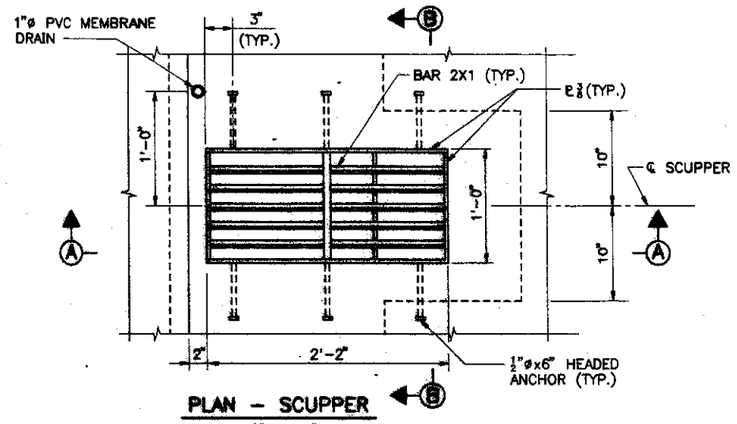
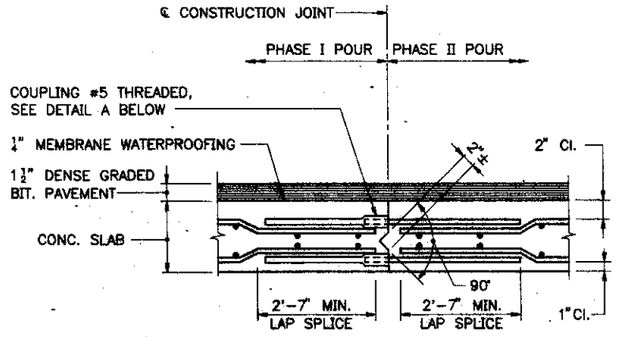
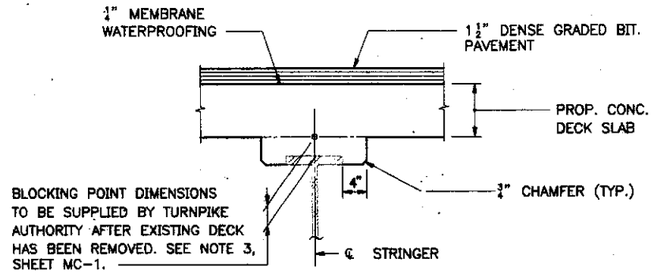


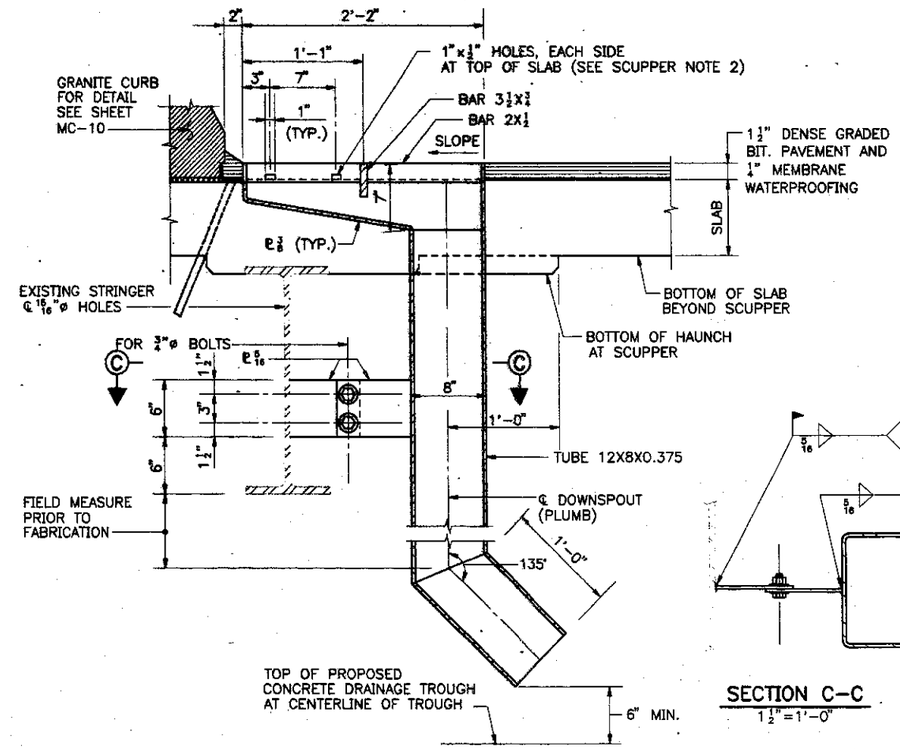
PLAN – SCUPPER
1½"=1'-0"



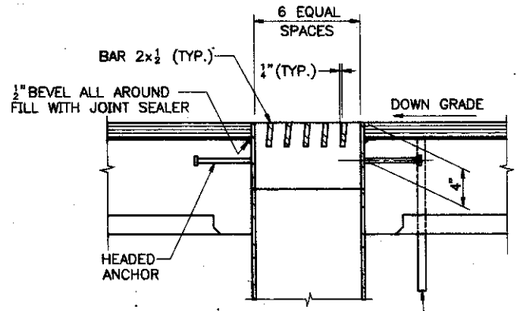
LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



BLOCKING POINT DETAIL
1"=1'-0"



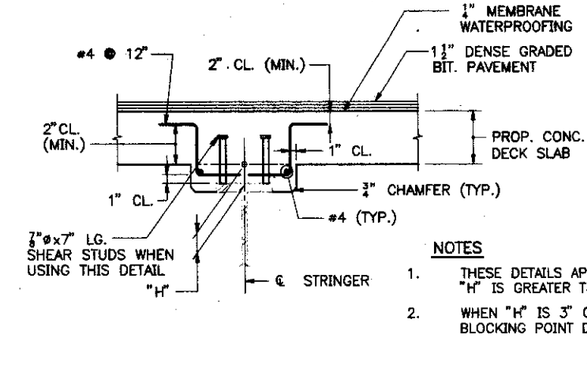
SECTION A–A
1½"=1'-0"



SECTION B–B
1½"=1'-0"

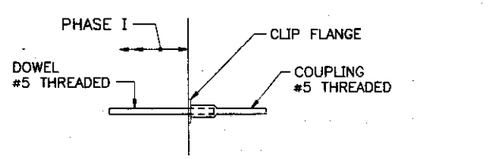
FIELD REPAIR GALVANIZATION WITH ZINC RICH PAINT ACCORDING TO SECTION 506 OF THE STANDARD SPECIFICATIONS. (PAYMENT INCIDENTAL TO ITEM 502.261).

SECTION C–C
1½"=1'-0"

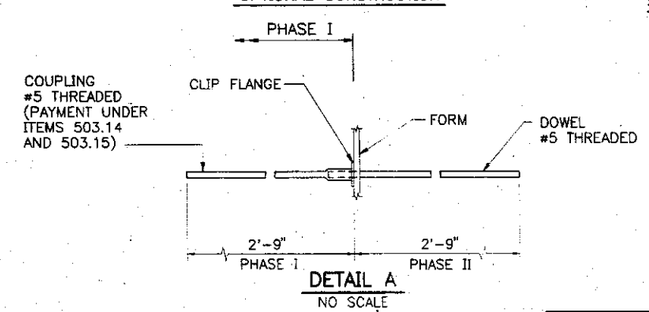


NOTES
1. THESE DETAILS APPLY ONLY WHEN "H" IS GREATER THAN 3".
2. WHEN "H" IS 3" OR LESS, SEE BLOCKING POINT DETAIL.

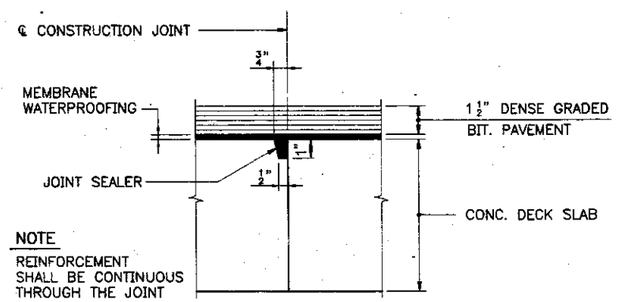
EXTRA DEPTH HAUNCH DETAILS
1"=1'-0"



OPTIONAL CONSTRUCTION



DETAIL A
NO SCALE



NOTE
REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT

TRANSVERSE CONSTRUCTION JOINT DETAIL
3"=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 SHALL BE INCIDENTAL TO CONTRACT ITEM 502.261.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET MC-8.

Revision	By	Date

	By	Date
Designed	JFW	1/96
Drawn	RDF	1/96
Checked	DMD	2/96
In Charge Of	RAL	

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER MAINE CENTRAL RAILROAD
SLAB DETAILS I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

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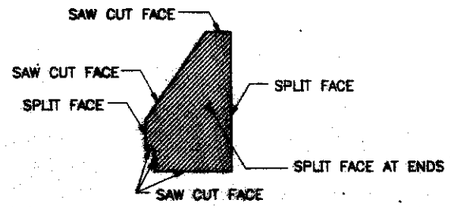
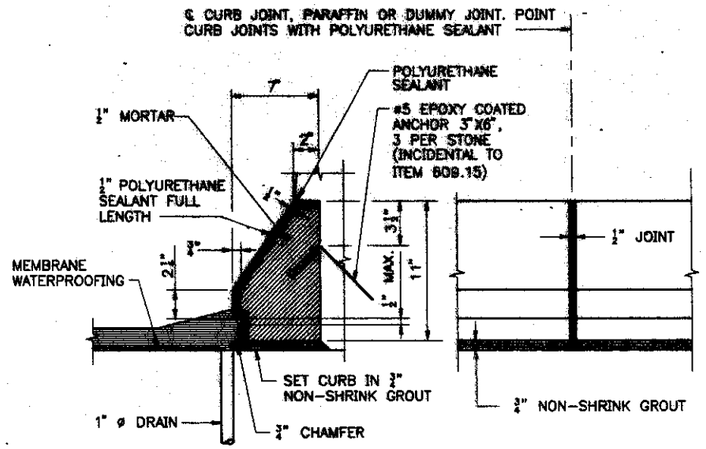
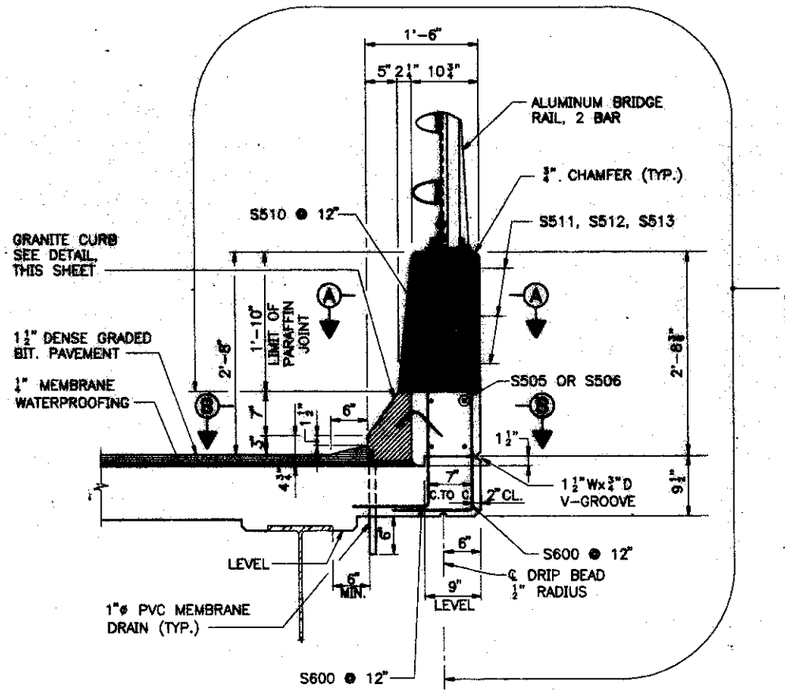


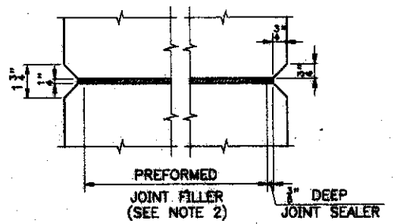
CURB CUT DETAIL
2"=1'-0"



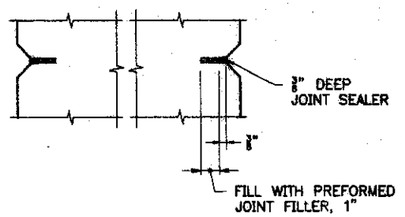
GRANITE CURB DETAIL
2"=1'-0"



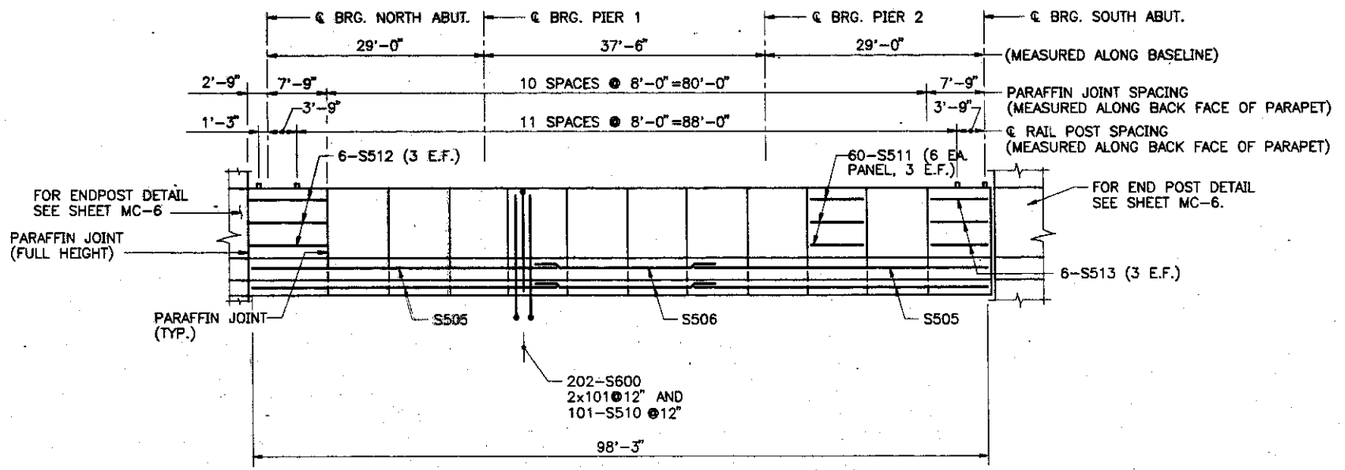
PARAPET DETAIL
1"=1'-0"



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



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



PARAPET ELEVATION
(EAST ELEVATION SHOWN, WEST ELEVATION SIMILAR)
HORIZ. 1"=10'
VERT. 1"=2'

PARAFFIN JOINT NOTES
1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1751.
3. JOINT SEALER SHALL BE SIKA FLEX 1A.
4. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.262, STRUCTURAL CONCRETE ROADWAY AND PARAPET ON STEEL BRIDGES.
5. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN JOINTS.

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER
MAINE CENTRAL RAILROAD
SLAB DETAILS II

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

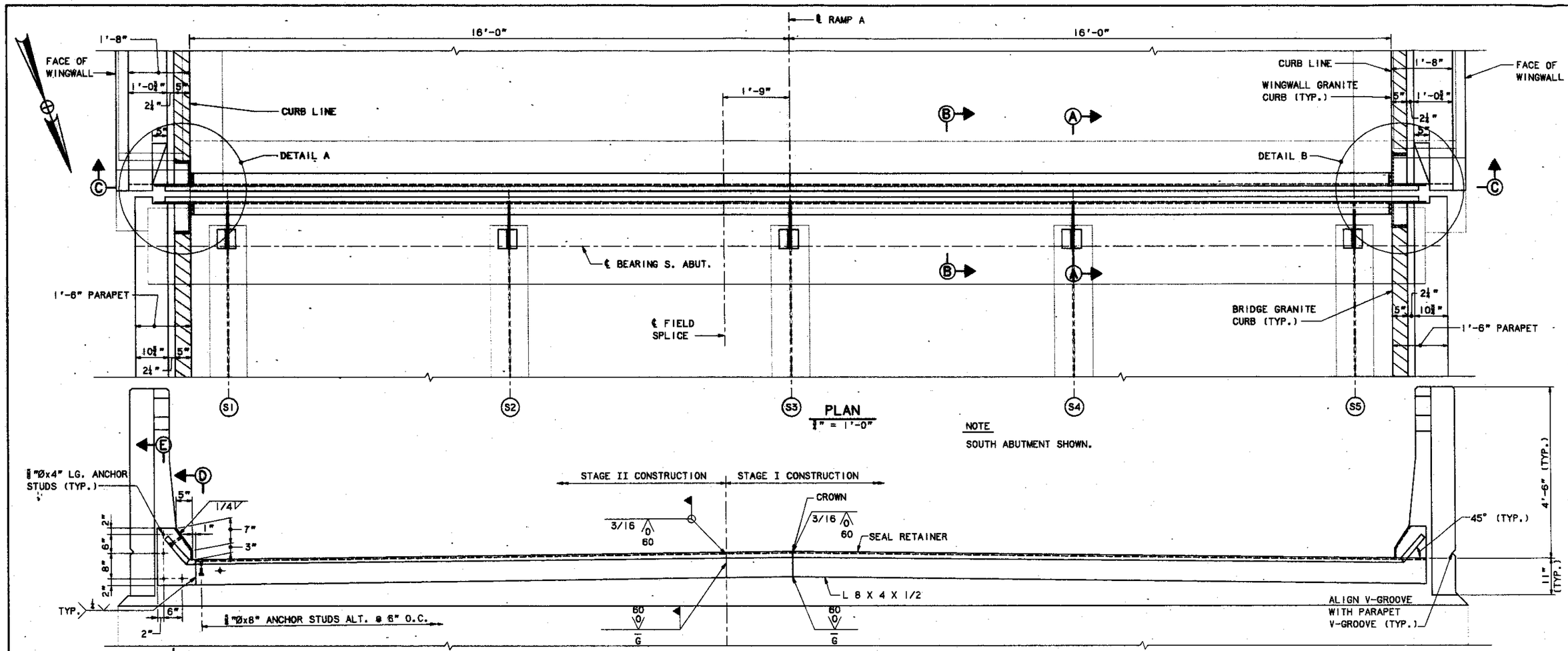
Revision	By	Date	In Charge Of	RAL
			Designed	JFW 1/96
			Drawn	JFT 1/96
			Checked	DMD 2/96

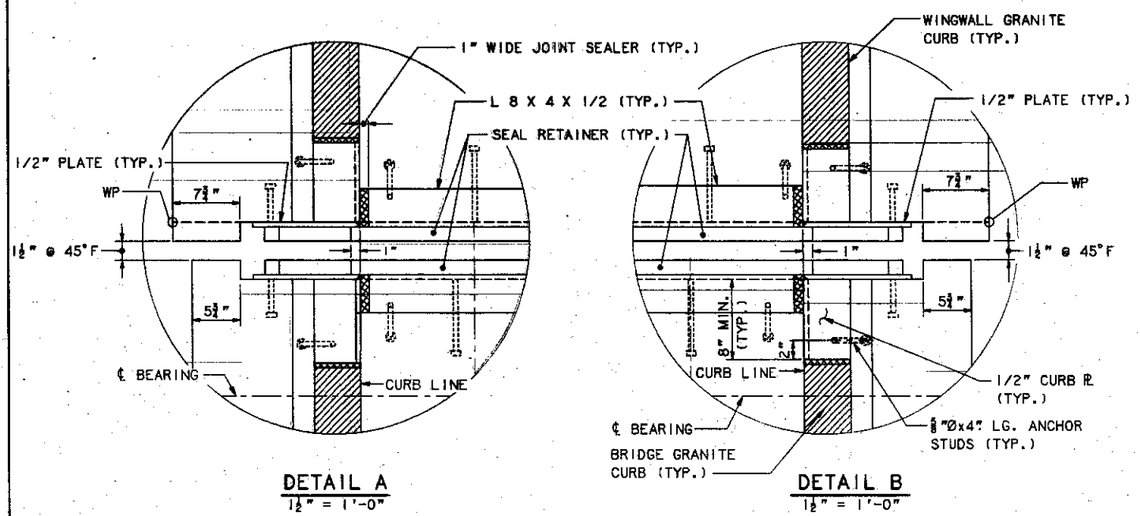
Contract 96.7

Sheet No. MC-10
23 of 44

(METPK08)

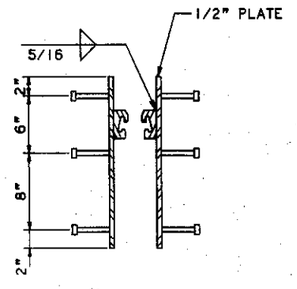
M:\B09009\HR\DWGS\MC-06 02/07/96 16:49



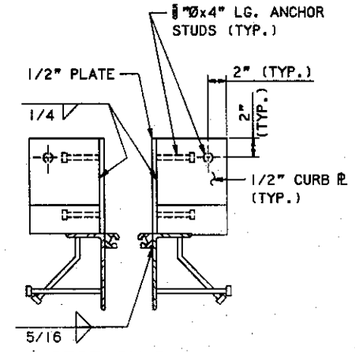


DETAIL A
1½" = 1'-0"

DETAIL B
1½" = 1'-0"



SECTION E-E
1½" = 1'-0"



SECTION D-D
1½" = 1'-0"

SECTION C-C
¾" = 1'-0"

NOTES

1. CONSTRUCTION STAGES SHOWN RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE DECK AND NORTH ABUTMENT SHALL BE CONSTRUCTED ACCORDING TO THE STAGE CONSTRUCTION AS SHOWN ON SHEET MC-3. THE SOUTH ABUTMENT SHALL BE CONSTRUCTED AS SHOWN ON MC-4.
2. FOR SECTIONS A-A AND B-B SEE SHEET NO. MC-12.
3. EXPANSION JOINT AT SOUTH ABUTMENT SHOWN. DECK IS CONTINUOUS OVER THE BACKWALL AT THE NORTH ABUTMENT.

Maine Turnpike Authority
Maine Turnpike

Trans Compass

RAMP A OVER
MAINE CENTRAL RAILROAD
EXPANSION JOINT DETAILS I

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

No.	Revision	By:	Date:

	By:	Date:
Designed	JFW	1/96
Drawn	RJT	1/96
Checked	DMD	1/96
In charge of:	RAL	

Contract 96.7

Sheet No. MC-11
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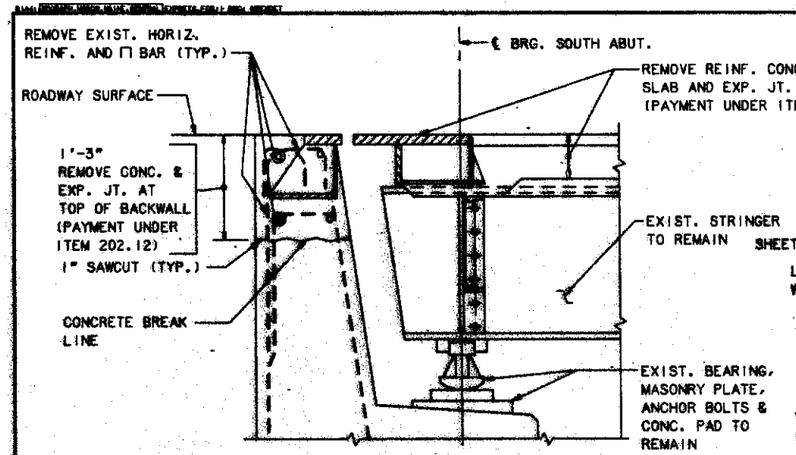
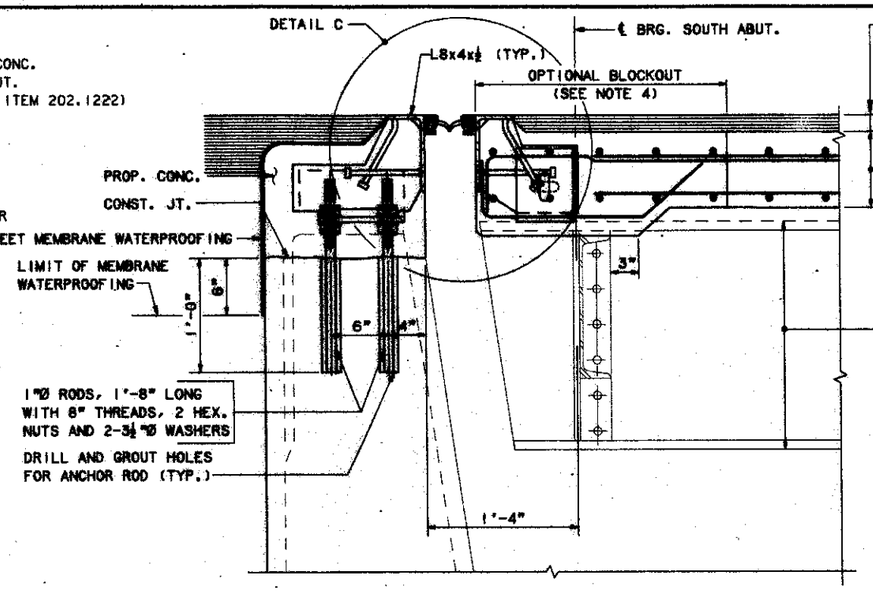
METPK04



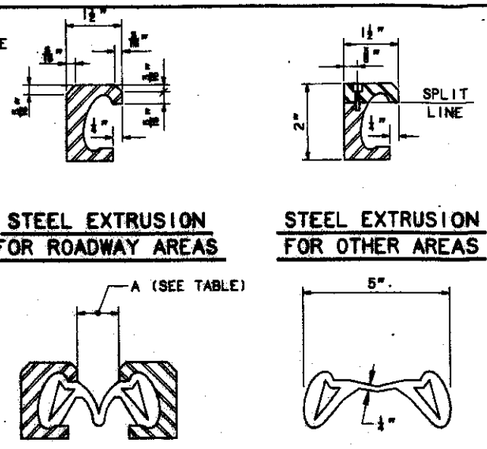
EXISTING SECTION A-A

1" = 1'-0"



PROPOSED SECTION A-A

1½" = 1'-0"

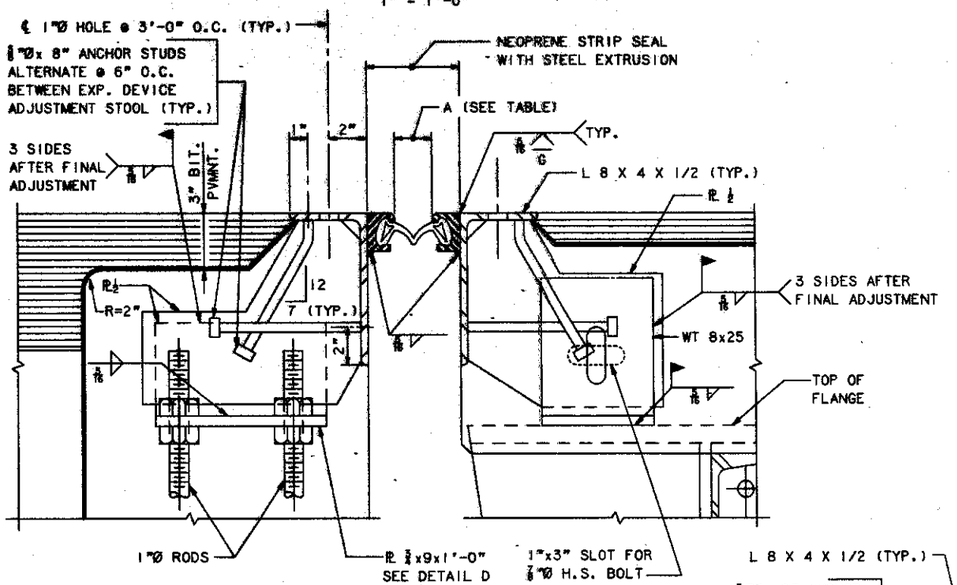


STEEL EXTRUSION FOR ROADWAY AREAS

STEEL EXTRUSION FOR OTHER AREAS

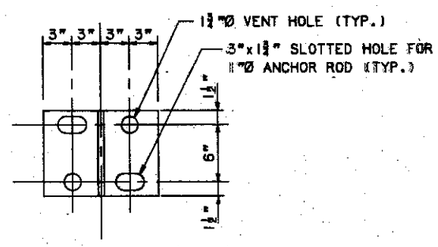
STRIP SEAL DETAILS

HALF SIZE



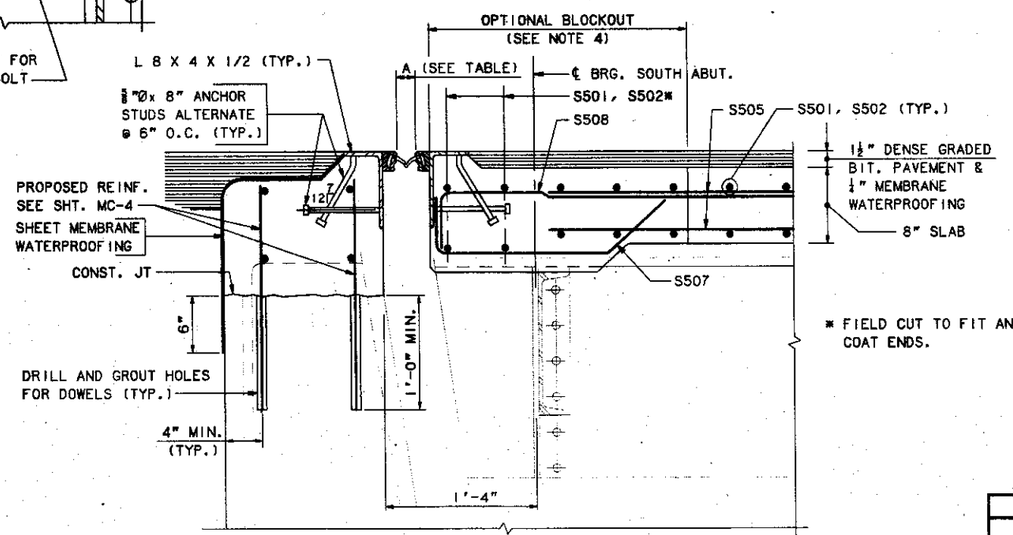
DETAIL C

3" = 1'-0"



DETAIL D

1½" = 1'-0"



PROPOSED SECTION B-B

1½" = 1'-0"

SEAL OPENING TABLE (DIM "A")								
TEMP.	0°F	15°F	30°F	45°F	60°F	75°F	90°F	105°F
S. ABUT.	1⅜	1⅜	1⅜	1¼	1⅛	1⅛	1¼	1⅜

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 1½ 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. SEE TABLE FOR OPENING DIMENSION. OPENING IS TO BE MEASURED PARALLEL TO THE CENTER LINE OF CONSTRUCTION.
4. THE SLAB CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY. SEE SECTION 520.06 OF THE STANDARD SPECIFICATIONS.
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 AND STEEL EXTRUSIONS 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 EMBEDDED IN CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND.

* FIELD CUT TO FIT AND EPOXY COAT ENDS.

No.	Revision	By:	Date:

	By:	Date:
Designed	JFW	1/96
Drawn	RJT	1/96
Checked	DMD	1/96
In charge of:	RAL	

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER
MAINE CENTRAL RAILROAD
EXPANSION JOINT
DETAILS II

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

Contract 96.7

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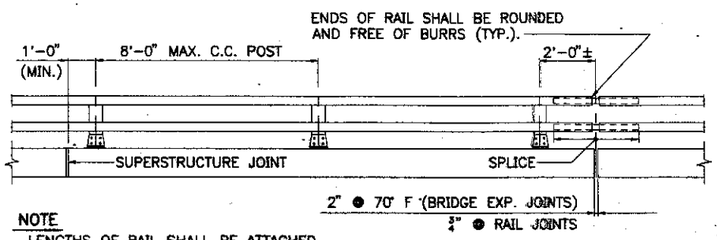
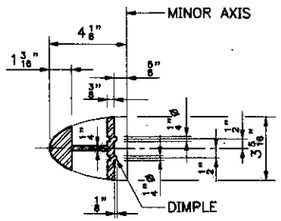
METPK04

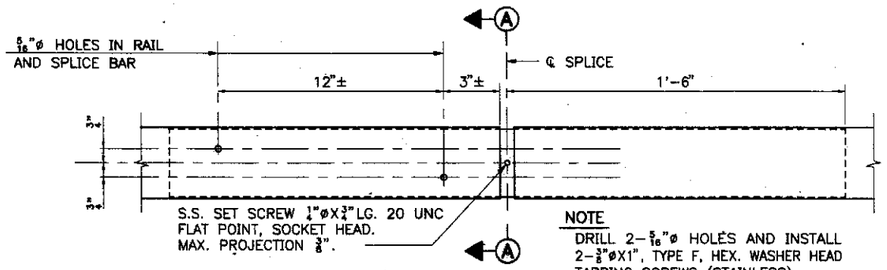


NOTE
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS. BRIDGE PLANS.

RAILING – ELEVATION
3/8"=1'-0"

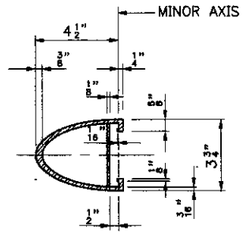


SECTION A–A (RAIL)
3"=1'-0"

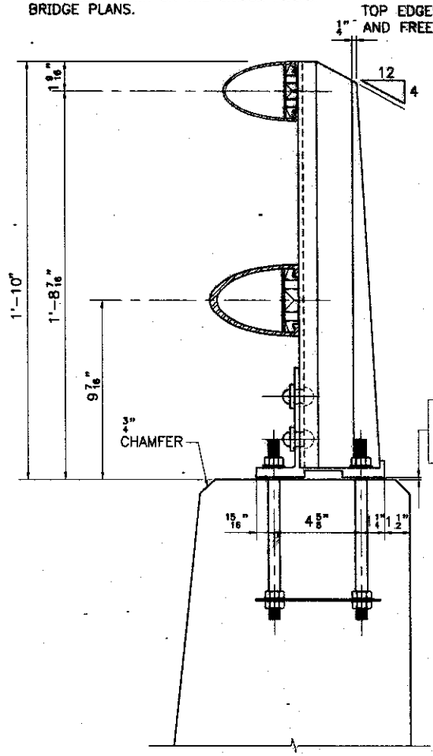


NOTE
DRILL 2–5/16"ø HOLES AND INSTALL 2–3/8"øX1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).

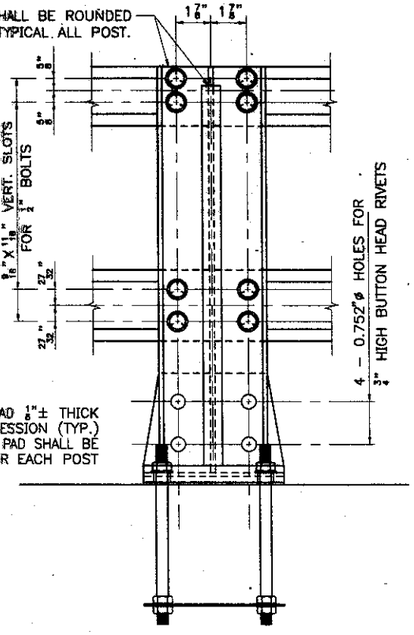
SPLICE DETAIL
3"=1'-0"



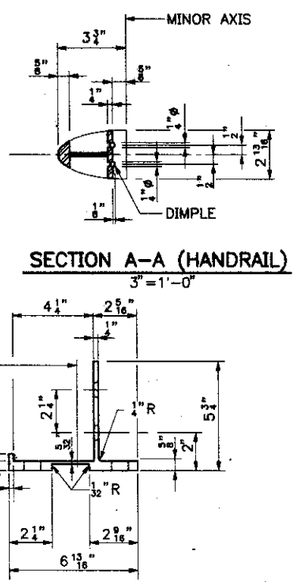
RAIL MEMBER
3"=1'-0"



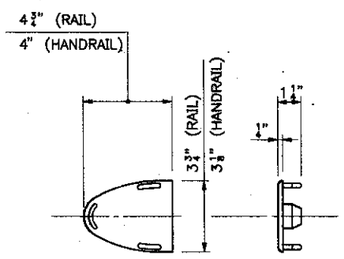
BRIDGE RAILING (ASSEMBLY)
3"=1'-0"



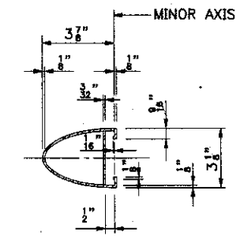
OUTSIDE ELEVATION OF POST
3"=1'-0"



SECTION A–A (HANDRAIL)
3"=1'-0"



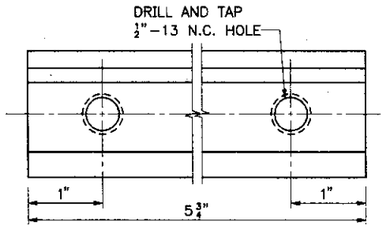
CAST ALUMINUM DRIVE FIT RAIL CAP
3"=1'-0"

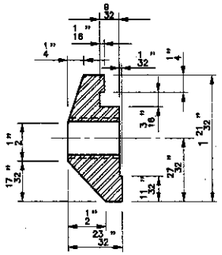


HANDRAIL MEMBER
3"=1'-0"

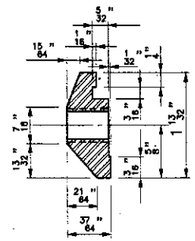
POST BASE SECTION
3"=1'-0"

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



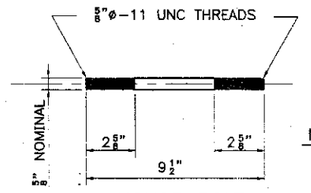


FOR RAIL MEMBER



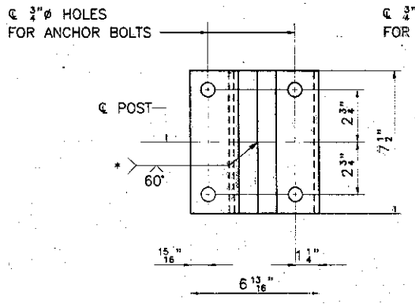
FOR HANDRAIL

CLAMP BAR DETAILS
FULL SIZE

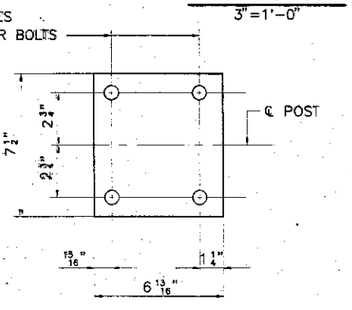


ANCHOR BOLT
3"=1'-0"

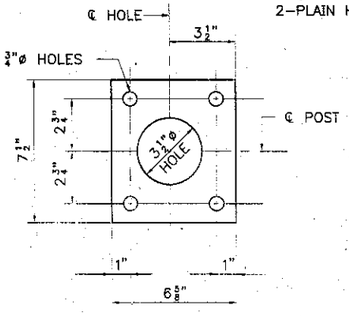
NOTE
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.



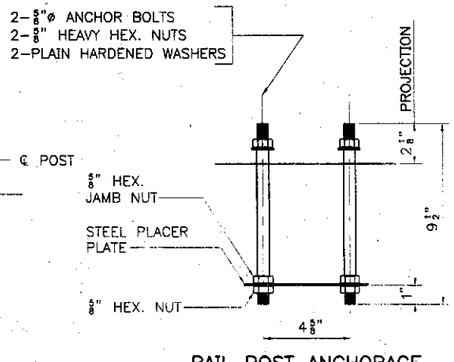
POST BASE (BOTTOM VIEW)
3"=1'-0"



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 AND ANCHOR BOLTS SHALL BE GALVANIZED.

Maine Turnpike Authority
Maine Turnpike

Trans pass

RAMP A OVER
MAINE CENTRAL RAILROAD
ALUMINUM BRIDGE RAIL DETAILS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Revision	By	Date

	By	Date
Designed	JFW	1/96
Drawn	RDF	1/96
Checked	RJD	1/96
In Charge Of	RAL	

Contract 96.7

Sheet No. MC–13
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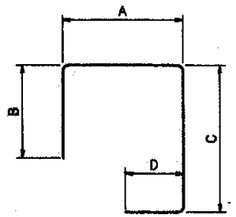
(MET1PK03B)

M:\B09009\HR\DWGS\MC-04 02/07/96 15:45

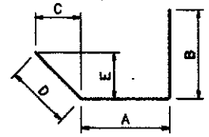
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
SOUTH ABUTMENT MODIFICATIONS											
A501	5	66	2 - 7	STR							ABUTMENT DOWELS
A502	5	6	16 - 11	STR							ABUTMENT BACKWALL
A503	5	6	4 - 4	113	2 - 2	2 - 2					ABUTMENT BACKWALL
A504	5	4	5 - 0	118	3 - 4	1 - 8					ABUTMENT CORNER
A505	5	4	3 - 8	118	2 - 0	1 - 8					ABUTMENT CORNER
A506	5	6	14 - 5	STR							ABUTMENT BACKWALL

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
DECK											
S501	5	400	18 - 5	STR							TRANSVERSE T & B
S502	5	400	15 - 11	STR							TRANSVERSE T & B
S503	5	400	5 - 6	113	2 - 9	2 - 9					TRANSVERSE COUPLE
S504	5	104	20 - 0	STR							ADDITIONAL OVER PIERS
S505	5	174	40 - 0	STR							LONGITUDINAL
S506	5	87	22 - 6	STR							LONGITUDINAL
S507	5	29	2 - 9	109	1 - 4	0 - 6	0 - 8	0 - 11	0 - 8		SOUTH ABUT HAUNCH
S508	5	29	3 - 6	118	3 - 0	0 - 6					SOUTH ABUT HAUNCH
S509	5	29	4 - 8	118	4 - 0	0 - 8					NORTH ABUT HAUNCH
S510	5	202	3 - 9	124A	0 - 6	1 - 8	0 - 0	1 - 7			PARAPET TRANSVERSE
S511	5	120	7 - 8	STR							PARAPET LONGIT
S512	5	12	10 - 2	STR							END PANEL - N. ABUT
S513	5	12	8 - 5	STR							END PANEL - S. ABUT
S600	6	404	4 - 1	118	3 - 1	1 - 0					PARAPET VERTICAL

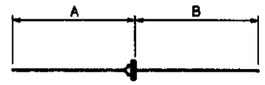
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
WINGWALL MODIFICATIONS											
W500	5	8	2 - 7	124A	0 - 5	0 - 0	0 - 5	1 - 9			FRONTFACE - VERTICAL
W501	5	8	2 - 11	102	0 - 5	0 - 3	2 - 3				FRONTFACE - VERTICAL
W502	5	4	2 - 0	STR							FRONTFACE - HORIZ
W503	5	14	10 - 9	STR							FRONTFACE - HORIZ
W504	5	2	9 - 8	STR							FRONTFACE - TOP - HORIZ
W505	5	14	8 - 6	STR							BACKFACE - HORIZ
W506	5	22	6 - 1	124A	0 - 8	2 - 0	1 - 8	1 - 9			FRONTFACE - VERT
W507	5	4	4 - 6	118	3 - 8	0 - 10					BACKFACE - HORIZ
W508	5	4	6 - 0	118	5 - 2	0 - 10					BACKFACE - HORIZ
W509	5	20	7 - 6	118	6 - 8	0 - 10					BACKFACE - HORIZ
W510	5	16	6 - 5	124A	1 - 0	2 - 0	1 - 8	1 - 9			FRONTFACE - VERT
W511	5	4	5 - 9	102	0 - 10	2 - 0	2 - 11				FRONTFACE - VERT
W512	5	4	5 - 2	102	0 - 8	2 - 0	2 - 6				FRONTFACE - VERT
W513	5	4	4 - 6	102	0 - 6	2 - 0	2 - 0				FRONTFACE - VERT
W514	5	24	5 - 9	119	2 - 0	3 - 9	3 - 8				FRONTFACE - HORIZ
W515	5	4	4 - 9	119	2 - 0	2 - 8	2 - 7				FRONTFACE - HORIZ
W516	5	8	4 - 10	119	1 - 8	3 - 2	2 - 11				SLOPED FACE - TOP
W517	5	14	7 - 0	STR							BACKFACE - HORIZ
W518	5	14	9 - 4	STR							FRONTFACE - HORIZ
W519	5	2	8 - 3	STR							FRONTFACE - TOP - HORIZ
W520	5	54	4 - 11	118	4 - 1	0 - 10					VERTICAL
W600	6	54	7 - 0	STR							BACKFACE - VERT - DOWEL
W601	6	54	3 - 1	118	2 - 1	1 - 0					FRONTFACE - VERT - DOWEL



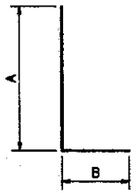
TYPE 102



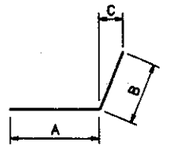
TYPE 109



TYPE 113



TYPE 118



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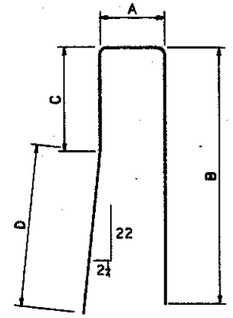

TYPE 124A

Maine Turnpike Authority
Maine Turnpike

Trans Compass

RAMP A OVER
MAINE CENTRAL RAILROAD
REINFORCING
SCHEDULE

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

No.	Revision	By:	Date:

	By:	Date:
Designed	JFW	/96
Drawn	RJT	/96
Checked	DMD	/96
In charge of: RAL		

Contract 96.7

Sheet No. MC-14
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METPK04

SPECIFICATIONS

DESIGN

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 1992 AND INTERIM SPECIFICATIONS 1995.

CONTRACT

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, REVISION OF APRIL 1995.

DESIGN LOADING

LIVE LOAD

HS20, 500,000 CYCLES (SUPERSTRUCTURE ONLY)

DESIGN METHOD

LOAD FACTOR

MATERIALS

CONCRETE

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

REINFORCING STEEL

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

STRUCTURAL STEEL

EXISTING STRUCTURAL STEEL IS ASTM A7, GRADE 33

GENERAL NOTES

1. PLANS OF EXISTING BRIDGE ARE AVAILABLE AT THE AUTHORITY'S OFFICE AT 430 RIVERSIDE ST., PORTLAND, MAINE.
2. SHIELDING REQUIRED DURING CONCRETE REMOVAL SHALL NOT PROJECT BELOW THE BOTTOM FLANGES OF STRINGERS. THE ESTIMATED QUANTITY OF SHIELDING IS THE MINIMUM REQUIRED AND IS BASED ON THE FOLLOWING LIMITS:
   A. NORMAL TO ℄ BRIDGE: AS SHOWN ON THE PLANS
   B. PARALLEL TO ℄ BRIDGE: ABUTMENT TO ABUTMENT
3. THE AUTHORITY'S PERSONNEL WILL PROFILE THE TOPS OF ALL STRINGERS BEFORE THE FORM WORK IS STARTED AND SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS.
4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.
5. CHAMFER ALL EXPOSED CONCRETE EDGES ¾", UNLESS OTHERWISE NOTED.
6. THE BEARING DIMENSIONS SHOWN ON THE BEARING DETAIL SHEET AND THE CORRESPONDING BRIDGE SEAT ELEVATIONS SHOWN ON THE ABUTMENT AND PIER SHEETS ARE ESTIMATED BASED ON POT BEARINGS MANUFACTURED BY SAI/SPENSER OF TERRYVILLE CT. AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS ACTUALLY SUPPLIED.
7. PREFORMED JOINT FILLER AND JOINT SEALER CALLED FOR ON PLANS WILL BE INCIDENTAL TO ITEMS 502.21 AND 502.262.
8. ALL BRIDGE PARAPET AND END POST CONCRETE (INCLUDING INSIDE FACE, TOP, AND OUTSIDE FACE) TO HAVE A RUBBED FINISH.
9. PLACE ALL REINFORCEMENT STEEL TO CLEAR ANCHOR BOLTS.

ITEM	DESCRIPTION	UNIT	QUANTITIES
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	C.Y.	6
202.1222	REMOVING EXISTING SUPERSTRUCTURE CONCRETE - RTE.196 (667 S.Y.)*	L.S.	1
203.20	COMMON EXCAVATION	C.Y.	30
304.10	AGGREGATE SUBBASE COURSE-GRAVEL	C.Y.	24
403.13	DENSE GRADED BITUMINOUS PAVEMENT FOR BRIDGES	TON	57
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	C.Y.	23
502.2392	STRUCTURAL CONCRETE, PIERS - ROUTE 196 (2 C.Y.)*	L.S.	1
502.262	STRUCTURAL CONCRETE ROADWAY AND PARAPETS ON STEEL BRIDGES-ROUTE 196 (192 C.Y.)*	L.S.	1
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB.	67,000
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB.	67,000
504.722	JACKING EXISTING SUPERSTRUCTURE-ROUTE 196	L.S.	1
505.092	STUD WELDED SHEAR CONNECTORS-ROUTE 196 (2050 EA)*	L.S.	1
507.09222	ALUMINUM BRIDGE RAILING, 2 BAR-ROUTE 196 (407 L.F.)*	L.S.	1
508.132	MEMBRANE WATERPROOFING-ROUTE 196 (690 S.Y.)*	L.S.	1
514.06	CURING BOX FOR CONCRETE CYLINDERS	EA.	1
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	S.Y.	340
515.201	PIGMENTED CONCRETE PROTECTIVE COATING	S.Y.	122
520.21	EXPANSION DEVICE - GLAND SEAL - ROUTE 196 (64 L.F.)*	EA.	2
523.10	POT BEARINGS	EA.	20
524.362	TEMPORARY DECK SUPPORT	L.S.	1
524.40	PROTECTIVE SHIELD	S.Y.	860
606.172	TEMPORARY STEEL GUARDRAIL	L.F.	201
609.15	SLOPED CURB TYPE 1	L.F.	460

*QUANTITIES FOR ESTIMATING PURPOSES ONLY

INDEX OF DRAWINGS

	By	Date
Designed	JFW	1/96
Drawn	CSL	1/96
Checked	RJR	2/96
Revision	By	Date

In Charge Of: RAL

Maine Turnpike Authority

Maine Turnpike

Transpass

RAMP A OVER ROUTE 196

SPECIFICATIONS, GENERAL NOTES AND QUANTITIES

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. RE-1

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(METPK08)

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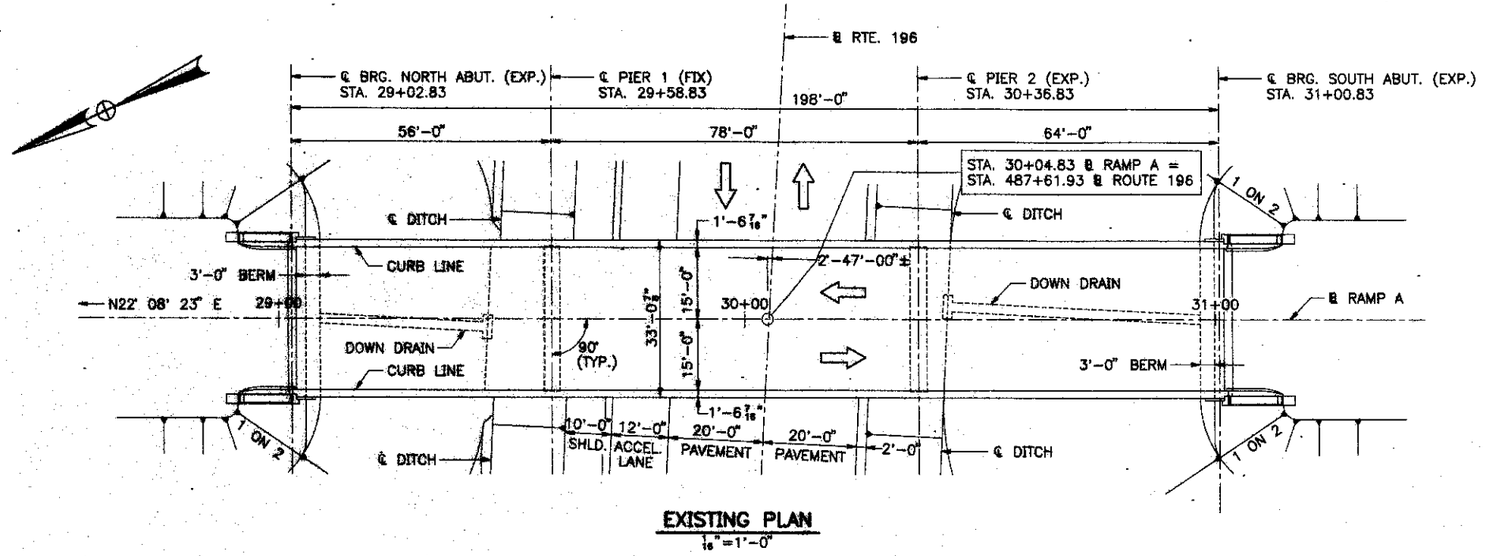
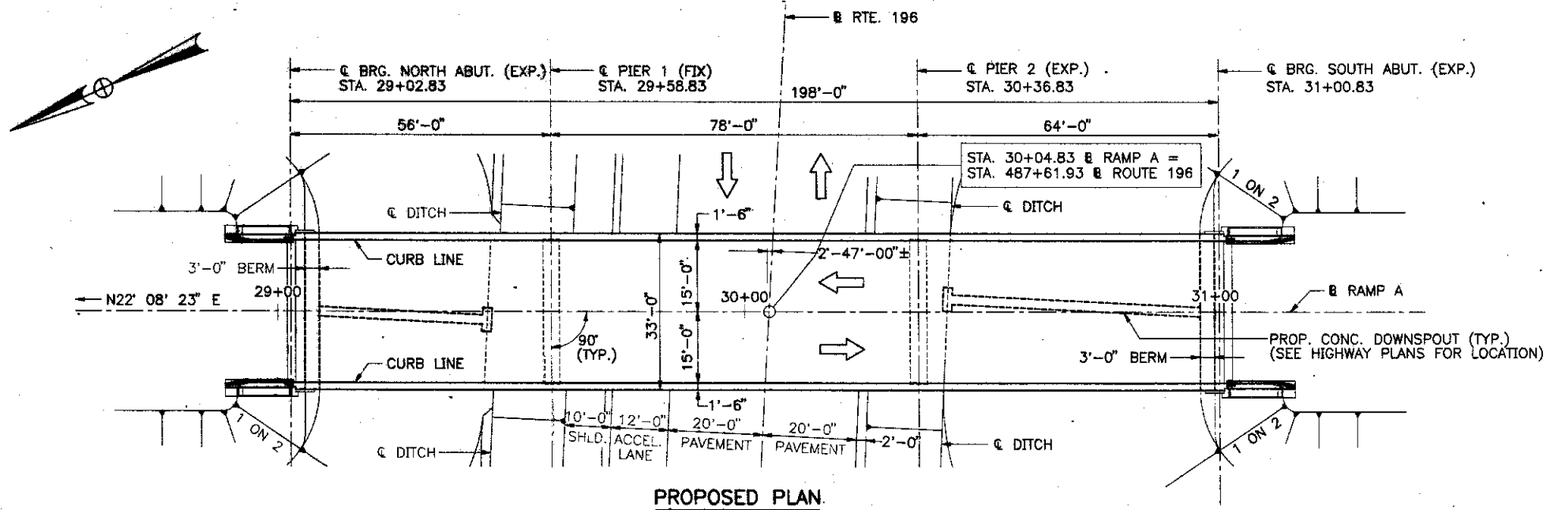
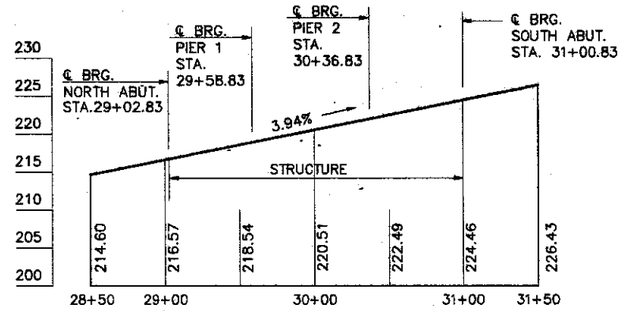


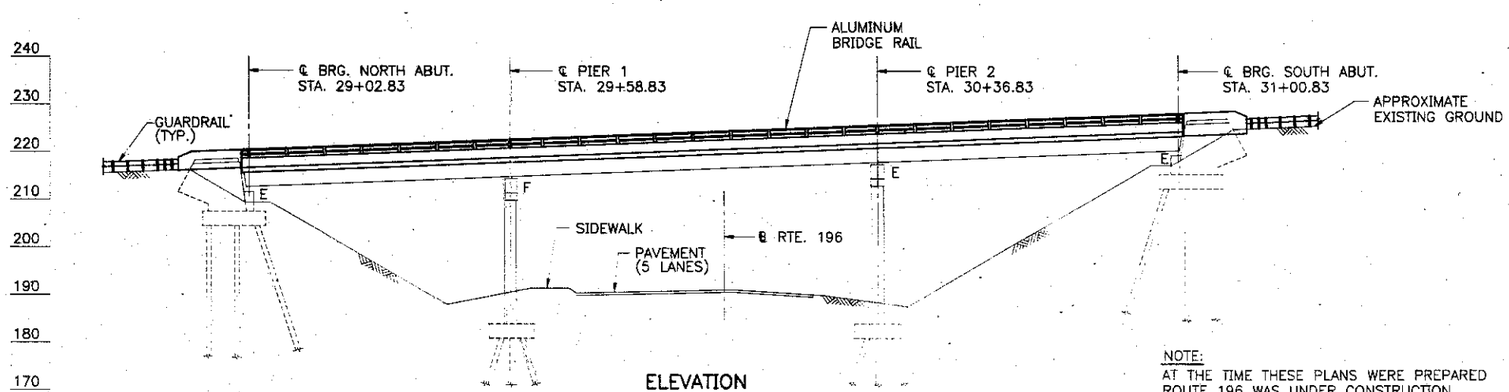
EXISTING PLAN
1/16" = 1'-0"



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



PROPOSED PROFILE
HOR. 1"=50'
VERT 1"=10'



ELEVATION
1/16" = 1'-0"

NOTE:
AT THE TIME THESE PLANS WERE PREPARED ROUTE 196 WAS UNDER CONSTRUCTION. ROUTE 196 BASELINE AND ROADWAY INFORMATION IS NOT GAURANTEED TO BE CORRECT.

Revision	By	Date	In Charge Of RAL
			Designed JFW 2/96
			Drawn RDF 2/96
			Checked RJR 2/96

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Maine Turnpike

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RAMP A OVER ROUTE 196
GENERAL PLAN AND ELEVATION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

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(METRIC08)

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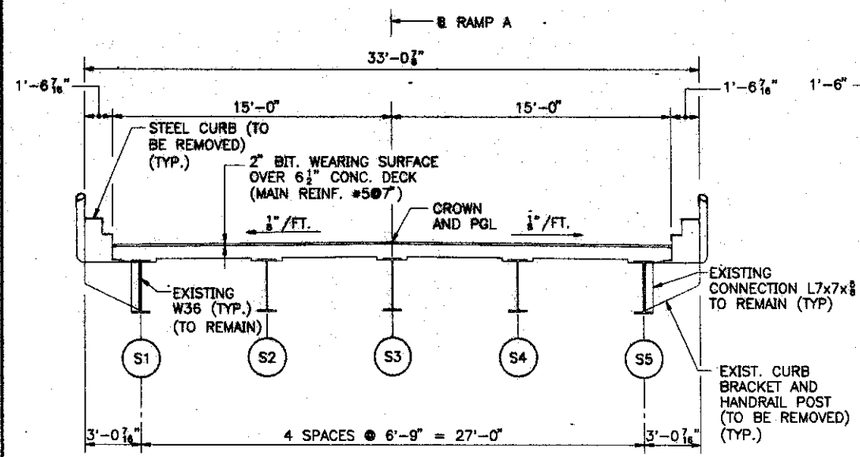
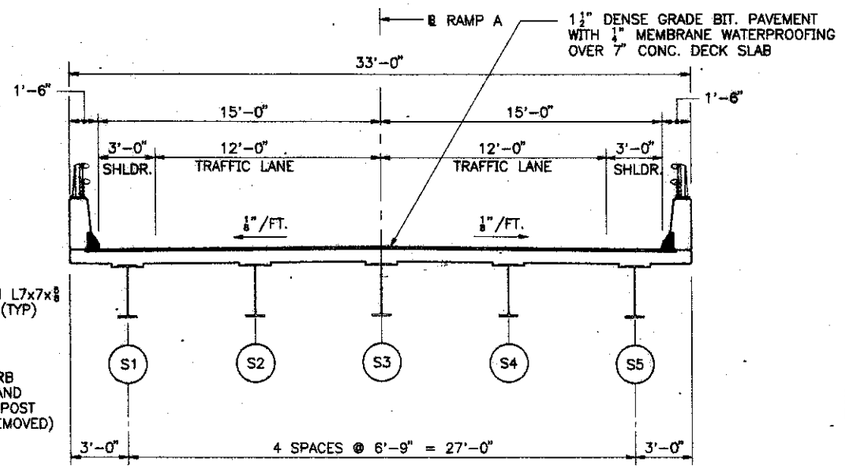


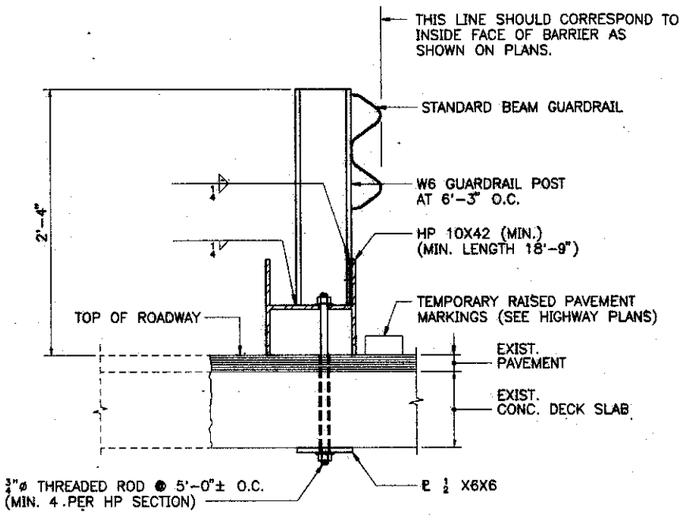
EXISTING CROSS SECTION

1/4"=1'-0"



PROPOSED CROSS SECTION

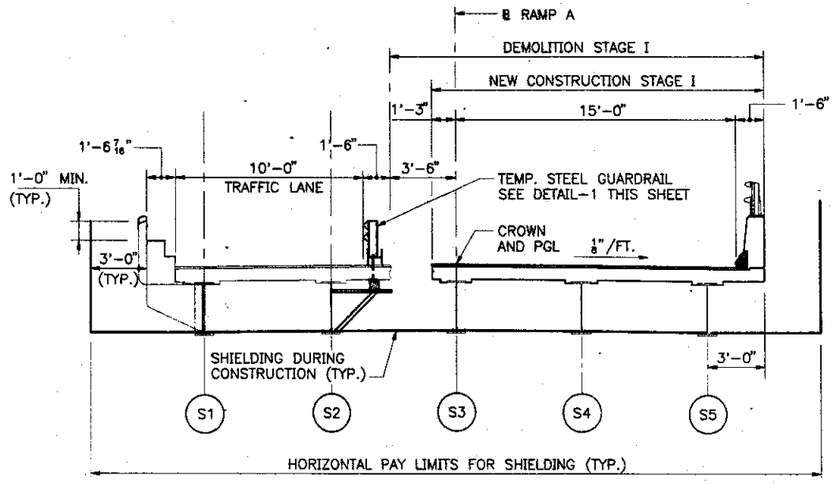
1/4"=1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL – 1

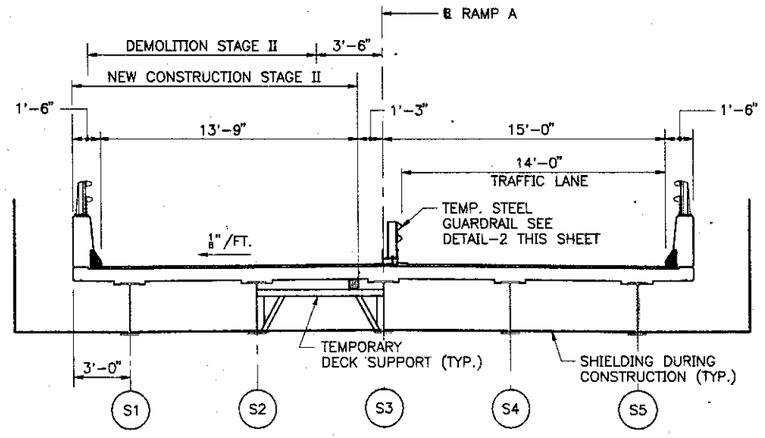
(EXISTING DECK SLAB)

1 1/2"=1'-0"



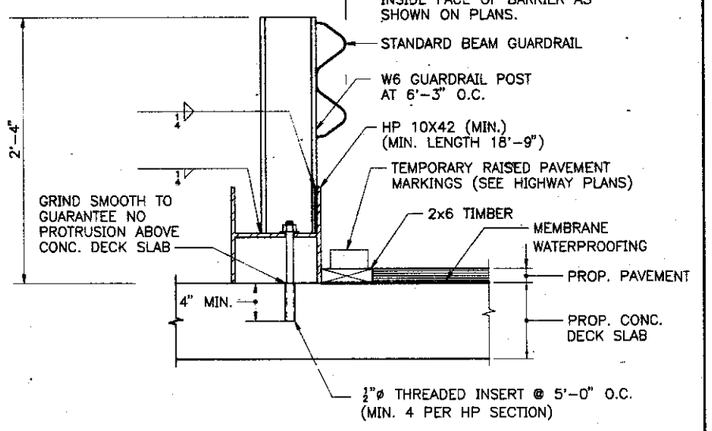
STAGE I CONSTRUCTION

1/4"=1'-0"



STAGE II CONSTRUCTION

1/4"=1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL – 2

(PROPOSED DECK SLAB)

1 1/2"=1'-0"

NOTES

1. ALL WORK NECESSARY TO ERECT, REMOVE AND RESET TEMP. STEEL GUARDRAIL SHALL BE PAID UNDER ITEM 606.172.
2. THE CONTRACTOR SHALL SUBMIT THE TEMPORARY DECK SUPPORT DESIGN FOR REVIEW AND APPROVAL.
3. TEMPORARY DECK SUPPORT SHALL BE DESIGNED FOR H20 LIVE LOAD.
4. ALL WORK NECESSARY TO ERECT AND REMOVE THE TEMPORARY DECK SUPPORTS SHALL BE PAYED FOR UNDER ITEM 524.362.
5. ALL CROSS SECTIONS ARE LOOKING SOUTH (UP STATION).
6. TEMPORARY RAISED PAVEMENT MARKINGS SHALL BE INCIDENTAL TO ITEM 202.1222.

Maine Turnpike Authority

Maine Turnpike

RAMP A OVER ROUTE 196

SEQUENCE OF CONSTRUCTION

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

	By	Date
Designed	JFW	2/96
Drawn	LMR	2/96
Checked	RJR	2/96
Revision	By	Date
In Charge Of	RAL	

Contract 96.7

Sheet No. RE-3

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(METPK08)

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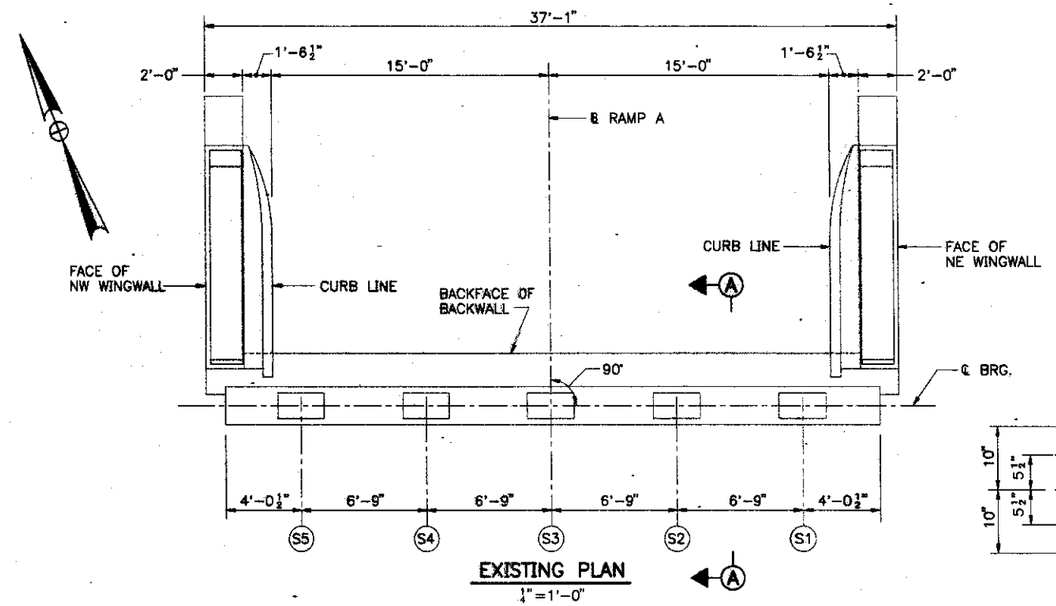
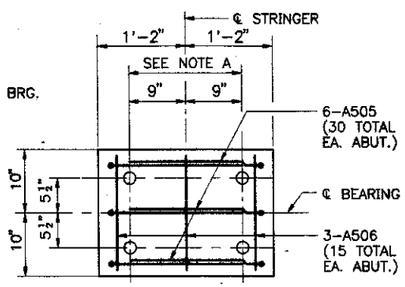


EXISTING PLAN

1/4"=1'-0"

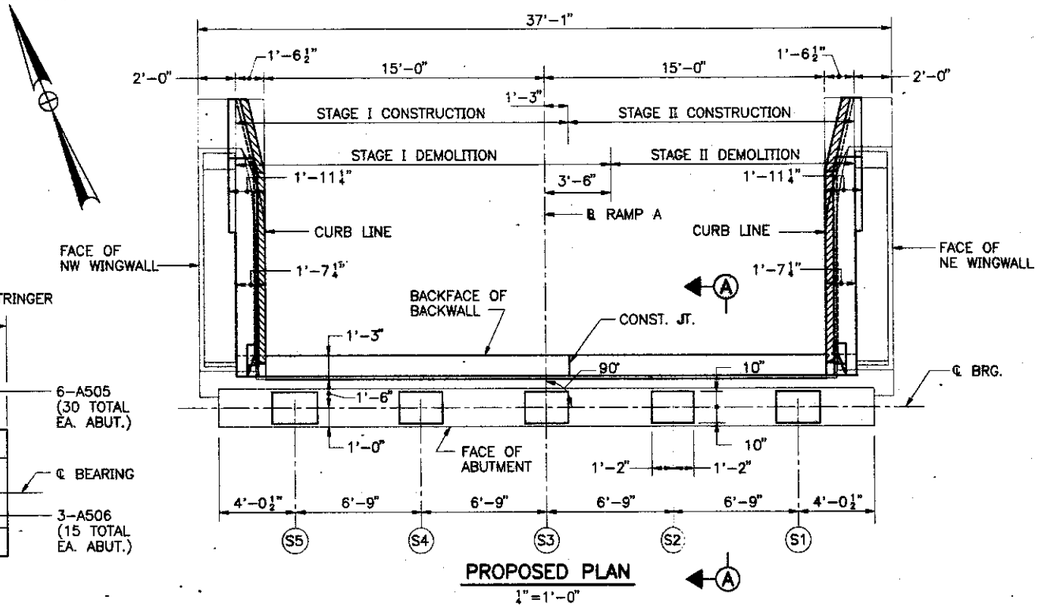


ANCHOR BOLT AND PAD REINFORCEMENT LAYOUT

1"=1'-0"

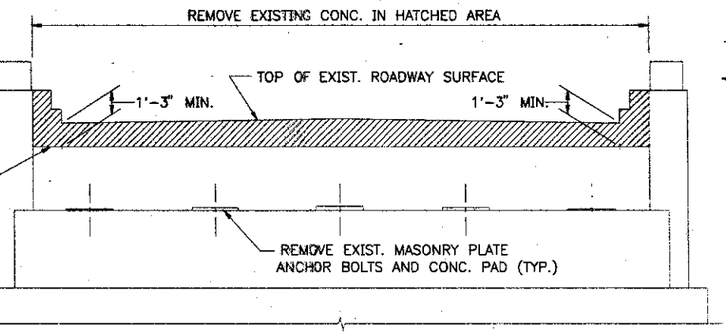
NOTE A

ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER, AND SHALL ALLOW FOR DRILLING OF HOLES WITH EXISTING STRINGERS AND DIAPHRAGMS IN PLACE.



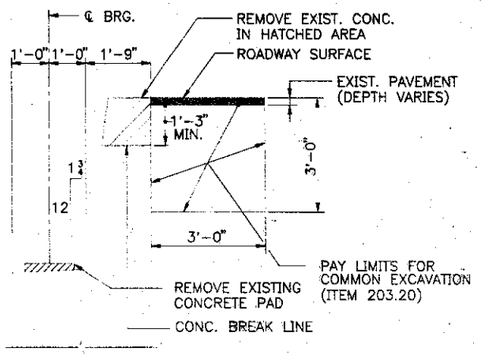
PROPOSED PLAN

1/4"=1'-0"



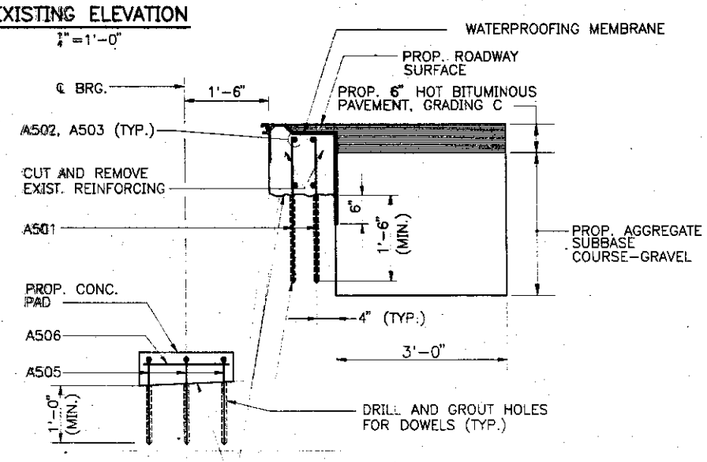
EXISTING ELEVATION

1/4"=1'-0"



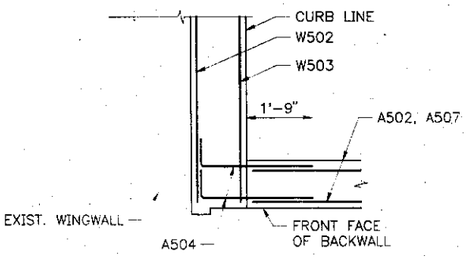
EXISTING SECTION A-A

1/2"=1'-0"



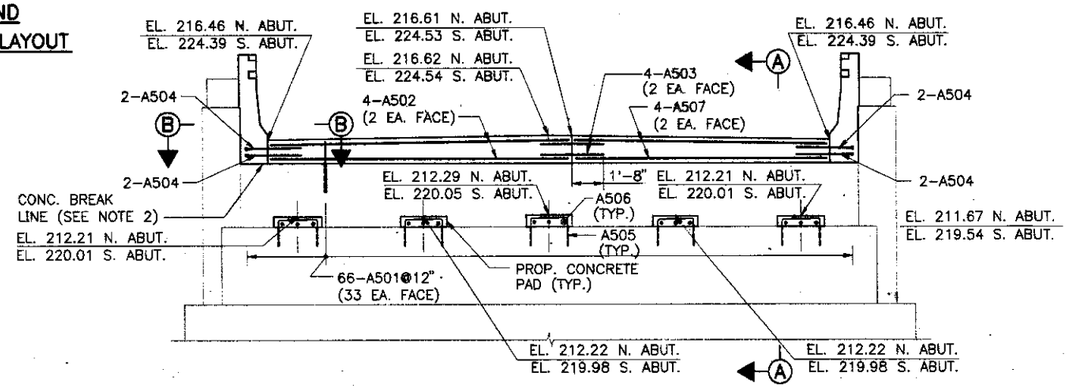
PROPOSED SECTION A-A

3/4"=1'-0"



SECTION B-B

1/2"=1'-0"



PROPOSED ELEVATION

1/4"=1'-0"

NOTES

1. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET NUMBERS RE-5 AND RE-6.
2. SAW CUT 1" MINIMUM DEEP BEFORE REMOVING EXISTING CONCRETE.
3. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NUMBERS RE-13 AND RE-14.
4. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NUMBER RE-6.
5. EXCAVATION FOR BACKFILL MODIFICATION IS TO BE PAID FOR UNDER 203.20 TO THE LIMITS SHOWN.
6. ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
7. REMOVAL OF THE EXISTING ARMOR JOINT SHALL BE INCIDENTAL TO ITEM 202.1222.
8. REMOVAL OF THE EXISTING MASONRY PLATE, ANCHOR BOLTS AND BEARING ASSEMBLY SHALL BE INCIDENTAL TO ITEM 202.12.

			By	Date
		Designed	JFW	2/96
		Drawn	RSJ	2/96
		Checked	RJR	2/96
Revision	By	Date	In Charge Of	RA_

Maine Turnpike Authority
Maine Turnpike

Trans pass

RAMP A OVER ROUTE 196
ABUTMENT MODIFICATIONS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

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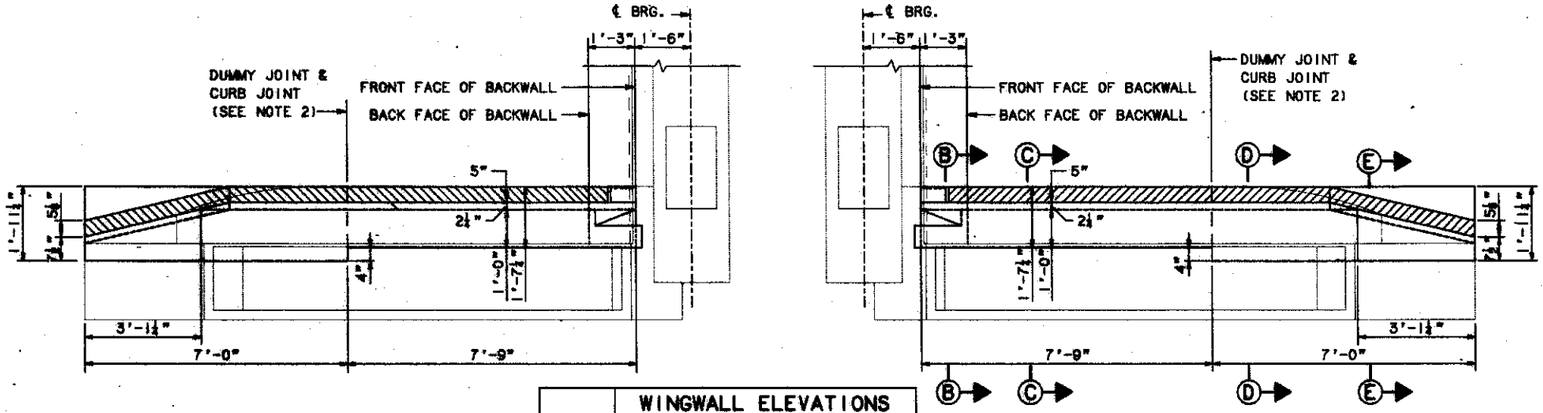
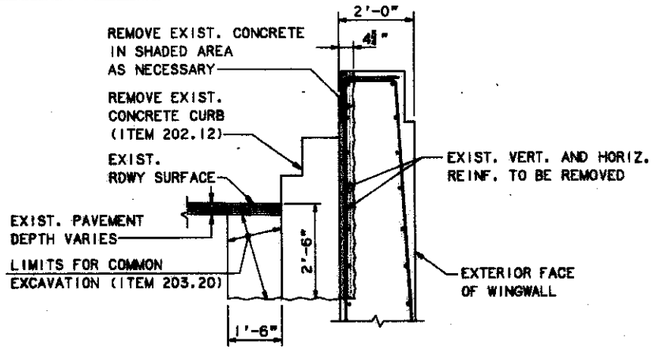
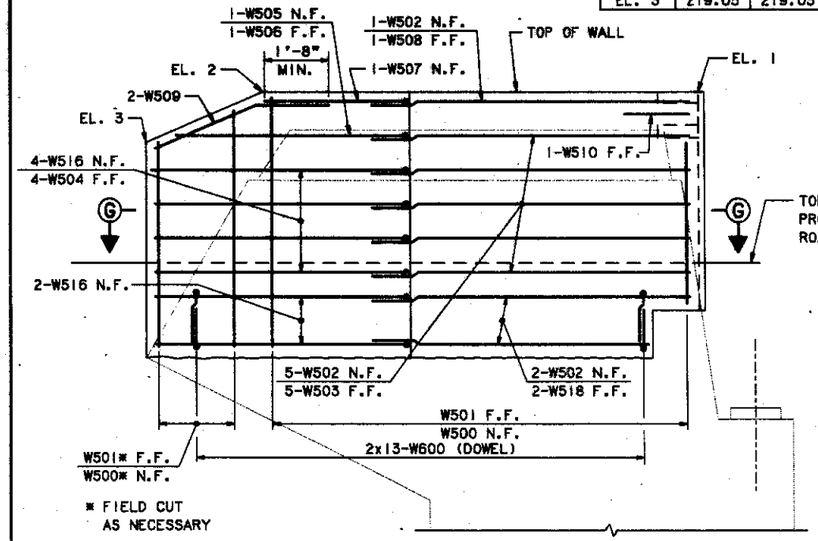


PLAN
½" = 1'-0"

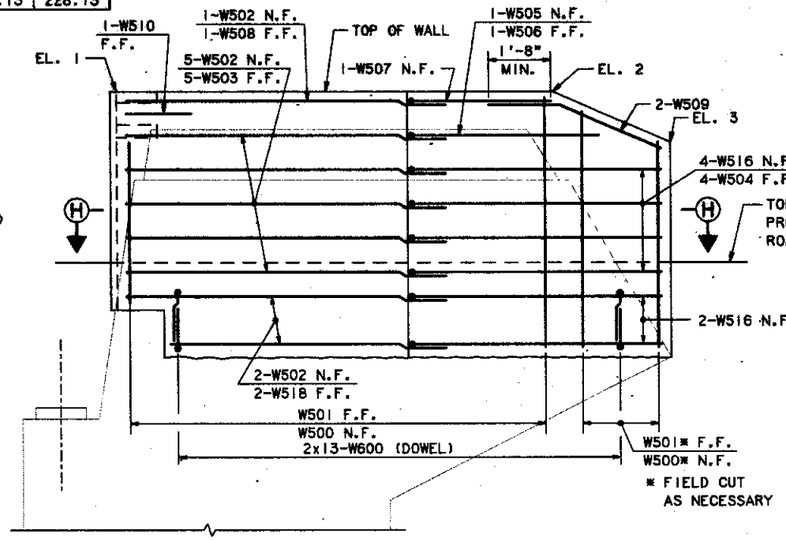
	WINGWALL ELEVATIONS			
	NE	NW	SE	SW
EL. 1	220.96	220.96	228.89	228.89
EL. 2	220.50	220.50	229.34	229.34
EL. 3	219.05	219.05	228.13	228.13



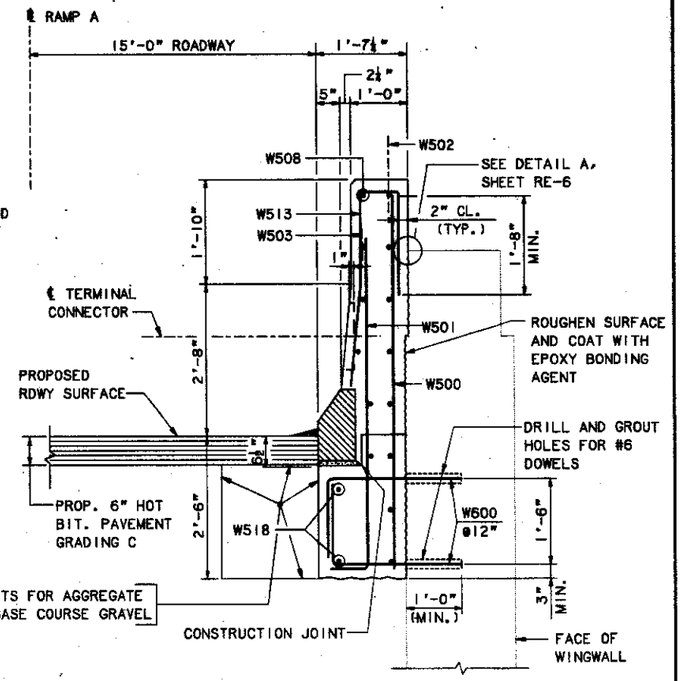
EXISTING SECTION D-D
½" = 1'-0"



ELEVATION
NW AND NE WINGWALL
NW WINGWALL SHOWN, NE WINGWALL SIMILAR
½" = 1'-0"



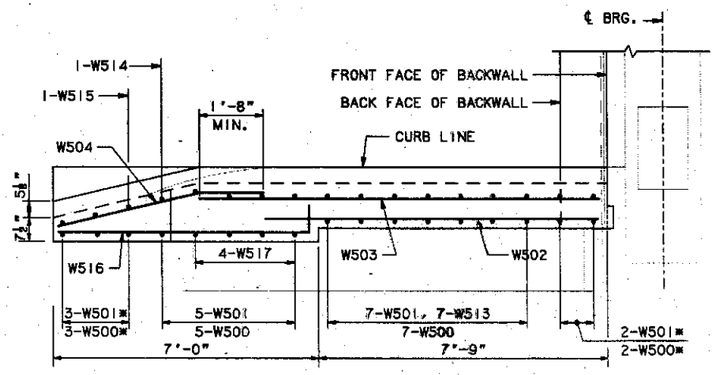
ELEVATION
SW AND SE WINGWALL
SW WINGWALL SHOWN, SE WINGWALL SIMILAR
½" = 1'-0"



NOTE

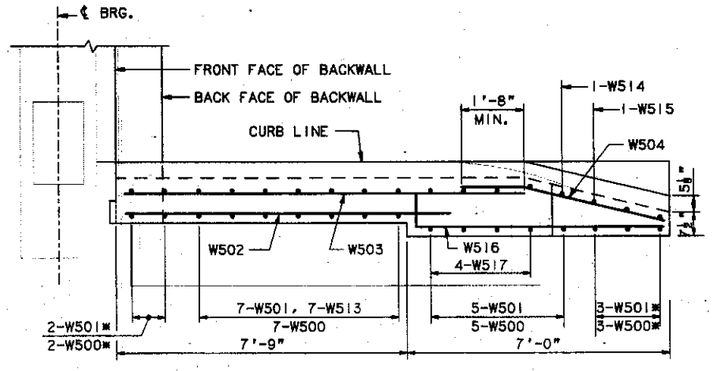
1. FOR SECTIONS B-B, D-D, E-E, AND GRANITE CURB DETAILS, SEE SHEET NO. RE-6.
2. PROVIDE DUMMY JOINT GROVE, SEALER AND FILLER ALONG EXPOSED CONCRETE FACES ONLY.

PROPOSED SECTION C-C
¾" = 1'-0"



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

SECTION G-G
½" = 1'-0"



SECTION H-H
½" = 1'-0"

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RAMP A OVER ROUTE 196
WINGWALL MODIFICATIONS I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:
			By: Date:
		Designed	JFW 2/96
		Drawn	LS 2/96
		Checked	RJR 2/96
		In charge of:	RAL

Contract 96.7

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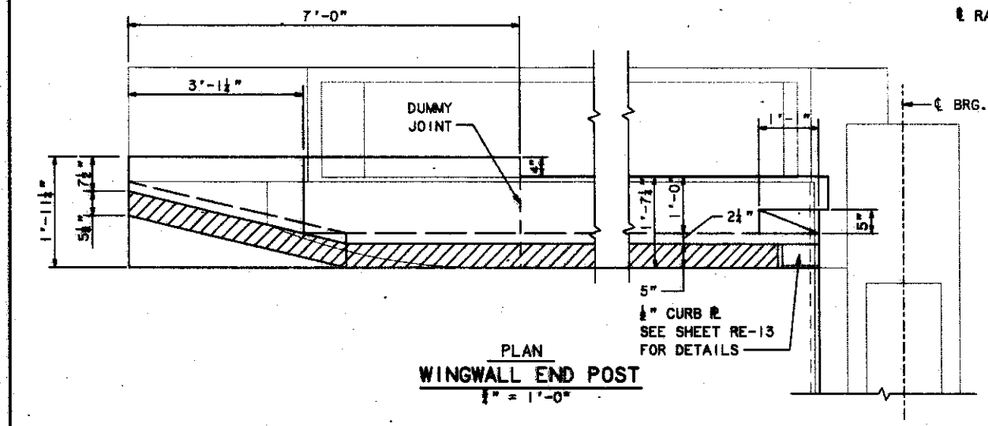
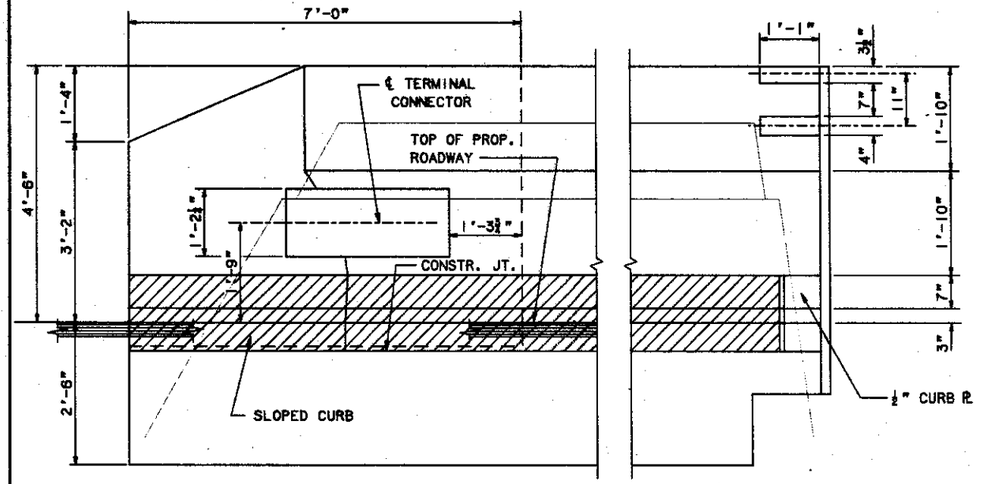
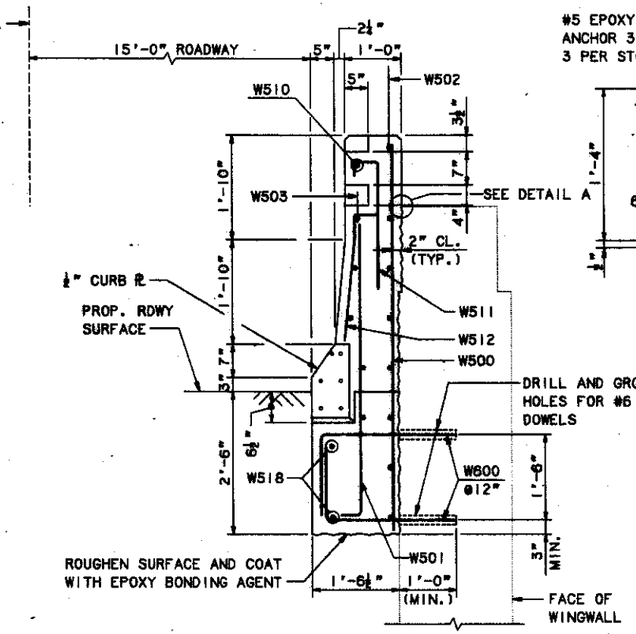
METPK04



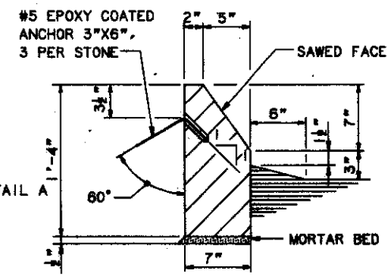
PLAN
WINGWALL END POST
¾" = 1'-0"



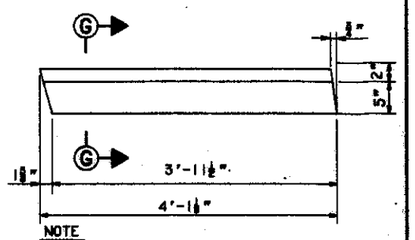
ELEVATION
WINGWALL END POST
¾" = 1'-0"



SECTION B-B
¾" = 1'-0"



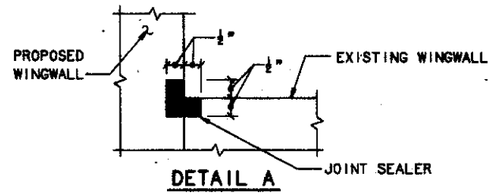
SECTION G-G
1½" = 1'-0"



NOTE
(CURB FOR N.E. & S.W. WINGWALLS SHOWN
CURB FOR N.W. & S.E. WINGWALLS SIMILAR
BUT OPPOSITE HAND)

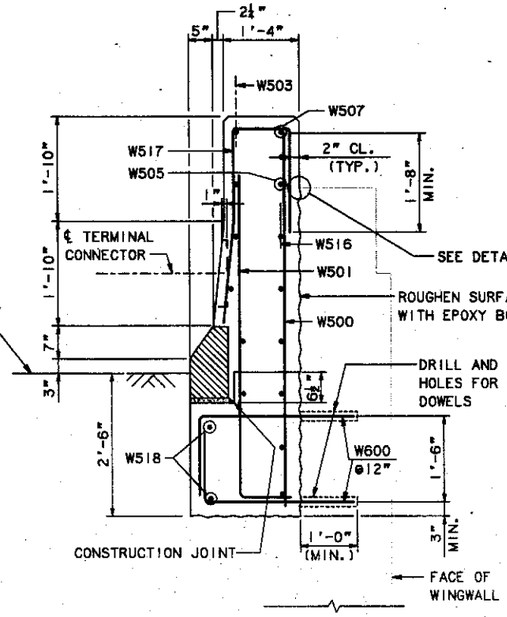
PLAN AT ENDPOST
1" = 1'-0"

TYPICAL WINGWALL GRANITE CURB

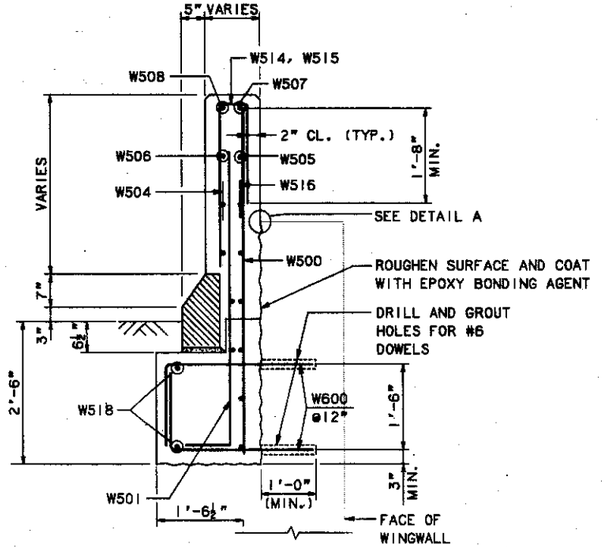


DETAIL A
NTS

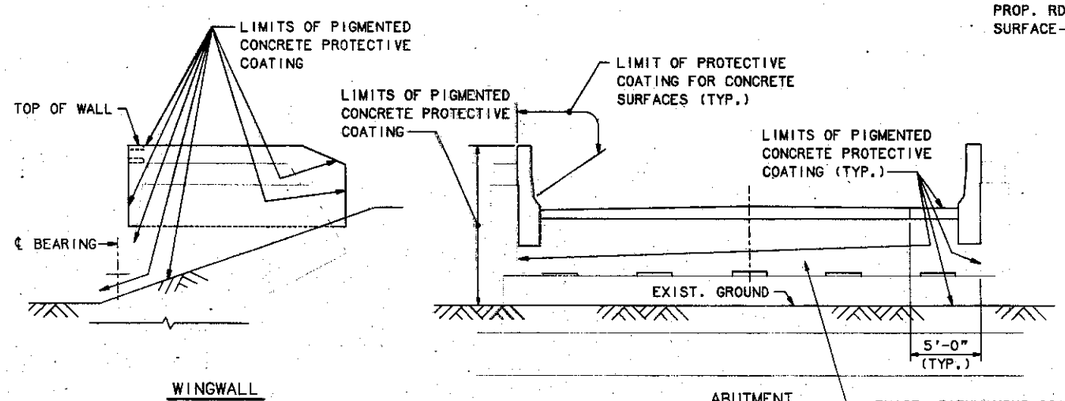
NOTE
FOR TERMINAL CONNECTOR ANCHORAGE DETAIL SEE STANDARD DETAIL SHEET BD 201-93



SECTION D-D
¾" = 1'-0"



SECTION E-E
¾" = 1'-0"



LIMITS OF CONCRETE PROTECTIVE COATING AT ABUTMENT AND WINGWALLS
NO SCALE

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER ROUTE 196
WINGWALL MODIFICATIONS II

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

No.	Revision	By:	Date:	In charge of: RAL
				Designed JFW 2/96
				Drawn LS 2/96
				Checked RJR 2/96

Contract 96.7

Sheet No. RE-6
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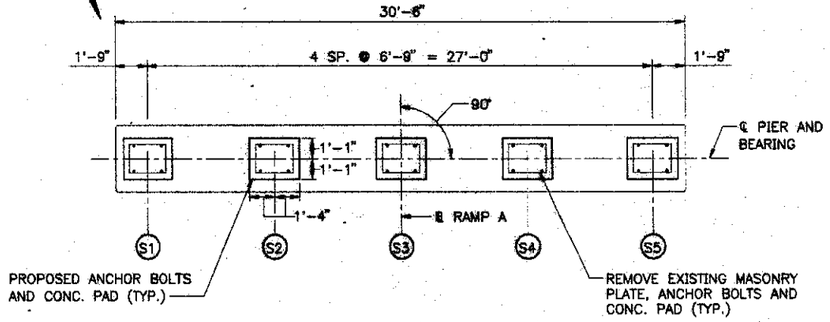
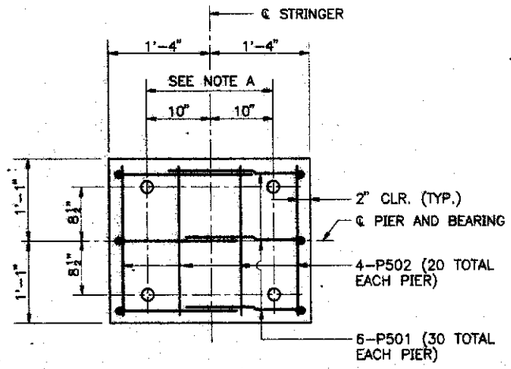
METPK04



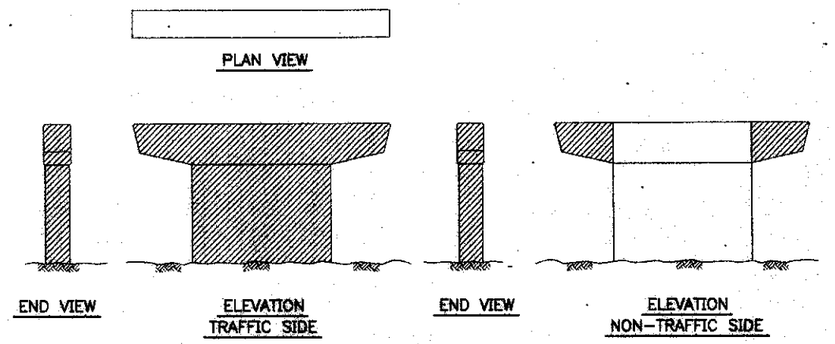
PLAN PIER 1
1"=1'-0"



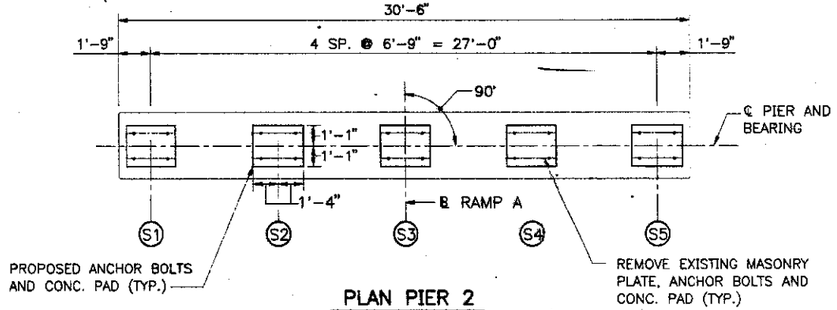
NOTE A

ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER, AND SHALL ALLOW FOR DRILLING OF HOLES WITH EXISTING STRINGERS AND DIAPHAGMS IN PLACE.

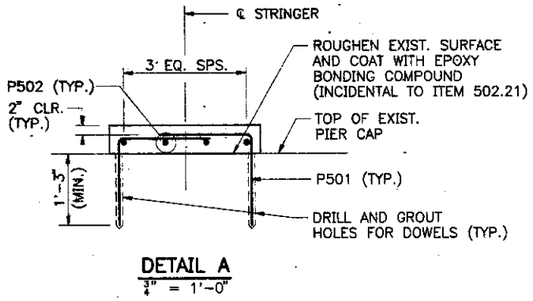
ANCHOR BOLT LAYOUT
PIERS 1 AND 2
1"=1'-0"



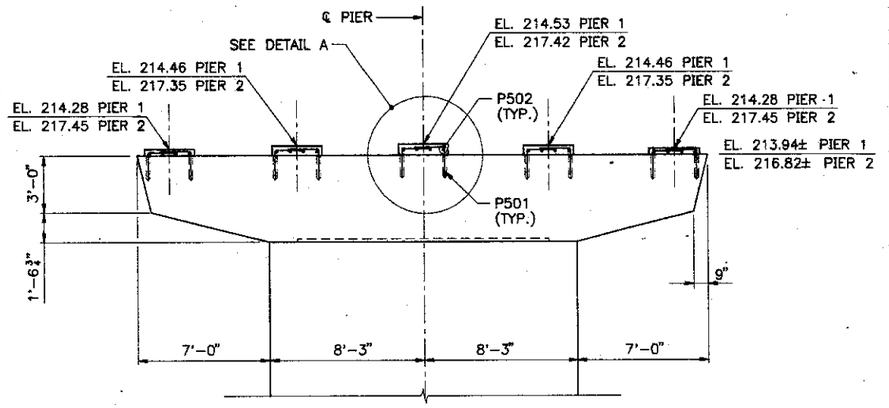
LIMITS OF PIGMENTED CONCRETE PROTECTIVE COATING
PIERS 1 AND 2
NOT TO SCALE



PLAN PIER 2
1"=1'-0"



DETAIL A
1"=1'-0"



ELEVATION – PIER CAP
1"=1'-0"

NOTE
1. THE CONTRACTOR SHALL EXPOSE THE TOP LAYER OF THE PIER CAP REINFORCING STEEL PRIOR TO ANY DRILLING AND SHALL REPORT INTERFERENCE OF DOWELS WITH EXISTING REINFORCEMENT TO THE ENGINEER.

Revision	By	Date	In Charge Of: RAL
		Designed	JFW 2/96
		Drawn	RSJ 2/96
		Checked	RJR 2/96

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER ROUTE 196
PIER MODIFICATIONS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

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(METRIC)

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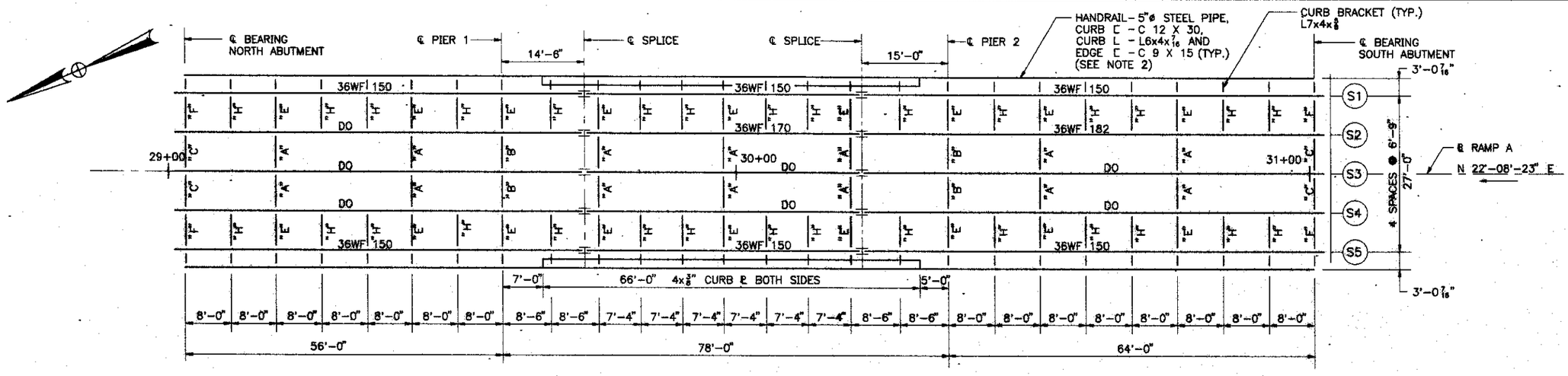
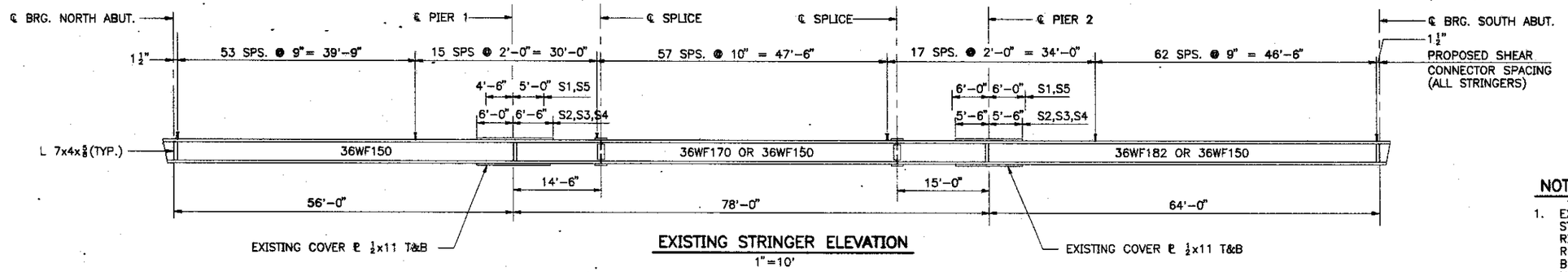
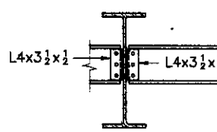


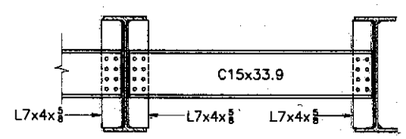
EXISTING FRAMING PLAN
1"=10'



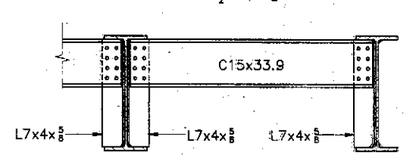
EXISTING STRINGER ELEVATION
1"=10'



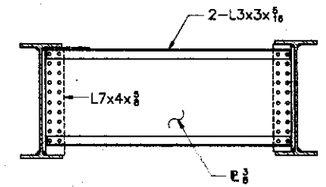
DIAPHRAGM TYPE A (EXISTING)
1/2"=1'-0"



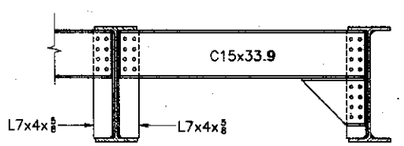
DIAPHRAGM TYPE B (EXISTING)
1/2"=1'-0"



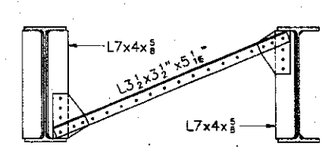
DIAPHRAGM TYPE C (EXISTING)
1/2"=1'-0"



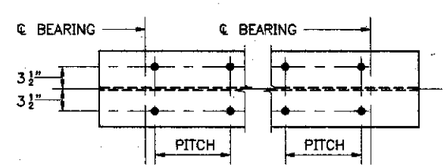
DIAPHRAGM TYPE E (EXISTING)
1/2"=1'-0"



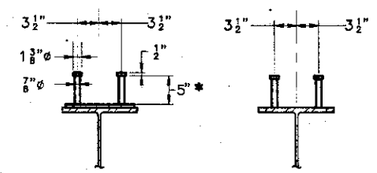
DIAPHRAGM TYPE F (EXISTING)
1/2"=1'-0"



DIAPHRAGM TYPE H (EXISTING)
1/2"=1'-0"



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



SEE STRINGER ELEVATION FOR PROPOSED SHEAR CONNECTOR SPACING

* 7" FOR EXTRA DEPTH HAUNCH, SEE SHEET RE-11

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

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 7/8"ø A-325 BOLTS, H.S. NUTS AND WASHERS, WHICH SHALL BE INCIDENTAL TO ITEM 504.721.
2. EXISTING STEEL CURBING TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS. THE EXISTING STEEL CURBING SHALL BE DISMANTLED BY REMOVING THE BOLTS AT THE CURB BRACKET (L7x4x5/8). THE CURB BRACKET SHALL REMAIN ATTACHED TO THE GIRDER WEB.

Maine Turnpike Authority
Maine Turnpike

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RAMP A OVER ROUTE 196
FRAMING PLAN AND STRINGER ELEVATION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Revision	By	Date	In Charge Of	RAL
			Designed	JFW 2/96
			Drawn	JFT 2/96
			Checked	RJR 2/96

Contract 96.7

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(METPK08)

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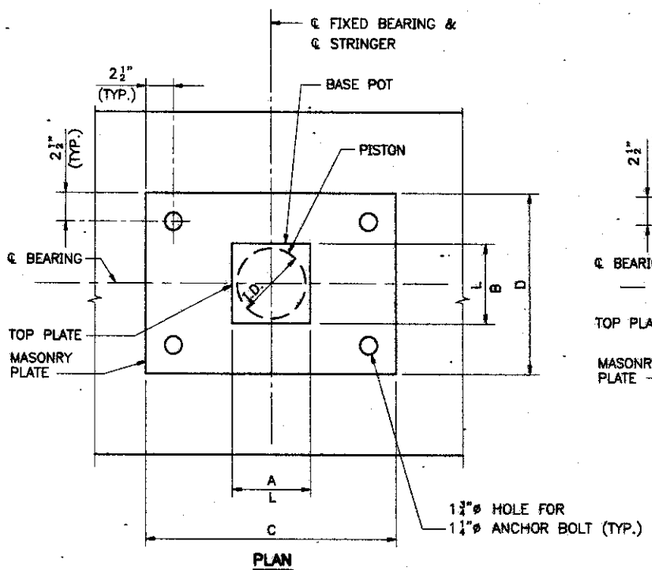
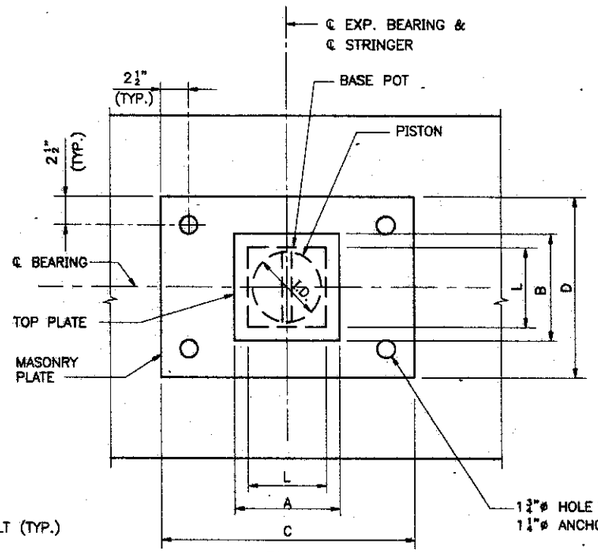


PLAN



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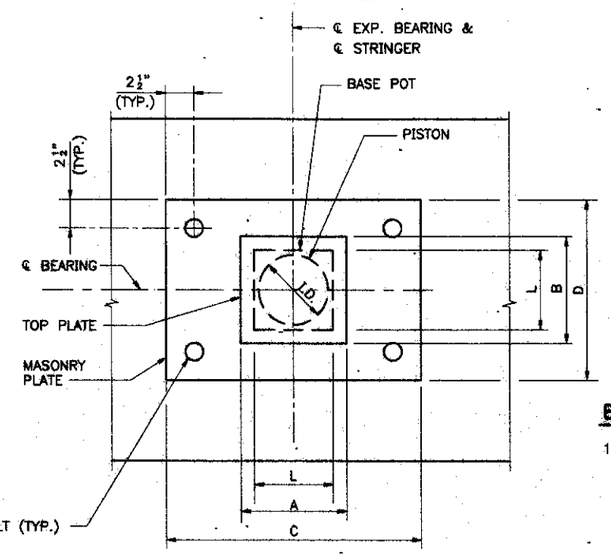
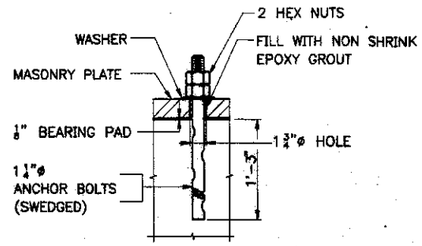


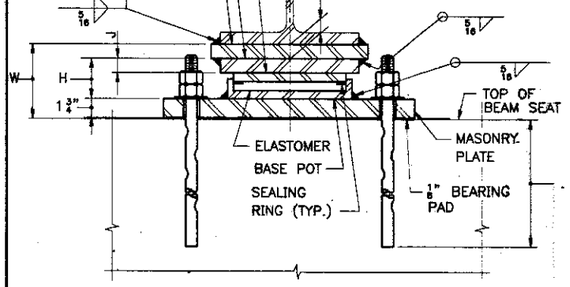
PLAN



ANCHOR BOLT DETAIL
1½"=1'-0"

BEARING DEVICE NOTES

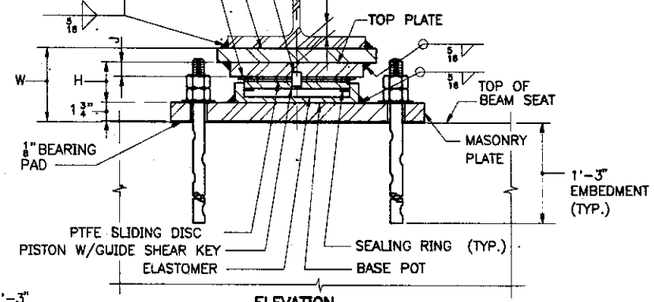
1. THE BEARING DIMENSIONS SHOWN ON THIS SHEET AND CORRESPONDING BRIDGE SEAT ELEVATIONS ARE ESTIMATED BASED ON GUIDED EXPANSION AND FIXED BEARINGS MANUFACTURED BY SAI/SPENCER OF TERRYVILLE, CT. AFFECTED DETAIL AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS ACTUALLY DETAIL AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS ACTUALLY SUPPLIED.
2. ALL DIMENSIONS ARE IN INCHES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
4. ALL STEEL FOR THE BEARING DEVICE ASSEMBLIES SHALL BE ASTM A709, GRADE 36.
5. MASONRY BASE PLATES SHALL BE PLACED ON 1/8" PREFORMED FABRIC PAD.
6. THE BASE POT SHALL BE SHOP WELDED TO THE MASONRY PLATE AS SHOWN. HOLD-DOWNS SHALL NOT BE PROVIDED.
7. THE 1 1/4"ø ANCHOR BOLTS AND NUTS SHALL BE A307. WASHERS SHALL CONFORM TO REQUIREMENTS OF AASHTO M293 (ASTM F4361). WASHERS AND NUTS SHALL BE GALVANIZED.
8. PTFE INDICATES POLYTETRAFLUORETHYLENE.
9. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.
10. BEARINGS TO BE ADJUSTED FOR TEMPERATURE ACCORDING TO THE CORRECTIONS TABLE, OR AS DIRECTED BY THE ENGINEER.



ELEVATION

FIXED BEARING

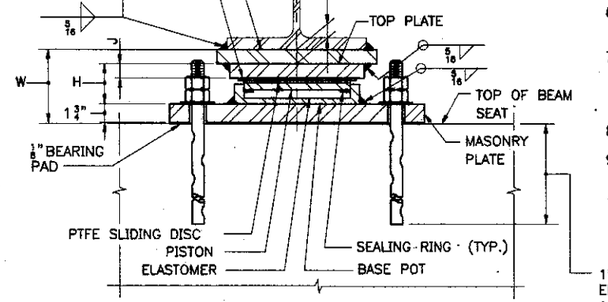
N.T.S.



ELEVATION

GUIDED EXPANSION BEARING

N.T.S.



ELEVATION

NON-GUIDED EXPANSION BEARING

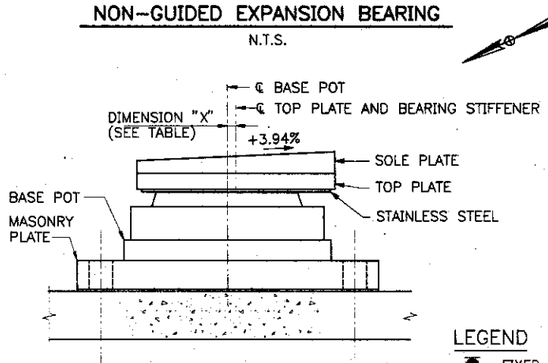
N.T.S.

EXPANSION BEARING

LOCATION	STRINGER	BEARING TYPE	D.L. (KIPS)	L.L. (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS)		TOTAL LONGITUDINAL MOVEMENT	BEARING SETTING CORRECTIONS (INCHES)							
									DIMENSION "X"							
						LONG.	TRANS.	-30°F TO 120°F	0°F	15°F	30°F	45°F	60°F	75°F	90°F	100°F
NORTH ABUTMENT	S1, S5	NGE1	22	44	66	–	–	5/8	3/16 →	1/8 →	1/16 →	0	← 1/16	← 1/8	← 3/16	← 1/4
	S2,S3,S4	GE1	23	46	69	–	7									
PIER 1	S1, S5	GE2	83	57	140	14	–	–	–	–	–	0	–	–	–	–
	S2,S3,S4	F1	84	58	142	14	14									
PIER 2	S1, S5	NGE2	90	60	150	–	–	15/16	1/4 →	3/16 →	1/16 →	0	← 1/16	← 3/16	← 1/4	← 5/16
	S2,S3,S4	GE3	93	60	153	–	15									
SOUTH ABUTMENT	S1, S5	NGE1	26	45	71	–	–	1 11/16	1/2 →	5/16 →	3/16 →	0	← 3/16	← 5/16	← 1/2	← 5/8
	S2,S3,S4	GE1	27	47	74	–	8									

NORTH (DOWN STATION) | SOUTH (UP STATION)

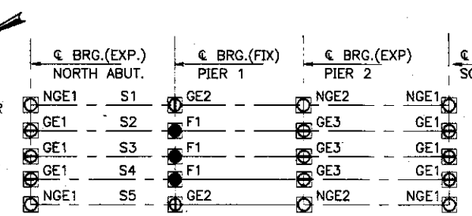
BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS						TOTAL HEIGHT	SOLE PLATE	MASONRY PLATE 1¾" THICK	
		I.D.	A	B	H	J	L	W		C	D
GE1	100	6.031	7.50	10.25	3.304	1.00	7.75	6.679	14X14X1½	23	16
GE2	150	7.387	9.00	11.75	3.777	1.375	9.00	7.152	14X14X1½	25	22
GE3	200	8.530	10.25	13.00	4.129	1.50	10.25	7.504	15X15X1½	25	22
F1	150	7.387	8.38	8.38	2.50	.75	9.00	5.875	14X14X1½	25	22
NGE1	100	6.031	10.00	10.00	2.65	.75	7.75	6.025	14X14X1½	23	16
NGE2	150	7.387	11.25	11.25	2.63	.75	9.00	6.005	14X14X1½	25	22



ELEVATION

POT BEARING

N.T.S.



POT BEARING ALIGNMENT PLAN

NO SCALE

LEGEND

- ● – FIXED
- ⊗ – GUIDED LONGITUDINAL EXP.
- ⊗ – GUIDED TRANSVERSE EXP.
- ○ – NON – GUIDED EXPANSION

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196
POT BEARING DETAILS

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Revision	By	Date		By	Date
			Designed	JFW	2/96
			Drawn	JFT	2/96
			Checked	RJR	2/96
			In Charge Of:	RAL	

Contract 96.7

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(ME1PK08)

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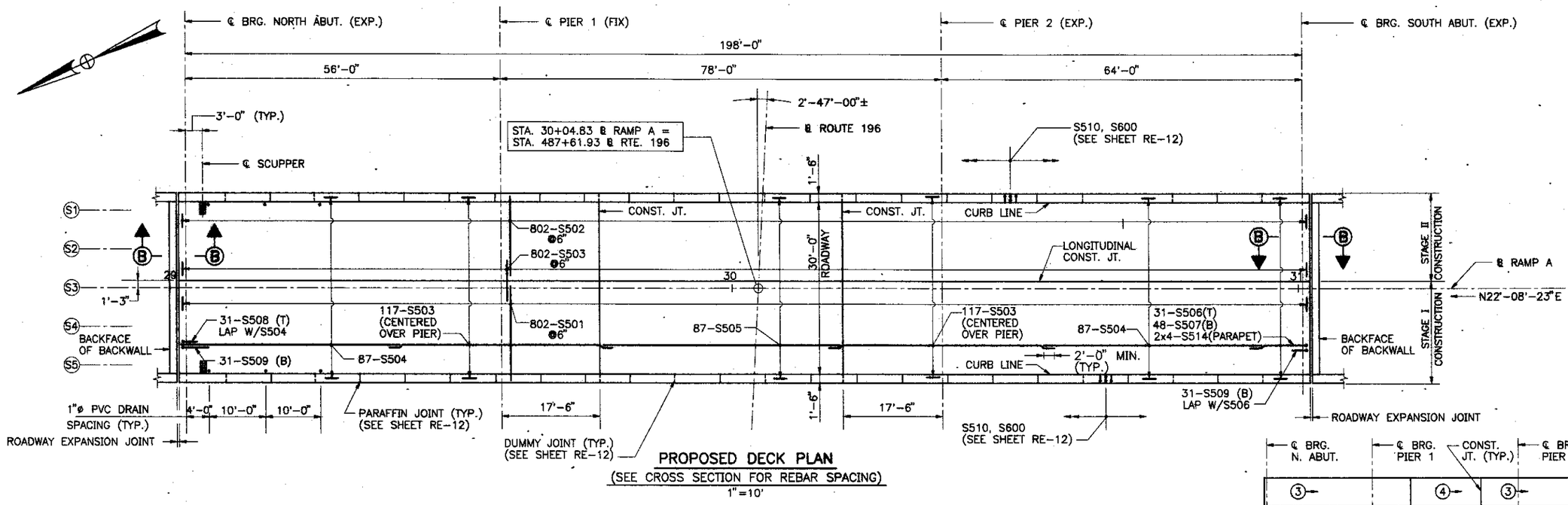
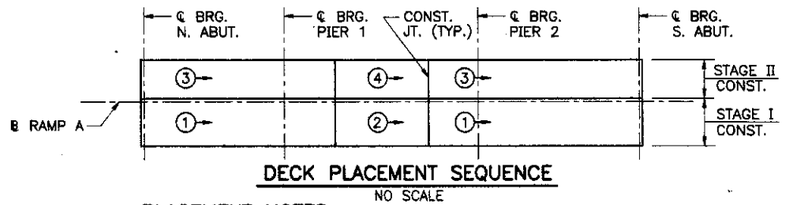


PROPOSED DECK PLAN

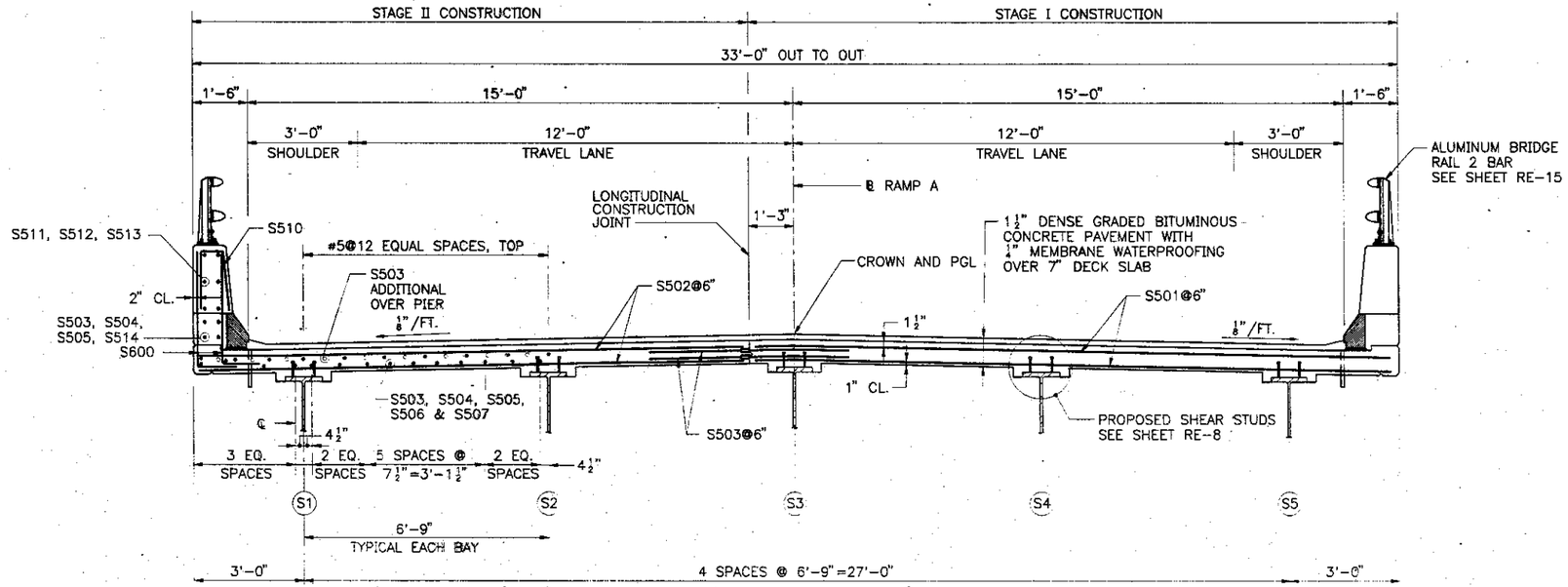
(SEE CROSS SECTION FOR REBAR SPACING)

1"=10'



DECK PLACEMENT SEQUENCE

NO SCALE



PROPOSED CROSS SECTION

(LOOKING UP STATION)

½"=1'-0"

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE, THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE FORMWORK FOR THE CONSTUCTION 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. POURS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT POURS.
4. STAY IN PLACE FORMS ARE NOT ALLOWED TO BE USED.
5. BEGIN PLACEMENT AT LOW END OF THE BLOCK.

SUPERSTRUCTURE NOTES

1. ADJUST REINFORCING STEEL TO FIT AROUND DRAINS IN A MANNER APPROVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS.
2. FOR STEEL REINFORCING SCHEDULE, SEE SHEET NO. RE-16.
3. FOR SCUPPER AND DRAIN DETAILS SEE SHEET NO. RE-11.
4. FOR SLAB DETAILS, SEE SHEET NO. RE-11 AND RE-12.
5. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NO. RE-13 AND RE-14.
6. FOR PARAFFIN AND DUMMY JOINT SPACING, SEE SHEET NO. RE-12.
7. FOR SECTION B-B SEE SHEET NO. RE-14.
8. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.

	By	Date
Designed:	JFW	1/96
Drawn:	JFT	1/96
Checked:	RJR	2/96
In Charge Of:	RAL	

Revision	By	Date

Maine Turnpike Authority
Maine Turnpike

Transpass

RAMP A OVER ROUTE 196
DECK PLAN AND SECTION

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

Sheet No. RE-10
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MEPKINS

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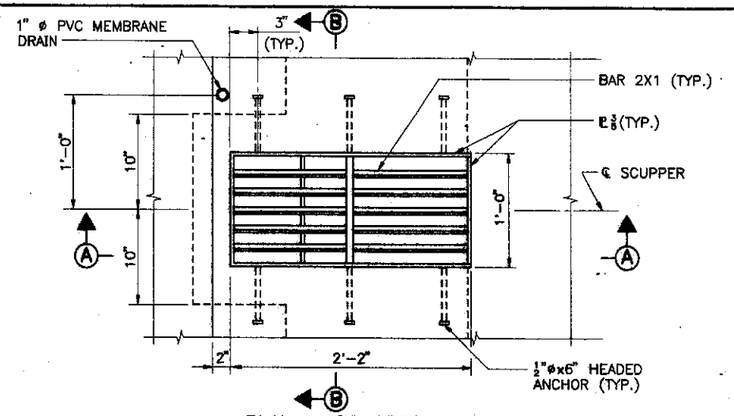
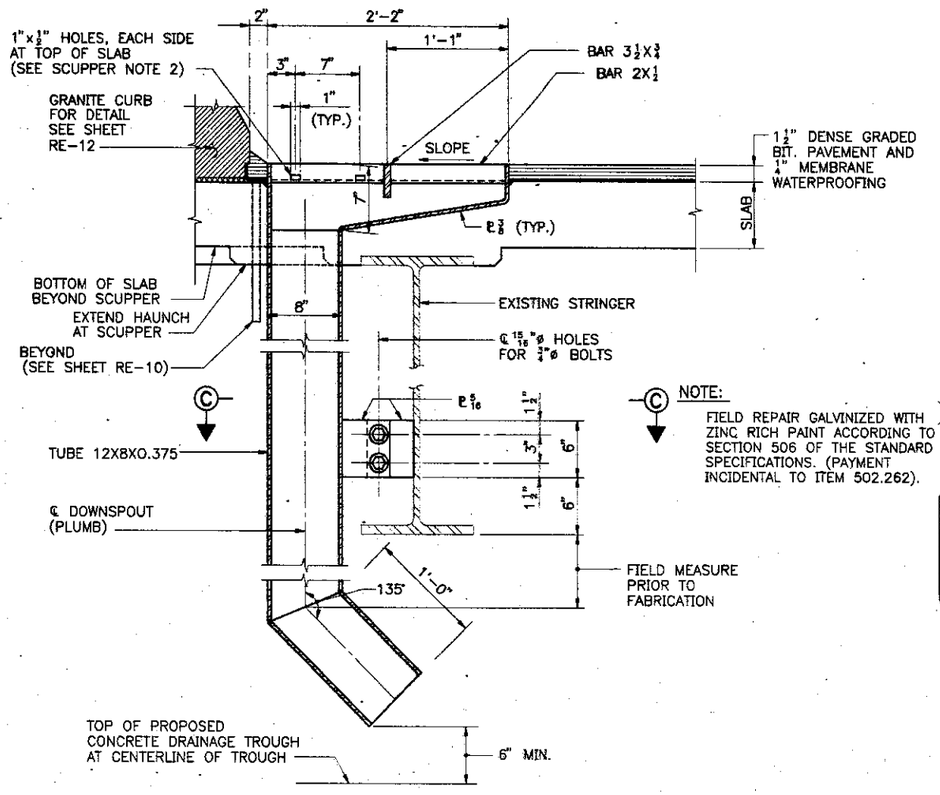


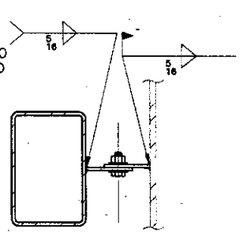
PLAN – SCUPPER
1½"=1'-0"



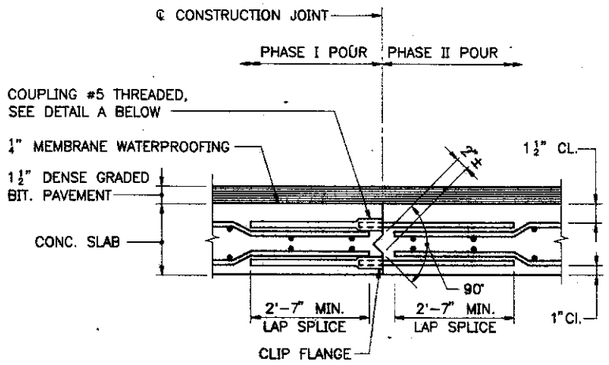
SECTION A–A
1½"=1'-0"

SCUPPER NOTES

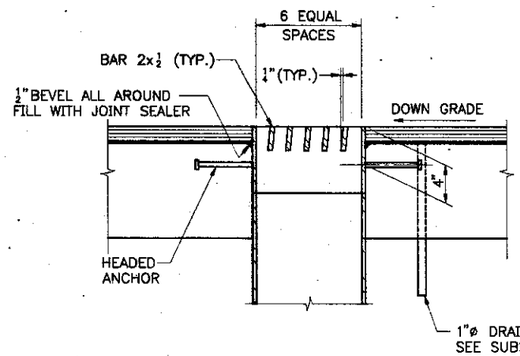
1. ALL WELDS TO BE CONTINUOUS ¼" FILLET WELDS EXCEPT AS NOTED.
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS ½" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (¼" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
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 SHALL BE INCIDENTAL TO CONTRACT ITEM 502.262.
7. FOR LOCATION OF SCUPPERS AND 1"ø DRAINS, SEE SHEET RE-10.



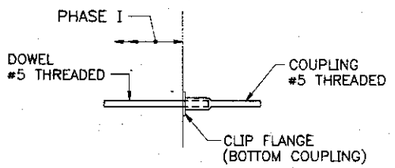
SECTION C–C
1½"=1'-0"



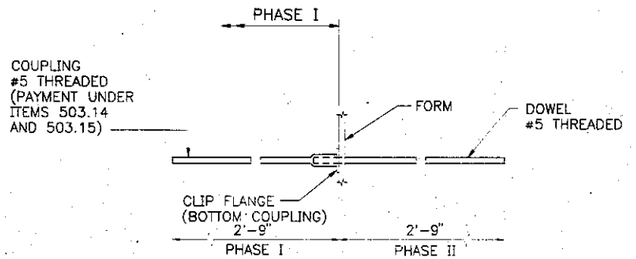
LONGITUDINAL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



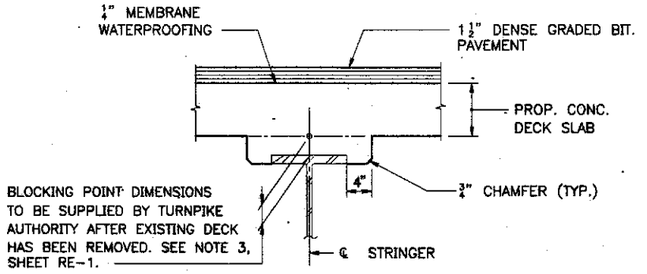
SECTION B–B
1½"=1'-0"



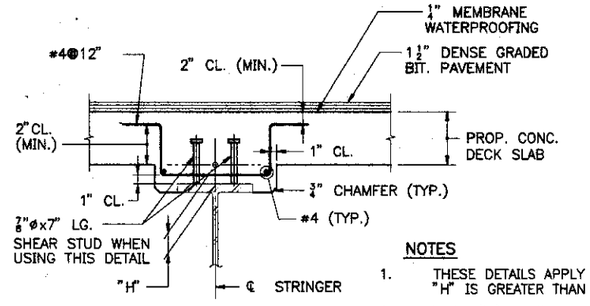
OPTIONAL CONSTRUCTION



DETAIL A
NO SCALE

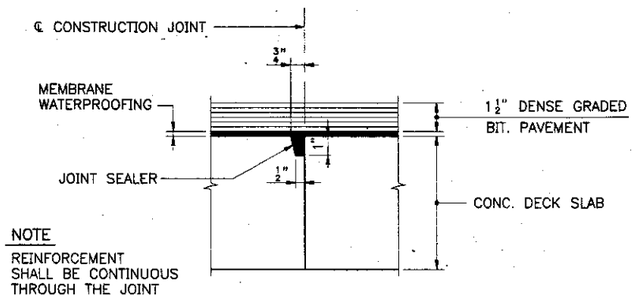


BLOCKING POINT DETAIL
1"=1'-0"



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"



NOTE
REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT

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

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196
SLAB DETAILS I

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

	By	Date
Designed	JFW	2/96
Drawn	RDF	2/96
Checked	RJR	2/96
In Charge Of	RAL	

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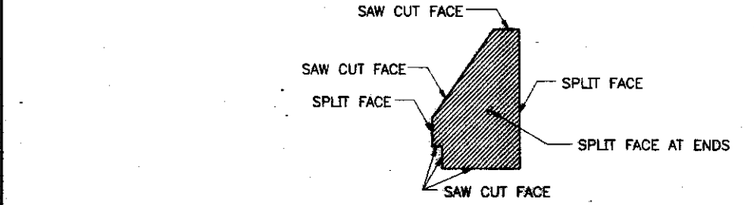
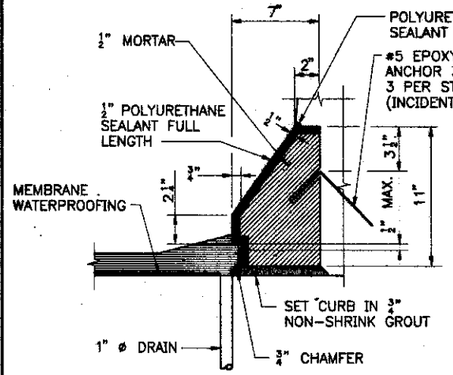
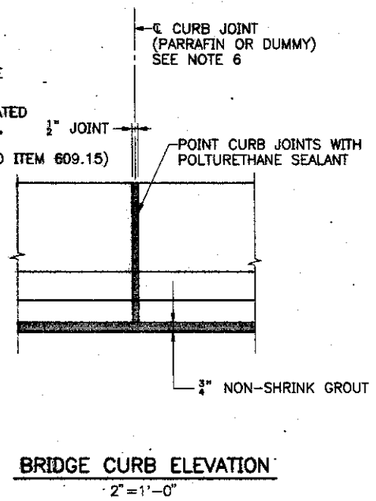


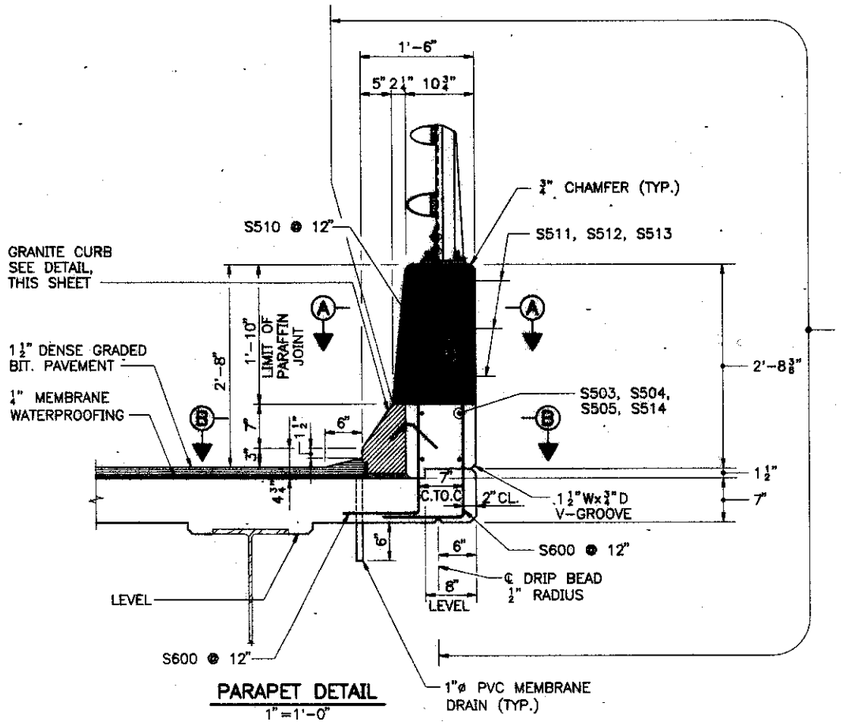
CURB CUT DETAIL
2"=1'-0"



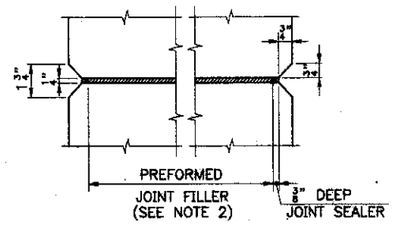
GRANITE CURB DETAIL
2"=1'-0"



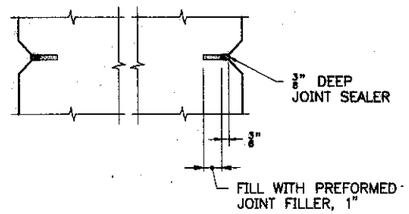
BRIDGE CURB ELEVATION
2"=1'-0"



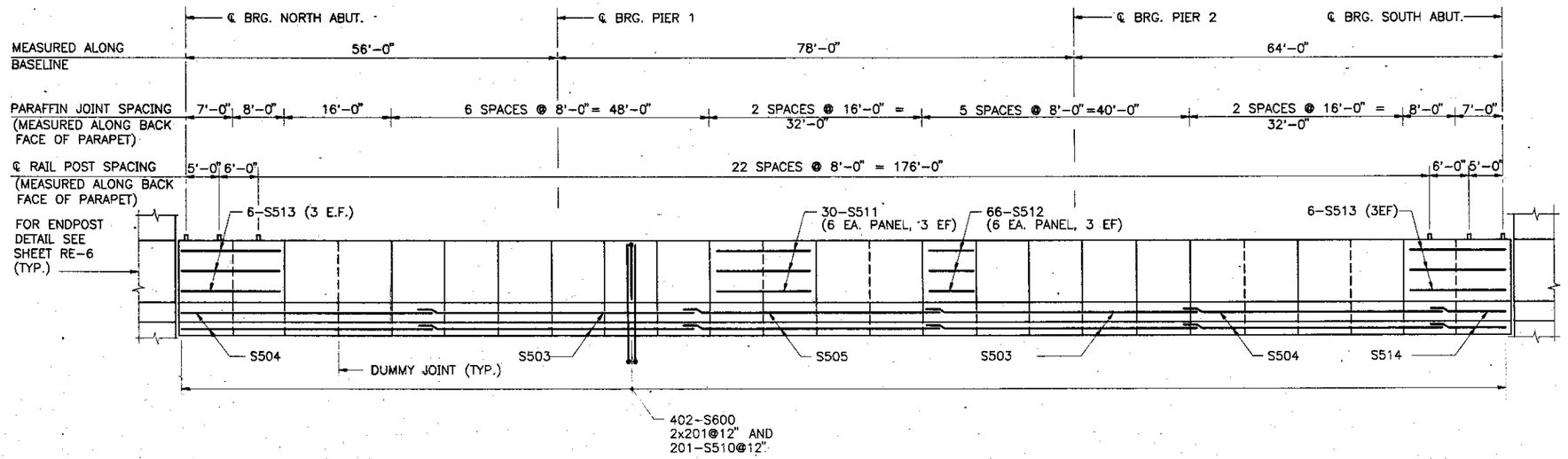
PARAPET DETAIL
1"=1'-0"



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



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



PARAPET ELEVATION
(EAST ELEVATION SHOWN, WEST ELEVATION SIMILAR)

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

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.
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.
6. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN AND DUMMY JOINTS.

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196

SLAB DETAILS II

		By	Date
	Designed	JFW	2/96
	Drawn	JFT	2/96
	Checked	RJR	2/96
Revision	By / Date	In Charge Of	RAL

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC. ARCHITECTS ENGINEERS PLANNERS

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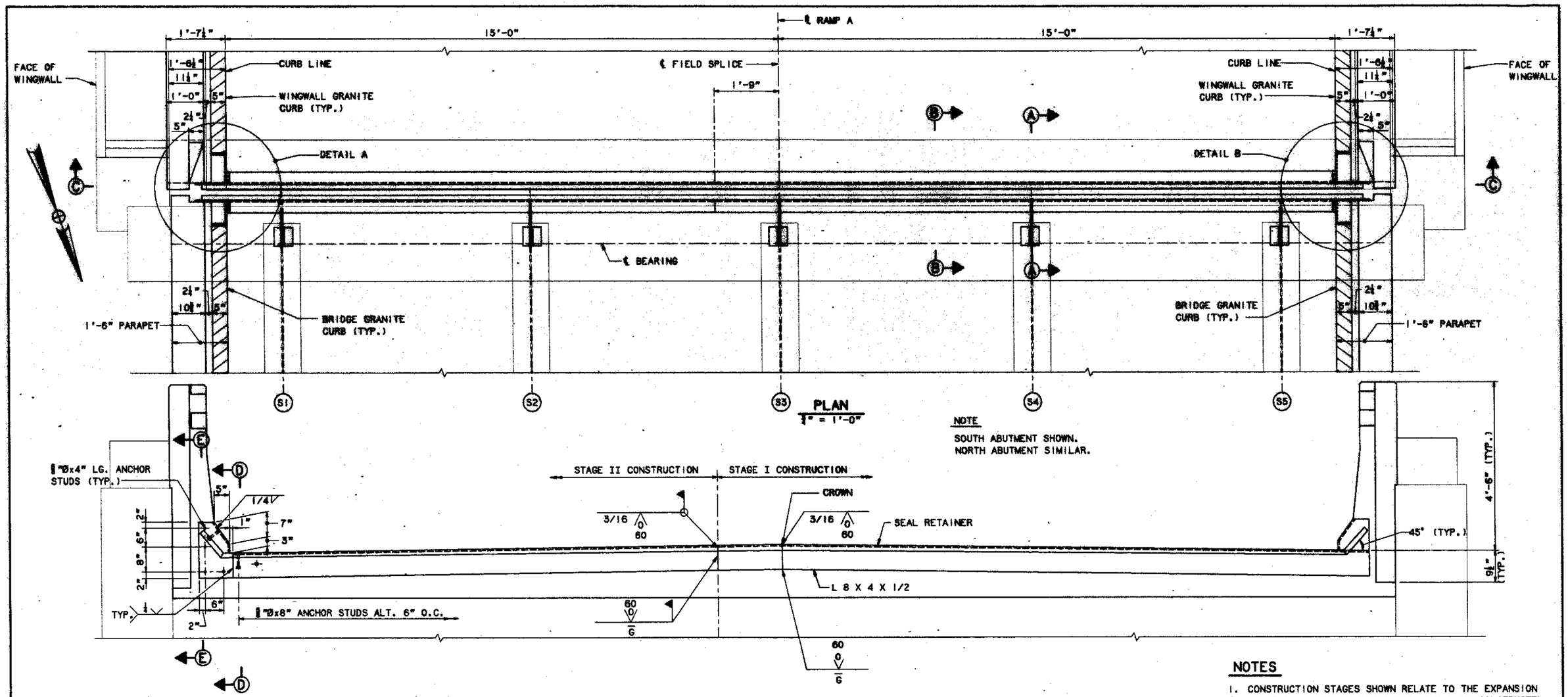
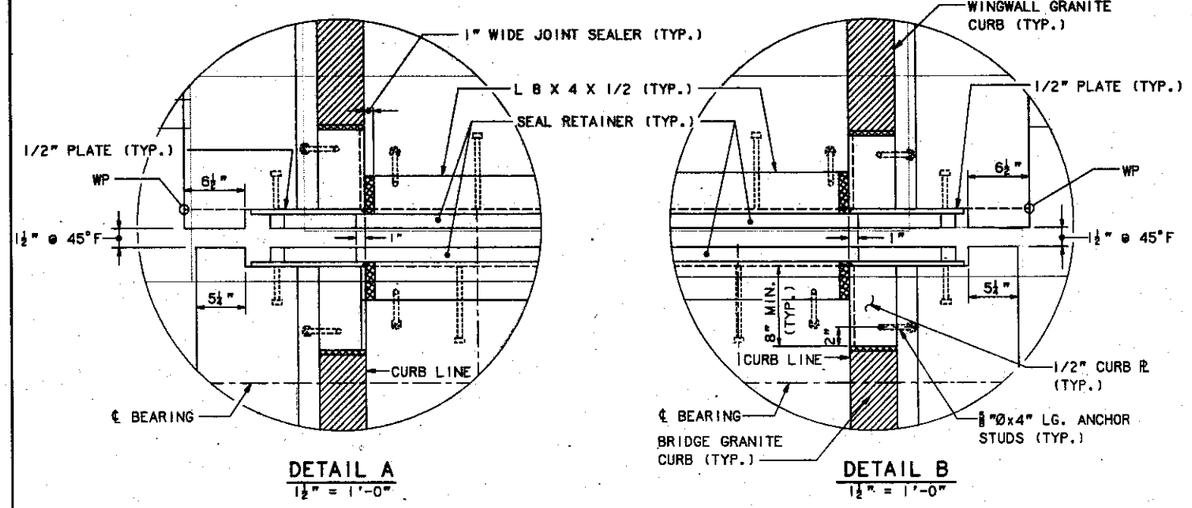
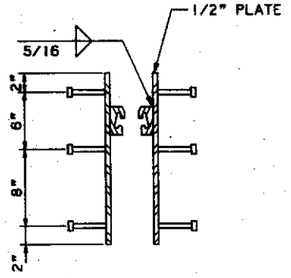




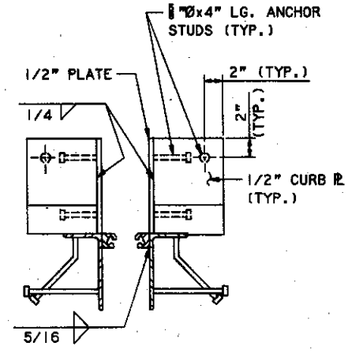
DETAIL A
1½" = 1'-0"

DETAIL B
1½" = 1'-0"

SECTION C-C
¾" = 1'-0"



SECTION E-E
1½" = 1'-0"



SECTION D-D
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 RE-3. THE NORTH AND SOUTH ABUTMENTS SHALL BE CONSTRUCTED AS SHOWN ON RE-4.
2. FOR SECTIONS A-A AND B-B SEE SHHET NO. RE-14.
3. EXPANSION JOINT AT SOUTH ABUTMENT SHOWN. EXPANSION JOINT AT NORTH ABUTMENT SIMILAR.

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196

EXPANSION JOINT DETAILS I

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:
		By:	Date:
	Designed	JFW	1/96
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	In charge of:	RAL	

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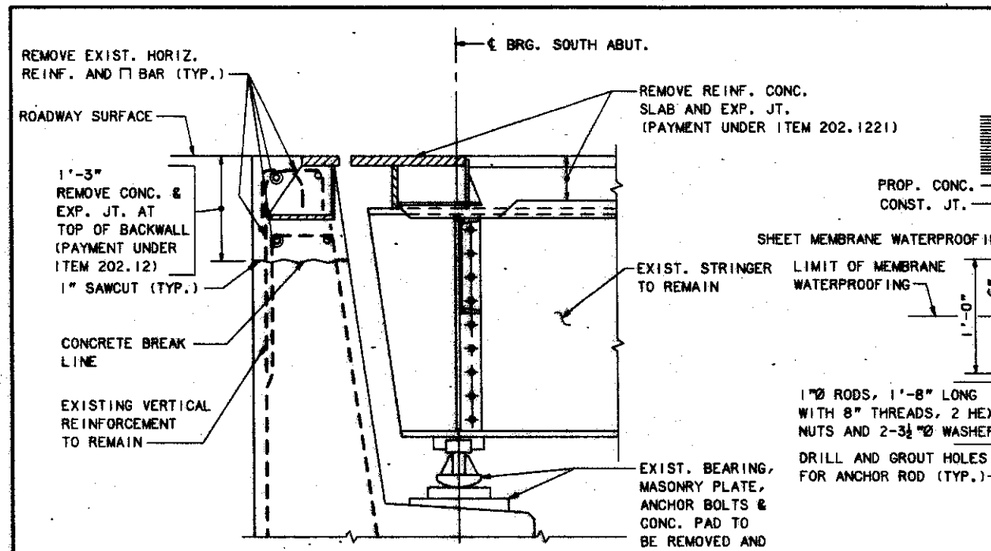
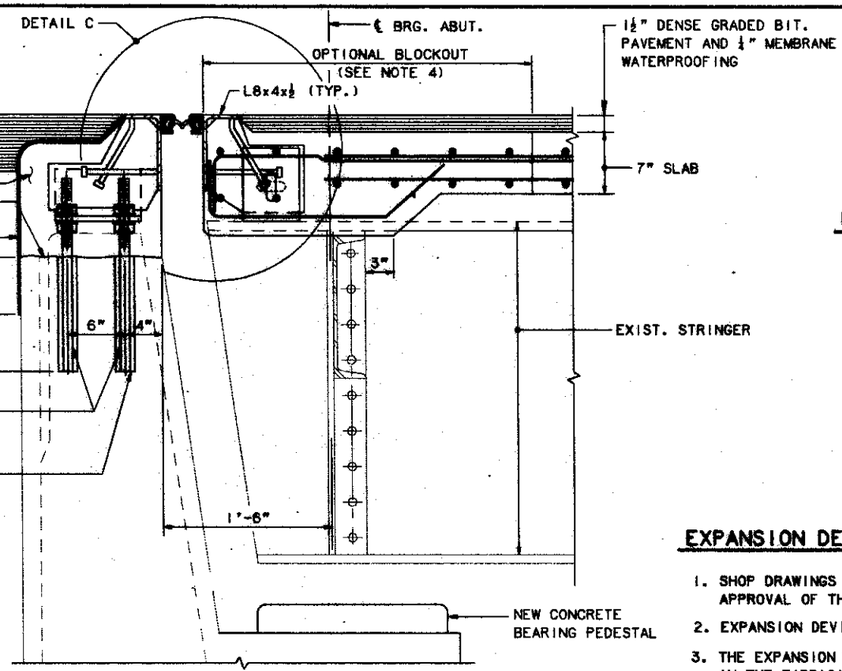
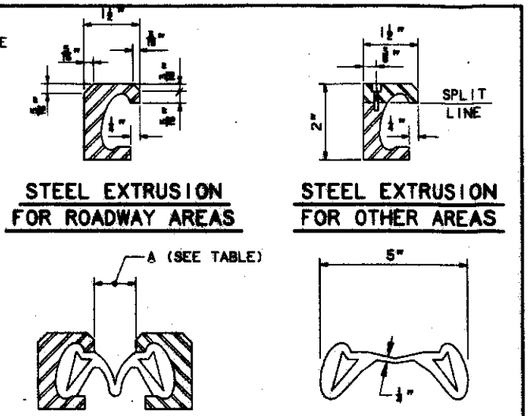


EXISTING SECTION A-A
1" = 1'-0"



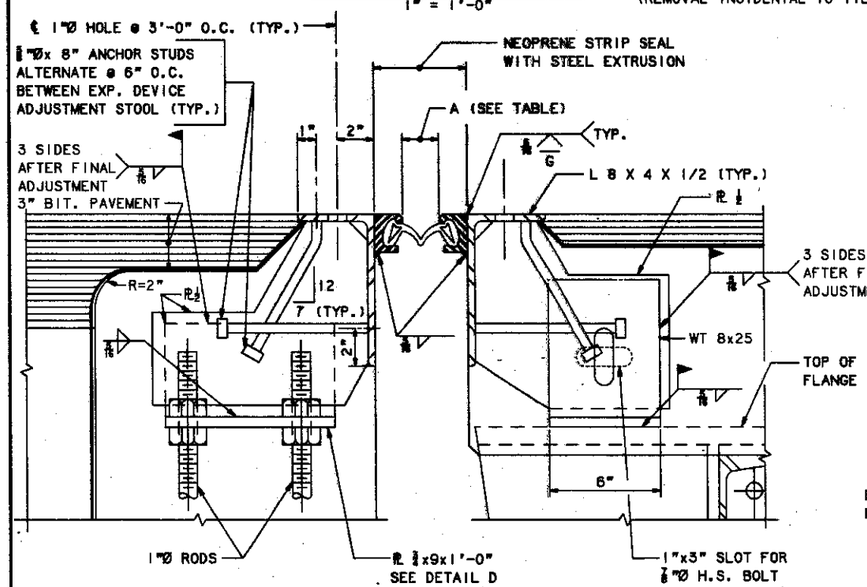
PROPOSED SECTION A-A
1½" = 1'-0"



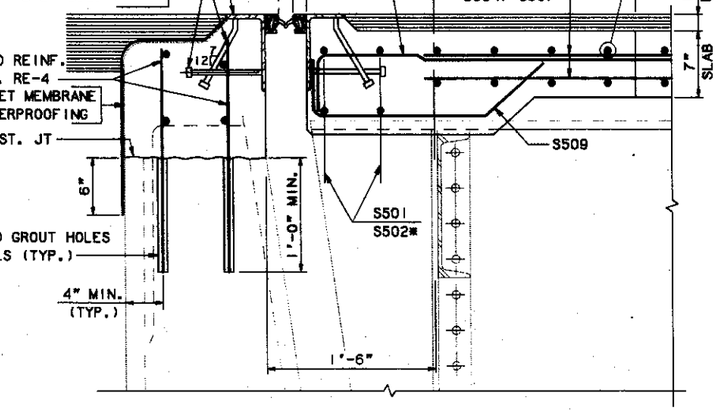
STRIP SEAL DETAILS
HALF SIZE

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 1½ 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. SEE TABLE FOR OPENING DIMENSION. OPENING IS TO BE MEASURED PARALLEL TO THE CENTERLINE OF CONSTRUCTION.
4. THE SLAB CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY. SEE SECTION 520.06 OF THE STANDARD SPECIFICATIONS.
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 EMBEDDED IN CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND.

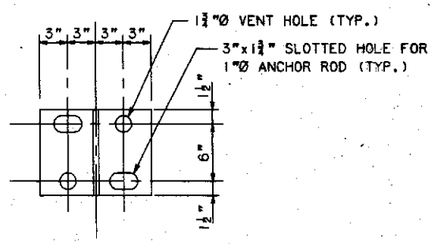


DETAIL C
3" = 1'-0"



* FIELD CUT TO FIT EPOXY COAT ENDS

PROPOSED SECTION B-B
1½" = 1'-0"



DETAIL D
1½" = 1'-0"

TEMP.	0°F	15°F	30°F	45°F	60°F	75°F	90°F	105°F
S. ABUT.	2	1 13/16	1 11/16	1½	1 5/16	1 3/16	1	13/16
N. ABUT.	1 11/16	1⅝	1 9/16	1½	1 7/16	1⅜	1 5/16	1¼

SEAL OPENING TABLE (DIM "A")

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196

EXPANSION JOINT DETAILS II

HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:

	By:	Date:
Designed	JFW	1/96
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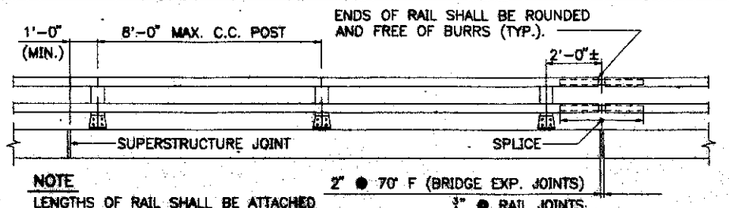
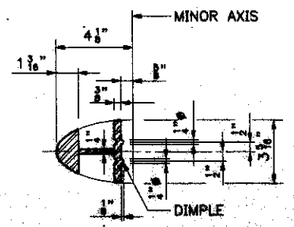
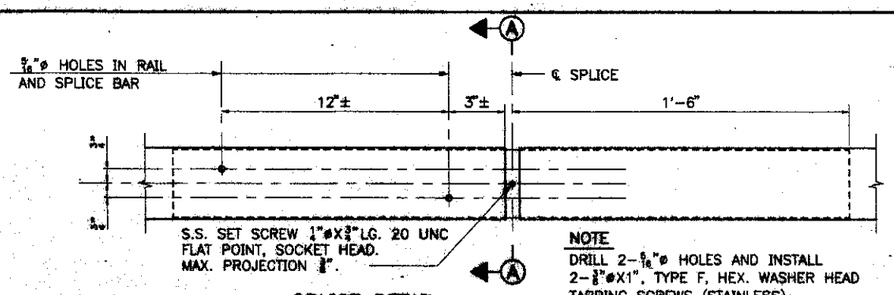


NOTE
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING – ELEVATION
$\frac{3}{8}$"=1'-0"

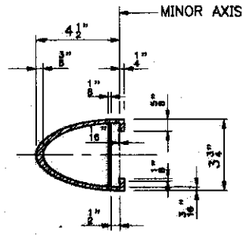


SECTION A–A (RAIL)
3"=1'-0"

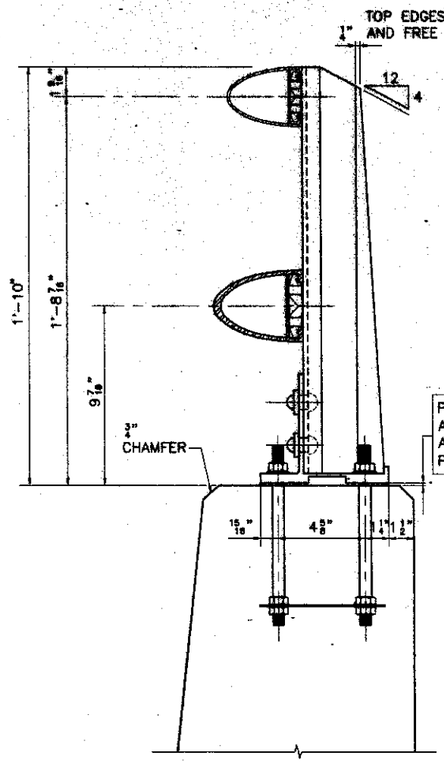


NOTE
DRILL 2–5/16"ø HOLES AND INSTALL 2–⅜"øX1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS).

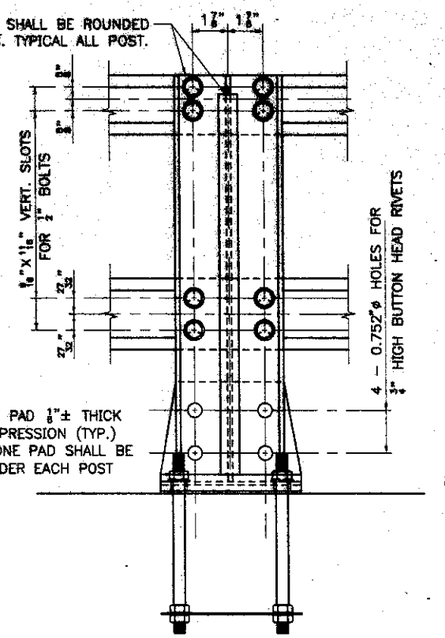
SPLICE DETAIL
3"=1'-0"



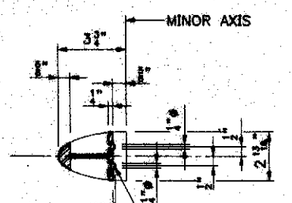
RAIL MEMBER
3"=1'-0"



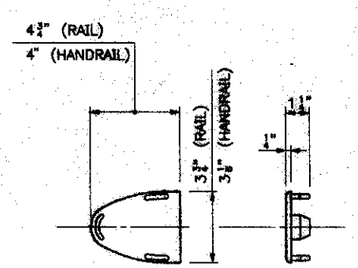
BRIDGE RAILING (ASSEMBLY)
3"=1'-0"



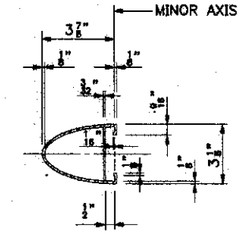
OUTSIDE ELEVATION OF POST
3"=1'-0"



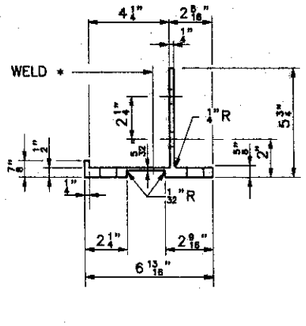
SECTION A–A (HANDRAIL)
3"=1'-0"



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

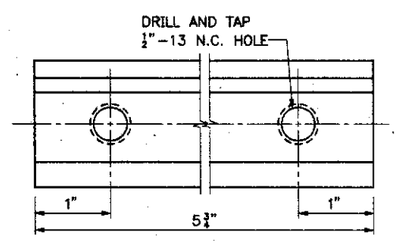


HANDRAIL MEMBER
3"=1'-0"

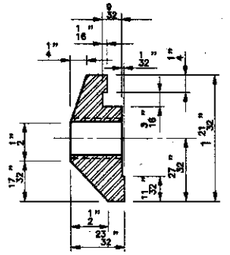


POST BASE SECTION
3"=1'-0"

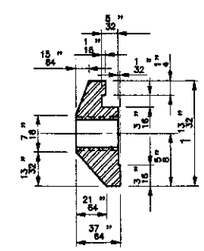
NOTE
* ONE–PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE–PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO–PIECE BASE PLATE



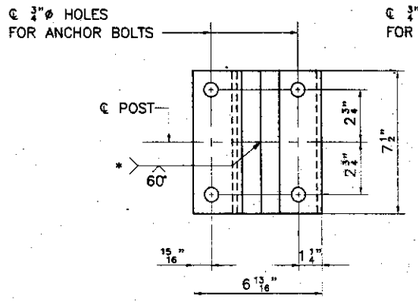
CLAMP BAR DETAILS
FULL SIZE



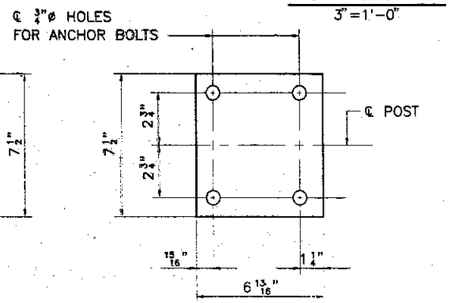
FOR RAIL MEMBER



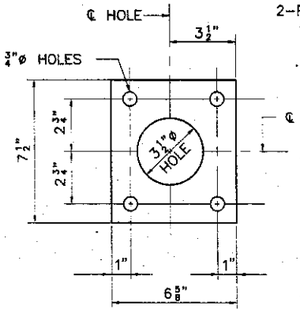
FOR HANDRAIL



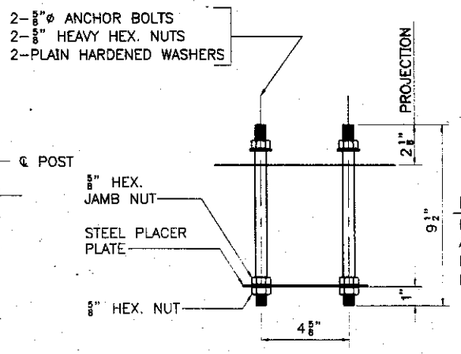
POST BASE (BOTTOM VIEW)
3"=1'-0"



PREFORMED PAD
3"=1'-0"

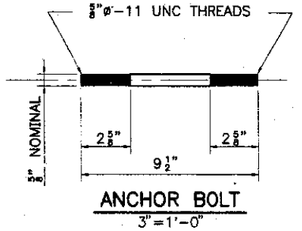


STEEL SPACER PLATE (FOR ANCHORAGE)
3"=1'-0"



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.



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.

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196
ALUMINUM · BRIDGE RAIL DETAILS

Trans pass

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

	By	Date
Designed	JFW	2/96
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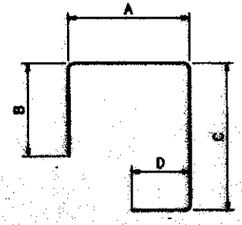
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
ABUTMENT MODIFICATIONS											
A501	5	132	2 - 5	STR							DOWELS
A502	5	8	18 - 0	STR							LONGITUDINAL
A503	5	8	3 - 8	115	1 - 10	1 - 10					THREADED COUPLER
A504	5	18	3 - 11	119	3 - 1	0 - 10					WINGWALL DOWELS
A505	5	80	3 - 1	118	1 - 9	1 - 4					PEDESTAL DOWELS
A506	5	30	1 - 4	STR							PEDESTAL
A507	5	8	18 - 8	STR							LONGITUDINAL

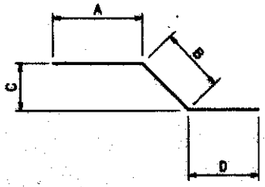
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
DECK											
S500	5	802	5 - 8	115	2 - 9	2 - 9					THREADED COUPLERS
S501	5	802	17 - 5	STR							TRANSVERSE
S502	5	802	14 - 11	STR							TRANSVERSE
S503	5	254	40 - 0	STR							LONGITUDINAL AT PIERS
S504	5	174	39 - 2	STR							LONGITUDINAL AT ABUTS
S505	5	87	42 - 10	STR							LONGIT AT CENTER SPAN
S506	5	31	10 - 8	118	10 - 2	0 - 6					TOP LONGIT AT S. ABUT
S507	5	48	9 - 0	STR							BOT LONGIT AT S. ABUT
S508	5	31	4 - 0	118	3 - 8	0 - 6					HAUNCH - TOP - N. ABUT
S509	5	62	2 - 11	115		0 - 6	1 - 6	0 - 11			HAUNCH - BOTTOM
S510	5	402	3 - 9	124A	0 - 6	1 - 8		1 - 7			PARAPET
S511	5	60	15 - 9	STR							PARAPET
S512	5	132	7 - 9	STR							PARAPET
S513	5	24	15 - 10	STR							PARAPET
S514	5	8	10 - 3	STR							LONGIT AT S. PARAPETS
S600	6	804	4 - 0	118	3 - 0	1 - 0					PARAPET - SLAB

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
WINGWALL MODIFICATIONS											
W500	5	68	6 - 6	STR							BACKFACE - VERTICAL
W501	5	68	6 - 0	118	5 - 2	0 - 10					FRONTFACE - VERTICAL
W502	5	32	9 - 0	STR							BACKFACE - HORIZONTAL
W503	5	20	10 - 6	STR							FRONTFACE - HORIZONTAL
W504	5	16	5 - 5	119	1 - 8	3 - 9	3 - 8				FRONTFACE - HORIZONTAL
W505	5	4	7 - 0	118	6 - 2	0 - 10					HORIZONTAL
W506	5	4	5 - 0	119	1 - 8	3 - 4	3 - 3				HORIZONTAL
W507	5	4	4 - 6	118	3 - 8	0 - 10					HORIZONTAL
W508	5	4	9 - 3	STR							HORIZONTAL
W509	5	8	4 - 9	119	1 - 8	3 - 1	2 - 9				HORIZONTAL - SLOPED TOP
W510	5	4	2 - 0	STR							HORIZONTAL
W511	5	8	2 - 11	124A	0 - 5	2 - 3	0 - 3				HORIZ - RAIL CONNECTION
W512	5	8	2 - 7	124A	0 - 5	0 - 0	0 - 5	1 - 9			HORIZ - RAIL CONNECTION
W513	5	28	6 - 1	124A	0 - 8	2 - 0	1 - 8	1 - 9			TOP BAR
W514	5	4	5 - 9	102	0 - 10	2 - 11	2 - 0				TOP BAR - SLOPED EDGE
W515	5	4	5 - 2	102	0 - 8	2 - 8	2 - 0				TOP BAR - SLOPED EDGE
W516	5	24	7 - 6	118	6 - 8	0 - 10					BACKFACE - HORIZONTAL
W517	5	16	6 - 5	124A	1 - 0	2 - 0	1 - 8	1 - 9			TOP BAR
W518	5	8	13 - 2	STR							LONGITUDINAL - BASE
W600	6	104	3 - 10	118	2 - 4	1 - 6					DOWELS

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INCR.	LOCATION AND REMARKS
PIER MODIFICATIONS											
P501	5	60	3 - 3	118	1 - 9	1 - 6					PEDESTAL DOWELS
P502	5	40	1 - 10	STR							PEDESTAL

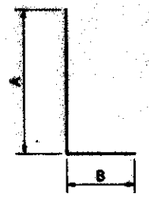


TYPE 102



TYPE 103

TYPE 113



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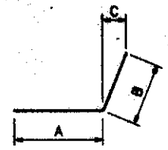

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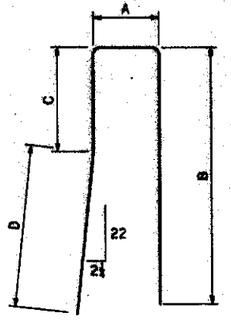

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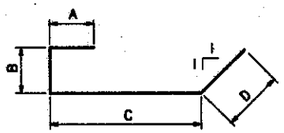

TYPE 115

Maine Turnpike Authority
Maine Turnpike

RAMP A OVER ROUTE 196
REINFORCING SCHEDULE

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC
ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:

	By:	Date:
Designed	JFW	1/96
Drawn	RJT	1/96
Checked	RJR	1/96
In charge of:	RAL	

Contract 96.7

Sheet No. RE-16
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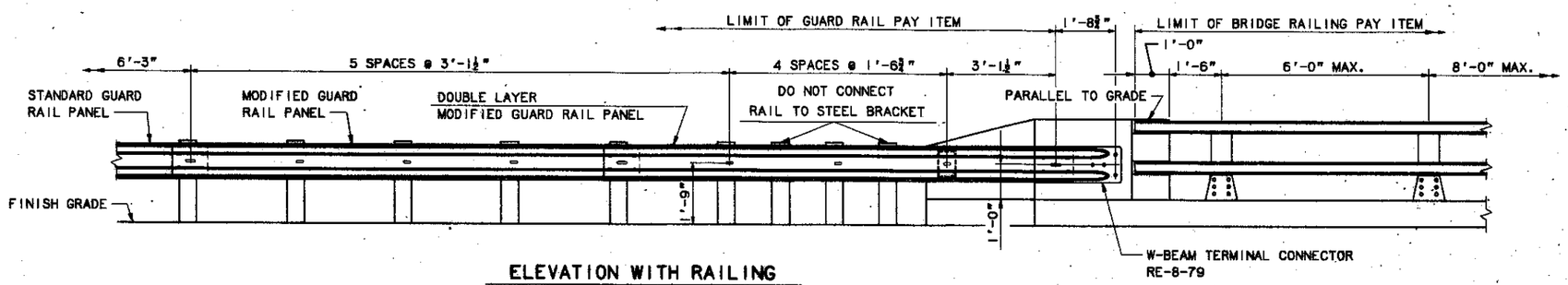
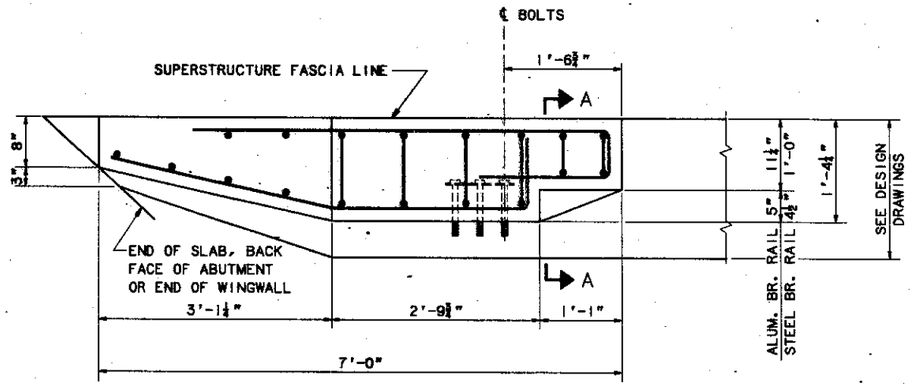
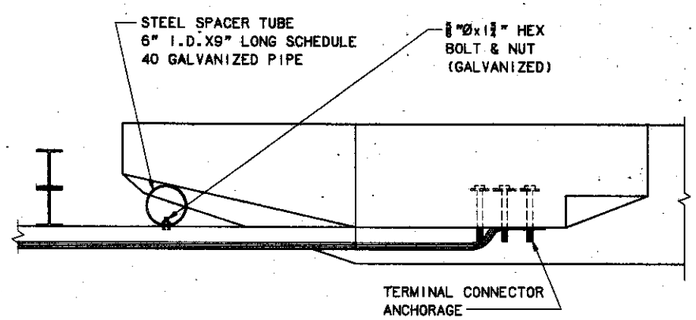
METPK04



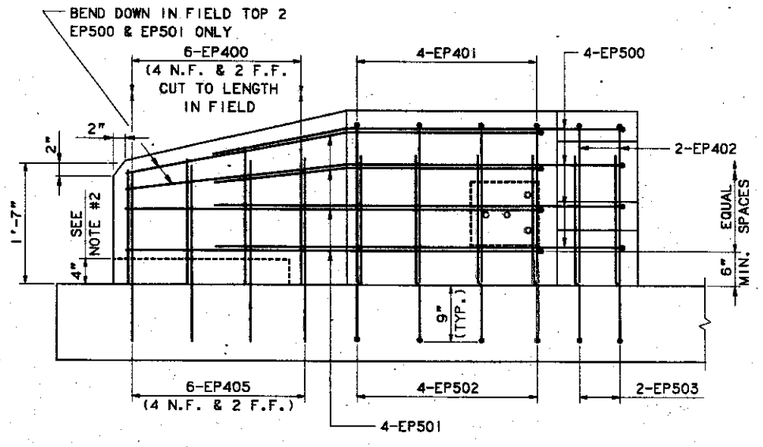
ELEVATION WITH RAILING
2-BAR BRIDGE RAIL (ALUMINUM OR STEEL)



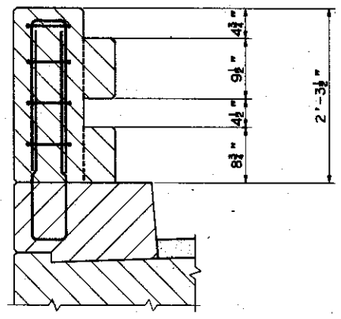
PLAN



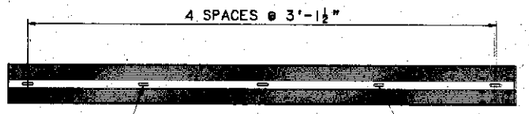
PLAN ENDPOST & GUARDRAIL



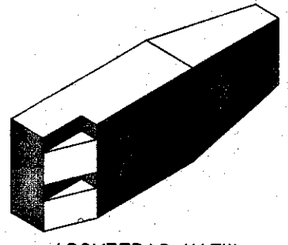
ELEVATION



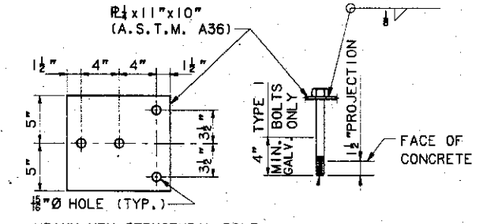
SECTION A - A



MODIFIED GUARD RAIL PANEL
RE-3-(4@3'-1½"=12'-6")-73



ISOMETRIC VIEW



TERMINAL CONNECTOR ANCHORAGE

NOTES

1. FOR LOCATIONS OF END POSTS ON THE STRUCTURE, SEE DESIGN DRAWINGS.
2. AT TIMES, AN END POST WING MAY BE CANTILEVERED FOR ALL OR PART OF ITS LENGTH. FOR DETAILS, SEE DESIGN DRAWINGS.
3. IF AN END POST WING IS CANTILEVERED, BARS EP405 ARE TO BE OMITTED AS NEEDED.
4. WHEN END POST WING IS CANTILEVERED MORE THAN 2'-0" ALL #5 BARS SHALL BE REPLACED BY #7 BARS.
5. NUTS AND WASHERS FOR ⅞"Ø ANCHOR BOLTS SHALL BE INCIDENTAL TO GUARD RAIL PAY ITEMS. NUTS SHALL CONFORM TO A.S.T.M. A563, GRADE DH, GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153, OR GRADE C3, PLAIN.
6. 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.
7. SPACER TUBE SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A53, GALVANIZED, GRADE B TYPE E OR S. HEX BOLT AND NUT ON SPACER TUBE SHALL CONFORM TO A.S.T.M. A307. PAYMENT FOR SPACER TUBE, BOLT AND NUT SHALL BE INCIDENTAL TO THE GUARD RAIL PAY ITEM.
8. REINFORCING STEEL SHALL HAVE 2" MIN. CONCRETE COVER.
9. 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.
10. TERMINAL CONNECTOR ANCHORAGE SHALL BE INCIDENTAL TO THE APPLICABLE CONCRETE PAY ITEM.
11. END POST SHALL BE CONSTRUCTED NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS.
12. ALL ACCESSORIES (POSTS, BOLTS, NUTS ETC.) SHALL BE AS DETAILED FOR STANDARD TYPE 3 GUARD RAIL, EXCEPT AS OTHERWISE DETAILED.
13. CONCRETE SHALL BE CLASS A WITH A SILICA FUME ADDITIVE.
14. EXTRA BEAM AND POSTS REQUIRED FOR EACH GUARD RAIL CONNECTION WILL BE INCIDENTAL TO RELATED GUARD RAIL PAY ITEMS.

No.	Revision	By:	Date:

Designed | Drawn | Checked | In charge of:

Maine Turnpike Authority
Maine Turnpike

Trans pass

STANDARD DETAILS
BD 201 - 93
CONCRETE END POST
2 - BAR

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF, INC ARCHITECTS ENGINEERS PLANNERS

Contract 96.7

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