RHODE ISLAND
STANDARD DETAILS

RHODE ISLAND STANDARD DETAILS

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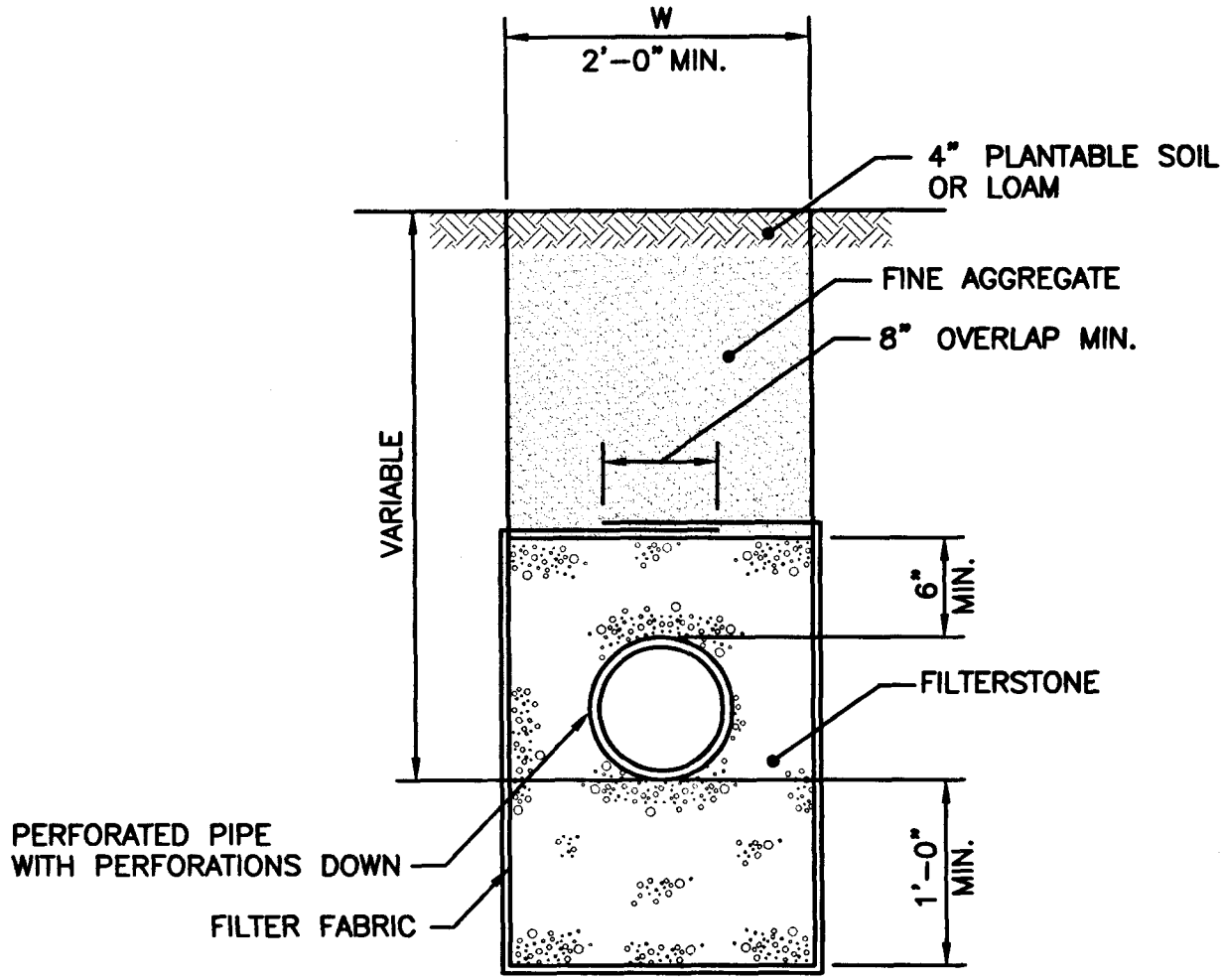


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. WIDTH (W) OF TRENCH = INSIDE DIAMETER OF PIPE + 1'-0" OR 2'-0" WHICH EVER IS GREATER.
3. MINIMUM PIPE DIAMETER 8".
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

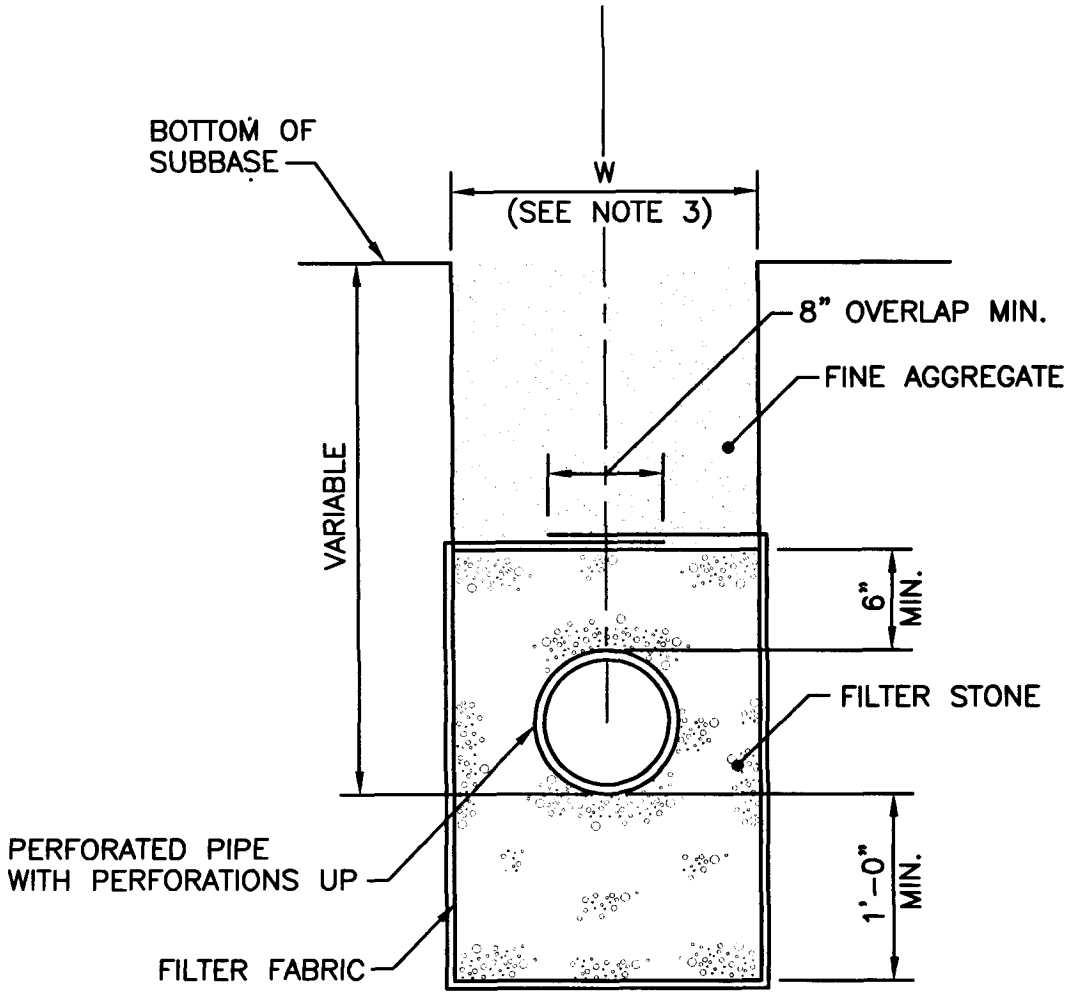
UNDERDRAIN

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 1.1.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM PIPE DIAMETER 1'-0".
3. TRENCH WIDTHS: PIPE $\leq$ 36" = O.D. + 24" EACH SIDE
   PIPE > 36" = O.D. + 30" EACH SIDE
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.
5. SEE CONSTRUCTION PLANS FOR LOCATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

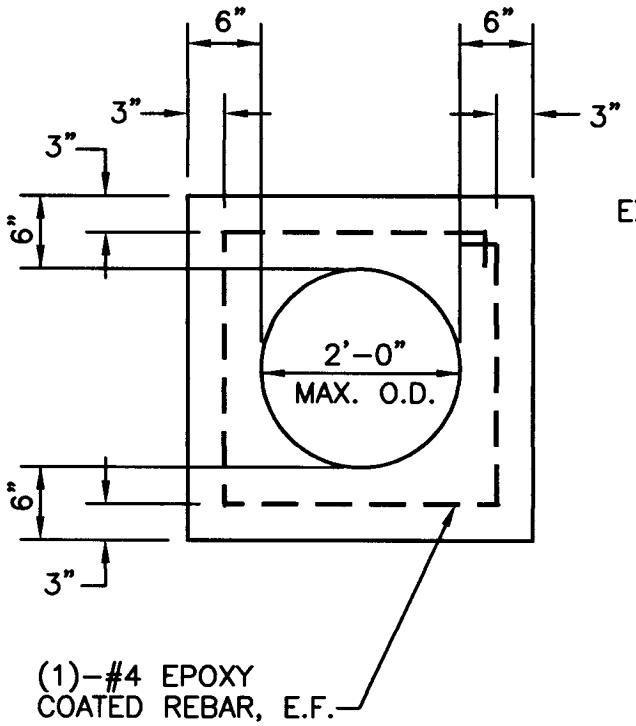
COMBINATION DRAIN

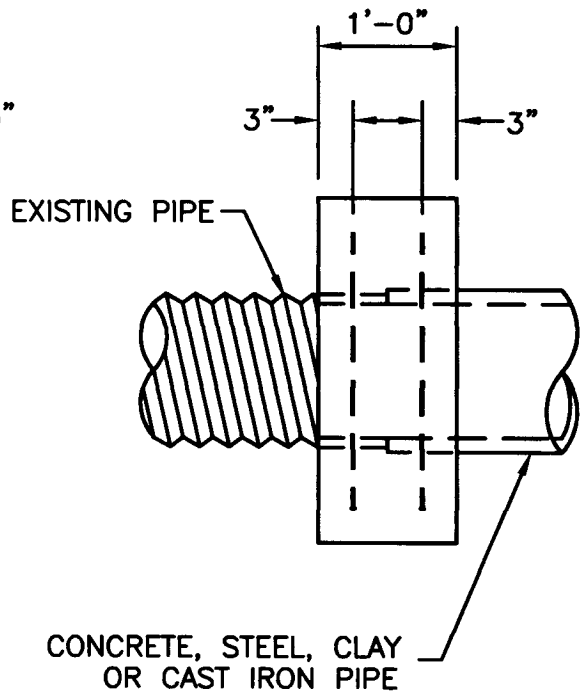
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 1.2.0





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. MAXIMUM PIPE DIAMETER FOR USE OF CONNECTING COLLAR IS 2'-0".
3. PIPE WITH LARGEST OUTSIDE DIAMETER USED TO DETERMINE SIZE OF COLLAR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

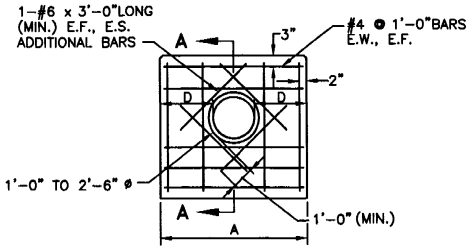
CONCRETE CONNECTING COLLAR

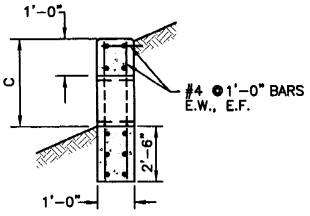
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

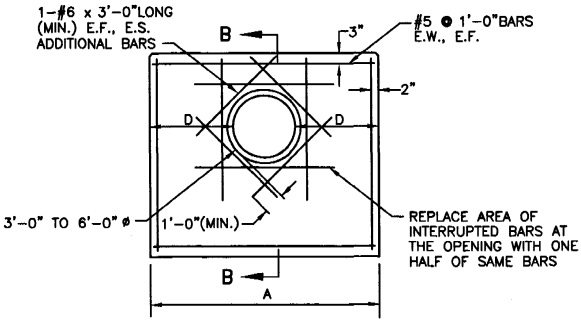
JUNE 15, 1998
ISSUE DATE

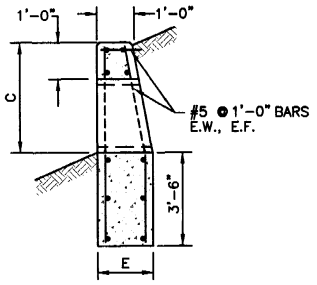
R.I. STANDARD 1.3.0





SECTION A-A





SECTION B-B

DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	–	13.2
1'-3"	3'-9"	2'-5"	1'-3"	–	17.2
1'-6"	4'-6"	2'-8"	1'-6"	–	21.5
1'-9"	5'-3"	2'-11"	1'-9"	–	26.0
2'-0"	6'-0"	3'-2"	2'-0"	–	30.9
2'-3"	6'-9"	3'-6"	2'-3"	–	36.5
2'-6"	7'-6"	3'-9"	2'-6"	–	42.0
3'-0"	9'-6"	4'-0"	3'-3"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-9"	1'-7"	111.8
4'-0"	12'-8"	5'-0"	4'-4"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-11"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-6"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	6'-1"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-8"	2'-5"	343.6

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE HEADWALLS FOR PIPE CULVERTS

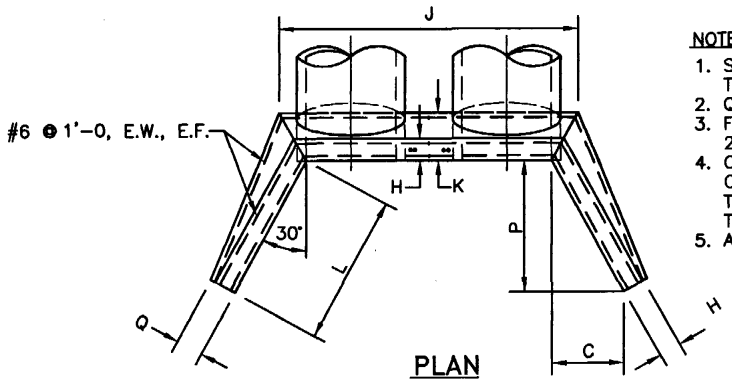
R.I. STANDARD 2.1.0

JUNE 15, 1998
ISSUE DATE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

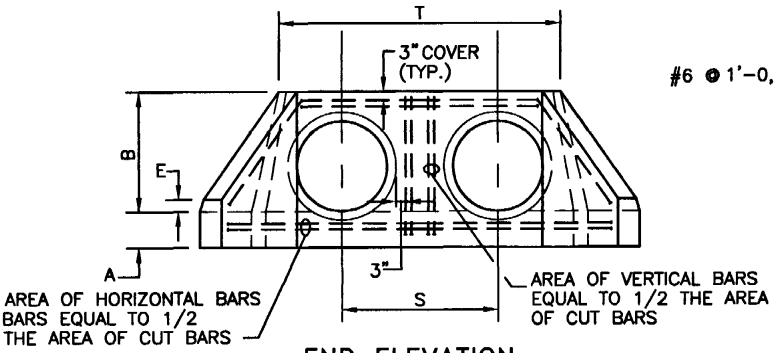
REVISIONS		
NO.	BY	DATE



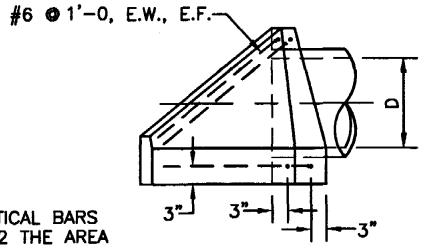
PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS.
2. QUANTITIES GIVEN ARE FOR ONE ENDWALL.
3. FOR DIMENSIONS NOT GIVEN IN TABLE, SEE SHEET 2 OF 2.
4. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
5. All REINFORCING BARS SHALL BE EPOXY COATED.



END ELEVATION



SIDE ELEVATION

FOR CORRUGATED METAL PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	5'-3 1/2"	8'-9 1/2"	5.1	1.3	5.8	1.3
4'-0"	6'-0 1/2"	10'-0 1/2"	6.3	1.7	7.2	1.4
4'-6"	6'-9 1/2"	11'-3 1/2"	8.3	2.1	8.4	2.1
5'-0"	7'-6 1/2"	12'-6 1/2"	10.4	2.7	11.8	2.4
5'-6"	8'-3 1/2"	13'-9 1/2"	12.8	3.3	14.6	3.9
6'-0"	9'-0 1/2"	16'-0 1/2"	16.7	4.1	17.9	4.1
6'-6"	9'-9 1/2"	16'-3 1/2"	19.0	5.0	21.7	4.9
7'-0"	10'-6 1/2"	17'-6 1/2"	22.8	6.0	26.0	5.1

FOR CONCRETE PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	6'-0"	9'-6"	4.1	1.3	5.5	1.3
4'-0"	6'-10"	10'-10"	6.0	1.6	6.9	1.6
4'-6"	7'-0"	12'-2"	7.7	2.1	8.8	2.1
5'-0"	8'-6"	13'-6"	9.7	2.6	11.2	2.6
5'-6"	9'-4"	14'-10"	12.1	3.3	13.9	3.3
6'-0"	10'-2"	16'-2"	14.7	4.0	16.9	4.0
6'-6"	11'-0"	17'-6"	17.7	4.8	20.4	4.8
7'-0"	11'-10"	18'-10"	21.2	5.7	24.4	5.7

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 2.2.0A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS

NO.	BY	DATE
REVISIONS		

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

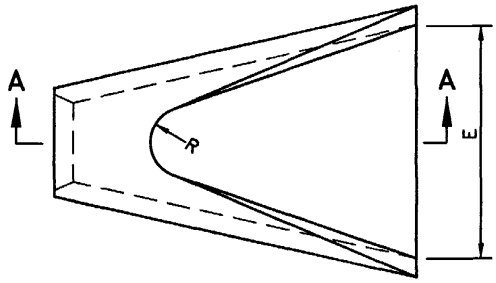
JUNE 15, 1998
ISSUE DATE

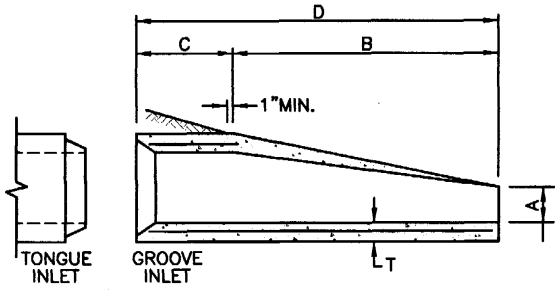
R.I. STANDARD 2.2.0B

TABLE OF DIMENSIONS AND CONCRETE VOLUMES PER HEADWALL
FOR 3'-6" TO 7'-0" CIRCULAR PIPE CULVERTS

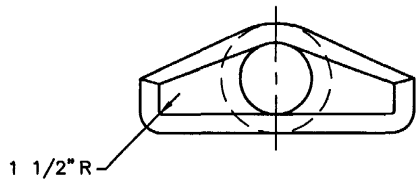
		DIAMETER OF PIPE CULVERTS							
FOR 1 1/2:1 FILL SLOPE		3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0'
	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"
	B	4'-4"	4'-10"	5'-4"	5'-10"	6'-4"	6'-10"	7'-4"	7'-10"
	C	3'-3 3/4"	3'-9"	4'-2 1/4"	4'-7"	5'-0 5/8"	5'-5 3/4"	5'-11"	6'-4 1/4"
	D	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
	E	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"
	H	0'-10"	0'-10"	0'-11"	1'-0"	1'-1"	1'-2"	1'-3"	1'-4"
	J	11'-8 1/2"	13'-2 1/4"	14'-9 1/4"	16'-4"	17'-11"	19'-6"	21'-0 3/4"	22'-7 5/8"
	K	1'-11"	2'-0 1/2"	2'-3"	2'-5 1/2"	2'-8"	2'-10 1/2"	3'-1"	3'-3 1/2"
	L	6'-7 5/8"	7'-6"	8'-4 1/2"	9'-2 7/8"	10'-1 1/4"	10'-11 5/8"	11'-10"	12'-8 3/8"
	P	5'-9"	6'-6"	7'-3"	8'-0"	8'-9"	9'-6"	10'-3"	11'-0"
	Q	0'-11 1/2"	0'-11 1/2"	1'-0 1/2"	1'-1 1/2"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"	1'-5 1/2"
CU. YD. CONC.	CONC. PIPE	3.6	4.4	5.7	7.1	8.8	10.8	12.9	15.4
	C.M. PIPE	3.8	4.7	6.1	7.7	9.5	11.7	14.4	16.7
FOR 2:1 FILL SLOPE	C	4'-4"	4'-10 7/8"	5'-5 3/4"	6'-0 3/4"	6'-7 5/8"	7'-2 5/8"	7'-9 1/2"	8'-4 1/2"
	J	11'-8 1/4"	13'-2"	14'-9"	16'-3 3/4"	17'-10 3/4"	19'-5 1/2"	21'-0 1/2"	22'-7 1/8"
	L	8'-0"	9'-9 3/4"	10'-11 5/8"	12'-1 1/2"	13'-3 3/8"	14'-5 1/4"	15'-7"	16'-9"
	P	7'-6"	8'-6"	9'-6"	10'-6"	11'-6"	12'-6"	13'-6"	14'-6"
CU. YD. CONC.	CONC. PIPE	4.3	5.3	6.8	8.6	10.7	13.0	15.7	18.7
	C.M. PIPE	4.5	5.6	7.2	9.1	11.4	13.9	16.8	20.0

NOTE:
FOR ALL DIMENSIONS NOT SHOWN, SEE VALUES LISTED ABOVE FOR 1 1/2:1 FILL SLOPE





SECTION A–A



END ELEVATION

DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	ONE LAYER REINFORCEMENT IN CENTER OF WALL MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'–0"	4"	2'–0"	4'–0 7/8"	6'–0 7/8"	2'–0"	9"	2"	0.048
1'–3"	6"	2'–3"	3'–10"	6'–1"	2'–6"	11"	2 1/4"	0.054
1'–6"	9"	2'–3"	3'–10"	6'–1"	3'–0"	12"	2 1/2"	0.060
2'–0"	9 1/2"	3'–7 1/2"	2'–6"	6'–1 1/2"	4'–0"	1'–2"	3"	0.072
2'–6"	1'–0"	4'–6"	1'–7 3/4"	6'–1 3/4"	5'–0"	1'–3"	3 1/2"	0.084
3'–0"	1'–3"	5'–3"	2'–10 3/4"	8'–1 3/4"	6'–0"	1'–8"	4"	0.096
3'–6"	1'–9"	5'–3"	2'–11"	8'–2"	6'–6"	1'–10"	4 1/2"	0.108
4'–0"	2'–0"	6'–0"	2'–2"	8'–2"	7'–0"	1'–10"	5"	0.120
4'–6"	2'–3"	5'–5"	2'–11"	8'–4"	7'–6"	2'–0"	5 1/2"	0.132
5'–0"	2'–6"	5'–0"	3'–3"	8'–3"	8'–0"	2'–0"	6"	0.144

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

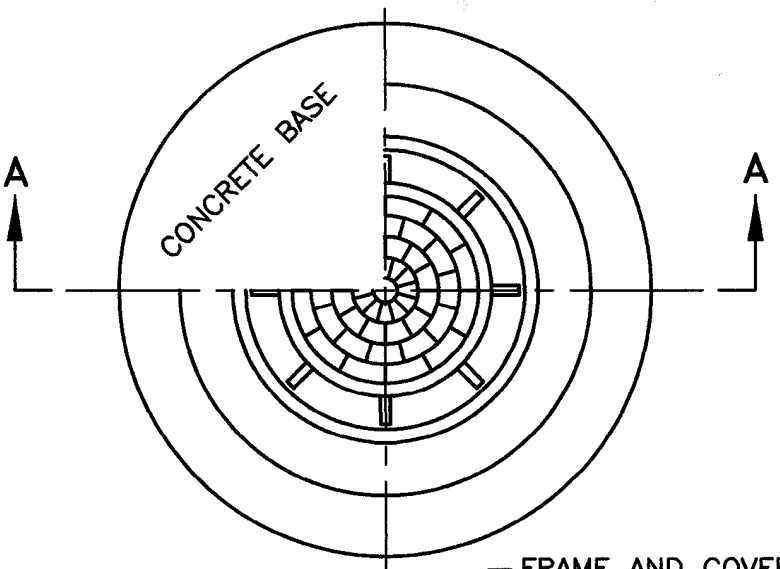
PRECAST CONCRETE FLARED END SECTION

CHIEF ENGINEER TRANSPORTATION

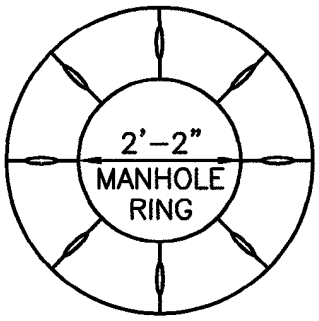
CHIEF DESIGN ENGINEER TRANSPORTATION

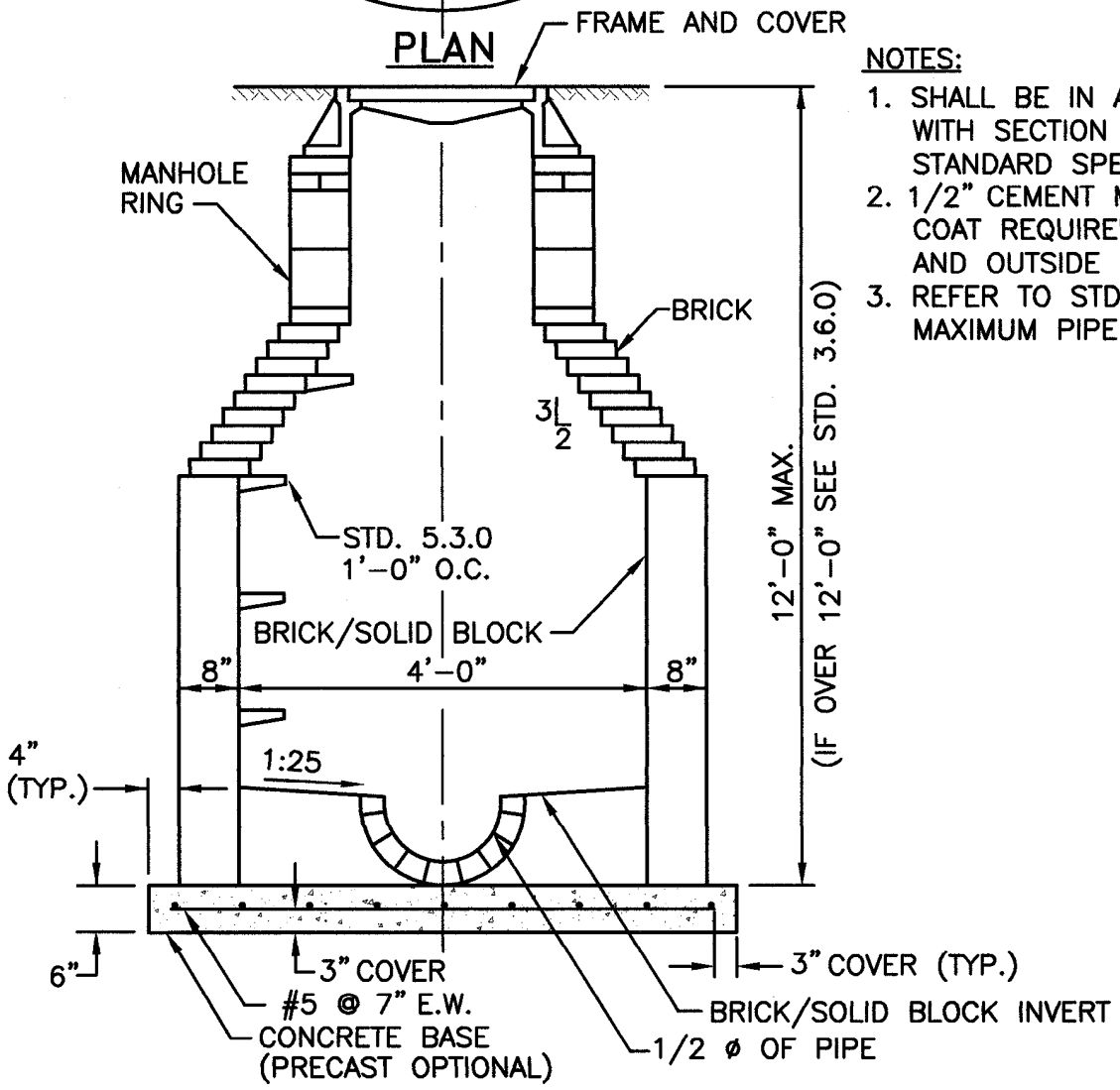
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 2.3.0



PLAN





SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

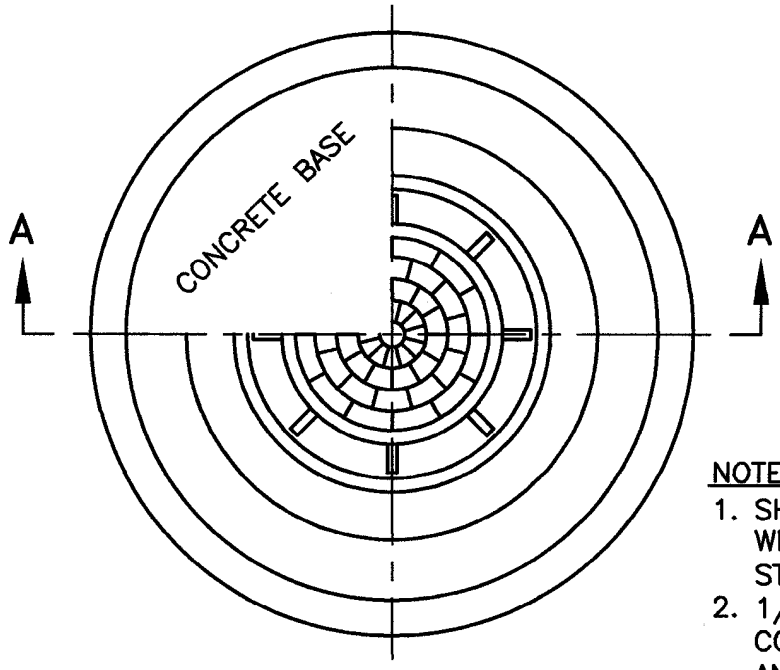
BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE

JAMES N. CAPUTO
CHIEF ENGINEER
TRANSPORTATION

EDMUND T. PARKER JR.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

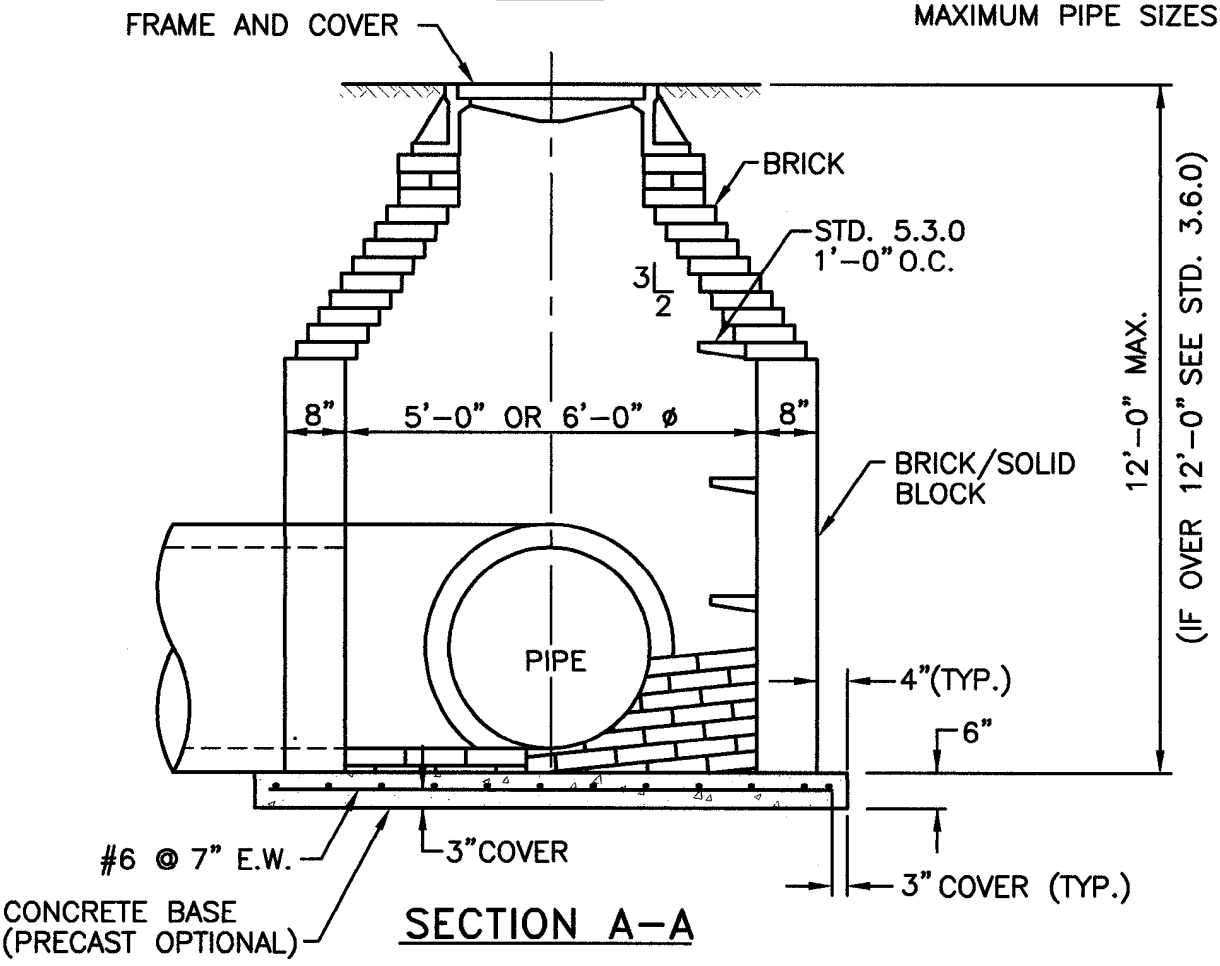
R.I. STANDARD 3.2.0



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

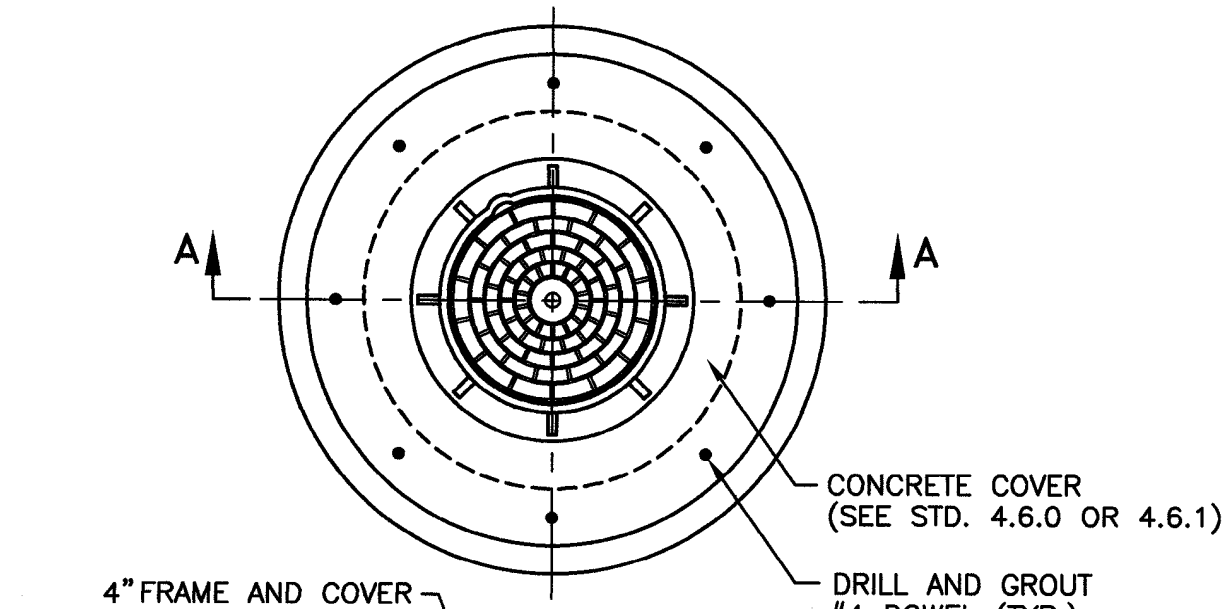
BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE

CHIEF ENGINEER TRANSPORTATION

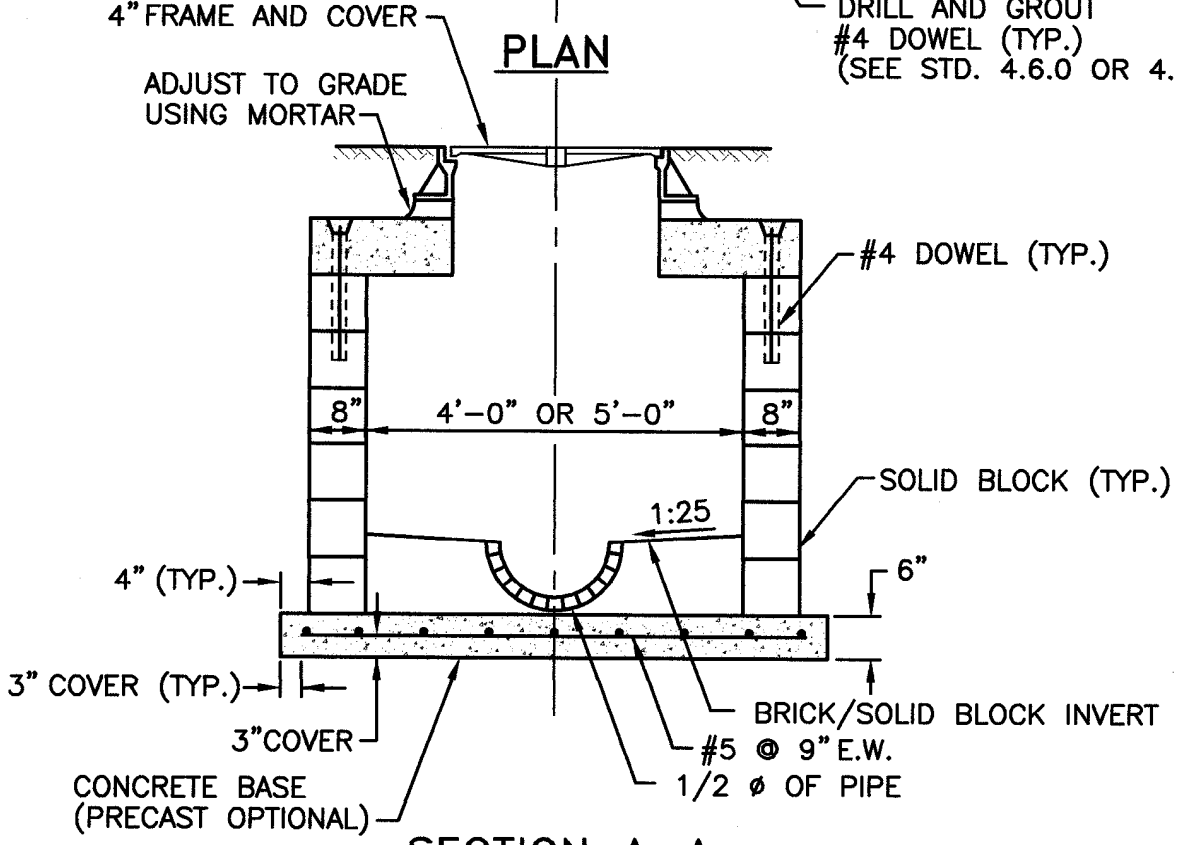
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.2.1



PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
5. ALL PIPES SHALL BE SEALED TO MANHOLE ON INSIDE AND OUTSIDE SURFACES.
6. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

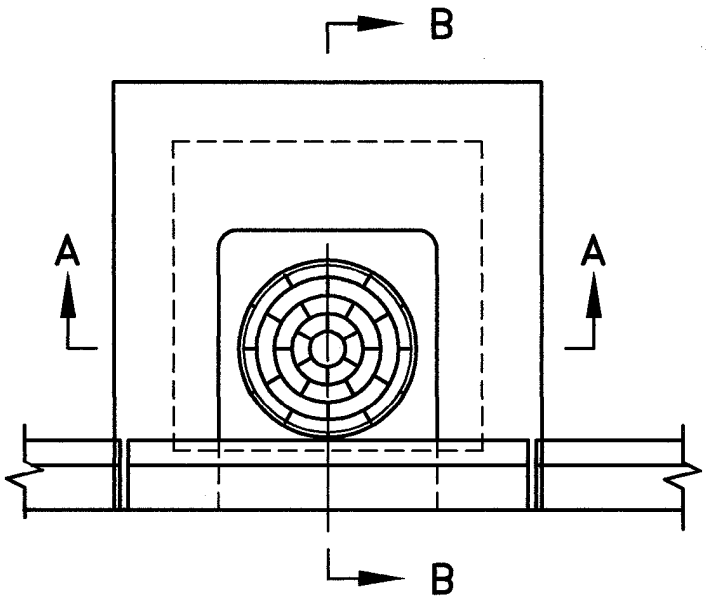
SOLID BLOCK SHALLOW 4'-0" OR 5'-0" ROUND MANHOLE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

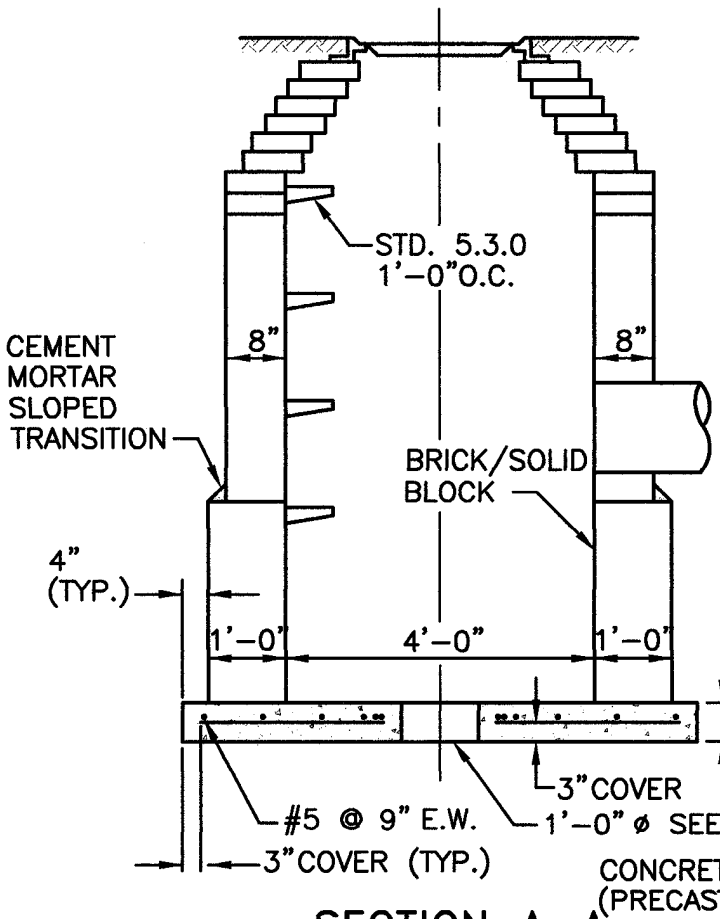
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.2.2

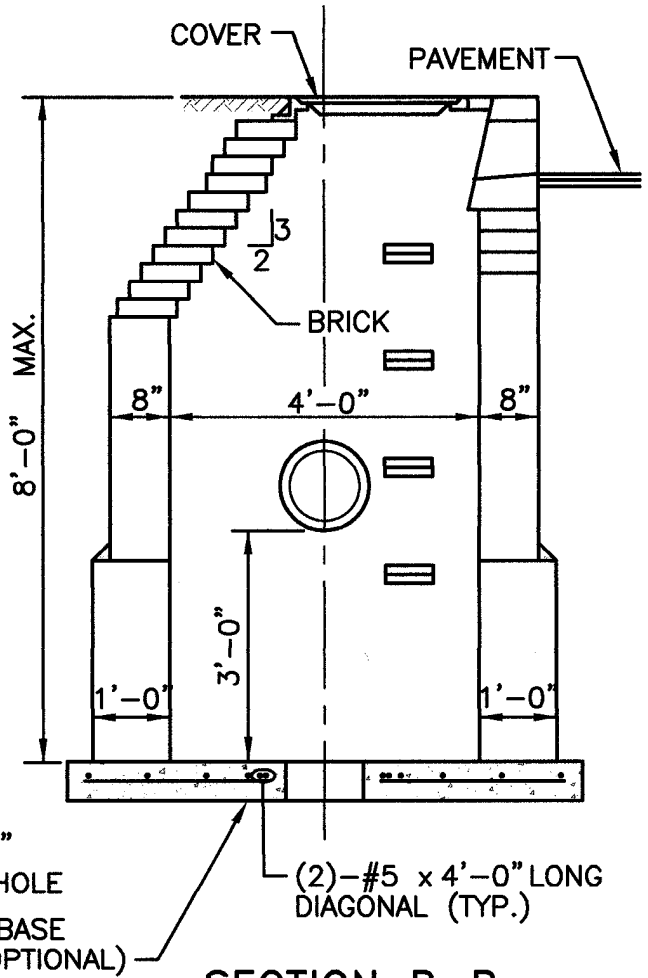


PLAN

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'–0" DEPTH AND 1'–0" WALLS UP TO 8'–0" DEPTH.



SECTION A–A



SECTION B–B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

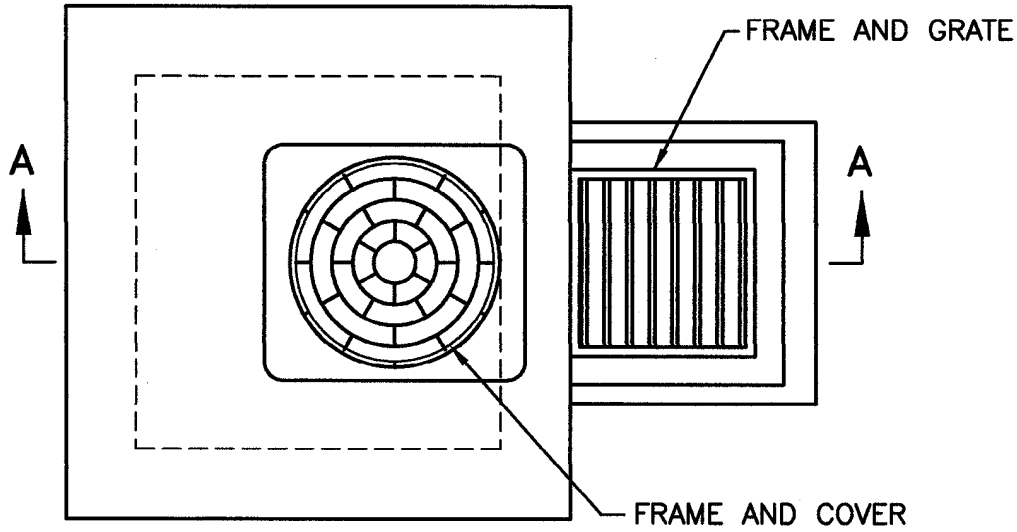
BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

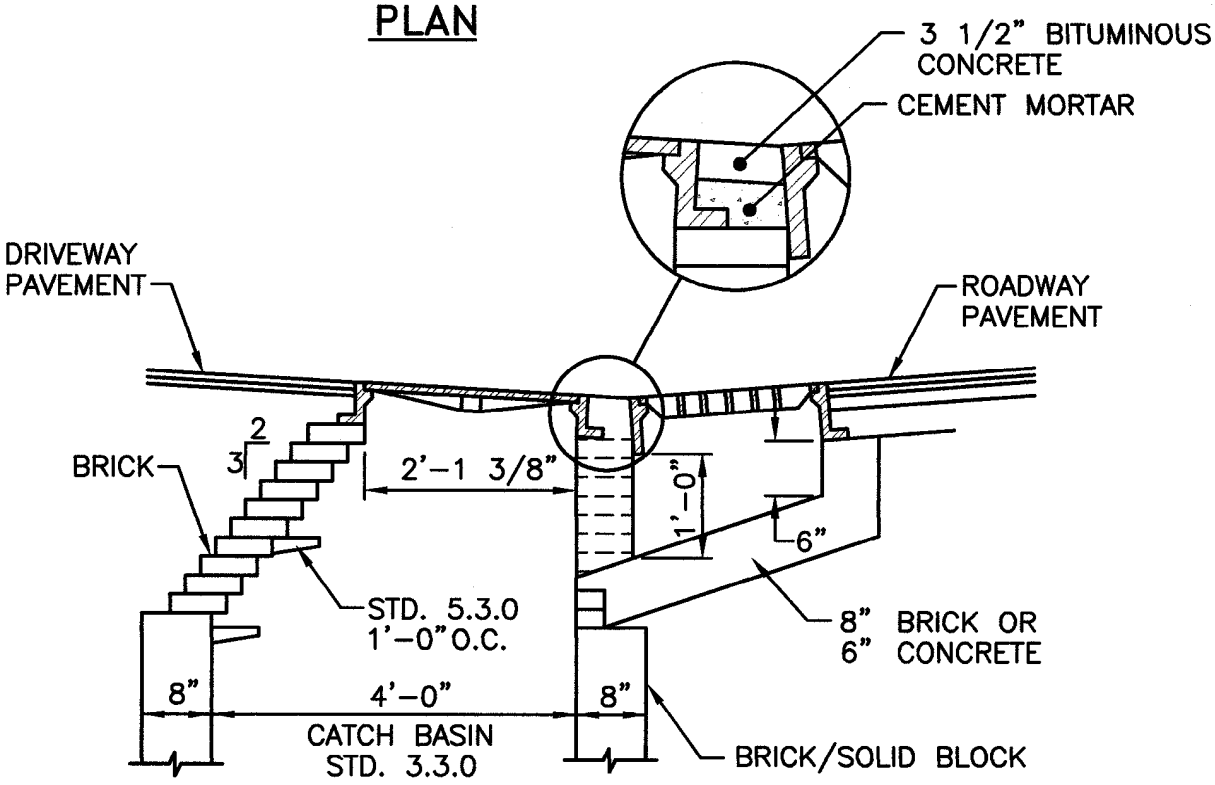
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.3.0



PLAN



SECTION A–A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

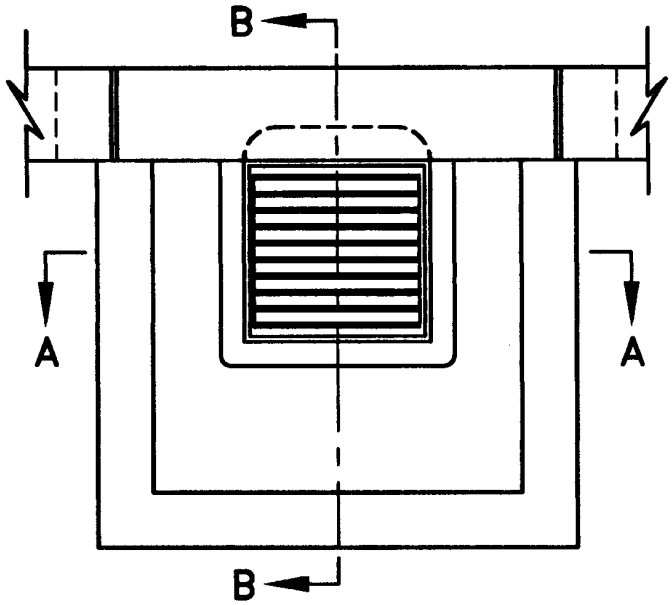
BRICK/SOLID BLOCK DRIVEWAY BASIN AND GUTTER INLET

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

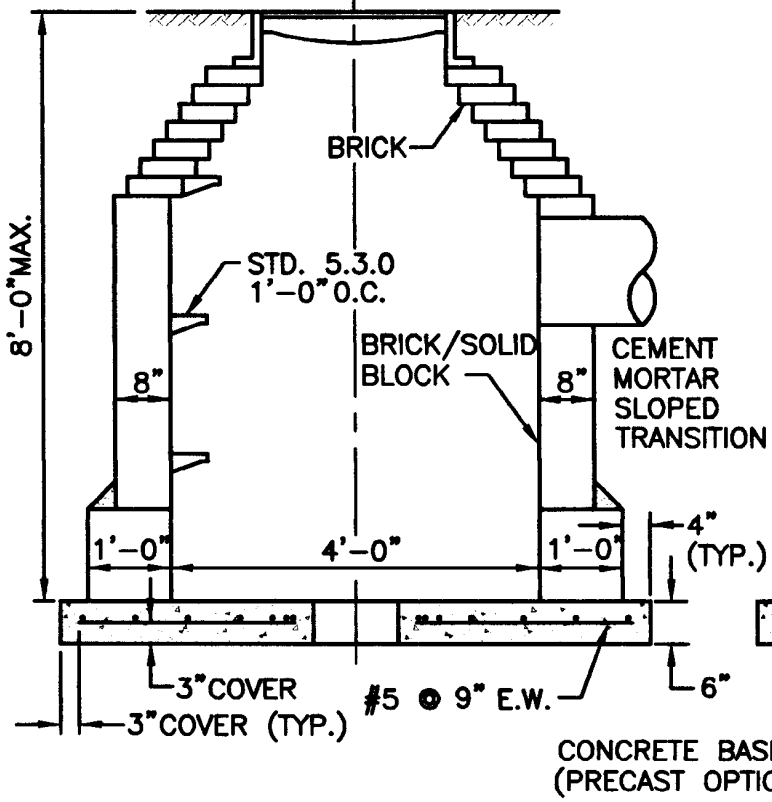
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.3.1

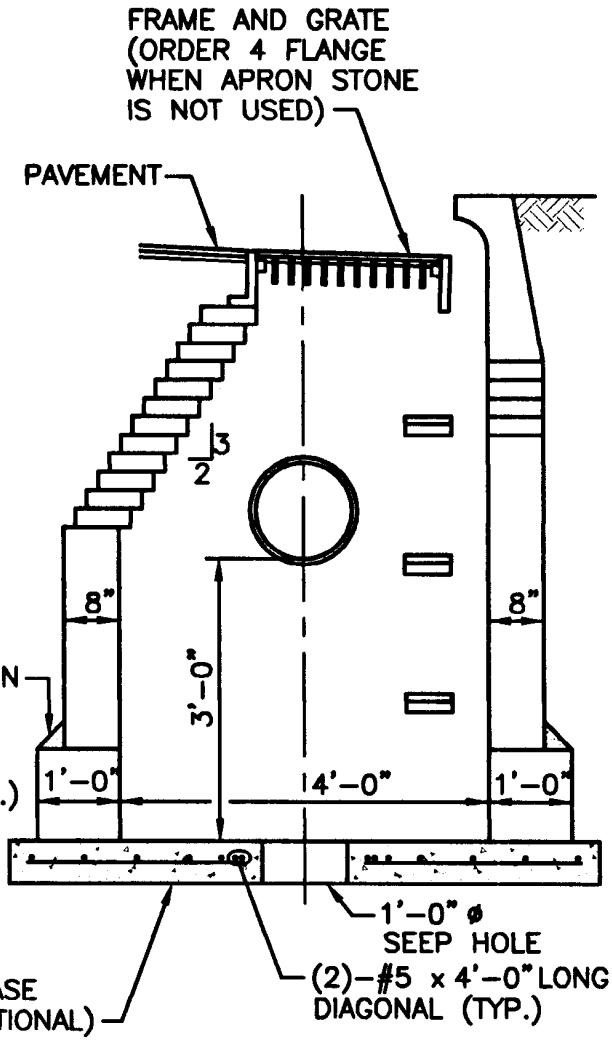


PLAN

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS TO 6'-0" DEPTH, USE 1'-0" WALLS TO 8'-0" DEPTH.



SECTION A-A



SECTION B-B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

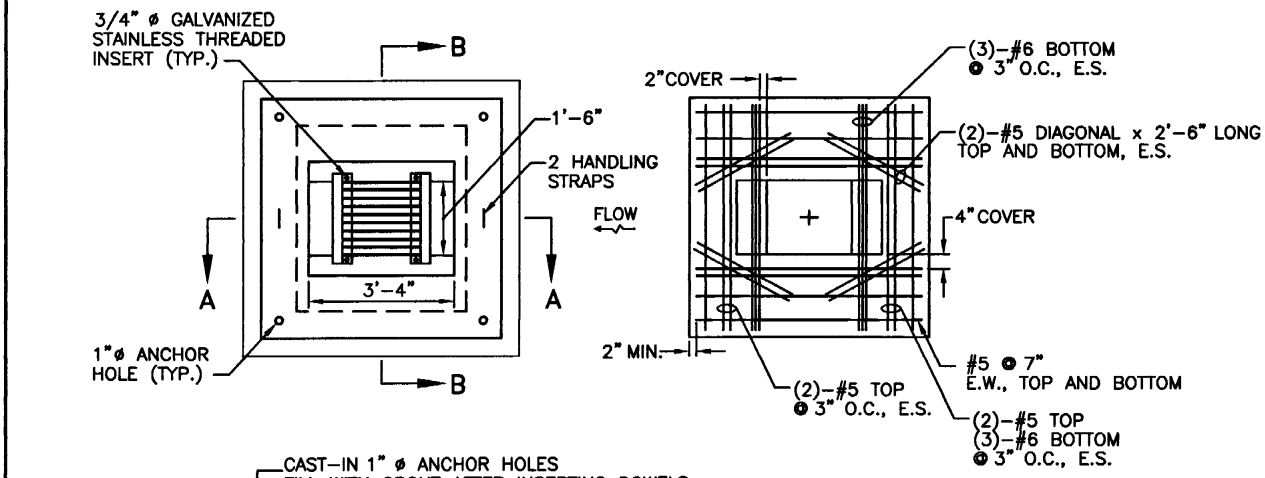
BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN

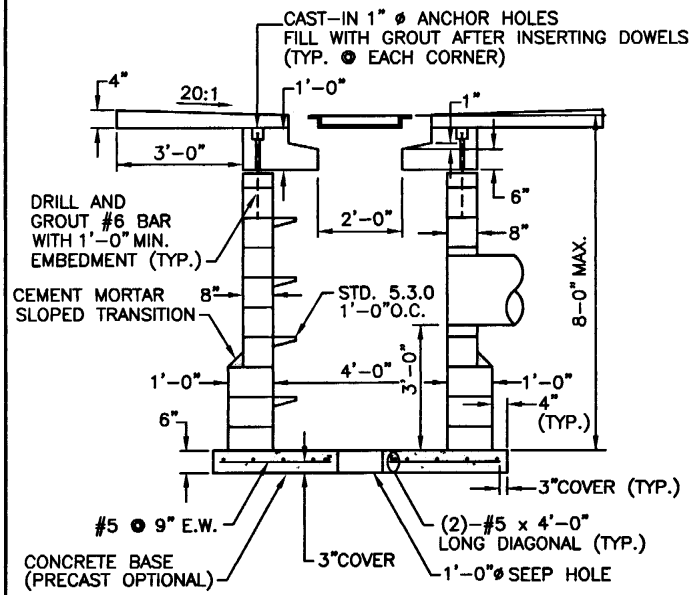
CHIEF ENGINEER TRANSPORTATION

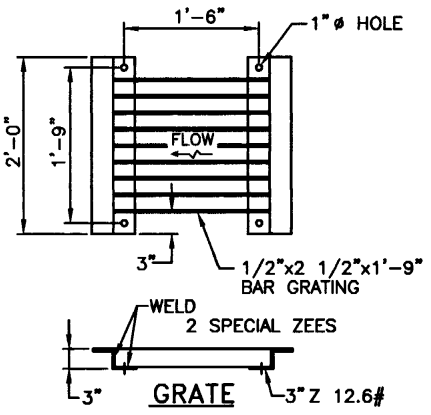
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

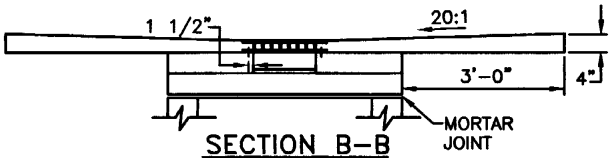
R.I. STANDARD 3.3.2







SECTION A-A



SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ALL REINFORCING BARS TO BE 5'-0" LONG UNLESS OTHERWISE NOTED.
5. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.
6. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

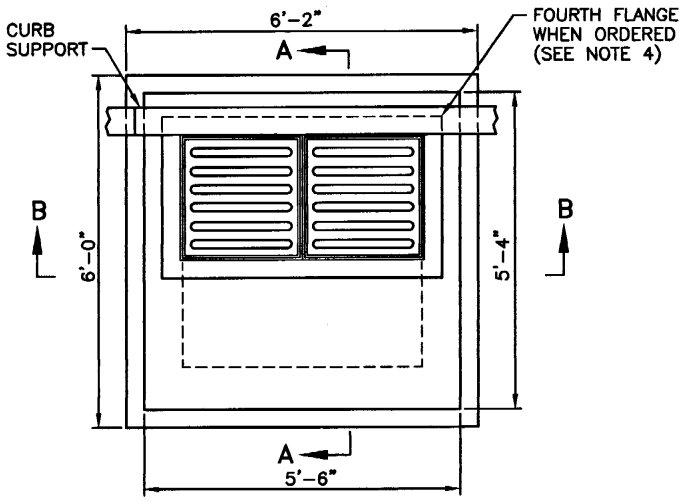
SOLID BLOCK FLUSH SQUARE CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

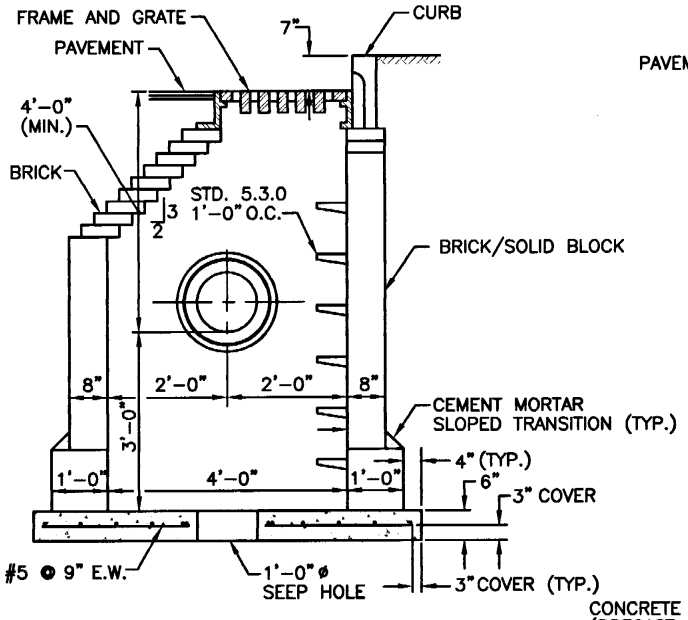
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

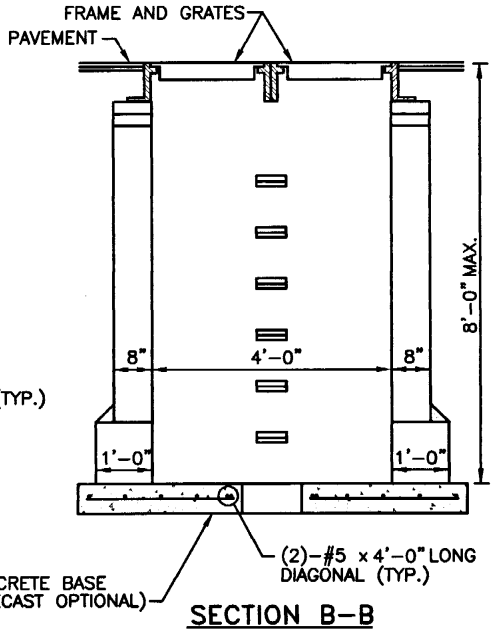
R.I. STANDARD 3.3.3



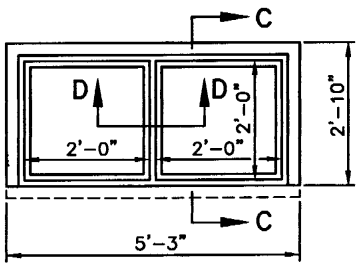
PLAN



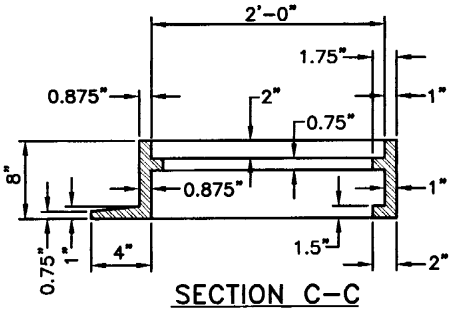
SECTION A-A



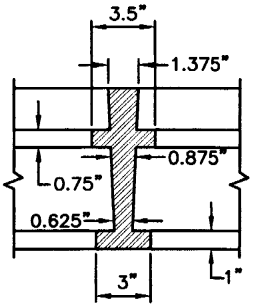
SECTION B-B



FRAME DETAILS



SECTION C-C



SECTION D-D

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

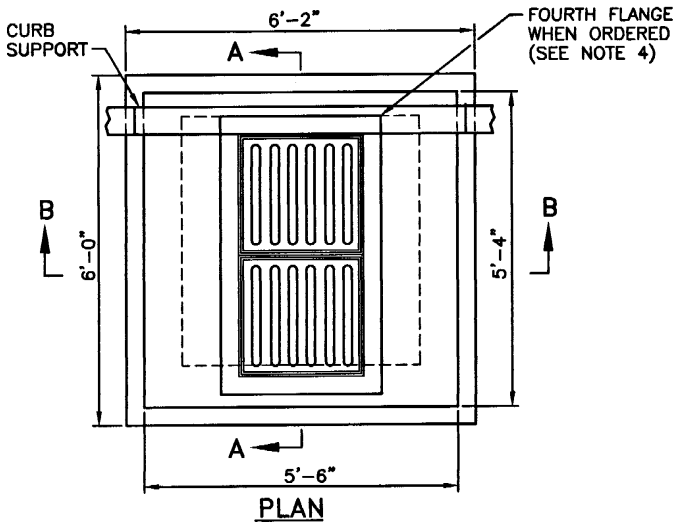
BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN GRATE PARALLEL TO EDGE OF PAVEMENT

CHIEF ENGINEER TRANSPORTATION

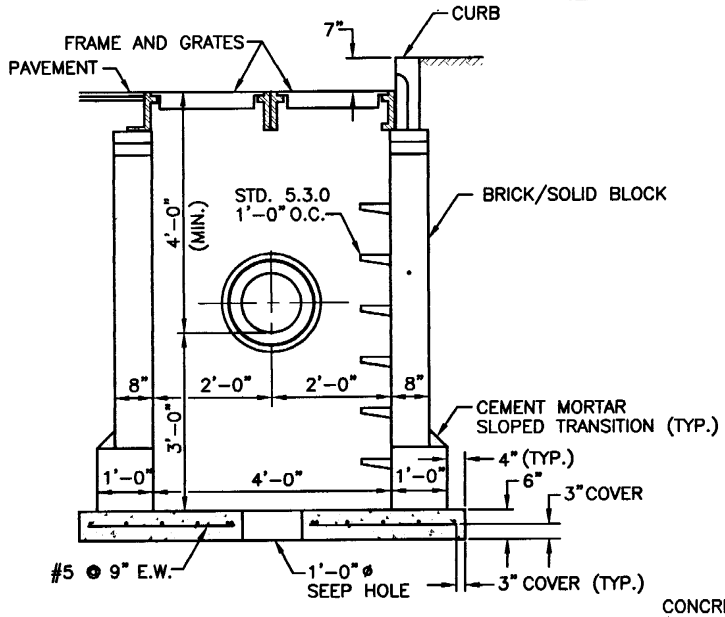
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

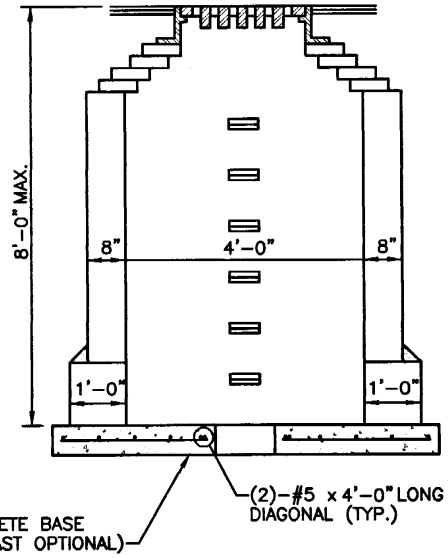
R.I. STANDARD 3.3.4



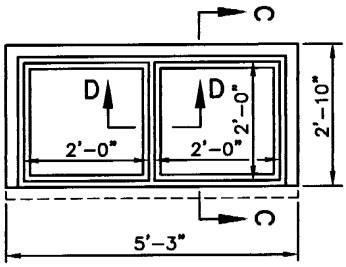
PLAN



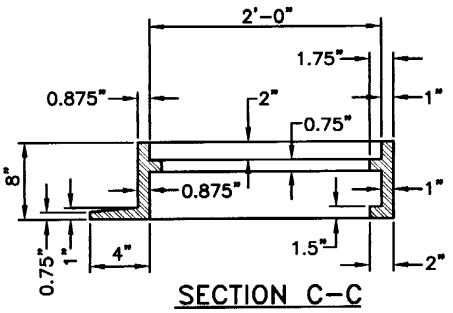
SECTION A-A



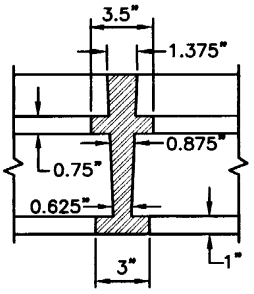
SECTION B-B



FRAME DETAILS



SECTION C-C



SECTION D-D

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

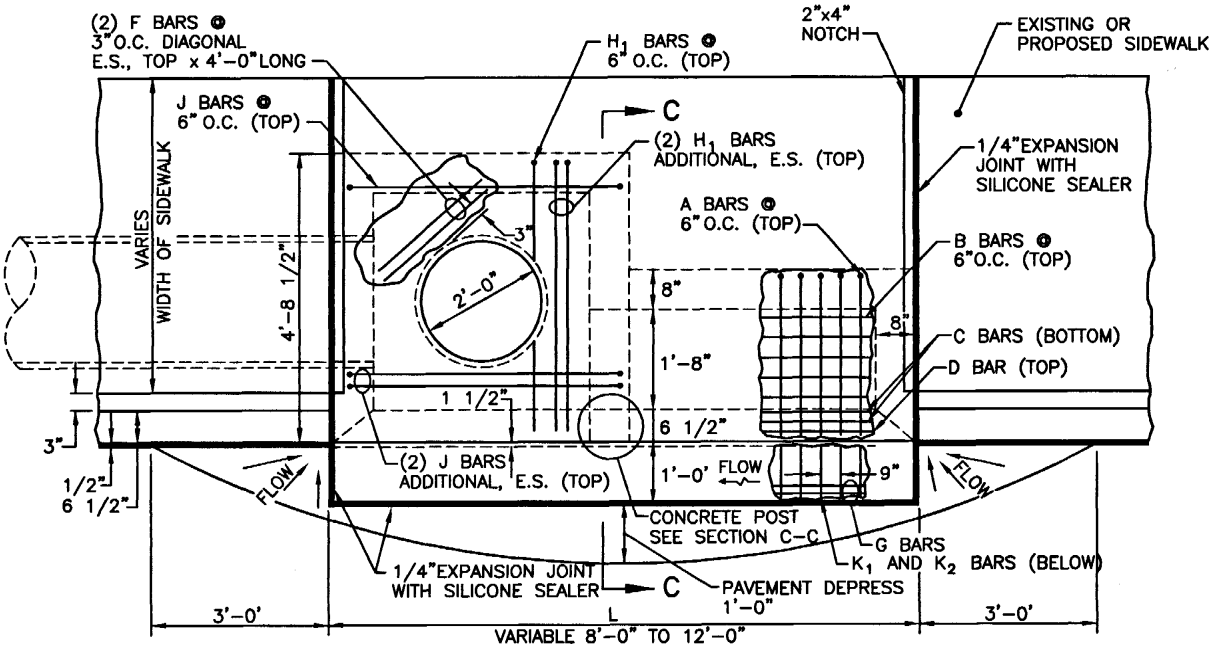
BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN GRATE PERPENDICULAR TO EDGE OF PAVEMENT

CHIEF ENGINEER TRANSPORTATION

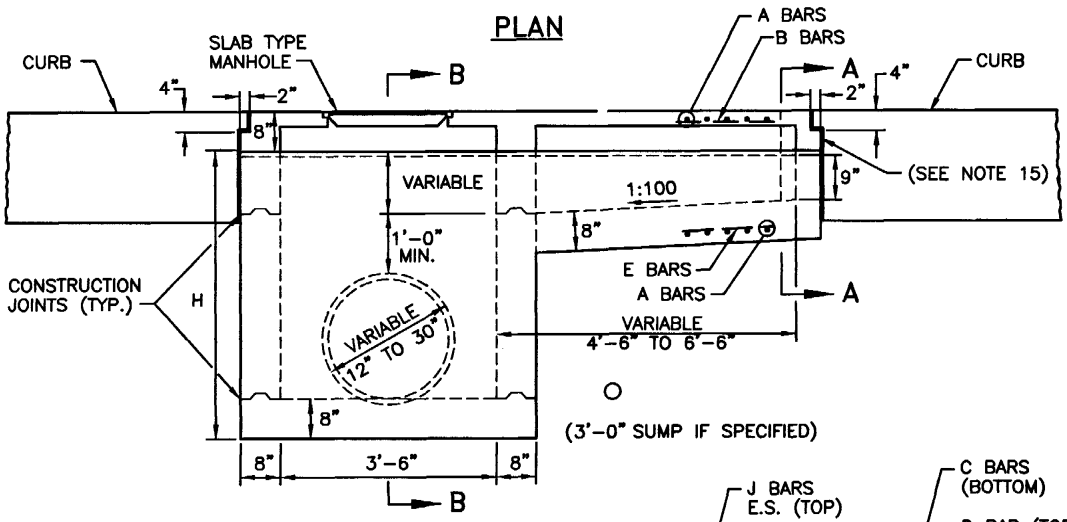
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

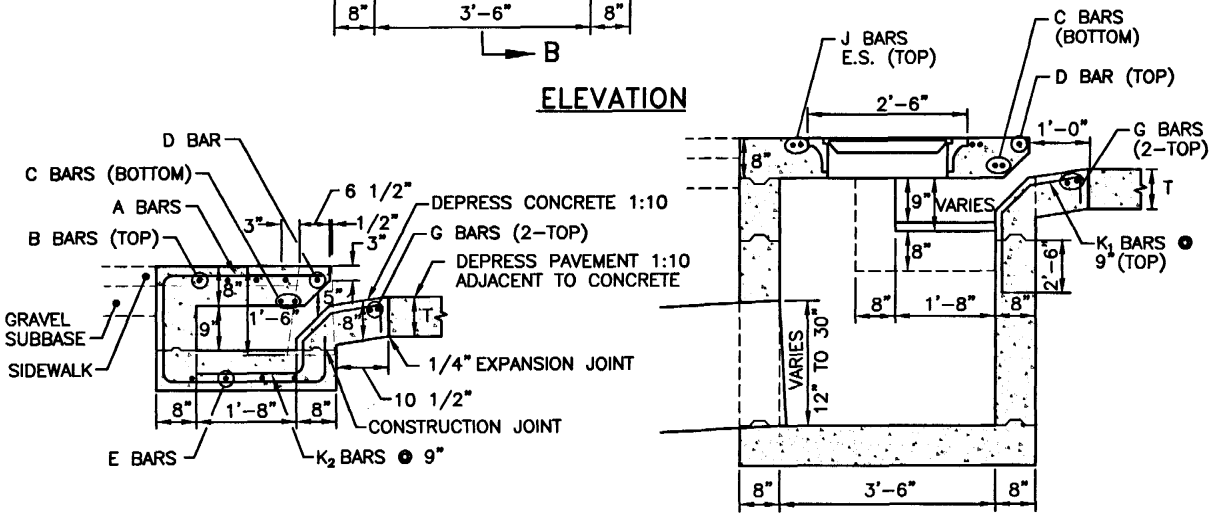
R.I. STANDARD 3.3.5



PLAN



ELEVATION



SECTION A-A

SECTION B-B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

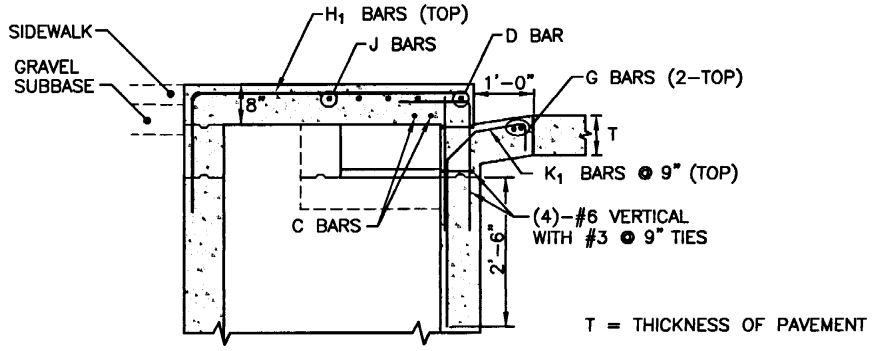
HIGH CAPACITY INLET

CHIEF ENGINEER TRANSPORTATION

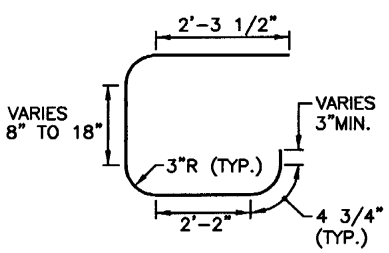
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

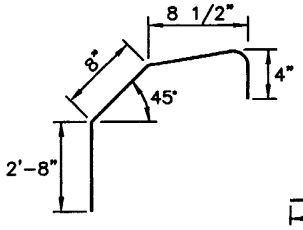
R.I. STANDARD 3.3.6A



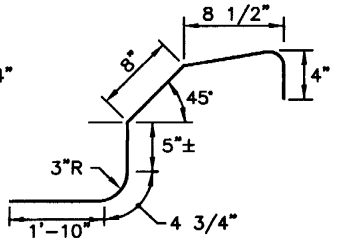
SECTION C-C



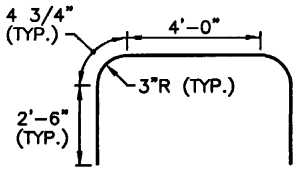
A BARS



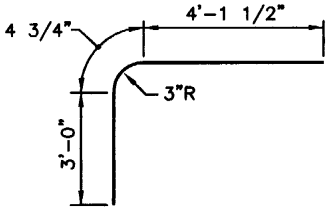
K_1 BARS



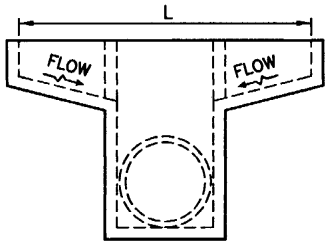
K_2 BARS



J BARS



H_1 BARS



NOTE: SKETCH SHOWS USE OF INLET SAGS. BOTH SIDES TO BE SYMMETRICAL.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/4" EXPANSION JOINT NOT NECESSARY WHEN FLEXIBLE PAVEMENT IS USED FOR SIDEWALK OR ROADWAY.
3. THE COVERING FOR ALL REINFORCING STEEL SHALL BE 2", MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF THE BAR, UNLESS OTHERWISE SHOWN.
4. THE HIGH CAPACITY INLET DETAILED HEREIN IS FOR USE ON A GRADE. IF IT IS TO BE USED IN A SAG, (SEE SKETCH HEREIN), IT SHOULD BE BUILT SYMMETRICALLY ABOUT THE CENTERLINE OF THE PIPE AND LENGTH OF OPENING SPECIFIED.
5. THE TYPE AND SIZE OF PIPE TO BE USED WITH THIS INLET SHALL BE THE TYPE AND SIZE AS CALLED FOR ON THE PLANS.
6. TYPICAL "KEYED" CONSTRUCTION JOINTS ARE SHOWN ON THE DETAILS HEREIN. OTHER "KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS MAY BE USED IF ACCEPTABLE TO THE ENGINEER.
7. THE BEARING AREA OF FRAME AND COVER SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR THE ENTIRE COVER IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING, AND THE COVER SHALL SEAT IN ITS FRAME WITHOUT ROCKING.
8. ALL REINFORCING BARS SHALL BE EPOXY COATED.
9. A SLAB TYPE MANHOLE AND STD. 7.1.0 PRECAST CURB TO BE USED WITH HIGH CAPACITY INLET.
10. THE BELL OR GROOVE OF CONCRETE PIPE CANNOT BE USED INSIDE THE INLET. IT MUST BE CUT OFF.
11. ALL EXPOSED EDGES AT CONSTRUCTION JOINTS SHALL BE BEVELED 3/4".
12. WHEN DEEMED NECESSARY, WEEP HOLES MAY BE INSTALLED IN THE SIDEWALLS OF INLETS DURING CONSTRUCTION TO PROVIDE BASE COURSE DRAINAGE PRIOR TO PLACEMENT OF PAVEMENT. THESE WEEP HOLES SHALL BE LOCATED AT OR BELOW SUBGRADE ELEVATION AS DIRECTED OR APPROVED BY THE ENGINEER TO PROPERLY DRAIN SUBSURFACE MATERIAL.
13. IF HIGH CAPACITY INLET IS TO BE CONSTRUCTED ALONG WITH A SIDEWALK, THE SIDEWALK SHALL BE CONSTRUCTED MONOLITHIC WITH THE TOP SLAB ON THE INLET. THE SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE MESH 6x6-W2.9xW2.9 PLACED 2" BELOW SURFACE OF SIDEWALK AND EXTENDED INTO THE TOP SLAB OF THE INLET A MINIMUM DISTANCE OF 8".
14. BAR SIZES - B BARS, C BARS, D BARS, E BARS, F BARS, G BARS K_1 BARS AND K_2 BARS ARE ALL TO BE #5 BARS. H_1 BARS AND J BARS ARE ALL TO BE #6 BARS. A BARS ARE TO BE #7 BARS.
15. THE COST TO NOTCH THE CURB SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CURBING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

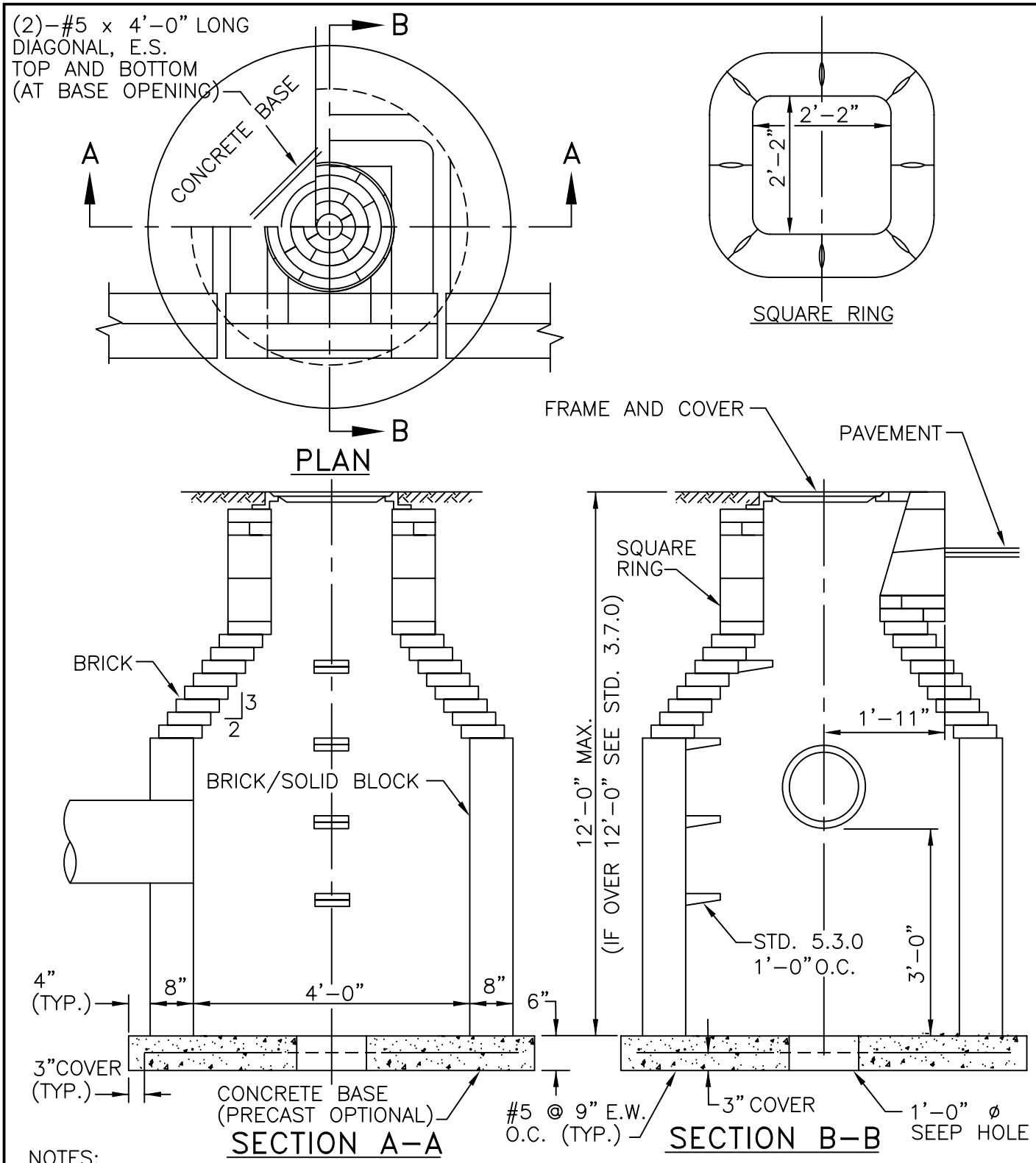
HIGH CAPACITY INLET

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.3.6B



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

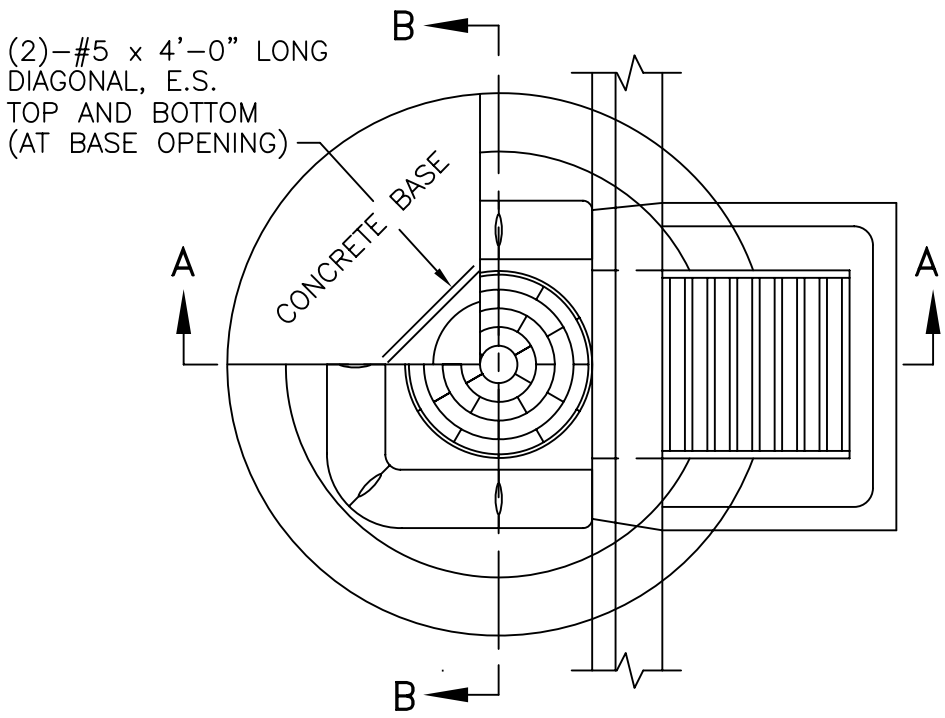
BRICK/SOLID BLOCK
TYPE "D" ROUND CATCH BASIN

James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

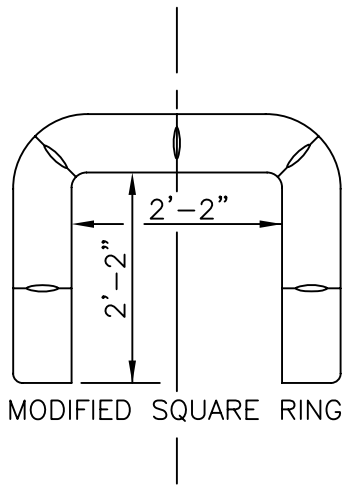
Edmund T. Parker, Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

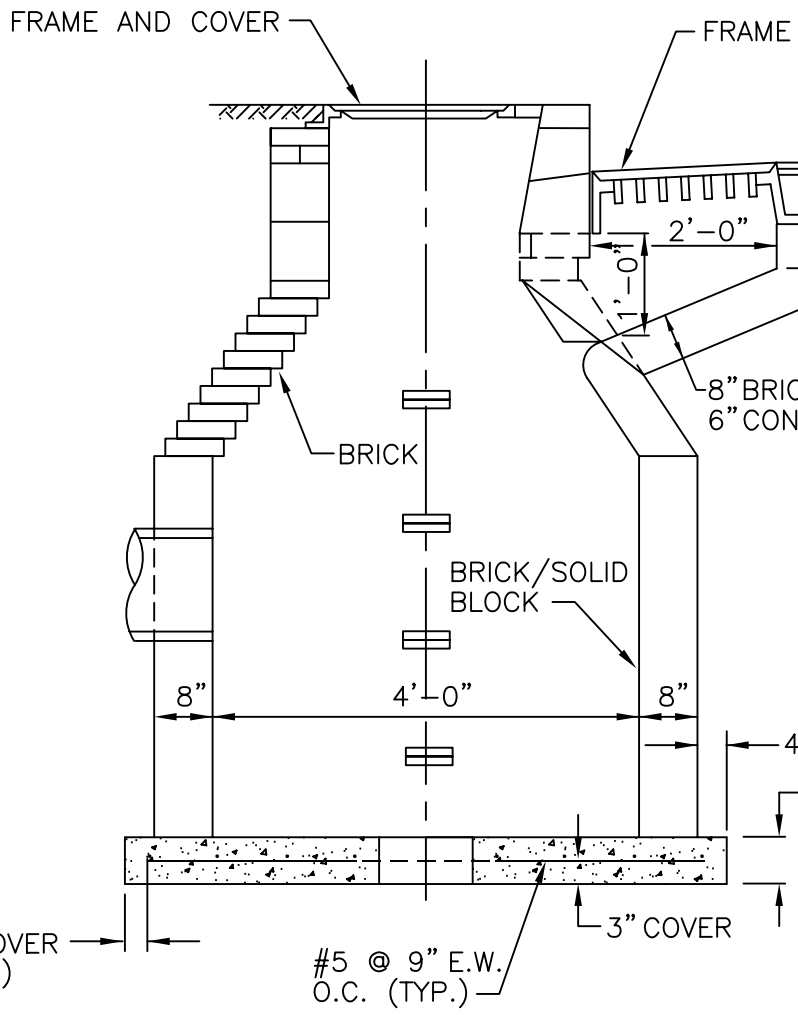
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.4.0

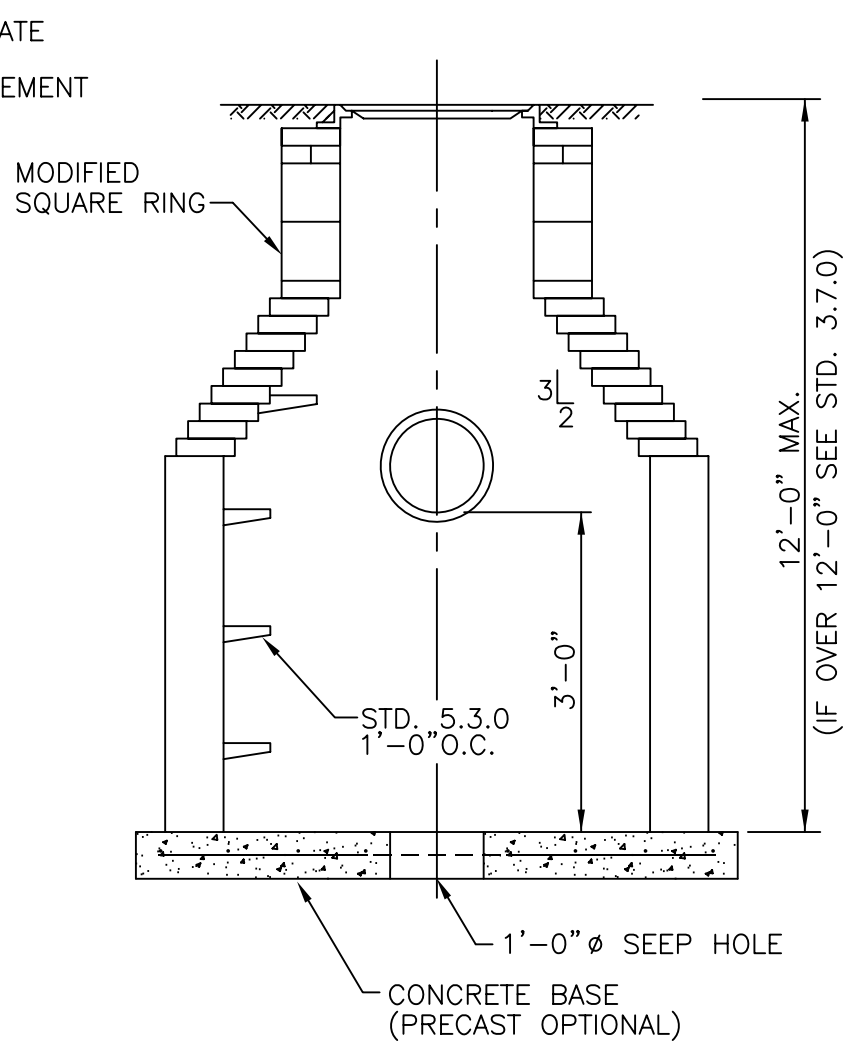


PLAN





SECTION A–A



SECTION B–B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

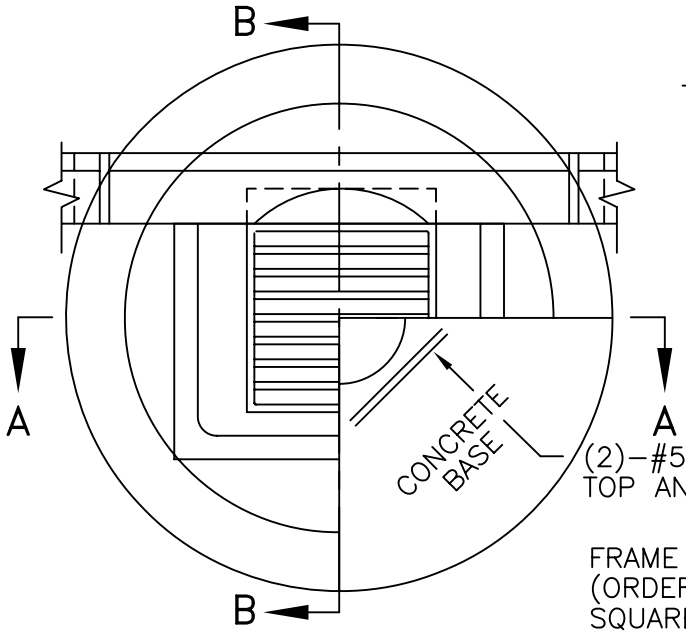
BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.4.1

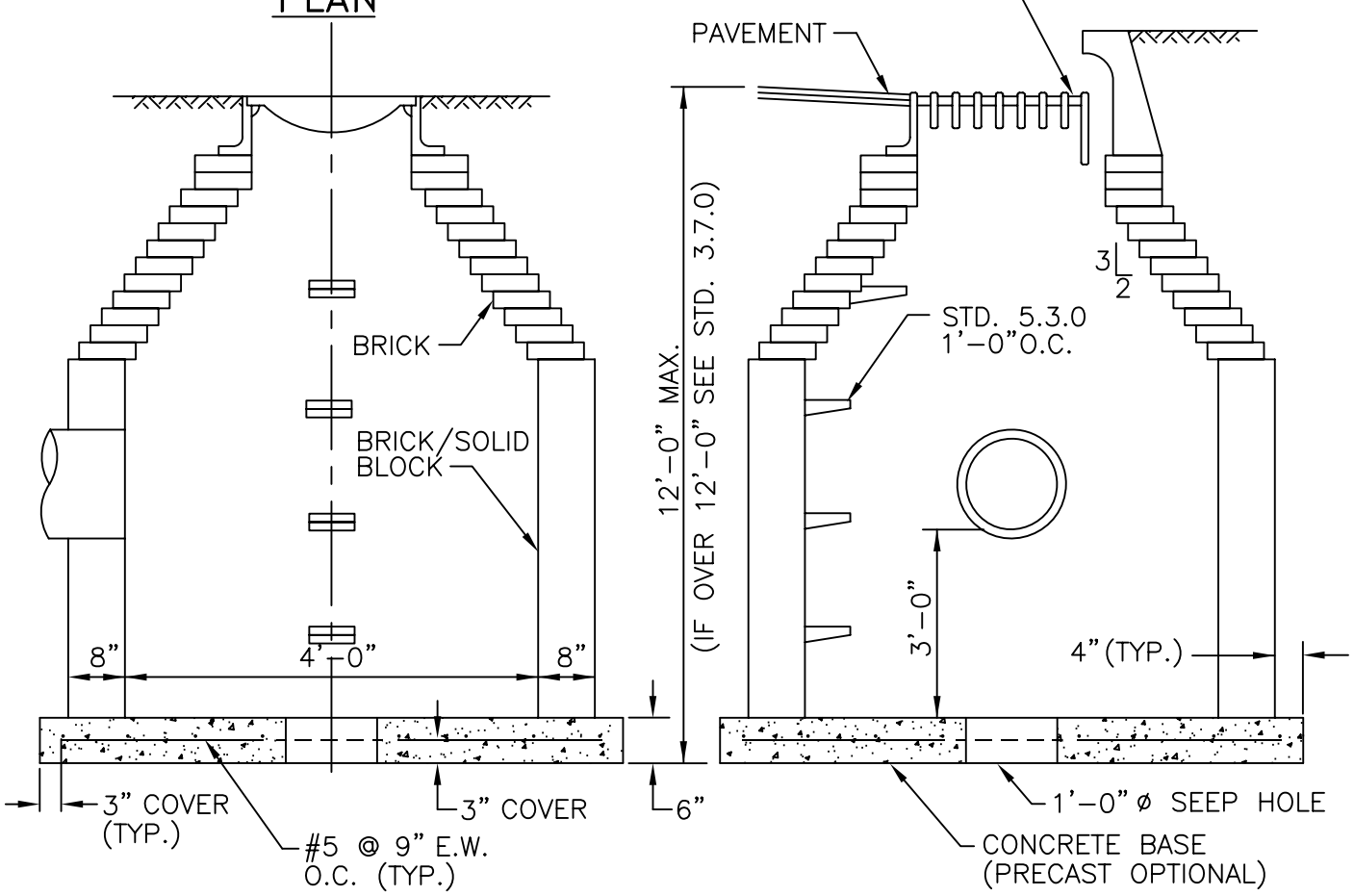


NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

(2)–#5 x 4'–0" LONG, DIAGONAL, TOP AND BOTTOM (AT BASE OPENING)

FRAME AND GRATE (ORDER 4 FLANGE AND SQUARE RING WHEN APRON STONE IS NOT USED)

PLAN



SECTION A–A

SECTION B–B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

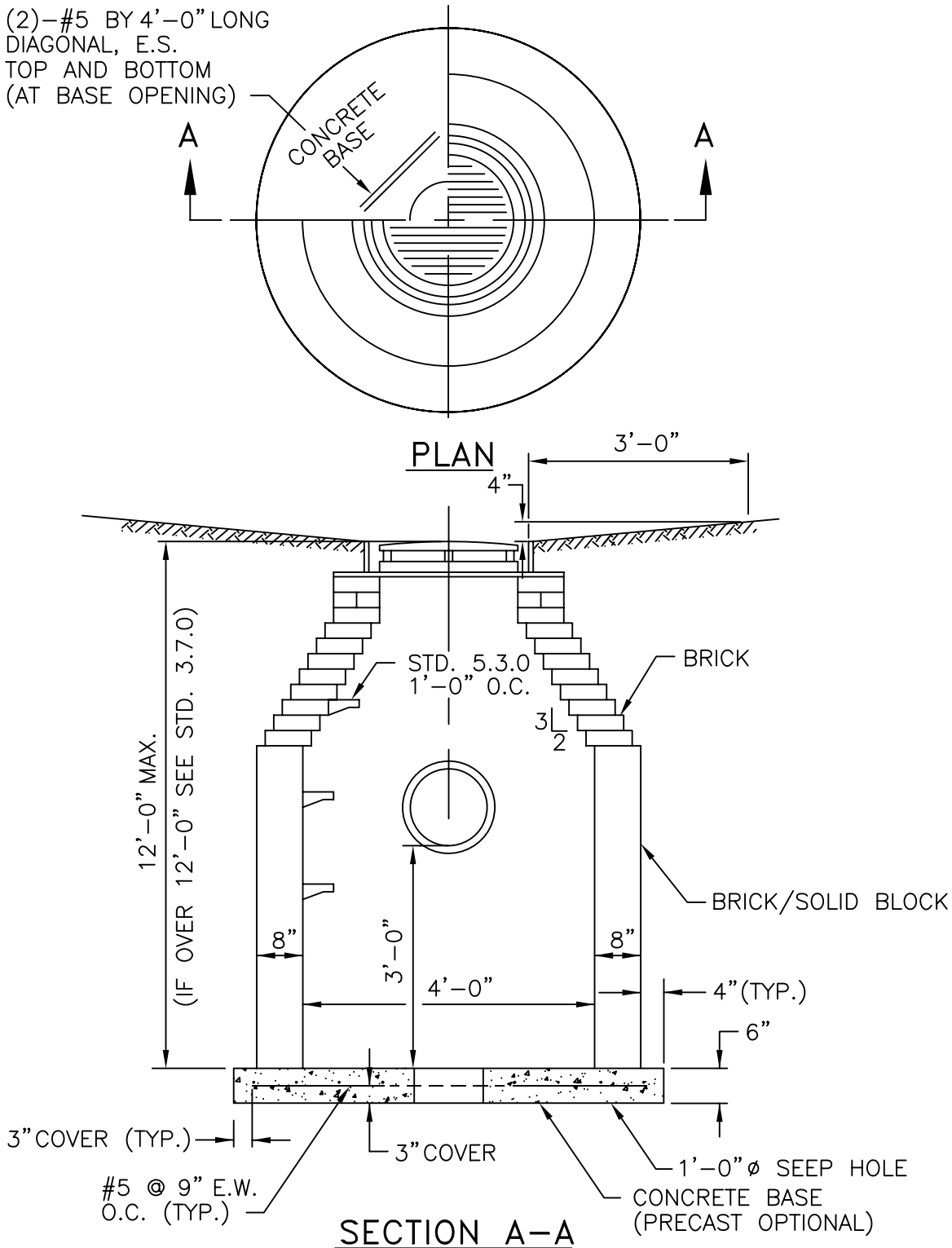
BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.4.2



SECTION A–A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

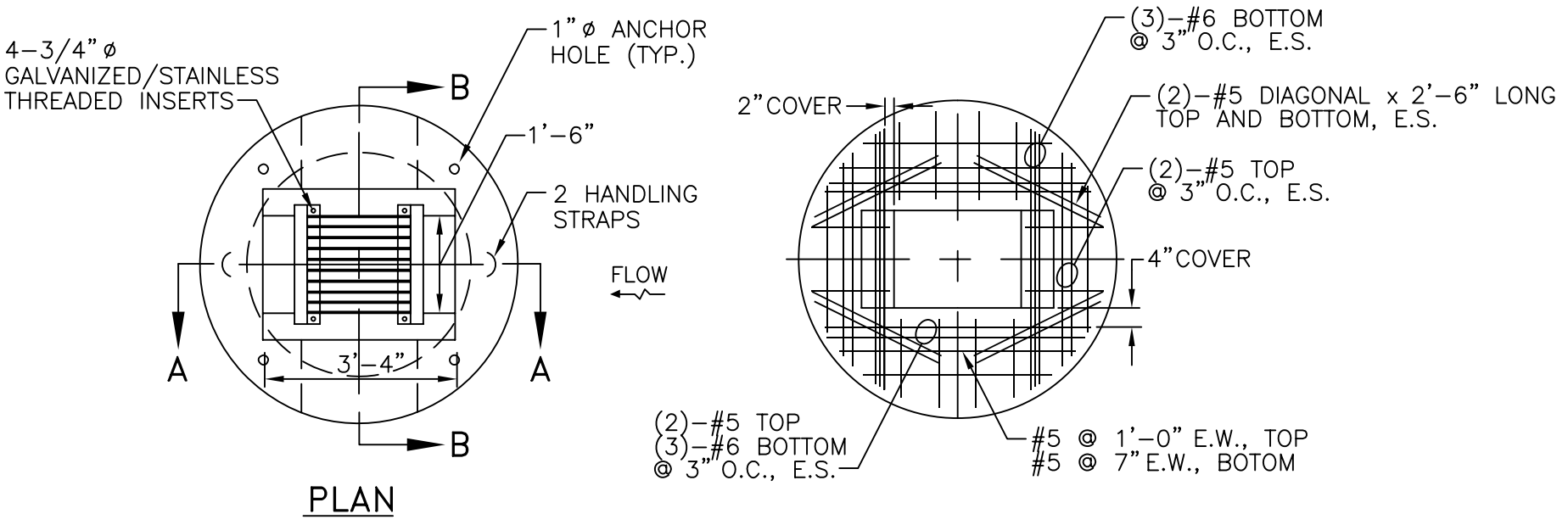
BRICK/SOLID BLOCK TYPE "R" CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

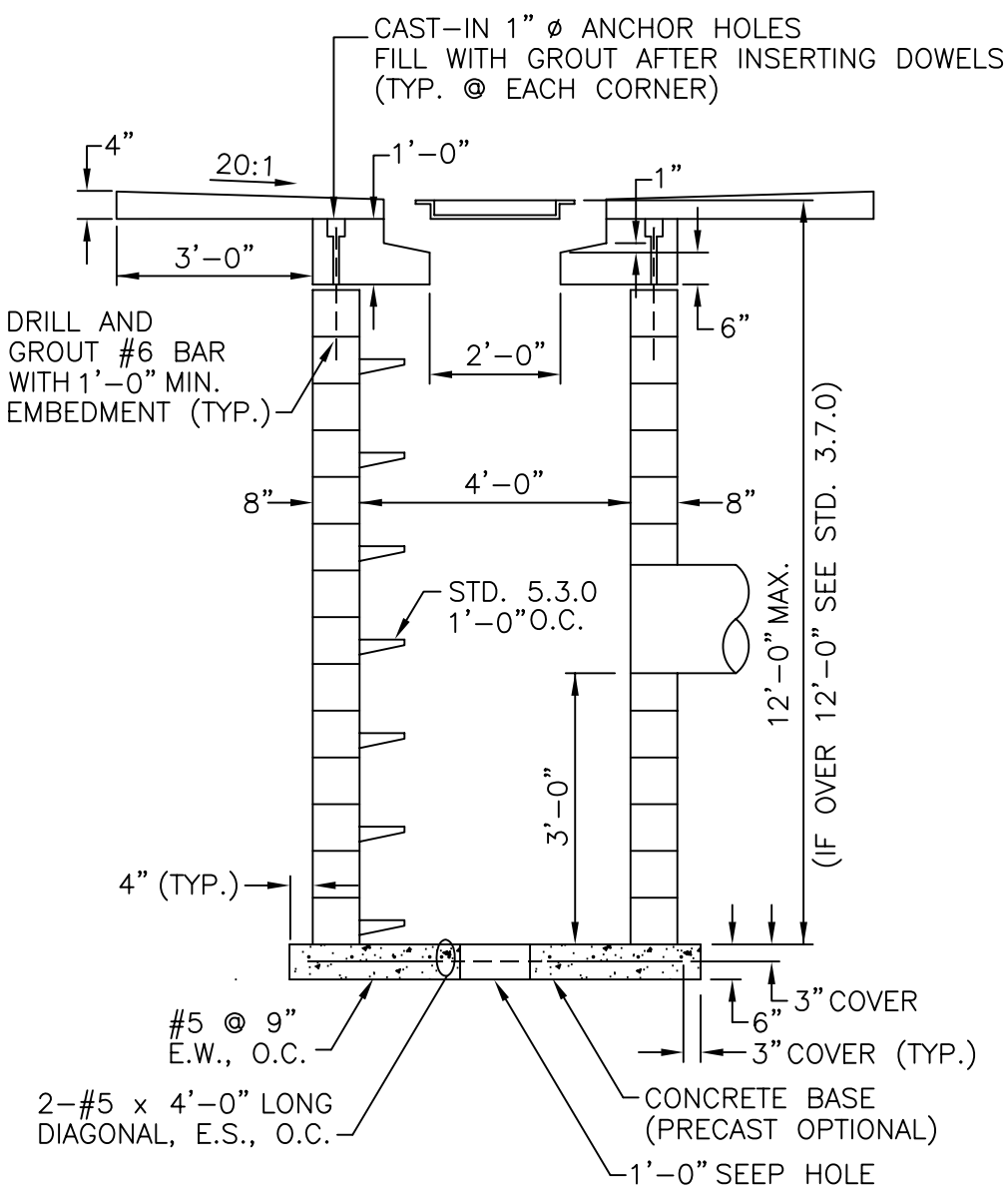
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

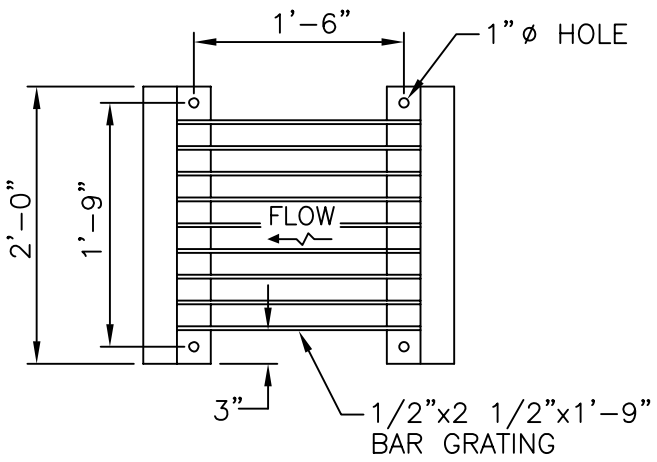
R.I. STANDARD 3.4.3

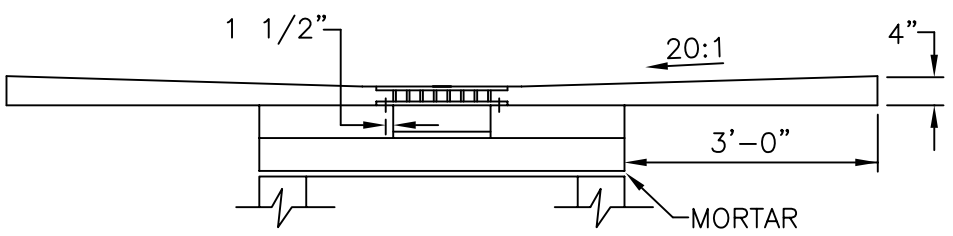


PLAN



SECTION A–A





SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
4. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

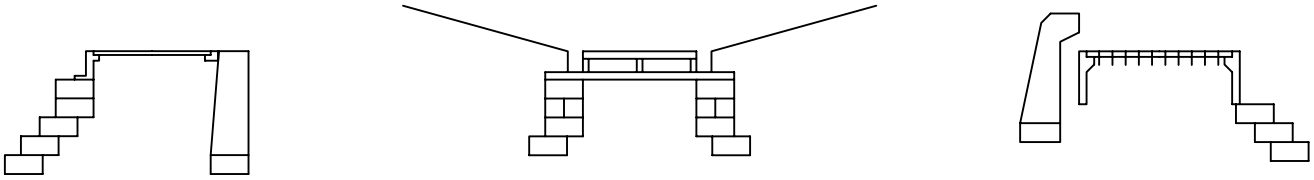
SOLID BLOCK FLUSH ROUND CATCH BASIN

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

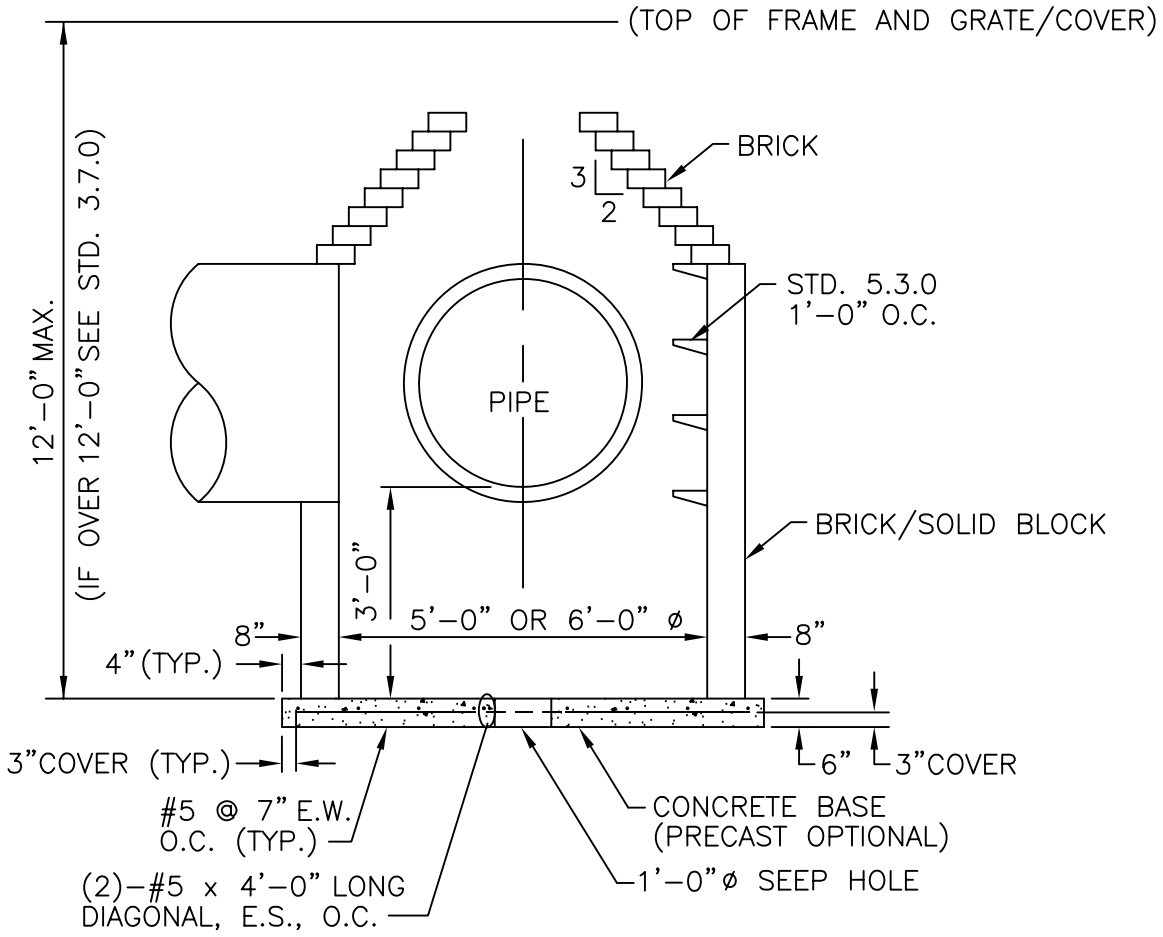
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.4.4



TYPE "D" TYPE "R" TYPE "F"

TYPE CATCH BASIN AS REQUIRED



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

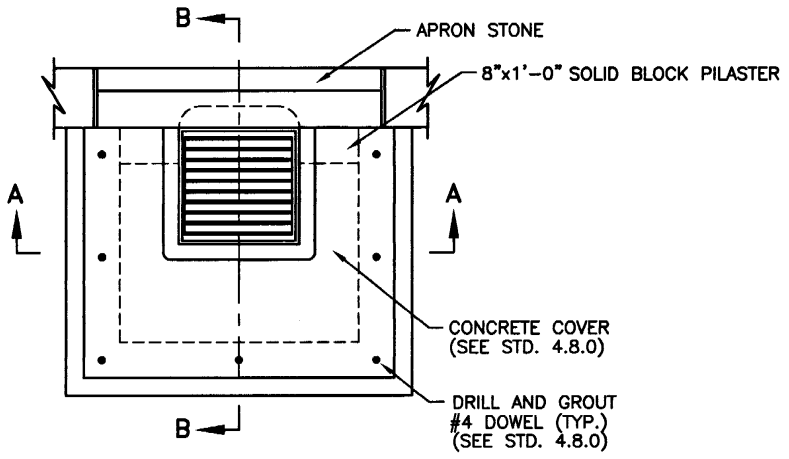
BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN

James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

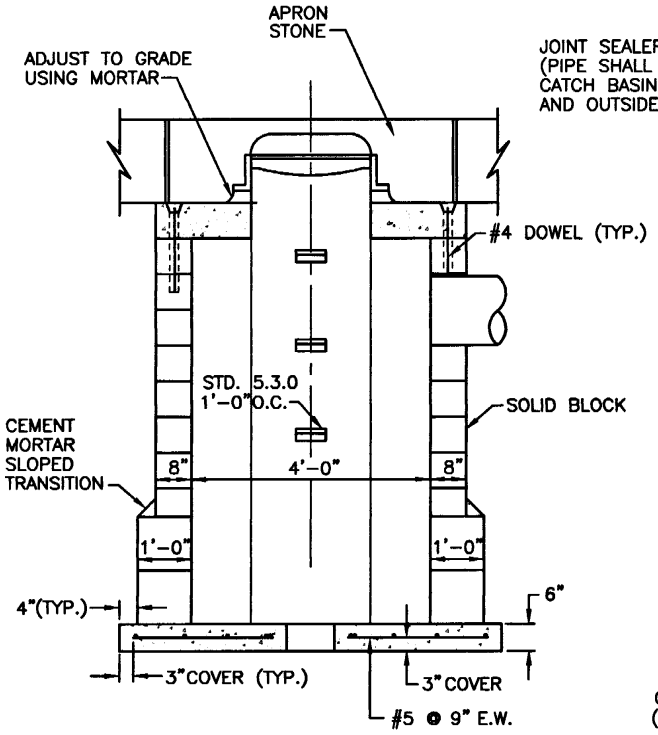
Edmund T. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

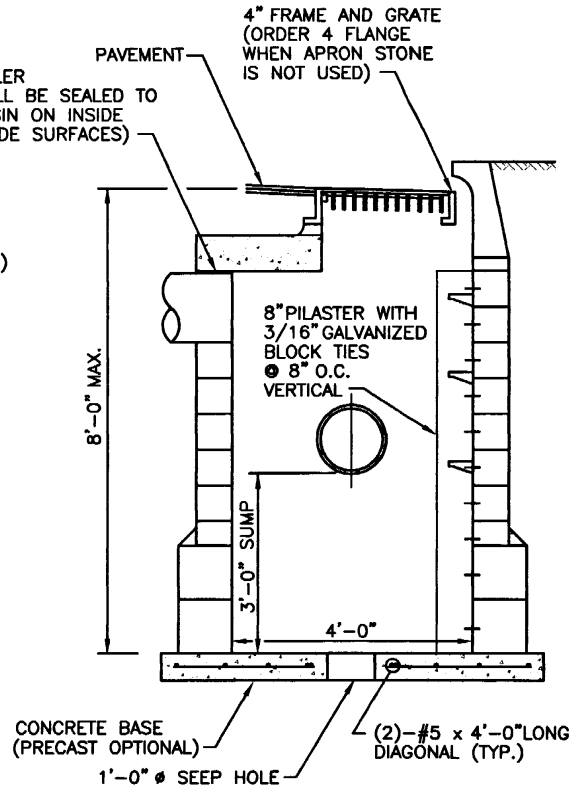
R.I. STANDARD 3.4.5



PLAN



SECTION A-A



SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

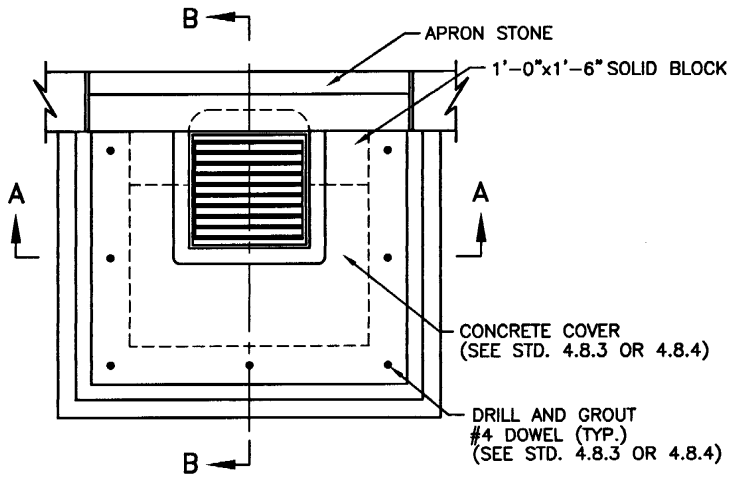
SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN (PIPE COVER 1'-6" TO 3'-0")

CHIEF ENGINEER TRANSPORTATION

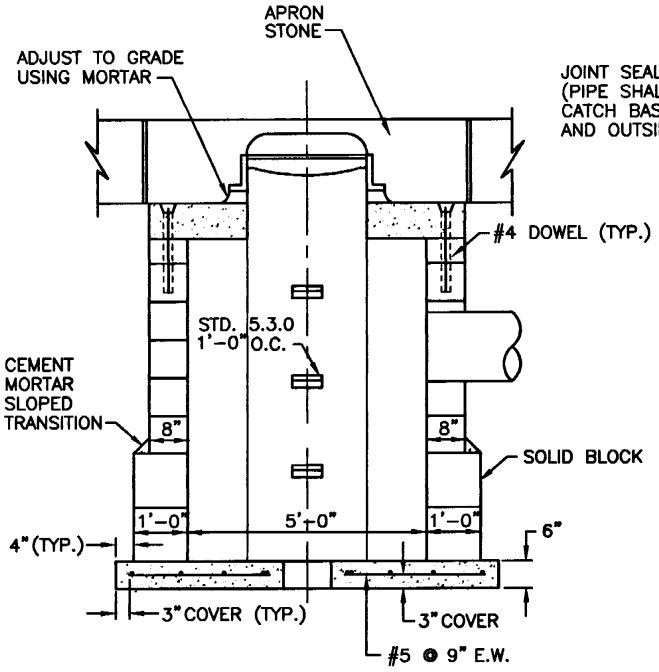
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

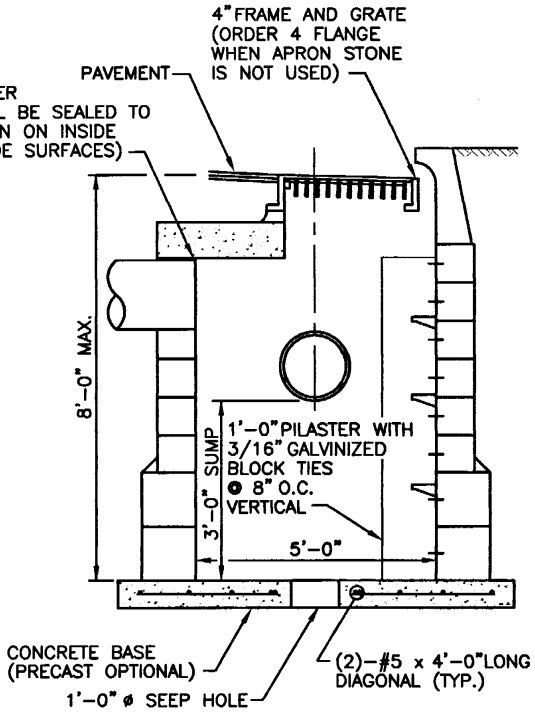
R.I. STANDARD 3.5.0



PLAN



SECTION A-A



SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

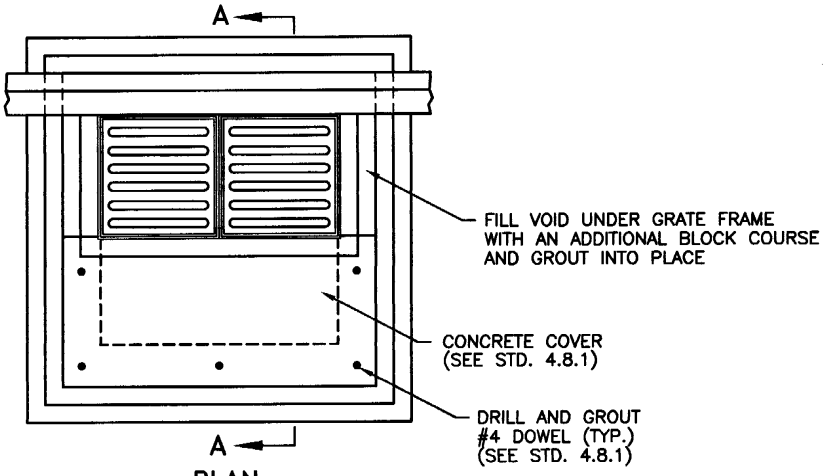
SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN (PIPE COVER 1'-6" TO 3'-0")

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.5.1



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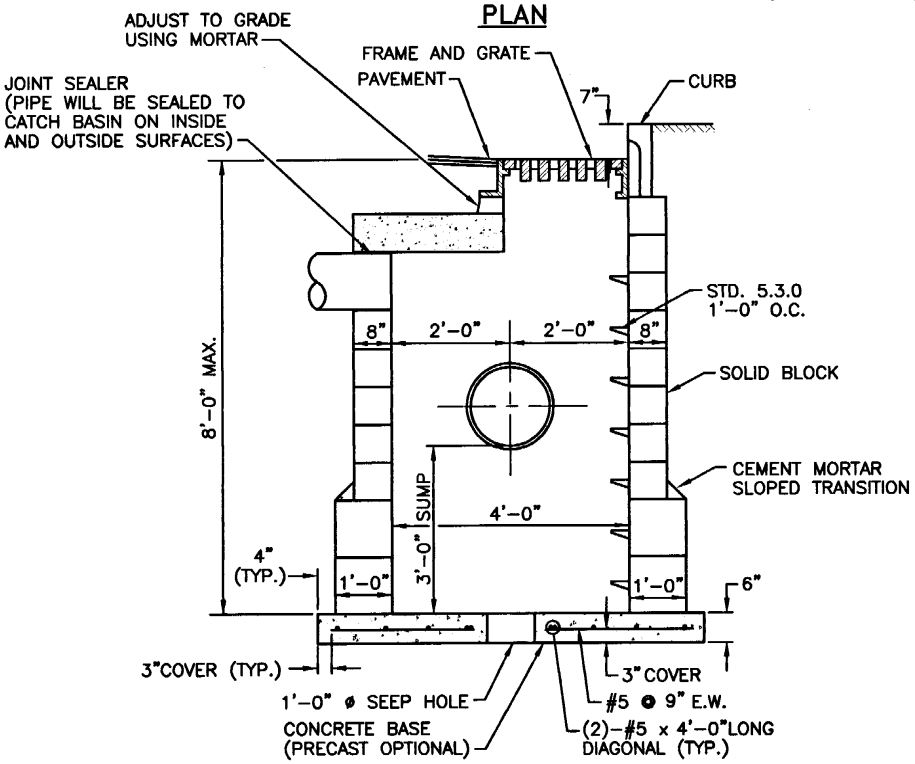
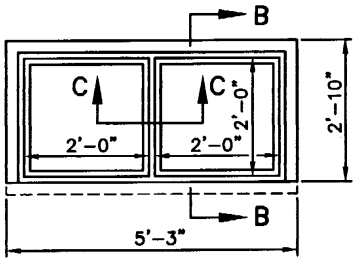
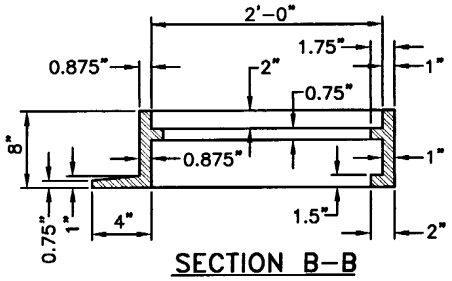


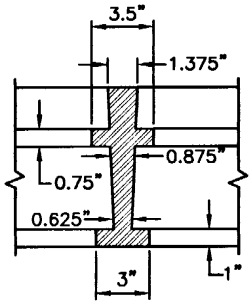
SECTION A-A



FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

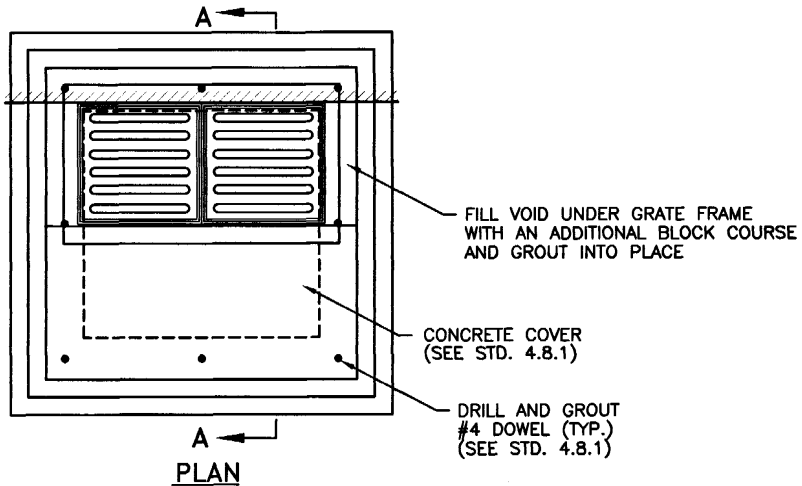
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN GRATE PARALLEL TO CURB

CHIEF ENGINEER TRANSPORTATION

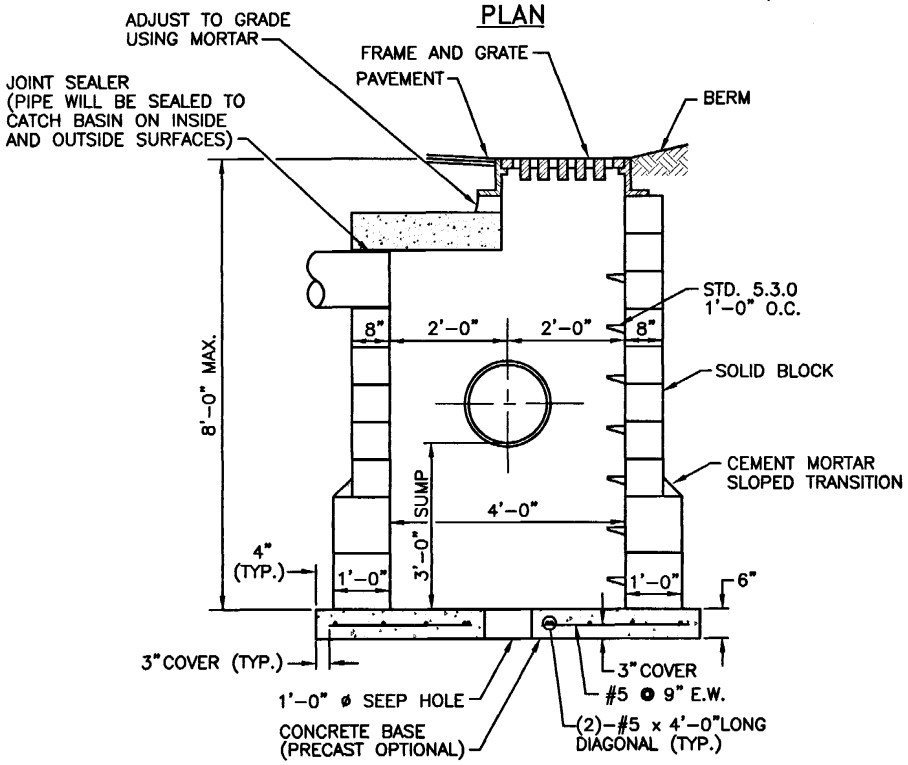
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

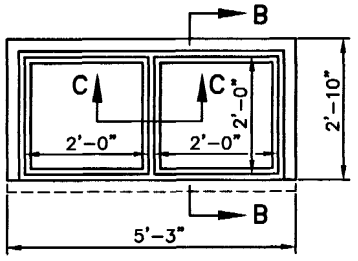
R.I. STANDARD 3.5.2



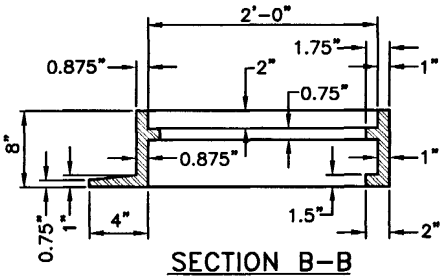
PLAN



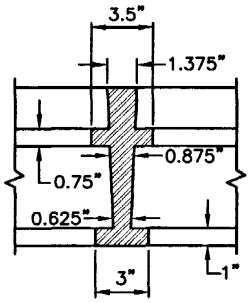
SECTION A-A



FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

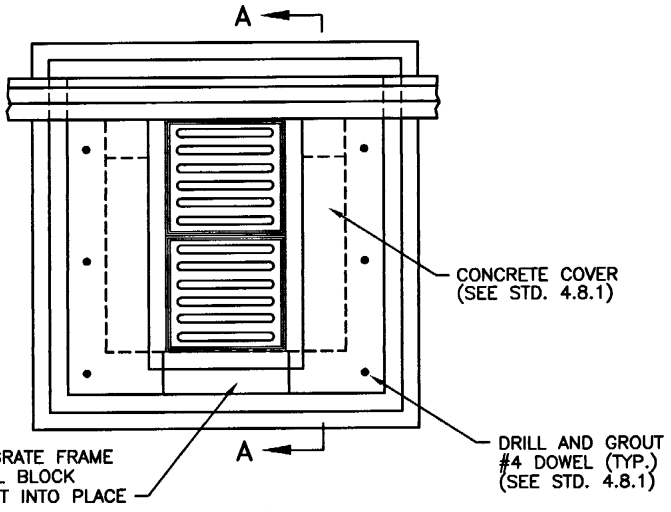
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN GRATE PARALLEL TO EDGE OF PAVEMENT

James R. Capaldi
CHIEF ENGINEER TRANSPORTATION

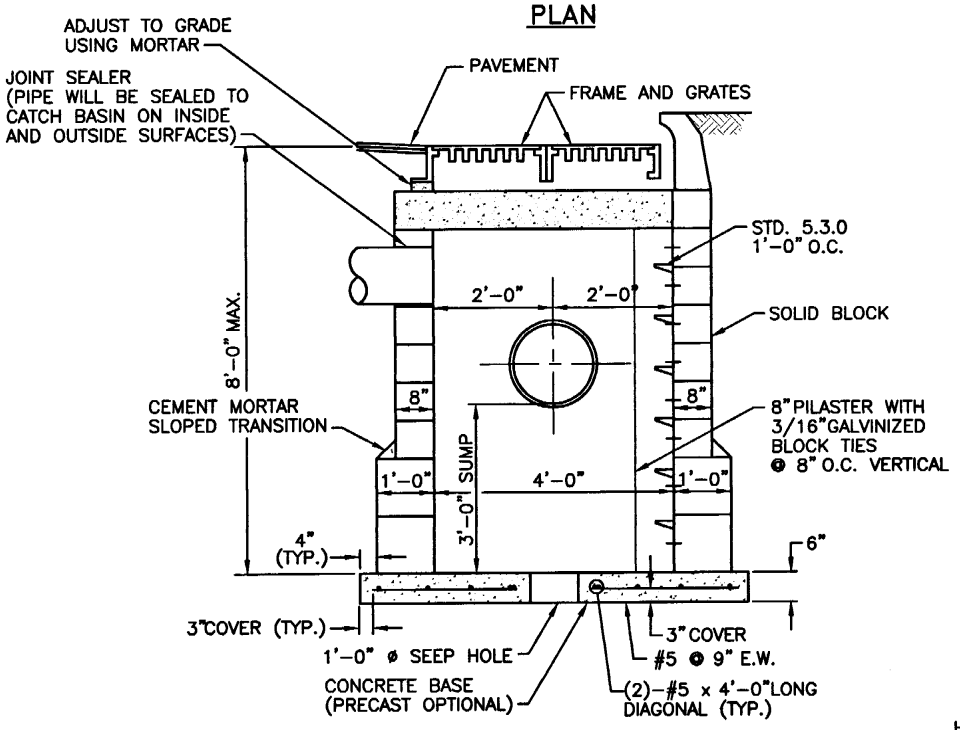
Edmund Parker Jr.
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

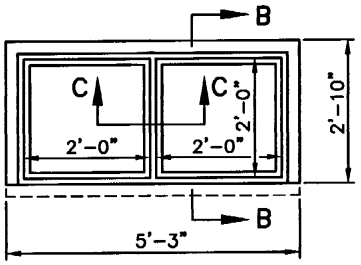
R.I. STANDARD 3.5.3



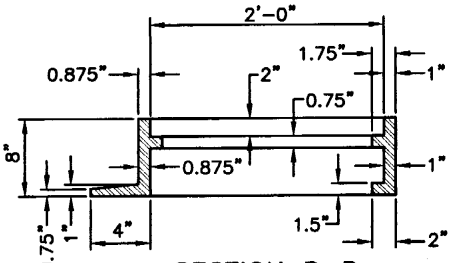
PLAN



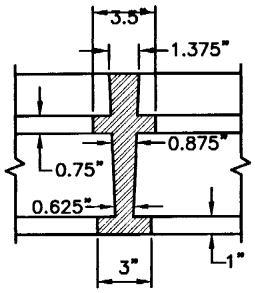
SECTION A-A



FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

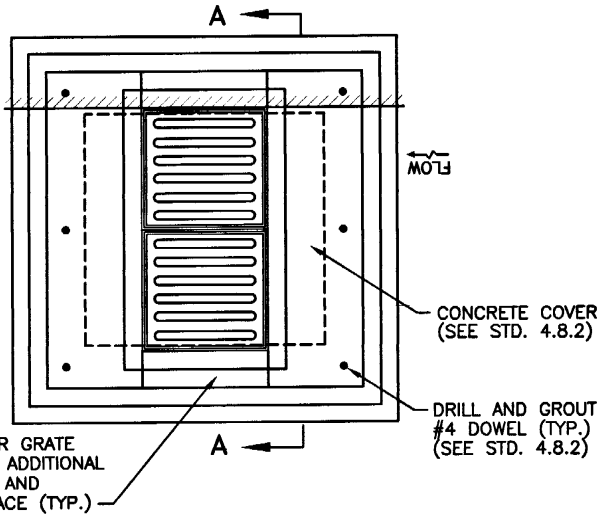
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN GRATE PERPENDICULAR TO CURB

CHIEF ENGINEER TRANSPORTATION

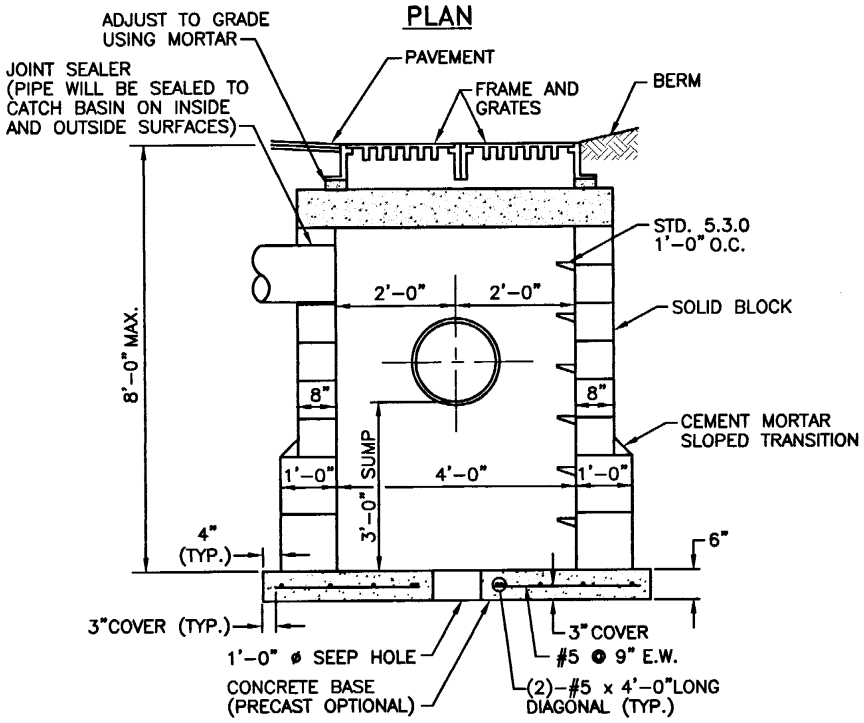
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

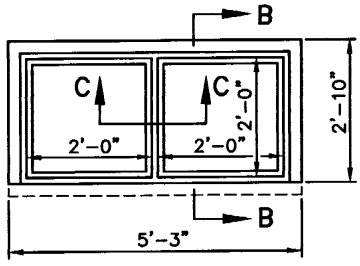
R.I. STANDARD 3.5.4



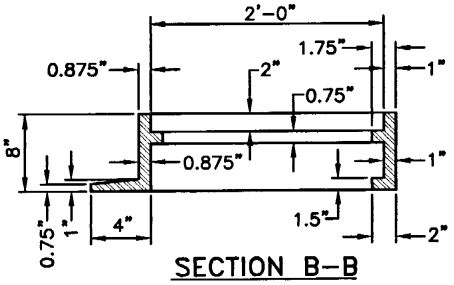
PLAN



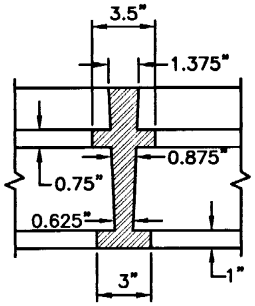
SECTION A-A



FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

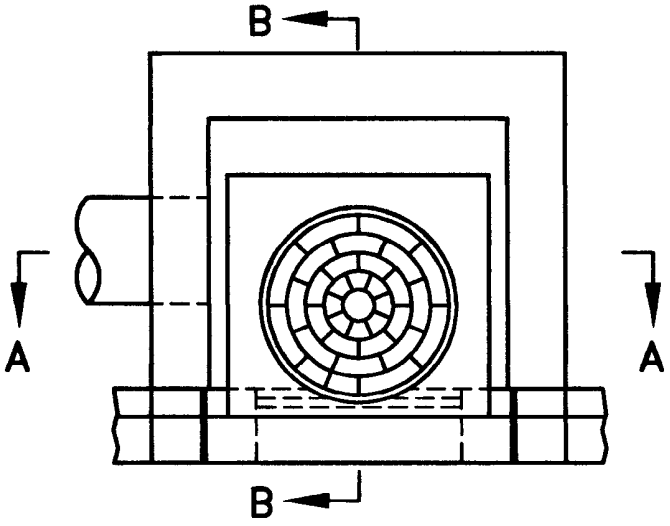
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN GRATE PERPENDICULAR TO EDGE OF PAVEMENT

CHIEF ENGINEER TRANSPORTATION

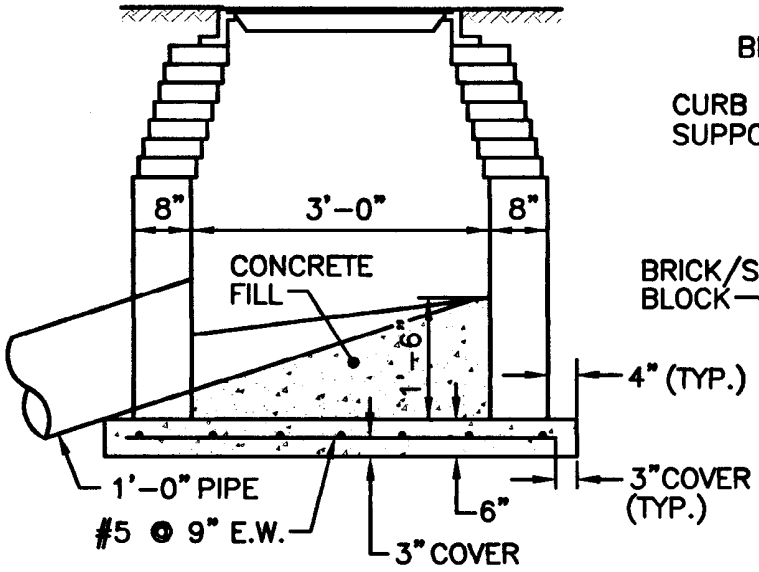
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

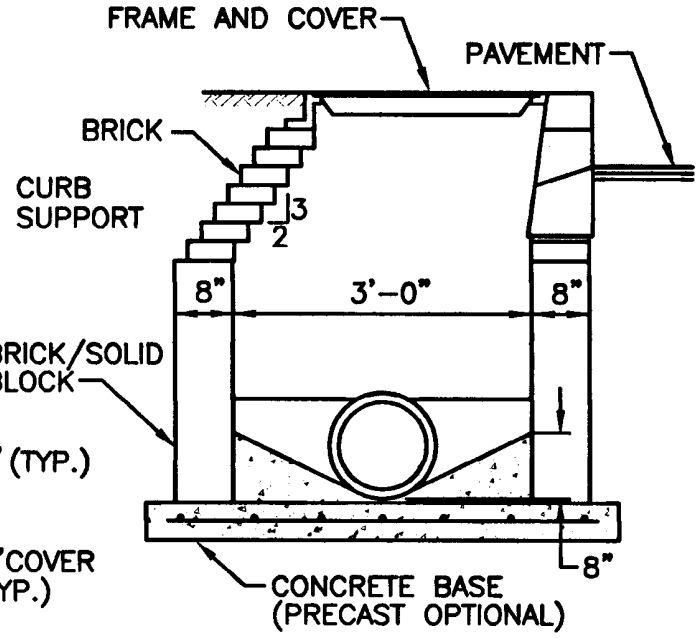
R.I. STANDARD 3.5.5



PLAN



SECTION A-A



SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

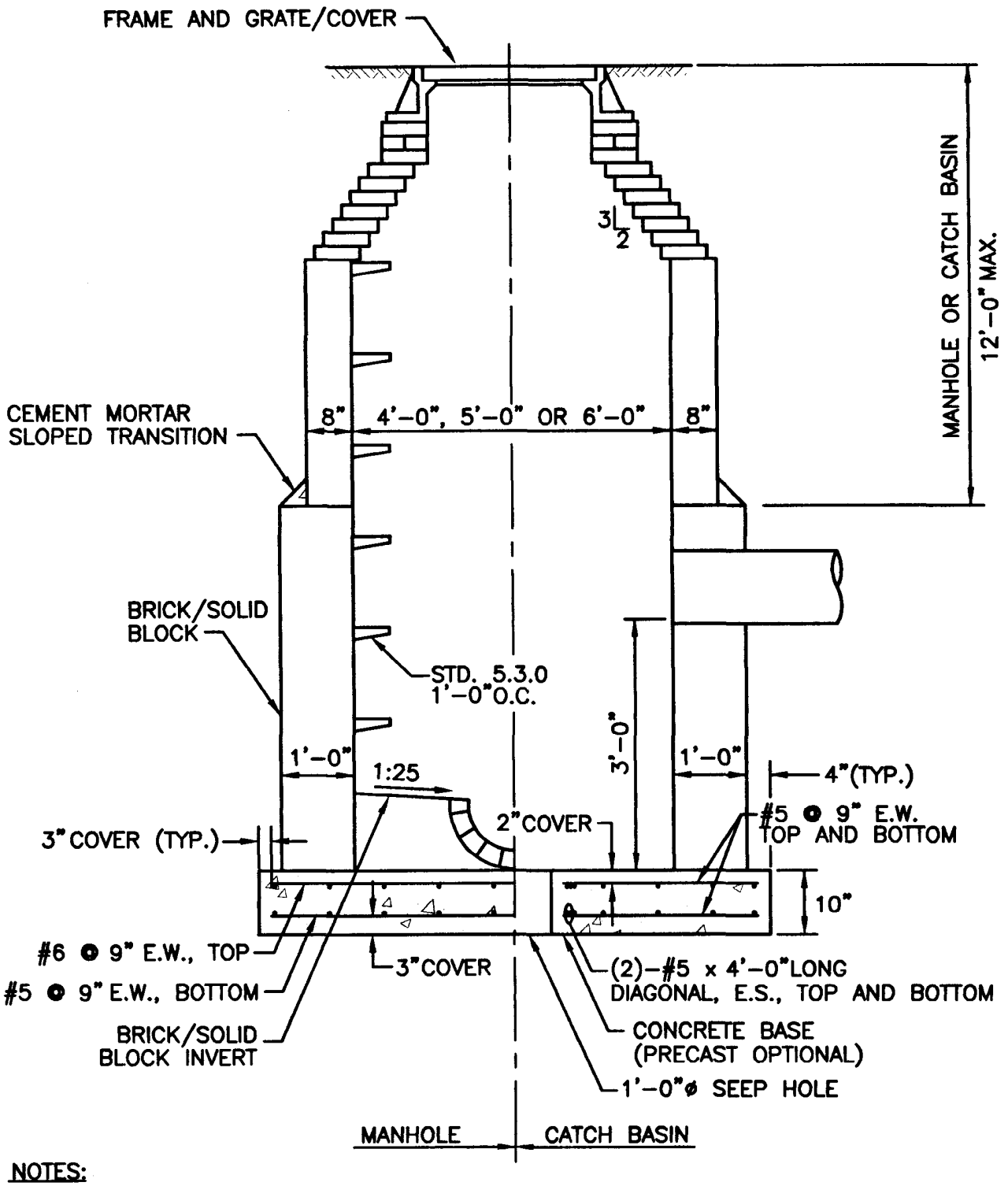
BRICK/SOLID BLOCK DROP INLET

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.6.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

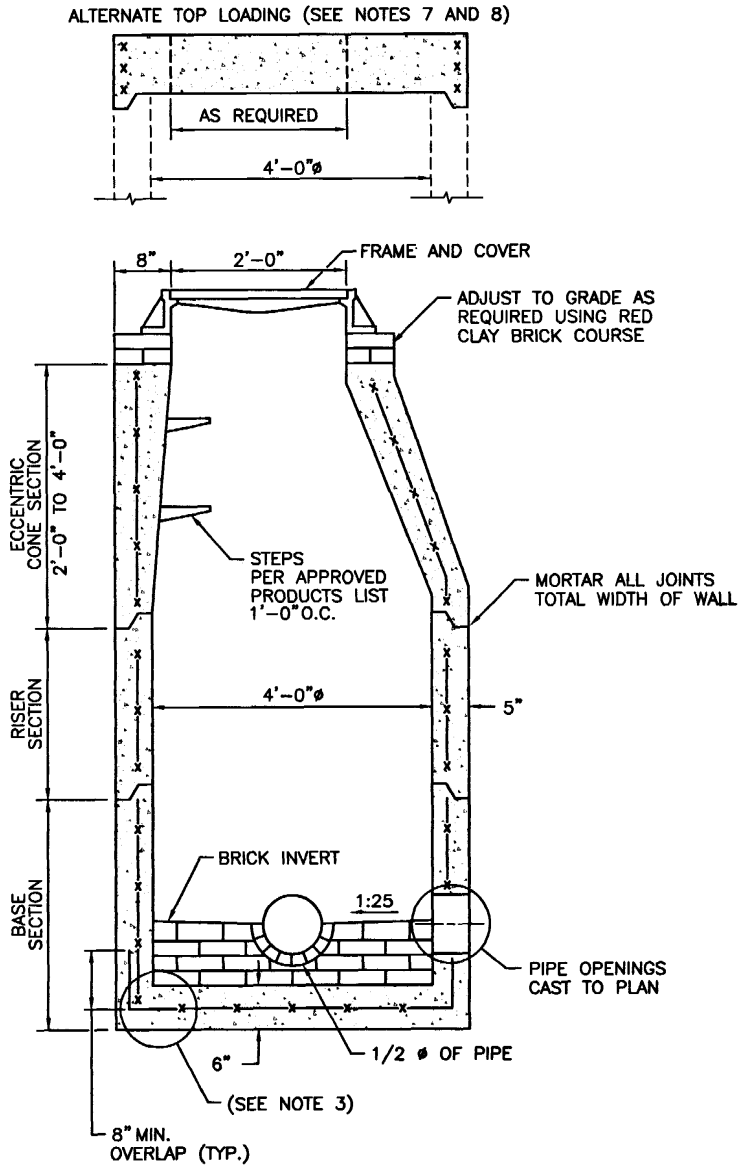
BRICK/SOLID BLOCK ROUND MANHOLES AND CATCH BASINS DEPTH GREATER THAN 12'-0"

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 3.7.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN/LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

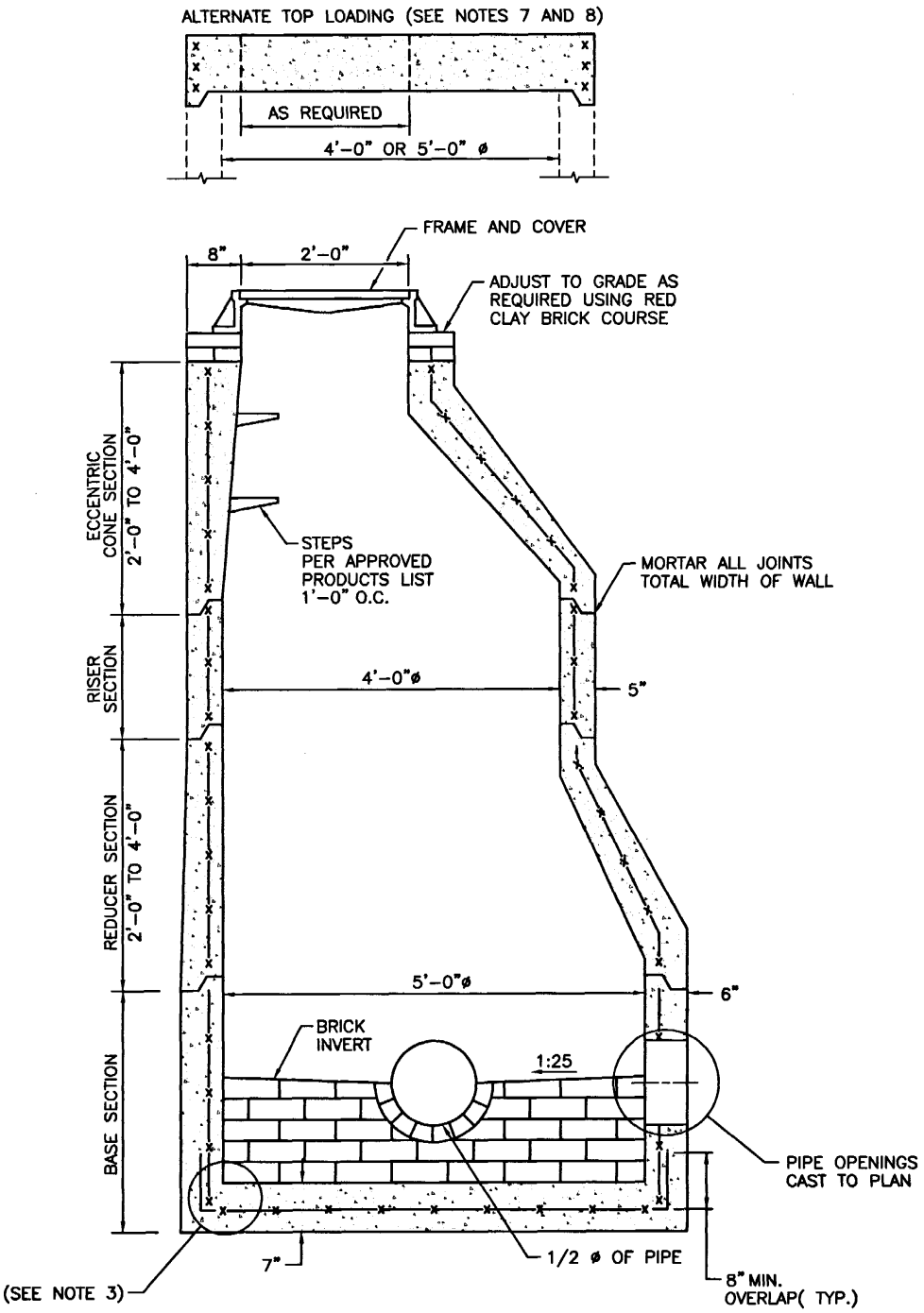
PRECAST 4'-0" ROUND MANHOLE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.2.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

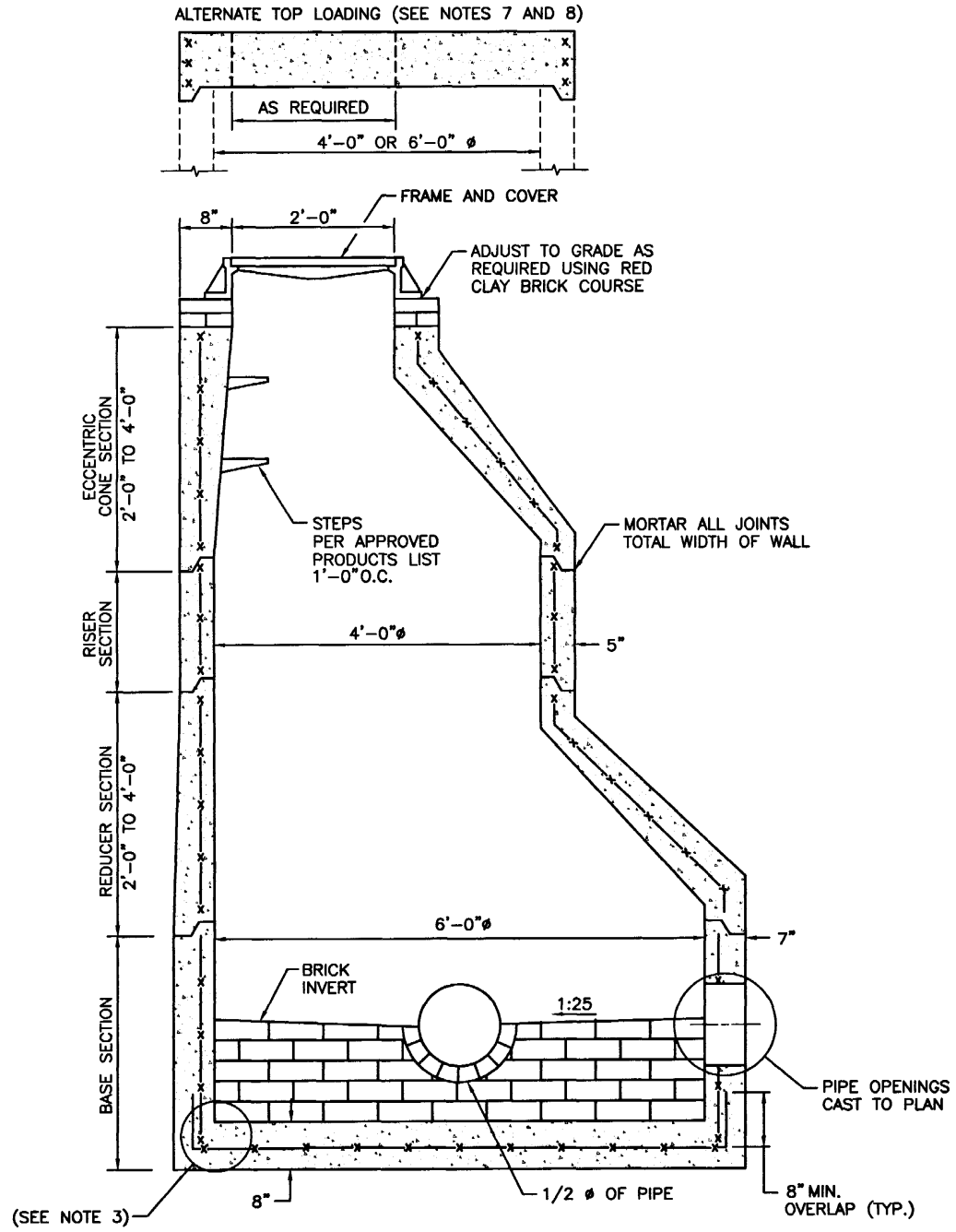
PRECAST 5'-0" ROUND MANHOLE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.2.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

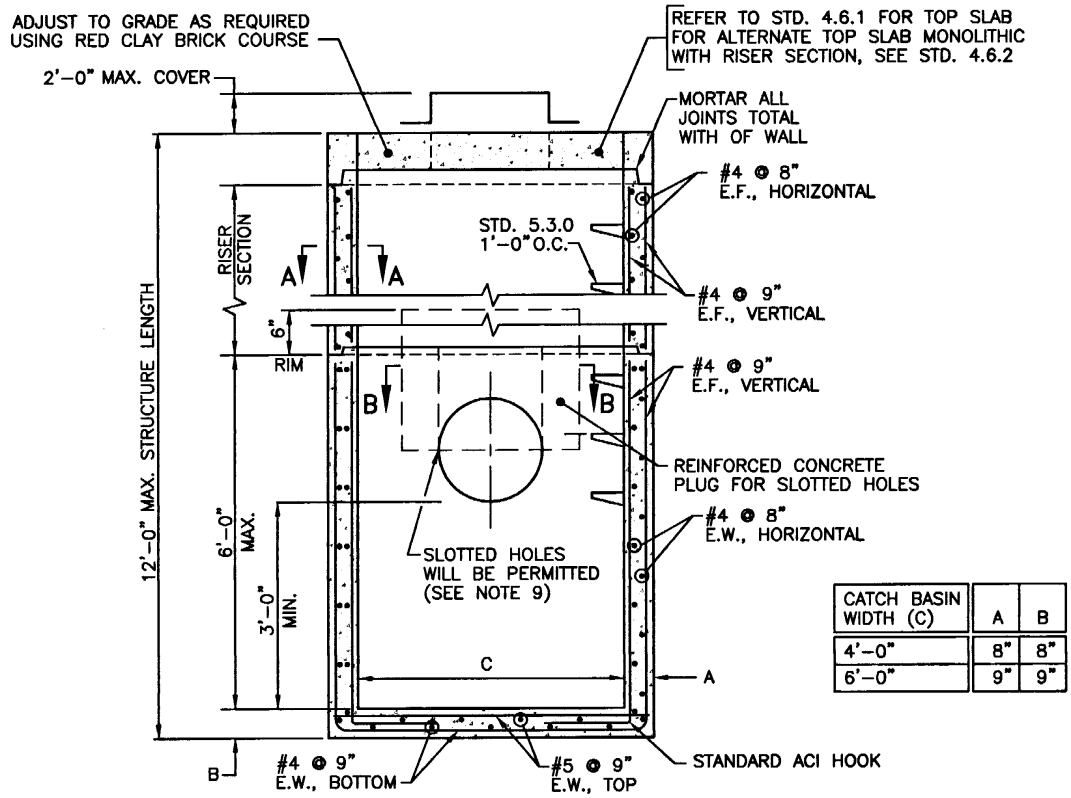
PRECAST 6'-0" ROUND MANHOLE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

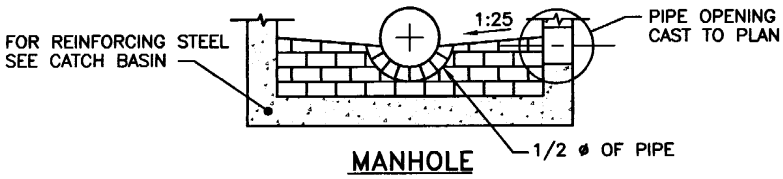
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.2.2

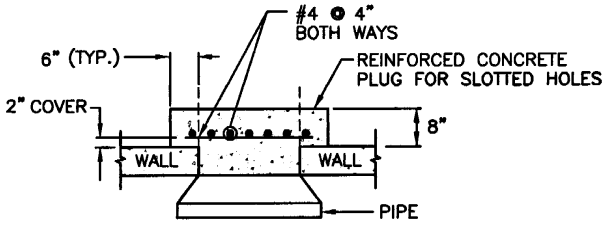


CATCH BASIN WIDTH (C)	A	B
4'-0"	8"	8"
6'-0"	9"	9"

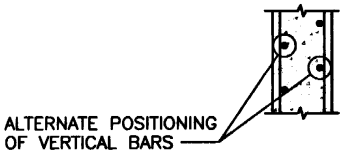
CATCH BASIN



MANHOLE



SECTION B-B



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNUEMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
5. THERE IS TO BE 2" MINIMUM COVER ON ALL REBAR.
6. ALL REBARS ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.
7. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
8. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-7".
9. WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE RIM IS "B" OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 8". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.3.0

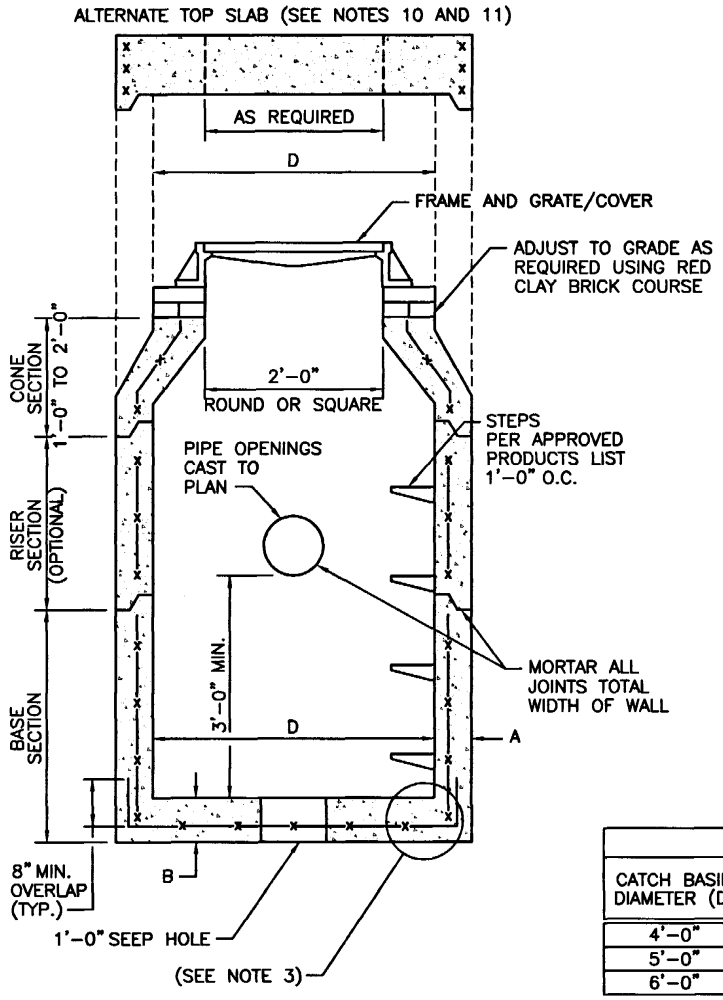
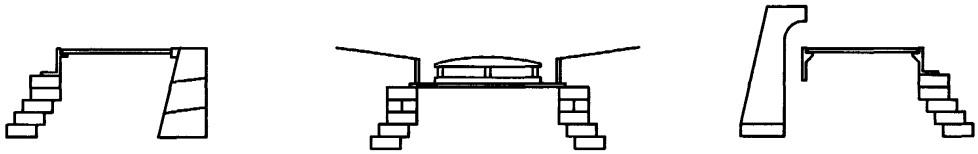


TABLE 1			
CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED *
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2



TYPE "D" TYPE "R" TYPE "F"

TYPE CATCH BASIN AS REQUIRED

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

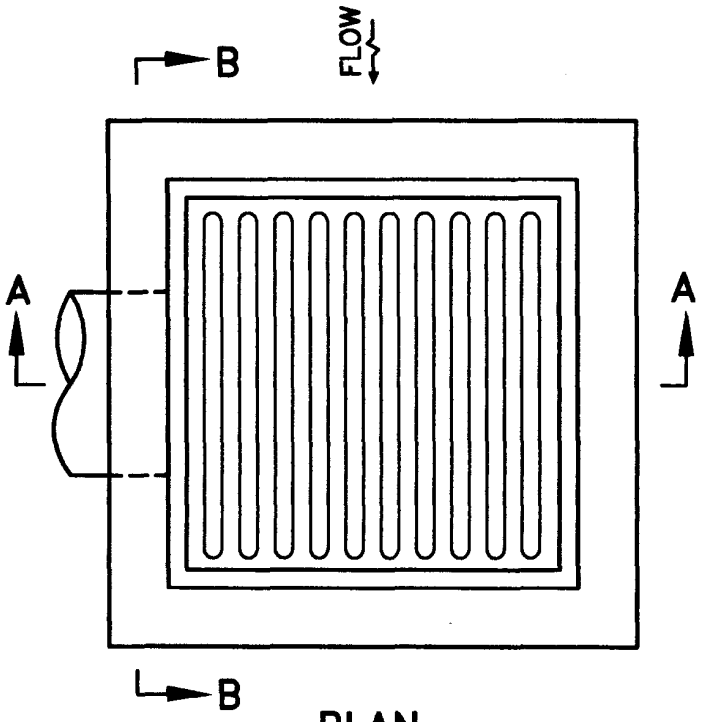
PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

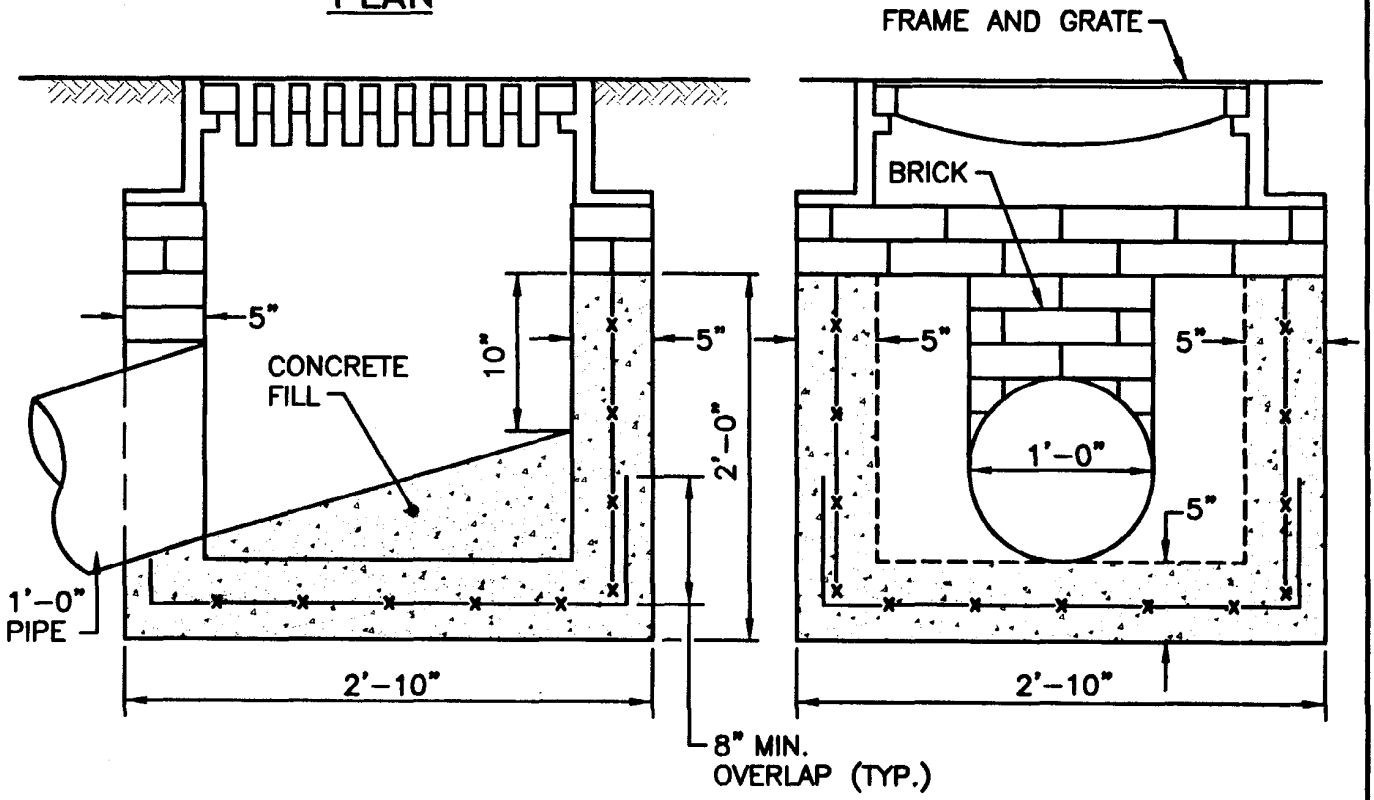
R.I. STANDARD 4.4.0



PLAN

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./ LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"–12"	1/4"
12"–24"	1/2"
24"–36"	3/4"



SECTION A–A

SECTION B–B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

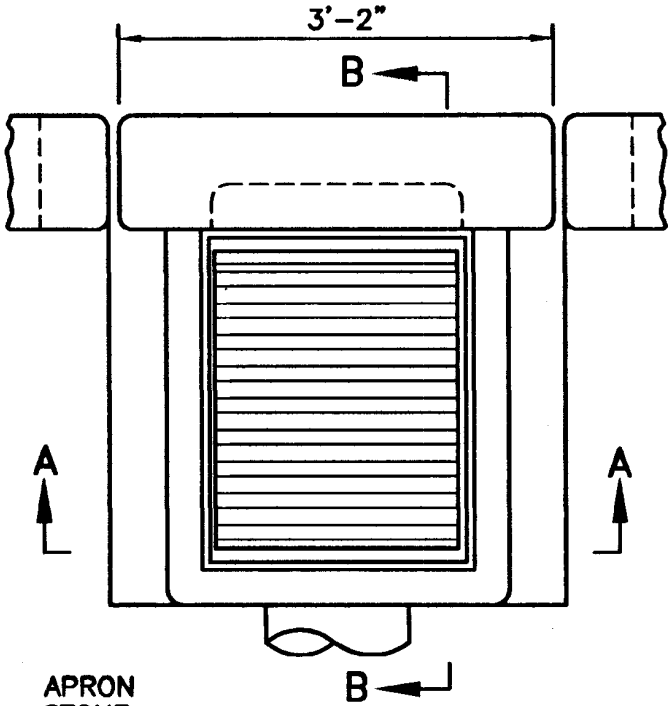
PRECAST CONCRETE DROP INLET

CHIEF ENGINEER TRANSPORTATION

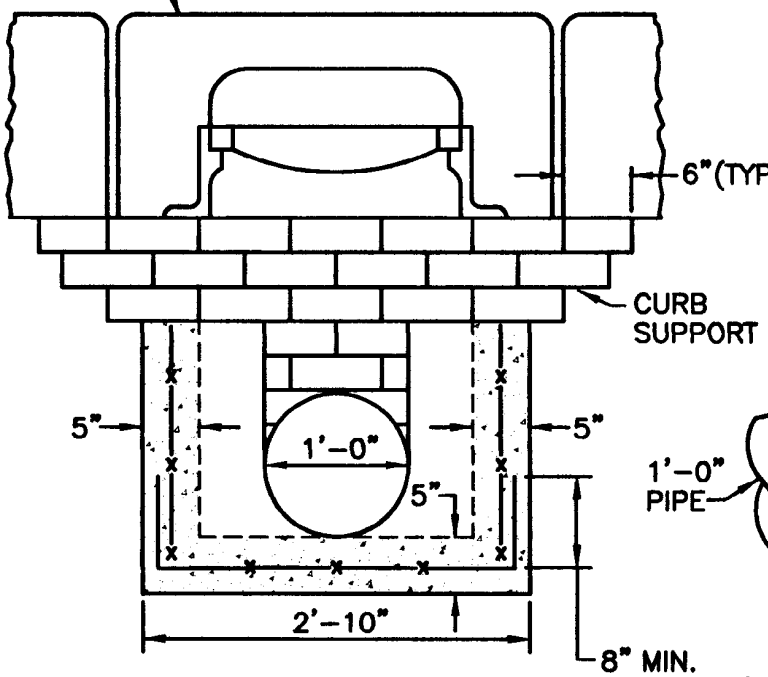
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

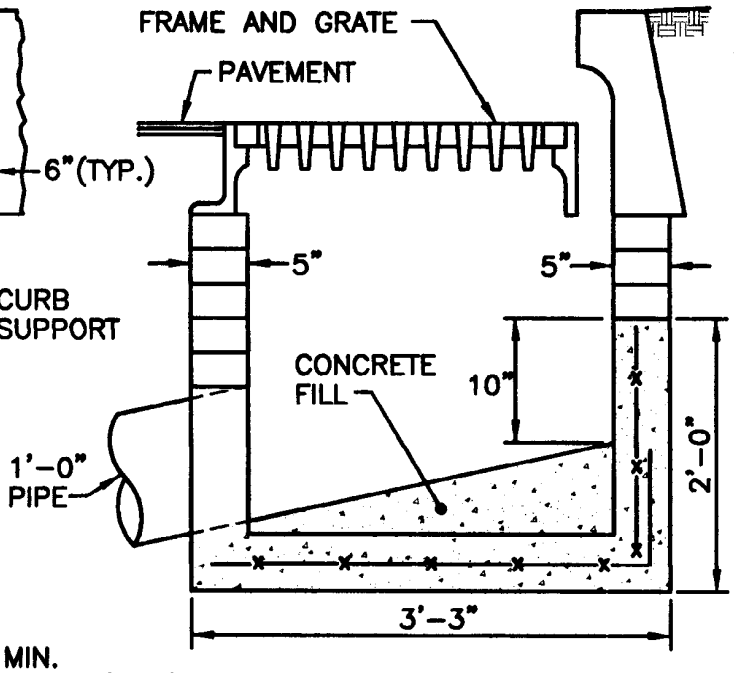
R.I. STANDARD 4.5.0



PLAN



SECTION A-A



SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

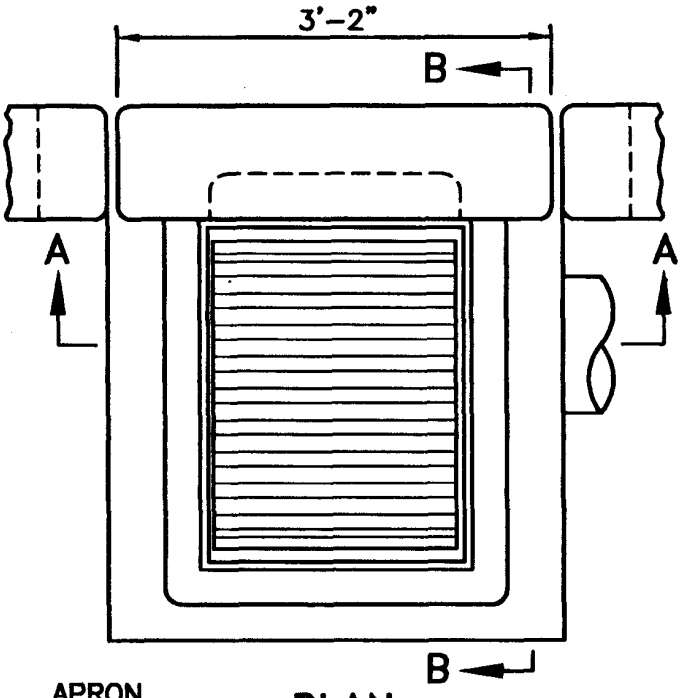
PRECAST CONCRETE DROP INLET LATERAL OUTLET

CHIEF ENGINEER TRANSPORTATION

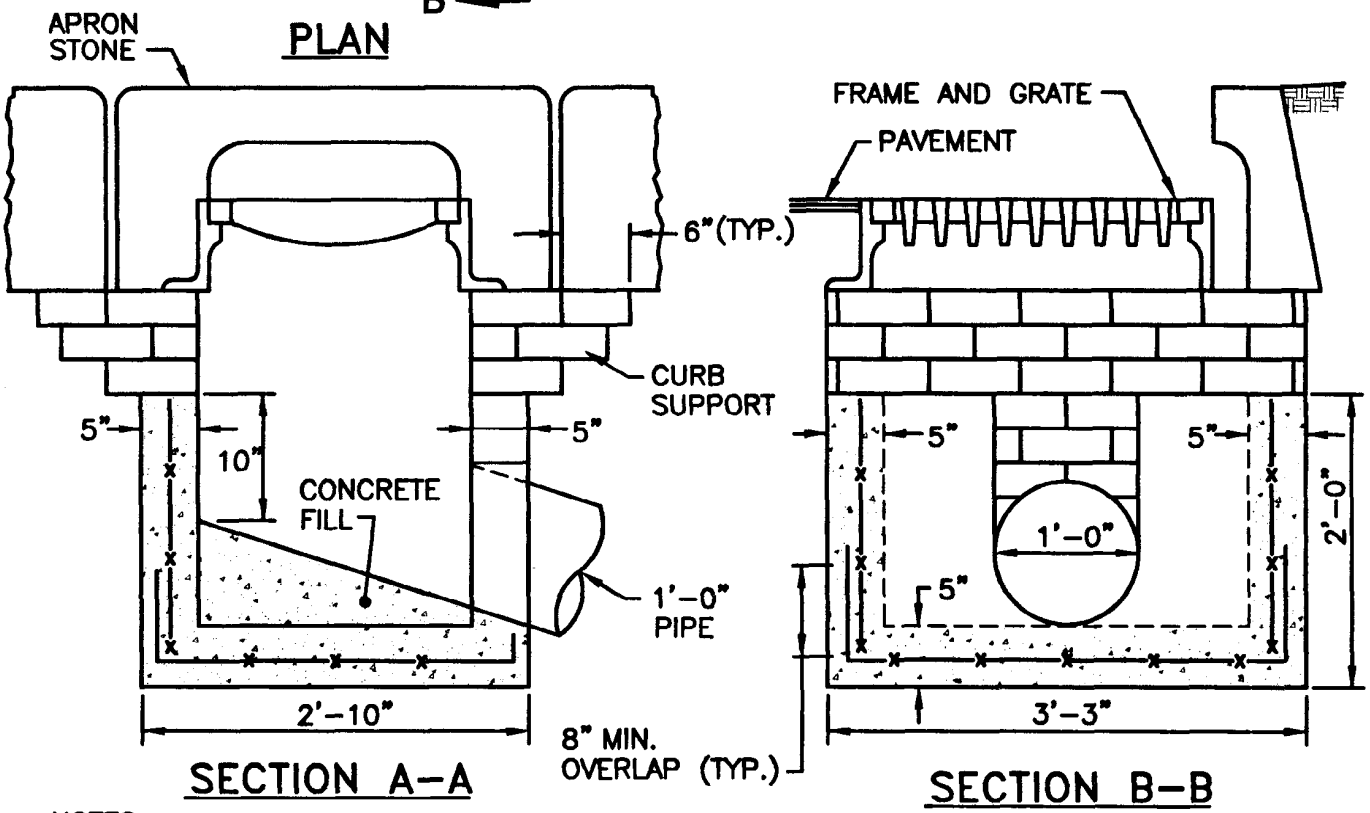
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.5.1



PLAN



SECTION A-A

SECTION B-B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

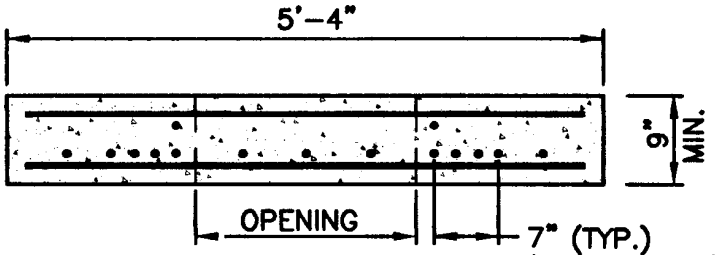
PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET

CHIEF ENGINEER TRANSPORTATION

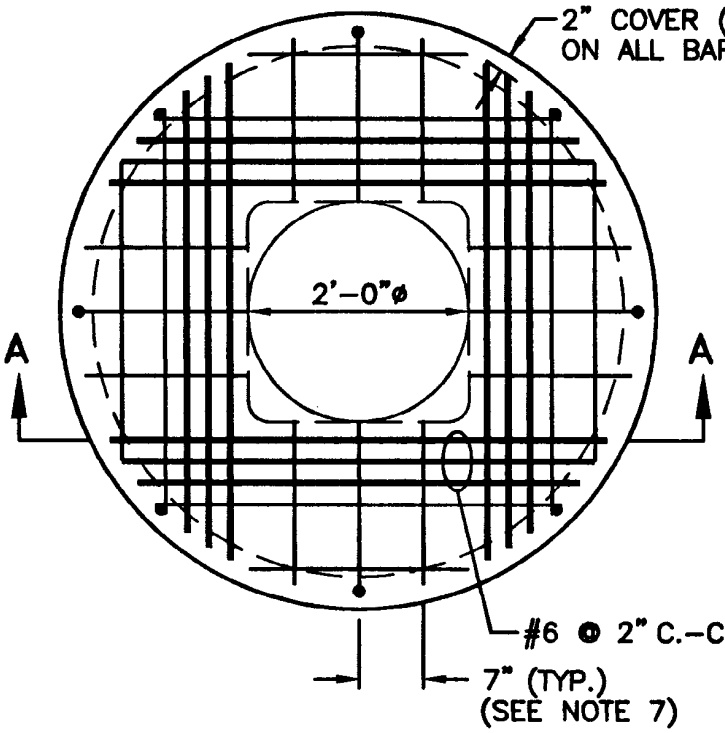
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

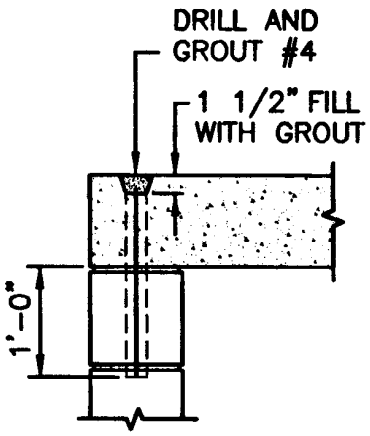
R.I. STANDARD 4.5.2



SECTION A-A



PLAN



DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

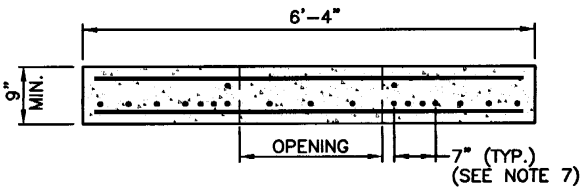
CONCRETE COVER FOR SHALLOW 4'-0" ROUND MANHOLES

CHIEF ENGINEER TRANSPORTATION

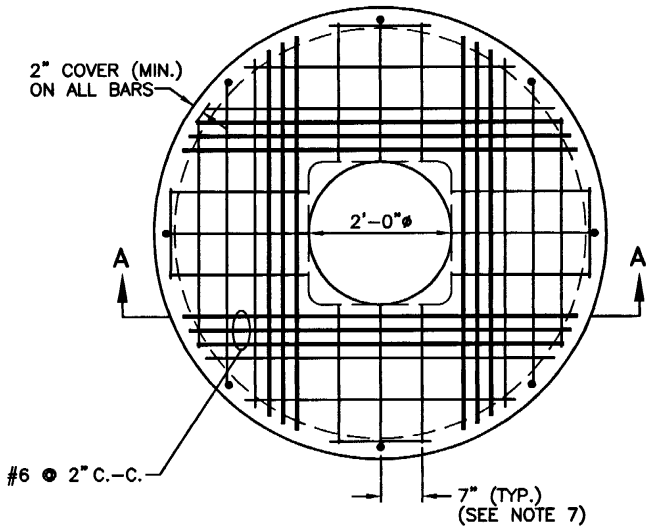
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

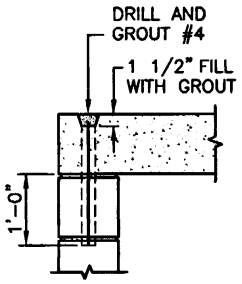
R.I. STANDARD 4.6.0



SECTION A-A



PLAN



DOWEL DETAIL

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

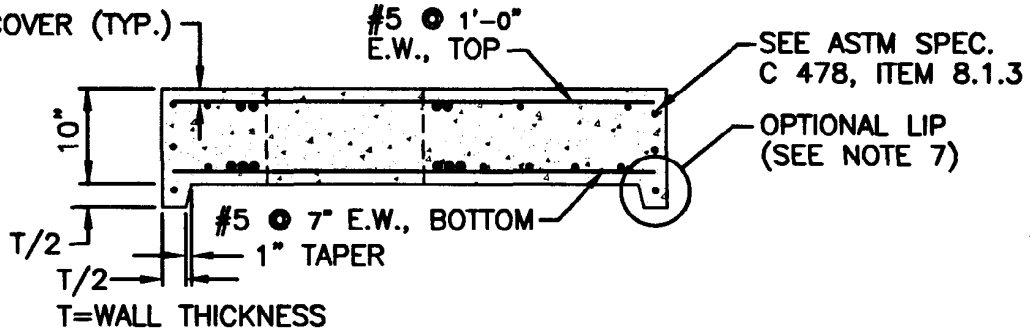
CONCRETE COVER FOR SHALLOW 5'-0" ROUND MANHOLES

CHIEF ENGINEER TRANSPORTATION

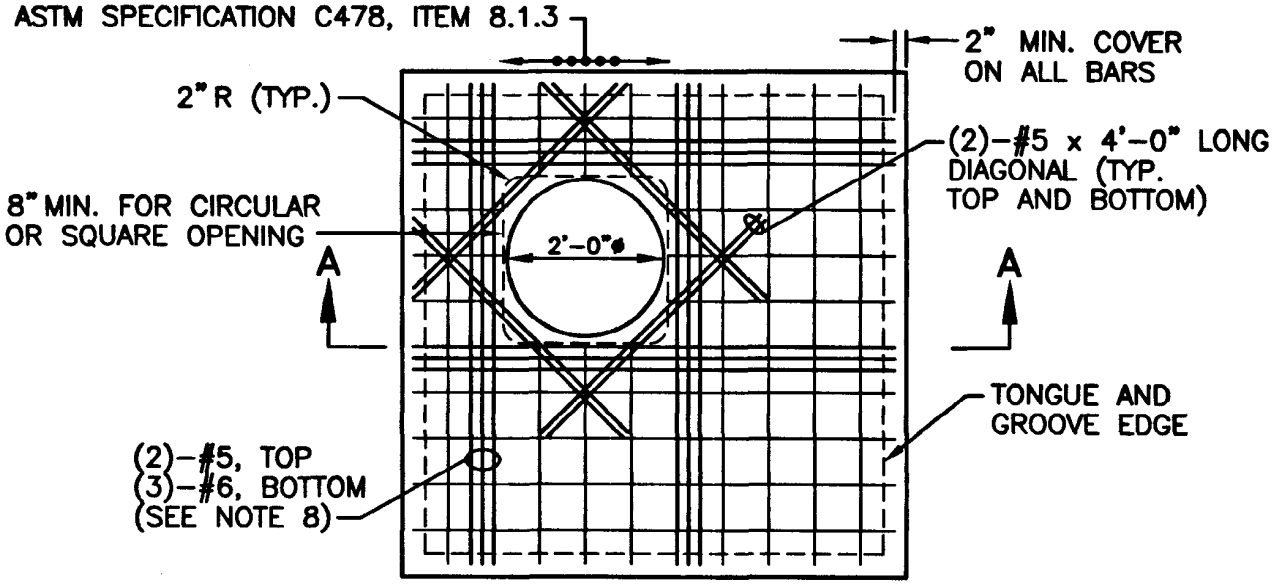
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.6.1



SECTION A-A



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS TOP COVER IS FOR STD. 4.3.0.
3. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNUEMATIC TOOLS WILL BE ALLOWED.
4. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
5. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
6. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
7. WHERE NO LIP IS PROVIDED, THE ASTM SPECIFICATION REFERENCE SHALL BE IGNORED. IN ALL CASES, THE CONTACT SURFACES SHALL MATCH.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARE ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REBARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

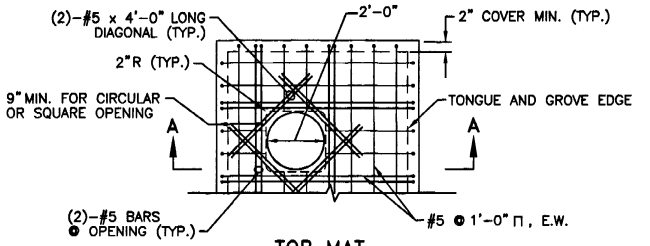
TOP COVER FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

CHIEF ENGINEER TRANSPORTATION

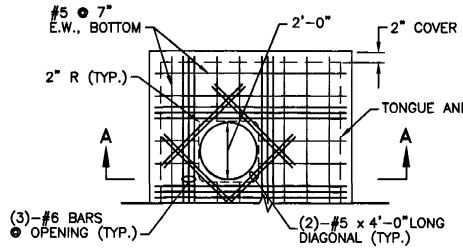
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

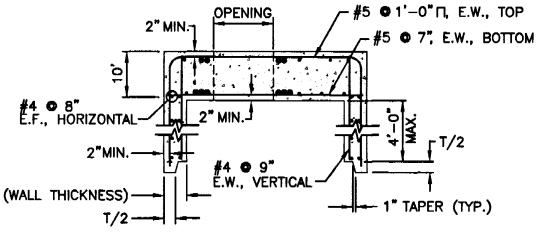
R.I. STANDARD 4.7.0



TOP MAT



BOTTOM MAT



SECTION A–A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW–CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNUEMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'–0" FROM THE STEPS.
4. TOP SLAB MONOLITHIC WITH RISER SECTION HAS BEEN REINFORCED TO MEET OR EXCEED H–25 OR HS–25 LOADING WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SECTION IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBARS ARE TO HAVE A 2" MINIMUM CLEARANCE FROM OPENING.
6. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'–6".
7. WALL WIDTHS MUST BE EQUIVALENT TO THOSE OF THE BASE SECTION.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)–#6 (SHOWN WITH HEAVIER LINES FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'–0", BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)–#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REINFORCING BARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

R.I. STANDARD 4.7.1

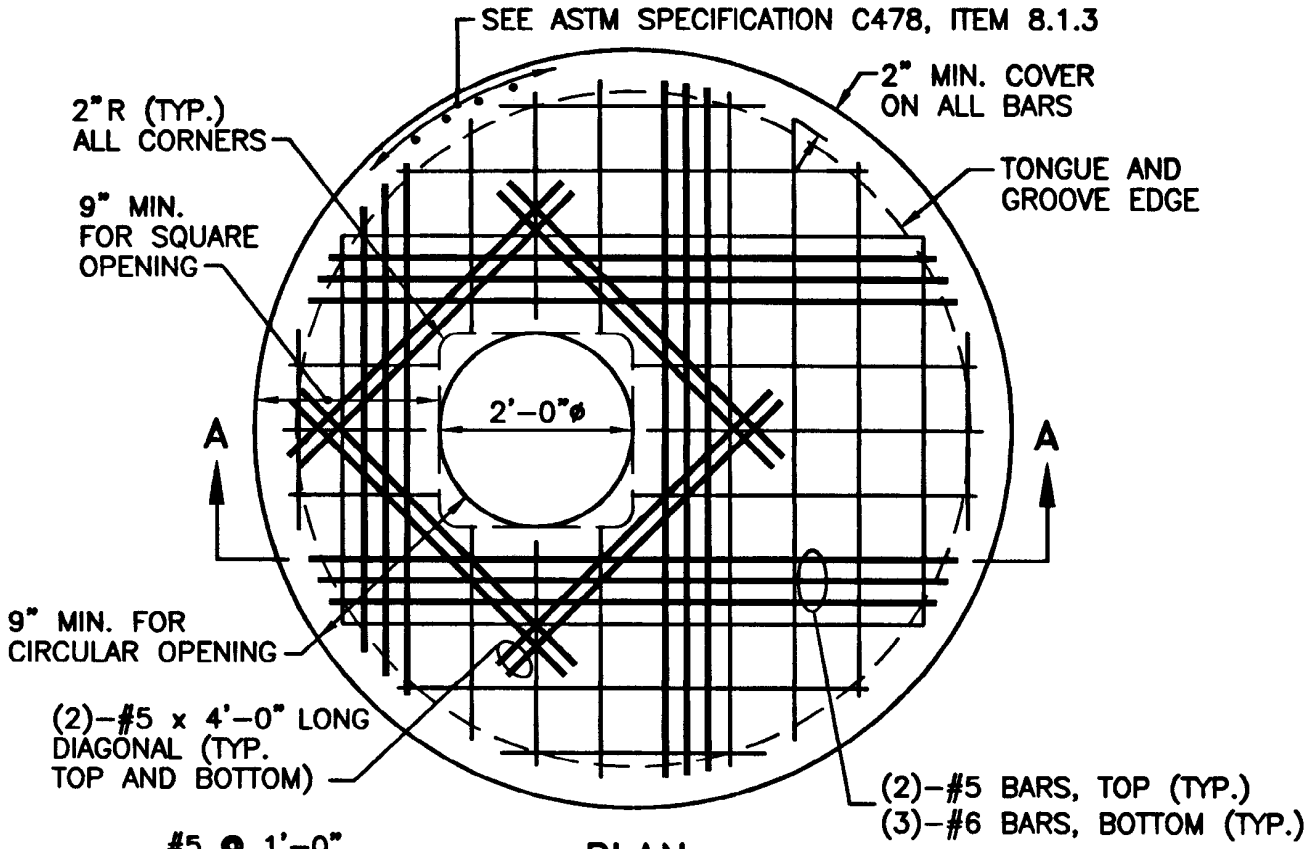
TOP COVER MONOLITHIC WITH RISER SECTION FOR 4'–0" OR 6'–0" SQUARE CATCH BASINS AND MANHOLES

JUNE 15, 1998
ISSUE DATE

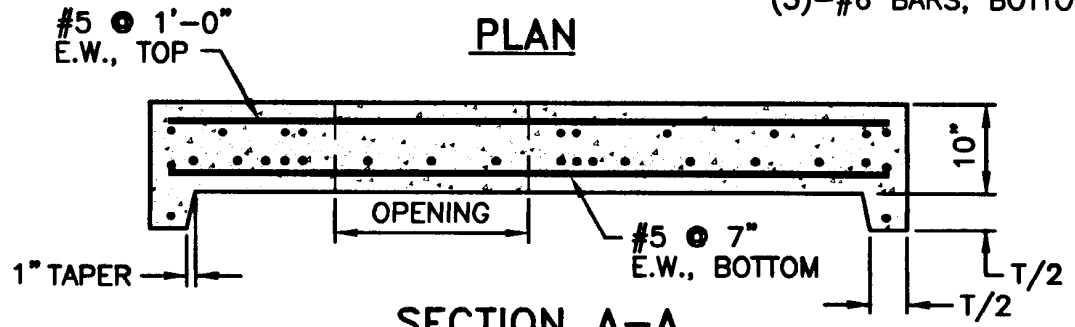
CHIEF DESIGN ENGINEER
TRANSPORTATION

CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
NO.	BY	DATE



PLAN



SECTION A-A

T=WALL THICKNESS

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTER LINE OF THE OPENING MUST BE WITHIN 2" FROM THE STEPS.
4. ALTERNATE TOP COVER IS STEEL REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBAR SHALL HAVE A MINIMUM OF 2" CLEARANCE FROM OPENING.
6. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 2", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 SHOWN WITH A HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

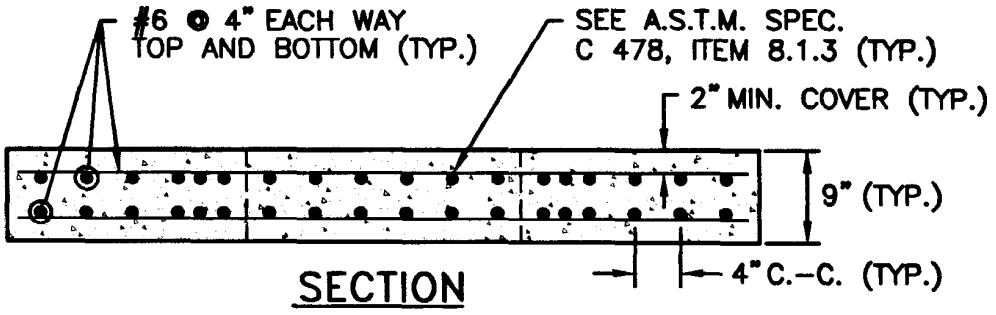
ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS

CHIEF ENGINEER TRANSPORTATION

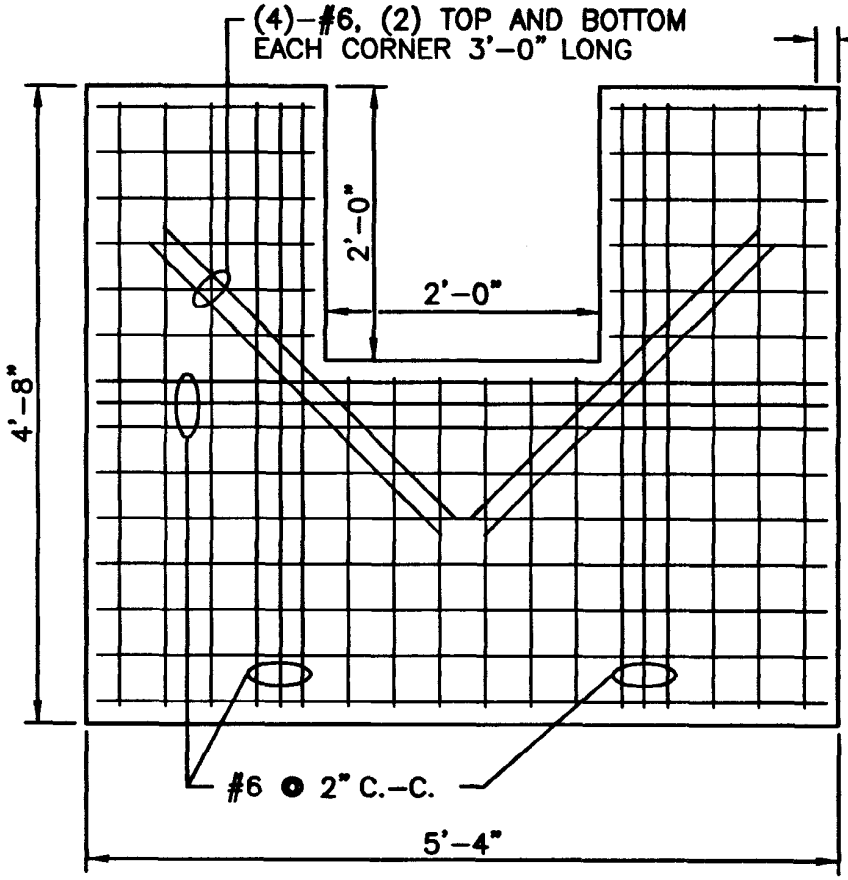
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.7.2



SECTION



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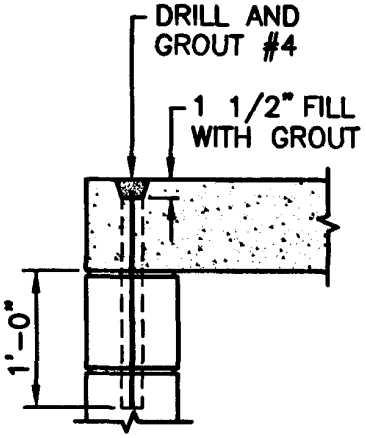


DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

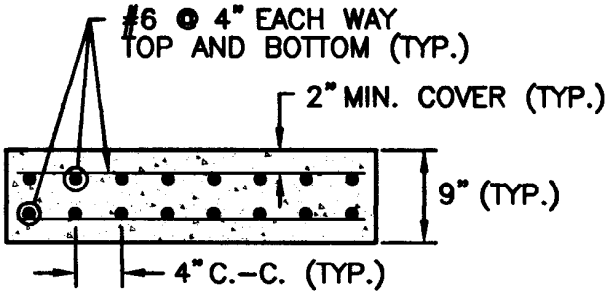
CONCRETE COVER FOR SHALLOW TYPE "F" SQUARE CATCH BASINS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.8.0



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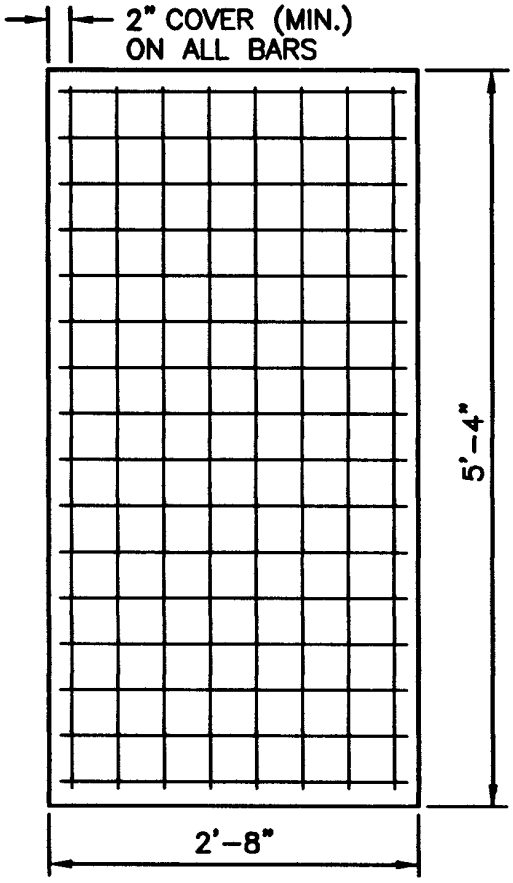

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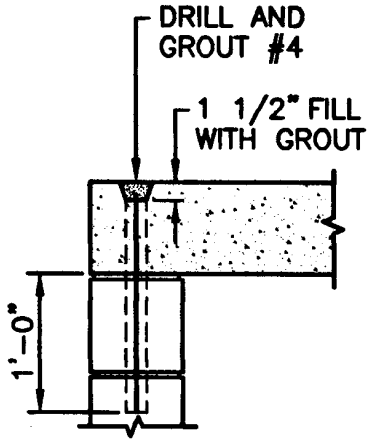


DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

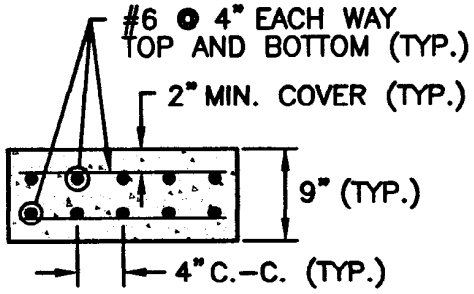
CONCRETE COVER FOR SHALLOW DOUBLE GRATE CATCH BASINS WITH CURB

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.8.1



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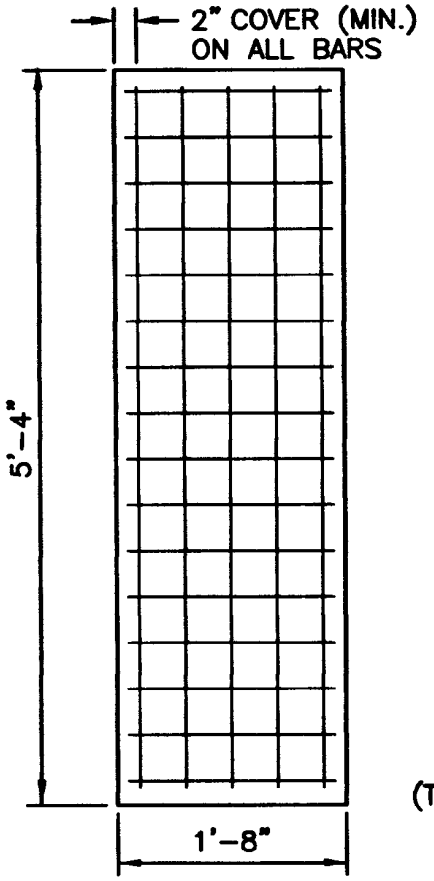

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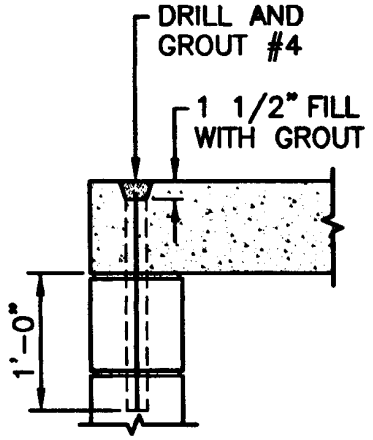


DOWEL DETAIL

(TWO REQUIRED FOR EACH CATCH BASIN)

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

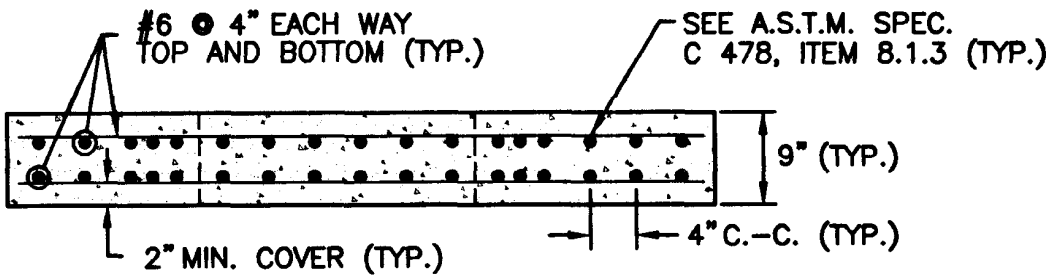
CONCRETE COVER FOR SHALLOW DOUBLE GRATE CATCH BASINS WITHOUT CURB

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.8.2



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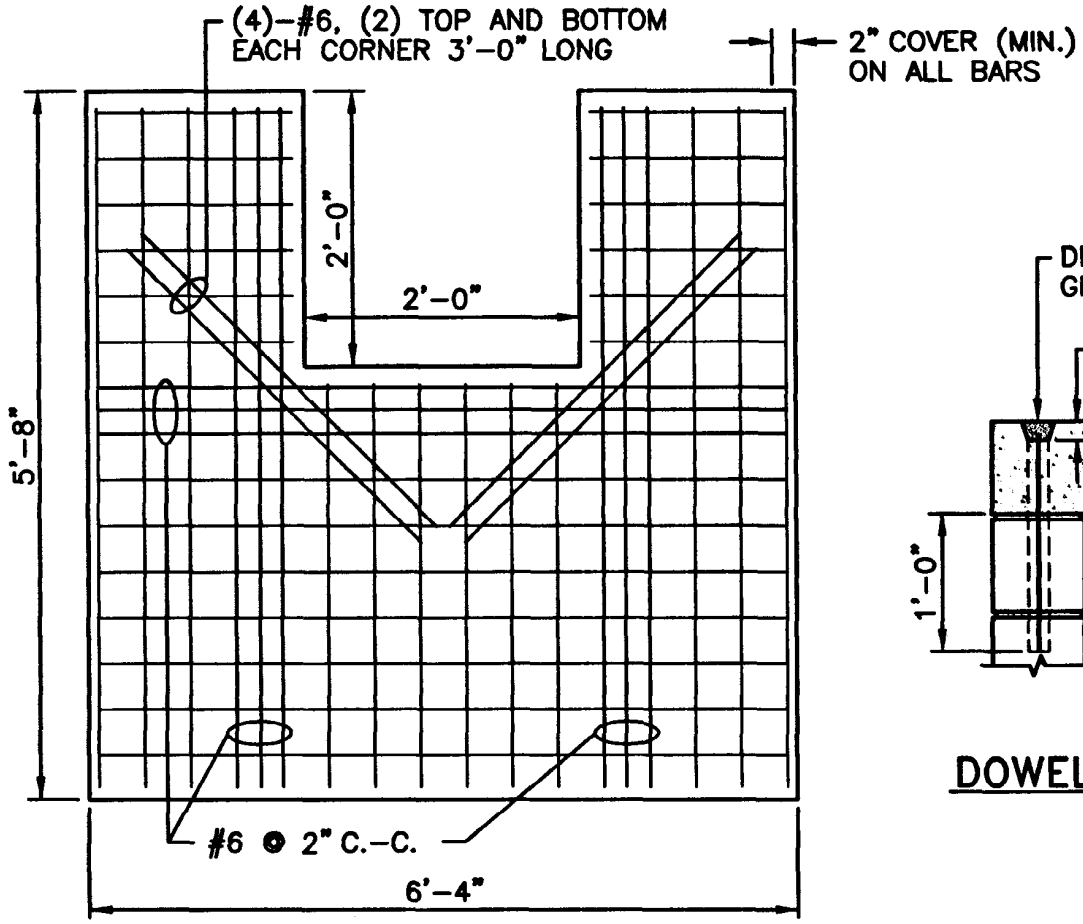

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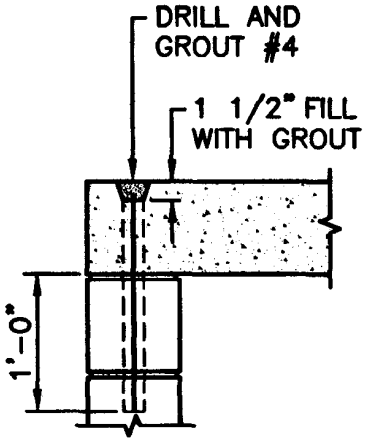


DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS NO GREATER THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

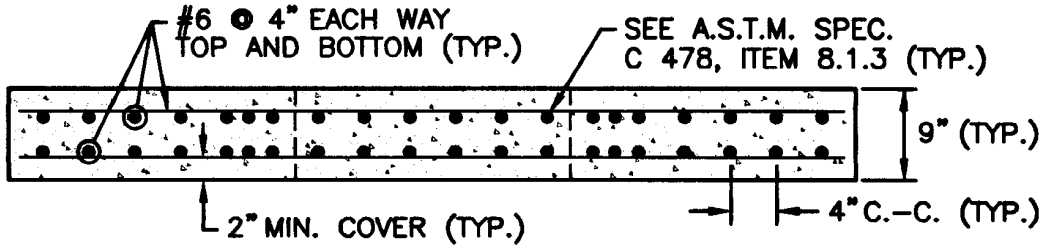
CONCRETE COVER FOR SHALLOW 5'-0" SQUARE CATCH BASINS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 4.8.3



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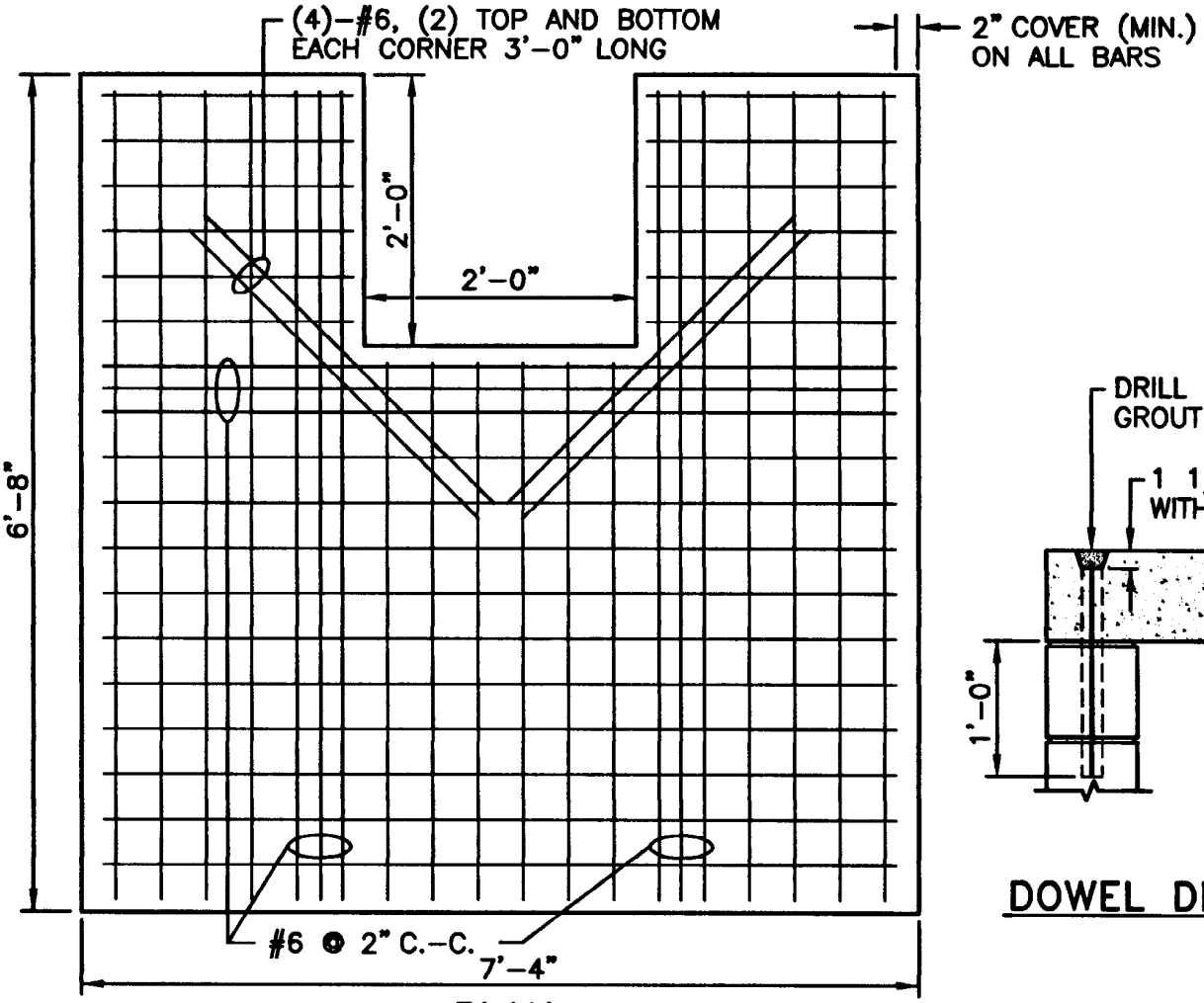


PLAN

DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

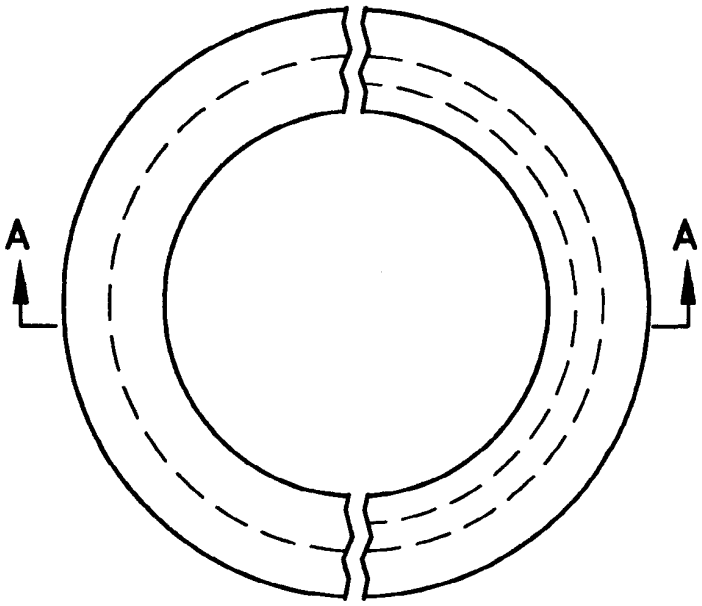
CONCRETE COVER FOR SHALLOW 6'-0" SQUARE CATCH BASINS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

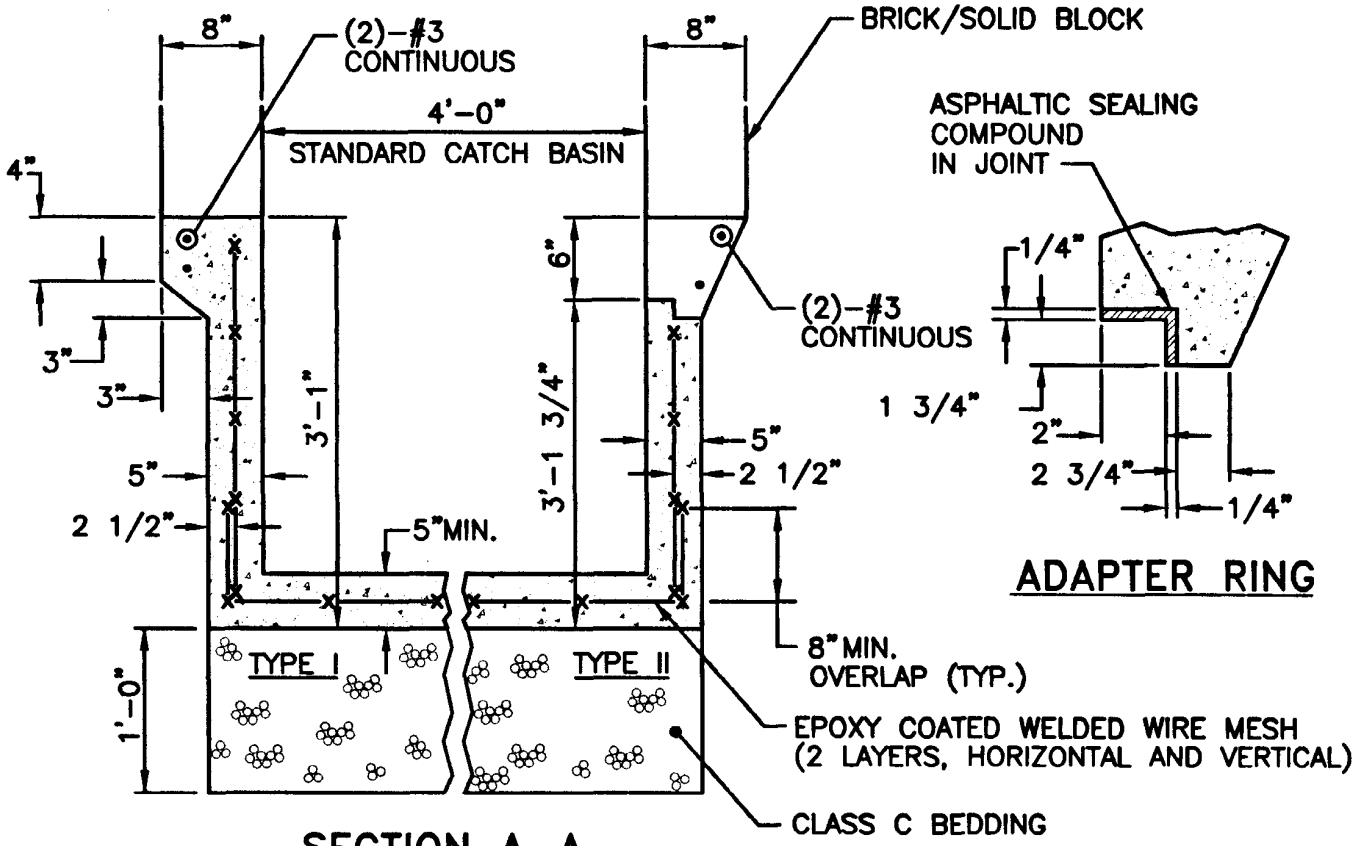
R.I. STANDARD 4.8.4



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. EITHER TYPE I OR TYPE II MAY BE USED AT THE DISCRETION OF THE ENGINEER.
3. REINFORCING TO BE 4x4–W4.0 xW4.0 WELDED WIRE MESH, 2 LAYERS, HORIZONTAL AND VERTICAL (EPOXY COATED).



SECTION A–A

ADAPTER RING

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

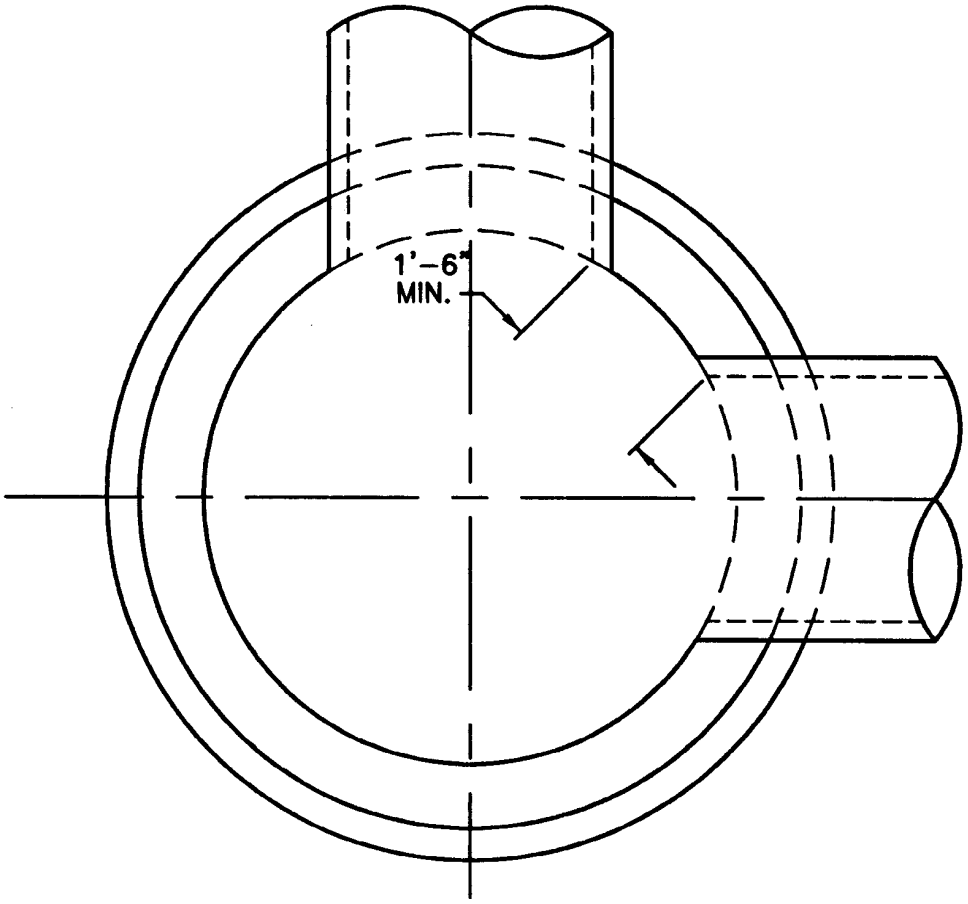
PRECAST CONCRETE SUMP FOR ROUND CATCH BASINS (WET AREAS)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 5.1.0



CROSS SECTION OF MANHOLE OR CATCH BASIN

	4 FT. MANHOLE OR CATCH BASIN	5 FT. MANHOLE OR CATCH BASIN	6 FT. MANHOLE OR CATCH BASIN
MAX. PIPE O.D. STRAIGHT THRU TO 45° DEFLECTION	33 1/2" O.D. 27" R.C. PIPE	44" O.D. 36" R.C. PIPE	51" O.D. 42" R.C. PIPE
MAX. PIPE O.D. 90° DEFLECTION	23" O.D. 18" R.C. PIPE	33 1/2" O.D. 27" R.C. PIPE	37" O.D. 30" R.C. PIPE

NOTE:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE MINIMUM DISTANCE BETWEEN PIPES ENTERING MANHOLES AND CATCH BASINS MUST BE 1'-6". THE SIZE OF THE CATCH BASIN WILL BE DETERMINED BY THE PIPE SIZE AND ENTRY ANGLE. (SEE TABLE ABOVE.)

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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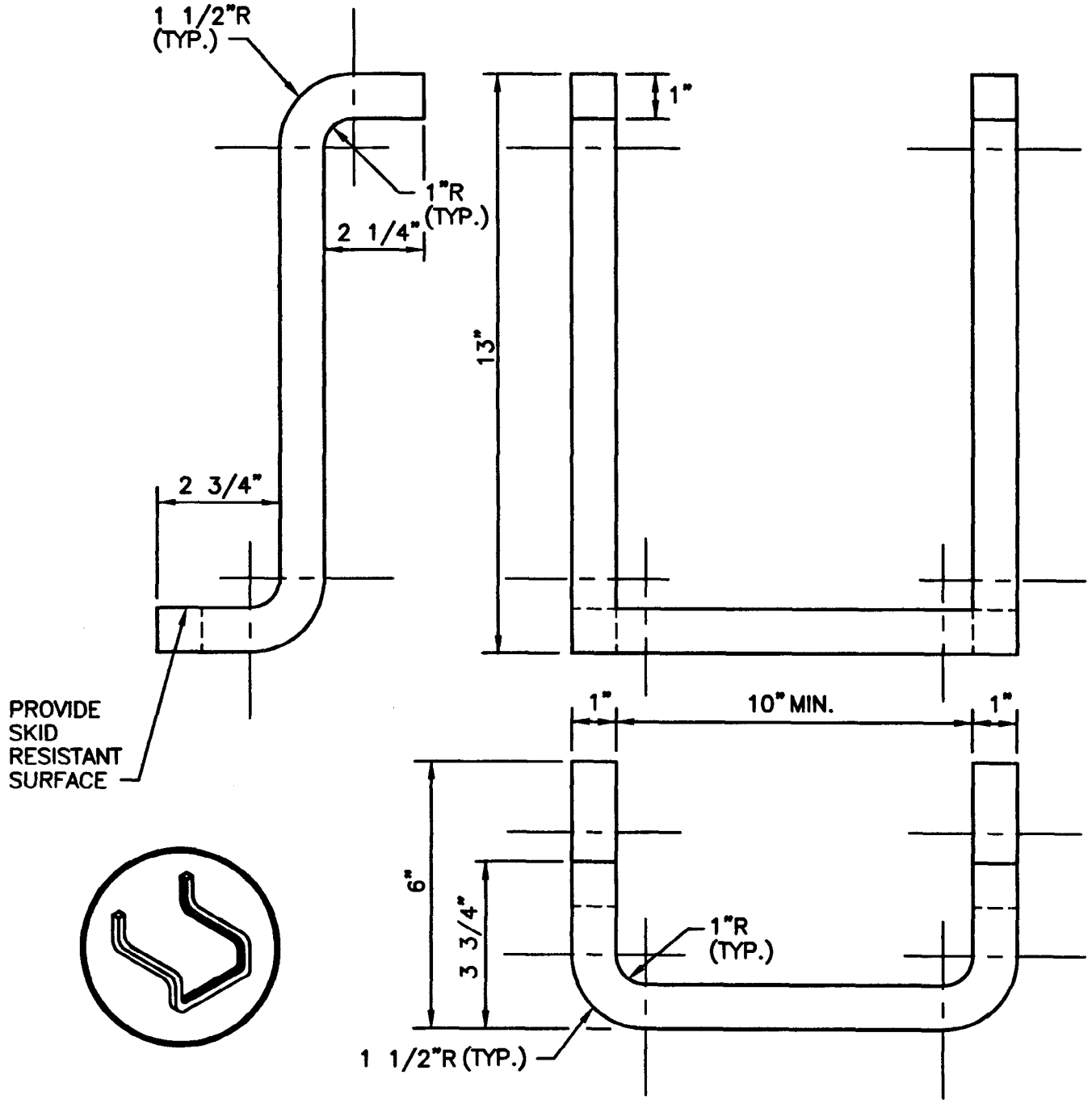
ROUND MANHOLES AND CATCH BASINS MAXIMUM PIPE SIZE STANDARD

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 5.2.0



NOTES:
1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

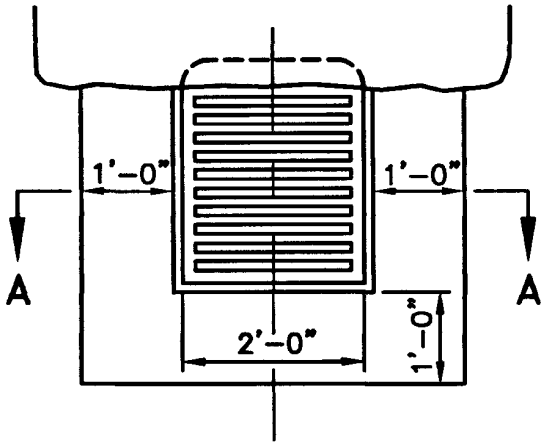
CATCH BASIN AND MANHOLE STEP

CHIEF ENGINEER TRANSPORTATION

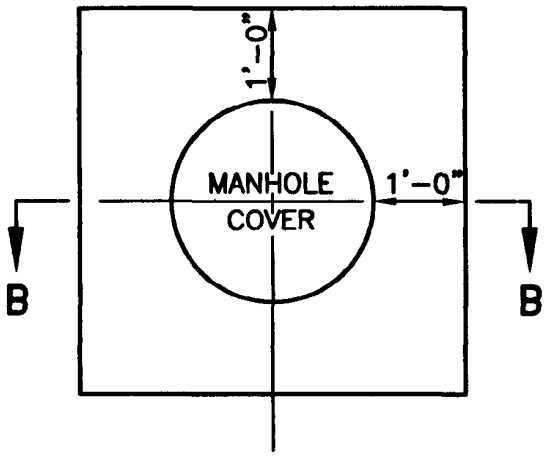
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 5.3.0



PLAN



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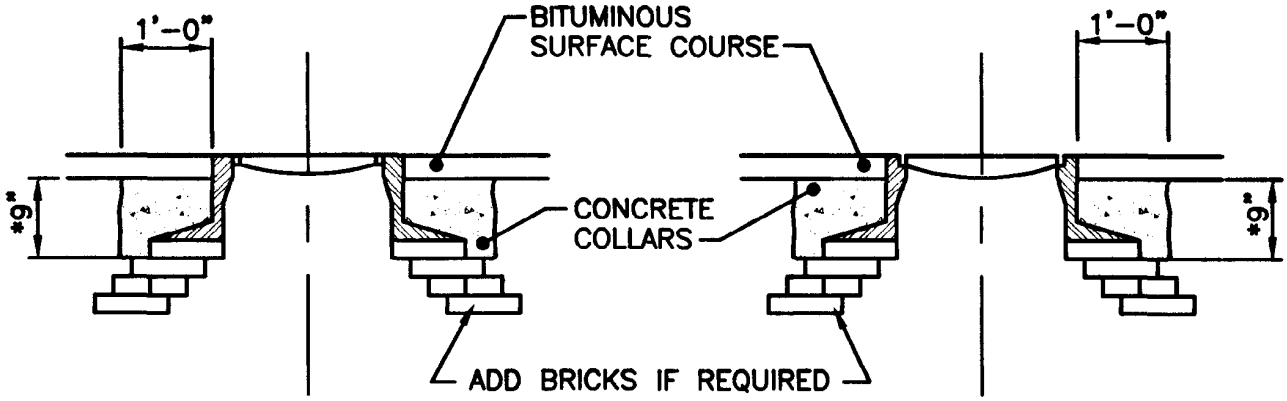


SECTION A–A
CATCH BASINS

SECTION B–B
MANHOLE COVERS

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. COLLARS TO BE CONCRETE MASONRY AS DIRECTED.
*3. 9" OF CONCRETE IN BITUMINOUS PAVED AREAS. MEET EXISTING CONCRETE IN PORTLAND CEMENT CONCRETE AREAS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

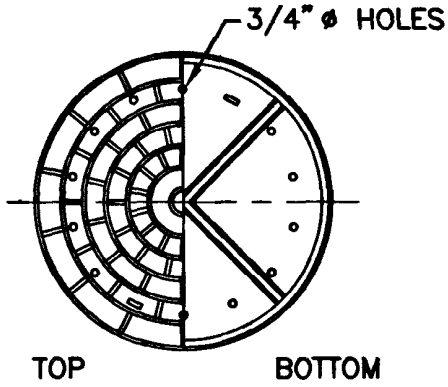
CONCRETE COLLARS

CHIEF ENGINEER
TRANSPORTATION

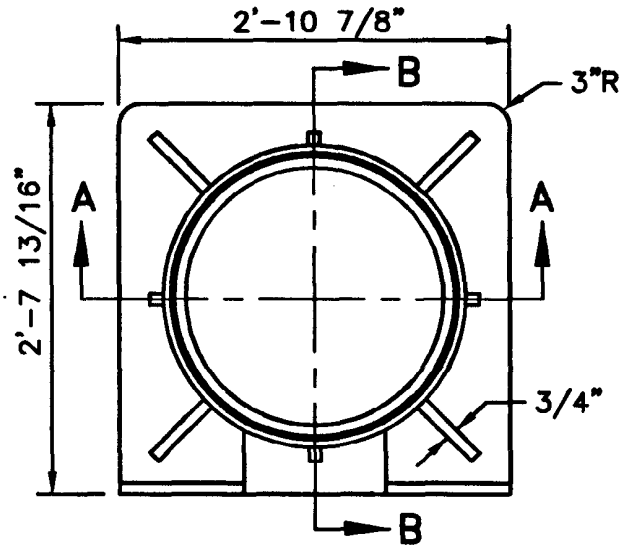
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 5.4.0



COVER



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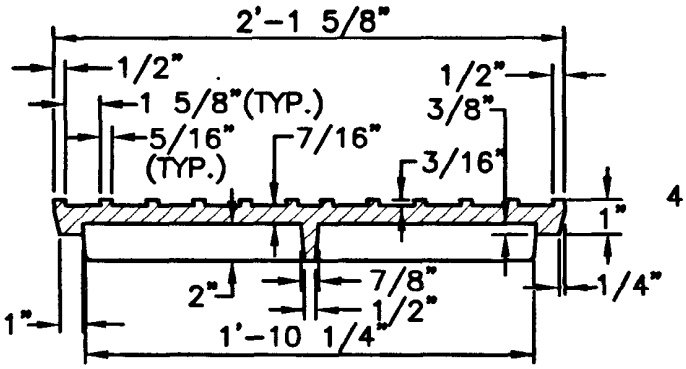
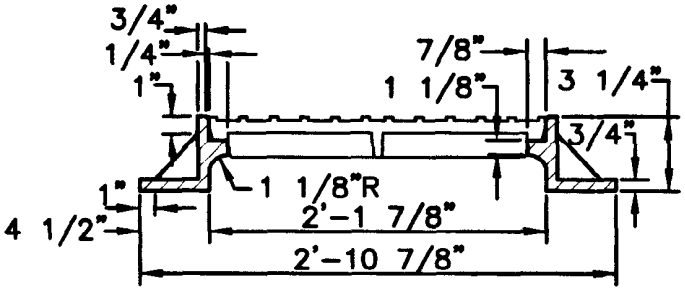
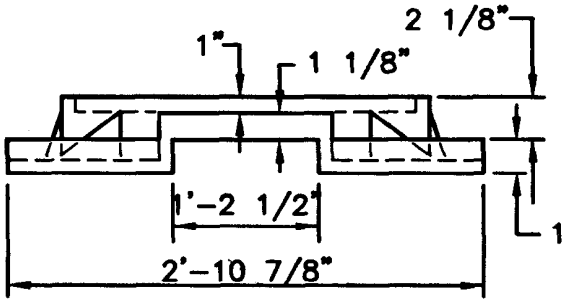




SECTION A-A



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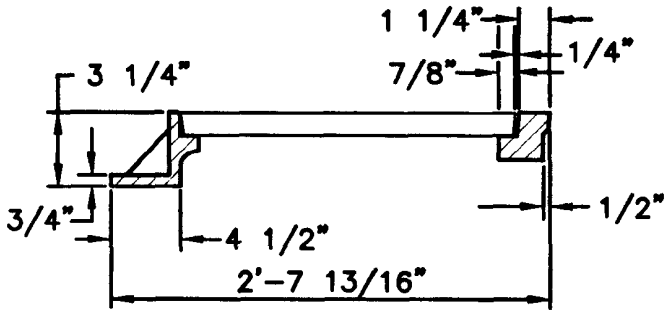


SECTION B-B

NOTES:
1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

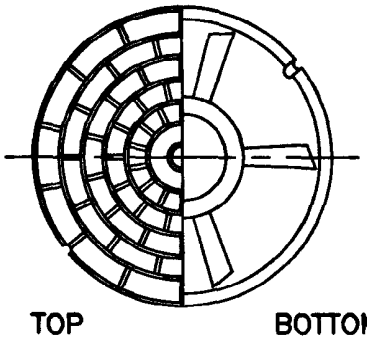
LIGHT-DUTY SQUARE FRAME AND ROUND COVER

CHIEF ENGINEER TRANSPORTATION

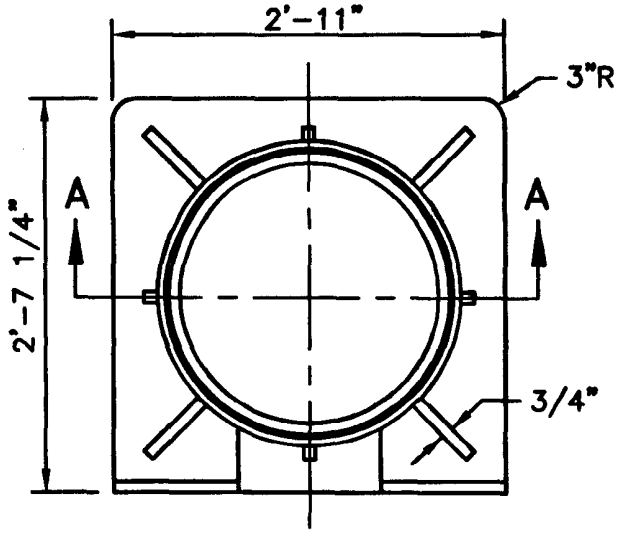
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.1.0



COVER



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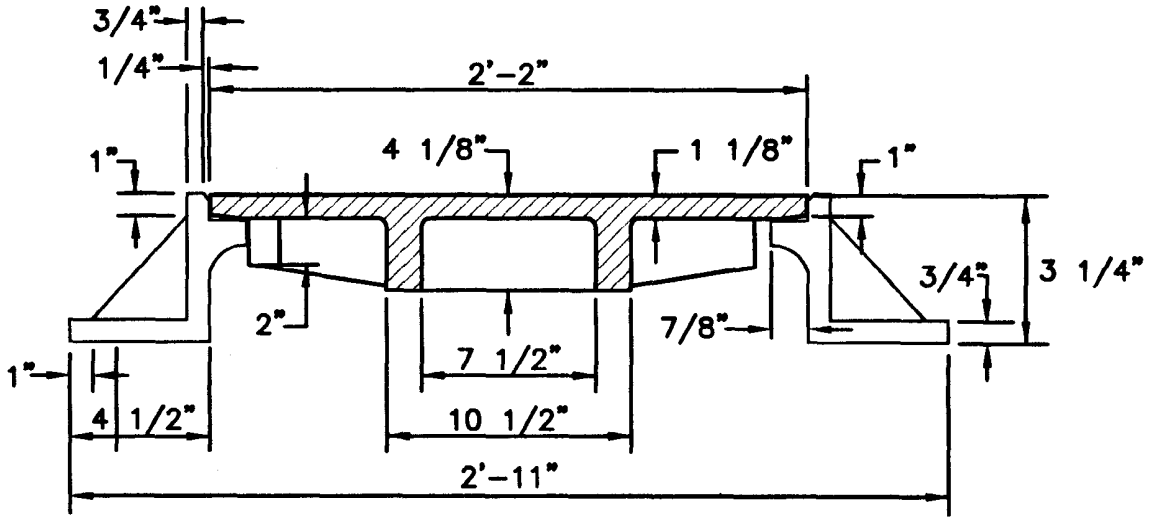


SECTION A-A

NOTES:
1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

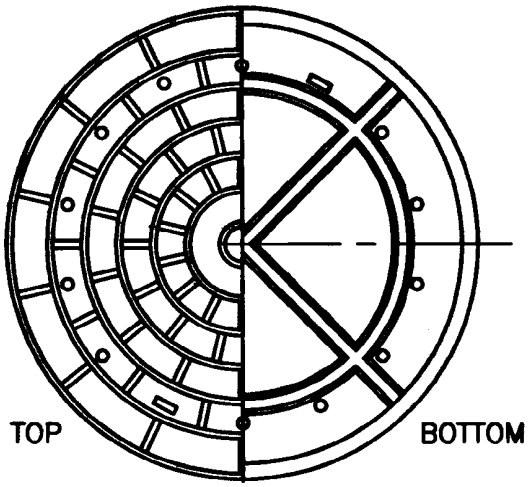
HEAVY-DUTY SQUARE FRAME AND ROUND COVER

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.1.1



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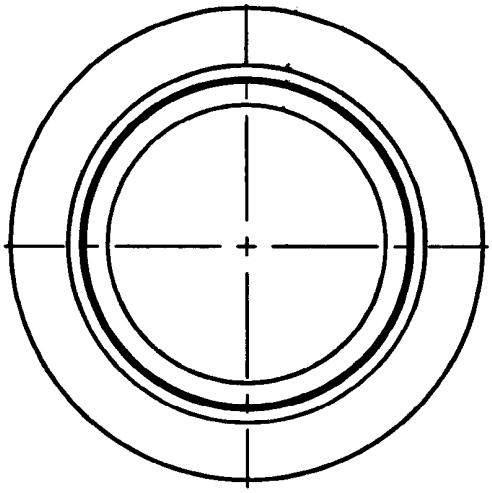

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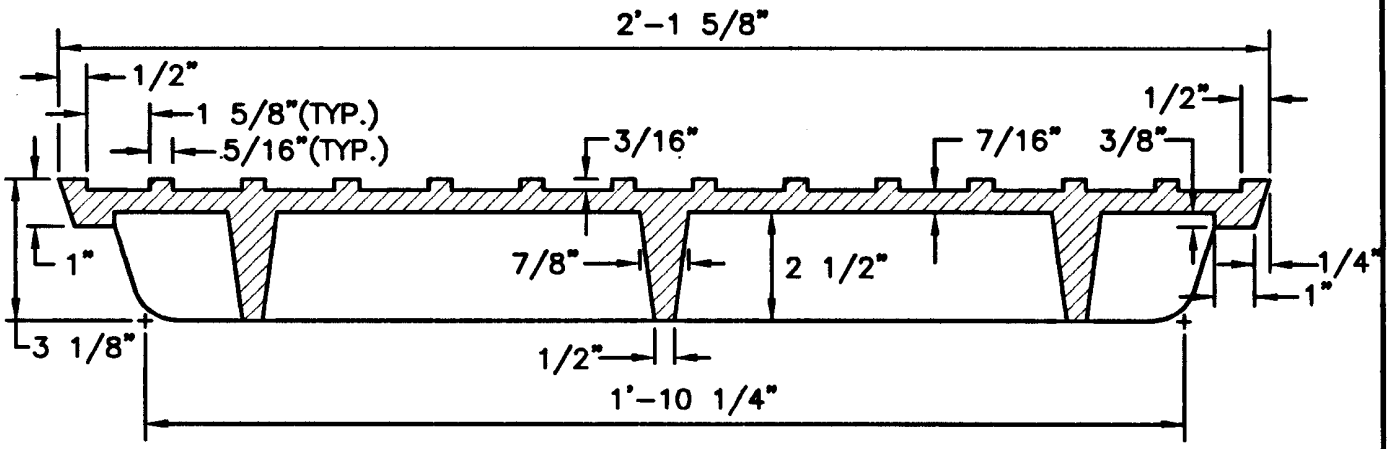
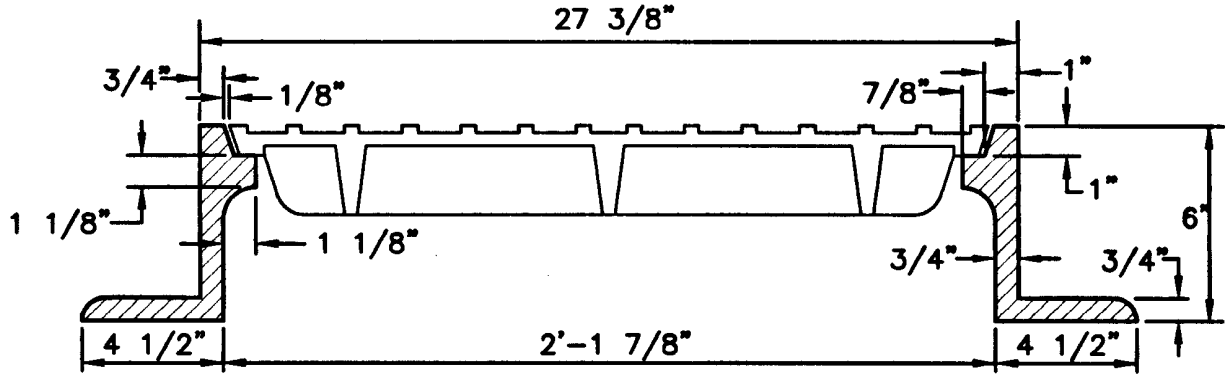


COVER SECTION



FRAME SECTION

NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

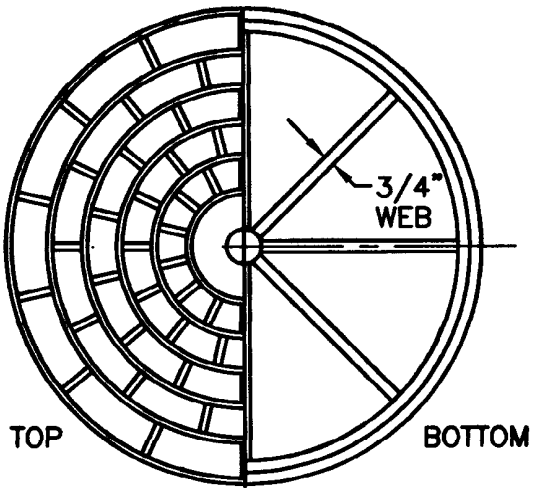
ROUND FRAME AND COVER LIGHT-DUTY

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.2.0



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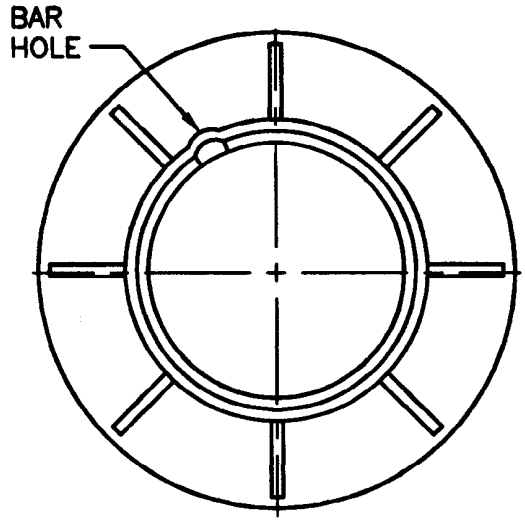

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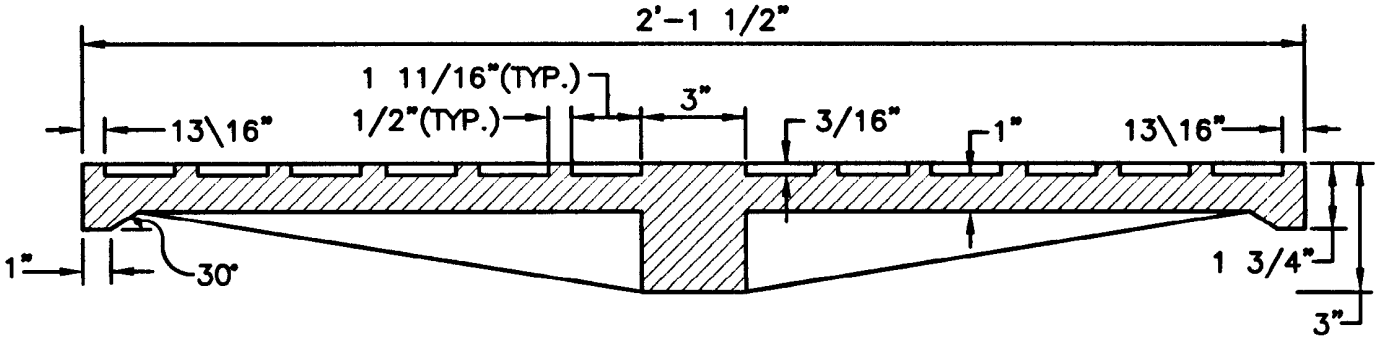
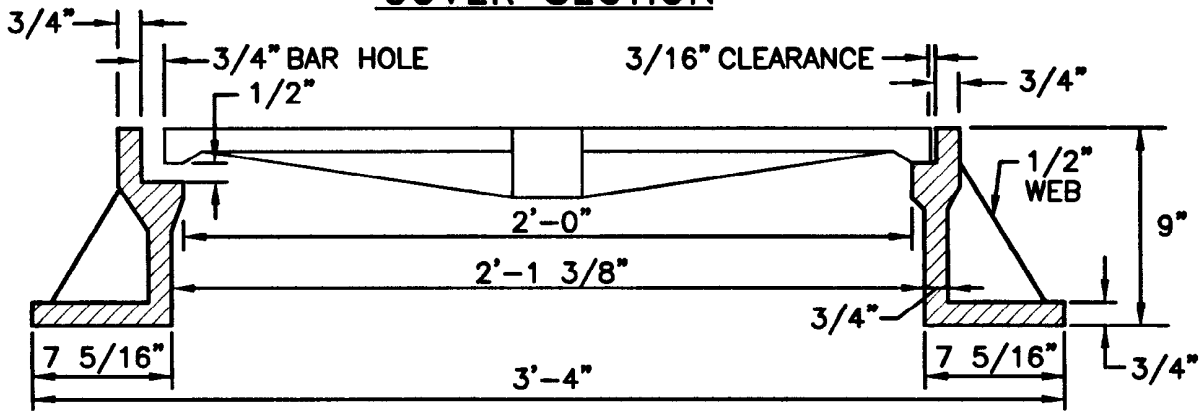


COVER SECTION



FRAME SECTION

NOTES:
1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

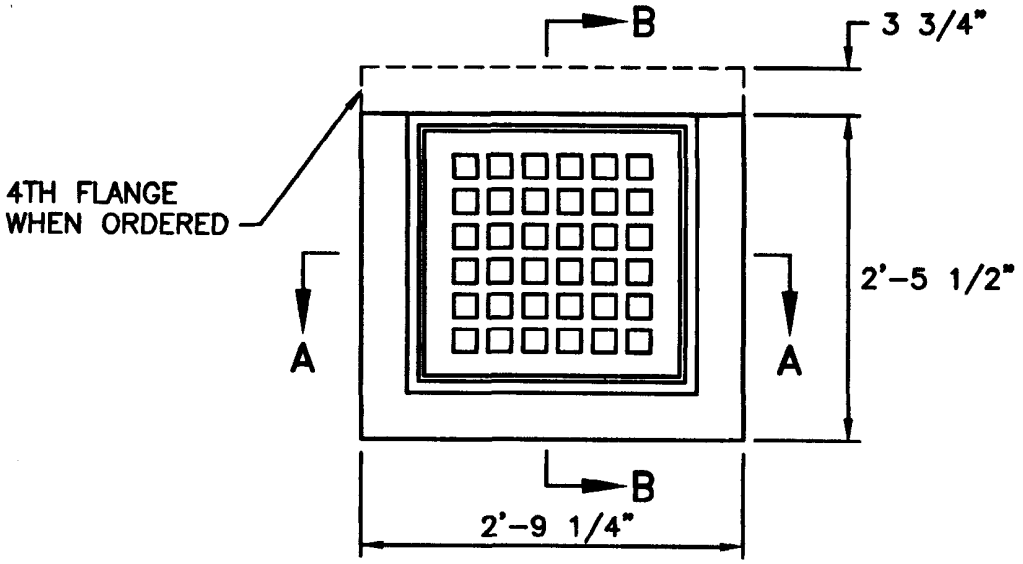
HEAVY-DUTY ROUND FRAME AND COVER

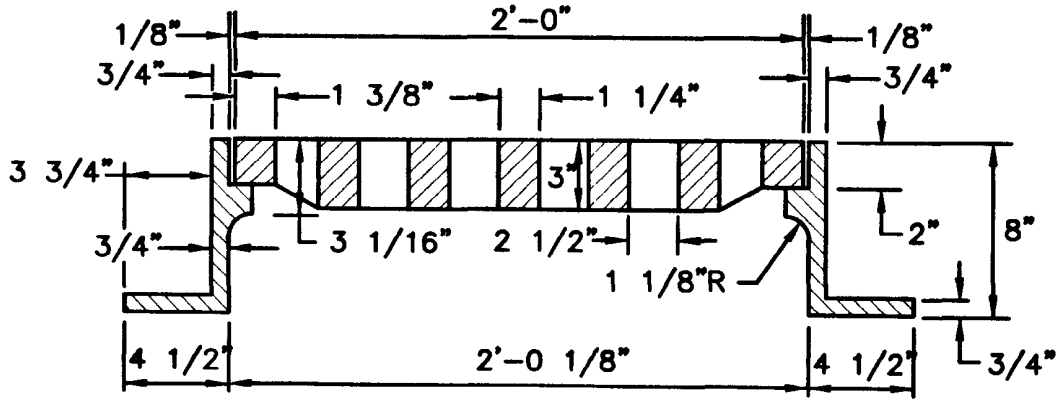
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

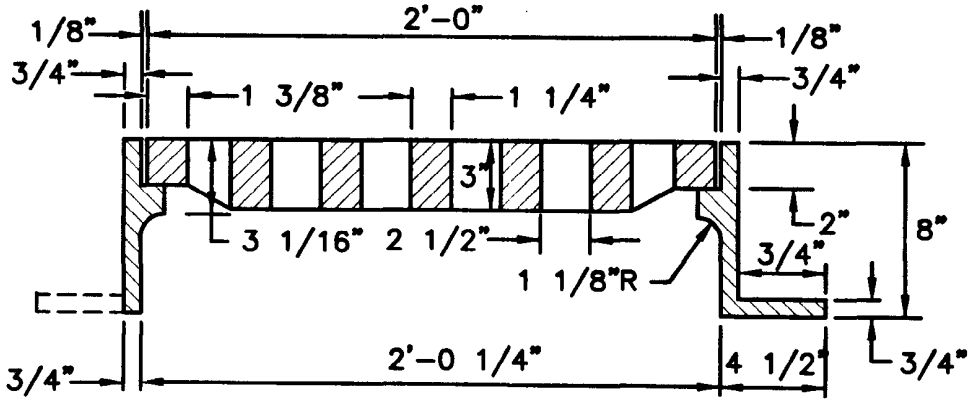
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.2.1





SECTION A–A



SECTION B–B

NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

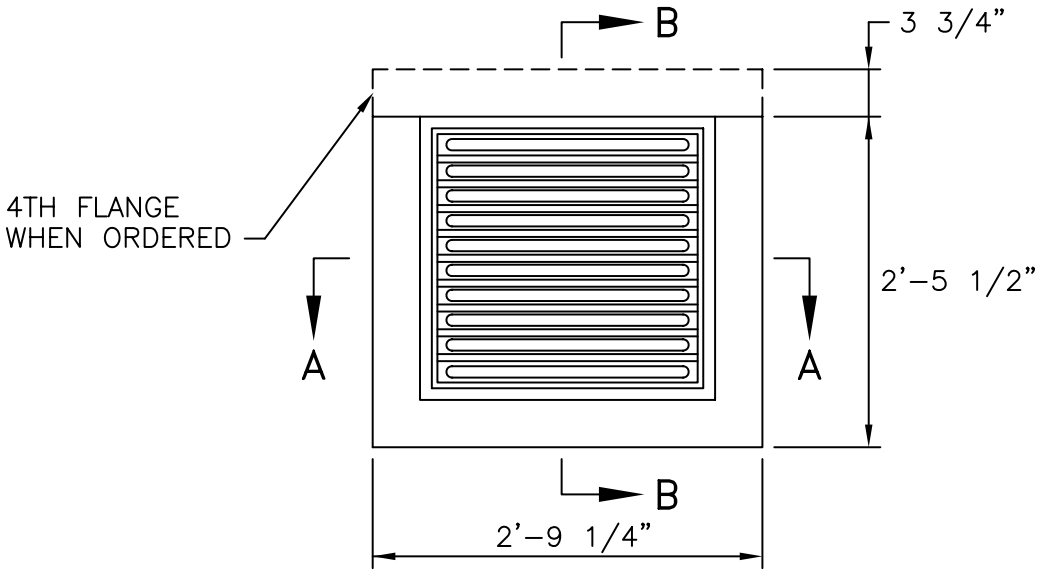
SQUARE FRAME AND GRATE

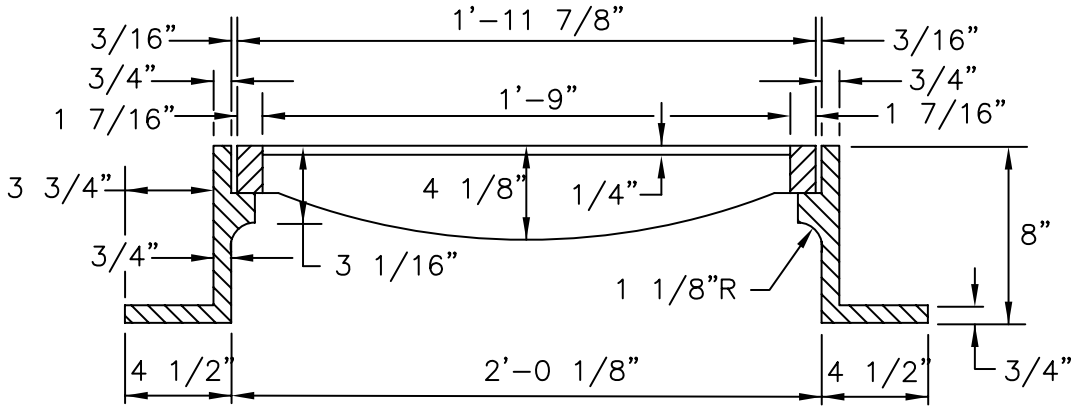
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

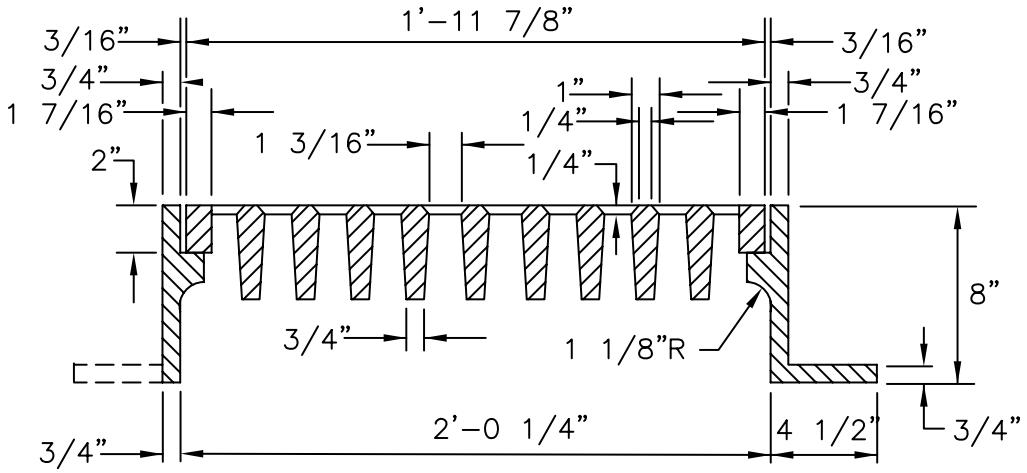
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.3.0





SECTION A–A



SECTION B–B

NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	7/21/06

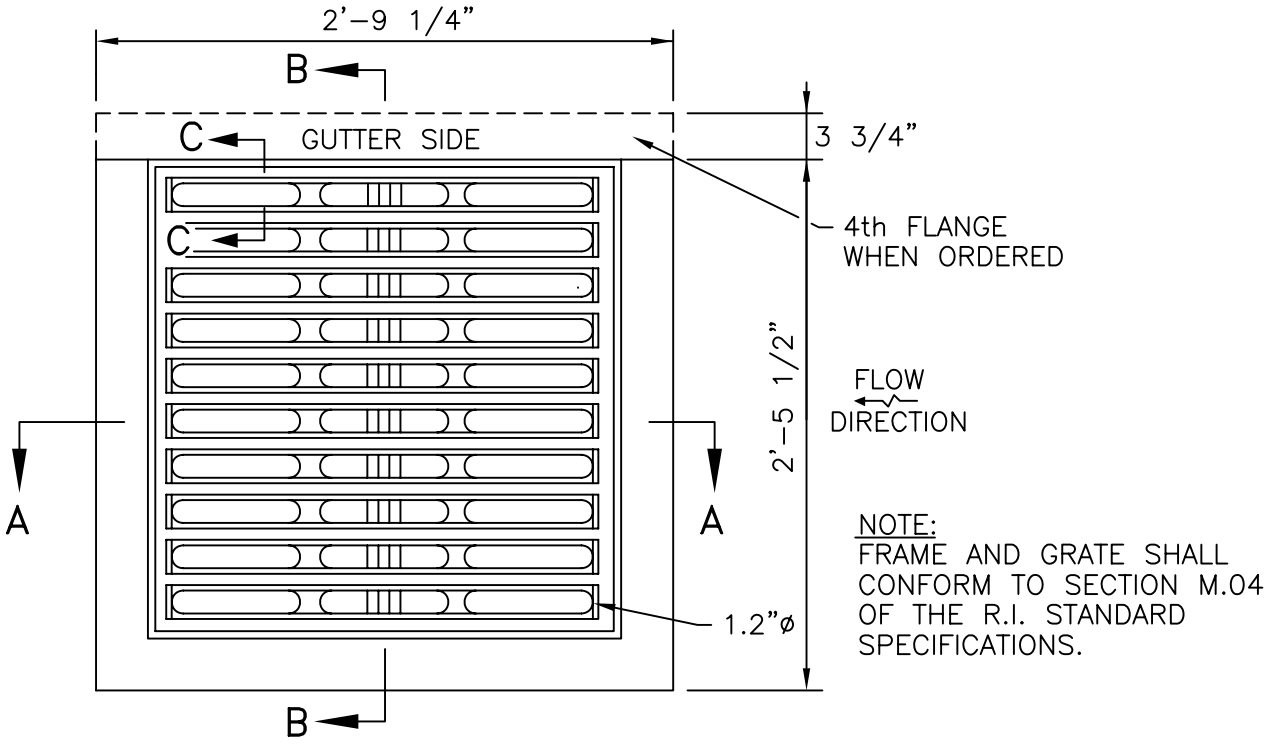
SQUARE FRAME AND GRATE

CHIEF ENGINEER
TRANSPORTATION

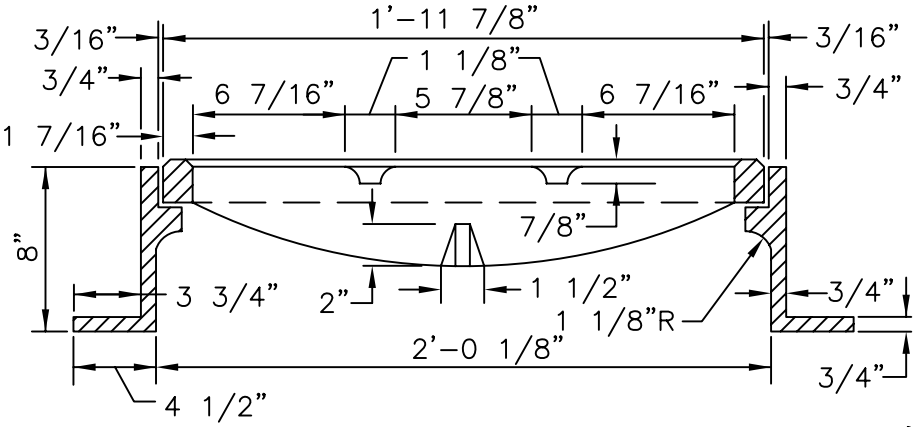
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

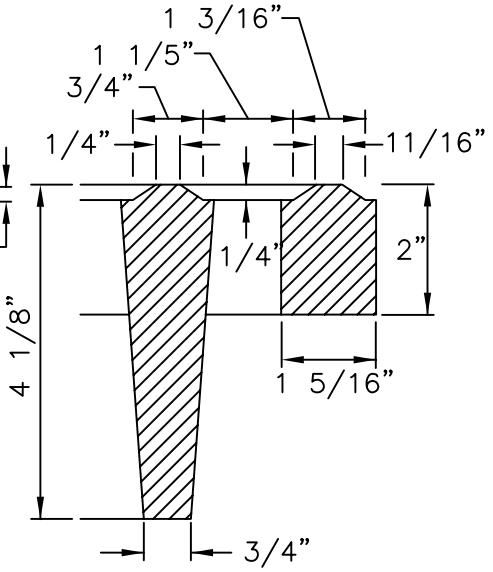
R.I. STANDARD 6.3.1



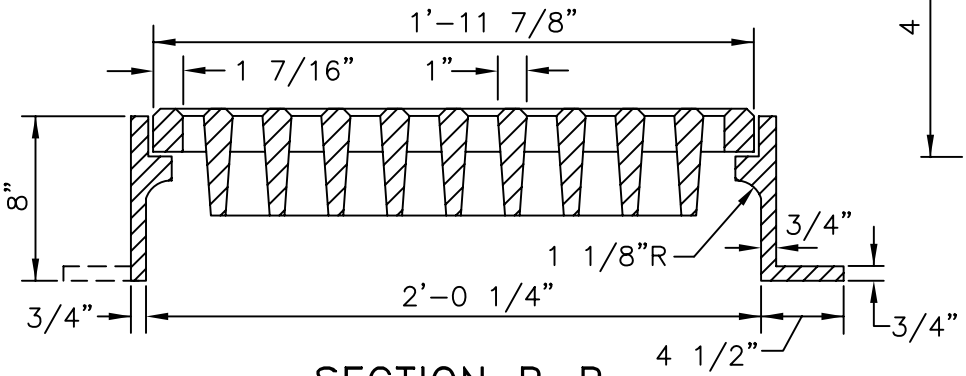
NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.



SECTION A–A



SECTION C–C



SECTION B–B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	7/21/06

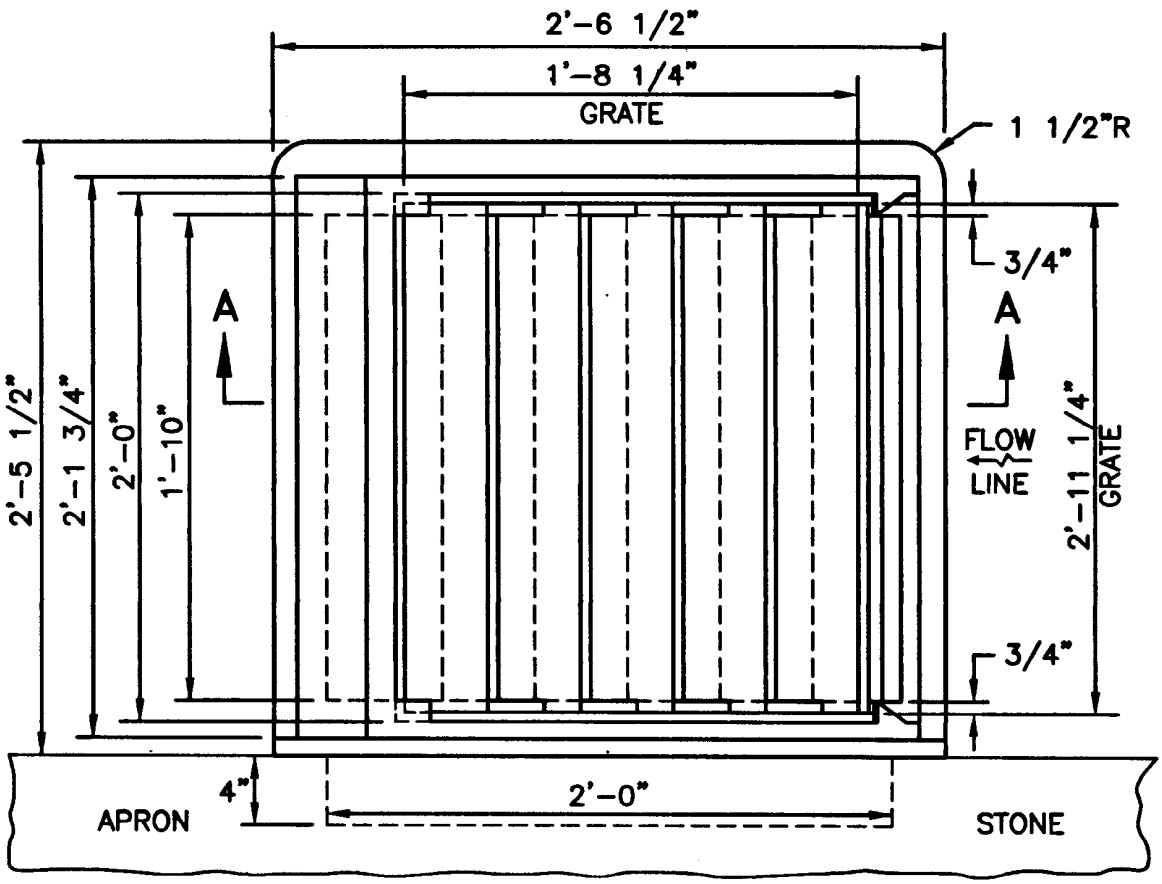
SQUARE FRAME AND GRATE (BICYCLE SAFE)

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

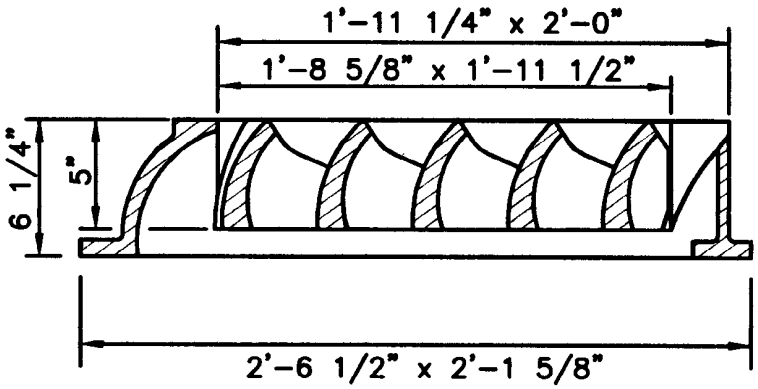
Edmund A. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.3.2



PLAN



SECTION A-A

NOTES:

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. GRATES CAN BE INSTALLED IN ONLY ONE POSITION IN THE FRAME. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FRAME FOR PROPER ORIENTATION OF GRATE.
3. ORDER 2 FLANGE FRAME WHEN USED WITH CURBING OR APRON STONE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

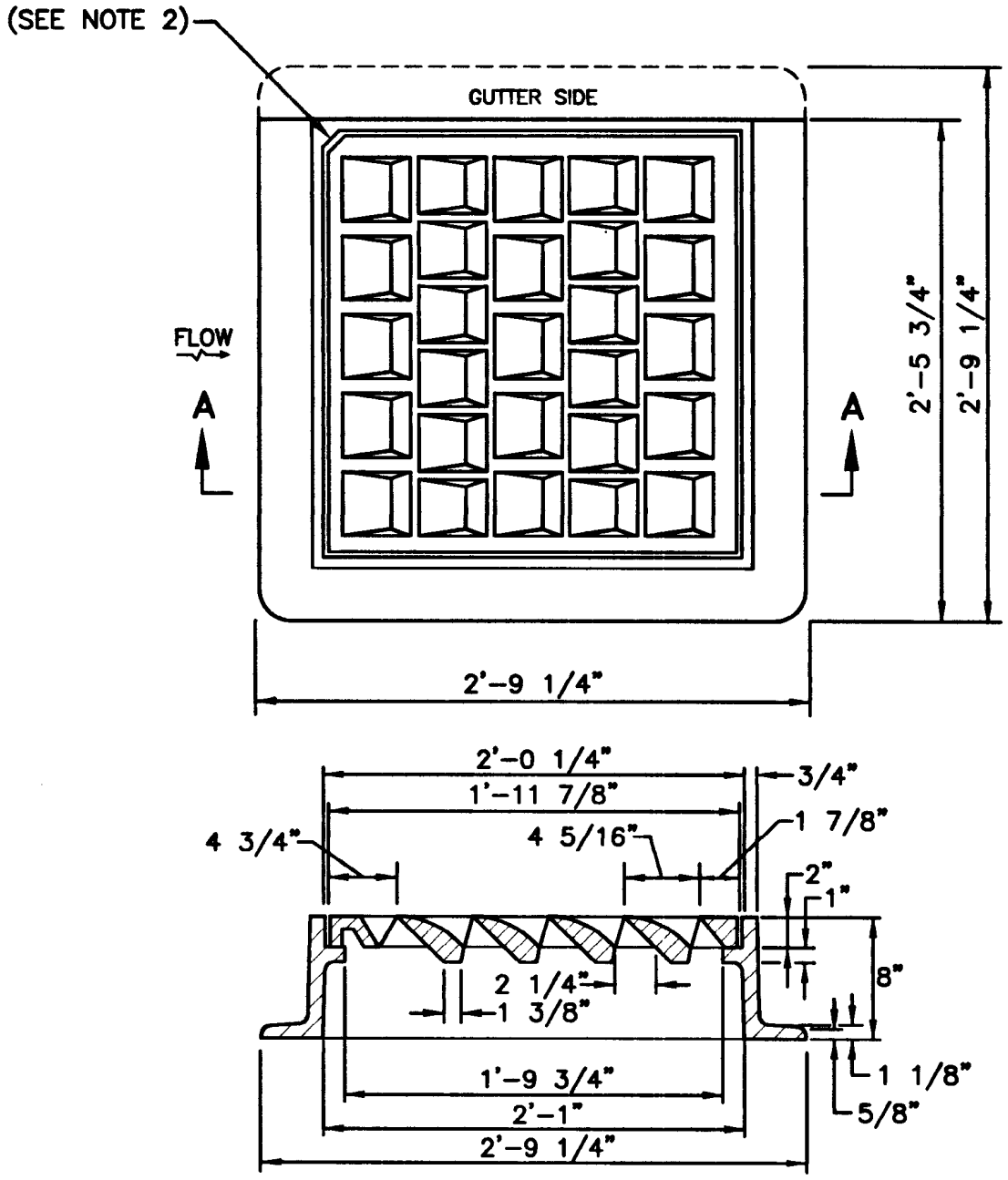
HIGH CAPACITY FRAME AND GRATE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 6.3.3



SECTION A–A

NOTES:
1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

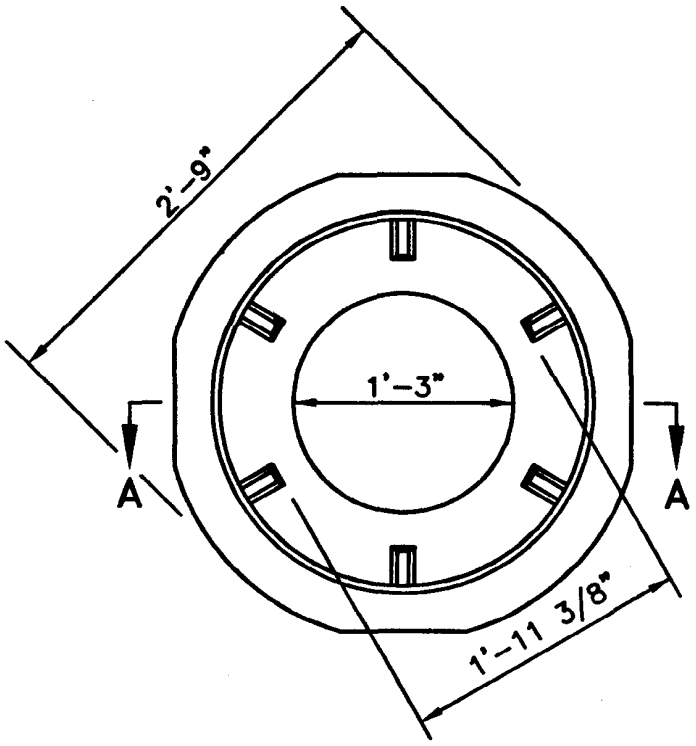
HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)

CHIEF ENGINEER TRANSPORTATION

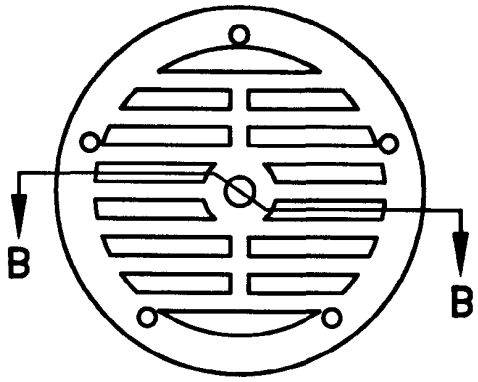
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

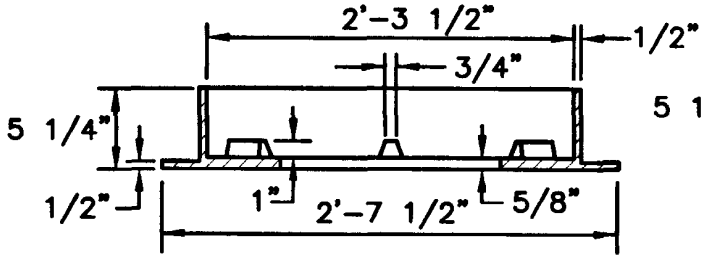
R.I. STANDARD 6.3.4



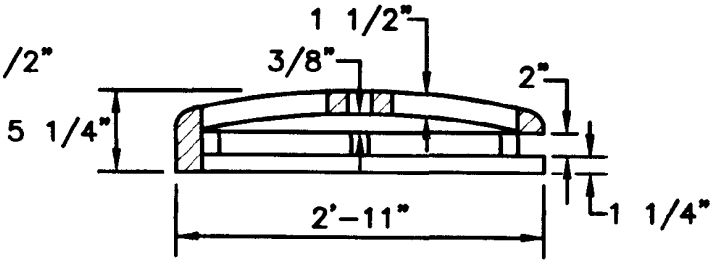
FRAME



GRATE



SECTION A-A



SECTION B-B

NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

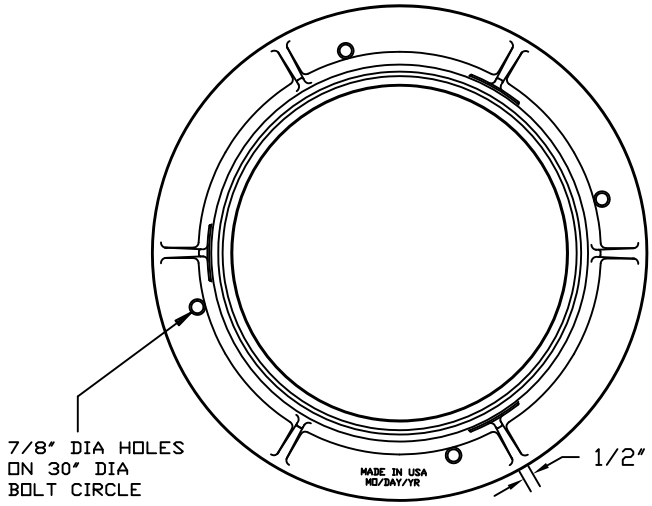
ROUND FRAME AND GRATE

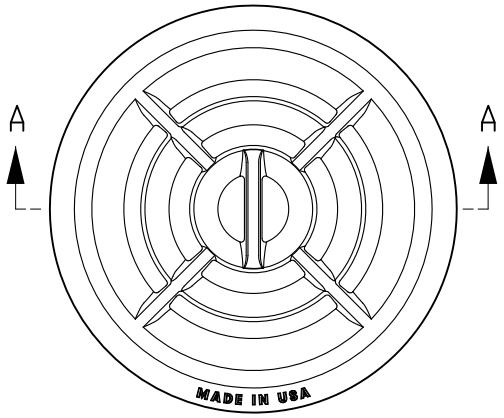
CHIEF ENGINEER TRANSPORTATION

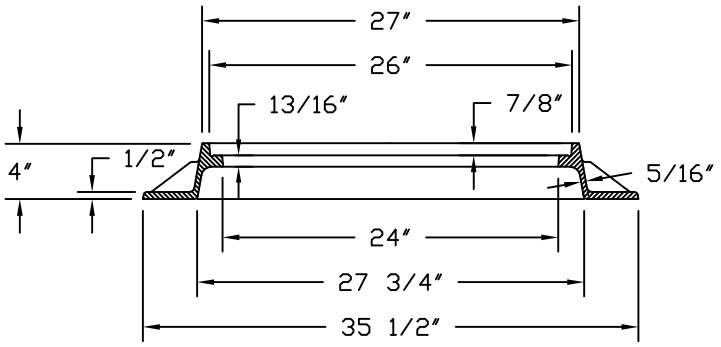
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

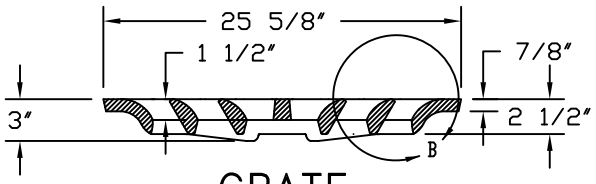
R.I. STANDARD 6.4.0



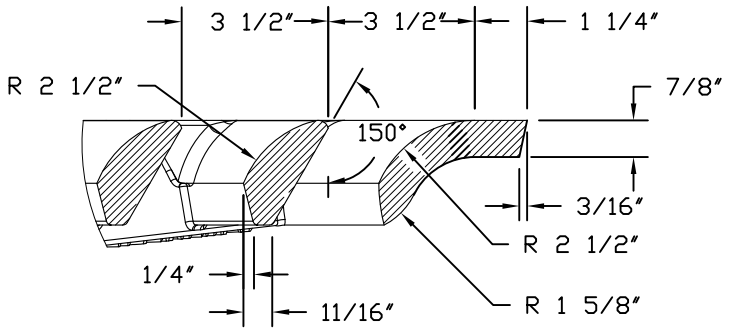




FRAME SECTION



GRATE
SECTION A–A



DETAIL B

NOTES:

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

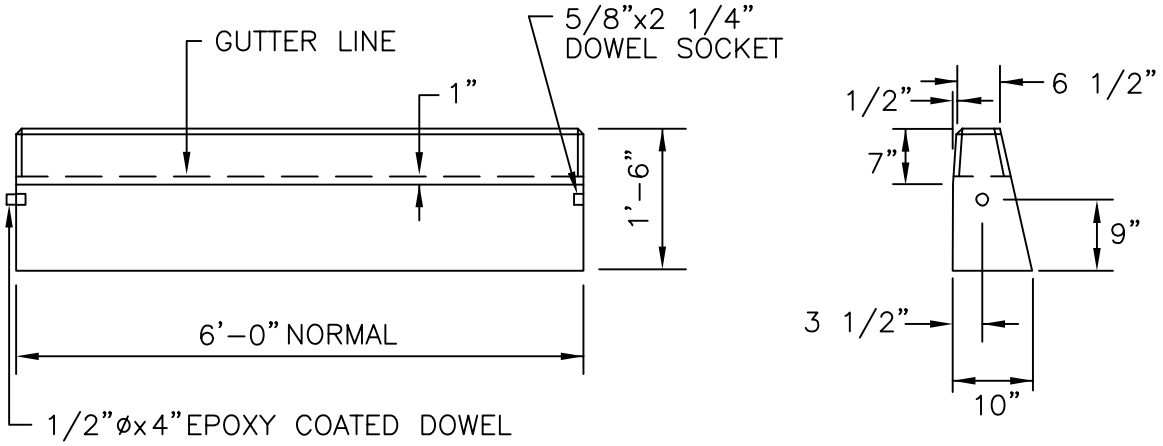
ROUND AREA FRAME AND GRATE

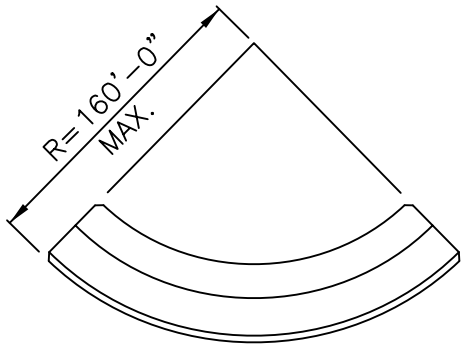
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

APRIL 30, 2013
ISSUE DATE

R.I. STANDARD 6.4.1





CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

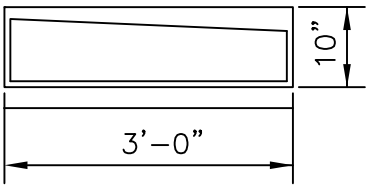
PRECAST CONCRETE CURB

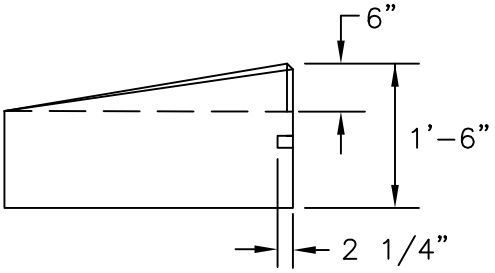
CHIEF ENGINEER TRANSPORTATION

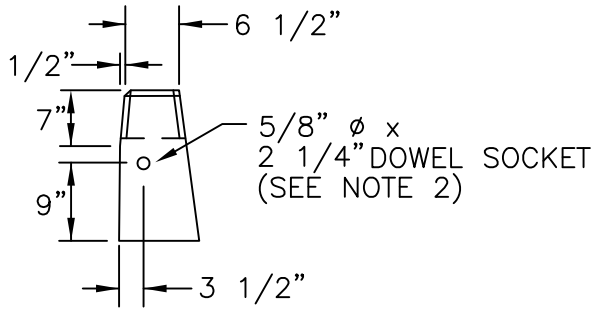
CHIEF DESIGN ENGINEER TRANSPORTATION

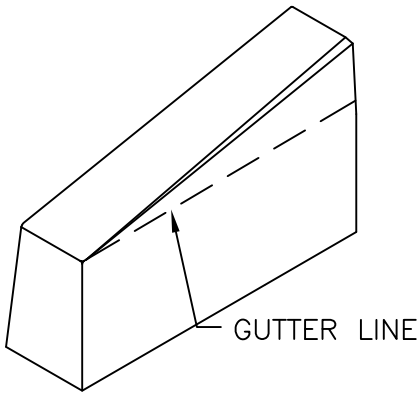
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.0









NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. LEFT AND RIGHT SECTIONS SHALL BE INSTALLED AS REQUIRED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	MLP	06/01/10

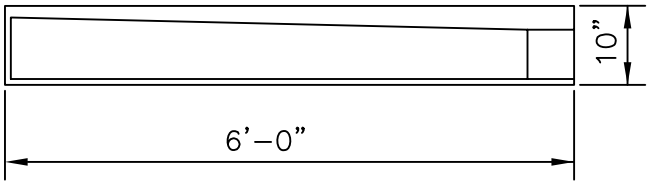
3'–0" PRECAST CONCRETE TRANSITION CURB

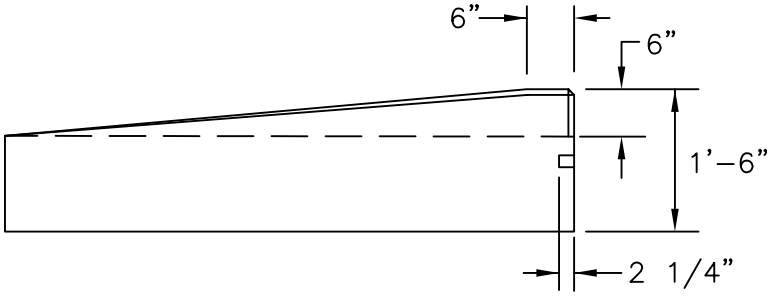
James R. Cagaldi
CHIEF ENGINEER
TRANSPORTATION

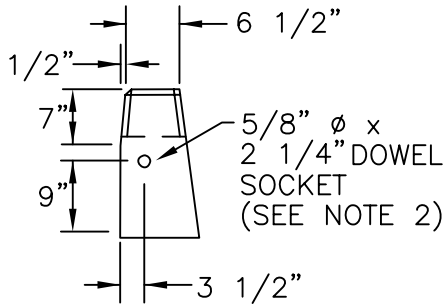
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

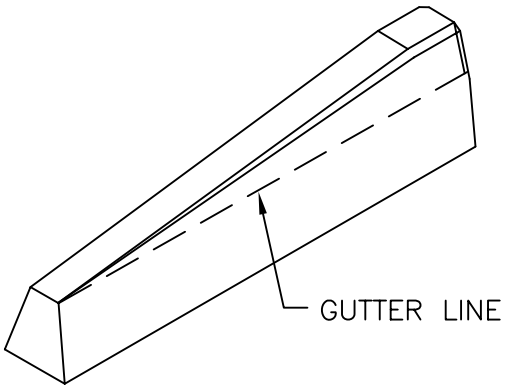
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.1









NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

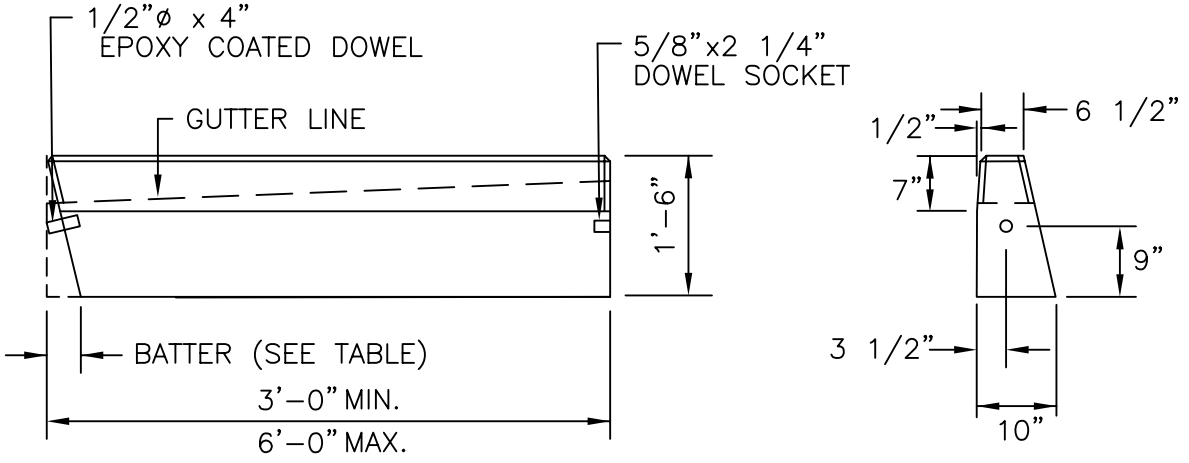
6'–0" PRECAST CONCRETE TRANSITION CURB

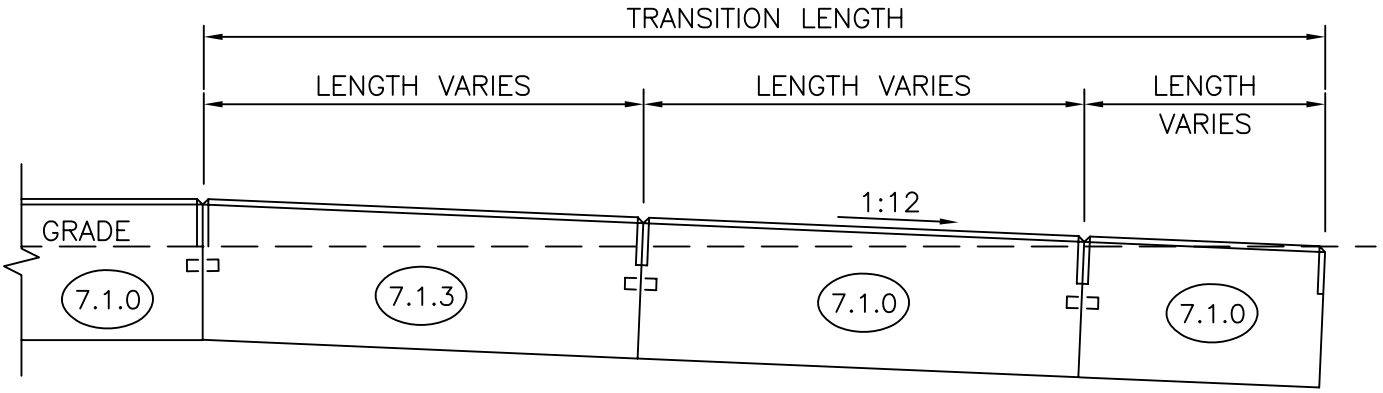
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.2





TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
5. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

PRECAST CONCRETE WHEELCHAIR RAMP TRANSITION CURB

CHIEF ENGINEER
TRANSPORTATION

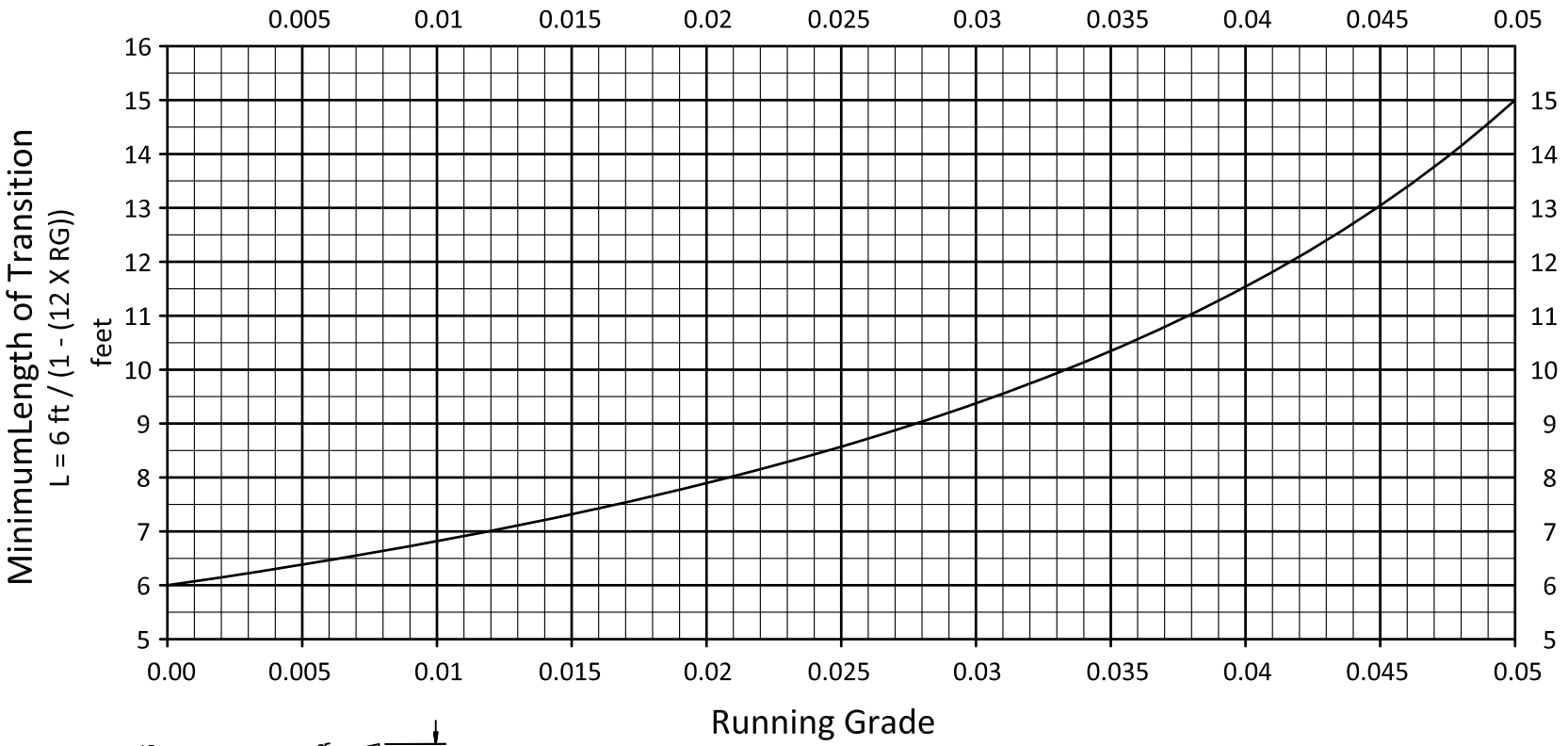
CHIEF DESIGN ENGINEER
TRANSPORTATION

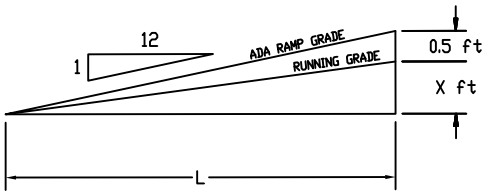
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.3

Wheelchair Ramp Transition Curb Chart

Required Transition Length to Achieve 1:12 Ramp Transition Slope





$\frac{X}{L}$ = RUNNING GRADE = RG

$X = L \times RG$

$\frac{0.5 + X}{L} = \frac{1}{12}$

$\frac{0.5 + LRG}{L} = \frac{1}{12}$

$L = \frac{6}{1 - 12\ RG}$

1. USE WITH STD. 7.1.3 AND 7.3.3.
2. THE HIGH SIDE TRANSITION CURB LENGTH SHALL BE ROUNDED UP TO THE NEXT HALF FOOT INCREMENT.
3. FOR RUNNING GRADES GREATER THAN 5%, THE LENGTH OF TRANSITION CURB SHALL BE 18 FEET.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

HIGH SIDE TRANSITION CURB LENGTH

CHIEF ENGINEER
TRANSPORTATION

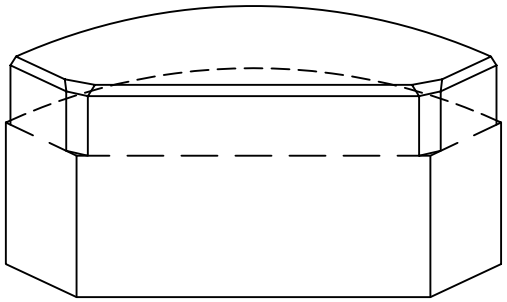
CHIEF DESIGN ENGINEER
TRANSPORTATION

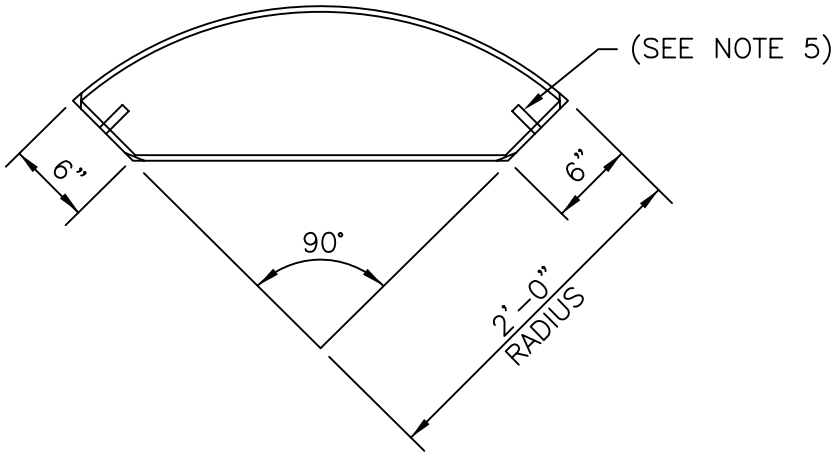
SEPT. 25, 2012
ISSUE DATE

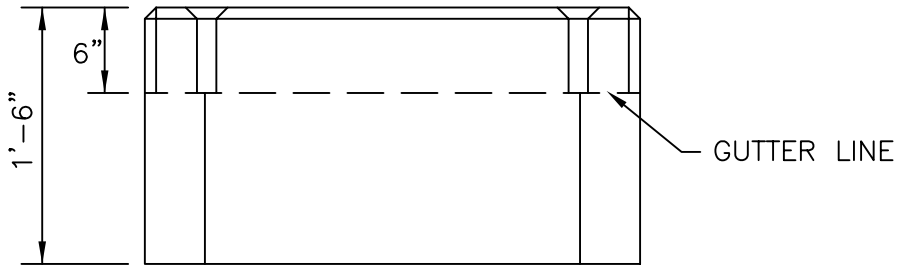
R.I. STANDARD 7.1.3A

REVISIONS

NO.	BY	DATE







NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. NO REINFORCEMENT REQUIRED.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. SEE STD. 7.1.0 FOR DOWEL SOCKET LOCATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

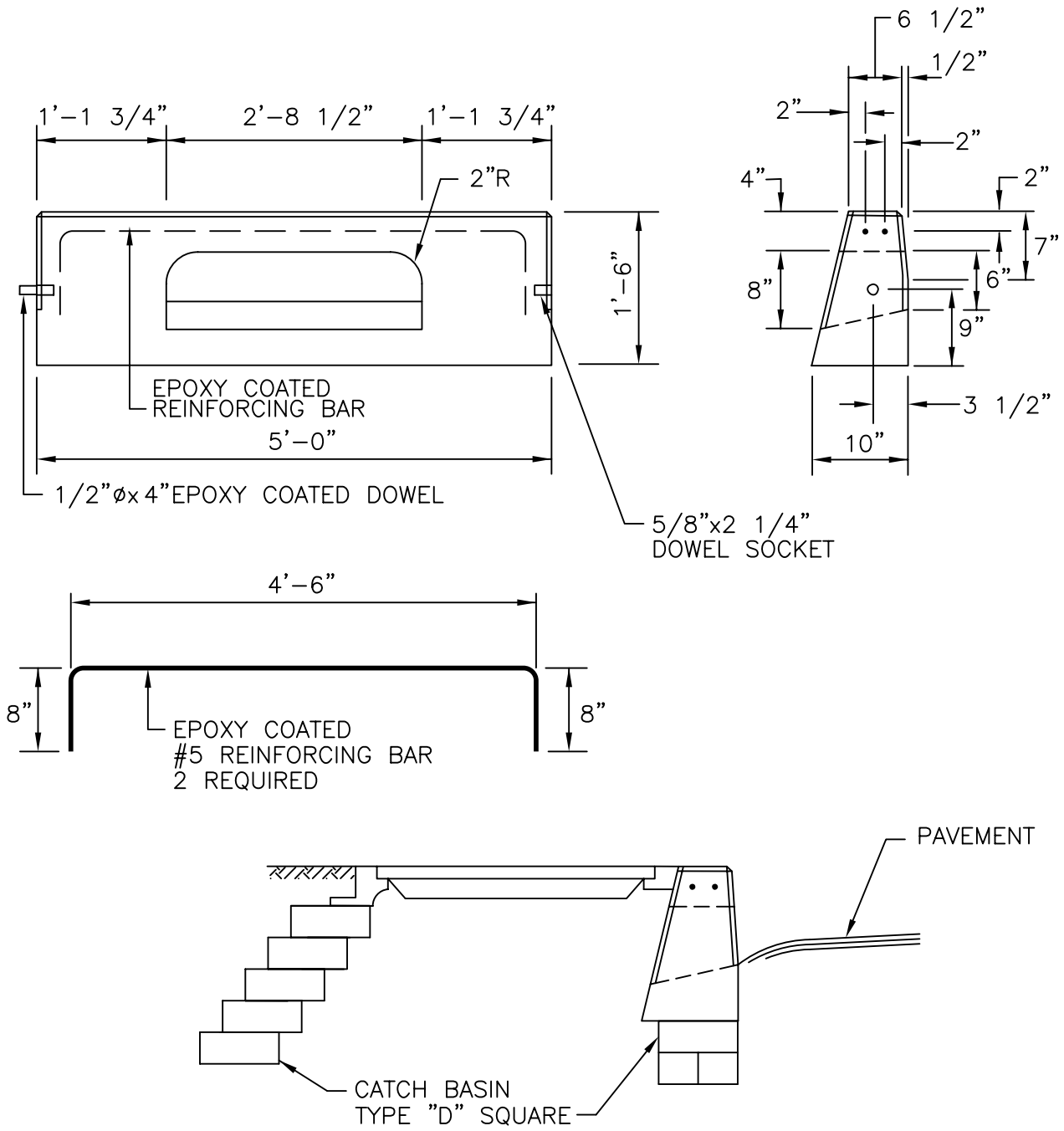
PRECAST CONCRETE 2'-0" RADIUS CORNER

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.4



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

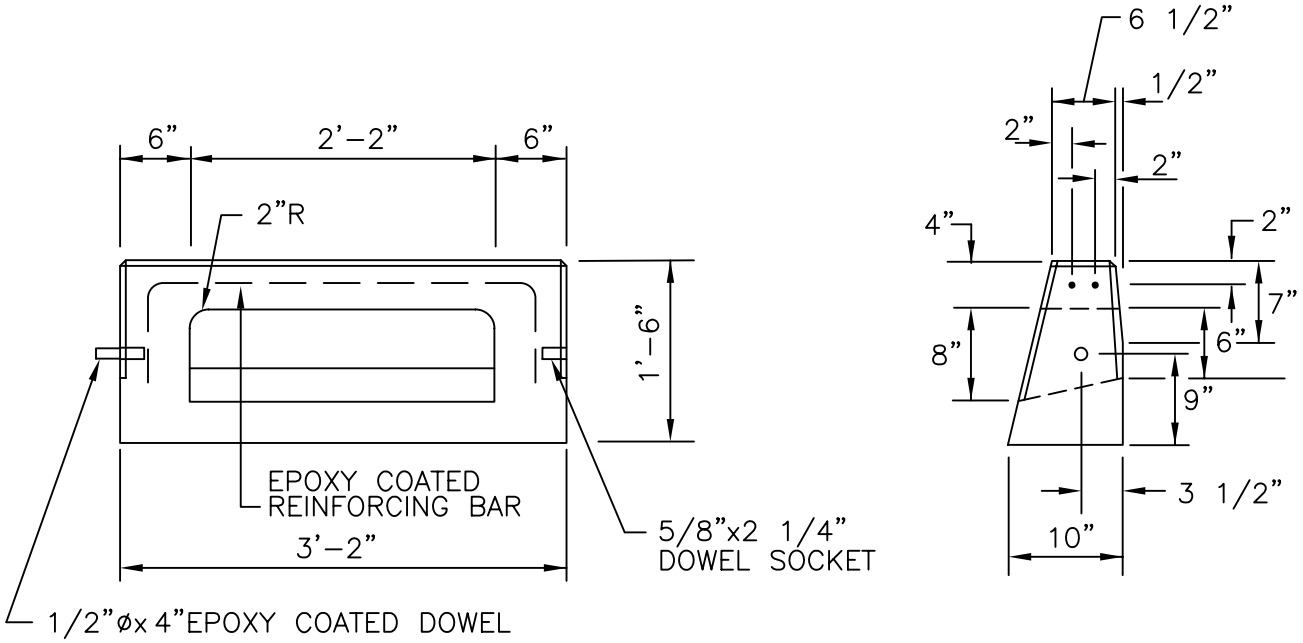
PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)

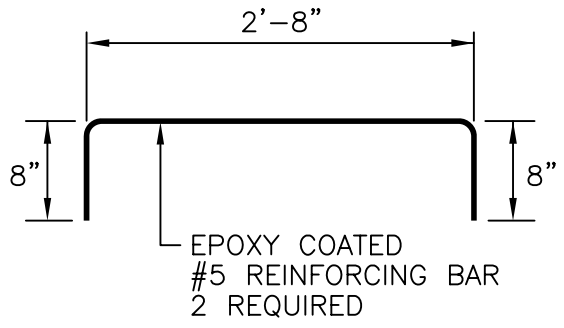
CHIEF ENGINEER TRANSPORTATION

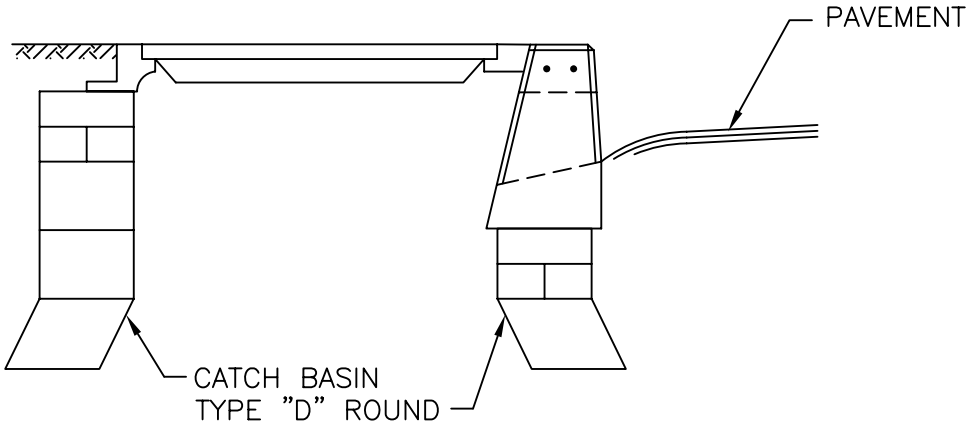
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.5







NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

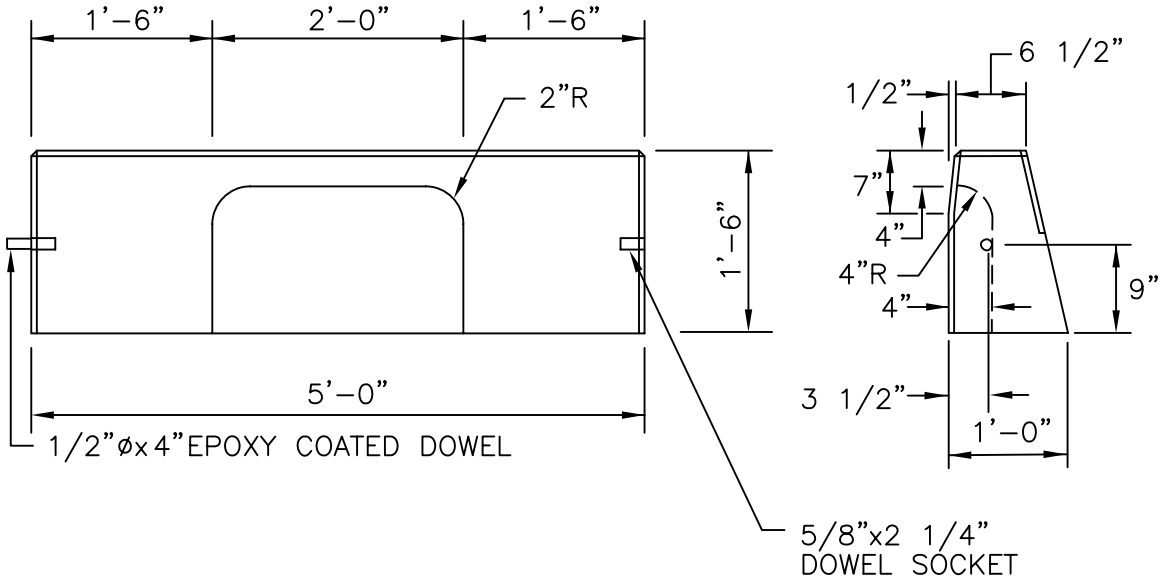
PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)

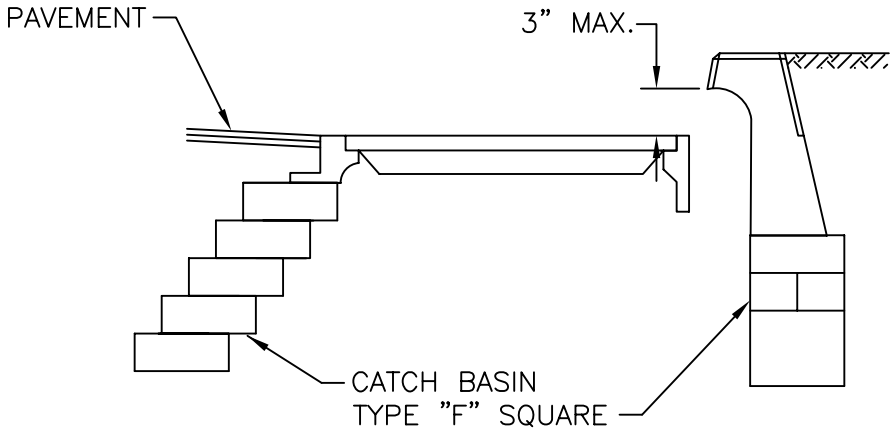
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.6





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

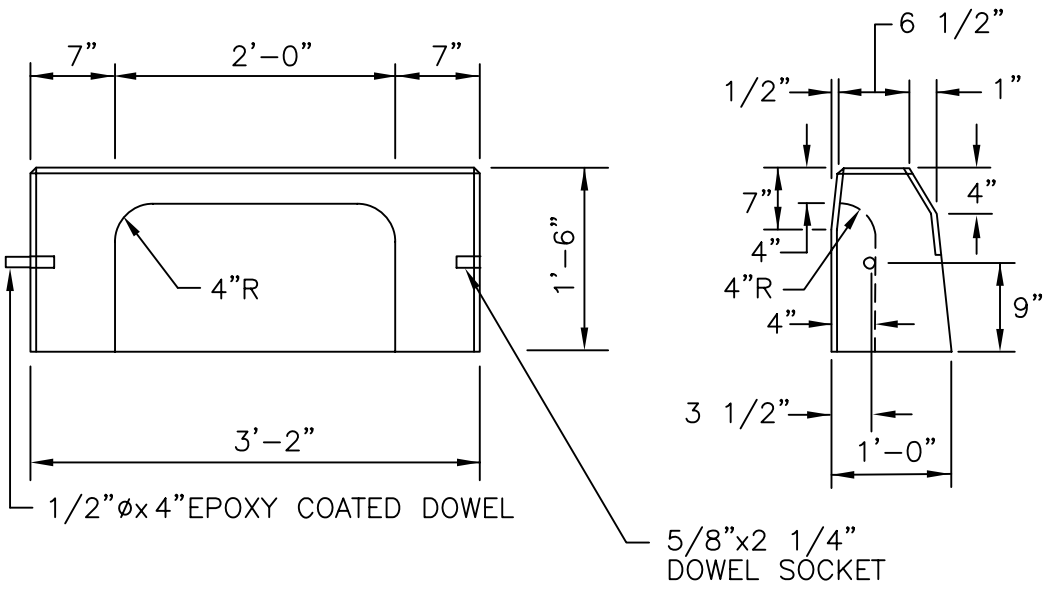
PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)

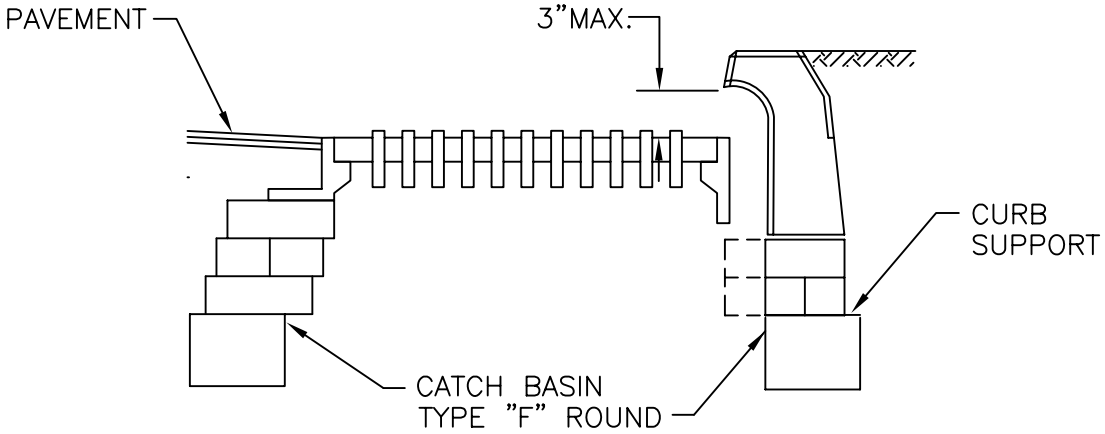
James R. Cogaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.7





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

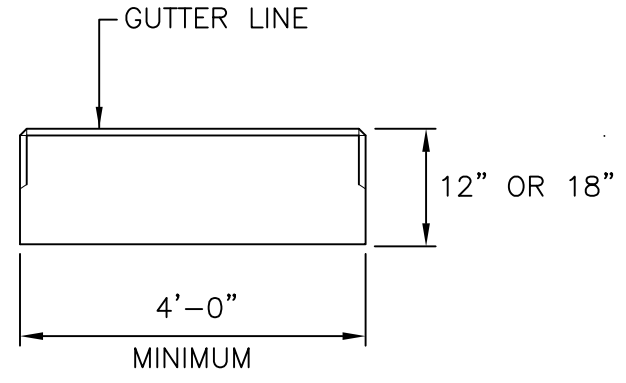
PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)

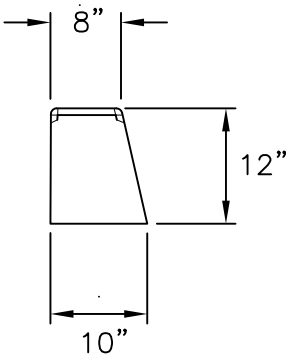
CHIEF ENGINEER TRANSPORTATION

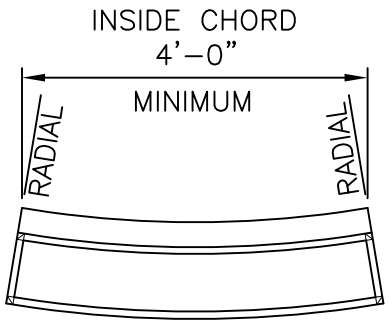
CHIEF DESIGN ENGINEER TRANSPORTATION

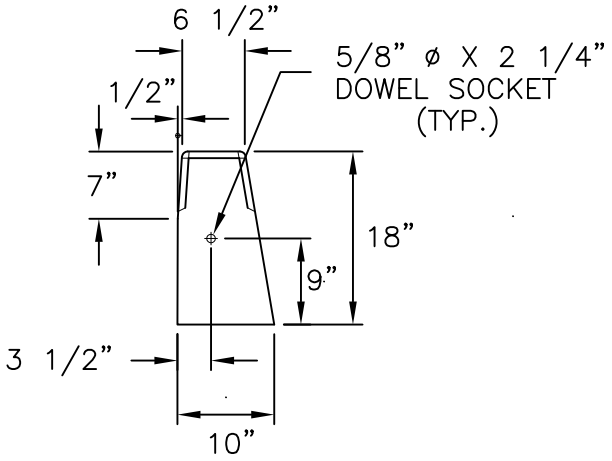
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.1.8









CIRCULAR CONCRETE RAMP STONE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR RAMP STONE TO BE 4'–0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR RAMP STONE IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT RAMP STONE TO BE USED ON CURVES OF MORE THAN 160'–0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
6. RAMP STONE SHALL BE SET IN ACCORDANCE WITH STD. 43.3.0.
7. 12" RAMP STONE SHALL BE SET IN CONJUNCTION WITH STD. 7.1.2.
8. 18" RAMP STONE SHALL BE SET IN CONJUNCTION WITH STD. 7.1.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Sep 2012

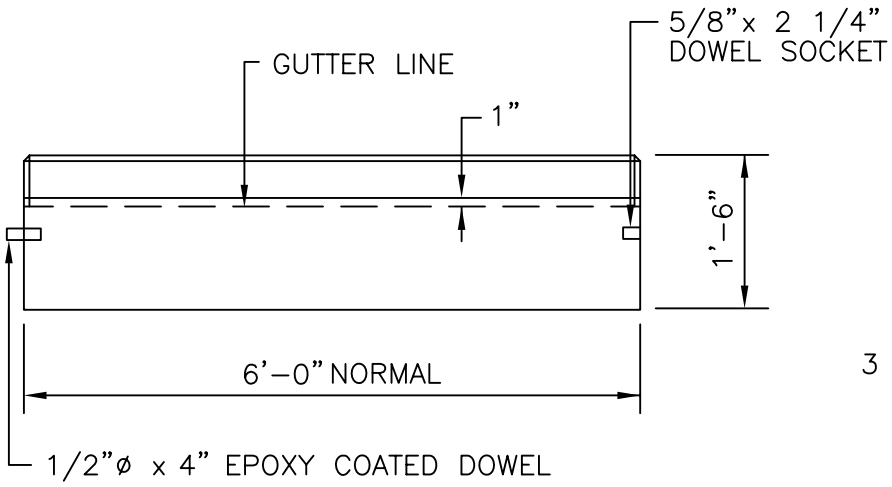
PRECAST CONCRETE RAMP STONE

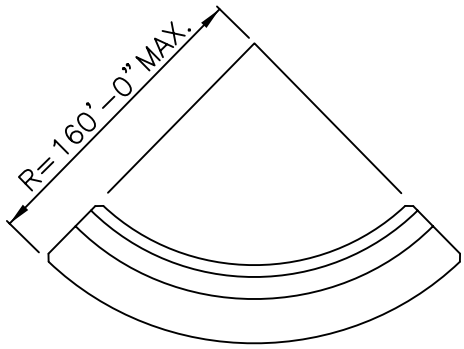
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 7.1.9





CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

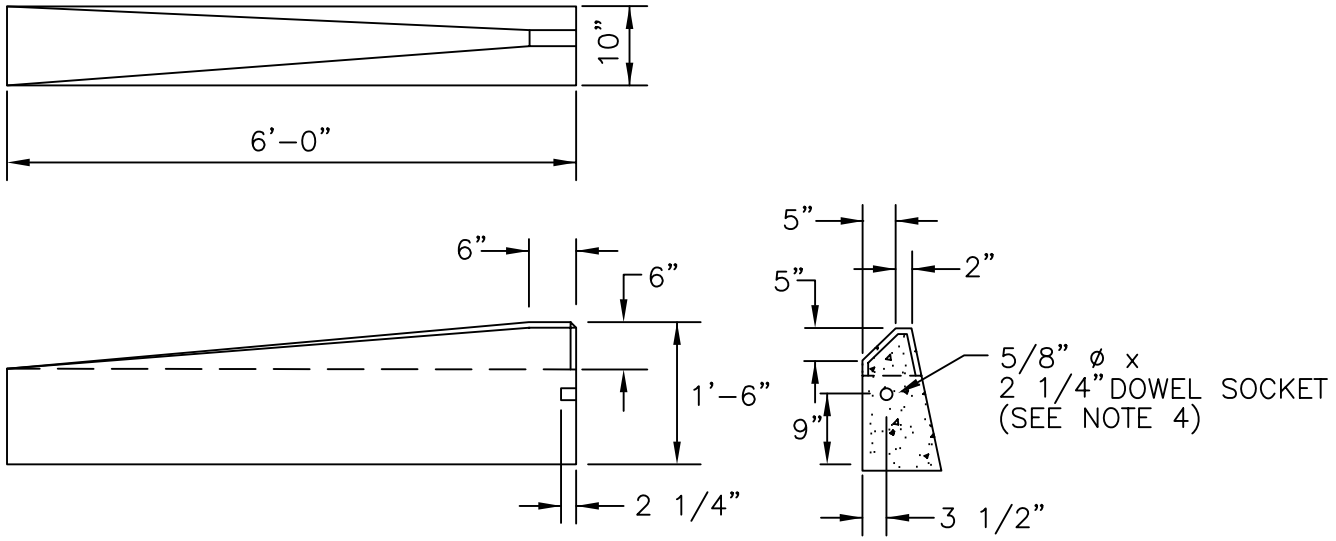
PRECAST CONCRETE SLOPED FACE CURB

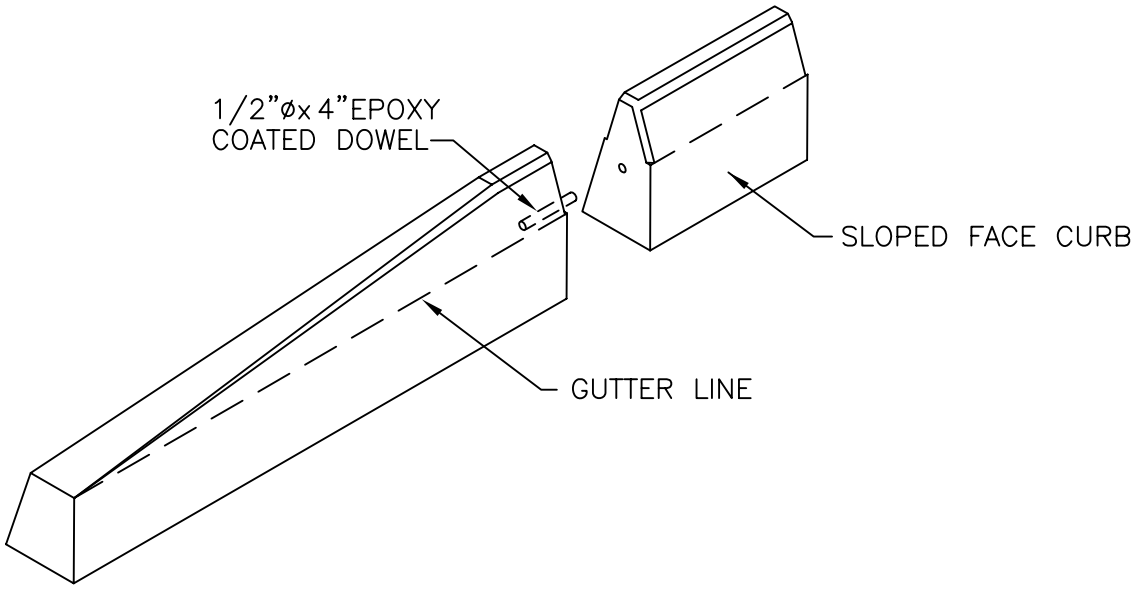
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.2.0





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

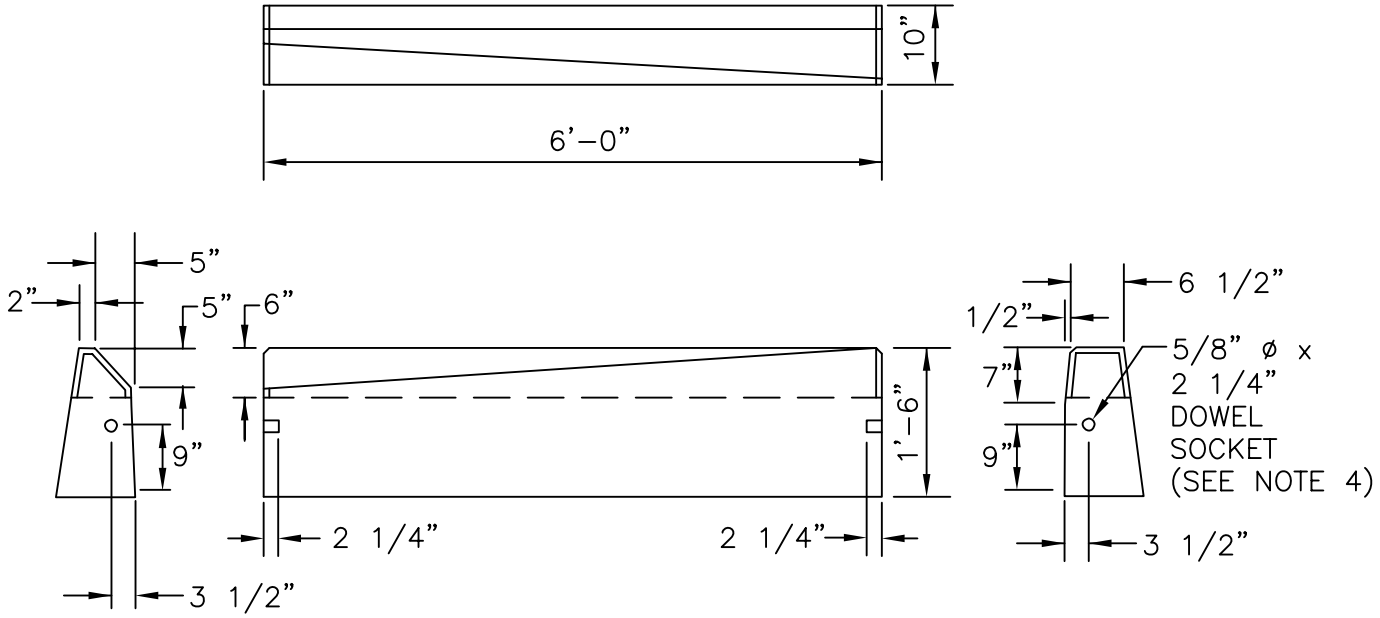
PRECAST CONCRETE SLOPED FACE TRANSITION CURB

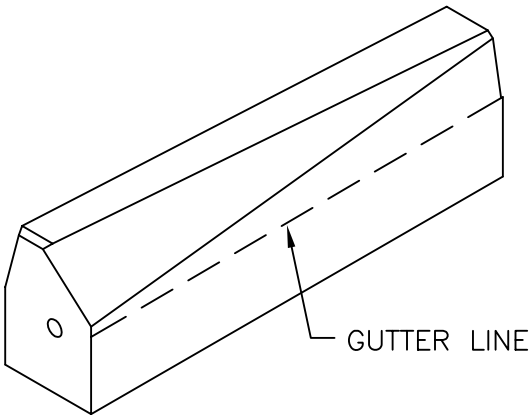
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.2.1





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

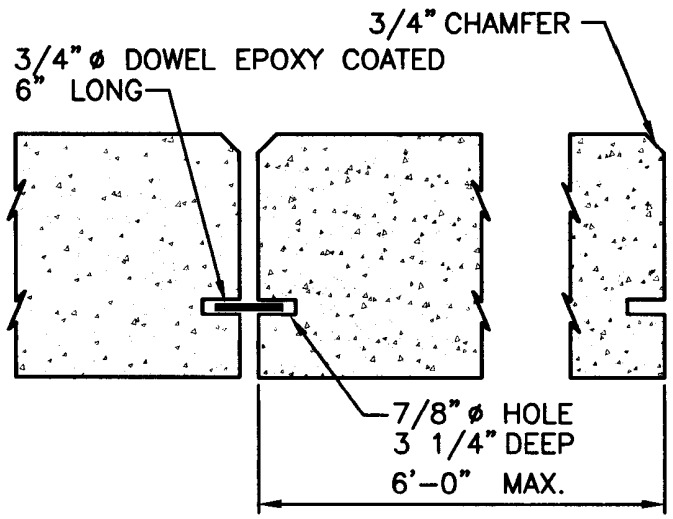
PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)

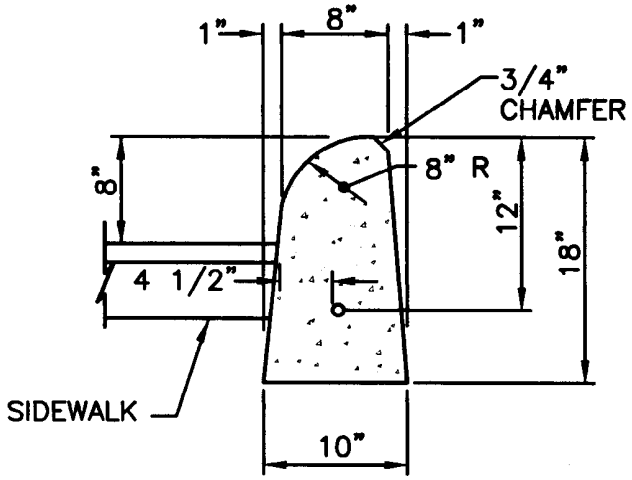
James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.2.2

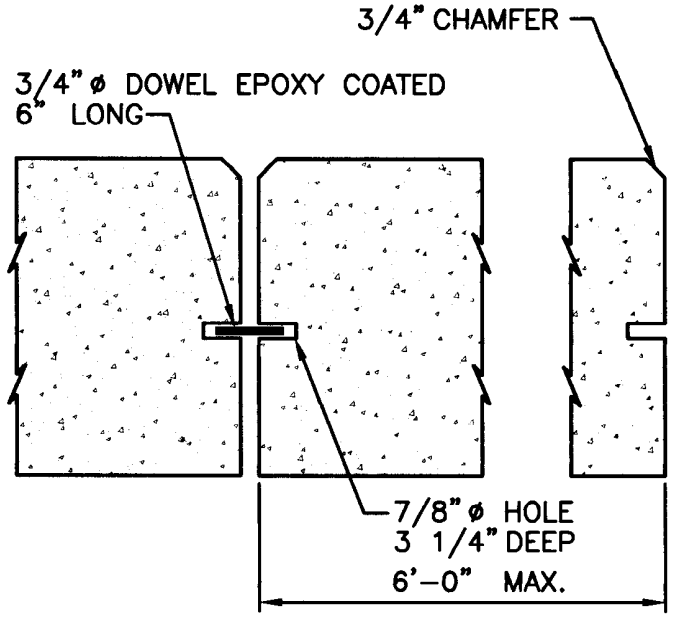


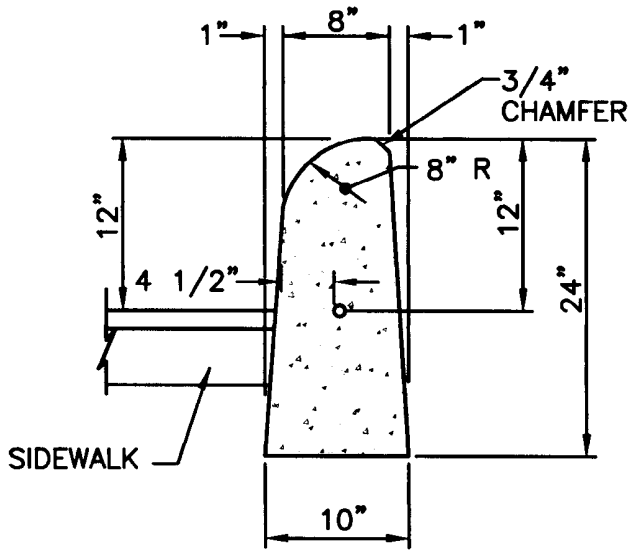


LONGITUDINAL SECTION @ JOINT

END SECTION

1'-6" LOT CURB





LONGITUDINAL SECTION @ JOINT

END SECTION

2'-0" LOT CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/8" JOINTS DOWELED WITH A 3/4" ø DOWEL 6" LONG.
3. TOP AND EXPOSED SURFACES TO H+ 2" TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

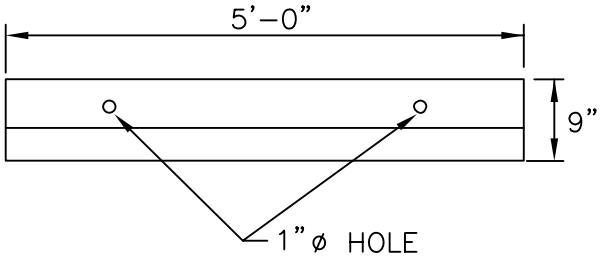
PRECAST CONCRETE LOT CURB

CHIEF ENGINEER TRANSPORTATION

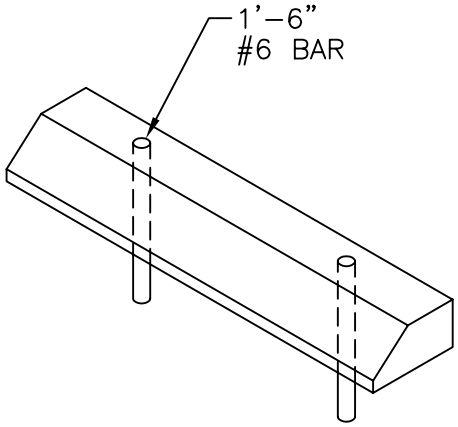
CHIEF DESIGN ENGINEER TRANSPORTATION

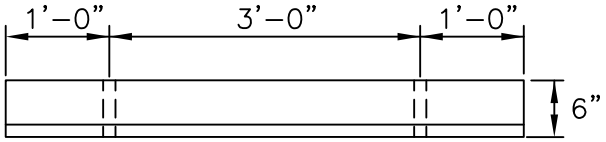
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.2.3

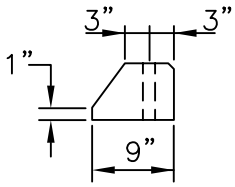


PLAN





FRONT ELEVATION



SIDE ELEVATION

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
3. ALL SURFACES TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

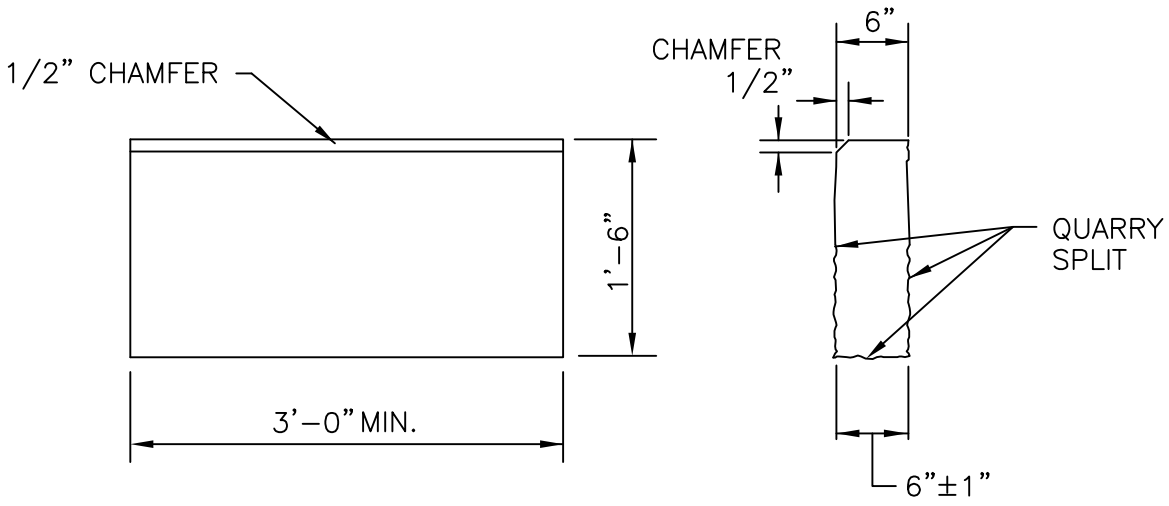
PRECAST CONCRETE CAR STOPS

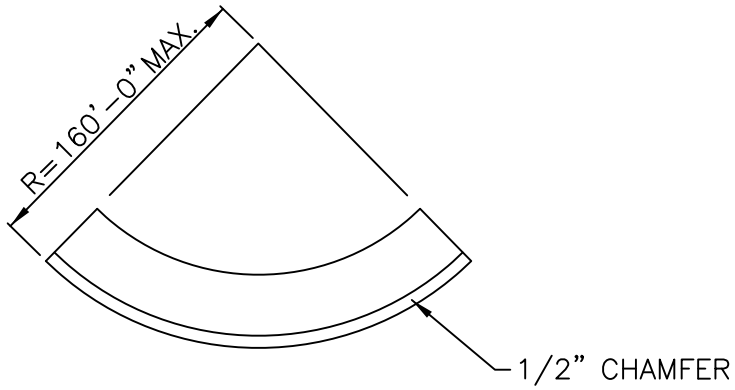
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.2.4





CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

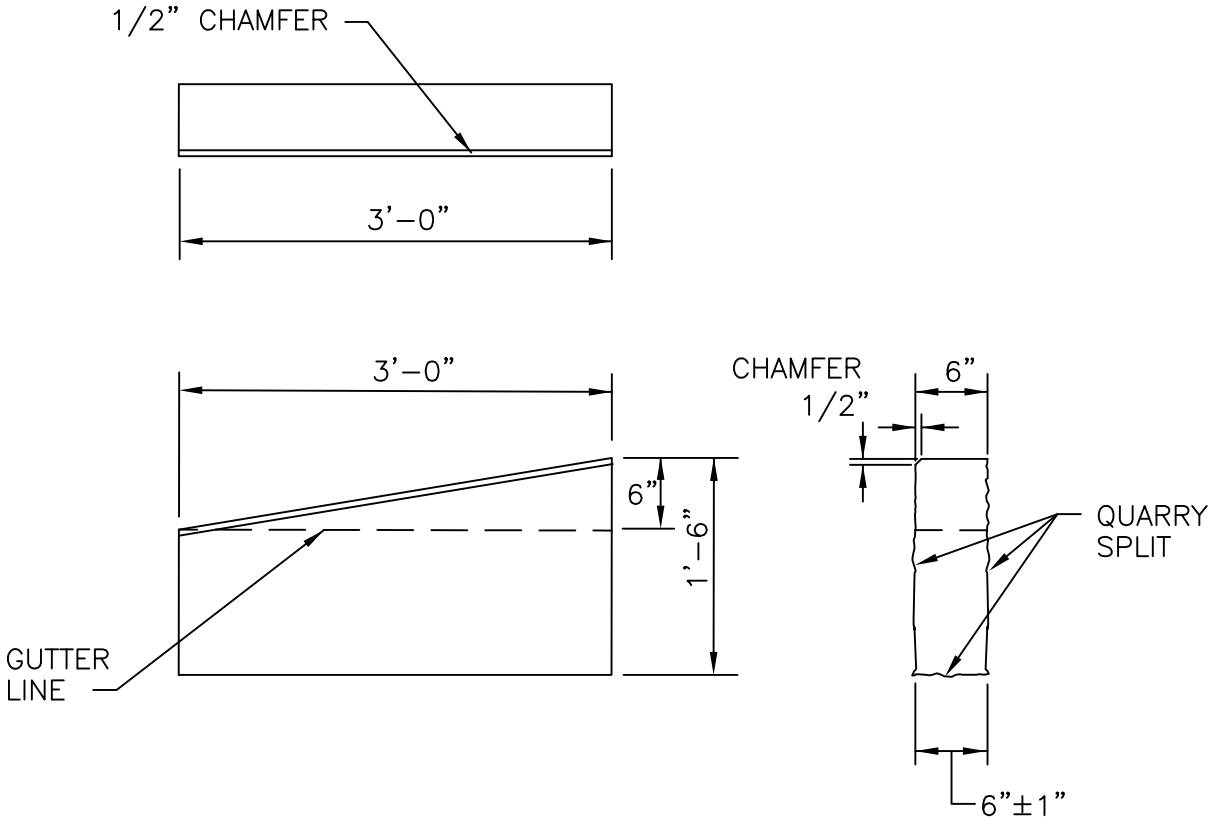
GRANITE CURB

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Jun 2010
3	MLP	Sep 2012

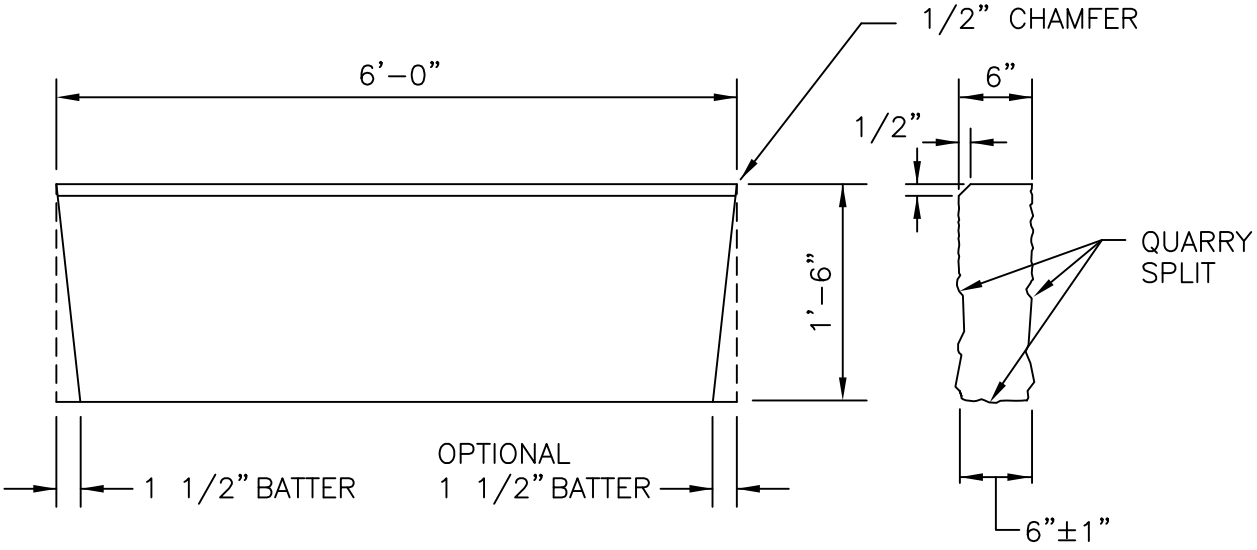
3'–0" GRANITE TRANSITION CURB

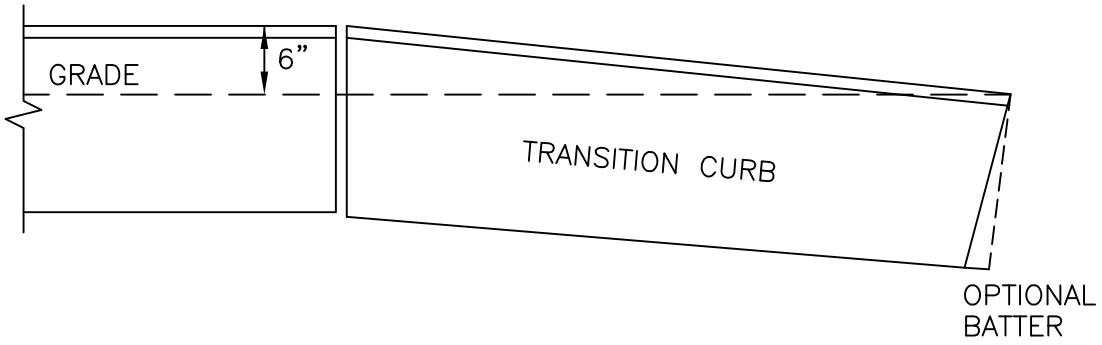
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.1





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

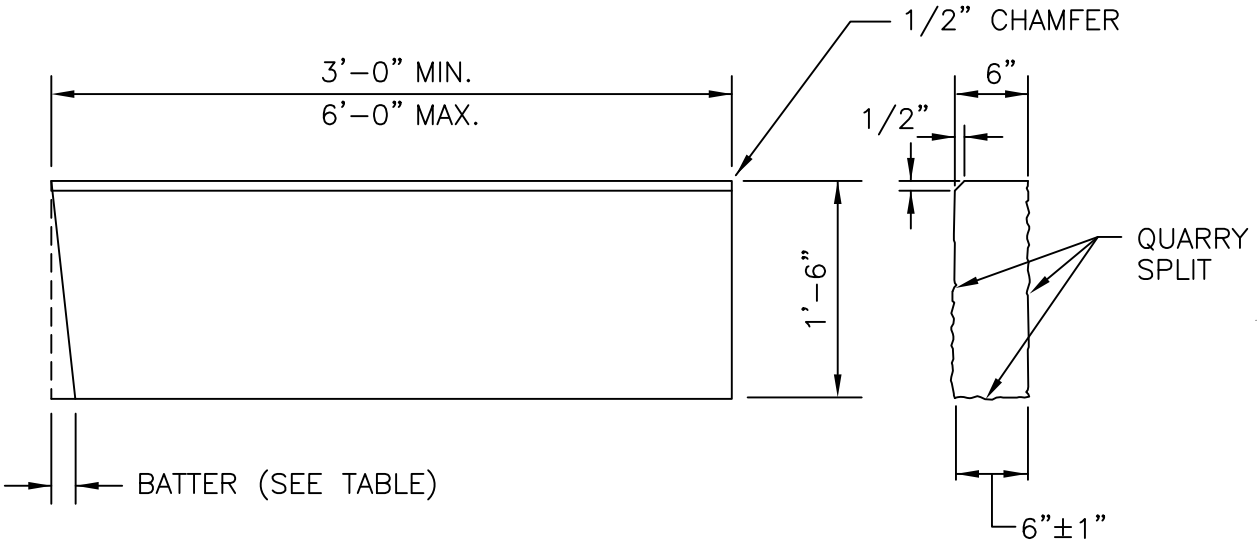
6'–0" GRANITE TRANSITION CURB

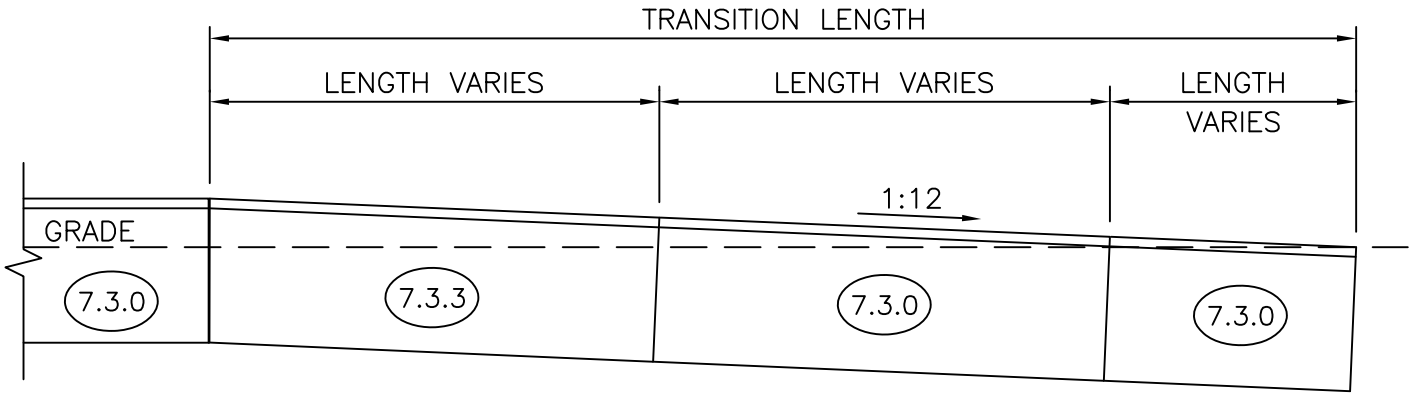
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.2





TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
4. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Jun 2012

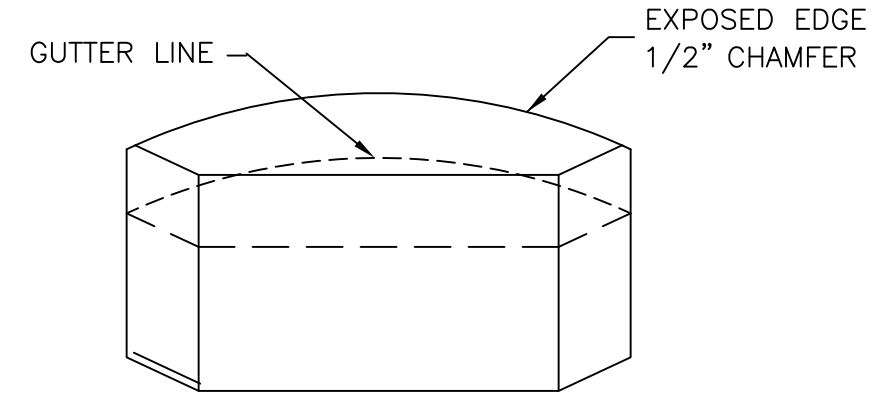
GRANITE WHEELCHAIR RAMP TRANSITION CURB

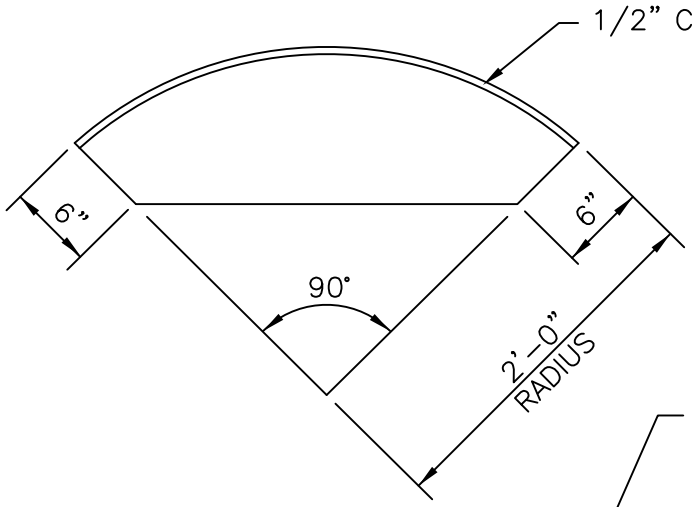
CHIEF ENGINEER TRANSPORTATION

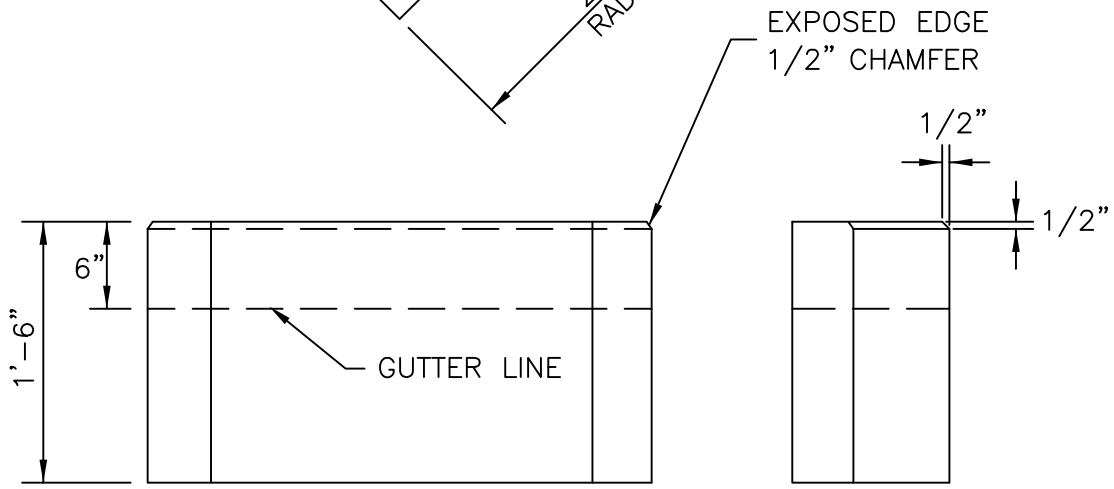
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.3







NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

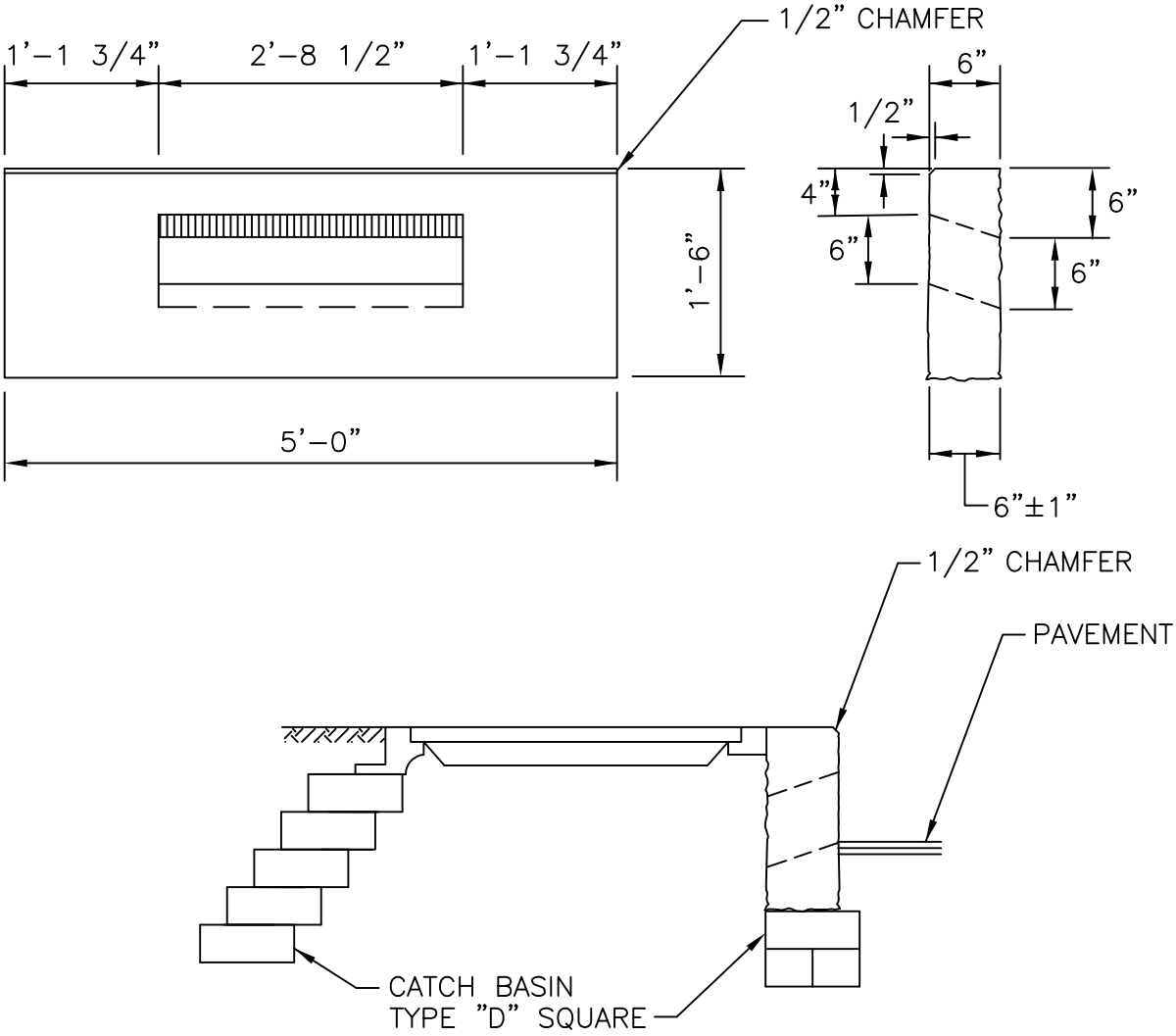
GRANITE 2'-0" RADIUS CORNER

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.4



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

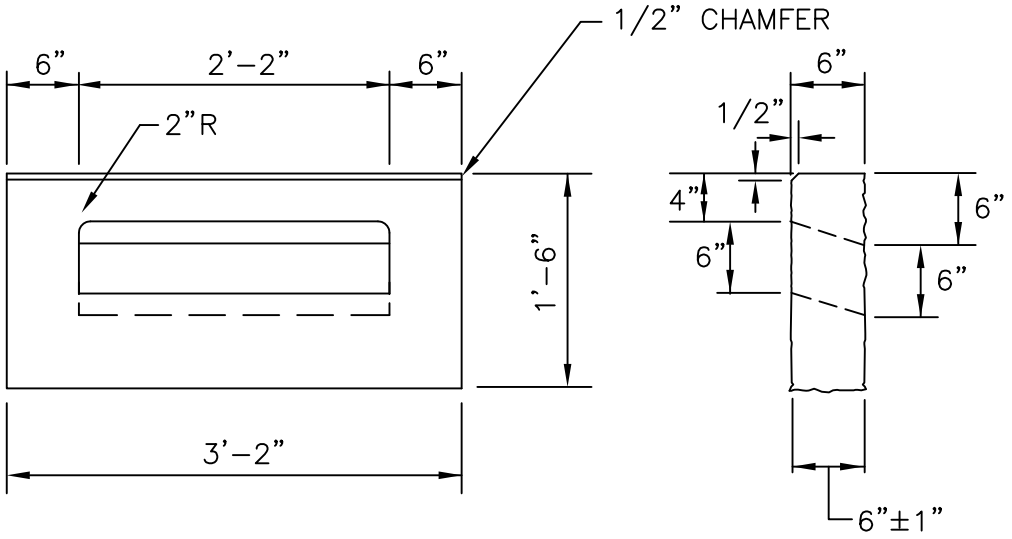
GRANITE INLET STONE (FOR SQUARE CATCH BASIN)

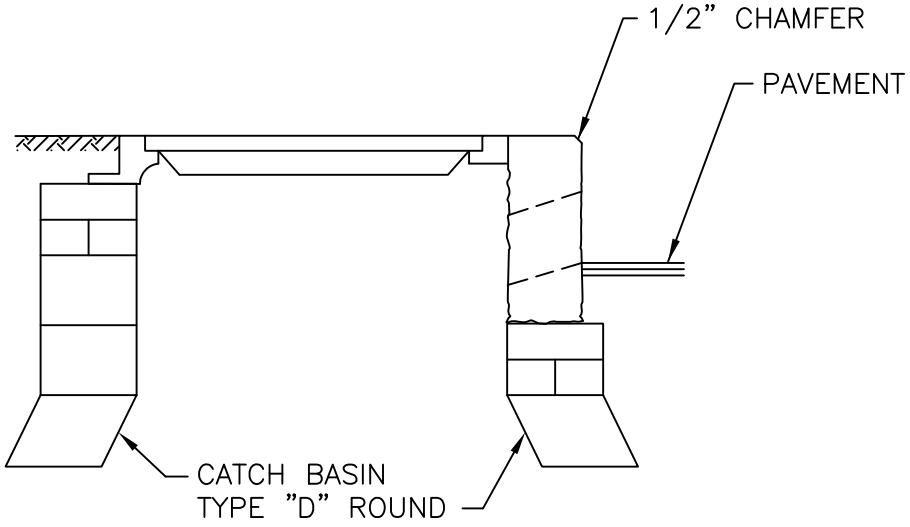
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.5





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

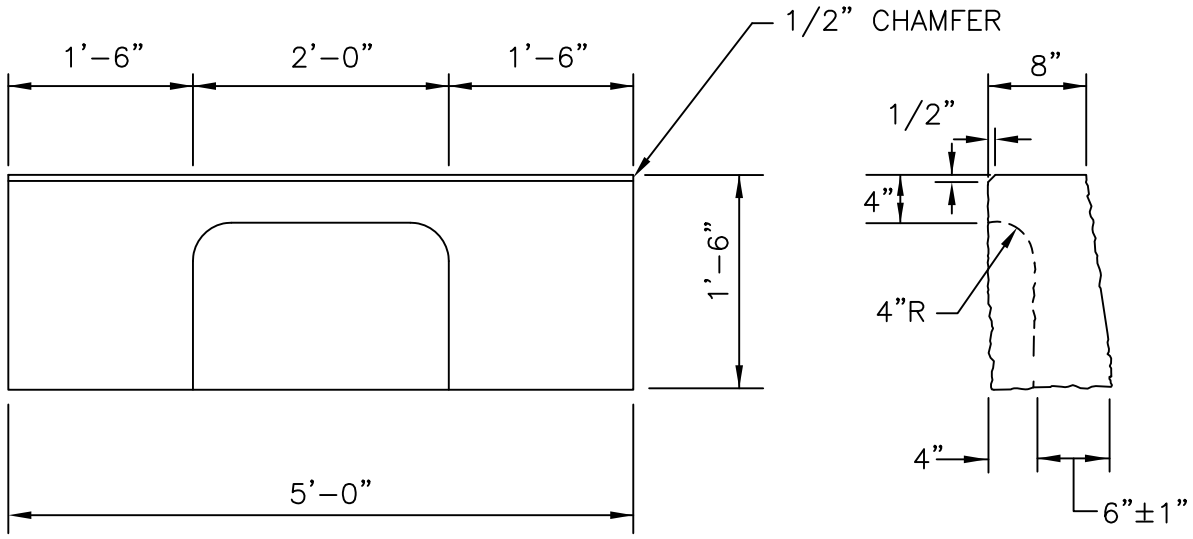
GRANITE INLET STONE (FOR ROUND CATCH BASIN)

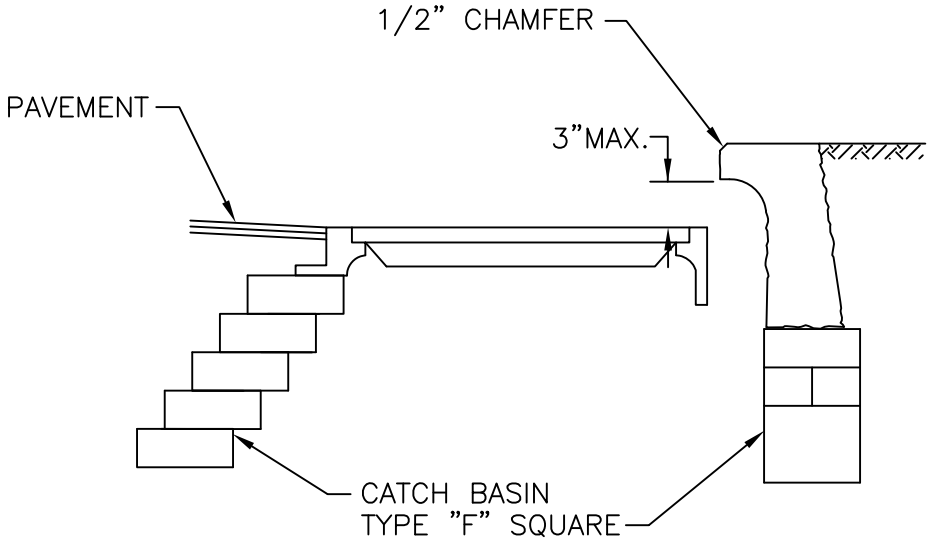
James R. Cagnoli
CHIEF ENGINEER
TRANSPORTATION

Edmund T. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.6





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

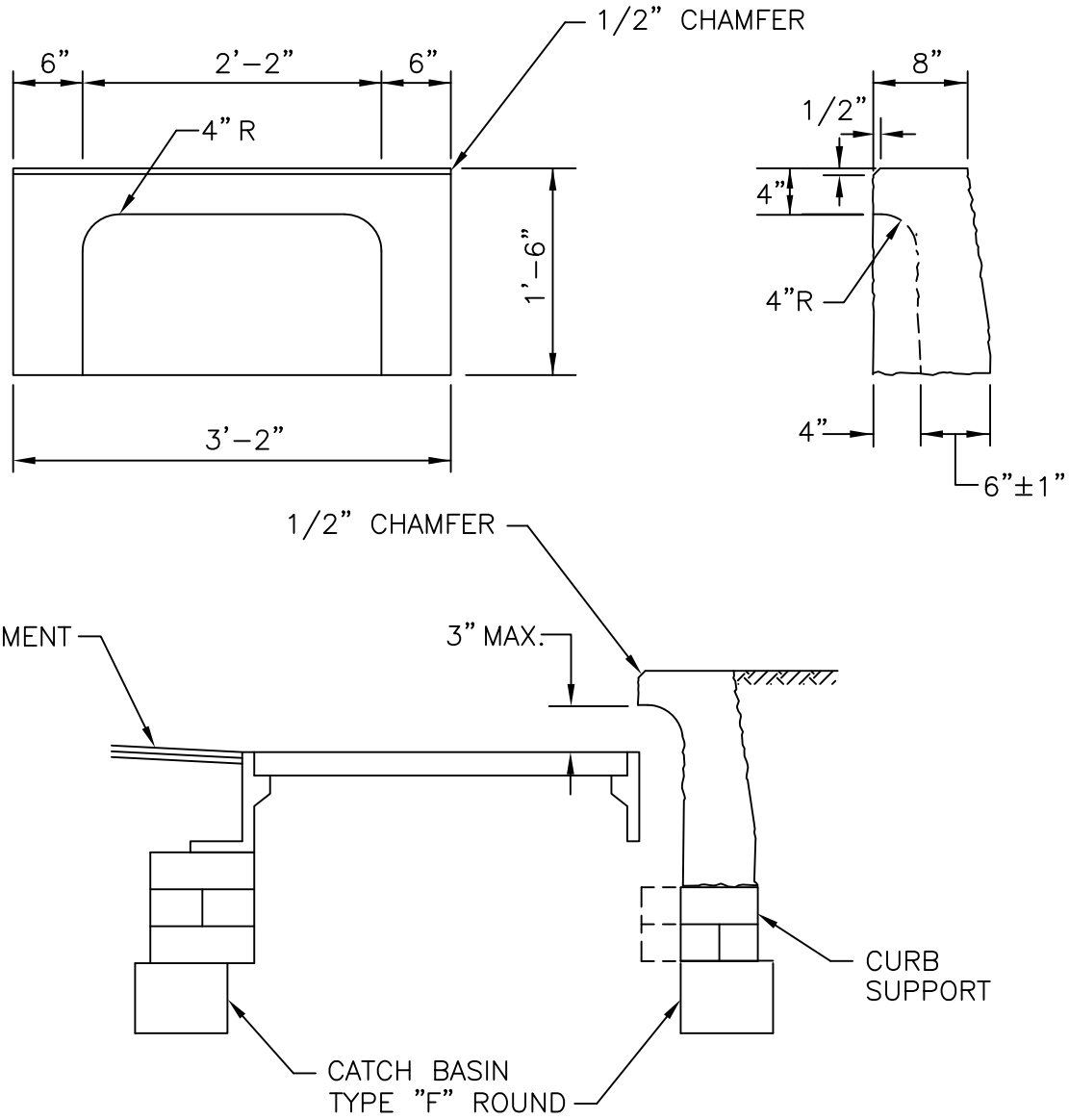
GRANITE APRON STONE (FOR SQUARE CATCH BASIN)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.7



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

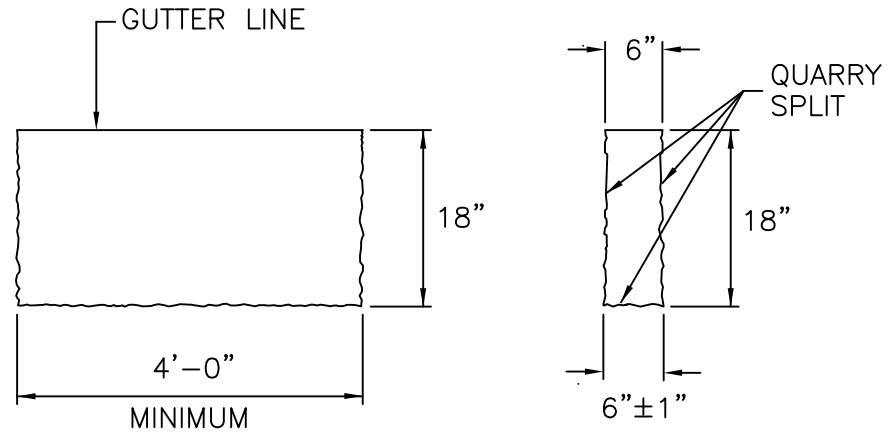
GRANITE APRON STONE (FOR ROUND CATCH BASIN)

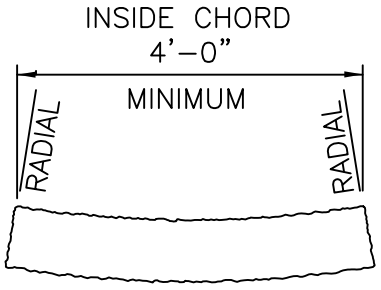
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.3.8





CIRCULAR GRANITE RAMP STONE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW TO PROVIDE NO–SLIP SURFACE; REMAINDER MAY BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR RAMP STONE TO BE 4'–0".
4. CIRCULAR RAMP STONE IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT RAMP STONE TO BE USED ON CURVES OF MORE THAN 160'–0" RADIUS.
5. RAMP STONE SHALL BE SET IN ACCORDANCE WITH STD. 43.3.0 AND IN CONJUNCTION WITH STD. 7.3.8.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Jun 2010
2	MLP	Sep 2012

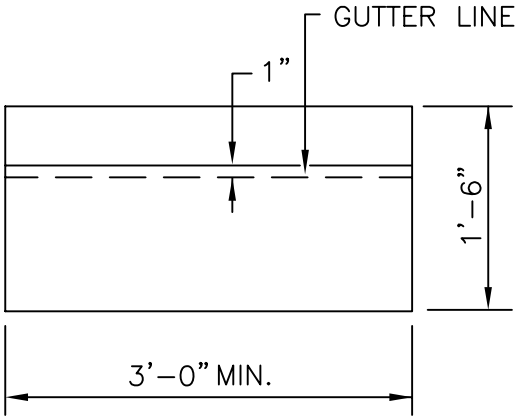
GRANITE RAMP STONE

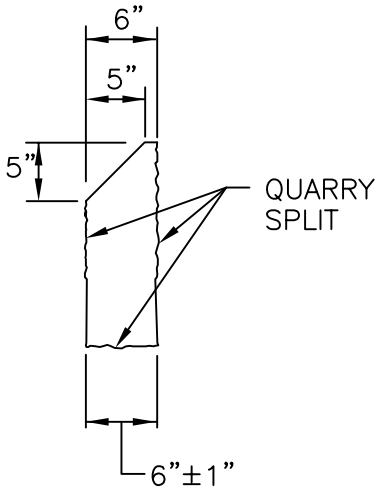
CHIEF ENGINEER TRANSPORTATION

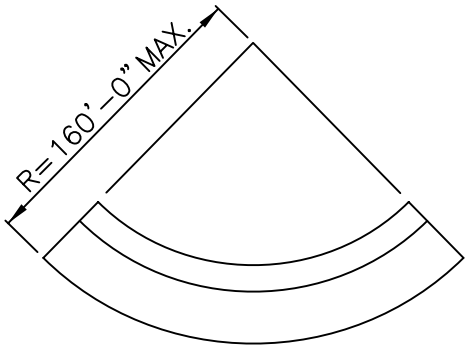
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 7.3.9







CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'–0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'–0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

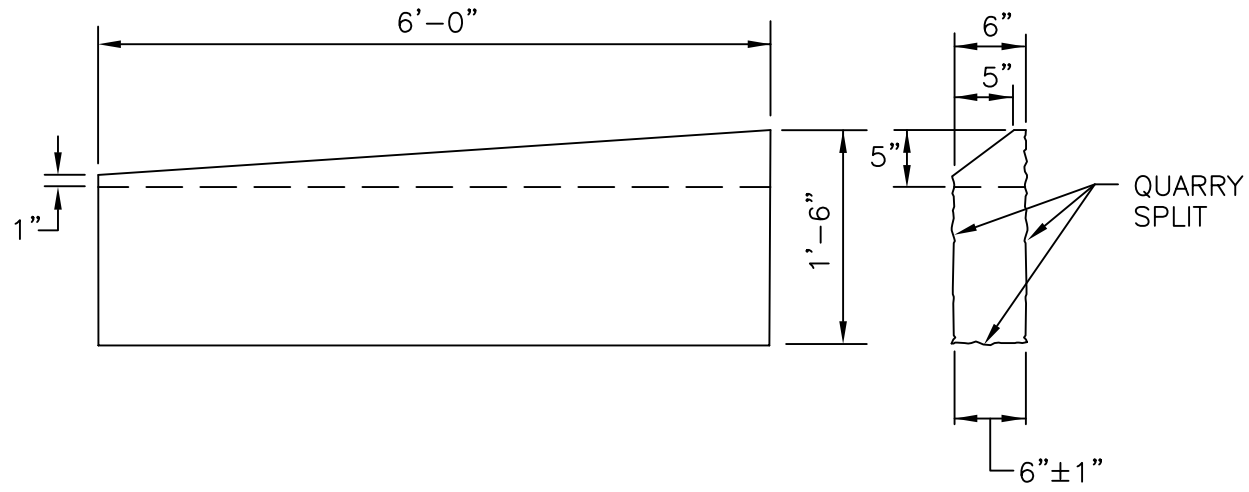
GRANITE SLOPED FACE CURB

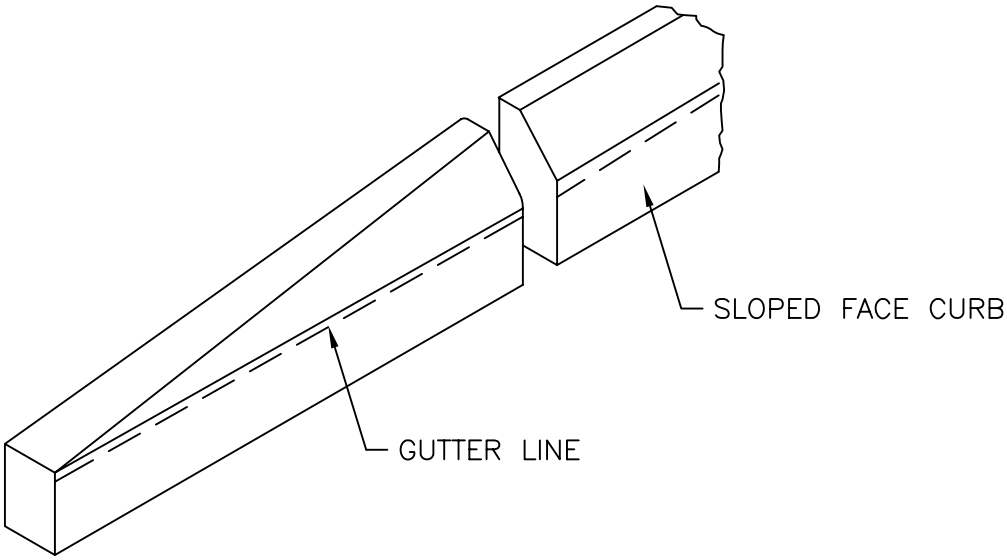
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.4.0





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

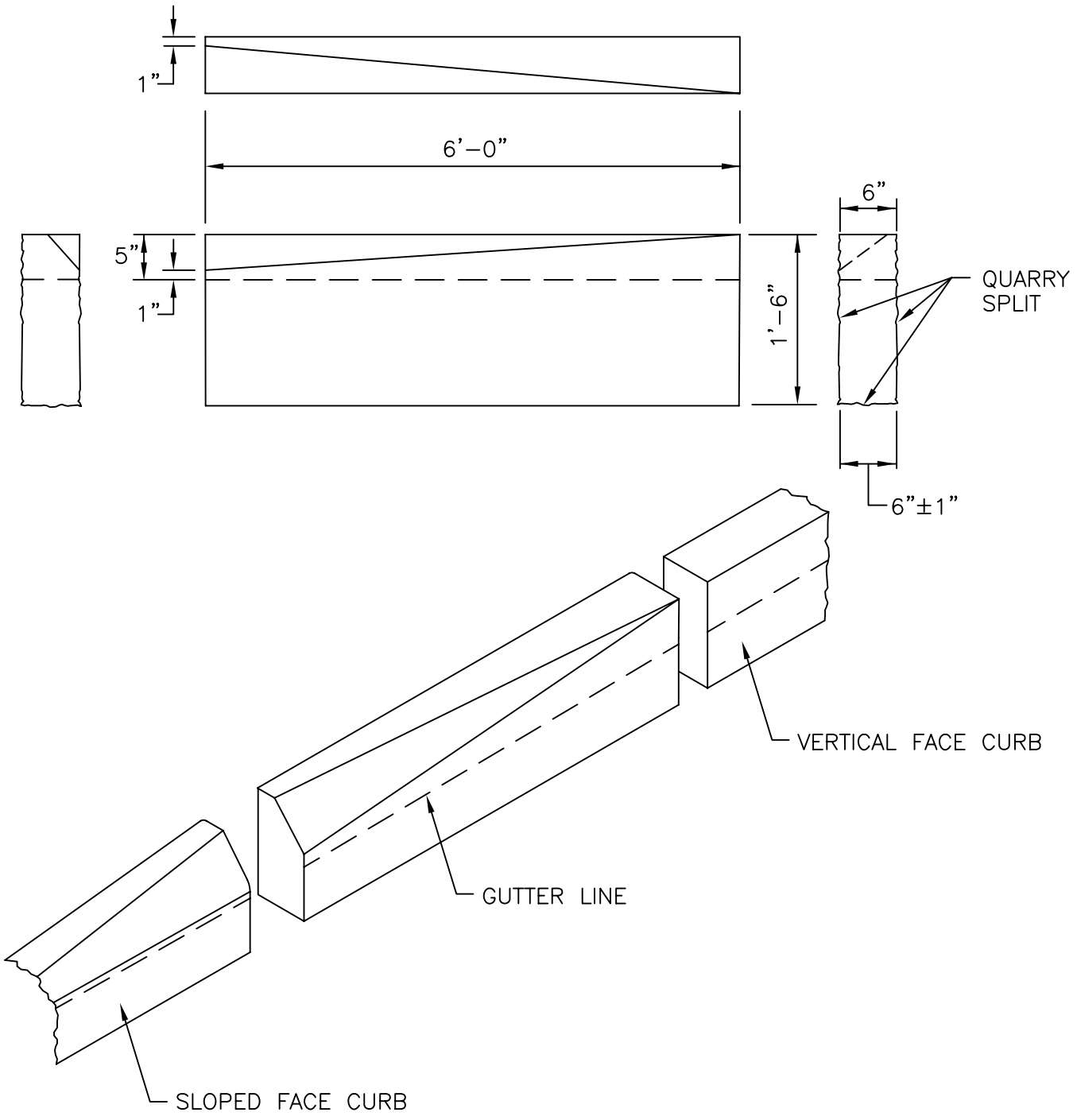
GRANITE
SLOPED FACE TRANSITION CURB

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.4.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

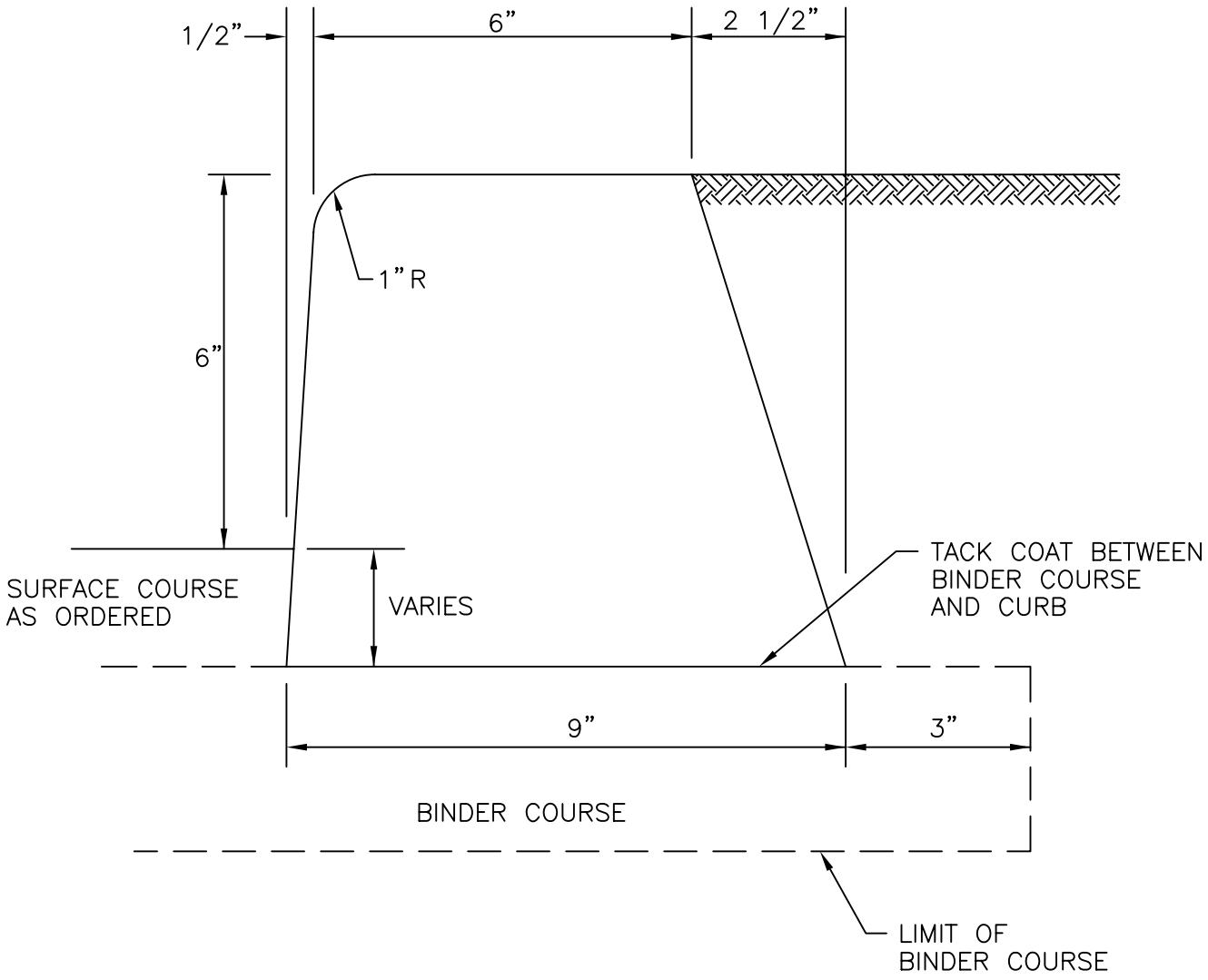
GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.4.2



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

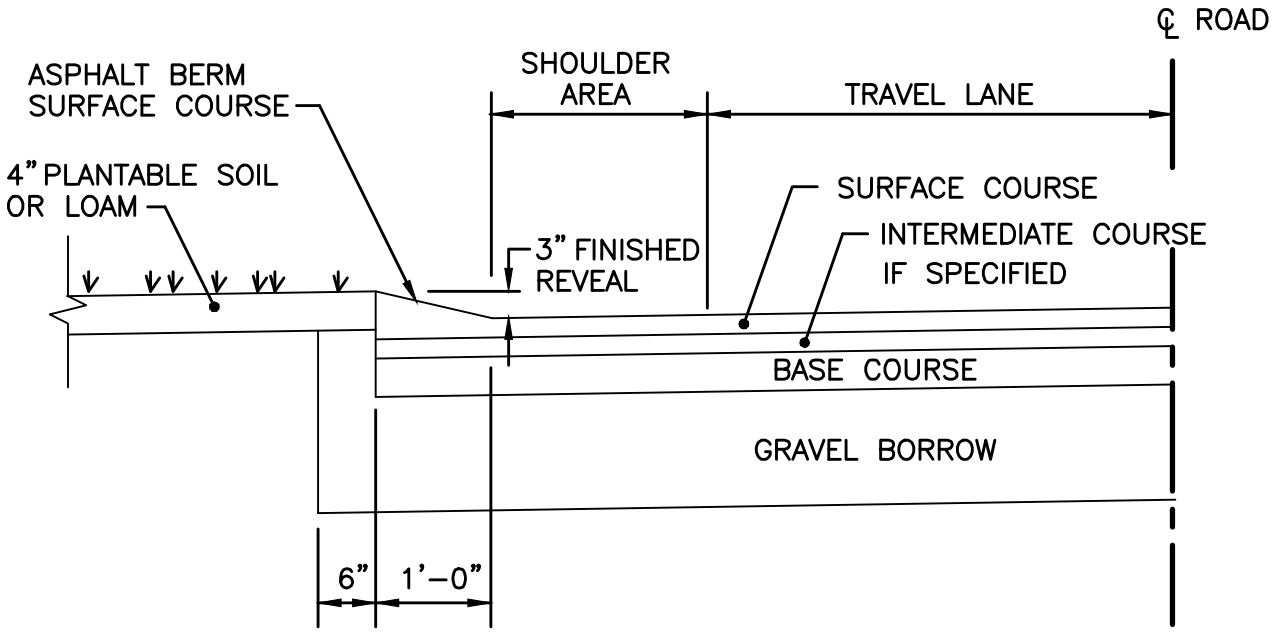
BITUMINOUS CONCRETE LIP CURB

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.5.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. ASPHALT BERM SHALL BE PLACED INTEGRALLY WITH THE SURFACE COURSE LAYER ON THE PROJECT ROADWAY.
3. CLEAN AND SWEEP PAVEMENT AND APPLY TACK COAT PRIOR TO PLACING BERM.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	AMM	Jan 25

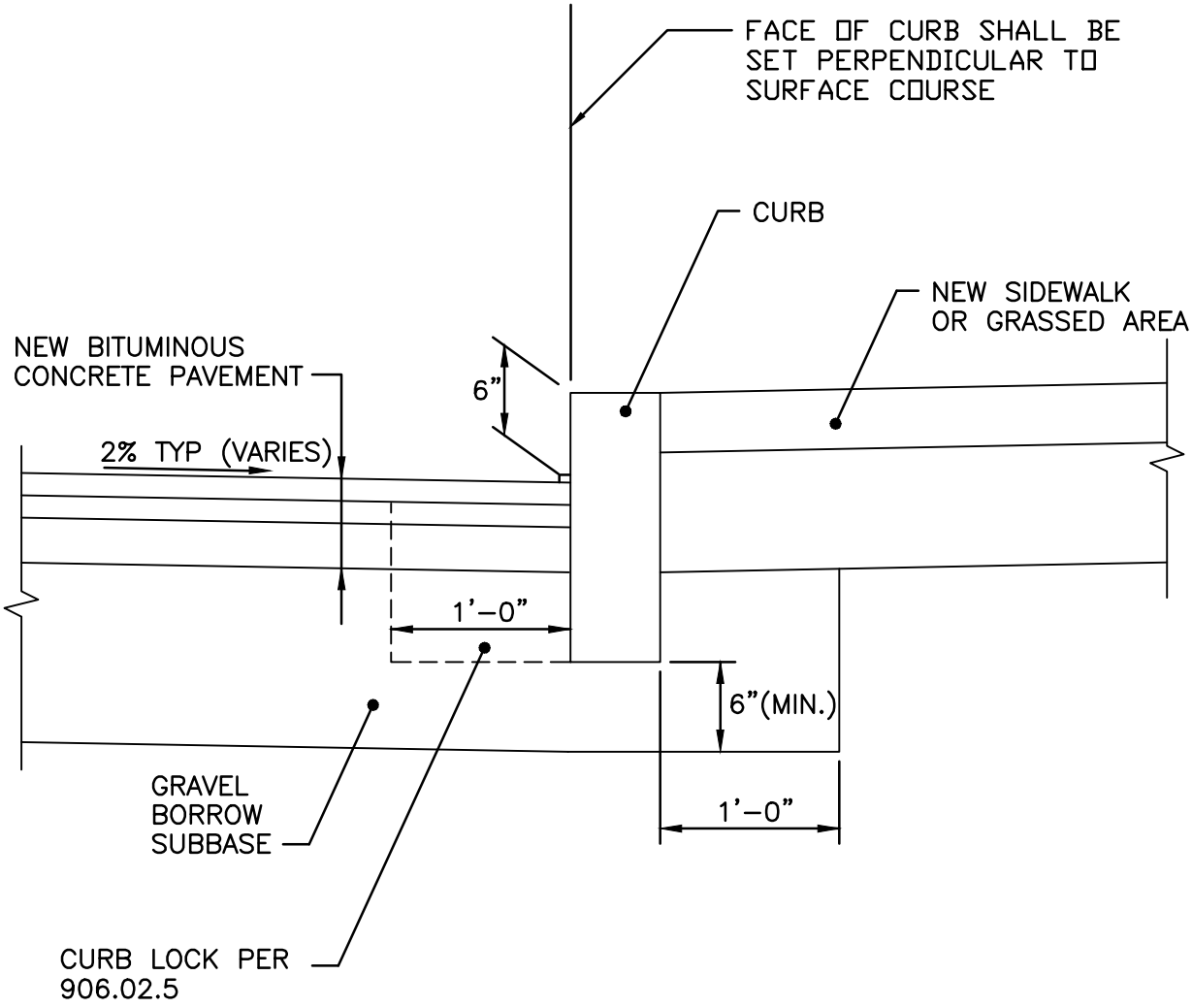
ASPHALT BERM

Robert Rocchio
Chief Engineer for Infrastructure
TRANSPORTATION

Lori A. Fisette
Director, Division of Project Management
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 7.5.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	AMM	Jan 25

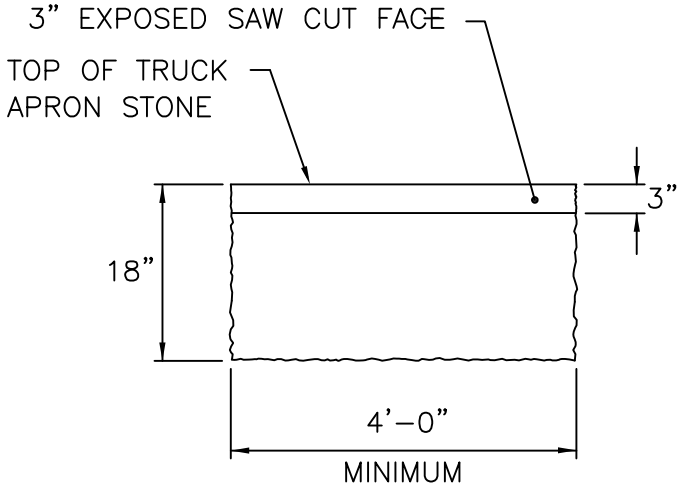
CURB SETTING DETAIL

Robert Rocchio
Chief Engineer for Infrastructure
TRANSPORTATION

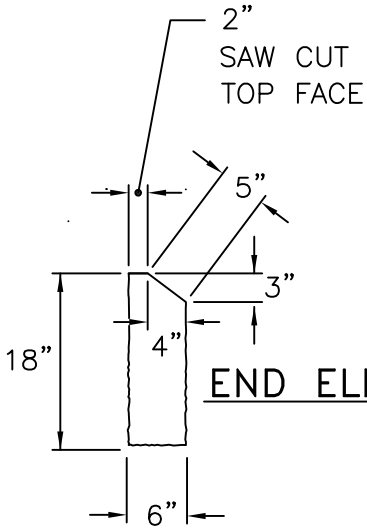
Lori A. Fisette
Director, Division of Project Management
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

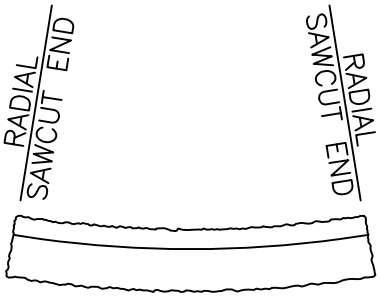
R.I. STANDARD 7.6.0



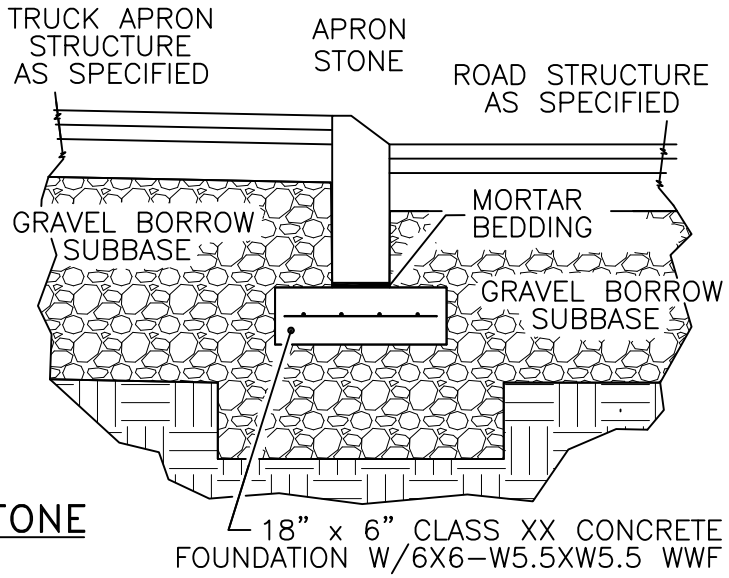
FRONT ELEVATION



END ELEVATION



CIRCULAR TRUCK APRON STONE
PLAN VIEW



GRANITE TRUCK APRON STONE
ON CONCRETE FOUNDATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED SURFACES AND ALL SURFACES FIVE (5) INCHES FROM THE TOP OR BOTTOM TO BE DRESSED BY SAW; REMAINDER MAY BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR RAMP STONE TO BE 4'–0".
4. CIRCULAR APRON STONE IS REQUIRED ON CURVES WITH RADII OF 140'–0" OR LESS.
5. GRANITE TRUCK APRON STONES ARE TO BE USED ON ROUNDABOUTS TO TRANSITION FROM THE ROADWAY SURFACE TO THE TRUCK APRON SURFACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

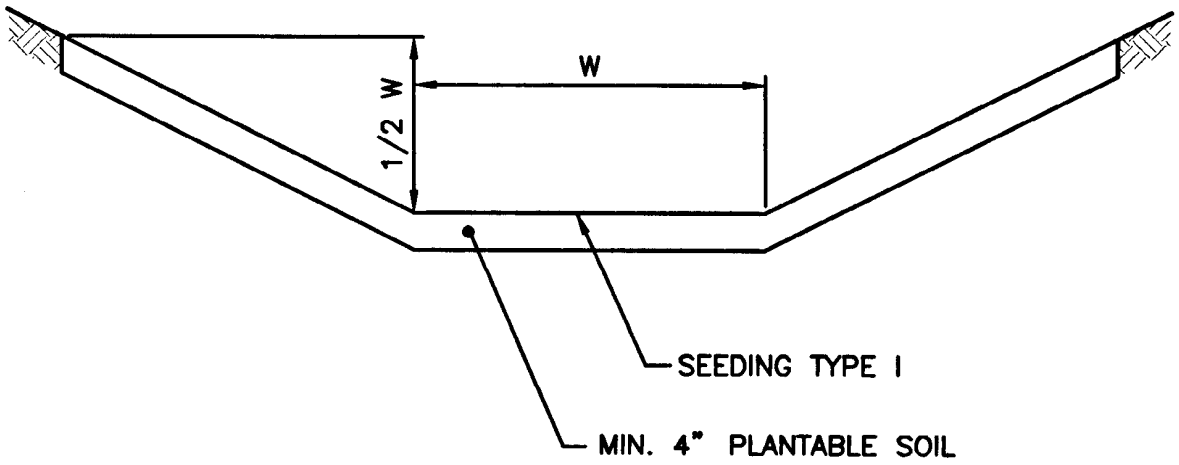
GRANITE TRUCK APRON STONE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

MARCH 25, 2014
ISSUE DATE

R.I. STANDARD 7.7.0



NOTE:
SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

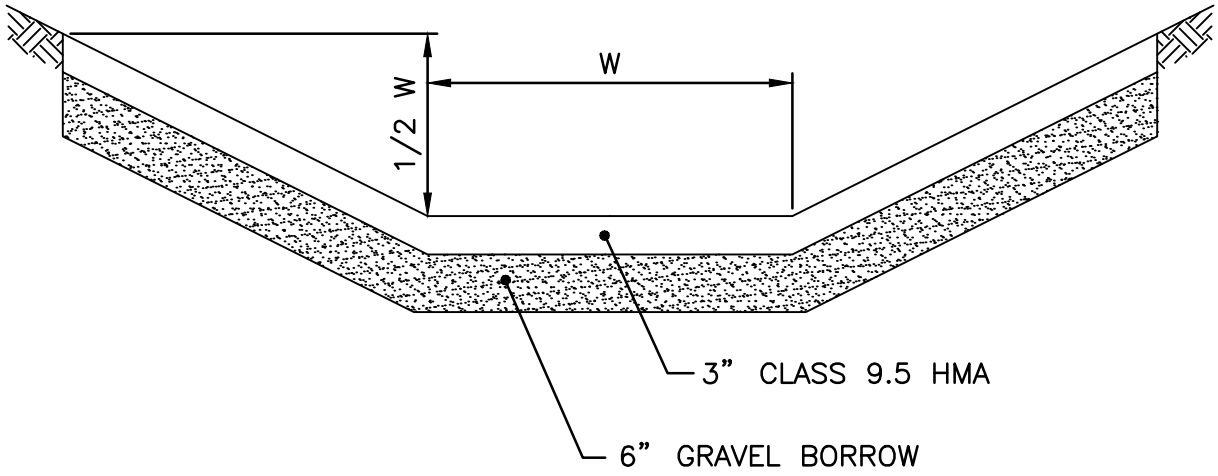
SEEDED DITCH

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 8.1.0



NOTE:

SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	AMM	Jan 25

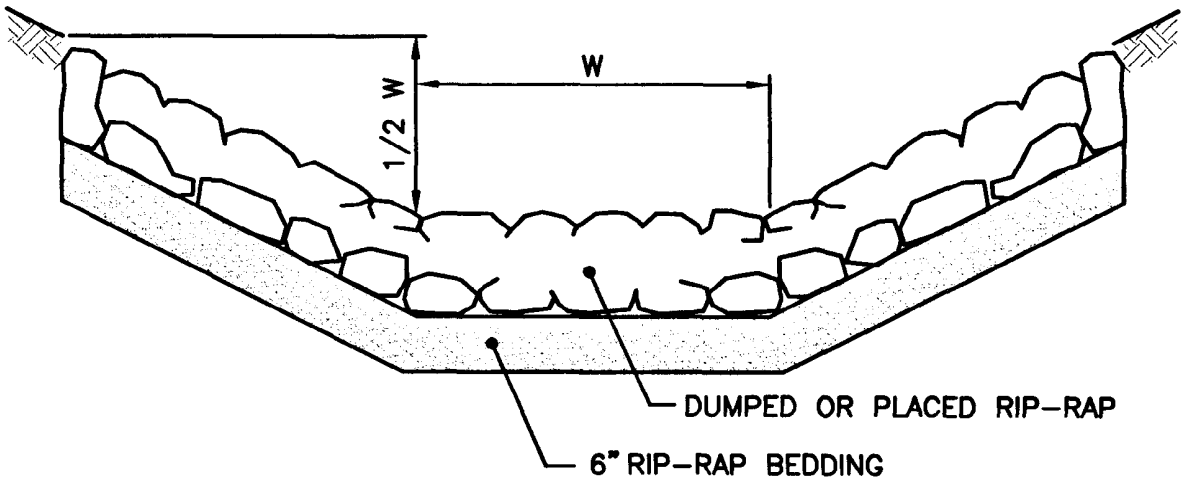
PAVED DITCH

Robert Rocchio
Chief Engineer for Infrastructure
TRANSPORTATION

Lori A. Fisette
Director, Division of Project Management
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 8.2.0



NOTES:

1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

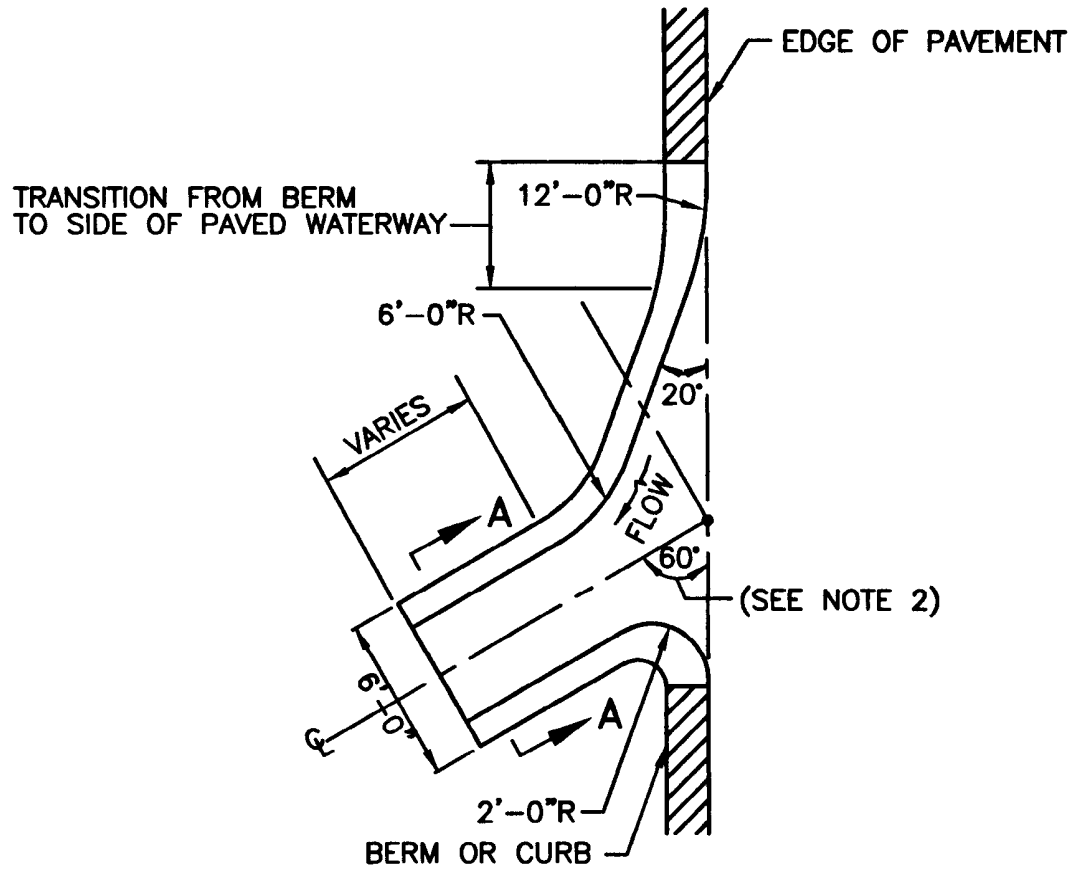
RIP-RAP DITCH

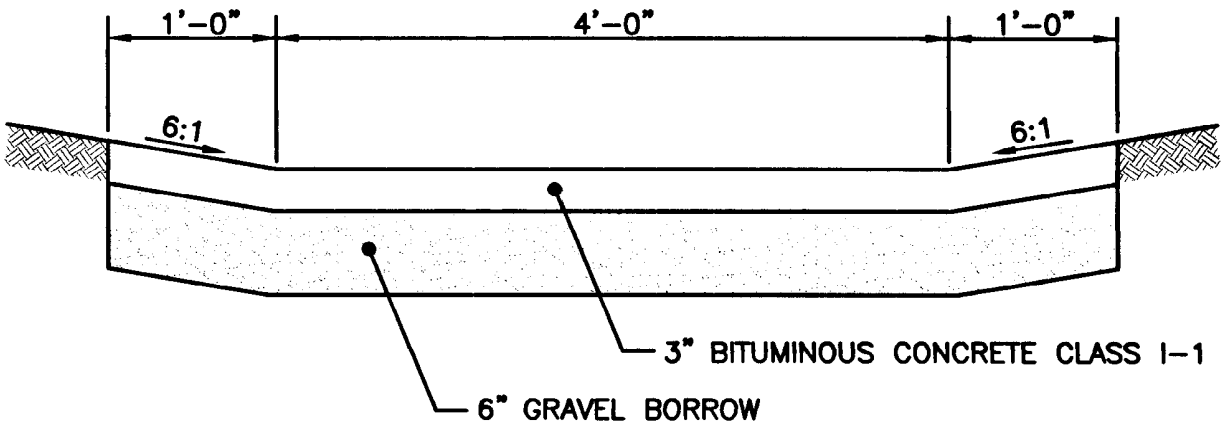
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 8.3.0





SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

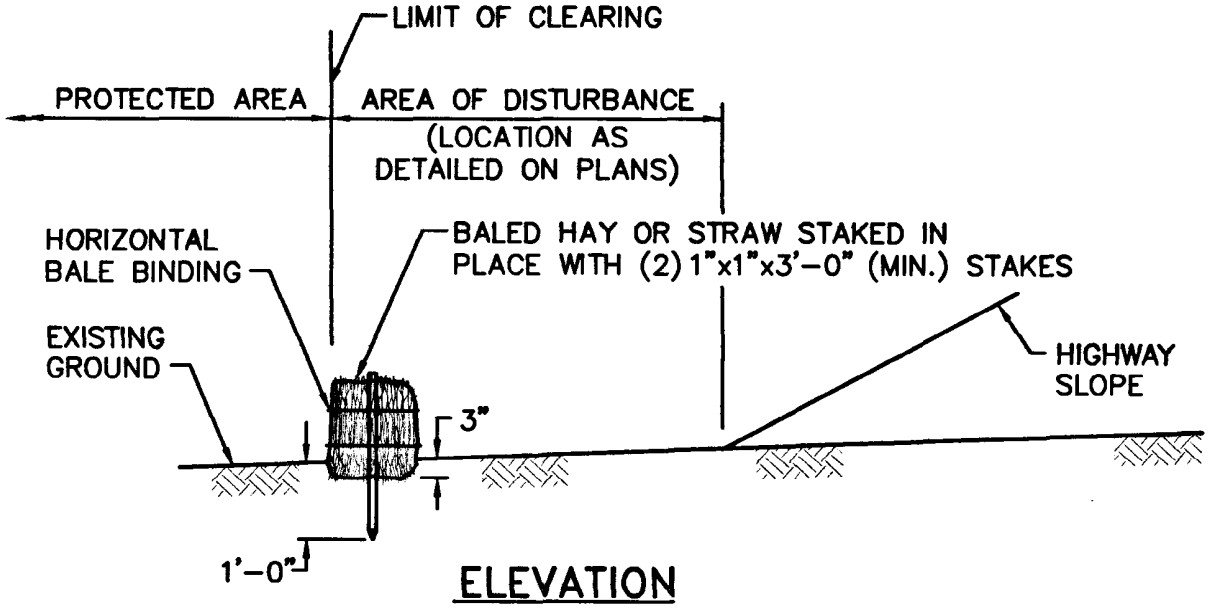
PAVED WATERWAY

CHIEF ENGINEER TRANSPORTATION

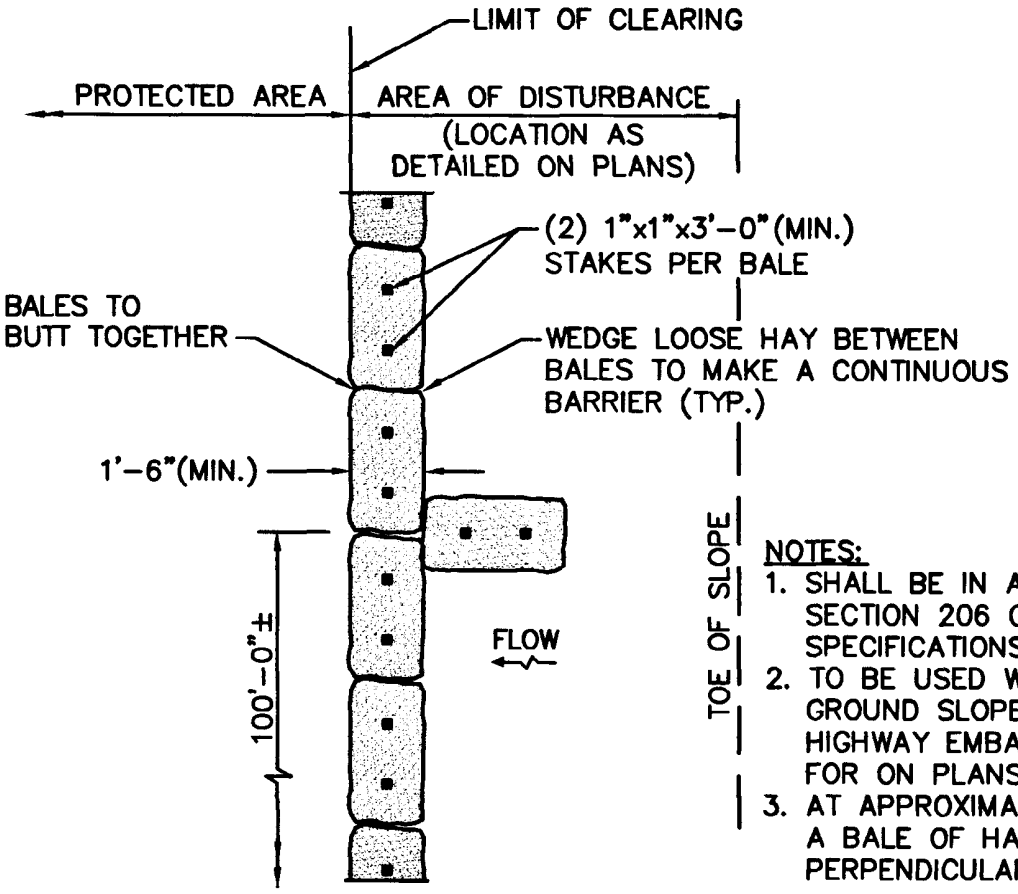
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 8.4.0



ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE HIGHWAY EMBANKMENT AS CALLED FOR ON PLANS.
3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

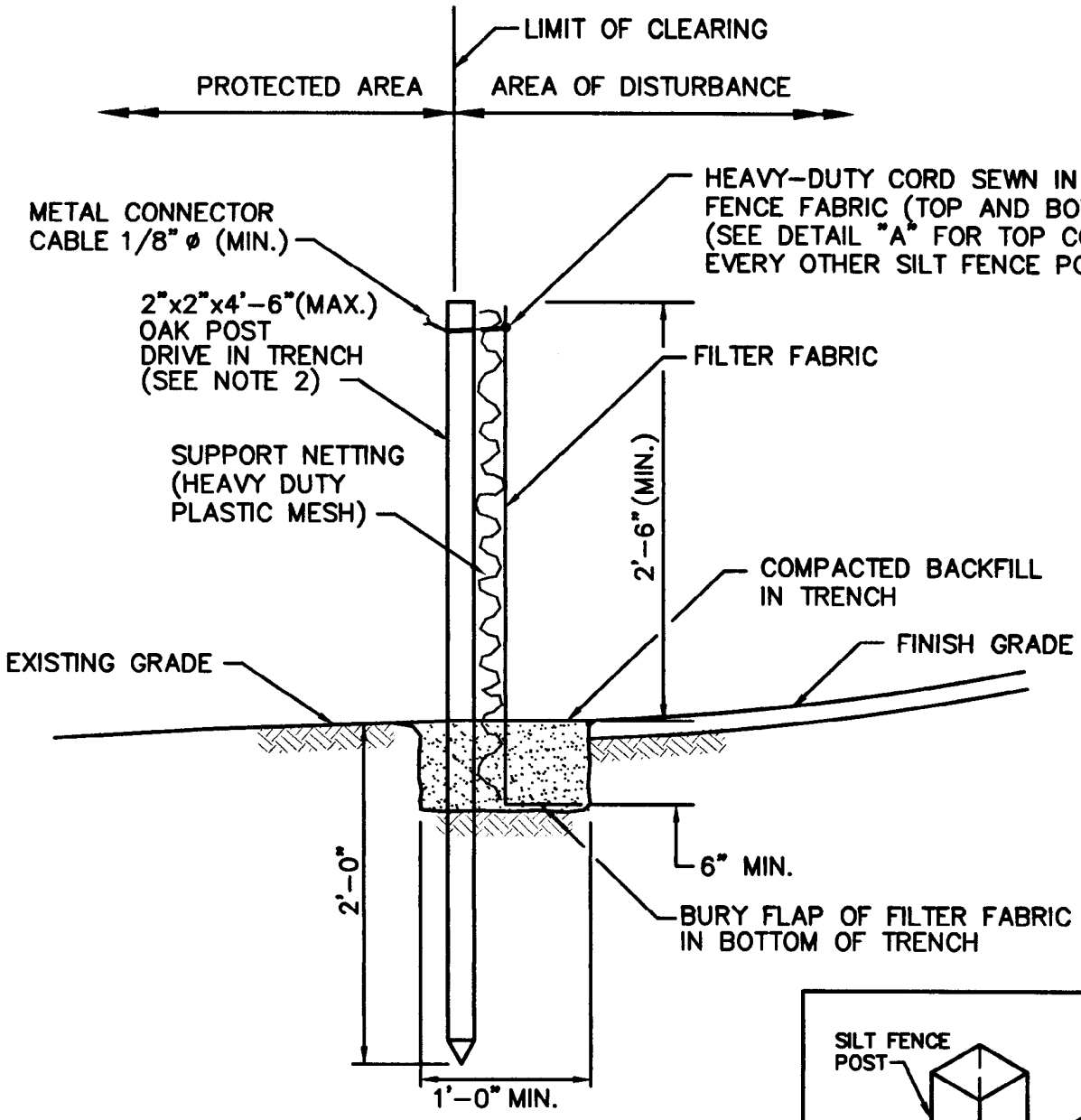
BALED HAY EROSION CHECK

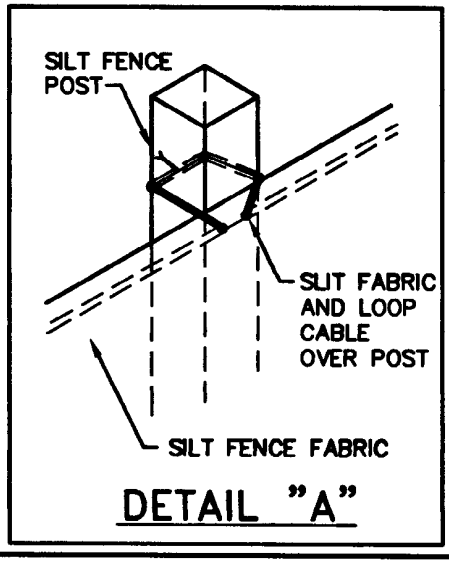
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.1.0





DETAIL "A"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

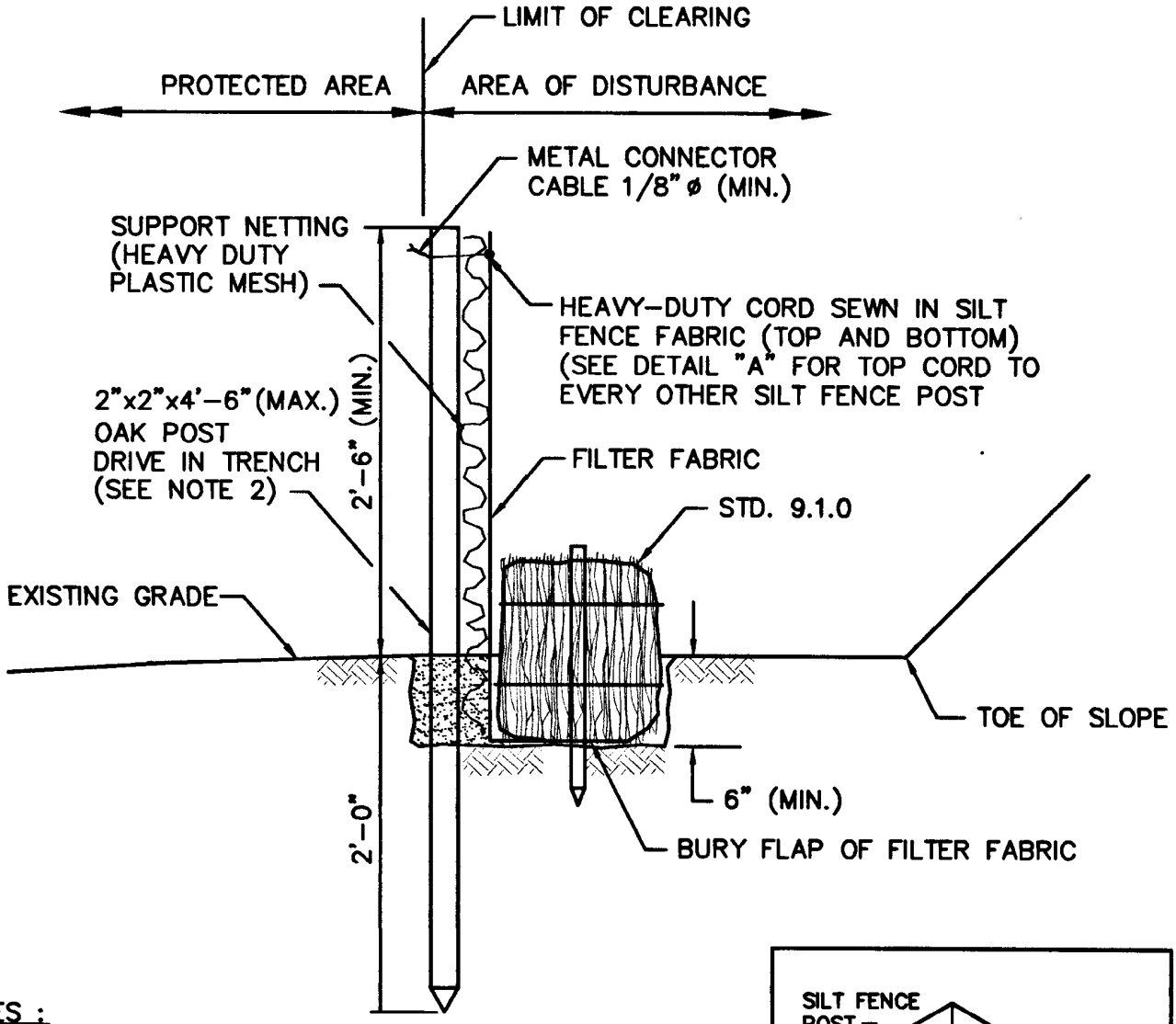
SILT FENCE DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

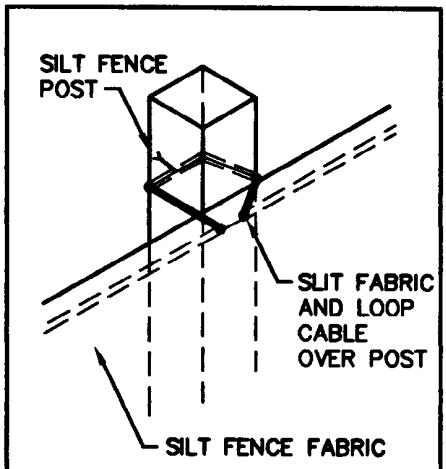
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.2.0



NOTES :

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6"(MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0"(MAX.) O.C. IN WETLAND AREAS AND 4'-0"(MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



DETAIL "A"

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

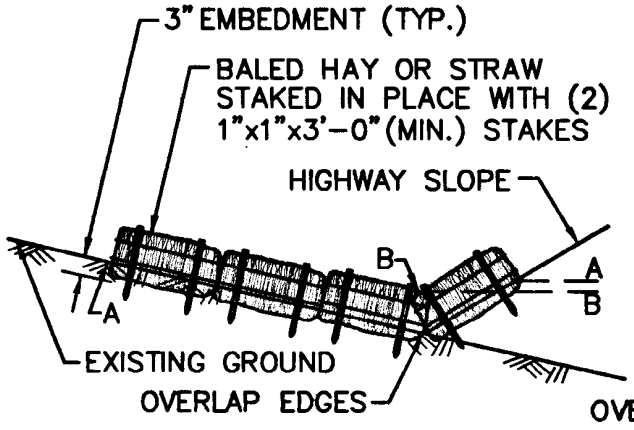
BALED HAY EROSION CHECK AND SILT FENCE COMBINED

CHIEF ENGINEER TRANSPORTATION

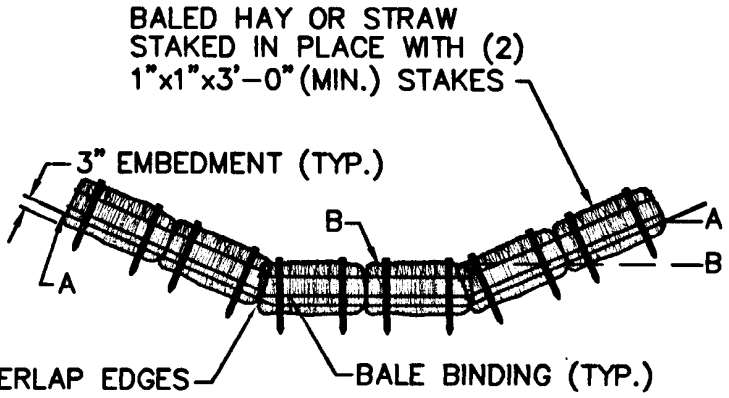
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

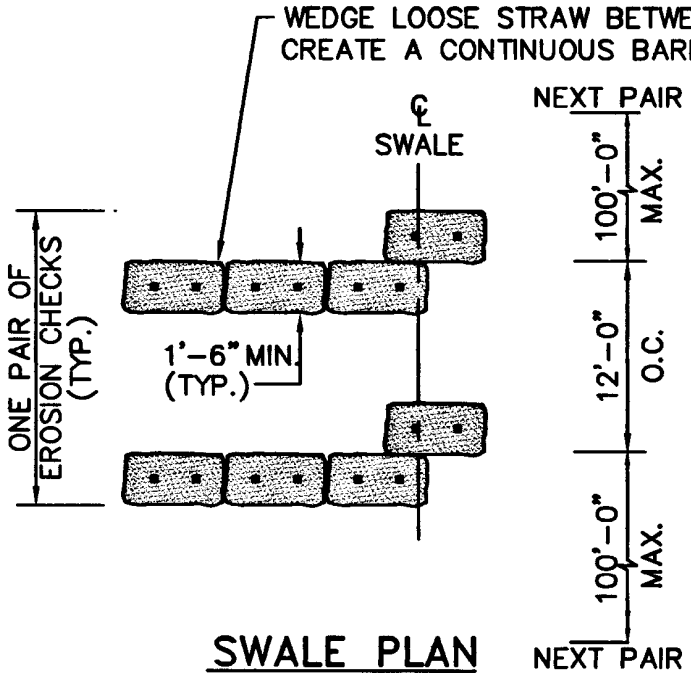
R.I. STANDARD 9.3.0



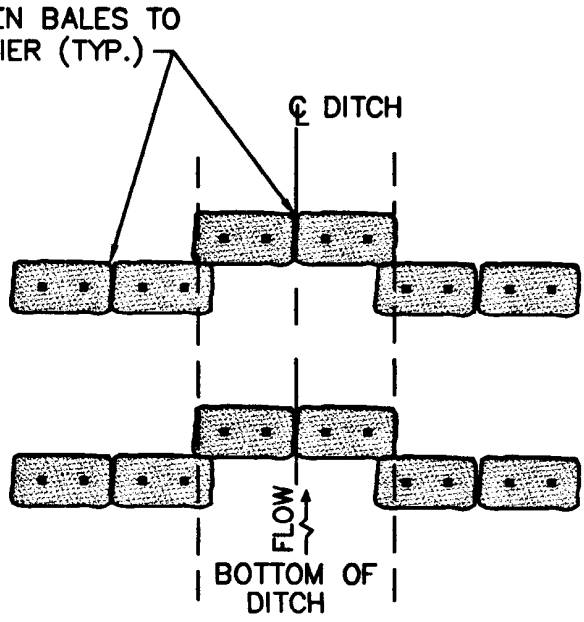
SWALE ELEVATION



DITCH ELEVATION



SWALE PLAN



DITCH PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES IN TOWARD THE EMBANKMENT OR IN DRAINAGE DITCHES AS CALLED FOR ON THE PLANS.
3. THE BALES ARE TO BE EMBEDDED A MINIMUM OF 3" INTO THE EXISTING GROUND, HIGHWAY SLOPE OR DITCH SECTION.
4. POINTS "A" SHOULD BE AT A HIGHER ELEVATION THAN POINTS "B".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

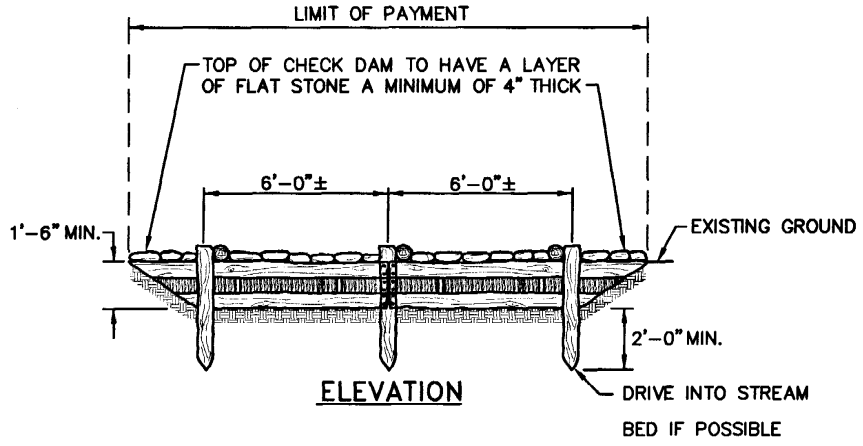
BALED HAY DITCH AND SWALE EROSION CHECK

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.4.0



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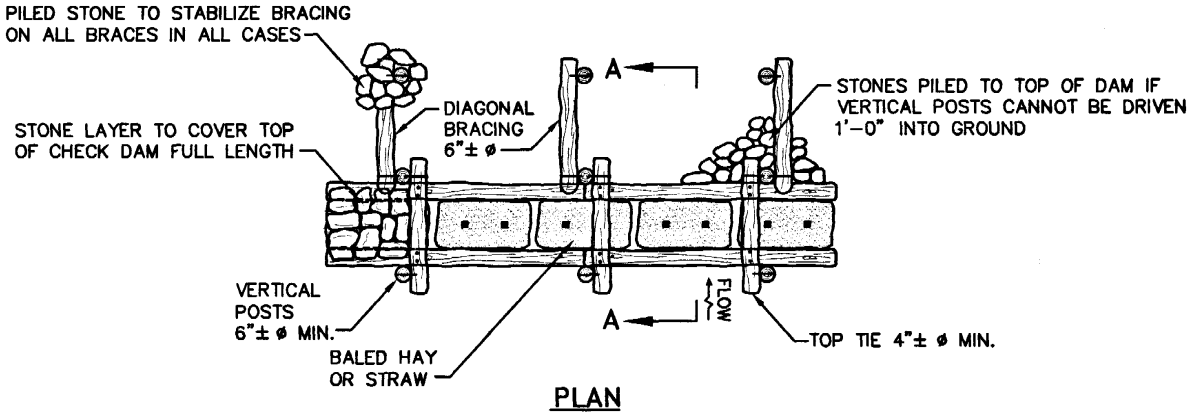
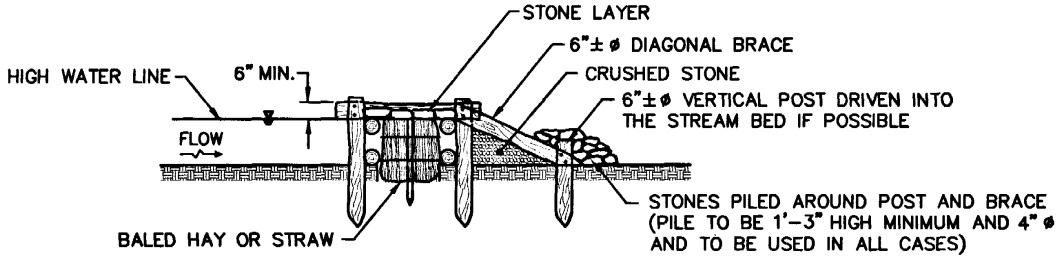


PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. DAM TO BE CONSTRUCTED OF NATIVE LOGS OBTAINED FROM CLEARING OPERATION, WHEN AVAILABLE. ALL LOGS TO BE SPIKED WITH WIRE SPIKES OR BOLTED TOGETHER. EXISTING TREES, BOULDERS OR LEDGE MAY BE USED IN PLACE OF THE THE VERTICAL POSTS AT THE DISCRETION OF THE ENGINEER.
3. WHEN VERTICAL POST CANNOT BE DRIVEN INTO THE STREAM BED, STONES SHALL BE USED TO BRACE THE STRUCTURE.
4. BALES OF HAY TO BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING GROUND. IF THE EXISTING GROUND IS LEDGE, A 2'-0"x2'-0" WEDGE OF CRUSHED STONE IS TO BE PLACED AGAINST THE UPSTREAM FACE OF THE CHECK DAM.
5. HEIGHT OF THE DAM WILL VARY BASED ON HIGH WATER LEVEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

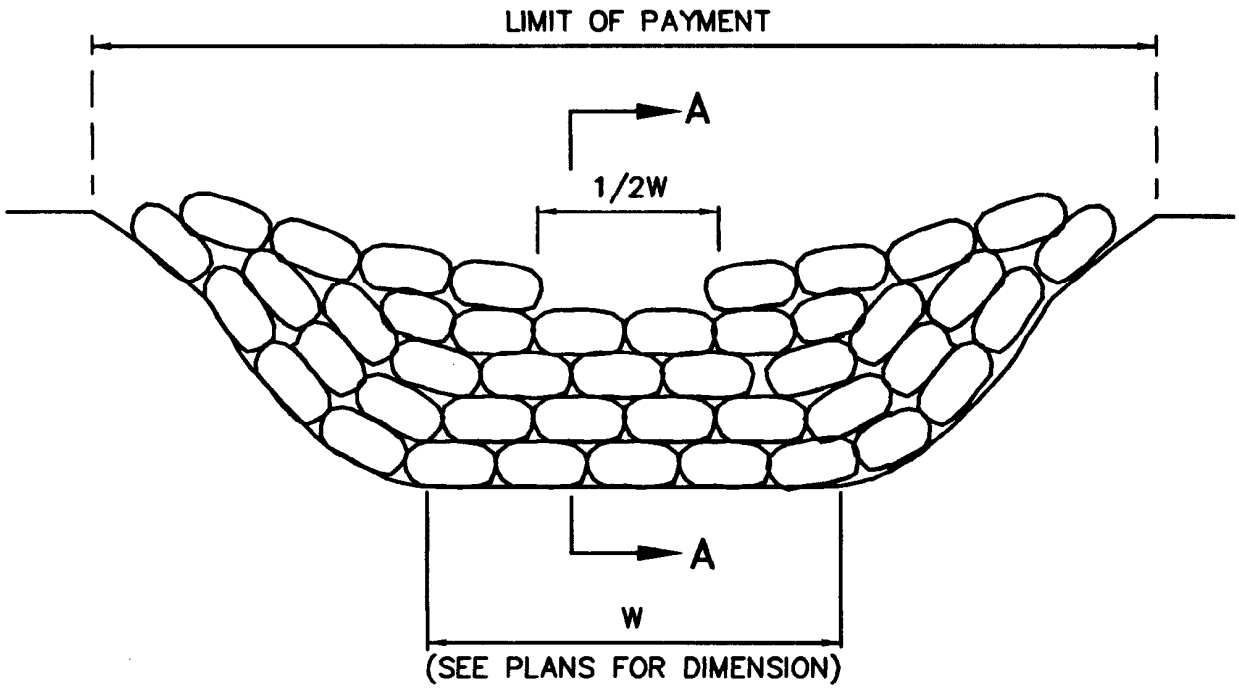
LOG AND HAY CHECK DAM

CHIEF ENGINEER TRANSPORTATION

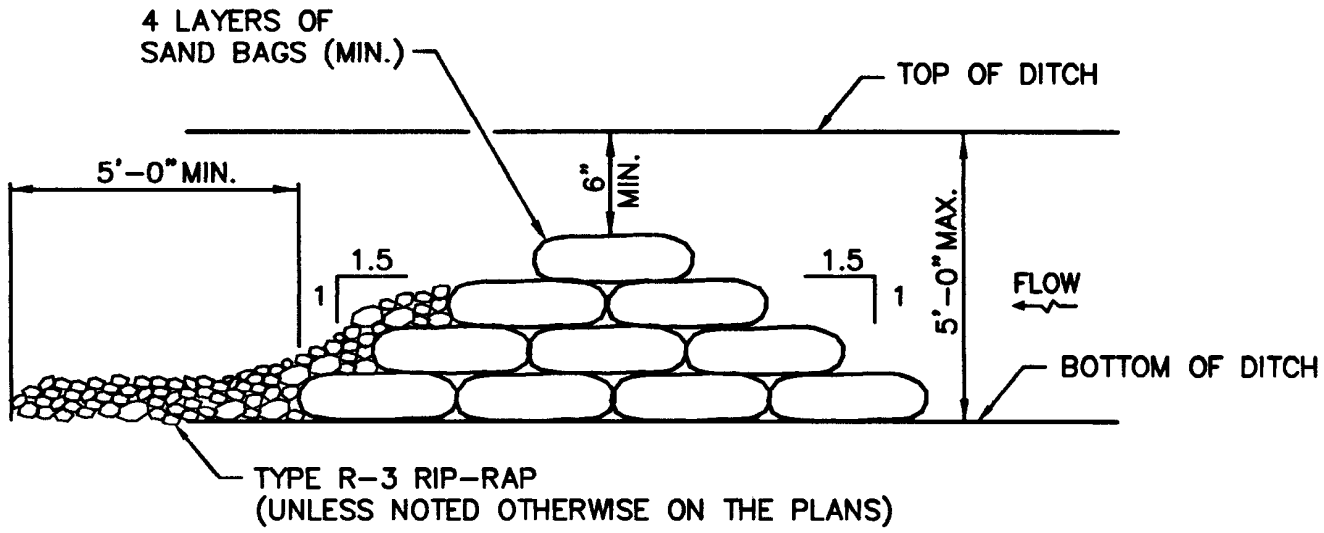
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.5.0



ELEVATION



SECTION A-A

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

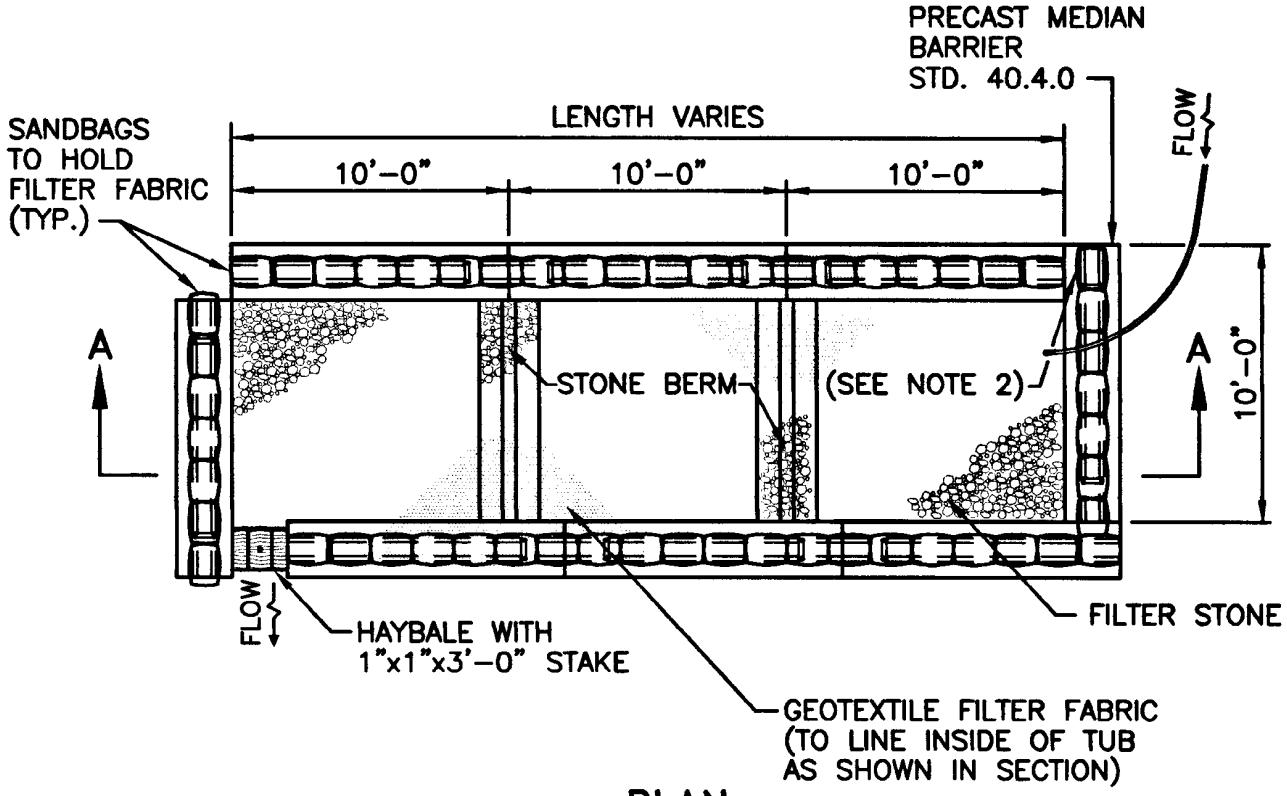
SAND BAG EROSION CHECK

CHIEF ENGINEER TRANSPORTATION

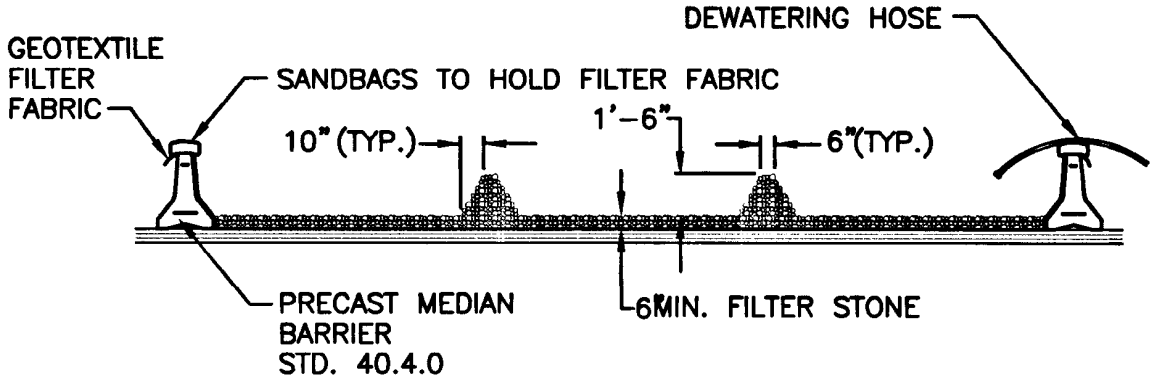
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.6.0



PLAN



SECTION

NOTS:
1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.
2. PROVIDE ADDITIONAL SAND BAGS AS REQUIRED TO FILL SPACE BETWEEN ADJACENT BARRIERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

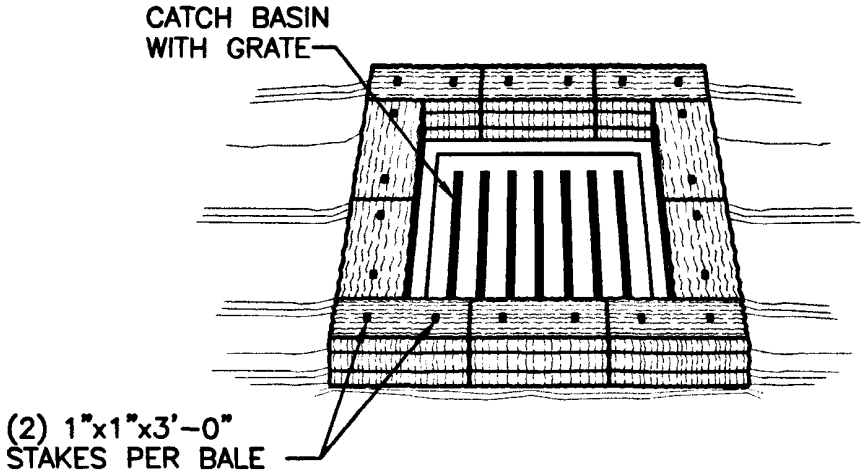
DEWATERING BASIN

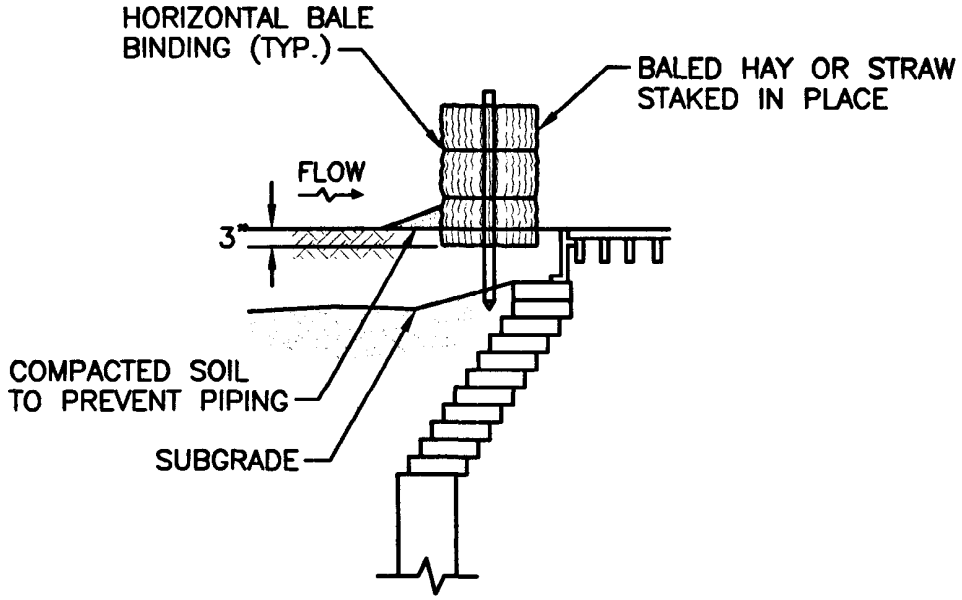
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.7.0





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

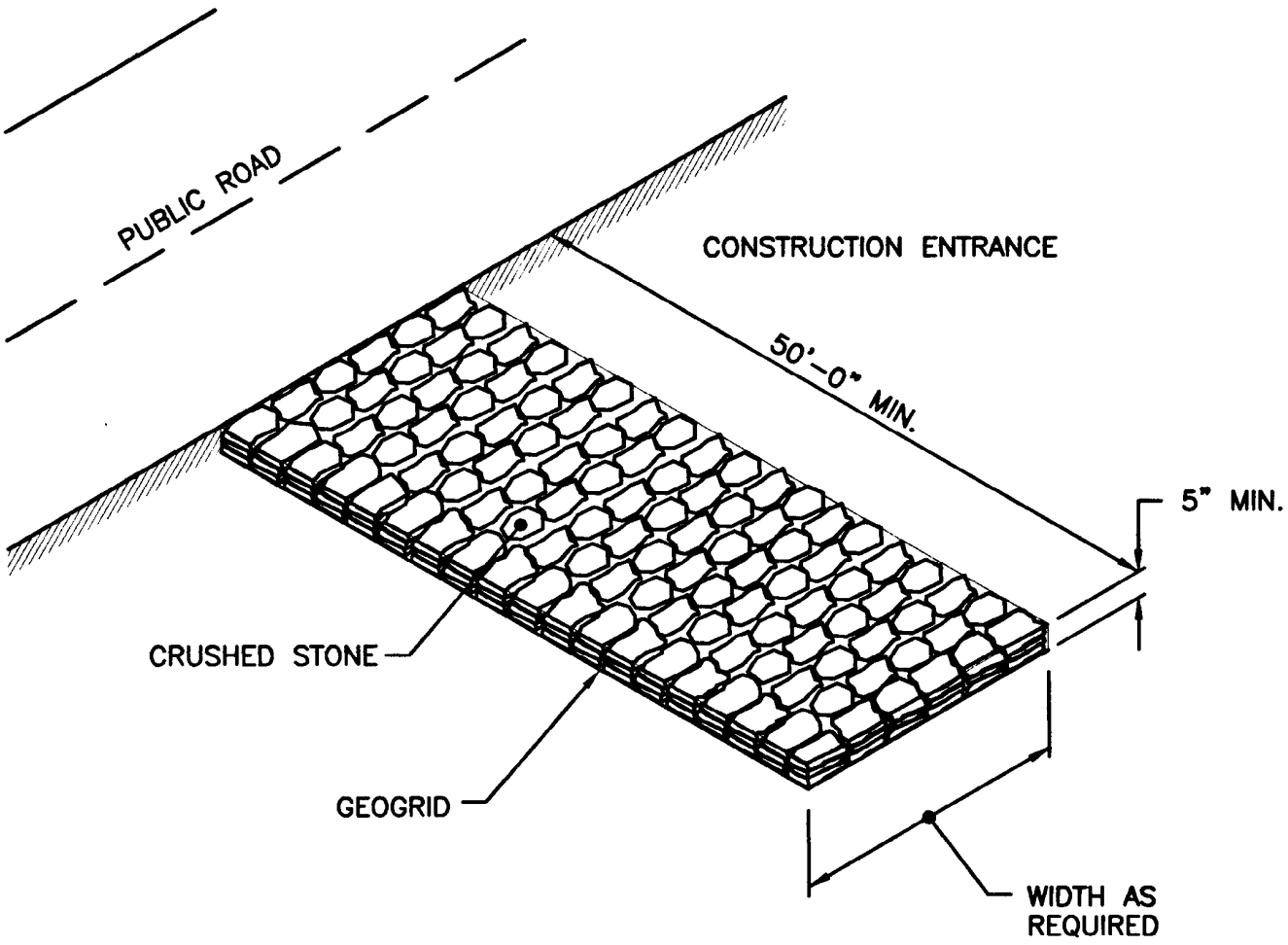
BALED HAY CATCH BASIN INLET PROTECTION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 9.8.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

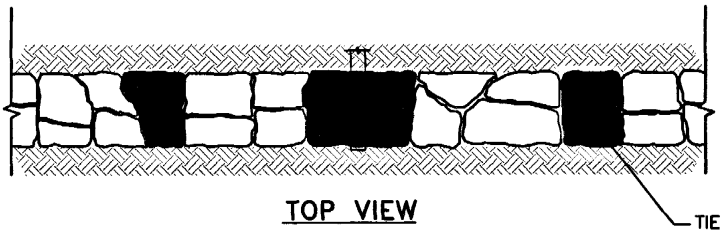
CONSTRUCTION ACCESS

CHIEF ENGINEER
TRANSPORTATION

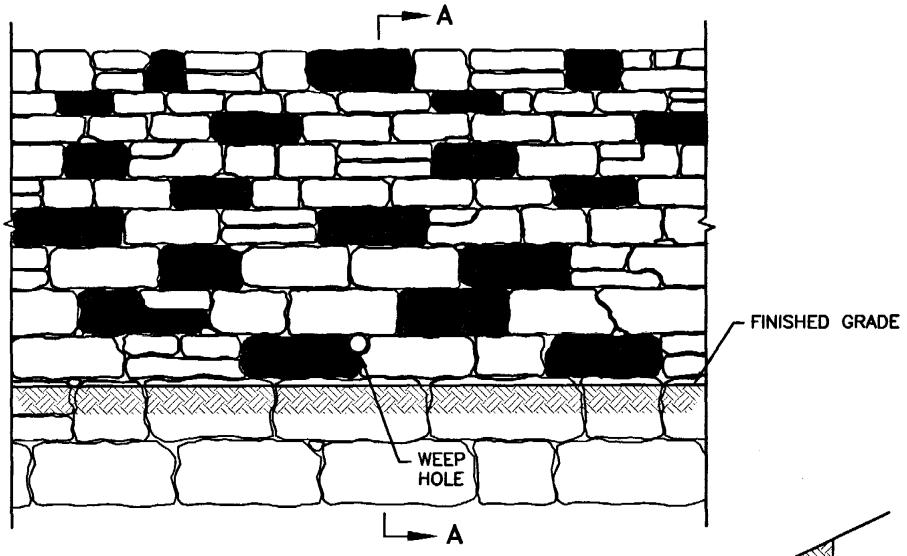
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

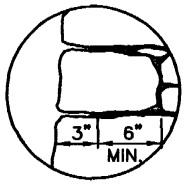
R.I. STANDARD 9.9.0



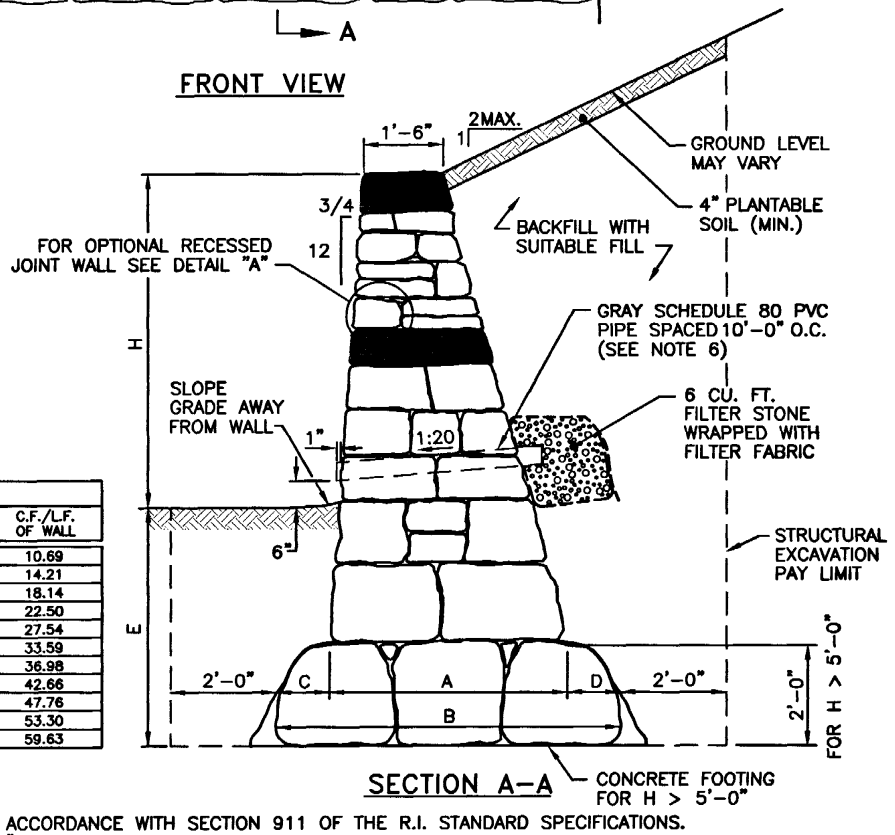
TOP VIEW



FRONT VIEW



DETAIL "A"



SECTION A-A

DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	–	–	–	2'-6"	10.69
3'-0"	3'-8"	–	–	–	2'-6"	14.21
4'-0"	4'-1"	–	–	–	2'-6"	18.14
5'-0"	4'-6"	–	–	–	2'-6"	22.50
6'-0"	–	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	–	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	–	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	–	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	–	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	–	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	–	9'-0"	1'-10"	2'-6"	3'-6"	59.63

NOTES:
1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. JOINTS SHALL NOT EXCEED 1" IN WIDTH.
3. JOINTS ON THE FACE OF WALL SHALL BE POINTED TO THE FACE LINE OF THE WALL UNLESS RECESSED JOINTS ARE CALLED FOR ABOVE GRADE.
4. POINTING OF JOINTS ON TOP OF WALL SHALL BE FLUSH AND PITCHED TO DEFLECT WATER OFF OF THE WALL.
5. DRESS 6" BELOW GRADE FOR FRONT FACE OF WALL.
6. WEEP HOLES SHALL BE CONSTRUCTED OF 3" GRAY SCHEDULE 80 PVC PIPE WHEN H ≤ 5'-0" AND 4" GRAY SCHEDULE 80 PIPE WHEN H >5'-0". ALL PIPE IS TO BE SOLID.
7. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

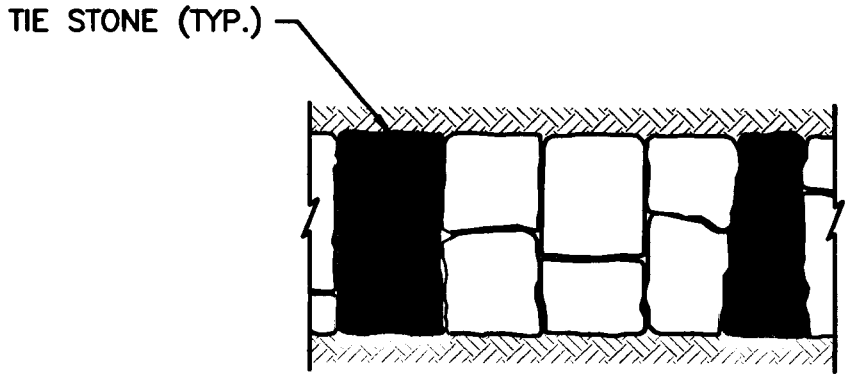
WET STONE MASONRY RETAINING WALL

CHIEF ENGINEER TRANSPORTATION

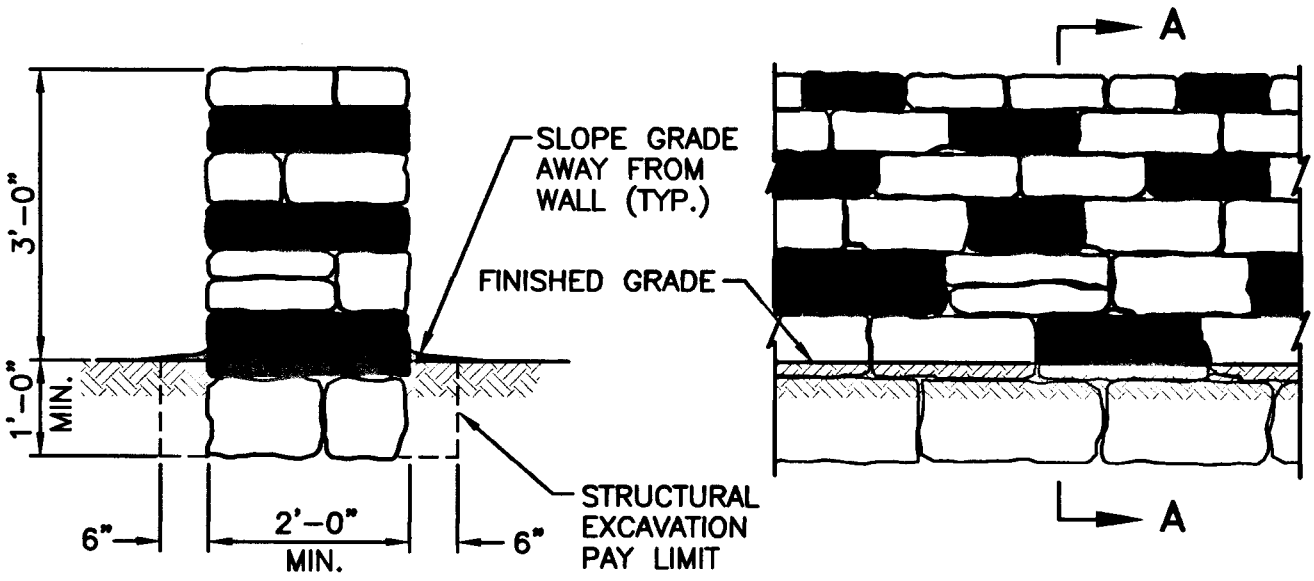
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 10.1.0



PLAN



SECTION A-A

ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 912 OF THE R.I. STANDARD SPECIFICATIONS.
2. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

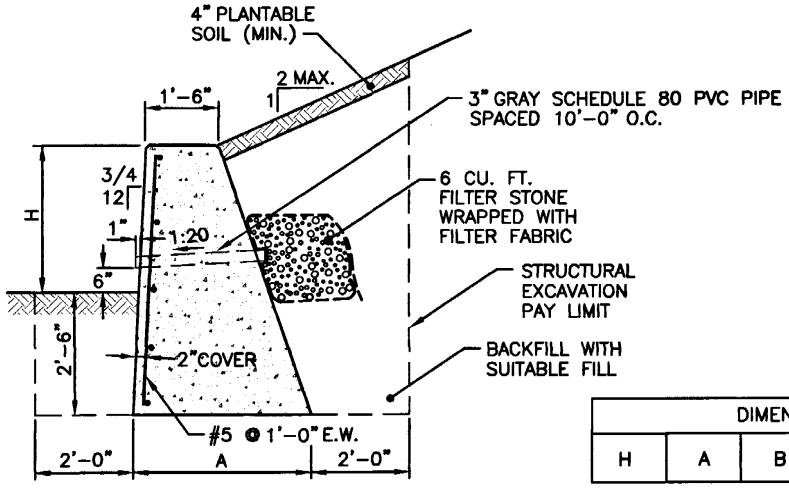
RUBBLE MASONRY WALL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

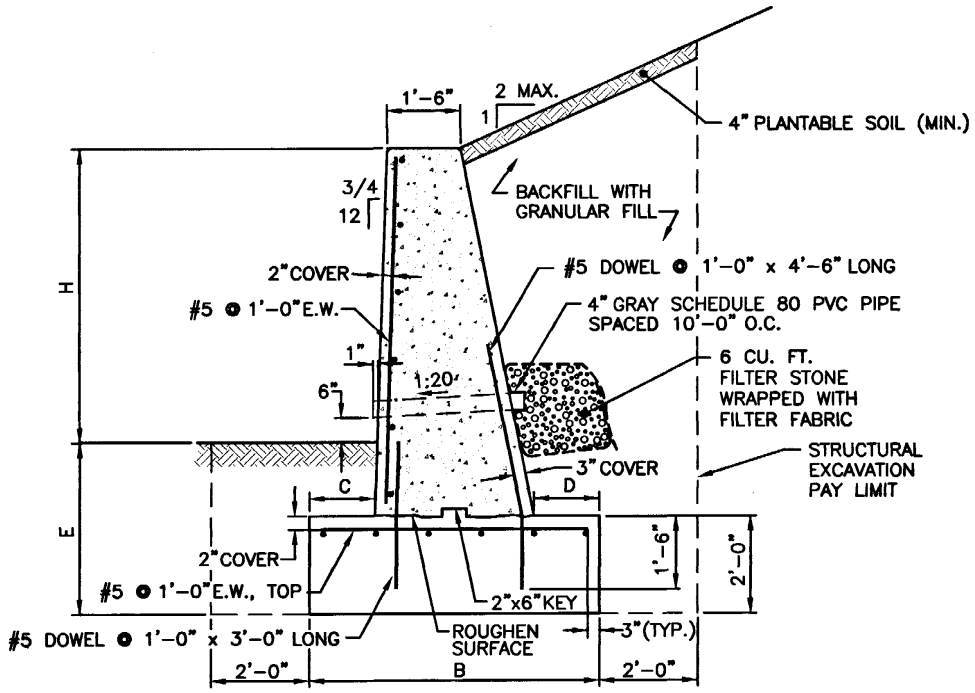
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 10.2.0



H = 2'-0" TO 5'-0"

DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	–	–	–	2'-6"	10.69
3'-0"	3'-8"	–	–	–	2'-6"	14.21
4'-0"	4'-1"	–	–	–	2'-6"	18.14
5'-0"	4'-6"	–	–	–	2'-6"	22.50
6'-0"	–	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	–	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	–	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	–	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	–	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	–	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	–	9'-0"	1'-10"	2'-6"	3'-6"	59.63



H = 6'-0" TO 12'-0"

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 808 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE 1/2" PREFORMED JOINT FILLER AND BEVEL EXPOSED EDGES WITH 3/4" CHAMFER.
3. SEAL BACKFACE WITH 1/4"x1/2" JOINT SEALANT.
4. SURFACE RUB EXPOSED FACE AND TOP.
5. ALL REINFORCING TO BE EPOXY COATED.
6. PROVIDE EXPANSION JOINTS EVERY 25'-0" IN STEMS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

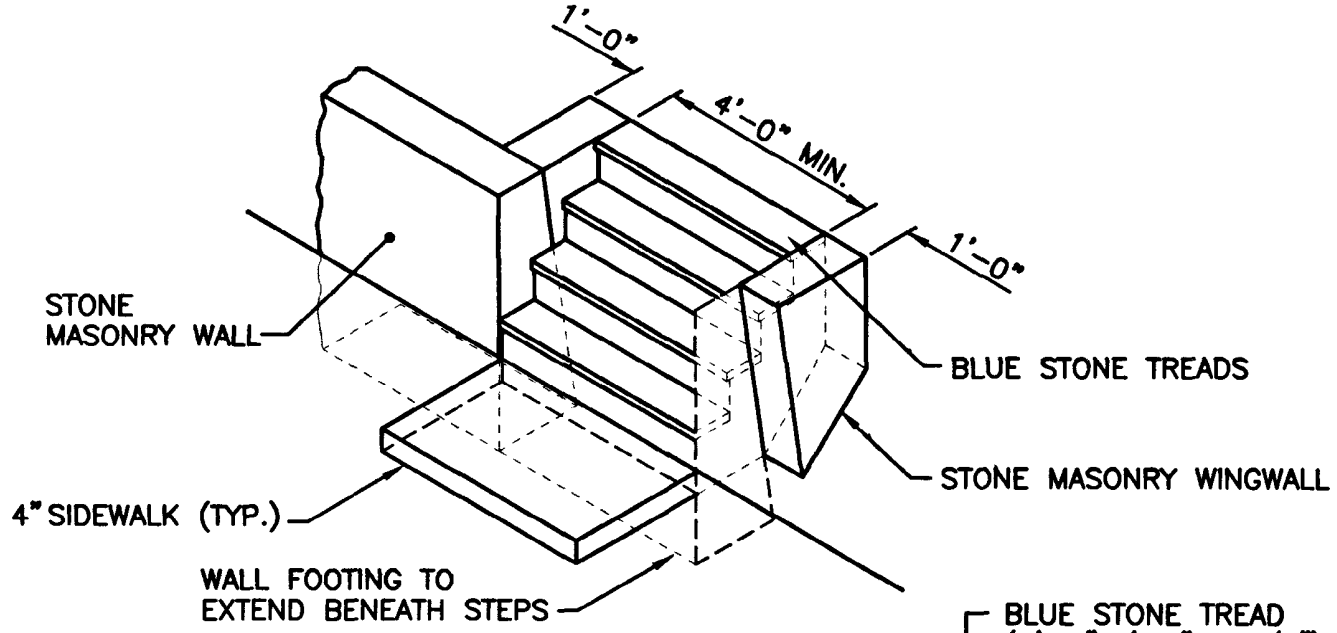
CONCRETE RETAINING WALL

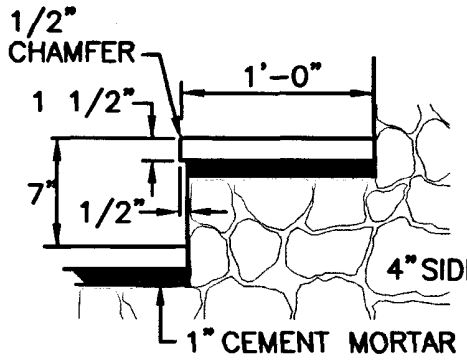
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

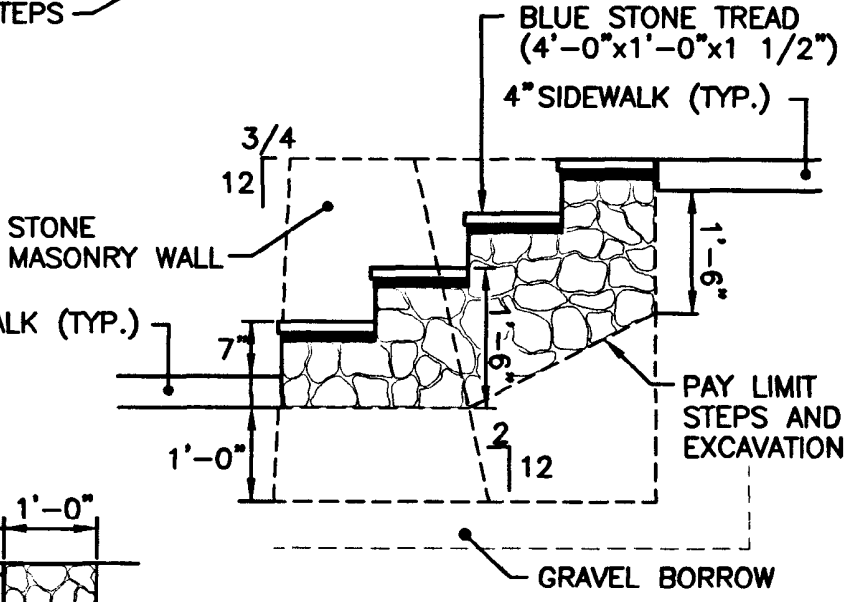
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 10.3.0

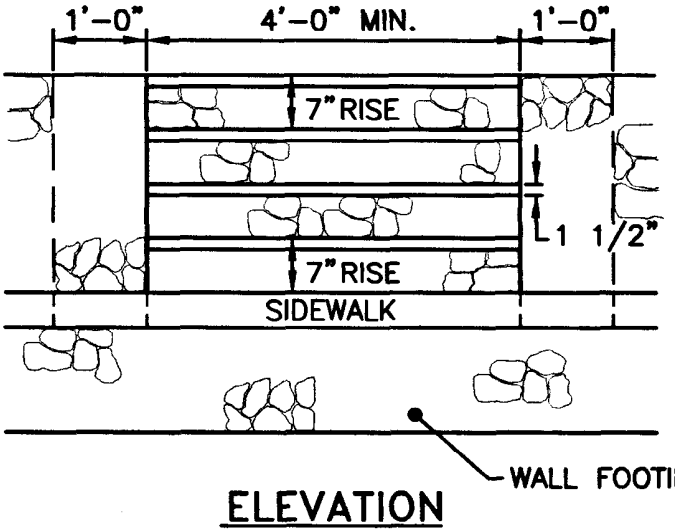




TREAD



SECTION



ELEVATION

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED TOP EDGES OF TREADS TO HAVE 1/2" CHAMFER (SAW OR TOOLED).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

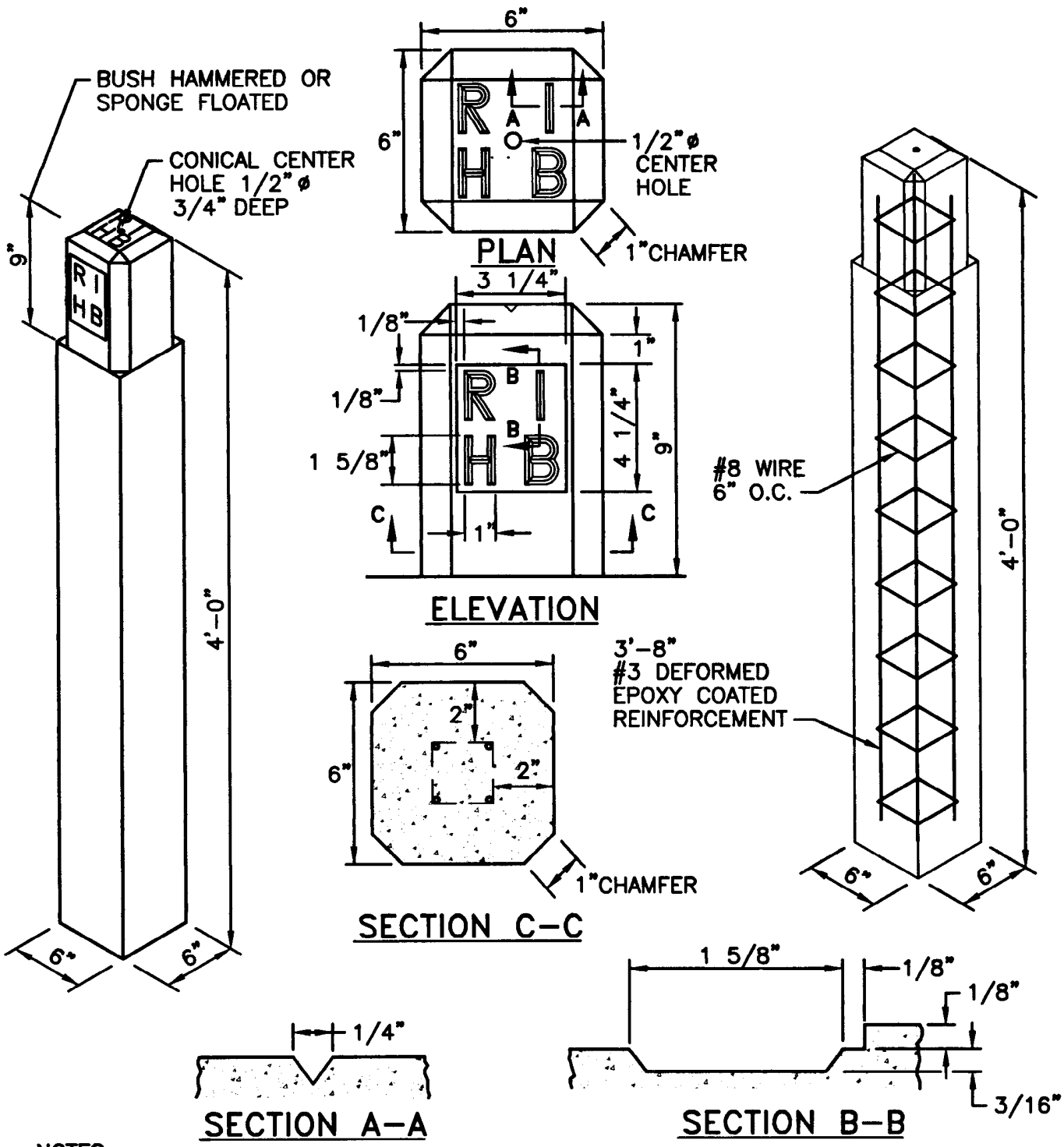
STONE MASONRY STEPS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 10.4.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. #3 DEFORMED EPOXY COATED REINFORCEMENT TO CLEAR TOP AND BOTTOM BY 2".
3. #8 EPOXY COATED WIRE TO CLEAR TOP AND BOTTOM BY 3".
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

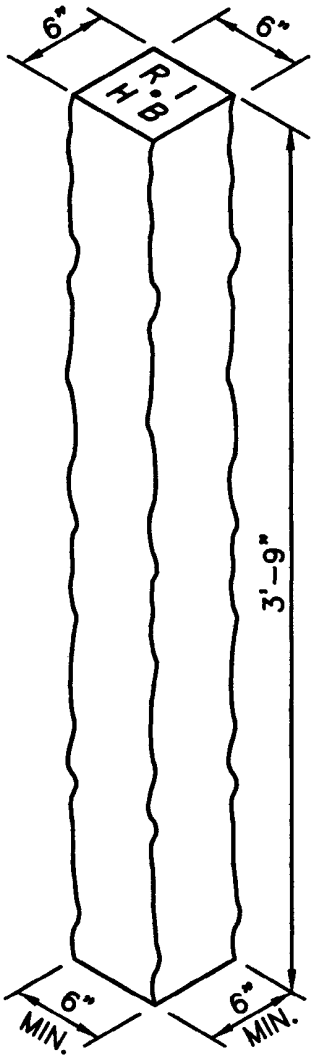
CONCRETE HIGHWAY BOUND

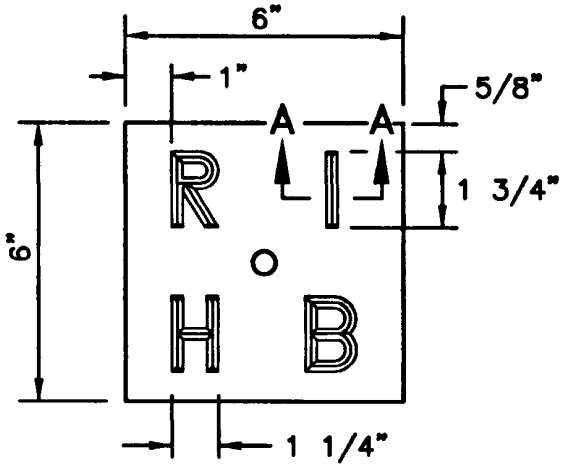
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

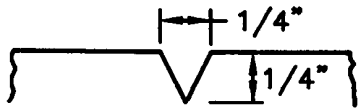
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.1.0





PLAN



SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. BOUND TO BE QUARRY SPLIT FROM FINE GRAIN GRANITE FREE FROM NATURAL FRACTURES, SEAMS, LAMINATIONS, CRACKS OR IMPURITIES.
3. TOP SURFACE OF BOUND TO BE DRESSED OR SAWED.
4. CONICAL DRILL HOLE IN CENTER OF TOP TO BE 1/4" ø AND 3/4" DEEP.
5. BOTTOM TO BE AT LEAST 6" SQUARE AND FLAT.
6. LETTERS "RIHB" ON TOP TO BE OF DIMENSIONS AS SHOWN.
7. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

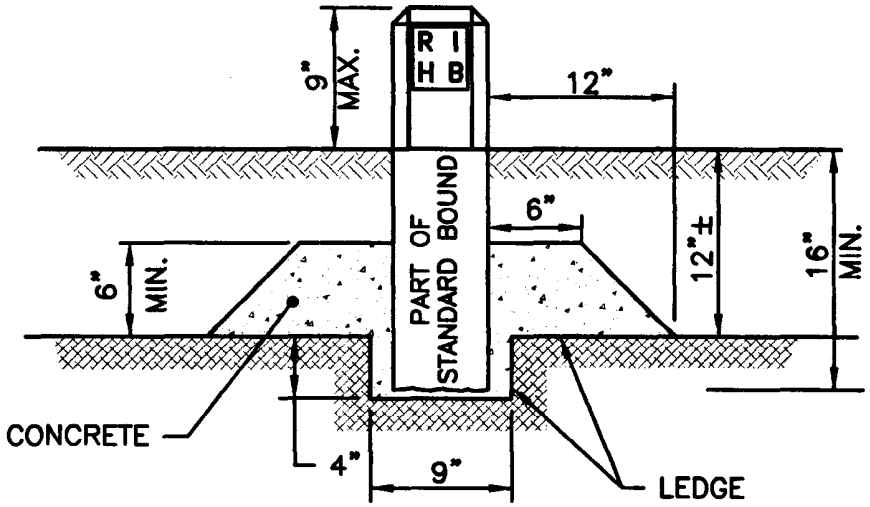
GRANITE HIGHWAY BOUND

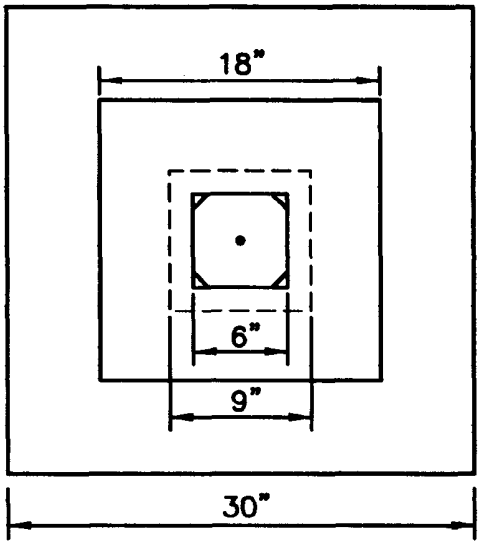
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.2.0





NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE STD. 14.1.0 OR STD. 14.2.0 FOR DETAILS OF BOUND.
3. 9" SQUARE HOLE, 4" DEEP TO BE CHIPPED IN LEDGE.
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

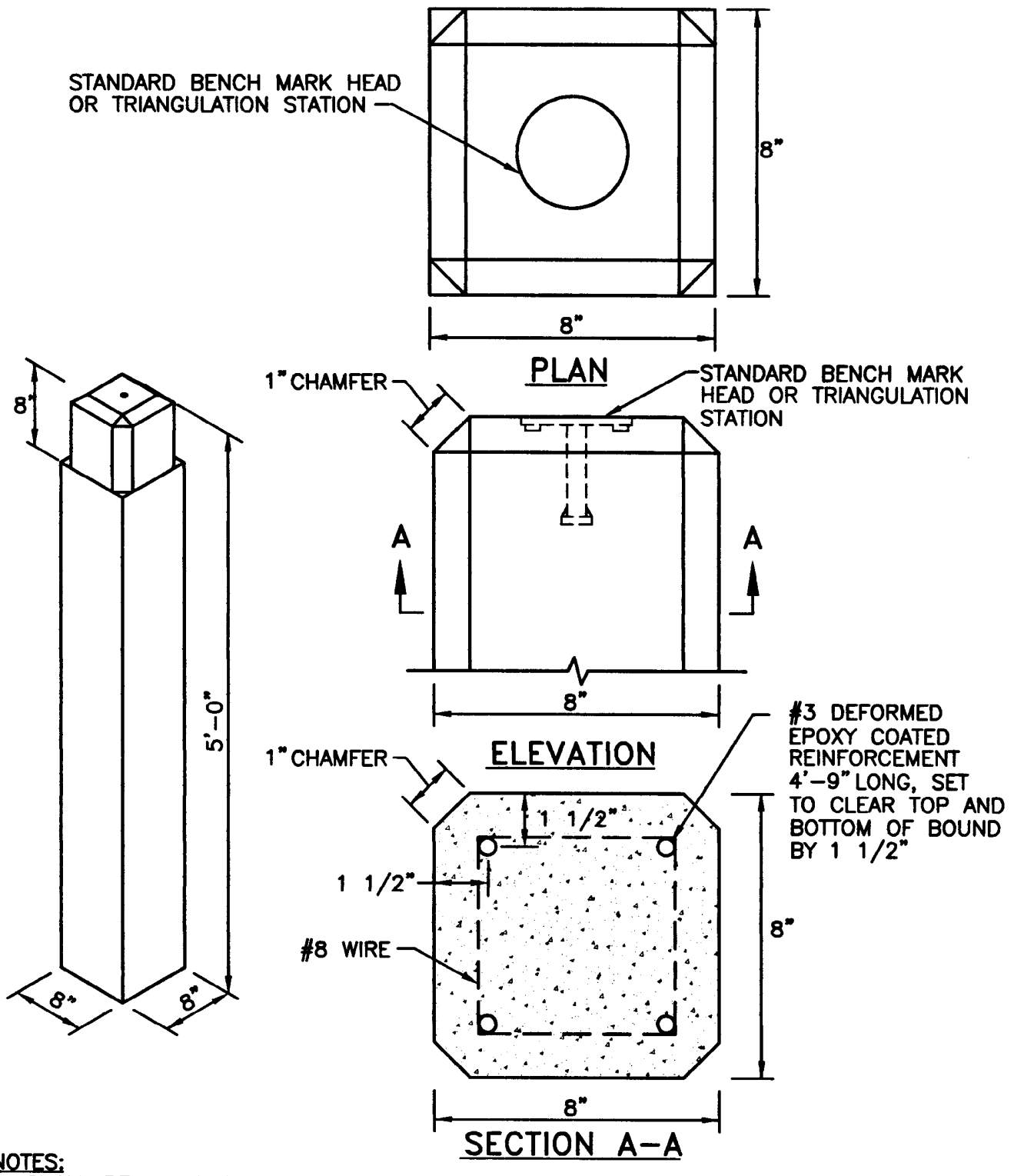
HIGHWAY BOUND SET IN CONCEALED LEDGE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.3.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. MONUMENTS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

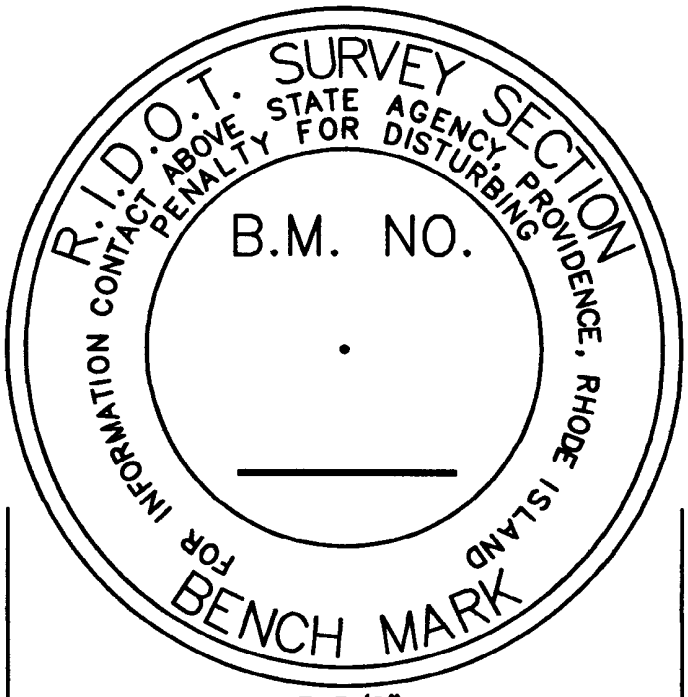
REINFORCED CONCRETE PRECISE LEVEL MONUMENT

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

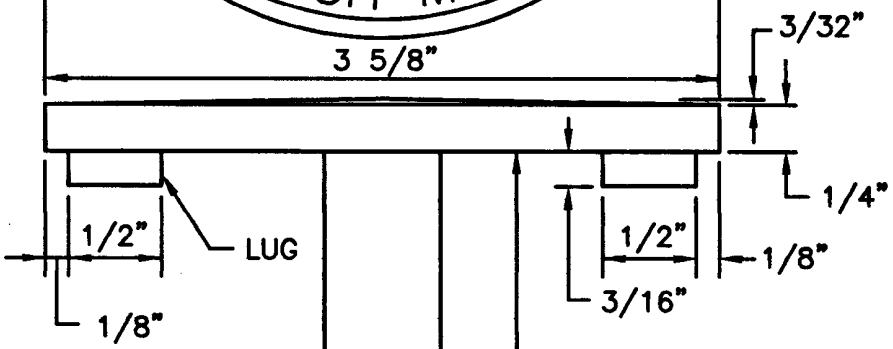
JUNE 15, 1998
ISSUE DATE

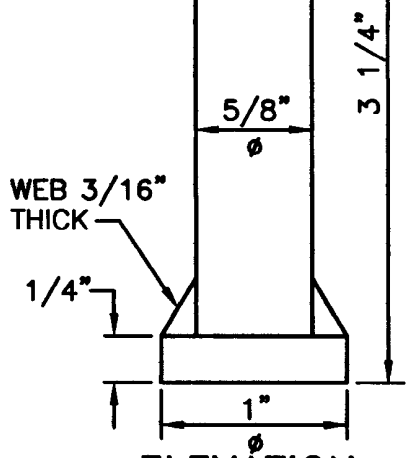
R.I. STANDARD 14.4.0



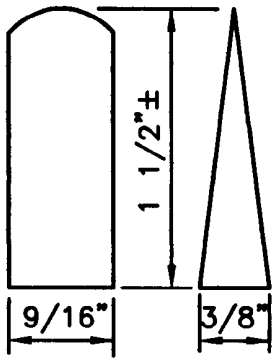
NOTES:

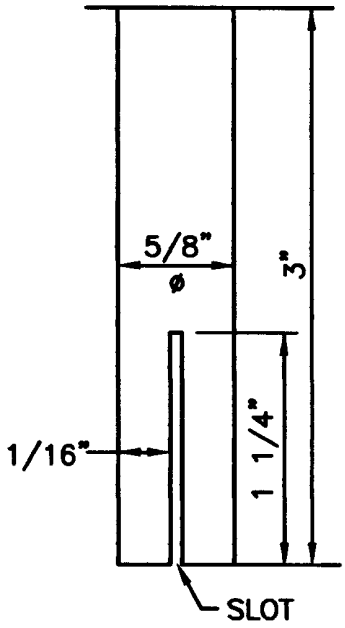
1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH
   3/64" STROKE
   1/32" INSET
3. MIDDLE LETTERS: 1/4" HIGH
   1/32" STROKE
   1/64" INSET
4. INNER LETTERS: 3/32" HIGH
   1/32" STROKE
   1/64" INSET
5. CIRCLES: 1/32" STROKE
   1/64" INSET
   CENTER PUNCHMARK– 1/32" INSET





ELEVATION
CONCRETE INSERT TYPE





ELEVATION
LEDGE TYPE SHANK

STEEL WEDGE FOR LEDGE SHANK

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

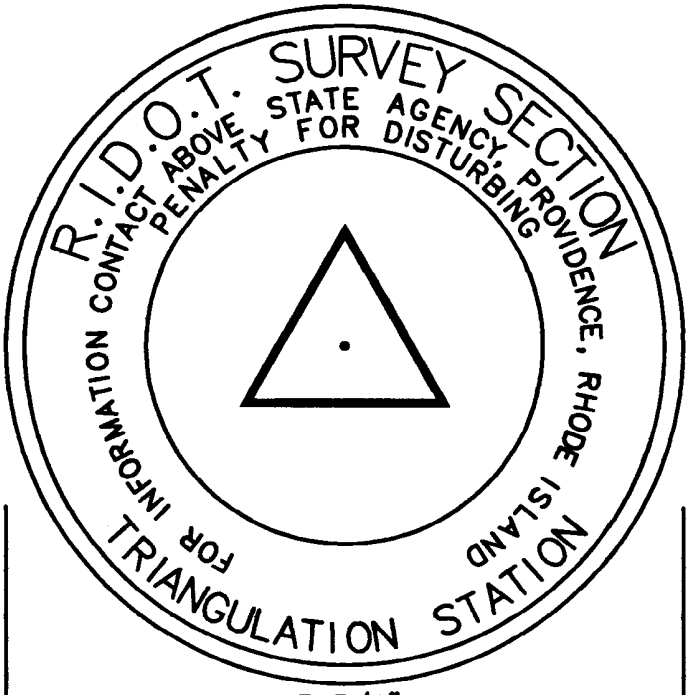
STANDARD BENCH MARK HEADS

CHIEF ENGINEER
TRANSPORTATION

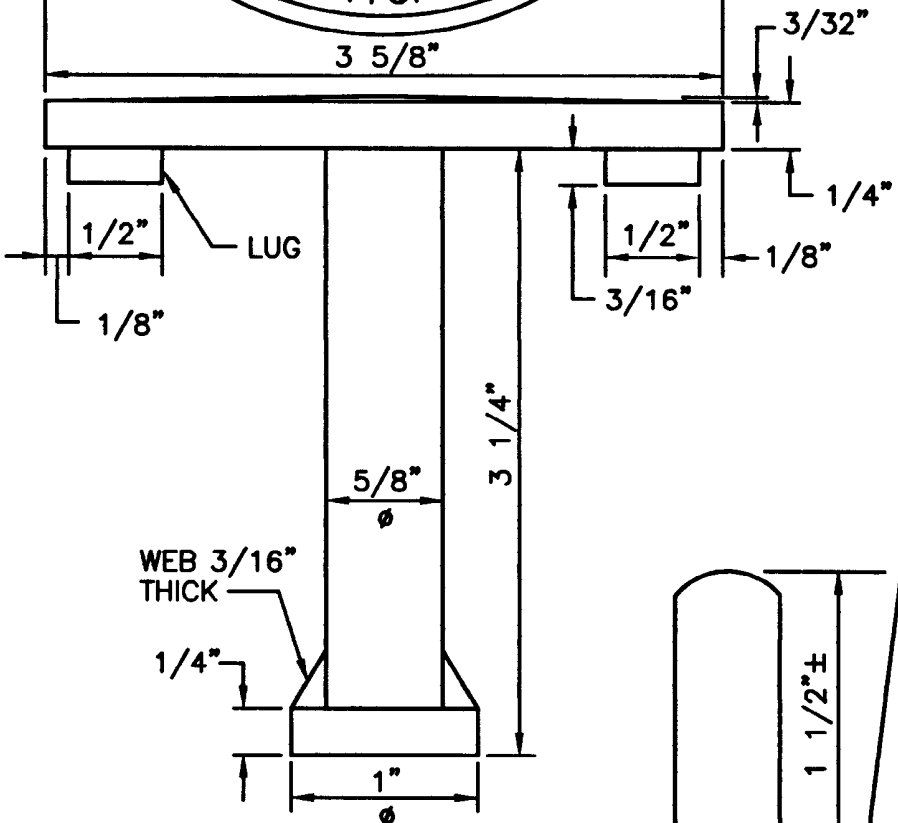
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

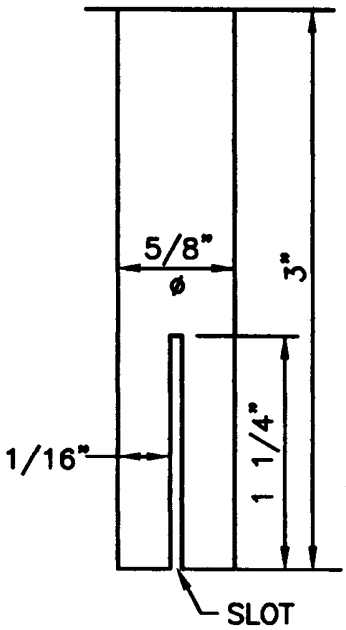
R.I. STANDARD 14.4.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH
   3/64" STROKE
   1/32" INSET
3. MIDDLE LETTERS: 1/8" HIGH
   1/32" STROKE
   1/64" INSET
4. INNER LETTERS: 3/32" HIGH
   1/32" STROKE
   1/64" INSET
5. CIRCLES: 1/32" STROKE
   1/64" INSET
6. TRIANGLE: 3/64" STROKE
   1/32" INSET
   CENTER PUNCHMARK– 1/32" INSET



TRIANGULATION CONCRETE INSERT TYPE



TRIANGULATION LEDGE TYPE SHANK

STEEL WEDGE FOR LEDGE SHANK

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

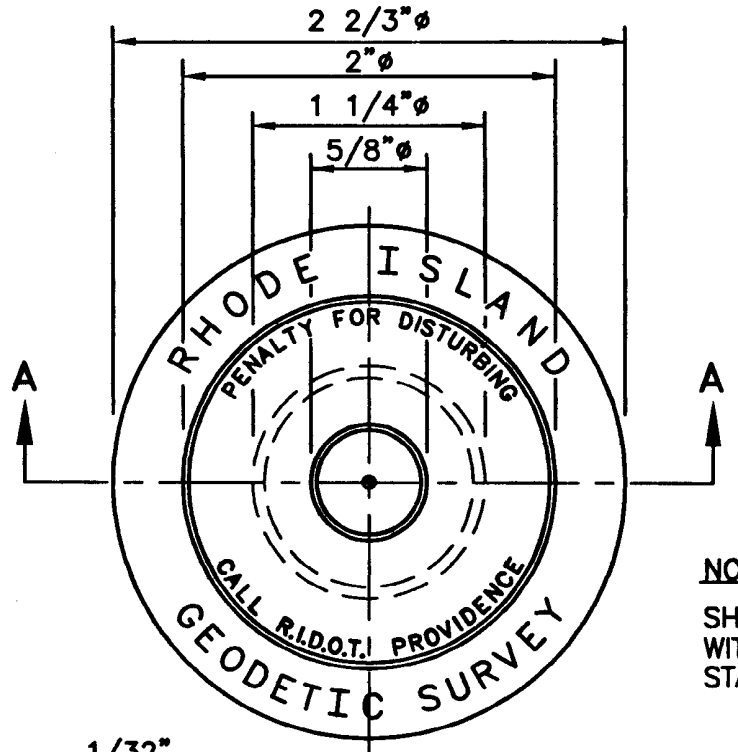
STANDARD MARKER TRIANGULATION STATION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

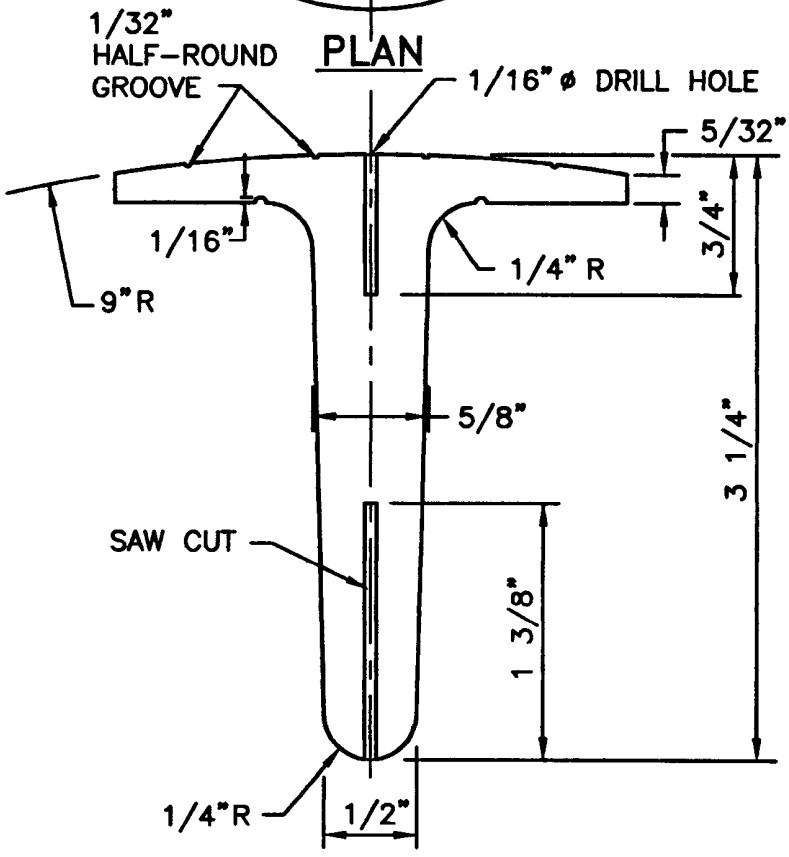
R.I. STANDARD 14.4.2



PLAN

NOTE:

SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

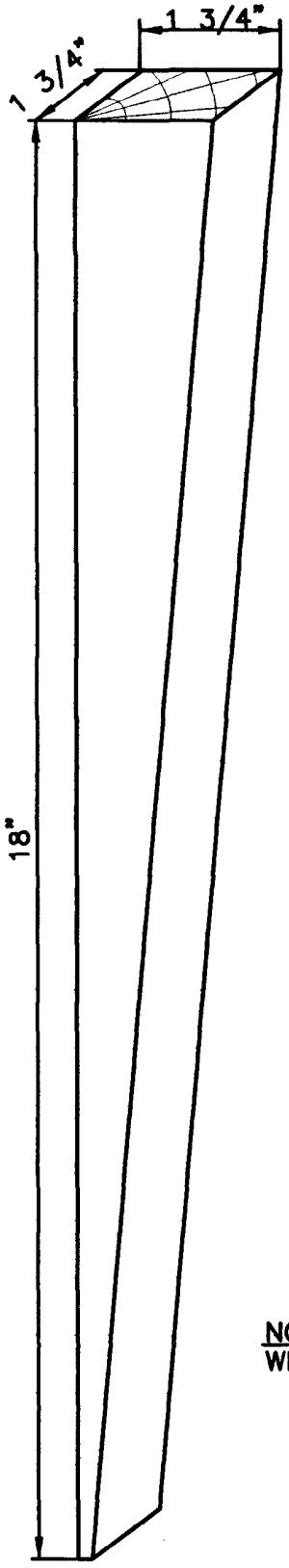
GEODETIC SURVEY DISK

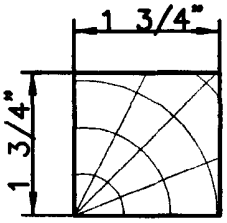
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.4.3





PLAN

NOTE:
WEDGE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

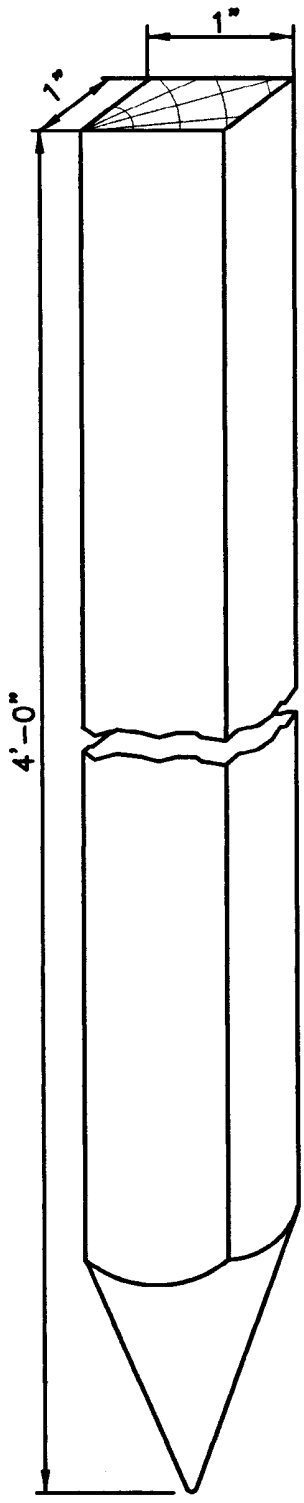
SURVEY WEDGE

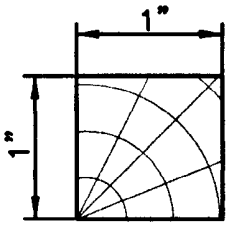
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.5.0





PLAN

NOTE:
STAKE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

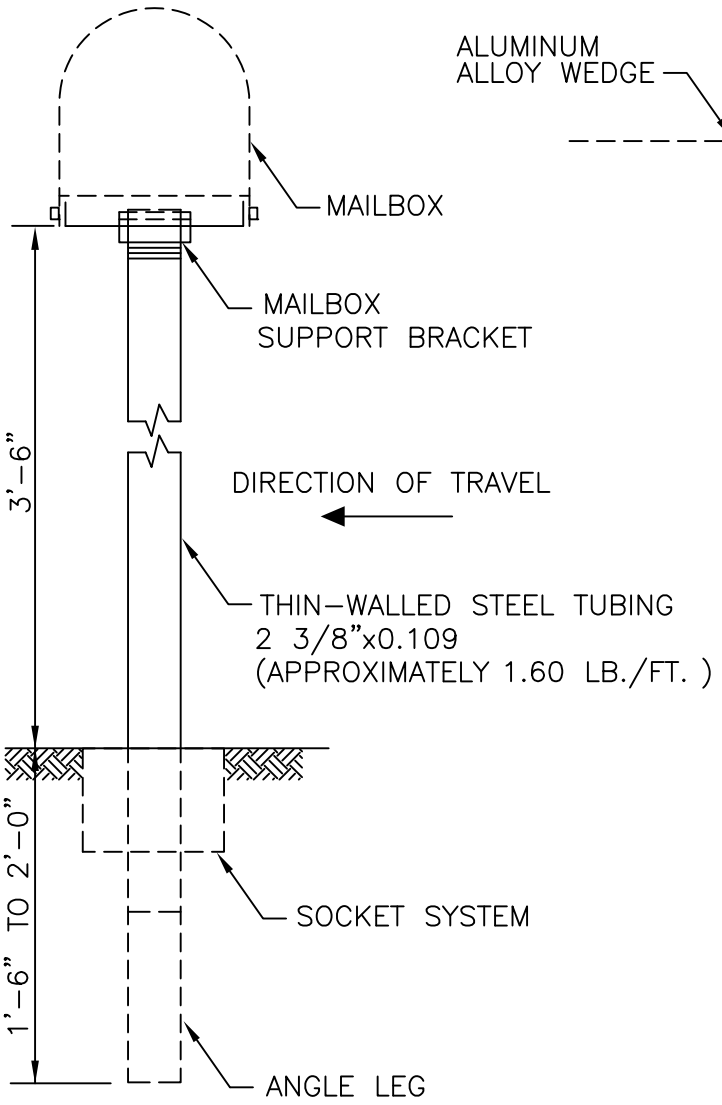
SURVEY STAKE

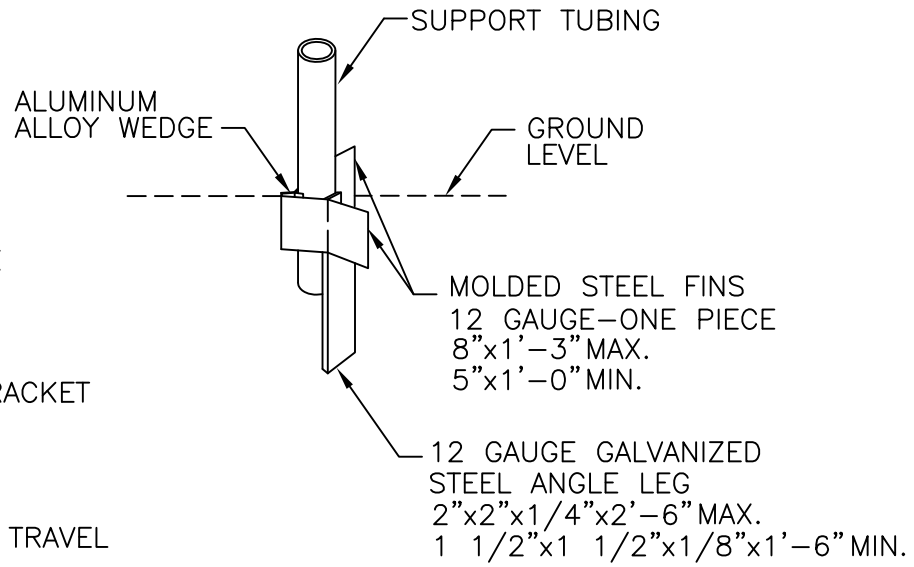
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

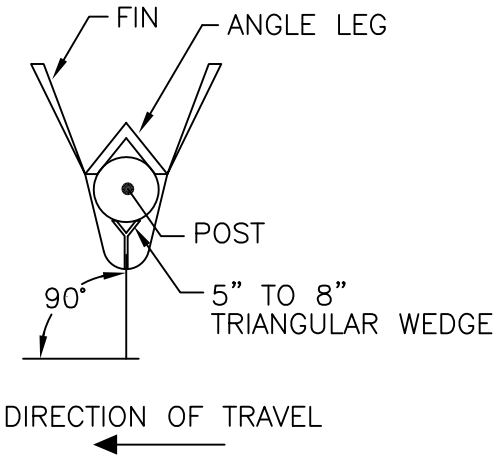
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 14.5.1





SOCKET DETAIL



SOCKET PLAN VIEW

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR WILL REPLACE EXISTING BOX IF BOX DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER ADVICE OF LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED, THE MINIMUM SPACING OF SUPPORT POSTS SHALL BE 3'-0".
6. USE 8-0.1875"x0.75" BOLTS WITH LOCKWASHERS FOR ALL SIZE BOXES (4 EACH SIDE).
7. USE WITH RI STANDARD DETAIL 15.1.1.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	06/01/10

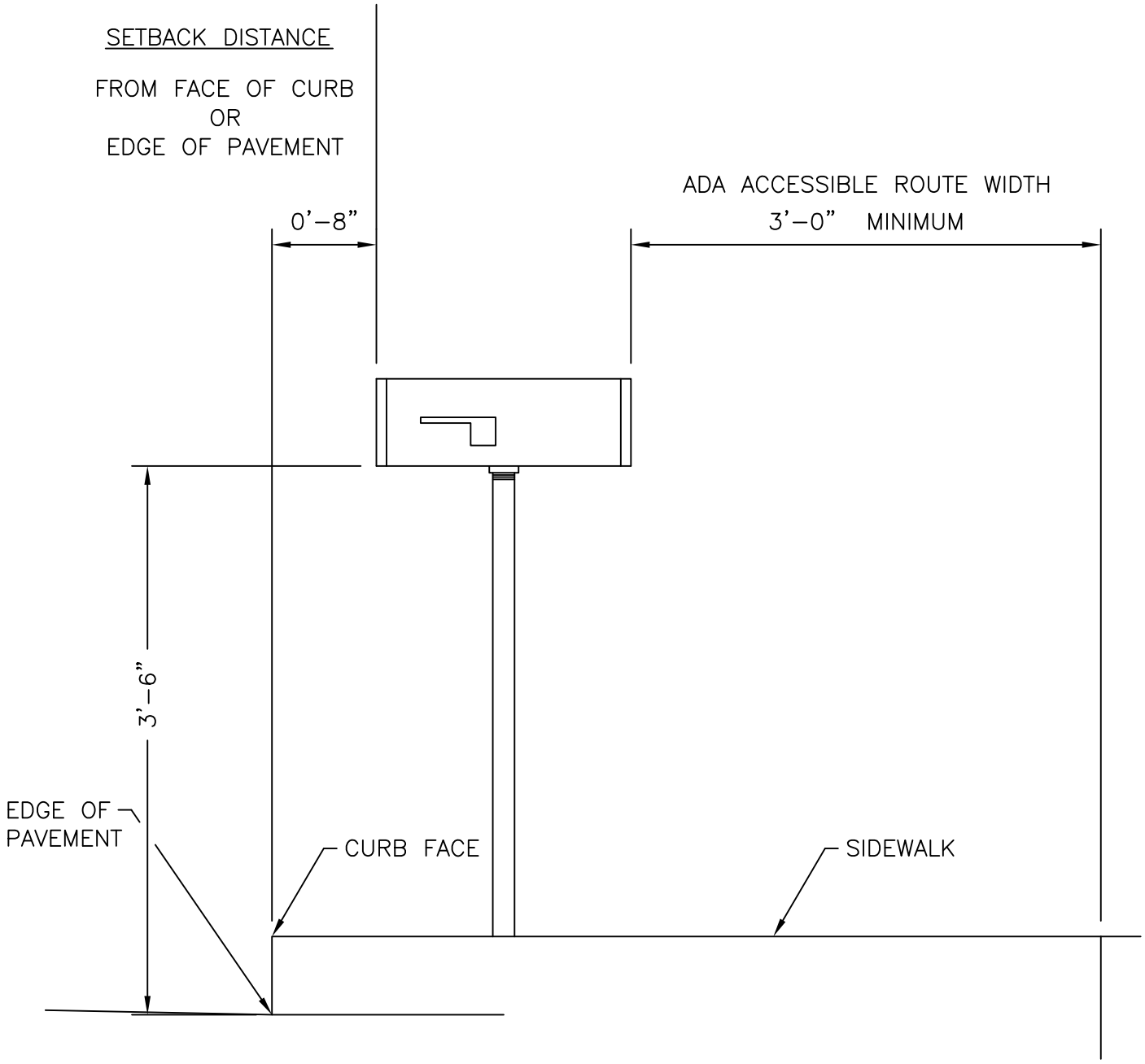
POST AND MOUNTING FOR RURAL MAILBOX

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 15.1.0



NOTES:
1. SHALL BE WHEN INSTALLING RURAL MAILBOXES RI STANDARD NOS. 15.1.0 AND 15.2.0.
2. MAILBOXES SHALL BE SET TO PROVIDE 3'–0" OF CLEARANCE BETWEEN THE BACK FACE OF MAILBOX AND BACK OF SIDEWALK OR OBSTRUCTION.
3. LOCATION OF POSTS TO BE SET UNDER ADVICE OF LOCAL MAIL CARRIER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

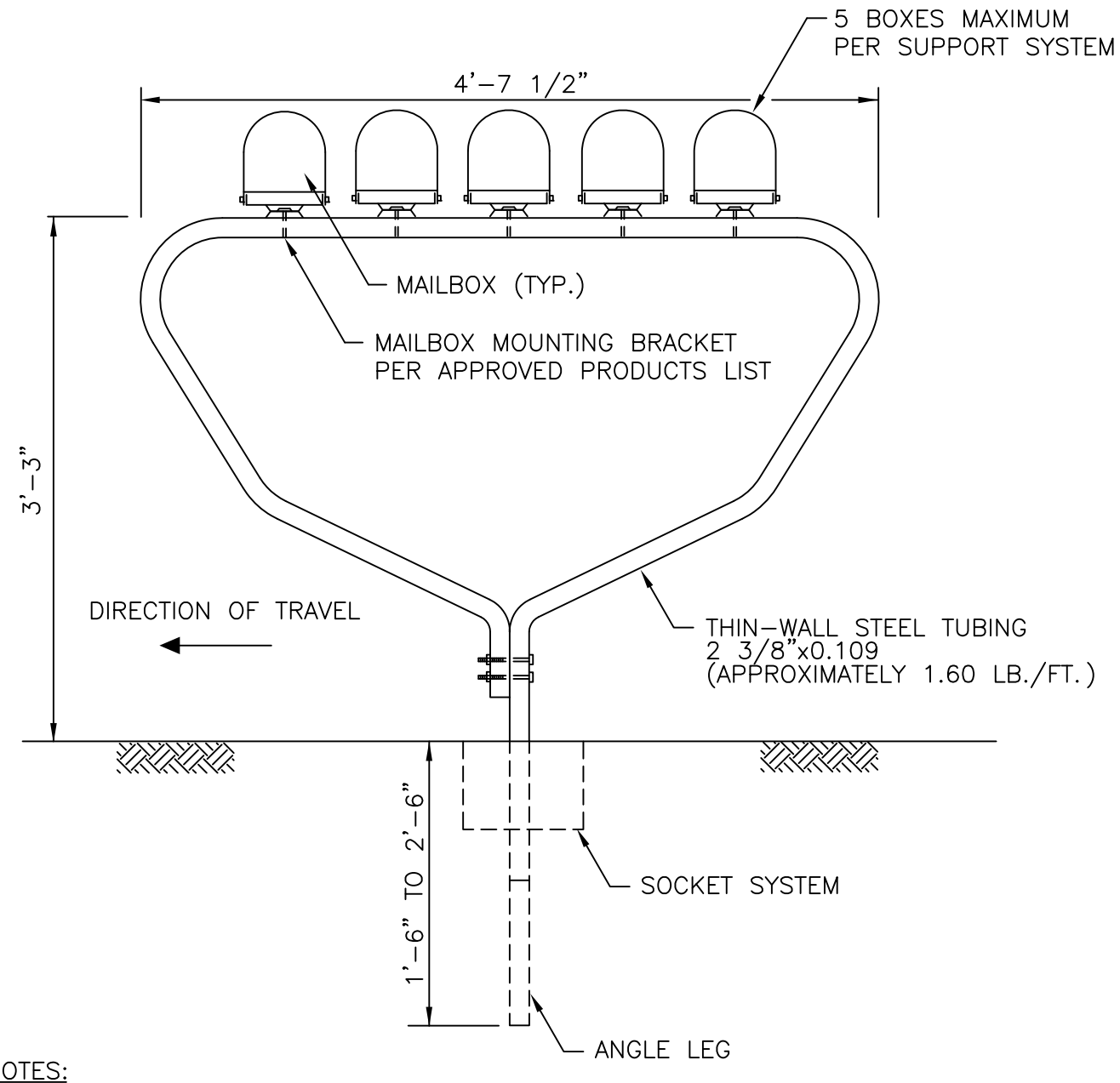
SETTING AND MOUNTING DIMENSIONS FOR RURAL MAILBOX

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

June 1, 2010
ISSUE DATE

R.I. STANDARD 15.1.1



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL REPLACE EXISTING BOX IF IT DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER THE ADVICE OF THE LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED THE MINIMUM SPACING OF THE SUPPORT POSTS SHALL BE 4'–7 1/2".
6. FOR SOCKET SYSTEM DETAILS SEE STD. 15.1.0.
7. USE WITH RI STANDARD DETAIL 15.1.1.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	06/01/10

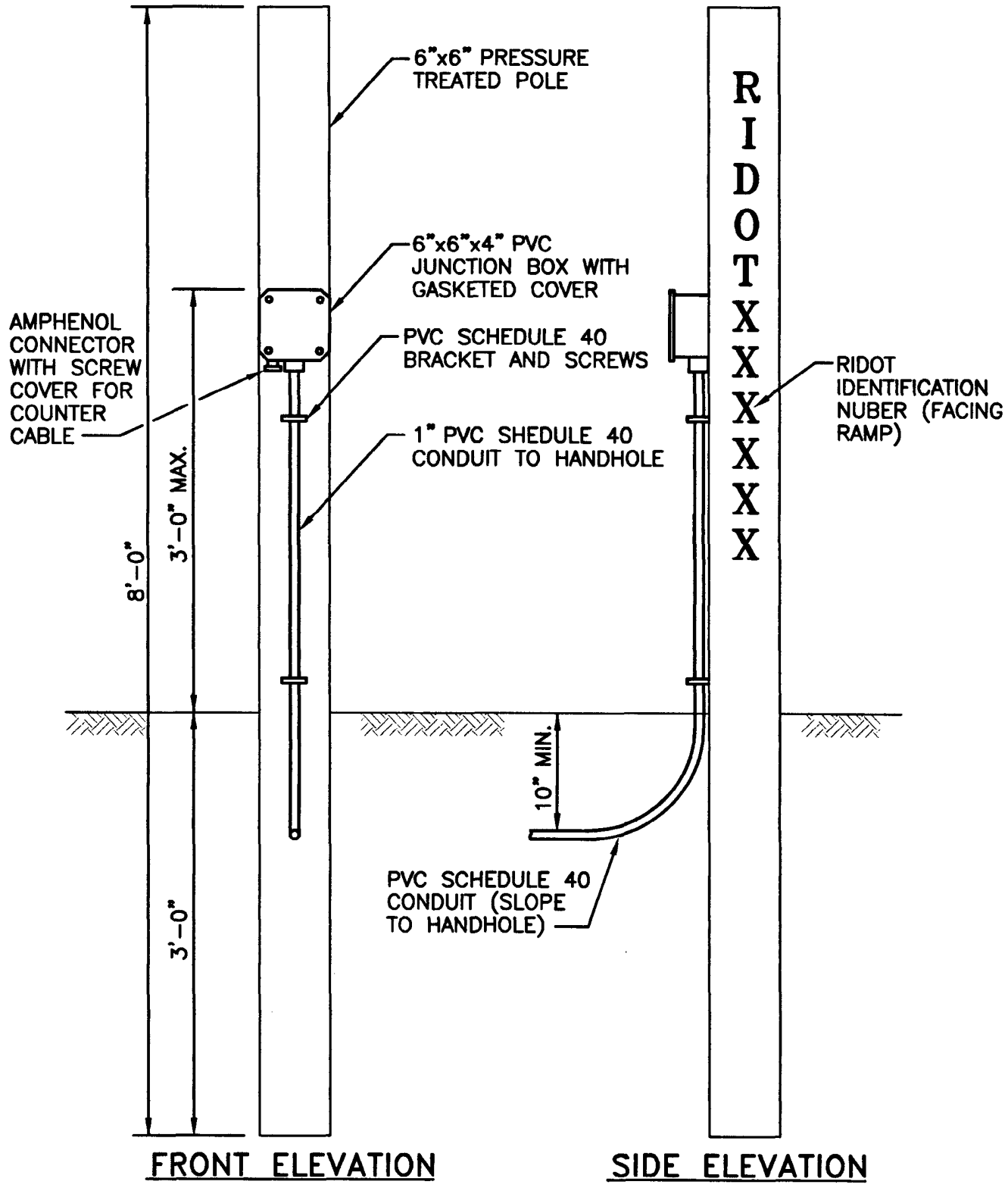
POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES

James R. Cagaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund D. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 15.2.0



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

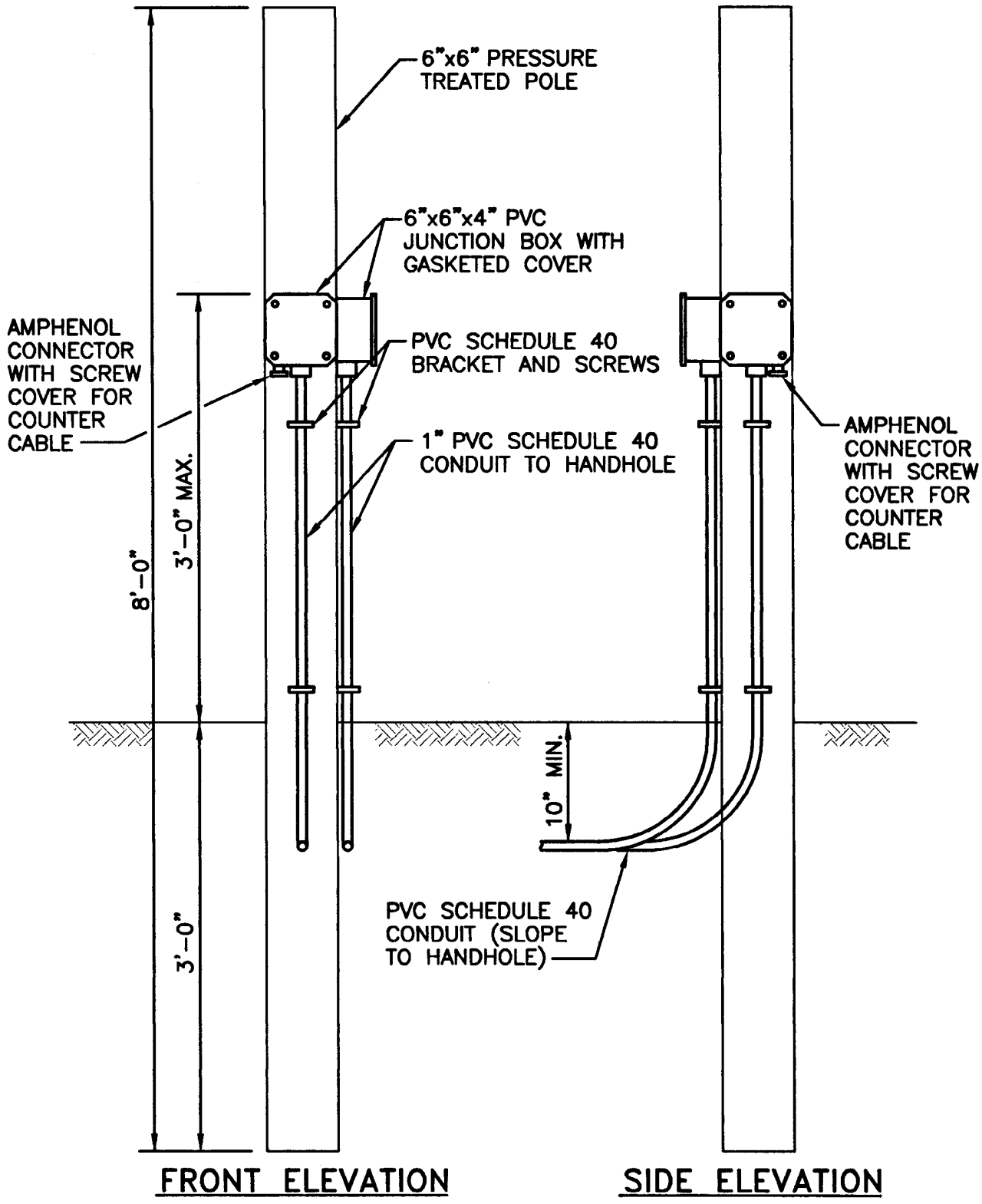
TRAFFIC MONITORING STATION
SINGLE JUNCTION BOX WOOD POST DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.1.0



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

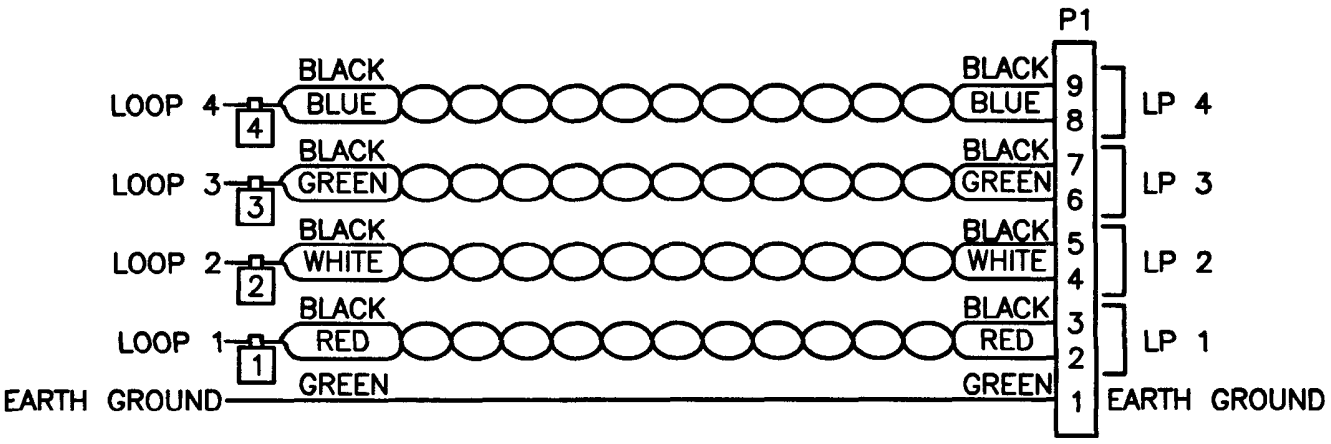
TRAFFIC MONITORING STATION DOUBLE JUNCTION BOX WOOD POST DETAIL

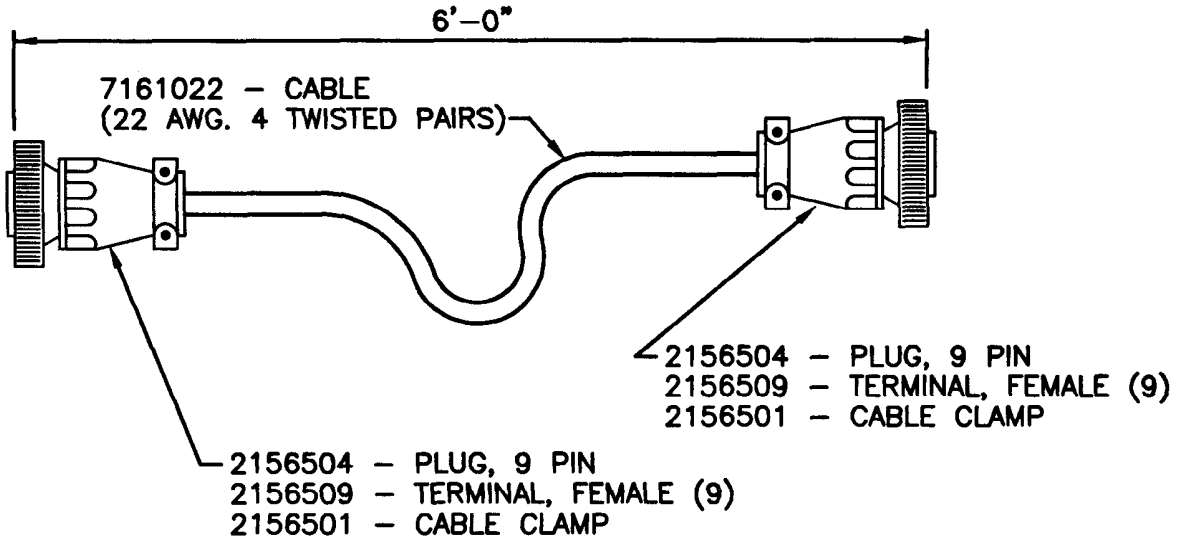
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.1.1





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

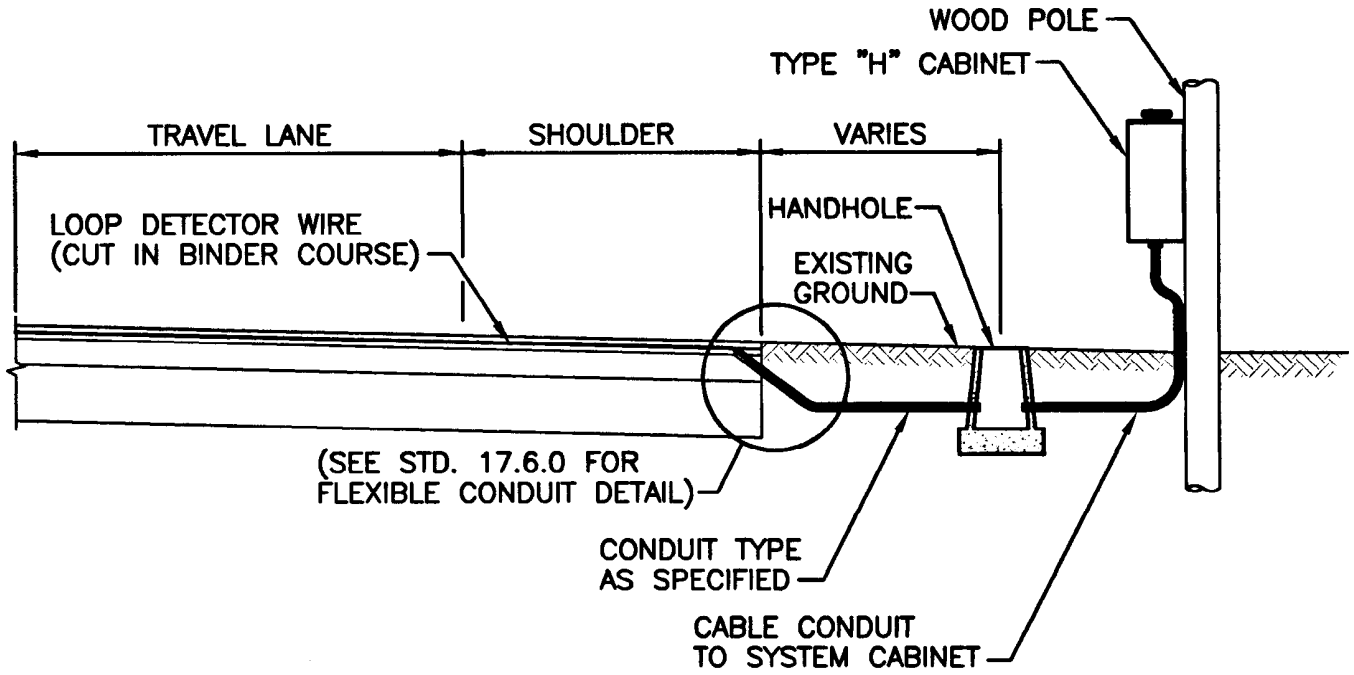
TRAFFIC MONITORING STATION PORTABLE COMPUTER CABLE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.2.0



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

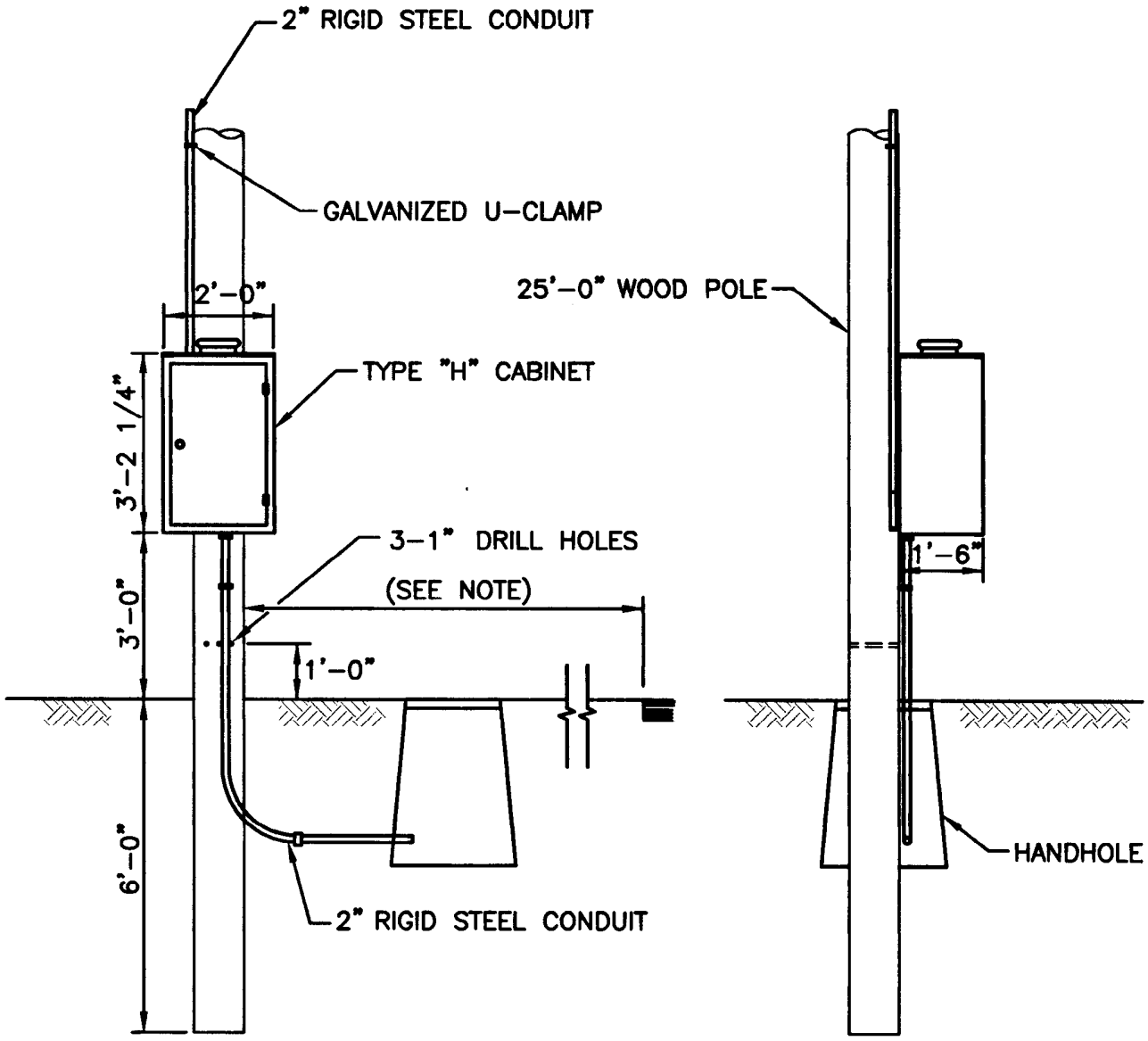
TRAFFIC MONITORING STATION POLE MOUNTED CABINET

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.3.0



FRONT ELEVATION

SIDE ELEVATION

NOTE:
1. TYPE "H" CABINET MUST BE LOCATED A MIN. OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.
2. PROVIDE WEATHER HEAD AT TOP OF POLE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

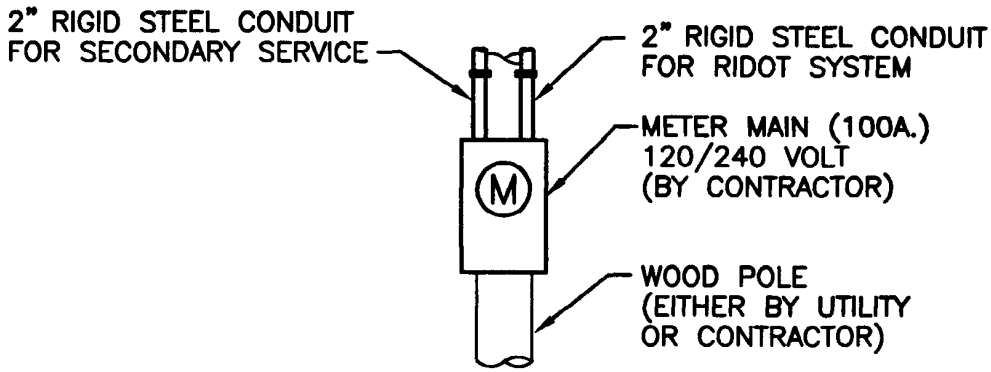
TRAFFIC MONITORING STATION
TYPE "H" CABINET
POST MOUNTED INSTALLATION

CHIEF ENGINEER
TRANSPORTATION

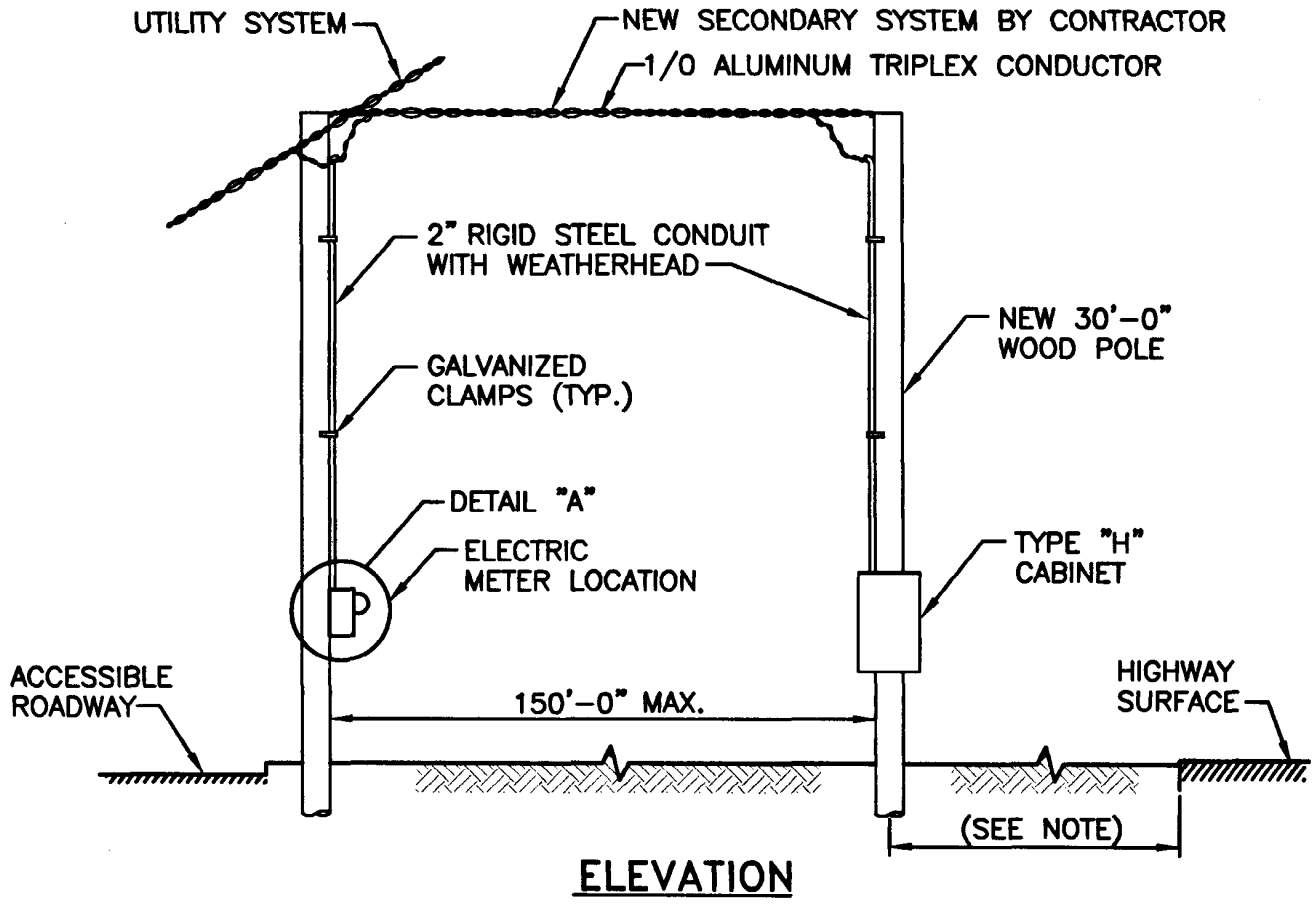
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.3.1



DETAIL "A"



ELEVATION

NOTE:
TYPE "H" CABINET MUST BE LOCATED A MINIMUM OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

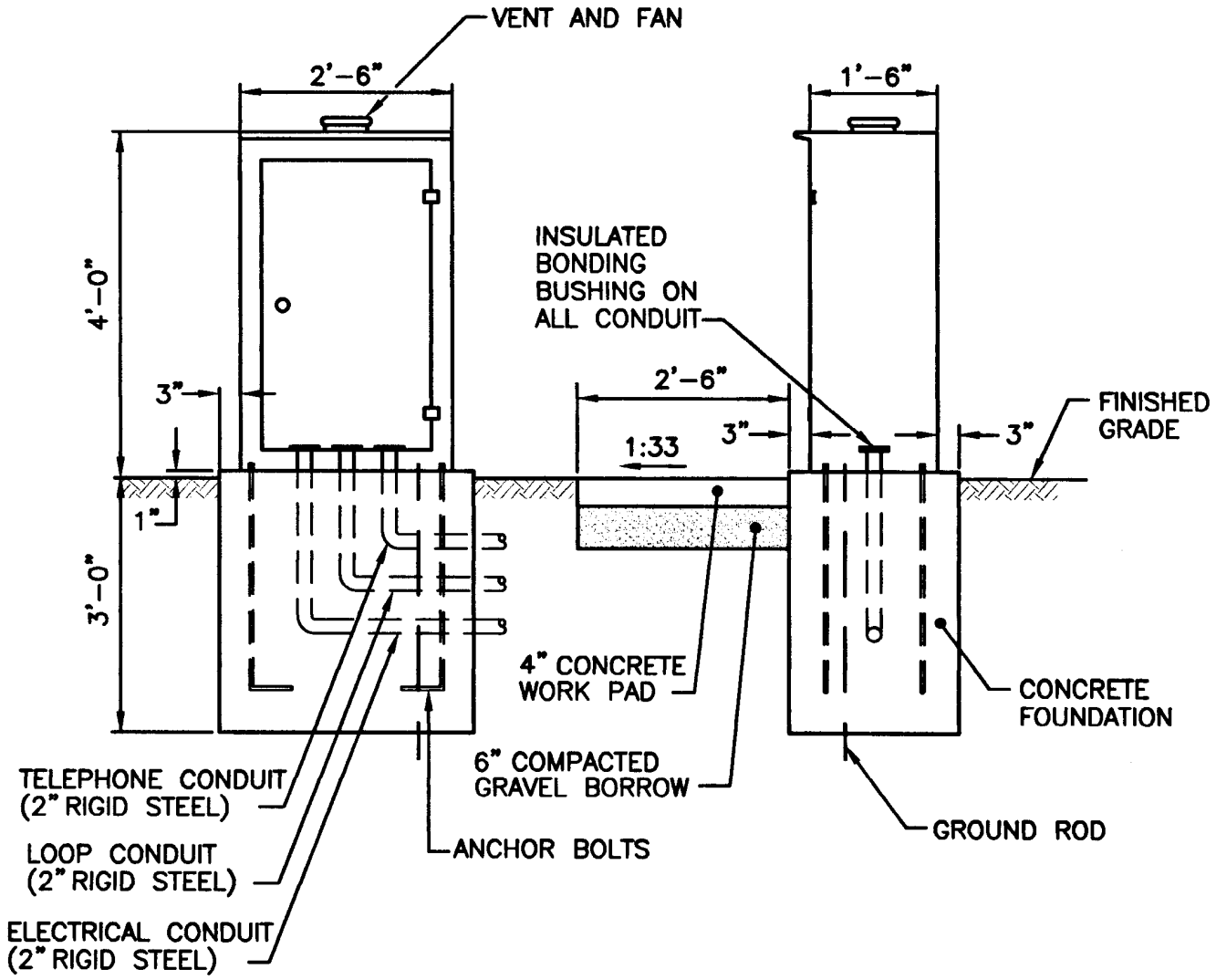
TRAFFIC MONITORING STATION
TYPE "H" CABINET – ELECTRIC SERVICE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.3.2



FRONT ELEVATION

SIDE ELEVATION

NOTE:
GASKET AND/OR CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHERTIGHT SEAL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

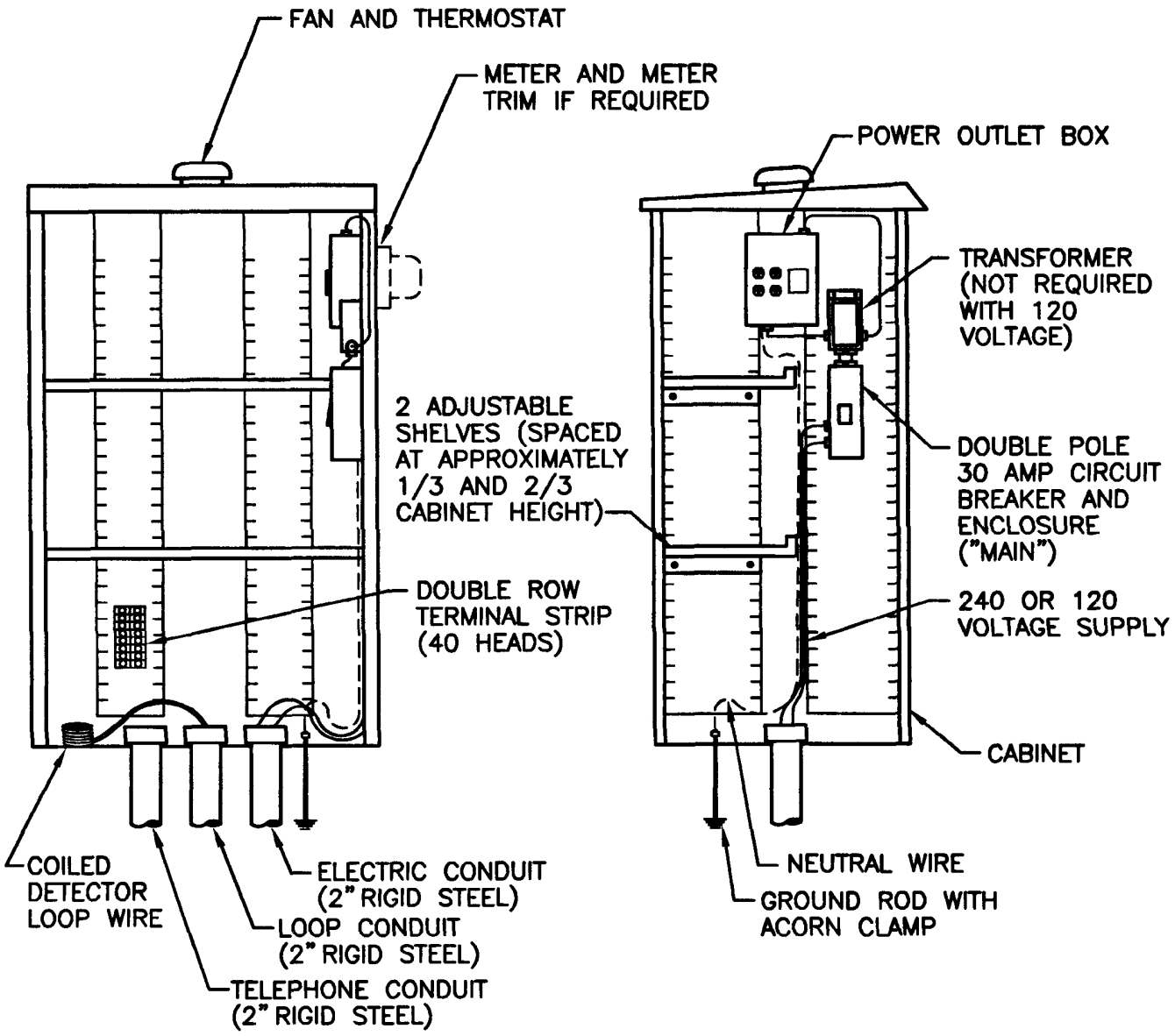
TRAFFIC MONITORING STATION
CONTROLLER CABINET
GROUND MOUNTED INSTALLATION

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.4.0



FRONT SECTION

SIDE SECTION

NOTES:

1. TRANSFORMER MUST BE WIRED TO ALLOW 120 SECONDARY VOLTAGE AT POWER OUTLET BOX.
2. WIRING SHOWN WITHOUT METER. IF METER IS REQUIRED, WIRE METER BETWEEN CONDUIT AND "MAIN."
3. 3/4" MARINE PLYWOOD TO BE USED AS BACKING TO MOUNT ACCESSORIES.
4. DOUBLE POLE BREAKER SWITCH REQUIRED FOR 220 VOLTAGE ONLY. SINGLE POLE BREAKER WITH ENCLOSURE MAY BE USED FOR 110 VOLTAGE.
5. INSTALLATION TO INCLUDE TELEPHONE JACK, PULL CHAIN LIGHT AND SURGE ARRESTOR.
6. PROVIDE 60 AMP SERVICE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

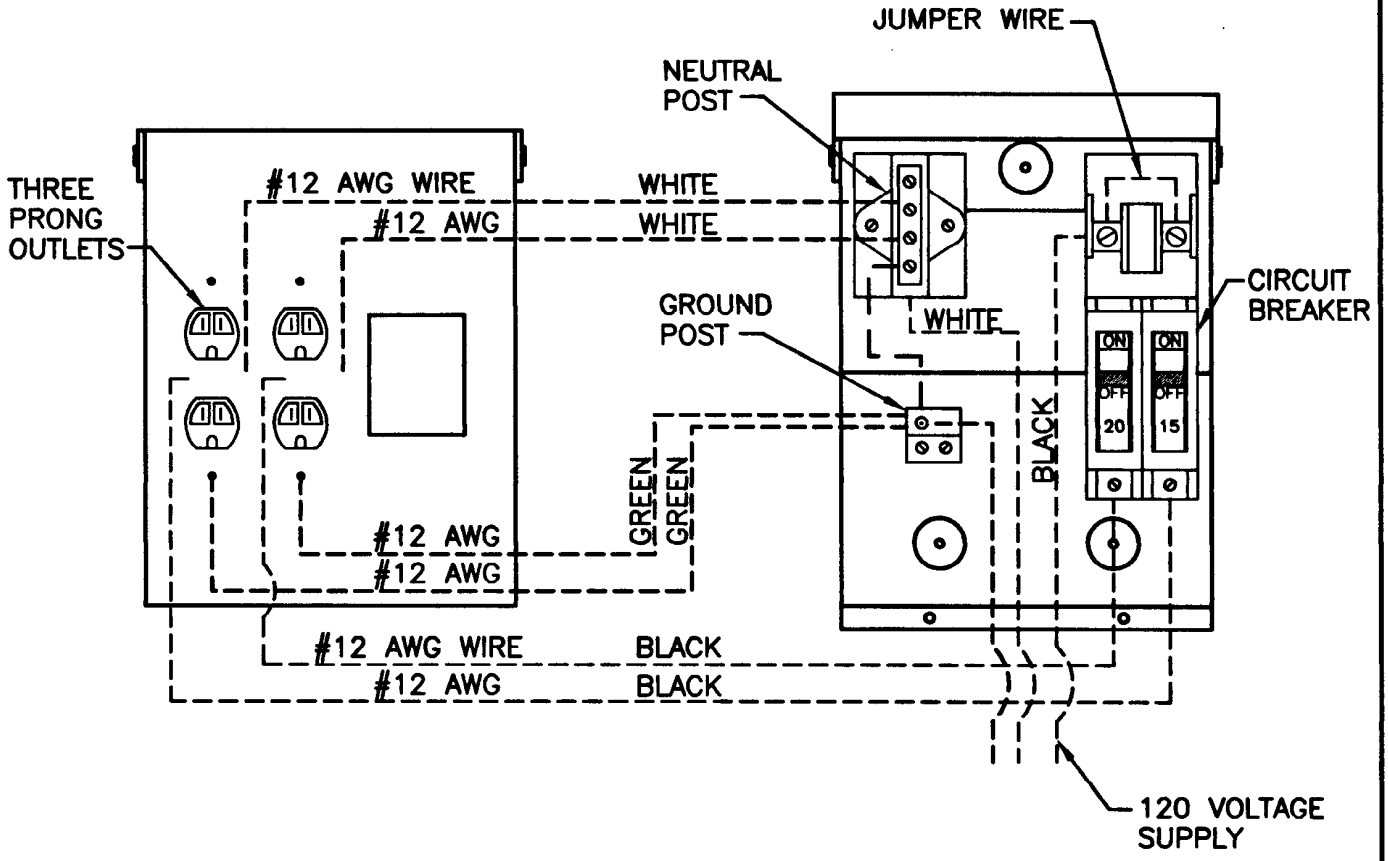
TRAFFIC MONITORING STATION CONTROLLER CABINET WIRING DETAILS – INTERIOR

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.4.1



COVER AND OUTLETS

POWER OUTLET BOX

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

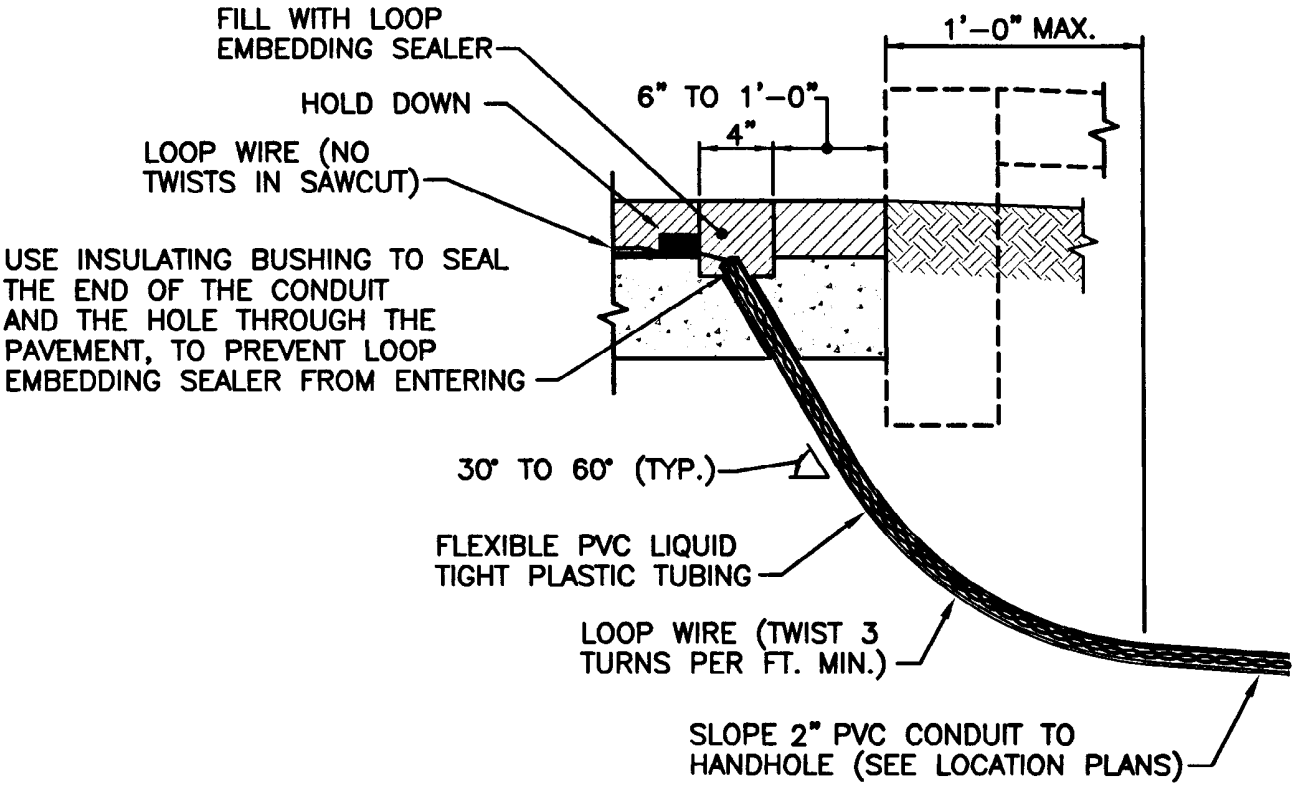
TRAFFIC MONITORING STATION POWER OUTLET BOX

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.5.0



NOTES:
1. DO NOT USE SHARP OBJECTS TO HOLD DOWN WIRE.
2. CURB DETAIL IS SHOWN BY DASHED LINES, RUN THE CONDUIT UNDER THE CURB.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

TRAFFIC MONITORING STATION FLEXIBLE CONDUIT INSTALLATION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.6.0

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

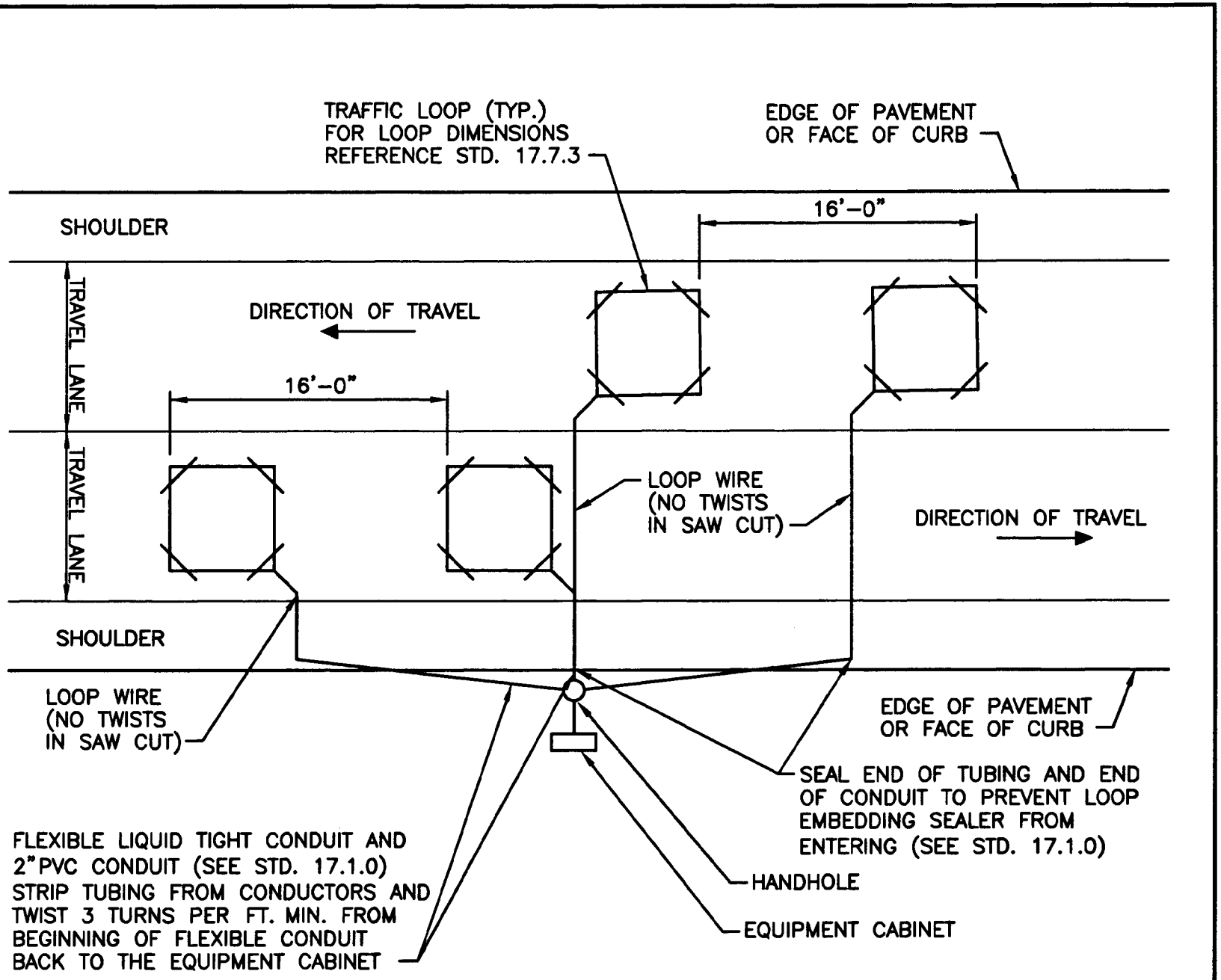
CHIEF ENGINEER TRANSPORTATION

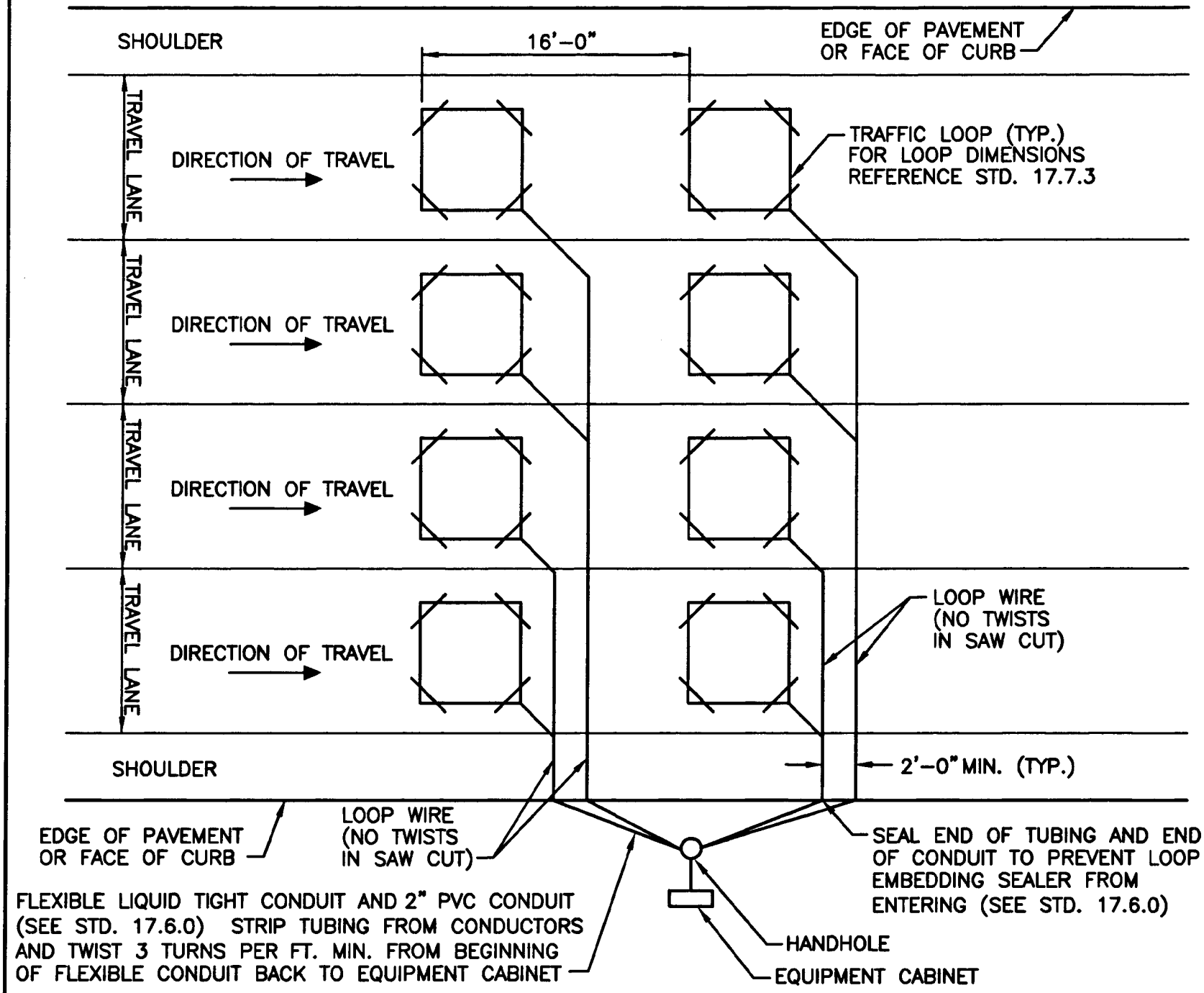
CHIEF DESIGN ENGINEER TRANSPORTATION

TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR DIRECTIONAL COUNTING

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 17.7.0





REVISIONS

NO.	BY	DATE

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

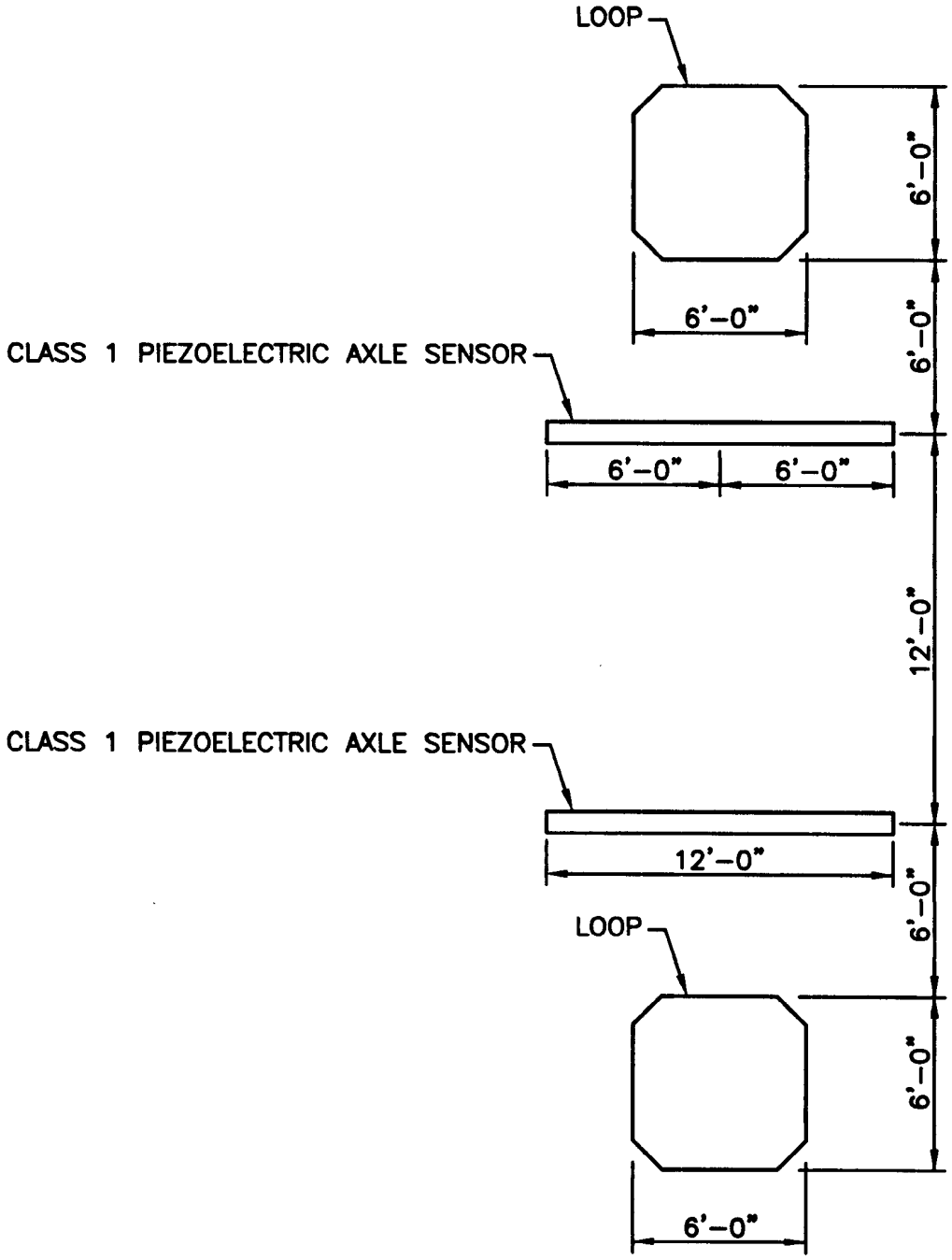
TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR MULTIPLE LANES IN THE SAME DIRECTION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.1



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

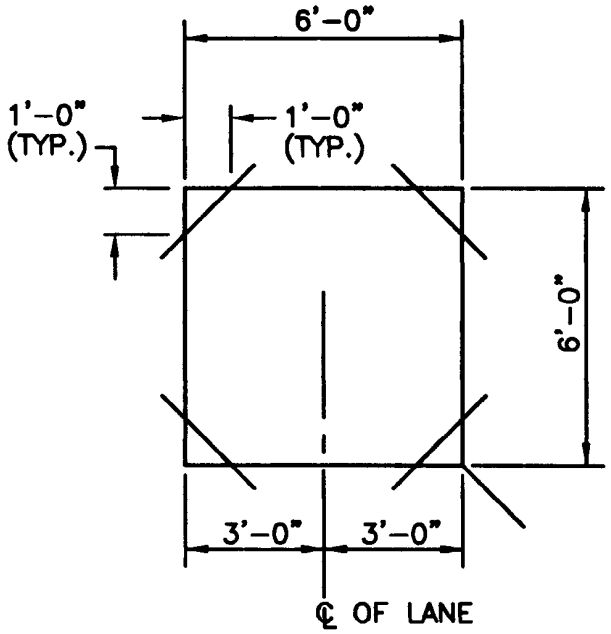
TRAFFIC MONITORING STATION AXLE SENSOR AND LOOP LAYOUT

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.2



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

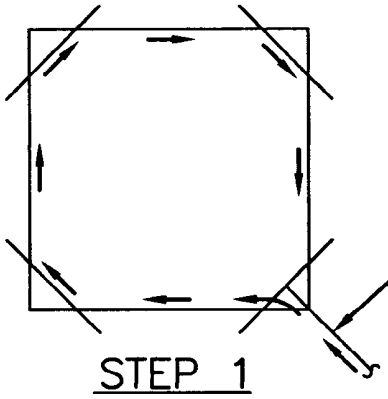
TRAFFIC MONITORING STATION LOOP DIMENSIONS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

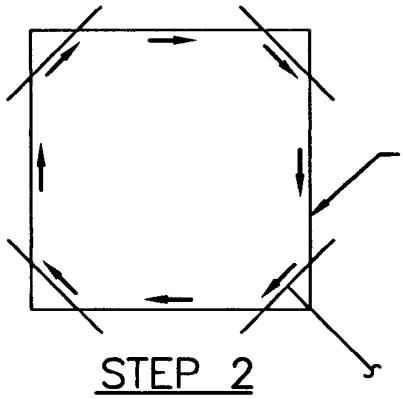
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.3



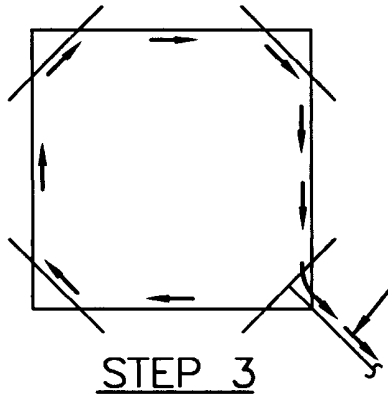
FEED WIRE FROM EQUIPMENT LOCATION ONE CIRCUMFERENCE OF LOOP WIRE

STEP 1



TWO ADDITIONAL CIRCUMFERENCES OF LOOP WIRE

STEP 2



FOURTH AND FINAL CIRCUMFERENCE OF LOOP WIRE RETURN WIRE TO EQUIPMENT LOCATION

STEP 3

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

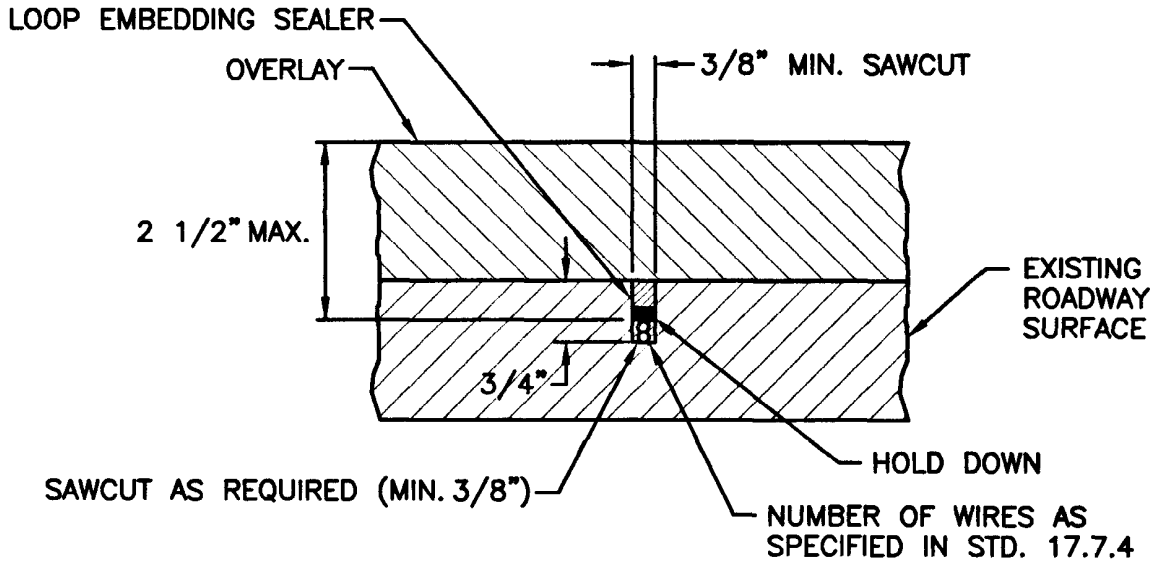
TRAFFIC MONITORING STATION LOOP WIRE INSTALLATION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.4



NOTE:
USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

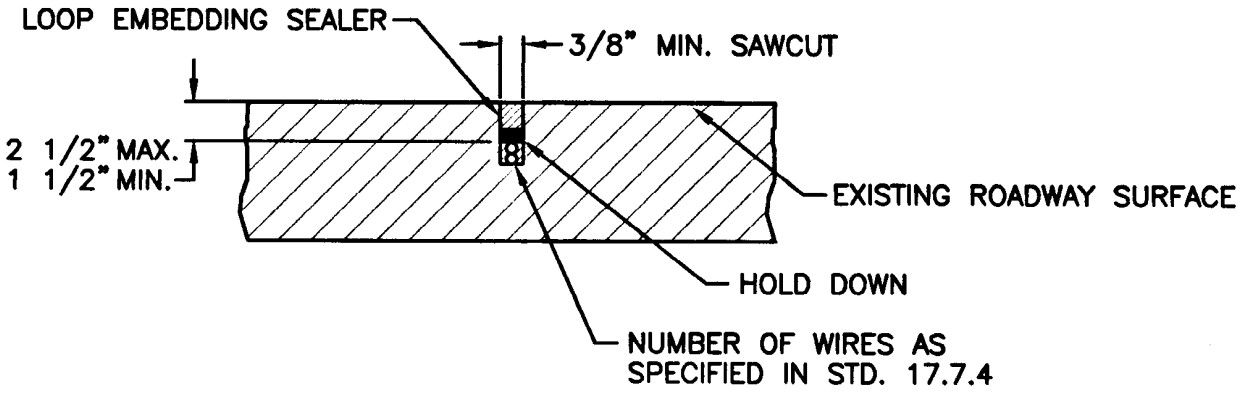
TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITH A PAVEMENT OVERLAY

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.5



NOTE:
USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

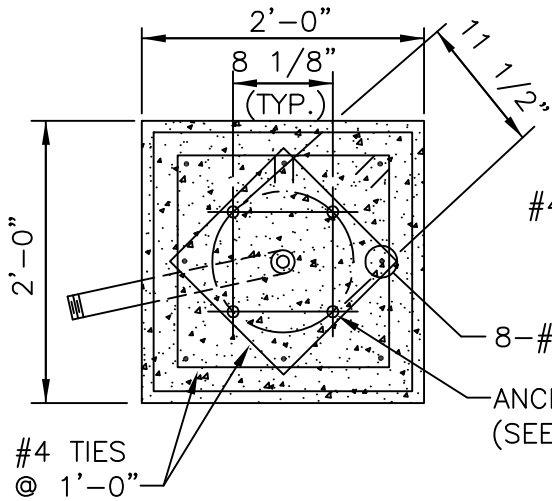
TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITHOUT A PAVEMENT OVERLAY

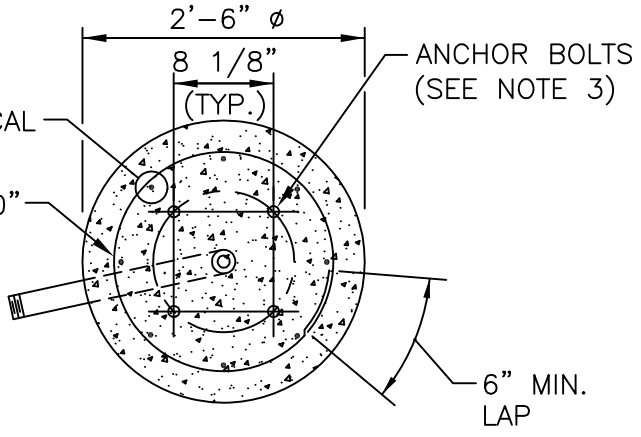
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

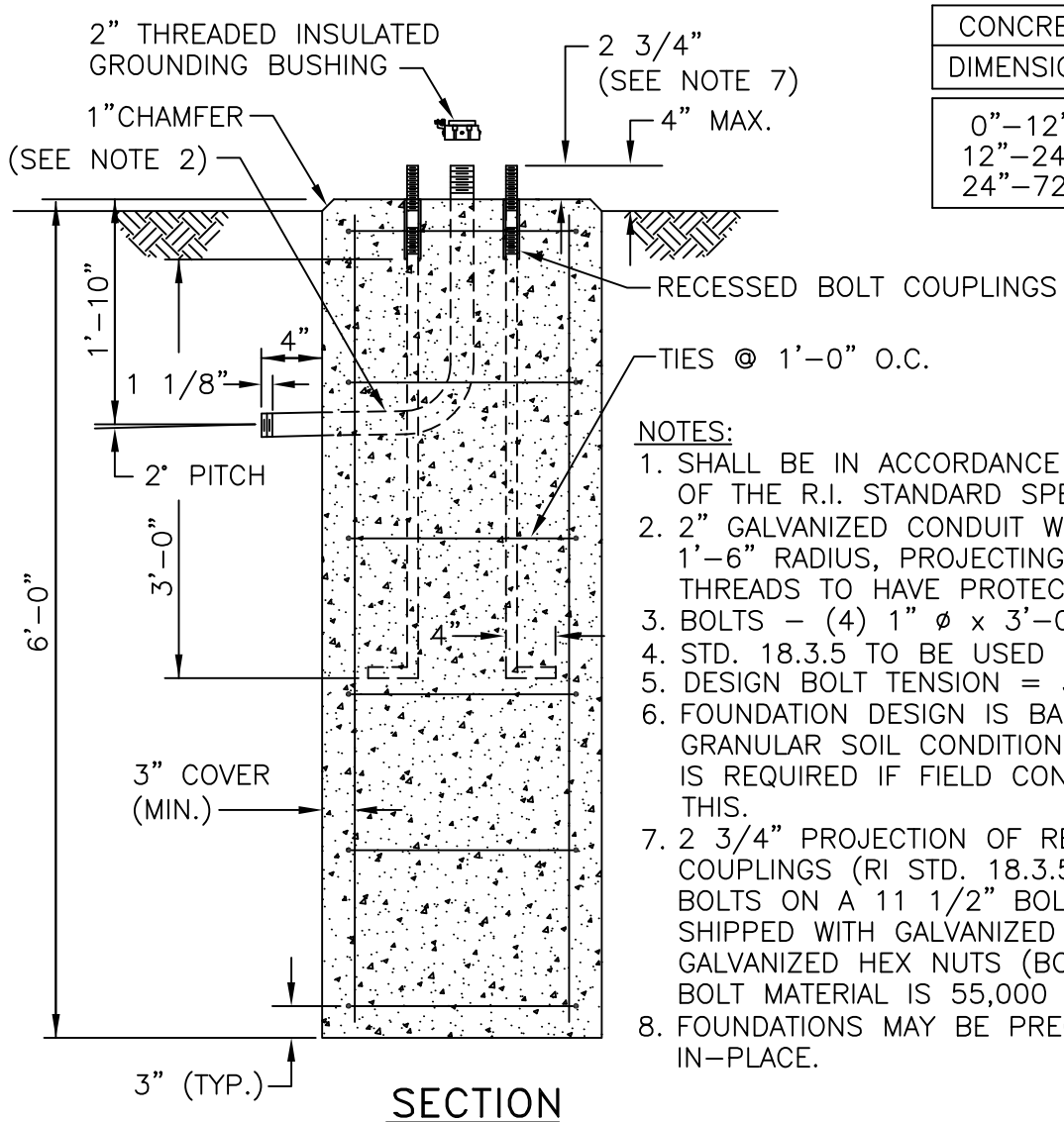
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 17.7.6





CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"–12" 12"–24" 24"–72"	1/4" 1/2" 3/4"



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2" GALVANIZED CONDUIT WITH 92° BEND AND 1'–6" RADIUS, PROJECTING 2 3/4" AS SHOWN. THREADS TO HAVE PROTECTOR.
3. BOLTS – (4) 1" ø x 3'–0" LONG WITH 4" HOOK.
4. STD. 18.3.5 TO BE USED WITH THIS STANDARD.
5. DESIGN BOLT TENSION = 30 K.
6. FOUNDATION DESIGN IS BASED ON COMPETENT GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.
7. 2 3/4" PROJECTION OF RECESSED BOLT COUPLINGS (RI STD. 18.3.5). ALL GALVANIZED BOLTS ON A 11 1/2" BOLT CIRCLE SHALL BE SHIPPED WITH GALVANIZED WASHERS AND GALVANIZED HEX NUTS (BOLT THREAD IS 8NC). BOLT MATERIAL IS 55,000 PSI MIN. YIELD.
8. FOUNDATIONS MAY BE PRECAST OR CAST IN–PLACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	6/27/08

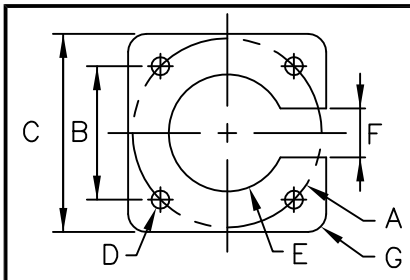
CONCRETE LIGHT STANDARD BASE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

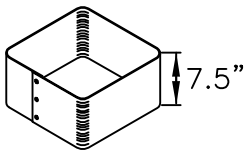
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.1.0

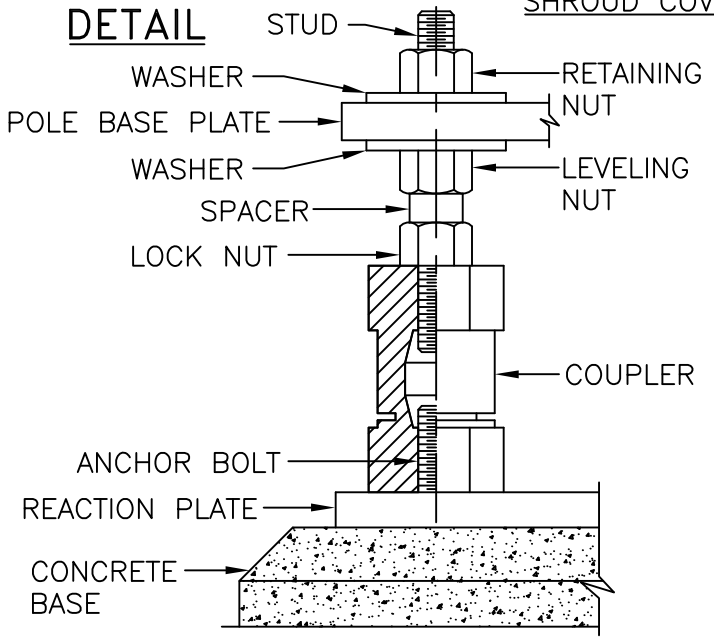


PART No.	A BOLT CIRCLE	B BOLT SQUARE	C PLATE SQUARE	D BOLT HOLE DIA.	E CENTER HOLE DIA.	F SLOT WIDTH	G CORNER RADIUS
RP-2	11.0/11.5	7.75/8.125	12.5	1.3125	7	3	1.75

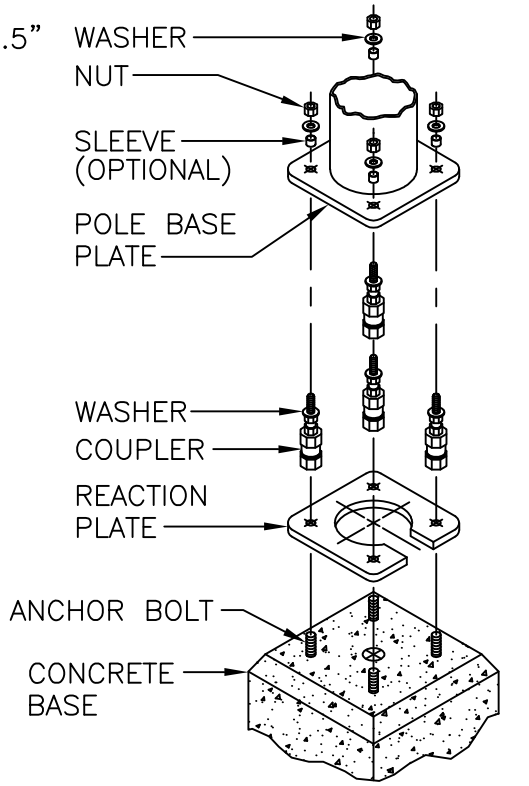
REACTION PLATE DETAIL



SHROUD COVER



SECTION DETAIL OF ASSEMBLY COUPLER



SAFETY BASE ASSEMBLY

NOTE:

1. DESCRIPTION: THE DEVICES SHALL BE FURNISHED IN "SETS". EACH "SET" SHALL BE PACKAGED IN A CORRUGATED BOX AND SHALL CONTAIN THE FOLLOWING:
   - 1 EA. GALVANIZED DUCTILE IRON REACTION PLATE, 7/8" THICK. MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION A536, STANDARD SPECIFICATION FOR DUCTILE IRON CASTINGS, AS ILLUSTRATED. THE PURPOSE OF THIS DEVICE IS TO PREVENT DAMAGE TO THE ANCHOR BOLTS WHEN BREAKAWAY COUPLINGS ARE FRACTURED AND TO PERMIT LEVELING.
   - 4 EA. GRAY IRON BREAKAWAY COUPLINGS MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION A48, STANDARD SPECIFICATION FOR GRAY IRON CASTINGS, AS ILLUSTRATED. DISSIMILAR METALS, SUCH AS CAST ALUMINUM, ARE NOT ACCEPTABLE.
   - 4 EA. ZINC PLATED THREADED STUDS
   - 12 EA. ZINC PLATED HEX NUTS
   - 4 EA. PLASTIC SPACERS
   - 12 EA. GALVANIZED WASHERS
   - 1 EA. 0.045 GAUGE ALUMINUM PROTECTIVE SHROUD
2. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS. THIS ITEM TO BE USED WITH STD. 18.1.0.
3. THIS ITEM SHALL BE INSTALLED IN ALL INSTALLATIONS, INCLUDING BEHIND GUARDRAIL UP TO 4' FROM THE BACK OF GUARDRAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

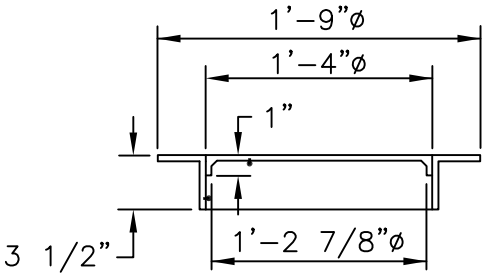
BREAKAWAY SUPPORT COUPLINGS FOR LIGHT STANDARDS

CHIEF ENGINEER TRANSPORTATION

DEPUTY CHIEF ENGINEER TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 18.1.1

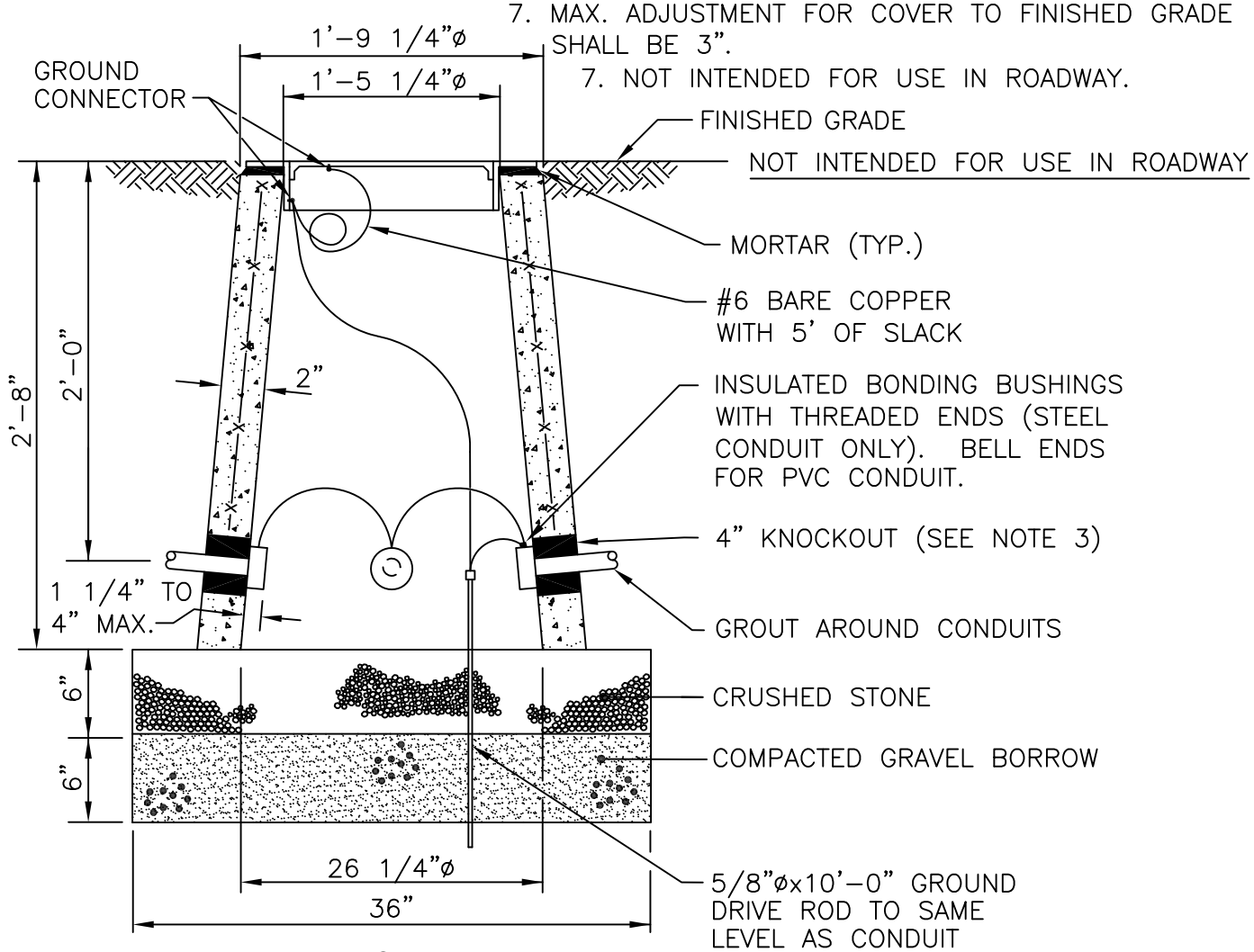


SECTION

HANDHOLE RING AND COVER

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE RI STANDARD SPECIFICATIONS.
2. COVER TO HAVE NON–SLIP DIAMOND SURFACE AND THE WORD "ELECTRIC" ON ELECTRIC HANDHOLES, "SIGNAL" ON SIGNAL HANDHOLES, AND "COMM" ON TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND CONDUIT ENTRANCES WITH CEMENT.
4. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.058 SQ. IN./LIN. FT. (EACH WAY).
5. HANDHOLE RING TO BE SET IN MORTAR OVER HANDHOLE WALL.
6. FRAME AND COVER TO BE PROVIDED WITH GROUND CONNECTOR (FASTENED WITH 3/8–16 THREADS INTO BLIND HOLE) AND WELDED NUT. BOND BOTH ITEMS TO GROUND ROD USING #6cu. BARE CONDUCTOR.
7. MAX. ADJUSTMENT FOR COVER TO FINISHED GRADE SHALL BE 3".
7. NOT INTENDED FOR USE IN ROADWAY.



SECTION

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	6/27/08
2	RBH	5/31/11
3	MLP	11/06/13

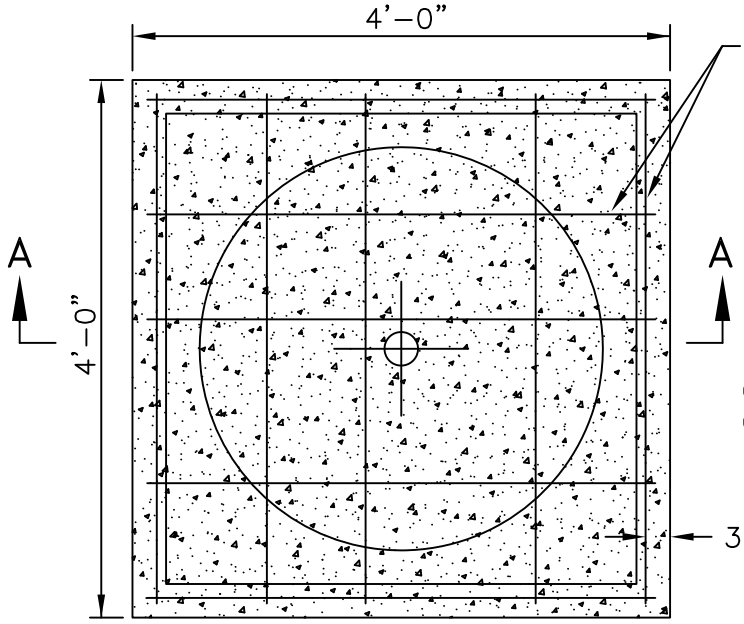
PRECAST TYPE "A" HANDHOLE

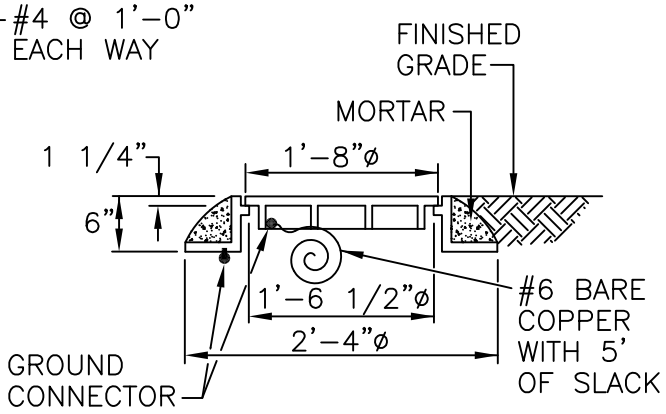
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

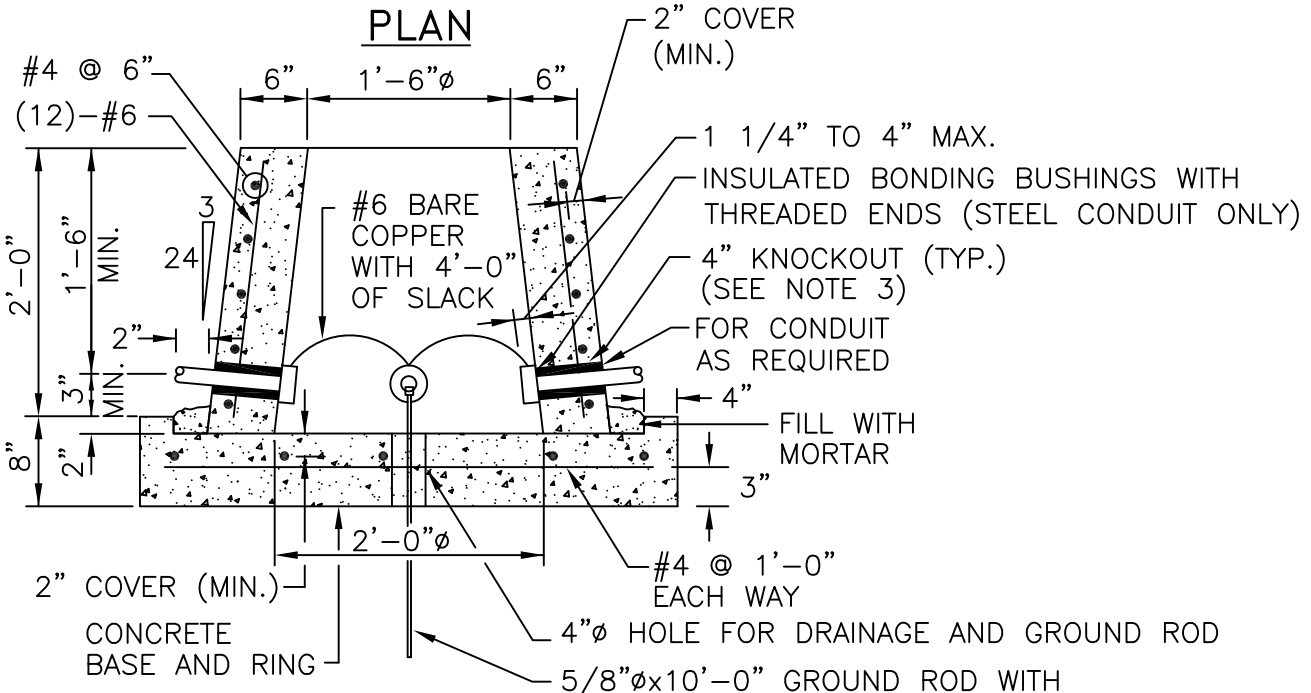
R.I. STANDARD 18.2.0





FRAME AND COVER

PLAN



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE RI STANDARD SPECIFICATIONS.
2. COVER TO HAVE NON–SLIP DIAMOND SURFACE AND THE WORD "ELECTRIC" ON ELECTRIC HANDHOLES, "SIGNAL" ON SIGNAL HANDHOLES, AND "COMM" ON TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND THE CONDUIT ENTRANCES WITH CEMENT.
4. FRAME AND COVER TO BE PROVIDED WITH GROUND CONNECTOR (FASTENED WITH 3/8–16 THREADS INTO BLIND HOLE) AND WELDED NUT. BOND BOTH ITEMS TO GROUND ROD USING #6cu. BARE CONDUCTOR.
5. MAX. ADJUSTMENT FOR COVER TO FINISHED GRADE SHALL BE 3".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	MLP	6/27/08
3	RBH	5/31/11

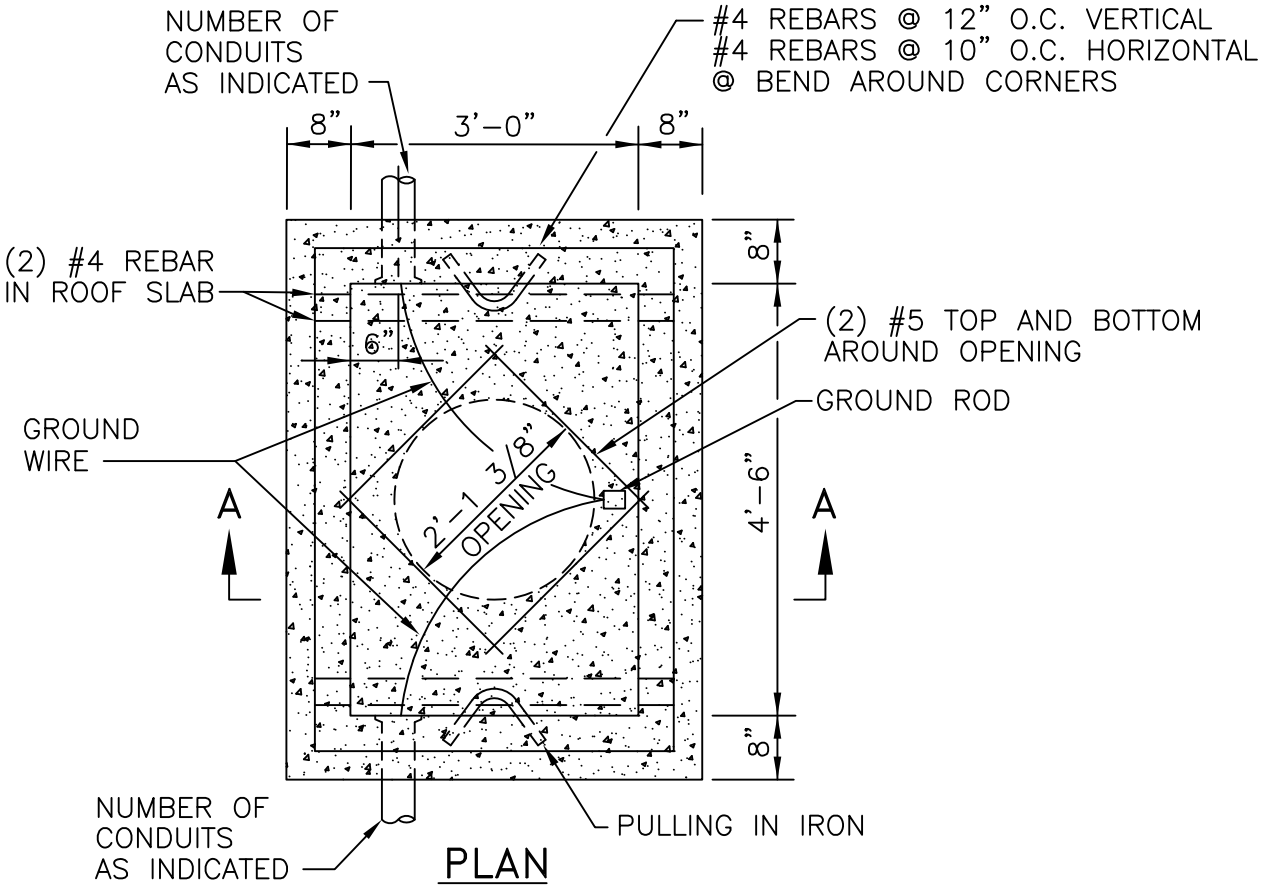
PRECAST TYPE "H" HEAVY–DUTY HANDHOLE

CHIEF ENGINEER TRANSPORTATION

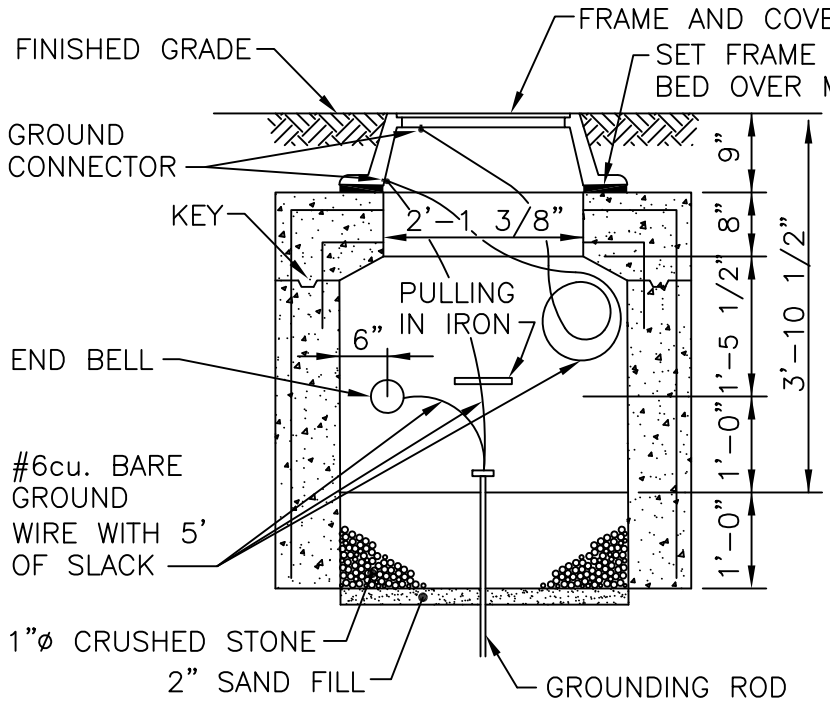
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.2.1



PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE RI STANDARD SPECIFICATIONS.
2. COVER TO HAVE NON-SLIP DIAMOND SURFACE AND THE WORD "ELECTRIC".
3. FRAME AND COVER TO BE PROVIDED WITH GROUND CONNECTOR (FASTENED WITH 3/8-16 THREADS INTO BLIND HOLE) AND WELDED NUT. BOND BOTH ITEMS TO GROUND ROD USING #6cu. BARE CONDUCTOR.
4. MAX. ADJUSTMENT FOR COVER TO FINISHED GRADE SHALL BE 3".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	MLP	6/27/08
3	RBH	5/31/11

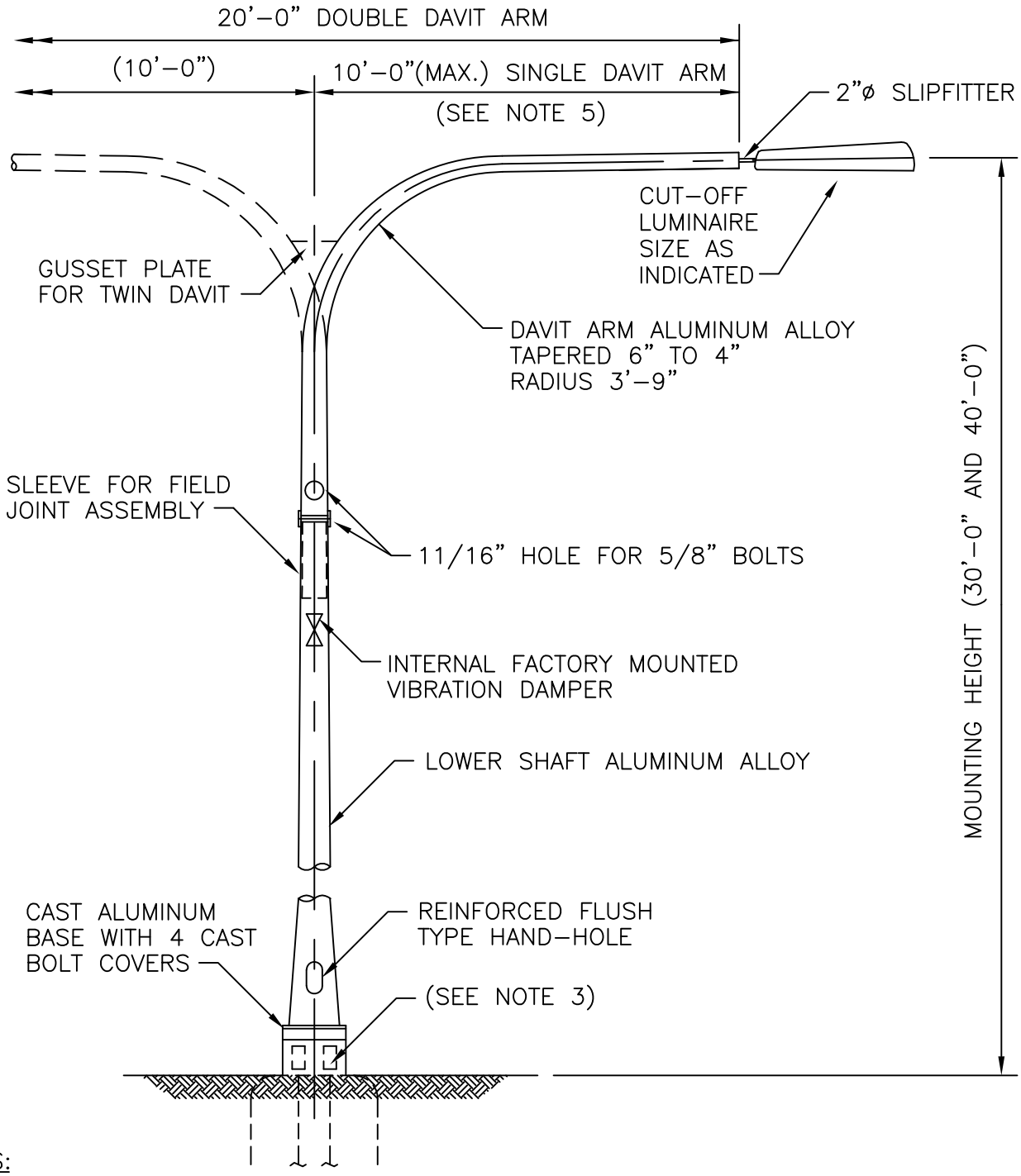
PRECAST TYPE "B" HEAVY DUTY HANDHOLE

James R. Cogaldi
CHIEF ENGINEER TRANSPORTATION

Edmund D. Parker Jr.
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.2.2



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE RI STANDARD SPECIFICATIONS.
2. SEE CONTRACT DOCUMENTS FOR SPECIFIC POLE HEIGHTS AND DAVIT CONFIGURATIONS.
3. FOR BREAKAWAY COUPLING DETAIL, SEE STD. 18.1.1.
4. SMALLER ARMS (4'–0" AND 6'–0") ALLOWED FOR RAMPS.
5. WHEN LIGHTING STANDARDS ARE INSTALLED ON BRIDGE PARAPETS, A DAMPER PAD(RUBBER) MUST BE INSTALLED BETWEEN STANDARD BASE AND CONCRETE FOUNDATION.
6. FOR INSTALLATION ON BRIDGES AND WHERE EXCESSIVE WINDS MAY BE PRESENT, CONSIDERATION IS TO BE GIVEN TO THE APPLICATION OF EXTERNAL DAMPERS ON THE DAVITS TO REDUCE VIBRATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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1	MLP	6/27/08

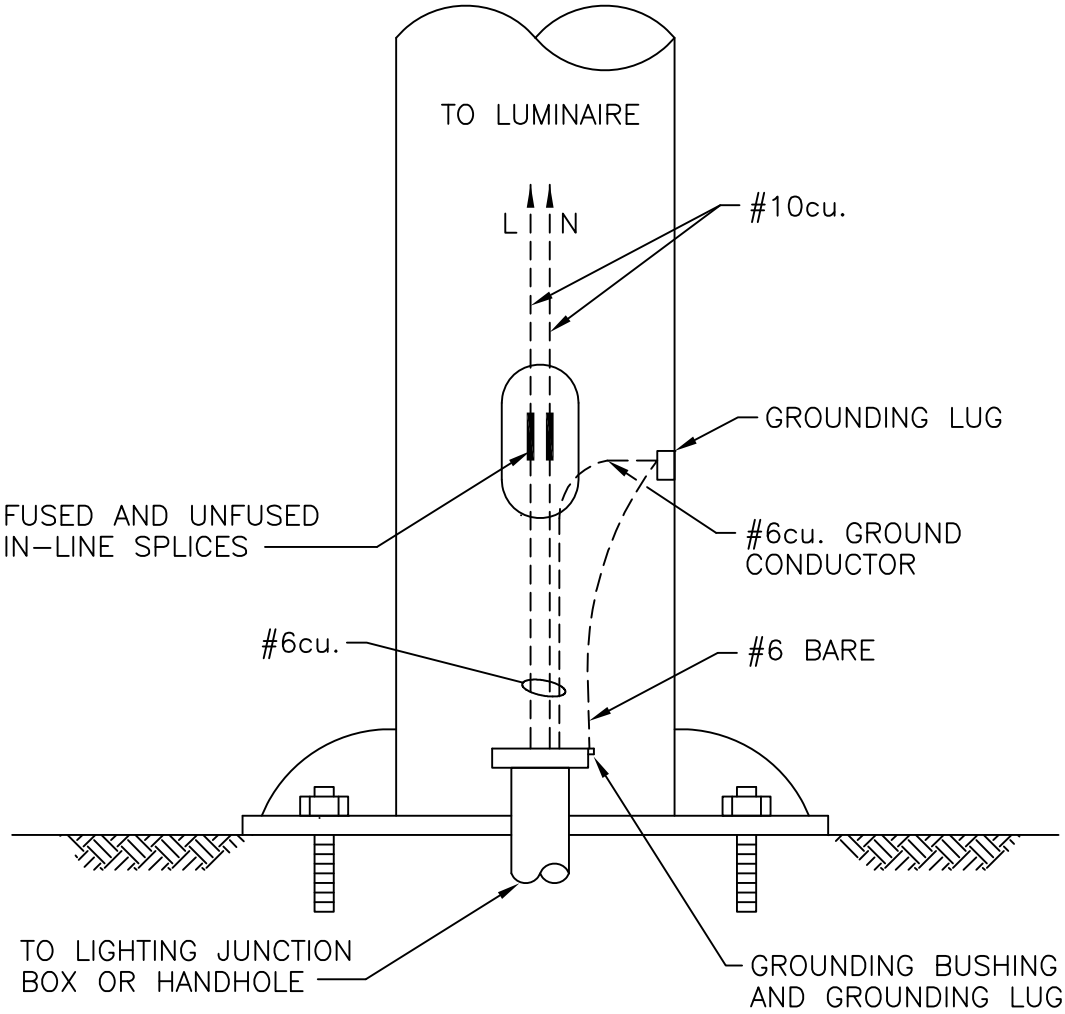
ALUMINUM LIGHTING STANDARDS

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.3.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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1	MLP	6/27/08

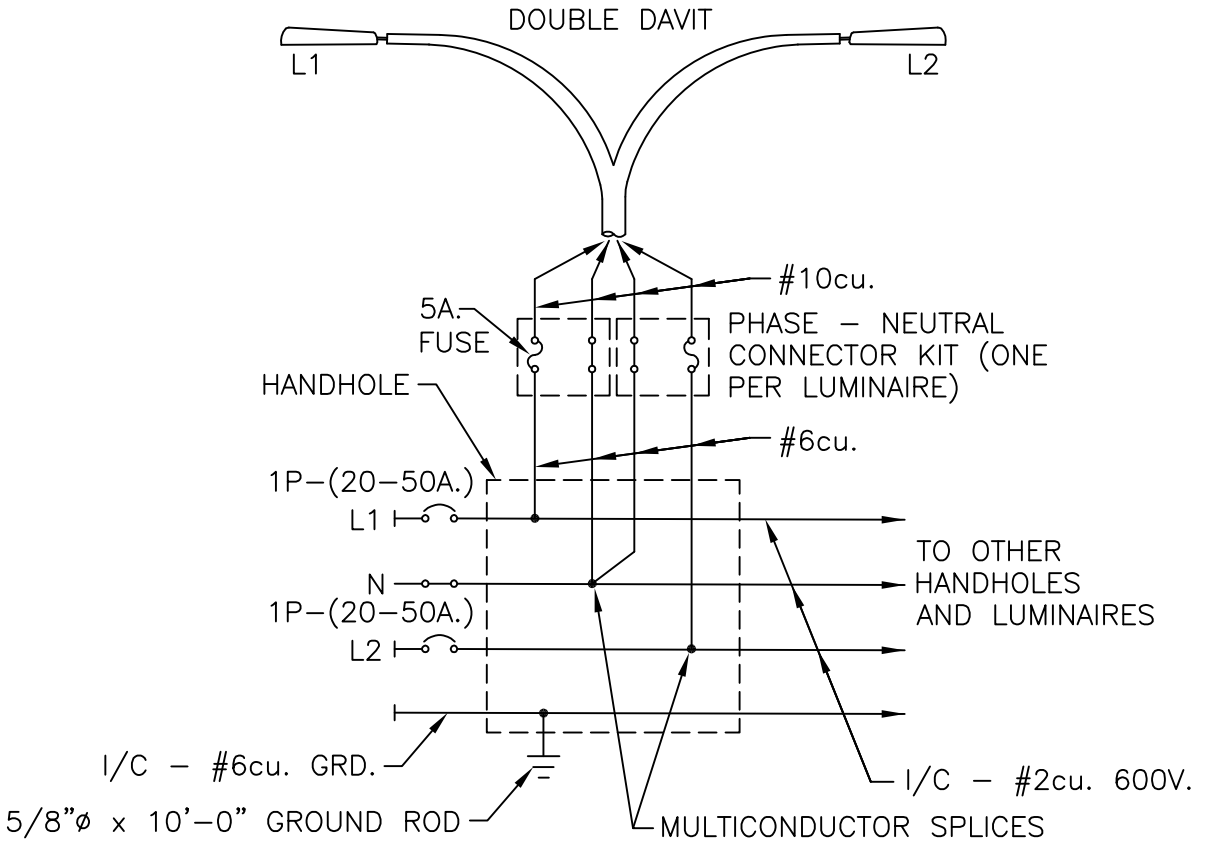
ALUMINUM POLE – GROUNDING DETAIL

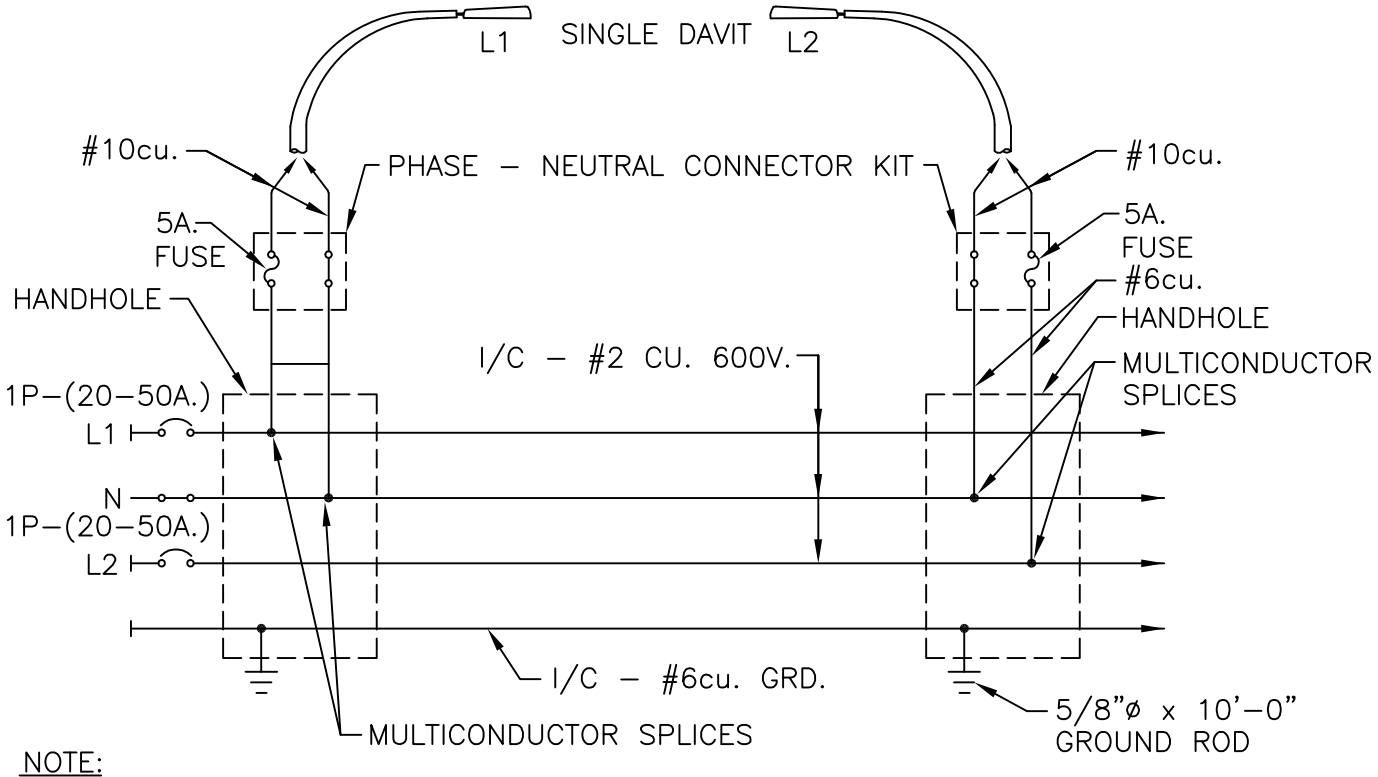
CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.3.1





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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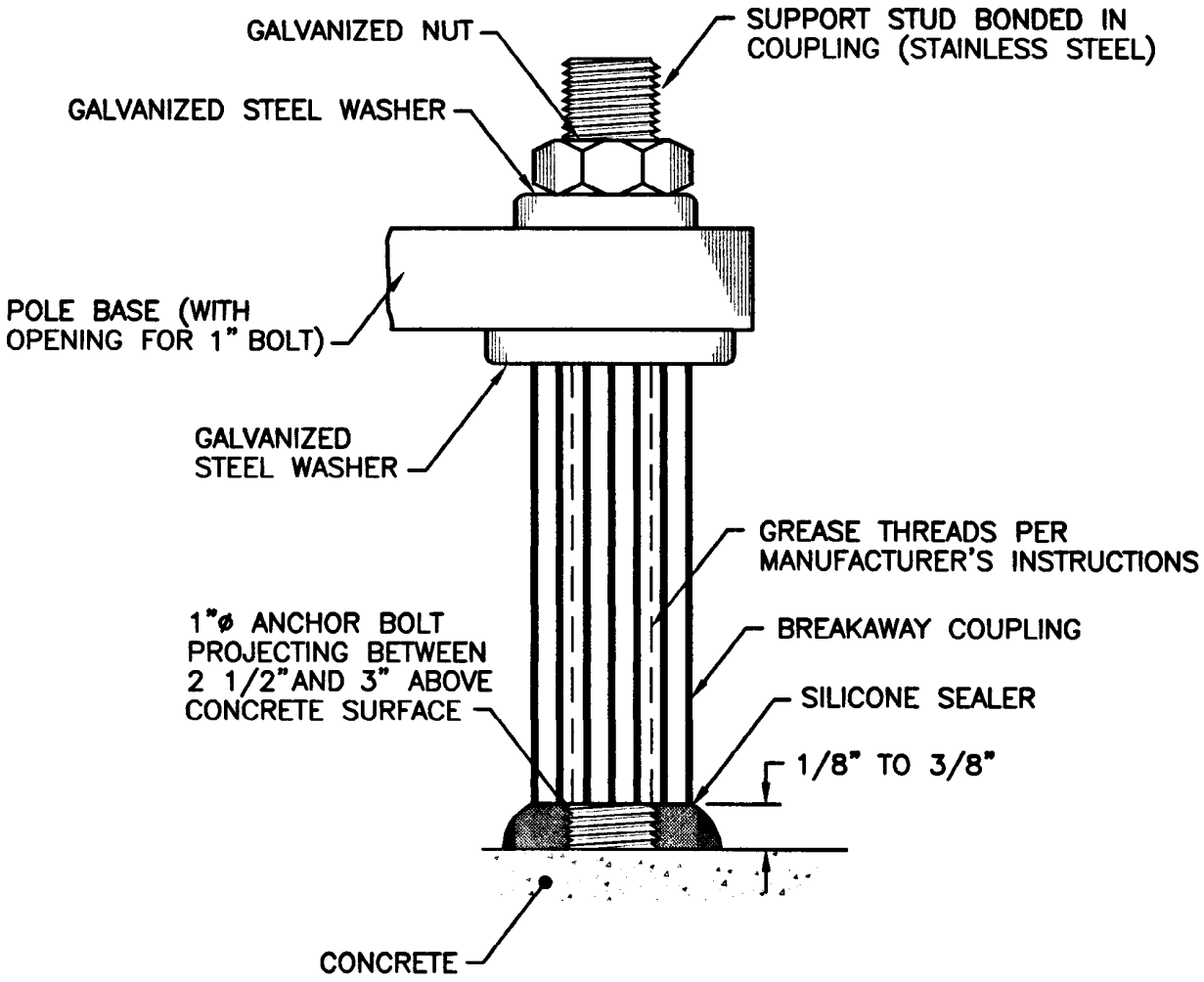
TYPICAL LUMINAIRE – WIRING DIAGRAM

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.3.2



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 18.3.5 TO BE USED WITH THIS STANDARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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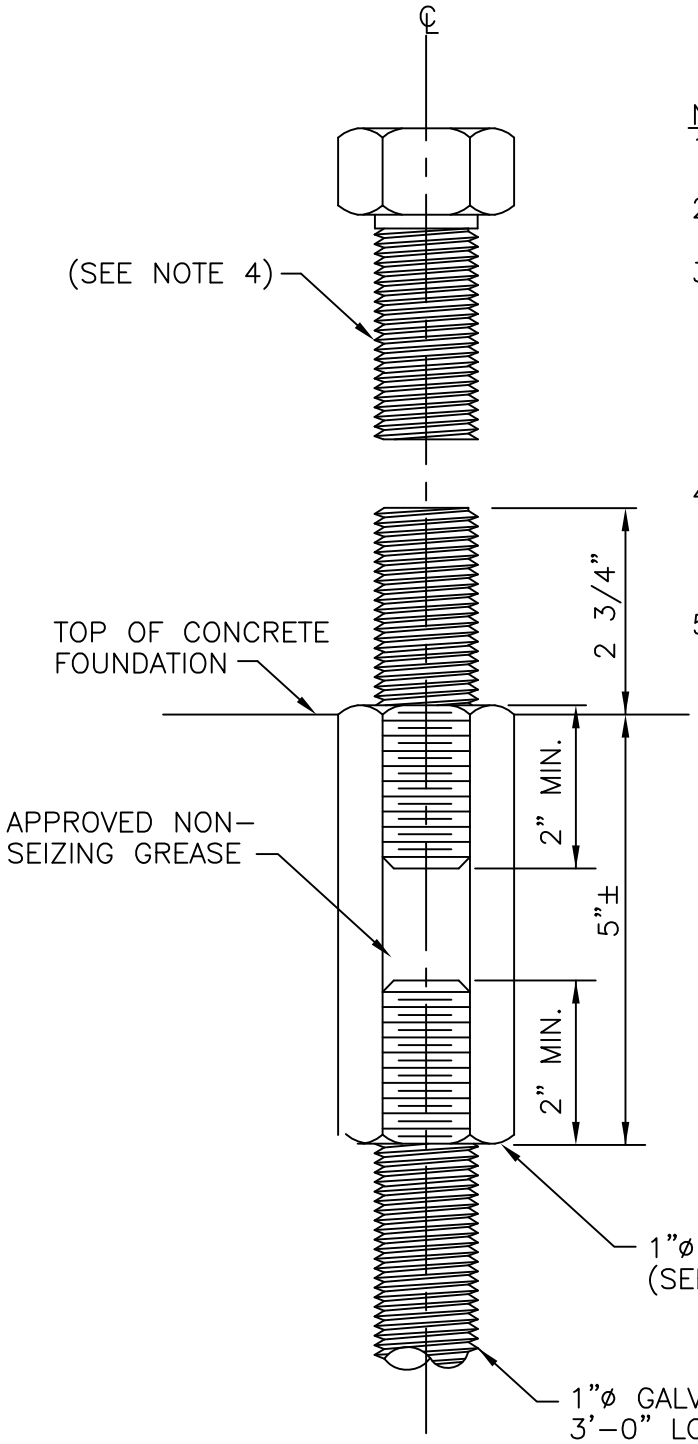
BREAKAWAY SUPPORT COUPLINGS FOR LIGHT STANDARDS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.3.4



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD SHALL BE COORDINATED WITH STD. 18.1.0 AND 18.1.1.
3. THE HEXAGONAL COUPLINGS SHALL BE GALVANIZED AND SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"ø ANCHOR BOLTS. THE BOLT LENGTH SHALL BE DETERMINED BY THE BOLT SUPPLIER AND SHALL MEET THE APPROVAL OF THE ENGINEER.
4. GALVANIZED OR STAINLESS STEEL HEX BOLTS SHALL BE USED. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"ø ANCHOR BOLTS.
5. APPROVED PLUGS SHALL BE INSERTED INTO THE HEX COUPLINGS DURING CONSTRUCTION OF THE FOUNDATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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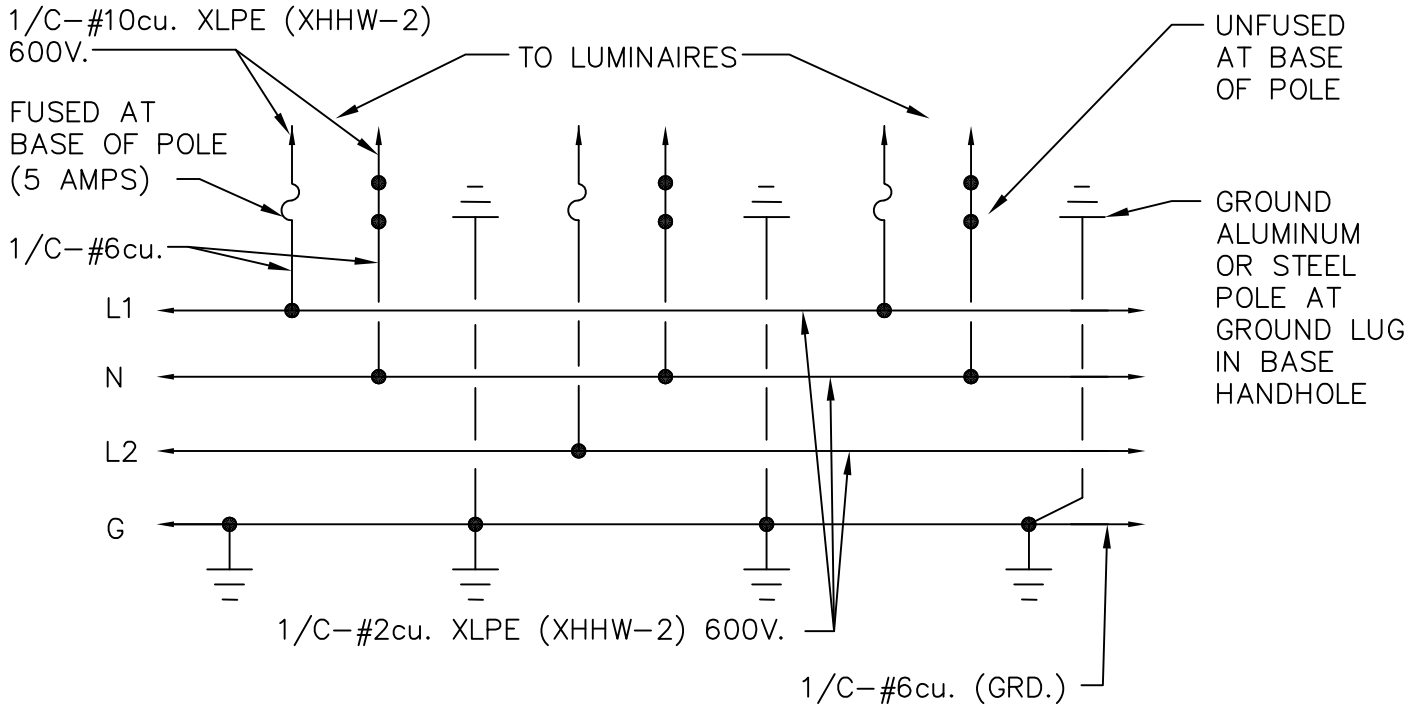
RECESSED BOLT COUPLINGS FOR LIGHT STANDARDS

CHIEF ENGINEER TRANSPORTATION

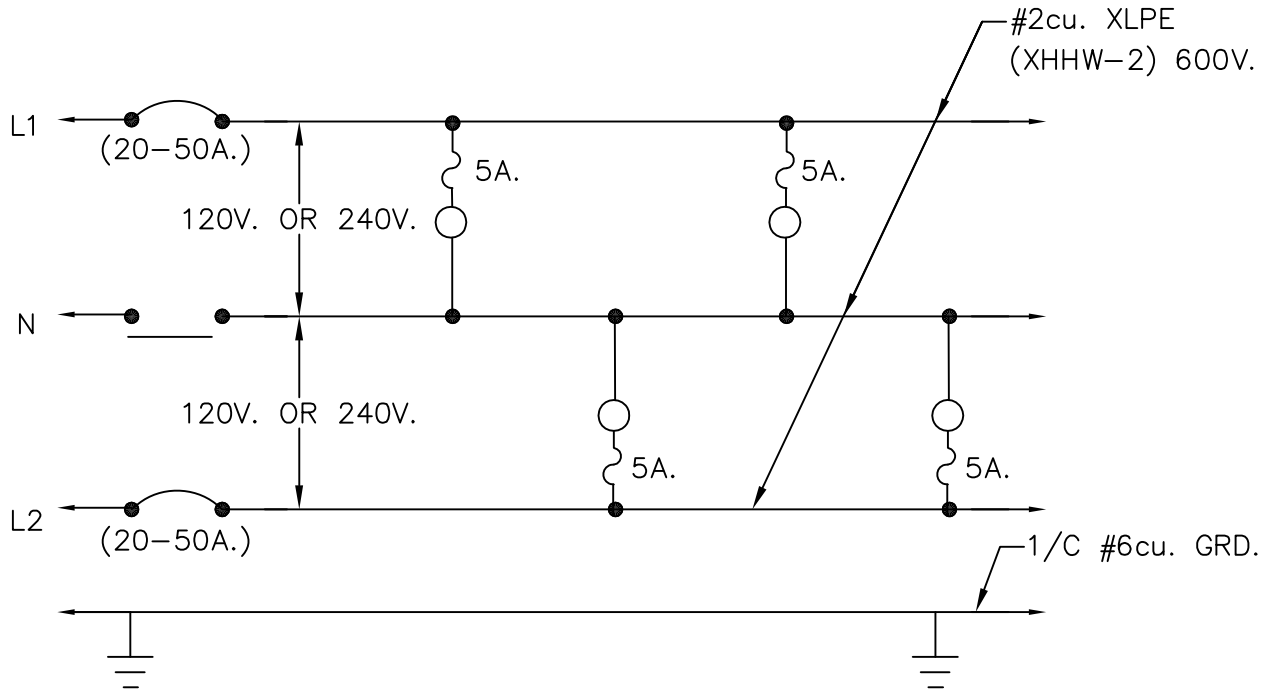
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.3.5



WIRING DIAGRAM DETAIL



TYPICAL LIGHTING CIRCUIT WIRING DIAGRAM DETAIL

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

TYPICAL WIRING DIAGRAMS

CHIEF ENGINEER
TRANSPORTATION

DEPUTY CHIEF ENGINEER
TRANSPORTATION

JUNE 27, 2008
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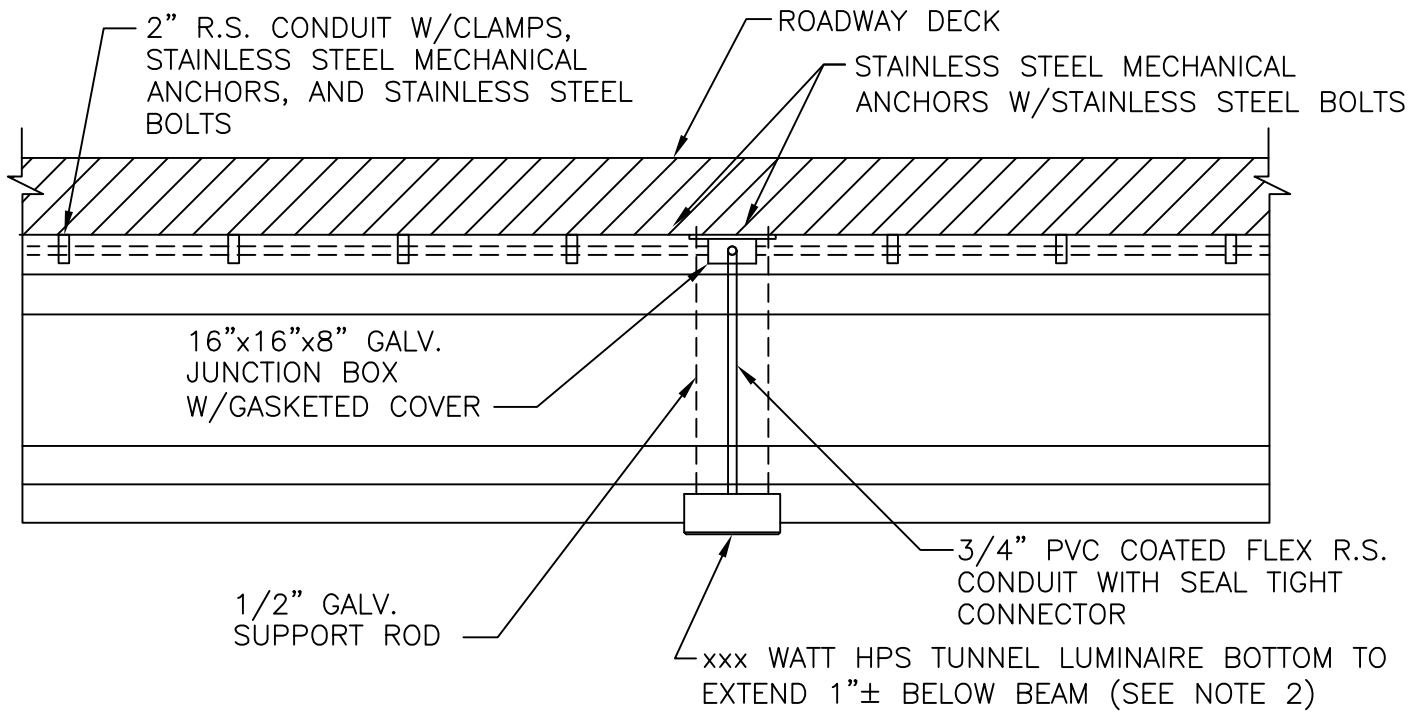
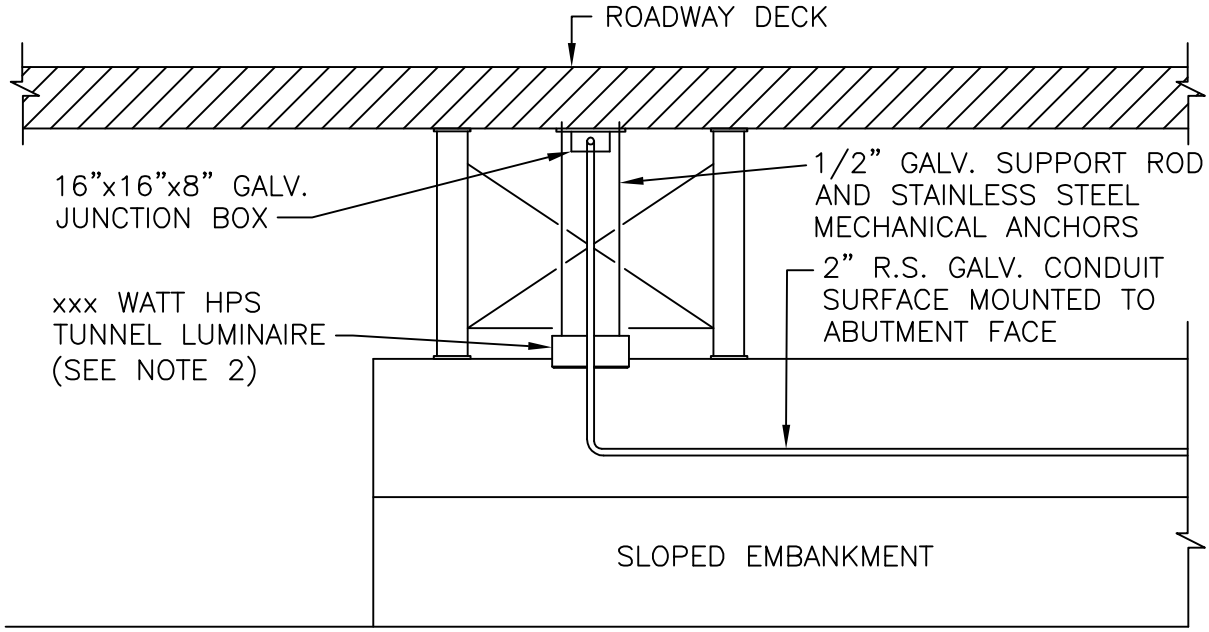
R.I. STANDARD 18.3.6



TUNNEL LUMINAIRE ATTACHMENT DETAIL



UNDERPASS LIGHTING – VERTICAL ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE RI STANDARD SPECIFICATIONS.
2. WATTAGE TO BE SPECIFIED BASED ON EACH INDIVIDUAL APPLICATION.
3. CONDUIT SIZE, JUNCTION BOXES, EXPANSION JOINTS AND CONDUCTORS TO BE ACCORDING TO PLANS FOR EACH PROJECT.
4. MECHANICAL ANCHORS SHALL BE USED FOR OVERHEAD MOUNTING – NO EPOXY ANCHORAGE SYSTEMS ARE ALLOWED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

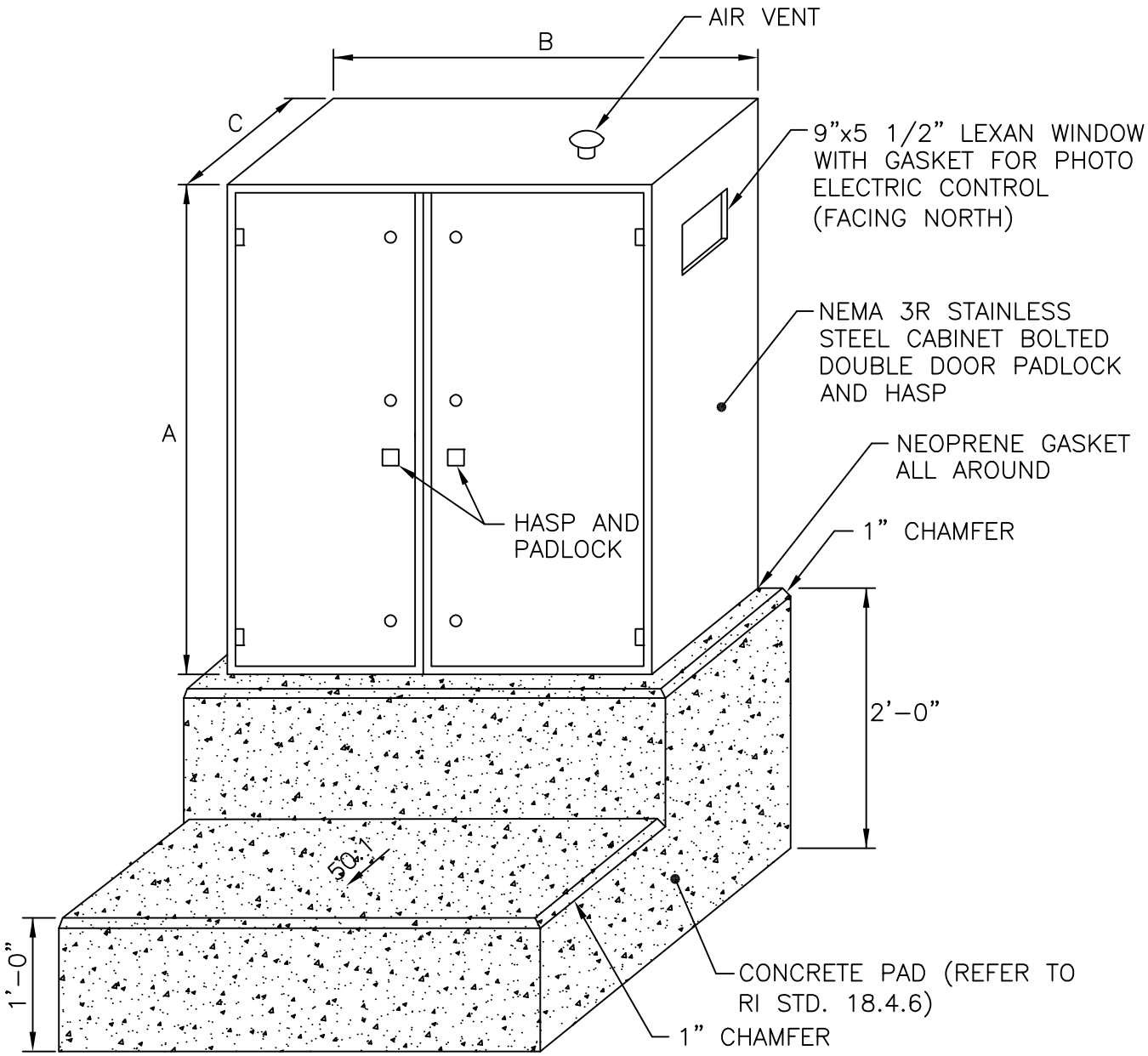
UNDERPASS LIGHTING DETAIL

CHIEF ENGINEER TRANSPORTATION

DEPUTY CHIEF ENGINEER TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 18.3.7



CABINET DIMENSIONS	A	B	C
120/240 OR 120/208 VOLT	4'-0" TO 4'-4"	3'-6" TO 4'-2"	1'-2" TO 2'-0"
240/480 VOLT	4'-0" TO 6'-0"	3'-6" TO 6'-0"	2'-0"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE RI STANDARD SPECIFICATIONS.
2. PEDESTAL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO ASSURE THAT ALL COMPONENTS FIT INSIDE THE ENCLOSURE ACCORDING TO NEC REQUIREMENTS.
3. ENCLOSURE TO BE SECURED TO FOUNDATION BY USING (2) 1/2" "THUNDERSTUDS" STAINLESS STEEL BOLTS ON EACH SIDE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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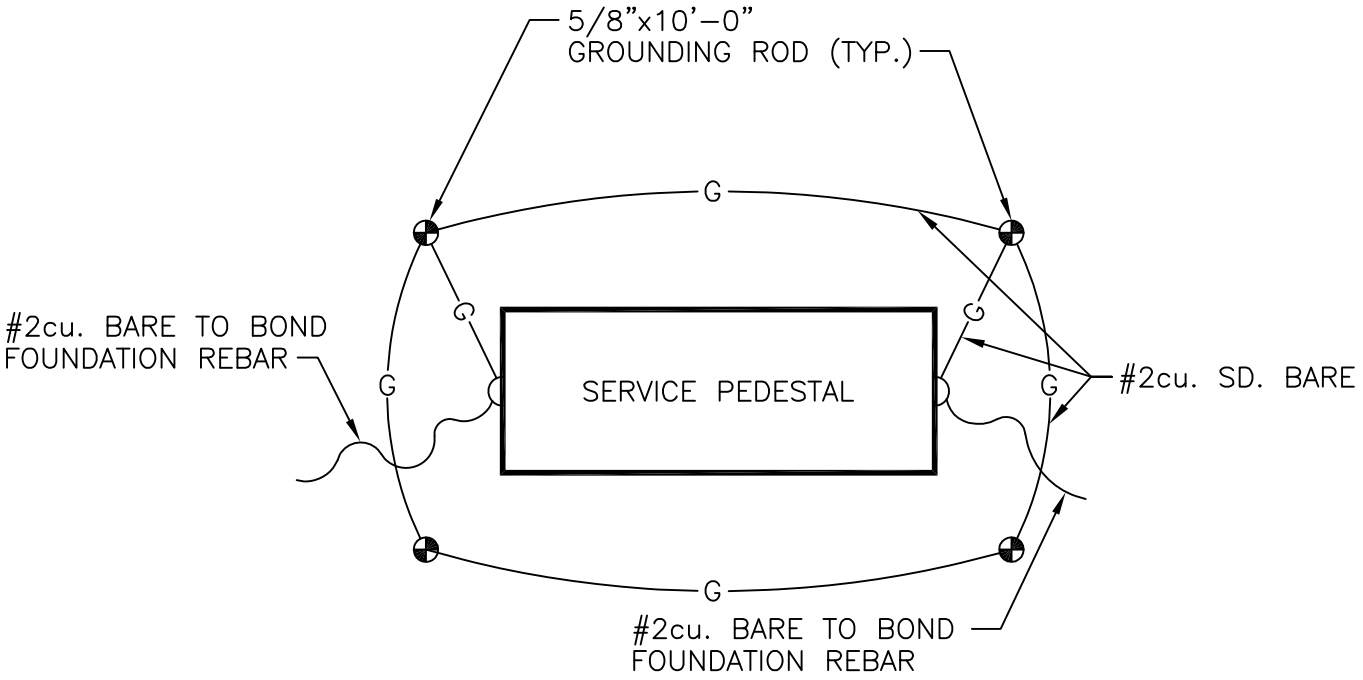
SERVICE PEDESTAL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.4.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH LATEST NEC(2005) AND WITH SECTION T.04 OF THE RI STANDARD SPECIFICATIONS.
2. #2cu. BARE GROUND WIRE 1'–0" BELOW GRADE. ALLOW 3'–0" SLACK LEADS TO BOND AT GROUNDING LUGS IN CABINET.
3. GROUND RODS MUST BE SPACED A MINIMUM OF 6'–0" FROM EACH OTHER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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SERVICE PEDESTAL – GROUNDING DETAIL

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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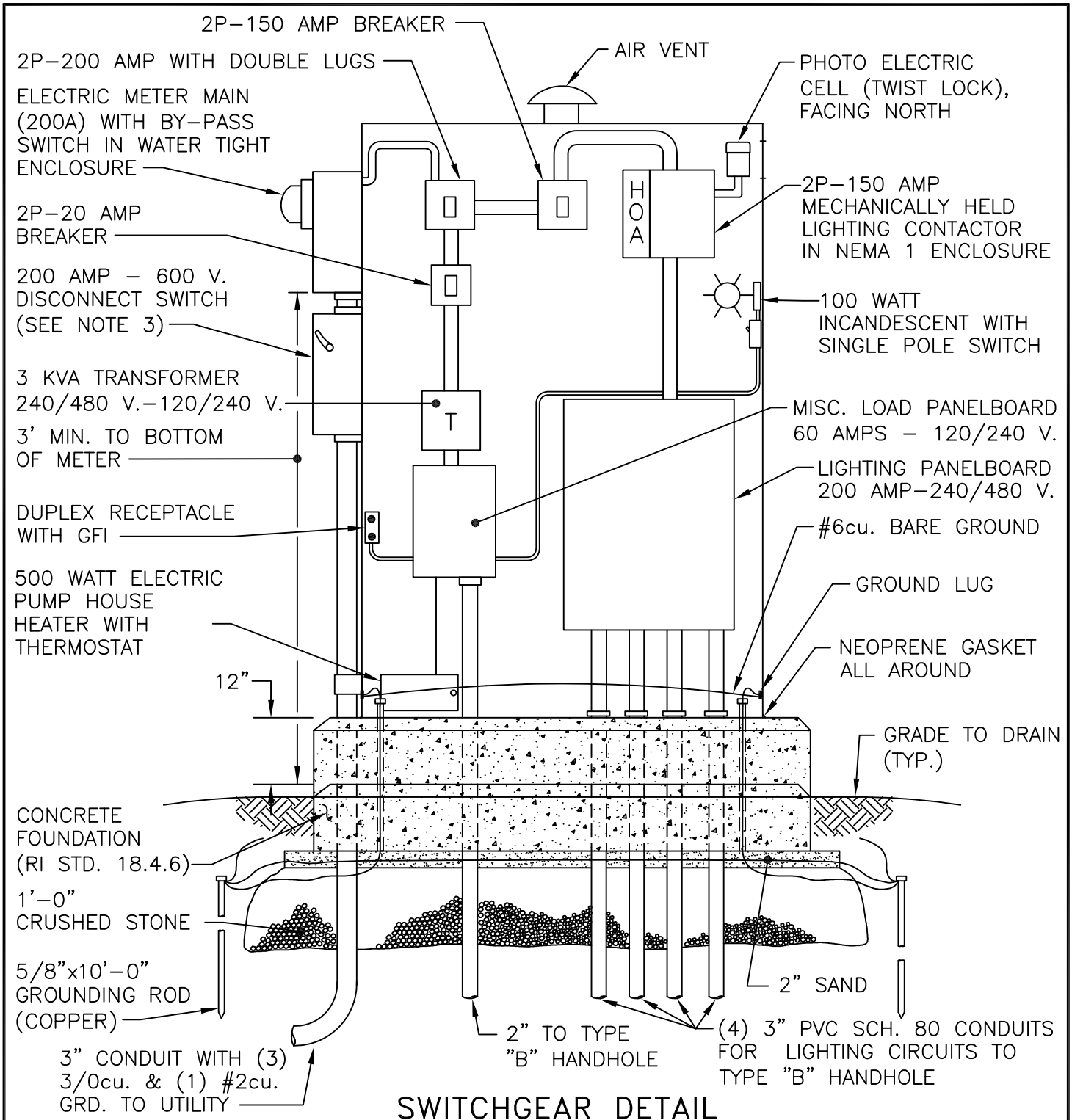
R.I. STANDARD 18.4.1



SWITCHGEAR DETAIL
FRONT VIEW

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE RI STANDARD SPECIFICATIONS.
2. APPROXIMATE DIMENSION 6'–0"(MAX.) x 4'–0" x 1'–6" TO 2'–0"(MAX.).
3. DISCONNECT SWITCH TO MEET UTILITY COLD SEQUENCE REQUIREMENTS. LOCKED BY UTILITY.
4. CONTRACTOR TO INSTALL OUTGOING CONDUITS DIRECTLY UNDERNEATH EACH PANELBOARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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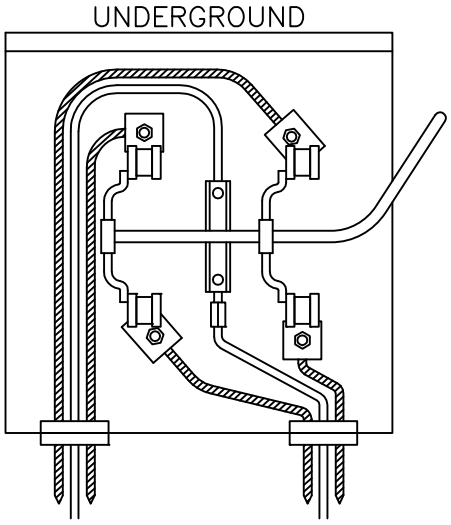
SERVICE PEDESTAL
240/480 VOLTS – 3W

CHIEF ENGINEER TRANSPORTATION

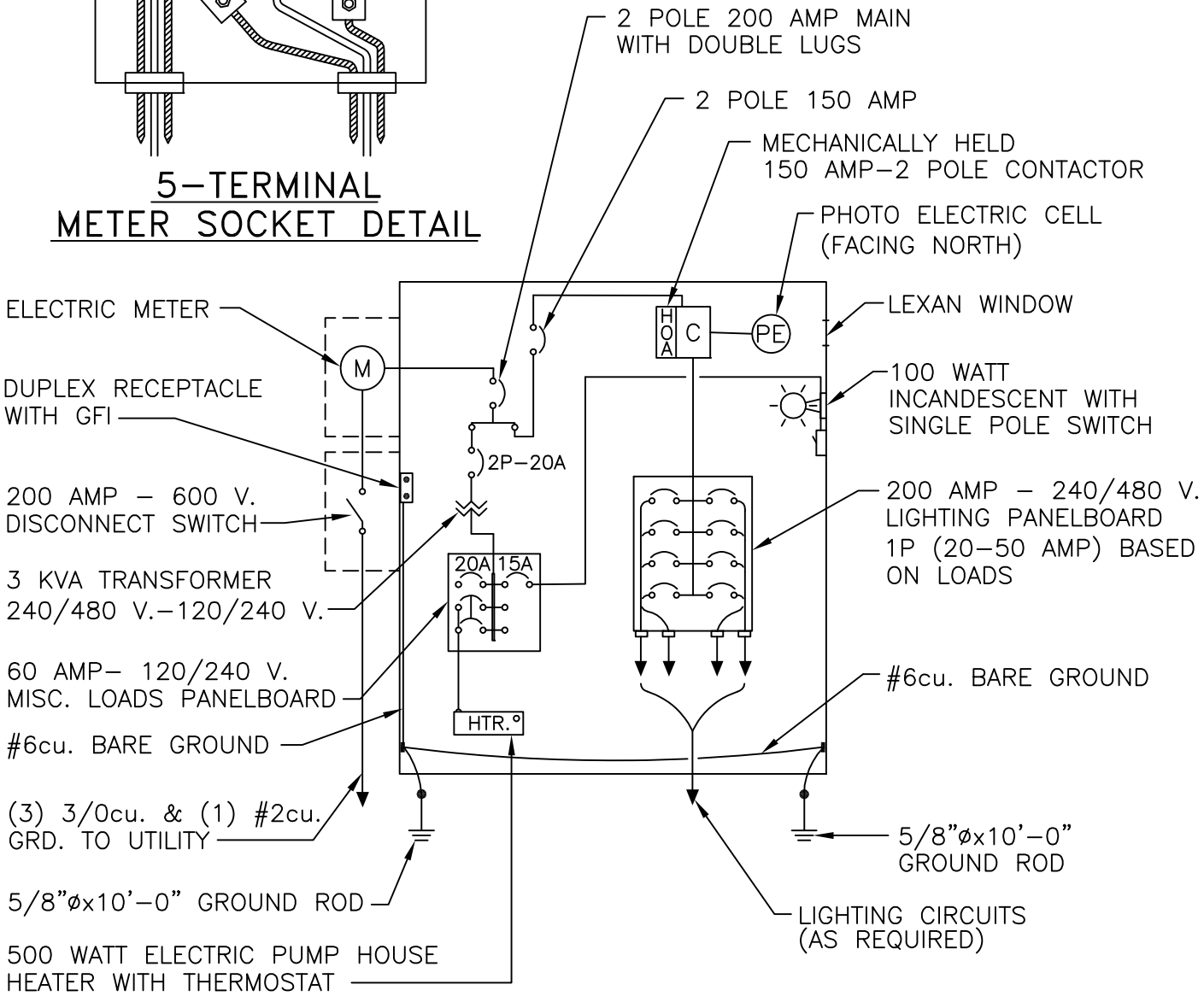
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.4.2



5–TERMINAL METER SOCKET DETAIL



POWER SCHEMATIC

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE RI STANDARD SPECIFICATIONS.
2. ON THREE–WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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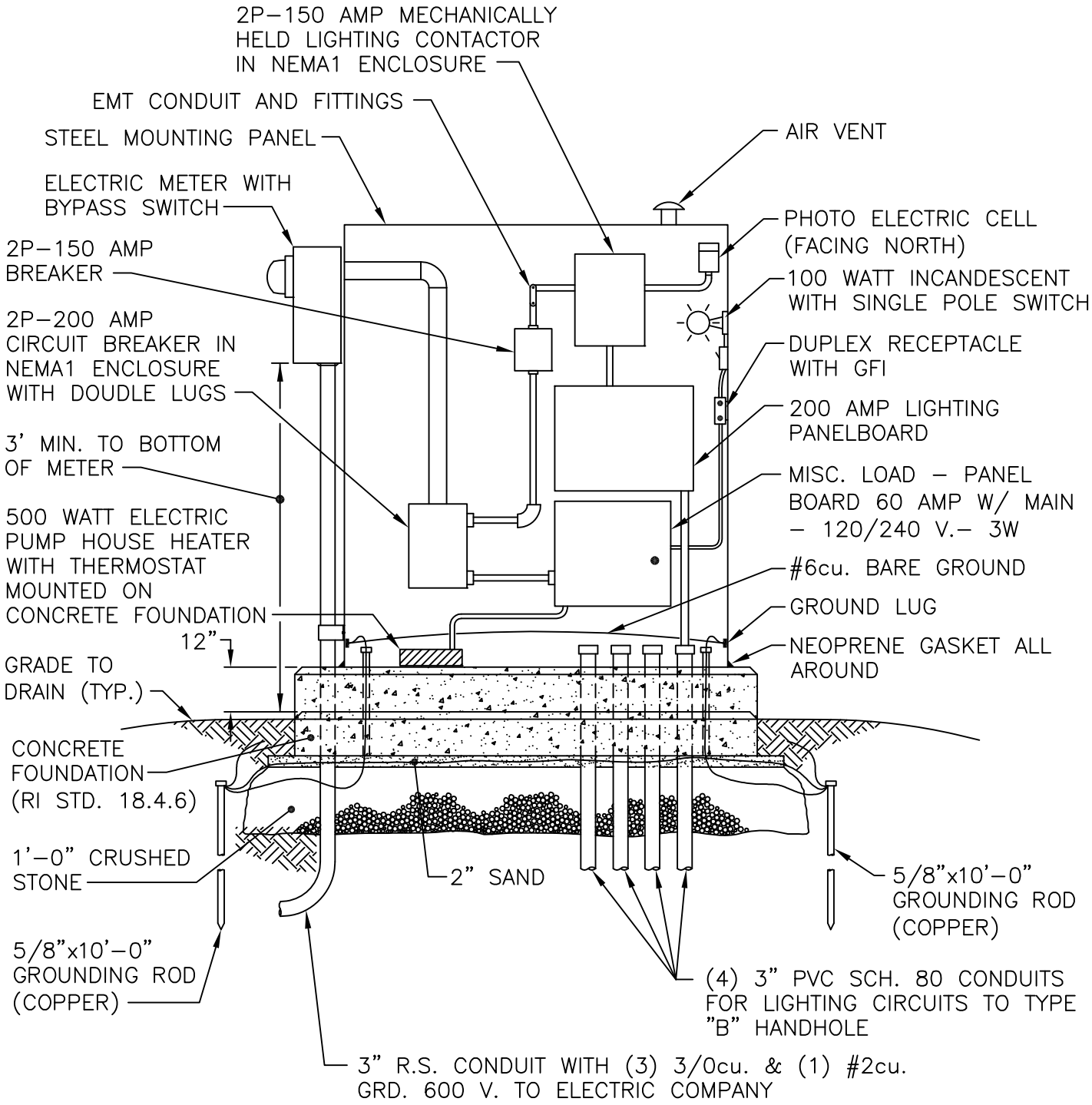
SERVICE PEDESTAL 240/480 VOLTS – 3W

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.4.3



SWITCHGEAR DETAIL
FRONT VIEW

NOTE:
1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE RI STANDARD SPECIFICATIONS.
2. CONTRACTOR TO INSTALL OUTGOING CONDUITS DIRECTLY UNDERNEATH EACH PANELBOARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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SERVICE PEDESTAL
120/240 OR 120/208 VOLTS – 3W

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
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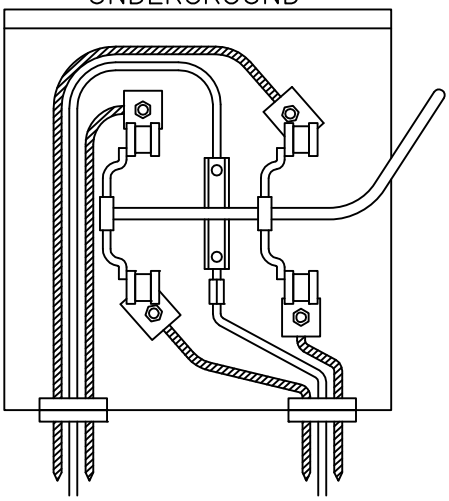
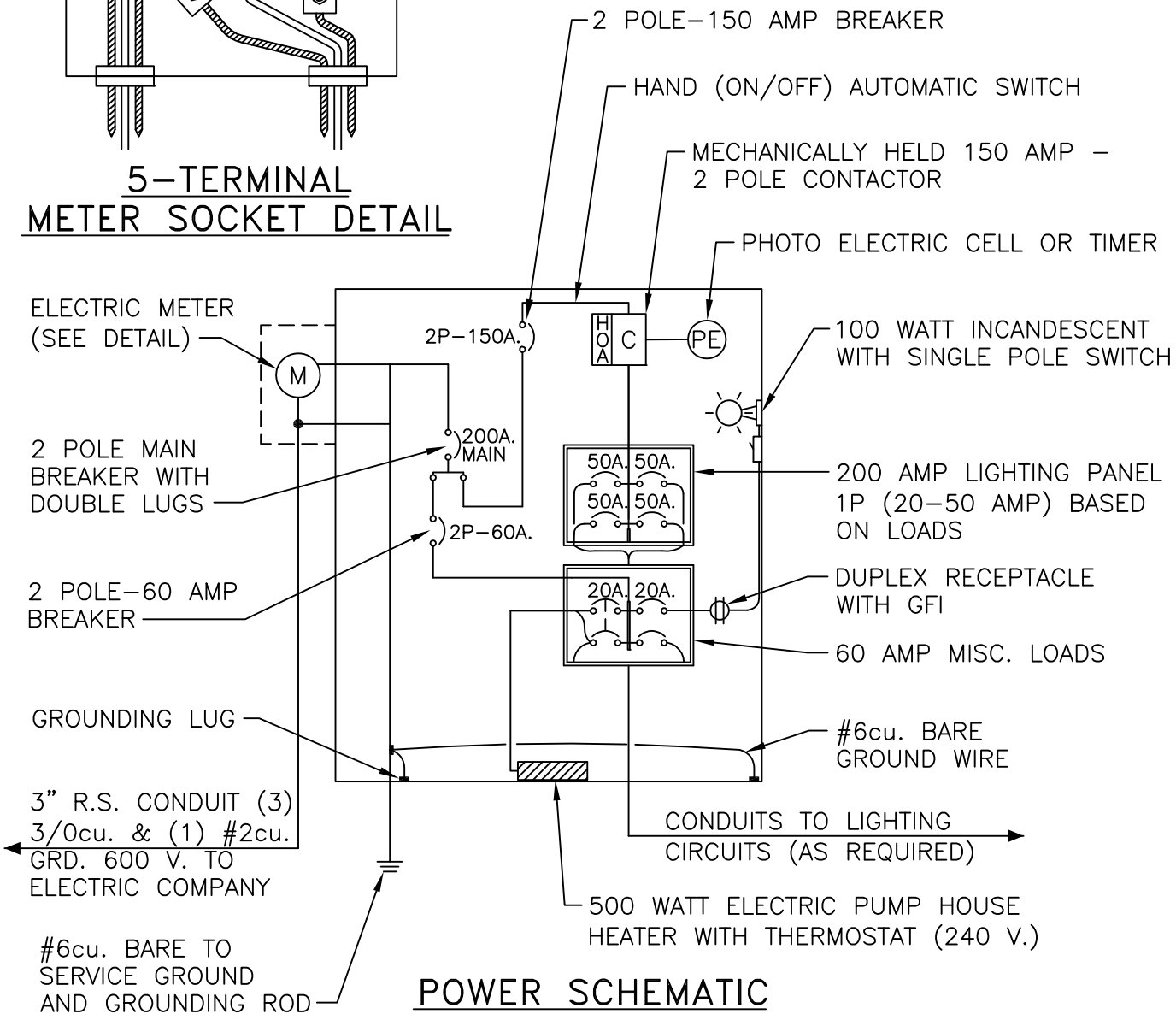
R.I. STANDARD 18.4.4



5–TERMINAL METER SOCKET DETAIL



POWER SCHEMATIC

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE RI STANDARD SPECIFICATIONS.
2. ON THREE–WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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SERVICE PEDESTAL 120/240 OR 120/208 VOLTS – 3W

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
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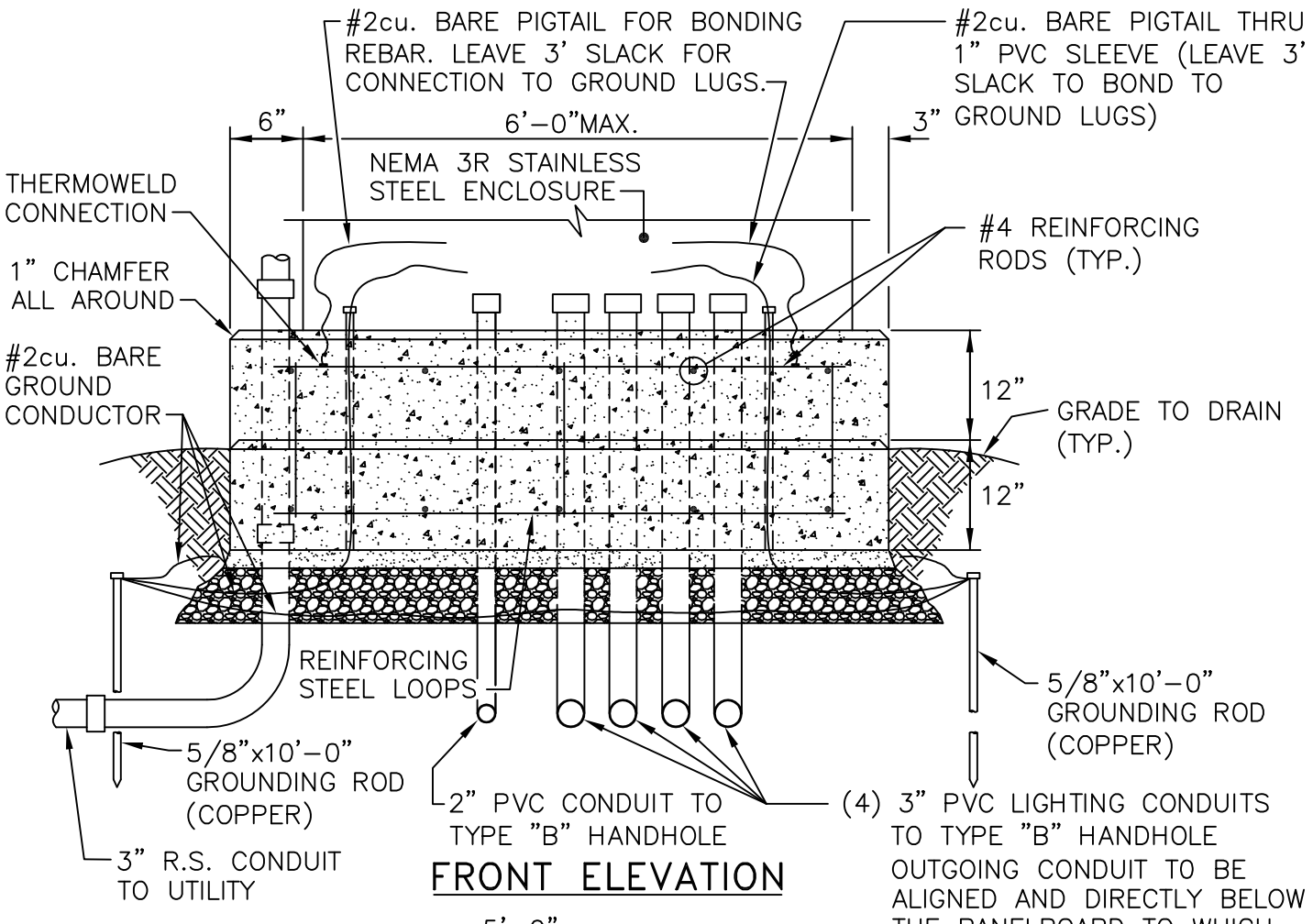
R.I. STANDARD 18.4.5



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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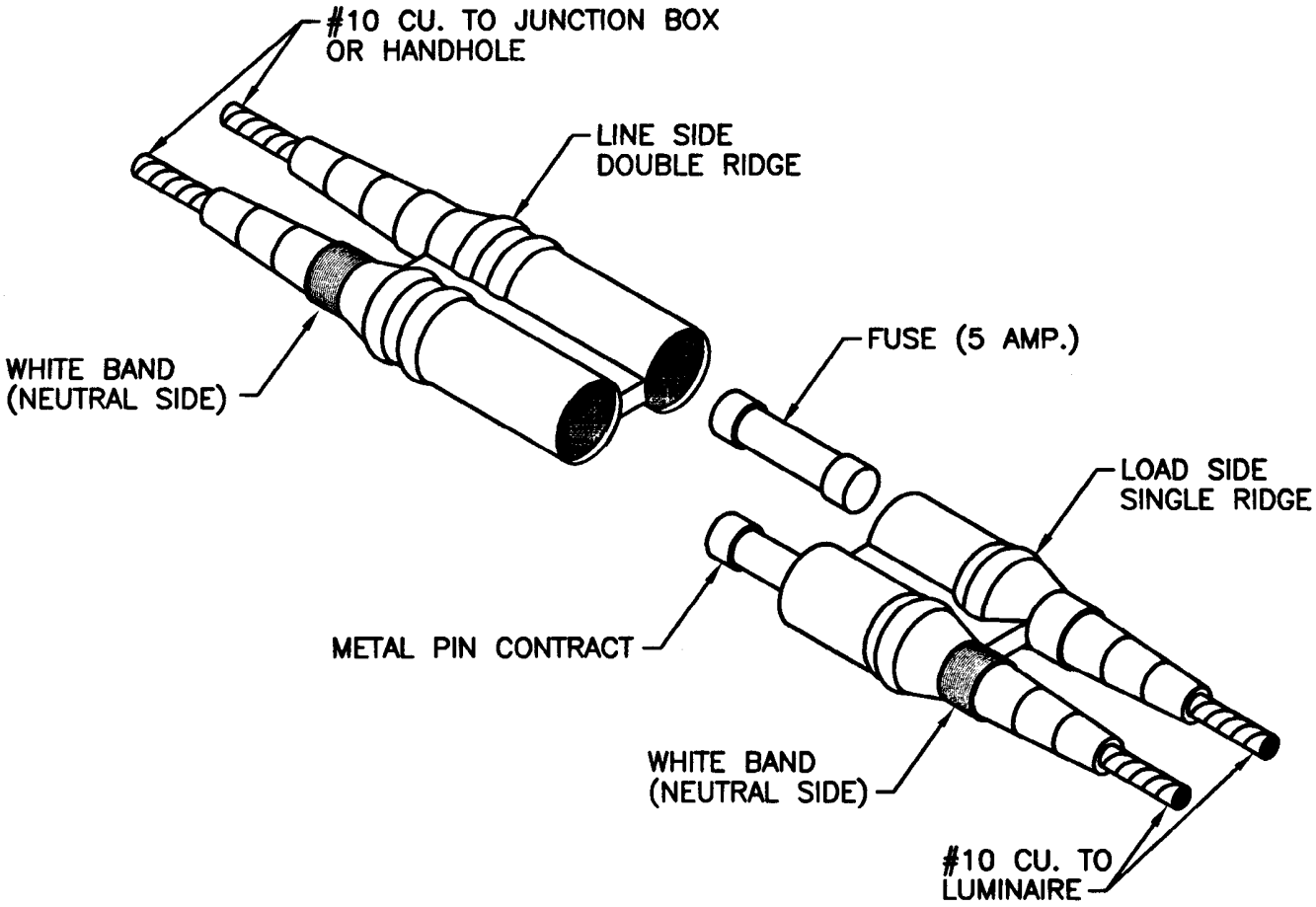
SERVICE PEDESTAL FOUNDATION

CHIEF ENGINEER TRANSPORTATION

DEPUTY CHIEF ENGINEER TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 18.4.6



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTON T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. LOCATED IN HANDHOLE AT BASE OF ALUMINUM POLE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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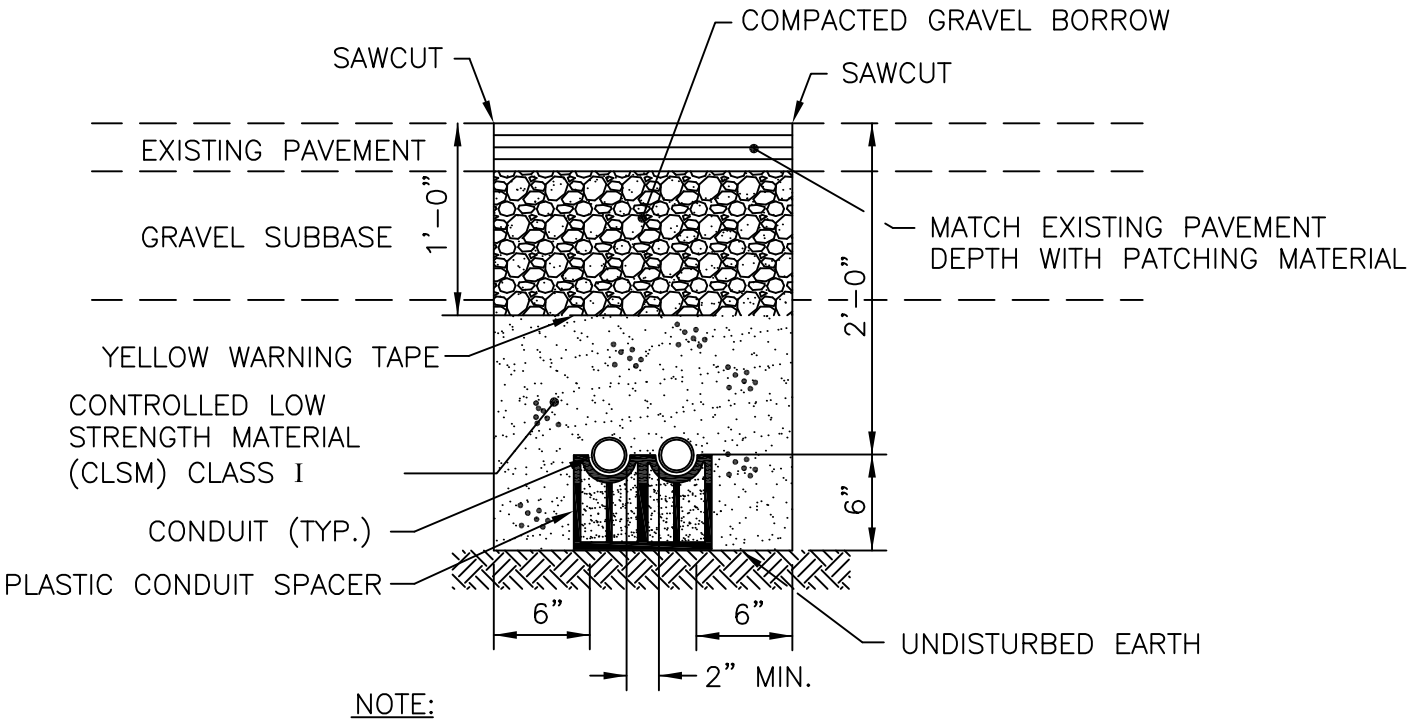
PHASE–NEUTRAL CONNECTOR KIT

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

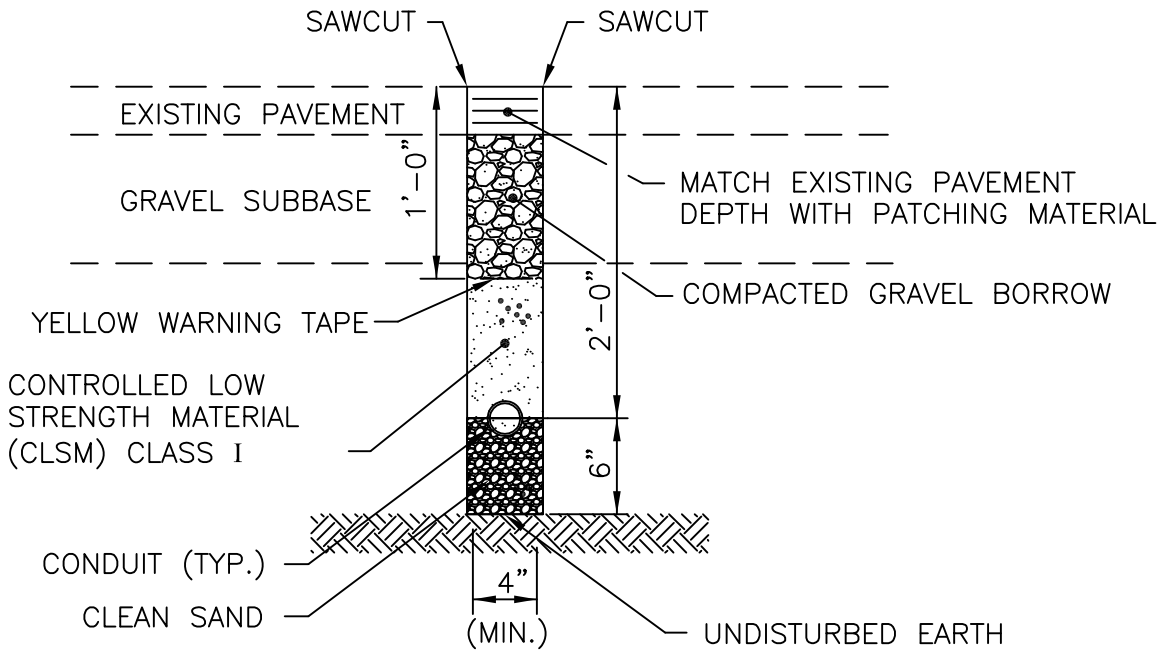
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.5.0



NOTE:
INSTALL SPACERS AT APPROXIMATELY 6' APART.

STANDARD TRENCH DETAIL



AUTOMATIC TRENCHING MACHINE DETAIL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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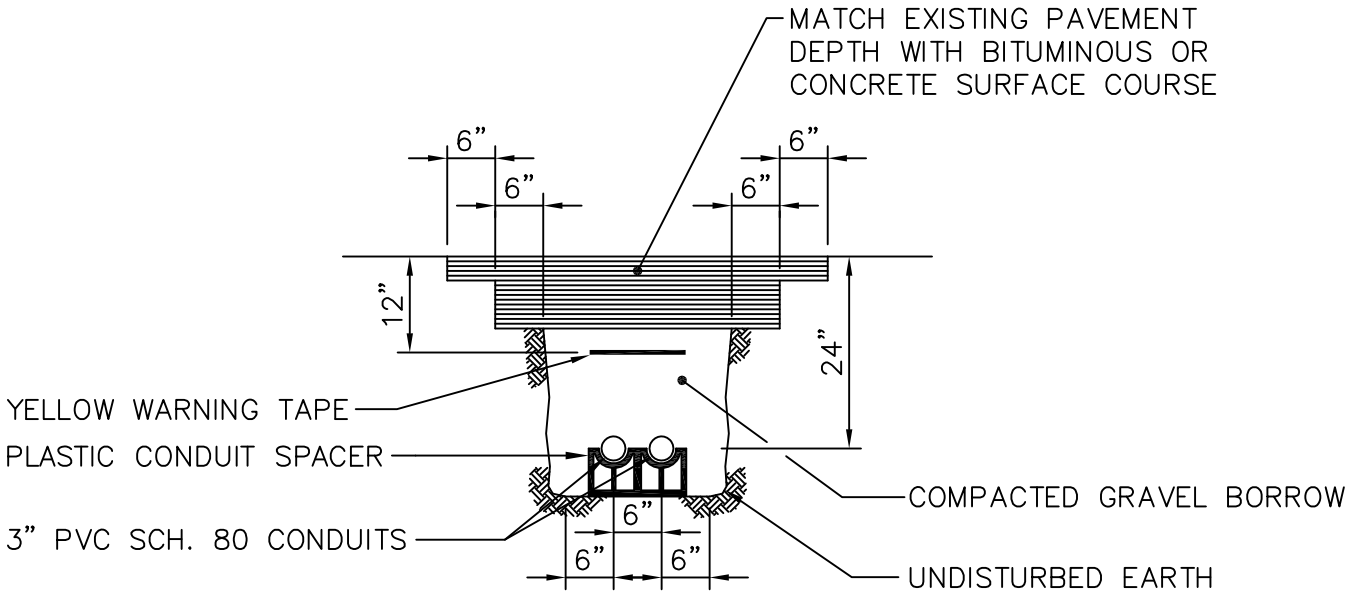
TRENCH DETAIL FOR CONDUIT IN EXISTING ROADWAY

James R. Cigna
CHIEF ENGINEER
TRANSPORTATION

Edmund F. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

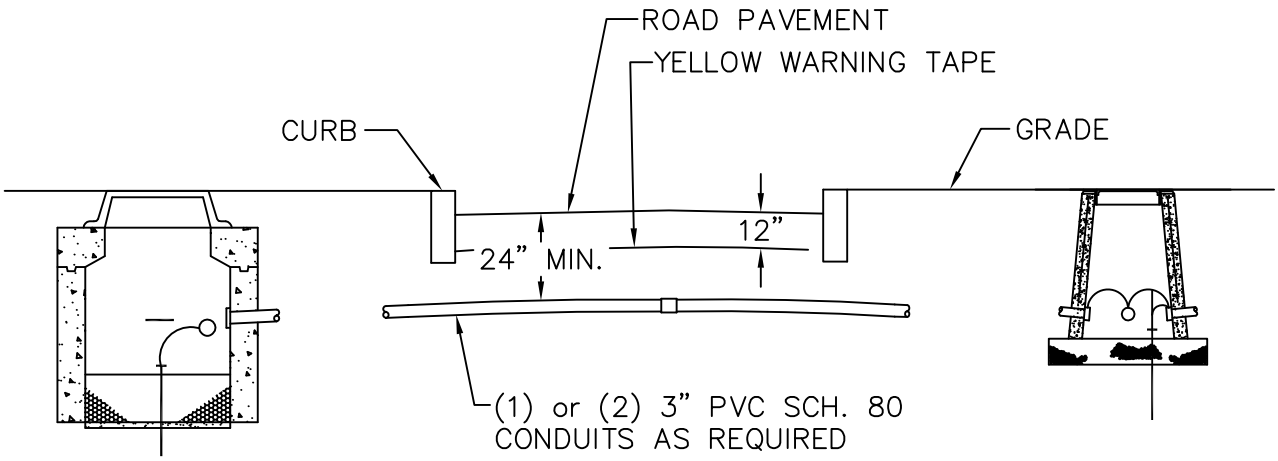
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.6.0



NOTE:
INSTALL SPACERS AT APPROXIMATELY 6' APART.

TRENCH SECTION



SECTION
TYPE "A" HANDHOLE
RIDOT 18.2.0
TYPE "H" HD HANDHOLE
RIDOT 18.2.1
OR TYPE "B" PULLBOX
RIDOT 18.2.2

SECTION
TYPE "A" HANDHOLE
RIDOT 18.2.0
TYPE "H" HD HANDHOLE
RIDOT 18.2.1
OR TYPE "B" PULLBOX
RIDOT 18.2.2

NOTE:
SHALL BE IN ACCORDANCE WITH SECTON T.06 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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NO.	BY	DATE

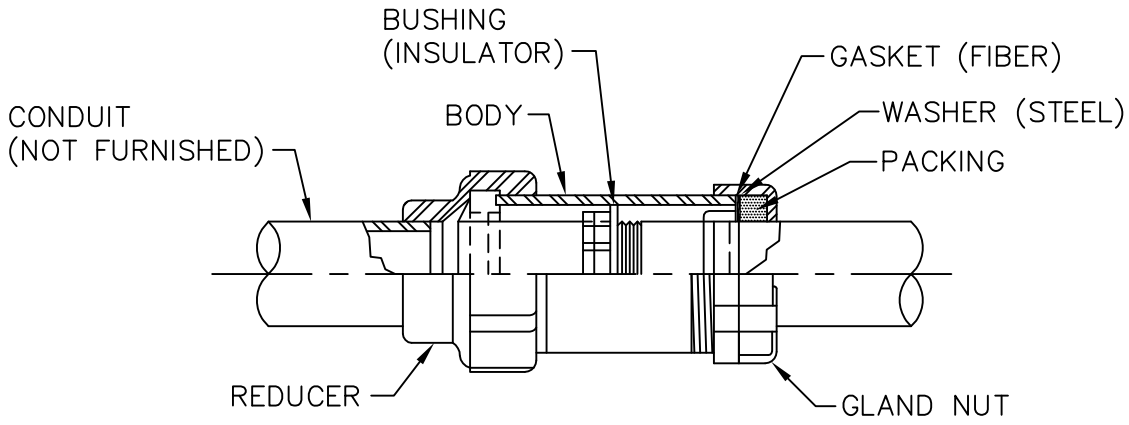
LIGHT CONDUIT – ROAD/RAMP CROSSING

CHIEF ENGINEER TRANSPORTATION

DEPUTY CHIEF ENGINEER TRANSPORTATION

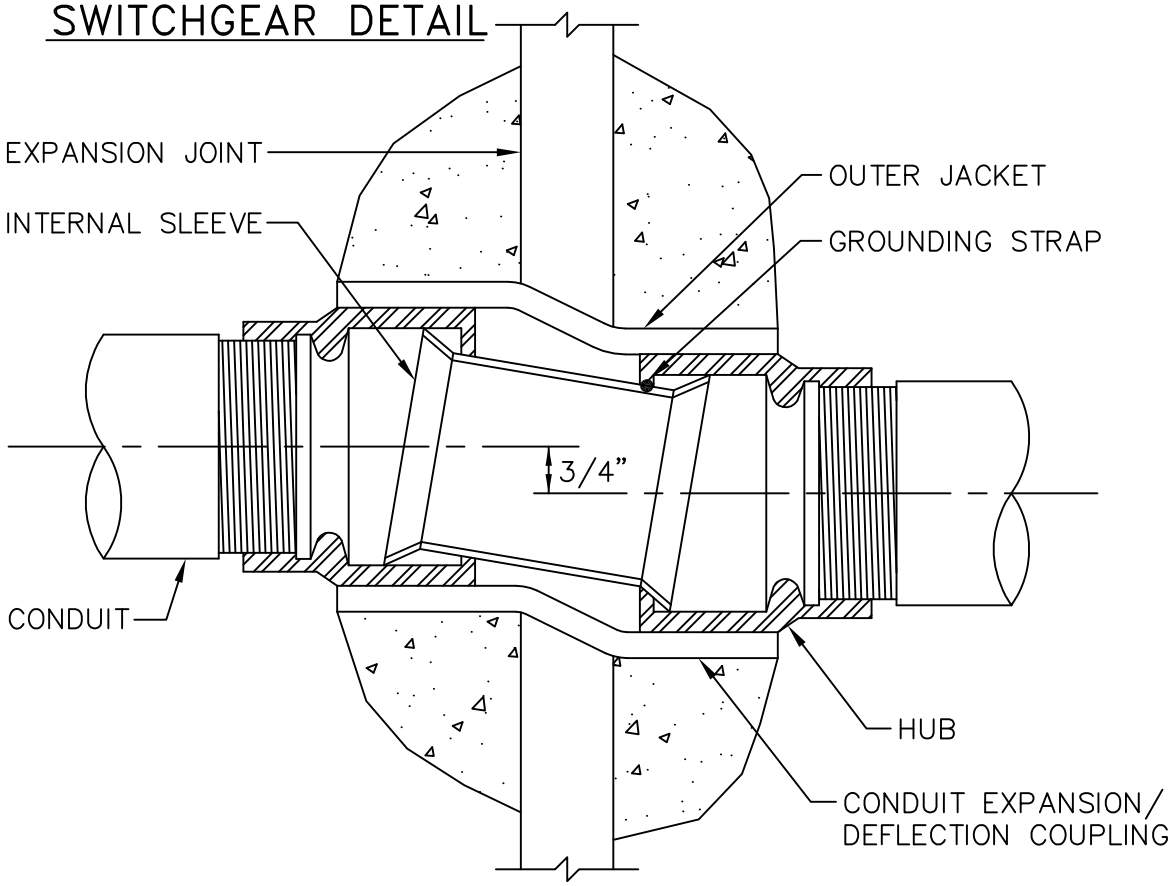
JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 18.6.1



EXPANSION JOINT DETAIL W/OUT DEFLECTION WATERTIGHT COUPLING

SWITCHGEAR DETAIL



EXPANSION JOINT DETAIL W/DEFLECTION WATERTIGHT COUPLING

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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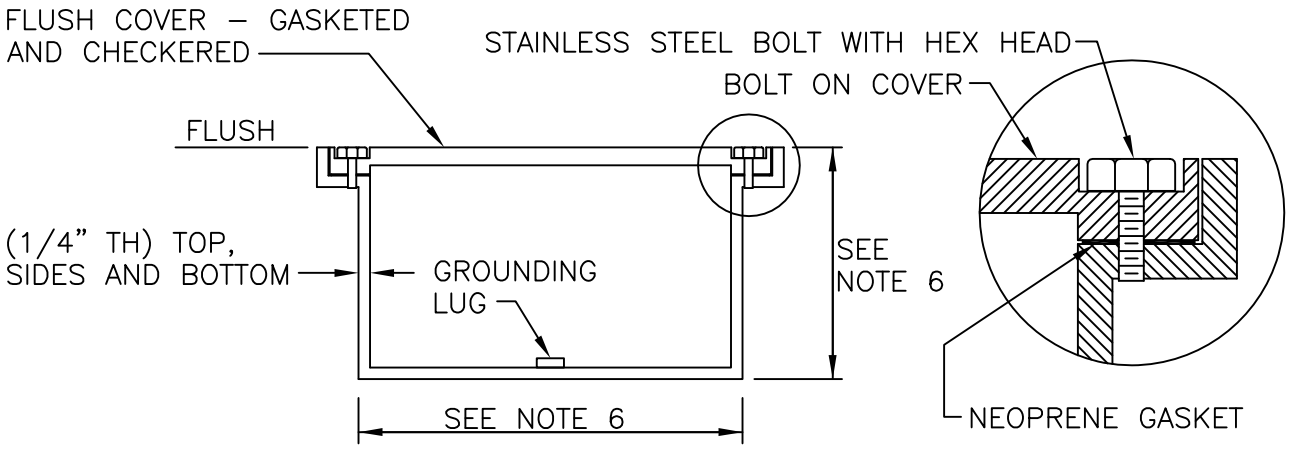
EXPANSION JOINTS

CHIEF ENGINEER
TRANSPORTATION

DEPUTY CHIEF ENGINEER
TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

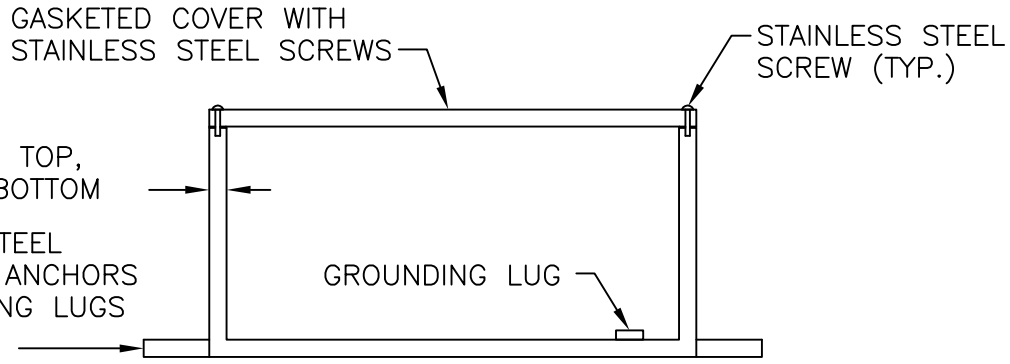
R.I. STANDARD 18.6.2



"V" PULLBOX NOTES:

1. FLANGE AND COVER TO BE MACHINED AT JOINT.
2. BOX TO BE U.L. LISTED.
3. BOX TO BE U.L. LISTED FOR SUBMERSIBLE USE. BOX TO BE CONSTRUCTED OF GALVANIZED STEEL WITH CAST IRON COVER.
4. PROVIDE HUBS AS REQUIRED.
5. SHALL BE IN ACCORDANCE WITH R.I. STANDARD. SPEC. T.05.
6. BOX SIZES TO BE: 24"Lx12"Wx8"D FOR 3" CONDUIT, 16"Lx12"Wx8"D FOR 2" CONDUIT.

TYPICAL SECTION AT TYPE "V" PULLBOX – WITHIN STRUCTURE



"W" PULLBOX NOTES:

1. FLANGE AND COVER TO BE MACHINED AT JOINT.
2. BOX TO BE U.L. LISTED.
3. BOX TO BE U.L. LISTED FOR SUBMERSIBLE USE. BOX TO BE CONSTRUCTED OF GALVANIZED STEEL.
4. PROVIDE HUBS AS REQUIRED.
5. SHALL BE IN ACCORDANCE WITH R.I. STANDARD. SPEC. T.05.

TYPICAL SECTION AT TYPE "W" PULLBOX – SURFACE MOUNTED

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

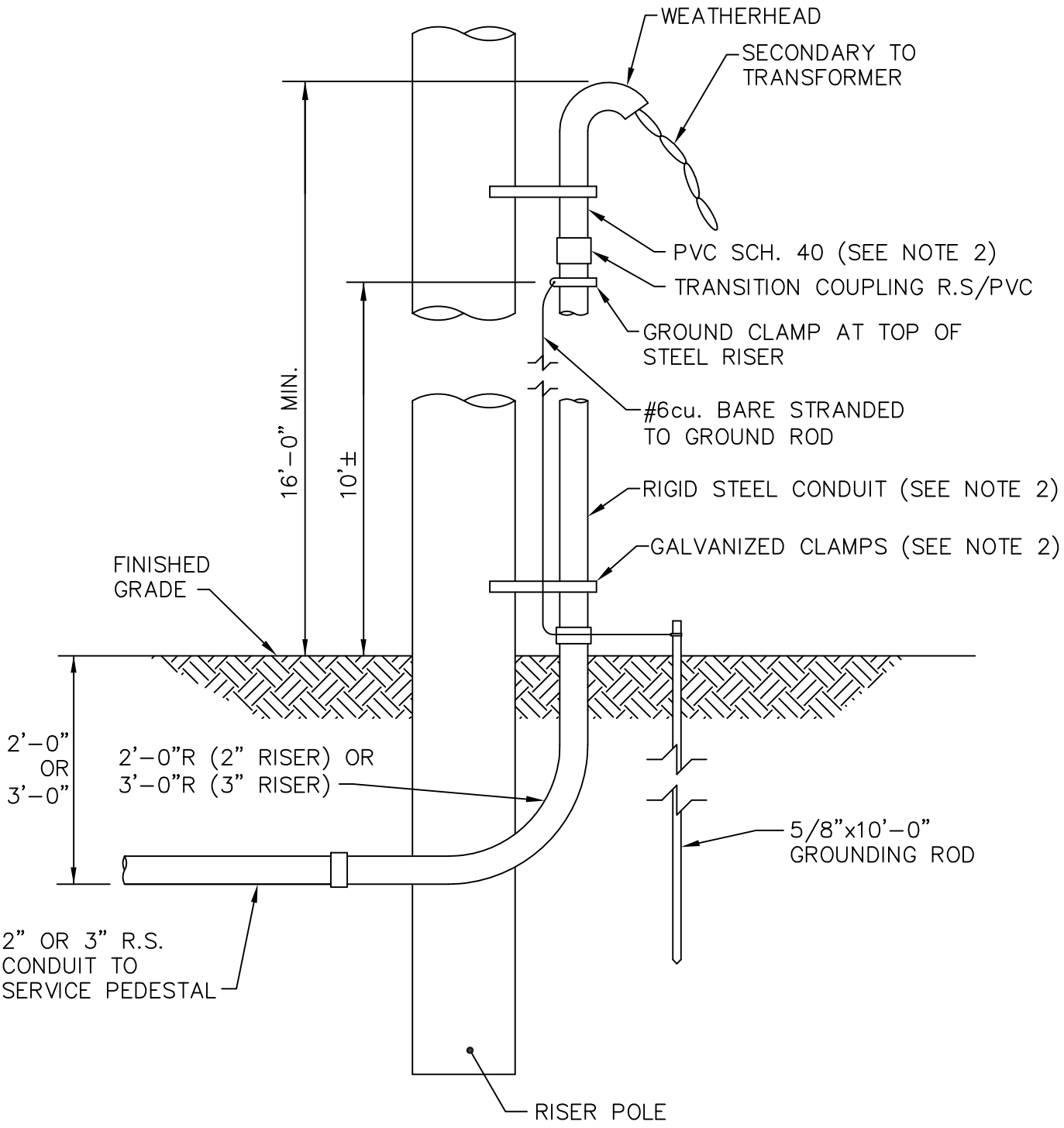
PULLBOXES – TYPE "V" AND TYPE "W"

CHIEF ENGINEER TRANSPORTATION

DEPUTY CHIEF ENGINEER TRANSPORTATION

JUNE 27, 2008
ISSUE DATE

R.I. STANDARD 18.6.3



NOTE:

1. SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE RI STANDARD SPECIFICATIONS.
2. 2" RISER TO BE USED FOR 100 AMP SERVICE AND 3" RISER TO BE USED FOR 200 AMP SERVICE.
3. GROUND WIRE AND GROUND ROD TO BE SUPPLIED BY UTILITY.

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1	MLP	6/27/08

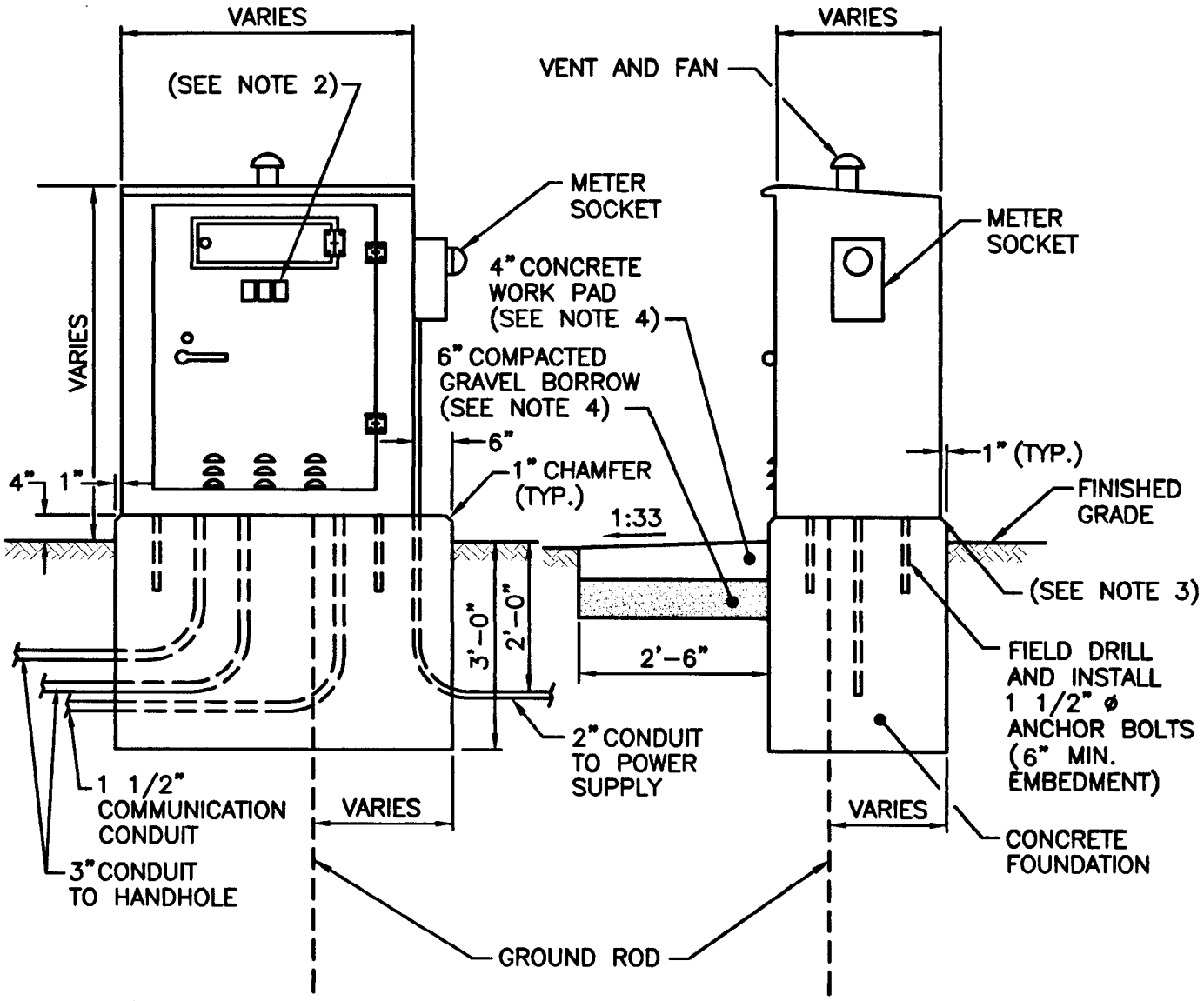
RISER POLE DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 18.7.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD SPECIFICATION.
2. TRAFFIC SIGNAL NUMBER TO BE STENCILED ON EXTERIOR AND INTERIOR OF ALL CABINET DOORS (GROUND AND POLE MOUNTED). STENCIL SHALL BE 3" HIGH BLOCK LETTERS APPLIED WITH BLACK PAINT.
3. SILICONE CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHER TIGHT SEAL.
4. IN UNPAVED AREAS A 4'-0"x2'-6" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE CABINET DOOR. PAD AND FOUNDATION SHALL BE COMPLETED IN ONE POUR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

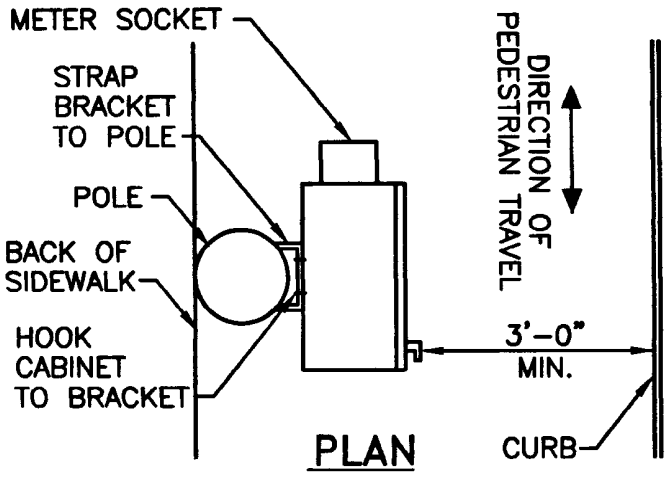
GROUND MOUNTED CONTROLLER INSTALLATION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

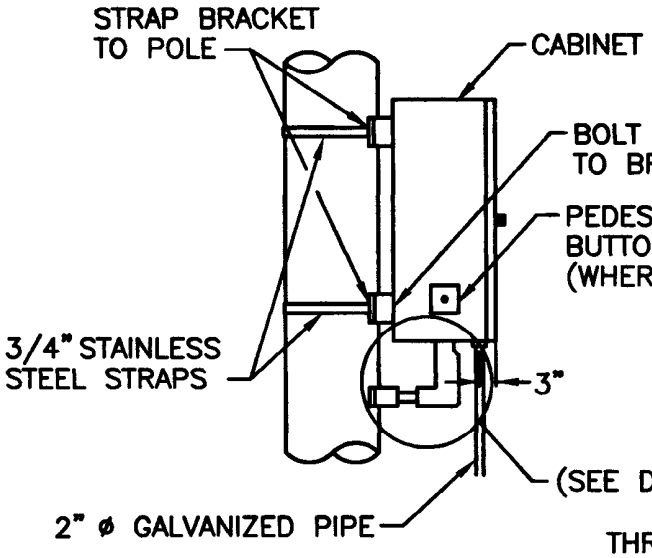
R.I. STANDARD 19.1.0



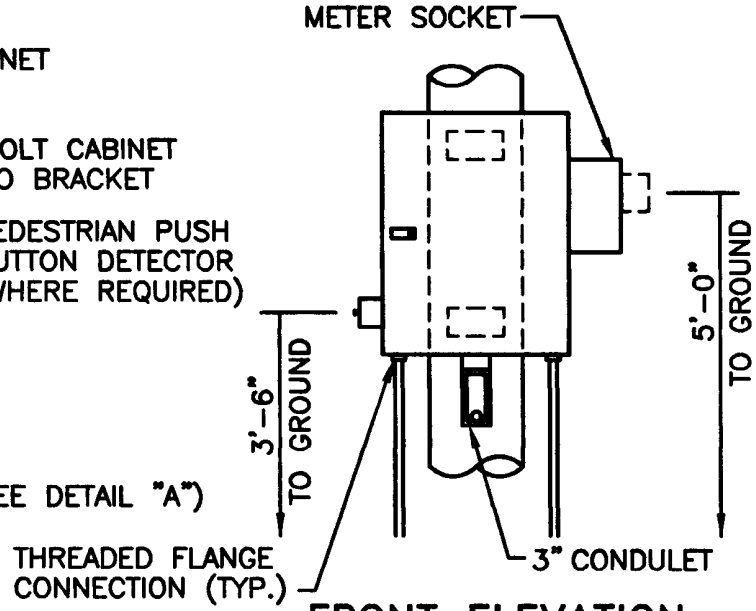
PLAN

NOTES:

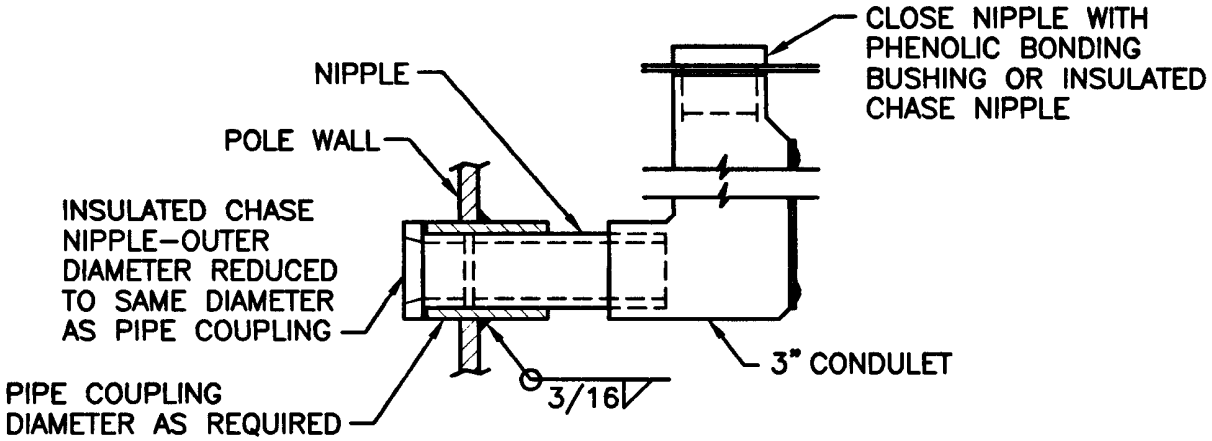
1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD DETAILS.
2. THE CABINET SHALL BE MOUNTED SO THAT HOLES IN THE POLE FOR WIRE ACCESS FITTINGS ARE AT 90° TO THE AXIS OF POLE LOAD.
3. LOCATE BRACKETS AND ATTACHING BOLTS TO CLEAR EQUIPMENT WITHIN CABINET.
4. IN UNPAVED AREAS, A 4'-0"x2'-6"x4" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE DOOR.
5. ALL HARDWARE SHALL BE STAINLESS STEEL.
6. LINE CONDUCTORS SHALL BE PROTECTED TO THE METER.



SIDE ELEVATION



FRONT ELEVATION



DETAIL "A"

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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POLE MOUNTED CONTROLLER INSTALLATION

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
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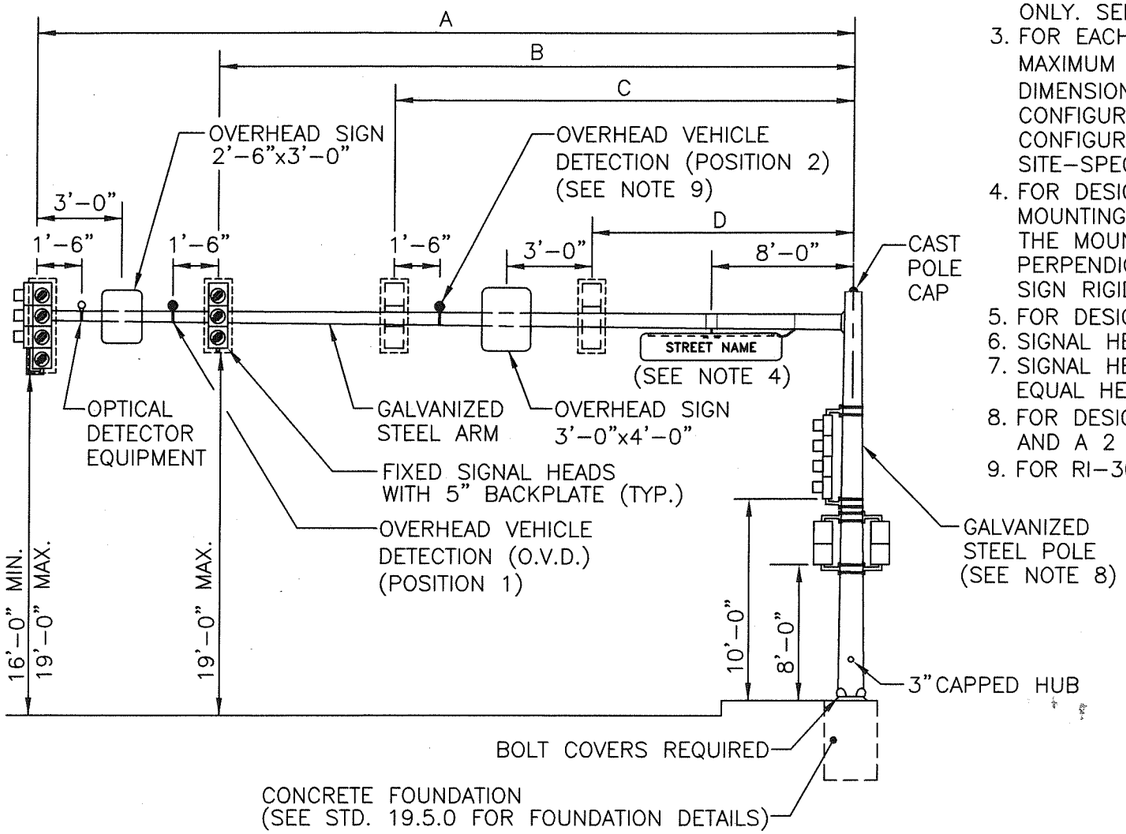

MAST ARM ELEVATION FOR STANDARD AND HEAVY LOADINGS

NOT TO SCALE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STD. SPECIFICATIONS.
2. EQUIPMENT & LOCATIONS SHOWN ON MAST ARM ELEVATION IS FOR DESIGN PURPOSES ONLY. SEE CONTRACT PLANS FOR ACTUAL EQUIPMENT/LOCATIONS TO BE USED.
3. FOR EACH MAST ARM TYPE, THE STANDARD & HEAVY LOADINGS TABLE PROVIDES THE MAXIMUM DESIGN CONFIGURATIONS (EQUIPMENT WEIGHTS, SURFACE AREAS, AND LOCATION DIMENSIONS). ACTUAL CONFIGURATIONS SHALL BE PER THE CONTRACT PLANS. FOR ACTUAL CONFIGURATIONS PRODUCING MAST ARM LOADS LARGER THAN THE MAXIMUM DESIGN CONFIGURATION, THE CONTRACT PLANS WILL INDICATE THE CONTRACTOR SHALL DEVELOP A SITE-SPECIFIC SHOP DRAWING SUBMITTAL.
4. FOR DESIGN PURPOSES, STREET NAME SIGNS ARE 1'-6" BY 8'-0". STREET NAME SIGN MOUNTING BRACKETS SHALL BE MOUNTED SECURELY WITH STAINLESS STEEL BANDS, AND THE MOUNTING BRACKETS SHALL BE ADJUSTABLE SUCH THAT THE FACE OF THE SIGN IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC. THE MOUNTING BRACKETS SHALL HOLD THE SIGN RIGIDLY IN PLACE AND RESIST MOVEMENT IN ALL DIRECTIONS; SIGN SHALL BE LEVEL.
5. FOR DESIGN PURPOSES, VEHICULAR SIGNAL HEADS SHALL INCLUDE 5" BACKPLATES.
6. SIGNAL HEAD DOOR FACE AND UNDERSIDE OF VISORS SHALL BE PAINTED FLAT BLACK.
7. SIGNAL HEADS SHALL BE PLACED ON THE MAST ARM SO THAT THE RED LENSES ARE AT EQUAL HEIGHT ABOVE THE PAVEMENT SURFACE.
8. FOR DESIGN PURPOSES, ALL MAST ARMS SHALL INCLUDE A 1 WAY/4 SECTION SIGNAL HEAD AND A 2 WAY PEDESTRIAN SIGNAL HEAD MOUNTED ON THE MAST ARM POLE.
9. FOR RI-30H, O.V.D. (POS. 2) SHALL BE LOCATED 18'-6" FROM THE ℄ OF POLE.

EQUIPMENT DESCRIPTION	DESIGN WEIGHT (LB)	FRONT AREA (SF)	SIDE AREA (SF)	ICE AREA (SF)
1 WAY/3 SECTION SIGNAL HEAD	74	8.5	4.8	28.1
1 WAY/4 SECTION SIGNAL HEAD	90	10.8	6.5	35.5
2 WAY/3 SECTION SIGNAL HEAD	158	13.3	13.3	56.2
2 WAY/4 SECTION SIGNAL HEAD	175	17.3	17.3	71.0
3 WAY/3 SECTION SIGNAL HEAD	202	21.8	18.1	84.3
3 WAY/4 SECTION SIGNAL HEAD	255	28.1	23.8	106.5
2 WAY PEDESTRIAN SIGNAL HEAD	125	6.2	6.2	32.7
2'-6"X3'-0" OVERHEAD SIGN	25	7.5	–	22.5
1'-6"X8' STREET NAME SIGN	20	12.0	–	36.0
OPTICAL DETECTION EQUIPMENT (DETECTOR OR STROBE PER EACH)	3	1.0	1.0	6.0
OVERHEAD VEHICLE DETECTION	20	1.0	1.0	6.0
3'-0"X4'-0" OVERHEAD SIGN	40	12.0	–	36.0

MAST ARM TYPE	DIMENSION A (FT.)	DESIGN SIGNAL CONFIGURATION @ A	DIMENSION B (FT.)	DESIGN SIGNAL CONFIGURATION @ B	DIMENSION C (FT.)	DESIGN SIGNAL CONFIGURATION @ C	DIMENSION D (FT.)	DESIGN SIGNAL CONFIGURATION @ D	DESIGN # OF OPTICAL DETECTION EQUIP.	DESIGN # OF OVERHEAD VEHICLE DETECTION	
										POSITION 1	POSITION 2
STANDARD LOADINGS (GENERALLY SINGLE DIRECTION MAST ARMS PERPENDICULAR TO TRAFFIC FLOW)											
RI-20	20	1 WAY/3 SEC	12	1 WAY/3 SEC	N/A	N/A	N/A	N/A	2	1	0
RI-25	25	1 WAY/4 SEC	17	1 WAY/3 SEC	N/A	N/A	N/A	N/A	2	1	0
RI-30	30	1 WAY/4 SEC	20	1 WAY/3 SEC	10	1 WAY/3 SEC	N/A	N/A	2	1	0
RI-35	35	1 WAY/4 SEC	25	1 WAY/3 SEC	15	1 WAY/3 SEC	N/A	N/A	2	1	0
RI-40	40	1 WAY/4 SEC	30	1 WAY/3 SEC	20	1 WAY/3 SEC	N/A	N/A	2	1	0
RI-45	45	1 WAY/4 SEC	35	1 WAY/3 SEC	25	1 WAY/3 SEC	15	1 WAY/3 SEC	2	1	0
RI-50	50	1 WAY/4 SEC	40	1 WAY/3 SEC	30	1 WAY/3 SEC	20	1 WAY/3 SEC	2	1	0
HEAVY LOADINGS (GENERALLY DIAGONAL MAST ARMS)											
RI-30H	30	2 WAY/4 SEC	20	2 WAY/3 SEC	N/A	N/A	N/A	N/A	3	2	1
RI-35H	35	3 WAY/4 SEC	25	3 WAY/3 SEC	15	2 WAY/3 SEC	N/A	N/A	3	2	2
RI-40H	40	3 WAY/4 SEC	30	3 WAY/3 SEC	20	2 WAY/3 SEC	N/A	N/A	4	2	2
RI-45H	45	3 WAY/4 SEC	35	3 WAY/3 SEC	25	2 WAY/3 SEC	15	2 WAY/3 SEC	4	2	2
RI-50H	50	3 WAY/4 SEC	40	3 WAY/3 SEC	30	2 WAY/3 SEC	20	2 WAY/3 SEC	4	2	2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL MAST ARM

R.I. STANDARD 19.2.0

JUNE 15, 1998
ISSUE DATE

CHIEF DESIGN ENGINEER
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHIEF ENGINEER
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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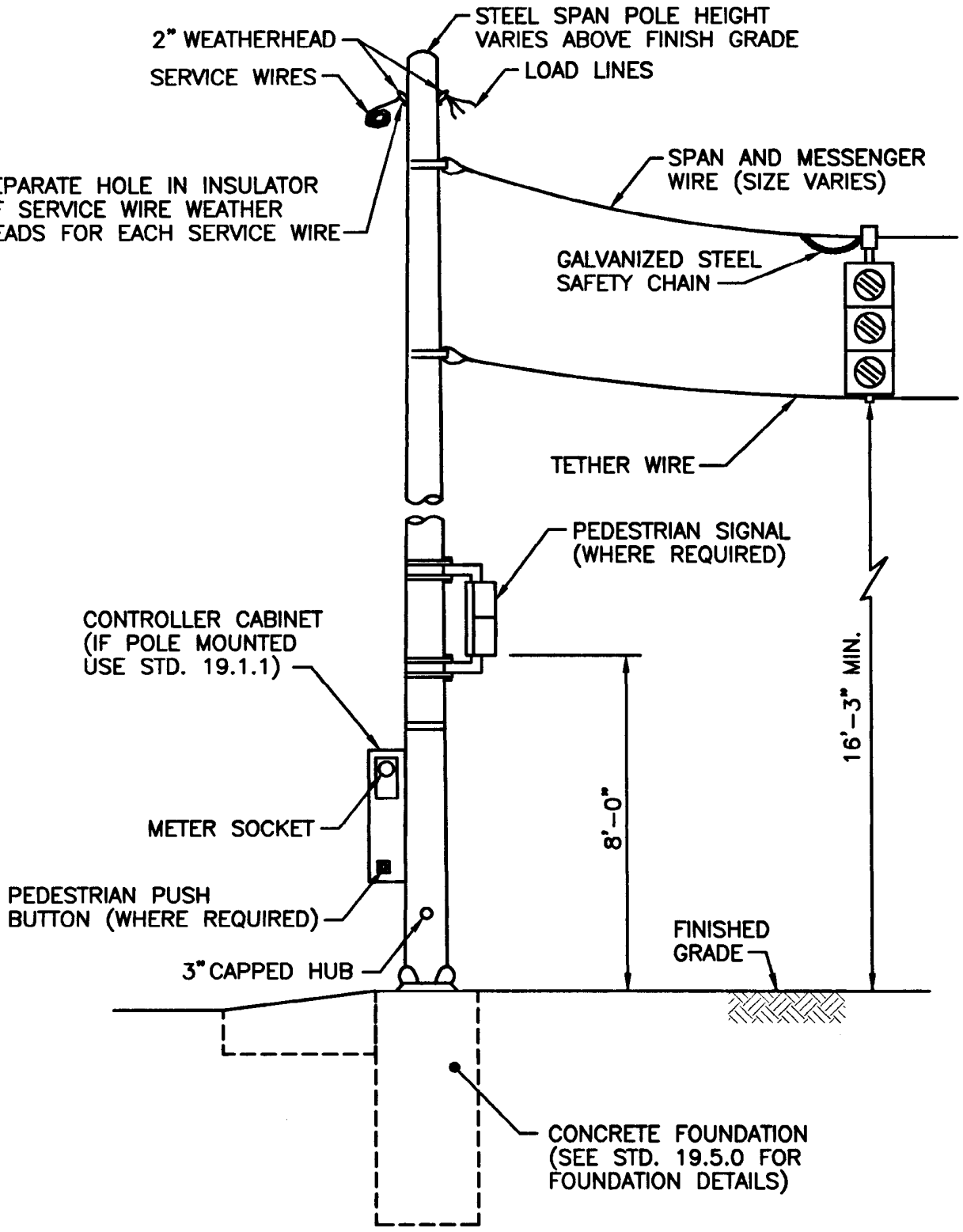
1	MLP	5/28/2019



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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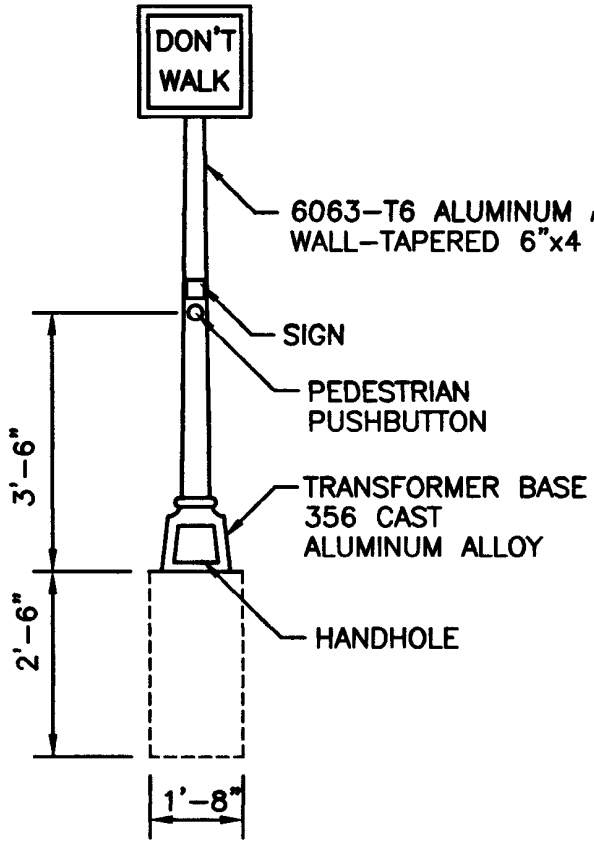
STEEL SPAN POLE

CHIEF ENGINEER TRANSPORTATION

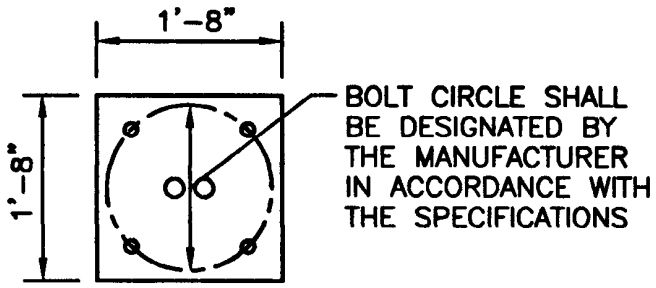
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

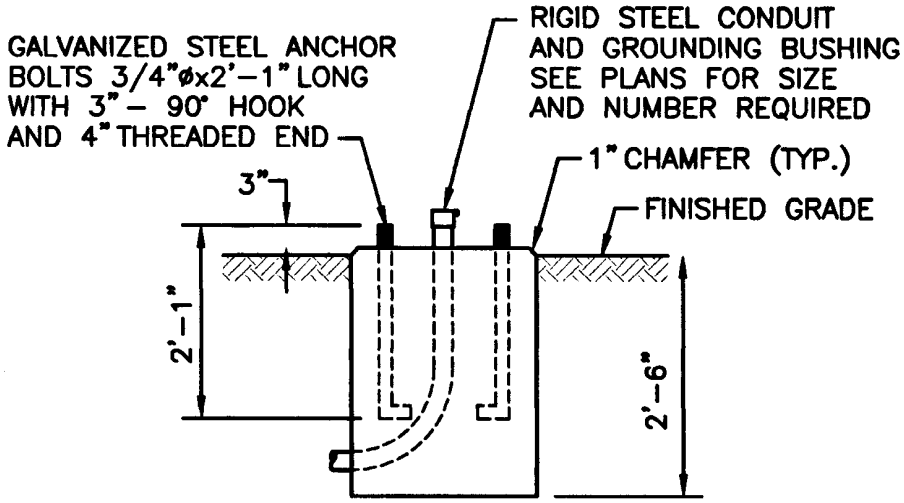
R.I. STANDARD 19.3.0



POLE DETAIL



PLAN



ELEVATION

FOUNDATION DETAIL

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. PRECAST CONCRETE FOUNDATIONS MAY BE PROVIDED AS AN ALTERNATE TO CAST IN-PLACE FOUNDATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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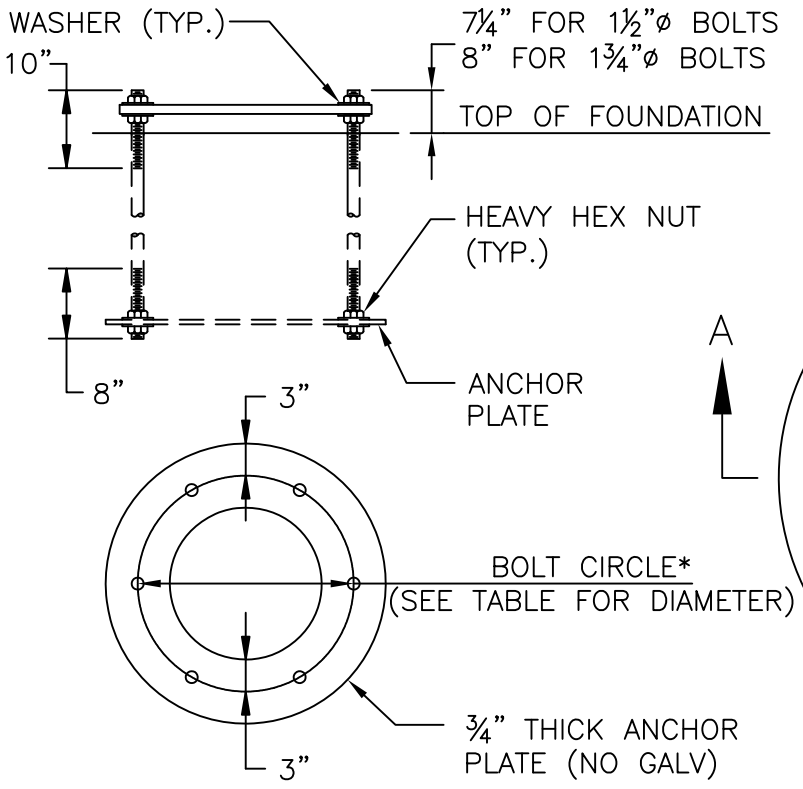
ALUMINUM PEDESTAL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

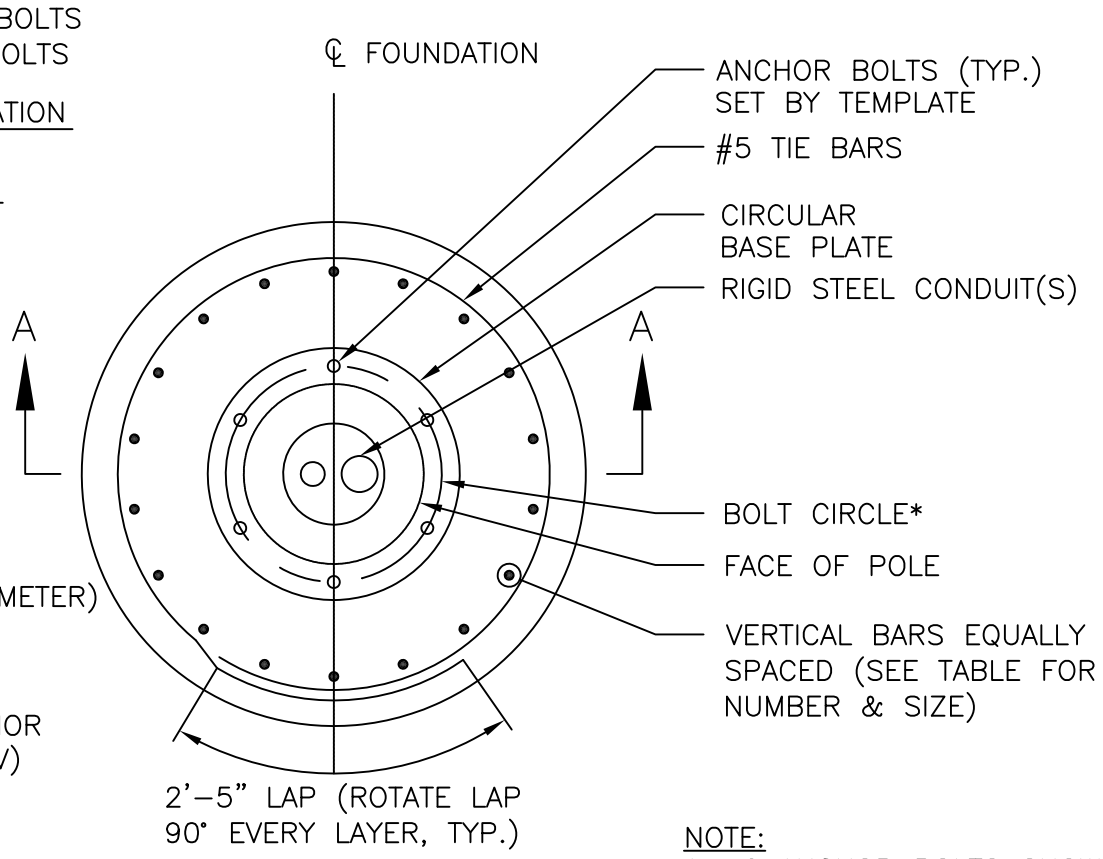
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 19.4.0



ANCHORAGE ASSEMBLY

NOT TO SCALE

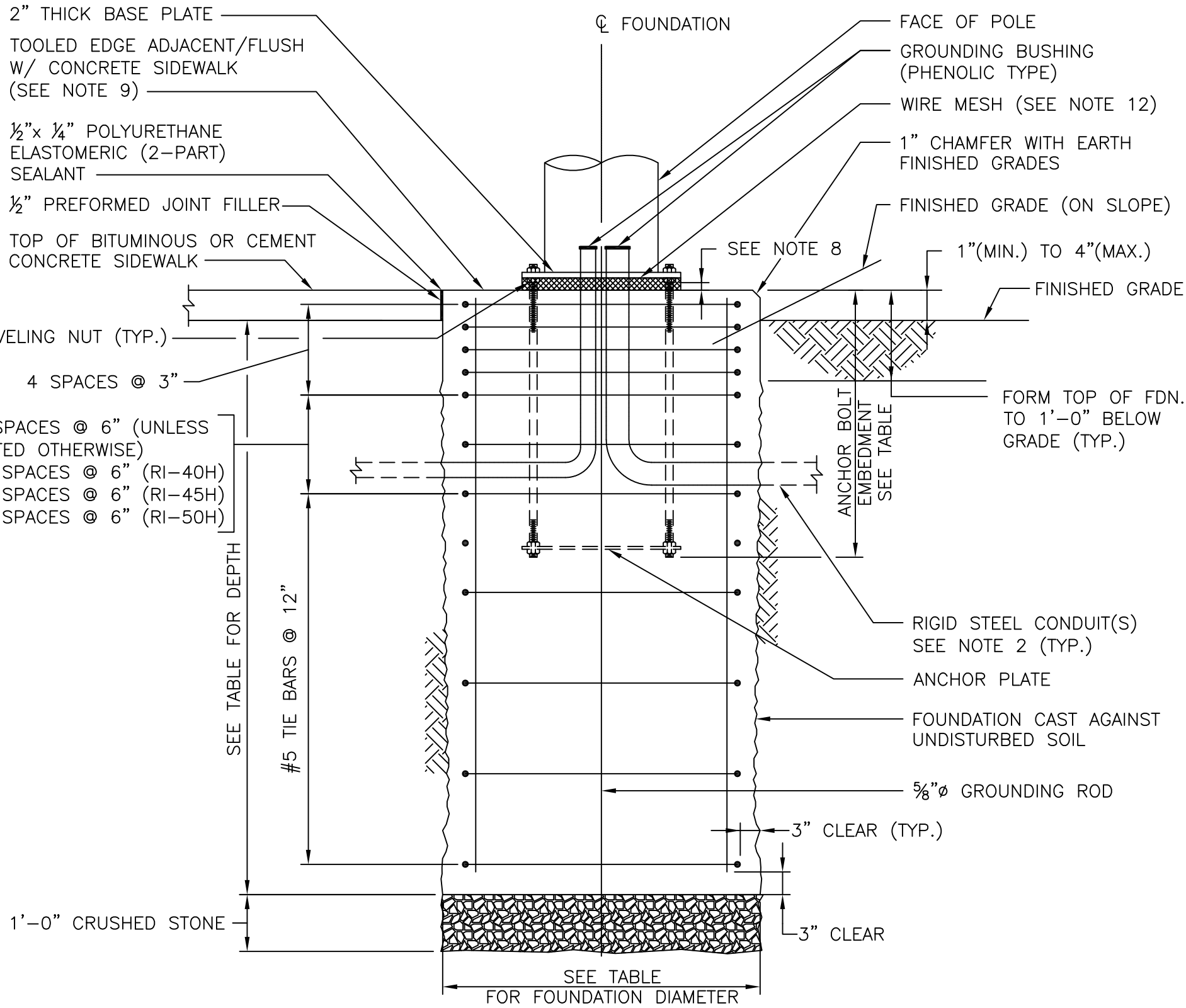


FOUNDATION PLAN

NOT TO SCALE

NOTE:

* 6 ANCHOR BOLTS SHOWN. SEE TABLE FOR FOUNDATIONS WITH 10 ANCHOR BOLTS.



SECTION A–A

NOT TO SCALE

NOTE:

FOUNDATION SHALL COMPLY WITH THE DESIGN TABLES AND NOTES SHOWN ON R.I. STD 19.5.0B AND 19.5.0C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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MAST ARM FOUNDATION – DETAILS

Robert Nocchio
CHIEF ENGINEER OF INFRASTRUCTURE
TRANSPORTATION

David W. Fish
ADMINISTRATOR OF PROJECT MANAGEMENT
TRANSPORTATION

MAY 28, 2019
ISSUE DATE

R.I. STANDARD 19.5.0A

DESIGN TABLES

STEP 1

CHOOSE SOIL CLASS USING THE SITE SPECIFIC SOIL TYPE.

SOIL CLASS	SOIL TYPE
1	LOOSE SAND (SP, SW)
	LOOSE SAND AND GRAVEL (GP, GW)
	MEDIUM DENSE SILTY SAND (SM)
	COMPACTED COMMON BORROW
2	MEDIUM DENSE SAND (SP, SW)
	MEDIUM DENSE SAND AND GRAVEL (GP, GW)
	DENSE SILTY SAND (SM)
	COMPACTED GRAVEL BORROW
3	DENSE SAND (SP, SW)
	DENSE SAND AND GRAVEL (GP, GW)
	VERY DENSE SAND AND GRAVEL (SW, GP, GW, GLACIAL TILL)

STEP 2

CHOOSE THE MAST ARM TYPE FROM R.I. STD. 19.2.0 BASED ON THE MAXIMUM OF THE OVERTURNING MOMENT OR TORSION APPLIED AT THE BASE OF THE POLE.

MAST ARM TYPE	MAST ARM LENGTH (FT)	LOADING	MAXIMUM OVERTURNING MOMENT (K–FT)	MAXIMUM TORSION (K–FT)	BOLT CIRCLE DIAMETER (IN)	NUMBER OF ANCHOR BOLTS	DIAMETER OF BOLTS (IN)	ANCHOR BOLT EMBEDMENT (IN)
RI–20	20	STANDARD	61.0	31.0	17.0	6	1.5	42”
RI–25	25	STANDARD	69.0	44.0	19.0	6	1.5	42”
RI–30	30	STANDARD	84.0	56.0	19.0	6	1.5	42”
RI–35	35	STANDARD	93.0	70.0	20.0	6	1.5	42”
RI–40	40	STANDARD	106.0	84.0	21.0	6	1.5	42”
RI–45	45	STANDARD	143.0	119.0	24.0	6	1.75	42”
RI–50	50	STANDARD	163.0	141.0	25.0	6	1.75	42”
RI–30H	30	HEAVY	99.0	72.0	21.0	6	1.75	42”
RI–35H	35	HEAVY	169.0	133.0	25.0	10	1.75	42”
RI–40H	40	HEAVY	198.0	160.0	25.0	10	1.75	42”
RI–45H	45	HEAVY	262.0	210.0	26.0	10	1.75	42”
RI–50H	50	HEAVY	288.0	244.0	26.0	10	1.75	42”

STEP 3

DETERMINE THE SIZE, DEPTH AND REINFORCING REQUIRED FOR THE FOUNDATION. SEE R.I. STD. 19.5.0A FOR FOUNDATION DETAILS.

STANDARD LOADING				
SOIL CLASS	MAST ARM TYPE			
	RI–20			
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–0”	9’–0”	9’–0”	13–#8
2	3’–0”	8’–0”	8’–0”	13–#8
3	3’–0”	7’–0”	8’–0”	13–#8
RI–25				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–0”	10’–0”	10’–0”	13–#8
2	3’–0”	9’–0”	9’–0”	13–#8
3	3’–0”	8’–0”	8’–0”	13–#8
RI–30				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–0”	10’–0”	11’–0”	13–#8
2	3’–0”	9’–0”	9’–0”	13–#8
3	3’–0”	8’–0”	8’–0”	13–#8
RI–35				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–0”	11’–0”	12’–0”	13–#8
2	3’–0”	9’–0”	10’–0”	13–#8
3	3’–0”	8’–0”	9’–0”	13–#8
RI–40				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	11’–0”	12’–0”	18–#8
2	3’–6”	9’–0”	10’–0”	18–#8
3	3’–6”	8’–0”	9’–0”	18–#8
RI–45				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	13’–0”	14’–0”	18–#8
2	3’–6”	11’–0”	11’–0”	18–#8
3	3’–6”	9’–0”	10’–0”	18–#8
RI–50				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	14’–0”	16’–0”	18–#8
2	3’–6”	11’–0”	12’–0”	18–#8
3	3’–6”	10’–0”	10’–0”	18–#8

HEAVY LOADING				
SOIL CLASS	MAST ARM TYPE			
	RI–30H			
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	11’–0”	11’–0”	18–#8
2	3’–6”	9’–0”	9’–0”	18–#8
3	3’–6”	8’–0”	8’–0”	18–#8
RI–35H				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	13’–0”	15’–0”	18–#8
2	3’–6”	11’–0”	11’–0”	18–#8
3	3’–6”	10’–0”	10’–0”	18–#8
RI–40H				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	3’–6”	15’–0”	17’–0”	18–#8
2	3’–6”	12’–0”	12’–0”	18–#8
3	3’–6”	10’–0”	11’–0”	18–#8
RI–45H				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	4’–0”	15’–0”	17’–0”	23–#8
2	4’–0”	12’–0”	13’–0”	23–#8
3	4’–0”	11’–0”	11’–0”	23–#8
RI–50H				
	DIA.	DEPTH[1]	DEPTH[2]	VERTICALS
1	4’–0”	16’–0”	18’–0”	23–#8
2	4’–0”	13’–0”	14’–0”	23–#8
3	4’–0”	11’–0”	12’–0”	23–#8

NOTES:
1. FOUNDATIONS SHALL COMPLY WITH THE DETAILS AND NOTES SHOWN ON R.I. STD. 19.5.0A AND 19.5.0C.
2. USE DEPTH[1] IF NO GROUNDWATER IS PRESENT.
3. USE DEPTH[2] IF GROUNDWATER IS PRESENT. FOUNDATION TABLES ARE APPLICABLE ONLY WHERE GROUNDWATER IS EQUAL TO OR GREATER THAN 5’–0” FROM THE GROUND SURFACE – SEE R.I. STD. 19.5.0C NOTE 6.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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MAST ARM FOUNDATION – DESIGN TABLES

Robert Nocchio
CHIEF ENGINEER
TRANSPORTATION

David W. Fish
CHIEF DESIGN ENGINEER
TRANSPORTATION

MAY 28, 2019
ISSUE DATE

R.I. STANDARD 19.5.0B

NOTES:

1. MAST ARM FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. SERVICE CONDUIT(S) FOR POLE SHALL BE CAST INTEGRAL WITH THE FOUNDATION. CONDUITS SHOWN SCHEMATICALLY. REFER TO CONTRACT PLANS FOR ACTUAL CONDUIT CONFIGURATION.
3. SOIL CLASS, SOIL TYPE AND GROUNDWATER PRESENCE SHOWN ON THE CONTRACT PLANS SHALL BE USED TO SELECT THE FOUNDATION FROM THE MAST ARM FOUNDATION DESIGN TABLES. DESIGN OF STANDARD FOUNDATIONS ARE BASED ON GRANULAR SOILS AND EXCLUDE POOR SOILS WHERE THE SPT N–VALUE IS LESS THAN 5, INCLUDING LOOSE SILTY SAND (SM), SILTS (ML), COHESIVE SOILS, MUCK, ORGANIC SOILS, MISCELLANEOUS FILLS, AND ROCK.
4. COMPACTED COMMON BORROW AND COMPACTED GRAVEL BORROW IN THE SOIL TYPE TABLE APPLY TO GRANULAR HIGHWAY EMBANKMENT FILL, IN WHICH THE TOP 3 FEET IS COMPACTED TO AT LEAST 95 PERCENT OF T180 AND MATERIAL BELOW 3 FEET IS COMPACTED TO AT LEAST 90 PERCENT OF T180.
5. FOUNDATION SHALL BE CAST AGAINST UNDISTURBED SOIL. EXCAVATIONS SHALL BE BY THE METHODS SPECIFIED IN SECTION T.11 TO THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATION WITHOUT DISTURBING THE SOIL AROUND AND BELOW THE PROPOSED FOUNDATION. IF THE SOIL IS DISTURBED OR REMOVED BEYOND THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATION, THEN DISTURBED SOILS SHALL BE REMOVED AND THE EXCAVATION SHALL BE FILLED WITH FOUNDATION CONCRETE.
6. FOUNDATIONS SHOWN IN THE DESIGN TABLES ARE DESIGNED FOR DRY CONDITIONS (NO GROUND WATER) AND WET CONDITIONS WHEN GROUNDWATER IS 5'–0" OR GREATER FROM THE GROUND SURFACE.
7. ALL FOUNDATIONS MUST HAVE CONES OR BARRELS BOLTED TO FOUNDATION BASES UNTIL ACTUAL POLE IS INSTALLED.
8. THE MAXIMUM CLEARANCE BETWEEN THE BOTTOM OF THE LEVELING NUTS AND TOP OF CONCRETE FOUNDATION SHALL NOT EXCEED THE DIAMETER OF THE ANCHOR BOLT UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL ENSURE THAT FINAL GRADING ALLOWS RUN–OFF FROM TOP OF FOUNDATION. FOR INSTALLATIONS AT SIDEWALKS, REFER TO CONTRACT PLANS TO ENSURE TOP OF FOUNDATION WILL BE FLUSH AND WILL MATCH SLOPE AND GRADE OF PROPOSED SIDEWALK.
10. CONCRETE SHALL BE CLASS XX ¾" f'c = 4000 PSI.
11. REINFORCING STEEL SHALL BE IN AASHTO DESIGNATION M31 (ASTM DESIGNATION A615) GRADE 60 AND SHALL BE GALVANIZED PER SECTION 810.
12. A WIRE MESH SCREEN SHALL BE INSTALLED AROUND THE PERIMETER OF THE POLE BASE PLATE. SCREEN SHALL BE PRESS–FORMED OF 3 OR 4 MESH, 21 GAGE OR HEAVIER, HOT DIPPED GALVANIZED WIRE SCREEN OR APPROVED EQUIVALENT. THE SCREEN SHALL BE SCREWED INTO DRILLED AND TAPPED HOLES AROUND THE SIDE OF THE POLE BASE PLATE. THE SCREEN SHALL BE FLUSH WITH THE TOP OF THE FOUNDATION. THE POLE BASE SCREW FASTENERS SHALL BE GALVANIZED PER AASHTO M232.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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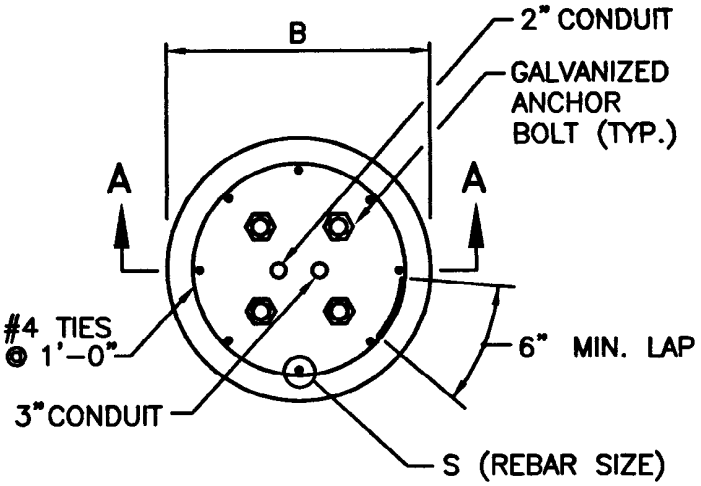
MAST ARM FOUNDATION – NOTES

Robert Nocchio
CHIEF ENGINEER OF INFRASTRUCTURE TRANSPORTATION

David W. Fish
ADMINISTRATOR OF PROJECT MANAGEMENT TRANSPORTATION

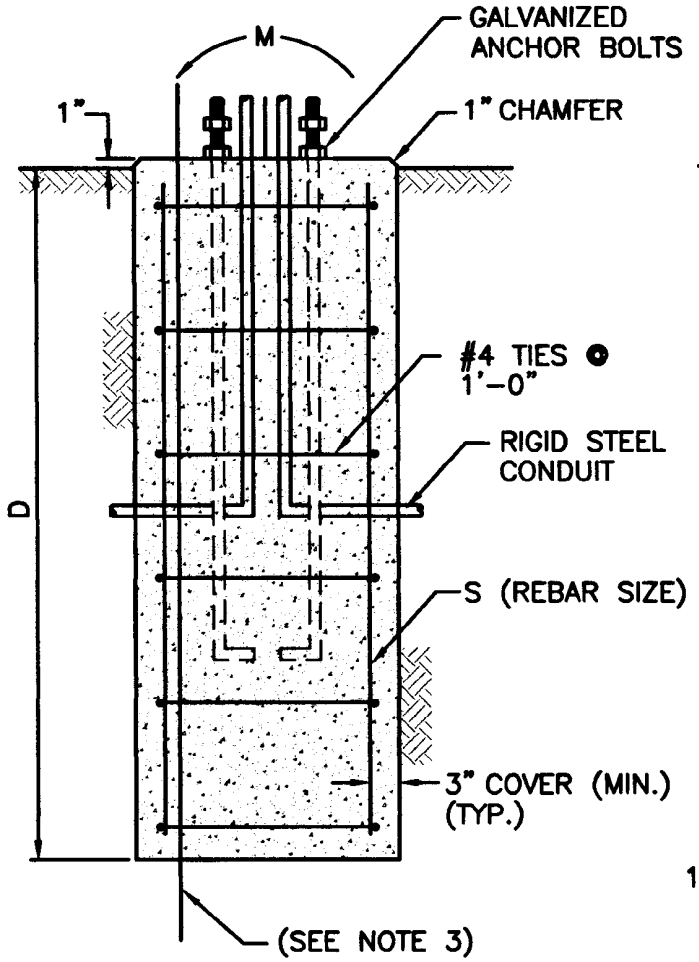
MAY 28, 2019
ISSUE DATE

R.I. STANDARD 19.5.0C



PLAN

FOUNDATION DIMENSIONS			
M(FT. K.)	B	D	S
0 TO 30	2'-6"	6'-0"	8-#5
40	3'-0"	6'-6"	8-#5
50	3'-0"	7'-0"	8-#6
60	3'-0"	7'-6"	8-#7
70	3'-0"	8'-0"	8-#7
80	3'-0"	9'-0"	8-#7
90	3'-0"	9'-6"	8-#8
100	3'-0"	10'-0"	8-#8
110	3'-0"	10'-6"	12-#8
120	3'-0"	11'-0"	12-#8



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY SPAN POLE FABRICATOR.
3. GROUND ROD 5/8" ø x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. CAST FOUNDATIONS AGAINST UNDISTURBED EARTH.
5. REFERENCE STD. 19.2.0.
6. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
7. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
8. DESIGN SOIL PRESSURE 1250 PSF.
9. PRIOR TO INSTALLATION OF THE POLES, THE FOUNDATION BOLTS SHALL BE MARKED BY A TRAFFIC CONE AND DOUBLE-NUTTED TO THE ANCHOR BOLT.
10. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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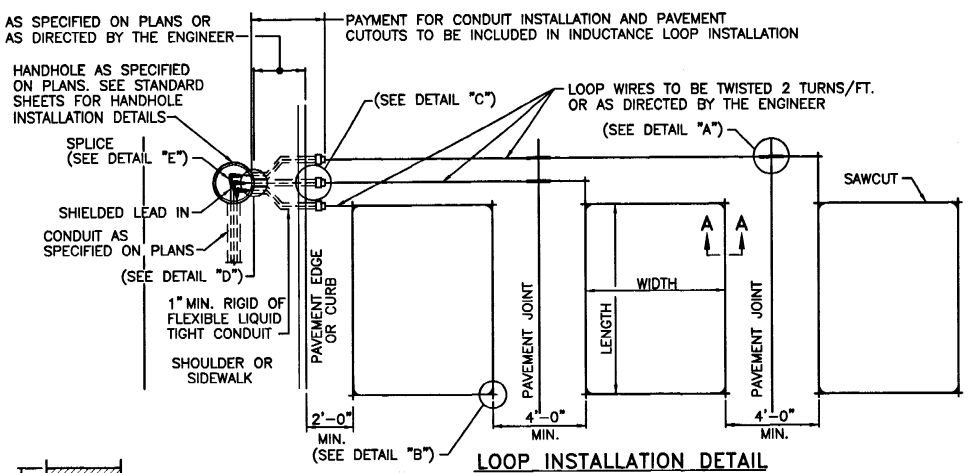
ORNAMENTAL MAST ARM FOUNDATION

CHIEF ENGINEER TRANSPORTATION

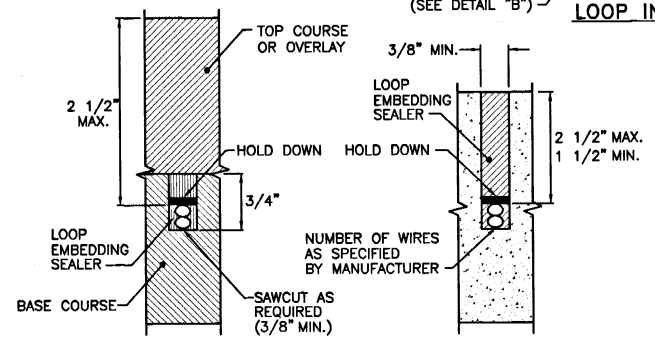
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 19.5.1



LOOP INSTALLATION DETAIL

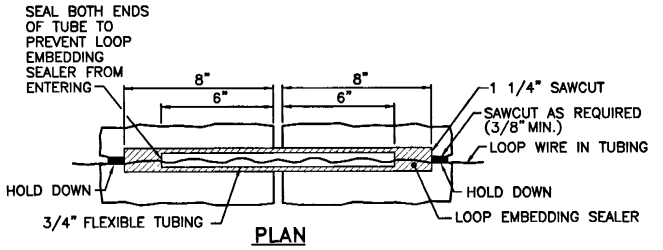


SAWCUT CROSS SECTION IN ASPHALT WHERE AN OVERLAY IS BEING PLACED

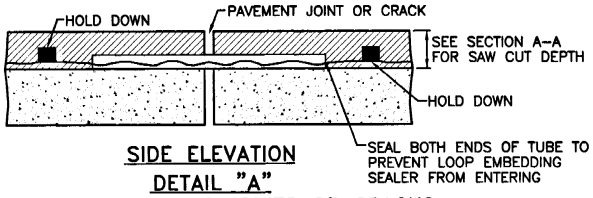
SECTION A–A

NOTE: USE SHORT (2" TYP.) PIECE OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

SAWCUT CROSS SECTION IN CONCRETE OR ASPHALT



PLAN



SIDE ELEVATION DETAIL "A"

CROSSING PAVEMENT JOINTS OR CRACKS

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

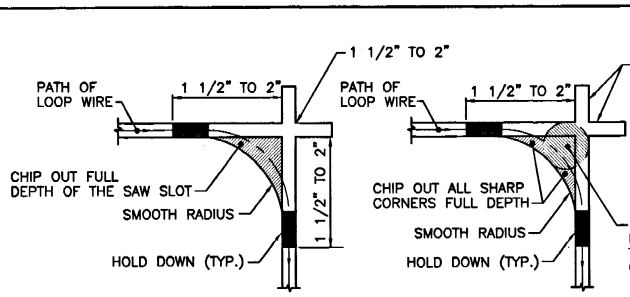
INDUCTANCE LOOP VEHICLE DETECTOR INSTALLATION DETAILS

R.I. STANDARD 9.6.0A

JUNE 15, 1998
ISSUE DATE

Chief Division Engineer
Chief Engineer
Director
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

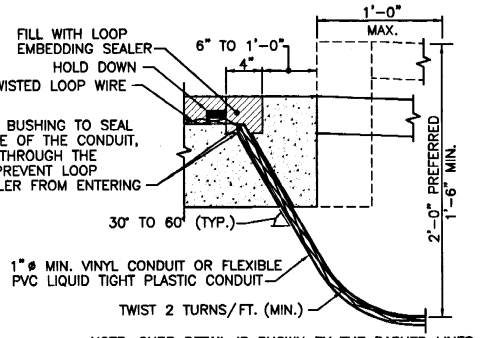


NOTE: PLACE THE LOOP WIRE NEAR THE CENTER OF THE CORNER TO ALLOW THE SEALANT TO FLOW ON BOTH SIDES OF WIRE.

CHIP OUT CORNER

CORE CORNER

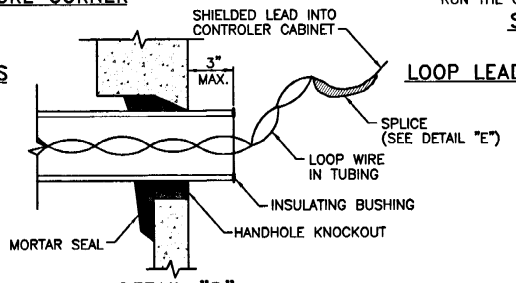
DETAIL "B"
CORNER DETAILS



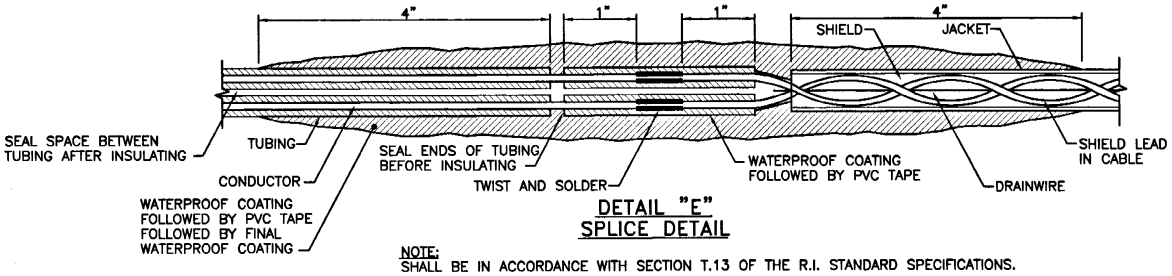
NOTE: CURB DETAIL IS SHOWN BY THE DASHED LINES. RUN THE CONDUIT UNDER THE CURB.

SIDE ELEVATION

DETAIL "C"
LOOP LEAD IN AT PAVEMENT EDGE



DETAIL "D"



DETAIL "E"
SPLICE DETAIL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.13 OF THE R.I. STANDARD SPECIFICATIONS.

SHEET 2 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

INDUCTANCE LOOP VEHICLE DETECTOR INSTALLATION DETAILS

R.I. STANDARD 9.6.08

JUNE 15, 1998
ISSUE DATE

Paul Parkyn
CHIEF ENGINEER
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

James A. Capaldi
DEPUTY CHIEF ENGINEER
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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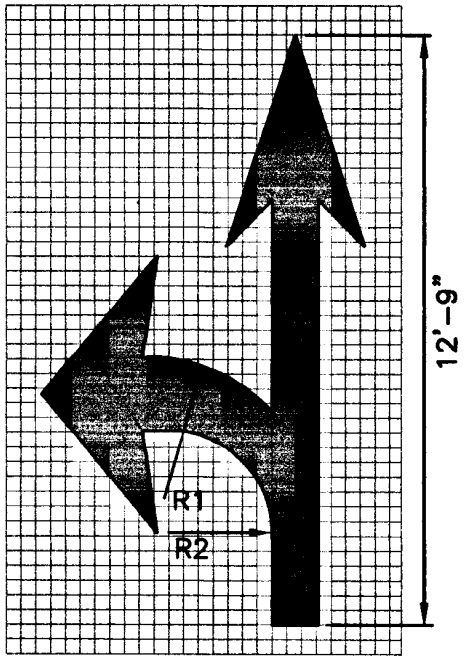
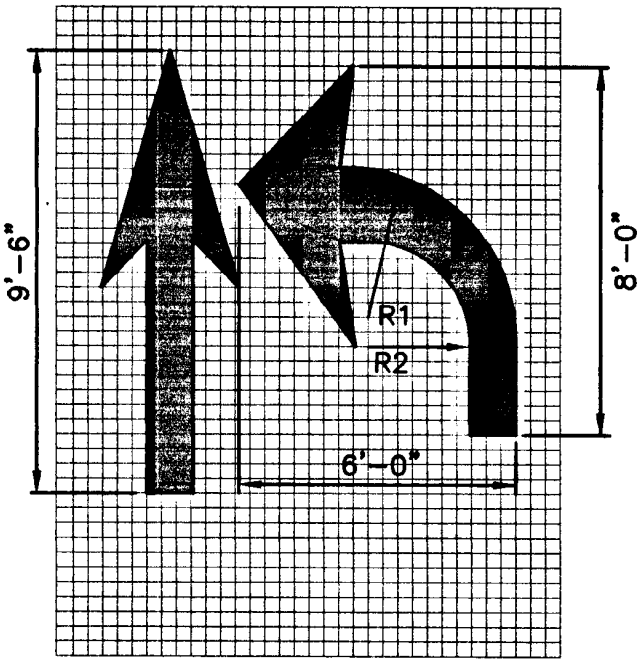
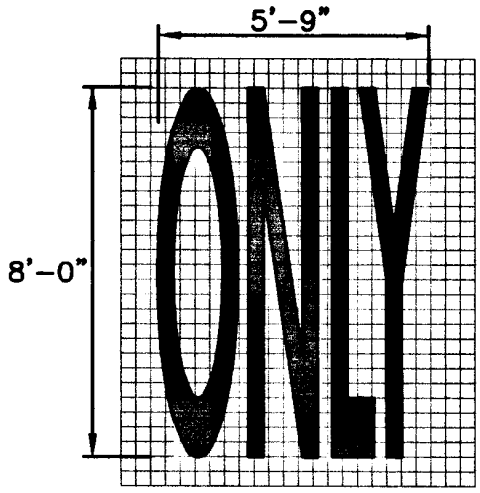




R1 = 3'-2"
R2 = 2'-2"



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS.
3. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD.
4. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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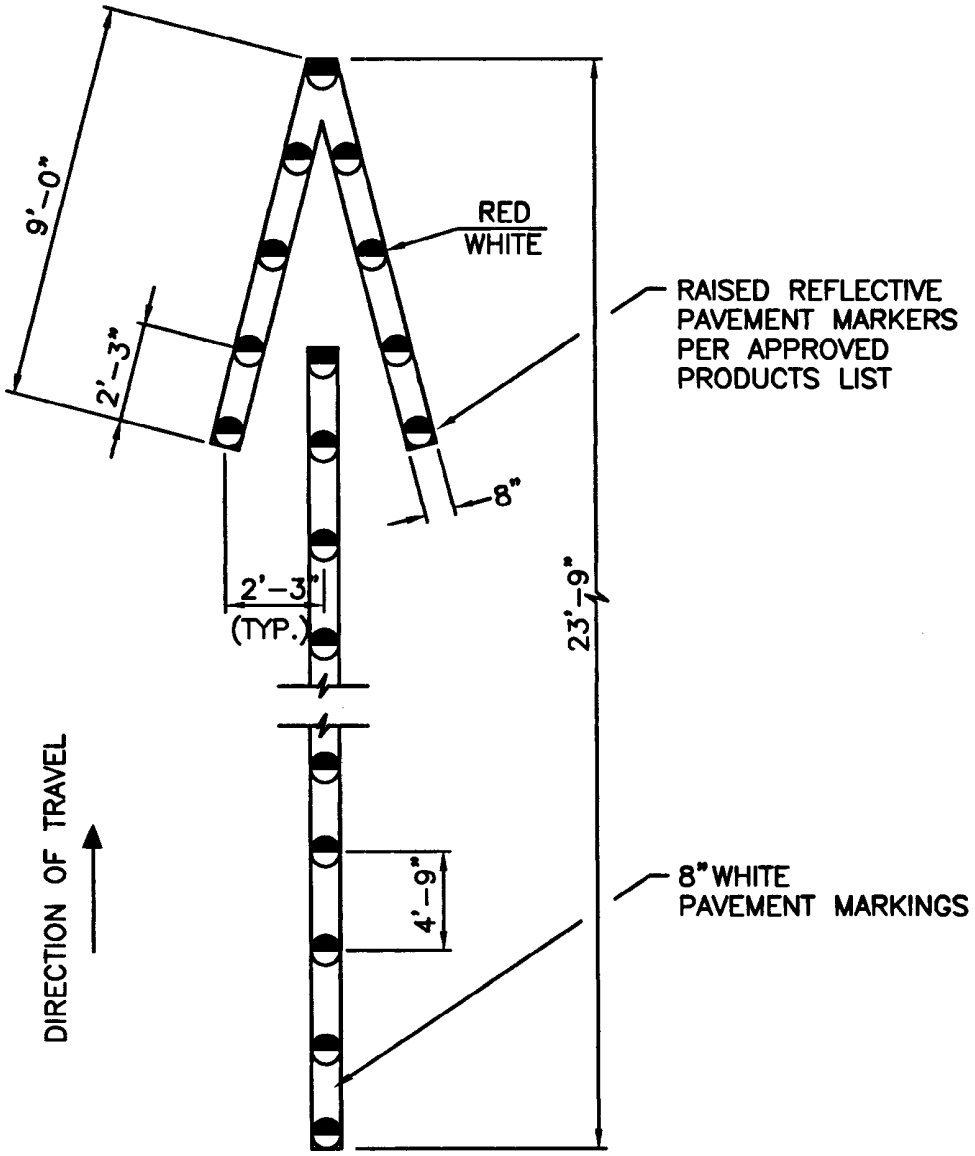
PAVEMENT MARKINGS ARROWS AND ONLY

James R. Capalbo
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 20.1.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED AFTER THE 8" ARROW HAS BEEN PLACED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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BI-DIRECTIONAL CONTROL DEVICE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 20.2.0

GENERAL NOTES:

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE RI STANDARD SPECIFICATIONS.
2. ALL CROSSWALK AND STOP LINE MARKINGS SHALL BE WHITE.
3. CROSSWALK AND STOP LINE MARKINGS SHALL ONLY BE INSTALLED WHERE CALLED FOR ON THE PLANS.

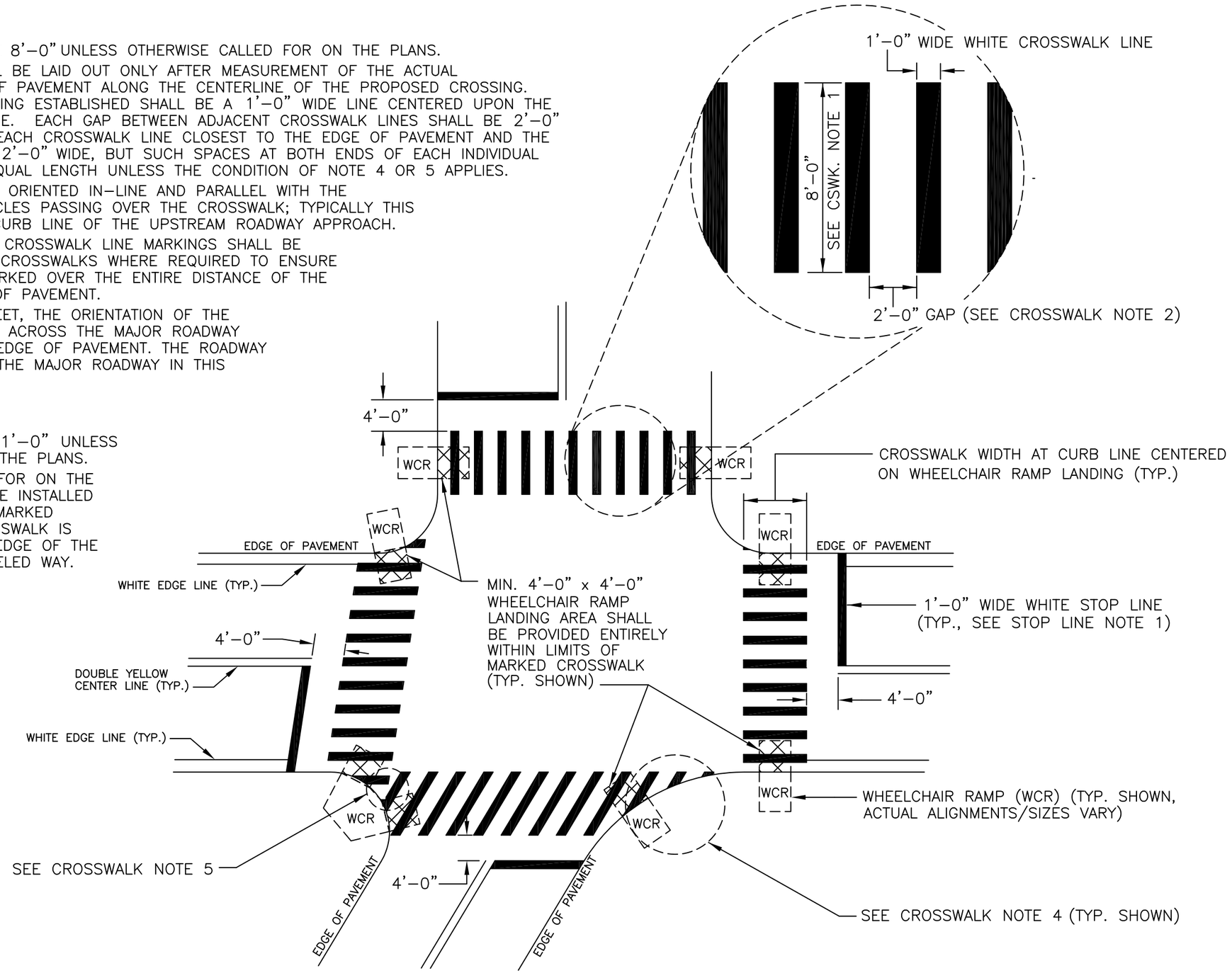
CROSSWALK NOTES:

1. CROSSWALK WIDTH SHALL BE 8'–0" UNLESS OTHERWISE CALLED FOR ON THE PLANS.
2. CROSSWALK MARKINGS SHALL BE LAID OUT ONLY AFTER MEASUREMENT OF THE ACTUAL DISTANCE BETWEEN EDGES OF PAVEMENT ALONG THE CENTERLINE OF THE PROPOSED CROSSING. THE FIRST CROSSWALK MARKING ESTABLISHED SHALL BE A 1'–0" WIDE LINE CENTERED UPON THE MIDPOINT OF THIS CENTERLINE. EACH GAP BETWEEN ADJACENT CROSSWALK LINES SHALL BE 2'–0" WIDE. THE SPACE BETWEEN EACH CROSSWALK LINE CLOSEST TO THE EDGE OF PAVEMENT AND THE LATTER MAY BE LESS THAN 2'–0" WIDE, BUT SUCH SPACES AT BOTH ENDS OF EACH INDIVIDUAL CROSSWALK SHALL BE OF EQUAL LENGTH UNLESS THE CONDITION OF NOTE 4 OR 5 APPLIES.
3. CROSSWALK LINES SHALL BE ORIENTED IN–LINE AND PARALLEL WITH THE PREDOMINANT PATH OF VEHICLES PASSING OVER THE CROSSWALK; TYPICALLY THIS WILL BE PARALLEL TO THE CURB LINE OF THE UPSTREAM ROADWAY APPROACH.
4. SHORTER SEGMENTS OF THE CROSSWALK LINE MARKINGS SHALL BE INSTALLED AT THE ENDS OF CROSSWALKS WHERE REQUIRED TO ENSURE THAT THE CROSSWALK IS MARKED OVER THE ENTIRE DISTANCE OF THE CROSSING BETWEEN EDGES OF PAVEMENT.
5. WHERE TWO CROSSWALKS MEET, THE ORIENTATION OF THE CROSSWALK LINES INSTALLED ACROSS THE MAJOR ROADWAY SHALL BE CARRIED TO THE EDGE OF PAVEMENT. THE ROADWAY RUNNING LEFT TO RIGHT IS THE MAJOR ROADWAY IN THIS DETAIL.

STOP LINE NOTES:

1. STOP LINE WIDTH SHALL BE 1'–0" UNLESS OTHERWISE CALLED FOR ON THE PLANS.
2. UNLESS OTHERWISE CALLED FOR ON THE PLANS, STOP LINES SHALL BE INSTALLED PARALLEL TO THE NEAREST MARKED CROSSWALK OR, IF NO CROSSWALK IS MARKED, PARALLEL TO THE EDGE OF THE NEAREST INTERSECTING TRAVELED WAY.

CROSSWALK DETAIL



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS – CROSSWALKS AND STOP LINES

R.I. STANDARD 20.3.0

FEBRUARY 27, 2018
ISSUE DATE

CHIEF ENGINEER OF INFRASTRUCTURE TRANSPORTATION

ADMINISTRATOR OF PROJECT MANAGEMENT TRANSPORTATION

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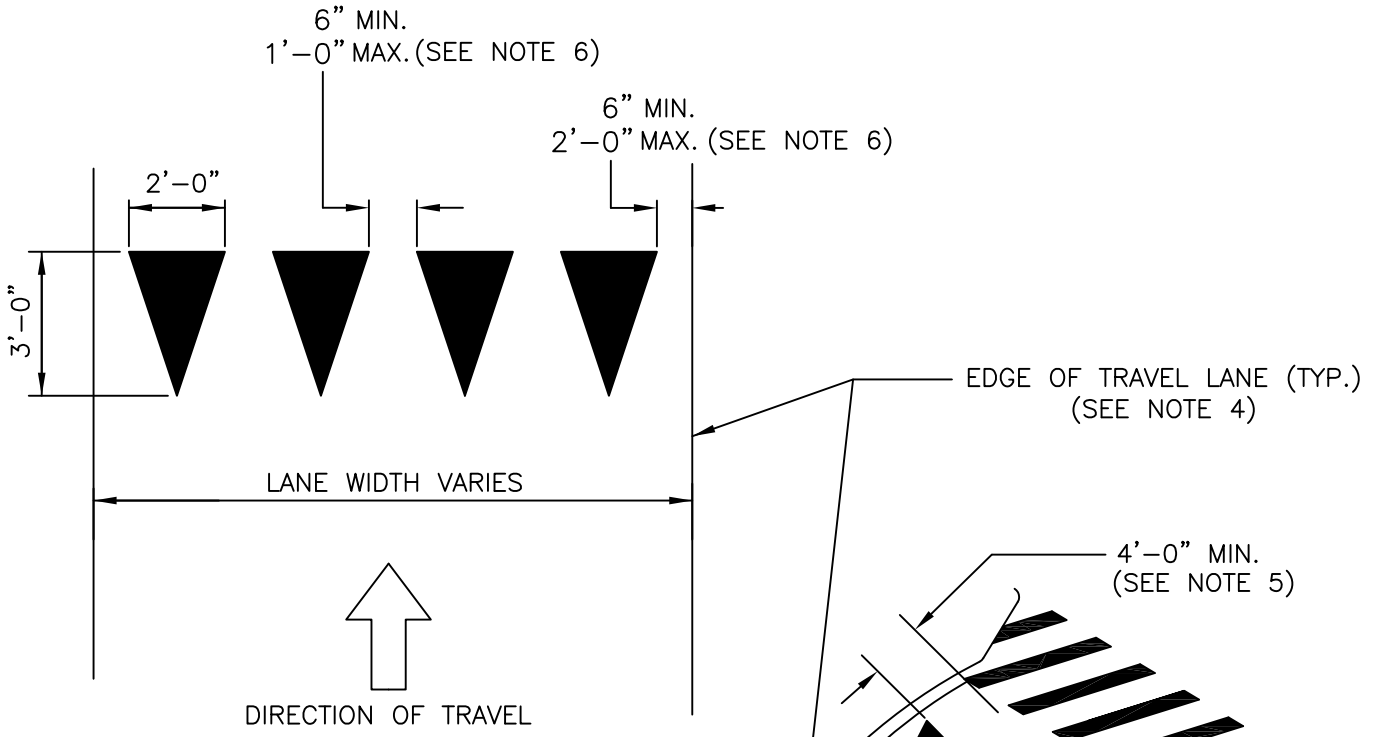

YIELD LINE LAYOUT

CURVED APPROACH

NOTES:

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE RI STANDARD SPECIFICATIONS.
2. ALL YIELD LINE MARKINGS SHALL BE WHITE.
3. YIELD LINE MARKINGS SHALL ONLY BE INSTALLED WHERE CALLED FOR ON THE PLANS.
4. THE EDGE OF TRAVEL LANE IS THE EDGE OR LANE LINE PAVEMENT MARKING OR, WHERE NO SUCH MARKING IS PRESENT, THE EDGE OF THE PAVEMENT.
5. THE INDIVIDUAL TRIANGLES OF EACH YIELD LINE SHALL ALL POINT TOWARD APPROACHING VEHICLES IN THE SAME DIRECTION AND ORIENTATION. WHERE THE DOWNSTREAM CROSSWALK (OR IF NONE IS PRESENT, THE EDGE OF THE NEAREST INTERSECTING TRAVEL LANE) IS NOT PERPENDICULAR TO THE APPROACH, THE POINT OF THE TRIANGLE'S BASE THAT IS CLOSEST TO THE CROSSWALK (OR EDGE OF THE NEAREST INTERSECTING TRAVEL LANE) SHALL CONFORM TO THE MINIMUM DISTANCES DESCRIBED IN NOTE 7.
6. THE SPACES BETWEEN THE BASES OF ADJACENT YIELD LINE TRIANGLES SHALL BE IDENTICAL ACROSS THE ENTIRE WIDTH OF THE TRAVEL LANE. THE SPACE BETWEEN THE EDGE OF THE YIELD LINE TRIANGLES CLOSEST TO THE EDGE OF THE TRAVEL LANE AND THE LATTER MAY VARY SUBJECT TO THE DIMENSIONS SHOWN ON THE DETAIL.
7. UNLESS OTHERWISE CALLED FOR ON THE PLANS:
   A. WHERE A MARKED CROSSWALK IS ABSENT FROM A YIELD–CONTROLLED APPROACH, THE YIELD LINE SHOULD BE PLACED AT THE LOCATION OF THE YIELD SIGN(S), BUT SHALL NOT BE PLACED MORE THAN 30'–0" NOR LESS THAN 4'–0" FROM THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE.
   B. WHERE A MARKED CROSSWALK IS PRESENT ON THE YIELD–CONTROLLED APPROACH, THE YIELD LINE SHOULD BE PLACED AT THE LOCATION OF THE YIELD SIGN(S), BUT SHALL NOT BE PLACED MORE THAN 30'–0" FROM THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE NOR LESS THAN 4'–0" IN ADVANCE OF THE NEAREST CROSSWALK LINE (OR THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE).
8. FOR YIELD LINES ON DESIGNATED BICYCLE FACILITIES, REFER TO THE PLANS FOR REDUCED–SIZE YIELD LINE TRIANGLES AND ALTERNATE LAYOUT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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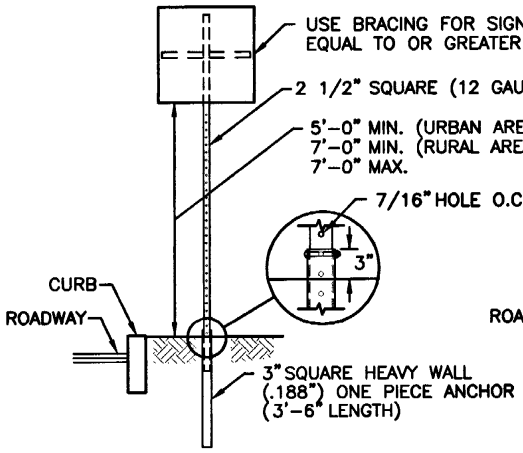
PAVEMENT MARKINGS – YIELD LINE

David W. Fish
ADMINISTRATOR, PROJECT MANAGEMENT
TRANSPORTATION

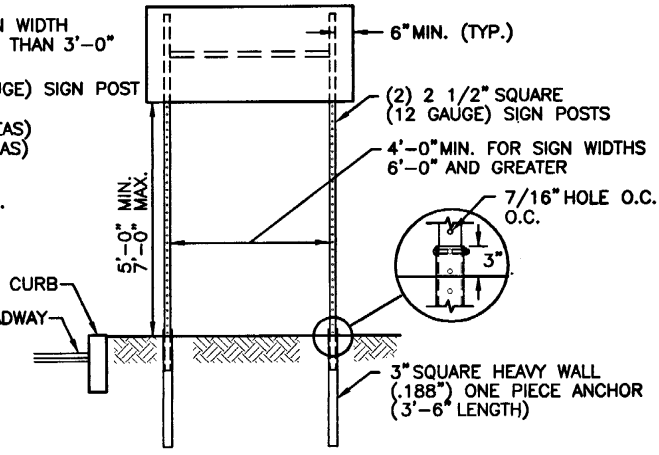
Robert Nocchio
CHIEF ENGINEER OF INFRASTRUCTURE
TRANSPORTATION

FEBRUARY 27, 2018
ISSUE DATE

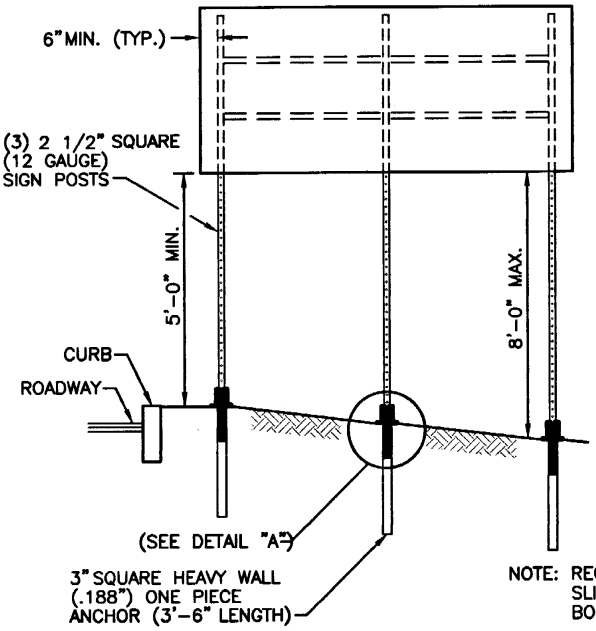
R.I. STANDARD 20.4.0



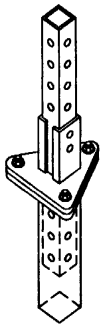
SIGNS UP TO 12 SQ. FT.



SIGNS UP TO 28 SQ. FT.

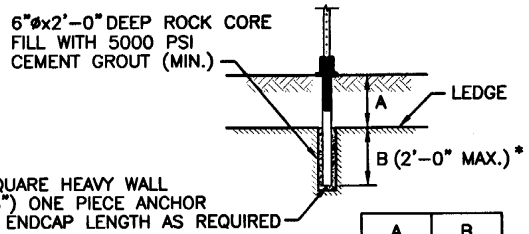


SIGNS UP TO 8'-0"Wx4'-0"H



DETAIL "A"

NOTE: RECOMMENDED TORQUE ON SLIP-BASE FLANGE HEAD BOLT AND NUT 40 FT. LBS.



A	B
3'-0"	1'-0"
2'-0"	1'-0"
1'-0"	1'-6"
0"	2'-0"

* AT WEATHERED ROCK, DEPTH AS PER ENGINEER

TYPICAL POST AT LEDGE LESS THAN 3'-0" BELOW GRADE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR A 10-YEAR MEAN WIND RECURRENCE INTERVAL.
3. FOR INSTALLATION IN GROUND OR BITUMINOUS CONCRETE DRIVE SIGN POST ANCHOR TO REQUIRED DEPTH SO THAT THE HOLE WILL MATCH TO SIGN POST ABOVE GROUND FOR THE BOLT CONNECTION. INSERT SIGN POST AND BOLT IN PLACE.
4. FOR INSTALLATION IN CONCRETE SEE STD. 25.3.0 AND FOLLOW THE PROCEDURE IN NOTE 2.
5. FOR INSTALLATION IN LEDGE LESS THAN 3'-0" BELOW GRADE SEE DETAIL ABOVE.
6. EDGE OF SIGN SHALL BE 1'-6" (MIN.) FROM EDGE OF CURB IN URBAN AREAS AND 6'-0" (MIN.) FROM EDGE OF CURB IN EDGE OF CURB IN RURAL AREAS.
7. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET.
9. STEEL POSTS SHALL CONFORM TO ASTM-A361, FY= 55 KSI. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (1.25 OZ.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARED TO AGREE WITH CORNER RADII. STANDARD CORNER RADIUS SHALL BE 3/32" PLUS OR MINUS 1/64".
10. ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
11. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER ASTM-A153.
12. FOR SIGNS GREATER THAN 32 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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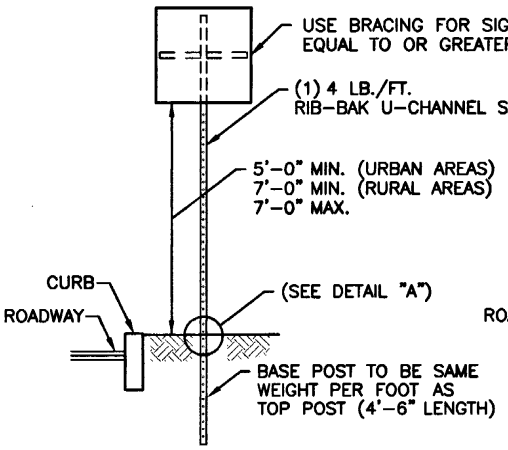
SIGN POST SELECTION AND INSTALLATION DETAILS SQUARE POST (SIGNS UP TO 8'-0"Wx4'-0"H)

CHIEF ENGINEER TRANSPORTATION

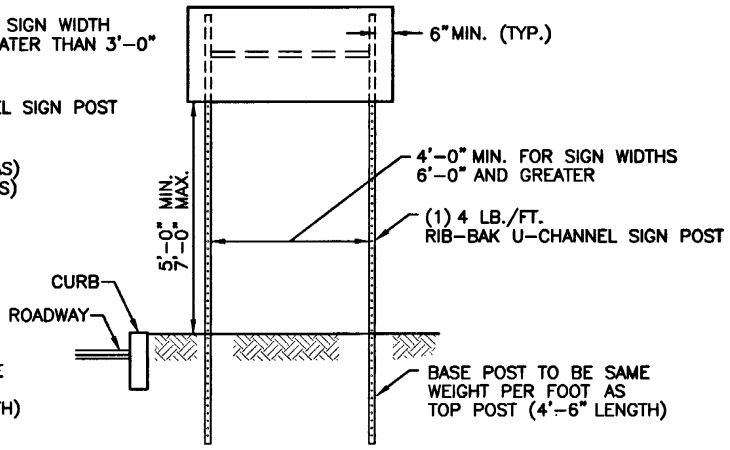
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

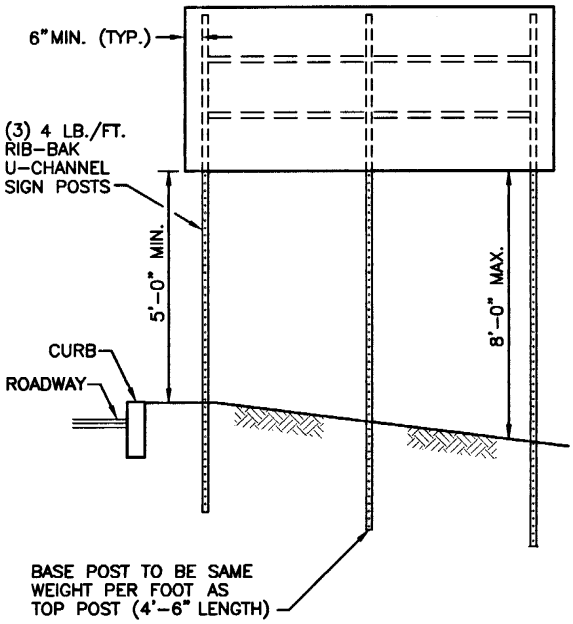
R.I. STANDARD 24.1.0



SIGNS UP TO 12 SQ. FT.



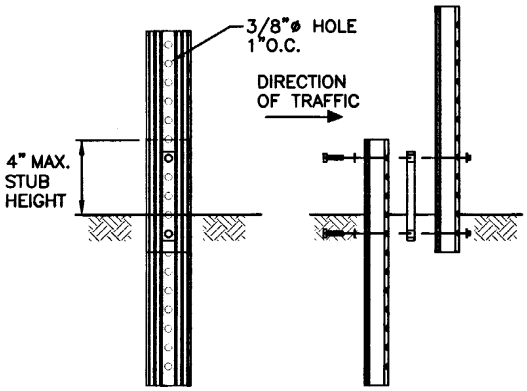
SIGNS UP TO 28 SQ. FT.



SIGNS UP TO 40 SQ. FT.

RECOMMENDED TORQUE VALUES:
BOLTS TO THREADED BAR SPACER
20 FT. LBS.
SELF-LOCKING FLANGE NUT TO BOLTS
20 FT. LBS.

TOP VIEW



FRONT VIEW RIGHT SIDE VIEW
DETAIL "A"

INSTALLATION PROCEDURE:
1. REMOVE A SPADE FULL OF SOIL (APPROXIMATELY 2" DEEP) FROM WHERE THE BASE POST WILL BE LOCATED.
2. DRIVE THE BASE POST IN THE CENTER OF THE HOLE JUST CREATED, TO WITHIN 4" OF GRADE LEVEL.
3. PLACE ONE BOLT AND FLAT WASHER IN THE TOP HOLE OF THE BASE POST. (IF THE TOP HOLE ON THE BASE POST, OR THE BOTTOM HOLE ON THE TOP POST IS LESS THAN 3/4" FROM END OF THE POST USE THE SECOND AND SIXTH HOLES.) WITH THE THREADED BAR SPACER ALIGNED WITH TOP HOLE ON THE BACK SIDE OF THE BASE POST, SECURELY TIGHTEN THE BOLT TO 20 FT. LBS. OF TORQUE. REPEAT THIS PROCESS FOR THE LOWER BOLT.
4. NEST THE TOP POST OVER THE PROTRUDING BOLTS ON THE BASE POST. PLACE A SELF-LOCKING FLANGE NUT ON EACH BOLT AND TIGHTEN SECURELY TO 20 FT. LBS. OF TORQUE.
5. REPLACE SOIL REMOVED IN STEP 1.
6. IN TRIPLE POST INSTALLATIONS USING 4 LB./FT. POSTS IN WEAK SOIL, A 1'-0"W x 6"H SOIL PLATE IS REQUIRED.

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE SIVER ANODIZED BAR SPACER IS FOR USE WITH 2, 2.5 AND 2.75 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
3. THE GOLD ANODIZED BAR SPACER IS FOR USE WITH 3 AND 4 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
4. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.
5. FOR SIGNS GREATER THAN 40 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

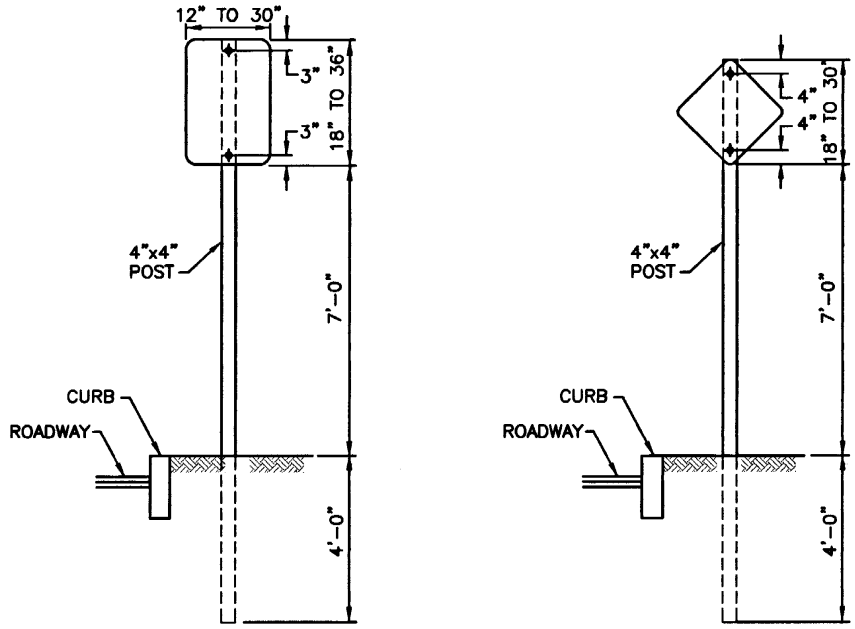
SIGN POST SELECTION AND INSTALLATION DETAILS U-CHANNEL POST (SIGNS UP TO 8'-0"Wx4'-0"H)

CHIEF ENGINEER TRANSPORTATION

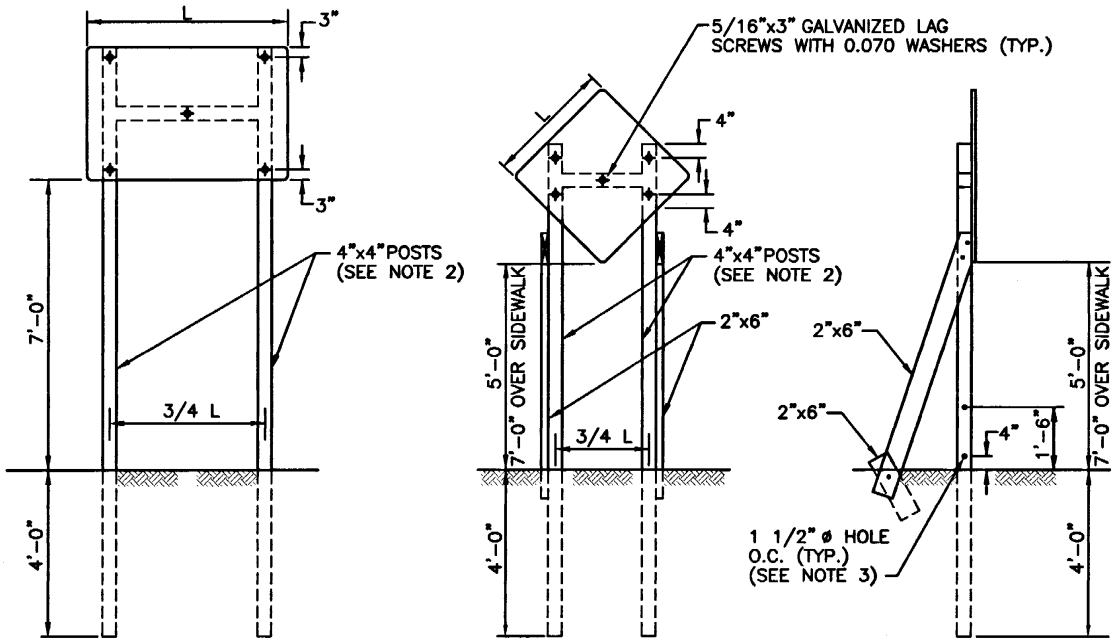
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.2.0



SIGNS UP TO 10 SQ. FT.



SIGNS UP TO 60 SQ. FT.

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE (2) 4"x6" POSTS FOR SIGN AREAS GREATER THAN 20 SQ. FT.
3. DRILL 1 1/2"ø HOLES FOR 4"x6" POSTS ONLY.
4. FOR SIGNS 5'-0"x5'-0" AND LARGER USE DIAGONAL BRACING ON EACH VERTICAL POST AND 4 LAG SCREWS
5. CONSTRUCTION AND TEMPORARY SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD OR ALUMINUM.
6. ALL SIGN SUPPORTS (INCLUDING TEMPORARY) MUST BE SUCCESSFULLY CRASH TESTED.
7. FOR SIGNS GREATER THAN 60 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

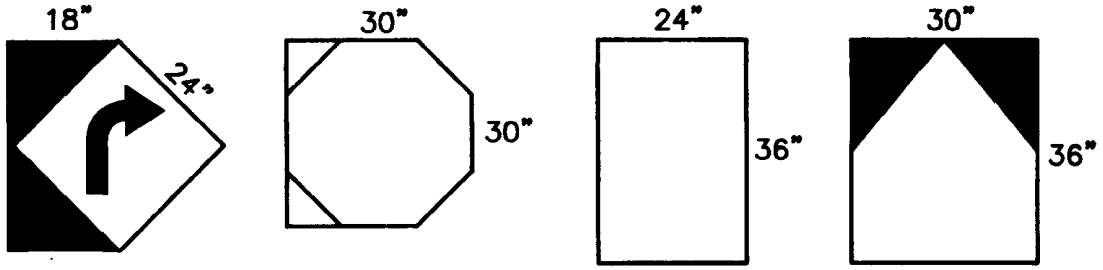
CONSTRUCTION AND TEMPORARY SIGN MOUNTINGS (SIGNS UP TO 60 SQ. FT.)

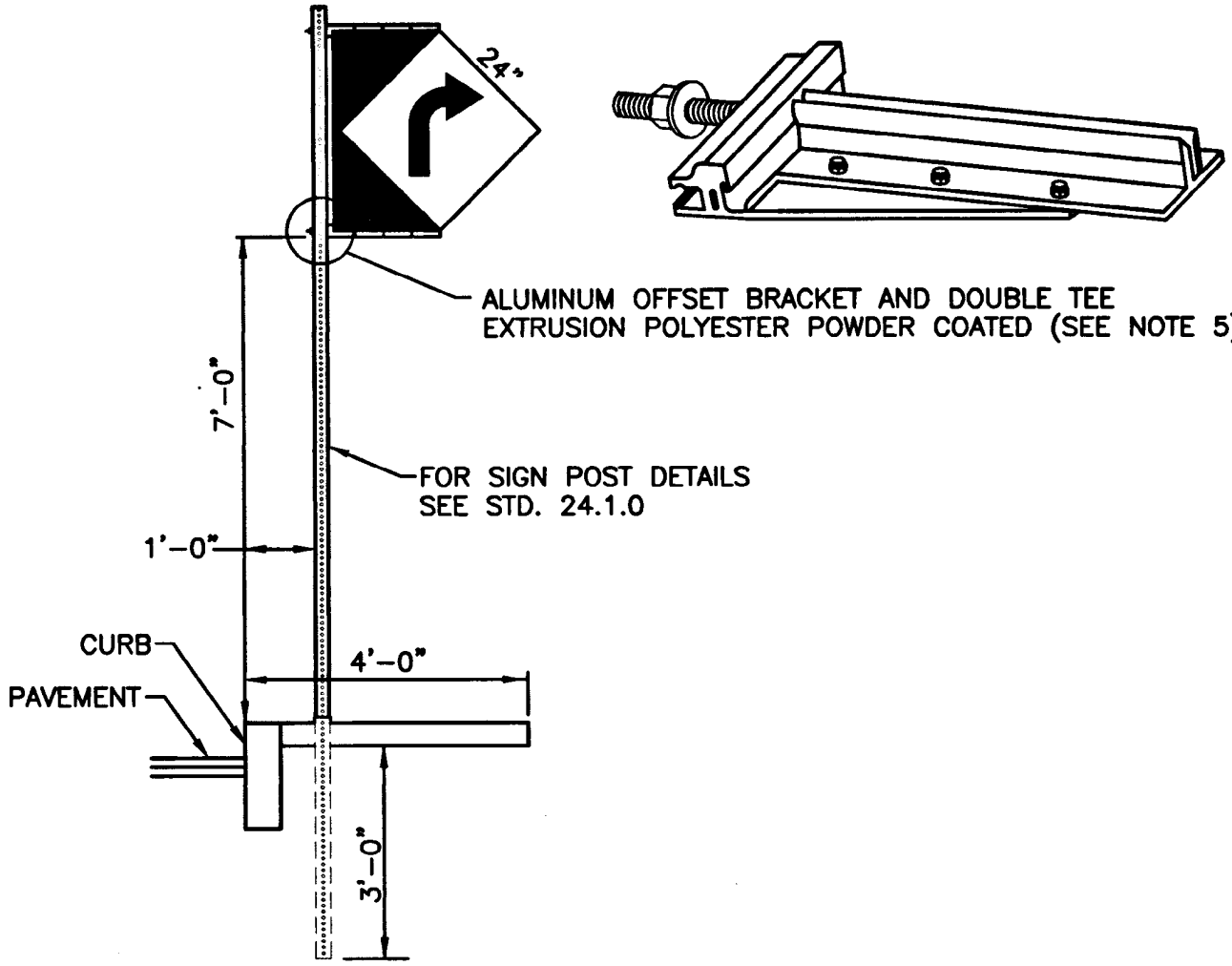
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.3.0





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS SIGN MOUNTING SHALL NOT REPLACE STD. 24.6.0 PARKING SIGN MOUNTING.
3. INSTALLATION SOIL, GRAVEL, OR ASPHALT CAP AND SLEDGE HAMMER. CONCRETE USE PNEUMATIC HAMMER OR CONCRETE DRILL.
4. MAXIMUM SIGN AREA 7.5 SQ. FT.
5. DOUBLE TEE EXTRUSION MAY BE ORDERED OR CUT TO EQUAL HORIZONTAL EDGE OF SIGN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

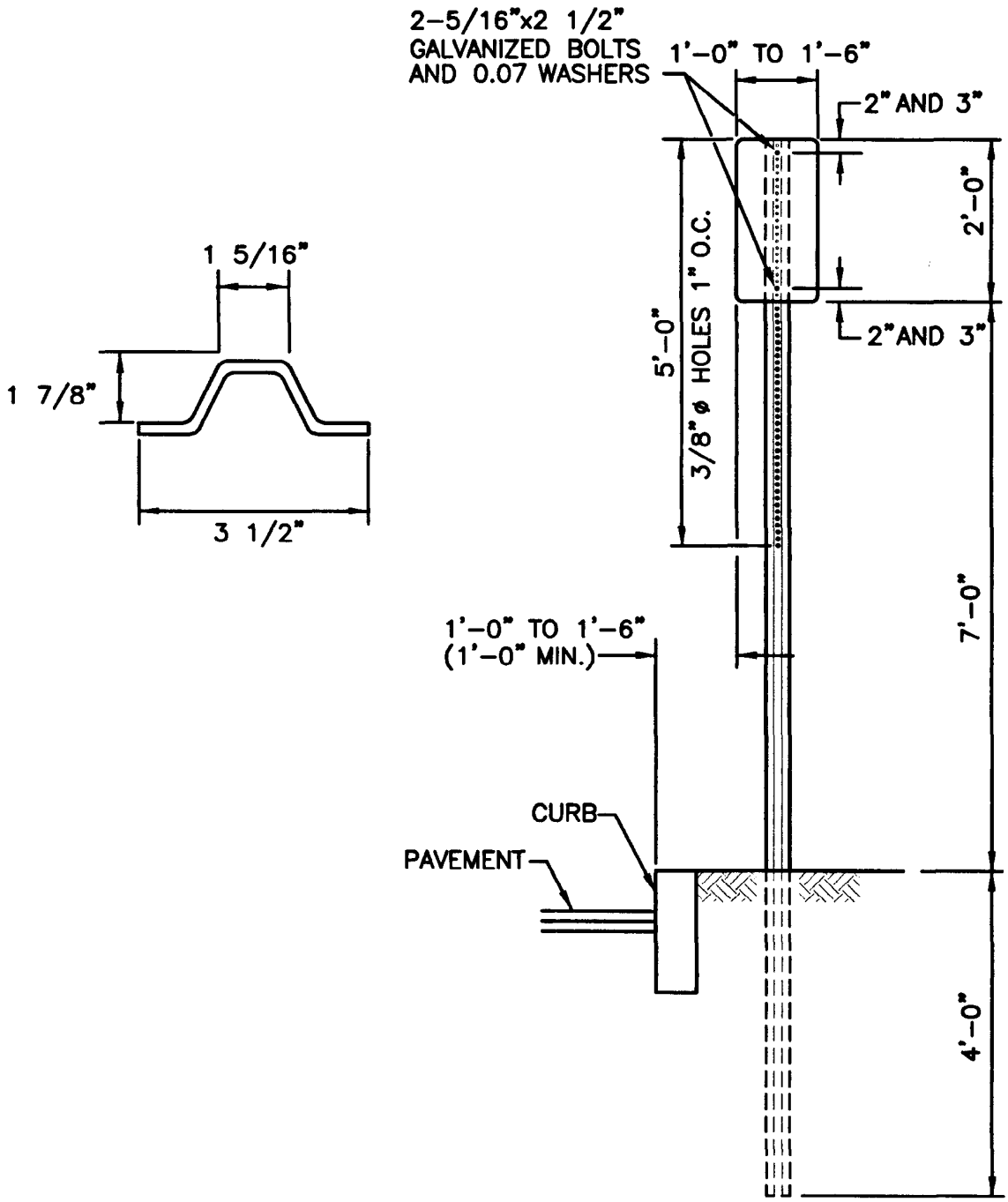
CANTILEVER BREAKAWAY SIGN SUPPORT FOR 4'-0" TO 5'-0" SIDEWALKS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.4.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE STANDARD SPECIFICATIONS.
2. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM EDGE OF CURB FACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

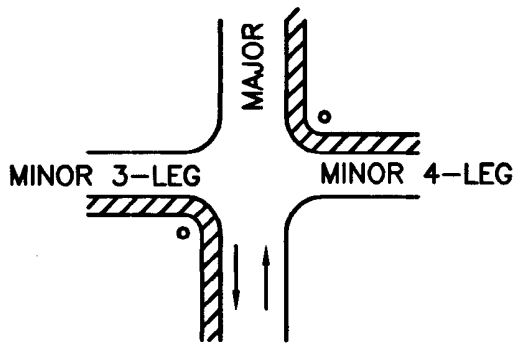
PARKING SIGN MOUNTING DETAIL

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

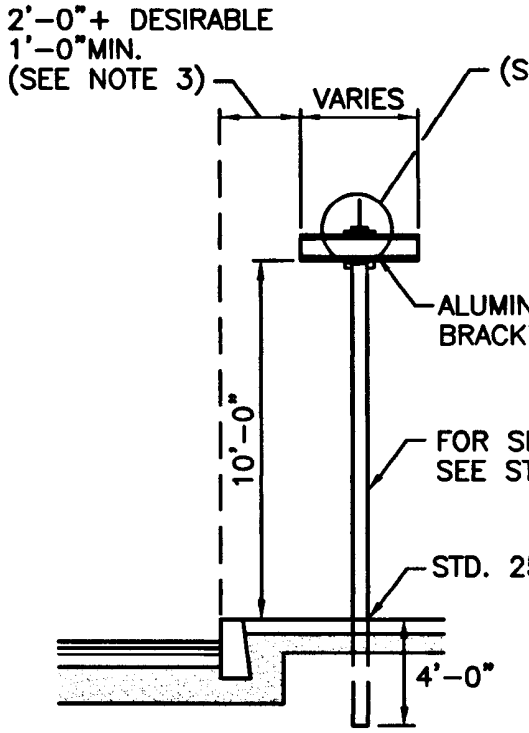
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.6.0

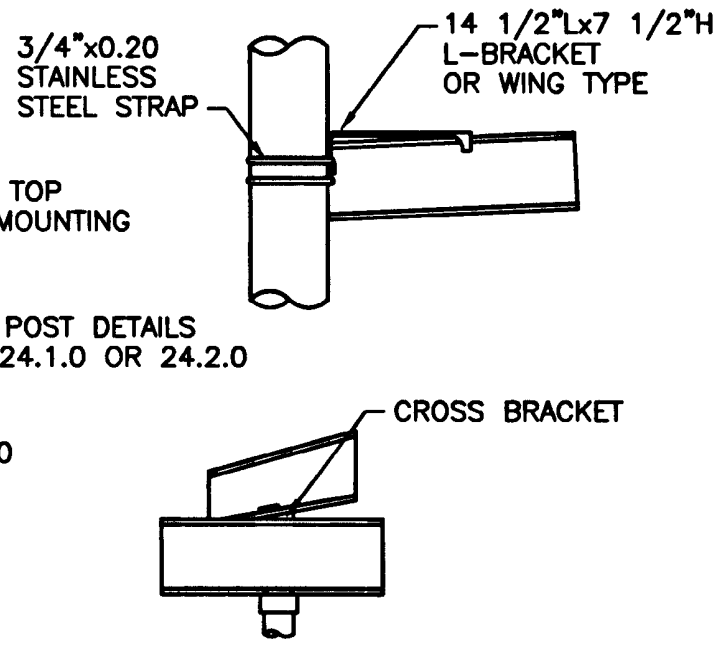


TYPICAL SIGN LOCATION

IF SIGNS ARE ON THEIR OWN SUPPORT POST, THE POST SHALL BE LOCATED NEARER TO THE MAJOR STREET AND WITHIN 5'-0" OF THE P.T. OF THE CURVE.



POST ANCHOR



DETAIL "A"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. POSTS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE BACK OF SIDEWALK, UNLESS SPACE DOES NOT PERMIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

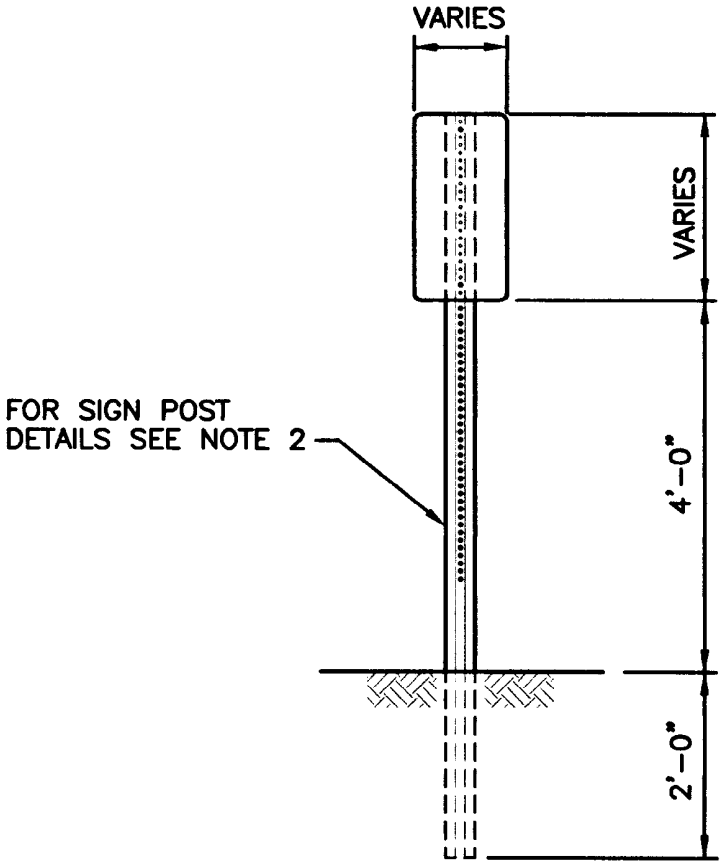
STREET SIGN MOUNTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.6.1



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.19 OR THE R.I. STANDARD SPECIFICATIONS.
2. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0
3. POST LENGTH FOR MILE MARKER SHALL BE 8'-0" WITH 3/8" ø HOLES 1" O.C. FOR A LENGTH OF 2'-6" FROM TOP OF POST.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

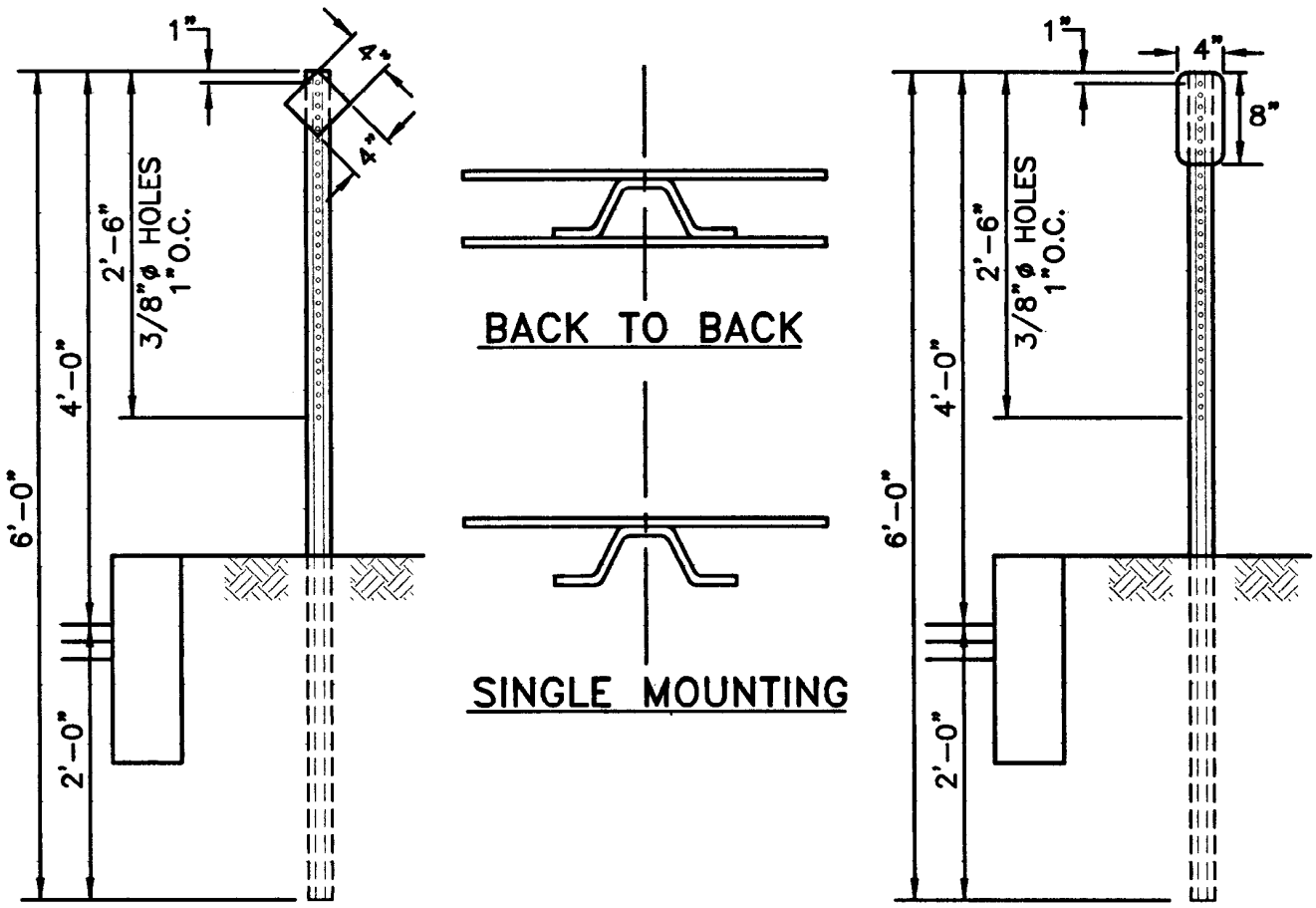
MILE MARKER MOUNTING DETAIL

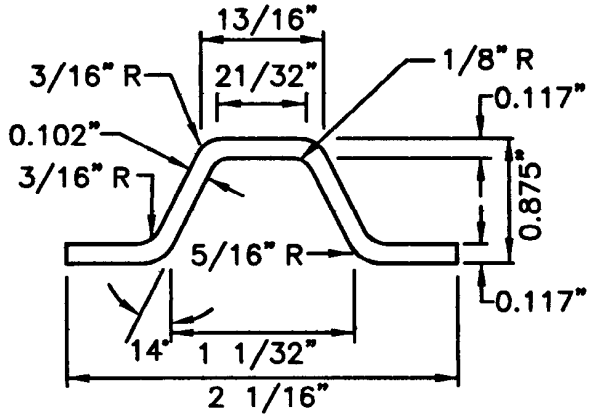
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.6.2





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
3. MOUNT WITH 3/16" ALUMINUM DRAW RIVETS AND WASHERS OR 1/4" ALUMINUM CARRIAGE BOLTS AND WAHERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

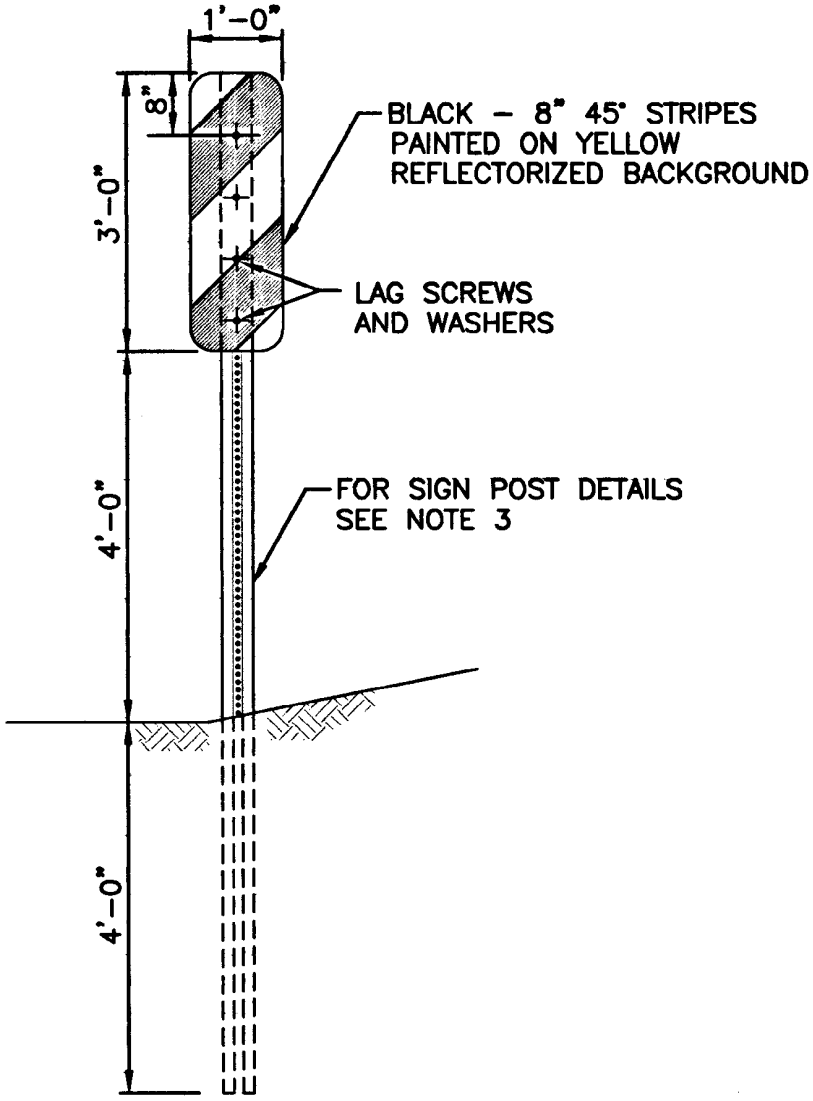
LIGHTWEIGHT STEEL DELINEATOR MOUNTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 24.6.3



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHOWN IS FOR RIGHT BRIDGE ABUTMENT. USE OPPOSITE SIGN FOR LEFT SIDE.
3. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

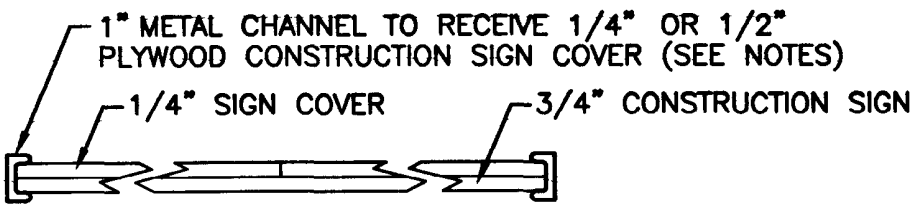
BRIDGE ABUTMENT MARKER MOUNTING DETAIL

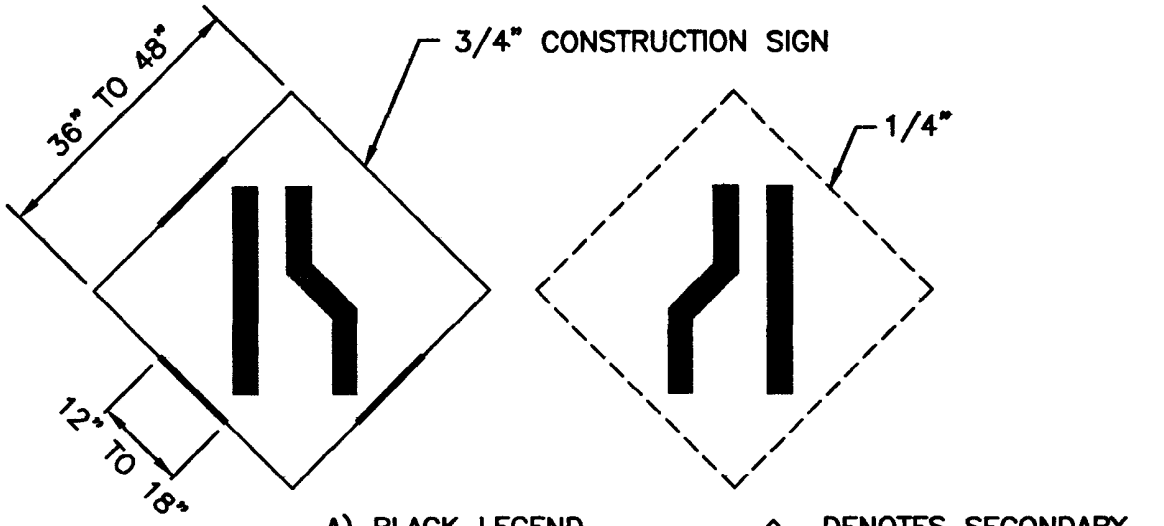
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

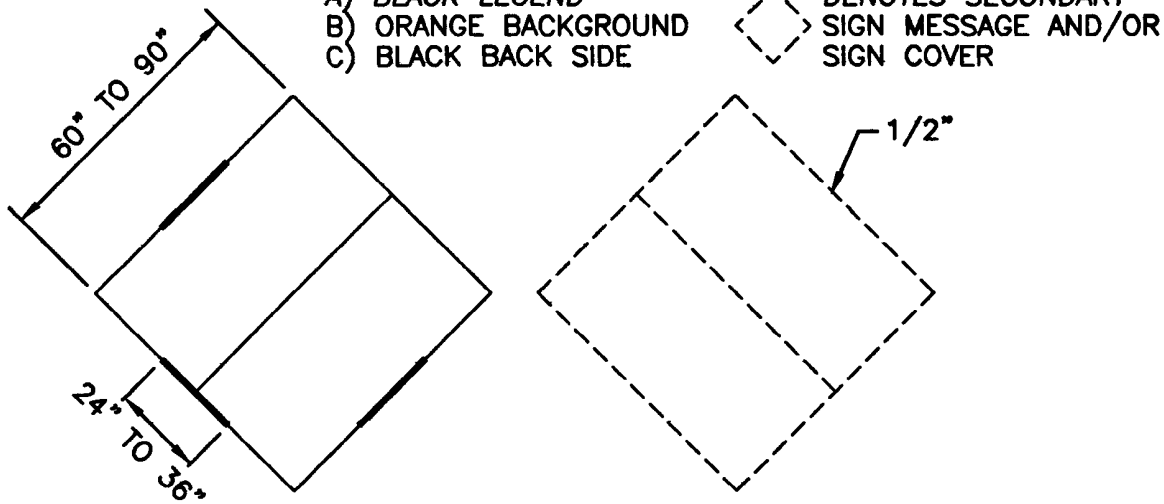
R.I. STANDARD 24.6.4





A) BLACK LEGEND
B) ORANGE BACKGROUND
C) BLACK BACK SIDE

DENOTES SECONDARY SIGN MESSAGE AND/OR SIGN COVER



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OR THE R.I. STANDARD SPECIFICATIONS.
2. HARD COVER – FOR DAILY COVERING OF CONSTRUCTION SIGNS AS NEEDED OR TO CHANGE SIGN MESSAGE AS NEEDED.
3. SOFT COVER – AN ALTERNATIVE TO USING A PLYWOOD SIGN COVER WILL BE A TARP COVER (NON-TRANSPARENT) WITH GROMMETS FOR THE PURPOSE OF RECEIVING A CORD OR A ROPE TO SECURE TARP COVER TO EXISTING CONSTRUCTION SIGN FACE. TARP COVER DIMENSIONS SHALL BE AT LEAST EQUAL TO THE CONSTRUCTION SIGN DIMENSIONS. THIS SOFT COVER IS SOLELY FOR THE PURPOSE OF COVERING CONSTRUCTION SIGNS, AT NO TIME SHALL SIGN MESSAGES APPEAR ON THE FACE OF THE TARP COVERS, NOR SHALL TARP COVERS BE SECURED BY TAPING OR STAPLING TO FRONT OF SIGN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

TEMPORARY CONSTRUCTION SIGN COVER DETAIL

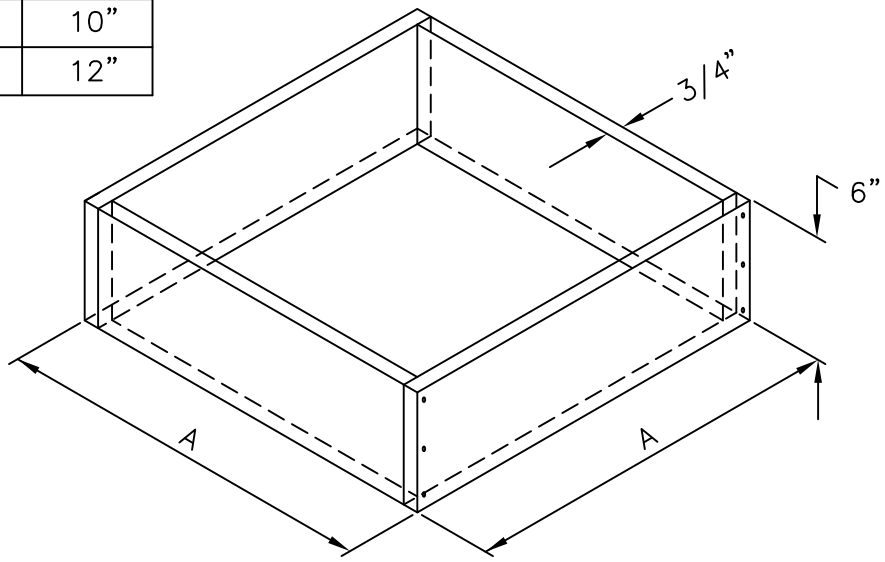
CHIEF ENGINEER TRANSPORTATION

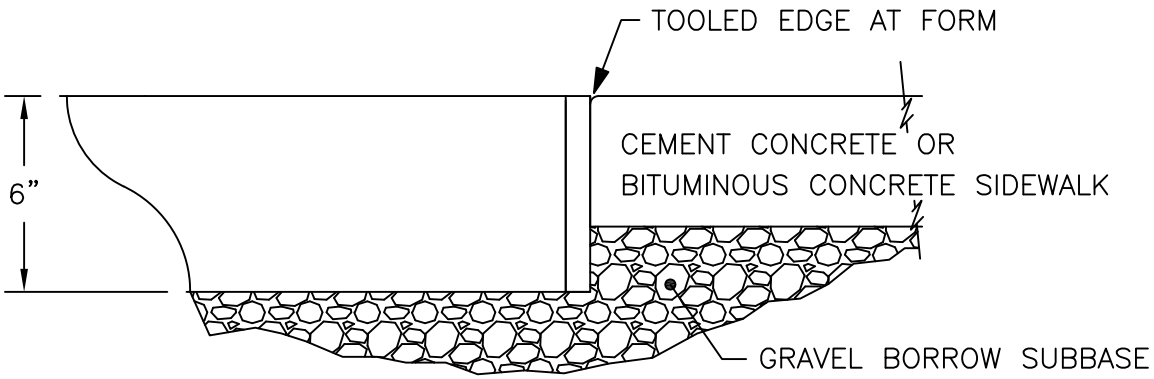
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 25.1.0

POST DIAMETER OR MAJOR DIMENSION	LENGTH "A"
LESS THAN 3"	8"
4"	10"
6"	12"





SECTION

NOTES:

1. 3/4"x6" BOARDS TO BE USED FOR FORMS FOR POST MOUNTING IN CONCRETE AND ASPHALT SIDEWALK AREAS.
2. DIMENSION "A" SHALL NOT BE LESS THAN 8".
3. AFTER INSTALLATION OF THE POST AND PROPER COMPACTION, THE HOLE SHALL BE PAVED TO MATCH THE SURROUNDING SIDEWALK.
4. THE BOX FORM SHALL BE REMOVED PRIOR TO PATCHING THE SIDEWALK AREA.
5. IN CONCRETE SIDEWALK AREAS EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE NEW PATCH AND THE ADJACENT SIDEWALK AREA.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	05/31/11

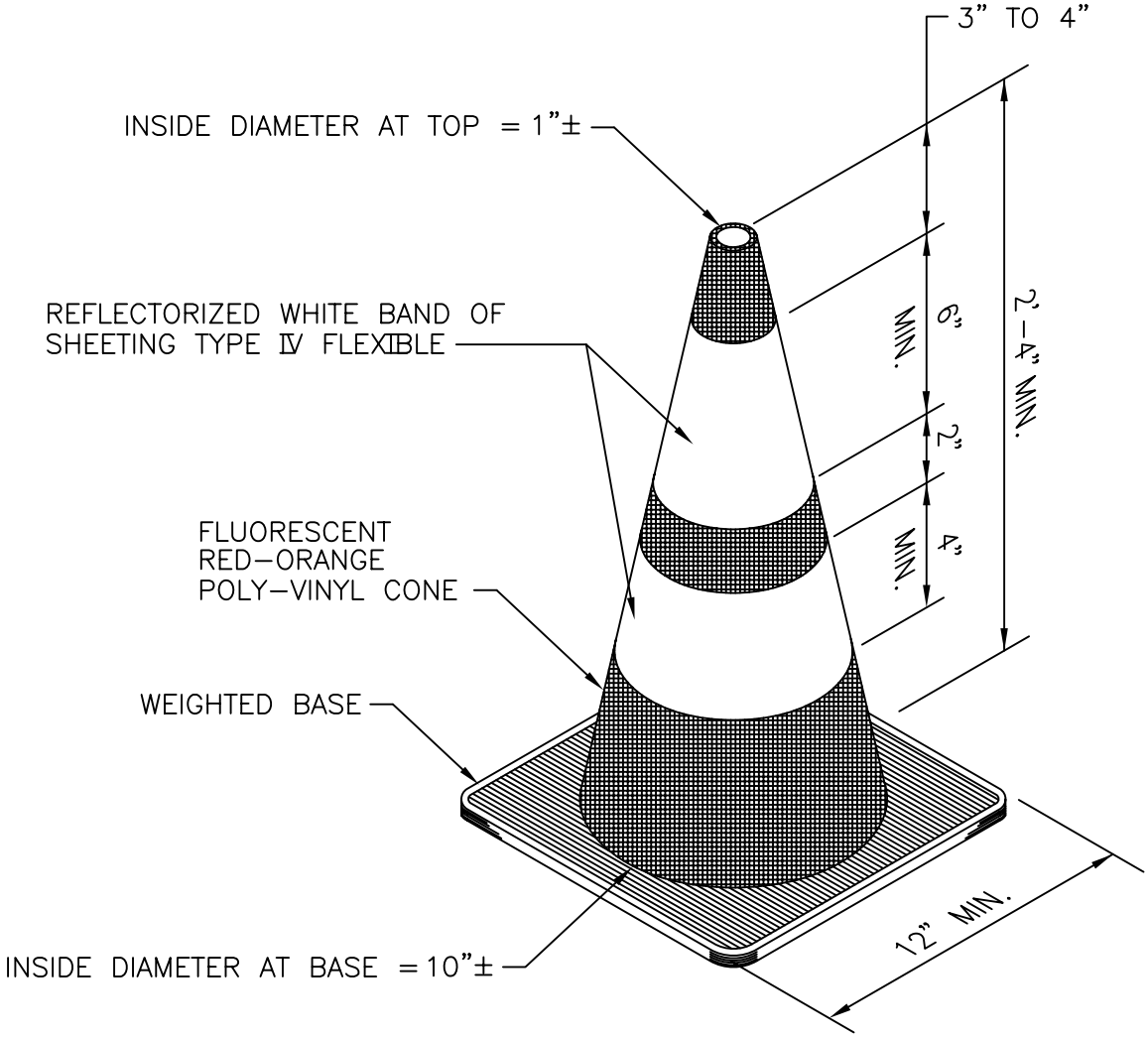
BOX FORM

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 25.2.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. DIMENSIONS MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS.
3. IN AREAS WHERE POSTED SPEED IS 45 MPH AND OVER ADD A 7 LB. WEIGHTED RING TO EACH CONE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

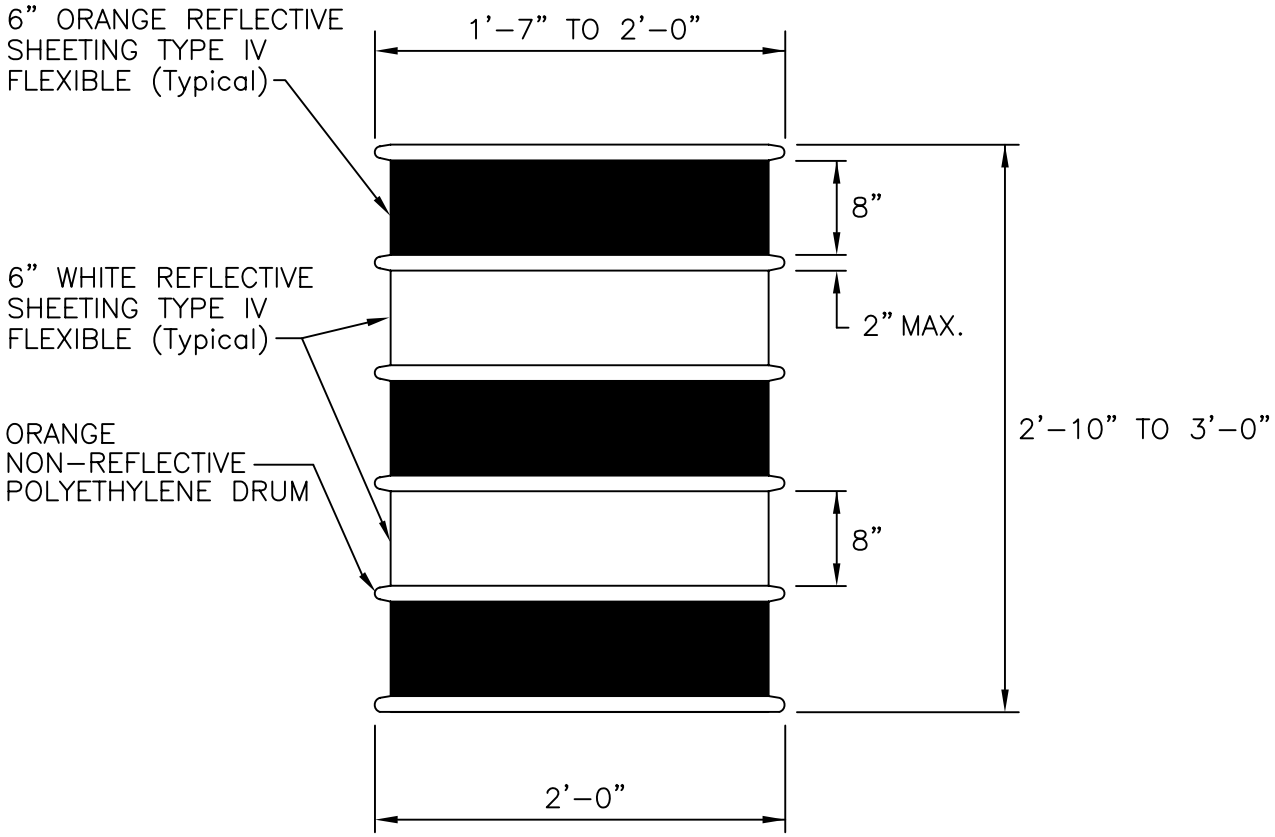
FLUORESCENT TRAFFIC CONE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 26.1.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. BASE TO BE ADAPTED FOR SANDBAG BALLAST.
3. DRUM CAN BE CYLINDRICAL OR PARTLY CYLINDRICAL WITH A FLAT SIDE.
4. DRUM SHALL BE MANUFACTURED FROM TOUGH, REBOUNDABLE PLASTIC, MADE OF HIGH DENSITY (HARD) POLYETHYLENE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

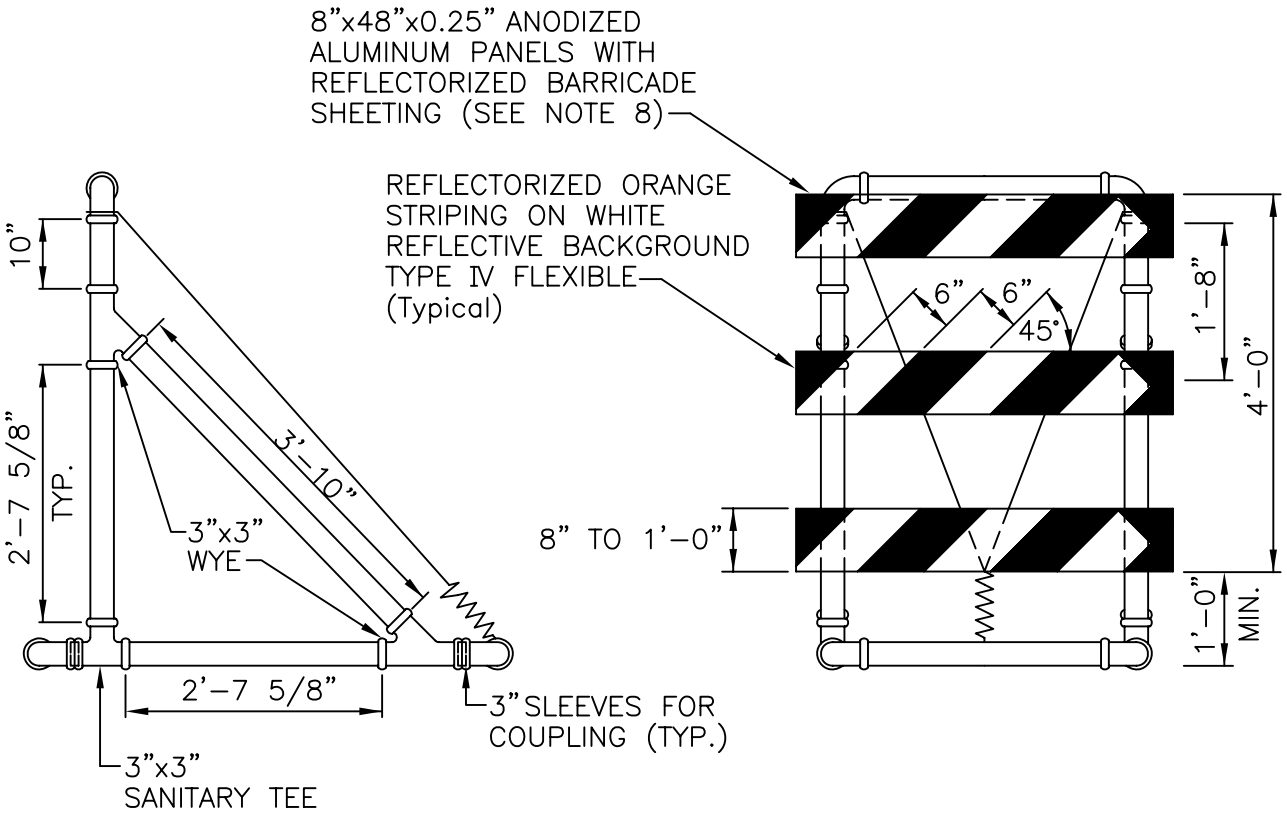
POLYETHYLENE DRUM WITH MARKINGS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

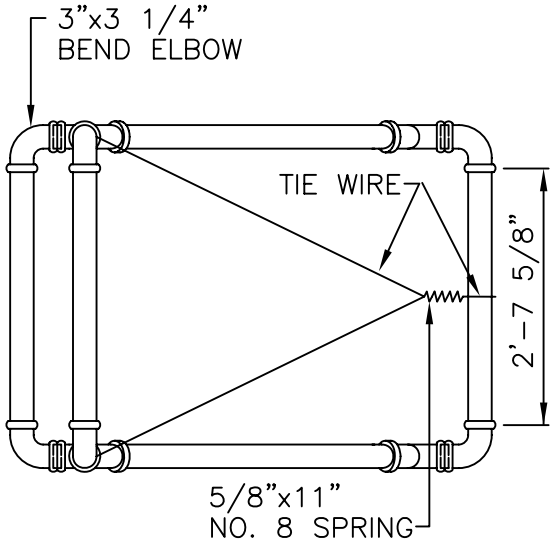
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 26.2.0



SIDE ELEVATION

FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE RATED CLASS SDR 21 OR SDR 26 CONFORMING TO ASTM D2241 OR ASTM D2729.
3. JOINT FILLINGS MAY BE PVC–ASTM D 2665 OR ACRYLONITILE BUTADIENE STYRENE (ABS) ASTM D 2661 (DRAINAGE WASTE AND VENT).
4. ALL PIPES SHALL BE WHITE. WHITE FITTINGS ARE PREFERRED, BLACK MAY BE USED.
5. ALL JOINTS SHALL BE FREE TO SEPARATE UPON VEHICLE IMPACT.
6. A FIXED FRANGIBLE PAVEMENT CONNECTION PREFERRED. SAND BAGS MAY BE SUBSTITUTED.
7. STRIPES SHALL BE SLOPED DOWNWARD IN DIRECTION OF TRAFFIC TO PASS.
8. PVC PIPE SHALL BE ULTRAVIOLET LIGHT STABILIZED.
9. ATTACH PANELS WITH 1" NO. 14 PAN HEAD METAL SCREWS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

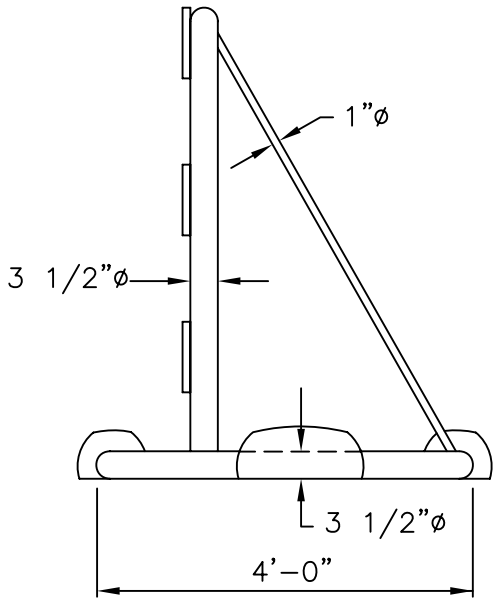
PVC PLASTIC PIPE TYPE III BARRICADE

James R. Cogaldi
CHIEF ENGINEER
TRANSPORTATION

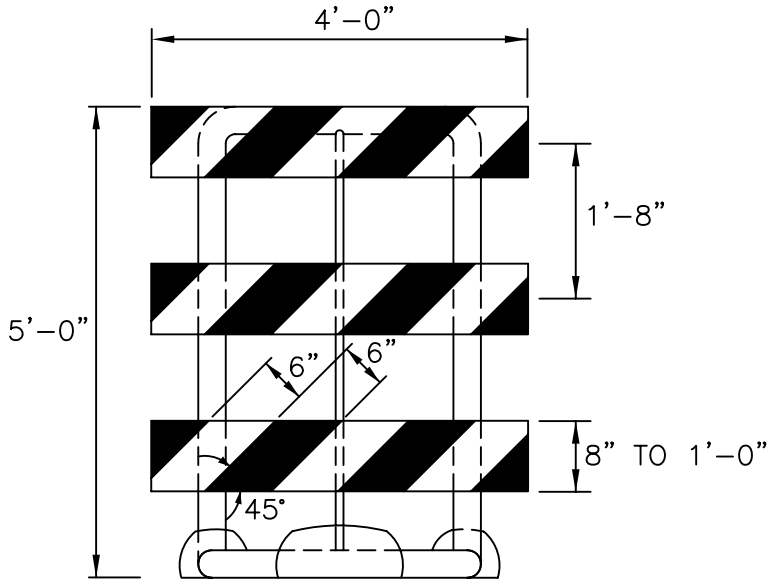
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

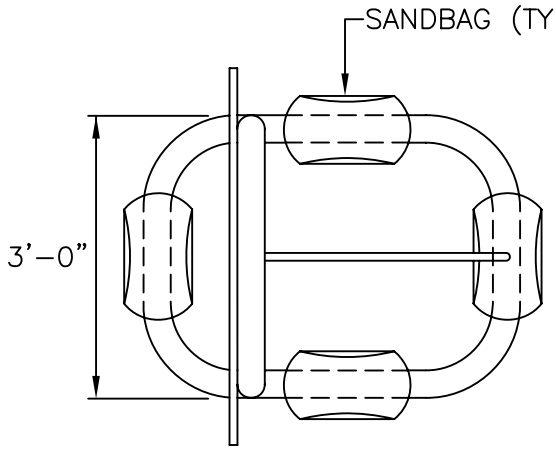
R.I. STANDARD 26.3.0



SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE BASE AND UPRIGHT PIPE SHALL BE ROTATIONALLY MOLDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248, CLASS A3–E4 OR CLASS II A4.
3. THE BRACE SHALL BE EXTRUDED POLYETHLENE PLASTIC CONFORMING TO ASTM D1248–IIIA4.
4. ALL PIPE SHALL BE WHITE AND SHALL BE ULTRAVIOLET LIGHT STABILIZED.
5. ALTERNATE ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED, 6" WIDE, SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC TO PASS.
6. THE BARRICADE RAILS SHALL BE 9"x48"x0.125" PLASTIC PANELS ATTACHED WITH 1" PLASTIC RIVETS, 4 PER RAIL.
7. THIS IS AN APPROVED ALTERNATE TO STD. 26.3.0.
8. ALL SHEETING SHALL BE TYPE IV FLEXIBLE SHEETING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

PLASTIC PIPE TYPE III BARRICADE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

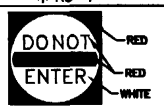
R.I. STANDARD 26.3.1

SIGN NUMBER		* R1-1				* R1-2			R2-1			R2-4a			R2-5c		
LEGEND																	
COLOR	BACKGROUND	RED				WHITE			WHITE			WHITE			WHITE		
	COPY	WHITE				RED			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	24"	30"	36"	48"	36"	48"	60"	24"	36"	48"	24"	36"	48"	24"	36"	48"
	HEIGHT	24"	30"	36"	48"	36"	48"	60"	30"	48"	60"	48"	72"	96"	30"	48"	60"

SIGN NUMBER		R3-1	R3-2	R3-3	R3-4	R3-5
LEGEND						
COLOR	BACKGROUND	WHITE	WHITE	WHITE	WHITE	YELLOW
	COPY	RED (BLACK ARROW)	RED (BLACK ARROW)	BLACK	RED (BLACK ARROW)	BLACK
SIGN DIMENSION	WIDTH	24"	24"	24"	24"	30"
	HEIGHT	24"	24"	24"	24"	36"

SIGN NUMBER		R3-6	R3-7 (R OR L)	R4-1		R4-2		R4-3		
LEGEND										
COLOR	BACKGROUND	WHITE	WHITE	WHITE		WHITE		WHITE		
	COPY	BLACK	BLACK	BLACK		BLACK		BLACK		
SIGN DIMENSION	WIDTH	30"	30"	18"	24"	18"	24"	24"	36"	48"
	HEIGHT	36"	30"	24"	30"	24"	30"	30"	48"	60"

SIGN NUMBER		R4-5			R4-6			* R4-7	R4-7a				R4-7b			
LEGEND																
COLOR	BACKGROUND	WHITE			WHITE			WHITE	WHITE				WHITE			
	COPY	BLACK			BLACK			BLACK	BLACK				BLACK			
SIGN DIMENSION	WIDTH	24"	36"	48"	24"	36"	48"	24"	18"	24"	36"	48"	18"	24"	36"	48"
	HEIGHT	30"	48"	60"	30"	48"	60"	30"	24"	30"	48"	60"	24"	30"	48"	60"

SIGN NUMBER		* R5-1			* R5-1a	R5-6	R5-10b	R6-1 (R OR L)
LEGEND								
COLOR	BACKGROUND	RED			RED	WHITE	WHITE	BLACK-ARROW WHITE
	COPY	WHITE			WHITE	RED (BLACK BICYCLE)	BLACK	BLACK
SIGN DIMENSION	WIDTH	30"	36"	48"	36"	24"	30"	36"
	HEIGHT	30"	36"	48"	24"	24"	18"	12"

SIGN NUMBER		R7-1	R7-2	R7-3	R7-4	R7-5
LEGEND						
COLOR	BACKGROUND	WHITE	WHITE	WHITE	WHITE	WHITE
	COPY	RED	RED	RED	RED	GREEN
SIGN DIMENSION	WIDTH	12"	12"	12"	12"	12"
	HEIGHT	18"	18"	18"	18"	18"

SIGN NUMBER		R8-7		R11-1			R11-2
LEGEND							
COLOR	BACKGROUND	WHITE		WHITE			WHITE
	COPY	BLACK		BLACK			BLACK
SIGN DIMENSION	WIDTH	30"	48"	24"	36"	48"	48"
	HEIGHT	24"	36"	30"	48"	60"	30"

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. * DENOTES TYPE VI GRADE SHEETING.
3. REGULARTORY SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.0.
4. THICKNESS OF ALUMINUM SIGN PLATES:
   LESS THAN 10 SQ. FT. – 0.081 IN.
   10 SQ. FT. TO 36 SQ. FT. – 0.102 IN.
   GREATER THAN 36 SQ. FT. – 0.125 IN.
5. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

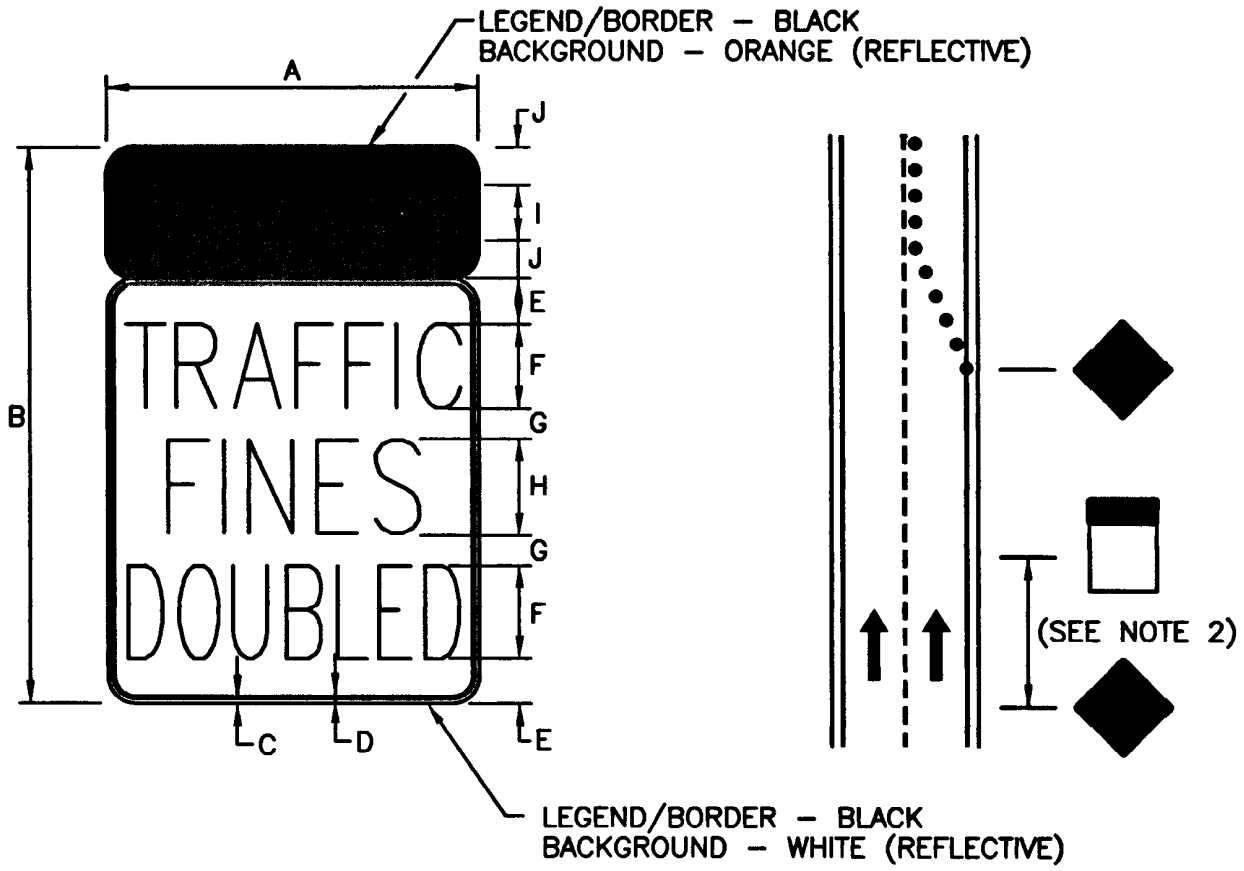
REGULARTORY SIGNS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 27.1.0



SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STANDARD	24	36	3/8	5/8	3 1/2	6B	2 1/2	6C	4C	2
RURAL	36	54	5/8	7/8	5	8B	4	8C	6C	3
EXPRESSWAY	48	72	3/4	1 1/4	7	10B	5	10C	8C	5

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. STANDARD: > 50'–0" < 200'–0"
   RURAL: > 200'–0" < 400'–0"
   EXPRESSWAY: > 400'–0" <800'–0"
3. WHEN INSTALLING ON JERSEY BARRIERS LESS THAN 48" WIDE, A 36"x54" SIGN DIMENSION MAY BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

TRAFFIC FINES IN WORK ZONE REGULATORY SIGN

CHIEF ENGINEER TRANSPORTATION

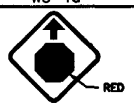
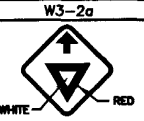
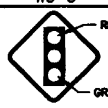
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 27.1.1

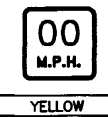
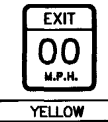
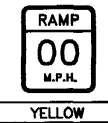
SIGN NUMBER		W1-1 (R OR L)			W1-2 (R OR L)			W1-3 (R OR L)			W1-4 (R OR L)			W1-5 (R OR L)			
LEGEND																	
COLOR	BACKGROUND	YELLOW			YELLOW			YELLOW			YELLOW			YELLOW			
	COPY	BLACK			BLACK			BLACK			BLACK			BLACK			
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"	48"
	HEIGHT	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"	48"

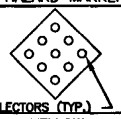
SIGN NUMBER		W1-6		W1-7		W2-1			W2-2 (R OR L)			W2-3 (R OR L)			
LEGEND															
COLOR	BACKGROUND	YELLOW		YELLOW		YELLOW			YELLOW			YELLOW			
	COPY	BLACK		BLACK		BLACK			BLACK			BLACK			
SIGN DIMENSION	WIDTH	48"		48"		30"	36"	48"	30"	36"	48"	24"	30"	36"	48"
	HEIGHT	24"		24"		30"	36"	48"	30"	36"	48"	24"	30"	36"	48"

SIGN NUMBER		W3-1a			W3-2a				W3-3			* W4-1			* W4-2 (R OR L)		
LEGEND																	
COLOR	BACKGROUND	YELLOW			YELLOW				YELLOW			YELLOW			YELLOW		
	COPY	BLACK			BLACK				BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	96"	30"	36"	48"	30"	36"	48"	30"	36"	48"
	HEIGHT	30"	36"	48"	30"	36"	48"	96"	30"	36"	48"	30"	36"	48"	30"	36"	48"

SIGN NUMBER		W6-1			W6-2			W6-3			W7-1			W8-5		
LEGEND																
COLOR	BACKGROUND	YELLOW			YELLOW			YELLOW			YELLOW			YELLOW		
	COPY	BLACK			BLACK			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"
	HEIGHT	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"

SIGN NUMBER		* W10-1		W11A-2			W11-2			W11-3			W12-1		
LEGEND															
COLOR	BACKGROUND	YELLOW		YELLOW			YELLOW			YELLOW			YELLOW		
	COPY	BLACK		BLACK			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	36" DIA.		30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"
	HEIGHT			30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"

SIGN NUMBER		W13-1		W13-2			W13-3			W14-1			W14-3	
LEGEND														
COLOR	BACKGROUND	YELLOW		YELLOW			YELLOW			YELLOW			YELLOW	
	COPY	BLACK		BLACK			BLACK			BLACK			BLACK	
SIGN DIMENSION	WIDTH	18"	24"	24"	36"	48"	24"	36"	48"	24"	30"	36"	48"	
	HEIGHT	18"	24"	30"	48"	60"	30"	48"	60"	24"	30"	36"	36"	

SIGN NUMBER		* HAZARD MARKER				S1-1			S2-1			* E5-1 (R OR L)	* E5-1a (R OR L)
LEGEND													
COLOR	BACKGROUND	YELLOW				YELLOW			YELLOW			GREEN	GREEN
	COPY	REFLECTOR SPACING TO BE THE SAME FOR ALL SIZE HAZARD MARKERS				BLACK			BLACK			WHITE	WHITE
SIGN DIMENSION	WIDTH	24"	30"	36"	48"	30"	36"	48"	30"	36"	48"	72"	72"(90" WITH 3 DIGITS)
	HEIGHT	24"	30"	36"	48"	30"	36"	48"	30"	36"	48"	60"	60"

3" REFLECTORS (TYP.)

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. * DENOTES TYPE XI GRADE SHEETING, IF USED WITHIN WORK ZONE USE TYPE XI SHEETING.
3. WARNING SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.4.
4. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

WARNING SIGNS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 28.1.0

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SIGNS

NO.	BY	DATE

REVISIONS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 29.1.0

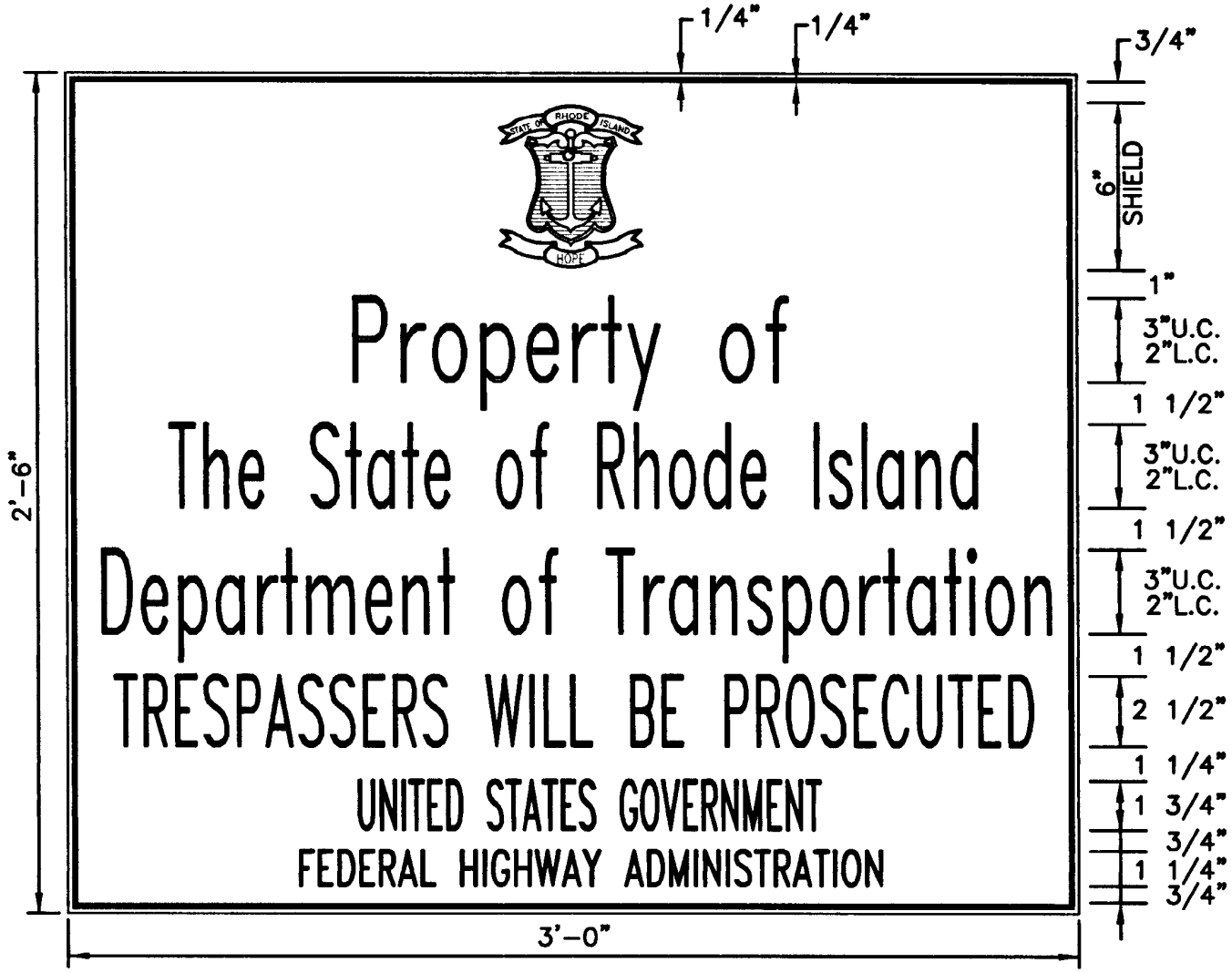
SIGN NUMBER		✱ W21-4				W20-2				W20-3				W20-4			
LEGEND		(SEE NOTE 2) ROAD WORK				(SEE NOTE 2) DETOUR				(SEE NOTE 2) ROAD CLOSED				(SEE NOTE 2) ONE LANE ROAD			
COLOR	BACKGROUND	ORANGE				ORANGE				ORANGE				ORANGE			
	COPY	BLACK				BLACK				BLACK				BLACK			
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"

SIGN NUMBER		W20-5 (R OR L)				W20-7				W20-7a				✱G20-1
LEGEND		(SEE NOTE 2) RIGHT LANE CLOSED				(SEE NOTE 2) FLAGGER								ROAD WORK NEXT 5 MILES
COLOR	BACKGROUND	ORANGE				ORANGE				ORANGE				ORANGE
	COPY	BLACK				BLACK				BLACK				BLACK
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	60"
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	24"

SIGN NUMBER		✱ G20-2A
LEGEND		END ROAD WORK
COLOR	BACKGROUND	ORANGE
	COPY	BLACK
DIMENSION	WIDTH	48"
	HEIGHT	24"

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. LEGEND ON W20-SERIES SHALL INDICATE DISTANCE AS FOLLOWS: 1500 FT 1/2 MILE
   1000 FT 1 MILE
   500 FT AHEAD

   EXAMPLE: W20-2a = DETOUR 1500 FT
3. ✱ DENOTES TYPE IV GRADE SHEETING.
4. CONSTRUCTION SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.3.0.
5. FOR ADDITIONAL SIGNS SEE THE MUTCD.



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHALL BE 3/4" EXTERIOR MARINE PLYWOOD OR ALUMINUM (THICKNESS = 0.081").
3. SIGN SHALL HAVE A WHITE REFLECTORIZED BACKGROUND WITH A BLUE LEGEND AND LIGHT BLUE STATE SEAL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

FIELD OFFICE IDENTIFICATION SIGN

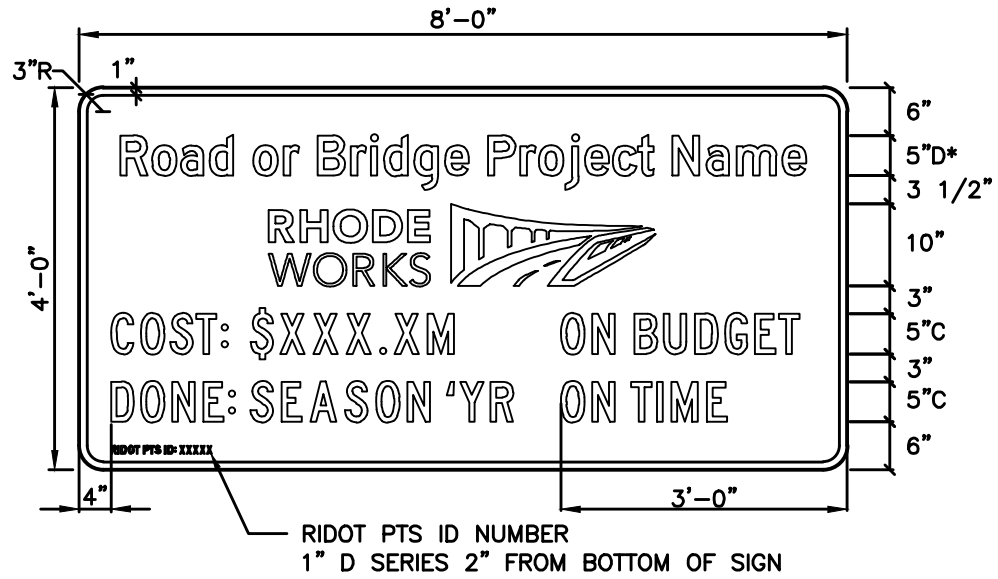
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

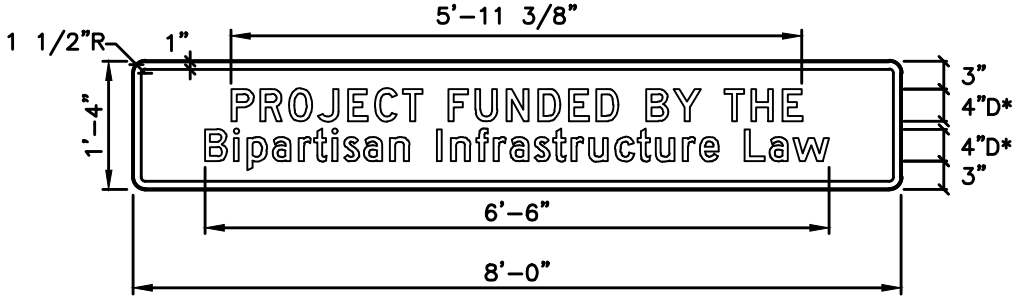
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 29.1.1

PROJECT INFORMATION SIGN



IIJA FUNDED PROJECT PLAQUE



LEGEND:

*C DENOTES C SERIES MAY BE USED ON LONGER TITLES

** DENOTES INCREASE LETTER AND WORD SPACING 100%

NOTES:

1. SIGN PANEL SUBSTRATE .080" SHEET ALUMINUM.
2. SHEETING TYPE NON–REFLECTIVE CAST VINYL, INKJET PRINT, ACRYLIC LAMINATE.
3. BACKGROUND GREEN, C:100 M:0 Y:39 K:48 (TRAFFIC GREEN APPROXIMATION).
4. LETTERING WHITE FHWA STD. SERIES C AND D.
5. BORDER WHITE NO INSET.
6. SYMBOL RHODE WORKS LOGO, 48"X10.5"
7. PROJECT SPECIFIC INFORMATION TO BE PROVIDED BY THE DEPARTMENT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

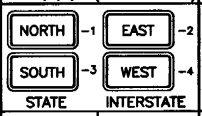
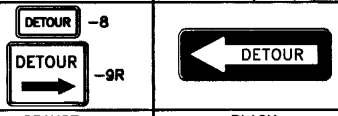
PROJECT INFORMATION SIGN

Robert Rocchio
CHIEF ENGINEER FOR INFRASTRUCTURE

SEPTEMBER 25, 2024
ISSUE DATE

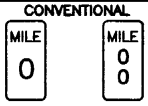
R.I. STANDARD 29.1.2

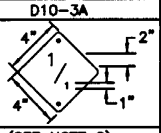
SIGN NUMBER		M1-1						M1-4	M1-5 (SEE NOTE 1)		M2-1	
LEGEND												
											STATE	INTERSTATE
COLOR	BACKGROUND	STANDARD INTERSTATE COLORS			STANDARD INTERSTATE COLORS			BLACK-WHITE SHIELD	WHITE		WHITE	WHITE
	COPY	WHITE			WHITE			BLACK	BLACK		BLACK	BLACK
DIMENSION	WIDTH	24"	36"	48"	30"	45"	60"	24"	24"	30"	21"	21"
	HEIGHT	24"	36"	48"	24"	36"	48"	24"	24"	24"	15"	15"

SIGN NUMBER		M3-1,2,3,4 (SEE NOTE 3)				M4-5				M4-6		M4-8,9R		M4-10 (R OR L)
LEGEND														
		STATE		INTERSTATE		STATE		INTERSTATE						
COLOR	BACKGROUND	WHITE		BLUE		WHITE		BLUE		WHITE		ORANGE		BLACK
	COPY	BLACK		WHITE		BLACK		WHITE		BLACK		BLACK		BLACK (ORANGE ARROW)
DIMENSION	WIDTH	24"	30"	24"	30"	24"	30"	24"	30"	24"	30"	24"	30"	48"
	HEIGHT	12"	15"	12"	15"	12"	15"	12"	15"	12"	15"	12"	24"	18"

SIGN NUMBER		M5-1 (R OR L)	M5-2 (R OR L)	M5-1 (R OR L)	M5-2 (R OR L)	M6-1
LEGEND				INTERSTATE 	INTERSTATE 	
COLOR	BACKGROUND	WHITE	WHITE	BLUE	BLUE	WHITE
	COPY	BLACK	BLACK	WHITE	WHITE	BLACK
DIMENSION	WIDTH	21"	21"	21"	21"	21"
	HEIGHT	15"	15"	15"	15"	15"

SIGN NUMBER		M6-2 (R OR L)	M6-3	M6-4	M6-1	M6-2 (R OR L)
LEGEND						INTERSTATE 
COLOR	BACKGROUND	WHITE	WHITE	WHITE	BLUE	BLUE
	COPY	BLACK	BLACK	BLACK	WHITE	WHITE
DIMENSION	WIDTH	21"	21"	21"	21"	21"
	HEIGHT	15"	15"	15"	15"	15"

SIGN NUMBER		M6-3	M6-4	I-4	D9-2	D10-1	D10-2
LEGEND		INTERSTATE 	INTERSTATE 			CONVENTIONAL 	
COLOR	BACKGROUND	BLUE	WHITE	BLUE	BLUE	GREEN	
	COPY	WHITE	BLACK	WHITE	WHITE (LETTER AND ARROW)	WHITE	
DIMENSION	WIDTH	21"	21"	24"x24"	24"x24"	10"	10"
	HEIGHT	15"	15"	24"x6" (PLAQUE)	24"x6" (PLAQUE)	18"	27"

SIGN NUMBER		D10-3A	D10-4	D10-5	D11-1
LEGEND			EXPRESSWAY-FREEWAY 		
COLOR	BACKGROUND	(SEE NOTE 2)	GREEN		GREEN
	COPY		WHITE		WHITE
DIMENSION	WIDTH		12"	12"	24"x18"
	HEIGHT		24"	36"	24"x6" (PLAQUE)

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTIONS T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN M1-5:
   A. LEGEND RI SHALL BE 4" SERIES D.
   B. ONE NUMERAL SHALL BE 12" SERIES E.
   C. TWO OR THREE NUMERALS SHALL BE 12" SERIES D.
   D. BORDER - 5/8" BLACK, 3/8" WHITE
   E. RADIUS - 1 1/2"
   F. POST LENGTH SHALL BE 8'-0" FOR MP SIGNS.
3. M3-SERIES WIDTH SAME AS M1-SERIES WIDTH.
4. D10-3A MILE TENTH'S USE 24.6.3.
5. GUIDE SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0, 24.6.2 OR 24.6.3.
6. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

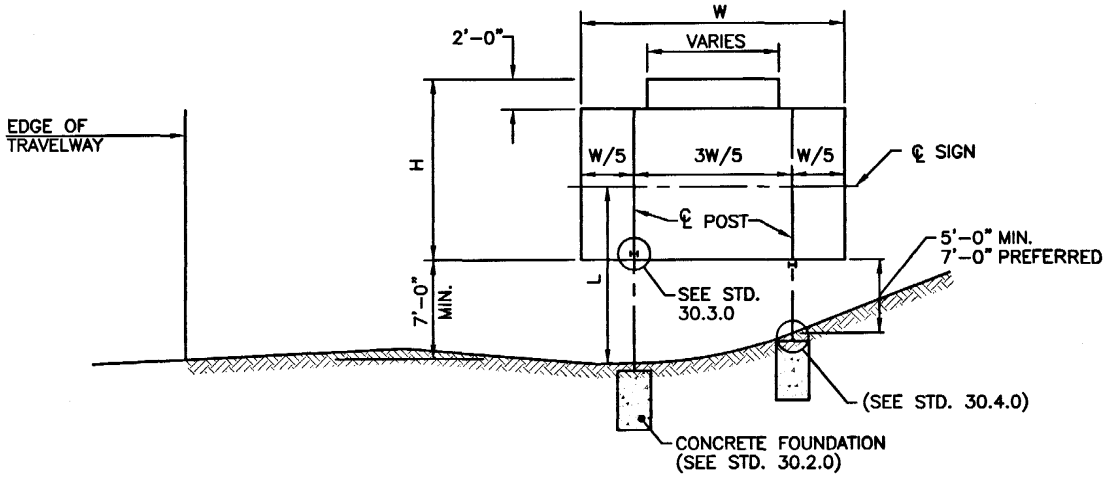
GUIDE SIGNS

CHIEF ENGINEER TRANSPORTATION

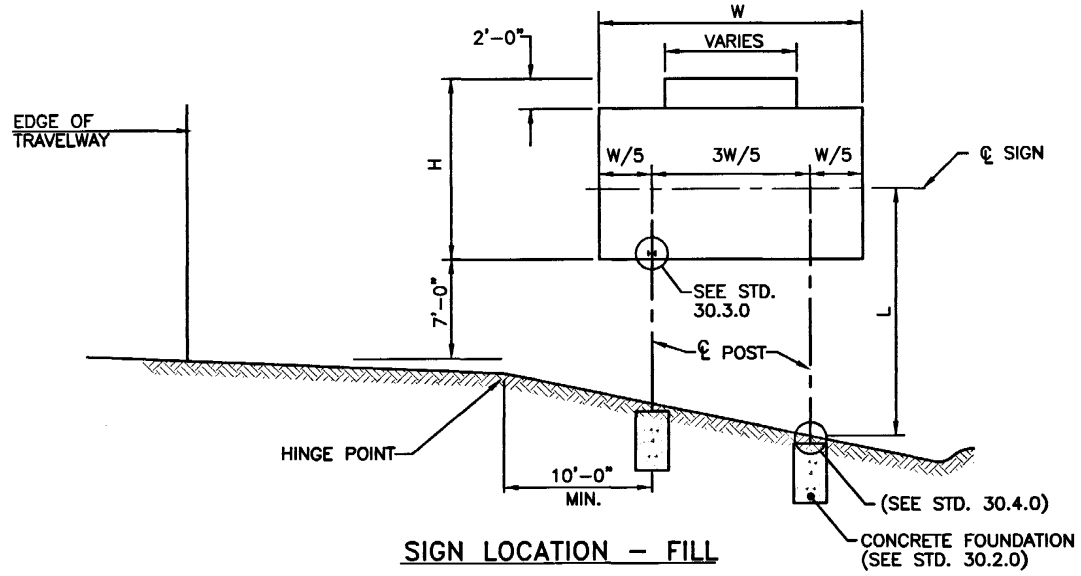
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 29.2.0



SIGN LOCATION – CUT



SIGN LOCATION – FILL

DETERMINE REQUIRED VALUES OF: W = MAXIMUM WIDTH OF SIGN
H = MAXIMUM HEIGHT OF SIGN
L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND CENTER LINE OF SIGN

ENTER THE POST SELECTION TABLE WITH MAXIMUM VALUE OF "L" AND REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF POST SIGN.
FOR SIGN SIZES BETWEEN THOSE VALUES OF "W","H" AND "L" IN THE TABLE, USE NEXT HIGHER FOOT VALUE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

SIGN LOCATION DETAILS (SIGNS 6'-0"Wx4'-0"H AND GREATER)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.1.0

POST ASSEMBLY TABLE FOR BREAKAWAY SIGNS
80 MPH WIND – 2 POST– ASTM A36 STEEL

W (FT.)	L (FT.)	HEIGHT OF SIGN "H" (FT.) 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
6	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22
	8	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22
	10	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22
	12	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W10X22	W10X22
	14	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	>600LB	>600LB
	16	W6X12	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	>600LB	>600LB	>600LB	>600LB	>45LB
	18	W6X12	W6X12	W6X15	W6X15	W6X15	W6X15	>600LB	>600LB	>600LB	>600LB	>600LB	>600LB	>600LB	>45LB	>45LB
	20	W6X12	W6X15	W6X15	W6X15	W6X15	>600LB	>600LB	>600LB	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB	>45LB
8	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W8X18	W8X21	W10X22	W10X22
	8	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22
	10	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22
	12	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22
	14	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	W8X21	>600LB	>600LB	>45LB	>45LB
	16	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB
	18	W6X12	W6X15	W6X15	W6X15	>600LB	>600LB	>600LB	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB
	20	W6X15	W6X15	W6X15	>600LB	>600LB	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB
10	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W8X18	W10X22	W10X22	W10X22	>45LB
	8	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W10X22	W10X22	W10X22	W10X22	W10X22	>45LB
	10	W6X9	W6X9	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22	W10X22	>45LB
	12	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22	>45LB	>45LB
	14	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	W8X21	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB
	16	W6X12	W6X15	W6X15	W8X18	W8X18	>600LB	>600LB	>600LB	600LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB
	18	W6X15	W6X15	W6X15	>600LB	>600LB	>600LB	>600LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB	>45LB
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12	6	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W8X18	W8X21	W10X22	W10X22	W10X22	W12X26	W14X30
	8	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W10X26	W12X26	W14X30
	10	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22	W10X26	W12X26	W14X30
	12	W6X9	W6X12	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W10X22	W10X22	W10X22	W10X26	W10X26	W12X26	W14X30
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	16	W6X15	W6X15	W8X18	W8X18	W8X21	W8X21	W10X22	W10X26	W10X26	W10X26	W10X26	W12X26	W14X30	W14X30	W18X35
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	20	W6X15	W8X18	W8X21	W8X21	W10X26	W10X26	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB	>600LB	>600LB	
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	10	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22	W12X26	W12X26	W14X30	W16X31
	12	W6X12	W6X12	W6X15	W8X18	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W12X26	W14X30	W16X31
	14	W6X12	W6X15	W8X18	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W10X26	W12X26	W14X30	W18X35	W18X35
	16	W6X15	W6X15	W8X18	W8X21	W8X21	W10X22	W10X26	W10X26	W10X26	W12X26	W14X30	W18X35	W18X35	>600LB	>600LB
	18	W6X15	W8X18	W8X21	W10X26	W10X26	W10X26	W12X26	W14X30	>600LB	>600LB	>600LB	>600LB	>600LB	>600LB	
	20	W8X18	W8X21	W8X21	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB	>600LB	>600LB	>600LB	>600LB		
16	6	W6X9	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W10X22	W10X22	W10X22	W10X22	W10X26	W12X26	W16X31	W18X35
	8	W6X9	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W14X30	W16X31	W18X35
	10	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W10X22	W10X22	W10X22	W10X26	W12X26	W14X30	W14X30	W16X31	W18X35
	12	W6X12	W6X12	W6X15	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W14X30	W16X31	W18X35	W21X44
	14	W6X15	W6X15	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W14X30	W18X35	W18X35	>600LB	
	16	W6X15	W8X18	W8X18	W8X21	W10X22	W10X26	W10X26	W10X26	W14X30	W18X35	W18X35	>600LB	>600LB		
	18	W6X15	W8X18	W8X21	W10X22	W10X26	W12X26	W14X30	>600LB	>600LB	>600LB	>600LB				
	20	W8X18	W8X21	W10X26	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB	>600LB					
18	6	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W10X22	W12X26	W14X30	W21X44	W21X44
	8	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	W21X44	W21X44
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	12	W6X12	W6X15	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W16X31	W18X35	W21X44		
	14	W6X15	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W16X31	W18X35	>600LB			
	16	W6X15	W8X18	W8X21	W10X22	W10X26	W10X26	W10X26	W12X26	W18X35	W18X35	>600LB				
	18	W8X18	W8X21	W8X21	W10X26	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB					
	20	W8X21	W8X21	W10X26	W10X26	W12X26	>600LB	>600LB	>600LB	>600LB						
20	6	W6X9	W6X9	W6X12	W6X12	W6X15	W8X18	W10X22	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W21X44	
	8	W6X9	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	W16X31	W18X35	W21X44	W21X44	
	10	W6X12	W6X12	W6X15	W8X18	W8X18	W10X22	W10X22	W10X26	W10X26	W12X26	W16X31	W18X35	W21X44		
	12	W6X12	W8X18	W8X18	W8X21	W10X22	W10X22	W10X26	W10X26	W12X26	W16X31	W18X35	W21X44			
	14	W6X15	W8X18	W8X18	W8X21	W10X22	W10X26	W10X26	W12X26	W12X26	W16X31	W18X35				
	16	W8X18	W8X18	W8X21	W10X22	W10X26	W10X26	W10X26	W12X26	W18X35	W18X35	>600				
	18	W8X18	W8X21	W10X26	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB	>600LB					
	20	W8X21	W10X26	W10X26	W10X26	W14X30	>600LB	>600LB	>600LB	>600LB						

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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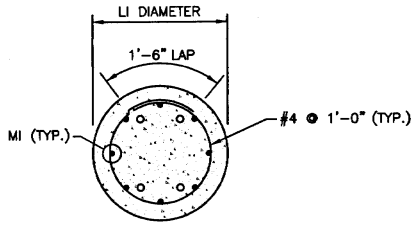
POST SELECTION TABLE FOR BREAKAWAY SIGNS (SIGNS 6'–0"Wx4'–0"H AND GREATER)

CHIEF ENGINEER TRANSPORTATION

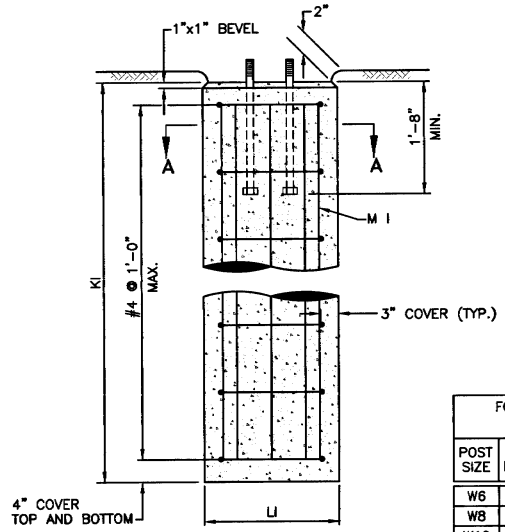
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.1.1



SECTION A-A



SECTION

FOUNDATION SELECTION TABLE FOR BREAK-SAFE SIGNS			
POST SIZE	DIAMETER FEET (L1)	DEPTH FEET (K1)	REINFORCING STEEL (M1)
W6	2.0	5.50	8-#5
W8	2.5	6.00	8-#5
W10	3.0	6.75	8-#6
W12	3.0	7.50	8-#7
W14	3.0	8.00	8-#7

NOTES:
1. THE CONTRACTOR SHALL DEVELOP DRAWINGS FOR THE FOUNDATION AND STRUCTURAL SUPPORTS BASED ON THE DATA INCLUDED ON THESE DETAILS.
2. FOUNDATION HOLES, EXCEPT IN LEDGE, SHALL BE EXCAVATED BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSIONS OF THE FOOTINGS WITHOUT DISTURBING THE SOIL AROUND OR BELOW THE PROPOSED FOOTING.
3. IN AREAS WHERE ROCK OR LEDGE IS ENCOUNTERED, THE BOTTOM OF THE FOOTING SHALL BE PLACED TO THE DESIGN DEPTH SHOWN ON THIS SHEET. THE CONCRETE SHALL FILL THE ENTIRE VOLUME OF THE EXCAVATION TO THE FULL DEPTH OF THE FOOTING.
4. WHERE THE FOUNDATION REQUIRES A SPREAD FOOTING, IT MAY BE PLACED SEPARATELY AND THE PEDESTAL THEN BROUGHT TO GRADE. THE FOOTINGS SHALL BE DESIGN BY A REGISTERED PROFESSIONAL ENGINEER. THE COST OF THE DESIGN AND CONSTRUCTION OF THE SPREAD FOOTINGS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
5. BACKFILL FOR FOUNDATIONS, IF REQUIRED BY THE ENGINEER, SHALL BE GRAVEL BORROW CONFORMING TO THE REQUIREMENTS OF THE R.I. STANDARD SPECIFICATIONS, EXCEPT THAT NO STONE LARGER THAN 1 1/2" SHALL BE ALLOWED.
6. WHERE FOOTINGS ARE PLACED AGAINST EMBANKMENTS THE TOP 6" BELOW FINISHED GRADE SHALL BE FORMED.
7. ANCHOR BOLTS SHALL BE SET TO CONFORM WITH THE BASE-PLATE TEMPLATE AS FURNISHED IN CONFORMANCE WITH THE STANDARD PLANS.
8. THE TOP OF THE FOUNDATIONS SHALL BE PROPERLY FINISHED AND DRESSED TO ASSURE THAT FULL BEARING WILL BE PROVIDED ON THE LEVELING NUTS WHICH ARE TO BE SET IN CONCRETE. ALL EXPOSED EDGES SHALL HAVE A 1/2" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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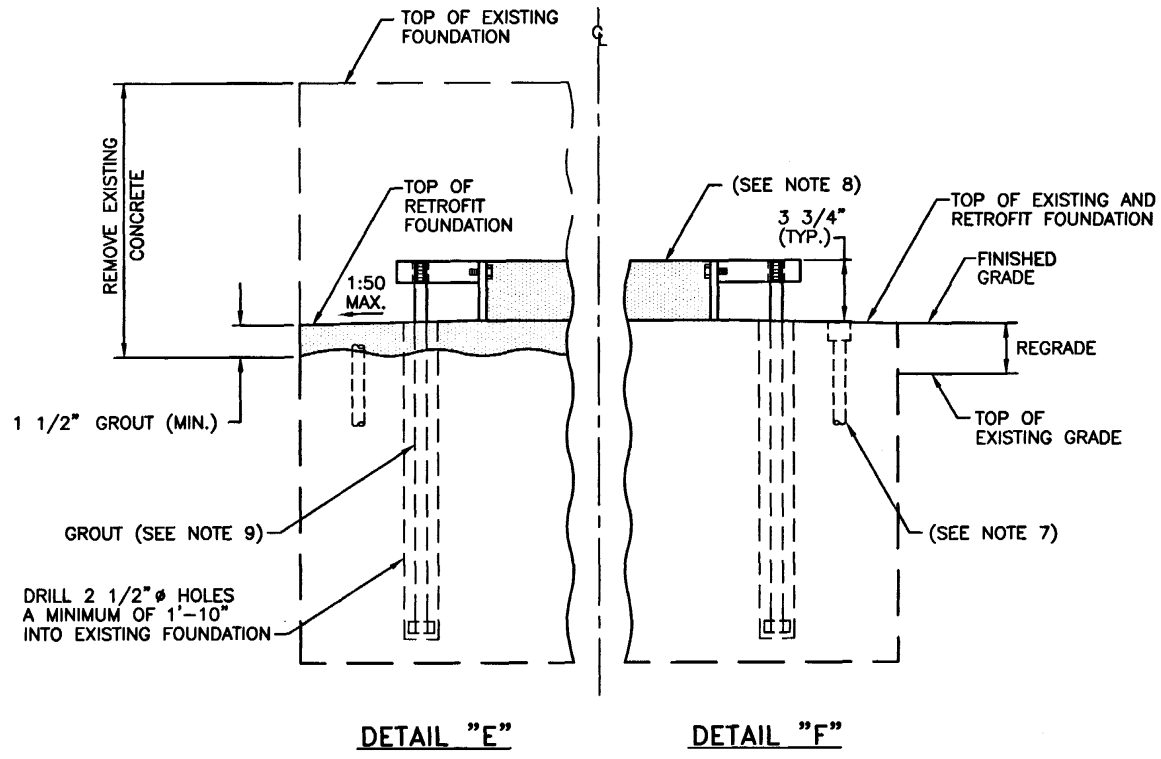
FOUNDATION DETAILS (SIGNS 6'-0"Wx4'-0"H AND GREATER)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.2.0



DETAIL "E" DETAIL "F"

ELEVATION

NOTES:

1. FOR CONCRETE CLASS, SEE SECTION 601.01.1, TABLE 1 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN EXISTING POST IS ATTACHED TO FOUNDATION BY ANCHOR BOLTS, REMOVE EXISTING ANCHOR BOLTS A MINIMUM OF 1" BELOW TOP OF NEW FOUNDATION. A 3 3/4" DEEP SECTION OF POST SHALL BE USED TO ATTACH THE ANCHOR PLATES. ANY UNCOATED PORTION OF THE SECTION SHALL BE PAINTED WITH AN APPROVED ZINC RICH PAINT.
3. WHEN EXISTING POST IS EMBEDDED IN A FOUNDATION, REMOVE POST APPROXIMATELY 3 3/4" ABOVE TOP OF NEW FOUNDATION, INSTALL ANCHOR PLATES AND PAINT TOP OF POST WITH AN APPROVED ZINC RICH PAINT.
4. AFTER CORRECTLY POSITIONING ANCHOR BOLTS AND ANCHOR PLATES, FILL HOLES WITH NON-SHRINK GROUT.
5. PAINT ANY EXPOSED EXISTING REINFORCING BARS WITH A ZINC RICH PAINT BEFORE APPLYING GROUT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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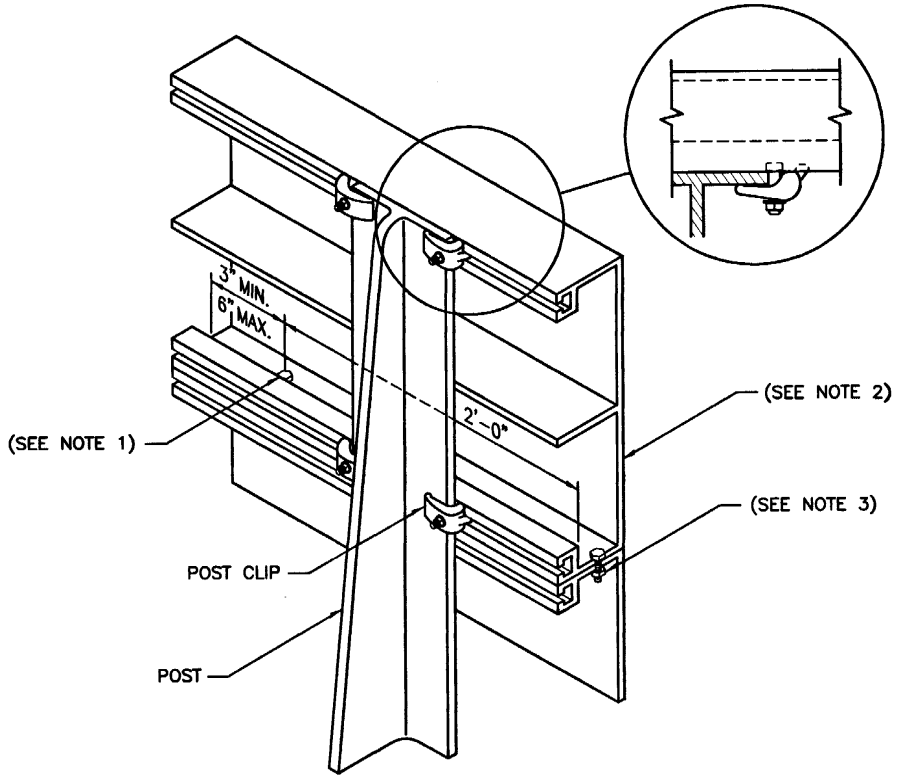
FOUNDATION MODIFICATION FOR RETROFIT (SIGNS 6'-0"Wx4'-0"H AND GREATER)

CHIEF ENGINEER TRANSPORTATION

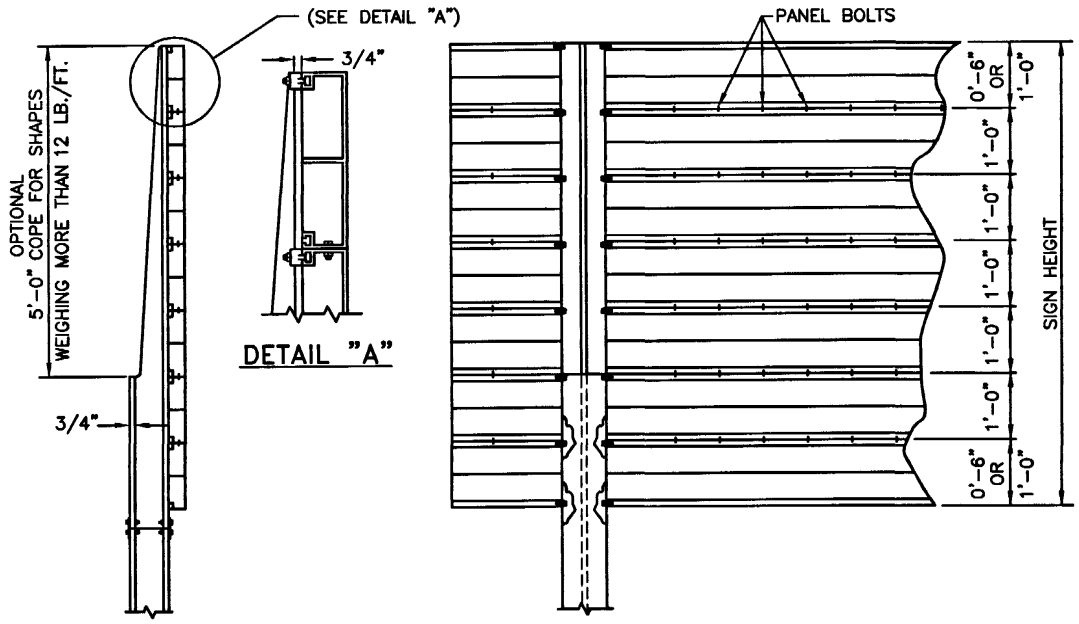
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.2.1



ISOMETRIC SHOWING SIGN COMPONENTS



REAR ELEVATION

SHOWING ARRANGEMENT OF POST CLIPS (BOTH POSTS OR ALL POSTS) AND PANEL BOLTS

NOTES:
1. PANEL HEX BOLT AND WASHER ASTM-B211 ALUMINUM ALLOY 2024-T4 3/4"-16x3/4" LONG.
2. ALUMINUM SIGN PANEL (TYPE B) ALUMINUM ALLOY 6063-T6 ASTM-B221 THICKNESS 0.125".
3. PANEL HEX NUT, ALUMINUM ALLOY 6062-T9 3/8"-16 HEX. HD. NUT ASTM-B211.
4. ALL EXTRUDED ALUMINUM PANELS SHALL HAVE SIDE MOULDINGS.
5. PANEL BOLTS TO BE PLACED SYMMETRICALLY ABOUT ℄ OF SIGN PANEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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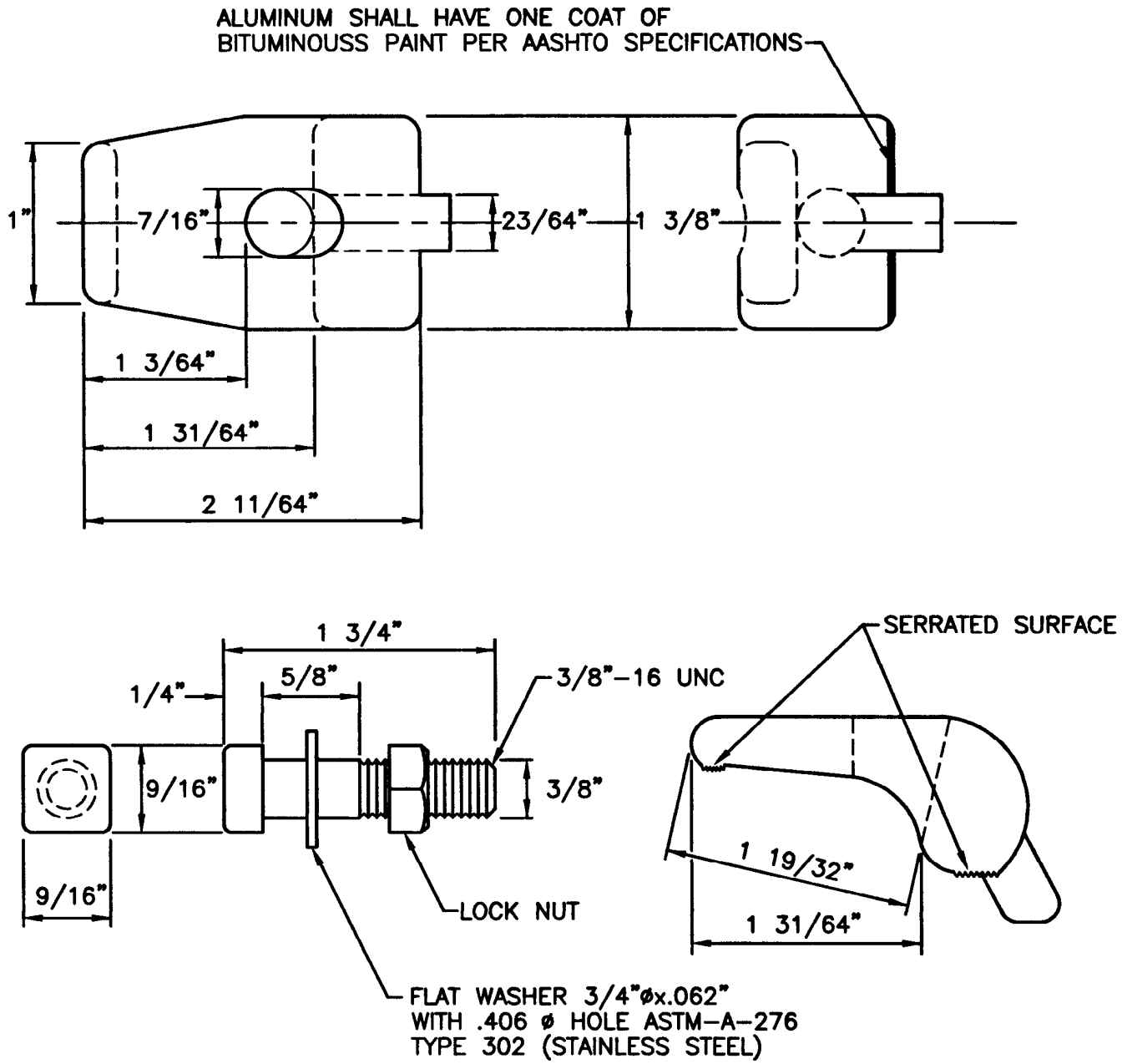
SIGN PANEL DETAILS (SIGNS 6'-0"Wx4'-0"H AND GREATER)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.3.0



NOTES:

1. BOLT SHALL BE STAINLESS STEEL ALLOY 304 ASTM-A-193-GRADE B8 OR ASTM-A-194-GRADE 8.
2. NUT SHALL BE STAINLESS STEEL ALLOY 303 ASTM-A-193-GRADE B 8F OR OR ASTM-A-194-GRADE 8F.
3. CLIP SHALL BE ALUMINUM ALLOY 356-T6 (SG70A) ASTM-B26.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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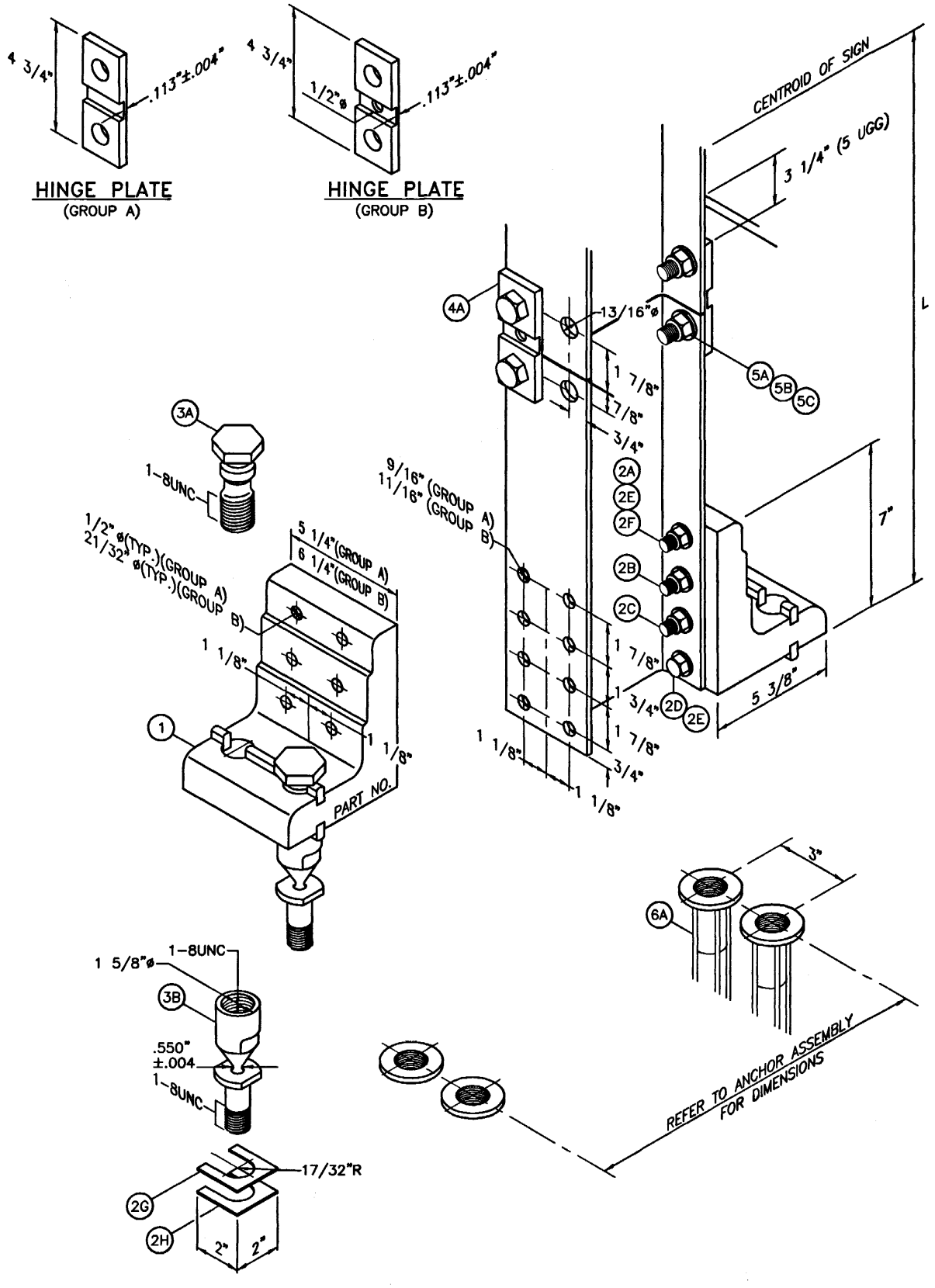
POST CLIP AND BOLT DETAIL (FOR EXTRUDED ALUMINUM)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.3.1



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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GROUND MOUNTED PRIMARY DIRECTIONAL SIGN POST ON BREAKAWAY COUPLINGS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.4.0

BRACKET SELECTION TABLE									
POST SIZE		#1 E=.100"		#2 E=.150"		#3 E=.200"		#4 E=.250"	
		MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L
GROUP A	6 WF 9	12'-2"	25'-0"	8'-7"	12'-1"	6'-7"	8'-6"	--	6'-6"
	6 WF 12	12'-4"	25'-0"	8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	6 WF 15	12'-4"		8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	8 WF 18	14'-1"		10'-0"	14'-0"	7'-9"	9'-11"	--	7'-8"
	8 WF 21	14'-3"		10'-2"	14'-2"	7'-11"	10'-1"	--	7'-10"
GROUP B	10 WF 22	15'-9"	25'-0"	11'-3"	15'-8"	8'-7"	11'-2"	--	8'-6"
	10 WF 26	15'-10"		11'-4"	15'-9"	8'-8"	11'-3"	--	8'-7"
	12 WF 26	17'-6"		12'-6"	17'-5"	9'-7"	12'-5"	--	9'-6"
	14 WF 30	19'-3"		13'-10"	19'-2"	10'-8"	13'-9"	--	10'-7"

		BOLT CIRCLE (DIAMETER)
GROUP A	6 WF 9	15-1/4"
	6 WF 12	15-3/8"
	6 WF 16	15-1/2"
	6 WF 20	15-1/2"
	8 WF 18	17-1/4"
	8 WF 21	17-3/8"
	8 WF 24	17-1/8"
GROUP B	10 WF 22	19-1/2"
	10 WF 26	19-5/8"
	10 WF 30	19-3/4"
	12 WF 26	21-1/2"
	12 WF 30	23-3/16"

NOTES:

1. SHALL MEET ALL REQUIREMENTS OF "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."
2. ALL HARDWARE (AMERICAN STANDARD) SUPPLIED ISHALL BE HOT DIP GALVANIZED PER ASTM A153 OR MECHANICALLY GALVANIZED PER ASTM B695.
3. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING SHALL BE INSTALLED WITH LOCKWASHERS OR LOCKNUTS AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTNERS SHOULD BE MADE AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES UNLESS NOTED OTHERWISE.
4. SQUARE AND LEVEL INDIVIDUAL COMPONENTS TO MINIMIZE NEED FOR SHIMMING.
5. STRUCTURAL STEEL TO BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION.
6. NO MORE THAN TWO SHIMS UNDERNEATH ANY ONE COUPLING AND NO MORE THAN THREE SHIMS UNDERNEATH ANY TWO COUPLINGS.
7. SELECT PROPER POST SIZE BY REFERRING TO POST SELECTION TABLES FOR MEDIUM AND LARGE SIGNS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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BRACKET SELECTION TABLE BOLT CIRCLE AND GENERAL NOTES

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.4.1

INSTALLATION NOTES:

WRENCH SIZES REQUIRED: 9/16", 7/8", 1", 1 1/16", 1 1/4", 1 7/16", 1 5/8"

ANCHOR ASSEMBLY:

1. ASSEMBLE COUPLING ANCHORS 6A TO INSTALLATION TEMPLATE (NOT SHOWN). RIGID STEEL TEMPLATE IS RECOMMENDED.
2. LOWER ENTIRE ANCHOR ASSEMBLY INTO FRESH CONCRETE AND VIBRATE INTO POSITION SO THAT THE TOPS OF THE INDIVIDUAL ANCHORS 6A ARE FLUSH WITH THE FINISHED TOP SURFACE OF THE FOOTINGS.

BRACKET ASSEMBLY:

1. ASSEMBLE BRACKET TO POST WITH BOLTS PROVIDED.
2. SQUARE AND TIGHTEN. (ITEMS 1, 2A, 2B, 2C, 2D, 2E, AND 2F)

HINGE ASSEMBLY:

1. BUTT UPPER AND LOWER POSTS TOGETHER ON FLAT SURFACE.
2. PLACE HINGE PLATES 4A ON OUTER FLANGES AND SECURE WITH BOLTS 5A, 5B AND 5C. SNUG BUT DO NOT TIGHTEN.
3. MAKE SURE UPPER AND LOWER POSTS ARE IN ALIGNMENT, THEN TIGHTEN ALL NUTS 5C TO PROOF LOAD (1/2 TURN BEYOND SNUG).

COUPLING ASSEMBLY:

1. SUSPEND POST OVER FOOTING AND INSERT SPECIAL BOLTS 3A THROUGH BRACKET 1.
2. BELOW BRACKET, THREAD COUPLINGS 3B INTO ANCHORS 6A BUT LEAVE LOOSE.
3. LOWER POST WITH SPECIAL BOLTS 3A ONTO LOOSE COUPLINGS 3B AND THREAD BOLTS INTO COUPLINGS.
4. THREAD COUPLINGS ALL THE WAY IN ANCHORS 6A.
5. TIGHTEN SPECIAL BOLTS 3A. DO NOT PLACE TORQUE ACROSS NECKED DOWN PORTION OF COUPLINGS. WRENCH FLATS ARE PROVIDED ON EITHER SIDE FOR PROPER TIGHTENING.
6. IF POST IS NOT PLUMB, INSERT SHIMS 2G AND 2H BETWEEN COUPLINGS 3B AND AND ANCHOR 6A.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

INSTALLATION NOTES

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.4.2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS

BILL OF MATERIALS		
ITEM	DESCRIPTION	QTY./POST
1 BRACKET	6061– T6 ALUMINUM (SEE BRACKET SELECTION TABLE)	2
	BRACKET HARDWARE ASSEMBLY:	
2A BOLT	GROUP A – 1/2"–13UNC x 2–1/2", HEX HEAD, ASTM A325, GALV., ASTM A153	4
	GROUP B – 5/8"–11UNC x 2–3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
2B BOLT	GROUP A – 1/2"–13UNC x 2–3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
	GROUP B – 5/8"–11UNC x 3", HEX HEAD, ASTM A325, GALV., ASTM A153	4
2C BOLT	GROUP A – 1/2"–13UNC x 3", HEX HEAD, ASTM 325, GALV., ASTM 153	4
	GROUP B – 5/8"–11UNC x 3–1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
2D CAP SCREW	GROUP A – 1/2"–13UNC x 1–1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	4
	GROUP B – 1/2"–13UNC x 1–1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	4
2E LOCKWASHER	GROUP A – 1/2", ANSI B18–21–1, GALV., ASTM A153	16
	GROUP B – 5/8", ANSI B18–21–1, GALV., ASTM A153	16
2F NUT	GROUP A – 1/2"–13UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	2
	GROUP B – 5/8"–11UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	2
2G SHIM	GROUP A – 21" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	2
	GROUP B – 1" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	2
2H SHIM	1"HORSESHOE, 14 GAUGE, GALV., STEEL SHEET	2
	COUPLING AND BOLT ASSEMBLY:	
3A SPECIAL BOLT	1"–8 UNC ASTM A449, GALV., ASTM A153/B695	4
3B COUPLING	1"–8 UNC LP., AMS 63780*, GALV., ASTM A153, POLYESTER COAT**	4
	HINGE ASSEMBLY:	
4A HINGE PLATE	GROUP A – TYPE B525, AISI A130 STEEL, GALV., ASTM A123	4
	GROUP B – TYPE B650, AISI 4130 STEEL, GALV., ASTM A123	4
	HINGE HARDWARE ASSEMBLY:	
5A BOLT	3/4"–10UNC x 2–1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	8
5B LOCKWASHER	3/4"ANSI B18–21–1, GALV., ASTM A153	8
5C NUT	3/4"–10UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A153	8
	ANCHOR ASSEMBLY:	
6A ANCHOR	GROUP A –1"–8UNC, 304 S.S. FERRULE, AISI 1038 ROD. AISI 1008 COIL	4
	GROUP B –1"–8UNC, 304 S.S. FERRULE, AISI 1008 COIL	4

*WITH EXCEPTION TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES
**2–4 MIL. THICK MORTON POWDER COATINGS' 20–7037 POLYESTER POWDER COAT

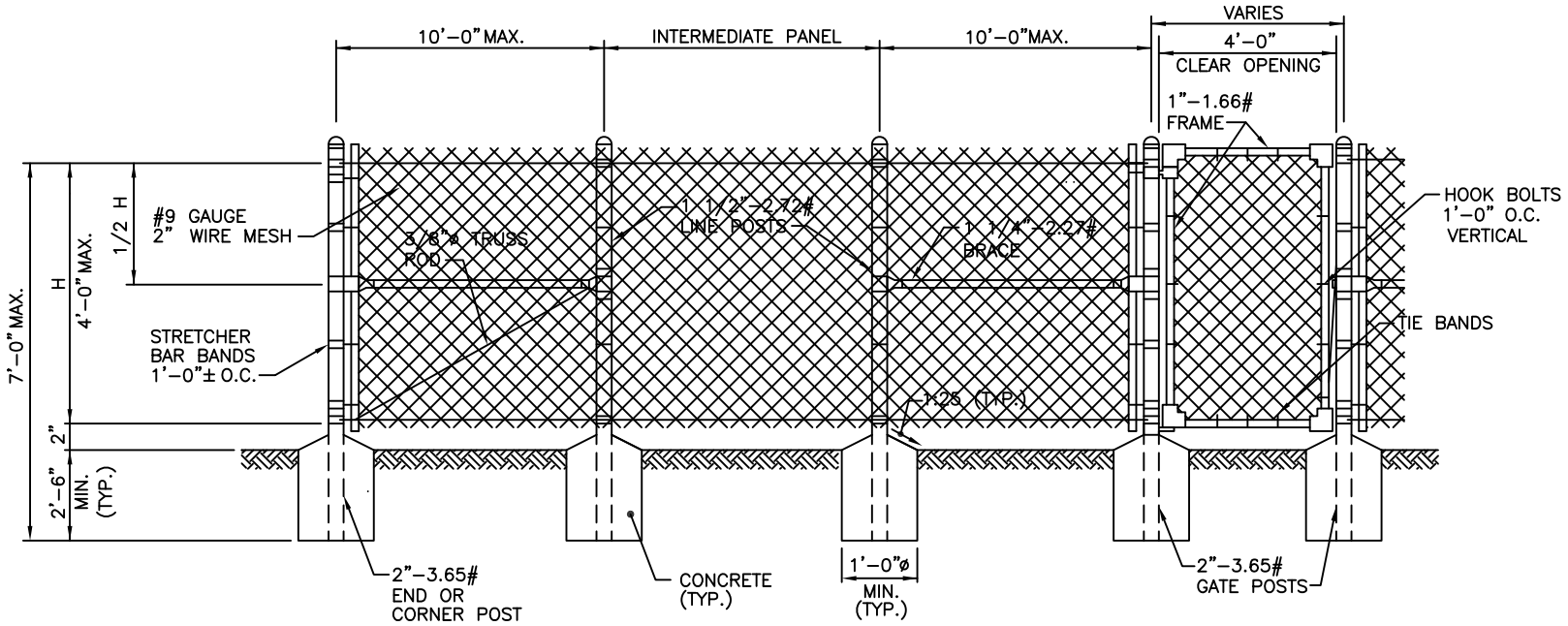
NO.	BY	DATE
REVISIONS		

CHIEF ENGINEER TRANSPORTATION

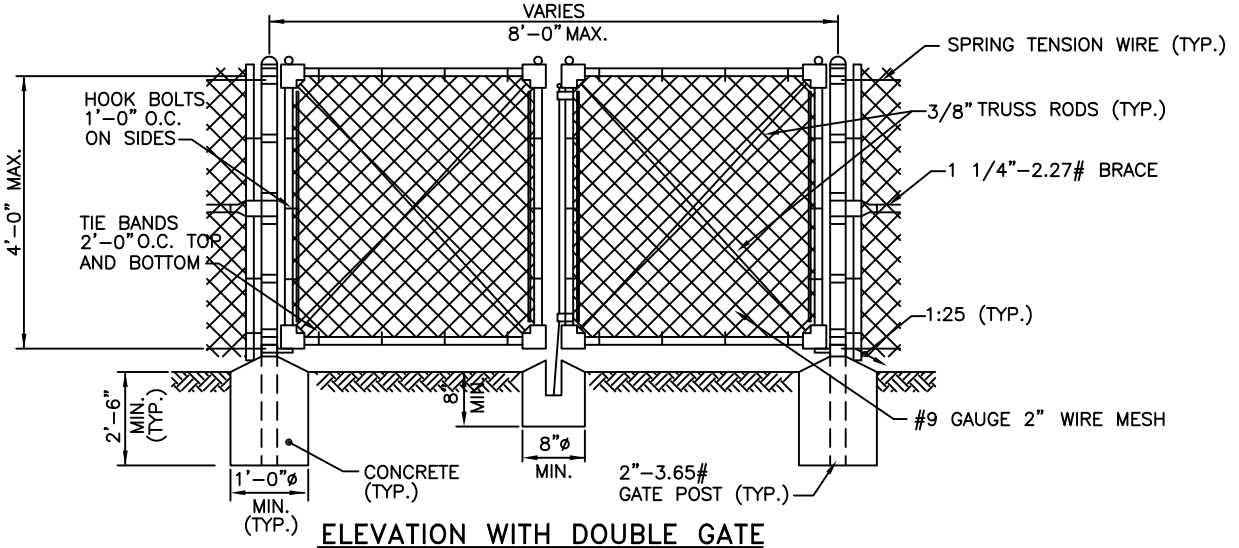
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 30.4.3



ELEVATION WITH SINGLE GATE



ELEVATION WITH DOUBLE GATE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. INTERMEDIATE POSTS REQUIRED EVERY 200'–0".
3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE 3'–0" TO 4'–0"

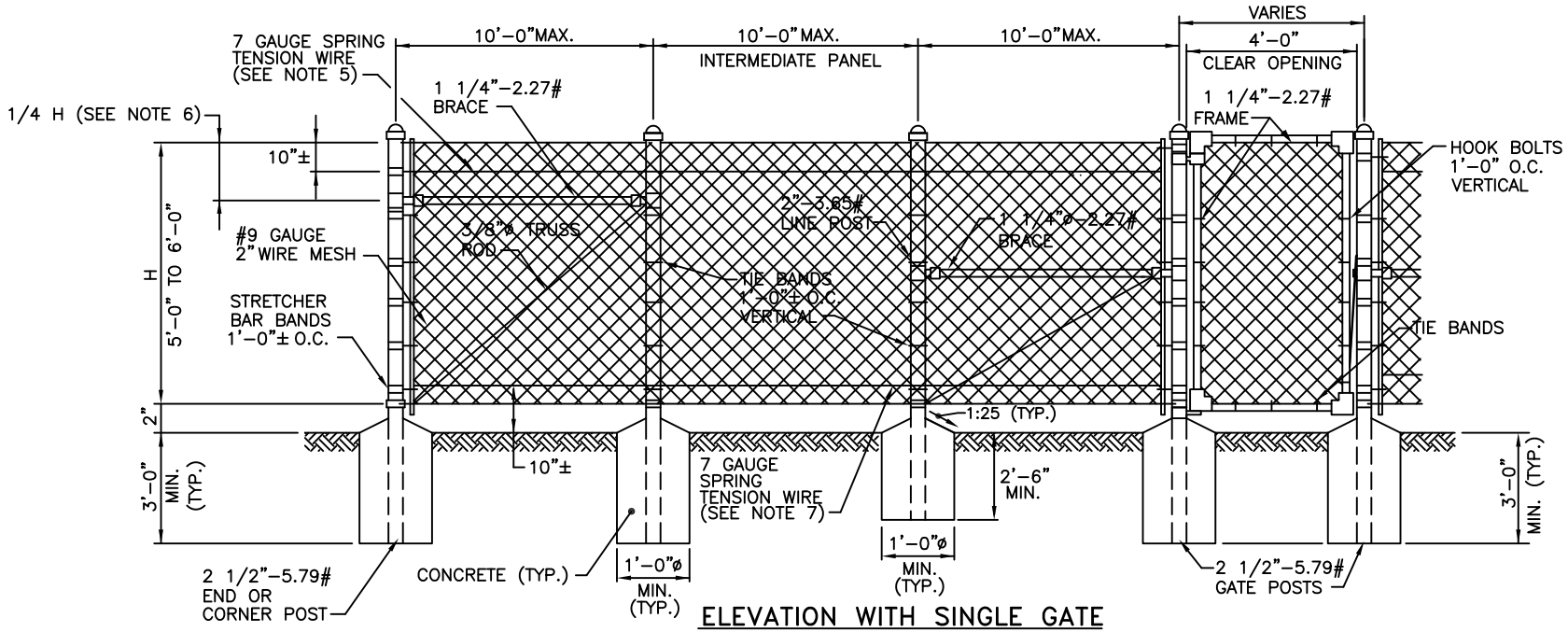
R.I. STANDARD 31.1.0

JUNE 15, 1998
ISSUE DATE

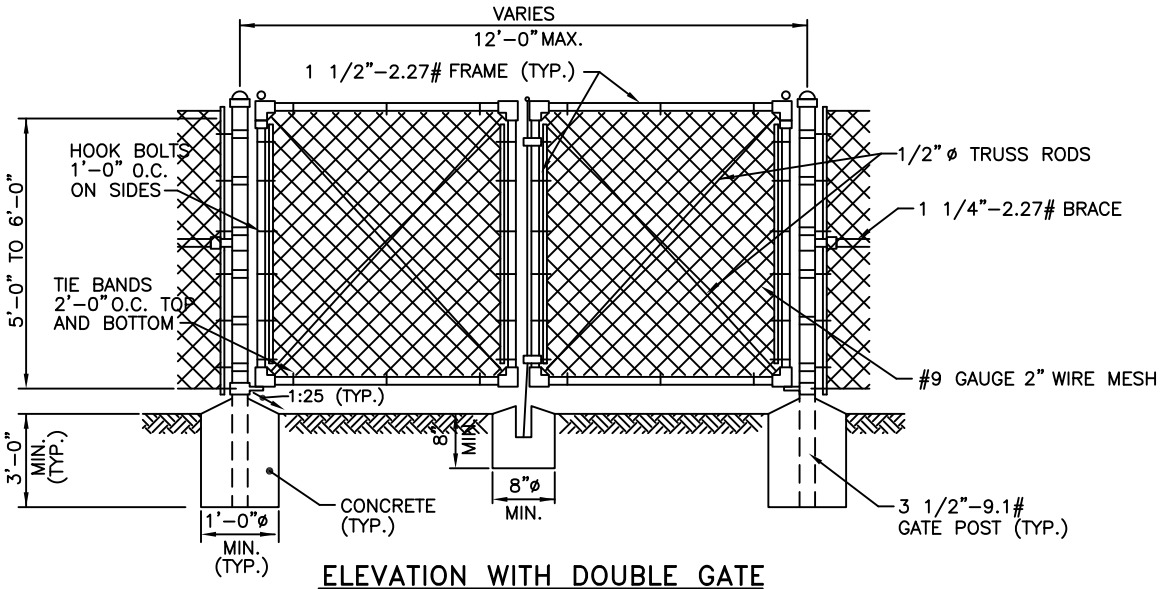
CHIEF DESIGN ENGINEER
TRANSPORTATION

CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/10/05
2	MLP	06/01/10



ELEVATION WITH SINGLE GATE



ELEVATION WITH DOUBLE GATE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. 6 GAUGE STREET CLIPS TO BE USED TO FASTEN SPRING TENSION WIRE TO LINE POST.
3. SPRING TENSION WIRE – NO. 7 GAUGE CORRUGATED HEAVILY GALVANIZED (2.0 OZ. PER SQ. FT.) ALUMINUM COATED (0.4 OZ. PER SQ. FT.)
4. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.
5. A 1 1/4"-2.27# TOP RAIL MAY BE SUBSTITUTED FOR THE TOP TENSION WIRE WHEN THE FENCE IS NOT LOCATED IN THE CLEAR ZONE.
6. WHEN A TOP RAIL IS USED, LOCATE THE BRACE RAIL AT 1/2 H.
7. WHEN A TOP RAIL IS USED, DELETE THE BOTTOM SPRING TENSION WIRE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE
5'-0" TO 6'-0"

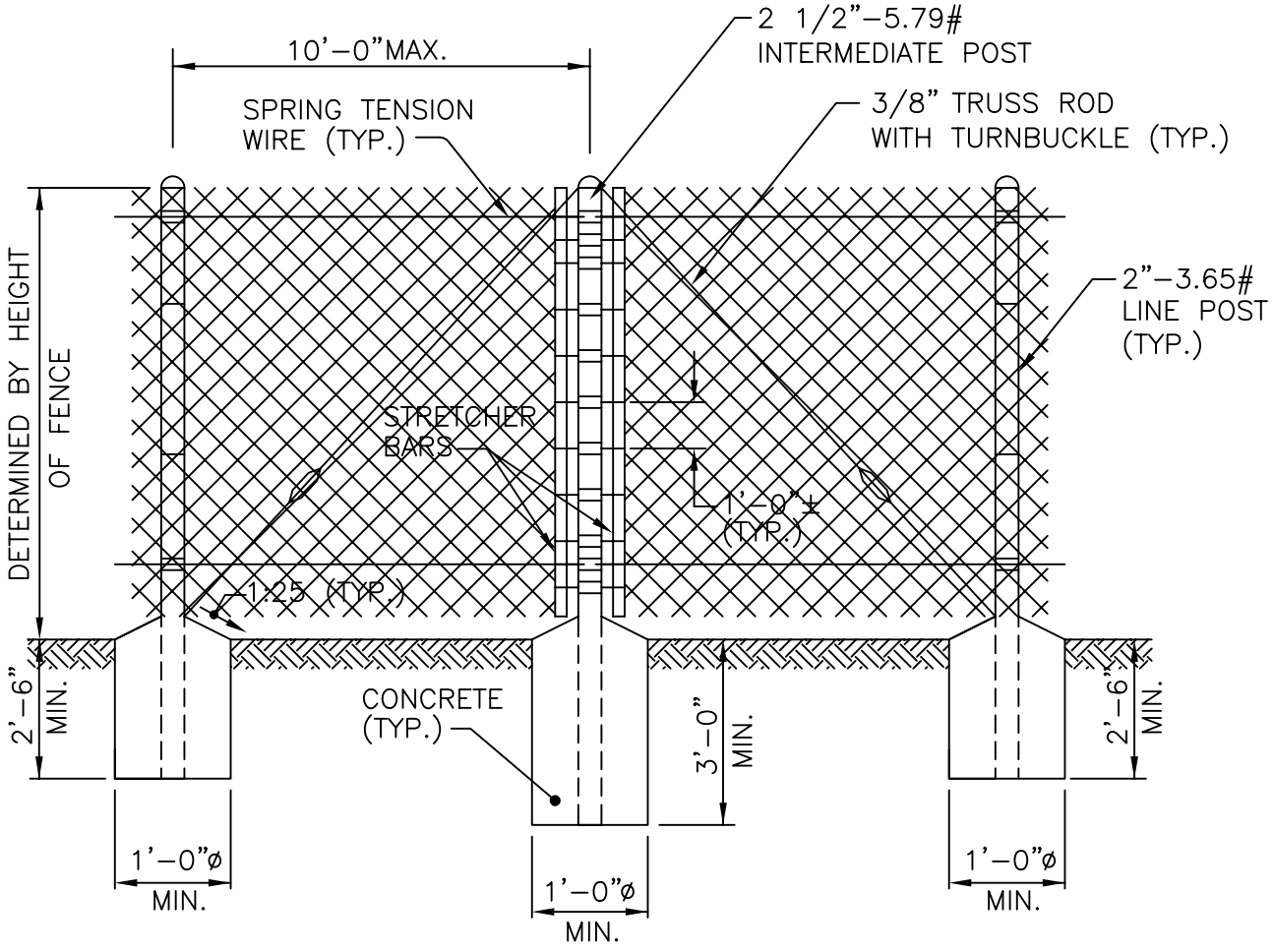
R.I. STANDARD 31.2.0

JUNE 15, 1998
ISSUE DATE

CHIEF DESIGN ENGINEER
TRANSPORTATION

CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/01/05
2	MLP	06/01/10



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. INTERMEDIATE POSTS REQUIRED EVERY 200'–0".
3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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1	MLP	3/1/2005

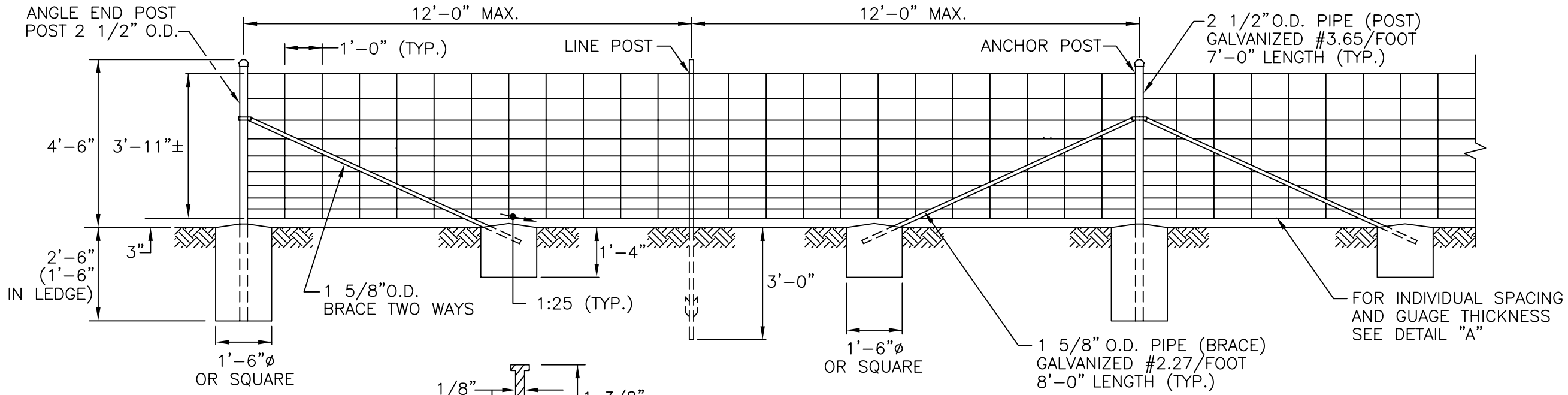
CHAIN LINK FENCE 5'–0" TO 6'–0" INTERMEDIATE POST

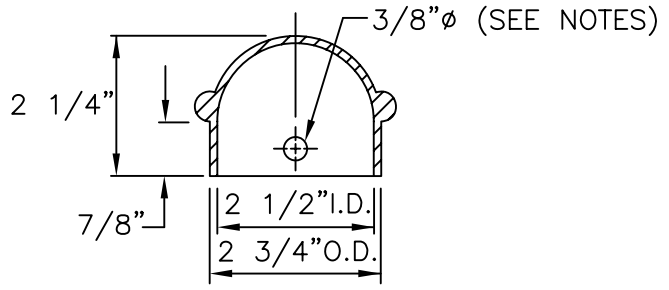
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

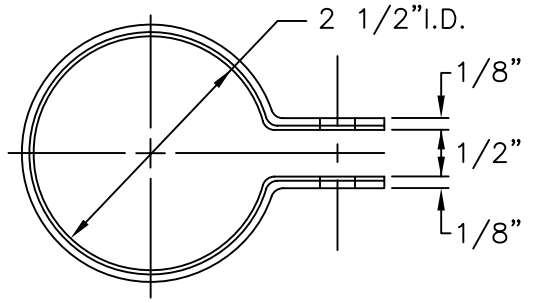
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 31.2.1

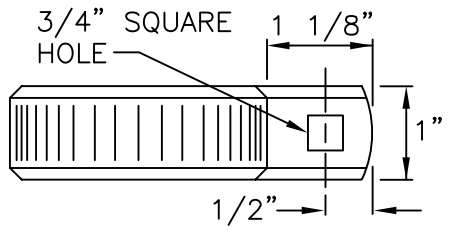




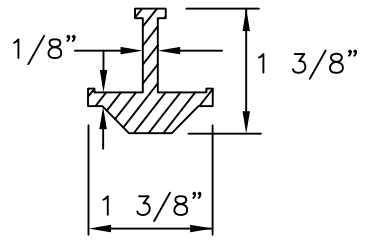
ROUND POST CAP



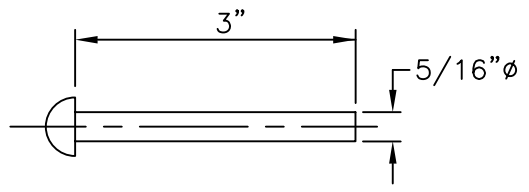
CARRIAGE BOLT–NUT FOR ASSEMBLY
5/16"–18 UNC–2A (1 1/4" LONG)



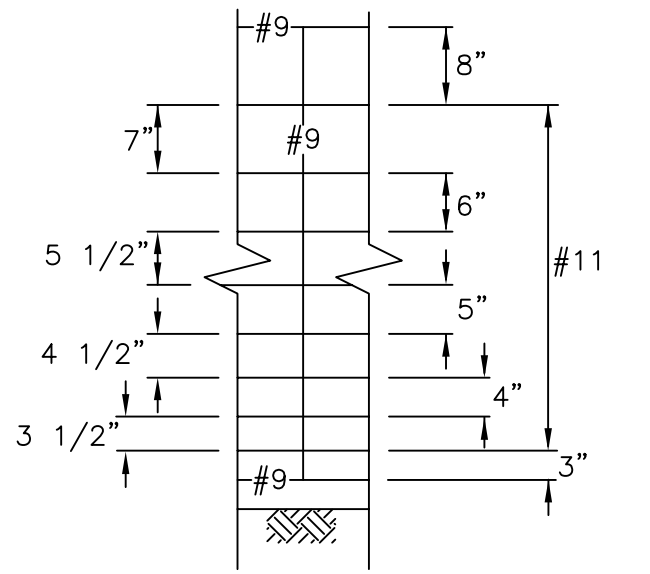
BRACE BAND



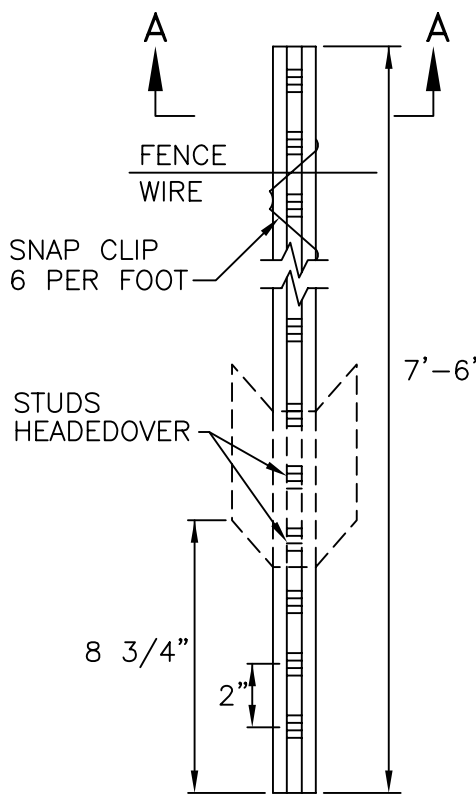
SECTION A–A



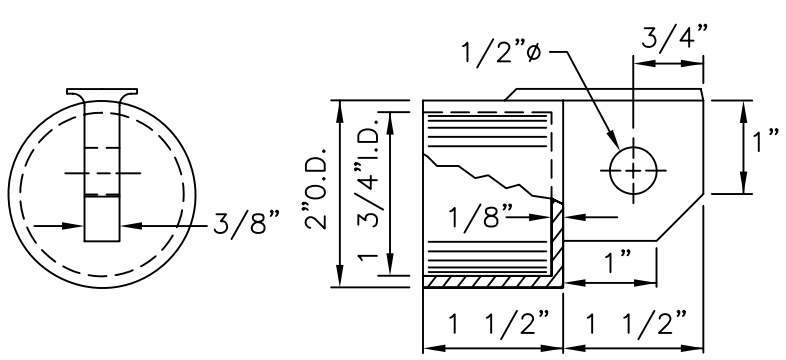
PIN CAP–POST SECURING



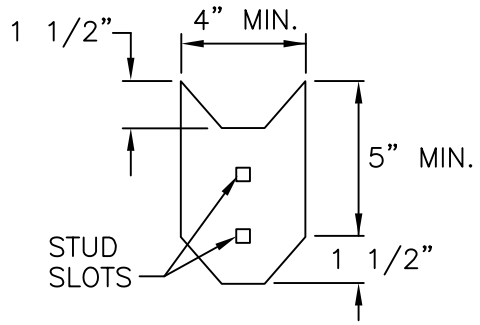
DETAIL "A"



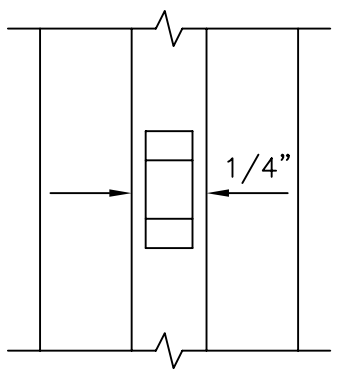
STUDDED "T" LINE POST

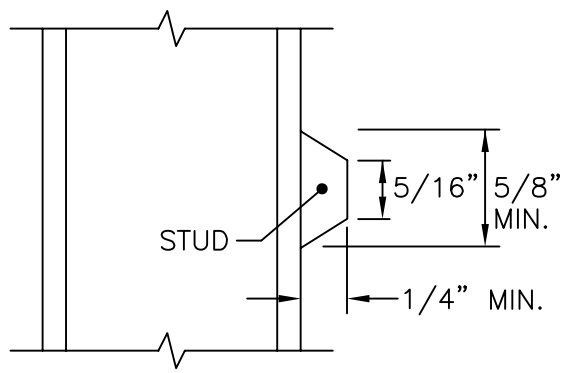


BRACE OR RAIL END



ANCHOR PLATE





STUD DETAIL – LINE POST

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONNECT LINE BRACE AT ALL SAG – SUMMIT. IN LONG EVEN RUNS, BRACE EVERY 15 BAYS WITH NEAR BRACE POSTS 180'–0" C–C.
3. CAP TO BE SECURED TO PIPE POST WITH 5/16" PIN, PEENED TO HOLD, IN FIELD OR PREASSEMBLED.
4. THE BULB STUD TEE (1 3/8"x1 1/4"x1/8", 1.33 LB./FT.) IS AN ACCEPTABLE SUBSTITUTION.
5. ALL POSTS, FENCES, FIXTURES TO BE GALVANIZED. FIXTURES ARE AS SHOWN OR EQUIVALENT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

WOVEN WIRE RIGHT–OF–WAY FENCE (STEEL POST)

R.I. STANDARD 31.3.0

JUNE 15, 1998
ISSUE DATE

Edmund F. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

James N. Cipolla
CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

NOTES:

1. ALL DIMENSIONS OF STANDARD GUARDRAIL COMPONENTS, INCLUDING PANELS, POSTS, OFFSET BLOCKS, BOLTS, NUTS, WASHERS AND HOLES, ARE BASED UPON ENGLISH UNIT CONVERSIONS OF THE AASHTO–AGC JOINT COMMITTEE TASK FORCE 13 REPORT: A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE (HTTP://WWW.AASHTOF13.ORG/BARRIER–HARDWARE .PHP.)

2. ALL GUARDRAIL MATERIALS SHALL CONFORM TO M.08 UNLESS OTHERWISE INDICATED.

3. APPROVAL BY THE ENGINEER IS REQUIRED WHERE A DIFFERING GUARDRAIL CONFIGURATION IS REQUIRED FOR CONSTRUCTABILITY BEYOND THE OPTIONS SHOWN IN THESE STANDARDS OR THE PLANS.

4. THE BEGIN OR END STATION LABELS SHOWN IN THESE STANDARDS CORRESPOND TO THE STATION AND OFFSET CALLOUTS SPECIFIED IN THE PLANS.

5. USE 12'–6″ NOMINAL LENGTH PANELS UNLESS OTHERWISE INDICATED IN THESE STANDARDS OR THE PLANS.

6. ALL LAP SPLICES SHALL BE MIDSPAN UNLESS OTHERWISE SHOWN.

7. LAP SPLICES SHALL BE CONSTRUCTED WITH THE SPLICE RIDGE ORIENTED DOWNSTREAM OF THE FINAL DIRECTION OF TRAFFIC IN THE NEAREST TRAVEL LANE. REORIENTING LAP SPLICES FOR TEMPORARY TRAFFIC CONTROL IS NOT REQUIRED.

8. STANDARD POSTS SHALL BE STEEL OR TIMBER, UNLESS OTHERWISE INDICATED IN THE PLANS, FABRICATED TO THE DIMENSIONS SHOWN ON POST AND OFFSET BLOCK DETAILS. POSTS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, ANCHORAGES, AND/OR LONG SPAN UNITS.

9. DEEP POST SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.

10. OFFSET BLOCKS, WHERE REQUIRED, SHALL BE TIMBER AND FABRICATED TO THE NOMINAL DIMENSIONS SHOWN ON POST AND OFFSET BLOCK DETAILS. PLASTIC OR COMPOSITE OFFSET BLOCKS OF THE SAME NOMINAL DIMENSIONS THAT ARE LISTED ON THE QUALIFIED CONSTRUCTION MATERIALS LIST MAY BE SUBSTITUTED. OFFSET BLOCKS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.

11. MILLINGS, WHERE CALLED, SHALL CONFORM TO SECTION 213 OF THE RI STANDARD SPECIFICATIONS. THE MILLINGS SHALL BE INSTALLED WITH A DEPTH OF 4".

12. GUARDRAIL DELINEATORS, CONFORMING TO SECTION 901 SHALL BE INSTALLED AT 25' INTERVALS WITHIN 100' OF END TREATMENT OR TRAILING ANCHORAGE AND AT 100' INTERVALS IN ALL OTHER AREAS UNLESS OTHERWISE SHOWN IN THE PLANS.

13. MINIMAL OFFSET DISTANCE FROM FACE OF W–BEAM PANEL TO A FIXED (NON–BREAKAWAY) OBJECT SHALL BE 48″ FOR TL–2 AND 60″ FOR TL–3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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GUARDRAIL GENERAL NOTES

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 34.1.0

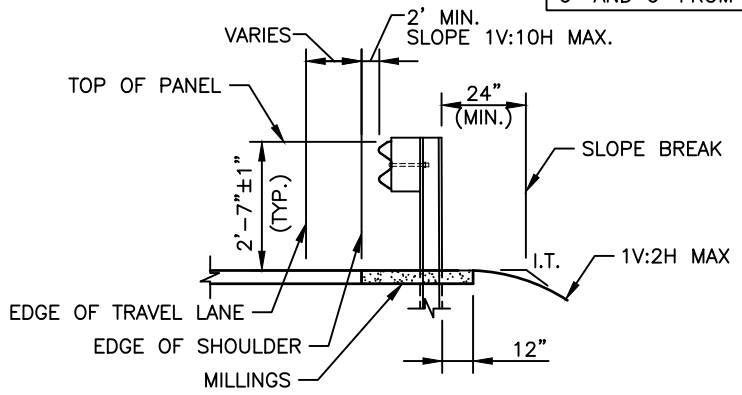
	TL-2	TL-3
BACK OF BERM OFFSET FROM BERM*	0" TO 6" 6'-0" (MIN.)	0" TO 6" N/A(SEE NOTE 3)

* SEE NOTE 7
NOTE: NO GUARDRAIL TO BE INSTALLED BETWEEN 6" AND 6' FROM BACK OF BERM.

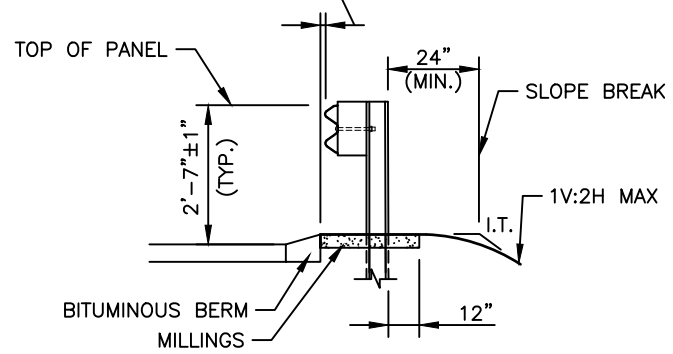
	TL-2	TL-3
FACE OF CURB OFFSET FROM CURB*	0" TO 6" 6'-0" (MIN.)	0" TO 6" N/A(SEE NOTE 3)

* SEE NOTE 7
NOTE: NO GUARDRAIL TO BE INSTALLED BETWEEN 6" AND 6' FROM FACE OF CURB.

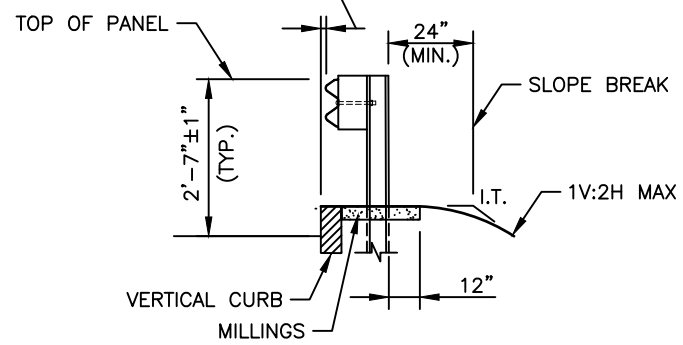
W-BEAM



EDGE OF PAVEMENT

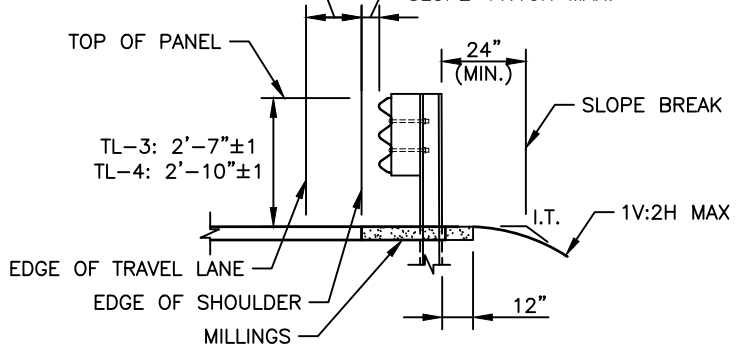


BITUMINOUS BERM

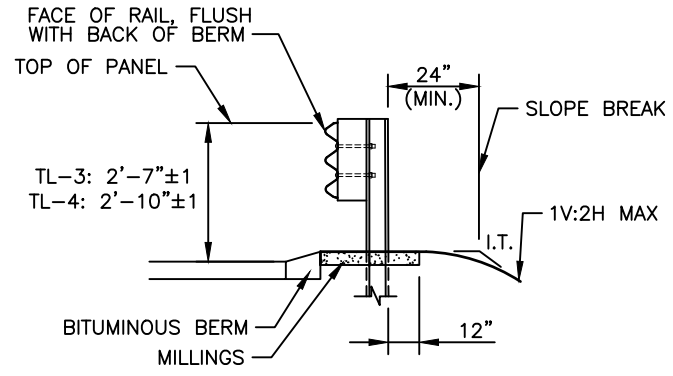


VERTICAL CURB

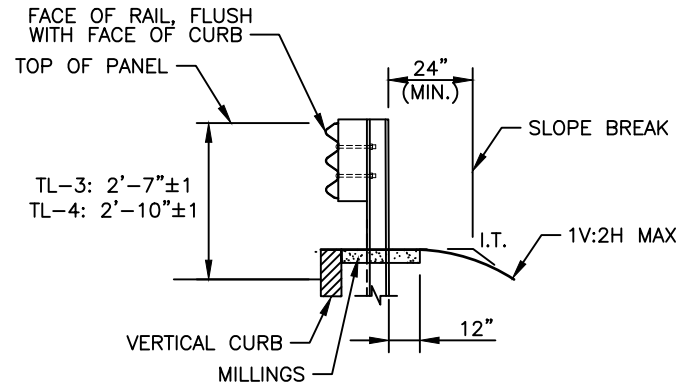
THRIE BEAM



EDGE OF PAVEMENT



BITUMINOUS BERM



VERTICAL CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. SHALL BE IN ACCORDANCE WITH SECTION 213 OF THE RI STANDARD SPECIFICATIONS. THE DEPTH OF MILLINGS SHALL BE 4".
3. SINGLE FACED TL-3 OR TL-4 GUARDRAIL SHALL NOT BE OFFSET FROM VERTICAL CURB OR BITUMINOUS BERM UNLESS OTHERWISE SHOWN IN THE PLANS OR THESE STANDARDS.
4. IN ORDER TO FACILITATE DESIGN AND CONSTRUCTION, THE OFFSET FROM THE CURB TO FACE OF GUARDRAIL DOES NOT HAVE TO BE SYMMETRICAL BETWEEN SIDES. ONE SIDE MAY BE LOCATED AT THE FACE OF CURB AND THE OPPOSITE MAY BE OFFSET.
5. REFER TO STD. 34.1.0 FOR TL-3 THRIE BEAM INSTALLATION AND STD. 34.5.3 & 34.5.4 FOR TL-4 STEEL THRIE BEAM GUARDRAIL INSTALLATIONS.
6. TOP OF RAIL HEIGHT MEASURED FROM 1V:10H SURFACE.
7. IF OFFSET IS REQUIRED BEHIND BITUMINOUS BERM OR VERTICAL CURB, THE OFFSET SHALL BE 6 FEET MINIMUM. THE GUARDRAIL WILL MEET TL-2 UNDER THIS CONDITION.

R.I. STANDARD 34.1.0 CONT.

10/21/2022
ISSUE DATE

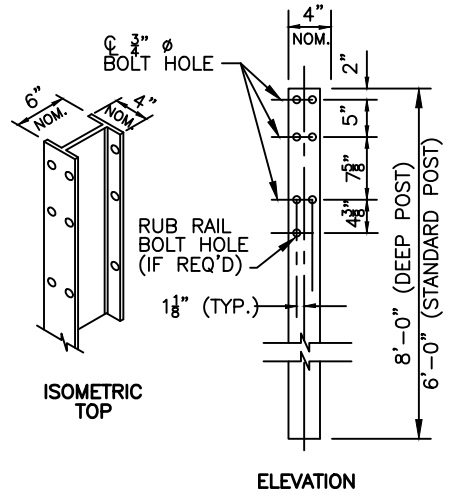
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

ROADSIDE GUARDRAIL INSTALLATION

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

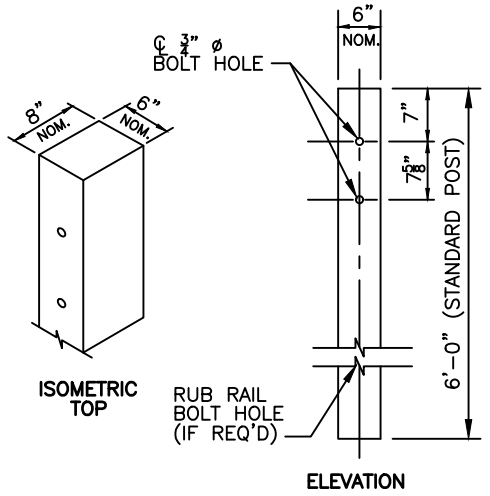
NO.	BY	DATE

REVISIONS

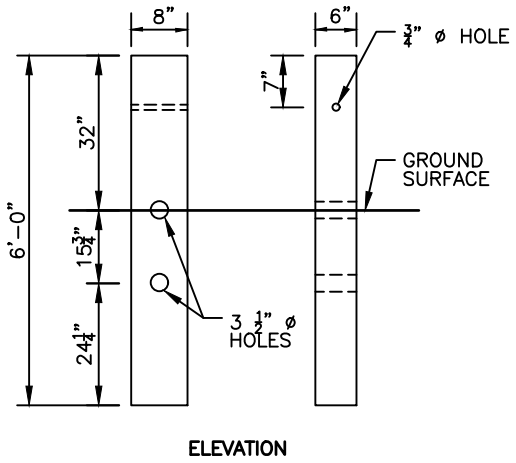


STEEL POST
(W6x8.5 OR W6x9)

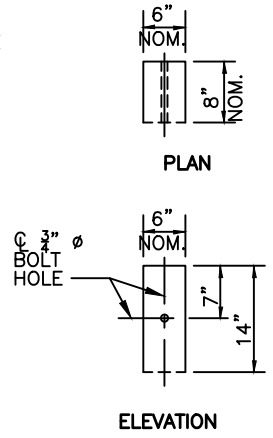
NOTES:
1. STEEL W-BEAM GUARDRAIL POSTS SHALL BE W6X9 STANDARD 72 INCHES OR AS SPECIFIED ON PLANS.
2. STEEL THRIE BEAM GUARDRAIL POSTS SHALL BE W6X9 STANDARD 81 INCHES OR AS SPECIFIED ON THE PLANS.



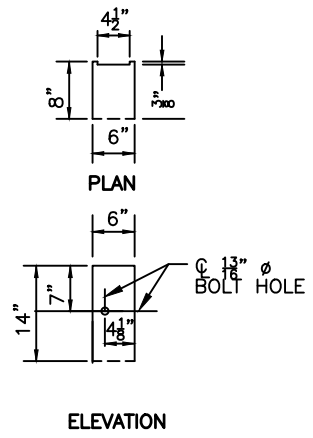
TIMBER POST
(6"x8" NOMINAL)



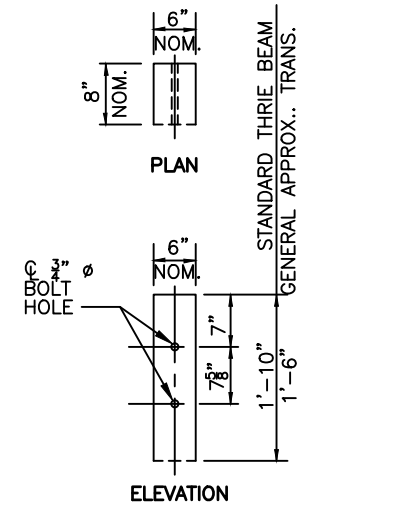
W-BEAM CRT POST (TIMBER ONLY)
(6"x8" NOMINAL)
USE ONLY WHERE SPECIFIED



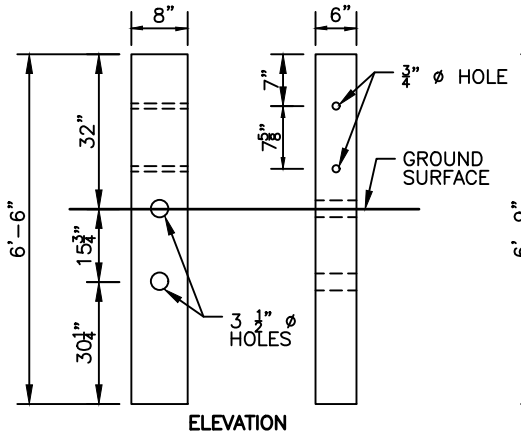
W-BEAM TIMBER OFFSET BLOCK
FOR USE WITH TIMBER POSTS
(6"x8" NOMINAL)



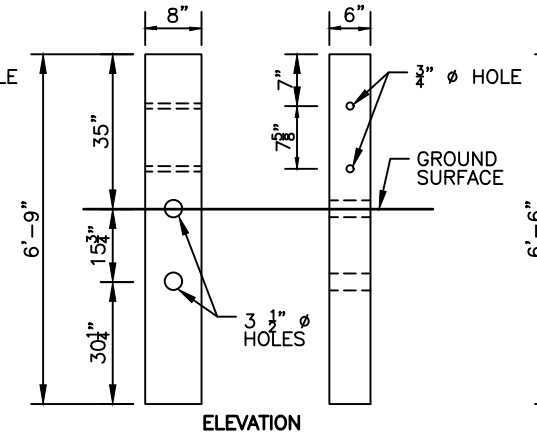
W-BEAM TIMBER OFFSET BLOCK
FOR USE WITH STEEL POSTS
(6"x8" NOMINAL)



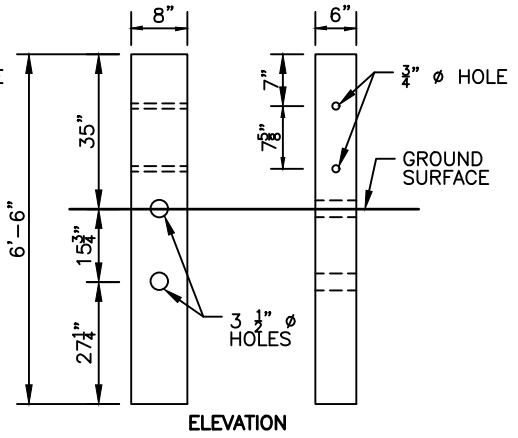
THRIE BEAM TIMBER OFFSET BLOCK
(6"x8" NOMINAL)



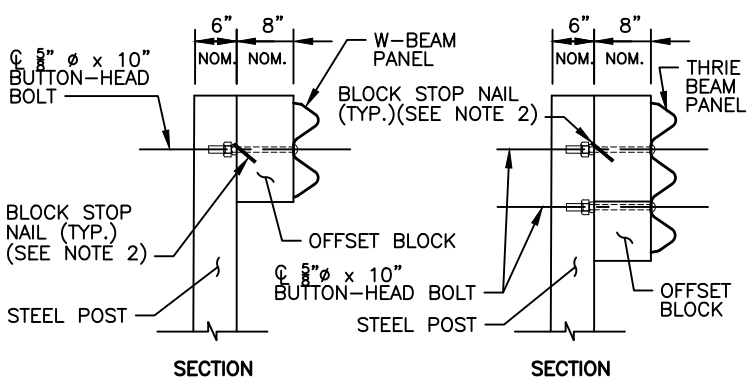
THRIE BEAM TL-3 CRT POST
(TIMBER ONLY) (6"x8" NOMINAL)
USE ONLY WHERE SPECIFIED



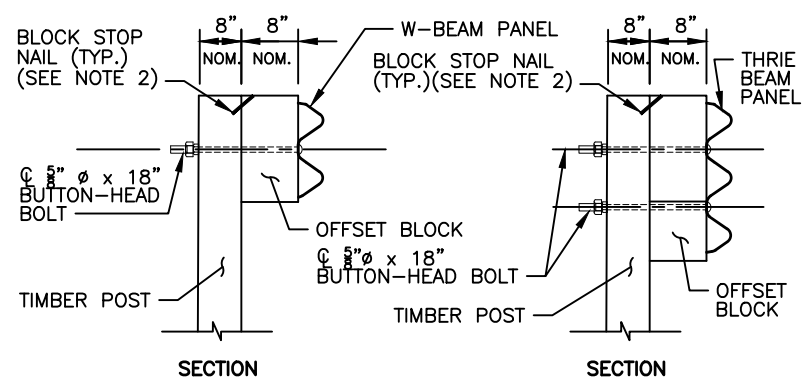
THRIE BEAM TL-4 SINGLE-SIDED CRT POST
(TIMBER ONLY) (6"x8" NOMINAL)
USE ONLY WHERE SPECIFIED



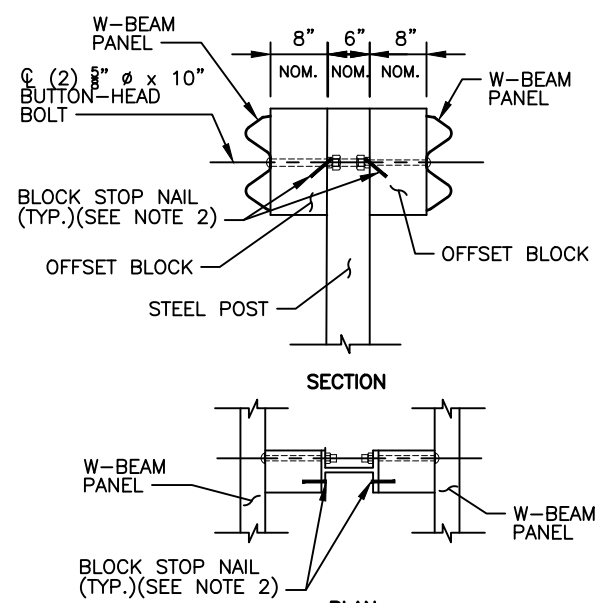
THRIE BEAM TL-4 DOUBLE-SIDED CRT POST
(TIMBER ONLY) (6"x8" NOMINAL)
USE ONLY WHERE SPECIFIED



W-BEAM & THRIE BEAM
STEEL POST



W-BEAM & THRIE BEAM
TIMBER POST



DOUBLED FACED W-BEAM
STEEL POST ONLY

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. DRIVE ONE NAIL PER W-BEAM TIMBER OFFSET BLOCK TO PREVENT BLOCK ROTATION. USE ASTM A153 HOT DIP GALVANIZED STEEL 3 ½" TYPE 16D NAILS. FOR STEEL POSTS, DRIVE THE NAIL THROUGH THE UNUSED FLANGE BOLT HOLE AND BEND THE NAIL SO ITS HEAD CONTACTS THE FLANGE.
3. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
4. WHERE BACK OF POSTS ARE EXPOSED AND PLACED WITHIN 2'-0" OF A SIDEWALK, SEPARATED BIKE FACILITY OR SHARED-USE PATH, TIMBER POSTS SHALL BE USED. ALTERNATIVELY, STEEL POSTS WITH A TIMBER BACKING. MAY BE SUBSTITUTED AT NO ADDITIONAL COST. WHEN TIMBER POSTS ARE USED, ONE OF THE FOLLOWING SAFETY TREATMENTS IS REQUIRED FOR ALL BOLTS PROTRUDING FROM THE BACK FACE OF THE POST:
   A. AFTER TIGHTENING THE NUT, TRIM THE PROTRUDING POST BOLT FLUSH WITH THE NUT AND GALVANIZE PER M7.04.11;
   B. USE 15" POST BOLTS AND COUNTERSINK THE WASHER AND NUT BETWEEN 1" AND 1 ½" DEEP INTO THE BACK FACE OF THE POST; OR
   C. USE 15" POST BOLT SLEEVE NUT AND WASHERS.
5. END TREATMENTS AND TRANSITIONS, WHERE SPECIFIC MATERIAL TYPES ARE SPECIFIED, ARE EXEMPT FROM THESE REQUIREMENTS.
6. STANDARD POSTS SHALL BE STEEL OR TIMBER UNLESS OTHERWISE INDICATED ON THE PLANS. POSTS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT THE ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES END SECTIONS.
7. OFFSET BLOCKOUTS, WHERE REQUIRED, SHALL BE TIMBER AND FABRICATED TO THE NOMINAL DIMENSIONS SHOWN; COMPOSITE BLOCKOUTS OF THE SAME NOMINAL DIMENSIONS MAY BE SUBSTITUTED. OFFSET BLOCKOUTS OF A SINGLE MATERIAL SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGE END SECTIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

POST & OFFSET BLOCK DETAILS

R.I. STANDARD 34.1.0 CONT.

10/21/2022
ISSUE DATE

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

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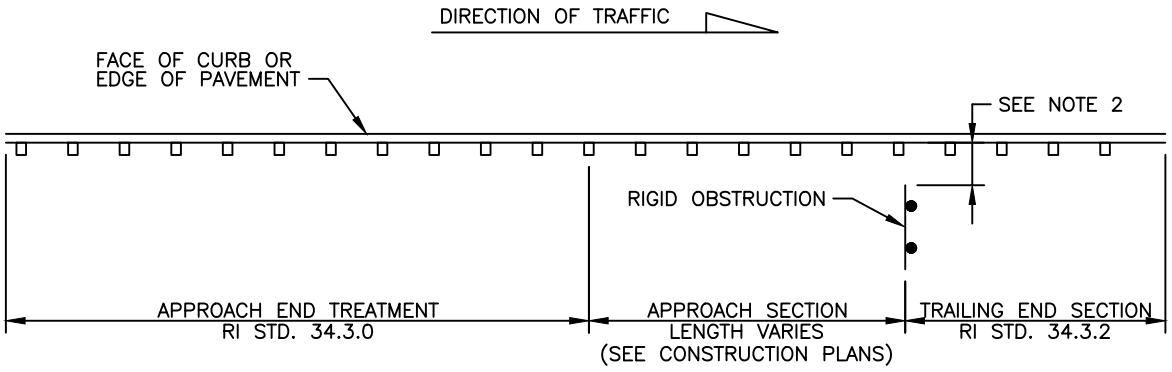
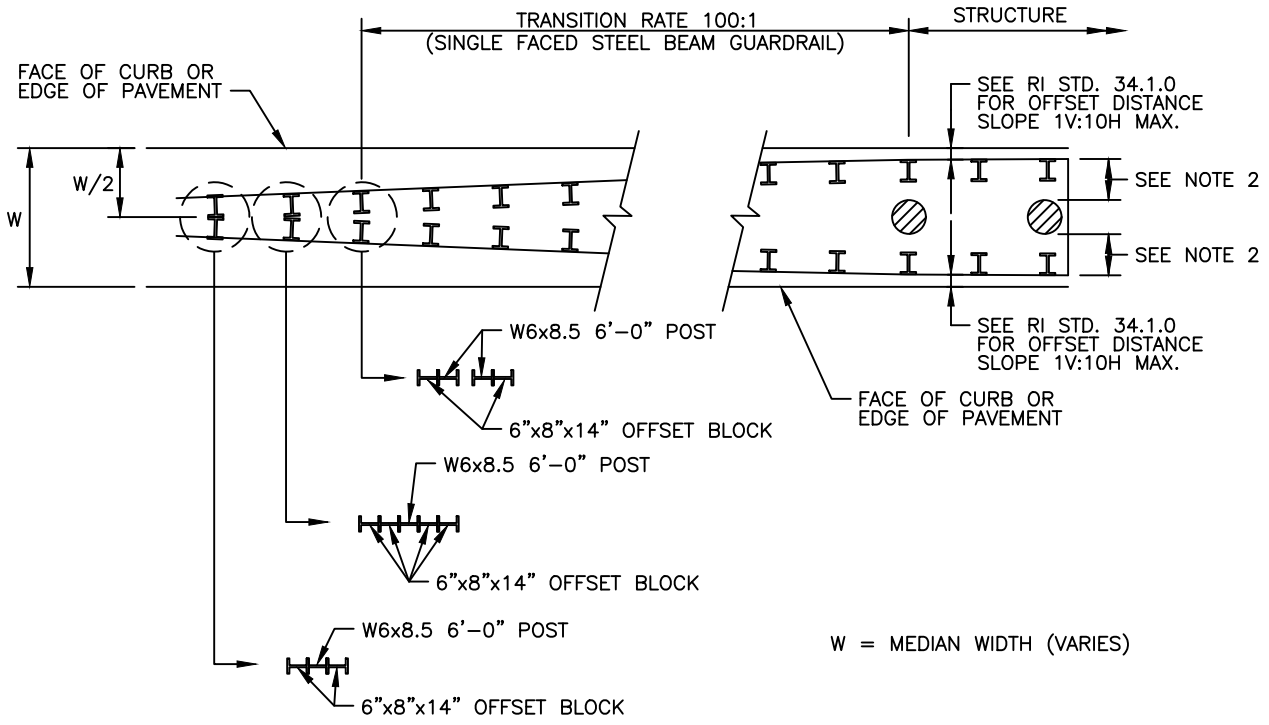


NOTE:
1. THIS DETAIL IS ONLY APPLICABLE IF OBSTRUCTION IS WITHIN THE CLEAR ZONE FOR THE SPECIFIED ROADWAY.

DETAIL AT ROADSIDE OBSTRUCTION



DETAIL AT PIERS

NOTE:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.

2. THE OFFSET DISTANCE FROM STRUCTURES OR PIERS SHALL BE A MINIMUM OF 5 FEET FOR TL-3 W-BEAM, 2 FEET FOR TL-3 THRIE BEAM, AND 3 FEET FOR TL-4 THRIE BEAM. THE MAXIMUM OFFSET DISTANCE IS DEPENDENT ON WHERE THE 1V:10H SLOPES CAN BE ACHIEVED IN FRONT OF THE GUARDRAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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TYPICAL GUARDRAIL INSTALLATION AT STRUCTURES

Robert Rocchio
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TRANSPORTATION

10/21/2022
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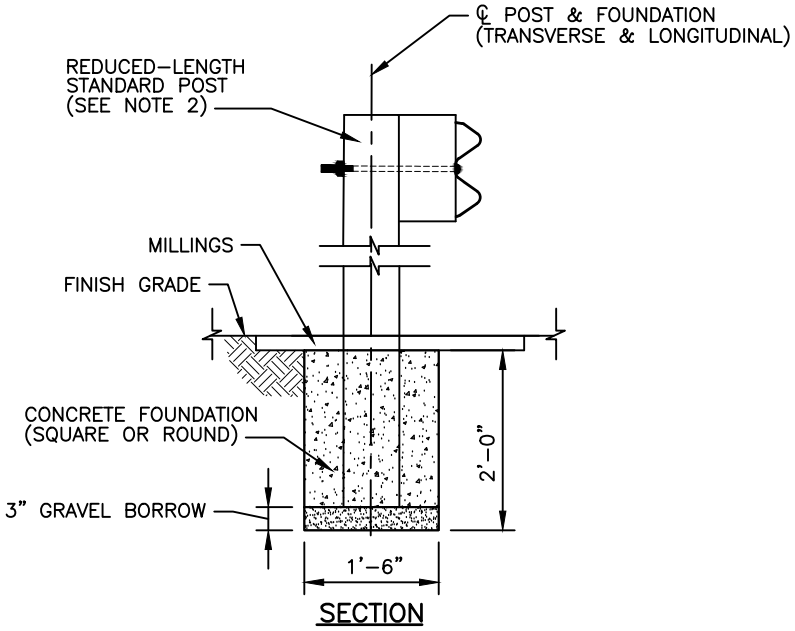
R.I. STANDARD 34.1.1



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.

2. WHEN THE CONSTRUCTION OF GUARDRAIL AT THE REQUIRED POST SPACING RESULTS IN POST(S) CONFLICTING WITH UNDERGROUND UTILITIES OR OTHER UNDERGROUND OBSTRUCTIONS, AN ENCASED POST MAY BE USED WHERE A 2'–0" DEPTH WILL AVOID THE CONFLICT. INSTALL WHERE SHOWN IN THE PLANS AND/OR AS–NEEDED.

3. USE A STANDARD POST WITH REDUCED LENGTH SUCH THAT THE PANEL HEIGHT IS MAINTAINED WHILE THE POST BOTTOM TERMINATES AT THE BOTTOM OF THE CONCRETE FOUNDATION AT THE TOP OF THE 3" (MIN) GRAVEL BORROW.

4. CONCRETE FOUNDATION SHALL BE CLASS XX CEMENT CONCRETE. AFTER CASTING THE CONCRETE, ENSURE THE SURROUNDING SOIL MATERIAL IS COMPLETELY BACKFILLED AND TAMPED TO PROVIDE FULL PASSIVE RESISTANCE.

5. ENCASED POSTS ARE NOT PERMITTED FOR CONSECUTIVE POSTS. IF MORE THAN ONE CONSECUTIVE ENCASED POST IS REQUIRED, A LONG SPAN SYSTEM SHALL BE UTILIZED. WHERE MULTIPLE ENCASED POSTS ARE REQUIRED IN A SINGLE GUARDRAIL RUN, NO MORE THAN ONE ENCASED POST SHALL BE USED EVERY 200' (MIN.).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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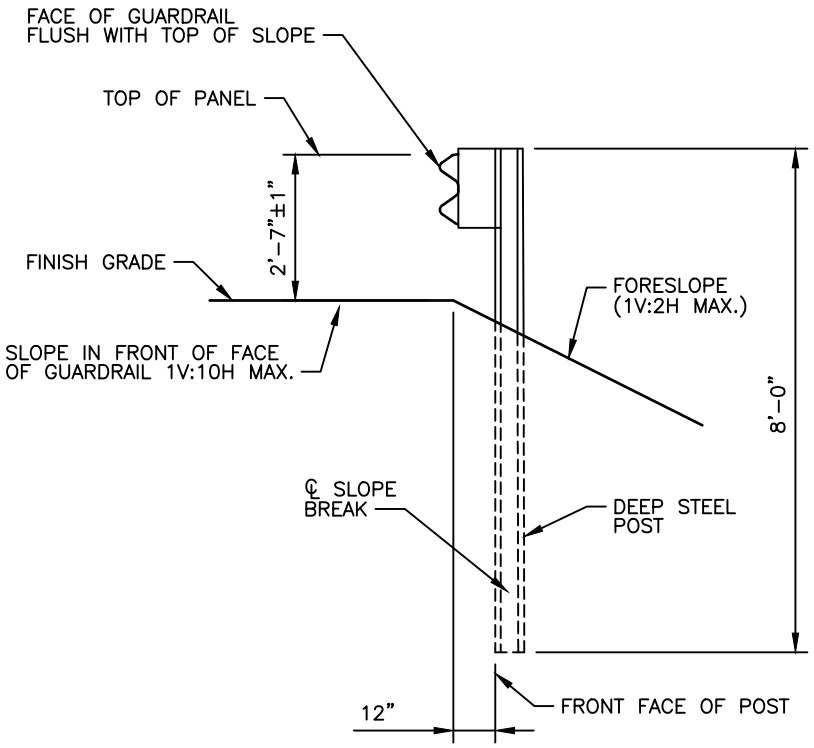
STEEL BEAM GUARDRAIL
ENCASED POST FOR SHALLOW INSTALLATION

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 34.1.2



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. IF FORESLOPE IS GREATER THAN 1V:2H, REGRADING SHOULD BE PERFORMED TO ACHIEVE THE MAXIMUM SLOPE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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STEEL BEAM GUARDRAIL DEEP POST INSTALLATION

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

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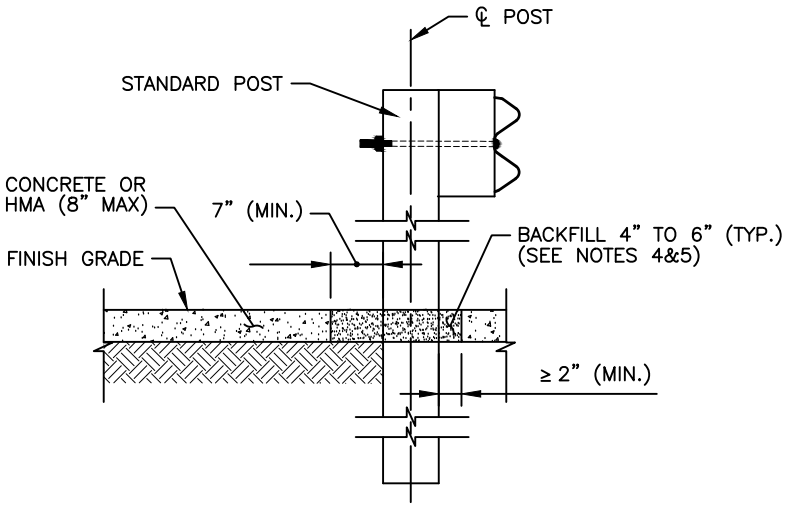
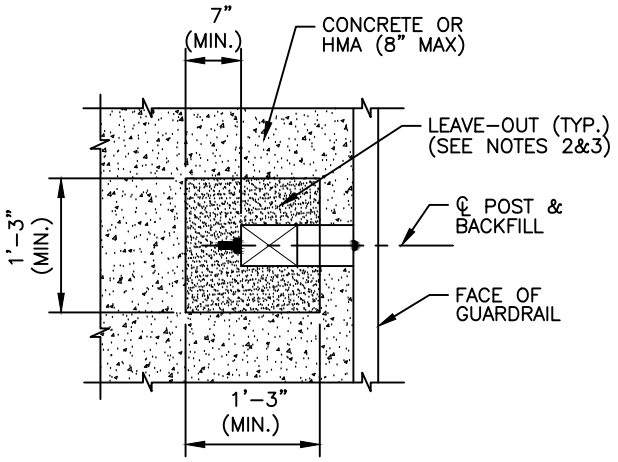
R.I. STANDARD 34.1.3



SECTION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.

2. WHEN THE CONSTRUCTION OF GUARDRAIL AT THE REQUIRED POST SPACING RESULTS IN POST(S) PLACED WITHIN A CONCRETE OR HMA SURFACE, USE A FRANGIBLE LEAVE–OUT AROUND THE POST BASE AS SHOWN. AN AUGER WITH A 2' DIAMETER MAY BE USED IN PLACE OF THE 1'–3" X 1'–3" SQUARE FOR THE LEAVE–OUT AROUND THE POST. INSTALL WHERE SHOWN IN THE PLANS AND/OR AS NEEDED.

3. FOR THE REQUIRED 1'–3" X 1'–3" OR THE 2' DIAMETER LEAVE–OUT, SMOOTHLY CUT THE EXISTING CONCRETE OR HMA SURFACE OR FORM–UP THE SQUARE SHAPE WHEN AN APPLICATION HAS NEW SURROUNDING CONCRETE. EXPANSION JOINT TO BE USED WHEN LEAVE OUT IS PROPOSED WITHIN CONCRETE SURFACES.

4. USE AN EXCAVATABLE CONTROLLED DENSITY FILL OR COMPACTED GRAVEL BORROW FOR BACKFILL (CLSM CLASS 1 OR 2).

5. ENSURE FILL MATERIAL SURFACE IS SMOOTH AND EVEN WITH THE ADJACENT SURFACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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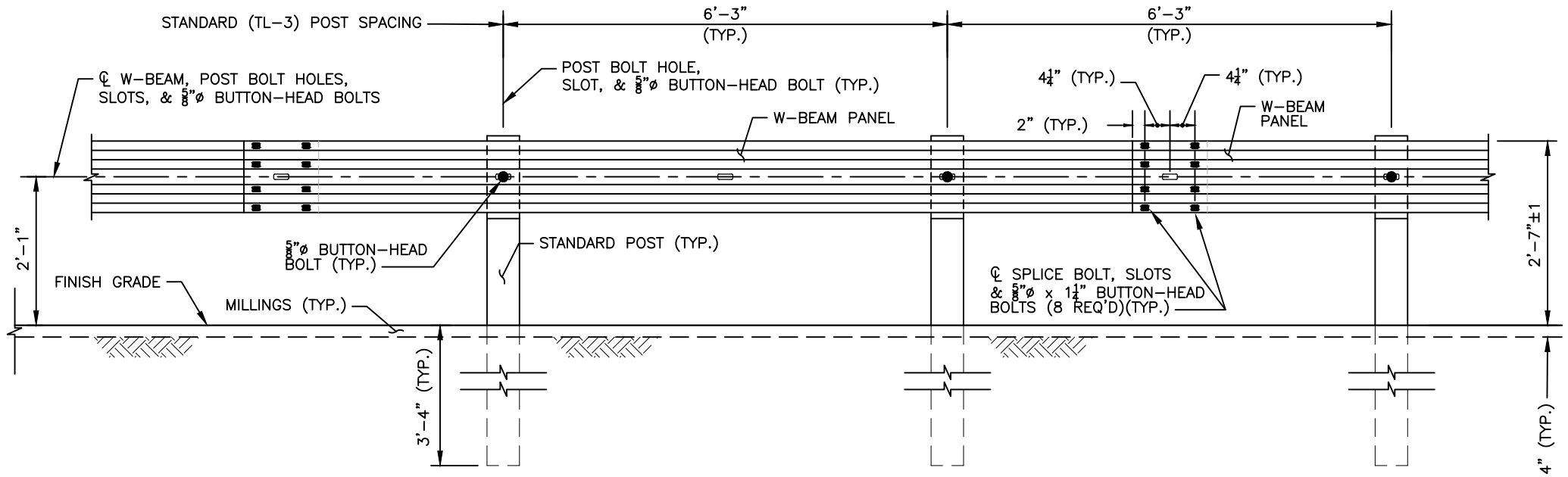
STEEL BEAM GUARDRAIL INSTALLED IN CONCRETE OR HMA SURFACE

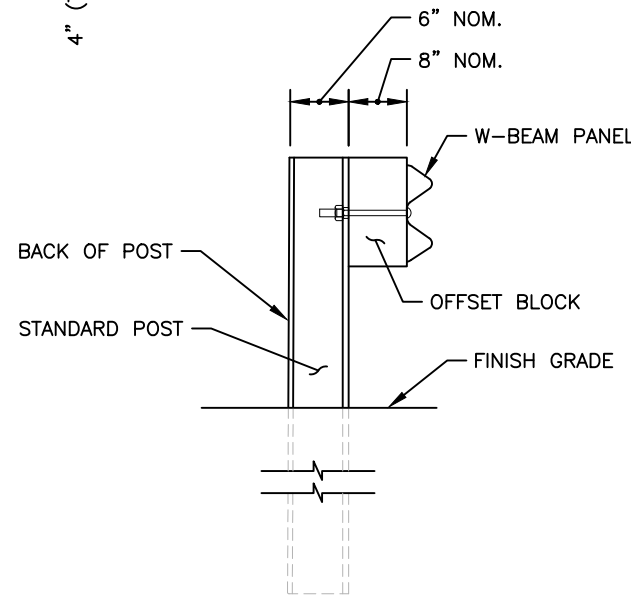
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

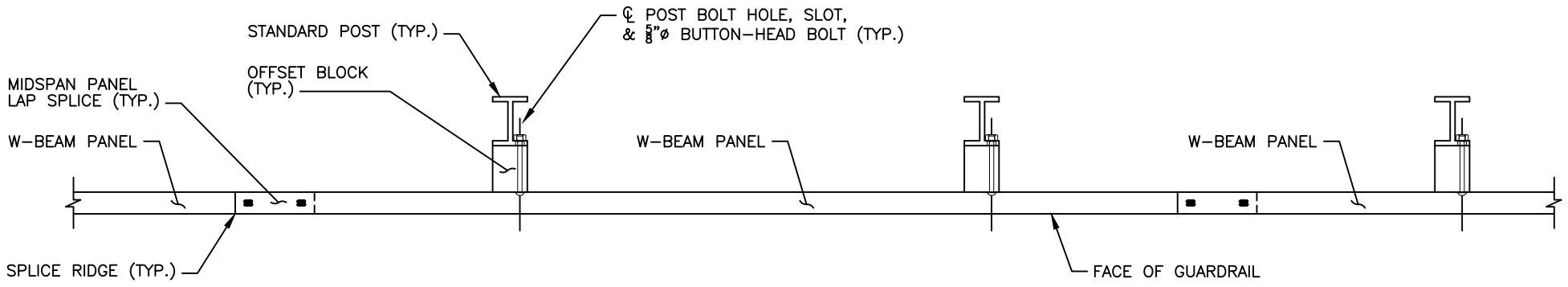
R.I. STANDARD 34.1.4



ELEVATION



SECTION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL, TL-3

R.I. STANDARD 34.2.0

10/21/2022
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CHIEF ENGINEER
TRANSPORTATION

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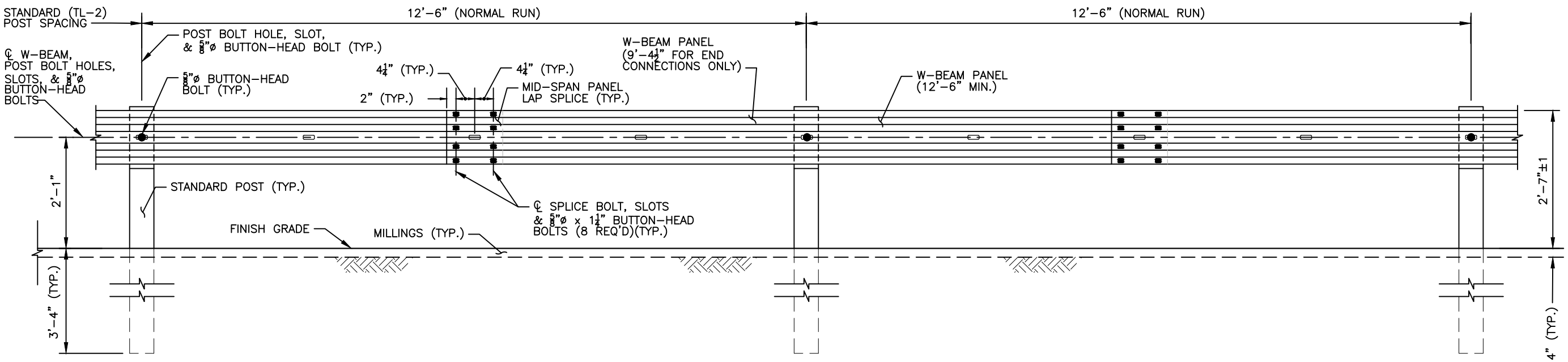
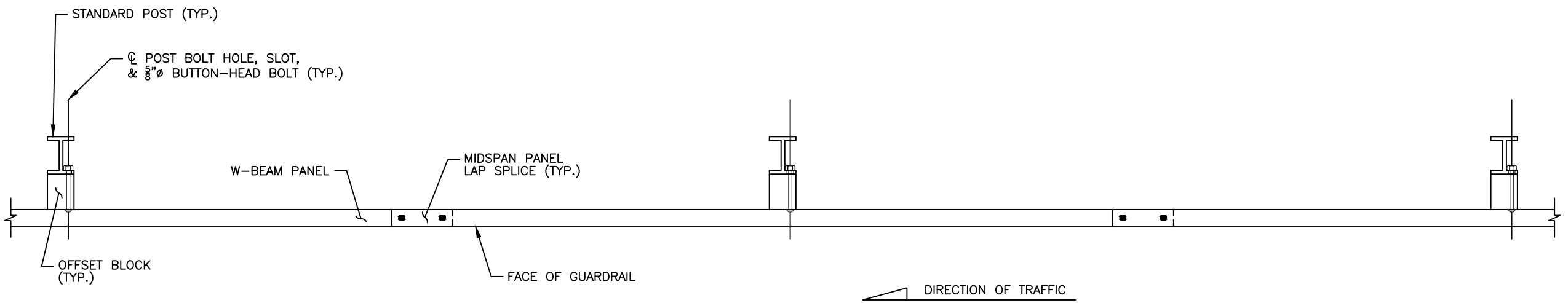


ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. A 9'-4 1/2" PANEL IS REQUIRED WHEN TRANSITIONING TO STEEL BEAM GUARDRAIL, TL-3 TO MAINTAIN PROPER POST SPACING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL, TL-2

R.I. STANDARD 34.2.1

10/21/2022
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TRANSPORTATION

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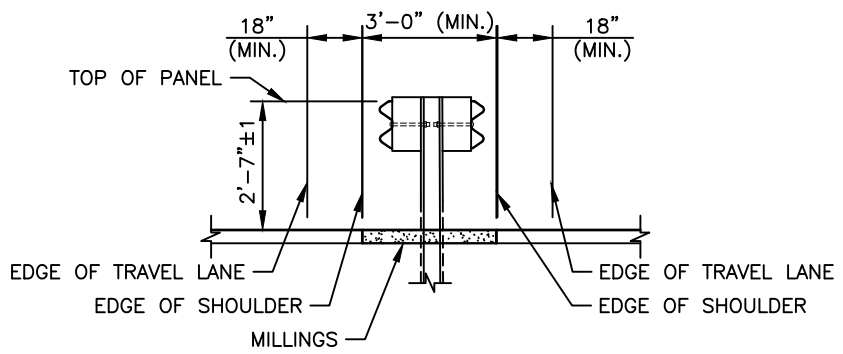
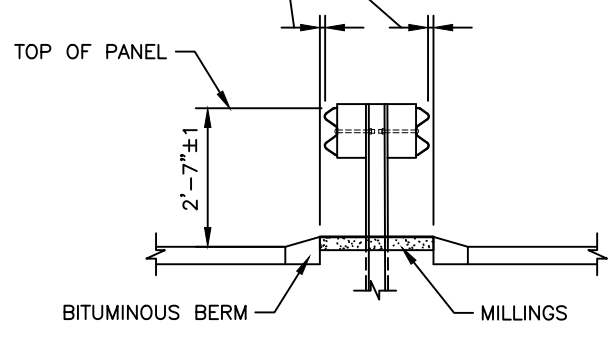


EDGE OF PAVEMENT

	TL-2	TL-3
BACK OF BERM OFFSET FROM BERM*	0" TO 10" 6'-0" (MIN.)	0" TO 10" N/A(SEE NOTE 2)

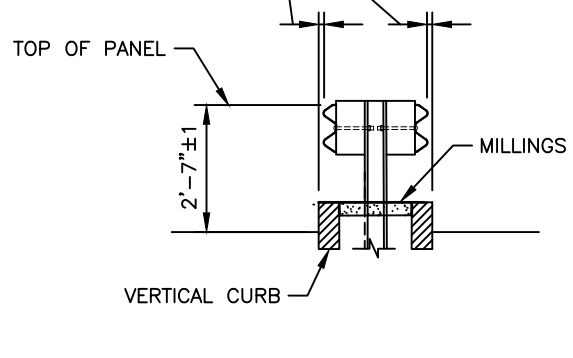
* SEE NOTE 6
NOTE: NO GUARDRAIL TO BE INSTALLED BETWEEN 10" AND 6' FROM BACK OF BERM.



BITUMINOUS BERM

	TL-2	TL-3
BACK OF BERM OFFSET FROM CURB*	0" TO 10" 6'-0" (MIN.)	0" TO 10" N/A(SEE NOTE 2)

* SEE NOTE 6
NOTE: NO GUARDRAIL TO BE INSTALLED BETWEEN 10" AND 6' FROM BACK OF BERM.



VERTICAL CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. DOUBLE FACED TL-3 GUARDRAIL SHALL NOT BE OFFSET FROM VERTICAL CURB OR BITUMINOUS BERM UNLESS OTHERWISE SHOWN IN THE PLANS OR THESE STANDARDS.
3. IN ORDER TO FACILITATE DESIGN AND CONSTRUCTION, THE OFFSET FROM THE CURB TO FACE OF GUARDRAIL DOES NOT HAVE TO BE SYMMETRICAL BETWEEN SIDES. ONE SIDE MAY BE LOCATED AT THE FACE OF CURB AND THE OPPOSITE MAY BE OFFSET.
4. STEEL BEAM GUARDRAIL POSTS SHALL BE W6X9 STANDARD 72 INCHES OR AS SPECIFIED ON PLANS.
5. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS.
6. IF OFFSET IS REQUIRED BEHIND THE BITUMINOUS BERM OR VERTICAL CURB FOR BOTH PANELS, THE OFFSET SHALL BE 6 FEET MINIMUM. THE GUARDRAIL WILL MEET TL-2 UNDER THIS CONDITION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY

R.I. STANDARD 34.2.2

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

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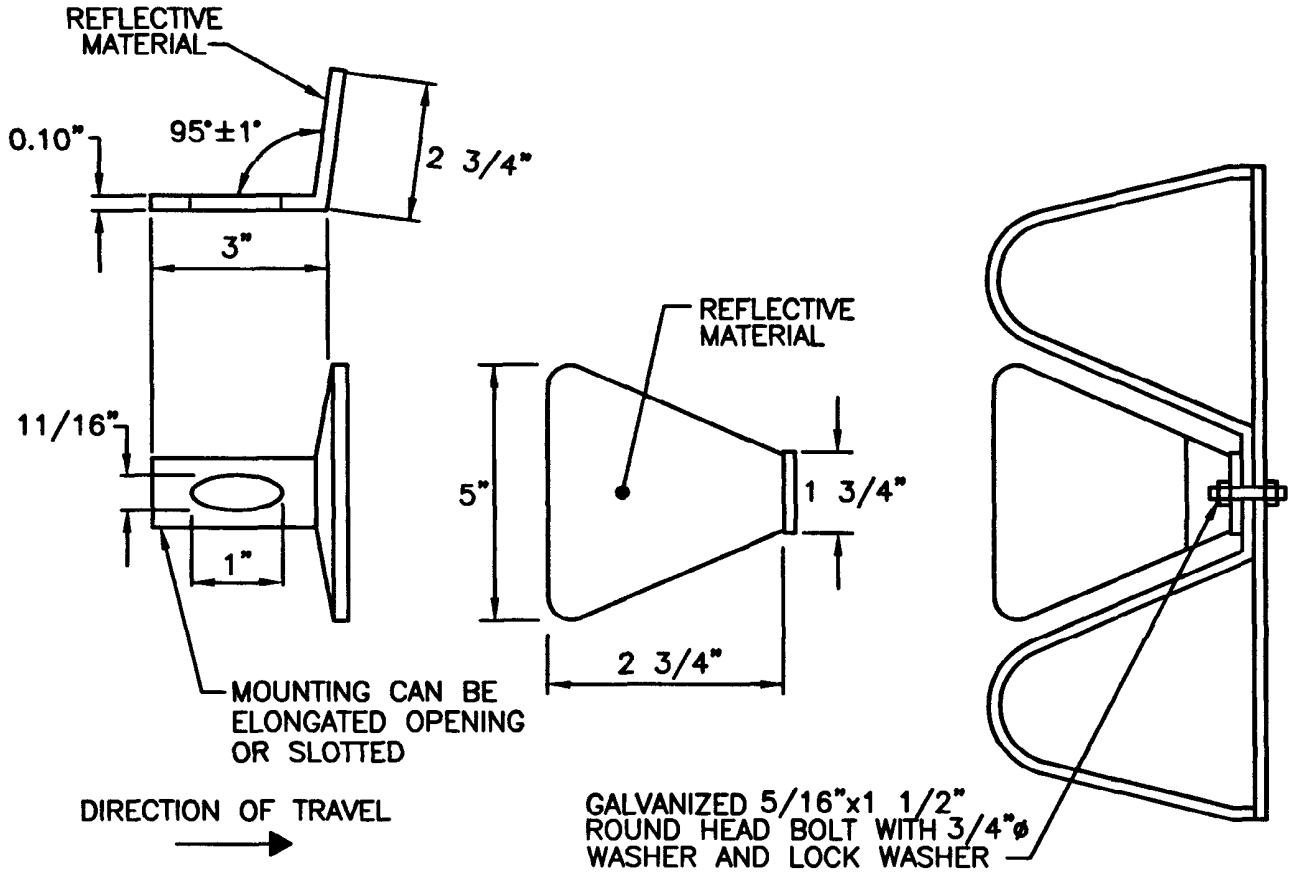

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFLECTIVE MATERIAL SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.
3. SILVER REFLECTORS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROAD AND AMBER ON THE LEFT, IN ACCORDANCE WITH MUTCD GUIDELINES FOR PAVEMENT EDGELINE MARKINGS.
4. THE REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH SIXTH POST.
5. REFLECTORIZED GALVANIZED WASHERS MAY BE USED AS AN OPTION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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STEEL BEAM GUARDRAIL
REFLECTORIZED TRIANGULAR DELINEATOR

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

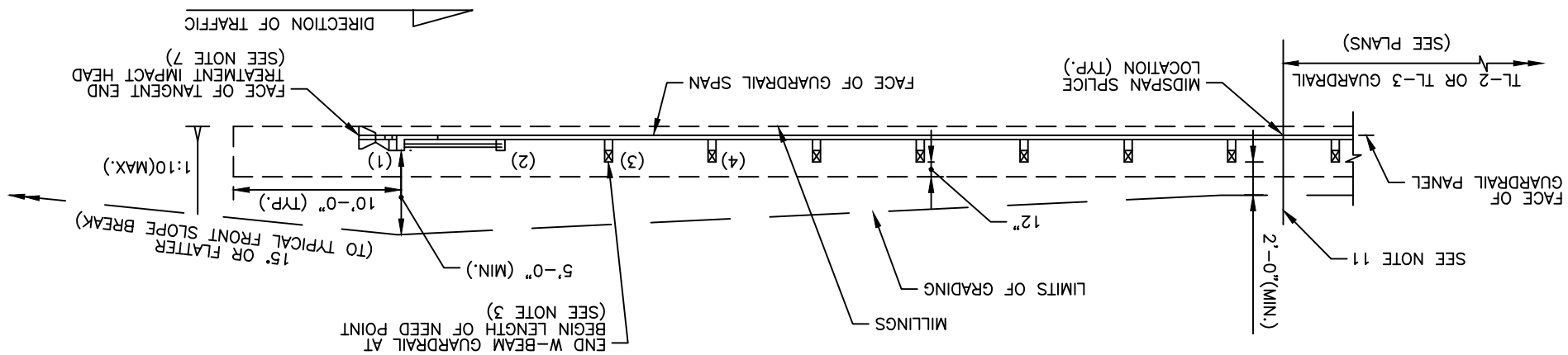
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 34.2.5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. SHALL BE IN ACCORDANCE WITH SECTION 213 OF THE RI STANDARD SPECIFICATIONS.
3. INSTALL GUARDRAIL AT STATION AND OFFSET SHOWN IN THE PLANS. THE END OF THE GUARDRAIL SHOWN IN THE PLANS CORRESPONDS WITH THE BEGIN LENGTH OF NEED POINT FOR THE END TREATMENT (SHOWN AT POST 3 IN THESE STANDARDS, BUT MAY VARY BY MANUFACTURER).
4. PROPRIETARY END TREATMENTS MAY VARY IN SIZE AND SHAPE FROM WHAT IS DEPICTED IN THESE STANDARDS, HOWEVER, THE MAXIMUM SLOPES AND MINIMUM OFFSETS DIMENSIONED FROM THE POSTS SHOWN HEREIN SHALL STILL APPLY.
5. END TREATMENT TEST LEVEL AND TYPE (TANGENT OR FLARED) SHALL BE SPECIFIED IN THE PLANS.
6. CONSTRUCT TANGENT AND FLARED END TREATMENTS IN ACCORDANCE WITH THE MANUFACTURER'S UNIQUE DRAWING DETAILS, PROCEDURES, AND SPECIFICATIONS.
7. AT THE DISCRETION OF THE ENGINEER, THE FACE OF THE TANGENT END TREATMENT IMPACT HEAD MAY BE OFFSET UP TO 2'-0" FROM THE PROJECTED FACE OF GUARDRAIL TO MINIMIZE NUISANCE HITS. THE OFFSET SHALL OCCUR OVER THE ENTIRE LENGTH OF THE END TREATMENT UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER.
8. LATERAL OFFSET OF FLARED END TREATMENT SHALL BE DETERMINED BY THE DESIGN ENGINEER FOLLOWING THE METHODOLOGY FOUND IN THE ROADSIDE DESIGN GUIDE AND SHOULD FALL WITHIN THE ALLOWABLE TOLERANCES SPECIFIED BY THE MANUFACTURER. LATERAL OFFSET SHALL BE MEASURED FROM THE EDGE OF TRAVELED WAY TO THE FACE OF THE GUARDRAIL AT POST #3.
9. END TREATMENT SHALL NOT TERMINATE CURVED W-BEAM SEGMENTS.
10. INSTALL GRADING AS SHOWN HEREIN UNDER SEPARATE PAY ITEMS.
11. MAINTAIN 2'-0" (MIN) OFFSET TO FRONT SLOPE BREAK DOWNSTREAM OF MIDSPAN SPLICE LOCATION AT ALL TIMES. IF, DOWNSTREAM OF THE SPLICE, GRADING CONSTRAINTS INHIBIT THIS MINIMUM OFFSET THEN USE DEEP STEEL POSTS AND TRANSITION TO A SLOPE BREAK CONDITION DESIGN PER THE DETAIL IN 400.1.5 UNTIL THE 2'-0" OFFSET CAN BE MET.

ENERGY ABSORBING END TREATMENT



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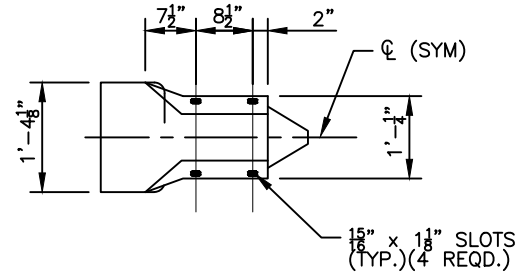
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL APPROACH END TREATMENT

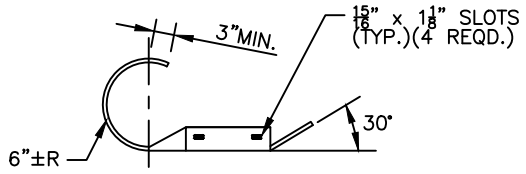
Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 34.3.0



ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. THE TERMINAL END SECTION SHALL BE USED IN RI STD. 34.3.2 (STEEL BEAM GUARDRAIL ANCHORAGE TRAILING END SECTION) AND IN TRANSITIONS FROM DOUBLE FACED GUARDRAIL TO SINGLE FACED GUARDRAIL WHICH ARE OUTSIDE OF THE CLEAR ZONE FOR THE ADJACENT ROADWAY.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

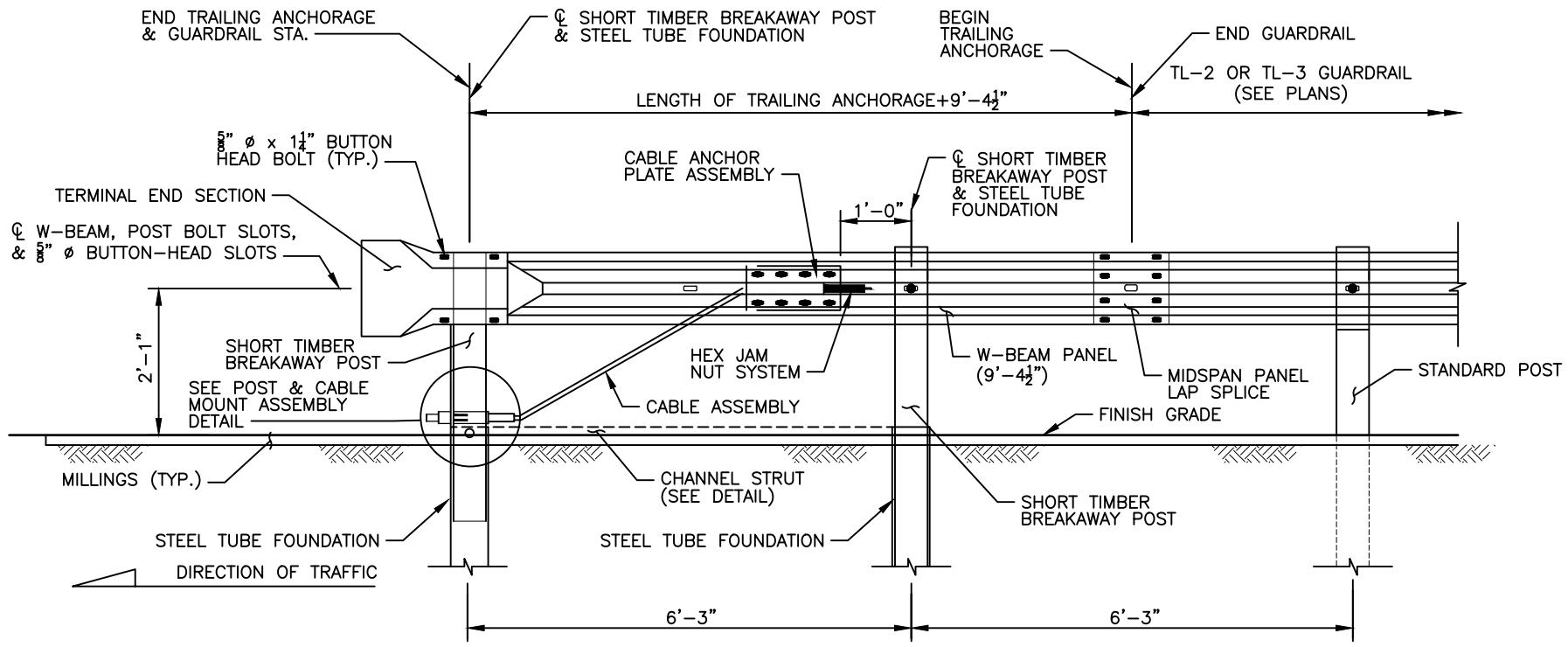
REVISIONS		
NO.	BY	DATE

STEEL BEAM GUARDRAIL TERMINAL END SECTION

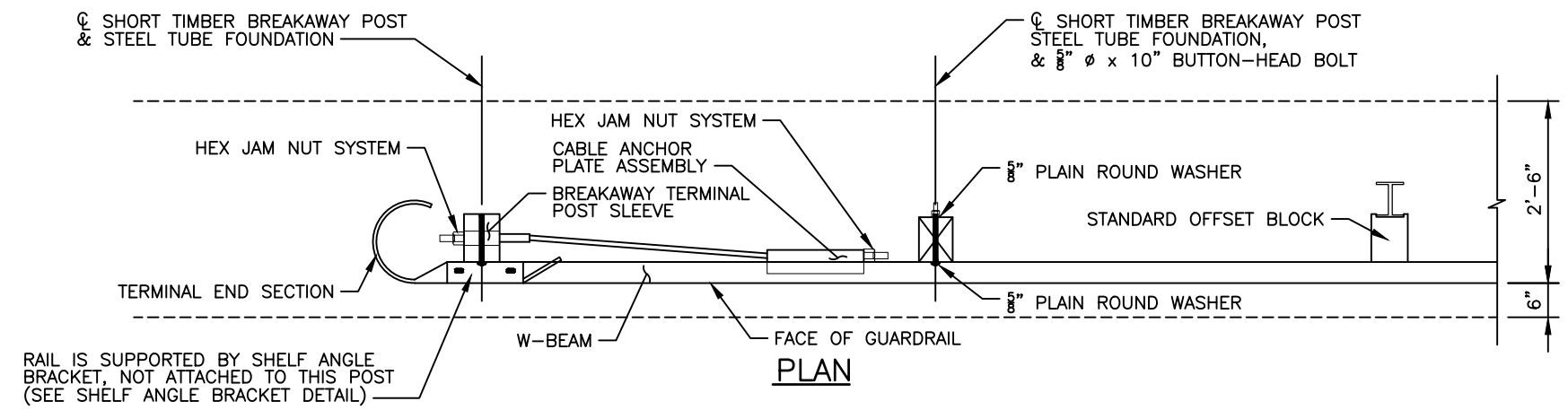
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

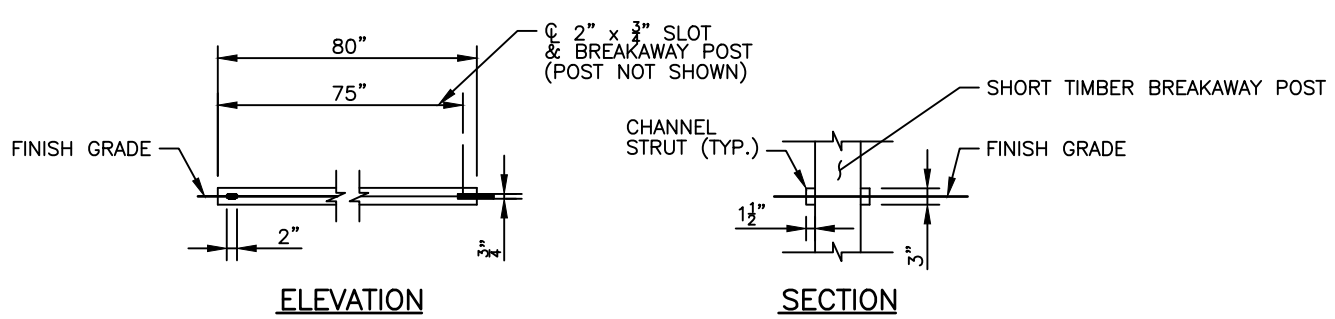
R.I. STANDARD 34.3.1



ELEVATION



PLAN



ELEVATION SECTION

CHANNEL STRUT

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. LAP THE ROUNDED END UNIT OVER THE FOLLOWING METHODS:
   A. EXCAVATE, INSTALL TUBE. BACKFILL, AND SUITABLY COMPACT MATERIALS; OR
   B. DRIVE THE TUBE USING A DUMMY TIMBER POST TO PREVENT DAMAGE TO THE SHORT BREAKAWAY POST.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL ANCHORAGE TRAILING END SECTION

R.I. STANDARD 34.3.2

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

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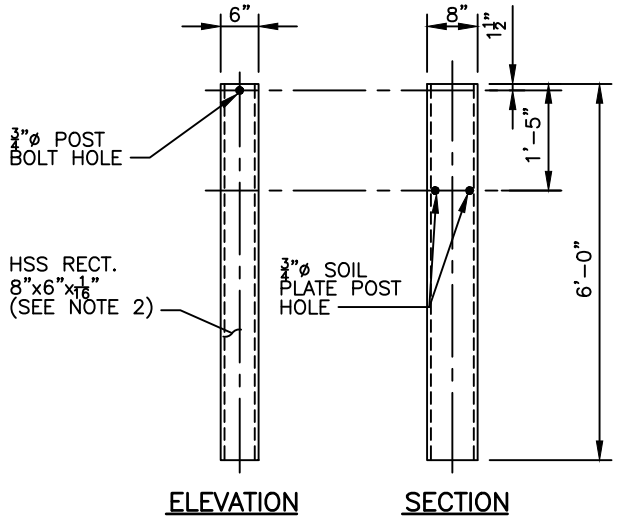
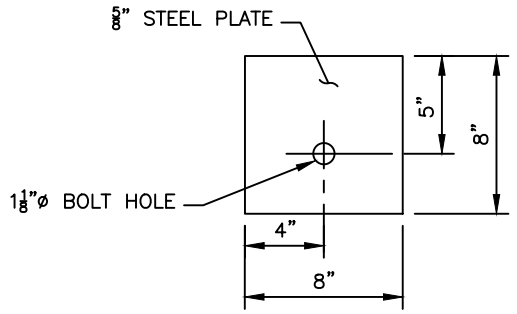
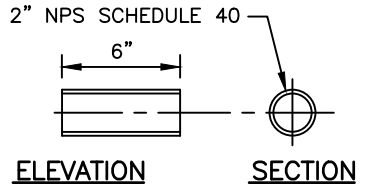


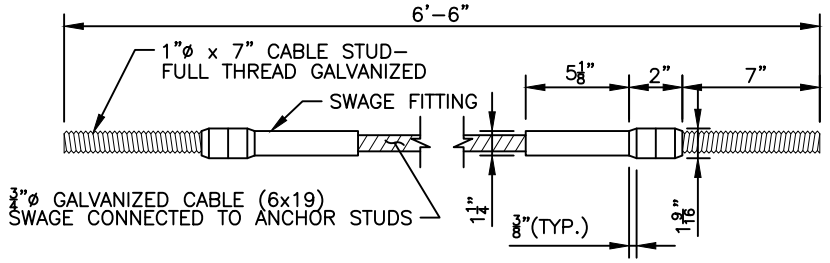
STEEL TUBE FOUNDATION



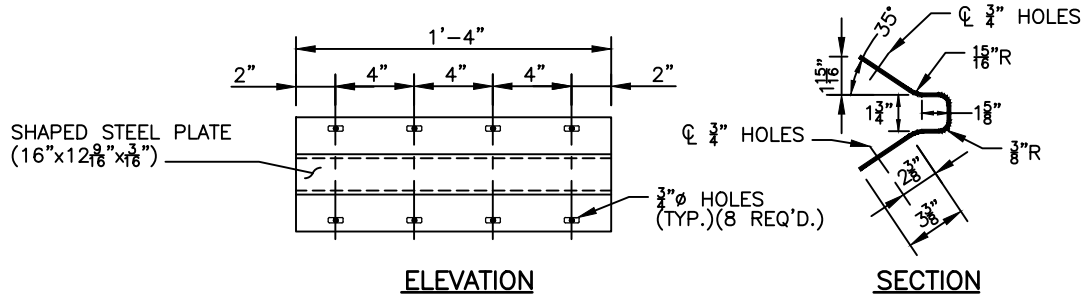
BCT BEARING PLATE



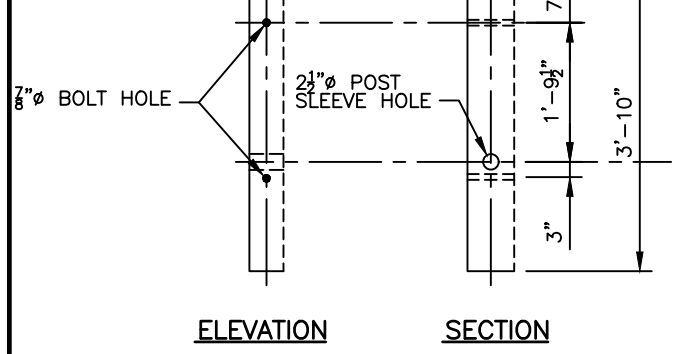
STEEL TUBE FOUNDATION



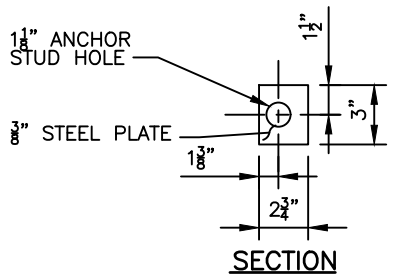
CABLE ASSEMBLY



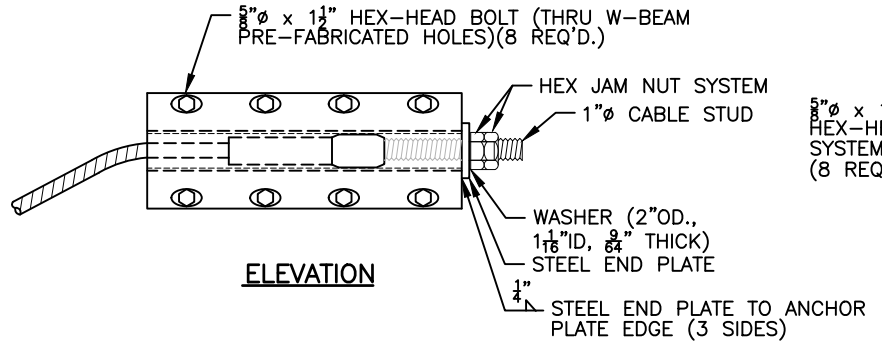
CABLE ANCHOR PLATE

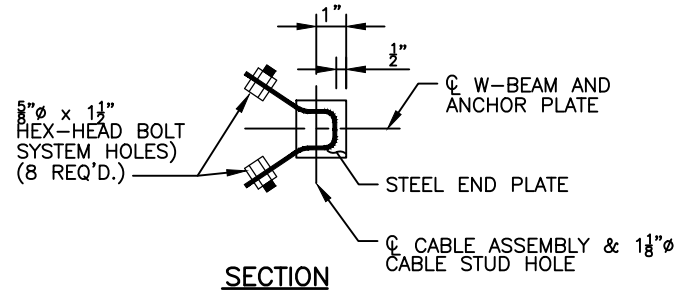


STEEL TUBE FOUNDATION

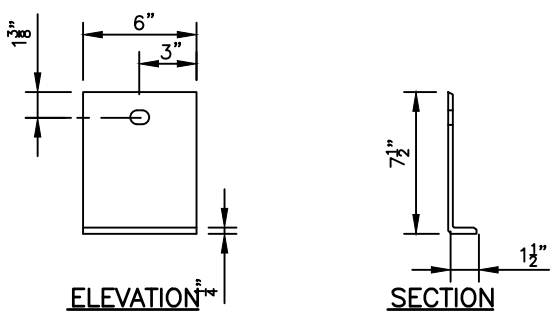


STEEL END PLATE

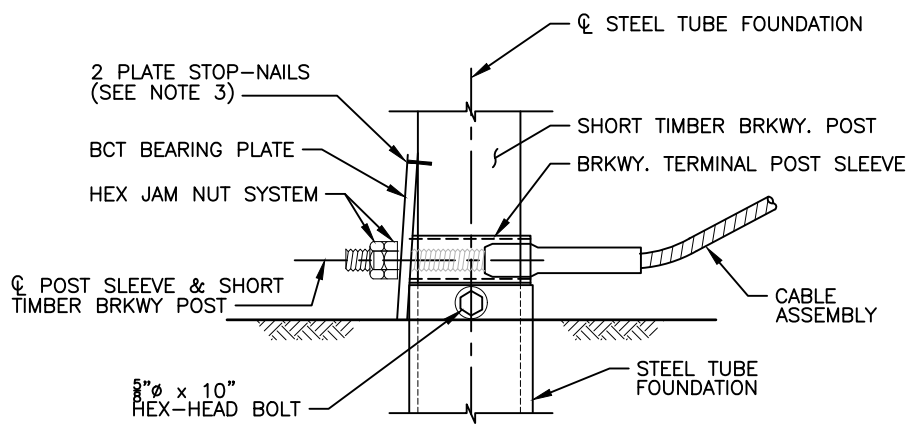




CABLE ANCHOR PLATE ASSEMBLY



SHELF ANGLE BRACKET



POST & CABLE MOUNT ASSEMBLY

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. HEX NUTS, HEX JAM NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH AASHTO–ARTBA–AGC A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE. TWO HEX NUTS MAY BE USED FOR THE HEX JAM SYSTEM.
3. DRIVE TWO ASTM A153 HOT DIP GALVANIZED STEEL 2½" TYPE BD NAILS TO PREVENT ROTATION OF THE BCT BEARING PLATE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL ANCHORAGE DETAILS

R.I. STANDARD 34.3.2 CONT.

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

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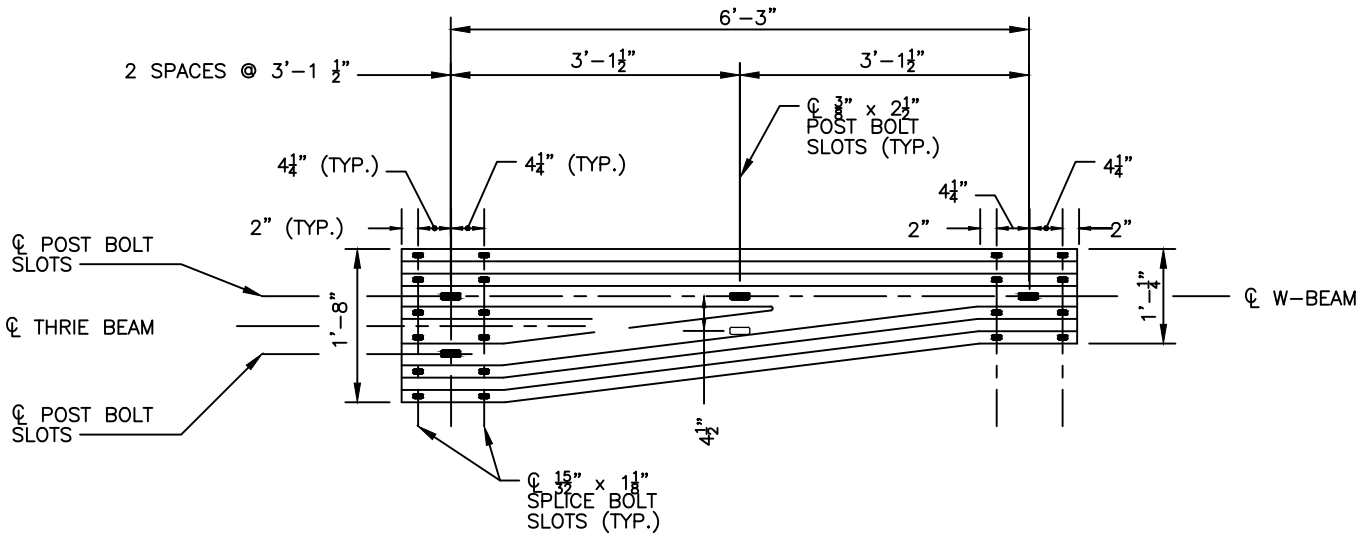

ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. REVERSE DIRECTION HAS THE SAME DIMENSIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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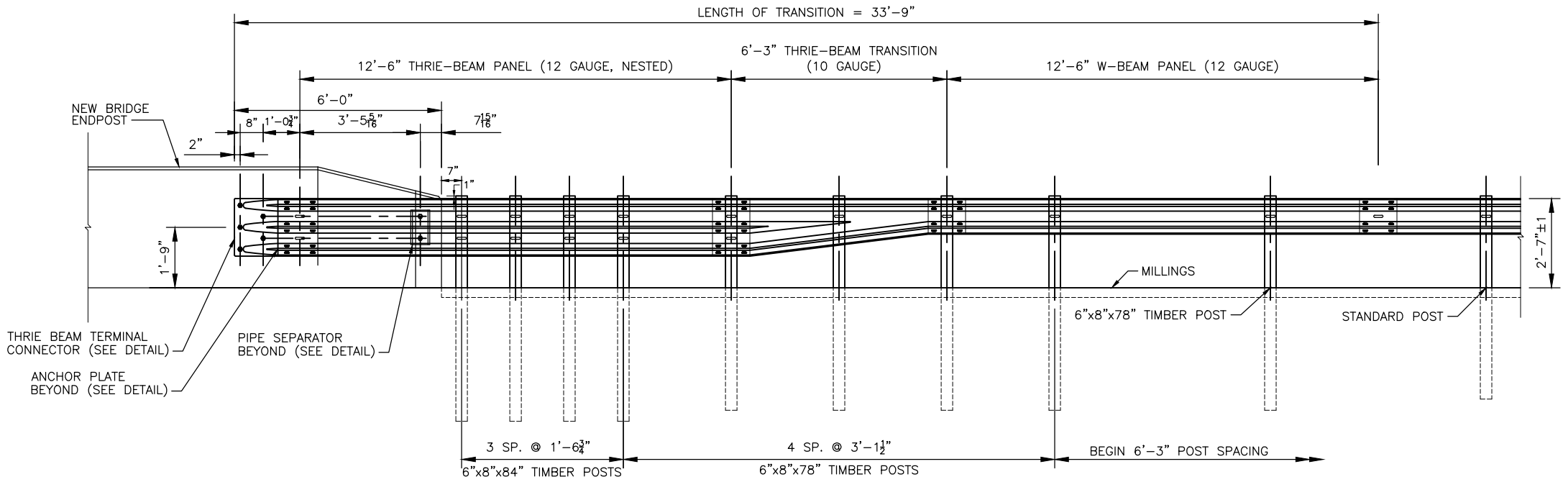
STEEL BEAM GUARDRAIL THRIE BEAM TRANSITION PANEL

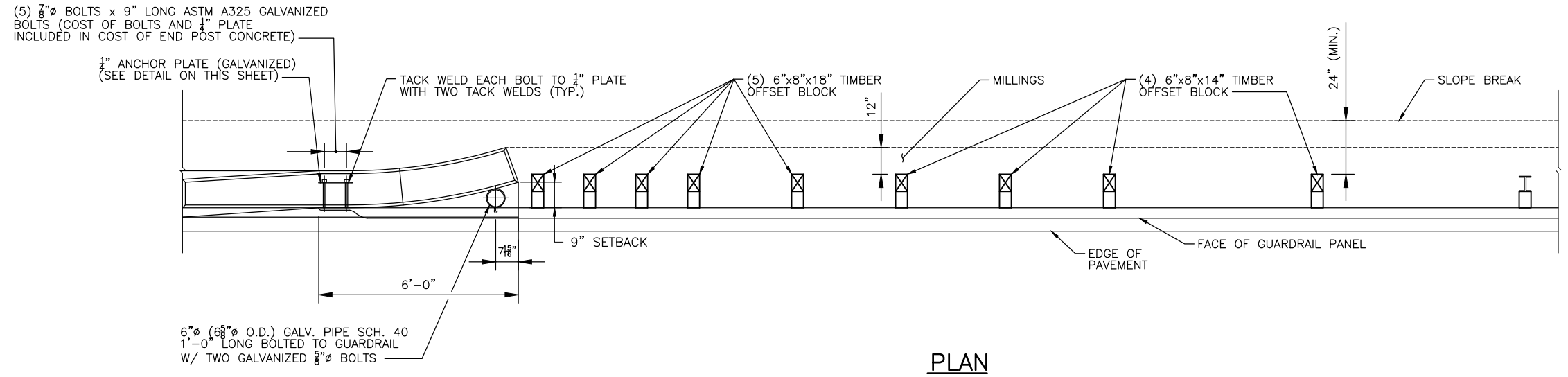
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

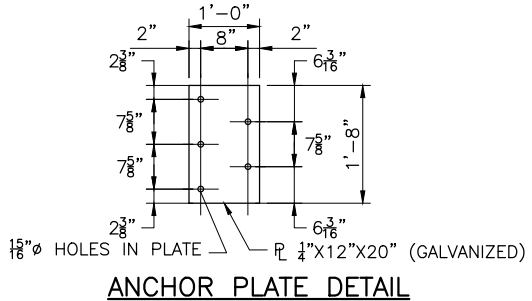
R.I. STANDARD 34.3.3



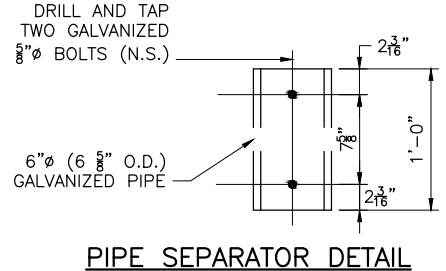
ELEVATION



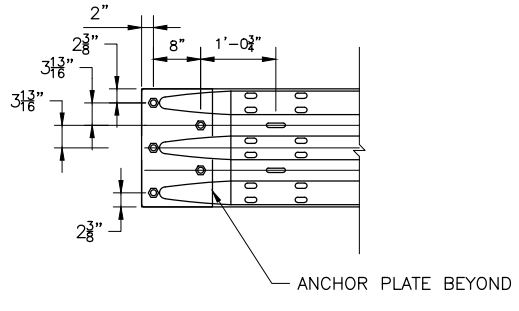
PLAN



ANCHOR PLATE DETAIL



PIPE SEPARATOR DETAIL



THRIE BEAM TERMINAL CONNECTOR DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS, WASHERS, DRILLING, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
4. A MINIIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL CONNECTION TO NEW END POST

R.I. STANDARD 34.3.4

10/21/2022
ISSUE DATE

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TRANSPORTATION

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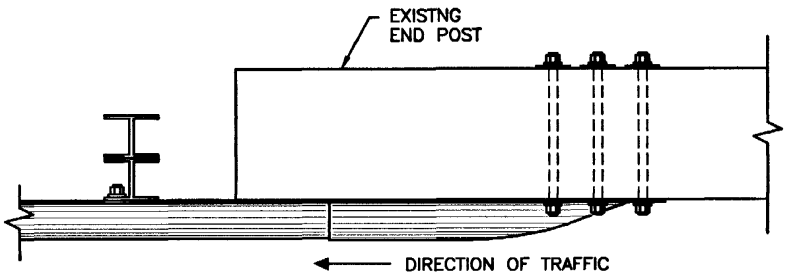

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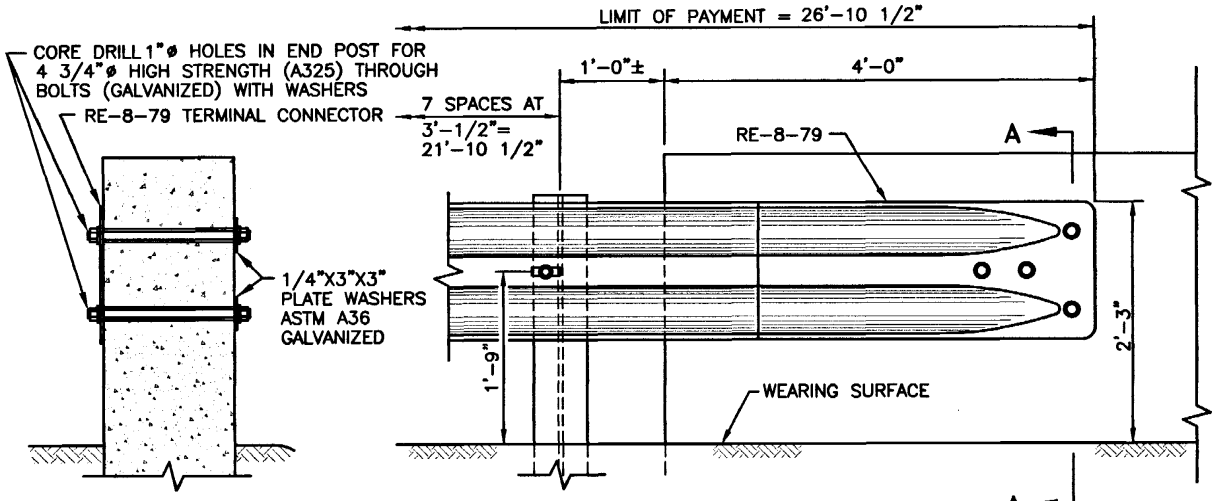

SECTION A-A

ELEVATION

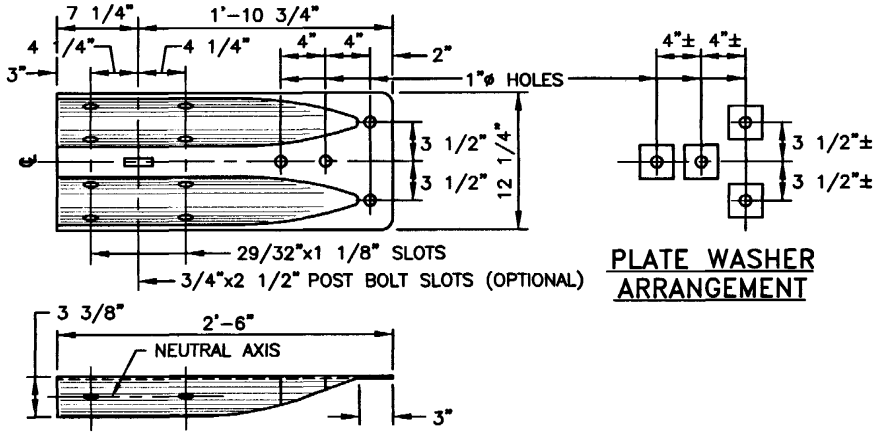

PLATE WASHER ARRANGEMENT

TERMINAL CONNECTOR
(RE-8-79)

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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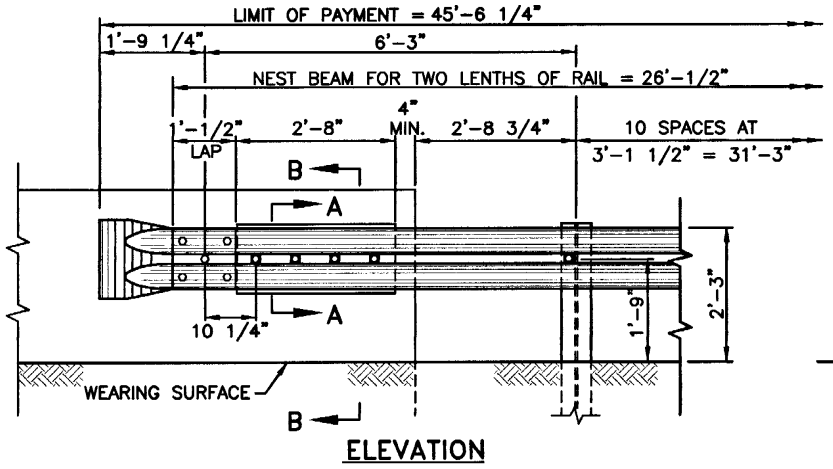
GUARDRAIL CONNECTION TO EXISTNG END POST APPROACH END SECTION

CHIEF ENGINEER TRANSPORTATION

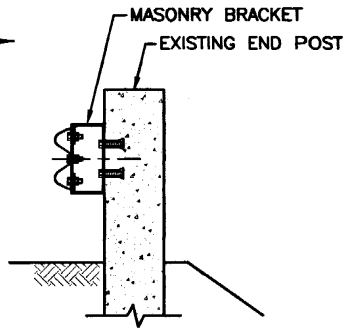
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

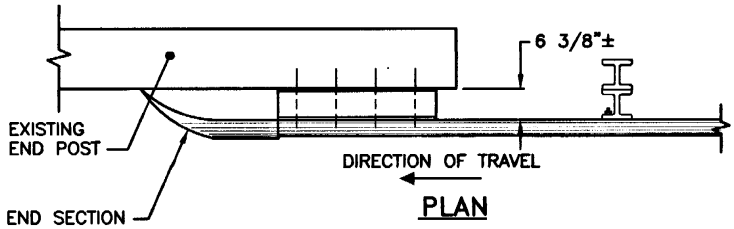
R.I. STANDARD 34.3.5



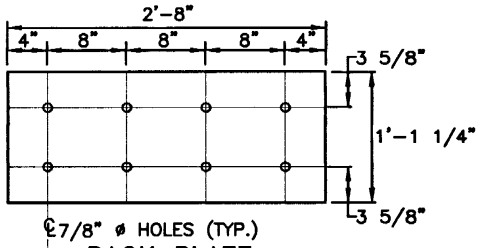
ELEVATION



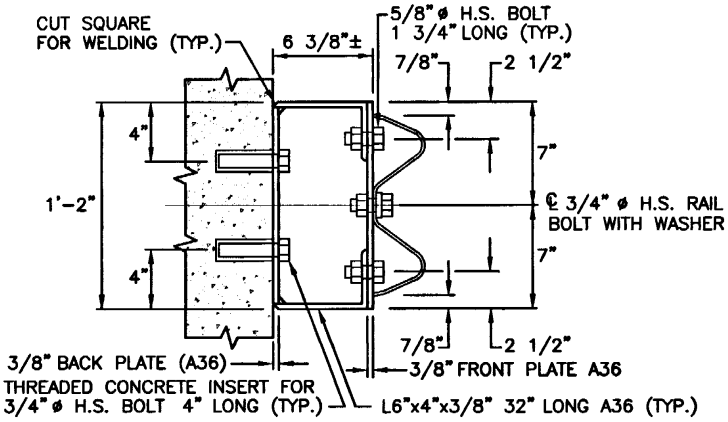
SECTION B-B



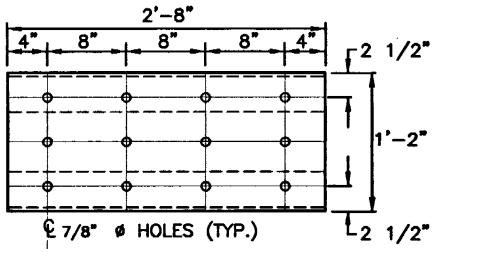
PLAN



BACK PLATE

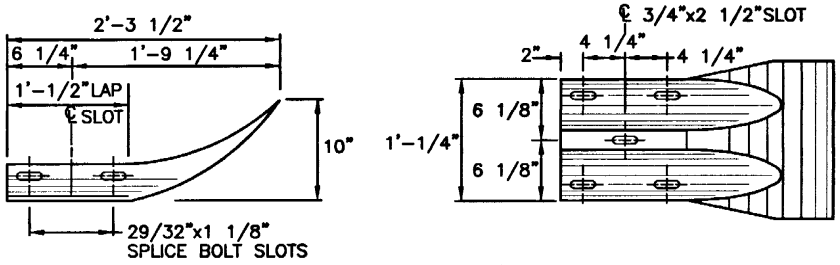


SECTION A-A



FRONT PLATE AND ANGLES

MASONRY BRACKET



FLARED END SECTION SECTION (RE-5-76)

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. MASONRY BRACKET, END SECTION, GUARDRAIL, POSTS ALL HARDWARE, NUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. ALL STRUCTURAL SHAPES WHICH MAKE UP THE MASONRY BRACKET SHALL BE GALVANIZED.
4. FOR HIGH SPEED, UPGRADE TO THIER BEAM ESPECIALLY AT FIXED OBJECT LOCATIONS.
5. DIMENTIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARENCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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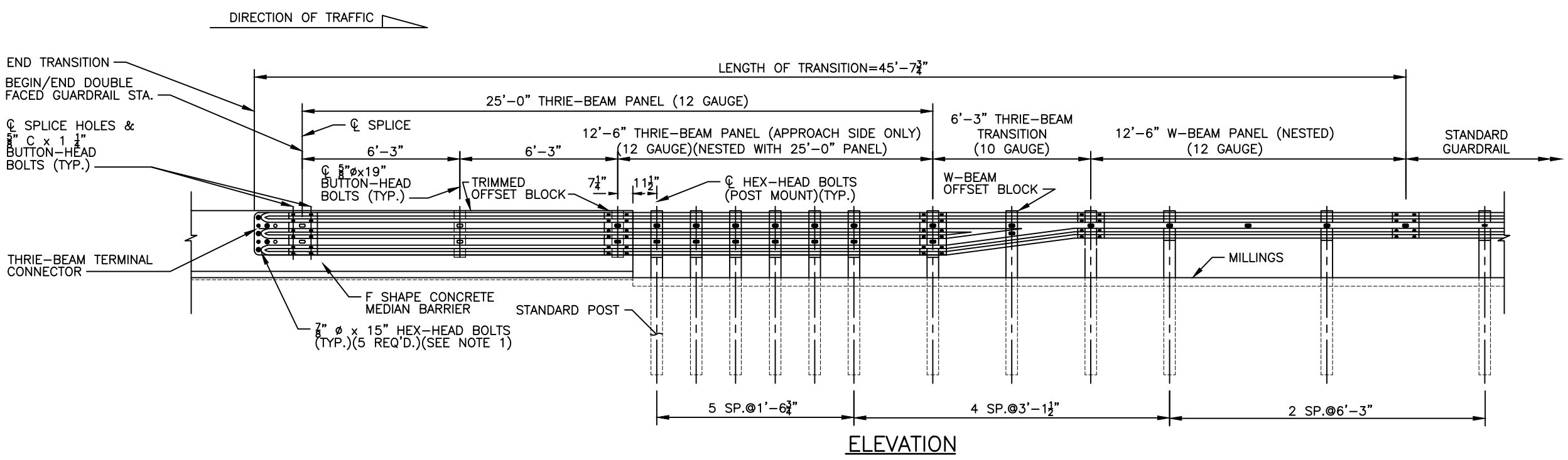
GUARDRAIL CONNECTION TO EXISTING END POST TRAILING END SECTION

CHIEF ENGINEER TRANSPORTATION

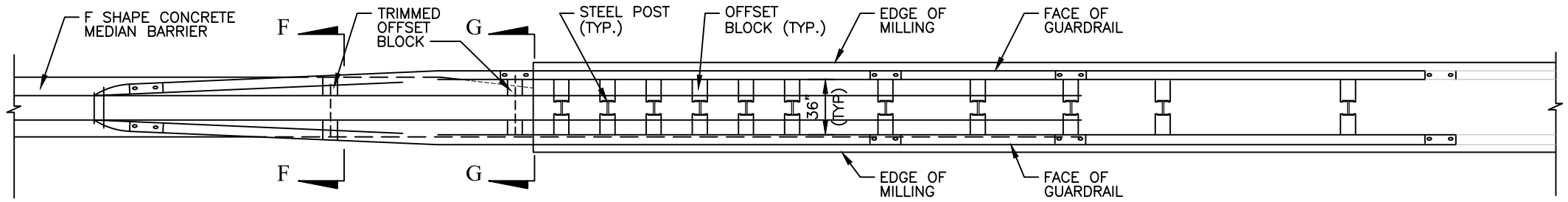
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

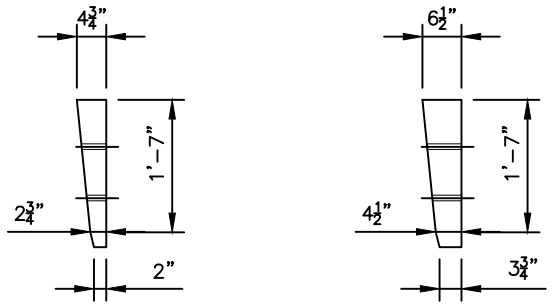
R.I. STANDARD 34.3.6



ELEVATION

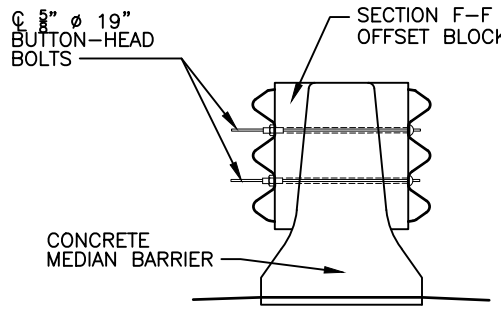


PLAN

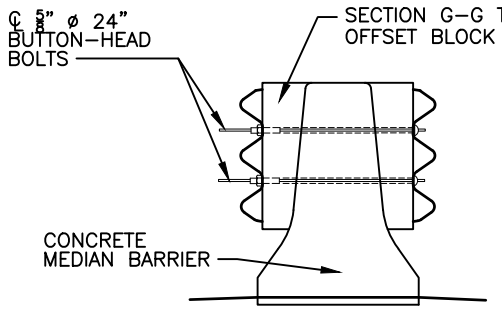


SECTION F-F SECTION G-G

TRIMMED OFFSET BLOCKS (TIMBER ONLY)



SECTION F-F



SECTION G-G

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATION.
2. THE INSTALLED BOLT'S THREADED PORTION IS NOT PERMITTED TO EXTEND BEYOND 3/4" FROM THE FACE OF THE NUT; TRIM THE THREADED PORTION AS NEEDED AND GALVANIZE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
3. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OF ANCHORAGE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL TRANSITION TO RIGID BARRIER

R.I. STANDARD 34.3.7

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

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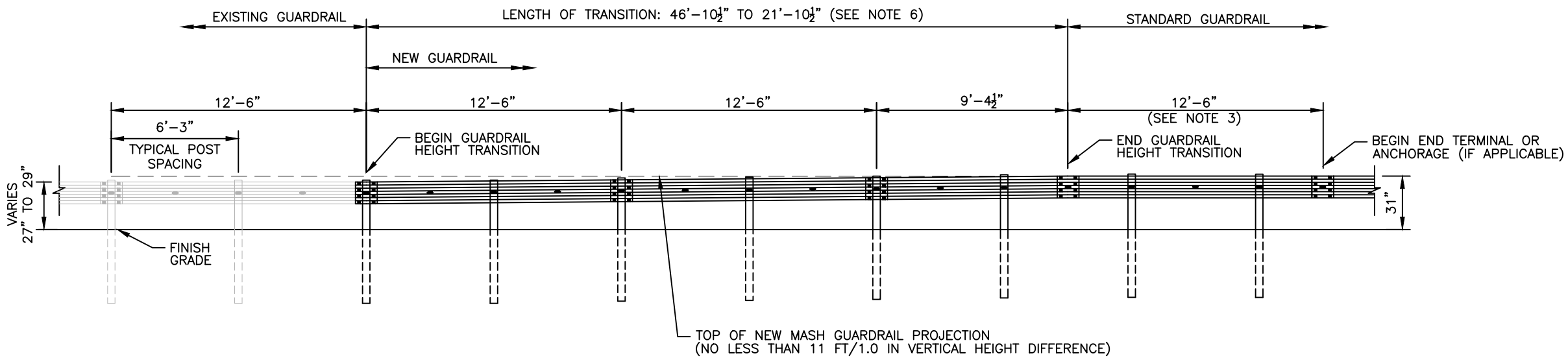

GUARDRAIL HEIGHT TRANSITION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
3. A MINIMUM OF ONE (1) 12'–6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
4. ALL NEW POSTS SHALL BE STEEL AND 72" IN LENGTH UNLESS OTHERWISE INDICATED ON THE PLANS.
5. ALL NEW OFFSET BLOCKS SHALL BE COMPOSITE UNLESS OTHERWISE INDICATED ON THE PLANS.
6. IF THE HEIGHT OF THE EXISTING GUARDRAIL IS LESS THAN 27", THE LENGTH OF THE TRANSITION SHALL BE INCREASED ACCORDINGLY. THE GUARDRAIL TRANSITION LENGTH RATE SHALL NOT BE LESS THAN 11 FT/1.0 IN OF HEIGHT DIFFERENCE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

MASH GUARDRAIL TRANSITION TO EXISTING GUARDRAIL

R.I. STANDARD 34.3.8

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

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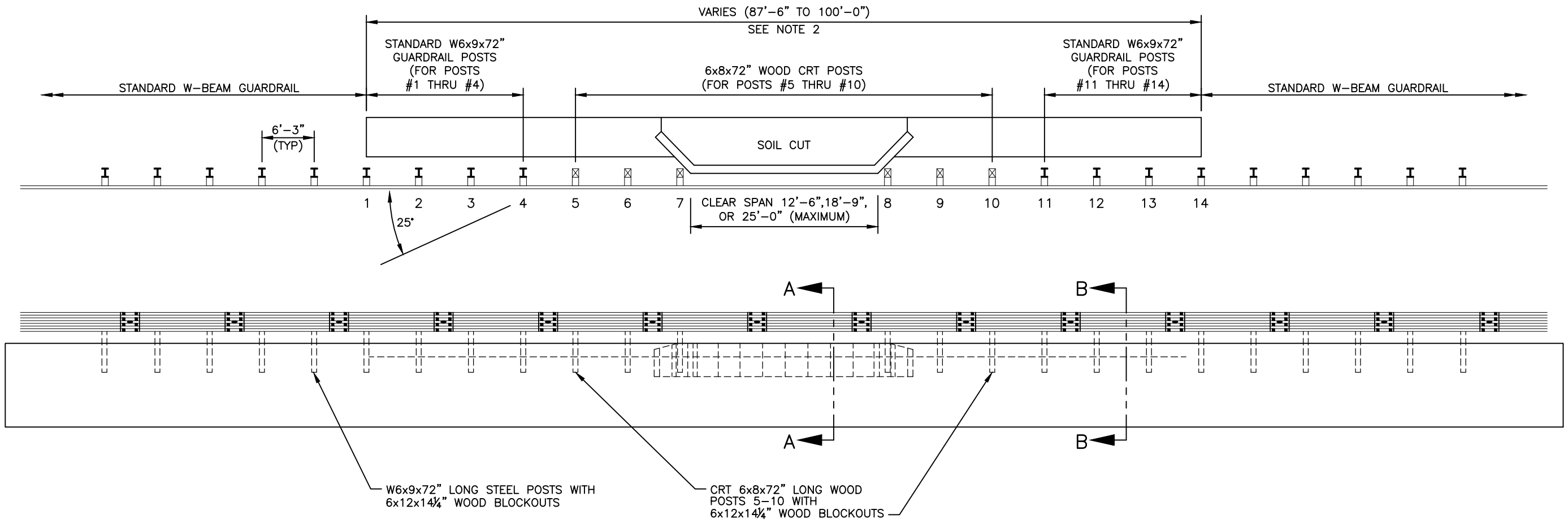
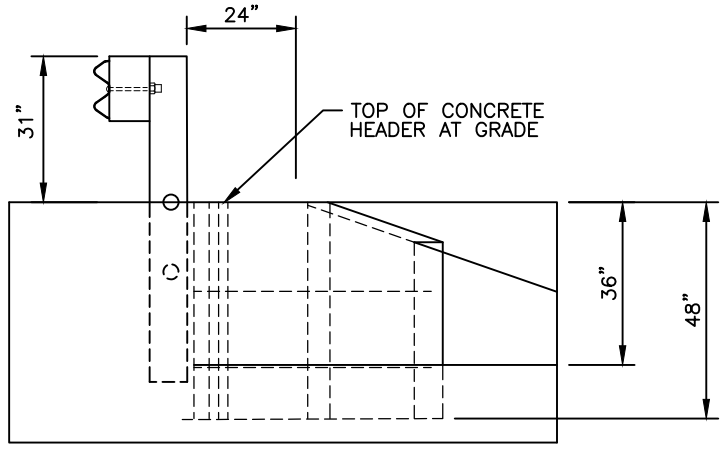
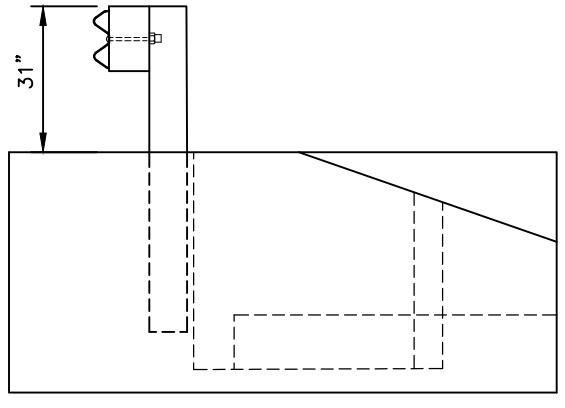




SECTION A–A



SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.
2. THE LONG SPAN DOES NOT HAVE TO BE CENTERED OVER THE AREA WHERE GUARDRAIL POSTS ARE TO BE OMITTED.
3. W–BEAM PANELS ARE NOT NESTED.
4. PRIOR TO THE INSTALLATION OF ENERGY ABSORBING END TERMINALS, (1) 12'–6" STANDARD W–BEAM PANEL SHALL BE ADDED.
5. SEE DETAIL 34.1.0 FOR CRT POST DETAILS.

R.I. STANDARD 34.3.9

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL LONG SPAN, TL–3

10/21/2022
ISSUE DATE

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
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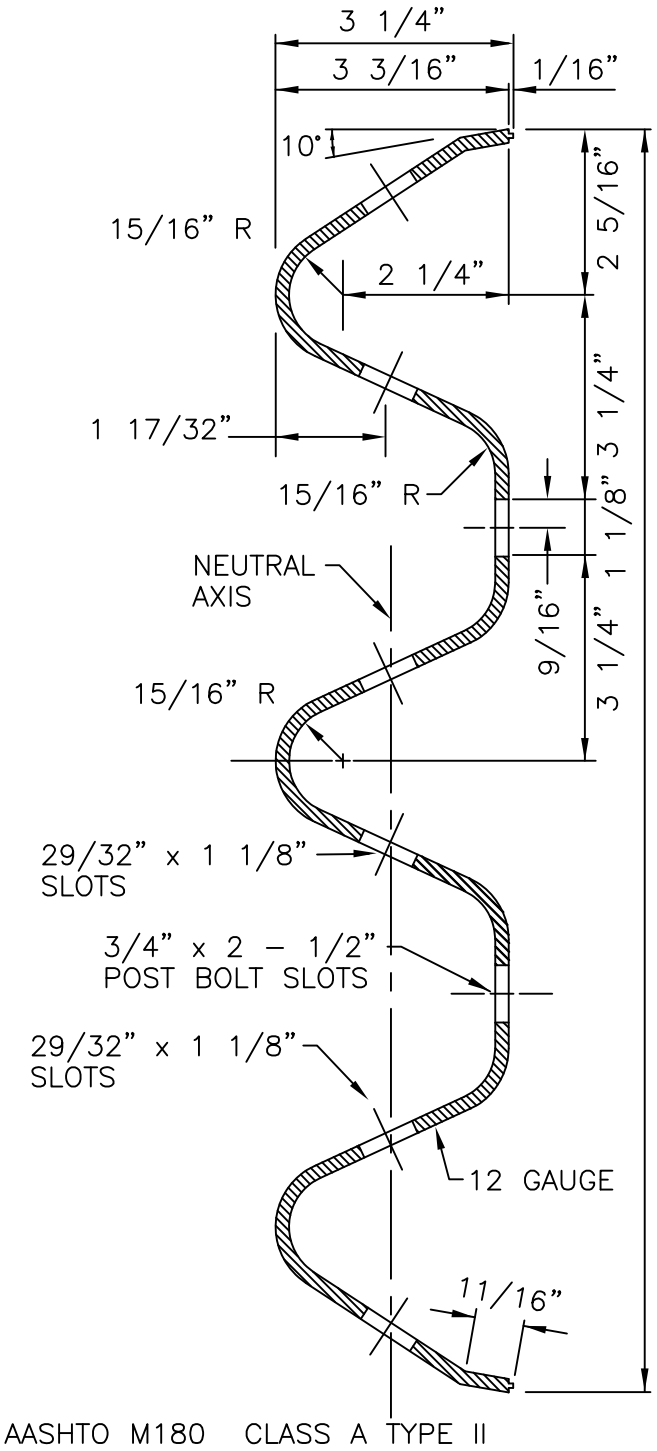
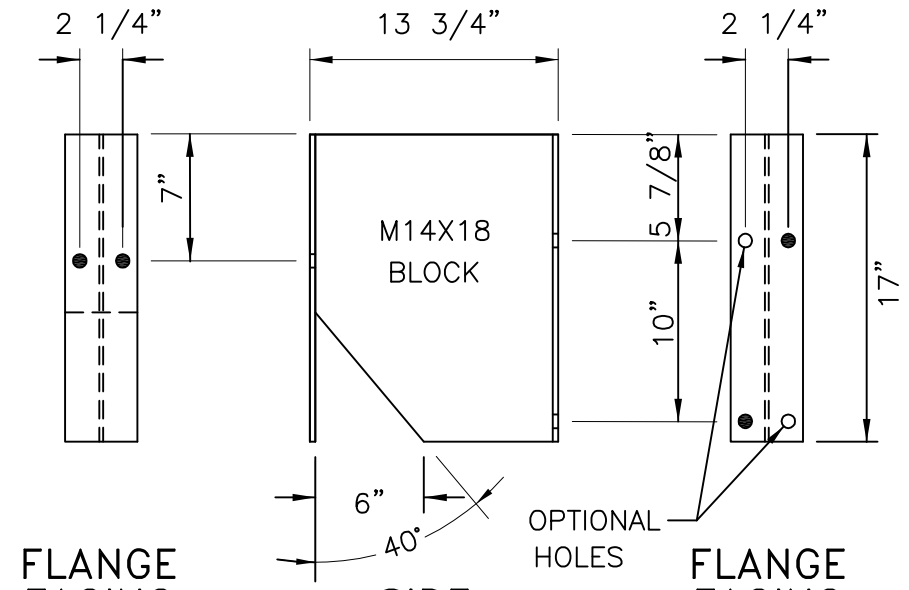


AASHTO M180 CLASS A TYPE II

BEAM SECTION

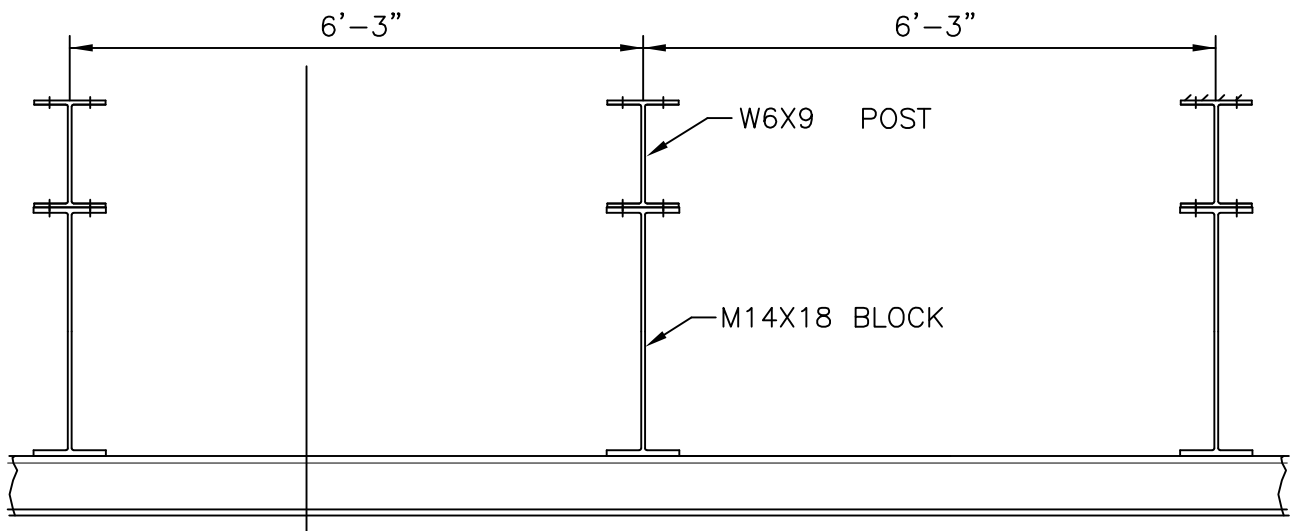


FLANGE FACING TRAFFIC

SIDE ELEVATION

FLANGE FACING POST

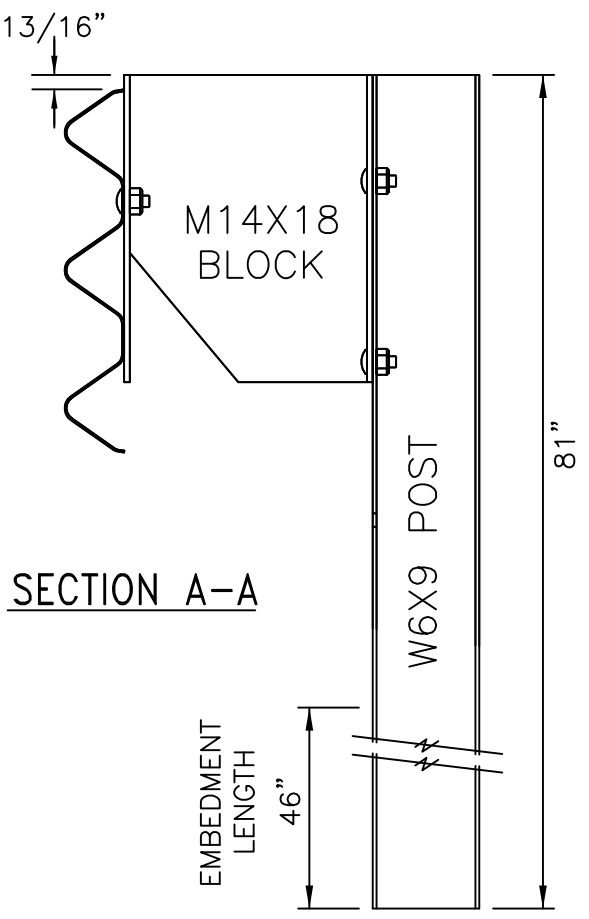
MODIFIED THRIE BEAM BLOCKOUT



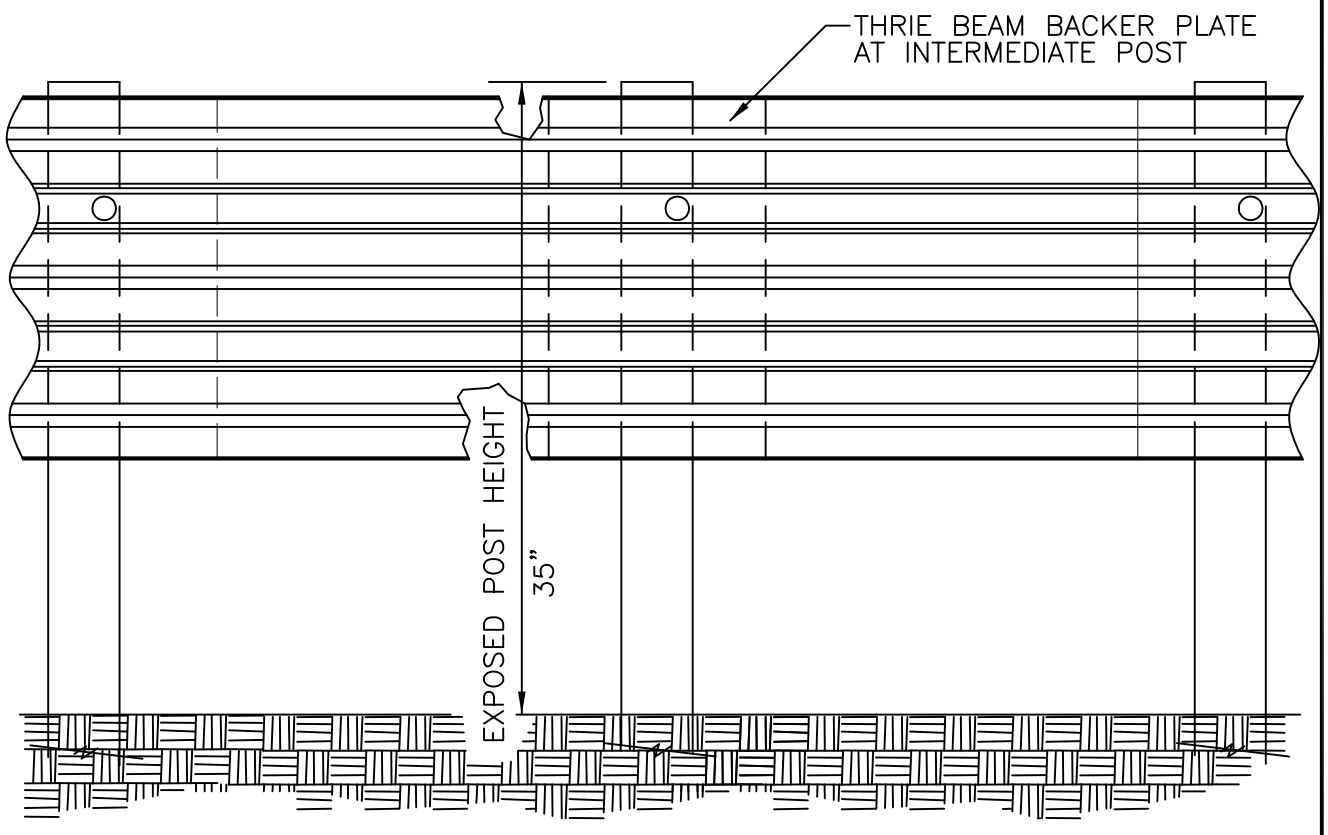
A–A

DIRECTION OF TRAVEL

PLAN OF RAIL



SECTION A–A



ELEVATION OF RAIL

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. POST TO BE FABRICATED FROM W6X9 BY 81" LONG STEEL SECTIONS.
3. MODIFIED BLOCKOUT TO BE FABRICATED FROM M14X18 BY 17" LONG STEEL SECTIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

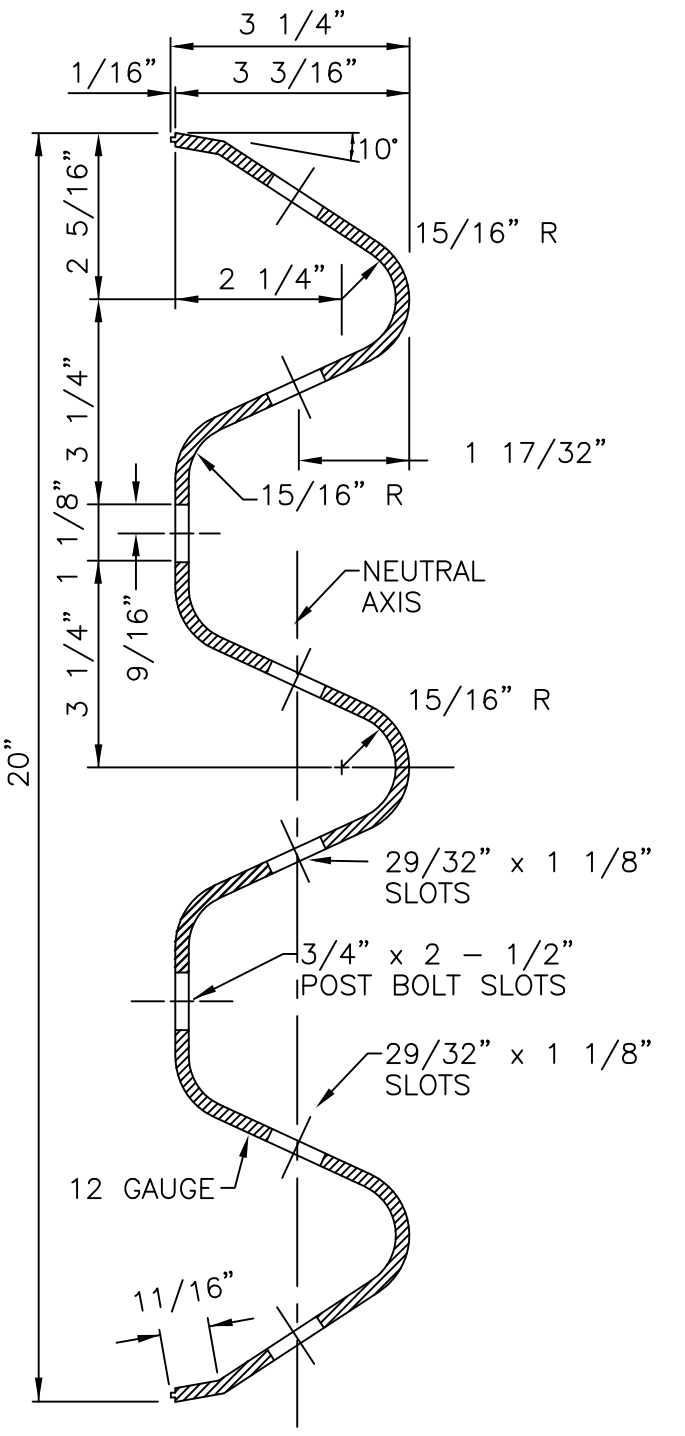
STEEL THRIE BEAM GUARDRAIL SINGLE FACE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

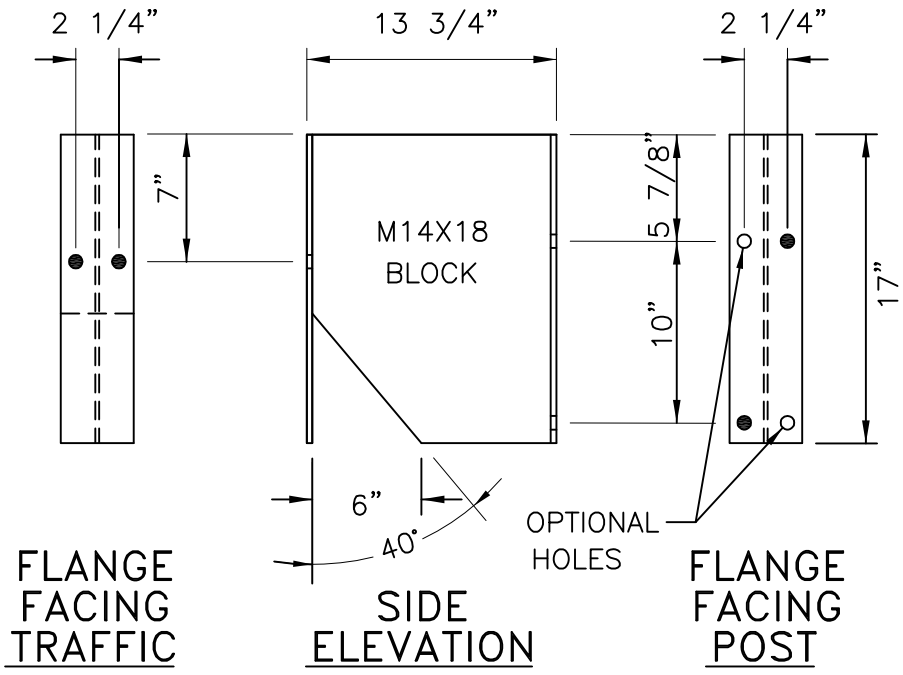
MAY 1, 2009
ISSUE DATE

R.I. STANDARD 34.5.3

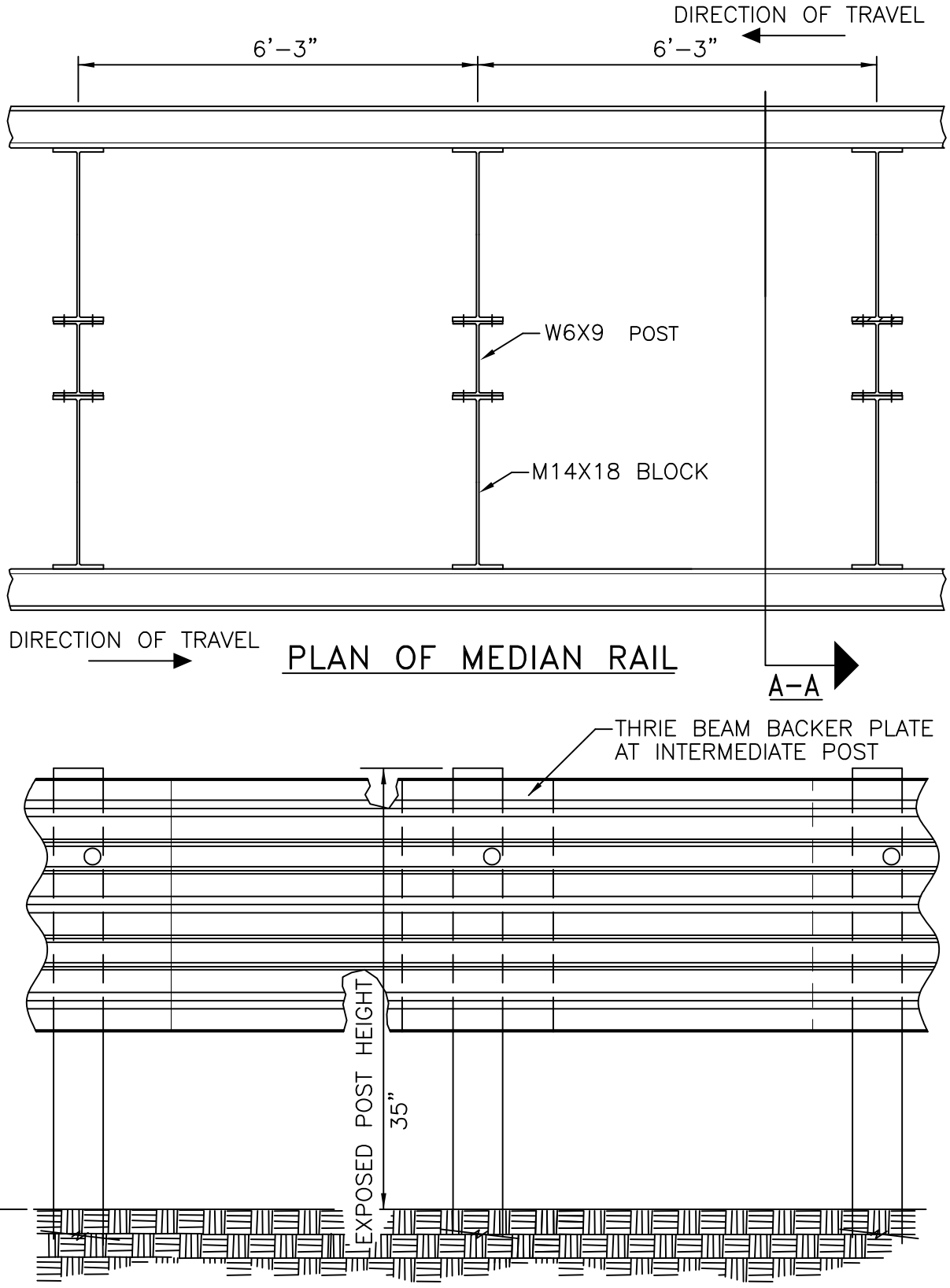


AASHTO M180 CLASS A Type II

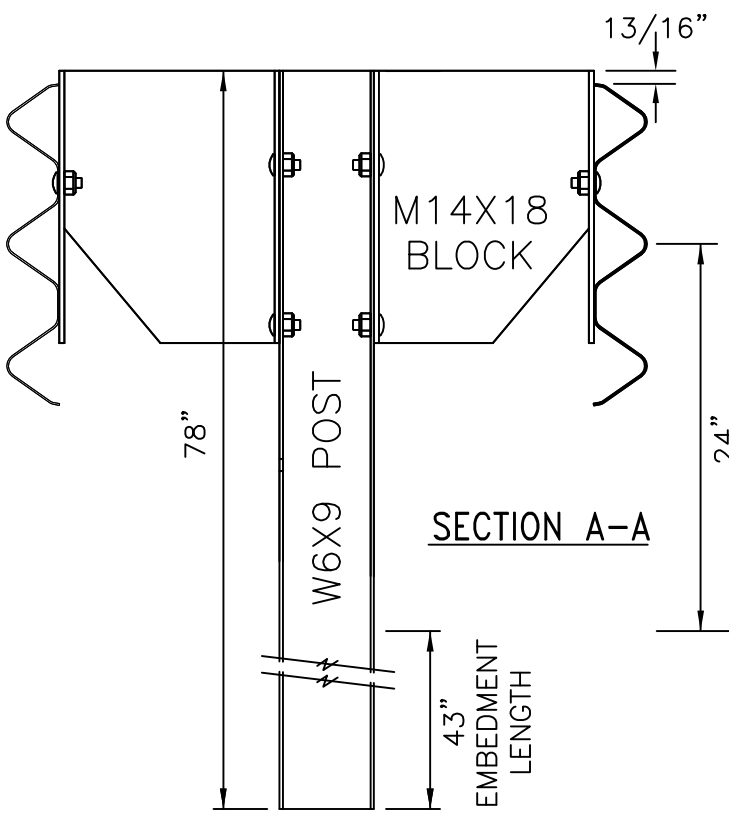
BEAM SECTION



MODIFIED THRIE BEAM BLOCKOUT



PLAN OF MEDIAN RAIL



SECTION A–A

ELEVATION OF MEDIAN RAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. POST TO BE FABRICATED FROM W6X9 BY 78" LONG STEEL SECTIONS.
3. MODIFIED BLOCKOUT TO BE FABRICATED FROM M14X18 BY 17" LONG STEEL SECTIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

STEEL THRIE BEAM GUARDRAIL DOUBLE FACE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

MAY 1, 2009
ISSUE DATE

R.I. STANDARD 34.5.4

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE RI STANDARD SPECIFICATIONS.

2. POSTS 1–4 AND 11–14 SHALL BE STANDARD STEEL POSTS WITH COMPOSITE BLOCKOUTS IF USED FOR A TL–3 THRIE BEAM LONG SPAN SYSTEM. FOR A TL–4 THRIE BEAM LONG SPAN SYSTEM, MODIFIED STEEL OFFSET BLOCKS SHALL BE USED.

3. POSTS 5–10 SHALL BE CRT WOOD POSTS WITH TWO WOOD BLOCKOUTS. SEE DETAIL 34.1.0 FOR CRT POST DETAILS.

4. PRIOR TO THE INSTALLATION OF ENERGY ABSORBING END TERMINALS ON A THRIE BEAM GUARDRAIL SECTION, THE FOLLOWING SHALL BE ADDED: (1) THRIE BEAM TRANSITION PANEL, (1) 12'–6" STANDARD W–BEAM PANEL, AND (1) 9'–4½" W–BEAM PANEL.

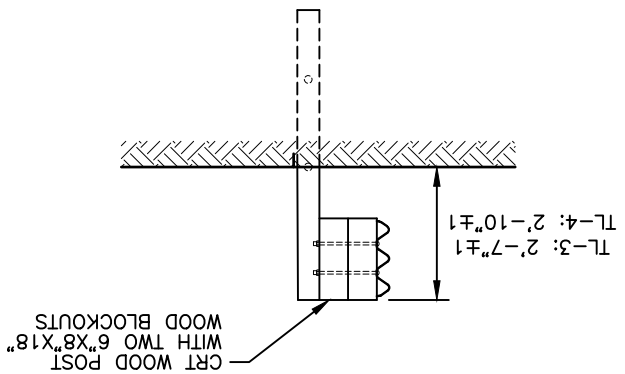
5. PRIOR TO THE INSTALLATION OF ANCHORAGE TRAILING END SECTIONS OR TERMINAL END SECTIONS ON A THRIE BEAM GUARDRAIL SECTION, THE FOLLOWING SHALL BE ADDED: (1) THRIE BEAM TRANSITION PANEL AND (1) 9'–4½" W–BEAM PANEL.

6. LAP SPLICES SHALL BE CONSTRUCTED WITH THE SPLICE RIDGE ORIENTED DOWNSTREAM OF THE FINAL DIRECTION OF TRAFFIC IN THE NEAREST TRAVEL LANE.

7. 25'–0" RAIL LENGTHS MAY BE USED TO ELIMINATE THE INTERMEDIATE LAP WITHOUT A POST. DO NOT PLACE A LAP WITHOUT A POST UNLESS NEEDED DUE TO THE LENGTH OF GAP.

8. THE LONG SPAN DOES NOT HAVE TO BE CENTERED OVER THE AREA WHERE GUARDRAIL POSTS ARE TO BE OMITTED.

CRT WOOD POSTS
SEE NOTE 3



REVISIONS

NO.	BY	DATE

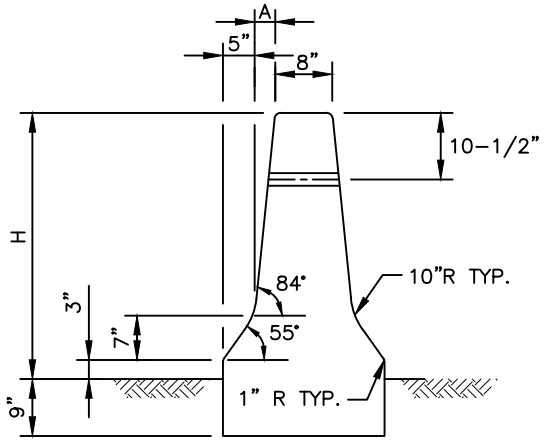
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL THRIE BEAM GUARDRAIL LONG SPAN

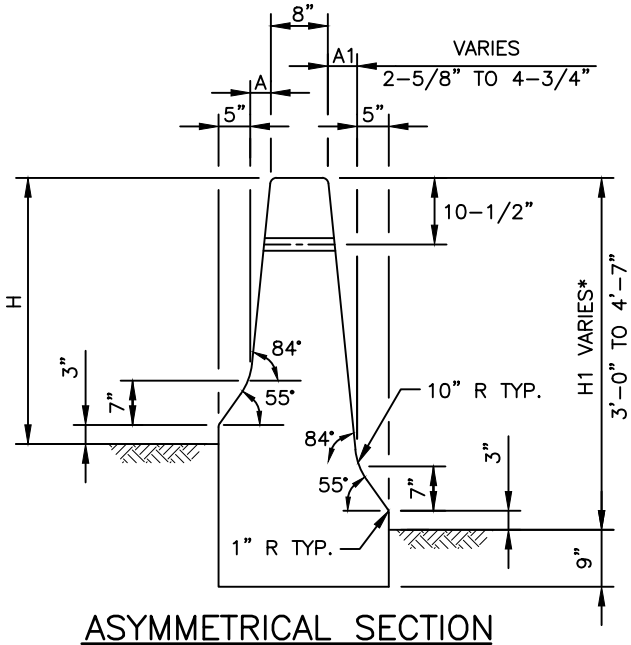
Robert Bocchio
CHIEF ENGINEER
TRANSPORTATION

ISSUE DATE 10/21/2022

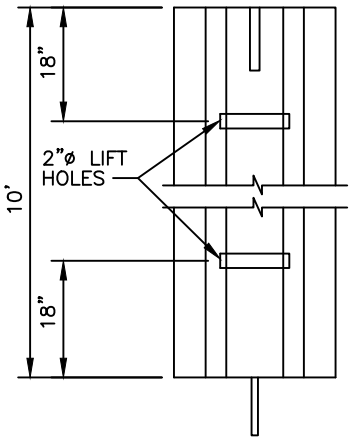
R.I. STANDARD 34.5.5



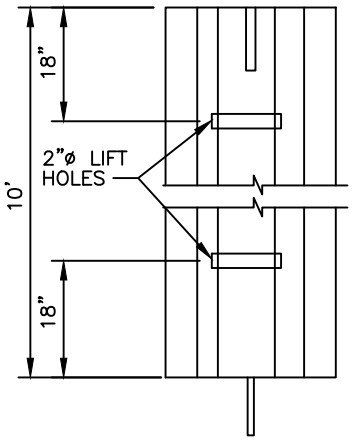
SYMMETRICAL SECTION



ASYMMETRICAL SECTION



PLAN



PLAN

SYSTEM	A	H
TL–4	2–5/8"	3'–0"
TL–5	3–1/4"	3'–6"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.

2. ALL EDGES SHALL BE ROUNDED WITH A 1" RADIUS EXCEPT AS SHOWN.

3. LIFT HOLES USED ONLY ON PRECAST BARRIERS 13' AND LESS.
* VARY "A1" RELATIVE TO "H1" WHILE MAINTAINING 55° AND 84° BARRIER ANGLES.
A1=4–3/4" MAX., H1=4'–7" MAX.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

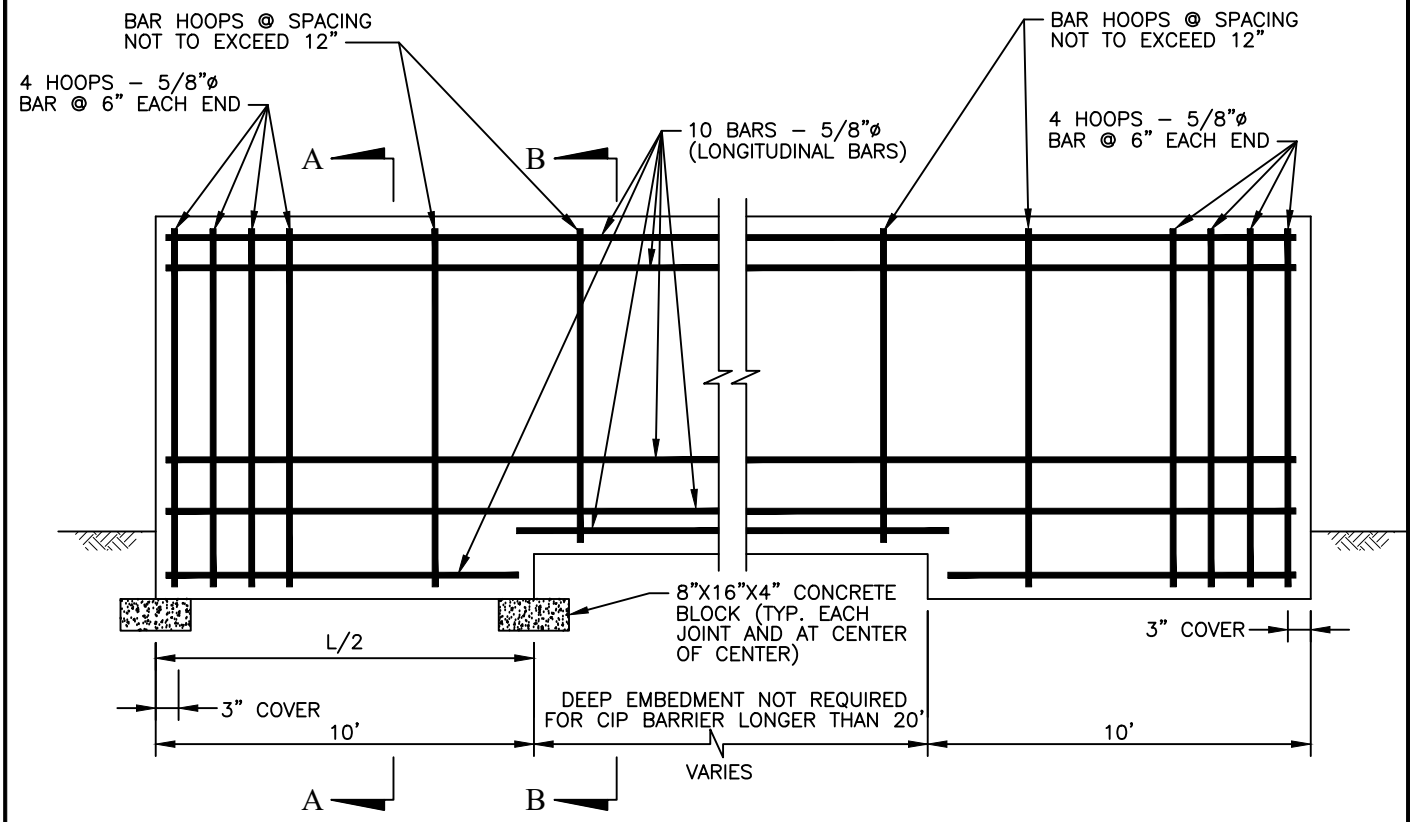
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER DOUBLE FACED

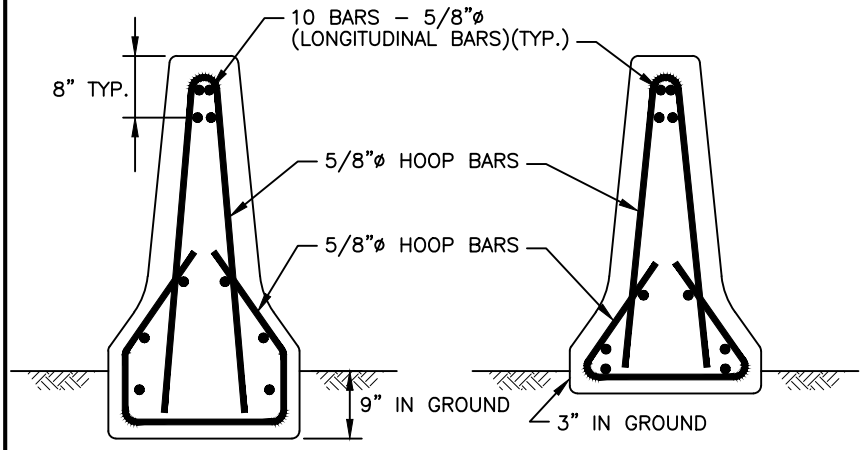
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.1.0



LONGITUDINAL ELEVATION



SECTION A–A

SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. CAST IN PLACE (CIP) NOT TO EXCEED 200' BETWEEN EXPANSION JOINTS.
3. CONSTRUCTION JOINTS REQUIRED AT 40' INTERVALS (1/2" PREMOULDED JOINT FILLER REQUIRED FOR PRECAST BARRIERS).
4. USE MINIMUM COVER OF 2" UNLESS OTHERWISE INDICATED.
5. ALL LONGITUDINAL BARS ARE TO BE CONTINUOUS FOR BOTH PRECAST AND CAST IN PLACE BARRIERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

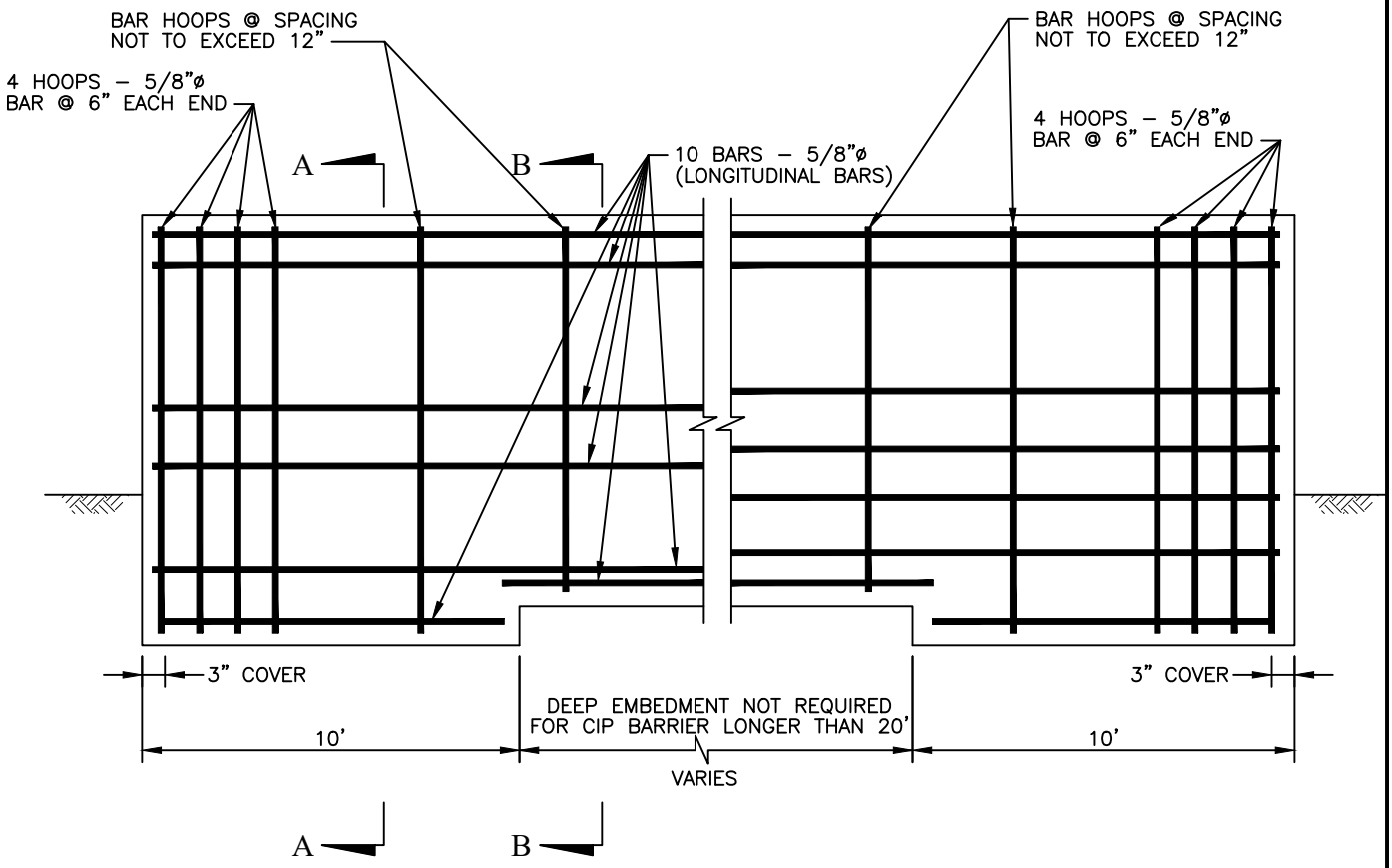
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER SYMMETRICAL SECTION–REINFORCING DETAILS

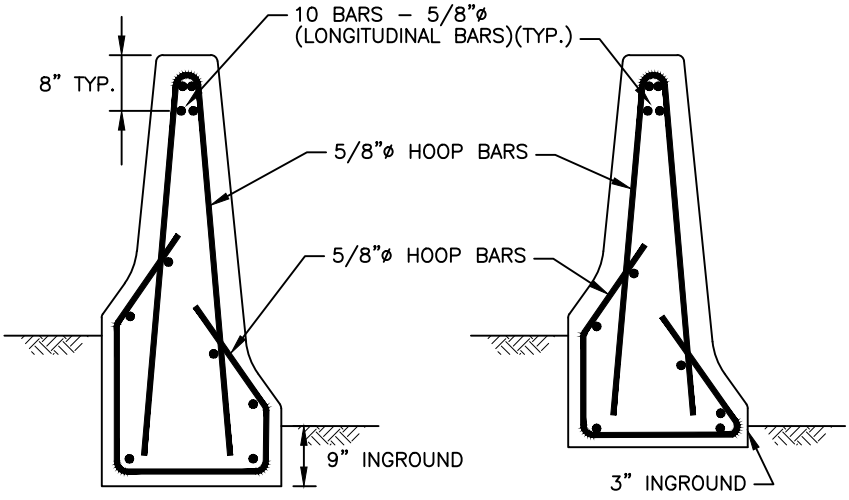
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.1.0 CONT.



LONGITUDINAL ELEVATION



SECTION A–A

SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. CAST IN PLACE (CIP) NOT TO EXCEED 200' BETWEEN EXPANSION JOINTS.
3. CONSTRUCTION JOINTS REQUIRED AT 40' INTERVALS (1/2" PREMOULDED JOINT FILLER REQUIRED FOR PRECAST BARRIERS).
4. USE MINIMUM COVER OF 2" UNLESS OTHERWISE INDICATED.
5. ALL LONGITUDINAL BARS ARE TO BE CONTINUOUS FOR BOTH PRECAST AND CAST IN PLACE BARRIERS.
6. FOR CONCRETE SETTING BLOCK INSTALLATION, SEE F SHAPE CONCRETE BARRIER SYMMETRICAL SECTION – REINFORCING DETAILS, STD. 40.1.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

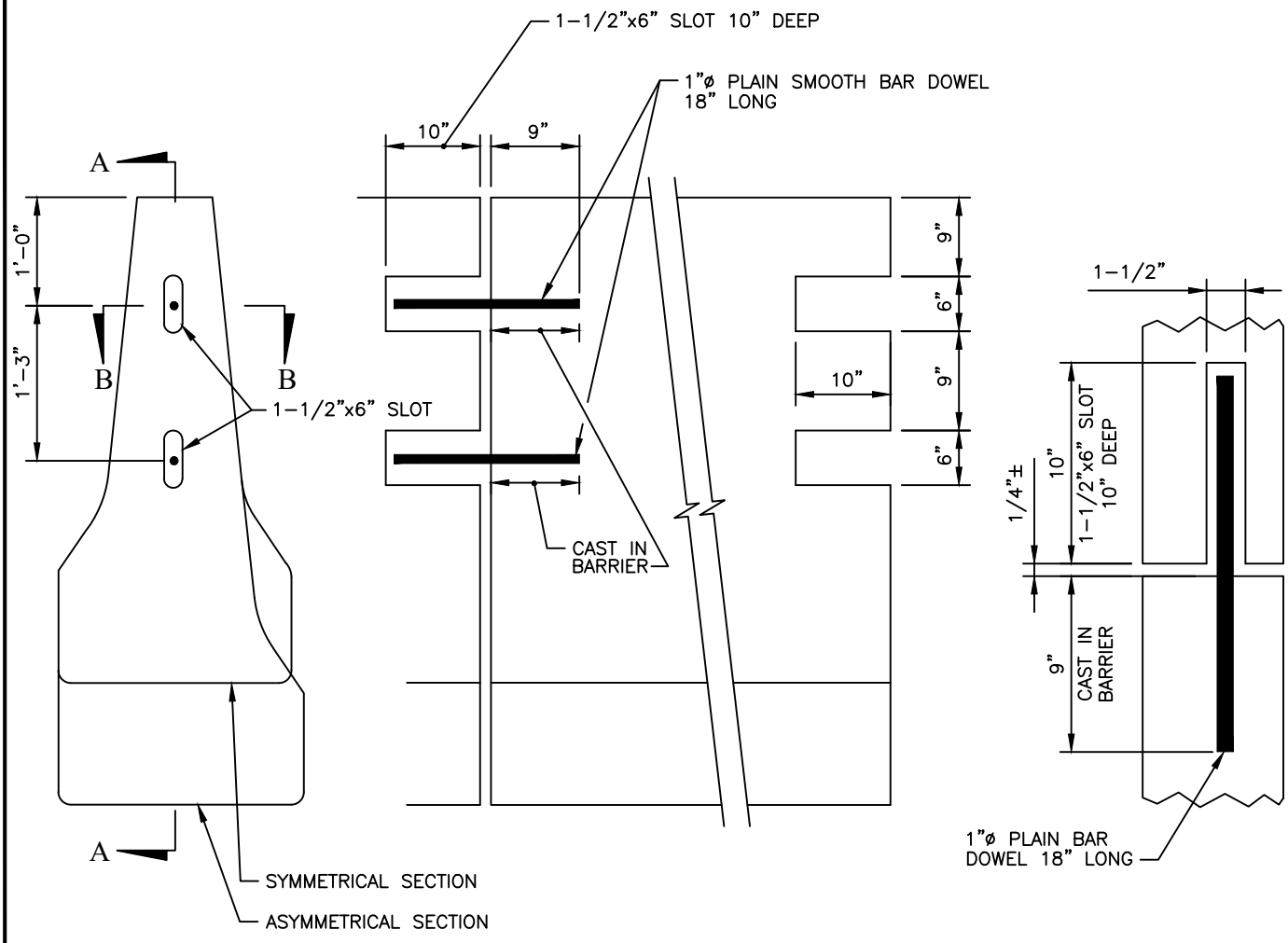
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER ASYMMETRICAL SECTION–REINFORCING DETAILS

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.1.0 CONT.



ELEVATION

SECTION A–A

SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

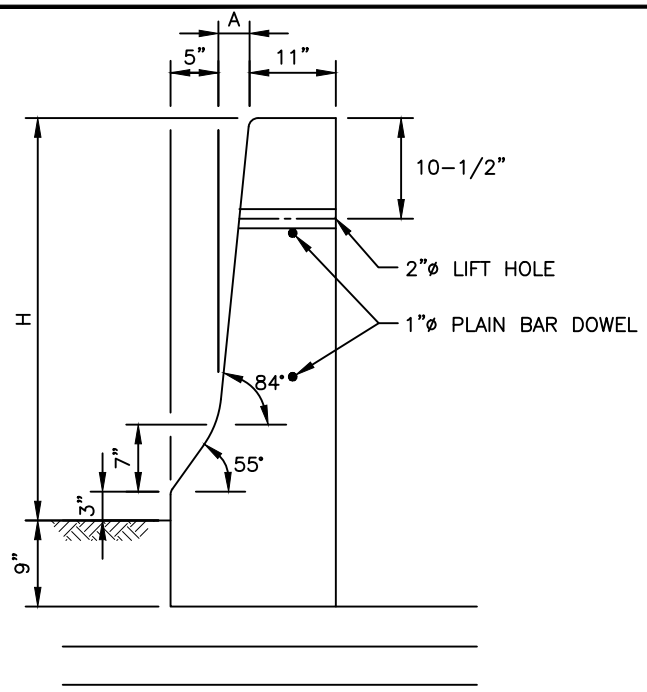
F SHAPE CONCRETE BARRIER DOWEL DETAILS

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

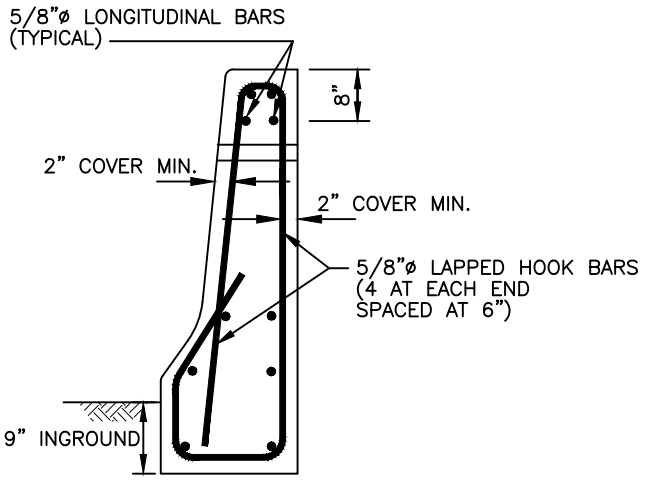
10/21/2022
ISSUE DATE

R.I. STANDARD 40.1.0 CONT.

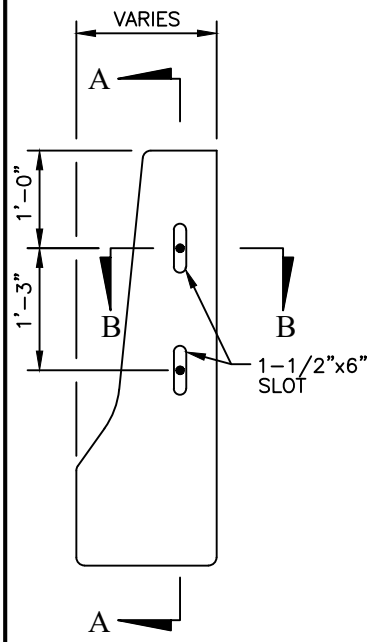
SYSTEM	A	H
TL-4	2-5/8"	3'-0"
TL-5	3-1/4"	3'-6"



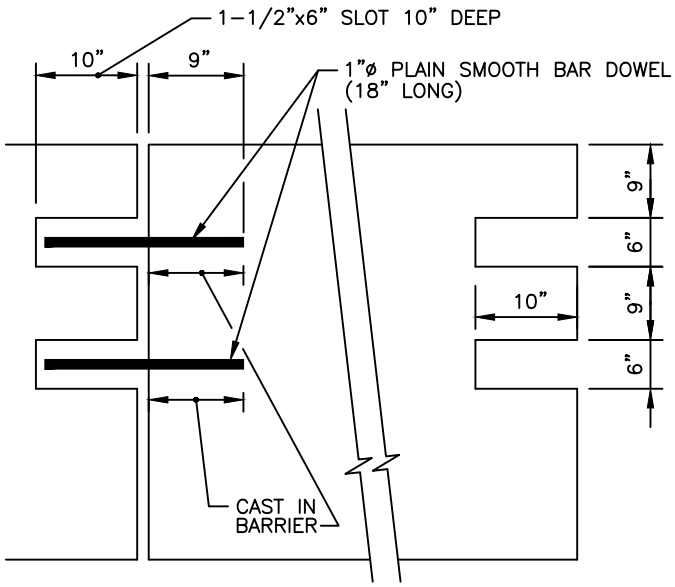
ELEVATION



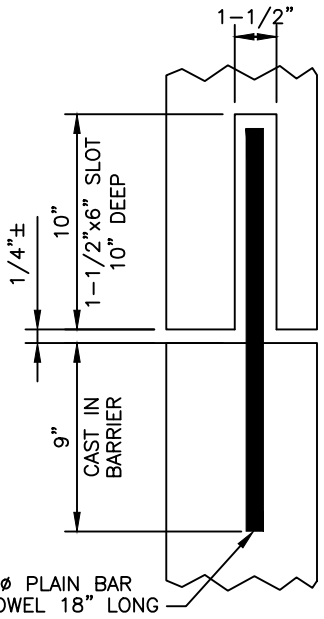
REINFORCING DETAILS



ELEVATION



SECTION A-A



SECTION B-B

DOWEL DETAILS

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. ALL LONGITUDINAL BARS ARE TO BE CONTINUOUS FOR BOTH PRECAST AND CAST IN PLACE BARRIERS.
3. USE MINIMUM COVER OF 2" UNLESS OTHERWISE INDICATED.
4. ALL EDGES SHALL BE ROUNDED WITH A 1" RADIUS EXCEPT AS SHOWN.
5. LIFT HOLES USED ONLY ON PRECAST BARRIERS 13' AND LESS.
6. FOR CONCRETE SETTING BLOCK INSTALLATION, SEE F SHAPE CONCRETE BARRIER SYMMETRICAL SECTION – REINFORCING DETAILS, STD. 40.1.0.
7. CAST IN PLACE (CIP) NOT TO EXCEED 200' BETWEEN EXPANSION JOINTS.
8. CONSTRUCTION JOINTS REQUIRED AT 40' INTERVALS (1/2" PREMOULDED JOINT FILLER REQUIRED FOR PRECAST BARRIERS).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

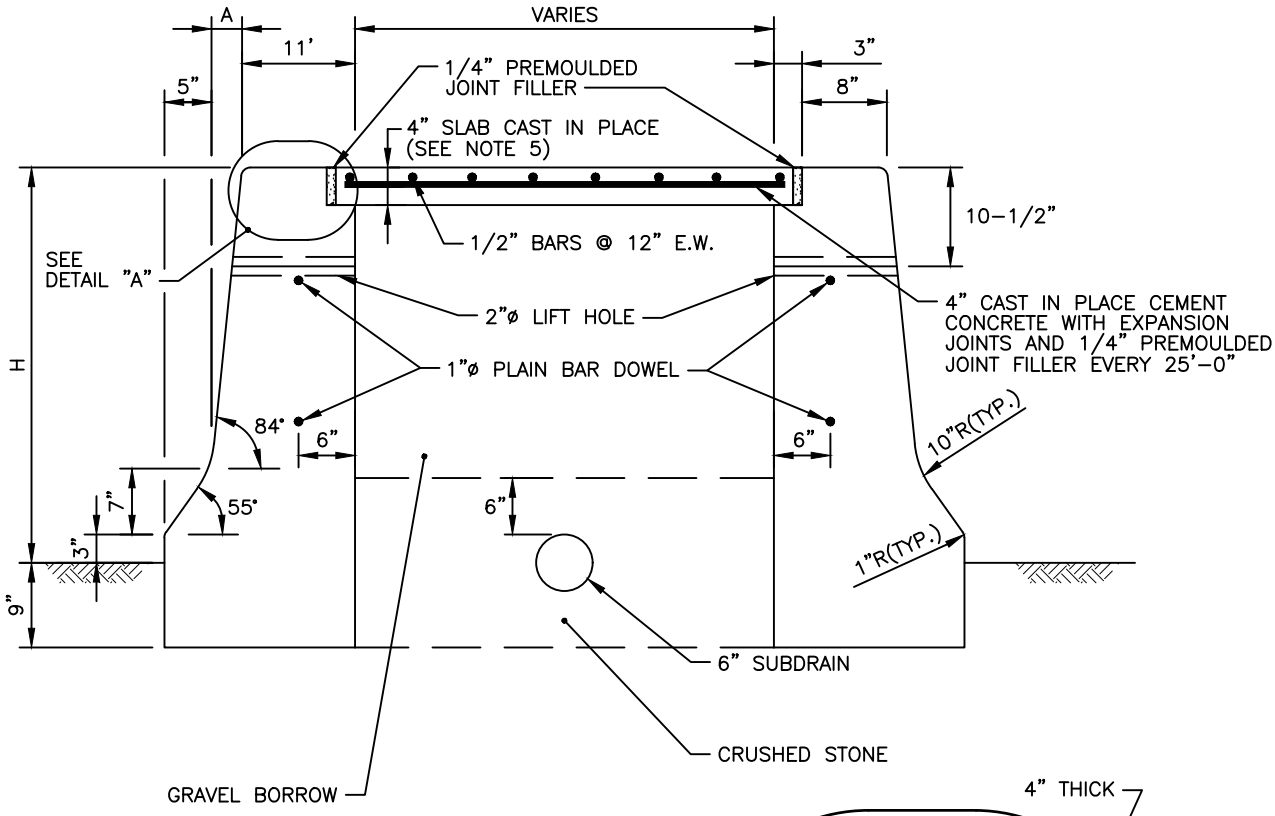
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER SINGLE FACED

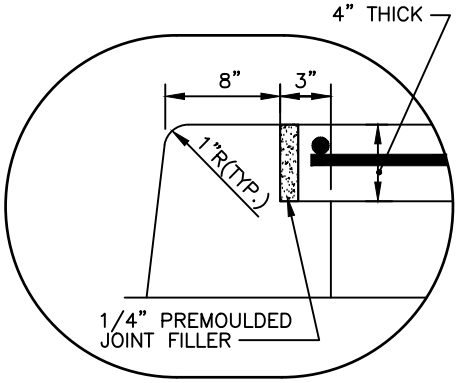
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.2.0



SYSTEM	A	H
TL-4	2-5/8"	3'-0"
TL-5	3-1/4"	3'-6"



DETAIL "A"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. ALL EDGES SHALL BE ROUNDED WITH A 1" RADIUS EXCEPT AS SHOWN.
3. LIFT HOLES USED ONLY ON PRECAST BARRIERS 13' AND LESS.
4. SUBDRAIN SHALL BE TIED INTO THE DRAINAGE SYSTEM.
5. MINIMUM SLOPE OF SLAB CAST SHALL BE 0.5%.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

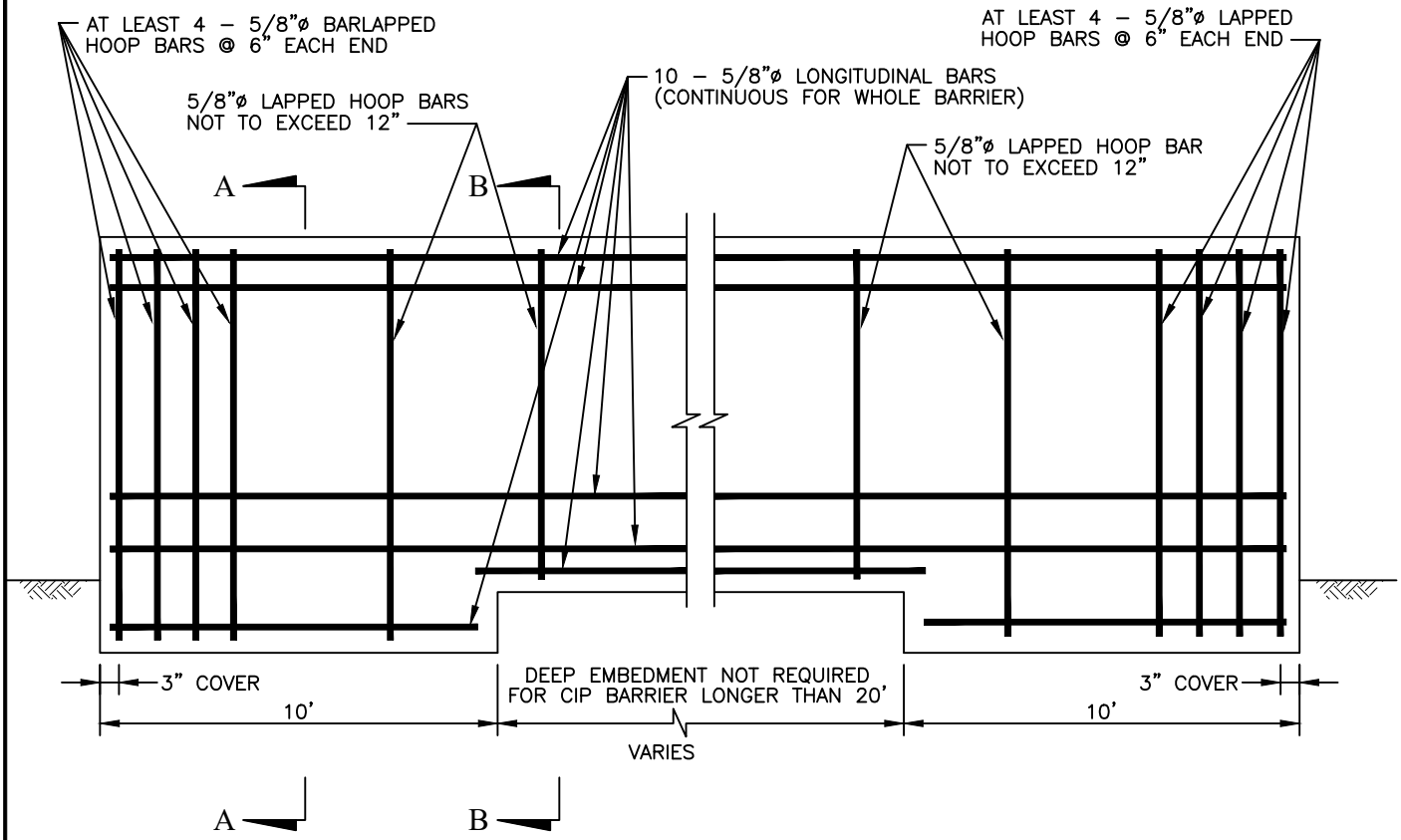
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER WITH CONCRETE SEPARATOR

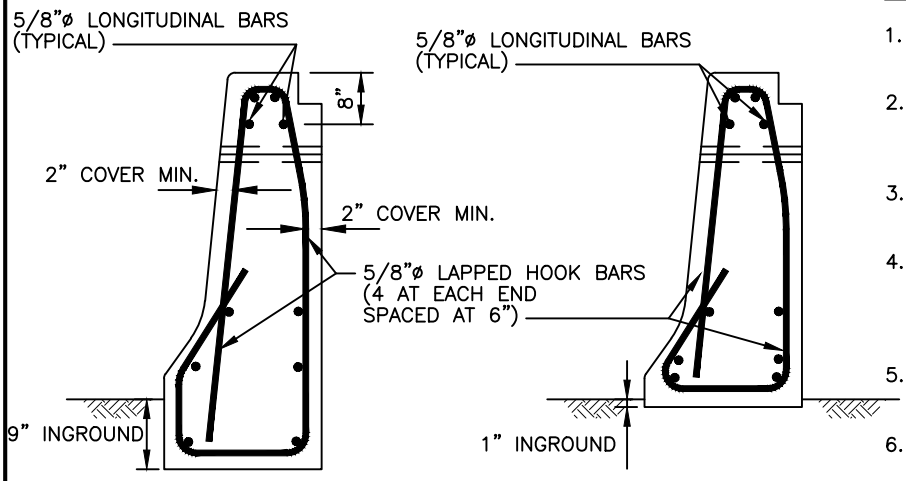
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.2.1



LONGITUDINAL ELEVATION



SECTION A–A

SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. ALL LONGITUDINAL BARS ARE TO BE CONTINUOUS FOR BOTH PRECAST AND CAST IN PLACE BARRIERS.
3. USE MINIMUM COVER OF 2" UNLESS OTHERWISE INDICATED.
4. FOR CONCRETE SETTING BLOCK INSTALLATION, SEE F SHAPE CONCRETE BARRIER SYMMETRICAL SECTION – REINFORCING DETAILS, STD. 40.1.0.
5. CAST IN PLACE (CIP) NOT TO EXCEED 200' BETWEEN EXPANSION JOINTS.
6. CONSTRUCTION JOINTS REQUIRED AT 40' INTERVALS (1/2" PREMOULDED JOINT FILLER REQUIRED FOR PRECAST BARRIERS).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

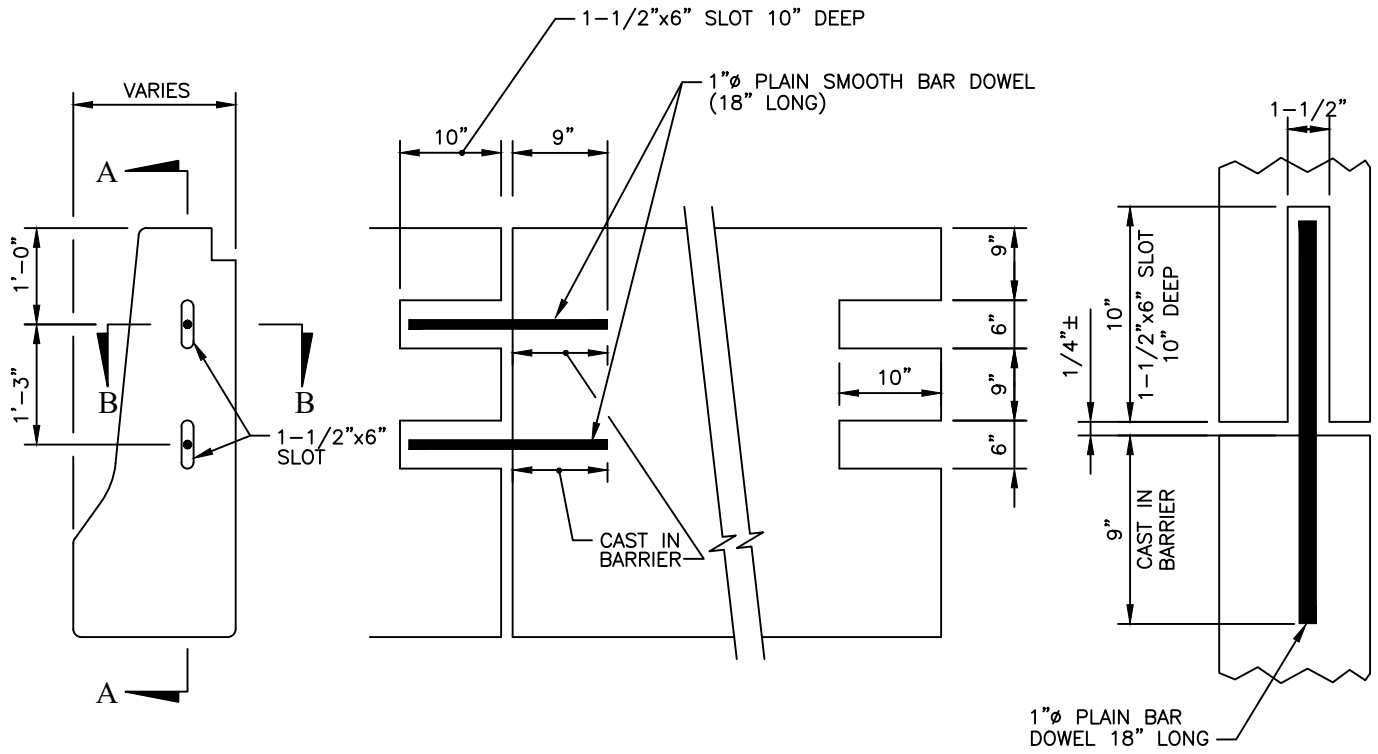
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER WITH CONCRETE SEPARATOR REINFORCING DETAILS

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.2.1 CONT.



ELEVATION

SECTION A–A

SECTION B–B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

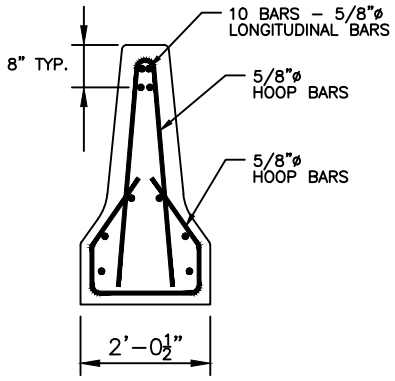
REVISIONS		
NO.	BY	DATE

F SHAPE CONCRETE BARRIER WITH CONCRETE SEPARATOR DOWEL DETAILS

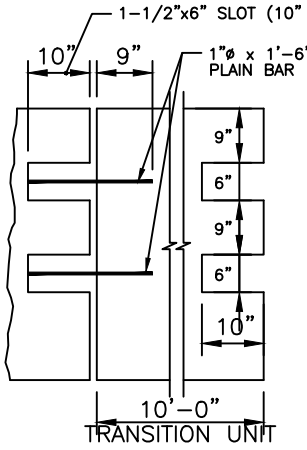
Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

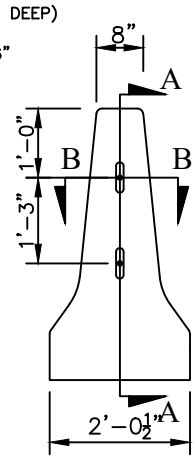
R.I. STANDARD 40.2.1 CONT.



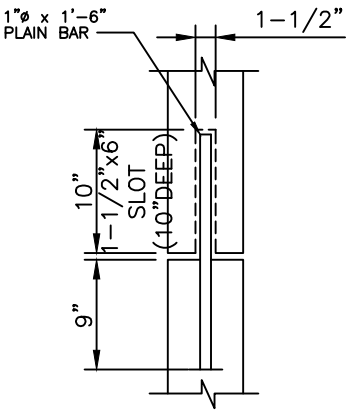
REINFORCING



SECTION A–A

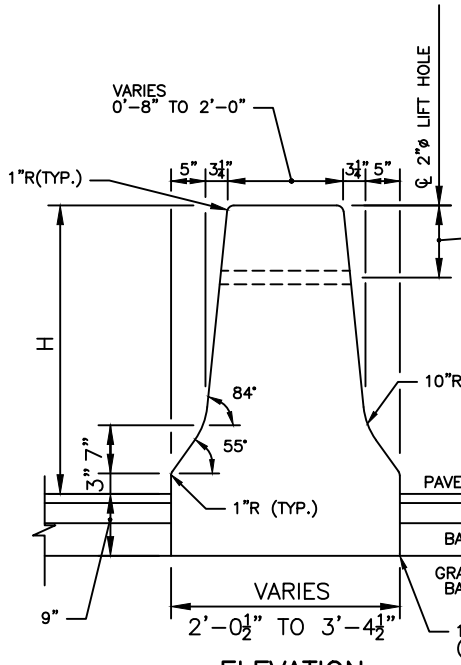


ELEVATION

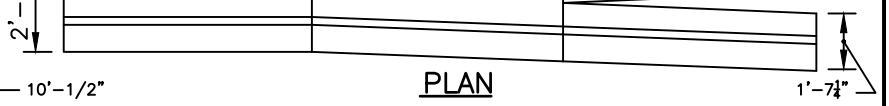


SECTION B–B

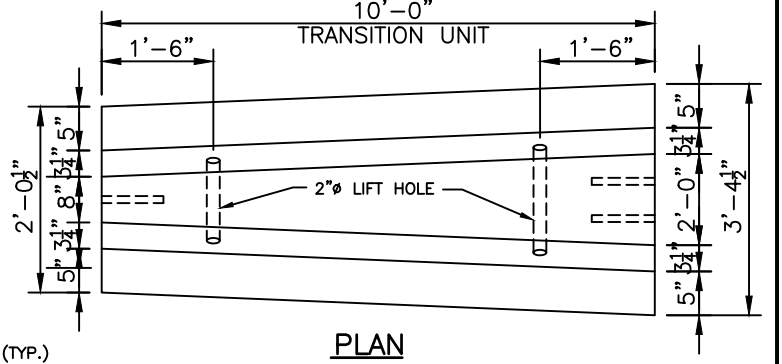
DOWEL DETAILS AT F SHAPED DOUBLE FACED ENDS



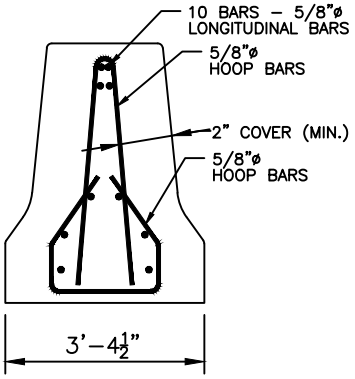
ELEVATION



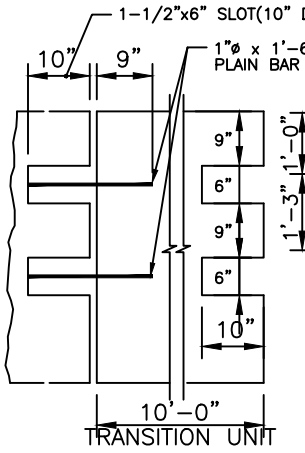
PLAN



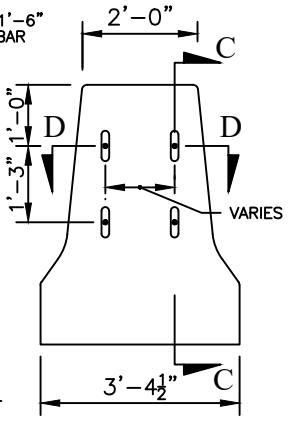
PLAN



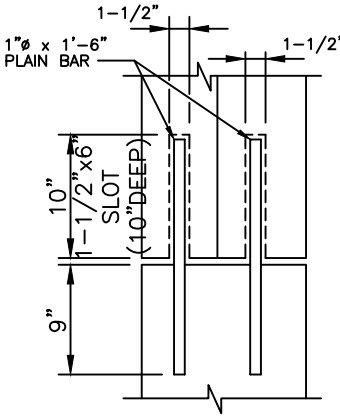
REINFORCING



SECTION C–C



ELEVATION



SECTION D–D

DOWEL DETAILS AT F–SHAPE BACK TO BACK ENDS

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. REFER TO STD. 40.1.0 FOR NOTES AND ADDITIONAL DETAILS.
3. USE THE TABLES PROVIDED ON STD. 40.1.0 AND 40.2.0 TO DETERMINE THE DIMENSIONS LABELED "H".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

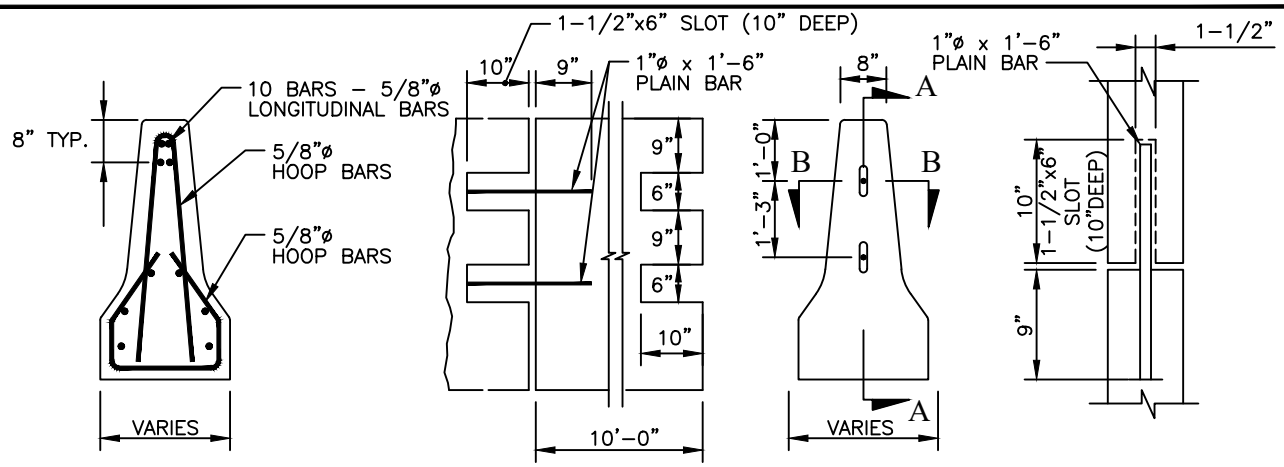
REVISIONS		
NO.	BY	DATE

PRECAST MEDIAN BARRIER TRANSITION UNIT

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

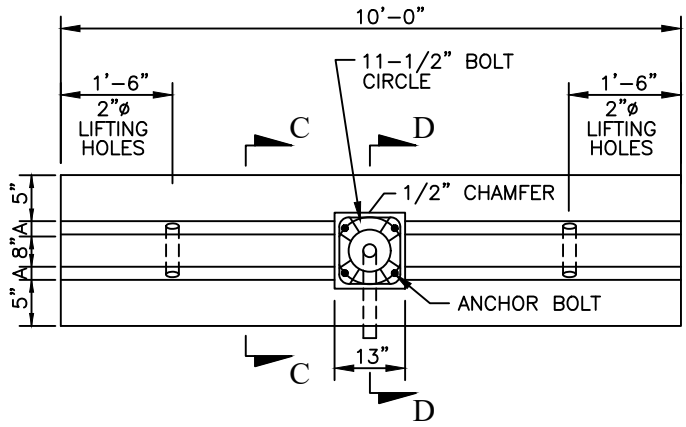
10/21/2022
ISSUE DATE

R.I. STANDARD 40.3.0

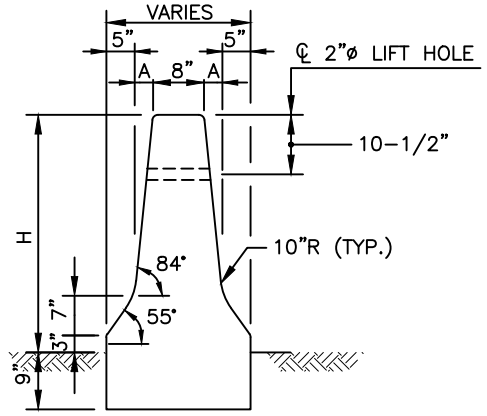


REINFORCING | SECTION A–A | ELEVATION | SECTION B–B

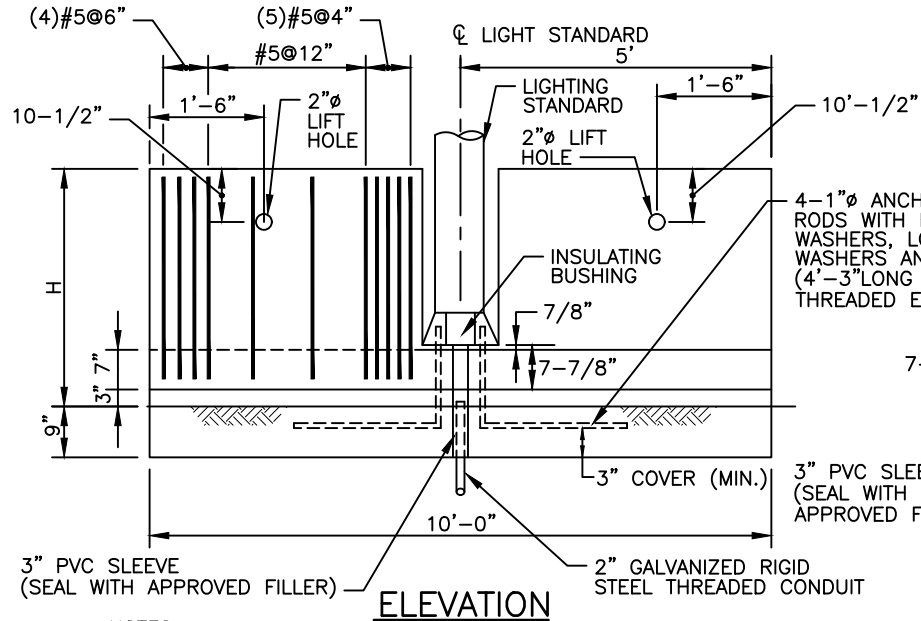
DOWEL DETAILS AT ENDS



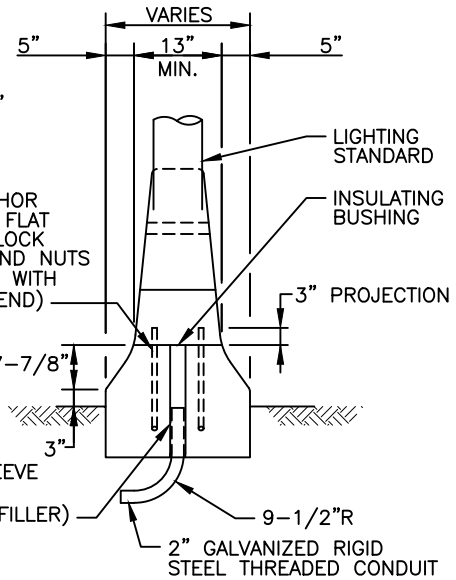
PLAN



SECTION C–C



ELEVATION



SECTION D–D

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. REFER TO STD. 40.1.0 FOR NOTES AND ADDITIONAL DETAILS.
3. USE THE TABLES PROVIDED ON STD. 40.1.0 TO DETERMINE THE DIMENSIONS LABELED "H".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

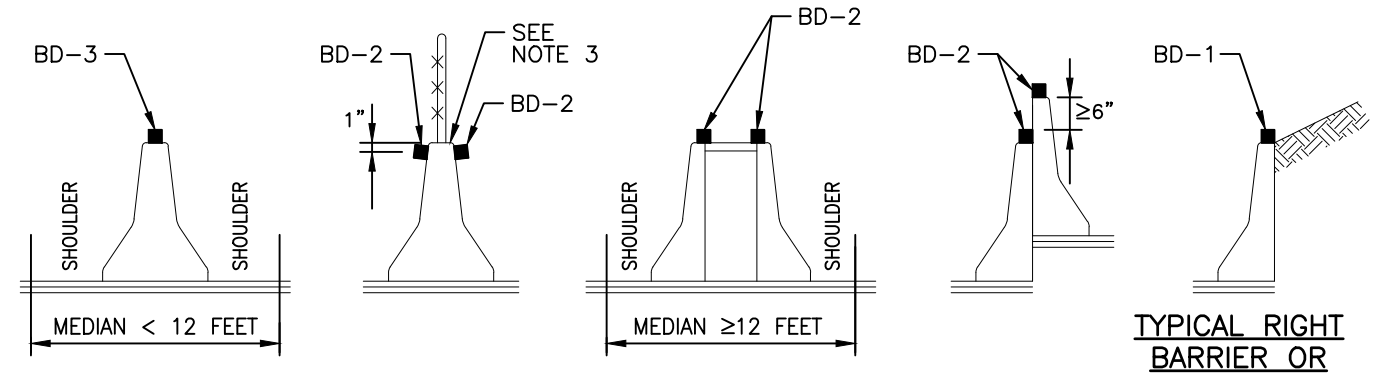
REVISIONS		
NO.	BY	DATE

PRECAST MEDIAN BARRIER FOR LIGHT STANDARD

Robert Rocchio
CHIEF ENGINEER
TRANSPORTATION

10/21/2022
ISSUE DATE

R.I. STANDARD 40.4.0

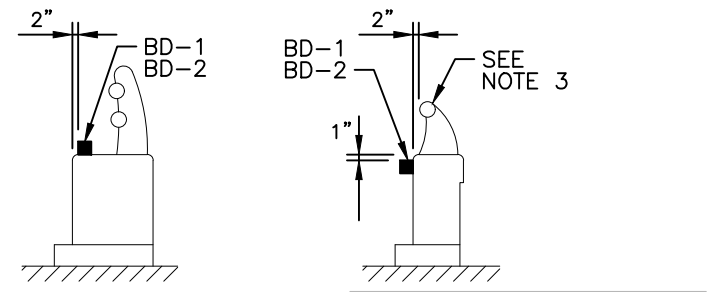


TYPICAL CONCRETE BARRIER INSTALLATION

OPTIONAL CONCRETE BARRIER INSTALLATION

TYPICAL RIGHT BARRIER OR PARAPET INSTALLATION

CONCRETE MEDIAN BARRIER DELINEATOR



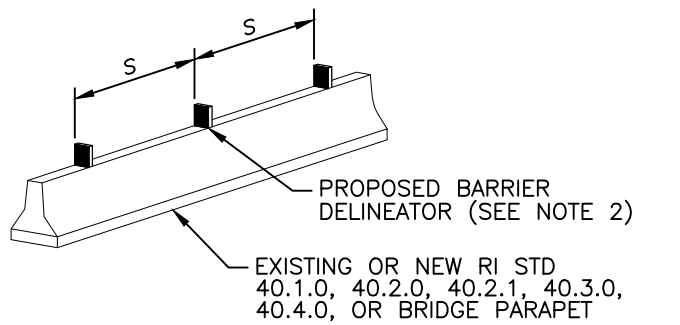
TYPICAL PARAPET INSTALLATION

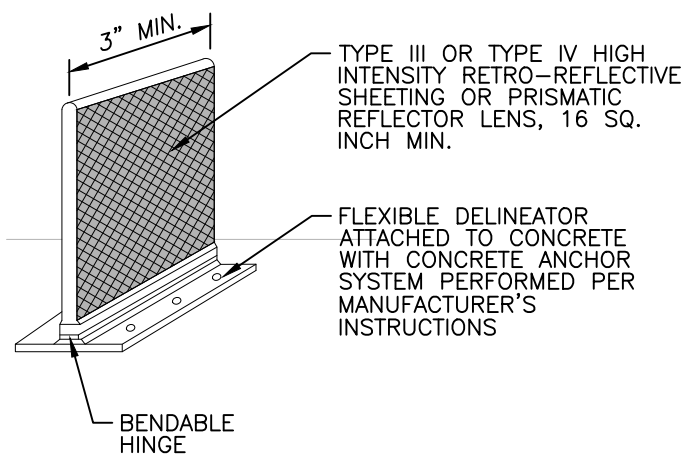
OPTIONAL PARAPET INSTALLATION

BRIDGE PARAPET DELINEATOR

LEGEND

BD-1	SINGLE FACE BARRIER DELINEATOR-WHITE
BD-2	SINGLE FACE BARRIER DELINEATOR-YELLOW
BD-3	TWO SIDED BARRIER DELINEATOR-YELLOW





FLEXIBLE DELINEATOR DETAIL

DELINEATOR SPACING FOR HORIZONTAL CURVES	
RADIUS (R) OF CURVE (FT)	SPACING (S) ON CURVE (FT)
50	20
115	25
180	35
250	40
300	50
400	55
500	65
600	70
700	75
800	80
900	85
1000	90

DELINEATOR SPACING NOTES:

1. SPACING FOR SPECIFIC RADII MAY BE INTERPOLATED FROM THE TABLE.
2. THE MINIMUM SPACING SHOULD BE 20 FT.
3. THE SPACING ON THE CURVES SHOULD NOT EXCEED 300 FT.
4. IN ADVANCE OF OR BEYOND CURVE, AND PROCEEDING AWAY FROM THE END OF THE CURVE, THE SPACING OF THE FIRST DELINEATOR IS 2S, THE SECOND IS 3S, AND THE THIRD IS 6S, BUT NOT TO EXCEED 300 FT SPACING.
5. S REFERS TO THE DELINEATOR SPACING FOR SPECIFIC RADII COMPUTED FROM THE FORMULA $S=3\sqrt{R}-50$
6. THE DISTANCES FOR S SHOWN IN THE TABLE ABOVE WERE ROUNDED TO THE NEAREST 5 FT.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE RI STANDARD SPECIFICATIONS.
2. THIS DELINEATOR REFLECTOR IS TO BE PLACED ON TOP OF PERMANENT BARRIERS OR BRIDGE PARAPETS. THE FRONT SURFACE OF DELINEATOR SHALL BE FACING APPROACHING TRAFFIC.
3. THE CONTRACTOR MAY INSTALL THE BARRIER DELINEATOR ON THE SIDE OF THE BARRIER IF THE REFLECTORS CANNOT BE INSTALLED ON THE TOP OF THE BARRIER DUE TO FENCING OR OTHER OBSTRUCTION AND AS SUCH WHEN DELINEATORS DO NOT NEED TO BE RETRO-REFLECTORIZED ON BOTH SIDES.
4. CONCRETE SURFACES SHALL BE WIRE BRUSHED OR SAND BLASTED, AND TREATED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF DELINEATOR.
5. DELINEATORS ON MAINLINE TANGENT SEGMENTS SHOULD NOT EXCEED 300 FOOT SPACING. DELINEATORS ON RAMP TANGENT SEGMENTS SHOULD BE SPACED AT 100 FEET.

R.I. STANDARD 40.5.0

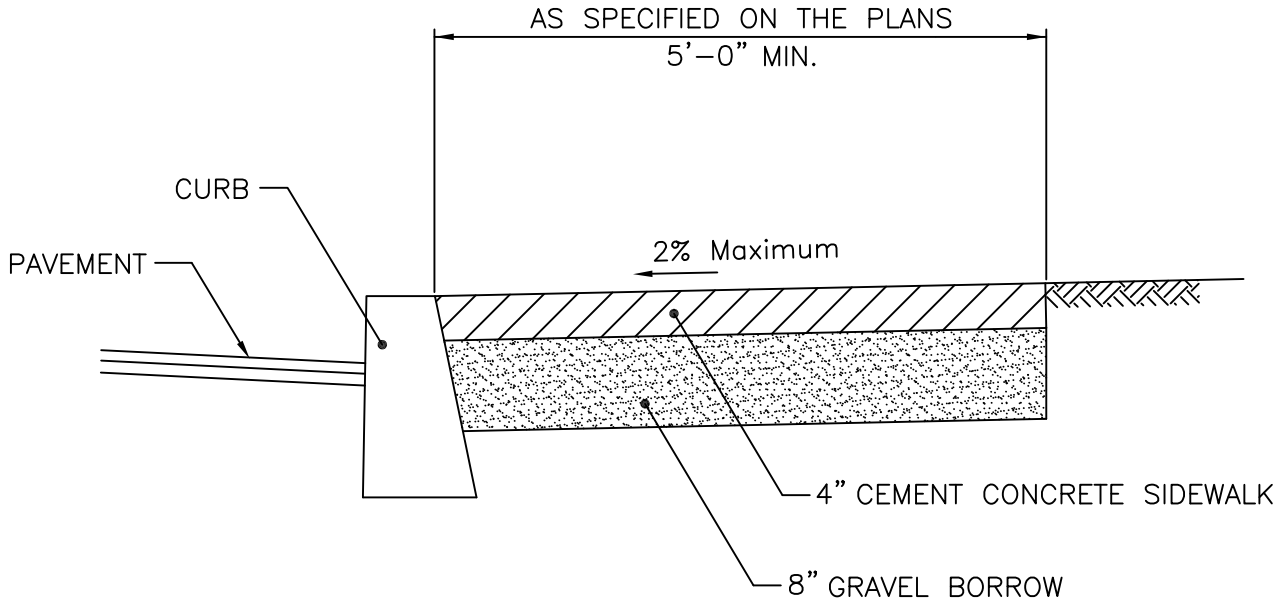
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BARRIER MOUNTED DELINEATOR

10/21/2022
ISSUE DATE

Robert Cocchio
CHIEF ENGINEER
TRANSPORTATION

REVISIONS		
NO.	BY	DATE



NOTES

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/05
2	MLP	06/01/10

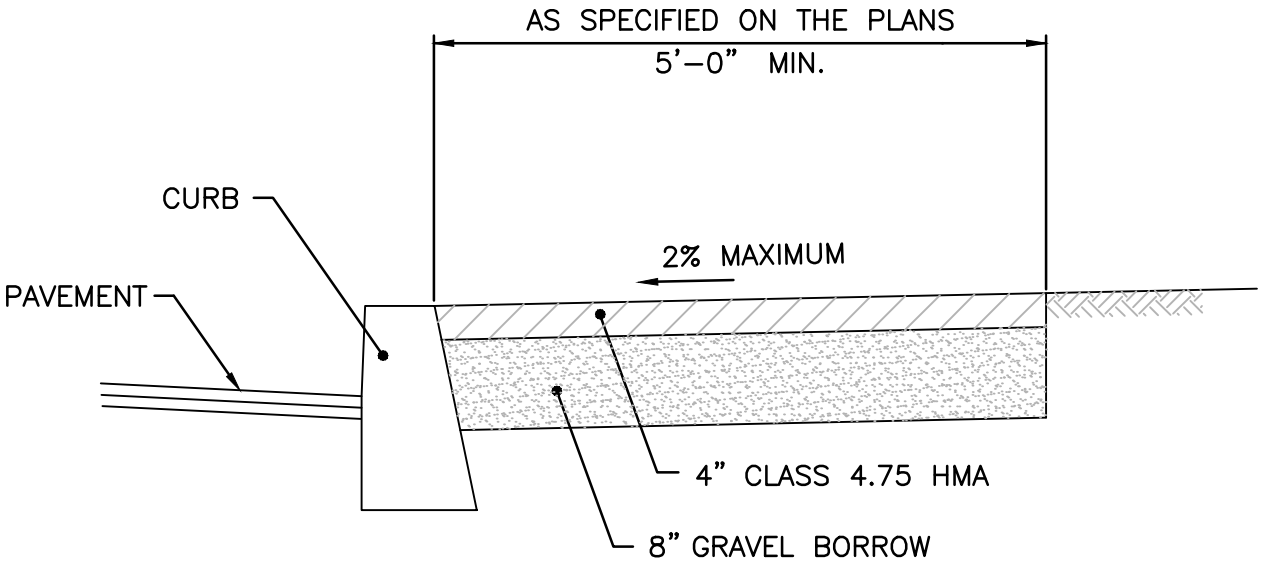
CEMENT CONCRETE SIDEWALK

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.1.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05
2	MLP	Jun 10
3	AMM	Jan 25

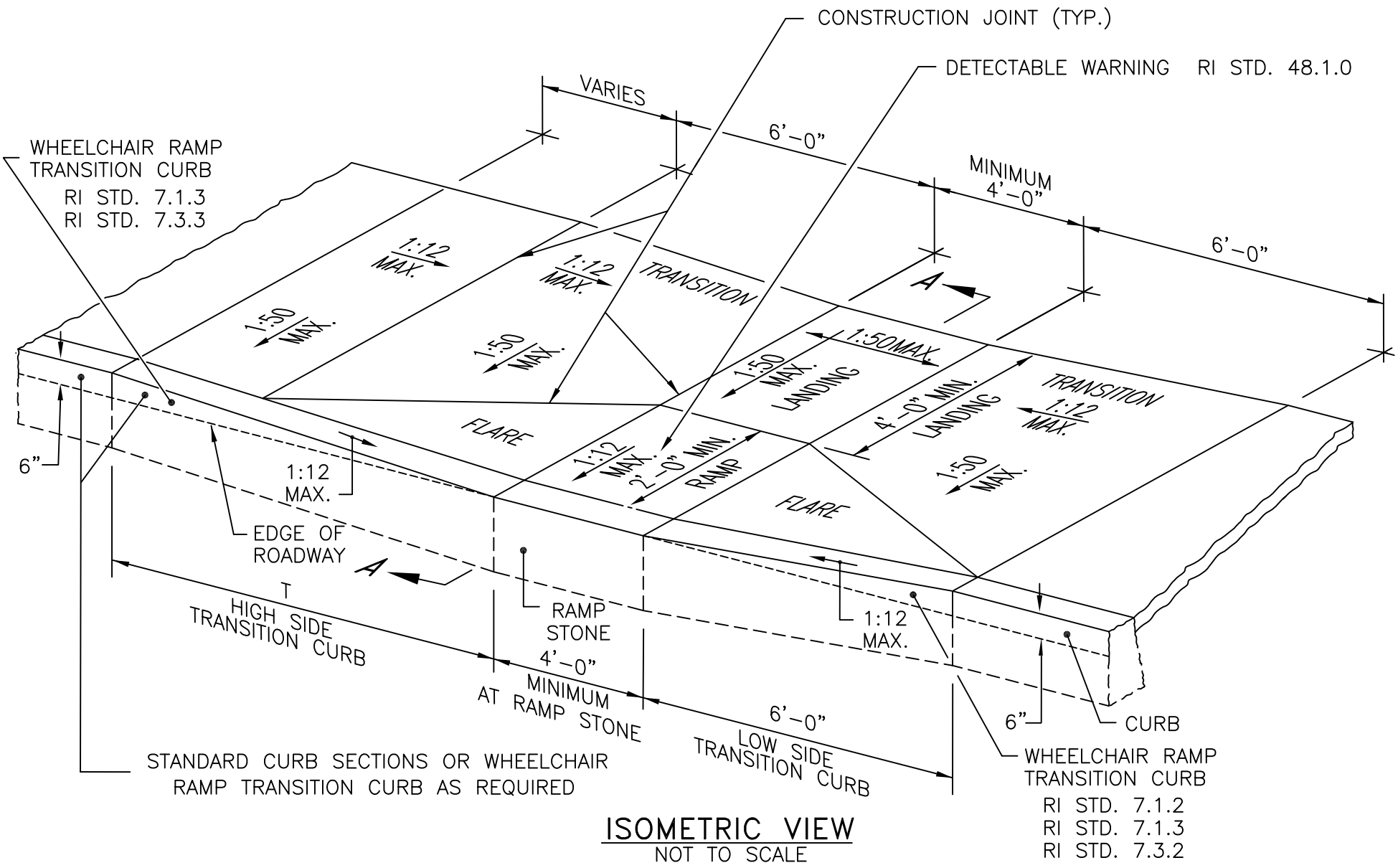
ASPHALT SIDEWALK

Robert Rocchio
Chief Engineer for Infrastructure
TRANSPORTATION

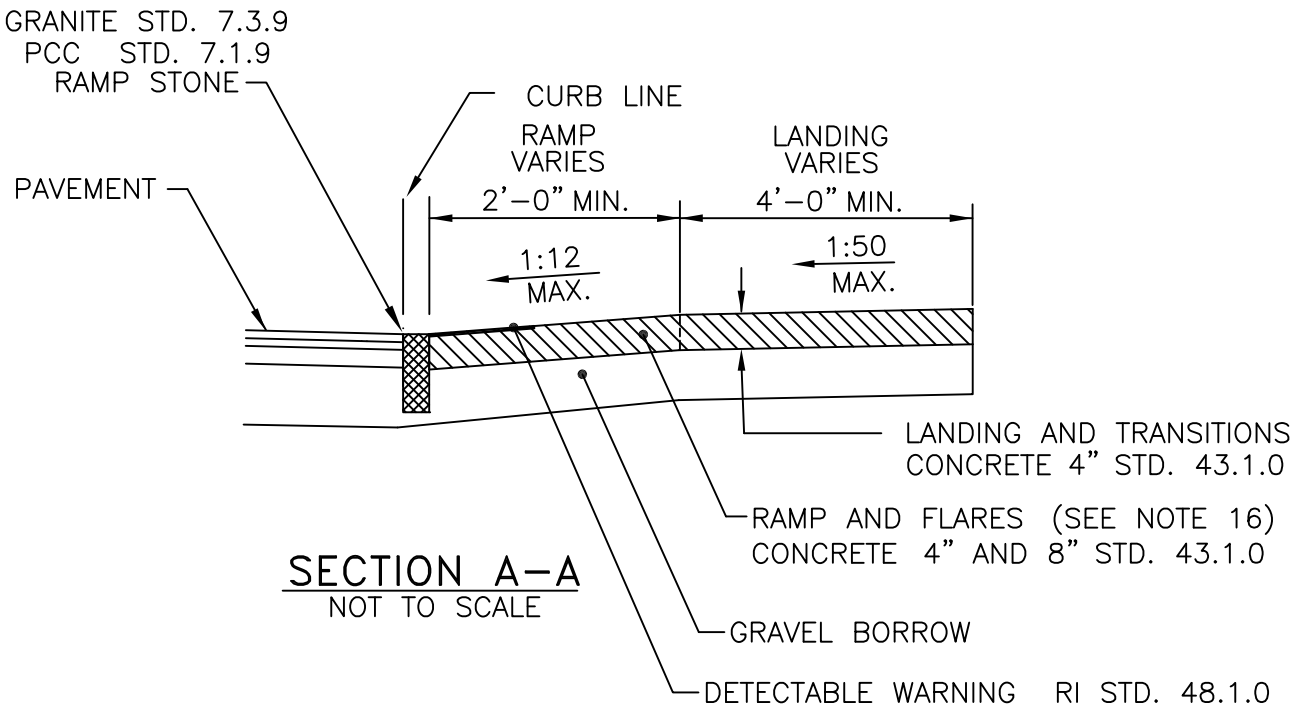
Lori A. Fisette
Director, Division of Project Management
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.2.0



ISOMETRIC VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP SHALL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'–0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT BE STEEPER THAN 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
15. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS
16. 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID–BLOCK) LOCATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Oct 2005
2	MLP	Jun 2008
3	MLP	Sep 2012

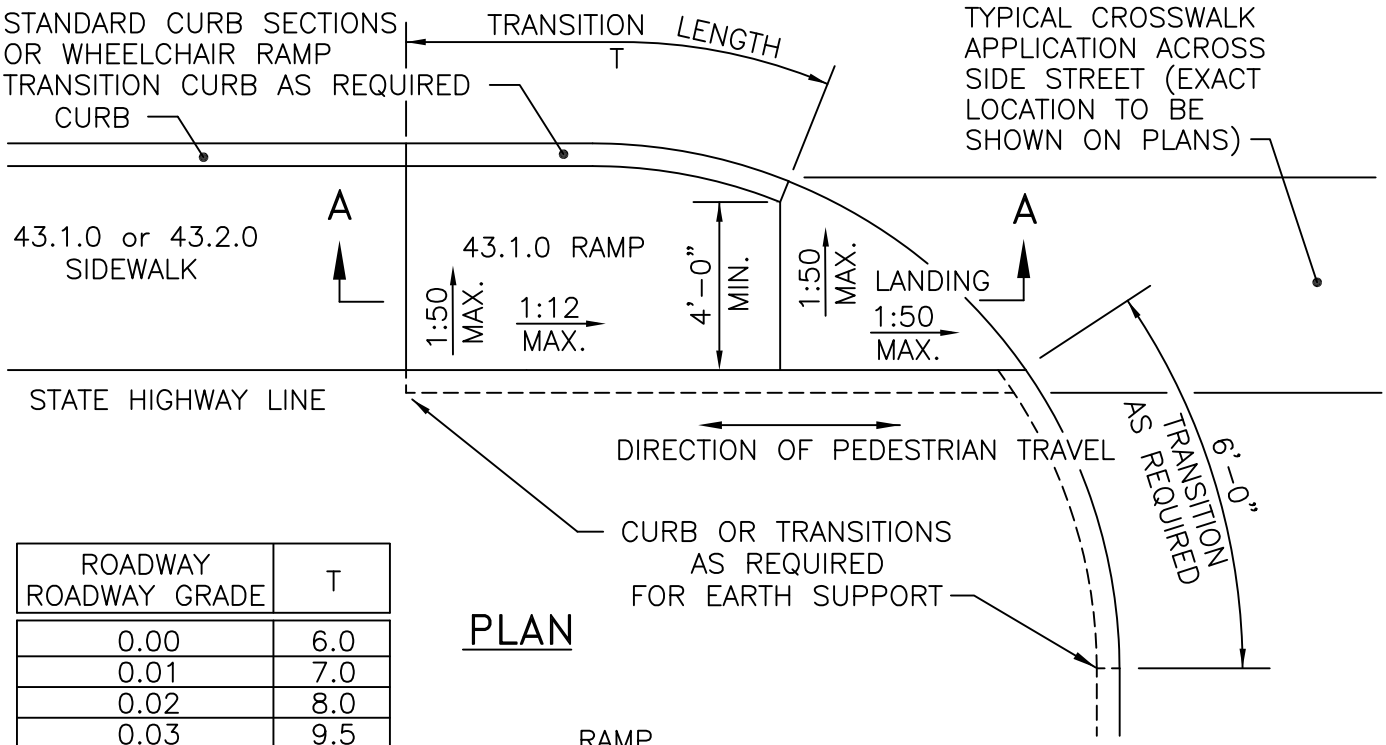
WHEELCHAIR RAMP

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

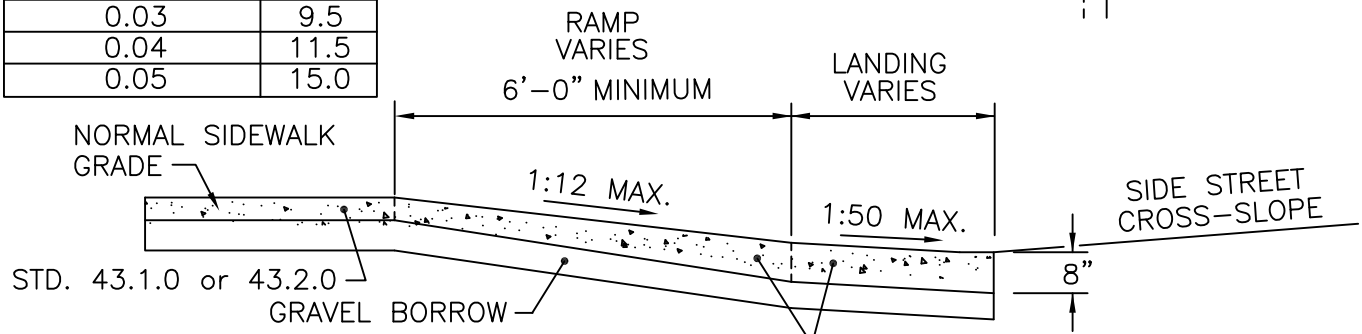
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.3.0



PLAN

ROADWAY ROADWAY GRADE	T
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A–A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT–OF–WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION SHALL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0"(GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'–0" SHALL BE MAINTAINED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Dec 2005
2	MLP	Sep 2012

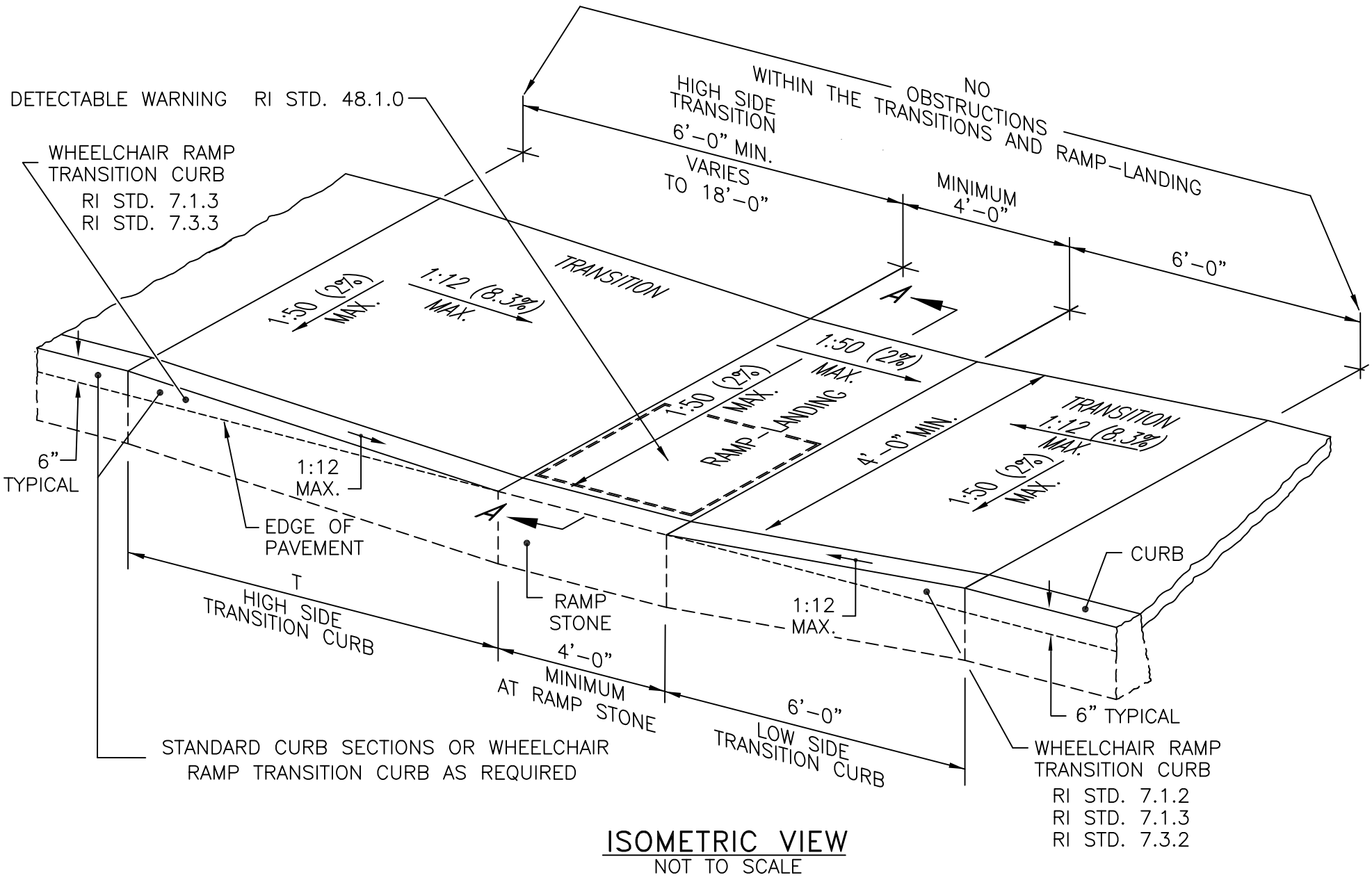
WHEELCHAIR RAMP FOR LIMITED RIGHT–OF–WAY AREAS

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

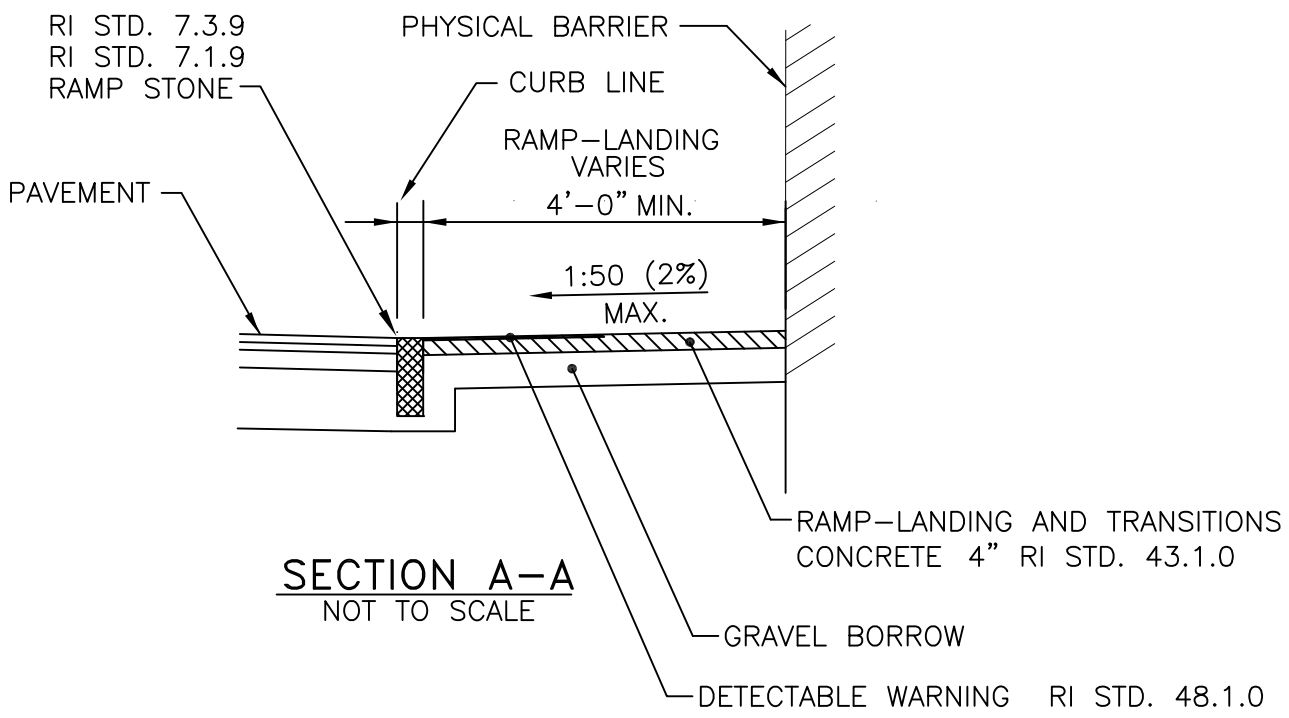
JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.3.1



ISOMETRIC VIEW
NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0
> 0.05	18.0



SECTION A–A
NOT TO SCALE

NOTES:

1. THIS DETAIL MAY BE USED WHEN A PHYSICAL BARRIER IS PRESENT AND THERE IS INSUFFICIENT ROOM TO PROPERLY CONSTRUCT AN ADA ACCESSIBLE RAMP AND LANDING; A TECHNICAL INFEASIBILITY FINDING IS REQUIRED.
2. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
3. THE RAMP–LANDING AND TRANSITIONS SHALL BE FREE OF OBSTRUCTIONS.
4. LOCATION OF THE RAMP–LANDING IS AS SHOWN ON CONTRACT DRAWINGS.
5. AN UNOBSTRUCTED PEDESTRIAN ACCESS ROUTE (PATH OF TRAVEL) WITH A MINIMUM WIDTH OF 4'–0" SHALL BE MAINTAINED.
6. THE ENTRANCE OF THE RAMP–LANDING SHALL BE FLUSH WITH THE PAVEMENT.
7. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
8. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
9. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

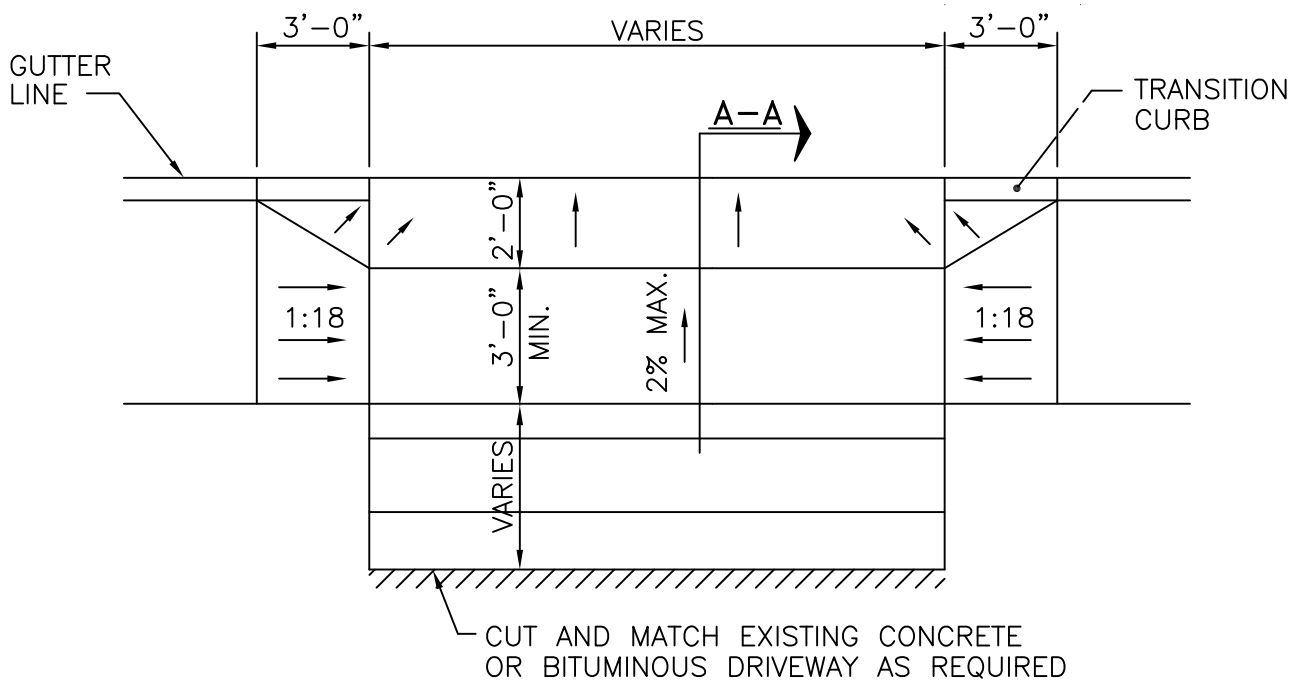
RAMP–LANDING FOR NARROW SIDEWALK

CHIEF ENGINEER TRANSPORTATION

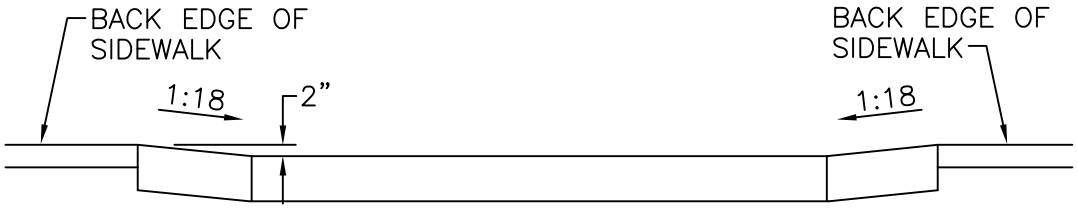
CHIEF DESIGN ENGINEER TRANSPORTATION

MARCH 31, 2015
ISSUE DATE

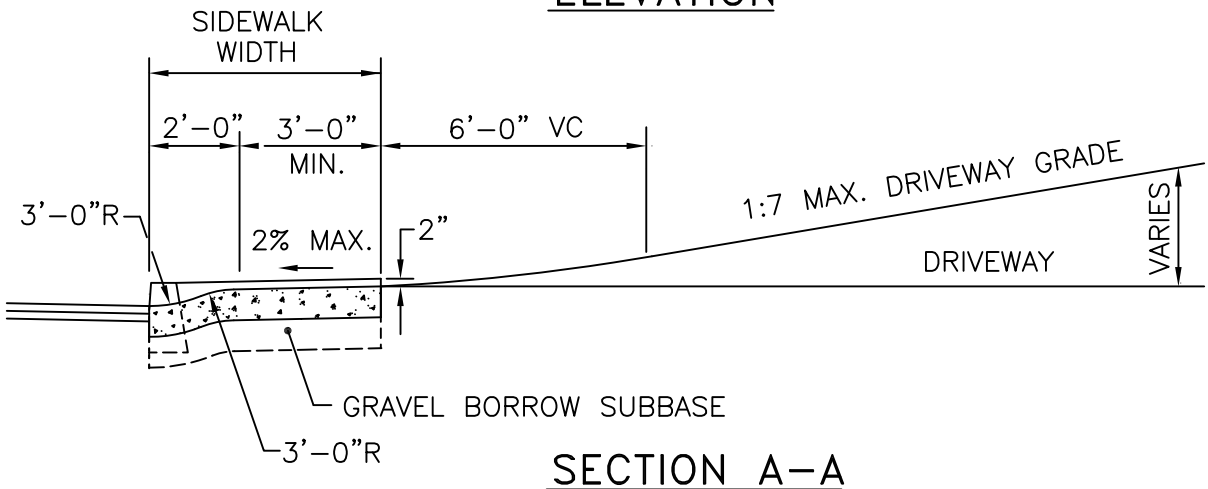
R.I. STANDARD 43.3.2



PLAN



ELEVATION



SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN DRIVEWAY IS BELOW BACK EDGE OF SIDEWALK PROFILE, STD. 43.4.1 MUST BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/01/05
2	MLP	6/27/08
3	MLP	6/01/10

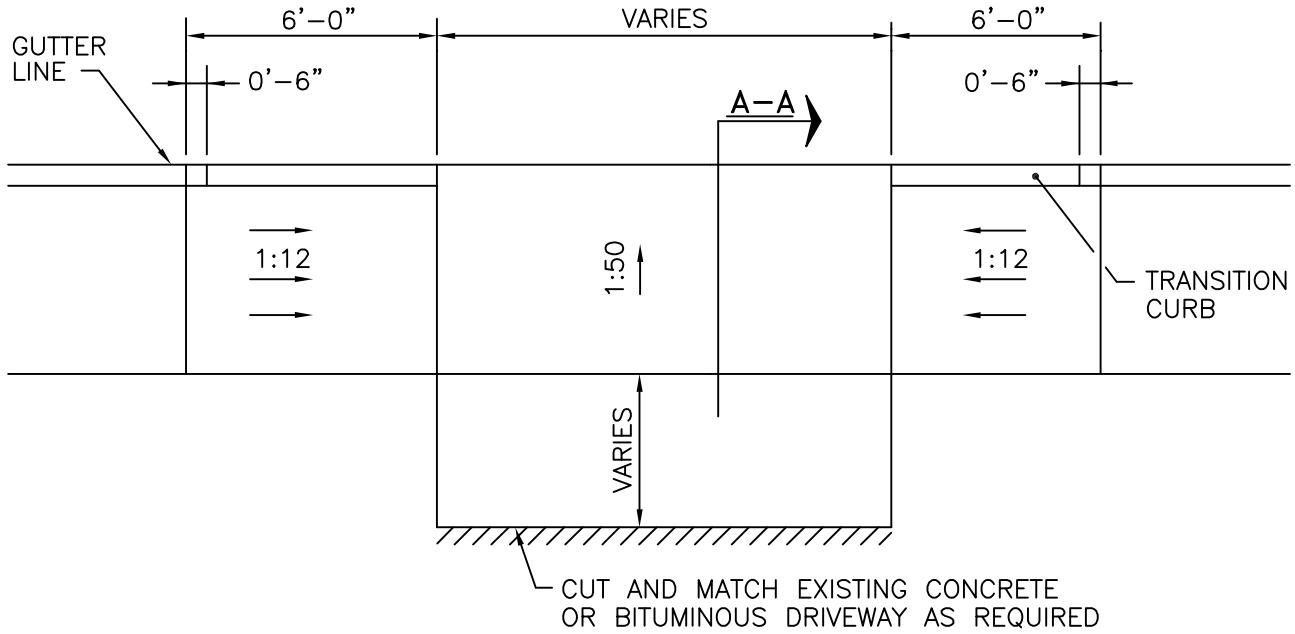
DRIVEWAY DEVELOPMENT FOR 3'–0" TRANSITION CURB

CHIEF ENGINEER TRANSPORTATION

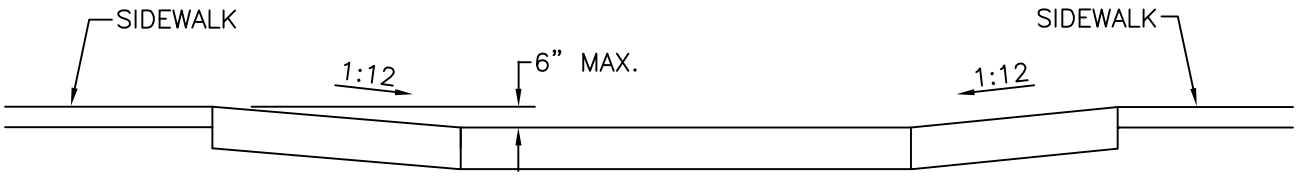
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

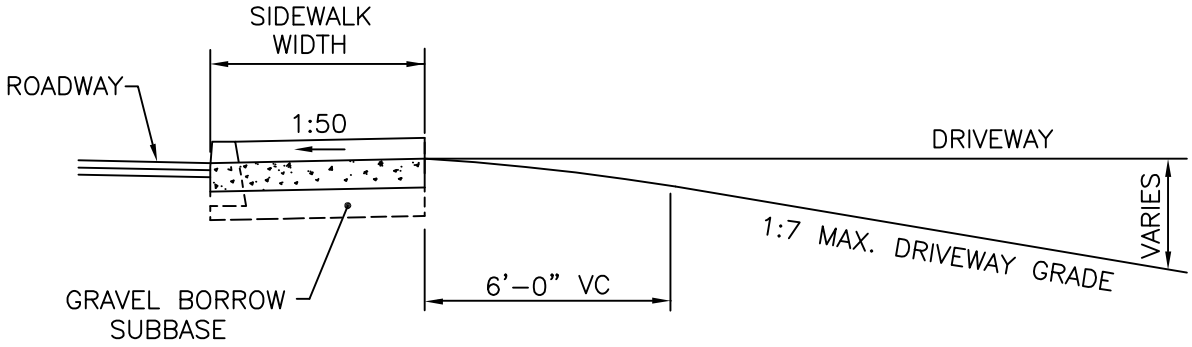
R.I. STANDARD 43.4.0



PLAN



ELEVATION



SECTION A–A

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/05
2	MLP	6/27/08

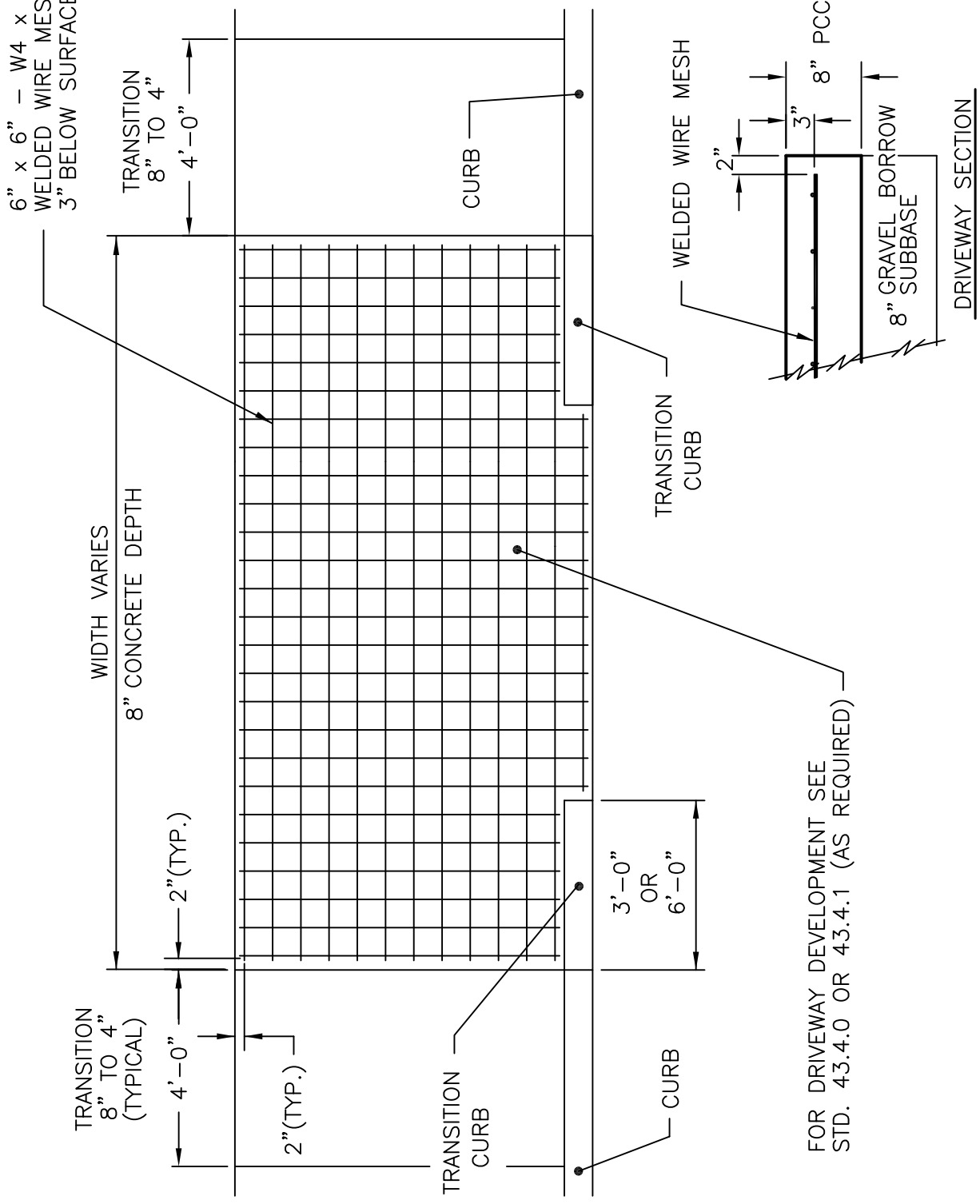
DRIVEWAY DEVELOPMENT FOR 6'–0" TRANSITION CURB

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.4.1



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	1/10/05
2	MLP	7/21/06
3	MLP	6/01/10

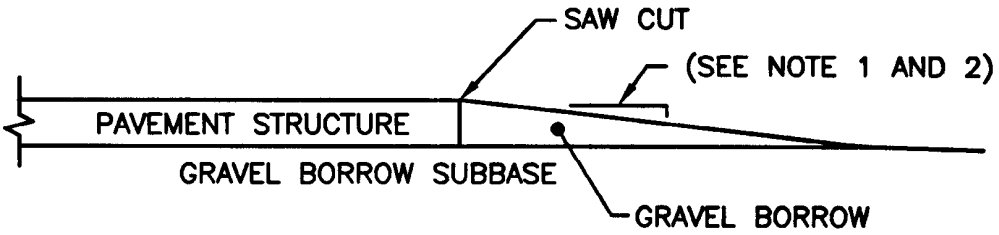
CEMENT CONCRETE DRIVEWAYS

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 43.5.0



NOTES:

1. TRANSVERSE DROP-OFF:
   POSTED SPEED ≤ 35 M.P.H.: 5 FEET HORIZONTALLY TO 1 INCH VERTICALLY
   POSTED SPEED > 35 M.P.H.: 10 FEET HORIZONTALLY TO 1 INCH VERTICALLY
2. LONGITUDINAL DROP-OFF (OUTSIDE EDGES OF PAVEMENT):
   POSTED SPEED ≤ 35 M.P.H.: DROP-OFFS > 3" BUT < 5" SHALL BE TAPERED TO A 1:1 OR FLATTER SLOPE TO EXISTING GROUND.
   ALL DROP-OFFS ≥ 5" SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.
   POSTED SPEED > 35 M.P.H. : LONGITUDINAL DROP-OFFS WILL NOT BE PERMITTED WITHIN 2'-0" OF A TRAVEL LANE. THIS AREA MUST BE AT GRADE WITH THE TRAVEL LANE. HOWEVER, SHOULD THE CONTRACTOR'S APPROVED SEQUENCE OF OPERATIONS RESULT IN OVERNIGHT DROP-OFFS GREATER THAN THREE INCHES OCURRING BETWEEN 2'-0" TO 6'-0" FROM A TRAVEL LANE, THEN THE DROP-OFFS SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

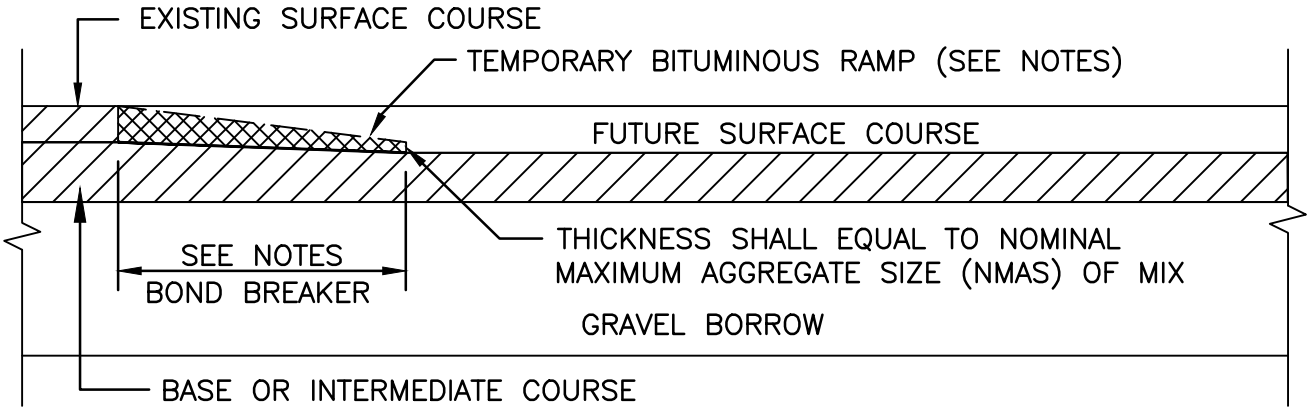
PAVEMENT REMOVAL DROP-OFF DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 47.1.0



NOTES:

1) FOR POSTED SPEEDS OF 35 MPH OR LESS, TRANSVERSE DROP–OFFS SHALL BE GRADED AT A SLOPE NOT STEEPER THAN 2 FEET HORIZONTAL TO 1 INCH VERTICAL. FOR POSTED SPEEDS GREATER THAN 35 MPH, TRANSVERSE DROP–OFFS SHALL BE GRADED AT A SLOPE NOT STEEPER THAN 5 FEET HORIZONTAL TO 1 INCH VERTICAL.

2) A BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED BETWEEN THE TEMPORARY RAMP AND UNDERLYING AREA. PRIOR TO PLACING THE SURFACE COURSE, THE BOND BREAKER WILL BE REMOVED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	AMM	Jan 25

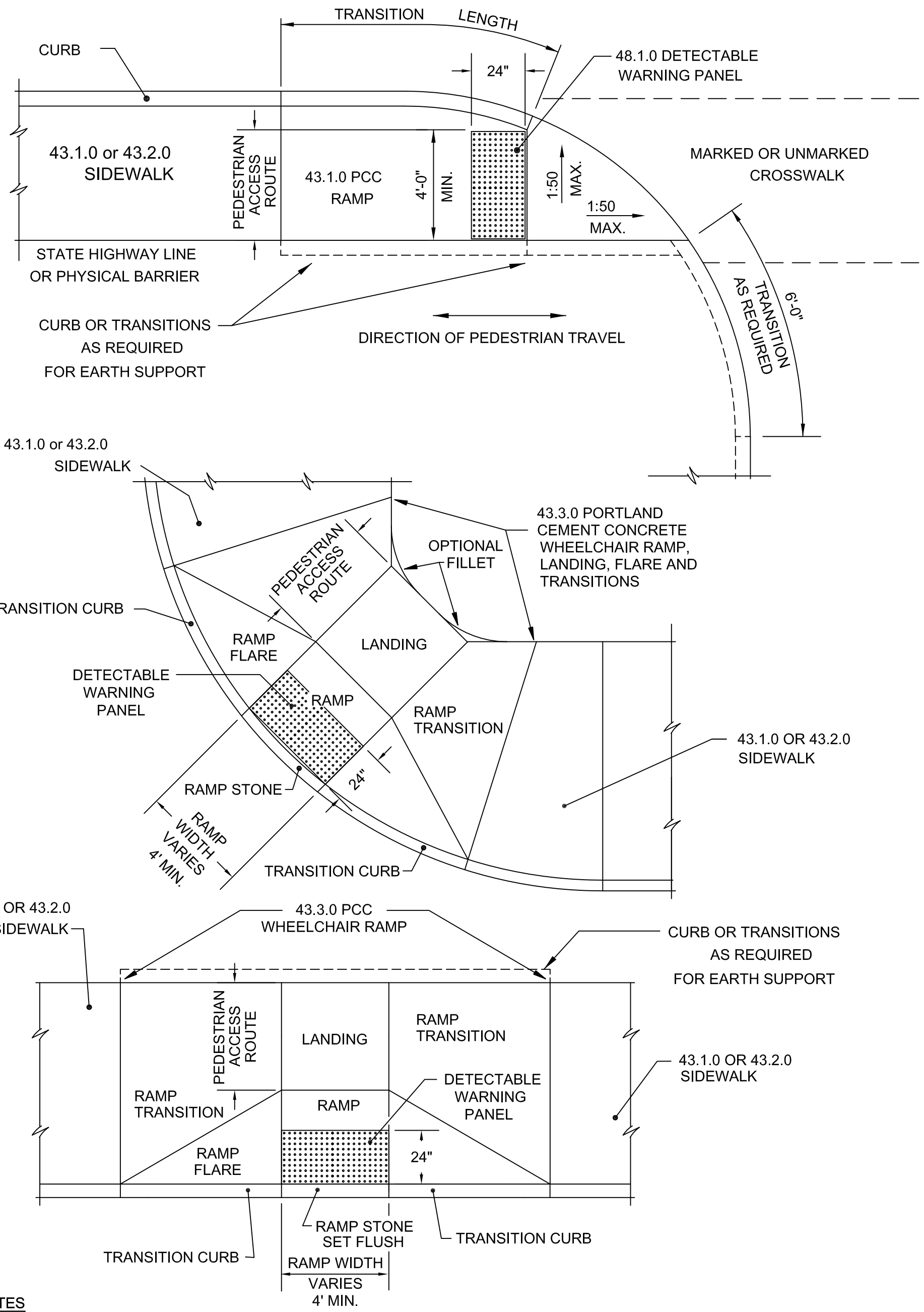
PAVEMENT TRANSVERSE DROP–OFFS CUT AND MATCH

Robert Rocchio
Chief Engineer for Infrastructure
TRANSPORTATION

Lori A. Fisette
Director, Division of Project Management
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 47.1.1



NOTES

1. DETECTABLE WARNING PANEL SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RHODE ISLAND STANDARD SPECIFICATIONS; PANEL TO MATCH RAMP WIDTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 2005
2	MLP	Sep 2012

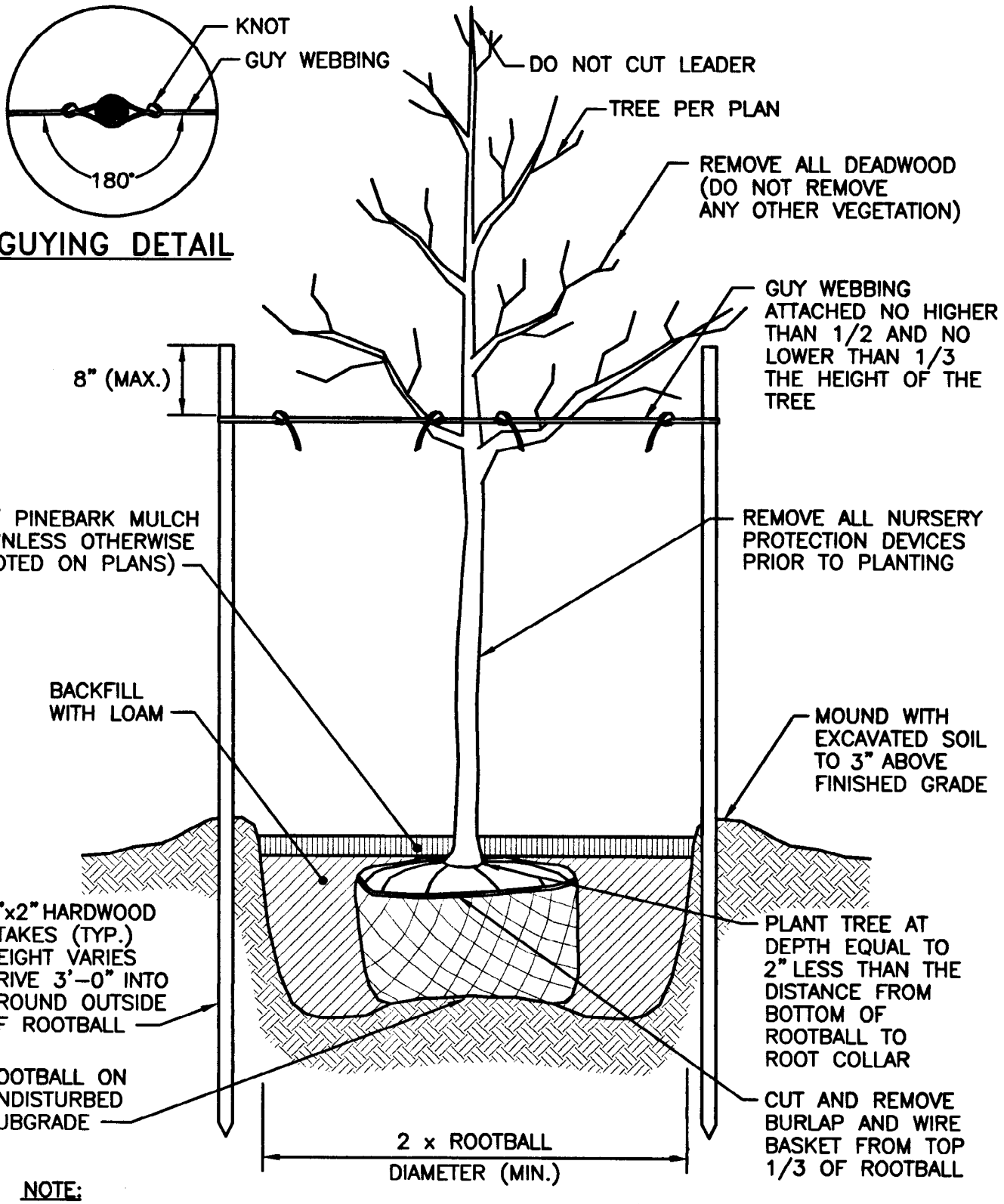
DETECTABLE WARNING PANEL PLACEMENT

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 48.1.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

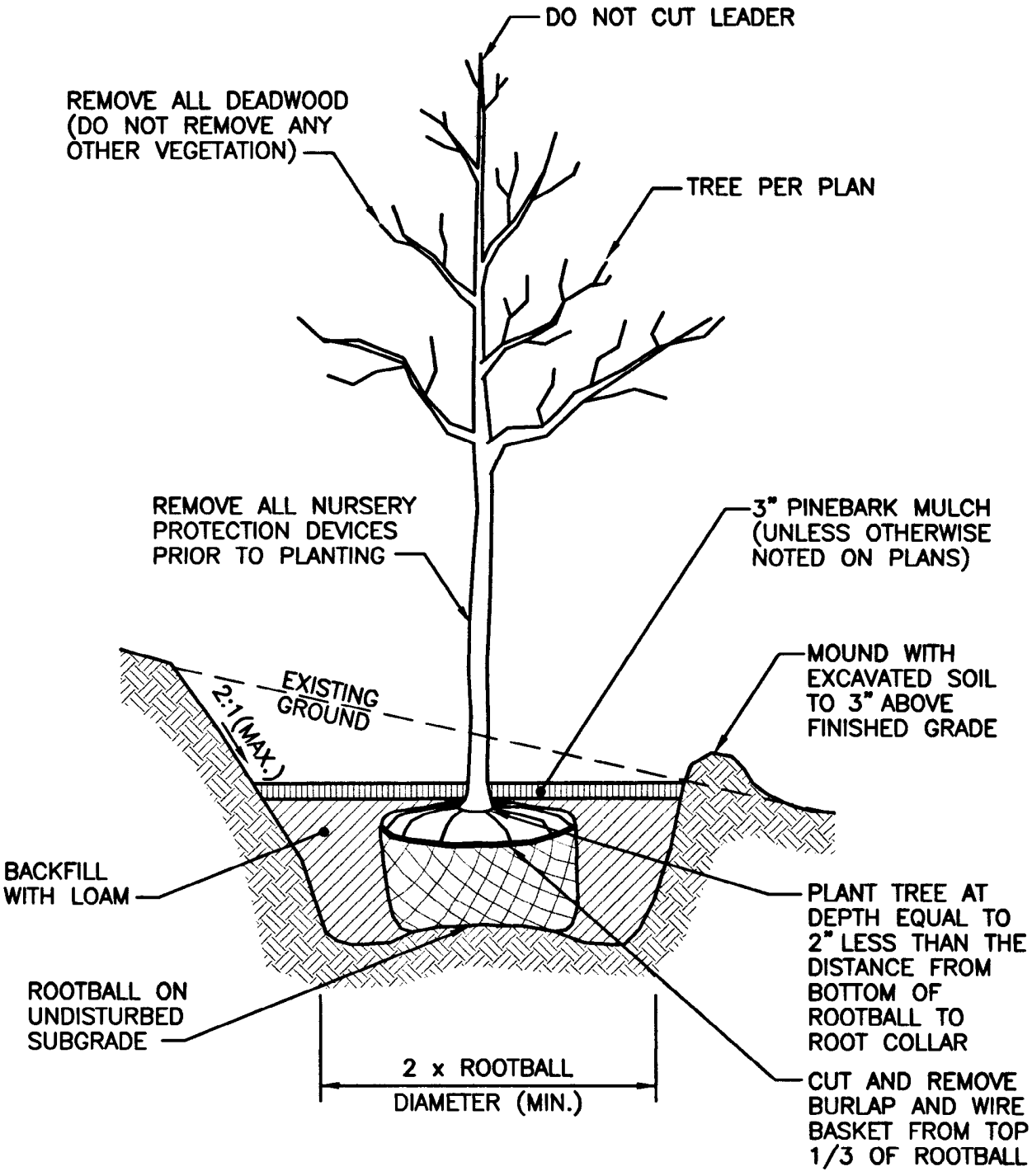
LARGE TREE STAKING AND PLANTING DETAIL (2" CALIPER AND GREATER)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.1.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR STAKING DETAIL SEE STD. 50.1.0

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

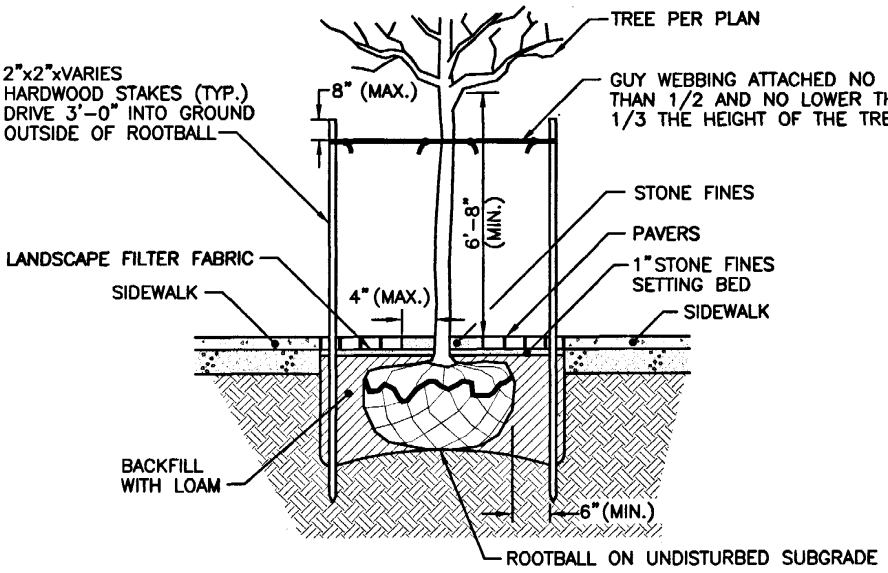
TREE PLANTING ON SLOPE

CHIEF ENGINEER TRANSPORTATION

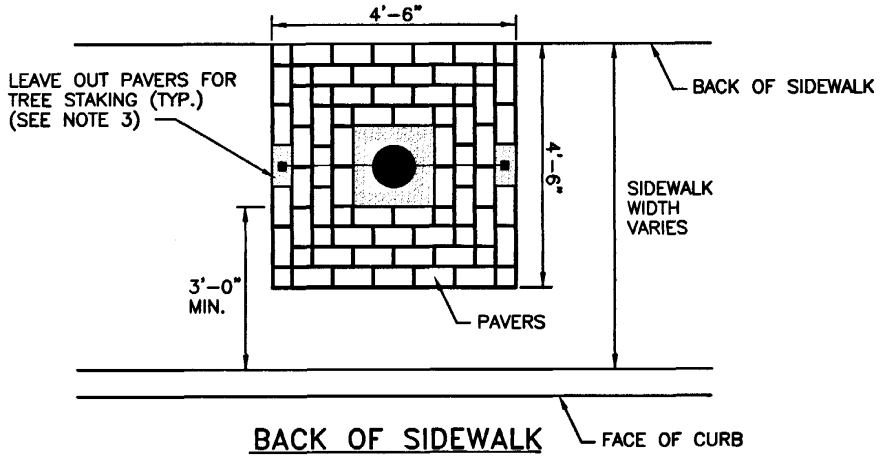
CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

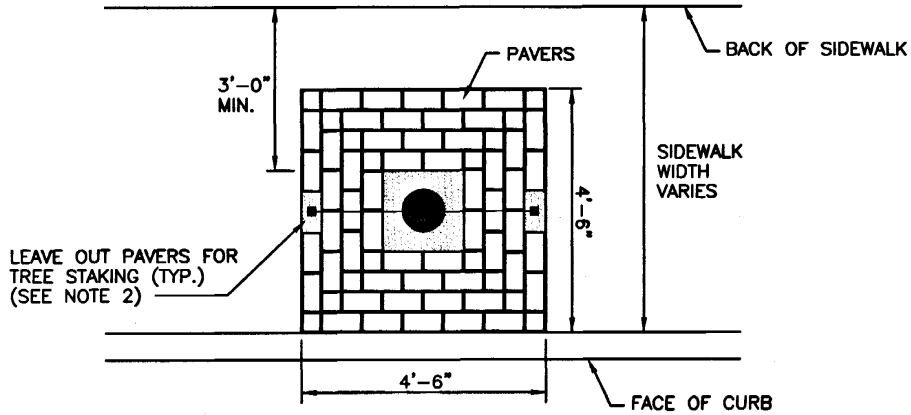
R.I. STANDARD 50.1.1



SECTION



BACK OF SIDEWALK



BACK OF CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTIONS L.06 AND L.12 OF THE R.I. STANDARD SPECIFICATIONS.
2. STAKES SHOULD BE LOCATED PARALLEL TO ROAD AND SIDEWALK.
3. AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF STAKES AND GUY WEBBING, AND FOR THE INSTALLATION OF PAVERS PREVIOUSLY LEFT OUT FOR STAKING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

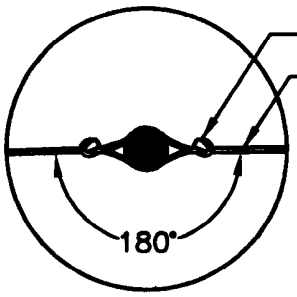
PAVER DETAIL AROUND NEW TREES

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.1.2



GUYING DETAIL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

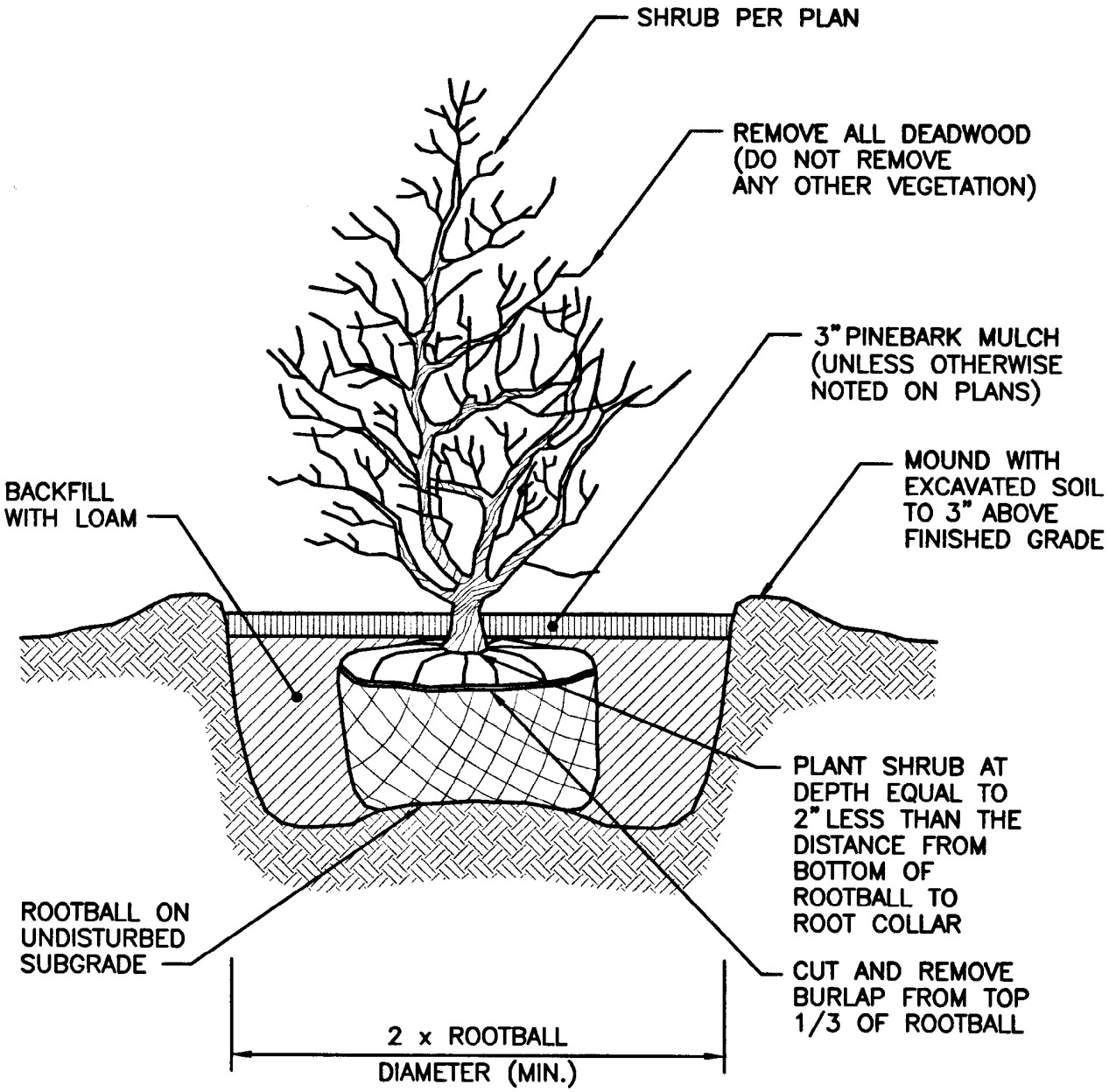
EVERGREEN TREE PLANTING DETAIL (4'-0" HIGH AND GREATER)

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.2.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

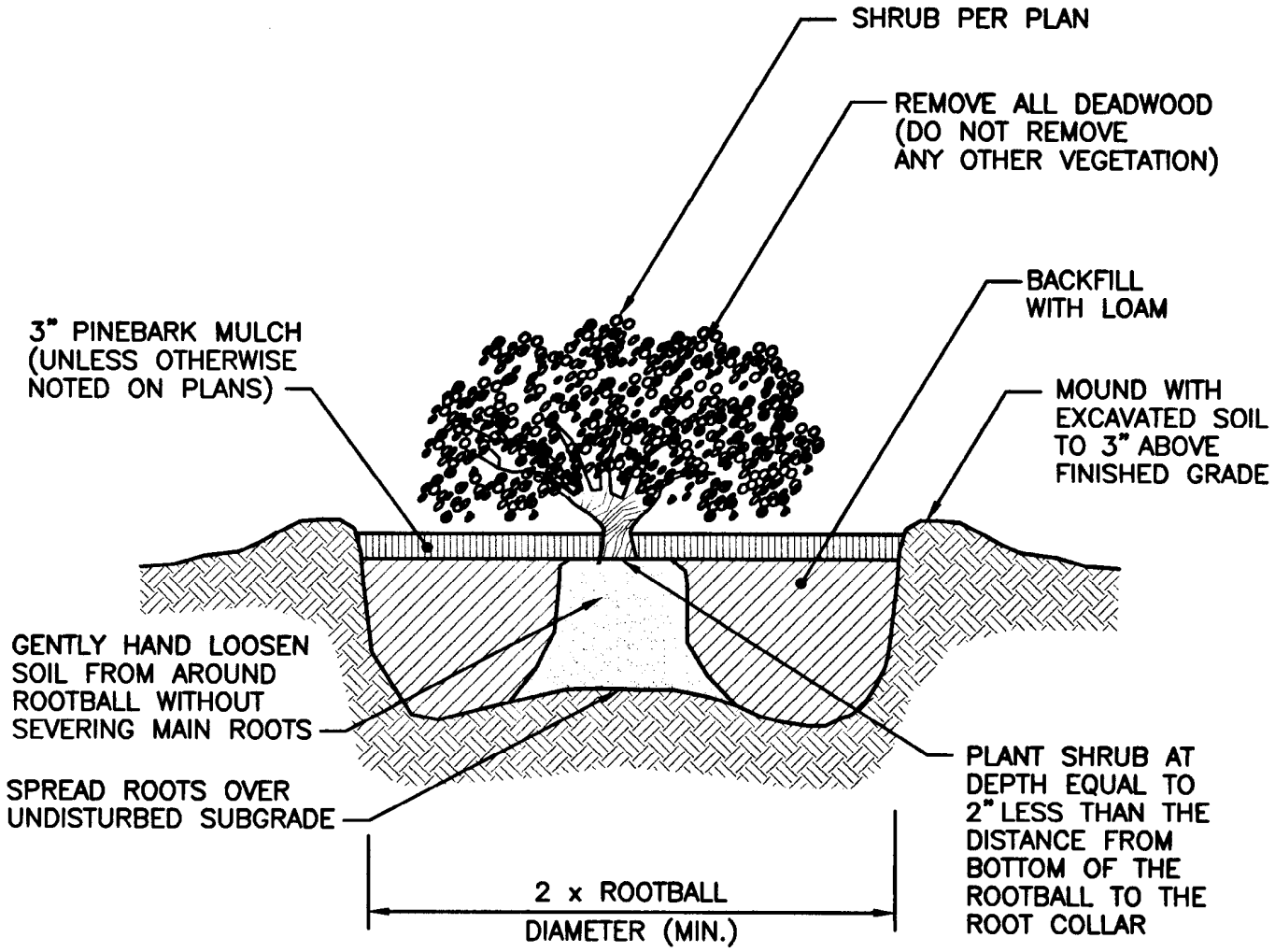
BALL AND BURLAP SHRUB PLANTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.3.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

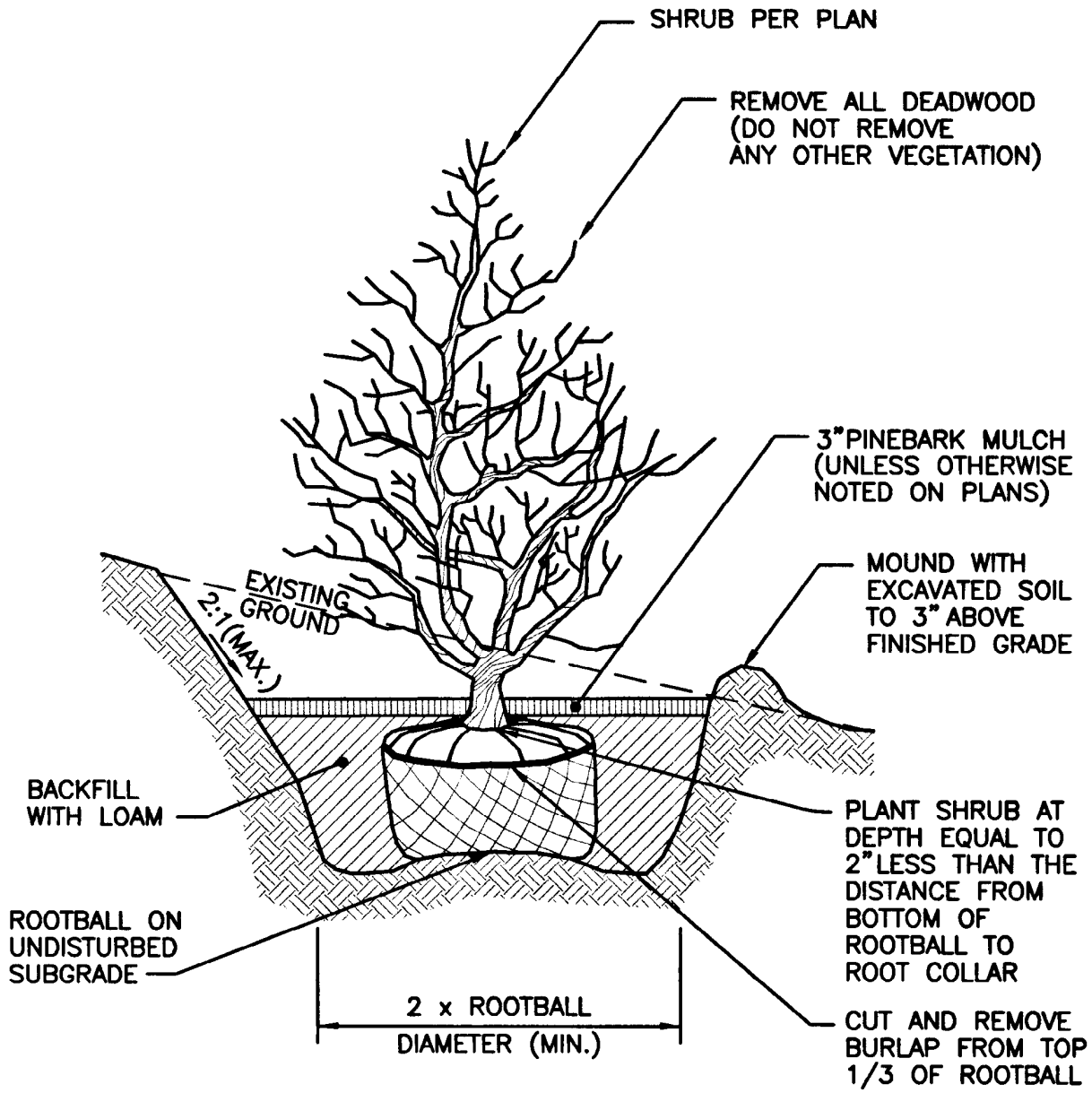
CONTAINER GROWN SHRUB PLANTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.3.1



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

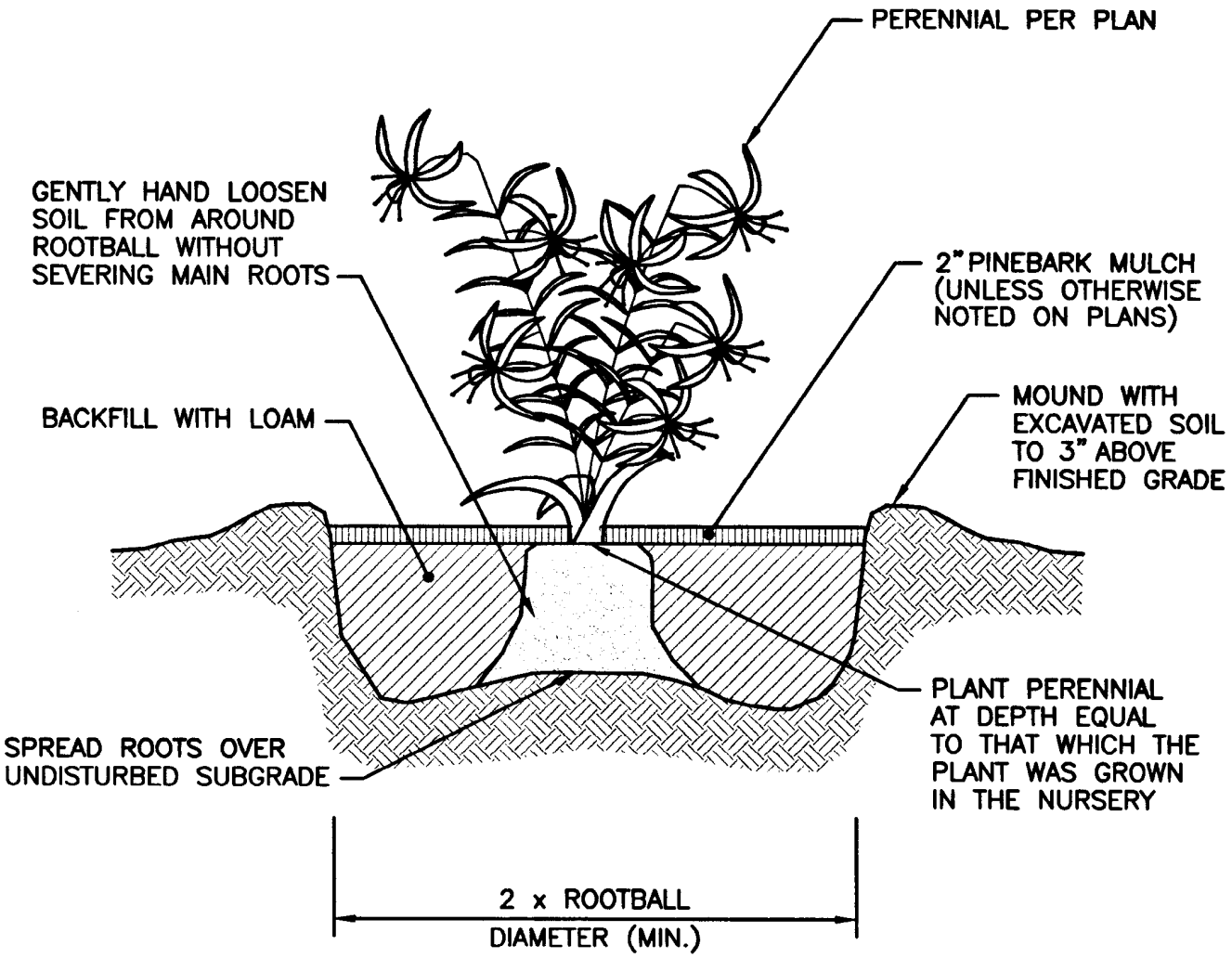
SHRUB PLANTING ON SLOPE

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.3.2



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

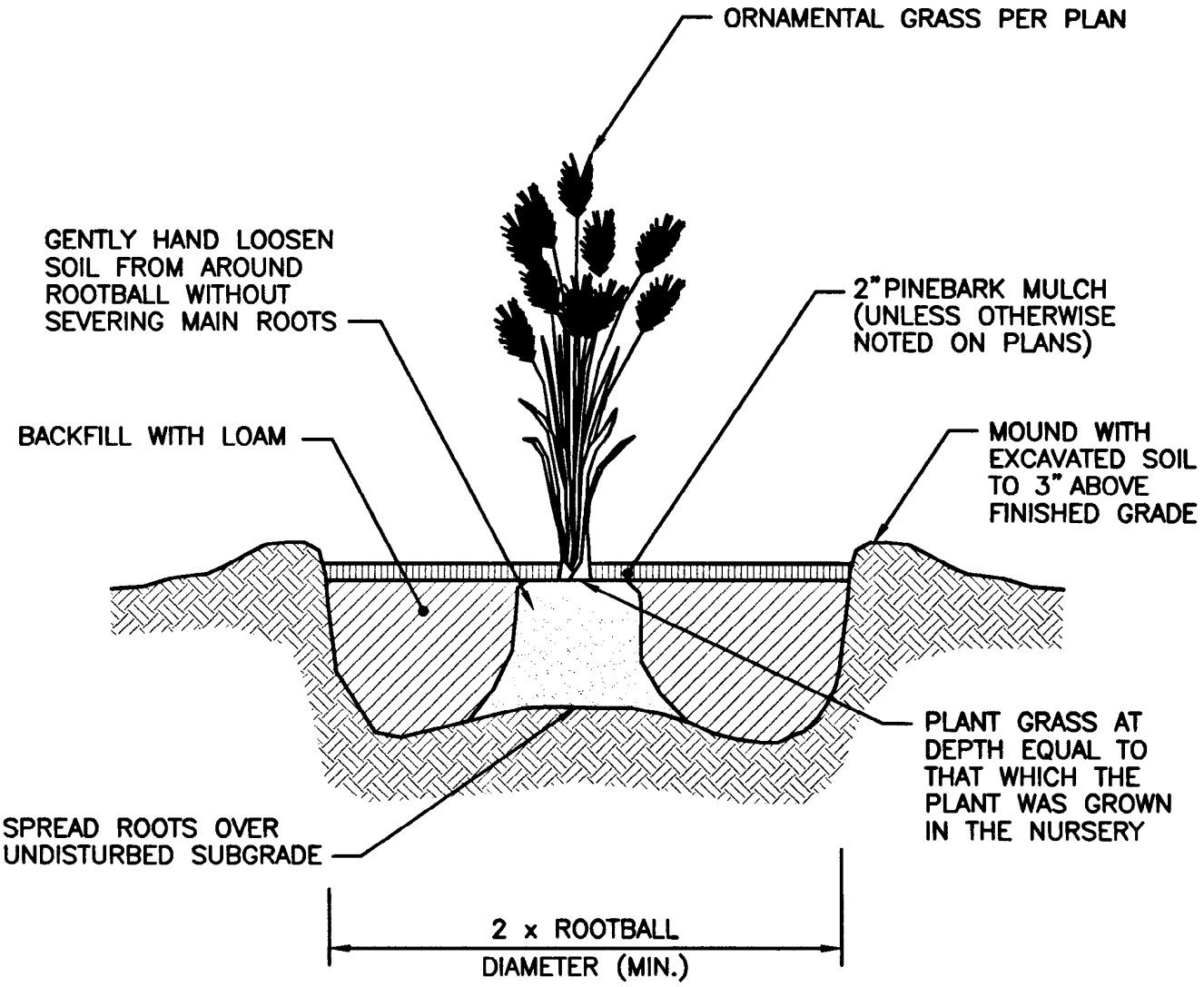
PERENNIAL PLANTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.4.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

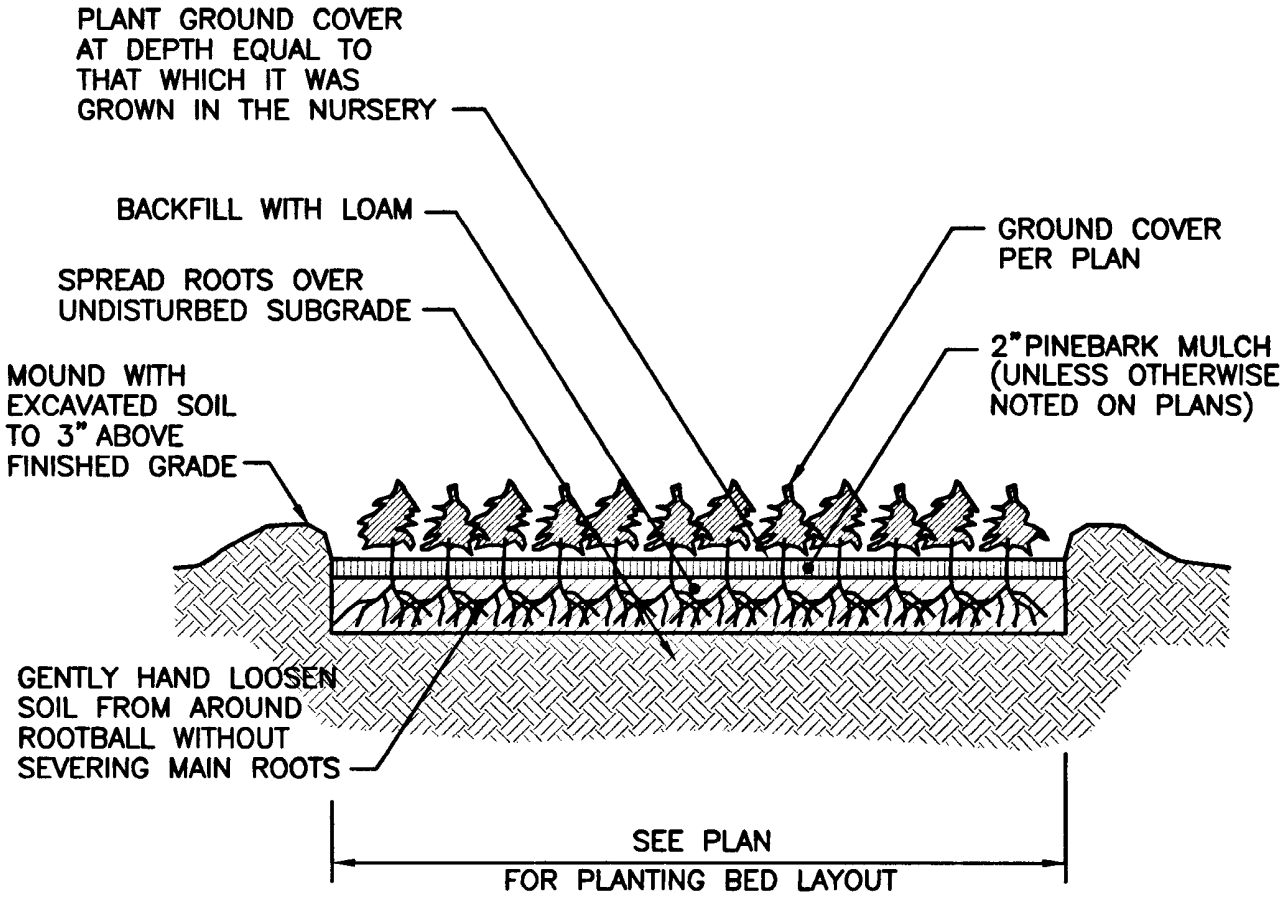
ORNAMENTAL GRASS PLANTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.5.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

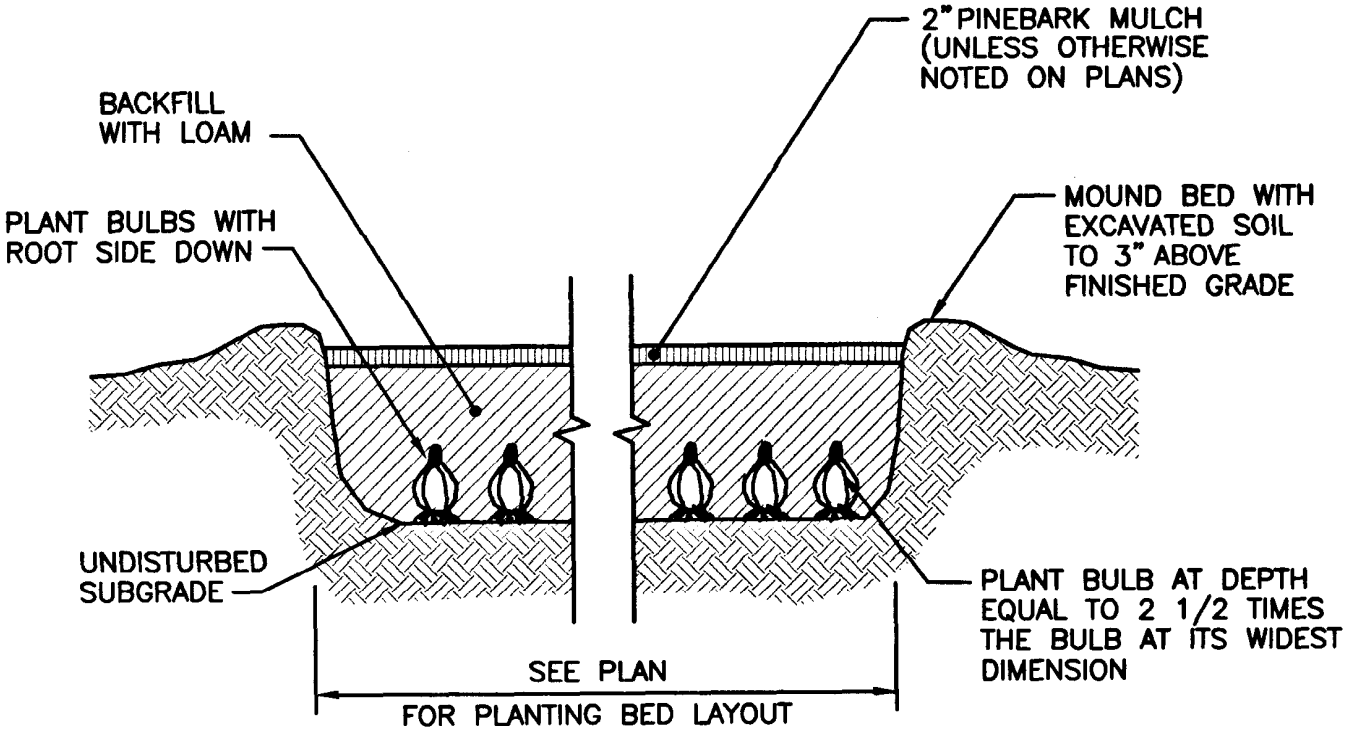
GROUNDCOVER PLANTING DETAIL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.6.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. BY HAND, SPREAD BONE MEAL OVER ENTIRE PLANTING BED AT A RATE NOT TO EXCEED 1/2 LB. PER 25 SQ. FT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

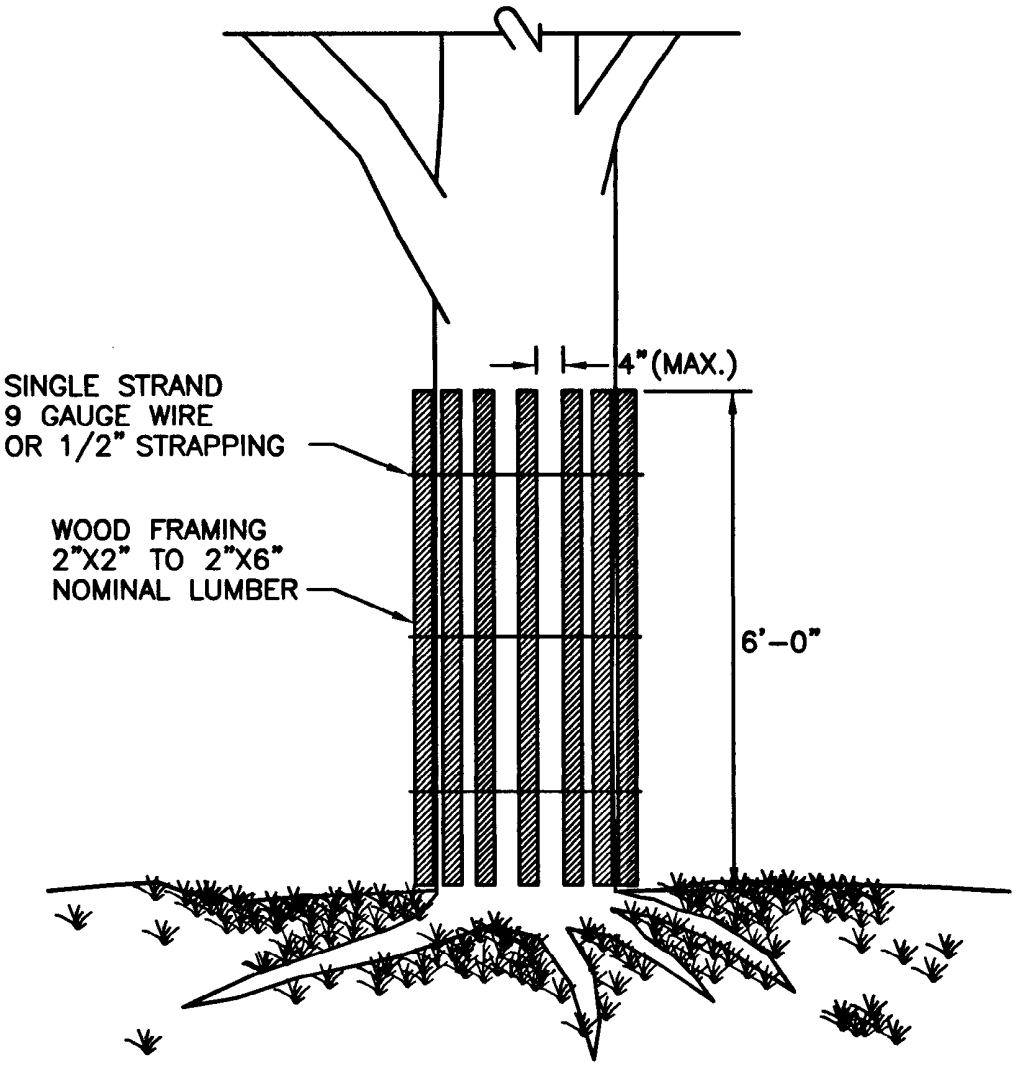
BULB PLANTING DETAIL

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 50.7.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

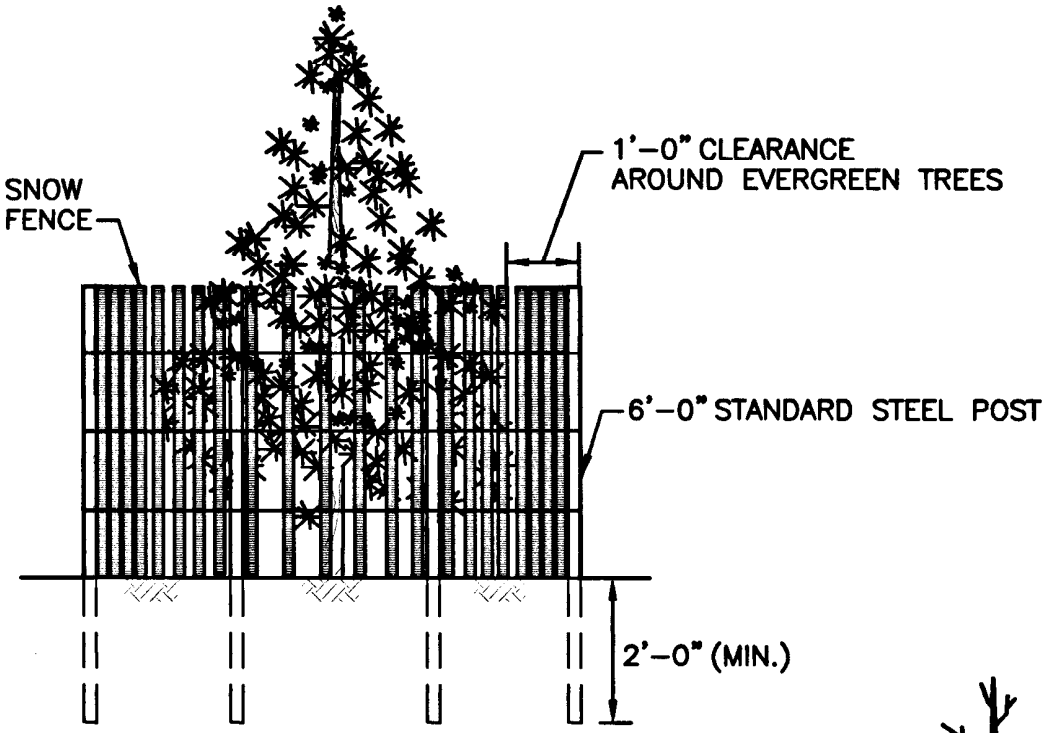
TREE PROTECTION DEVICE

CHIEF ENGINEER
TRANSPORTATION

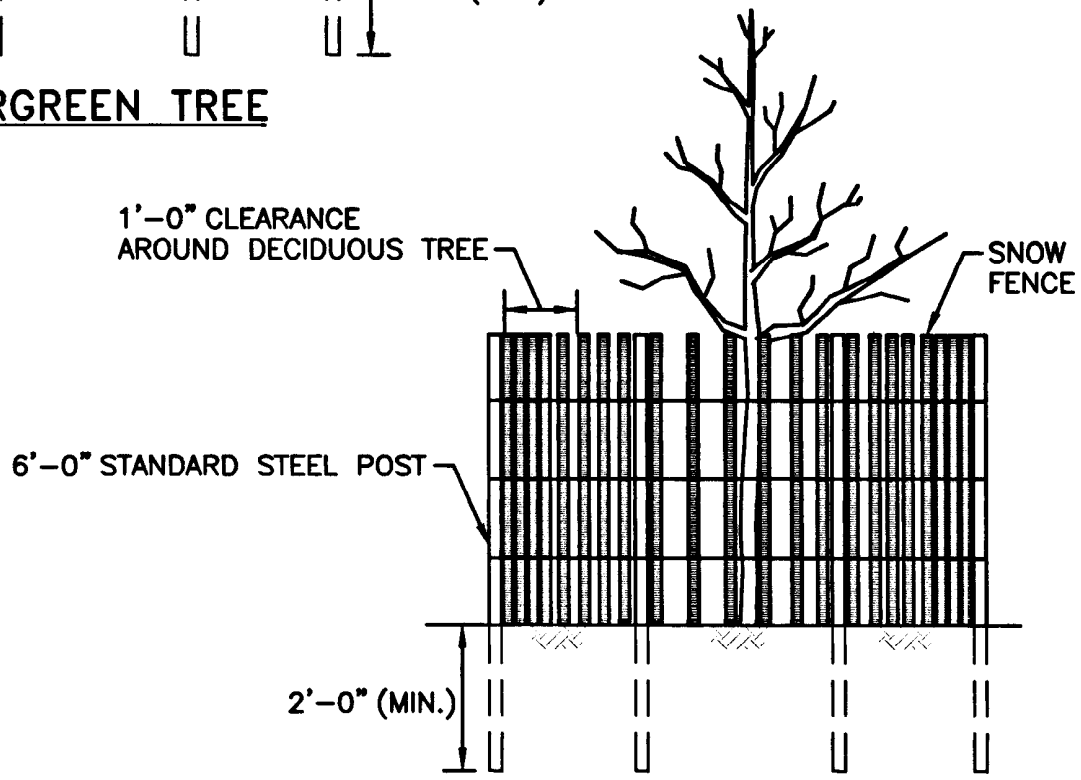
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 51.1.0



EVERGREEN TREE



DECIDUOUS TREE

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

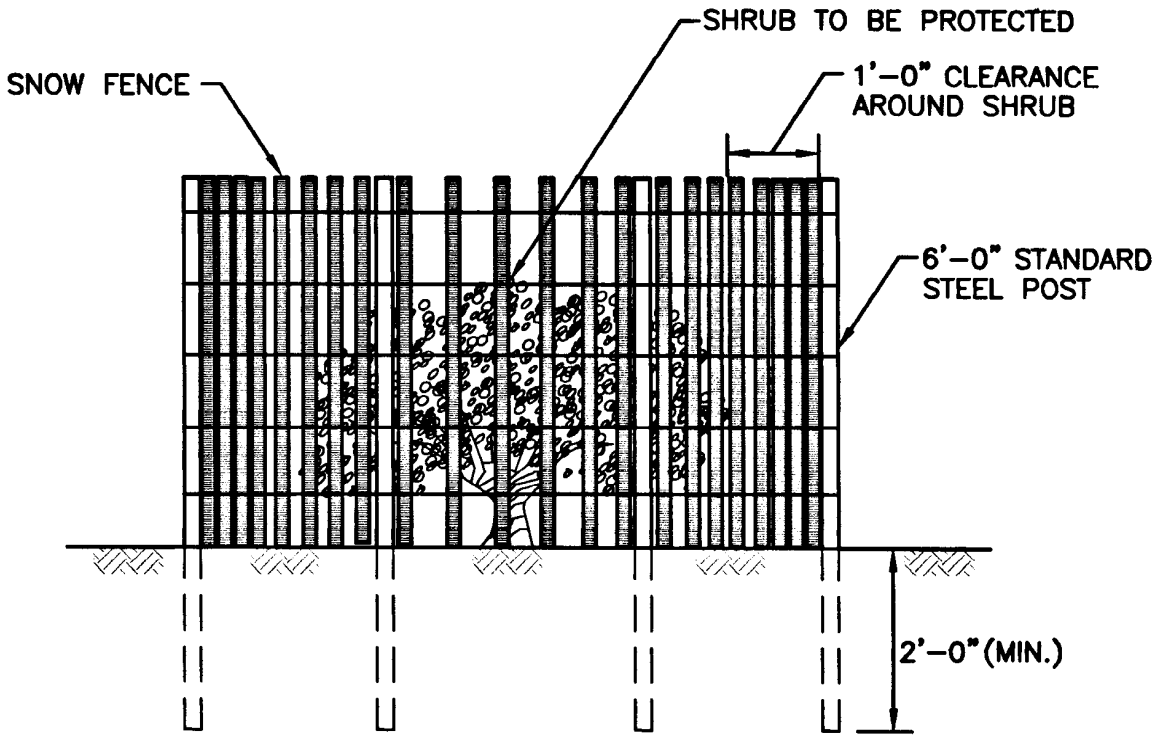
DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 51.1.1



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

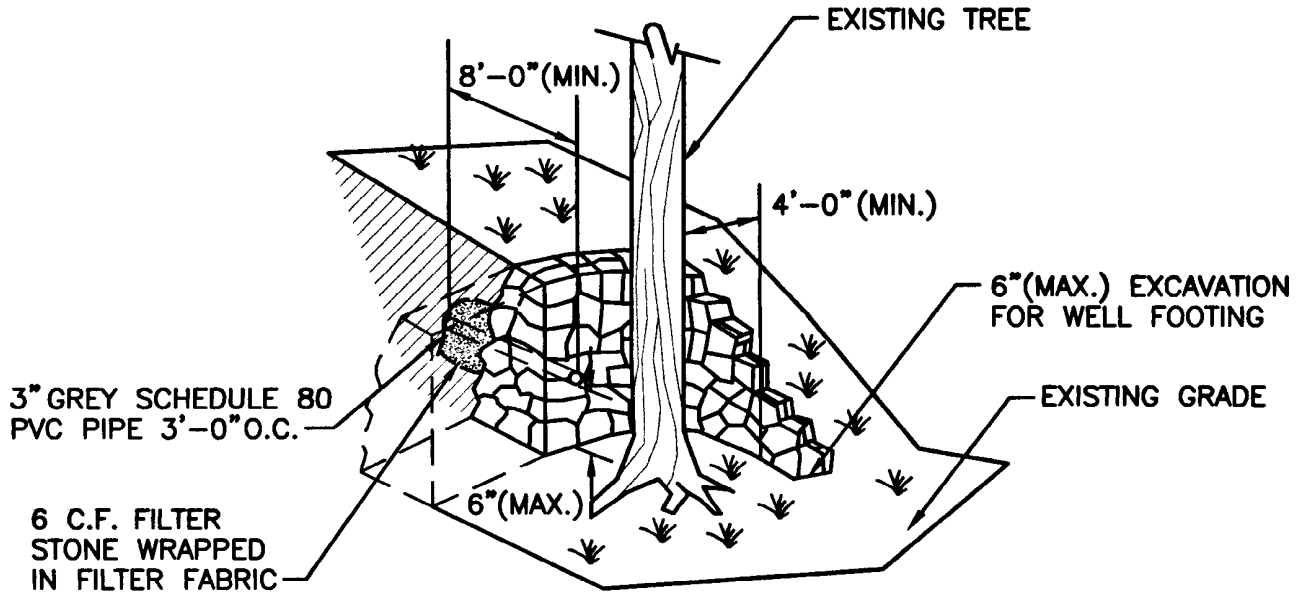
SHRUB PROTECTION DEVICE

CHIEF ENGINEER
TRANSPORTATION

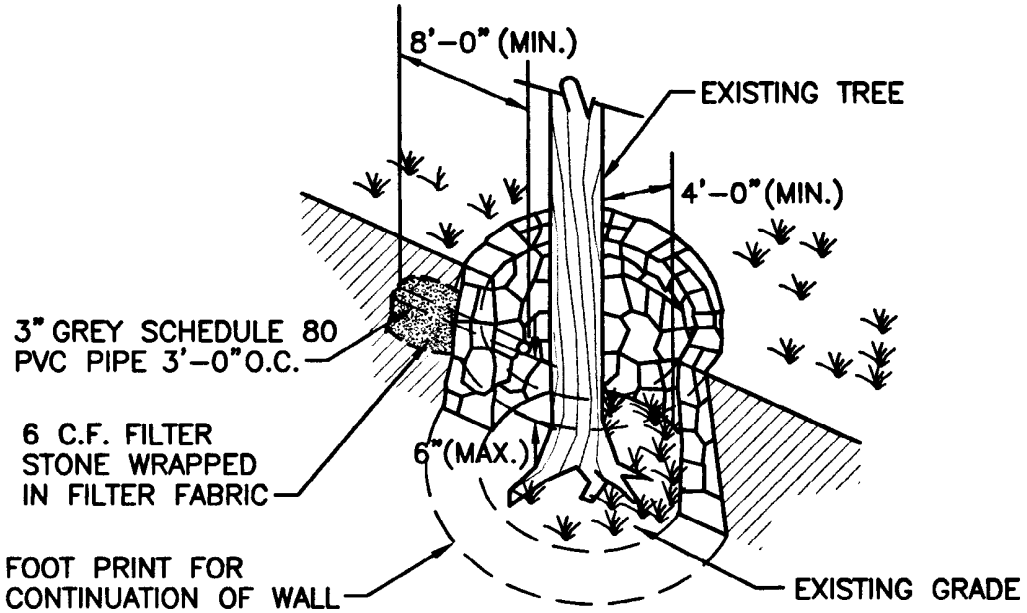
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 51.2.0



PARTIAL TREE WELL



CIRCUMFERENTIAL TREE WELL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

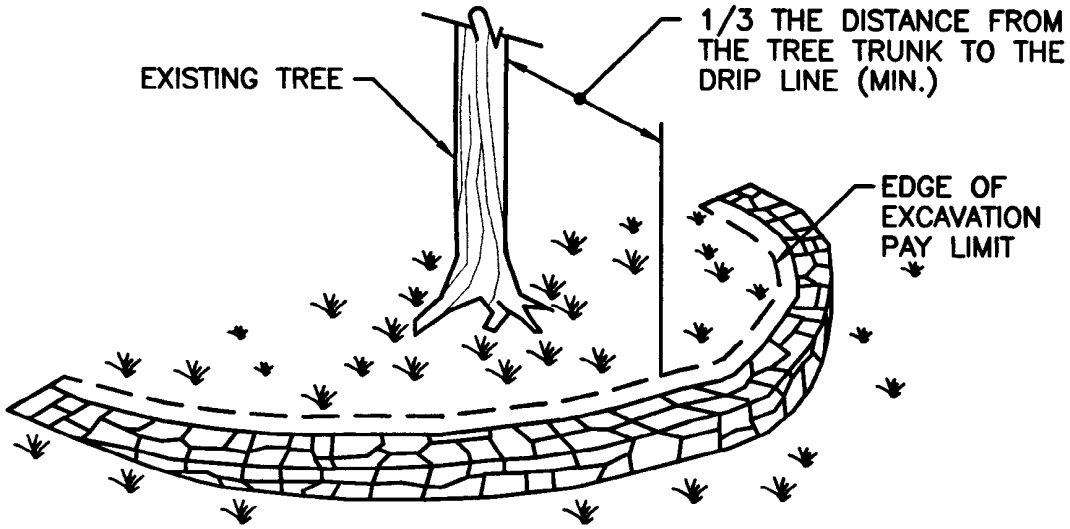
TREE WELL

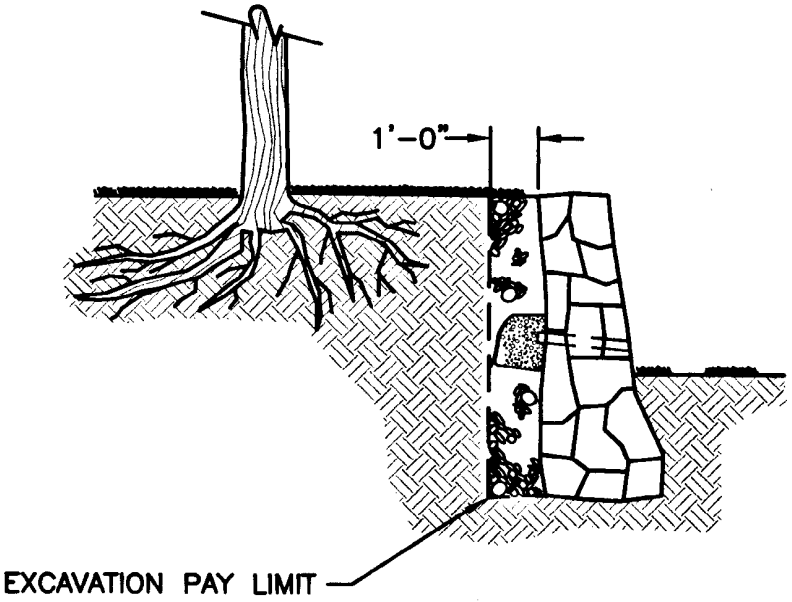
CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 51.3.0





SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR WALL INSTALLATION DETAILS REFERENCE STD. 10.0.1.
3. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL ROOT PRUNE THE TREE. ALL ROOT PRUNING SHALL BE IN ACCORDANCE WITH SECTION L.10 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

TREE WALL

CHIEF ENGINEER TRANSPORTATION

CHIEF DESIGN ENGINEER TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I. STANDARD 51.4.0