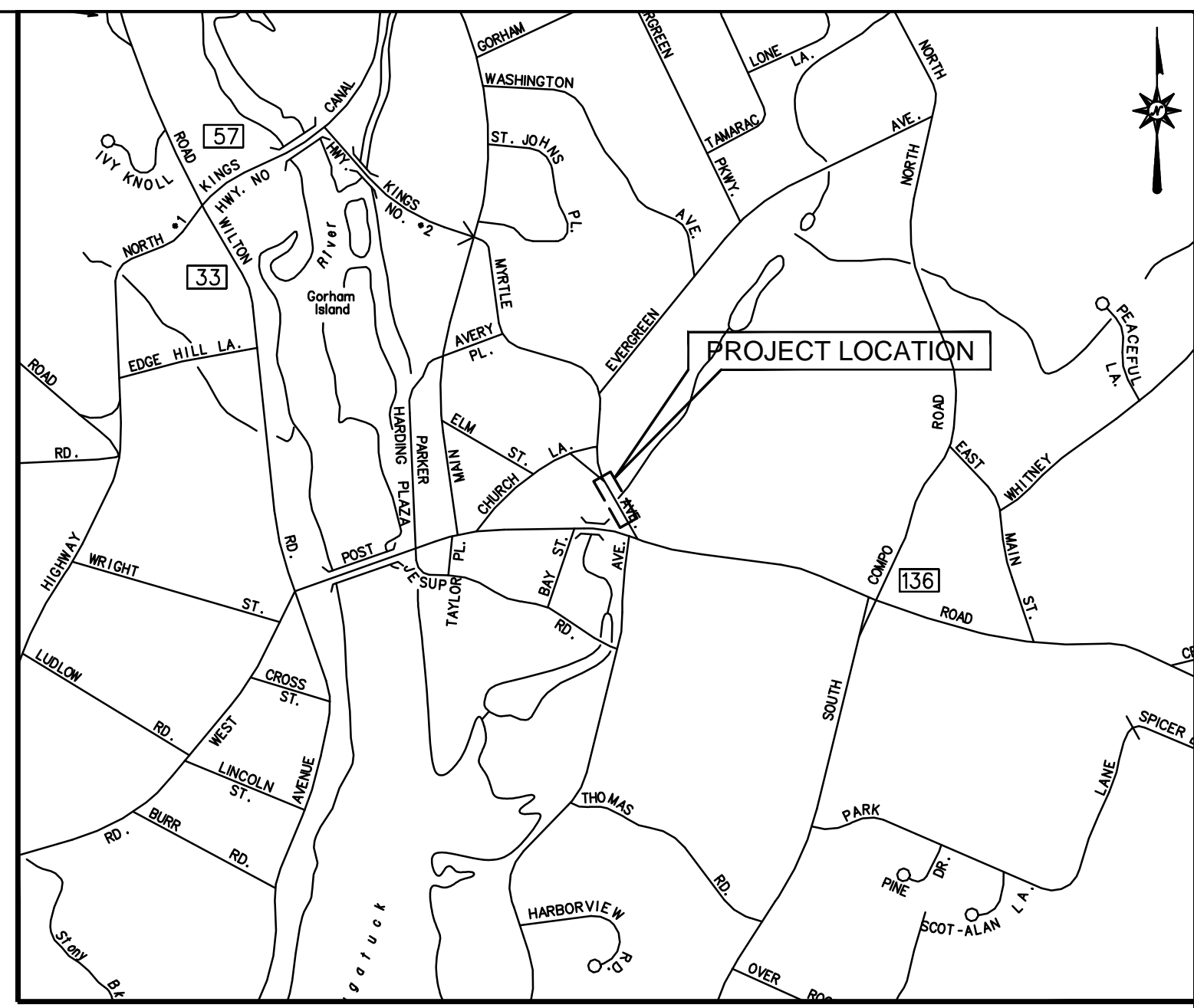
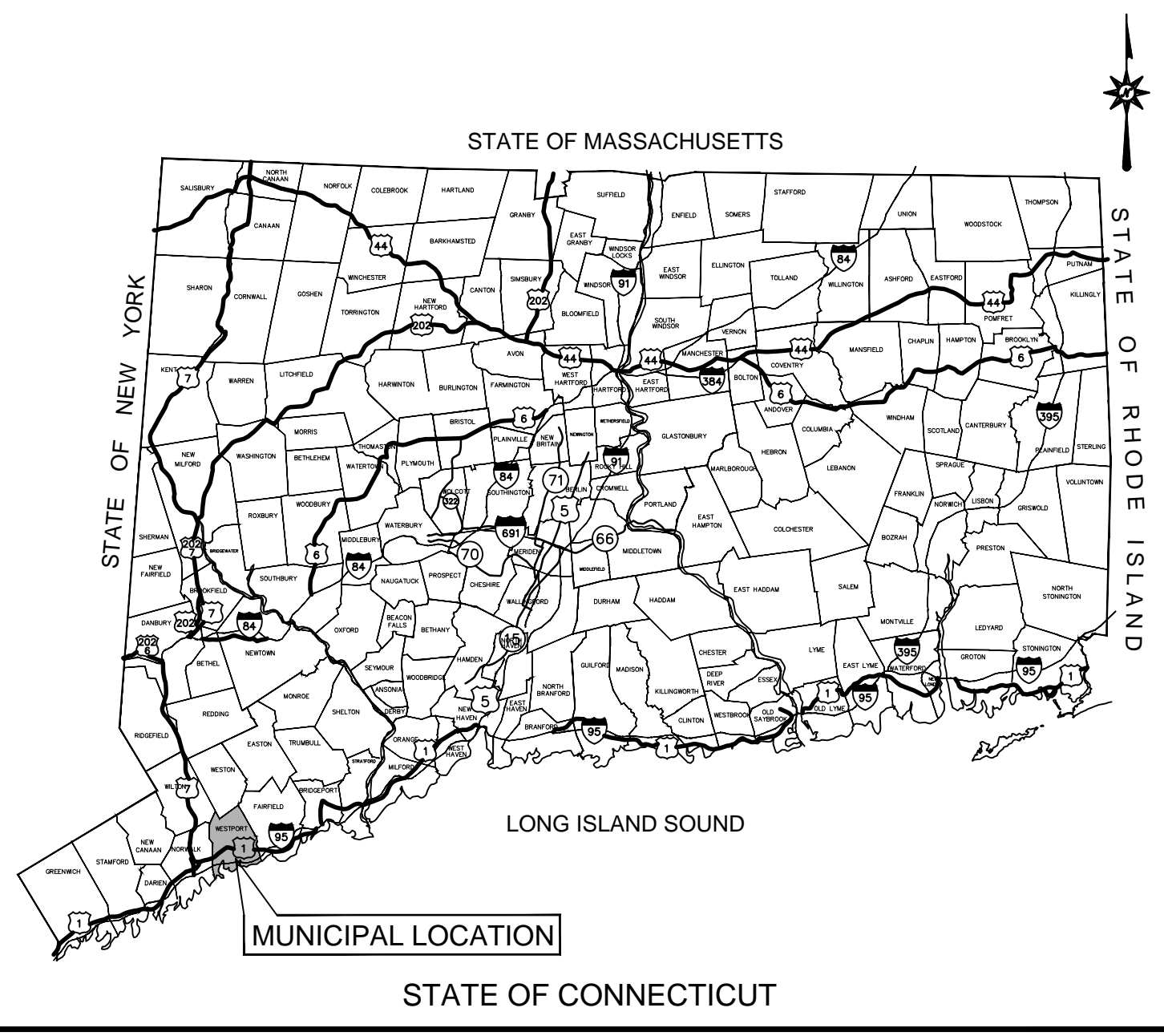


# DESIGN PLANS

## FOR REPLACEMENT OF BRIDGE NO. 158-017 MYRTLE AVENUE OVER DEADMAN BROOK TOWN OF WESTPORT, CT



VICINITY MAP  
SCALE: 1"=800'



LOCATION MAP  
N.T.S.

# SEMI-FINAL DESIGN SUBMISSION

PREPARED FOR:  
TOWN OF WESTPORT  
110 MYRTLE AVE.  
WESTPORT, CT 06880

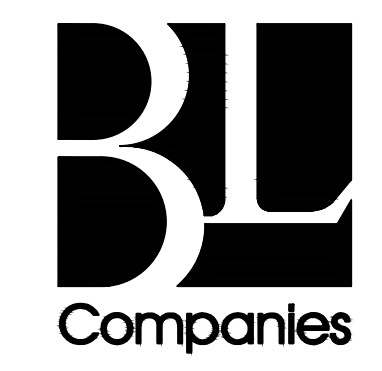
2016 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 817, INCLUDING ALL SUPPLEMENTS THERETO DATED JULY 2017.

ALL HORIZONTAL GEOMETRY ON THIS PROJECT IS BASED ON A FIELD SURVEY PERFORMED BY BL COMPANIES DATED: JANUARY 2017 ON HORIZONTAL DATUM NAD83.

ALL ELEVATIONS ON THIS PROJECT BASED ON NAVD88.

DESIGN STANDARDS:  
TOWN OF WESTPORT DESIGN STANDARDS  
CONNECTICUT DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL, 2003 EDITION.  
A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2011 EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).  
CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2003 EDITION.

PREPARED BY:



ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYING

355 RESEARCH PARKWAY  
MERIDEN, CONNECTICUT 06450  
(203) 630-1406  
(203) 630-2615 Fax

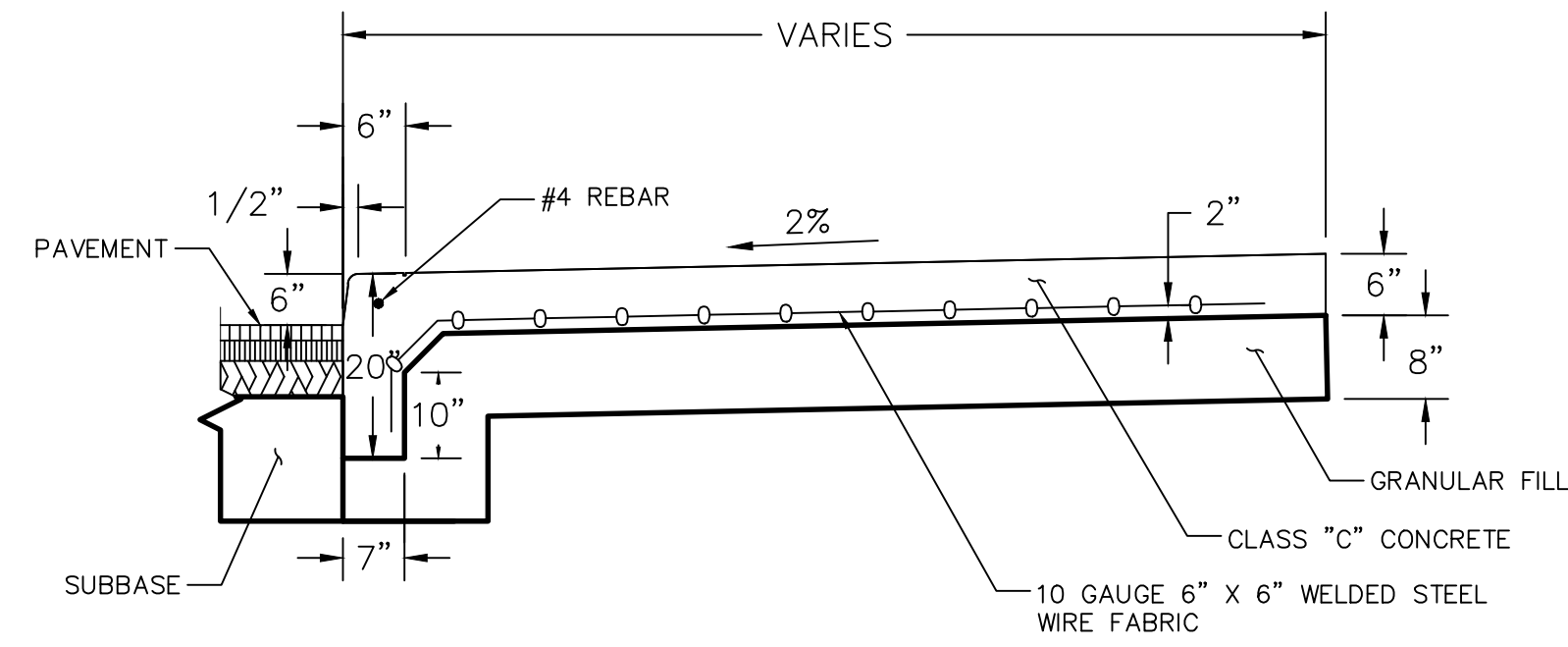
### CONTENTS

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PRO-1	ROADWAY PROFILE
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DGS-03	CATCH BASIN TYPES DOUBLE GRATE II GUIDE SHEET
DGS-07	CATCH BASIN TOPS TYPE "C" & "C-L" GUIDE SHEET
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TR-1220_01	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

### SUBCONSULTANTS:

### DATES

ISSUE DATE: JUNE 18, 2018  
REVISION:



**MONOLITHIC CONCRETE SIDEWALK AND CURB**

NOT TO SCALE

NOTES:

1. MONOLITHIC CONCRETE SIDEWALK AND CURB TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR "MONOLITHIC CONCRETE SIDEWALK AND CURB".



ARCHITECTURE  
ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

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Meriden, CT 06450  
(203) 630-1406  
(203) 630-2615 Fax

REPLACEMENT OF BRIDGE No. 158-017  
MYRTLE AVENUE OVER DEADMAN BROOK  
WESTPORT, CONNECTICUT

REVISIONS  
No. Date Desc.

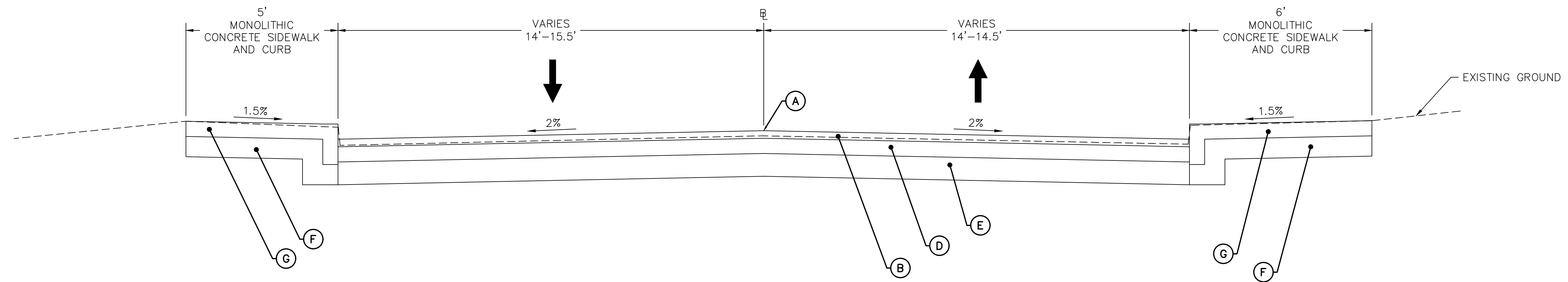
Designed C.L.M.  
Drawn C.L.M.  
Checked M.F.  
Approved  
Scale N.T.S.  
Project No. 16C6016  
Date 06/18/18

CAD File:  
TMD516C6016-01

Title  
MISCELLANEOUS  
DETAILS

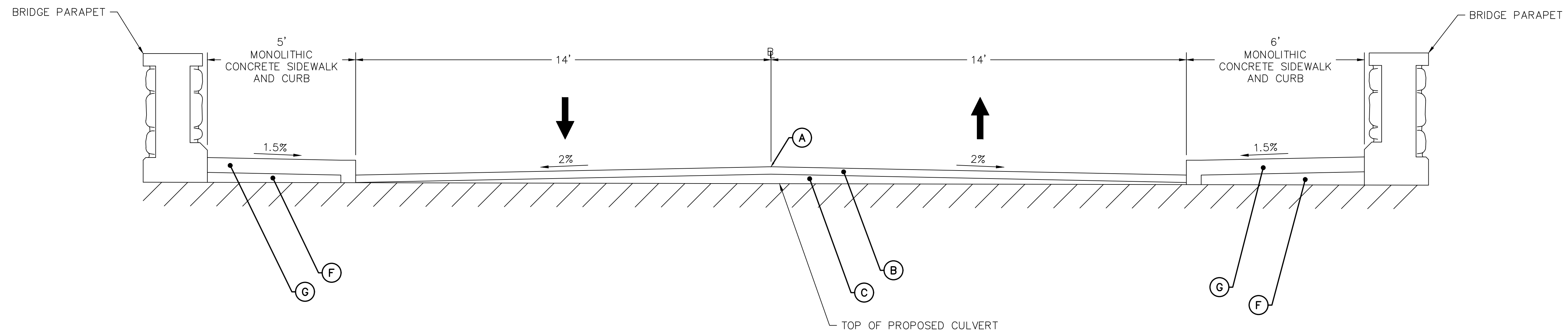
Sheet No.

MDS-1



**MYRTLE AVENUE TYPICAL SECTION**

NOT TO SCALE  
STA. 10+50 TO 11+20  
STA. 11+40 TO 12+00



**MYRTLE AVENUE SECTION OVER CULVERT**

NOT TO SCALE  
STA. 11+20 TO 11+40

**LEGEND**

- (A) POINT OF APPLICATION OF GRADE
- (B) 3" HMA S0.375 (TWO EQUAL LIFTS)
- (C) HMA S0.375 SHIM COURSE OVER CULVERT
- (D) 6" HMA S1.0
- (E) 9" SUBBASE
- (F) 8" GRANULAR FILL
- (G) MONOLITHIC CONCRETE SIDEWALK AND CURB

REPLACEMENT OF BRIDGE No. 158-017  
MYRTLE AVENUE OVER DEADMAN BROOK  
WESTPORT, CONNECTICUT

REVISIONS  
No. Date Desc.

Designed C.L.M.  
Drawn C.L.M.  
Checked M.F.  
Approved  
Scale N.T.S.  
Project No. 16C6016  
Date 06/18/18

CAD File: TYP16C6016-01

Title  
**TYPICAL  
ROADWAY  
SECTION**

Sheet No.

**TYP-1**

**REPLACEMENT OF BRIDGE No. 158-017  
MYRTLE AVENUE OVER DEADMAN BROOK  
WESTPORT, CONNECTICUT**

REVISIONS

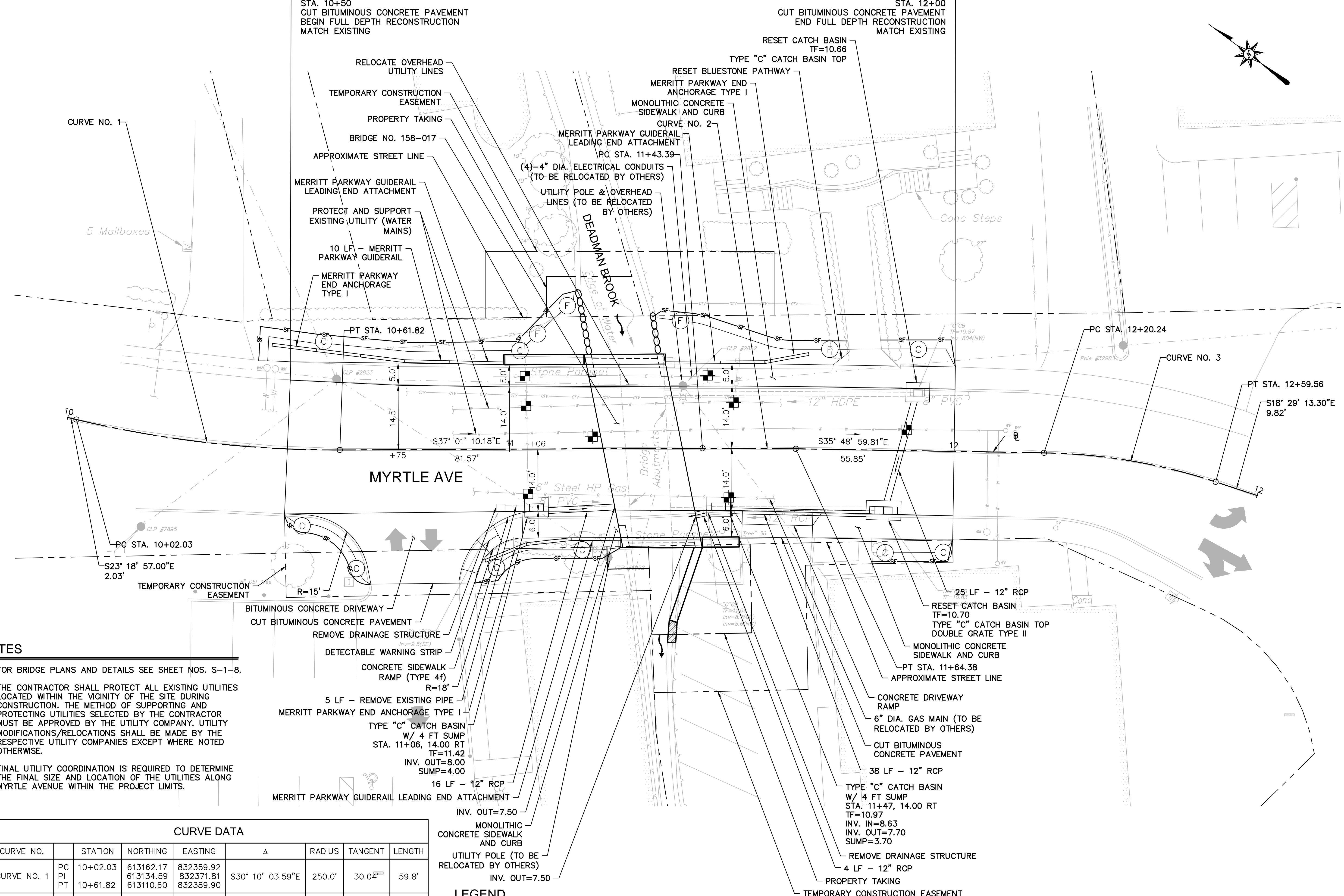
No.	Date	Desc.

Designed: C.L.M.  
Drawn: C.L.M.  
Checked: M.F.  
Approved: 1"=10'  
Scale: 16C6016  
Project No.: 16C6016  
Date: 06/18/18

CAD File: THWY16C6016-01  
Title: ROADWAY CONSTRUCTION PLAN  
Sheet No.

**BEGIN PROJECT** STA. 10+50  
CUT BITUMINOUS CONCRETE PAVEMENT  
BEGIN FULL DEPTH RECONSTRUCTION  
MATCH EXISTING

**END PROJECT** STA. 12+00  
CUT BITUMINOUS CONCRETE PAVEMENT  
END FULL DEPTH RECONSTRUCTION  
MATCH EXISTING



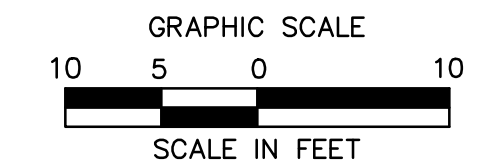
- NOTES**
- FOR BRIDGE PLANS AND DETAILS SEE SHEET NOS. S-1-8.
  - THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES LOCATED WITHIN THE VICINITY OF THE SITE DURING CONSTRUCTION. THE METHOD OF SUPPORTING AND PROTECTING UTILITIES SELECTED BY THE CONTRACTOR MUST BE APPROVED BY THE UTILITY COMPANY. UTILITY MODIFICATIONS/RELOCATIONS SHALL BE MADE BY THE RESPECTIVE UTILITY COMPANIES EXCEPT WHERE NOTED OTHERWISE.
  - FINAL UTILITY COORDINATION IS REQUIRED TO DETERMINE THE FINAL SIZE AND LOCATION OF THE UTILITIES ALONG MYRTLE AVENUE WITHIN THE PROJECT LIMITS.

**CURVE DATA**

CURVE NO.	STATION	NORTHING	EASTING	Δ	RADIUS	TANGENT	LENGTH
CURVE NO. 1	PC	10+02.03	613162.17	832359.92	S30° 10' 03.59"E	250.0'	30.04'
	PI	10+61.82	613134.59	832371.81			
	PT	10+61.82	613110.60	832389.90			
CURVE NO. 2	PC	11+43.39	613045.47	832439.01	S36° 25' 04.99"E	1000.0'	10.50'
	PI	11+64.38	613037.09	832445.33			
	PT	11+64.38	613028.58	832451.47			
CURVE NO. 3	PC	12+20.24	612983.29	832484.16	S27° 09' 06.56"E	130.0'	19.81'
	PI	12+59.56	612967.23	832495.75			
	PT	12+59.56	612948.44	832502.03			

**LEGEND**

- FILL/CUT APPROXIMATE SLOPE LIMITS
- SEDIMENTATION CONTROL SYSTEM
- APPROXIMATE TEST PIT LOCATION



**REPLACEMENT OF BRIDGE No. 158-017  
MYRTLE AVENUE OVER DEADMAN BROOK  
WESTPORT, CONNECTICUT**

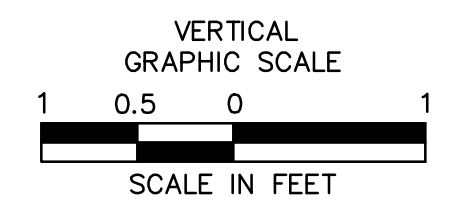
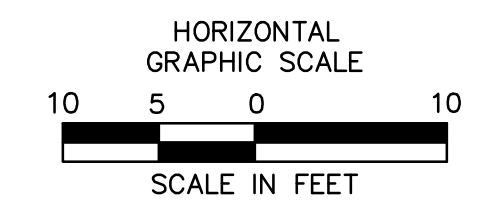
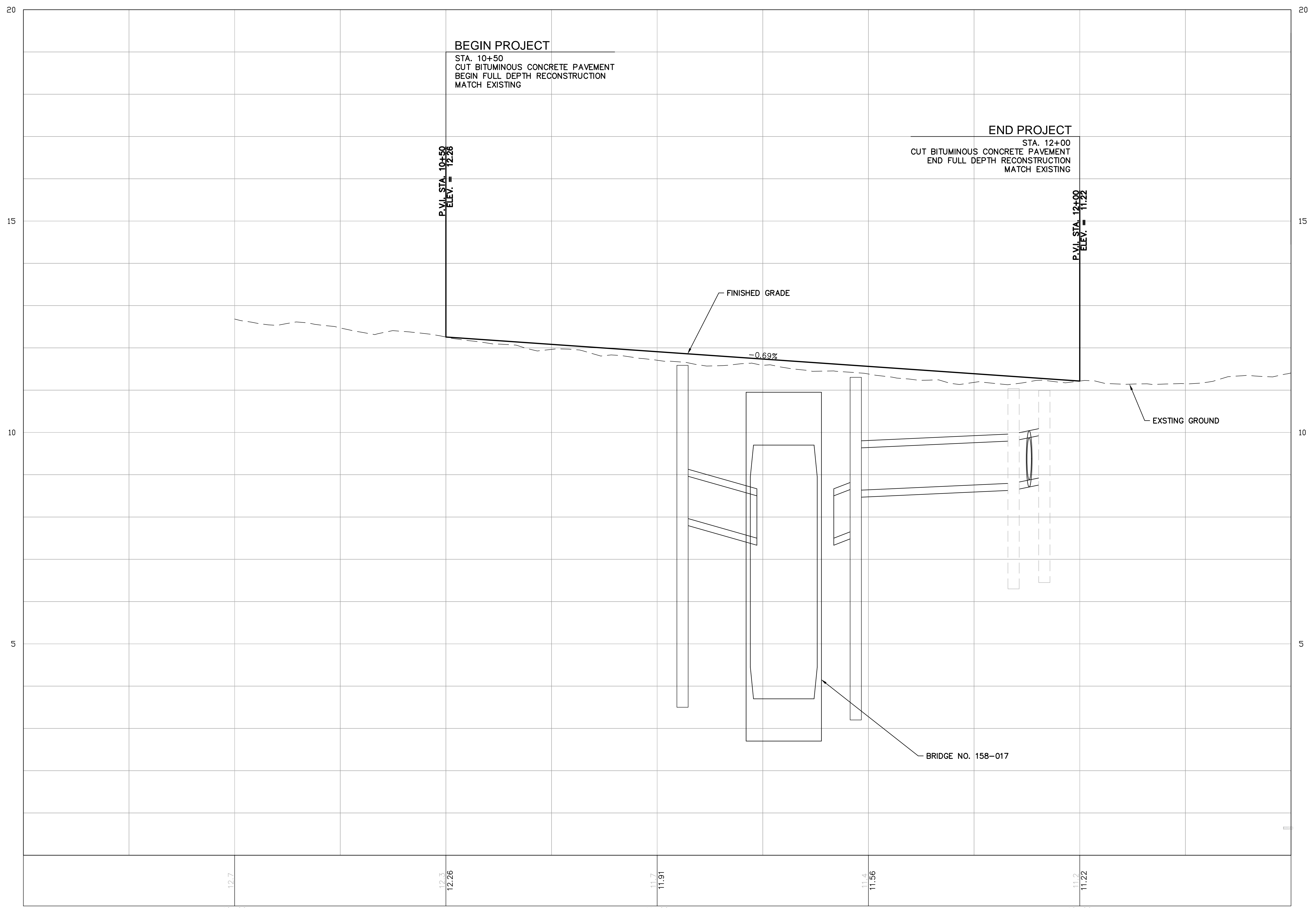
REVISIONS	
No.	Date

CAD File: TPRO16C6016-01

Title  
**PROFILE DESIGN SHEET**

Sheet No.

**PRO-1**



**UTILITY NOTES**

- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES LOCATED WITHIN THE VICINITY OF THE SITE DURING CONSTRUCTION. THE METHOD OF SUPPORTING AND PROTECTING UTILITIES SELECTED BY THE CONTRACTOR MUST BE APPROVED BY THE UTILITY COMPANY. UTILITY MODIFICATIONS/RELOCATIONS SHALL BE MADE BY THE RESPECTIVE UTILITY COMPANIES EXCEPT WHERE NOTED OTHERWISE.
- FINAL UTILITY COORDINATION IS REQUIRED TO DETERMINE THE FINAL SIZE AND LOCATION OF THE UTILITIES ALONG MYRTLE AVENUE WITHIN THE PROJECT LIMITS.

**GENERAL NOTES**

**SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016) AND SPECIAL PROVISIONS.

**DESIGN SPECIFICATIONS:** AASHTO LRFD SPECIFICATIONS FOR HIGHWAY BRIDGES, 8TH EDITION (2017) AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL (2003) EDITION WITH REVISIONS UP TO AND INCLUDING 2013.

**ALLOWABLE DESIGN STRESSES:**

CLASS 'A' CONCRETE:	f <sub>c</sub> = 3,300 psi
CLASS 'F' CONCRETE:	f <sub>c</sub> = 4,400 psi
CLASS '50' CONCRETE:	f <sub>c</sub> = 5,000 psi
REINFORCEMENT (ASTM 615 GRADE 60)	f <sub>y</sub> = 60,000 psi

**LIVE LOAD:**

STANDARD DESIGN VEHICLE: AASHTO HL-93

**SALVAGE:** NONE

**DIMENSIONS AND ELEVATIONS:** WHEN DECIMAL DIMENSIONS AND ELEVATIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZERO. ALL ELEVATIONS ARE GIVEN IN DECIMAL FEET AND ARE BASED ON NAVD 88.

**EXISTING DIMENSIONS:** DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

**CONCRETE NOTES**

**CLASS 'A' CONCRETE:** CLASS 'A' CONCRETE SHALL BE USED FOR THE CUT-OFF WALLS, RETURN WALLS, WINGWALL FOOTING, AND ENDWALL FOOTINGS.

**CLASS 'F' CONCRETE:** CLASS 'F' CONCRETE SHALL BE USED FOR THE HEADWALLS/PARAPETS, WINGWALL STEM, AND ENDWALL STEMS.

**CLASS '50' CONCRETE:** CLASS '50' CONCRETE SHALL BE USED FOR THE PRECAST CONCRETE BOX CULVERT.

**REINFORCEMENT:** ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

**EXPOSED EDGES:** EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1", UNLESS DIMENSIONED OTHERWISE.

**EPOXY COATED REINFORCEMENT BARS:** ALL REINFORCEMENT IN THE PRECAST CONCRETE BOX CULVERT SHALL BE EPOXY COATED AND INCLUDED IN THE PAY ITEM "15.5'X6' PRECAST CONCRETE BOX CULVERT". ALL REINFORCEMENT IN THE PARAPETS AND ENDWALL STEMS SHALL ALSO BE EPOXY COATED AND SHALL BE PAID FOR UNDER THE PAY ITEM "DEFORMED STEEL BARS (EPOXY COATED)".

**CONCRETE COVER:** ALL REINFORCEMENT FOR CAST-IN-PLACE CONCRETE SHALL HAVE TWO INCHES COVER, UNLESS DIMENSIONED OTHERWISE.

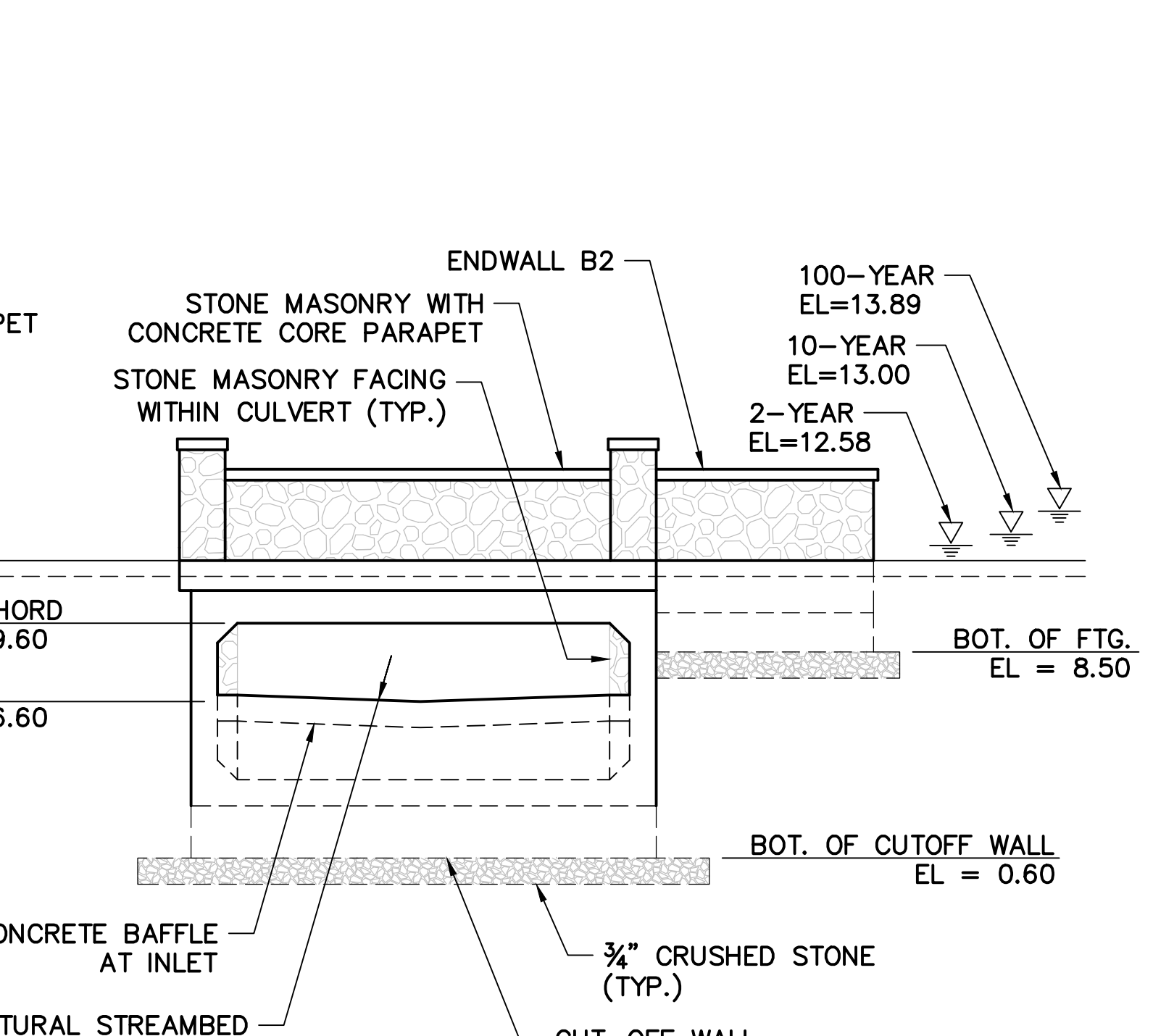
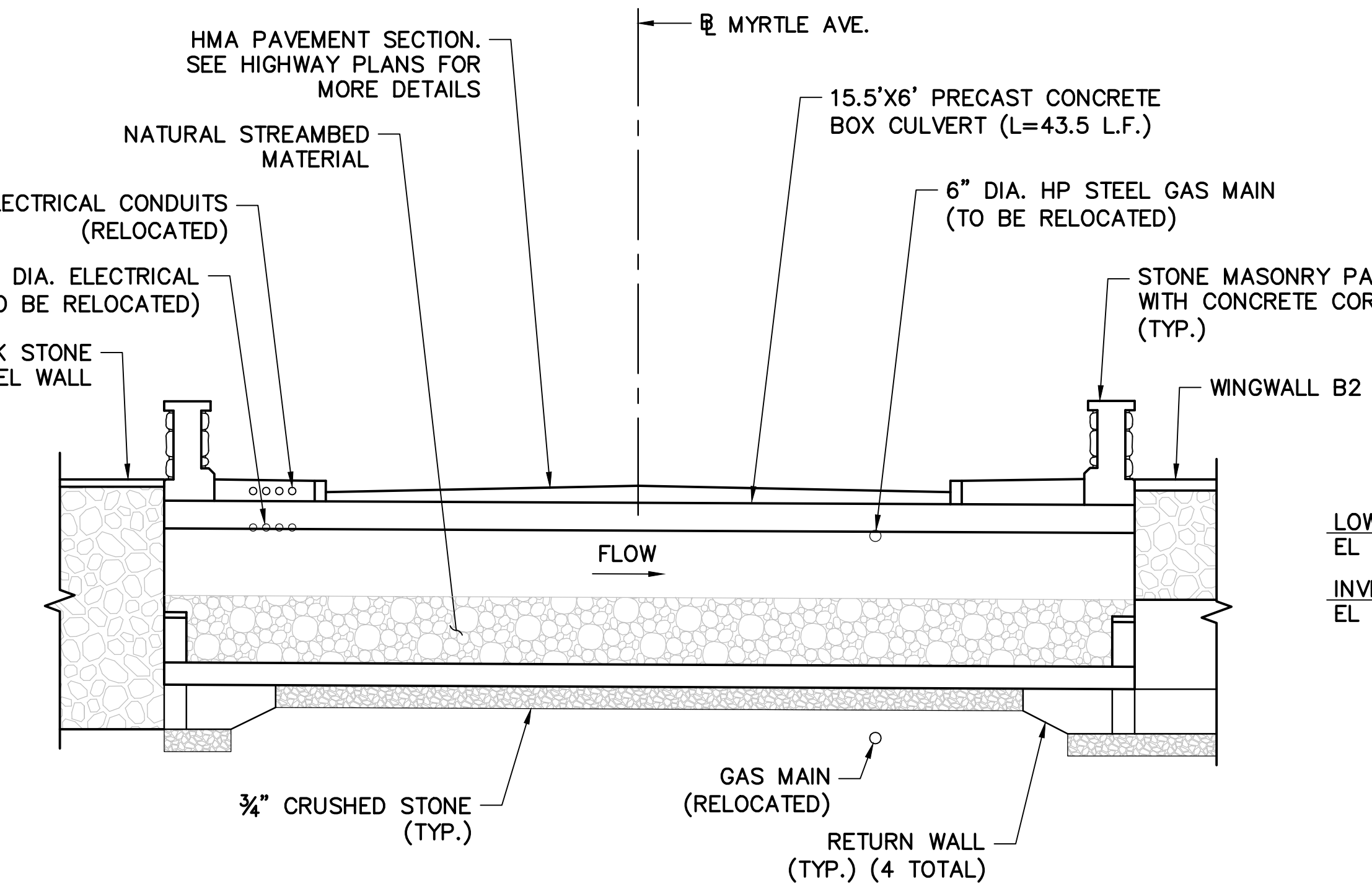
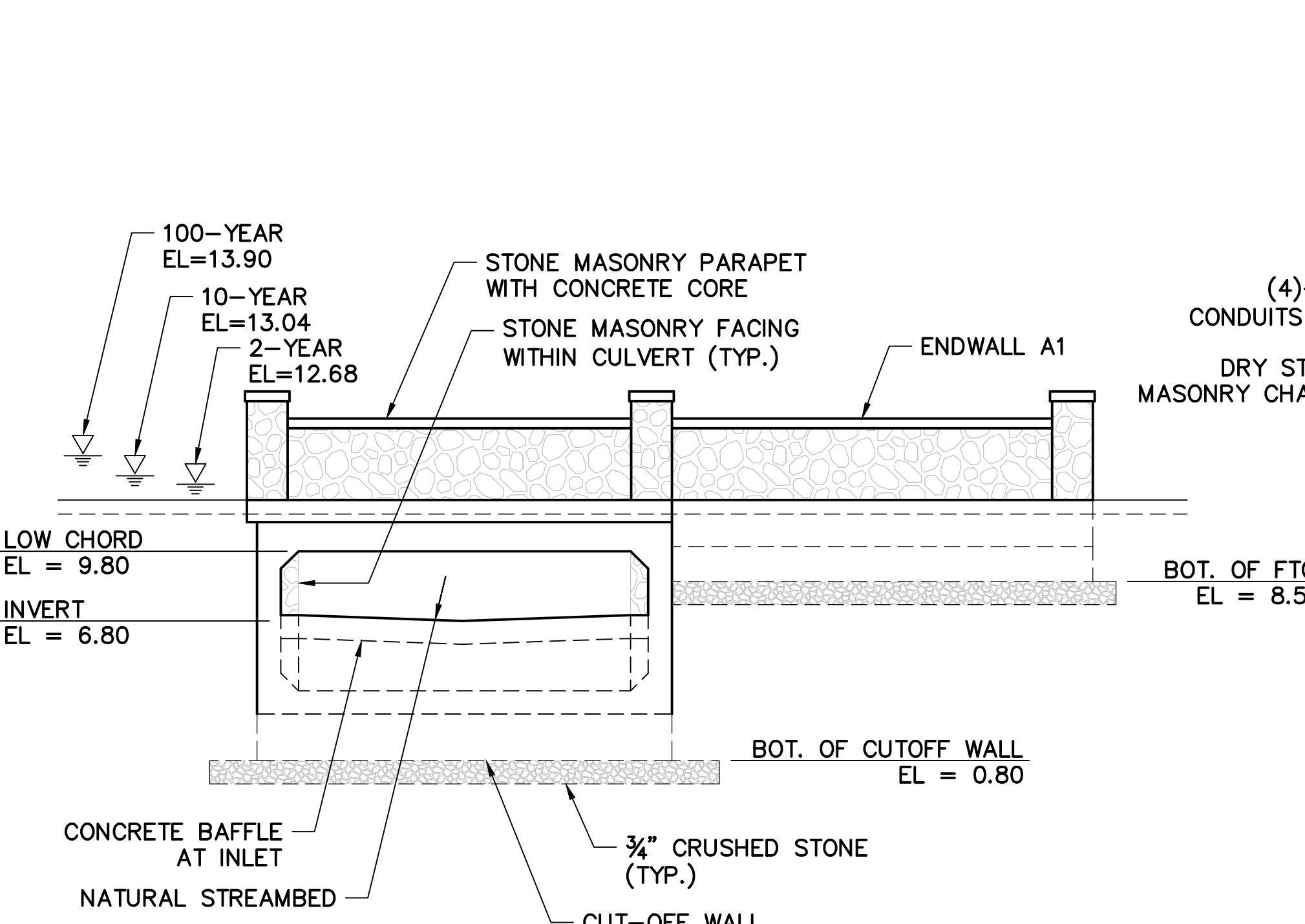
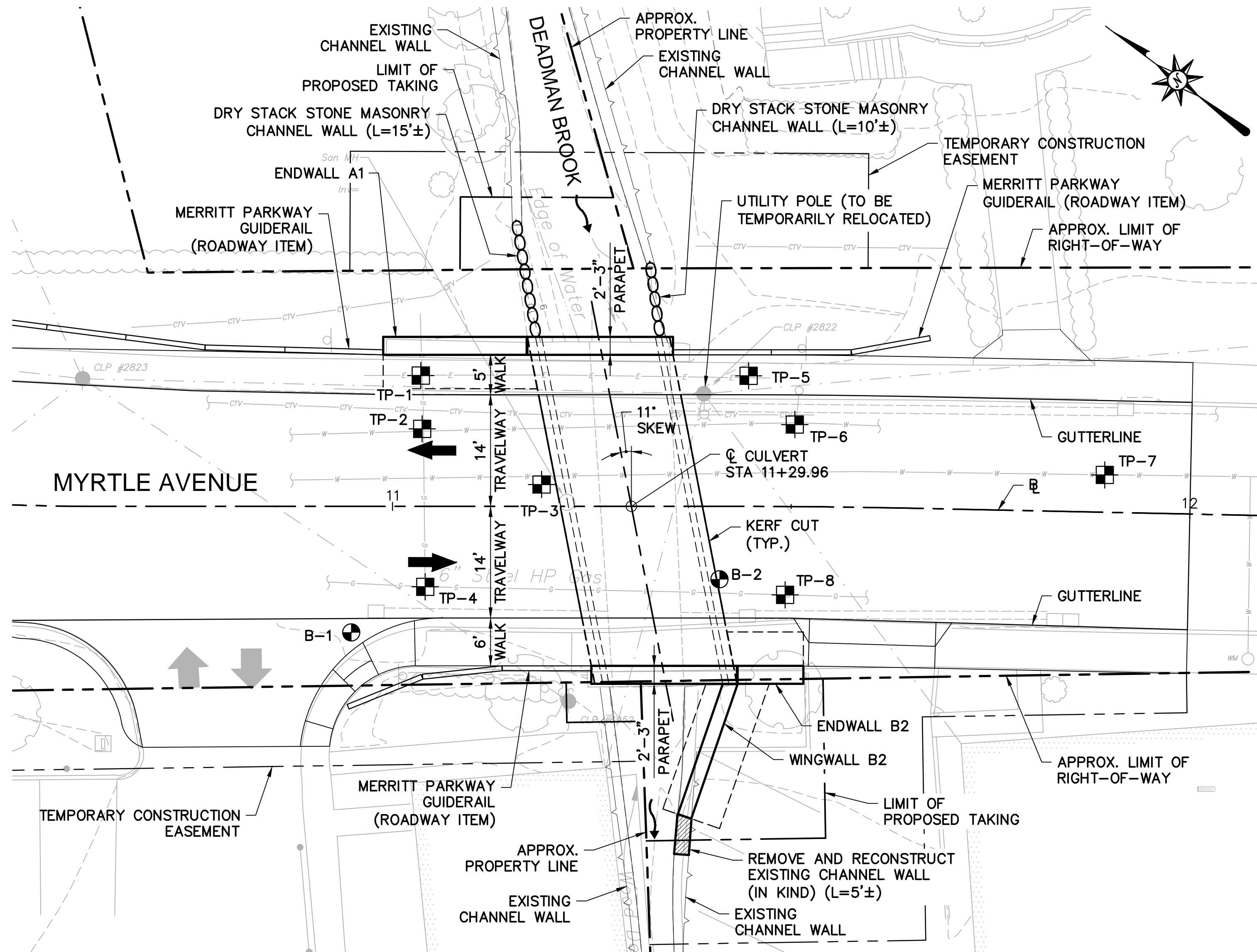
**PREFORMED EXPANSION JOINT FILLER:** THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLERS SHALL BE INCLUDED IN THE ITEM(S) "PRECAST CONCRETE BOX CULVERT".

**CONSTRUCTION JOINTS:** CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

DRAWING INDEX	
GENERAL PLAN, ELEVATION, AND SECTION	S-1
LAYOUT PLAN, PROFILE, AND QUANTITIES	S-2
BORING LOGS	S-3
SEQUENCE OF CONSTRUCTION	S-4
CULVERT DETAILS 1	S-5
CULVERT DETAILS 2	S-6
WINGWALL DETAILS	S-7
ENDWALL DETAILS	S-8

LEGEND	
	B-X APPROXIMATE BORING LOCATION
	TP-X APPROXIMATE TEST PIT LOCATION

HYDRAULIC DATA DEADMAN BROOK	
DRAINAGE AREA	2.0 sq mi
DESIGN STORM FREQUENCY	100-yr
DESIGN DISCHARGE	1,430 cfs
UPSTREAM DESIGN WSEL	13.90 ft
DOWNSTREAM DESIGN WSEL	13.89 ft



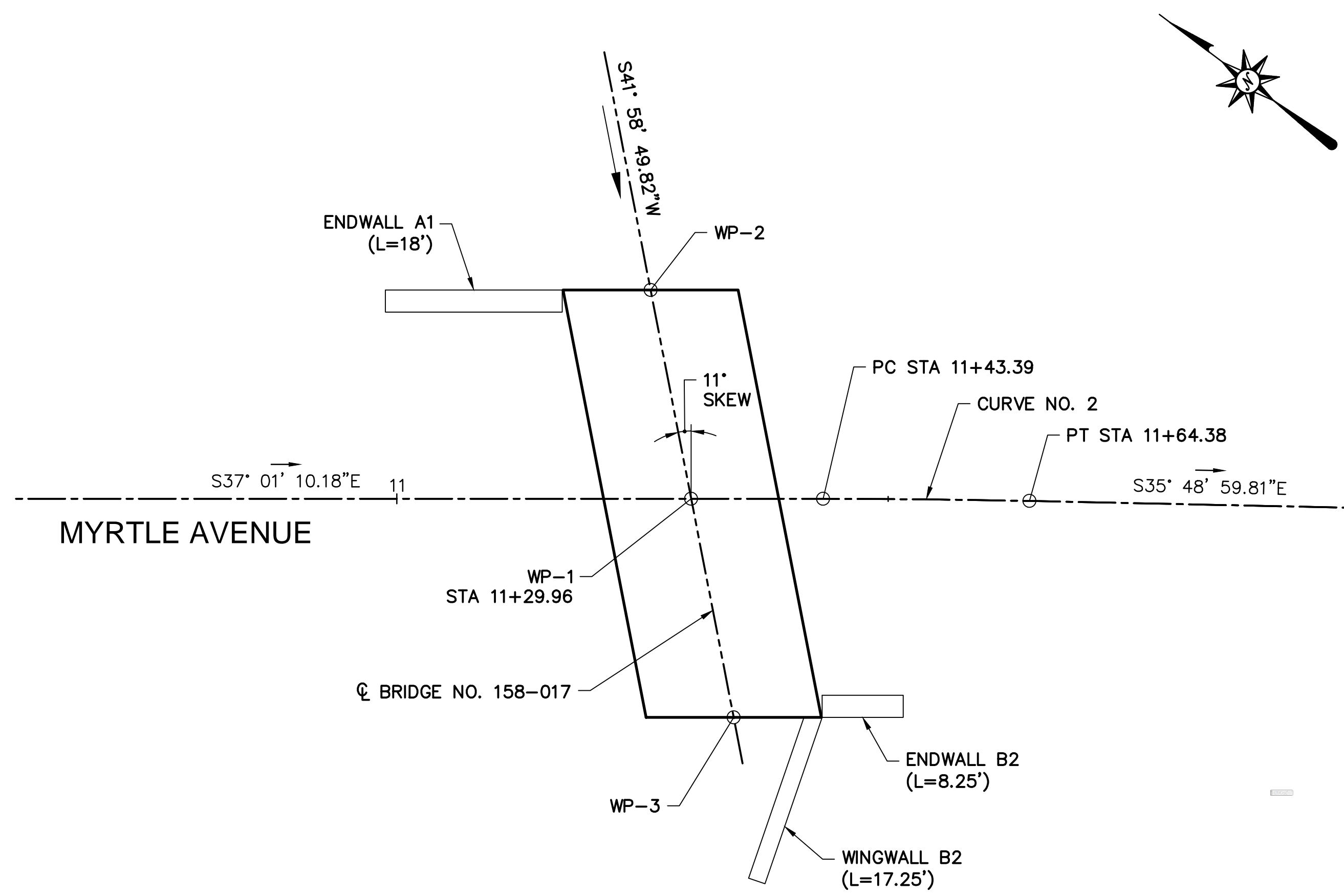
NOT FOR CONSTRUCTION

Designed: K.C.L.  
Drawn: K.C.L.  
Checked: C.E.P.  
Approved: C.E.P.  
Scale: AS SHOWN  
Project No: 16C6016  
Date: 06/18/18  
CAD File: TBRG16C6016-01\_GENERAL  
Title: GENERAL PLAN, ELEVATION, AND SECTION  
Sheet No: S-1

**GENERAL NOTES**

- SEE DRAWING NO. HWY-1, ROADWAY CONSTRUCTION PLAN, FOR COMPLETE BASELINE GEOMETRY
- FOR WINGWALL DETAILS, SEE DWG. NO. S-7, "WINGWALL DETAILS".
- FOR ENDWALL DETAILS, SEE DWG. NO. S-8, "ENDWALL DETAILS".

QUANTITIES		
ITEM	UNITS	TOTALS
TEST PIT	EA	8
STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)	CY	630
STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	CY	60
COFFERDAM AND DEWATERING	LS	1
HANDLING WATER	LS	1
GRANULAR FILL	CY	8
PERVIOUS STRUCTURE BACKFILL	CY	450
SAWING AND SEALING JOINTS IN BIT. CONC. PAVEMENT	LF	58
DRY STACK RETAINING WALL SYSTEM	SF	275
CLASS 'A' CONCRETE	CY	30
15.5'X6' PRECAST CONCRETE BOX CULVERT	LF	35
CLASS 'F' CONCRETE	CY	25
DEFORMED STEEL BARS	LB	4,250
DEFORMED STEEL BARS (EPOXY COATED)	LB	3,000
DOWEL BAR SPLICER SYSTEM	EA	80
DRILLING HOLES AND GROUTING DOWELS	EA	50
MASONRY FACING	SF	790
REMOVE AND RECONSTRUCT STONE MASONRY CHANNEL WALL	LF	5
INTERMEDIATE RIPRAP	CY	30
ROUNDED STONE RIPRAP	CY	100
MEMBRANE WATERPROOFING (WOVEN GLASS FABRIC)	SY	115
DAMPPOOFING	SY	115
TEMPORARY EARTH RETAINING SYSTEM	SF	400
EARTH RETAINING SYSTEM LEFT IN PLACE	SF	250
¾" CRUSHED STONE	CY	55
5' POLYVINYL CHLORIDE CHAIN LINK FENCE (BRIDGE)	LF	30
REMOVAL OF EXISTING MASONRY	CY	150



**LAYOUT PLAN**  
SCALE: 1" = 10'-0"

**WORKING POINT COORDINATES**

WP	NORTHING	EASTING
WP-1	613056.20	832430.92
WP-2	613072.29	832445.40
WP-3	613039.35	832415.76

**NOTICE TO BRIDGE INSPECTORS**

IT IS RECOMMENDED THAT CONDOT'S BRIDGE SAFETY PROCEDURES BE FOLLOWED WHEN INSPECTING THIS BRIDGE FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING OF COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE.) THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY THE MANAGER OF BRIDGE SAFETY AND EVALUATIONS.

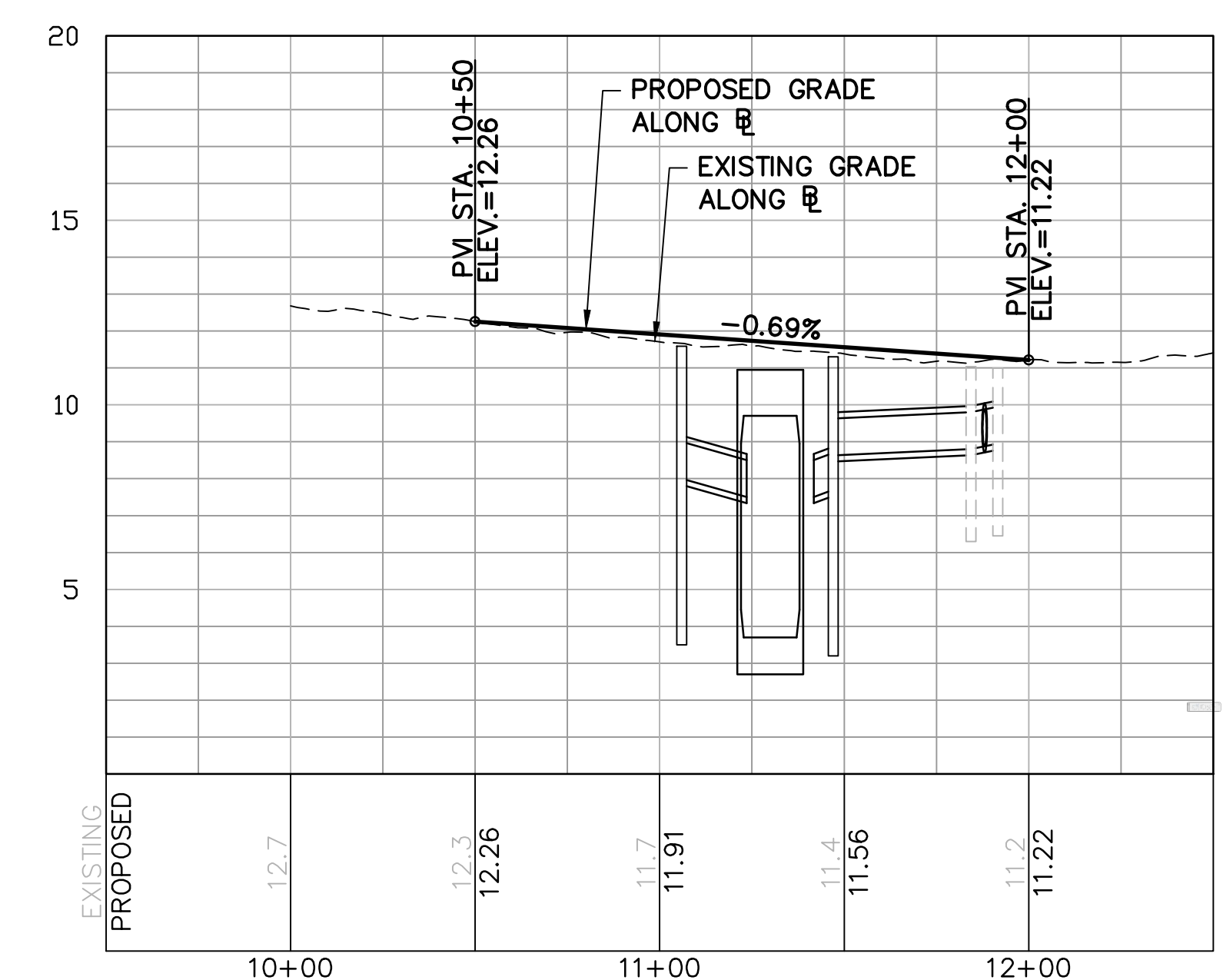
COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE
NONE	-

**TRANSPORTATION DATA**

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
CULVERT SECTION	17'-6"	8'-3"	7'-3"	60,000 lbs

**CURVE DATA**

CURVE NO.		NORTHING	EASTING	Δ	RADIUS	TANGENT	LENGTH
CURVE NO. 2	PC	613044.45	832439.78	S36° 29' 28.43"E	1000.0'	9.22'	18.4'
	PI	613037.09	832445.33				
	PT	613029.63	832450.75				



**PROFILE**  
HOR. SCALE: 1" = 40'-0"  
VERT. SCALE: 1" = 4'-0"

NOT FOR CONSTRUCTION

**NOTES**

- BORINGS TAKEN BY SIEFERT ASSOCIATES, LLC ON DECEMBER 1, 2016.



355 Research Parkway  
Meriden, CT 06450  
(203) 630-1406  
(203) 630-2615 Fax

REPLACEMENT OF BRIDGE No. 158-017  
MYRTLE AVENUE OVER DEADMAN BROOK  
WESTPORT, CONNECTICUT

Jamie Lloret		TEST BORING REPORT										SHEET 1 OF 1	
DRILLER		SIEFERT ASSOCIATES, LLC											
Dylan Allen		180 CHURCH STREET, NAUGATUCK, CT										CME-55 Truck	
INSPECTOR		Tel (203) 723-1477										DRILLING EQUIPMENT	
Joseph Kidd		PROJECT NAME: Myrtle Ave Over Deadman Brook										BL Companies, Inc.	
SOILS ENGINEER		PROJECT NUMBER: 658.001										CLIENT	
Surface Elevation:		LOCATION: Westport, CT											
Date Started:	12/1/2016	Auger		Casing		Sampler	SS	Core Bar	NV-2	Hole No.	<b>B-1</b>		
Date Finished:	12/1/2016	Type	HSA							Line & Station			
Groundwater Observations		Size I. D.	2 1/4 in				1 3/8 in			Offset			
AT	3.0	AFTER	0	HRS	Hammer	Cat Head		140 lb	Bit	N Coordinate			
AT		AFTER		HRS	Fall			30 in		E. Coordinate			
D E P T H	Casing blows per foot	SAMPLE				BLOWS				STRATA CHANGE: DEPTH, ELEV.	FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		
		DEPTH IN FEET FROM - TO	NO.	PEN. INCH	REC. INCH	PER 6 INCHES ON SAMPLER	0-6	6-12	12-18			18-24	
		1.0 to 3.0	S-1	24	4	SS	10	7	5	4	Pavement	2" Asphalt over 10" Gravel Base Course	
											Fill	Medium dense, grey, fine to medium SAND, little Silt, trace Gravel	
5		5.0 to 7.0	S-2	10	4	SS	44	50	4			Very dense, brown, fine to coarse SAND, little Gravel, trace Silt	
10		10.0 to 12.0	S-3	24	7	SS	15	19	32	32		Very dense, brown, fine to coarse SAND, little Gravel, trace Silt	
15		15.0 to 17.0	S-4	24	24	SS	8	12	7	8		Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt	
20		20.0 to 22.0	S-5	24	24	SS	4	6	8	7		Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt	
25		25.0 to 27.0	S-6	24	24	SS	7	5	9	5		Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt	
30		30.0 to 32.0	S-7	24	0	SS	2	5	9	10		No Recovery	
												Bottom of Boring at 32.0'	
Footage in Earth		32.0'	Footage in Rock		0.0'	No. of Samples		7	Hole No.		<b>B-1</b>		

Jamie Lloret		TEST BORING REPORT										SHEET 1 OF 1	
DRILLER		SIEFERT ASSOCIATES, LLC											
Dylan Allen		180 CHURCH STREET, NAUGATUCK, CT										CME-55 Truck	
INSPECTOR		Tel (203) 723-1477										DRILLING EQUIPMENT	
Joseph Kidd		PROJECT NAME: Myrtle Ave Over Deadman Brook										BL Companies, Inc.	
SOILS ENGINEER		PROJECT NUMBER: 658.001										CLIENT	
Surface Elevation:		LOCATION: Westport, CT											
Date Started:	12/1/2016	Auger		Casing		Sampler	SS	Core Bar	NV-2	Hole No.	<b>B-2</b>		
Date Finished:	12/1/2016	Type	HSA							Line & Station			
Groundwater Observations		Size I. D.	2 1/4 in				1 3/8 in			Offset			
AT	3.0	AFTER	0	HRS	Hammer	Cat Head		140 lb	Bit	N Coordinate			
AT		AFTER		HRS	Fall			30 in		E. Coordinate			
D E P T H	Casing blows per foot	SAMPLE				BLOWS				STRATA CHANGE: DEPTH, ELEV.	FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		
		DEPTH IN FEET FROM - TO	NO.	PEN. INCH	REC. INCH	PER 6 INCHES ON SAMPLER	0-6	6-12	12-18			18-24	
		1.0 to 3.0	S-1	24	9	SS	9	12	21	15		2" Asphalt over 6" Conc over 4" Gravel Base	
											Fill	Medium dense, brown, fine to medium SAND, some Silt, little Gravel	
5		5.0 to 7.0	S-2	24	8	SS	35	36	45	42		Very dense, orange brown, fine to coarse SAND, some Silt, little Gravel	
10		10.0 to 12.0	S-3	24	11	SS	6	16	20	26		Dense, brown, fine to coarse SAND, trace Gravel, trace Silt	
15		15.0 to 17.0	S-4	24	24	SS	2	4	5	5		Loose, brown, fine to coarse SAND, trace Gravel, trace Silt	
20		20.0 to 22.0	S-5	24	0	SS	9	5	3	6		No Recovery	
25		25.0 to 27.0	S-6	24	4	SS	2	2	3	3		Loose, brown, fine to coarse SAND, trace Gravel, trace Silt	
30		30.0 to 32.0	S-7	24	13	SS	8	6	6	6		Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt	
												Bottom of Boring at 32.0'	
Footage in Earth		32.0'	Footage in Rock		0.0'	No. of Samples		7	Hole No.		<b>B-2</b>		

6/12/2018, 04:58:16 PM, C:\STRAND. G. \06516\16C\16C016\DWG\TBRG16C016-03\_BORING LOGS.DWG, 3 24X36 NTS.

NOT FOR CONSTRUCTION

No. Date Desc. REVISIONS  
Xref (G) : BDRG016-01

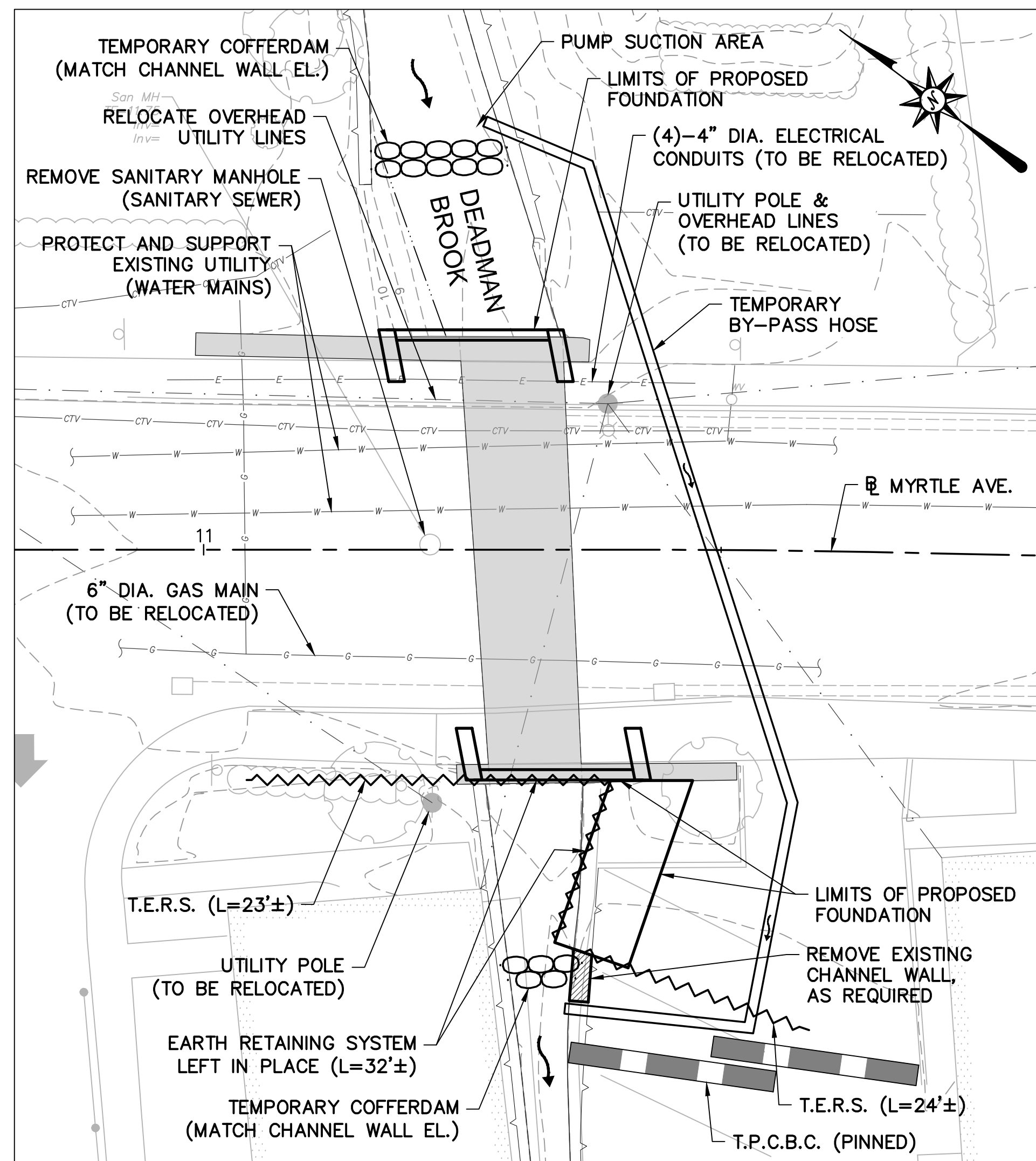
Designed K.C.L.  
Drawn C.L.M.  
Checked C.E.P.  
Approved C.E.P.  
Scale N.T.S.  
Project No. 16C016  
Date 06/18/18

CAD File: TBRG16C016-03\_BORING LOGS  
Title  
**BORING LOGS**

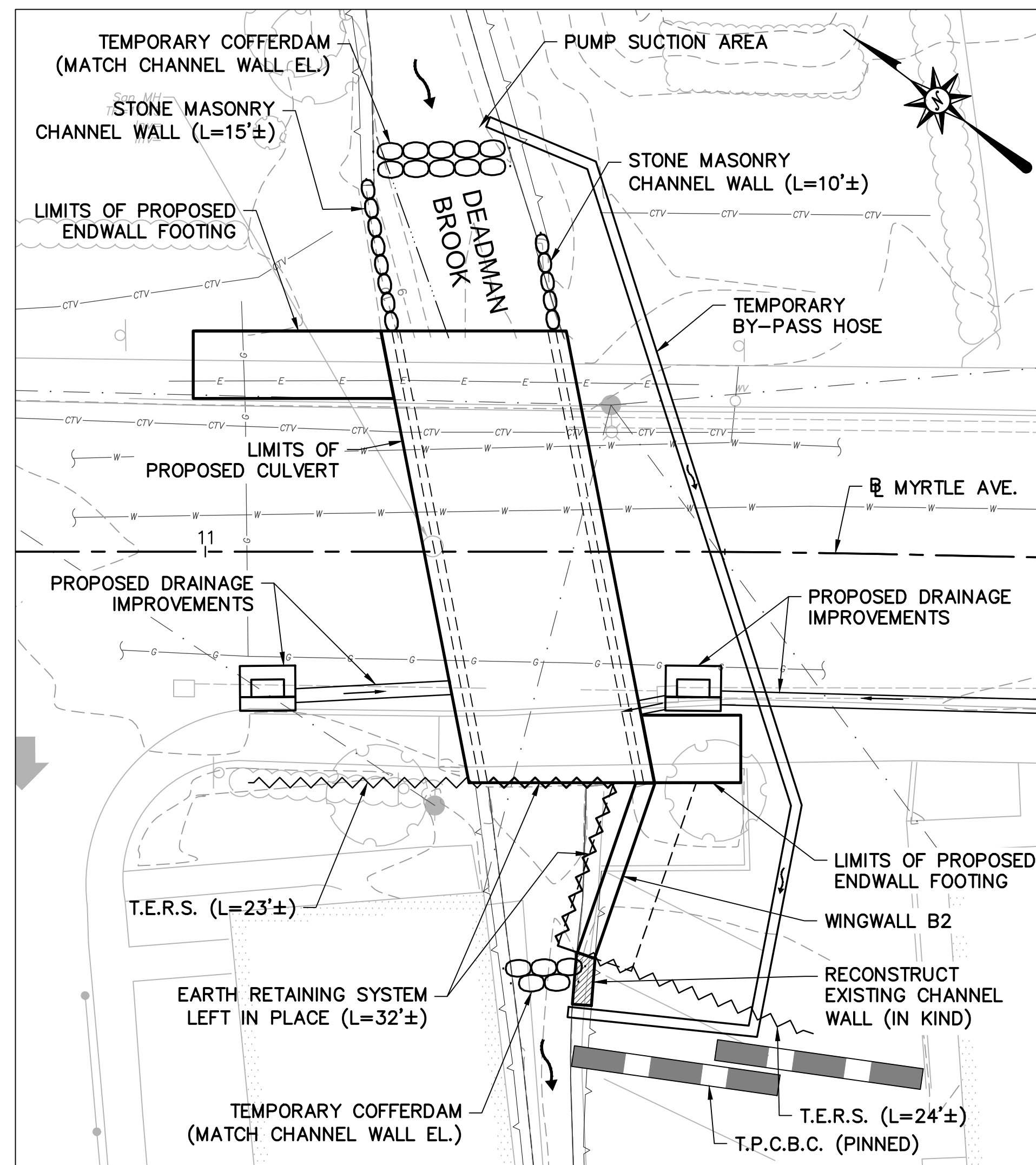
Sheet No.

**S-3**

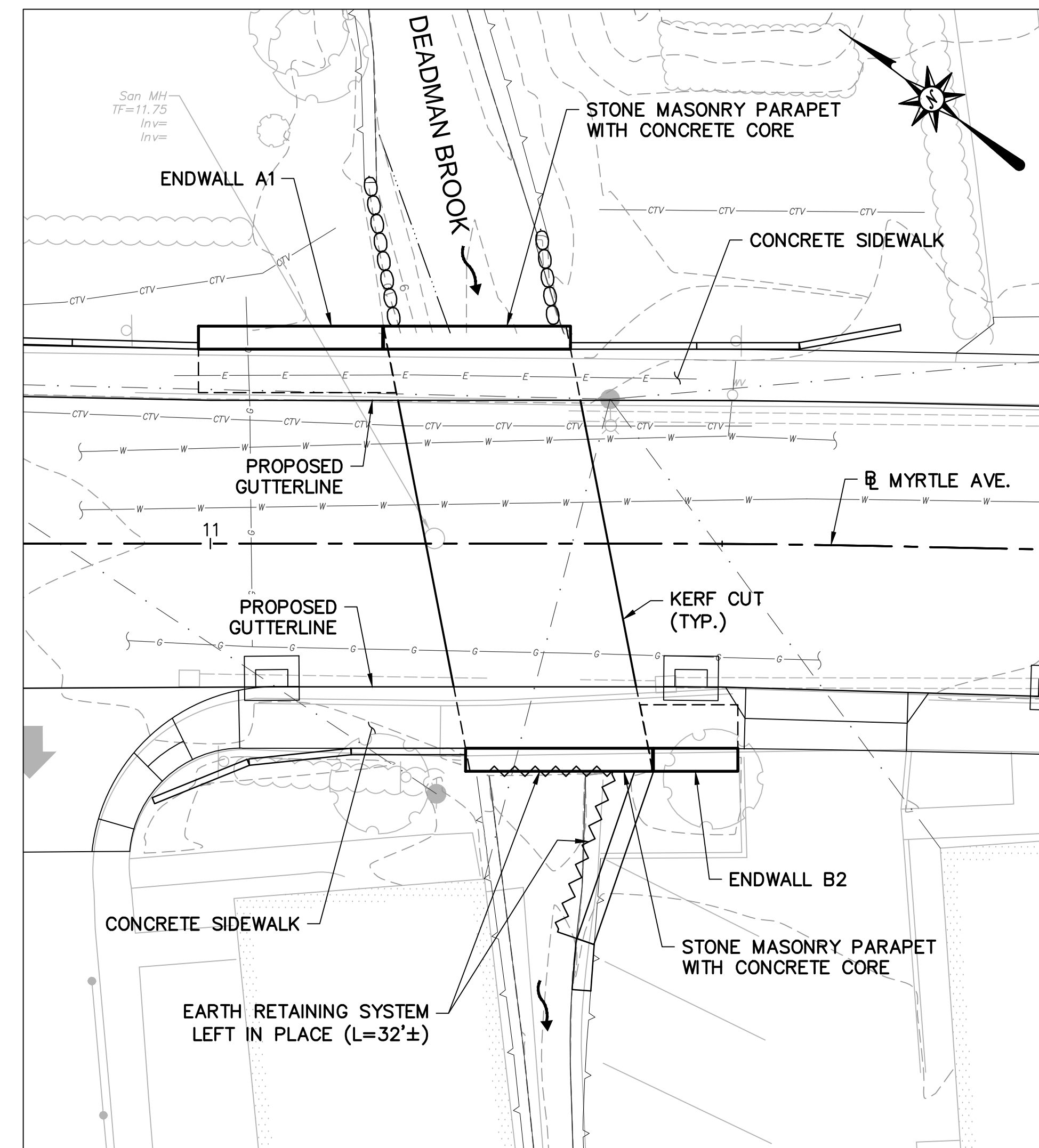




STAGE 1  
SCALE: 1" = 10'-0"



STAGE 2  
SCALE: 1" = 10'-0"



STAGE 3  
SCALE: 1" = 10'-0"

GENERAL NOTES

- THE CONSTRUCTION SEQUENCE SHOWN IS A SUGGESTED CONCEPT THAT IS CONSIDERED FEASIBLE FOR PERFORMING THE WORK WHILE SATISFYING THE PERMIT REQUIREMENTS OF THE PROJECT. THIS SHEET IS ONLY INTENDED TO PROVIDE INFORMATION PERTINENT FOR THE DEVELOPMENT OF THE CONTRACTOR'S DETAILED CONSTRUCTION SEQUENCE.
- THE CONTRACTOR SHALL EVALUATE SITE CONDITIONS AND SUBMIT A DETAILED CONSTRUCTION SEQUENCE, CONSISTING OF PLANS AND NARRATIVE, IN CONFORMANCE WITH THE CONTRACT, FOR THE ENGINEER'S REVIEW. NO WORK SHALL BE PERFORMED PRIOR TO THE ENGINEER'S REVIEW AND ACCEPTANCE OF THE CONTRACTOR'S DETAILED CONSTRUCTION SEQUENCE. THE FURNISHING OF A DETAILED CONSTRUCTION SEQUENCE OR FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL NOT SERVE TO RELIEVE THE CONTRACTOR OF ANY PART OF ITS RESPONSIBILITY FOR THE SUCCESSFUL COMPLETION OF PROJECT WORK.
- THE CONTRACTOR'S DETAILED CONSTRUCTION SEQUENCE SHALL INCLUDE PLANS AND NARRATIVE THAT SUFFICIENTLY DETAIL THE INTENDED MEANS AND METHODS OF WATER HANDLING AND WATER HANDLING DEVICES NECESSARY TO COMPLETE PROJECT WORK.
- THE CONTRACTOR MAY ELECT TO PERFORM THE WORK USING ADDITIONAL STAGES OF WATER HANDLING WHICH VARY FROM THOSE DEPICTED HEREIN. A TEMPORARY CHANNEL MEETING THE REQUIREMENTS OF THESE PLANS SHALL BE MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
- THE CONTRACTOR'S DETAILED CONSTRUCTION SEQUENCE SHALL INCLUDE A PLAN DESCRIBING THE MEANS AND METHODS FOR CONTAINING DEBRIS DURING REMOVAL OF THE EXISTING STRUCTURE. THE MEANS FOR CONTAINING DEBRIS MAY INCLUDE SAND BAGS, TURBIDITY CONTROL CURTAIN, SILT FENCE, AND ANY OTHER COMPONENTS ACCEPTABLE TO THE ENGINEER.
- BEST MANAGEMENT PRACTICES (BMP) SHALL BE UTILIZED AS APPROPRIATE AND SHALL BE CONSISTENT WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- CONSTRUCTION ACTIVITIES SHALL CONFORM TO SECTION 1.10 ENVIRONMENTAL COMPLIANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROVIDING FULLY ADEQUATE PASSAGE OF BASE STREAM FLOWS AT ALL TIMES DURING CONSTRUCTION, AND SHALL IMPLEMENT PROVISIONS, AS REQUIRED, TO PROVIDE FULLY ADEQUATE PASSAGE OF THE TEMPORARY DESIGN STORM.

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE 1

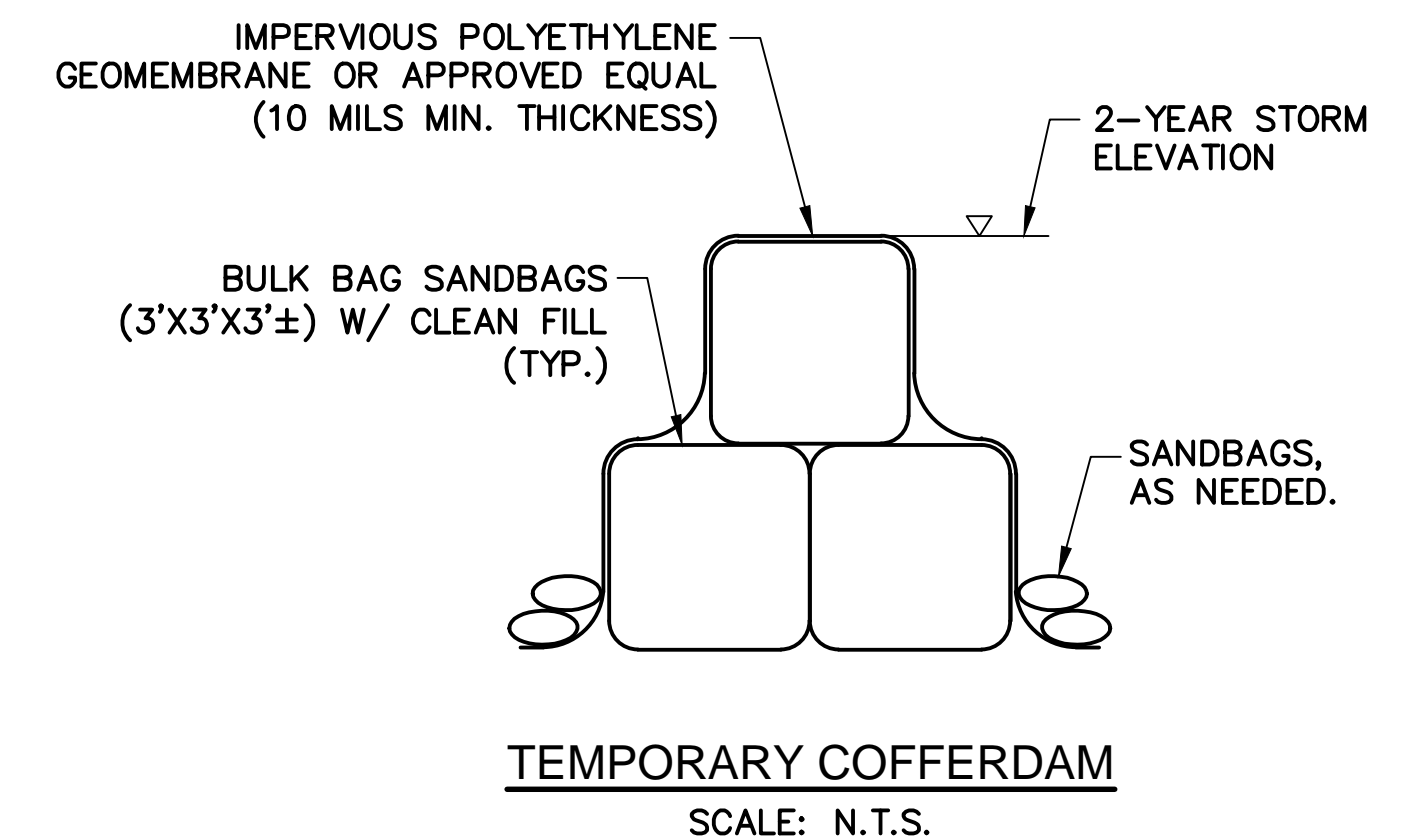
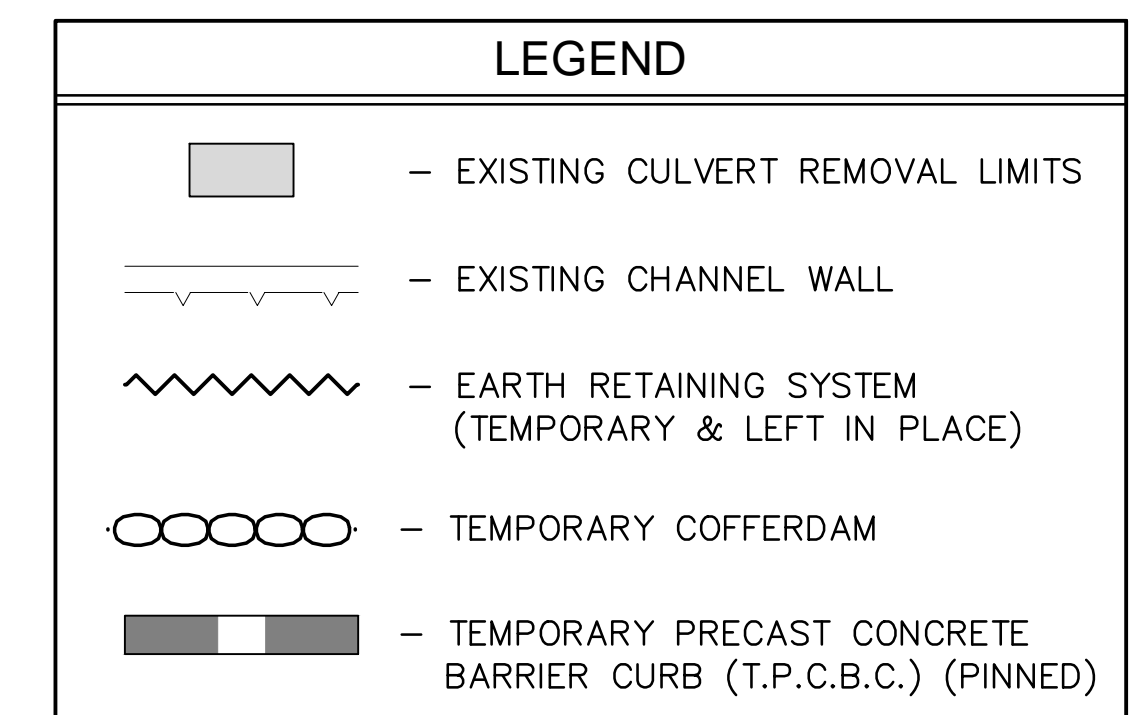
- CLOSE MYRTLE AVENUE AND DETOUR TRAFFIC AS SHOWN ON SHEET NO. DTR-1.
- CONTACT "CALL BEFORE YOU DIG" AND PERFORM UTILITY MARK OUT.
- INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES, AS REQUIRED.
- RELOCATE UTILITY POLES AND OVERHEAD LINES.
- INSTALL TEMPORARY COFFERDAMS AND BYPASS PUMP, AS SHOWN.
- INSTALL TEMPORARY EARTH RETAINING SYSTEM (T.E.R.S.) AND EARTH RETAINING SYSTEM TO BE LEFT IN PLACE, AS SHOWN.
- DEWATER THE WORK AREA, AS NEEDED.
- PERFORM UTILITY RELOCATION WORK (GAS MAIN AND ELECTRIC DUCT BANK).
- INSTALL TEMPORARY UTILITY SUPPORT FOR THE WATER MAINS.
- REMOVE THE SANITARY SEWER MANHOLE.
- REMOVE THE EXISTING STRUCTURE. CONTRACTOR SHALL REMOVE, PROTECT, AND CLEAN THE EXISTING STONES SO THAT THEY CAN BE UTILIZED FOR THE PROPOSED STONE MASONRY FACING.
- CONSTRUCT CUTOFF WALLS, RETURN WALLS, AND THE WWB2 FOOTING.

STAGE 2

- REMOVE THE EARTH RETAINING SYSTEM TO THE TOP OF FOUNDATION ELEVATION AND LEAVE THE REMAINING PORTION IN PLACE.
- INSTALL THE PRECAST CONCRETE BOX CULVERT.
- CONSTRUCT WINGWALL B2, AS SHOWN.
- INSTALL DRAINAGE IMPROVEMENTS.
- CONSTRUCT THE UPSTREAM STONE MASONRY CHANNEL WALLS, AS SHOWN.
- APPLY DAMPPROOFING ALONG THE CULVERT AND WINGWALL.
- BACKFILL STRUCTURE PER SPECIFICATIONS.
- CONSTRUCT ENDWALL FOOTINGS.
- INSTALL THE STONE MASONRY FACING WITHIN THE BOX CULVERT.
- INSTALL SCOUR COUNTERMEASURE AND NATURAL STREAMBED MATERIAL WITHIN THE CULVERT AND ALONG THE CHANNEL, AS REQUIRED.
- REMOVE THE WATER HANDLING DEVICES.

STAGE 3

- CONSTRUCT ENDWALL STEMS AND PARAPETS.
- REMOVE TEMPORARY OVERHEAD UTILITY LINES/POLES.
- PERFORM FULL DEPTH ROADWAY RECONSTRUCTION.
- INSTALL GUIDERAILING, CONCRETE SIDEWALKS, PAVEMENT MARKINGS, AND OTHER MISCELLANEOUS ROADWAY ITEMS.
- RESTORE THE AREA TO EXISTING CONDITIONS OR BETTER.



NOT FOR CONSTRUCTION

No.	Date	Desc.

Designed K.C.L.  
Drawn K.C.L.  
Checked C.E.P.  
Approved C.E.P.  
Scale AS SHOWN  
Project No. 16C6016  
Date 06/18/18  
CAD File: TBRG16C6016-04\_CONSTRUCTION  
Title  
SEQUENCE OF CONSTRUCTION  
Sheet No.

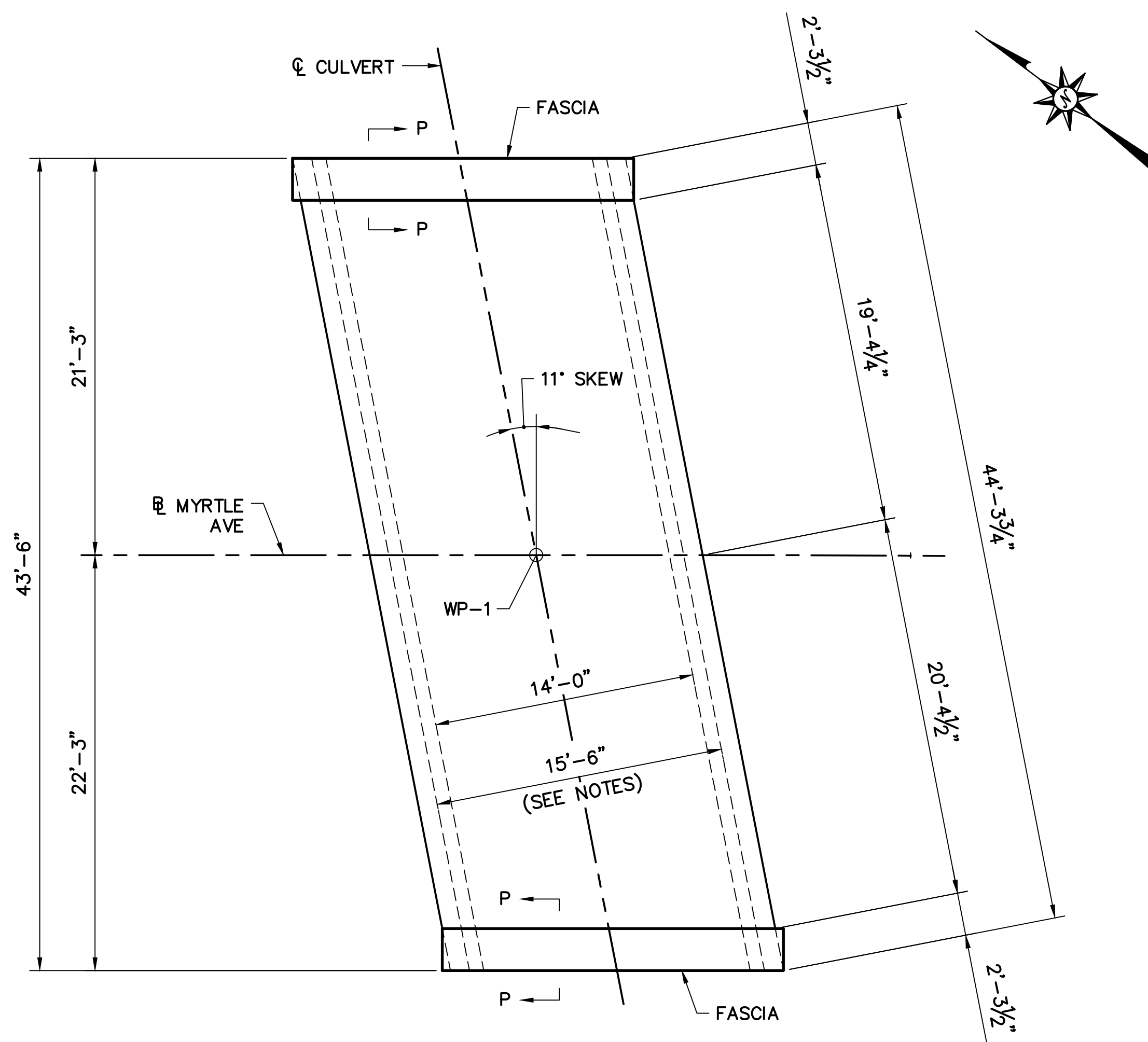
REVISIONS	No.	Date	Desc.

Designed	K.C.L.
Drawn	K.C.L.
Checked	C.E.P.
Approved	C.E.P.
Scale	AS SHOWN
Project No.	16C6016
Date	06/18/18

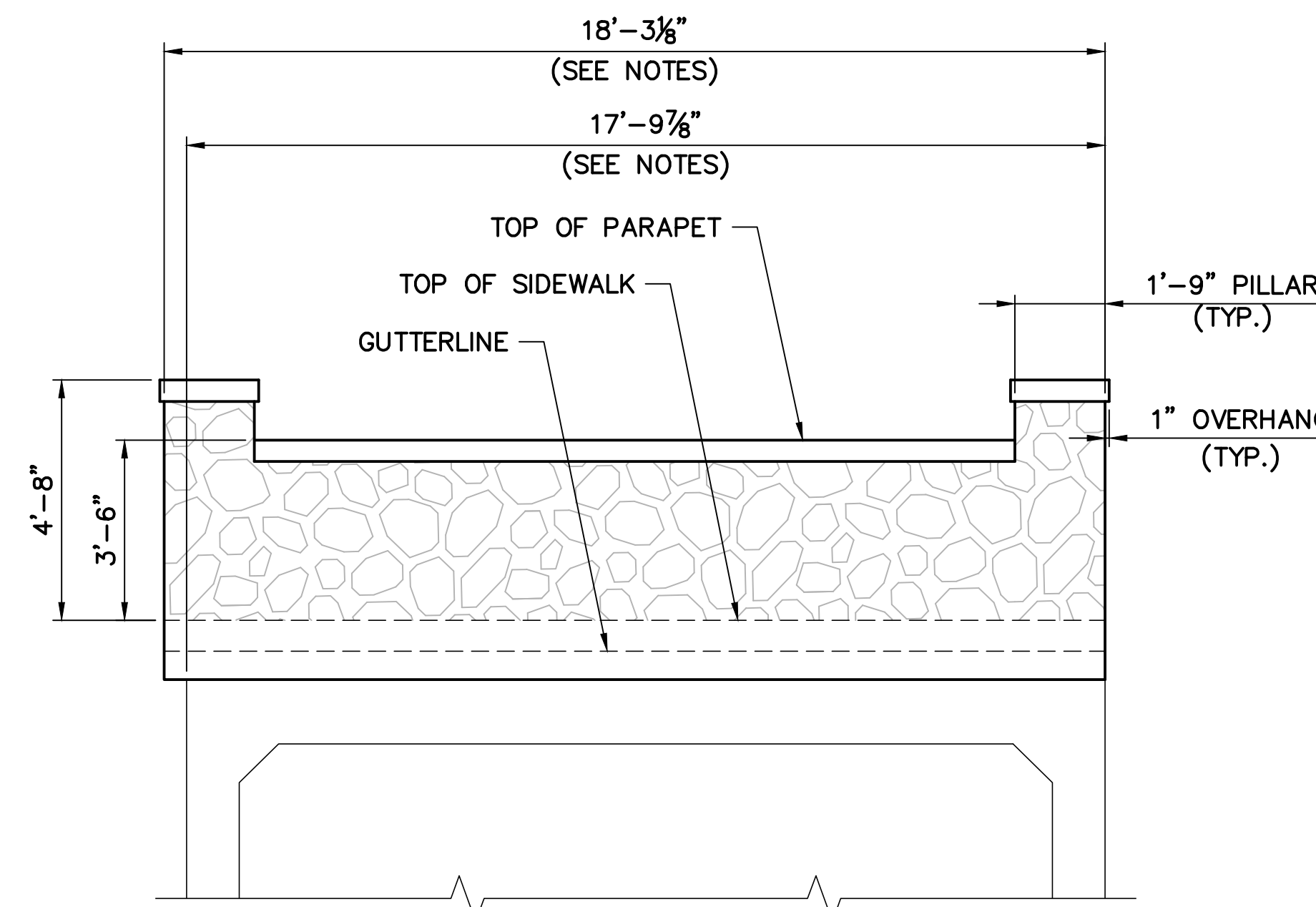
CAD File: TBRG16C6016-05\_CULVERT  
Title: CULVERT DETAILS 1  
Sheet No.

**NOTES**

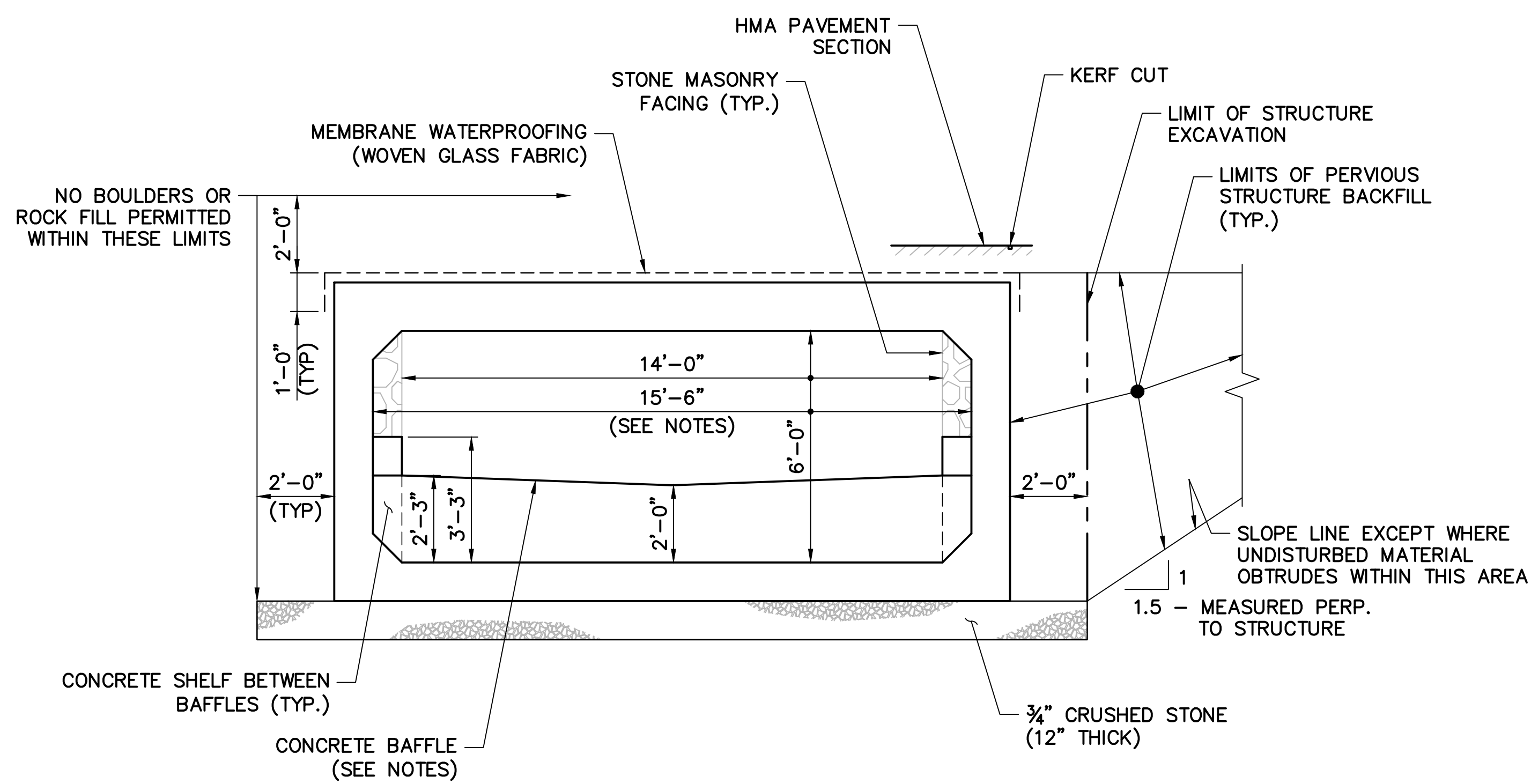
- THE CONTRACTOR SHALL DESIGN, MANUFACTURE, AND CONSTRUCT THE PRECAST CONCRETE BOX CULVERT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "15.5'X6' PRECAST CONCRETE BOX CULVERT" AND TO THE INSIDE DIMENSIONS, LENGTH, AND DETAILS SHOWN ON THESE PLANS.
- ALL INSERTS OR HOLES CAST INTO THE CULVERT SECTIONS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
- NON-SHRINK GROUT SHALL BE USED TO GROUT THE REINFORCEMENT.
- THE COST OF FURNISHING AND INSTALLING DOWEL BAR SPLICER INSERTS SHALL BE INCLUDED IN THE COST OF THE ITEM "15.5'X6' PRECAST CONCRETE BOX CULVERT" AND SHALL BE ONE OF THE FOLLOWING:
  - STAR EXPANSION INDUSTRIES CORP. TYPE P-35-T
  - RICHMOND SCREW ANCHOR CO. TYPE LF
  - DAYTON SUPERIOR CORP. TYPE F-57
- ALL INSERTS SHALL BE MECHANICALLY GALVANIZED WITH ASTM B 695, CLASS 50, TYPE 1
- THE #5 BARS WITH THREADED END SHALL BE COMPATIBLE WITH THE THREADED INSERTS.
- ALL REINFORCEMENT SHALL HAVE 2" COVER UNLESS NOTED OTHERWISE.
- ALL STRUCTURES SHALL REST ON A MINIMUM OF 12" COMPACTED GRANULAR FILL.
- JOINT SEAL SHALL BE DOW CORNING 902 RCS OR 888 OR AN APPROVED EQUAL.
- DEPTH AND DIAMETER OF DRILLED HOLES TO BE AS REQUIRED BY THE CHEMICAL ADHESIVE MANUFACTURER.
- IF AN EXISTING REINFORCING BAR IS CONTACTED DURING THE DRILLING PROCESS, THE CONTRACTOR SHALL ABANDON THE HOLE AND MOVE THE LOCATION AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL ABANDONED HOLES ARE FILLED WITH GROUT BEFORE THE PARAPET CONCRETE POUR.
- THE DIMENSIONS SHOWN FOR THE CULVERT AND PARAPET ARE APPROXIMATE. THE ACTUAL DIMENSIONS WILL BE CONTROLLED BY THE DESIGN OF THE PRECAST CONCRETE CULVERT MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE MANUFACTURER AND ADJUSTING THE PARAPET REINFORCEMENT LAYOUT, AS NEEDED. IF THE DESIGNED CHAMFER IS GREATER THAN THE ASSUMED 9", THE CULVERT SIZE SHALL BE INCREASED TO ALLOW FOR THE CHAMFER TO BE COVERED WITHIN THE MASONRY FACING LIMITS WHILE MAINTAINING THE 14'-0" CLEAR SPAN.
- THE TOP OF THE CONCRETE BAFFLE SHALL BE LEVEL ALONG THE WIDTH OF THE STONE MASONRY FACING.
- THE CONCRETE SHELF SUPPORTING THE STONE MASONRY FACING AND THE CONCRETE BAFFLES SHALL NOT BE MEASURED FOR PAYMENT, BUT ARE TO BE INCLUDED IN THE PAY ITEM "15.5'X6' PRECAST CONCRETE BOX CULVERT".



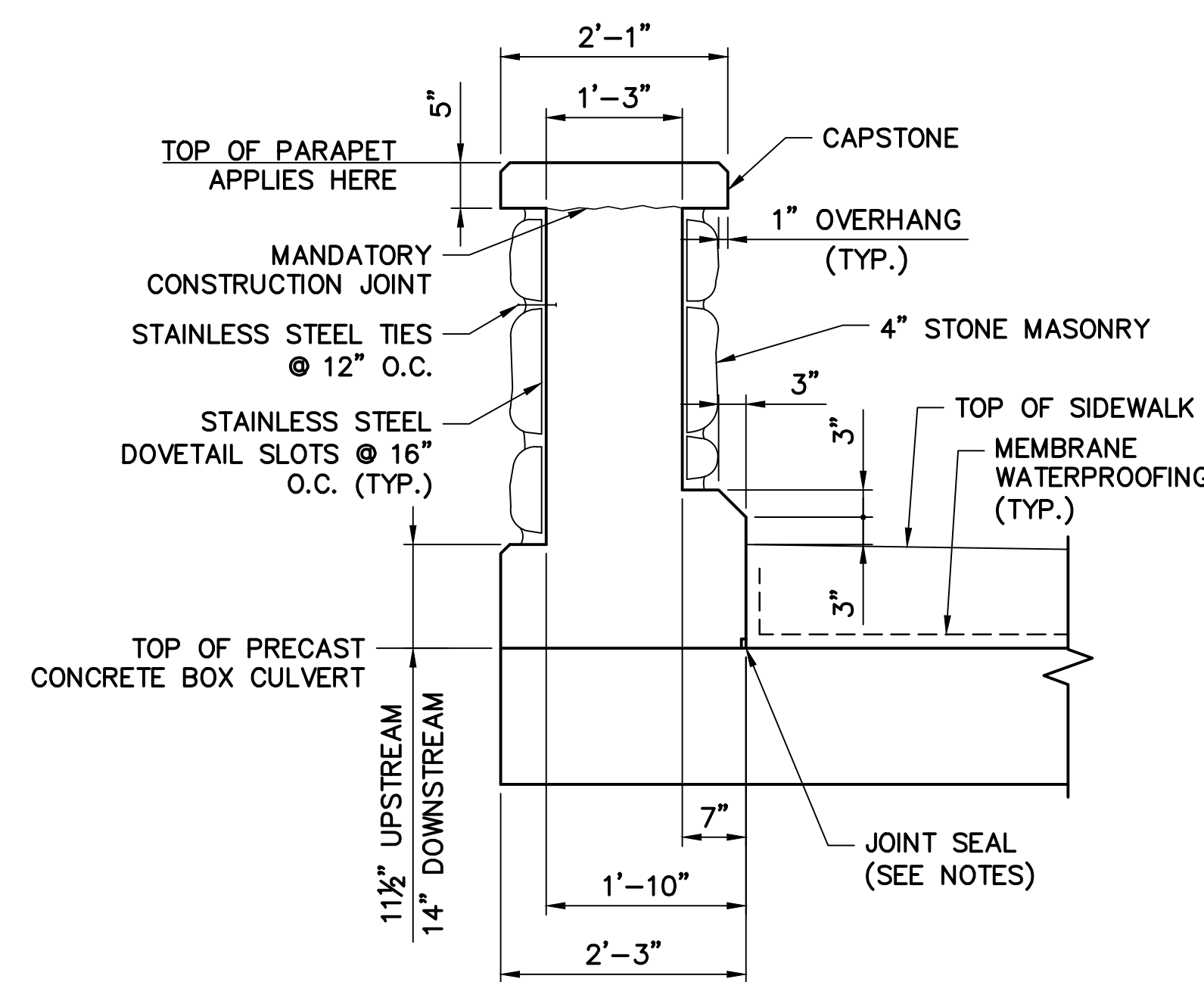
**CULVERT PLAN**  
SCALE: 1/8" = 1'-0"



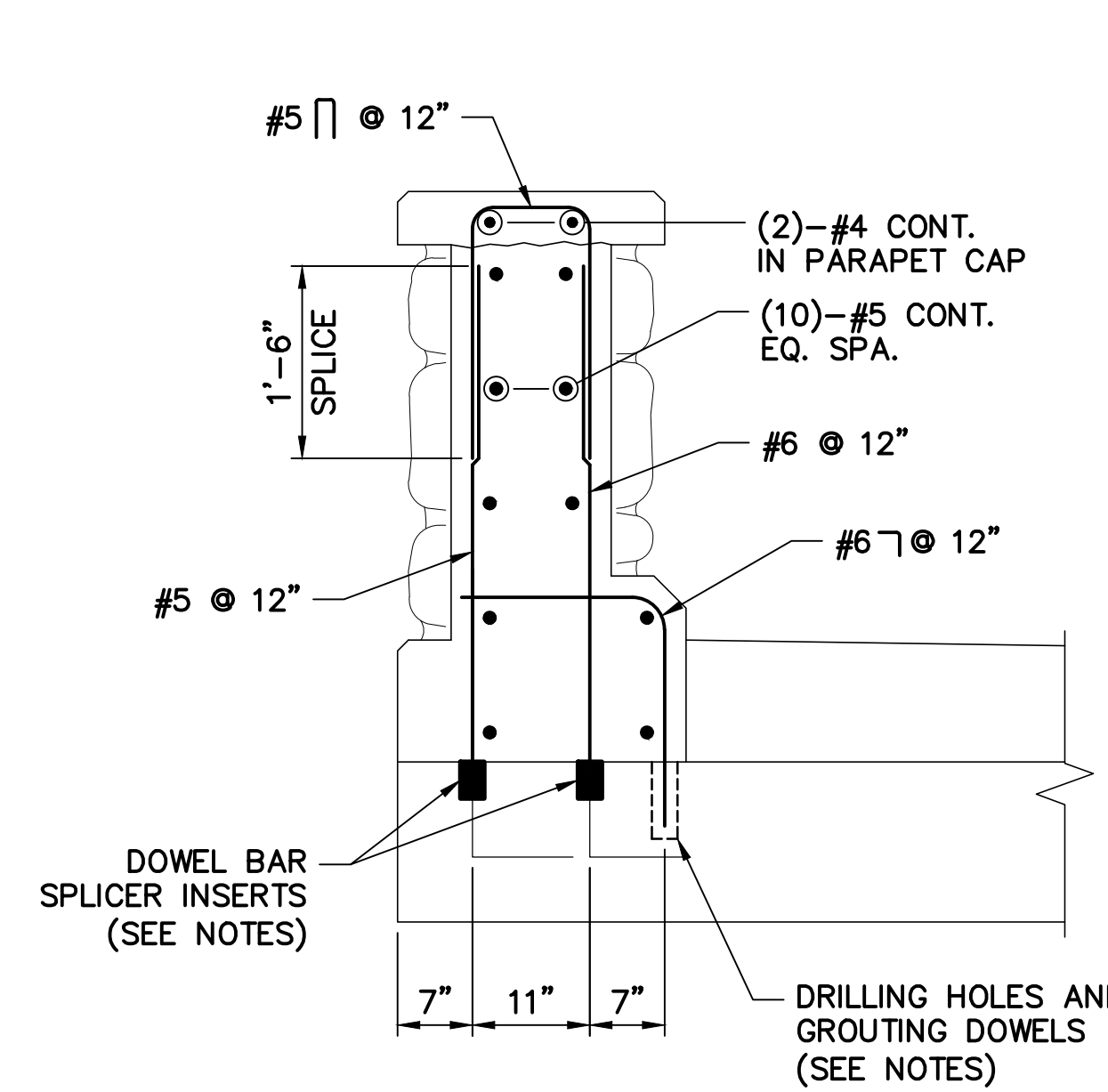
**TYPICAL PARAPET ELEVATION**  
SCALE: 3/8" = 1'-0"



**TYPICAL CULVERT SECTION**  
SCALE: 3/8" = 1'-0"



**TYPICAL SECTION**



**REINFORCING LAYOUT**

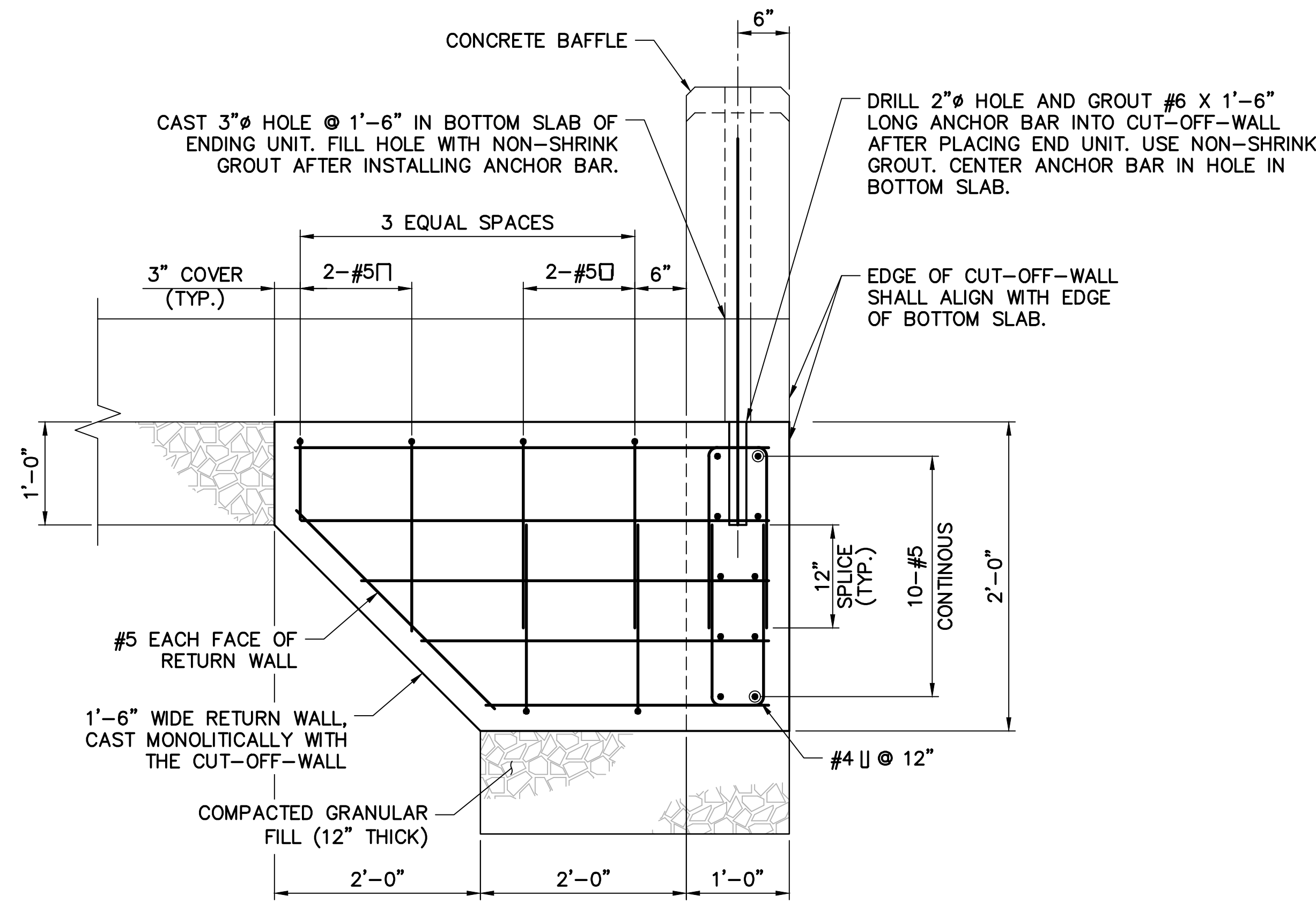
**SECTION P-P**  
SCALE: 3/4" = 1'-0"

NOT FOR CONSTRUCTION

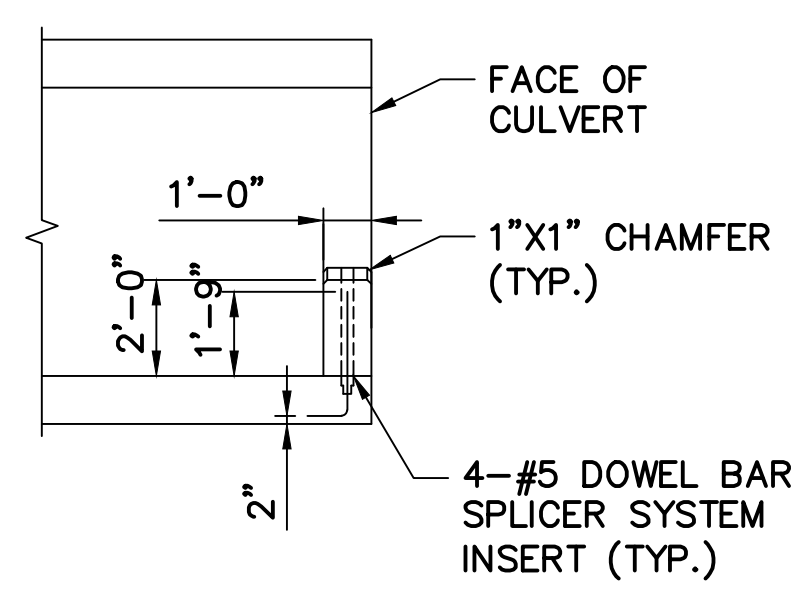
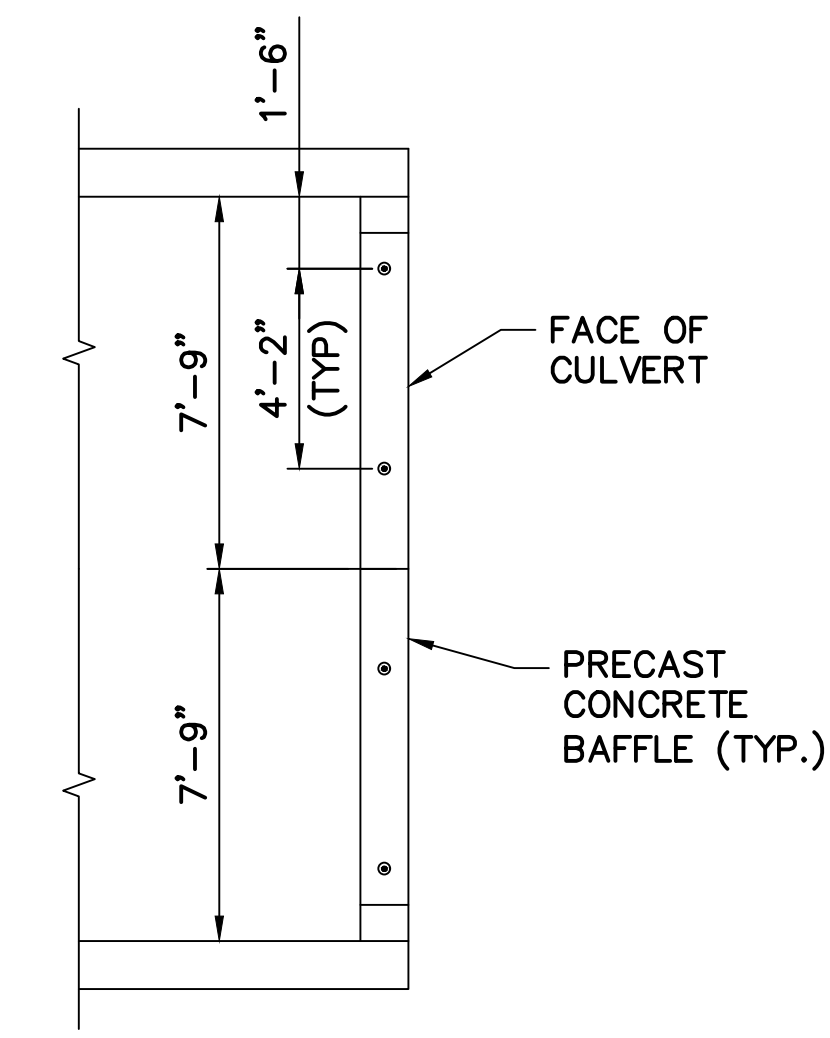
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**NOTES**

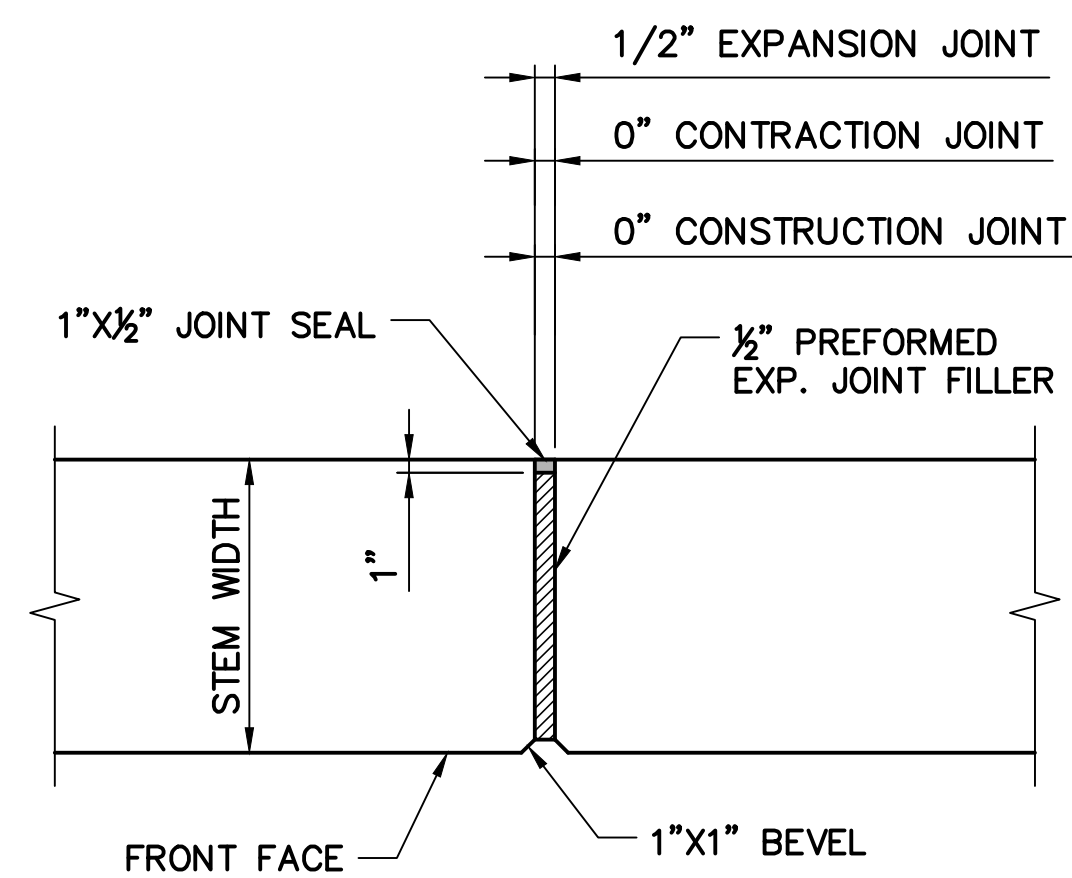
- SEE SHEET NO. S-1, "GENERAL PLAN, ELEVATION, AND SECTION", FOR BAFFLE LOCATIONS.
- SEE SHEET NO. S-5, "CULVERT DETAILS 1" FOR CONCRETE BAFFLE AND JOINT SEAL NOTES.



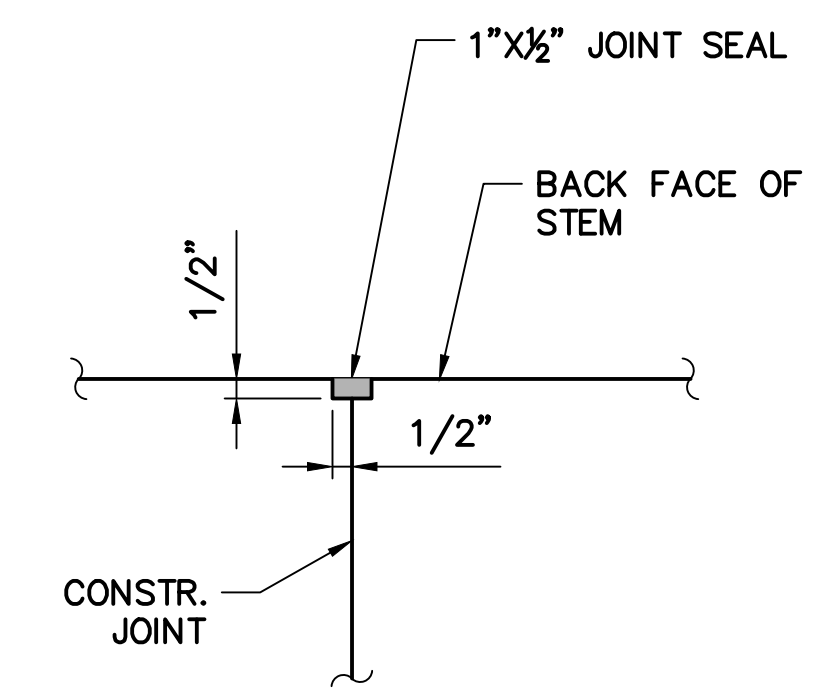
**CUTOFF & RETURN WALL DETAIL**  
N.T.S.



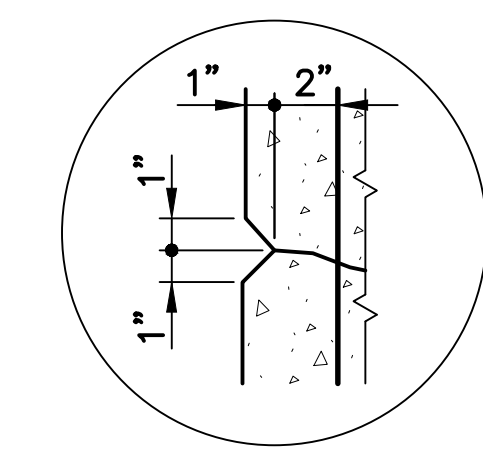
**CONCRETE BAFFLE DETAIL**  
SCALE: 1/4" = 1'-0"



**STEM JOINT DETAIL**  
N.T.S.



**JOINT SEAL DETAIL**  
N.T.S.



**RUSTICATION DETAIL**  
N.T.S.

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REVISIONS	
No.	Date

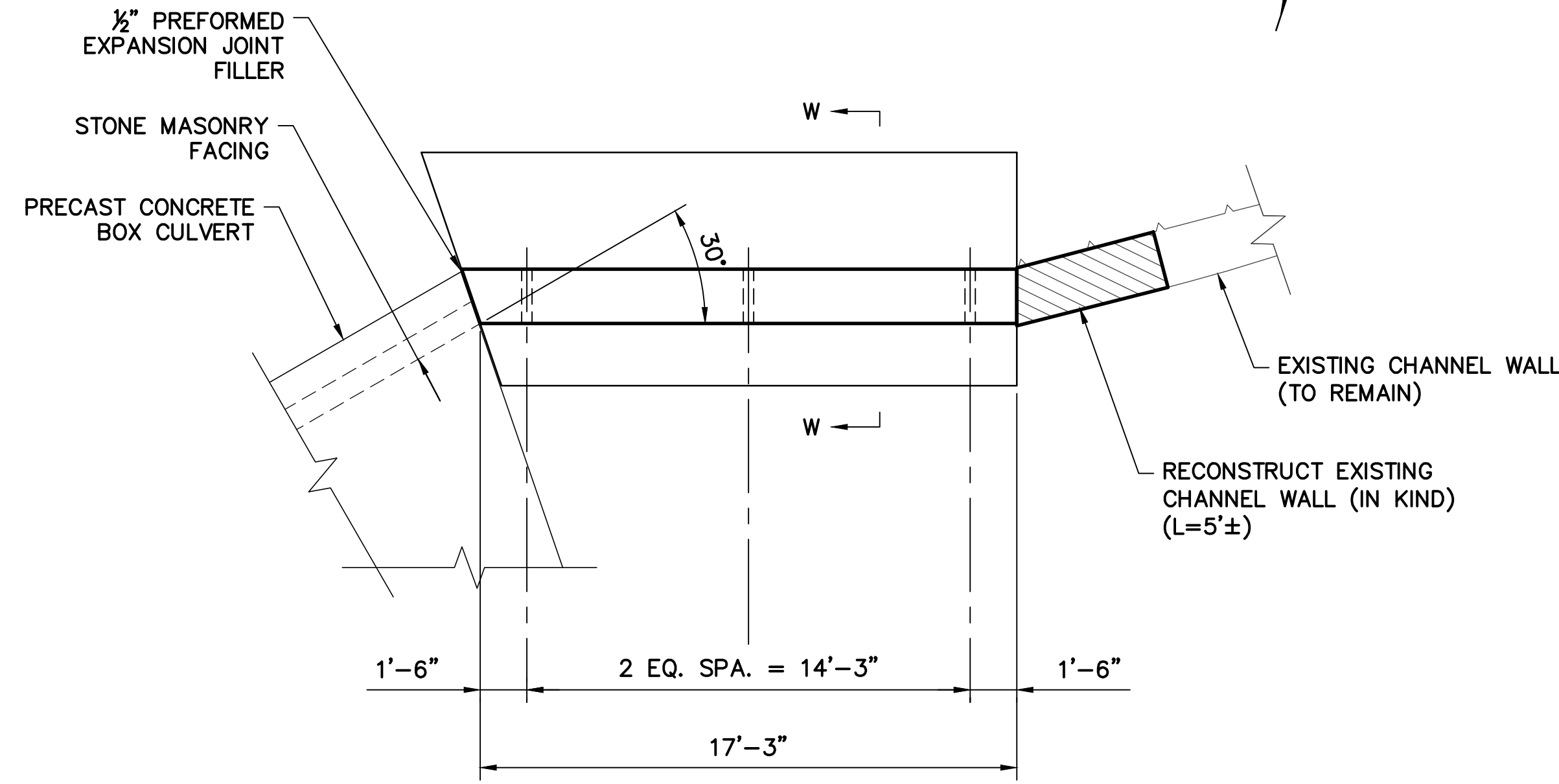
Designed K.C.L.  
Drawn K.C.L.  
Checked C.E.P.  
Approved C.E.P.  
Scale AS SHOWN  
Project No. 16C016  
Date 06/18/18

CAD File: TBRG16C016-06\_CULVERT  
Title  
CULVERT  
DETAILS 2  
Sheet No.

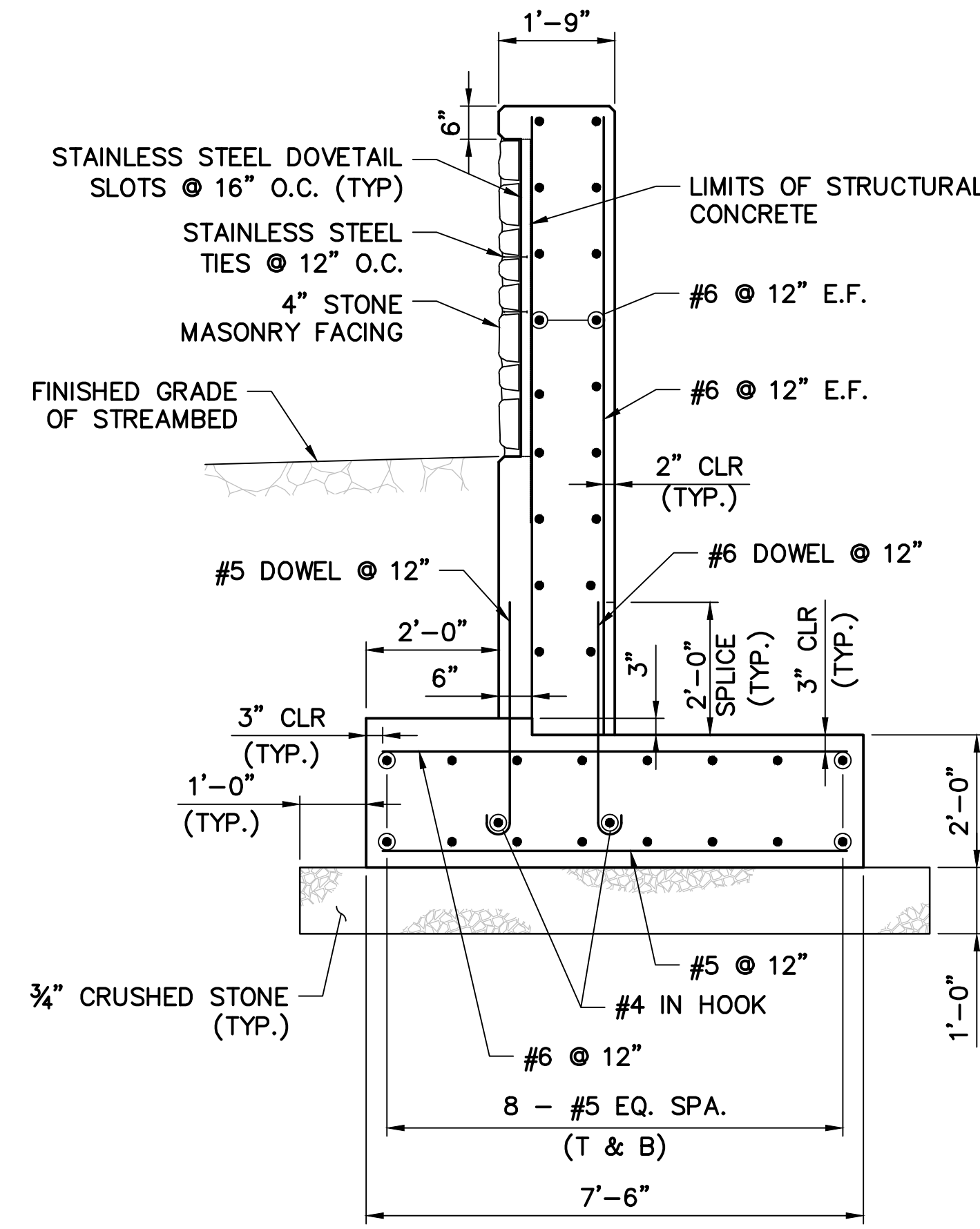
NOT FOR CONSTRUCTION

**NOTES**

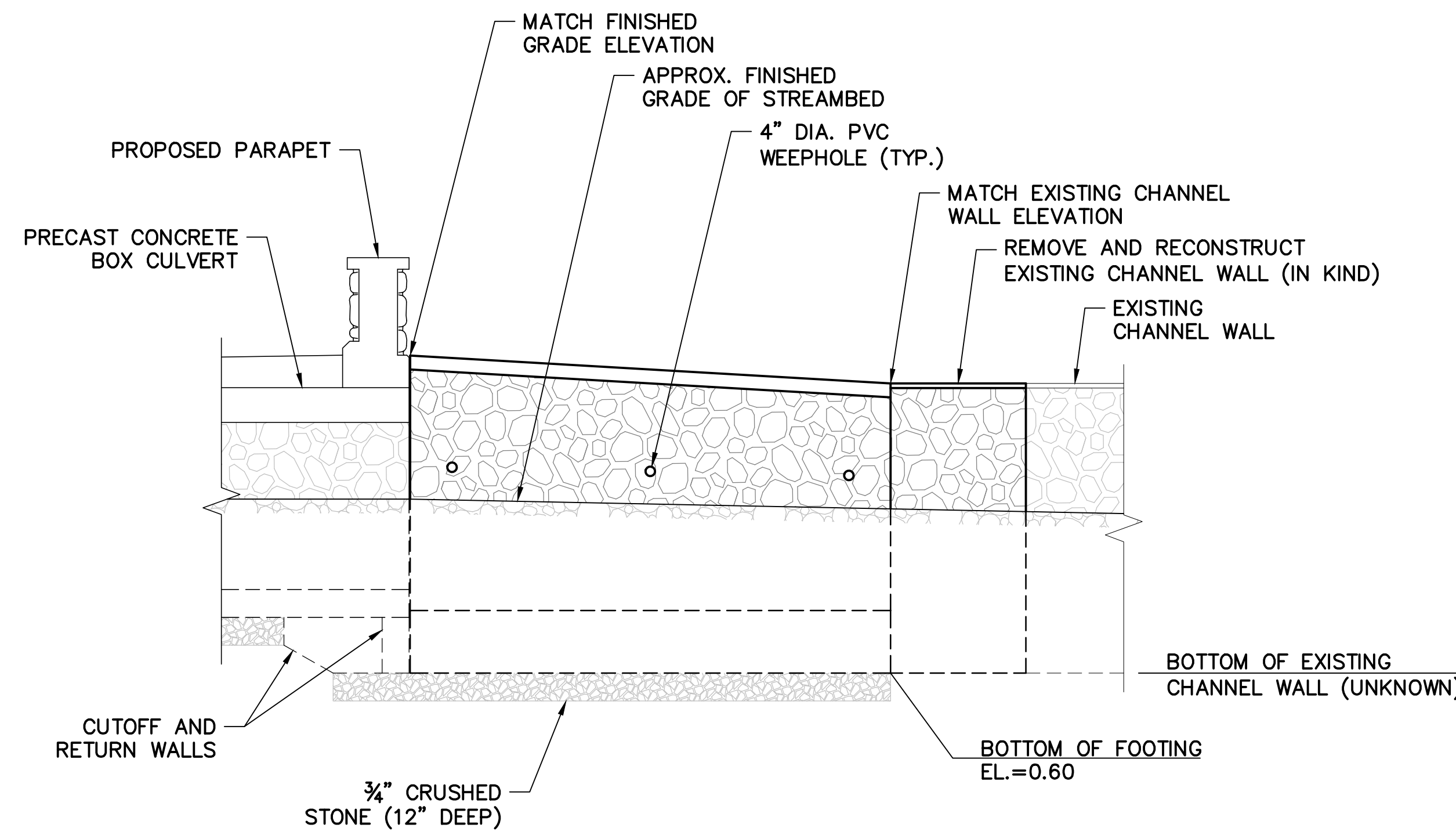
1. FOR STRUCTURE GEOMETRY INFORMATION, SEE SHEET NO. S-2, "LAYOUT PLAN, PROFILE, AND QUANTITIES".
2. WEEPHOLES SHALL CONSIST OF 4" DIA. POLYVINYL CHLORIDE PLASTIC PIPE. BAGGED STONE SHALL CONSIST OF FURNISHING AND PLACING CRUSHED STONE OR GRAVEL IN BURLAP BAGS AT INLET ENDS OF WEEP HOLES TO THE DIMENSIONS INDICATED ON THE PLANS OR AS ORDERED BY THE ENGINEER. THE CRUSHED STONE OR GRAVEL SHALL CONFORM TO THE GRADING REQUIREMENTS ESTABLISHED IN THE FORM 817, ARTICLE M.01.01 FOR 2-INCH OR 1 1/4 INCH COARSE AGGREGATE OR A MIXTURE OF BOTH. ALL WORK ASSOCIATED WITH THE WEEP HOLES AND BAGGED STONE SHALL BE PAID FOR IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".



PLAN

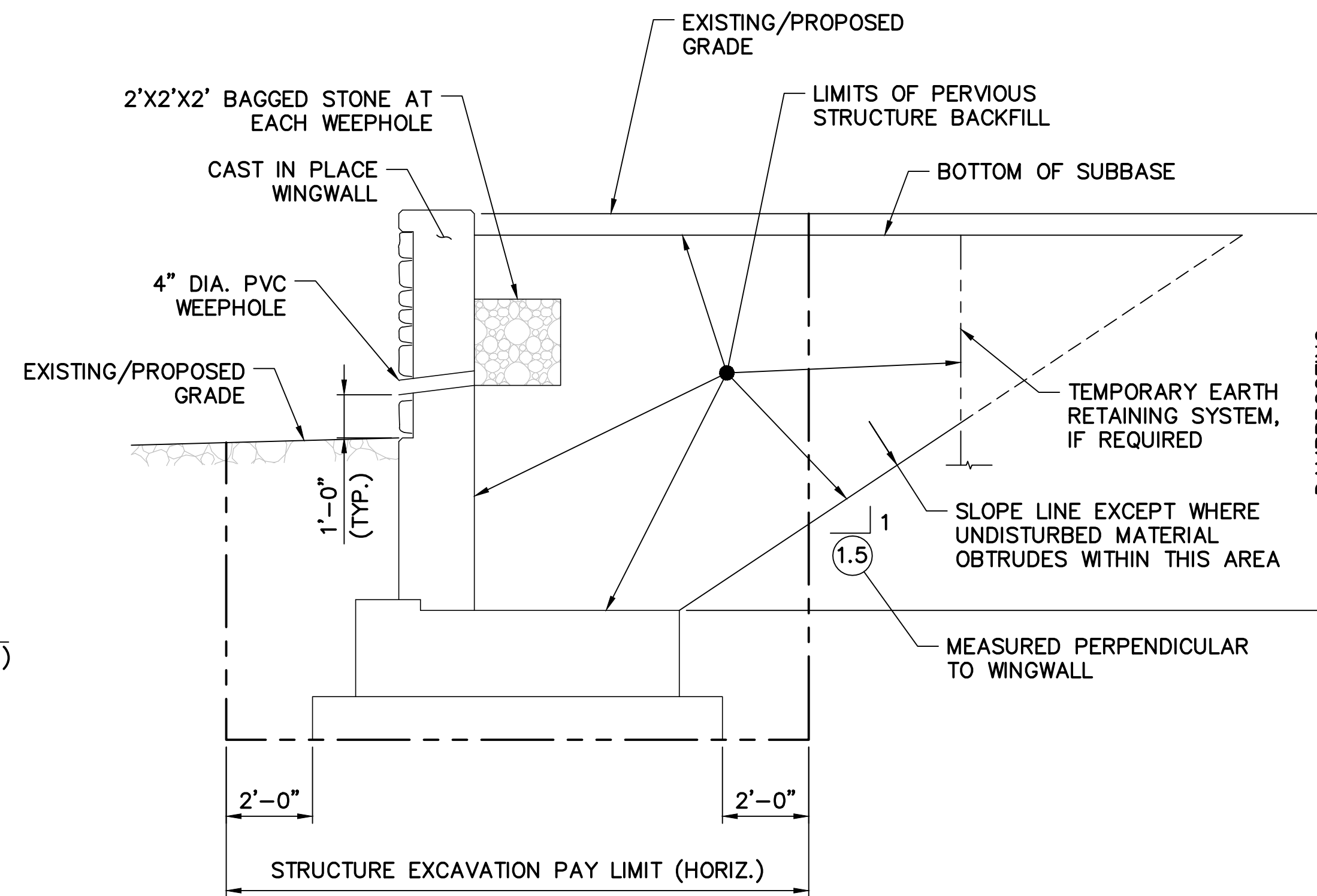


SECTION W-W  
SCALE: 1/2" = 1'-0"



ELEVATION

WINGWALL B2  
SCALE: 1/4" = 1'-0"

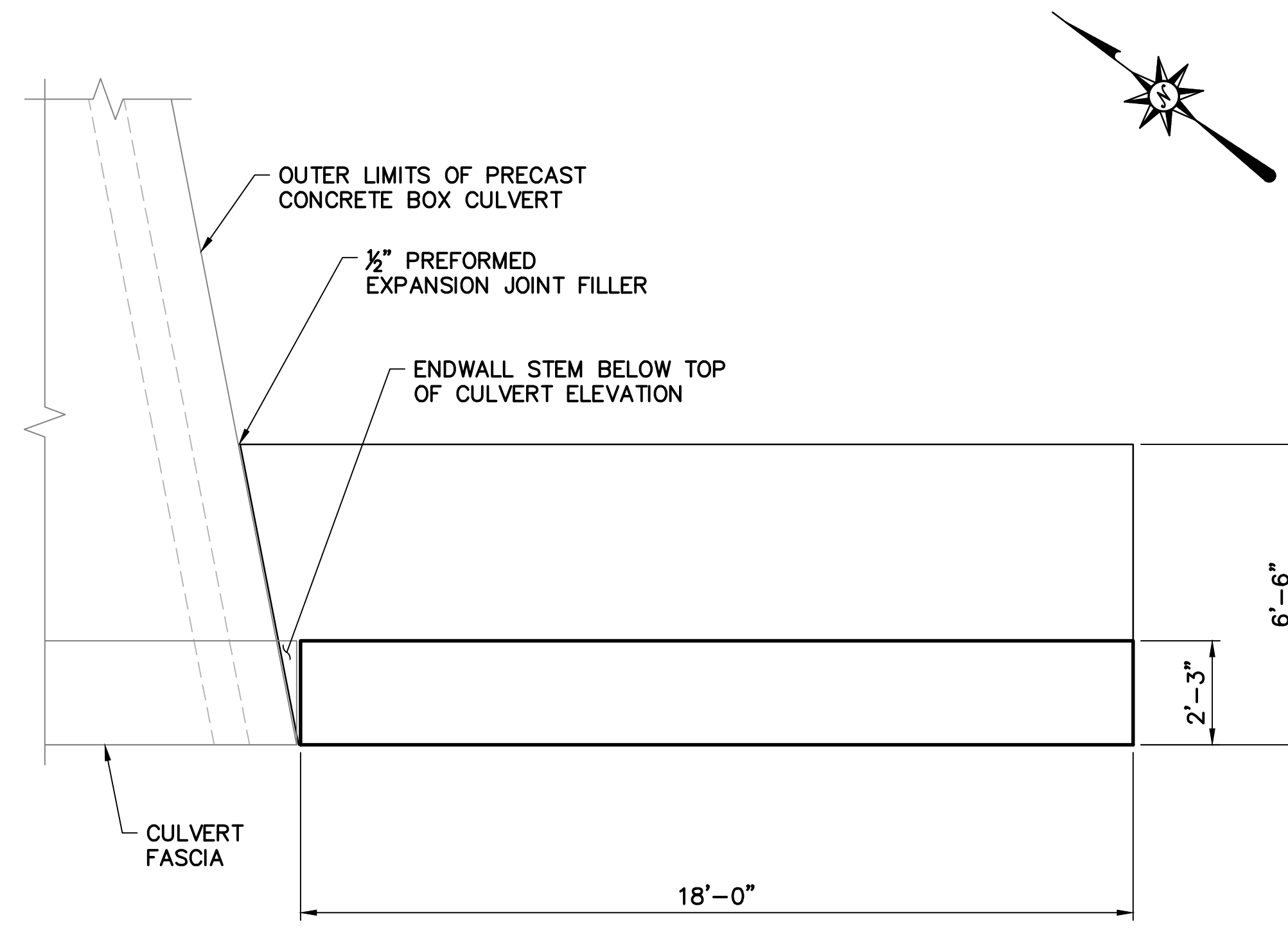


TYPICAL WINGWALL PAY LIMITS  
N.T.S.

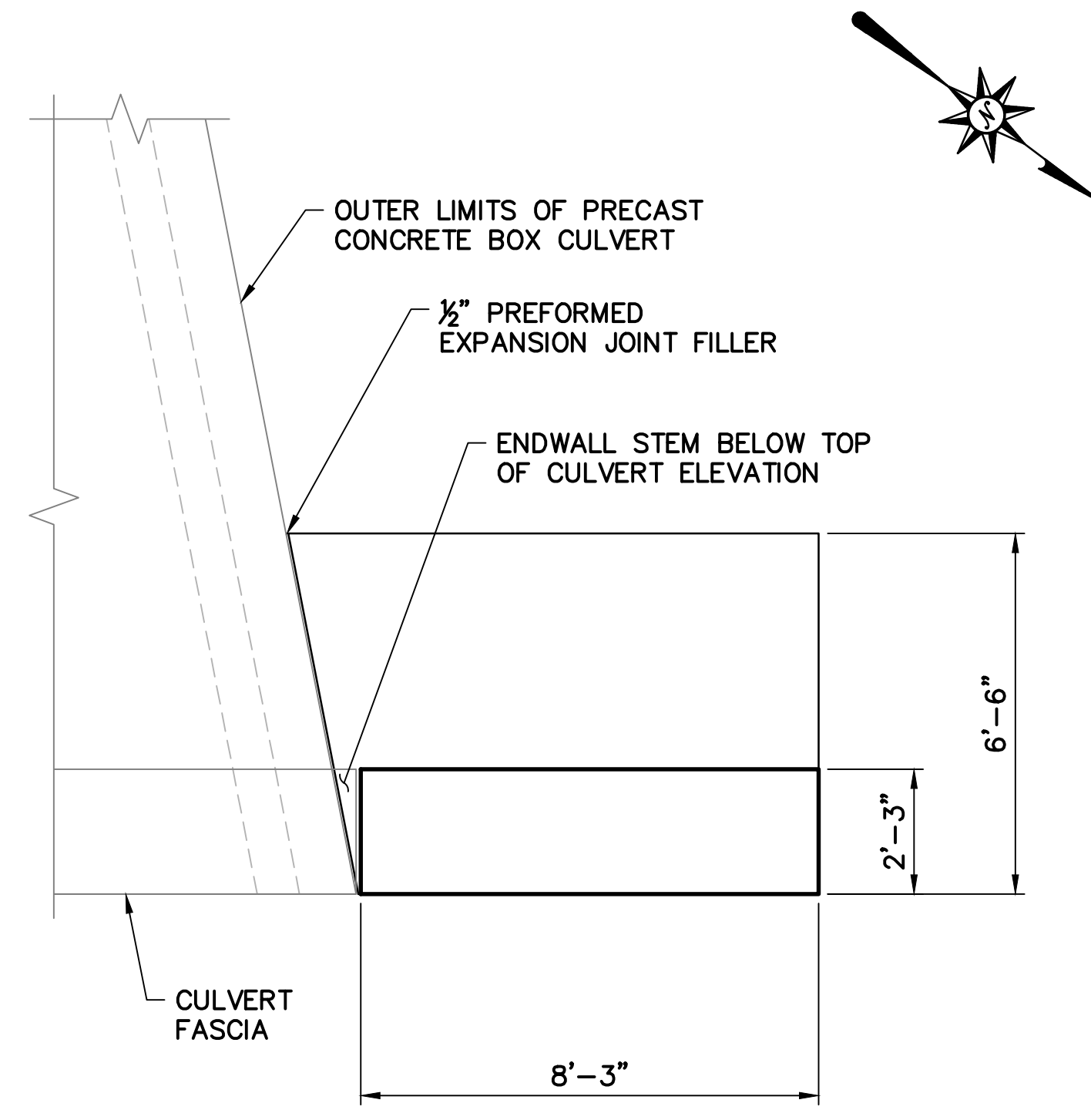
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**NOTES**

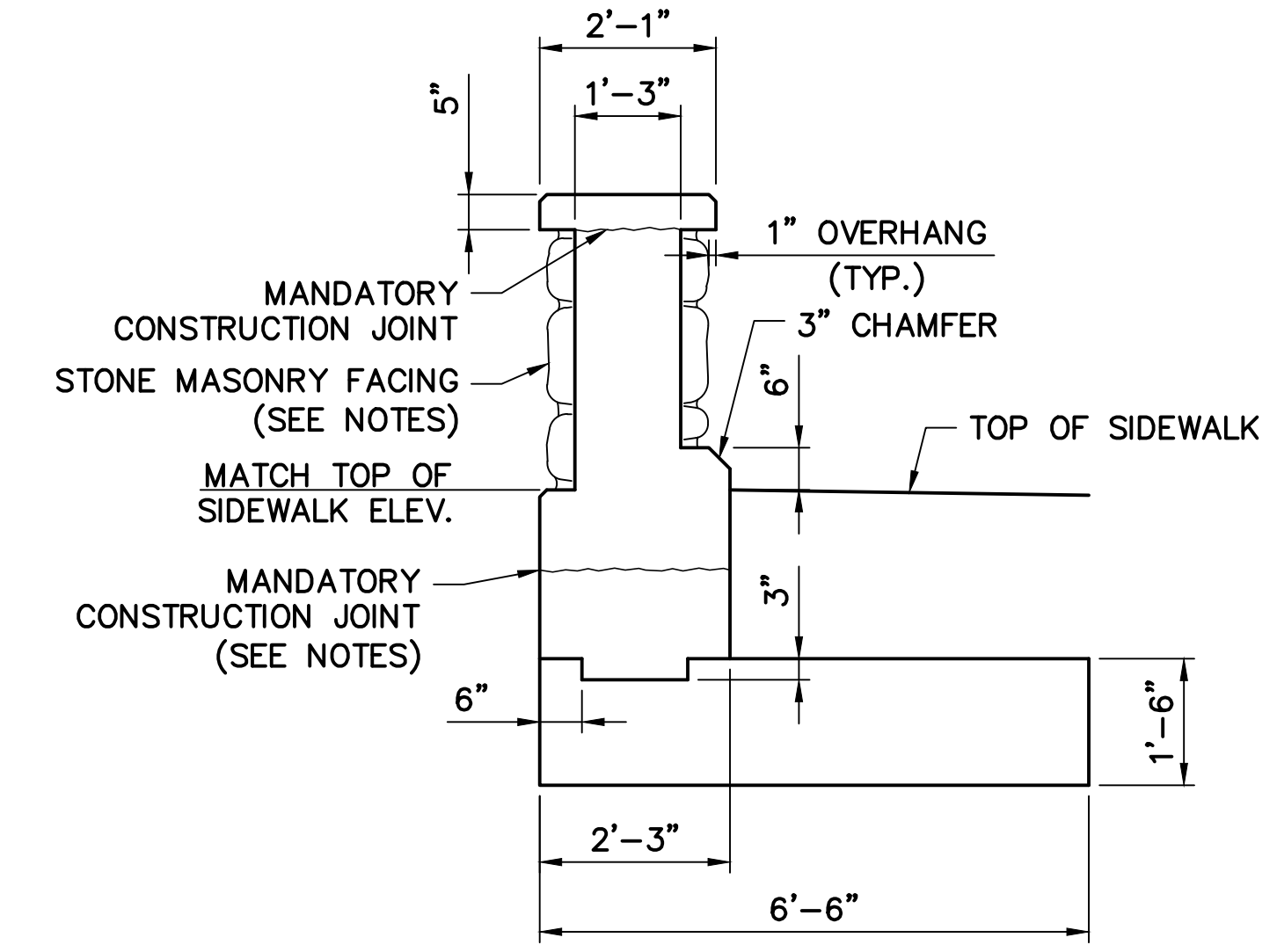
1. ENDWALL STEMS TO BE POURED ALONG THE SKEWED CULVERT WALL FACE TO THE TOP OF CULVERT ELEVATION. 15 LB ROOFING FELT SHALL BE USED AS A BOND BREAKER BETWEEN THE PARAPET AND STEM WALL.
2. DIMENSIONS ARE BASED ON AN ASSUMED CULVERT WALL THICKNESS OF 12" AND CHAMFER OF 9". IF THE CONTRACTOR SELECTS A PRECAST STRUCTURE WITH A DIFFERENT WALL THICKNESS AND/OR LARGER CHAMFER DIMENSION, AFFECTED DETAILS SHALL BE ADJUSTED ACCORDINGLY.
3. FOR MASONRY FACING DETAILS, SEE DETAIL ON SHEET NO. S-5, "CULVERT DETAILS-1".



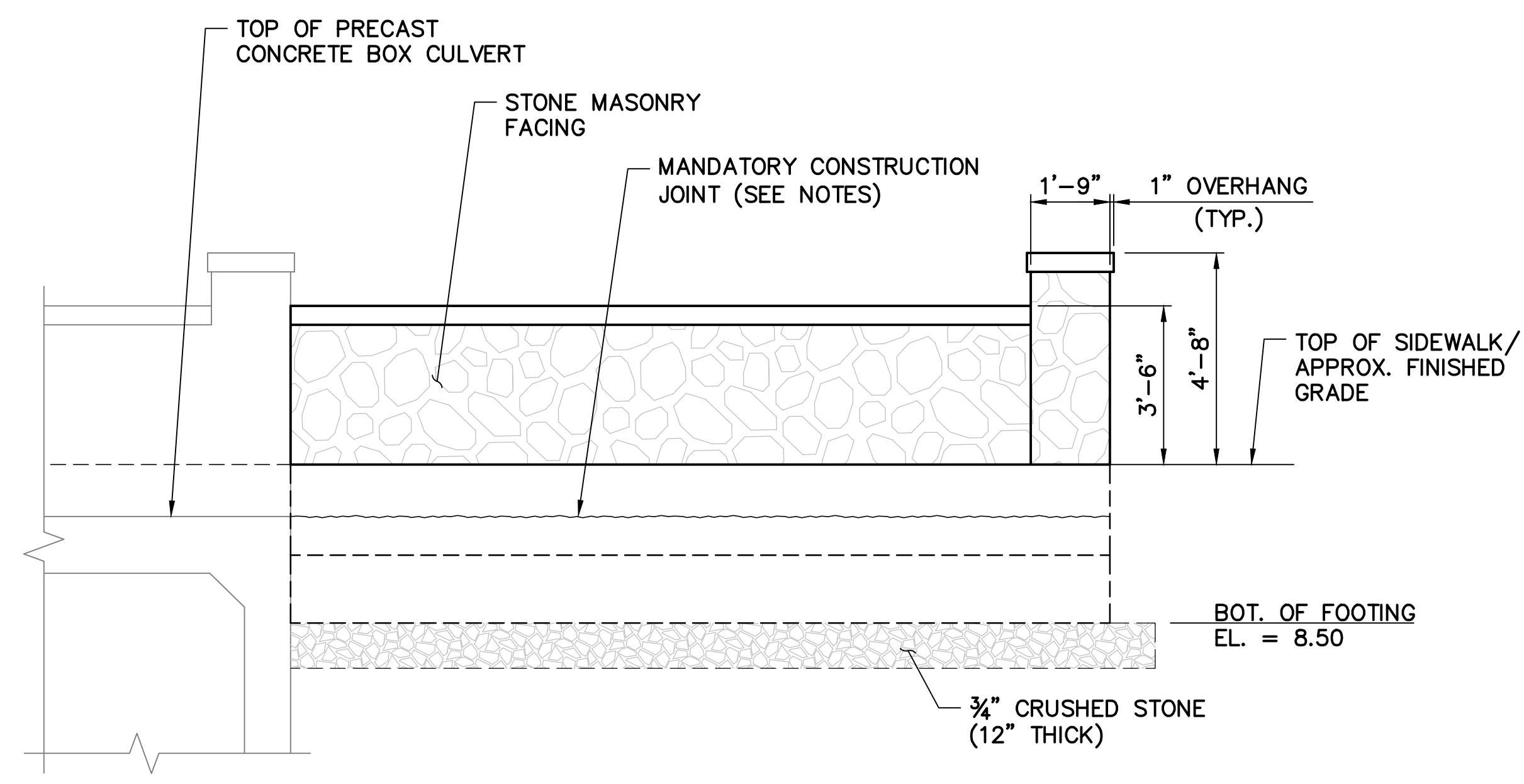
**PLAN**



**PLAN**

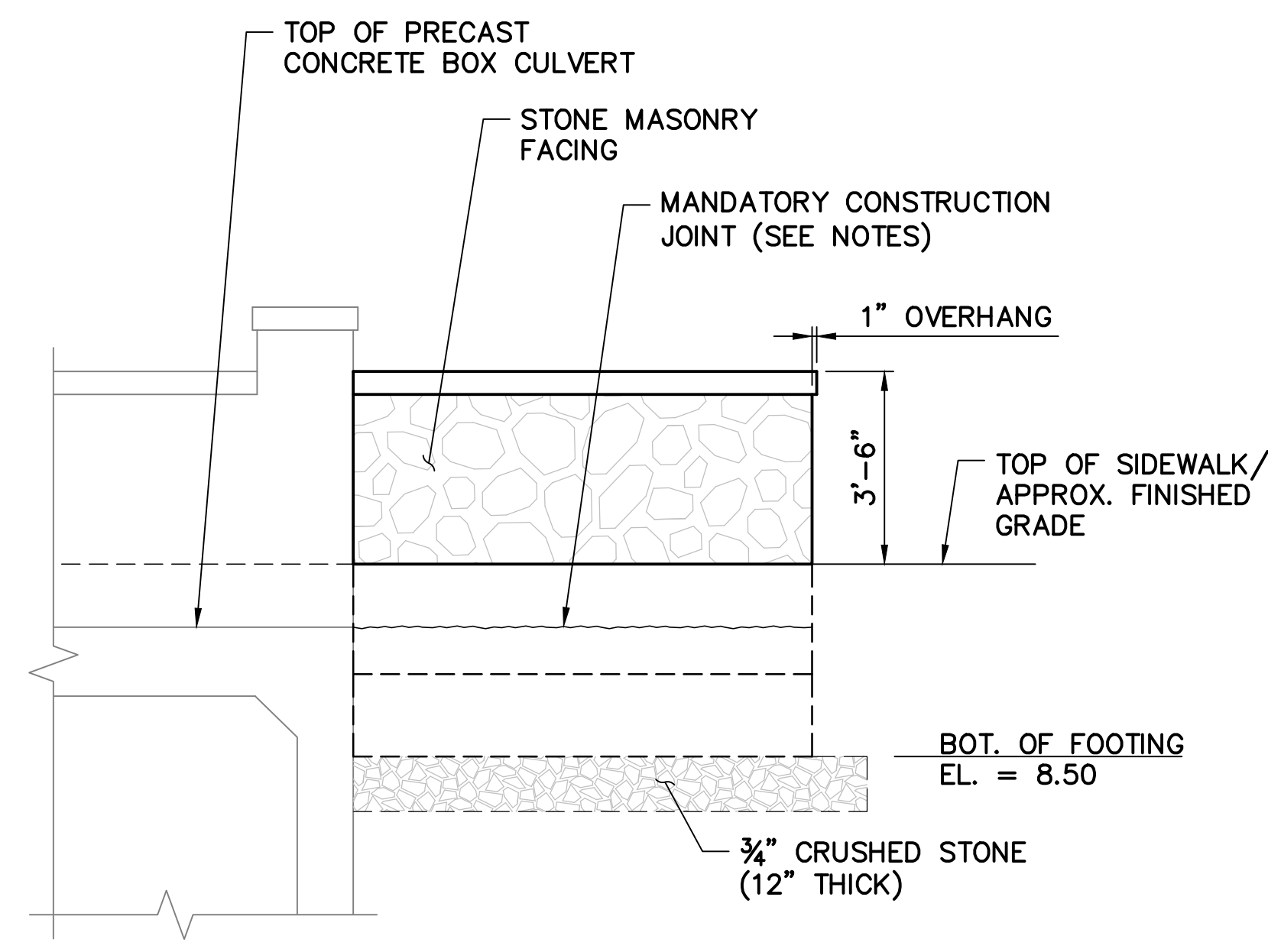


**TYPICAL SECTION**



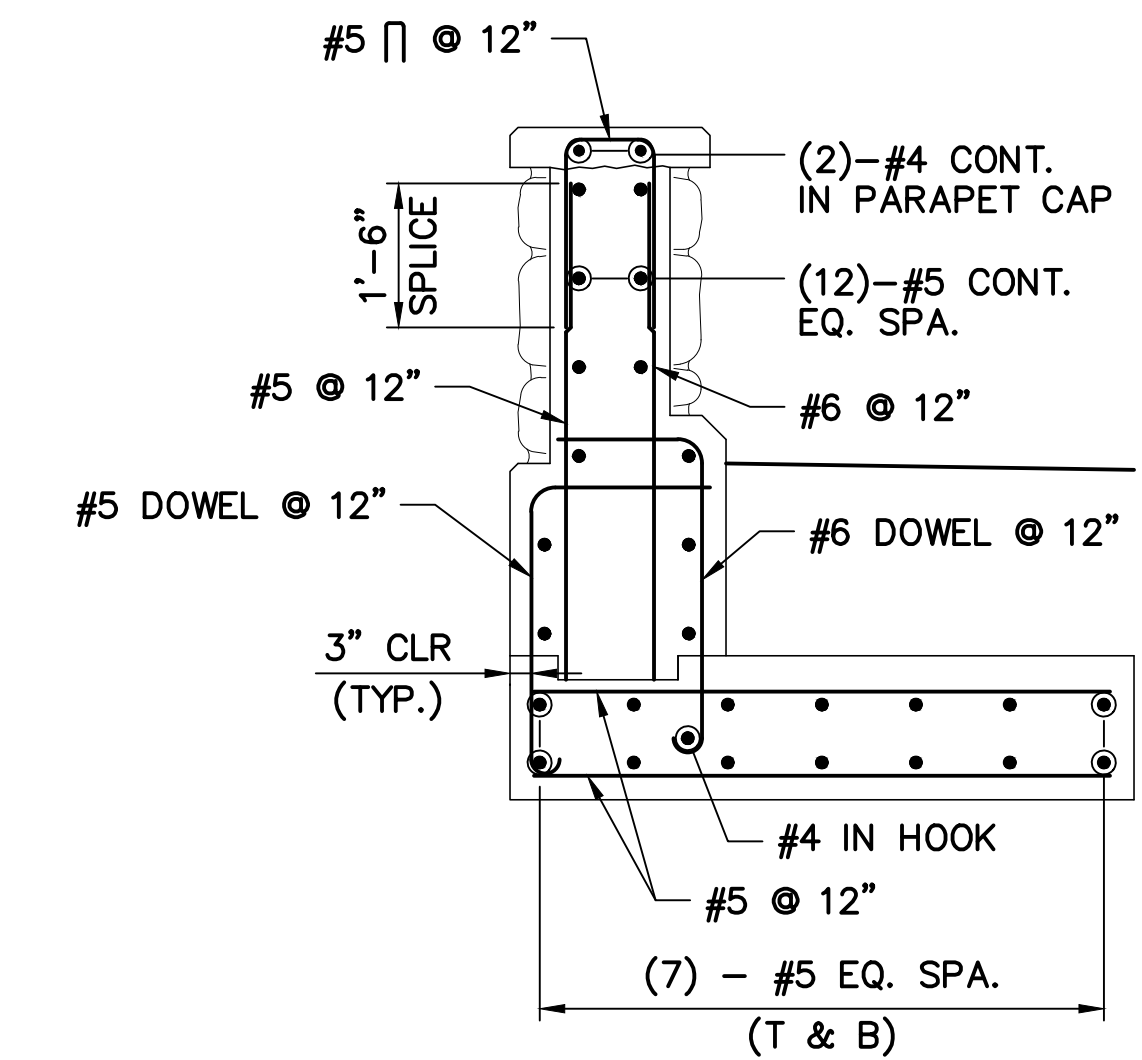
**ELEVATION**

**ENDWALL A1**  
SCALE: 3/8" = 1'-0"



**ELEVATION**

**ENDWALL B2**  
SCALE: 3/8" = 1'-0"



**REINFORCING LAYOUT**

**TYPICAL SECTION**  
SCALE: 3/8" = 1'-0"

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REVISIONS	
No.	Date

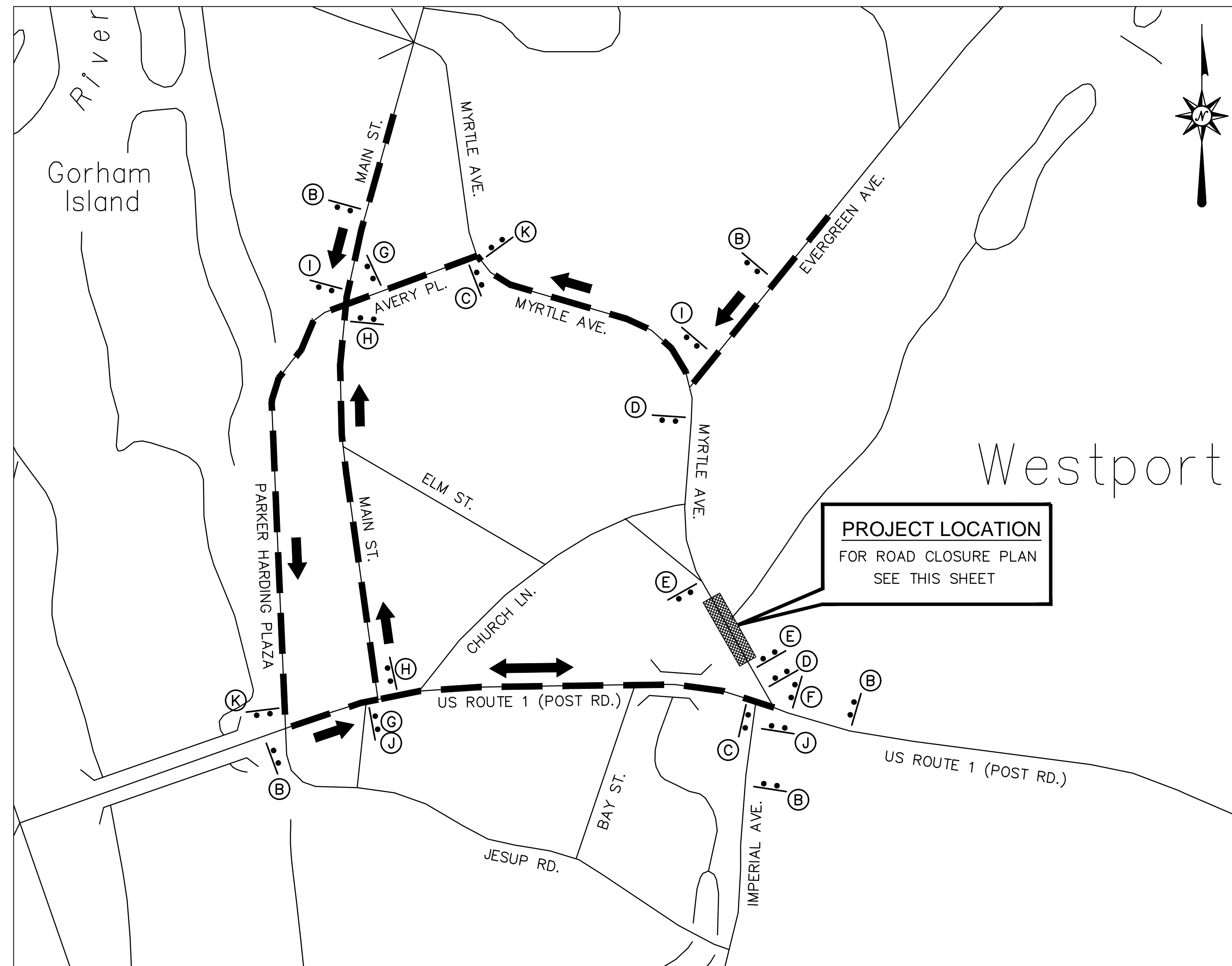
  

Designed	K.C.L.
Drawn	K.C.L.
Checked	C.E.P.
Approved	C.E.P.
Scale	AS SHOWN
Project No.	16C016
Date	06/18/18

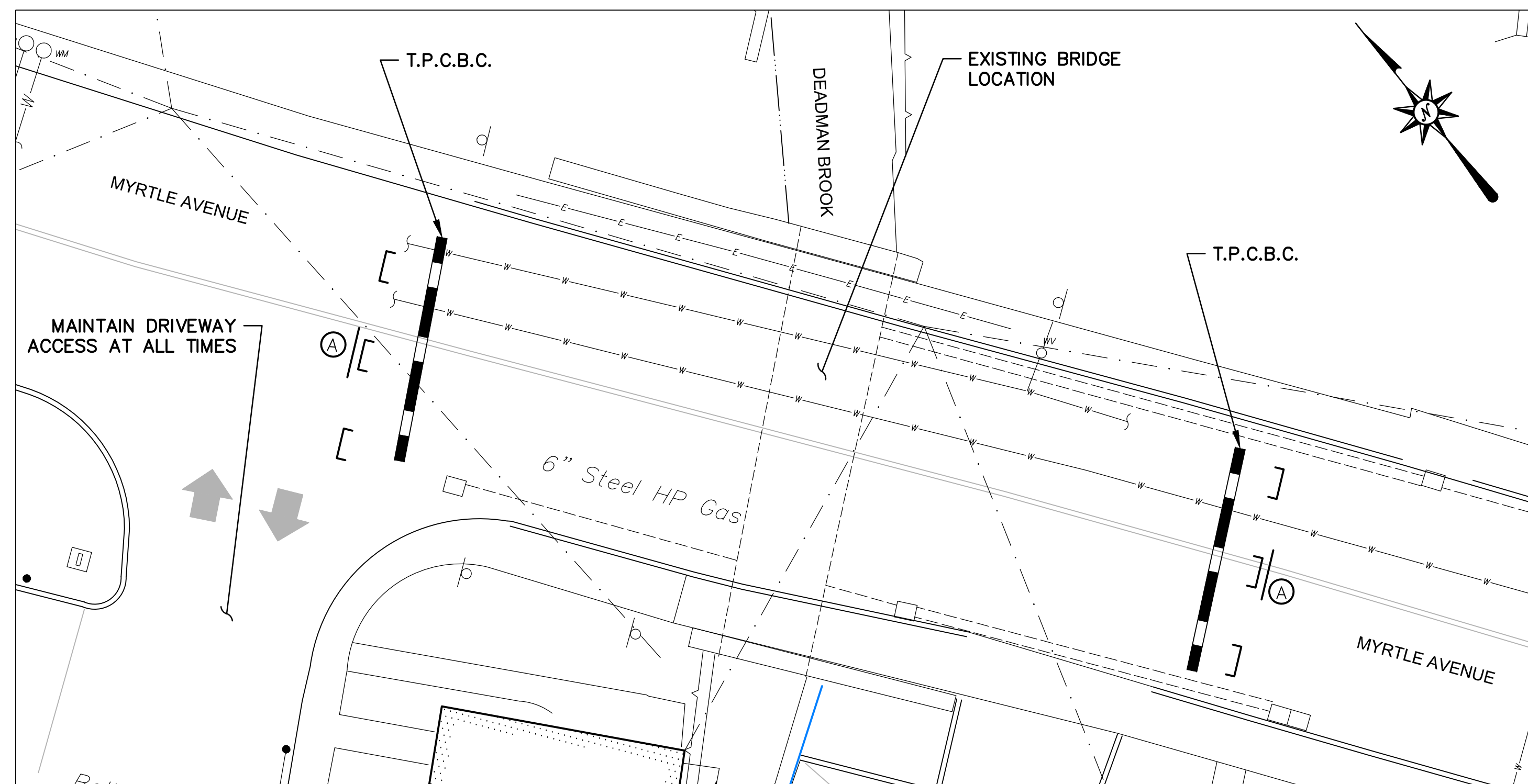
  

CAD File:	TBRG16C016-08_ENDWALL
Title	ENDWALL DETAILS
Sheet No.	S-8

NOT FOR CONSTRUCTION



**DETOUR PLAN**  
SCALE: 1" = 200'







**ROAD CLOSURE PLAN**  
SCALE: 1" = 10'


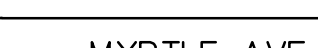
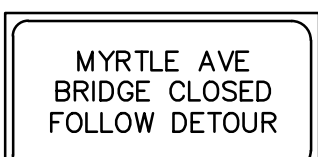

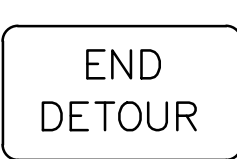

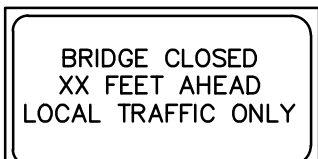

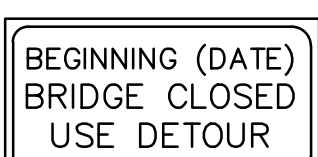


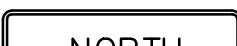




**DETOUR NOTES**

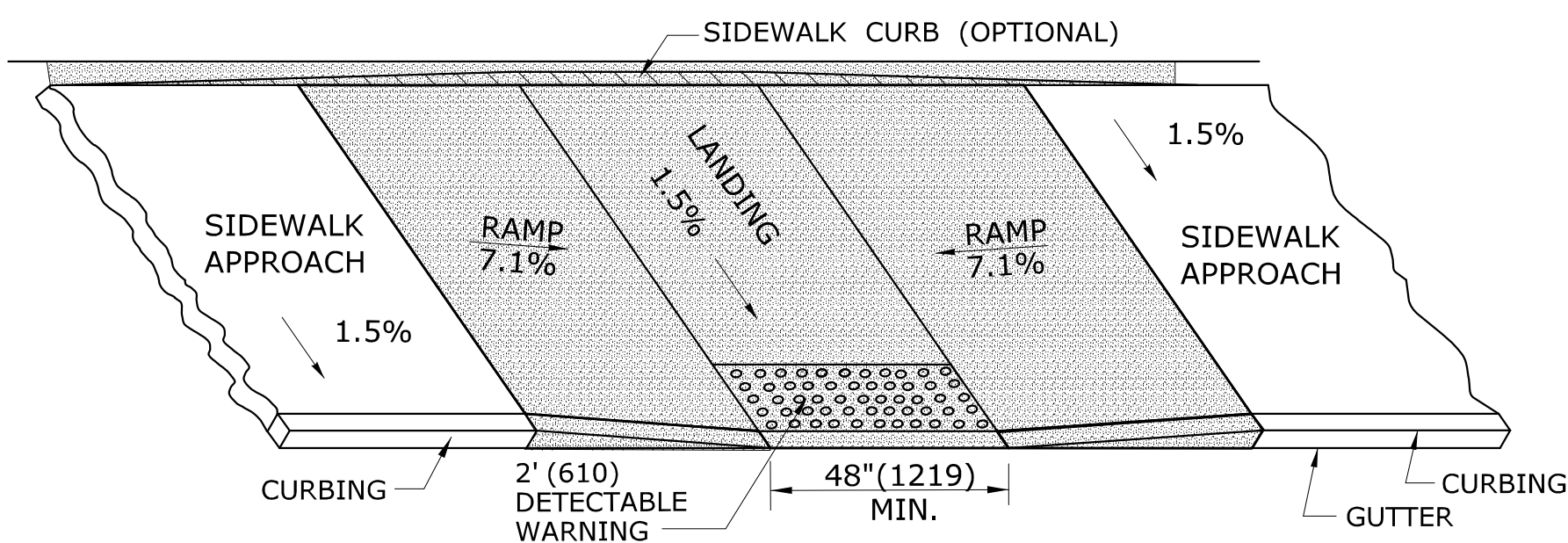
1. THIS PLAN IS INTENDED TO DESCRIBE MAINTENANCE AND PROTECTION OF TRAFFIC ACTIVITIES ASSOCIATED WITH DETOURING TRAFFIC FOR THE INSTALLATION OF THE PROPOSED BRIDGE. IN GENERAL, MAINTENANCE AND PROTECTION OF TRAFFIC ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE CT DOT FORM 817 AND SUPPLEMENTAL SPECIAL PROVISION SPECIFICATIONS CONTAINED IN THE PROJECT'S CONTRACT DOCUMENTS.
2. ALL ADVANCE WARNING SIGNS TO BE POST MOUNTED.
3. EXISTING TRAFFIC SIGNS SHALL BE REMOVED OR COVERED IF IN CONFLICT WITH THE TRAFFIC CONTROL PLAN.
4. UPON COMPLETION OF THE WORK, EXISTING TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE REESTABLISHED AS DIRECTED BY THE ENGINEER.
5. EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES TO BE APPROVED BY THE ENGINEER.
6. COORDINATION WITH THE TOWN OF WESTPORT MUST BE COMPLETED PRIOR TO PERFORMING WORK IN WESTPORT (SEE NOTICE TO CONTRACTOR).

**LEGEND**

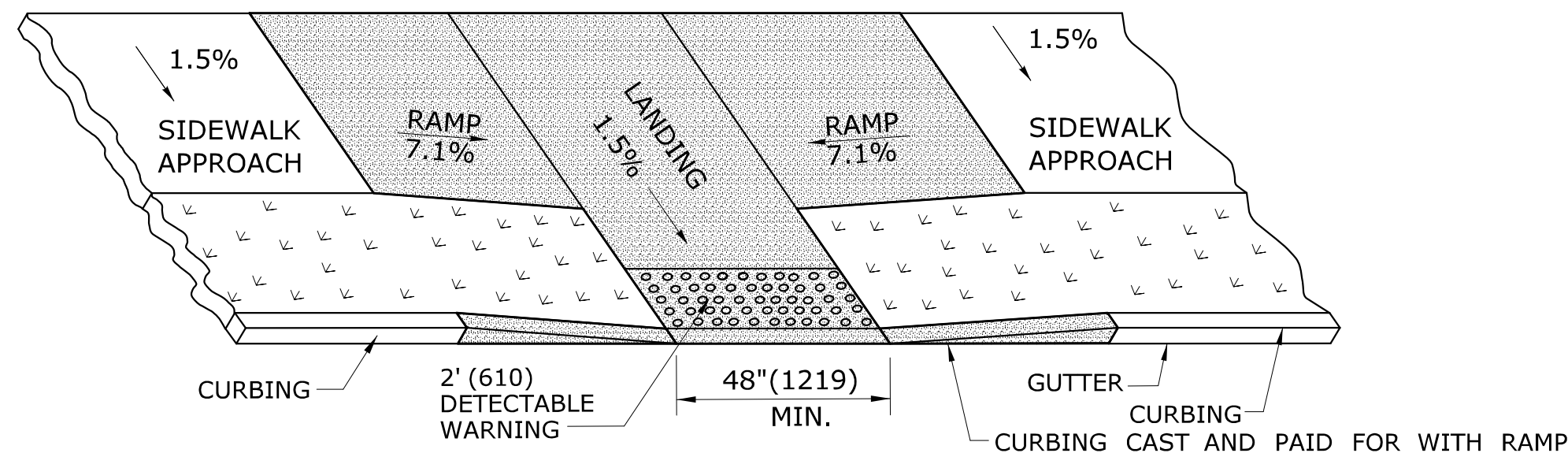
-  - POST MOUNTED SIGN (2 METAL POSTS)
-  - CONSTRUCTION BARRICADE TYPE III WITH BARRICADE WARNING LIGHTS HIGH INTENSITY
-  - TEMPORARY PRECAST CONCRETE BARRIER CURB
-  - DIRECTION OF TRAVEL

**DETOUR SIGNING LEGEND**

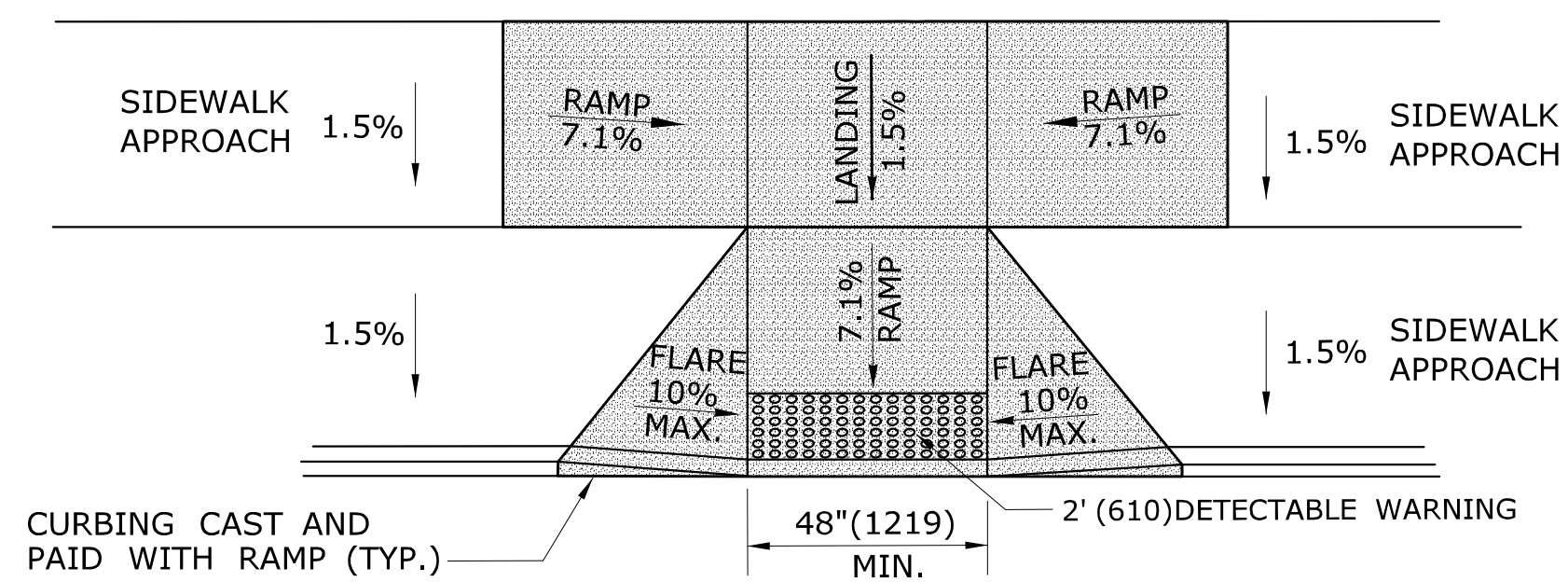
(A)		80-9080 48" X 30"	(H)		80-9913 48" X 18"
(B)		80-9928 60" X 30"	(I)		80-9919 30" X 10"
(C)		80-9708 24" X 18"	(J)		80-9710 30" X 24"
(D)		80-9078 60" X 30"	(K)		80-9913 48" X 18"
(E)		80-9928 60" X 30"			80-9919 30" X 10"
(F)		80-9913 48" X 18"			80-9710 30" X 24"
(G)		80-9919 30" X 10"			80-9913 48" X 18"
		80-9919 30" X 10"			80-9919 30" X 10"
		80-9710 30" X 24"			80-9710 30" X 24"
		80-9913 48" X 18"			80-9913 48" X 18"
		80-9919 30" X 10"			80-9919 30" X 10"
		80-9710 30" X 24"			80-9710 30" X 24"



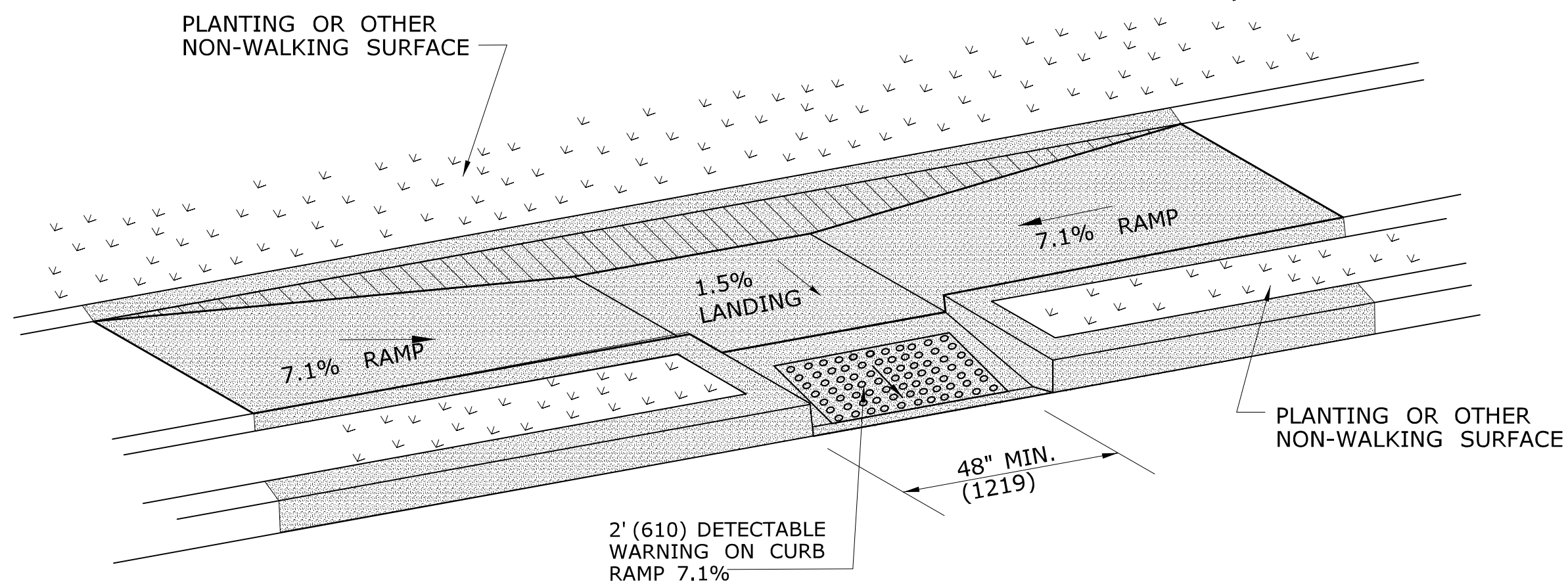
**PARALLEL SIDEWALK RAMP (TYPE 1) NO UTILITY STRIP**



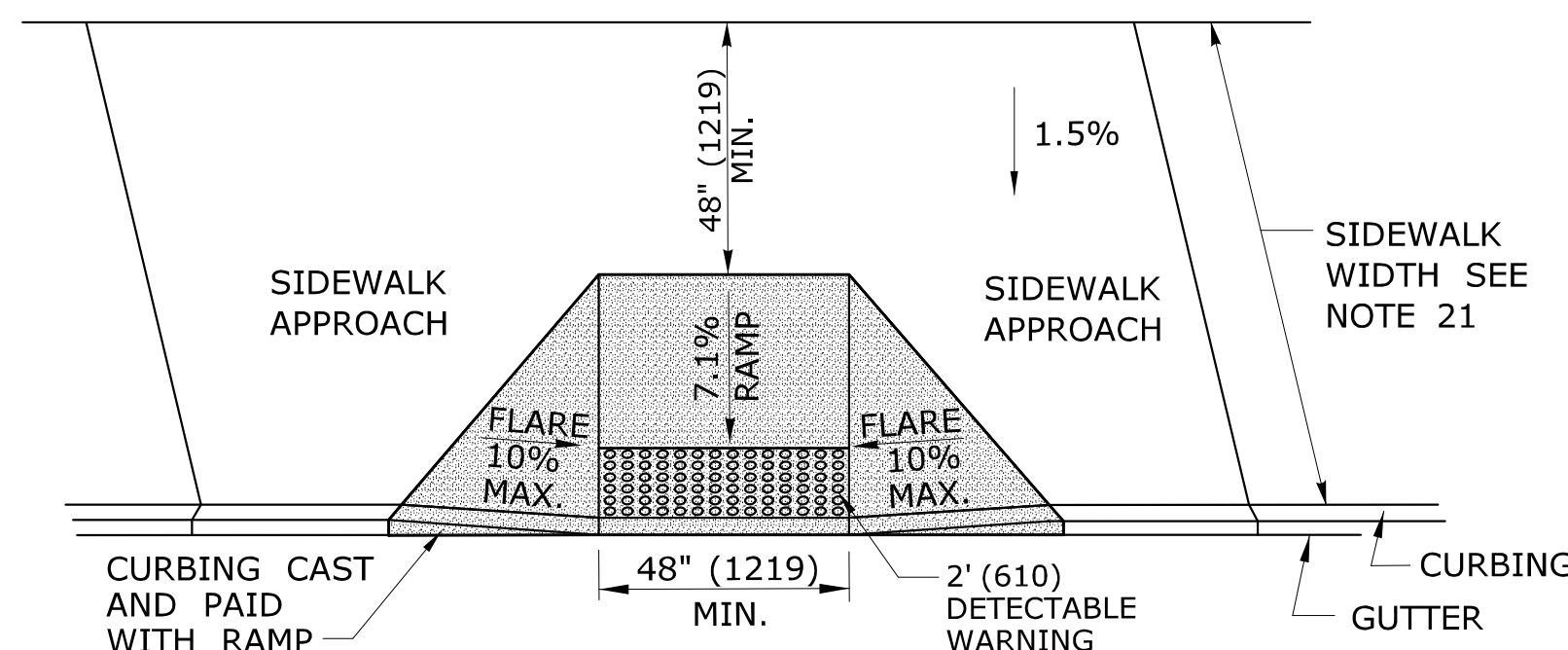
**PARALLEL SIDEWALK RAMP (TYPE 1a) WITH UTILITY / GRASS STRIP**



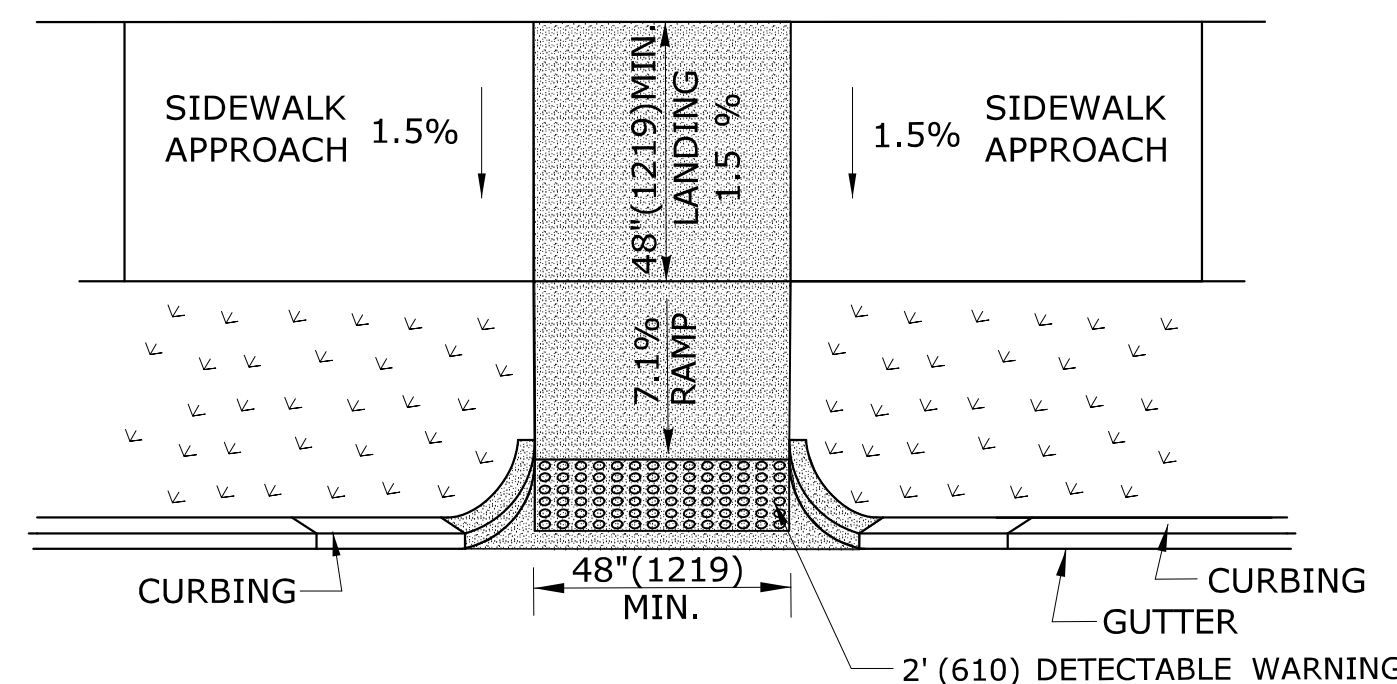
**PARALLEL/PERPENDICULAR SIDEWALK RAMP NO UTILITY/GRASS STRIP (TYPE 1b)**



**PARALLEL SIDEWALK RAMP (TYPE 1c) WITH UTILITY / GRASS STRIP**

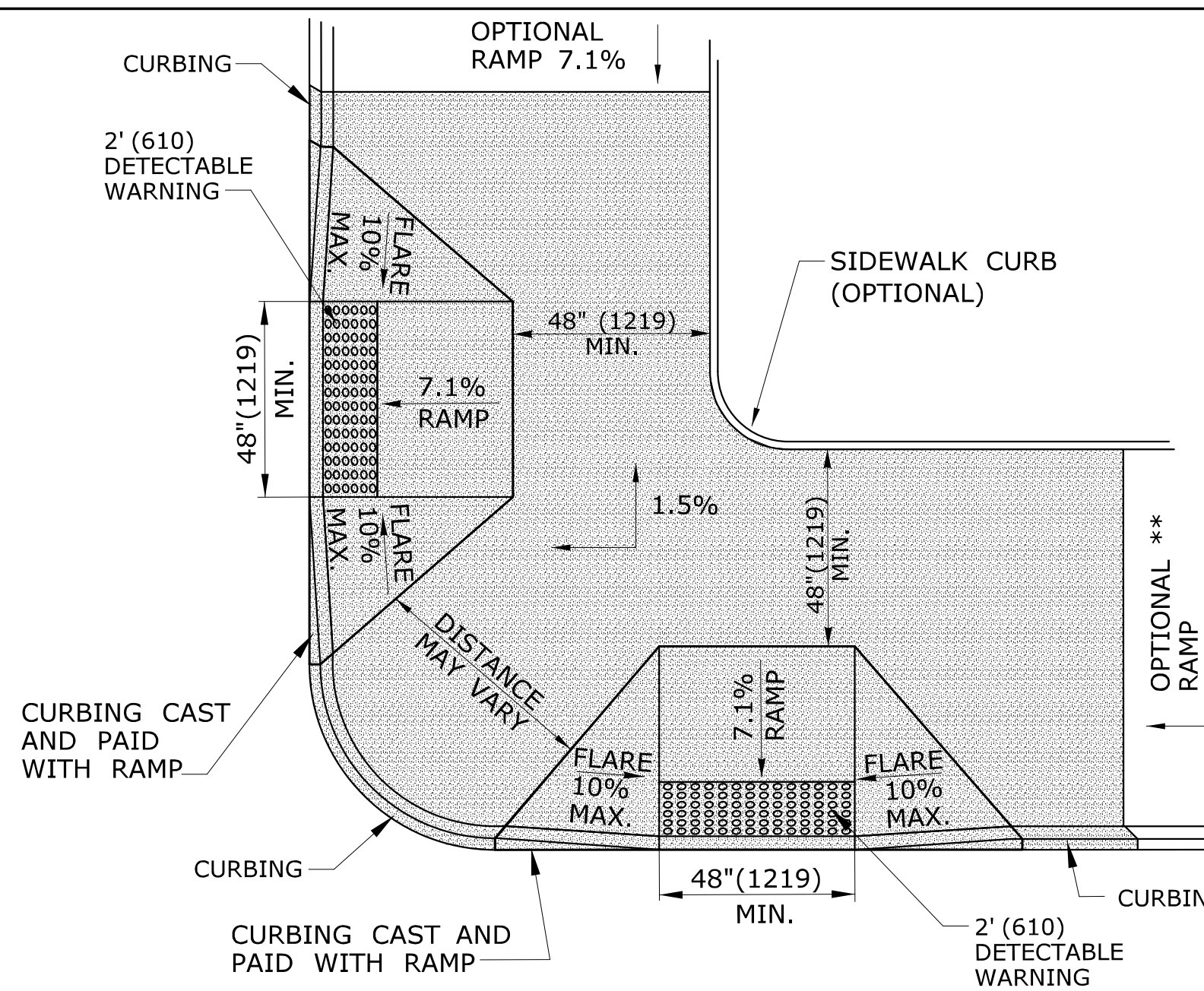


**PERPENDICULAR SIDEWALK RAMP W/ 48" (1219) MIN. BY PASS LANDING (TYPE 2)**



**PERPENDICULAR SIDEWALK RAMP W/CURB RETURNS / UTILITY GRASS STRIP (TYPE 2a)**

\* OPTIONAL FLARE ONE SIDE OF RAMP

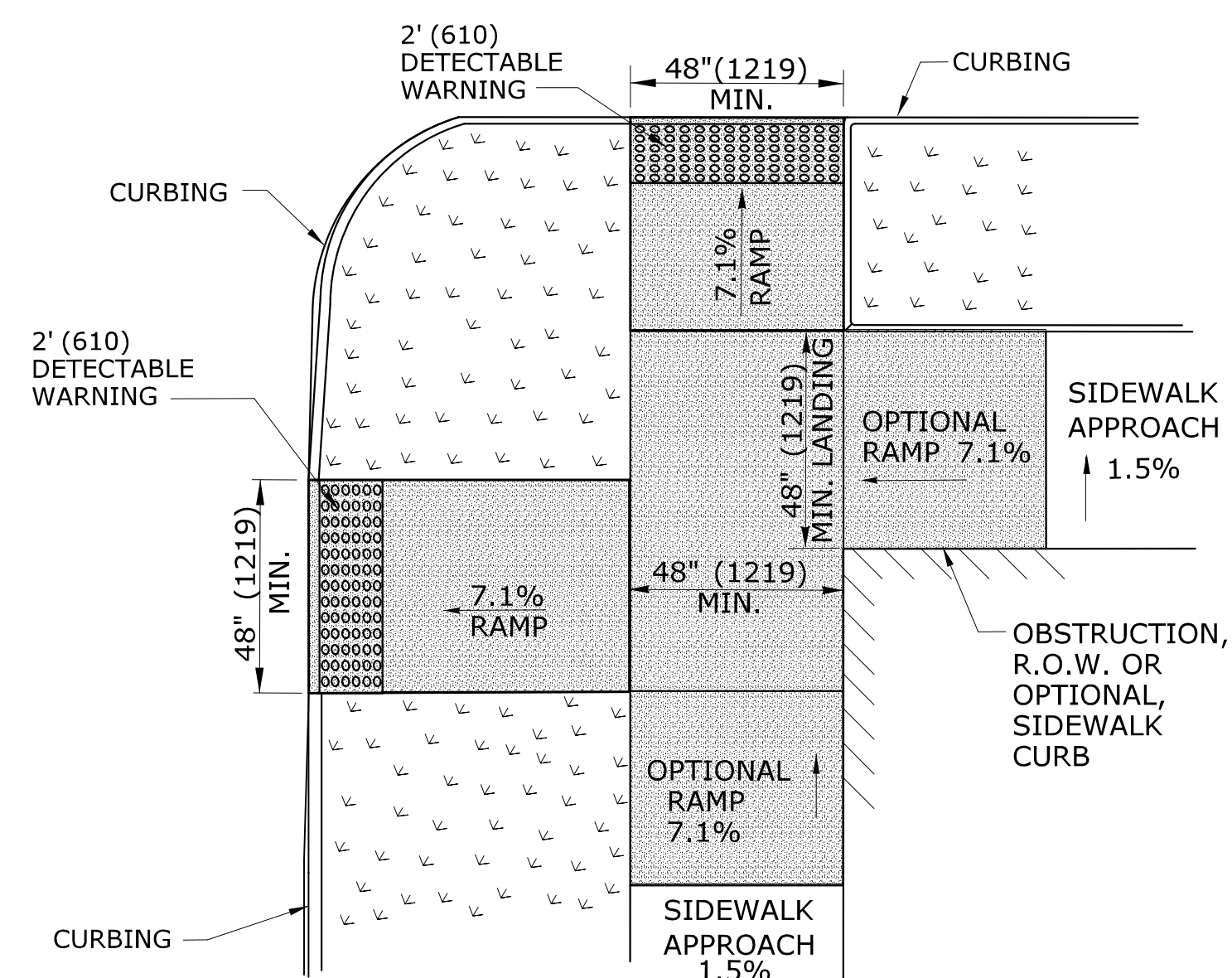


**DUAL PERPENDICULAR SIDEWALK RAMPS (TYPE 3)**

SEE NOTES 19  
\* OPTIONAL CURB RETURN ON ONE SIDE OF RAMP  
\*\* SEE NOTE 23

**GENERAL NOTES:**

1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP SHOULD NOT EXCEED 5%. THE MAXIMUM GRADE DIFFERENCE BETWEEN THE GUTTER AND CURB RAMP SHALL NOT EXCEED 13%. SEE DETAIL 1 ON SHEET 4.
2. RAMP GRADE SHALL BE UNIFORM, FREE OF SAGS AND ABRUPT GRADE CHANGES. RUNNING SLOPES OF RAMPS SHALL NOT EXCEED 8.33% AND SHALL NOT EXCEED 15' (4.5m) WITHOUT PROVIDING A LANDING.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "F" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE OF ALL SIDEWALK RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT. SURFACE DISCONTINUITIES SHALL NOT EXCEED 1/2" (13) MAX. VERTICAL DISCONTINUITIES BETWEEN 1/4" (6.4) AND 1/2" (13) MAX. SHALL BE BEVELED 1:2 MINIMUM APPLIED ACROSS THE ENTIRE LEVEL CHANGE.
5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. DIAGONAL AND PERPENDICULAR RAMPS SHALL HAVE THE RAMP CUT PERPENDICULAR TO THE TANGENT OF THE CURB RADIUS FOR THE DESIGNATED ACCESSIBLE ROUTE. BOTH LONGITUDINAL SIDES OF THE RAMP SHOULD BE THE SAME LENGTH. SKEWED RAMPS SHOULD BE AVOIDED. FLARES ARE NOT CONSIDERED PART OF PEDESTRIAN ACCESS ROUTE. DIAGONAL RAMPS SHOULD NOT BE INSTALLED WHERE CURB RADII IS LESS THAN 20'(6096).
6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION OR CONTRACTION JOINT. 8.3% MAXIMUM SLOPE MAY NOT BE ACHIEVABLE DUE TO EXISTING SIDEWALK GRADE. IN RECOGNITION OF THIS, A LIMIT OF 15' (4572) FOR REMOVAL SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK RAMP" OR "CONCRETE SIDEWALK".
7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' (3658) UNLESS OTHERWISE NOTED.
8. CONCRETE SIDEWALK RAMPS, SHALL BE PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK RAMP", AS DEFINED BY THE CONSTRUCTION LIMITS ON THE PLANS AND SHALL BE FIELD VERIFIED.
9. SIDEWALK RAMPS SHALL BE CONSTRUCTED WITH THE TOE OF THE GUTTER CAST INTEGRALLY WITH RAMP UNLESS DIRECTED OTHERWISE BY THE ENGINEER (SEE TYPICAL SECTION ON SHEET 3). CURB REMOVAL AND CAST IN PLACE CURBING REQUIRED FOR THE RAMP, SHALL BE INCLUDED WITH PAY ITEM "CONCRETE SIDEWALK RAMP". CURBING OUTSIDE LIMITS OF RAMP OR LANDING SHOWN ON SHEET 3 SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
10. PREFERRED LOCATION TO INSTALL DETECTABLE WARNING STRIP SHALL BE 6" (152) FROM THE EDGE OF ROAD ALONG THE FULL WIDTH OF THE RAMP. FOR ALTERNATE LOCATIONS, REFER TO DETECTABLE WARNING PLACEMENT DETAILS ON SHEET 4.
11. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF RUNNING SLOPE (PERPENDICULAR TO CURB OR SLOPE BREAK). THE TRANSITION FROM RAMP TO GUTTER SHALL BE FLUSH WITHOUT A LIP.
12. WHERE COMMERCIAL DRIVEWAYS ARE PROVIDED WITH TRAFFIC SIGNALS AND THE SIDEWALK IS CONTINUOUS THROUGH DRIVEWAY, DETECTABLE WARNINGS ARE REQUIRED AT THE JUNCTION BETWEEN THE PEDESTRIAN ROUTE AND DRIVEWAY.
13. CONSTRUCT A SIDEWALK CURB WHEN THERE IS INSUFFICIENT BUFFER AVAILABLE TO GRADE OR WHEN CALLED FOR IN PLANS. PAID FOR WITH SIDEWALK RAMP WHEN REQUIRED FOR RAMP.
14. THE TOP AND BOTTOM OF RAMPS SHOULD BE PROVIDED WITH A 4' x 4' (1219 x 1219) MINIMUM LEVEL LANDING AREA WITH A CROSS SLOPE LESS THAN OR EQUAL TO 2% IN ANY DIRECTION.
15. UTILITY POLES, LUMINAIRE, PEDESTRIAN OR SIGNAL POLES, GRATES, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON RAMPS, LANDINGS, BLENDED TRANSITIONS, AND @ GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
16. APPROACH SIDEWALK WIDTHS, GRASS STRIP OR UTILITY STRIP WIDTHS MAY VARY.
17. APPROACH SIDEWALK AND LANDING CROSS SLOPE SHALL NOT EXCEED 2%.
18. THE RUNNING OR CROSS SLOPES ON LANDINGS AT MID BLOCK CROSSING MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.
19. FOR PERPENDICULAR CURB RAMPS A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE TOP OF CURB RAMP. WHERE THE LEVEL LANDING IS RESTRICTED AT THE BACK OF SIDEWALK THE LEVEL LANDING SHALL BE 4'(1.2m) x 5'(1.5m) WITH THE 5'(1.5m) DIMENSION PROVIDED IN THE DIRECTION OF THE RAMP RUN.
20. FOR PARALLEL CURB RAMPS, A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE BOTTOM OF CURB RAMP. IF THE LEVEL LANDING IS RESTRICTED ON 2 OR MORE SIDES, THE LEVEL LANDING SHALL BE 4'(1.2m) x 5'(1.5m) WITH THE 5'(1.5m) DIMENSION PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.
21. WHEN WIDTH OF SIDEWALK IS >48" AND A PERPENDICULAR SIDEWALK RAMP IS INSTALLED, THE FLARED SIDES SHALL BE 10% MAX. IF WIDTH OF SIDEWALK IS <48" THE FLARED SIDES MUST NOT EXCEED 8.33% (12:1).
22. SHADED AREAS ARE TYPICAL PAY LIMITS FOR CONCRETE SIDEWALK RAMP BUT, MAY VARY AS DIRECTED BY THE ENGINEER.
23. OPTIONAL RAMP, WHEN REQUIRED, SHALL BE PAID FOR AS PART OF CONCRETE SIDEWALK RAMP.



**DUAL PERPENDICULAR SIDEWALK RAMPS (TYPE 3a) WITH UTILITY / GRASS STRIP**

SEE NOTE 20

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

1	7/13	Created new sheets (4 total).	
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CHECKED BY: <b>LLF</b>

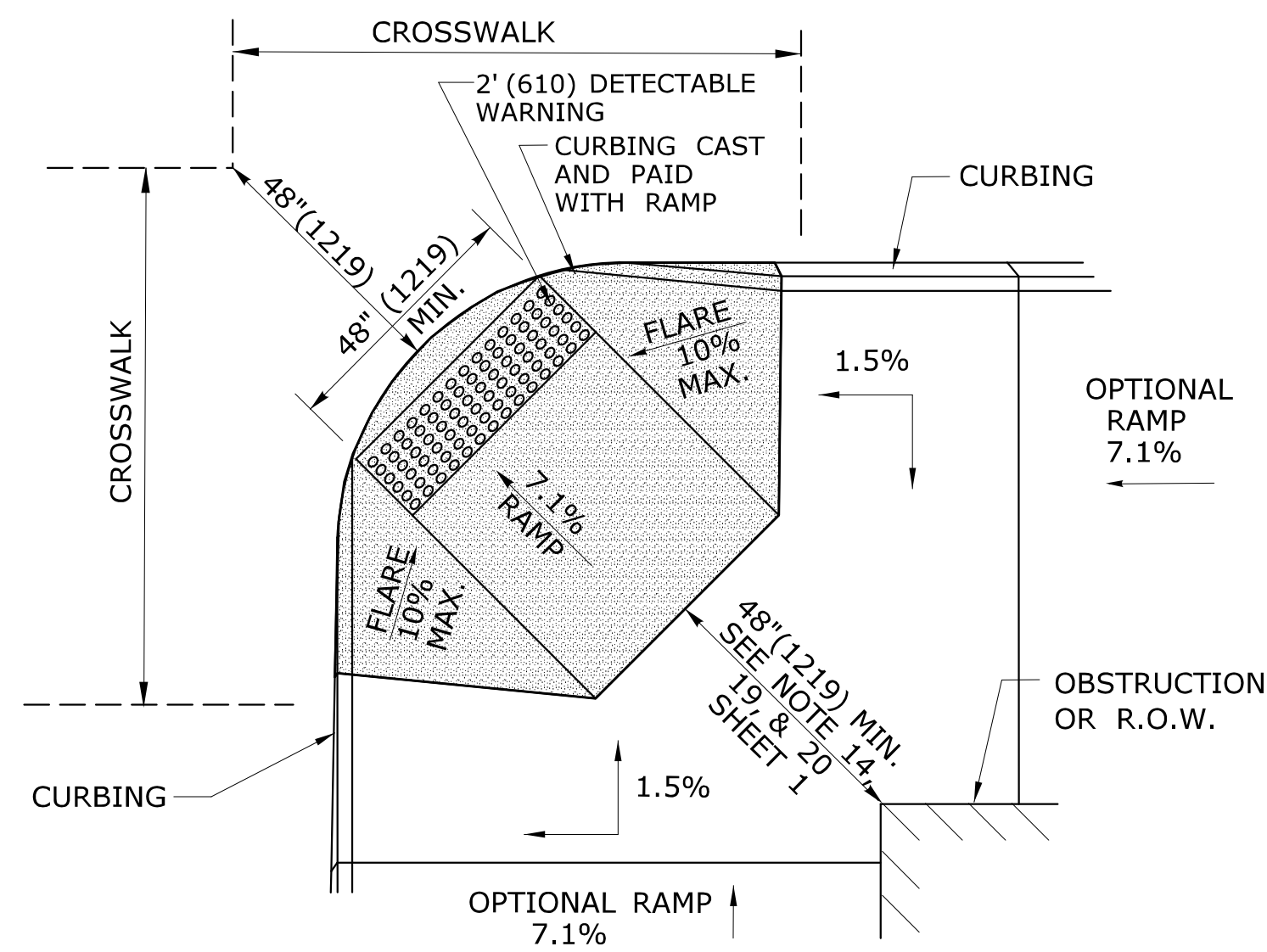
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

FILENAME: ...CTDOT\_Highway\_GD (11-21-17).dgn

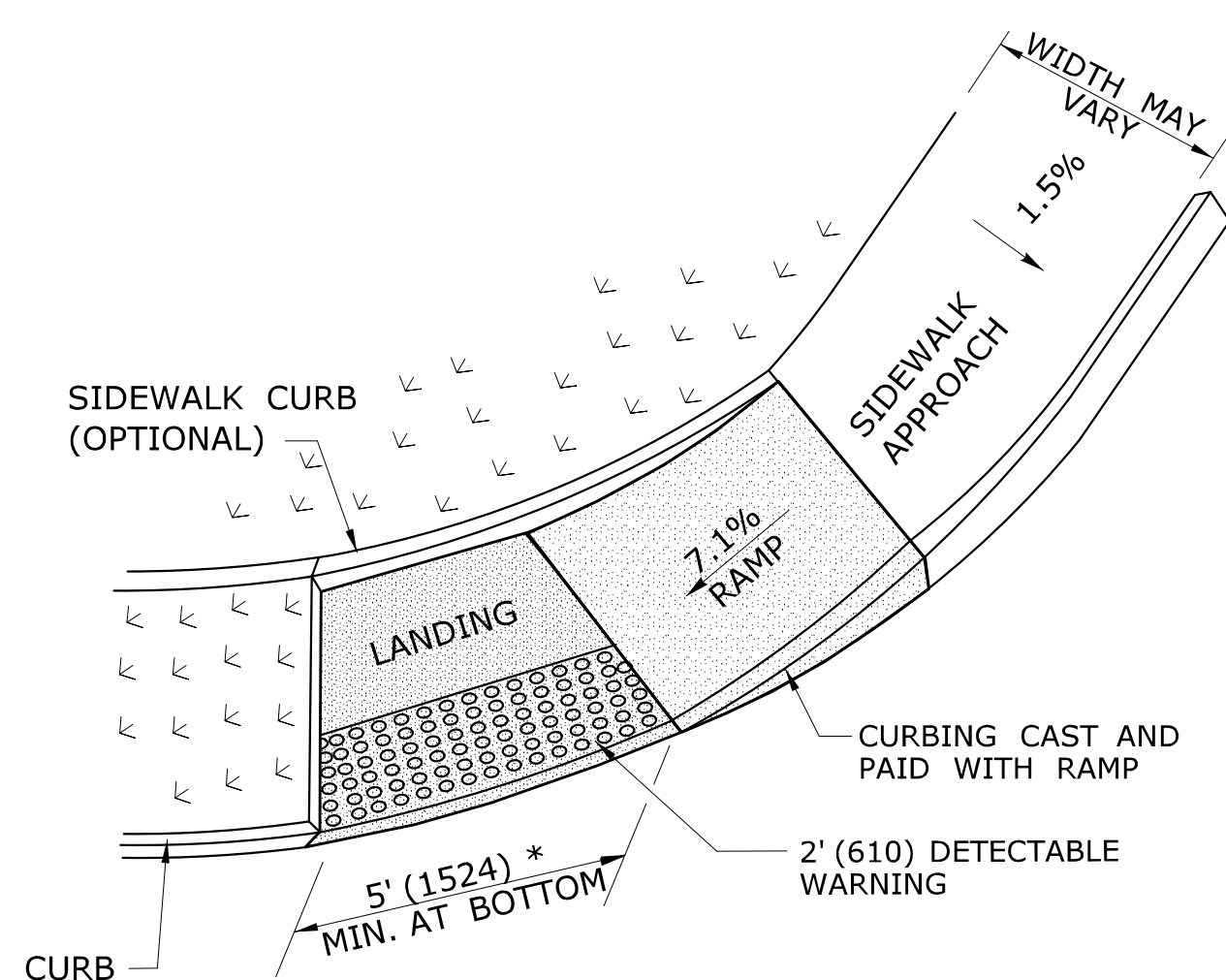
OFFICE OF ENGINEERING

SIGNATURE/BLOCK:  
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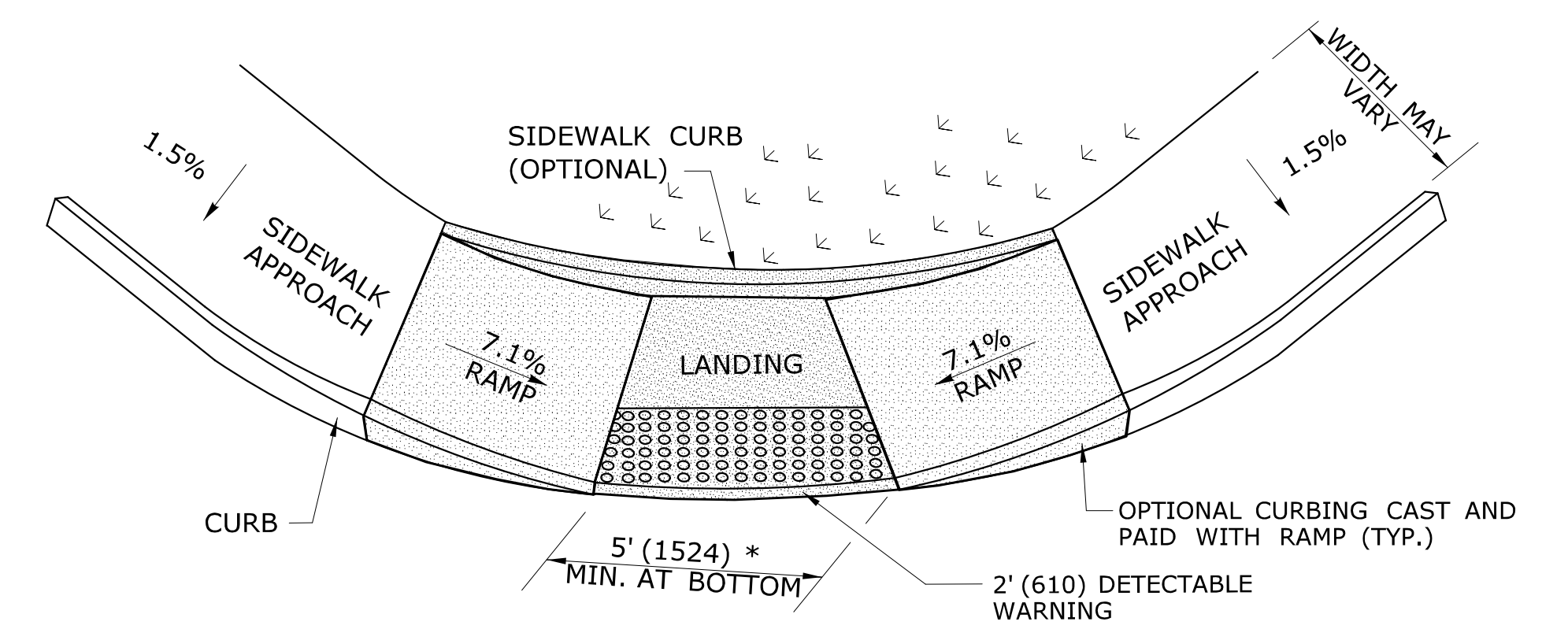
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DRAWING TITLE: <b>SIDEWALK RAMPS SHEET 1</b>		DRAWING NO.:
		SHEET NO.:



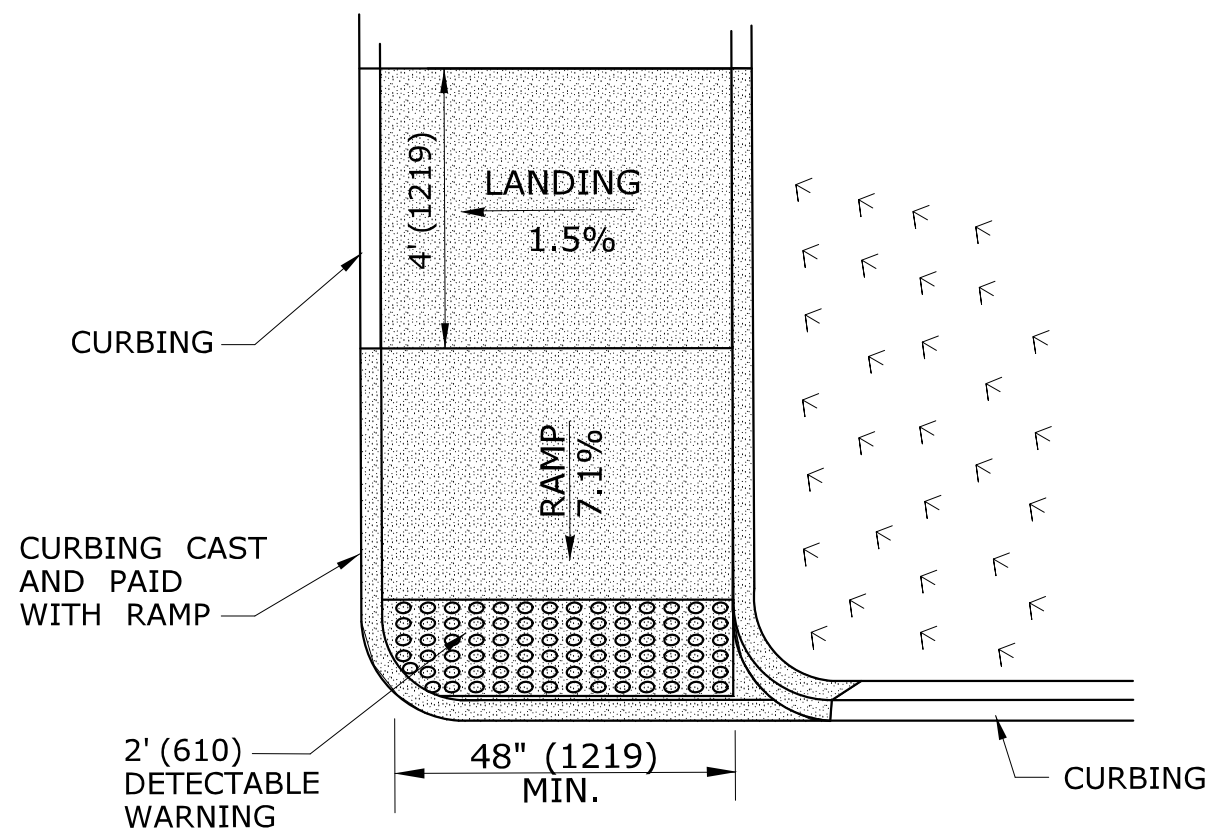
**DIAGONAL SIDEWALK RAMP (TYPE 4)  
W/LANDING AT TOP**



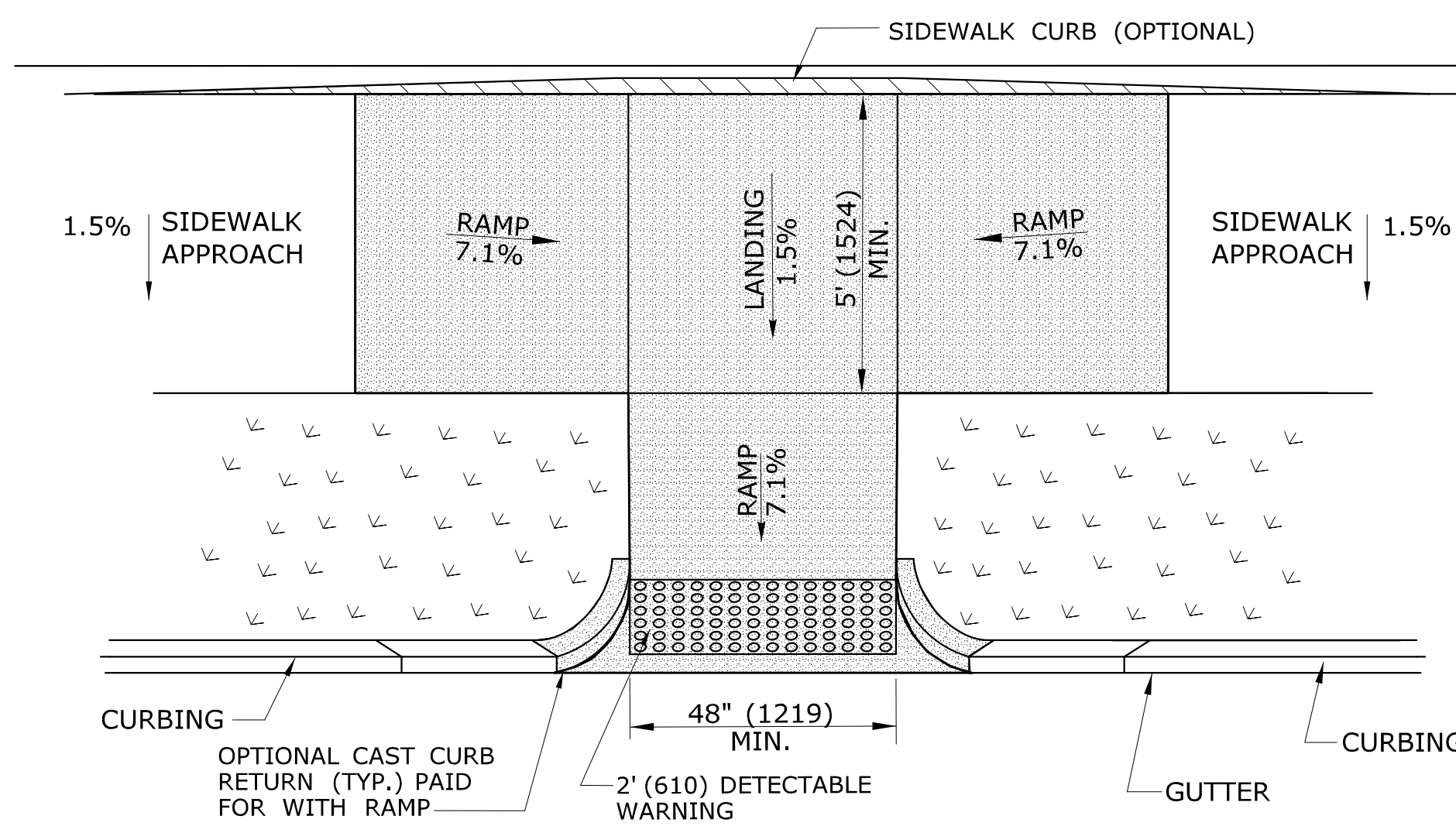
**SINGLE PARALLEL SIDEWALK RAMP  
W/LANDING AT BOTTOM ON  
CORNER (TYPE 4c)**  
\* SEE NOTE 20 SHEET 1



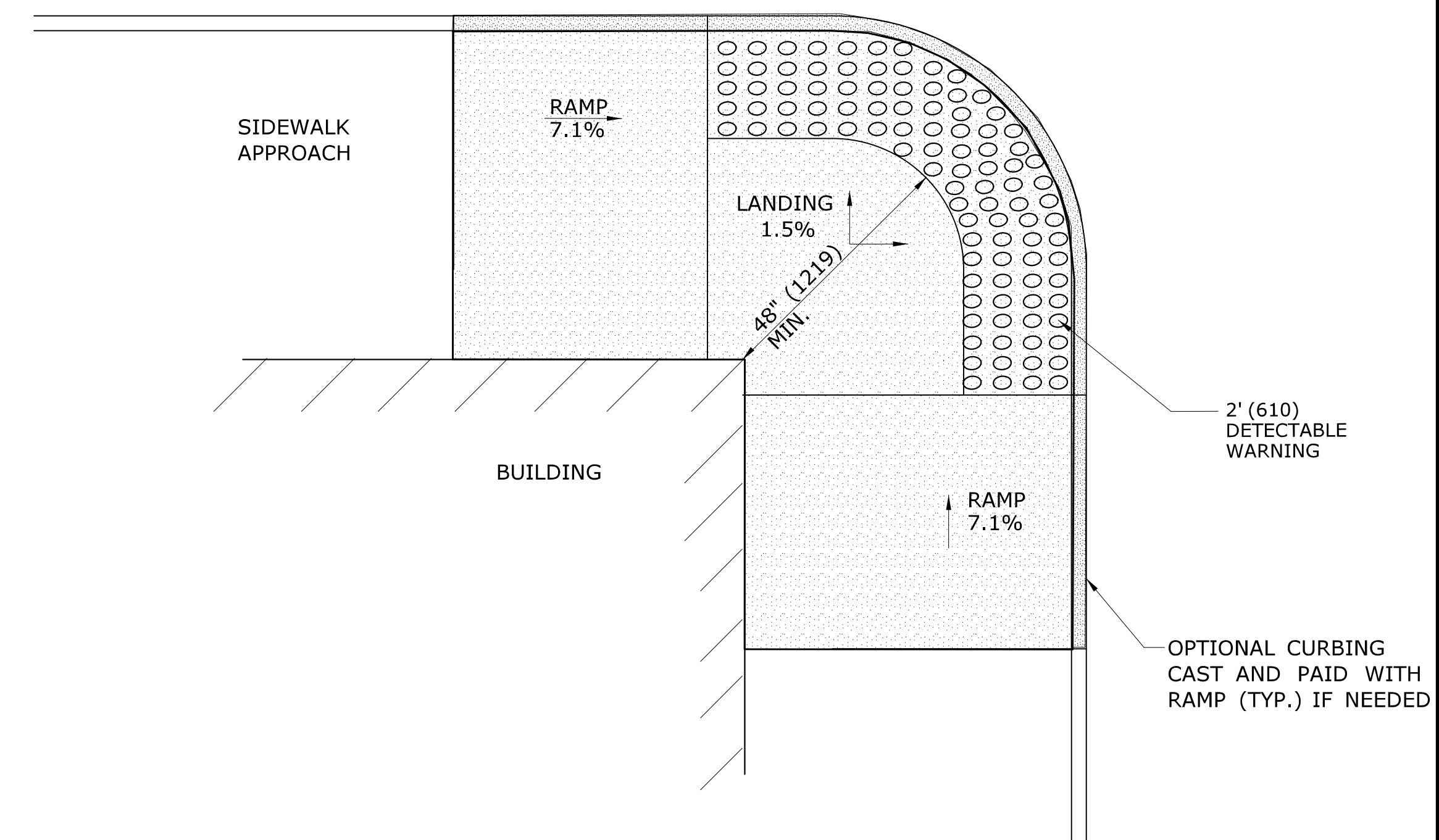
**DOUBLE PARALLEL SIDEWALK RAMP  
W/LANDING AT BOTTOM ON CORNER (TYPE 4f)**  
\* SEE NOTE 20 SHEET 1



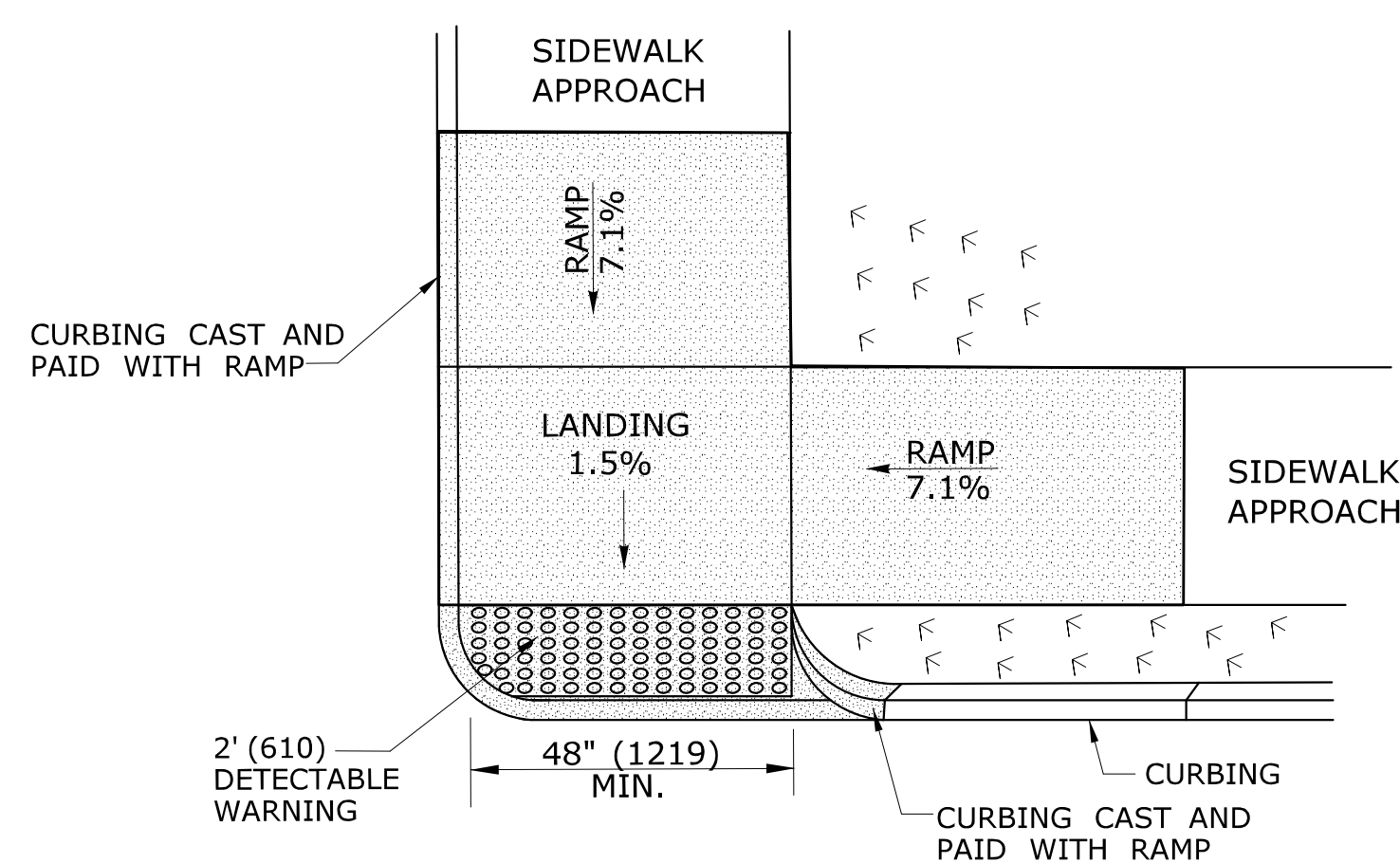
**SINGLE DIRECTION  
PERPENDICULAR SIDEWALK RAMP  
NO / UTILITY GRASS STRIP  
(TYPE 4a)**



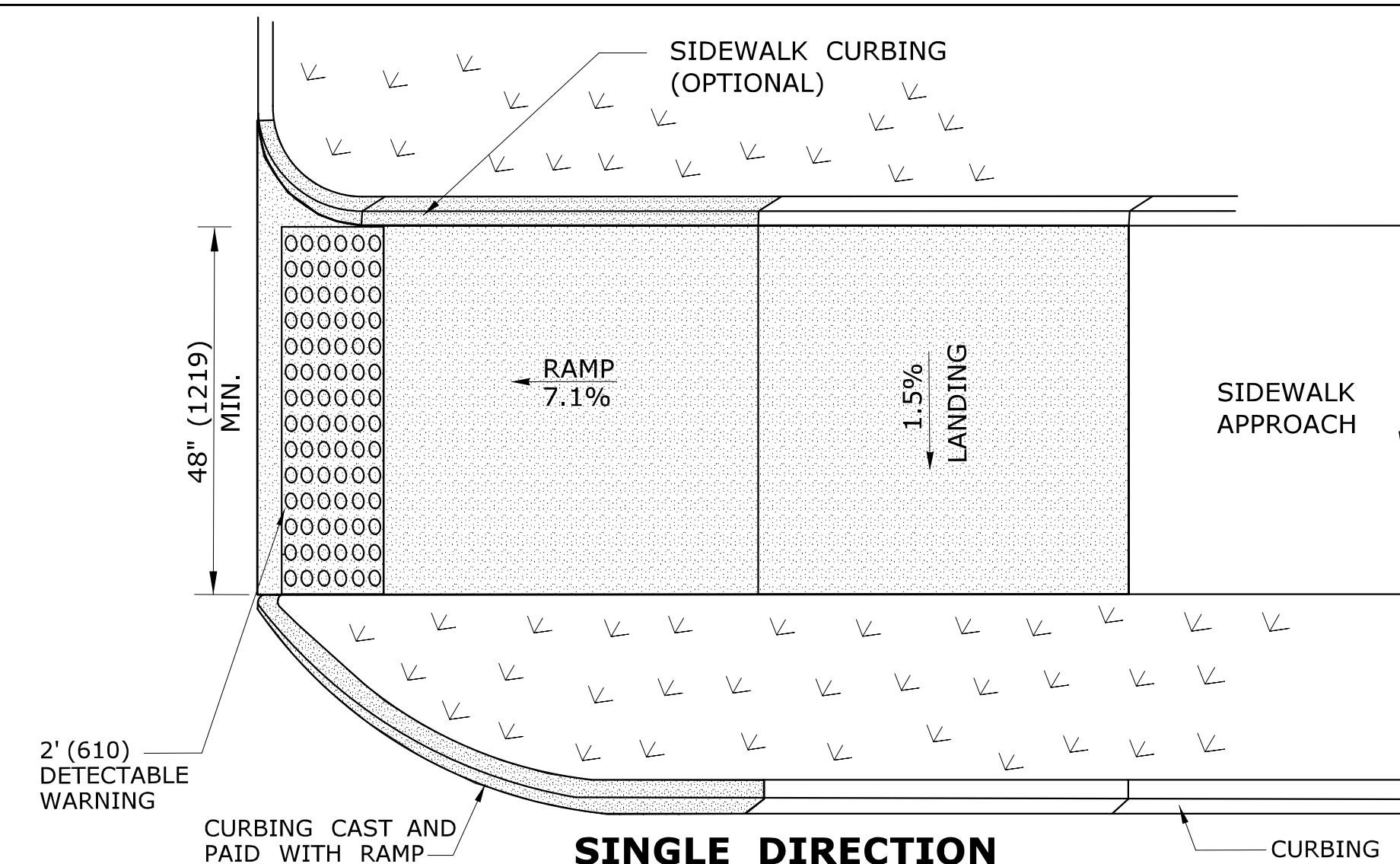
**PARALLEL/PERPENDICULAR SIDEWALK RAMP  
COMBINATION W/ CURB RETURNS (TYPE 4d)**  
\* OPTIONAL FLARE ONE SIDE



**RESTRICTED CONDITION  
DIAGONAL SIDEWALK RAMP  
(TYPE 4g)**



**DOUBLE DIRECTION  
PARALLEL SIDEWALK RAMP  
NO / UTILITY GRASS STRIP  
(TYPE 4b)**  
SEE NOTE 20 SHEET 1

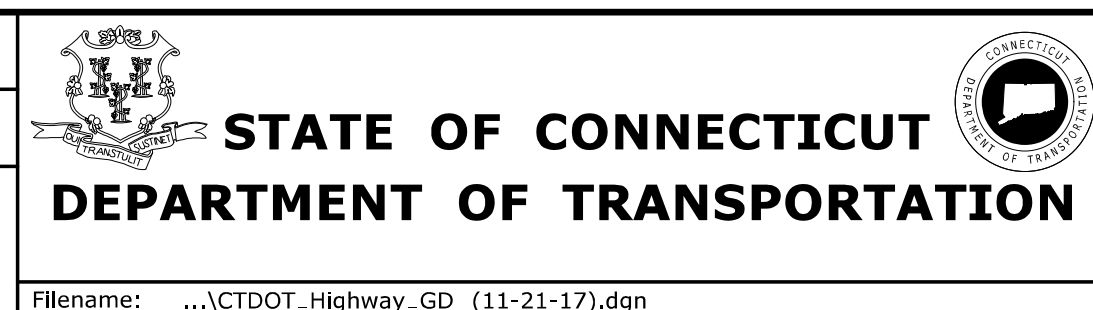


**SINGLE DIRECTION  
PERPENDICULAR SIDEWALK RAMP  
W/ UTILITY GRASS STRIP (TYPE 4e)**  
REFER TO DETECTABLE WARNING PLACEMENT ON SHEET 4

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/30/2017

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**MGB/EMK**  
CHECKED BY:  
**LLF**



SIGNATURE/  
BLOCK:  
**OFFICE OF ENGINEERING**  
APPROVED BY:

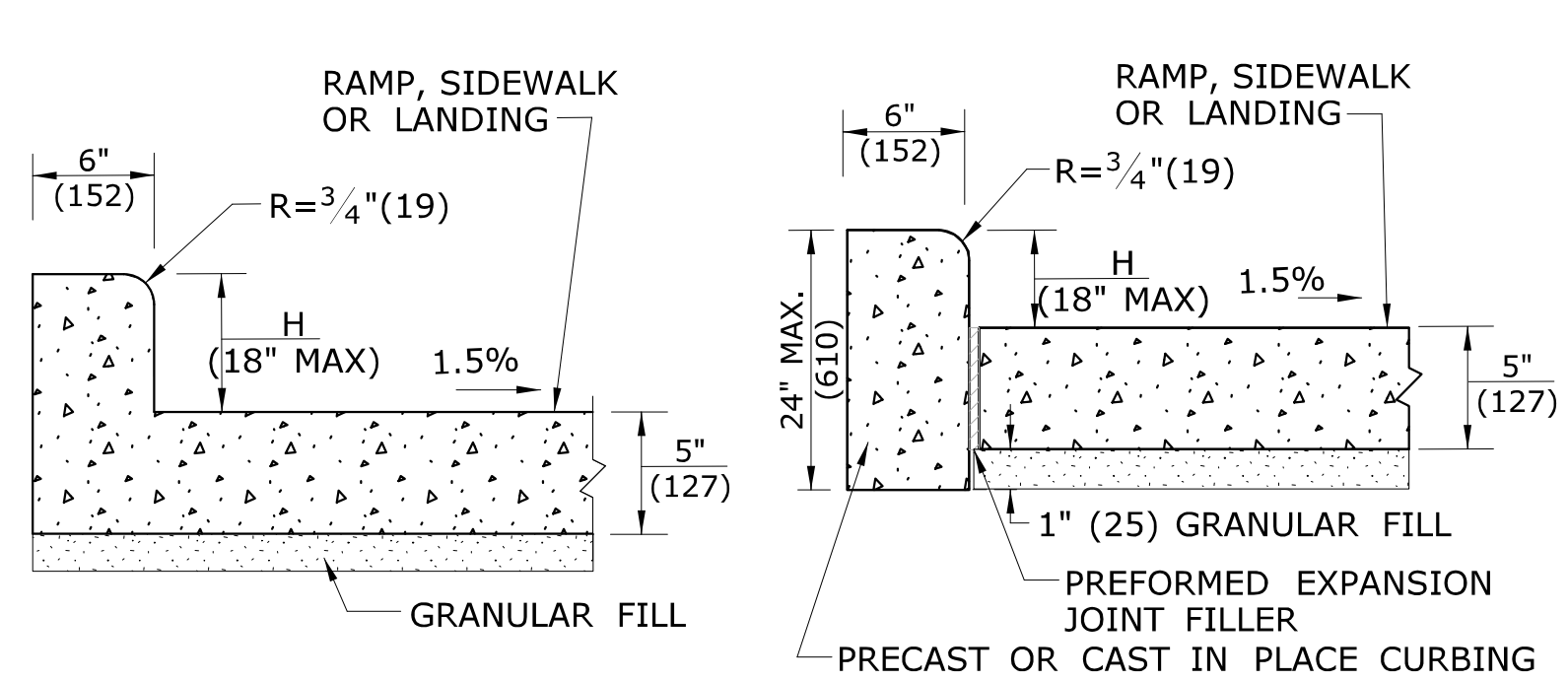
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**SIDWALK RAMP SHEET 2**

TOWN:  
DRAWING TITLE:  
**SIDWALK RAMP SHEET 2**

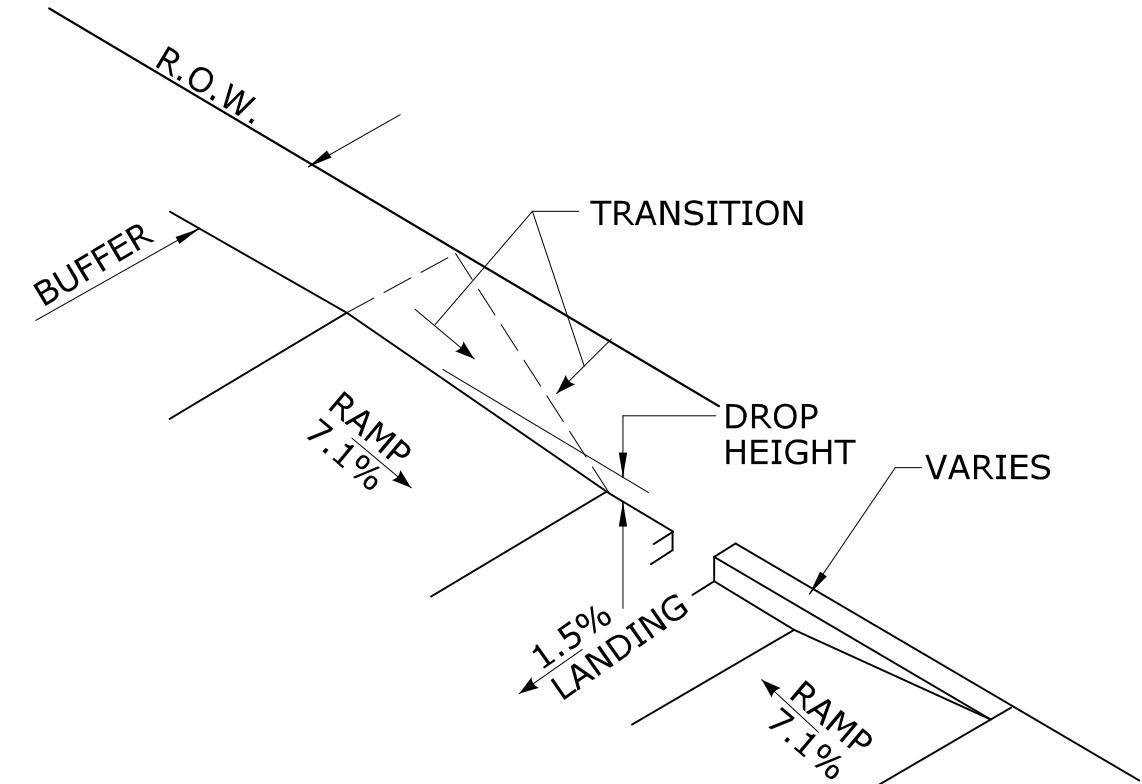
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SHEET NO.

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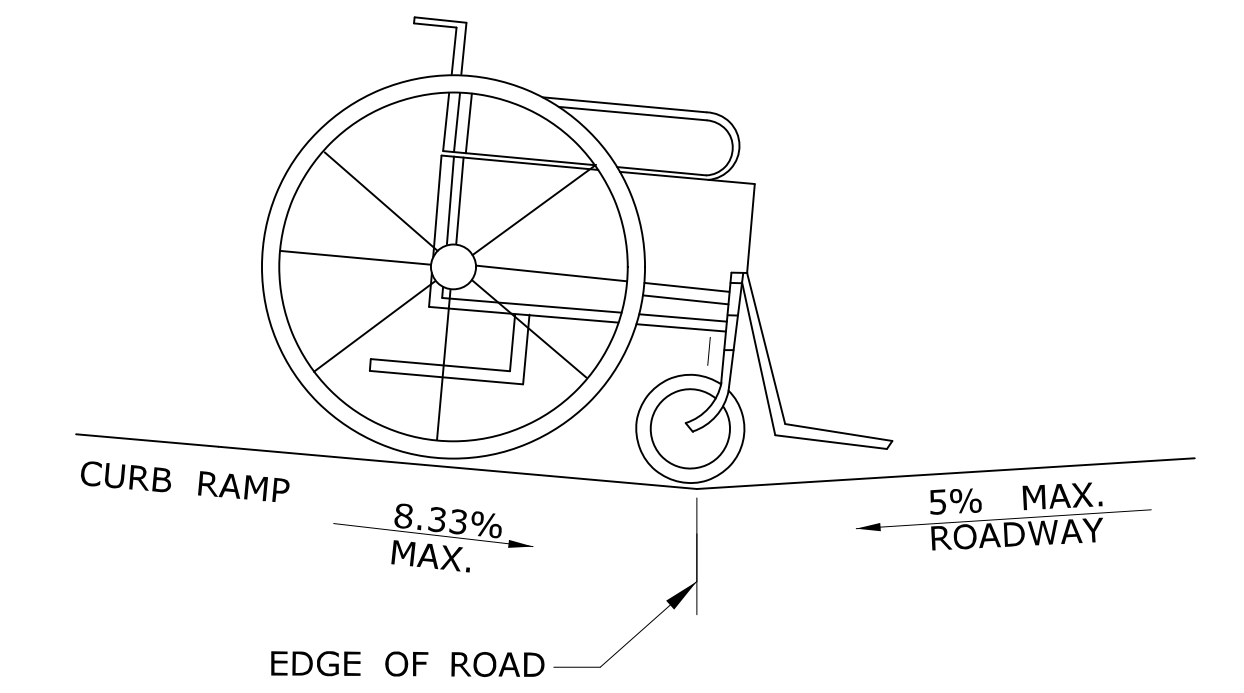




**MONOLITHIC CAST CURB**      **SEPARATELY CAST CURB**  
**SIDEWALK CURB OPTIONS AT BACK OF SIDEWALK**



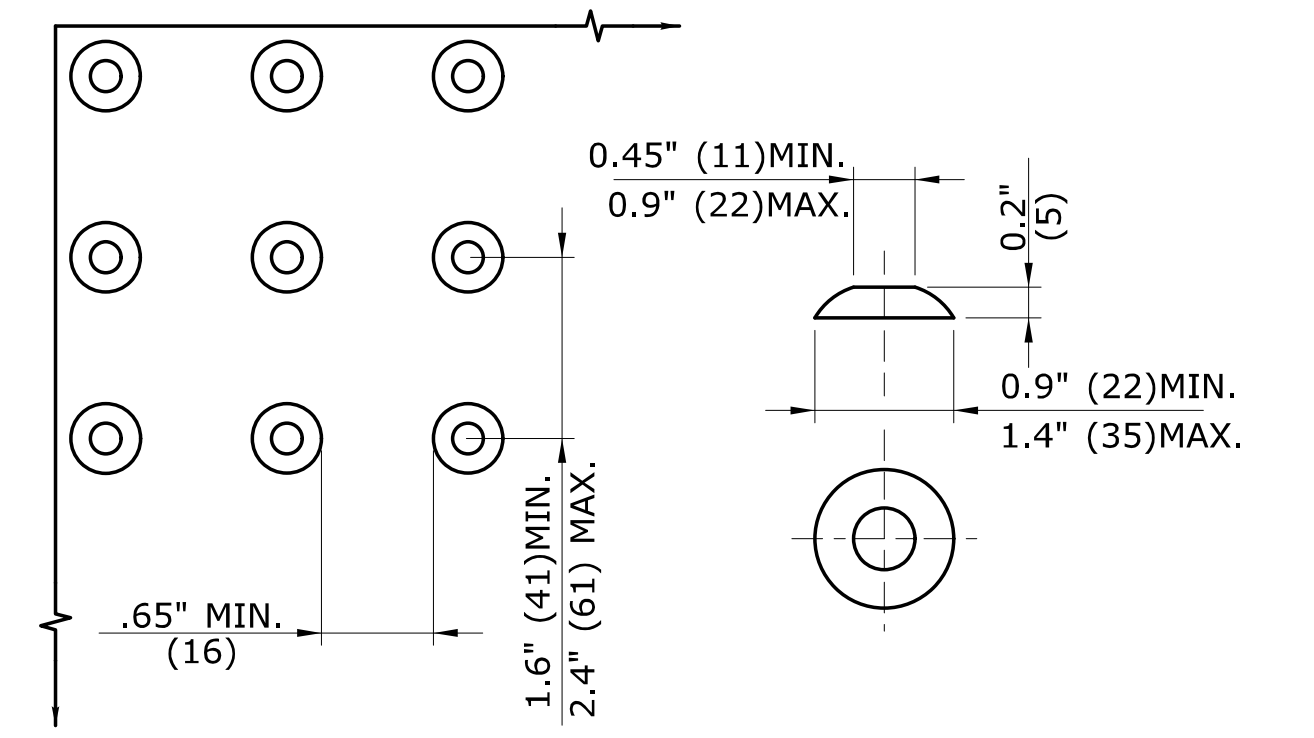
**BACK OF SIDEWALK CURB OR BUFFER TRANSITION**



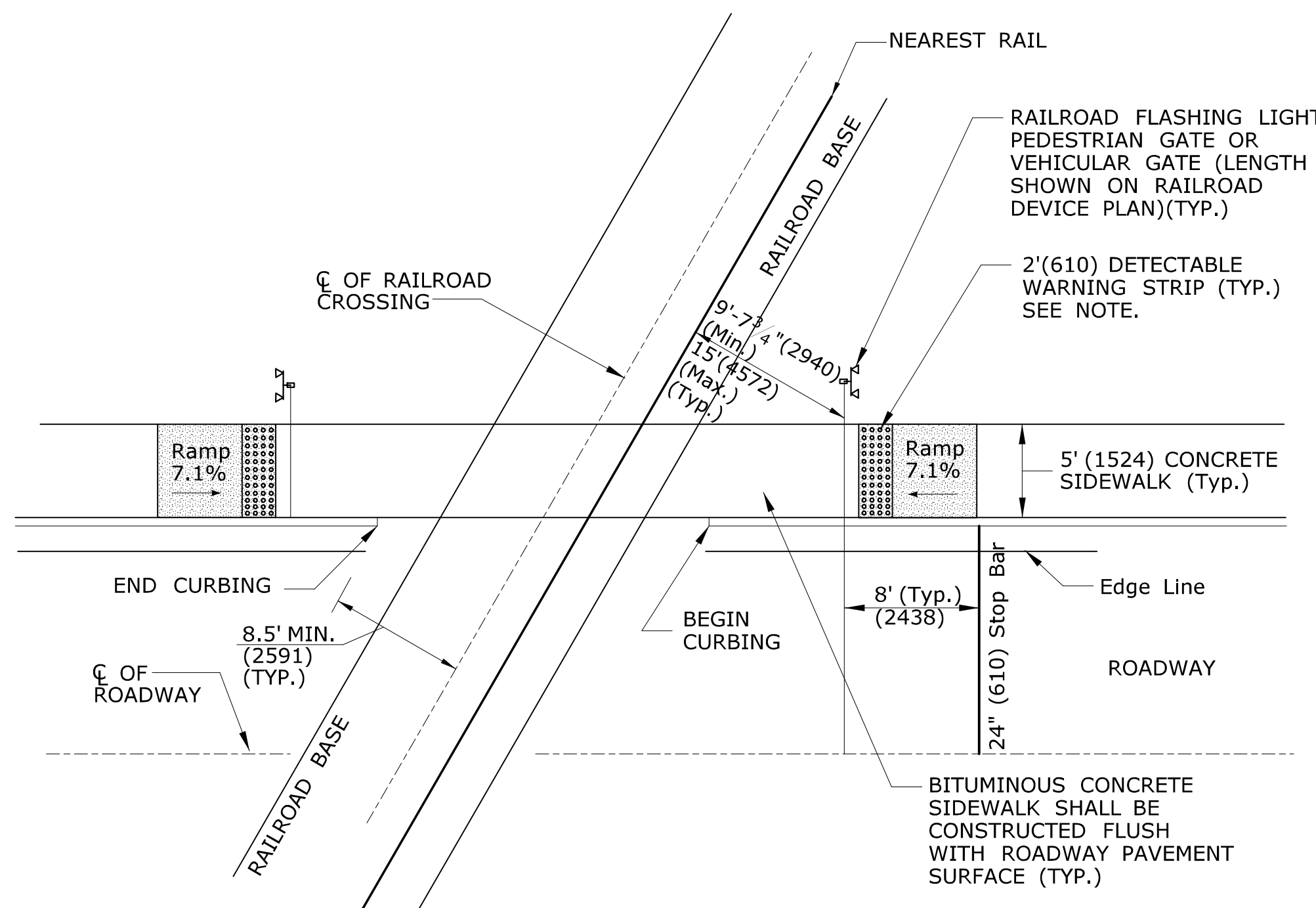
**DETAIL 1**  
**SEE GRADE CHANGE AT ROADWAY INTERFACE**  
 SEE NOTE 1 ON SIDEWALK RAMP SHEET 1

**GENERAL NOTES:**

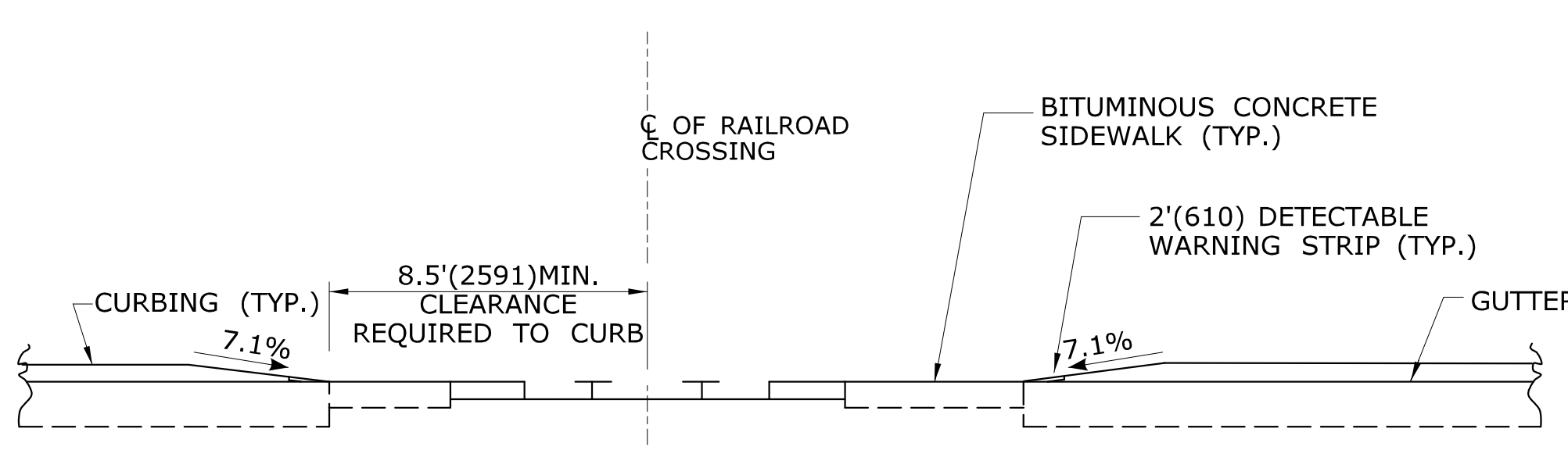
1. RAMPED MEDIANS SHALL HAVE A CURB RAMP AT EITHER END AND LEVEL LANDING A MINIMUM OF 5' x 5' (1.5m x 1.5m) IN BETWEEN. CUT-THROUGH MEDIANS SHALL BE A MINIMUM OF 6' (1.8m) LONG AND 5' (1.5m) WIDE. FOR ALL MEDIANS, CUT-THROUGH OR RAMPED, A 2' (610) STRIP OF DETECTABLE WARNINGS SHALL BE INSTALLED AT THE ENTRANCE AND EXIT.
2. SEE GENERAL NOTES ON SHEET 1.



**DOME SPACING**      **DOME SECTION**  
**STANDARD DOME ON DETECTABLE WARNING TILES**



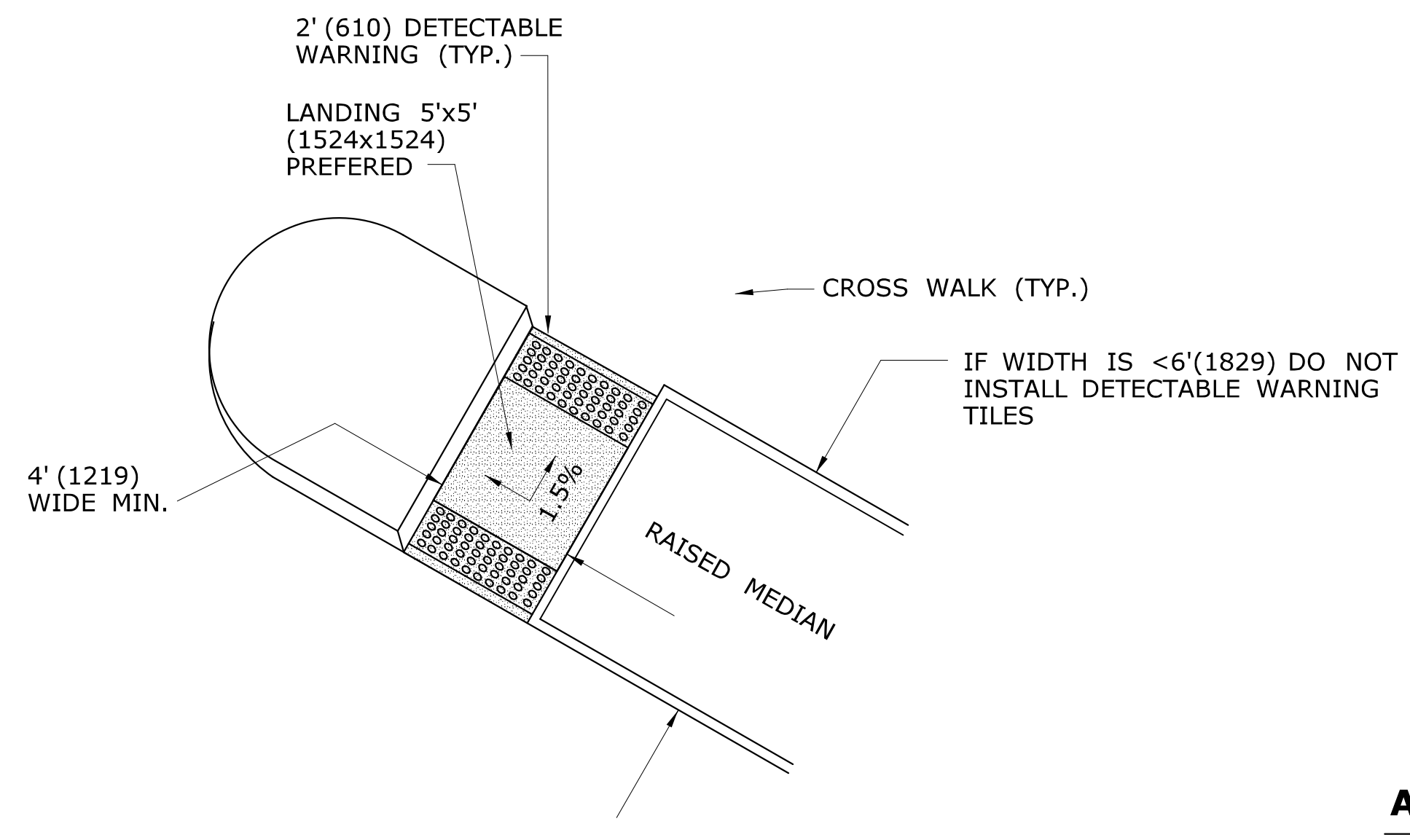
**PLAN VIEW**



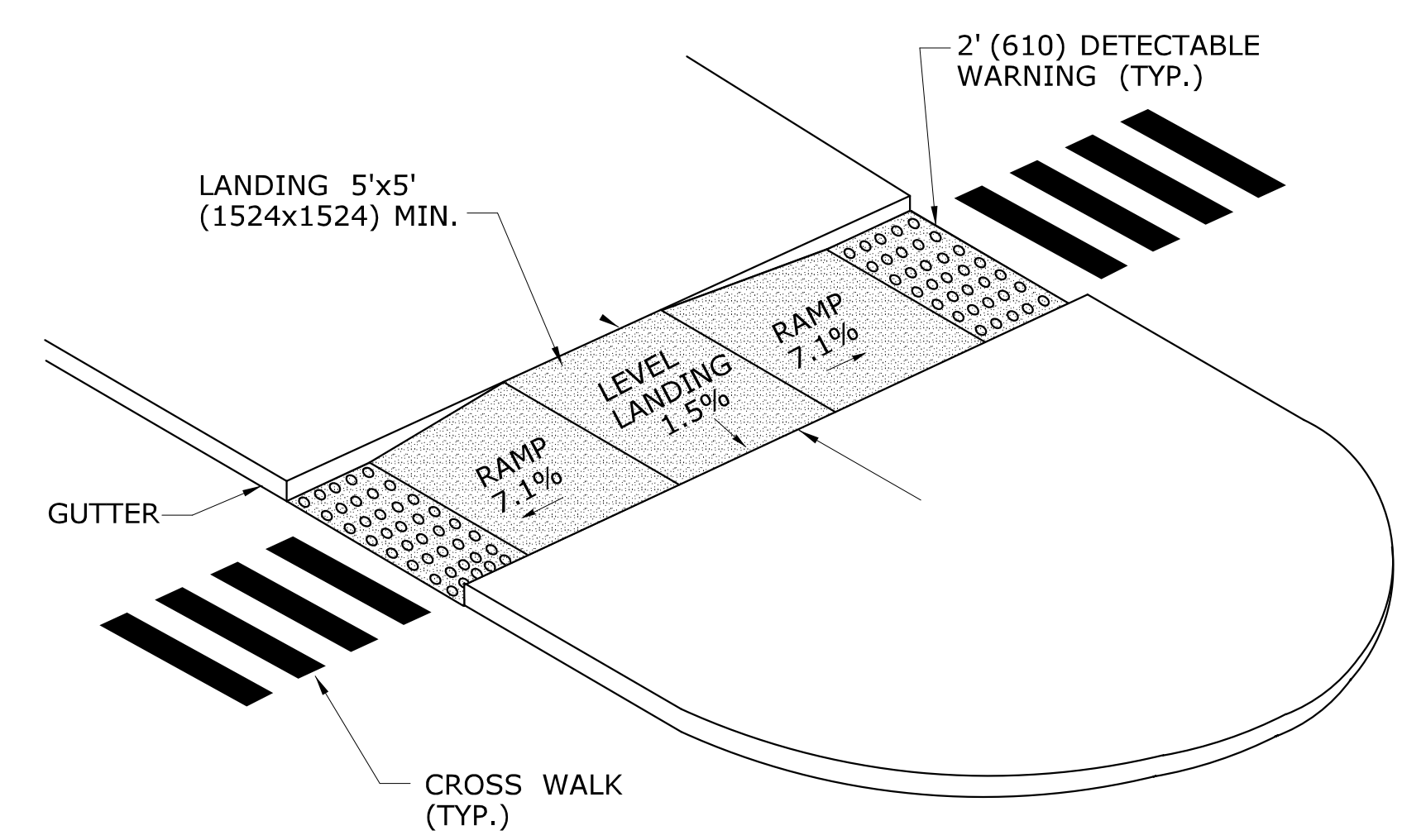
**ELEVATION VIEW**

**DETECTABLE WARNINGS AT RAILROAD CROSSING**

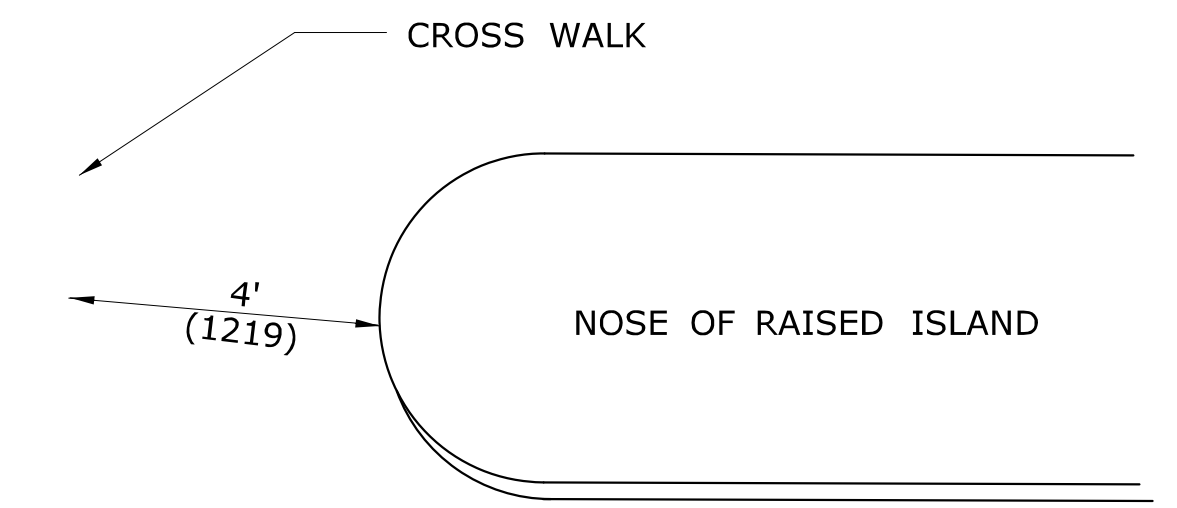
NOTE: WHEN NO GATE IS PRESENT, INSTALL DETECTABLE WARNING SURFACE 12' (3.6m) FROM THE NEAREST RAIL. IF GATE IS PRESENT, INSTALL DETECTABLE WARNING 2' (610) PRIOR TO GATE. THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE INSTALLED PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL.



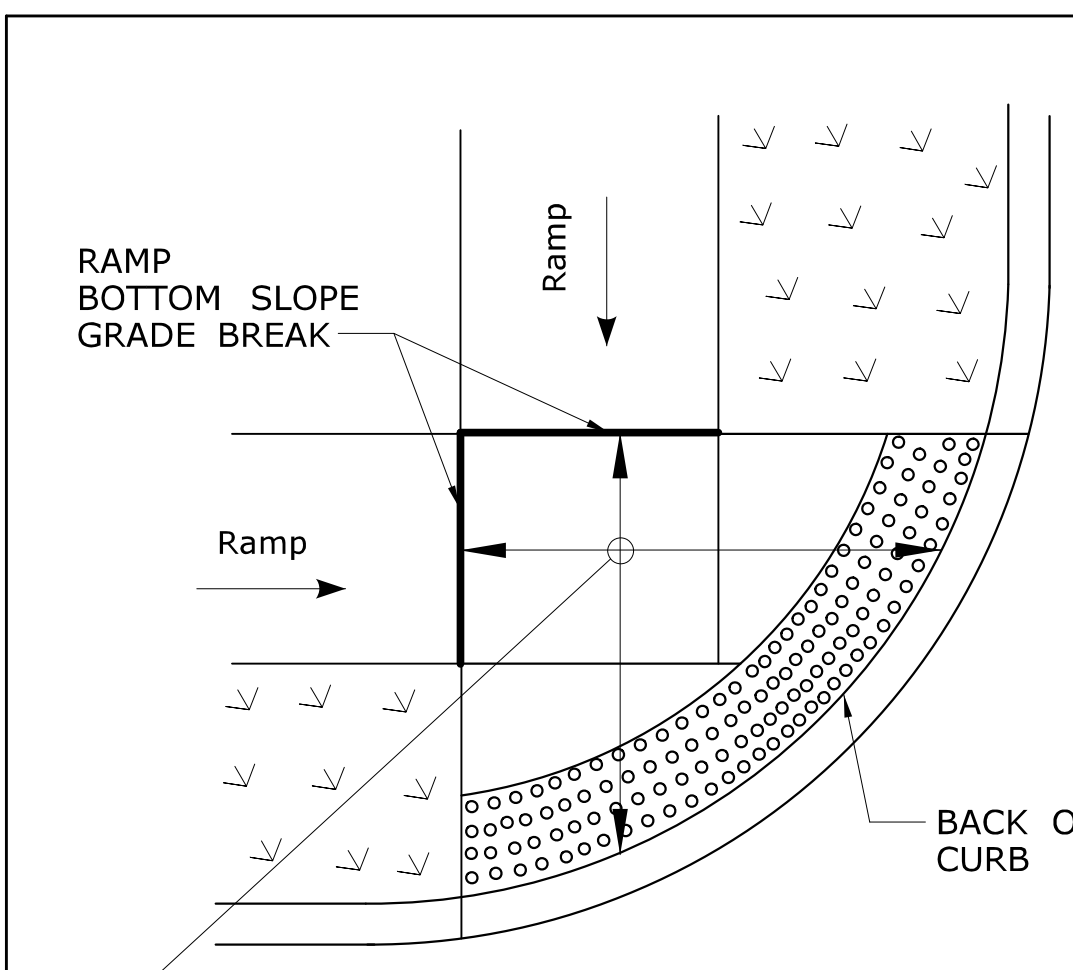
**CUT-THROUGH MEDIAN ISLAND**



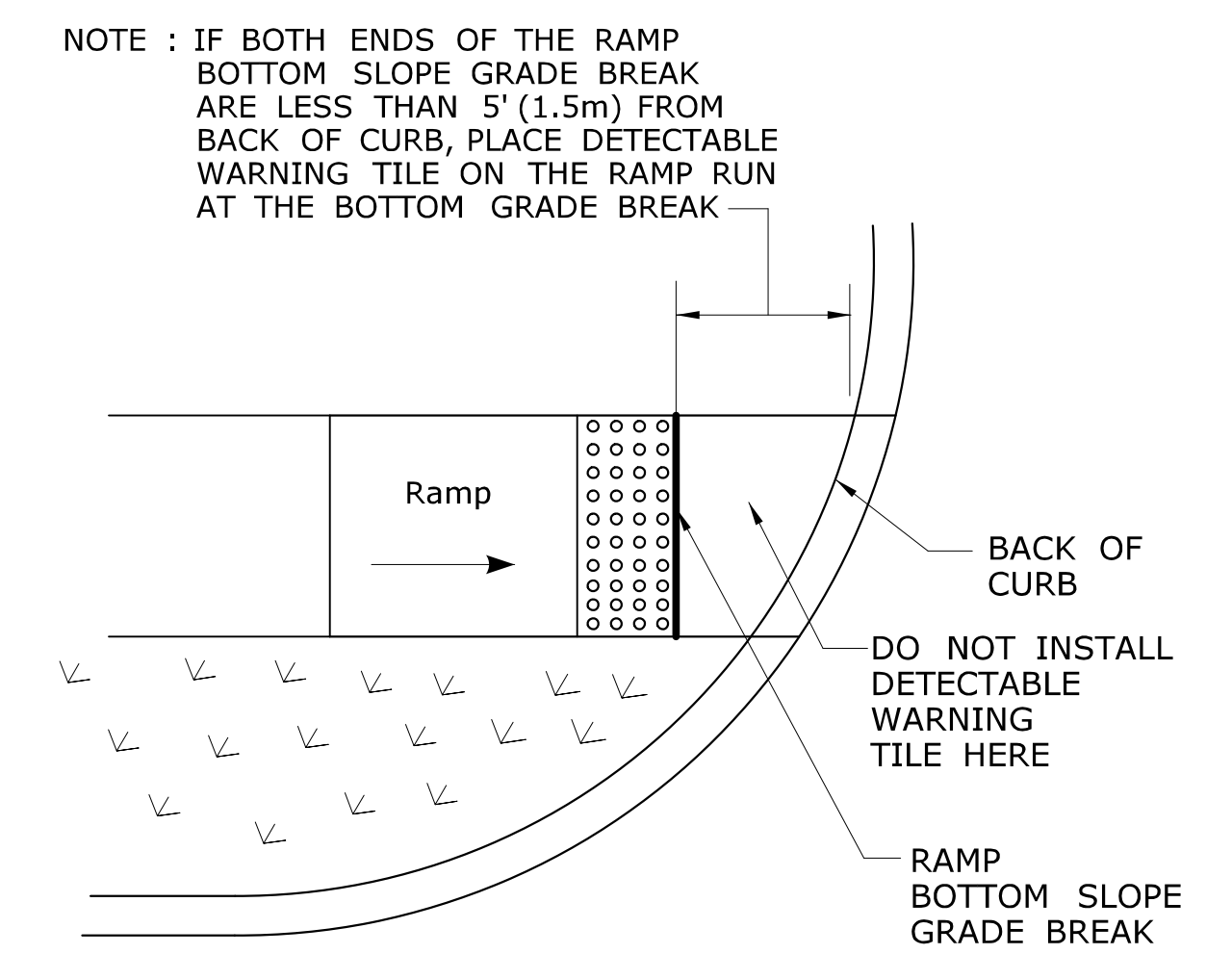
**RAISED MEDIAN ISLAND WITH LANDING AND RAMPS**



**ALTERNATE CROSSWALK WITH MEDIAN ISLAND PULLED BACK**



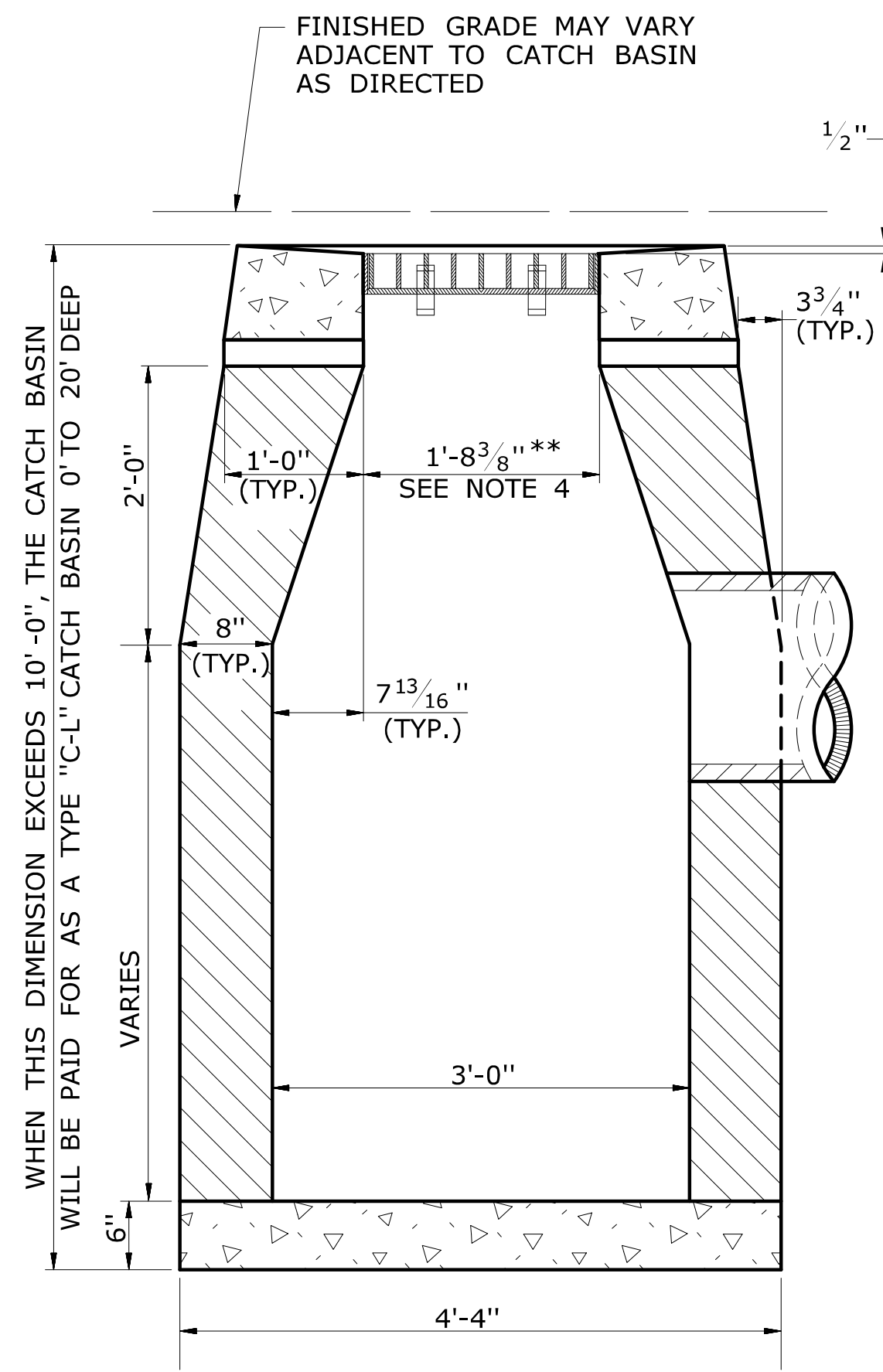
**DETECTABLE WARNING PLACEMENT DETAIL 1**



**DETECTABLE WARNING PLACEMENT DETAIL 2**

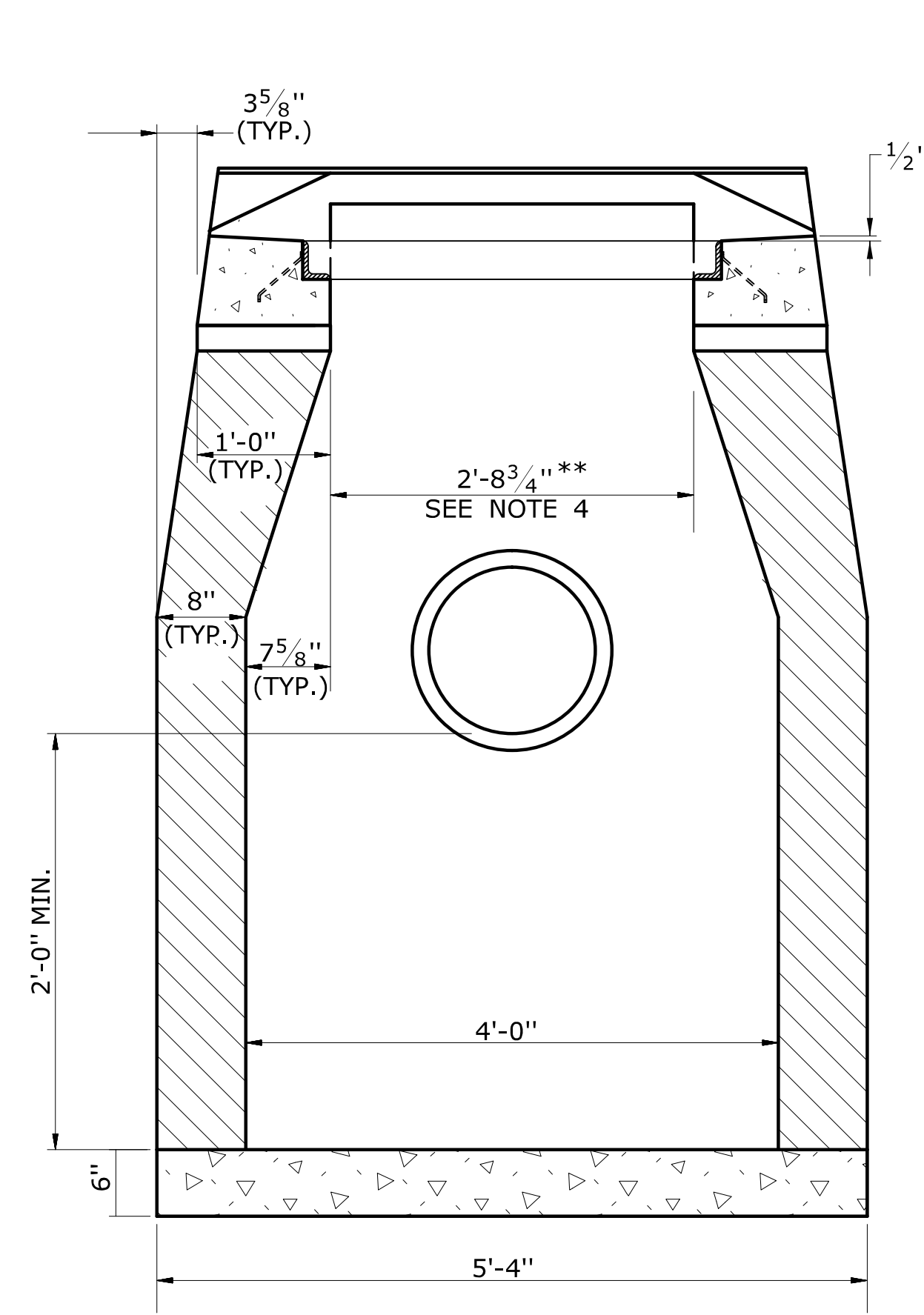
ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.			DESIGNER/DRAFTER: <b>MGB/EMK</b> CHECKED BY: <b>LLF</b>		<b>STATE OF CONNECTICUT</b> <b>DEPARTMENT OF TRANSPORTATION</b>		SIGNATURE/BLOCK: <b>OFFICE OF ENGINEERING</b> APPROVED BY: _____ DATE: _____		PROJECT TITLE:  TOWN: _____ PROJECT NO.: _____	
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/30/2017	Filename: ...CTDOT_Highway_GD (11-21-17).dgn	<b>SIDWALK RAMP SHEET 4</b>			DRAWING NO.	SHEET NO.



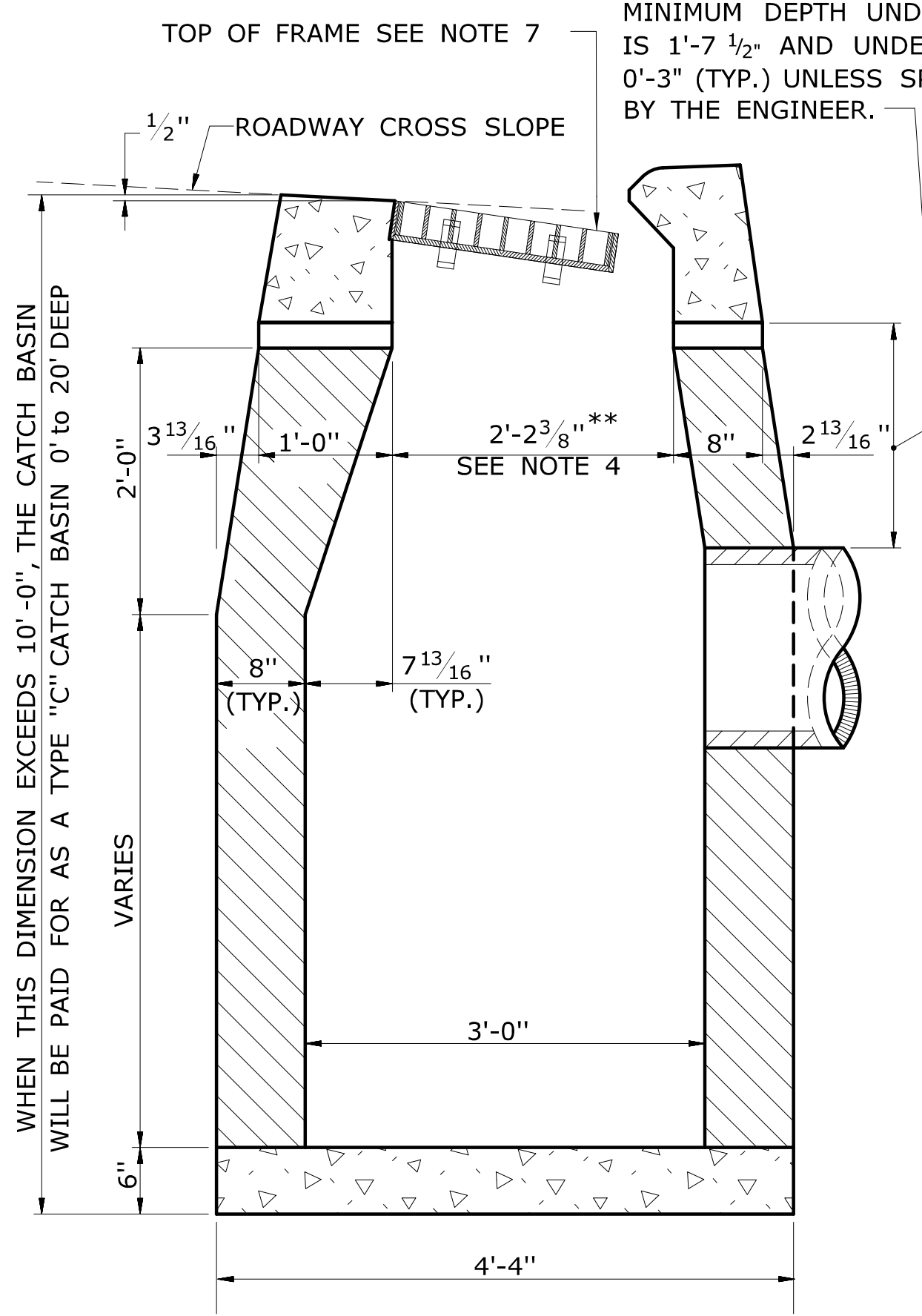
SECTION B

TYPE "C-L" CATCH BASIN



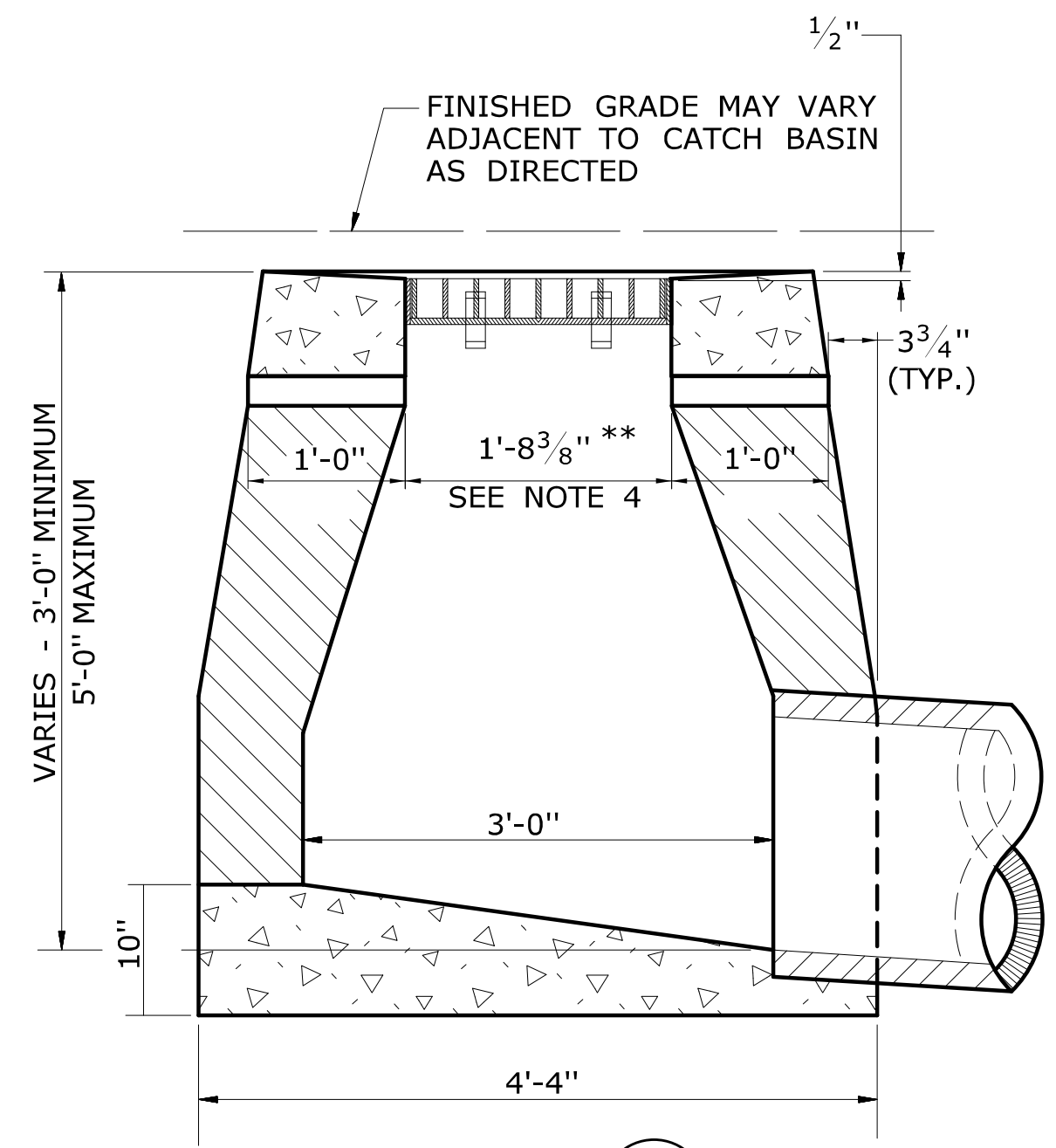
SECTION A

TYPE "C" & "C-L" CATCH BASIN  
(TYPE "C" TOP SHOWN)



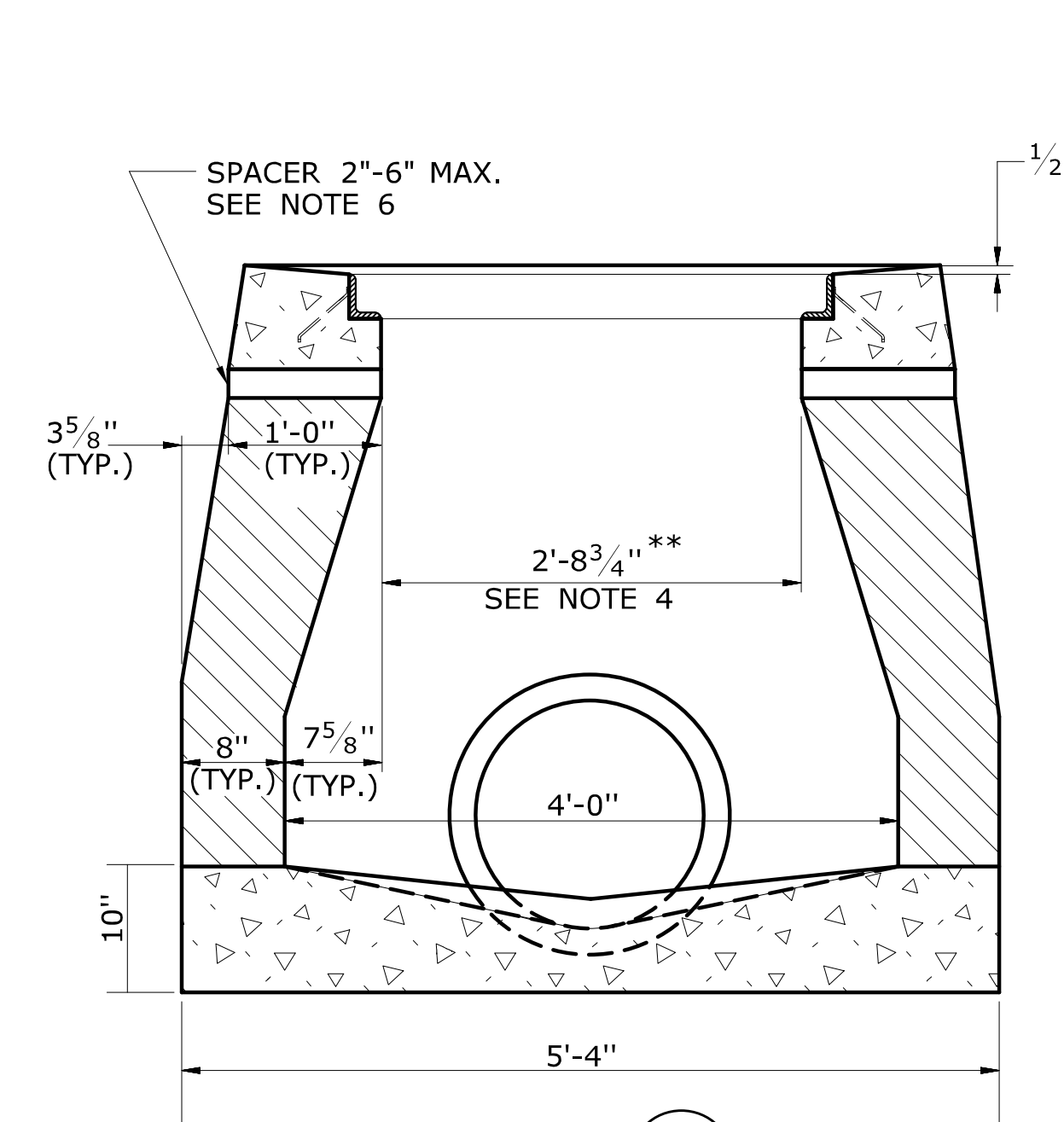
SECTION B

TYPE "C" CATCH BASIN



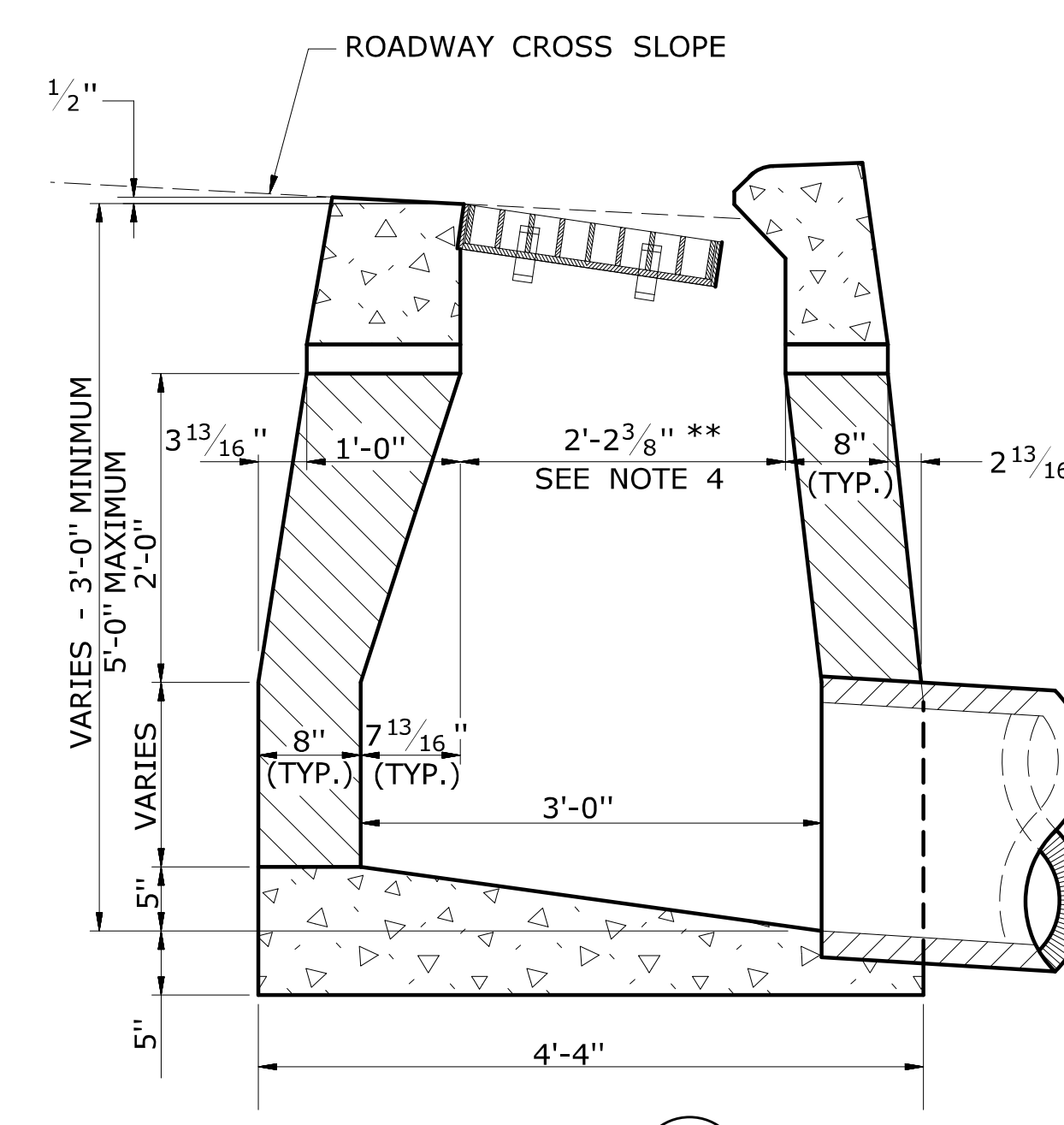
SECTION B

TYPE "C-L" DROP INLET



SECTION A

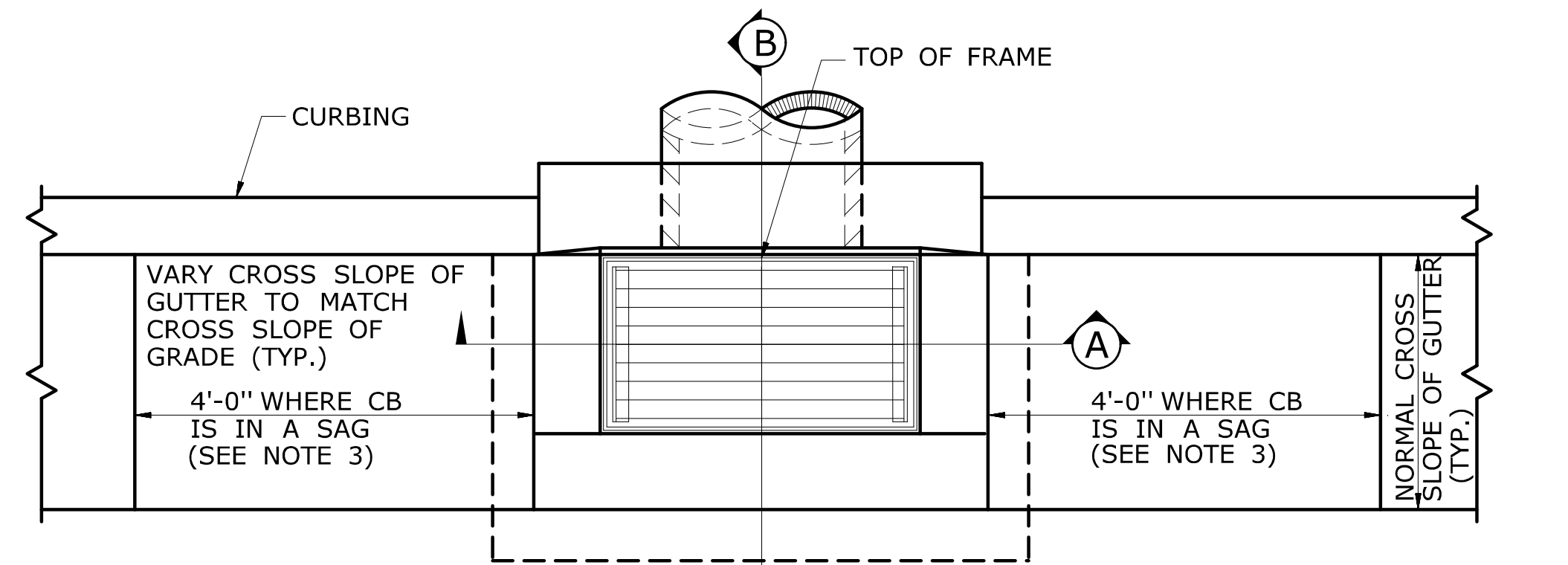
TYPE "C" & "C-L" DROP INLET  
(TYPE "C-L" TOP SHOWN)



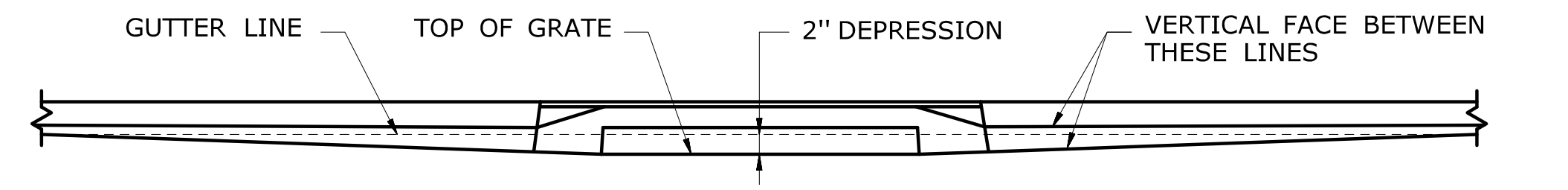
SECTION B

TYPE "C" DROP INLET

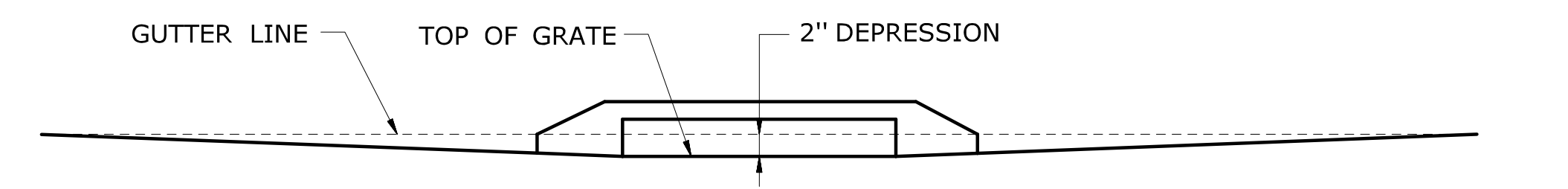
- GENERAL NOTES:**
1. FOR CATCH BASIN TOPS, SEE DRAWING NO. DGS-07.
  2. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
  3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED BY THE ENGINEER.
  4. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE DIMENSIONS SHOWN. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS FOR THE CATCH BASIN OPENINGS SHOWN IN THE SECTION VIEWS \*\*.
  5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
  6. SPACERS CAN BE EITHER CONCRETE MASONRY UNIT OR PRECAST WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) AS NEEDED TO PROVIDE THE PROPER GRADE SHOWN ON THE PLANS.
  7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN THE CENTER OF GRATE AT GUTTER LINE.



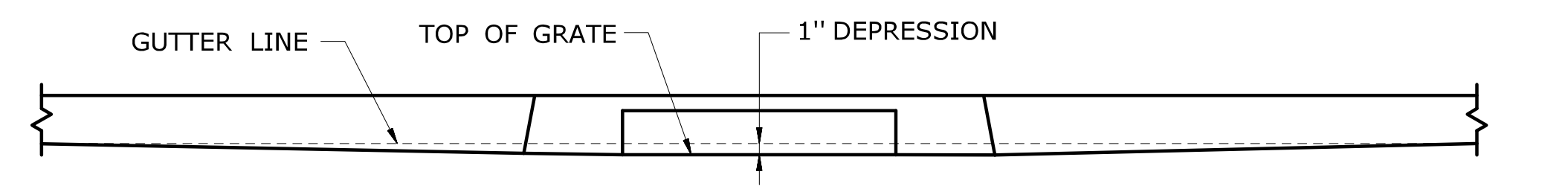
PLAN



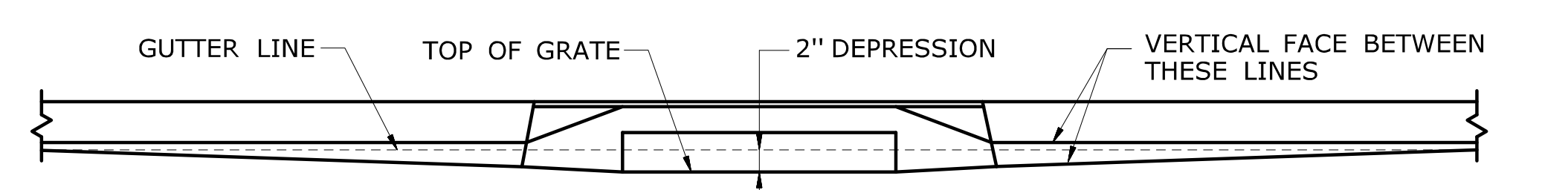
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED



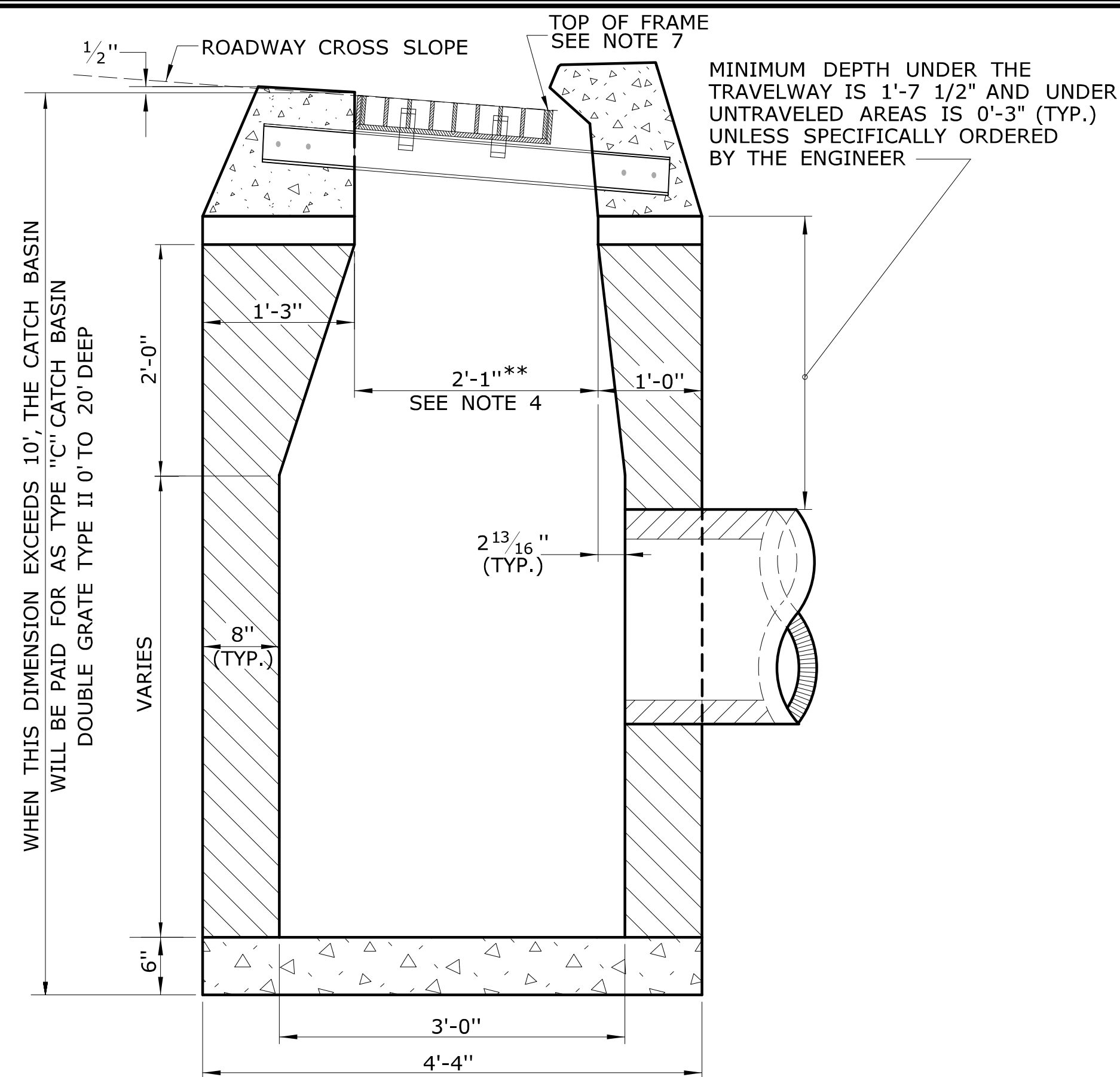
CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING



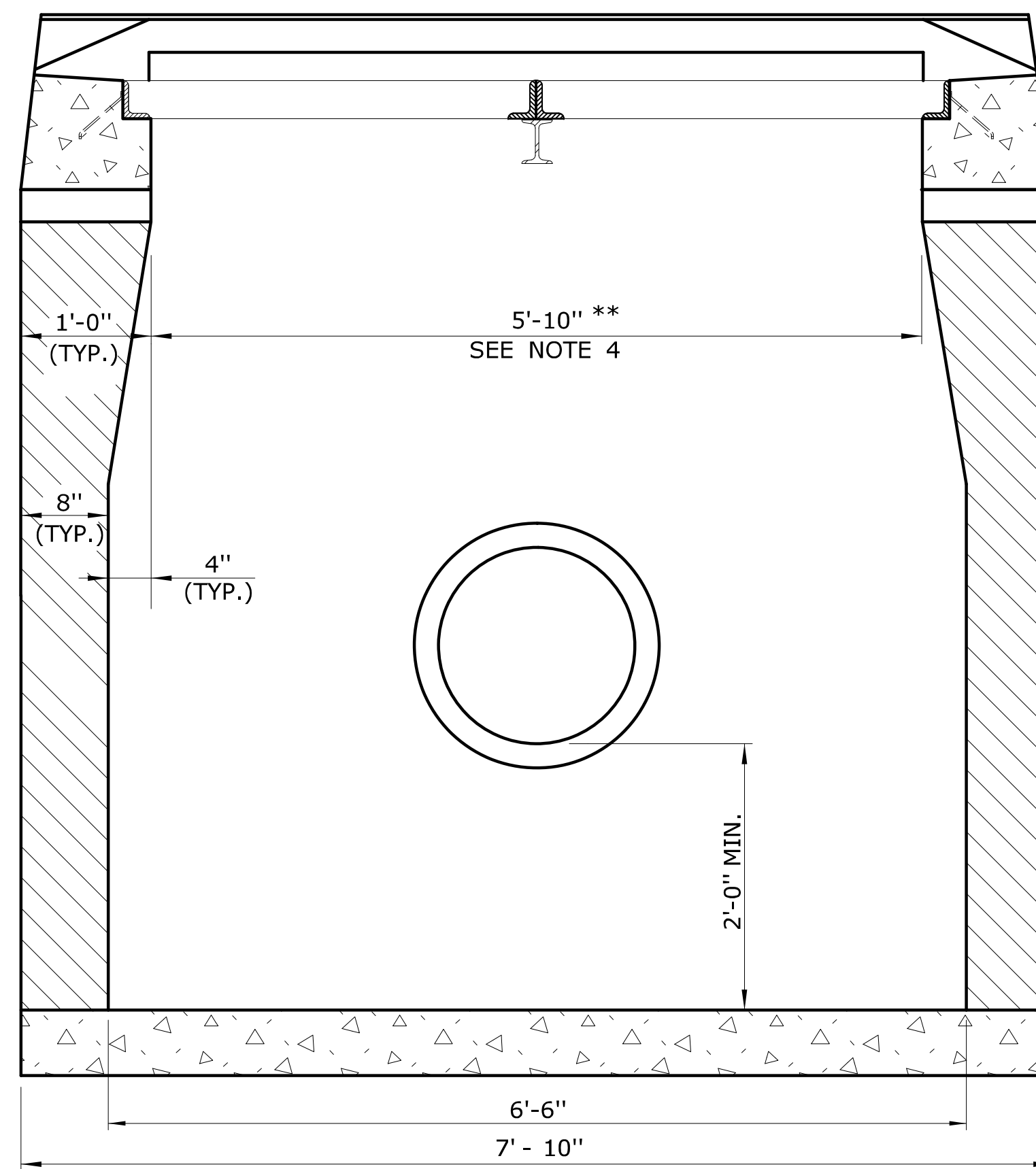
CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		DESIGNER/DRAFTER: - CHECKED BY: -	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SIGNATURE/BLOCK: - APPROVED BY: -	PROJECT TITLE: -	TOWN: -	PROJECT NO.: - DRAWING NO.: <b>DGS-01</b> SHEET NO.:
REV. DATE REVISION DESCRIPTION SHEET NO. Plotted Date: 11/30/2017	Filename: ...CTDOT-Highway_GD (11-21-17).dgn	<b>CATCH BASIN AND DROP INLET</b>					

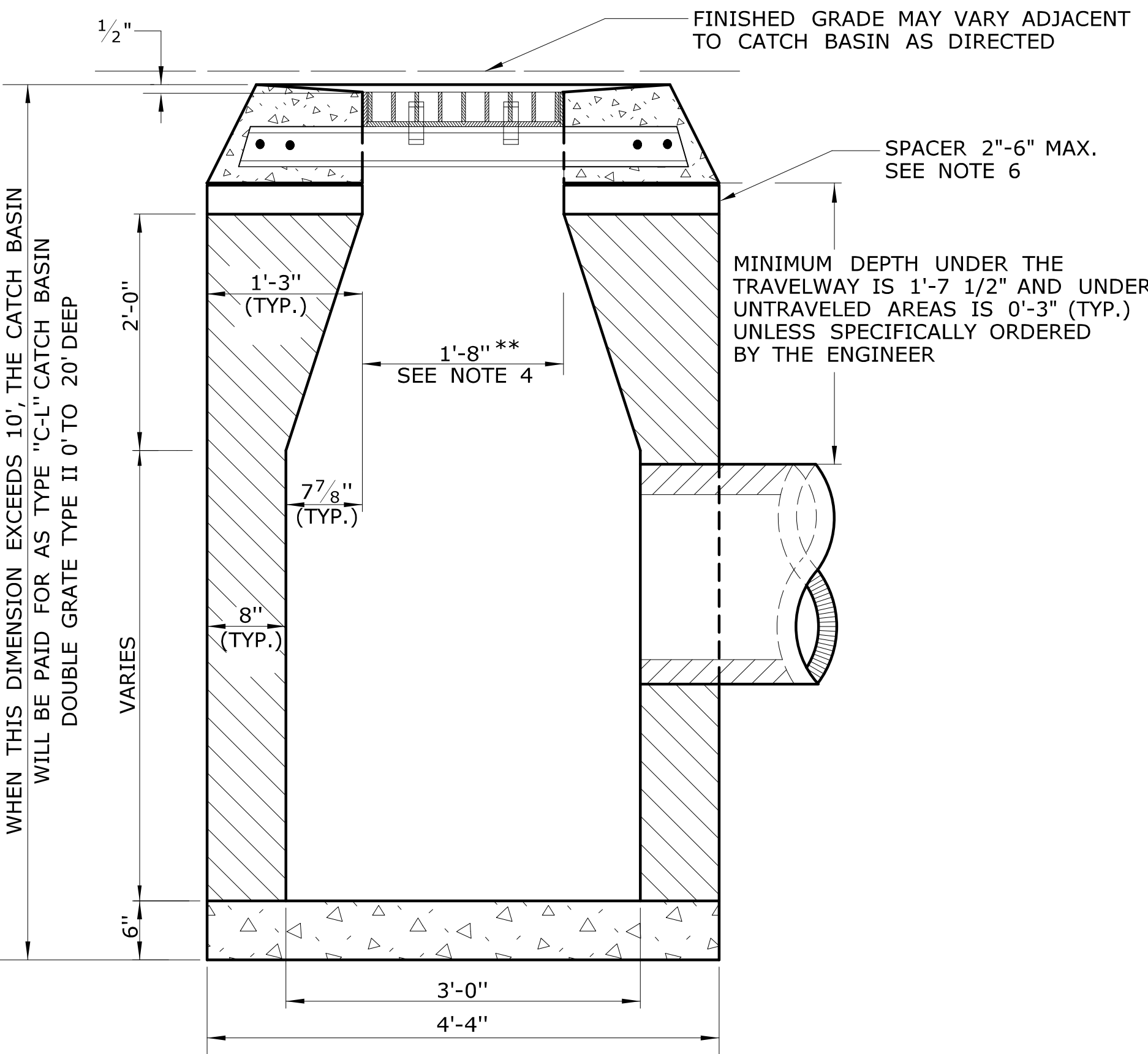


**SECTION B**

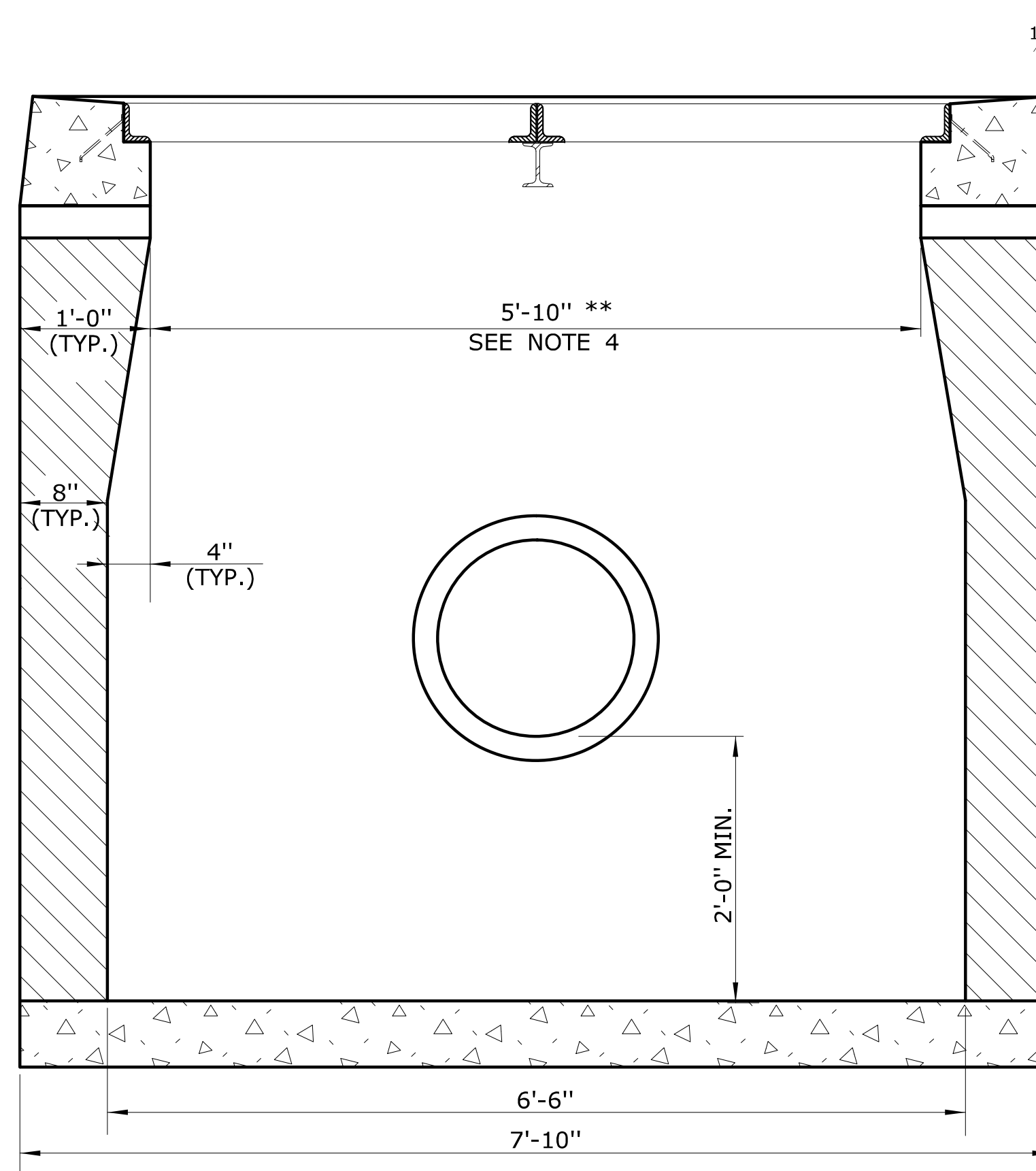


**SECTION A**

**TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II**



**SECTION B**

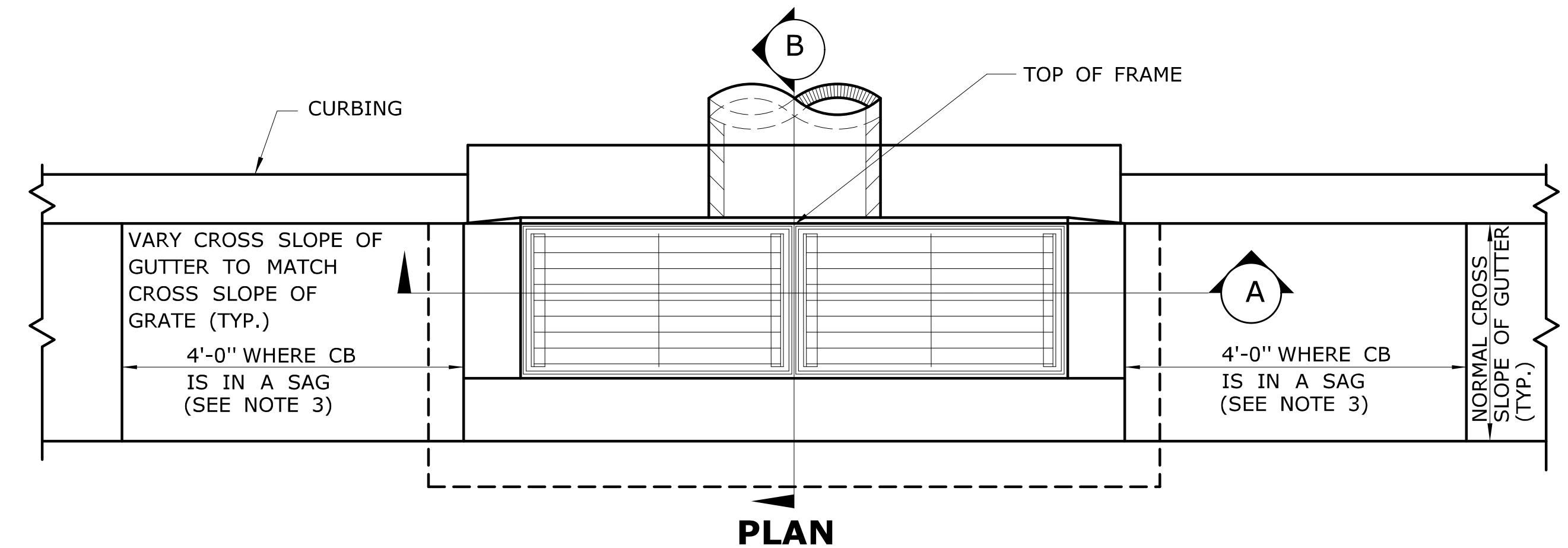


**SECTION A**

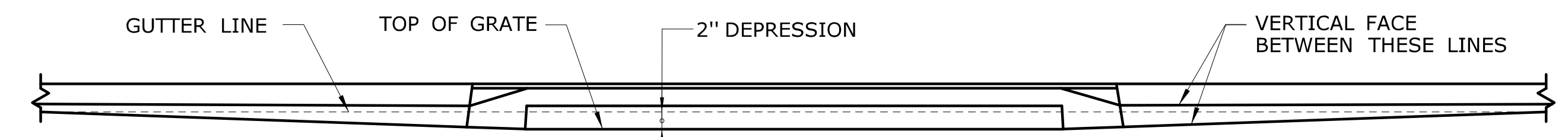
**TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II**

**GENERAL NOTES:**

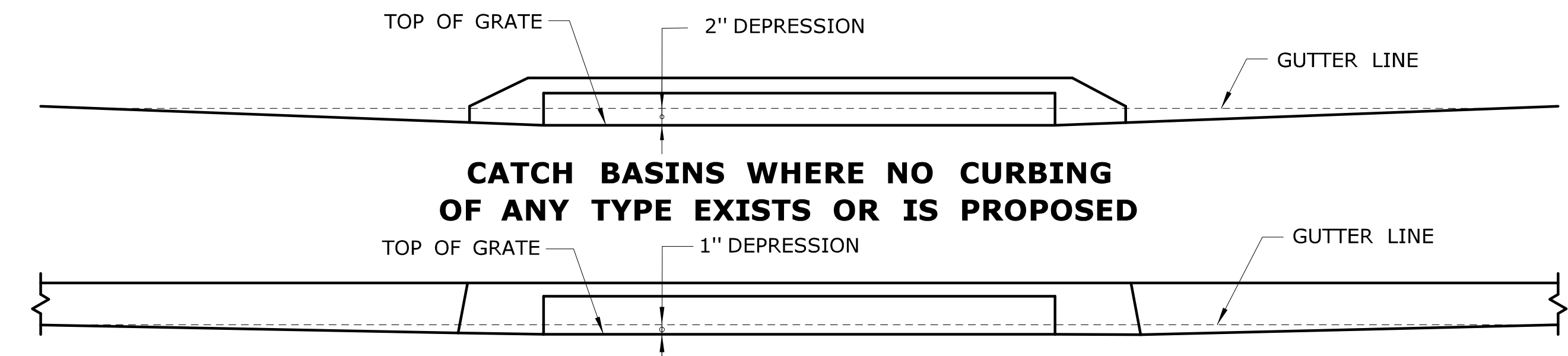
1. FOR CATCH BASIN TOPS, SEE DRAWING NO. DGS-07.
2. ALL THE FACES OF THE STRUCTURE IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE AS DIRECTED BY THE ENGINEER.
4. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH DIMENSIONS SHOWN. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY \*\*.
5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
6. SPACERS CAN BE EITHER CONCRETE MASONRY UNIT OR PRECAST, WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) AS NEEDED TO PROVIDE THE PROPER GRADE SHOWN ON THE PLANS.
7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN BETWEEN BOTH GRATES AT THE GUTTER.



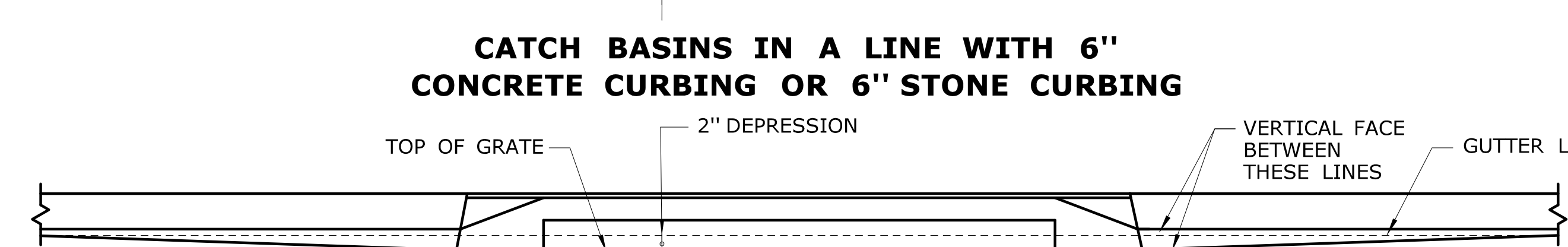
**PLAN**



**CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING**



**CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED**



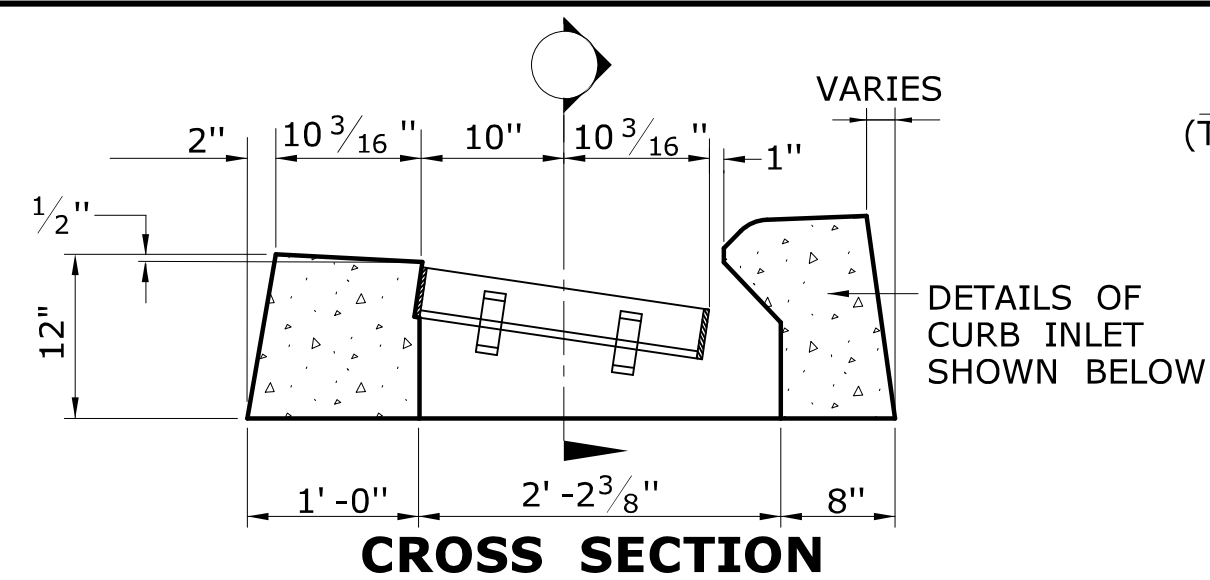
**CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING**



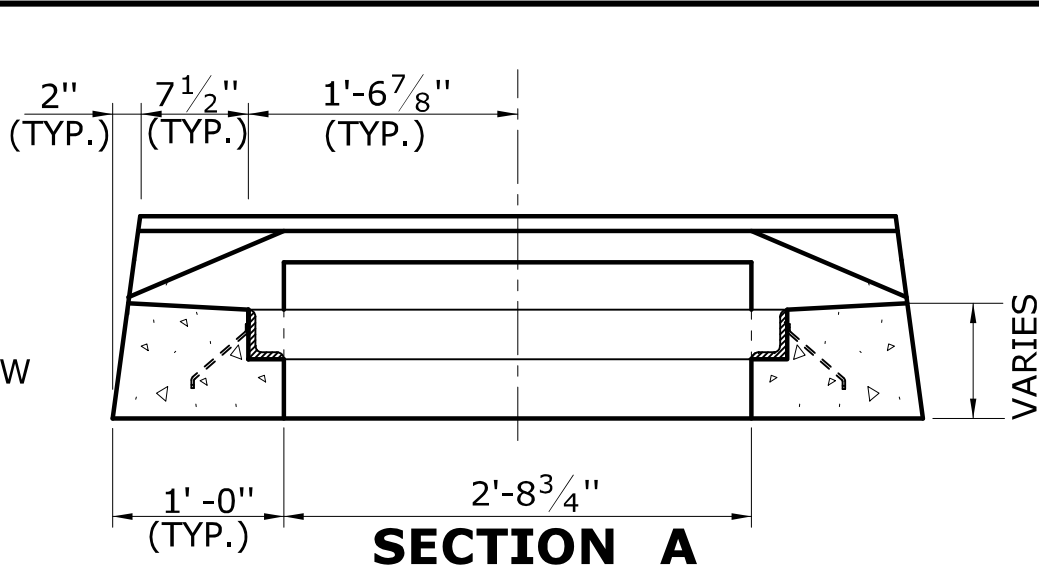
**CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)**

**DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II**

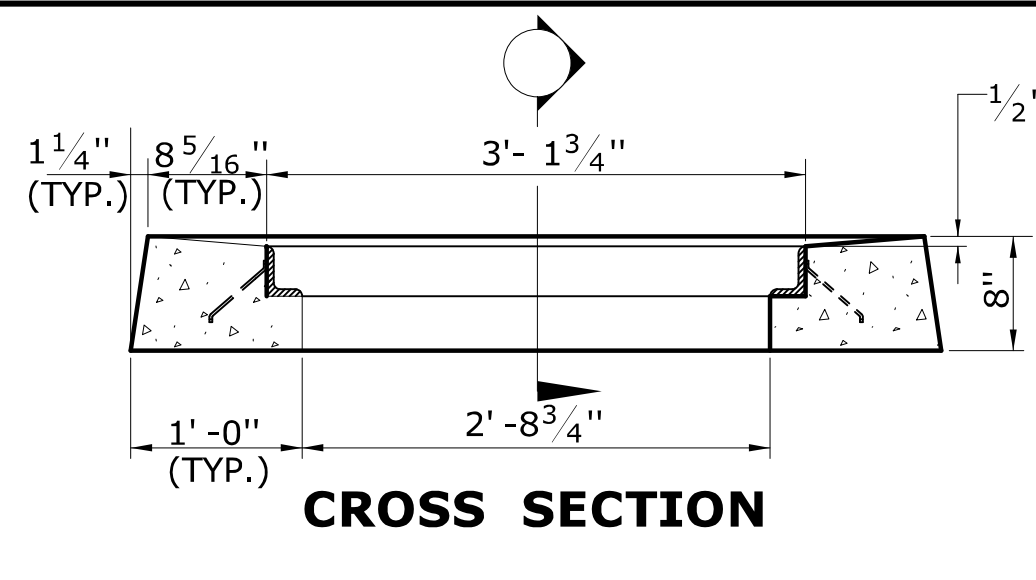
<p>THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.</p>			<p>DESIGNER/DRAFTER: - CHECKED BY: -</p>	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	<p>SIGNATURE/BLOCK: - OFFICE OF ENGINEERING APPROVED BY: -</p>	<p>PROJECT TITLE: -</p>	<p>TOWN: -</p>	<p>PROJECT NO. - DRAWING NO. - DGS-03 SHEET NO. -</p>
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/30/2017	Filename: ...CTDOT_Highway_GD (11-21-17).dgn	<p><b>CATCH BASIN TYPES DOUBLE GRATE II</b></p>		



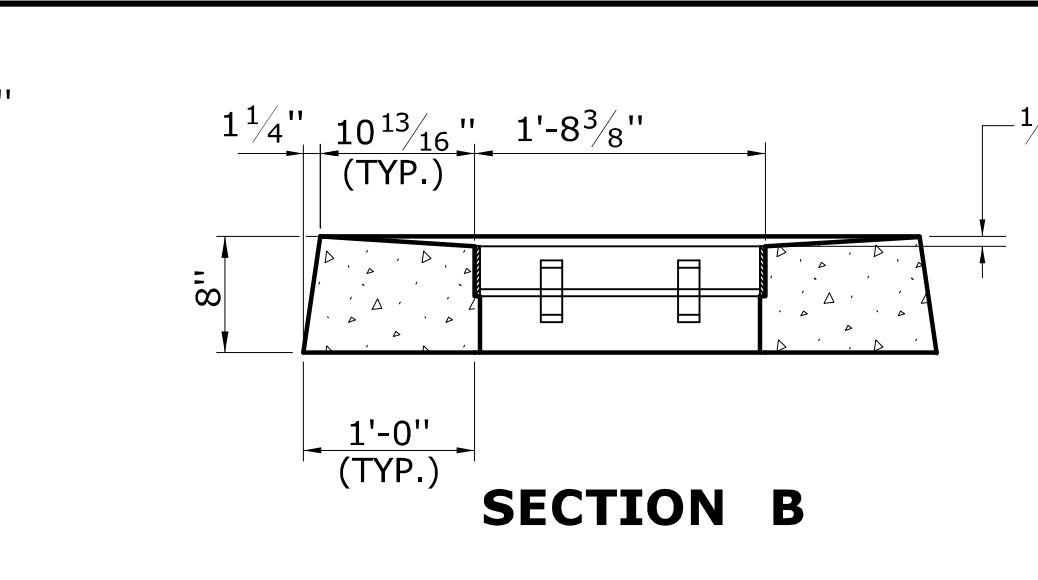
**CROSS SECTION  
TYPE "C" CATCH BASIN TOP**



**SECTION A  
TYPE "C-L" CATCH BASIN TOP**

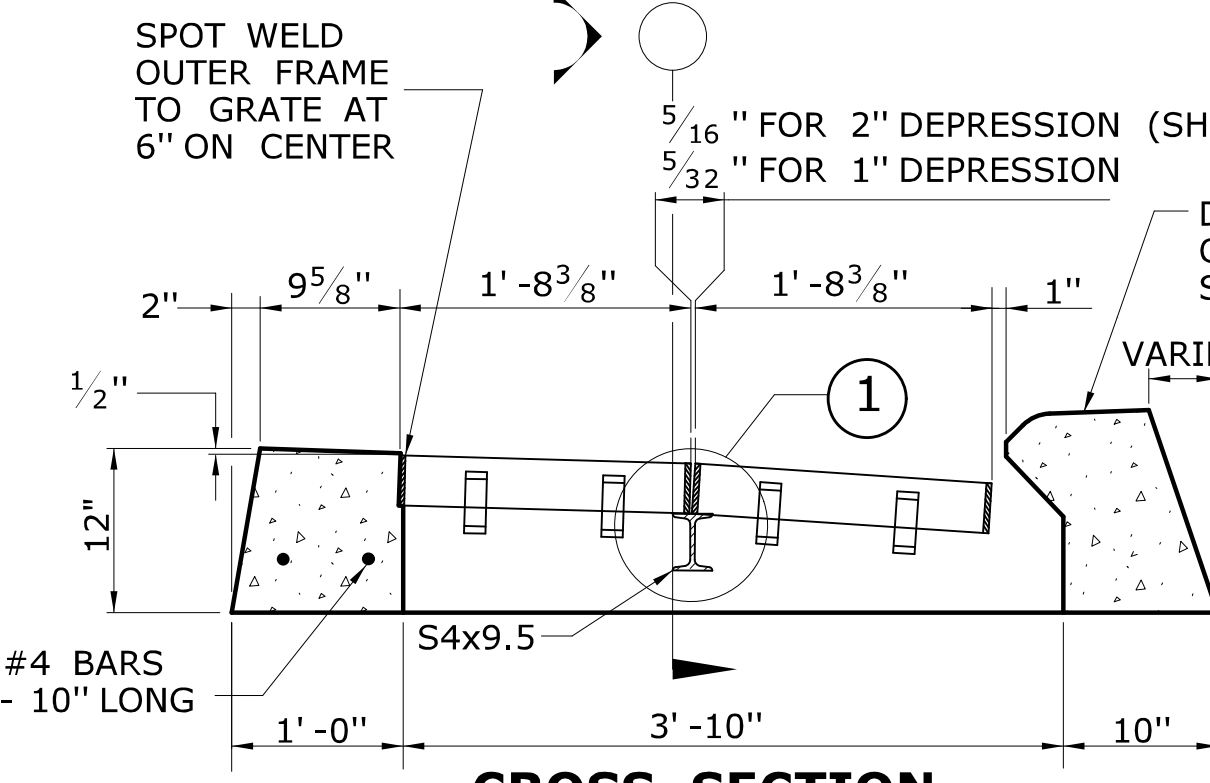


**CROSS SECTION  
TYPE "C-L" CATCH BASIN TOP**

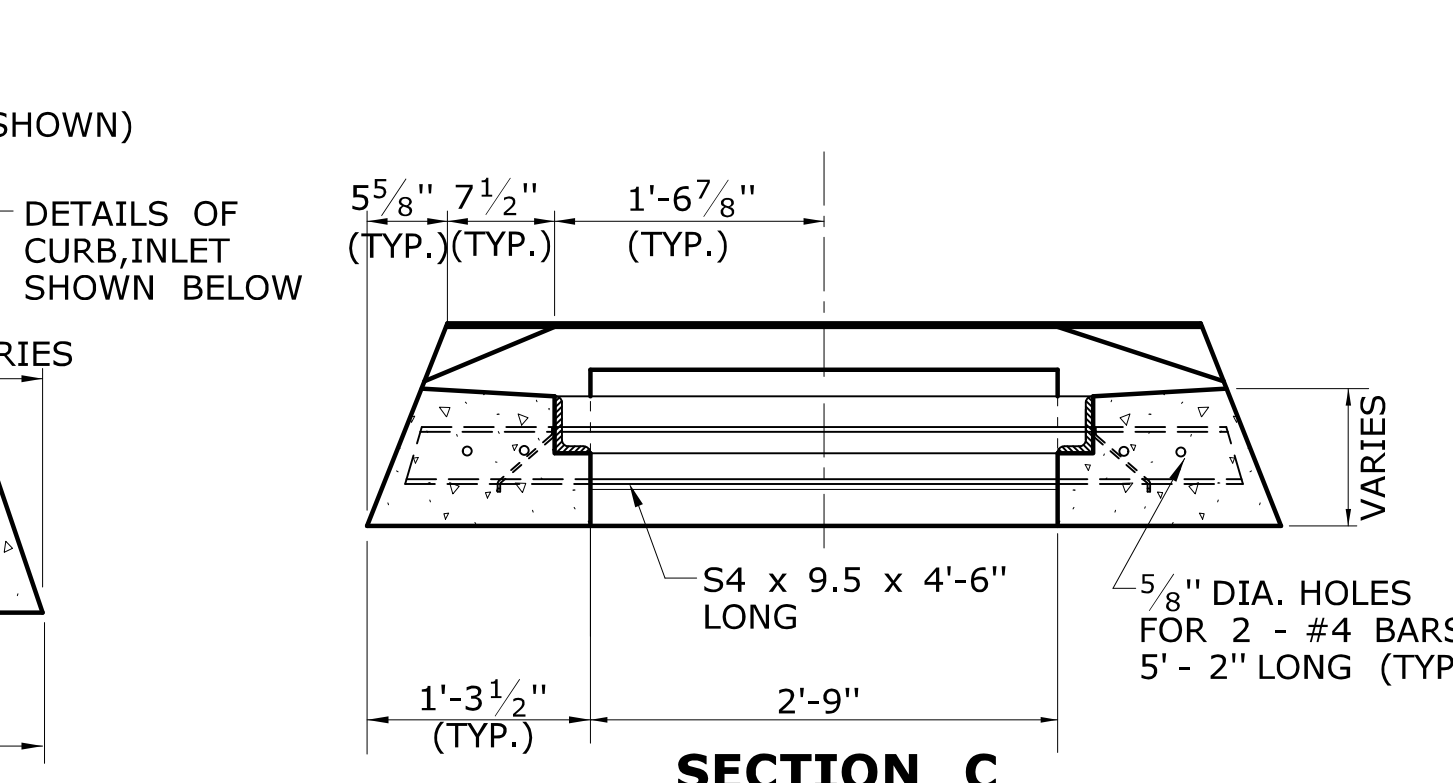


**SECTION B  
TYPE "C-L" CATCH BASIN TOP**

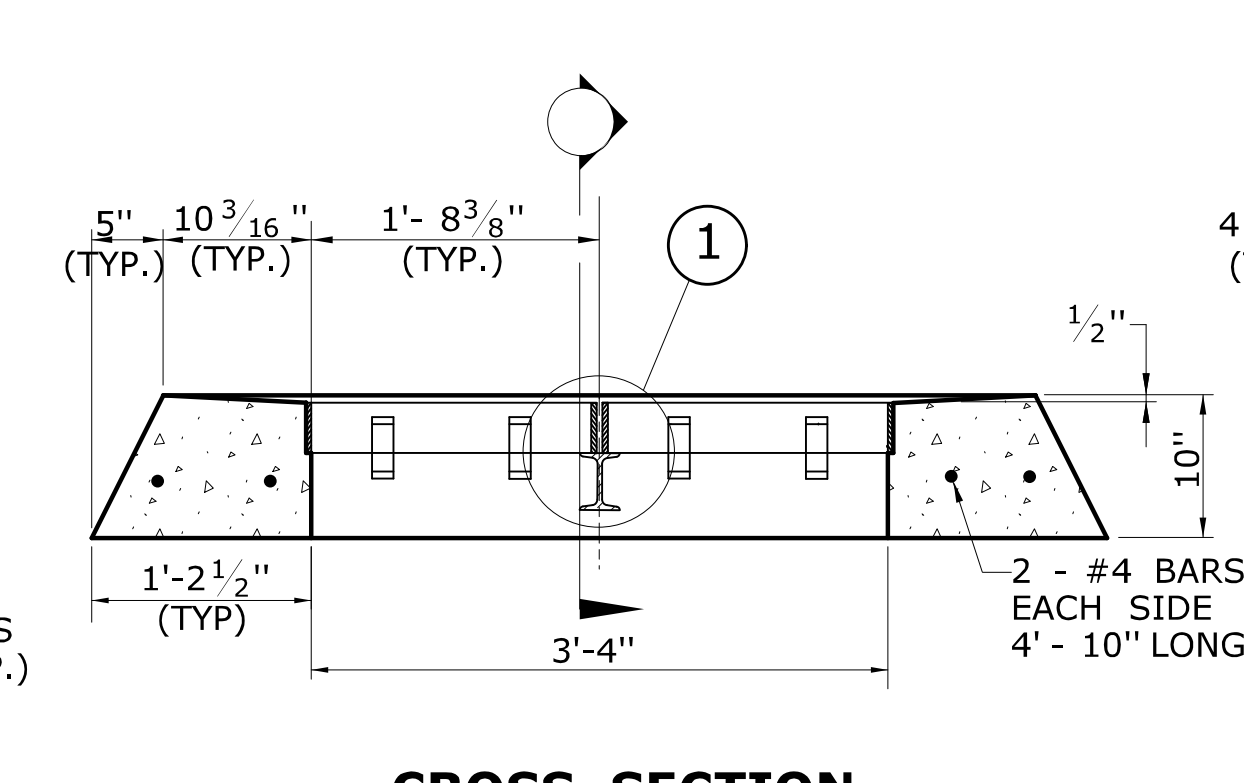
**GENERAL NOTES:**  
1. FOR DETAILS OF FRAMES AND GRATES, SEE DRAWING NO. DGS-08.  
2. ALL BARS SHALL HAVE A MINIMUM 2" COVER.



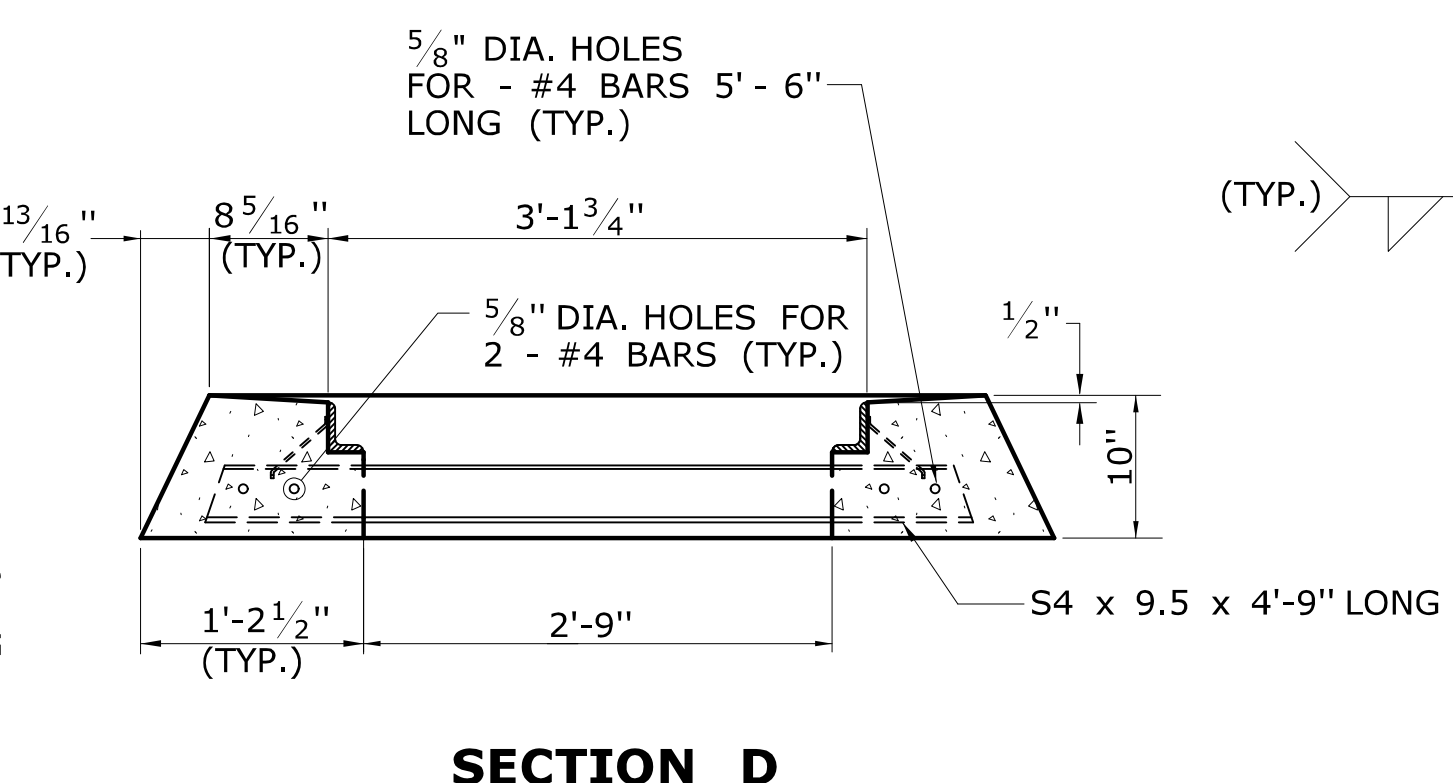
**CROSS SECTION  
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



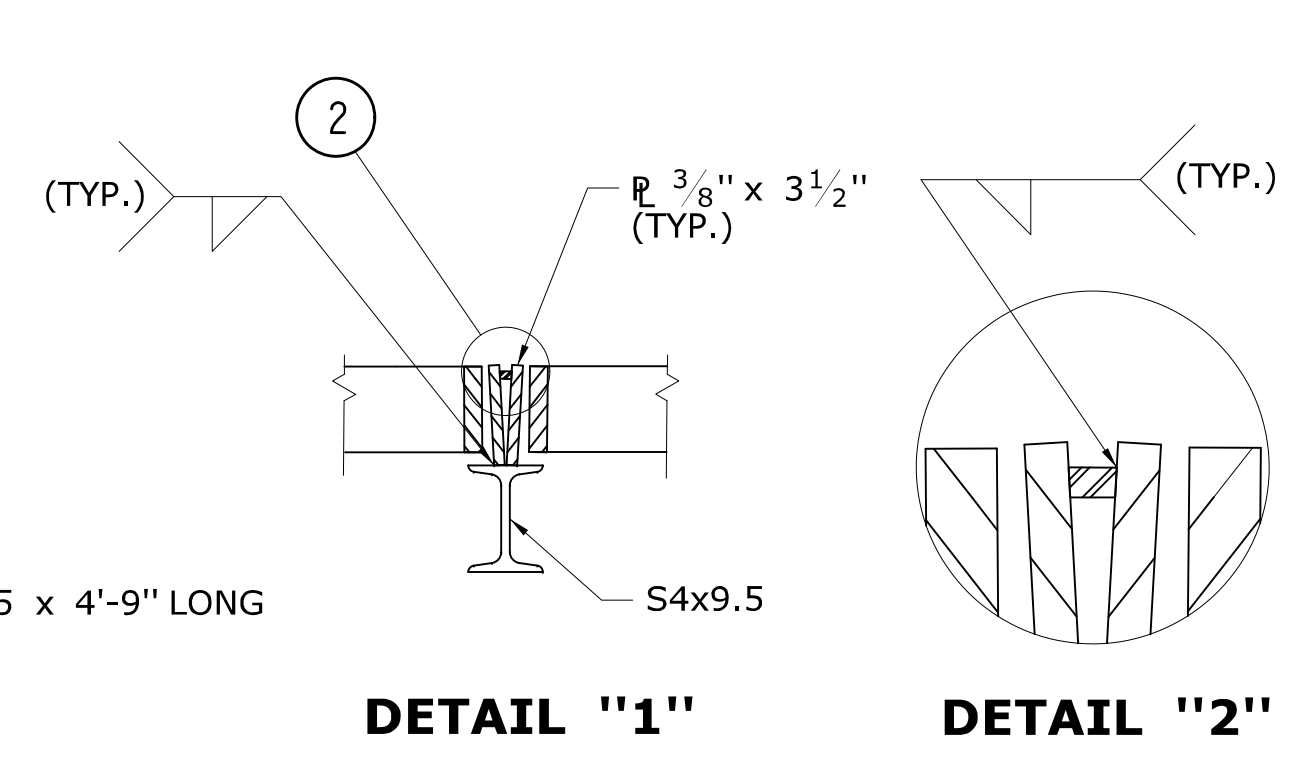
**SECTION C  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



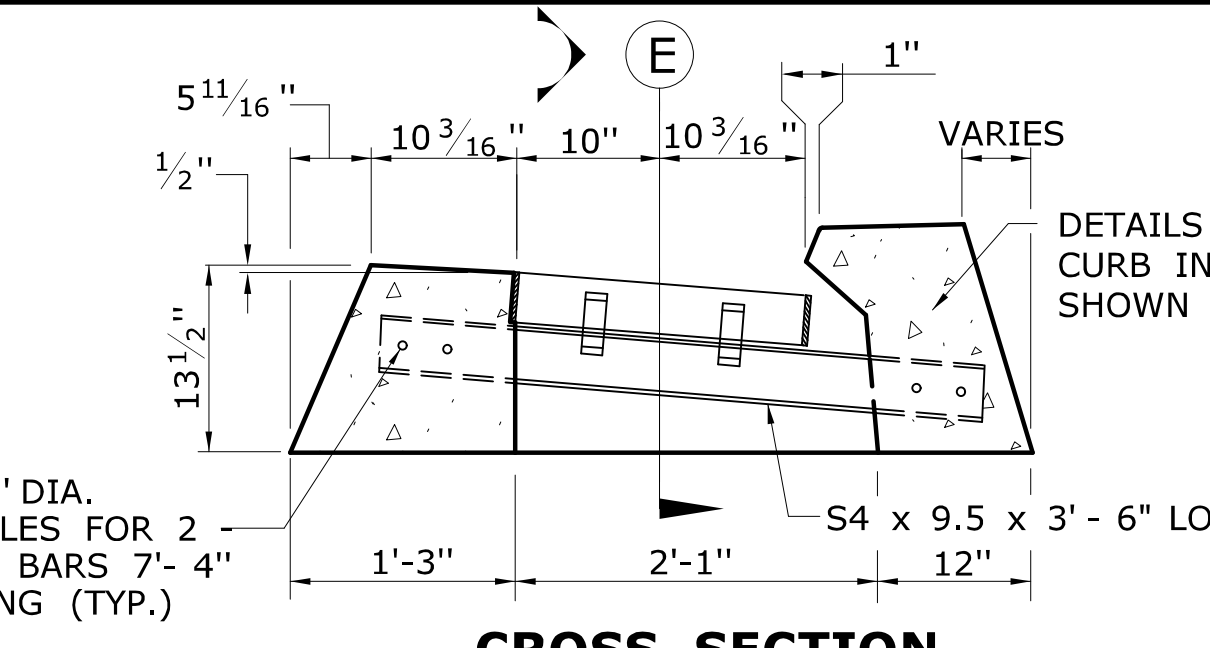
**CROSS SECTION  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



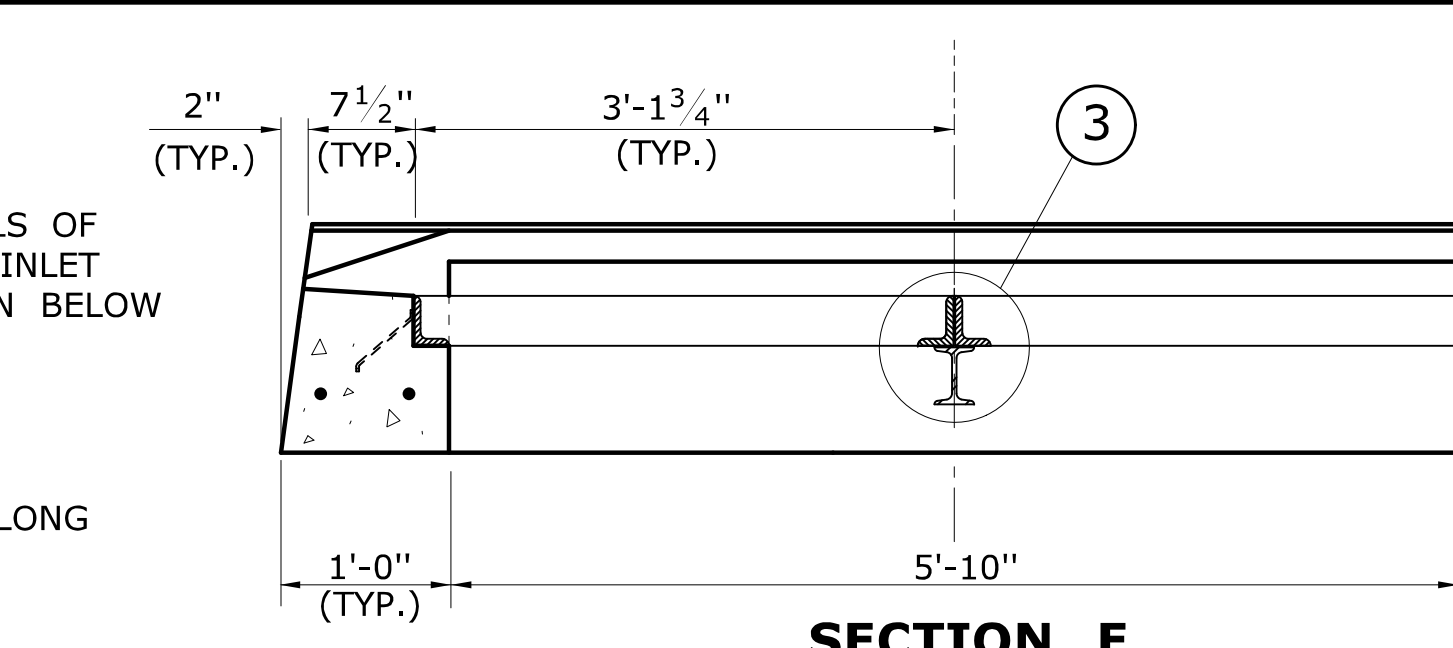
**SECTION D  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



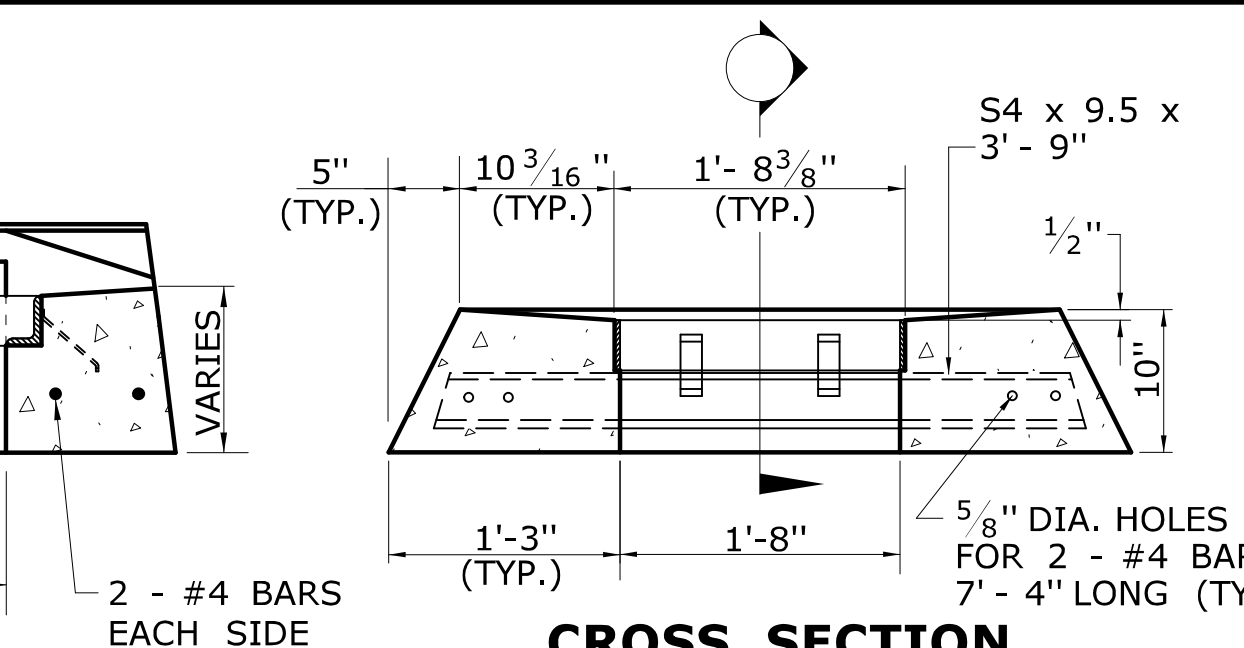
**DETAIL "1"      DETAIL "2"**



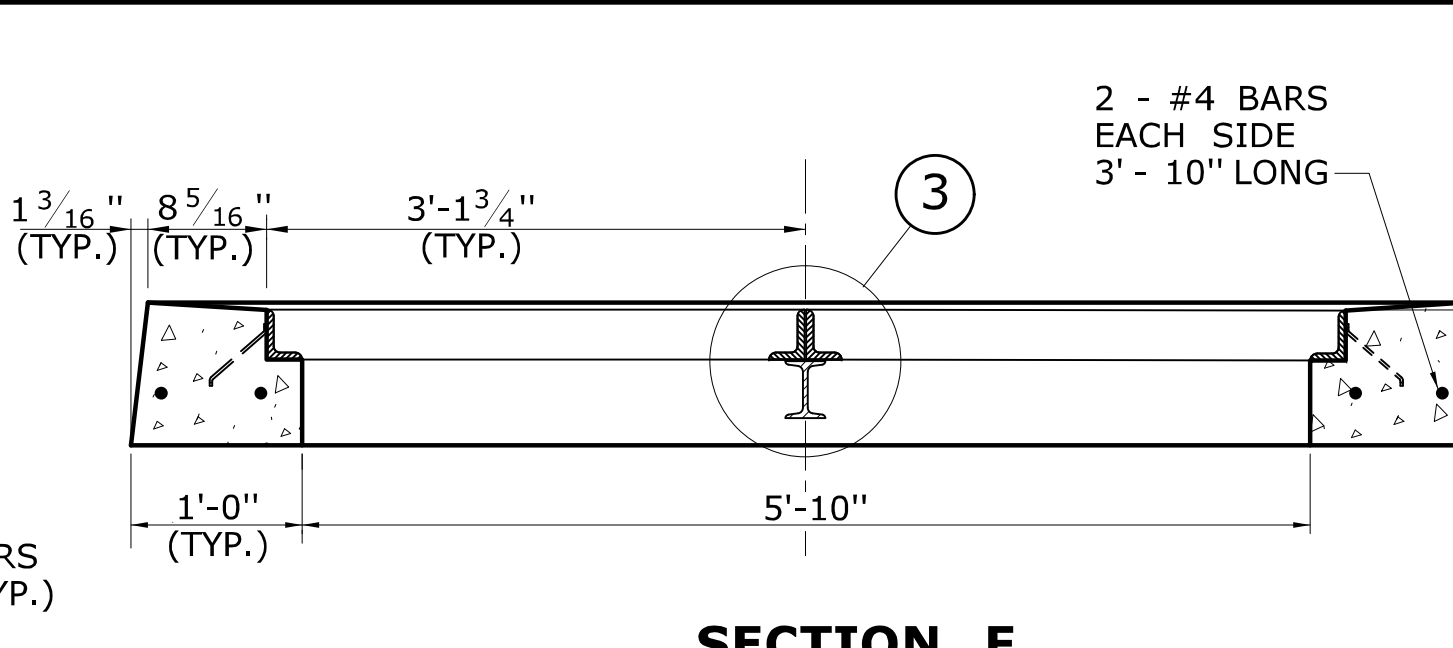
**CROSS SECTION  
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



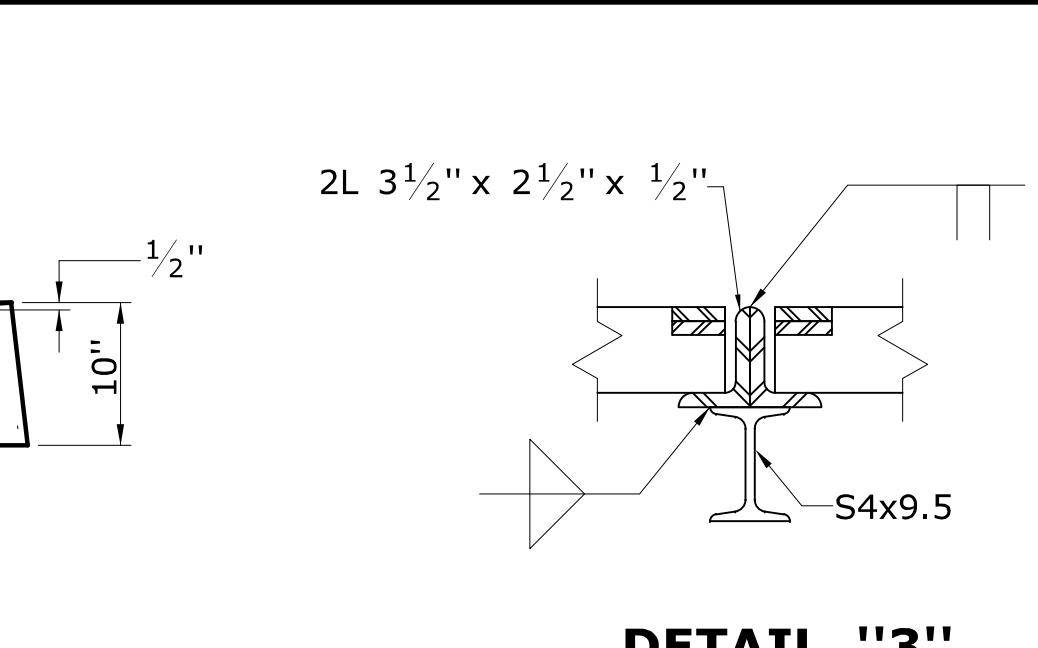
**SECTION E  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



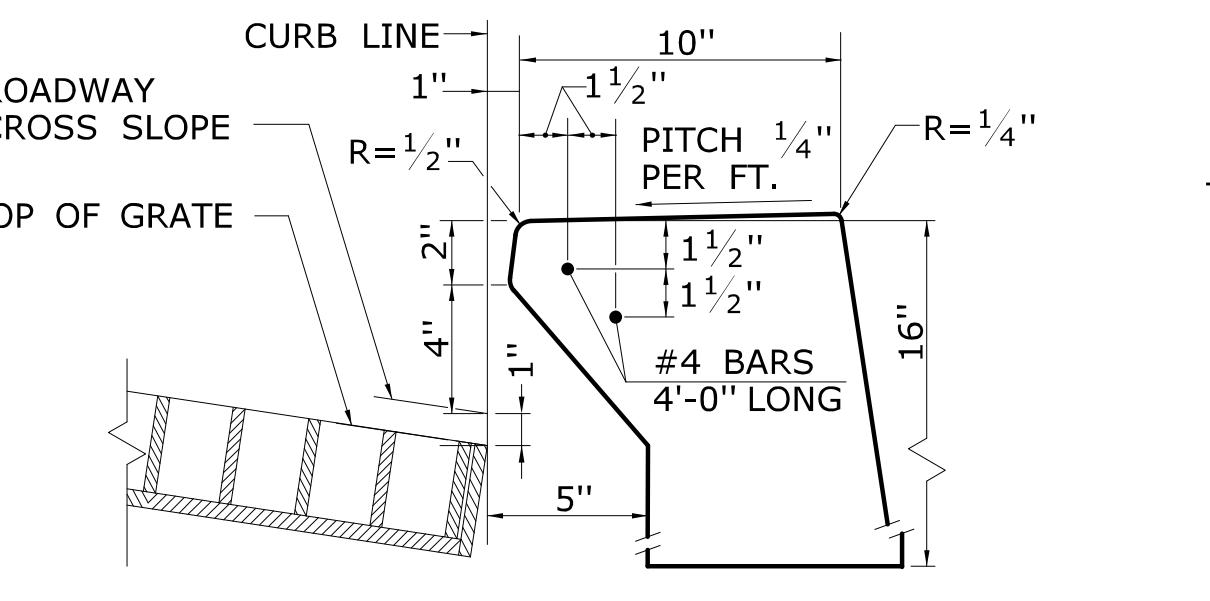
**CROSS SECTION  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



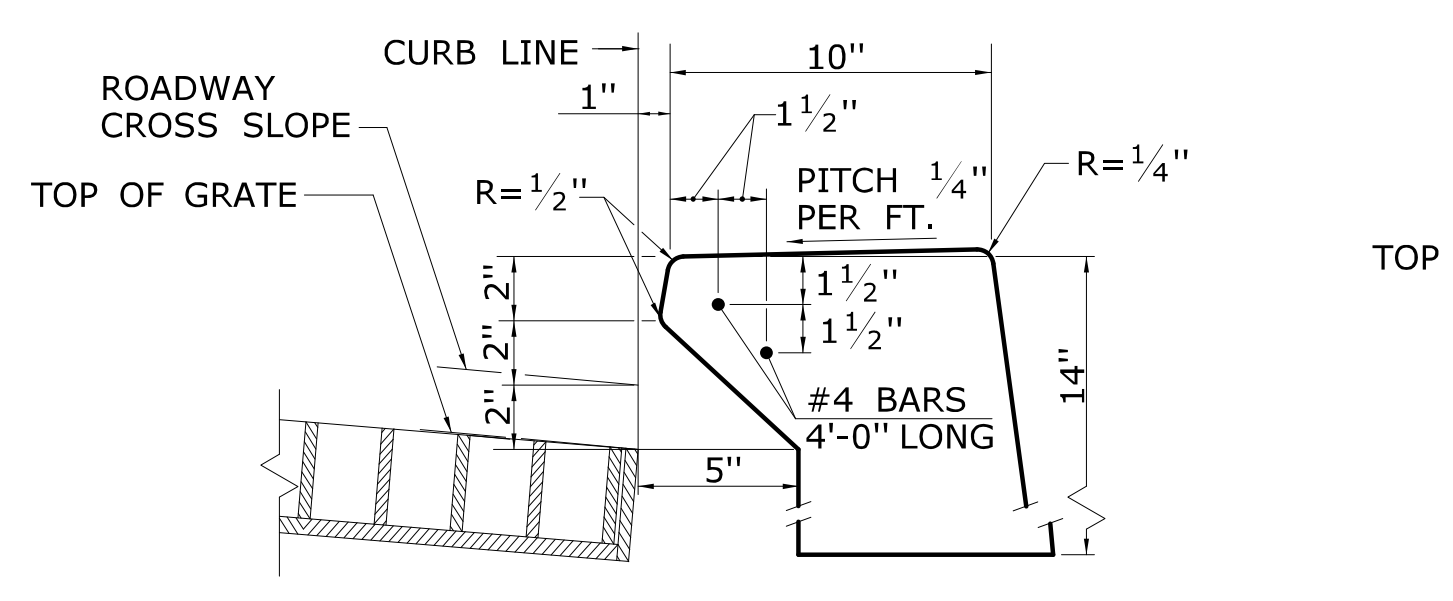
**SECTION F  
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



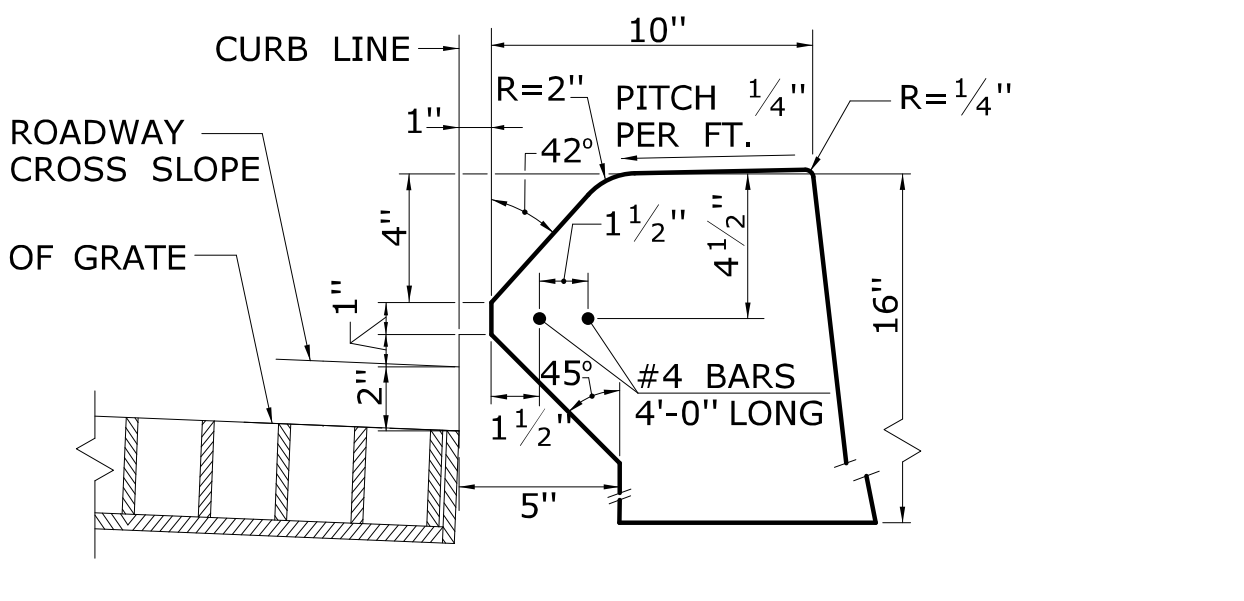
**DETAIL "3"**



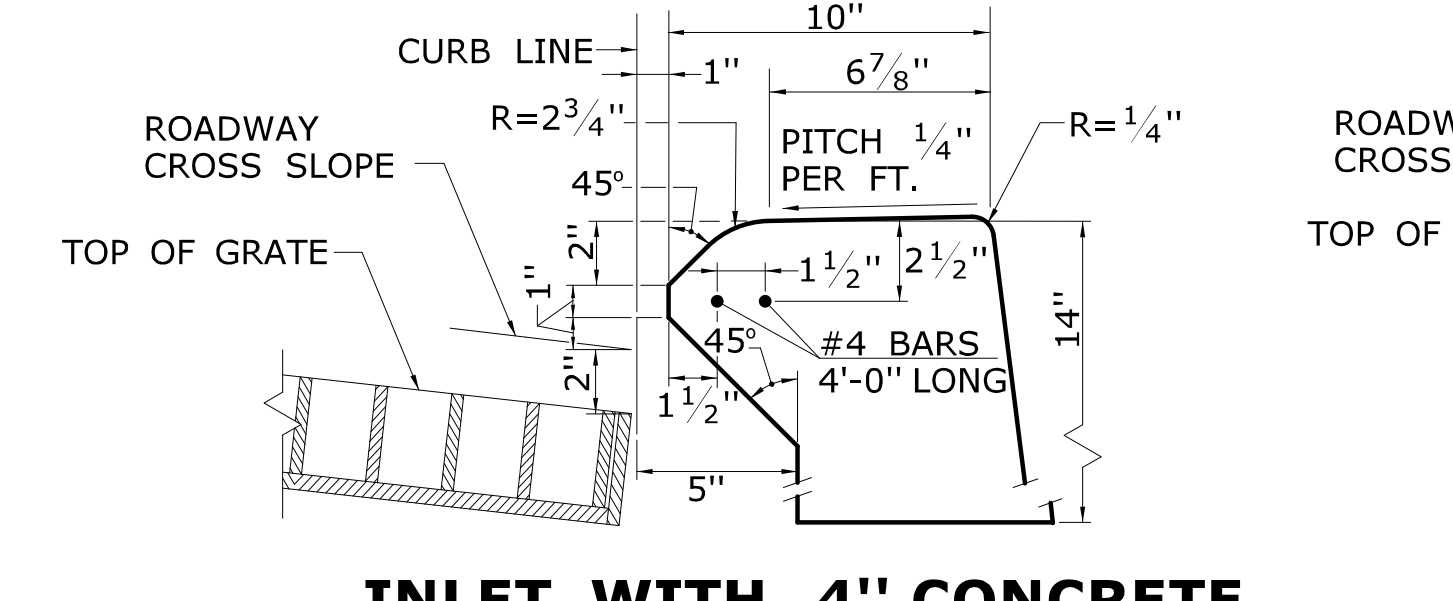
**INLET WITH 6" CONCRETE OR STONE CURBING FOR TYPE "C" CB**



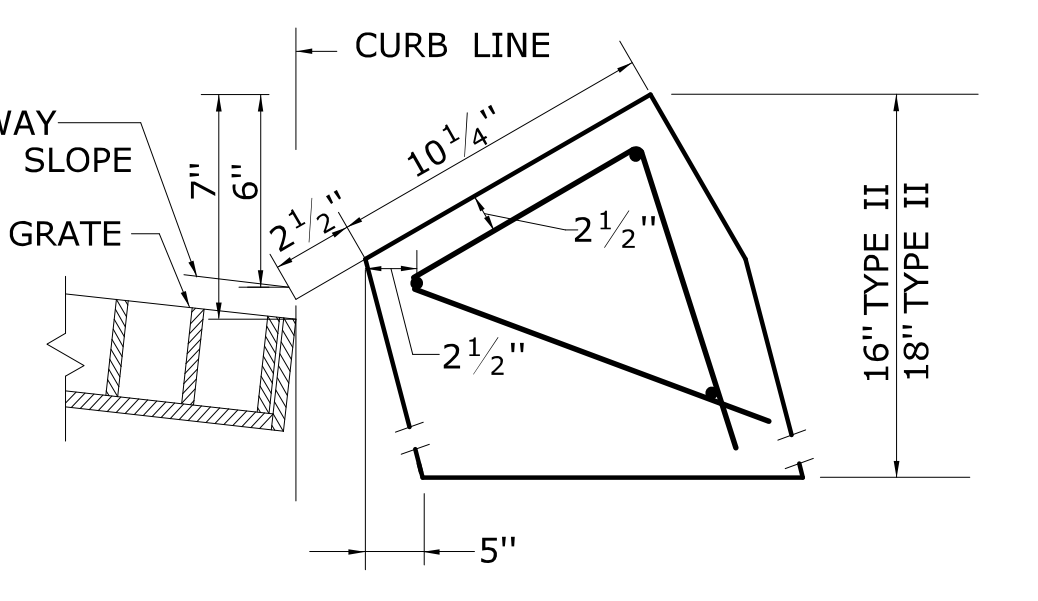
**INLET WITH NO CURBING (PLAIN TYPE) FOR TYPE "C" CB**



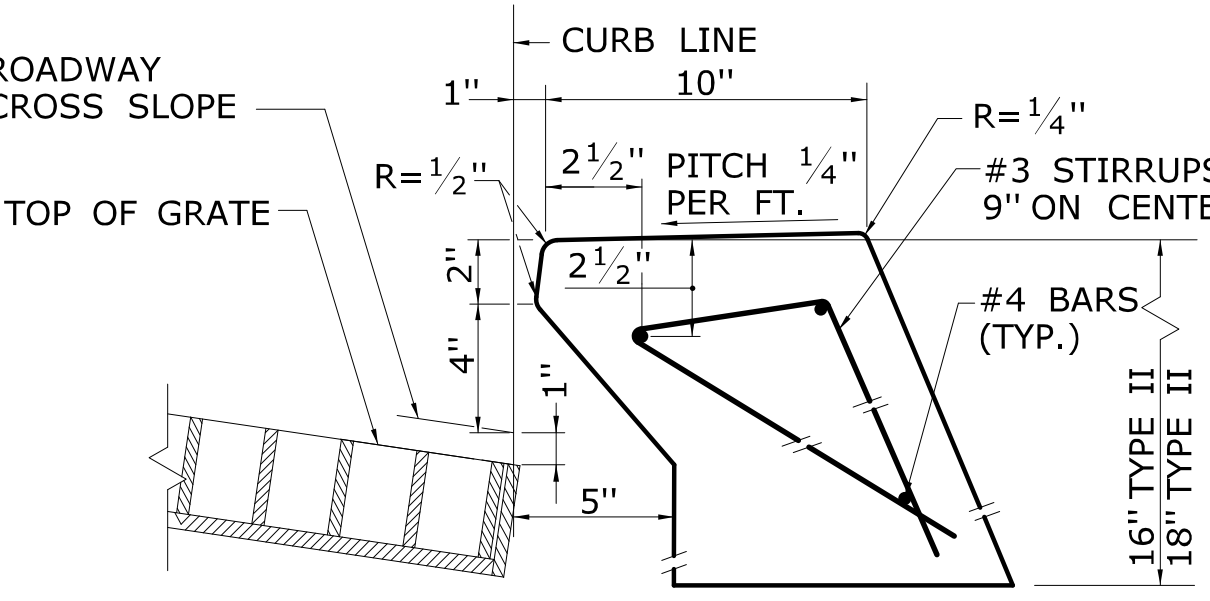
**INLET WITH 6" BITUMINOUS CONCRETE LIP CURBING FOR TYPE "C" CB**



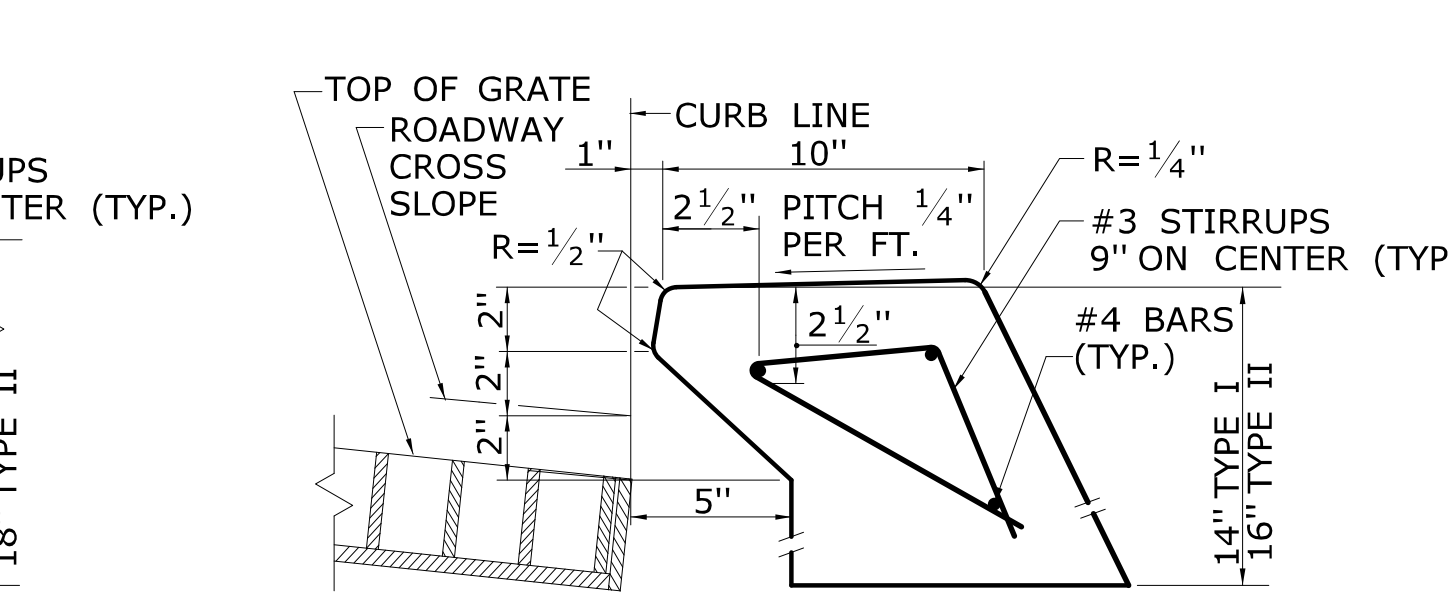
**INLET WITH 4" CONCRETE PARK CURBING FOR TYPE "C" CB**



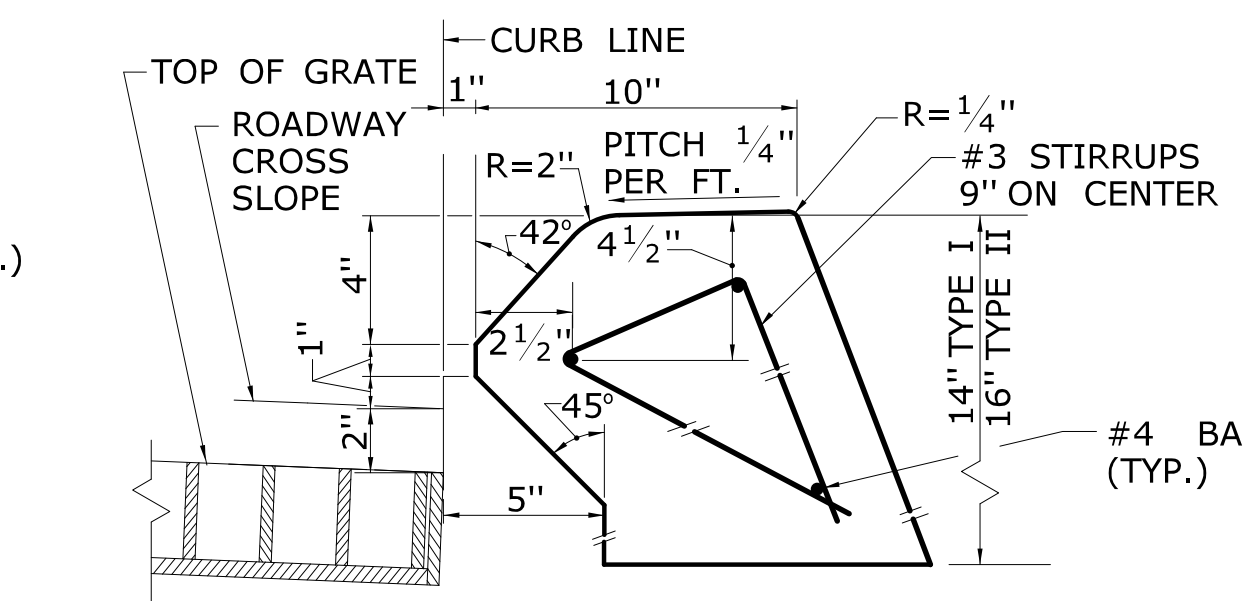
**INLET WITH GRANITE SLOPE CURB FOR TYPE "C" CB**



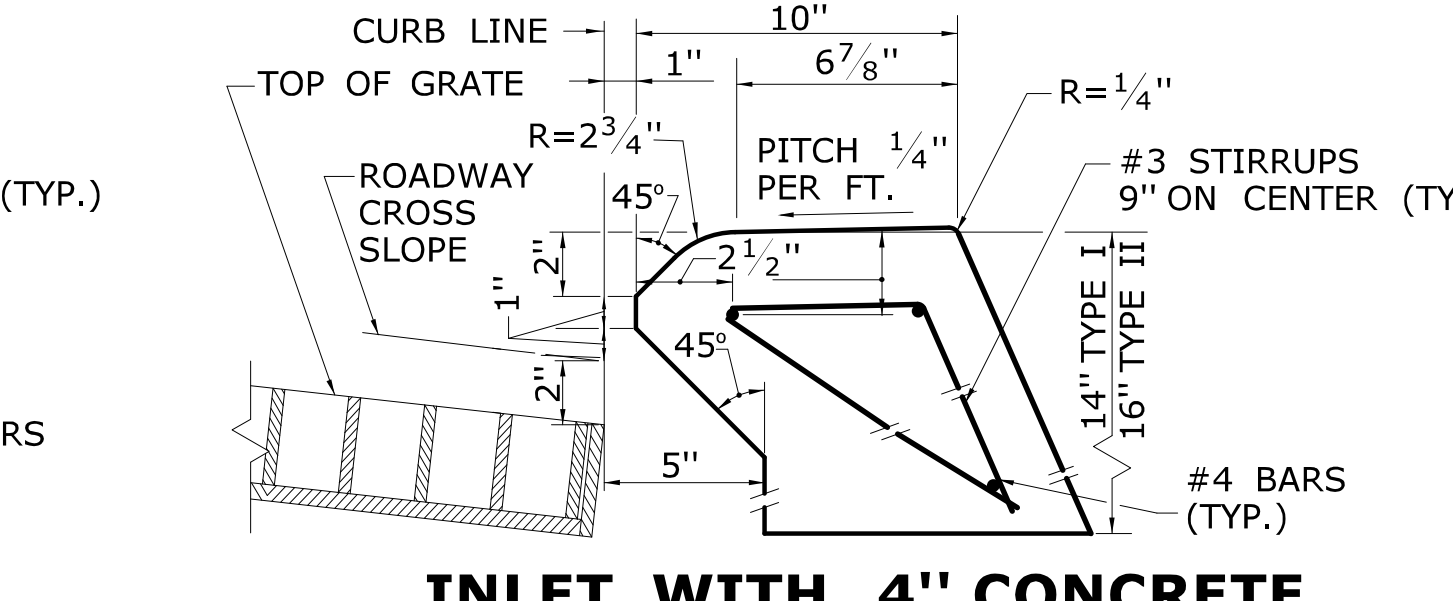
**INLET WITH 6" CONCRETE OR STONE CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II**



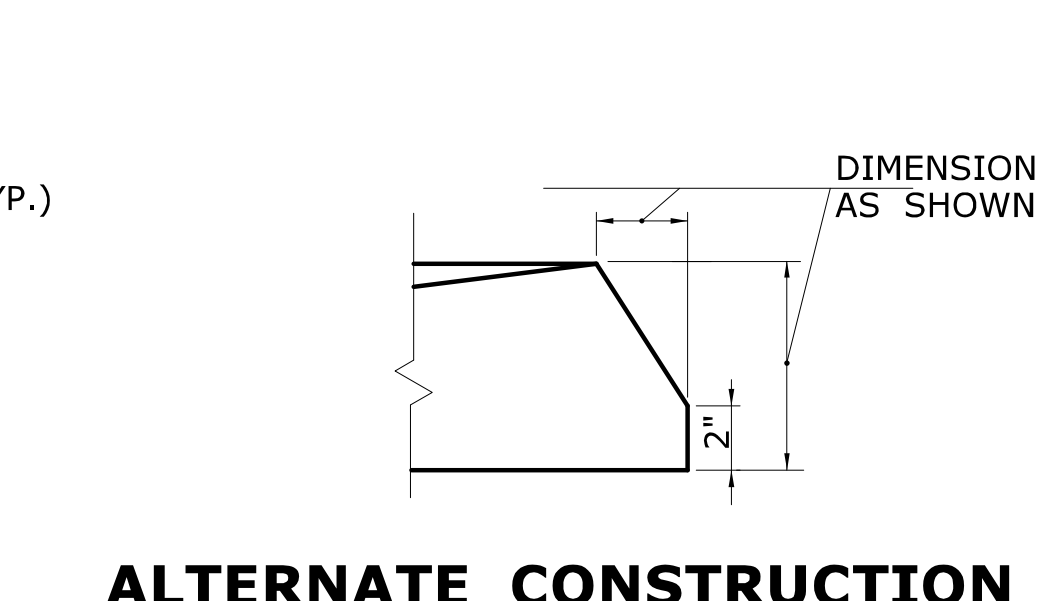
**INLET WITH NO CURBING (PLAIN TYPE) FOR TYPE "C" CB DOUBLE GRATE TYPE I & II**



**INLET WITH 6" BITUMINOUS CONCRETE LIP CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II**

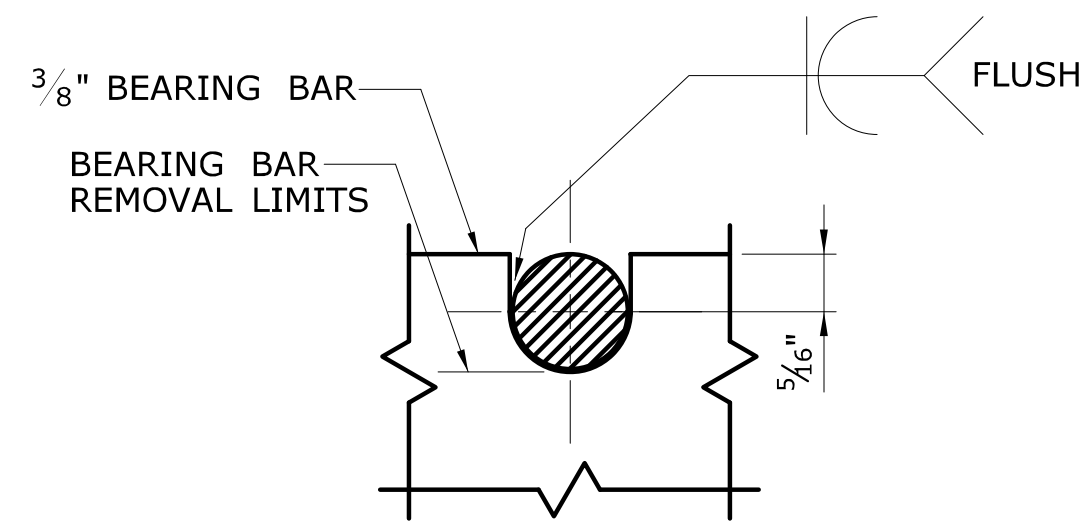


**INLET WITH 4" CONCRETE PARK CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II**



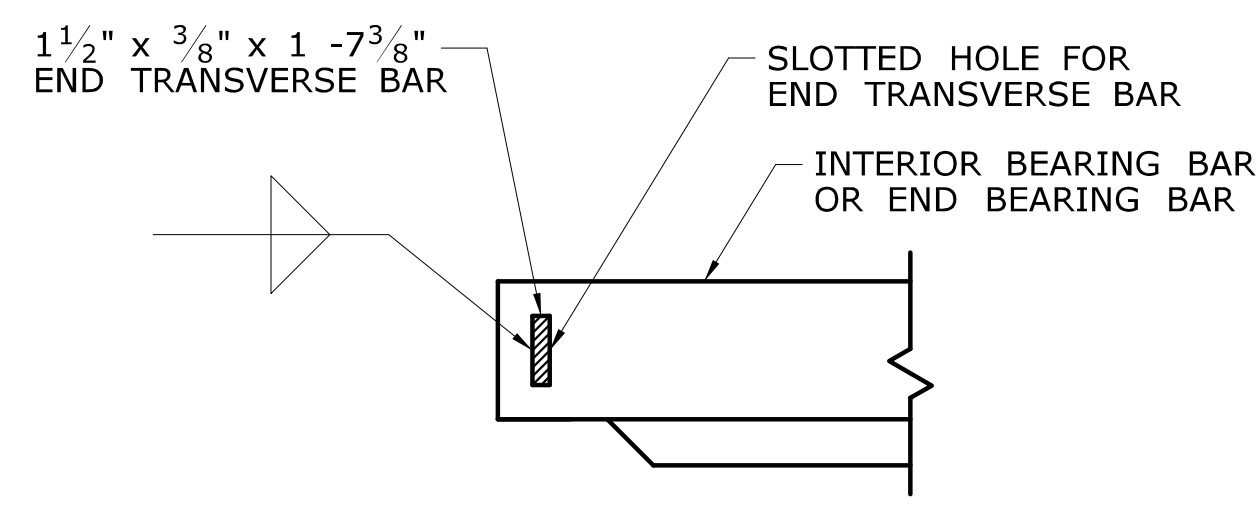
**ALTERNATE CONSTRUCTION OF TYPE II TOP**

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REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/30/2017	Filename: ...CTDOT_Highway_GD (11-21-17).dgn	<b>CATCH BASIN TOPS TYPE "C" &amp; "C-L"</b>		DRAWING NO. <b>DGS-07</b> SHEET NO.

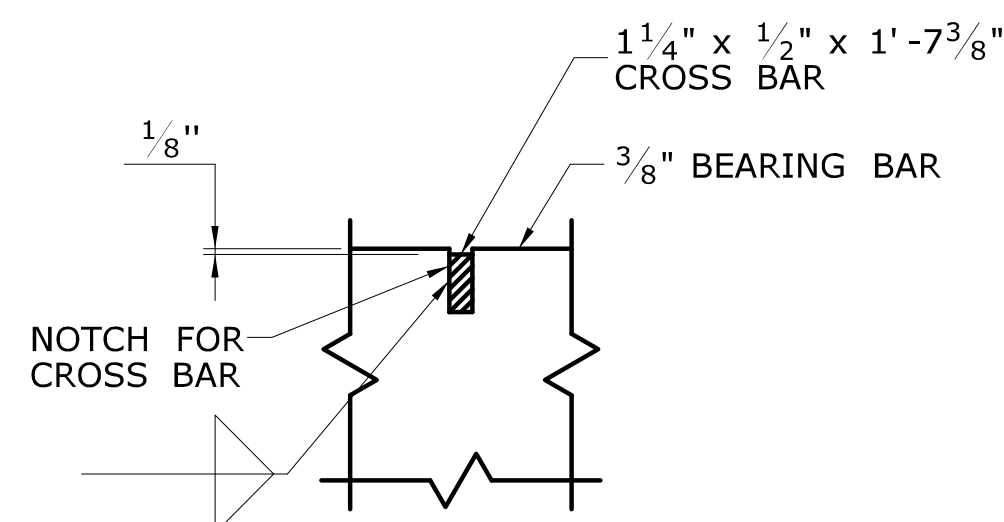


NOTE:  
5/16" DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

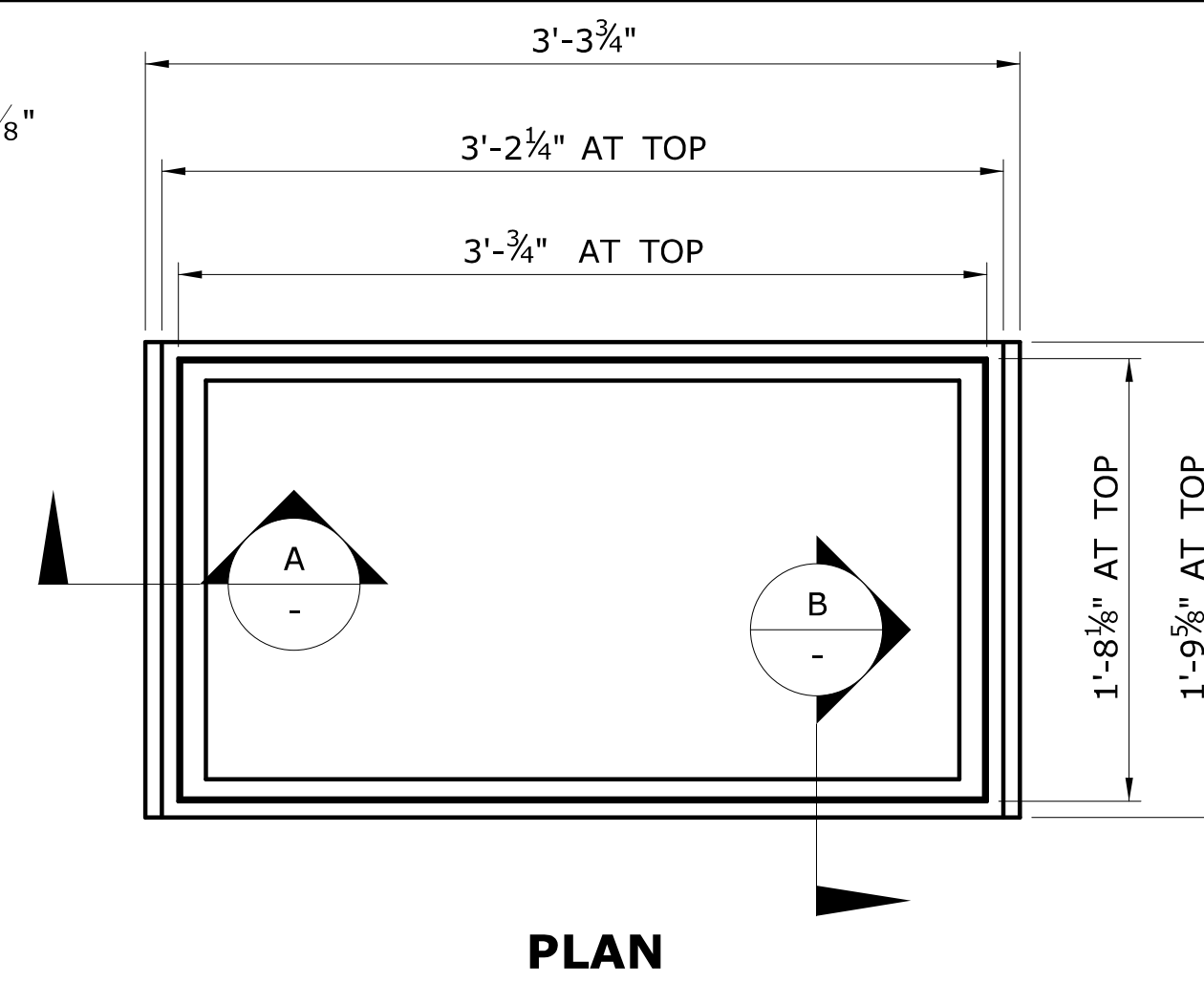
**ROUND BAR ATTACHMENT  
CATCH BASIN GRATE TYPE A**



**END TRANSVERSE BAR ATTACHMENT  
CATCH BASIN GRATE TYPE A AND B**



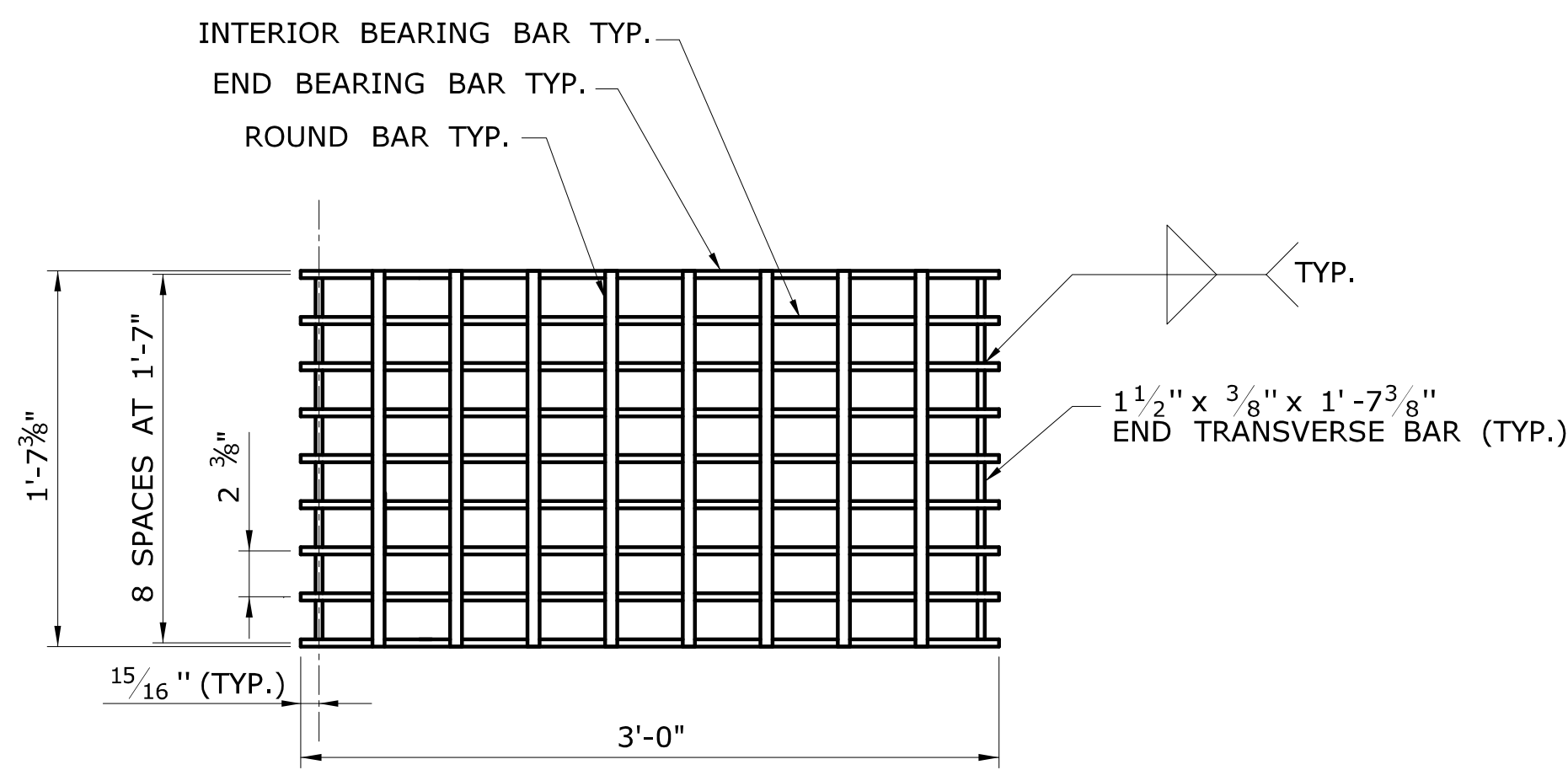
**CROSS BAR ATTACHMENT  
CATCH BASIN GRATE TYPE B**



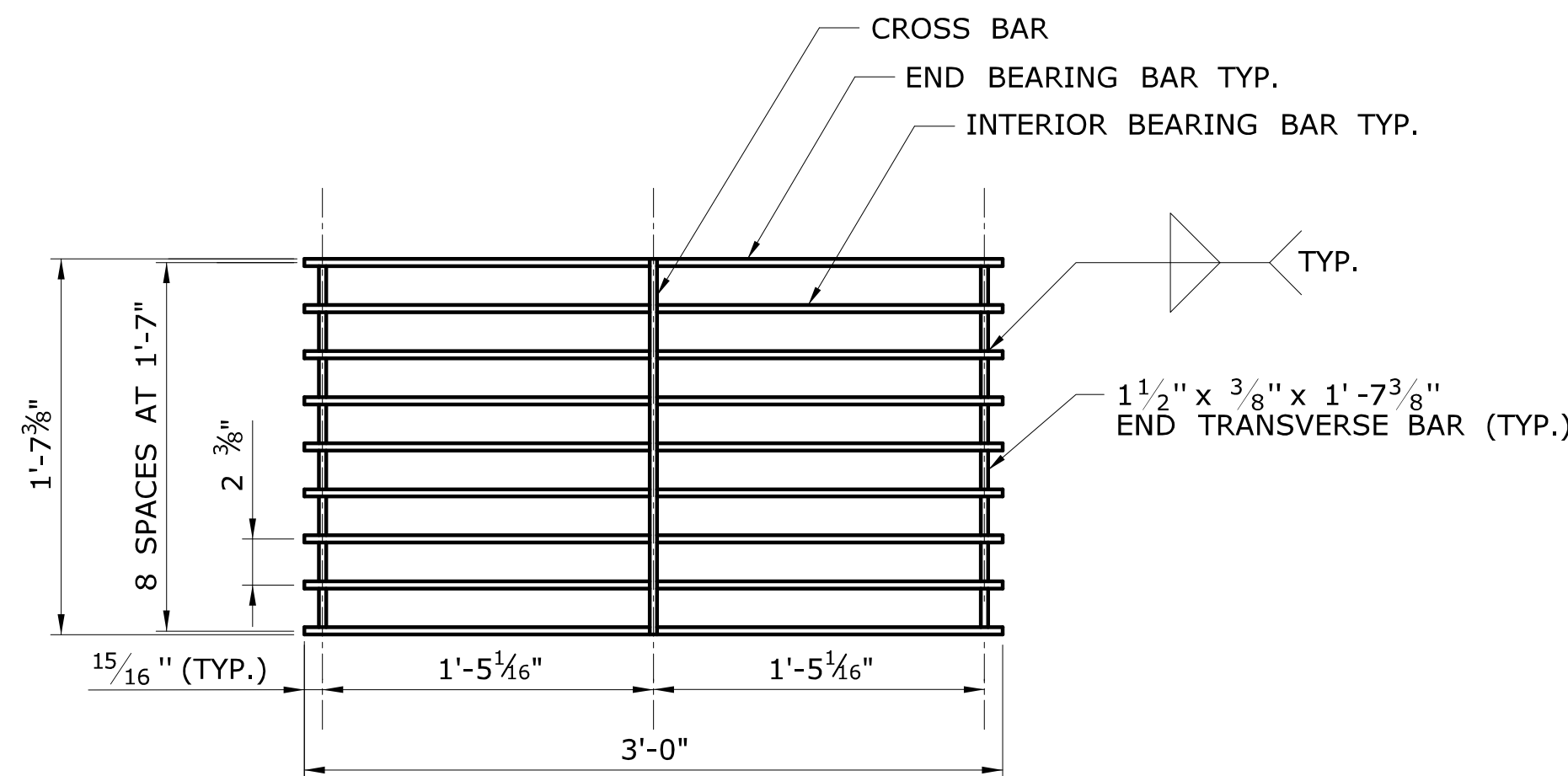
**PLAN**

**GENERAL NOTES:**

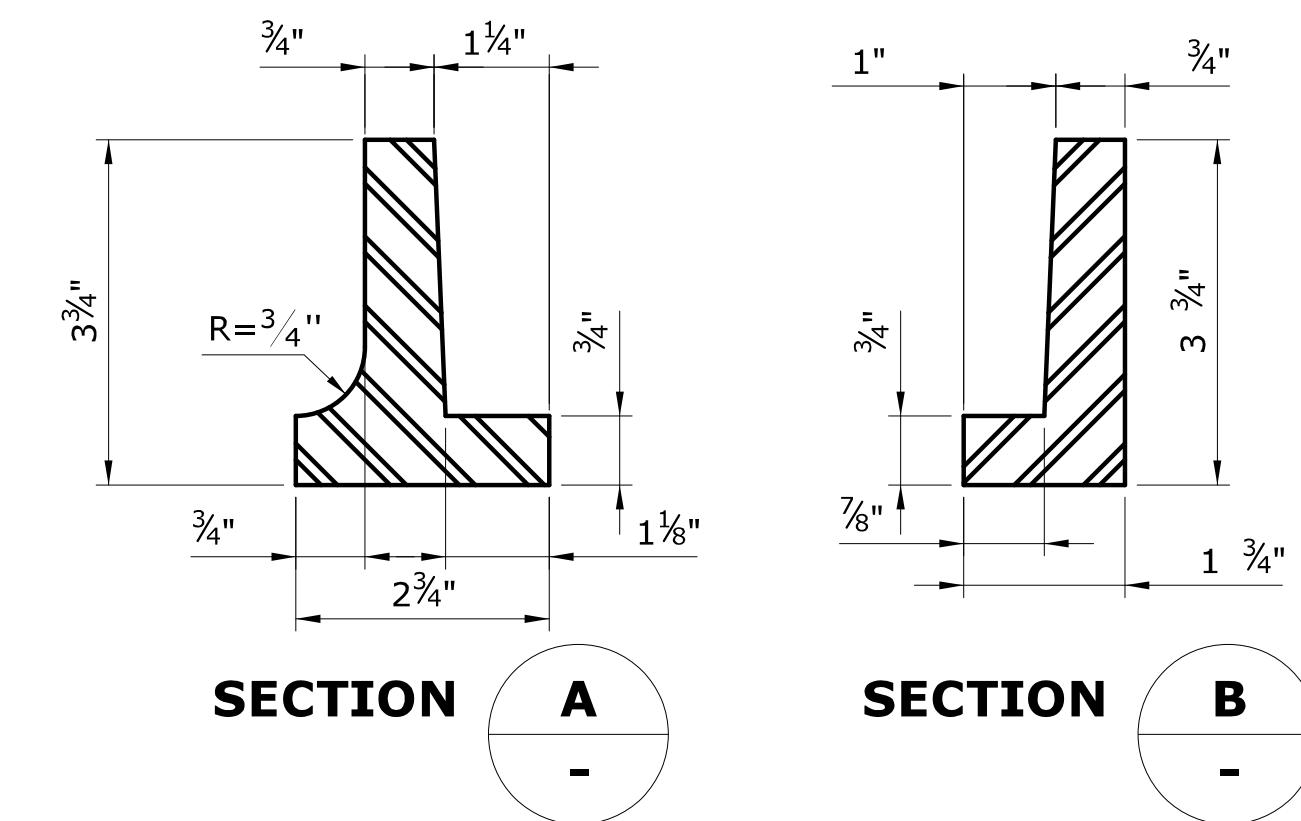
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" AND "B" GRATES.
2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR ON HEAVY DUTY LOCK DOWN TOPS AS DIRECTED BY THE ENGINEER.
3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS, RAMPS AND WHERE BICYCLE TRAFFIC IS NOT ALLOWED OR AS DIRECTED BY THE ENGINEER.
4. DO NOT GALVANIZE CAST IRON FRAMES.
5. DIMENSIONAL TOLERANCES SHALL BE  $\pm 1/16$  INCH.
6. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS.



**PLAN**



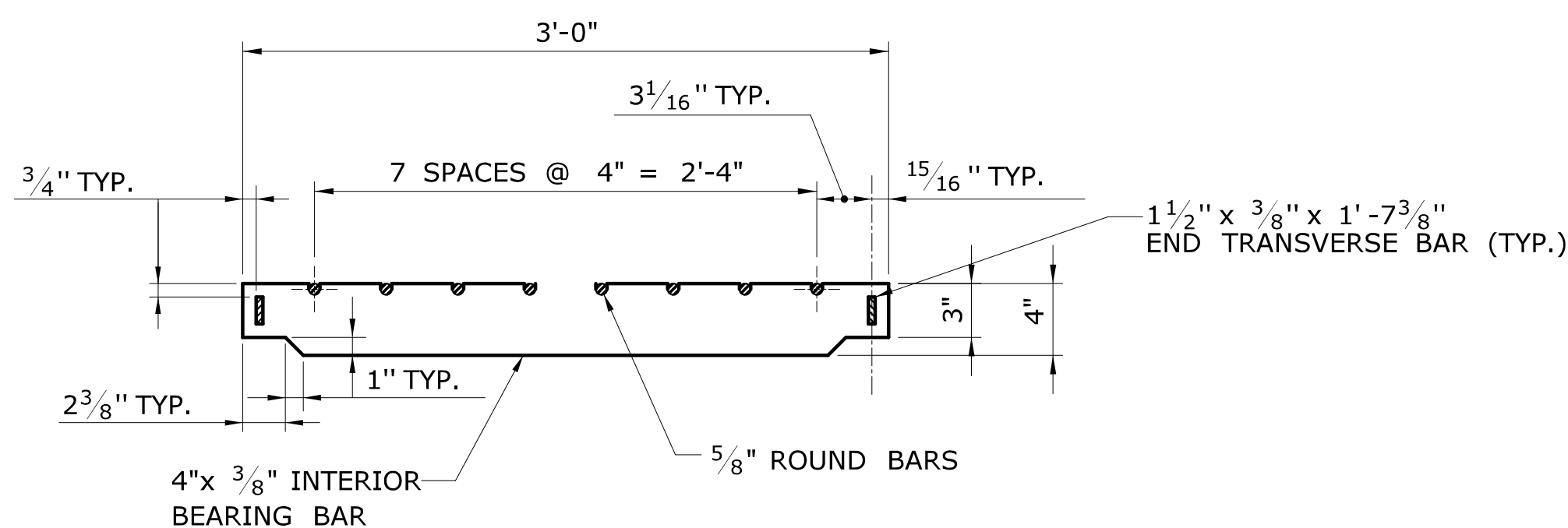
**PLAN**



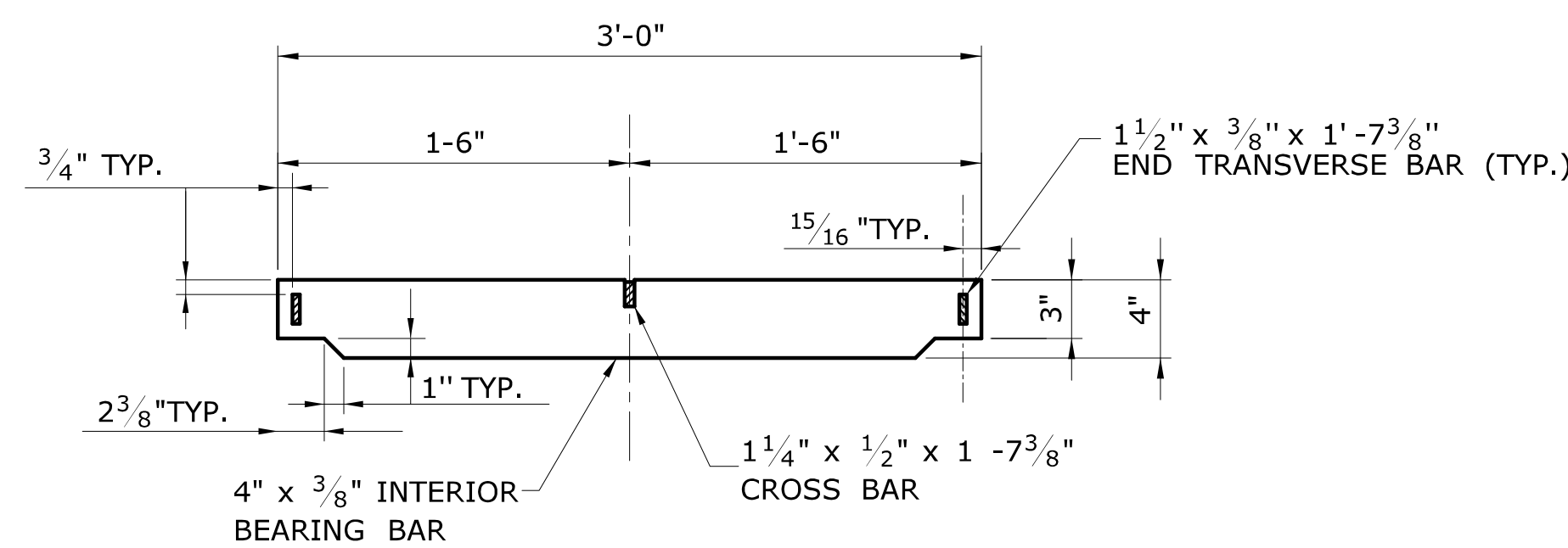
**SECTION A**

**SECTION B**

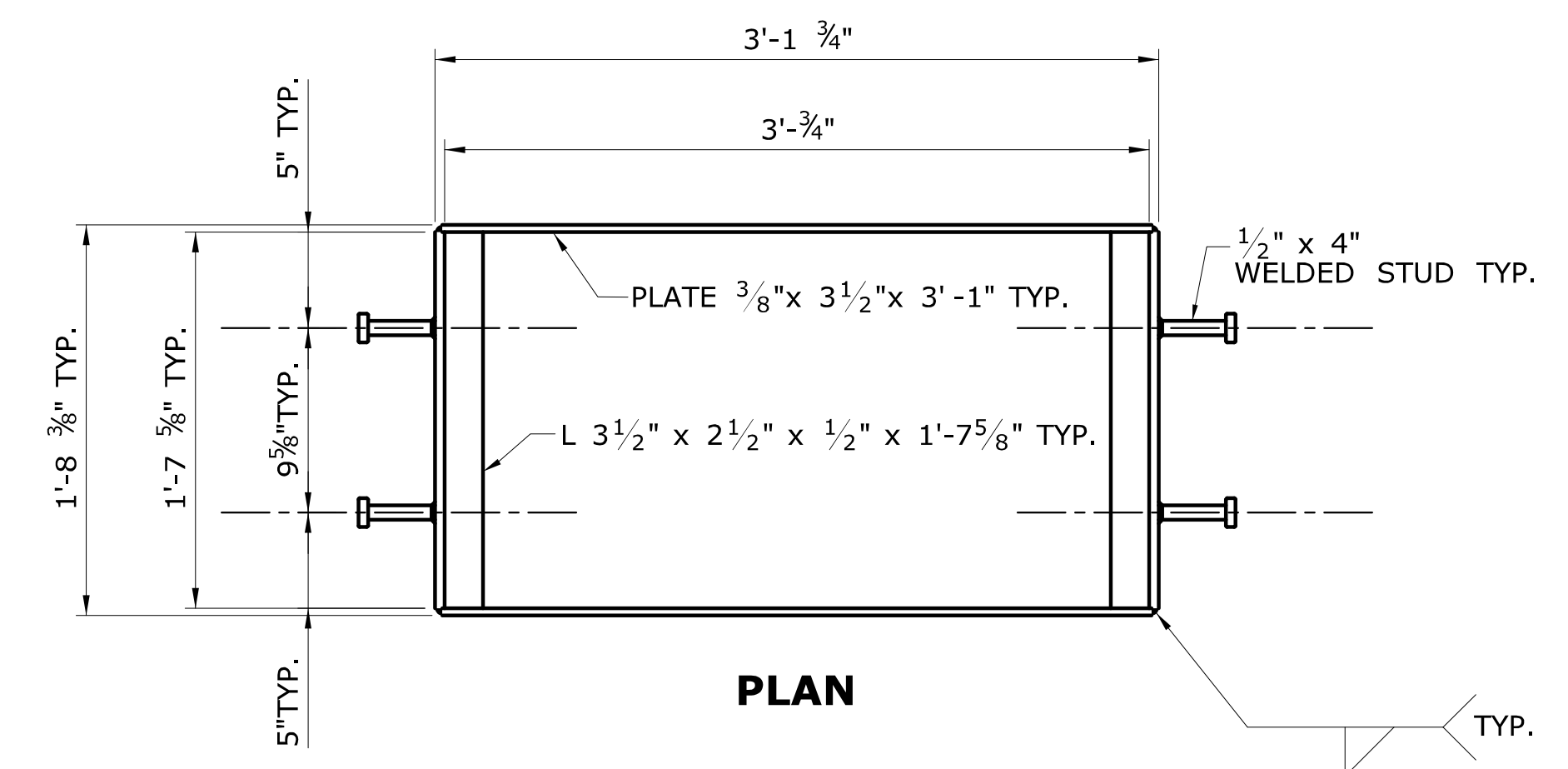
**CAST IRON FRAME ALTERNATE**



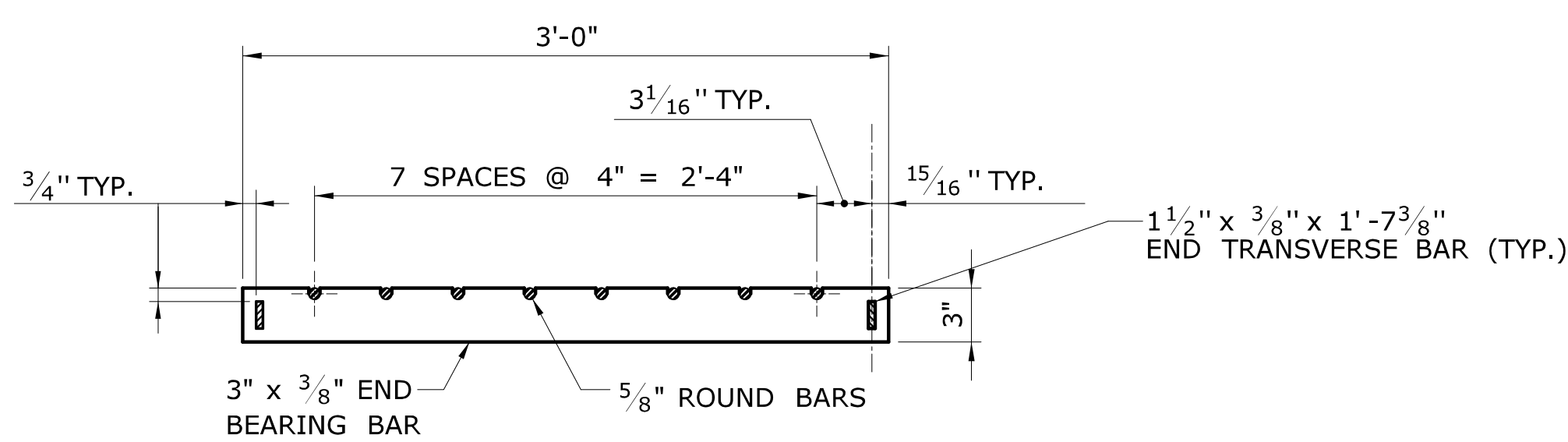
**ELEVATION- INTERIOR BEARING BAR**



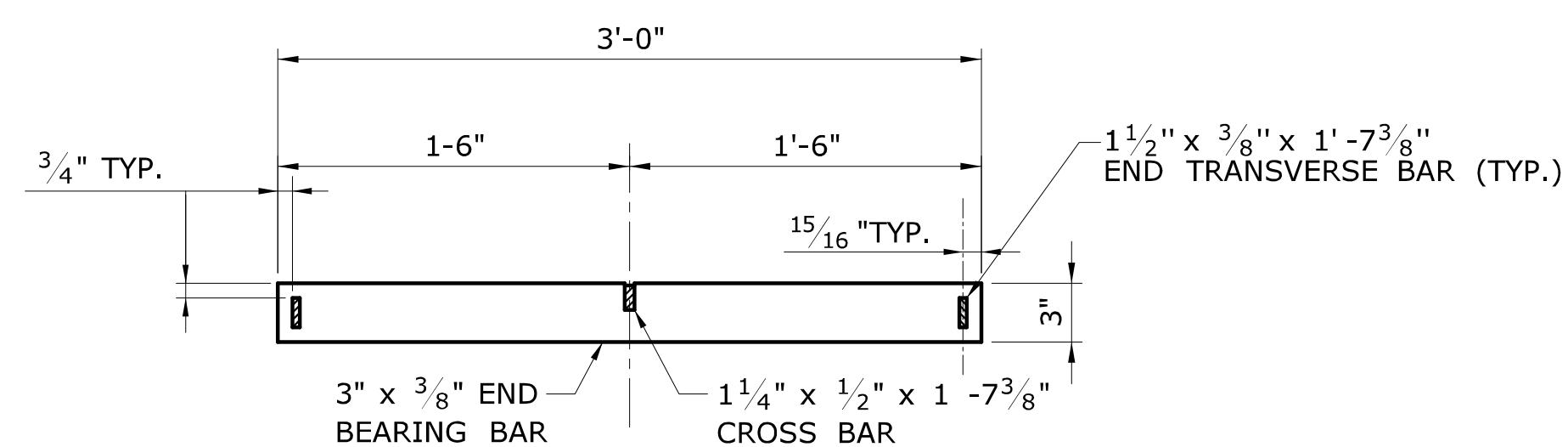
**ELEVATION- INTERIOR BEARING BAR**



**PLAN**



**ELEVATION- END BEARING BAR  
CATCH BASIN GRATE TYPE A**



**ELEVATION- END BEARING BAR  
CATCH BASIN GRATE TYPE B**

**WELDED STUD ANCHOR DETAILS  
STEEL FRAME**

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REV. DATE REVISION DESCRIPTION SHEET NO. Plotted Date: 11/30/2017	Filename: ...CTDOT_Highway_GD (11-21-17).dgn				<b>CATCH BASIN FRAMES AND GRATES</b>			

\*ONLY STANDARD SHEETS MARKED WITH AN "✓" ARE IN THIS PROJECT #

\*\*REVISED OR ADDED

✓*	SHEET NO.	TITLE	APPROVAL DATE**
<input type="checkbox"/>	HW-506_01	ENDWALLS, SLOPE PAVED INLETS AND OUTLETS	1-26-12
<input type="checkbox"/>	HW-506_02	TYPE "D-G" & "L" ENDWALLS	7-13-12
<input type="checkbox"/>	HW-506_03	ENDWALLS FOR PIPE ARCH	9-18-09
<input type="checkbox"/>	HW-507_01	TYPE "C", "C-L" & DROP INLET CATCH BASIN	7-24-13
<input type="checkbox"/>	HW-507_02	TYPE "C", "C-L" & DOUBLE GRATE TYPE - I	7-24-13
<input type="checkbox"/>	HW-507_03	TYPE "C", "C-L" & DOUBLE GRATE TYPE - II	7-24-13
<input type="checkbox"/>	HW-507_04	TYPE "C", "C-L" & ROUND PRECAST CONCRETE CB	11-10-11
<input type="checkbox"/>	HW-507_05	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - I	11-10-11
<input type="checkbox"/>	HW-507_06	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - II	11-10-11
<input type="checkbox"/>	HW-507_07	TYPE "C" & "C-L" CATCH BASIN TOPS AND CURBS	11-10-11
<input type="checkbox"/>	HW-507_08	CATCH BASIN FRAMES AND GRATES	9-18-09
<input type="checkbox"/>	HW-507_09	HEAVY DUTY LOCK DOWN TOPS	7-12-12
<input type="checkbox"/>	HW-507_10	MANHOLE - FRAME & COVER	7-24-13
<input type="checkbox"/>	HW-651_01	C.C.M. PIPE INSTALLATIONS IN FILL & ROCK SLOPES & PIPE TRENCH DETAIL	7-24-13
<input type="checkbox"/>	HW-651_02	SLOTTED DRAIN PIPE 12"- 15"-18"-24"-30" (305-381-457-610-762)	7-12-12
<input type="checkbox"/>	HW-652_01	PIPE ENDS	7-24-13
<input type="checkbox"/>	HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS	7-12-12
<input type="checkbox"/>	HW-803_01a	PAVED APRONS	6-07-17
<input type="checkbox"/>	HW-803_01b	PAVED DITCHES AND PAVED CHANNELS	6-07-17
✓	HW-811_01	CONCRETE CURBING	6-07-17
<input type="checkbox"/>	HW-813_01	GRANITE STONE TRANSITION CURBING	7-24-13
<input type="checkbox"/>	HW-813_02	STONE CURBING	6-07-17
<input type="checkbox"/>	HW-815_01	BITUMINOUS CONCRETE CURBING	6-07-17
<input type="checkbox"/>	HW-821_01a	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
<input type="checkbox"/>	HW-821_01b	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
<input type="checkbox"/>	HW-821_01c	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	1-26-12
<input type="checkbox"/>	HW-821_02a	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1	7-24-13
<input type="checkbox"/>	HW-821_02b	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 2	7-24-13
<input type="checkbox"/>	HW-821_03a	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
<input type="checkbox"/>	HW-821_03b	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
<input type="checkbox"/>	HW-821_03c	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	10-18-10
<input type="checkbox"/>	HW-821_03d	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 4	10-18-10
<input type="checkbox"/>	HW-821_03e	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) F-SHAPE	7-24-13

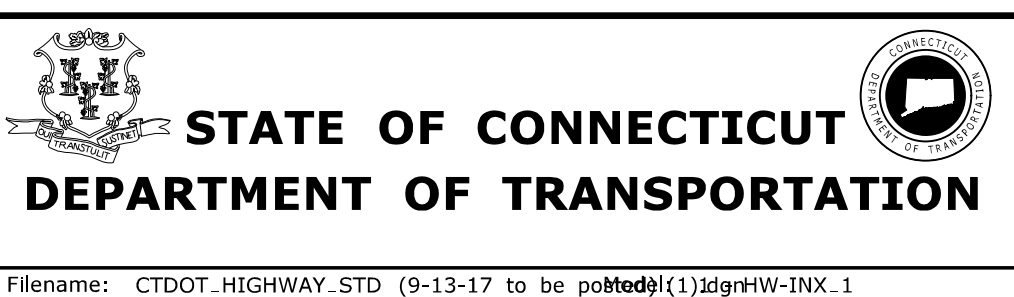
✓*	SHEET NO.	TITLE	APPROVAL DATE**
<input type="checkbox"/>	HW-821_04a	MERRITT PARKWAY NARROW MEDIAN BARRIER	6-09-11
<input type="checkbox"/>	HW-821_04b	MERRITT PARKWAY - 2' (610) WIDE MEDIAN BARRIER AND ROADSIDE BARRIER	7-24-13
<input type="checkbox"/>	HW-821_05a	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 1	1-26-12
<input type="checkbox"/>	HW-821_05b	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 2	1-26-12
<input type="checkbox"/>	HW-821_06	54" (1372) VERTICAL SHAPE BARRIER	2-06-12
<input type="checkbox"/>	HW-821_07	MISCELLANEOUS DETAILS FOR BARRIER TRANSITIONS	7-12-12
✓	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	7-24-13
<input type="checkbox"/>	HW-905_01	STONE WALL, FARM WALL AND WIRE FENCES	6-07-17
<input type="checkbox"/>	HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE	6-09-11
<input type="checkbox"/>	HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL	6-09-11
<input type="checkbox"/>	HW-910_03	METAL BEAM RAIL (TYPE MD-B 350)	6-09-11
<input type="checkbox"/>	HW-910_04	METAL BEAM RAIL (TYPE R-B 350) SYSTEMS 5, 5A, & 6	6-09-11
<input type="checkbox"/>	HW-910_05	METAL BEAM RAIL R-B 350 SPAN TYPE I, II, III SECTIONS	7-24-13
<input type="checkbox"/>	HW-910_06	R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	6-09-11
<input type="checkbox"/>	HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	6-09-11
<input type="checkbox"/>	HW-910_08	R-B 350 BRIDGE ATTACHMENT TRAILING END	6-09-11
<input type="checkbox"/>	HW-910_09a	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 1	1-26-12
<input type="checkbox"/>	HW-910_09b	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 2	7-25-12
<input type="checkbox"/>	HW-910_10	METAL BEAM RAIL 8" (203) X 6" (152) BOX BEAM	7-24-13
<input type="checkbox"/>	HW-910_11	CURVED GUIDERAIL TREATMENT DETAIL	7-25-12
✓	HW-910_12a	MERRITT PARKWAY GUIDERAIL ATTACHMENT - SYSTEM 2 & 3	7-24-13
✓	HW-910_12b	MERRITT PARKWAY GUIDERAIL	7-24-13
<input type="checkbox"/>	HW-910_12c	MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENTS	7-24-13
<input type="checkbox"/>	HW-910_12d	MERRITT PARKWAY MEDIAN GUIDERAIL AND END ANCHOR	6-09-11
<input type="checkbox"/>	HW-910_13a	THRIE-BEAM METAL BEAM RAIL HARDWARE	7-24-13
<input type="checkbox"/>	HW-910_13b	THRIE-BEAM TRANSITIONS	7-24-13
<input type="checkbox"/>	HW-910_14a	THRIE-BEAM 350 BRIDGE ATTACHMENT	6-09-11
<input type="checkbox"/>	HW-910_14b	THRIE-BEAM 350 GUIDERAIL TRANSITION TO R-B 350 GUIDERAIL	6-09-11
<input type="checkbox"/>	HW-910_15	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	6-09-11
<input type="checkbox"/>	HW-910_16	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	6-09-11
<input type="checkbox"/>	HW-910_17	R-B TERMINAL SECTION	7-24-13
<input type="checkbox"/>	HW-910_18	METAL BEAM RAIL (TYPE MD-I)	10-18-10
<input type="checkbox"/>	HW-910_19a	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE I	7-24-13

REV.	DATE	REVISION DESCRIPTION
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 9/20/2017

NOT TO SCALE



CTDOT  
STANDARD SHEET  
OFFICE OF ENGINEERING

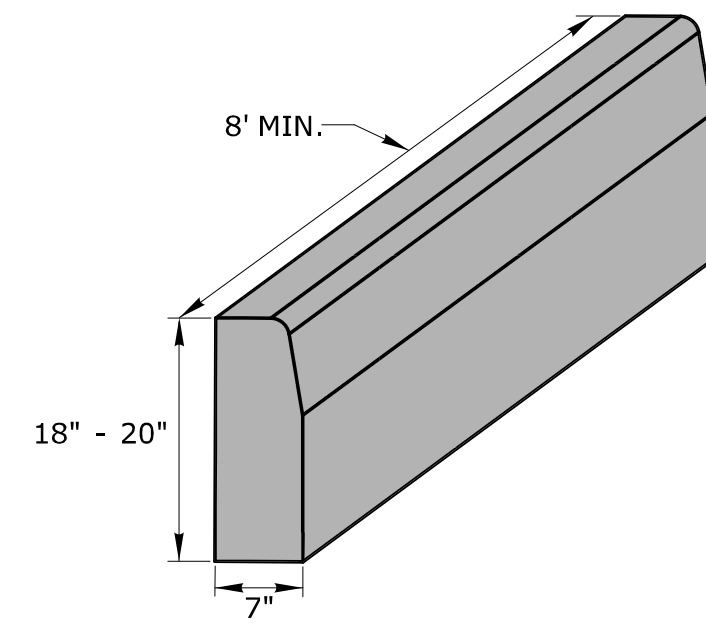
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**HIGHWAY  
STANDARD SHEET INDEX**

STANDARD SHEET NO.:  
**HW\_INX  
1 of 2**

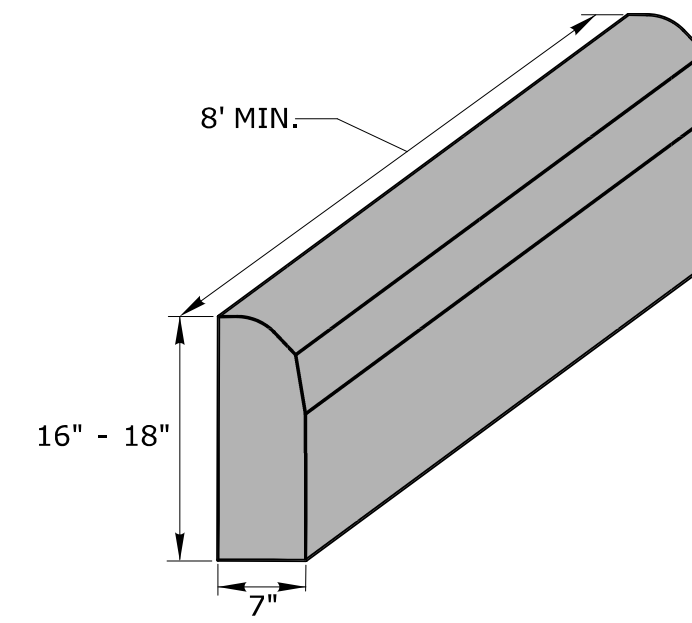


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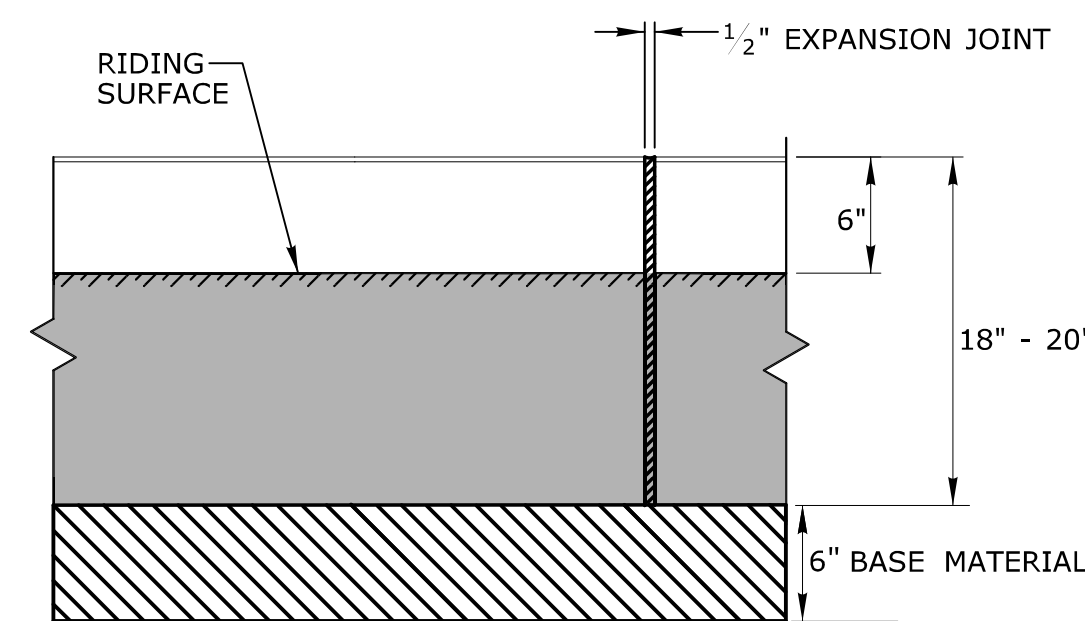
1. PRECAST CONCRETE CURBING MAY BE CAST BY THE MANUFACTURER WITH OPTIONAL LIFTING AND DOWEL BAR HOLES.



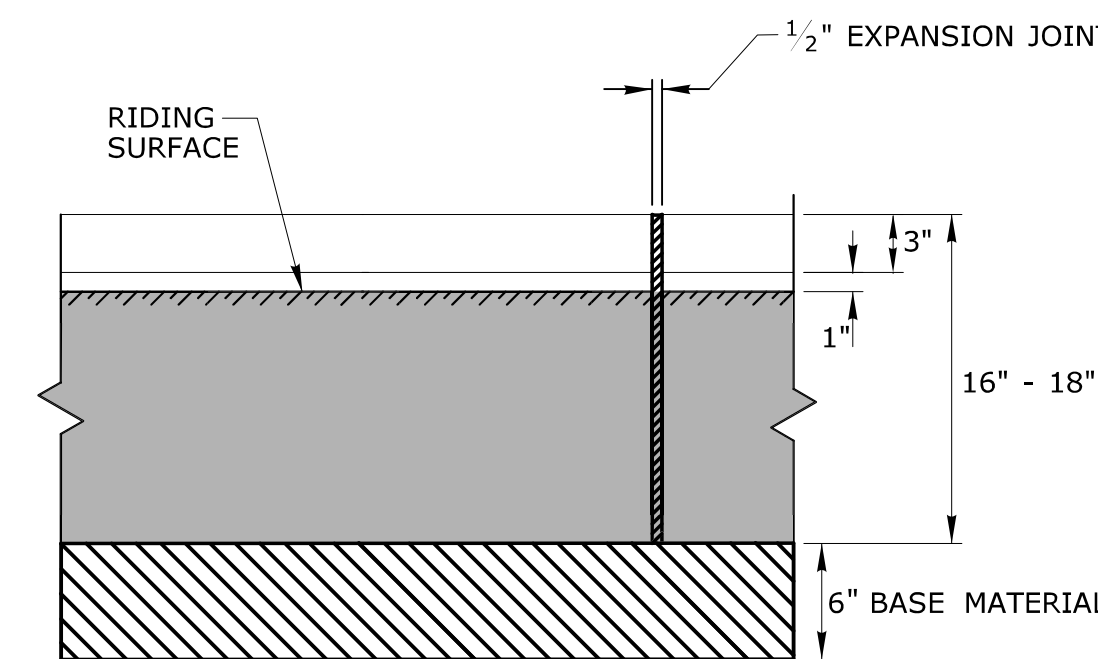
**CONCRETE CURBING (6" REVEAL)**



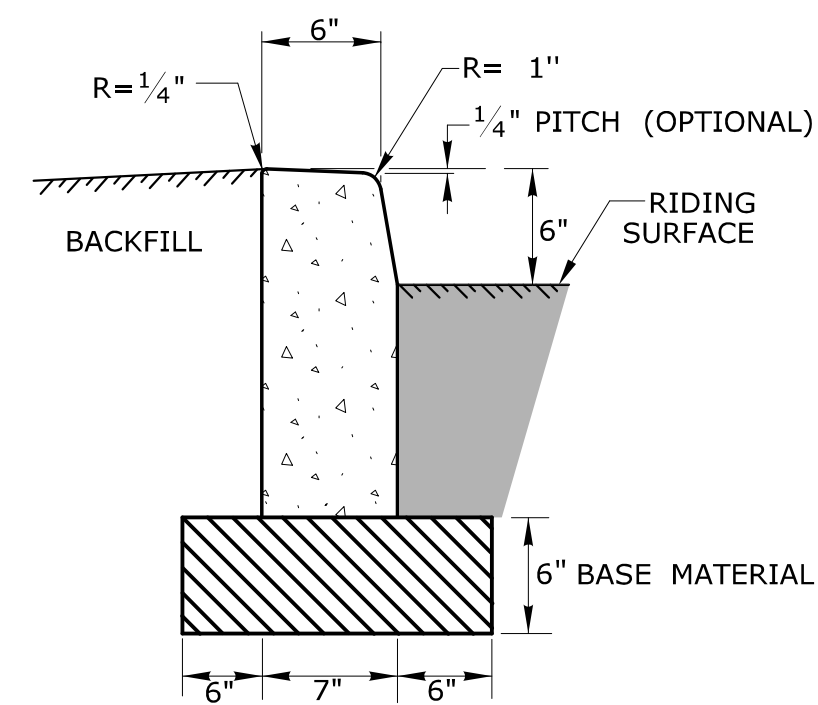
**CONCRETE PARK CURBING (4" REVEAL)**



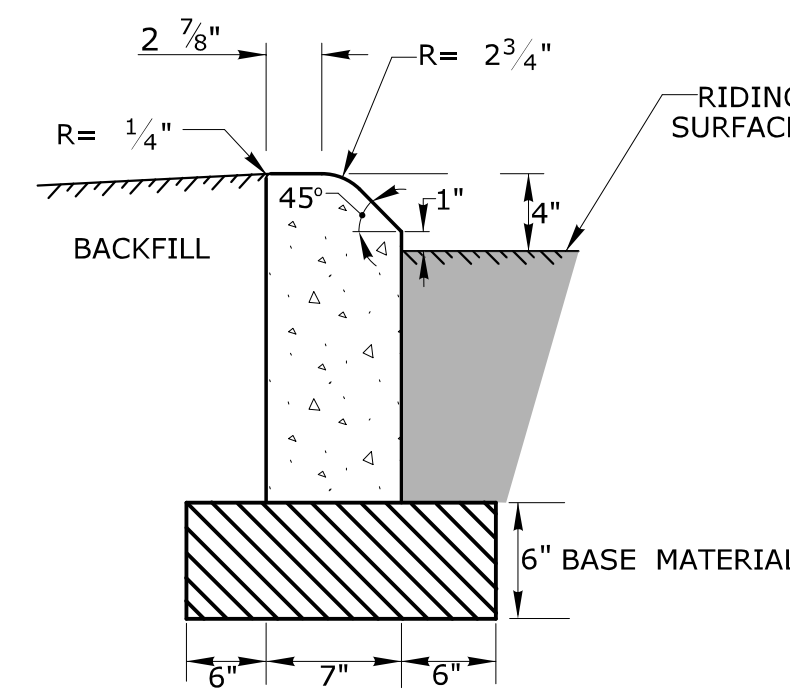
**FRONT ELEVATION**



**FRONT ELEVATION**




**SECTION**



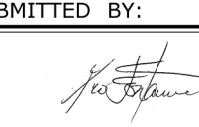
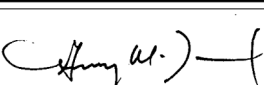
**SECTION**

1	6/01/10	REVISED TITLE FOR 6" CONC. CURB	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.
2	6/17	REMOVED STONE, BITUMINOUS & GRANITE ITEMS	
REV.	DATE	REVISION DESCRIPTION	Plotted Date: 6/6/2017

NOT TO SCALE


**STATE OF CONNECTICUT**  
**DEPARTMENT OF TRANSPORTATION**

Filename: HW-811\_01.dgn Model: CT\_Civil\_2D\_Sheet

SUBMITTED BY:	NAME/DATE/TIME:
	Leo Fontaine, P.E. 2017.06.07 07:33:29-04'00'
APPROVED BY:	NAME/DATE/TIME:
	Gregory M. Dorosh, P.E. 2017.06.07 10:41:26-04'00'

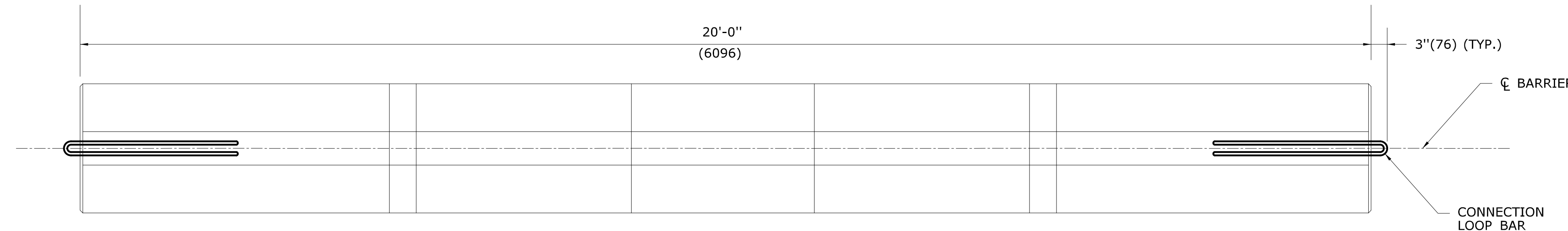
**CTDOT**  
**STANDARD SHEET**  
**OFFICE OF ENGINEERING**

STANDARD SHEET TITLE:	STANDARD SHEET NO.:
<b>CONCRETE CURBING</b>	<b>HW-811_01</b>

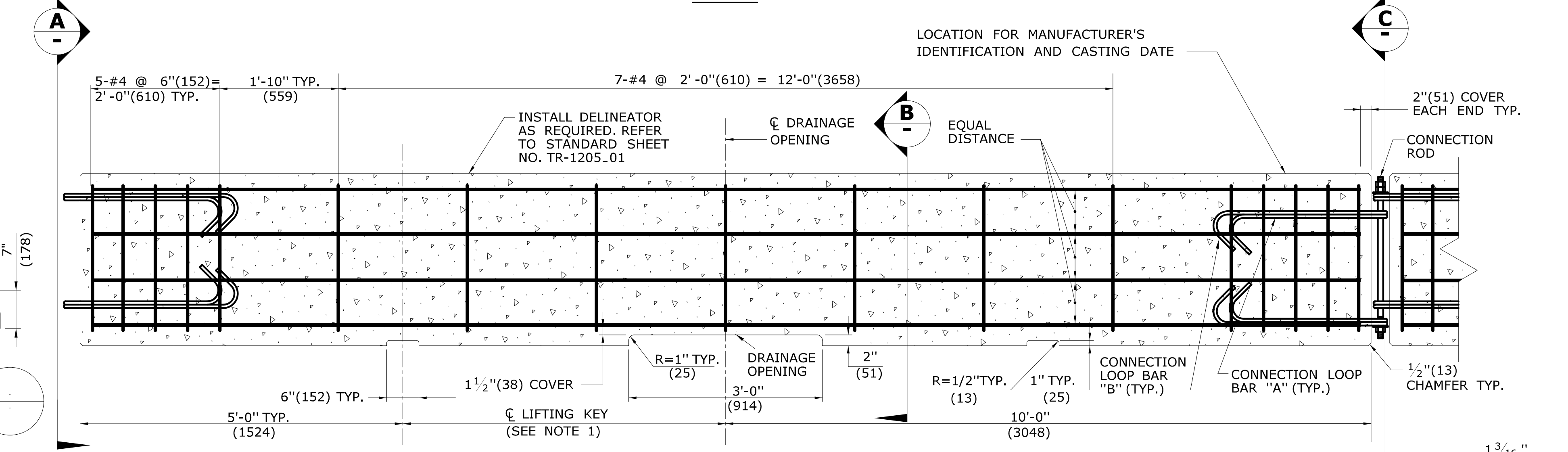


**GENERAL NOTES:**

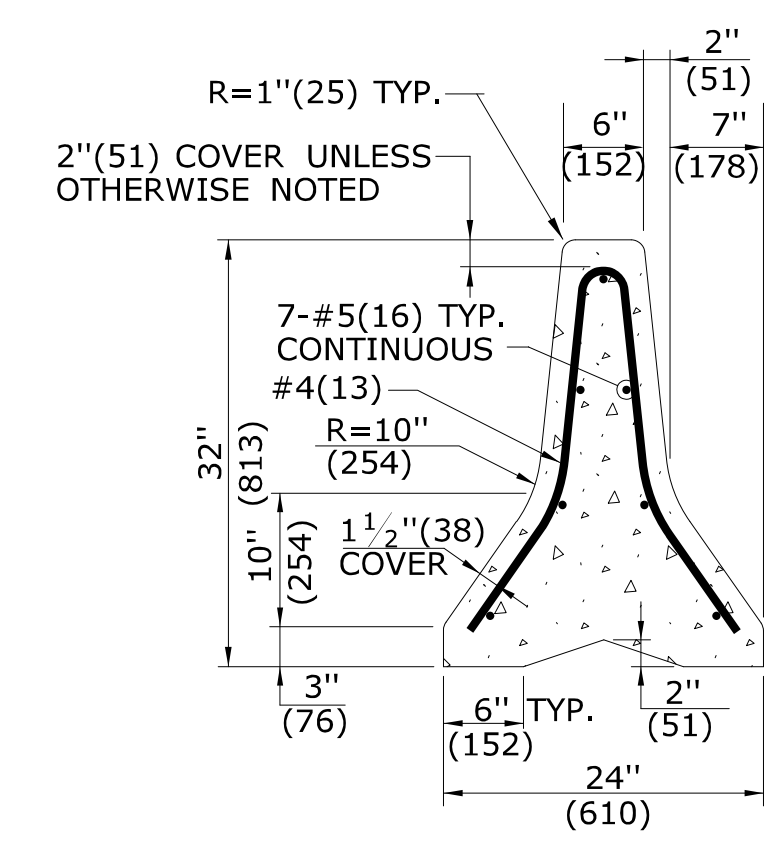
1. ALTERNATE DESIGNS FOR LIFTING KEYS, HOLES OR OTHER HANDLING DEVICES MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. EXPECTED PERMANENT DYNAMIC DEFLECTION IS 3'-6" (1148) BASED ON TL-3 CRASH TESTS WITH 240' (73152) OF TPCBC.



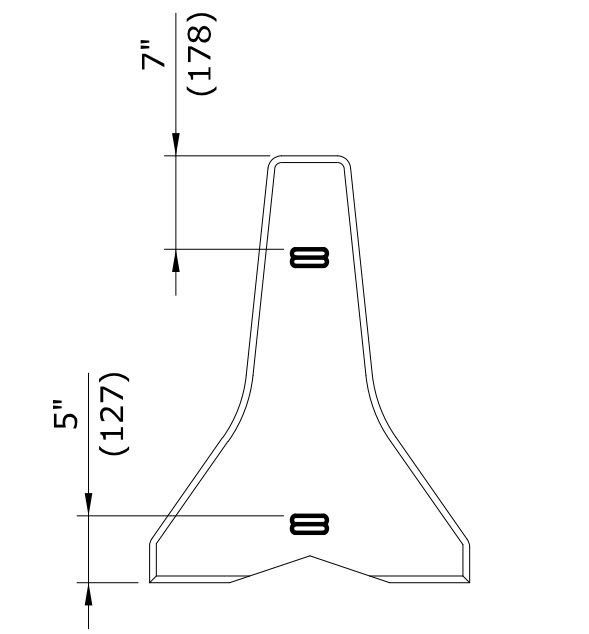
**PLAN**



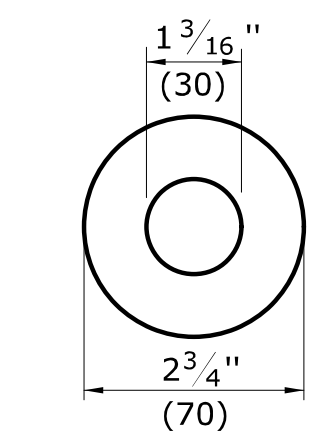
**ELEVATION**



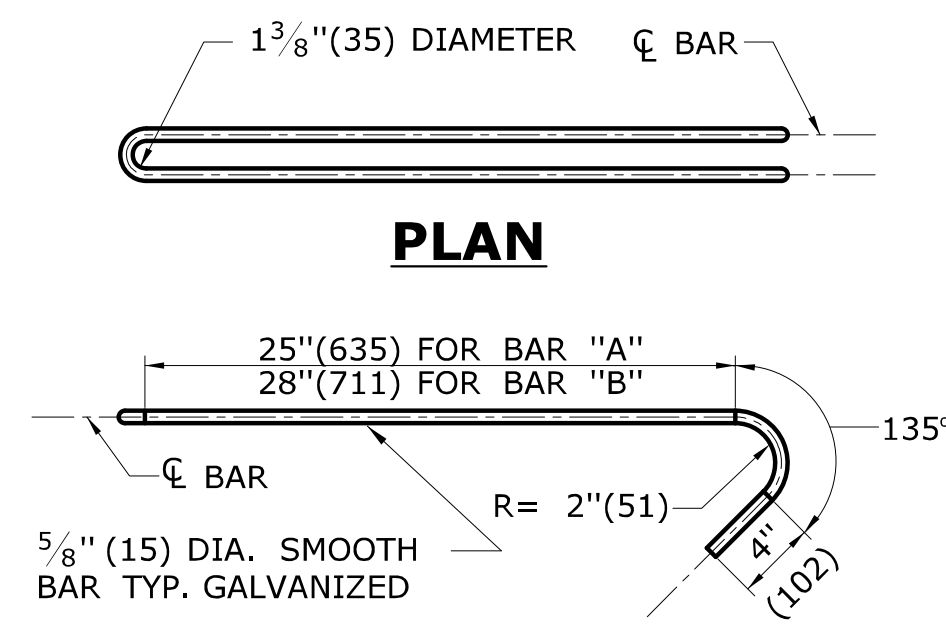
**SECTION B**



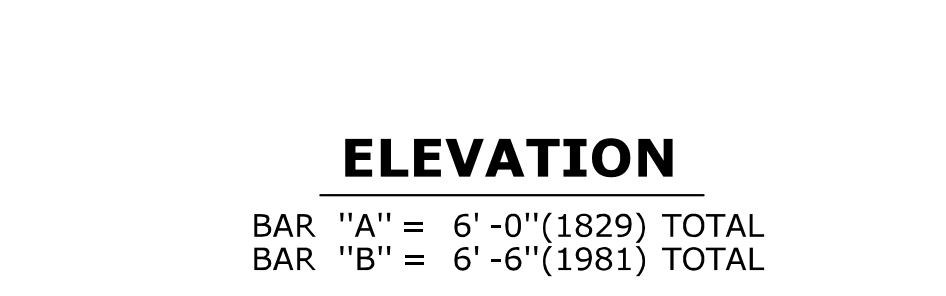
**END VIEW C**



**WASHER DETAIL**

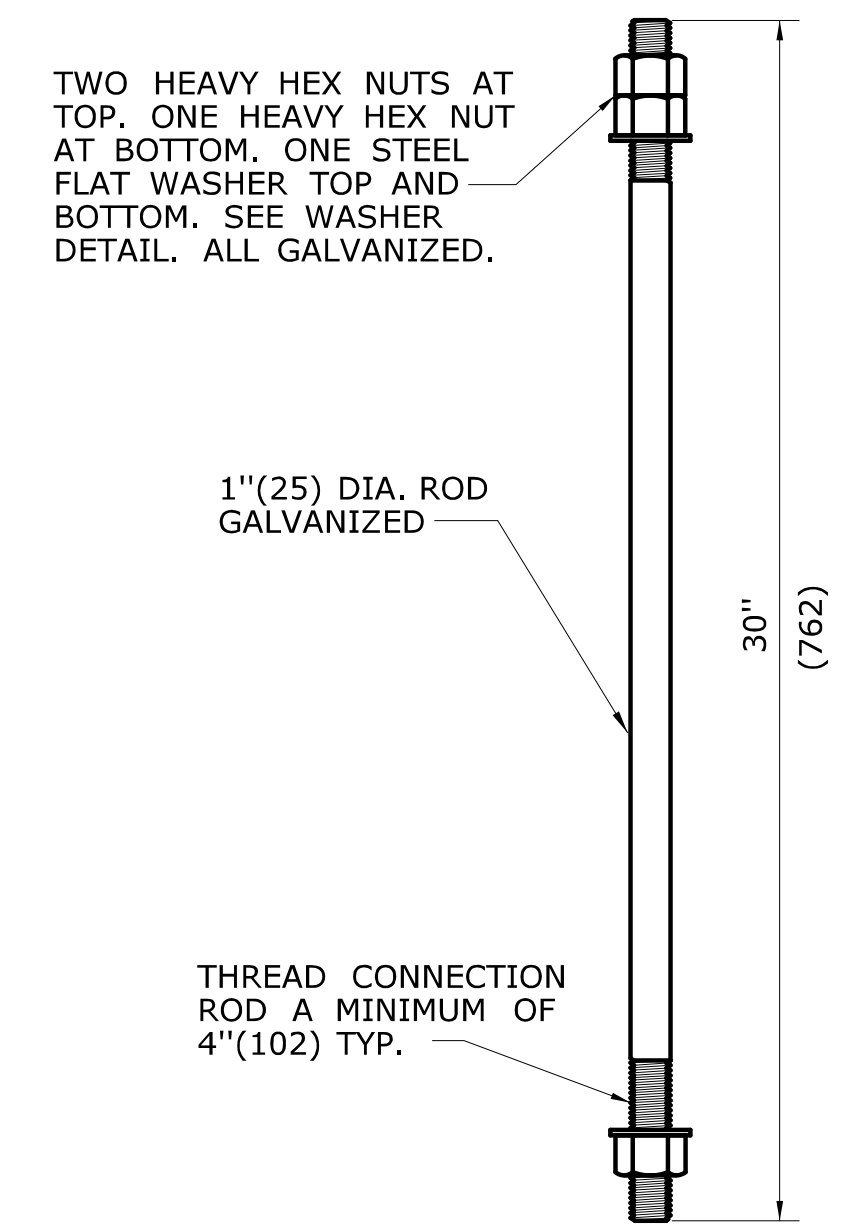


**PLAN**

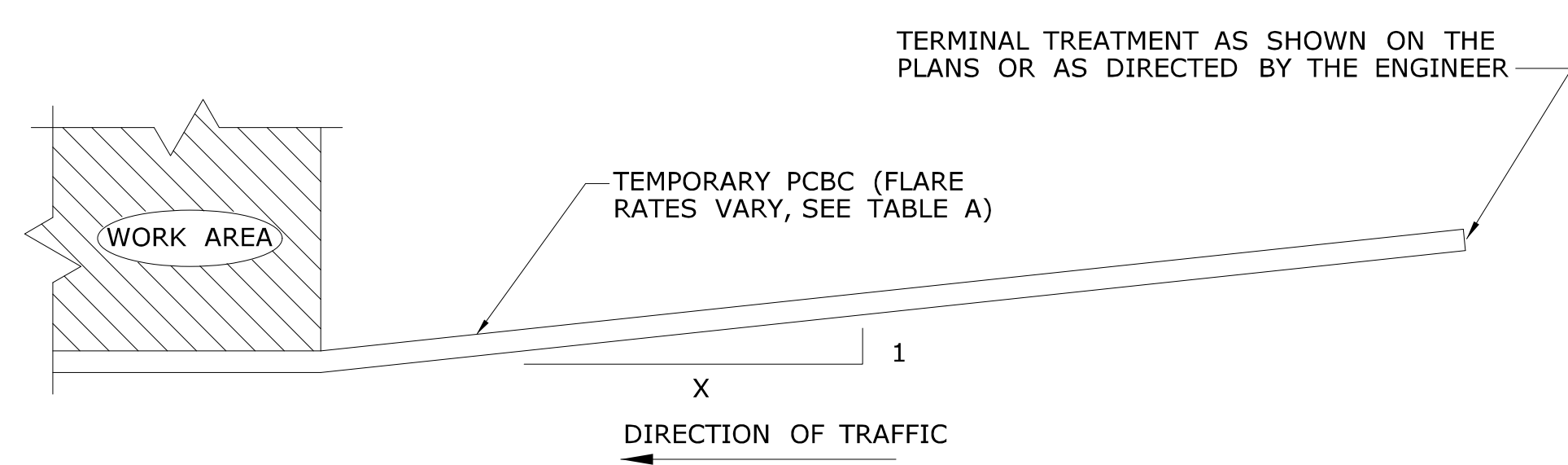


**ELEVATION**

**CONNECTION LOOP BAR**



**CONNECTION ROD**



**PLAN - TYPICAL INSTALLATION**

TABLE A	
FLARE RATES	
* SPEED	FLARE RATE (X : 1)
≤ 30MPH(48KPH)	4 : 1
> 30MPH(48KPH) < 45MPH(72KPH)	6 : 1
≥ 45MPH(72KPH) NON-LIMITED ACCESS HIGHWAYS	8 : 1
ALL LIMITED ACCESS HIGHWAYS	10 : 1

\* DESIGN SPEED THROUGH THE WORK AREA.

TERMINAL TREATMENT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER

TEMPORARY PCBC (FLARE RATES VARY, SEE TABLE A)

1	3/12	REVISE SLOPE NOTE & DETAIL NOTE	-
2	7/13	ERRATA	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

NOT TO SCALE



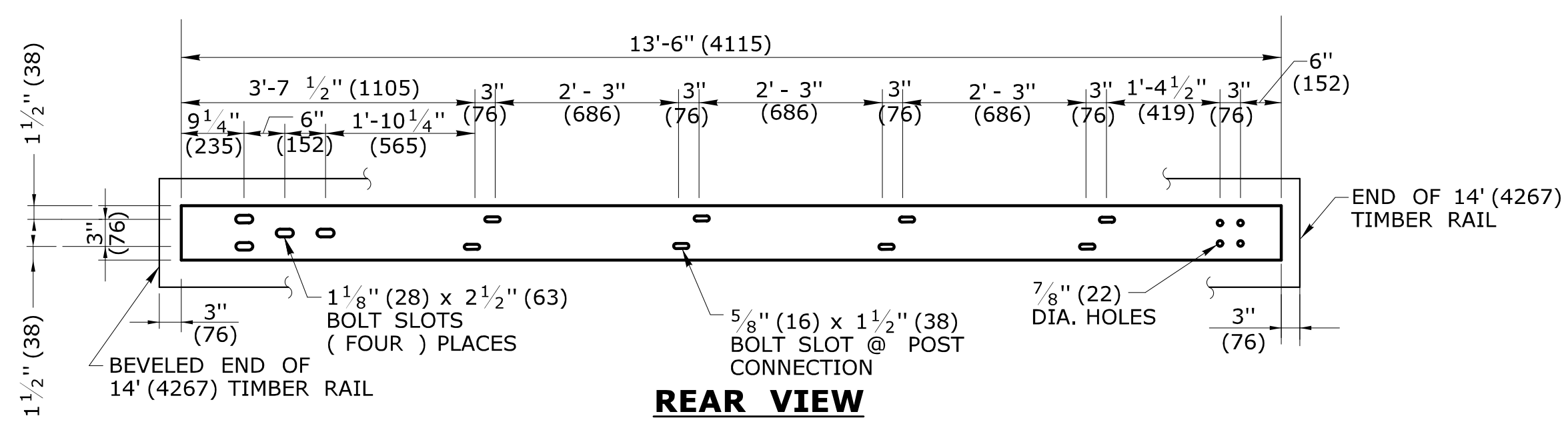
APPROVED BY: *[Signature]*  
 NAME/DATE/TIME: James H. Norman  
 2013.07.24 14:48:34-04'00'

**CTDOT  
STANDARD SHEET**  
**OFFICE OF ENGINEERING**

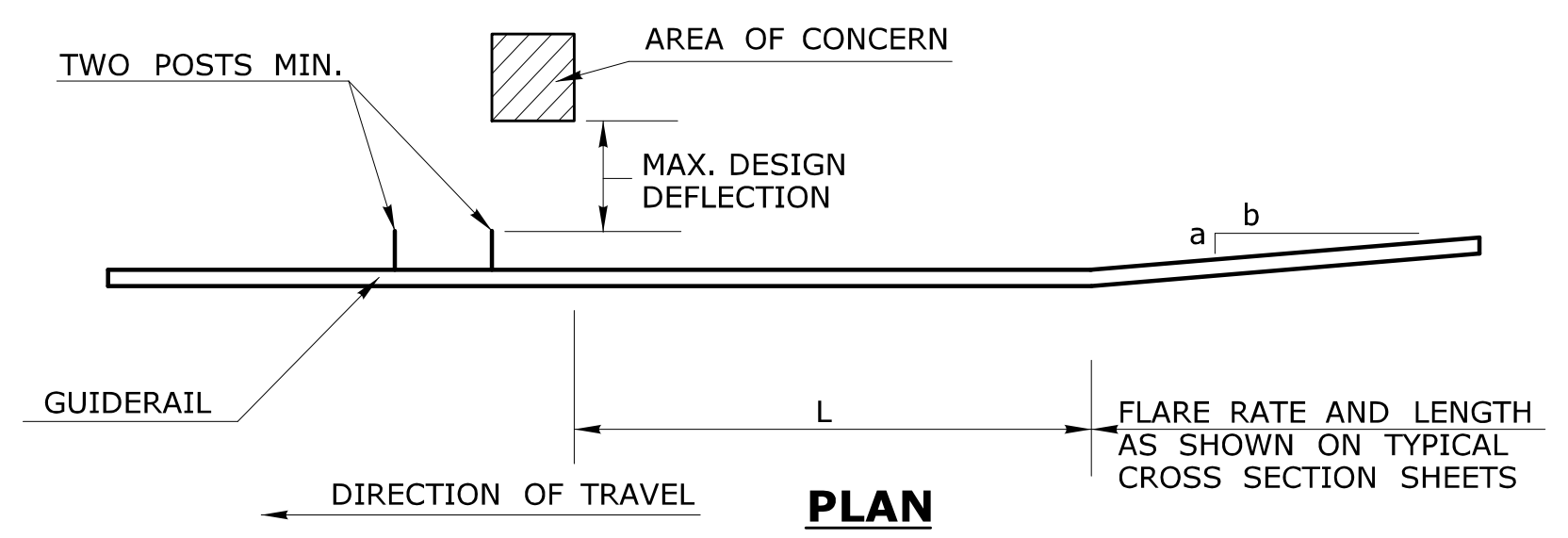
**TEMPORARY PRECAST  
CONCRETE BARRIER CURB**

**HW-822\_01**

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.



**STEEL TRANSITION RAIL**  
**6" x 3/8" x 13'-6" (152x9x4115)**  
**FOR LEADING END ATTACHMENT**

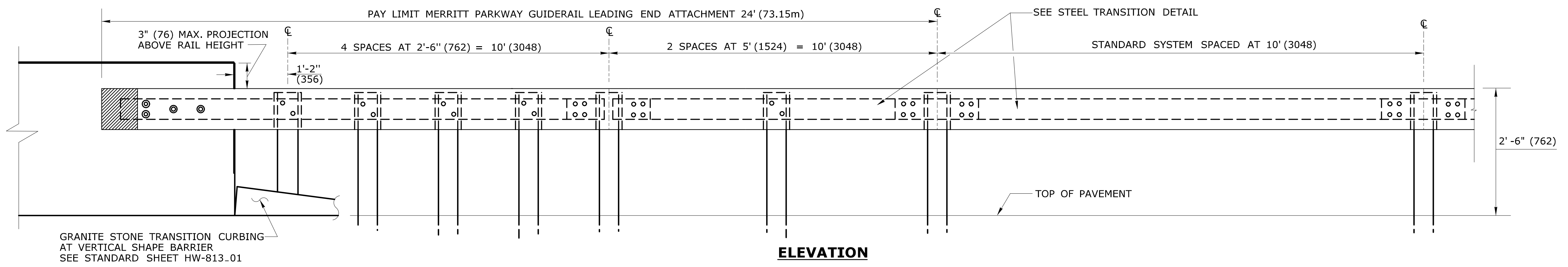
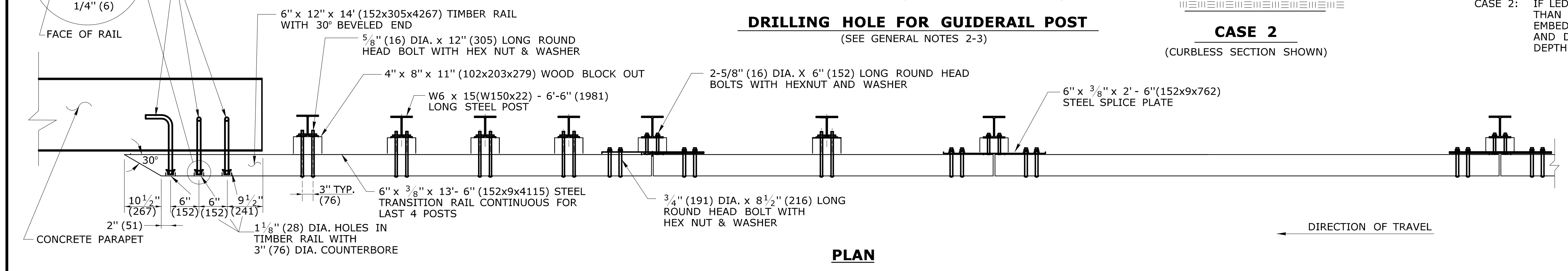
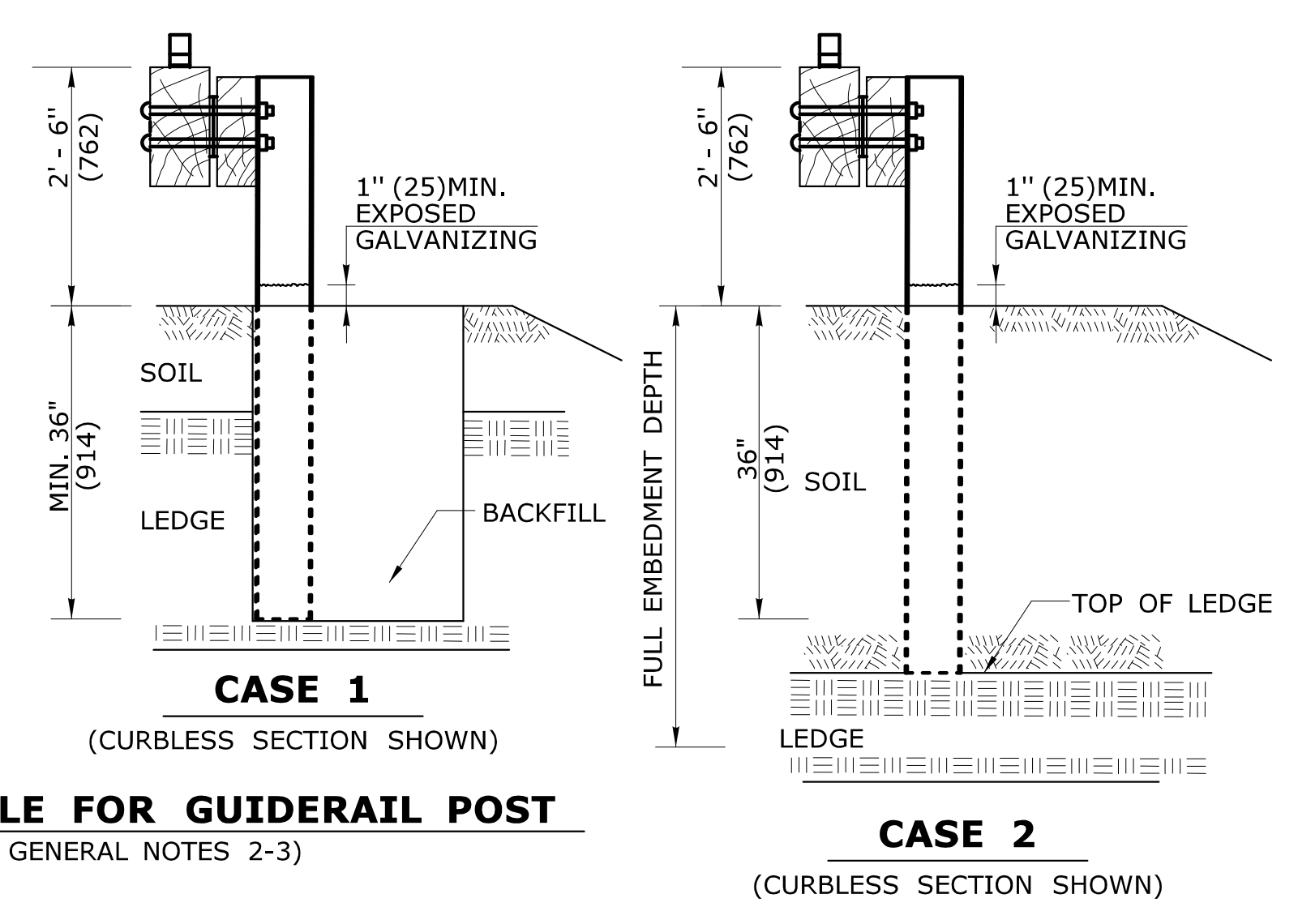
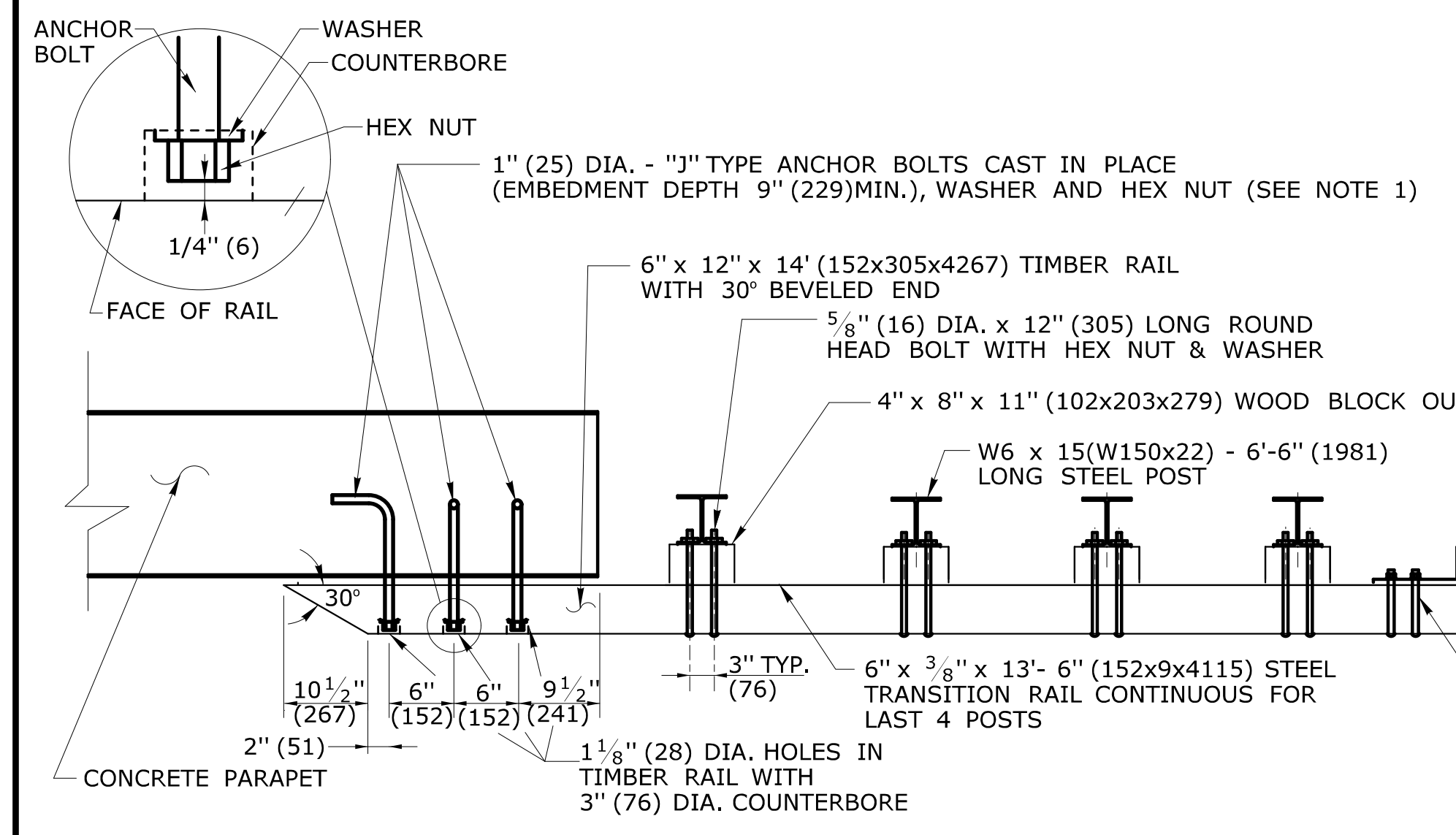


- GENERAL NOTES:**
- THIS DRAWING SHOWS LEADING END ATTACHMENT TO PROPOSED BARRIER/PARAPET. AT EXISTING PARAPETS ATTACH GUIDERAIL USING D.O.T. APPROVED CHEMICAL ANCHORS.
  - PRIOR TO GUIDERAIL POST INSTALLATION THE CONTRACTOR SHALL INVESTIGATE POST LOCATIONS FOR THE PRESENCE AND DEPTH OF LEDGE.
  - 20" (507) DIA. EXCAVATED HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR GRANULAR FILL COMPACTED IN 6" (150) LIFTS BEFORE DRIVING POST OR POSTS MAY BE SET IN EXCAVATED HOLE AND BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM).

Maximum Design Deflection (ft) (mm)	Area Of Concern Plus 2 Posts (see sketch)	SYSTEM 3 W6x15 (W150x22) Posts Spaced at 2'-6" (762)	SYSTEM 2 W6x15 (W150x22) Posts Spaced at 5' (1524)	Standard System W6x15 (W150x22) Posts Spaced at 10' (3048)	L Min. Length Needed
1' (305)	System 3	10' (3048)	10' (3048)	50' (16.40m)	70' (21.34m)
2' - 6" (762)	System 2	-	10' (3048)	60' (19.68m)	70' (21.34m)
4' (1219)	Standard System	-	-	70' (21.34m)	70' (21.34m)

**MERRITT PARKWAY GUIDERAIL DESIGN DEFLECTION CHART**

- CASE 1:** IF LEDGE IS LOCATED WITHIN 36" (914) OF THE FINISHED GRADE AT THE POST LOCATION A 20" (507) DIAMETER HOLE SHALL BE DRILLED IN THE LEDGE TO THE MINIMUM EMBEDMENT DEPTH OF 36" (914) AND THE POST SHALL BE CUT AND DRIVEN TO ACHIEVE THIS DEPTH.
- CASE 2:** IF LEDGE IS LOCATED AT A DEPTH GREATER THAN 36" (914) BUT LESS THAN THE FULL EMBEDMENT DEPTH THE POST SHALL BE CUT AND DRIVEN TO ACHIEVE EMBEDMENT TO THE DEPTH OF THE TOP OF LEDGE.



**ATTACHMENT AT LEADING END (VERTICAL SHAPE BARRIER SHOWN)**  
**(FRONT VIEW)**  
 (SEE GENERAL NOTES 1)

REV.	DATE	REVISION DESCRIPTION
1	6/11	REVISED ELEVATION VIEW OF ATTACHMENT
2	7/13	REVISED POST IN LEDGE & ADDED COUNTERBORE DETAIL
-	-	-
-	-	-
-	-	-
-	-	-

NOT TO SCALE

STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION

Plotted Date: 6/14/2013

SUBMITTED BY: NAME/DATE/TIME:

APPROVED BY: NAME/DATE/TIME:

James H. Norman  
 2013.07.24 14:50:14-04'00'

CTDOT  
 STANDARD SHEET

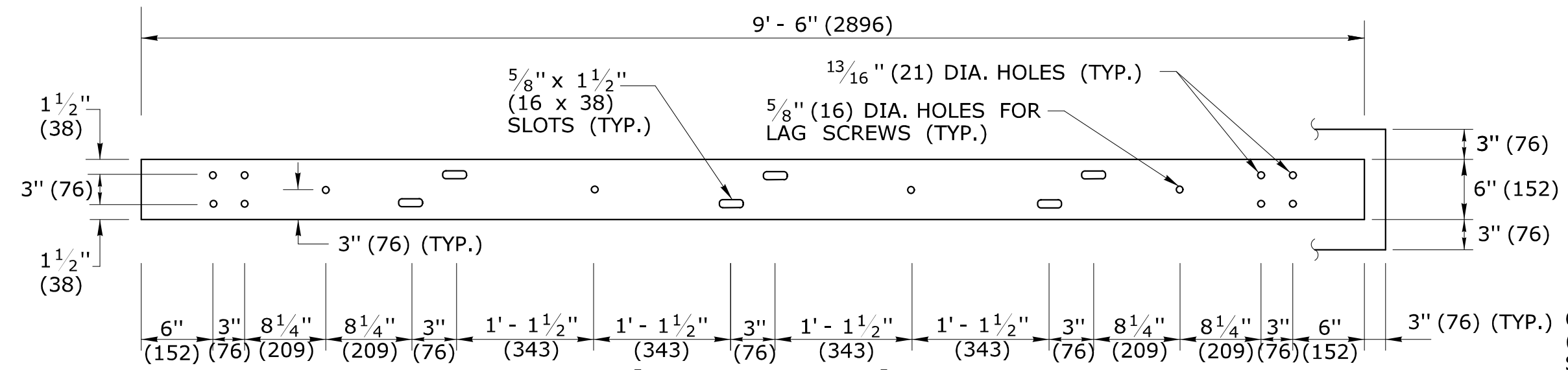
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:

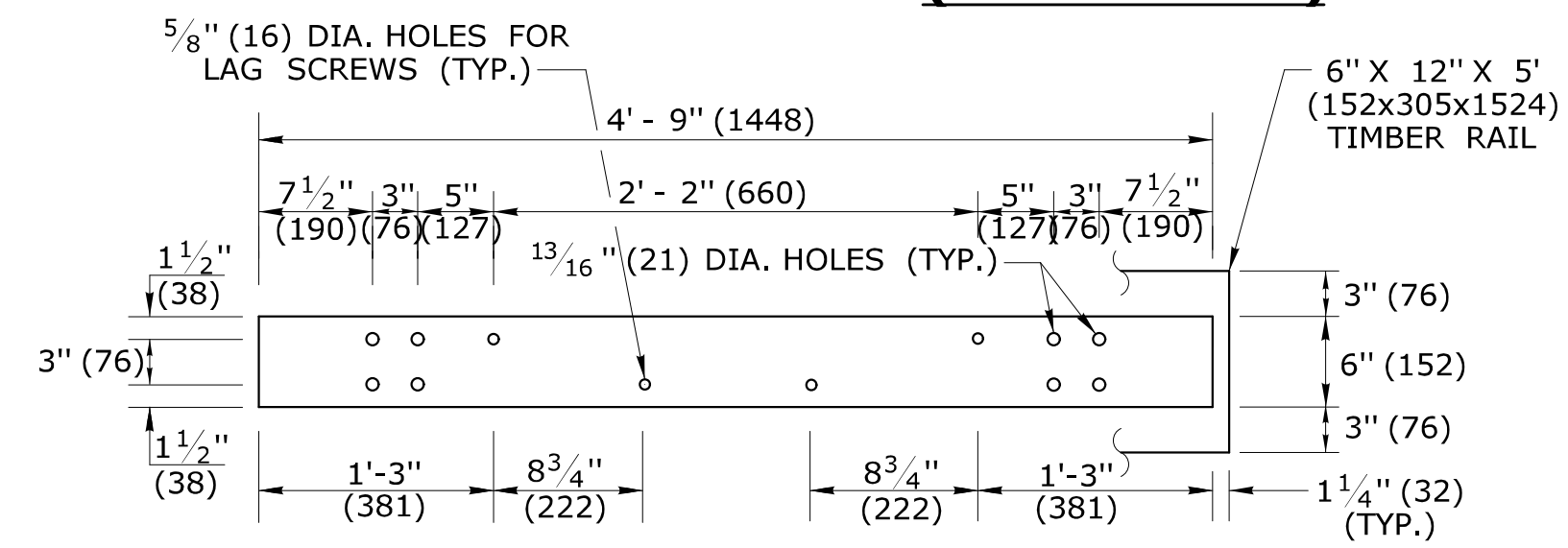
**MERRITT PARKWAY GUIDERAIL LEADING END ATTACHMENT AND SYSTEMS 2 & 3**

STANDARD SHEET NO.: HW-910\_12a

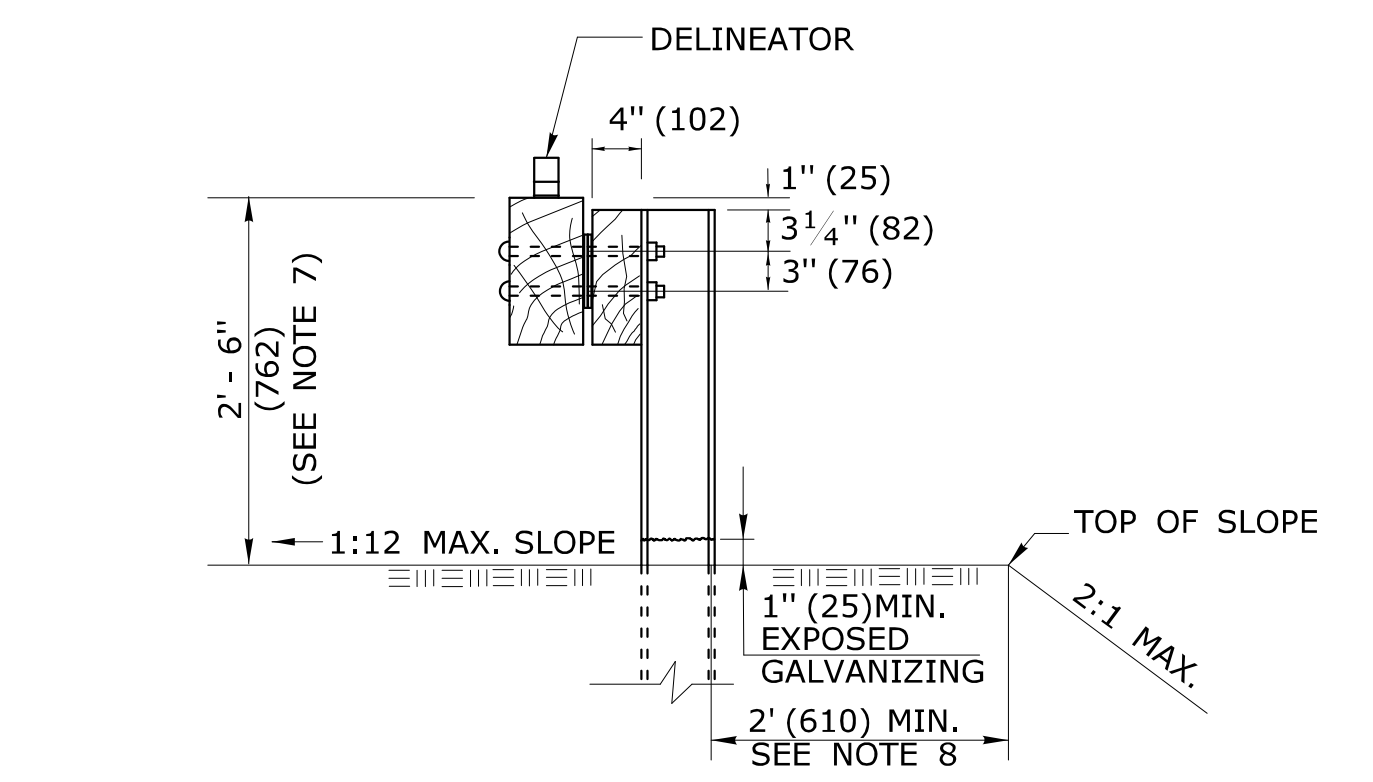
ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.



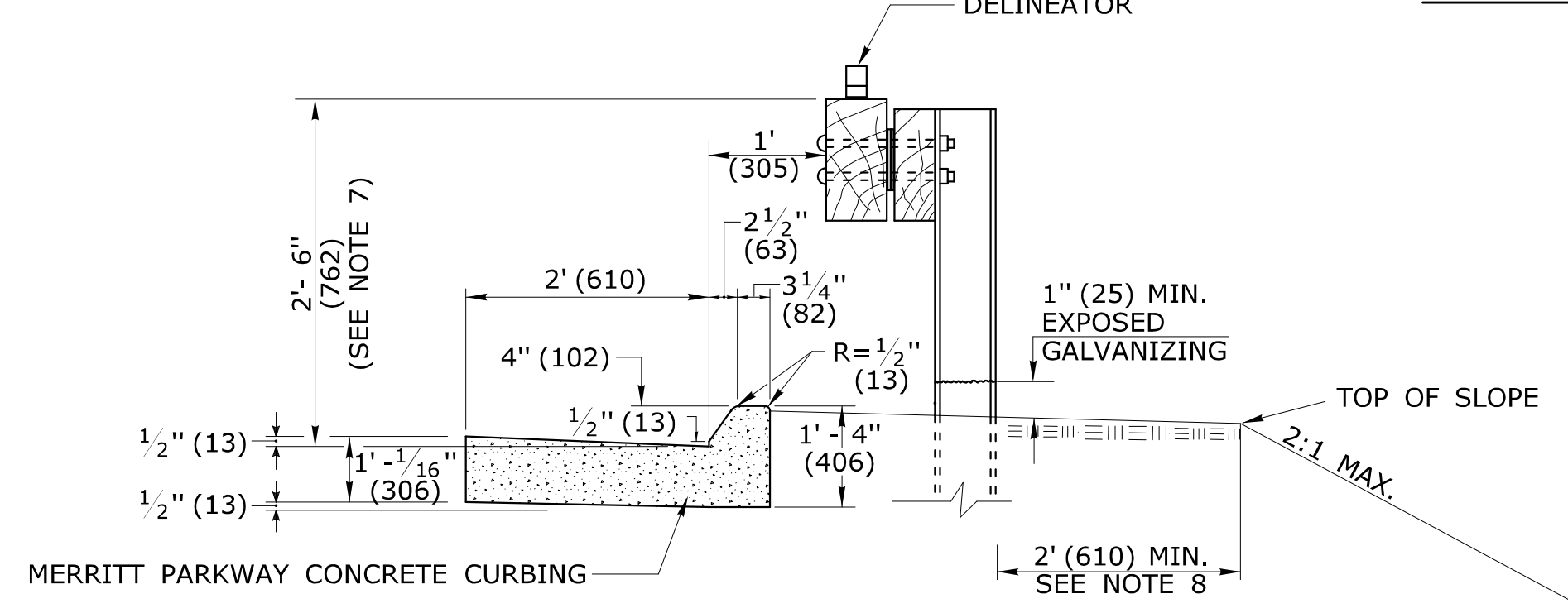
**STANDARD STEEL RAIL DETAIL**  
**6" x 3/8" x 9'-6"**  
**(152x9x2896)**



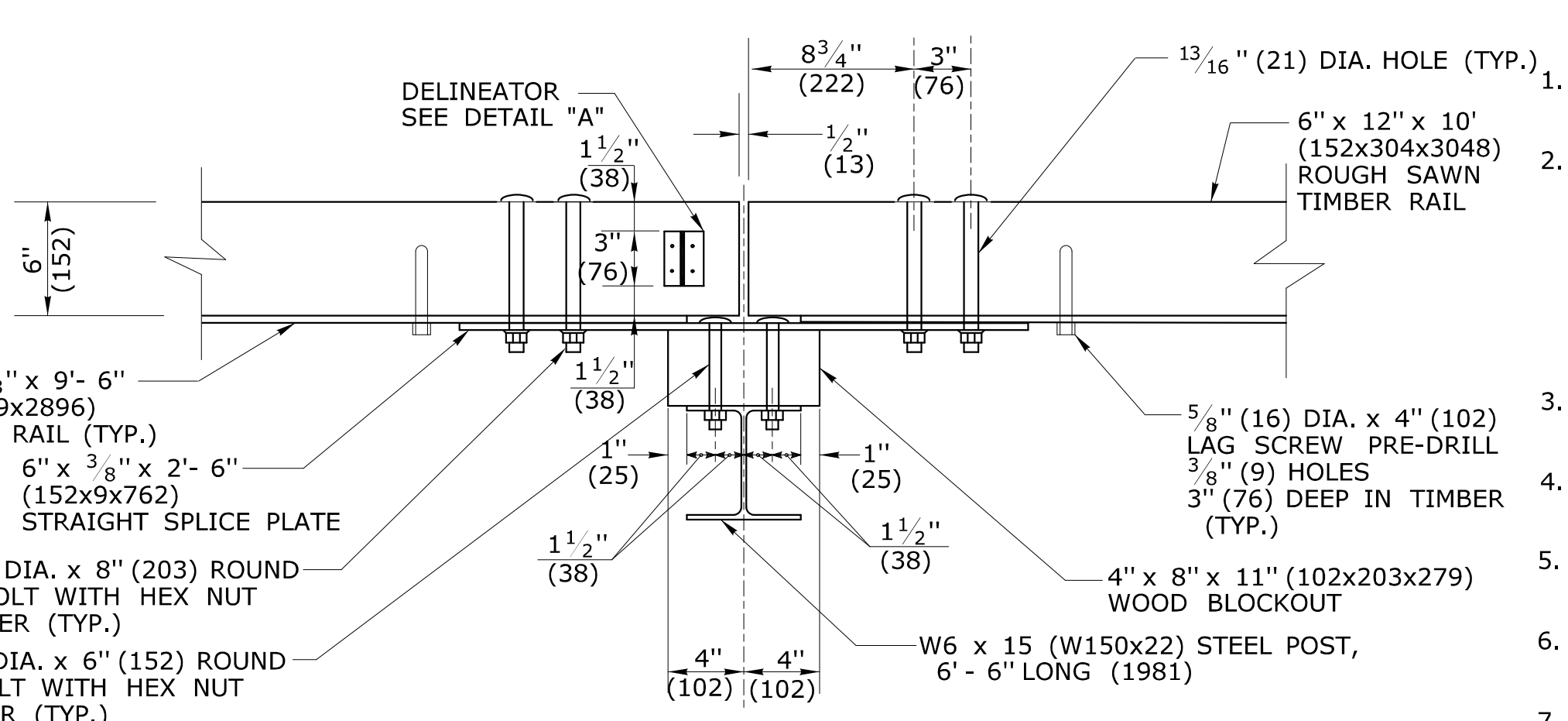
**STEEL RAIL DETAIL**  
**6" x 3/8" x 4'-9"**  
**(1829 x 9 x 1448)**  
**FOR CURVES WITH R < 70' (21.3m)**



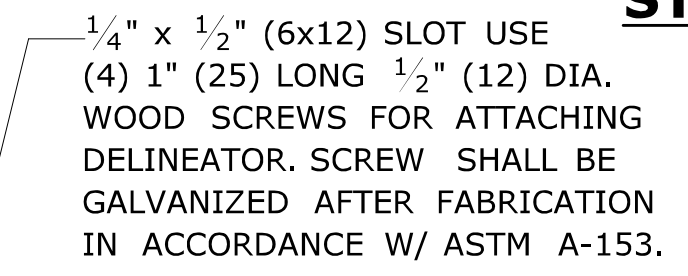
**SECTION (NO CURB)**



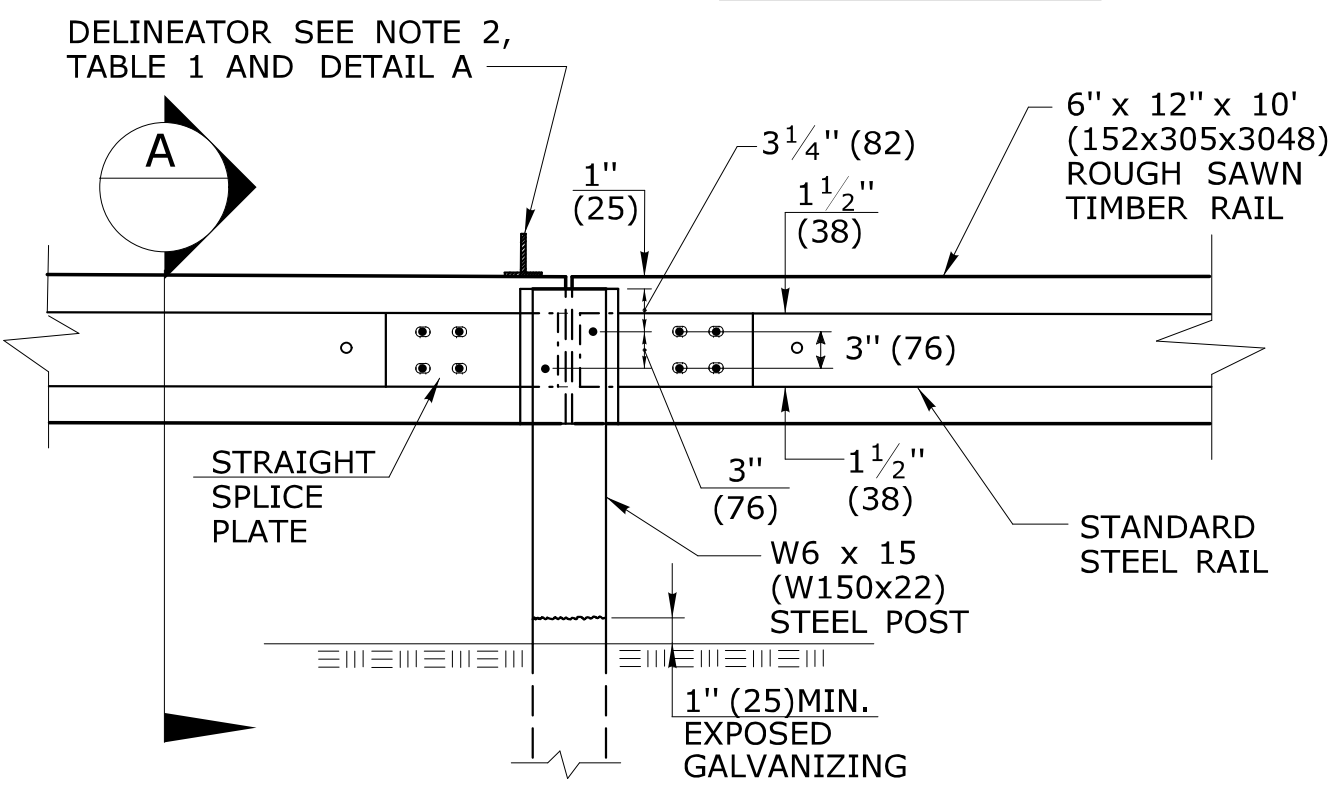
**MERRITT PARKWAY CONCRETE CURBING WITH MERRITT PARKWAY GUIDERAIL**



**POST CONNECTION FOR STRAIGHT SECTIONS**



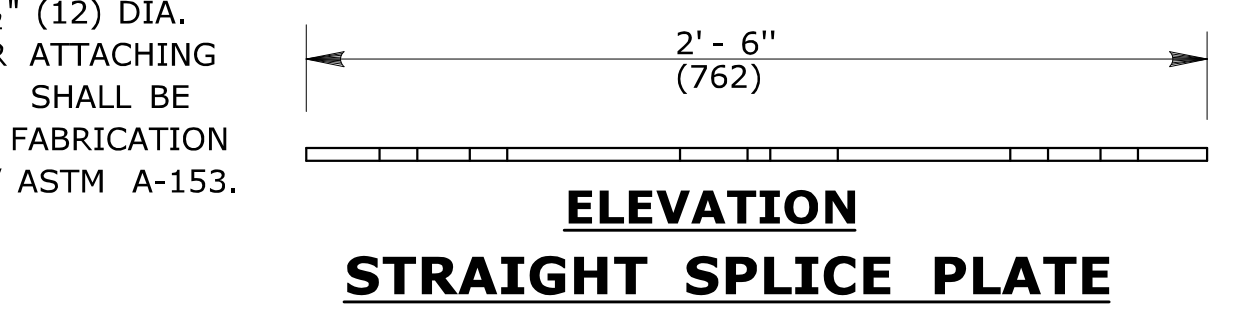
**DETAIL A DELINEATOR**



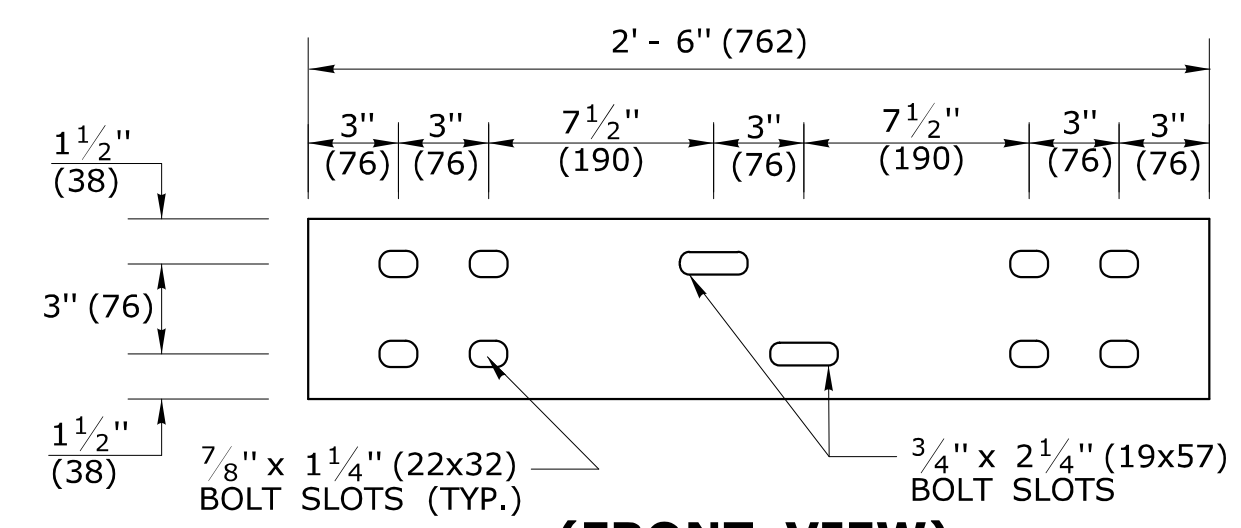
**REAR VIEW ELEVATION POST CONNECTION**

**TABLE 1**

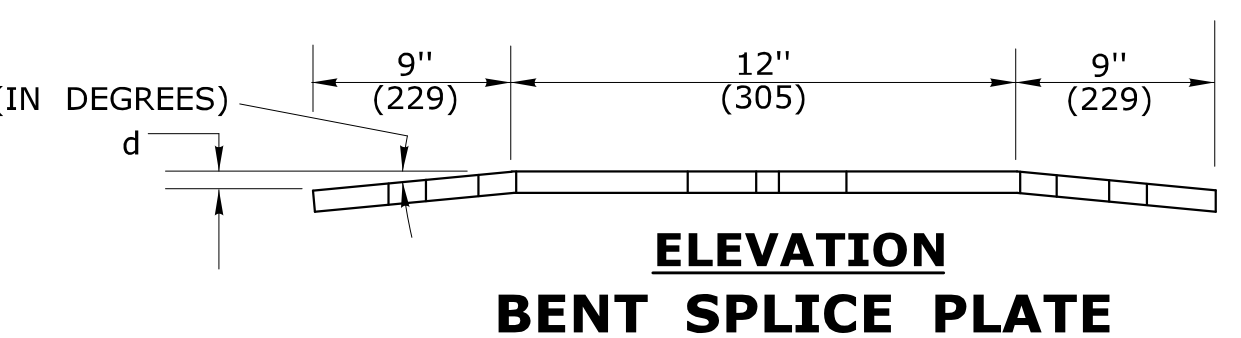
DELINEATOR SPACING	
CURVE RADIUS	SPACE
< 300' (91.4m)	20' (6.10m)
≥ 300' (91.4m)	50' (15.2m)



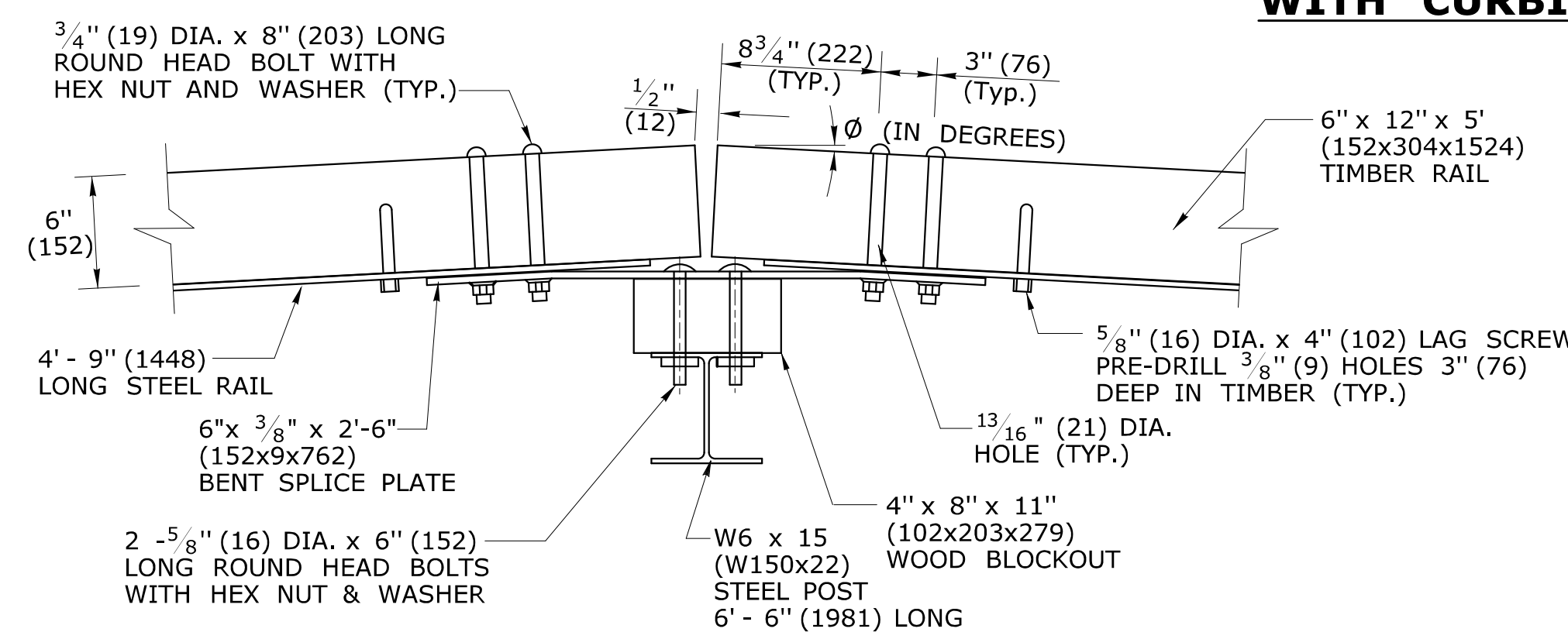
**ELEVATION STRAIGHT SPLICE PLATE**



**(FRONT VIEW) STEEL SPLICE PLATE DETAIL**  
**6" x 3/8" x 2'-6"**  
**(152x9x762)**



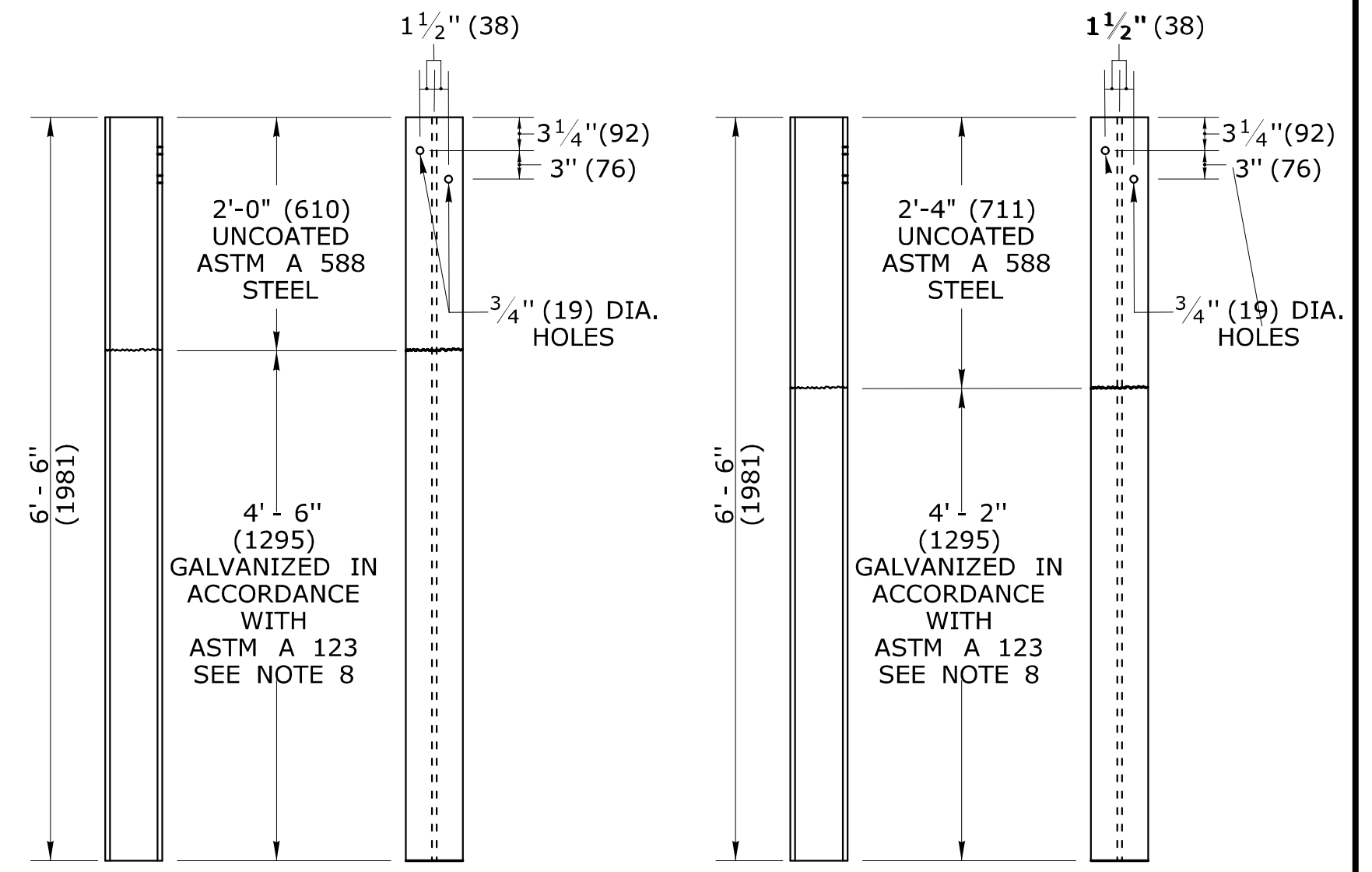
**ELEVATION BENT SPLICE PLATE**



**POST CONNECTION FOR CURVES WITH R < 70' (21.3m)**

**GENERAL NOTES:**

- MATERIALS AND CONSTRUCTION OF THE MERRITT PARKWAY GUIDERAIL SHALL CONFORM TO SPECIAL PROVISION PROVIDED WITH THE PROJECT.
- DELINEATORS SHALL BE PLASTIC INVERTED T-SECTIONS IN ACCORDANCE WITH DETAIL "A". REFLECTORS SHALL BE SPACED IN ACCORDANCE WITH TABLE 1, AND POSITIONED PERPENDICULAR TO THE ADJACENT EDGE OF LANE. DO NOT ATTACH REFLECTORS ON FLARE OR TERMINAL SECTIONS. REFLECTIVE SHEETING SHALL BE SILVER-WHITE ON ALL RAIL SECTIONS ADJACENT TO THE RIGHT SHOULDER, AND YELLOW ON RAIL SECTIONS ADJACENT TO THE LEFT SHOULDER OF TRAVEL LANES. DELINEATORS SHALL BE INCLUDED IN THE COST FOR "MERRITT PARKWAY GUIDERAIL."
- TWO ADDITIONAL 5/8" (16) DIA. X 4" (102) LONG LAG SCREWS AND WASHERS SHALL BE INSTALLED AT ALL MID-SPAN POINTS FOR STANDARD SYSTEMS.
- ALL CONNECTION HARDWARE SHALL BE SUFFICIENTLY TIGHTENED TO ACCOMMODATE FOR SHRINKAGE OF THE WOOD ELEMENTS.
- WHEN FURNISHING THE SHOP BENT SPLICE PLATES, USE THE MINIMUM BEND ANGLE AS SHOWN IN TABLE 2.
- FOR RAILING SET ON A CURVE WITH RADII < 70' (21.3m) SPACE POSTS AT 5' (1524).
- GUIDERAIL HEIGHT MAY VARY UP TO 2" (51) PLUS OR MINUS THE HEIGHT SHOWN IN THE DETAILS TO ACHIEVE A SMOOTH AND CONTINUOUS GUIDERAIL PROFILE.
- 7'-6" (2286) LONG POSTS MAY BE USED IN LOCATIONS WHERE 2' (610) MIN SHELF IS NOT ATTAINABLE. GALVANIZED COATING LIMITS SHALL BE INCREASED BY 1' (305). PAYMENT FOR EXTRA LONG POSTS SHALL BE INCLUDED WITH THE ITEM FOR MERRITT PARKWAY GUIDERAIL.



**POST DETAIL W6 X 15 (W150X22) WITH CURBING**

**POST DETAIL W6 X 15 (W150X22) NO CURBING**

**TABLE 2**

Radius R (ft.)(m)	∅ (Degrees)	d (in.)(mm)
35 (10.7)Min.	4.10	5/8(16)
40 (12.2)	3.58	9/16(14)
45 (13.7)	3.18	1/2(13)
50 (15.2)	2.86	7/16(11)
55 (16.8)	2.60	7/16(11)
60 (18.3)	2.40	3/8(9)
65 (19.8)	2.20	3/8(9)
70 (21.3)	2.05	5/16(8)
Over 70 (21.3)	Flat	0

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

REV.	DATE	REVISION DESCRIPTION
1	6/11	REVISED STEEL RAIL REAR VIEW
2	7/13	ADDED NOTE 8 AND REVISED GALVANIZE DIMENSION
-	-	-
-	-	-
-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/14/2013

NOT TO SCALE

STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION

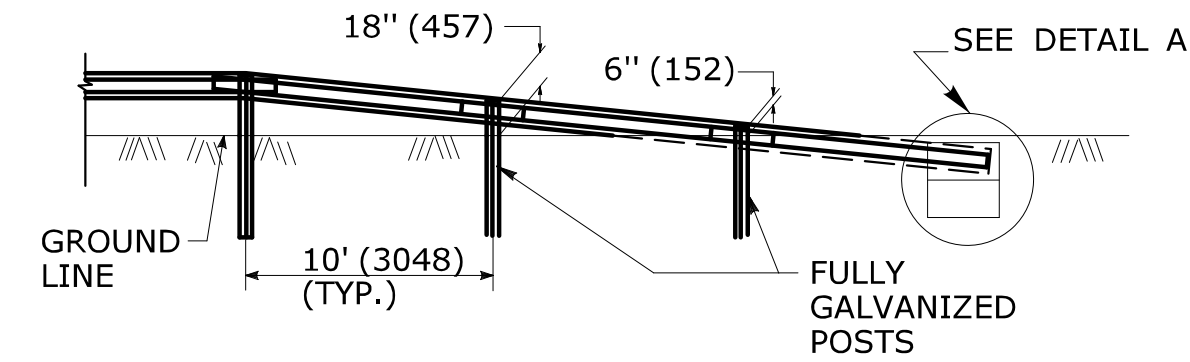
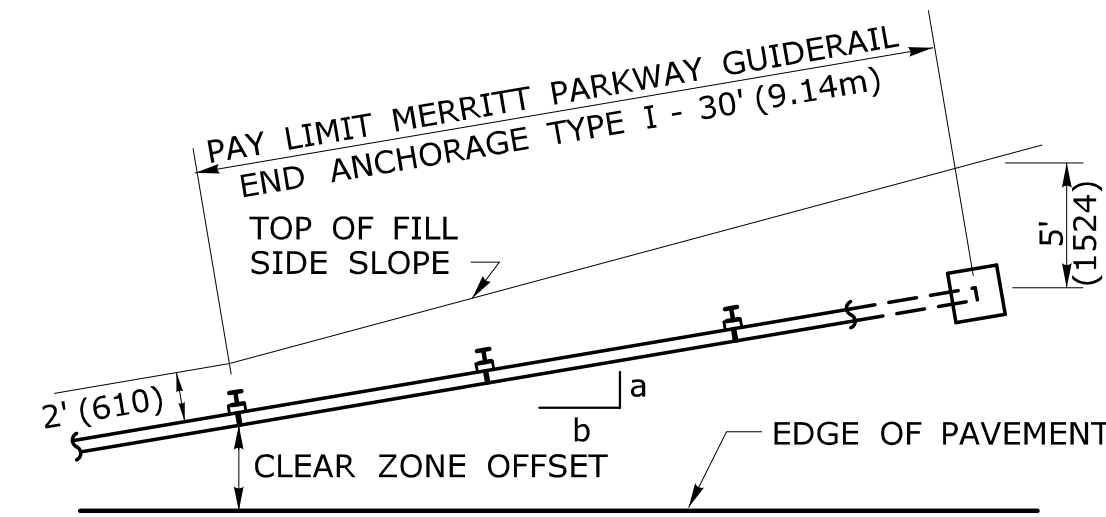
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SUBMITTED BY: NAME/DATE/TIME:  
 APPROVED BY: NAME/DATE/TIME:  
 James H. Norman  
 2013.07.24 14:50:49-04'00'

CTDOT  
 STANDARD SHEET  
 OFFICE OF ENGINEERING

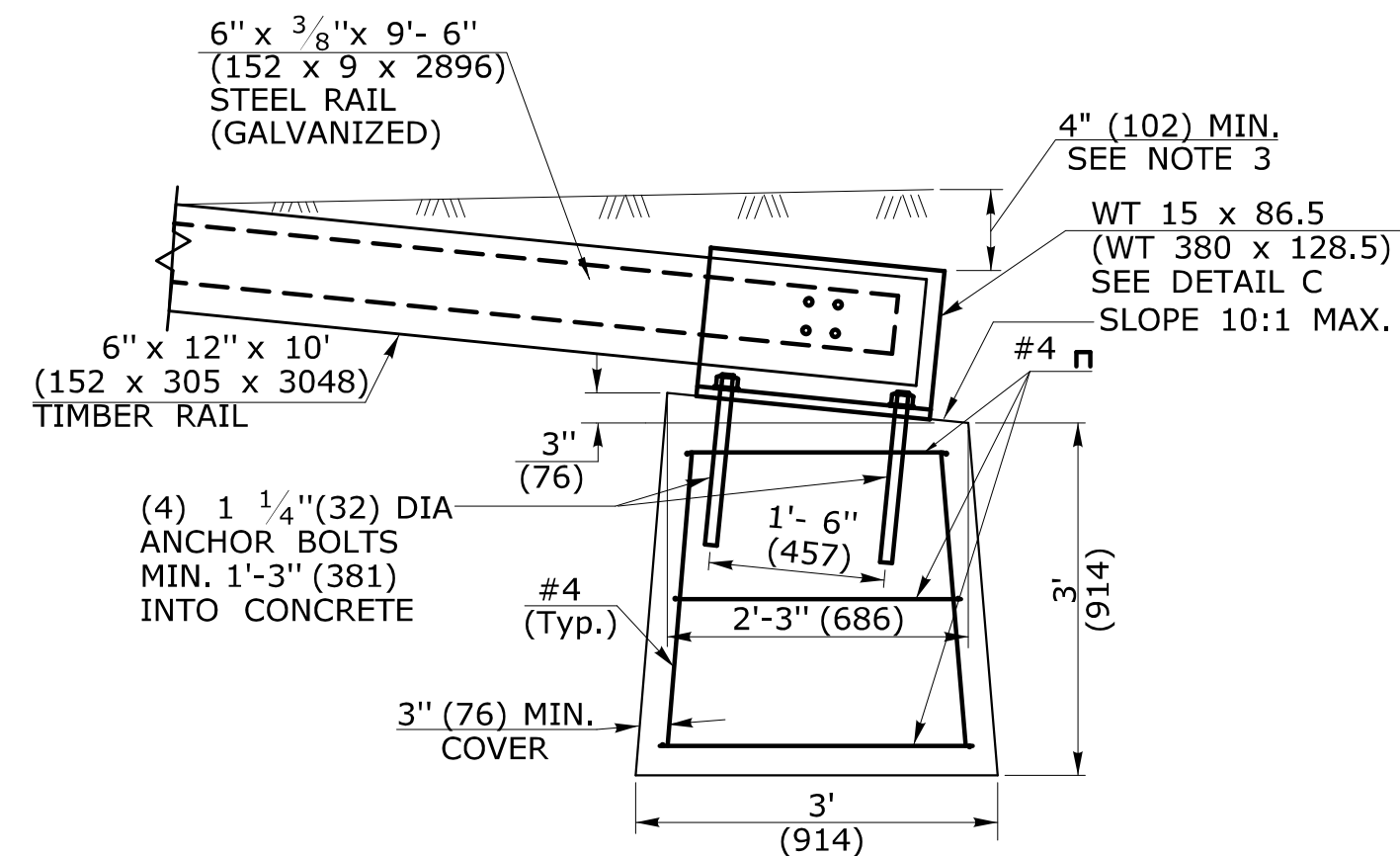
STANDARD SHEET TITLE:  
**MERRITT PARKWAY GUIDERAIL HARDWARE DETAILS**

STANDARD SHEET NO.:  
**HW-910\_12b**



**PLAN**  
**MERRITT PARKWAY GUIDERAIL END ANCHORAGE TYPE I**  
**(BURIED ANCHOR)**

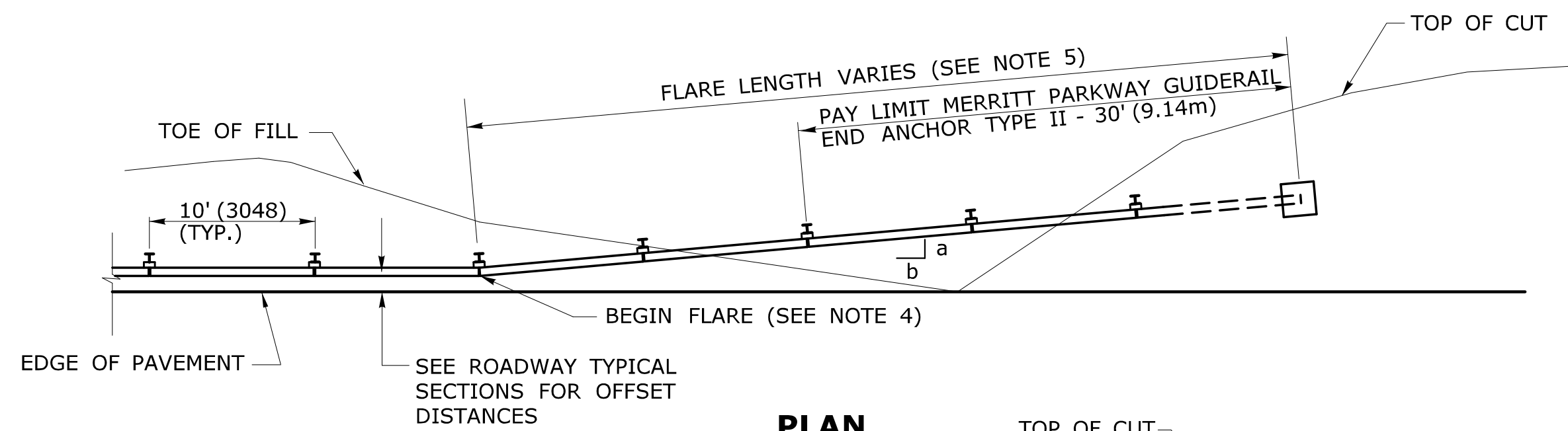
NOTE: SEE PLAN SHEETS FOR FLARE RATE a:b.



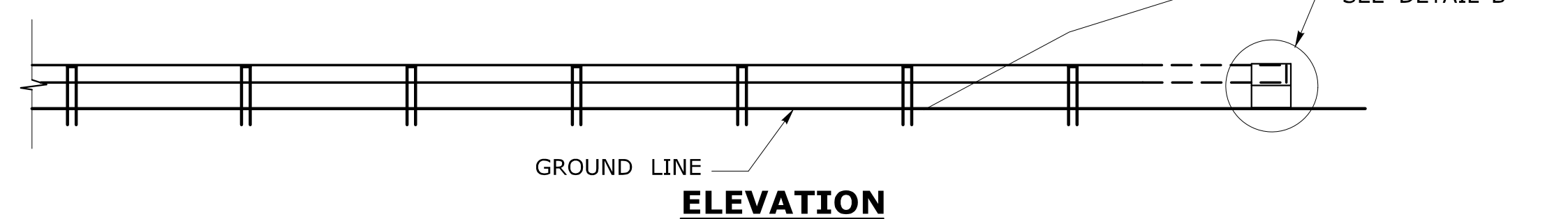
**ELEVATION**  
**DETAIL A**

**GENERAL NOTES:**

1. MATERIALS AND CONSTRUCTION OF THE MERRITT PARKWAY GUIDERAIL END ANCHORS SHALL CONFORM TO THE SPECIAL PROVISIONS PROVIDED WITH THE PROJECT. ALL HARDWARE IN CONTACT WITH THE GROUND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIAL PROVISION.
2. FOR THE END ANCHOR TYPE II, EXTEND THE FLARE INTO THE CUT SLOPE UNTIL A MINIMUM 12" (305) OF COVER IS OBTAINED OVER THE GUIDERAIL ELEMENT.
3. FOR THE END ANCHOR TYPE I, EXTEND THE FLARE OUTSIDE THE CLEAR ZONE AND BURY THE GUIDERAIL ANCHOR AND ELEMENT TO OBTAIN A MINIMUM COVER OF 4" (102). SEE DETAIL A.
4. BEGIN THE FLARE AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
5. THE GUIDERAIL FLARE SHOWN ON THE PLAN SHEETS IS THE MINIMUM LENGTH AND RATE REQUIRED AS DIRECTED BY THE ENGINEER. FLARE THE GUIDERAIL SO THAT THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE.



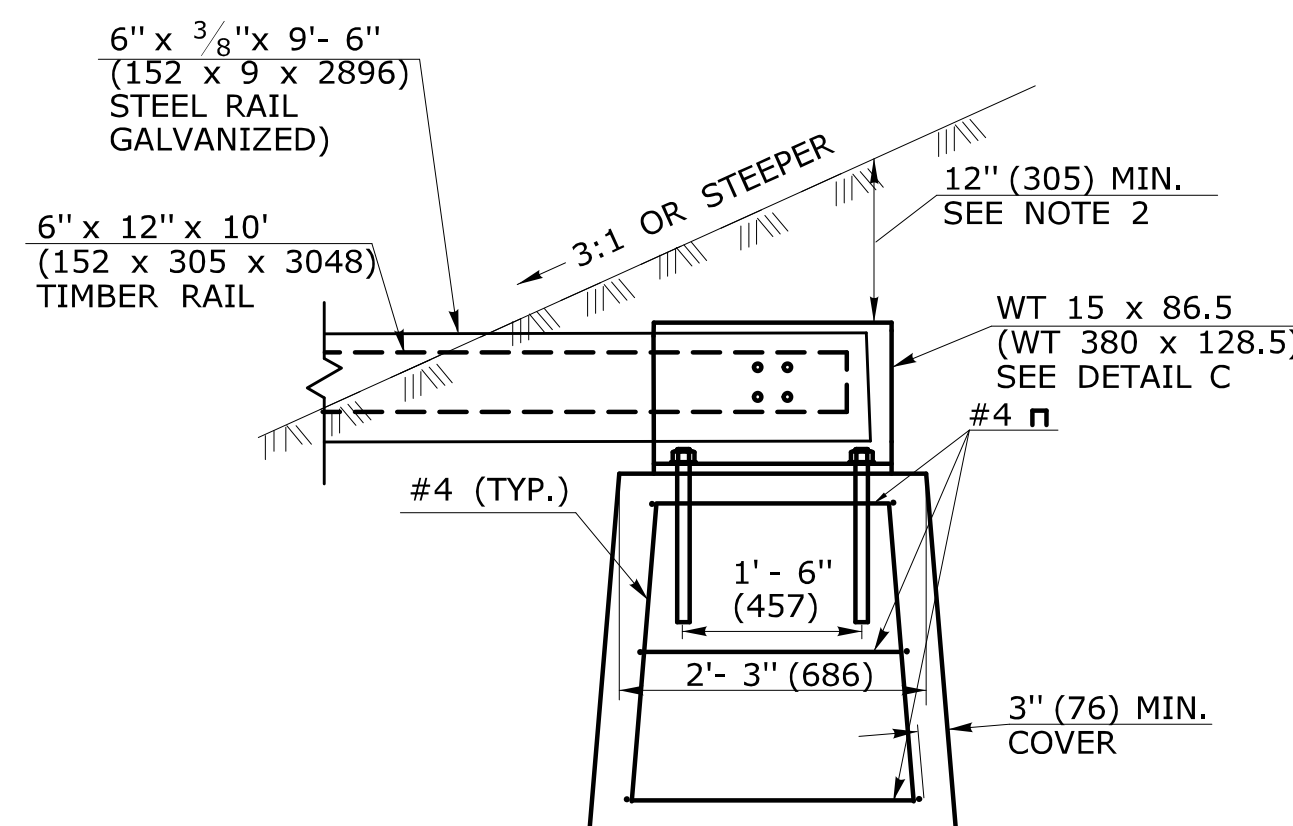
**PLAN**



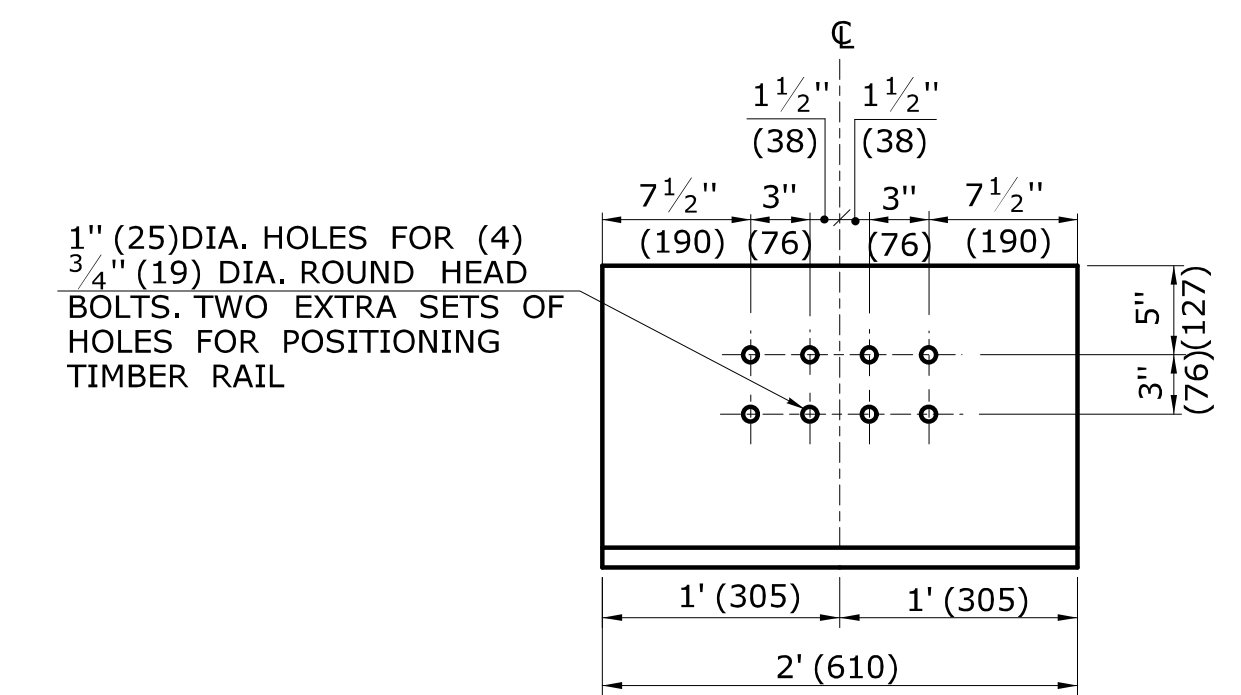
**ELEVATION**

**MERRITT PARKWAY GUIDERAIL END ANCHORAGE TYPE II**  
**(EARTH CUT SLOPE ANCHOR)**

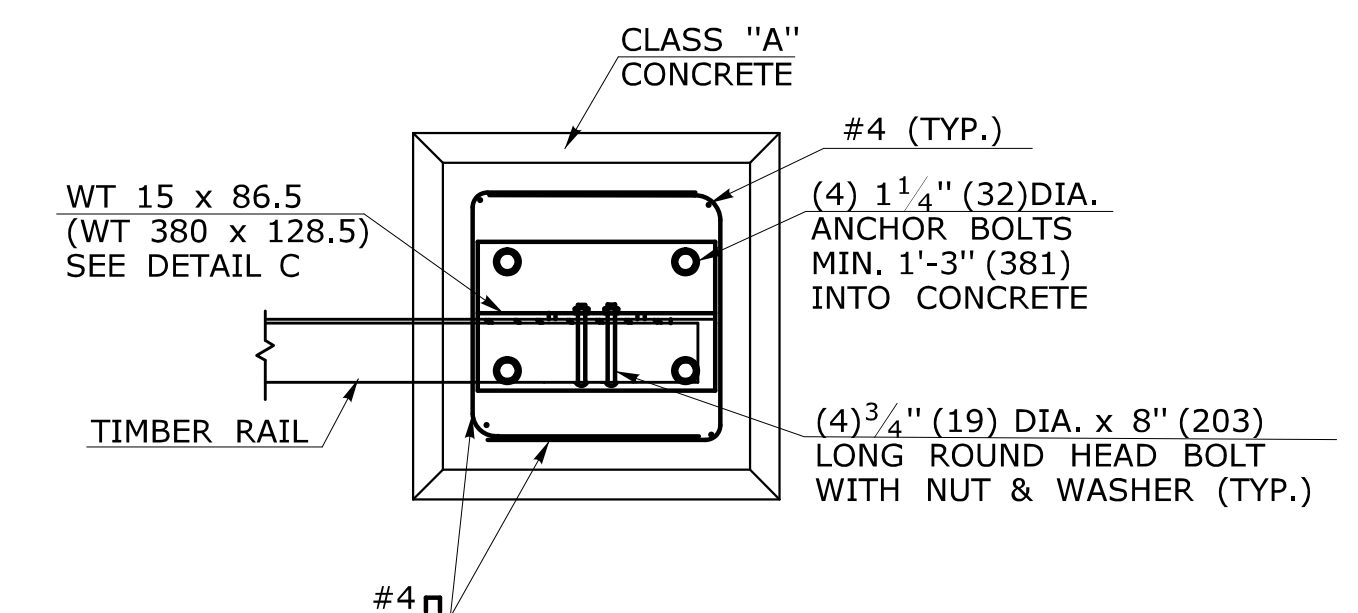
NOTE: SEE PLAN SHEETS FOR FLARE RATE a:b.



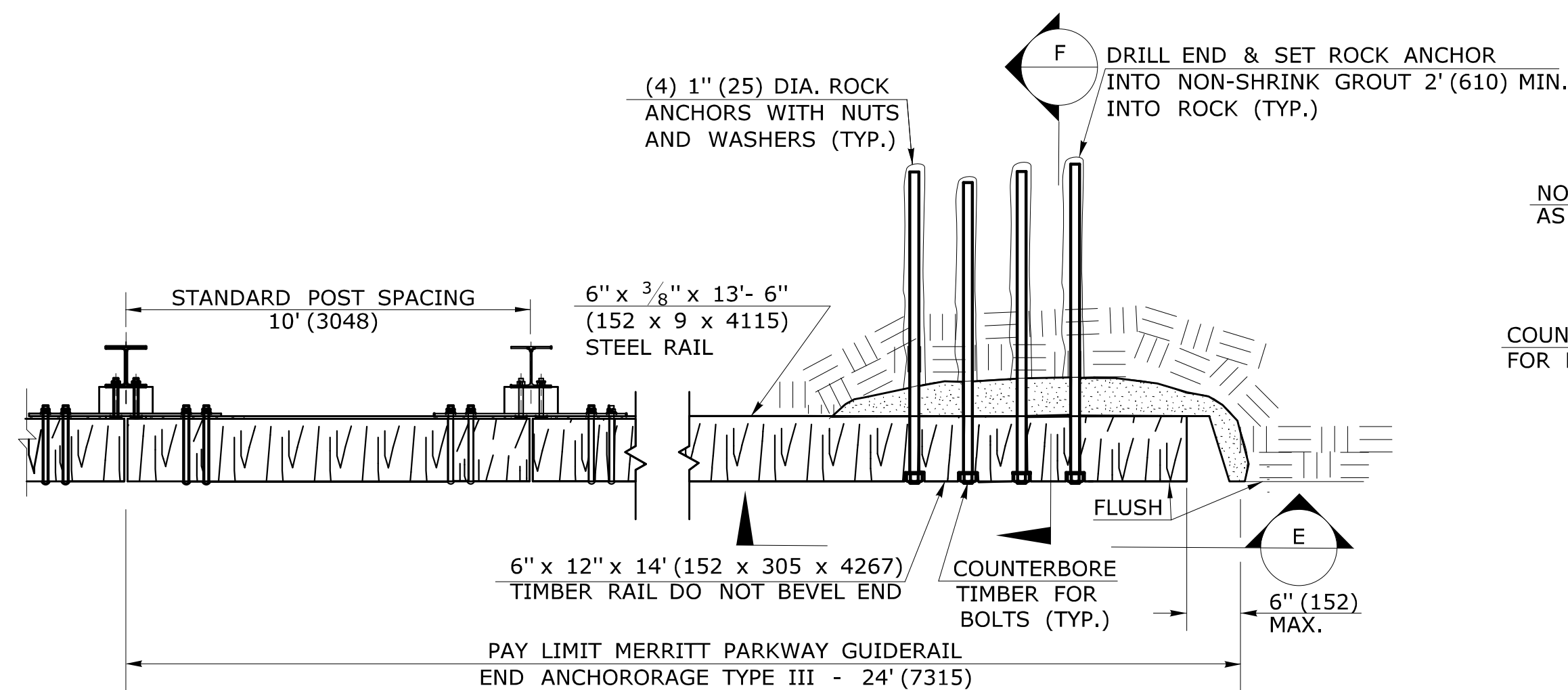
**ELEVATION**  
**DETAIL B**



**ELEVATION**  
**DETAIL C**  
**WT 15 x 86.5 (GALVANIZED)**  
**(WT 380 X 128.5)**

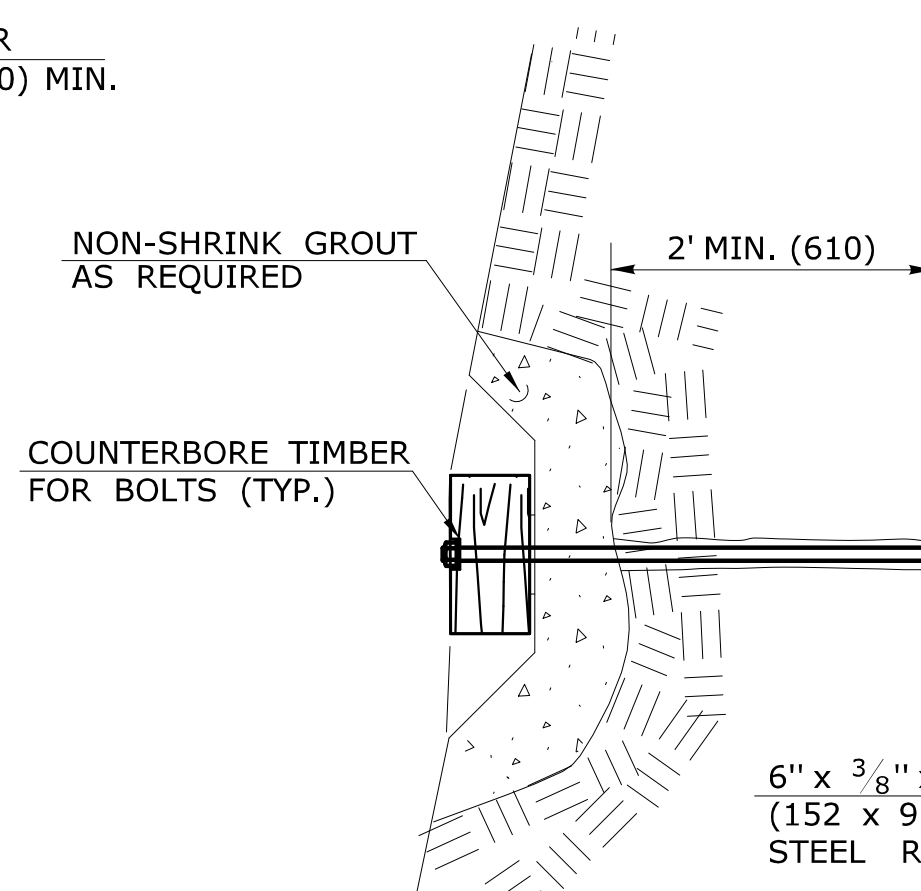


**PLAN**  
**DETAIL D**  
**PLAN VIEW FOR**  
**TYPE I & II ANCHOR**

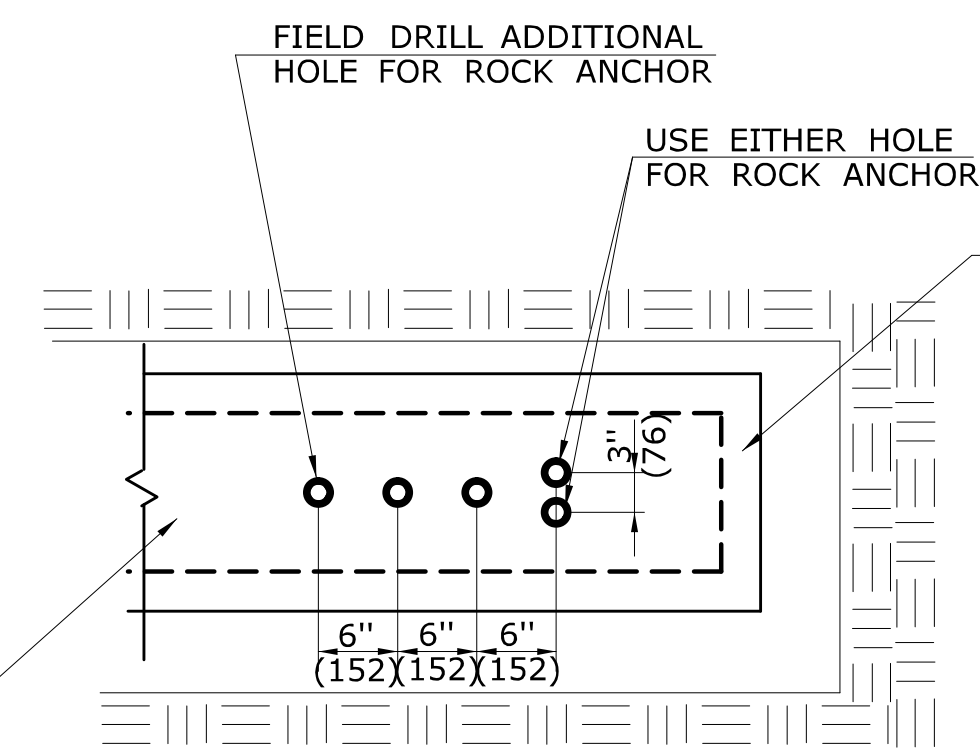


**PLAN**

**MERRITT PARKWAY GUIDERAIL END ANCHORAGE TYPE III**  
**(ROCK CUT ANCHOR)**



**SECTION**  
**F**

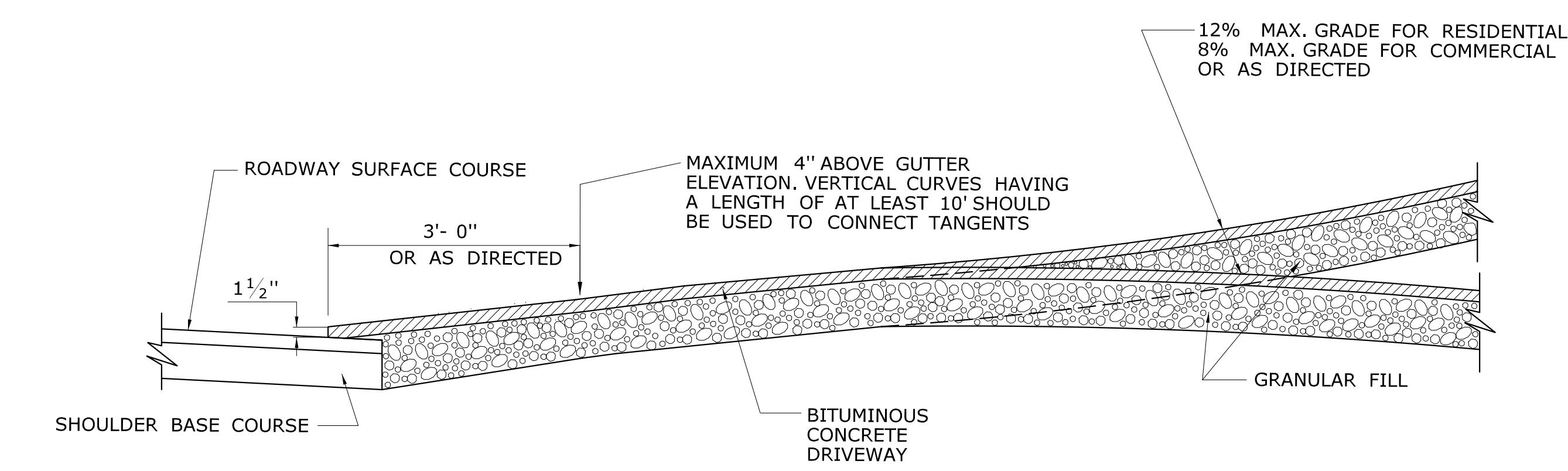


**SECTION**  
**E**

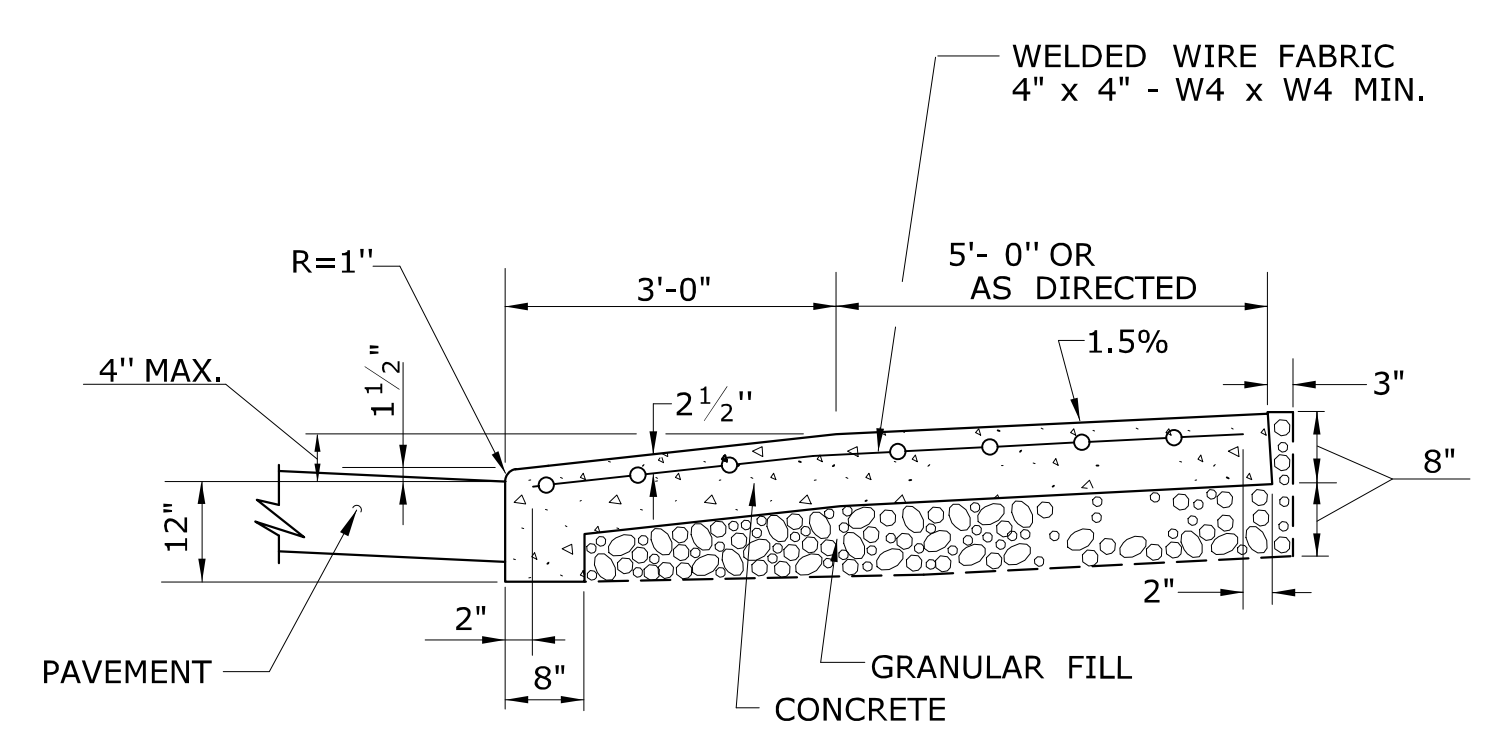
ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

1	7/13	ERRATA	-	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	NOT TO SCALE	<p><b>STATE OF CONNECTICUT</b> <b>DEPARTMENT OF TRANSPORTATION</b></p>	SUBMITTED BY: [Signature] NAME/DATE/TIME: [Blank] APPROVED BY: [Signature] NAME/DATE/TIME: James H. Norman 2013.07.24 14:56:06-04'00'	<b>CTDOT</b> <b>STANDARD SHEET</b> <b>OFFICE OF ENGINEERING</b>	STANDARD SHEET TITLE: <b>MERRITT PARKWAY</b> <b>GUIDERAIL END ANCHORS</b>	STANDARD SHEET NO.: <b>HW-911_05</b>
REV.	DATE	REVISION DESCRIPTION	Plotted Date: 6/13/2013	Filename: CTDOT-HIGHWAY-STD2013.dgn Model: 74 - HW-911_05						

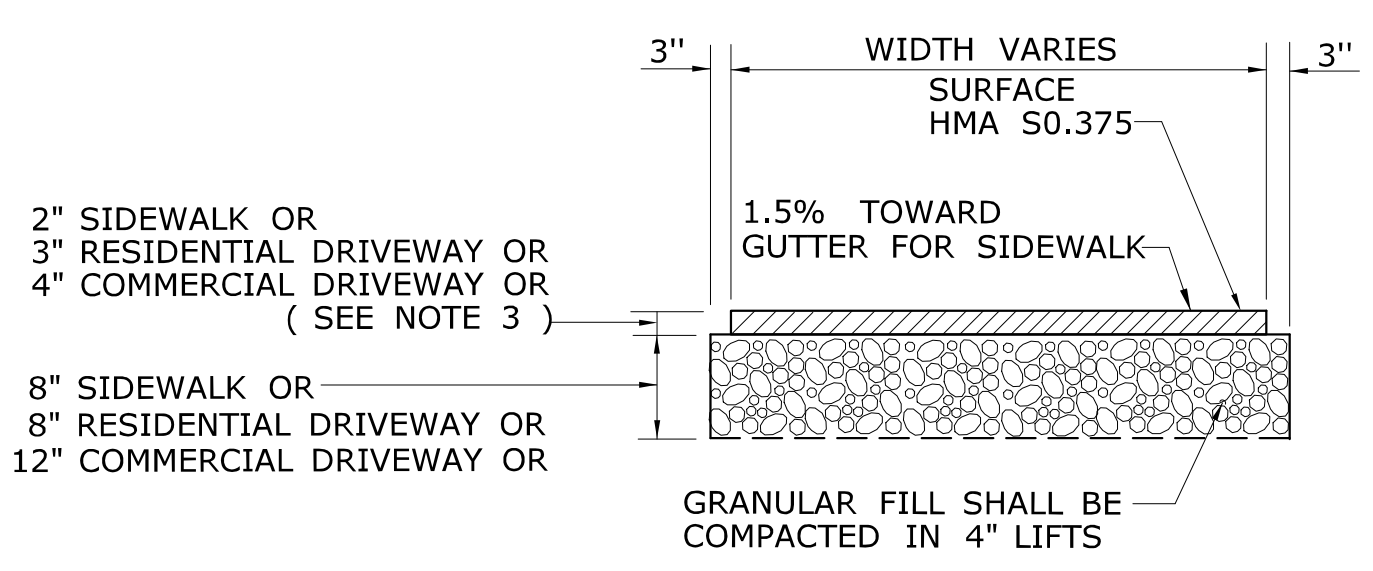
- GENERAL NOTES:**
1. DRIVEWAY ENTRANCE SHALL BE A MINIMUM OF 12' WIDE, EXCLUDING CURBING WHEN PRESENT.
  2. WELDED WIRE FABRIC MATS WITH REINFORCING AT CLOSER SPACING MAY BE USED.
  3. SURFACE HMA S0.375 TO BE PLACED IN TWO EQUAL LIFTS FOR BOTH RESIDENTIAL AND COMMERCIAL DRIVEWAYS.



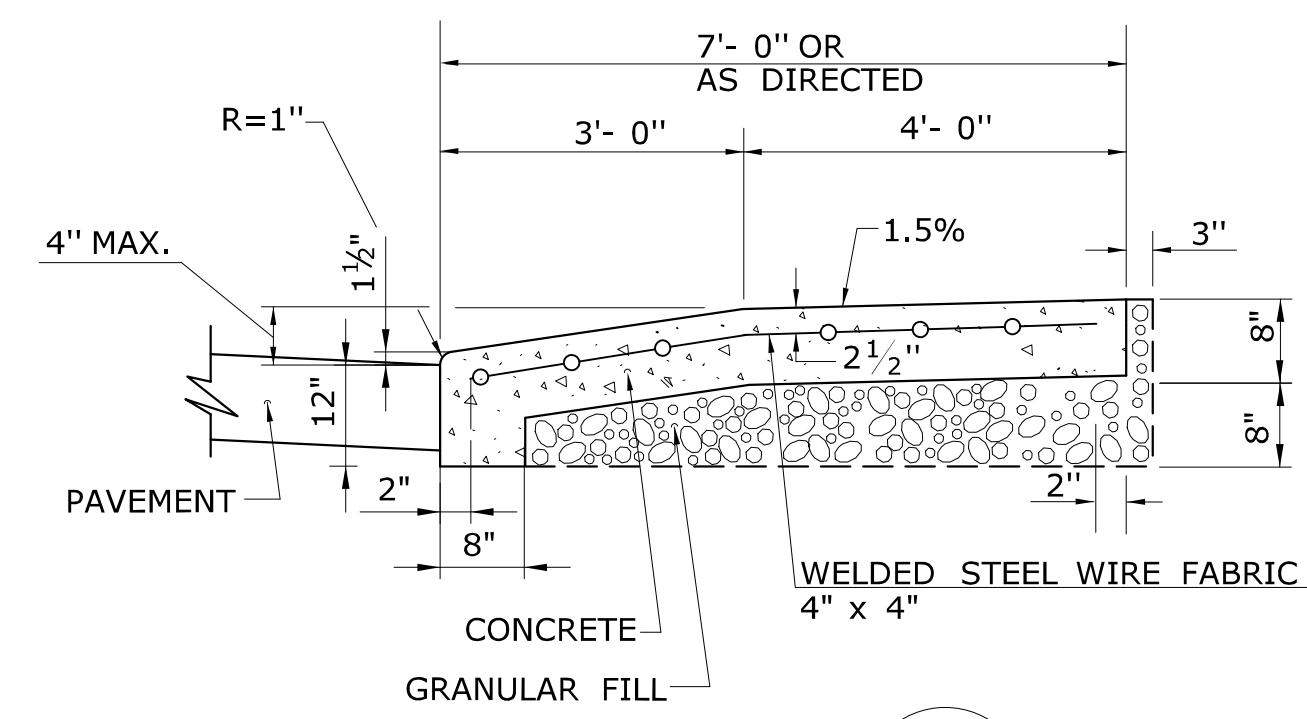
**SECTION A**



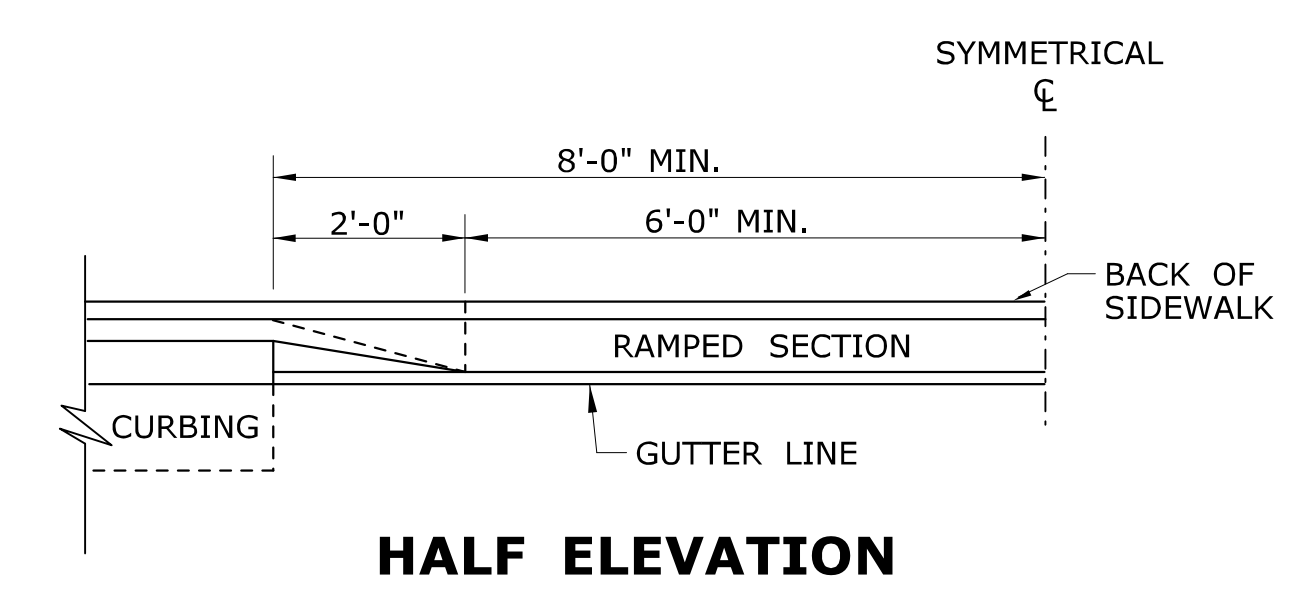
**SECTION C**



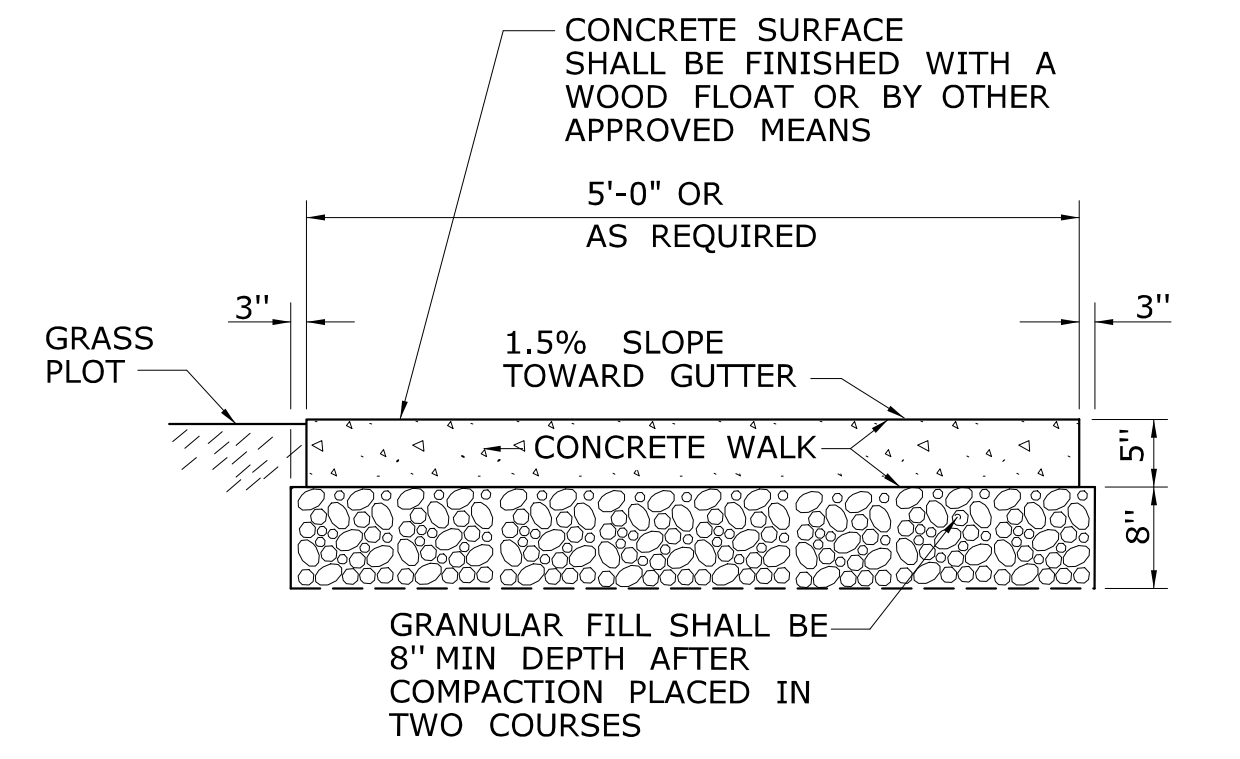
**TYPICAL SECTION  
BITUMINOUS CONCRETE  
SIDEWALK AND DRIVEWAY**



**SECTION B**

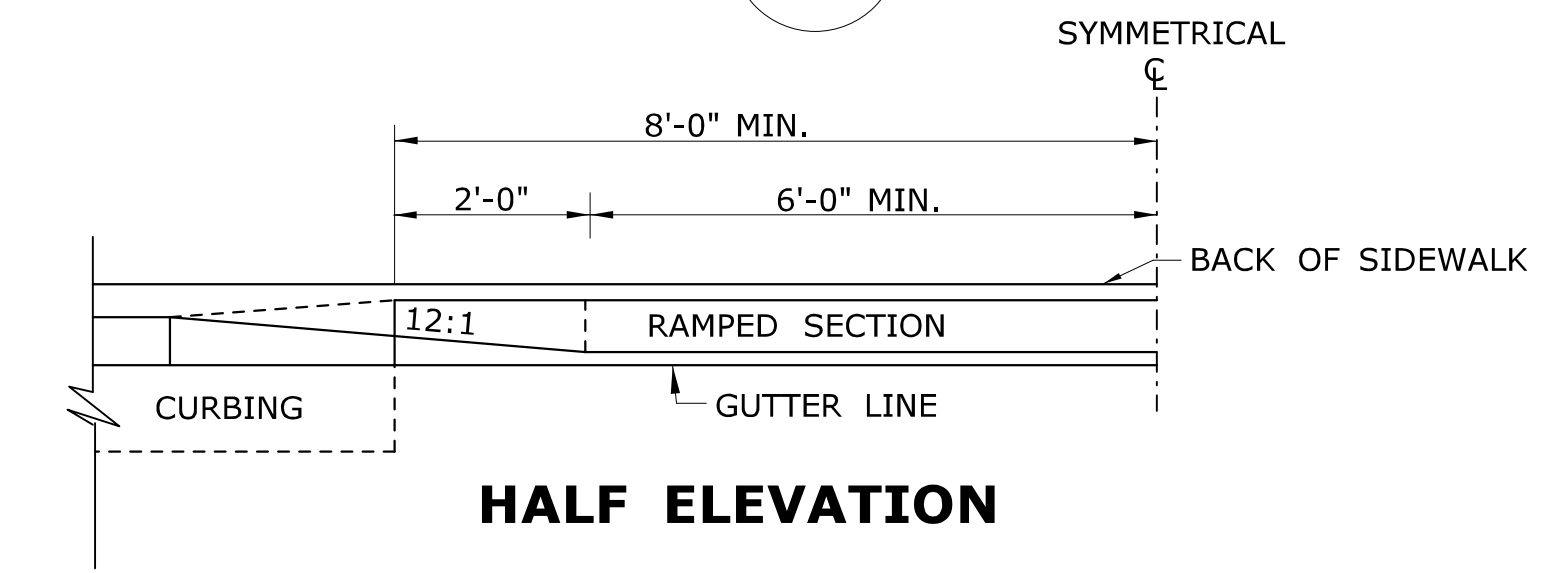


**HALF ELEVATION**

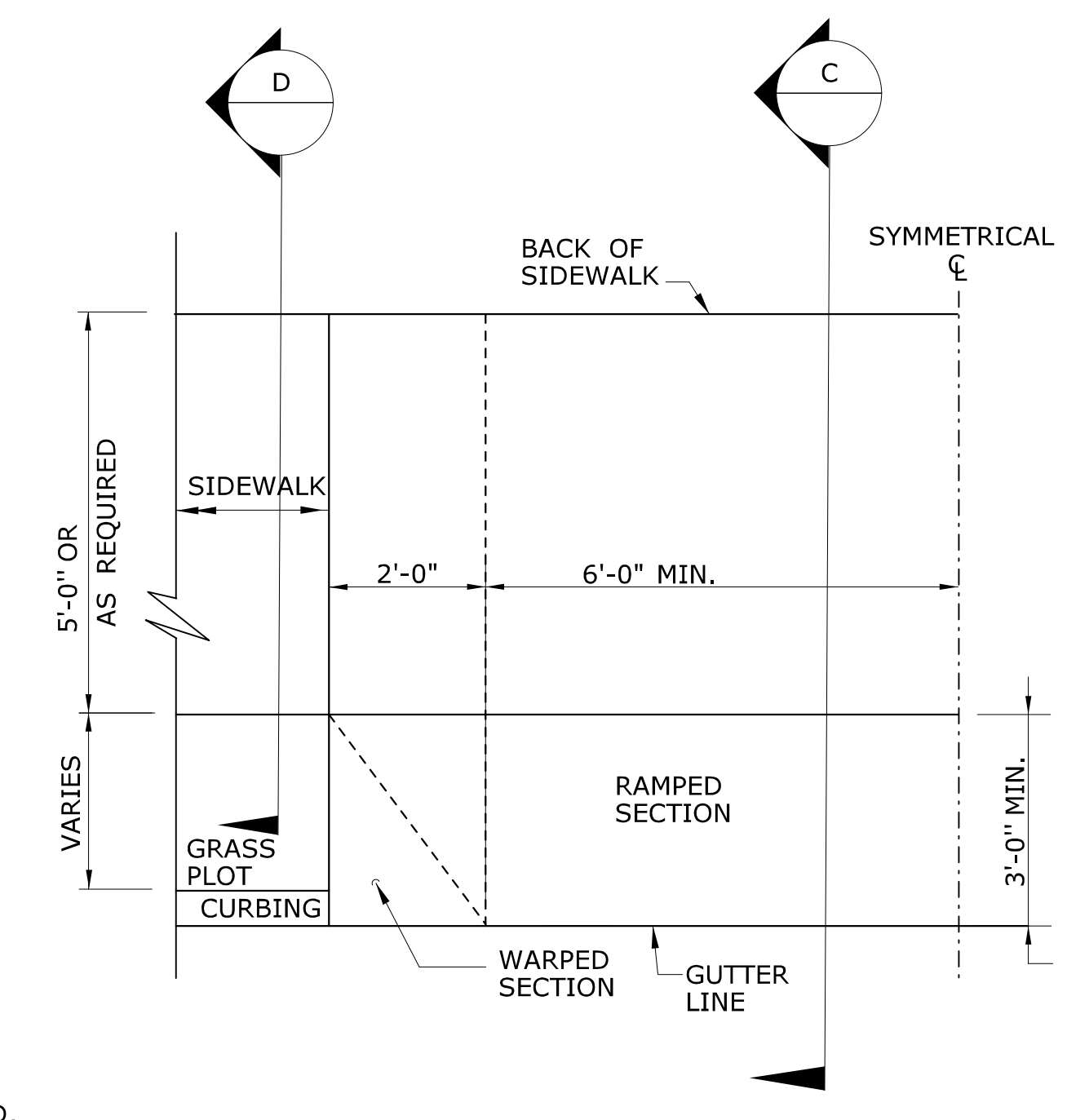


**SECTION D**

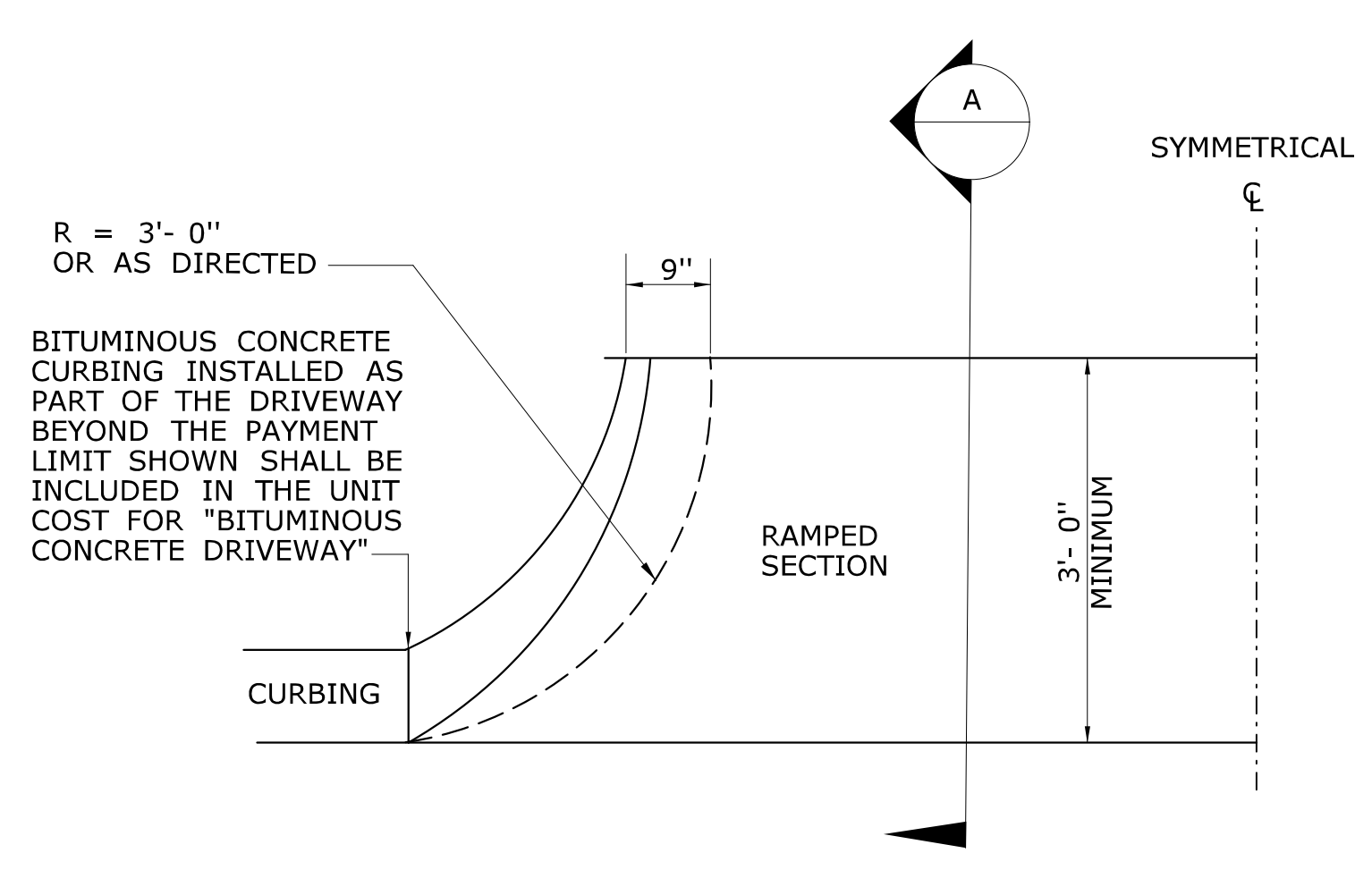
**5' WIDE CONCRETE  
SIDEWALK WITH GRASS PLOT**



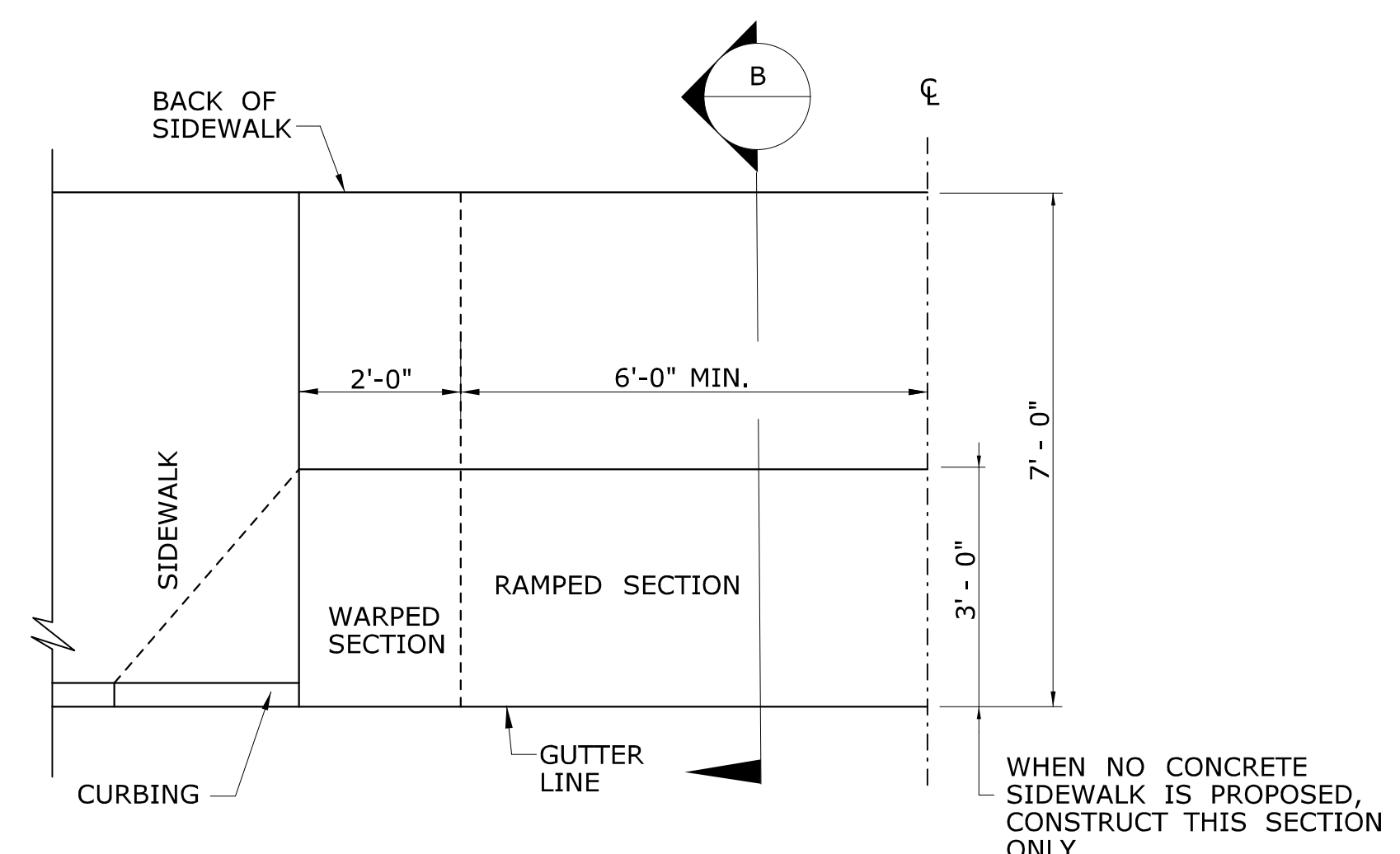
**HALF ELEVATION**



**HALF PLAN OF  
CONCRETE DRIVEWAY RAMP WHERE  
CURB IS SEPARATED FROM  
SIDEWALK BY GRASS PLOT**




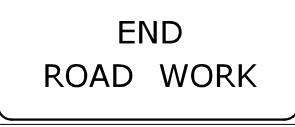

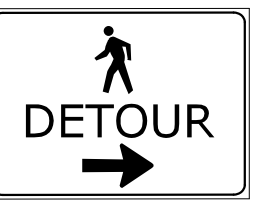


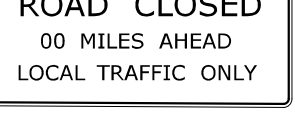
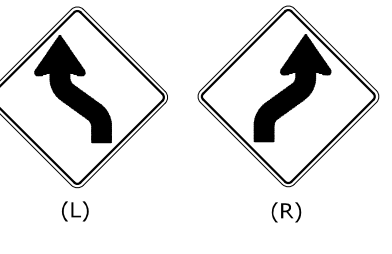


**HALF BITUMINOUS CONCRETE  
DRIVEWAY PLAN**



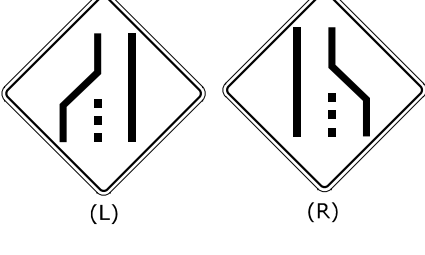





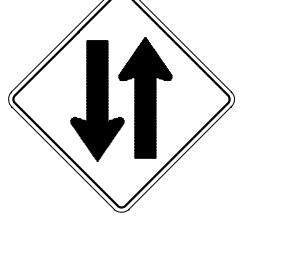
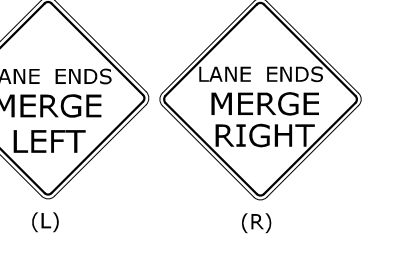
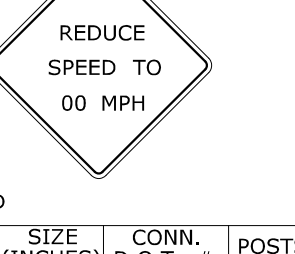

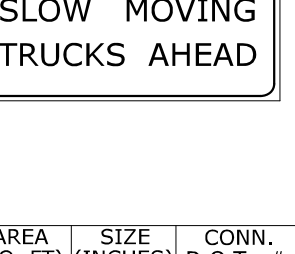
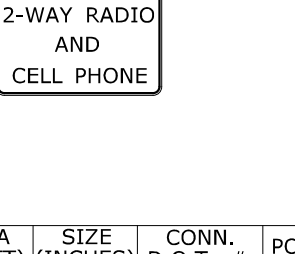

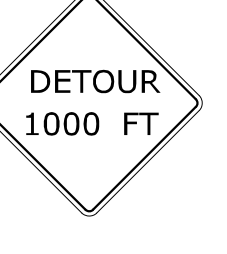

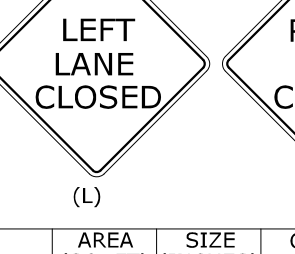
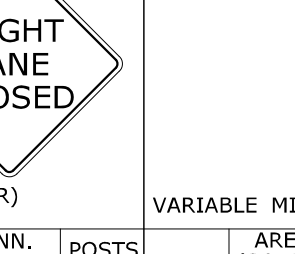
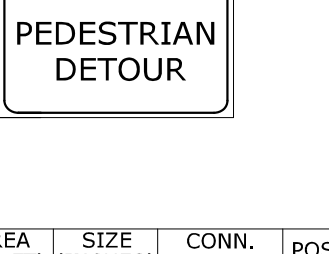
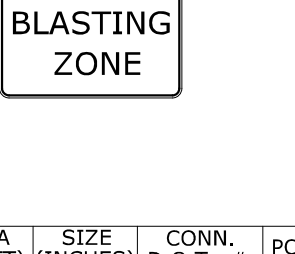
**HALF PLAN OF  
CONCRETE DRIVEWAY RAMP WHERE  
SIDEWALK ADJOINS CURBING**

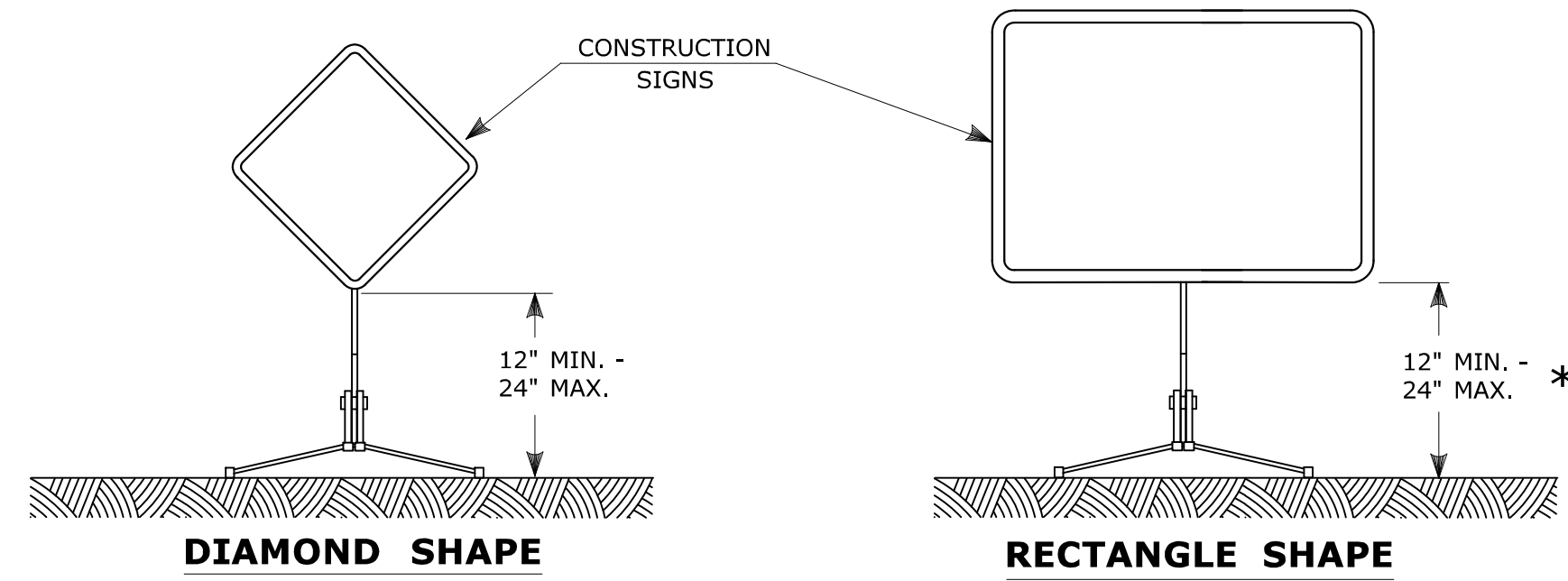
1	6/01/10	REVISED BORDER TITLE	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	<p><b>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</b></p>	SUBMITTED BY: <i>[Signature]</i> Leo Fontaine, P.E. 2017.06.07 07:34:10-04'00"	<b>CTDOT STANDARD SHEET</b>	STANDARD SHEET TITLE: <b>DRIVEWAY RAMPS AND SIDEWALKS</b>	STANDARD SHEET NO.: <b>HW-921_01</b>	
2	6/01/10	REVISED HALF ELEVATION DETAILS			APPROVED BY: <i>[Signature]</i> Gregory M. Dorosh, P.E. 2017.06.07 10:47:32-04'00"				<b>OFFICE OF ENGINEERING</b>
3	1/12	REVISE 2% MAX. SLOPE NOTE							
4	6/17	REVISED SLOPES & MATERIAL COMPOSITIONS							
-	-	INCREASED WALKING WIDTH OF CONCRETE DRIVEWAY RAMP							
REV.	DATE	REVISION DESCRIPTION	Plotted Date: 6/6/2017	NOT TO SCALE	Filename: HW-921_01.dgn Model: CT.Civil_2D_Sheet				



E5 - SERIES	G20 - SERIES	M4 - SERIES	R1 - SERIES	R9 & R11 - SERIES	W1 - SERIES	W3 - SERIES																																																																																
<p>E5-1</p>  <p>COPY &amp; BORDER - WHITE BACKGROUND - GREEN</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>16.0</td> <td>48</td> <td>51-6147</td> <td>2</td> </tr> </tbody> </table>	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	16.0	48	51-6147	2	<p>G20-2a</p>  <p>ROAD WORK NEXT 0 MILE(S) BE PREPARED TO STOP</p> <p>VARIABLE MILEAGE</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>8.0</td> <td>48X24</td> <td>80-9612</td> <td>2</td> </tr> <tr> <td>90.0</td> <td>120X108</td> <td>80-9728</td> <td></td> </tr> </tbody> </table>	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	8.0	48X24	80-9612	2	90.0	120X108	80-9728		<p>M4-8</p>  <p>M4-9b</p>  <p>VARIABLE ARROW</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>2.0</td> <td>24X12</td> <td>80-9707</td> <td>1</td> </tr> <tr> <td>5.0</td> <td>30X24</td> <td>80-9703</td> <td>1</td> </tr> </tbody> </table>	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	2.0	24X12	80-9707	1	5.0	30X24	80-9703	1	<p>R1-1</p>  <p>* COPY &amp; BORDER - WHITE BACKGROUND - RED</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>5.19</td> <td>30</td> <td>31-0552</td> <td>1</td> </tr> <tr> <td>13.30</td> <td>48</td> <td>31-0557</td> <td>2</td> </tr> </tbody> </table>	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	5.19	30	31-0552	1	13.30	48	31-0557	2	<p>R9-9</p>  <p>COPY &amp; BORDER - BLACK BACKGROUND - WHITE</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>3.75</td> <td>30X18</td> <td>80-9076</td> <td>1</td> </tr> </tbody> </table> <p>R11-3a</p>  <p>VARIABLE MILEAGE COPY &amp; BORDER - BLACK BACKGROUND - WHITE</p> <table border="1"> <thead> <tr> <th>AREA (SQ. FT)</th> <th>SIZE (INCHES)</th> <th>CONN. D.O.T. #</th> <th>POSTS</th> </tr> </thead> <tbody> <tr> <td>12.5</td> <td>60X30</td> <td>80-9077</td> <td>2</td> </tr> </tbody> </table>	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	3.75	30X18	80-9076	1	AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	12.5	60X30	80-9077	2	<p>W1-4</p>  <p>(L) (R)</p> <p>BOTH LANES SHIFT LEFT AHEAD (L)</p> <p>BOTH LANES SHIFT RIGHT AHEAD (R)</p> <p>AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tbody> <tr> <td>9.0</td> <td>36</td> <td>80-9432L</td> <td>1</td> </tr> <tr> <td>9.0</td> <td>36</td> <td>80-9431R</td> <td>1</td> </tr> <tr> <td>16.0</td> <td>48</td> <td>80-9452L</td> <td>2</td> </tr> <tr> <td>16.0</td> <td>48</td> <td>80-9451R</td> <td>2</td> </tr> </tbody> </table>	9.0	36	80-9432L	1	9.0	36	80-9431R	1	16.0	48	80-9452L	2	16.0	48	80-9451R	2	<p>W3-1</p>  <p>AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tbody> <tr> <td>9.0</td> <td>36</td> <td>80-9808</td> <td>1</td> </tr> </tbody> </table>	9.0	36	80-9808	1
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 M4-8a  M4-9b  VARIABLE ARROW   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 3.0           | 24X18         | 80-9708        | 1     | | 6.25          | 30X30         | 80-9706        | 1     | | R1-2  \* COPY & BORDER - RED BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 3.90          | 36            | 31-0523        | 1     | | 10.83         | 60            | 31-0528        | 2B    | | R9-11  VARIABLE ARROW COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 3.0           | 24X18         | 80-9074        | 1     |   R11-3b  VARIABLE MILEAGE COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 12.5          | 60X30         | 80-9078        | 2     | | W1-6  (L or R)  BOTH LANES SHIFT LEFT (L)  BOTH LANES SHIFT RIGHT (R)  AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS   |      |    |          |   | |------|----|----------|---| | 16.0 | 48 | 80-9434L | 2 | | 16.0 | 48 | 80-9436R | 2 | | W3-1a  OCTAGON - RED W/ WHITE BORDER ARROW & BORDER - BLACK BACKGROUND - FLUORESCENT ORANGE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 9.0           | 36            | 80-9050        | 1     | | 16.0          | 48            | 80-9051        | 2     | || CONSTRUCTION AHEAD  ROAD USE RESTRICTED STATE LIABILITY LIMITED GENERAL STATUTES SEC 13a-115, 13a-145 COMMISSIONER OF TRANSPORTATION   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS   |    | |---------------|---------------|----------------|---------|----| | 16-M          | 5.0           | 30X24          | 80-1613 | 1  | | 16-H          | 17.5          | 60X42          | 80-1608 | 2  | | 16-E          | 35.0          | 84X60          | 80-1605 | 2B | | 16.0 | 48 | 80-9712 | 2 |
 M4-10  (R)  (L)  AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS   |     |       |          |   | |-----|-------|----------|---| | 6.0 | 48X18 | 80-9701R | 2 | | 6.0 | 48X18 | 80-9702L | 2 | | R4-7  COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 5.0           | 24X30         | 31-1526        | 1     | | R9-11a  VARIABLE ARROW COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 2.0           | 24X12         | 80-9075        | 1     |   R11-3b  COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 12.5          | 60X30         | 80-9081        | 2     | | W1-8  AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS   |      |       |         |   | |------|-------|---------|---| | 8.0  | 48X24 | 80-9424 | 2 | | 12.5 | 60X30 | 80-9423 | 2 | | W3-2a  TRIANGLE - RED W/ WHITE BORDER ARROW & BORDER - BLACK BACKGROUND - FLUORESCENT ORANGE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 9.0           | 36            | 80-9054        | 1     | | 16.0          | 48            | 80-9055        | 2     | || CONSTRUCTION AHEAD  SIDEWALK USE RESTRICTED STATE LIABILITY LIMITED GENERAL STATUTES SEC 13a-115, 13a-145 COMMISSIONER OF TRANSPORTATION   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS   |   | |---------------|---------------|----------------|---------|---| | 16-S          | 10.0          | 48X30          | 80-1619 | 2 | | 9.0 | 36 | 50-5934 | 2 |
 M4-10  VARIABLE ARROW   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 5.0           | 30X24         | 80-9710        | 1     | | R11-2  COPY & BORDER - BLACK BACKGROUND - WHITE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 10.0          | 48X30         | 80-9080        | 2     | | 14.0          | 48X42         | 31-1906        | 2     | | 22.5          | 60X54         | 31-1907        | 2     | | 30.0          | 72X60         | 31-1908        | 2B    | | W1-8  AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS   |     |       |         |   | |-----|-------|---------|---| | 3.0 | 18X24 | 80-9401 | 1 | | 5.0 | 24X30 | 80-9403 | 1 | | 7.5 | 30X36 | 80-9404 | 1 | | W3-3  TOP CIRCLE - RED MIDDLE CIRCLE - YELLOW BOTTOM CIRCLE - GREEN COPY & BORDER - BLACK BACKGROUND - FLUORESCENT ORANGE   | AREA (SQ. FT) | SIZE (INCHES) | CONN. D.O.T. # | POSTS | |---------------|---------------|----------------|-------| | 25.0          | 60            | 80-9444L       | 2B    | | 25.0          | 60            | 80-9446R       | 2B    | |

W4-W6 - SERIES	W8-W9 - SERIES	W13 - SERIES	W20 - SERIES	W21 - SERIES	W22 - SERIES	STOP-SLOW PADDLE																																																																																																					
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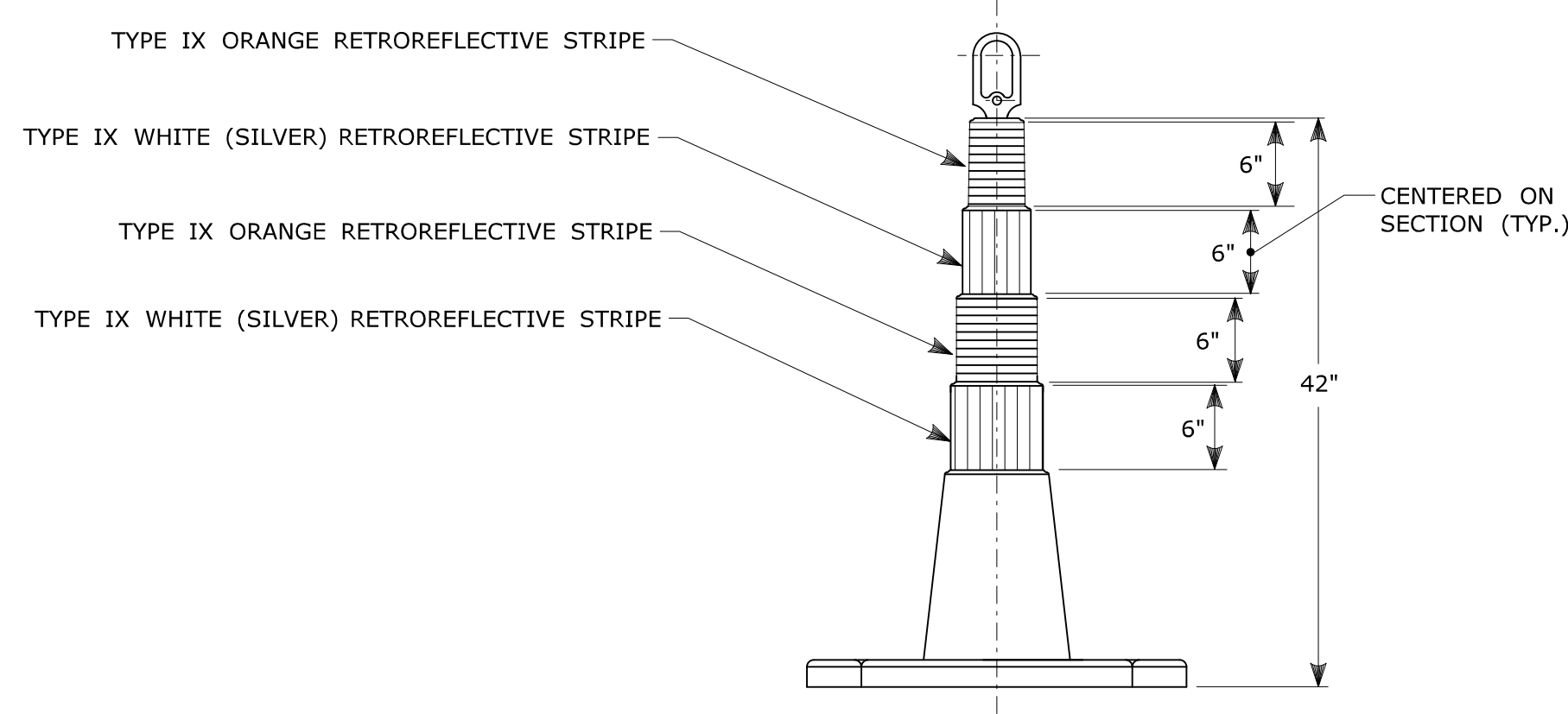


**PORTABLE CONSTRUCTION SIGNS**

NOTES FOR PORTABLE SIGN SUPPORTS:

- SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220.01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.

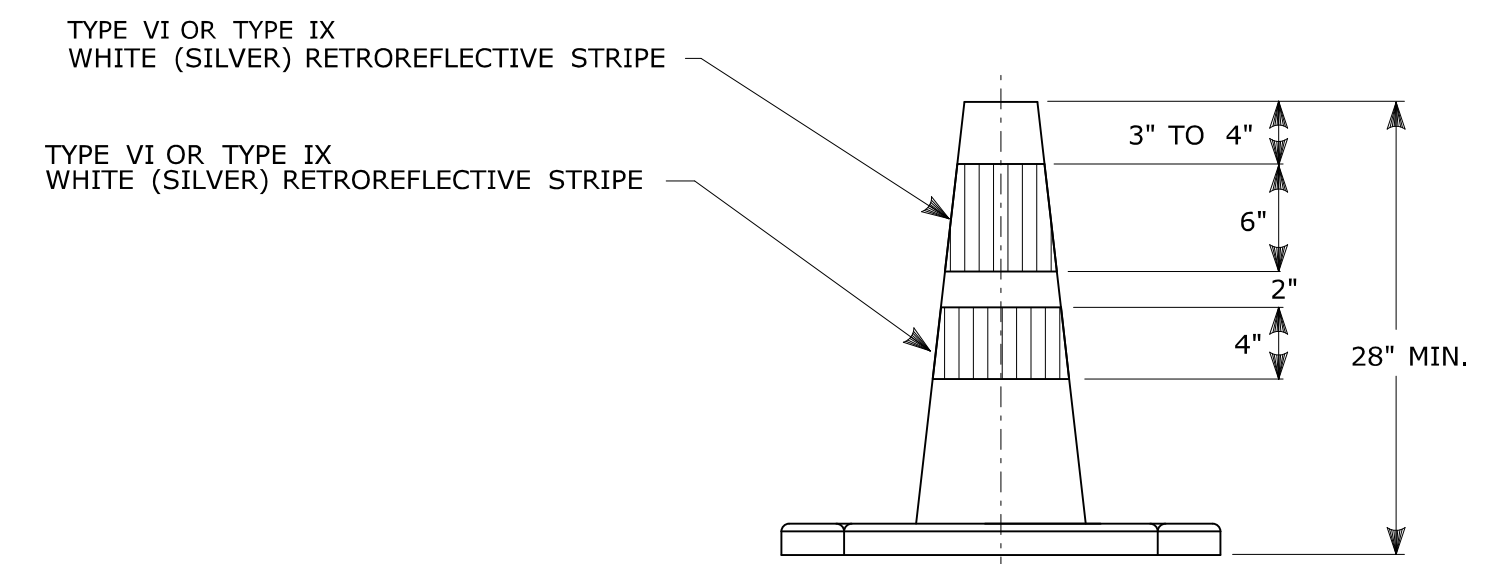
\* FOR E5-1 (EXIT SIGNS) USE MIN 48".



**42" TRAFFIC CONE**

NOTES:

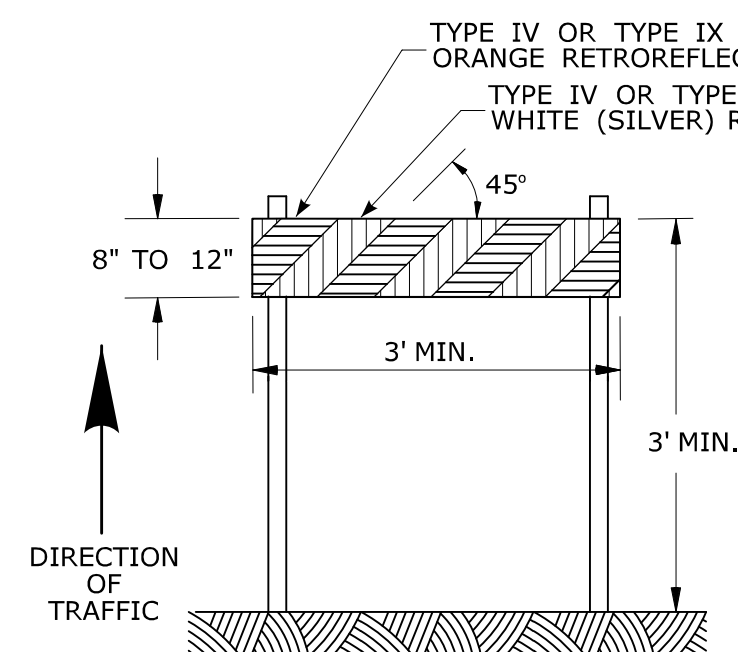
- TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



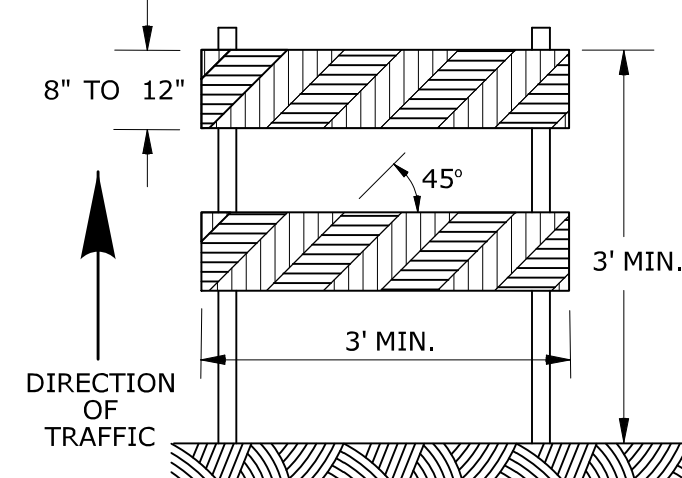
**TRAFFIC CONE**

NOTES:

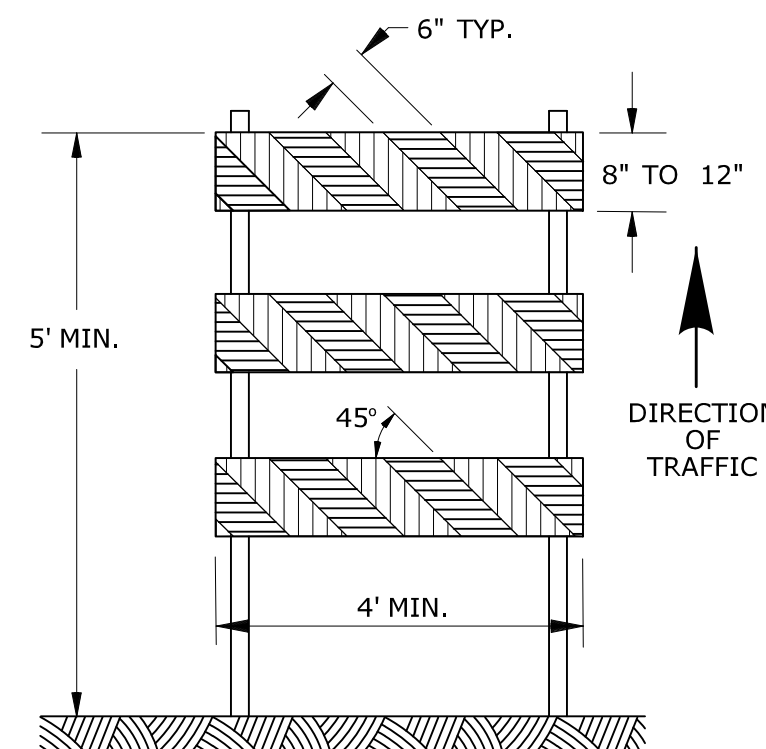
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- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



**TYPE I BARRICADE**



**TYPE II BARRICADE**

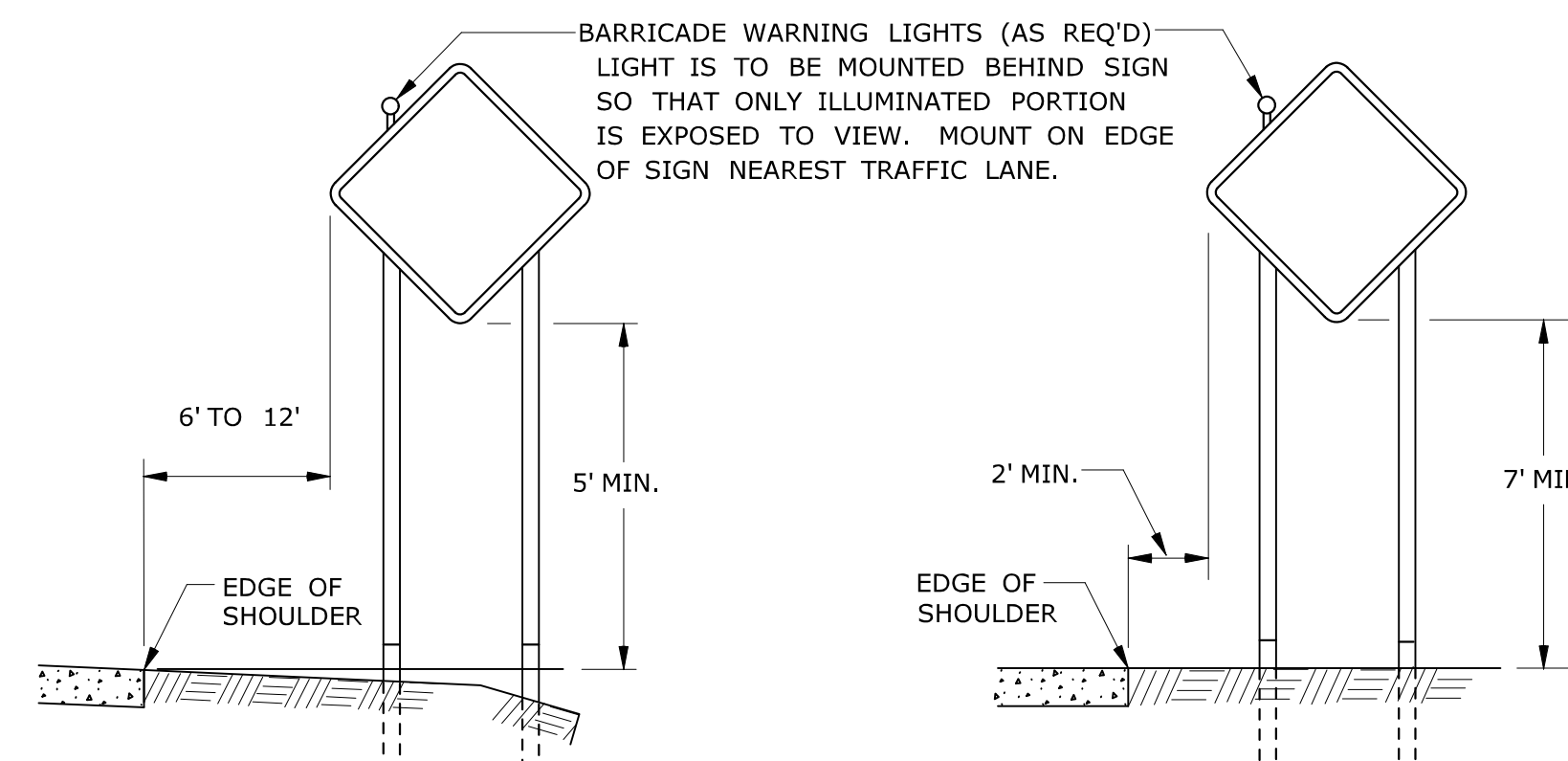


**TYPE III BARRICADE**

**CONSTRUCTION BARRICADES**

NOTES:

- CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.



**RURAL AREA**

**URBAN AREA**

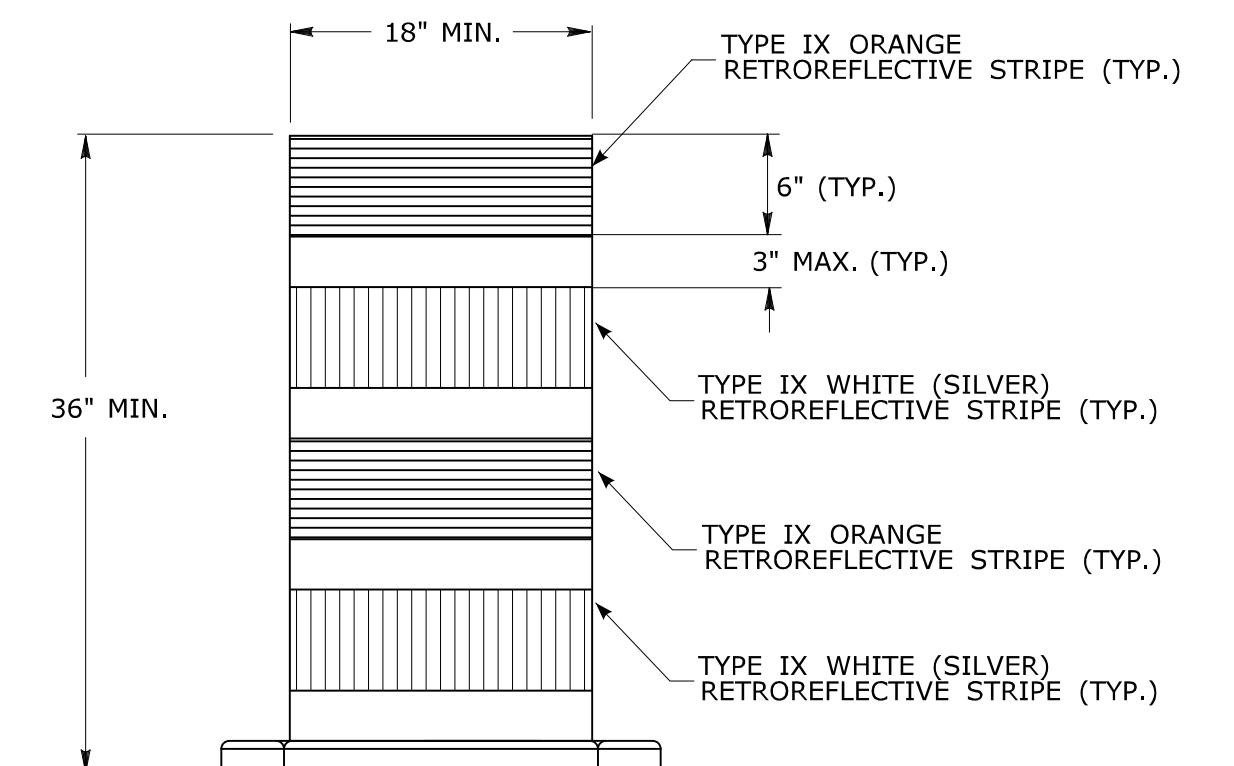
**PLACEMENT OF CONSTRUCTION SIGNS  
TYPICAL LONG TERM INSTALLATION**

NOTES:

SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES.

SEE TYPICAL SHEETS:

- "TYPICAL SIGN SUPPORT AND SIGN PLACEMENT DETAILS-GORE EXIT SIGN"
- "TYPICAL METAL SIGN POSTS AND SIGN MOUNTING DETAILS"



**TRAFFIC DRUM  
FRONT VIEW**

NOTES:

- TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.				SUBMITTED BY: <i>Mark Makuch</i> Mark F. Makuch, P.E. 2015.08.26 07:15:47-04'00' APPROVED BY: <i>Charles S. Harlow</i> Charles S. Harlow, P.E. 2015.08.28 11:40:57-04'00'	STANDARD SHEET TITLE: <b>CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES</b>	STANDARD SHEET NO.: <b>TR-1220_02</b>
2 8-2015 UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION. 1 2-2011 MINOR REVISIONS.	REVISION DESCRIPTION	Plotted Date: 8/14/2015	NOT TO SCALE	CTDOT STANDARD SHEET OFFICE OF ENGINEERING		
REV. DATE		FILENAME: CTDOT_TRAFFIC_STD.DGN MODEL: TR-1220_02				