*ONLY STANDARD SHEETS MARKED WITH AN "✓" ARE IN THIS PROJECT # L079-0004 **REVISED OR ADDED

✓*	SHEET NO.	TITLE	APPROVAL DATE**
✓	HW-211_01	ANTI-TRACKING PAD	11-09-22
✓	HW-286_01	DRAINAGE TRENCH EXCAVATION	11-09-22
✓	HW-505 01a	STRAIGHT ENDWALLS	02-28-24
✓	HW-505 01b	STEEL REINFORCING FOR STRAIGHT ENDWALLS (2" DIFF BASE TO FLOW LINE)	01-05-24
✓	HW-505 01c	STEEL REINFORCING FOR STRAIGHT ENDWALLS (STANDARD RIPRAP APPLICATION)	01-05-24
	HW-505_02	TYPE "D-G" & "L" ENDWALLS	01-05-24
	HW-586_01	CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" STRUCTURES	01-05-24
✓	HW-586_02	CATCH BASIN (TYPES "C" AND "C-L") FOR DOUBLE GRATE TYPE I STRUCTURES	01-05-24
✓	HW-586_03	CATCH BASIN (TYPES "C" AND "C-L") FOR DOUBLE GRATE TYPE II STRUCTURES	01-05-24
✓	HW-586_04	PRECAST CATCH BASIN AND ROUND STRUCTURE	10-17-24
✓	HW-586_05	PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE I	10-17-24
✓	HW-586_06	PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE II	10-17-24
✓	HW-586 07a	CATCH BASIN TYPE "C" AND "C-L" TOPS	01-05-24
✓	HW-586 07b	CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE I TOPS	11-09-22
✓	HW-586 07c	CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE II TOPS	11-08-22
	HW-586 07d	CATCH BASIN TYPE "C-G" AND "C-M" BARRIER CURB TOPS	11-09-22
✓	HW-586_08	CATCH BASIN FRAMES AND GRATES	11-09-22
	HW-586_09	CATCH BASIN LOCK DOWN TOPS	11-09-22
	HW-586_10a	MANHOLE FRAME AND COVER	01-05-24
	HW-586_10b	MANHOLE FRAME AND GRATE	01-05-24
	HW-586_10c	REINFORCED PRECAST CONCRETE MANHOLE	11-08-22
	HW-586_10d	MANHOLE NON-PRECAST CONCRETE UNIT	11-08-22
	HW-686_01a	CONCRETE PIPE CONNECTION SHEET 1	11-08-22
	HW-686_01b	CONCRETE PIPE CONNECTION SHEET 2	11-08-22
	HW-686_02a	DRAINANGE PIPE ENDS SHEET 1 [CORRUGATED METAL PIPE]	11-08-22
	HW-686_02b	DRAINAGE PIPE ENDS SHEET 2 [CONCRETE PIPE]	11-08-22
	HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS	10-17-24
	HW-803_01	PAVED APRONS	11-08-22
✓	HW-811_01	CONCRETE CURBING	11-08-22
	HW-813_01	GRANITE STONE TRANSITION CURBING	11-08-22
	HW-813_02	STONE CURBING	11-08-22
✓	HW-815_01	BITUMINOUS CONCRETE CURBING	11-08-22

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-821_01a	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_01b	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_01c	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 3	11-08-22
	HW-821_02a	45" F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1	11-08-22
	HW-821_02b	45" F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 2	11-08-22
	HW-821_03a	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_03b	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_03c	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 3	11-08-22
	HW-821_03d	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 4	11-08-22
	HW-821_03e	TRANSITION - 32" JERSEY SHAPE TO 45" F-SHAPE	11-08-22
	HW-821_04a	MERRITT PARKWAY NARROW MEDIAN BARRIER	11-08-22
	HW-821_04b	MERRITT PARKWAY - 2' WIDE MEDIAN BARRIER AND ROADSIDE BARRIER	11-08-22
	HW-821_05a	TRANSITION - 45" F-SHAPE TO 54" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_05b	TRANSITION - 45" F-SHAPE TO 54" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_06	54" VERTICAL SHAPE BARRIER	11-08-22
	HW-821_07	MISCELLANOUS DETAILS FOR BARRIER TRANSITIONS	11-08-22
	HW-821_08a	F-SHAPE CONC. BARRIER CURB (21"x45") TRANSITION FOR THRIE-BEAM	10-17-24
	HW-821_08b	F-SHAPE CONC. BARRIER CURB (21"x45") TRANSITION FOR THRIE-BEAM - REINF.	11-08-22
	HW-821_09a	SINGLE SLOPE CONC. BARRIER CURB (20"x42") TRANS. FOR THRIE-BEAM	11-08-22
	HW-821_09b	SINGLE SLOPE CONC. BARRIER CURB (20"x42") TRANS. FOR THRIE-BEAM - REINF.	11-08-22
	HW-821_10a	VERTICAL FACE CONC. (21"x54") TRANSITION FOR THRIE-BEAM	11-08-22
	HW-821 10b	VERTICAL FACE CONC. (21"x54") TRANSITION FOR THRIE-BEAM REINF.	11-08-22
	HW-821_11a	42" SINGLE SLOPE PRECAST CONCRETE BARRIER CURB -SHEET 1	01-05-24
	HW-821_11b	42" SINGLE SLOPE PRECAST CONCRETE BARRIER CURB -SHEET 2	01-05-24
✓	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	11-08-22
✓	HW-822 02a	TEMPORARY TRAFFIC BARRIER - DETAILS	11-08-22
✓	HW-822 02b	TEMPORARY TRAFFIC BARRIER (BOLTED)	10-17-24
✓	HW-822 02c	TEMPORARY TRAFFIC BARRIER & TEMPORARY TRAFFIC BARRIER (PINNED)	10-17-24
	HW-905_01	STONE WALL FENCE	11-09-22
	HW-906_01	WIRE FENCE	11-08-22

NOT TO SCALE

SIGNATURE BLOCK:

Ronald Sacchi
GM2 Associates, Inc.
rsacchi@gm2inc.com
2026.10.29 08:39:23-04'00'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
HIGHWAY STANDARD SHEET INDEX

STANDARD SHEET NO.:
1 OF 2

PLOTTED DATE: 10/21/2024

*ONLY STANDARD SHEETS MARKED WITH AN " ✓ " ARE IN THIS PROJECT # **L079-0004** **REVISED OR ADDED

✓*	SHEET NO.	TITLE	APPROVAL DATE**
✓	HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE	11-08-22
✓	HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL	11-08-22
	HW-910_03	METAL BEAM RAIL (TYPE MD-B 350) GUIDERAIL	11-08-22
	HW-910_04	METAL BEAM RAIL (TYPE R-B 350) SYSTEMS 5, 5A, & 6	11-08-22
	HW-910_05	METAL BEAM RAIL R-B 350 SPAN TYPE I, II, III SECTIONS	11-08-22
	HW-910_06	R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	11-08-22
✓	HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	11-08-22
	HW-910 09a	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 1	11-08-22
	HW-910 09b	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 2	11-08-22
	HW-910 10	METAL BEAM RAIL 8" x 6" BOX BEAM	11-08-22
✓	HW-910 11	CURVED GUIDERAIL TREATMENT DETAIL	11-08-22
	HW-910_12a	MERRITT PARKWAY GUIDERAIL LEADING END ATTACHMENTS AND SYSTEMS 2&3	11-08-22
	HW-910_12b	MERRITT PARKWAY GUIDERAIL HARDWARE DETAILS	11-08-22
	HW-910_12c	MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENTS	11-02-22
	HW-910_12d	MERRITT PARKWAY MEDIAN GUIDERAIL AND END ANCHOR	10-17-24
	HW-910_13a	THRIE-BEAM METAL BEAM RAIL HARDWARE	11-08-22
	HW-910_13b	THRIE-BEAM TRANSITIONS	11-08-22
	HW-910_14a	THRIE-BEAM 350 BRIDGE ATTACHMENT	11-08-22
	HW-910_14b	THRIE-BEAM 350 GUIDERAIL TRANSITION TO R-B 350 GUIDERAIL	11-08-22
	HW-910_15	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	11-08-22
	HW-910_16	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	11-08-22
✓	HW-910_17	R-B TERMINAL SECTION	11-08-22
	HW-910_18	METAL BEAM RAIL (TYPE MD-I) GUIDERAIL	11-08-22
	HW-910_19a	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE I	10-17-24
	HW-910_19b	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE II	10-17-24
	HW-910_19c	METAL BEAM RAIL (MODIFIED TYPE R-I) SYSTEMS 2 AND 3	11-08-22
	HW-910_20	MASH W-BEAM HARDWARE	10-17-24
	HW-910_21	METAL BEAM RAIL (R-B MASH) GUIDERAIL	01-05-24
	HW-910_22	METAL BEAM RAIL (MD-B MASH) GUIDERAIL	11-08-22
	HW-910_23	METAL BEAM RAIL (R-B MASH) HALF & QUARTER POST SPACING GUIDERAIL	11-08-22
	HW-910_24	METAL BEAM RAIL SPAN SECTION TYPES II AND III	11-08-22

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-910_25a	METAL BEAM RAIL TRANSITION 350 TO MASH	10-17-24
	HW-910_25b	METAL BEAM RAIL MEDIAN APPLICATION TRANSITION 350 TO MASH GUIDERAIL	01-05-24
	HW-910_26	THRIE-BEAM ATTACHMENT HARDWARE	11-08-22
	HW-910_27	THRIE-BEAM ATTACHMENT	11-08-22
	HW-910_29	THRIE-BEAM BRIDGE ATTACHMENT TRAILING END	02-02-24
	HW-911_01	R-B END ANCHORAGE TYPE I AND II	10-17-24
	HW-911_02	MD-B END ANCHORAGE TYPE I	10-17-24
	HW-911_03	ANCHOR IN EARTH CUT SLOPE & ANCHOR IN ROCK CUT SLOPE	01-05-24
	HW-911_05	MERRITT PARKWAY GUIDERAIL END ANCHORS	11-08-22
	HW-913_01a	CHAIN LINK FENCE	11-08-22
	HW-913_01b	CHAIN LINK FENCE HARDWARE	11-08-22
	HW-913_02	CHAIN LINK FENCE GATES	11-08-22
	HW-918_01a	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 1	11-08-22
	HW-918_01b	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 2	11-08-22
	HW-918_01c	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 3	11-08-22
✓	HW-921_01	CONCRETE SIDEWALKS	11-08-22
✓	HW-922_01	BITUMINOUS CONCRETE SIDEWALK AND BITUMINOUS CONCRETE DRIVEWAY	11-08-22
✓	HW-924_01	CONCRETE DRIVEWAY RAMPS	10-17-24
✓	HW-930_01	OBJECT MARKER (MAINTENANCE)	10-17-24
	HW-949_01a	LANDSCAPE PLANTING	11-09-22
	HW-949_01b	TREE STAKING	11-02-22
	HW-1800_01	GRADING PLAN FOR IMPACT ATTENUATION SYSTEMS (FLARED AND TANGENTIAL)	10-17-24
	HW-1800 02	GRADING PLAN FOR IMPACT ATTENUATION SYSTEMS (MEDIAN/GORE)	10-17-24

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Ronald Sacchi
GM2 Associates, Inc.
rsacchi@gm2inc.com
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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

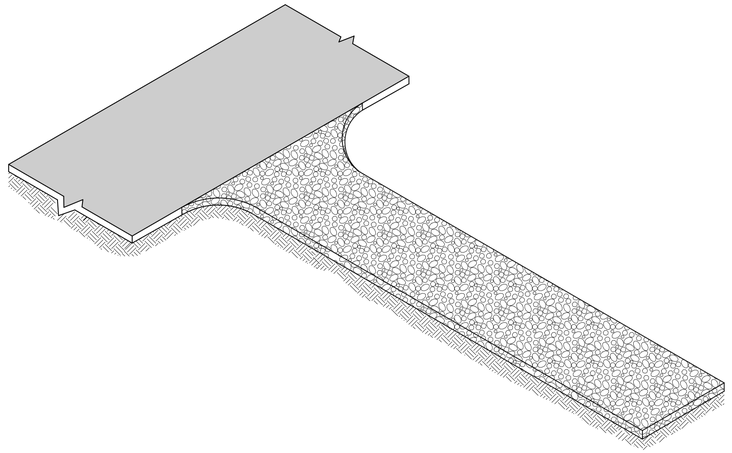
STANDARD SHEET TITLE:
HIGHWAY STANDARD SHEET INDEX

STANDARD SHEET NO.:
2 OF 2

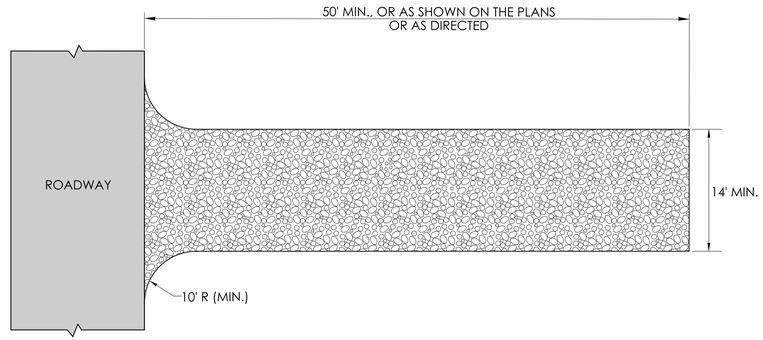
PLOTTED DATE: 10/21/2024

GENERAL NOTE:

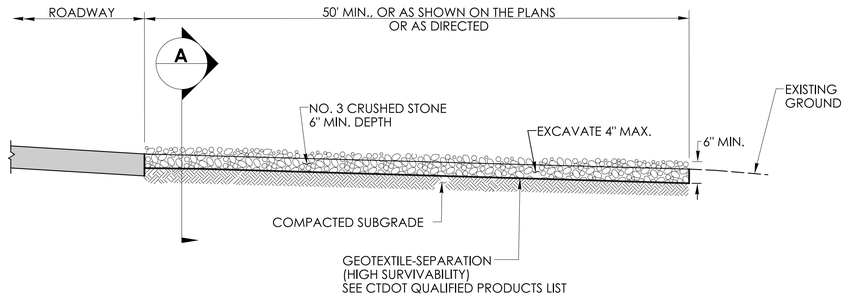
1. THE LENGTH OF THE ANTI-TRACKING PAD SHALL BE INCREASED AS DIRECTED FOR SITES COMPOSED OF CLAY OR SILTS.



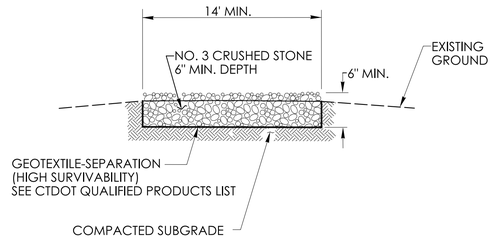
ANTI-TRACKING PAD



PLAN



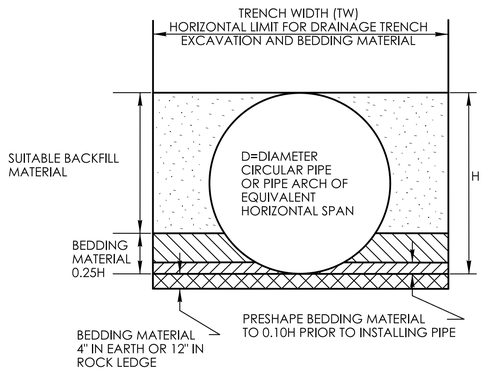
ELEVATION



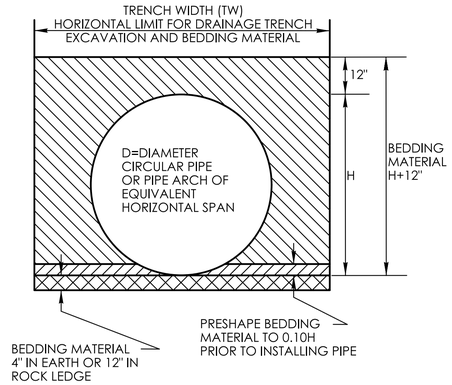
SECTION A

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 14:21:42-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.09 13:46:56-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: ANTI-TRACKING PAD	STANDARD SHEET NO.: HW-211_01

PLOTTED DATE: 9/21/2022



PIPE TRENCH
FOR PIPES LESS THAN 48"



PIPE TRENCH
FOR PIPES GREATER THAN
OR EQUAL TO 48"

TRENCH WIDTH (TW) CHART

PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 30"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN GREATER THAN OR EQUAL TO 30"	3' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH FABRICATED FROM STRUCTURAL PLATES	4' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OR FOUNDATION WALLS

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SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2022.09.27 14:24:13-04'00'

APPROVED BY:
Digitally signed by Calabrese, Michael
Date: 2022.11.09 13:47:30-05'00'

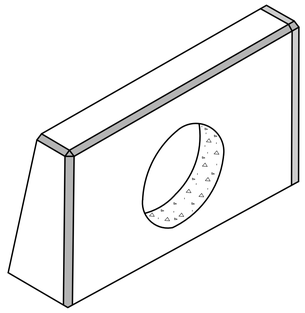
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

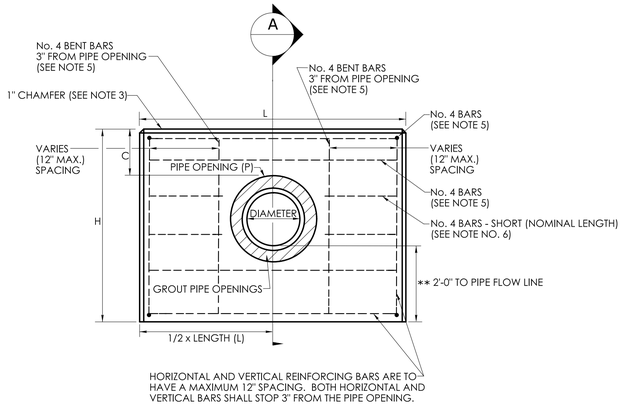
STANDARD SHEET TITLE:
DRAINAGE TRENCH EXCAVATION

STANDARD SHEET NO.:
HW-286_01

PLOTTED DATE: 9/21/2022

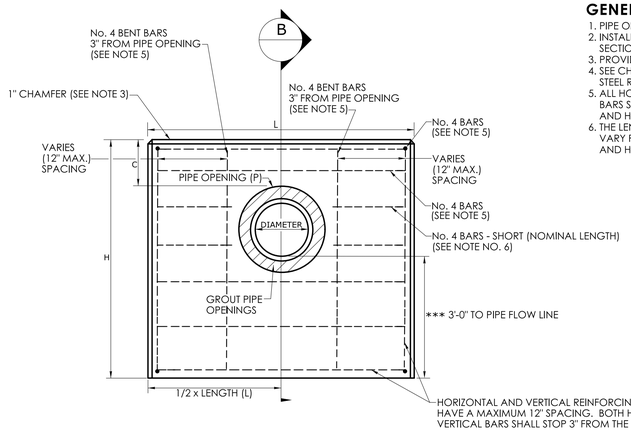


STRAIGHT ENDWALL



FRONT ELEVATION

** THIS ENDWALL CONFIGURATION IS TO BE USED WHEN ALL MATERIAL EXCEPT STANDARD RIPRAP IS TO BE INSTALLED AT THE OUTLET. A 2'-0" ELEVATION DIFFERENCE IS PROVIDED FROM THE BASE TO THE PIPE FLOW LINE.

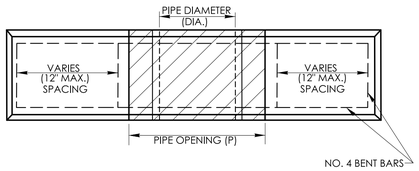


FRONT ELEVATION

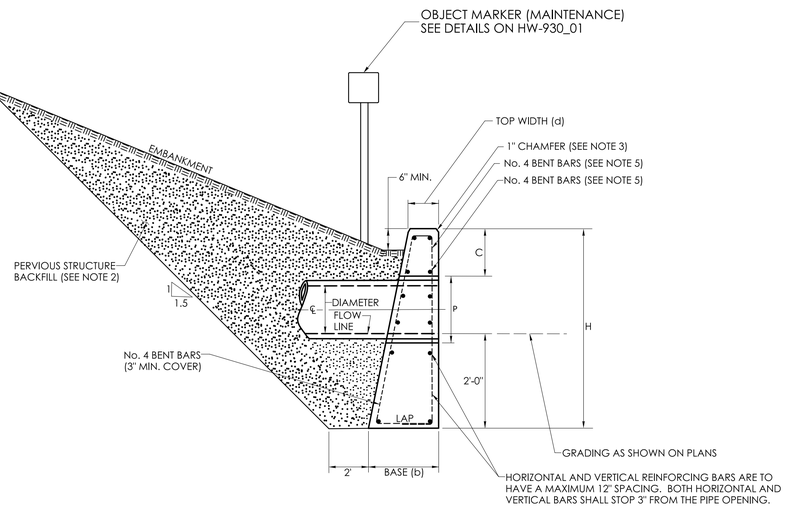
*** THIS ENDWALL CONFIGURATION IS TO BE USED WHEN STANDARD RIPRAP IS INSTALLED AT THE OUTLET. A 3'-0" ELEVATION DIFFERENCE IS PROVIDED TO ACCOMMODATE THE PLACEMENT OF THE STANDARD RIPRAP.

GENERAL NOTES:

1. PIPE OPENING (P) DIMENSIONS ARE NOMINAL (SEE CHART*).
2. INSTALL THE PERVIOUS STRUCTURE BACKFILL AS SHOWN IN SECTION A AND B, AND ONLY ALONG THE LENGTH OF THE ENDWALL.
3. PROVIDE A 1" CHAMFER ON ALL EXPOSED EDGES OR AS SHOWN.
4. SEE CHARTS BELOW FOR STANDARD WALL DIMENSIONS AND STEEL REINFORCING DETAILS.
5. ALL HORIZONTAL BARS SHOWN ARE NO. 4 BARS AND ALL VERTICAL BARS SHOWN ARE NO. 4 BENT BARS. SEE SHEETS HW-505_01b AND HW-505_01c FOR REINFORCING DETAILS.
6. THE LENGTH AND QUANTITY OF NO. 4 BARS - SHORT (NOMINAL LENGTH) VARY FOR EACH WALL SIZE. THESE BARS ARE SHOWN ON HW-505_01b AND HW-505_01c FOR REFERENCE ONLY.

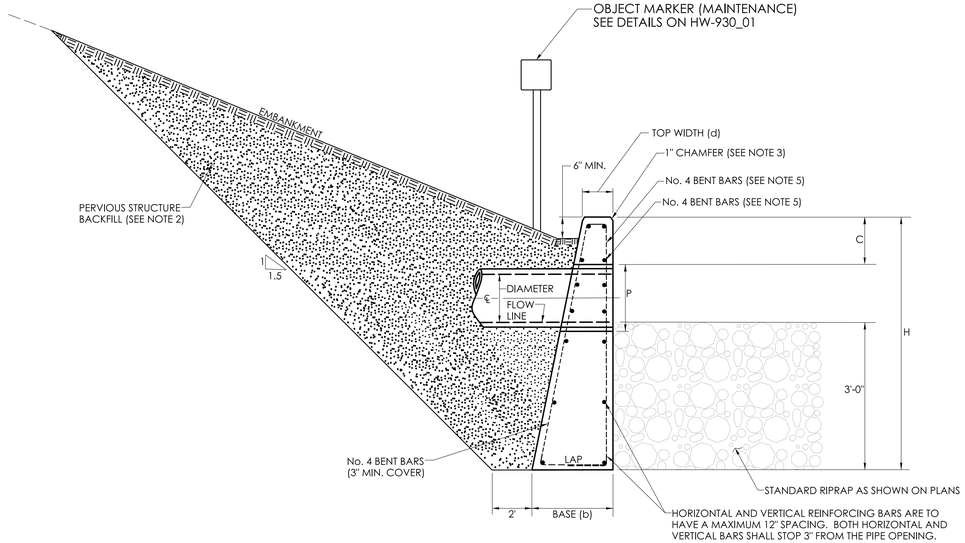


STRAIGHT ENDWALL PLAN



SECTION A

STRAIGHT ENDWALL



SECTION B

STRAIGHT ENDWALL FOR STANDARD RIPRAP APPLICATION

STRAIGHT ENDWALL DIMENSIONS

CONCRETE								REINFORCING STEEL		
PIPE DIAMETER (DIA.)	CLEARANCE (C)	*PIPE OPENINGS (P)	TOTAL HEIGHT (H)	LENGTH (L)	TOP WIDTH (d)	BASE (b)	VOL.	PIPE DIAMETER (DIA.)	NO. 4 BENT BARS	NO. 4 BARS - (NOMINAL LENGTH)
IN.	IN.	IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.	C.Y.	IN.	EA.	EA.
12"	14"	20"	4'-6"	4'-6"	1'-3"	2'-0"	1.10	12"	4	14 - (4'-0")
15"	13.5"	24"	4'-9"	5'-6"	1'-3"	2'-0"	1.39	15"	6	14 - (5'-0")
18"	14"	26"	5'-0"	6'-6"	1'-3"	2'-0"	1.75	18"	6	14 - (6'-0")
24"	14"	32"	5'-6"	8'-6"	1'-6"	2'-3"	2.87	24"	8	16 - (8'-0")
30"	12"	42"	6'-0"	10'-6"	1'-9"	2'-6"	3.98	30"	8	14 - (10'-0")
36"	12"	48"	6'-6"	12'-6"	1'-9"	2'-8"	5.67	36"	10	16 - (12'-0")
42"	12"	54"	7'-0"	14'-6"	2'-0"	3'-0"	7.99	42"	12	16 - (14'-0")
48"	11"	62"	7'-6"	16'-6"	2'-0"	3'-0"	9.59	48"	14	18 - (16'-0")

SEE PROJECT PLANS FOR NON-STANDARD ENDWALL DETAILS

STRAIGHT ENDWALL DIMENSIONS (FOR STANDARD RIPRAP APPLICATION)

CONCRETE								REINFORCING STEEL		
PIPE DIAMETER (DIA.)	CLEARANCE (C)	*PIPE OPENINGS (P)	TOTAL HEIGHT (H)	LENGTH (L)	TOP WIDTH (d)	BASE (b)	VOL.	PIPE DIAMETER (DIA.)	NO. 4 BENT BARS	NO. 4 BARS - (NOMINAL LENGTH)
IN.	IN.	IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.	C.Y.	IN.	EA.	EA.
12"	14"	20"	5'-6"	4'-6"	1'-3"	2'-2"	1.52	12"	4	16 - (4'-0")
15"	13.5"	24"	5'-9"	5'-6"	1'-3"	2'-2"	1.88	15"	6	16 - (5'-0")
18"	14"	26"	6'-0"	6'-6"	1'-3"	2'-2"	2.31	18"	6	16 - (6'-0")
24"	14"	32"	6'-6"	8'-6"	1'-6"	2'-5"	3.66	24"	8	18 - (8'-0")
30"	12"	42"	7'-0"	10'-6"	1'-9"	2'-8"	5.03	30"	8	16 - (10'-0")
36"	12"	48"	7'-6"	12'-6"	1'-9"	2'-10"	6.98	36"	10	18 - (12'-0")
42"	12"	54"	8'-0"	14'-6"	2'-0"	3'-2"	9.68	42"	12	18 - (14'-0")
48"	11"	62"	8'-6"	16'-6"	2'-0"	3'-2"	11.50	48"	14	20 - (16'-0")

SEE PROJECT PLANS FOR NON-STANDARD ENDWALL DETAILS

NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.02.09 13:31:42-05'00'

APPROVED BY:
Michael N. Calabrese, P.E.
2024.02.28 11:44:24-05'00'

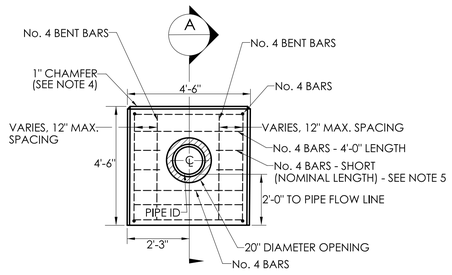
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

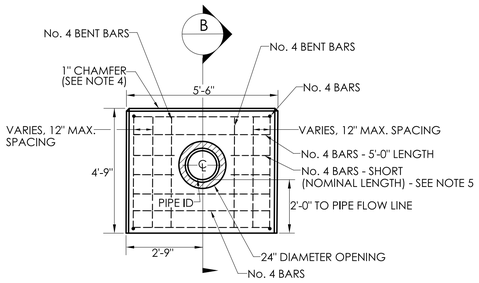
STANDARD SHEET TITLE:
STRAIGHT ENDWALLS

STANDARD SHEET NO.:
HW-505_01a

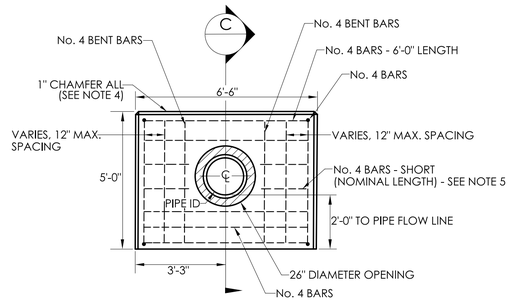
PLOTTED DATE: 2/9/2024



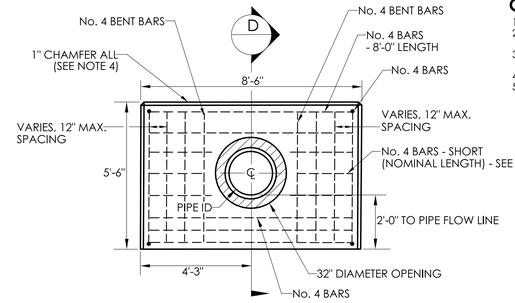
FRONT ELEVATION (FOR 12" RCP)



FRONT ELEVATION (FOR 15" RCP)



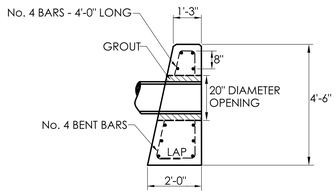
FRONT ELEVATION (FOR 18" RCP)



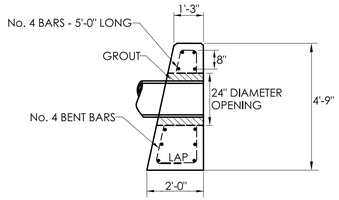
FRONT ELEVATION (FOR 24" RCP)

GENERAL NOTES:

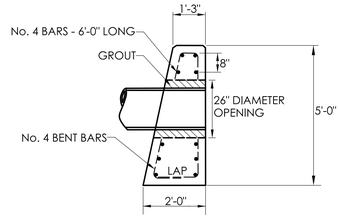
1. SEE CHARTS ON HW-505_01a FOR REINFORCING BARS.
2. ALL THE HORIZONTAL BARS SHOWN ARE NO. 4 BARS AND ALL THE VERTICAL BARS SHOWN ARE NO. 4 BENT BARS.
3. ALL BARS SHALL HAVE A 3" MIN. COVER AND ALSO STOP 3" FROM THE PIPE OPENING AND HAVE 12" MAX. SPACING.
4. PROVIDE A 1" CHAMFER ON ALL EXPOSED EDGES OR AS SHOWN.
5. THE LENGTH AND QUANTITY OF NO. 4 BARS - SHORT (NOMINAL LENGTH) VARY FOR EACH WALL SIZE. THESE BARS ARE SHOWN FOR REFERENCE ONLY.



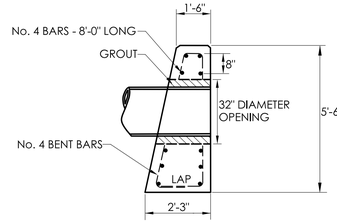
SECTION A (FOR 12" RCP)



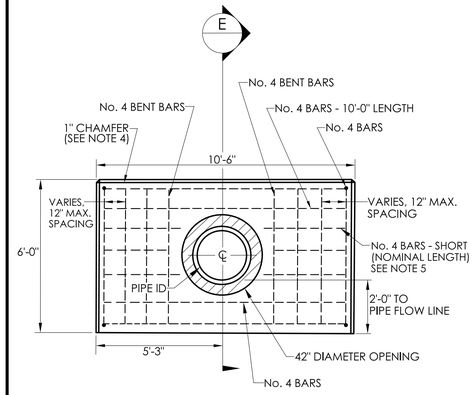
SECTION B (FOR 15" RCP)



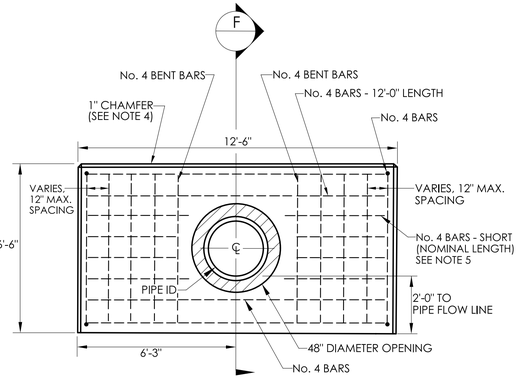
SECTION C (FOR 18" RCP)



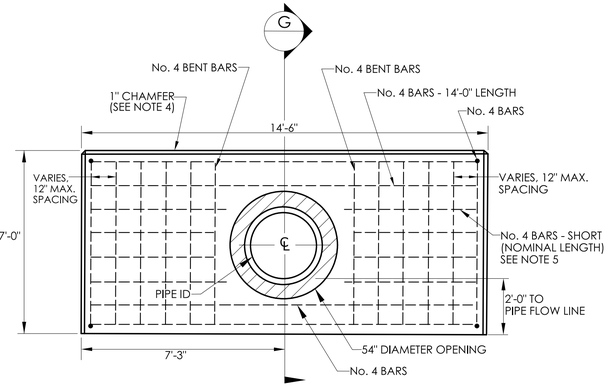
SECTION D (FOR 24" RCP)



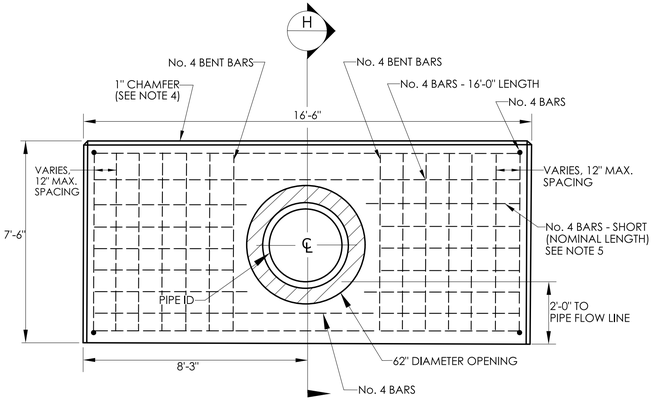
FRONT ELEVATION (FOR 30" RCP)



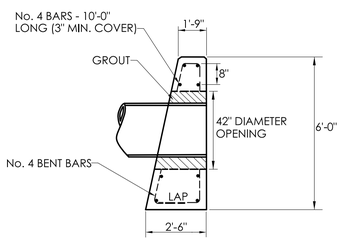
FRONT ELEVATION (FOR 36" RCP)



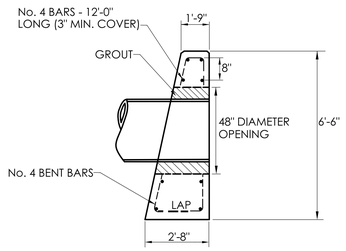
FRONT ELEVATION (FOR 42" RCP)



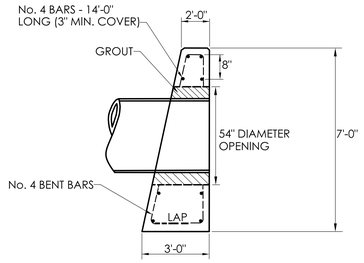
FRONT ELEVATION (FOR 48" RCP)



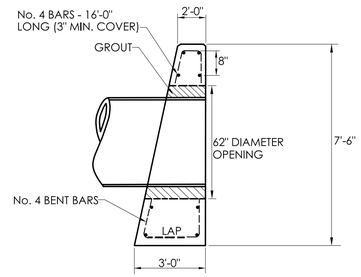
SECTION E (FOR 30" RCP)



SECTION F (FOR 36" RCP)



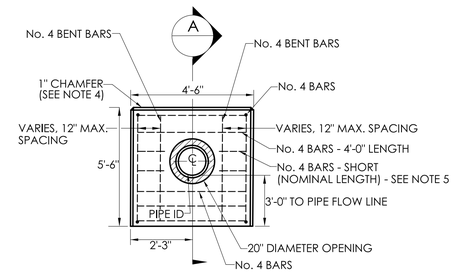
SECTION G (FOR 42" RCP)



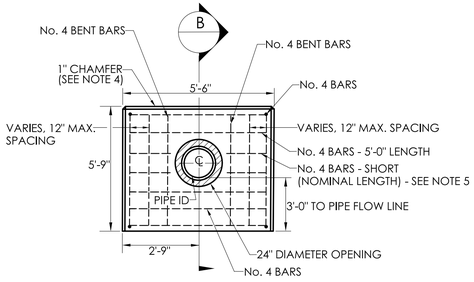
SECTION H (FOR 48" RCP)

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:49:18-05'00'	APPROVED BY: Michael N. Calabrese, P.E. 2024.01.04 21:55:44-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: STEEL REINFORCING FOR STRAIGHT ENDWALLS (FOR 2'-0" DIFFERENCE FROM BASE TO FLOW LINE)	STANDARD SHEET NO.: HW-505_01b

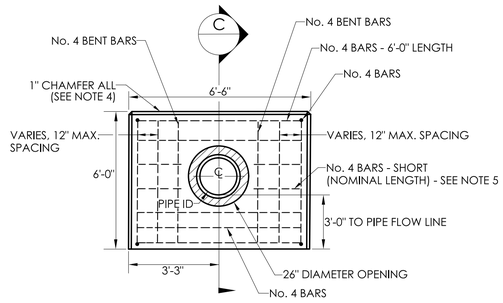
PLOTTED DATE: 12/28/2023



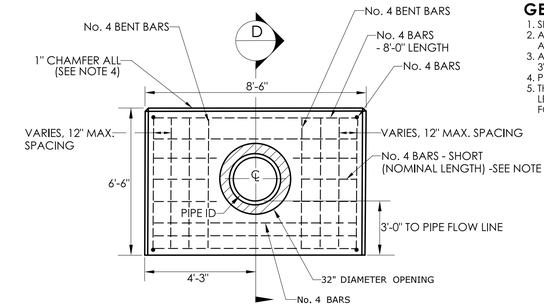
FRONT ELEVATION (FOR 12" RCP)



FRONT ELEVATION (FOR 15" RCP)



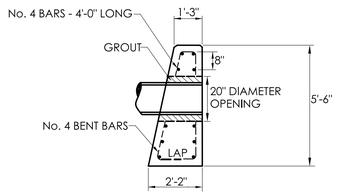
FRONT ELEVATION (FOR 18" RCP)



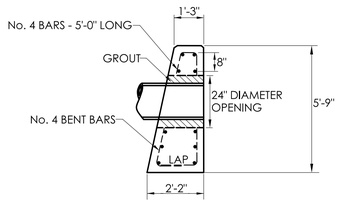
FRONT ELEVATION (FOR 24" RCP)

GENERAL NOTES:

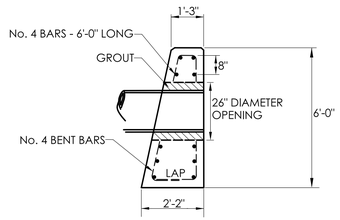
1. SEE CHARTS ON HW-505_01a FOR REINFORCING BARS.
2. ALL THE HORIZONTAL BARS SHOWN ARE NO. 4 BARS AND ALL THE VERTICAL BARS SHOWN ARE NO. 4 BENT BARS.
3. ALL BARS SHALL HAVE A 3" MIN. COVER AND ALSO STOP 3" FROM THE PIPE OPENING AND HAVE 12" MAX. SPACING.
4. PROVIDE A 1" CHAMFER ON ALL EXPOSED EDGES OR AS SHOWN.
5. THE LENGTH AND QUANTITY OF NO. 4 BARS - SHORT (NOMINAL LENGTH) VARY FOR EACH WALL SIZE. THESE BARS ARE SHOWN FOR REFERENCE ONLY.



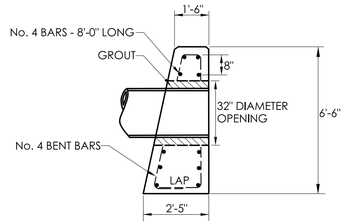
SECTION A (FOR 12" RCP)



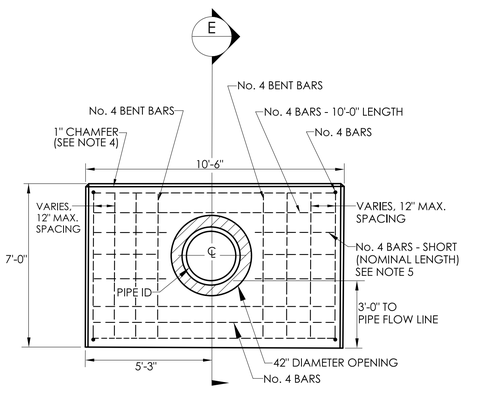
SECTION B (FOR 15" RCP)



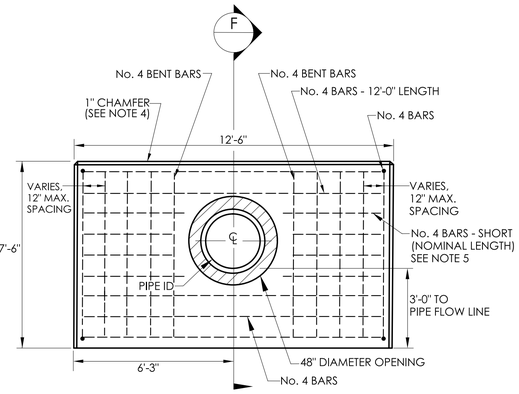
SECTION C (FOR 18" RCP)



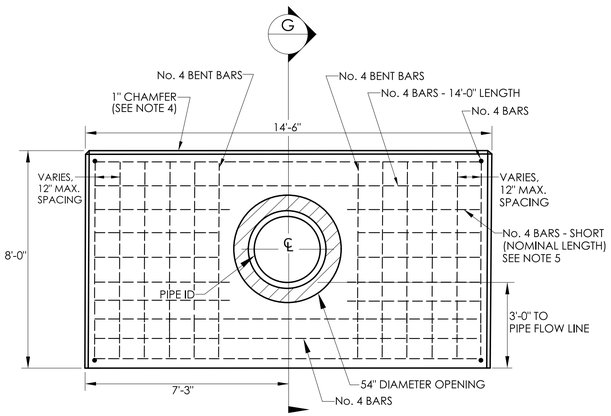
SECTION D (FOR 24" RCP)



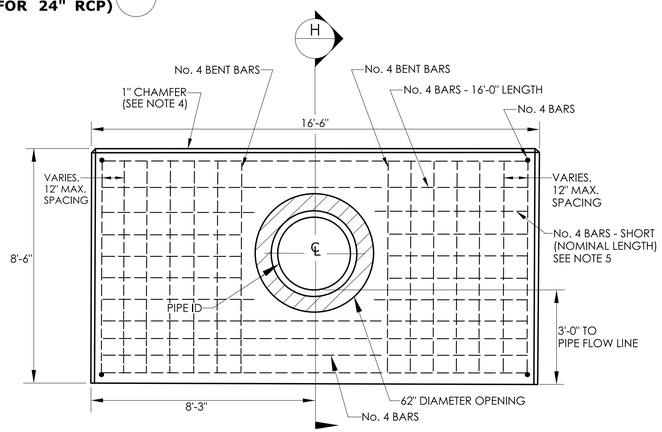
FRONT ELEVATION (FOR 30" RCP)



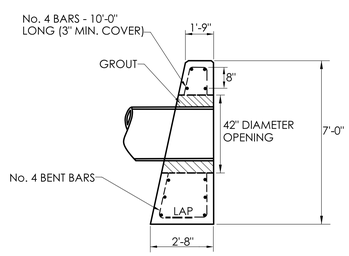
FRONT ELEVATION (FOR 36" RCP)



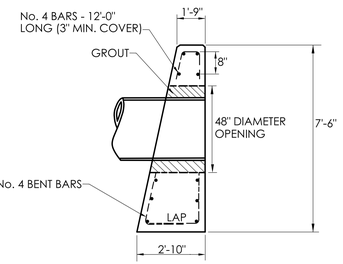
FRONT ELEVATION (FOR 42" RCP)



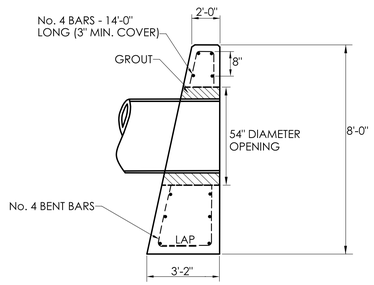
FRONT ELEVATION (FOR 48" RCP)



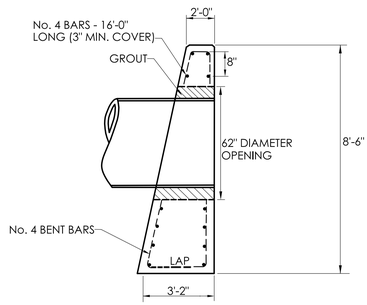
SECTION E (FOR 30" RCP)



SECTION F (FOR 36" RCP)



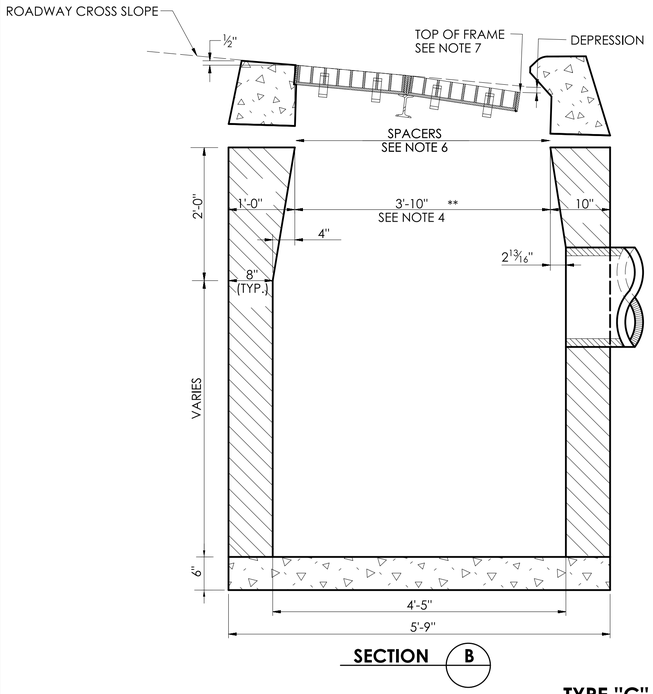
SECTION G (FOR 42" RCP)



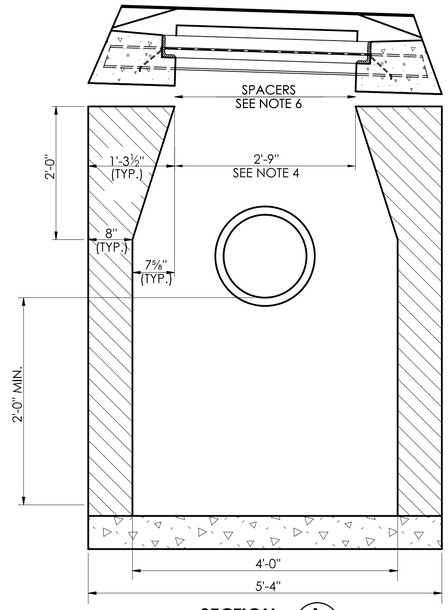
SECTION H (FOR 48" RCP)

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:41:00-05'00'	APPROVED BY: Michael N. Calabrese, P.E. 2024.01.04 21:59:57-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: STEEL REINFORCING FOR STRAIGHT ENDWALL (FOR STANDARD RIPRAP APPLICATION)	STANDARD SHEET NO.: HW-505_01C

PLOTTED DATE: 12/28/2023

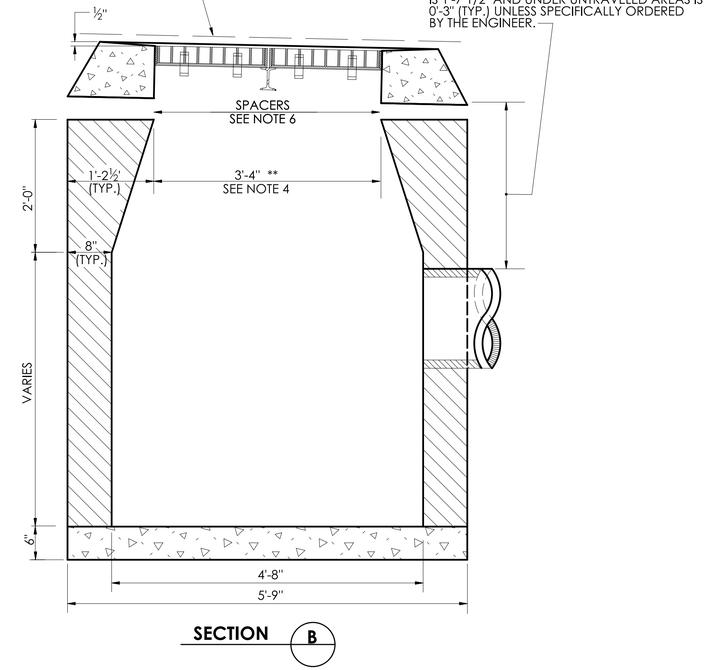


SECTION B

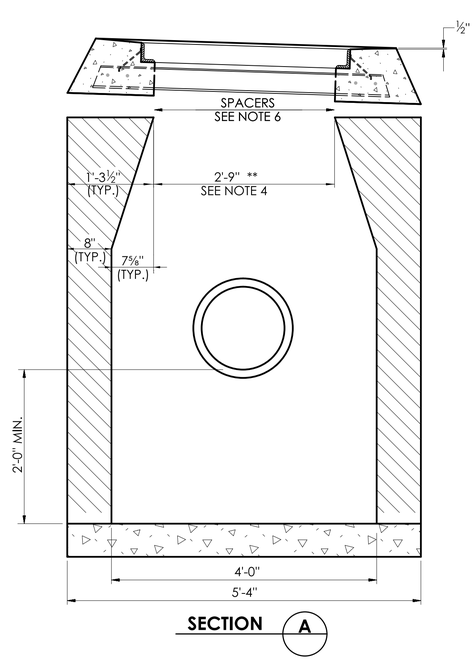


SECTION A

TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I



SECTION B

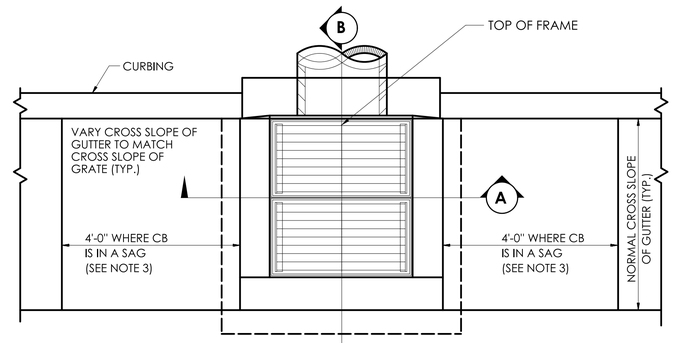


SECTION A

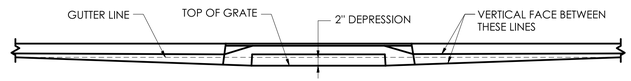
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE I

GENERAL NOTES:

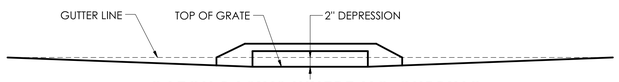
1. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07.
2. ALL FACES OF THE STRUCTURE IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
3. USE 6'-0" ON THE UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE AS DIRECTED 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 BY **.
5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSIONS SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
6. FOR GRADE ADJUSTMENT OF THE CATCH BASIN TOP (TO MATCH THE ROADWAYS' PROFILE AND CROSS-SLOPE SHOWN ON THE PLANS) USE: SPACERS EITHER CONCRETE MASONRY UNIT OR PRECAST WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) COMBINED WITH MORTAR AS NEEDED TO PROVIDE THE PROPER GRADE ADJUSTMENTS.
7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN THE CENTER OF THE GRATE AT THE GUTTER LINE.



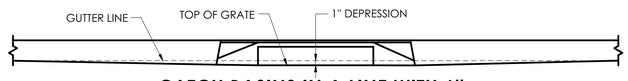
PLAN



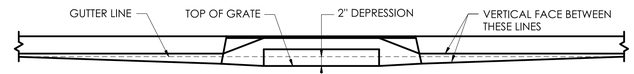
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



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)

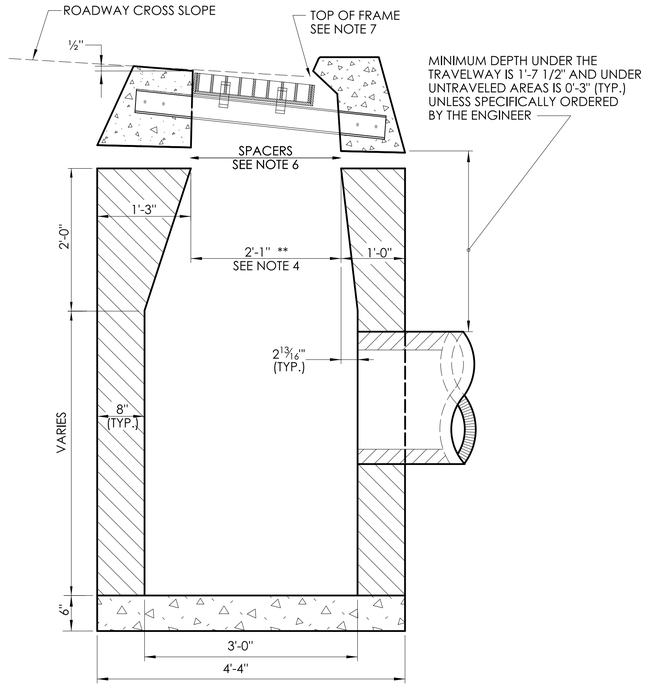
DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:47:50-05'00'	APPROVED BY: Michael N. Calabrese, P.E. 2024.01.04 21:56:52-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN (TYPES "C" and "C-L") FOR DOUBLE GRATE TYPE I STRUCTURES	STANDARD SHEET NO.: HW-586_02

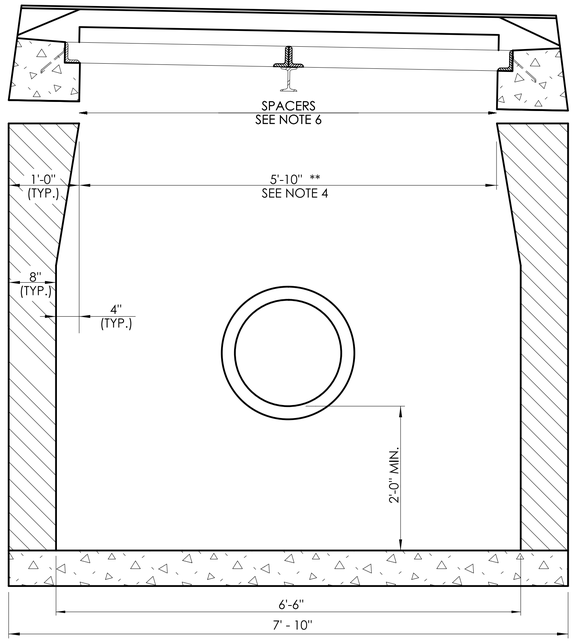
PLOTTED DATE: 12/28/2023

GENERAL NOTES:

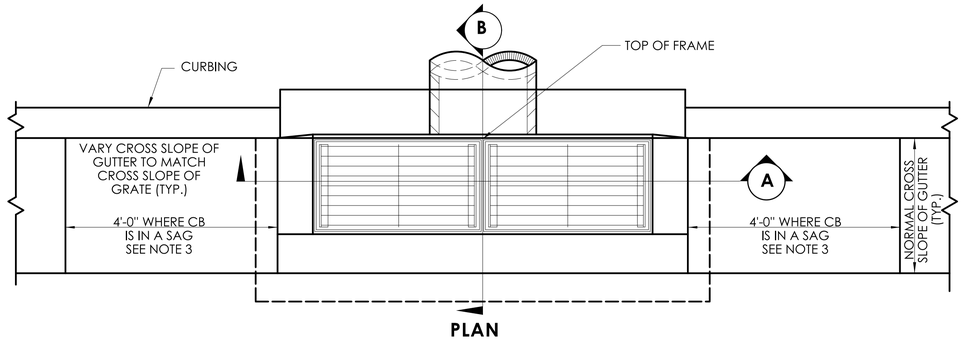
1. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07.
2. ALL THE FACES OF THE STRUCTURE IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE AS DIRECTED 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. FOR GRADE ADJUSTMENT OF THE CATCH BASIN TOP (TO MATCH THE ROADWAYS' PROFILE AND CROSS-SLOPE SHOWN ON THE PLANS) USE; SPACERS EITHER CONCRETE MASONRY UNIT OR PRECAST WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) COMBINED WITH MORTAR AS NEEDED TO PROVIDE THE PROPER GRADE ADJUSTMENTS.
7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN BETWEEN BOTH GRATES AT THE GUTTER.



SECTION B

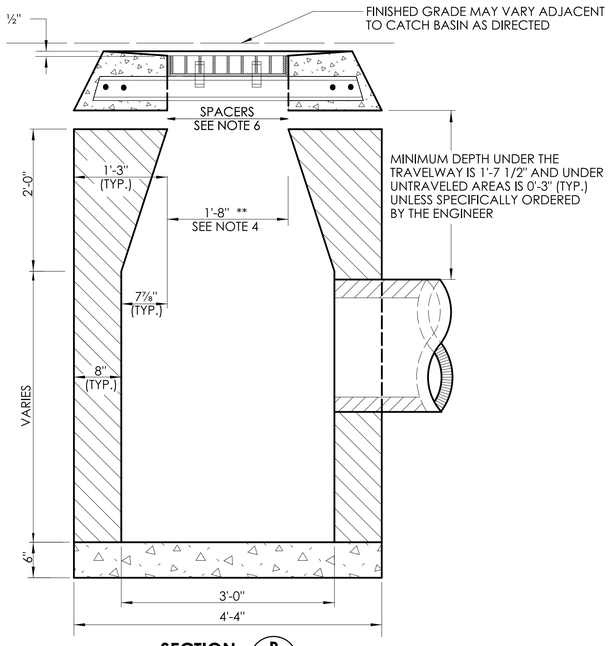


SECTION A

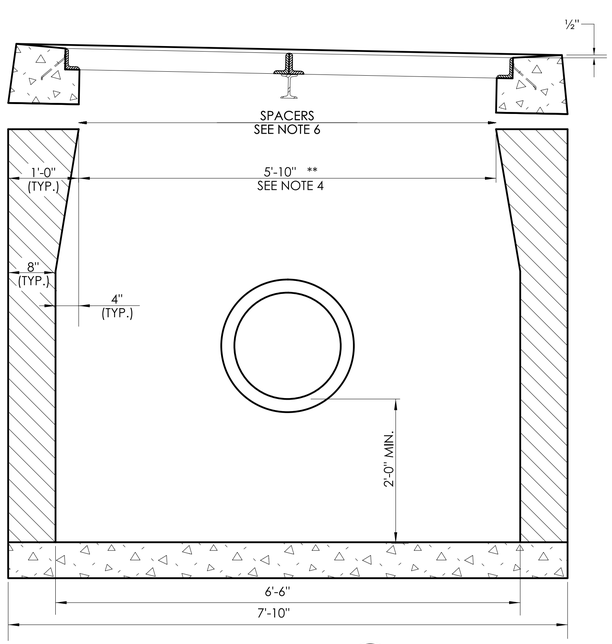


PLAN

TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II

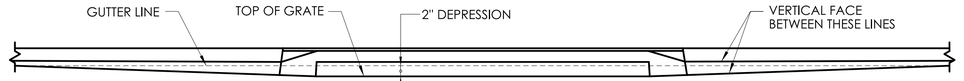


SECTION B

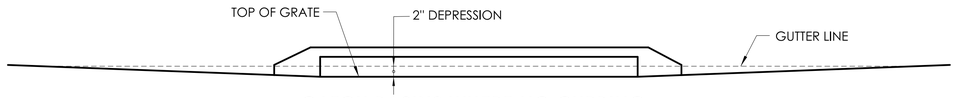


SECTION A

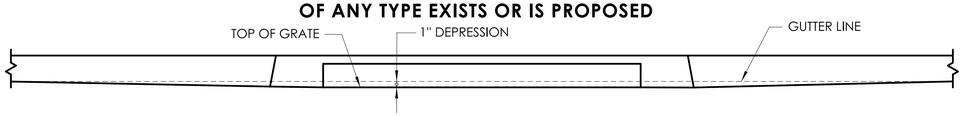
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II



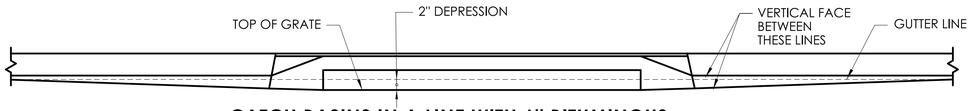
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



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)

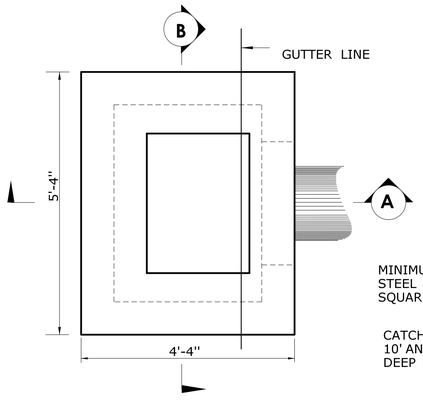
DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:45:03-05'00'	APPROVED BY: Michael N. Calabrese, P.E. 2024.01.04 21:59:24-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN (TYPES "C" AND "C-L") FOR DOUBLE GRATE TYPE II STRUCTURES	STANDARD SHEET NO.: HW- 586_03

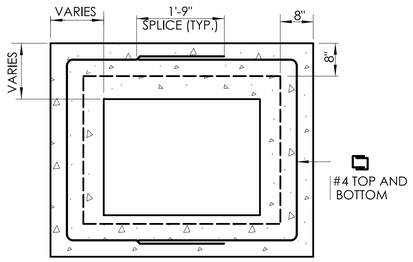
PLOTTED DATE: 12/28/2023

GENERAL NOTES:

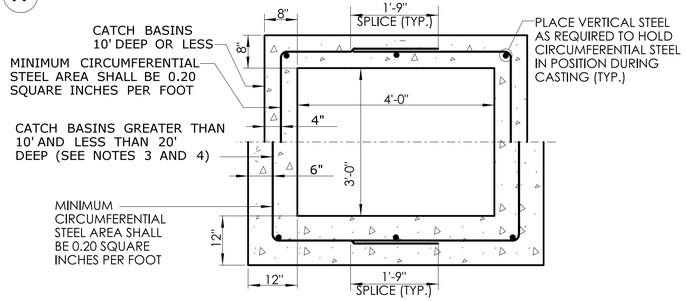
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES, EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKNESS SHALL START AFTER THE FIRST 10 FEET.
4. BASES AND RISERS AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
5. RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS SHALL BE PROVIDED. RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
6. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. ROUND STRUCTURES SHALL BE USED WHEN PIPES CANNOT ALIGN WITH A RECTANGULAR STRUCTURE KNOCKOUT.
7. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED IN THE TOPS OF SLABS. THE TOTAL AREA OF REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 SQUARE INCHES PER FOOT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
8. THE DETAILS SHOWN IN THE PLAN VIEW FOR PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.
9. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07 FOR RECTANGULAR OPENING OR SHEET NOS. HW-586_10a, HW-586_ 10b OR HW-586_ 10c FOR CIRCULAR OPENING.



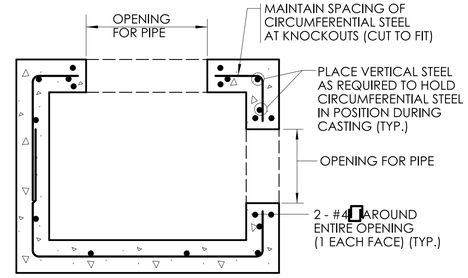
PLAN



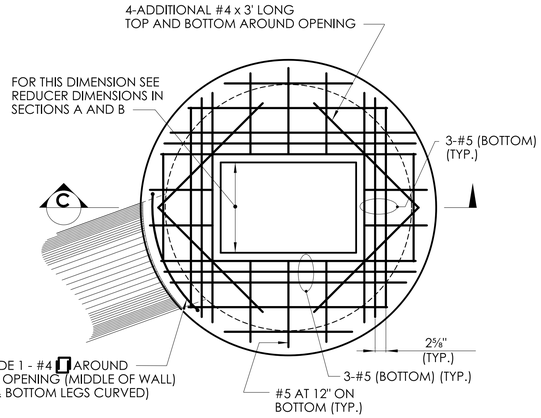
REDUCER SECTION (TYP.)



RISER SECTION (TYP.)



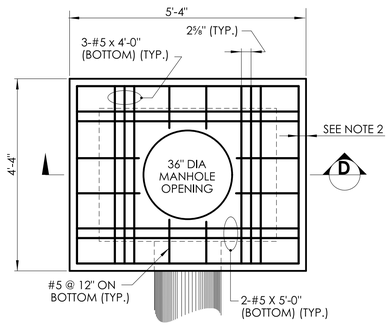
TYPICAL SECTION THROUGH RISER WITH OPENING



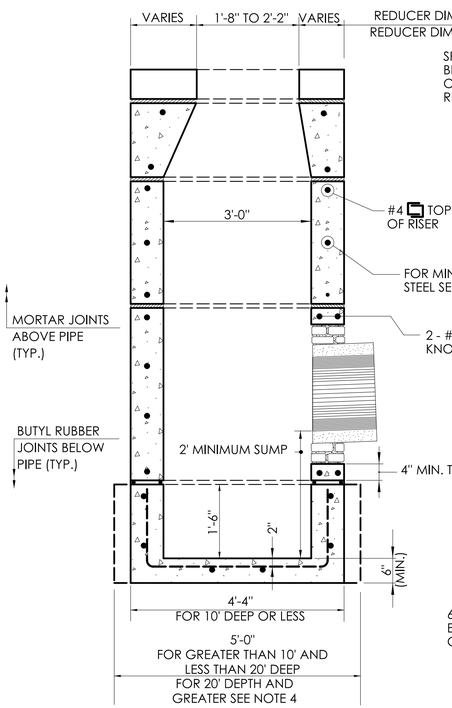
PLAN
(SEE NOTE 9)

MORTAR JOINT DETAIL

BUTYL RUBBER JOINT DETAIL

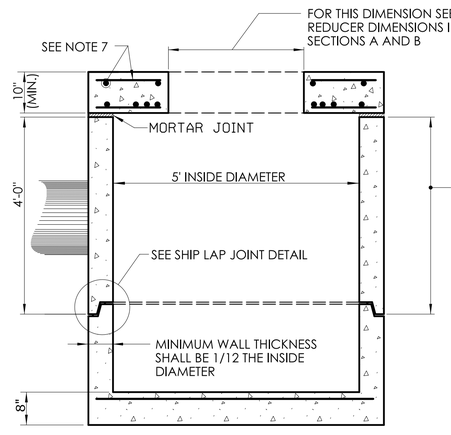


PLAN



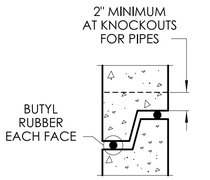
SECTION A

SECTION B

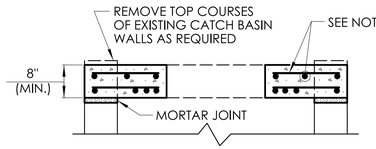


SECTION C

PRECAST CONCRETE TYPE "C" AND "C-L" ROUND STRUCTURE
(SEE NOTE 6)



SHIP LAP JOINT DETAIL
(FOR USE WITH ROUND STRUCTURES ONLY)

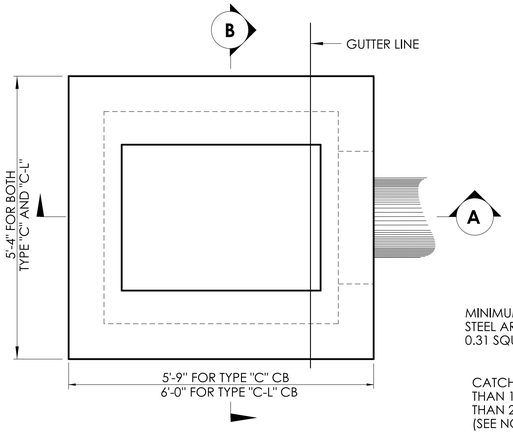


SECTION D

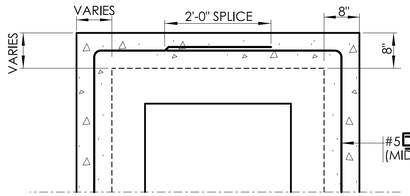
TOP SLAB TO CONVERT CATCH BASIN TO MANHOLE

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.08.16 11:08:33-04'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2024.10.18 11:56:19-04'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: PRECAST CATCH BASIN AND ROUND STRUCTURE / STANDARD SHEET NO.: HW- 586_04

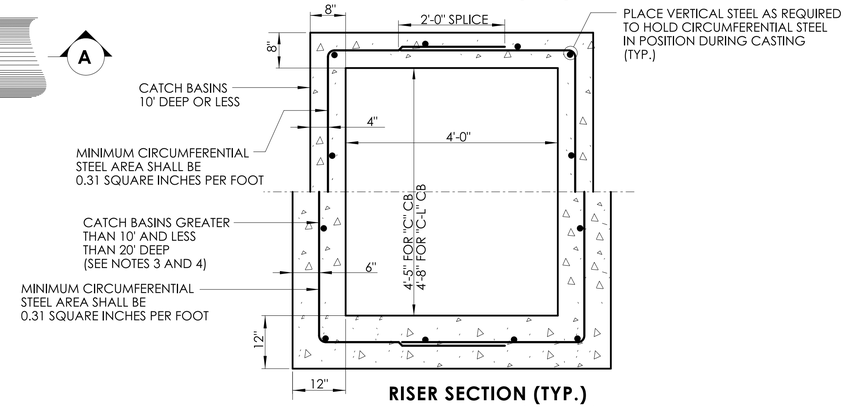
PLOTTED DATE: 8/13/2024



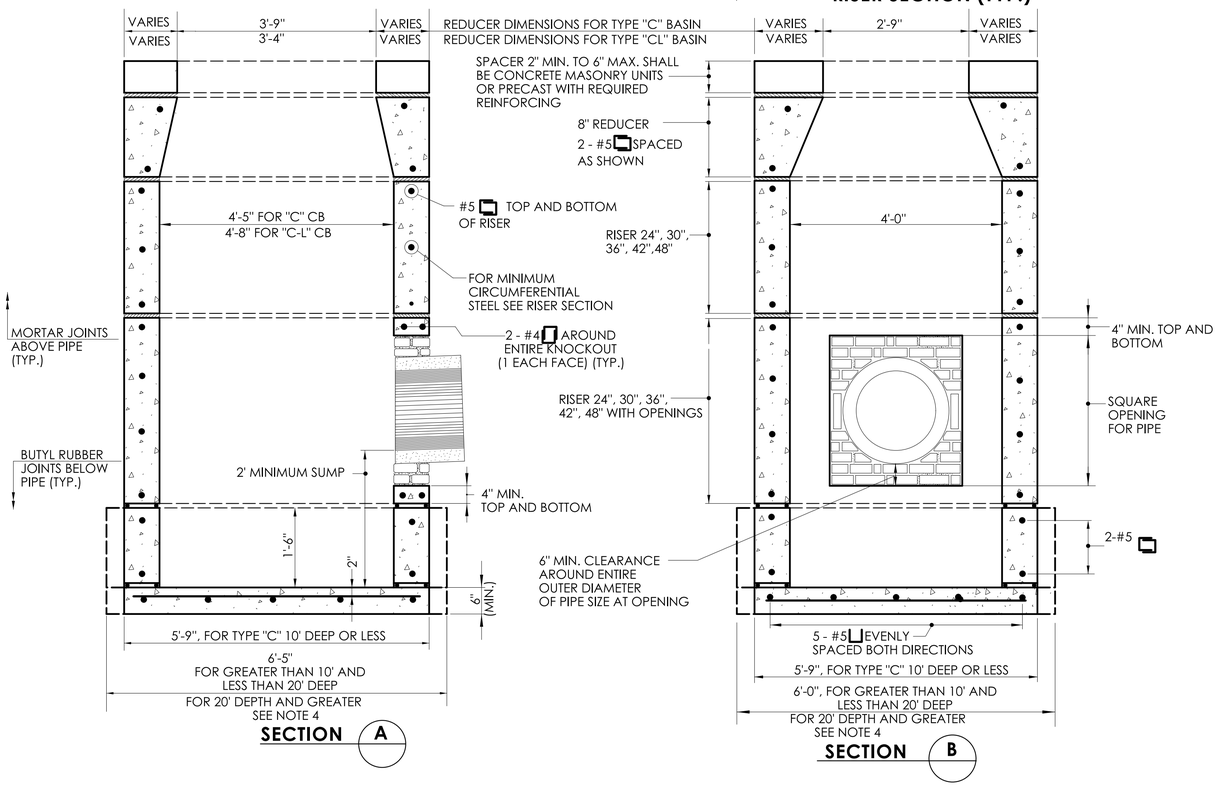
PLAN



HALF REDUCER SECTION (TYP.)



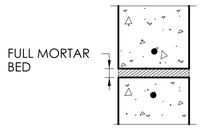
RISER SECTION (TYP.)



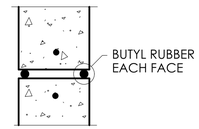
PRECAST CONCRETE TYPE "C" AND "C-L" DOUBLE GRATE TYPE I CATCH BASIN
(UNDER 10' DEEP SHOWN)

GENERAL NOTES:

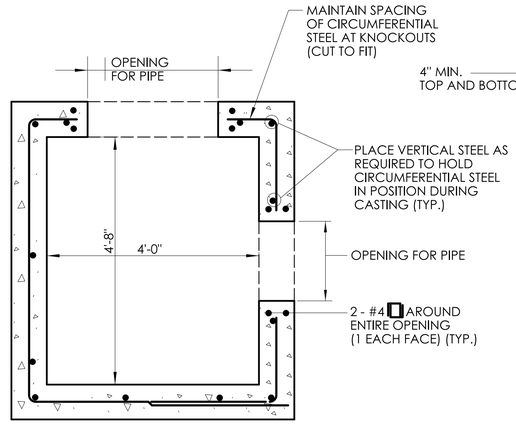
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES, EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKNESS SHALL START AFTER THE FIRST 10 FEET.
4. BASES AND RISERS AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
5. RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS SHALL BE PROVIDED. RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
6. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. ROUND STRUCTURES SHALL BE USED WHEN PIPES CANNOT ALIGN WITH A RECTANGULAR STRUCTURE KNOCK OUT.
7. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07.



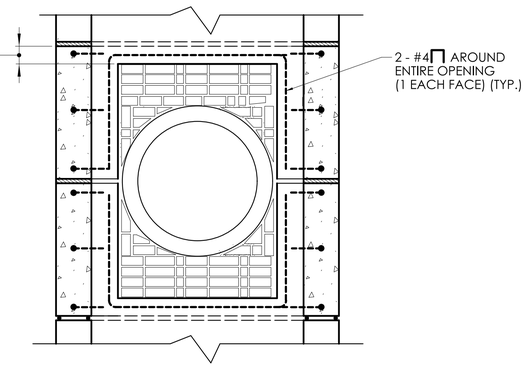
MORTAR JOINT



BUTYL RUBBER JOINT



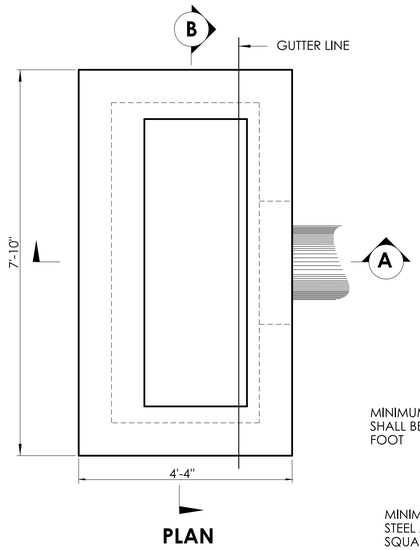
TYPICAL SECTION THRU SINGLE RISER WITH OPENING



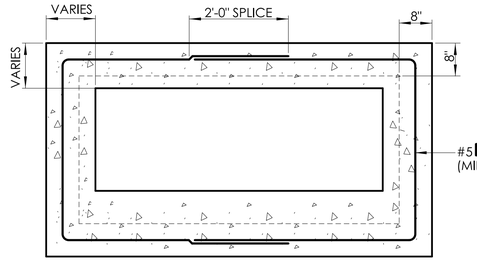
DOUBLE RISER OPENING (TYP.)
PIPES GREATER THAN 24" OUTSIDE DIAMETER

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.08.16 11:07:54-04'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2024.10.18 11:56:58-04'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE I	STANDARD SHEET NO.: HW- 586_05

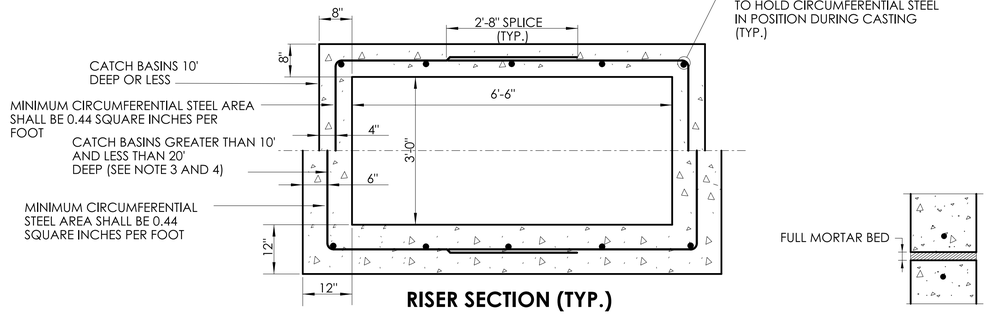
PLOTTED DATE: 8/13/2024



PLAN

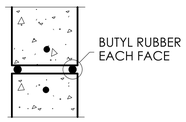


REDUCER SECTION (TYP.)



RISER SECTION (TYP.)

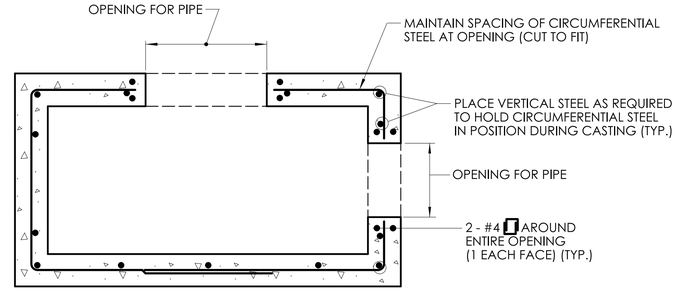
MORTAR JOINT



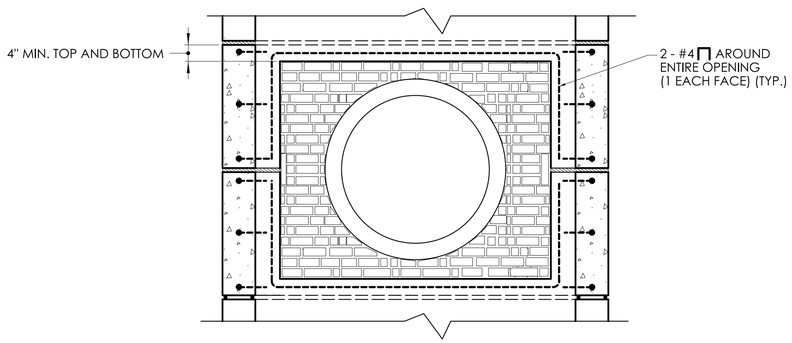
BUTYL RUBBER JOINT

GENERAL NOTES:

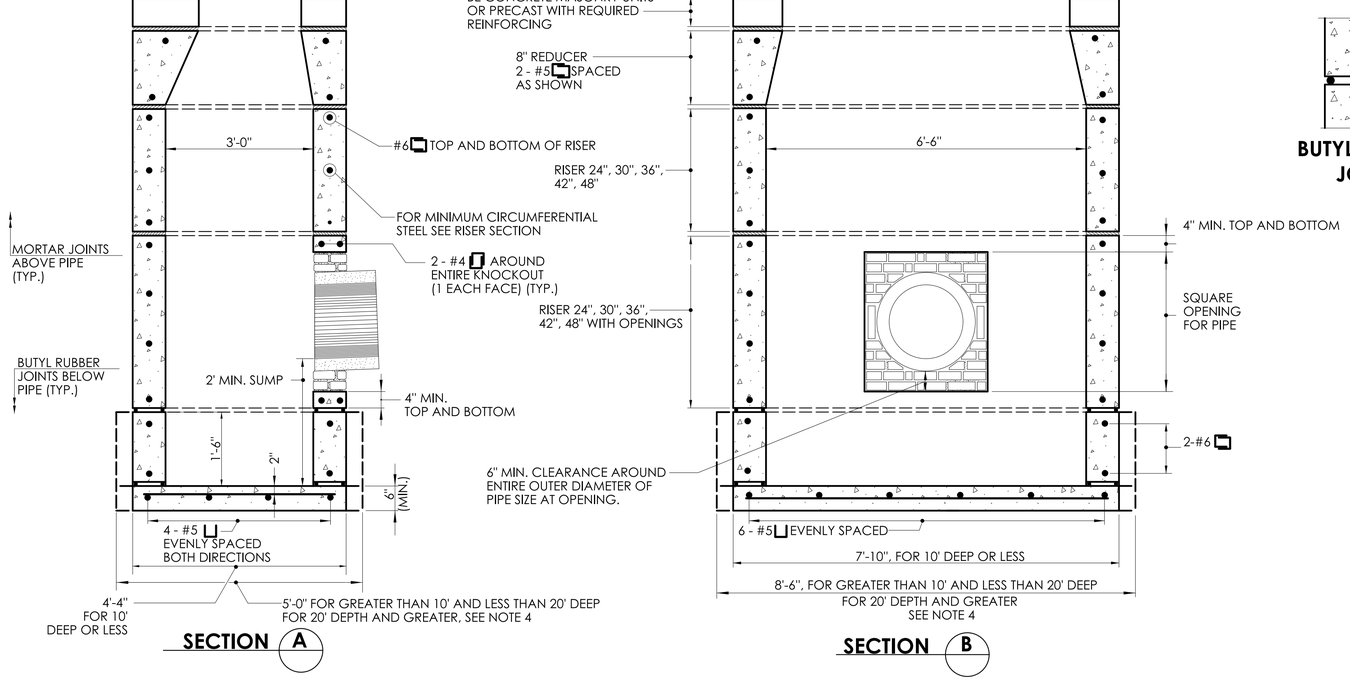
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKNESS SHALL START AFTER THE FIRST 10 FEET.
4. BASES AND RISERS AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
5. RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS SHALL BE PROVIDED. RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
6. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. ROUND STRUCTURES SHALL BE USED WHEN PIPES CANNOT ALIGN WITH A RECTANGULAR STRUCTURE KNOCKOUT.
7. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07.



TYPICAL SECTION THROUGH SINGLE RISER WITH OPENINGS



DOUBLE RISER OPENING (TYP.)
PIPES GREATER THAN 24" OUTSIDE DIAMETER



PRECAST CONCRETE TYPE "C" AND "C-L" DOUBLE GRATE TYPE II CATCH BASIN

(UNDER 10' DEEP SHOWN)

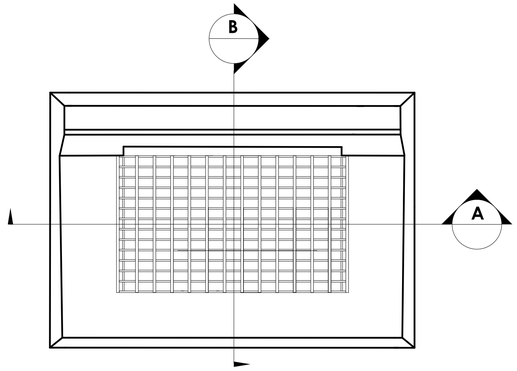
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.08.16 11:09:13-04'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2024.10.18 11:55:20-04'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE II	STANDARD SHEET NO.: HW-586_06

PLOTTED DATE: 8/13/2024

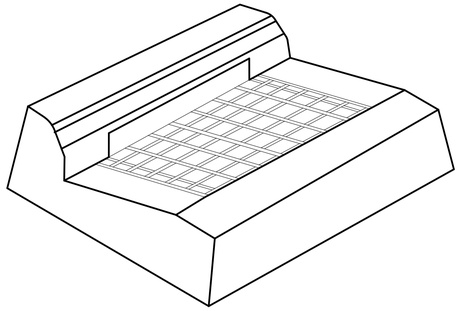
GENERAL NOTES:

1. SEE SHEET HW-586_08, FOR CATCH BASIN FRAMES AND GRATES AND HW-586_09 FOR CATCH BASIN LOCK DOWN TOPS.
2. SEE SHEET HW-586_01, CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" TO DETERMINE THE TOP OF FRAME DEPRESSION AT THE GUTTER.
3. ALL BARS SHALL HAVE A MINIMUM 2" COVER.
4. Manufacturing Dimensional Tolerance Table

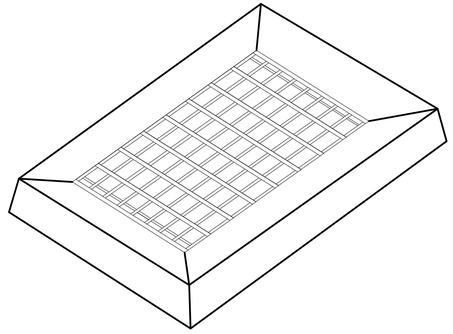
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	± 1"



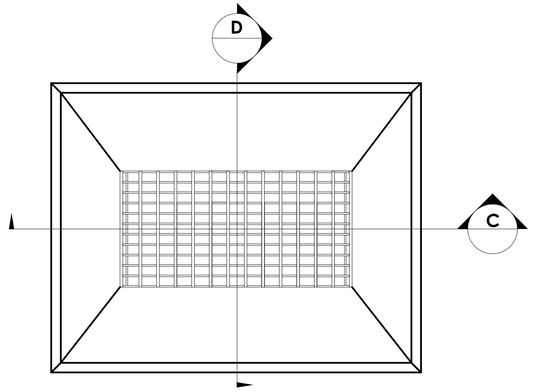
TYPE "C" CATCH BASIN TOP PLAN



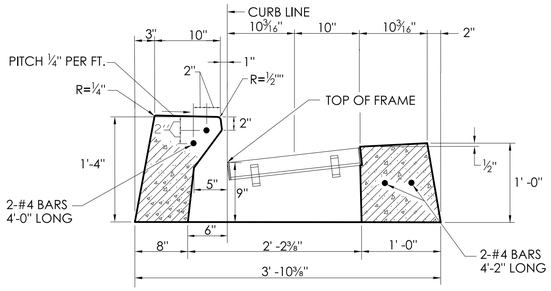
TYPE "C" CATCH BASIN TOP



TYPE "C-L" CATCH BASIN TOP

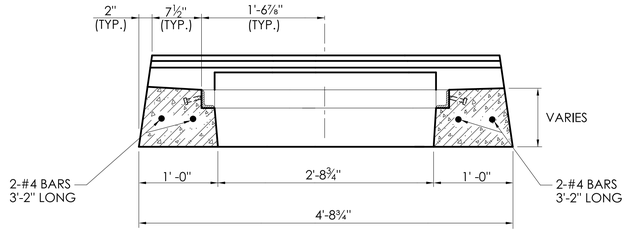


TYPE "C-L" CATCH BASIN TOP PLAN



TYPE "C" CATCH BASIN TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING

SECTION B



TYPE "C" CATCH BASIN TOP

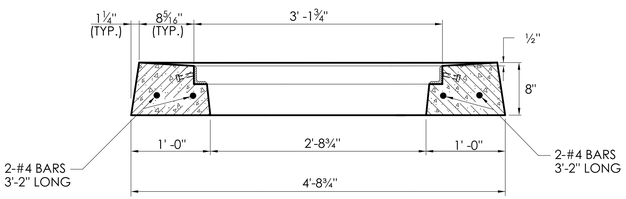
SECTION A

TYPE "C" CATCH BASIN TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

SECTION B

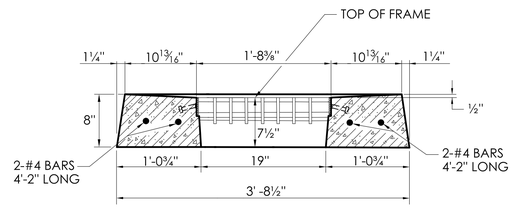
TYPE "C" CATCH BASIN TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING

SECTION B



TYPE "C-L" CATCH BASIN TOP

SECTION C



TYPE "C-L" CATCH BASIN TOP

SECTION D

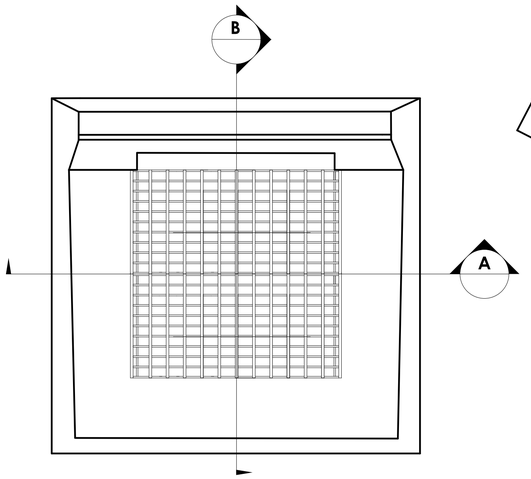
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:26:18-05'00'	APPROVED BY: Michael N. Calabrese, P.E. 2024.01.04 22:00:22-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN TYPE "C" AND "C-L" TOPS	STANDARD SHEET NO.: HW- 586_07a

PLOTTED DATE: 12/28/2023

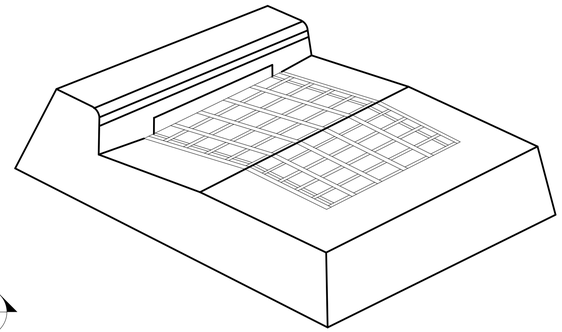
GENERAL NOTES:

1. SEE SHEET HW-586_08 FOR CATCH BASIN FRAMES AND GRATES, AND HW-586_09 CATCH BASIN LOCK DOWN TOPS.
2. SEE SHEET HW-586_02 CATCH BASIN TOPS (TYPES "C" AND "C-L") FOR DOUBLE GRATE TYPE I TO DETERMINE THE TOP OF FRAME AT THE GUTTER.
3. ALL BARS SHALL HAVE A MINIMUM 2" COVER.
4. MANUFACTURING DIMENSIONAL TOLERANCE TABLE

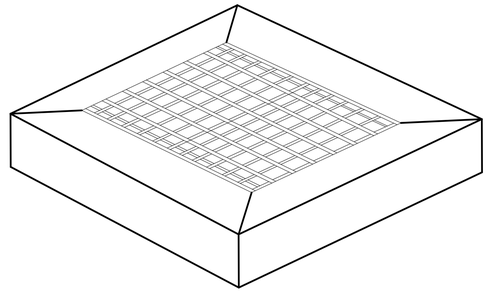
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	± 1"



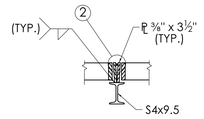
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP PLAN



TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP



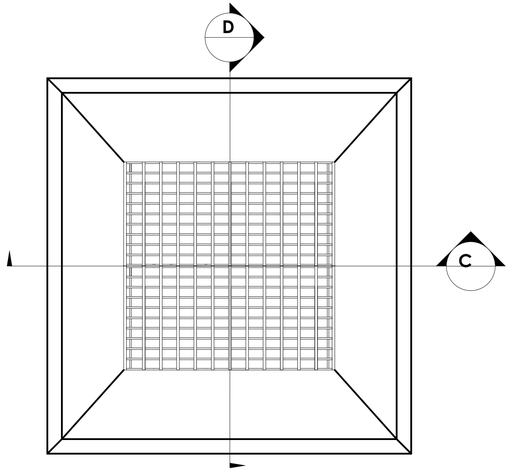
TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE I TOP



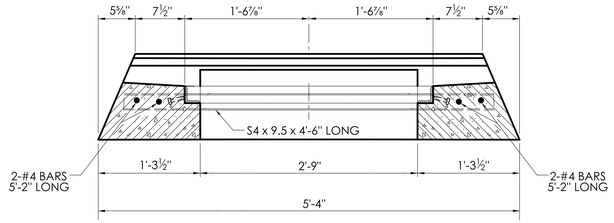
DETAIL 1



DETAIL 2

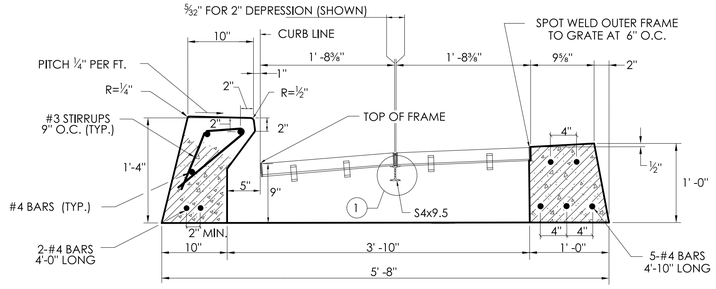


TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE I TOP PLAN



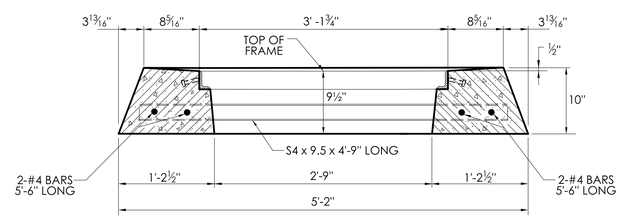
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP

SECTION A



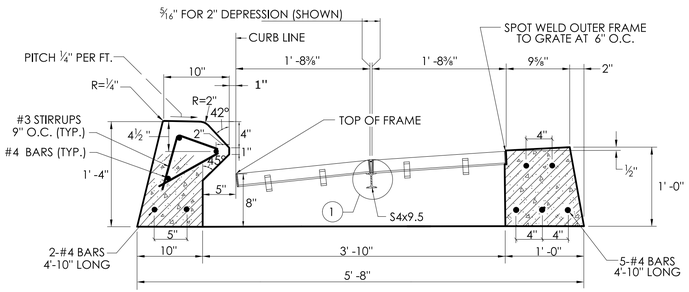
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING

SECTION B



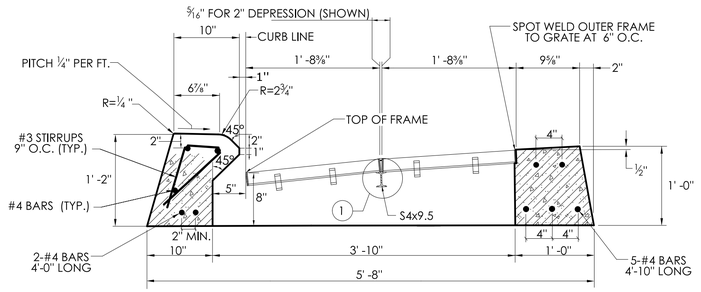
TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE I TOP

SECTION C



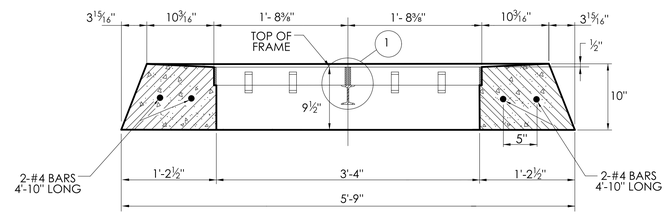
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

SECTION B



TYPE "C" CATCH BASIN DOUBLE GRATE TYPE I TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING

SECTION B



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

SECTION D

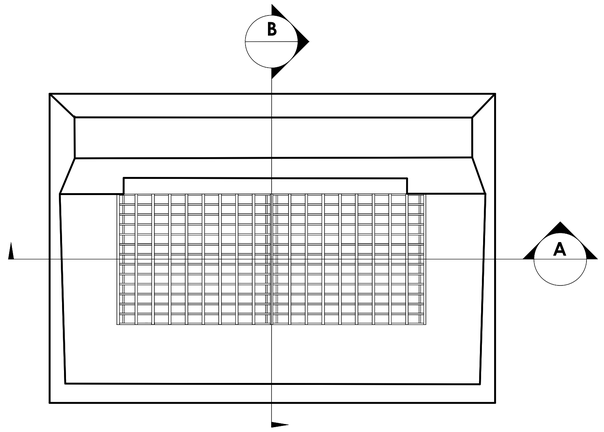
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.10.05 14:18:04-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.09 13:52:10-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE I TOPS	STANDARD SHEET NO.: HW-586_07b

PLOTTED DATE: 9/21/2022

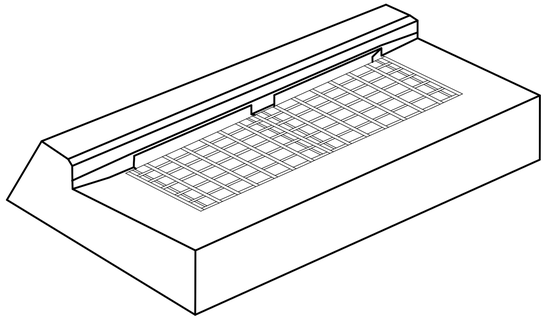
GENERAL NOTES:

1. SEE SHEET HW-586_08 FOR CATCH BASIN FRAMES AND GRATES, AND HW-586_09 CATCH BASIN LOCK DOWN TOPS.
2. SEE SHEET HW-586_03 CATCH BASIN TOPS (TYPE "C" AND "C-L") FOR DOUBLE GRATE TYPE II, TO DETERMINE THE TOP OF FRAME AT THE GUTTER.
3. ALL BARS SHALL HAVE A MINIMUM 2" COVER
4. MANUFACTURING DIMENSIONAL TOLERANCE TABLE

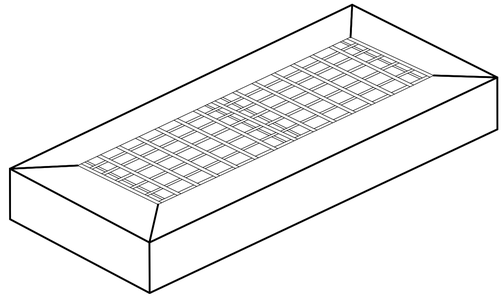
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	± 1"



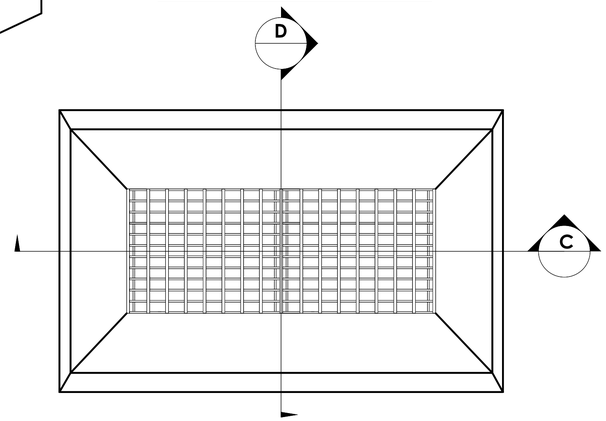
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP PLAN



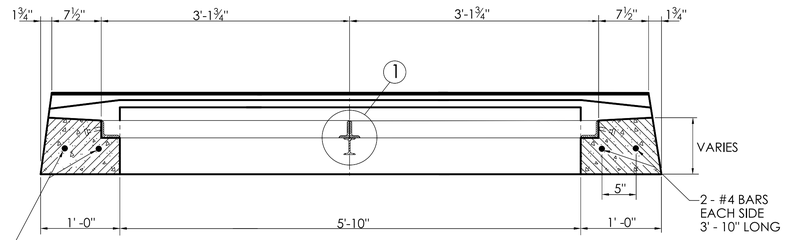
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP



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

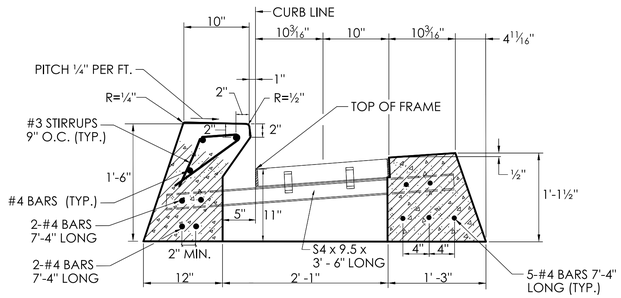


TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP PLAN



TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP

SECTION A

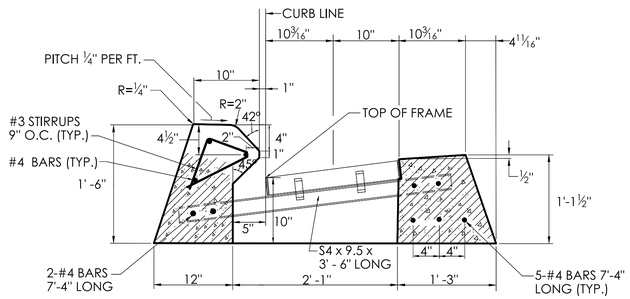


TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING

SECTION B

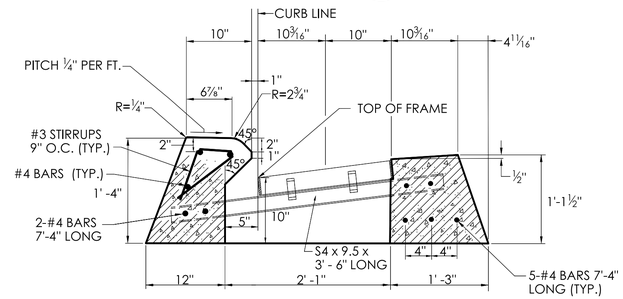
TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP

SECTION C



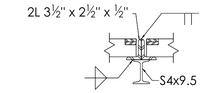
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

SECTION B

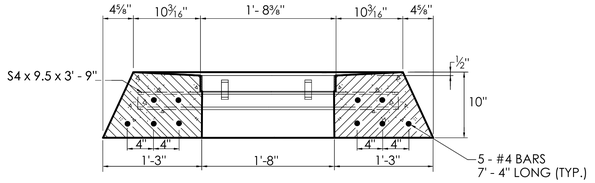


TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING

SECTION B



DETAIL 1

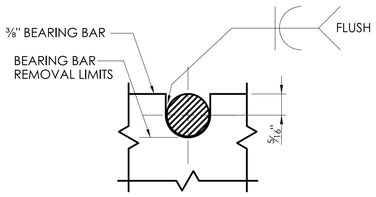


TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP

SECTION D

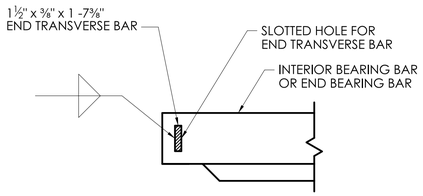
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.10.05 14:18:19-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.09 13:53:51-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE II TOPS	STANDARD SHEET NO.: HW- 586_07c

PLOTTED DATE: 9/21/2022

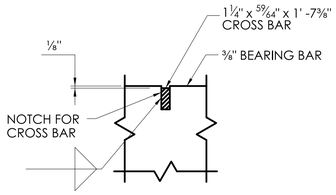


NOTE:
⅝" DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

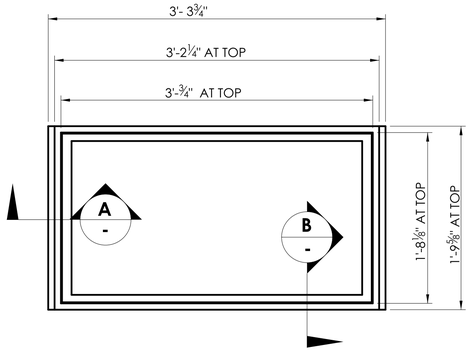
ROUND BAR ATTACHMENT
CATCH BASIN GRATE TYPE A



END TRANSVERSE BAR ATTACHMENT
CATCH BASIN GRATE TYPE A AND B



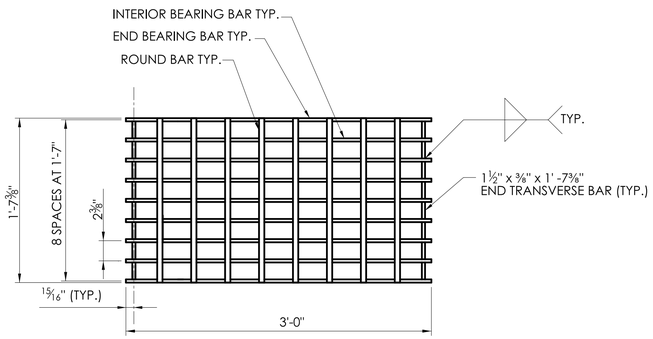
CROSS BAR ATTACHMENT
CATCH BASIN GRATE TYPE B



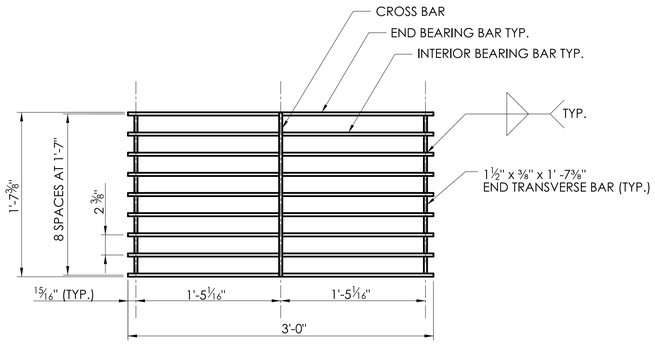
PLAN

GENERAL NOTES:

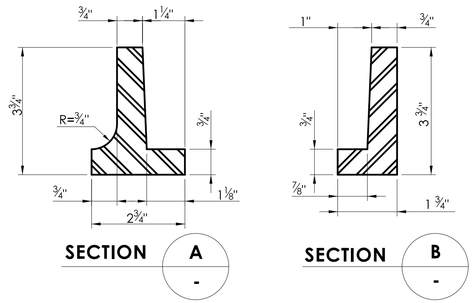
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" AND "B" GRATES.
2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR ON HEAVY DUTY LOCK DOWN TOPS AS DIRECTED BY THE ENGINEER.
3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS, 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 ± 3/16".
6. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS.



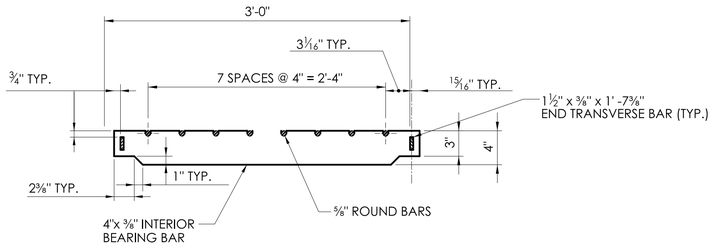
PLAN



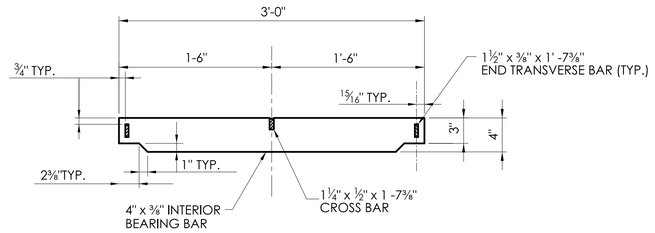
PLAN



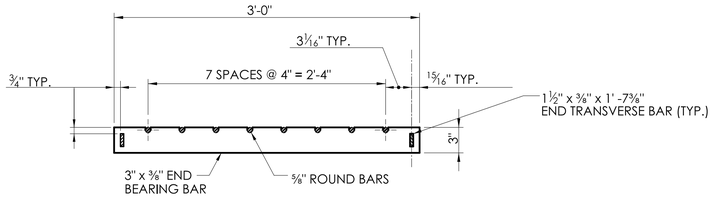
CAST IRON FRAME ALTERNATE



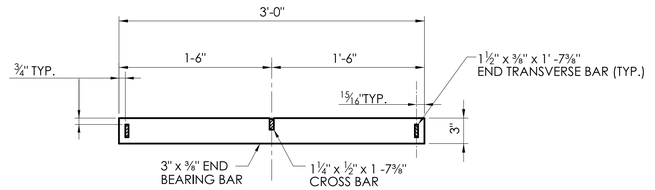
ELEVATION- INTERIOR BEARING BAR



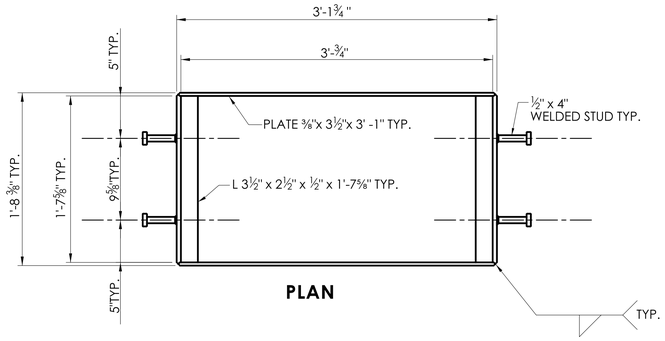
ELEVATION- INTERIOR BEARING BAR



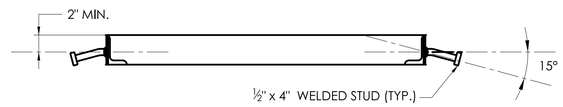
ELEVATION- END BEARING BAR
CATCH BASIN GRATE TYPE A



ELEVATION- END BEARING BAR
CATCH BASIN GRATE TYPE B



PLAN



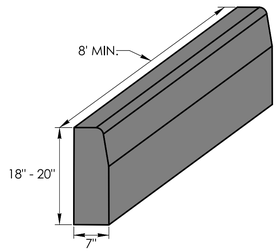
WELDED STUD ANCHOR DETAILS
STEEL FRAME

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.10.05 14:19:16-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.09 14:00:56-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN FRAMES AND GRATES	STANDARD SHEET NO.: HW- 586_08

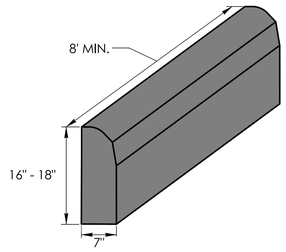
PLOTTED DATE: 9/21/2022

GENERAL NOTE:

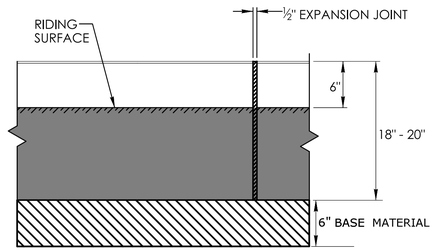
1. PRECAST CONCRETE CURBING MAY BE CAST BY THE MANUFACTURER WITH OPTIONAL LIFTING AND DOWEL BAR HOLES.



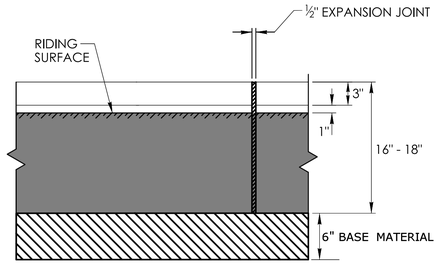
CONCRETE CURBING (6" REVEAL)



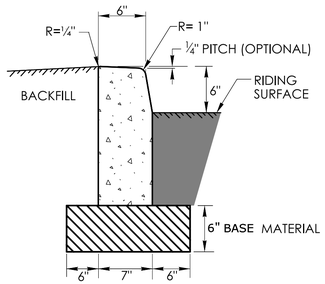
CONCRETE PARK CURBING (4" REVEAL)



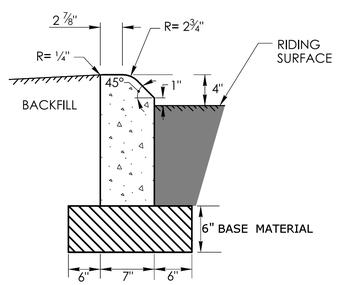
FRONT ELEVATION



FRONT ELEVATION



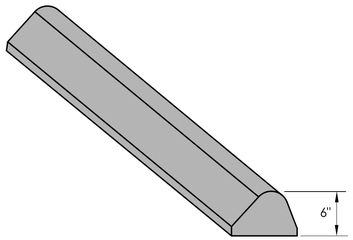
SECTION



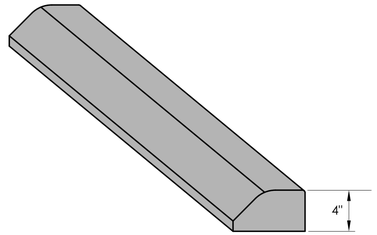
SECTION

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 14:41:41-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 11:41:25-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE CURBNG	STANDARD SHEET NO.: HW- 811_01

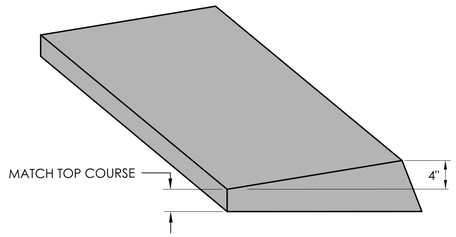
PLOTTED DATE: 9/21/2022



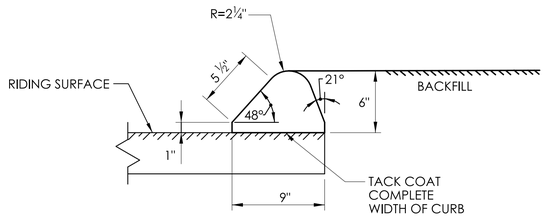
BITUMINOUS CONCRETE LIP CURBING
(6" HIGH)



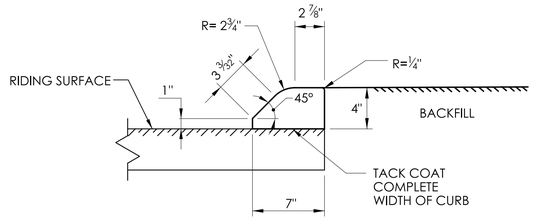
BITUMINOUS CONCRETE PARK CURBING
(4" HIGH)



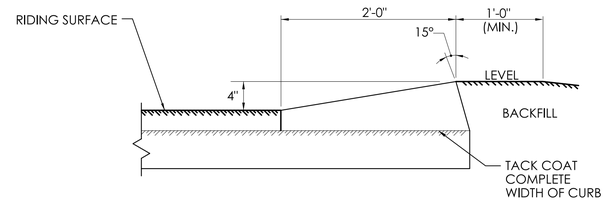
BITUMINOUS CONCRETE BERM CURBING
(4" HIGH)



SECTION



SECTION



SECTION

NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2022.09.27 14:43:18-04'00'

APPROVED BY:
Digitally signed by Calabrese, Michael
Date: 2022.11.08 11:39:39-05'00'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

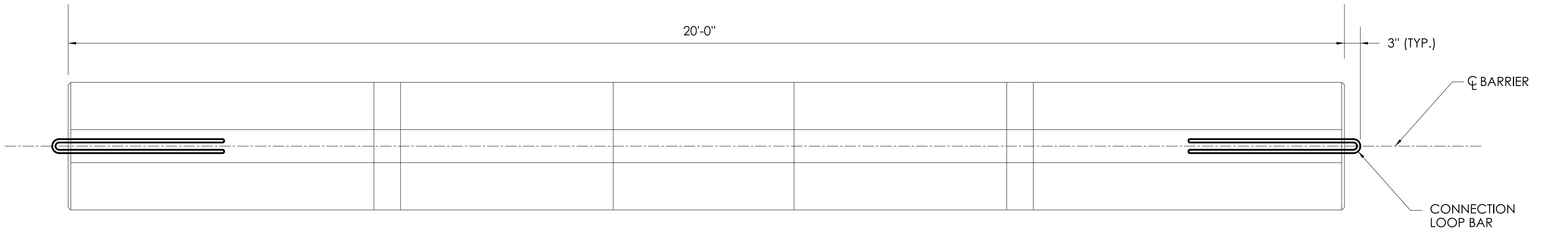
STANDARD SHEET TITLE:
BITUMINOUS CONCRETE CURBING

STANDARD SHEET NO.:
HW-815_01

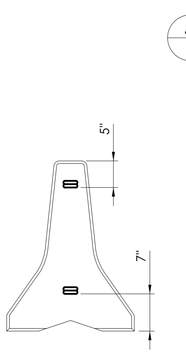
PLOTTED DATE: 9/21/2022

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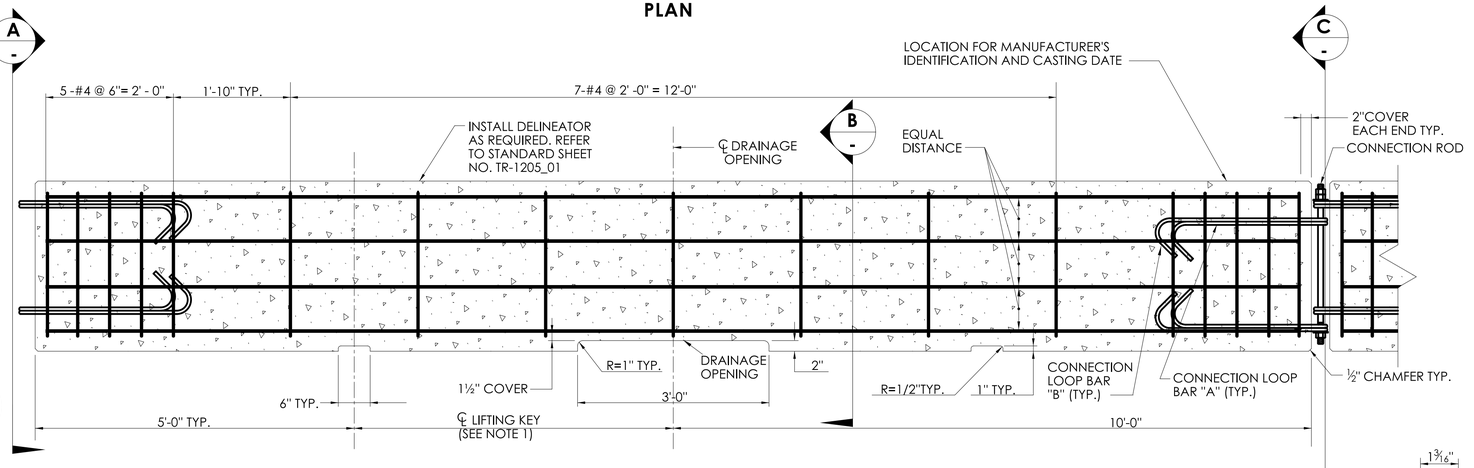
1. ALTERNATE DESIGNS FOR LIFTING KEYS, HOLES OR OTHER HANDLING DEVICES MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. EXPECTED PERMANENT DYNAMIC DEFLECTION IS 3'-6" BASED ON TL-3 CRASH TESTS WITH 240' OF TPCBC.



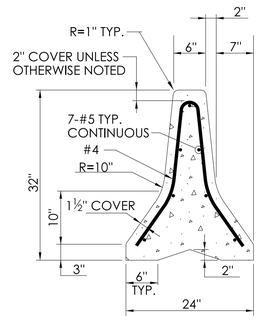
PLAN



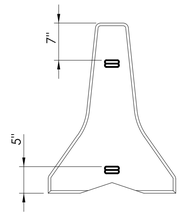
SECTION A -



ELEVATION



SECTION B -



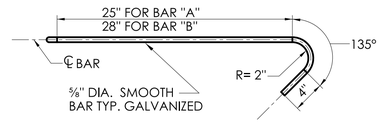
END VIEW C -



WASHER DETAIL



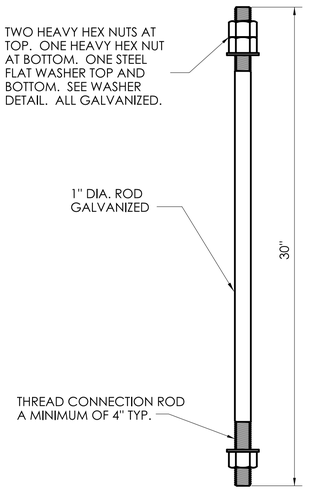
PLAN



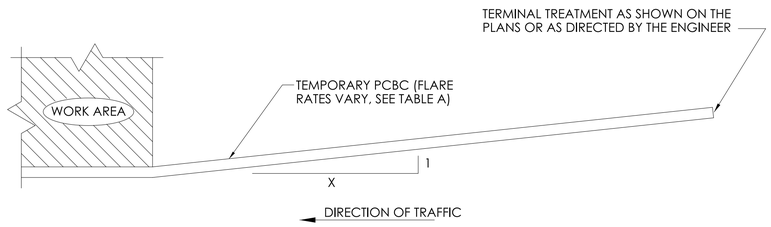
ELEVATION

BAR " A " = 6' - 0" TOTAL
BAR " B " = 6' - 6" TOTAL

CONNECTION LOOP BAR



CONNECTION ROD



PLAN - TYPICAL INSTALLATION

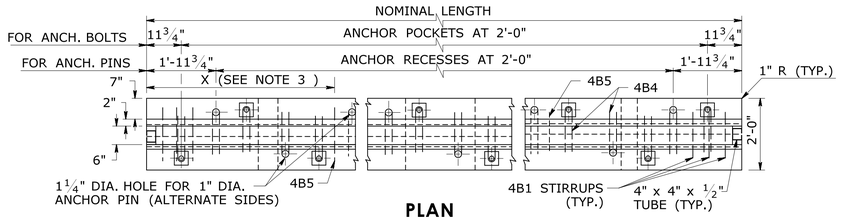
TABLE A FLARE RATES

* SPEED	FLARE RATE (X : 1)
≤ 30MPH	4 : 1
> 30MPH BUT < 45MPH	6 : 1
≥ 45MPH NON-LIMITED ACCESS HIGHWAYS	8 : 1
ALL LIMITED ACCESS HGHWAYS	10 : 1

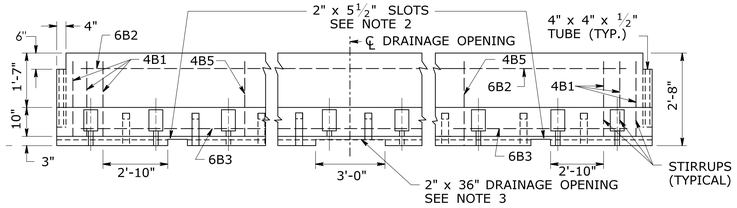
* DESIGN SPEED THROUGH THE WORK AREA.

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:00:00-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 10:22:53-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: TEMPORARY PRECAST CONCRETE BARRIER CURB	STANDARD SHEET NO.: HW- 822_01

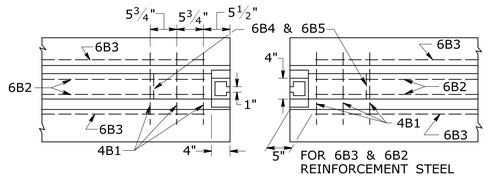
PLOTTED DATE: 9/21/2022



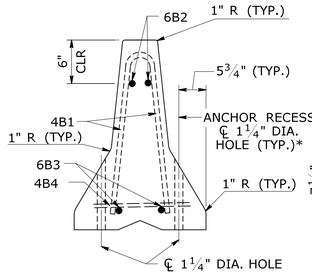
PLAN



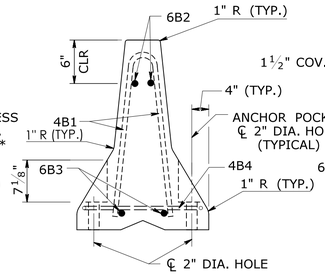
ELEVATION



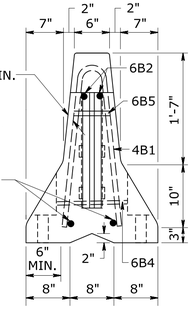
PLAN - BARRIER END



SECTION A-A



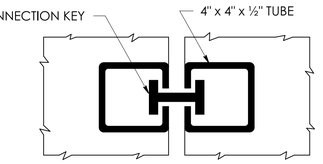
SECTION B-B



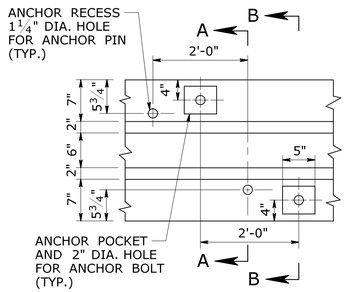
SECTION D-D

GENERAL NOTES:

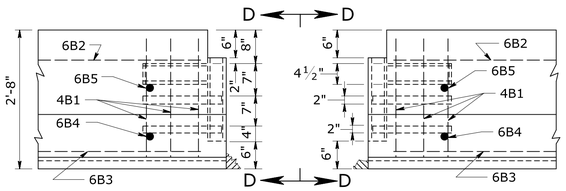
1. CONCRETE CLEAR COVER FOR REINFORCEMENT STEEL IS 1½" (MIN.).
2. 2" x 5½" SLOTS - TWO REQUIRED IN SECTIONS 12 FEET AND GREATER. ONE REQUIRED IN 8 FOOT AND 10 FOOT SECTIONS.
3. 2" x 36" DRAINAGE OPENING IS ONLY REQUIRED FOR TEMPORARY TRAFFIC BARRIER UNITS OF 20 FEET IN LENGTH, LOCATED IN MIDDLE OF THE BARRIER UNIT.
4. A TEMPORARY TRAFFIC BARRIER UNIT IS 20 FEET IN LENGTH; HOWEVER OTHER LENGTHS MAY BE USED TO MEET FIELD CONDITIONS. THE NUMBER AND PLACEMENT OF THE 4B4 AND 4B5 REINFORCEMENT STEEL WILL VARY WITH THE LENGTH OF THE BARRIER UNIT AS SHOWN ON THE TABLE OF VARIABLE REINFORCEMENT STEEL. THE 6B2 AND 6B3 REINFORCEMENT STEEL TO BE PLACED 10 INCHES SHORTER THAN THE NOMINAL LENGTH OF THE BARRIER UNITS.
5. ANCHOR RECESS HOLES OR ANCHOR POCKETS WITH ASSOCIATED REINFORCEMENT STEEL ARE ONLY REQUIRED FOR THE ASSOCIATED TEMPORARY TRAFFIC BARRIER (PINNED) OR TEMPORARY TRAFFIC BARRIER (BOLTED).



KEY IN PLACE



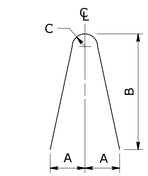
PLAN - ANCHOR RECESS/POCKET
SEE NOTE 5



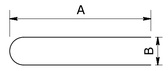
ELEVATION

TABLE OF VARIABLE REINFORCEMENT STEEL			
NOMINAL LENGTH OF BARRIER UNIT	MARK	"X"	NO. EACH SECTION
20'	4B4	N.A.	19
20'	4B5	6'-11"	2
18'	4B4	N.A.	17
18'	4B5	6'-5"	2
16'	4B4	N.A.	15
16'	4B5	5'-11"	2
14'	4B4	N.A.	13
14'	4B5	7'-0"	1
12'	4B4	N.A.	11
12'	4B5	6'-0"	1
10'	4B4	N.A.	9
10'	4B5	5'-0"	1
8'	4B4	N.A.	7
8'	4B5	-	0
"X" DISTANCE FROM END OF BARRIER TO 4B5 REINFORCEMENT STEEL			

TEMPORARY TRAFFIC BARRIER

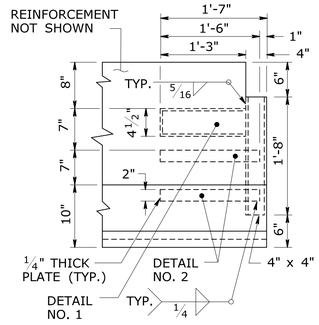


TYPE "I" REINFORCEMENT STEEL

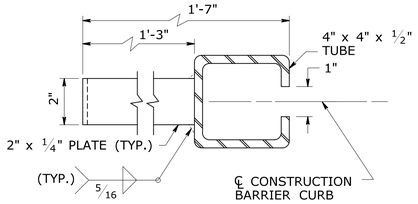


TYPE "II" REINFORCEMENT STEEL

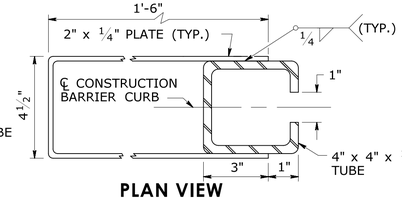
REINFORCEMENT STEEL LIST (EACH BARRIER SECTION)								
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	LOCATION
4B1	#4	6	4'-11"	I	5"	26"	2"	STIRRUPS
4B4	#4	SEE NOTE 4	3'-1"	II	15½"	4"		STIRRUPS
4B5	#4	SEE NOTE 4	4'-11"	I	5"	26"	2"	STIRRUPS
6B2	#6	2	SEE NOTE 4	STR.				LONGITUDINAL (TOP) NORMAL SECTION
6B3	#6	2	SEE NOTE 4	STR.				LONGITUDINAL (BOTTOM) NORMAL SECTION
6B4	#6	2	1'-2"	STR.				TRANSVERSE (BOTTOM) NORMAL SECTION
6B5	#6	2	0'-6"	STR.				TRANSVERSE (TOP) NORMAL SECTION



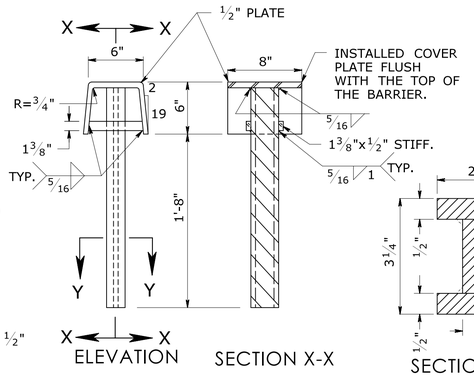
ELEVATION



PLAN VIEW
DETAIL NO. 1



PLAN VIEW
DETAIL NO. 2



ELEVATION SECTION X-X SECTION Y-Y

CONNECTION KEY

TEMPORARY TRAFFIC BARRIER CONNECTION DETAILS

MASH 2016 COMPLIANT
APPROVAL ID. 2021-01

NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2022.09.27 15:00:31-04'00'

APPROVED BY:
Digitally signed by Calabrese, Michael
Date: 2022.11.08 10:22:10-05'00'

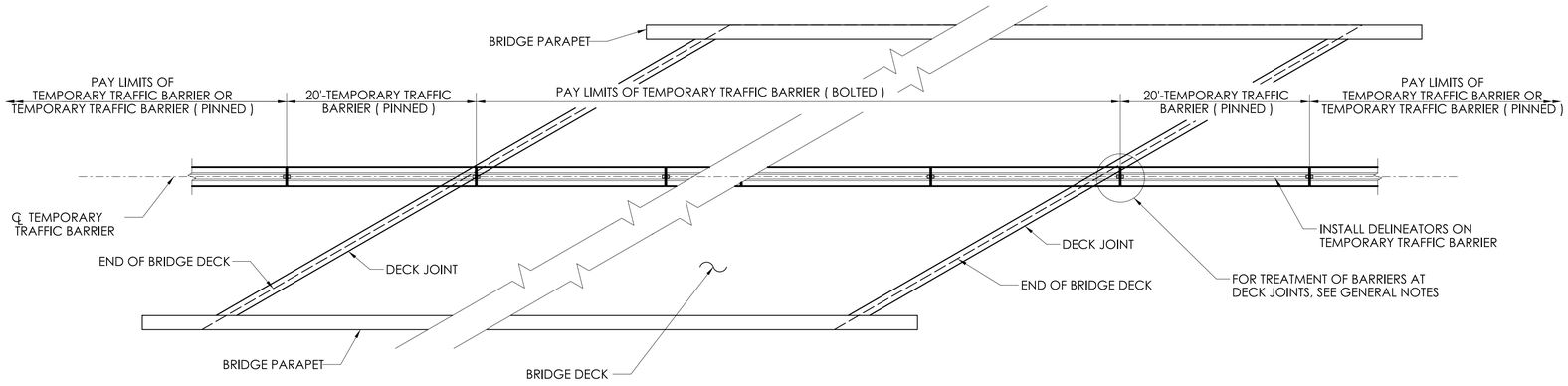
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

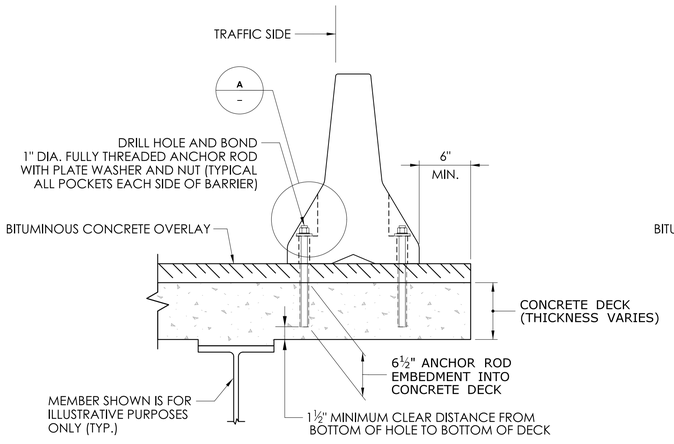
STANDARD SHEET TITLE:
TEMPORARY TRAFFIC BARRIER - DETAILS

STANDARD SHEET NO.:
HW- 822_02a

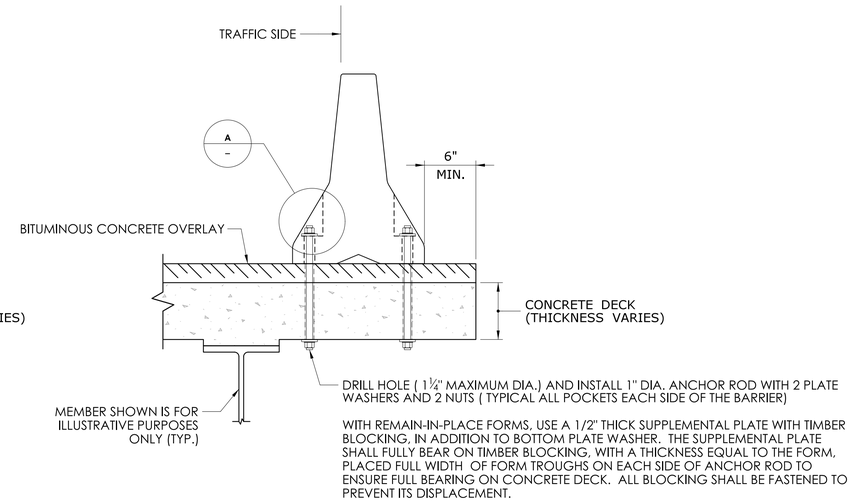
PLOTTED DATE: 9/21/2022



LAYOUT PLAN

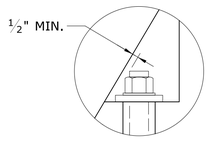


ADHESIVE BONDED ANCHORAGE OPTION



THRU-BOLTED ANCHORAGE OPTION

TEMPORARY TRAFFIC BARRIER (BOLTED)



ANCHOR ROD CLEARANCE A –

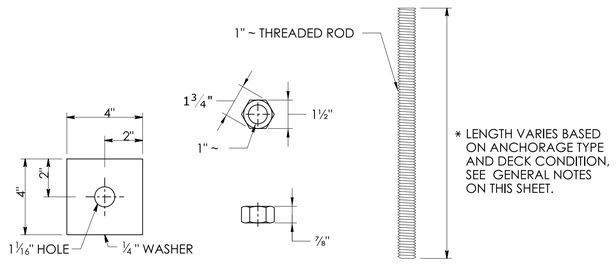


PLATE WASHER **HEX NUT** **THREADED ROD**

ANCHOR ROD DETAILS

GENERAL NOTES:

THE TEMPORARY TRAFFIC BARRIER (BOLTED) DEPICTED ON THIS SHEET SHALL BE A PRECAST CONCRETE BARRIER CONFORMING TO THE DETAILS SHOWN ON STANDARD SHEET HW-822_02A AND BE ANCHORED TO A CONCRETE DECK, WITH OR WITHOUT A BITUMINOUS CONCRETE OVERLAY. NO BARRIER SECTION SHALL BE LESS THAN 10 FT. LONG. ANCHORAGES SHALL BE INSTALLED IN ALL ANCHOR POCKETS ON EACH SIDE OF THE BARRIER. DELINEATORS SHALL BE INSTALLED ON THE TOP OF ALL BARRIERS AS REQUIRED BY SECTION 8.22. FOR ADDTIONAL INSTALLATION AND REMOVAL REQUIREMENTS, SEE SECTION 8.22.

THE TEMPORARY TRAFFIC BARRIER (BOLTED) IS MASH TL-3 COMPLIANT. THE CTDOT MAXIMUM LATERAL DEFLECTION LIMIT, DUE TO THE PERMANENT SET DEFLECTION OR THE DYNAMIC DEFLECTION, FOR A BARRIER ANCHORED TO A CONCRETE SURFACE IMPACTED BY A VEHICLE MEETING THE REQUIREMENTS OF MASH TL-3 IS 6 IN.

THREE TYPES OF BOLTED ANCHORAGES ARE ALLOWED: ADHESIVE BONDED ANCHORAGES, THRU-BOLTED ANCHORAGES, AND DOWEL BAR ANCHORAGES. THE FOLLOWING ARE THE LIMITATIONS AND CONDITIONS FOR USE OF EACH TYPE OF ANCHORAGE:

ADHESIVE BONDED ANCHORAGES ARE PERMITTED TO BE USED UNDER THE FOLLOWING CONDITIONS:
- IN NEW DECKS, WITH A MINIMUM 8.5 IN. THICKNESS AND 2 MATS OF REINFORCEMENT, SUPPORTED BY DISCRETE MEMBERS
- IN NEW DECKS, WITH A MINIMUM 7 IN. THICKNESS AT THE ANCHORAGE, SUPPORTED BY BUTTED PRECAST CONCRETE DECK UNITS
- IN EXISTING DECKS, WITH A MINIMUM 8.00 IN. THICKNESS, 2 MATS OF REINFORCEMENT, AND A CONDITION RATING OF NO LESS THAN 5
- IN EXISTING DECKS, WITH A MINIMUM 7.25 IN. THICKNESS AND 2 MATS OF REINFORCEMENT, ONLY OVER FLANGES OF THE SUPPORTING DISCRETE MEMBERS

ADHESIVE BONDED ANCHORAGES ARE NOT PERMITTED TO BE USED IN ANY PORTION OF A PRETENSIONED CONCRETE MEMBER.

THRU-BOLTED ANCHORAGES ARE PERMITTED TO BE USED IN EXISTING DECKS SUPPORTED BY A DISCRETE MEMBERS, EXCEPT WHERE THE ANCHORAGE WILL CONFLICT WITH A COMPONENT OF THE MEMBER (SUCH AS THE TOP FLANGE), REGARDLESS OF THE DECK THICKNESS OR CONDITION RATING.

THRU-BOLTED ANCHORAGES ARE NOT PERMITTED TO BE USED IN ANY PORTION OF A NEW DECK OR ANY COMPONENT OF THE MEMBER SUPPORTING THE DECK, SUCH AS A STRUCTURAL STEEL OR PRETENSIONED MEMBER.

DOWEL BAR ANCHORAGES ARE PERMITTED TO BE USED ONLY IN NEW PRESTRESSED DECK UNITS JOINED WITH A PARTIAL OR FULL DEPTH CLOSURE POUR WITHOUT A DECK.

ADHESIVE BONDED ANCHORAGE REQUIREMENTS:

THE ADHESIVE BONDING MATERIAL SHALL HAVE A MINIMUM CHARACTERISTIC BOND STRESS OF 1,550 PSI OR GREATER IN DRY, UNCRACKED CONCRETE AT TEMPERATURE RANGE A IN A HAMMER DRILLED OR CORE DRILLED HOLE. THE CONCRETE DECK SHALL BE ASSUMED TO HAVE A MINIMUM CONCRETE STRENGTH OF 3,000 PSI.

THE MINIMUM CONCRETE EMBEDMENT DEPTH OF THE ANCHOR ROD SHALL BE NO LESS THAN 6.50 IN. THE MINIMUM DISTANCE FROM THE BOTTOM OF THE DRILLED HOLE TO THE BOTTOM OF THE CONCRETE DECK SHALL BE 1.5 IN. TO PREVENT SPALLING OF CONCRETE.

IF REINFORCEMENT IS ENCOUNTERED AND CANNOT BE AVOIDED, THE REINFORCEMENT SHALL BE DRILLED THROUGH TO ACHIEVE THE REQUIRED EMBEDMENT.

IN EXISTING DECKS, IF THE BOTTOM OF THE DECK SPALLS AND THE DECK THICKNESS IS COMPLETELY PENETRATED BY DRILLING OPERATIONS, A THRU-BOLTED ANCHORAGE SHALL BE USED.

NO FIELD TESTING OF THE ADHESIVE BONDED ANCHORS IS REQUIRED.

THE ADHESIVE BONDING MATERIAL SHALL BE FULLY CURED PRIOR TO PUTTING THE TEMPORARY TRAFFIC BARRIER (BOLTED) INTO SERVICE. THE TIME TO FULL CURE SHALL BE BASED ON THE LOWEST TEMPERATURE DURING THE CURING TIME PERIOD.

THRU-BOLTED ANCHORAGE REQUIREMENTS:

ANCHOR HOLES IN THE CONCRETE DECK SHALL BE MADE WITH A CORE DRILL OR ANY OTHER APPROVED ROTARY DRILLING DEVICE THAT DOES NOT IMPART AN IMPACT FORCE.

IF REINFORCEMENT IS ENCOUNTERED AND CANNOT BE AVOIDED, THE REINFORCEMENT SHALL BE DRILLED THROUGH TO COMPLETE THE HOLE.

ANCHOR HOLES SHALL NOT EXTEND INTO OR DAMAGE MEMBERS SUPPORTING THE CONCRETE DECK.

FOR CONCRETE DECKS CONSTRUCTED WITH STAY IN PLACE FORMS, THE VALLEYS SHALL BE FILLED WITH A NON-COMPRESSIBLE MATERIAL TO ENSURE FULL BEARING OF THE PLATE WASHER.

DOWEL BAR ANCHORAGE REQUIREMENTS:

FOR DOWEL BAR ANCHORAGE REQUIREMENTS AND DETAILS, REFER TO THE STRUCTURE SUBSET(S).

TO ACCOMMODATE BRIDGE MOVEMENTS AT A DECK JOINT, THE ENDS OF THE ABUTTING BARRIER SECTIONS SHALL BE PLACED OVER AND ADJACENT TO THE DECK JOINT. VARYING BARRIER SECTION LENGTHS MAY BE REQUIRED TO MEET THIS REQUIREMENT ON A BRIDGE. ON BARRIER SECTIONS SPANNING A DECK JOINT, BOLTED ANCHORAGES SHALL ONLY BE INSTALLED ON ONE END OF A BARRIER SECTION TO ALLOW FOR BRIDGE MOVEMENTS. NO MORE THAN 1 BOLTED ANCHORAGE MAY BE OMITTED FROM A BOLTED BARRIER SECTION TO AVOID CONFLICT WITH THE DECK JOINT. BOLTED ANCHORAGES SHALL BE NO LESS THAN 9 IN. FROM THE END OF A DECK OR THE EDGE OF A DECK JOINT BLOCKOUT. AT DECK JOINTS, THE ABUTTING BARRIER ENDS SHALL BE PLACED 0.625 IN. APART AND USE A TYPICAL CONNECTION KEY TO CONNECT THE BARRIER ENDS TOGETHER.

MASH 2016 COMPLIANT
APPROVAL ID. 2021-01

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NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.08.16 11:10:25-04'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2024.10.18 11:54:05-04'00'

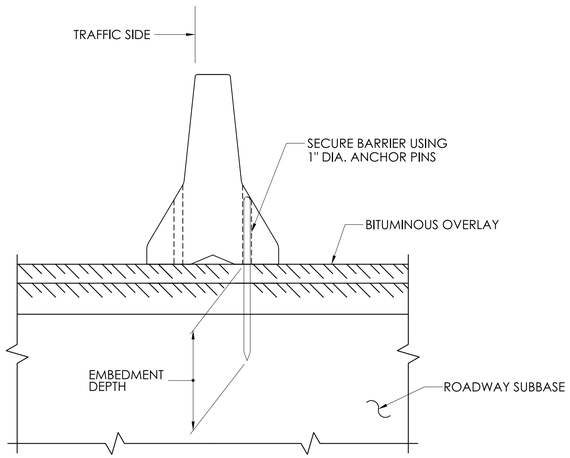
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
TEMPORARY TRAFFIC BARRIER (BOLTED)

STANDARD SHEET NO.:
HW- 822_02b

PLOTTED DATE: 8/13/2024



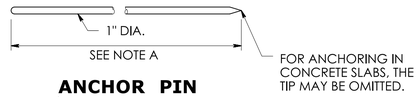
END VIEW - TEMPORARY TRAFFIC BARRIER (PINNED)

SEE NOTES 2 & 3 FOR PIN OPTIONS
ROADSIDE APPLICATION SHOWN

NOTE A

ENSURE THAT THE LENGTH OF THE ANCHOR PIN IS SUCH THAT THE FOLLOWING MINIMUM EMBEDMENT LENGTH IS OBTAINED:

(A) INTO CONCRETE PAVEMENT 0'-5"
(B) INTO FLEXIBLE PAVEMENT 1'-6"
(C) INTO UNPAVED AREA 2'-6"



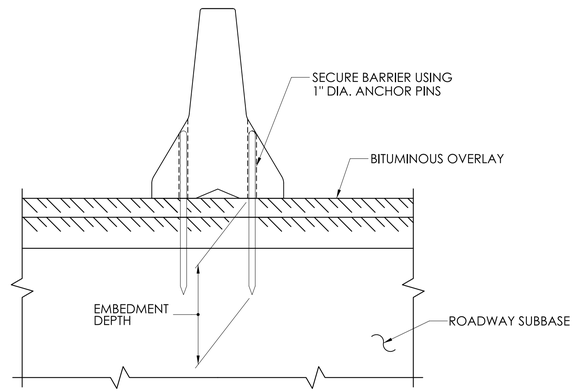
ANCHOR PIN

GENERAL NOTES:

1. THE FIRST AND LAST UNIT OF A TEMPORARY TRAFFIC BARRIER LAYOUT SHALL BE 20 FOOT IN LENGTH AND FULLY PINNED (9 PINS) ON BOTH SIDES.
2. TEMPORARY TRAFFIC BARRIER (PINNED) SHALL ONLY BE PINNED ON THE WORK AREA SIDE OF THE BARRIER AFTER THE REQUIRED LENGTH OF BARRIER IS PLACED.
3. TEMPORARY TRAFFIC BARRIER (PINNED) SHALL BE FULLY PINNED (9 PINS) IN LOCATIONS WHERE THE BARRIERS ARE DIVIDING OPPOSING TRAFFIC.
4. ALL ANCHOR PINS INSTALLED SHALL NOT PROJECT BEYOND THE TEMPORARY TRAFFIC BARRIER'S SURFACE.
5. INSTALL DELINEATORS WITH THE COLORS AND SPACING AS REQUIRED IN SECTION 8.22.
6. TEMPORARY TRAFFIC BARRIER DESIGN DEFLECTION DISTANCES BY TYPE;

BARRIER TYPE	**DEFLECTION
UNPINNED	40"
PINNED	20"

** MASH STANDARD DEFLECTION CAUSED BY 5,000 LB VEHICLE TRAVELING 62 MPH IMPACTING THE BARRIER AT 25 DEGREE ANGLE.



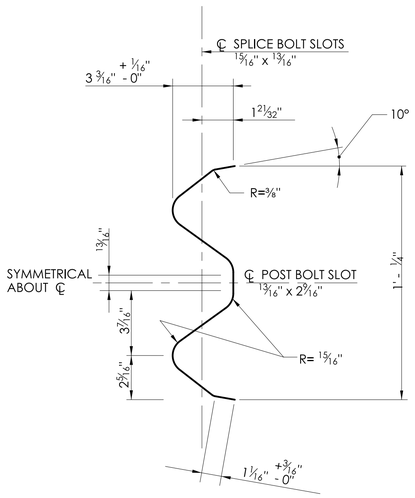
END VIEW - TERMINAL UNIT

TEMPORARY TRAFFIC BARRIER

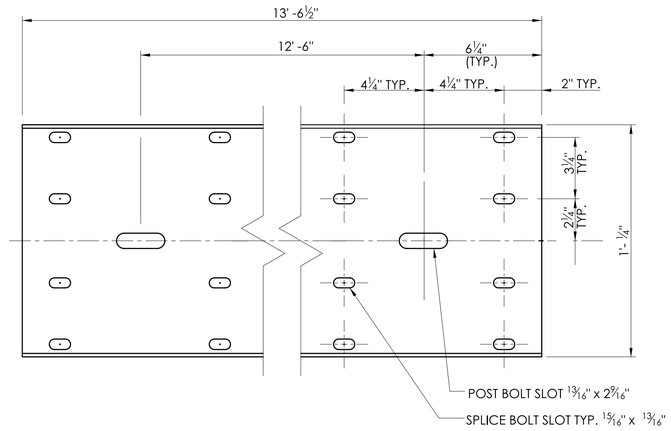
MASH 2016 COMPLIANT
APPROVAL ID. 2021-01

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.08.16 11:07:03-04'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2024.10.17 22:57:02-04'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: TEMPORARY TRAFFC BARRIER AND TEMPORARY TRAFFC BARRIER (PINNED)	STANDARD SHEET NO.: HW- 822_02c

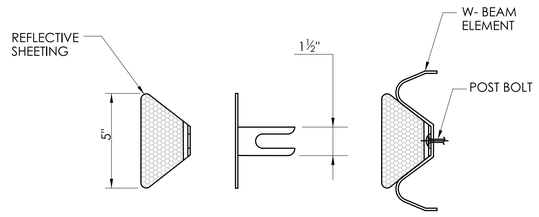
PLOTTED DATE: 8/13/2024



SELECTION THRU RAIL ELEMENT
END VIEW
NOTE: ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



TYPICAL W-BEAM RAIL ELEMENT
CLASS A, TYPE II



DELINEATOR DETAIL

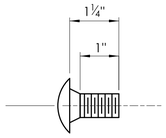
GENERAL NOTES:

1. NEW R-B 350 GUIDERAIL INCLUDING SYSTEMS, ANCHORS AND TRANSITIONS INSTALLED ON EXPRESSWAYS AND RAMPS SHALL USE CLASS B TYPE II (10 GAUGE) W-BEAM RAIL ELEMENTS.
2. W6 x 9 POSTS MAY BE USED IN PLACE OF W6 x 8.5 POSTS.
3. W8 x 13 POSTS, 7'-6" LONG, ARE USED WITH TRANSITIONS TO VERTICAL OR SAFETY SHAPE PARAPETS (POSTS 1 AND 2) AND SYSTEM 6.
4. W6 x 8.5 POSTS, 6'-0" LONG, ARE USED WITH TRANSITIONS TO VERTICAL OR SAFETY SHAPE PARAPETS (POSTS 3 THOUGH 6), MD-B 350, SYSTEM 5 & 5A, AND STANDARD R-B 350 GUIDERAIL.

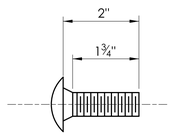
DELINEATOR NOTES:

1. DELINEATORS SHALL BE FORMED OF .080 POLY-CARBONATE OR .080 SHEET ALUMINUM IN ACCORDANCE WITH M.18.13.
2. REFLECTIVE SHEETING SHALL CONFORM TO M.18.09.2.
3. DELINEATORS SHALL BE INSTALLED ON THE POST CLOSEST TO THE DESIGNATED SPACING.
4. REFLECTIVE SHEETING SHALL BE WHITE EXCEPT ON THE LEFT SIDE OF DIVIDED STREETS, HIGHWAYS, RAMPS, AND ONE WAY ROADS IN THE DIRECTION OF TRAVEL WHERE IT SHALL BE YELLOW.
5. INSTALL DELINEATORS ON RAIL THAT IS PARALLEL TO AND NOT GREATER THAN 6' FROM THE EDGE OF THE ROADWAY. A MINIMUM OF THREE DELINEATORS MUST BE INSTALLED ON ANY RUN OF RAIL.

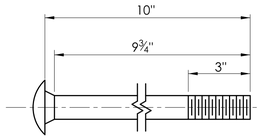
DELINEATOR SPACING:
RADIUS ≥ 300' - SPACE EVERY 50'
RADIUS < 300' - SPACE EVERY 25'



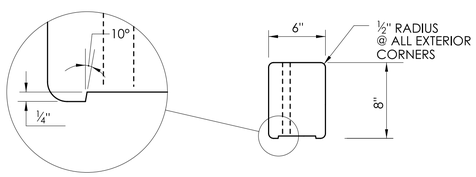
W-BEAM SPLICE
BOLT DETAIL



POST BOLT DETAIL
FOR R-B 350
SYSTEM 6 RUBRAIL

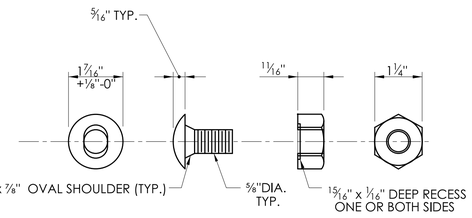


POST BOLT DETAIL FOR R-B 350
AND MD-B 350 GUIDERAIL
(UNTHREADED PORTION NOT TO EXCEED 6¾")



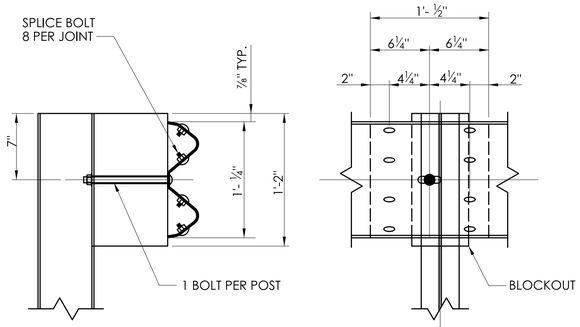
PLAN





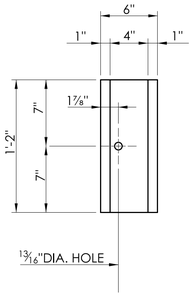
BUTTONHEAD BOLT **HEX NUT**

NOTE: AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT. DIAMETER SHOWN IS TYPICAL FOR ALL GUIDERAIL BOLTS. SEE DETAILS ABOVE FOR SPECIFIC LENGTHS.



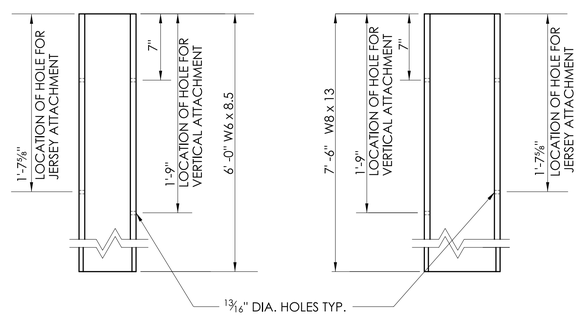
SECTION **ELEVATION**

LAP DETAIL
NOTE: LAP RAIL SECTION IN DIRECTION OF TRAFFIC



ELEVATION

R-B 350 PLASTIC
BLOCKOUT DETAIL



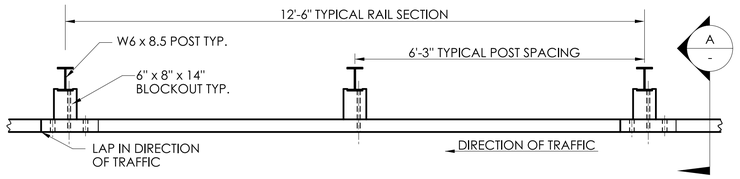
W6x8.5 POST
6'-0" LONG

W8x13 POST
7'-6" LONG

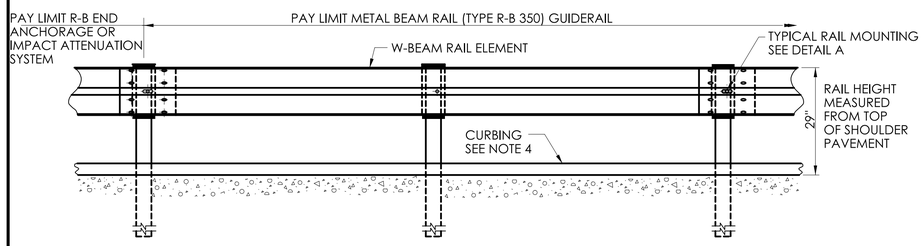
BOLT HOLE LAYOUT FOR W8 x 13 AND W6 x 8.5 UNIFORM POST
(REFER TO GENERAL NOTES)

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:03:36-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 10:16:31-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: W-BEAM METAL BEAM RAIL HARDWARE / STANDARD SHEET NO.: HW-910_01

PLOTTED DATE: 9/21/2022



PLAN



ELEVATION

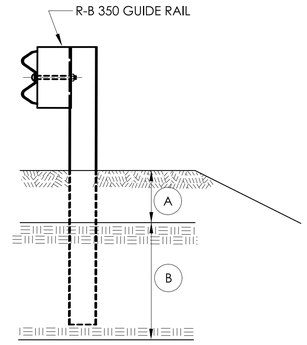
METAL BEAM RAIL (TYPE R-B 350)

CONDITION 1 :

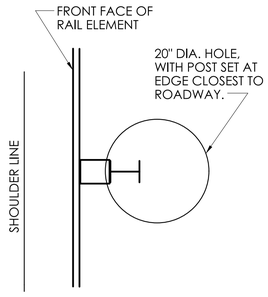
IF SOIL DEPTH IS ≤ 18" DEEP (A) DRILL 20" DIA. HOLE 24" INTO LEDGE. (B)

CONDITION 2 :

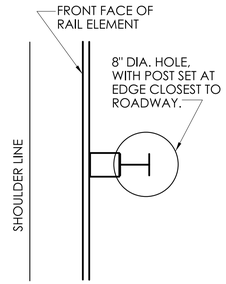
IF SOIL DEPTH IS > 18" DEEP (A) DRILL 8" DIA. HOLE 1' INTO LEDGE (B) OR TO THE DEPTH OF FULL EMBEDMENT OF 42⅛" WHICHEVER IS LESS.



ELEVATION
(SEE NOTE 8)



PLAN
CONDITION 1
(SEE NOTE 8)

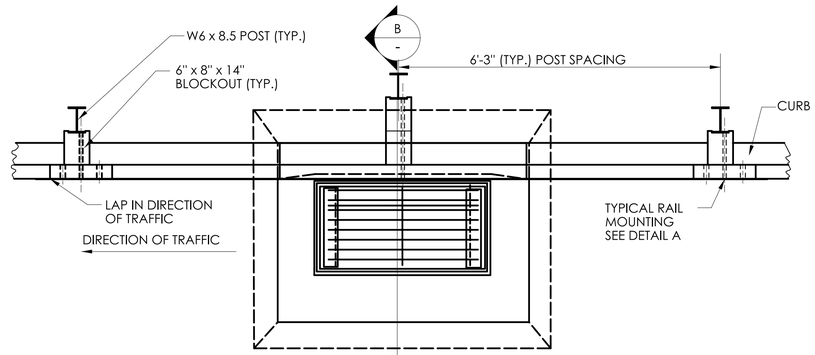


PLAN
CONDITION 2
(SEE NOTE 8)

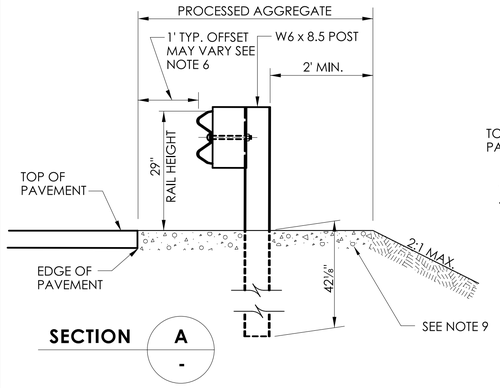
DRILLING IN ROCK FOR GUIDERAIL POSTS

GENERAL NOTES:

1. SEE SHEET HW-910_01 FOR HARDWARE AND DELINEATOR DETAILS.
2. MAXIMUM DESIGN DEFLECTION FOR R-B 350 GUIDERAIL AT THE STANDARD POST SPACING OF 6'-3" IS 4'-3". DEFLECTION REQUIREMENT IS MEASURED FROM THE BACK OF POST TO THE FACE OF OBJECT.
3. FOR CURVES WITH RADII OF 150' OR LESS, ALL RAIL ELEMENTS SHALL BE SHOP FABRICATED TO THE PROPER RADIUS AND GALVANIZED AFTER FABRICATION. RADIUS RAIL WHEN REQUIRED AND NOTED ON THE PLANS, IS INCLUDED IN THE PAY ITEM FOR GUIDERAIL.
4. RAIL HEIGHT WITH CURBING SHALL BE MEASURED FROM THE TOP OF PAVEMENT. ON HIGH SPEED ROADWAYS (>45mph), 4" CURBING MAY BE USED IN CONJUNCTION WITH GUIDERAIL AND THE RAIL ELEMENT SHALL BE PLACED FLUSH WITH THE FACE OF CURB. ON LOW SPEED ROADWAYS (<45mph) , 6" CURBING MAY BE USED IN CONJUNCTION WITH GUIDERAIL AND THE RAIL ELEMENT SHALL BE PLACED A MAXIMUM OF 9" BEHIND THE FACE OF CURB.
5. THREE BLOCKOUTS MAY BE USED FOR ONE POST ONLY. TWO BLOCKOUTS MAY BE USED FOR A SERIES OF POSTS. THE COST OF ADDITIONAL BLOCKOUTS AND LONGER BOLTS SHALL BE INCLUDED IN THE BID PRICE PER FOOT OF GUIDERAIL. EXTRA BLOCKOUTS AT TRANSITION TO BRIDGE PARAPETS SHOULD BE AVOIDED.
6. W-BEAM GUIDERAIL MAY BE PLACED 1' OR MORE FROM THE EDGE OF PAVEMENT ONLY ON SLOPES 10:1 OR FLATTER AND WITHOUT CURBING. IF THE RAIL IS INSTALLED WITHIN 2' OF THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE SHOULDER SLOPE EXTENDED TO THE RAIL. IF THE RAIL IS INSTALLED BEYOND 2' FROM THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE GROUND DIRECTLY BELOW THE RAIL.
7. ALL R-B 350 GUIDERAIL TYPES INSTALLED ON EXPRESSWAYS AND RAMPS SHALL USE CLASS B, TYPE-II (10 GAUGE) W-BEAM RAIL ELEMENTS.
8. 20" DIA. EXCAVATED HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR GRANULAR FILL COMPACTED IN 6" LIFTS BEFORE DRIVING POST OR POSTS MAY BE SET IN EXCAVATED HOLE AND BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). 8" DIA. HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
9. AS DIRECTED BY THE ENGINEER AND WHERE PAVEMENT FOR RAILING IS NOT BEING INSTALLED, A MIN. 6" DEPTH OF PROCESSED AGGREGATE SHALL BE INSTALLED FROM THE PAVEMENT EDGE OR BACK OF CURB TO A MINIMUM OF 2' BEHIND THE GUIDERAIL POST AND COMPACTED IN 6" LIFTS.
10. MINIMUM RAIL HEIGHT FOR NEW CONSTRUCTION SHALL BE 29" ± 1".

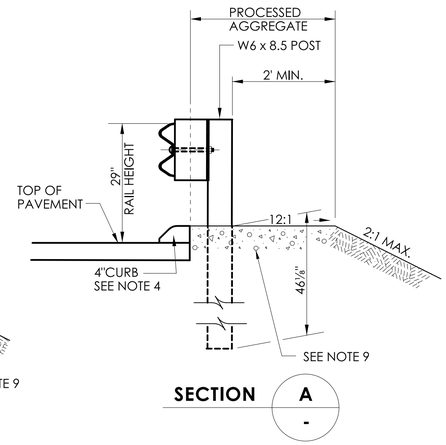


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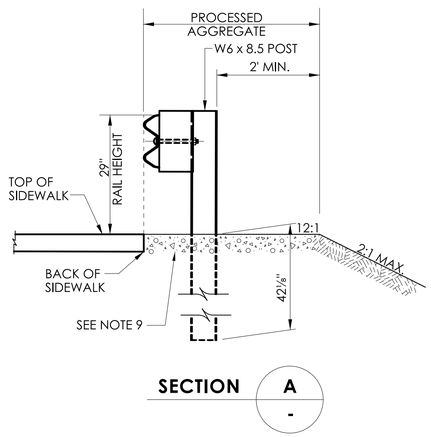
SECTION A -

NO CURB APPLICATION



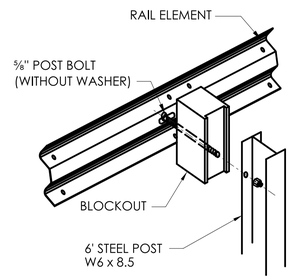
SECTION A -

CURB APPLICATION

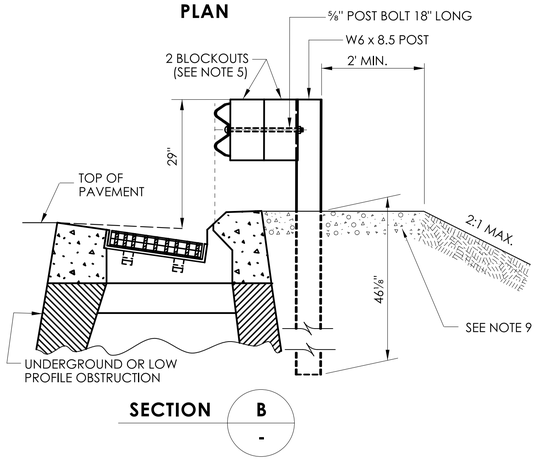


SECTION A -

SIDEWALK APPLICATION



DETAIL A
RAIL MOUNTING

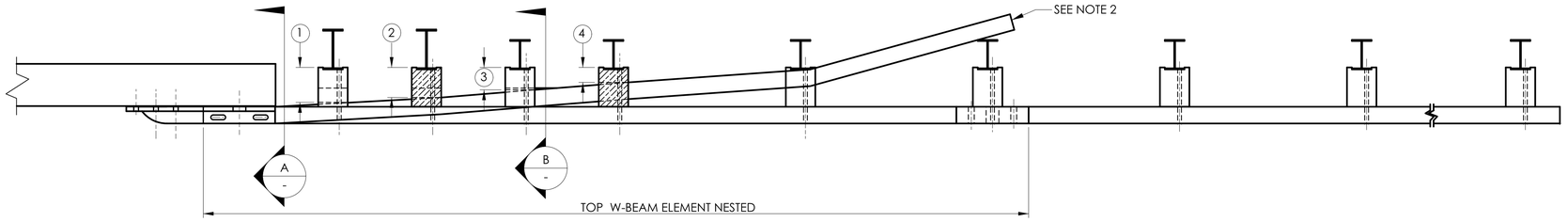


SECTION B -

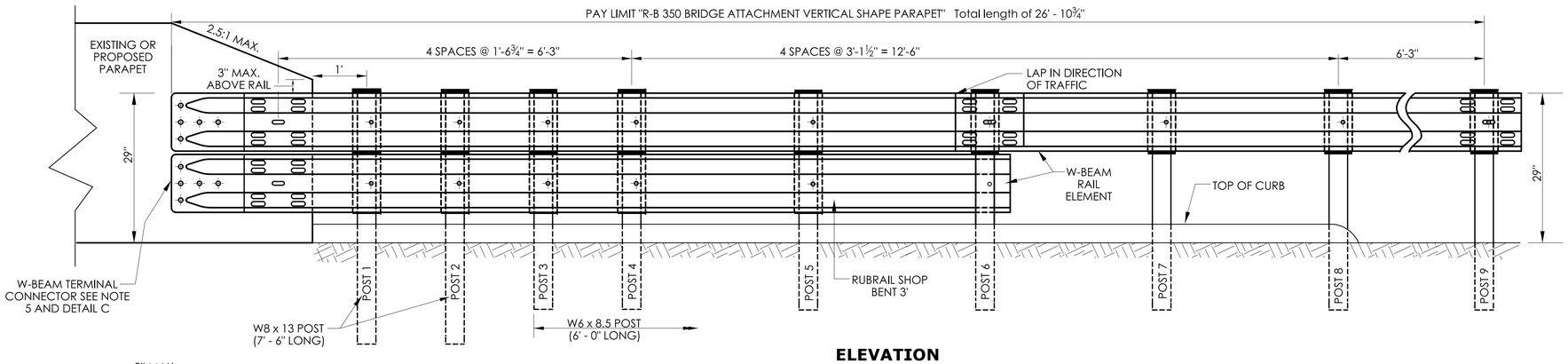
MULTIPLE BLOCKOUT APPLICATION (MAY BE USED TO AVOID UNDERGROUND OR LOW PROFILE OBSTRUCTION)

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:02:52-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 10:16:01-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL / STANDARD SHEET NO.: HW-910_02

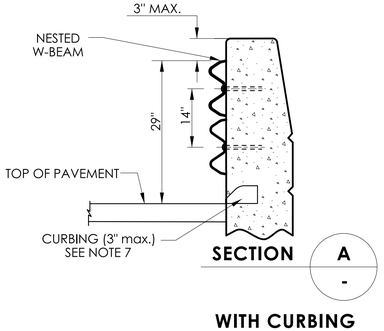
PLOTTED DATE: 9/21/2022



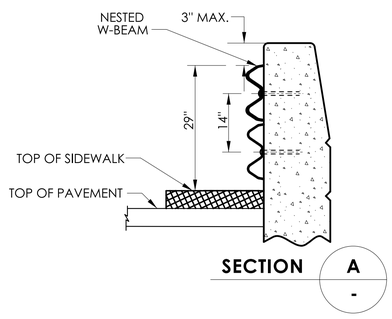
PLAN



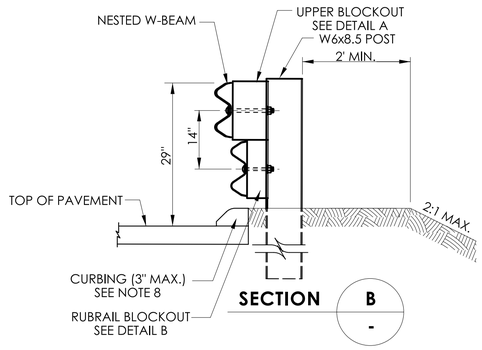
ELEVATION



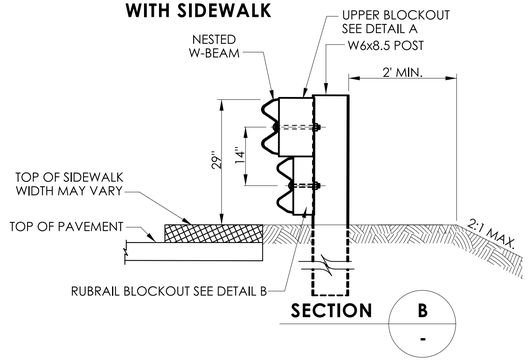
WITH CURBING



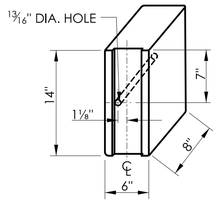
WITH SIDEWALK



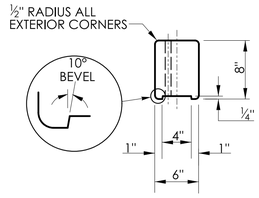
WITH CURBING



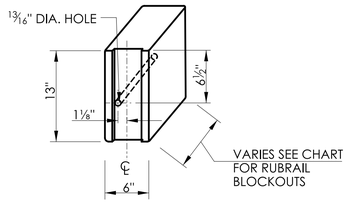
WITH SIDEWALK



DETAIL A
UPPER BLOCKOUT

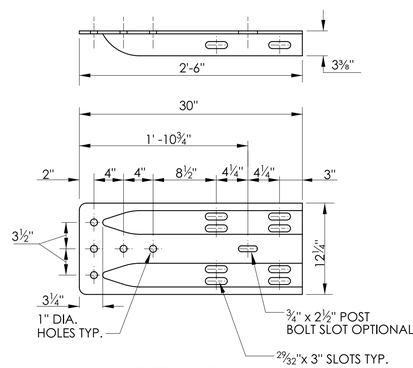


TOP



DETAIL B
RUBRAIL BLOCKOUT

RUBRAIL BLOCKOUTS 13" HIGH x 6" WIDE		
POST	THICKNESS	BOLT LENGTH
1	7"	9"
2	6"	8"
3	4½"	6"
4	3"	5"



DETAIL C
W-BEAM TERMINAL CONNECTOR
CLASS B TYPE II
SEE NOTE 5

GENERAL NOTES:

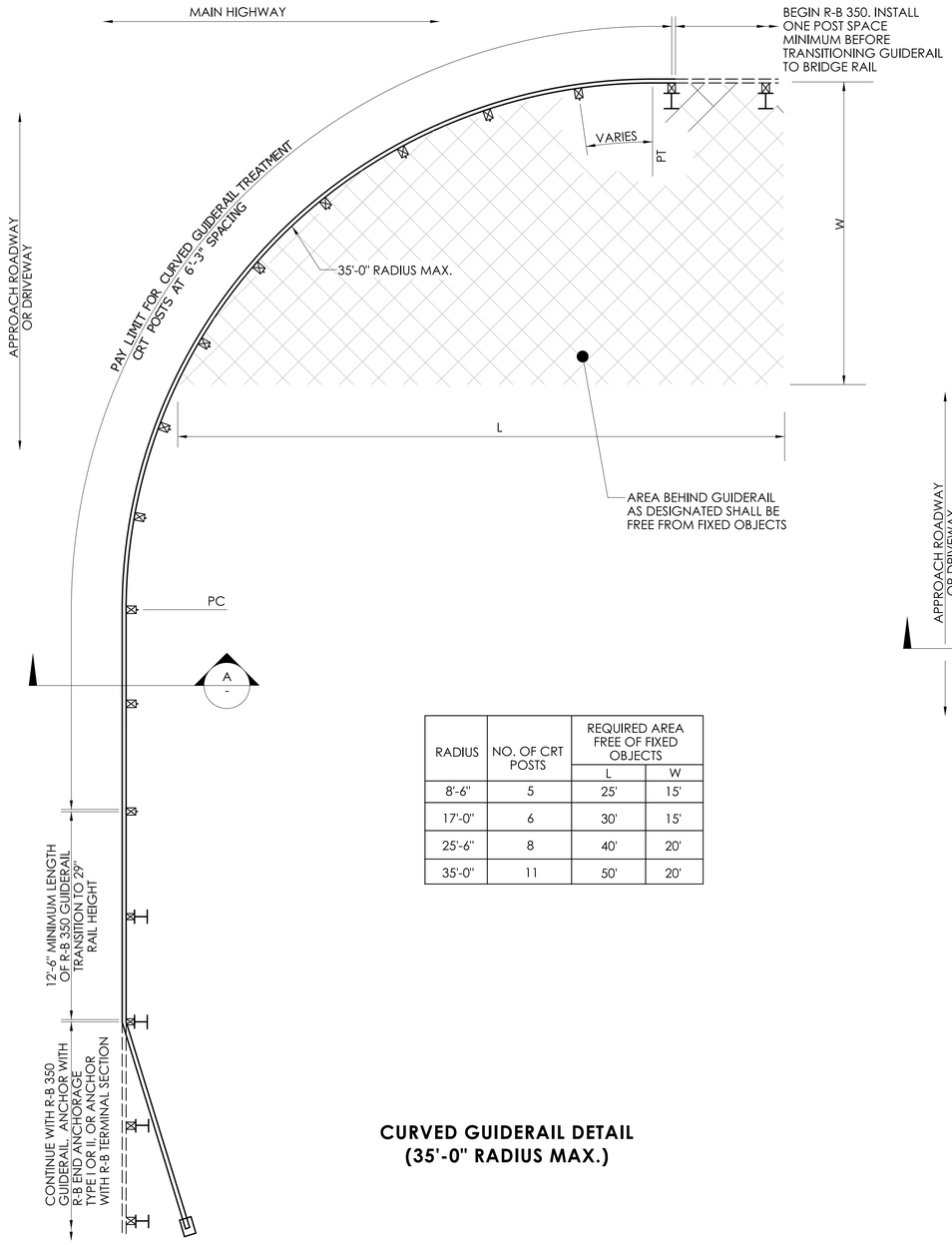
1. RUBRAIL BLOCKOUTS FOR POSTS 1 THROUGH 4 ARE ATTACHED TO POST AND RAIL WITH A ⅝" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTH). RUBRAIL ONLY IS ATTACHED TO POST 5 WITH A ⅝" x 1¼" BUTTONHEAD BOLT.
2. THE RUBRAIL SHALL BE SHOP BENT IN THE LAST 3' TO FACILITATE INSTALLATION. DO NOT ATTACH RUBRAIL TO BACK OF POST 6.
3. ANCHORAGE:
   (A) AT EXISTING PARAPETS EACH W-BEAM TERMINAL CONNECTOR SHALL BE ANCHORED USING FOUR ⅞" x 12" CHEMICALLY ANCHORED BOLTS WITH WASHERS OR AS DETAILED ON STRUCTURE SHEETS. MAXIMUM BOLT PROJECTION BEYOND THE NUT SHALL BE ½". THE 12" MINIMUM LENGTH OF CHEMICALLY ANCHORED BOLTS SHALL INCLUDE A MINIMUM EMBEDMENT DEPTH OF 10" INTO SUITABLY REINFORCED CONCRETE OR AS RECOMMENDED BY THE MANUFACTURER OF BONDING MATERIAL.
   (B) FOR NEW PARAPETS OR BARRIERS, THE W-BEAM TERMINAL CONNECTORS SHALL BE ANCHORED AS DETAILED ON THE STRUCTURE SHEETS.
4. ADDITIONAL BLOCKOUTS WITH POSTS 1 THROUGH 6 SHOULD BE AVOIDED.
5. FOR SINGLE DIRECTION ROADWAY:
   INSTALL W-BEAM TERMINAL CONNECTOR BETWEEN NESTED GUIDE RAIL ELEMENTS.
   FOR DUAL DIRECTION ROADWAY FOR APPROACHING TRAFFIC:
   INSTALL W-BEAM TERMINAL CONNECTOR BETWEEN NESTED GUIDE RAIL ELEMENTS.
   FOR TRAILING END:
   INSTALL W-BEAM TERMINAL CONNECTOR OUTSIDE OF THE NESTED GUIDE RAIL ELEMENTS.
6. MINIMUM RAIL HEIGHT FOR NEW CONSTRUCTION SHALL BE 29" +/- 1".
7. USE MODIFIED 4" BITUMINOUS CONCRETE PARK CURBING REDUCED TO A 3 INCH REVEAL BENEATH THE RUBRAIL IF CURBING IS REQUIRED.

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:01:16-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 10:12:19-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: R-B 350 BRIDGE ATTACHMENT TO VERTICAL SAFETY SHAPE PARAPET	STANDARD SHEET NO.: HW-910_07

PLOTTED DATE: 9/21/2022

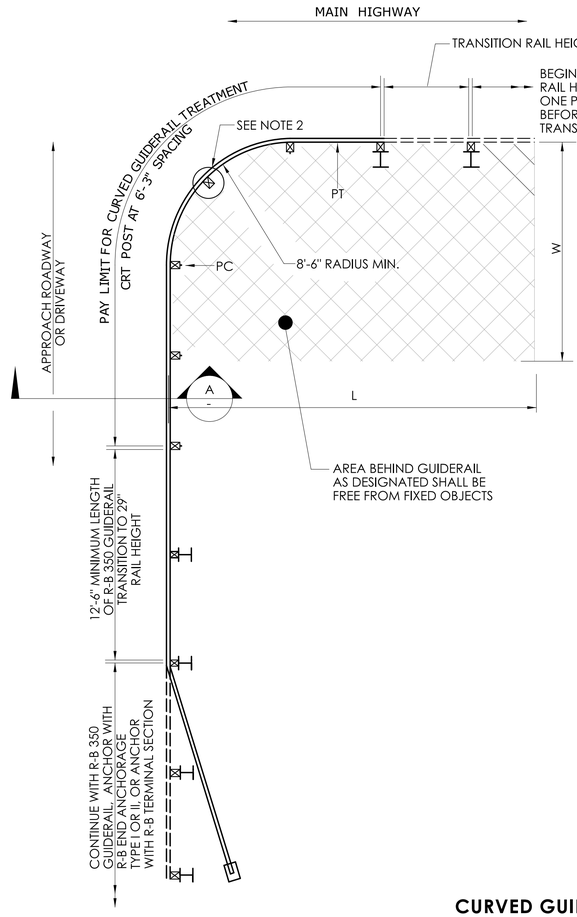
GENERAL NOTES:

1. NO WASHERS ARE USED ON THE ⅝" DIA. BUTTON HEAD BOLTS CONNECTING THE RAIL TO THE CONTROLLED RELEASING TERMINAL (CRT) POSTS.
2. THE RAIL IS NOT BOLTED TO THE CRT POST AT THE CENTER OF THE NOSE AS SHOWN FOR THE 8'-6" RADIUS CURVED GUIDERAIL TREATMENT ONLY.
3. THE CURVED GUIDERAIL SECTION SHALL BE SHOP BENT.
4. THE SLOPE FROM THE EDGE OF THE SHOULDER TO THE FACE OF THE RAIL SHALL BE 10:1 OR FLATTER. NO CURBING SHALL BE INSTALLED WITHIN THE PAY LIMIT OF THE CURVED GUIDERAIL TREATMENT.
5. THIS SYSTEM SHALL BE USED ONLY ON ROADS WITH DESIGN SPEEDS ≤ 50 mph.
6. MAINTAIN MINIMUM 27¾" RAIL HEIGHT THROUGH RADIUS.

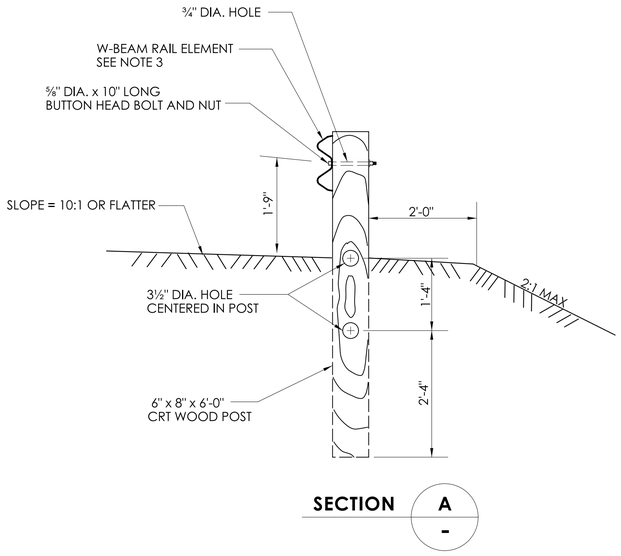


RADIUS	NO. OF CRT POSTS	REQUIRED AREA FREE OF FIXED OBJECTS	
		L	W
8'-6"	5	25'	15'
17'-0"	6	30'	15'
25'-6"	8	40'	20'
35'-0"	11	50'	20'

CURVED GUIDERAIL DETAIL (35'-0" RADIUS MAX.)

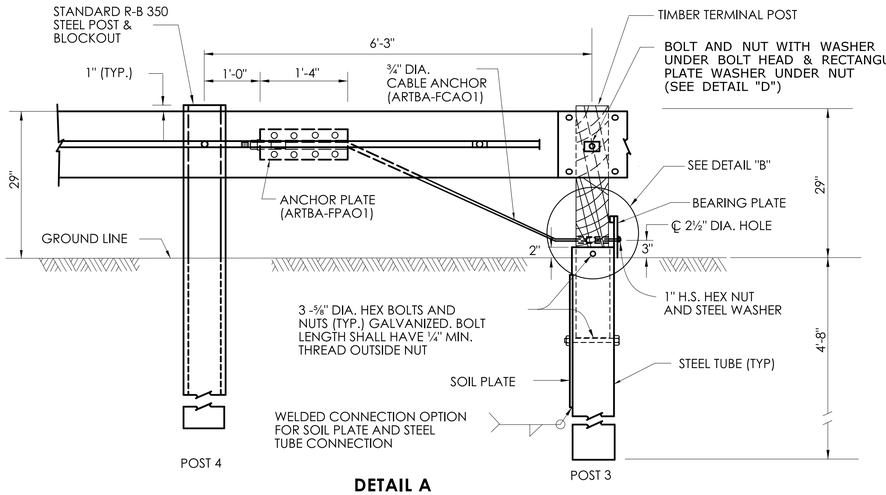


CURVED GUIDERAIL DETAIL (8'-6" RADIUS MIN.)



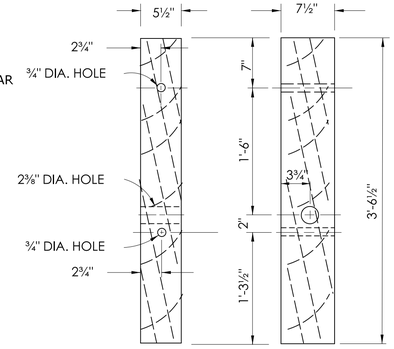
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:05:33-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 10:09:25-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CURVED GUIDERAIL TREATMENT	STANDARD SHEET NO.: HW-910_11

PLOTTED DATE: 9/21/2022



DETAIL A

CABLE ANCHORAGE ASSEMBLY

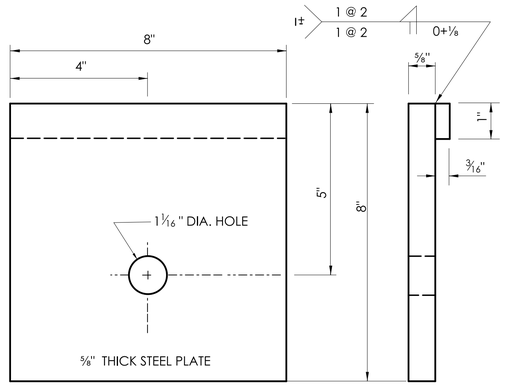


DETAIL C

TIMBER TERMINAL POST

(ARTBA-PDFO1)

(SEE NOTE 2)

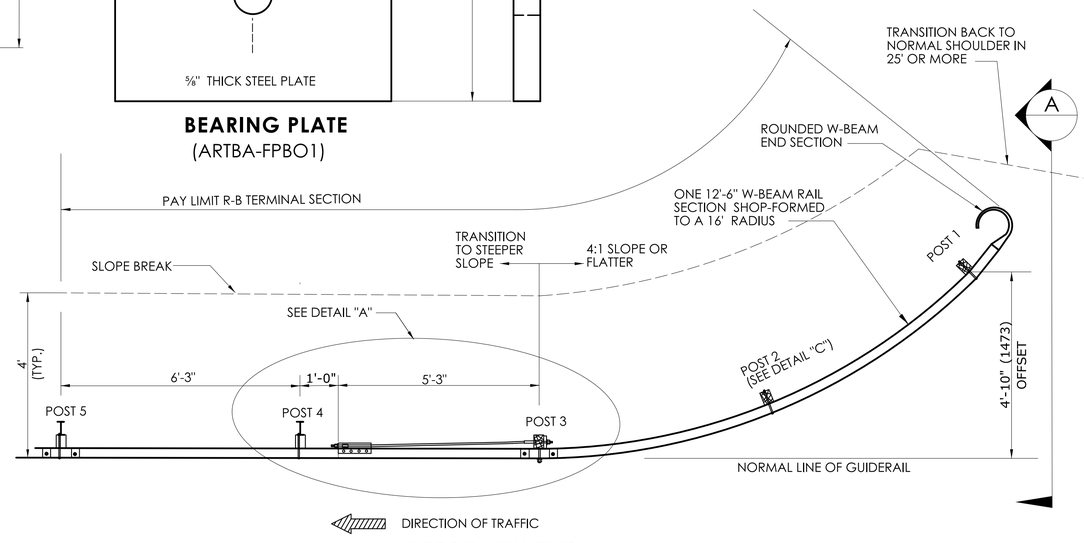


BEARING PLATE

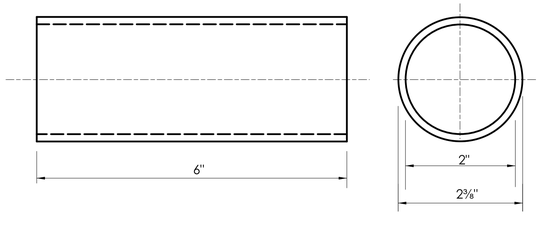
(ARTBA-FPBO1)

GENERAL NOTES:

1. APPROACH END R-B TERMINAL SECTION SHALL ONLY BE USED ON LOW SPEED (<45 MPH) ROADWAYS.
2. POSTS 1, 2 AND 3 ARE TIMBER TERMINAL POSTS (DETAIL "C") WITH STEEL TUBES. POSTS 4 AND 5 ARE STANDARD R-B 350 STEEL POSTS WITH BLOCKOUTS.
3. REFER TO CTDOT STANDARD SPECIFICATIONS FOR MATERIAL AND GENERAL CONSTRUCTION METHODS.
4. MINIMUM RAIL HEIGHT FOR NEW CONSTRUCTION SHALL BE 29" +/- 1".

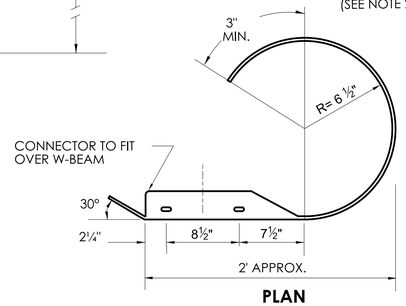


APPROACH END
(TRAILING END NOT SHOWN)

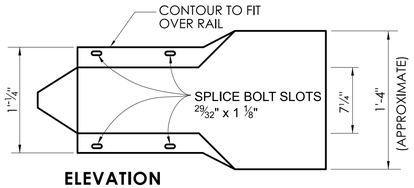


BREAKAWAY TERMINAL POST SLEEVE

(ARTBA-FMMO2)

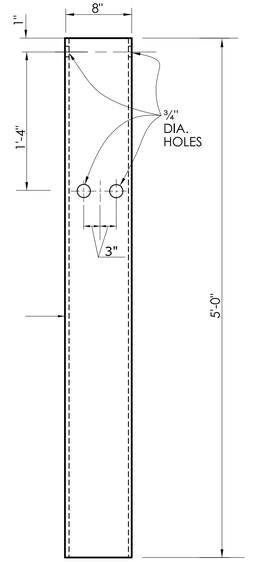


PLAN

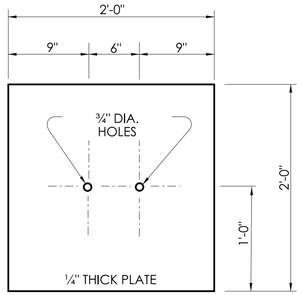


ELEVATION

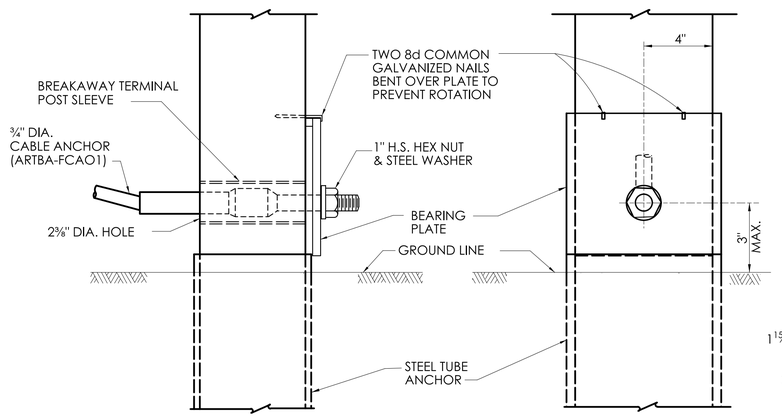
ROUNDED W-BEAM END SECTION



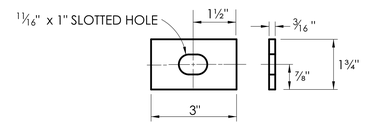
STEEL TUBE



SOIL PLATE

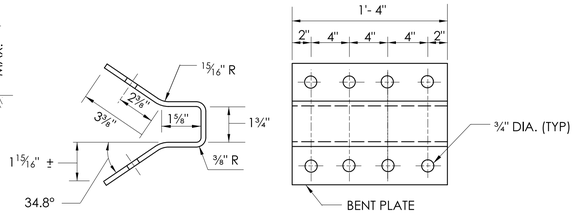


DETAIL B



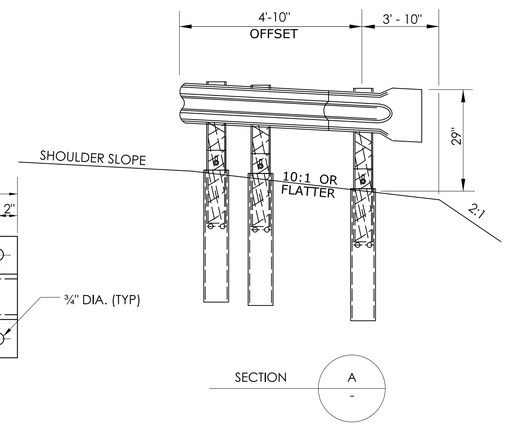
DETAIL D

RECTANGULAR PLATE WASHER



ANCHOR PLATE

(ARTBA-FPAO1)

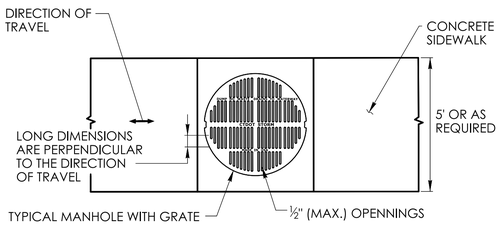


	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:05:19-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 09:58:12-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: R-B TERMINAL SECTION	STANDARD SHEET NO.: HW-910_17

PLOTTED DATE: 9/21/2022

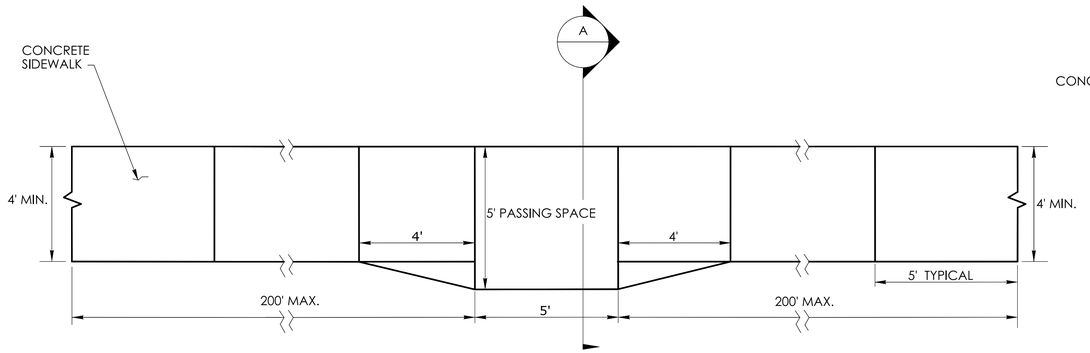
GENERAL NOTES:

1. SEE CONCRETE SIDEWALK RAMPS GUIDE SHEETS FOR PEDESTRIAN RAMP TYPES.
2. ALL CURBING SHALL BE INSTALLED AS EITHER PRECAST OR CAST IN PLACE AS DIRECTED.



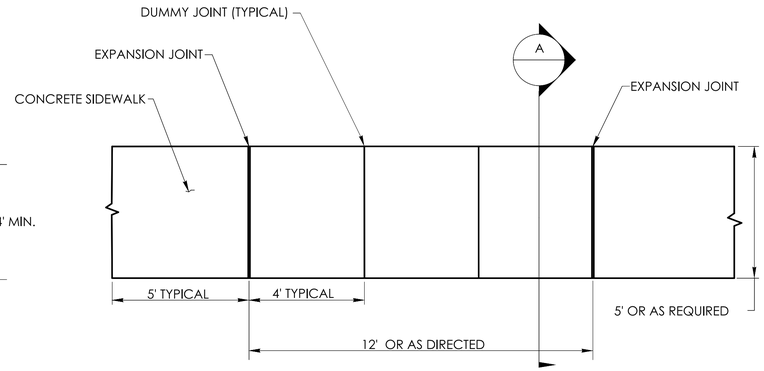
PEDESTRIAN ACCESS ROUTE OVER A MANHOLE WITH GRATE

1. HORIZONTAL OPENINGS IN GRATES AND JOINTS MUST NOT BE MORE THAN ½ INCH
2. ELONGATED OPENINGS IN GRATES MUST BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL

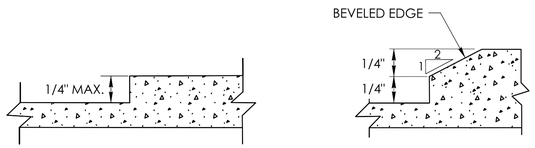


5' PASSING SPACE FOR 4' WIDE SIDEWALK PLAN

PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200' MAXIMUM FOR SIDEWALKS LESS THAN 5' IN WIDTH

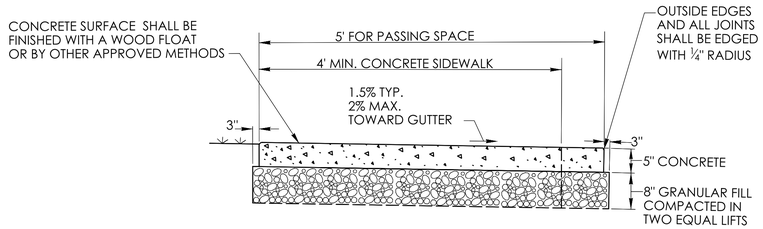


5' WIDE SIDEWALK PLAN



VERTICAL SURFACE DISCONTINUITIES

VERTICAL SURFACE DISCONTINUITIES MUST BE BEVELED TO A HEIGHT NOT GREATER THAN ¼ INCH. THE BEVEL MUST BE THE ENTIRE WIDTH OF THE DISCONTINUITY

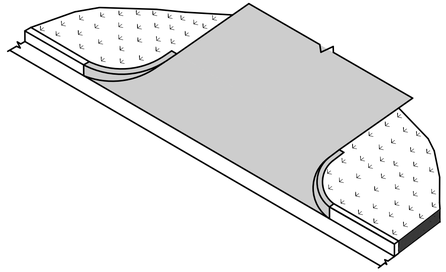


5' PASSING SPACE FOR 4' WIDE SIDEWALK

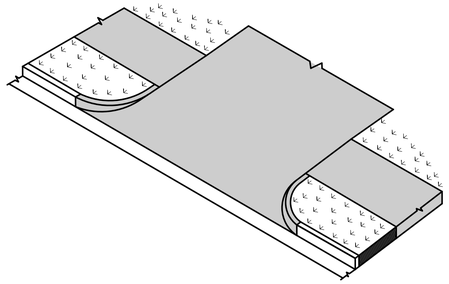
SECTION A

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:15:58-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 09:42:54-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE SIDEWALKS / STANDARD SHEET NO.: HW-921_01

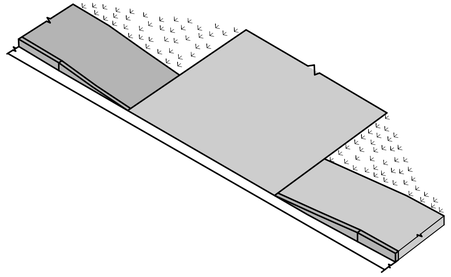
PLOTTED DATE: 9/23/2022



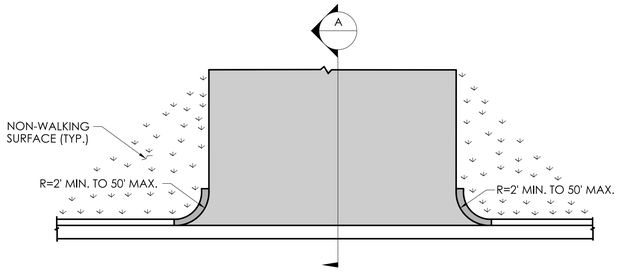
BITUMINOUS CONCRETE DRIVEWAY



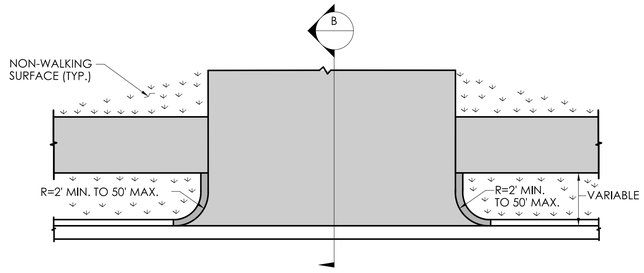
BITUMINOUS CONCRETE DRIVEWAY
WITH A PEDESTRIAN SIDEWALK SETBACK



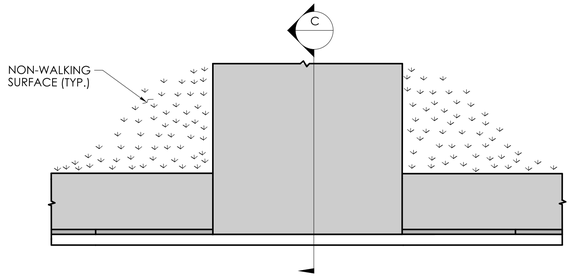
BITUMINOUS CONCRETE DRIVEWAY
WITH PEDESTRIAN SIDEWALK AT THE CURB



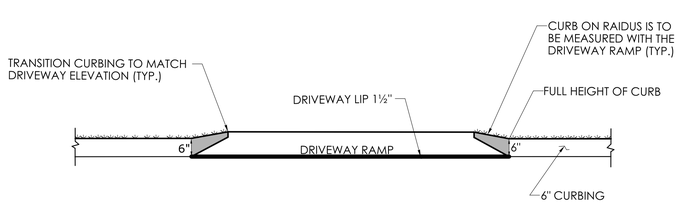
PLAN



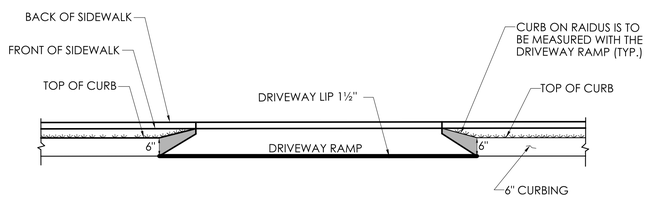
PLAN



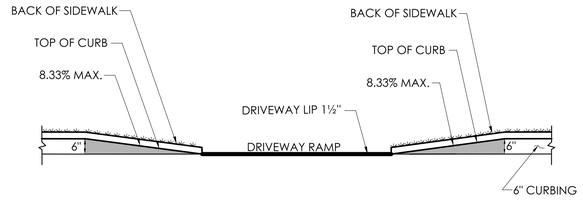
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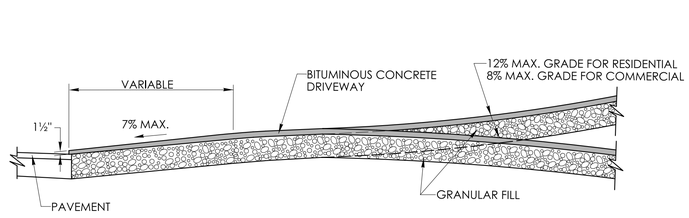
ELEVATION



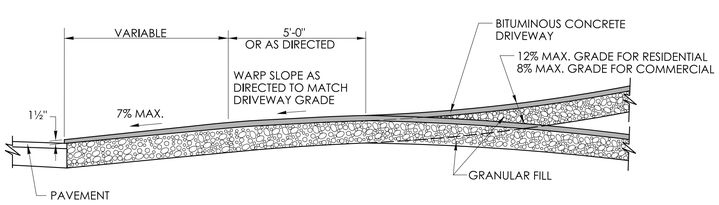
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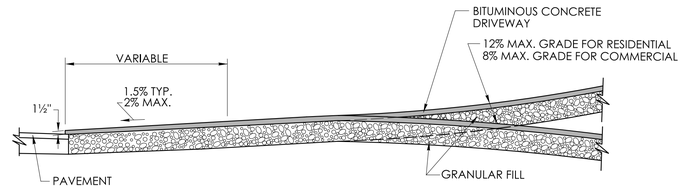
ELEVATION



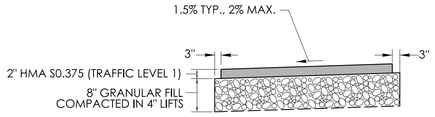
SECTION A



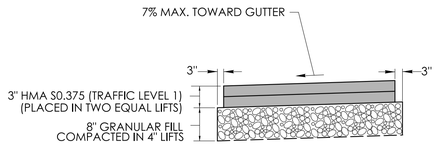
SECTION B



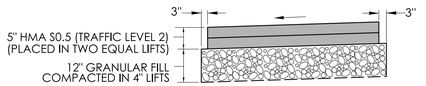
SECTION C



BITUMINOUS CONCRETE SIDEWALK



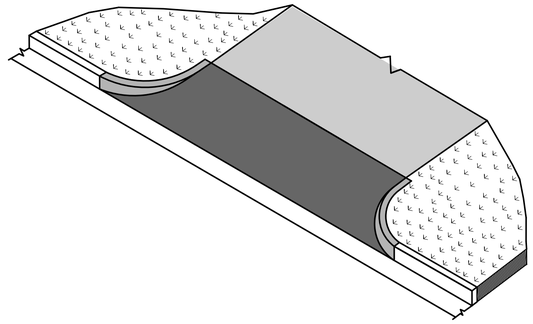
BITUMINOUS CONCRETE DRIVEWAY



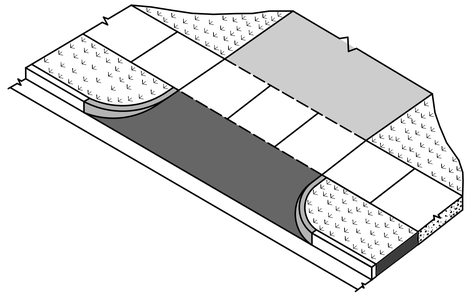
COMMERCIAL
BITUMINOUS CONCRETE DRIVEWAY

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:14:43-04'00'	APPROVED BY: Digitally signed by Calabrese, Michael Date: 2022.11.08 09:41:50-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	**CTDOT STANDARD SHEET**	STANDARD SHEET TITLE: **BITUMINOUS CONCRETE SIDEWALK AND BITUMINOUS CONCRETE DRIVEWAY**	STANDARD SHEET NO.: **HW-922_01**

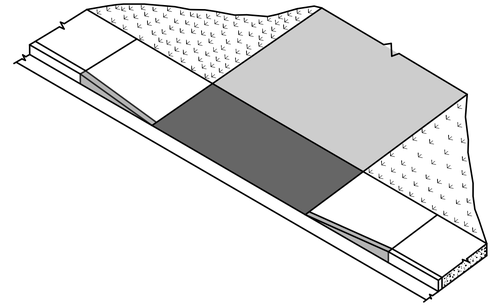
PLOTTED DATE: 9/23/2022



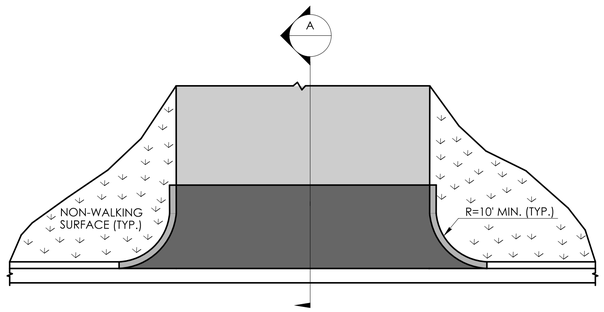
CONCRETE DRIVEWAY RAMP



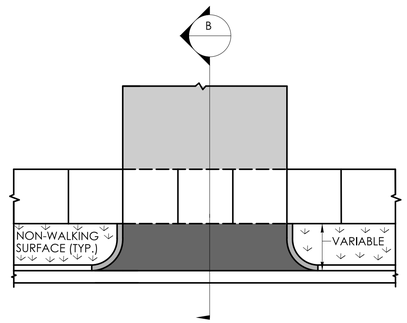
CONCRETE DRIVEWAY RAMP
WITH A PEDESTRIAN SIDEWALK SETBACK



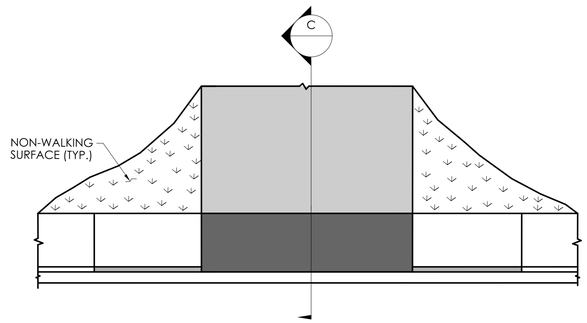
CONCRETE DRIVEWAY RAMP
WITH PEDESTRIAN SIDEWALK AT THE CURB



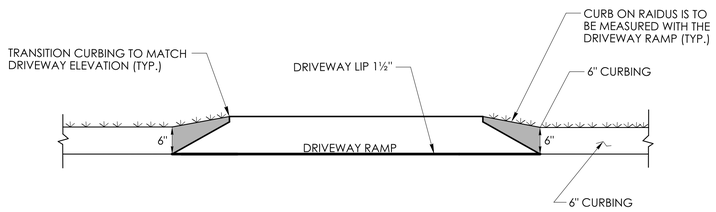
PLAN



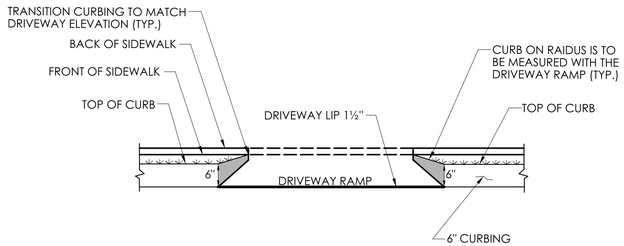
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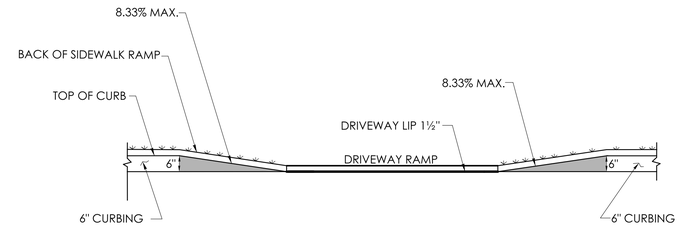
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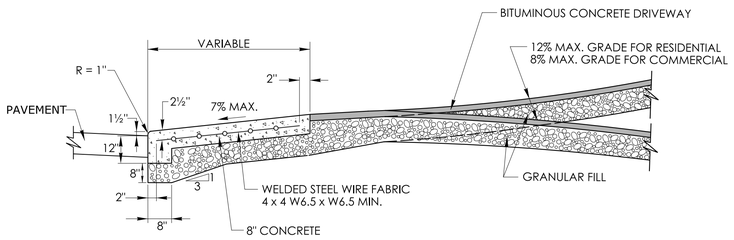
ELEVATION



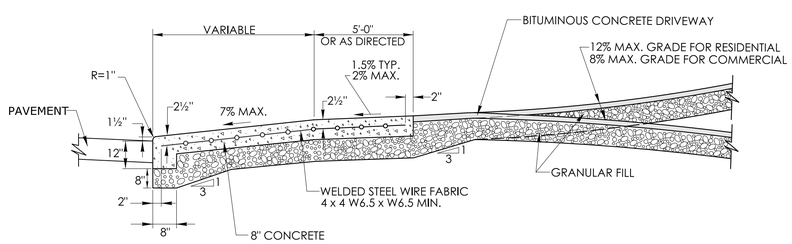
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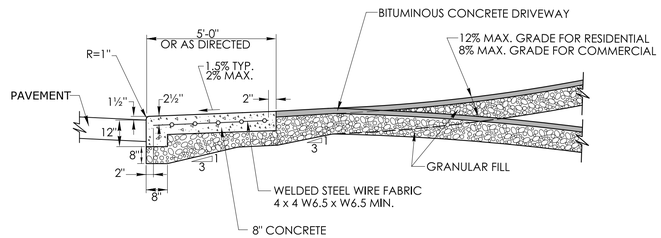
ELEVATION



SECTION A



SECTION B



SECTION C

NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.08.16 11:06:01-04'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2024.10.18 11:48:13-04'00'

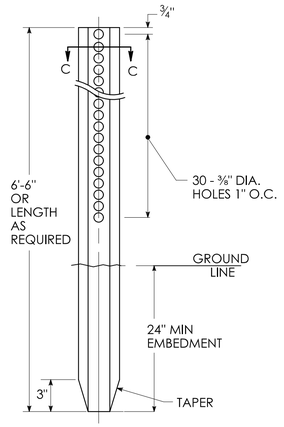
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

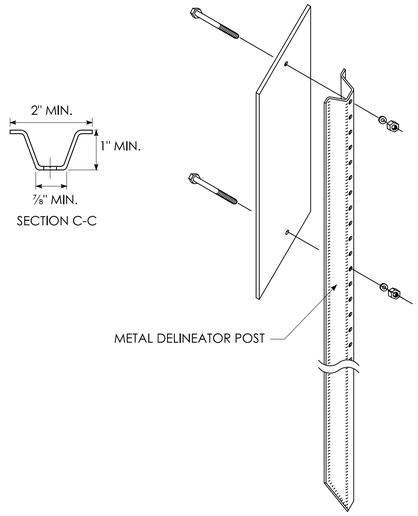
STANDARD SHEET TITLE:
CONCRETE DRIVEWAY RAMPS

STANDARD SHEET NO.:
HW-924_01

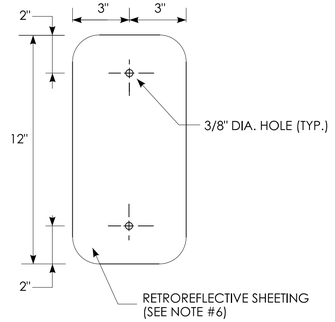
PLOTTED DATE: 8/13/2024



METAL DELINEATOR POST



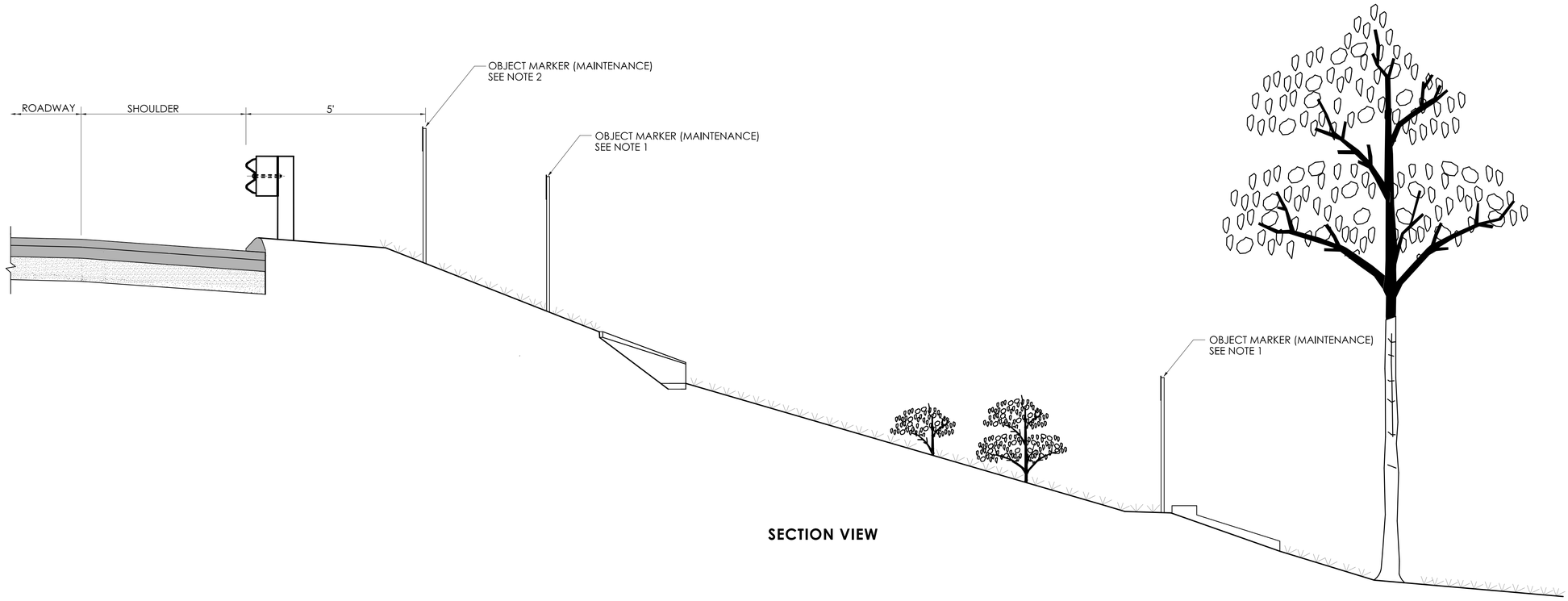
INSTALLATION ON DELINEATOR POSTS



OBJECT MARKER DETAIL

GENERAL NOTES:

1. OBJECT MARKER (MAINTENANCE) SHALL BE INSTALLED ADJACENT TO; END WALLS, DRAINAGE PIPE ENDS, UNDERDRAIN OUTLETS AND PAVED APRONS WITH THE MARKER FACING PARALLEL TO THE DIRECTION OF TRAFFIC.
2. SECOND OBJECT MARKER (MAINTENANCE) SHALL ONLY BE INSTALLED 5 FEET FROM THE EDGE OF ROADWAY WHEN THE OBJECT MARKER ADJACENT TO STRUCTURE IS GREATER THAN 15 FEET FROM THE EDGE OF THE ROADWAY.
3. OBJECT MARKER (MAINTENANCE) SHALL BE INSTALLED AT METAL BEAM GUIDERAIL ANCHORS AS SHOWN ON;
   HW-911_01 R-B END ANCHORAGE TYPE I AND II,
   HW-911_02 MD-B END ANCHORAGE TYPE I.
4. OBJECT MARKERS SHALL BE FASTENED WITH 5/16" STAINLESS STEEL HEX HEAD BOLTS (LENGTH AS REQUIRED), WASHER AND FIBER INSERT SELF LOCKING NUT, ON STANDARD METAL DELINEATOR POST.
5. METAL DELINEATOR POST SHALL BE 1.12 LBS/FT. ASTM A36 STEEL
6. OBJECT MARKER COMPOSITION SHALL BE 14 GA. (0.080") THICK SHEET ALUMINUM WITH YELLOW TYPE XI RETROREFLECTIVE SHEETING.
7. ALL OBJECT MARKERS (MANTENANCE) SHALL BE INSTALLED WITH THE BOTTOM OF THE OBJECT MARKER 4 FT ABOVE THE GROUND.



SECTION VIEW

NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.08.16 11:04:48-04'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2024.10.18 11:50:18-04'00'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
OBJECT MARKER (MAINTENANCE)

STANDARD SHEET NO.:
HW-930_01

PLOTTED DATE: 8/13/2024