***ONLY STANDARD SHEETS MARKED WITH AN "✓" ARE IN THIS PROJECT #** **0124-0165** ****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	01-21-25
	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	08-20-25
	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)	01-23-25
	HW-822 02c	TEMPORARY TRAFFIC BARRIER & TEMPORARY TRAFFIC BARRIER (PINNED)	01-23-25
	HW-905_01	STONE WALL FENCE	11-09-22
	HW-906_01	WIRE FENCE	11-08-22

NOT TO SCALE

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

CONNECTICUT DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
HIGHWAY STANDARD SHEET INDEX

STANDARD SHEET NO.:
1 of 2

PLOTTED DATE: 1/23/2025

*ONLY STANDARD SHEETS MARKED WITH AN " ✓ " ARE IN THIS PROJECT # 0124-0165 **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-910_30a	METAL BEAM RAIL (6 X 6 BOX BEAM) GUIDERAIL - HARDWARE	01-28-25
	HW-910_30b	METAL BEAM RAIL (6 X 6 BOX BEAM) GUIDERAIL	01-28-25
✓	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_06a	METAL BEAM RAIL (6 x 6 BOX BEAM) END ANCHORAGE TYPE I - HARDWARE	01-28-25
	HW-911_06b	METAL BEAM RAIL (6 x 6 BOX BEAM) END ANCHORAGE TYPE I	01-28-25
	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

NOT TO SCALE

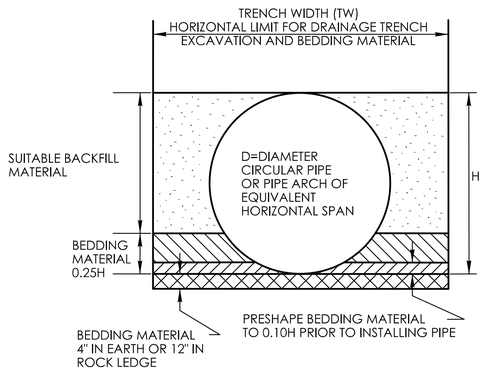
SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

CONNECTICUT DEPARTMENT OF TRANSPORTATION

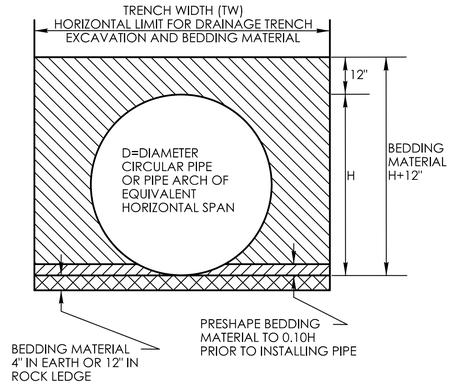
CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
HIGHWAY STANDARD SHEET INDEX

STANDARD SHEET NO.:
2 OF 2



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

NOT TO SCALE

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

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.12.16 10:12:03-05'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2025.01.21 12:25:59-05'00'

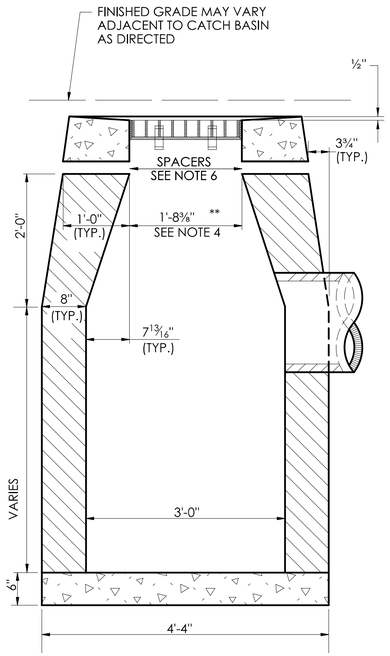
CONNECTICUT DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

STANDARD SHEET TITLE:
DRAINAGE TRENCH EXCAVATION

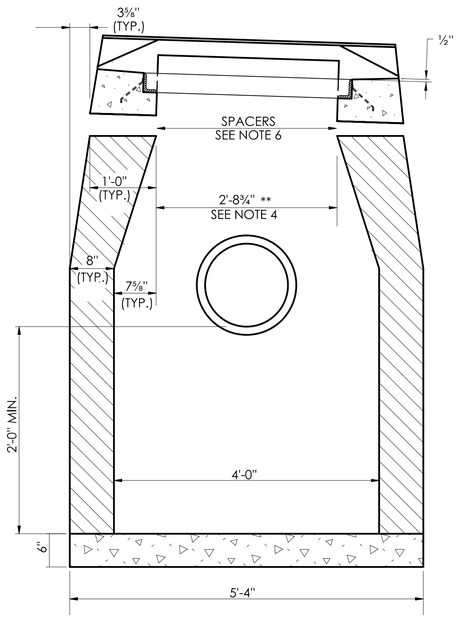
STANDARD SHEET NO.:
HW-286_01

PLOTTED DATE: 10/22/2024



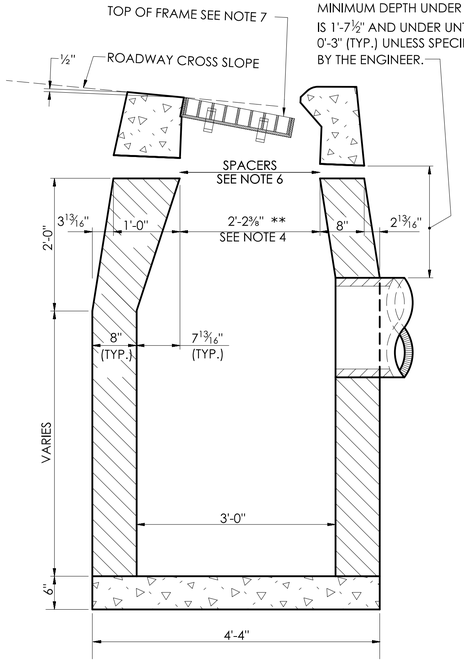
SECTION B

TYPE "C-L" CATCH BASIN



SECTION A

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

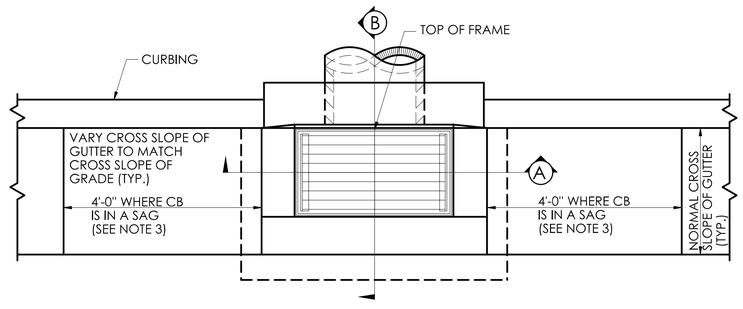


SECTION B

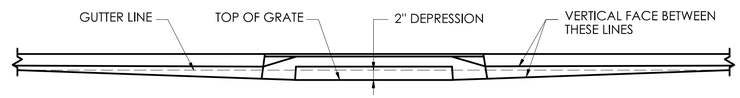
TYPE "C" CATCH BASIN

GENERAL NOTES:

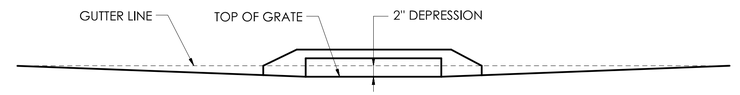
1. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07.
2. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED BY THE ENGINEER.
4. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE DIMENSIONS SHOWN. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS FOR THE CATCH BASIN OPENINGS SHOWN IN THE SECTION VIEWS **.
5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
6. 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 GRATE AT GUTTER LINE.



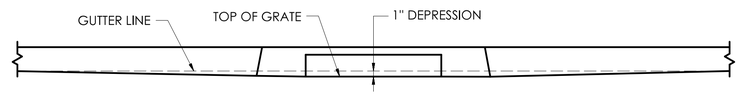
PLAN



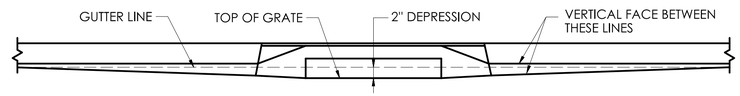
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



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

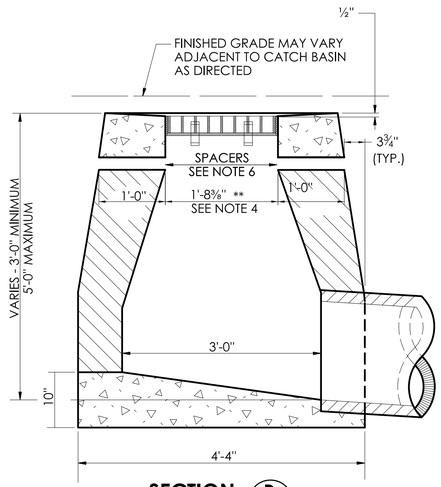


CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING



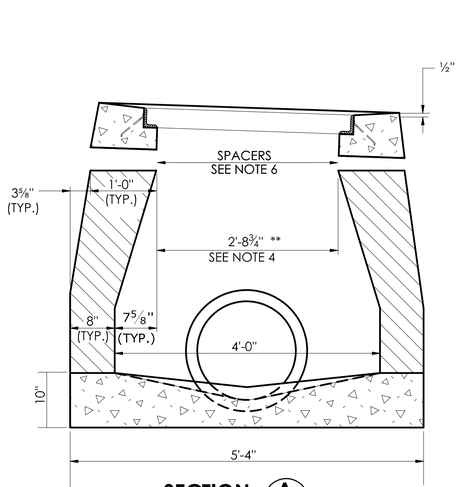
CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

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



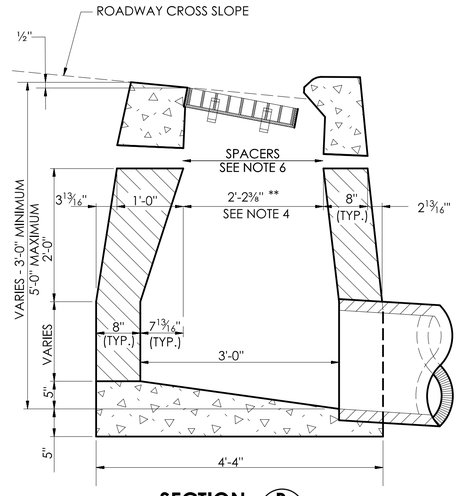
SECTION B

TYPE "C-L" DROP INLET



SECTION A

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

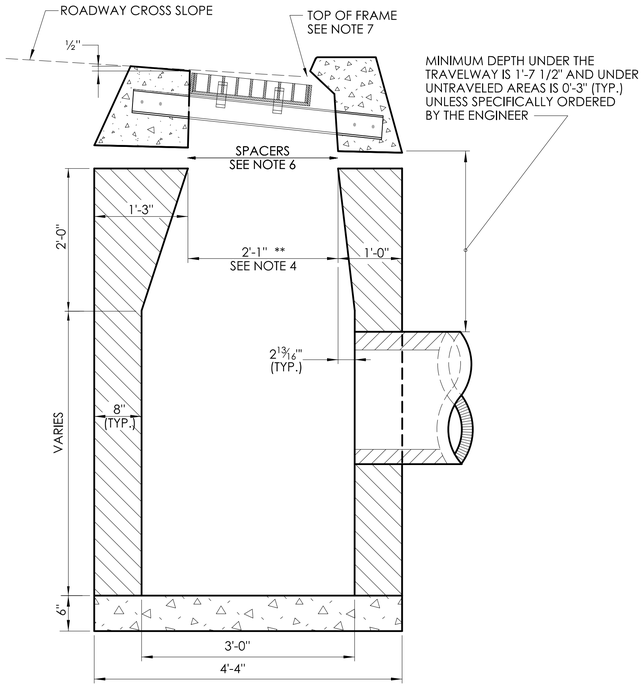


SECTION B

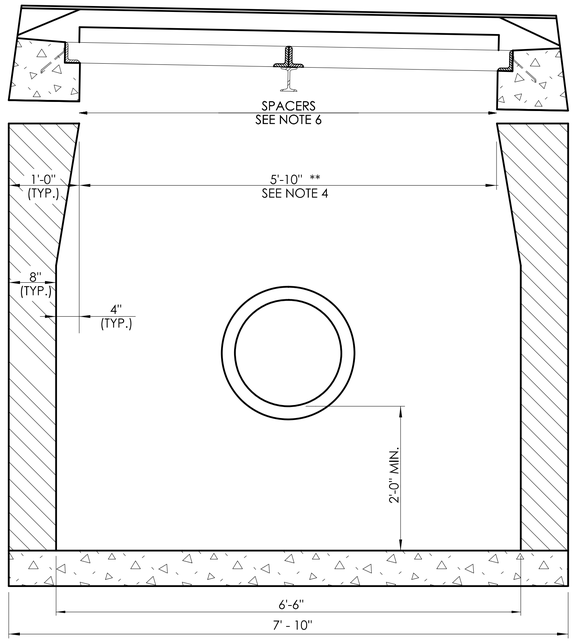
TYPE "C" DROP INLET

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:09:07-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:35:34-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" STRUCTURES	STANDARD SHEET NO.: HW-586_01

PLOTTED DATE: 10/22/2024



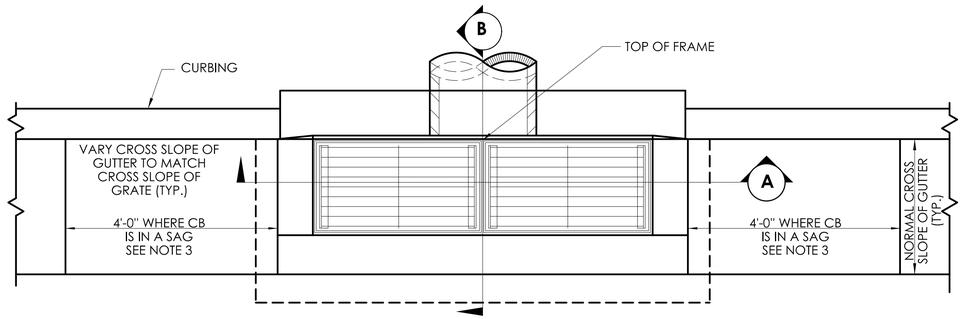
SECTION B



SECTION A

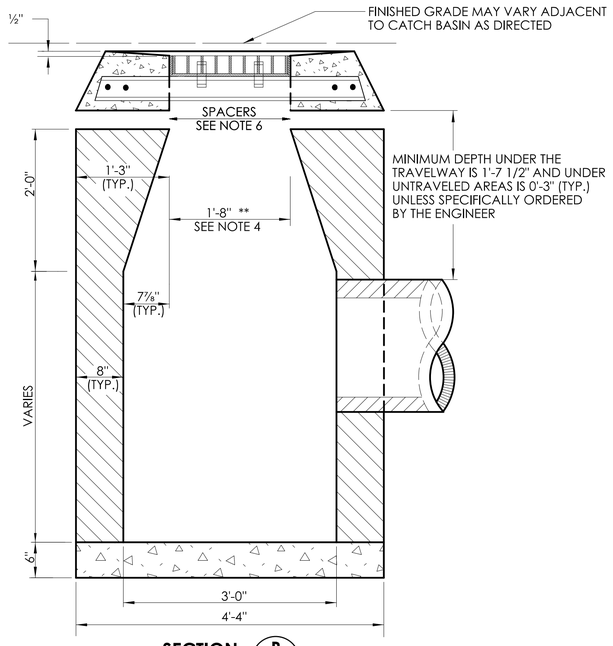
GENERAL NOTES:

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.

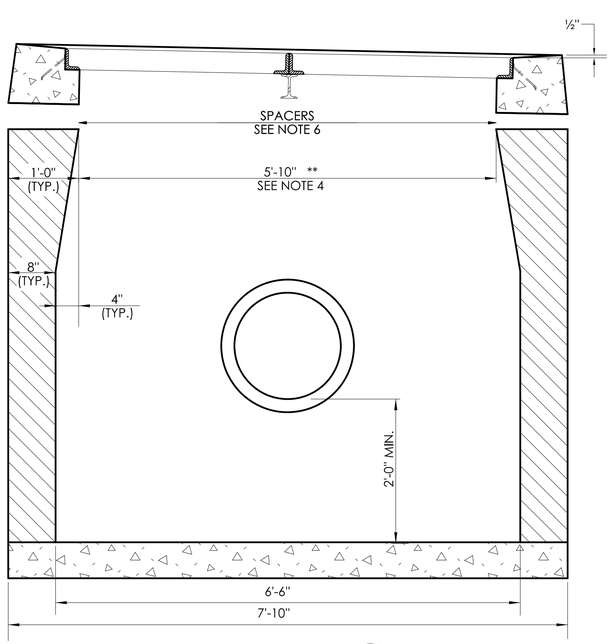


PLAN

TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II

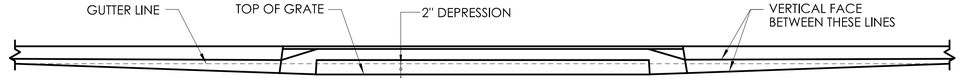


SECTION B

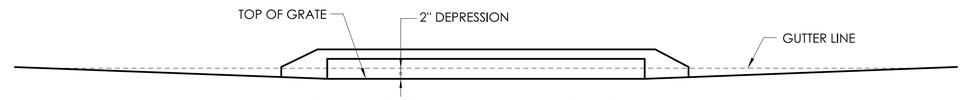


SECTION A

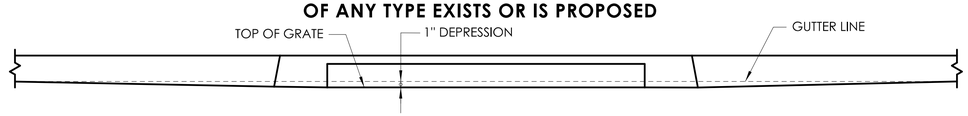
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II



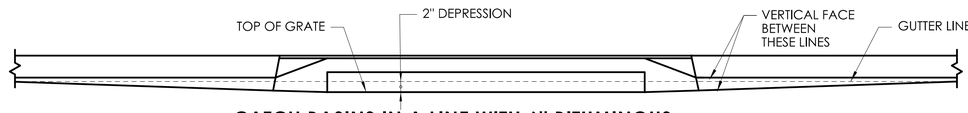
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



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

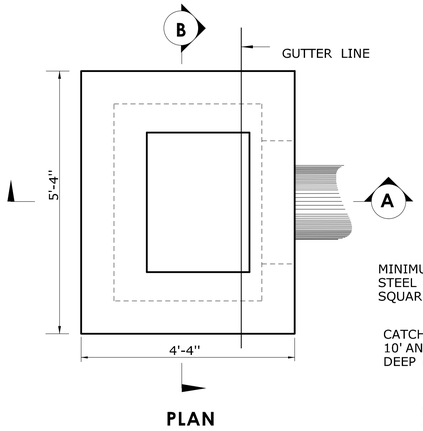


CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

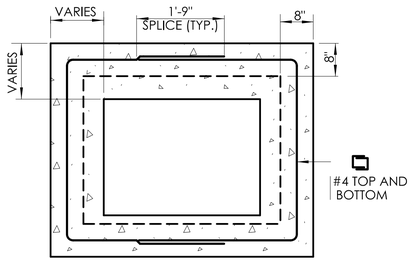
DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:01:03-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:38:31-05'00'	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

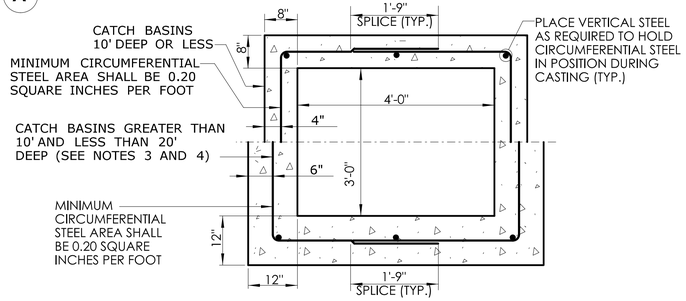
PLOTTED DATE: 10/22/2024



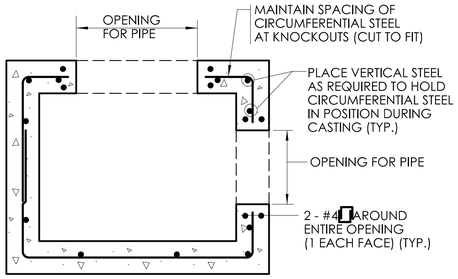
PLAN



REDUCER SECTION (TYP.)



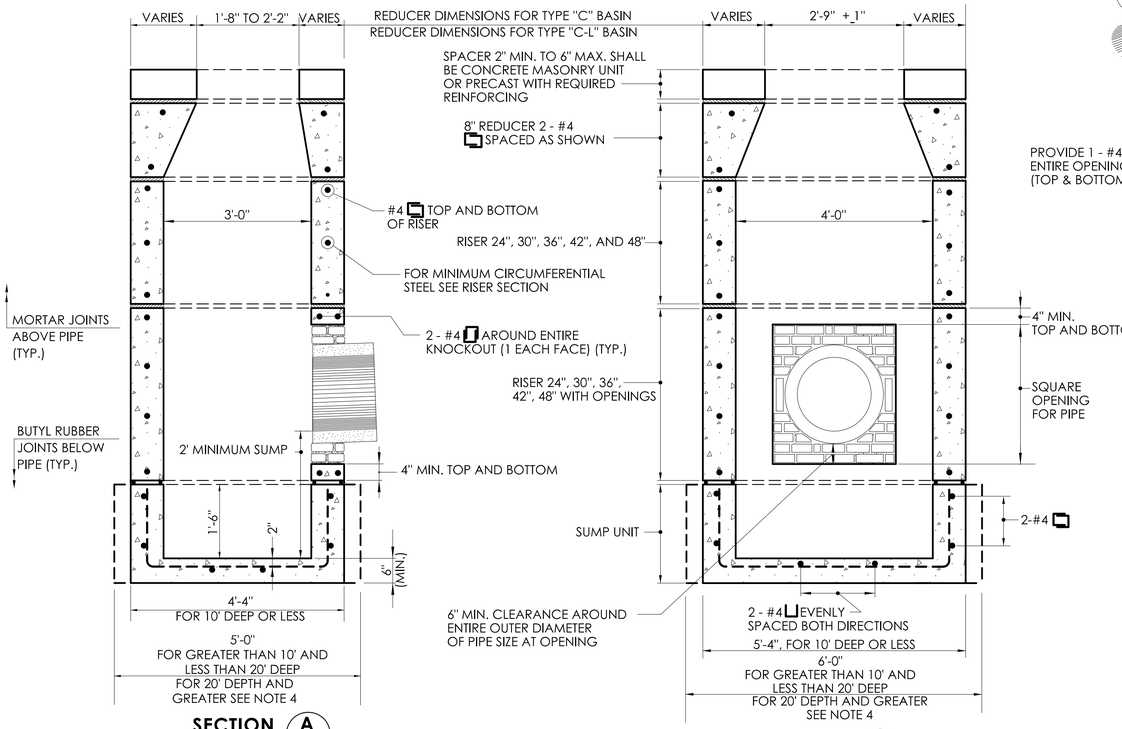
RISER SECTION (TYP.)



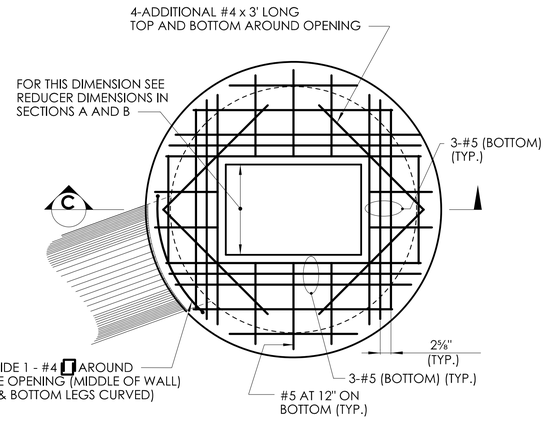
TYPICAL SECTION THROUGH RISER WITH OPENING

GENERAL NOTES:

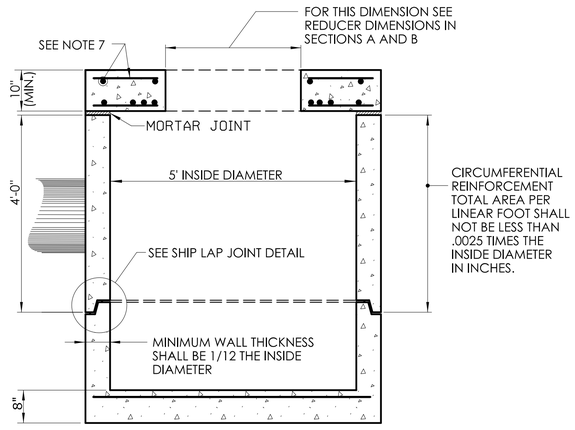
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES, EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS 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.



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

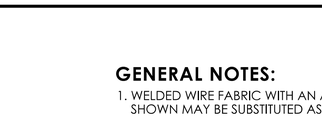


PLAN
(SEE NOTE 9)



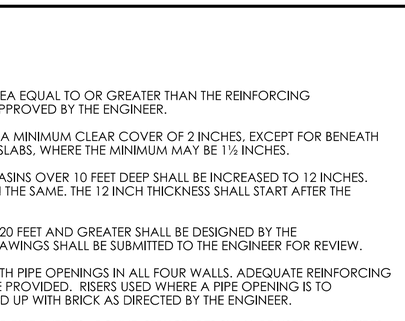
SECTION C

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

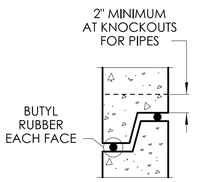


MORTAR JOINT DETAIL

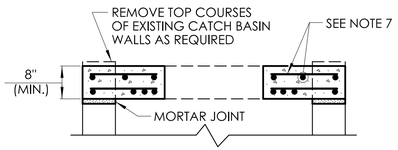
BUTYL RUBBER JOINT DETAIL



PLAN



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

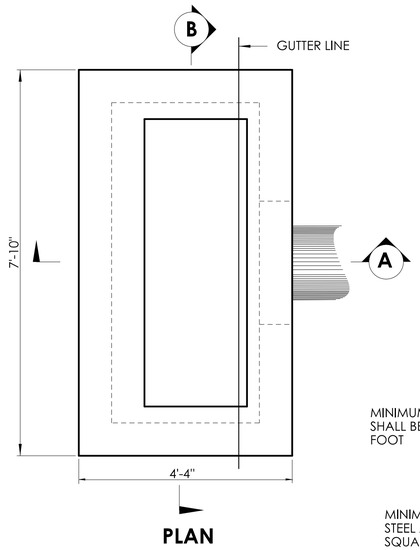


SECTION D

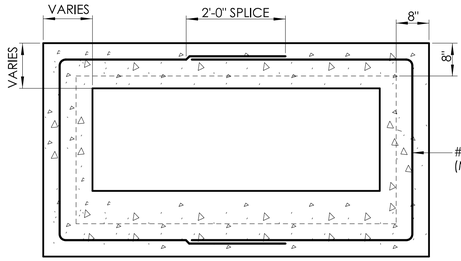
TOP SLAB TO CONVERT
CATCH BASIN TO MANHOLE

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:00:03-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:39:12-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: PRECAST CATCH BASIN AND ROUND STRUCTURE / STANDARD SHEET NO.: HW-586_04

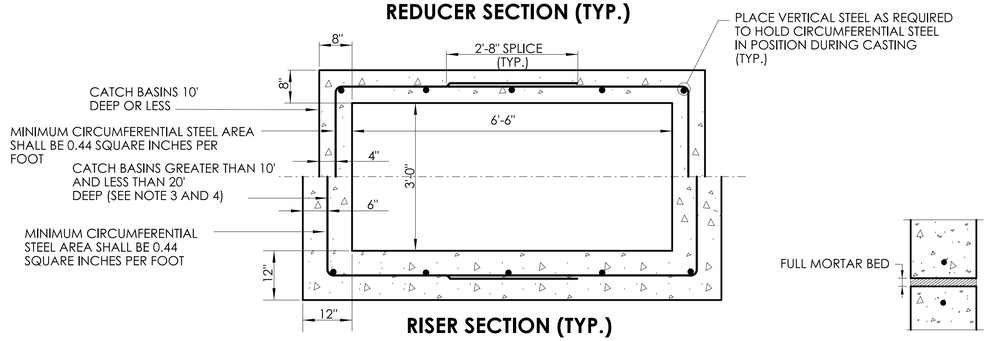
PLOTTED DATE: 11/25/2024



PLAN

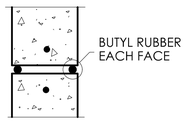


REDUCER SECTION (TYP.)



RISER SECTION (TYP.)

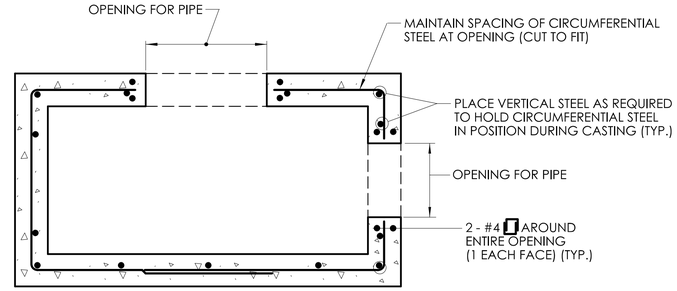
MORTAR JOINT



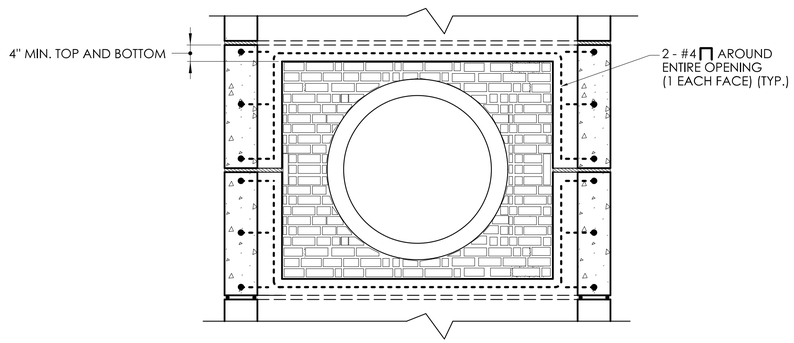
BUTYL RUBBER JOINT

GENERAL NOTES:

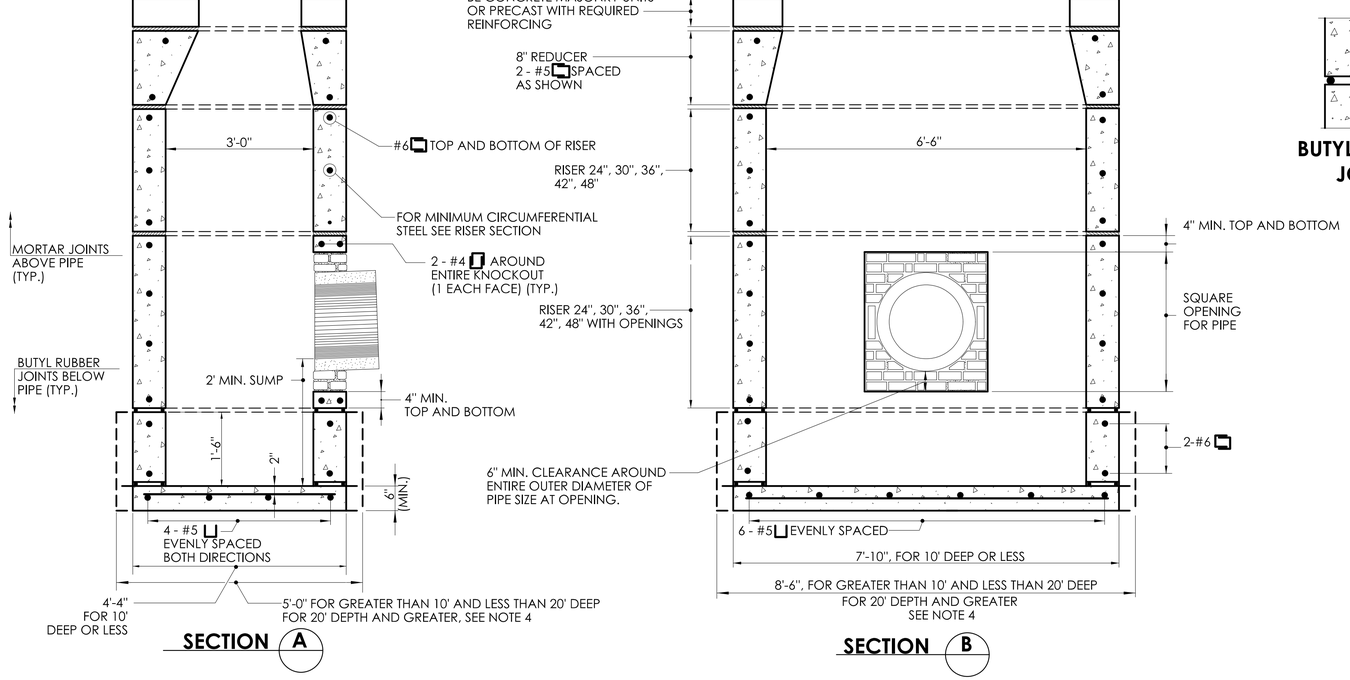
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS 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



SECTION A

SECTION B

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

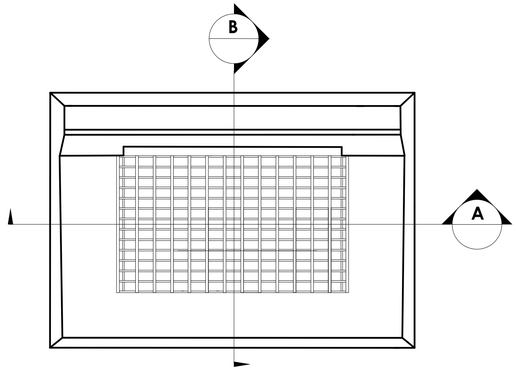
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:21:22-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:41:24-05'00'	CTDOT CONNECTICUT DEPARTMENT 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: 11/25/2024

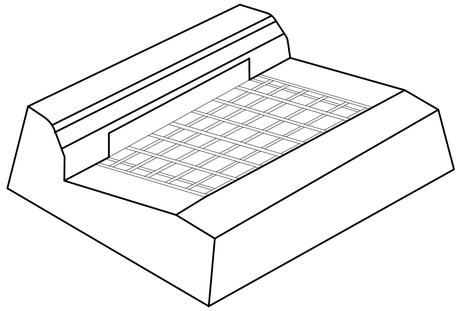
GENERAL NOTES:

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

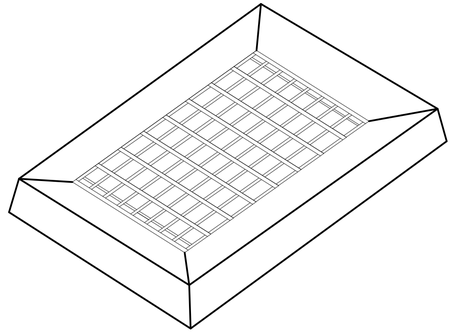
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	± 1"



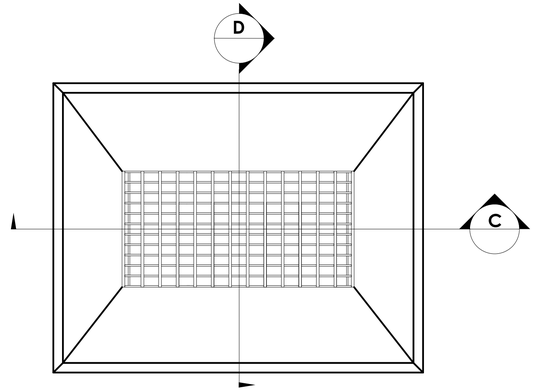
TYPE "C" CATCH BASIN TOP PLAN



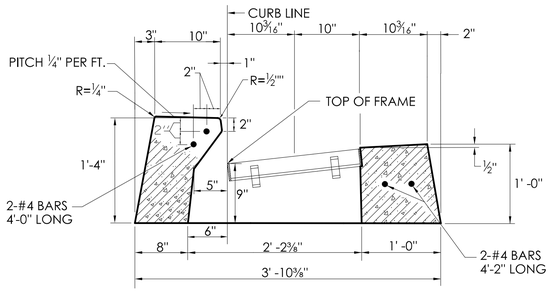
TYPE "C" CATCH BASIN TOP



TYPE "C-L" CATCH BASIN TOP

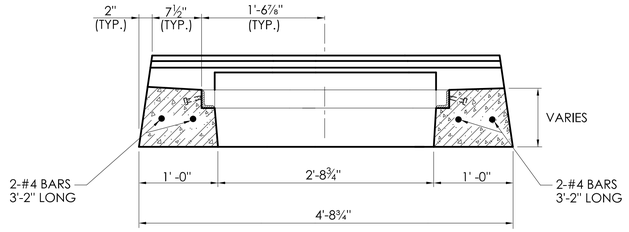


TYPE "C-L" CATCH BASIN TOP PLAN



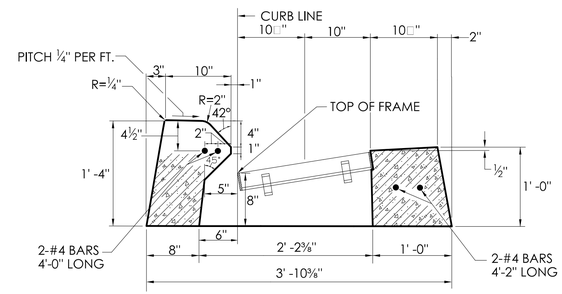
TYPE "C" CATCH BASIN TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING

SECTION B



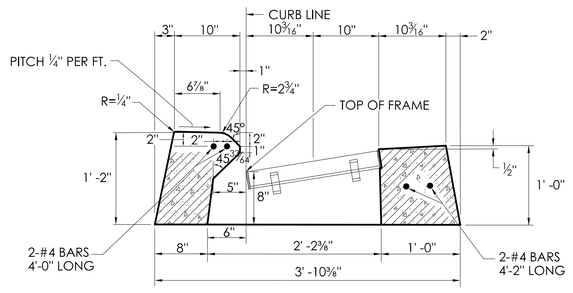
TYPE "C" CATCH BASIN TOP

SECTION A



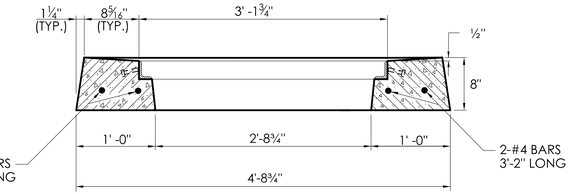
TYPE "C" CATCH BASIN TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

SECTION B



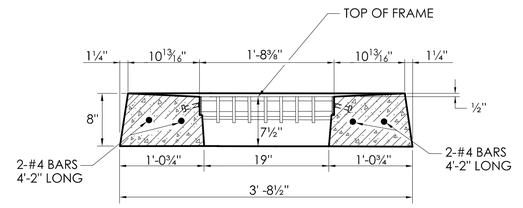
TYPE "C" CATCH BASIN TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING

SECTION B



TYPE "C-L" CATCH BASIN TOP

SECTION C



TYPE "C-L" CATCH BASIN TOP

SECTION D

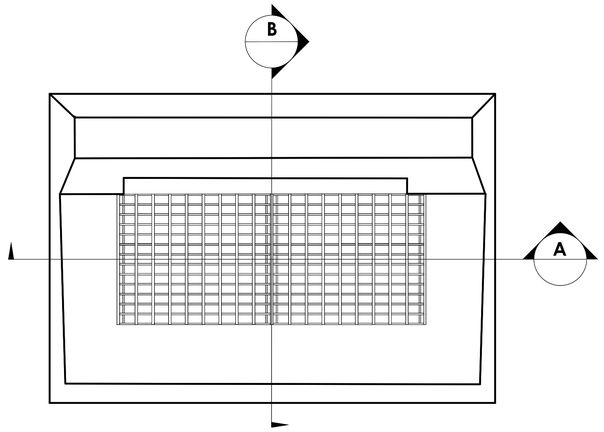
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:20:48-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:42:28-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN TYPE "C" AND "C-L" TOPS	STANDARD SHEET NO.: HW-586_07a

PLOTTED DATE: 10/22/2024

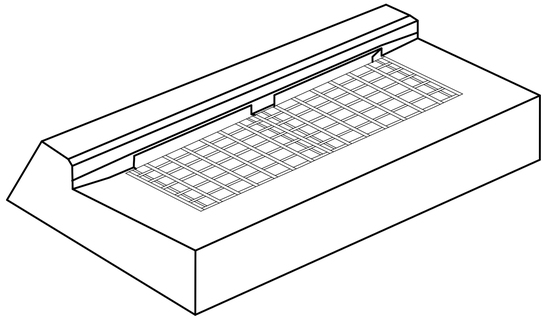
GENERAL NOTES:

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

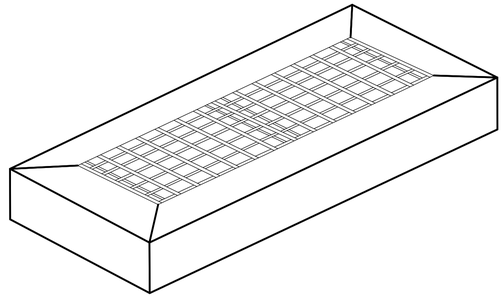
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	± 1"



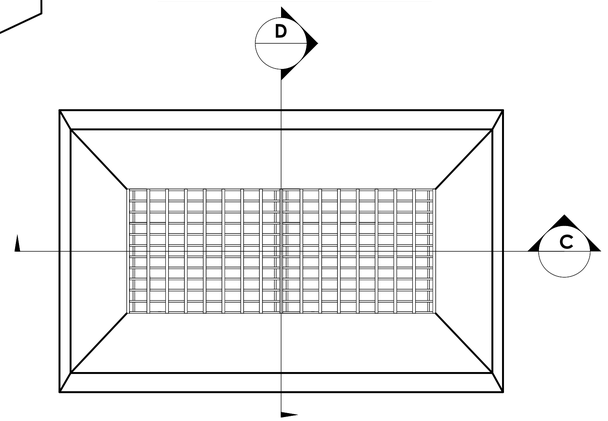
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP PLAN



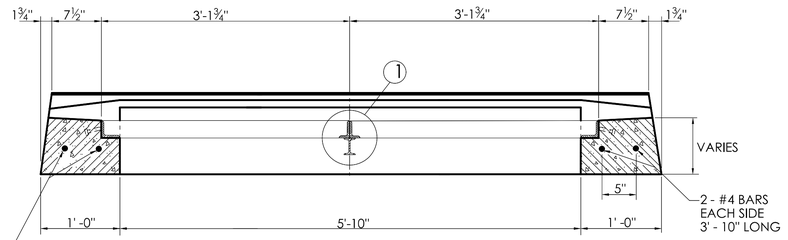
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP



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

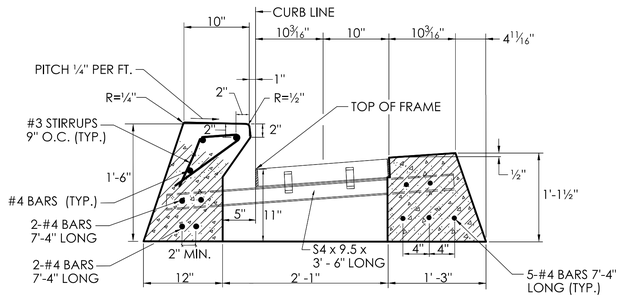


TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP PLAN



TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP

SECTION A

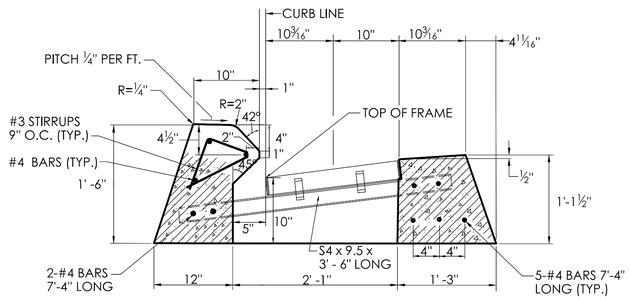


TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING

SECTION B

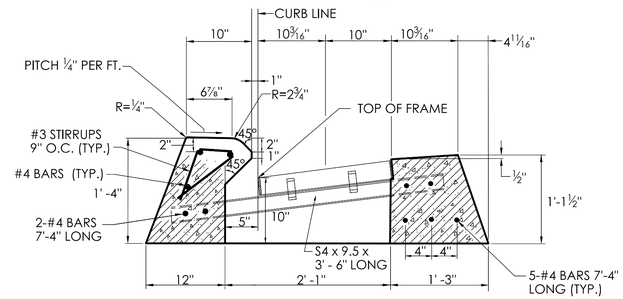
TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP

SECTION C



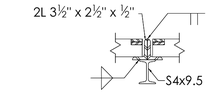
TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

SECTION B

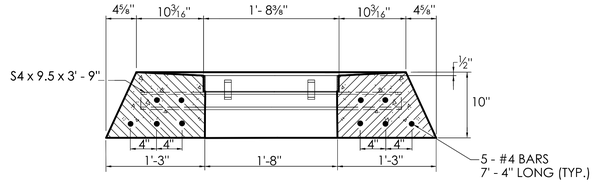


TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING

SECTION B



DETAIL 1

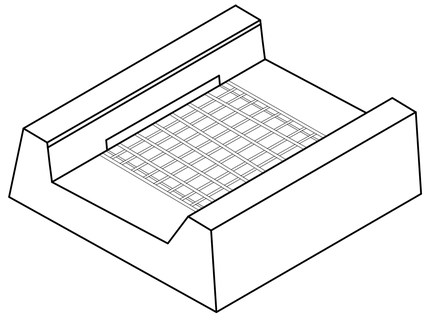


TYPE "C-L" CATCH BASIN DOUBLE GRATE TYPE II TOP

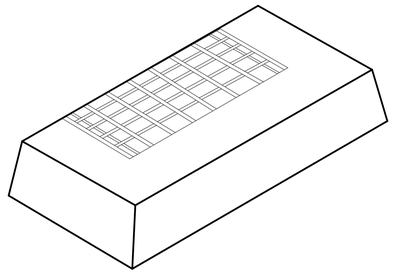
SECTION D

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:20:21-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:43:54-05'00'	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

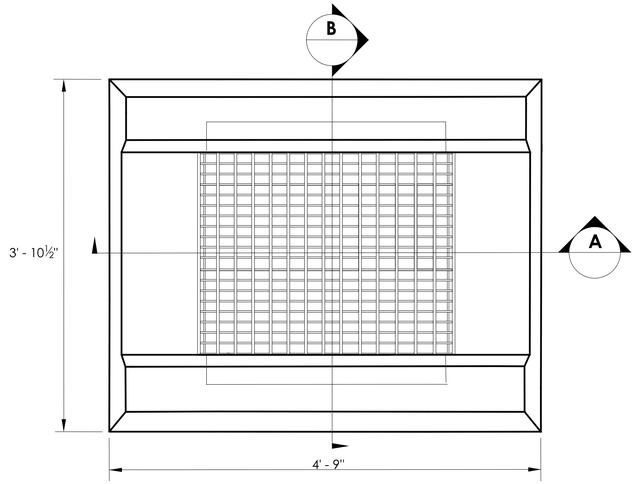
PLOTTED DATE: 10/22/2024



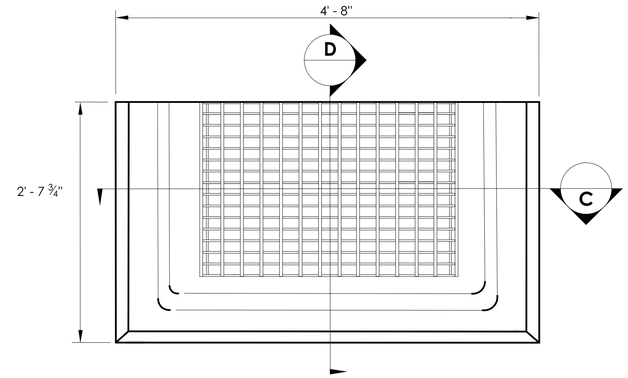
TYPE "C-G" CATCH BASIN TOP



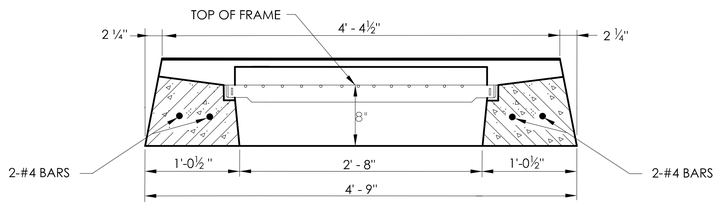
TYPE "C-M" BARRIER CURB CATCH BASIN TOP



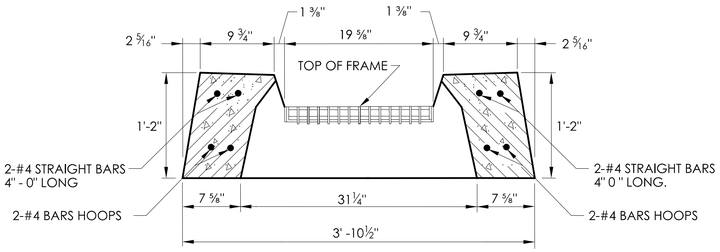
PLAN



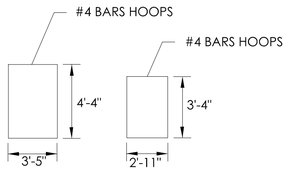
PLAN



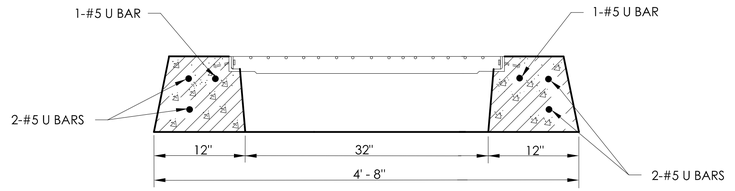
SECTION A



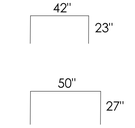
SECTION B



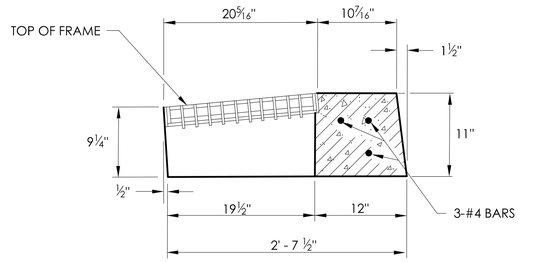
BAR HOOPS



SECTION C



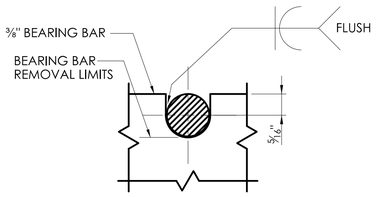
U BARS



SECTION D

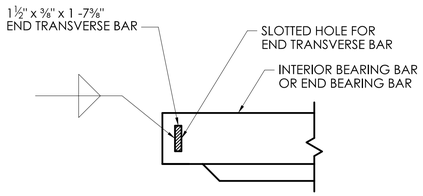
	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:20:05-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 12:56:09-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN TYPE "C-G" AND "C-M" BARRIER CURB TOPS	STANDARD SHEET NO.: HW-586_07d

PLOTTED DATE: 10/22/2024

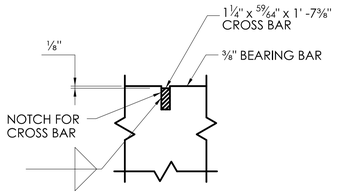


NOTE:
⅝" DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

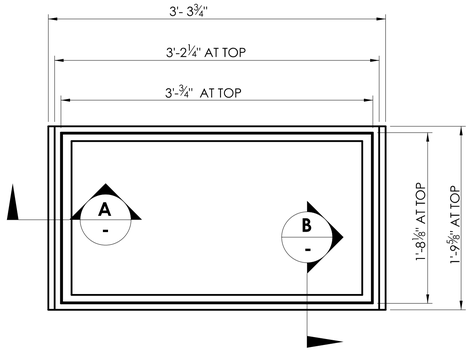
ROUND BAR ATTACHMENT
CATCH BASIN GRATE TYPE A



END TRANSVERSE BAR ATTACHMENT
CATCH BASIN GRATE TYPE A AND B



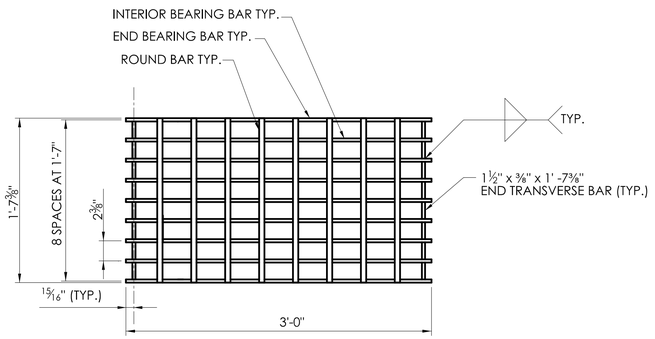
CROSS BAR ATTACHMENT
CATCH BASIN GRATE TYPE B



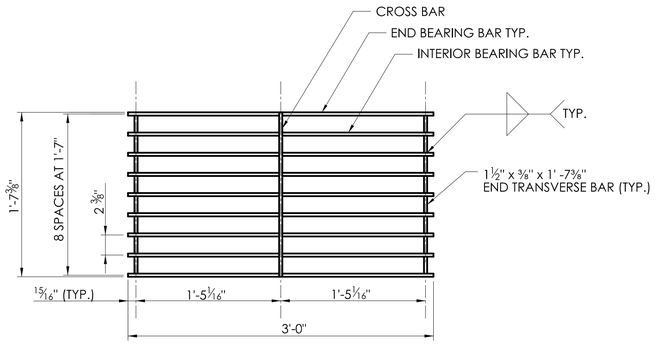
PLAN

GENERAL NOTES:

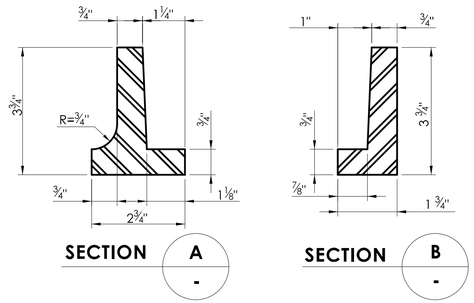
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" AND "B" GRATES.
2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR ON HEAVY DUTY LOCK DOWN TOPS AS DIRECTED BY THE ENGINEER.
3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS,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



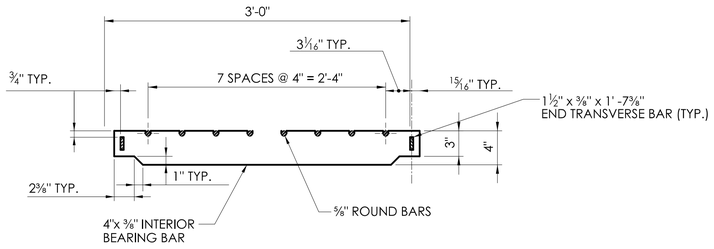
PLAN



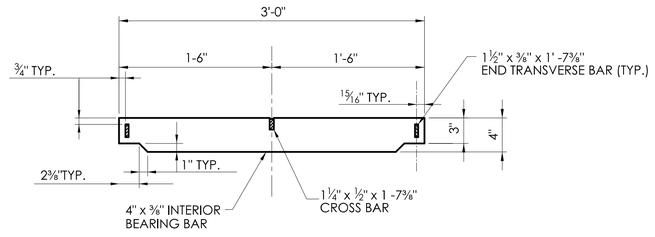
PLAN



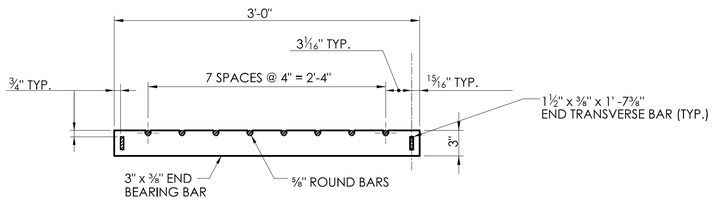
CAST IRON FRAME ALTERNATE



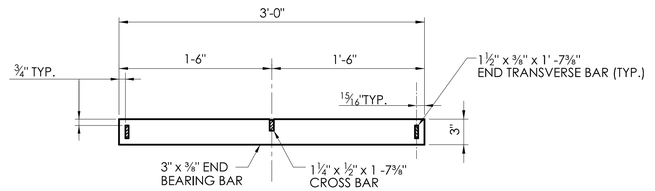
ELEVATION- INTERIOR BEARING BAR



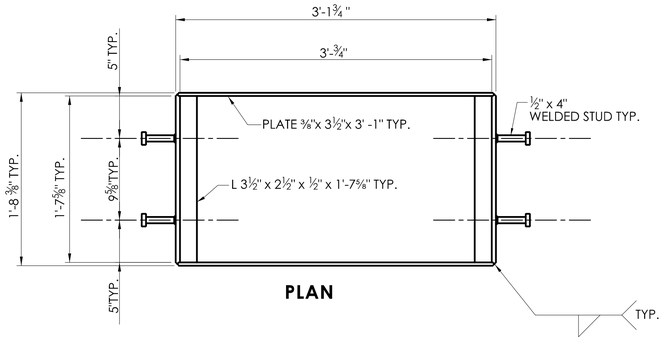
ELEVATION- INTERIOR BEARING BAR



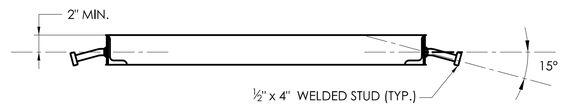
ELEVATION- END BEARING BAR
CATCH BASIN GRATE TYPE A



ELEVATION- END BEARING BAR
CATCH BASIN GRATE TYPE B



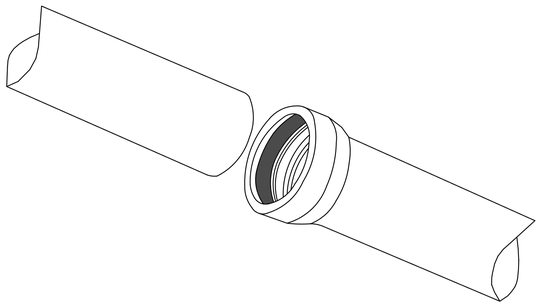
PLAN



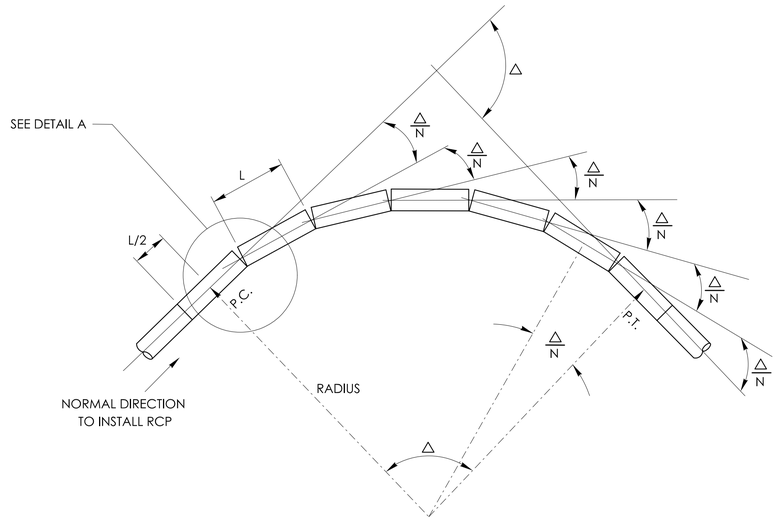
WELDED STUD ANCHOR DETAILS
STEEL FRAME

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:16:20-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:02:17-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CATCH BASIN FRAMES AND GRATES / STANDARD SHEET NO.: HW-586_08

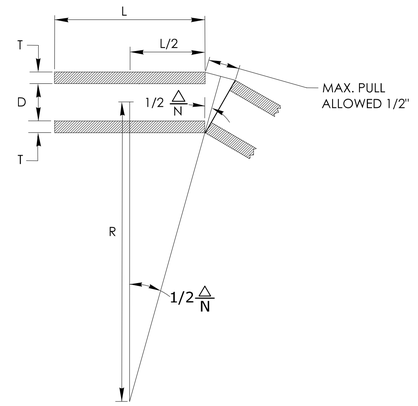
PLOTTED DATE: 10/22/2024



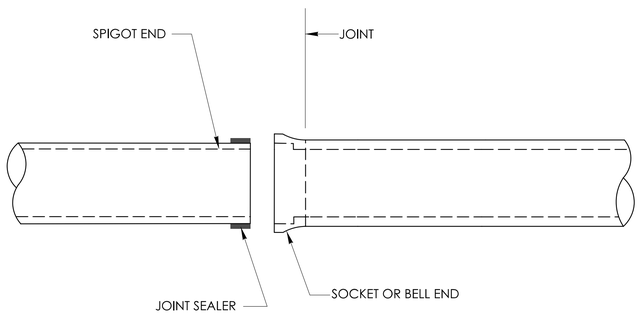
CONCRETE PIPE ASSEMBLY AT THE JOINT



CURVED ALIGNMENT USING DEFLECTED STRAIGHT PIPE FOR MAXIMUM PULL 1/2"



DETAIL A
DEFLECTING STANDARD FOR RCP



STANDARD CONNECTION FOR CONCRETE PIPE

MINIMUM RADII FOR RCP PIPE ON CURVED ALIGNMENT

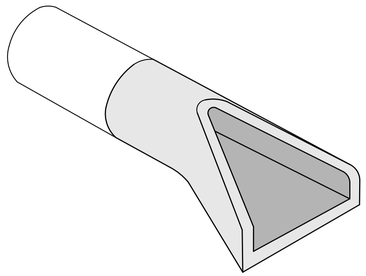
DIAMETER (D)	MINIMUM RADII USING 8' PIPE LENGTHS
IN.	FT.
15	337
18	392
21	401
24	452
30	617
36	729
42	842
48	953
54	1066
60	1178
72	1403

NOTES:

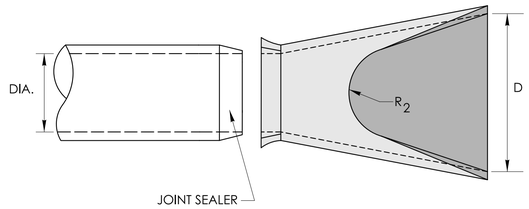
1. N IS THE NUMBER OF PIPE SEGMENTS
2. D IS PIPE DIAMETER
3. L IS LENGTH OF PIPE
4. T IS PIPE THICKNESS
5. △ IS THE DEGREE OF CURVATURE

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 14:02:42-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:08:17-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE PIPE CONNECTION SHEET 2	STANDARD SHEET NO.: HW-686_01b

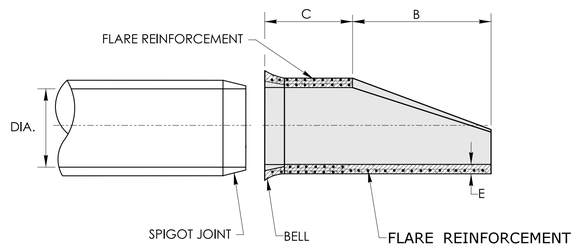
PLOTTED DATE: 10/22/2024



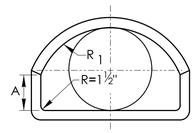
PRECAST CONCRETE PIPE END



PLAN



SECTION



ELEVATION

END SECTION FOR REINFORCED CONCRETE PIPE END								FLARE REINFORCEMENT ONE LAYER ONLY IN CENTER OF WALL	
PIPE DIAMETER INCHES	A INCHES	B INCHES	C INCHES	D INCHES	E INCHES	R_1 INCHES	R_2 INCHES	MIN. AREA OF LONGITUDINAL STEEL SQ. IN PER FT.	MIN. AREA OF TRANSVERSE STEEL STEEL SQ. IN PER FT.
12	4	24	48 7/8	24	3	10 1/4	9	0.048	0.048
15	6	27	46	30	3	12 1/2	11	0.054	0.054
18	9	27	46	36	3	15 1/2	12	0.060	0.060
24	9 1/2	43 1/2	30	48	3	16 13/16	14	0.072	0.072
30	12	54	19 3/4	60	3 1/2	18 1/2	15	0.084	0.084
36	15	63	34 3/4	72	4	24 5/16	20	0.096	0.096
42	21	63	35	78	4 1/2	27 1/2	22	0.108	0.108
48	24	72	26	84	5	28 1/2	22	0.120	0.120
54	27	65	35	90	5 1/2	33 1/8	24	0.132	0.132
60	30	60	39	96	6	36 1/16	24	0.144	0.144

NOT TO SCALE

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

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.12.16 14:01:43-05'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2025.01.21 13:10:02-05'00'

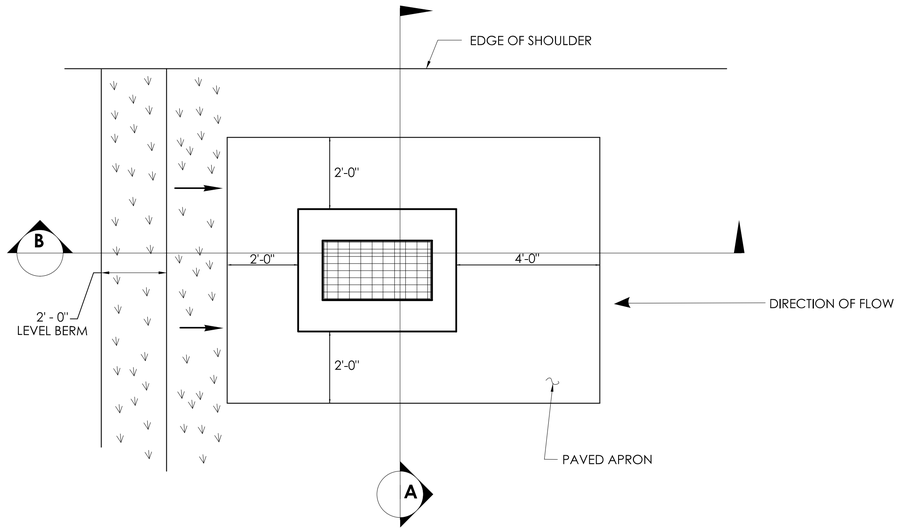
CONNECTICUT DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

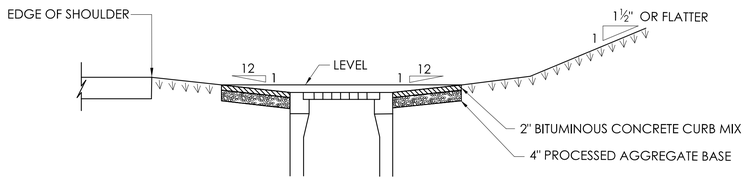
STANDARD SHEET TITLE:
DRAINAGE PIPE ENDS SHEET 2

STANDARD SHEET NO.:
HW-686_02b

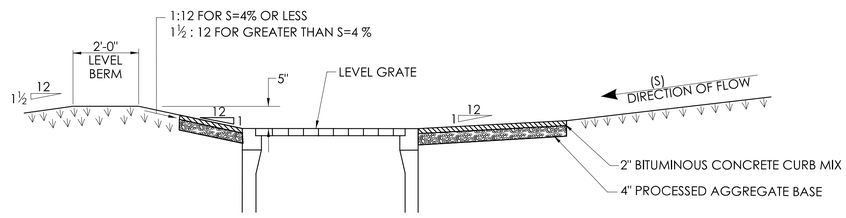
PLOTTED DATE: 10/22/2024



PLAN

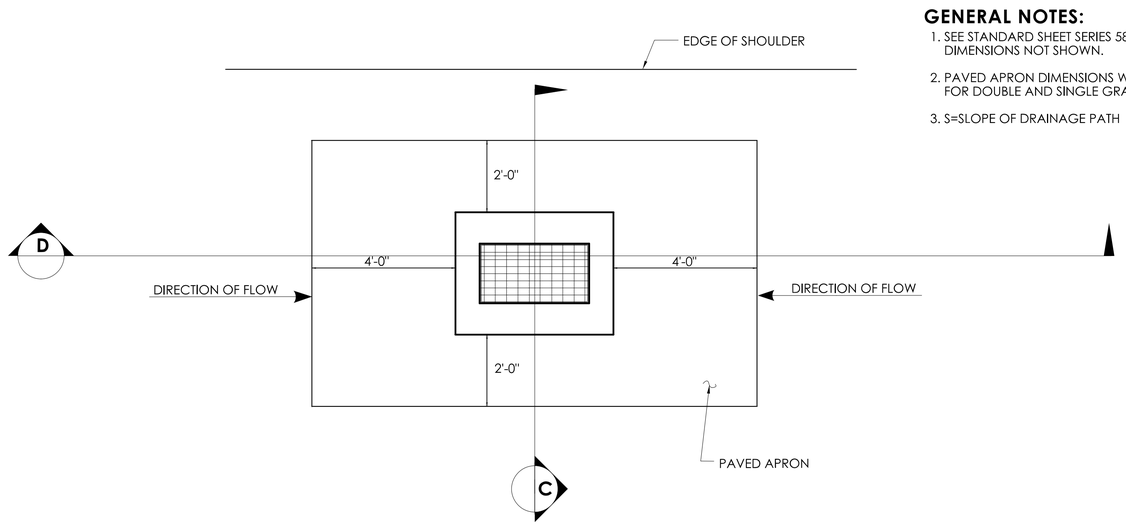


SECTION A -

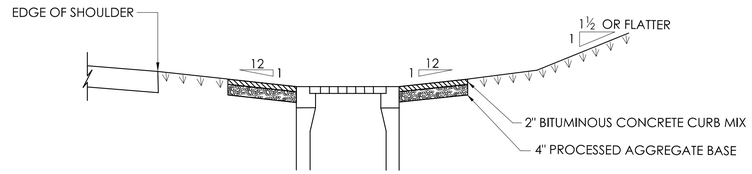


SECTION B -

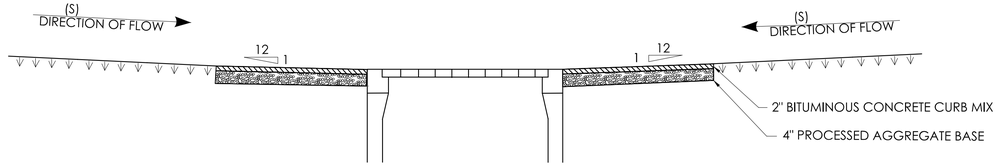
PAVED APRON FOR "C-L" CATCH BASIN ON GRADE



PLAN



SECTION C -



SECTION D -

PAVED APRON FOR "C-L" CATCH BASIN IN A SAG

GENERAL NOTES:

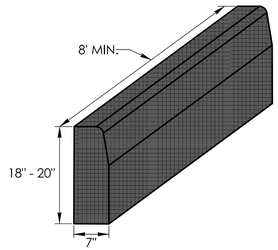
1. SEE STANDARD SHEET SERIES 586, FOR CATCH BASIN DIMENSIONS NOT SHOWN.
2. PAVED APRON DIMENSIONS WILL REMAIN THE SAME FOR DOUBLE AND SINGLE GRATES.
3. S=SLOPE OF DRAINAGE PATH

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 14:01:07-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:12:24-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: PAVED APRONS / STANDARD SHEET NO.: HW-803_01

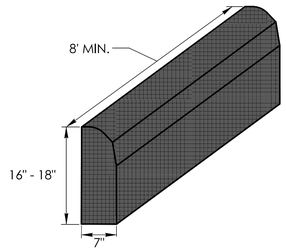
PLOTTED DATE: 10/22/2024

GENERAL NOTE:

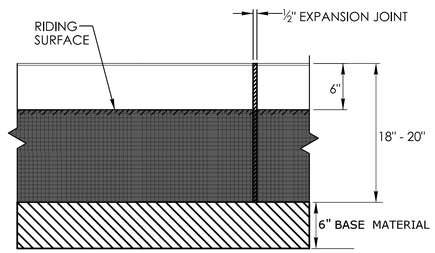
1. PRECAST CONCRETE CURBING MAY BE CAST BY THE MANUFACTURER WITH OPTIONAL LIFTING AND DOWEL BAR HOLES.



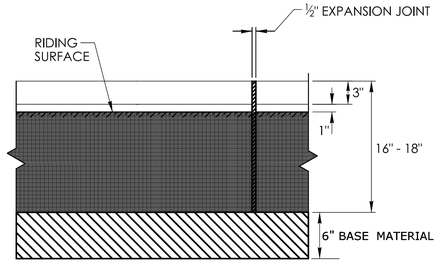
CONCRETE CURBING (6" REVEAL)



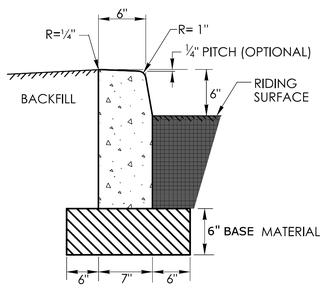
CONCRETE PARK CURBING (4" REVEAL)



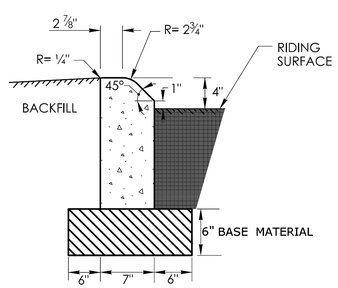
FRONT ELEVATION



FRONT ELEVATION



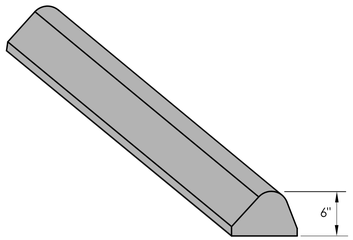
SECTION



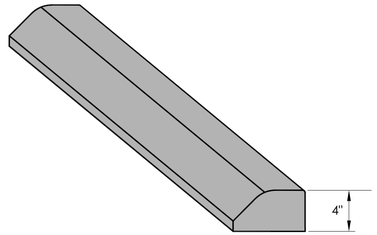
SECTION

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 14:00:51-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:13:38-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE CURBNG	STANDARD SHEET NO.: HW-811_01

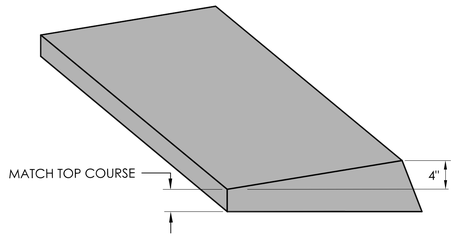
PLOTTED DATE: 10/22/2024



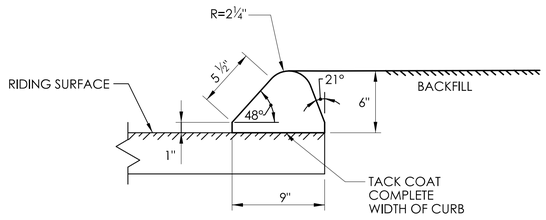
BITUMINOUS CONCRETE LIP CURBING
(6" HIGH)



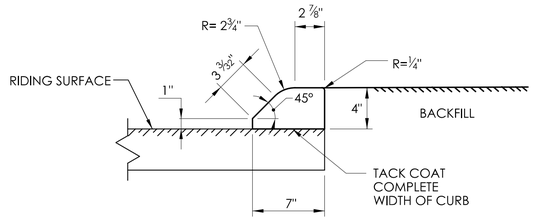
BITUMINOUS CONCRETE PARK CURBING
(4" HIGH)



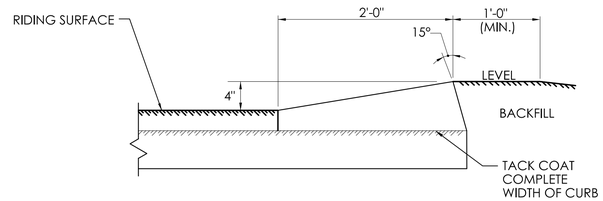
BITUMINOUS CONCRETE BERM CURBING
(4" HIGH)



SECTION



SECTION



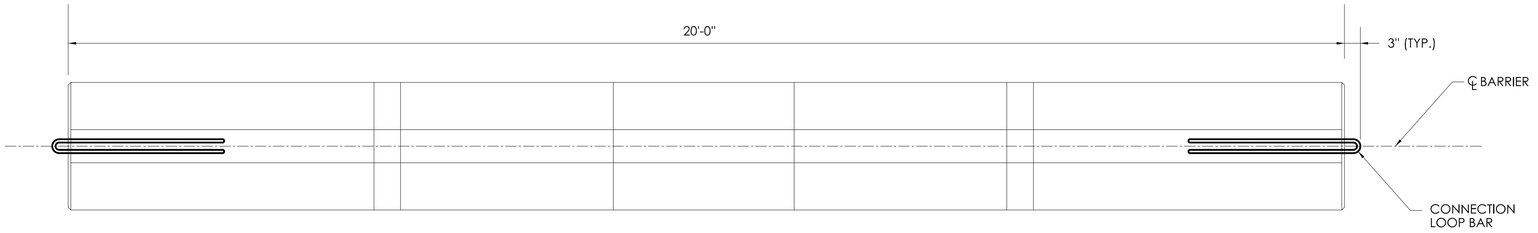
SECTION

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 14:00:18-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:16:01-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: BITUMINOUS CONCRETE CURBING / STANDARD SHEET NO.: HW-815_01

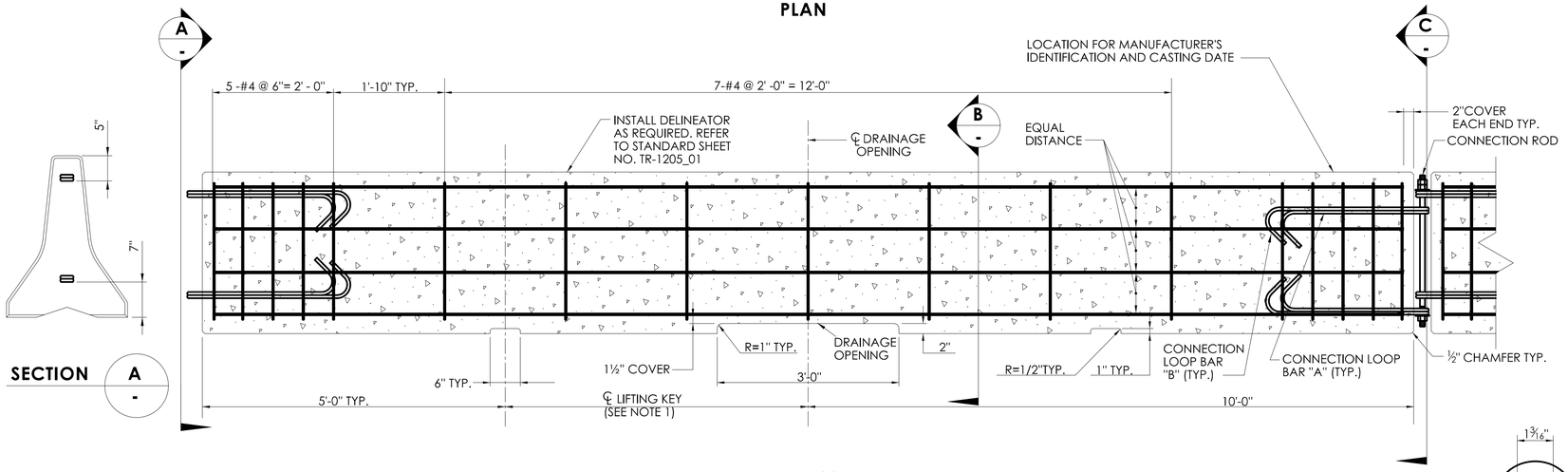
PLOTTED DATE: 10/22/2024

GENERAL NOTES:

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

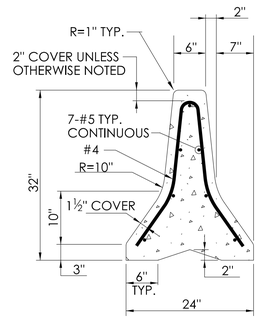


PLAN

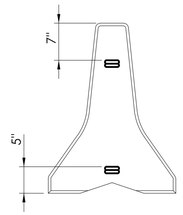


SECTION A -

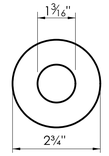
ELEVATION



SECTION B -

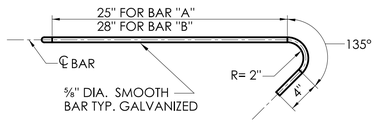


END VIEW C -



WASHER DETAIL

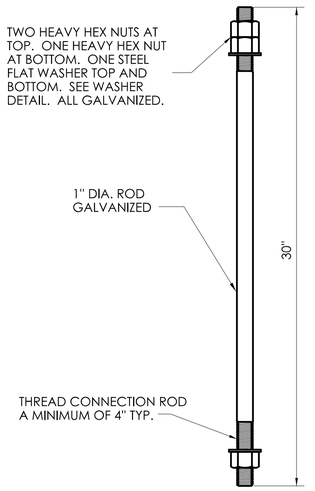
PLAN



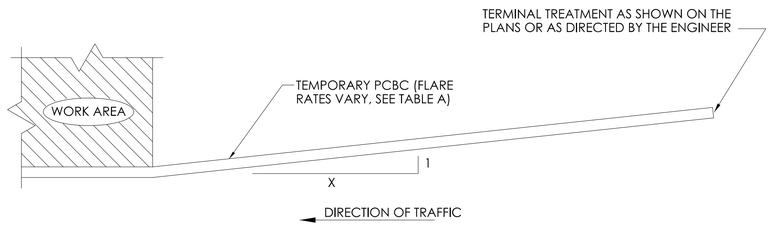
ELEVATION

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

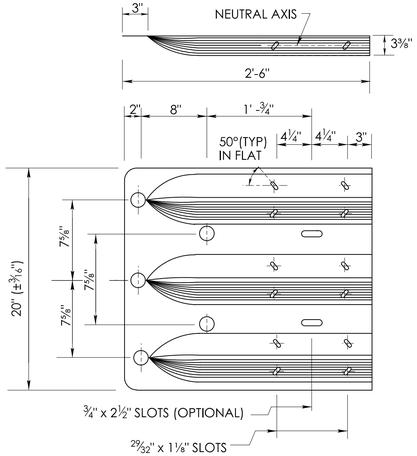
* DESIGN SPEED THROUGH THE WORK AREA.

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 14:21:58-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.21 13:39:44-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: TEMPORARY PRECAST CONCRETE BARRIER CURB	STANDARD SHEET NO.: HW-822_01

PLOTTED DATE: 10/22/2024

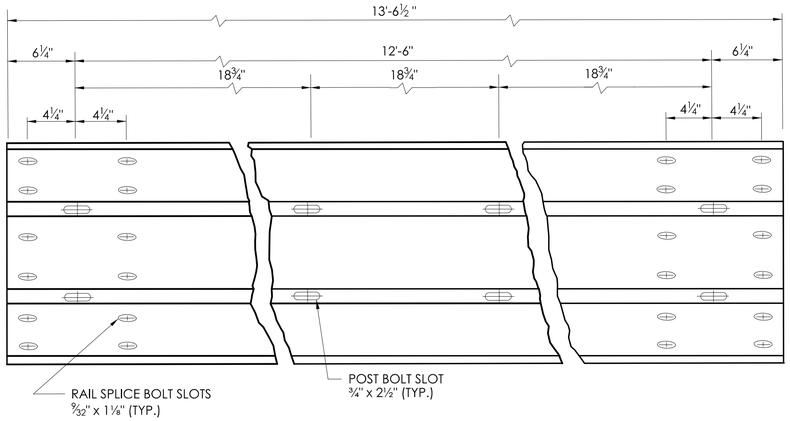
GENERAL NOTE:

1. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



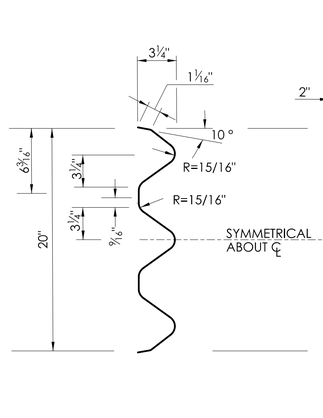
THRIE-BEAM TERMINAL CONNECTOR

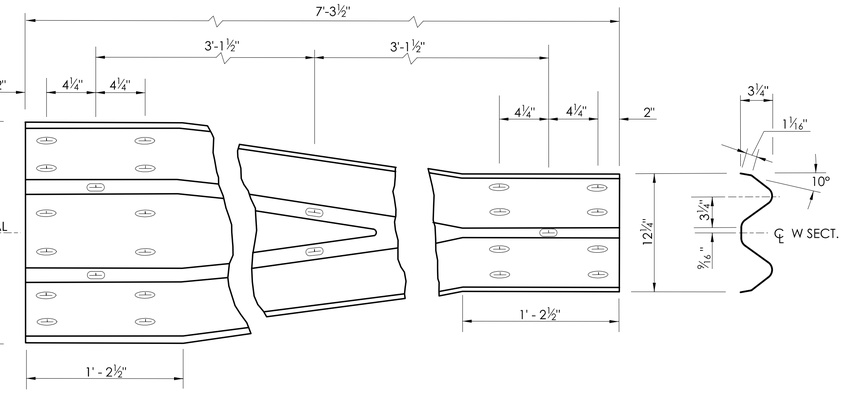
[RTE01b]
(10 GUAGE)



TYPICAL THRIE-BEAM RAIL ELEMENT

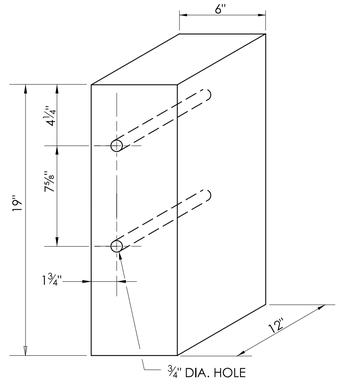
[RTM19a FOR 6'-3" AND RTM08a FOR 12'-6" THRIE-BEAM LENGTHS]
(12 GUAGE)





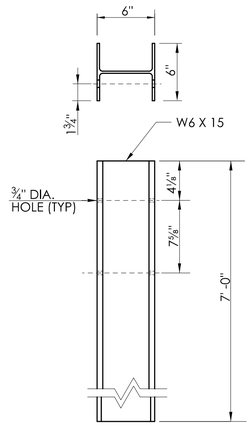
TYPICAL THRIE-BEAM TRANSITION ELEMENT

[RWT01b]
(10 GAUGE)



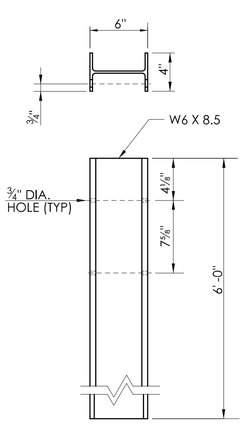
12" WOOD BLOCKOUT

[PDB18]
(FOR POSTS 1 TO 8)



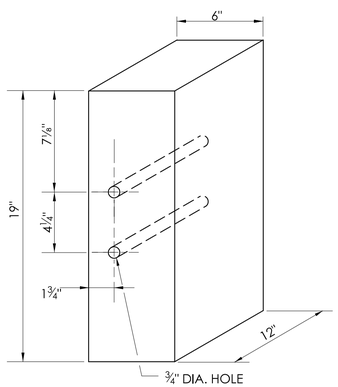
STEEL POST 7' - 0" LONG

[PDB18]
(FOR POSTS 1 TO 3)



STEEL POST 6' - 0" LONG

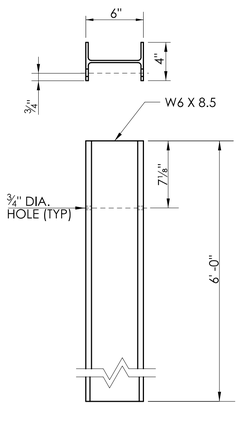
[PDB18]
(FOR POSTS 4 TO 8)



12" WOOD BLOCKOUT

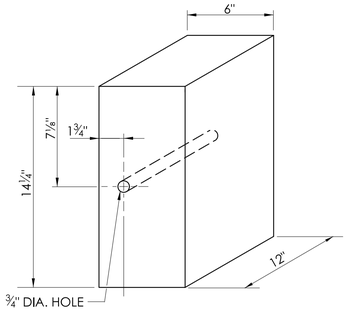
[PDB18]
(FOR POST 9 ONLY)

END VIEW OF TRANSITION



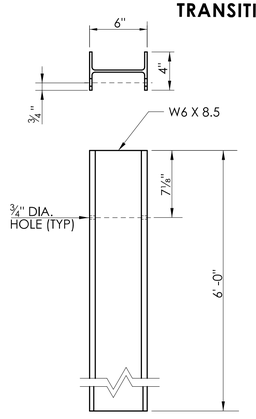
STEEL POST 6' - 0" LONG

[PDB18]
(FOR POST 9 ONLY)



12" WOOD BLOCKOUT

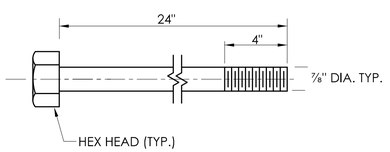
[PDB10a]
(FOR POSTS 10 TO 12)



STEEL POST 6' - 0" LONG

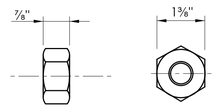
[PDB18]
(POSTS 10 TO 12)

END VIEW OF TRANSITION

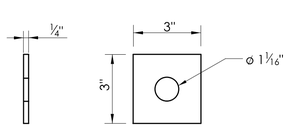


LONG HEAVY HEX HEAD BOLT

[FBX22b]
(FOR THRIE-BEAM TERMINAL CONNECTOR)

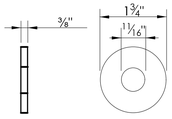


HEX NUT



SQUARE PLATE WASHER

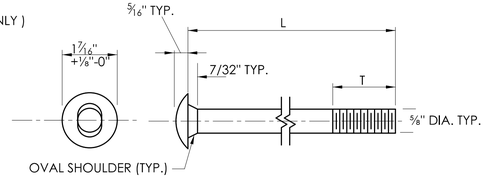
[FWR10]
(For THRIE-BEAM TERMINAL CONNECTOR, PLACED BETWEEN HEX NUT AND BACKSIDE OF CONCRETE STRUCTURE)



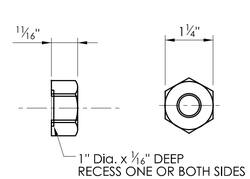
WASHER

[FWC16a]

(FOR WASHERS PLACED BETWEEN SPLICE NUT AND THRIE-BEAM TERMINAL CONNECTOR)



BUTTONHEAD BOLT



HEX NUT

DESIGNATOR	L	T	INTENDED USE
FBB02	2"	1⅞"	RAIL SPLICE BOLTS
FBB06	14"	4"	POST BOLT (12" BLOCK OUTS)

5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)

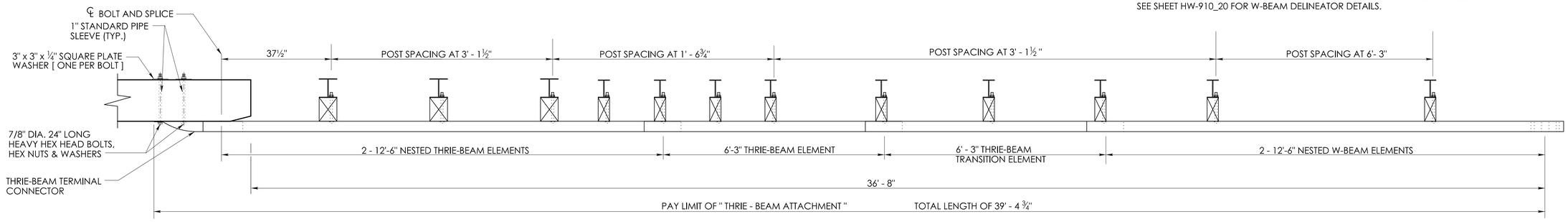
NOTE: AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT. DIAMETER SHOWN IS TYPICAL FOR ALL GUIDERAIL BOLTS. SEE DETAILS ABOVE FOR SPECIFIC LENGTHS.

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:06:40-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:36:42-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: THRIE-BEAM ATTACHMENT HARDWARE	STANDARD SHEET NO.: HW-910_26

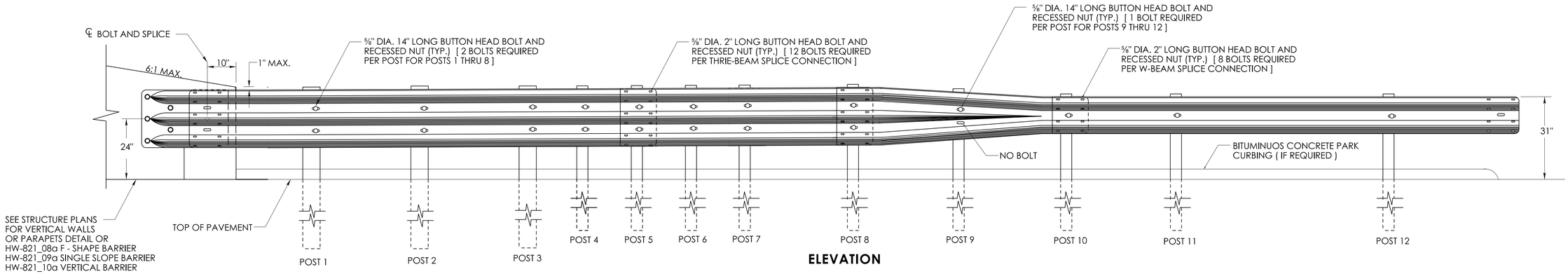
PLOTTED DATE: 10/23/2024

GENERAL NOTES:

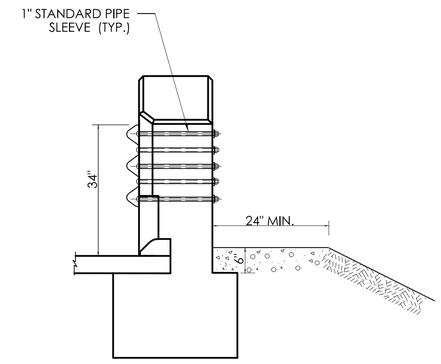
1. PROVIDE 2 FOOT MINIMUM EMBANKMENT BETWEEN THE BACK OF THE GUIDERAIL POST(S) / CONCRETE BARRIER AND THE BREAK IN THE FILL SLOPE.
2. INSTALL THRIE - BEAM TERMINAL CONNECTOR BETWEEN NESTED GUIDERAIL ELEMENTS, EXCEPT FOR SINGLE DIRECTION ROADWAY APPPLICATION ONLY WHERE THE THRIE - BEAM TERMINAL CONNECTOR IS INSTALLED OUTSIDE OF NESTED GUIDERAIL ELEMENTS ON THE TRAILING END.
3. DELINEATORS SHALL BE INSTALLED ON THE POST CLOSEST TO THE DESIGNATED SPACING. SEE SHEET HW-910_20 FOR W-BEAM DELINEATOR DETAILS.



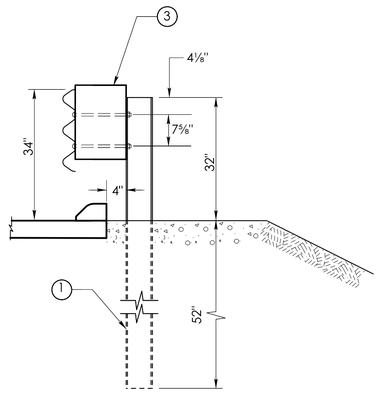
PLAN



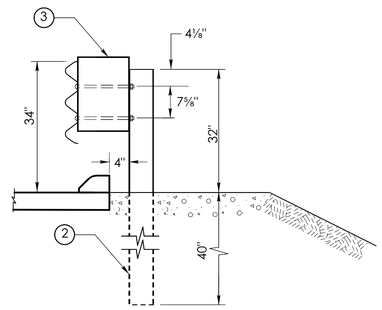
ELEVATION



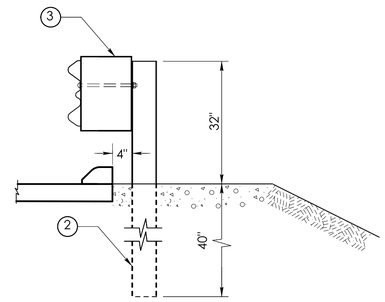
THRIE BEAM CONNECTION



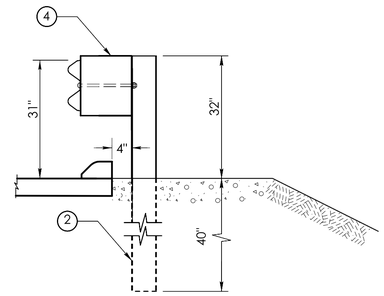
POST 1,2 & 3



POST 4,5,6,7 & 8



POST 9



POST 10, 11 & 12

LEGEND

1. W6 x 15, 7 FOOT LONG STEEL POST
2. W6 x 8.5 OR W6 x 9, 6 FOOT LONG STEEL POST
3. 6" x 12" x 19" TREATED TIMBER BLOCKOUT
4. 6" x 12" x 14 ¼" TREATED TIMBER BLOCKOUT

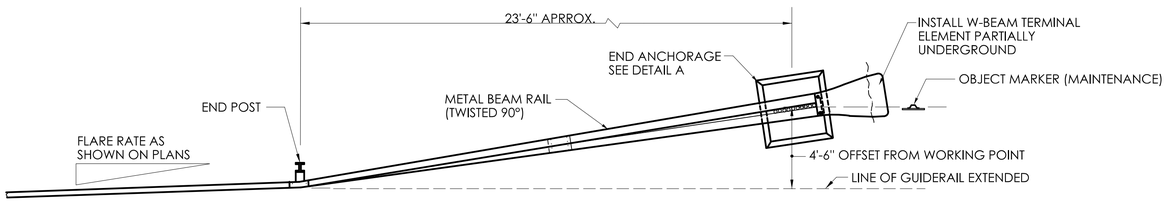
MASH 2016 COMPLIANT
APPROVAL ID. 2019-01

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:06:03-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:37:54-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: THRIE-BEAM ATTACHMENT / STANDARD SHEET NO.: HW-910_27

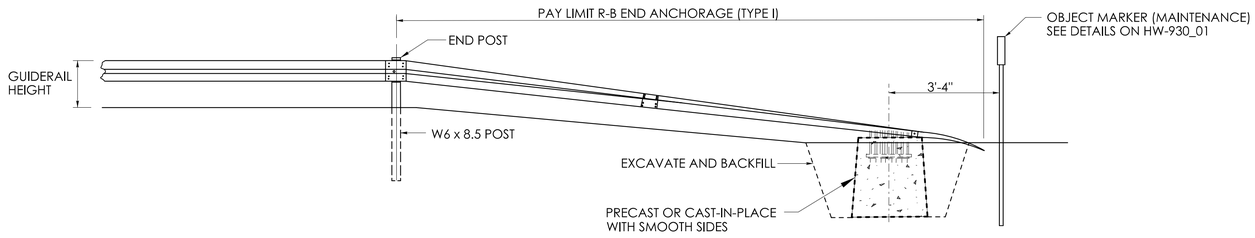
PLOTTED DATE: 10/23/2024

GENERAL NOTES:

1. J-HOOK BOLTS MAY BE SUBSTITUTED FOR BOTTOM PLATE ANCHORAGE IN CONCRETE END ANCHORS USING THE SAME SIZE, STRENGTH, AND LENGTH AS NOTED ON THE PLANS.
2. INSTALLATION OF RADII DIFFERENT THAN WHAT IS SHOWN IN DETAIL "C" FOR R-B END ANCHORAGE TYPE II MUST BE APPROVED BY THE ENGINEER.

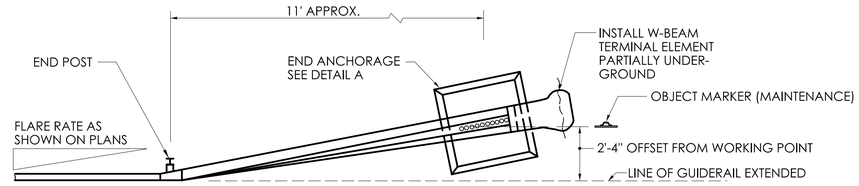


PLAN

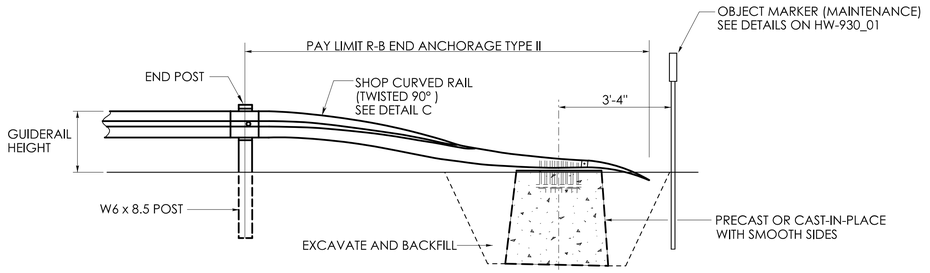


ELEVATION

R-B END ANCHORAGE TYPE I

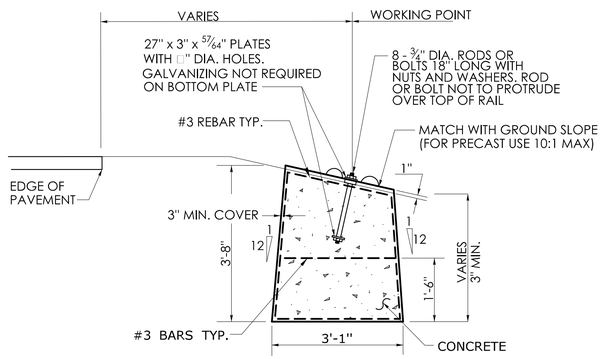


PLAN

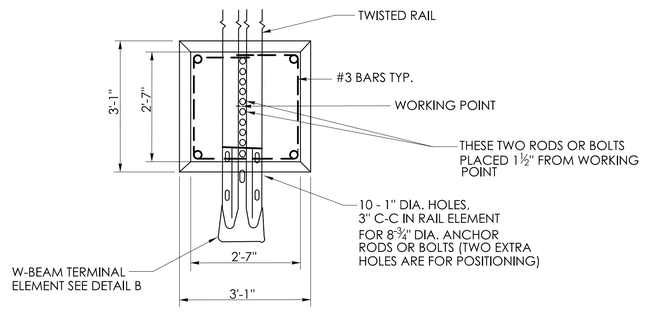


ELEVATION

R-B END ANCHORAGE TYPE II

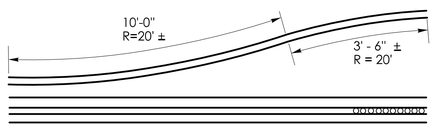


ELEVATION

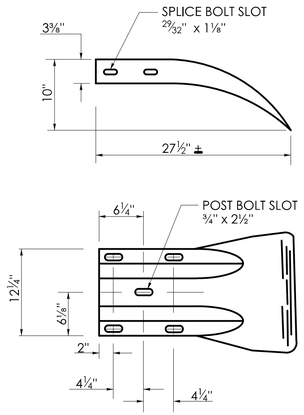


PLAN

DETAIL A
ROADSIDE CONCRETE END ANCHOR
SEE NOTE 2



DETAIL C
SHOP CURVED RAIL
SEE NOTE 2



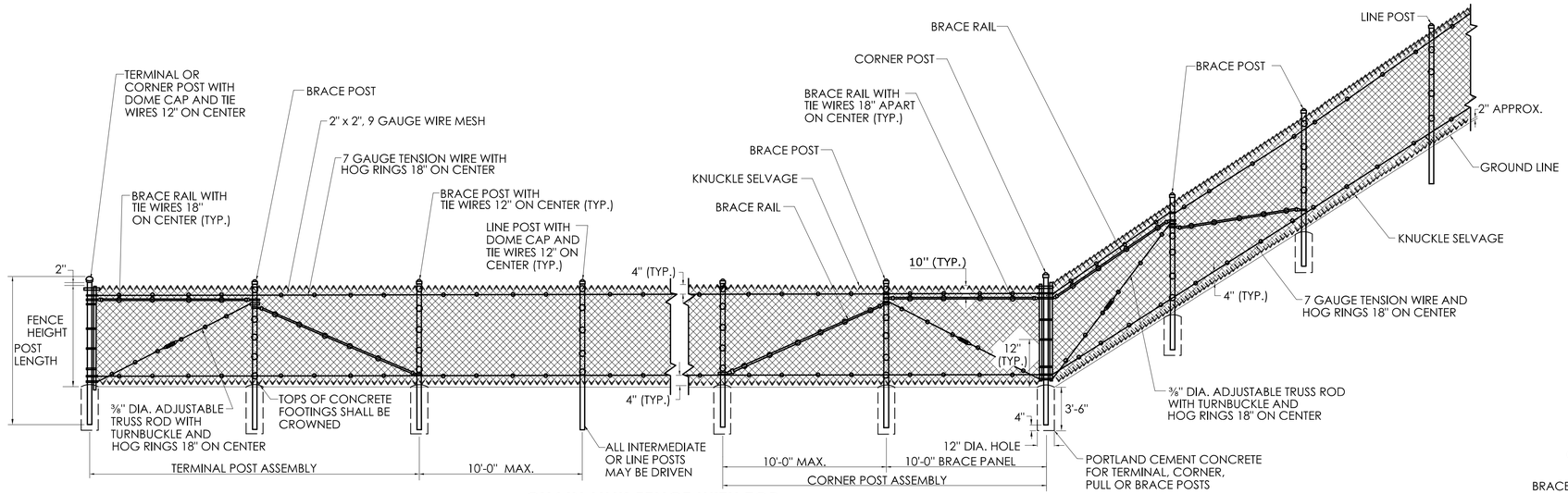
DETAIL B
W-BEAM TERMINAL ELEMENT

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:05:33-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:39:13-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: R-B END ANCHORAGE TYPE I AND II / STANDARD SHEET NO.: HW-911_01

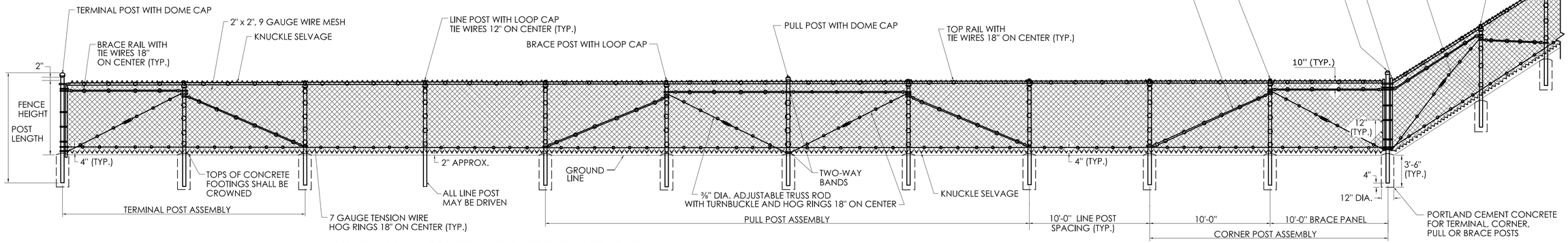
PLOTTED DATE: 11/25/2024

GENERAL NOTES:

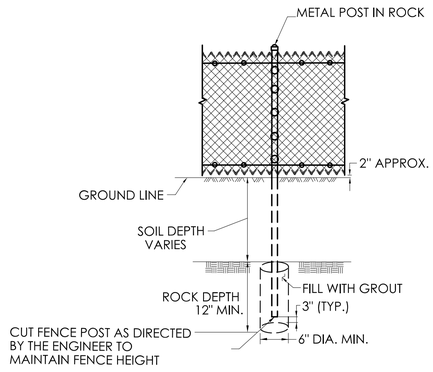
1. INSTALL PULL POST ASSEMBLIES AT ALL CHANGES IN VERTICAL TO HORIZONTAL OF 10 DEGREES OR MORE.
2. ALL POSTS WILL BE CAPPED.
3. WHERE ROCK IS ENCOUNTERED, IT SHALL BE DRILLED AND THE POSTS SET IN MORTAR.
4. FENCE SHALL BE PLACED WITH FABRIC FACING OUTSIDE HIGHWAY RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.
5. SEE HW-913_01b FOR CHAIN LINK FENCE HARDWARE.



CHAIN LINK FENCE WITH TOP TENSION WIRE



CHAIN LINK FENCE WITH TOP BRACE RAIL AND INTERMEDIATE OR BOTTOM TENSION WIRE



METAL POST IN ROCK

FENCE FABRIC HEIGHT	GROUP 1A ASTM F1083 SCH. 40 PIPE 50,000 PSI DIAMETER	GROUP 1C ASTM F1043 ELEC. RESISTANCE WELDED PIPE 50,000 PSI DIAMETER
LINE OR INTERMEDIATE POST		
UP TO 5'-0"	1⅞"	1⅞"
6'-0" TO 7'-0"	2⅜"	2⅜"
8'-0" TO 9'-0"	2⅞"	2⅞"
10'-0"	3½"	3½"
12'-0" OR HIGHER	4"	4"
TERMINAL, CORNER OR PULL POST		
UP TO 5'-0"	2⅜"	2⅜"
6'-0" TO 7'-0"	2⅞"	2⅞"
8'-0" TO 9'-0"	3½"	3½"
10'-0" OR HIGHER	4"	4"
TOP OR BRACE RAIL POSTS UP TO 6'-0"	1⅝"	1⅝"
POSTS HIGHER THAN 6'-0"	1⅞"	1⅞"

NOT TO SCALE

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

SUBMITTED BY:
Digitally signed by Leo Fontaine, P.E.
Date: 2024.12.19 15:12:47-05'00'

APPROVED BY:
Digitally signed by Michael N. Calabrese, P.E.
Date: 2025.01.29 12:42:57-05'00'

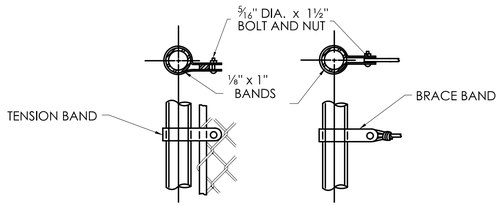
CONNECTICUT DEPARTMENT OF TRANSPORTATION

CTDOT STANDARD SHEET

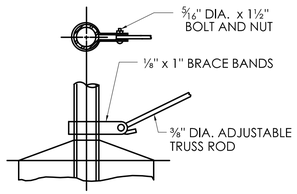
STANDARD SHEET TITLE:
CHAIN LINK FENCE

STANDARD SHEET NO.:
HW-913_01a

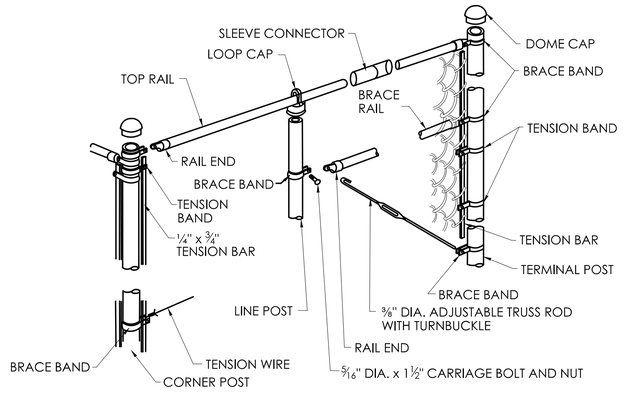
PLOTTED DATE: 10/23/2024



TENSION BAR **TENSION WIRE**

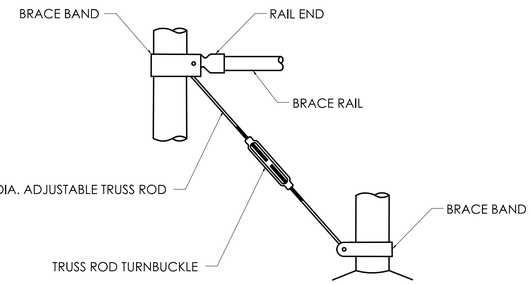


ADJUSTABLE TRUSS ROD

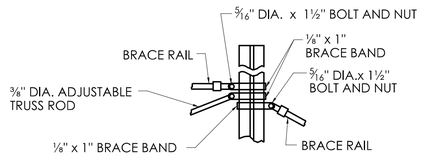


TOP RAIL / TRUSSED BRACE RAIL WITH BOTTOM TENSION WIRE

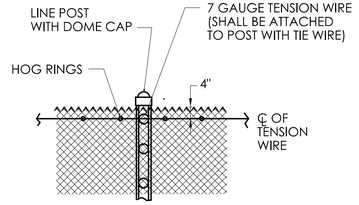
TIE WIRE



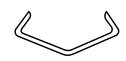
BRACE & TRUSS CONNECTIONS



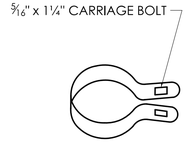
BRACE RAILS ATTACHMENT TO LINE POSTS



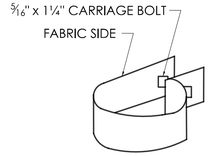
TENSION WIRE



HOG RING

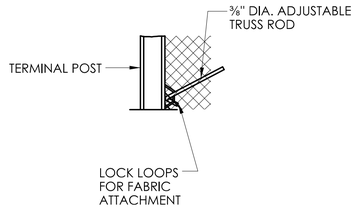


1/8" x 1" BRACE BAND

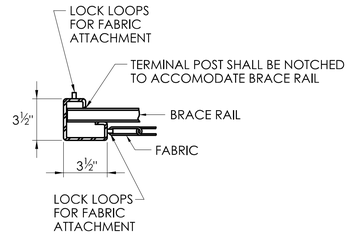


1/8" x 1" TENSION BAND

KNUCKLE SELVAGE



TRUSS ROD ATTACHMENT



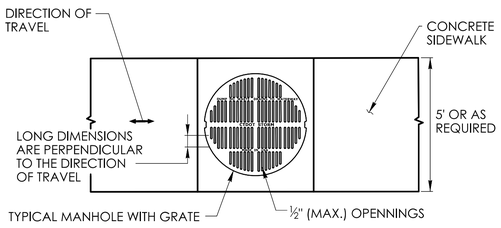
FABRIC AND BRACE RAIL ATTACHMENT

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:13:04-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:43:33-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CHAIN LINK FENCE HARDWARE / STANDARD SHEET NO.: HW-913_01b

PLOTTED DATE: 10/23/2024

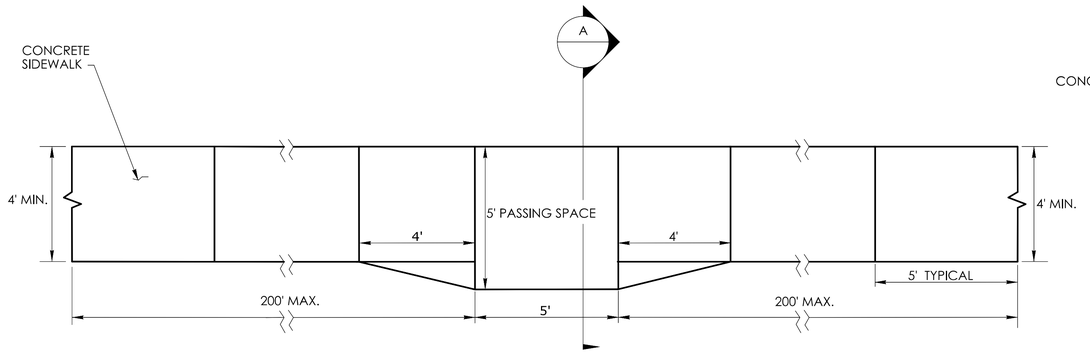
GENERAL NOTES:

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.



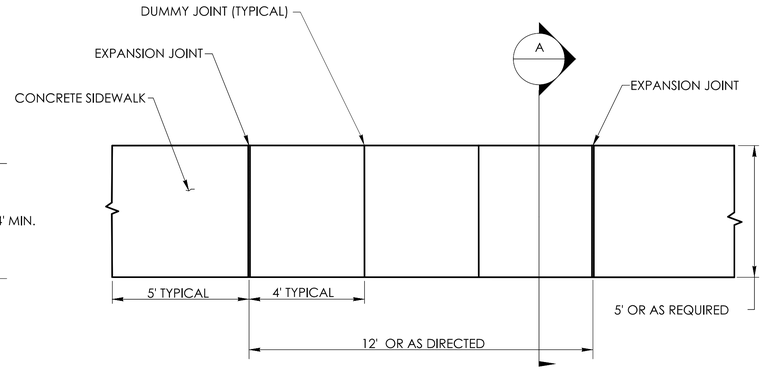
PEDESTRIAN ACCESS ROUTE OVER A MANHOLE WITH GRATE

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

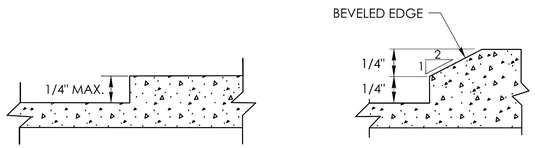


5' PASSING SPACE FOR 4' WIDE SIDEWALK PLAN

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

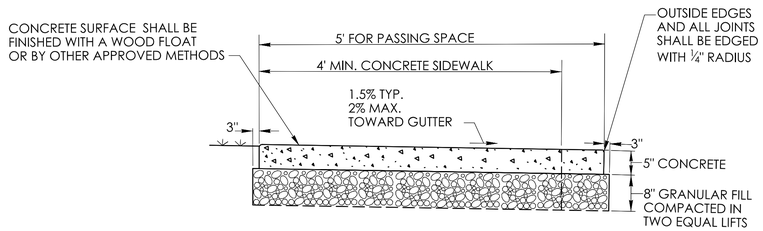


5' WIDE SIDEWALK PLAN



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

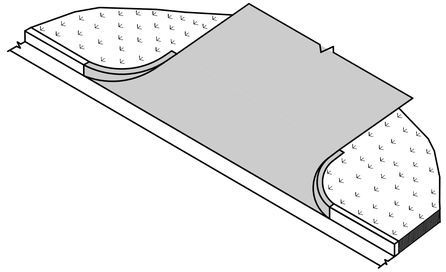


5' PASSING SPACE FOR 4' WIDE SIDEWALK

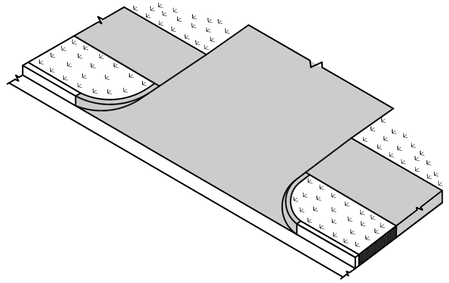
SECTION A

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:11:56-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:47:10-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE SIDEWALKS	STANDARD SHEET NO.: HW-921_01

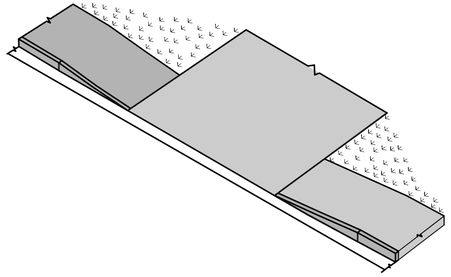
PLOTTED DATE: 10/23/2024



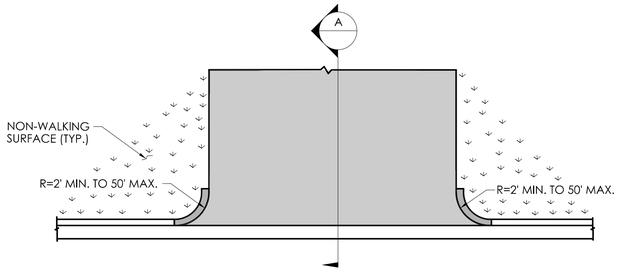
BITUMINOUS CONCRETE DRIVEWAY



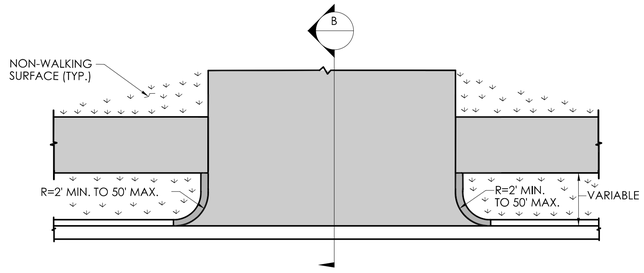
BITUMINOUS CONCRETE DRIVEWAY
WITH A PEDESTRIAN SIDEWALK SETBACK



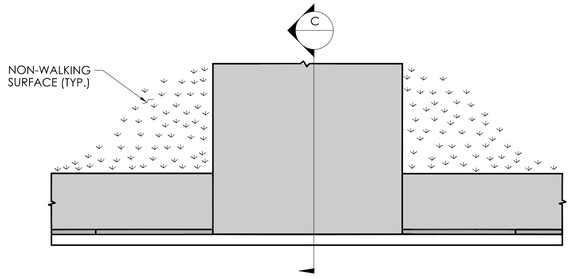
BITUMINOUS CONCRETE DRIVEWAY
WITH PEDESTRIAN SIDEWALK AT THE CURB



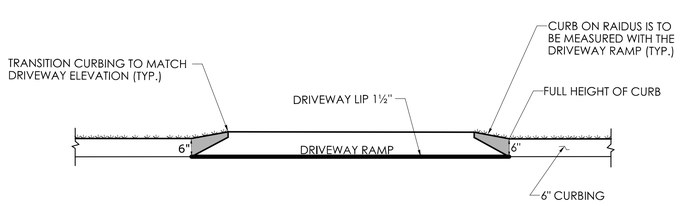
PLAN



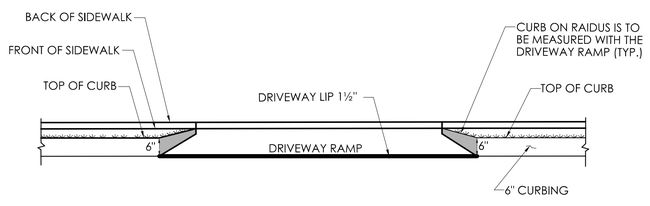
PLAN



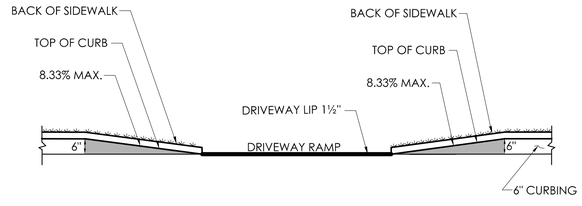
PLAN



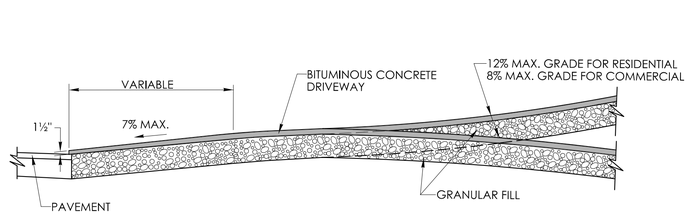
ELEVATION



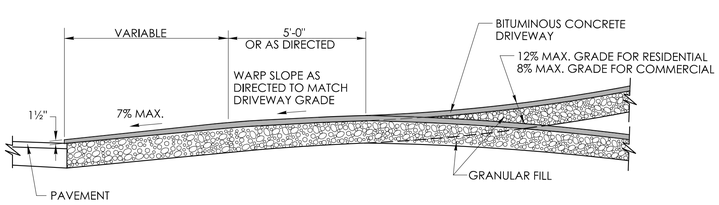
ELEVATION



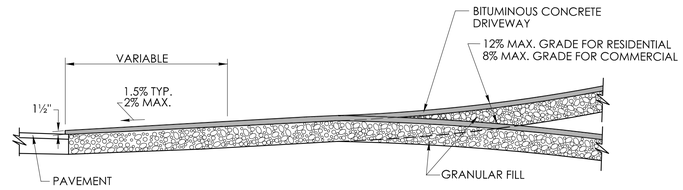
ELEVATION



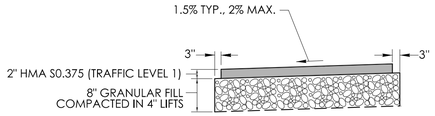
SECTION A



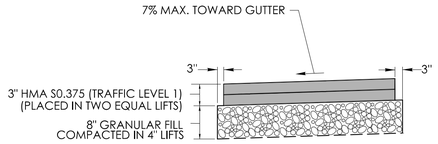
SECTION B



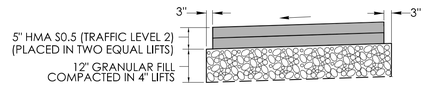
SECTION C



BITUMINOUS CONCRETE SIDEWALK



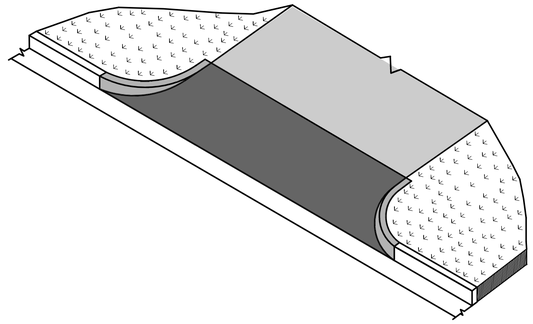
BITUMINOUS CONCRETE DRIVEWAY



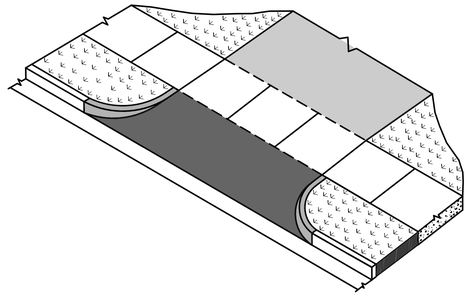
COMMERCIAL
BITUMINOUS CONCRETE DRIVEWAY

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:11:01-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:47:54-05'00'	CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: **BITUMINOUS CONCRETE SIDEWALK AND BITUMINOUS CONCRETE DRIVEWAY**	STANDARD SHEET NO.: **HW-922_01**

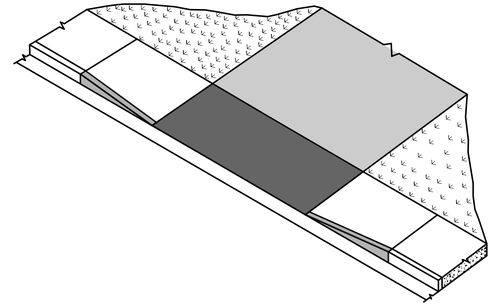
PLOTTED DATE: 10/23/2024



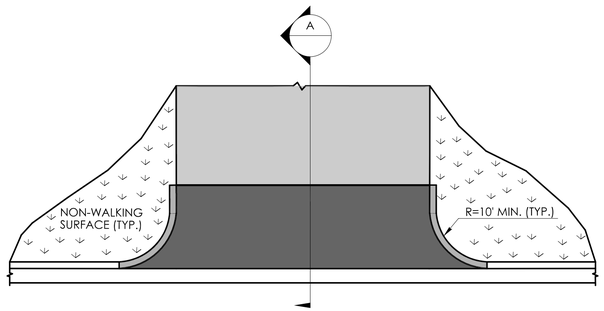
CONCRETE DRIVEWAY RAMP



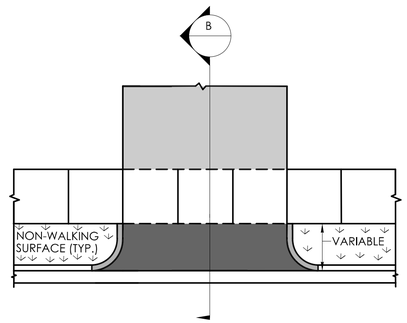
CONCRETE DRIVEWAY RAMP
WITH A PEDESTRIAN SIDEWALK SETBACK



CONCRETE DRIVEWAY RAMP
WITH PEDESTRIAN SIDEWALK AT THE CURB



PLAN



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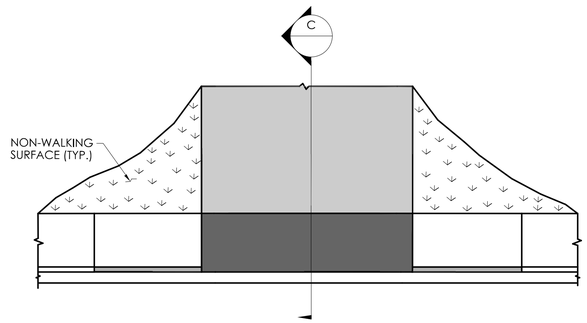

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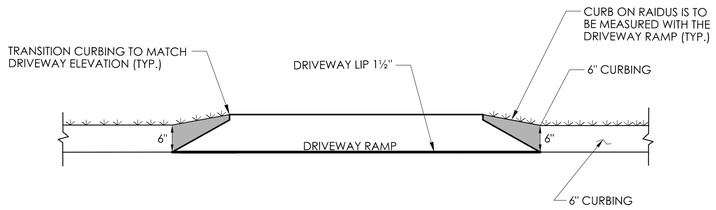
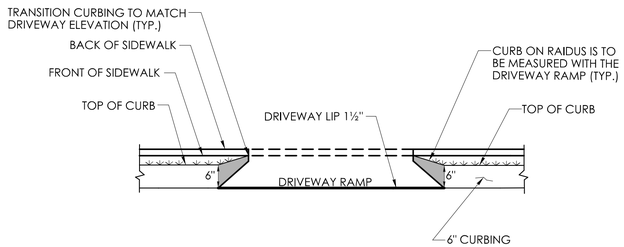


ELEVATION



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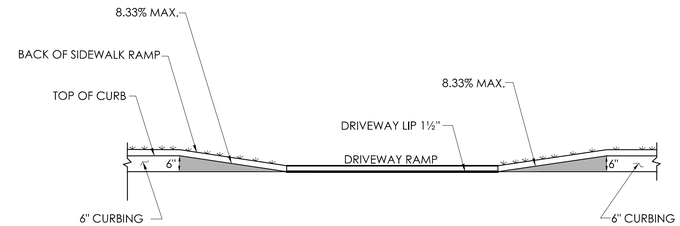

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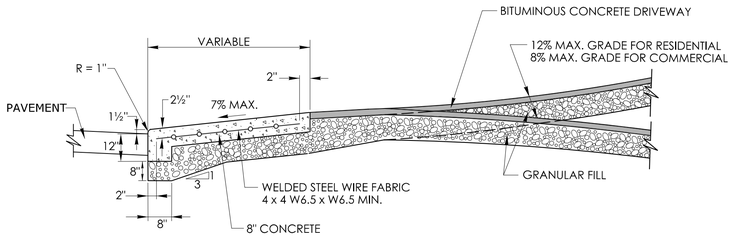
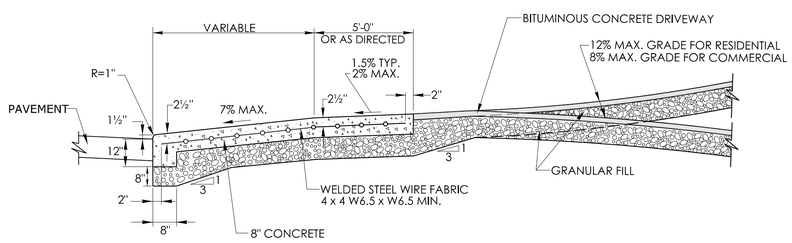
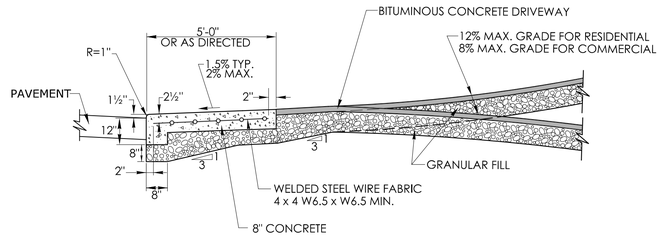


SECTION A



SECTION B



SECTION C

4/19/24 updated version

	NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.12.19 15:10:16-05'00'	APPROVED BY: Digitally signed by Michael N. Calabrese, P.E. Date: 2025.01.29 12:48:28-05'00'	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: CONCRETE DRIVEWAY RAMPS	STANDARD SHEET NO.: HW-924_01

PLOTTED DATE: 11/25/2024