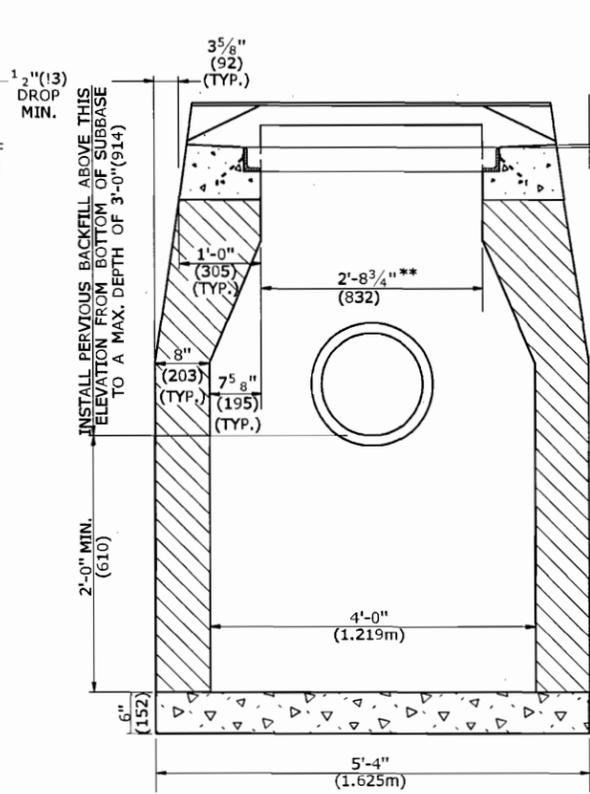
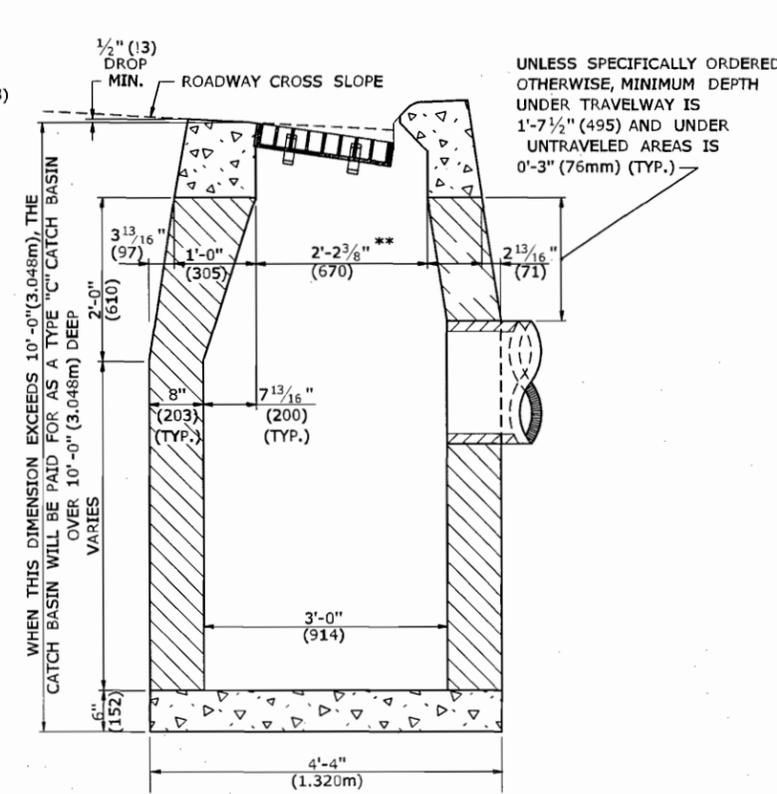


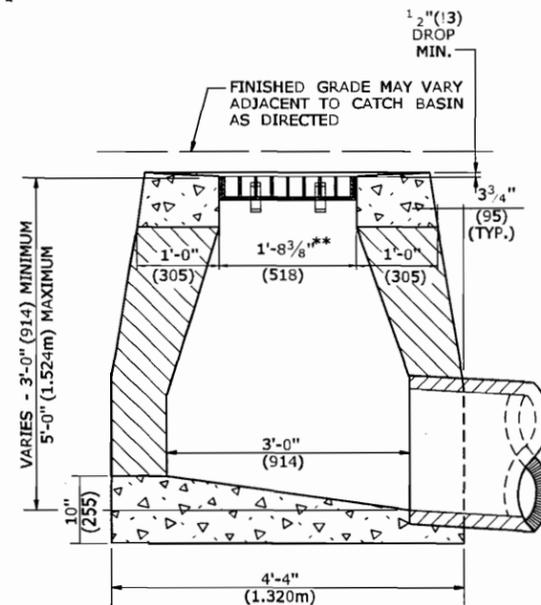
SECTION B
TYPE "C-L" CATCH BASIN



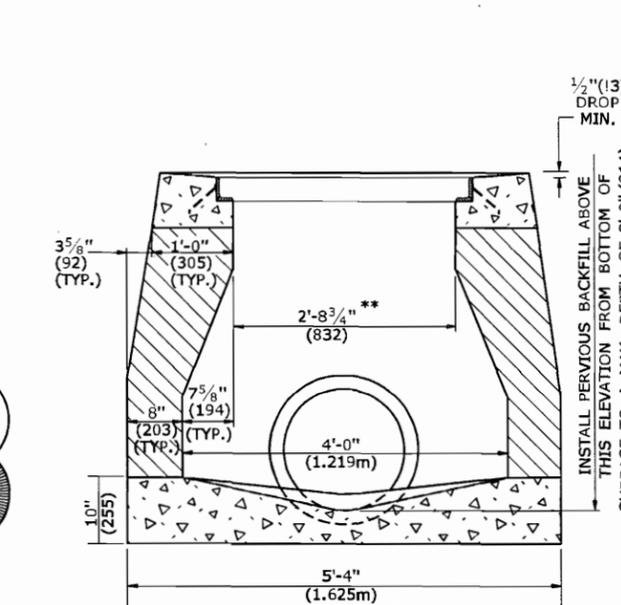
SECTION A
TYPE "C" & "C-L" CATCH BASIN
(TYPE "C" TOP SHOWN)



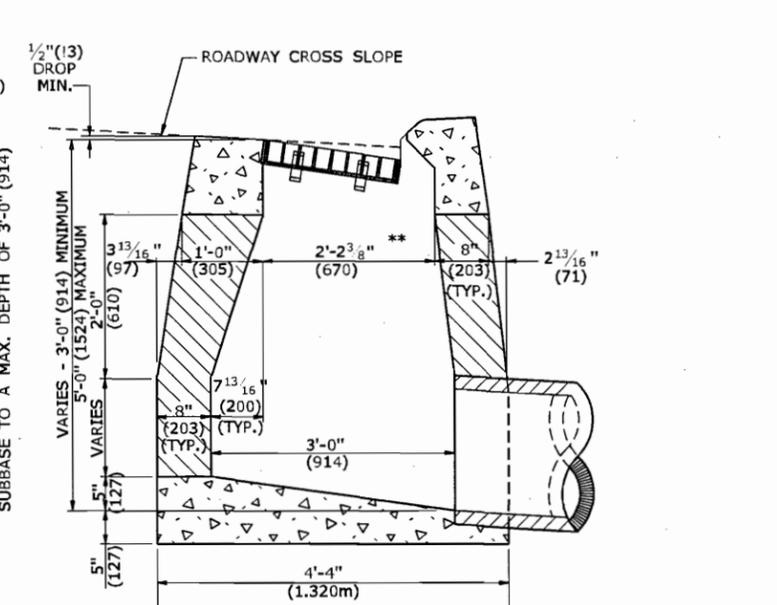
SECTION B
TYPE "C" CATCH BASIN



SECTION B
TYPE "C-L" DROP INLET



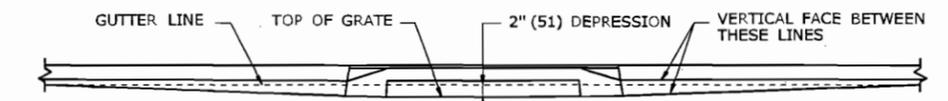
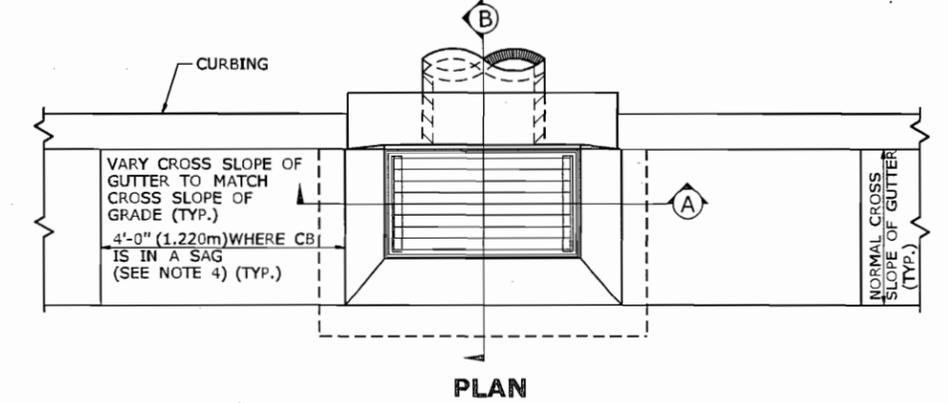
SECTION A
TYPE "C" & "C-L" DROP INLET
(TYPE "C-L" TOP SHOWN)



SECTION B
TYPE "C" DROP INLET

GENERAL NOTES:

- FOR DETAILS OF FRAME AND GRATE SEE STANDARD SHEET HW-507.08.
- USE APPROPRIATE CONCRETE TOP FOR CURBING SHOWN ON PLANS. IF CURBING IS NOT SPECIFIED ON THE PLANS, IT SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.
- ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL. THE COST FOR THE PAPER SHALL BE INCLUDED IN THE BID PRICE FOR THE TYPE OF CATCH BASIN INSTALLED.
- USE 6'-0" (1.830m) ON UPGRADE SIDE OF CONTINUOUS GRADE AND 1'-0" (305mm) ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.
- IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE AND SECTION 5.07 OF THE STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3" (75mm). NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY **.
- WALL THICKNESS OF ALL CB'S OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305mm) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" (305mm) THICKNESS WILL START AFTER THE FIRST 10' (3.048m).
- TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN THE FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH OF F'c = 4000 PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
- LATEST STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.



FOR CATCH BASINS IN A LINE OF 4" (102) CONCRETE PARK CURBING OR 4" (102) BITUMINOUS CONCRETE PARK CURBING



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



FOR CATCH BASINS IN A LINE OF 6" (152) CONCRETE CURBING OR 6" (152) STONE CURBING



FOR CATCH BASINS IN A LINE OF 6" (152) BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

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

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

REV.	DATE	REVISION DESCRIPTION

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

NOT TO SCALE

Plotted Date: 9/11/2009

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

File name: CTDOT-HIGHWAY-STD.dgn Model: HW-507_01

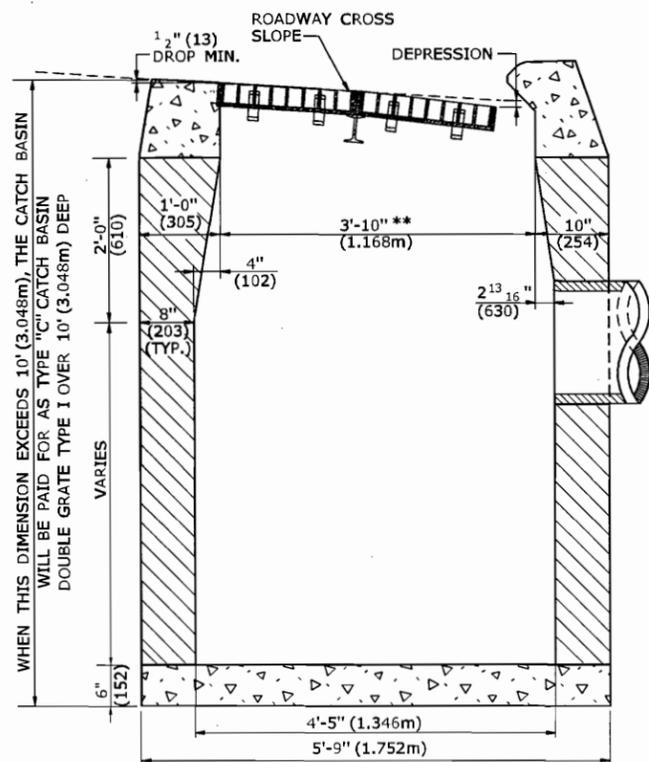
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Timothy M. Wilson
2009.09.16 11:10:00 -04'00'

APPROVED BY: NAME/DATE/TIME:
James H. Norman
2009.09.18 14:19:35 -04'00'

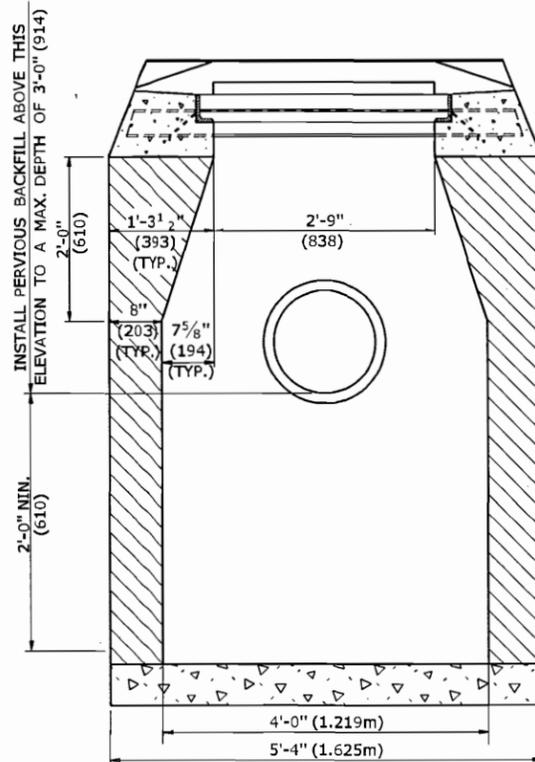
CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
TYPE "C", "C-L" & DROP INLET CATCH BASIN

STANDARD SHEET NO.:
HW-507_01



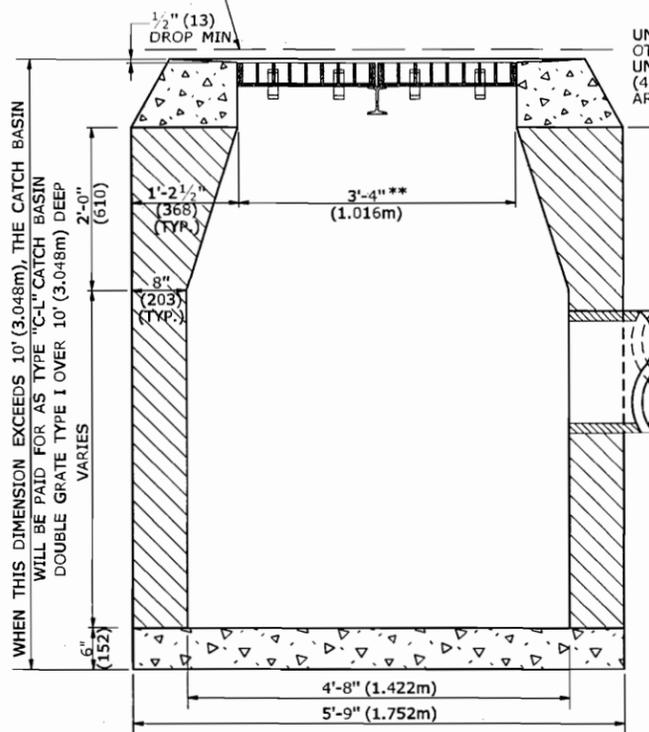
SECTION B



SECTION A

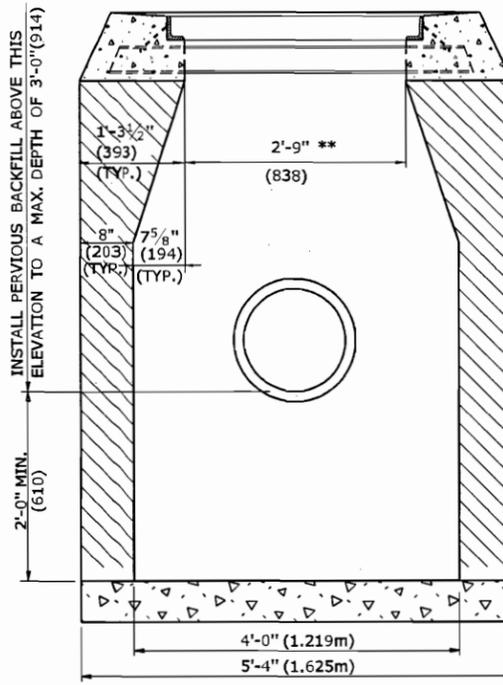
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I

FINISHED GRADE MAY VARY ADJACENT TO CATCH BASIN AS DIRECTED



SECTION B

UNLESS SPECIFICALLY ORDERED OTHERWISE, MINIMUM DEPTH UNDER TRAVELWAY IS 1'-7 1/2" (495mm) AND UNDER UNTRAVELED AREAS IS 0'-3" (76mm) (TYP.)

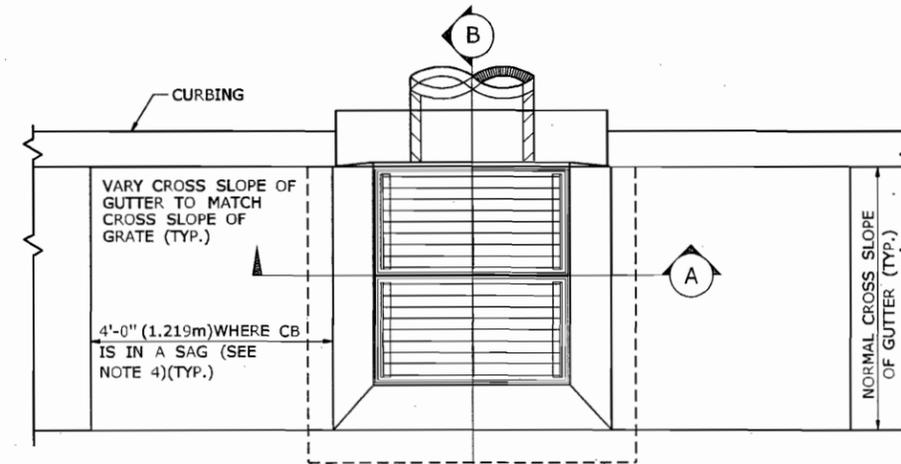


SECTION A

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

GENERAL NOTES:

1. FOR DETAILS OF FRAME AND GRATE SEE STANDARD SHEET HW-507_08.
2. USE APPROPRIATE CONCRETE TOP FOR CURBING SHOWN ON PLANS. IF CURBING IS NOT SPECIFIED ON THE PLANS, IT SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.
3. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL. THE COST FOR THE PAPER SHALL BE INCLUDED IN THE BID PRICE FOR THE TYPE OF CATCH BASIN INSTALLED.
4. USE 6'-0" (1.830m) ON UPGRADE SIDE OF CONTINUOUS GRADE AND 1'-0" (305) ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.
5. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE AND SECTION 5.07 OF THE STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3" (75mm). NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY **.
6. WALL THICKNESS OF ALL CB'S OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305mm) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (12" (305) THICKNESS WILL START AFTER THE FIRST 10' (3.048m)).
7. TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN THE FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.
8. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF F'c = 4000 PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
9. LATEST STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.



PLAN



FOR CATCH BASINS IN A LINE OF 4" (102) (CONCRETE PARK CURBING OR 4" (102) BITUMINOUS CONCRETE PARK CURBING



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



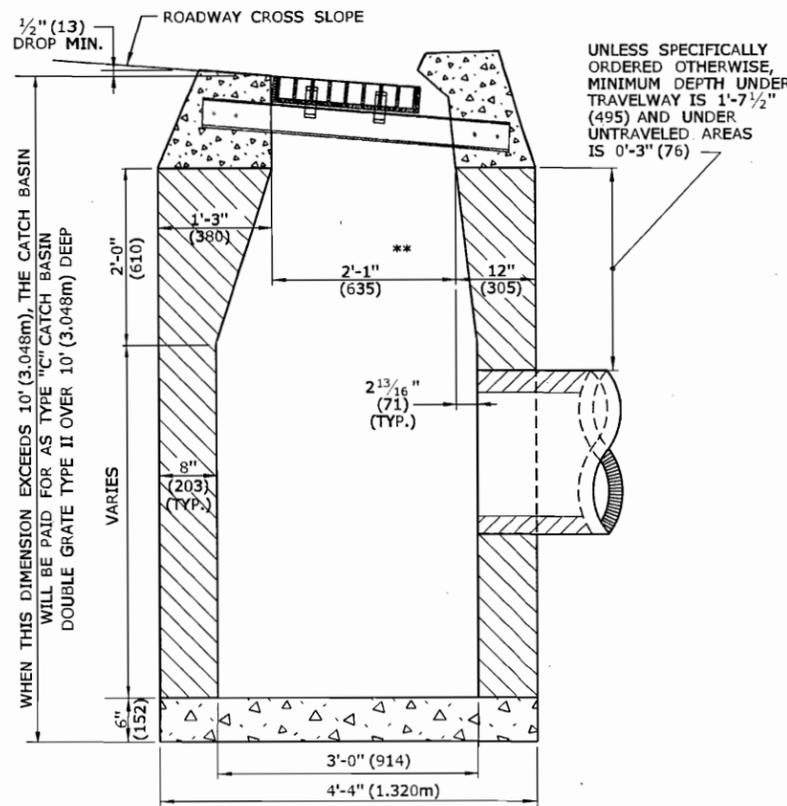
FOR CATCH BASINS IN A LINE OF 6" (152) CONCRETE CURBING OR 6" (152) STONE CURBING



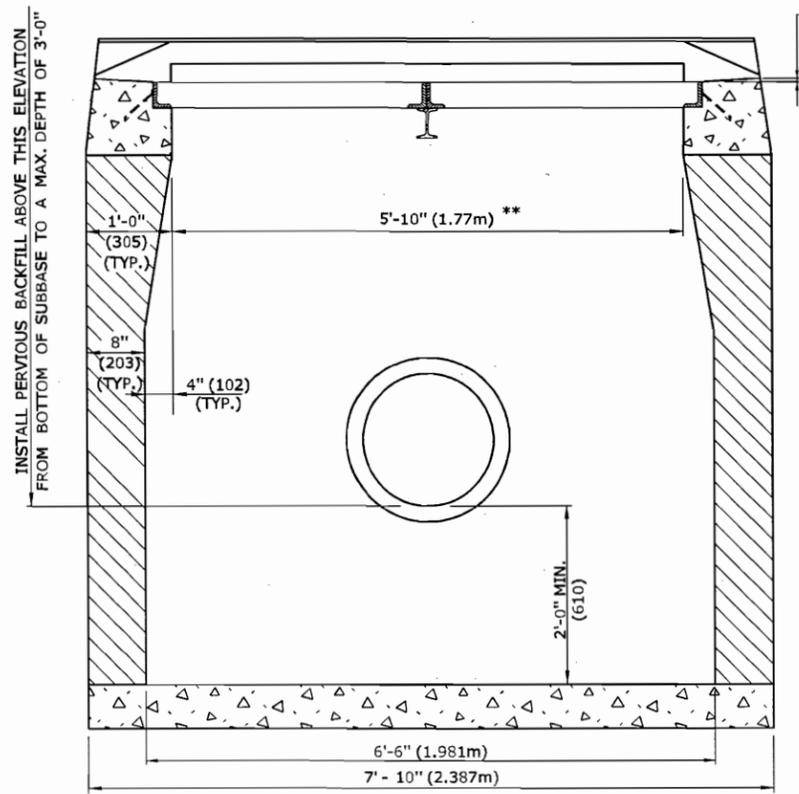
FOR CATCH BASINS IN A LINE OF 6" (152) BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)
DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN

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

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		NOT TO SCALE				SUBMITTED BY: NAME/DATE/TIME: Timothy M. Wilson 2009.09.16 11:13:32 -04'00'		STANDARD SHEET TITLE: CTDOT STANDARD SHEET TYPE "C" , "C-L" & DOUBLE GRATE TYPE - I		STANDARD SHEET NO.: HW-507_02	
APPROVED BY: NAME/DATE/TIME: James H. Norman 2009.09.18 14:20:04 -04'00'		OFFICE OF ENGINEERING		FILENAME: CTDOT_HIGHWAY_STD.dgn		MODEL: HW-507_02		PLOTTED DATE: 9/11/2009		REV. DATE REVISION DESCRIPTION	

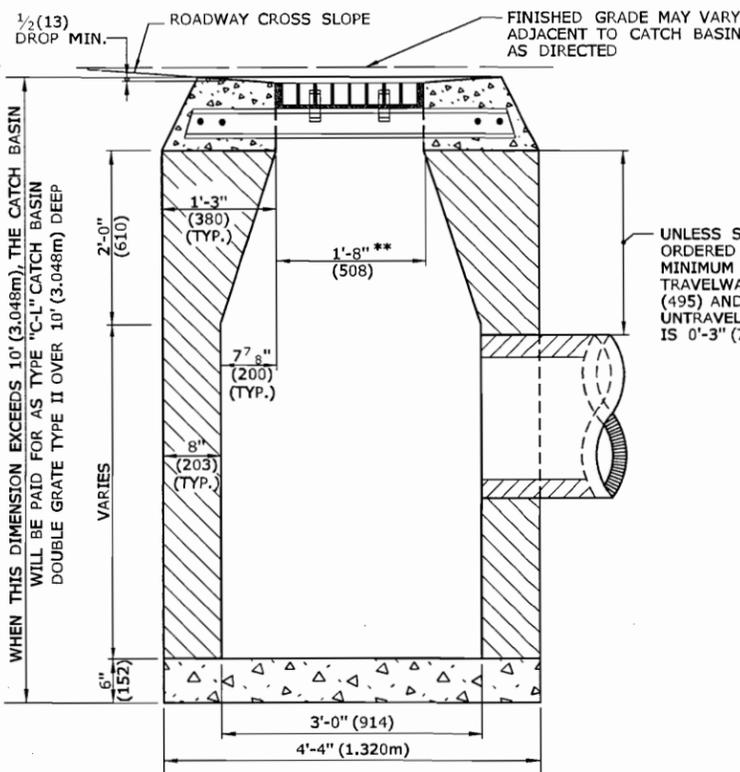


SECTION B

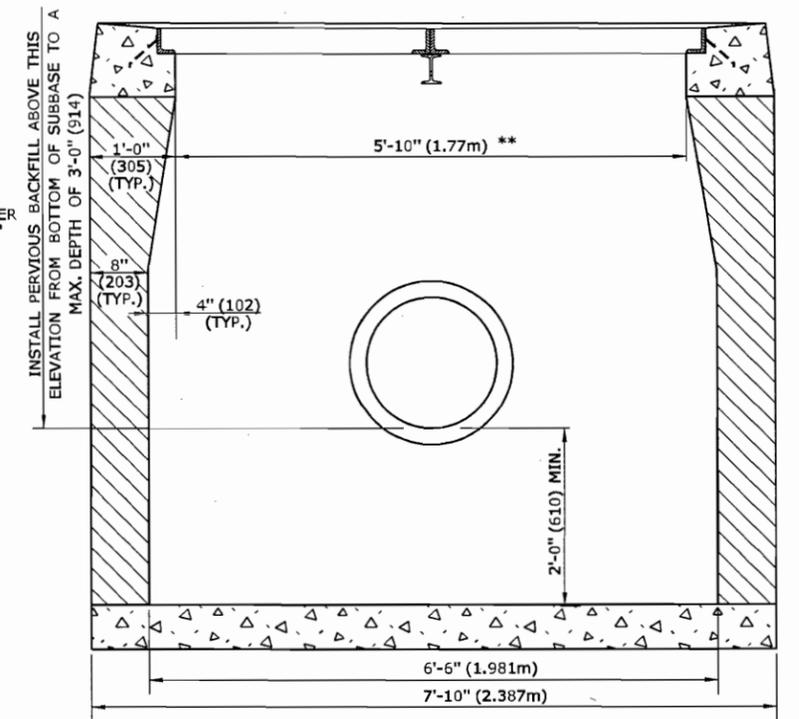


SECTION A

TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II



SECTION B

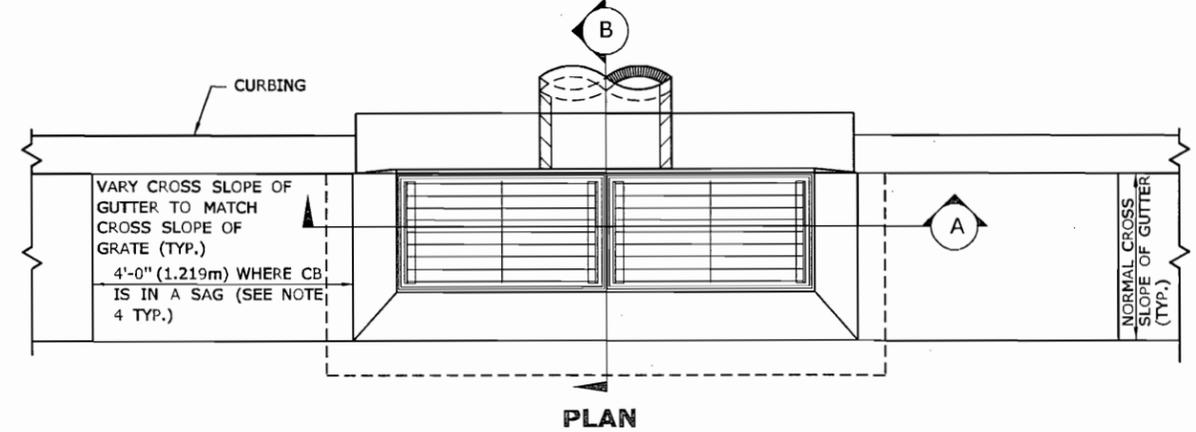


SECTION A

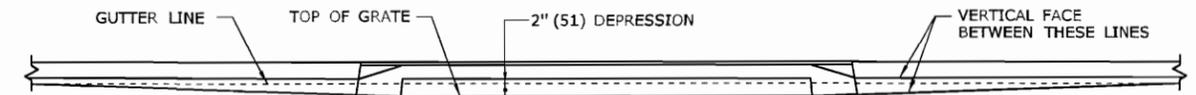
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II

GENERAL NOTES:

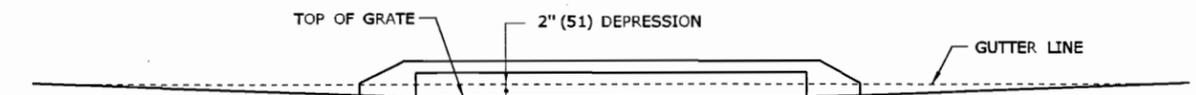
1. FOR DETAILS OF FRAME AND GRATE SEE STANDARD SHEET HW-507-08.
2. USE APPROPRIATE CONCRETE TOP FOR CURBING SHOWN ON PLANS. IF CURBING IS NOT SPECIFIED ON THE PLANS, IT SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.
3. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL. THE COST FOR THE PAPER SHALL BE INCLUDED IN THE BID PRICE FOR THE TYPE OF CATCH BASIN INSTALLED.
4. USE 6'-0" (1.830m) ON UPGRADE SIDE OF CONTINUOUS GRADE AND 1'-0" (305) ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.
5. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE AND SECTION 5.07 OF THE STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3" (75). NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY **.
6. WALL THICKNESS OF ALL CB'S OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (12" (305) THICKNESS WILL START AFTER THE FIRST 10' (3.048m)).
7. TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN THE FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.
8. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF Fc = 4000 PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
9. LATEST STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.



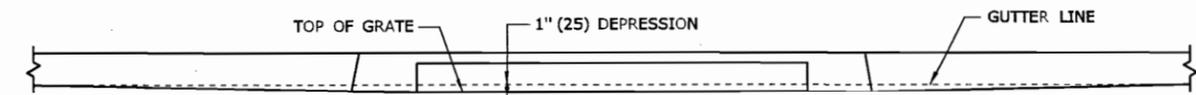
PLAN



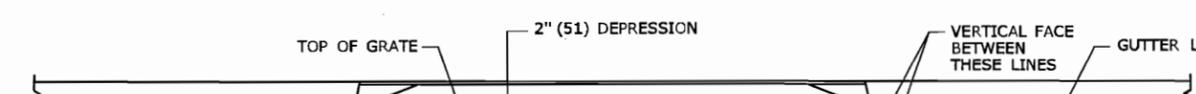
FOR CATCH BASINS IN A LINE OF 4" (102) CONCRETE PARK CURBING OR 4" (102) BITUMINOUS CONCRETE PARK CURBING



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



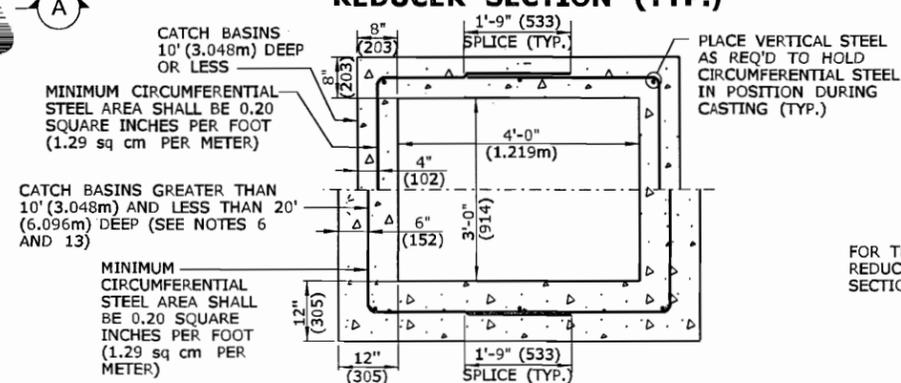
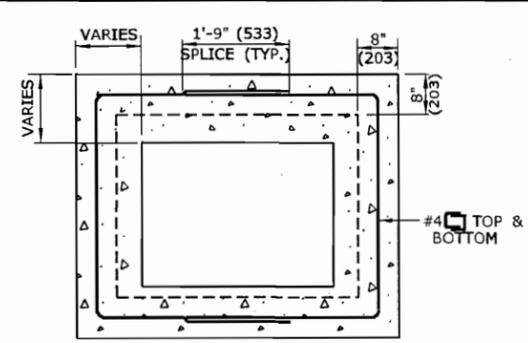
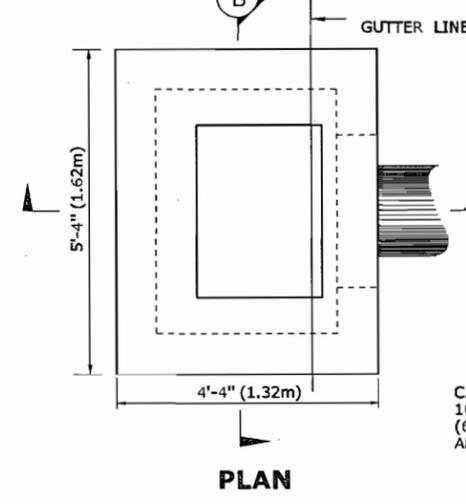
FOR CATCH BASINS IN A LINE OF 6" (152) CONCRETE CURBING OR 6" (152) STONE CURBING



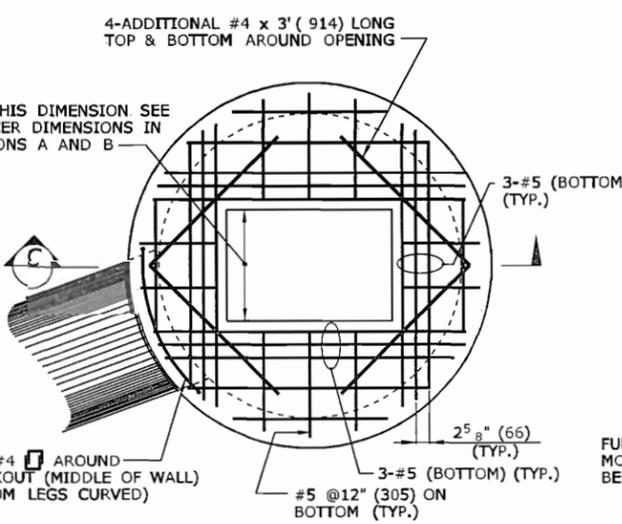
FOR CATCH BASINS IN A LINE OF 6" (152) BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)
DETAILS OF DEPRESSED GUTTER STRIP
FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II

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

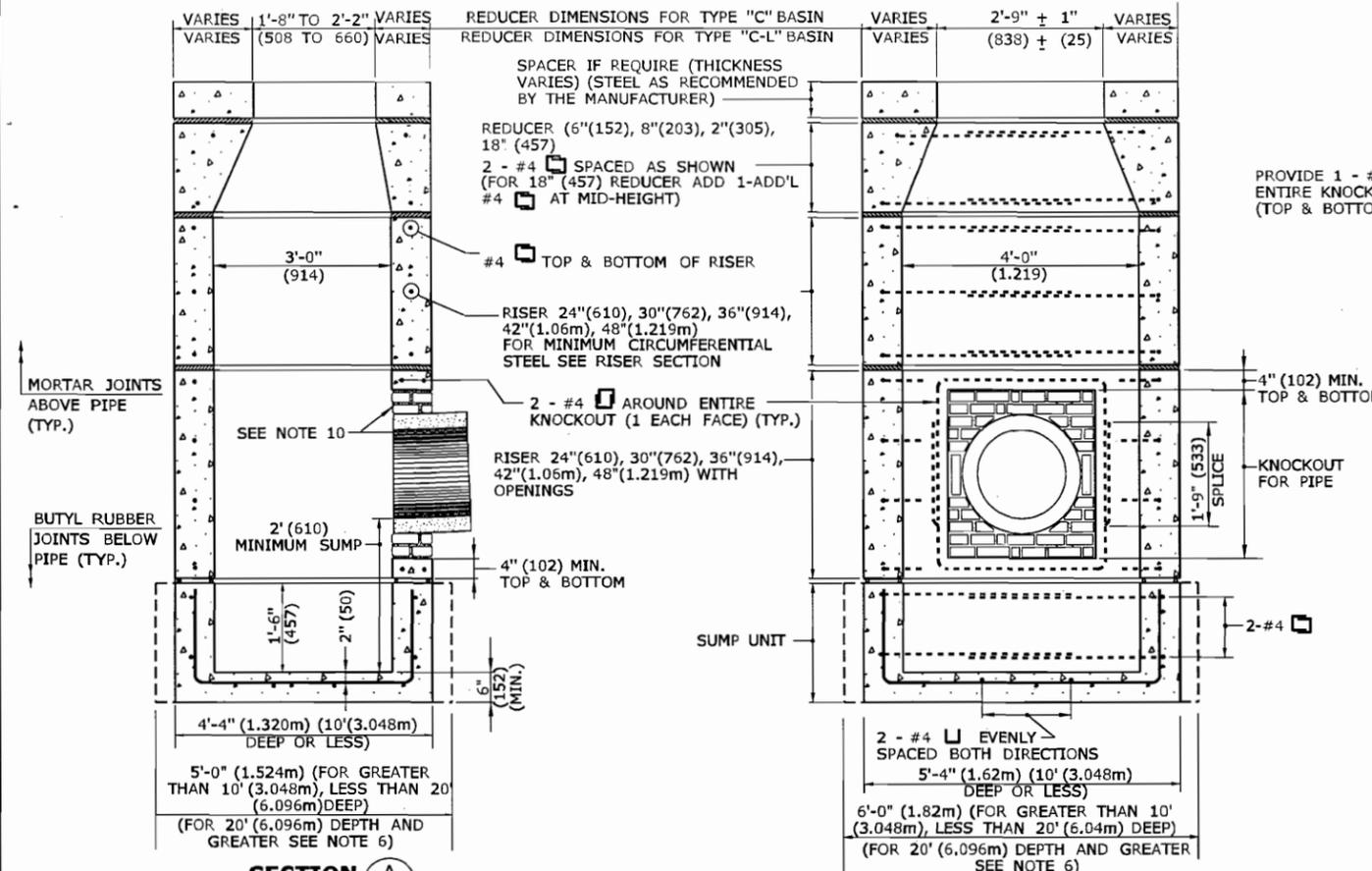
REV.	DATE	REVISION DESCRIPTION	Plotted Date: 9/11/2009	NOT TO SCALE	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SUBMITTED BY: Timothy M. Wilson 2009.09.16 11:14:05 -04'00' APPROVED BY: James H. Norman 2009.09.18 14:20:32 -04'00'	NAME/DATE/TIME: CTDOT STANDARD SHEET OFFICE OF ENGINEERING	STANDARD SHEET TITLE: TYPE "C" , "C-L" & DOUBLE GRATE TYPE - II	STANDARD SHEET NO.: HW-507_03
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TYPICAL SECTION THRU RISER WITH KNOCKOUTS



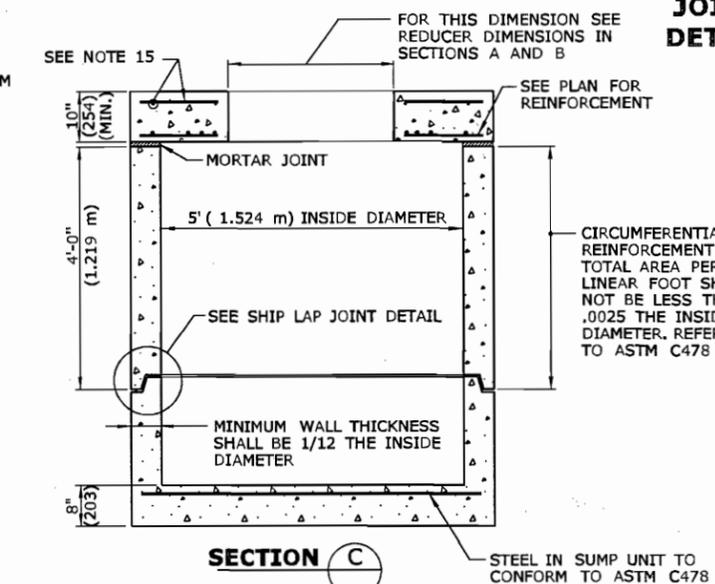
PLAN



SECTION A

SECTION B

PRECAST CONCRETE TYPE "C" & "C-L" CATCH BASIN
(UNDER 10' (3.04m) DEEP SHOWN)



SECTION C

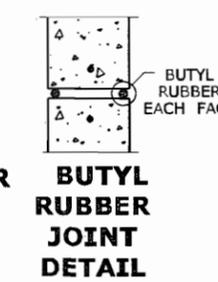
PRECAST CONCRETE TYPE "C" & "C-L" ROUND STRUCTURE
(SEE NOTE 9)

GENERAL NOTES:

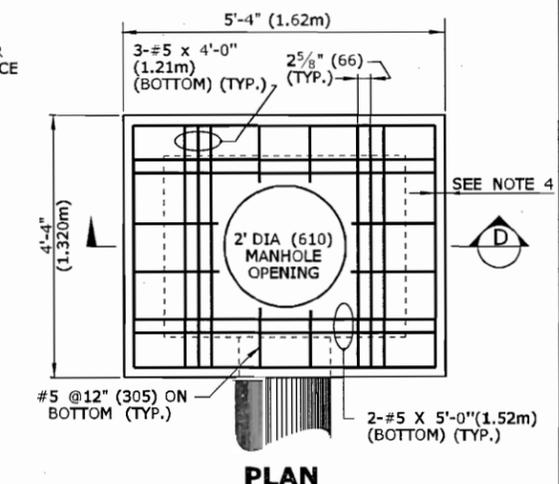
1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2"(51), EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1 1/2"(38).
5. MINIMUM CONCRETE COMPRESSIVE STRENGTH $f'_c = 4000$ PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
6. BASES AND RISERS AT A DEPTH OF 20' (6.096) AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
8. FOR DOT MAINTENANCE PERSONNEL, RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS CONFORMING TO THESE PLANS SHALL BE PROVIDED. ANY RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE, MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
9. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED, A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
10. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS SECTION M.08.02. IF THE ENGINEER DETERMINES THAT THE CLOSURE OF ANY PIPE OPENING IS UNSATISFACTORY, THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
11. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
12. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
13. WALL THICKNESS OF ALL CB'S OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" (305) THICKNESS WILL START AFTER THE FIRST 10' (3.048m).)
14. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.
15. 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 (0.8 sq cm PER METER) IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES (457).
16. THE DETAILS SHOWN IN THE PLAN VIEW FOR PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.



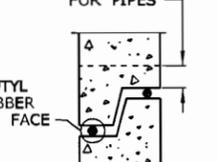
MORTAR JOINT DETAIL



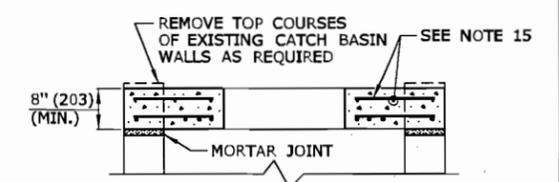
BUTYL RUBBER JOINT DETAIL



PLAN



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

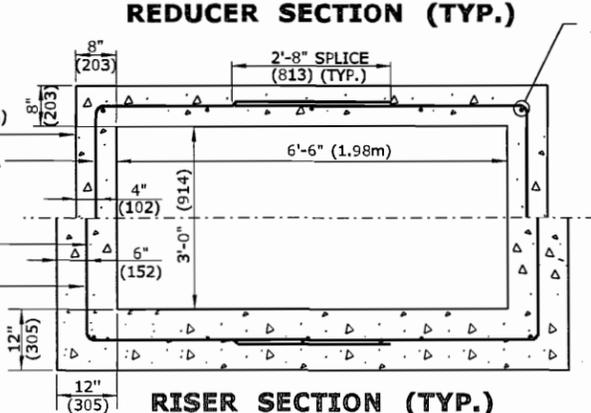
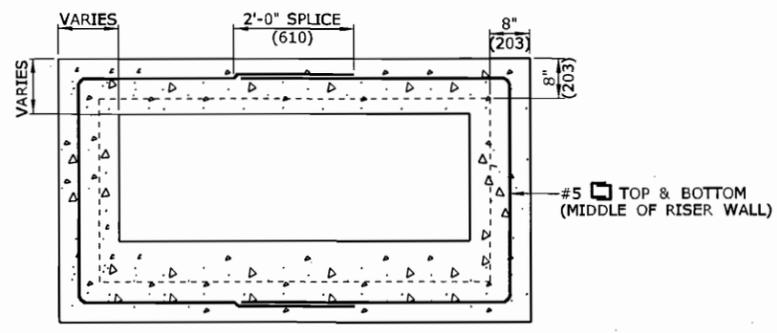
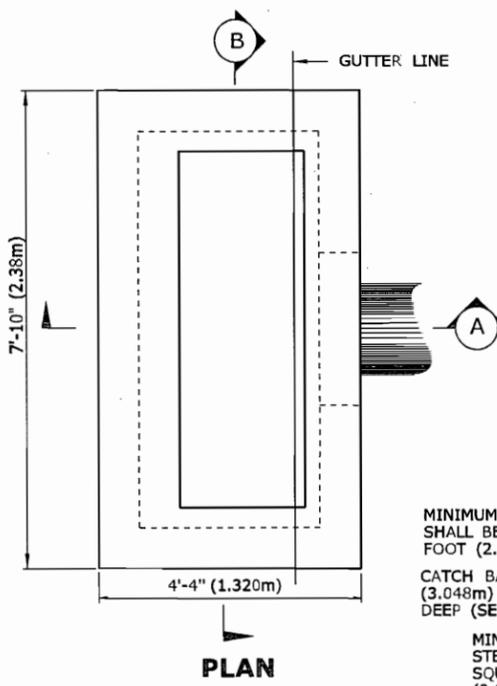


SECTION D

TOP SLAB TO CONVERT CATCH BASIN TO MANHOLE

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

<p>THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.</p> <p>Plotted Date: 9/11/2009</p>	<p>NOT TO SCALE</p>	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	<p>SUBMITTED BY: Timothy M. Wilson 2009.09.16 11:14:31 -04'00'</p> <p>APPROVED BY: James H. Norman 2009.09.18 14:21:04 -04'00'</p>	<p>CTDOT STANDARD SHEET OFFICE OF ENGINEERING</p>	<p>STANDARD SHEET TITLE: TYPE "C", "C-L" & ROUND PRECAST CONCRETE CB</p>	<p>STANDARD SHEET NO.: HW-507_04</p>
<p>REV. DATE</p>	<p>REVISION DESCRIPTION</p>	<p>Filename: CTDOT_HIGHWAY_STD.dgn Model: HW-507_04</p>	<p>(SEE NOTE 9)</p>	<p>ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED</p>	<p>REMOVE TOP COURSES OF EXISTING CATCH BASIN WALLS AS REQUIRED</p>	<p>SEE NOTE 15</p>

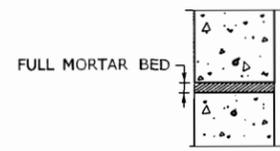


PLACE VERTICAL STEEL AS REQ'D TO HOLD CIRCUMFERENTIAL STEEL IN POSITION DURING CASTING (TYP.)

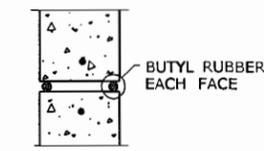
CATCH BASINS 10' (3.048m) DEEP OR LESS
 MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.44 SQUARE INCHES PER FOOT (2.84 sq cm per Meter)
 CATCH BASINS GREATER THAN 10' (3.048m) AND LESS THAN 20' (6.096m) DEEP (SEE NOTES 6 AND 13)
 MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.44 SQUARE INCHES PER FOOT (2.84sq cm per Meter)

GENERAL NOTES:

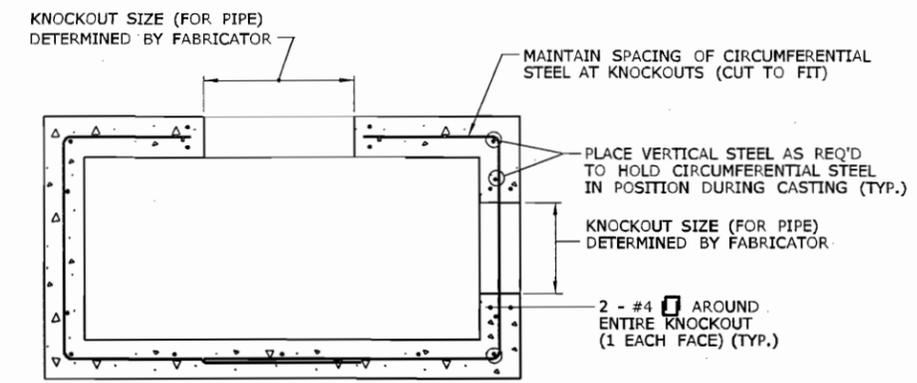
1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2"(51), EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1 1/2"(38).
5. MINIMUM CONCRETE COMPRESSIVE STRENGTH $F_c' = 4000$ PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
6. BASES AND RISERS AT A DEPTH OF 20' (6.096m) AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
8. FOR DOT MAINTENANCE PERSONNEL, RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS CONFORMING TO THESE PLANS SHALL BE PROVIDED. ANY RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE, MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
9. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED, A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
10. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS SECTION M.08.02. IF THE ENGINEER DETERMINES THAT THE CLOSURE OF ANY PIPE OPENING IS UNSATISFACTORY, THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
11. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
12. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
13. WALL THICKNESS OF ALL CB'S OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" (305) THICKNESS WILL START AFTER THE FIRST 10' (3.048m).)
14. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.



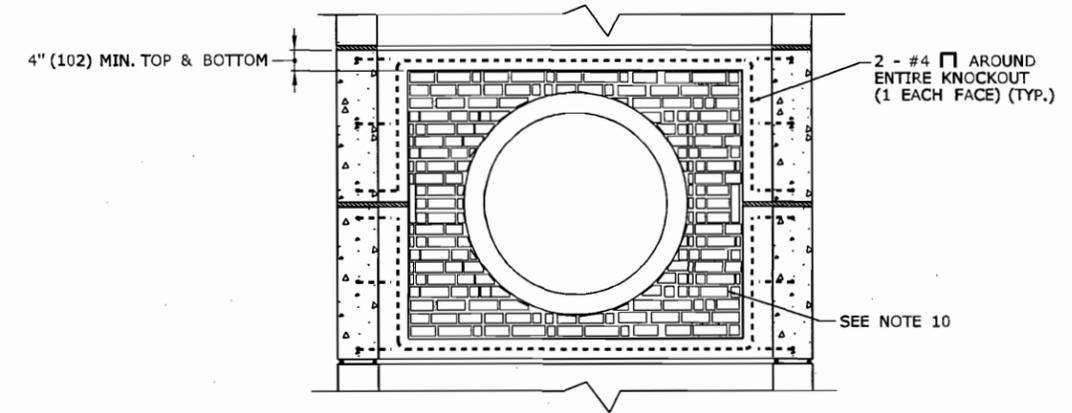
MORTAR JOINT DETAIL



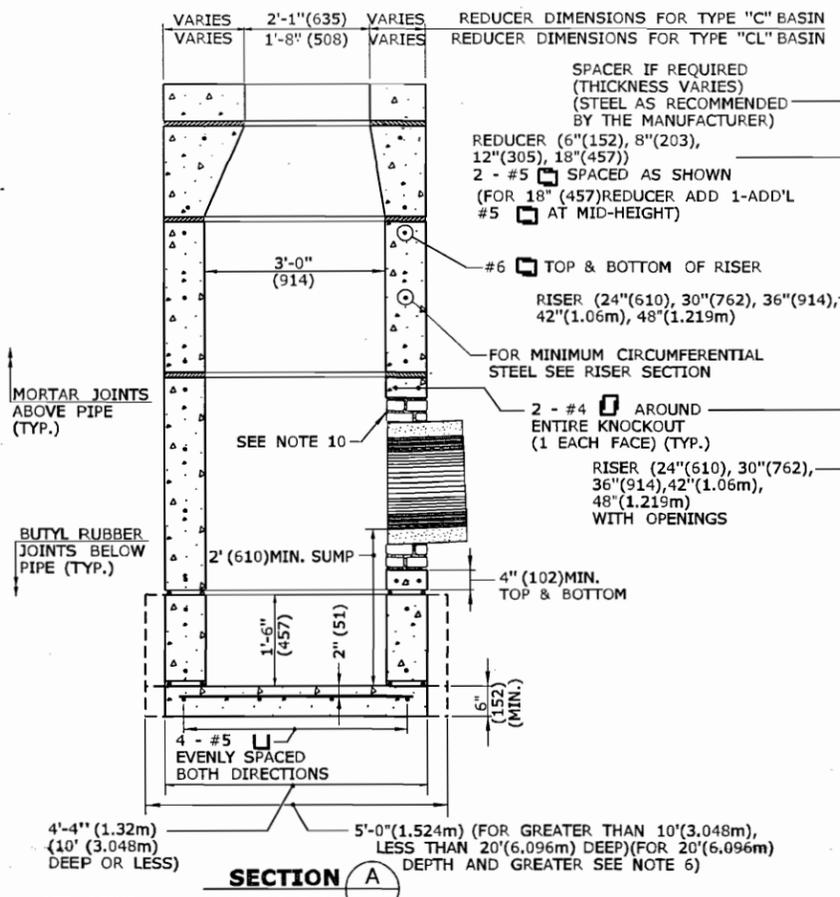
BUTYL RUBBER JOINT DETAIL



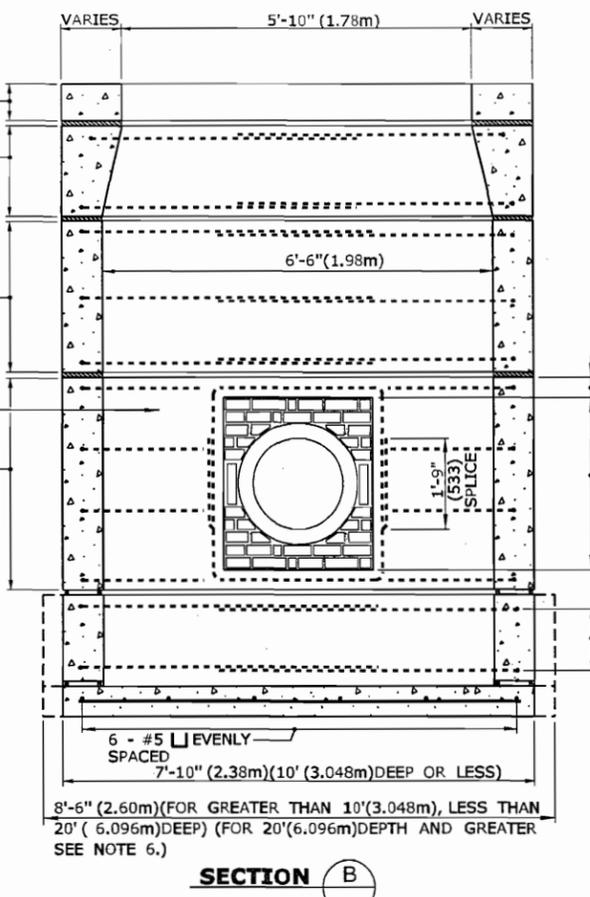
TYPICAL SECTION THRU SINGLE RISER WITH KNOCKOUTS



DOUBLE RISER OPENING (TYP.) PIPES GREATER THAN 24" (610) O.D.



SECTION A



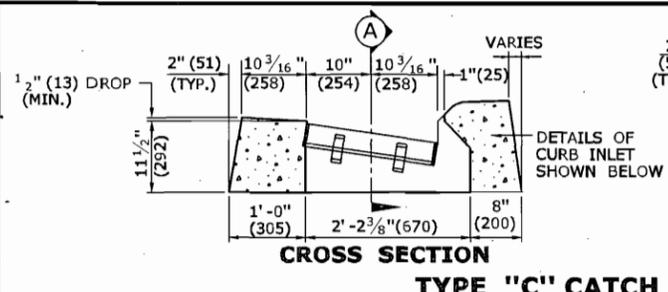
SECTION B

NOTE: REINFORCEMENT IN FAR FACE WALL NOT SHOWN FOR CLARITY

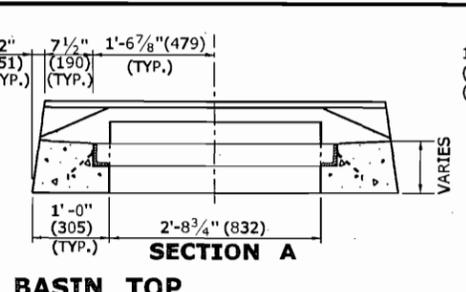
PRECAST CONCRETE TYPE "C" & "C-L" DOUBLE GRATE TYPE II CATCH BASIN
 (UNDER 10' (3.048m) DEEP SHOWN)

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

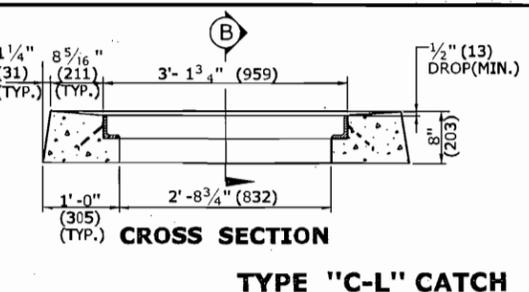
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		NOT TO SCALE				SUBMITTED BY: Timothy M. Wilson 2009.09.16 11:15:31 -04'00'		CTDOT STANDARD SHEET		STANDARD SHEET TITLE: TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE-II		STANDARD SHEET NO.: HW-507_06	
REV. DATE REVISION DESCRIPTION		Plotted Date: 9/11/2009		Filename: CTDOT_HIGHWAY_STD.dgn Model: HW-507_06		APPROVED BY: James H. Norman 2009.09.18 14:21:48 -04'00'		OFFICE OF ENGINEERING					



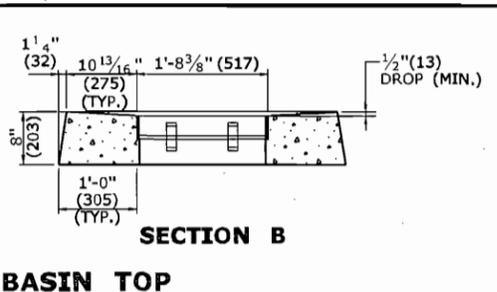
CROSS SECTION TYPE "C" CATCH BASIN TOP



SECTION A

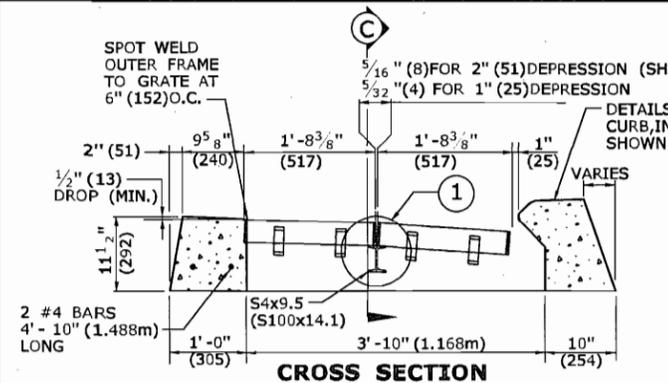


CROSS SECTION

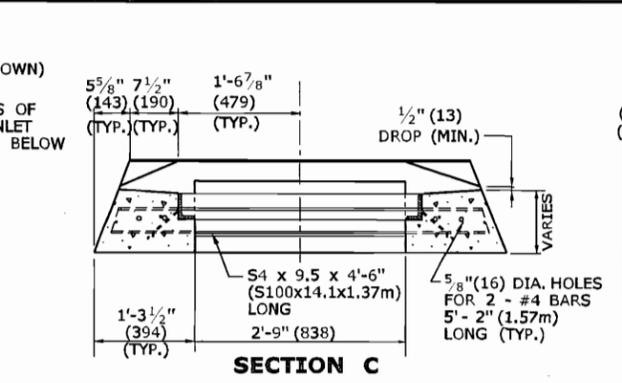


SECTION B

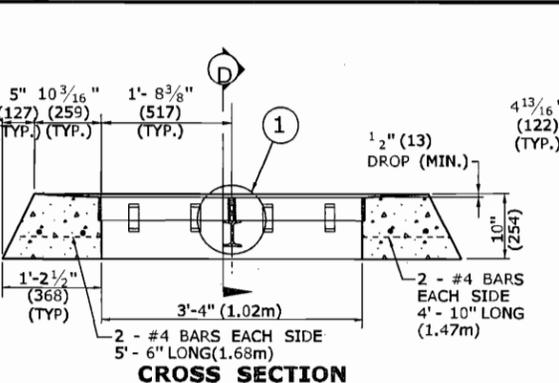
- GENERAL NOTES:**
1. FOR DETAILS OF FRAME AND GRATE SEE STANDARD SHEET HW-507_01.
 2. ALL STEEL EXCEPT REINFORCING BARS SHALL BE GALVANIZED IN CONFORMANCE WITH SECTION M06.03 OF CONNECTICUT'S STANDARD SPECIFICATIONS.
 3. ALL BARS SHALL HAVE A MINIMUM 2" (51) COVER.



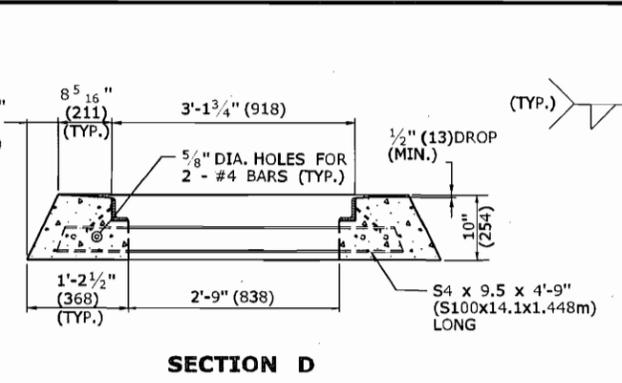
CROSS SECTION TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I TOP



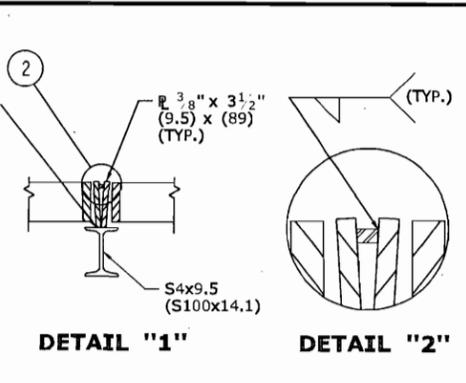
SECTION C



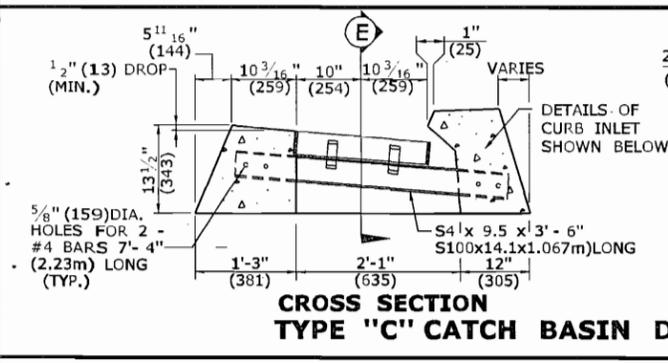
CROSS SECTION



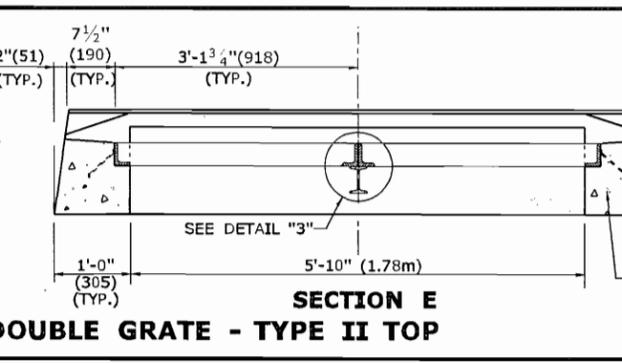
SECTION D



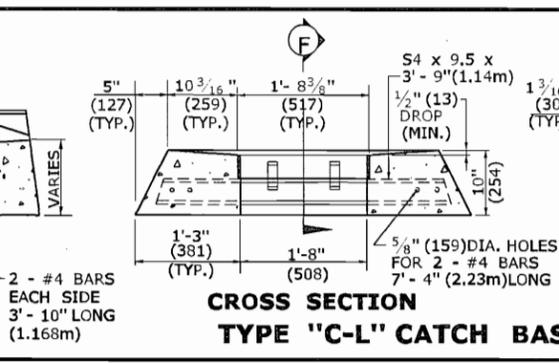
DETAIL "1" DETAIL "2"



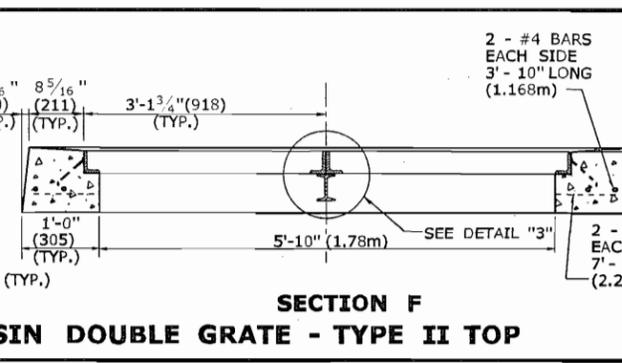
CROSS SECTION TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II TOP



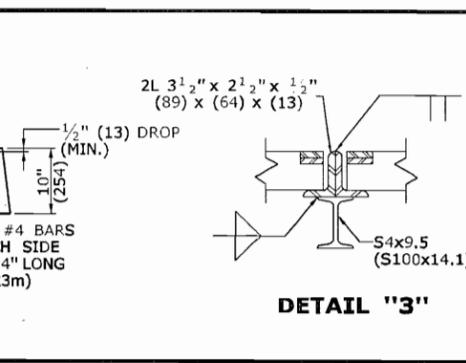
SECTION E



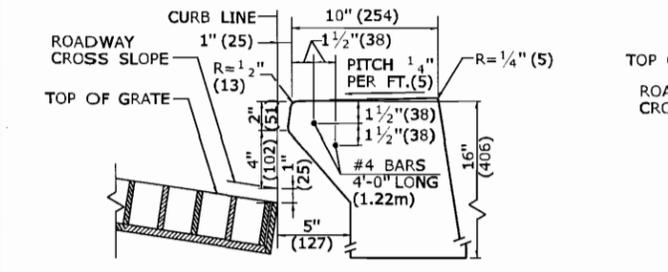
CROSS SECTION



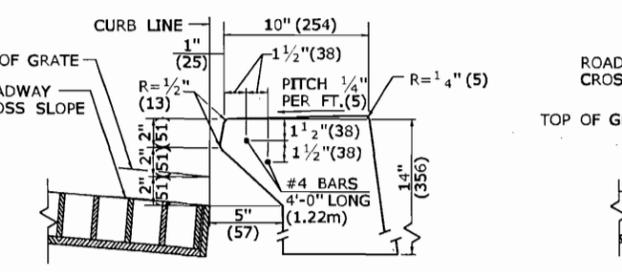
SECTION F



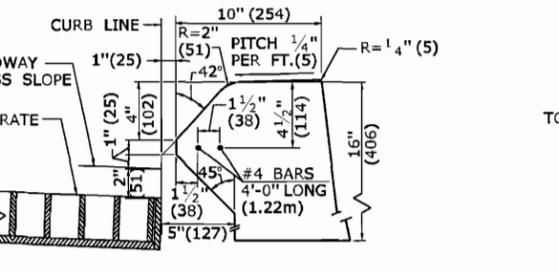
DETAIL "3"



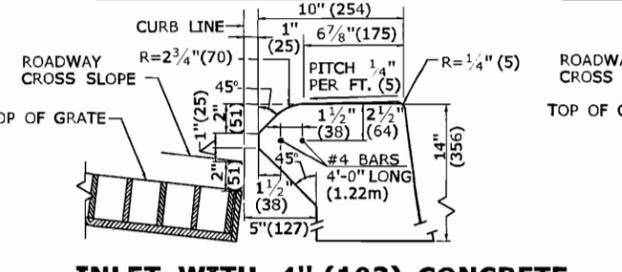
INLET WITH 6" (152) CONCRETE OR STONE CURBING FOR TYPE "C" CB



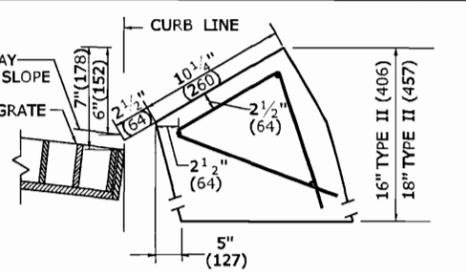
INLET WITH NO CURBING (PLAIN TYPE) FOR TYPE "C" CB



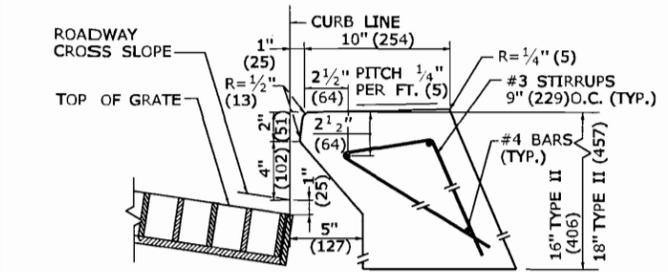
INLET WITH 6" (152) BITUMINOUS CONCRETE LIP CURBING FOR TYPE "C" CB



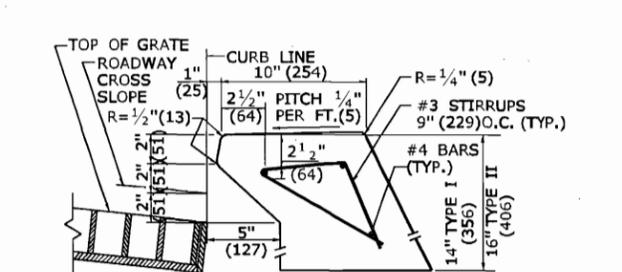
INLET WITH 4" (102) CONCRETE PARK CURBING FOR TYPE "C" CB



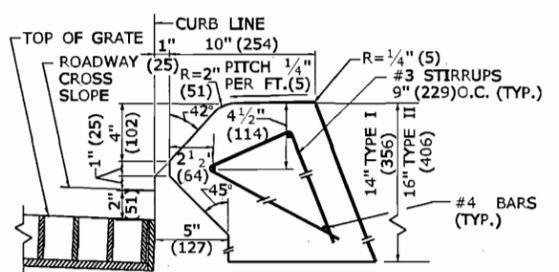
INLET WITH GRANITE SLOPE CURB FOR TYPE "C" CB



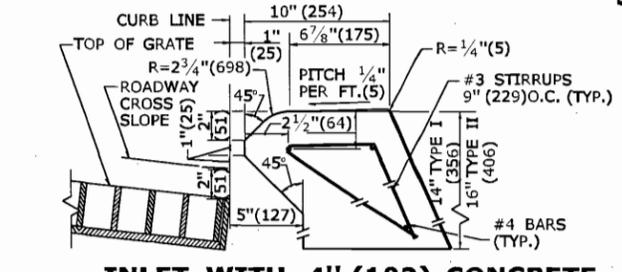
INLET WITH 6" (152) CONCRETE OR STONE CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II



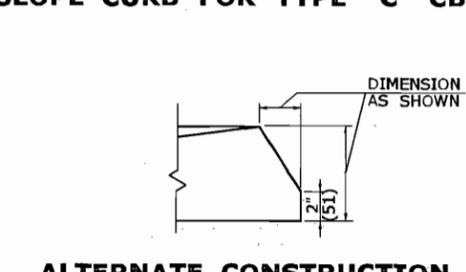
INLET WITH NO CURBING (PLAIN TYPE) FOR TYPE "C" CB DOUBLE GRATE TYPE I & II



INLET WITH 6" (152) BITUMINOUS CONCRETE LIP CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II



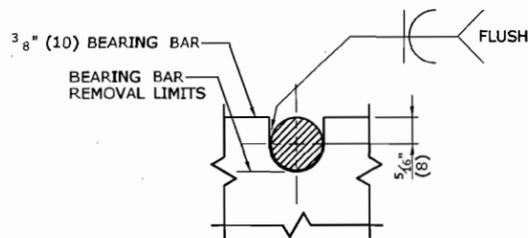
INLET WITH 4" (102) CONCRETE PARK CURBING FOR TYPE "C" CB DOUBLE GRATE TYPE I & II



ALTERNATE CONSTRUCTION OF TYPE II TOP

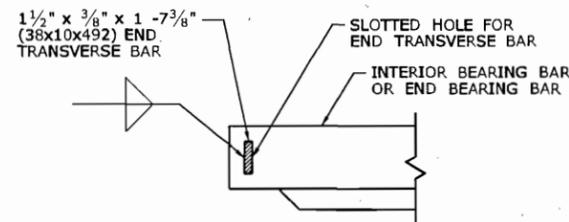
ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

REV. DATE	REVISION DESCRIPTION	Plotted Date: 9/11/2009	NOT TO SCALE	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SUBMITTED BY: Timothy M. Wilson NAME/DATE/TIME: 2009.09.16 11:16:02 -04'00' APPROVED BY: James H. Norman NAME/DATE/TIME: 2009.09.18 14:22:11 -04'00'	CTDOT STANDARD SHEET OFFICE OF ENGINEERING	STANDARD SHEET TITLE: TYPE "C" & "C-L" CATCH BASIN TOPS AND CURBS	STANDARD SHEET NO.: HW-507_07
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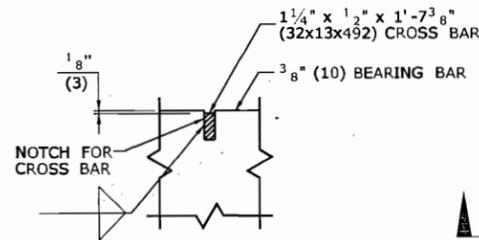


NOTE:
5/8" (16) DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

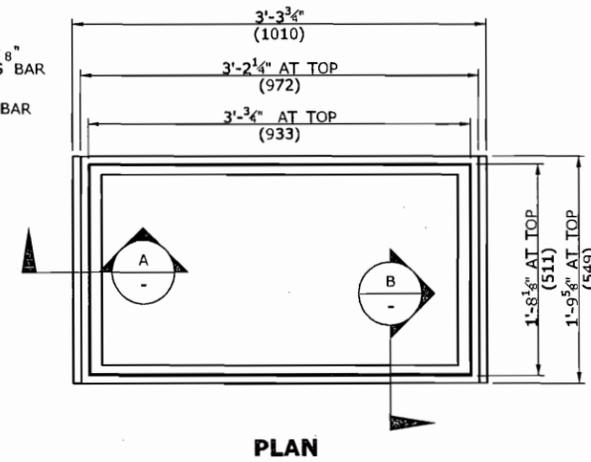
**ROUND BAR ATTACHMENT
CATCH BASIN GRATE TYPE A**



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



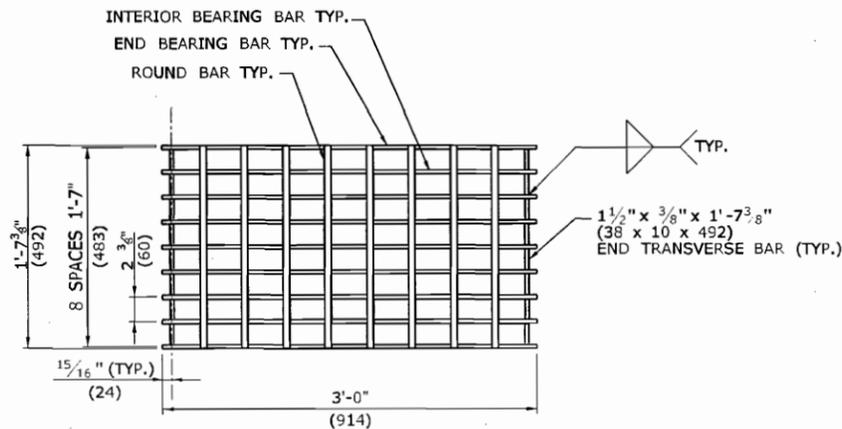
**CROSS BAR ATTACHMENT
CATCH BASIN GRATE TYPE B**



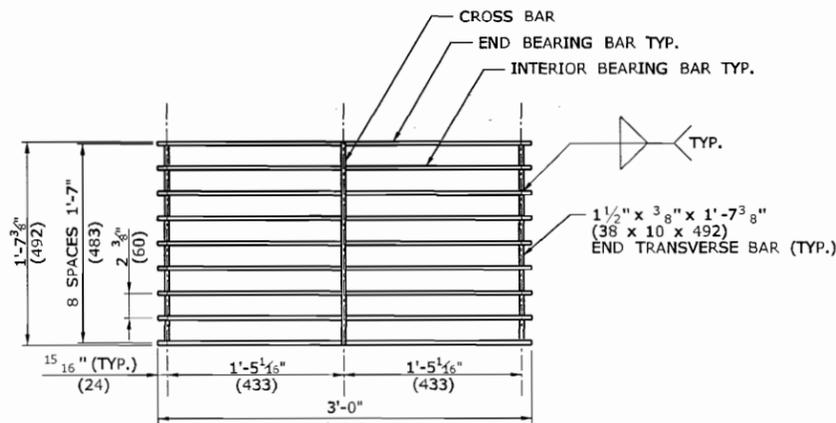
PLAN

GENERAL NOTES:

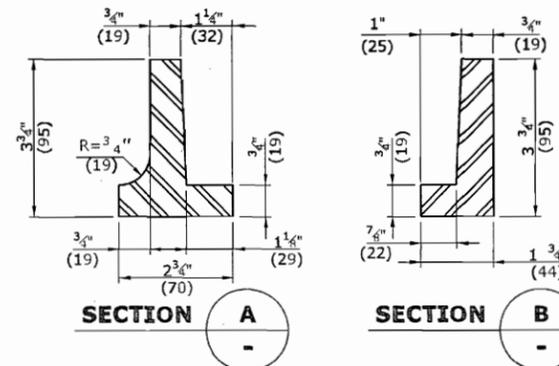
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" & "B" GRATES.
2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR AS DIRECTED BY THE ENGINEER.
3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS, RAMPS AND WHERE BICYCLE TRAFFIC IS NOT ALLOWED OR AS DIRECTED BY THE ENGINEER.
4. STEEL FRAMES AND GRATES SHALL BE GALVANIZED IN ACCORDANCE WITH ARTICLE M.06.03.
5. DO NOT GALVANIZE CAST IRON FRAMES.
6. DIMENSIONAL TOLERANCES SHALL BE $\pm 1/16"$ (1.6)
7. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS.
8. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS STRUCTURAL WELDING CODE, D1.1.



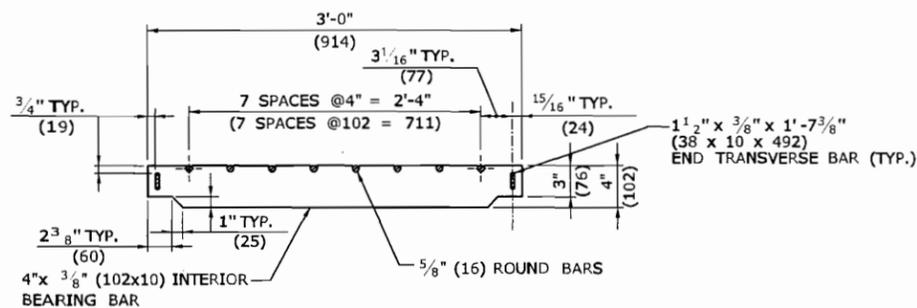
PLAN



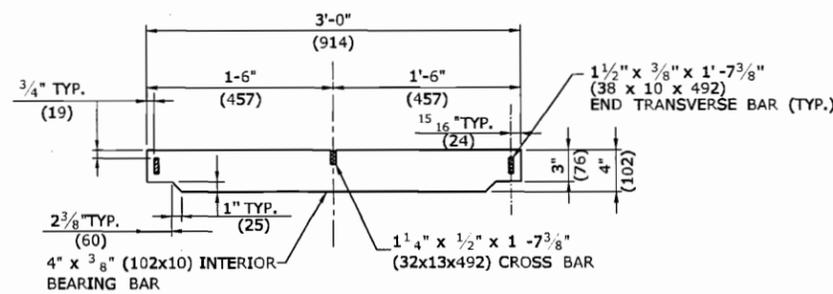
PLAN



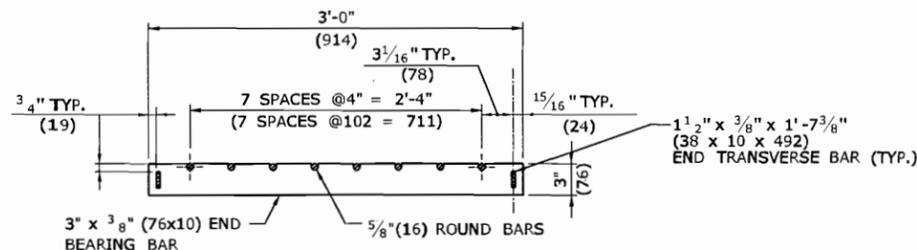
CAST IRON FRAME ALTERNATE



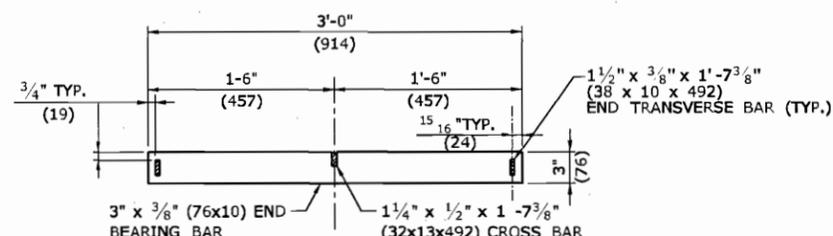
**ELEVATION- INTERIOR BEARING BAR
CATCH BASIN GRATE TYPE A**



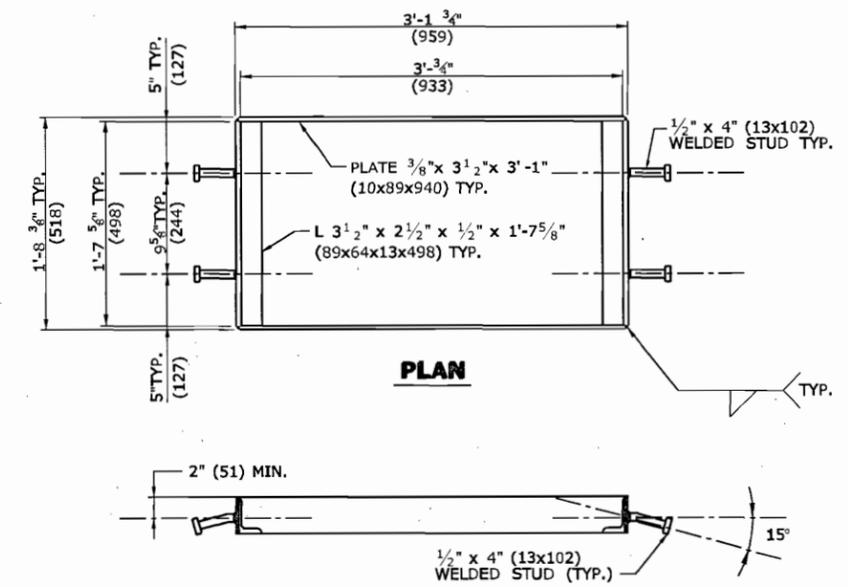
**ELEVATION- INTERIOR BEARING BAR
CATCH BASIN GRATE TYPE B**



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



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



**WELDED STUD ANCHOR DETAILS
STEEL FRAME**

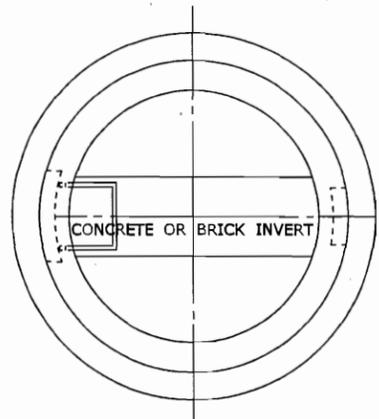
ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		NOT TO SCALE				SUBMITTED BY: NAME/DATE/TIME: Timothy M. Wilson 2009.09.16 11:16:32 -04'00'		STANDARD SHEET TITLE: CATCH BASIN FRAMES AND GRATES		STANDARD SHEET NO.: HW-507_08	
REV. DATE REVISION DESCRIPTION		Plotted Date: 9/11/2009		FILENAME: CTDOT_HIGHWAY_STD.dgn MODEL: HW-507_08		APPROVED BY: NAME/DATE/TIME: James H. Norman 2009.09.18 14:22:33 -04'00'		CTDOT STANDARD SHEET OFFICE OF ENGINEERING			

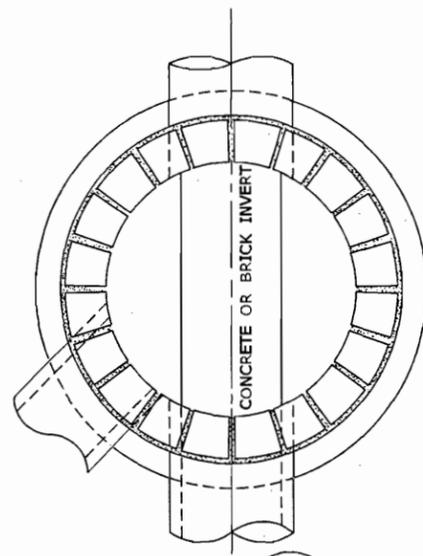
GENERAL NOTES:

- CHANNELS MAY BE SHAPED IN CONCRETE BASE OF MANHOLE OR FORMED USING BRICK OR MASONRY.
- A FRAME DIAMETER OF 3'-3" (991) WITH 4" (102) FLANGE MUST BE USED WHEN THE TOP DIAMETER OF THE PRECAST CONE IS LESS THAN 3'-6" (1067). ALL OTHER FRAME DIMENSIONS SHALL REMAIN THE SAME.
- FRAME AND COVER:

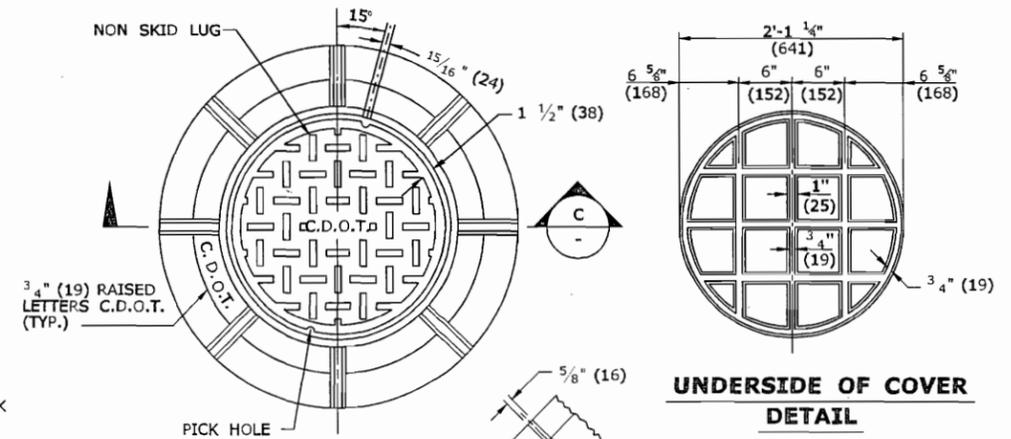
	CAST IRON	STEEL
APPROX. COVER WEIGHT	184LB.(83kg)	134LB.(61kg)
APPROX. FRAME WEIGHT	312LB.(142kg)	227LB.(103kg)
- ALL DIMESIONS SUBJECT TO MANUFACTURING TOLERANCES.



SECTION A

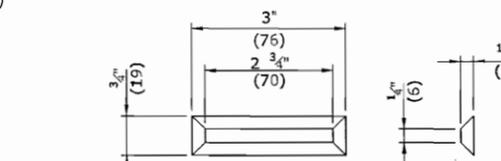


SECTION B

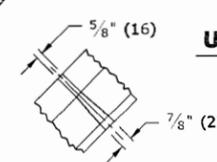


PLAN

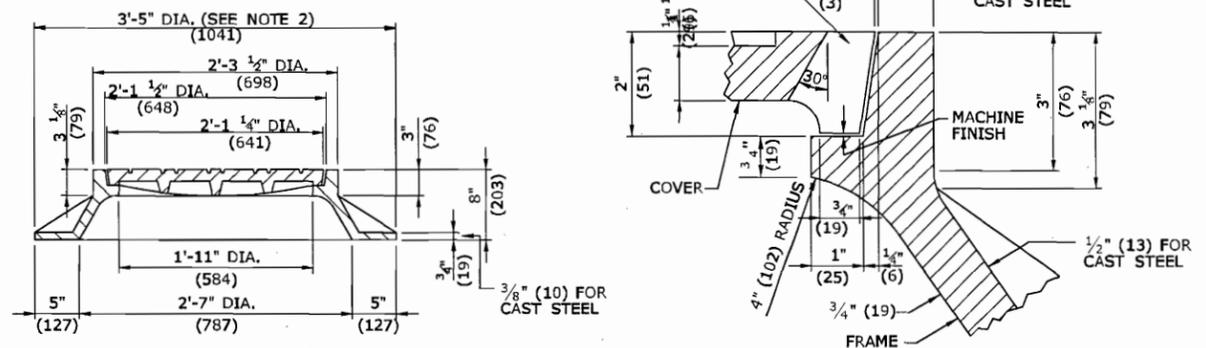
UNDERSIDE OF COVER DETAIL



NON SKID LUG DETAIL

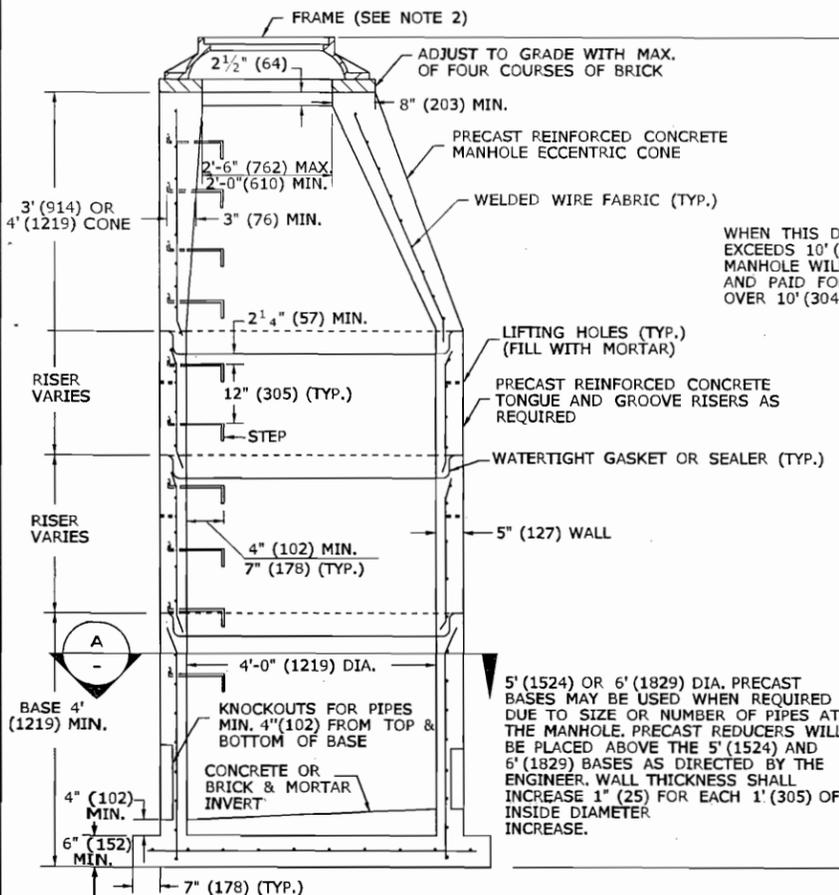


DETAIL OF SEAT



SECTION C

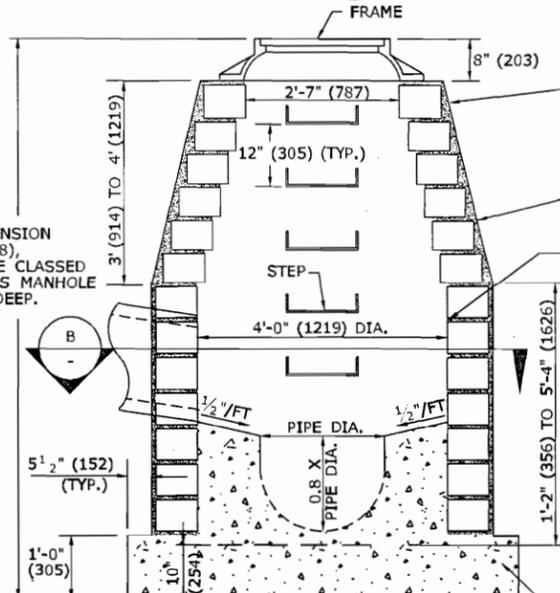
FRAME AND COVER DETAILS



ELEVATION

MANHOLE

REINFORCED PRECAST CONCRETE UNIT



ELEVATION

MANHOLE

MASONRY CONCRETE UNIT OR CLASS "A" CONCRETE

WALL SHALL BE A MIN. OF 6" (152) WITH MASONRY CONCRETE UNITS. CLASS "A" CONCRETE WALL SHALL BE 12" (300) THICK WHEN DEPTH OF MANHOLE IS GREATER THAN 10' (3048) DEEP.

MASONRY WALLS SHALL BE PLASTERED OUTSIDE WITH 2:1 CEMENT MORTAR 1/2" (13) THICK. MASONRY MUST BE WET WHEN MORTAR IS APPLIED.

ALL JOINTS SHALL BE POINTED FLUSH AND FULL

WALLS SHALL BE BUILT OF MASONRY CONCRETE UNITS OR CLASS "A" CONCRETE AT THE OPTION OF THE CONTRACTOR.

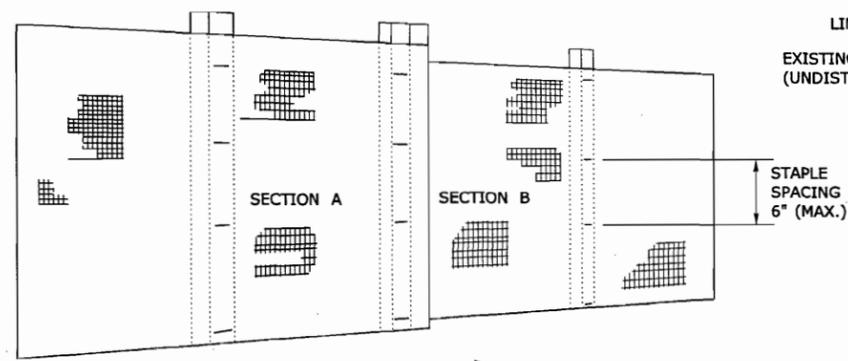
MASONRY CONCRETE UNITS SHALL BE LAID IN CEMENT SAND MORTAR 1:2 MIX. JOINTS SHALL NOT BE OVER 1/2" (13) ON INSIDE FACE

WHEN THIS DIMENSION EXCEEDS 10' (3048), MANHOLE WILL BE CLASSED AND PAID FOR AS MANHOLE OVER 10' (3048) DEEP.

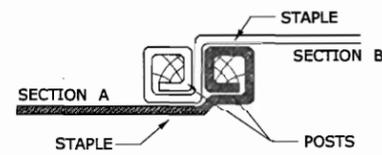
5' (1524) OR 6' (1829) DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' (1524) AND 6' (1829) BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS SHALL INCREASE 1" (25) FOR EACH 1' (305) OF INSIDE DIAMETER INCREASE.

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

REV. DATE REVISION DESCRIPTION	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. Plotted Date: 9/11/2009	NOT TO SCALE	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SUBMITTED BY: Timothy M. Wilson 2009.09.16 11:17:43 -04'00"	CTDOT STANDARD SHEET OFFICE OF ENGINEERING	STANDARD SHEET TITLE: MANHOLE - FRAME & COVER	STANDARD SHEET NO.: HW-507_10
				APPROVED BY: James H. Norman 2009.09.18 14:23:21 -04'00"			
Filename: CTDOT_HIGHWAY_STD.dgn Model: HW-507.10							

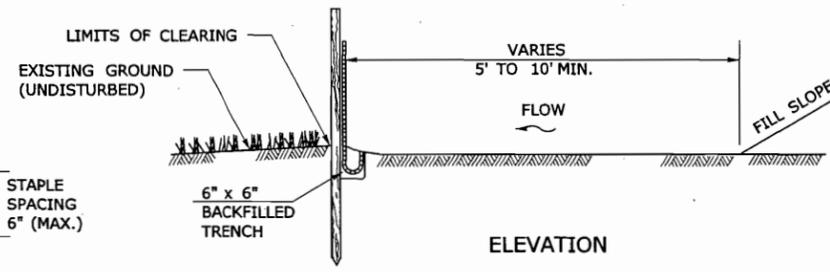


ELEVATION

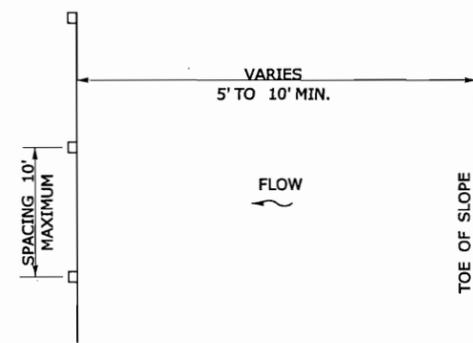


PLAN

JOINING TWO ADJACENT SILT FENCE SECTIONS

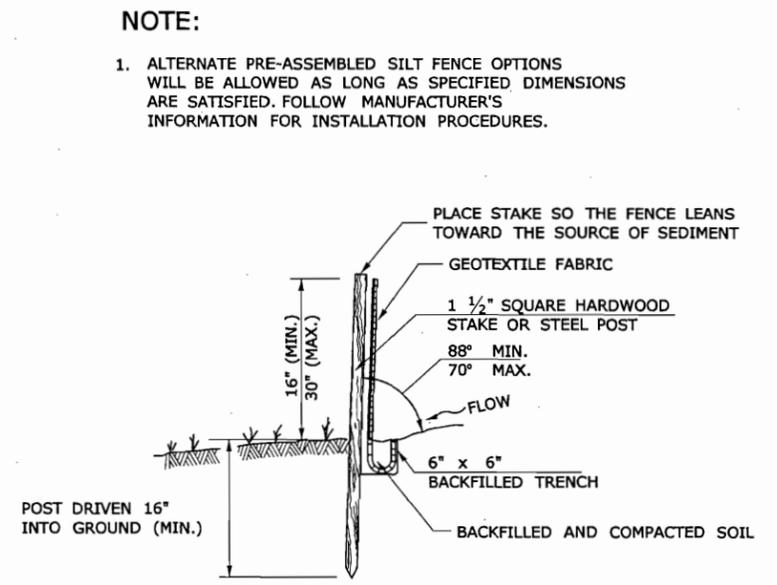


ELEVATION



PLAN

SILT FENCE INSTALLATION AT TOE OF FILL



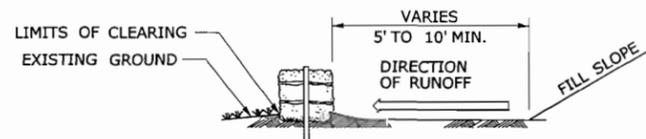
SECTION

POST AND FABRIC INSTALLATION DETAIL

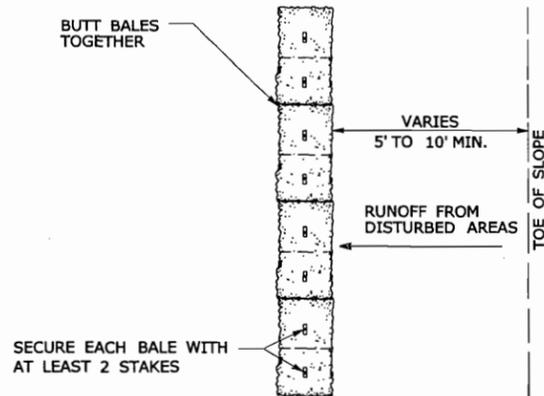
NOTE:

1. ALTERNATE PRE-ASSEMBLED SILT FENCE OPTIONS WILL BE ALLOWED AS LONG AS SPECIFIED DIMENSIONS ARE SATISFIED. FOLLOW MANUFACTURER'S INFORMATION FOR INSTALLATION PROCEDURES.

**SILT FENCE
NOT TO SCALE**



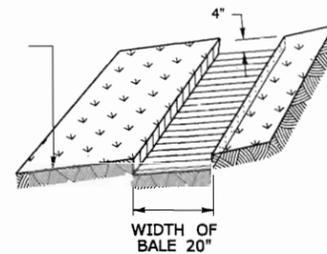
ELEVATION



PLAN

INSTALLATION OF A HAY BALE BARRIER AT TOE OF FILL

EXISTING GROUND (TYP.)



STEP 1: EXCAVATE TRENCH



STEP 3: TIGHTLY PACK STRAW BETWEEN BALES
(PLAN VIEW OF BALES)

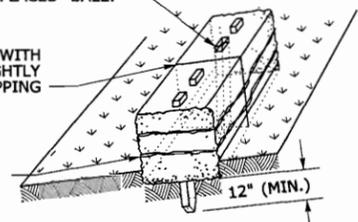
**HAY BALES
NOT TO SCALE**

PROPERLY STAKED AND ENTRENCHED HAY BALES

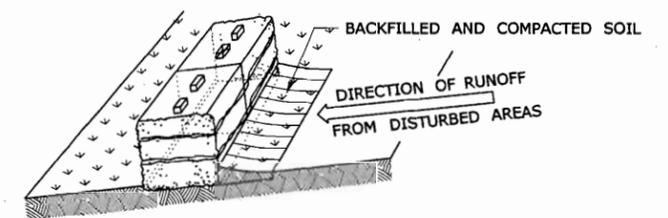
SECURE EACH BALE WITH AT LEAST 2 STAKES. ANGLE THE POINT OF FIRST STAKE TOWARDS THE PREVIOUSLY PLACED BALE.

INSTALL BALES IN TRENCHES WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING EACH OTHER OR OVERLAPPING

ORIENT BALE SO THAT STRING BINDING IS PLACED HORIZONTAL



STEP 2: INSTALL BALES



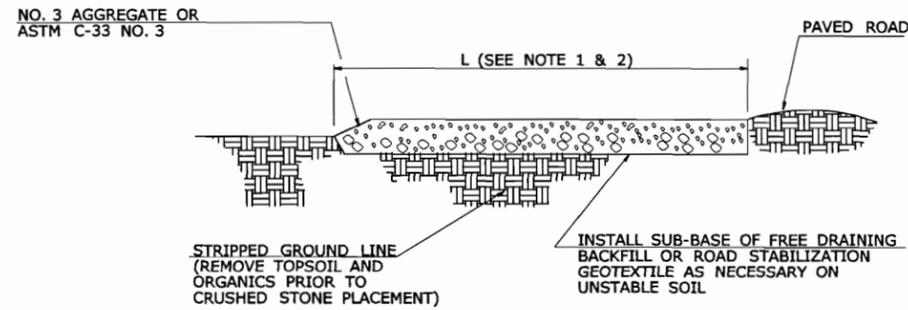
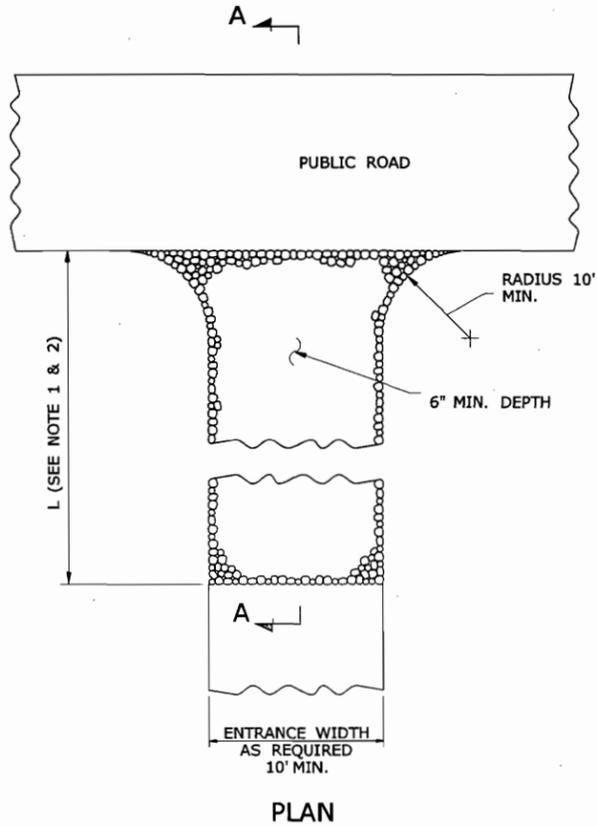
STEP 4: BACKFILL SOIL AGAINST BALES

FINAL DESIGN REVIEW

DESIGNER/DRAFTER: BAS	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SIGNATURE/ BLOCK: S E A CONSULTANTS	PROJECT TITLE: NEW BRITAIN - HARTFORD BUS RAPID TRANSIT STATIONS	TOWN: NEWINGTON, W. HARTFORD AND HARTFORD	PROJECT NO. 88-H039
CHECKED BY: AGB		APPROVED BY:	DATE:	DRAWING TITLE: CIVIL DETAILS	DRAWING NO. MDS-C01
NTS		FILENAME: ...VFD_MSH_MDS_88H039_CIV-01.dgn			SHEET NO.
REV. DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 7/8/2010		

NOTES:

1. L=50' MIN. WHERE THE SOILS ARE SANDS OR GRAVELS
2. L=100' MIN. WHERE THE SOILS ARE CLAYS OR SILTS
3. PAID FOR UNDER ITEM "ANTI-TRACKING PAD" INCLUDING ALL MATERIALS, TOOLS, EQUIPMENT, LABOR INCIDENTAL TO INSTALLATION AND REMOVAL THERETO.

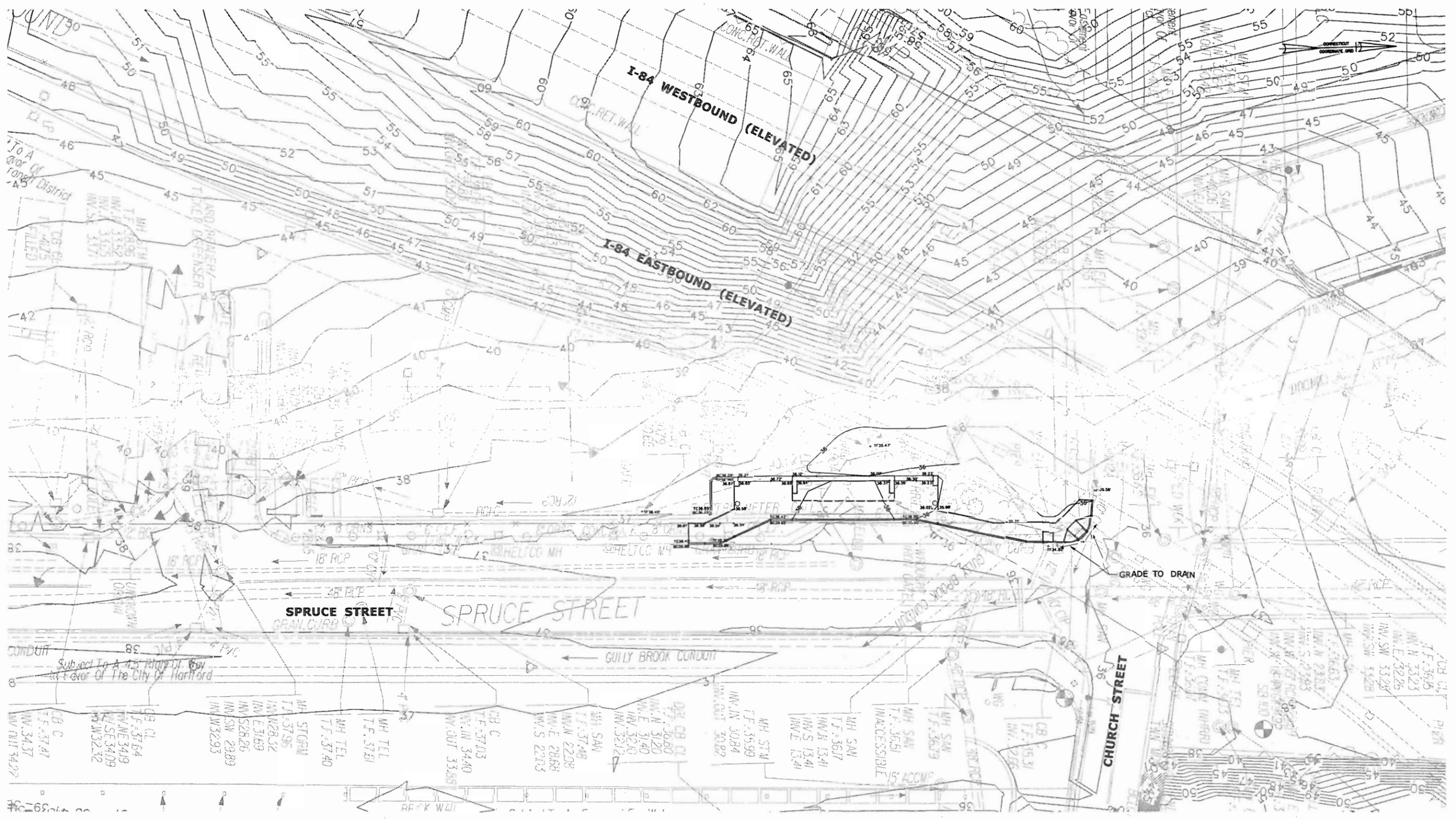


SECTION A-A

**ANTI-TRACKING CONSTRUCTION ENTRANCE RAMP
NOT TO SCALE**

FINAL DESIGN REVIEW

DESIGNER/DRAFTER: EAD		 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SIGNATURE/ BLOCK: S E A CONSULTANTS	PROJECT TITLE: NEW BRITAIN - HARTFORD BUS RAPID TRANSIT STATIONS	TOWN: NEWINGTON, W. HARTFORD HARTFORD	PROJECT NO. 88-H039
CHECKED BY: AGB						
NTS						
REV. DATE	REVISION DESCRIPTION	SHEET NO.	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	APPROVED BY:	DATE:	DRAWING NO. MDS-C02
Plotted Date: 7/8/2010		Filename: ...VFD_MSH_MDS_88H039_CIV-02.dgn		DRAWING TITLE: CIVIL DETAILS		SHEET NO.



ENVIRONMENTAL PERMIT REVIEW

REV.	DATE	DESIGN COORDINATION REVISIONS	REVISION DESCRIPTION	SHEET NO.
1	NOV. 09	DESIGN COORDINATION REVISIONS	REVISION DESCRIPTION	

Plotted Date: 11/11/2009

DESIGNER/DRAFTER:
KRV
CHECKED BY:
SCALE IN FEET
SCALE 1"=20'

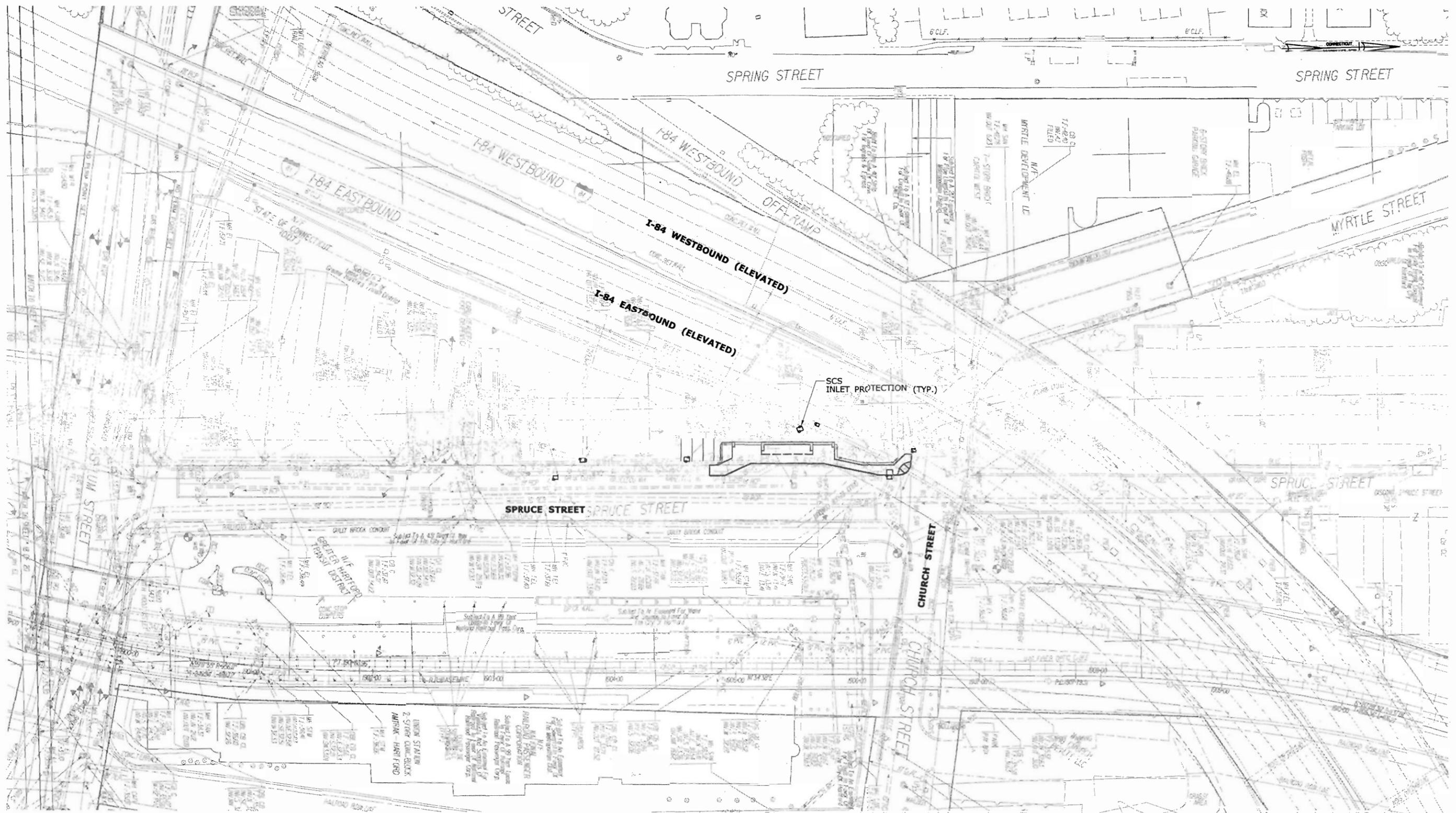
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
 Filename: ...FD_MSH_GRD_88H039_UNION.dgn

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

PROJECT TITLE:
**NEW BRITAIN - HARTFORD
BUS RAPID TRANSIT SYSTEM**

TOWN:
HARTFORD
DRAWING TITLE:
**UNION STATION
GRADING PLAN**

PROJECT NO.
88--H039
DRAWING NO.
GRD-XX
SHEET NO.
\$\$



PRELIMINARY DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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

DESIGNER/DRAFTER:
KRV

CHECKED BY:
-

SCALE IN FEET
0 40 80
SCALE 1"=40'

Plotted Date: 10/22/2009



SIGNATURE/
BLOCK:
-

OFFICE OF ENGINEERING

APPROVED BY: DATE:

PROJECT TITLE:
NEW BRITAIN - HARTFORD
BUS RAPID TRANSIT STATIONS

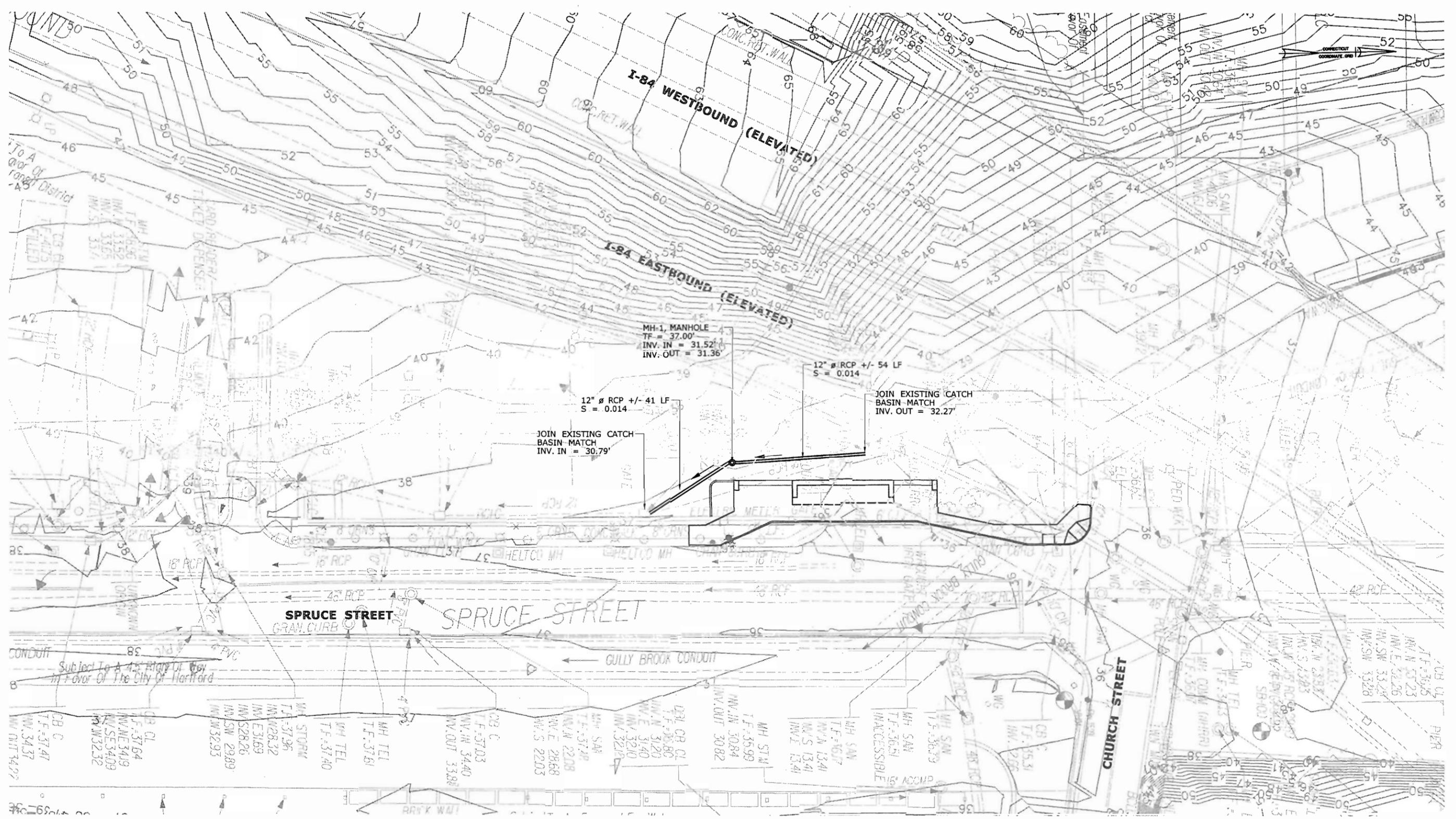
TOWN:
HARTFORD

DRAWING TITLE:
UNION STATION
SEDIMENTATION CONTROL

PROJECT NO.
88-H039

DRAWING NO.
SED-XX

SHEET NO.
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ENVIRONMENTAL PERMIT REVIEW

1	NOV.	DESIGN COORDINATION REVISIONS	
REV.	DATE	REVISION DESCRIPTION	SHEET NO.

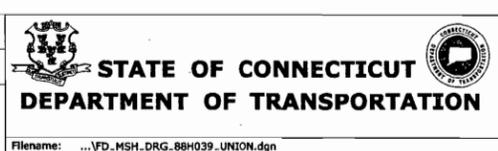
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 11/11/2009

DESIGNER/DRAFTER:
KCM

CHECKED BY:
-

SCALE IN FEET
0 20 40
SCALE 1"=20'



SIGNATURE/
BLOCK:
OFFICE OF ENGINEERING

APPROVED BY: DATE:

PROJECT TITLE:
**NEW BRITAIN - HARTFORD
BUS RAPID TRANSIT STATIONS**

TOWN:
HARTFORD

DRAWING TITLE:
**UNION STATION
DRAINAGE PLAN**

PROJECT NO.
88--H039

DRAWING NO.
DRG-XX

SHEET NO.
\$\$\$