

STORMWATER GENERAL NOTES

1. BEDDING FOR ALL STORM DRAIN SHALL BE PER THE STANDARD STORM DRAIN BEDDING DETAILS - DETAILS 6-6 AND 6-7 FOR REINFORCED CONCRETE PIPE AND POLYWRAPPED DUCTILE IRON PIPE.

2. ALL STORM DRAINAGE CONSTRUCTION SHALL CONFORM TO THE CITY OF GREELEY'S MOST RECENT STORM DRAINAGE SPECIFICATIONS. A COPY OF THE SPECIFICATIONS MAY BE OBTAINED FROM THE CITY OR FOUND ON THE CITY'S WEB PAGE - GREELEYGOV.COM.

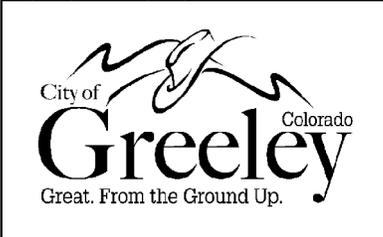
3. RCP SHALL HAVE FLEXIBLE GASKET MATERIAL (WATER TIGHT RUBBER GASKETS) MEETING ASTM C443 AND TYPE 4-G BELL AND SPIGOT JOINTS. DUCTILE IRON PIPE SHALL BE POLYWRAPPED IN ACCORDANCE WITH AWWA STANDARD C-105.

4. BACKFILL MATERIAL MAY BE LOCAL SITE MATERIAL THAT IS WELL-GRADED, NON-COHESIVE GRANULAR MATERIAL FREE OF ROCKS, FROZEN LUMPS, FOREIGN MATERIAL OR STONES GREATER THAN 3" IN ANY DIMENSION, AGGREGATE BASE COURSE, OR FLOWFILL. REMOVE ALL DEBRIS INCLUDING SODA CANS, RAGS, PIPE BANDING MATERIAL, ETC. FROM THE PIPE TRENCH BEFORE BACKFILLING.

5. ALL AREAS IMPACTED BY THE CONSTRUCTION SHALL BE CLEARED OF PROJECT GENERATED DEBRIS BY THE CONTRACTOR AT THE EARLIEST OPPORTUNITY, BUT IN NO CASE SHALL ANY ROADS OR WALKWAYS BE LEFT UNCLEARED AFTER THE COMPLETION OF THE DAY'S WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE NECESSARY EQUIPMENT AND MATERIAL TO SATISFACTORILY CLEAN THE ROADWAYS.

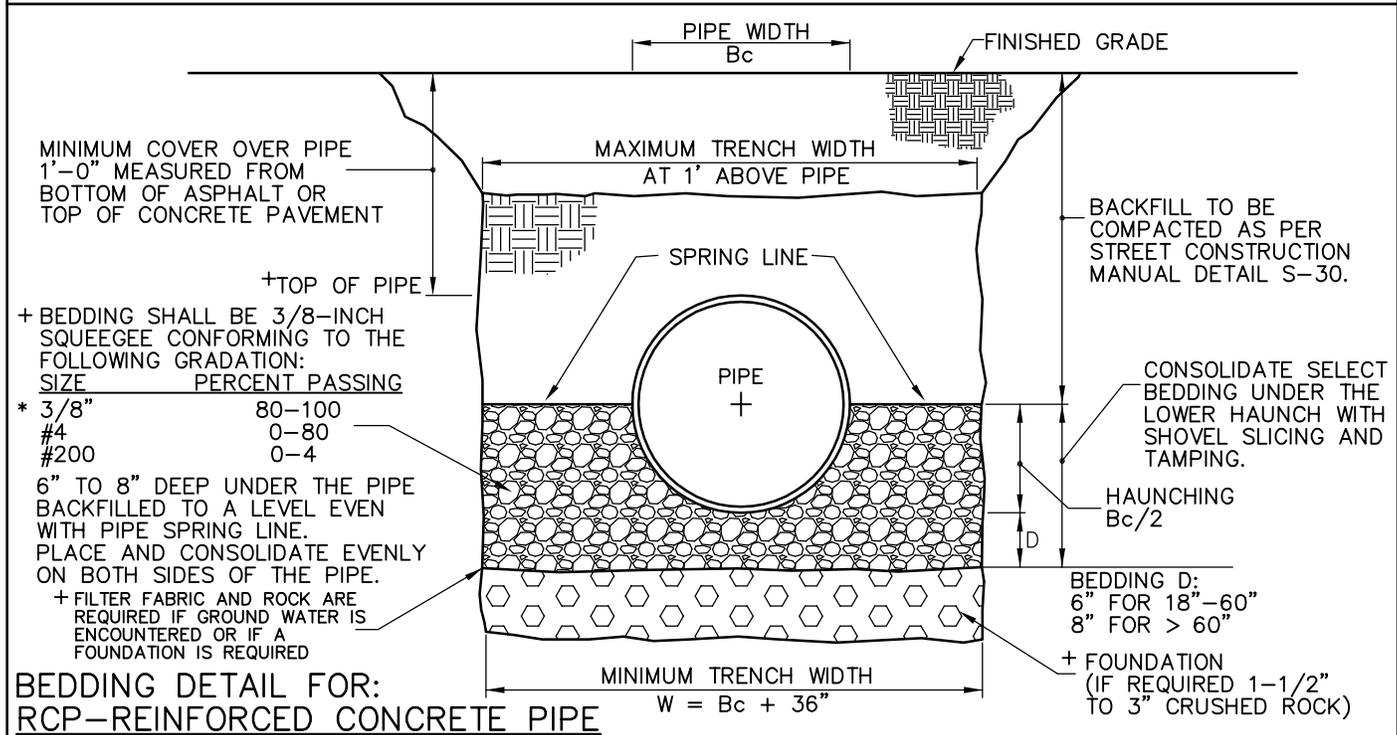
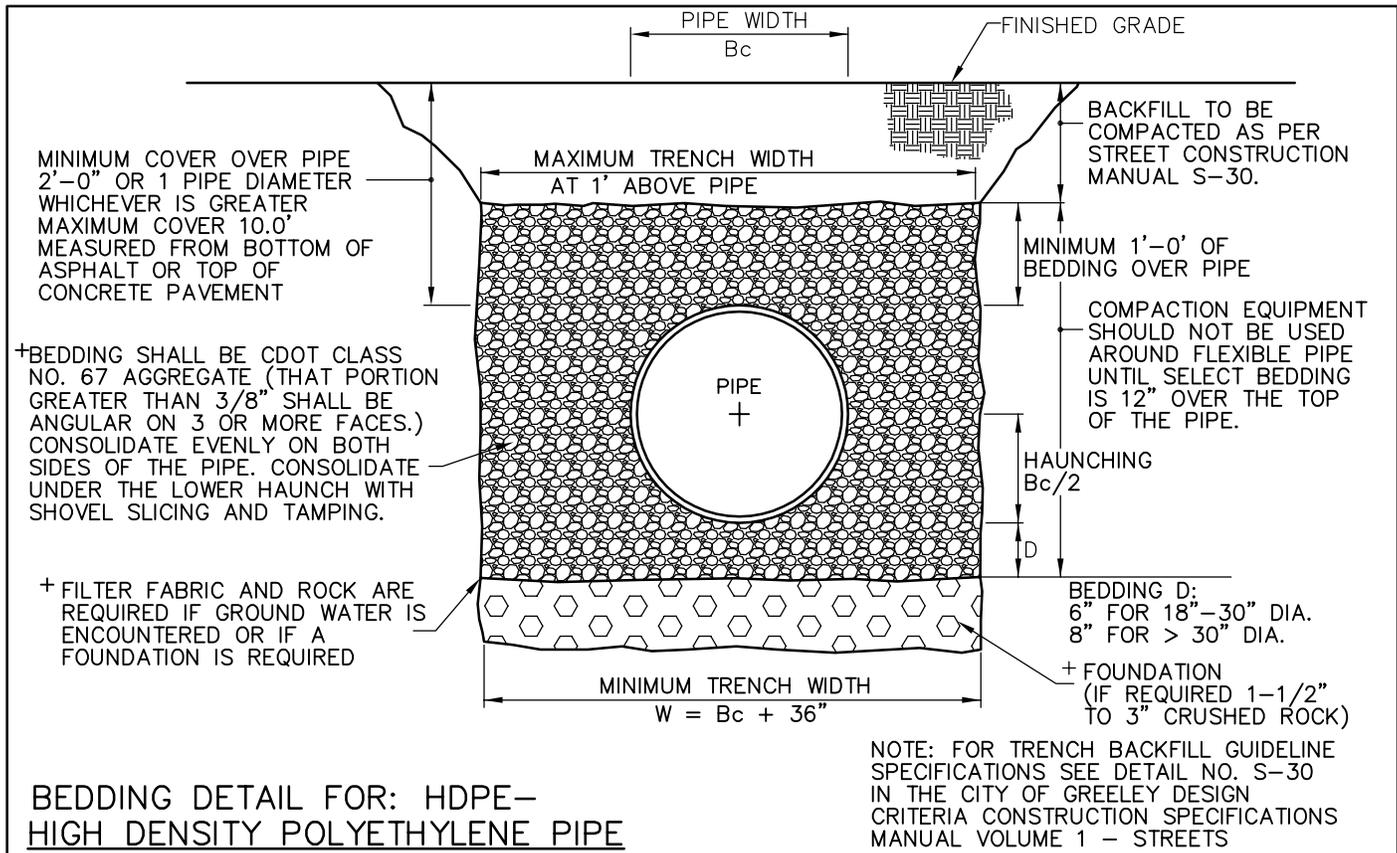
CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

REVISIONS	
3/31/07	+ NEW DETAIL



STORMWATER GENERAL NOTES DETAIL 1-1

DATE: MARCH 2007
SCALE: N.T.S.



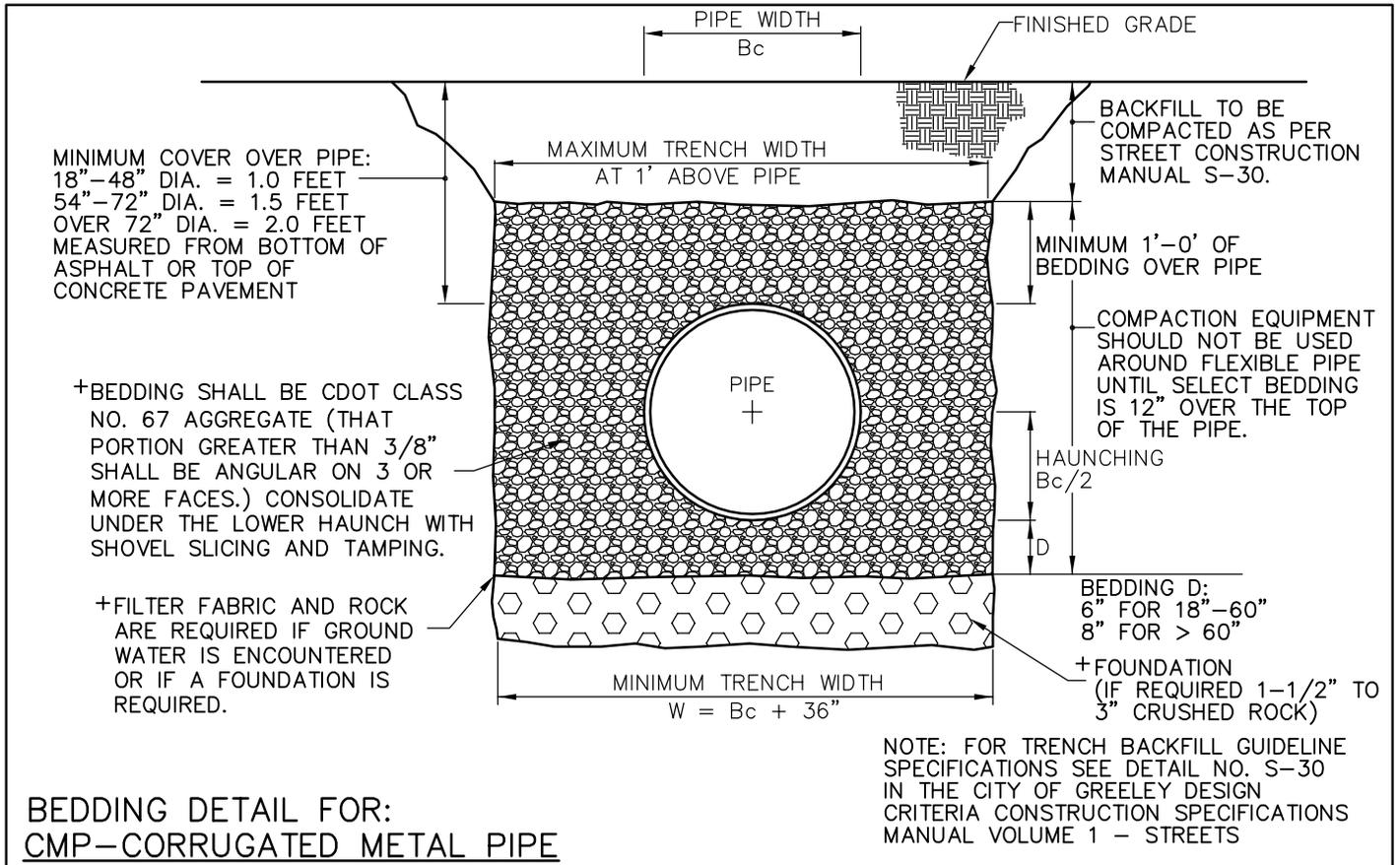
REVISIONS	
3/31/07	+ UPDATE DETAIL
6/03/08	* UPDATE DETAIL



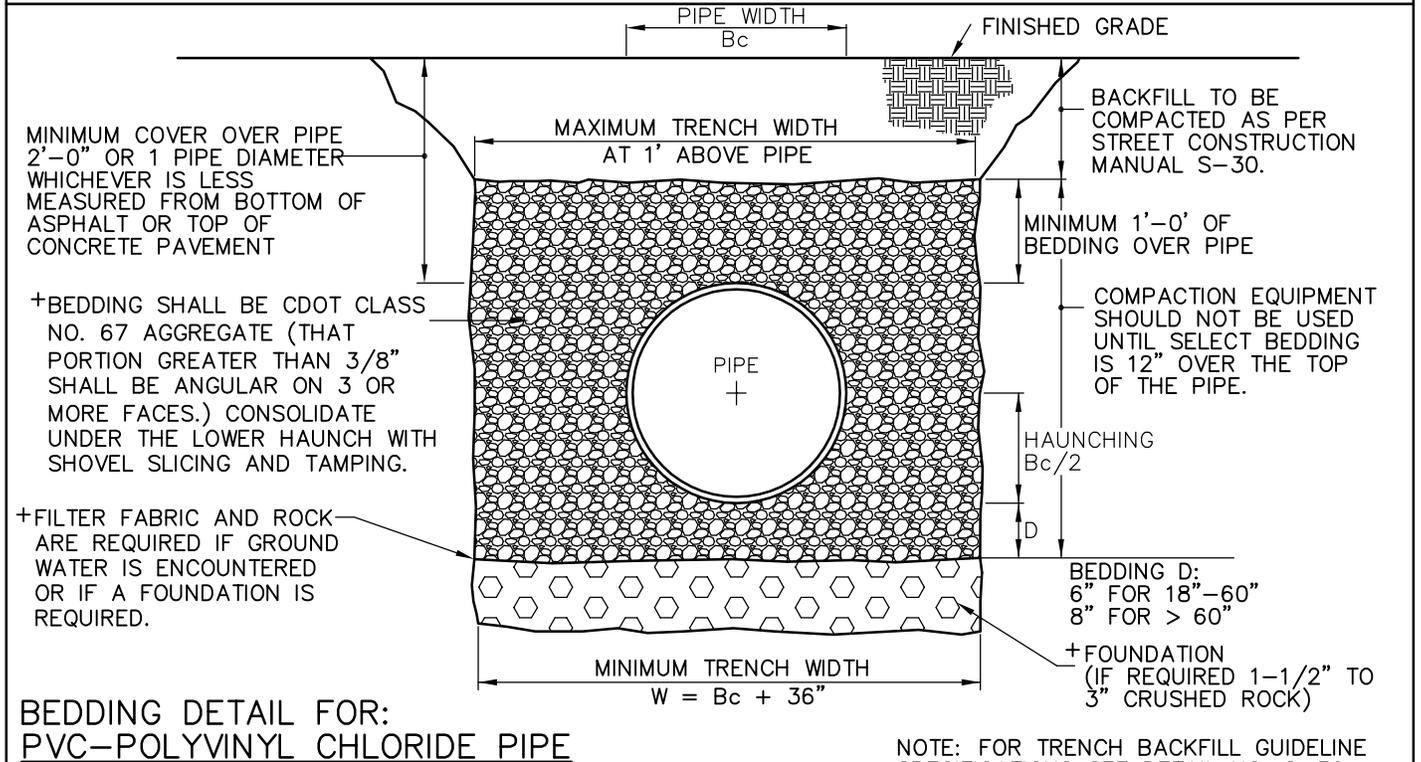
**STANDARD STORM WATER
BEDDING DETAIL
DETAIL 6-6**

DATE: JUNE 2008

SCALE: N.T.S.



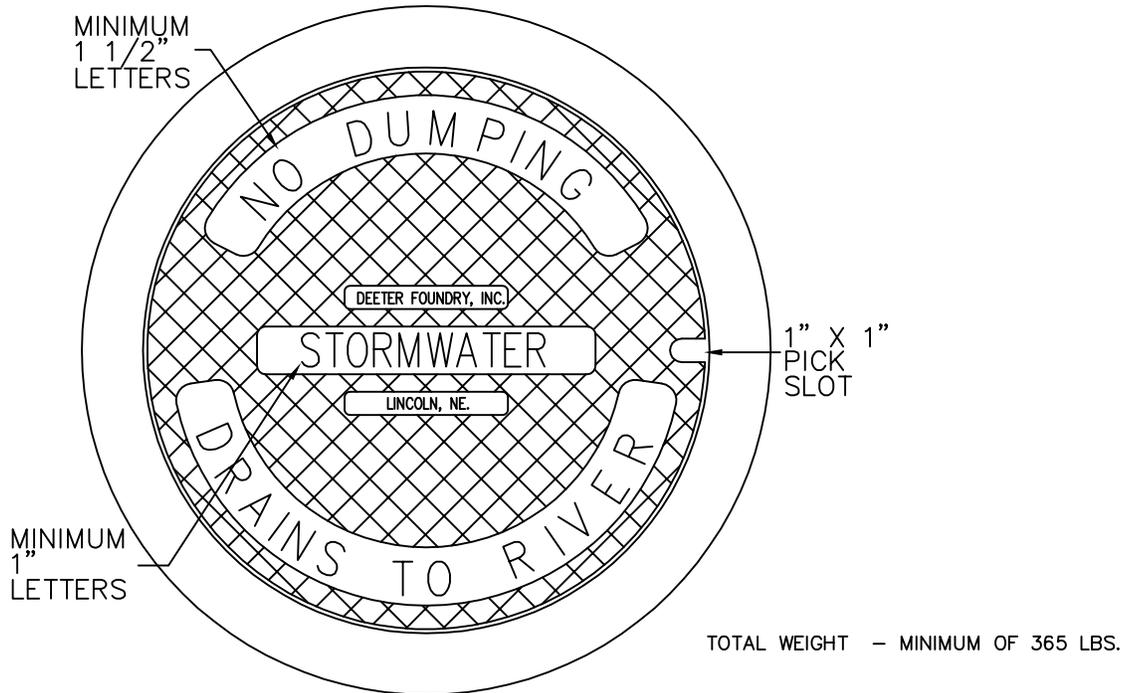
**BEDDING DETAIL FOR:
 CMP-CORRUGATED METAL PIPE**



**BEDDING DETAIL FOR:
 PVC-POLYVINYL CHLORIDE PIPE**

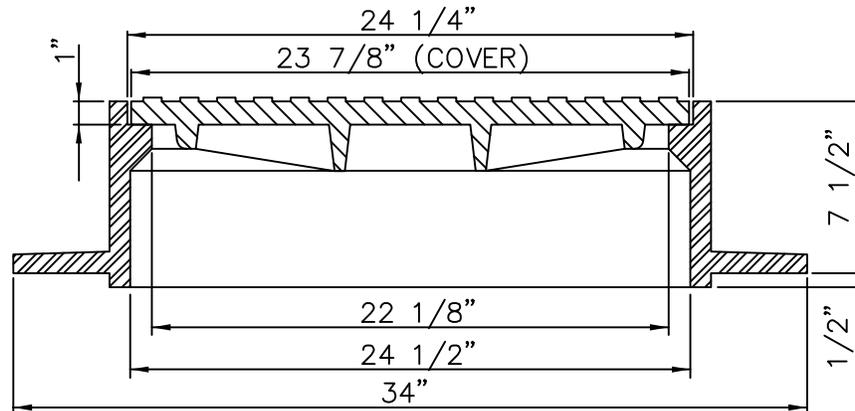
REVISIONS	
3/31/07	+ UPDATE DETAIL





TOTAL WEIGHT - MINIMUM OF 365 LBS.

PLAN



SECTION

GENERAL NOTES

1. RING AND COVER SHALL BE GRAY IRON, MANUFACTURED PER ASTM A-48, AASHTO M 105, CLASS 35B.
2. COVER SHALL BE NONPERFORATED, WITH LETTERING AS SHOWN, CAST ON THE TOP OF THE LID FOR STORMWATER MANHOLES.
- +3. COVER SHALL BE BOLTED IF SPECIFIED BY THE PUBLIC WORKS DEPARTMENT. BOLTS SHALL BE BRASS.
- +4. NEENAH NO. R-1706 MANHOLE RING AND SOLID COVER, OR DEETER NO. 1258, OR APPROVED EQUAL. TOTAL WEIGHT SHALL BE A MINIMUM OF 365 LBS AND SHALL WITHSTAND HS-20 LOADING.
5. LID SHALL READ "STORMWATER". "STORM SEWER" IS UNACCEPTABLE.
6. FISH SYMBOL ON LID IS PREFERRED, BUT NOT REQUIRED.
7. COVER AND RING OPENING SHALL BE SQUARE, NOT TAPERED.

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1-800-922-1987

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MEMBER UTILITIES.

REVISIONS	
3/31/07	+ UPDATE DETAIL

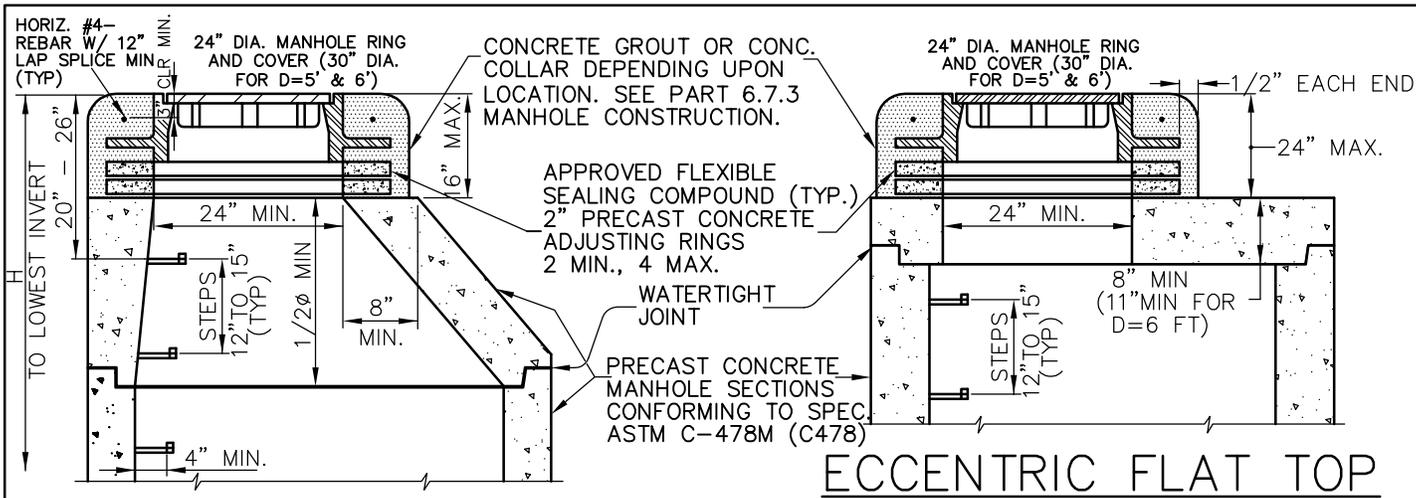


STANDARD STORMWATER
MANHOLE RING AND COVER

DETAIL 6-8

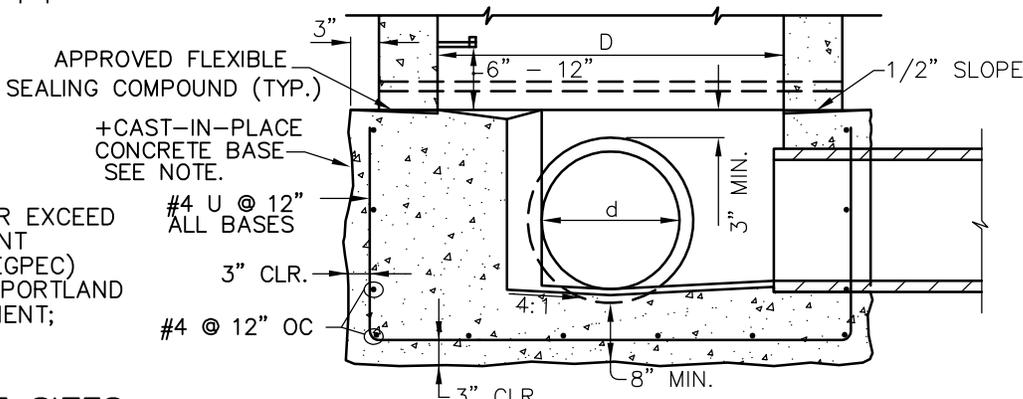
DATE: MARCH 2007

SCALE: N.T.S.



ECCENTRIC CONE TOP
FOR H > 8 FT ±

ECCENTRIC FLAT TOP
MAY BE USED ON SHALLOW MANHOLE



SECTION - BASE

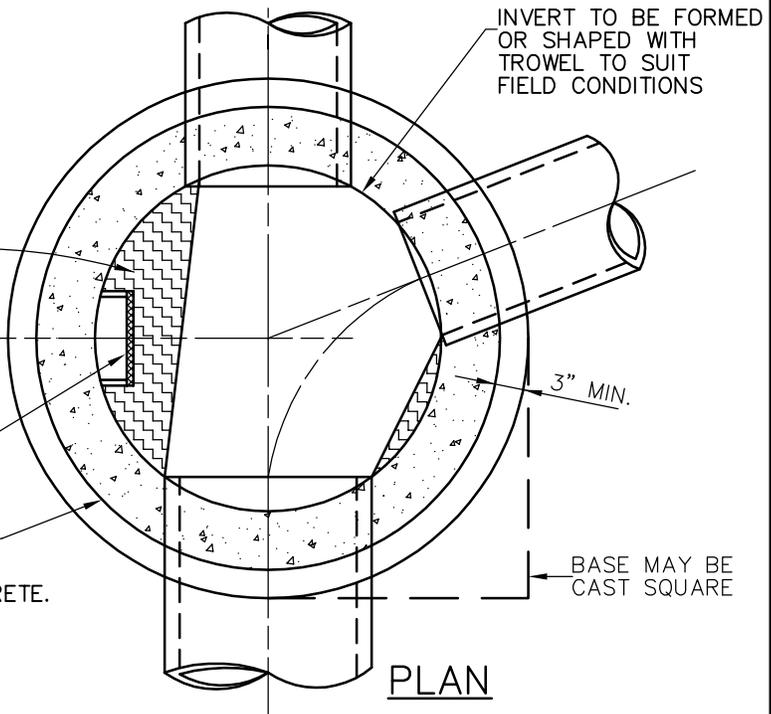
CONCRETE NOTE:

+ CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MEGPC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.

#4 U @ 12" ALL BASES
#4 @ 12" OC

MANHOLE SIZES

BOTTOM REINF.	PIPE DIA. (d)	MANHOLE DIAMETER
#4 @ 12	15" TO 18"	4 FT.
#4 @ 12	21" TO 30"	5 FT.
#4 @ 12	36" TO 54"	6 FT.
60" & Larger	CDOT Std. M-604-20	



PLAN

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

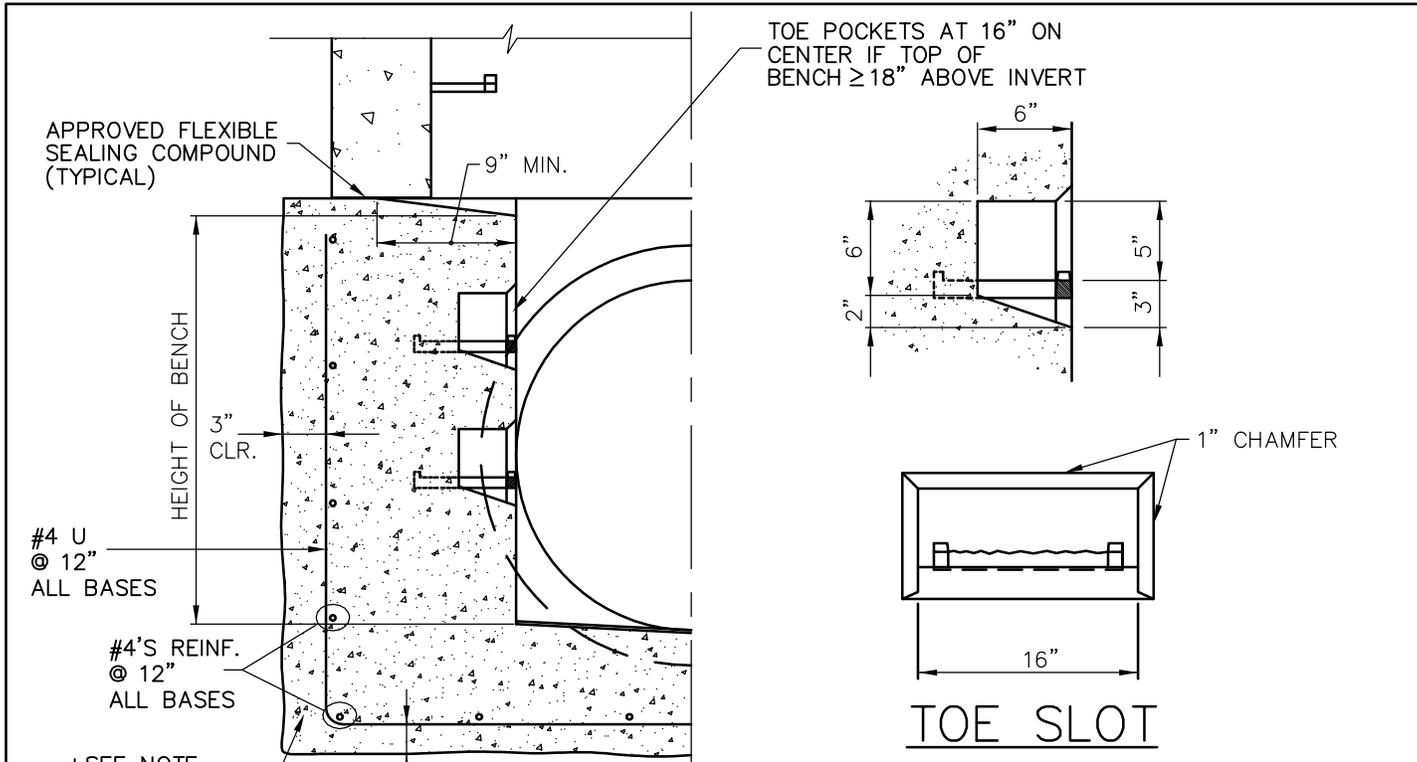
REVISIONS	
3/31/07	+ UPDATE DETAIL



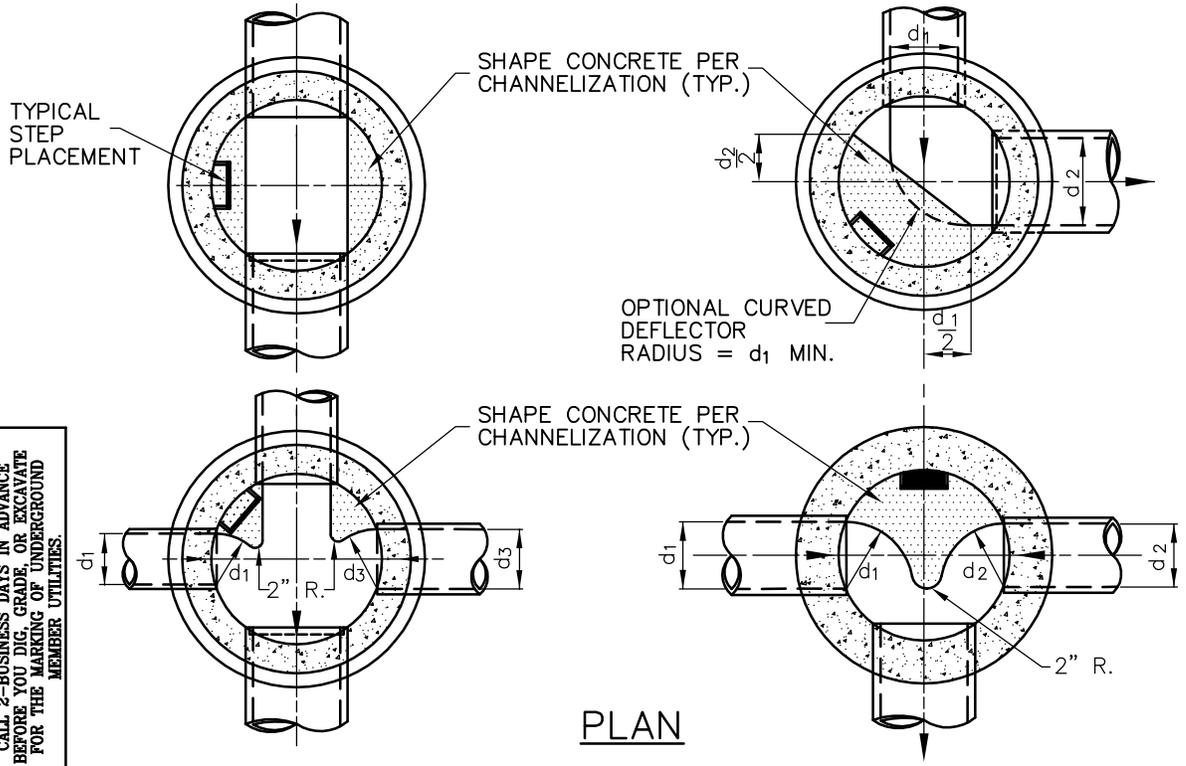
STANDARD STORM WATER MANHOLE
DETAIL 6-9

DATE: MARCH 2007

SCALE: N.T.S.



TOE POCKET DETAILS
FOR HEIGHT OF BENCH GREATER THAN 30"



PLAN

NOTE:
+ CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MEGPEC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.

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REVISIONS	
3/31/07	+ UPDATE DETAIL



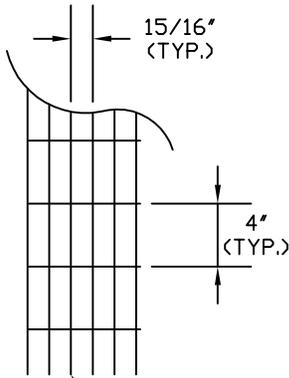
**STORM MANHOLE
TYPICAL BASE CHANNEL DETAILS
DETAIL 6-10**

DATE: MARCH 2007

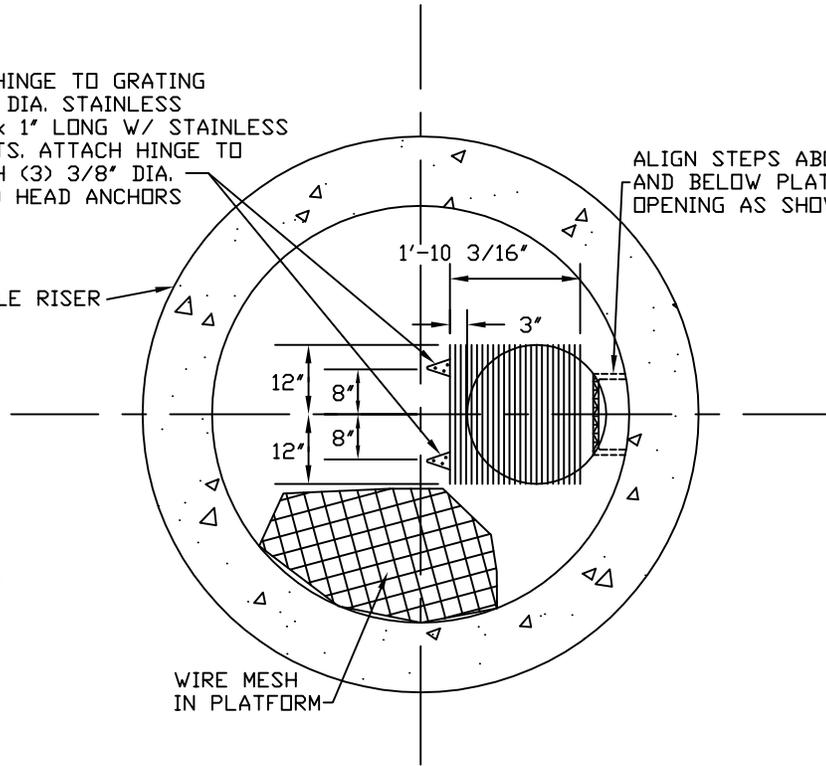
SCALE: N.T.S.

ATTACH EACH HINGE TO GRATING WITH (2) 3/8" DIA. STAINLESS STEEL BOLTS x 1" LONG W/ STAINLESS STEEL HEX NUTS. ATTACH HINGE TO PLATFORM WITH (3) 3/8" DIA. x 3" LONG RED HEAD ANCHORS OR EQUAL.

ALIGN STEPS ABOVE AND BELOW PLATFORM OPENING AS SHOWN.

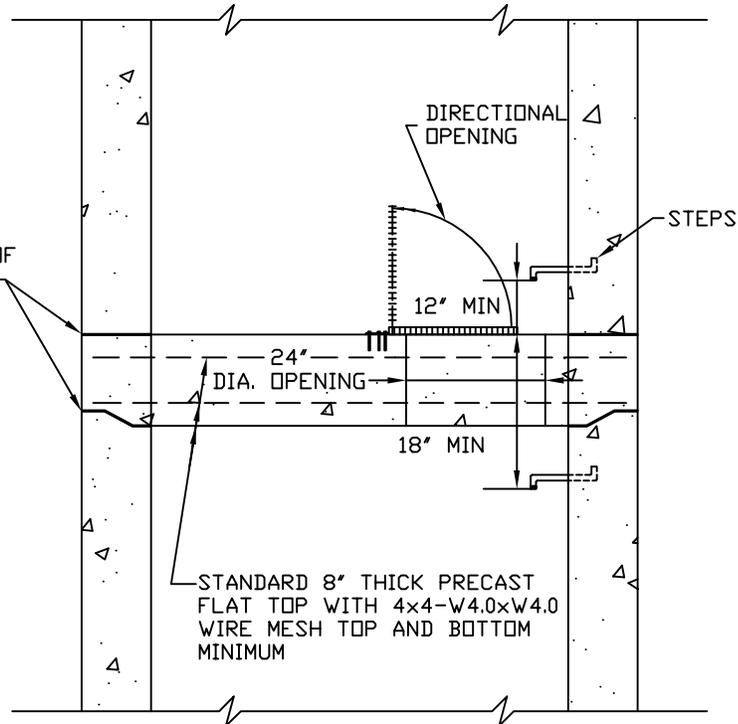


FIBERGLASS OR ALUMINUM GRATING 3/16" x 1 1/4" BEARING BARS. SERRATED GRATING OPTIONAL.



+ SECTION

SET IN FULL BED OF SEALING COMPOUND ALL AROUND



+ ELEVATION

REVISIONS

03/31/07 + UPDATED DETAIL



Public Works Department

CALL UTILITY NOTIFICATION CENTER OF COLORADO

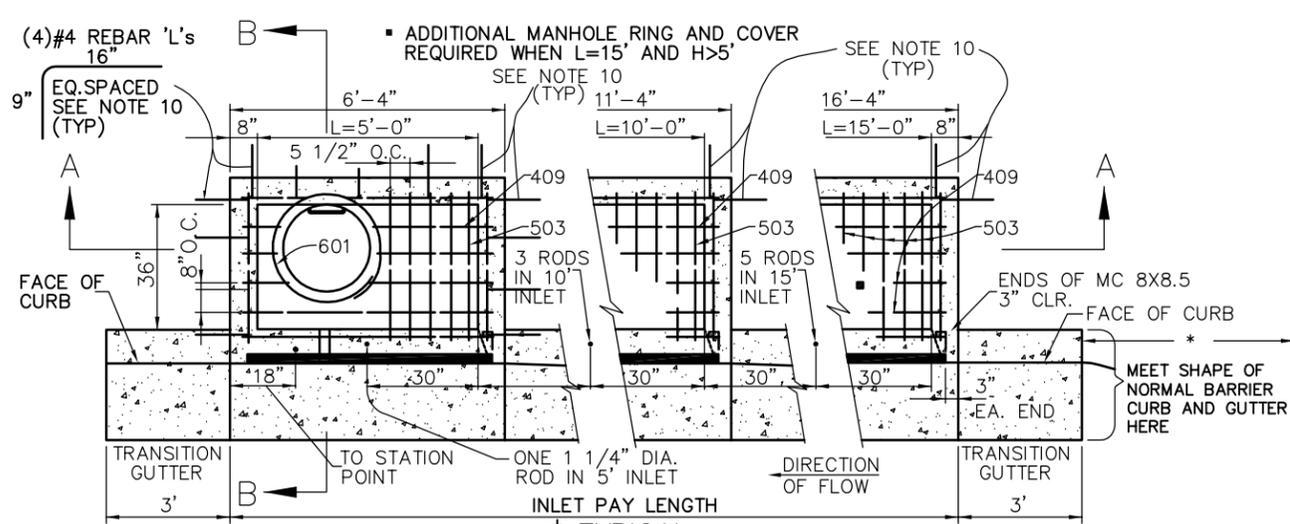
1-800-922-1987

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

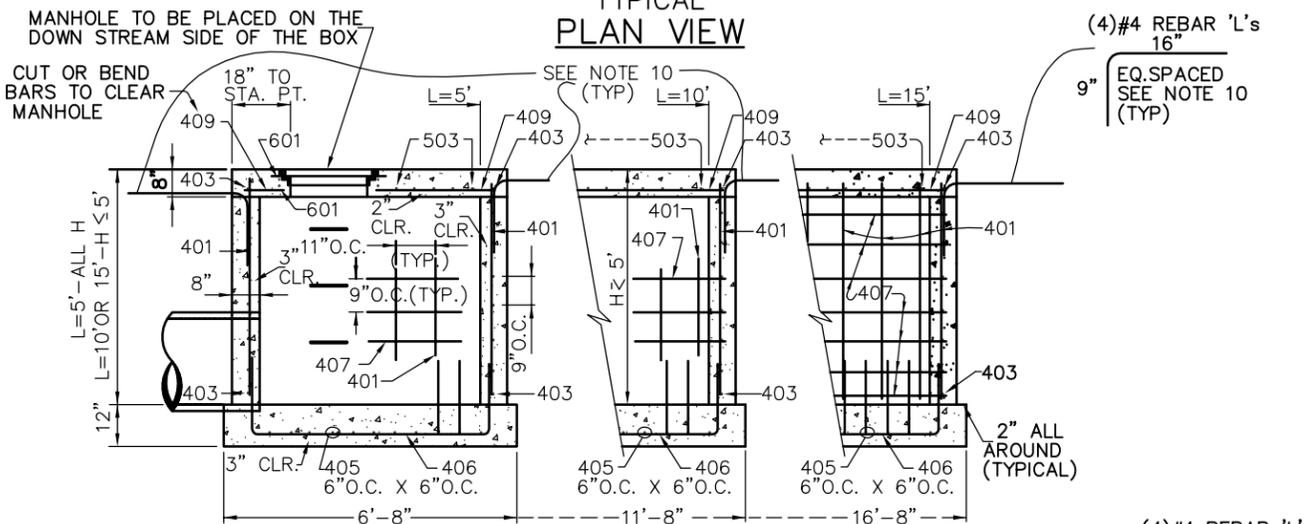
INTERMEDIATE PLATFORM FOR MANHOLES OVER 20' IN DEPTH
DETAIL 6-11

DATE: MARCH 2007

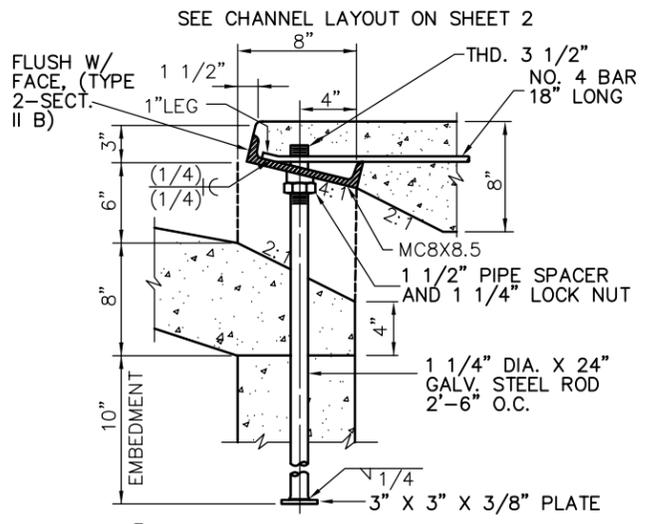
SCALE: N.T.S.



TYPICAL PLAN VIEW

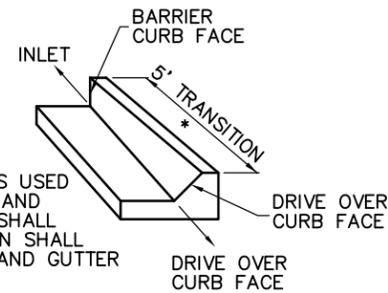


SECTION A - A
REGULAR INLET



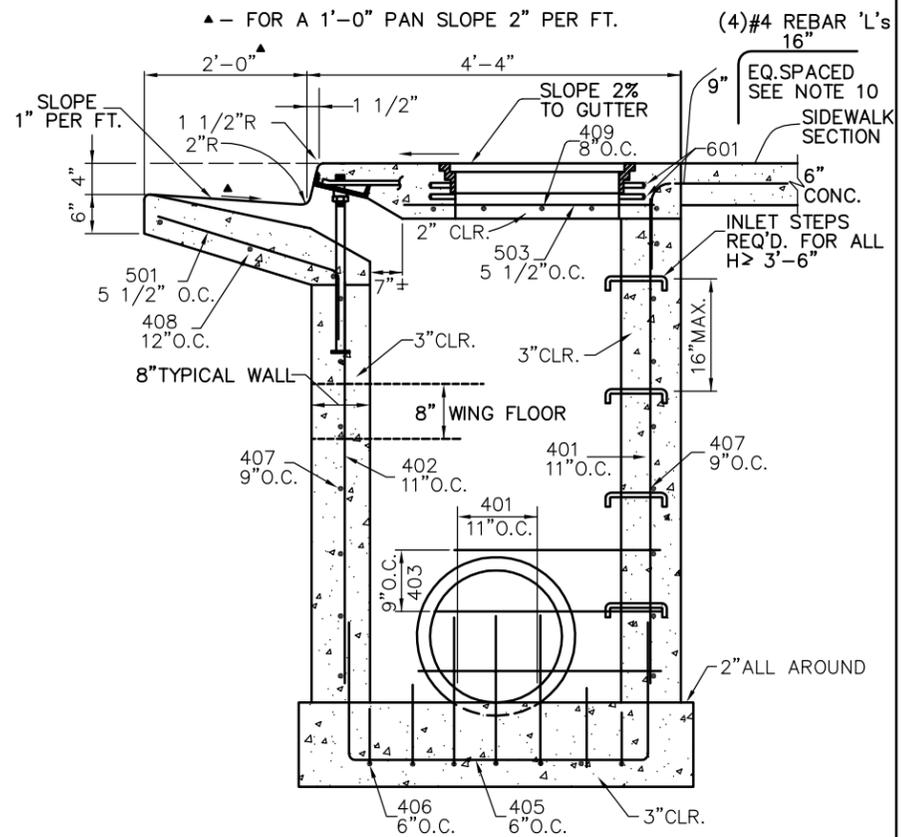
CURB FACE ASSEMBLY

PLACE ENTIRE ASSEMBLY BEFORE POURING CONCRETE



TRANSITION CURB

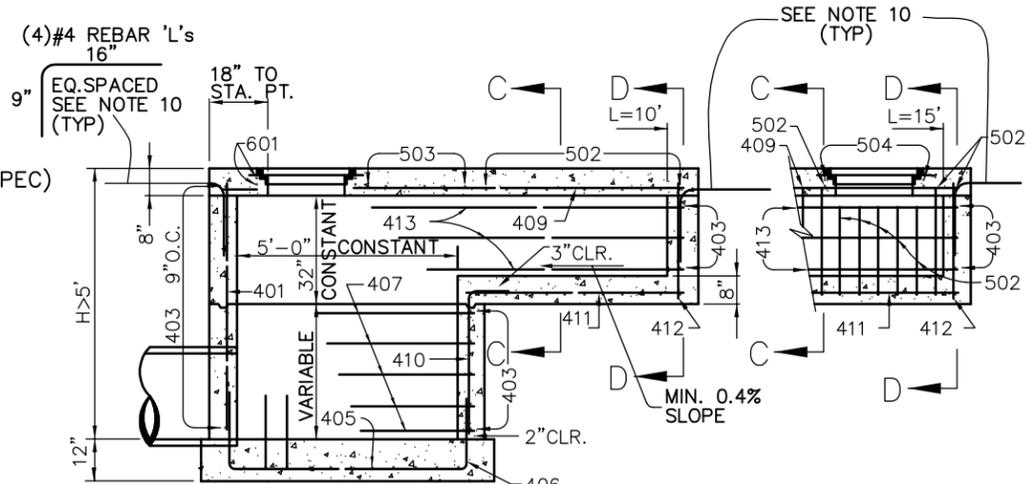
* WHEN A TYPE R INLET IS USED WITH DRIVE OVER CURB AND GUTTER, 5' TRANSITION SHALL BE REQUIRED. TRANSITION SHALL BE PAID FOR AS CURB AND GUTTER



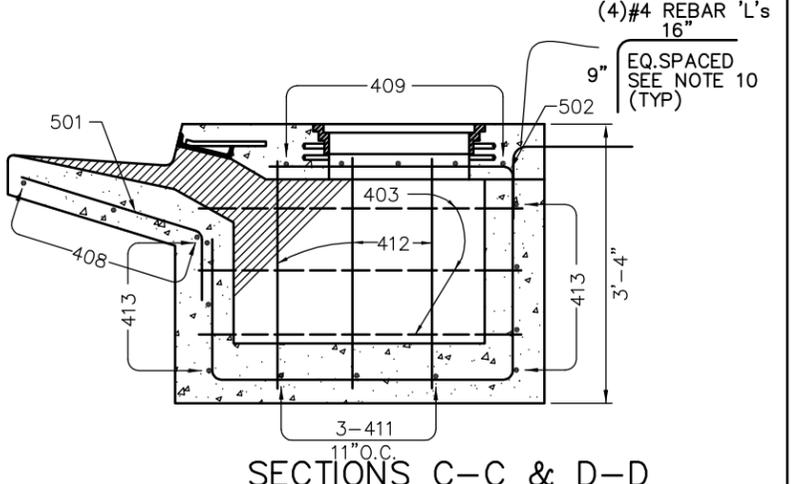
SECTION B-B
TYPICAL END VIEW

NOTE: 1. MANHOLE RING & COVER, STATION POINT AND OUTFLOW PIPE SHALL BE LOCATED AT THE SAME END OF THE INLET.
2. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

- GENERAL NOTES**
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 - INLET MAY BE CAST-IN-PLACE OR PRECAST. CAST-IN-PLACE CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
 - REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, EPOXY COATED, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
 - STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
 - ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT-712.06. GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.
 - SEE PLAN DETAILS FOR LOCATION AND SIZE OF PIPE.
 - SEE DETAIL 7-3 FOR BAR LIST AND INLET QUANTITIES.
 - TYPE R DISCOURAGED ON DRIVE OVER CURB.
 - INLET STRUCTURES SHALL NOT BE CONSTRUCTED UNTIL THE CURB AND GUTTER HAS BEEN INSTALLED, OR CONTRACTOR STAKES THE CURB & GUTTER FOR 100' ON EACH SIDE OF INLET. CONTRACTOR MUST ALSO STAKE INLET BOX CORNERS.
 - ADD (4) #4 REBARS-"L" SHAPED, EQUALLY SPACED MID-DEPTH INTO THE CONCRETE LID & WALL AND MID-DEPTH INTO EACH SIDEWALK SECTION POURED NEXT TO THE INLET (TYP L=5'). 4 ADDITIONAL BARS ARE REQUIRED FOR EACH 5' OF LENGTH ADDED FOR DOUBLE OR TRIPLE INLET.
 - MINIMUM REBAR SPLICE LENGTH SHALL BE 10".



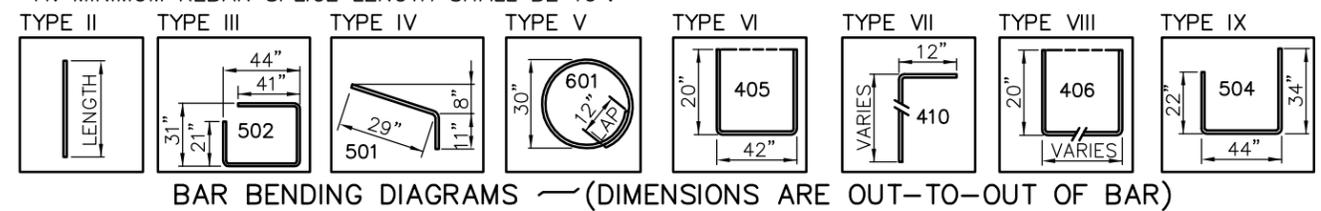
SECTION A - A
INLET WITH DROP BOX - H > 5'



SECTIONS C-C & D-D

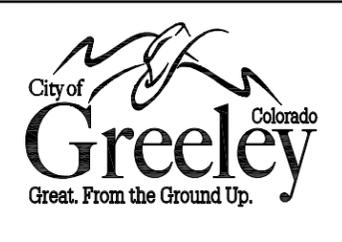
REFERENCE:
COLORADO DEPARTMENT OF TRANSPORTATION STANDARD M-604-12 (SHEET 1 OF 2)
REFER TO THE LATEST M & S STANDARDS.

REVISIONS	
DATE	DESCRIPTION
9/16/04	SEE GENERAL NOTES
3/31/07	+UPDATE DETAIL
6/3/08	=UPDATE DETAIL



BAR BENDING DIAGRAMS (DIMENSIONS ARE OUT-TO-OUT OF BAR)

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CURB INLET TYPE R
DETAIL 7-1
DATE: JUNE 2008
SCALE: N.T.S.

(FOR ESTIMATING ONLY)
TABLE ONE — BAR LIST FOR CURB INLETS, TYPE "R"

MARK	DIA. IN.	O.C. SPACING	TYPE	ALL INLETS L = 5'				INLETS, H ≤ 5'				INLETS, H > 5'			
				L = 5'		L = 10'		L = 15'		L = 10'		L = 15'			
				NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH		
401		11"	II	15	*	21	*	26	*	11	*	11	*		
402		11"	II	7	*	13	*	18	*	7	*	7	*		
403		9"	II	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"		
405		6"	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"	11	6'-10"		
406		6"	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"	7	8'-10"		
407	1/2"	9"	II	*	5'-10"	*	10'-10"	*	15'-10"	*	5'-10"	*	5'-10"		
408		12"	II	3	6'-0"	3	11'-0"	3	16'-0"	3	11'-0"	3	16'-0"		
409		8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"		
410		11"	VII							3	*	3	*		
411		11"	II							3	5'-2"	3	10'-2"		
412		11"	II							3	2'-9"	3	2'-9"		
413		9"	II							7	10'-10"	7	15'-10"		
501	5/8"	5 1/2"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"		
502	5/8"	5 1/2"	III							11	11'-5"	17	11'-5"		
503	5/8"	5 1/2"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"		
504	5/8"	5 1/2"	IX									5	8'-4"		
601	3/4"	2 1/2"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"		
MC8X8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"		
				2 BARS, 1 ROD		4 BARS 3 RODS		8 BARS 5 RODS		4 BARS 3 RODS		8 BARS 5 RODS			

REGULAR INLETS DROP BOX INLETS

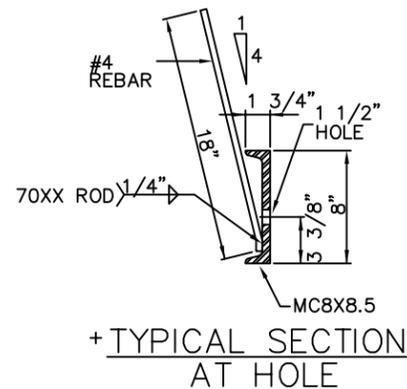
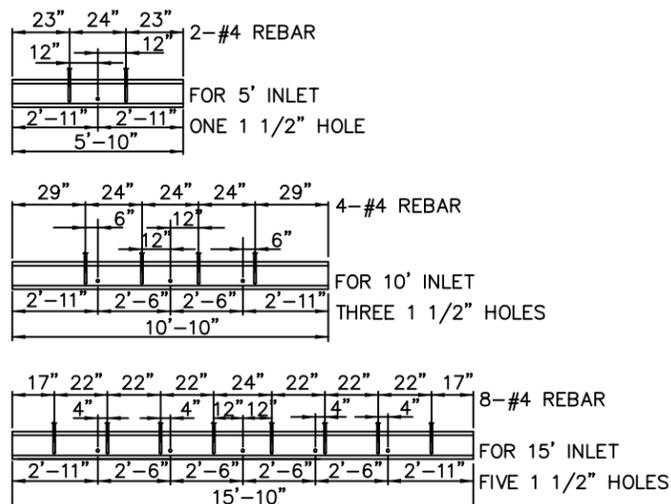
* VARIABLE, REFER TO TABLE TWO
Ø INCLUDE 18" NO. 4 BARS (SEE CHANNEL LAYOUT DETAIL)
▼ SEE CURB FACE ASSEMBLY ON SHEET 1 AND CHANNEL LAYOUT DETAILS ON THIS SHEET

(FOR ESTIMATING ONLY)
TABLE TWO — BARS AND QUANTITIES VARIABLE WITH "H"

'H'	LENGTH			NO. REQ'D.		L = 5'		L = 10'		L = 15'	
	401	402	410	REGULAR	DROP BOX	CU. YD.	LB.	CU. YD.	LB.	CU. YD.	LB.
3'-0"	2'-8"	1'-8"		10	7	3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7	3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9	3.7	326	6.0	559	8.4	786
4'-6"	4'-2"	3'-2"		12	9	3.9	334	6.4	571	8.8	803
5'-0"	4'-8"	3'-8"		14	11	4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	3'-5"	16	13	4.4	375	6.0	607	7.4	850
6'-0"	5'-8"	4'-8"	3'-11"	16	13	4.6	382	6.2	616	7.6	860
6'-6"	6'-2"	5'-2"	4'-5"	18	15	4.8	402	6.4	637	7.8	880
7'-0"	6'-8"	5'-8"	4'-11"	20	17	5.0	423	6.6	654	8.0	897
7'-6"	7'-2"	6'-2"	5'-5"	20	17	5.3	430	6.9	664	8.3	907
8'-0"	7'-8"	6'-8"	5'-11"	22	19	5.5	451	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	6'-5"	24	21	5.7	471	7.3	702	8.7	944
9'-0"	8'-8"	7'-8"	6'-11"	24	21	6.0	479	7.6	711	9.0	954
9'-6"	9'-2"	8'-2"	7'-5"	26	23	6.2	499	7.8	732	9.2	974
10'-0"	9'-8"	8'-8"	7'-11"	28	25	6.4	520	8.0	749	9.4	992
10'-6"	10'-2"	9'-2"	8'-5"	28	25	6.7	527	8.3	759	9.7	1001
11'-0"	10'-8"	9'-8"	8'-11"	30	27	6.9	547	8.5	779	9.9	1022

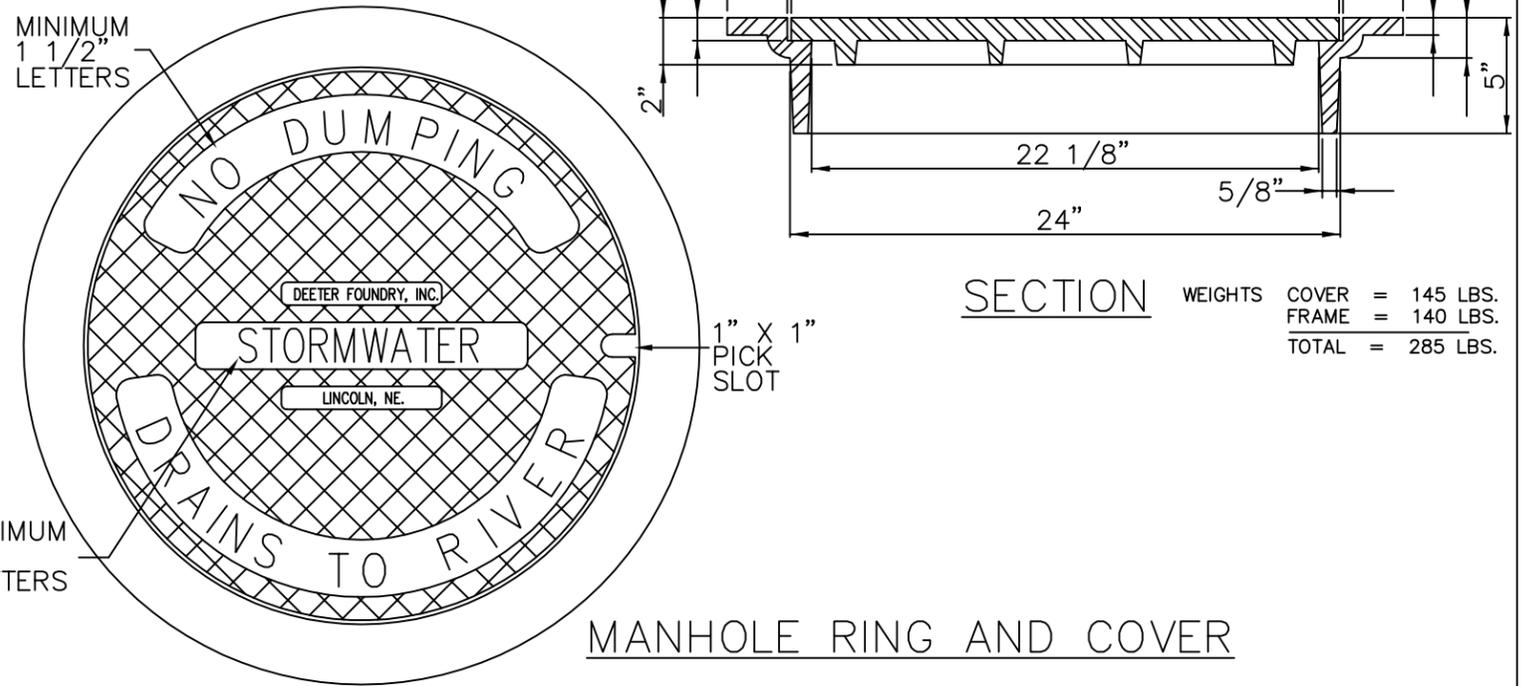
NOTE: FOR L=5', L=10' AND L=15'
REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE OF THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE OF THE HEAVY BLACK LINE.

STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL.



MINIMUM 1 1/2" LETTERS

MINIMUM 1" LETTERS

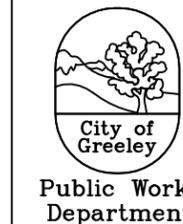


GENERAL NOTES

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- CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8" THICK.
- INLET STEPS SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4". CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
- REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, EPOXY COATED, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
- DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
- MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT-712.06.
- SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE. THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
- STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF CDOT - 712.06.
- MINIMUM REBAR SPLICE LENGTH SHALL BE 10".

REVISIONS	
DATE	DESCRIPTION
7/12/00	MANHOLE RING AND FRAME # 2018-A NEENAH / DEETER FOUNDRY, INC. OR EQUAL
9/16/04	CHANGED TEXT ON M/H LID, NOTES
3/31/07	+ UPDATE DETAIL

REFERENCE:
COLORADO DEPARTMENT OF TRANSPORTATION STANDARD M-604-12 (SHEET 2 OF 2)
REFER TO LATEST M & S STANDARDS.

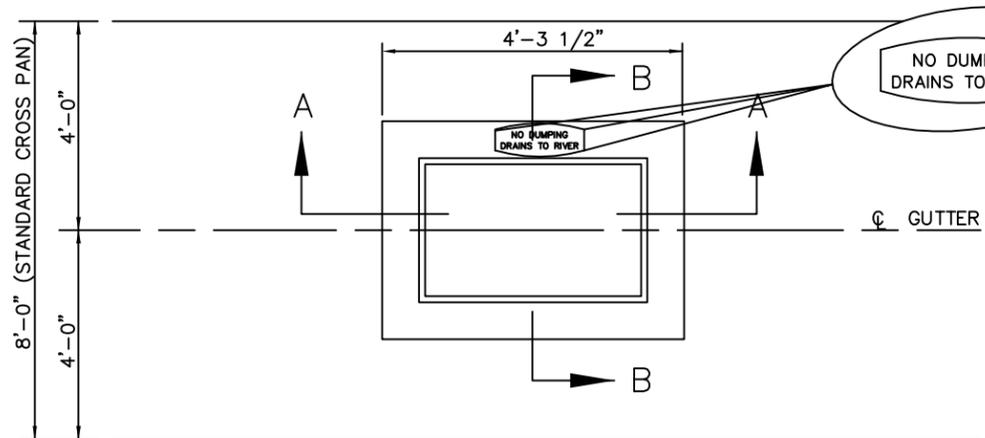


CURB INLET TYPE R
DETAIL 7-1 (CONTINUED)

DATE: MARCH 2007

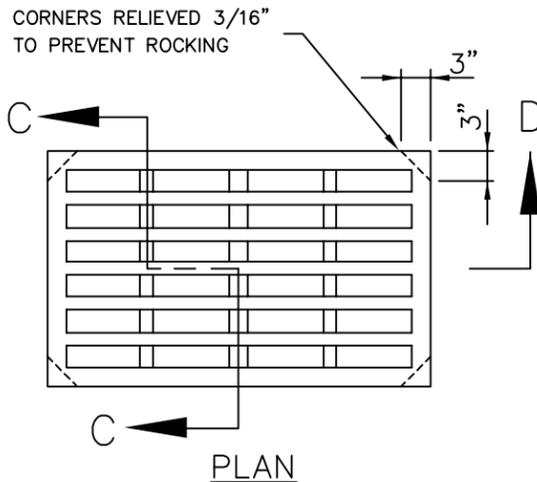
SCALE: N.T.S.

- +1. CONTRACTOR SHALL IMPRINT THE PLASTIC CONCRETE W/ CITY SUPPLIED STAMP AS SHOWN.
2. FINAL IMPRESSION SHALL BE CLEAR AND LEGIBLE AND FREE OF ANY AGGREGATE AND DEBRIS.
3. STAMP SUPPLIED BY CITY STORMWATER DIVISION (970) 336-4073 OR (970) 336-4074.

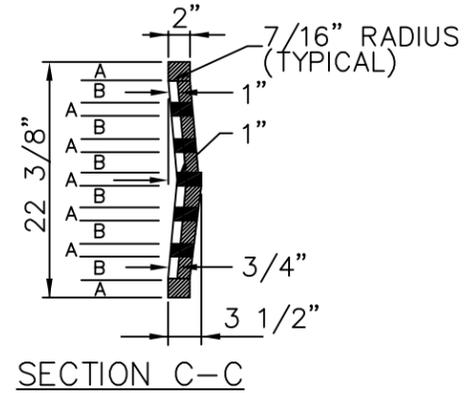


PLAN OF TYPE 13 INLET

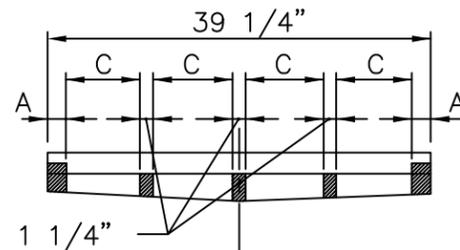
NOTE: INLET MAY BE USED IN GENERAL TYPE CONSTRUCTION.



PLAN



SECTION C-C

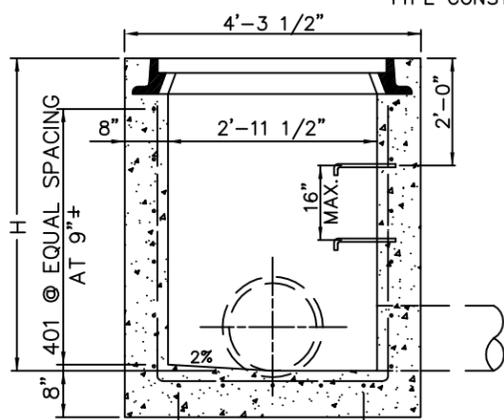


SECTION D-D

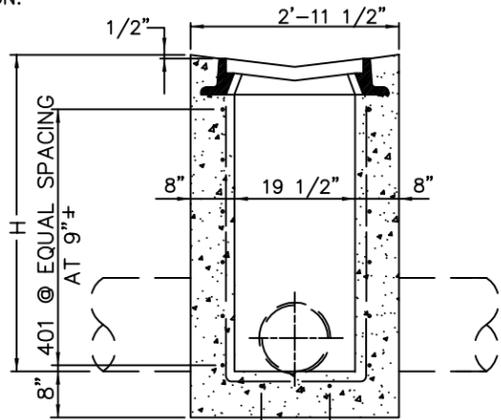
PLAN - GRATE

APPROXIMATE WEIGHT 235 LBS.

- A = 1 3/4" MIN.
- B = 1 3/4" MAX
- C = 8" MAX



SECTION A-A



SECTION B-B

NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

GENERAL NOTES

- +1. CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MGPEC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.
2. CAST-IN-PLACE CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES.
3. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- +4. REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
5. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE W/ AASHTO M199.
6. ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION-712.06. GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.
7. SEE PLAN DETAILS FOR LOCATION AND SIZE OF PIPE.
- + 8. INLET STRUCTURES SHALL NOT BE CONSTRUCTED UNTIL THE CURB AND GUTTER HAS BEEN INSTALLED, OR CONTRACTOR STAKES THE CURB & GUTTER FOR 100' ON EACH SIDE OF INLET. CONTRACTOR MUST ALSO STAKE INLET BOX CORNERS.
9. A MULTIPLE TYPE 13 INLET SHALL BE CONSTRUCTED THE SAME AS A MULTIPLE TYPE 3 INLET MINUS THE CURB OPENING DETAILS.
- +10. MINIMUM REBAR SPLICE LENGTH SHALL BE 10".

REVISIONS	
DATE	DESCRIPTION
4-3-00	SEE GENERAL NOTES
4-26-00	GRATE CHANGE, TYPE "L" VANE TO DEETER #2501-A GRATE AND FRAME CHANGE
7-12-00	CLARIFY DRAWING ADD STAMP
9/16/04	SLOPE INLET FLOORS
3/31/07	+ UPDATE DETAIL

QUANTITIES (FOR ESTIMATING ONLY)

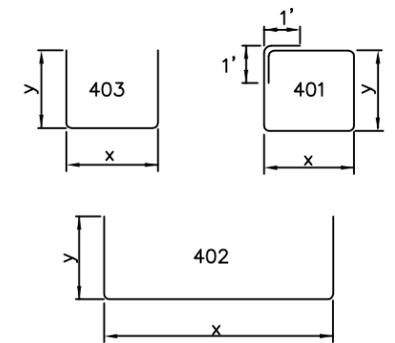
H	CONCRETE	REINFORCING STEEL	NO. OF 401 BARS REQ'D.
	(CU. YDS)	Ø (LBS)	
3'-0"	1.3	72	4
3'-6"	1.5	76	4
4'-0"	1.6	90	5
4'-6"	1.8	104	6
5'-0"	1.9	109	6
5'-6"	2.1	122	7
6'-0"	2.2	136	8
6'-6"	2.4	141	8
7'-0"	2.5	154	9
7'-6"	2.7	168	10
8'-0"	2.8	173	10
8'-6"	3.0	187	11
9'-0"	3.1	200	12
9'-6"	3.3	205	12
10'-0"	3.4	219	13

Ø INCLUDES 1% FOR OVERRUN
NOTE: CONCRETE QUANTITIES INCLUDE VOLUME OCCUPIED BY PIPE

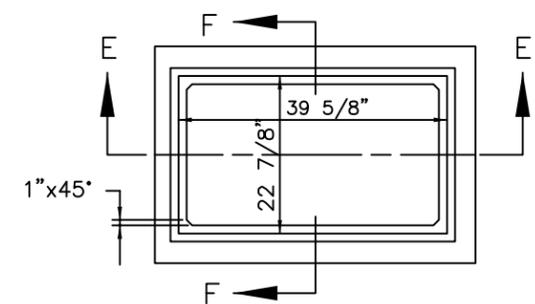
BAR LIST FOR H=3'-0"

MARK	NO. REQ'D.	DIMENSIONS		LENGTH
		X	Y	
401	4	3'-6"	2'-2"	13'-4"
402	2	3'-4 1/2"	*2'-6 1/2"	8'-5 1/2"
402	5	2'-0 1/2"	*2'-7"	7'-2 1/2"

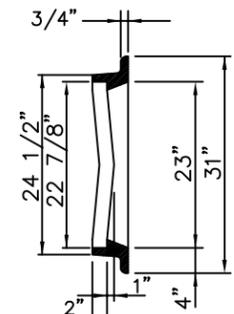
*ADD 6" TO THIS DIMENSION FOR EACH 6" INCREASE OF "H" OVER 3'-0"



ALL DIMENSIONS ARE OUT-TO-OUT BAR BENDING DIAGRAM



SECTION E-E

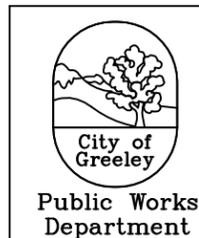


SECTION F-F

DEETER #2501-A CATCH BASIN INLET FRAME

APPROXIMATE WEIGHT 295 LBS.

TYPE 13 GRATE
FRAME - #2501-A DEETER
FOUNDRY, INC., OR EQUAL



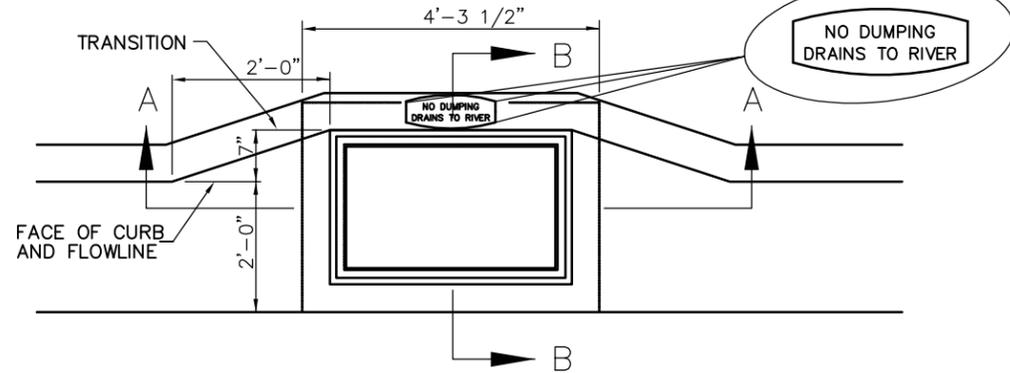
GRATED INLET TYPE 13 (GENERAL)

DETAIL 7-3

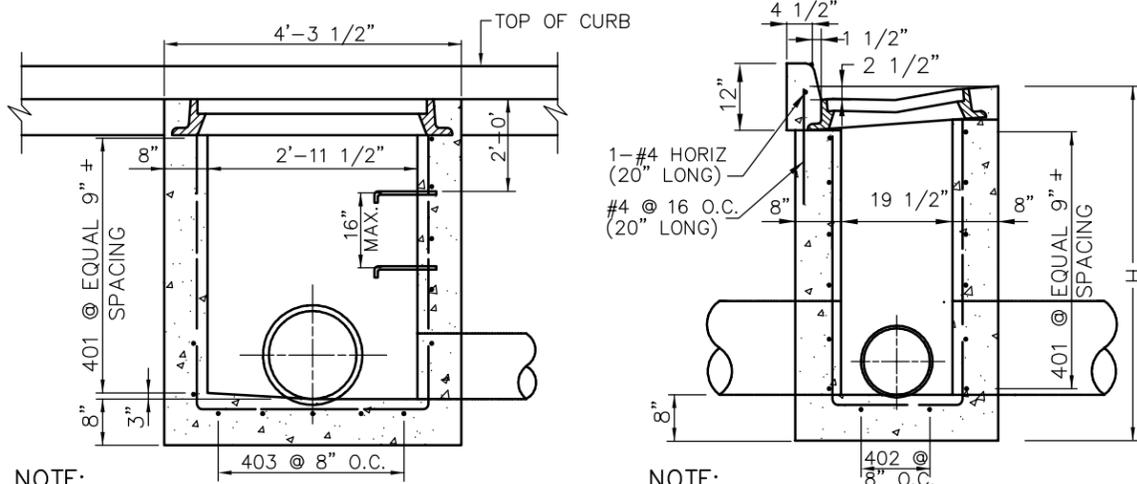
DATE: MARCH 2007

SCALE: N.T.S.

- + 1. CONTRACTOR SHALL IMPRINT THE PLASTIC CONCRETE W/ CITY SUPPLIED STAMP AS SHOWN.
- 2. FINAL IMPRESSION SHALL BE CLEAR AND LEGIBLE AND FREE OF ANY AGGREGATE AND DEBRIS.
- 3. STAMP SUPPLIED BY CITY STORMWATER DIVISION (970) 336-4073 OR (970) 336-4074.



PLAN OF TYPE 13 INLET =
VERTICAL FACE CURB, GUTTER & SIDEWALK



NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

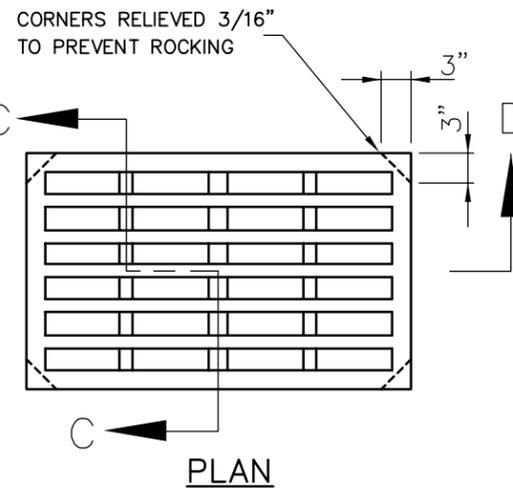
SECTION A-A

SECTION B-B

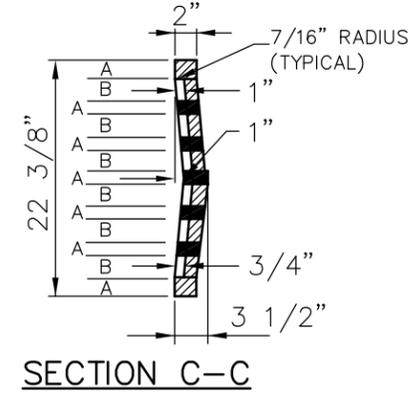
GENERAL NOTES

- +1. CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MGPEC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.
- 2. INLET MAY BE CAST-IN-PLACE OR PRECAST. CAST-IN-PLACE CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES.
- 3. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- 4. REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
- 5. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- 6. ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION-712.06. GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.

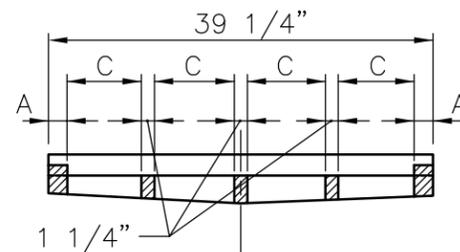
- 7. SEE PLAN DETAILS FOR LOCATION AND SIZE OF PIPE.
- + 8. INLET STRUCTURES SHALL NOT BE CONSTRUCTED UNTIL THE CURB AND GUTTER HAS BEEN INSTALLED, OR CONTRACTOR STAKES THE CURB & GUTTER FOR 100' ON EACH SIDE OF INLET. CONTRACTOR MUST ALSO STAKE INLET BOX CORNERS.
- 9. A MULTIPLE TYPE 13 INLET SHALL BE CONSTRUCTED THE SAME AS A MULTIPLE TYPE 3 INLET MINUS THE CURB OPENING DETAILS.
- + 10. MINIMUM REBAR SPLICE LENGTH SHALL BE 10".



PLAN



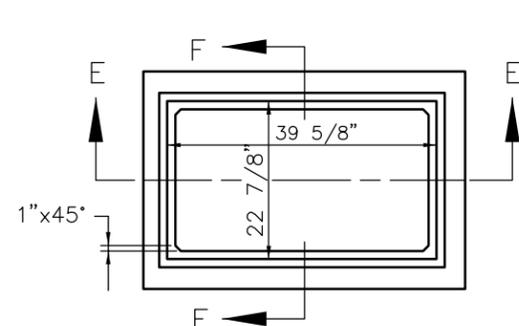
SECTION C-C



SECTION D-D

PLAN - GRATE

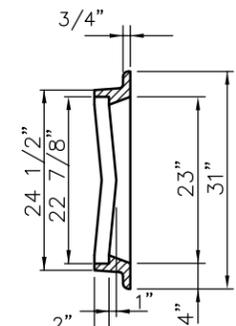
APPROXIMATE WEIGHT 235 LBS.



SECTION E-E

DEETER #2501 CATCH BASIN
FRAME AND GRATE

APPROXIMATE WEIGHT 295 LBS.



SECTION F-F

QUANTITIES
(FOR ESTIMATING ONLY)

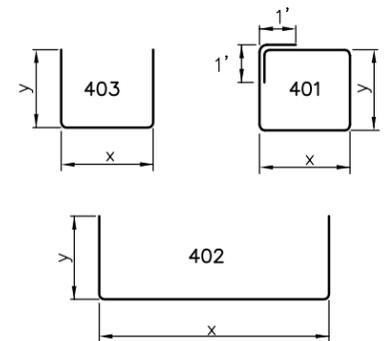
H	CONCRETE (CU. YDS)	REINFORCING STEEL Ø (LBS)	NO. OF 401 BARS REQ'D.
3'-0"	1.3	72	4
3'-6"	1.5	76	4
4'-0"	1.6	90	5
4'-6"	1.8	104	6
5'-0"	1.9	109	6
5'-6"	2.1	122	7
6'-0"	2.2	136	8
6'-6"	2.4	141	8
7'-0"	2.5	154	9
7'-6"	2.7	168	10
8'-0"	2.8	173	10
8'-6"	3.0	187	11
9'-0"	3.1	200	12
9'-6"	3.3	205	12
10'-0"	3.4	219	13

Ø INCLUDES 1% FOR OVERRUN
NOTE: CONCRETE QUANTITIES INCLUDE VOLUME OCCUPIED BY PIPE

BAR LIST FOR H=3'-0"

MARK	NO. REQ'D.	DIMENSIONS		LENGTH
		X	Y	
401	4	3'-6"	2'-2"	13'-4"
402	2	3'-4 1/2"	2'-6 1/2"	8'-5 1/2"
402	5	2'-0 1/2"	2'-7"	7'-2 1/2"

*ADD 6" TO THIS DIMENSION FOR EACH 6" INCREASE OF "H" OVER 3'-0"



ALL DIMENSIONS ARE OUT-TO-OUT BAR BENDING DIAGRAM

TYPE "13" GRATE
FRAME - #2501-A NEENAH / DEETER
FOUNDRY, INC., OR EQUAL

DATE	REVISIONS DESCRIPTION
4-3-00	SEE GENERAL NOTES
4-26-00	GRATE CHANGE, TYPE "L" VANE TO DEETER #2501-A
7-12-00	GRATE AND FRAME CHANGE
09-16-04	CLARIFY DRAWING ADD STAMP SLOPE INLET FLOORS
3-31-07	+ UPDATE DETAIL
06-03-08	= UPDATE DETAIL

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

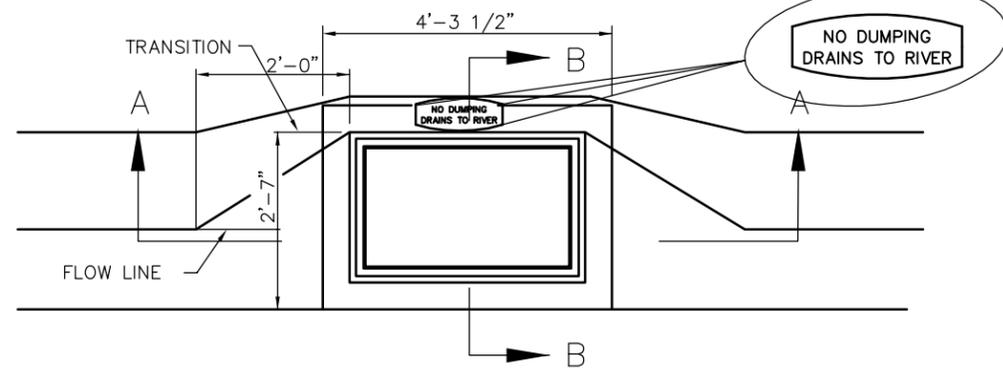


GRATED INLET TYPE 13
(FOR VERTICAL FACE CURB)
DETAIL 7-3A

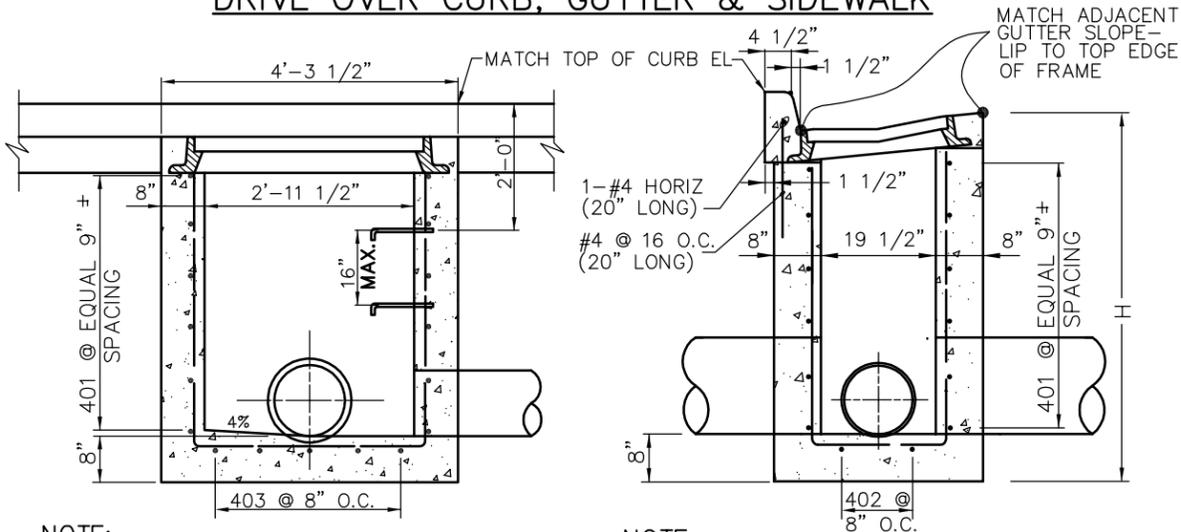
DATE: JUNE 2008

SCALE: N.T.S.

- +1. CONTRACTOR SHALL IMPRINT THE PLASTIC CONCRETE W/ CITY SUPPLIED STAMP AS SHOWN.
- 2. FINAL IMPRESSION SHALL BE CLEAR AND LEGIBLE AND FREE OF ANY AGGREGATE AND DEBRIS.
- 3. STAMP SUPPLIED BY CITY STORMWATER DIVISION (970) 336-4073 OR (970) 336-4074.



**PLAN OF TYPE 13 INLET
DRIVE OVER CURB, GUTTER & SIDEWALK**



NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

NOTE:
1. SLOPE INLET FLOORS TOWARD PIPES A MIN. OF 2% SO THEY WILL DRAIN COMPLETELY.

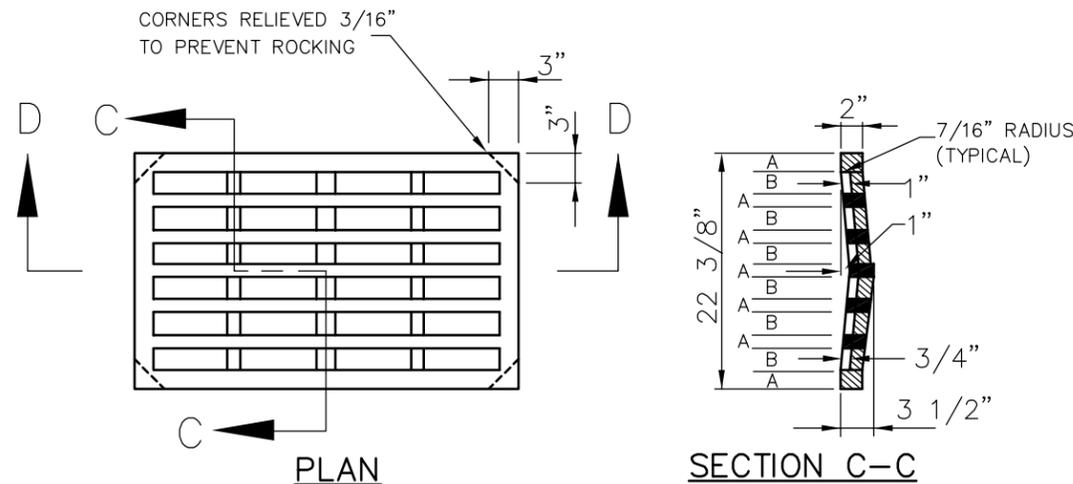
SECTION A-A

SECTION B-B

GENERAL NOTES

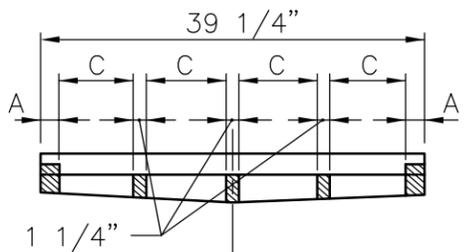
- +1. CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MGPEC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.
- 2. INLET MAY BE CAST-IN-PLACE OR PRECAST. CAST-IN-PLACE CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES.
- 3. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- 4. REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
- 5. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- 6. ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION-712.06. GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.
- 7. SEE PLAN DETAILS FOR LOCATION AND SIZE OF PIPE.
- + 8. INLET STRUCTURES SHALL NOT BE CONSTRUCTED UNTIL THE CURB AND GUTTER HAS BEEN INSTALLED, OR CONTRACTOR STAKES THE CURB & GUTTER FOR 100' ON EACH SIDE OF INLET. CONTRACTOR MUST ALSO STAKE INLET BOX CORNERS.
- 9. A MULTIPLE TYPE 13 INLET SHALL BE CONSTRUCTED THE SAME AS A MULTIPLE TYPE 3 INLET MINUS THE CURB OPENING DETAILS.
- + 10. MINIMUM REBAR SPLICE LENGTH SHALL BE 10".

REVISIONS	
DATE	DESCRIPTION
4-3-00	SEE GENERAL NOTES
4-26-00	GRATE CHANGE, TYPE "L" VANE TO DEETER #2501-A GRATE AND FRAME CHANGE
7-12-00	CLARIFY DRAWING ADDED STAMP SLOPE INLET FLOORS
09-16-04	+ UPDATE DETAIL
3-31-07	= UPDATE DETAIL
06-03-08	



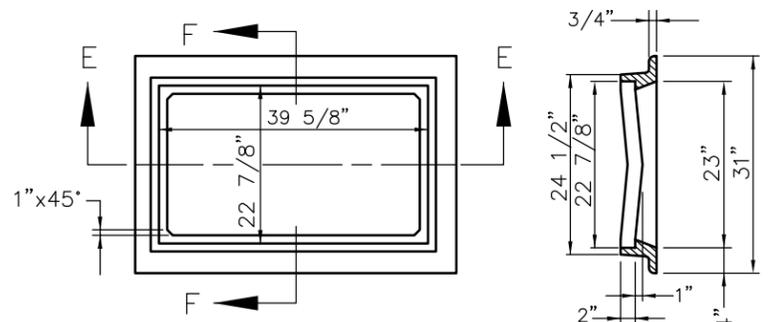
PLAN

SECTION C-C



**SECTION D-D
PLAN - GRATE**
APPROXIMATE WEIGHT 235 LBS.

A = 1 3/4" MIN.
B = 1 3/4" MAX
C = 8" MAX



**SECTION E-E
DEETER #2501-A CATCH BASIN
FRAME AND GRATE**
APPROXIMATE WEIGHT 295 LBS.

SECTION F-F

**QUANTITIES
(FOR ESTIMATING ONLY)**

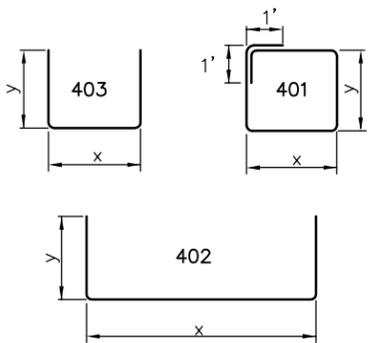
H	CONCRETE (CU. YDS)	REINFORCING STEEL Ø (LBS)	NO. OF 401 BARS REQ'D.
3'-0"	1.3	72	4
3'-6"	1.5	76	4
4'-0"	1.6	90	5
4'-6"	1.8	104	6
5'-0"	1.9	109	6
5'-6"	2.1	122	7
6'-0"	2.2	136	8
6'-6"	2.4	141	8
7'-0"	2.5	154	9
7'-6"	2.7	168	10
8'-0"	2.8	173	10
8'-6"	3.0	187	11
9'-0"	3.1	200	12
9'-6"	3.3	205	12
10'-0"	3.4	219	13

Ø INCLUDES 1% FOR OVERRUN
NOTE: CONCRETE QUANTITIES INCLUDE VOLUME OCCUPIED BY PIPE

BAR LIST FOR H=3'-0"

MARK	NO. REQ'D.	DIMENSIONS		LENGTH
		X	Y	
401	4	3'-6"	2'-2"	13'-4"
402	2	3'-4 1/2"	*2'-6 1/2"	8'-5 1/2"
402	5	2'-0 1/2"	*2'-7"	7'-2 1/2"

*ADD 6" TO THIS DIMENSION FOR EACH 6" INCREASE OF "H" OVER 3'-0"



ALL DIMENSIONS ARE OUT-TO-OUT BAR
BENDING DIAGRAM

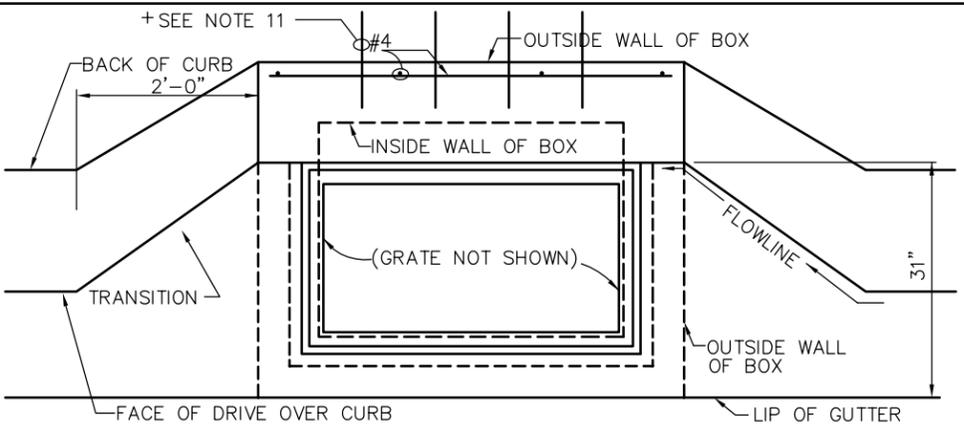
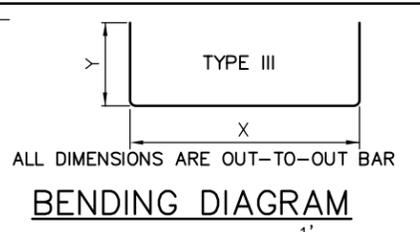
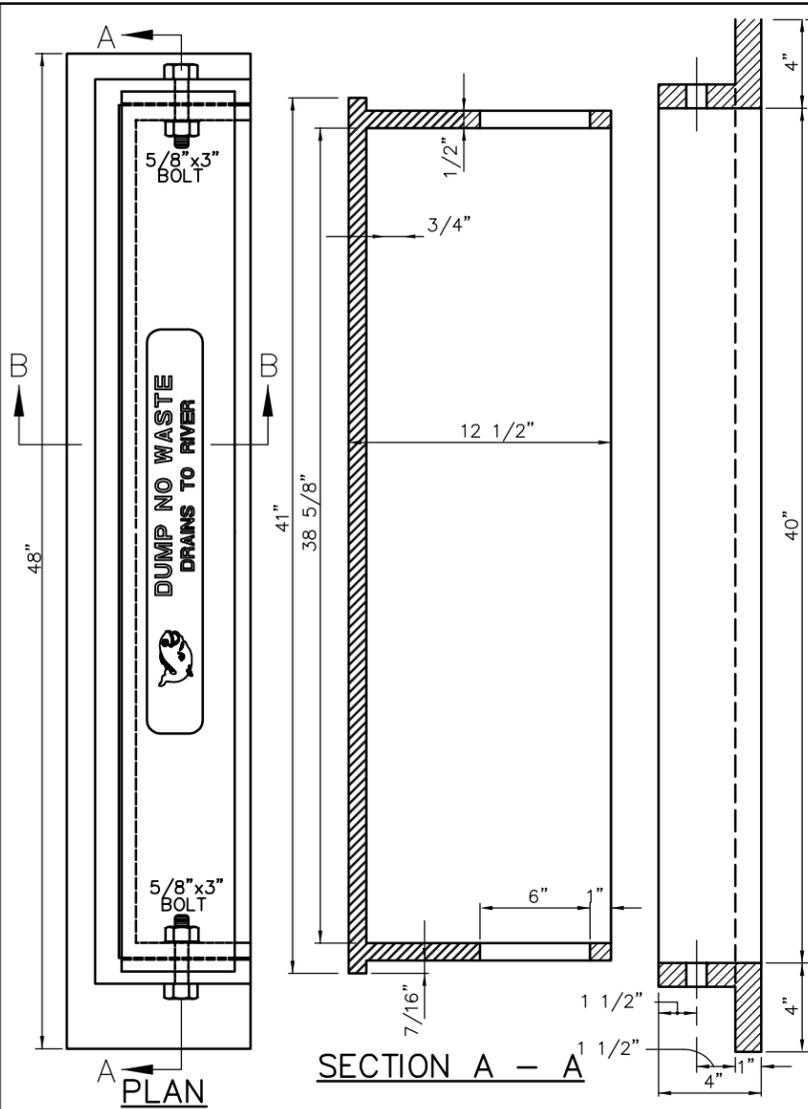
TYPE "13" GRATE
FRAME - #2501-A NEENAH / DEETER
FOUNDRY, INC., OR EQUAL

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.



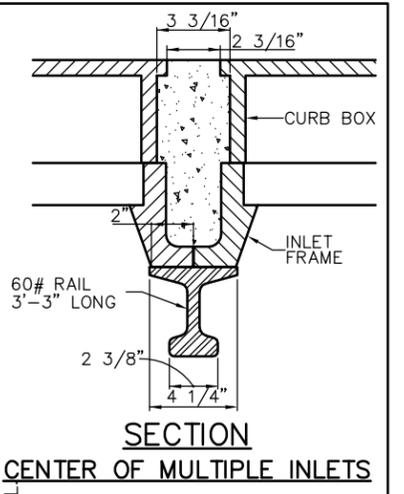
**GRATED INLET TYPE 13
(FOR DRIVE OVER CURB)
DETAIL 7-3B**

DATE: JUNE 2008 SCALE: N.T.S.

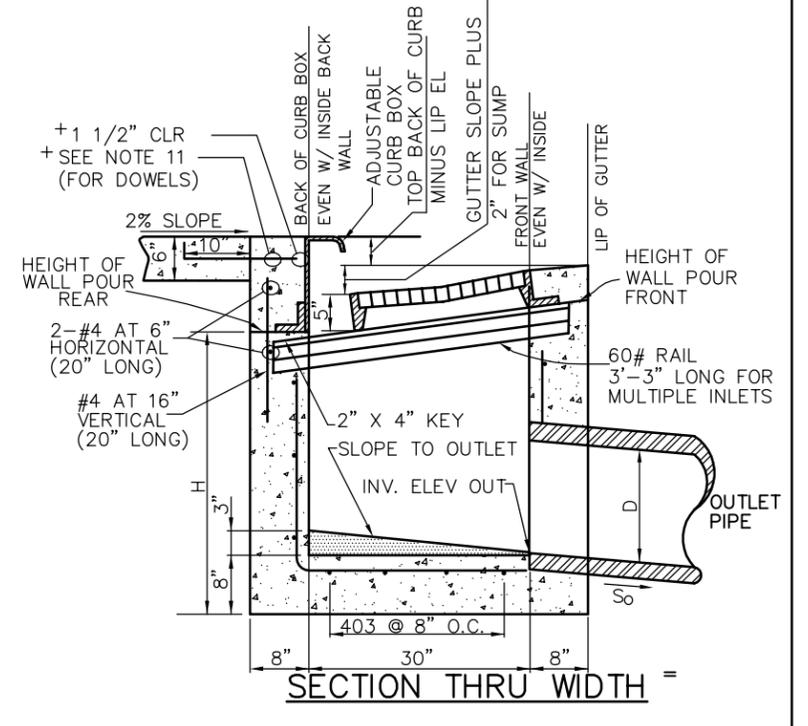
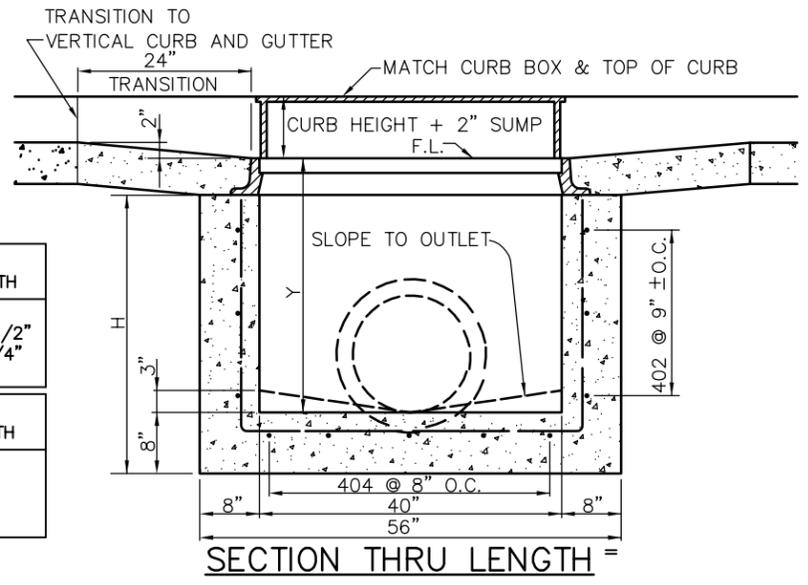
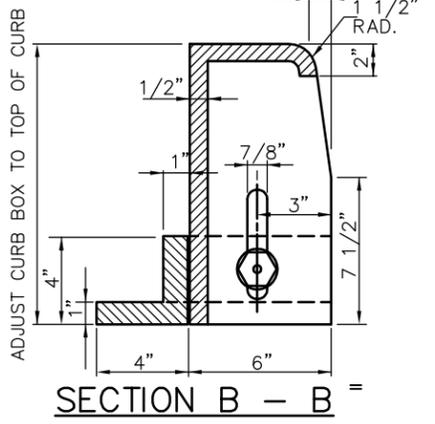


BAR QUANTITIES

H	NO. OF 402 BARS REQ'D.
3'-0"	3
3'-6"	4
4'-0"	4
4'-6"	5
5'-0"	6
5'-6"	6
6'-0"	7
6'-6"	8
7'-0"	8
7'-6"	9
8'-0"	10
8'-6"	10
9'-0"	11
9'-6"	12
10'-0"	12



DEETER NO. 2502-A SINGLE, CURB INLET FRAME, GRATE, CURB & PARTIAL FRAME
PLAN OF TYPE 3 INLET/DRIVE OVER CURB, GUTTER & SIDEWALK

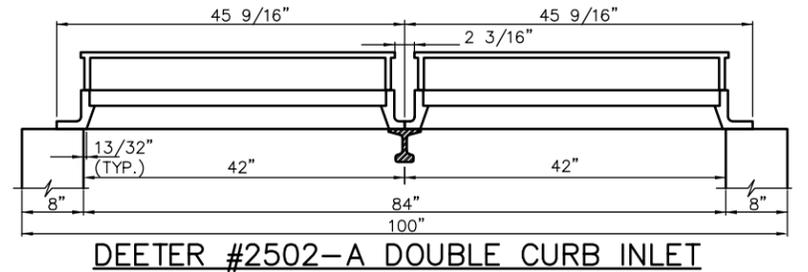


BAR LIST FOR H=3'-0"

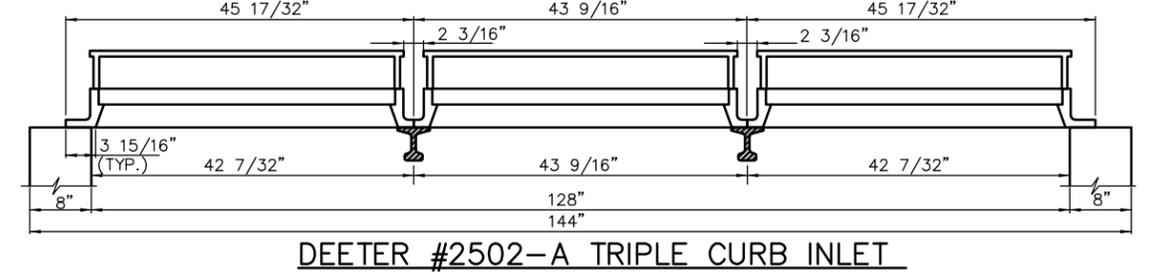
MARK	TYPE	NO. REQ'D	TYPE 3 INLET DIMENSIONS		LENGTH
			X	Y	
401	I	4	1'-0"	1'-0"	2'-0"
402	II	3	3'-7 1/4"	2'-10 1/2"	14'-11 1/2"
403	III	2	3'-5 3/4"	2'-0 1/2"	7'-6 3/4"
404	III	4	2'-9"	2'-1"	6'-11"

MARK	TYPE	NO. REQ'D	TYPE 3 DOUBLE INLET DIMENSIONS		LENGTH
			X	Y	
401	I	7	1'-0"	1'-0"	2'-0"
402	II	3	7'-2 1/2"	2'-10 1/2"	22'-2"
403	III	2	7'-1"	2'-0 1/2"	11'-2"
404	III	8	2'-9"	2'-1"	6'-11"

*ADD 6" TO THIS DIMENSION FOR EACH 6" INCREASE OF "H" OVER 3'-0"



DEETER #2502-A DOUBLE CURB INLET



DEETER #2502-A TRIPLE CURB INLET

# OF INLETS	STD. DEPTH (Y)	MIN Ø (D)	MIN. SLOPE S ₀	FRAME AND GRATE
SINGLE	3'-6"	18"	1.00%	FRAME AND GRATE
DOUBLE	4'-0"	18"	1.80%	FRAME AND GRATE SHALL BE A
TRIPLE	4'-6"	21"	1.80%	DEETER 2502-A OR EQUAL

GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF GREELEY DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS.
- CONCRETE SHALL MEET OR EXCEED METROPOLITAN GOVERNMENT ENGINEERING COUNCIL (MGPEC) SPECIFICATIONS, ITEM 11, PORTLAND CEMENT CONCRETE PAVEMENT; SECTION 11.2, MATERIALS.
- ALL CONCRETE SHALL BE FORMED ON BOTH SIDES.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- ALL GRATINGS, FRAMES, RINGS AND COVERS SHALL BE CAST IRON.
- REINFORCING BARS SHALL BE DEFORMED, GRADE 60, PER ASTM A615, AND SHALL HAVE A 2" MINIMUM CLEARANCE.
- BARS MAY BE BENT OR CUT AT CULVERT ENTRANCES.
- ALL CULVERTS SHALL BE SMOOTHLY GROUTED INTO THE WALLS OF THE BOX.
- FOR INLETS WHERE H IS LESS THAN 3'-0", REINFORCING IS STILL REQUIRED AS DIRECTED BY THE ENGINEER. INLET FRAMES SHOWN ARE FOR SINGLE INLETS. ONLY DOUBLE INLETS REQUIRE FRAMES WITH CLIPPED FLANGES WHERE THE TWO FRAMES ABUT.
- INLET STRUCTURES SHALL NOT BE CONSTRUCTED UNTIL THE CURB AND GUTTER HAS BEEN INSTALLED, OR CONTRACTOR STAKES THE CURB & GUTTER FOR 100' ON EACH SIDE OF INLET. CONTRACTOR MUST ALSO STAKE INLET BOX CORNERS.
- ADD (4) #4 REBARS-16 INCHES LONG (MIN) EQUALLY SPACED AND 6" AT MID-DEPTH INTO THE TYPE 3 INLET CONCRETE & 10" AT MID-DEPTH INTO EACH SIDEWALK SECTION ADJACENT TO THE INLET (TYP L=5'). 4 ADDITIONAL BARS ARE REQUIRED FOR EACH 5' OF LENGTH ADDED FOR DOUBLE OR TRIPLE INLET.
- ALL GRATINGS AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION-712.06. GRATINGS AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.
- MINIMUM CURB OPENING AREA = 150 SQ. IN.
- MINIMUM REBAR SPLICE LENGTH SHALL BE 10".

REVISIONS

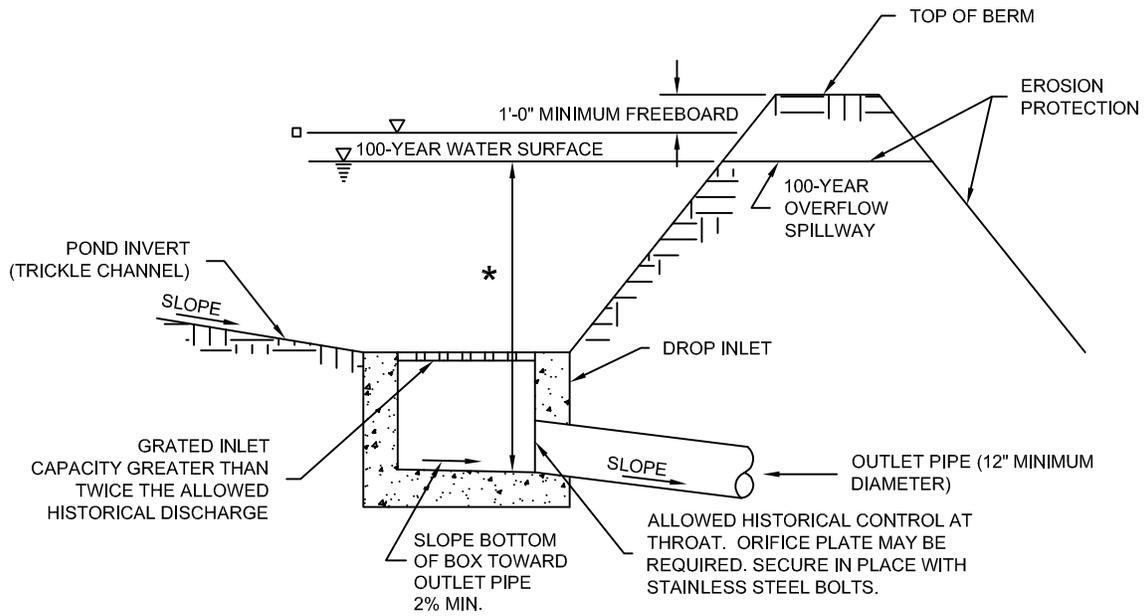
DATE	DESCRIPTION
7-12-00	ADDED FRAME DETAILS
9-16-04	CLARIFIED DWG. GEN. NOTES
3-31-07	+ UPDATE DETAIL
6-03-08	= UPDATE DETAIL

CALL UTILITY NOTIFICATION
 CENTER OF COLORADO
1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES.

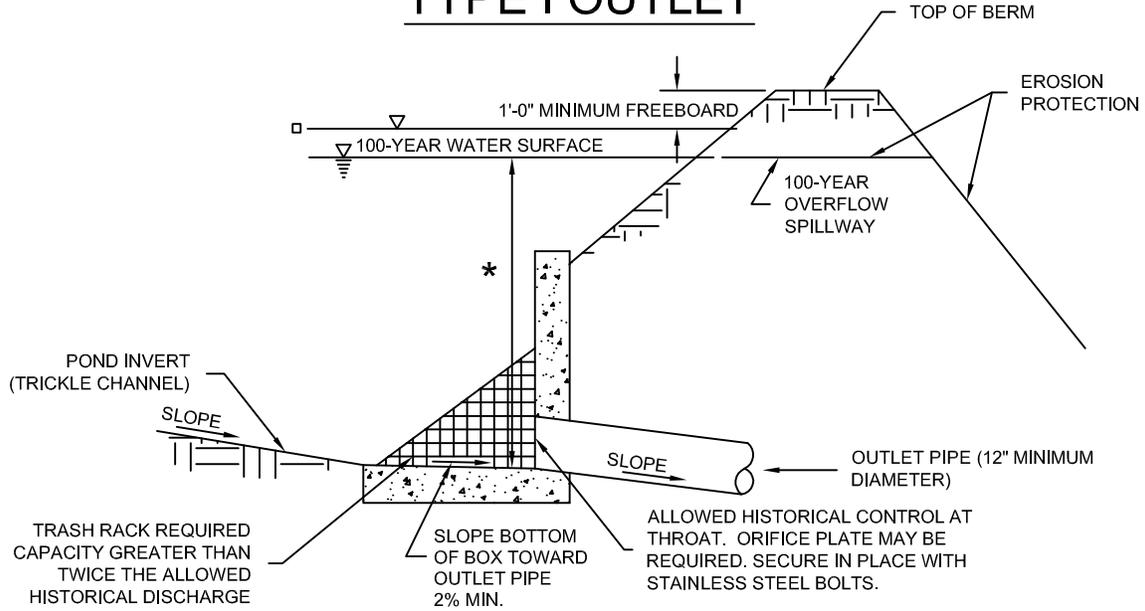


**COMBINATION INLET TYPE 3
 (FOR DRIVE OVER CURB)**
 DETAIL 7-4B

DATE: JUNE 2008 SCALE: N.T.S.



TYPE I OUTLET



TYPE II OUTLET

NOTES:

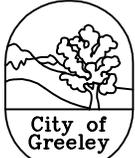
1. PROVIDE AT LEAST A $\frac{3}{8}$ " THICK ORIFICE PLATE. ORIFICE PLATE SHALL BE HOT DIPPED GALVANIZED COATED.
2. ALL STEEL TRASH RACKS SHALL BE HOT DIPPED GALVANIZED COATED.
3. A TRASH RACK SHALL BE ABLE TO CARRY A MINIMUM LOAD (LIVE LOAD) EQUAL TO 250 LB/FT² OR TWICE THE HYDRAULIC LOADING PLACED ON THE TRASH RACK DURING A CLOGGED CONDITION AT THE 100-YR WATER SURFACE ELEVATION, WHICH EVER IS GREATER.

* HEADWATER FOR ALLOWABLE HISTORIC DISCHARGE

□ WATER SURFACE ELEVATION WHEN WATER IS FLOWING OVER THE SPILLWAY DURING A 100-YEAR STORM EVENT DURING A PLUGGED ORIFICE CONDITION.

REVISIONS

3/28/07 + UPDATE DETAIL



City of
Greeley
Public Works
Department

CALL UTILITY NOTIFICATION
CENTER OF COLORADO

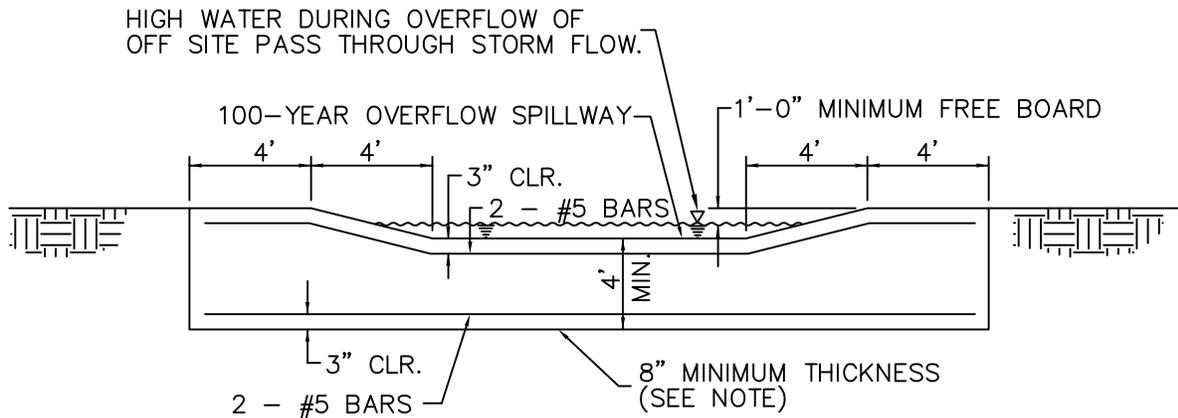
1-800-922-1987

CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

TYPE I AND TYPE II
OUTLET DETAILS
DETAIL 11-3

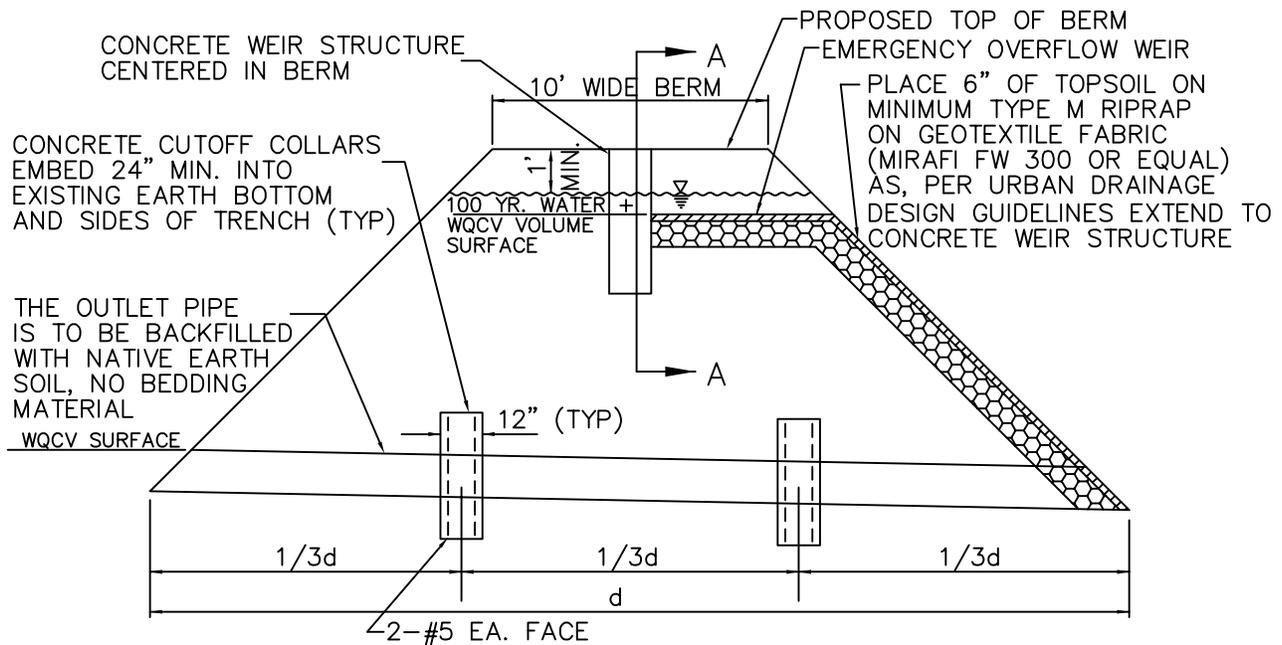
DATE: MARCH 2007

SCALE: N.T.S.



NOTE:
 TRENCH FOR WEIR OUTLET STRUCTURE USING NATIVE GROUND AS FORM WORK. CONSTRUCT WEIR 8" MINIMUM THICKNESS. UPON COMPLETION OF TRENCHING, PLACE TEMPERATURE STEEL AND CONCRETE IMMEDIATELY, FORM TOP 4".

SECTION A - A
CONCRETE WEIR OVERFLOW STRUCTURE



DETAIL A
OUTLET AND SPILLWAY DETAILS

REVISIONS	
3/31/07	+ UPDATE DETAIL



Public Works
 Department

CALL UTILITY NOTIFICATION
 CENTER OF COLORADO
1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES.

**OUTLET AND SPILLWAY
 DETAILS**
 DETAIL 11-7

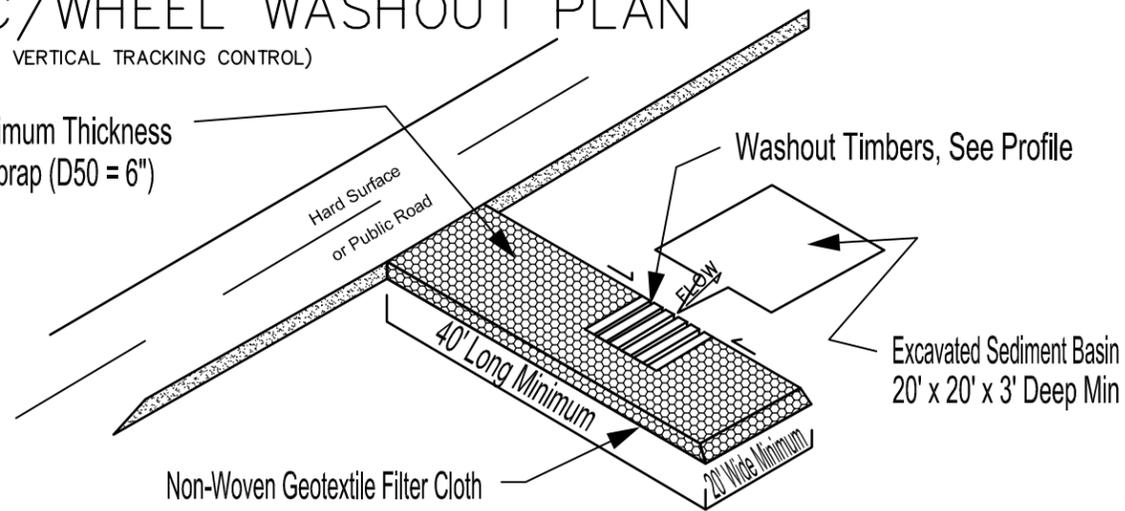
DATE: MARCH 2007

SCALE: N.T.S.

VTC/WHEEL WASHOUT PLAN

(VTC = VERTICAL TRACKING CONTROL)

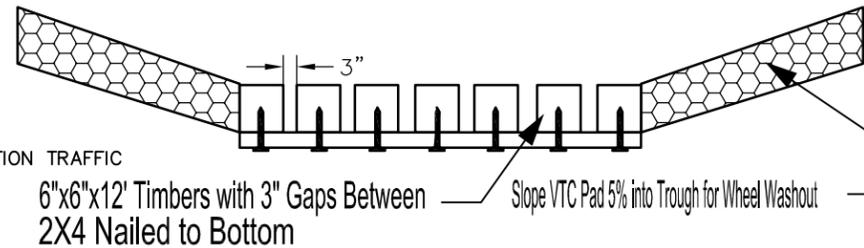
9" Minimum Thickness
VL Riprap (D50 = 6")



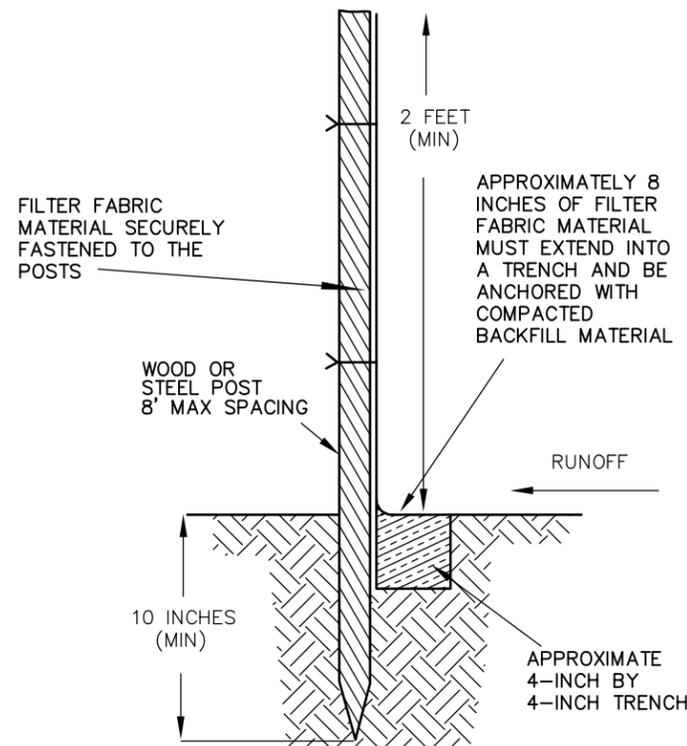
NOTES:

1. CONTRACTOR TO SUPPLY WASH WATER
2. WASHOUT BASIN TO BE ISOLATED FROM STORM SYSTEM
3. VTC PAD RIP RAP TO BE CLEANED OF MUD AFTER RAIN EVENTS
4. PUBLIC ROADS TO BE CLEANED OF DEBRIS AT THE END OF EACH DAYS WORK OR AFTER RAIN EVENTS, AS NEEDED.
5. WHEEL WASHOUT TIMBERS REQUIRED ONLY ON EXIT SIDE OF PAD, SECURE TIMBER GAP WITH 2X4 NAILED TO BOTTOM OF TIMBERS EACH END
6. VTC PAD TO BE DELINEATED TO ENSURE USE BY CONSTRUCTION TRAFFIC

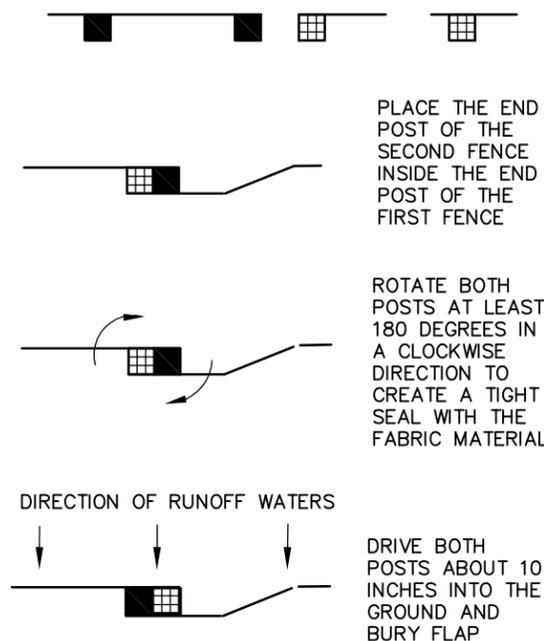
WASHOUT PROFILE



SILT FENCE INSTALLATION



ATTACHING TWO SILT FENCES



GENERAL EROSION CONTROL NOTES

CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT AND EROSION CONTROL DEVICES INCLUDING, BUT NOT LIMITED TO, SILT FENCE, INLET PROTECTION, VTC PAD, WHEEL WASHOUT, AND SEDIMENT BASINS BEFORE COMMENCING ANY LAND CLEARING OR GRADING ACTIVITIES. THE CONTRACTOR SHALL LIMIT TOPSOIL STRIPPING OPERATIONS TO WITHIN THE AREAS IN WHICH THEY WILL BE IMMEDIATELY WORKING. THE CONSTRUCTION OF UNDERGROUND UTILITIES SHALL BE INCLUDED AS A LAND DISTURBING ACTIVITY. ALL EXCAVATED MATERIAL SHALL BE PLACED WHERE SEDIMENT WILL ERODE BACK INTO THE TRENCH. ALL TRENCHES SHALL BE BACKFILLED BY THE END OF THE DAYS WORK; BACKFILL SHALL BE PERMANENTLY STABILIZED BEFORE CONSTRUCTION IS CONSIDERED COMPLETE.

ALL DISTURBED AREAS AND SOIL STOCKPILES SHALL BE ADEQUATELY STABILIZED AS DEFINED IN THE URBAN DRAINAGE FLOOD CONTROL DISTRICT (UDFCD), VOLUME 3, CONSTRUCTION BEST MANAGEMENT PRACTICES, SECTION 3.0 "EROSION CONTROL". ALL DISTURBED SOILS AND SOIL STOCKPILES SHALL BE WATERED AND MAINTAINED IN A ROUGHENED CONDITION AT ALL TIMES DURING CONSTRUCTION ACTIVITIES TO PREVENT WIND-CAUSED EROSION. ALL LAND DISTURBING ACTIVITIES WILL BE IMMEDIATELY DISCONTINUED WHEN FUGITIVE DUST IMPACTS ADJACENT PROPERTIES, AS DETERMINED BY CITY INSPECTOR. PERMANENT OR TEMPORARY NATIVE SEED (SEE EROSION CONTROL STRUCTURES - DETAIL 12-2 FOR SEEDING SPECIFICATIONS) SOIL STABILIZATION SHALL BE REQUIRED WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED. IF DISTURBED AREAS OR STOCKPILES ARE NOT BROUGHT TO FINAL GRADE WITHIN 30 DAYS FOLLOWING THE INITIAL DISTURBANCE, OR RE-DISTURBANCE, TEMPORARY STABILIZATION MEASURES SHALL BE REQUIRED. NO SOIL STOCKPILE SHALL EXCEED TEN (10) FEET IN HEIGHT. ALL SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED A SLOPE OF 4V:1H.

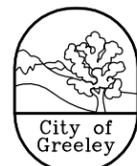
ALL STORM SEWER INLETS SHALL BE PROTECTED FROM THE ENTRY OF SEDIMENT-LADEN WATER. HAY BALES ARE NOT RECOGNIZED BY THE CITY OF GREELEY AS AN ACCEPTABLE FORM OF EROSION CONTROL.

INSPECTION OF ALL EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REQUIRED AT THE END OF EACH DAY'S WORK, WITH NECESSARY MAINTENANCE AND REPAIRS PROVIDED IMMEDIATELY. THE CITY OF GREELEY INSPECTOR SHALL, AT THEIR DISCRETION, REQUIRE ANY EROSION CONTROL DEVICES BE REPAIRED, REPLACED, RELOCATED, MODIFIED, OR REMOVED. SUCH REQUESTS SHALL BE COMPLETED WITHIN 5 WORKING DAYS FOLLOWING RECEIPT OF THE WRITTEN REQUEST FROM THE INSPECTOR. ALL PUBLIC RIGHT OF WAY POLLUTED WITH DIRT, MUD, OR DEBRIS SHALL BE SWEEPED CLEAN AT THE END OF EACH DAYS WORK OR AFTER STORM EVENTS, AS NECESSARY. ALL TEMPORARY AND PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AS SOON AS THEIR FUNCTION HAS BEEN FULFILLED. SEDIMENT TRAPS/BASINS SHALL BE CLEANED AND REMOVED, OR STABILIZED, WHEN ALL UPSTREAM AREAS ARE PERMANENTLY STABILIZED. THE SITE CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OFF ALL SILT FROM THE SITE, IF IT IS NOT REUSABLE ON SITE.

THE LANDOWNER SHALL BE HELD RESPONSIBLE FOR THE LONG-TERM STABILITY OF CUT AND FILL SLOPES AND THE SUCCESSFUL ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOIL AS DEFINED IN THE UDFCD, VOLUME 3, CONSTRUCTION BEST MANAGEMENT PRACTICES, SECTION 3.2 "MULCHING".

ALL CONSTRUCTION SUPPLIES OR MATERIALS USED OR STORED ON SITE MUST BE DISPOSED OF PROPERLY AND MUST MEET ALL APPLICABLE MATERIAL SAFETY DATA SHEET CRITERIA.

THE STATE STORMWATER DISCHARGE PERMIT HOLDER MAY BE LIABLE FOR ANY VIOLATIONS RESULTING FROM THE ACTIONS TAKEN BY SITE CONTRACTORS, SUBCONTRACTORS, MAINTENANCE CREWS, ETC.



Public Works
Stormwater Management

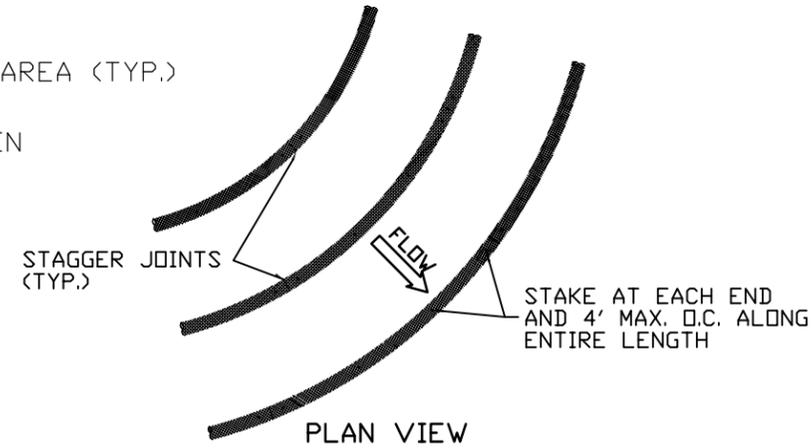
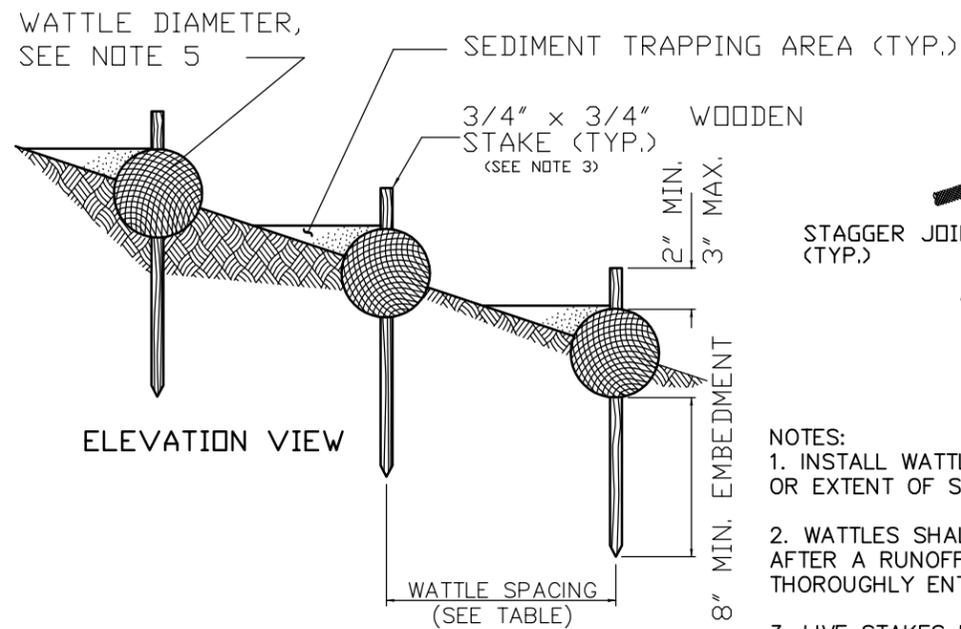
EROSION CONTROL STRUCTURES

DETAIL 12-1

DATE: MARCH 2007

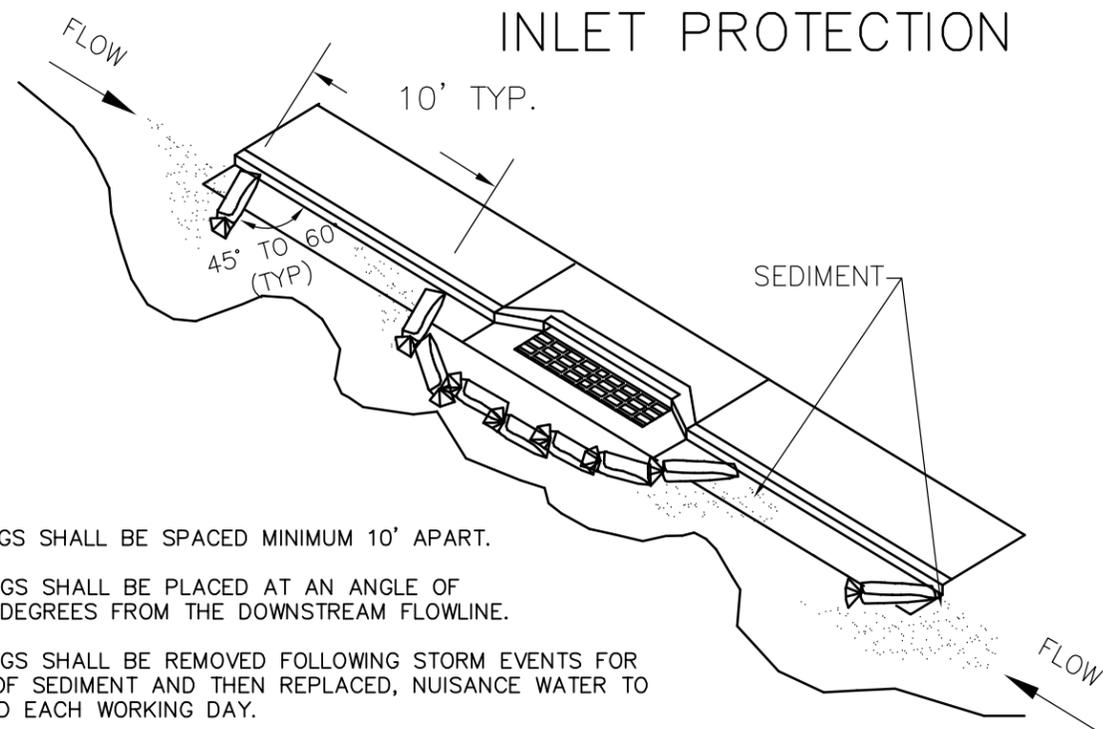
SCALE: N.T.S.

SLOPE AND SWALE PROTECTION



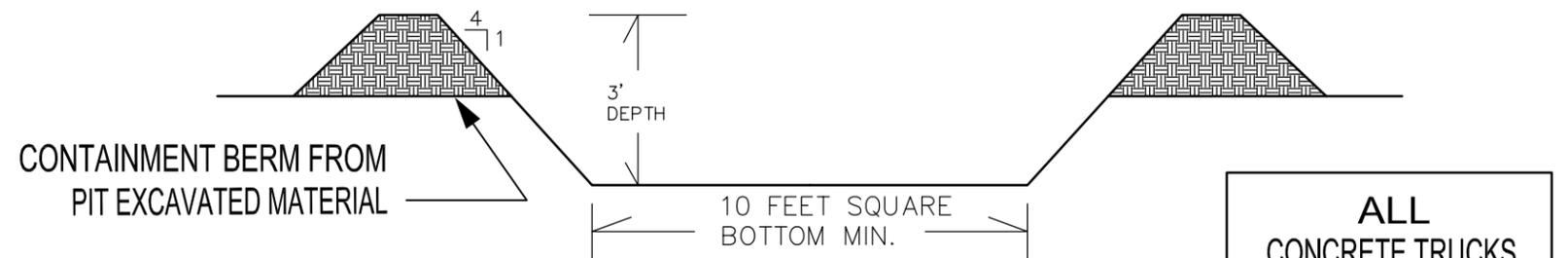
WATTLE SPACING TABLE	
SLOPE TYPE	MAXIMUM SPACING
ALL SWALES	20 FEET
4:1 SLOPE OR >	40 FEET

- NOTES:
1. INSTALL WATTLES ALONG CONTOURS, FULL LENGTH OF SLOPE OR EXTENT OF SWALE.
 2. WATTLES SHALL BE INSPECTED REGULARLY AND IMMEDIATELY AFTER A RUNOFF PRODUCING RAINFALL TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH THE SOIL.
 3. LIVE STAKES MAY BE USED FOR PERMANENT INSTALLATIONS.
 4. INSTALL WATTLES SNUGLY INTO THE TRENCH (4" DEEP). ABUT ADJACENT WATTLES TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS.
 5. WATTLES TO BE 9" MIN DIAMETER FOR SLOPES, 12" MIN DIAMETER FOR SWALES.



- NOTES:
1. SANDBAGS SHALL BE SPACED MINIMUM 10' APART.
 2. SANDBAGS SHALL BE PLACED AT AN ANGLE OF 45 TO 60 DEGREES FROM THE DOWNSTREAM FLOWLINE.
 3. SANDBAGS SHALL BE REMOVED FOLLOWING STORM EVENTS FOR REMOVAL OF SEDIMENT AND THEN REPLACED, NUISANCE WATER TO BE DRAINED EACH WORKING DAY.
 4. BACK OF INLET MAY REQUIRE PROTECTION IF SUBJECT TO CROSS-SIDEWALK FLOWS.

CONCRETE TRUCK WASHOUT PIT PROFILE



- NOTES:
1. PIT TO BE MAINTAINED AND UTILIZED UNTIL ALL CONCRETE WORK IS COMPLETED, INCLUDING ALL FOUNDATION AND FLATWORK. RELOCATED PITS SHALL MEET THIS STANDARD.
 2. PIT TO BE PERMANENTLY SIGNED TO ALERT DRIVERS OF ITS LOCATION
 3. SET CONCRETE TO BE BROKEN UP AND DISPOSED OF PROPERLY OFF SITE PER LOCAL, STATE, AND FEDERAL LAWS.
 4. WASHOUT PITS THAT ARE SEPARATED FROM A PAVED SURFACE MAY REQUIRE A VTC PAD TO PROTECT STREETS FROM TRACKING OF DIRT.

*SIGN: 2' Tall x 3' Wide on 4' Tall Post, 6"x2" Lettering



Public Works
Stormwater Management

EROSION CONTROL STRUCTURES

DETAIL 12-2

DATE: MARCH 2007

SCALE: N.T.S.