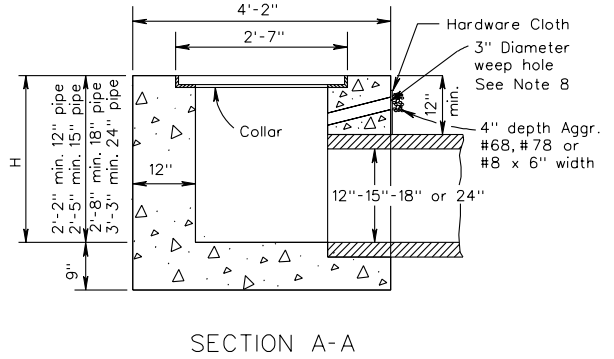
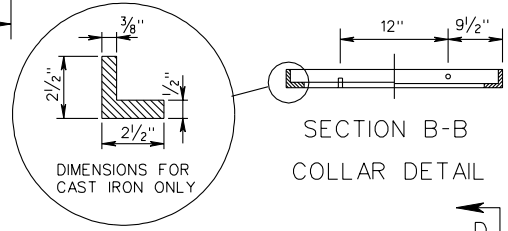
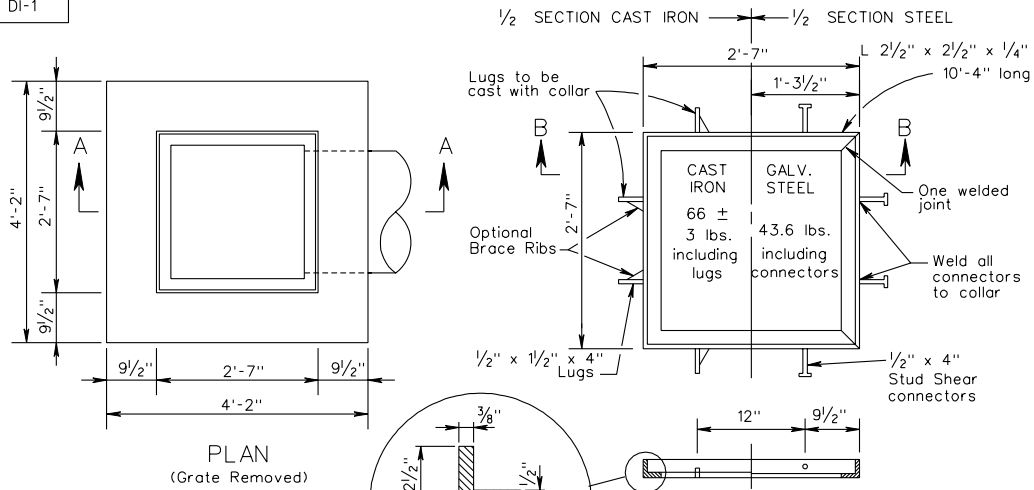
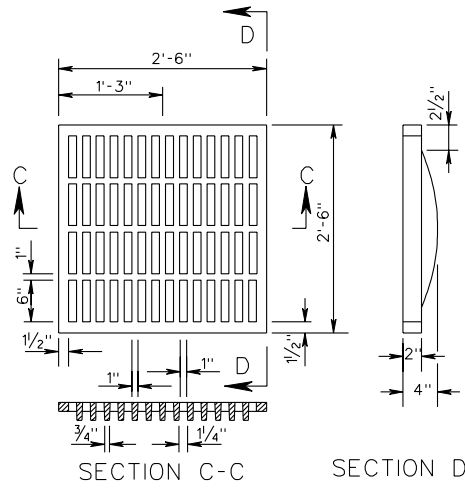


DI-1



CONCRETE QUANTITIES FOR MIN. DEPTH

- 12" concrete pipe - 1.440 Cu. Yds. Concrete
 - 15" concrete pipe - 1.528 Cu. Yds. Concrete
 - 18" concrete pipe - 1.620 Cu. Yds. Concrete
 - 24" concrete pipe - 1.817 Cu. Yds. Concrete
- Add 0.469 Cu. Yds. per additional foot of depth.



GRATE DETAIL

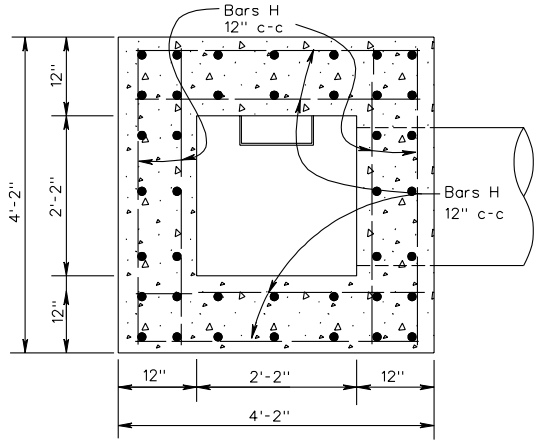
APPROXIMATE WEIGHT
Cast Iron
Grate 363 ± 18 lbs

NOTES

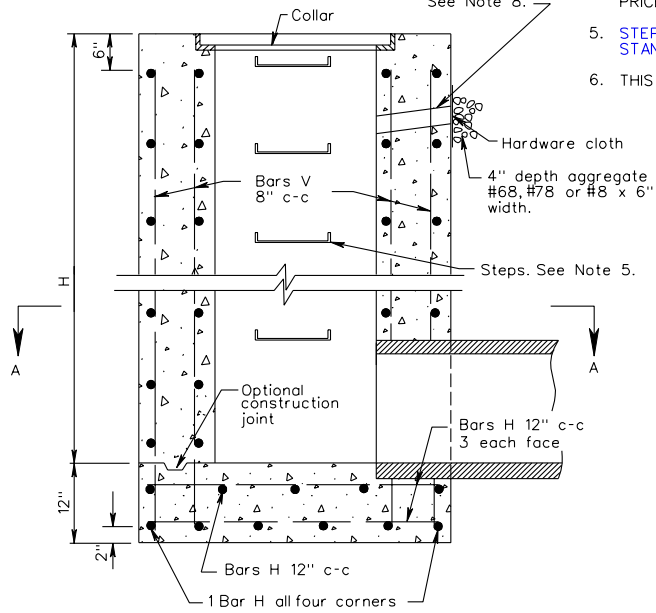
1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 10' USE STANDARD DI-1A
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO INLET SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2"x4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE WITH 12"x12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. CAST IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
10. ANY ALTERNATE METHODS OF ANCHORAGE MEETING THE APPROVAL OF THE ENGINEER MAY BE SUBSTITUTED FOR THE CAST IRON LUGS AS SHOWN HEREON.

STANDARD DROP INLET
12" - 24" PIPE: MAXIMUM DEPTH (H) = 10'
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
233
302



SECTION A-A



SECTION THROUGH ELEVATION

NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MAXIMUM DEPTH (H) TO BE 20'. FOR DEPTHS LESS THAN 10' USE STANDARD DI-1.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE REQUIRED. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETERS (20").
- IF OPTIONAL CONSTRUCTION JOINT IS USED, IT IS TO BE KEYED.
- FOR DETAILS AND DIMENSIONS, ETC. OF GRATE AND STEEL OR CAST IRON COLLAR SEE STANDARD DI-1.

REINFORCING STEEL SCHEDULE			
MARK	SIZE	NO REQ'D	LENGTH
Bars H	#5	8x(H + 2)	3'-10"
Bars V	#4	40	H + 4"

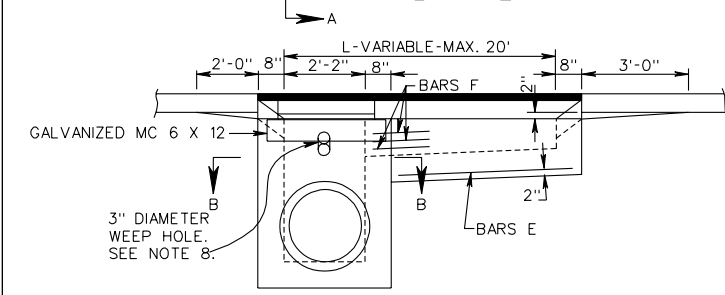
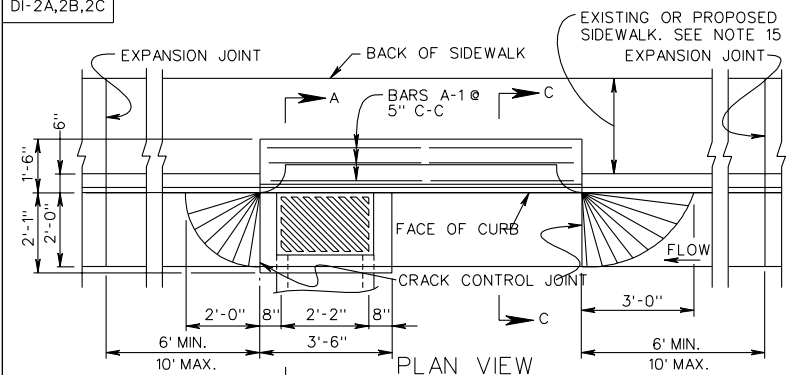
APPROXIMATE QUANTITIES FOR MINIMUM (10') DEPTH		
CONCRETE PIPE DIAMETER	CONCRETE	REINF. STEEL
	Cu. Yds.	Lbs.
12"	5.218	655
15"	5.193	651
18"	5.163	647
24"	5.089	639

Increments to be added for each additional foot of depth (H):
 0.465 Cu. Yds. of concrete
 58.7 Lbs. of reinforcing steel

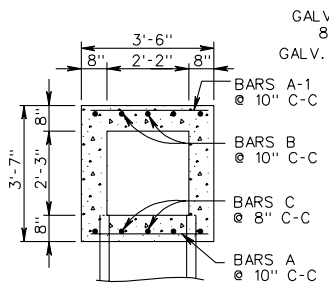
SPECIFICATION REFERENCE
233
302

STANDARD DROP INLET
 12" - 24" PIPE: DEPTH (H) 10' TO 20'
 VIRGINIA DEPARTMENT OF TRANSPORTATION

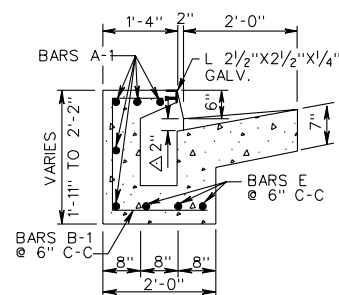
DI-2A,2B,2C



FRONT ELEVATION

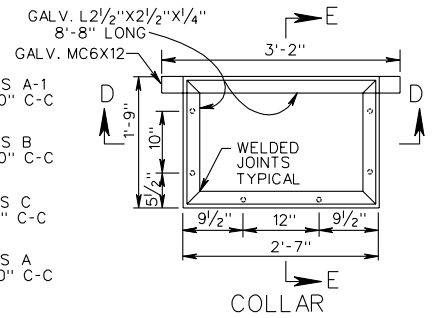


SECTION B-B

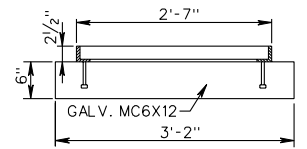


SECTION C-C

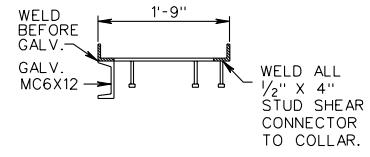
△ DECREASE TO 1" WHEN INLET IS USED WITH MEDIANS.



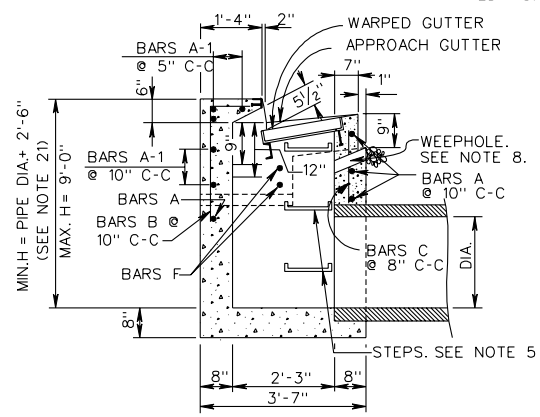
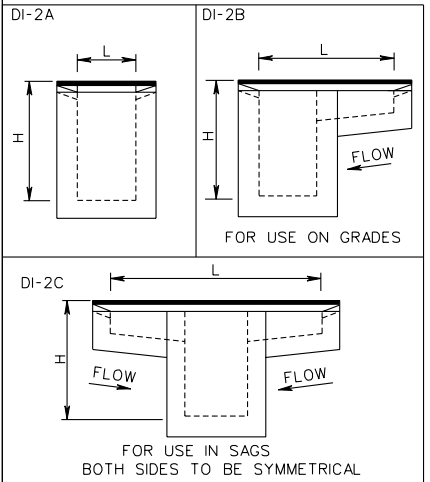
COLLAR



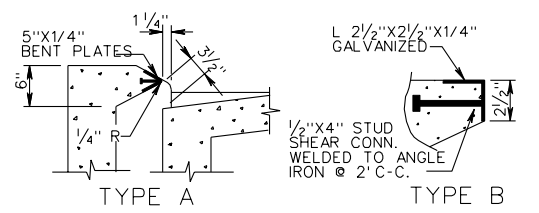
SECTION D-D



SECTION E-E



SECTION A-A FOR STEP DETAILS SEE STD. ST-1.



NOSE DETAILS

TYPE A NOSE DETAIL SHALL BE USED WITH CG-7 STANDARD. TYPE B NOSE DETAIL SHALL BE USED WITH CG-6 STANDARD. GALVANIZED PLATE FOR TYPE A TO BE BENT ON AN ANGLE OF 54° AND IS TO BE ANCHORED WITH 1/2" X 4" STUD SHEAR CONNECTORS WELDED TO BENT PLATE AT 2' C-C.

SHEET 1 OF 2

STANDARD CURB DROP INLET
12" - 24" PIPE: MAXIMUM DEPTH (H) = 9'

VIRGINIA DEPARTMENT OF TRANSPORTATION

104.03

SPECIFICATION REFERENCE

233
302

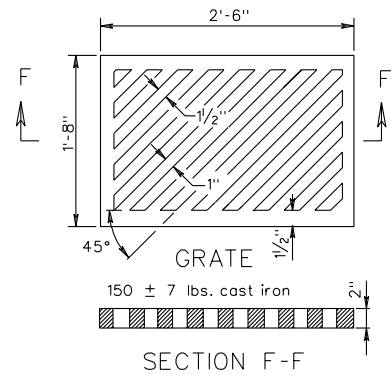
TABLE OF QUANTITIES

DI-2A,2B,2C

TYPE	L	REINFORCING STEEL															WEIGHT Lbs.	
		CONCRETE		BARS A		BARS A-1		BARS B		BARS B-1		BARS C		BARS E		BARS F		
		Ft.	Cu. Yds.	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.		Lin. Ft.*
DI-2A	2'-2"	1.71	4	3'-2"	5	3'-2"	4	3'-6"	-	-	5	2'-0"	-	-	-	1'-6"	55	
DI-2B	4'	1.95	4	3'-2"	5	5'-0"	4	3'-6"	3	4'-3" to 4'-6"	5	2'-0"	3	2'-0"	3	1'-6"	84	
	6'	2.23	4	3'-2"	5	7'-0"	4	3'-6"	7	4'-3" to 4'-6"	5	2'-0"	3	4'-0"	3	1'-6"	119	
	8'	2.51	4	3'-2"	5	9'-0"	4	3'-6"	11	4'-3" to 4'-6"	5	2'-0"	3	6'-0"	3	1'-6"	154	
	10'	2.79	4	3'-2"	5	11'-0"	4	3'-6"	15	4'-3" to 4'-6"	5	2'-0"	3	8'-0"	3	1'-6"	189	
	12'	3.05	4	3'-2"	5	13'-0"	4	3'-6"	19	4'-3" to 4'-6"	5	2'-0"	3	10'-0"	3	1'-6"	224	
	14'	3.34	4	3'-2"	5	15'-0"	4	3'-6"	23	4'-3" to 4'-6"	5	2'-0"	3	12'-0"	3	1'-6"	259	
	16'	3.61	4	3'-2"	5	17'-0"	4	3'-6"	27	4'-3" to 4'-6"	5	2'-0"	3	14'-0"	3	1'-6"	294	
	18'	3.89	4	3'-2"	5	19'-0"	4	3'-6"	31	4'-3" to 4'-6"	5	2'-0"	3	16'-0"	3	1'-6"	329	
20'	4.17	4	3'-2"	5	21'-0"	4	3'-6"	35	4'-3" to 4'-6"	5	2'-0"	3	18'-0"	3	1'-6"	364		
DI-2C	6'	2.24	4	3'-2"	5	7'-0"	4	3'-6"	6	4'-3" to 4'-6"	5	2'-0"	6	2'-1"	6	1'-6"	115	
	8'	2.55	4	3'-2"	5	9'-0"	4	3'-6"	10	4'-3" to 4'-6"	5	2'-0"	6	3'-1"	6	1'-6"	150	
	10'	2.82	4	3'-2"	5	11'-0"	4	3'-6"	14	4'-3" to 4'-6"	5	2'-0"	6	4'-1"	6	1'-6"	185	
	12'	3.09	4	3'-2"	5	13'-0"	4	3'-6"	18	4'-3" to 4'-6"	5	2'-0"	6	5'-1"	6	1'-6"	220	
	14'	3.37	4	3'-2"	5	15'-0"	4	3'-6"	22	4'-3" to 4'-6"	5	2'-0"	6	6'-1"	6	1'-6"	255	
	16'	3.65	4	3'-2"	5	17'-0"	4	3'-6"	26	4'-3" to 4'-6"	5	2'-0"	6	7'-1"	6	1'-6"	290	
	18'	3.93	4	3'-2"	5	19'-0"	4	3'-6"	30	4'-3" to 4'-6"	5	2'-0"	6	8'-1"	6	1'-6"	325	
	20'	4.20	4	3'-2"	5	21'-0"	4	3'-6"	34	4'-3" to 4'-6"	5	2'-0"	6	9'-1"	6	1'-6"	360	

NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"x12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM 1/8" WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
- STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
- THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRU QUANTITIES, FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.28 CUBIC YARDS OF CONCRETE FOR EACH FOOT.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L + 16" AT 4.10 LBS./FT..
- * DENOTES LENGTH OF ONE (1) BAR.
- ALL REINFORCING BARS TO BE #5.
- GRATE TO BE INSTALLED SO SLOTS WILL DIRECT WATER TOWARD THE INLET THROAT.
- MINIMUM HEIGHT = PIPE DIA. + 2'-6" WHEN PIPES ARE LOCATED UNDER EXTENDED SLOT OF INLET.

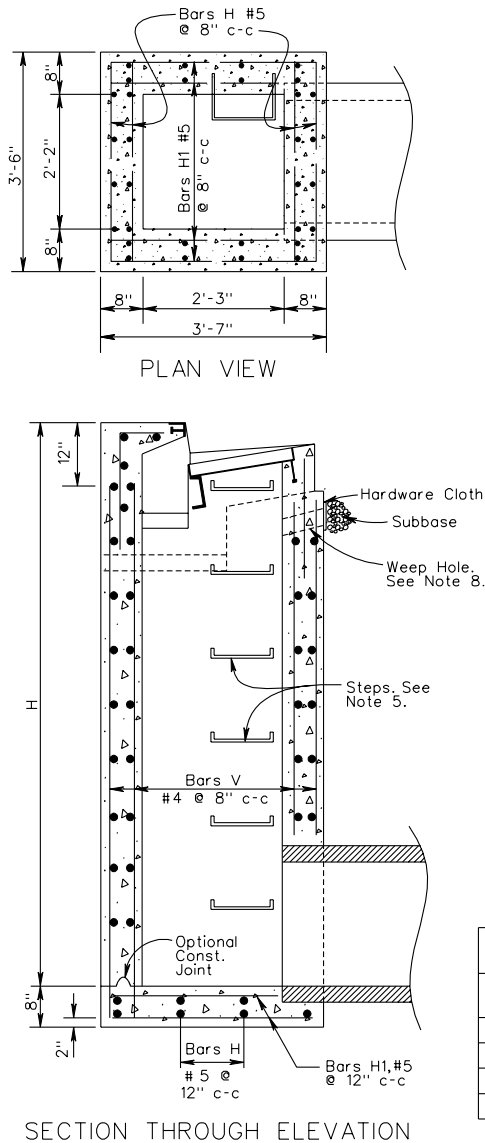


SPECIFICATION REFERENCE
233
302

STANDARD CURB DROP INLET
12"-24" PIPE: MAXIMUM DEPTH (H)=9'

VIRGINIA DEPARTMENT OF TRANSPORTATION

DI-2AA,2BB,2CC



NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MAXIMUM DEPTH (H) TO BE 20'. FOR DEPTHS LESS THAN 9' USE STANDARD DI-2A, 2B OR 2C.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE IS TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12" X 12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN- PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
- IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYS. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETERS (20").
- FOR PLAN VIEW OF INLET SEE STANDARD DI-2A, 2B, 2C.
- FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET 104.03.
- FOR NUMBER OF BARS A-F REQUIRED AND LENGTHS SEE SHEET 104.04.
- QUANTITIES SHOWN ARE FOR MINIMUM INLETS OF EACH TYPE. FOR INLETS OF GREATER DEPTHS (H) OR LONGER SLOTS (L) INCREMENTS SHOWN PER FOOT MUST BE ADDED. THE AMOUNT OF CONCRETE AND STEEL DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- FOR DETAILS AND DIMENSIONS OF CURB, SLOT, BEAM, COLLAR AND GRATE, DROPPED GUTTER LINE, AND REINFORCING AND STRUCTURAL STEEL NOT DETAILED SEE STANDARD DI-2A.

INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FEET OF DEPTH (H) AND/OR SLOT LENGTH (L)			
H		L	
Cu. Yds. Conc.	Lbs. Steel	Cu. Yds. Conc.	Lbs. Steel
0.28	64	-	-
0.28	64	0.16	17
0.28	64	0.16	17

APPROXIMATE QUANTITIES FOR MINIMUM 9" DEPTH INLET			
TYPE	DIMENSION L SEE NOTE 16	REINFORCING STEEL	CONCRETE
	Lin. Ft.	Lbs.	Cu. Yds.
DI-			
2AA	2'-2"	609	2.77
2BB	4'-0"	647	3.06
2CC	6'-0"	685	3.38

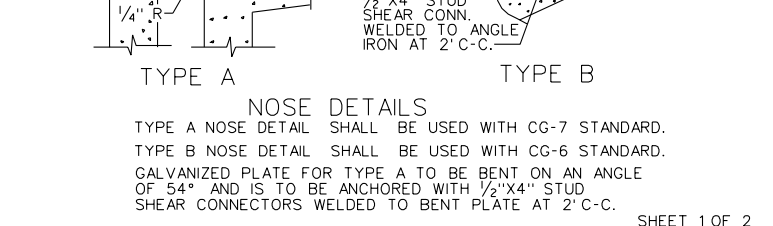
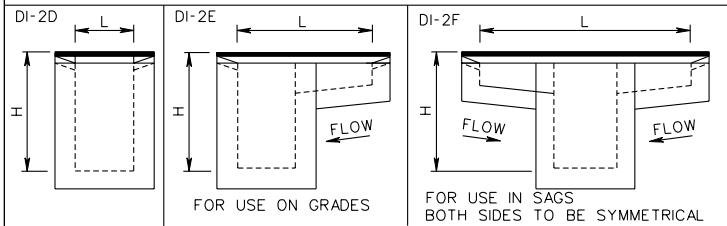
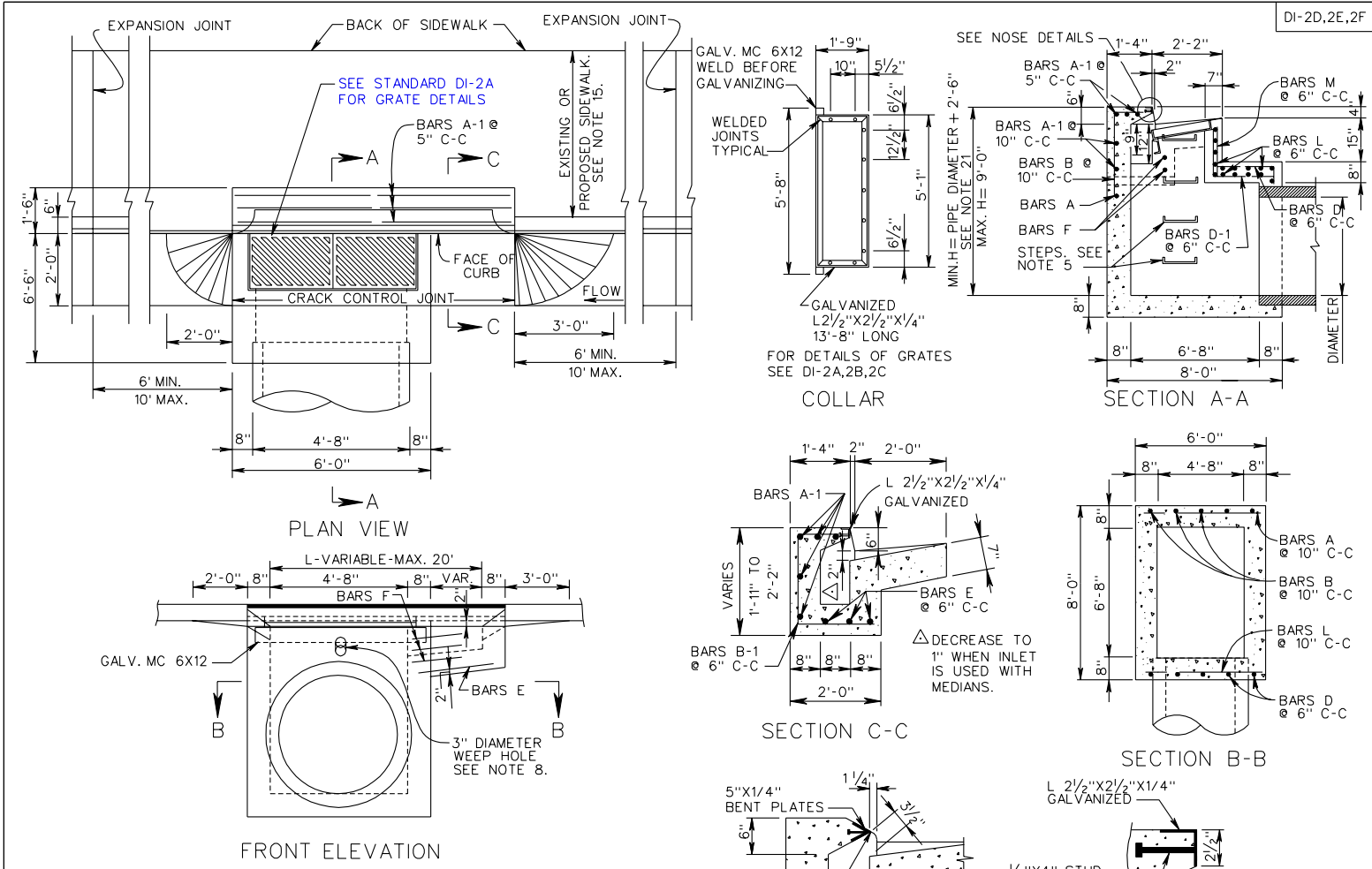
SCHEDULE OF REINFORCING STEEL SEE NOTE 17					
BARS H		BARS H1		BARS V	
NO REQ'D.	LENGTH	NO REQ'D.	LENGTH	NO REQ'D.	LENGTH
4(1.5H + 1)+8	3'-2"	4(1.5H + 1)+8	3'-3"	36	H-(1'-4")

STANDARD CURB DROP INLET
12" - 24" PIPE: DEPTH (H) = 9' to 20'

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

233
302



SPECIFICATION REFERENCE
233
302

STANDARD CURB DROP INLET
 30" - 48" PIPE: MAXIMUM DEPTH (H) = 9'
 VIRGINIA DEPARTMENT OF TRANSPORTATION

DI-2D,2E,2F

TABLE OF QUANTITIES

TYPE	L	CONCRETE	REINFORCING STEEL														WEIGHT						
			BARS A		BARS A-1		BARS B		BARS B-1		BARS D		BARS D-1		BARS E			BARS F		BARS L		BARS M	
			No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*		No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*
DI-2D	4'-8"	4.52	1	5'-8"	5	5'-8"	7	3'-2"	-	-	13	6'-8"	13	5'-8"	-	-	-	-	12	5'-8"	13	1'-0"	328
	6'-0"	4.73	1	5'-8"	5	7'-0"	7	3'-2"	3	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	1'-0"	3	1'-6"	12	5'-8"	13	1'-0"	350
	8'-0"	5.05	1	5'-8"	5	9'-0"	7	3'-2"	7	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	3'-0"	3	1'-6"	12	5'-8"	13	1'-0"	371
	10'-0"	5.36	1	5'-8"	5	11'-0"	7	3'-2"	10	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	5'-0"	3	1'-6"	12	5'-8"	13	1'-0"	406
DI-2E	12'-0"	5.68	1	5'-8"	5	13'-0"	7	3'-2"	15	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	7'-0"	3	1'-6"	12	5'-8"	13	1'-0"	441
	14'-0"	6.00	1	5'-8"	5	15'-0"	7	3'-2"	19	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	9'-0"	3	1'-6"	12	5'-8"	13	1'-0"	476
	16'-0"	6.31	1	5'-8"	5	17'-0"	7	3'-2"	23	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	11'-0"	3	1'-6"	12	5'-8"	13	1'-0"	511
	18'-0"	6.62	1	5'-8"	5	19'-0"	7	3'-2"	27	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	13'-0"	3	1'-6"	12	5'-8"	13	1'-0"	546
	20'-0"	6.94	1	5'-8"	5	21'-0"	7	3'-2"	31	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	3	15'-0"	3	1'-6"	12	5'-8"	13	1'-0"	581
DI-2F	6'-0"	4.73	1	5'-8"	5	7'-0"	7	3'-2"	2	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	1'-0"	6	1'-6"	12	5'-8"	13	1'-0"	353
	8'-0"	5.05	1	5'-8"	5	9'-0"	7	3'-2"	6	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	2'-0"	6	1'-6"	12	5'-8"	13	1'-0"	388
	10'-0"	5.36	1	5'-8"	5	11'-0"	7	3'-2"	10	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	3'-0"	6	1'-6"	12	5'-8"	13	1'-0"	423
	12'-0"	5.68	1	5'-8"	5	13'-0"	7	3'-2"	14	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	4'-0"	6	1'-6"	12	5'-8"	13	1'-0"	458
	14'-0"	6.00	1	5'-8"	5	15'-0"	7	3'-2"	18	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	5'-0"	6	1'-6"	12	5'-8"	13	1'-0"	493
	16'-0"	6.31	1	5'-8"	5	17'-0"	7	3'-2"	22	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	6'-0"	6	1'-6"	12	5'-8"	13	1'-0"	528
	18'-0"	6.62	1	5'-8"	5	19'-0"	7	3'-2"	26	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	7'-0"	6	1'-6"	12	5'-8"	13	1'-0"	563
	20'-0"	6.94	1	5'-8"	5	21'-0"	7	3'-2"	30	4'-3" to 4'-6"	13	6'-8"	13	5'-8"	6	8'-0"	6	1'-6"	12	5'-8"	13	1'-0"	598

NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
- STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
- THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-0" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.63 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L + 16" AT 4.10 LBS./FT..
- *DENOTES LENGTH OF ONE (1) BAR.
- ALL REINFORCING BARS TO BE #5.
- GRATE TO BE INSTALLED SO SLOTS WILL DIRECT WATER TOWARD THE INLET THROAT. GRATE MUST BE REVERSIBLE (RIGHT HAND GRATE IS SHOWN).
- MINIMUM HEIGHT WHEN PIPES ARE LOCATED UNDER EXTENDED SLOT OF INLET.
- INLET MAY BE USED WITH LARGER LONGITUDINAL PIPES (72" MAXIMUM) PROVIDED HORIZONTAL CLEARANCE BETWEEN ADJACENT PIPES IS ADEQUATE AND MINIMUM HEIGHT (H) EQUALS PIPE DIAMETER PLUS 2'-10".

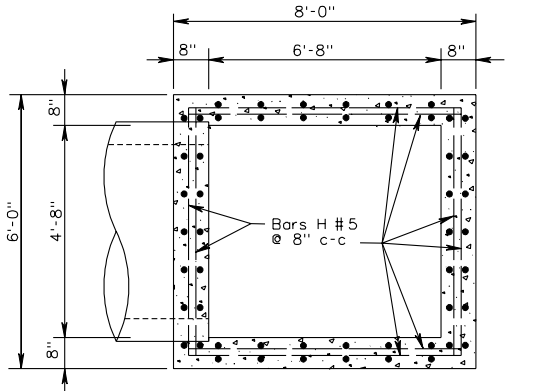
Sheet 2 of 2

STANDARD CURB DROP INLET
30" - 48" PIPE: MAXIMUM DEPTH (H) = 9'

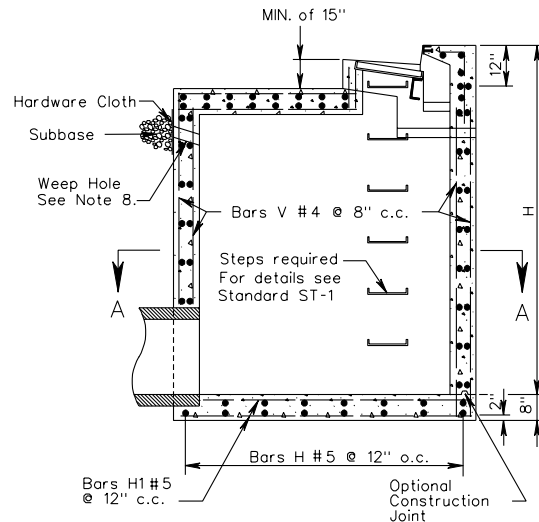
VIRGINIA DEPARTMENT OF TRANSPORTATION

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SECTION A-A



SECTION THROUGH ELEVATION

SCHEDULE OF REINFORCING STEEL		
BARS MARK	NO. REQUIRED	LENGTH
H	4(1.5H+1)+16	5'-8"
H1	4(1.5H+1)+12	7'-8"
V	76	H-1'-2"

APPROXIMATE QUANTITIES FOR MINIMUM 9' DEPTH INLET			
DI-TYPE	DIMENSION L SEE NOTE 17	REINFORCING STEEL	CONC.
	Lin. Ft.	Lbs.	Cu. Yds.
2DD	4'-8"	1,683	6.93
2EE	6'-0"	1,714	7.20
2FF	6'-0"	1,733	7.25

DI-TYPE	INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH (H) AND OR SLOT LENGTH (L)			
	H		L	
	Conc. Cu. Yds.	Steel Lbs.	Conc. Cu. Yds.	Steel Lbs.
2DD	0.63	191	—	—
2EE	0.63	191	0.16	17
2FF	0.63	191	0.16	17

NOTES

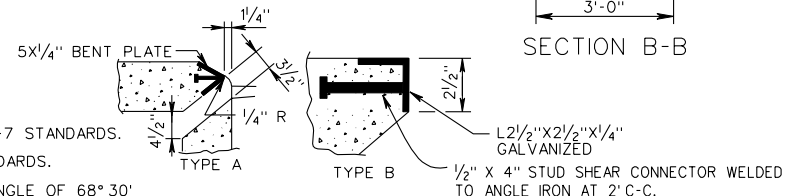
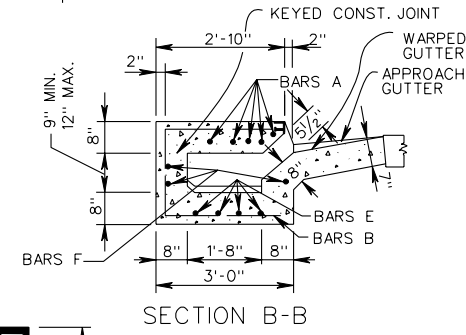
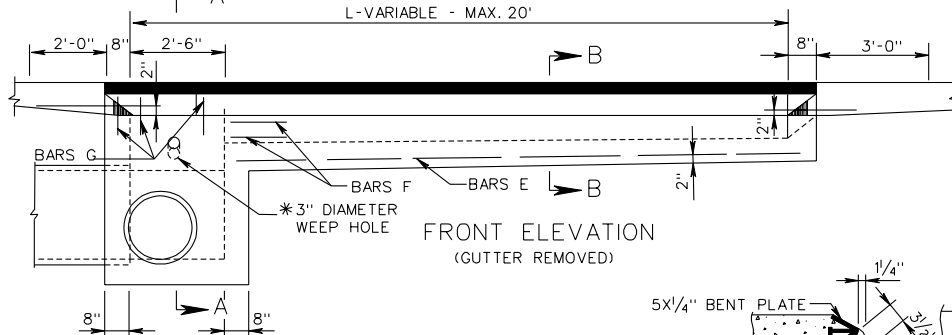
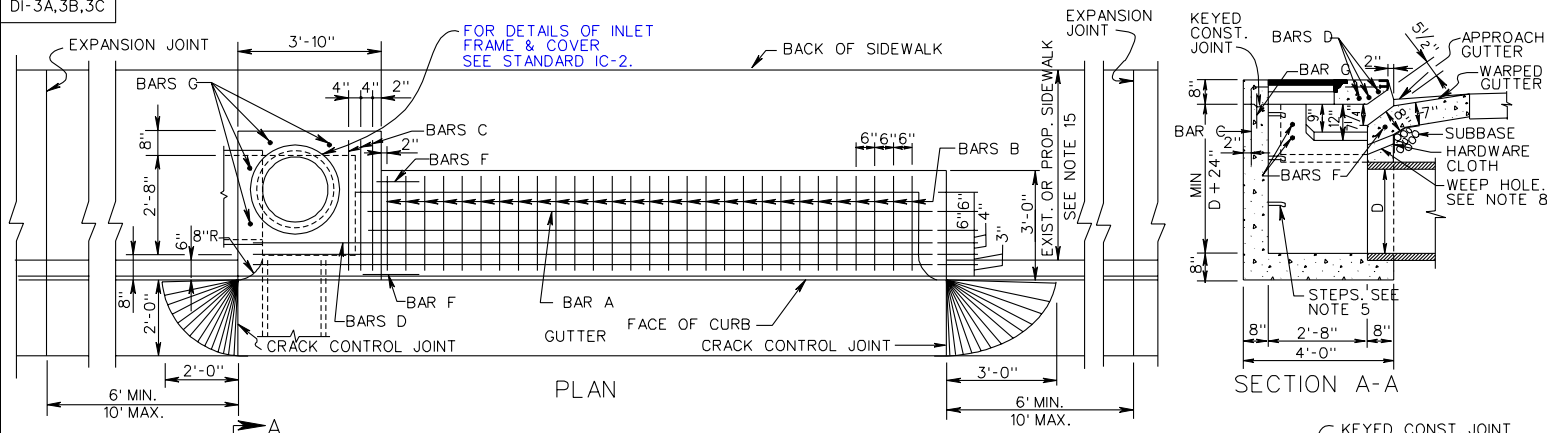
- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
- IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYS. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40D (20").
- FOR PLAN VIEW OF INLET SEE STANDARD DI-2D, 2E, 2F.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
- FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET 104.06.
- FOR NUMBER OF BARS A-M REQUIRED AND LENGTHS SEE SHEET 104.07.
- QUANTITIES SHOWN ARE FOR MIN. INLETS OF EACH TYPE. FOR INLETS OF GREATER DEPTH (H) OR LARGER SLOTS (L), INCREMENTS SHOWN PER FOOT MUST BE ADDED. THE AMOUNT OF CONCRETE AND STEEL DISPLACED MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- FOR DETAILS AND DIMENSIONS OF CURB, SLOT, BEAM, COLLAR AND GRATE, DROPPED GUTTER LINE, AND REINFORCING AND STRUCTURAL STEEL NOT DETAILED SEE STANDARD DI-2D.
- INLET MAY BE USED WITH LARGER LONGITUDINAL PIPE (72" MAXIMUM) PROVIDED HORIZONTAL CLEARANCE BETWEEN ADJACENT PIPES IS ADEQUATE.

SPECIFICATION REFERENCE

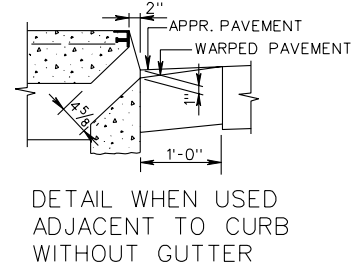
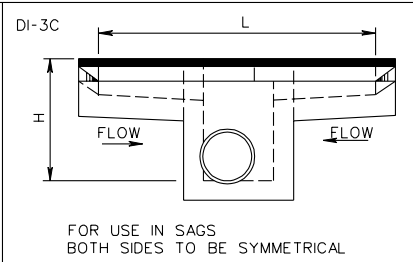
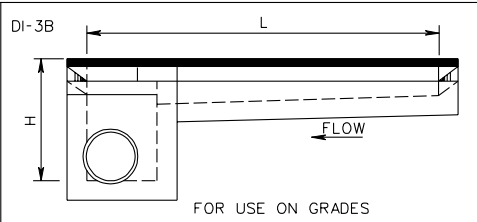
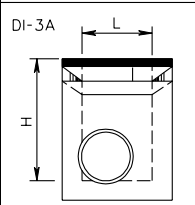
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STANDARD CURB DROP INLET
30" - 48" PIPE: DEPTH (H) = 9' TO 20'

DI-3A,3B,3C



TYPE A NOSE DETAIL SHALL BE USED WITH CG-3 & CG-7 STANDARDS.
 TYPE B NOSE DETAIL SHALL BE USED WITH CG-2 STANDARDS.
 GALVANIZED PLATE FOR TYPE A TO BE BENT ON AN ANGLE OF 68° 30' CONNECTORS AND IS TO BE ANCHORED WITH 1/2" X 4" STUD SHEAR WELDED TO BENT PLATE AT 2' C-C.



SHEET 1 OF 2

STANDARD CURB DROP INLET
 12" - 30" PIPE: MAXIMUM DEPTH (H) = 8'

VIRGINIA DEPARTMENT OF TRANSPORTATION

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TABLE OF QUANTITIES

DI-3A,3B,3C

TYPE	AREA OF SLOT		REINFORCING STEEL														WEIGHT		
			Concrete		BARS A		BARS B		BARS C		BARS D		BARS E		BARS F			BARS G	
	Ft.	Sq. Ft.	Cu. Yds.	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.		Lin. Ft. *	Lbs.
DI-3A	2'-6"	1.15	2.26	-	-	-	-	1	5'-7"	3	3'-2"	-	-	-	-	6	1'-0"	22	
	4'	1.83	2.59	5	1'-6"	2	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	1'-6"	3	1'-6"	4	1'-0"	64	
DI-3B	6'	2.75	3.02	5	3'-6"	6	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	3'-6"	3	1'-6"	4	1'-0"	111	
	8'	3.67	3.46	5	5'-6"	10	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	5'-6"	3	1'-6"	4	1'-0"	158	
	10'	4.58	3.90	5	7'-6"	14	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	7'-6"	3	1'-6"	4	1'-0"	204	
	12'	5.50	4.34	5	9'-6"	18	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	9'-6"	3	1'-6"	4	1'-0"	251	
	14'	6.42	4.78	5	11'-6"	22	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	11'-6"	3	1'-6"	4	1'-0"	298	
	16'	7.33	5.22	5	13'-6"	26	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	13'-6"	3	1'-6"	4	1'-0"	345	
	18'	8.25	5.66	5	15'-6"	30	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	15'-6"	3	1'-6"	4	1'-0"	391	
	20'	9.17	6.09	5	17'-6"	34	6'-7" to 6'-10"	3	5'-7"	3	3'-2"	4	17'-6"	3	1'-6"	4	1'-0"	438	
	DI-3C	6'	2.75	3.01	10	1'-9"	4	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	1'-9"	6	1'-6"	2	1'-0"	111
		8'	3.67	3.45	10	2'-9"	8	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	2'-9"	6	1'-6"	2	1'-0"	158
10'		4.58	3.89	10	3'-9"	12	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	3'-9"	6	1'-6"	2	1'-0"	205	
12'		5.50	4.33	10	4'-9"	16	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	4'-9"	6	1'-6"	2	1'-0"	252	
14'		6.42	4.77	10	5'-9"	20	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	5'-9"	6	1'-6"	2	1'-0"	298	
16'		7.33	5.21	10	6'-9"	24	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	6'-9"	6	1'-6"	2	1'-0"	345	
18'		8.25	5.65	10	7'-9"	28	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	7'-9"	6	1'-6"	2	1'-0"	392	
20'		9.17	6.09	10	8'-9"	32	6'-7" to 6'-10"	5	5'-7"	3	3'-2"	8	8'-9"	6	1'-6"	2	1'-0"	439	

NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
8. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
13. IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
14. STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
15. THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
16. CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.32 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
17. LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L +16" AT 4.10 LBS./FT..
18. * DENOTES LENGTH OF ONE (1) BAR.
19. ALL REINFORCING BARS TO BE #5.
20. WHEN INLET IS USED IN 4'-0" MEDIAN, BACK OF INLET IS TO BE SHAPED TO CONFORM TO PROPOSED CURB.

Sheet 2 of 2

SPECIFICATION REFERENCE

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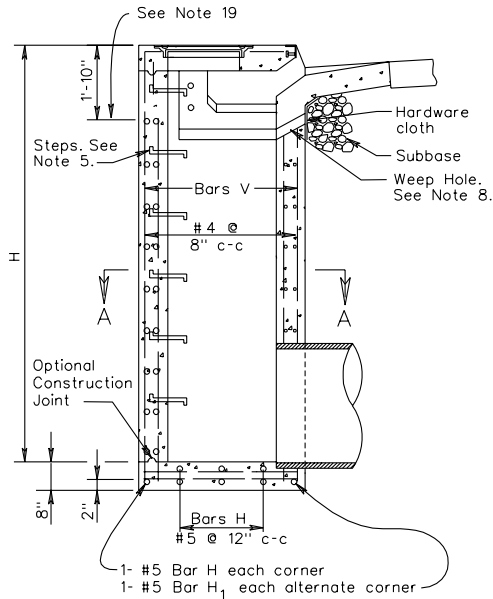
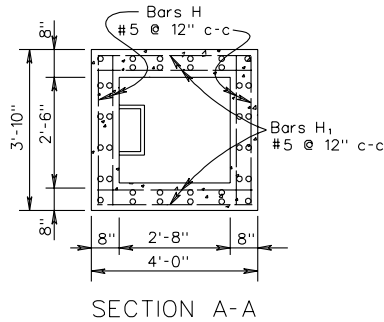
STANDARD CURB DROP INLET

12" - 30" PIPE: MAXIMUM DEPTH (H) = 8'

VIRGINIA DEPARTMENT OF TRANSPORTATION

104.10

NOTES



SECTION THROUGH ELEVATION

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MINIMUM DEPTH (H) TO BE 8'-0". MAXIMUM DEPTH TO BE 20'-0". FOR INLETS LESS THAN 8'-USE STANDARD DI-3A, 3B, 3C.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE REQUIRED. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- WHEN INLET IS USED IN 4' MEDIAN BACK OF INLET IS TO BE SHAPED TO CONFORM WITH PROPOSED CURB.
- IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYED. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETERS (20").
- FOR PLAN VIEW OF INLET SEE STANDARD DI-3A, 3B, 3C.
- QUANTITIES SHOWN ARE FOR MINIMUM INLETS OF EACH TYPE. FOR INLETS OF GREATER DEPTH (H) OR LONGER SLOT (L) INCREMENTS SHOWN PER FOOT MUST BE ADDED. THE AMOUNT OF CONCRETE AND STEEL DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- FOR NUMBER OF BARS A-G REQUIRED AND LENGTHS SEE SHEET 104.10.
- FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET 104.09.
- FOR ALL DETAILS, DIMENSIONS, AND REINFORCING STEEL ABOVE THIS LINE SEE STANDARD DI-3A, 3B, 3C.

SCHEDULE OF REINFORCING STEEL					
BARS H		BARS H ₁		BARS V	
NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
4x(H+1)	3'-6"	4x(H+1)	3'-8"	36	H-1'-4"

APPROXIMATE QUANTITIES FOR MINIMUM 8' DEPTH INLET			
TYPE	DIMENSION L SEE NOTE 18	REINFORCING STEEL	CONCRETE
	Lin. Ft.	Lbs.	Cu. Yds.
3AA	2'-6"	452	3.14
3BB	4'-0"	494	3.47
3CC	6'-0"	541	3.89

INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH (H) AND/OR SLOT LENGTH (L)			
H		L	
CONCRETE	STEEL	CONCRETE	STEEL
Cu. Yds.	Lbs.	Cu. Yds.	Lbs.
0.317	54	-	-
0.317	54	0.22	23.5
0.317	54	0.22	23.5

STANDARD CURB DROP INLET
12" - 30" PIPE: DEPTH (H) 8' TO 20'

SPECIFICATION REFERENCE

233
302

TABLE OF QUANTITIES

TYPE	L	AREA OF SLOT	REINFORCING STEEL													WEIGHT						
			Concrete			BARS A		BARS B		BARS C		BARS D		BARS E			BARS F		BARS G		BARS H	
			Cu. Yds.	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*		No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*
DI-3D	2'-6"	1.15	3.21	5	3'-2"	-	-	1	8'-0"	3	3'-2"	-	-	-	-	10	1'-0"	4	3'-1"	58		
DI-3E	4'	1.83	3.54	5	4'-8"	2	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	1'-6"	3	1'-6"	8	1'-0"	4	3'-1"	106		
	6'	2.75	3.97	5	6'-8"	6	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	3'-6"	3	1'-6"	8	1'-0"	4	3'-1"	153		
	8'	3.67	4.41	5	8'-8"	10	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	5'-6"	3	1'-6"	8	1'-0"	4	3'-1"	199		
	10'	4.58	4.85	5	10'-8"	14	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	7'-6"	3	1'-6"	8	1'-0"	4	3'-1"	246		
	12'	5.50	5.29	5	12'-8"	18	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	9'-6"	3	1'-6"	8	1'-0"	4	3'-1"	293		
	14'	6.42	5.73	5	14'-8"	22	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	11'-6"	3	1'-6"	8	1'-0"	4	3'-1"	340		
	16'	7.33	6.17	5	16'-8"	26	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	13'-6"	3	1'-6"	8	1'-0"	4	3'-1"	386		
	18'	8.25	6.61	5	18'-8"	30	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	15'-6"	3	1'-6"	8	1'-0"	4	3'-1"	433		
DI-3F	20'	9.17	7.04	5	20'-8"	34	6'-7" to 6'-10"	3	8'-0"	3	3'-2"	4	17'-6"	3	1'-6"	8	1'-0"	4	3'-1"	480		
	6'	2.75	3.96	5	6'-8"	4	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	1'-9"	6	1'-6"	6	1'-0"	4	3'-1"	158		
	8'	3.67	4.40	5	8'-8"	8	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	2'-9"	6	1'-6"	6	1'-0"	4	3'-1"	205		
	10'	4.58	4.84	5	10'-8"	12	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	3'-9"	6	1'-6"	6	1'-0"	4	3'-1"	251		
	12'	5.50	5.28	5	12'-8"	16	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	4'-9"	6	1'-6"	6	1'-0"	4	3'-1"	298		
	14'	6.42	5.72	5	14'-8"	20	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	5'-9"	6	1'-6"	6	1'-0"	4	3'-1"	345		
	16'	7.33	6.16	5	16'-8"	24	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	6'-9"	6	1'-6"	6	1'-0"	4	3'-1"	392		
	18'	8.25	6.60	5	18'-8"	28	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	7'-9"	6	1'-6"	6	1'-0"	4	3'-1"	438		
	20'	9.17	7.04	5	20'-8"	32	6'-7" to 6'-10"	5	8'-0"	3	3'-2"	8	8'-9"	6	1'-6"	6	1'-0"	4	3'-1"	485		

NOTES

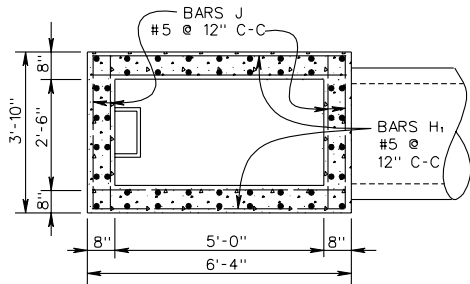
- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
- STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
- THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.44 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L+16" AT 4.10 LBS./FT..
- * DENOTES LENGTH OF ONE (1) BAR.
- ALL REINFORCING BARS TO BE #5.

Sheet 2 of 2

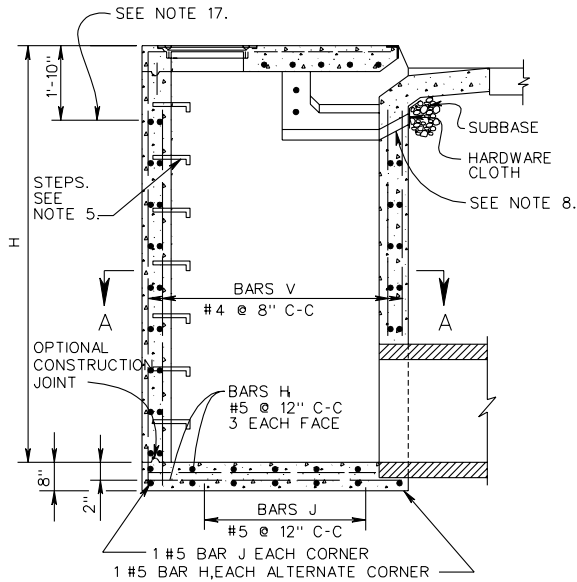
STANDARD CURB DROP INLET (WITH UTILITY SPACE)
12" - 30" PIPE: MAXIMUM DEPTH (H) = 8'

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE233
302



SECTION A-A



SECTION THROUGH ELEVATION

SCHEDULE OF REINFORCING STEEL					
BARS J		BARS H ₁		BARS V	
NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
4X(H+2)	3'-6"	4X(H+1)	6'-0"	52	H-1'-4"

- NOTES**
- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MINIMUM DEPTH (H) TO BE 8'-0", MAXIMUM DEPTH TO BE 20'-0". FOR INLETS LESS THAN 8' USE STANDARD DI-3D, 3E, 3F.
 - THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
 - WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
 - IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
 - STEPS ARE REQUIRED. FOR DETAILS SEE STANDARD ST-1.
 - THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
 - # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
 - 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
 - ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
 - ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
 - CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
 - LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
 - THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
 - IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYED. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETER (20").
 - FOR PLAN VIEW OF INLET SEE STANDARD DI-3D, 3E, 3F.
 - CONCRETE QUANTITIES SHOWN ARE FOR MINIMUM INLETS OF EACH TYPE. FOR INLETS OF GREATER DEPTH (H) OR LONGER SLOTS (L) INCREMENTS SHOWN PER FOOT MUST BE ADDED. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
 - FOR ALL DETAILS, DIMENSIONS, AND REINFORCING STEEL ABOVE THIS LINE SEE STANDARD DI-3D, 3E, 3F.
 - PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
 - FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET 104.12.
 - FOR NUMBER OF BARS A-H REQUIRED AND LENGTHS SEE SHEET 104.13.

APPROXIMATE QUANTITIES FOR MINIMUM 8' DEPTH INLET			
TYPE	DIMENSION L SEE NOTE 19	REINFORCING STEEL	CONCRETE
		LBS.	CU. YDS.
DI-	2'-6"	661	4.38
3EE	4'-0"	709	4.71
3FF	6'-0"	761	5.13

INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH (H) AND/OR SLOT LENGTH (L)			
H		L	
CU. YDS. CONCRETE	LBS. STEEL	CU. YDS. CONCRETE	LBS. STEEL
0.431	75	-	-
0.431	75	0.22	23.5
0.431	75	0.22	23.5

SPECIFICATION REFERENCE

233
302

STANDARD CURB DROP INLET (WITH UTILITY SPACE)
12" - 30" PIPE: DEPTH (H)=8' TO 20'

VIRGINIA DEPARTMENT OF TRANSPORTATION

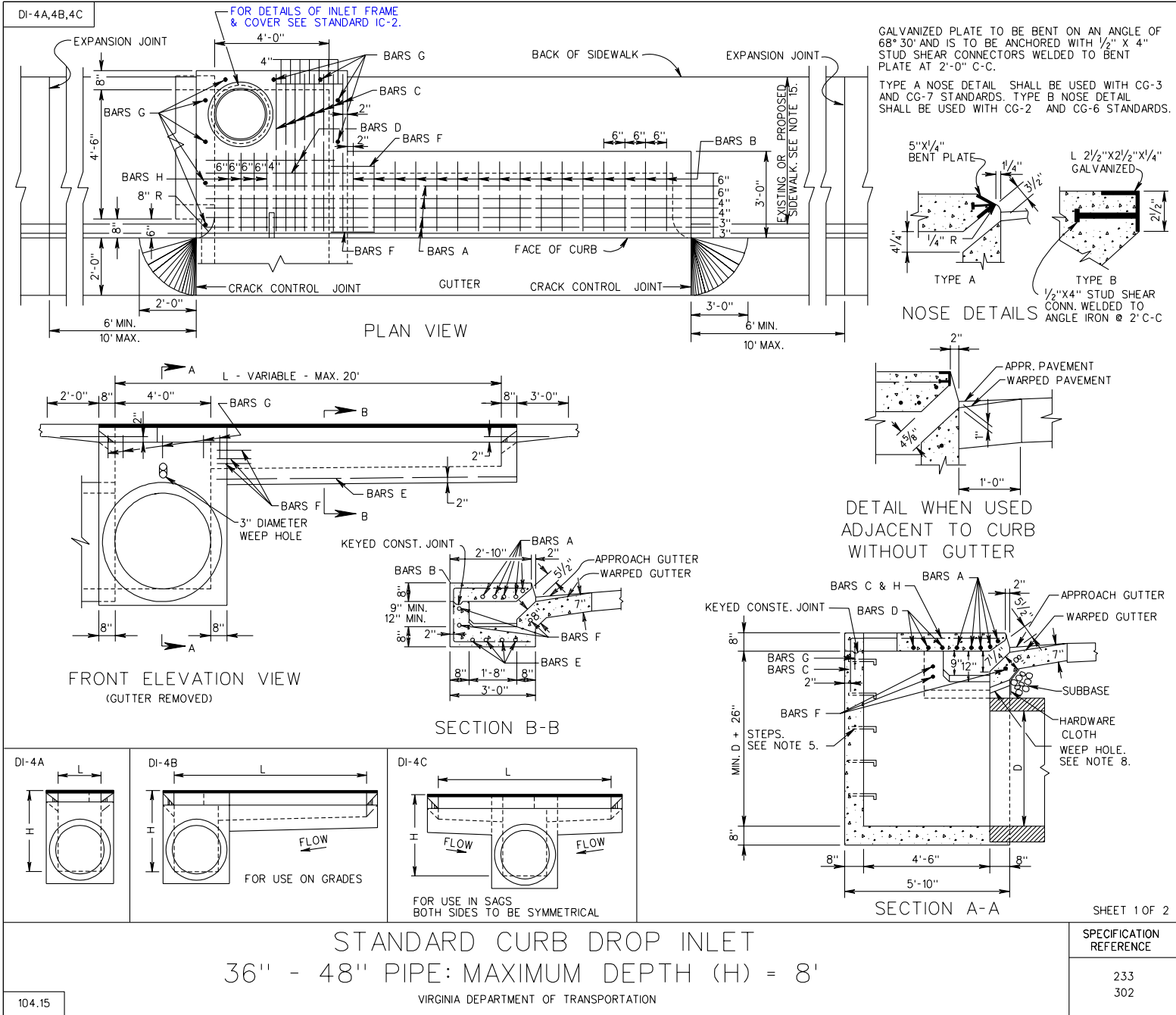


TABLE OF QUANTITIES

DI-4A,4B,4C

TYPE	L Ft.	AREA OF SLOT Sq. Ft.	Concrete Cu. Yds.	REINFORCING STEEL										WEIGHT Lbs.						
				BARS A		BARS B		BARS C		BARS D		BARS E			BARS F		BARS G		BARS H	
				No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*		No.	Lin. Ft.*	No.	Lin. Ft.*	No.	Lin. Ft.*
DI-4A	4'	1.83	4.65	5	4'-8"	-	-	6	7'-6"	2	4'-8"	-	-	-	-	11	1'-0"	4	2'-8"	104
DI-4B	6'	2.75	5.07	5	6'-8"	3	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	2'-0"	3	1'-6"	9	1'-0"	4	2'-8"	162
	8'	3.67	5.51	5	8'-8"	7	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	4'-0"	3	1'-6"	9	1'-0"	4	2'-8"	209
	10'	4.58	5.96	5	10'-8"	11	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	6'-0"	3	1'-6"	9	1'-0"	4	2'-8"	256
	12'	5.50	6.40	5	12'-8"	15	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	8'-0"	3	1'-6"	9	1'-0"	4	2'-8"	302
	14'	6.42	6.85	5	14'-8"	19	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	10'-0"	3	1'-6"	9	1'-0"	4	2'-8"	349
	16'	7.33	7.30	5	16'-8"	23	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	12'-0"	3	1'-6"	9	1'-0"	4	2'-8"	396
	18'	8.25	7.74	5	18'-8"	27	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	14'-0"	3	1'-6"	9	1'-0"	4	2'-8"	443
	20'	9.17	8.19	5	20'-8"	31	6'-7" to 6'-10"	8	7'-6"	2	4'-8"	4	16'-0"	3	1'-6"	9	1'-0"	4	2'-8"	489
DI-4C	8'	3.67	5.48	5	8'-8"	6	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	2'-0"	6	1'-6"	7	1'-0"	4	2'-8"	220
	10'	4.58	5.92	5	10'-8"	10	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	3'-0"	6	1'-6"	7	1'-0"	4	2'-8"	267
	12'	5.50	6.37	5	12'-8"	14	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	4'-0"	6	1'-6"	7	1'-0"	4	2'-8"	314
	14'	6.42	6.81	5	14'-8"	18	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	5'-0"	6	1'-6"	7	1'-0"	4	2'-8"	360
	16'	7.33	7.26	5	16'-8"	22	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	6'-0"	6	1'-6"	7	1'-0"	4	2'-8"	407
	18'	8.25	7.70	5	18'-8"	26	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	7'-0"	6	1'-6"	7	1'-0"	4	2'-8"	454
	20'	9.17	8.15	5	20'-8"	30	6'-7" to 6'-10"	10	7'-6"	2	4'-8"	8	8'-0"	6	1'-6"	7	1'-0"	4	2'-8"	501

NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. **WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1.** THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. **FOR DETAILS SEE STANDARD ST-1.**
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
8. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. LENGTH OF SLOT (L) WILL IN EVERY CASE, BE SHOWN ON PLANS.
13. IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
14. **STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.**
15. THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
16. CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 6'-10" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.49 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
17. LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L+16" AT 4.10 LBS./FT..
18. * DENOTES LENGTH OF ONE (1) BAR.
19. ALL REINFORCING BARS TO BE #5.

Sheet 2 of 2

SPECIFICATION
REFERENCE

233
302

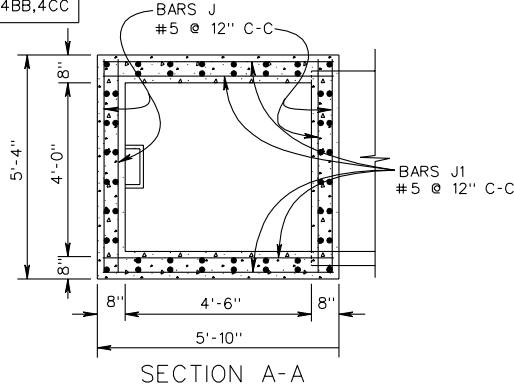
STANDARD CURB DROP INLET

36" - 48" PIPE: MAXIMUM DEPTH (H) = 8'

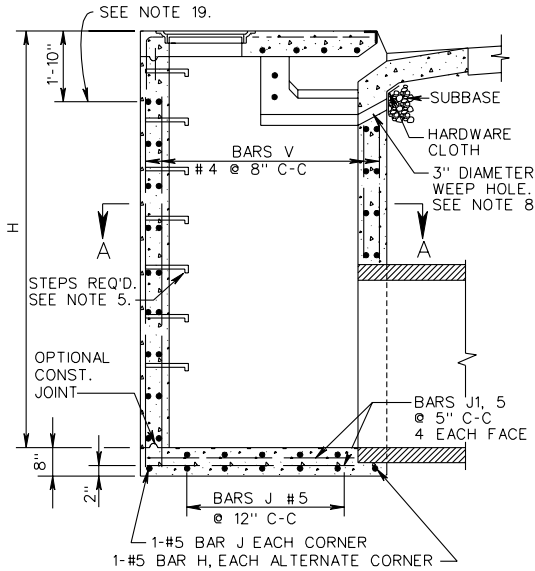
VIRGINIA DEPARTMENT OF TRANSPORTATION

104.16

DI-4AA,4BB,4CC



SECTION A-A



SECTION THROUGH ELEVATION

SCHEDULE OF REINFORCING STEEL
SEE NOTE 17.

BARS J		BARS J1		BARS V	
NO. REQUIRED	LENGTH	NO. REQUIRED	LENGTH	NO. REQUIRED	LENGTH
4X(H + 2)	5'-0"	4H+6	5'-6"	60	H-1'-4"

APPROXIMATE QUANTITIES FOR
MINIMUM 8' DEPTH INLET

TYPE	DIMENSION L SEE NOTE 18	REINFORCING STEEL	CONCRETE
	LIN. FT.	LBS.	CU. YDS.
4AA	4'-0"	798	5.14
4BB	6'-0"	856	5.56
4CC	8'-0"	914	5.97

NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MINIMUM DEPTH (H) TO BE 8'-0". MAXIMUM DEPTH TO BE 20'-0". FOR INLETS LESS THAN 8' USE STANDARD DI-4A, 4B, AND 4C.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL WITH STANDARD DI-4A, 4B, 4C).
- IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYS. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETERS (20").
- FOR PLAN VIEW OF INLET SEE STANDARD DI-4A, 4B, 4C.
- QUANTITIES SHOWN ARE FOR MINIMUM INLETS OF EACH TYPE. FOR INLETS OF GREATER DEPTH (H) OR LONGER SLOT (L) INCREMENTS SHOWN PER FOOT MUST BE ADDED. THE AMOUNT OF CONCRETE AND STEEL DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- FOR NUMBER OF BARS A-H REQUIRED AND LENGTH SEE TABLE OF QUANTITIES FOR STANDARD DI-4A, 4B, 4C.
- FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET STANDARD DI-4A, 4B, 4C.
- FOR ALL DETAILS, DIMENSIONS AND REINFORCING STEEL ABOVE THIS LINE, SEE STANDARD DI-4A, 4B, AND 4C.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

INCREMENTS TO BE ADDED
FOR EACH ADDITIONAL FOOT OF
DEPTH (H) AND/OR SLOT LENGTH (L)

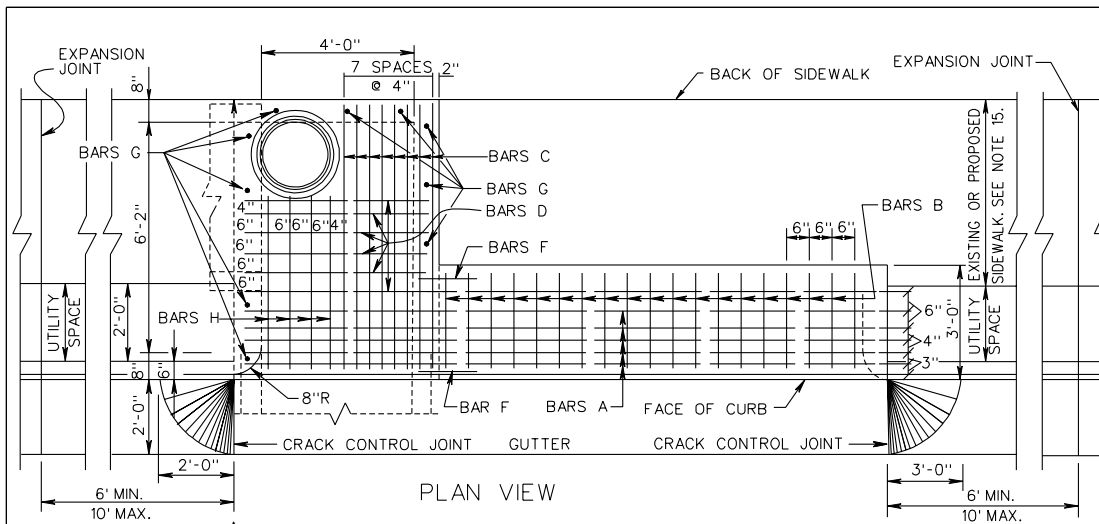
H		L	
CONCRETE CU. YDS.	STEEL LBS.	CONCRETE CU. YDS.	STEEL LBS.
0.479	84	-	-
0.479	84	0.22	23.5
0.479	84	0.22	23.5

STANDARD CURB DROP INLET
36" - 48" PIPE: DEPTH (H) 8' TO 20'

VIRGINIA DEPARTMENT OF TRANSPORTATION

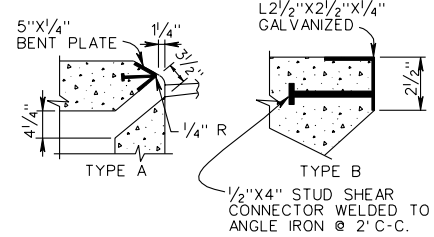
SPECIFICATION
REFERENCE

233
302

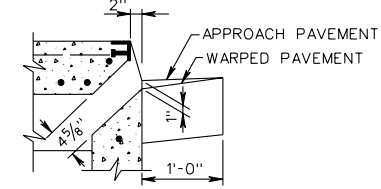
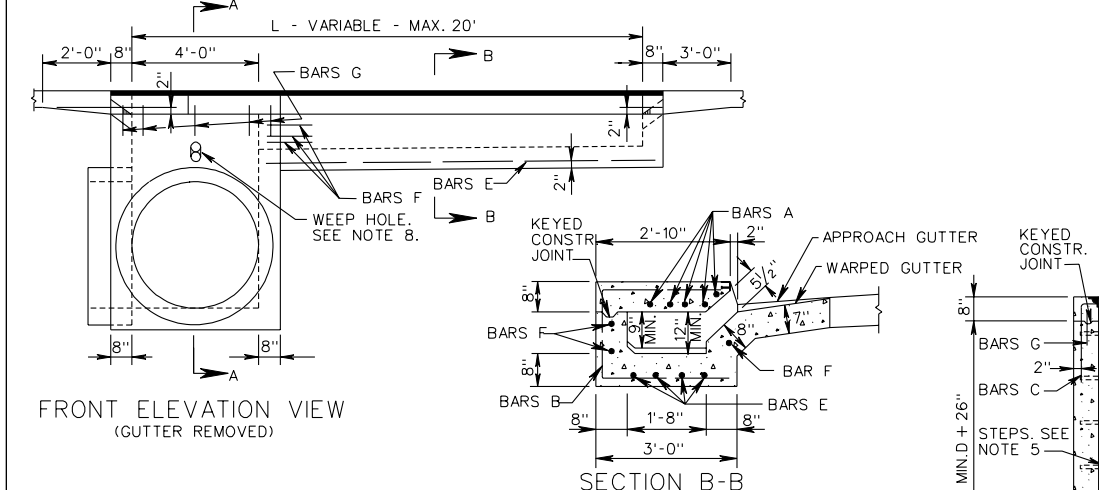


GALVANIZED PLATE TO BE BENT ON AN ANGLE OF 68° 30' AND IS TO BE ANCHORED WITH 1/2" X 4" STUD SHEAR CONNECTORS WELDED TO BENT PLATE AT 2' C-C.

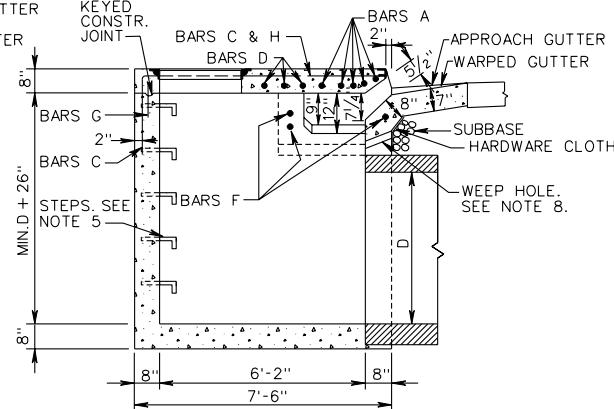
TYPE A NOSE DETAIL SHALL BE USED WITH CG-3 AND CG-7 STANDARDS. TYPE B NOSE DETAIL SHALL BE USED WITH CG-2 AND CG-6 STANDARDS.



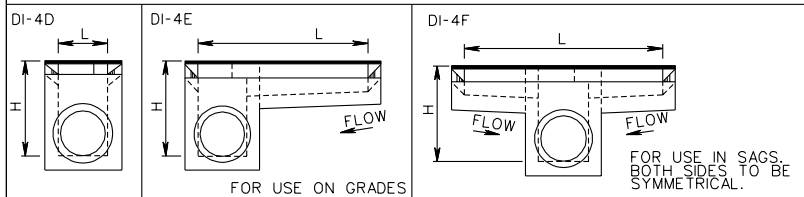
NOSE DETAILS



DETAIL WHEN USED ADJACENT TO CURB WITHOUT GUTTER



SECTION A-A



SPECIFICATION REFERENCE
233
302

STANDARD CURB DROP INLET

36" - 48" PIPE: MAXIMUM DEPTH (H) = 8' (WITH UTILITY SPACE)

54" - 60" MAX. PIPE: MAX. (H) = 8' (WITHOUT UTILITY SPACE)

VIRGINIA DEPARTMENT OF TRANSPORTATION

TABLE OF QUANTITIES

TYPE	L Ft.	AREA OF SLOT Sq. Ft.	Concrete Cu. Yds.	REINFORCING STEEL												WEIGHT Lbs.				
				BARS A		BARS B		BARS C		BARS D		BARS E		BARS F			BARS G		BARS H	
				No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *	No.	Lin. Ft. *		No.	Lin. Ft. *	No.	Lin. Ft. *
DI-4D	4'	1.83	5.60	5	4'-8"	-	-	6	9'-2"	6	4'-8"	-	-	-	-	13	1'-0"	4	4'-6"	144
	6'	2.75	6.02	5	6'-8"	3	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	2'-0"	3	1'-6"	11	1'-0"	4	4'-6"	205
	8'	3.67	6.46	5	8'-8"	7	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	4'-0"	3	1'-6"	11	1'-0"	4	4'-6"	252
	10'	4.58	6.91	5	10'-8"	11	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	6'-0"	3	1'-6"	11	1'-0"	4	4'-6"	299
DI-4E	12'	5.50	7.35	5	12'-8"	15	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	8'-0"	3	1'-6"	11	1'-0"	4	4'-6"	345
	14'	6.42	7.80	5	14'-8"	19	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	12'-0"	3	1'-6"	11	1'-0"	4	4'-6"	392
	16'	7.33	8.25	5	16'-8"	23	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	10'-0"	3	1'-6"	11	1'-0"	4	4'-6"	439
	18'	8.25	8.69	5	18'-8"	27	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	14'-0"	3	1'-6"	11	1'-0"	4	4'-6"	486
	20'	9.17	9.14	5	20'-8"	31	6'-7" to 6'-10"	8	9'-2"	6	4'-8"	4	16'-0"	3	1'-6"	11	1'-0"	4	4'-6"	532
	8'	3.67	6.43	5	8'-8"	6	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	2'-0"	6	1'-6"	9	1'-0"	4	4'-6"	267
	10'	4.58	6.87	5	10'-8"	10	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	3'-0"	6	1'-6"	9	1'-0"	4	4'-6"	310
DI-4F	12'	5.50	7.32	5	12'-8"	14	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	4'-0"	6	1'-6"	9	1'-0"	4	4'-6"	360
	14'	6.42	7.76	5	14'-8"	18	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	5'-0"	6	1'-6"	9	1'-0"	4	4'-6"	407
	16'	7.33	8.21	5	16'-8"	22	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	6'-0"	6	1'-6"	9	1'-0"	4	4'-6"	454
	18'	8.25	8.65	5	18'-8"	26	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	7'-0"	6	1'-6"	9	1'-0"	4	4'-6"	500
	20'	9.17	9.10	5	20'-8"	30	6'-7" to 6'-10"	10	9'-2"	6	4'-8"	8	8'-0"	6	1'-6"	9	1'-0"	4	4'-6"	547

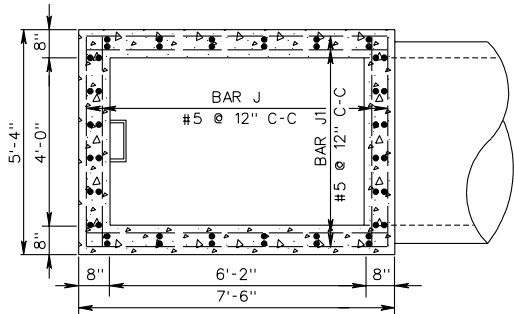
NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL BE MATERIALS INCIDENTAL TO THE SHAPING IS TO INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- THIS STANDARD IS INTENDED FOR USE IN CURB AND GUTTER SITUATIONS ONLY.
- IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL).
- STANDARD INLETS MAY BE CONSTRUCTED WITH CONCRETE BLOCKS IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING DI-MB.
- THIS AREA MAY BE EARTHEN, IN WHICH CASE THE EXPANSION JOINTS WILL APPLY ONLY TO CURB AND GUTTER.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.28 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L+16" AT 4.10 LBS./FT..
- * DENOTES LENGTH OF ONE (1) BAR.
- ALL REINFORCING BARS TO BE #5.
- INLET MAY BE USED WITH LARGER LONGITUDINAL PIPES (60" MAXIMUM) PROVIDED UTILITY SPACE CLEARANCE IS NOT NEEDED, HORIZONTAL CLEARANCE BETWEEN ADJACENT PIPES IS ADEQUATE AND MINIMUM HEIGHT (H) EQUALS PIPE DIAMETER PLUS 3 FEET.

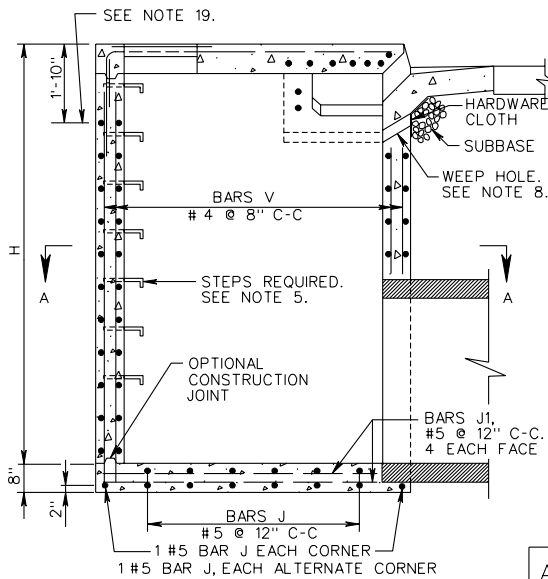
Sheet 2 of 2

STANDARD CURB DROP INLET (WITH UTILITY SPACE)
36" - 48" PIPE: MAXIMUM DEPTH (H) = 8'SPECIFICATION
REFERENCE233
302

NOTES



SECTION A-A



SECTION THROUGH ELEVATION

SCHEDULE OF REINFORCING STEEL (SEE NOTE 17)					
BARS J		BARS J1		BARS V	
NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
4H + 10	5'-0"	4H + 6	7'-2"	72	H-1'-4"

APPROXIMATE QUANTITIES FOR MINIMUM 8' DEPTH INLET			
TYPE	DIMENSION L SEE NOTE 18	REINFORCING STEEL	CONC.
DI-	LIN. FT.	LBS.	CU. YDS.
4DD	4'-0"	968	6.19
4EE	6'-0"	1029	6.61
4FF	8'-0"	1091	7.02

INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH (H) AND/OR SLOT LENGTH (L)			
H		L	
CONC. CU. YDS.	STEEL LBS.	CONC. CU. YDS.	STEEL LBS.
0.560	99	—	—
0.560	99	0.22	23.5
0.560	99	0.22	23.5

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MINIMUM DEPTH (H) TO BE 8'-0". MAXIMUM DEPTH TO BE 16'-0". FOR INLETS LESS THAN 8'-0" USE STANDARD DI-4D, 4E, AND 4F.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- IF INLET IS CONSTRUCTED IN MEDIAN CURB OR WITH INTEGRAL CURB, GUTTER IS TO BE OMITTED (SEE DETAIL WITH STANDARD DI-4D, 4E, 4F).
- IF OPTIONAL CONSTRUCTION JOINT IS USED IT IS TO BE KEYS. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETER (20").
- FOR PLAN VIEW OF INLET SEE STANDARD DI-4D, 4E, 4F.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.28 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
- FOR NUMBER OF BARS A-H REQUIRED AND LENGTH SEE TABLE OF QUANTITIES FOR STANDARD DI-4D, 4E, 4F.
- FOR DESCRIPTION AND LOCATION OF DIMENSION L SEE SHEET STANDARD DI-4D, 4E, 4F.
- FOR ALL DETAILS, DIMENSIONS AND REINFORCING STEEL ABOVE THIS LINE, SEE STANDARD DI-4D, 4E, AND 4F.
- INLET MAY BE USED WITH LARGER LONGITUDINAL PIPE (72" MAXIMUM), PROVIDED UTILITY SPACE CLEARANCE IS NOT NEEDED, HORIZONTAL CLEARANCE BETWEEN ADJACENT PIPES IS ADEQUATE AND MINIMUM HEIGHT (H) EQUALS PIPE DIAMETER PLUS 3 FEET.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

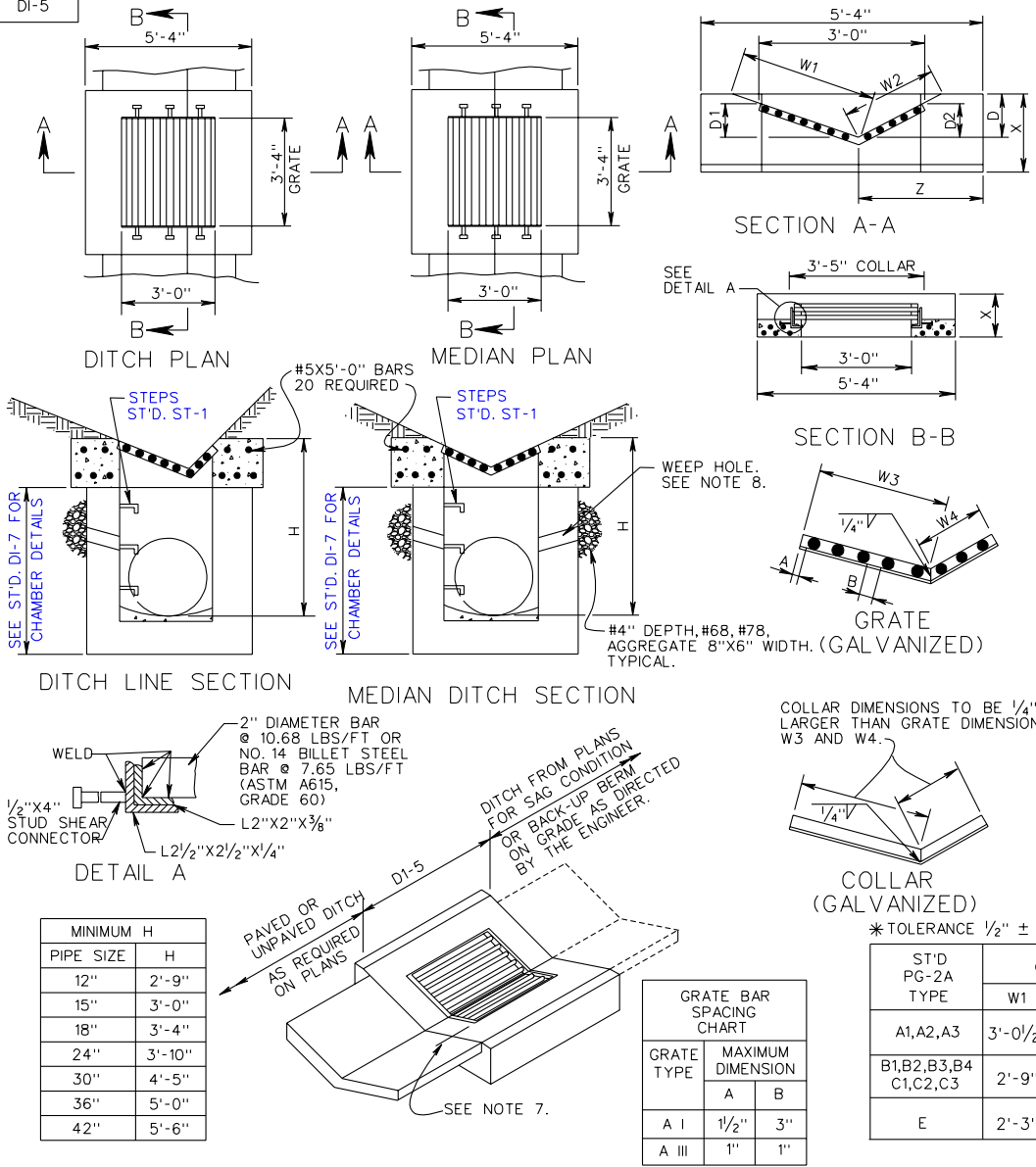
SPECIFICATION REFERENCE

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302

STANDARD CURB DROP INLET (WITH UTILITY SPACE)
36" - 48" PIPE: DEPTH (H) 8' TO 16'

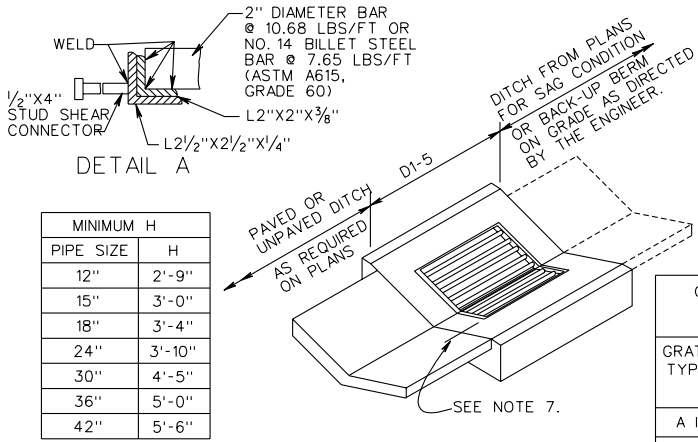
VIRGINIA DEPARTMENT OF TRANSPORTATION

DI-5



NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. CHAMBER MAY BE CAST IN PLACE, PRECAST, BRICK OR CONCRETE BLOCK. SEE DI-7 FOR DETAILS.
7. WHERE PAVED DITCHES ARE REQUIRED, JOINTS ARE TO BE DOWELED WITH #4 X 8" SMOOTH RODS AT APPROXIMATELY 12" C-C IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE ST'D T-DI-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.



MINIMUM H	PIPE SIZE	H
12"	2'-9"	
15"	3'-0"	
18"	3'-4"	
24"	3'-10"	
30"	4'-5"	
36"	5'-0"	
42"	5'-6"	

GRATE TYPE	MAXIMUM DIMENSION	
	A	B
A I	1 1/2"	3"
A III	1"	1"

ST'D PG-2A TYPE	COVER DIMENSIONS AND QUANTITIES								
	W1	W2	W3	W4	*D	D1	D2	X	Z
A1,A2,A3	3'-0 1/2"	2'-0 3/4"	2'-0 9/16"	1'-0 3/8"	6"	4"	3"	14"	2'-2"
B1,B2,B3,B4 C1,C2,C3	2'-9"	2'-9"	1'-6 9/16"	1'-6 9/16"	8"	4 1/2"	4 1/2"	16"	2'-8"
E	2'-3"	2'-3"	1'-8 1/16"	1'-8 1/16"	12"	9"	9"	19"	2'-8"

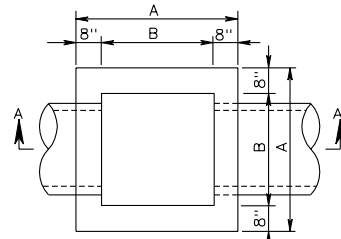
STANDARD DITCH DROP INLET

VIRGINIA DEPARTMENT OF TRANSPORTATION

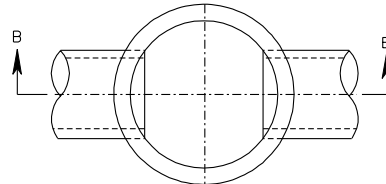
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SPECIFICATION REFERENCE
233
302

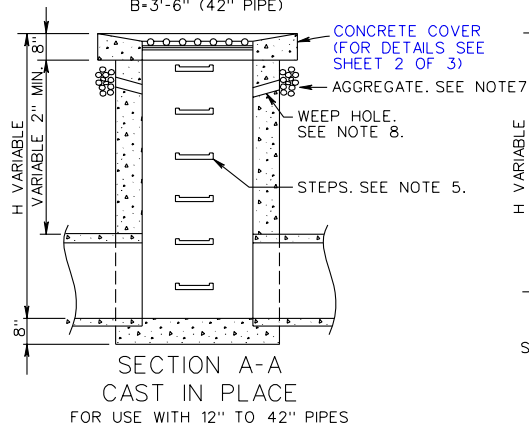
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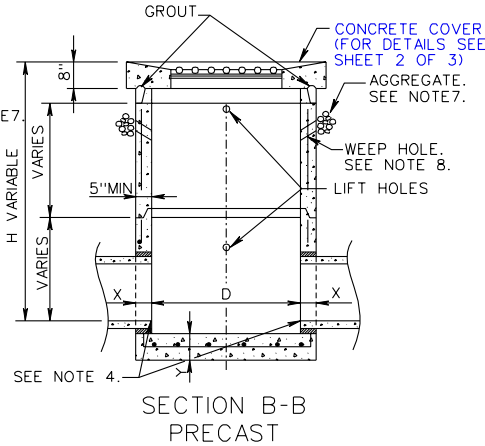
PLAN
(COVER REMOVED)
A=4'-4" (12" - 36" PIPE)
B=3'-0" (12" - 36" PIPE)
A=4'-10" (42" PIPE)
B=3'-6" (42" PIPE)



PLAN
(COVER REMOVED)



SECTION A-A
CAST IN PLACE
FOR USE WITH 12" TO 42" PIPES



SECTION B-B
PRECAST

NOTES (CONT.)

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS. MAXIMUM DEPTH (H) TO BE 12'-8".
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. REINFORCED CONCRETE FOOTING MAY BE PRECAST OR CAST-IN-PLACE. TWO LIFTING HOOKS OF FABRICATORS DESIGN TO BE PROVIDED IN PRECAST FOOTING
7. 4" DEPTH AGGREGATE #68, #78, OR #8 X 6" WIDTH.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. THE TYPE OF INLET (PRECAST OR CAST IN PLACE), DETAILED HEREON, TO BE CONSTRUCTED, WILL BE AT THE OPTION OF THE CONTRACTOR.
10. FOR DETAILS OF CONCRETE COVER, COLLAR AND GRATE AND THE METHOD OF PLACING APPROACH GUTTER SEE SHEET 2 OF 3.
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. CONCRETE QUANTITIES SHOWN ARE FOR INDICATED DEPTH (H) WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT THE APPROPRIATE CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
13. PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STANDARD PG-2A.
14. PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

RECOMMENDED MINIMUM HEIGHT CHART		
PIPE SIZE	H DIMENSION	
	CONC.	CORR. METAL
12"	2'-6"	2'-5"
15"	2'-9 1/4"	2'-8"
18"	3'-0 1/2"	2'-11"
21"	3'-3 3/4"	3'-2"
24"	3'-7"	3'-5"
27"	3'-10 1/4"	3'-8"
30"	4'-1 1/2"	3'-11"
33"	4'-4 3/4"	4'-2"
36"	4'-8"	4'-5"
42"	5'-2 1/2"	4'-11"

15. DI-7-----NO GUTTER
DI-7A-----SINGLE GUTTER WHEN DROP INLET IS ON A GRADE.
DI-7B----- DOUBLE GUTTER WHEN DROP INLET IS IN A SAG BETWEEN TWO GRADES.
16. FOR DETAILS OF PRECAST DI-7 NOT SHOWN HEREON SEE PRECAST UNIT ASSEMBLY DIAGRAM, PAGE 103.01, FOR PRECAST GENERAL NOTES, PAGE 103.02 AND FOR APPLICABLE PRECAST BASE, RISER AND TOP DETAILS, PAGES 103.07 THRU 103.12.
17. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

PIPE SIZE	12"	15"	18"	24"	30"	36"	42"
MINIMUM DEPTH H	2'-0"	2'-3 1/4"	2'-6 1/2"	3'-1"	3'-7 1/2"	4'-2"	4'-8 1/2"
CONCRETE CUBIC YARDS	.947	1.045	1.143	1.339	1.535	1.731	1.927

INCREMENT PER FOOT OF ADDITIONAL DEPTH (H) } = 0.362 CU. YDS. (12" - 36" PIPE)
= 0.410 CU. YDS. (42" PIPE)

SPECIFICATION REFERENCE

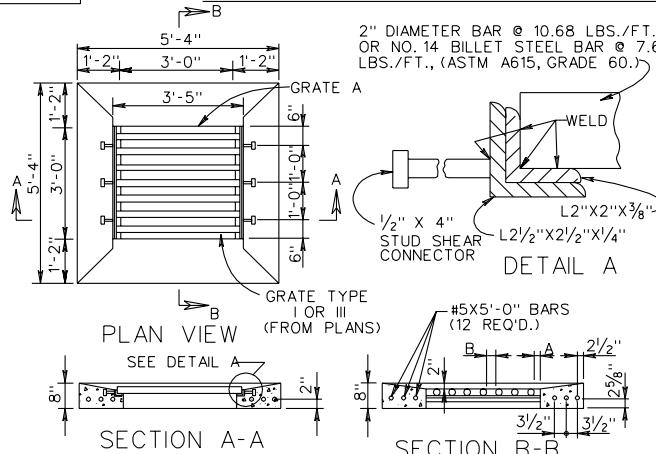
241
503

STANDARD MEDIAN DROP INLET
12" TO 42" PIPE

VIRGINIA DEPARTMENT OF TRANSPORTATION

DI-7,7A,7B

DETAILS OF CONCRETE COVER AND GRATE



APPROXIMATE QUANTITIES	
CONCRETE CLASS A3	REINFORCING STEEL
0.423 C. Y.	63 LBS.

BAR SPACING CHART		
GRATE TYPE	MAXIMUM DIMENSION	
I	A	B
II	1 1/2"	3"
III	1"	1"

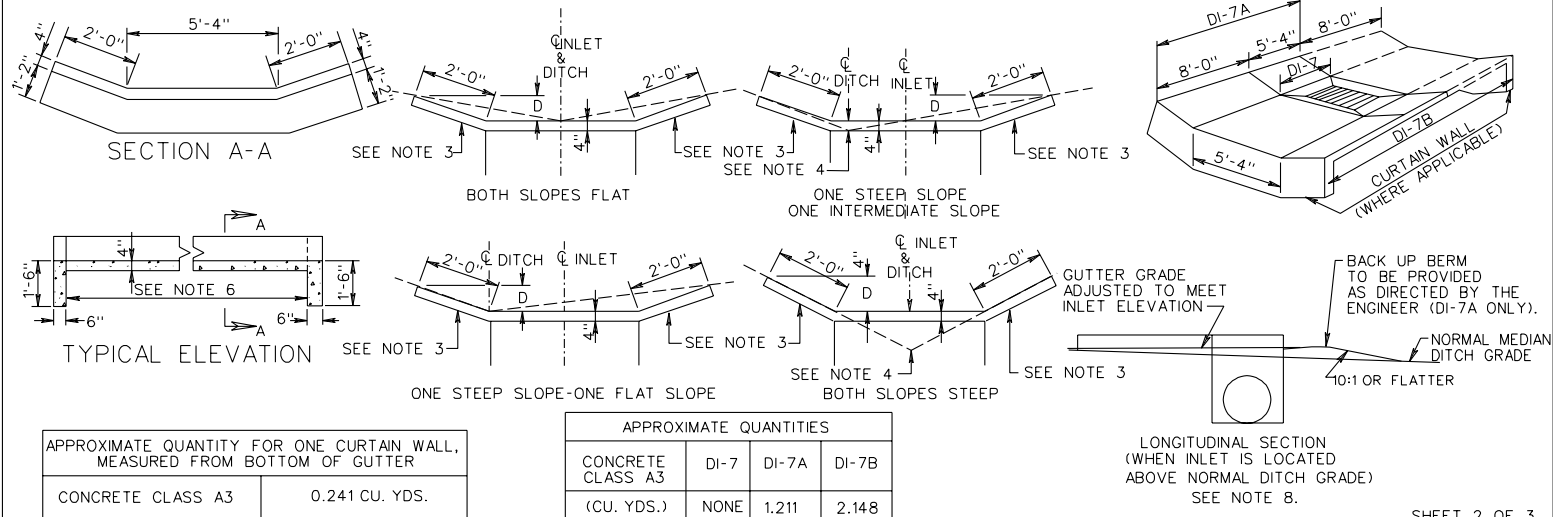
NOTES

- GRATE A IS TO BE USED WHEN INLET IS LOCATED IN MEDIAN OR OTHER AREAS NOT NORMALLY SUBJECT TO TRAFFIC.
- GRATE B IS TO BE USED WHEN INLET IS LOCATED ON SHOULDER OR OTHER AREAS SUBJECT TO TRAFFIC.
- FOR DETAILS OF LOAD CARRYING GRATE (GRATE B), SEE T-DI-7, SHEET 103.08.
- CONCRETE COVER AND GRATE ARE TO BE FURNISHED AS A SINGLE UNIT. OUTSIDE DIMENSIONS OF GRATE TO BE 3'-4" X 2'-11 3/4" (GRATE A) OR 3'-4" X 2'-11 1/2" (GRATE B).
- ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
- GRATE AND COLLAR ARE TO BE GALVANIZED.
- CONCRETE COVER MAY BE PRECAST OR CAST IN PLACE.
- CONCRETE TO BE CLASS A3 IF CAST IN PLACE. 4000 PSI IF PRECAST.
- GRATE BARS TO BE PARALLEL TO DITCH FLOW.

DETAILS OF GUTTER AND METHOD OF PLACEMENT

NOTES

- DI-7 NO GUTTERS.
DI-7A NO GUTTER IN ONE DIRECTION.
DI-7B GUTTER IN BOTH DIRECTIONS.
- JOINTS BETWEEN GUTTERS AND CONCRETE COVER ARE TO BE DOWELED WITH #4 X 8" SMOOTH RODS @ APPROX. 12" C-C TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED.
SEE STANDARD T-DI-3, 4 ALTERNATE DESIGN.
- VARIABLE 2:1 OR FLATTER.
- DITCH GRADE MUST BE ADJUSTED TO MEET DIFFERENCE IN ELEVATION. SEE LONGITUDINAL SECTION.
- IF DEPTH (D) BECOMES LESS THEN 4", LENGTH OF WINGS ARE TO BE EXTENDED AS DIRECTED BY THE ENGINEER.
- CURTAIN WALL TO BE LOCATED AT THE END OF THE PAVED DITCH SECTIONS OF THE DI-7A & DI-7B THAT ARE NOT ABUTTED BY OTHER DRAINAGE.
- IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET, A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.



APPROXIMATE QUANTITY FOR ONE CURTAIN WALL, MEASURED FROM BOTTOM OF GUTTER	
CONCRETE CLASS A3	QUANTITY
CONCRETE CLASS A3	0.241 CU. YDS.

APPROXIMATE QUANTITIES			
CONCRETE CLASS A3	DI-7	DI-7A	DI-7B
(CU. YDS.)	NONE	1.211	2.148

LONGITUDINAL SECTION (WHEN INLET IS LOCATED ABOVE NORMAL DITCH GRADE) SEE NOTE 8.

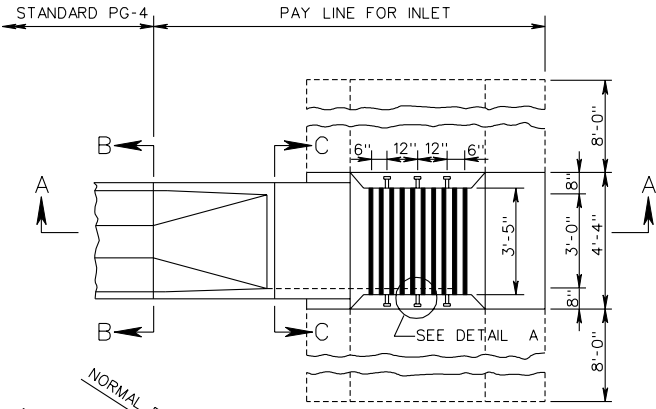
SHEET 2 OF 3

STANDARD MEDIAN DROP INLET
12" TO 42" PIPE

VIRGINIA DEPARTMENT OF TRANSPORTATION

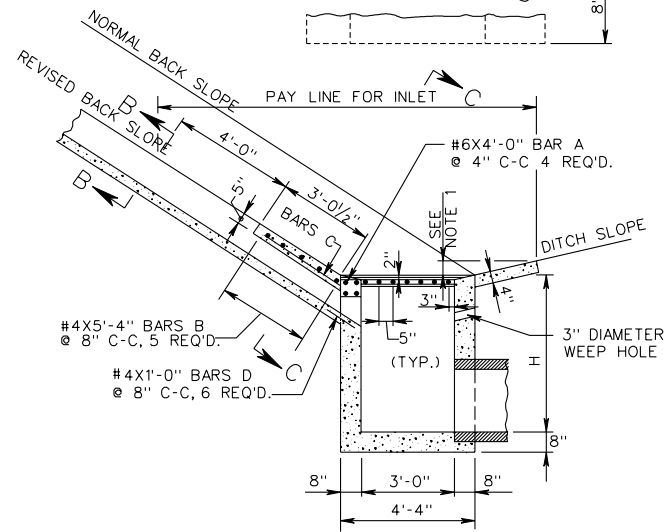
SPECIFICATION REFERENCE

241
503



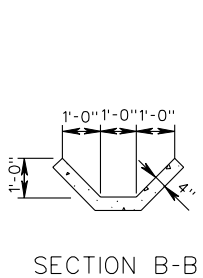
NOTES

1. APRON IS TO BE CONSTRUCTED TO A DEPTH OF 1'-0" ON BACK SLOPE SIDE OF INLET (DI-7). ON ROADWAY SIDE, THE DEPTH IS TO BE 1'-0" OR TO THE SHOULDER ELEVATION, WHICHEVER IS LESSER.
2. ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
3. COLLAR AND GRATE ARE TO BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS.
4. OUTSIDE DIMENSIONS OF GRATE ARE TO BE 3'-4" X 2'-11 3/4".
5. ALL CONCRETE IS TO BE CLASS A3.
6. NORMAL DITCH IS TO BE TRANSITIONED TO THE SMOOTHLY INTO GUTTER. DITCH GRADE IS TO BE ADJUSTED AS NECESSARY TO MEET GRADE ELEVATION.
7. QUANTITIES SHOWN ARE BASED ON DEPTH H = 5'-0".
8. THE AMOUNT OF CONCRETE DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR EACH FOOT OF DIFFERENCE IN DEPTH H ADD OR SUBTRACT INCREMENT AS SHOWN.
9. SEE STANDARD DI-7, DI-7A AND DI-7B FOR DETAILS AND DIMENSIONS NOT SHOWN HEREON.
10. GRATE BARS ARE TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO THE DITCH FLOW.

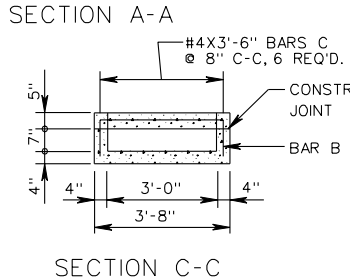


APPROXIMATE QUANTITIES	
CLASS A3 CONCRETE	REINFORCING STEEL
CU. YDS.	LBS.
4.091	60

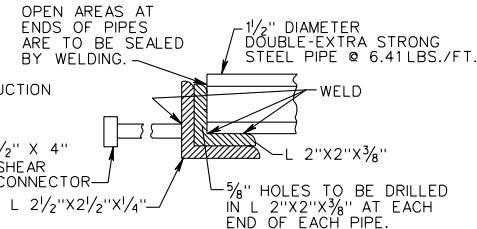
INCREMENT PER FOOT OF DEPTH (H) = 0.362 CU. YDS.
 CONCRETE TO BE ADDED WHEN DOUBLE GUTTER IS REQ'D. = 1.112 CU. YDS.



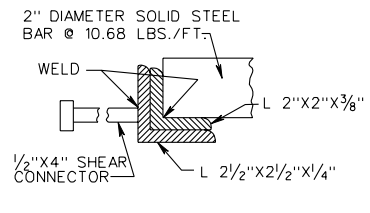
SECTION B-B



SECTION C-C



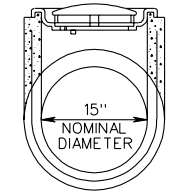
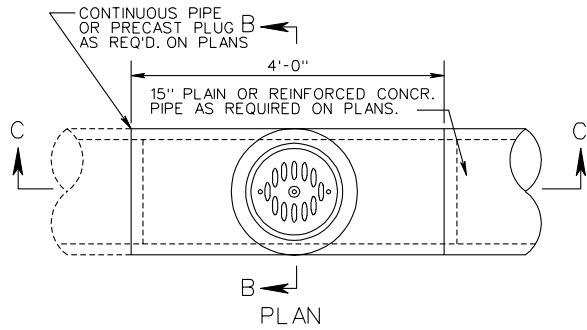
DETAIL A



ALTERNATE DETAIL A

SPECIFICATION REFERENCE
502

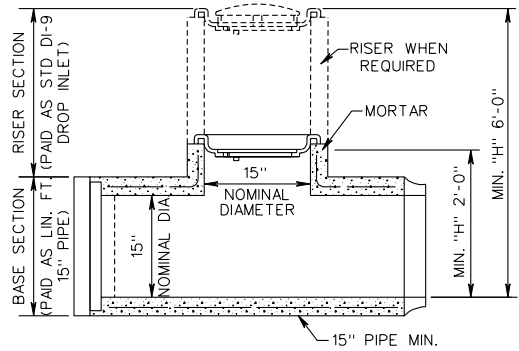
STANDARD DI-7, 7A OR 7B WITH FLUME CONNECTION
 12" TO 36" PIPE



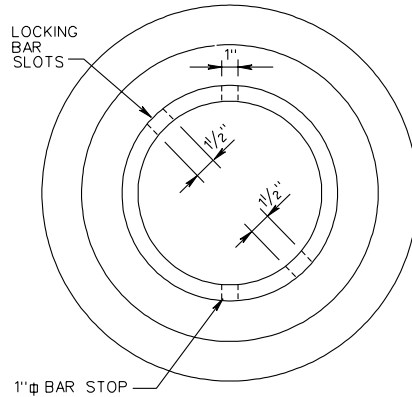
SECTION B-B

NOTES

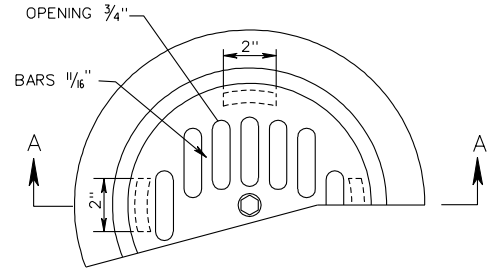
1. PRECAST PIPE PLUG SHALL BE SET IN FRESH MORTAR.
2. PRECAST PLUG SHALL CONFORM TO PIPE MANUFACTURER'S JOINT DESIGN AND SHALL HAVE A MINIMUM THICKNESS NOT LESS THAN PIPE WALL THICKNESS.
3. THIS INLET IS TO BE USED ONLY IN LOCATIONS NOT SUBJECT TO TRAFFIC.
4. FRAME IS TO BE SECURELY MORTARED TO TEE SECTION.
5. FRAME AND GRATE SHALL BE GRAY IRON, ASTM A48, CLASS 30S.
6. THE PRECAST TEE UNIT IS TO CONFORM TO THE REQUIREMENTS OF AASHTO M170 FOR 15" CLASS III REINFORCED CONCRETE PIPE.
7. IF A PRECAST PLUG IS NEEDED, THE COST OF THE PRECAST PLUG SHALL BE INCLUDED IN THE PRICE BID FOR DI-9.



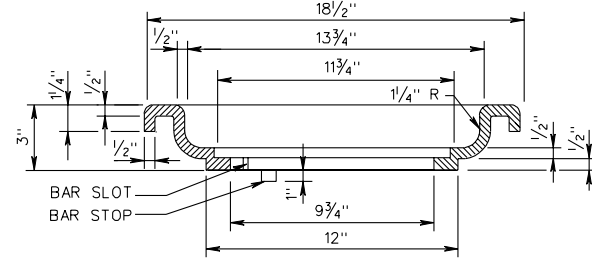
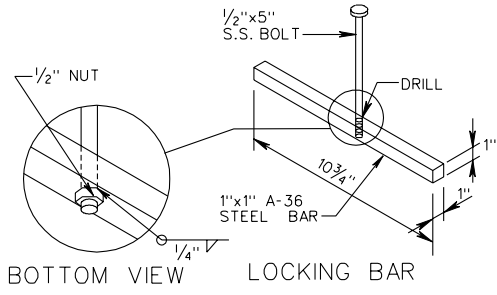
SECTION C-C



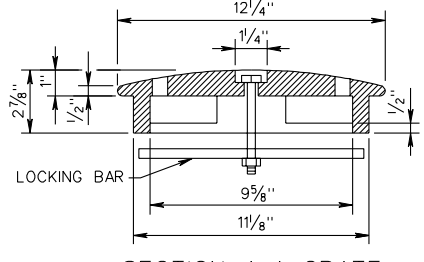
FRAME PLAN



PART PLAN FRAME & GRATE



SECTION A-A FRAME



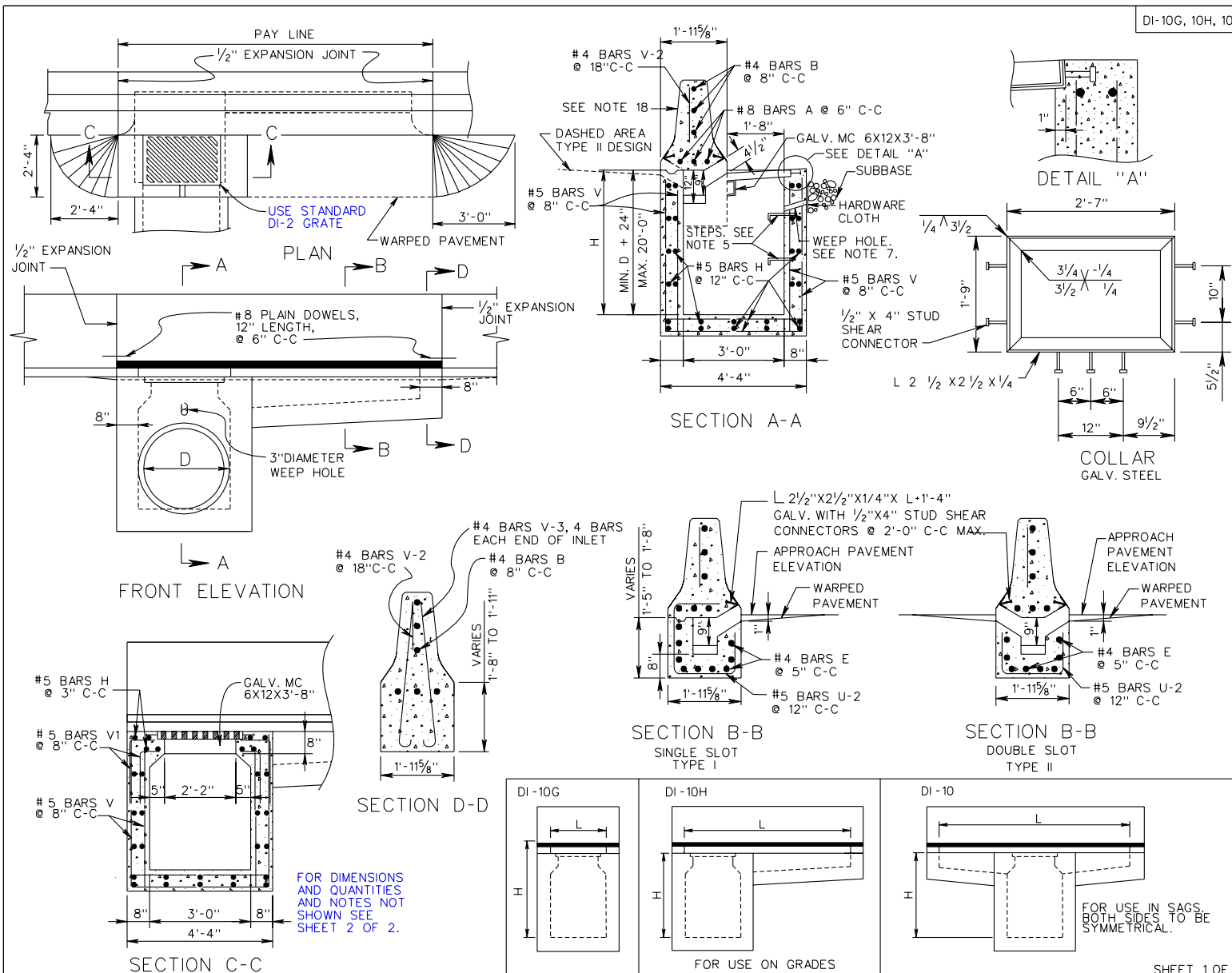
SECTION A-A GRATE

15" PIPE TEE SECTION DROP INLET

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

233
302



SPECIFICATION REFERENCE 233 302	CONCRETE MEDIAN BARRIER DROP INLET (WITH MB-7D) 12"-36" PIPE: DEPTH (H)=20'-0" MAX.	SHEET 1 OF 2
VIRGINIA DEPARTMENT OF TRANSPORTATION		
		104.26

TABLE OF QUANTITIES

REINFORCING STEEL

TYPE	L	CONCRETE		BARS A		BARS B		BARS E		BARS H		BARS U-1		BARS U-2		BARS V		BARS V-1		BARS V-2		BARS V-3		TYPE I	TYPE II	
		Ft.	Type I	Type II	No.	Ln*	No.	Ln*	No.	Ln*	No.	Ln*	No.	*Ln. Ft.	No.	*Ln. Ft.	No.	Ln*	No.	Ln*	No.	Ln*	No.			Ln*
			Cu. Yd.	Cu. Yd.		4'-0"		4'-0"		4'-0"		4'-0"		4'-0"		4'-0"		4'-0"		4'-0"		4'-0"				4'-0"
DI-10G	3'	2.08	2.05	3	4'-0"	3	4'-0"	-	-	38	4'-0"	-	-	-	-	48	3'-4"	12	2'-6"	3	2'-4"	8	4'-5"	426	426	
	4'	2.26	2.25	3	5'-0"	3	5'-0"	8	1'-4"	38	4'-0"	2	5'-2" to 5'-8"	2	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	4	2'-4"	8	4'-5"	456	451	
DI-10H	6'	2.65	2.63	3	7'-0"	3	7'-0"	8	3'-4"	38	4'-0"	4	5'-2" to 5'-8"	4	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	5	2'-4"	8	4'-5"	499	490	
	8'	3.04	3.02	3	9'-0"	3	9'-0"	8	5'-4"	38	4'-0"	6	5'-2" to 5'-8"	6	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	7	2'-4"	8	4'-5"	544	531	
	10'	3.43	3.40	3	11'-0"	3	11'-0"	8	7'-4"	38	4'-0"	8	5'-2" to 5'-8"	8	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	8	2'-4"	8	4'-5"	588	571	
	12'	3.82	3.78	3	13'-0"	3	13'-0"	8	9'-4"	38	4'-0"	10	5'-2" to 5'-8"	10	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	9	2'-4"	8	4'-5"	631	610	
	14'	4.21	4.16	3	15'-0"	3	15'-0"	8	11'-4"	38	4'-0"	12	5'-2" to 5'-8"	12	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	11	2'-4"	8	4'-5"	677	650	
	16'	4.60	4.54	3	17'-0"	3	17'-0"	8	13'-4"	38	4'-0"	14	5'-2" to 5'-8"	14	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	12	2'-4"	8	4'-5"	720	690	
	18'	5.00	4.94	3	19'-0"	3	19'-0"	8	15'-4"	38	4'-0"	16	5'-2" to 5'-8"	16	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	13	2'-4"	8	4'-5"	764	729	
	20'	5.39	5.32	3	21'-0"	3	21'-0"	8	17'-4"	38	4'-0"	18	5'-2" to 5'-8"	18	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	15	2'-4"	8	4'-5"	809	770	
	DI-10 I	6'	2.65	2.63	3	7'-0"	3	7'-0"	16	2'-0"	38	4'-0"	6	5'-2" to 5'-8"	6	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	5	2'-4"	8	4'-5"	514	501
		8'	3.04	3.02	3	9'-0"	3	9'-0"	16	3'-0"	38	4'-0"	8	5'-2" to 5'-8"	8	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	7	2'-4"	8	4'-5"	559	542
10'		3.43	3.40	3	11'-0"	3	11'-0"	16	4'-0"	38	4'-0"	10	5'-2" to 5'-8"	10	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	8	2'-4"	8	4'-5"	603	581	
12'		3.82	3.78	3	13'-0"	3	13'-0"	16	5'-0"	38	4'-0"	12	5'-2" to 5'-8"	12	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	9	2'-4"	8	4'-5"	646	620	
14'		4.21	4.16	3	15'-0"	3	15'-0"	16	6'-0"	38	4'-0"	14	5'-2" to 5'-8"	14	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	11	2'-4"	8	4'-5"	691	661	
16'		4.60	4.54	3	17'-0"	3	17'-0"	16	7'-0"	38	4'-0"	16	5'-2" to 5'-8"	16	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	12	2'-4"	8	4'-5"	735	700	
18'		5.00	4.94	3	19'-0"	3	19'-0"	16	8'-0"	38	4'-0"	18	5'-2" to 5'-8"	18	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	13	2'-4"	8	4'-5"	778	739	
20'		5.39	5.32	3	21'-0"	3	21'-0"	16	9'-0"	38	4'-0"	20	5'-2" to 5'-8"	20	3'-1" to 3'-7"	48	3'-4"	12	2'-6"	15	2'-4"	8	4'-5"	824	780	

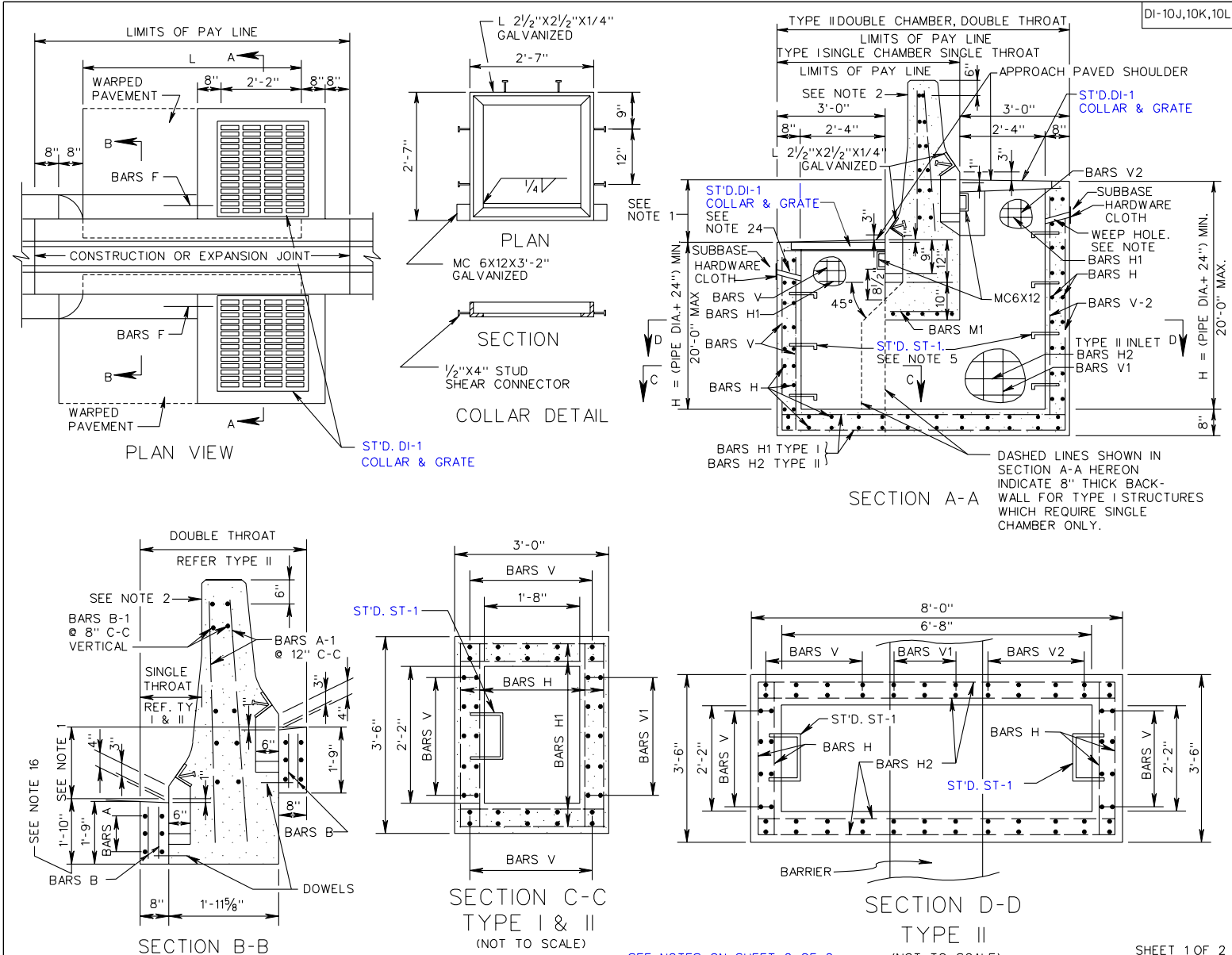
NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 3'-0" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.36 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH. AND 84 LBS. OF REINFORCING STEEL.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L+16" AT 4.10 LBS./FT..
- * DENOTES LENGTH OF ONE (1) BAR.
- GRATE TO BE INSTALLED SO SLOTS WILL DIRECT WATER TOWARD THE INLET THROAT. GRATE MUST BE REVERSIBLE (RIGHT HAND GRATE IS SHOWN).
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON PLANS.
- FOR DETAILS AND DIMENSIONS NOT SHOWN FOR MEDIAN BARRIER SEE STANDARD MB-7D.
- QUANTITIES INCLUDE MB-7D.

Sheet 2 of 2

CONCRETE MEDIAN BARRIER DROP INLET (WITH MB-7D)
12"-36" PIPE: DEPTH (H) = 20'-0" MAX.

SPECIFICATION
REFERENCE233
302



SPECIFICATION REFERENCE	<p>CONCRETE MEDIAN BARRIER DROP INLET (WITH MB-8A) 12" - 24" PIPE: DEPTH (H) = 20' MAX</p>	DI-10J,10K,10L
233 302		SEE NOTES ON SHEET 2 OF 2
VIRGINIA DEPARTMENT OF TRANSPORTATION		104.28

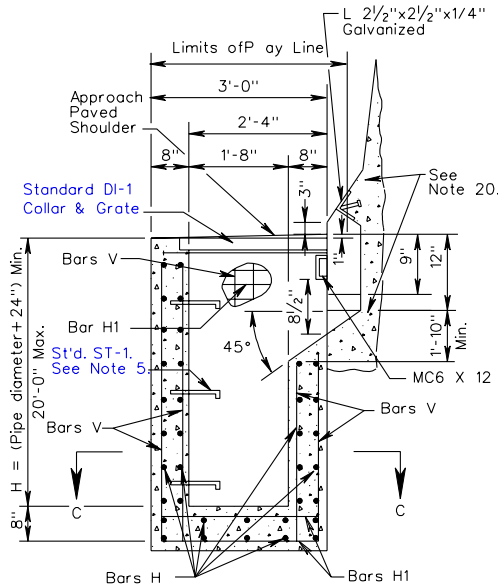
DI-10J,10K,10L

TYPE I & III INLET

REINFORCING STEEL				
MARK	SIZE	NO.	LENGTH	SPACE
A See Note 9	#4	6	L - 2'-6"	AS SHOWN
A-1 See Note 11	#4	(2xL)+2	4'-0"	12
B See Note 9	#3	2x(L-4)	1'-1"	12
B-1 See Note 11	#4	9	L+(2'-4")	8
DOWELS	#4	See Note 6	1'-0"	6
F See Note 9	#5	See Note 10	1'-6"	6
H	#5	(4xH)+10	3'-2"	12
H1	#5	(4xH)+8	2'-8"	10

TYPE - II INLET

REINFORCING STEEL				
MARK	SIZE	NO.	LENGTH	SPA.
A-1	#4	(2xL) 2	4'-0"	12"
B-1	#4	9	L+(2'-4")	8"
H-2	#5	See Note 12	7'-8"	10"
V-1	#4	12	H - (1'-2")	8"
V-2	#4	30	LENGTH = H	8"
A See Note 15	#4	See Note 14	L - (2'-6")	AS SHOWN
B See Note 15	#3	4(L-4)	1'-1"	12"
DOWELS	#4	DOUBLE NO. SHOWN FOR TYPE I	1'-0"	6"
F See Note 15	#5	See Note 13	1-6"	6"
H	#5	(4 + H)+8	3'-2"	12"
H-1	#5	(4 + H)+16	2'-8"	10"
V	#4	30	LENGTH = H	8"
M-1	#5	5	3'-2"	5"
M	#4	4	1'-8"	12"

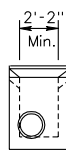


FOR USE ADJACENT TO WALL OR BARRIER WITH SAFETY SHAPE (TYPE III)

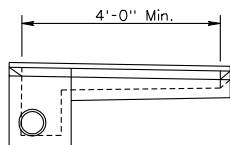
- TYPE I DENOTES INLET WITH SINGLE THROAT AND CHAMBER. TYPE II DENOTES INLET WITH DOUBLE THROAT AND CHAMBER. TYPE III DENOTES INLET WITH SINGLE THROAT AND CHAMBER ADJACENT TO WALL OR BARRIER.
- MAXIMUM PIPE SIZE IS 24" DIAMETER.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12" X 12" P LASTIC HARDWARE CLOTH 1/4" MESH OR GALV. STEEL WIRE, MIN. WIRE DIAMETER 0.03", #4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO OUTSIDE OF THE STRUCTURE.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

NOTES

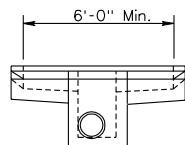
- VARIABLES GREATER THAN: 0' TO 18' MAX. TYPE II CHAMBER. 4' TO 3' MAX. TYPE I CHAMBER.
- FOR DETAILS AND DIMENSIONS NOT SHOWN FOR MEDIAN BARRIER, SEE STANDARD MB-8A.
- GALVANIZED MC-6 X 12 IS TO BE WELDED UNDER THE COLLAR AND EXTENDED INTO SIDEWALLS TO WITHIN 2" OF OUTSIDE FACE.
- ALL REINFORCING BARS ARE TO BE GRADE 60 STEEL WITH MIN. OF 1/2" CONCRETE COVER. ANY BAR IN CONFLICT WITH IPE SHELL AND/OR TOP SLAB OPENING ARE TO BE FIELD CUT TO PROVIDE THE REQUIRED COVER.
- DO NOT LOCATE STANDARD ST-1 STEPS ON CHAMBER WALLS THAT HAVE IPES WHEN POSSIBLE.
- 8 DOWELS REQUIRED FOR DI-10L, MIN. L ≥ 8'. ADD 2 DOWELS FOR EACH ADDITIONAL FOOT. 4 DOWELS REQUIRED FOR DI-10K, MIN. L = 4'-0". ADD 2 DOWELS FOR EACH ADDITIONAL FOOT.
- 12 BARS A REQUIRED FOR DI-10L.
- LENGTH OF BARS A, DI-10L = $\frac{L - (2'-6")}{2}$
- DO NOT USE WITH DI-10J.
- USE 6 BARS F FOR DI-10L TYPE I.
- DO NOT USE WITH TYPE III.
- ADD 4 ADDITIONAL BARS FOR EACH EXTRA FOOT OF DEPTH.
- USE 12 BARS F FOR DI-10L TYPE II.
- 24 BARS A ARE REQUIRED FOR DI-10L.
- DO NOT USE WITH DI-10J.
- A MINIMUM 22" FOOTING DEPTH IS REQUIRED FOR FORMING THE INLET SLOT. SEEP LANS FOR LENGTH "L".
- REFER TOP LANS FOR STRUCTURE LOCATIONS, DATA AND DIMENSIONS.
- REFER TOP LANS FOR LOCATIONS OF IPES AND INVERTS.
- FOR TYPE III, COST OF ACCOMMODATION OF INLET THROAT IS TO BE INCLUDED IN COST OF WALL BARRIER.
- FOR TYPE III, SEE WALL LANS FOR WALL FOOTING DETAILS.



DI-10J



DI-10K



DI-10L

Sheet 2 of 2

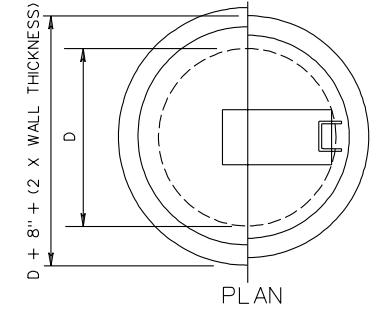
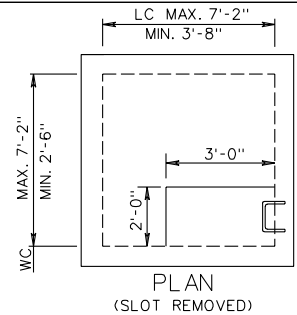
CONCRETE BARRIER DROP INLET (WITH MB-8A)

12"-24" P IPE: DEPTH (H) = 20' MAX.

VIRGINIA DEPARTMENT OF TRANSPORTATION

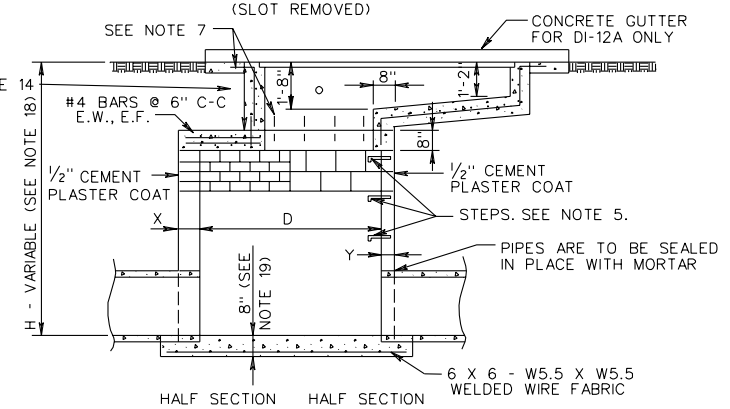
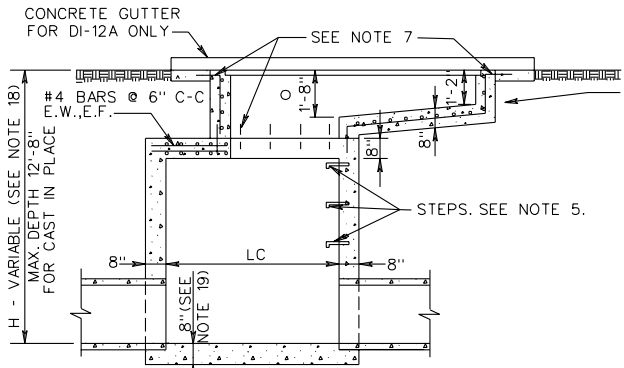
SPECIFICATION REFERENCE

233
302



X DIM.	DEPTH
8"	0' TO 10'
12"	10' TO 16'
16"	16' TO 25'

Y DIM.	DEPTH
5"	0' TO 12'
10"	12' TO 25'



SECTION (CAST IN PLACE)
MAXIMUM DEPTH: UNLIMITED, 60" MINIMUM DIAMETER.

SECTION BRICK CONCRETE BLOCK

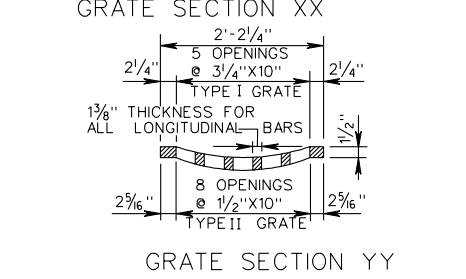
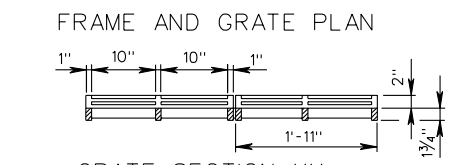
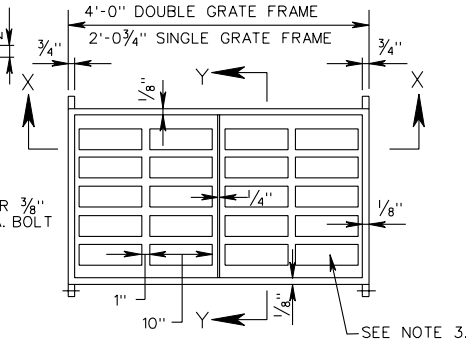
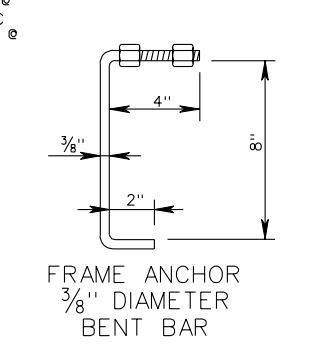
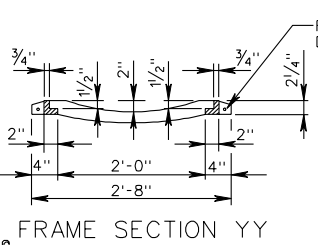
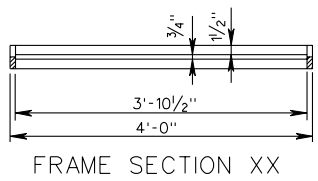
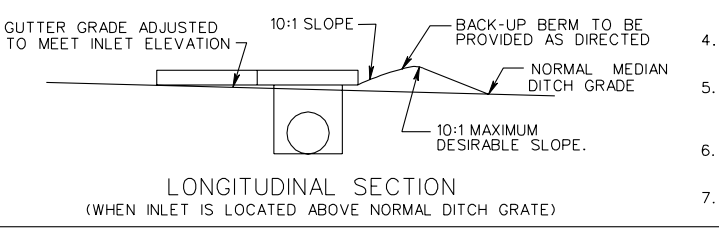
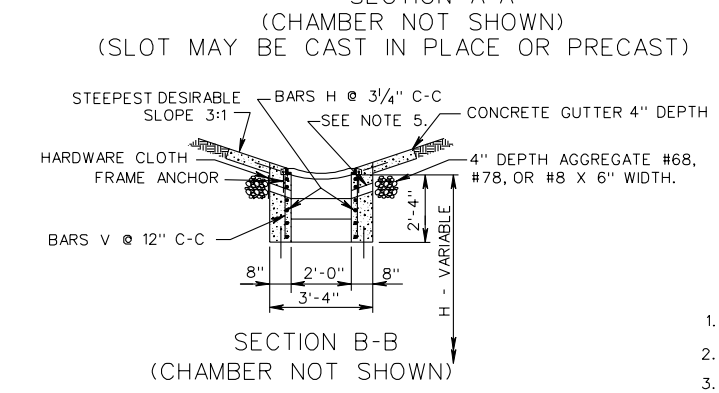
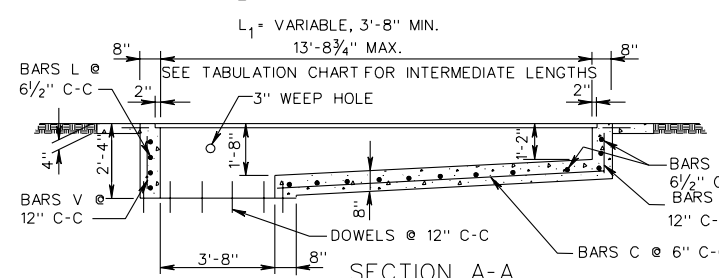
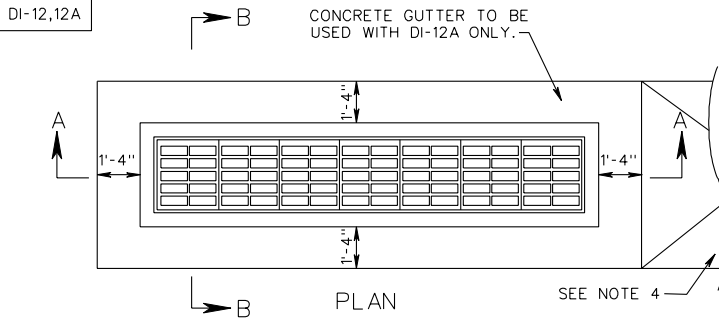
NOTES

- USE OF INLET RESTRICTED TO NON-VEHICULAR LOCATIONS.
- DEPTH OF INLET (H) AND LENGTH (L) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- CHAMBER MAY BE PRECAST. SEE STANDARD 103.10 FOR DETAILS.
- # 4 DOWELS 12" LONG SPACED AT 12" C-C ALL SIDES.
- FOOTING MAY BE ROUND OR SQUARE IN SHAPE. KEY IS TO BE 1" DEEP X WALL THICKNESS + 1".
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- ALL REINFORCING BARS TO BE #4.
- GRATE BARS TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO DITCH FLOW.
- FOR DETAILS OF CONCRETE SLOT, COLLAR AND GRATE, AND METHOD OF PLACING APPROACH GUTTER SEE SHEET 2 OF 3.
- PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN ST'D. PG-2A.
- QUANTITIES SHOWN ARE FOR INLETS WITHOUT PIPES. PIPE DISPLACEMENTS MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. SEE SHEET 3 OF 3 FOR QUANTITIES.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
- SEE TABULATION CHART ON SHEET 3 OF 3 FOR FOR MINIMUM DEPTH (H).
- 10" THICK SLAB FOR PIPE SIZES 60" TO 72" IN DIAMETER.
- THE TYPE OF INLET DETAILED HEREON TO BE CONSTRUCTED WILL BE AT THE OPTION OF THE CONTRACTOR.
- DI-12 NO GUTTER.
DI-12A PERIPHERAL GUTTER.

SPECIFICATION REFERENCE
233
302

MULTIGRATE DROP INLET
FOR PIPE SIZES 12" TO 72"
VIRGINIA DEPARTMENT OF TRANSPORTATION

DI-12,12A



NOTES

1. TYPE I GRATE: LIMITED ACCESS AND RURAL UNLIMITED ACCESS: PEDESTRIAN ACCESS UNLIKELY
2. TYPE II GRATE: URBAN AREAS: PEDESTRIAN ACCESSIBLE AREAS.
3. SEE GRATE SECTION YY FOR SIZE AND NUMBER OF GRATE OPENING REQUIRED FOR TYPE I AND TYPE II GRATE.
4. PAVED TRANSITION WHERE REQUIRED ON PLANS IS TO BE SHAPED TO CONFORM TO ROUNDED CONCRETE GUTTER OF DI-12A.
5. 3" DIAMETER WEEP HOLE WITH 12" X 12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO OUTSIDE OF STRUCTURE.
6. IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET, A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.
7. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

SHEET 2 OF 3

MULTIGRATE DROP INLET
FOR PIPE SIZES 12" TO 72"

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
233 302

104.31

TABULATION CHARTS

APPROXIMATE QUANTITIES (SEE NOTE 2)						
CAST IN PLACE CHAMBER						
PIPE SIZES	MINIMUM DEPTH H (SEE NOTE 3)	REINFORCING STEEL LBS.	CONCRETE CU. YDS.	CHAMBER DIMENSIONS		CONCRETE CHAMBER INCREMENTS PER FOOT (SEE NOTE 1) CU. YDS.
				W _C	L _C	
12" TO 24"	4'-2"	20.5	1.20	2'-6"	3'-8"	.37
27" TO 36"	5'-6 1/4 "	30.33	2.14	3'-8"	3'-8"	.43
42" TO 54"	6'-10 1/2 "	129.80	4.39	5'-5"	5'-5"	.53
60" TO 72"	8'-6"	277.32	7.65	7'-2"	7'-2"	.69

NOTES

- FOR EACH ADDITIONAL FOOT IN DEPTH THE INCREMENT SHOWN MUST BE MULTIPLIED BY THE ADDITIONAL DEPTH IN FEET AND ADDED TO THE CONCRETE TOTAL.
- APPROXIMATE QUANTITIES ARE SHOWN FOR BIDDING PURPOSES ONLY: ITEMS ARE NOT TO BE BID SEPARATELY. TO OBTAIN THE TOTAL APPROXIMATE CONCRETE QUANTITIES FOR EACH INLET, THE CHAMBER, SLOT AND GUTTER (GUTTER TO BE USED WITH DI-12A ONLY) QUANTITIES MUST BE ADDED TOGETHER.
- MINIMUM DEPTHS SHOWN ARE FOR THE SMALLEST PIPE SIZE IN EACH SERIES. MINIMUM DEPTH H=PIPE DIAMETER +PIPE WALL THICKNESS +3".
- FOR APPROXIMATE QUANTITIES FOR DI-12A ADD 0.36 CU. YDS. OF CLASS A3 CONCRETE TO DI-12 QUANTITIES FOR CONCRETE GUTTER. QUANTITY SHOWN IS FOR A MINIMUM SLOT LENGTH OF 3'-8". FOR OTHER CONCRETE LENGTHS SEE CONCRETE GUTTER INCREMENTS IN THIS TABLE.
- DI-12A CONCRETE GUTTER INCREMENT: ADD 0.07 CU. YDS. CLASS A3 CONCRETE FOR EACH ADDITIONAL FOOT OF SLOT LENGTH GREATER THAN MINIMUM 3'-8".
- DOWELS ARE TO BE PROVIDED FOR THE JOINT BETWEEN THE CONCRETE GUTTER AND SLOT. THE COST OF DOWELS ARE TO BE INCLUDED IN THE CUBIC YARD COST FOR CONCRETE.
- SLOT MAY BE PRECAST OR CAST IN PLACE.
- L=LENGTH ROUNDED FOR PLAN USE.

APPROXIMATE QUANTITIES						
BRICK AND BLOCK CHAMBER						
PIPE SIZES	CHAMBER DIMENSIONS "D"	REINFORCING STEEL LBS.	CONCRETE CU. YDS.	BRICK		BLOCK
				MIN. DEPTH H	NO.	
12" TO 24"	4'-0"	102.68	1.25	4'-2"	688	42
27" TO 36"	4'-0"	102.68	1.25	5'-6 1/4"	911	55
42" TO 54"	5'-6"	200.81	2.01	7'-10 1/2"	1300	111
60" TO 72"	8'-0"	404.74	3.65	9'-6"	1568	190

BRICK CHAMBER INCREMENTS PER FT.

X DIM.	DEPTH	4' DIAMETER APPROX. NO. BRICKS/FT.	5'-6" DIAMETER APPROX. NO. BRICKS/FT.	8'-0" DIAMETER APPROX. NO. BRICKS/FT.
8"	0' - 10'	165	227	330
12"	10' - 16'	250	341	495
16"	16' - 25'	330	454	660

BLOCK CHAMBER INCREMENTS PER FT.

Y DIM.	DEPTH	4' DIAMETER APPROX. NO. BRICKS/FT.	5'-6" DIAMETER APPROX. NO. BRICKS/FT.	8'-0" DIAMETER APPROX. NO. BRICKS/FT.
5"	0' - 12'	10	14	20
10"	12' - 25'	20	28	40

APPROXIMATE QUANTITIES - DI - 12 ONLY
(SEE NOTE 4)SLOT 4' TO 14'
(SEE NOTE 8)

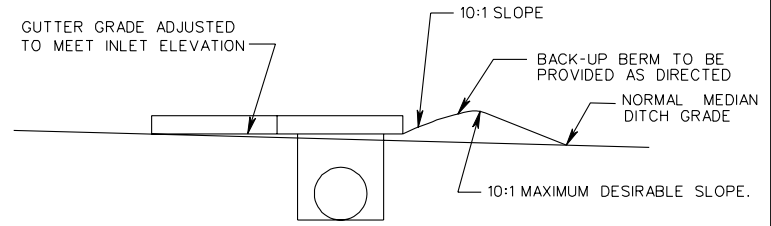
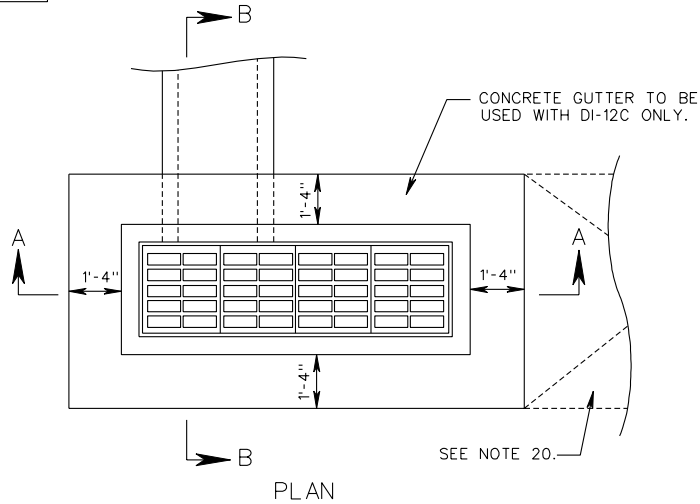
L (SEE NOTE 8)	L ₁	CONCRETE CU. YDS.	REINFORCING STEEL LBS.	GRATES NO.
4	3'-8"	0.81	81.27	2
6	5'-8 3/4"	1.10	122.81	3
8	7'-8"	1.30	161.90	4
10	9'-8 3/4"	1.61	203.37	5
12	11'-8"	1.91	242.45	6
14	13'-8 3/4"	2.22	283.93	7

Sheet 3 of 3

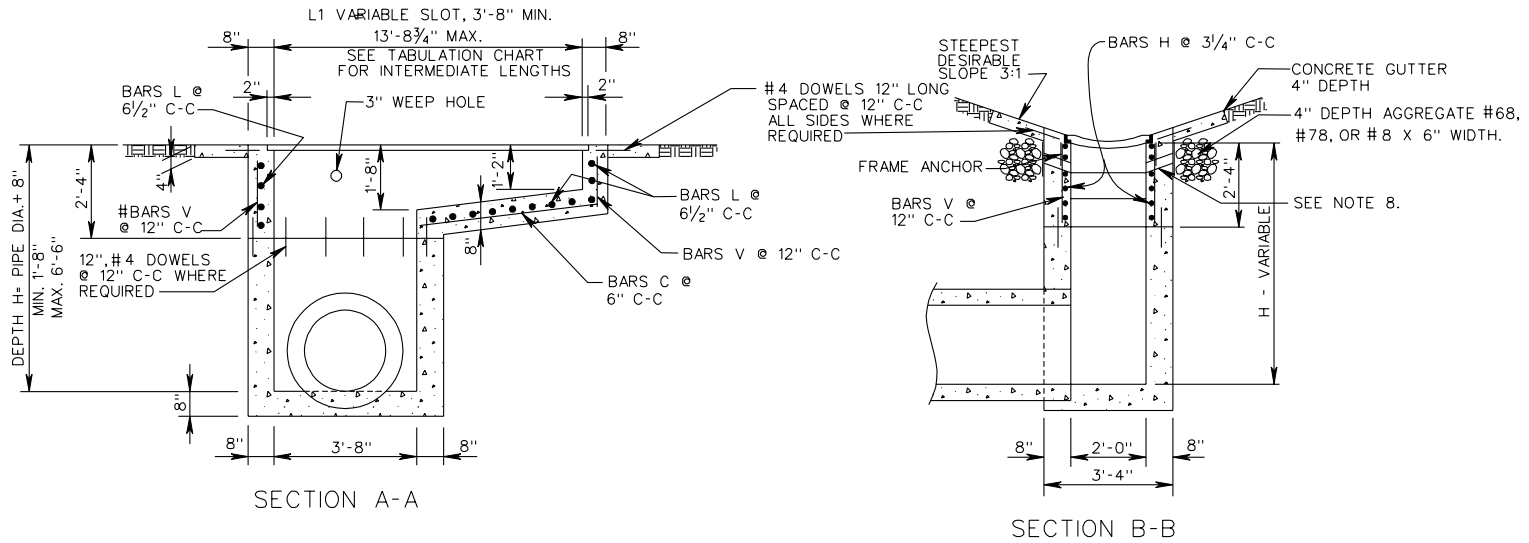
SPECIFICATION
REFERENCE233
302MULTIGRATE DROP INLET
FOR PIPE SIZES 12" TO 72"
VIRGINIA DEPARTMENT OF TRANSPORTATION

104.32

DI-12B,12C



LONGITUDINAL SECTION
(WHEN INLET IS LOCATED ABOVE NORMAL DITCH GRADE)
SEE NOTE 16.



SHEET 1 OF 2

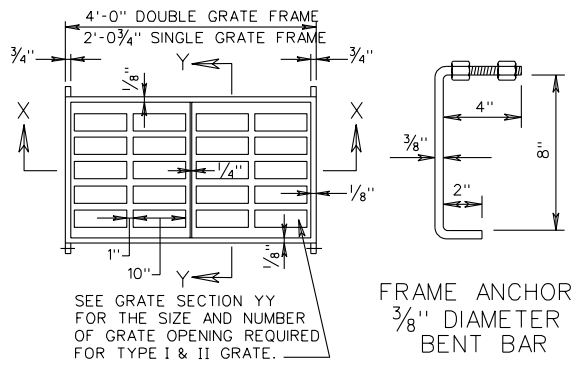
MULTIGRADE DROP INLET
FOR PIPE SIZES 12" TO 36"

VIRGINIA DEPARTMENT OF TRANSPORTATION

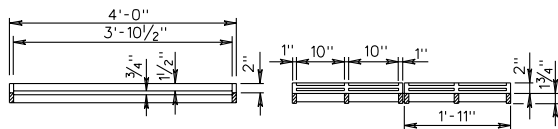
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SPECIFICATION
REFERENCE

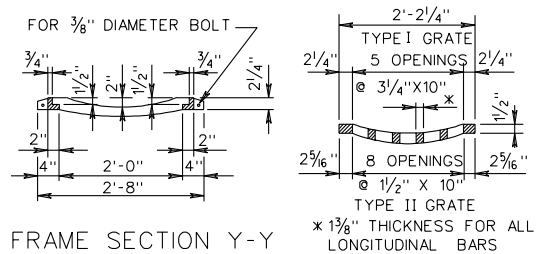
241
503



GRATE AND FRAME PLAN



FRAME SECTION X-X GRATE SECTION X-X



FRAME SECTION Y-Y GRATE SECTION Y-Y

NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 6'-6", USE ST'D. DI-12, DI-12A.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- # 4 DOWELS 12" LONG, 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
- 3" DIAMETER WEEP HOLE 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- ALL REINFORCING BARS TO BE #4.
- DI-12C CONCRETE GUTTER INCREMENT: ADD 0.07 CU. YDS. CLASS A3 CONCRETE FOR EACH ADDITIONAL FOOT OF SLOT LENGTH GREATER THAN MINIMUM 3'-8".
- GRATE BARS TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO THE DITCH FLOW.
- IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.
- DI-12B-----NO GUTTER.
DI-12C-----PERIPHERAL GUTTER.
- PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STANDARD PG-2A.
- QUANTITIES SHOWN ARE FOR INLETS WITHOUT PIPES. PIPE DISPLACEMENTS MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- PAVED TRANSITION WHERE REQUIRED ON PLANS. TRANSITION IS TO BE SHAPED TO CONFORM TO ROUNDED CONCRETE GUTTER OF DI-12C.
- TYPE I GRATE: LIMITED ACCESS AND RURAL UNLIMITED ACCESS. PEDESTRIAN ACCESS UNLIKELY.
- TYPE II GRATE: URBAN AREAS; PEDESTRIAN ACCESSIBLE AREAS.
- L = LENGTH ROUNDED FOR PLAN USE.
- DI-12C: FOR APPROX. QUANTITIES FOR DI-12C, ADD 0.36 CU. YDS. OF CLASS A3 CONCRETE TO DI-12B QUANTITIES FOR CONCRETE GUTTER. QUANTITY SHOWN IS FOR A MINIMUM SLOT LENGTH OF 3'-8". FOR OTHER LENGTHS SEE CONCRETE GUTTER INCREMENT BELOW.

TABULATION CHARTS

APPROXIMATE QUANTITIES DI-12B ONLY
(SEE NOTES 19 & 24)

(MINIMUM HEIGHT) SLOT 4' TO 14' (SEE NOTE 23)					
L (SEE NOTE 23)	L1	CONCRETE CU. YDS.	REINFORCING STEEL LBS.	NUMBER GRATES	CONCRETE CHAMBER INCREMENTS PER FOOT CU. YDS.
4	3'-8"	0.99	81.27	2	.35
6	5'-8 3/4"	1.28	122.81	3	
8	7'-8"	1.48	161.90	4	
10	9'-8 3/4"	1.79	203.37	5	
12	11'-8"	2.09	242.45	6	
14	13'-8 3/4"	2.40	283.93	7	

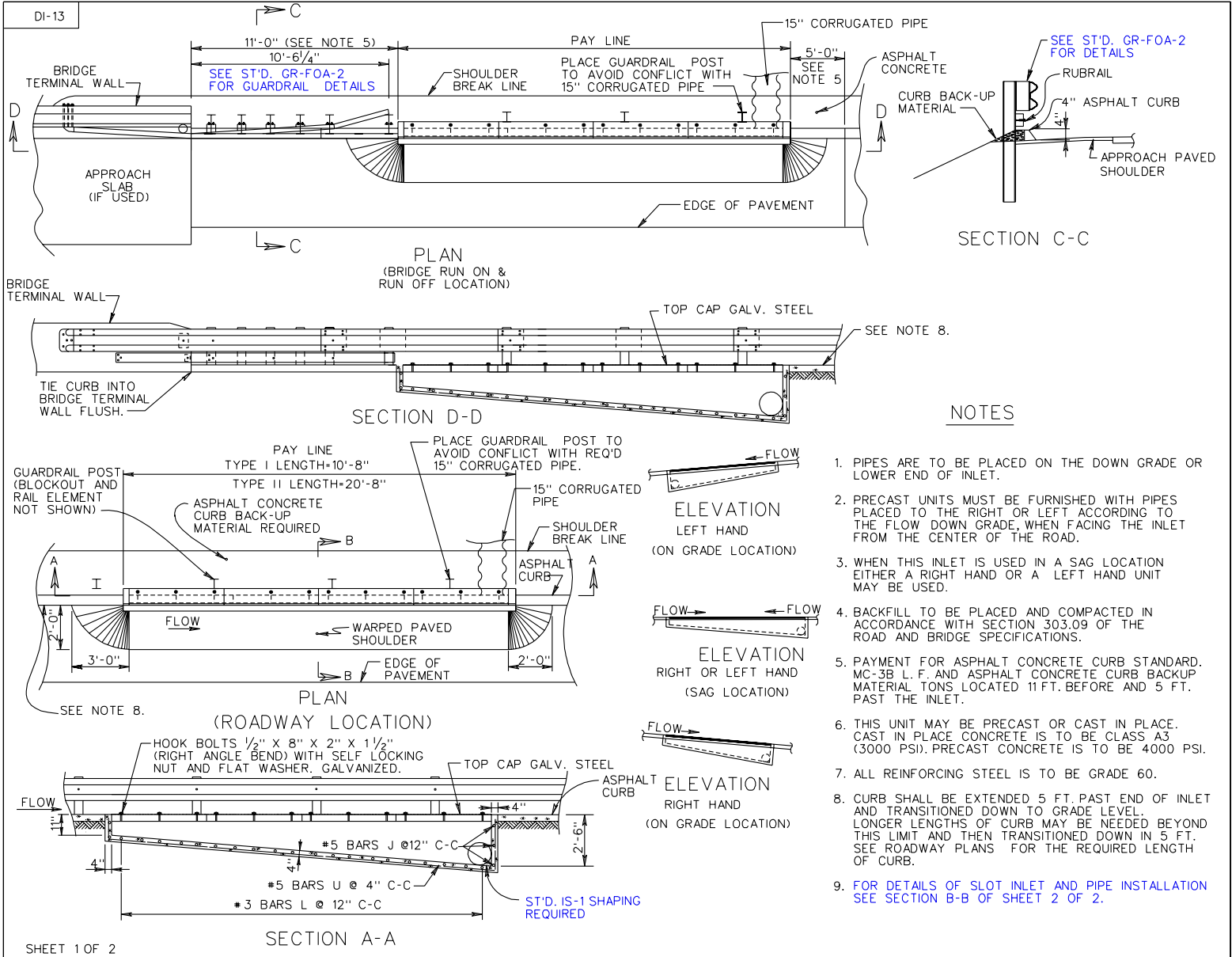
SHEET 2 OF 2

SPECIFICATION REFERENCE

241
503

MULTIGRATE DROP INLET
FOR PIPE SIZES 12" TO 36"

VIRGINIA DEPARTMENT OF TRANSPORTATION



NOTES

1. PIPES ARE TO BE PLACED ON THE DOWN GRADE OR LOWER END OF INLET.
2. PRECAST UNITS MUST BE FURNISHED WITH PIPES PLACED TO THE RIGHT OR LEFT ACCORDING TO THE FLOW DOWN GRADE, WHEN FACING THE INLET FROM THE CENTER OF THE ROAD.
3. WHEN THIS INLET IS USED IN A SAG LOCATION EITHER A RIGHT HAND OR A LEFT HAND UNIT MAY BE USED.
4. BACKFILL TO BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 303.09 OF THE ROAD AND BRIDGE SPECIFICATIONS.
5. PAYMENT FOR ASPHALT CONCRETE CURB STANDARD, MC-3B L.F. AND ASPHALT CONCRETE CURB BACKUP MATERIAL TONS LOCATED 11 FT. BEFORE AND 5 FT. PAST THE INLET.
6. THIS UNIT MAY BE PRECAST OR CAST IN PLACE. CAST IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
7. ALL REINFORCING STEEL IS TO BE GRADE 60.
8. CURB SHALL BE EXTENDED 5 FT. PAST END OF INLET AND TRANSITIONED DOWN TO GRADE LEVEL. LONGER LENGTHS OF CURB MAY BE NEEDED BEYOND THIS LIMIT AND THEN TRANSITIONED DOWN IN 5 FT. SEE ROADWAY PLANS FOR THE REQUIRED LENGTH OF CURB.
9. FOR DETAILS OF SLOT INLET AND PIPE INSTALLATION SEE SECTION B-B OF SHEET 2 OF 2.

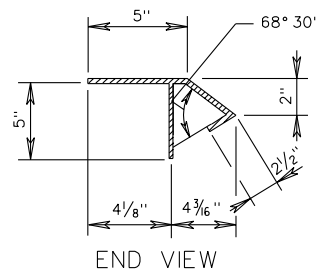
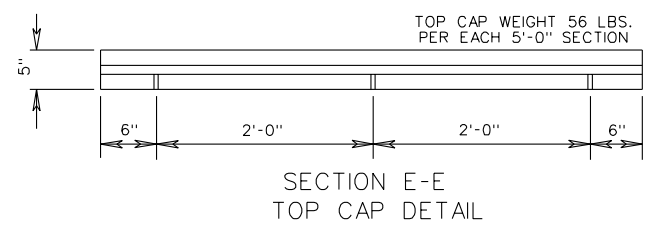
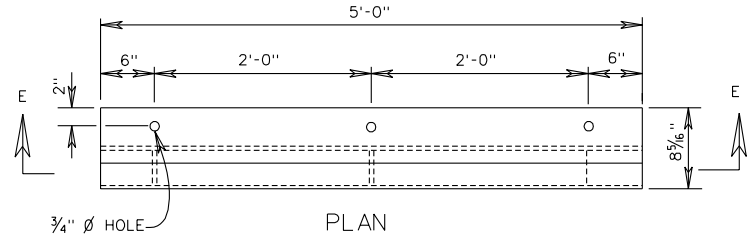
SHEET 1 OF 2

SHOULDER SLOT INLET

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

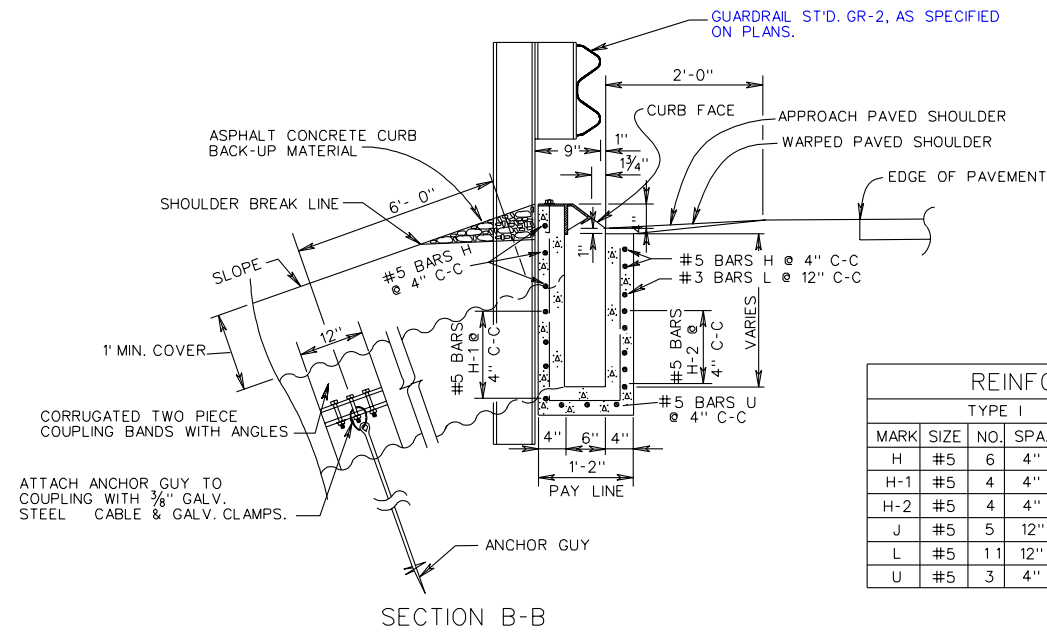
233
302



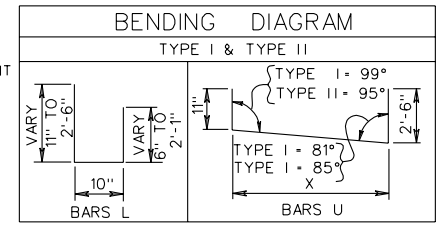
TYPICAL METHOD OF INSTALLATION FOR PIPE ON FILL SLOPE

NOTES

- SEE SHEET 1 OF 2 (104.35) OF ROAD AND BRIDGE STANDARDS FOR ADDITIONAL DESIGN AND PLACING INFORMATION.
- TOP CAP IS TO BE FABRICATED FROM A-36 STEEL PLATE 1/4" THICK. ALL JOINTS ARE TO BE WELDED USING 1/4" FILLET WELDS AND THE COMPLETE UNIT IS TO BE GALVANIZED.



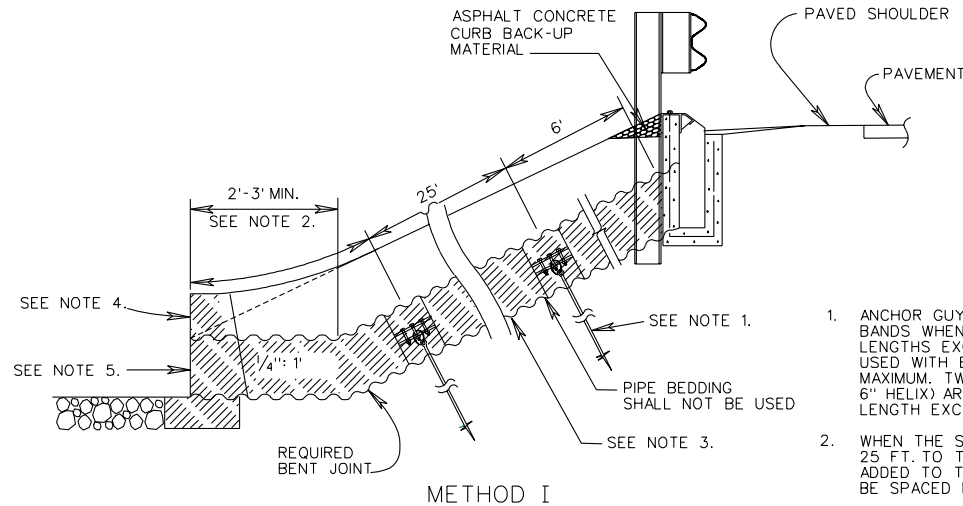
TYPE I		TYPE II	
MARK	X	MARK	X
U	10'-5 1/2"	U	20'-4 3/4"



REINFORCING STEEL SCHEDULE									
TYPE I					TYPE II				
MARK	SIZE	NO.	SPA.	LENGTH	MARK	SIZE	NO.	SPA.	LENGTH
H	#5	6	4"	10'-4"	H	#5	6	4"	20'-4"
H-1	#5	4	4"	8'-11" TO 2'-8"	H-1	#5	4	4"	12'-8" TO 2'-8"
H-2	#5	4	4"	8'-11" TO 2'-8"	H-2	#5	4	4"	12'-8" TO 2'-8"
J	#5	5	12"	0'-10"	J	#5	5	12"	0'-10"
L	#5	11	12"	5'-5" TO 2'-3"	L	#5	21	12"	5'-5" TO 2'-3"
U	#5	3	4"	13'-10"	U	#5	3	4"	23'-10"

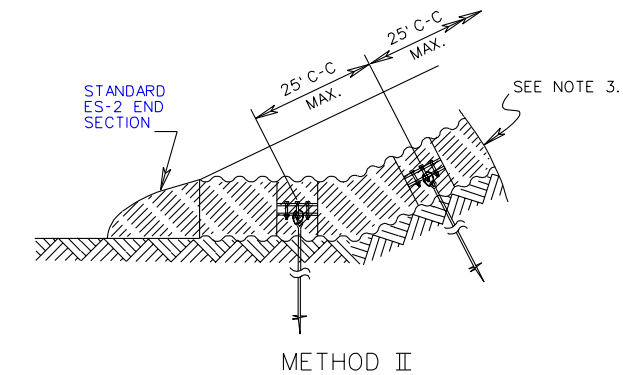
SPECIFICATION REFERENCE

SHOULDER SLOT INLET
VIRGINIA DEPARTMENT OF TRANSPORTATION



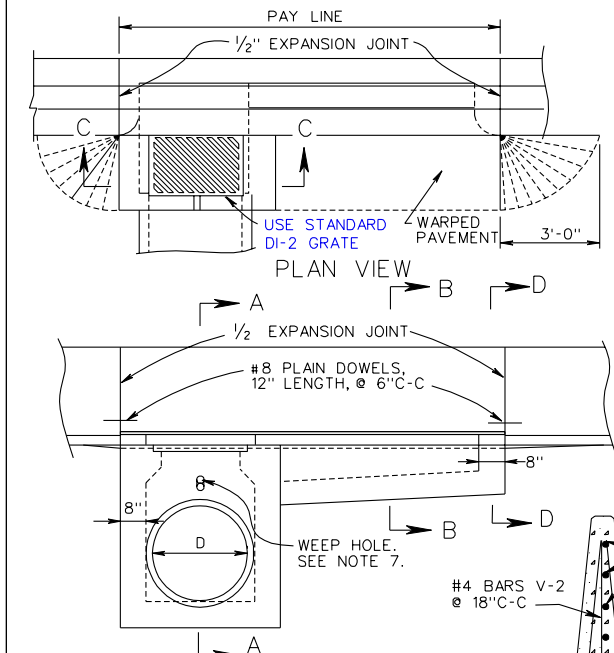
NOTES

1. ANCHOR GUY SCREWS ARE NOT TO BE USED WITH THE COUPLING BANDS WHEN THE PIPE LENGTHS ARE LESS THAN 50 FT. WHEN PIPE LENGTHS EXCEED 50 FT. TWO (2) ANCHOR GUY SCREWS ARE TO BE USED WITH EACH COUPLING BAND SPACED AT 25 FT. C-C MAXIMUM. TWO (2) ANCHOR GUY SCREWS, (1/2" DIAMETER X 5'-6", 6" HELIX) ARE TO BE USED WITH EACH COUPLING BAND, WHEN PIPE LENGTH EXCEEDS 50 FT.
2. WHEN THE SPACING OF THE LOWER COUPLING FALLS CLOSER THAN 25 FT. TO THE STORM SYSTEM STRUCTURE THE DISTANCE IS TO BE ADDED TO THE LAST FULL 12'-6" SPACE, AND THE COUPLING IS TO BE SPACED MID-WAY OF THE TOTAL DISTANCE.
3. REQUIRED 15" CORRUGATED PIPE. SEE PLAN FOR LIN. FT. QUANTITIES. THE LIN. FT. COST FOR THE PIPE IS TO INCLUDE FURNISHING AND PLACING COUPLINGS AND ANCHOR GUYS. CORRUGATED POLY-ETHYLENE PIPE LENGTHS GREATER THAN 50 FT. MAY BE USED AS AN ALTERNATE PROVIDED THE COUPLING BAND ANCHORAGE DESIGN IS SUBMITTED BY THE MANUFACTURER FOR THE ENGINEER'S REVIEW AND APPROVAL.
4. REQUIRED 15" CORRUGATED PIPE MUST BE TERMINATED AT THE TOE OF FILL SLOPE WITH AN APPROPRIATE END TREATMENT. FOR 3:1 SLOPES AND FLATTER THE PIPE MAY BE TERMINATED WITH A STANDARD ES-2 END SECTION OR TIED INTO ANOTHER DRAINAGE STRUCTURE. FOR SLOPES 3:1 AND STEEPER (MAX. 1/2:1) THE 15" PIPE MUST HAVE ONE OF THE FOLLOWING END TREATMENTS (SEE PLANS FOR REQUIRED TYPE OF STRUCTURE):
 - METHOD I: TERMINATE PIPE WITH A STANDARD END WALL OR OTHER DRAINAGE STRUCTURE, TO BE APPROVED BY THE ENGINEER. FOR PIPE LENGTHS LONGER THAN 50 FT., COUPLING BANDS WITH ANCHOR GUYS ARE TO BE USED AT 12'-6" C-C MAXIMUM SPACING.
 - METHOD II: TERMINATE PIPE WITH A STANDARD ES-2 END SECTION ANCHORED WITH COUPLING BAND AND ANCHOR GUYS. ADDITIONAL COUPLING BANDS AND ANCHOR GUYS ARE TO BE PLACED AT 12'-6" C-C MAXIMUM FOR THE REMAINING LENGTH OF PIPE.
5. MORTAR REQUIRED CORRUGATED PIPE INTO THE WALL IF PRECAST STRUCTURE IS USED.

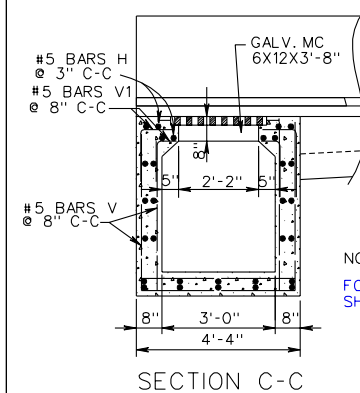


METHOD OF OUTLET PIPE INSTALLATION FOR DI-13

SPECIFICATION
REFERENCE

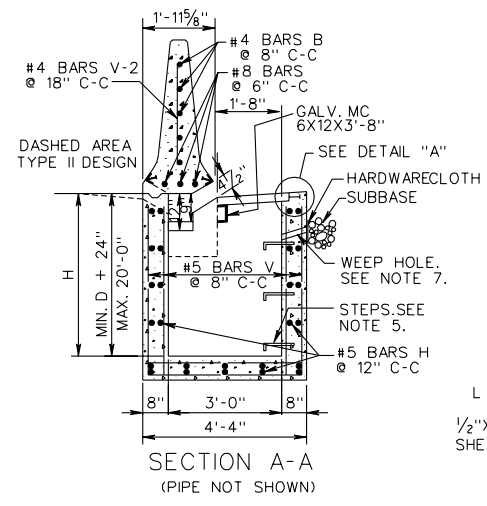


FRONT ELEVATION
(PAVEMENT REMOVED)

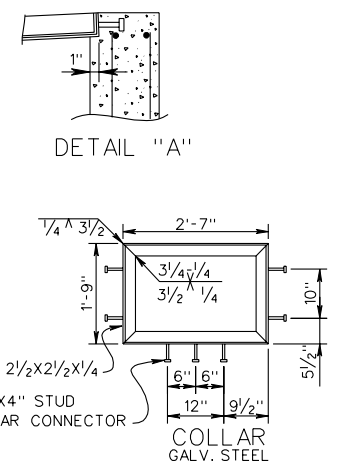


SECTION C-C

NOTE:
FOR DIMENSIONS, QUANTITIES AND NOTES NOT SHOWN SEE SHEET 2 OF 2.

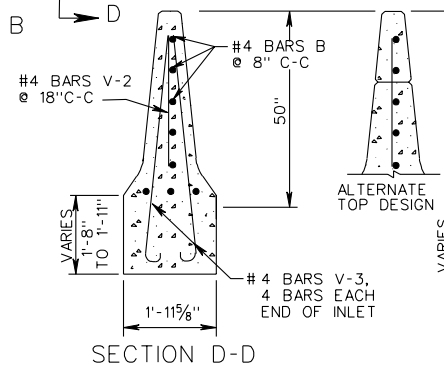


SECTION A-A
(PIPE NOT SHOWN)

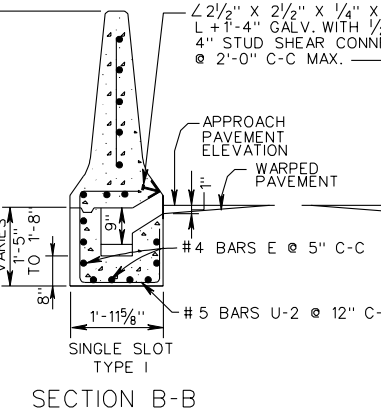


DETAIL "A"

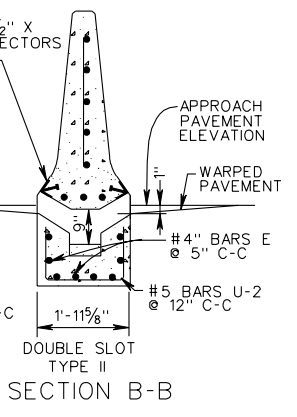
COLLAR
GALV. STEEL



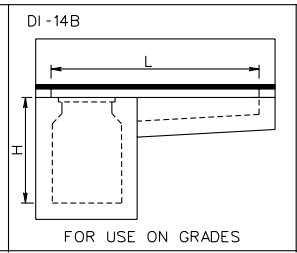
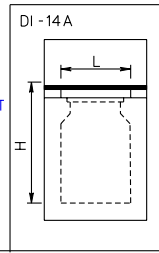
SECTION D-D



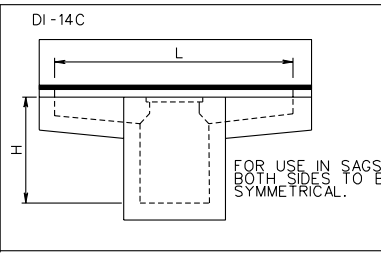
SECTION B-B



SECTION B-B



FOR USE ON GRADES



FOR USE IN SAGS
BOTH SIDES TO B
SYMMETRICAL.

SHEET 1 OF 2

SPECIFICATION REFERENCE
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CONCRETE MEDIAN BARRIER DROP INLET

12"-36" PIPE: DEPTH (H)=20'-0" MAX.

VIRGINIA DEPARTMENT OF TRANSPORTATION

TABLE OF QUANTITIES

TYPE	L	CONCRETE		REINFORCING STEEL														TYPE I	TYPE II						
		Type I	Type II	BARS A	BARS B	BARS E	BARS H	BARS U-1		BARS U-2		BARS V	BARS V-1	BARS V-2	BARS V-3										
		FT.	CU. YD.	NO.	LN.*FT.	NO.	LN.*FT.	NO.	LN.*FT.	NO.	LN.*FT.	NO.	LN.*FT.	NO.	LN.*FT.	NO.	LN.*FT.			NO.	LN.*FT.	Lbs.	Lbs.		
DI-14A	3'	2.23	2.20	3	4'-0"	5	4'-0"	-	-	38	4'-0"	-	-	-	-	48	3'-4"	12	2'-6"	3	3'-8"	8	5'-9"	455	455
DI-14B	4'	2.45	2.44	3	5'-0"	5	5'-0"	8	1'-4"	38	4'-0"	2	5'-2" TO 5'-8"	2	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	4	3'-8"	8	5'-9"	485	480
	6'	2.91	2.89	3	7'-0"	5	7'-0"	8	3'-4"	38	4'-0"	4	5'-2" TO 5'-8"	4	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	5	3'-8"	8	5'-9"	528	519
	8'	3.36	3.34	3	9'-0"	5	9'-0"	8	5'-4"	38	4'-0"	6	5'-2" TO 5'-8"	6	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	7	3'-8"	8	5'-9"	573	560
	10'	3.82	3.78	3	11'-0"	5	11'-0"	8	7'-4"	38	4'-0"	8	5'-2" TO 5'-8"	8	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	8	3'-8"	8	5'-9"	617	600
	12'	4.28	4.24	3	13'-0"	5	13'-0"	8	9'-4"	38	4'-0"	10	5'-2" TO 5'-8"	10	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	9	3'-8"	8	5'-9"	660	639
	14'	4.74	4.69	3	15'-0"	5	15'-0"	8	11'-4"	38	4'-0"	12	5'-2" TO 5'-8"	12	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	11	3'-8"	8	5'-9"	706	679
	16'	5.20	5.14	3	17'-0"	5	17'-0"	8	13'-4"	38	4'-0"	14	5'-2" TO 5'-8"	14	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	12	3'-8"	8	5'-9"	749	719
	18'	5.67	5.61	3	19'-0"	5	19'-0"	8	15'-4"	38	4'-0"	16	5'-2" TO 5'-8"	16	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	13	3'-8"	8	5'-9"	793	758
	20'	6.13	6.06	3	21'-0"	5	21'-0"	8	17'-4"	38	4'-0"	18	5'-2" TO 5'-8"	18	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	15	3'-8"	8	5'-9"	838	799
	DI-14C	6'	2.91	2.89	3	7'-0"	5	7'-0"	16	2'-0"	38	4'-0"	6	5'-2" TO 5'-8"	6	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	5	3'-8"	8	5'-9"	543
8'		3.36	3.34	3	9'-0"	5	9'-0"	16	3'-0"	38	4'-0"	8	5'-2" TO 5'-8"	8	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	7	3'-8"	8	5'-9"	588	571
10'		3.82	3.79	3	11'-0"	5	11'-0"	16	4'-0"	38	4'-0"	10	5'-2" TO 5'-8"	10	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	8	3'-8"	8	5'-9"	632	610
12'		4.28	4.24	3	13'-0"	5	13'-0"	16	5'-0"	38	4'-0"	12	5'-2" TO 5'-8"	12	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	9	3'-8"	8	5'-9"	675	646
14'		4.74	4.69	3	15'-0"	5	15'-0"	16	6'-0"	38	4'-0"	14	5'-2" TO 5'-8"	14	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	11	3'-8"	8	5'-9"	720	690
16'		5.20	5.14	3	17'-0"	5	17'-0"	16	7'-0"	38	4'-0"	16	5'-2" TO 5'-8"	16	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	12	3'-8"	8	5'-9"	764	729
18'		5.67	5.61	3	19'-0"	5	19'-0"	16	8'-0"	38	4'-0"	18	5'-2" TO 5'-8"	18	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	13	3'-8"	8	5'-9"	807	768
20'		6.13	6.06	3	21'-0"	5	21'-0"	16	9'-0"	38	4'-0"	20	5'-2" TO 5'-8"	20	3'-1" TO 3'-7"	48	3'-4"	12	2'-6"	15	3'-8"	8	5'-9"	853	809

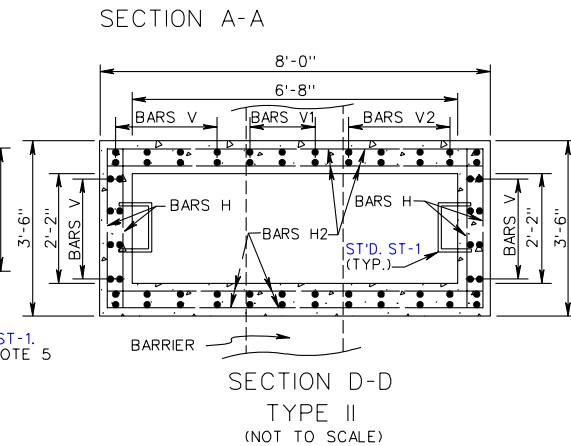
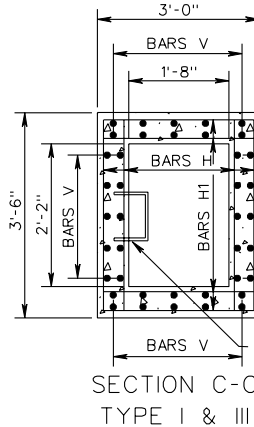
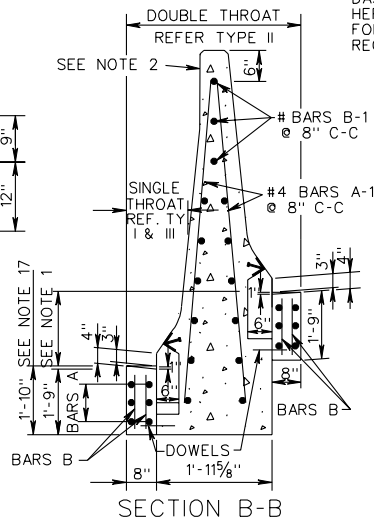
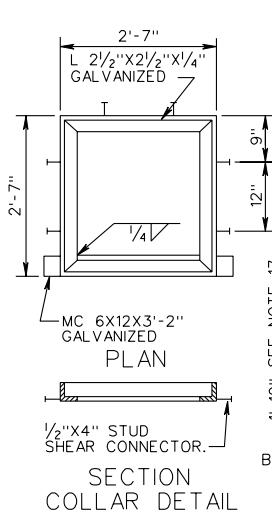
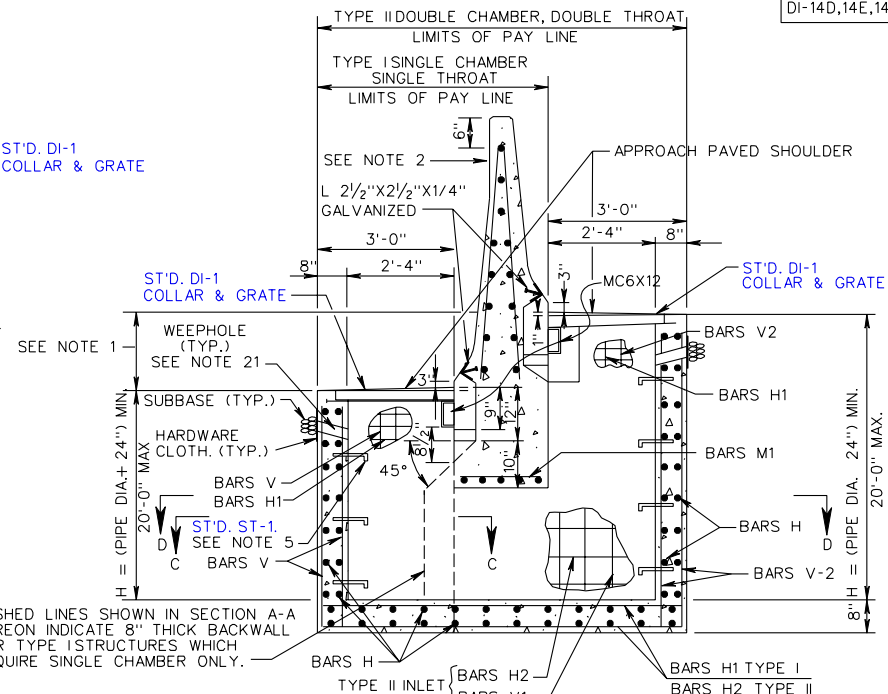
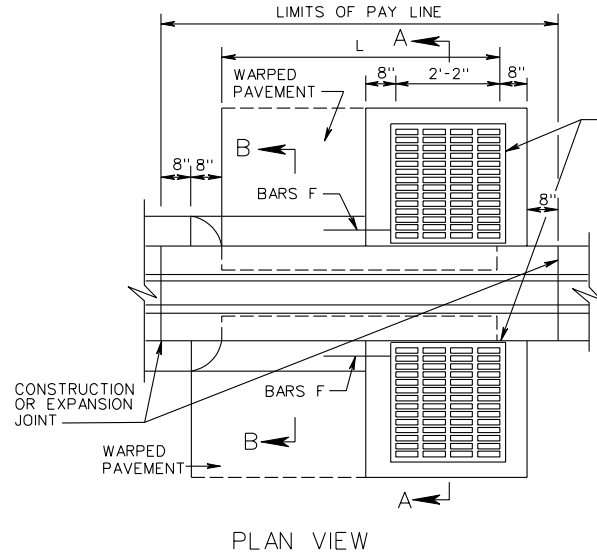
NOTES

- DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
- THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"x12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
- LENGTH OF SLOT (L) WILL, IN EVERY CASE, BE SHOWN ON PLANS.
- CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 3'-0" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.36 CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH. AND 84 LBS. OF REINFORCING STEEL.
- LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 OF 2 IS TO BE L + 16" AT 4.10 LBS./FT..
- * DENOTES LENGTH OF ONE (1) BAR.
- GRATE TO BE INSTALLED SO SLOTS WILL DIRECT WATER TOWARD THE INLET THROAT. GRATE MUST BE REVERSIBLE (RIGHT HAND GRATE IS SHOWN).
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
- FOR DETAILS AND DIMENSIONS NOT SHOWN FOR MEDIAN BARRIER SEE STANDARD MB-12.
- QUANTITIES INCLUDE MB-12.

CONCRETE MEDIAN BARRIER DROP INLET
12"-36" PIPE: DEPTH (H) = 20'-0" MAX.
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE

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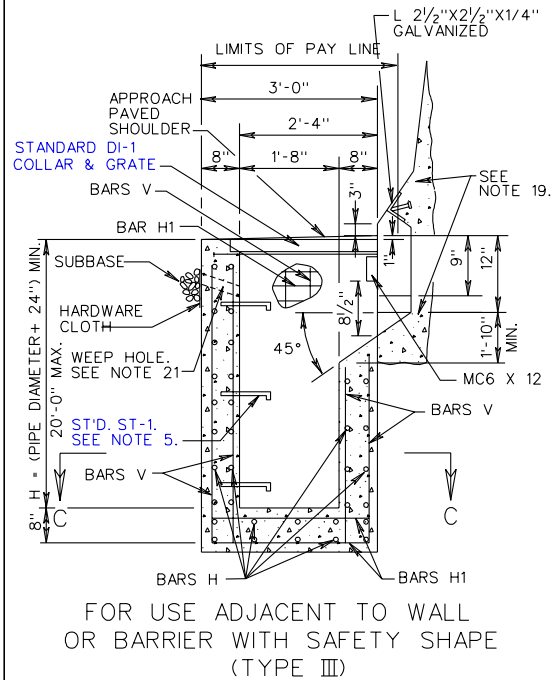
DASHED LINES SHOWN IN SECTION A-A HEREON INDICATE 8" THICK BACKWALL FOR TYPE I STRUCTURES WHICH REQUIRE SINGLE CHAMBER ONLY.

SEE NOTES ON SHEET 2 OF 2.

SPECIFICATION REFERENCE	
233 302	

CONCRETE MEDIAN BARRIER DROP INLET
12" - 24" PIPE: DEPTH (H) = 20' MAX.

DI-14D,14E,14F



TYPE I & III INLET

REINFORCING STEEL

MARK	SIZE	NO.	LENGTH	SPACE
A SEE NOTE 9	# 4	SEE NOTE 7	L - 2'-6" SEE NOTE 8	AS SHOWN
A-1 SEE NOTE 11	# 4	(2XL)+2	5'-6"	12"
B SEE NOTE 9	# 3	2X(L-4)	1'-1"	12"
B-1 SEE NOTE 11	# 4	11	L+ (2'-4")	8"
DOWELS	# 4	SEE NOTE 6	1'-0"	6"
F SEE NOTE 9	# 5	SEE NOTE 10	1'-6"	6"
H	# 5	(4XH)+10	3'-2"	12"
H1	# 5	(4XH)+8	2'-8"	10"

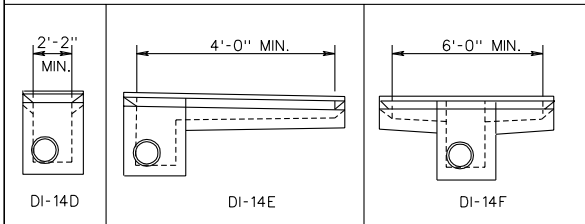
TYPE - II INLET

A-1	# 4	(2XL)+2	5'-6"	12"
B-1	# 4	11	L+ (2'-4")	8"
H-2	# 3	SEE NOTE 12	7'-8"	10"
V-1	# 5	12	H - (1'-2")	8"
V-2	# 4	30	LENGTH +H	8"
A SEE NOTE 15	# 4	SEE NOTE 14	L - (2'-6") SEE NOTE 8	AS SHOWN
B SEE NOTE 15	# 4	4(L-4)	1'-1"	12"
DOWELS	# 3	DOUBLE NO. SHOWN FOR TYPE I	1'-0"	6"
F SEE NOTE 15	# 5	SEE NOTE 13	1'-6"	6"
H	# 5	(4+ H)+8	3'-2"	12"
H-1	# 5	(4+ H)+16	2'-8"	10"
V	# 4	30	LENGTH +H	8"
M-1	# 5	5	3'-2"	5"
M	# 4	4	1'-8"	12"

NOTES

- VARIES GREATER THAN: 0' TO 18' MAX. TYPE I CHAMBER 4' TO 3' MAX. TYPE I CHAMBER.
- FOR DETAILS AND DIMENSIONS NOT SHOWN FOR MEDIAN BARRIER, SEE STANDARD MB-13.
- GALVANIZED MC-6 X 12 IS TO BE WELDED UNDER THE COLLAR AND EXTENDED INTO SIDEWALLS TO WITHIN 2" OF OUTSIDE FACE.
- ALL REINFORCING BARS ARE TO BE GRADE 60 STEEL WITH MIN. OF 1 1/2" CONCRETE COVER. ANY BARS IN CONFLICT WITH PIPE SHELL AND/OR TOP SLAB OPENING ARE TO BE FIELD CUT TO PROVIDE THE REQUIRED COVER.
- DO NOT LOCATE STANDARD ST-1 STEPS ON CHAMBER WALLS THAT HAVE PIPES WHEN POSSIBLE.
- 8 DOWELS REQUIRED FOR DI-14F, MIN. L = 7'-0". ADD 2 DOWELS FOR EACH ADDITIONAL FOOT. 4 DOWELS REQUIRED FOR DI-14E, MIN. L = 4'-0". ADD 2 DOWELS FOR EACH ADDITIONAL FOOT.
- 12 BARS A REQUIRED FOR DI-14F.
- LENGTH OF BARS A, DI-14F = $\frac{L - (2'-6")}{2}$
- DO NOT USE WITH DI-14D.
- USE 6 BARS F FOR DI-14F TYPE I.
- DO NOT USE WITH TYPE III
- ADD 4 ADDITIONAL BARS FOR EACH EXTRA FOOT OF DEPTH.
- USE 12 BARS F FOR DI-14F TYPE II.
- 24 BARS A ARE REQUIRED FOR DI-14F.
- DO NOT USE WITH DI-14D.
- A MINIMUM 22' FOOTING DEPTH IS REQUIRED FOR FORMING THE INLET SLOT. SEE PLANS FOR LENGTH "L".
- REFER TO PLANS FOR STRUCTURE LOCATIONS, DATA AND DIMENSIONS.
- REFER TO PLANS FOR LOCATIONS OF PIPES AND INVERTS.
- FOR TYPE III, COST OF ACCOMMODATION OF INLET THROAT IS TO BE INCLUDED IN COST OF WALL BARRIER.
- FOR TYPE III SEE WALL PLANS FOR WALL FOOTING DETAILS.
- 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH, 1/4" MESH OR GALV. STEEL WIRE, MIN. WIRE DIA. 0.03", NO. 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.

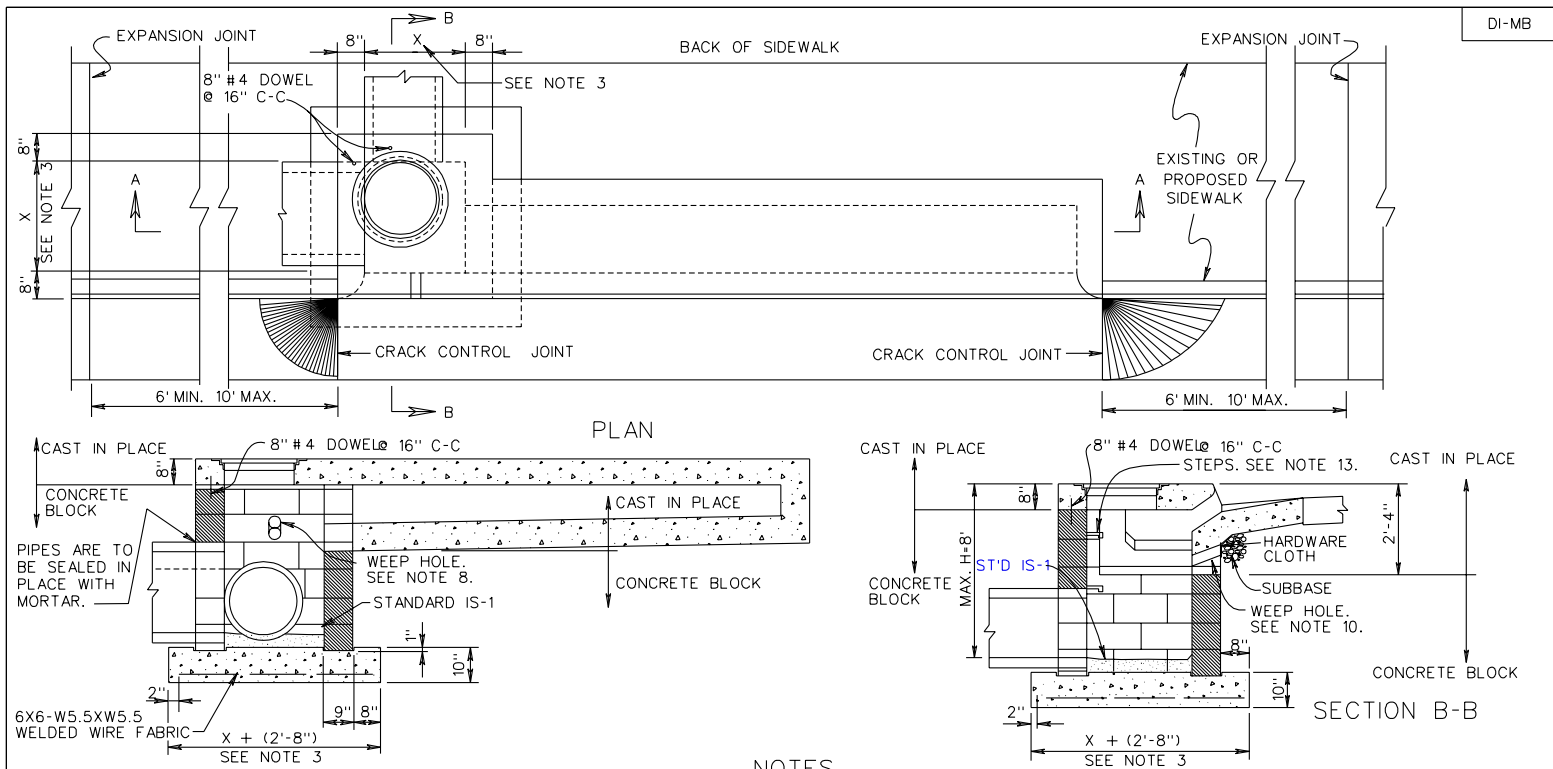
- TYPE I DENOTES INLET WITH SINGLE THROAT AND CHAMBER. TYPE II DENOTES INLET WITH DOUBLE THROAT AND CHAMBER. TYPE III DENOTES INLET WITH SINGLE THROAT AND CHAMBER ADJACENT TO WALL OR BARRIER.
- MAXIMUM PIPE SIZE IS 24" DIAMETER.
- CONCRETE MEDIAN BARRIER (TALL WALL) SHALL HAVE DELINEATORS INSTALLED ON BARRIER WALL ORIENTED TOWARDS ONCOMING TRAFFIC AT APPROXIMATELY 25" ABOVE THE ROADWAY.
- PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.



CONCRETE BARRIER DROP INLET
12"-24" PIPE: DEPTH (H) = 20' MAX.

SPECIFICATION REFERENCE

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NOTES

1. CONCRETE BLOCK IS TO BE EITHER 8" X 8" X 16" OR 8" X 8" X 12" (NOMINAL DIMENSION) SOLID CONCRETE MASONRY BLOCK MEETING THE REQUIREMENTS OF ASTM C-139.
2. DETAILS ABOVE APPLY TO STANDARD DRAWINGS 3A THROUGH 3F AND 4A THROUGH 4F.
3. X EQUALS INTERIOR DIMENSION OF STANDARD DROP INLET SPECIFIED ON PLANS.
4. PARTIAL BLOCK, BRICK OR MORTAR MAY BE USED TO ADJUST TOP TO CURB ELEVATION.
5. REINFORCED CONCRETE FOOTING MAY BE PRECAST OR CAST IN PLACE. LIFTING HOOKS OF FABRICATORS DESIGN ARE TO BE PROVIDED IN PRECAST FOOTING.
6. MAXIMUM DEPTH ALLOWABLE FOR CONCRETE BLOCK CONSTRUCTION IS TO BE 8 FEET.
7. MORTAR JOINTS ON INTERIOR SURFACES ARE TO BE FINISHED FLUSH AND MAY BE LEFT EXTRUDED ON EXTERIOR FACES.
8. THE "H" DIMENSION SHOWN ON THE ST'DS AND SPECIFIED ON THE PLANS WILL MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR BY FIELD CONDITIONS.
9. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD PLAN IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
10. 3" DIAMETER WEEP HOLE SHALL BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12" X 12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
11. ALL DETAILS AND DIMENSIONS OF THE PORTION OF THE INLET DESIGNATED "CAST-IN-PLACE", ARE TO BE IN STRICT ACCORDANCE WITH THE ST'D. DRAWING SPECIFIED ON THE PLANS. THIS WILL INCLUDE ALL NOTES, DETAILS OF FRAME AND COVER, GUTTER, AND ANGLE IRON. ALL REINF. STEEL WILL REMAIN AS DETAILED WITH THE FOLLOWING EXCEPTIONS:
 A) THE VERTICAL LEG OF BARS C WILL BE ELIMINATED.
 B) BARS G WILL BE ELIMINATED AND REPLACED WITH DOWELS SHOWN HEREON.
12. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTALS TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
13. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.

SPECIFICATION REFERENCE
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CONSTRUCTION METHODS FOR CONCRETE MASONRY BLOCK CURB DROP INLET
 VIRGINIA DEPARTMENT OF TRANSPORTATION