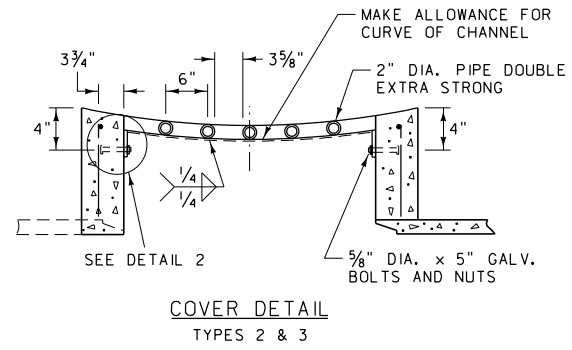
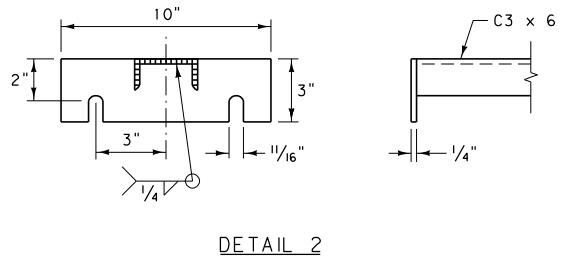
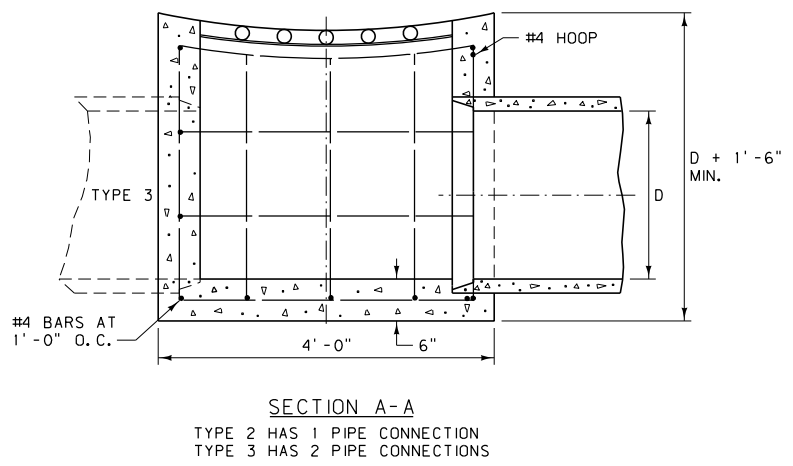
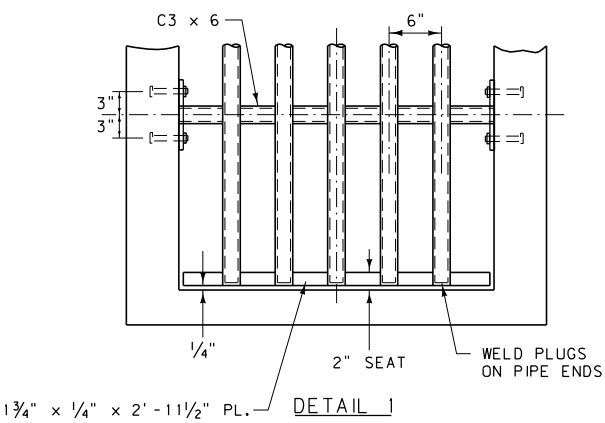
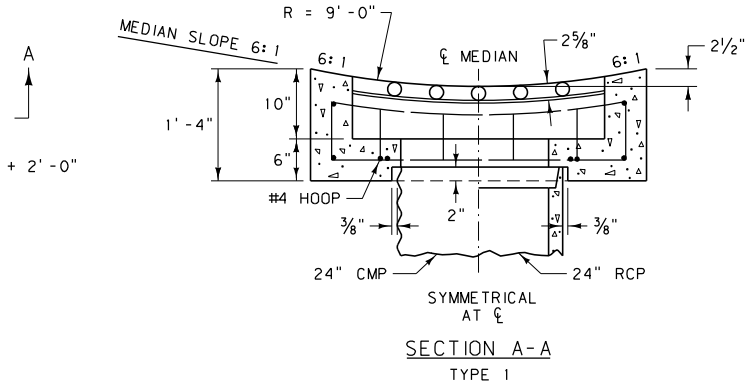


NOTE:
WHEN MEDIAN INLET COVER IS INSTALLED OVER PIPES LARGER THAN 36", WITHOUT ADEQUATE COVER TO PERMIT THE USE OF TYPE 1 INSTALLATION, PROVIDE A DETAIL OF THE INSTALLATION IN THE PLANS.



TYPE	GRATE AND REINFORCING STEEL (LB.) *		
	CMP AND RCP		
	24"	30"	36"
1	50	~	~
2	85	95	105
3	85 ⊗	95 ⊗	105 ⊗
GRATE	165	185	210

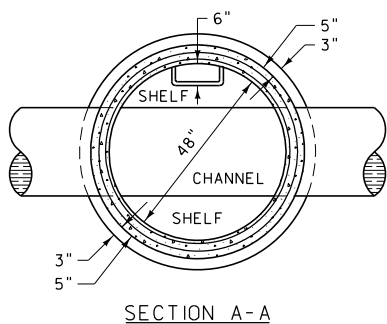
TYPE	CLASS "DD" CONC. OR EQUAL (C.Y.) *					
	24"		30"		36"	
	CMP	RCP	CMP	RCP	CMP	RCP
1	0.4	0.4	~	~	~	~
2	1.0	1.0	1.1	1.0	1.2	1.1
3	0.9 ⊗	0.9 ⊗	1.0 ⊗	0.9 ⊗	1.0 ⊗	0.9 ⊗

* QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY.
⊗ TYPE 3 IS A SPECIAL CASE TO BE FIGURED FOR THE PARTICULAR INSTALLATION.

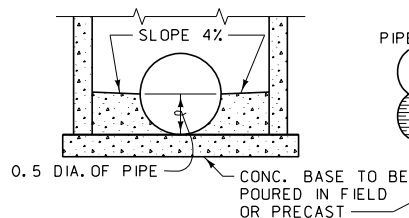
NOTE:
PAINT ALL EXPOSED METAL PARTS WITH ONE COAT OF ZINC RICH PAINT AND TWO COATS OF ALUMINUM PAINT IN ACCORDANCE WITH SECTION 710 OF THE STANDARD SPECIFICATIONS.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 604	DWG. NO. 604-00
MEDIAN INLET COVER	
EFFECTIVE: FEBRUARY 2005	
MONTANA DEPARTMENT OF TRANSPORTATION <i>-serving you with pride</i>	

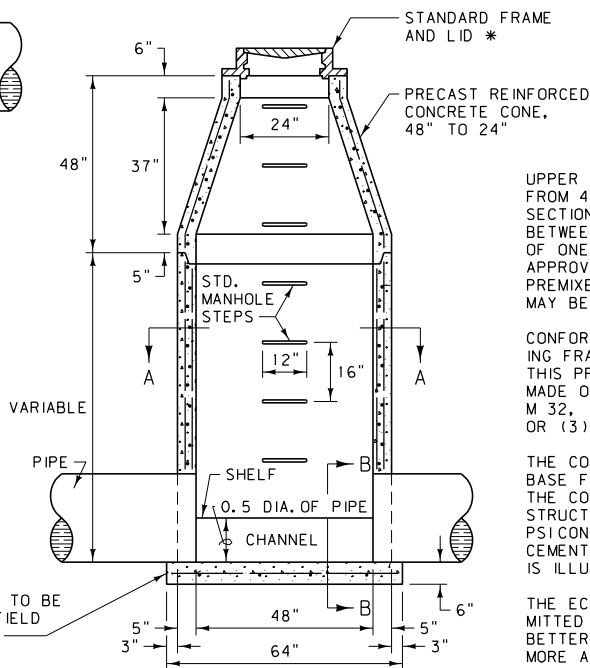
* MINIMUM WEIGHT FOR FRAME AND LID IS 400 LB. TOOL RING AND COVER TO A MACHINE FIT.



SECTION A-A



SECTION B-B



ELEVATION

UPPER PART IS A CONE TO REDUCE DIAMETER FROM 48" TO 24". CUT BOTTOM OF LOWER SECTION SQUARE TO FIT BASE. GROUT JOINT BETWEEN BASE AND WALL. A GROUT CONSISTING OF ONE PART PORTLAND CEMENT AND TWO PARTS APPROVED SAND MAYBE USED; AN APPROVED PREMIXED GROUT, AVAILABLE COMMERCIALY, MAY BE USED.

CONFORM ALL MANHOLE CONSTRUCTION, EXCEPTING FRAME, LID, AND BASE, TO AASHTO M 199. THIS PROVIDES THAT REINFORCEMENT MAY BE MADE OF (1) COLD DRAWN STEEL WIRE- AASHTO M 32, (2) STEEL WIRE FABRIC- AASHTO M 55, OR (3) STEEL BARS- AASHTO M 31.

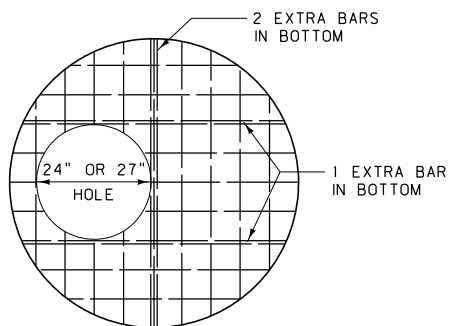
THE CONSTRUCTION AND REINFORCEMENT OF THE BASE FOR EACH TYPE MUST BE COMPATIBLE WITH THE CONDITIONS AND THE WEIGHT OF THE SUPERSTRUCTURE. AASHTO M 199 PROVIDES FOR 4000 PSI CONCRETE. THE MIX CALLS FOR 6 SACKS OF CEMENT PER CUBIC YARD. REINFORCEMENT SHOWN IS ILLUSTRATIVE ONLY. SEE AASHTO M 199.

THE ECCENTRIC CONE TRANSITION WILL BE PERMITTED WHEN ITS USE WILL BE AS GOOD OR BETTER THAN THE ONES SHOWN, OR IF IT IS MORE ADAPTABLE TO EXISTING CONDITIONS.

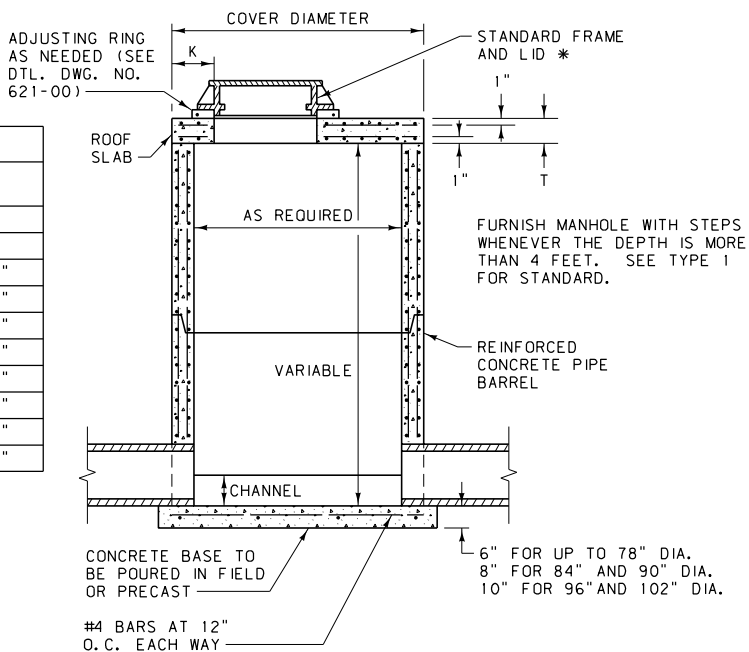
USE MANHOLE STEPS THAT ARE METALLIC AND COATED WITH COPOLYMER POLYPROPYLENE, OR AN APPROVED EQUAL. THE MINIMUM DESIGN LIVE LOAD FOR A SINGLE CONCENTRATED LOAD IS 300 POUNDS.

TYPE 1 MANHOLE

TYPE 3 MANHOLE ROOF SLAB					
PIPE DIA.	SLAB DIA.	T	K	BOTTOM BARS	TOP BARS
48"	58"	6"	6"	#4 AT 6"	~
54"	65"	8"	6"	#4 AT 6"	~
60"	72"	8"	7"	#4 AT 6"	#3 AT 6"
66"	79"	8"	7"	#4 AT 6"	#3 AT 6"
72"	86"	8"	8"	#4 AT 6"	#3 AT 6"
78"	93"	8"	8"	#4 AT 4"	#4 AT 4"
84"	100"	8"	9"	#4 AT 4"	#4 AT 4"
90"	107"	8"	9"	#4 AT 4"	#4 AT 4"
96"	114"	8"	9"	#5 AT 4"	#4 AT 4"
102"	121"	8"	9"	#5 AT 4"	#4 AT 4"



TYPE 3 MANHOLE ROOF SLAB

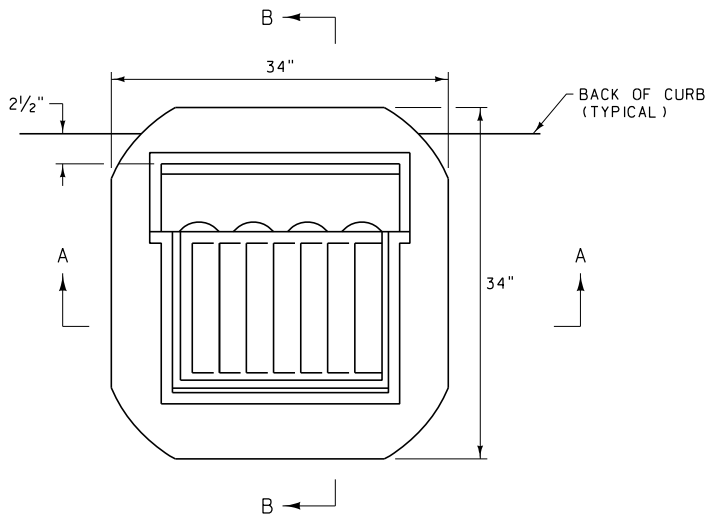


TYPE 3 MANHOLE

DETAILED DRAWING	
REFERENCE STANDARD SPEC.	DWG. NO. 604-02

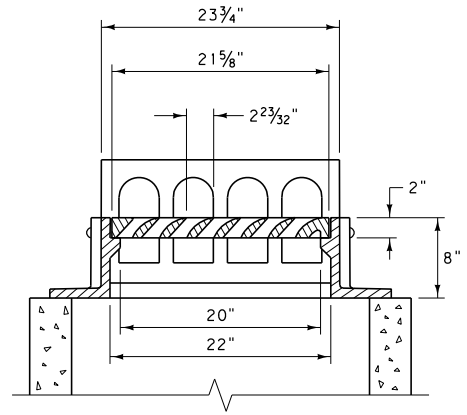
CONCRETE MANHOLE

EFFECTIVE: FEBRUARY 2005

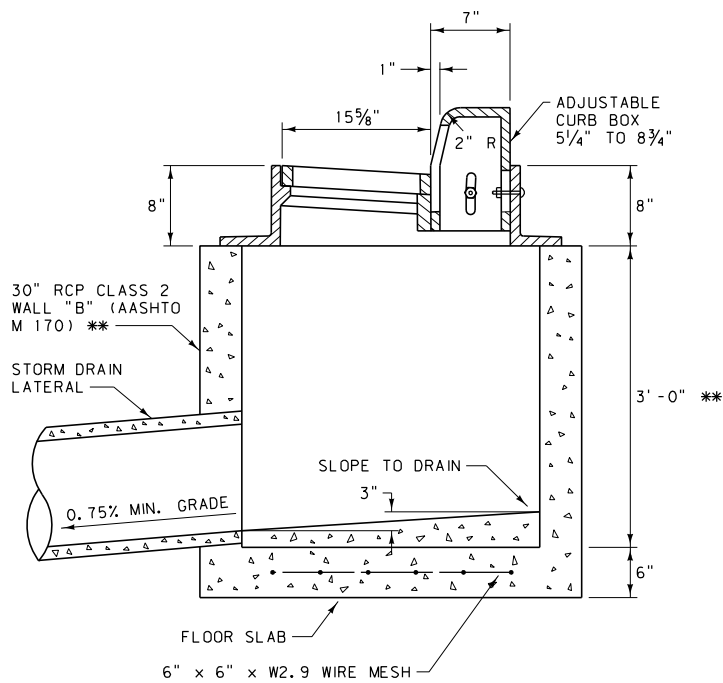


PLAN

NEENAH FOUNDRY R-3286-8V (JUNE 1992 REVISION), D & L FOUNDRY MODEL I-3559, OR APPROVED EQUAL (VANE STYLE)



SECTION A-A

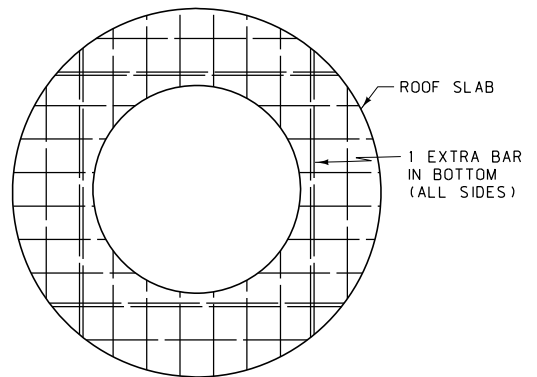
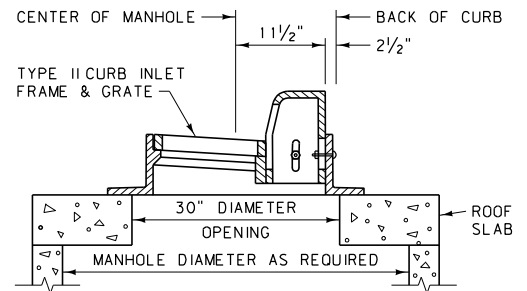


SECTION B-B

** STANDARD UNLESS OTHERWISE NOTED ON THE PLANS.

NOTE:
ALL CONCRETE IS CLASS "DD" OR APPROVED EQUAL.

COMBINATION



ROOF SLAB

SEE DETAILED DRAWING NO. 604-02 FOR DIAMETER, SLAB THICKNESS AND REINFORCING REQUIREMENTS FOR COMBINATION TYPE 3 MANHOLE, TYPE II CURB INLET.

DETAILED DRAWING

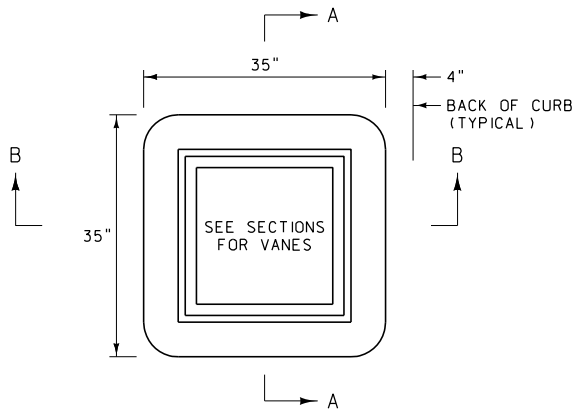
REFERENCE STANDARD SPEC. SECTION 604	DWG. NO. 604-03
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CURB INLET
TYPE II

-- REVISED --
January 2008

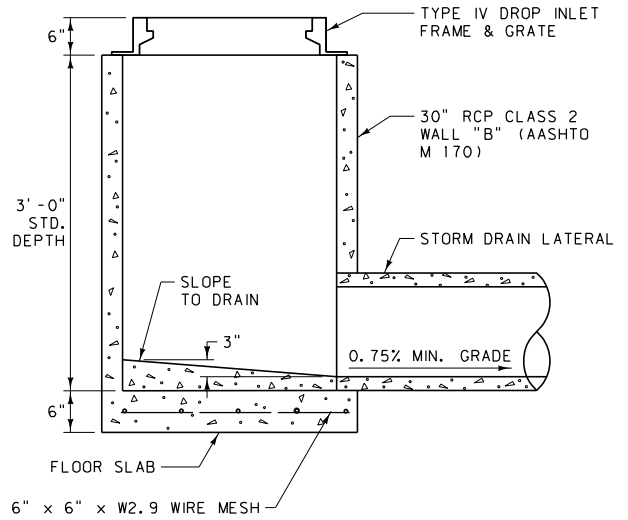
EFFECTIVE: FEBRUARY 2005

 MONTANA DEPARTMENT OF TRANSPORTATION
serving you with pride

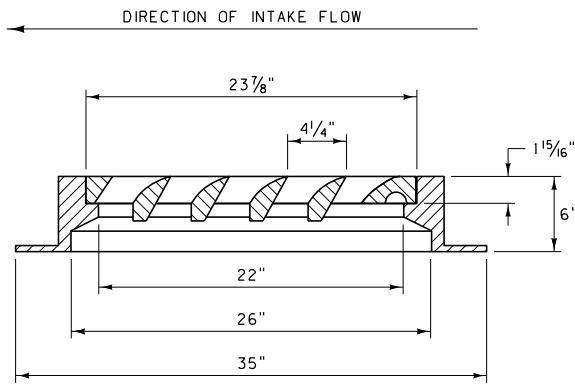


PLAN

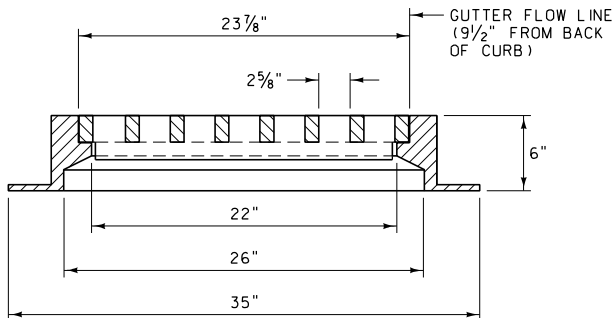
NEENAH CASTING R-3210-L (VANE STYLE), D & L FOUNDRY MODEL I-3425, OR APPROVED EQUAL



**SINGLE DROP INLET
TYPE IV**

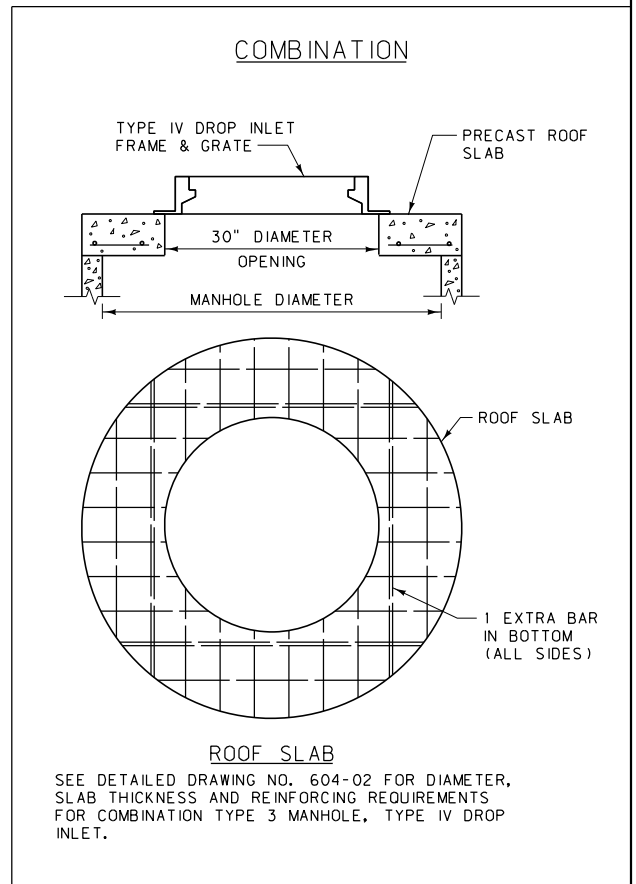


SECTION A-A

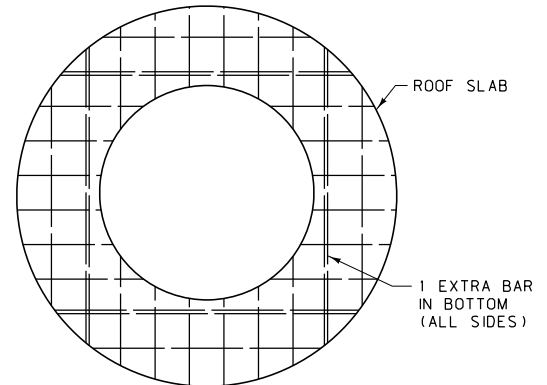
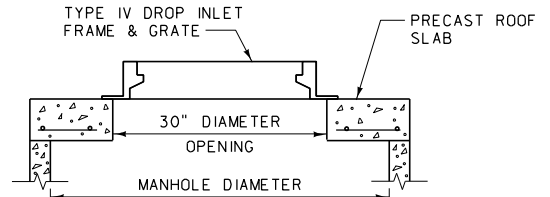


SECTION B-B

NOTE:
ALL CONCRETE IS CLASS "DD" OR APPROVED EQUAL.



COMBINATION



ROOF SLAB

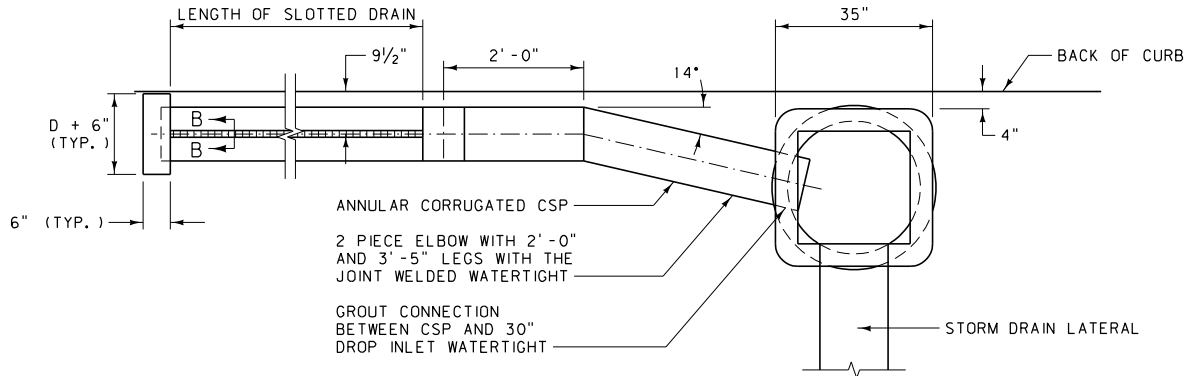
SEE DETAILED DRAWING NO. 604-02 FOR DIAMETER, SLAB THICKNESS AND REINFORCING REQUIREMENTS FOR COMBINATION TYPE 3 MANHOLE, TYPE IV DROP INLET.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 604	DWG. NO. 604-04

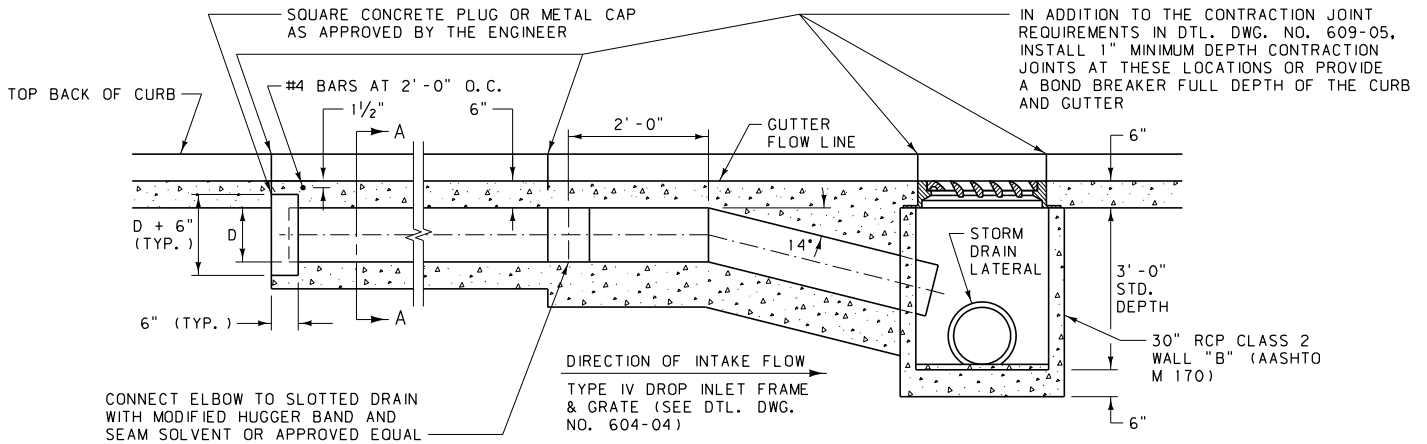
**DROP INLET
TYPE IV**

-- REVISED --
January 2008

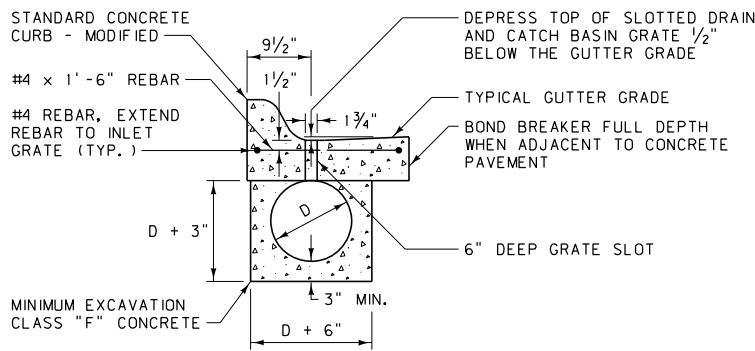
EFFECTIVE: FEBRUARY 2005



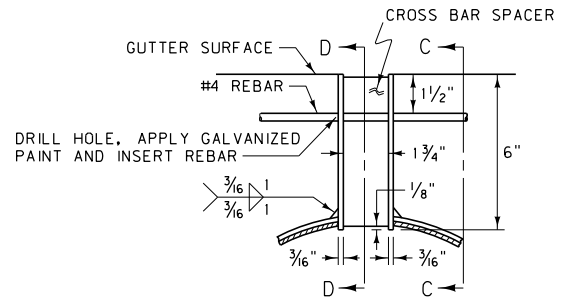
PLAN



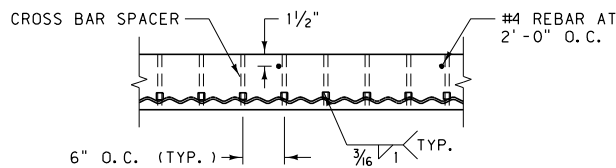
ELEVATION



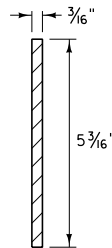
SECTION A-A



SECTION B-B
GRATE SLOT DETAIL



SECTION C-C
GRATE SLOT WELDING DETAIL



SECTION D-D
CROSS BAR SPACER

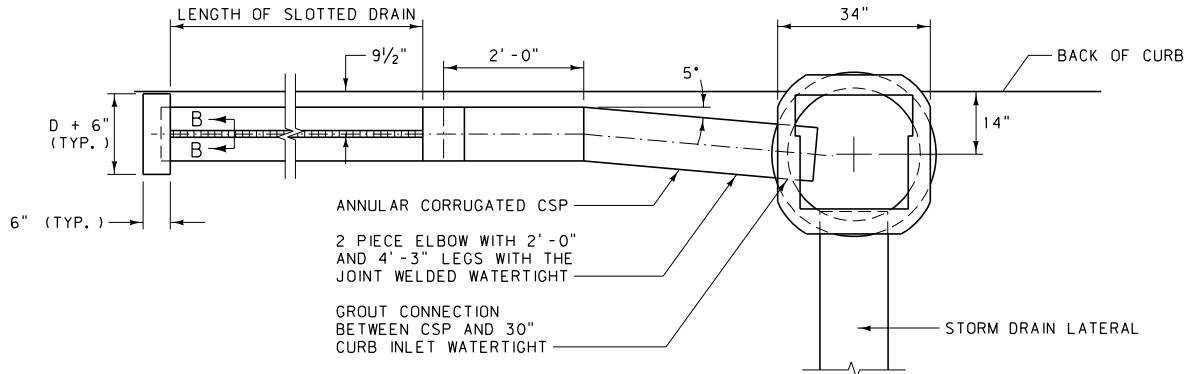
NOTES:

PAINT ALL WELDS AND OTHER NON-GALVANIZED PARTS, EXCEPT REBAR IN ACCORDANCE WITH STD. SPEC. SECTION 710.

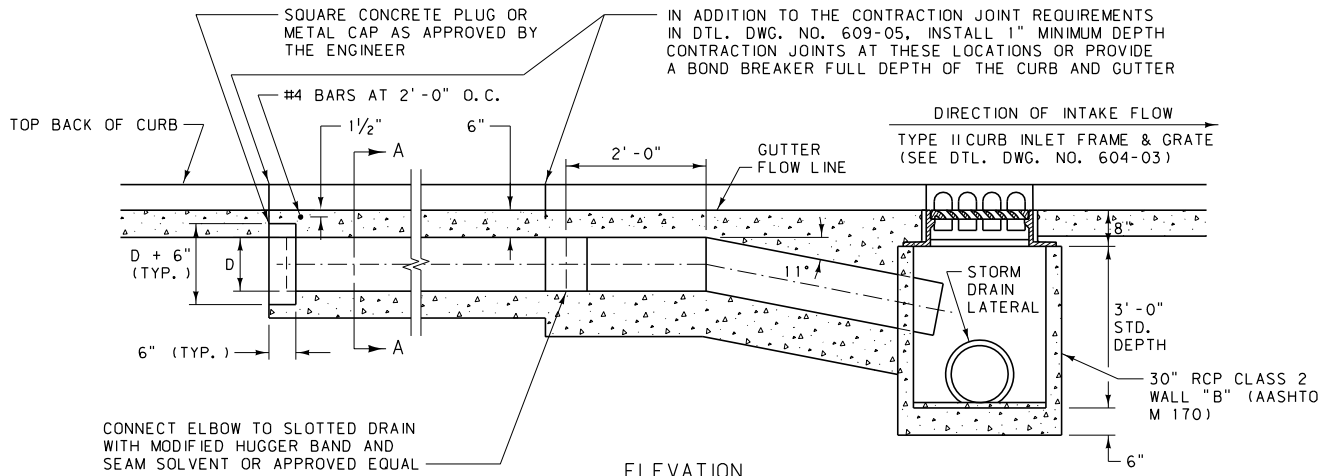
USE A 15 OR 30 POUND ROOFING FELT MATERIAL, OR OTHER PRODUCT AS APPROVED BY THE ENGINEER, FOR A BOND BREAKER.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 604	DWG. NO. 604-06
TYPE IV DROP INLET WITH SLOTTED DRAIN	

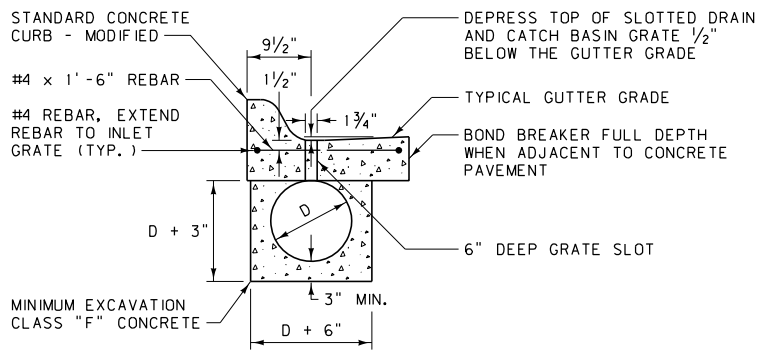
EFFECTIVE: FEBRUARY 2005



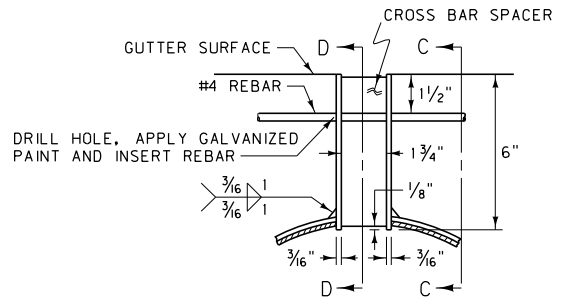
PLAN



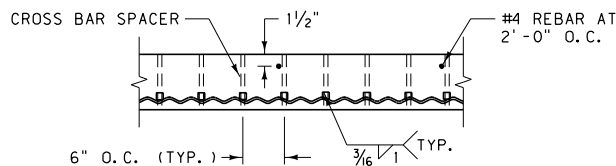
ELEVATION



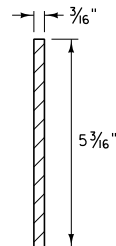
SECTION A-A



SECTION B-B
GRATE SLOT DETAIL



SECTION C-C
GRATE SLOT WELDING DETAIL



SECTION D-D
CROSS BAR SPACER

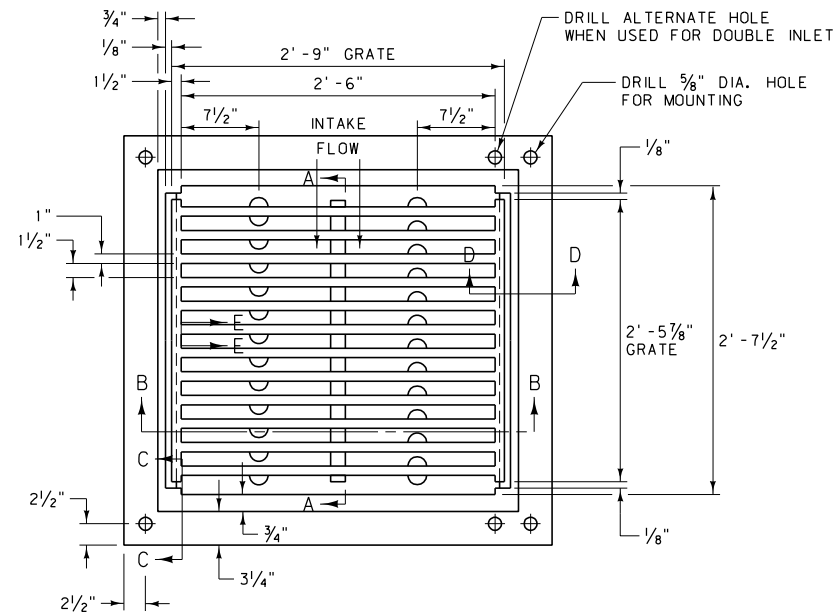
NOTES:

PAINT ALL WELDS AND OTHER NON-GALVANIZED PARTS, EXCEPT REBAR IN ACCORDANCE WITH STD. SPEC. SECTION 710.

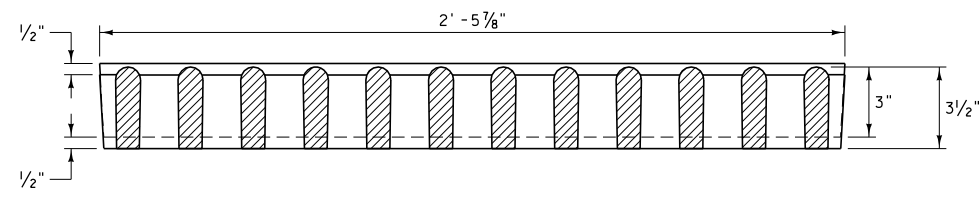
USE A 15 OR 30 POUND ROOFING FELT MATERIAL, OR OTHER PRODUCT AS APPROVED BY THE ENGINEER, FOR A BOND BREAKER.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 604	DWG. NO. 604-08
TYPE II CURB INLET WITH SLOTTED DRAIN	

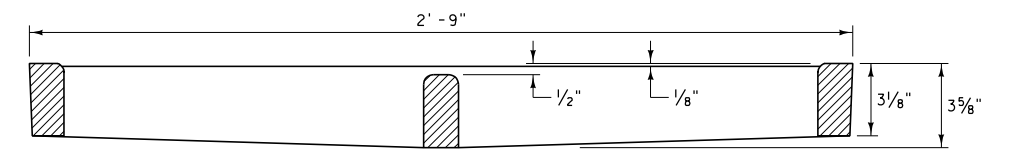
EFFECTIVE: FEBRUARY 2005



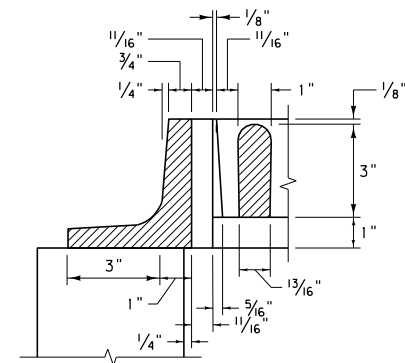
PLAN
NOTE: INSTALL GRATE WITH BARS PERPENDICULAR TO INTAKE FLOW



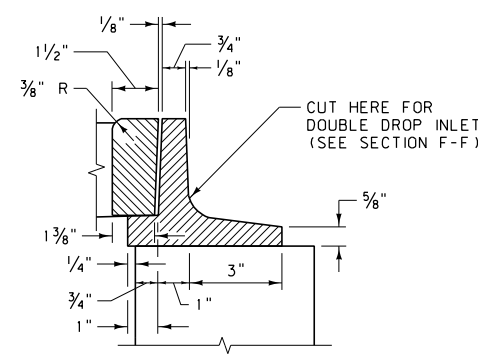
SECTION A-A
GRATE



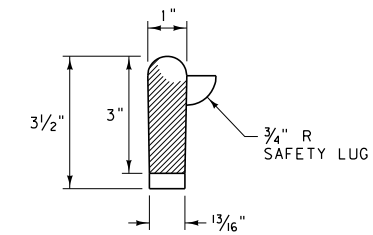
SECTION B-B
GRATE



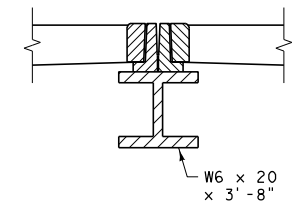
SECTION C-C



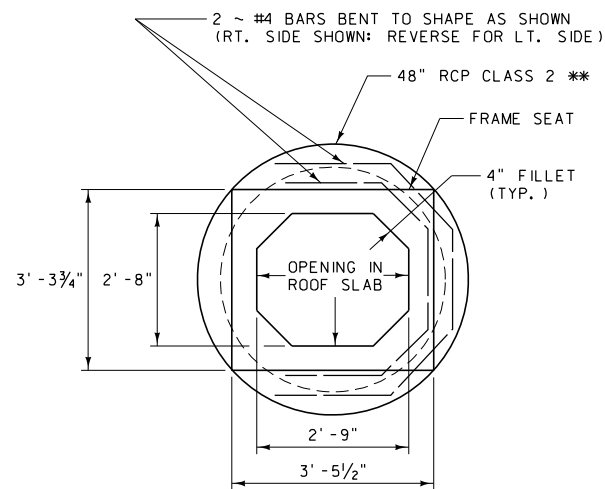
SECTION D-D



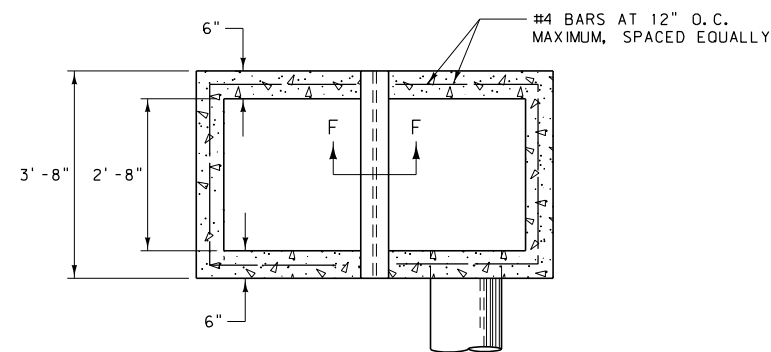
SECTION E-E



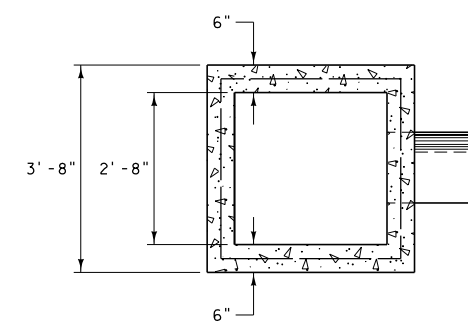
SECTION F-F
(FOR DOUBLE INLET)



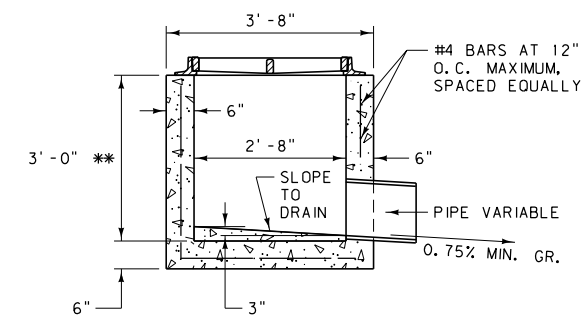
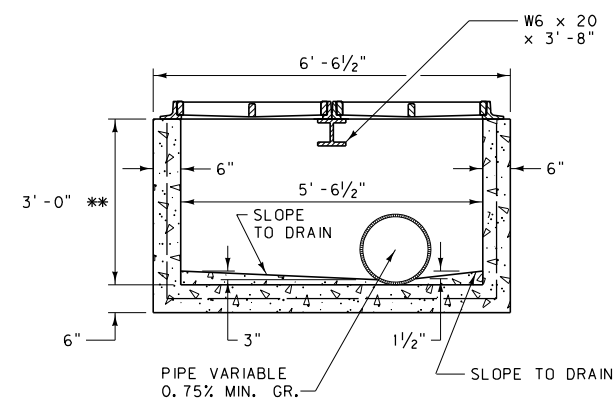
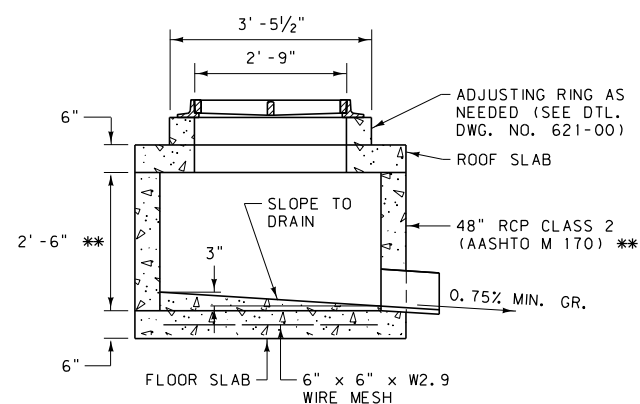
ROUND, SINGLE DROP INLET
TYPE I



DOUBLE DROP INLET
TYPE II



SINGLE DROP INLET
TYPE III



QUANTITIES *		
	CONCRETE	REINF. STL.
TYPE I	0.45 C. Y.	40 LB.
TYPE II	1.5 C. Y.	145 LB.
TYPE III	1.0 C. Y.	90 LB.

* FOR ESTIMATING PURPOSES ONLY

NOTES:

USE TYPE I, TYPE II AND TYPE III DROP INLETS IN SAG LOCATIONS ONLY.

ALL CONCRETE IS CLASS "DD" OR APPROVED EQUAL.

SEE PLANS FOR DETAILS AND QUANTITIES.

** STANDARD UNLESS OTHERWISE NOTED ON PLANS.

DETAILED DRAWING	
REFERENCE	DWG. NO.
STANDARD SPEC.	604-14
SECTION 604	

DROP INLETS

-- REVISED --
January 2008

EFFECTIVE: FEBRUARY 2005

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