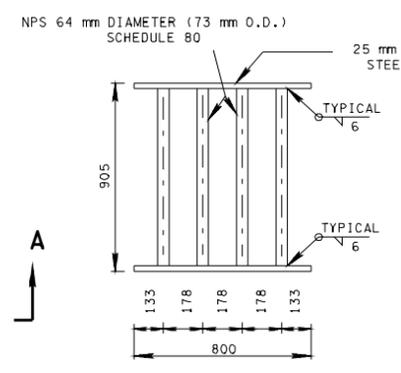


PLAN VIEW



GRATE UNIT NO. 38

GRATE UNIT IS STRUCTURALLY DESIGNED TO CARRY LOW SPEED MAINTENANCE VEHICLES ONLY.

NOTE: MATERIAL FOR GRATE SPECIFICATIONS FOR STEEL BARS SHALL CONFORM TO ASTM A36M. FOR THE PIPE CROSS MEMBERS, ASTM A53 TYPE E OR S GRADE A OR B. THE GRATE UNIT SHALL BE PAINTED BLACK, FEDERAL SPEC. TT-E-489C.

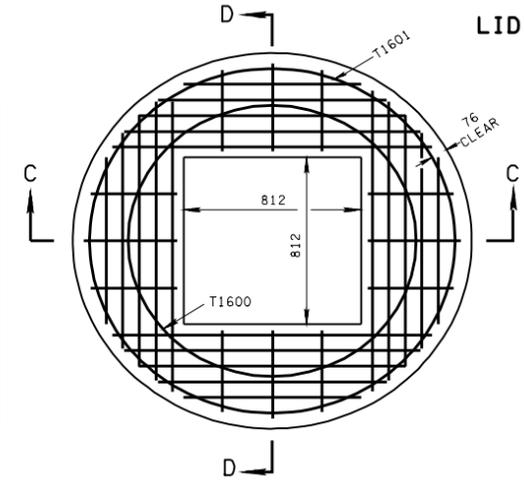
WELDING: AWS SPECIFICATIONS D1.1-72 AS MODIFIED BY THE CURRENT AASHTO STD. SPECIFICATIONS FOR WELDING OF HIGHWAY BRIDGES.

INSIDE DIA. OF CATCH BASIN (mm)	OUTSIDE DIA. OF LID (mm)	DIMENSION J (mm)
1524	1828	76.25
1828	2184	120.75
2134	2540	165.25
2438	2896	209.75

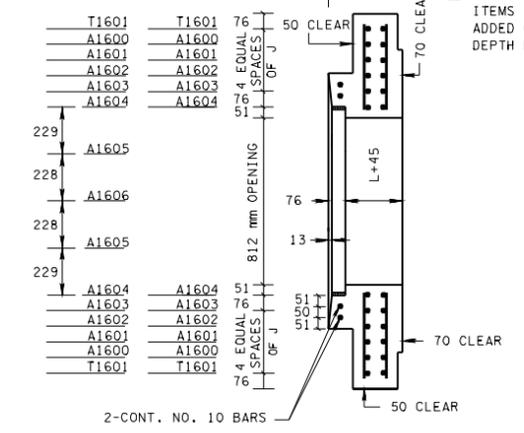
DIAMETER FOR T1600 REINFORCING BARS EQUAL 1321 MILLIMETERS.

DIAMETER FOR T1601 REINFORCING BARS EQUAL OUTSIDE DIAMETER OF LID MINUS 152 MILLIMETERS.

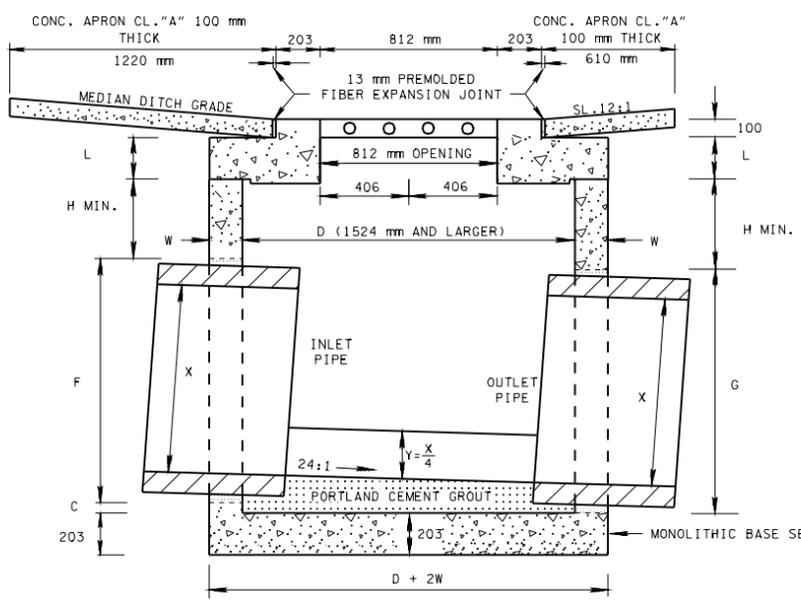
CATCH BASIN MAXIMUM DEPTH NOTE
 MAXIMUM DEPTH FOR PRECAST CONCRETE CIRCULAR CATCH BASINS IS 12 m.



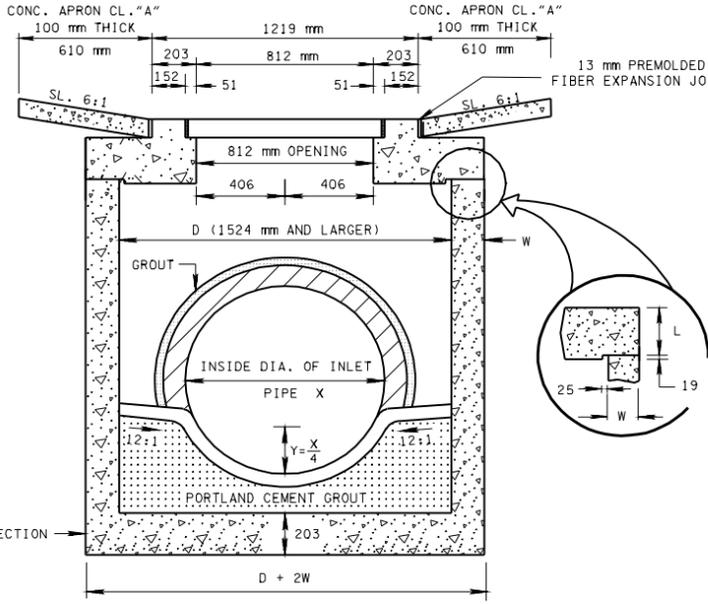
LID REINFORCING



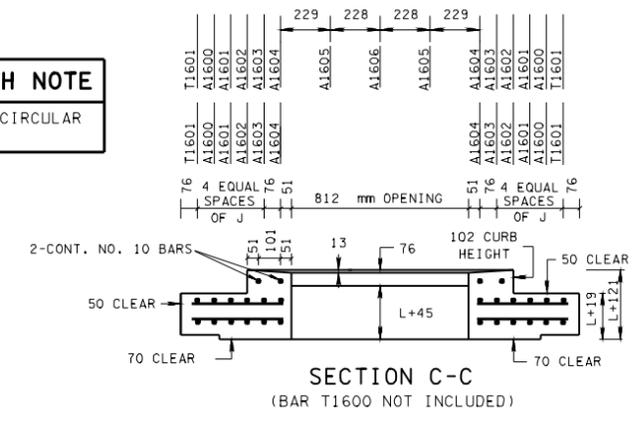
SECTION D-D
(BAR T1600 NOT INCLUDED)



SECTION A-A



SECTION B-B



SECTION C-C
(BAR T1600 NOT INCLUDED)

INSIDE DIAMETER (X) OF PIPE (mm)	DIAMETER OF CUT-OUT HOLES F & G - (MILLIMETERS)		
	CONCRETE PIPE	CORRUGATED METAL PIPE	POLYETHYLENE PIPE
450	660	535	610
600	815	685	785
750	1015	840	990
900	1195	1015	1145
1050	1370	1170	1270
1200	1550	1320	1420
1350	1725	1475	—
1500	1905	1625	—
1650	2085	1780	—

CUT-OUT HOLES FOR PRECAST STRUCTURES TO BE CORED OR FORMED IN ORDER TO OBTAIN A SMOOTH EDGED HOLE. SCORED OR ETCHED HOLES WITH REINFORCING STEEL LEFT UNCUT WILL NOT BE PERMITTED.

INSIDE DIAMETER (X) OF PIPE (mm)	MINIMUM DEPTH - (m)		
	CONCRETE PIPE	CORRUGATED METAL PIPE	POLYETHYLENE PIPE
450	1.13	1.07	1.11
600	1.28	1.22	1.27
750	1.46	1.37	1.45
900	1.62	1.54	1.60
1050	1.79	1.69	1.74
1200	1.96	1.84	1.89
1350	2.12	1.99	—
1500	2.29	2.15	—
1650	2.45	2.30	—

- DEPTH MEASUREMENT MADE FROM TOP OF CURB TO OUTLET FLOW ELEVATION BASED ON INLET AND OUTLET PIPES BEING THE SAME DIAMETER, IF OUTLET PIPE IS GREATER ADJUSTMENT IN DEPTHS MUST BE MADE TO ACCOMMODATE THIS SITUATION.
- MINIMUM DEPTH TO BE REDUCED BY DIMENSION "C" WHERE ONLY OUTLET PIPE EXISTS.
- TO DETERMINE FLOOR OF CATCH BASIN ELEVATION, WHEN INLET AND OUTLET PIPES ARE THE SAME SIZE, ADD PIPE WALL THICKNESS PLUS 40 mm TO THE ABOVE MINIMUM DEPTHS.
- IF 1828 mm INSIDE DIAMETER CATCH BASIN IS USED, ADD 0.040 m TO ALL THE ABOVE MINIMUM DEPTHS. IF 2134 mm INSIDE DIAMETER CATCH BASIN IS USED, ADD 0.152 m TO ALL THE ABOVE MINIMUM DEPTHS. IF 2438 mm INSIDE DIAMETER CATCH BASIN IS USED, ADD 0.192 m TO ALL THE ABOVE MINIMUM DEPTHS.

GENERAL NOTES

(A) ALL PRECAST ELEMENTS TO MEET ASTM C478M (CURRENT EDITION) AND AASHTO M199 (CURRENT EDITION) UNLESS SUPERSEDED BY THIS DRAWING.
 CONCRETE: $f'_c = 28 \text{ MPa}$ AT 28 DAYS
 REINFORCING STEEL: ASTM A615M, $f_y = 415 \text{ MPa}$
 ALL REINFORCING IS TO BE INSTALLED AS DETAILED ON THIS DRAWING.

(B) CONCRETE JOINT MATERIAL IS TO BE 13 mm PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 OF THE STANDARD SPECIFICATIONS.

(C) PRECAST CATCH BASIN UNITS WHICH ARE DAMAGED DURING SHIPMENT OR INSTALLATION WILL BE REJECTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE DAMAGED CATCH BASIN UNITS AT HIS OWN EXPENSE.

(D) ADDITIONAL REINFORCING STEEL NECESSARY ABOVE THE CORED OR FORMED CUT-OUT HOLES TO MAINTAIN THE INTEGRITY OF THE STRUCTURE DURING HANDLING AND PLACEMENT SHALL BE THE RESPONSIBILITY OF THE FABRICATOR.

(E) APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION OF THE PRECAST CATCH BASIN.

(F) THE CONTRACTOR IS TO PATCH ALL LIFTING DEVICE HOLES AND PLACE A MINIMUM OF 25 mm OF COVER OVER THE HARDWARE OF THESE DEVICES ON BOTH TOP AND BOTTOM SURFACES.

(G) INVERT ELEVATIONS ARE TO BE ADJUSTED AS DIRECTED BY THE ENGINEER IN ORDER TO ACCOMMODATE INLET AND OUTLET PIPES.

(H) PAYMENT FOR CATCH BASIN WILL BE MADE UNDER ITEM NUMBERS 611M38.02 CATCH BASINS, TYPE 38, > 1m-2m DEPTH THROUGH 611M38.09, CATCH BASINS, TYPE 38, > 8m-9m DEPTH PER EACH. PAYMENT FOR CATCH BASINS DEEPER THAN 9 m WILL BE MADE UNDER ITEM NUMBER 611M38.10, CATCH BASINS, TYPE 38, ___ m - ___ m DEPTH PER EACH. WHEN CLASS "A" CONCRETE APRON IS USED, IT IS TO BE INCLUDED IN THE PRICE BID PER CATCH BASIN.

INSIDE DIA. OF CATCH BASIN D (mm)	WALL THICKNESS W (mm)	LID THICKNESS L (mm)	OUTSIDE DIA. OF CATCH BASIN D + 2W (mm)	MAX. INLET OR OUTLET CONC. PIPE SIZE - STR. (mm)	MAX. INLET OR OUTLET CONC. PIPE SIZE - 90° (mm)	DIMENSION	
						C (mm)	H (mm)
1524	152	203	1828	900	600	65	205
1828	178	229	2184	1200	750	75	205
2134	203	229	2540	1500	900	90	305
2438	229	254	2896	1650	1050	100	305

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STANDARD PRECAST CIRCULAR NO. 38 CATCH BASIN
 1-19-98 **DM-CB-38RB**