



DEPARTMENT OF PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

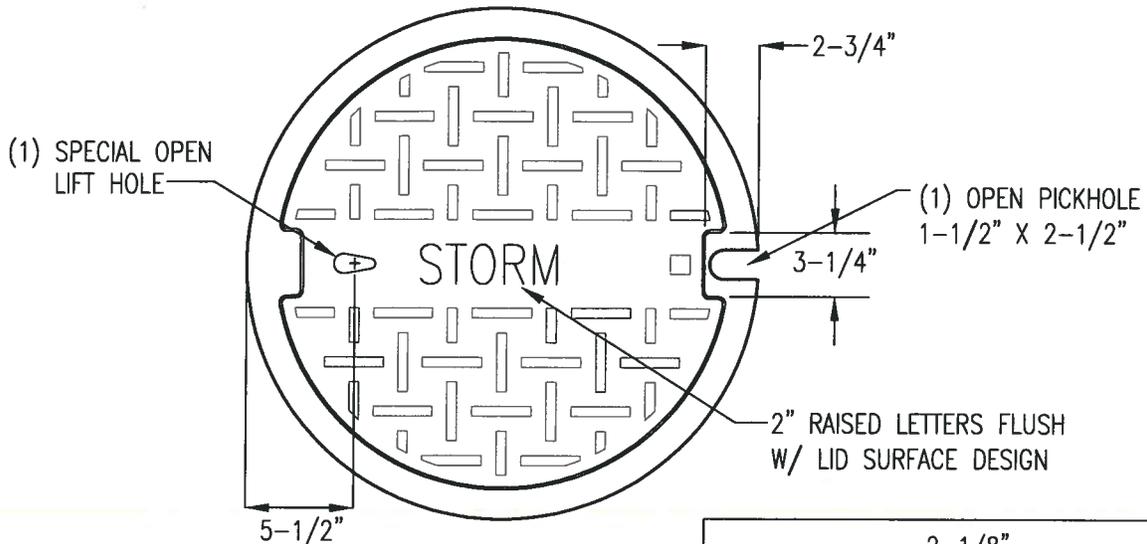
STANDARD DETAIL DRAWINGS

STORM

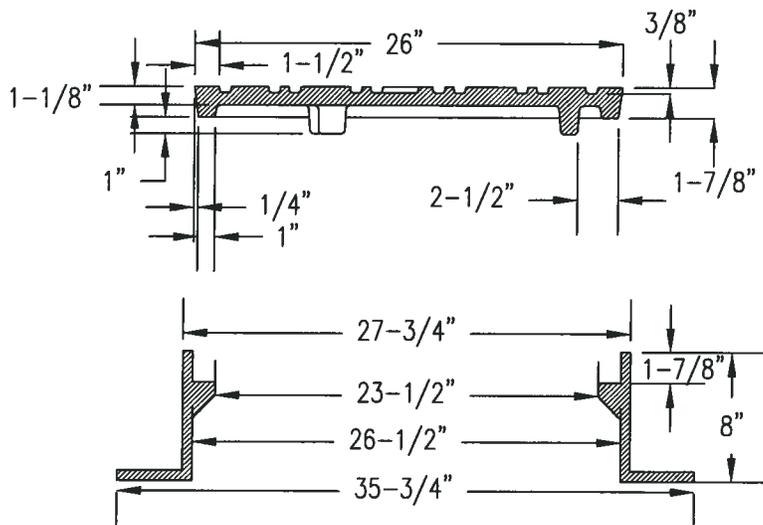
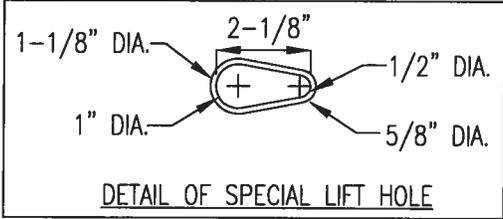
- STRM-1 STORM MANHOLE CASTING
- STRM-2 CATCH BASIN/CURB BOX CASTING
- STRM-3 CATCH BASIN/CURB BOX CASTINGS
- STRM-4 FABRIC WRAPPED CATCHBASIN CASTING
- STRM-5 FABRIC WRAPPED MANHOLE
- STRM-6 GUTTER SWALE

WGT. 298 LBS		MATL. GRAY IRON CLASS 35B
WGT. 122 LBS	TOT.WGT. 420 LBS.	SPEC. ASTM A-48-74

NOTE: SUITABLE FOR HS25 WHEEL LOADS



NOTE: T/CAST SHALL BE .03' BELOW FINISHED PAVEMENT SURFACE.



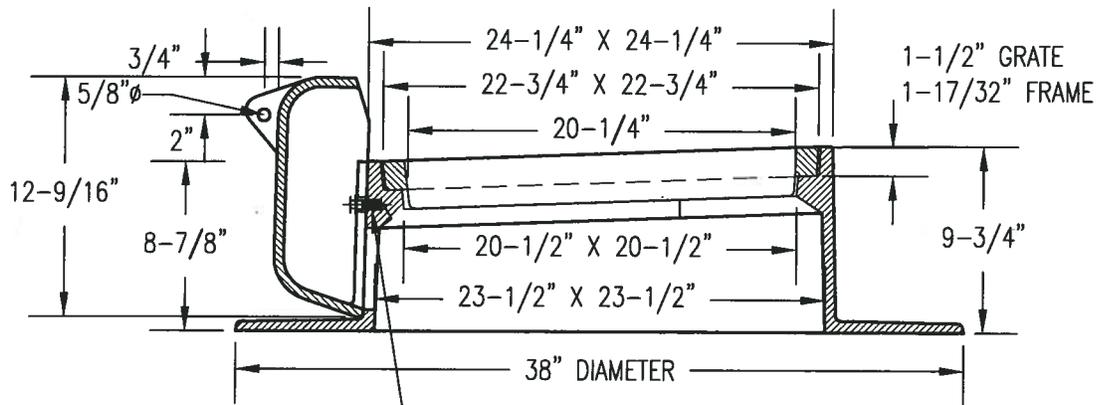
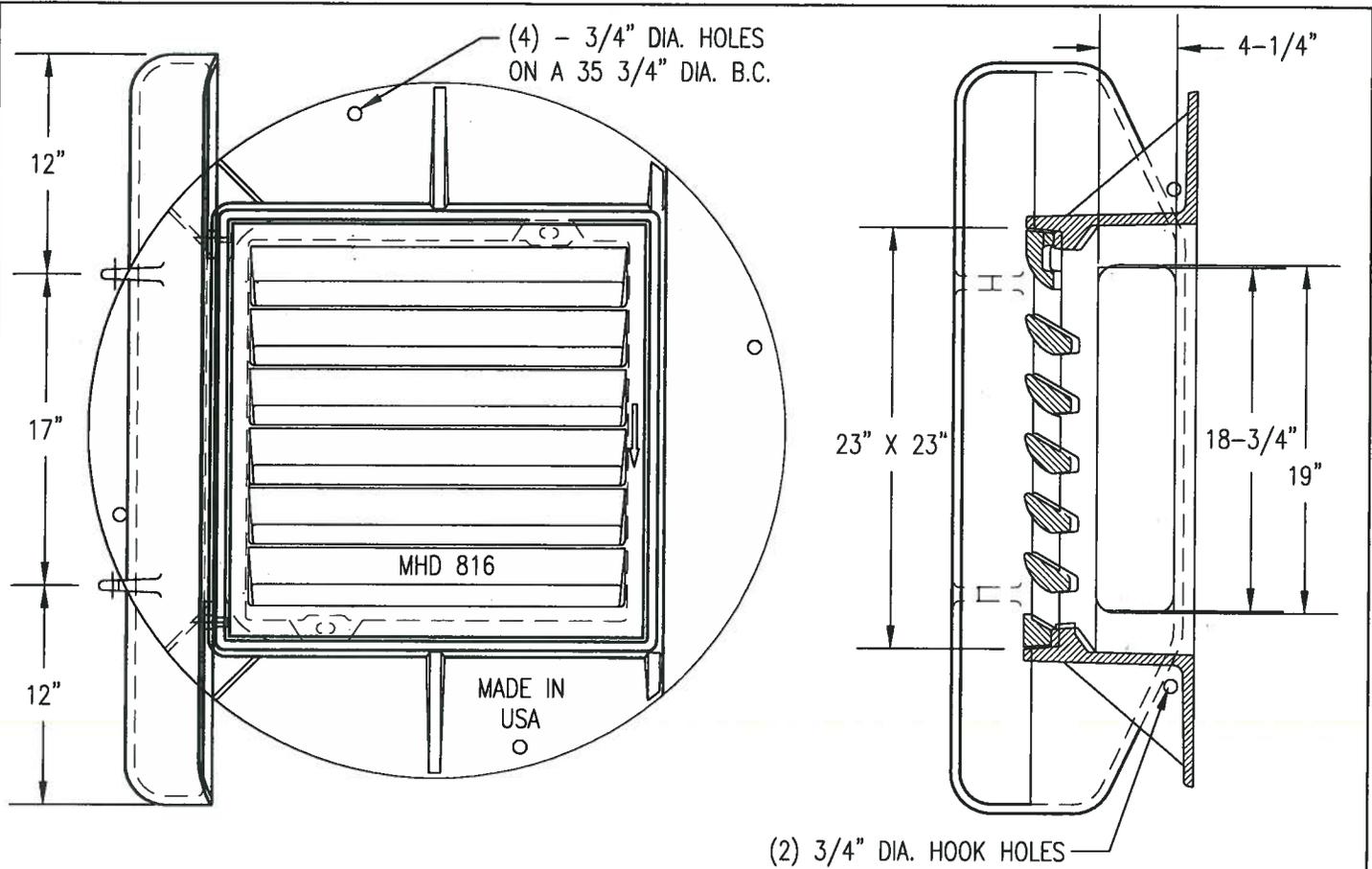
STORM MANHOLE CASTING

STRM-1

REVIEWED/APPROVED 2/01/2013

CITY OF DULUTH STANDARD DETAIL  
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE



DRILL AND TAP 1/2"-13 NC  
 3/4" DEEP (2 PLACES)  
 REMOVE CAP SCREWS AFTER  
 CONCRETE CURB HAS SET.

**NOTES:**

1. COMPONENT NO'S: FRAME 5002, GRATE MHD 816 (STD PLATE 4154B), CURB BOX 823A (STD PLATE 4160D).
2. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
3. WEIGHT: FRAME APPROX. 257#, GRATE 131#, CURB BOX 105#.
4. ALL GUTTERS UPSTREAM OF CATCH BASINS SHALL BE STAMPED, "NO DUMPING, LEADS TO LAKE" WITH A CITY SUPPLIED STAMP.

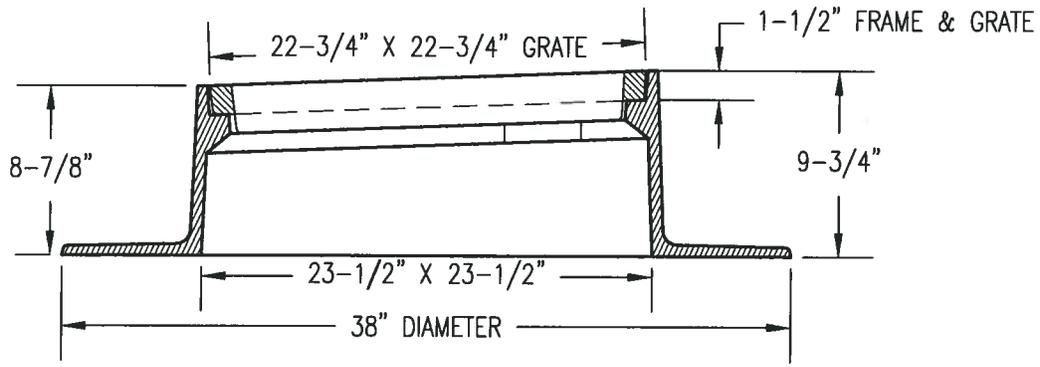
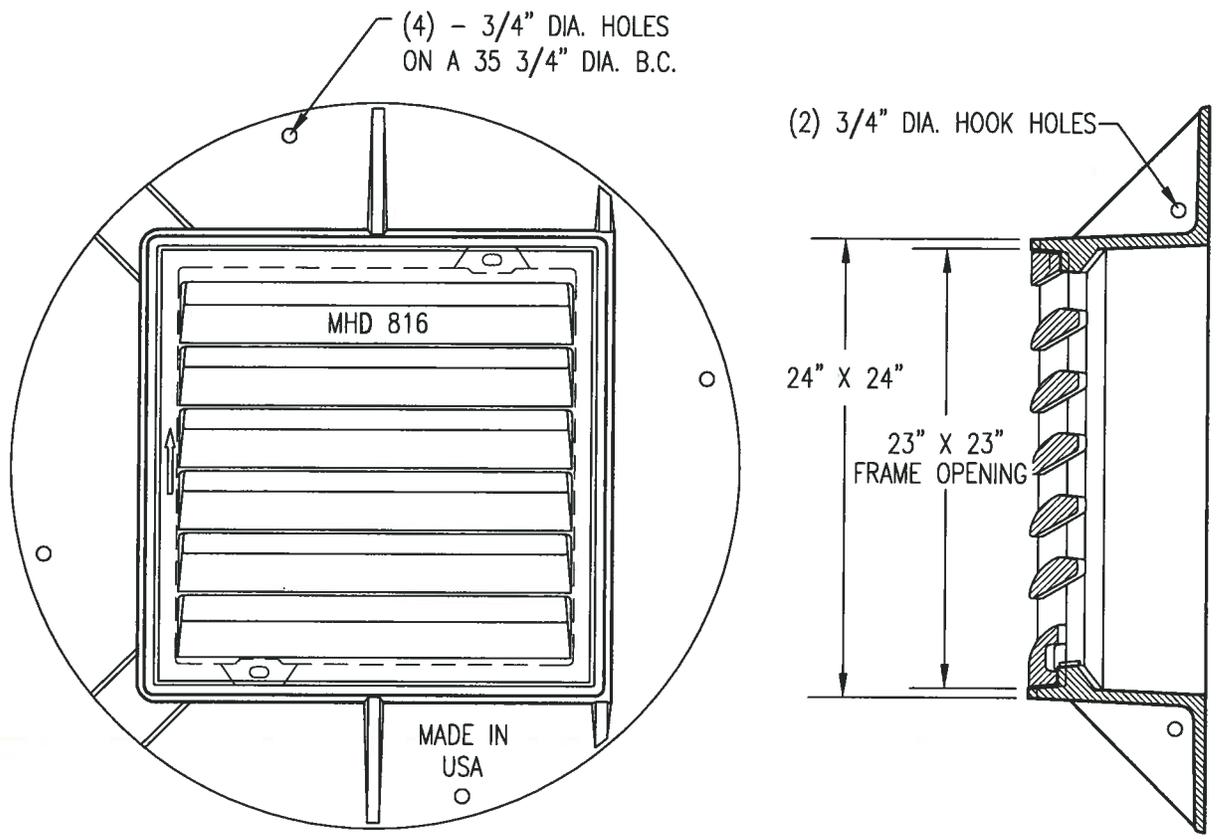
**CATCH BASIN/CURB BOX CASTINGS**

**STRM-2**

REVIEWED/APPROVED 2/01/2013

CITY OF DULUTH STANDARD DETAIL  
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NO SCALE



**NOTES:**

1. COMPONENT NO'S: TOP FRAME 5005, GRATE 816 (STD PLATE 4154B).
2. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
3. WEIGHT: FRAME 262#; GRATE 131#
4. ALL GUTTERS UPSTREAM OF CATCH BASINS SHALL BE STAMPED, "NO DUMPING, LEADS TO LAKE" WITH A CITY SUPPLIED STAMP.

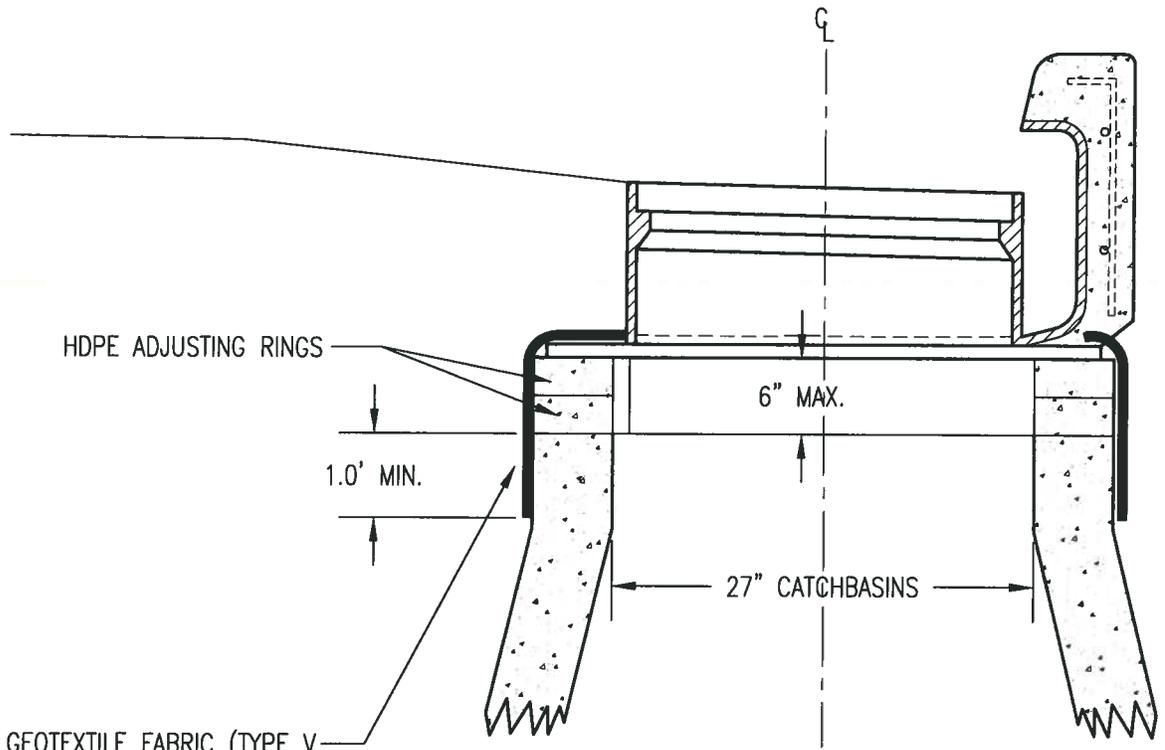
**CATCH BASIN/CURB BOX CASTINGS**

**STRM-3**

REVIEWED/APPROVED 2/01/2013

CITY OF DULUTH STANDARD DETAIL  
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NO SCALE



WRAP GEOTEXTILE FABRIC (TYPE V  
 NON-WOVEN) ENTIRELY AROUND HDPE  
 ADJUSTING RINGS AND TOP OF FLANGE  
 (TAPE IN PLACE AND BACKFILL). REQUIRED  
 ON ALL CATCH BASINS (INCIDENTAL)

FABRIC WRAPPED CATCH BASIN CASTING

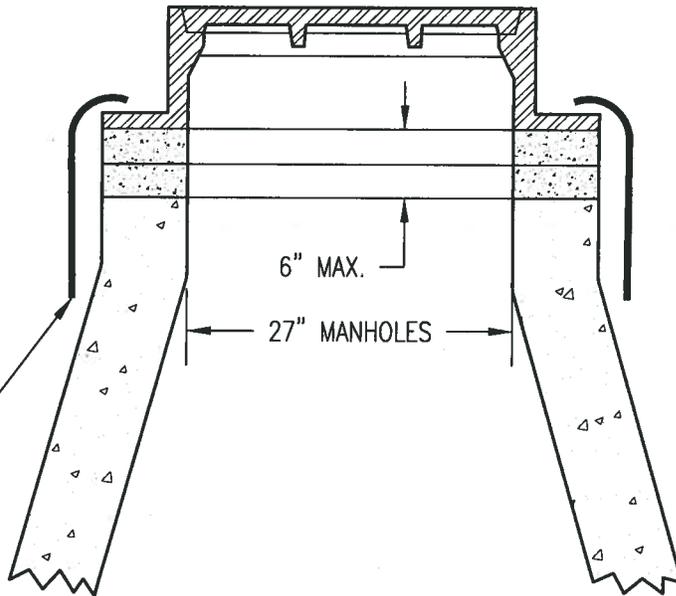
STRM-4

REVIEWED/APPROVED 2/01/2013

CITY OF DULUTH STANDARD DETAIL  
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NO SCALE

TYPE V NON-WOVEN GEOTEXTILE FABRIC WRAP ENTIRELY AROUND, WITH 1 FT OVERLAP FROM TOP OF STRUCTURE. (TAPE TOP OF FABRIC TO CASTING THEN BACKFILL.) REQUIRED ON ALL STORM MANHOLES (INCIDENTAL)



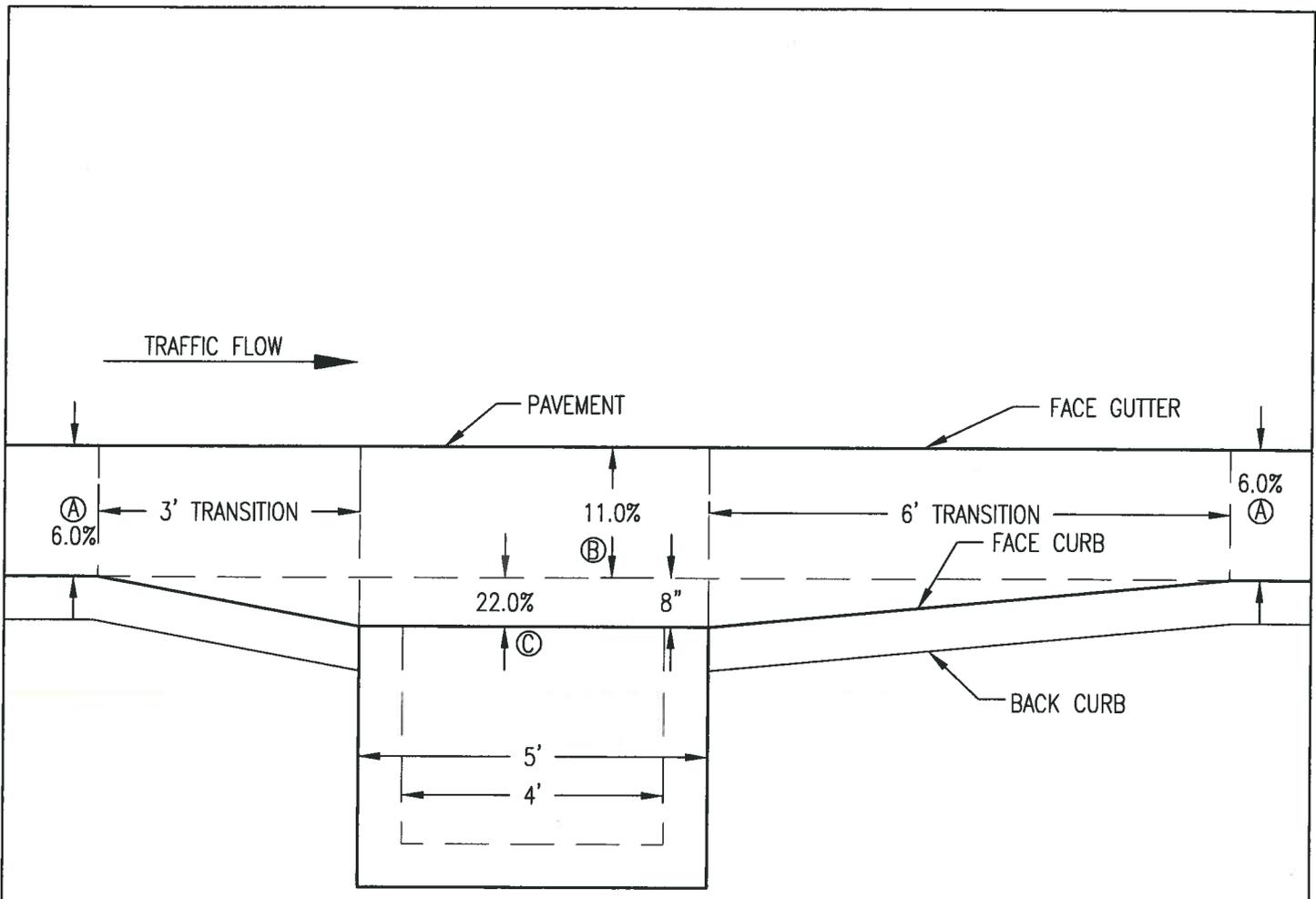
FABRIC WRAPPED MANHOLE

STRM-5

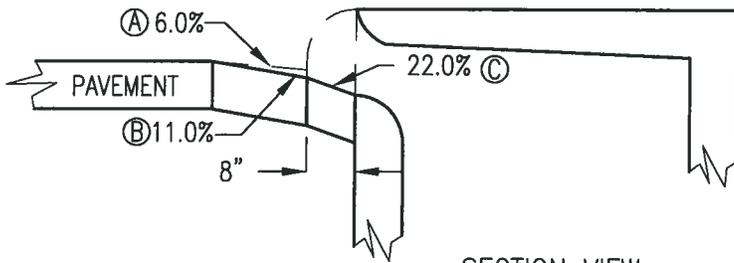
REVIEWED/APPROVED 2/01/2013

CITY OF DULUTH STANDARD DETAIL  
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NO SCALE



PLAN VIEW



SECTION VIEW

SEE STANDARD PLATE 4021 FOR CATCH BASIN CONSTRUCTION DETAILS.

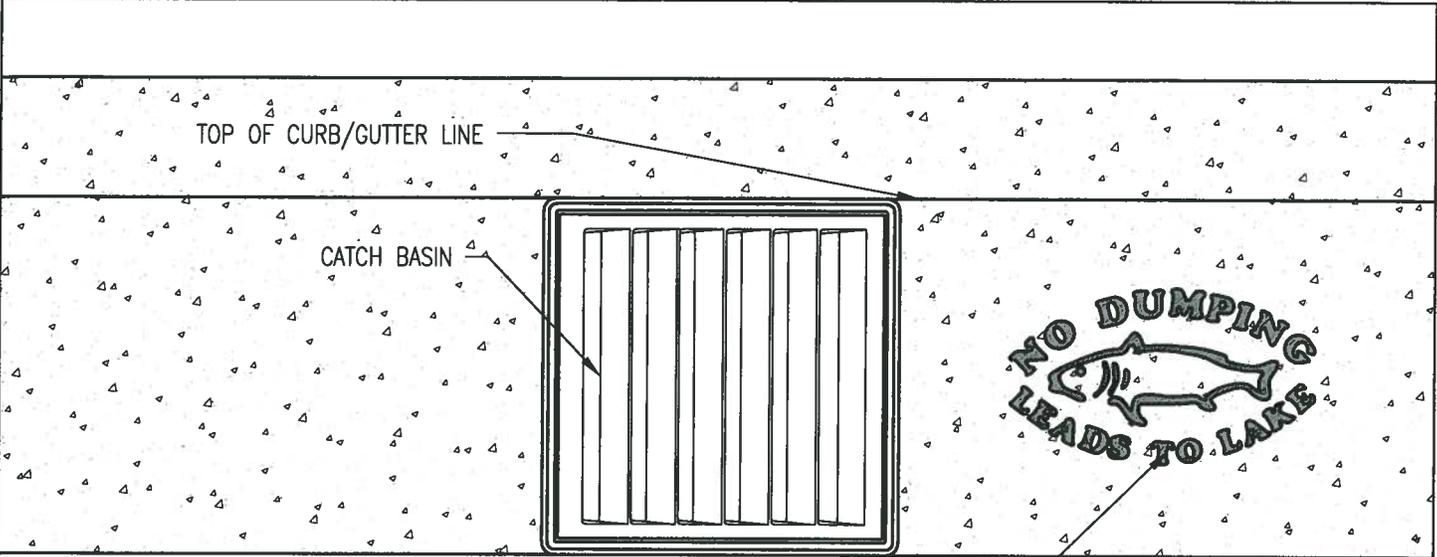
GUTTER SWALE

STRM-6

REVIEWED/APPROVED 2/01/2013

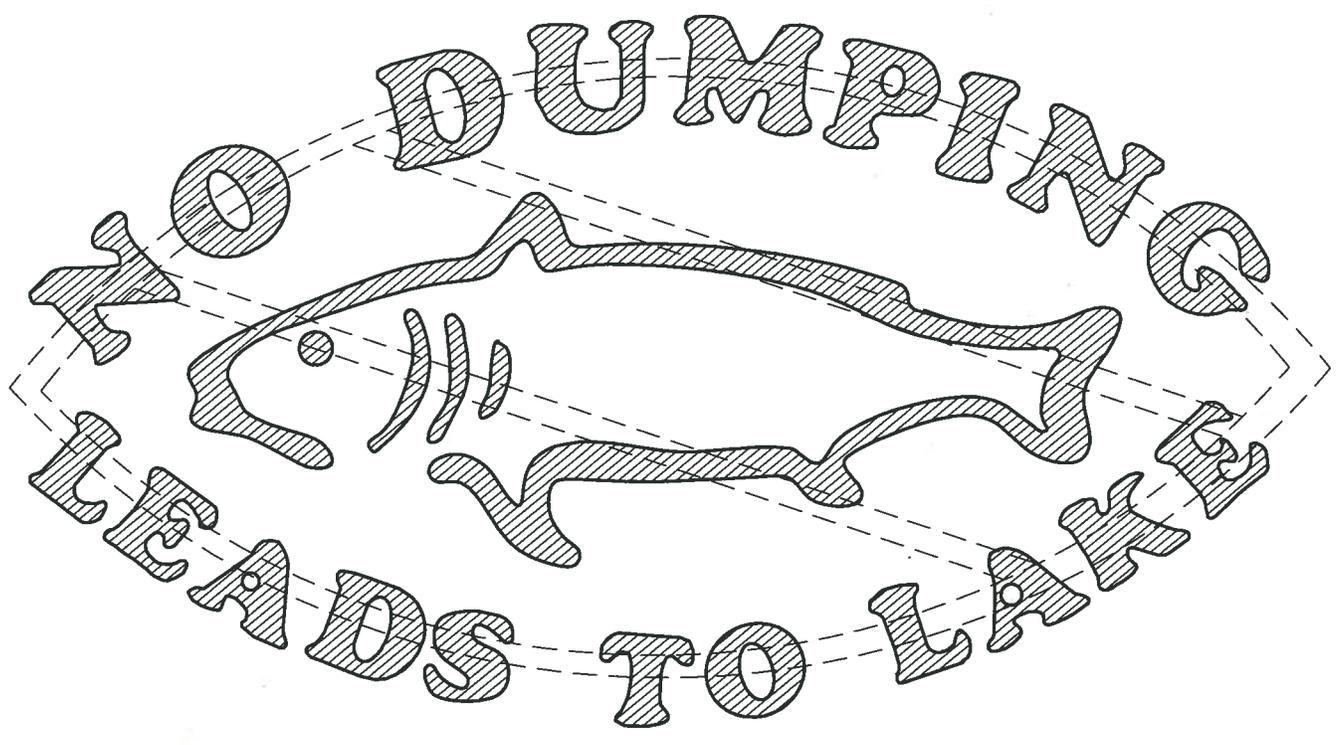
CITY OF DULUTH STANDARD DETAIL  
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GUTTER STAMP TO BE PLACED A MAXIMUM OF 18" FROM CATCH BASIN GRATE ON UPHILL SIDE AND CENTERED IN GUTTER.

GUTTER STAMP TO BE OBTAINED FROM CITY OF DULUTH BY CONTRACTOR.



GUTTER STAMP		STRM-7
REVIEWED/APPROVED 2/01/2013	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE