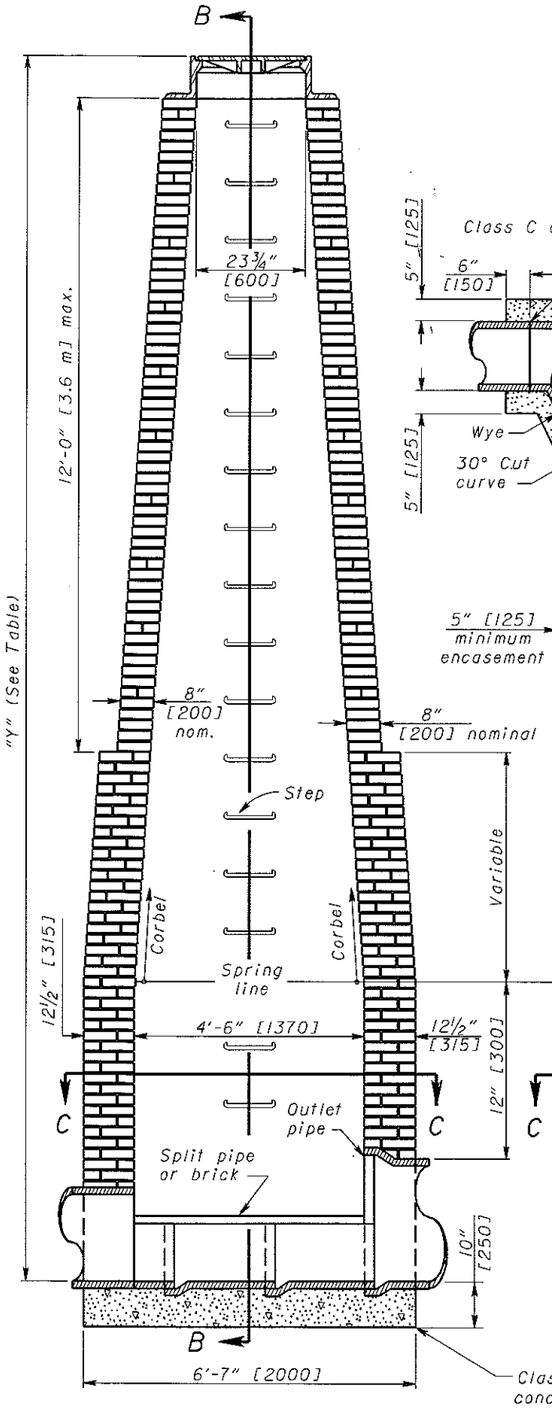
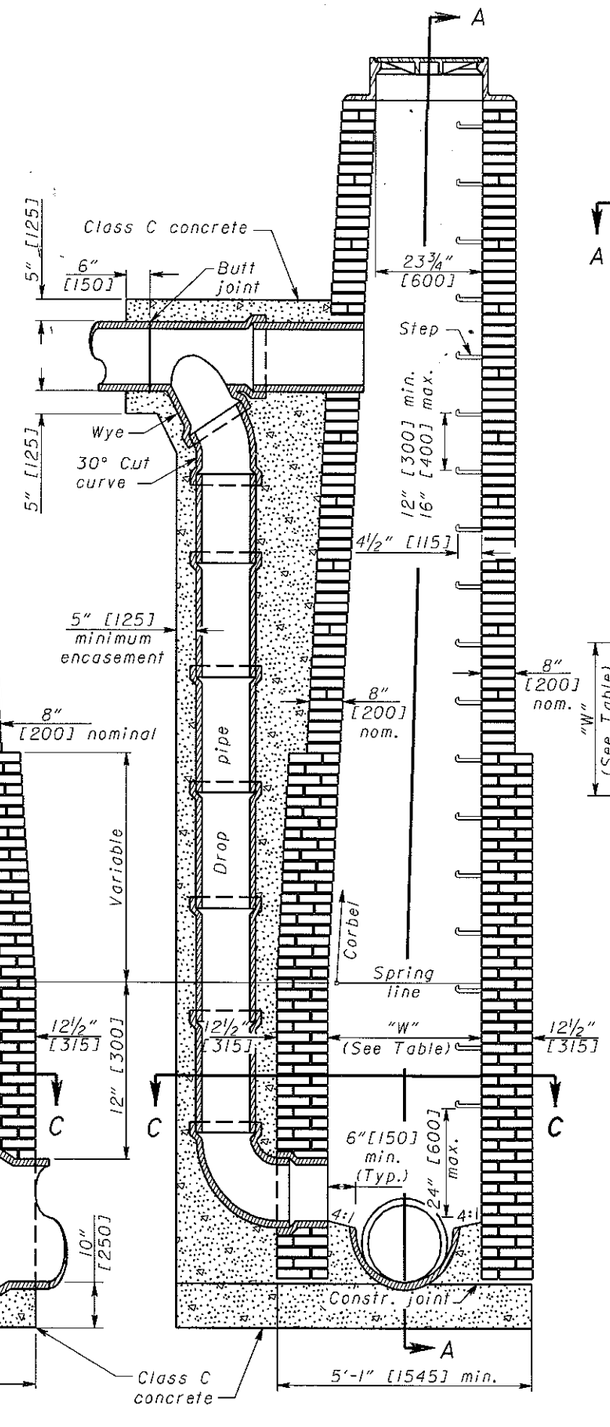
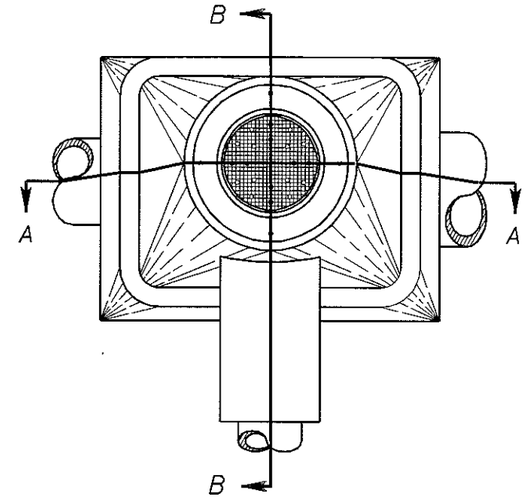


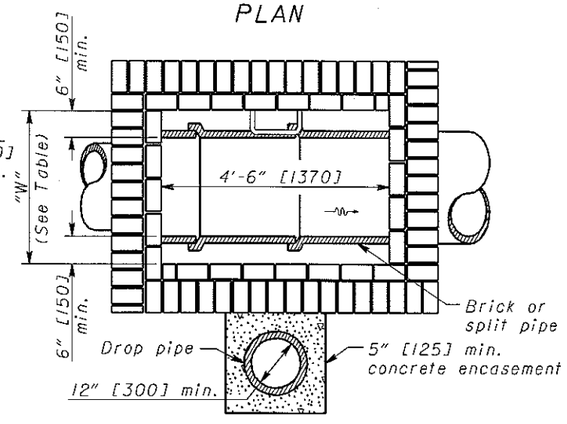
SECTION A-A



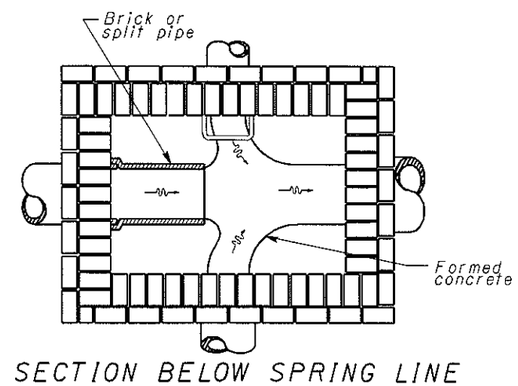
SECTION B-B



PLAN



SECTION C-C



SECTION BELOW SPRING LINE

Showing method of turning side drains which enter the manhole at the flowline.

NOTES

CONSTRUCTION: Manholes shall be built of brick, precast solid concrete blocks or cast-in-place concrete. When manholes are constructed of brick, every sixth course shall be a stretcher course. Manholes constructed of Class C cast in place concrete shall be reinforced by placing #5 [#16M] bars 12" [300] center to center both vertically and horizontally with a 2" [50] clearance from the inside face of the wall. Payment for furnishing and placing reinforcing steel shall be included in the unit price bid for Item 604.

Channel sections in the manhole shall be constructed of split pipe or brick except that curved sections may be built by forming a channel in the concrete.

DROP PIPES: When specified on the plans, drop pipes shall be constructed for all conduits carrying sanitary flow which cannot be connected to the manhole within 4' [1.2 m], flowline to flowline, as detailed on this drawing.

STEPS, FRAMES AND COVERS: Shall comply with the requirements set forth on **SCD MH-1.1.**

ALTERNATE DESIGN: Precast reinforced concrete manholes detailed on **SCD's MH-1.1, MH-1.3** and **MH-2.1** may be used in lieu of the design shown, unless otherwise required by the plans.

WALL: Thicknesses shall be 8" [200] nominal for the top 12' [3.6 m] of depth, 12½" [315] for the next 13' [4.0] m, 17" [430] for the next 15' [4.5 m] and 22½" [570] for the next 15' [4.5 m]. Maximum allowable depth is 55' [16.7 m].

Due to the depth requirement above the wall spring line necessary to corbel from dimension "W" to the frame diameter, designs shown shall not be used unless "Y", measured from flowline to top of cover, is equal to or greater than the minimum depth shown in the following table:

Diameter of outlet pipe.	Width "W" above outlet pipe. (See SECTION B-B)	Min. Depth "Y". Top of cover to flowline. (See SECTION A-A)
12" [300]	3.0' [915]	12.0' [3.7]
15" [375]		
18" [450]		
21" [525]	3.2' [970]	
24" [600]	3.5' [1060]	
27" [675]	3.8' [1150]	
30" [750]	4.1' [1240]	
33" [825]	4.4' [1330]	13.0' [4.0]
36" [900]	4.7' [1420]	14.0' [4.3]
42" [1050]	5.3' [1600]	15.5' [4.7]
48" [1200]	5.8' [1750]	17.5' [5.3]
54" [1350]	6.4' [1930]	19.0' [5.8]
60" [1500]	7.0' [2110]	21.0' [6.4]
66" [1650]	7.6' [2290]	23.0' [7.0]
72" [1800]	8.2' [2470]	24.5' [7.5]
78" [1950]	8.8' [2650]	26.0' [7.9]
84" [2100]	9.3' [2800]	28.0' [8.5]
90" [2250]	9.9' [2980]	30.0' [9.1]
96" [2400]	10.5' [3160]	31.5' [9.6]
102" [2550]	11.1' [3340]	33.5' [10.2]
108" [2700]	11.7' [3520]	35.0' [10.7]
114" [2850]	12.3' [3700]	37.0' [11.3]
120" [3000]	12.8' [3850]	38.5' [11.7]

THIS DRAWING REPLACES MH-3.1M DATED 9-6-95.

OHIO DEPARTMENT OF TRANSPORTATION
Brad Fagrell
ENGINEER OF BRIDGES

DATE 7-20-01

HYDRAULIC ENGINEER D. Gruver

All metric dimensions [] are in millimeters unless otherwise noted.

OFFICE OF STRUCTURAL ENGINEERING

STANDARD HYDRAULIC CONSTRUCTION DRAWING

MANHOLE No. 2

NUMBER MH-3.1

1/1