

CATCH BASIN No. 2-2A

**NOTES**

**GENERAL:** Catch Basins 2-2A and 2-2B are not intended for traffic bearing applications.

**CATCH BASINS 2-2A & B:** This sheet depicts Catch Basin 2-2A. See Sheet 2 of 2 for Catch Basin 2-2B.

**GRATE AND FRAME:** Furnish a design essentially the same and equally as strong as the one shown (see Construction Information Table), or meet the requirements of CMS 711.4. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

Cast the following text into the top of the grate:

**"DUMP NO WASTE" and "DRAINS TO WATERWAY"**

Print text in bold, capital letters at least 1/4" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

**WALLS:** Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls of least 6" thick with sufficient reinforcing to permit shipping and handling without damage. Do not use brick above the flow line of the side opening for Type 2-2A.

**CONCRETE:** Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

**PRECAST BASE:** If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

**LOCATION AND ELEVATION:** When given on the plans, location is the top center of the grate and the elevation is the flow line of the side inlet.

**MINIMUM DEPTH:** The minimum depth of CB No. 2-2A is the outside diameter (O.D.) of the outlet pipe plus 4".

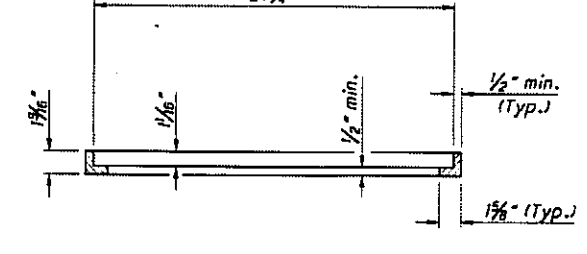
**OPENINGS:** Obtain the Engineer's approval for any pipe openings greater than 4" from the outside of the pipe to the structure. Fill all voids per CMS 611.

**2-2A SIDE INLETS:** Provide inlets on both sides of the No. 2-2A catch basin in soffit and on upstream side only where the ditch has a continuous down grade past the catch basin. Do not use CB 2-2A within the Clear Zone. The flow line should be 4" to 6" below normal ditch returning to normal 10' to 15' each side of the inlet.

**PAYMENT:** All materials and labor, including excavation and backfilling, are paid for under Item 611 - Catch Basin, No. 2-2A.

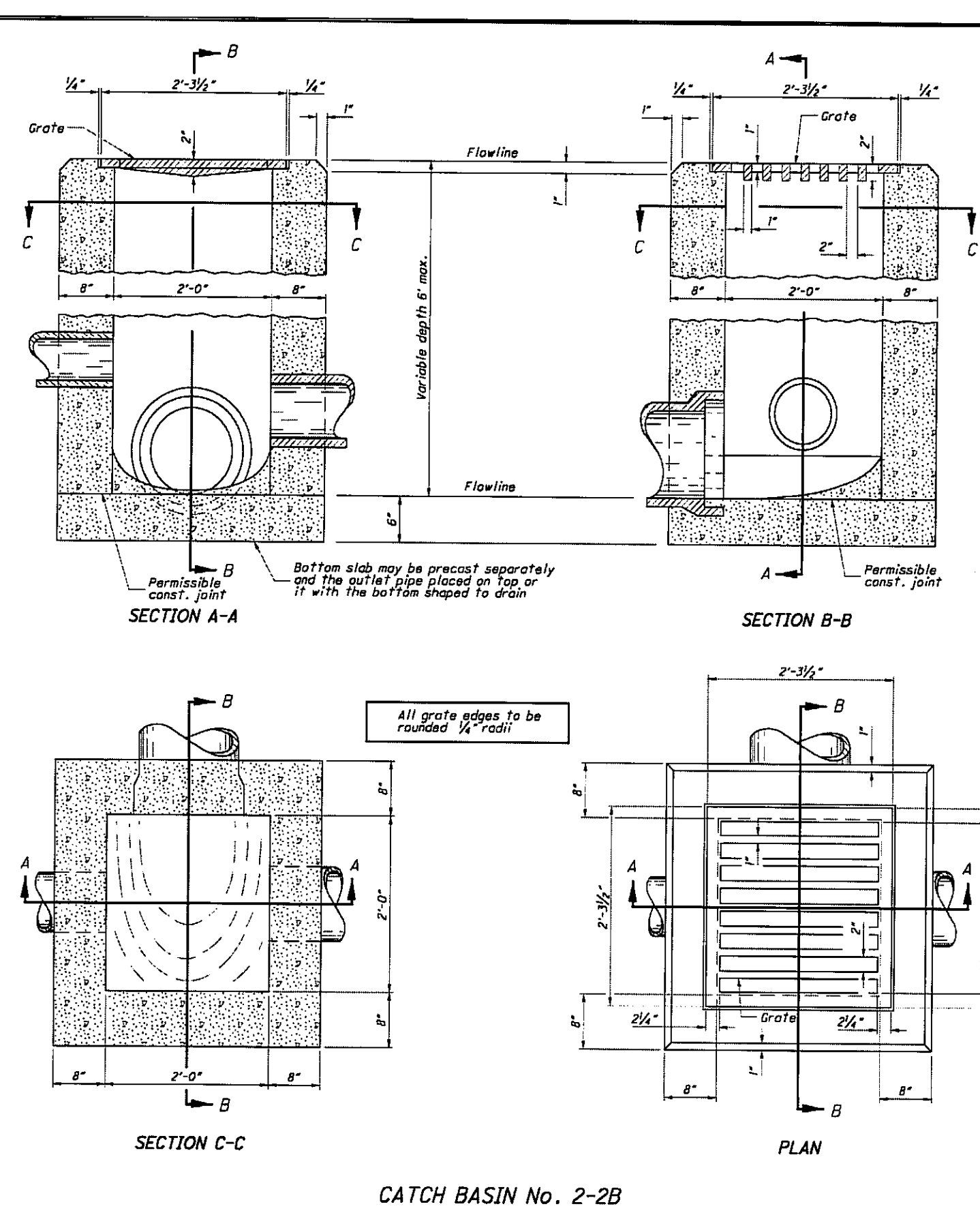
**CONSTRUCTION INFORMATION**

Minimum weight of grate, 120 lbs.  
Minimum weight of frame, 40 lbs.



SECTION THRU ANGLE FRAME FOR STANDARD No. 2-2A CATCH BASIN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION  
STANDARD SPECIFICATIONS FOR CONSTRUCTION  
SECTION 110 - STORM SEWERAGE  
OFFICE OF HYDRAULIC ENGINEERING  
STANDARD SPECIFICATIONS FOR CONSTRUCTION  
CATCH BASIN No. 2-2A & B  
SECTION NUMBER: CB-1.1  
1/2



CATCH BASIN No. 2-2B

**NOTES**

**GENERAL:** Catch Basins 2-2A & B. This sheet depicts Catch Basin 2-2B. See Sheet 1 of 2 for Catch Basin 2-2A.

**GRATE AND FRAME:** Furnish a design essentially the same and equally as strong as the one shown (see Construction Information Table), or meet the requirements of CMS 711.4. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

If necessary, bicycle safe grates will be specified in the plans. Furnish Weeman No. R-455-C or East Jordan No. 510 Type 45 bicycle safe grates or approved equals.

Cast the following text into the top of the grate:

**"DRAINS TO WATERWAY" and "DUMP NO WASTE"**

Print text in bold, capital letters at least 1/4" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

**WALLS:** Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls of least 6" thick with sufficient reinforcing to permit shipping and handling without damage.

**CONCRETE:** Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

**PRECAST BASE:** If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

**LOCATION AND ELEVATION:** When given on the plans, location and elevation are of the top center of the grate. When side openings are provided, the elevation is at the flow line of the side inlet.

**MINIMUM DEPTH:** The minimum depth of CB No. 2-2B is the outside diameter (O.D.) of the outlet pipe plus 4".

**2-2B GRATE ELEVATION:** Place grate elevation 4" to 6" below normal ditch and return to normal 10' to 15' each side of inlet.

**OPENINGS:** Obtain the Engineer's approval for any pipe openings greater than 4" from the outside of the pipe to the structure. Fill all voids per CMS 611.

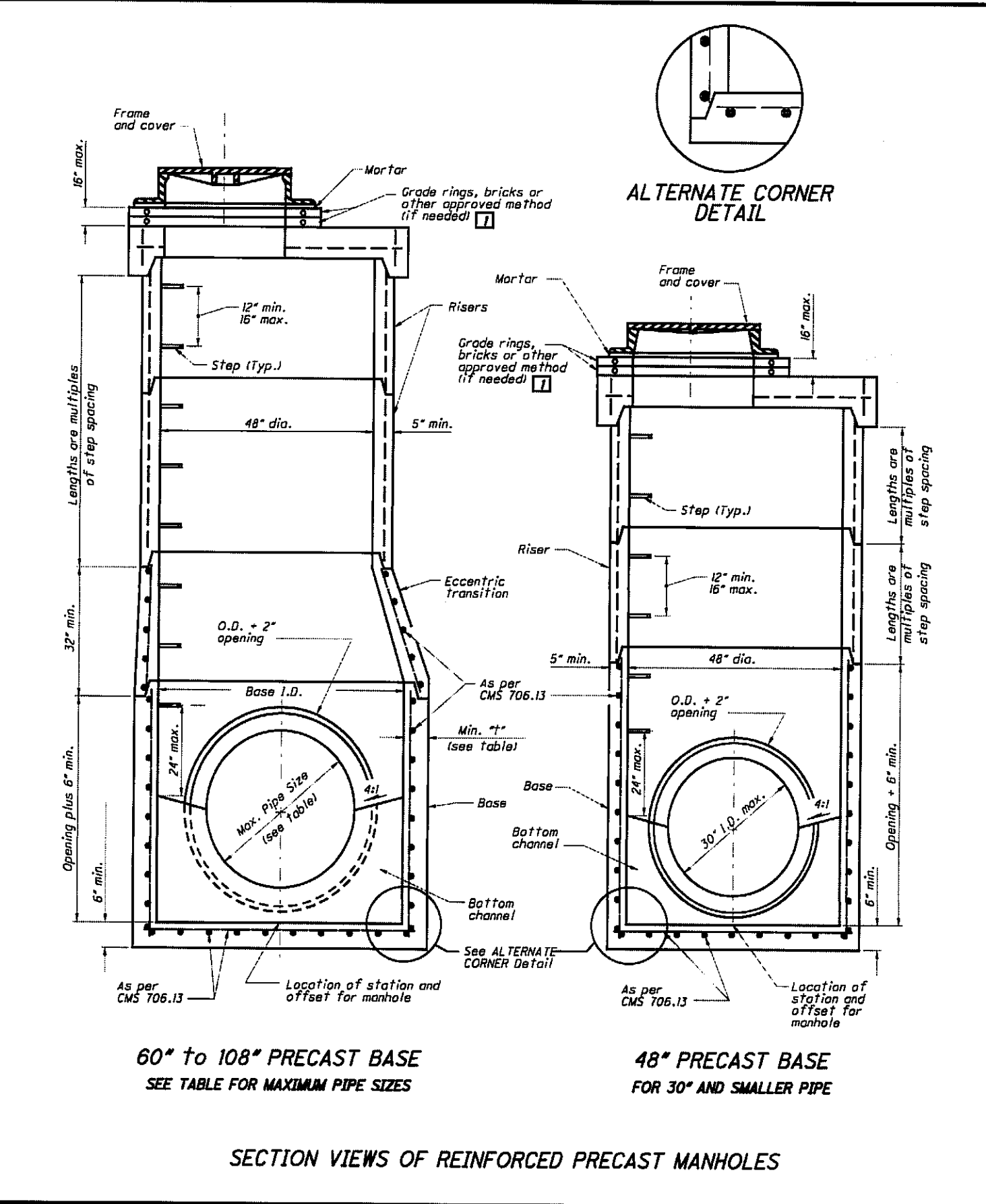
**PAYMENT:** All materials and labor, including excavation and backfilling, are paid for under Item 611 - Catch Basin, No. 2-2B.

**CONSTRUCTION INFORMATION**

Minimum weight of grate, 120 lbs.

CATCH BASIN	OUTLET PIPE SIZE
2-2A	12" to 21"
2-2B	12" to 21"

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CATCH BASIN No. 2-2A & B  
SECTION NUMBER: CB-1.1  
2/2



SECTION VIEWS OF REINFORCED PRECAST MANHOLES

**NOTES**

**GENERAL:** With normal soil and site conditions, this standard precast manhole may be used for any manhole depth, cast and assembled sections of the precast manhole with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

Leave handling device for the flat slab in place.

**TOP:** Provide a flat slab for this section unless an eccentric cone or flat slab.

**TRANSITION OR REDUCER:** This section can be either eccentric cone or flat slab.

**BASE:** Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and place the floor and bases separately. Provide openings for inlet and outlet pipes, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on SDD MH-1.1 and MH-3.1.

**RISER SECTIONS:** Openings for 18" and smaller inlet pipes may be either prefabricated or cut in the field provided the sides of the pipe at the springline do not project into the manhole.

**CONNECTIONS:** Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 523.

**JOINT SEALS:** Furnish resilient seal between precast manhole sections in sanitary sewers and flexible gasket joints per CMS 706.11.

**OPENINGS:** The maximum pipe opening is the O.D. of the pipe being supported plus 2" when fabricated or field cut. Fill all voids per CMS 501.

**MATERIALS:** Provide materials for bases and other precast sections, including reinforcement not specified here, that meet the requirements of CMS 706.13.

**DROP PIPE:** When specified on the plans, construct drop pipe as shown on SDD MH-3.1.

**STEPS, FRAMES AND COVERS:** Meet the requirements shown on SDD MH-1.1.

**TOP SLAB REBAR:** Use epoxy coated reinforcing steel within the top slab.

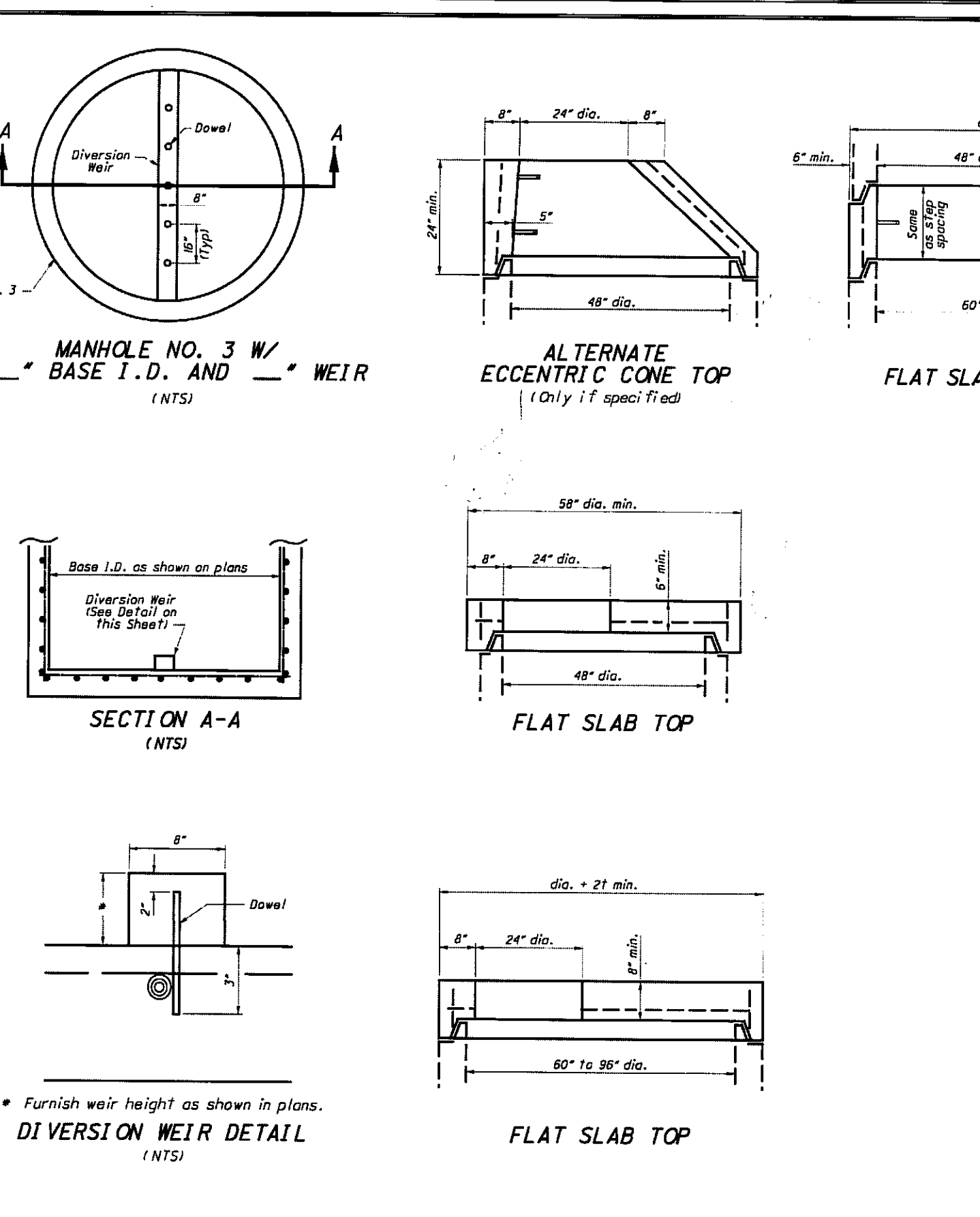
**LEGEND**

Reconstruction to grade only. Approved materials are kept on file by the Office of Materials Management.

**MAXIMUM PIPE SIZES**

BASE I.D.	MIN. #"	MAX. PIPE SIZE
50"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7 1/2"	60"
96"	8"	66"
108"	9"	72"

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STANDARD SPECIFICATIONS FOR CONSTRUCTION  
SECTION 110 - STORM SEWERAGE  
OFFICE OF HYDRAULIC ENGINEERING  
STANDARD SPECIFICATIONS FOR CONSTRUCTION  
MANHOLE No. 3  
SECTION NUMBER: MH-1.2  
1/2



MANHOLE NO. 3 W/ BASE I.D. AND WEIR (NTS)

ALTERNATE ECCENTRIC CONE TOP (Only if specified)

FLAT SLAB TRANSITION

SECTION A-A (NTS)

FLAT SLAB TOP

DI VERSION WEIR DETAIL (NTS)

FLAT SLAB TOP

**NOTES**

**MANHOLE NO. 3 W/ BASE I.D. AND WEIR:** Furnish manhole base with precast diversion weir or construct diversion weir from Structural Concrete, 4000 psi compressive strength concrete or Brick and Masonry Units conforming to CMS 611. A bottom channel section for the manhole is not required when a diversion weir is specified on the plans.

Place diversion weir perpendicular to flow of inflowing storm sewer. Dowel concrete or masonry units into the base of the manhole to a depth of 3" using epoxy coated #4 reinforcing bars. Start dowels at the center of the diversion weir and space 16" on center across the entire weir.

All materials and labor, including excavation and backfill, are paid for under the contract price for ITEM 611 - MANHOLE NO. 3 WITH BASE I.D. AND WEIR.

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SECTION 110 - STORM SEWERAGE  
OFFICE OF HYDRAULIC ENGINEERING  
STANDARD SPECIFICATIONS FOR CONSTRUCTION  
MANHOLE No. 3  
SECTION NUMBER: MH-1.2  
2/2

JOB NO 12289F	SCALE AS NOTED
DRAWN BY MJD	CHK'D BY CJO
DWG NAME 12289C-det	DATE SEPTEMBER, 2014

HILLSIDE ESTATES - PHASE 4  
**STORM SEWER DETAILS**  
TOWNSHIP OF COPLEY, COUNTY OF SUMMIT, STATE OF OHIO



REV NO	DATE	DESCRIPTION	BY
3	02/27/15	REV. PER COSE & SUMMIT SWCD	CJO
2	11/17/14	REV. PER COSE, DOES, AKRON WTR.	CJO
1	09/15/14	ORIGINAL SUBMITTAL	CJO

SHEET NO.  
**C7.5**