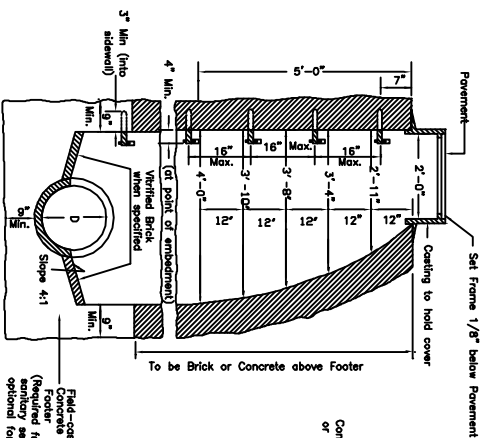
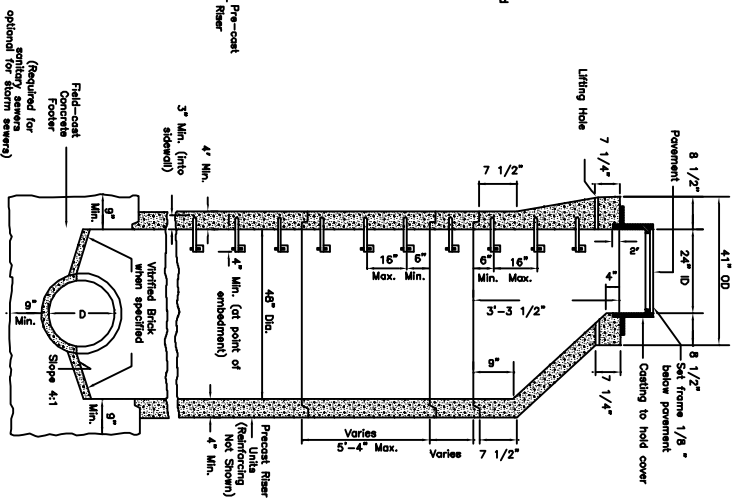
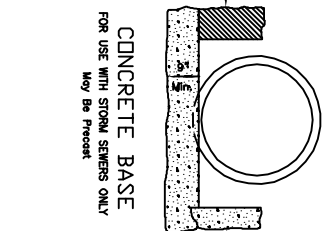


PLAN VIEWS



CAST-IN-PLACE OPTION

CONCRETE BASE FOR USE WITH STORM SEWERS ONLY May Be Precast



PRE-CAST

NOTES

1. Type A Manholes, when specified on the Plans, may be cast-in-place or pre-cast (cast-in-place or pre-cast option) as shown herein.
2. Steps, frames, and covers shall be as shown on Standard Sheet DR7-X.
3. "Keyed" or "doweled" type construction joints, acceptable to the Engineer, may be used in the construction of concrete manholes.
4. If the cast-in-place manhole is over twelve feet (12') in depth, the sidewalls below that depth will be double thickness.
5. Pipe at elevations other than shown may be joined to the manhole by cutting a hole the size of the connecting pipe in the manhole, inserting the pipe the thickness of the manhole shell and closing of openings around the connecting pipe with joint mortar.
6. Drawing shows pipe entering and leaving manhole in a straight line. However, the pipes may enter or leave at an angle or place as called for or shown on the Plans.
7. Minimum height of bench wall above flowline of pipe is 25% of the diameter of the pipes.
8. The use of brick for manhole construction will not be allowed when a manhole is located in the roadway.
9. The following additional notes are applicable for pre-cast manholes:
 - a. Manhole steps shall be placed into plastic concrete wall during manufacture or mortared into holes after the concrete has set.
 - b. Sidewall sections may be used in any combination to produce a manhole of desired depth, except the tapered top section shall be retained as shown.
 - c. The tapered top section shall be manufactured and meet the same requirements as the manhole's sidewalls, but shall conform to the dimensions detailed herein.
 - d. Lifting holes in the tapered top section and the circumferential notches in the manhole cover are for hoisting purposes only.
 - e. The pre-cast sidewall units shall be set in joint mortar or sealed with O-ring gaskets.

WEST VIRGINIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAILS

TYPE A MANHOLE

STANDARD SHEET DR7-A