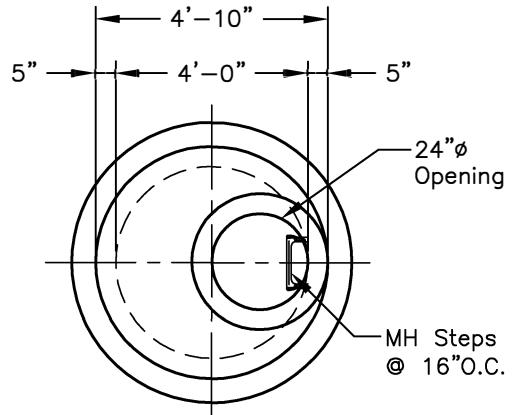
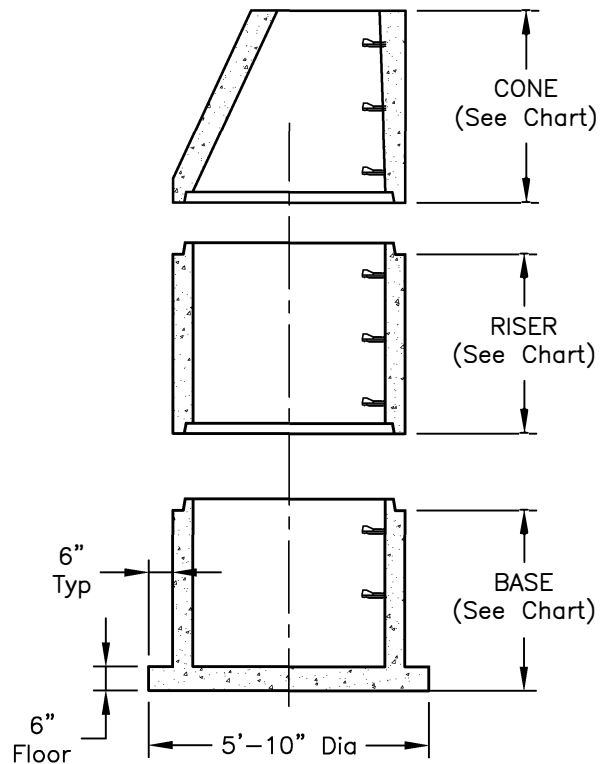


**NOTES:**

1. Precast Manholes are Fabricated to meet or Exceed the Following Specifications:
  - Manhole: ASTM C-478 Latest AASHTO M-199,
  - Wall: ASTM A-185,
  - Base: ASTM 615, Grade 60.
2. Concrete Compressive Strength = 4,000psi.
3. Precast Meets ASTM C913.
4. All Manhole Sections are Designed for HS20 Loading (NCDOT #840.52).
5. Limit Depth of Fill to 30'-0" from Finish Grade to Top of Inside Floor.
6. All Joints Conform to ASTM C990.
7. Joint Sealant: Butyl Rubber SS-S-00210.
8. Co-Polymer Polypropylene Steel Reinforced Steps meet ASTM-C478 Latest.
9. Wall Reinforcing Minimum of 0.12 SQ IN. per Linear Foot each Way.
10. Manhole Base Reinforced Both Ways with a Minimum Area of 0.12 SQ IN. per Linear Foot each Way.
11. All Cast Holes are Additionally Reinforced with #4 Rebar Grade 60.
12. All Pipe Openings to be no Greater than 3" Larger than Outside Diameter of Pipe and Additionally Reinforced with a Minimum of 0.20 SQ IN. of Steel at 90 Degrees. Additional Reinforcing not Required for Cored Openings.



**PLAN VIEW**



**SECTION VIEW**

| ITEM  | HEIGHT | WT (LBS) |
|-------|--------|----------|
| CONE  | 20"    | 1,460    |
|       | 36"    | 2,720    |
|       | 48"    | 3,620    |
| RISER | 12"    | 880      |
|       | 16"    | 1,180    |
|       | 32"    | 2,340    |
|       | 48"    | 3,520    |
|       | 64"    | 4,690    |
| BASE  | 24"    | 3,530    |
|       | 28"    | 3,820    |
|       | 32"    | 4,110    |
|       | 36"    | 4,410    |

**4' DIA SEWER MANHOLE  
W/ 6" EXPANDED BASE**