GENERAL NOTES:

1. Either precast or cast-in-place manholes may be used.
2. Details for manhole frame, cover and step are generic in nature and may vary from shown depending on manufacturer.
3. Use 8" thick cast-in-place concrete bases for depths less than 10' and 12" thick bases for depths 10' or greater.
4. Manhole frames shall have a depth of 6" unless otherwise indicated on the plans.
5. Step requirements:
   a. The max. vertical clearance to bottom of manhole or concrete invert.
   b. 3", minimum embedment.
   c. 1500 lb. min. pullout force.
   d. ASTM A-615 grade 60 steel bar.
   e. In-situ molded polypropylene covering meeting ASTM D-4400.
   f. Slip resistant foot tread with "wings" to prevent feet from sliding off the edge.
   g. Reflectors at step corners.
6. Reinforcement for precast manhole sections shall meet AASHTO M 189.