



NOTES:

1. MANHOLE TO CONFORM WITH ASTM C478 EXCEPT AS MODIFIED BELOW.
2. WALL REINFORCING TO BE A MINIMUM OF 0.12 SQ. IN. PER LINEAR FOOT. EITHER TONGUE AND GROOVE OR JOINTS SHALL HAVE REINFORCING EQUAL IN AREA TO MINIMUM OF WALL SECTION.
3. ALL JOINTS SHALL CONFORM WITH ASTM C443.
4. STEPS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH 1/2" GRADE 60 STEEL REINFORCEMENT AND RESIST 1000 LB. PULLOUT TEST.
5. ALL PIPE OPENINGS TO BE NO GREATER THAN 3" LARGER THAN O.D. OF PIPE AND ADDITIONALLY REINFORCED WITH A MINIMUM OF 0.20 SQ. IN. OF STEEL AT 90 DEGREES. PIPE TO BE CENTERED IN OPENINGS.
6. ALL SURFACES SHALL BE SMOOTH EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FINS AND OTHER IMPERFECTIONS.
7. MANHOLE BASE SHALL BE 3600 P.S.I. CONCRETE PLACED AGAINST SHAPED BANKS IN LIEU OF FORMS.
8. CARE MUST BE TAKEN TO FORM A SMOOTH FINISHED TROUGH FROM ENTRANCE PIPES TO EXIT PIPE, AND IN CURVED MANHOLES THE TROUGH MUST BE A SMOOTH CIRCULAR ARC TANGENT TO THE INSIDE WALLS OF THE PIPES AT THEIR ENDS. ALL CHANNELS TO BE 100% OF PIPE DIAMETER.
9. ALL MANHOLE RINGS SHALL BE BOLTED THROUGH MANHOLE AND/OR CONCRETE GRADE RING WITH 1/2" DIAMETER KWIK BOLT STUD ANCHOR SYSTEM.
10. MANHOLE GRADE SETTING SHALL BE AS FOLLOWS:
 - A. FLUSH WITH GRADE IN PAVED AREAS
 - B. 0.10' ABOVE GRADE IN MOWED PLAZA AREAS WITHIN OR ADJACENT TO STREET RIGHT-OF-WAY.
 - C. 2.0' ABOVE GRADE IN CROSS-COUNTRY UTILITY RIGHTS-OF-WAY.
 - D. A HEIGHT SPECIFIED BY THE WATER RESOURCES ENGINEER.
11. PENETRATING LIFTING HOLES SHALL BE PLUGGED WITH EXPANSION GROUT.
12. INFLOW DISHES/INSERTS SHALL BE INSTALLED ON ALL MANHOLES, 12-INCH SEWER MAINS OR LESS, WITH THE EXCEPTION TO CROSS COUNTRY MANHOLES.
13. FLOW CHANNELS MUST ALLOW FOR PLACEMENT, REMOVAL AND PASSAGE OF CITY OF MONROE CCTV EQUIPMENT.

#	REVISED	DATE:	7/1/04	STANDARD DETAIL	WATER RESOURCES DEPARTMENT	
	1/26/17	SCALE:	NONE		CITY OF MONROE, NC	
		DRAWN BY:	JPH			
		CHECKED BY:	DSW			
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