1. MANHOLE SPACING FOR TRUNK LINES IS AS FOLLOWS:
   - 400' MAX. SPACING FOR UP TO 8" DIAMETER PIPE.
   - 500' MAX. SPACING FOR PIPE 10" THROUGH 15" IN DIAMETER.
   - 800' MAX. SPACING FOR PIPE 16" THROUGH 30" IN DIAMETER.
   - 1000' MAX. SPACING FOR PIPE 31" THROUGH 48" IN DIAMETER.
   - 2000' MAX. SPACING FOR PIPE 54" AND LARGER.
   - AT ALL LOCATIONS WHERE DIAMETER OF PIPE CHANGES.
   - AT ALL LOCATIONS WHERE HORIZONTAL AND VERTICAL ALIGNMENT CHANGES.
   - AT THE ENDS OF ALL MAINS LONGER THAN 400'.
   - AT LATERAL CONNECTIONS 6" AND LARGER.

2. THE MAXIMUM ALLOWABLE MANHOLE SPACING IN SUBDIVISIONS IS 400'. MAXIMUM ALLOWABLE MANHOLE SPACING FOR SEWER LINES WITH HORIZONTAL CURVATURE SHALL BE 300 FEET. A MANHOLE SHALL BE LOCATED AT THE PC AND PT OF THE CURVE.

3. ALL MANHOLES SHALL HAVE A 30" OPENING. THERE SHALL BE A MINIMUM OF 0.10 FEET IN FLOW LINE DROP AT EACH MANHOLE.

4. WHERE SEWER LINES ENTER THE MANHOLE HIGHER THAN 24 INCHES ABOVE THE MANHOLE INVERT, THE INVERT SHALL BE FILLED TO PREVENT SOLIDS DEPOSITION. A DROP PIPE SHALL BE PROVIDED FOR A SEWER LINE ENTERING A MANHOLE MORE THAN 18 INCHES ABOVE THE INVERT. IF THE DROP PIPE IS INSIDE THE MANHOLE, A MINIMUM OF 48 INCHES OF CLEAR SPACE SHALL BE MAINTAINED AND THE DROP SHALL BE PERMANENTLY AFFIXED TO THE WALL OF THE MANHOLE.

5. MANHOLES 10 FEET DEEP SHALL BE A MINIMUM OF 60-INCH DIAMETER AT THE FLOW LINE AND ECCENTRIC WITH ONE VERTICAL WALL.

6. WHEN ECCENTRIC CONES ARE SPECIFIED, THE VERTICAL WALL SHALL BE ALIGNED WITH THE OUTGOING (DOWNSTREAM) PIPE.

7. PIPE MATERIAL SHALL BE AS FOLLOWS:
   - FOR PIPE 6" THROUGH 15" DIAMETER LESS THAN 10' DEEP: USE ASTM D3034 SDR-35 PVC.
   - FOR PIPE 6" THROUGH 15" DIAMETER MORE THAN 10' DEEP: USE ASTM D3034 SDR-26 PVC.
   - FOR PIPE 16" DIAMETER AND LARGER LESS THAN 10' DEEP: USE ASTM F679 SDR-35 (PS 46) PVC.
   - FOR PIPE 16" DIAMETER AND LARGER MORE THAN 10' DEEP: USE ASTM F679 SDR-26 (PS 115) PVC.

8. THE INTERIOR OF ALL WASTEWATER MANHOLES, INCLUDING EXISTING MANHOLES THAT ARE ADJUSTED OR CONNECTED TO, SHALL BE COATED WITH AN APPROVED CORROSION-RESISTANT EPOXY COATING SUCH AS RAVEN 405, SPRAYROQ, QUADEX STRUCTURE GUARD, CONSHIELD(MAX 10' MANHOLE DEPTH),NUKOTE AEGIS LINING SYSTEMS, SEWPERCOAT OR AN APPROVED EQUAL. NUMBER AND THICKNESS OF COATINGS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

9. ALL TESTING SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG).

10. ALL WASTEWATER LINES SIX (6) INCHES OR LARGER SHALL BE AIR AND MANDREL TESTED, UPON COMPLETION OF FRANCHISE UTILITIES. TELEVISION INSPECTION SHALL ALSO BE REQUIRED WITH MANDREL SHOWN ON VIDEO. ALONG WITH THE PUBLIC WASTEWATER LINES, ALL PRIVATE SEWER LINES WILL BE TESTED PER THE SAME PROCEDURES WITH AN INSPECTOR PRESENT.

11. ALL FORCE MAINS SHALL BE HYDROSTATICALLY TESTED.

12. ALL WASTEWATER MANHOLES SHALL BE VACUUM TESTED.

13. SEWER LINES 12 INCHES AND LARGER WILL REQUIRE AN AS-BUILT SURVEY FOR COMPARISON TO THE DESIGN. THE TOLERANCES ALLOWED ARE AS FOLLOWS:
   - FLOW LINE: ±0.10' FROM THE DESIGN
   - PERCENT SLOPE: ±0.10% OF THE DESIGN SLOPE
   - MINIMUM ALLOWABLE SLOPES: AS DEFINED BY TCEQ.

14. THE CITY ENGINEER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION OF ANY AND ALL PUBLIC IMPROVEMENTS.

15. A PLUG WILL BE INSTALLED IN THE CLOSEST DOWNSTREAM MANHOLE TO THE TIE-IN LOCATION. THE PLUG WILL BE REMOVED ONLY AFTER ALL PUBLIC IMPROVEMENTS HAVE BEEN COMPLETED AND PASSED TESTING.

16. DENSITY TESTING FOR UTILITY BACKFILL SHALL BE PERFORMED PER TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF STREETS, HIGHWAYS, AND BRIDGES ITEM 132.

M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE	
	500	
GENERAL CONSTRUCTION WASTEWATER NOTES	MODIFIED DATE: 3/25/19	STANDARD DRAWING NO.: 5001M*
CITY OF MELISSA, TEXAS	NOTICE DATE: 3/27/19	APPLIED DATE: 3/27/19 / ENFORCED DATE: 4/27/19