

## METER VAULT REPLACEMENT

1. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR HAS TO PROTECT ALL UTILITIES FOR THE DURATION OF THE CONTRACT.
2. THE BACKFILL AROUND THE PIPE AND BEHIND THE VAULT WALLS SHALL BE PLACED ON WELL COMPACTED GROUND IN ONE FOOT LAYERS STARTING AT 2 FT BELOW THE PIPE AND EXTENDING UP TO 6" BELOW THE TOP OF THE SIDE WALK SLAB AND/OR THE ROAD SIDE CURB. COMPACTION IS TO BE DONE BY MANUAL OR MECHANICAL TAMPING TO A MINIMUM DENSITY OF 90% OF THE MAXIMUM UNIT WEIGHT OF THE SOIL. THE LAST 6" SHOULD BE FILLED WITH TOP SOIL AND THE SURFACE GRADED TO MATCH THE GRADE OF THE ROAD SIDE OR CURB AND THE SIDE WALK AS APPLICABLE. THE TOP SOIL HAS TO BE COMPACTED LIGHTLY AND OVERLAYED WITH SOD.
3. ALL DAMAGE CAUSED BY THE CONTRACTOR TO NEIGHBORING PROPERTIES, ROADS AND CURBS HAS TO BE RESTORED TO ORIGINAL CONDITION AND TO THE FULL SATISFACTION OF THE OWNERS.
4. ALL SCRAP MATERIAL IS CONSIDERED THE PROPERTY OF THE CONTRACTOR AND MUST BE REMOVED FROM THE SITE DAILY, UNLESS A REQUEST FOR DELIVERY TO D.W.S.D. IS ISSUED. THE SITE HAS TO BE LEFT CLEAN AND NEAT.
5. THE CONTRACTOR HAS TO PROVIDE TEMPORARY SUPPORTS TO THE EXISTING PIPES AS NECESSARY TO PREVENT DEFLECTION OR DAMAGE TO THE PIPES DURING CONSTRUCTION.
6. PRIOR TO PROCUREMENT OF PLUMBING AND STEEL VAULT STRUCTURES, THE CONTRACTOR SHALL SUBMIT TO THE OWNER/ENGINEER SHOP DRAWINGS SHOWING LAYOUT AND DETAILS OF PLUMBING AND METER VAULT STRUCTURES. THE METER VAULT SHOP DRAWINGS MUST INCLUDE DETAILS OF ALL KNOCK OUT LOCATIONS FOR THE PIPE PENETRATIONS AND ALL CONDUITS AND INSERTS DEEMED TO BE NECESSARY TO COMPLETE THE JOB. ALL SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. THE DESIGN ENGINEER IS RESPONSIBLE FOR SIZING THE METER VAULT TO PROVIDE SUFFICIENT ROOM BETWEEN VALVES FOR THE METER, AUXILIARY EQUIPMENT AND COUPLINGS. THE MINIMUM SPACE BETWEEN VALVES FOR 3" AND 4" METERS IS 5'-10" AND WILL TYPICALLY BE INCREASED FOR LARGE METER. THE METER SETTINGS SHALL BE SHOWN ON THE METER VAULT SHOP DRAWING.
8. THE METER VAULT MUST BE SET ON FIRM SOIL WITH A MINIMUM BEARING CAPACITY OF 2500 PSF. THE SOIL SHALL BE COMPACTED OR REPLACED WITH PRE ENGINEERED SOIL AS DIRECTED BY AN INDEPENDENT LICENSED SOIL LABORATORY TO ACHIEVE AN ACCEPTABLE BENDING CAPACITY.
9. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER INSTRUCTIONS WHEN INSTALLING NEW STEEL OR CONCRETE METER VAULT OR PIT.
10. THE STEEL METER VAULTS SHALL BE PLACED ON CONCRETE PADS AS RECOMMENDED BY VAULT MANUFACTURER. PADS SHALL BE SIZED FOR A TOTAL SETTLEMENT NOT TO EXCEED 0.25 INCH. PADS SHOULD ALSO BE DESIGNED TO WITHSTAND MAXIMUM UPLIFT PRESSURE WHEN LOCATED BELOW THE CROSS WATER TABLE. A SAFETY FACTOR OF 1.5 AGAINST UPLIFT SHALL BE PROVIDED. SIDE FRICTION SHALL NOT BE CONSIDERED AS RESISTING FORCE AGAINST UPLIFT.
11. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS RELATED WITH TAPPING D.W.S.D.'S WATER MAINS. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ALL LIABILITIES ASSOCIATED WITH THE TAP WORK.
12. THE TAPPING CONTRACTOR SHALL BE EXPERIENCED IN TAPPING PRESTRESSED CONCRETE OR DUCTILE IRON WATER MAINS. THE TAPPING CONTRACTOR SHALL BE APPROVED BY D.W.S.D. PRIOR TO STARTING THE TAPPING WORK.
13. D.W.S.D.'S WATER MAIN SHALL BE TAPPED ONLY DURING A PERIOD OF LOW WATER DEMANDS. THE CONTRACTOR SHALL SCHEDULE WORK IN COORDINATION WITH D.W.S.D. FIELD STAFF TO ENABLE D.W.S.D. TO ENSURE THAT THE WATER SUPPLIES TO COMMUNITIES WILL NOT BE AFFECTED.

C						<b>METER VAULT REPLACEMENT NOTES</b>	CITY OF DETROIT
B							WATER AND SEWERAGE DEPARTMENT
A							ENGINEERING DIVISION
	DESCRIPTION	DRW	CKD	APP	DATE		SHEET 1 OF 1
REVISIONS							13400-12
DRAWN BY: S.D.A.							DWG No.
CHECKED BY: S.D.A.							
APPROVED:							SCALE: NONE