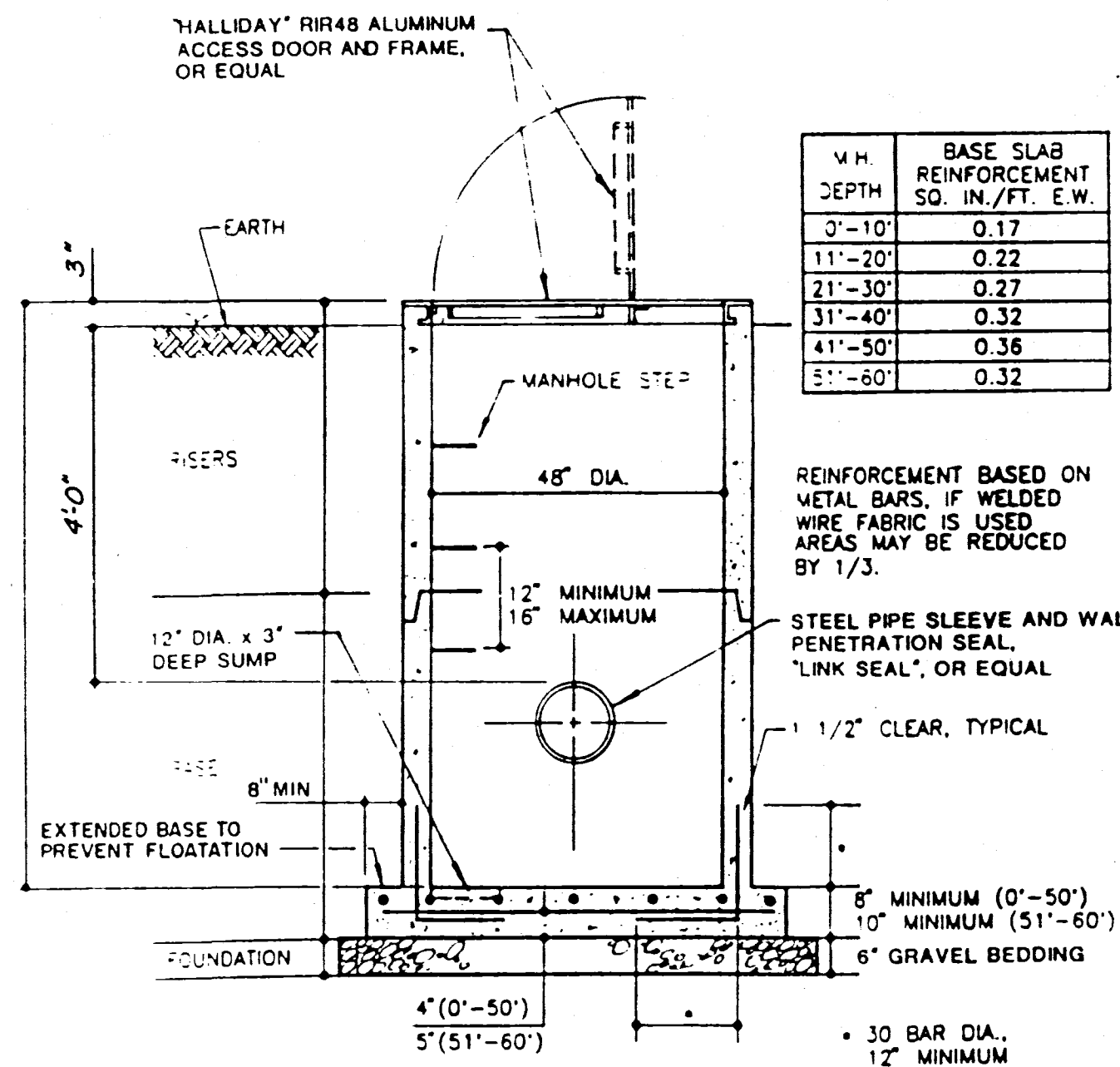


CONCRETE ANCHOR COLLAR DETAIL
NO SCALE



TYPE "A"
PRECAST CONCRETE MANHOLE
NOT TO SCALE

NOTES

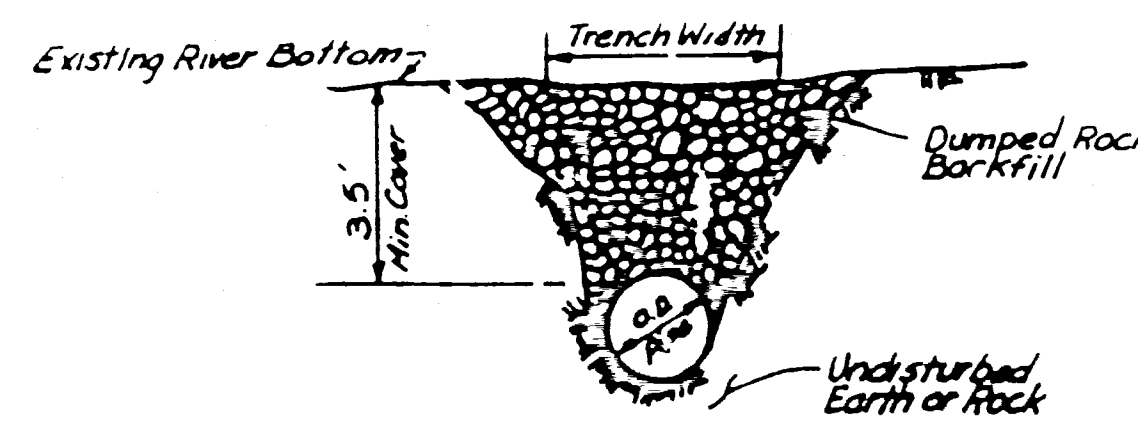
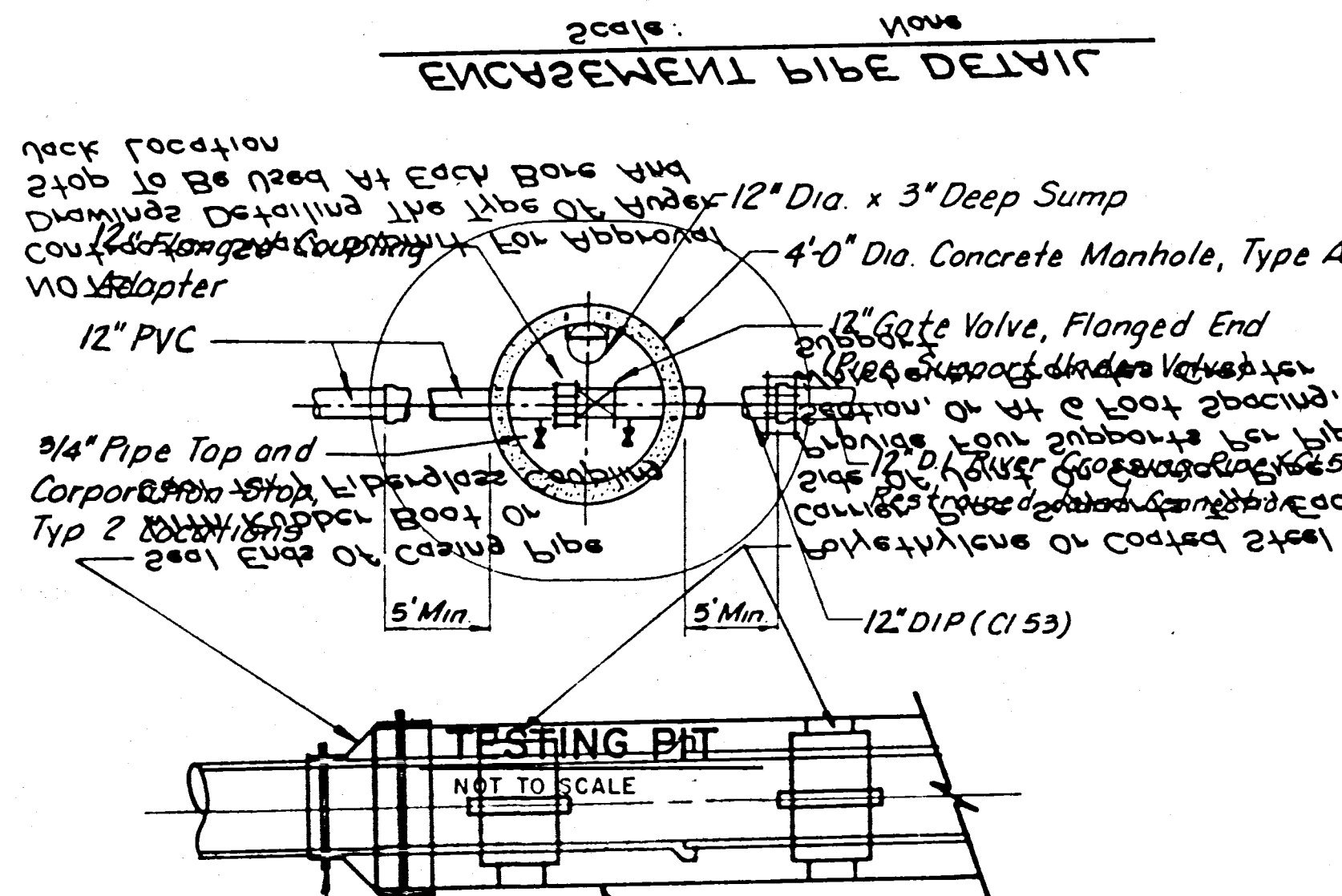
- MANHOLE SECTIONS SHALL BE PRECAST AND CONFORM TO THE REQUIREMENTS OF ASTM C478, EXCEPT THAT THE MINIMUM WALL THICKNESS SHALL BE EQUAL TO THE REQUIREMENTS OF ASTM C76, WALL B. JOINTS OF THE MANHOLE SECTIONS SHALL BE FORMED ENTIRELY OF CONCRETE EMPLOYING A ROUND RUBBER GASKET CONFORMING TO ASTM C443 MAKING A WATERTIGHT JOINT. LIFT HOLES, IF PROVIDED, SHALL BE WATERTIGHT.
- MANHOLE STEPS SHALL BE CAST IRON OR REINFORCED POLYPROPYLENE PLASTIC* EQUAL TO NEENAH FOUNDRY COMPANY, NEENAH, WISCONSIN, R-1982-F (CAST IRON); OR M. A. INDUSTRIES, INC., PEACHTREE CITY, GEORGIA, PS-I-PF (POLYPROPYLENE PLASTIC).
- REINFORCED POLYPROPYLENE PLASTIC STEPS SHALL BE MANUFACTURED WITH POLYPROPYLENE CONFORMING TO THE LATEST REQUIREMENTS OF ASTM D2146, TYPE II, GRADE 4910B, AND THE REINFORCING STEEL TO THE LATEST REQUIREMENTS OF ASTM A-615, GRADE 60.

GENERAL NOTES

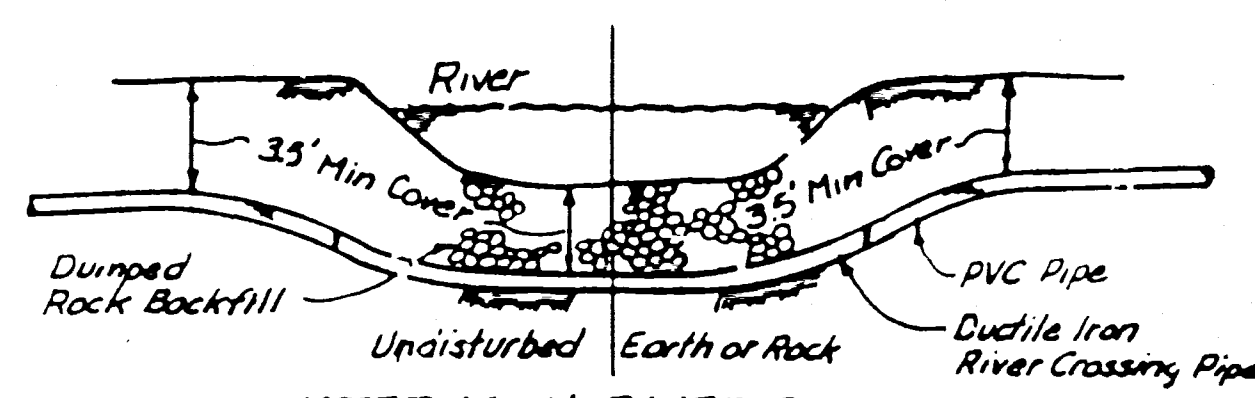
- MAPPING. MAPPING FOR THIS PROJECT WAS DEVELOPED FROM AERIAL PHOTOGRAPHS TAKEN BY GEOME PHOTOGRAMMETRIC SERVICES, REYNOLDSBURG, OHIO. THE PLAN SHEETS WERE PRODUCED BY ENLARGING AERIAL PHOTOGRAPHS TO A SCALE OF APPROXIMATELY 1"=50'; THEREFORE, SOME INHERENT INACCURACIES IN SCALE DO EXIST.
- UTILITIES AND STRUCTURES SHOWN ON THE PLANS. THE LOCATION OF UTILITIES AND STRUCTURES, BOTH SURFACE AND SUBSURFACE, ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF DESIGN AND ARE NOT NECESSARILY COMPLETE OR CORRECT. THE EXACT LOCATION AND PROTECTION OF UTILITIES AND STRUCTURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. DURING CONSTRUCTION, THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTION FROM DAMAGE TO ALL EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME TO THE SATISFACTION OF THE ENGINEER AND FOR ANY RESULTING CONTINGENT DAMAGE AT NO COST TO THE OWNER.
- NOTIFICATION - UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITIES PROTECTION SERVICE (800-362-2764) AND THE OIL AND GAS PRODUCERS PROTECTION SERVICE (614-587-0486) AT LEAST FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK.
THE CONTRACTOR SHALL NOTIFY THE PROPER OFFICIALS OF AFFECTED UTILITY COMPANIES AT LEAST FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK THAT MAY AFFECT THEIR UNDERGROUND FACILITIES.
A. AMERITECH (OHIO BELL) (614) 454-3515
B. NATIONAL GAS & OIL (614) 344-4087
C. COLUMBIA GAS TRANSMISSION (614) 432-2130
D. MUSKINGUM COUNTY SANITARY ENGINEERING DEPARTMENT (614) 452-4940
E. TCI CABLEVISION OF OHIO (614) 452-5414
F. COLUMBIA GAS OF OHIO (614) 452-6341
G. OHIO POWER CO. (614) 455-4684
- EXPOSE UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAINS, UTILITIES, OR STRUCTURES, SUFFICIENTLY IN ADVANCE OF LAYING THE PROPOSED PIPE TO VERIFY THE LOCATIONS, SIZE, TYPE OF MATERIAL, AND THE PROPOSED GRADE. LOCATIONS NOT MARKED MAY HAVE TO BE EXPOSED. COST FOR ALL LOCATIONS EXPOSED IS TO BE INCLUDED IN THE UNIT BID PRICE PER FOOT OF WATER MAIN. ALL POINTS WHERE THE PROPOSED WATER MAIN CONFLICTS WITH EXISTING UTILITIES, THE PROPOSED WATER MAIN SHALL BE LOWERED TO PROVIDE 15 INCH MINIMUM CLEARANCE BETWEEN LINES, EXCEPT WHEN A SANITARY SEWER IS ENCOUNTERED, THE PROPOSED WATER MAIN SHALL HAVE A MINIMUM CLEARANCE OF 18 INCHES.
- WATER MAIN STATIONING. BASELINE STATIONING HAS BEEN ESTABLISHED ALONG THE CENTERLINE OF THE WATER MAIN. ALL WATER MAIN STATIONING SHOWN IS REFERENCED TO THIS ESTABLISHED BASELINE. STATIONS INDICATED ON THE WATER MAIN REFER TO THE POINT ON THE WATER MAIN LOCATED NORMAL TO THE INDICATED BASELINE STATION. DISTANCES TO "RIGHT" OR "LEFT" OF BASELINE STATIONS REFER TO DISTANCES TAKEN RIGHT OR LEFT OF THAT STATION WHEN GOING IN THE DIRECTION OF INCREASING STATIONS.
- SUBSURFACE INVESTIGATIONS. IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATIONS OF SUBSURFACE CONDITIONS ALONG PROPOSED WATER MAIN ROUTES PRIOR TO SUBMITTING HIS PROPOSAL.
- NOTIFICATIONS-STATE HIGHWAYS AND TOWNSHIP/COUNTY ROADS. PRIOR TO THE START OF ANY WORK WITHIN STATE HIGHWAY OR TOWNSHIP/COUNTY RIGHTS-OF-WAY, THE CONTRACTOR SHALL GIVE THE GOVERNING AGENCY FIVE (5) DAYS NOTICE.
OHIO DEPARTMENT OF TRANSPORTATION (ODOT) - DISTRICT 5 (614) 323-4400
MS. MARY GARRISON
MUSKINGUM COUNTY ENGINEER (614) 454-0155
MR. LOREN CAMP, PE
- PROPOSED WATER MAINS. ALL WATER MAINS SHALL BE PROVIDED WITH A MINIMUM OF 4.0 FEET OF COVER EXCEPT AS NOTED ON THE PLANS.
THE MAXIMUM BREAK IN GRADE FOR ONE JOINT OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATION. THE CONTRACTOR SHALL DEFLECT AS MANY JOINTS AS NECESSARY TO LAY THE PIPE AS CLOSE AS POSSIBLE TO THE EXISTING GRADE OR DEFLECT UNDER EXISTING UNDERGROUND UTILITIES OR DITCHES AND STILL MAINTAIN MINIMUM COVER OVER THE WATER MAIN PIPE.
THE MAXIMUM BREAK IN HORIZONTAL ALIGNMENT FOR ONE JOINT OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATION. THE CONTRACTOR SHALL DEFLECT AS MANY JOINTS AS NECESSARY TO LAY THE PIPE IN ACCORDANCE TO THE PROPOSED HORIZONTAL ALIGNMENT AS SHOWN ON THE PLANS.
MINOR CHANGES IN ALIGNMENT AND GRADE OF THE PROPOSED WATER MAIN NECESSARY TO AVOID CONFLICT WITH EXISTING UTILITIES AND/OR STRUCTURES SHALL BE MADE ONLY AT THE DIRECTION OF THE ENGINEER.
- FITTINGS. VERTICAL AND HORIZONTAL FITTINGS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE THESE FITTINGS WHERE NECESSARY. PAYMENT FOR FITTINGS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT OF PIPE.
- CONCRETE ENCASUREMENT. THE CONTRACTOR SHALL PROVIDE CONCRETE ENCASUREMENTS AS NOTED ON THE DRAWINGS AND SPECIFICATIONS AND AS REQUIRED BY THE ENGINEER.
- PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PRESERVE ALL CORNER STONES, IRON PINS, CONCRETE MONUMENTS, OR ANY OTHER TYPE OF LAND MONUMENT. HE SHALL HAVE ALL LAND MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THEN, IF ANY OF THE LAND MONUMENTS ARE DESTROYED OR DAMAGED, HE SHALL HAVE THEM REPLACED BY A SURVEYOR AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED. PAYMENT FOR THIS WORK IS TO BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT OF PIPE.
- PAVEMENT REPLACEMENT. ALL DRIVEWAYS, SIDEWALKS, AND ROADS DAMAGED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS. PAYMENT FOR PAVEMENT REPLACEMENT SHALL BE AS INDICATED IN THE PRICES TO INCLUDE. PAVEMENT DAMAGED OUTSIDE OF THE LIMITS INDICATED IN THE PRICES TO INCLUDE SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- SPECIAL AND GRANULAR BACKFILL. STATION LOCATIONS OF SPECIAL AND GRANULAR BACKFILL AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- TRAFFIC MAINTENANCE. TEMPORARY ROUTES, TRAFFIC DIVERSION, AND STREETS OR ROADS TO BE CLOSED TO THROUGH TRAFFIC SHALL BE SUBMITTED BY THE CONTRACTOR IN SCHEDULED FORM FOR REVIEW AND APPROVAL OF THE AUTHORITY HAVING JURISDICTION OVER THE ROUTES INVOLVED. CONTRACTOR SHALL SIGN ALL WORK SITES WITHIN PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PROVIDE PLATES C-11, C-12, AND C-18 AS REQUIRED.
- DRIVEWAYS. PRIOR TO DISTURBING EXISTING DRIVEWAYS, THE CONTRACTOR MUST NOTIFY THE OWNER OF THE DRIVEWAY OF HIS INTENT TO BEGIN WORK. IN NO CASE SHALL A DRIVEWAY BE CLOSED FOR MORE THAN 24 HOURS UNLESS WRITTEN PERMISSION OF THE OWNER OF THE DRIVEWAY TO DO SO HAS BEEN OBTAINED BY THE CONTRACTOR.
- HIGHWAY CROSSINGS. HIGHWAY CROSSINGS ARE DESIGNATED ON THE PLANS. HIGHWAY CROSSING SIZES REFER TO THE SIZE OF THE CARRIER PIPE. ALL CROSSINGS SHALL BE MADE USING TUNNEL OPTION NUMBER 1 UNLESS OTHERWISE NOTED. THE MINIMUM WALL THICKNESS FOR THE WELDED STEEL ENCASUREMENT PIPE SHALL BE 0.25 INCHES.
- PROTECTION OF TREES. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGES TO TREES OR THEIR ROOT SYSTEM. MACHINE EXCAVATION SHALL NOT BE USED WHEN, IN THE OPINION OF THE ENGINEER, IT WOULD ENDANGER TREE ROOTS. IN GENERAL, WHERE THE LINE OF TRENCH FALLS WITHIN THE LIMITS OF THE LIMB SPREAD, THE LEAVING OF HEADERS ACROSS THE TRENCH TO PROTECT ROOTS WILL BE REQUIRED. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS; THE STORAGE OF MATERIALS; AND THE DEPOSITION OF EXCAVATION SHALL BE CONDUCTED IN A MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES, OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED BY THE ENGINEER FOR THEIR REMOVAL.
- BORING PITS. BACKFILL FOR BORING PIT EXCAVATIONS SHALL BE SPECIAL BACKFILL. PAYMENT FOR SPECIAL BACKFILL AND SEEDING FOR BORING PIT EXCAVATIONS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR HIGHWAY CROSSINGS.
- SHOULDER, BERMS, AND UNDERDRAINS. THE CONTRACTOR SHALL REPAIR ALL SHOULDER, BERMS, OR UNDERDRAINS THAT ARE DAMAGED BY THE CONTRACTOR'S CONSTRUCTION OPERATION. REPAIRS SHALL BE MADE USING THE SAME TYPE OF MATERIAL AS WAS USED PRIOR TO BEING DISTURBED. ALL SHOULDER, BERMS, AND UNDERDRAINS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT OF PIPE.
- GRADING AND SEEDING. ALL DISTURBED GRASSED AREAS WILL BE GRADED AND SEED. PAYMENT FOR GRADING AND SEEDING SHALL BE AS INDICATED IN THE PRICES TO INCLUDE.
- DRAINAGE. THE LOCATION OF CULVERTS, INLETS, AND OTHER DRAINAGE ITEMS HAS BEEN DETERMINED FROM DATA AVAILABLE AT THE TIME OF DESIGN AND ARE NOT NECESSARILY COMPLETE. PROPER DRAINAGE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DRIVEWAY CULVERTS AND OTHER STORM DRAINAGE PIPES REMOVED DURING CONSTRUCTION MUST BE REPLACED AT THE SAME LOCATION, GRADE AND ELEVATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL WATER MAINS INSTALLED ADJACENT TO AND/OR CROSSING CULVERTS SHALL HAVE A MINIMUM CLEARANCE OF 24 INCHES IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS. THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTING FROM DAMAGE ALL EXISTING CULVERTS WHETHER SHOWN ON THE PLANS OR NOT. IF DAMAGE IS CAUSED TO ANY DRAINAGE FEATURES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME TO THE SATISFACTION OF THE ENGINEER, AND FOR ANY RESULTING CONTINGENT DAMAGE AT NO COST TO THE OWNER.
- ALTERNATE PIPE MATERIALS. WHERE THE PLANS INDICATE POLYVINYL CHLORIDE (PVC) PIPE IS TO BE INSTALLED, ALL PIPE SHALL CONFORM TO AWWA C900 OF THE PRESSURES CLASSES SHOWN WITH THE FOLLOWING EXCEPTIONS:
A. THE CONTRACTOR MAY SUBSTITUTE DUCTILE IRON PIPE CONFORMING TO AWWA C151, CLASS 51 AND THE SPECIFICATIONS FOR ALL AWWA C900 PIPE INDICATED ON THE PLANS.
B. ALL PVC PIPE SHALL MEET NATIONAL SANITATION FOUNDATION (NSF) SPECIFICATIONS FOR POTABLE WATER.
- AIR RELEASE ASSEMBLIES. ALL AIR RELEASE ASSEMBLIES SHALL BE MANUALLY OPERATED, UNLESS NOTED OTHERWISE.
- PROPERTY LINES AND RIGHTS-OF-WAY. ALL PROPERTY LINES AND RIGHT-OF-WAY LINES SHOWN ON THESE SHEETS WERE TAKEN FROM EXISTING TAX MAPS AND HIGHWAY MAPS PROVIDED BY THE MUSKINGUM COUNTY ENGINEER AND OHIO DEPARTMENT OF TRANSPORTATION. PROPERTY LINES AND RIGHT-OF-WAY LINES HAVE NOT BEEN FIELD SURVEYED AND MAY NOT BE COMPLETE OR CORRECT.
- POLE GUY WIRES. A MINIMUM DISTANCE OF FOUR FEET BETWEEN GUY WIRE ANCHOR (AT GROUND LEVEL) AND THE NEAREST EDGE OF WATER MAIN TRENCH SHALL BE MAINTAINED DURING WATER MAIN INSTALLATION.
- PRESSURE TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESSURE TESTING OF THE WATER MAINS IN ACCORDANCE WITH THE SPECIFICATIONS.
- DISINFECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISINFECTION OF THE WATER MAINS IN ACCORDANCE WITH AWWA C651 AND THE SPECIFICATIONS.
- SPOIL PLACEMENT. THE CONTRACTOR SHALL SELECT AREAS, TO BE APPROVED BY THE OWNER, IN WHICH EXCESS TRENCH SPOIL SHALL BE STOCKPILED. IN NO CASE SHALL ANY TRENCH SPOIL BE STOCKPILED AREAS IDENTIFIED AS WOODED WETLANDS. EXCESS TRENCH SPOIL SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- WOODED WETLANDS. AREAS THAT HAVE BEEN IDENTIFIED AS WOODED WETLANDS ARE SHOWN ON THE PLANS. IN THESE AREAS, THE WATER MAIN IS TO BE INSTALLED WITHIN THE PREVIOUSLY DISTURBED AREA OF THE ABANDONED RAILROAD. ANY DEVIATIONS TO THE WATER MAIN ROUTING THROUGH THIS AREA MUST BE APPROVED BY THE OWNER. IN WOODED WETLANDS, ALL EXCESS OVERBURDEN AND SPOIL MATERIALS SHALL BE REMOVED AND STOCKPILED IN AN APPROVED AREA. NO EXCESS MATERIAL SHALL BE PLACED IN THE ADJACENT WOODED AREAS.

LEGEND FOR PLAN SHEETS

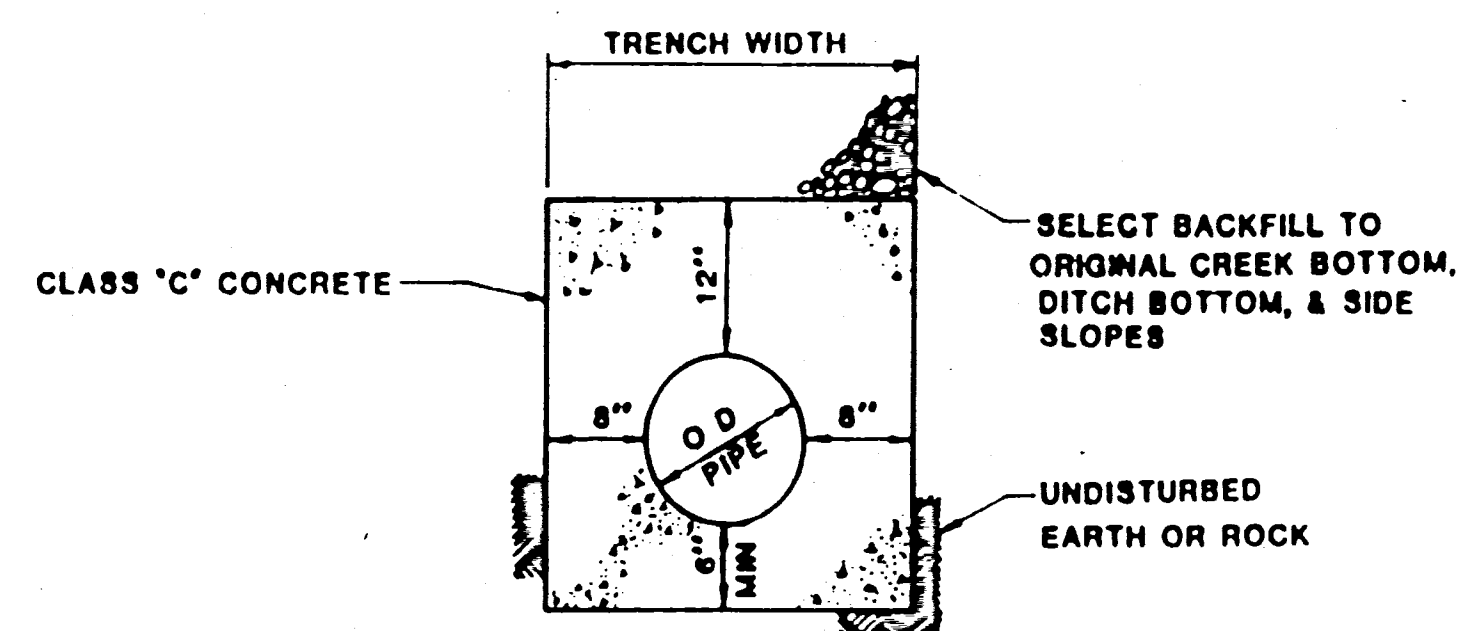
- Proposed Water Main
- W — Existing Water Main
- G — Existing Gas Main
- S — Existing Sanitary Sewer
- FM — Existing Force Main
- ST — Existing Storm Sewer
- R — Property Line
- R/W — Right-Of-Way
- — Easement Line
- T — Existing Underground Telephone Line
- FO — Existing Underground Fiber Optic Cable
- UE — Existing Underground Electric Line



RIVER CROSSING PIPE DETAIL
NO SCALE



WATER MAIN RIVER CROSSING
NO SCALE



CONCRETE ENCASUREMENT DETAIL
NO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
|-----|-----------|------|----|------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
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MAYSVILLE REGIONAL WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
CONTRACT 94-2

| | |
|--------------|-----------|
| JOB NO. | 15669 |
| DESIGNED BY: | LES |
| DRAWN BY: | LP |
| CHECKED BY: | LES |
| APPROVED BY: | LES |
| DATE: | OCT, 1994 |

GENERAL NOTES, LEGEND
AND MISCELLANEOUS DETAILS

| | |
|-----------|----------|
| SCALE: | AS NOTED |
| SHEET NO. | 2 |
| OF | 9 |