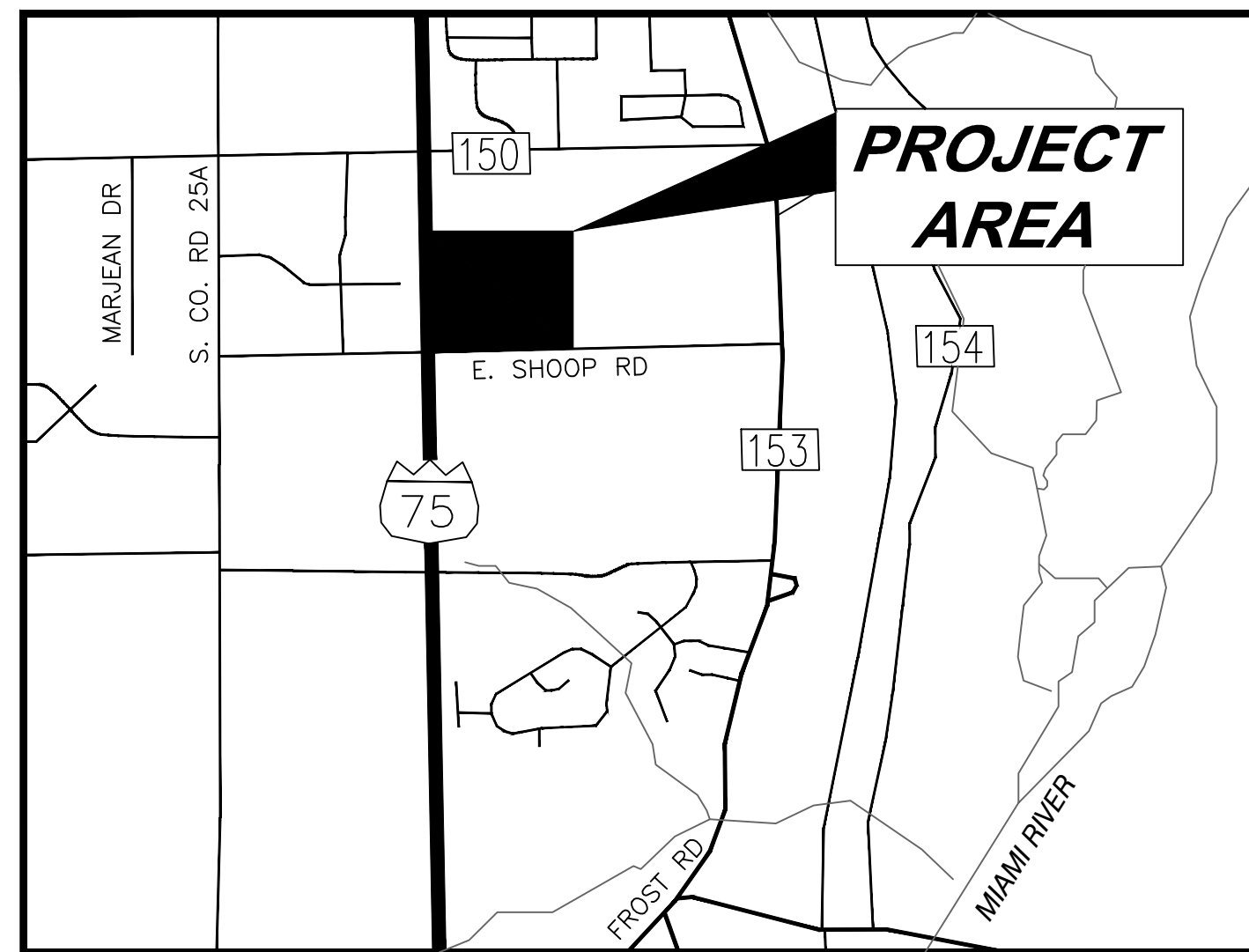


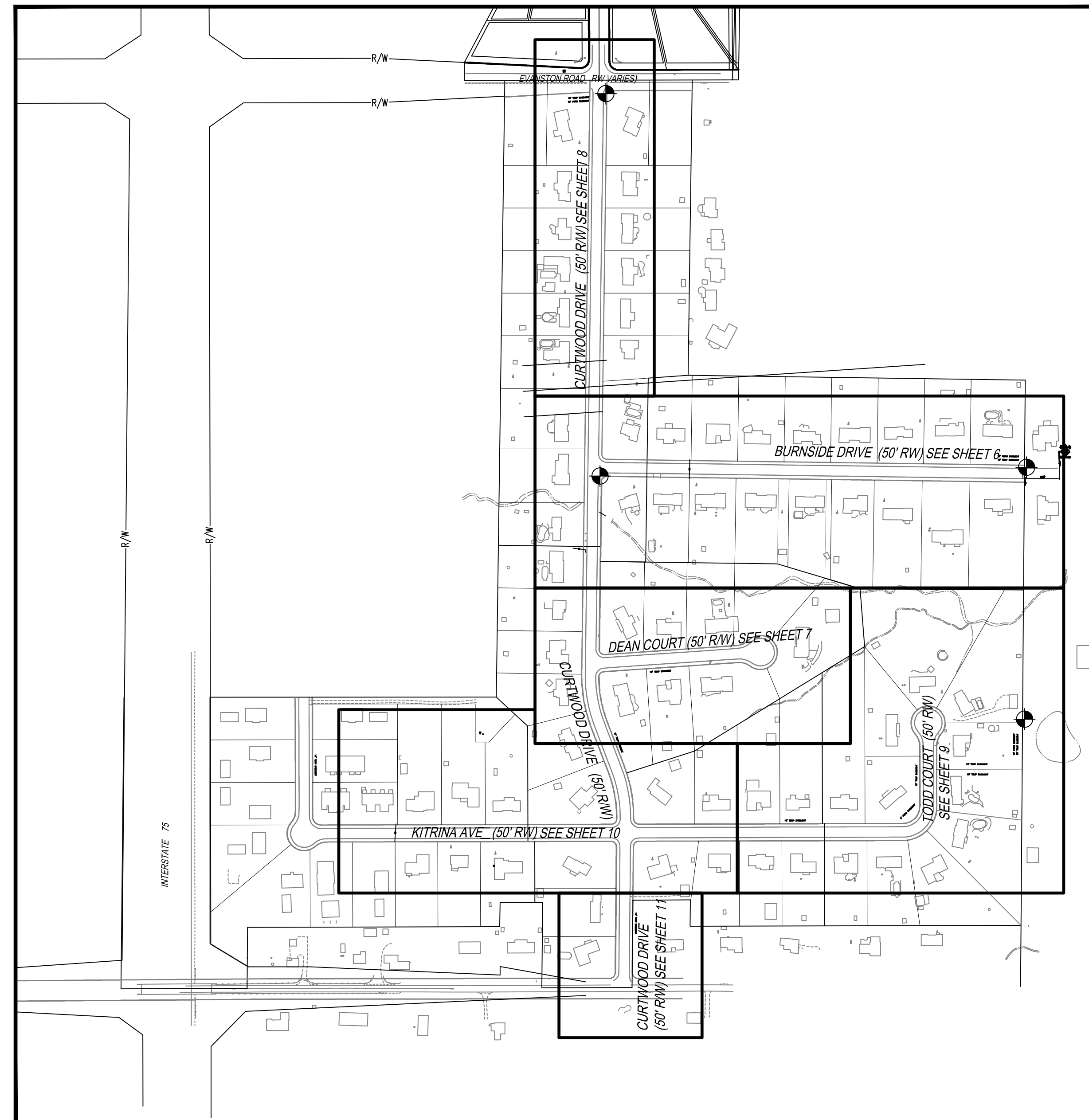
MONROE TOWNSHIP, MIAMI COUNTY, OHIO MONROE TOWNSHIP WATER & SEWER DISTRICT COUNTRY ESTATES EAST SANITARY SEWER IMPROVEMENTS



LOCATION MAP
NOT TO SCALE 1

INDEX OF SHEETS:

- 1.....TITLE SHEET
 - 2.....GENERAL NOTES
 - 3.....GENERAL NOTES & SUMMARY OF ESTIMATED QUANTITIES
 - 4.....MISC. DETAILS
 - 5.....MISC. DETAILS
- PLAN & PROFILE
- 6.....MH EX 1 TO MH N5
 - 7.....MH N5 TO MH N8
 - 8.....MH N4 TO MH N11
 - 9.....MH EX2 TO MH S4 & MH S2 TO MH S8
 - 10.....MH S4 TO MH EX3
 - 11.....MH S6 TO MH S9
 - 12.....LIFT STATION / FORCE MAIN ABANDONMENT PLAN



INDEX MAP
1" = 250' 2

BENCH MARKS

- BM 1
ELEVATION 877.56
EAST BOLT OF TOP FLANGE OF FIRE HYDRANT LOCATED APPROXIMATELY 230 FEET EAST OF THE CUL DE SAC OF TODD COURT.
- BM 2
ELEVATION 874.80
WEST BOLT OF TOP FLANGE OF FIRE HYDRANT ON THE NORTH SIDE OF BURNSIDE DRIVE APPROXIMATELY 1,200 FEET EAST OF CURTWOOD DRIVE
- BM 3
ELEVATION 884.73
MAGNOLIA IN TOP OF CURB SOUTHEAST CORNER OF THE INTERSECTION OF CURTWOOD DRIVE AND BURNSIDE DRIVE
- BM 4
ELEVATION 894.17
CHISELED X IN THE NORTH BOLT OF THE TOP FLANGE OF THE FIRE HYDRANT AT THE SOUTHEAST CORNER OF THE INTERSECTION OF CURTWOOD DRIVE AND EVANSTON ROAD

OWNER

MONROE TOWNSHIP WATER & SEWER DISTRICT
4 E. MAIN STREET
TIPP CITY, OH 45371

MONROE TOWNSHIP WATER & SEWER DISTRICT BOARD

- WILLIAM RODENBERG PRESIDENT
- DALE VOISARD VICE PRESIDENT
- DAVID DEXTER SECRETARY
- RICHARD MAINS TREASURER
- JAMES FLESHER BOARD MEMBER

MONROE TOWNSHIP REPRESENTATIVE

RONALD D. THUMA TRUSTEE

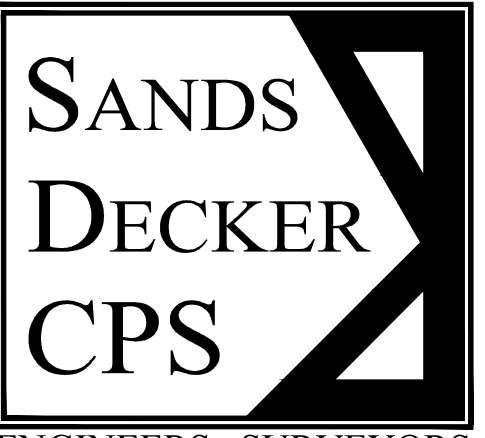
WATER & SEWER DISTRICT OFFICIALS APPROVALS

THE SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND LOCATION OF THE PROPOSED IMPROVEMENT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS.

William Rodenberg

ACCEPTING AUTHORITY SIGNATURES EPA

THE SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND LOCATION OF THE PROPOSED IMPROVEMENT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS.



ENGINEERS • SURVEYORS

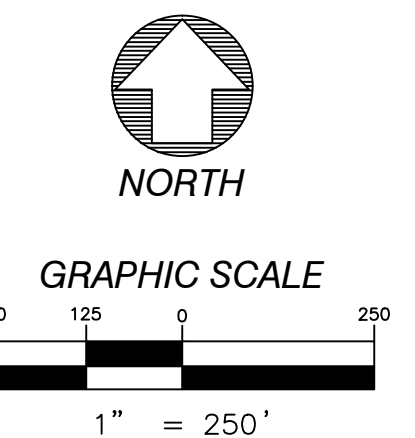
128 EAST MAIN ST
PO BOX 188
LOGAN, OH 43138
740-385-2140

1495 OLD HENDERSON RD
COLUMBUS, OH 43220
614-459-6992

507 MAIN STREET, SUITE 203
ZANESVILLE, OH 43701
740-450-1640

FAX: 614-459-6987
TOLL FREE: 866-277-0600

J. Scott Sands
05-03-16
Registered Engineer Date



**COUNTRY ESTATES EAST
SANITARY SEWER IMPROVEMENTS**

- 02-09-15 PRELIMINARY
- 08-07-15 BACKCHECK
- 02-26-16 BACKCHECK 2
- 03-30-16 BACKCHECK 3
- 04-29-16 BACKCHECK 4
- 05-03-16 FINAL

TITLE SHEET

1

SDCPS PROJECT NO. 2772

GENERAL NOTES: THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION & MATERIAL SPECIFICATIONS (ODOTCMS) TOGETHER WITH THE REQUIREMENTS OF MONROES TOWNSHIP WATER & SEWER DISTRICT (MTWSD) & TIPP CITY INCLUDING ALL SUPPLEMENTS THERETO, IN FORCE ON THE DATE OF THE CONTRACT, SHALL GOVERN ALL MATERIALS & WORKMANSHIP INVOLVED IN THESE IMPROVEMENTS. WHEN THERE IS OR APPEARS TO BE A CONFLICT BETWEEN THE REFERENCED SPECIFICATIONS &/OR THESE CONSTRUCTION DRAWINGS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN. UNLESS OTHERWISE NOTED, ALL ITEMS NUMBERS REFER TO ODOTCMS.

WORK LIMITS: THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE UNDER DEVELOPMENT, THE EXISTING RIGHT-OF-WAY, CONSTRUCTION, & PERMANENT EASEMENTS. CONTRACTOR SHALL NOT TRESPASS UPON OTHER PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER(S).

PERMITS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING & COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, COUNTY & LOCAL PERMITS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.

MISCELLANEOUS WORK: ALL ITEMS OF WORK CALLED FOR IN THE CONSTRUCTION DRAWINGS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED TO COMPLETE THE PROJECT AS DESIGNED & INTENDED. THE COST FOR THESE ITEMS SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS RELATED OR ASSOCIATED ITEMS.

SURPLUS EXCAVATION: THE CONTRACTOR SHALL DISPOSE OF ALL SURPLUS EXCAVATION AT HIS OWN EXPENSE, UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS.

CONTINGENCY QUANTITIES: THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS & QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

DRAINAGE TILE: ALL FIELD, FARM, ROADWAY & ANY OTHER DRAIN TILES ENCOUNTERED WITHIN THE LIMITS OF THE TRENCH OR EXCAVATION DURING CONSTRUCTION SHALL BE PROVIDED WITH AN UNOBSTRUCTED OUTLET. AN UNOBSTRUCTED OUTLET SHALL INCLUDE CLEANING, REPAIR, &/OR REPLACEMENT OF THE ENCOUNTERED PIPE(S). DAMAGE TO DRAINAGE TILES OUTSIDE THE CONSTRUCTION AREA AS A RESULT OF CONSTRUCTION TRAFFIC, EQUIPMENT OUTRIGGERS OR SUPPORTS, OR OTHER PROJECT RELATED ACTIVITY SHALL BE REPAIRED OR REPLACED IMMEDIATELY UPON DISCOVERY. EXISTING TILES THAT ARE LOCATED BELOW PROPOSED FINISHED ROADSIDE SWALE ELEVATIONS & WHICH CROSS THE TRENCH SHALL BE REPLACED WITHIN THE TRENCH LIMITS BY ITEM 603 CONDUIT. THE OWNER OR HIS REPRESENTATIVE SHALL DETERMINE THE LOCATION, TYPE, SIZE & GRADE OF THE REQUIRED REPLACEMENTS DURING CONSTRUCTION & PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS. IF TILE IS ENCOUNTERED THAT IS LARGER THAN THAT INDICATED HEREIN, THE CONTRACTOR SHALL NOT DAMAGE OR REMOVE SAID TILE & NO COMPENSATION WILL BE GIVEN UNLESS A SPECIFIC UNIT PRICE HAS BEEN ESTABLISHED IN THE BID SCHEDULE OR BY CONTRACT CHANGE ORDER. ALL NECESSARY BENDS, WYES, FITTINGS & APPURTENANCES, INCLUDING GRANULAR BACKFILL, SHALL BE INCLUDED FOR THIS WORK.

EXISTING UTILITIES: THE INFORMATION SHOWN CONCERNING EXISTING UTILITIES IS APPROXIMATE ONLY. IT IS NOT REPRESENTED, WARRANTED, OR GUARANTEED TO BE COMPLETE & IS ONLY AS ACCURATE AS THE INFORMATION PROVIDED BY THE UTILITY OWNERS. THE ENGINEER DOES NOT INDEPENDENTLY VERIFY OR FIELD LOCATE UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PHYSICALLY LOCATE & VERIFY, IN THE FIELD, ALL HORIZONTAL & VERTICAL UTILITY LOCATIONS & ELEVATIONS, WHETHER SHOWN IN THE PLANS OR NOT, PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES OR OPERATIONS. THE CONTRACTOR SHALL SUPPORT & PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION & SHALL RESTORE ALL EXISTING UTILITIES & THEIR ASSOCIATED ITEMS UPON COMPLETION OF THE WORK IN THE VICINITY OF THE UTILITY. THE CONTRACTOR SHALL NOTIFY THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE & ALL UTILITY OWNERS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE BUT MAY HAVE FACILITIES IN THE PROJECT AREA, IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE.

NOTICE SHALL BE GIVEN BY TELEPHONE OR IN PERSON, AT LEAST 2 WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS & LEGAL HOLIDAYS, PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES OR OPERATIONS. FURTHER, THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL UTILITIES HAVING FACILITIES IN THE PROJECT AREA & SHALL KEEP THEM APPRISED OF HIS SCHEDULE & REQUIREMENTS UNTIL ALL WORK IS COMPLETE. THE CONTRACTOR SHALL PROVIDE THE OWNER OR THE OWNER'S AGENT WITH EVIDENCE OF HAVING NOTIFIED THE UTILITIES & PROVIDING THEM WITH HIS WORK SCHEDULE PRIOR TO BEGINNING ANY WORK.

THE CONTRACTOR MAY REVIEW THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES AT THE OFFICE OF THE ENGINEER PRIOR TO SUBMITTING HIS BID. CONTRACTORS REQUIRING MORE ACCURATE OR COMPLETE INFORMATION IN PREPARING THEIR BIDS SHOULD FIELD LOCATE OR OTHERWISE VERIFY THE HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO SUBMITTING THEIR BID.

NOTICE SHALL BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 FOR THE MEMBER UTILITIES. THE FOLLOWING UTILITIES MAY HAVE FACILITIES IN THE PROJECT AREA:

ELECTRIC, WATER & SANITARY:	CITY OF TIPP CITY	CABLE:	TIME WARNER
	MUNICIPAL BLDG.		3691 TURNER RD.
	260 S. GARBER ST.		DAYTON, OH 45415
	TIPP CITY, OHIO 45371		937-440-6656
	937-667-6305		CONTACT: CHRIS GRAVES
GAS:	VECTREN	ELECTRIC: DAYTON POWER AND LIGHT CO	
	6500 CLOY RD.		1900 DRYDEN ROAD
	CENTERVILLE OHIO, 45459		DAYTON, OHIO 45439
	937-312-2533		JOHN KENTON
	CONTACT: DON SPECHT		937-331-4132
		DP&L TRANSMISSION	
	DAYTON, OHIO 45439		DAYTON, OHIO 45439
	GREG TOKAR		937-331-4647

CONFLICTS: IN ALL CONFLICTS IN GRADE BETWEEN WATER LINES & GRAVITY SEWERS &/OR SEWER SERVICES, THE WATER LINES SHALL BE LOWERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUCH WORK WITH THE WATER LINE OWNER. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WATER LINE OWNER & AT THE EXPENSE OF THE CONTRACTOR. A MINIMUM OF 18" VERTICAL & 10' HORIZONTAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE WATER LINE & ANY SANITARY SEWER. IF LESS THAN 18" VERTICAL CLEARANCE WILL OCCUR BETWEEN THE WATER LINE & THE SANITARY SEWER &/OR SEWER SERVICE, THE CONTRACTOR MAY CONSTRUCT THE SEWER LINE OR SERVICE BY MAINTAINING THE REQUIRED SEWER SLOPE & USING PIPE MATERIAL MEETING THE SPECIFICATIONS FOR WATER LINE FOR A DISTANCE OF MANHOLE TO MANHOLE.

BACKFILL: ALL TRENCHES & EXCAVATIONS SHALL BE BACKFILLED AS SPECIFIED HEREIN AS SOON AS THE UTILITY INSTALLATION IS COMPLETE & THE PARTICULAR TYPE OF CONSTRUCTION & CIRCUMSTANCES WILL PERMIT.

ROADS & PAVEMENT: TEMPORARY PAVEMENT REPLACEMENT SHALL BE PROVIDED ON ALL PAVEMENT DAMAGED OR REMOVED BY THE CONTRACTOR & SHALL BE INSTALLED AS SOON AS THE TRENCH HAS BEEN BACKFILLED. THE OWNER OR THE OWNER'S REPRESENTATIVE MAY REQUIRE THAT ALL MATERIALS & EQUIPMENT INCIDENTAL TO PROVIDING TEMPORARY PAVEMENT BE STORED ON THE JOBSITE PRIOR TO REMOVING THE EXISTING PAVEMENT. TEMPORARY PAVEMENT SHALL CONSIST OF 2" COMPACTED BITUMINOUS MATERIAL, ITEM 405, PLACED UPON 6" COMPACTED AGGREGATE BASE, ITEM 304, UNLESS OTHERWISE DIRECTED OR APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY PAVEMENT UNTIL PERMANENT PAVEMENT IS INSTALLED.

PERMANENT PAVEMENT SHALL BE INSTALLED AFTER FIRST REMOVING THE TEMPORARY PAVEMENT DOWN TO CLEAN GRANULAR BASE MATERIAL & REMOVING THE EXISTING PAVEMENT FOR A DISTANCE OF A LEAST 12" BEYOND THE TRENCH OR EXCAVATION LIMITS. THE PAVEMENT TO BE REMOVED SHALL BE NEATLY SAWCUT NOT MORE THAN 72 HOURS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MATERIALS. THE PERMANENT PAVEMENT REPLACEMENT MATERIALS & WORKMANSHIP SHALL BE AT LEAST EQUIVALENT TO THE EXISTING PAVEMENT AS DETERMINED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. AFTER SAWING OF EXISTING PAVEMENT EDGES & REMOVAL OF TEMPORARY PAVEMENT, & PRIOR TO INSTALLING THE PERMANENT PAVEMENT, TACK COAT, ITEM 407 SHALL BE APPLIED AT A RATE OF 0.10 GAL/SY TO THE EXPOSED EXISTING PAVEMENT EDGES. PRIME COAT, ITEM 408, SHALL BE APPLIED AT A RATE OF 0.35 GAL/SY TO THE BASE MATERIAL.

TRAFFIC CONTROL: THE CONTRACTOR SHALL SUBMIT A PLAN & SCHEDULE FOR DETOURING TRAFFIC 14 DAYS PRIOR TO THE CLOSING OF ANY ROAD. ANY TEMPORARY CLOSING OF A ROAD DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PROVIDE ACCESS TO PROPERTIES BY EMERGENCY VEHICLES & THE INDIVIDUAL PROPERTY OWNERS. TIPP CITY INCORPORATED PORTION OF BURNSIDE DRIVE SHALL NOT BE USED FOR CONSTRUCTION TRAFFIC.

WHEN IT IS ANTICIPATED THAT WORK WILL CLOSE A ROAD, THE CONTRACTOR SHALL INFORM THE AGENCY HAVING JURISDICTION OVER THE RIGHT-OF-WAY, THE LOCAL LAW ENFORCEMENT AGENCIES, THE LOCAL FIRE DEPARTMENT, THE COUNTY ENGINEER & THE OWNER'S REPRESENTATIVE AS TO THE EXTENT, NATURE, TIME & DURATION OF THE CLOSING. THE CONTRACTOR SHALL POST PRE-CLOSING NOTIFICATION SIGNS ALONG THE ROAD(S) TO BE CLOSED A MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE STATING THE EXTENT, NATURE, TIME, & DURATION OF THE CLOSING. ADJACENT INDIVIDUAL PROPERTY OWNERS SHALL RECEIVE WRITTEN NOTIFICATION, DELIVERED TO THE PROPERTIES BEING DIRECTLY AFFECTED. LIGHTS, SIGNS, FLAGMEN & BARRICADES WILL BE EMPLOYED PURSUANT TO ITEM 614 TO SAFEGUARD THE TRAVELING PUBLIC AT ALL TIMES. ALL TRENCHES MUST BE BACKFILL OR SECURELY PLATED DURING NON-WORKING HOURS. NO ROAD WILL BE CLOSED UNTIL THE SCHEDULE IS APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE & THE AGENCY HAVING JURISDICTION OVER THE RIGHT-OF-WAY. NO EXISTING TRAFFIC FLOW SHALL BE ALTERED UNTIL THE CONTRACTOR SUBMITS, IN WRITING, A REQUEST FOR APPROVAL OF THE ALTERATION OF TRAFFIC. THIS REQUEST SHALL BE DIRECTED TO THE OWNER & THE AGENCY HAVING JURISDICTION OVER THE RIGHT-OF-WAY.

SAFETY OF CONSTRUCTION: THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS & MATERIAL MEN ARE BOUND BY THE PROVISIONS OF THE FEDERAL OCCUPATIONAL SAFETY & HEALTH ACT (OSHA) OF 1970 & ALL OTHER APPLICABLE FEDERAL, STATE & LOCAL CODES, ORDINANCES & REGULATIONS RELATIVE TO THE WORK & TYPE OF ACTIVITIES. CONSTRUCTION METHODS FOR COMPLETING THE WORK DESCRIBED IN THESE CONSTRUCTION DRAWINGS SHALL BE CONSISTENT WITH THE MOST CURRENT OSHA AMENDED CONSTRUCTION STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION & APPLICABLE TO THE TYPE OF WORK BEING PERFORMED.

EXCAVATIONS SHALL BE BACKFILLED AS CONDITIONS ALLOW EACH DAY PRIOR TO LEAVING THE SITE. IN THE EVENT AN EXCAVATION MUST BE LEFT OPEN, IT SHOULD BE PLATED AS CONDITIONS ALLOW. IN THE EVENT IT CANNOT BE PLATED OR BACKFILLED, IT MUST BE BARRICADED, SECURED & PROPERLY IDENTIFIED TO PREVENT ACCESS BY THE GENERAL PUBLIC. BARRICADES MUST COMPLY WITH OSHA & ODOT REGULATIONS GOVERNING THE TYPE OF WORK & SITE CONDITIONS.

DUST CONTROL: THE CONTRACTOR SHALL RESTRICT EMISSION OF ALL FUGITIVE DUST & PARTICULATE, AIRBORNE OR OTHERWISE, WHICH ARISE FROM HIS OPERATIONS & ACTIVITIES RELATIVE TO THIS PROJECT. DUST CONTROL MEASURES SHALL BE IMPLEMENTED & MAINTAINED PURSUANT TO THE APPLICABLE REQUIREMENTS OF ITEM 616 & THE OHIO ADMINISTRATIVE CODE (OAC) SECTION 3745-17-08, IN EFFECT AT THE TIME THE WORK IS PERFORMED. SUCH MEASURES SHALL APPLY TO ACTIVITIES BOTH ON AS WELL AS OFF SITE.

SEDIMENT & EROSION CONTROL: ALL COST TO INSTALL, MAINTAIN, MANAGE & REMOVE SEDIMENTATION & SOIL EROSION CONTROL DEVICES SHALL BE INCLUDED IN THE PRICE BID FOR THE ASSOCIATED WORK. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE OF THE FLOWS UPSTREAM OF THE CONSTRUCTION SITE. ALL TRENCHES ARE TO BE BACKFILLED IMMEDIATELY AFTER TRENCHING & UTILITY INSTALLATION, & NO MORE THAN 25' OF TRENCH WILL REMAIN OPEN AT ANY TIME, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. AFTER THE TRENCH IS BACKFILLED, THE DISTURBED AREA WILL BE ROUGH GRADED TO THE EXISTING CONTOURS TO ALLOW FOR PROPER DRAINAGE. TRENCH OPENING, PIPE INSTALLATION & BACKFILLING WILL OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA.

SLOPES WITH A GRADE STEEPER THAN 2:1 (TWO FEET HORIZONTAL FOR EACH ONE FOOT OF VERTICAL RISE) REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, SODDING OR THE USE OF JUTE MATTING OR EXCELSIOR BLANKETS.

SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER STORM SEWER SYSTEMS. PROPERLY INSTALLED SILT BARRIERS (I.E. SILT FENCE) SHALL BE USED FOR SOIL EROSION/SEDIMENT CONTROL AS REQUIRED TO PREVENT SILT FROM LEAVING THE CONSTRUCTION SITE & SHALL BE MAINTAINED UNTIL PERMANENT VEGETATIVE COVER HAS BEEN SUCCESSFULLY ESTABLISHED. WHEN CONSTRUCTION OCCURS NEAR OR AFFECTS STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS SHALL BE USED & MAINTAINED TO PREVENT SILT FROM ENTERING THE STORM SEWERS. SUCH EROSION CONTROL MEASURES SHALL NOT IMPEDE THE NORMAL FLOW OF TRAFFIC.

REMOVE ONLY THOSE TREES, SHRUBS & GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION, PROTECTING THE REST TO PRESERVE THEIR AESTHETIC & EROSION CONTROL VALUES. USE SILT FENCES, TEMPORARY SEEDING & OTHER MEASUREMENTS AS NECESSARY TO CONTROL SOIL EROSION PURSUANT TO THE REQUIREMENTS OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) STORM WATER REGULATIONS. THESE MEASURES ARE REQUIRED IMMEDIATELY FOLLOWING THE DISTURBANCE OF SURFACE CONDITIONS IN ORDER TO MINIMIZE THE EFFECT OF DRAINAGE & STORM WATER RUNOFF & DRAINAGE COURSE SILTATION ON STORM SEWERS & DRAINAGE STRUCTURES. THESE PROTECTIVE MEASURES SHALL BE MAINTAINED FOR THE DURATION OF THE WORK & UNTIL GRASS & GROUND COVER GROWTH HAVE RETURNED TO PRE-CONSTRUCTION CONDITIONS OR BETTER.

SHOULD DEWATERING PROCEDURES BE REQUIRED, THE CONTRACTOR SHALL FURNISH & OPERATE SUITABLE EQUIPMENT WITH ADEQUATE CAPACITY TO DEWATER THE TRENCH OR EXCAVATION. ALL DEWATERING FLOWS ARE TO BE SETTLED IN SILTATION BASINS OR DIRECTED THROUGH FILTERS BEFORE DISCHARGE TO STABILIZED SITES SUCH AS STREAMS OR STORM SEWERS, NOT ONTO EXPOSED SOILS, STREAM BANKS OR ANY OTHER SITES WHERE FLOWS COULD CAUSE EROSION. NO CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIAL, RAW SEWAGE, TREES, BRUSH OR DEBRIS FROM DEMOLITION OR EXCAVATION ACTIVITIES WILL BE DISCHARGED OR DISPOSED OF ONTO OR ALONGSIDE ANY STREAM, WATERCOURSE, FLOOD PLAIN OR WETLANDS UNDER ANY CIRCUMSTANCES. THE COST FOR DEWATERING SHALL BE INCLUDED IN VARIOUS RELATED BID ITEMS.

SEEDING & MULCHING: ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, SLOPES & ELEVATIONS, UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS, PER ITEM 659. THE CONTRACTOR SHALL PROVIDE A SEEDBED FREE OF STONE & OTHER DELETERIOUS MATERIALS. IF THE EQUIPMENT USED TO PREPARE THE SEEDBED IS NOT CAPABLE OF RAKE THE SEEDBED, THE CONTRACTOR SHALL REMOVE DELETERIOUS MATERIALS FROM THE SEEDBED. IF THIS METHOD DOES NOT REMOVE ADEQUATE DELETERIOUS MATERIALS FROM THE SEEDBED, THE CONTRACTOR WILL BE REQUIRED TO SUPPLEMENT THE SEEDBED WITH SUITABLE PLANTING MATERIAL. ALL AREAS SHALL BE SEEDDED USING TABLE 659.09-1 (ODOTCMS).

SEEDING APPLICATION SHALL BE AT THE RATE OF 6 POUNDS PER 1000 SQUARE FEET. THE FOLLOWING SEED MIXTURE OR EQUIVALENT SHALL BE USED IN LIEU OF THE MIXTURES LISTED IN 659.09:

- 30% KENTUCKY BLUE(VNS)
- 23% PALMER II PERENNIAL RYE
- 22% YORKTOWN III PERENNIAL RYE
- 15% CREEPING RED FESCUE(VNS)
- 10% BARON KENTUCKY BLUEGRASS

LANDSCAPE REPLACEMENT: TREES, SHRUBS & OTHER PLANTINGS DISTURBED OR DESTROYED IN EASEMENT AREAS OR WORK AREAS OUTSIDE ROAD RIGHT-OF-WAY SHALL BE REPLACED AS NECESSARY IN LIKE KIND AT NO ADDITIONAL COST TO THE OWNER. NO TREES OR ROOT SYSTEMS SHALL BE REMOVED OR DAMAGED BY CONSTRUCTION OPERATIONS WITHOUT WRITTEN APPROVAL FROM THE TREE OWNER(S) PRIOR TO CONSTRUCTION.

PRE-CONSTRUCTION VIDEO: PRIOR TO DISTURBANCE, THE CONTRACTOR SHALL MAKE A VIDEO RECORDING OF ALL EXISTING SYSTEMS & FEATURES WITHIN THE PUBLIC RIGHT-OF-WAY, PRIVATE PROPERTY, ETC. WHICH WILL BE IN OR NEAR THE PROPOSED ALIGNMENT OR CONSTRUCTION OR SUBJECT TO CONSTRUCTION EQUIPMENT USE. THIS RECORDING SHALL BE AVAILABLE TO ALL PARTIES TO INSURE PROPER & COMPLETE RESTORATION TO PRE-CONSTRUCTION CONDITIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.

PROTECTION OF EXISTING SURFACES: ANY & ALL PAVED ROADS, DRIVEWAYS &/OR OTHER SURFACES SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR FROM EQUIPMENT OR OTHER CONSTRUCTION OPERATIONS, FROM DAMAGE OR MARKING. NO TRACKED OR NON-RUBBER TIRE EQUIPMENT OR TOOLS SHALL BE OPERATED ON ANY OF THE ABOVE SURFACES BY ANY CONTRACTOR UNLESS PRE-APPROVED IN WRITING BY THE SURFACE OWNER.

SIGNS, MAILBOXES, FENCES, GUARDRAILS, ETC.: ALL SIGNS, MAILBOXES, FENCES, GUARDRAILS, ROADSIDE DITCHES, MISC. SURFACE INLETS OR OTHER PHYSICAL FEATURES DISTURBED OR DAMAGED DURING WORK UNDER THIS CONTRACT SHALL BE RESTORED TO THEIR ORIGINAL CONDITION &, IF NECESSARY, RELOCATED BY THE CONTRACTOR PER COUNTY SPECIFICATIONS. MAILBOX LOCATIONS SHALL CONFORM TO LOCAL POST OFFICE REQUIREMENTS. THE COST OF ALL SUCH WORK SHALL BE INCLUDED WITH THE VARIOUS RELATED ITEMS.

IRON PINS & MONUMENTATION: ANY EXISTING IRON PINS OR MONUMENTATION DISTURBED OR DESTROYED BY THE CONTRACTOR SHALL BE RESET BY A REGISTERED PROFESSIONAL SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

RESTORATION & DAILY/FINAL CLEANUP: THE CONTRACTOR SHALL REMOVE ALL DEBRIS, RUBBLE, SPOILS & CONSTRUCTION MATERIALS FROM THE ADJACENT STREETS, ALLEYS &/OR ROADS & THE SITE LEFT IN A NEAT & ORDERLY MANNER AT THE END OF EACH DAY. AFFECTED STREETS, ALLEYS &/OR ROADS SHALL BE SWEEPED WITH A SELF-CONTAINED SWEEPER & THE ACCUMULATED DEBRIS DISPOSED OF IN A PROPER & LEGAL MANNER.

IF CONSTRUCTION OPERATIONS ENCOUNTER MUDDY CONDITIONS, MUD SHALL NOT BE ALLOWED TO ACCUMULATE IN THE STREETS. IT MUST BE REMOVED AFTER EACH VEHICLE EXITS THE SITE, EITHER WITH THE USE OF EQUIPMENT OR BY HAND.

WHEN PERFORMING FINAL CLEANUP, THE CONTRACTOR SHALL CLEAN UP ALL MATERIALS & DEBRIS RESULTING FROM HIS WORK & DISPOSE OF THEM IN A PROPER & LEGAL MANNER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PAYMENT FOR RELATED OR ASSOCIATED WORK & SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

GRAFFITI AND VANDALISM: THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF ANY CONCRETE WORK OR OTHER PAY ITEM UNDER THIS CONTRACT WHICH IS DEEMED UNACCEPTABLE BY THE CITY DUE TO GRAFFITI OR VANDALISM DAMAGE.

SUBCONTRACTOR SUPERVISION: THE CONTRACTOR IS REQUIRED TO HAVE A PROJECT SUPERVISOR ON-SITE TO SUPERVISE THE SUBCONTRACTOR FOR QUALITY CONTROL PURPOSES AND TO PROVIDE ANY NECESSARY ASSISTANCE TO THE SUBCONTRACTOR TO ENSURE QUALITY WORK.

COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF RELATED PAY ITEMS OF THIS PROJECT.

TESTING AND CERTIFICATION: PROVIDE TESTING OF OR CERTIFICATION THAT MATERIAL SUPPLIED FOR THIS PROJECT MEETS THE PROJECT SPECIFICATIONS, IF REQUIRED.

POTENTIAL ITEMS FOR TESTING CONSIST OF TRENCH BACKFILL, EMBANKMENT, AND CONCRETE, WHICH MAY BE PERFORMED BY THE DISTRICT IF THEY SUSPECT DEFECTIVE WORK OR MATERIALS. PAYMENT FOR CERTIFICATION OF WORK SHALL BE INCIDENTAL TO THE VARIOUS ITEMS IT IS RELATED TO AND SHALL INCLUDE ALL COST RELATED TO PROVIDING THE CERTIFICATION AS REQUIRED. COST OF ANY TESTING BY A TESTING LAB CONTRACTED BY THE DISTRICT SHALL BE BORNE BY THE DISTRICT, UNLESS THE TEST DOES NOT MEET PROJECT SPECIFICATIONS OR WORK IS FOUND TO BE DEFECTIVE, AT WHICH, THE CONTRACTOR SHALL PAY THE EXPENSES FOR TESTING.

RECORD DRAWINGS: THE CONTRACTOR SHALL PROVIDE 2 COMPLETE SETS OF RECORD DRAWINGS TO THE DISTRICT WITHIN 30 DAYS OF PROJECT COMPLETION. THESE DRAWINGS SHALL SHOW ALL CHANGES TO THE ORIGINAL DRAWINGS, ALL MANHOLE LOCATIONS AND INVERTS, ALL LATERAL LOCATIONS AND DEPTHS FOR SANITARY SEWERS ANS ALL MAINLINE, SERVICE AND VALVE AND HYDRANT LOCATIONS FOR WATER, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION AND ALL OTHER PERTINENT DATA TO THE IMPROVEMENTS. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO THE OTHER ITEMS PAID FOR IN THIS PROJECT.

HAUL ROADS: WHEN PICKING A DUMP SITE, CONTRACTOR IS TO TAKE INTO CONSIDERATION THE HAUL ROAD ROUTE AND ANY NECESSARY ROADWAY REPAIR CAUSED BY HAULING TO THE DUMP SITE. PRIOR TO HAULING EQUIPMENT OR MATERIALS THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE TOWNSHIP OF THE SPECIFIC ROADS OR STREETS ON THE HAUL ROUTE. IF THE HAUL ROUTE INCLUDES ROADS AND STREETS THAT ARE NOT UNDER THE JURISDICTION AND CONTROL OF THE TOWNSHIP OR OF THE STATE, THE CONTRACTOR MUST USE LOCAL ROADS AND STREETS THAT ARE NOT RESTRICTED BY LOCAL AUTHORITIES. IF IT IS DETERMINED BY THE TOWNSHIP THAT THE HAUL ROADS USED TO HAUL EQUIPMENT AND MATERIALS TO THE DUMP SITE WERE DAMAGED FROM THIS OPERATION, THE DISTRICT WILL ORDER THE CONTRACTOR TO PERFORM IMMEDIATE AND PRACTICAL REPAIRS TO ENSURE REASONABLY NORMAL TRAVELING CONDITIONS AND BRING PAVEMENT CONDITIONS BACK TO WHAT THEY WERE PRIOR TO CONTRACTOR'S OPERATION AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL TAKE ALL THIS INTO CONSIDERATION WHEN PICKING A DUMP SITE. THE CONTRACTOR SHALL NOT FILE A CLAIM FOR DELAYS OR OTHER IMPACTS TO THE WORK CAUSED BY DISPUTE WITH THE LOCAL AUTHORITIES REGARDING THE USE OF LOCAL ROADS OR STREETS AS HAUL ROADS. THE CONTRACTOR SHALL SAVE THE CITY AND THE STATE HARMLESS FOR ANY CLOSURES OR HAULING RESTRICTION OUTSIDE THE PROJECT LIMITS BEYOND THE CONTROL OF THE DISTRICT.

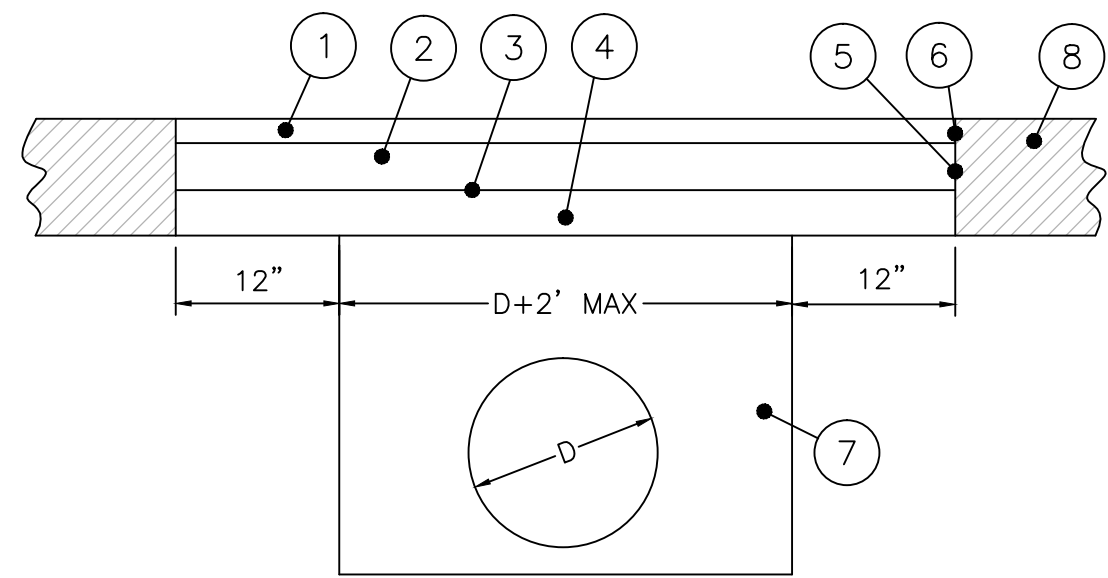
CONSTRUCTION NOISE: IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ITEM 452 NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN
THIS ITEM OF WORK: SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 452 NON-REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, EXCEPT AS HEREIN MODIFIED.

CONCRETE DRIVE APPROACHES SHALL HAVE A MINIMUM THICKNESS OF 6", AND 6" OF AGGREGATE BASE SATURATED W/ WATER PRIOR TO COMPACTION SHALL BE INCLUDED IN THIS ITEM. CONCRETE SHALL BE A 4000 PSI, AIR ENTRAINED MIXTURE AND REINFORCED WITH 1.6 LBS OF FORTA ULTRA-NET (1.5 IN.) FIBRILLATED MICROFIBERS PER CUBIC YARD. PERFORM A BROOM FINISH AND TOOLED EDGES ON ALL SURFACES AND APPLY CURING COMPOUND IMMEDIATELY. PROVIDE 1/2" PREMOLDED EXPANSION JOINT TO ISOLATE APPROACHES AND WALKS.

DRIVES SHALL BE INSTALLED TO MATCH INTO EXISTING. REMOVAL AND DISPOSAL OF EXISTING DRIVE MATERIALS SHALL BE INCLUDED IN THIS ITEM.

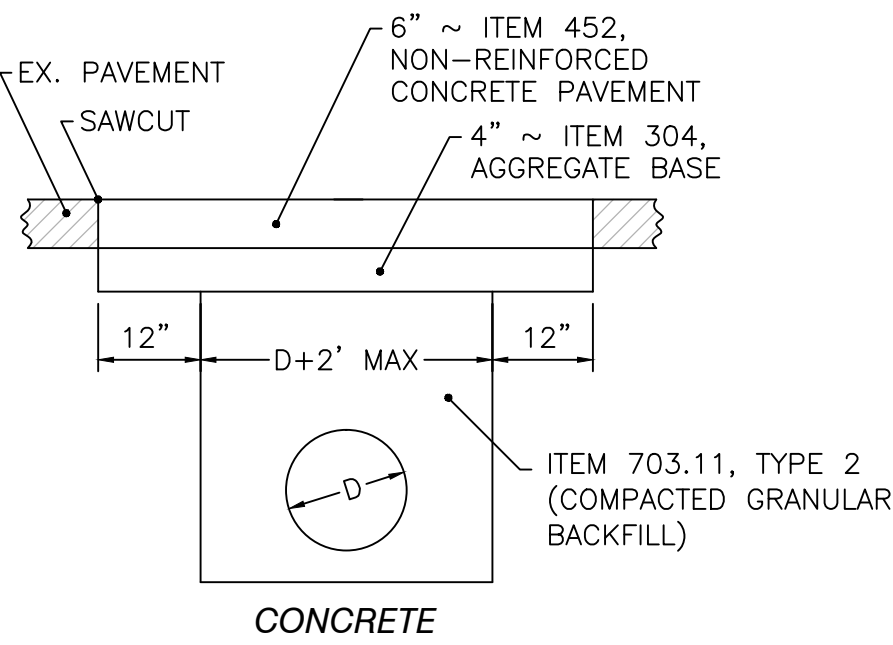
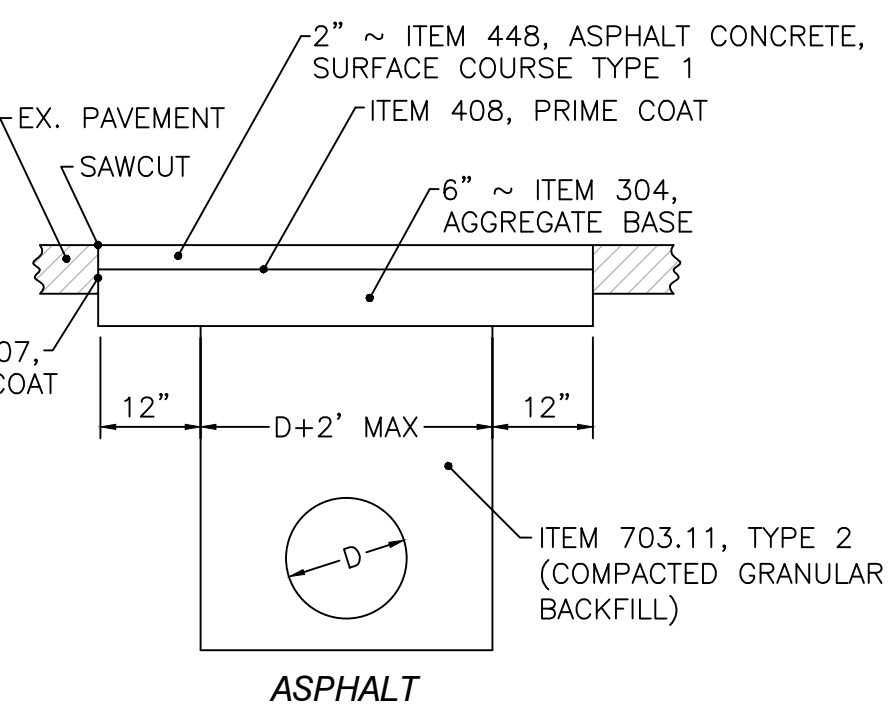
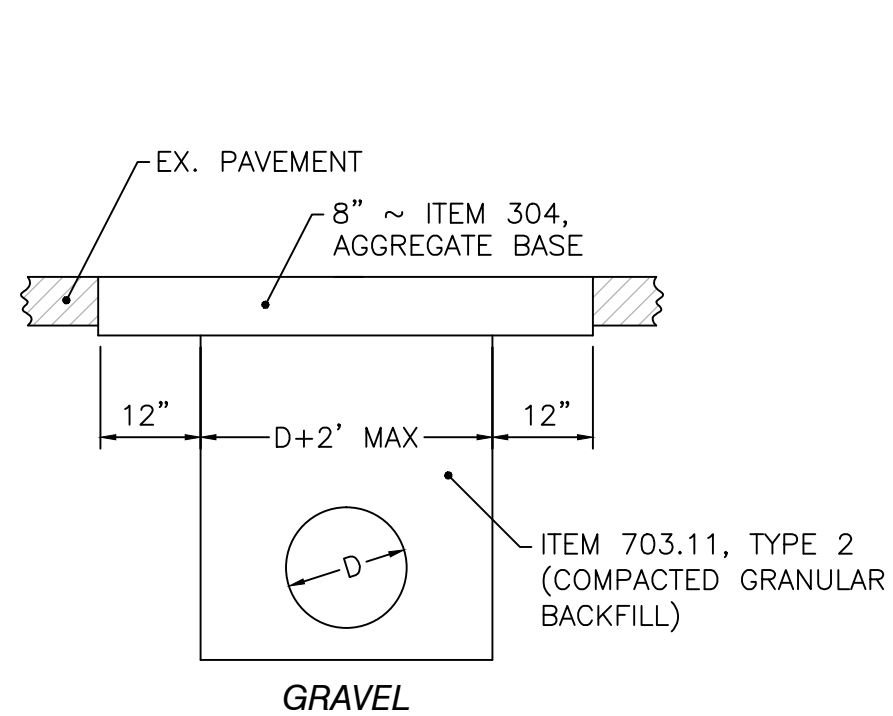
PAYMENT FOR ITEM 452 NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT SQUARE YARD BID PRICE AND SHALL INCLUDE ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.



1. 2" ~ ITEM 448, ASPHALT CONCRETE, SURFACE COURSE TYPE 1, PG-64-22
2. 6" ~ ITEM 301, BITUMINOUS AGGREGATE BASE
3. ITEM 408, PRIME COAT (0.35 GAL/SY)
4. 6" ~ ITEM 304, AGGREGATE BASE
5. SAWCUT
6. ITEM 407, TACK COAT (0.10 GAL/SY)
7. ITEM 703.11, TYPE 2 (COMPACTED GRANULAR BACKFILL)
8. EX. PAVEMENT

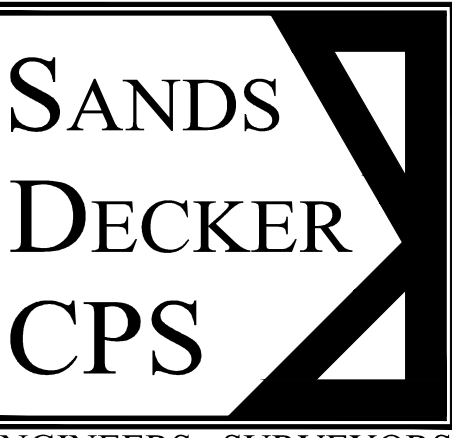
PERMANENT PAVEMENT REPLACEMENT (TOWNSHIP ONLY)

NOT TO SCALE



DRIVEWAY PAVEMENT REPLACEMENT (TOWNSHIP ONLY)

NOT TO SCALE



ENGINEERS • SURVEYORS

128 EAST MAIN ST
PO BOX 188
LOGAN, OH 43138
740-385-2140

1495 OLD HENDERSON RD
COLUMBUS, OH 43220
614-459-6992

507 MAIN STREET, SUITE 203
ZANESVILLE, OH 43701
740-450-1640

FAX: 614-459-6987
TOLL FREE: 866-277-0600



COUNTRY ESTATES EAST SANITARY SEWER IMPROVEMENTS

02-09-15	PRELIMINARY
08-07-15	BACKCHECK
02-26-16	BACKCHECK 2
03-30-16	BACKCHECK 3
04-29-16	BACKCHECK 4

GENERAL NOTES

2

SDCPS PROJECT NO. 2772

MANHOLES AND INLETS

2.1 MATERIALS, SANITARY SEWER MANHOLES

A. BOTTOM SECTIONS

1. MANHOLE BOTTOMS SHALL BE IN ACCORDANCE WITH ASTM C 478-75 "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS". ALL PRECAST CONCRETE SHALL BE CLASS C (ODOTCMS).

2. BOTTOM CHANNELS WILL BE FORMED CONCRETE PRECAST WITH THE BASE.

3. OPENINGS IN THE BASE FOR INLET & OUTLET PIPES SHALL BE PROVIDED WHEN THE UNIT IS CAST TO MEET PROJECT REQUIREMENTS.

4. CONNECTIONS: THE PIPE TO MANHOLE CONNECTIONS ON ALL SANITARY SEWERS SHALL BE FLEXIBLE & WATER TIGHT. THE SEWER PIPE BARREL AT THE SPRINGLINE SHALL NOT EXTEND MORE THAN 1 INCH BEYOND THE INSIDE FACE OF THE MANHOLE. TO MAINTAIN FLEXIBILITY IN THE CONNECTION, A 1 INCH SPACE SHALL BE LEFT BETWEEN THE END OF THE PIPE INSIDE THE MANHOLE & THE CONCRETE CHANNEL. THIS SPACE SHALL BE FILLED WITH A WATERPROOF FLEXIBLE JOINT FILLER. ALL STUB CONNECTIONS SHALL BE PIPE WITH THE SAME JOINT, STRENGTH & SPECIFICATIONS AS THE SEWER PIPE. THE STUB SHALL BE PLUGGED & BLOCKED WITH A STOPPER COMPATIBLE WITH THE SEWER PIPE JOINT & AS APPROVED BY THE ENGINEER. ANY METAL THAT IS USED SHALL BE TYPE 300 SERIES STAINLESS STEEL. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:

A. RUBBER SLEEVE WITH STAINLESS STEEL BANDING.

- 1.) KOR-N-SEAL AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS INC.
- 2.) LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERPACE CORPORATION.
- 3.) A-LOK.
- 4.) OR APPROVED EQUAL.

B. BARREL SECTIONS

1. MANHOLE BARREL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM C 478-75.
2. LIFT HOLES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
3. OPENINGS IN BARREL SECTIONS FOR 18 INCH & SMALLER INLET PIPES SHALL BE PREFABRICATED. THE PIPE PROJECTING THROUGH THE MANHOLE IS TO BE FLUSH WITH THE INSIDE OF THE MANHOLE WALL. SURFACE OPENINGS IN RISER SECTIONS FOR PIPES LARGER THAN 18 INCHES SHALL BE PROVIDED BY A TEE CONNECTION PREFABRICATED IN THE RISER SECTION. MANHOLES LOCATED WITHIN GRASSED AREAS OR 100 YEAR FLOODWAY PATHES SHALL HAVE SOLID BOLT DOWN LIDS WITH CHIMNEY SEALS.

C. TOP SECTION

1. TOP & TRANSITION (OR REDUCER) SECTIONS MAY BE EITHER ECCENTRIC CONE OR FLAT SLAB & SHALL BE IN ACCORDANCE WITH ASTM C 478-75.

D. JOINTS

1. JOINTS OF THE MANHOLE SECTIONS SHALL BE OF THE RUBBER GASKET TYPE, SELF-CENTERING & WATER TIGHT, & SHALL BE IN ACCORDANCE WITH ASTM C 443-76A "JOINTS FOR CIRCULAR CONCRETE SEWER & CULVERT PIPE USING RUBBER GASKETS". THE EXTERIOR OF THE JOINT SHALL BE INFILLED WITH CEMENT MORTAR.

E. FRAMES & COVERS

1. FRAMES & COVERS SHALL BE OF HEAVY DESIGN (475 POUNDS MINIMUM TOTAL WEIGHT, NEENAH R-1785 OR EQUIVALENT) WHEN THE MANHOLE IS PLACED WITHIN THE LIMITS OF THE PAVEMENT OR SHOULDER. OTHERWISE THE LIGHT DESIGN (275 POUNDS MINIMUM TOTAL WEIGHT, NEENAH R-1786 OR EQUIVALENT) MAY BE USED. FRAME & COVER SHALL BE MADE OF GOOD QUALITY CAST IRON CONFORMING TO ASTM A 48 "GRAY CAST IRON CASTINGS". THE COVER & SEAT SHALL HAVE MACHINED BEARING SURFACES TO PREVENT ROCKING. FRAMES SHALL BE PLACED ACCURATELY TO GRADE IN A FULL BED OF NONSHRINK GROUT.

2. SOLID MANHOLE COVERS WITH CONCEALED PICK HOLES SHALL BE USED IN ALL LOCATIONS. THEY SHALL BE OF AN APPROVED WATERPROOF TYPE.

F. DROP PIPE

1. DROP PIPES SHALL BE INSTALLED & CONSTRUCTED OF THE MATERIALS SHOWN ON THE CONTRACT DRAWINGS.

G. STEPS

1. STEPS SHALL BE REINFORCED POLYPROPYLENE & CONFORM TO ITEMS 711.30 & 711.31 & THE CONTRACT DRAWINGS.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. FOUNDATION. WHEN A PRECAST CONCRETE MANHOLE BASE IS USED, THE CONTRACTOR SHALL PROVIDE GRAVEL BEDDING FOR THE BASE FOUNDATION. THE PAD SHALL EXTEND A MINIMUM OF 4 INCHES BEYOND THE OUTSIDE WALL OF THE MANHOLE BASE & SHALL BE 6 INCHES THICK WITH A 1/4" TOLERANCE. THE PAD SHALL BE SOLID & FREE FROM MUD & WATER BEFORE ANY MANHOLE IS PLACED THEREON.

B. COLD WEATHER. IF THE WORK IS CARRIED ON IN COLD WEATHER, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING, AT HIS OWN EXPENSE, THE NECESSARY MEANS FOR HEATING CONCRETE, BRICK & MORTAR & FOR COMPLYING WITH ALL THE REQUIREMENTS OF THE ENGINEER TO THOROUGHLY PROTECT THE MASONRY & CONCRETE WORK DURING & AFTER CONSTRUCTION FROM DAMAGE BY FROST. NO WORK SHALL BE DONE ON ANY MASONRY OR BACKFILLING DURING SUCH DAYS AS, IN THE OPINION OF THE ENGINEER, ARE UNSUITABLE FOR GOOD WORKMANSHIP.

C. GRADE ADJUSTMENT. IF THE MANHOLE FRAME & COVER ARE TO BE ADJUSTED TO GRADE, ADJUSTMENT SHALL BE MADE WITH THE USE OF PRECAST GRADE RINGS CONFORMING TO ASTM C 478. THE RINGS SHALL BE WATERPROOFED ON THE OUTSIDE WITH THE USE OF A 1 INCH PLASTER COATING AND THE USE GRADE RINGS IS LIMITED TO A MAXIMUM TOTAL OF 2.

D. COMPLETION. ALL SEWERS, MANHOLES & INLETS, UPON THEIR COMPLETION, ARE TO BE CLEAN & FREE FROM RUBBISH & KEPT SO UNTIL THE ACCEPTANCE OF THE WORK. REPAIRS OR ALTERATIONS MADE TO THE MANHOLES AFTER PERFORMING THE LEAKAGE TEST MAY BE JUSTIFICATION FOR A RETEST OF THE SECTION OF SEWER INVOLVED.

E. INVERTS. WHERE THERE ARE CHANGES IN THE DIRECTION OF THE SEWER OR ENTERING BRANCHES TO THE MANHOLE OR INLET, THE CENTERLINE OF THE INVERT SHALL HAVE A TRUE CURVE OF AS LARGE A RADIUS AS THE SIZE OF THE MANHOLE OR INLET WILL PERMIT.

SANITARY SEWER TESTING

A. TEST SECTION. A LEAKAGE TEST SECTION FOR SANITARY SEWERS SHALL BE FROM THE INLET END OF THE DOWNSTREAM MANHOLE TO THE INLET END OF THE UPSTREAM MANHOLE, INCLUDING THE UPSTREAM MANHOLE & ALL HOUSE SERVICES.

B. TEST SEQUENCE. TESTING ON FORCE MAIN & GRAVITY SEWER SHALL BE PERFORMED 60 DAYS AFTER INSTALLATION AND BACKFILLING ARE COMPLETE.

C. LEAKAGE ALLOWANCE.

1. SANITARY SEWERS. THE MAXIMUM LEAKAGE ALLOWANCE FOR ALL SANITARY SEWERS SHALL BE 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS.

D. TEST PROCEDURE

AIR TESTING OF PIPES WILL BE ACCOMPLISHED ONLY BY THE USE OF EQUIPMENT THAT HAS BEEN APPROVED BY THE ENGINEER & IN ACCORDANCE WITH THE FOLLOWING STEPS:

- 1.) PLUG ALL PIPE OUTLETS WITH SUITABLE TEST PLUGS. BRACE EACH PLUG SECURELY.
- 2.) ADD AIR SLOWLY TO THE PORTION OF THE PIPE INSTALLATION UNDER TEST UNTIL THE

INTERNAL AIR PRESSURE IS RAISED TO 4.0 POUNDS PER SQUARE INCH GAUGE (PSIG).

3.) AFTER AN INTERNAL PRESSURE OF 4.0 PSIG IS OBTAINED, ALLOW AT LEAST 2 MINUTES FOR AIR TEMPERATURE TO STABILIZE, ADDING ONLY THE AMOUNT OF AIR REQUIRED TO MAINTAIN PRESSURE.

4.) WHEN PRESSURE DECREASES TO 3.5 PSIG, START STOPWATCH. DETERMINE THE TIME IN SECONDS THAT IS REQUIRED FOR THE INTERNAL AIR PRESSURE TO REACH 3.0 PSIG. MINIMUM PERMISSIBLE PRESSURE HOLDING TIMES FOR RUNS OF SINGLE PIPE DIAMETER & FOR SYSTEMS OF 4 INCH, 6 INCH OR 8 INCH LATERALS IN COMBINATION WITH TRUNK LINES SHALL BE AS PUBLISHED IN TABLES BY THE NATIONAL CLAY PIPE INSTITUTE (AS SEEN ON THIS SHEET).

IN THE EVENT THE ALLOWABLE LEAKAGE LIMITS ARE NOT MET, THE CONTRACTOR SHALL DETERMINE THE LOCATION WHERE EXCESS WATER IS ENTERING OR LEAVING THE SEWER, OR EXCESSIVE AIR. THE SEWER &/OR MANHOLES SHALL BE REPAIRED IN A MANNER SATISFACTORY TO THE PVRSD AND RETESTED UNTIL THE LEAKAGE IS WITHIN THE ALLOWABLE LIMITS.

ALL MANHOLES SHALL BE VACUUM TESTED AFTER THE SANITARY SEWER HAS BEEN BACKFILLED FOR 60 DAYS.

STANDARD CONCRETE SEWER MANHOLE VACUUM TEST PER ASTM (DESIGNATION C-1244-93)

PROCEDURE:

THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 INCHES OF MERCURY. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 TO 9 MEETS OR EXCEEDS THE VALUES INDICATED IN THE TABLE BELOW. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD. THE MANHOLE SHALL THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

Z:\SDCPS Inactive Projects-2013\Pleasant Valley 2026 Site Mill Green Area\dwg\TABLE.TIF

THE CONTRACTOR SHALL INCLUDE IN THE PRICE BID PER LINEAR FOOT OF SEWER, THE COST OF ALL BULKHEADS, PLUGS, PIPE STOPPERS, PUMPS, COMPRESSORS, WATER, WEIRS, LABOR, DELAY & ANY OTHER ITEMS OF COST NECESSARY FOR THE PERFORMANCE & COMPLETION OF THE REQUIRED LEAKAGE TESTS & FOR THE COST OF ANY REPAIRS OR ADJUSTMENTS WHICH MAY BE NECESSARY TO MAKE THE PROJECT CONFORM TO THE REQUIRED ALLOWABLE LEAKAGE LIMITS.

ALL LEAKAGE TESTS SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE DISTRICT OR THEIR REPRESENTATIVE.

ALL SANITARY SEWER LINE INSTALLED ON THIS PROJECT USING PVC PIPE SHALL BE SUBJECT TO DEFLECTION TESTING BY PULLING AN APPROVED MANDREL EQUAL IN DIAMETER TO 95% OF THE PIPE DIAMETER THROUGH THE PIPE AFTER PIPE IS BACKFILLED FOR 60 DAYS. REROUNDING OF FAILED PIPE MAY BE PERFORMED ONLY IF LESS THAN 10% OF THE TESTED SEWERS FAIL THE MANDREL TEST. ALL FAILED PIPE SHALL BE REROUNDED OR REPLACED & WARRANTED AN ADDITIONAL 2 YEARS.

GENERAL NOTES (SEWERS)

A. ROOF DRAINS, FOUNDATION DRAINS, SUMP PUMPS, & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED ON THIS PROJECT.

B. ALL SEWERS CONSTRUCTED UNDER THIS PLAN SHALL MEET MONROE TOWNSHIP WATER & SEWER DISTRICT SPECIFICATIONS AND TIPP CITY SPECIFICATIONS.

C. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPE SHALL BE PVC PLASTIC SEWER PIPE ASTM D-3034, SDR 35, OR DUCTILE IRON PIPE.

D. PIPE FOR ALL 6 INCH HOUSE SERVICES SHALL BE PVC PLASTIC SEWER PIPE, ASTM D-3034, SDR 35. ALL SERVICE EXTENSIONS SHALL BE LAID AT A MINIMUM GRADE OF ONE QUARTER INCH PER FOOT & SHALL BE CONSTRUCTED AT THE TIME OF CONSTRUCTION OF THE MAIN SEWER. SANITARY SEWER SERVICES MAY BE JACKED & BORED ACROSS STREETS WITH PRIOR APPROVAL OF THE DISTRICT.

E. APPROVED WYE POLES MADE OF 2"x 2" LUMBER SHALL BE FURNISHED & PLACED AT ALL WYE BRANCHES & AT THE END OF EXTENDED SERVICES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE SEWER ITEMS.

F. WHERE DEPTHS FROM WYES TO EXISTING OR PROPOSED ELEVATIONS EXCEED 12 FEET, RISERS SHALL BE INSTALLED WITH THE TOPS OF THE RISERS 9 FEET (MIN.) BELOW THE EXISTING OR PROPOSED SURFACE ELEVATION, WHICHEVER IS HIGHER, PROVIDED THAT SERVICE SHALL STILL BE PROVIDED. THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ANY HOUSE SERVICE AT THE WYE POLE TO ENSURE THAT EVERY EFFORT IS MADE TO SERVICE TO THE EXISTING STRUCTURE. WHERE SERVICE RISERS ARE NOT INSTALLED, A MINIMUM 5 FOOT LENGTH OF LATERAL PIPE OF THE SAME SIZE AS THE WYE OPENING SHALL BE INSTALLED.

G. THE WYE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE & SHALL BE FIELD LOCATED DURING CONSTRUCTION TO SERVE THE INDIVIDUAL STRUCTURES.

H. MANHOLE COVERS SHALL CONFORM TO THE DETAILS SHOWN HEREIN. ALL MANHOLES IN GRASSED AREAS OR 100 YR FLOODWAYS REQUIRE CHIMNEY SEALS AND SOLID BOLT LIDS.

I. MANHOLE TOPS SHALL BE BUILT OR SUBSEQUENTLY ADJUSTED TO MEET SURFACE GRADES ESTABLISHED FOR THE PROJECT. COST OF THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS SEWER ITEMS.

J. THE CONTRACTOR SHALL INSTALL A TEMPORARY PLUG AT ALL CONNECTIONS TO THE EXISTING SEWER SYSTEM PRIOR TO CONSTRUCTION OF THE PROPOSED SEWERS & SHALL MAINTAIN SAME UNTIL SAID PROPOSED SEWERS ARE ACCEPTED BY THE MONROE TOWNSHIP WATER & SEWER DISTRICT.

K. THE MAXIMUM TRENCH WIDTH AT THE TOP OF PIPE BARREL SHALL NOT BE GREATER THAN OUTSIDE DIAMETER OF PIPE PLUS 16 INCHES, OR 30 INCHES, WHICHEVER IS GREATER.

L. AN ELECTRONICALLY DETECTABLE IDENTIFICATION TAPE SHALL BE INSTALLED AT A DEPTH OF 3 FEET ± IN ALL SANITARY SEWER TRENCHES (EXCEPT SERVICE LATERALS) OVER NONMETALLIC SANITARY SEWER LINES. DEPTH OF IDENTIFICATION TAPE SHALL BE 12" TO 18" OVER SEWER FORCE MAIN. IDENTIFICATION TAPE SHALL READ "CAUTION - SEWER BELOW" OR "CAUTION - SEWER FORCE MAIN BELOW" AS APPLICABLE.

M. A CONNECTION PERMIT SHALL BE OBTAINED FROM THE DISTRICT WITH PAYMENT OF ASSOCIATED FEES TO THE DISTRICT BEFORE CONNECTIONS ARE MADE INTO THE PROPOSED SANITARY SEWER SYSTEM. NO SANITARY SEWER CONNECTIONS SHALL BE SOLD UNTIL THE SANITARY SEWERS HAVE PASSED THE LEAKAGE TEST BY THE CONTRACTOR.

N. WORK IN TIPP CITY RIGHT-OF-WAY: CONTRACTOR REGISTRATION IS REQUIRED FOR ALL WORK IN THE TIPP CITY RIGHT-OF-WAY. CONTACT TIPP CITY FOR APPLICATION PROCESS.

O. CONTRACTOR SHALL MAINTAIN CONSTRUCTION PLANS ONSITE WITH DETAILED AS-BUILT CONDITIONS. UPON COMPLETION OF CONSTRUCTION A SURVEY OF MANHOLE INVERTS SHALL BE PERFORMED AND A DOCUMENT OF GRADE CERTIFICATIONS BE PROVIDED TO THE DISTRICT AND TIPP CITY.

LOW PRESSURE AIR TEST

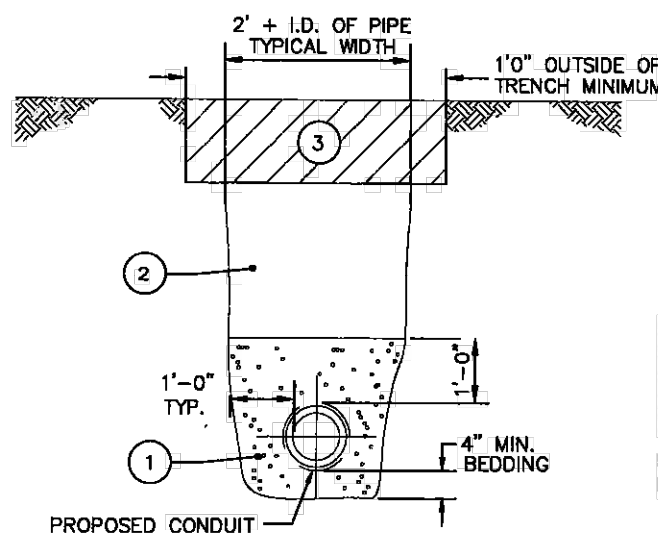
A.) AFTER BACKFILLING, THE AIR TEST SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES. ALL PIPE OUTLETS MUST BE PLUGGED IN THE SECTION BEING TESTED WITH SUITABLE TEST PLUGS. ONE OF THE PLUGS USED AT A MANHOLE MUST BE TAPPED AND EQUIPPED FOR AN AIR INLET CONNECTION FOR FILLING THE LINE FROM THE AIR COMPRESSOR. AIR SHALL BE SUPPLIED SLOWLY TO THE TEST SECTION UNTIL THE INTERNAL PRESSURE REACHES APPROXIMATELY 4 PSI. IF THE PIPE IS BELOW EXISTING GROUNDWATER LEVEL, THE INTERNAL PRESSURE SHALL BE INCREASED BY THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE, BUT IN NO CASE SHOULD THE INTERNAL PRESSURE EVER EXCEED 5 PSI.

B.) AT LEAST 2 MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSI, THE AIR SUPPLY SHALL BE DISCONNECTED AND TIMING SHALL BEGIN WITH A STOP WATCH. THE STOP WATCH SHALL BE ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 PSI. IF THE TIME SHOWN ON THE STOP WATCH IS GREATER THAN THE SPECIFIED MINIMUM TIME, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE TEST. TIME MAY BE INTERPOLATED FROM THE FIGURES LISTED BELOW.

PIPE DIA. (IN.)	Time for Longer Length (sec)	Specified Minimum for Length (L) Shown (min:sec)						
		100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.
4	0.380L	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	0.854L	5:40	5:40	5:40	5:40	5:40	5:40	5:42
8	1.520L	7:34	7:34	7:34	7:34	7:36	8:52	10:08
10	2.374L	9:26	9:26	9:26	9:53	11:52	13:51	15:49
12	3.418L	11:20	11:20	11:24	14:15	17:05	19:56	22:47
15	5.342L	14:10	14:10	17:48	22:15	26:42	31:09	35:36
18	7.692L	17:00	19:13	25:38	32:03	38:27	44:52	51:16
21	10.470L	19:50	26:10	34:54	43:37	52:21	61:00	69:48
24	13.674L	22:47	34:11	45:34	56:58	68:22	79:46	91:10

SPECIFICATION TIME FOR LENGTH (L) SHOWN (MIN:SEC)

SUMMARY OF ESTIMATED QUANTITIES										
ITEM	DESCRIPTION	SHEET 6	SHEET 7	SHEET 8	SHEET 9	SHEET 10	SHEET 11	SHEET 12	TOTAL	UNIT
203	CLEARING & GRUBBING								LUMP	SUM
301	BITUMINOUS AGGREGATE BASE	138	97	54	83	80	41		542	C.Y.
304	AGGREGATE BASE (ROADWAY REPAIR)	138	97	54	83	80	41		542	C.Y.
304	AGGREGATE BASE (DRIVE REPAIR)			4					4	C.Y.
407	TACK COAT (0.10 GAL/SY)	83	59	33	50	48	25		325	GAL
408	PRIME COAT (0.35 GAL/SY)	290	204	114	175	168	87		1,138	GAL
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (ROADWAY REPAIR)	46	33	18	28	27	14		180	C.Y.
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (DRIVE REPAIR)									C.Y.
452	NON-REINFORCED CONCRETE PAVEMENT			5					5	S.Y.
609	CURB REPLACEMENT	220	130	90	160	60	40		700	L.F.
611	8" CONDUIT, TYPE D, 707.01, CONTINGENCY ITEM								100	L.F.
611	12" CONDUIT, TYPE D, 707.01								100	L.F.
611	6" CONDUIT, TYPE D, 707.33								100	L.F.
611	8" SANITARY SEWER	1,436	920	908	1,131	1,138	425		5,958	L.F.
611	8" HDPE DIRECTIONAL BORE									L.F.
611	6" SANITARY SEWER HOUSE SERVICE	412	309	224	403	132	100		1,580	L.F.
611	8"x6" WYE	19	10	11	15	5	4		64	EACH
611	SANITARY MANHOLE -- STANDARD	4	4	3	7	3	1		22	EACH
611	SANITARY MANHOLE -- DROP	1							1	EACH
614	MAINTAINING TRAFFIC								LUMP	SUM
659	SEEDING & MULCHING	221	967	2,013	1,078	646	45		4,970	S.Y.
670	EROSION CONTROL								LUMP	SUM
SPEC	ABANDON PUMP STATION, COMPLETE								LUMP	SUM
SPEC	SANITARY FLOW METER, COMPLETE	1			1				2	EACH
SPEC	ADDITIONAL GRANULAR BACKFILL								3,075	C.Y.
SPEC	ABANDONED EXISTING PUMP STATION							1	LUMP	SUM



- GRANULAR MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS, FOR GRANULAR EMBANKMENT AND STRUCTURAL BACKFILL. COMPACT EACH LIFT OF MATERIAL USING MECHANICAL DEVICES, HOE RAMS, JUMPING JACKS, HAND DEVICES, VIBRATING PLATES, OR OTHER SIMILAR EQUIPMENT. COMPACTION REQUIREMENTS SHALL BE 98% OF STANDARD PROCTOR CURVE.
- LOW STRENGTH MORTAR BACKFILL SHALL BE FURNISHED AND PLACED AS PER ODOT ITEM 613.

ALL TRENCH EDGES NOT WITHIN THE STREET RIGHT-OF-WAY, CAN BE BACKFILLED WITH CLEAN NATIVE MATERIAL COMPACTED IN 12 INCH LIFTS. MATERIAL SHALL BE COMPACTED TO 85% OF THE ORIGINAL COMPACTION. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS GRANULAR MATERIAL, ROCK OR STONE GREATER THAN 4 INCHES IN DIAMETER.

3. PAVEMENT RESTORATION

IN PAVED AREAS WITHIN THE STREET RIGHT-OF-WAY THE PAVEMENT AND AGGREGATE BASE COMPOSITION SHALL BE PROVIDED EQUAL TO THE EXISTING PAVEMENT BUT IN NO CASE SHALL THE COMPOSITION BE LESS THAN THE FOLLOWING:

- 1-1/2" OF ODOT ITEM 448 SURFACE COURSE, TYPE 1
- 2-1/2" OF ODOT ITEM 448 INTERMEDIATE COURSE, TYPE 2
- 10" OF ODOT ITEM 304 AGGREGATE BASE

IN ALLEYSWAYS AND DRIVEWAYS OUTSIDE OF THE STREET RIGHT-OF-WAY THE REPLACEMENT OF PAVEMENT AND/OR AGGREGATE SHALL BE EQUAL TO THE EXISTING ALLEYWAY OR DRIVEWAY COMPOSITION. IF THE PERMANENT ASPHALT CANNOT BE APPLIED WITHIN 48 HOURS OF THE INITIAL REPAIR, ODOT ITEM 405 OR GOLD PATCH SHALL BE APPLIED TO THE TRENCH SURFACE. MINIMUM THICKNESS OF THE COLD PATCH MATERIAL SHALL BE 3 INCHES. SAID MATERIAL SHALL BE REMOVED PRIOR TO THE PLACEMENT OF ODOT ITEM 448, UNLESS OTHERWISE APPROVED.

CONCRETE RESTORATION

ALL CONCRETE DRIVEWAYS, DRIVE APPROACHES, AND SIDEWALKS WITHIN THE STREET RIGHT-OF-WAY, SHALL BE REPLACED WITH THE FOLLOWING:

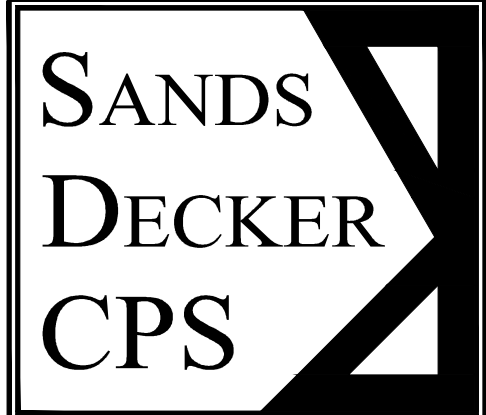
- SIDEWALKS -- MINIMUM THICKNESS OF 4" INCHES OF CONCRETE
 - MATCH ORIGINAL WIDTH OF SIDEWALK
 - MINIMUM WIDTH OF 4' REQUIRED
 - DRIVEWAYS AND DRIVE APPROACHES:
 - RESIDENTIAL: MINIMUM THICKNESS OF 6" OF CONCRETE
 - BUSINESS & INDUSTRIAL: MINIMUM THICKNESS OF 8" OF CONCRETE

ALL CONCRETE DRIVEWAYS, DRIVE APPROACHES, AND SIDEWALKS OUTSIDE OF THE STREET RIGHT-OF-WAY SHALL BE REPLACED EQUAL TO THE EXISTING MATERIAL COMPOSITION.

COMPACTION GUIDELINES

THE CONTRACTOR MAY OPERATE SMALL COMPACTION EQUIPMENT WITH LESS THAN A TOTAL WEIGHT OF 1 TON OVER THE CONDUIT TO COMPACT THE BACKFILL. DO NOT USE HOE RAMS ON TOP OF THE CONDUIT UNTIL 2' OF BACKFILL IS COMPACTED ON TOP OF THE CONDUIT. THE CONTRACTOR MAY OPERATE COMPACTION EQUIPMENT WITH LESS THAN A TOTAL WEIGHT OF 8 TONS OR MORE UNTIL PLACING AND COMPACTING A COVER OF 4" OVER THE TOP OF THE CONDUIT. THE ABOVE RESTRICTIONS APPLY WHEN WORKING WITHIN ONE SPAN ON EACH SIDE OF THE CONDUIT, OR 6', WHICHEVER IS LESS.

ALL TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED IMMEDIATELY AFTER THE PLACEMENT OF THE CONDUIT, UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER. UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE CONDUIT HAS BEEN PLACED.



128 EAST MAIN ST
PO BOX 188
LOGAN, OH 43138
740-385-2140

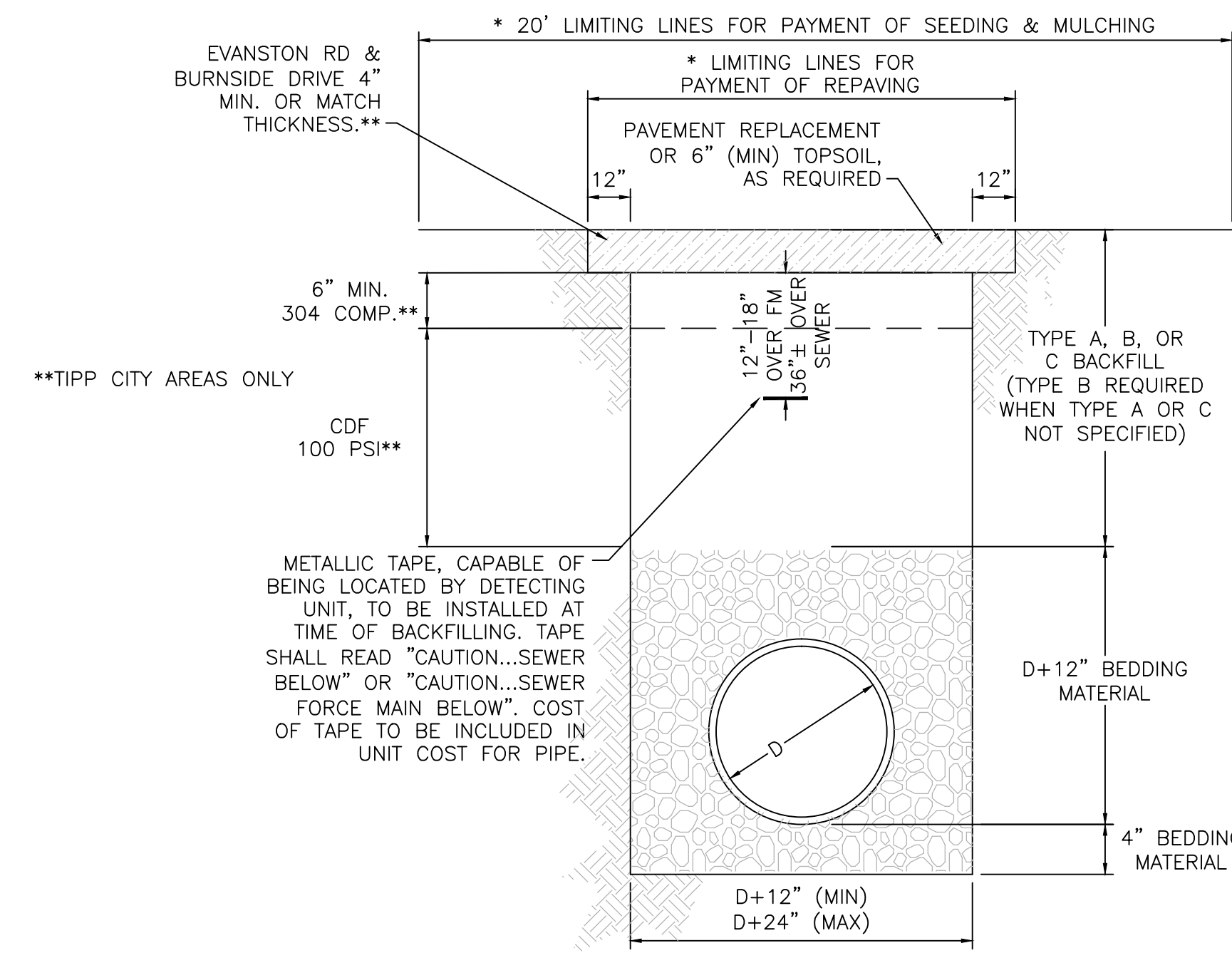
1495 OLD HENDERSON RD
COLUMBUS, OH 43220
614-459-6992

507 MAIN STREET, SUITE 203
ZANESVILLE, OH 43701
740-450-1640

FAX: 614-459-6987
TOLL FREE: 866-277-0600



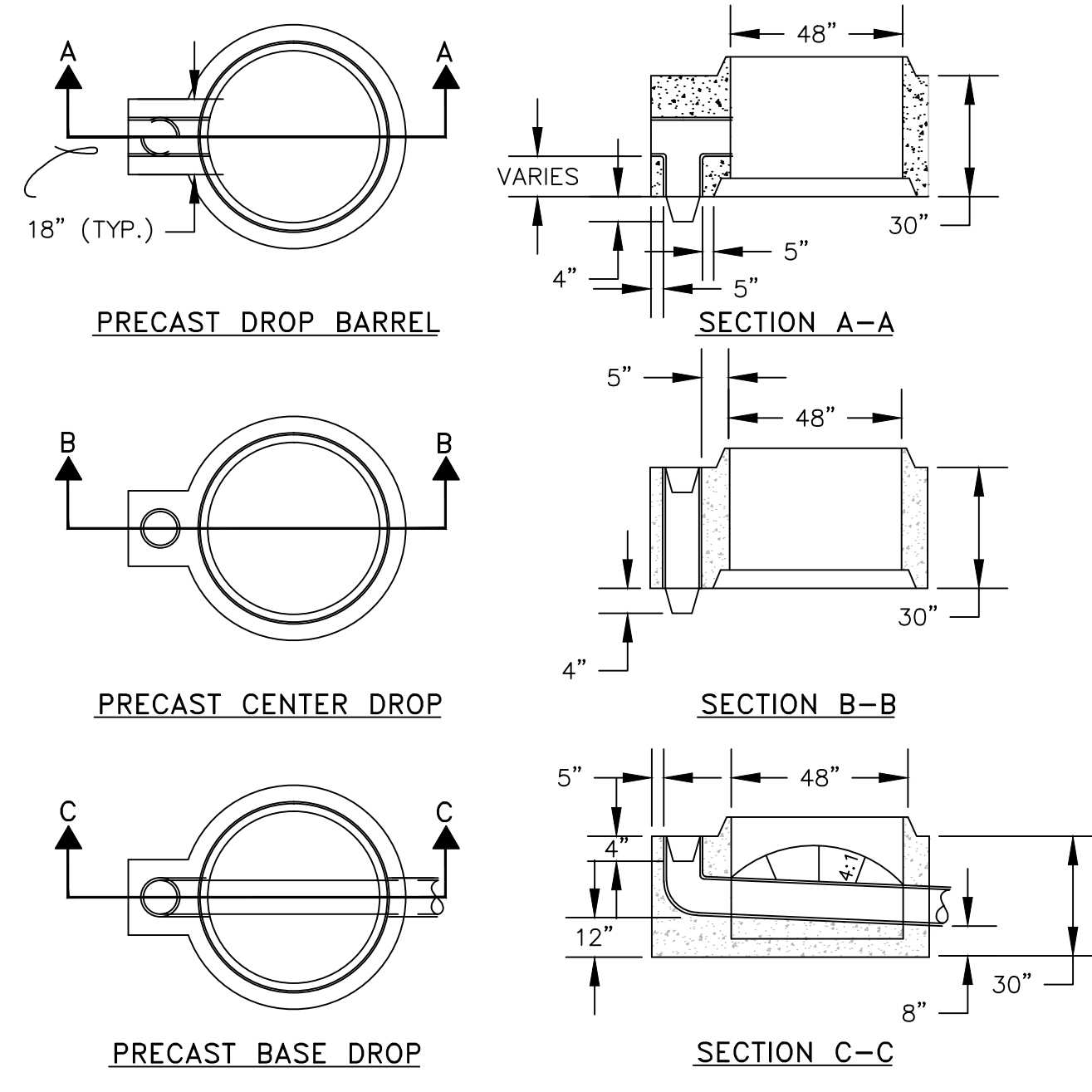
COUNTRY ESTATES EAST SANITARY



* LIMITING LINES FOR PAYMENT APPLY ONLY WHEN CONTRACT PROVIDES FOR UNIT PRICE PAYMENT OF PAVEMENT REPLACEMENT AND SEEDING & MULCHING.

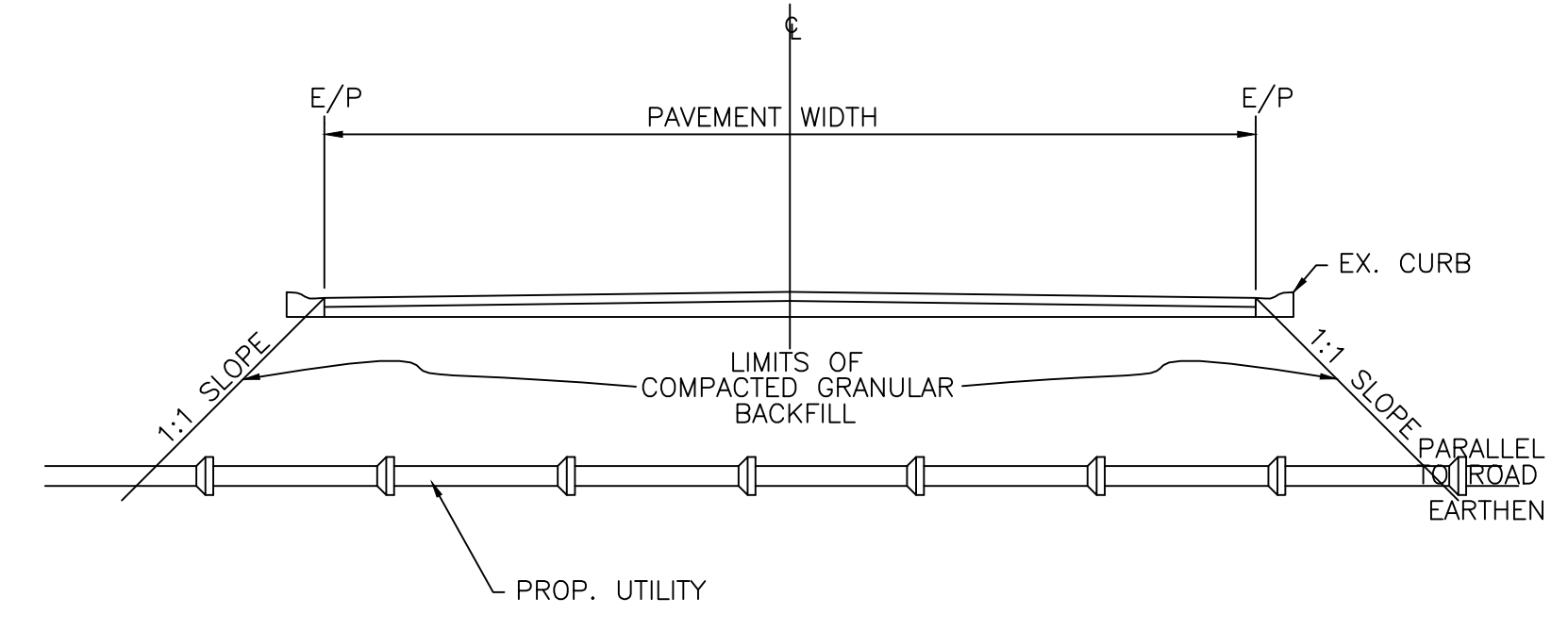
TOWNSHIP AREAS TYPICAL TRENCH FOR PVC SANITARY SEWER & SEWER FORCE MAIN
NOT TO SCALE

- NOTES:
- ITEM NUMBERS REFER TO STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS.
 - AGGREGATE FOR BEDDING FOR SEWERS SHALL BE NO. 57, CRUSHED GRAVEL. BEDDING FOR FORCE MAIN SHALL BE SAND.
 - TYPE A BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL AS SPECIFIED IN ITEM 304, GRADE A. TYPE A BACKFILL SHALL BE USED WHEN THE TRENCH IS 5' OR LESS FROM ANY PAVED OR GRAVEL SURFACE, OR BENEATH THE PAVEMENT OR GRAVEL. CONSTRUCTION SHALL MEET THE REQUIREMENTS OF ITEM 203.
 - TYPE B BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 2" ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH, OR FROZEN MATERIAL, COMPACTED TO 95% OF ITS MAXIMUM LABORATORY DRY WEIGHT.
 - TYPE C BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 6" ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH, OR FROZEN MATERIAL, COMPACTED TO 90% OF ITS MAXIMUM LABORATORY DRY WEIGHT. WHEN APPROVED BY THE ENGINEER, STONES NO LARGER THAN ONE CUBIC FOOT MAY BE DEPOSITED AT LEAST 3' ABOVE THE TOP OF THE PIPE.
 - THE EXCAVATED TRENCH WIDTH 12" ABOVE THE CONDUIT MAY BE INCREASED WITHOUT EXTRA COMPENSATION.
 - COVER OVER PIPE SHALL BE AS SPECIFIED ON PLANS. UNLESS OTHERWISE SPECIFIED, ROOF DRAINS SHALL HAVE 30" MIN. COVER AND SANITARY SEWER SERVICES SHALL HAVE 48" MIN. COVER.

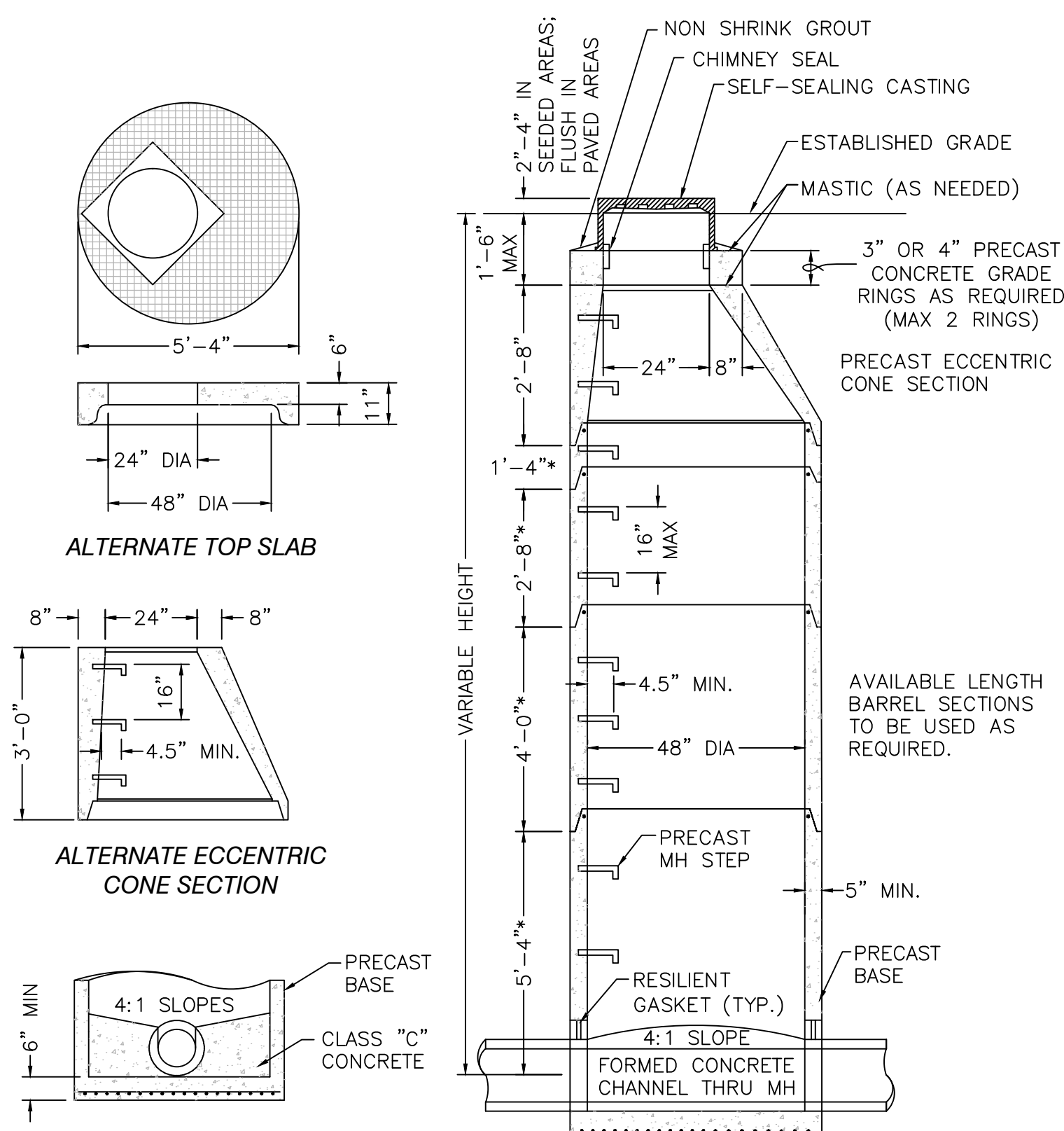


PRECAST DROP BARREL
PRECAST CENTER DROP
PRECAST BASE DROP

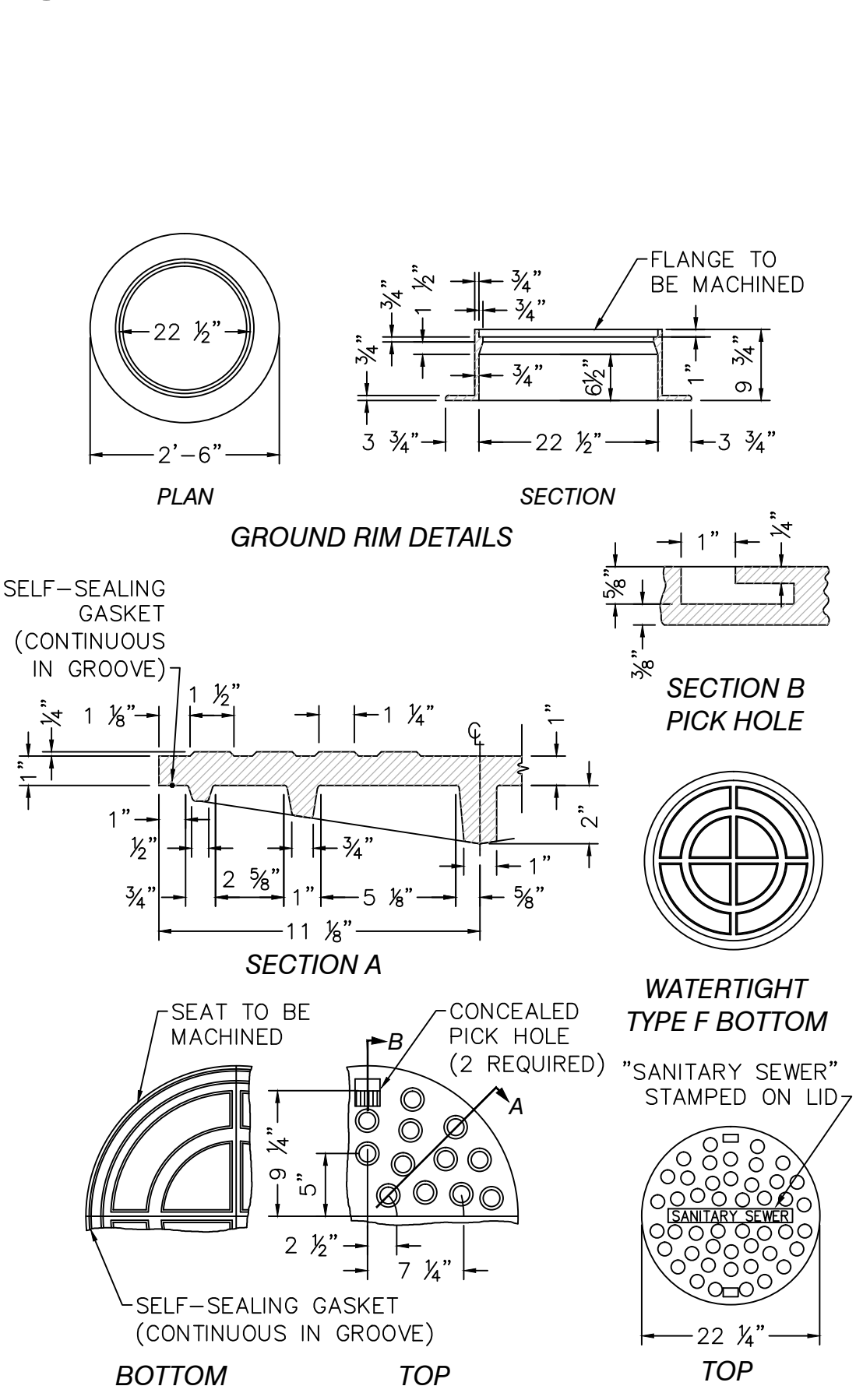
- NOTES:
- FOR SECTIONS ABOVE THE DROP BARREL SECTION, SEE PRE-CAST CONCRETE MANHOLE DETAIL, THIS SHEET.
 - SEWER PIPE SHALL BE SECURED THROUGH THE MANHOLE WALL BY KOR-N-SEAL BOOT, PRESS WEDGE II GASKET OR APPROVED EQUIVALENT MEETING C923.
 - ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM C-478-70 UNLESS OTHERWISE SHOWN.
 - FOR MANHOLE STEP SPACING AND DETAILS, SEE Sd.S.-5.



GRANULAR BACKFILL OF TRENCHES CROSSING ROADS
NOT TO SCALE



PRECAST CONCRETE MANHOLE (24" PIPE & UNDER)
NOT TO SCALE

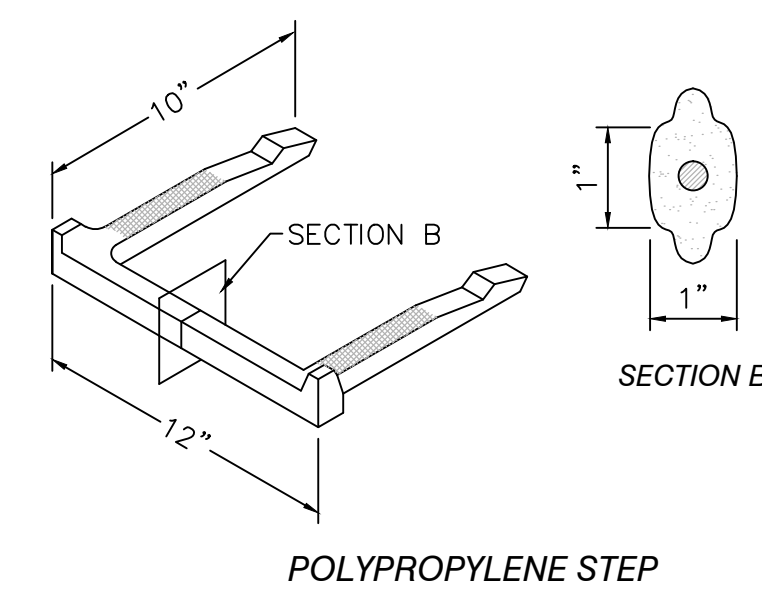


24" MANHOLE FRAME & COVER CASTINGS
NOT TO SCALE

- NOTES:
- SEWER PIPE SHALL BE SECURED THROUGH MANHOLE WALL IN ACCORDANCE WITH ASTM C923 BY KOR-N-SEAL BOOT, PRESS WEDGE II GASKET, OR AN APPROVED EQUIVALENT, MEETING ASTM C443.
 - ALL CONSTRUCTION & MATERIALS SHALL CONFORM TO ASTM C478 UNLESS OTHERWISE SHOWN.
 - ALL FIELD CUT OPENINGS SHALL BE DONE ONLY AS DIRECTED BY THE ENGINEER.
 - PRECAST CONCRETE GRADE RINGS WITH MASTIC, GROUTED IN PLACE, SHALL BE USED IF NEEDED BETWEEN THE SLAB OR CONE TOP & THE ACCESS FRAME CASTING & COVER. NO MANHOLE BRICK SHALL BE PERMITTED FOR USE.
 - WHEN SHOWN IN TRAFFIC AREAS, ALTERNATE TOP SLAB SHALL BE DESIGNED FOR TRAFFIC LOADINGS.
 - TOP OF CASTING SHALL BE FLUSH WITH FINAL GRADE IN PAVEMENT AREAS & 2" MIN. TO 4" MAX. ABOVE FINAL GRADE IN NON-PAVEMENT AREAS.
 - ALL MANHOLE SECTIONS SHALL BE SEALED USING A FLEXIBLE RUBBER GASKET IN ACCORDANCE WITH ASTM C443. MANHOLE SECTIONS CONCRETE GRADE RINGS & FRAME CASTINGS SHALL BE SEALED WITH CONSEAL CS-202 OR EQUIVALENT.

- NOTES:
- FRAMES & COVERS SHALL BE NEENAH R-1767 OR EAST JORDAN 1600 WITH SELF SEALING GASKET & CONCEALED PICK-HOLE COVERS OR APPROVED EQUAL UNLESS BOLT DOWN WATER TIGHT FRAME & COVERS ARE SPECIFIED.
 - BOLT DOWN WATERTIGHT LIDS REQUIRED ON ALL MANHOLES LOCATED IN GRASSY FLOOD PLAIN OR FLOODPRONE AREAS. USE NEENAH R-1915-H OR EAST JORDAN IRON WORKS V-2358 WATERTIGHT FRAME WITH BOLTED LIDS MARKED "SANITARY SEWER".
 - FOUNDRY NAME SHALL BE CAST ON UNDERSIDE OR UNEXPOSED SURFACE OF BOTH LID & GROUND RIM

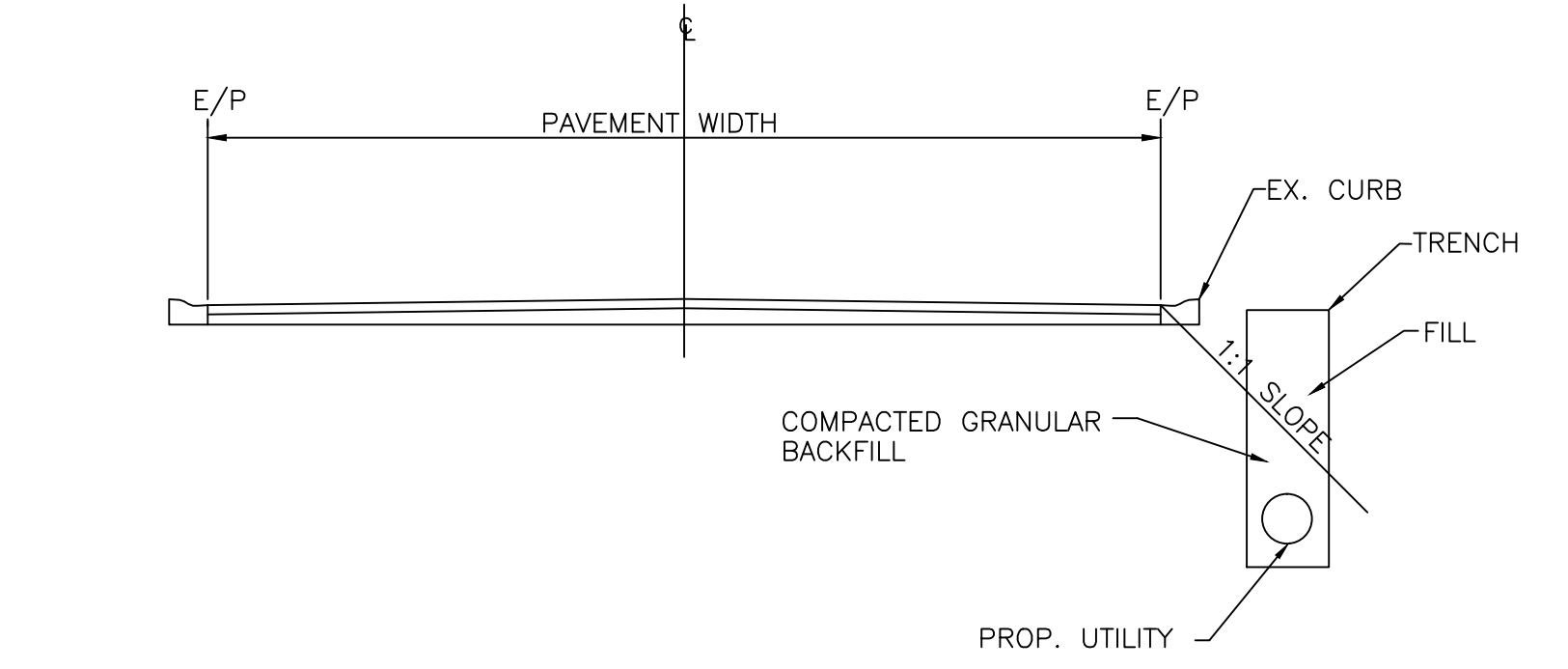
DROP MANHOLE
NOT TO SCALE



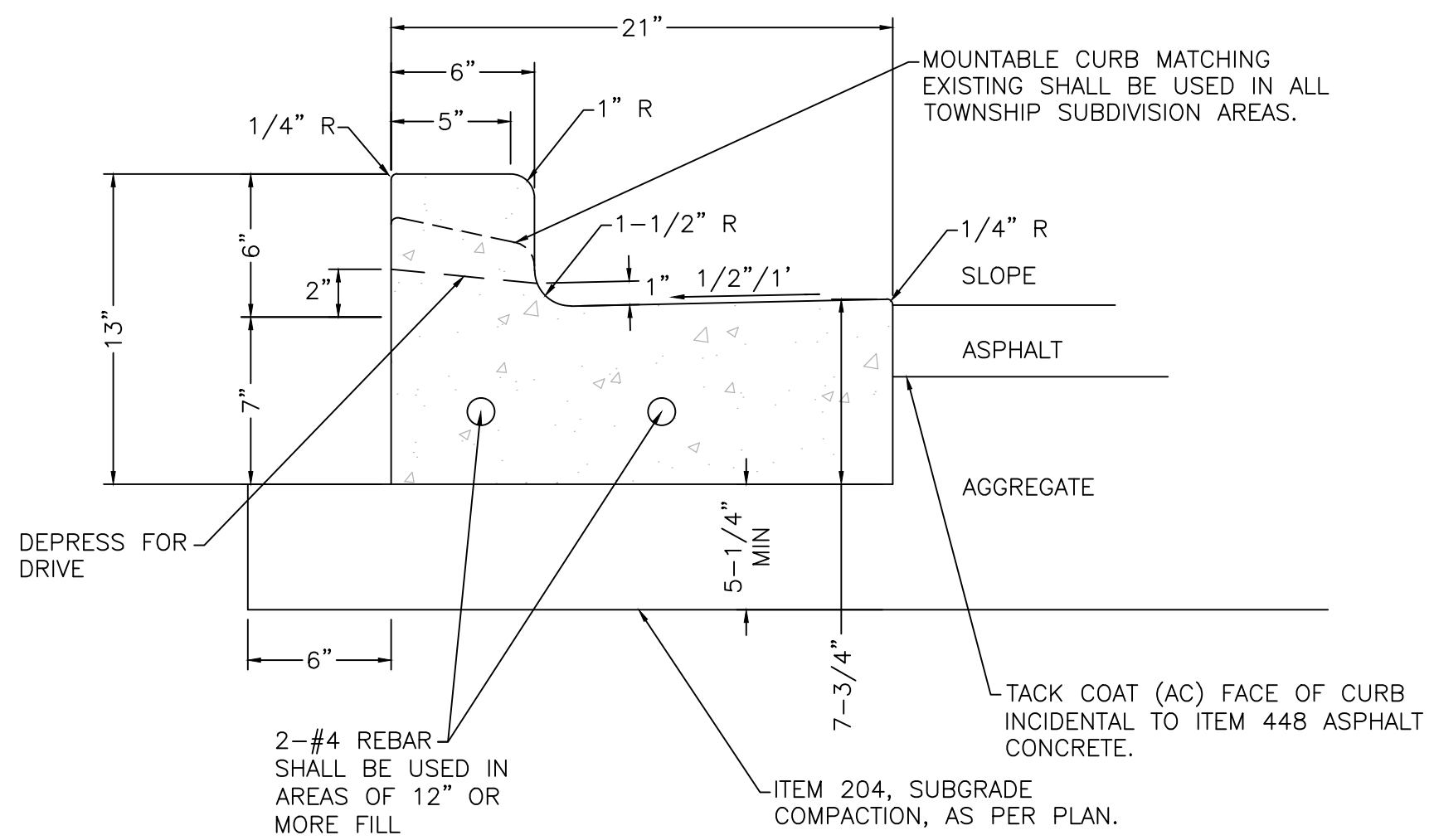
MANHOLE STEPS
NOT TO SCALE

STEPS SHALL BE POLYPROPYLENE CAREFULLY DRIVEN INTO THE BARREL BY PRESSURE OR VIBRATION BEFORE INITIAL SET OCCURS, OR CAST IN PLACE.

NOTE: CONTRACTOR REGISTRATION REQUIRED FOR ALL WORK IN TIPP CITY R/W.



GRANULAR BACKFILL OF TRENCHES PARALLEL TO ROADS
NOT TO SCALE



TIPP CITY (ONLY) TYPE 1 COMBINATION CURB & GUTTER
NOT TO SCALE

EXISTING CONDITIONS: THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS WORK AND HE MUST CONSIDER SAME AS PART OF HIS BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR'S FAILURE TO BECOME AWARE OF EXISTING CONDITIONS.

CODES: ALL ELECTRICAL WORK FOR THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL ELECTRIC CODE (NEC) AND ALL STATE AND LOCAL CODES. SAID CODES SHALL BE CONSIDERED THE MINIMUM STANDARD FOR MATERIALS AND METHODS NOT OTHERWISE COVERED IN THIS SPECIFICATIONS.

GROUNDING: GROUND ALL ELECTRICAL EQUIPMENT FURNISHED OR CONNECTED UNDER THIS CONTRACT IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. SIZE ALL GROUNDING CONDUCTORS AS REQUIRED BY THE APPROPRIATE TABLES IN SAID ARTICLE.

CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT. RIGID GALVANIZED STEEL CONDUIT SHALL BE USED FOR ABOVE GRADE WIRING AND SCHEDULE 40 PVC MAY BE USED FOR WIRING INSTALLED BELOW GRADE.

WIRE: ALL WIRE SHALL BE STRANDED COPPER WITH THHN INSULATION. CONDUCTORS SIZES SHALL BE SELECTED SO THAT THE MAXIMUM VOLTAGE DROP DOES NOT EXCEED 3% OF THE NOMINAL SERVICE VOLTAGE FOR THE ENTIRE LENGTH OF THE CIRCUIT INVOLVED. CALCULATIONS SHALL BE BASED ON RESISTANCE VALUES STATED IN CHAPTER 9 OF NEC.

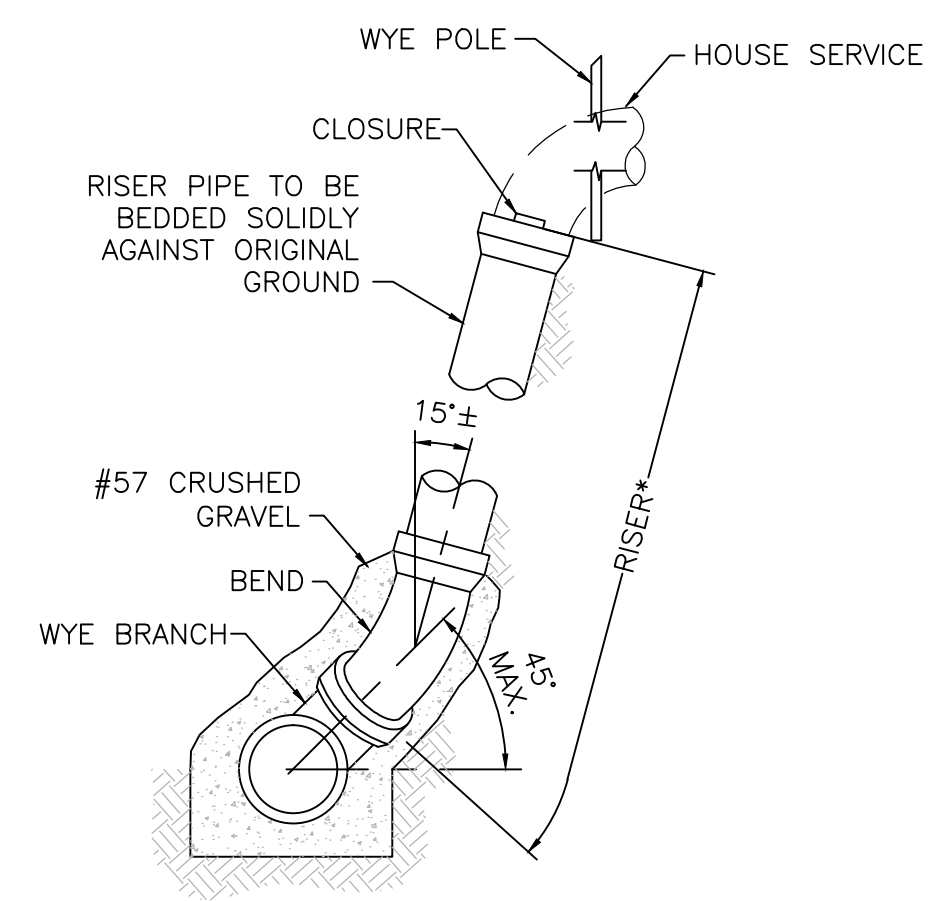
SERVICE DISCONNECT: FURNISH AND INSTALL A SERVICE ENTRANCE RATED (PER ARTICLE 230-66 NEC), NEMA 3R, FUSED DISCONNECT SWITCH AT THE METERING MANHOLE SITE. PROVIDE ONE CLASS RK-5 AND ONE ADDITIONAL SPARE FUSE FOR EACH FUSE HOLDER IN SAID DISCONNECT. SERVICE DISCONNECT AND FUSES SHALL BE SIZED APPROPRIATELY FOR THE VOLTAGE AND LOAD TO WHICH THEY ARE CONNECTED. FUSES SHALL COMPLY WITH OTHER REQUIREMENTS LISTED IN THIS SPECIFICATION. A SURGE ARRESTER SHALL BE INSTALLED ON THE LOAD SIDE OF SERVICE ENTRANCE DISCONNECT. THE SERVICE DISCONNECT SHALL BE PADLOCKABLE IN THE OFF AND ON POSITION.

AID IN CONSTRUCTION: THE OWNER WILL PAY FOR ANY AID IN CONSTRUCTION COSTS REQUIRED BY THE LOCAL UTILITY COMPANIES. **TERMINAL BOX:** PROVIDE A STAINLESS STEEL NEMA 4X TERMINAL BOX, COMPLETE WITH PROPERLY SIZED TERMINALS, ABOVE AND OUTSIDE OF THE MANHOLE EXTEND CORD, IN CONDUIT, TO SAID TERMINAL BOX. PROVIDE SEAL FITTINGS AND SEAL ALL CONDUITS TO PREVENT PASSAGE OF GASSES FROM THE WETWELL.

FUSES: PROVIDE AND INSTALL CLASS RK-5 FUSES FOR EACH FUSED DISCONNECT. FUSES SHALL BE SIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. PROVIDE 3 SPARE FUSES OF EACH SIZE INSTALLED AND DELIVER SAME TO THE OWNER'S REPRESENTATIVE.

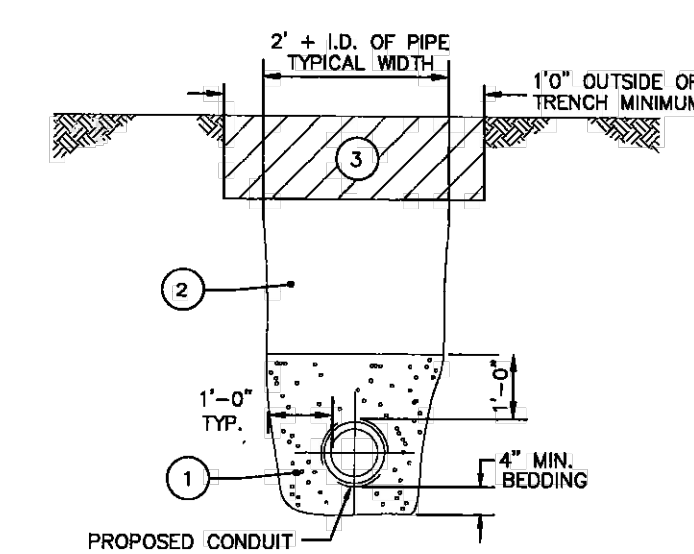
FASTENERS AND HARDWARE: ALL EXTERIOR FASTENERS AND HARDWARE FOR THIS INSTALLATION SHALL BE STAINLESS STEEL. USE STAINLESS STEEL OR ALUMINUM UNISTRUT OR EQUAL FOR EQUAL FOR THE DISCONNECT AT THE MANHOLE SITE. THE USE OF PERFORATED AND/OR PAINTED STRUCTURAL MATERIALS IS PROHIBITED.

PERMITS: CONTRACTOR TO OBTAIN ALL NECESSARY STATE AND LOCAL PERMITS. (STRUCTURAL, ELECTRICAL, ECT.)



*PRICE BID PER LINEAL FOOT OF RISER PIPE SHALL INCLUDE ALL LABOR & MATERIAL BETWEEN THESE POINTS

RISER PIPE
NOT TO SCALE



GRANULAR MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS. FOR GRANULAR EMBANKMENT AND STRUCTURAL BACKFILL, COMPACT EACH LIFT OF MATERIAL USING MECHANICAL DEVICES, HOE RAMS, JUMPING JACKS, HAND DEVICES, VIBRATING PLATES, OR OTHER SIMILAR EQUIPMENT. COMPACTION REQUIREMENTS SHALL BE 98% OF STANDARD PROCTOR CURVE.

LOW STRENGTH MORTAR BACKFILL SHALL BE FURNISHED AND PLACED AS PER ODOT ITEM 613.

ALL TRENCH EDGES NOT WITHIN THE STREET RIGHT-OF-WAY, CAN BE BACKFILLED WITH CLEAN NATIVE MATERIAL COMPACTED IN 12 INCH LIFTS. MATERIAL SHALL BE COMPACTED TO 85% OF THE ORIGINAL COMPACTION. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS GRANULAR MATERIAL, ROCK OR STONE GREATER THAN 4 INCHES IN DIAMETER.

3. PAVEMENT RESTORATION

IN PAVED AREAS WITHIN THE STREET RIGHT-OF-WAY THE PAVEMENT AND AGGREGATE BASE COMPOSITION SHALL BE PROVIDED EQUAL TO THE EXISTING PAVEMENT BUT IN NO CASE SHALL THE COMPOSITION BE LESS THAN THE FOLLOWING:

- 1-1/2" OF ODOT ITEM 448 SURFACE COURSE, TYPE 1
- 2-1/2" OF ODOT ITEM 448 INTERMEDIATE COURSE, TYPE 2
- 10" OF ODOT ITEM 304 AGGREGATE BASE

IN ALLEYS AND DRIVEWAYS OUTSIDE OF THE STREET RIGHT-OF-WAY THE REPLACEMENT OF PAVEMENT AND/OR AGGREGATE SHALL BE EQUAL TO THE EXISTING ALLEYWAY OR DRIVEWAY COMPOSITION. IF THE PERMANENT ASPHALT CANNOT BE APPLIED WITHIN 48 HOURS OF THE INITIAL REPAIR, ODOT ITEM 405 OR GOLD PATCH SHALL BE APPLIED TO THE TRENCH SURFACE. MINIMUM THICKNESS OF THE GOLD PATCH MATERIAL SHALL BE 3 INCHES. SAID MATERIAL SHALL BE REMOVED PRIOR TO THE PLACEMENT OF ODOT ITEM 448, UNLESS OTHERWISE APPROVED.

CONCRETE RESTORATION

ALL CONCRETE DRIVEWAYS, DRIVE APPROACHES, AND SIDEWALKS WITHIN THE STREET RIGHT-OF-WAY, SHALL BE REPLACED WITH THE FOLLOWING:

SIDEWALKS --- MINIMUM THICKNESS OF 4" INCHES OF CONCRETE

- MATCH ORIGINAL WIDTH OF SIDEWALK
- MINIMUM WIDTH OF 4' REQUIRED

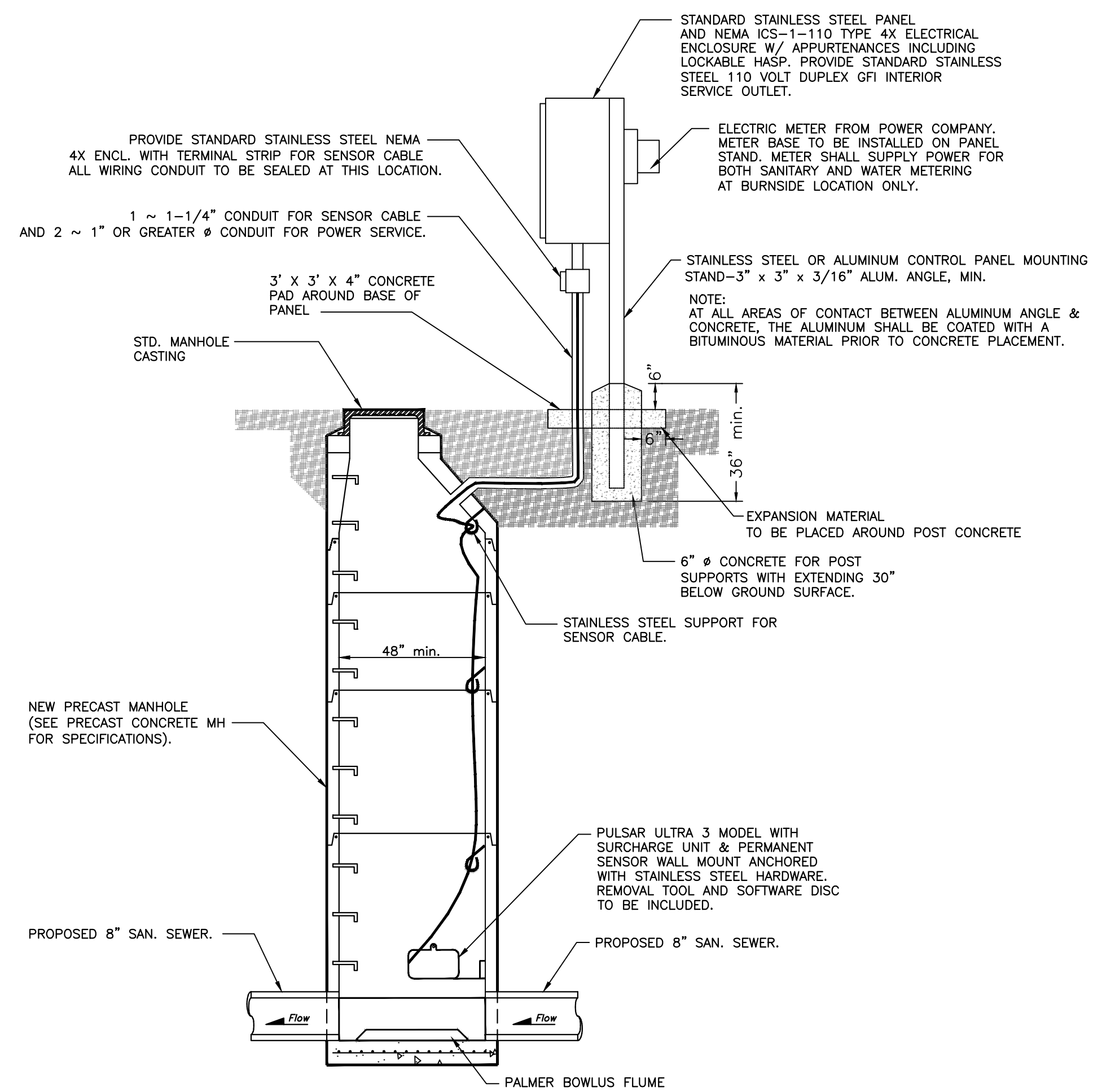
DRIVEWAYS AND DRIVE APPROACHES:

- RESIDENTIAL: MINIMUM THICKNESS OF 6" OF CONCRETE
- BUSINESS & INDUSTRIAL: MINIMUM THICKNESS OF 8" OF CONCRETE

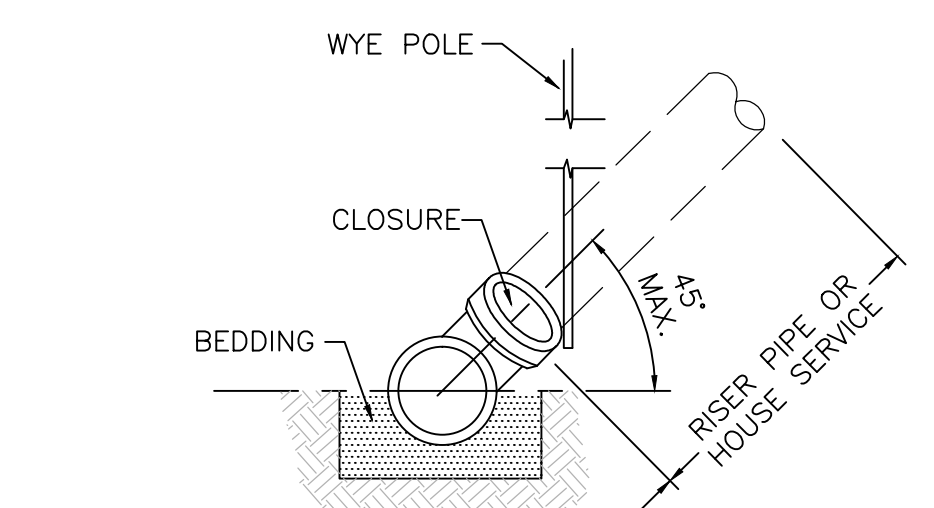
COMPACTION GUIDELINES

THE CONTRACTOR MAY OPERATE SMALL COMPACTION EQUIPMENT WITH LESS THAN A TOTAL WEIGHT OF 1 TON OVER THE CONDUIT TO COMPACT THE BACKFILL. DO NOT USE HOE RAMS ON TOP OF THE CONDUIT UNTIL 2" OF BACKFILL IS COMPACTED ON TOP OF THE CONDUIT. THE CONTRACTOR MAY OPERATE COMPACTION EQUIPMENT WITH LESS THAN A TOTAL WEIGHT OF 8 TONS, BUT MORE THAN 1 TON, OVER THE CONDUIT AFTER PLACING AND COMPACTING 2" OF BACKFILL. DO NOT OPERATE EQUIPMENT WITH A TOTAL WEIGHT OF 8 TONS OR MORE UNTIL PLACING AND COMPACTING A COVER OF 4" OVER THE TOP OF THE CONDUIT. THE ABOVE RESTRICTIONS APPLY WHEN WORKING WITHIN ONE SPAN ON EACH SIDE OF THE CONDUIT, OR 6', WHICHEVER IS LESS.

ALL TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED IMMEDIATELY AFTER THE PLACEMENT OF THE CONDUIT, UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER. UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE CONDUIT HAS BEEN PLACED.

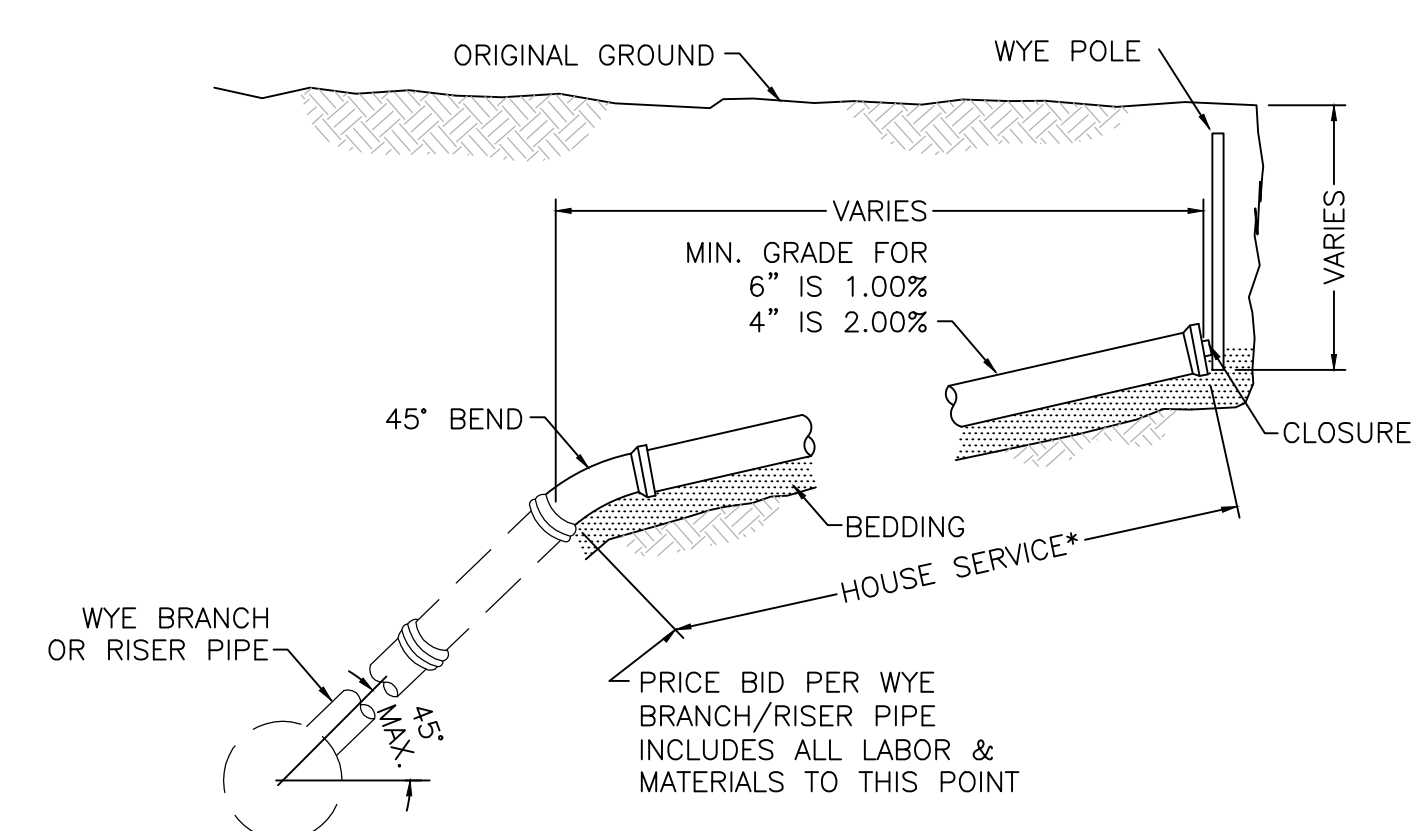


FLOW METER DETAIL
NOT TO SCALE



PRICE BID PER WYE BRANCH INCLUDES ALL LABOR & MATERIALS TO THIS POINT

WYE BRANCH
NOT TO SCALE



*PRICE BID PER LINEAL FOOT OF HOUSE SERVICE SHALL INCLUDE ALL LABOR & MATERIAL BETWEEN THESE POINTS

HOUSE SERVICE
NOT TO SCALE

1. BEDDING

GRANULAR BEDDING MATERIAL SHALL BE CRUSHED STONE OR GRAVEL COMPLYING WITH ODOT ITEM 603 TYPE 2 BEDDING (#57 OR #41). BEDDING SHALL EXTEND 4" BELOW THE CONDUIT. BEDDING MATERIAL SHALL EXTEND 12" ABOVE THE TOP AND TO EACH SIDE OF THE CONDUIT. USE SHOVEL, SLICING AND SPUD BARS IN CONJUNCTION WITH THE COMPACTION OPERATIONS TO COMPACT THE MATERIAL AND TO MANIPULATE THE MATERIAL UNDER THE HAUNCH OF THE PIPE.

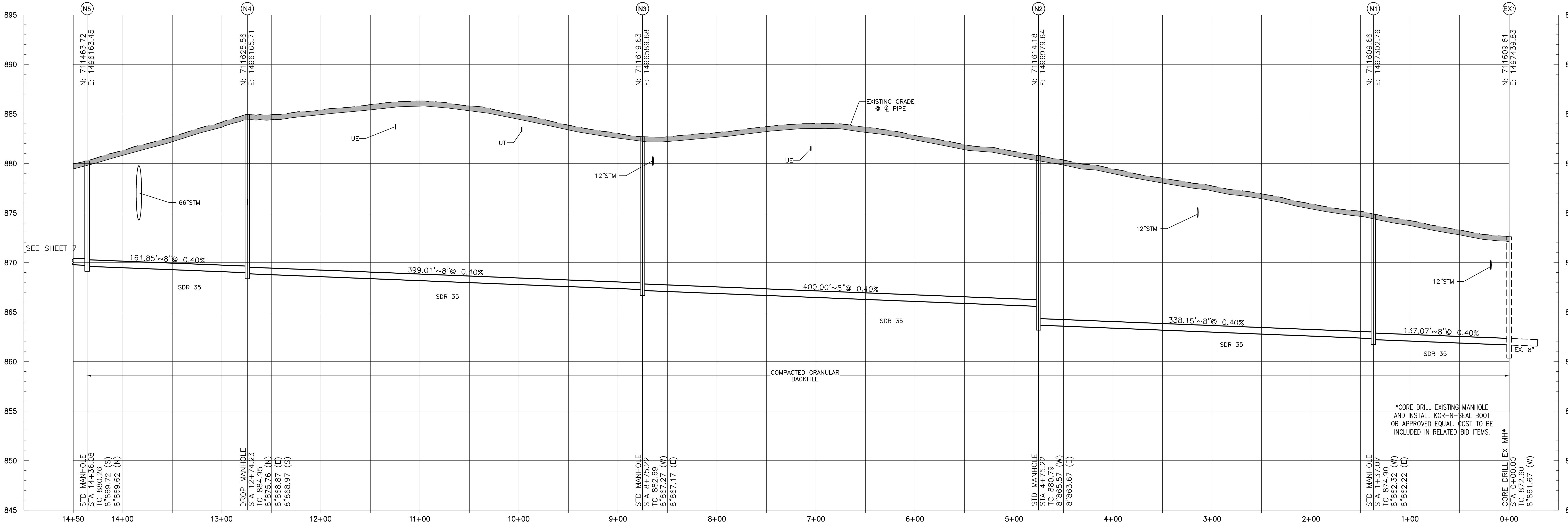
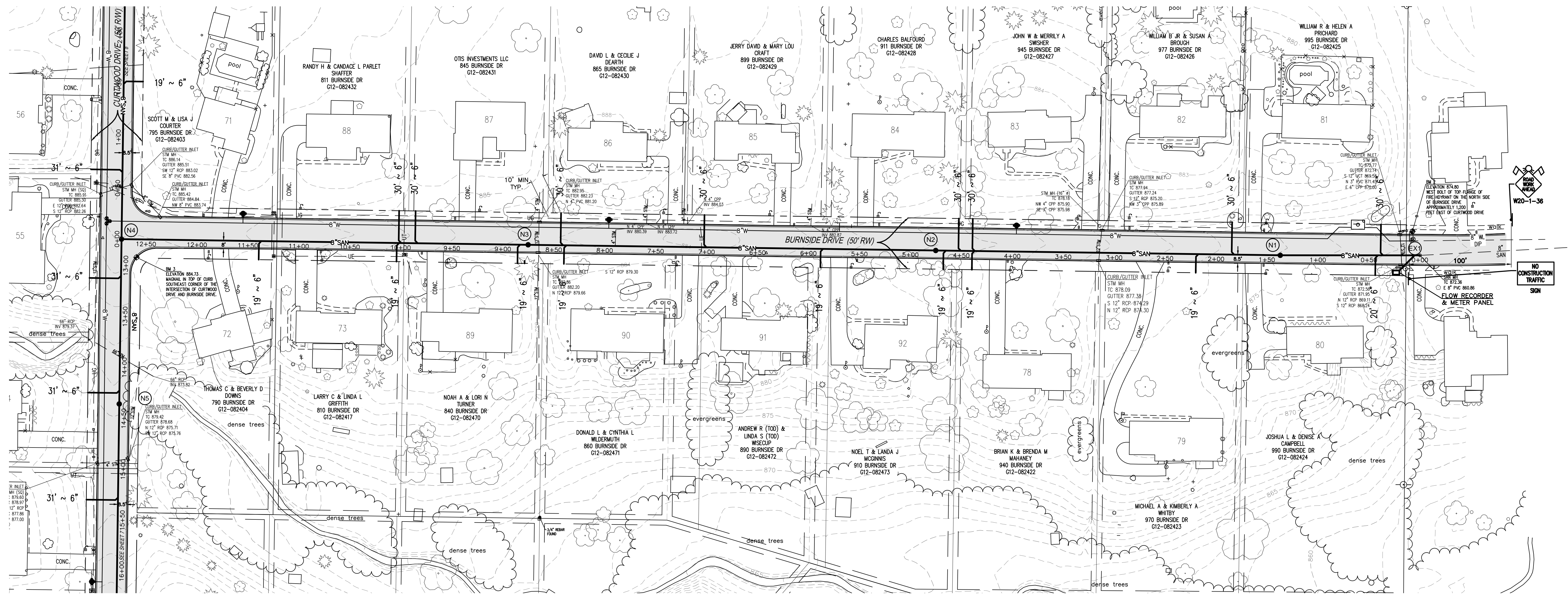
2. BACKFILL

ALL TRENCH EDGES WITHIN THE STREET RIGHT-OF-WAY, SHALL BE BACKFILLED WITH EITHER ODOT ITEM 603 GRANULAR BACKFILL MATERIAL (#304, #41) OR ODOT ITEM 613 LOW STRENGTH MORTAR BACKFILL, AS DIRECTED BY THE CITY.

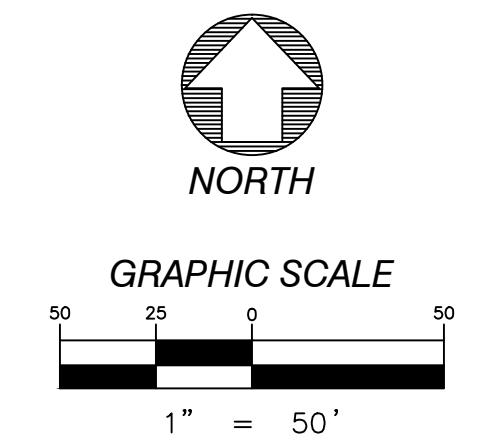
**TIPP CITY STREET REPAIR
DETAIL AND NOTES**
NOT TO SCALE

MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL BE 8"x6" WYES WITH 6" SERVICE PIPE AT 2.08% MIN. SLOPE.

ALL SIGNS TO BE PLACED WITHIN THE R/W.



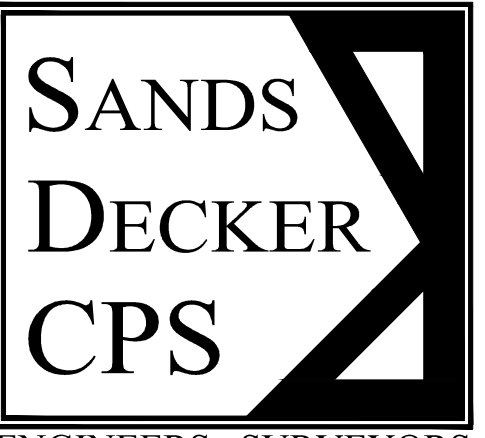
OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG (NON MEMBERS MUST BE CALLED DIRECTLY)



COUNTRY ESTATES EAST SANITARY SEWER IMPROVEMENTS

- 02-09-15 PRELIMINARY
- 08-07-15 BACKCHECK
- 02-26-16 BACKCHECK 2
- 03-30-16 BACKCHECK 3
- 04-29-16 BACKCHECK 4

PLAN & PROFILE MH EX1 TO MH N5



ENGINEERS • SURVEYORS

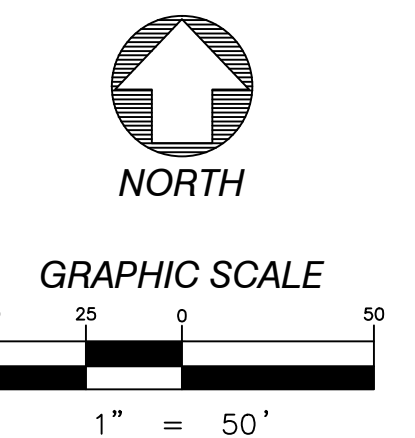
128 EAST MAIN ST
PO BOX 188
LOGAN, OH 43138
740-385-2140

1495 OLD HENDERSON RD
COLUMBUS, OH 43220
614-459-6992

507 MAIN STREET, SUITE 203
ZANESVILLE, OH 43701
740-450-1640

FAX: 614-459-6987
TOLL FREE: 866-277-0600

MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL
BE 8"x6" WYES WITH 6" SERVICE PIPE
AT 2.08% MIN. SLOPE.



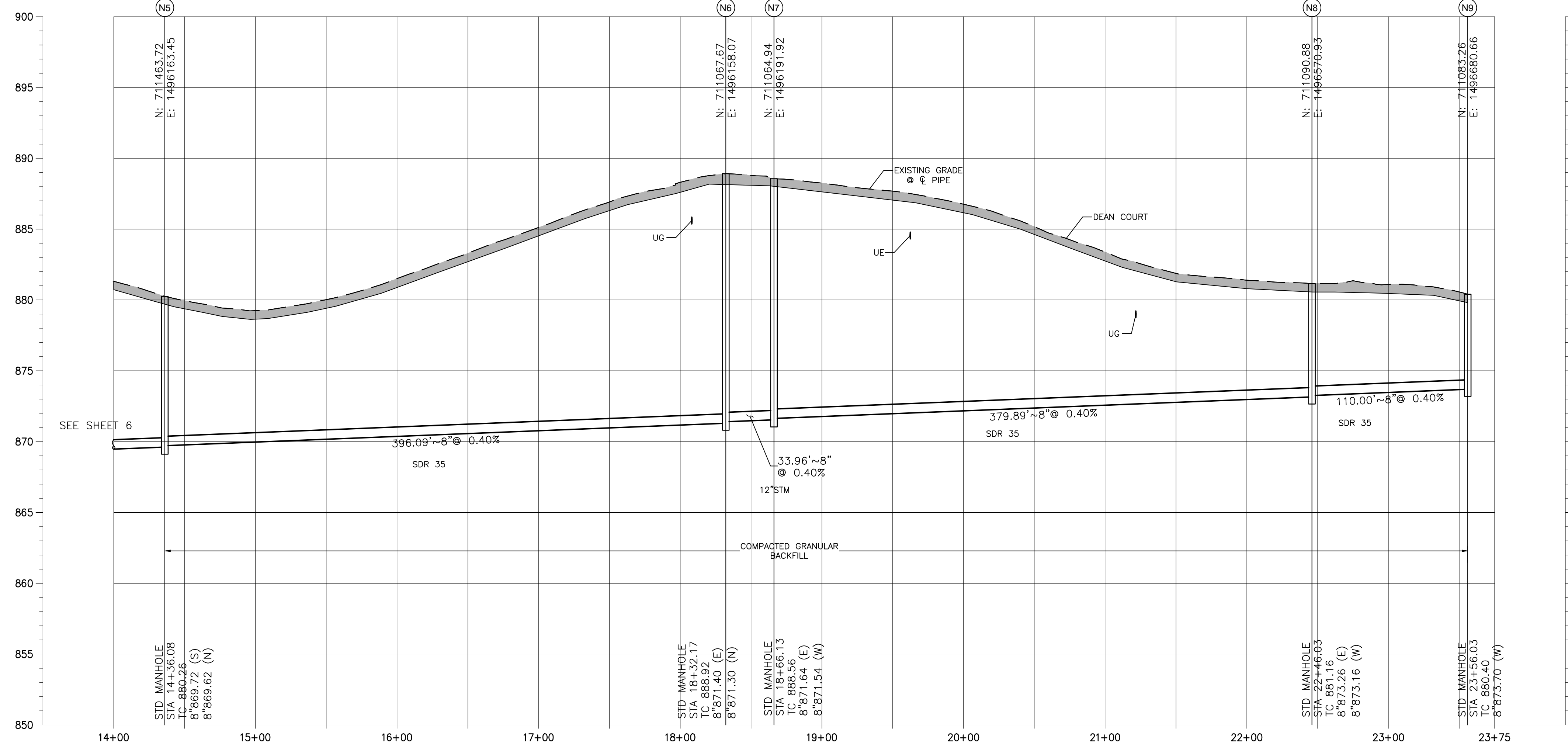
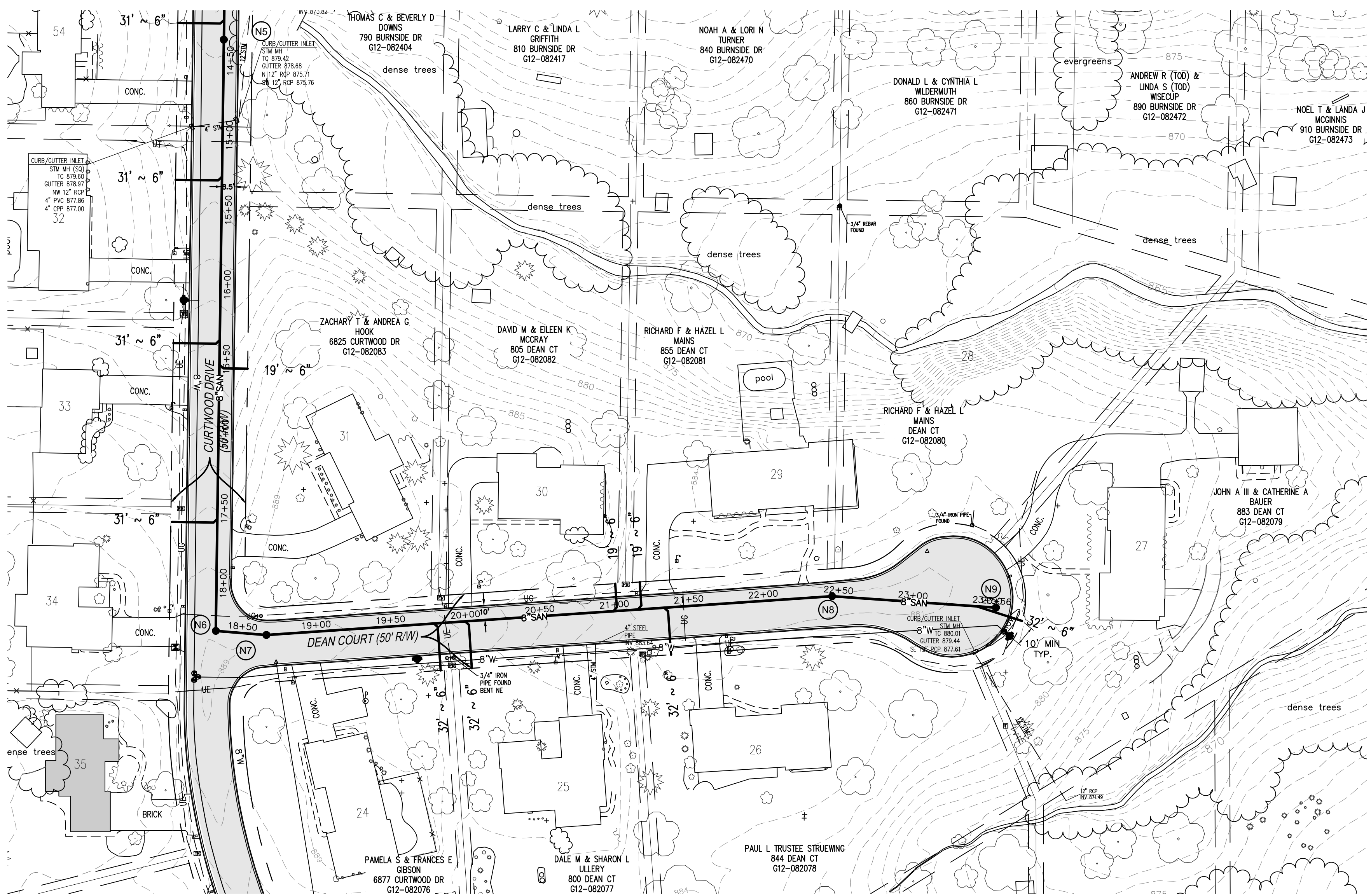
**COUNTRY
ESTATES EAST
SANITARY SEWER
IMPROVEMENTS**

02-09-15 PRELIMINARY
08-07-15 BACKCHECK
02-26-16 BACKCHECK 2
03-30-16 BACKCHECK 3
04-29-16 BACKCHECK 4

**PLAN & PROFILE
MH N5 TO MH N8**

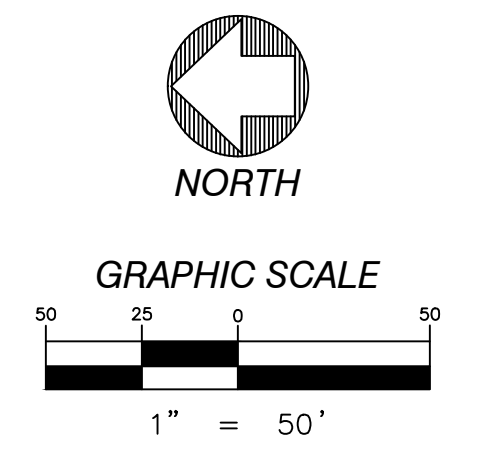
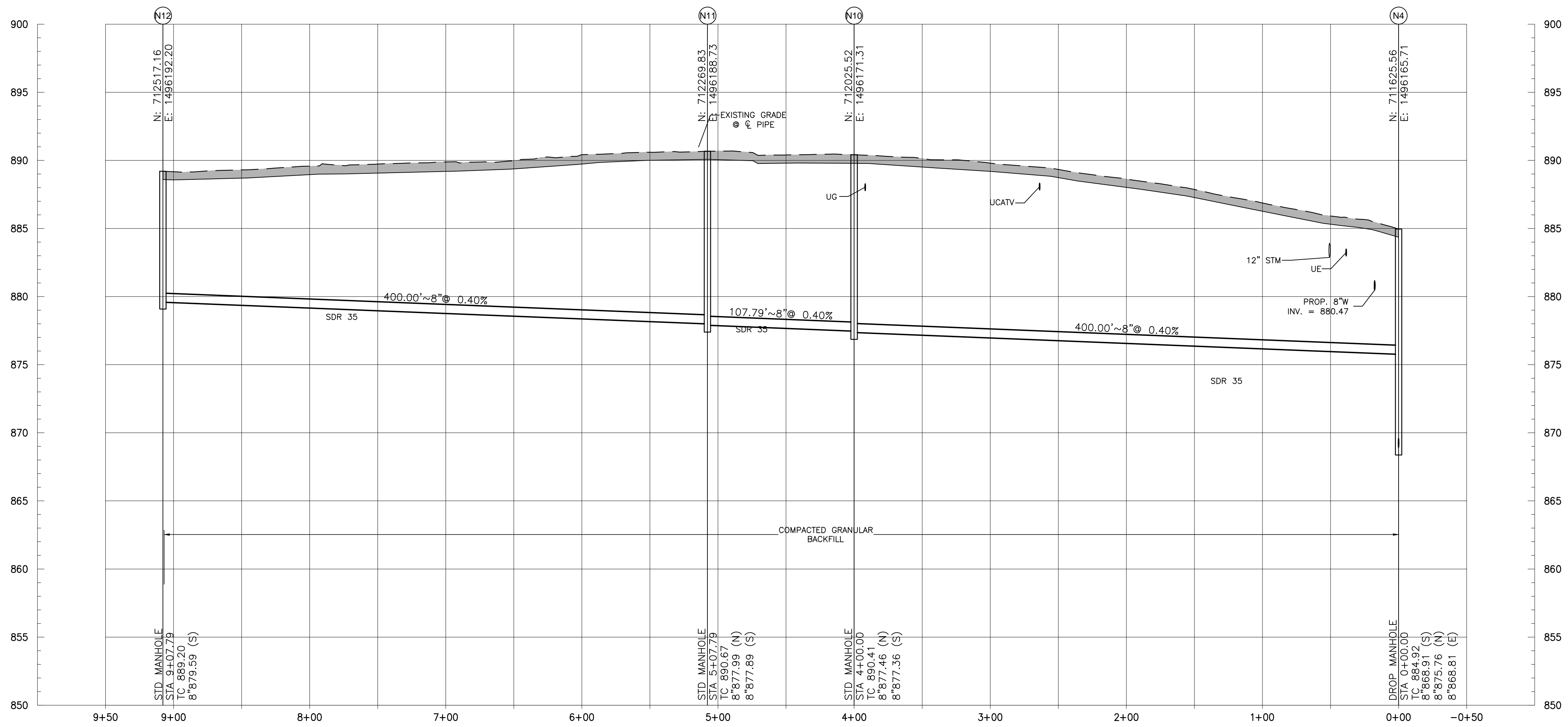
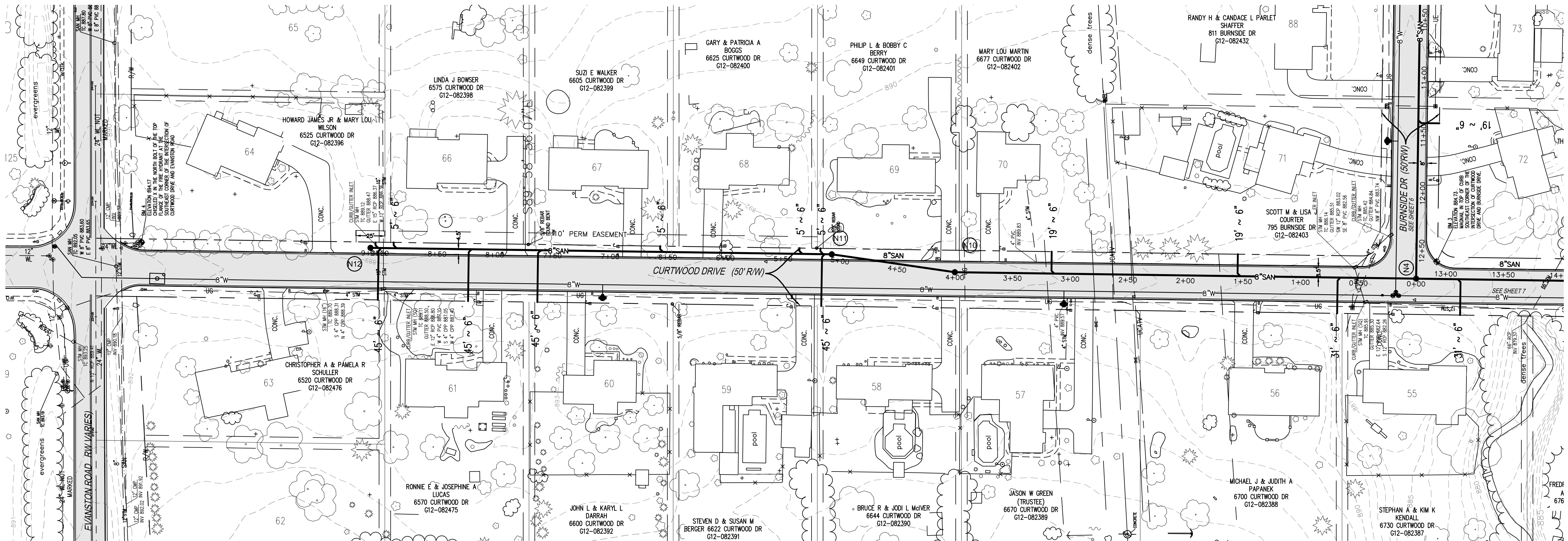
7

SDCPS PROJECT NO. 2772



MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL
BE 8"x6" WYES WITH 6" SERVICE PIPE
AT 2.08% MIN. SLOPE.

ADDRESSES 6600, 6622, & 6670
CURTWOOD DRIVE ARE SERVED FROM
EXISTING SAN. SEWER TO REAR OF LOTS.

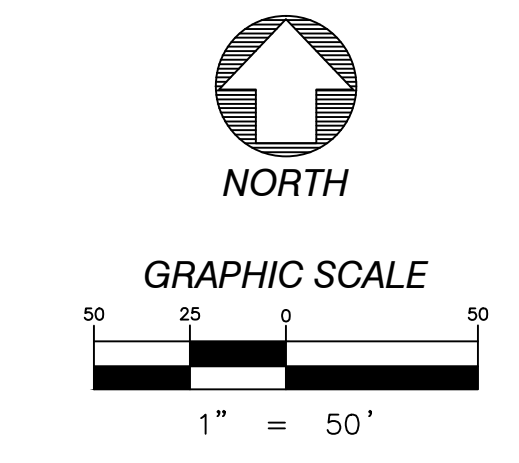


**COUNTRY
ESTATES EAST
SANITARY SEWER
IMPROVEMENTS**

- 02-09-15 PRELIMINARY
- 08-07-15 BACKCHECK
- 02-26-16 BACKCHECK 2
- 03-30-16 BACKCHECK 3
- 04-29-16 BACKCHECK 4

**PLAN & PROFILE
MH N4 TO MH N11**

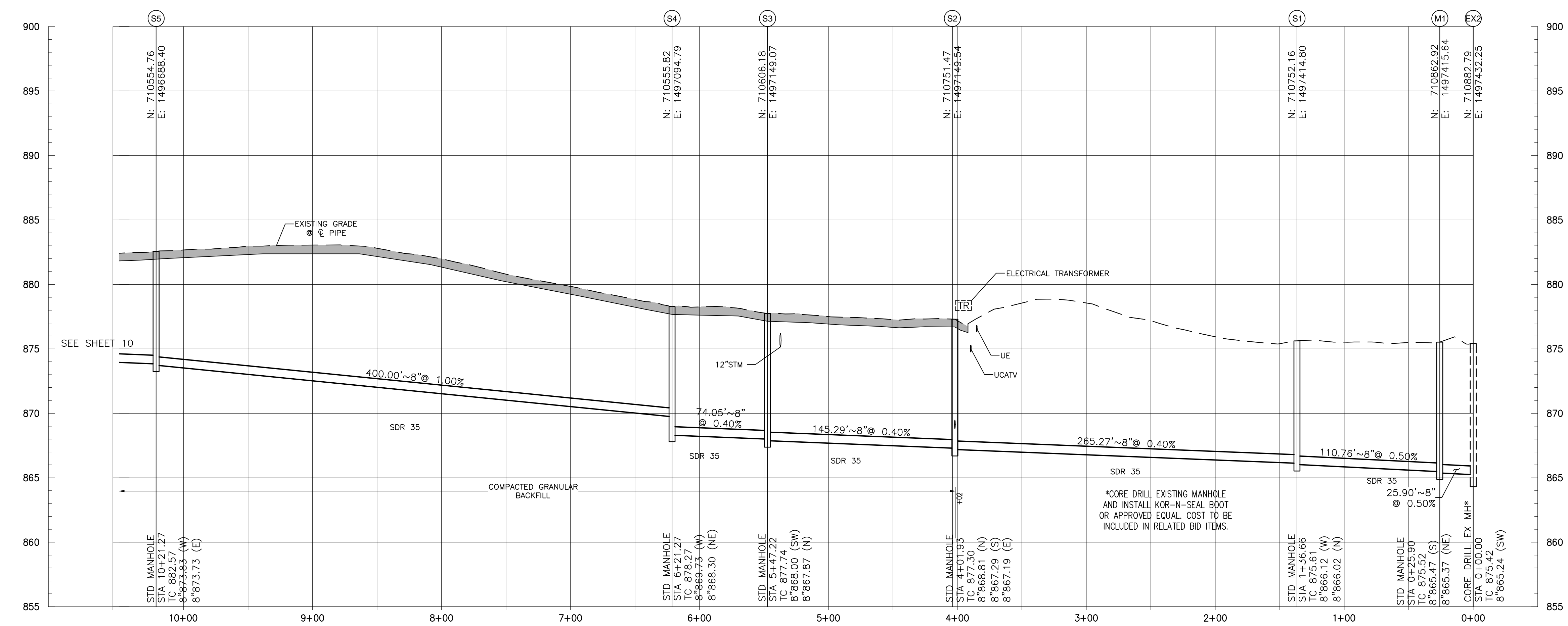
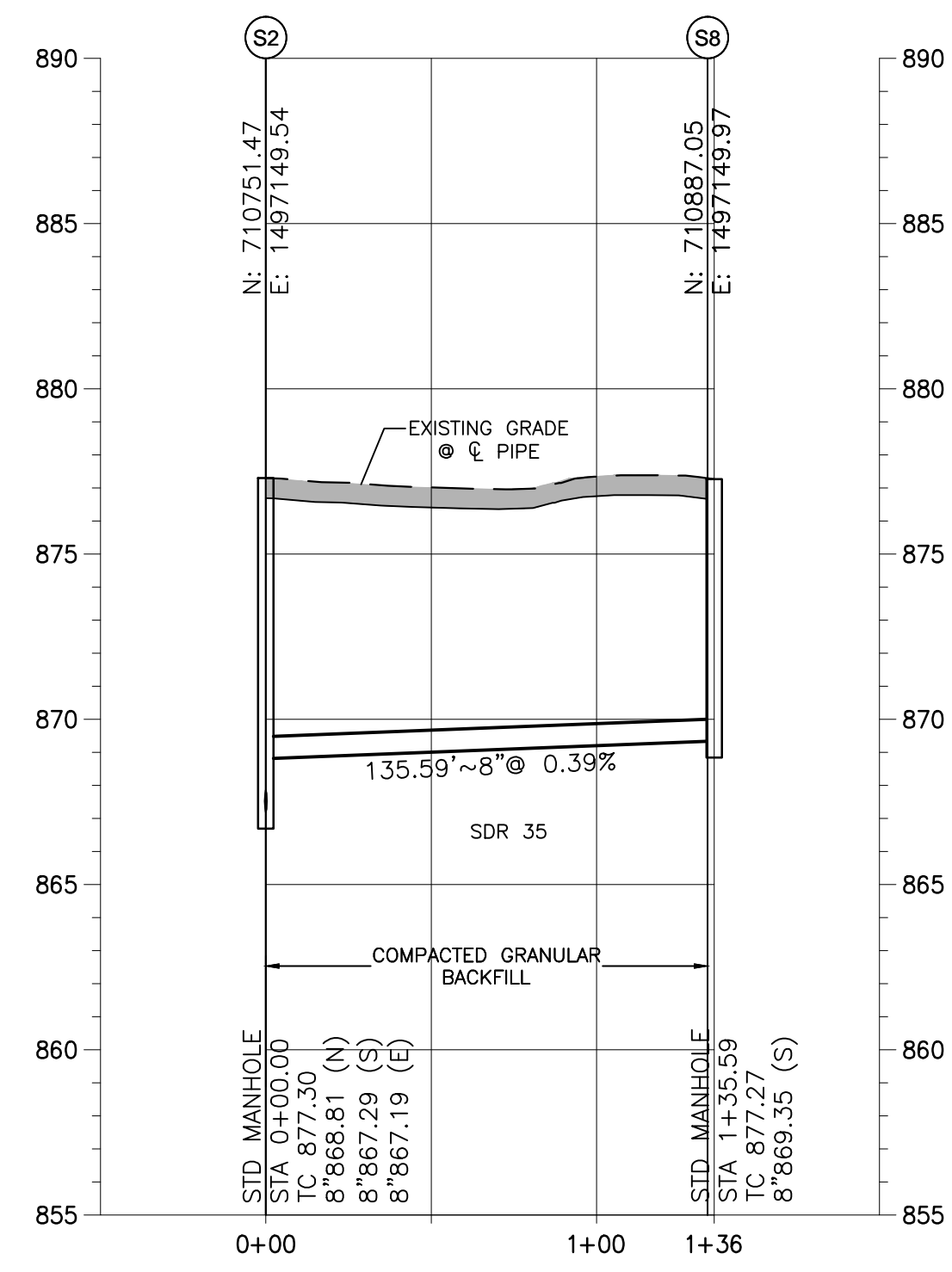
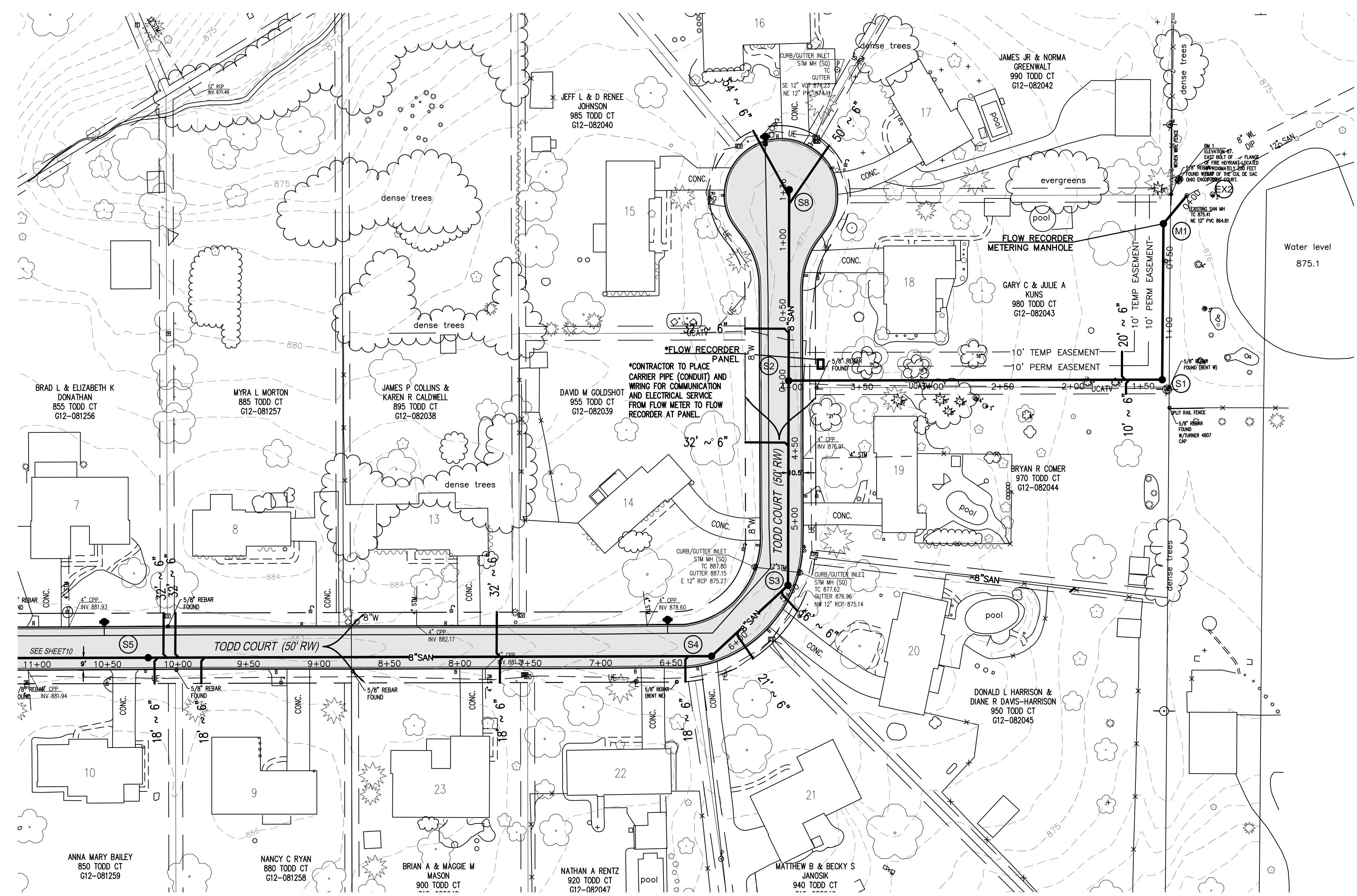
MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL BE 8"x6" WYES WITH 6" SERVICE PIPE AT 2.08% MIN. SLOPE.



COUNTRY ESTATES EAST SANITARY SEWER IMPROVEMENTS

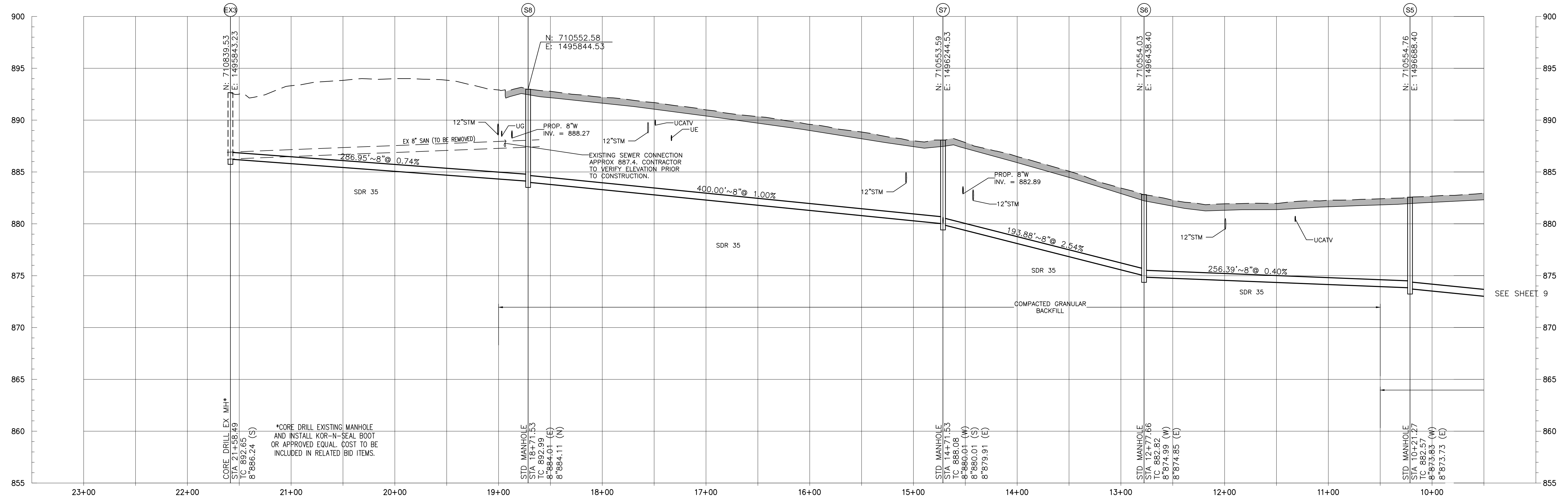
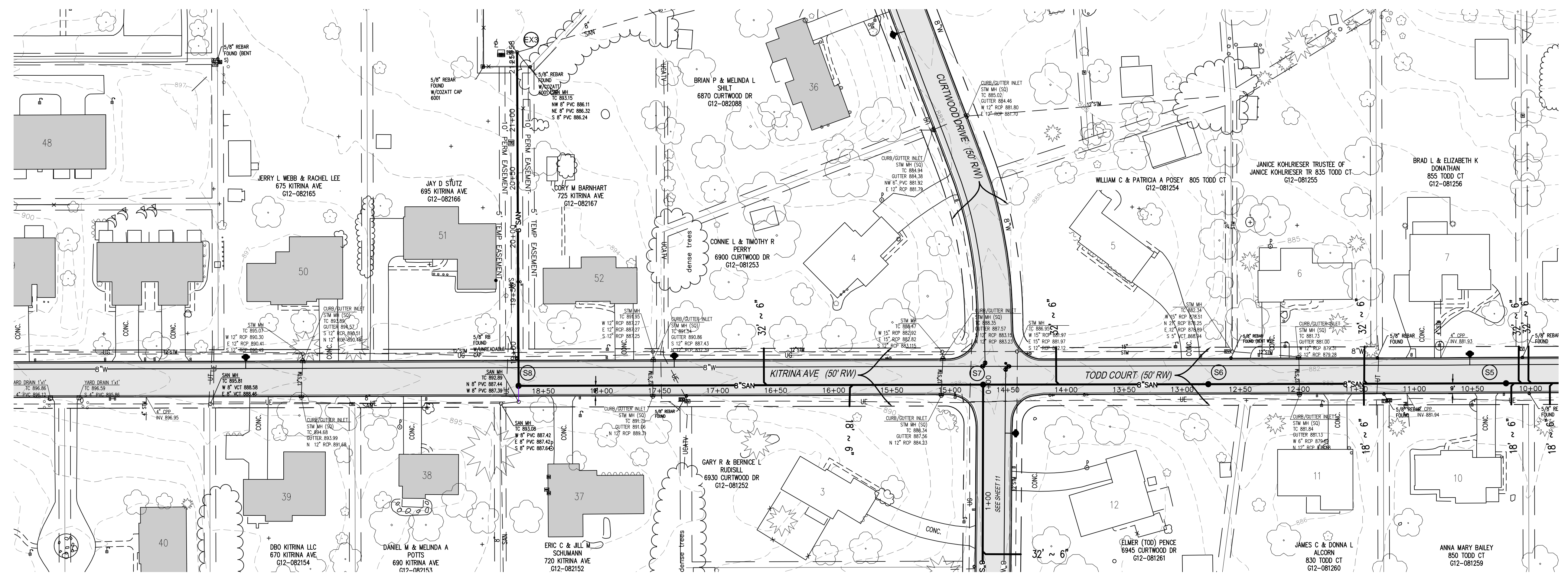
02-09-15 PRELIMINARY
08-07-15 BACKCHECK 1
02-26-16 BACKCHECK 2
03-30-16 BACKCHECK 3
04-29-16 BACKCHECK 4

PLAN & PROFILE MH EX2 TO MH S4 & MH S2 TO MH S8

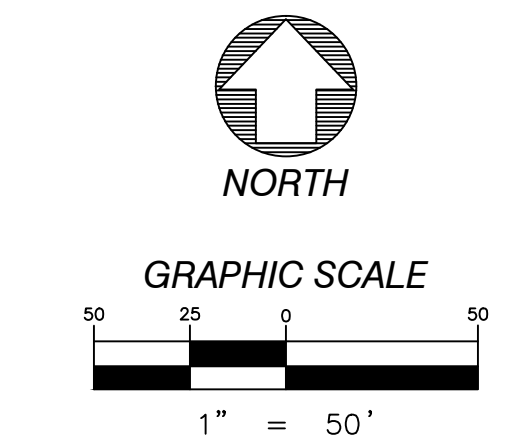


MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL
BE 8"X6" WYES WITH 6" SERVICE PIPE
AT 2.08% MIN. SLOPE.

CONTRACTOR TO PROVIDE TEMPORARY
SANITARY SERVICE FOR ALL FLOW
DURING CONSTRUCTION OF SANITARY
LINE S7 TO EX3



**OHIO
Utilities Protection
SERVICE**
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

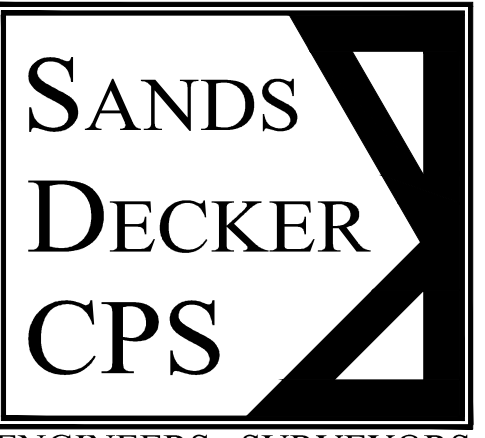


**COUNTRY
ESTATES EAST
WATER AND
SANITARY SEWER
IMPROVEMENTS**

02-09-15 PRELIMINARY
08-07-15 BACKCHECK
02-26-16 BACKCHECK 2
03-30-16 BACKCHECK 3
04-29-16 BACKCHECK 4

**PLAN & PROFILE
MH S4 TO MH EX3**

10
SDCPS PROJECT NO. 2772



ENGINEERS • SURVEYORS

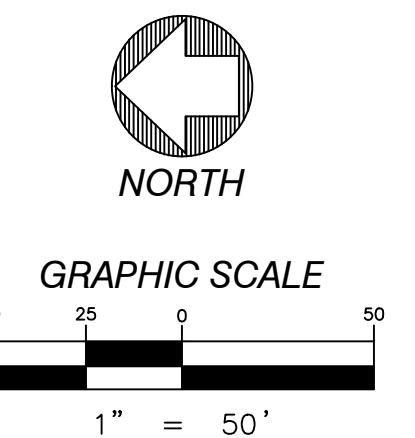
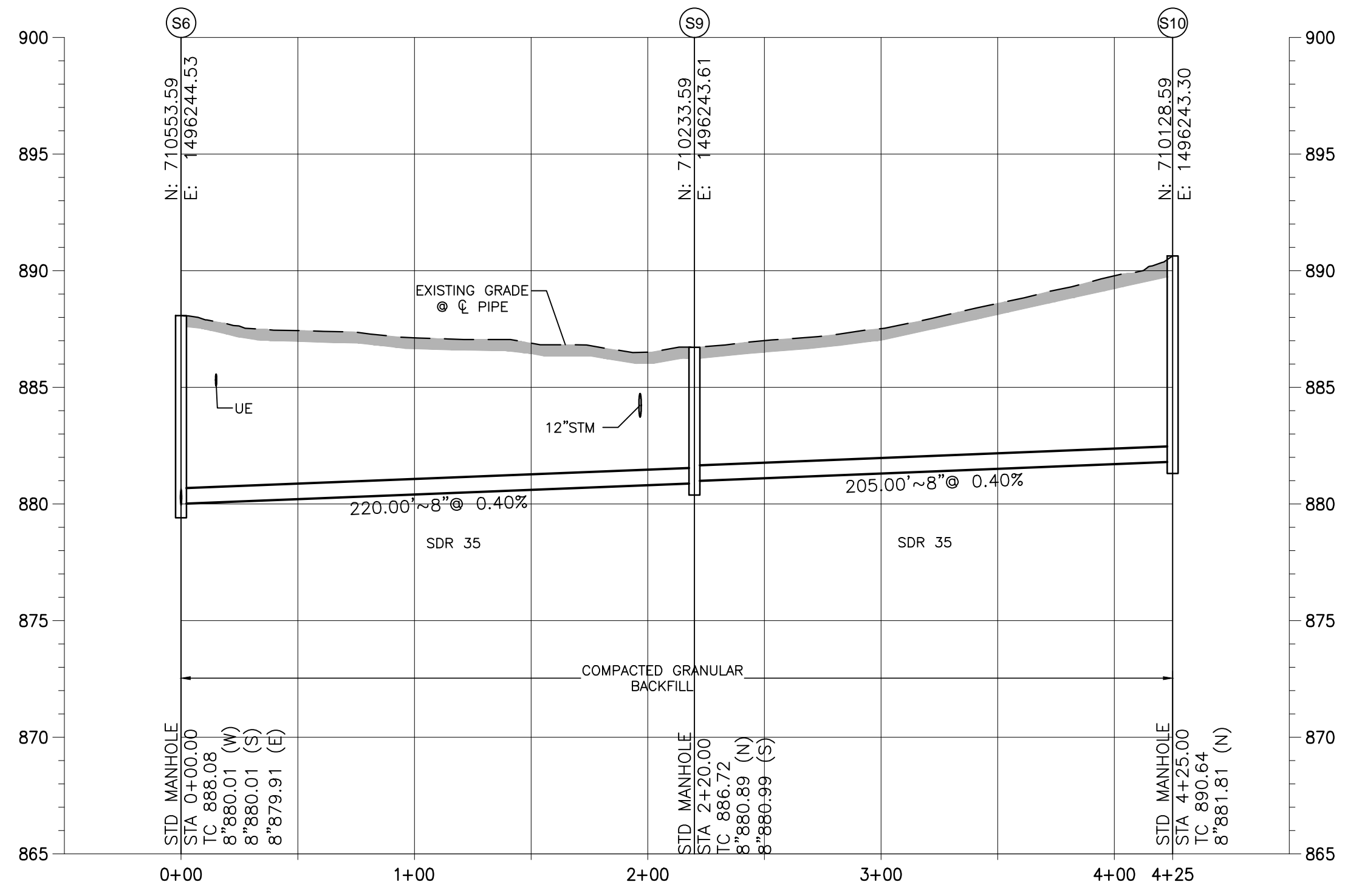
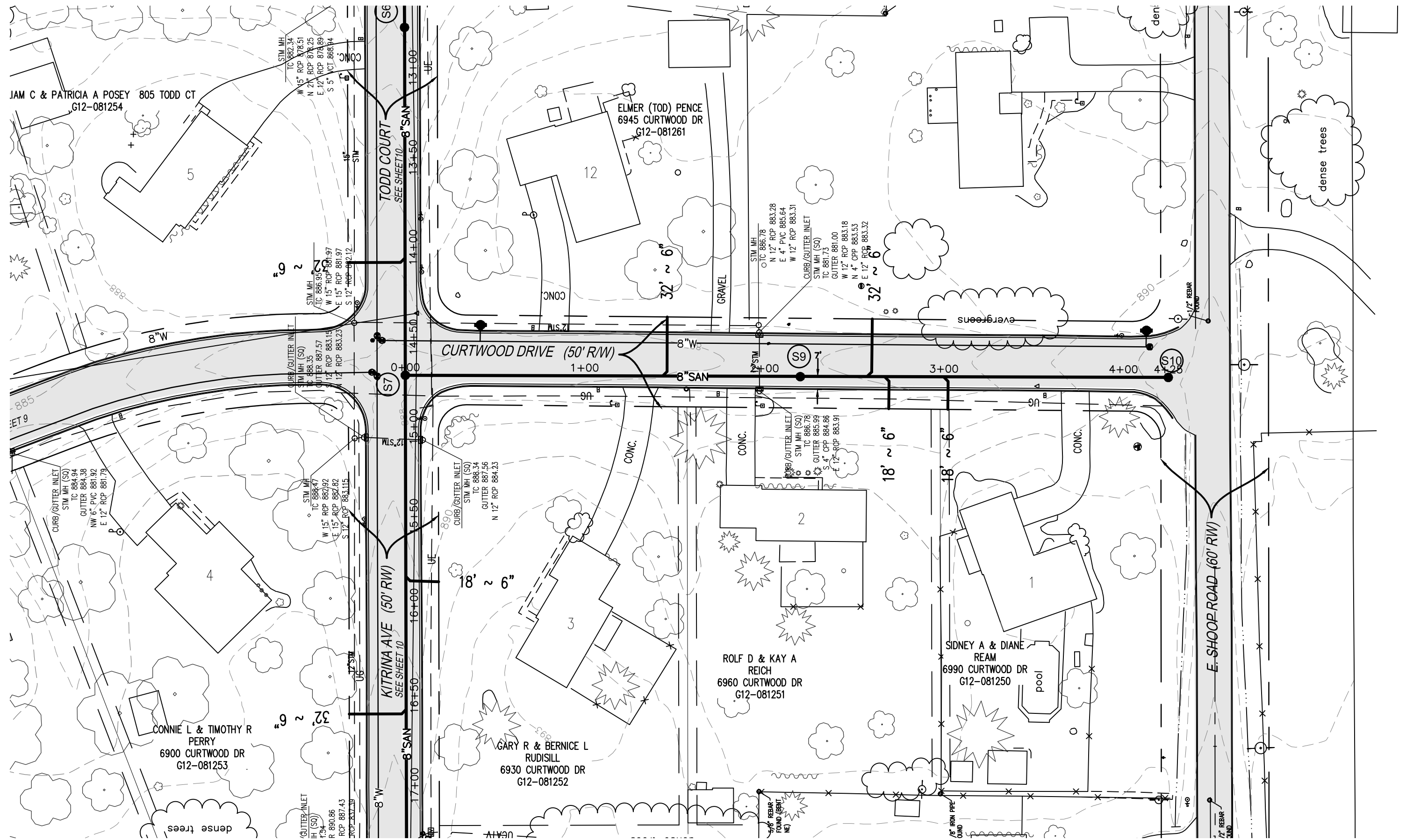
128 EAST MAIN ST
PO BOX 188
LOGAN, OH 43138
740-385-2140

1495 OLD HENDERSON RD
COLUMBUS, OH 43220
614-459-6992

507 MAIN STREET, SUITE 203
ZANESVILLE, OH 43701
740-450-1640

FAX: 614-459-6987
TOLL FREE: 866-277-0600

MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL
BE 8"x6" WYES WITH 6" SERVICE PIPE
AT 2.08% MIN. SLOPE.



COUNTRY ESTATES EAST
SANITARY SEWER IMPROVEMENTS

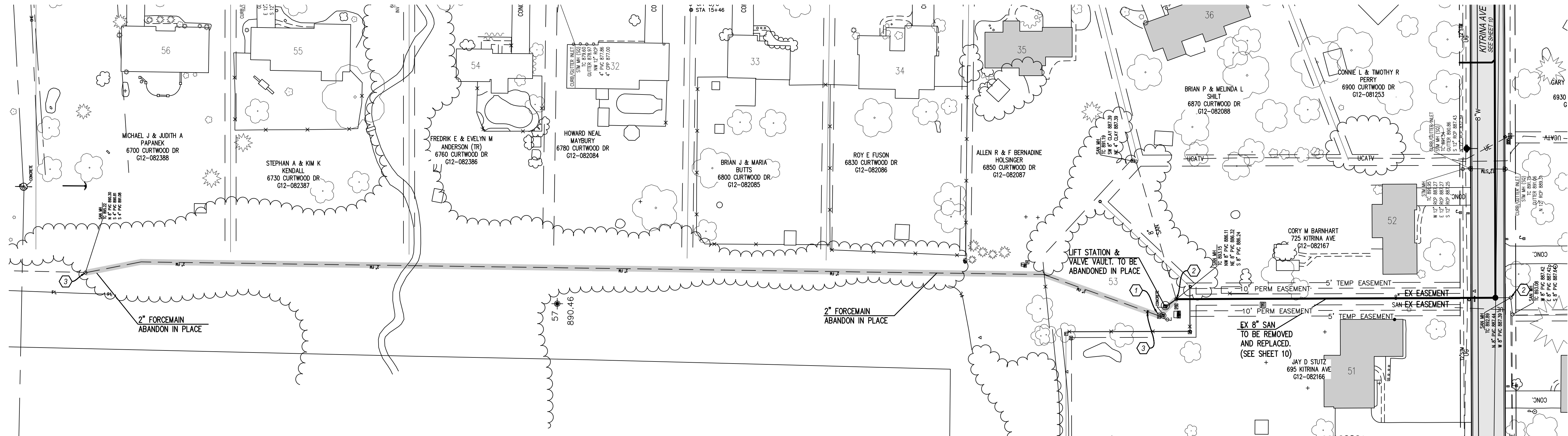
02-09-15	PRELIMINARY
08-07-15	BACKCHECK
02-26-16	BACKCHECK 2
03-30-16	BACKCHECK 3
04-29-16	BACKCHECK 4

PLAN & PROFILE
MH S6 TO MH S9

11

SDPCS PROJECT NO. 2772

MISC. NOTES:
ALL SANITARY SEWER SERVICES SHALL
BE 8"x6" WYES WITH 6" SERVICE PIPE
AT 2.08% MIN. SLOPE.



KEYNOTES

- CONTRACTOR TO COORDINATE ABANDONMENT OF EXISTING PUMP STATION & VALVE VAULT WITH THE PROPOSED SEWER CONSTRUCTION. NO RESTRICTION OF EXISTING FLOW SHALL BE ALLOWED WITHOUT PRIOR CONSENT OF THE OWNER. CONTRACTOR TO REMOVE EXISTING TOPS, SALVAGE INTERIOR PUMPS, VALVES, AND FIXTURES AND RETURN TO THE OWNER ONLY AFTER THE PROPOSED SEWER IS INSTALLED AND APPROVED. ALL ABOVE-GRADE STRUCTURE & APPURTENANCES SHALL BE COMPLETELY REMOVED. REMAINING STRUCTURE SHALL BE REMOVED TO A MIN. OF 2' BELOW GRADE. BOTTOMS SHALL BE SUFFICIENTLY CRACKED/BROKEN TO ALLOW DRAINAGE & PREVENT WATER RETENTION. FILL WITH COMPACTED GRANULAR MATERIAL & FINISH WITH 6"± TOPSOIL, SEEDING & MULCHING.
- EX. SEWER FLOWS INTO EACH EXISTING MAIN SHALL BE MAINTAINED UNTIL NEW SEWER IS APPROVED FOR USE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY SEWER BYPASS PUMPING TO PREVENT ANY DISRUPTION IN SEWER SERVICE AND TO PREVENT ANY UNAUTHORIZED SEWERAGE OVERFLOW/SPILLS.
EX. FORCE MAIN TO BE CUT & CAPPED IN BOTH DIRECTION USING A WATER TIGHT MECHANICAL CAP.
-

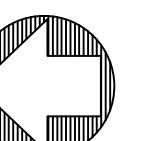
PUMP STATION & SEWER ABANDONMENT NOTES

- AFTER DISCONNECTING LIFT STATION INFLUENT & PRIOR TO BEGINNING LIFT STATION DEMOLITION, ANY SEWAGE, SLUDGE OR OTHER BY-PRODUCTS REMAINING IN THE COMPONENTS TO BE DEMOLISHED SHALL BE REMOVED & DISPOSED IN ACCORDANCE WITH ALL APPLICABLE EPA REQUIREMENTS.
- EX. LIFT STATION COMPONENTS & VALVE VAULT (INCLUDING, MECHANICAL & ELECTRICAL COMPONENTS, & INTERNAL PIPING) SHALL BE REMOVED & DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL & LOCAL REGULATIONS, UNLESS OTHERWISE DIRECTED BY OWNER.
- EX. & PROP. SEWER LINES: THE INTENT IS TO KEEP THE EX. SEWER LINES IN SERVICE UNTIL THE PROPOSED SEWER LINES ARE INSTALLED & TESTED. CONTRACTOR SHALL COORDINATE SEQUENCE & SCHEDULING OF THIS WORK WITH THE DISTRICT.
- CONTRACTOR SHALL COORDINATE THE DISCONNECTION EXISTING ELECTRIC SERVICE WITH THE POWER COMPANY AND THE COUNTY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY SEWER BYPASS PUMPING TO PREVENT ANY DISRUPTION IN SEWER SERVICE AND TO PREVENT ANY UNAUTHORIZED SEWAGE OVERFLOWS/SPILLS.



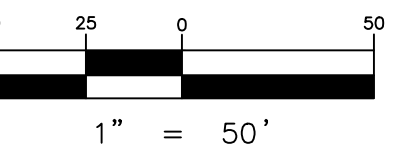
**OHIO
Utilities Protection
SERVICE**
Call Before You Dig
1-800-362-2764

CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)



NORTH

GRAPHIC SCALE



**COUNTRY
ESTATES EAST
WATER AND
SANITARY SEWER
IMPROVEMENTS**

02-09-15	PRELIMINARY
08-07-15	BACKCHECK
02-26-16	BACKCHECK 2
03-30-16	BACKCHECK 3
04-29-16	BACKCHECK 4

**LIFT STATION / FORCE MAIN
ABANDONMENT PLAN**

12