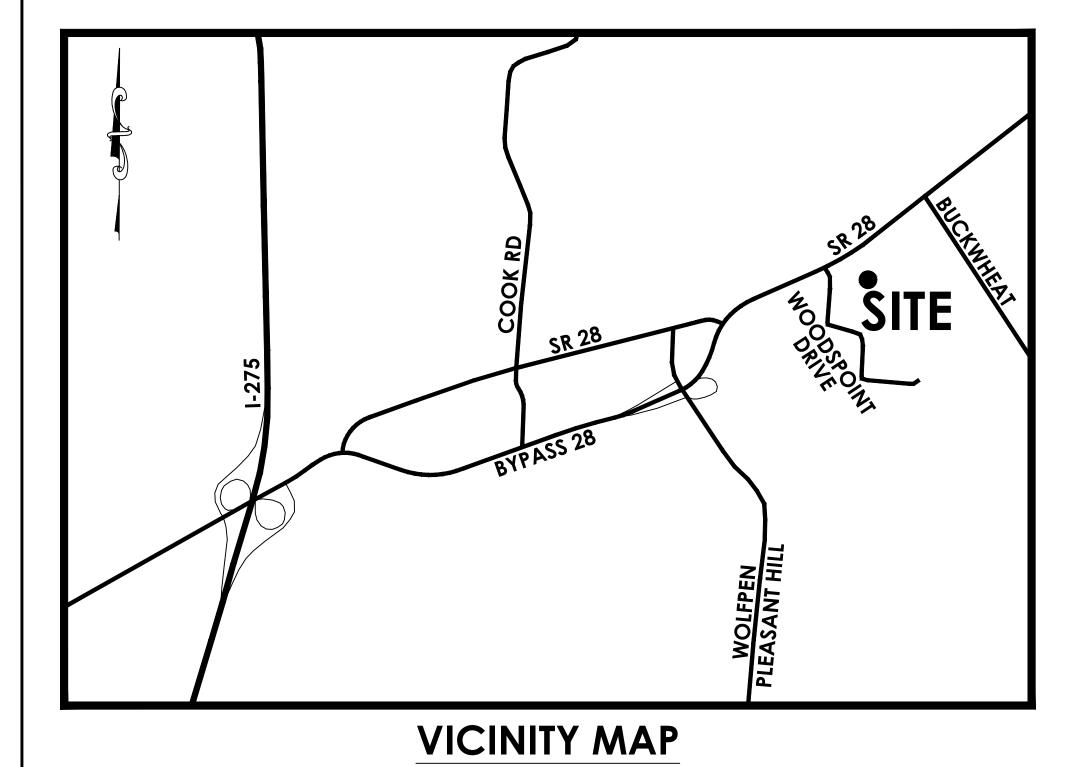
LORVEN DRIVE - PHASE 2A PUBLIC ROADWAY IMPROVEMENTS



NOT TO SCALE

JONES MILITARY SURVEY No. 991 MIAMI TOWNSHIP CLERMONT COUNTY, OHIO

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PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE EXTENSION OF LORVEN DRIVE PUBLIC ROADWAY IMPROVEMENTS ASSOCIATED WITH THE IMPROVEMENTS TO FUTURE COMMERCIAL USES AND FUTURE CONNECTION TO AN EXISTING RESIDENTIAL COMMUNITY. THE DESIGN INCLUDES APPROXIMATELY 490 LINEAR FEET OF PUBLIC ROADWAY.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS PROJECT.

UNDERGROUND UTILITIES ARE PLOTTED FROM A COMBINATION OF RECORD INFORMATION AND SURFACE INDICATIONS OF UNDERGROUND STRUCTURES ALL UTILITIES MAY NOT BE SHOWN. EXACT LOCATIONS CANNOT BE VERIFIED. PLEASE NOTIFY THE OHIO UTILITY PROTECTION SERVICE AT 1-800-362-2764 BEFORE ANY EXCAVATION OR CONSTRUCTION ACTIVITY.

ELEVATION DATUM:

BENCHMARK FROM CLERMONT COUNTY MONUMENTS M151 & 227





Project Manager Drawn By

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Sheet Title

File Number

TITLE SHEET 18441.03 AS NOTED **Drawing Scale**

Sheet Number 18441

1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG

(NON MEMBERS MUST BE CALLED DIRECTLY)

WHEREVER THE WORD "STATE" OCCURS, IT IS TO MEAN THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT).

PRE-CONSTRUCTION MEETING FOLLOWING THE AWARD OF THE CONTRACT AND BEFORE STARTING ANY WORK, THE CONTRACTOR AND HIS SUPERINTENDENT, SHALL MEET WITH THE OWNER AND COUNTY FOR A PRE-CONSTRUCTION MEETING. THE PURPOSE OF SUCH IS FOR REVIEWING ANY RESTRICTIONS AND REGULATIONS GOVERNING THE WORK.

ANY SCHEDULES, REQUESTS, PAPERS, APPROVALS, SUBMITTALS, SHOP DRAWINGS, CHANGES, ETC. AS CALLED FOR IN THE CONTRACT DOCUMENTS SHALL BE DONE AT THIS TIME UNLESS OTHERWISE DIRECTED.

THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ANY AND ALL PERMITS AND INSPECTIONS REQUIRED FOR THE CONSTRUCTION WORK

BY LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

UNLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIALS SHALL BE OF THE FIRST QUALITY, PROPER AND SUFFICIENT FOR THE PURPOSE CONTEMPLATED. THE CONTRACTOR SHALL FURNISH, IF SO REQUIRED, SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND WORKMANSHIP. ALL ITEMS OF EQUIPMENT AND/OR

MATERIALS PROPOSED FOR SUBSTITUTION MUST BE APPROVED BY THE OWNER IN WRITING AND SHALL BE FOLIAL OR BE SUPERIOR TO THE ITEMS SPECIFIED IN THE CONTRACT DOCUMENTS. IF SAID SUBSTITUTION PROPOSED BY THE CONTRACTOR FOR A SPECIFIED ITEM REQUIRED ENGINEERING REVISIONS, THE EXPENSE OF SUCH REVISIONS SHALL BE PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING FACILITY. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL REPLACE THE DAMAGED PORTION AT HIS EXPENSE AND TO THE SATISFACTION OF THE OWNER.

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE OF THE PROPOSED WORK, THE PLANS AND SPECIFICATIONS. THE SUBMISSION OF A BID SHALL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAS MADE SUCH EXAMINATION AND IS SATISFIED AS TO THE CONDITIONS TO BE ENCOUNTERED IN PERFORMING THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

CONSTRUCTION LIMITS THE CONTRACTOR SHALL RESTRICT ALL OF HIS ACTIVITIES, EQUIPMENT STORAGE, AND STAGING WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE ACTUAL CONSTRUCTION LIMITS ARE SHOWN ON THE PLANS OR THE EXISTING OR PROPOSED R/W, WHICHEVER IS NEAREST. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, HE MUST SUBMIT HIS REQUEST IN WRITING TO THE OWNER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE OWNER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO THE BEGINNING OF WORK, THE CONTRACTOR, SUPERINTENDENT OR HIS REPRESENTATIVE, THE OWNER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY SHALL REVIEW AND RECORD ALL ADJACENT SITES WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE OWNER'S AND CONSTRUCTION MANAGER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF THE ADJACENT SITES WILL BE MADE. ANY AREAS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE

ELEVATION DATUM
BENCHMARK FROM CLERMONT COUNTY MONUMENTS M151 & 227

REPAIRED OR REPLACED. AT THE CONTRACTOR'S EXPENSE, IN KIND OR AS DIRECTED BY THE OWNER

PROTECTING EXISTING UNDERGROUND UTILITIES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING, MARKING, OR OTHERWISE DESIGNATING THE LOCATIONS OF THE UNDERGROUND UTILITIES IN THE CONSTRUCTION AREAS IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH OF WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF PLANNED CONSTRUCTION. EXTREME CARE SHALL BE TAKEN IN THE VICINITY OF THE EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ISOLATE, BRACE, SUPPORT, SHEET, ETC. AND PROTECT THE EXISTING UTILITY FROM MOVING EITHER HORIZONTALLY OR VERTICALLY. IF SUCH MOVEMENT DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THE UTILITY AT HIS EXPENSE. THE CONTRACTOR MAY ELECT TO REMOVE AND RECONSTRUCT PORTIONS OF THE EXISTING UTILITY AT HIS OWN EXPENSE IF HE SO DESIRES.

SHOULD AN UNLOCATED OR AN EXTREME VARIANCE IN LOCATION OF A UTILITY BE ENCOUNTERED DURING EXCAVATION, CONSULT THE

DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY OTHERS. EXCEPT WHEN PERMITTED IN WRITING BY THE OWNER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICING HAS BEEN PROVIDED. COOPERATION WITH THE OWNER IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION IS ESSENTIAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING UTILITY. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL NOTIFY THE OWNER IMMEDIATELY AND REPLACE THE DAMAGED PORTION IMMEDIATELY, AND AT HIS EXPENSE.

WHILE THE WORK OF THIS CONTRACT IS BEING PERFORMED, THE UTILITY COMPANIES MAY BE WORKING IN THE AREA ADJUSTING AND RESETTING EXISTING FACILITIES. THE CONTRACTOR SHALL FULLY COOPERATE WITH UTILITY COMPANIES SO THAT THE ENTIRE WORK IS COMPLETED IN A MANNER CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. THE CONTRACTOR, UTILITY COMPANIES AND OWNER

SHALL DISCUSS THE NECESSARY CONSTRUCTION SCHEDULES TO COMPLETE THE PROJECT AT THE PRE-CONSTRUCTION MEETING.

THE FOLLOWING IS A LIST OF THE KNOWN EXISTING UTILITIES IN THE PROJECT AREA ALONG WITH THE RESPECTIVE OWNERS. THE LIST IS INCLUDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS IN THE PROJECT AREA PRIOR TO START OF CONSTRUCTION WHETHER LISTED ON THIS PAGE OR NOT.

RESOURCE DEPARTMENT

4400 HASKELL LANE

BATAVIA, OH 45103

(513)732-8864

ELECTRIC DUKE ENERGY DUKE ENERGY 92 S 4TH STRTEET **4612 KELOG AVENUE** BATAVIA OH 45103 CINCINNATI OH 45226 (513) 287-5629 CONTACT: ROBBIE STUMPE ONLY. JORGE GALLARDO (513)-287-1460

CABLE SPECTRUM ROADWAY & STORM SEWERS CLERMONT COUNTY ENGINEER 2381 CLERMONT CENTRE DE 3268 HIGHLAND AVI BATAVIA OH 45103 CINCINNATI, OH 45213 CONTACT: ERIC ELY (513) 321-0868 (513) 732-8857 WATER & SANITARY SEW

CINCINNATI BELL 209 7TH STREET MAIL LOCATION, 121-900 CINCINNATI, OH 45202 CONTACT JOSH BURNS (513)-397-0548

ALL UTILITIES WHICH ARE SHOWN OR LOCATED DURING THE COURSE OF CONSTRUCTION THAT ARE FOUND TO BE IN CONFLICT WITH THESE PLANS ARE TO BE RELOCATED OR ADJUSTED BY THE CONTRACTOR AS DIRECTED BY THE RESPECTIVE UTILITY COMPANY.

UNDERGROUND UTILITIES THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64

THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN LOCATED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT; BUT MIAMI TOWNSHIP, CLERMONT COUNTY, OHIO OR McGILL SMITH PUNSHON, INC. DOES NOT GUARANTEE THEIR

ACCURACY OR COMPLETENESS. AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE

CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN ON THE PLAN. THE OWNER OF THE LINDERGROUND FACILITY SHALL. WITHIN 48 HOURS (FYCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOUDAYS), MARK THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE AND THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

CONSTRUCTION NOISE
ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER - OPERATED CONSTRUCTION - TYPE DEVICE 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.

NO CONSTRUCTION SHALL BE DONE DURING STORMY, FREEZING, OR INCLEMENT WEATHER UNLESS PERMISSION IS GIVEN BY THE OWNER. WHENEVER WORK PROCEEDS DURING SUCH WEATHER, THE CONTRACTOR SHALL PROVIDE APPROVED FACILITIES, INCLUDING HEAT (IF REQUIRED), FOR THE PROTECTION OF ALL MATERIALS AND FINISHED WORK.

THE CONTRACTOR SHALL PROVIDE FOR PROTECTION OF THE FOLLOWING: EXISTING STREETS, DRIVEWAYS, SIDEWALKS, CURBS, GUTTERS, RE-SEEDING/RE-SODDING, REMOVAL OF TREES, RESTORATION OF AGRICULTURAL LAND, THE MAINTENANCE OF THE CONSTRUCTION AREA DURING PROGRESS OF THE WORK AND THE COMPLETE RESTORATION OF THE CONSTRUCTION AREA AFTER THE BACKFILLING IS COMPLETED, AND HE SHALL PROCEED TO RESTORE TO ITS ORIGINAL CONDITION ALL STREETS, DRIVEWAYS, SIDEWALKS, CURBS, GUTTERS, STRUCTURES, AND ALL AREAS THAT WERE DAMAGED, DISTURBED, OR OCCUPIED BY THE CONTRACTOR IN CONNECTION WITH ANY PHASE OF THE WORK.

PAVEMENTS, TREES, SHRUBS, FENCES, POLES, OR OTHER PROPERTY AND SURFACE STRUCTURES WHICH HAVE BEEN DAMAGED, REMOVED, OR DISTURBED BY THE CONTRACTOR, WHETHER DELIBERATELY OR THROUGH FAILURE TO CARRY OUT THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, STATE LAWS, MUNICIPAL ORDINANCES, THE SPECIFIC DIRECTION OF THE OWNER, OR THROUGH FAILURE TO EMPLOY USUAL AND REASONABLE SAFEGUARDS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

ALL TEMPORARY SIGNS, SPRINKLER SYSTEMS, LANDSCAPING, ORNAMENTAL FENCING, ETC., LOCATED WITHIN THE PROJECT LIMITS MUST BE REPLACED UPON COMPLETION OF THE CONSTRUCTION.

THE ESTIMATED QUANTITIES UPON WHICH THIS PROPOSAL IS BASED ARE APPROXIMATE ONLY. THEY SHALL BE USED TO DETERMINE THE LOWEST AND BEST BIDDER. DURING THE TERM OF THE CONTRACT, AND AT THE OPTION OF THE ENGINEER, THEY MAY BE INCREASED, DECREASED, OR NON-PERFORMED AS CONDITIONS DICTATE AND/OR WHEN THE NEED FOR ANY ITEM CANNOT BE DETERMINED UNTIL THE COMPLETION OF OTHER CONTRACTUAL ITEMS AND/OR THE PROPER INSPECTIONS HAVE BEEN MADE. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY CLAIM OR LOSS OF PROFITS OR OTHER DAMAGES SHOULD THE ACTUAL QUANTITIES OF ANY OR ALL ITEMS BE GREATER THAN OR LESS THAN THE STATED ESTIMATED QUANTITIES.

WHERE THE PLANS PROVIDE FOR THE PROPOSED CONDUIT TO BE CONNECTED TO OR TO CROSS OVER/UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO CONSTRUCT THE PROPOSED CONDU

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION. OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE OWNER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE OWNER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

WHERE PLANS REQUIRE PAVEMENT REMOVED. SAWING OF PAVEMENT PRIOR TO PAVEMENT REMOVAL IS INCIDENTAL TO ITEM 202. PAVEMENT REMOVED. SAW CUTS ARE TO BE MADE USING A DIAMOND EDGE BLADE. IF FULL DEPTH PAVEMENT IS NOT ENCOUNTERED. IT IS THE INTENT TO REPLACE WITH FULL DEPTH TO THE EXISTING EDGE OF FULL DEPTH PAVEMENT.

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT ASDIRECTED BY THE OWNER.

CLEARING LIMITS HAVE BEEN INDICATED ON THE PLANS. ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISION AS SET FORTH IN THE SPECIFICATION UNDER THIS TIME SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

THIS WORK SHALL CONSIST OF THE PREPARATION OF AREAS UPON WHICH EMBANKMENTS ARE TO BE PLACED; EXCAVATION FOR THE ROADWAY AND CHANNEL, INCLUDING THE REMOVAL OF ALL MATERIAL ENCOUNTERED NOT BEING REMOVED UNDER SOME OTHER ITEM; CONSTRUCTION EMBANKMENTS WITH THE EXCAVATED MATERIAL AND MATERIAL FROM OTHER SOURCES NECESSARY TO COMPLETE PLANNED EMBANKMENTS: FURNISHING AND INCORPORATING ALL WATER REQUIRED FOR COMPACTING EMBANKMENT AND SURGRADE: DISPOSING OF LINSUITABLE AND SUPPLIES MATERIAL: PREPARING THE SURGRADE: TESTING THE STABILITY AND UNIFORMITY OF COMPACTION OF THE SUBGRADE FOR AREAS SPECIFICALLY CALLED FOR ON THE PLANS; FINISHING SHOULDERS, SLOPES AND DITCHES; ALL IN ACCORDANCE WITH ITEM 203 AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, THICKNESS AND CROSS SECTIONS SHOWN IN

ON-SITE BORROW MATERIAL WILL NOT BE PAID FOR AS A SEPARATE ITEM. ON-SITE BORROW USED IN EMBANKMENT CONSTRUCTION SHALL BE PLACED IN ACCORDANCE WITH ALL THE REQUIREMENTS OF ITEM 203.

THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS TO OBTAIN OFFSITE BORROW MATERIAL, AND PAY ALL COSTS INVOLVED. OFFSITE BORROW MATERIA USED TO CONSTRUCT THE ROADWAY EMBANKMENT SHALL BE OBTAINED FROM OFFSITE AREAS AS APPROVED BY THE OWNER AND HIS GEOTECHNICAL ENGINEER. OFFSITE BORROW MATERIAL SHALL BE PER ODOT ITEM 203. CLEAN. COHESIVE CLAY SOIL FREE OF ORGANIC MATERIALS, ROOTS, AND COBBLES. THE OFFSITE CLAY SOIL PROPOSED FOR USE IN THE ROADWAY EMBANKMENT SHALL BE LABORATORY TESTED TO DETERMINE SUITABILITY AND COMPACTION CHARACTERISTICS.

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY AS DIRECTED BY THE ENGINEER.

IF UNSUITABLE SOILS ARE ENCOUNTERED IN THE PROPOSED ROAD BED AREA THEY SHALL BE REMOVED & REPLACED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 203.02, PARAGRAPH (R). THE LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER UNDER CONTRACT WITH

THE CONTINGENCY QUANTITIES HAVE BEEN INCLUDED TO BE USED AS DIRECTED BY THE OWNER.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN SEWER FLOWS AT ALL TIMES THROUGH EXISTING FACILITIES WHICH ARE TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED.

ALL EXISTING SEWERS SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS WITHIN THE CONSTRUCTION LIMITS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE

COMPLETED AND PLACED IN USE.

DISTURBED AREAS ARE STABILIZED. ANY SILT FENCING, STRAW BALES, ETC. FOR EROSION CONTROL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE

AFTER THE OWNER DEEMS SUFFICIENT GROWTH PREVENTS EROSION.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE PERFORMED BY THE CONTRACTOR. ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 21 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND

MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM THE NECESSARY PRECAUTIONS TO AVOID EXCESSIVE SOIL EROSION AND THE RUNOFF OF SEDIMENT INSIDE AND DOWNSTREAM OF THE PROJECT TO THE SATISFACTION OF THE OWNER. THIS SHALL INCLUDE, BUT IS NOT

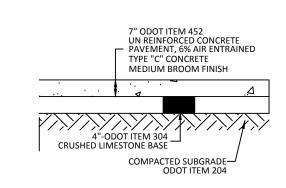
LIMITED TO, ERECTION OF SILT FENCE (SF) ALONG THE PERIMETER OF THE CONSTRUCTION LIMITS AND PLACEMENT OF STRAW BALE BARRIERS (SBB) AND/OR FILTER BARRIERS (FB) AS DITCH CHECKS. DITCH CHECKS SHALL BE PLACED AT A MAXIMUM SPACING OF 50 FEET ALONG ALL PROPOSED DITCHES.

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OWNER AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE OWNER.

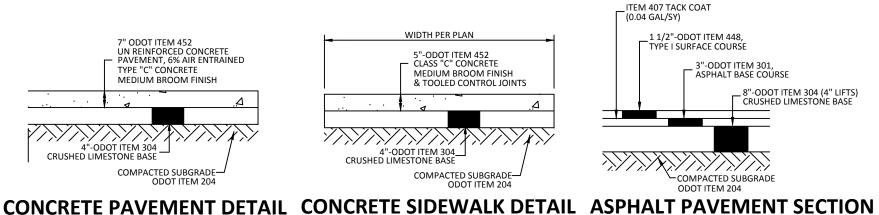
ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE OWNER.

ALL EXISTING SEWERS TO REMAIN AND INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE

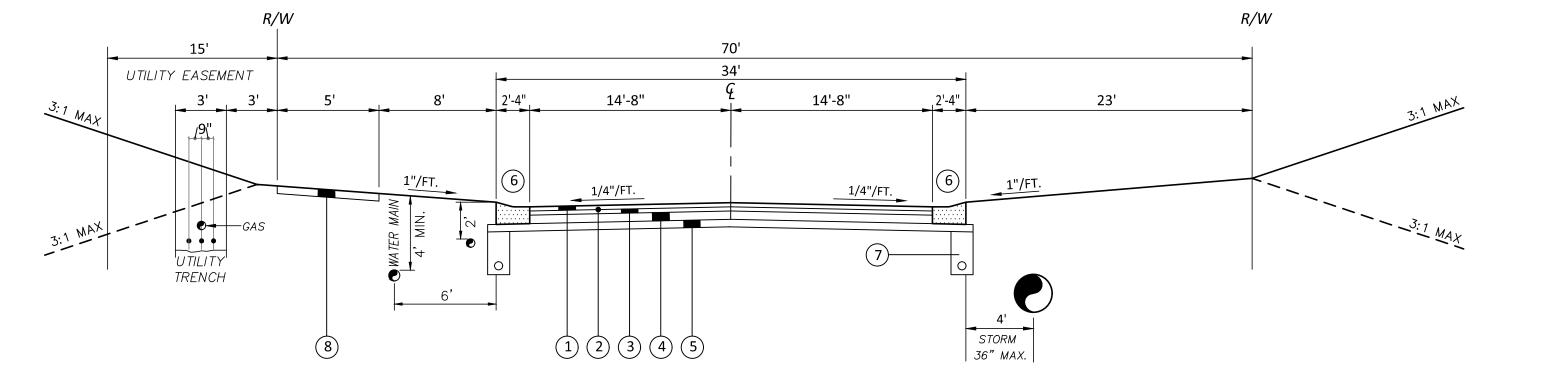
PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603



& TOOLED CONTROL JOINTS 4"-ODOT ITEM 304__ CRUSHED LIMESTONE BASE COMPACTED SUBGRADE-ODOT ITEM 204



FOR DRIVEWAYS



MIN. COVER	UTILIT
24"	GAS
24"	SUMP L
36"	ELECTR
36"	TELEPH
36"	CABLE 1
48"	\M/ATER

1) ITEM 448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

(6) ITEM 609 CLERMONT COUNTY STANDARD ROLL CURB AND GUTTER

(8) ITEM 608 CONCRETE WALK, 5"THICK, CLASS C CONCRETE

LORVEN DRIVE TYPICAL SECTION

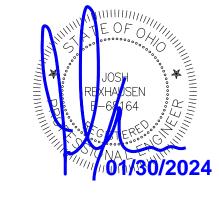


■ Architecture ■ Engineering ■ Landscape Architecture ■ Planning ■ Surveying

3700 Park 42 Drive Suite 190B Cincinnati OH 45241 Phone 513.759.0004 www.mspdesign.com

Project Manager	JMR
Orawn By	DCA
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Sheet Title

GENERAL NOTES & TYPICAL SECTIONS

18441.03 Project Number **AS NOTED** Drawing Scale Sheet Number 2/14 18441

File Number

LINE HONE

(2) ITEM 407 TACK COAT (APPLICATION RATE OF 0.1 GAL./SQ. YD. (3)ITEM 448 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 , PG64-22

(4) ITEM 301 5" ASPHALT BASE

(5) ITEM 304 6" AGGREGATE BASE W/UNDERDRAIN

7) ITEM 605 6"SHALLOW PIPE UNDERDRAIN

GENERAL NOTES

GENERAL: ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST RULES AND REGULATIONS OF THE CLERMONT COUNTY WATER RESOURCES DEPARTMENT FOUND AT WRD.CLERMONTCOUNTYOHIO.GOV. IT IS THE INTENT OF THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS TO DESCRIBE A COMPLETE FUNCTIONING SYSTEM IN ALL RESPECTS, WHETHER OR NOT EVERY SUB-ELEMENT OF THE TOTAL SYSTEM IS ACTUALLY DEFINED IN WRITING AND/OR DETAIL. PAYMENT TO THE CONTRACTOR(S) SHALL BE INFERRED TO COVER WORK AND MATERIALS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM SUCH THAT WHEN FINAL PAYMENT IS MADE, THE SYSTEM IS COMPLETELY OPERABLE AND FUNCTIONS IN ALL RESPECTS AS REQUIRED BY THE CONTRACT DOCUMENTS.

THE WORK TO BE PERFORMED UNDER THESE SPECIFICATIONS INCLUDES FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE THE WORK CALLED FOR IN THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ELECTRIC, WATER, SANITARY FACILITIES AND WASTE DISPOSAL TO COMPLETE THE WORK.

A SITE VISIT IS HIGHLY RECOMMENDED PRIOR TO SUBMISSION OF BID.

THE EXISTING WATER MAIN IS SHOWN BASED ON FIELD SURVEYS AND THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.

THE EXISTING WATER MAIN IS TO REMAIN IN SERVICE DURING CONSTRUCTION OF THE NEW

THE PROPOSED WATER MAIN SHALL BE INSTALLED AT A MINIMUM 4' BELOW THE PROPOSED GRADE OR AS DIRECTED BY THE ENGINEER.

CONTRACTOR IS RESPONSIBLE TO PROVIDE SUPPORT TO THE EXISTING UTILITY POLES, AS NECESSARY TO COMPLETE THE WORK CALLED FOR IN THE CONTRACT DRAWINGS AND SPECIFICATIONS.

PAVEMENT: ALL PAVEMENT AND/ROADWAY SURFACE DISTURBED BY THE CONTRACTOR, SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND IN CONFORMANCE WITH THE REGULATIONS OF THE GOVERNING AUTHORITY OF SAID ROADWAYS. IN THE ABSENCE OF SUCH REGULATIONS, THE RESTORATION SHALL BE IN ACCORDANCE WITH INSTRUCTIONS BY THE OWNER'S REPRESENTATIVE WITH THE OBJECTION OF RESTORING THE PAVING OR ROADWAY SURFACE TO THE ORIGINAL CONDITION OF SAME.

RESTORATION: TEMPORARY RESTORATION AND RESTORATION OUTSIDE OF THE LIMITS OF THIS CONSTRUCTION PROJECT ARE THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO VIDEO TAPE AND PHOTOGRAPH ALL AREAS THAT WILL BE DISTURBED AS A RESULT OF HIS CONSTRUCTION ACTIVITIES AND WILL DELIVER TO THE OWNER'S REPRESENTATIVE A COPY OF THE VIDEO TAPE AND PHOTOGRAPHS. ALL PICTURES SHALL BE LABELED WITH THE LOCATION WHERE TAKEN. NONCOMPLIANCE MAY RESULT IN THE CONTRACTOR'S LIABILITY FOR ALL DISPUTED PROPERTY RESTORATIONS.

EROSION CONTROL: THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY TO COMPLETE THE WORK AS OUTLINED IN THESE DRAWINGS AND PROJECT SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. THIS WORK SHALL INCLUDE THE TIME FOLLOWING THE THIRD PARTY RESTORATION. ALL WORK SHALL BE PREFORMED IN ACCORDANCE WITH THE CLERMONT COUNTY WATER MANAGEMENT AND SEDIMENT CONTROL REGULATIONS AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE

UTILITIES: THE EXISTENCE, LOCATION, AND CONDITION OF UTILITIES AND STRUCTURES, BOTH ABOVE AND BELOW GROUND, SHALL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK. EXCAVATION IN THE VICINITY OF SUCH UTILITIES AND STRUCTURES, SHALL BE DONE CAREFULLY AND BY HAND IF NECESSARY. THE CONTRACTOR SHALL PROTECT ALL SUCH UTILITIES AND STRUCTURES, BOTH MARKED AND UNMARKED, AND BE HELD RESPONSIBLE FOR DAMAGE TO SAME. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ISOLATE, BRACE, SUPPORT, SHEET, ETC. AND PROTECT THE EXISTING UTILITIES FROM MOVING EITHER HORIZONTALLY OR VERTICALLY. IF SUCH MOVEMENT DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL REPAIR THE UTILITY TO THE SATISFACTION OF THE UTILITY OWNER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL OWNERS OF ADJACENT UTILITIES, FIXTURES, AND/OR PROPERTY, OF HIS IMPENDING OPERATIONS, BUT IN NO WAY SHALL SUCH NOTICE RELIEVE THE CONTRACTOR OF HIS LIABILITY FOR DAMAGES TO SAID UTILITIES, FIXTURES, AND/OR PROPERTY. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS IN ADVANCE OF EXCAVATION IN THE VICINITY OF SAID UTILITY. FIELD LOCATION SHALL BE MADE BY THE UTILITY OR ITS AUTHORIZED AGENCY BEFORE ANY WORK IS PERFORMED BY THE CONTRACTOR. IF AT ANYTIME DURING WORK, AN EXISTING UTILITY IS DAMAGED IN ANY WAY, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE APPROPRIATE GOVERNING ENTITY AND THE OWNER'S REPRESENTATIVE.

SHUT DOWNS AND SCHEDULING

- 1 WEEK TO PLAN
- 48 HOURS NOTICE TO AFFECTED CUSTOMERS REQUIRED PRIOR TO SHUTDOWNS
- CONTRACTOR REQUIRED TO DISTRIBUTE THE SHUT DOWN NOTICES PROVIDED BY THE OWNER

TESTING AND DISINFECTION OF WATER MAIN THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO DISINFECT THE COMPLETE WATER PIPE LINE IN ACCORDANCE WITH AWWA C-651 AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL PIPING AND APPURTANCES MUST BE PROPERLY DISINFECT WITH A MINIMUM OF 50

MILLIGRAMS PER LITER TOTAL CHLORINE RESIDUAL FOR 48 HOURS. THE PIPING MUST BE FLUSHED TO REMOVE ANY EXCESS CHLORINE. CHLORINE SOLUTION SHALL BE EVENLY APPLIED AND DISTRIBUTED THROUGHOUT THE PIPING.

A HYDROSTATIC TEST AS REQUIRED IN SECTION 4 OF THE STANDARD AWWA SPECIFICATIONS C-600 SHALL BE APPLIED TO INDIVIDUAL VALVED-OFF SECTIONS OF THE MAINS AND FIRE HYDRANT LEADS EITHER BEFORE OR AFTER THE TRENCH IS BACKFILLED. THE PRESSURE DURING THE TEST SHALL BE MAINTAINED AT 200 PSI, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE, IN ANY SECTION BEING TESTED. THE DURATION OF EACH TEST SHALL BE AT LEAST TWO HOURS. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, MAKE ALL TAPS OR CONNECTIONS REQUIRED, AND PROVIDED ANY NECESSARY PIPING AND ALL NECESSARY ASSISTANCE FOR CONDUCTING THE TEST.

THE ONLY EXCLUSION OF TESTING IS TIE IN PIPING LESS THAN 18' IN LENGTH. IN THIS CASE, THE PIPE WILL BE SWABBED OR SPRAY DISINFECTED WITH CHLORINE SOLUTION, IN ACCORDANCE WITH AWWA C-657.

SPECS FOR PIPE, BENDS, VALVES AND APPURTANCES

DUCTILE IRON PIPE SHALL BE DUCTILE, CENTRIFUGALLY CAST TYPE IN ACCORDANCE WITH ANSI A21.51 (AWWA C-151) UNLESS OTHERWISE NOTED. FOR ALL IN-GROUND INSTALLATIONS THE PRESSURE CLASS SHALL BE CLASS 52. UNLESS A HIGHER CLASS IS REQUIRED BY LAYING CONDITIONS OR PRESSURE IN ACCORDANCE WITH ANSI A21.50 AND APPROVED BY THE OWNER'S REPRESENTATIVE. ALL DUCTILE PIPES SHALL HAVE BITUMINOUS COATED CEMENT LINING COMPLYING WITH AWWA C-104 AND SHALL HAVE AN OUTSIDE COATING OF BITUMASTIC ENAMEL OR APPROVED EQUAL. ALL DUCTILE IRON PIPES SHALL BE PROVIDED WITH EITHER MECHANICAL JOINT ENDS OR PUSH-ON JOINTS ENDS.

ALL FITTINGS, WALL PIPES AND SPECIALS SHALL BE OF DUCTILE IRON OR IN ACCRODANCE WITH ANSI A21.10 (AWWA C-153). ALL FITTINGS SHALL HAVE A BITUMINOUS COATED CEMENT LINING COMPLYING WITH AWWA C-104 AND SHALL HAVE AN OUTSIDE COATING COMPLYING WITH AWWA C-153 OR AN EPOXY COATING COMPLYING WITH AWWA C-116. ALL DUCTILE IRON FITTINGS SHALL BE PROVIDED WITH AND ASSEMBLED USING MECHANICAL JOINT ENDS AND RETAINER GLANDS

CONCRETE THRUST BLOCKING, SUPPORTS AND/OR BUTTRESSES SHALL BE PROVIDED AT ALL TEES AND BENDS AND AT ANY OTHER LOCATIONS REQUIRED BY THE DISTRICT. THESE CONCRETE STRUCTURES SHALL BE BUILT TO THE LINES, GRADES AND DIMENSIONS SHOWN ON THE STANDARD DRAWINGS. CONCRETE USED FOR BLOCKING SHALL CONFORM TO CLASS C CONCRETE, HAVING A COMPRESSIVE STRENGTH OF 4,000 POUNDS PER SQUARE INCH. ALL CONCRETE SHALL BE MIXED BY MECHANICAL MEANS PRIOR TO INSTALLATION. THE INSTALLATION OF DRY CONCRETE WILL NOT BE PERMITTED.

PIPE JOINTS RESTRAINTS SHALL BE FIELD LOK GASKET, AMERICAN FAST GRIP, OR APPROVED EQUAL AS DETERMINED BY OWNER'S REPRESENTATIVE, EXCEPT AS MODIFIED HEREIN. ALL FIRE HYDRANT LEADS AND FIRE HYDRANT ASSEMBLIES SHALL BE RESTRAINED USING MEGALUG SERIES 1100 MECHANICAL JOINT RESTRAINT OR SIGMA CORPORATION ONE-LOCK SERIES SLDE MECHANICAL JOINT RESTRAINT FOR DUCTILE IRON PIPE OR APPROVED EQUAL AS DETERMINED BY OWNER'S REPRESENTATIVE.

POLYETHYLENE ENCASEMENT SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5 METHODS A OR B AND THE COUNTY'S SPECIFICATIONS. THE POLYETHYLENE ENCASEMENT SHALL BE A LOW-DENSITY POLYETHYLENE FILM MADE FROM VIRGIN LOW-DENSITY POLYETHYLENE RAW MATERIAL CONFORMING TO ASTM D4976 AND SHALL BE A MINIMUM OF EIGHT MILS IN THICKNESS.

GATE VALVES: ALL GATE VALVES SHALL CONFORM TO AWWA C-509 OR C-515 EXCEPT AS MODIFIED HEREIN. NEW GATE VALVES SHALL BE FULLY ENCAPSULATED RESILIENT WEDGE, NON-RISING STEM, LEFT HAND OPEN (COUNTER CLOCKWISE), AND SHALL HAVE RUBBER "O"-RING, PACKING SEALS AND MECHANICAL JOINT ENDS WITH A 250 PSI PRESSURE RATING, UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE. THE INTERNAL VALVE COATING SHALL BE IN ACCORDANCE WITH AWWA-C550. APPROVED MODELS ARE: AMERICAN FLOW CONTROL SERIES 2500, MUELLER 2362, US PIPE A-USP2, M&H 4067, M&H 7000, KENNEDY KS-RW, AND CLOW MODEL 2638.

VALVE BOXES SHALL BE EQUAL TO F-2450 SERIES AS MANUFACTURED BY CLOW CORP OR SIGMA CORPORATION VB261-8. VALVE BOX ASSEMBLY SHALL BE OF CAST IRON WITH STAY PUT COVER AND PROPERLY SIZED BASE FOR THE VALVE BEING FITTED. COVER SHALL BE MARKED "WATER". ALL BOXES SHALL BE FURNISHED WITH THE NECESSARY EXTENSIONS TO BRING THE TOP OF THE BOX TO THE FINISHED GRADE.

BUTTERFLY VALVES: ALL BUTTERFLY VALVES SHALL CONFORM TO THE AWWA STANDARD SPECIFICATION FOR RUBBER SEATED BUTTERFLY VALVES; DESIGNATION AWWA C-504 OF THE LATEST REVISION EXCEPT AS MODIFIED HEREIN. VALVES SHALL BE SUITABLE FOR FLOW IN EITHER DIRECTION AND SHALL BE BUBBLE TIGHT IN EITHER DIRECTION. WAFER VALVES SHALL NOT BE ACCEPTABLE. INTERNAL VALVE COATING SHOULD BE IN ACCORDANCE WITH AWWA-C550. VALVES SHALL BE AWWA CLASS 250B DESIGNED FOR 250 PSI NON-SHOCK SHUT-OFF PRESSURE. VALVES AND APPURTENANCES, INCLUDING OPERATORS, SHALL BE CAST IRON SUITABLE FOR BURIED AND SUBMERGED SERVICE. VALVES FOR USE WITH DUCTILE IRON PIPE SHALL HAVE MECHANICAL JOINT ENDS FURNISHED WITH HIGH STRENGTH CAST IRON TEE HEAD BOLTS AND HEX NUTS, AND RUBBER GASKETS. BODIES SHALL BE CAST IRON CONFORMING TO ASTM A126, CLASS B, OR ASTM A48, CLASS 40, OR DUCTILE IRON CONFORMING TO ASTM A536 GRADE 65-45-12 OR 70-50-05. UNLESS OTHERWISE APPROVED, SHAFTS SHALL BE STAINLESS STEEL CONFORMING WITH ASTM A276, TYPE 304, OR ASTM 564, TYPE 630, OR MONEL, TURNED, GROUND AND POLISHED. SHAFTS SHALL BE SECURED TO THE VALVE DISC BY A PROCESS SUCH AS BOLTING, RIVETING, THREADING, UPSETTING, OR CROSS-PINNING, USING CORROSION-RESISTANT METALS. CHEMICAL BONDING, ADHESIVES, OR WELDING SHALL NOT BE USED.

VALVES SHALL BE DESIGNED TO SEAT AT 90 DEGREES TO THE PIPE AXIS AND SHALL BE CONSTRUCTED OF CORROSION-RESISTANT MATERIALS. SEATS SHALL BE OF A RUBBER COMPOUND COMPLYING WITH THE REQUIREMENTS OF AWWA C-504. RUBBER SEATS SHALL BE ON THE BODY. OPERATORS SUITABLE FOR BURIED AND SUBMERGED SERVICE SHALL BE FURNISHED WITH EACH VALVE.

OPERATORS SHALL BE DESIGNED TO PRODUCE THE SPECIFIED OUTPUT TORQUE WITH A MAXIMUM INPUT TORQUE OF 150 FOOT-POUNDS APPLIED TO THE OPERATING NUT. OPERATORS SHALL BE TRAVELING NUT TYPE. THE TOTAL NUMBER OF TURNS APPLIED TO THE WRENCH NUT REQUIRED TO COMPLETELY OPEN (CLOSE) THE VALVE FROM COMPLETELY CLOSED (OPEN) POSITION SHALL BE NOT LESS THAN TWICE THE NOMINAL VALVE DIAMETER IN INCHES FOR VALVES LESS THAN 16 INCHES IN DIAMETER AND SHALL BE NOT LESS THAN 30 TURNS FOR 16 INCH AND LARGER VALVES. ALL OPERATORS SHALL BE FOR LEFT-HAND (COUNTER CLOCKWISE) OPENING.

APPROVED BUTTERFLY VALVES ARE: DEZURIK-250B, MUELLER LINESEAL XPII-250B, HENRY PRATT COMPANY-MODEL HP-250II, AND KENNEDY CLASS 250B.

VALVE BOXES SHALL BE EQUAL TO F-2450 SERIES AS MANUFACTURED BY CLOW CORP OR SIGMA CORPORATION VB261-8. VALVE BOX ASSEMBLY SHALL BE OF CAST IRON WITH STAY PUT COVER AND PROPERLY SIZED BASE FOR THE VALVE BEING FITTED. COVER SHALL BE MARKED "WATER". ALL BOXES SHALL BE FURNISHED WITH THE NECESSARY EXTENSIONS TO BRING THE TOP OF THE BOX TO THE FINISHED GRADE.

WATER SERVICE, FITTINGS, AND METER SETTING

DIRECT TAPS ARE TO BE USED FOR 3/4" CONNECTIONS, TAPPING SADDLES ARE TO BE USED FOR CONNECTIONS LARGER THAT 3/4". TAPPING SADDLES SHALL BE MANUFACTURED FOR THE FORD METER BOX COMPANY STYLE 202BS WITH STAINLESS STEEL STRAP AND BRASS BODY WITH CC THREAD OUTLET.

CORPORATION STOPS- APPROVED CORPORATION STOPS SHALL BE

- $\frac{3}{4}$ " AND 1"- FORD METER BOX COMPANY F1000-3-G-NL 1 ½"- FORD METER BOX COMPANY FB1000-6-G-NL
- 2"- FORD METER BOX COMPANY FB1000-7-G-NL

WATER SERVICE LINES, WHICH EXTEND FROM THE WATER MAIN TO 3' BEYOND THE METER, SHALL BE TYPE "K" COPPER CONFORMING TO ASTM B-88 SPECIFICATIONS.

METER BOXES SHALL BE:

- 3/4" METER- OLD CASTLE HEAVY WALL METER PIT 0020-30 B BODY B-W 2 MSHI 1" METER- OLD CASTLE HEAVY WALL METER PIT 0020-30 BODY B-W 2 MSHI
- $1 \frac{1}{2}$ " AND 2"- OLD CASTLE HEAVY WALL METER PIT 0030-30 B BODY B-W 2 MSHI OR APPROVED EQUAL.

ALL METERS USED IN THE CLERMONT COUNTY WATER RESOURCES DEPARTMENT DISTRIBUTION SYSTEM MUST BE PURCHASED FROM THE WATER RESOURCES DEPARTMENT AND INSTALLED ACCORDING TO THE WATER RESOURCES DEPARTMENT STANDARD DRAWINGS. WHERE EXISTING WATER SERVICES ARE BEING RELOCATED OR RECONNECTED, THE EXISTING WATER METER CAN BE

ANGLE VALVES FOR RELOCATED \(\frac{5}{8} \)" X \(\frac{3}{4} \)" AND 1" WATER METERS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND INSTALLED ACCORDING TO THE CLERMONT COUNTY WATER **RESOURCES DEPARTMENT STANDARD DRAWINGS:**

METER SIZE	ANGLED YOKE VALVE,	ANGLED CHECK VALVE
	W/ PADLOCK WING	
5/8" X 3/4"	FORD AV94-323-WG-NL	FORD HA94-323-G-NL
- ,	OR APPROVED EQUAL	OR APPROVED EQUAL
1"	FORD AV94-444-WG-NL	FORD L94-44-G-NL
	OR APPROVED EQUAL	OR APPROVED EQUAL

THE EXISTING WATER METER, YOKE AND EXPANSION WHEEL ASSEMBLY SHALL BE RE-USED AND RE-INSTALLED BY THE CONTRACTOR.

METER ASSEMBLIES FOR 1 ½" AND 2" DOMESTIC METERS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND INSTALLED ACCORDING TO CLERMONT COUNTY WATER RESOURCES DEPARTMENT STANDARD DRAWINGS: 1½" METERS- FORDVH76-18-11-66-G-NL, 2" METERS- FORD VH77-18-11-77-G-NL.

COMPRESSION FITTINGS USED FOR RELOCATED AND RECONNECTED WATER METERS SHALL BE FORD GRIP JOINT COUPLING (C44-XX-G-NL STYLE), FORD PACK JOINT COUPLING (C44-XX-NL STYLE), OR APPROVED EQUAL.

CONTRACTOR MUST SUBMIT LITERATURE AND/OR CATALOG CUT SHEETS FOR REVIEW AND APPROVAL PRIOR TO ORDERING OF ALL MATERIAL AND FITTINGS TO BE USED ASSOCIATED WITH THE INSTALLATION OF 2" AND SMALLER SIGNLE, DOMESTIC WATER SERVICES.

SUBMIT LITERATURE DETAILING THE CONSTRUCTION METHOD TO BE USED TO PROVIDE TRENCHLESS INSTALLATION OF WATER SERVICES FOR REVIEW AND APPROVAL. TRENCHLESS SERVICE LINE INSTALLATION IS REQUIRED FOR ALL SERVICES CROSSING PUBLIC ROADWAYS.

McGill Smith Punshon ■ Architecture 3700 Park 42 Drive ■ Engineering Suite 190B

■ Landscape Architecture Cincinnati OH 45241 ■ Planning Phone 513.759.0004 ■ Surveying www.mspdesign.com

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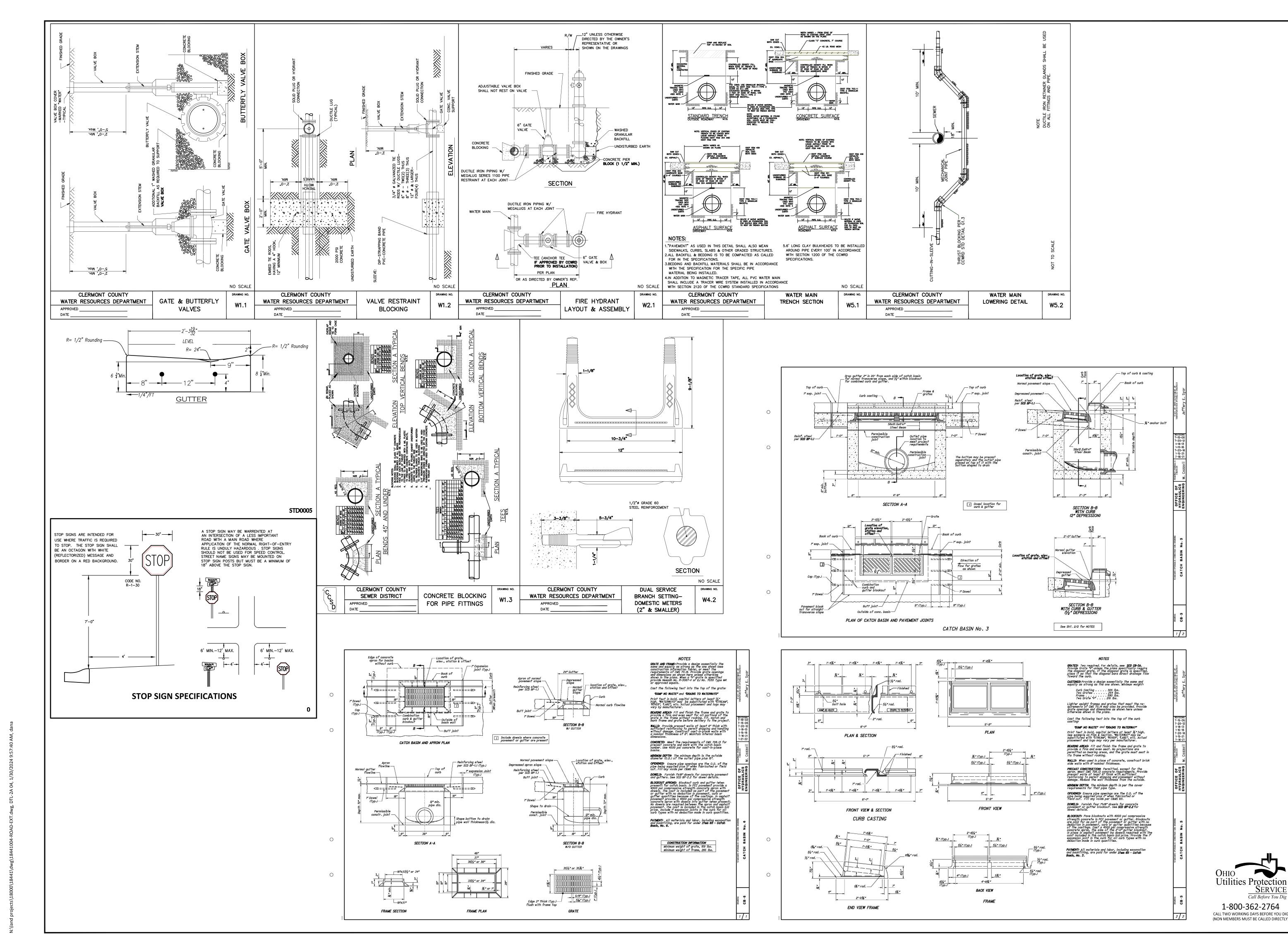
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WATER MAIN NOTES

Project Number 18441.03 **AS NOTED** Drawing Scale

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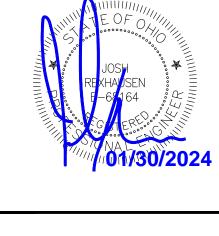
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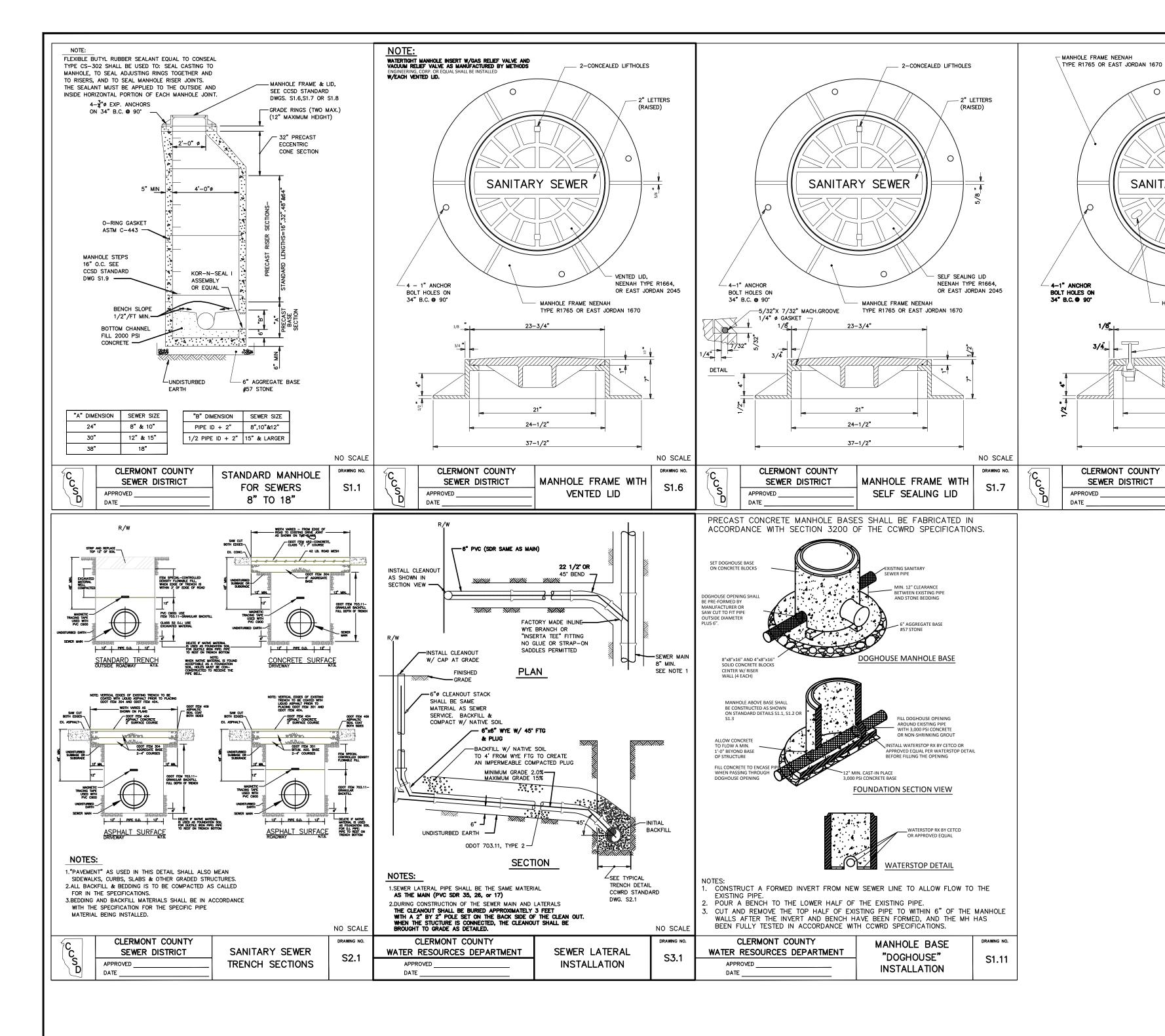


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DETAILS

18441.03 **Project Number AS NOTED** Drawing Scale 4/14 **Sheet Number** 18441 File Number



SANITARY SEWER PIPE TESTING

5.1 GENERAL

- 2- CONCEALED LIFTHOLES

SOLID LID NEENAH

TYPE R1664 OR

BY THE CCSD

MANHOLE FRAME WITH

SOLID LID & LOCK

SANITARY SEWER

- HOLE FOR "T" HANDLE

PVC GRAVITY SEWER PIPE SHALL BE CAPABLE OF PASSING THE INFILTRATION AND EXFILTRATION TESTS SPECIFIED HEREIN.

THE INFILTRATION OR LEAKAGE OF GROUND OR SUB-SURFACE WATER INTO THE SANITARY SEWERS AND MANHOLES SHALL NOT EXCEED THE RATE OF 100 GALLONS PER INCH OF TRIBUTARY PIPE DIAMETER PER 24 HOURS PER MILE OF LENGTH, OR THE COMPUTED FOUIVALENT FOR SHORTER SECTIONS AND SHORTER PERIODS OF TIME. SEWER TESTING SHALL BE AS ORDERED AND MAY INCLUDE INFILTRATION, EXFILTRATION, AIR TESTING, OR TELEVISING.

PRIOR TO TESTING, THE CONTRACTOR MAY BE REQUIRED TO FLUSH AND SWAB THE LINES. SWABBING SHALL BE A RUBBER INFLATED BALL OR OTHER APPROVED METHOD. ALL DEBRIS SHALL BE REMOVED BY METHODS APPROVED BY THE WATER RESOURCES DEPARTMENT. UPON COMPLETION OF ALL REQUIRED TESTING, THE BULKHEAD SHALL BE REMOVED AT THE FURTHEST DOWNSTREAM CONNECTION POINT.

THE WATER RESOURCES DEPARTMENT MAY ORDER INFILTRATION (LEAKAGE) TESTS OF AS MANY SECTIONS OF THE SANITARY SEWERS AS MAY BE NECESSARY TO DETERMINE WHETHER WORK COMPLIES WITH THE ABOVE REQUIRED RATE OF INFILTRATION. GENERALLY, A SECTION OF SEWER SHALL MEAN THE DISTANCE BETWEEN MANHOLES. SUCH TESTS WILL BE OF 30 MINUTE MINIMUM DURATION AND WILL ONLY BE MADE AT THE TIME OF MAXIMUM HEIGHT OF GROUND WATER, PROVIDED THAT SUCH MAXIMUM HEIGHT OF GROUND WATER MUST BE AT LEAST TWO (2) FEET ABOVE THE ELEVATION OF THE OUTSIDE TOP OF THE SEWER AT THE UPSTREAM LIMIT OF THE SECTION BEING TESTED. THE INFILTRATION TEST SHALL BE MADE BY INSTALLING A WEIR OR OTHER APPROVED MEASURING DEVICE IN THE LOWER END OF THE SEWER SECTION TO BE TESTED. THE QUANTITY OF GROUND WATER INFILTRATION INTO THE SEWER WILL BE MEASURED AND SHALL NOT EXCEED THE ALLOWABLE LEAKAGE.

5.3 EXFILTRATION TESTING

THE WATER RESOURCES DEPARTMENT MAY ALSO ORDER EXFILTRATION TESTS TO BE MADE. FOR EXFILTRATION TESTS, THE CONTRACTOR SHALL FILL THE SEWER WITH WATER TO AN ELEVATION OF TWO (2) FEET ABOVE THE OUTSIDE TOP OF THE SEWER AT THE UPSTREAM LIMIT OF THE SECTION BEING TESTED. THE EXFILTRATION SHALL NOT EXCEED THE RATE OF 100 GALLONS PER INCH OF TRIBUTARY PIPE DIAMETER, PER 24 HOURS PER MILE OF LENGTH, AS SPECIFIED FOR INFILTRATION.

EAST JORDAN 2045 WITH "J" LOCK ON REMOTE 5.4 LEAKAGE CORRECTION

IN CASE THE ABOVE REQUIREMENTS FOR EITHER INFILTRATION OR EXFILTRATION ARE NOT MET, THE CONTRACTOR SHALL CAULK JOINTS WITH ACCEPTABLE MATERIALS OR DO SUCH WORK AS MAY BE NECESSARY UNTIL THE RATE OF INFILTRATION OR EXFILTRATION IS LESS THAN THE ABOVE REQUIREMENTS, AS DETERMINED BY ADDITIONAL INFILTRATION OR EXFILTRATION

AN APPROVED TYPE OF LOW PRESSURE AIR TEST MAY BE USED IN LIEU OF THE ABOVE EXFILTRATION TESTS AT THE OPTION OF THE WATER RESOURCES DEPARTMENT. UNLESS OTHERWISE DIRECTED, THE SEWER WILL BE TESTED AT 5 POUNDS OF

PRESSURE FOR 5 MINUTES WITH NO LOSS OF PRESSURE. 5.6 TELEVISION INSPECTION

THE WATER RESOURCES DEPARTMENT MAY ORDER THE CONTRACTOR TO INSPECT, BY CLOSED CIRCUIT TELEVISION, AND TEST JOINTS OF SECTIONS OF SEWERS, INCLUDING SEWERS WITH "LIVE" SERVICE CONNECTIONS. THE TESTING METHOD SHALL BE SUBJECT TO THE APPROVAL OF THE WATER RESOURCES DEPARTMENT. JOINTS THAT FAIL THE JOINT TEST SHALL BE SEALED WITH AN APPROVED CHEMICAL GROUT OR EXCAVATED FOR REPAIRS AND RETESTED UNTIL THE JOINTS PASS THE JOINT TEST.

THE CONTRACTOR SHALL ALSO PERFORM A DEFLECTION TEST IN ALL SECTIONS OF GRAVITY SEWER PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. PRIOR TO MAKING THE DEFLECTION TESTS, THE LINES SHALL BE FLUSHED AND SWABBED. SWABBING SHALL BE BY AN INFLATED RUBBER BALL OR OTHER APPROVED METHOD. THE DEFLECTION OF ANY SEWER PIPE SHALL NOT EXCEED 5 PERCENT.

THE DEFLECTION TEST SHALL BE MADE BY USING A RIGID BALL OR MANDREL AND SHALL HAVE A DIAMETER EQUAL TO 95

PERCENT OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. CORRECTION OF ANY SECTION OF SEWER PIPE NOT MEETING THE DEFLECTION TEST SHALL BE APPROVED BY THE WATER

RESOURCES DEPARTMENT.

THE MANHOLES WILL BE TESTED AND INSPECTED FOR DAMAGE PRIOR TO PLACING IN SERVICE, UNDER THE WATER RESOURCES DEPARTMENT SUPERVISION, AFTER INSTALLATION IS COMPLETE TO SHOW THEY ARE WATERTIGHT.

A. THIS SPECIFICATION SHALL GOVERN THE VACUUM TESTING OF SANITARY SEWER MANHOLES AND STRUCTURES AND SHALL BE USED AS A METHOD OF DETERMINING ACCEPTABILITY IN ACCEPTING MAINTENANCE OF A SANITARY SEWER MANHOLE OR STRUCTURE. VACUUM TESTING SHALL BE ACCORDING TO ASTM C1244, EXCEPT AS SPECIFIED OTHERWISE HEREIN. ALL NEW SANITARY SEWER MANHOLES AND STRUCTURES SHALL BE TESTED BY VACUUM TEST AS SPECIFIED HEREIN TO TEST FOR

B. MANHOLES SHALL BE TESTED AFTER INSTALLATION WITH ALL CONNECTIONS IN PLACE.

- 1. LIFT HOLES, IF ANY, SHALL BE PLUGGED WITH AN APPROVED, NON-SHRINKABLE GROUT PRIOR TO TESTING. 2. DROP CONNECTIONS SHALL BE INSTALLED PRIOR TO TESTING.
- 3. THE VACUUM TEST SHALL INCLUDE TESTING OF THE SEAL BETWEEN THE CAST IRON FRAME AND THE CONE, SLAB OR GRADE RINGS.
- 4. THE MANHOLES SHALL BE BACKFILLED AND FINISHED TO DESIGN GRADE.
- 5. IF A COATING OR LINING IS TO BE APPLIED TO THE INTERIOR OF THE MANHOLE THE VACUUM TEST MUST NOT BE PERFORMED UNTIL THE COATING OR LINING HAS BEEN CURED ACCORDING TO THE MANUFACTURER'S
- RECOMMENDATION. 6. IF EXISTING MANHOLES ARE TO BE VACUUM TESTED (E.G. IN THE CASE OF A SEWER REHABILITATION PROJECT), THEN
- CLERMONT COUNTY MUST DEEM THE MANHOLE STRUCTURALLY SOUND PRIOR TO VACUUM TESTING.

C. PROCEDURE FOR TESTING SHALL BE AS FOLLOWS: 1. TEMPORARILY PLUG, WITH THE PLUGS BEING BRACED TO PREVENT THE PLUGS OR PIPES FROM BEING DRAWN INTO

INCLUDE THE MANHOLE FRAME

- THE MANHOLE, ALL PIPES ENTERING THE MANHOLE AT LEAST SIX INCHES INTO THE SEWER PIPE(S). THE PLUG MUST BE INFLATED AT A LOCATION PAST THE MANHOLE/PIPE GASKET.
- 2. THE TEST HEAD SHALL BE PLACED INSIDE THE FRAME AT THE TOP OF THE MANHOLE AND INFLATED, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
- 3. A VACUUM OF TEN INCHES OF MERCURY (10"HG) SHALL BE DRAWN ON THE MANHOLE. SHUT THE VALVE ON THE VACUUM LINE TO THE MANHOLE AND SHUT OFF THE PUMP OR DISCONNECT THE VACUUM LINE FROM THE PUMP.
- 4. THE PRESSURE GAUGE SHALL BE LIQUID FILLED, HAVING A 3.5 INCH DIAMETER FACE WITH A READING FROM ZERO TO THIRTY INCHES OF MERCURY.
- 5. THE MANHOLE SHALL BE CONSIDERED TO PASS THE VACUUM TEST IF THE TIME FOR THE VACUUM READING TO DROP FROM 10" TO 9" HG MEETS OR EXCEEDS THE VALUES INDICATED IN THE FOLLOWING TABLE:

MINIMUM TEST TIMES FOR VARIOUS MANHOLE DIAMETERS (MINUTES AND SECONDS)

······································					
MH DEPTH (FEET)	4' DIAMETER MH	5' DIAMETER MH	6' DIAMETER MH		
15 FEET OR LESS	50 SEC.	1 MIN. & 5 SEC.	1 MIN. & 20 SEC.		
15.01 TO 30 FEET	1 MIN. & 20 SEC.	1 MIN. & 45 SEC.	2 MIN. & 10 SEC.		
6. UNLESS OTHERWISE DI	RECTED BY THE WATER RESOL	JRCES DEPARTMENT. ALL MANHOLE VA	CUUM TESTING SHALL		

7. IF A MANHOLE FAILS THE VACUUM TEST, THE MANHOLE SHALL BE REPAIRED WITH MATERIAL APPROVED BY

CLERMONT COUNTY. THE VACUUM TEST SHALL THEN BE REPEATED UNTIL A SATISFACTORY TEST IS OBTAINED. 8. ALL TEMPORARY PLUGS AND BRACES SHALL BE REMOVED AFTER EACH TEST

McGill Smith Punshon

■ Planning

■ Architecture 3700 Park 42 Drive ■ Engineering Suite 190B ■ Landscape Architecture Cincinnati OH 45241 Phone 513.759.0004 ■ Surveying www.mspdesign.com

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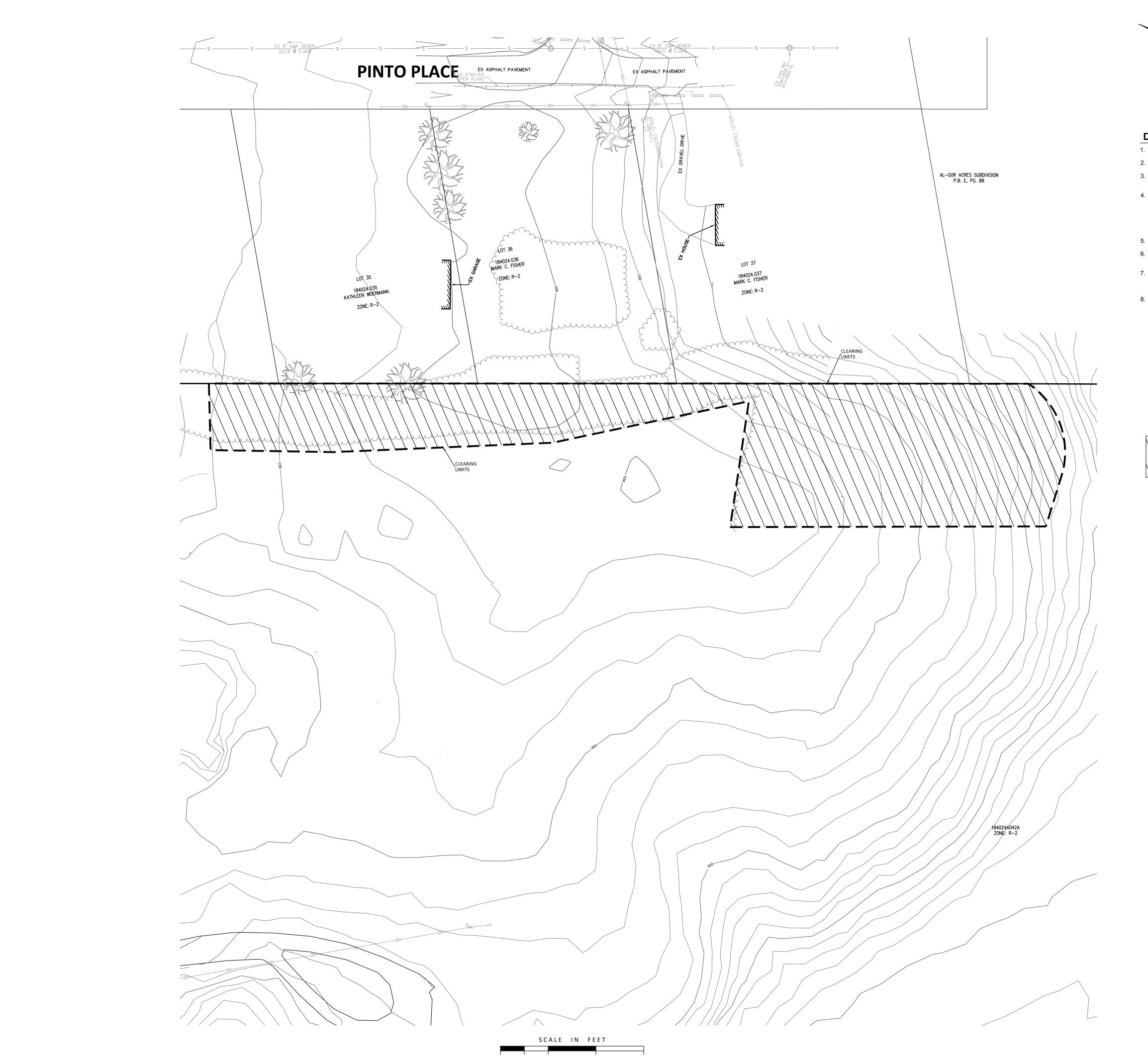
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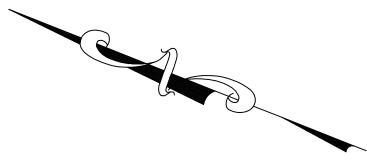
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Utilities Protection

1-800-362-2764

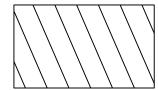
CALL TWO WORKING DAYS BEFORE YOU DIG





DEMOLITION PLAN NOTES

- 1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE CODES AND STANDARDS OF CONSTRUCTION.
- 2. ALL DEMOLITION PERMITS SHALL BE OBTAINED PRIOR TO THE START OF DEMOLITION.
- 3. THE CONTRACTOR IS TO COORDINATE ALL EX. UTILITIES TO BE REMOVED & ABANDON WITH THE APPROPRIATE UTILITY COMPANY.
- 4. THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF SURFACE EVIDENCE AND AVAILABLE PLANS AND RECORDS;THEY HAVE NOT BEEN PHYSICALLY LOCATED. THERE ARE NO GUARANTEES THAT THE UNDERGROUND UTILITIES AS SHOWN COMPRISE ALL SUCH UTILITIES WITHIN THE CONSTRUCTION AREA, EITHER IN SERVICE OR ABANDONED. NOR IS IT GUARANTEED THAT THEY ARE IN THE EXACT LOCATION AS INDICATED. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION.
- 5. ALL DEBRIS IS TO BE REMOVED AND HAULED OFFSITE.
- 6. CONTRACTOR IS RESPONSIBLE FOR FOR PROTECTION OF ALL WORK TO REMAIN, ANY DAMAGE TO EXISTING SHALL BE REPLACED TO LIKE NEW CONDITION.
- 7. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL OTHER MISCELLANEOUS ITEMS AS REQUIRED TO PERFORM THE WORK. ANY ITEMS NOT SPECIFICALLY EXCLUDED FROM DEMOLITION SCOPE OF WORK WITHIN THE GENERAL LIMITS OF WORK SHALL BE REMOVED AT CONTRACTORS EXPENSE.
- 8. CLEARING CONTRACTOR IS TO LEAVE SITE CLEAR OF ROOTS & DEBRIS AND READY FOR EARTHWORK CONSTRUCTION. ANY BACK CHARGES FOR ROOT CLEAN UP OR REMOVAL OR DEBRIS WILL BE THE RESPONSIBILITY OF THE CLEARING CONTRACTOR.



AREA TO BE CLEARED & GRUBBED 0.88 Ac.



Architecture 3700 Park 42 Drive ■ Engineering Suite 190B ■ Landscape Architecture Cincinnati OH 45241 ■ Planning Phone 513.759.0004 Surveying www.mspdesign.com

Project Manager DCA Drawn By 18441004-ROAD-EXT

X-Ref(s)

Issue/Revision No. Date 04/07/23 ISSUE 11/27/23 CLERMONT CO. REV 12/20/23 SPLIT PH. 2A & 2B 01/29/24 CLERMONT CO REV.

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Sheet Title

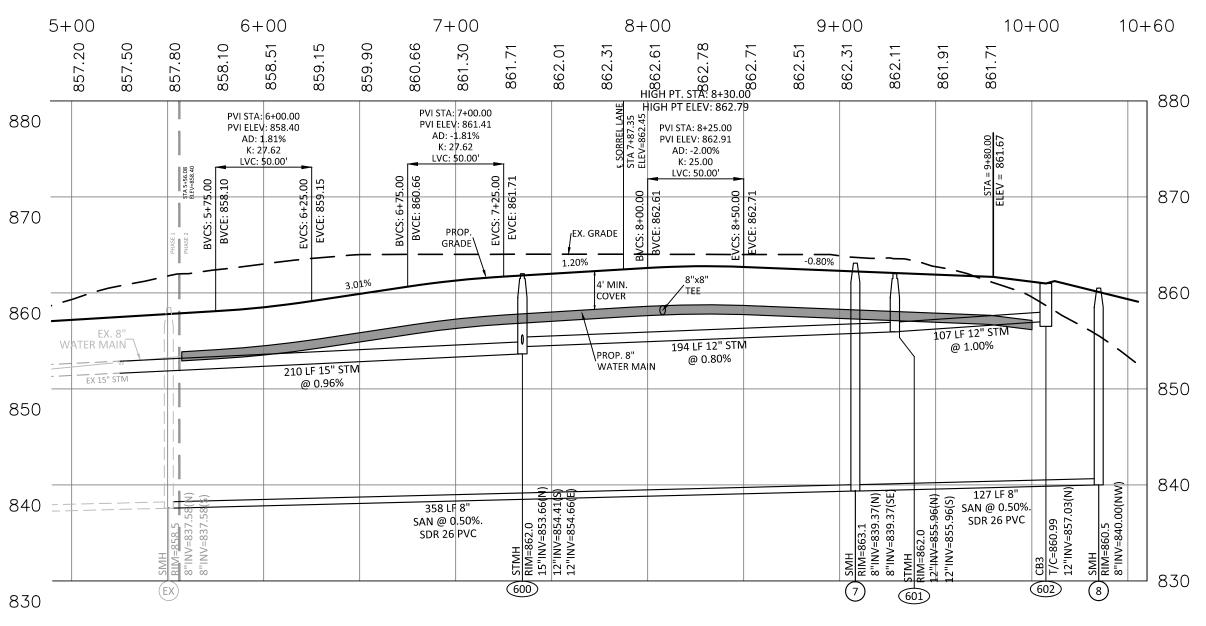
OHIO
Utilities Protection
SERVICE
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CALL TWO WORKING DAYS BEFORE YOU DIG (NON MEMBERS MUST BE CALLED DIRECTLY)

CLEARING &

AS NOTED **Drawing Scale Sheet Number**

18441

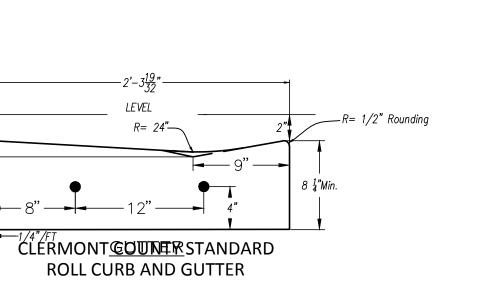


LOW PT. STA: 11+81.59 890 890 LOW PT ELEV: 861.81 PVI STA: 11+87.50 PVI STA: 10+87.50 PVI ELEV: 862.99 AD: 0.45% K: 26.88 K: 111.15 LVC: 100.00' LVC: 50.00' 880 STA 12+14.68 /ELEV = 862.01 / END PAVEMENT | WATER MAIN

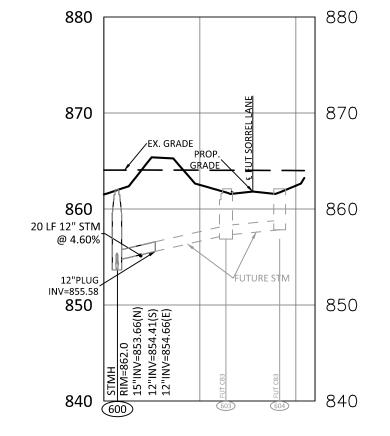
> **SORREL DRIVE** 1"=50' HOR. / 1"=10' VERT.

PROPOSED LORVEN DRIVE 1"=50' HOR. / 1"=10' VERT.

T/C DENOTES TOP OF CURB



R= 1/2" Rounding —



STORM SEWER 600-604

1"=50' HOR. / 1"=10' VERT.

UTILITY PLAN NOTES

LOCATION OF EXISTING UTILITIES SHOWN HEREON IS APPROXIMATE AND IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. THE OWNER AND ENGINEER ASSUMES NO LIABILITY FOR THE LOCATION OF ANY AND ALL UTILITIES WITHIN THE LIMITS OF WORK. ANY DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

STREETS AND STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS FOR CLERMONT COUNTY, OHIO.

UNLESS OTHERWISE NOTED, MATERIALS AND SPECIFICATIONS SHALL CONFORM TO THE CONSTRUCTION AND MATERIALS SPECIFICATIONS OF ODOT.

BACKFILL FOR UNDERGROUND UTILITIES AT ROAD CROSSINGS, PARKING AREAS AND WITHIN FIVE (5) FEET OF SIDEWALK OR EDGE OF PAVEMENT TO BE GRANULAR MATERIAL OR CONTROLLED FILL. ALL OTHER BACKFILL FOR UNDERGROUND UTILITIES TO BE EXCAVATED MATERIAL. WATER MAIN REQUIRES GRANULAR BACKFILL AROUND AND 12" OVER TOP OF PIPE AND 6" BELOW THE INVERT OF THE PIPE.

ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE OR THERMOPLASTIC PIPE, UNLESS OTHERWISE NOTED, AND ACCEPTABLE TO THE CLERMONT COUNTY ENGINEER

WATER MAIN MATERIAL TO BE C900 DR14 UNLESS APPROVED BY CLERMONT COUNTY WATER RESOURCES

McGill Smith Punshon

■ Planning

Surveying

1-800-362-2764

Architecture ■ Engineering

3700 Park 42 Drive Suite 190B ■ Landscape Architecture Cincinnati OH 45241 Phone 513.759.0004 www.mspdesign.com

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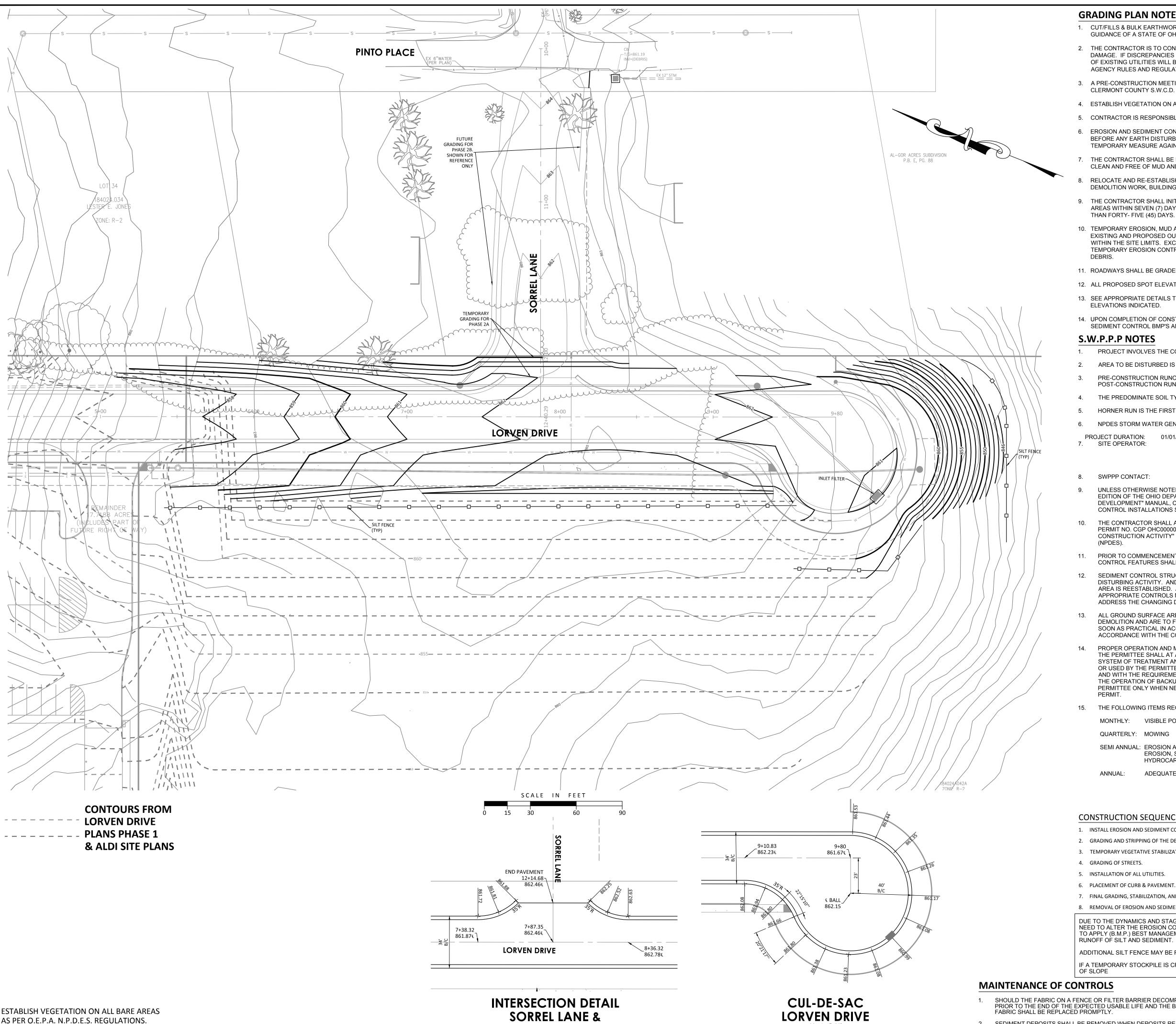


Sheet Title

IMPROVEMENT PLAN & PROFILES

18441.03 Project Number AS NOTED Drawing Scale Sheet Number 18441

File Number



LORVEN DRIVE

ANGLES SHOWN ARE 22.5° UNLESS NOTED OTHERWISE

ELEVATIONS SHOWN TOP OF CURB UNLESS NOTED OTHERWISE

CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S.

INSPECTIONS DURING CONSTRUCTION PERIOD.

GRADING PLAN NOTES

- 1. CUT/FILLS & BULK EARTHWORK FOR THE ROADWAY MUST BE PERFORMED UNDER THE OBSERVATION & GUIDANCE OF A STATE OF OHIO REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER.
- 2. THE CONTRACTOR IS TO CONFIRM ALL EXISTING UTILITY LOCATIONS AND PROTECT THEM FROM DAMAGE. IF DISCREPANCIES EXIST, NOTIFY THE PROPER UTILITY COMPANY OR AGENCY. RELOCATION OF EXISTING UTILITIES WILL BE DONE IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY OR AGENCY RULES AND REGULATIONS.
- 3. A PRE-CONSTRUCTION MEETING IS REQUIRED WITH A REPRESENTATIVE OF THE OWNER/DEVELOPER, CLERMONT COUNTY S.W.C.D. AND GENERAL CONTRACTOR.
- 4. ESTABLISH VEGETATION ON ALL BARE AREAS AS PER O.E.P.A., N.P.D.E.S. REGULATIONS.
- 5. CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S. INSPECTIONS DURING CONSTRUCTION.
- 6. EROSION AND SEDIMENT CONTROLS SHALL BE ESTABLISHED AROUND THE PERIMETER OF THE SITE BEFORE ANY EARTH DISTURBING ACTIVITIES HAVE BEGUN. SILT FENCE SHOULD BE USED AS A TEMPORARY MEASURE AGAINST SILT BEING WASHED ONTO THE ADJACENT PROPERTIES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ADJACENT PUBLIC ROADS & PRIVATE DRIVES CLEAN AND FREE OF MUD AND DEBRIS.
- RELOCATE AND RE-ESTABLISH CONSTRUCTION ENTRANCE AS NECESSARY TO ACCOMODATE DEMOLITION WORK, BUILDING CONSTRUCTION AND UTILITY CONSTRUCTION.
- 9. THE CONTRACTOR SHALL INITIATE EROSION & SEDIMENT CONTROL PRACTICES ON ALL DISTURBED AREAS WITHIN SEVEN (7) DAYS IF THE DISTURBED AREAS ARE TO REMAIN UNDISTURBED FOR MORE THAN FORTY- FIVE (45) DAYS.
- 10. TEMPORARY EROSION, MUD AND DEBRIS CONTROL USING SILT FENCE MUST BE PROVIDED AT ALL EXISTING AND PROPOSED OUTLET DITCHES SWALES, WATERCOURSES OR TEMPORARY PIPE OUTLETS WITHIN THE SITE LIMITS. EXCESS BUILD UP OF SEDIMENT AND DEBRIS DEPOSITED AT THESE TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED WHEN HALF FULL OF SEDIMENT AND
- 11. ROADWAYS SHALL BE GRADED TO ASSURE POSITIVE FLOW TOWARDS THE STORM SEWER INLETS.
- 12. ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- 13. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- 14. UPON COMPLETION OF CONSTRUCTION, REMOVE AND PROPERLY DISPOSE OF ALL EROSION AND SEDIMENT CONTROL BMP'S AND STABILIZE ALL DISTURBED AREAS.

S.W.P.P.P NOTES

- PROJECT INVOLVES THE CONSTRUCTION OF TWO PUBLIC ROADWAYS.
- AREA TO BE DISTURBED IS APPROXIMATELY 1.19 ACRES.
- PRE-CONSTRUCTION RUNOFF COEFFICIENT IS 0.30.
- POST-CONSTRUCTION RUNOFF COEFFICIENT IS 0.46.
- THE PREDOMINATE SOIL TYPE IS JONESBORO ROSSMOYNE.
- HORNER RUN IS THE FIRST NAMED STREAM RECEIVING RUNOFF FROM THIS SITE.
- NPDES STORM WATER GENERAL PERMIT NUMBER: TBD
- PROJECT DURATION: 01/01/24 12/01/24 SITE OPERATOR: MIAMI TOWNSHIP
 - 6101 MEIJER DRIVE MIAMI TOWNSHIP, OHIO 45150
 - 513-248-3725
- SWPPP CONTACT: STEVE KELLY
- UNLESS OTHERWISE NOTED, STANDARDS AND SPECIFICATIONS ESTABLISHED IN THE LATEST EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT" MANUAL, CURRENT EDITION, SHALL GOVERN THE EROSION AND SEDIMENT CONTROL INSTALLATIONS SPECIFIED ON THIS PLAN.
- THE CONTRACTOR SHALL ABIDE BY THE RULES AND REGULATIONS SET FOURTH IN THE OHIO EPA PERMIT NO. CGP OHC000005 "AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
- PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS, ALL SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE IN PLACE.
- SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY. AND SHALL CONTINUE TO FUNCTION UNTIL THE UP SLOPE DEVELOPMENT AREA IS REESTABLISHED. AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED, APPROPRIATE CONTROLS MUST BE CONSTRUCTED OR EXISTING CONTROLS ALTERED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.
- ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF DEMOLITION AND ARE TO FINAL GRADE AND TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH STATE OF OHIO SPECIFICATION ITEM 659. AND IN ACCORDANCE WITH THE CONDITIONS OF THE NPDES STORM WATER GENERAL PERMIT.
- PROPER OPERATION AND MAINTENANCE. THE PERMITTEE SHALL AT ALL TIMES PROPERLY OPERATE AND MAINTAIN ALL FACILITIES AND SYSTEM OF TREATMENT AND CONTROL (AND RELATED APPURTENANCES) WHICH ARE INSTALLED OR USED BY THE PERMITTEE TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT AND WITH THE REQUIREMENTS OF SWP3s. PROPER OPERATION AND MAINTENANCE REQUIRES THE OPERATION OF BACKUP OR AUXILIARY FACILITIES OR SIMILAR SYSTEMS, INSTALLED BY A PERMITTEE ONLY WHEN NECESSARY TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THE
- THE FOLLOWING ITEMS REQUIRE INSPECTION AT THE FREQUENCY NOTED BELOW:

MONTHLY: VISIBLE POLLUTION, DEBRIS AT INLETS

QUARTERLY: MOWING

SEMI ANNUAL: EROSION ALONG SHORELINE, EMBANKMENT EROSION, SEDIMENT ACCUMULATION,

HYDROCARBON BUILD UP

ADEQUATE GROUND COVER, EMERGENCY SPILLWAY

CONSTRUCTION SEQUENCE

- 1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
- 2. GRADING AND STRIPPING OF THE DEVELOPMENT SITE OR PROJECT AREA.
- 3. TEMPORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL MEASURES.
- 4. GRADING OF STREETS.
- 5. INSTALLATION OF ALL UTILITIES.
- 7. FINAL GRADING, STABILIZATION, AND LANDSCAPING.
- 8. REMOVAL OF EROSION AND SEDIMENT CONTROLS MEASURES.

DUE TO THE DYNAMICS AND STAGING OF EARTH MOVEMENT. CONTRACTOR MAY NEED TO ALTER THE EROSION CONTROL MEASURES AS SHOWN HEREON. CONTRACTOR TO APPLY (B.M.P.) BEST MANAGEMENT PRACTICES IN ORDER TO CONTROL THE RUNOFF OF SILT AND SEDIMENT.

ADDITIONAL SILT FENCE MAY BE REQUIRED AS SITE CONDITIONS DETERMINE.

IF A TEMPORARY STOCKPILE IS CREATED, SILT FENCE SHALL BE PLACED AT THE TOE

MAINTENANCE OF CONTROLS

ANGLES SHOWN ARE 22.5° UNLESS NOTED OTHERWISE

ELEVATIONS SHOWN TOP OF CURB UNLESS NOTED OTHERWISE

- SHOULD THE FABRIC ON A FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE PREPARED FOR



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18441004-ROAD-EXT

No. Date

04/07/23

11/27/23

12/20/23

01/29/24

Suite 190B

DCA

■ Architecture

■ Engineering

■ Planning

■ Surveying

Drawn By

X-Ref(s)

■ Landscape Architecture

Project Manager

Issue/Revision

CLERMONT CO. REV

SPLIT PH. 2A & 2B

CLERMONT CO REV.

Sheet Title

GRADING & S.W.P.P. PLAN

18441.03 **Project Number AS NOTED** Drawing Scale Sheet Number

File Number

18441

MULCHING

be mulched.

2. Materials

1. Mulch material shall be applied

on very flat areas may not need

* Straw-If straw is used it shall be

lb./1.000 sq. ft. (two to three bales

by hand or mechanically so the soil

distribution of hand-spread mulch

1,000-sq.-ft. sections and spread

two 45-lb. bales of straw in each

* Hydroseeders-If wood cellulose fiber is used, it shall be used at 2,000

* Other-Other acceptable mulches

include mulch mattings applied

recommendations or wood chips

Straw Mulch Anchoring Methods

* Mechanical-A disk, crimper, or

to punch or anchor the mulch

material into the soil. Straw

longer than 6 in.

critical slopes.

similar type tool shall be set straight

mechanically anchored shall not be

* Mulch Nettings-Netting shall be

finely chopped but, generally, be left

used according to the manufacturer's

recommendations. Netting may be

necessary to hold mulch in place in

areas of concentrated runoff and on

* Asphalt Emulsion-Asphalt shall be

manufacturer or at the rate of 160

* Synthetic Binders-Synthetic binders

* Wood Cellulose Fiber-Wood cellulose

fiber binder shall be applied at a net

water and the mixture shall contain a

dry weight of 750 lb./ac. The wood

cellulose fiber shall be mixed with

1. Permanent seeding shall include

adverse site conditions as needed for

2. Excessive irrigation rates shall be

avoided and irrigation monitored to

prevent erosion and damage from

irrigation to establish vegetation

during dry or hot weather or on

adequate moisture for seed

germination and plant growth.

naximum of 50 lbs./100 gal.

applied as recommended by the

such as Acrylic DLR (Agri-Tac),

DCA-70. Petroset. Terra Tack or

equivalent may be used at rates

recommended by manufacturer.

immediately to minimize loss by wind

Straw mulch shall be anchored

surface is covered. For uniform

divide area into approximately

lb./ac/ or 46 lb./1,000 sq. ft.

according to manufacturer's

applied at 6 tons/ac.

or water.

The mulch shall be spread uniformly

the rate of 2 tons/ac. or 90

unrotted small-grain straw applied at

mulch to achieve adequate

immediately after seeding. Seedings

made during optimum seeding dates

and with favorable soil conditions and

stabilization. Dormant seeding shall

fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing 2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation 3. Resoil shall be applied where

needed to establish vegetation SEEDBED PREPARATION 1. Lime-Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 lbs./1,000 sq. ft.

2. Fertilizer-Fertilizer shall be applied as recommended by a soil test. In lieu of a soil test, fertilizer shall be applied at a rate of 12 lb./1,000 sq. ft. or 500 lb./ac/ of 10-10-10 or

3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or othe suitable field implement to a depth of 3 in. On sloping land the soil shall be worked on the contour. SEEDING DATES AND SOIL CONDITIONS Seeding should be done March 1 to May 31 or Aug. 1 to September 30. These seeding dates are ideal but, with the use of additional mulch and irrigation, seedings may be made any time throughout the growing season Tillage/ seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding

DORMANT SEEDING: 1. Seedings shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate, but probably will not be able to survive the winter 2. The following methods may be used for "Dormant Seeding": * From October 1 through November 20, prepare the seedbed, and the required amounts of lime and fertilizer, then mulch and ancho After November 20, and before March

mixture, mulch and anchor. Increase the seeding rates by 50 % for this type of seeding. * From November 20 through March 15, when soil conditions permit prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50 % for this

15, broadcast the selected seed

type of seeding. * Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed

and fertilizer) on a firm, moist * Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed followin seeding operations with a cultipacket lier or light drag. On sloping lan seeding operations should be on the contour where feasible.

lote: Other approved seed species may be substituted

Permanent Seeding Seeding Rate Seed Mix Notes: lb./ac. | lb./1.000 ft. General Use 1/2-1 1/4-1/2 Creeping Red Fescue Domestic Ryegrass 1/4-1/2 Kentucky Bluegrass Tall Fescue 40 1 Dwarf Fescue 40 1 Steep Banks or Cut Slopes Tall Fescue 40 1/4 Crown Vetch Do not seed later than August Tall Fescue Do not seed later than August Tall Fescue Road Ditches and Swales Tall Fescue 40 2 1/4 Dwarf Fescue Kentucky Bluegrass Lawns 1 1/2 1 1/2 Kentucky Bluegrass Perennial Ryegrass Kentucky Bluegrass 1 1/2 1 1/2 For shaded areas Creeping Red Fescue

1. Permanent seeding shall not be considered established for at least 1 full year from the time of planting. Seeded areas shall be inspected for failure and reestablished as needed Depending on site conditions, it may be necessary to irrigate, fertilize, overseed, or reestablish plantings in order to provide permanent vegetation for adequate erosion control.

be established by soil test recommendations or by using the rates shown in the following table.

Maintenance for Permane Fertilization and Mowing	ent Seedings				
Mixture	Formula	lb./ac.	lb./1.000 ft. 2	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed.	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Verch Fescue	0-20-20	400	10	Spring, yearly following establish-	Do not mow
Flat Pea Fescue	0-20-20	400	10	ment and every 4-7 yr. thereafter.	Do not mow

Specifications Temporary Seeding

Seeding Dates	Species	lb./1.000 ft. ²	Per Ac.
March 1 to August 15	Oats	3	4 bushel
	Tall Fescus	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescus	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 16 to November 1	Rye	3	2 bushel
	Tall Fescus	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushel
	Tall Fescus	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescus	1	40 lb.
	Annual Ryegrass	1	40 lb.

Note: Other approved seed species may be substituted Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.

Temporary seed shall be applied between construction operations of soil that will not be graded or eworked for 45 days or more These idle areas should be seeded as soon as possible after grading or shall be seeded within 7 days Several applications of temporar seeding are necessary on typical 3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed

preparation is not possible. 4. Soil Amendments-Applications of temporary vegetation shall establish adequate stands of vegetation that may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer 5. Seeding Method-Seed shall be applied uniformly with a cyclone seeder, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking and dragging and then lightly tamped into place using a roller or cultipacker. If nydroseeding is used, the seed and fertilizer will be mixed on site and the seeding shall be done immediately and without interruption MULCHING TEMPORARY SEEDING 1. Applications of temporary seeding shall include mulch that shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with

favorable soil conditions and on very

10' MINIMUM

TYPE "BELOW" GRADE

flat areas may not need mulch to

achieve adequate stabilization.

10 mil PLASTIC LINING

10 mil PLASTIC LINING-

1. ACTUAL LAYOUT DETERMINED IN THE FIELD. 2. THE CONCRETE WASHOUT SIGN SHALL BE

INSTALLED WITHIN 32' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

* Straw-If straw is used, it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lbs./1.000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq. ft. sections and spread two 45 lb. bales of straw in each section. * Hvdroseeders-If wood cellulose fiber * Other-Other acceptable mulches include mulch matting applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

4. Anchoring Methods: * Mechanical-A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but generally, be left

* Mulch Nettings-Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.

* Wood Cellulose Fiber-Wood cellulose

fiber binder shall be applied at a net

dry weight of 750 lb./ac. The wood

cellulose fiber shall be mixed with

STAPLE DETAIL

water and the mixture shall

contain a maximum of 50

lbs./100 gal.

surfaces.

runoff bypassing the inlet will not flow to a settling pond. The top of strength to support fabric with the earth dikes shall be at least 6 water fully impounded against it. It in. higher than the top of the shall be stretched tightly around the frame and fastened securely to the Specifications Construction Entrance

Road or Other Existing PROFILE

Specifications

Inlet Protection in Swales, Ditch Lines or Yard Inlets

. ⊿ ∢.

5. Geotextile shall have an

equivalent opening size of 20-40

sieve and be resistant to sunlight

It shall be stretched tightly around

shall extend from the top of the

frame to 18 in. below the inlet

the frame and fastened securely. It

notch elevation. The geotextile shall

overlap across one side of the inlet

so the ends of the cloth are not

6. Backfill shall be placed around

the inlet in compacted 6-in, layers

until the earth is even with notch

7. A compacted earth dike or a

check dam shall be constructed in

inlet is not in a depression and if

the ditch line below the inlet if the

elevation on ends and top elevation

fastened to the same post.

Backfill

16" Minimum

SECTION

1. Silt fence shall be constructed

before upslope land disturbance

2. All silt fences shall be placed as

close to the contour as possible so

that water will not concentrate at low

points in the fence and so that small

carry small concentrated flows to the

swales or depressions, which may

silt fence, are dissipated along its

3. To prevent water ponded by the

silt fence from flowing around the

upslope so that the ends are at a

higher elevation.

ends, each end shall be constructed

4. Where possible, silt fence shall be

placed on the flattest area available.

preserved for 5 ft. (or as much as

5. Where possible, vegetation shall be

possible) upslope from the silt fence.

reestablished within 7 days from the

If vegetation is removed, it shall be

6. The height of the silt fence shall

be a minimum of 16 in. above the

7. The silt fence shall be placed in a

The trench shall be cut with a

trencher, cable laying machine, o

other suitable device that will ensure

an adequately uniform trench depth

8. The silt fence shall be placed with

the stakes on the downslope side of

cloth are below the ground surface.

The trench shall be backfilled and

Any areas that will lie dormant for one

Any areas within 50 feet of a surface

Any disturbed areas within 50 feet of a

disturbed areas that will be dormant for

more than 14 days but less than one year,

and not within 50 feet of a surface water

AREAS AND STEEP SLOPES WHERE PRACTICABLE.

Disturbed areas that will be idle over

EARTHWORK REGULATIONS.

For all construction activities, any

water of the State and at final grade

Any other areas at final grade

the geotextile and so that 8-in. of

Excess material shall lie on the

bottom of the 6-in. deep trench

year or more

of the State

installation of the silt fence.

original ground surface.

Specifications

Silt Fence

——10" Maximum

Level Contour

ELEVATION

Silt Fence

9. Seams between section of silt

fence shall be overlapped with the

end stakes of each section wrapped

10. Maintenance-Silt fence shall allow

runoff to pass only as diffuse flow

overtops the silt fence, flows under

or around ends, or in any other way

becomes a concentrated flow, on o

the following shall be performed, as

removed, or 3) Other practices shall

1. Fence Posts-The length shall be a

minimum of 32 in. long. Wood post

sound quality. The maximum spacing

Fabric Propertie

raviolet Exposure Strength Retention 70 %

.... 1 x 10 sec

Within seven days of the most recent

Nithin two days of reaching final grade

Within seven days of reaching final

Within two days of the most recent

Within seven days of the most recent

For residential subdivisions, disturbed

areas must be stabilized at least sever

Prior to the onset of winter weather

days prior to transfer of permit coverage

will be 2-by-2 in. of hardwood of

between posts shall be 10 ft.

2. Silt Fence Fabric shall be ODOT

Type C Geotextile Fabric or as

described by the chart below:

aximum Elongation at 60 lbs

mimum Tear Strength ...

mimum Burst Strength ..

nimum Permittivity

STABILIZATION. DISTURBED AREAS MUST BE STABILIZED AS SPECIFIED IN

Area requiring permanent stabilization | Time frame to apply erosion controls

Area requiring permanent stabilization | Time frame to apply erosion controls

surface water of the State and not a final | disturbance if the area will remain idle

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE

CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENFORCING OFFICIAL BEFORE IMPLEMENTING

PERMANENT STABILIZATION OF DITCHES: SPECIAL MEASURES SHALL BE UNDERTAKEN TO STABILIZE DITCHES AND PREVENT EROSIVE FLOWS. MEASURES MAY INCLUDE SEEDING,

OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES SHALL BE EMPLOYED.

ALTERNATIVE STABILIZATION TECHNIQUES PER SECTION 310(N) OF THE HAMILTON COUNTY

DORMANT SEEDING (AS DEFINED IN THE LATEST EDITION OF THE RAINWATER AND LAND

DEVELOPMENT MANUAL), MULCHING, EROSION CONTROL MATTING, SODDING, RIPRAP,

RUNOFF CONTROL PRACTICES: THE PROJECT SHALL INCORPORATE MEASURES WHICH

CONTROL THE FLOW OF RUNOFF FROM DISTURBED AREAS SO AS TO PREVENT EROSION

GRADING PRACTICES. THESE PRACTICES SHALL DIVERT RUNOFF AWAY FROM DISTURBED

FROM OCCURRING. SUCH PRACTICES MAY INCLUDE ROCK CHECK DAMS, PIPE SLOPE

DRAINS, DIVERSIONS TO DIRECT FLOW AWAY FROM EXPOSED SOILS AND PROTECTIVE

NATURAL DESIGN WITH BIOENGINEERING TECHNIQUES OR ROCK CHECK DAMS.

disturbance

grade within that area

for more than 14 days

for the individual lot(s).

disturbance within the area

Table 1: Permanent Stabilization

Table 2: Temporary Stabilization

appropriate: 1) The layout of the

silt fence shall be changed, 2)

Criteria for Silt Fence Materials

be installed.

Accumulated sediment shall be

through the geotextile. If runoff

together before driving into the

No Slope

1 Stone Size-Two-inch stone shall be used, or recycled concrete eguivalent.

2. Length-The construction entrance shall be as long as required to stabilize high traffic areas but not less than 50 ft. (except on single residence lot where a 30-ft. minimum

length apples). 3. Thickness-The stone layer shall be at least 6 in. thick.

4. Width-The entrance shall be at

least 10 ft. wide, but not less than the full width at points where ingress or egress occurs. 5. Bedding-A geotextile shall be placed over the entire area prior to

placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a Mullen Burst Strength of at least 190 lbs. 6. Culvert-A pipe or culvert shall be

7. Water Bar-A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.

9. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction site shall be restricted

EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES

1. EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE MAINTAINED AS FOLLOWS: A. <u>INSPECTIONS</u>. THE PERMITTEE SHALL ASSIGN "QUALIFIED INSPECTION PERSONNEL" TO CONDUCT INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE SWP3 IS ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE PROPOSED IN PART III.G.1.G OF THIS PERMIT OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. AT A MINIMUM, PROCEDURES IN A SWP3 SHALL PROVIDE THAT ALL CONTROLS ON THE SITE ARE

> AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24-HOUR PERIOD BY THE END OF THE NEXT CALENDAR DAY, EXCLUDING WEEKENDS AND HOLIDAYS UNLESS WORK IS SCHEDULED; AND ONCE EVERY SEVEN CALENDAR DAYS.

B. THE INSPECTION FREQUENCY MAY BE REDUCED TO AT LEAST ONCE EVERY MONTH FOR

THE ENTIRE SITE IS TEMPORARILY STABILIZED OR

 RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR EXTENDED PERIODS OF TIME (E.G., SITE IS COVERED WITH SNOW, ICE, OR THE GROUND IS FROZEN).

C. THE BEGINNING AND ENDING DATES OF ANY REDUCED INSPECTION FREQUENCY SHALL BE DOCUMENTED IN THE SWP3.

D. ONCE A DEFINABLE AREA HAS ACHIEVED FINAL STABILIZATION, THE AREA MAY BE MARKED ON THE SWP3 AND NO FURTHER INSPECTION REQUIREMENTS SHALL APPLY TO THAT PORTION OF THE SITE.

1. FOLLOWING EACH INSPECTION, A CHECKLIST MUST BE COMPLETED AND SIGNED BY THE QUALIFIED INSPECTION PERSONNEL REPRESENTATIVE. AT A MINIMUM, THE INSPECTION REPORT SHALL INCLUDE:

THE INSPECTION DATE;

NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY IF THE FIRST INSPECTION) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT. DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES), AND WHETHER ANY DISCHARGES OCCURRED; WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING

AT THE TIME OF THE INSPECTION; LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE

LOCATION(S) OF BMPS THAT NEED TO BE MAINTAINED;

LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;

LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND

CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THE SWP3 NECESSARY AND IMPLEMENTATION DATES.

DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED FO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWP3 SHALL BE OBSERVED TO ENSURE THAT THOSE ARE OPERATING CORRECTLY.DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.

F. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED EROSION CONTROL BARRIERS, END RUNS, AND THE UNDERCUTTING OF BARRIERS BY RUNOFF.

G. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION HAS REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

H. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SEDIMENT CONTROL BARRIER IS NOT LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE APPROPRIATE GRADE ELEVATION, PREPARED AND SEEDED.

THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF MUD AND DIRT BEING TRACKED ONTO THE STREETS BY INSTITUTING BEST MANAGEMENT PRACTICES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST PER ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 616.

THE PERMITTEE SHALL MAINTAIN FOR THREE YEARS FOLLOWING THE SUBMITTAL OF A NOTICE OF TERMINATION FORM, A RECORD SUMMARIZING THE RESULTS OF THE INSPECTION, NAMES(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWP3 AND A CERTIFICATION AS TO WHETHER THE FACILITY IS IN COMPLIANCE WITH THE SWP3 AND THE PERMIT AND IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. THE RECORD AND CERTIFICATION SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS

WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT SETTLING POND. IT SHALL BE REPAIRED OR MAINTAINED WITHIN 3 DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS SHALL BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.

INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWP3 SHALL BE AMENDED AND THE NEW CONTROL

WHEN PRACTICES DEPICTED ON THE SWP3 ARE NOT INSTALLED. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE CONTAINED IN PART III.G.1.H OF THIS PERMIT, THE CONTROL PRACTICE SHALL BE IMPLEMENTED WITHIN 10 DAYS FROM THE DATE OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD SHALL CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT

APPROVED STATE OR LOCAL PLANS. ALL DISCHARGERS REGULATED UNDER THIS GENERAL PERMIT MUST COMPLY, EXCEPT THOSE EXEMPTED UNDER STATE LAW, WITH THE LAWFUL REQUIREMENTS OF MUNICIPALITIES. COUNTIES AND OTHER LOCAL AGENCIES REGARDING DISCHARGES OF STORM WATER FROM CONSTRUCTION ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL PLANS AND STORM WATER

STORM WATER MANAGEMENT PROGRAM OF THE MS4 OPERATOR.

EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THIS PERMIT OR SITE-SPECIFIC CONDITIONS ARE SUCH THAT IMPLEMENTATION OF ANY EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THIS PERMIT WILL RESULT IN NO ENVIRONMENTAL BENEFIT. THEN THE PERMITTEE SHALL PROVIDE JUSTIFICATION FOR REJECTING EACH PRACTICE BASED ON SITE CONDITIONS. EXCEPTIONS FROM IMPLEMENTING THE EROSION AND SEDIMENT CONTROL STANDARDS CONTAINED IN THIS

McGill Smith Punshon ■ Architecture 3700 Park 42 Drive ■ Engineering Suite 190B

■ Surveying

Drawn By

X-Ref(s)

■ Landscape Architecture Cincinnati OH 45241 Phone 513.759.0004 www.mspdesign.com **Project Manager**

18441004-ROAD-EXT

Issue/Revision No. Date 04/07/23 11/27/23 **CLERMONT CO. REV** 12/20/23 SPLIT PH. 2A & 2B CLERMONT CO REV.

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WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION IF THE

PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

MANAGEMENT PLANS APPROVED BY LOCAL OFFICIALS SHALL BE RETAINED WITH THE SWP3 PREPARED IN ACCORDANCE WITH THIS PERMIT. APPLICABLE REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL AND STORM WATER MANAGEMENT APPROVED BY LOCAL OFFICIALS ARE, UPON SUBMITTAL OF A NOI FORM, INCORPORATED BY REFERENCE AND ENFORCEABLE UNDER THIS PERMIT EVEN IF THEY ARE NOT SPECIFICALLY INCLUDED IN AN SWP3 REQUIRED UNDER THIS PERMIT. WHEN THE PROJECT IS LOCATED WITHIN THE JURISDICTION OF A REGULATED MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4), THE PERMITTEE SHALL CERTIFY THAT THE SWP3 COMPLIES WITH THE REQUIREMENTS OF THE

EXCEPTIONS. IF SPECIFIC SITE CONDITIONS PROHIBIT THE IMPLEMENTATION OF ANY OF THE PERMIT WILL BE APPROVED OR DENIED ON A CASE-BY-CASE BASIS.

> SERVIC Call Before You Dig 1-800-362-2764

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

Sheet Title

R R

S.W.P.P.P. NOTES & **DETAILS**

18441

18441.03 **Project Number AS NOTED** Drawing Scale Sheet Number

File Number

CONCRETE WASHOUT DETAIL

Permanent Seeding

Specifications

2. Maintenance fertilization rates shall

operational. 2. The earth around the inlet shall be excavated completely to a depth of at least 18 in. 3. The wooden frame shall be constructed of 2-by-4 in. construction grade lumber. The 2-by-4 in. posts shall be driven: ft, into the ground at four corner of the inlet and the top portion of 2-by-4 in, frame assembled using the frame shall be at least 6 in. water would pose a safety hazard to 4. Wire mesh shall be of sufficient

1. Inlet protection shall be

the storm drain becomes

constructed either before upslope

land disturbance begins or before

the soil surface is covered. For is used, it shall be used at 2.000 lb./ac. or 46 lb./1,000 sq. ft.

> 3. Straw mulch shall be anchored immediately to minimize loss by wind

longer than 6 in.

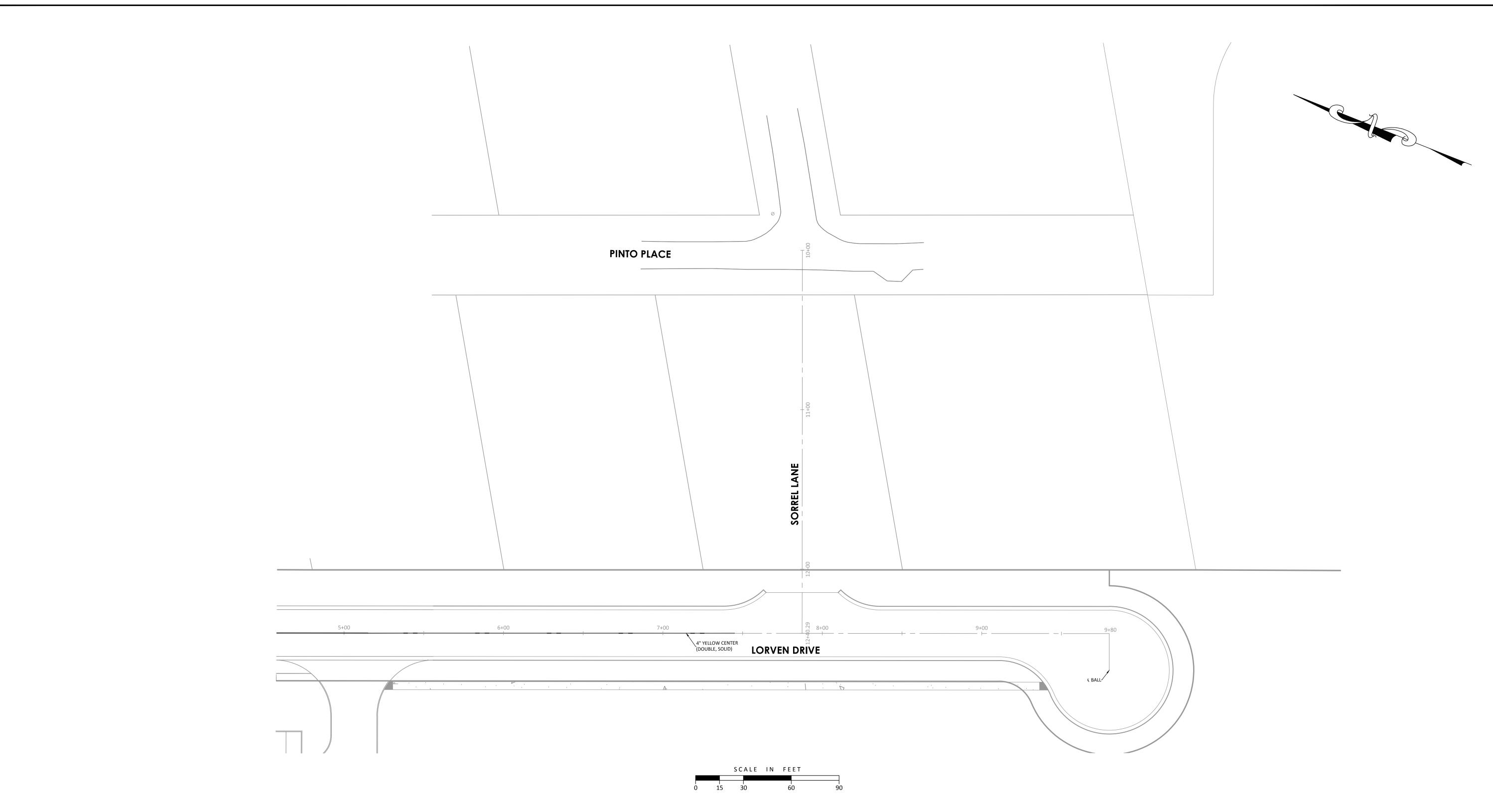
* Asphalt Emulsion-Asphalt shall be applied as recommended by the

manufacturer or at the rate of 160 * Synthetic Binders-Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70. Petroset. Terra Tack or equivalent may be used at rates recommended by manufacturer.

constructed under the entrance i needed to prevent surface water flowing across the entrance from being directed out onto paved

8. Maintenance-Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately Removal shall be accomplished by scraping or sweeping

from muddy areas.





■ Engineering

Project Manager Drawn By 18441004-ROAD-EXT

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Sheet Title

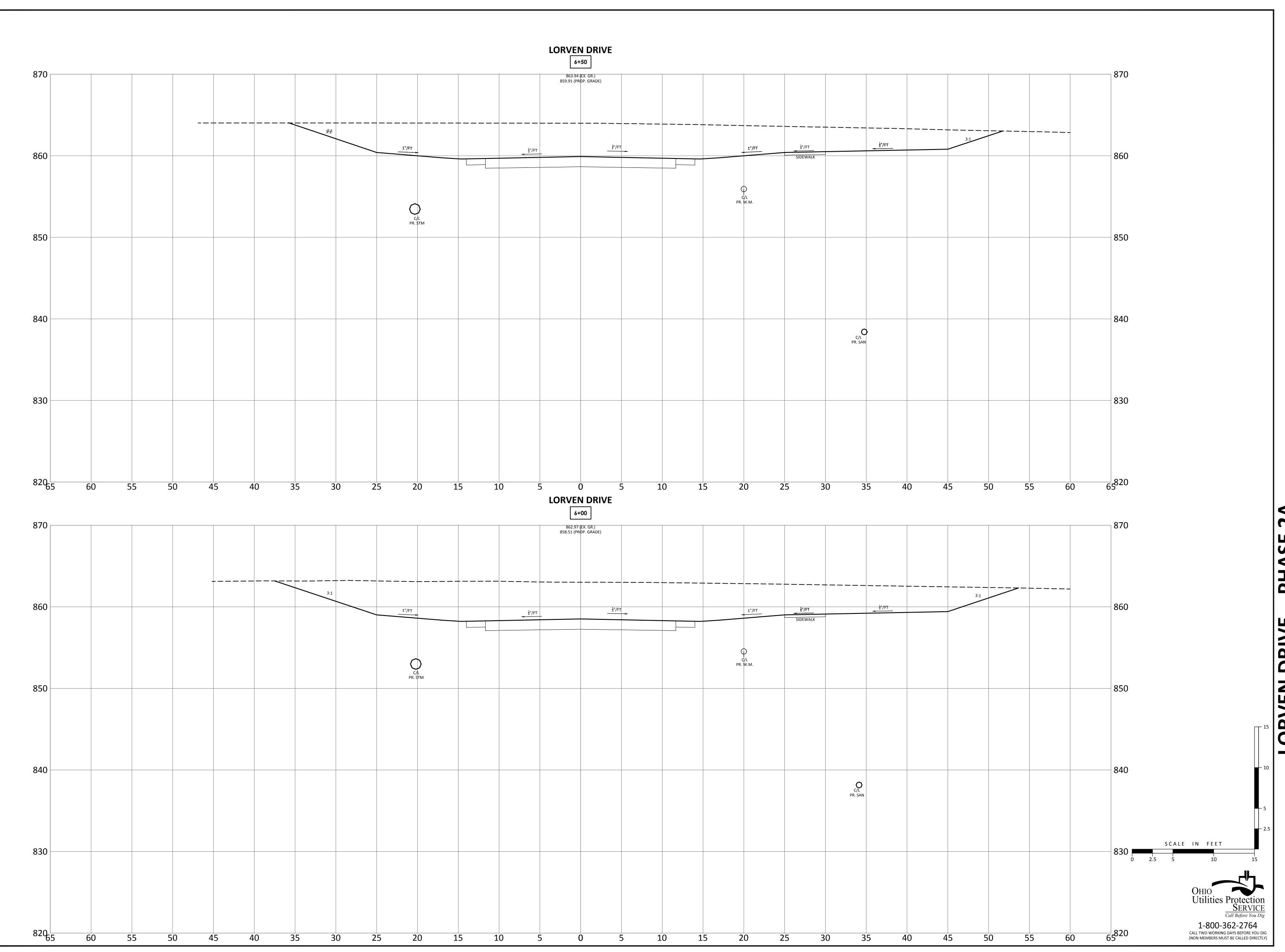
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TRAFFIC CONTROL PLAN

Project Number **Drawing Scale Sheet Number**

18441.03 AS NOTED 18441 File Number





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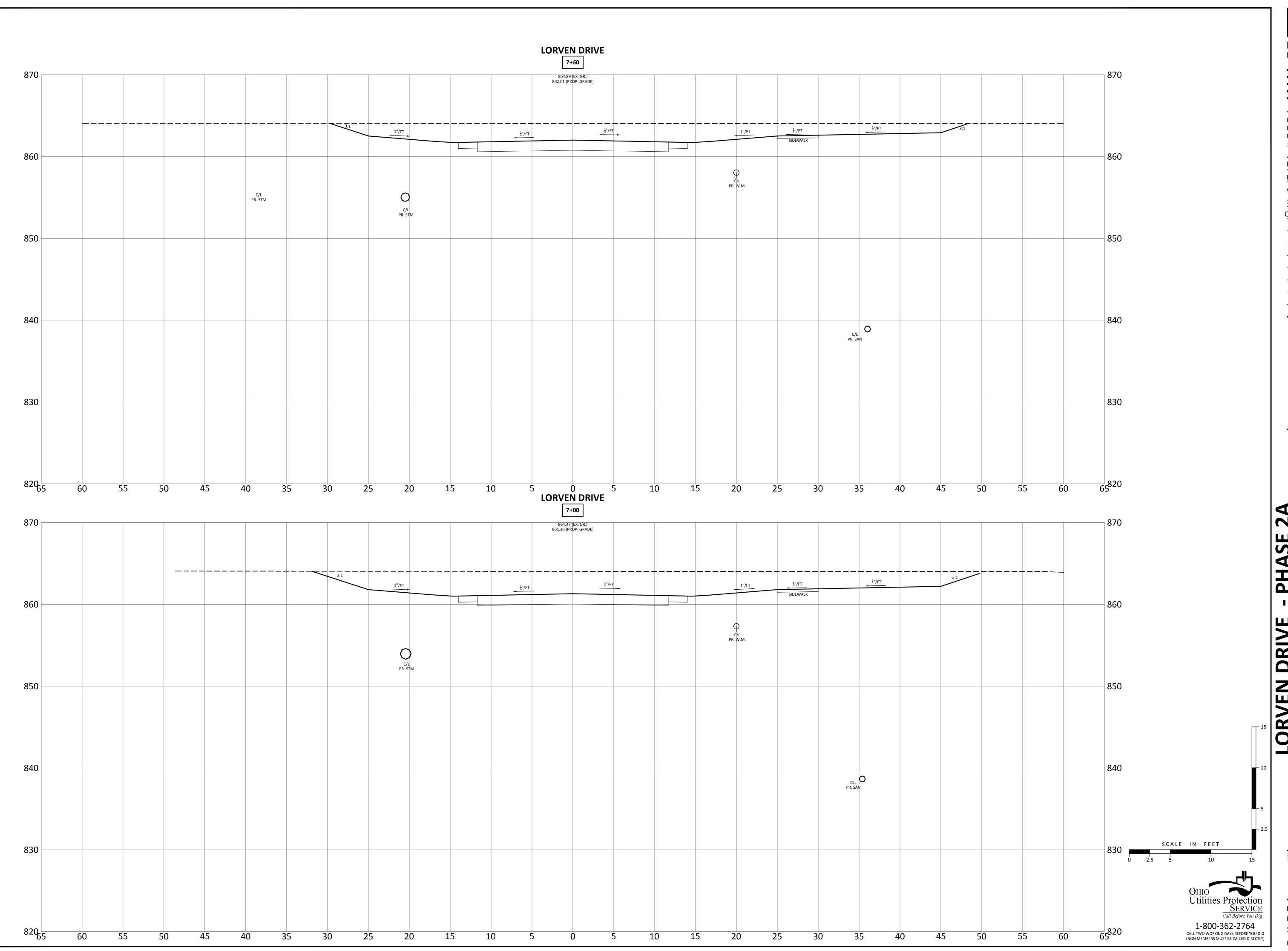


Sheet Title

CROSS SECTIONS

Project Number 18441.03 **Drawing Scale Sheet Number**

AS NOTED 18441



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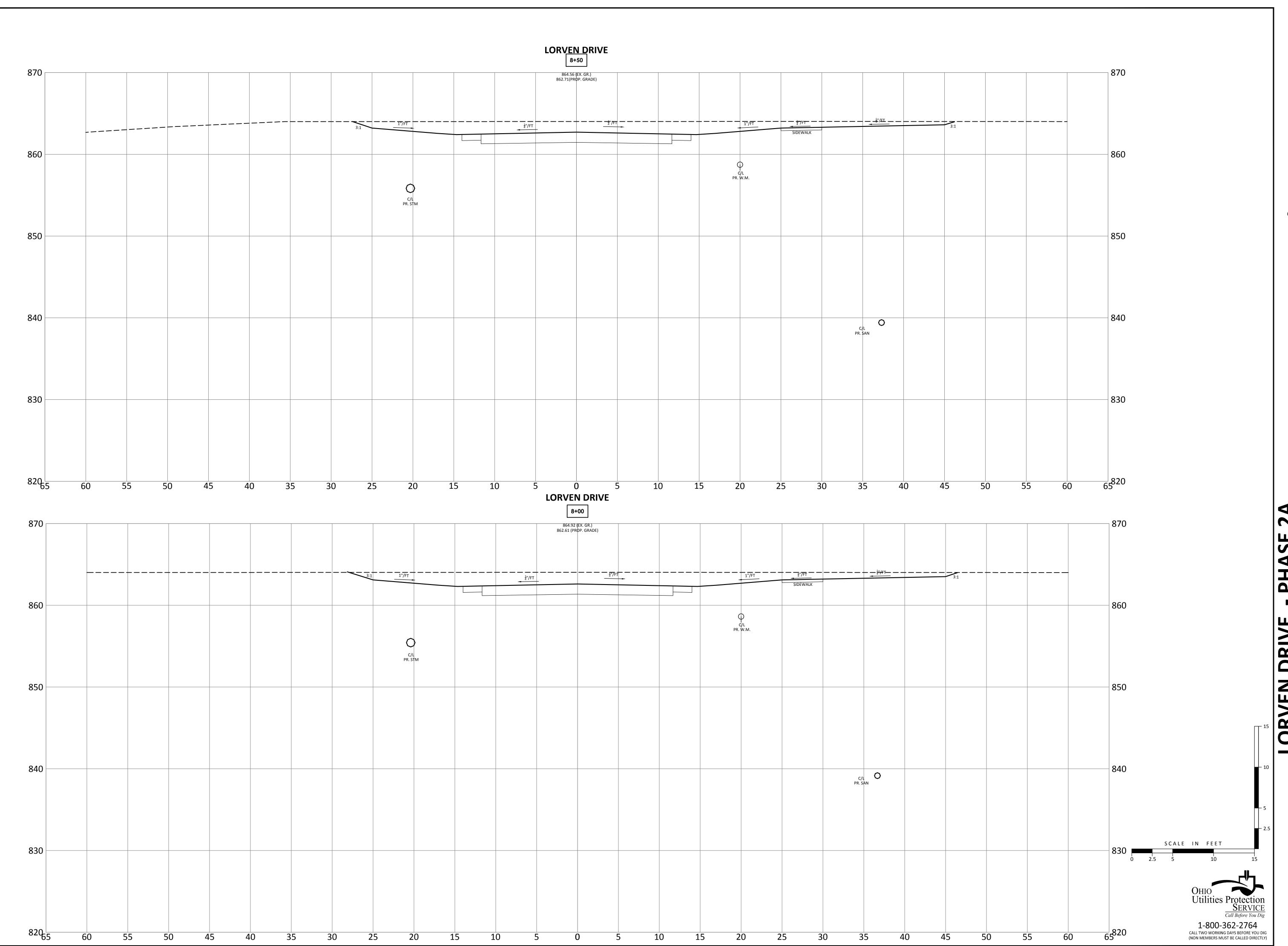


Sheet Title

CROSS SECTIONS

Project Number **Drawing Scale Sheet Number**

18441.03 AS NOTED 18441





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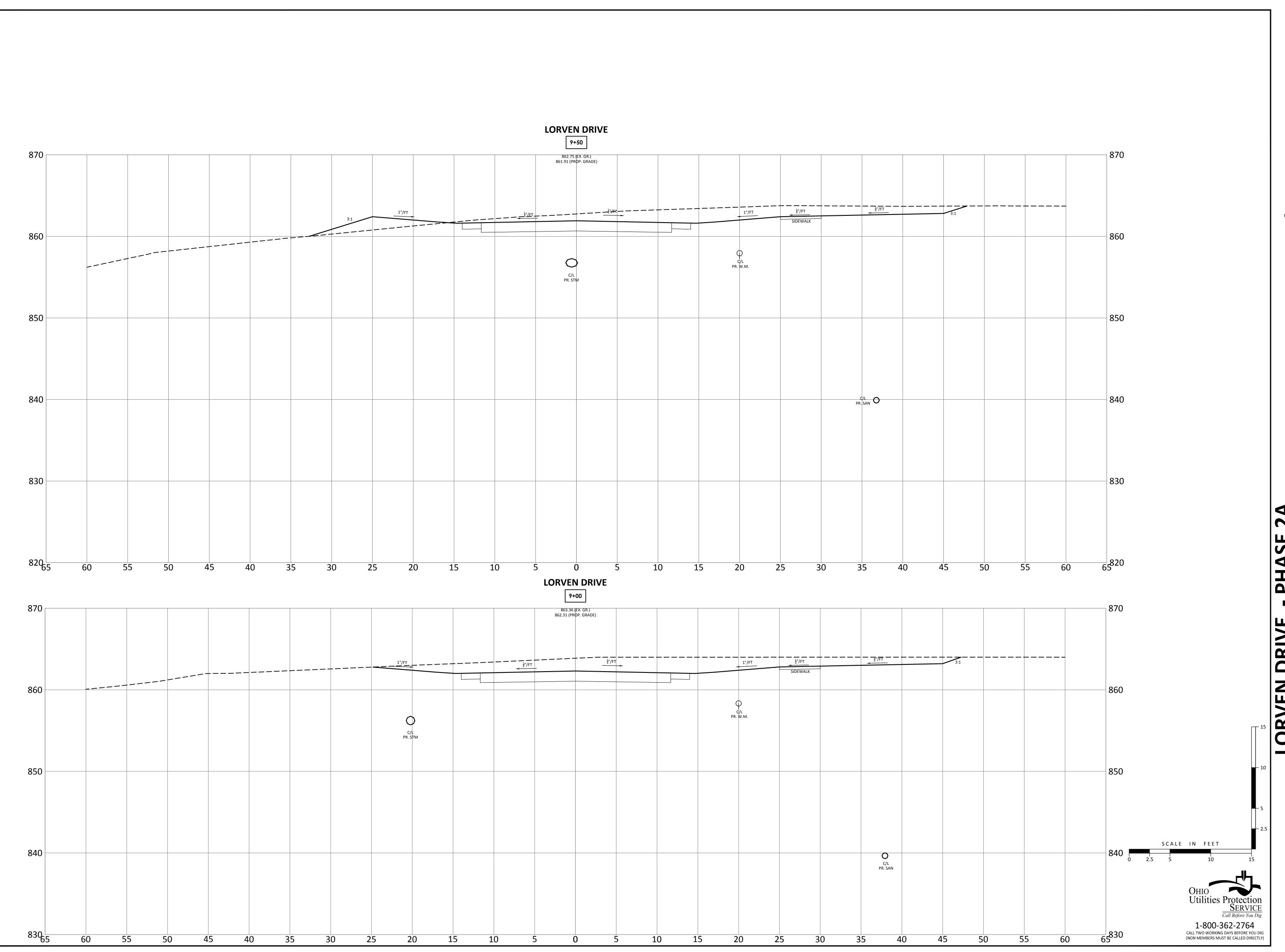


Sheet Title

CROSS SECTIONS

Project Number 18441.03 **Drawing Scale Sheet Number**

AS NOTED 13/14 18441





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Sheet Title

CROSS SECTIONS

18441.03 Project Number AS NOTED **Drawing Scale** Sheet Number 18441