

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 WATER MAIN.

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 PERFORMED 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 ACCORDANCE 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 SLOE 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 XP11-250B, 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 THAN 3/4". TAPPING SADDLES SHALL BE MANUFACTURED FOR THE FORD METER BOX COMPANY STYLE 202BS WITH STAINLESS STEEL STRAP AND BRASS BODY WITH CC T-THREAD OUTLET.

CORPORATION STOPS- APPROVED CORPORATION STOPS SHALL BE:

- 3/4" AND 1" - FORD METER BOX COMPANY F1000-3-G-NL
1 1/2" - 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 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 RE-USED.

ANGLE VALVES FOR RELOCATED 3/4" X 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:

Table with 3 columns: METER SIZE, ANGLED YOKE VALVE, W/ PADLOCK WING, OR APPROVED EQUAL; ANGLED CHECK VALVE, FORD HA94-323-G-NL 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 1/2" AND 2" DOMESTIC METERS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND INSTALLED ACCORDING TO CLERMONT COUNTY WATER RESOURCES DEPARTMENT STANDARD DRAWINGS: 1 1/2" 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.

REGIONAL NO. REGIONAL #1 - DALLAS, TEXAS; REGIONAL #2 - HOUSTON, TEXAS; REGIONAL #3 - SAN ANTONIO, TEXAS; REGIONAL #4 - AUSTIN, TEXAS; REGIONAL #5 - DALLAS, TEXAS; REGIONAL #6 - HOUSTON, TEXAS; REGIONAL #7 - SAN ANTONIO, TEXAS; REGIONAL #8 - AUSTIN, TEXAS; REGIONAL #9 - DALLAS, TEXAS; REGIONAL #10 - HOUSTON, TEXAS; REGIONAL #11 - SAN ANTONIO, TEXAS; REGIONAL #12 - AUSTIN, TEXAS.

GENERAL WATER NOTES

SCALE: N/A

DATE: JANUARY 2014

CLERMONT COUNTY WATER RESOURCES DEPARTMENT 4400 HASKELL LANE BATAVIA, OHIO 45830

W 1-0



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DWG 18441004-ROAD-EXT
X-Ref(s) ---

Table with 3 columns: Issue/Revision, No., Date. Includes entries for CLERMONT CO. REV, SPLIT PH. 2A & 2B, ODOT COMMENTS, CLERMONT CO. REV.

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LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

Water Main Notes
Project Number 18441.03
Drawing Scale AS NOTED
Sheet Number 3/12
File Number 18441



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



LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

Sheet Title



1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

DETAILS
Project Number 18441.03
Drawing Scale AS NOTED
Sheet Number 4/12
File Number 18441

BUTTERFLY VALVE BOX
GATE VALVE BOX

NO SCALE

VALVE RESTRAINT BLOCKING

NO SCALE

FIRE HYDRANT LAYOUT & ASSEMBLY

NO SCALE

WATER MAIN TRENCH SECTION

NO SCALE

WATER MAIN LOWERING DETAIL

NO SCALE

CLERMONT COUNTY WATER RESOURCES DEPARTMENT	GATE & BUTTERFLY VALVES	W1.1	CLERMONT COUNTY WATER RESOURCES DEPARTMENT	VALVE RESTRAINT BLOCKING	W1.2	CLERMONT COUNTY WATER RESOURCES DEPARTMENT	FIRE HYDRANT LAYOUT & ASSEMBLY	W2.1	CLERMONT COUNTY WATER RESOURCES DEPARTMENT	WATER MAIN TRENCH SECTION	W5.1	CLERMONT COUNTY WATER RESOURCES DEPARTMENT	WATER MAIN LOWERING DETAIL	W5.2
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GUTTER

NO SCALE

CONCRETE BLOCKING FOR PIPE FITTINGS

NO SCALE

DUAL SERVICE BRANCH SETTING - DOMESTIC METERS (2" & SMALLER)

NO SCALE

STOP SIGN SPECIFICATIONS

0

CATCH BASIN AND GROUND PLAN

NO SCALE

CATCH BASIN No. 3

NO SCALE

GRADING PLAN NOTES

- CUTFILLS & BULK EARTHWORK FOR THE ROADWAY MUST BE PERFORMED UNDER THE OBSERVATION & GUIDANCE OF A STATE OF OHIO REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER.
- 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.
- A PRE-CONSTRUCTION MEETING IS REQUIRED WITH A REPRESENTATIVE OF THE OWNER/DEVELOPER, CLERMONT COUNTY S.W.C.D. AND GENERAL CONTRACTOR.
- ESTABLISH VEGETATION ON ALL BARE AREAS AS PER O.E.P.A., N.P.D.E.S. REGULATIONS.
- CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S. INSPECTIONS DURING CONSTRUCTION.
- 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.
- 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 ACCOMMODATE DEMOLITION WORK, BUILDING CONSTRUCTION AND UTILITY CONSTRUCTION.
- 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.
- 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 DEBRIS.
- ROADWAYS SHALL BE GRADED TO ASSURE POSITIVE FLOW TOWARDS THE STORM SEWER INLETS.
- ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- 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. NOTES

- PROJECT INVOLVES THE CONSTRUCTION OF TWO PUBLIC ROADWAYS.
- AREA TO BE DISTURBED IS APPROXIMATELY 0.38 ACRES.
- PRE-CONSTRUCTION RUNOFF COEFFICIENT IS 0.30. POST-CONSTRUCTION RUNOFF COEFFICIENT IS 0.48.
- THE PREDOMINANT 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 MELIER 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 FORTH IN THE OHIO EPA PERMIT NO. CDP 0HC00005 "AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).
- 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 559 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 SYSTEMS OF TREATMENT AND CONTROL (AND RELATED APURTENANCES) WHICH ARE INSTALLED OR USED BY THE PERMITTEE TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT AND WITH THE REQUIREMENTS OF SWPPP. 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 PERMIT.
- 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
ANNUAL: ADEQUATE GROUND COVER, EMERGENCY SPILLWAY

CONSTRUCTION SEQUENCE

- INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
- GRADING AND STRIPPING OF THE DEVELOPMENT SITE OR PROJECT AREA.
- TEMPORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL MEASURES.
- GRADING OF STREETS.
- INSTALLATION OF ALL UTILITIES.
- PLACEMENT OF CURB & PAVEMENT.
- FINAL GRADING, STABILIZATION, AND LANDSCAPING.
- 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 OF SLOPE

MAINTENANCE OF CONTROLS

- 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 SEEDING.



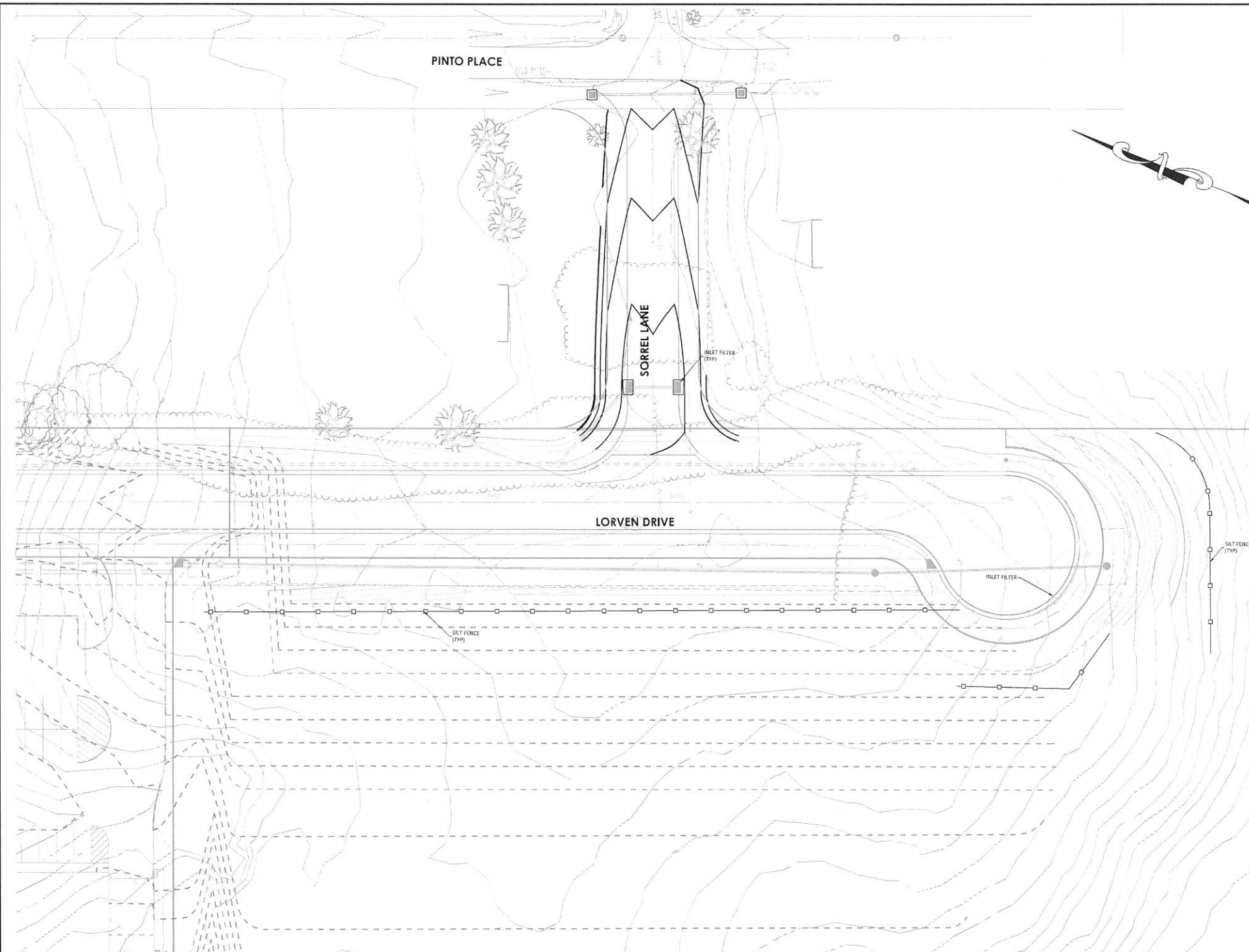
3700 Park 42 Drive
Suite 1908
Cincinnati OH 45241
Phone 513.759.8004
www.mspsdesign.com

Project Manager: JMR
Drawn By: DCA
DWG: 18441004-ROAD-EXT
X-Ref(s):

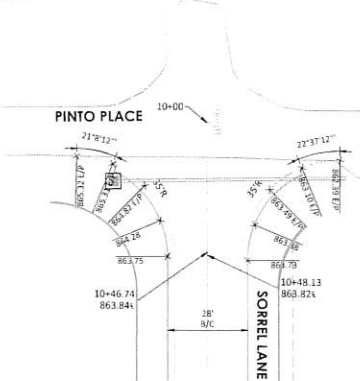
Issue/Revision	No.	Date
ISSUE		04/07/23
CLERMONT CO. REV		11/27/23
SPLIT PH. 2A & 2B		12/20/23
ODOT COMMENTS		01/04/24
CLERMONT CO. REV		01/29/24



**LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION**
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO



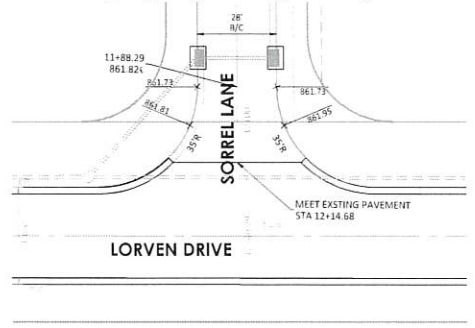
CONTOURS FROM LORVEN DRIVE PLANS PHASE 1 & ALDI SITE PLANS



**INTERSECTION DETAIL
PINTO PLACE &
SORREL LANE**

SCALE: 1"=30'
ANGLES SHOWN ARE 22.5° UNLESS NOTED OTHERWISE
ELEVATIONS SHOWN TOP OF CURB UNLESS NOTED OTHERWISE

SCALE IN FEET
0 15 30 60 90



**INTERSECTION DETAIL
SORREL LANE &
LORVEN DRIVE**

SCALE: 1"=30'
ANGLES SHOWN ARE 22.5° UNLESS NOTED OTHERWISE
ELEVATIONS SHOWN TOP OF CURB UNLESS NOTED OTHERWISE

ESTABLISH VEGETATION ON ALL BARE AREAS AS PER O.E.P.A. N.P.D.E.S. REGULATIONS.

CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S. INSPECTIONS DURING CONSTRUCTION PERIOD.




1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

Sheet Title
**GRADING &
S.W.P.P. PLAN**
Project Number: 18441.03
Drawing Scale: AS NOTED
Sheet Number: 7/12
File Number: 18441

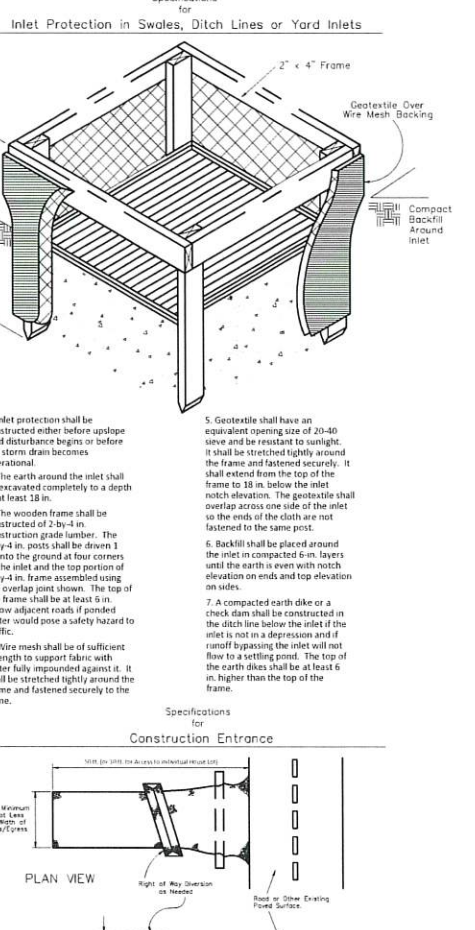
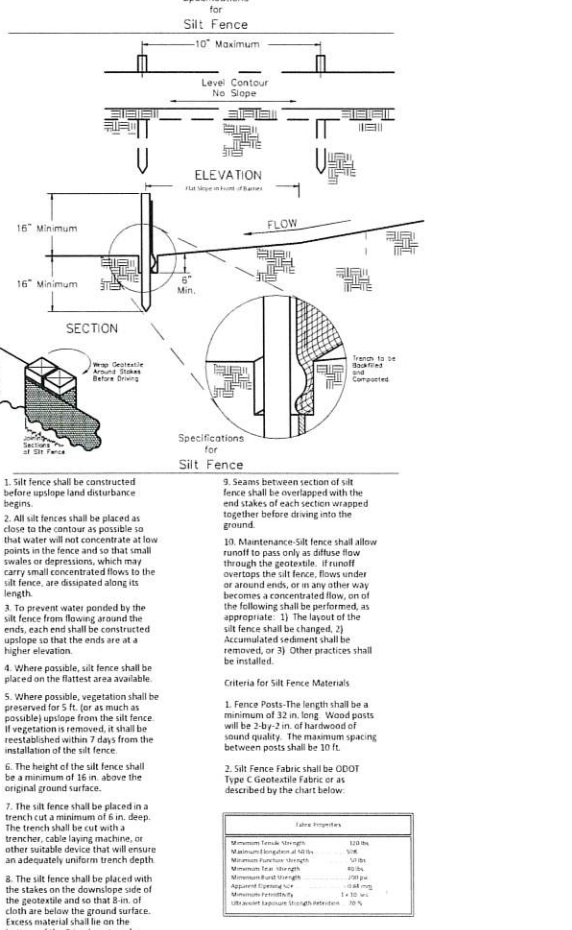
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Issue/Revision	No.	Date
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EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES

1. EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE MAINTAINED AS FOLLOWS:
 - A. INSPECTIONS: 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 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 INSPECTED:
 - 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 DORMANT SITES IF:
 - 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.
2. FOLLOWING EACH INSPECTION, A CHECKLIST MUST BE COMPLETED AND SIGNED BY THE QUALIFIED INSPECTOR PERSONNEL REPRESENTATIVE. AT A MINIMUM, THE INSPECTION REPORT SHALL INCLUDE:
 - I. THE INSPECTION DATE.
 - II. NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION.
 - III. 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.
 - IV. LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.
 - V. LOCATION(S) OF BMPs THAT NEED TO BE MAINTAINED.
 - VI. LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION.
 - VII. LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION, AND
 - VIII. CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THE SWP3 NECESSARY AND IMPLEMENTATION DATES.
3. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES ENTERING THE DRAINAGE SYSTEM 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.
4. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED EROSION CONTROL BARRIERS, END RUNS, AND THE UNDERCUTTING OF BARRIERS BY RUNOFF.
5. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION HAS REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
6. 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.
7. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF MUD AND DIRT BEING TRACKED ONTO THE STREETS BY INSTITUTING BEST MANAGEMENT PRACTICES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST PER ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 616.
9. THE PERMITTEE SHALL MAINTAIN FOR THREE YEARS FOLLOWING THE SUBMITTAL OF A NOTICE OF TERMINATION FORM A RECORD SUMMARIZING THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATIVE 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 PERMIT.
 - i. 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.
 - ii. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION, IF THE 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 PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.
 - iii. 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 NEEDED.
10. 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 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 STORM WATER MANAGEMENT PROGRAM OF THE MS4 OPERATOR.
11. EXCEPTIONS, IF SPECIFIC SITE CONDITIONS PROHIBIT THE IMPLEMENTATION OF ANY OF THE 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 PERMIT WILL BE APPROVED OR DENIED ON A CASE-BY-CASE BASIS.



STABILIZATION, DISTURBED AREAS MUST BE STABILIZED AS SPECIFIED IN THE FOLLOWING TABLES BELOW.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will be dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the State and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

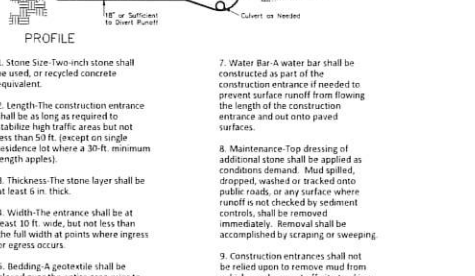
Table 2: Temporary Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the State and not a final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but not more than one year and not within 50 feet of a surface water of the State	Within seven days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lots. Prior to the onset of winter weather

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES SHALL BE EMPLOYED. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENFORCING OFFICIAL BEFORE IMPLEMENTING ALTERNATIVE STABILIZATION TECHNIQUES PER SECTION 3109 OF THE HAMILTON COUNTY EARTHWORK REGULATIONS.

PERMANENT STABILIZATION OF DITCHES, SPECIAL MEASURES SHALL BE UNDERTAKEN TO STABILIZE DITCHES AND PREVENT EROSION FLOWS. MEASURES MAY INCLUDE SEEDING, DORMANT SEEDING (AS DEFINED IN THE LATEST EDITION OF THE HANDBOOK OF LAND DEVELOPMENT MANUAL), MULCHING, EROSION CONTROL MATTING, SCODING, RIPRAP, NATURAL DESIGN WITH BIOENGINEERING TECHNIQUES OR ROCK CHECK DAMS.

RUNOFF CONTROL PRACTICES: THE PROJECT SHALL INCORPORATE MEASURES WHICH CONTROL THE FLOW OF RUNOFF FROM DISTURBED AREAS SO AS TO PREVENT EROSION FROM OCCURRING. SUCH PRACTICES MAY INCLUDE ROCK CHECK DAMS, PIPE SLOPE DRAINS, DIVERSIONS TO DIRECT FLOW AWAY FROM EXPOSED SOILS AND PROTECTIVE GRADING PRACTICES. THESE PRACTICES SHALL DEPORT RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHERE PRACTICABLE.



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

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 residential lots where a 30-ft. minimum length applies).

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 Muller Burst Strength of at least 150 lb.

6. Culvert: A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flow from being directed out onto paved surfaces.

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.

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.

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 from muddy areas.

Specifications for Permanent Seeding

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 plants in order to retain permanent vegetation for adequate erosion control.
2. Maintenance fertilization rates shall be established by soil test recommendations or by using the rates shown in the following table.

Mixture	Formula	lb./ac.	lb./1,000 ft.²	Fine	Mowing
Creeping Red Fescue Kentucky Bluegrass	10-10-10	500	12		Not closer than 3"
Tall Fescue	10-10-10	500	12	Fall, yearly or as needed.	Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Vetch	0-20-20	400	10	Spring, yearly following establishment and every 4-7 yr thereafter.	Do not mow.
Flat Pea Fescue	0-20-20	400	10		Do not mow.

Note: Fertilizer and lime recommendations are subject to soil test results shown above.

Specifications for Temporary Seeding

1. Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or an additional irrigation to provide adequate moisture for seed germination and plant growth.

2. Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

3. Mulch: Temporary seed shall be applied between construction operations on soil that will be graded or reworked for 45 days or more. These idle areas shall be seeded as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeding are necessary on typical construction projects.

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 hydro-seeder. 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 hydro-seeding is used, the seed and fertilizer will be mixed on site and the seeding shall be done immediately and without interruption.

6. 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 flat areas may not need mulch to achieve adequate stabilization.
2. Materials:
 - Straw: If straw is used, it shall be untreated small grain straw applied at the rate of 2 tons/ac. or 50 lb./1,000 sq. ft. (two to three bales).
 - Hydroseeders: If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
 - Other: Other acceptable mulches include mulch matting applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.
3. Straw mulch shall be anchored immediately to minimize loss by wind or water.
 - Mechanical: A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch mechanically to the soil.
 - 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.
 - 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 water and the mixture shall contain a maximum of 10 lb./100 gal.

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 - 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 water and the mixture shall contain a maximum of 10 lb./100 gal.

Permanent Seeding

Seed Mix	Seeding Rate		Notes:
	lb./ac.	lb./1,000 ft.²	
General Use			
Creeping Red Fescue	20-40	1/2-1	
Domestic Bluegrass	10-20	1/4-1/2	
Kentucky Bluegrass	10-20	1/4-1/2	
Tall Fescue	40	1	Steep Banks or Cut Slopes
Dwarf Fescue	40	1	
Tall Fescue	40	1	
Road Ditches and Swales			
Crown Vetch	10	1/4	Do not seed later than August
Tall Fescue	20	1/2	
Flat Pea	20	1/2	Do not seed later than August
Tall Fescue	20	1/2	
Lawns			
Kentucky Bluegrass	60	1 1/2	For shaded areas
Perennial Ryegrass	60	1 1/2	
Kentucky Bluegrass Creeping Red Fescue	60	1 1/2	

Note: Other applications and rates may be substituted.



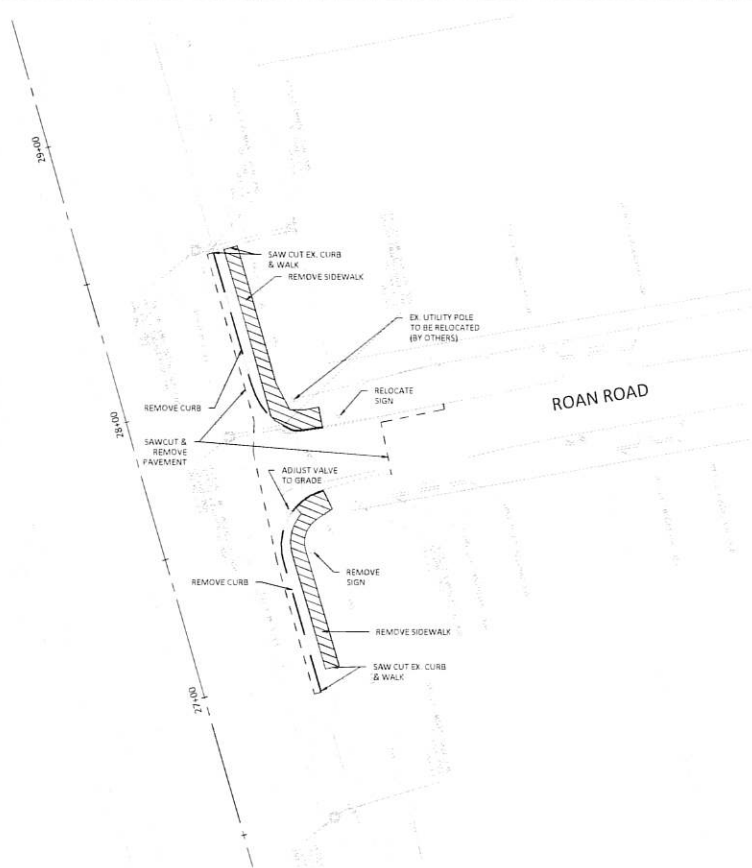
1. The CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 12' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 12' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

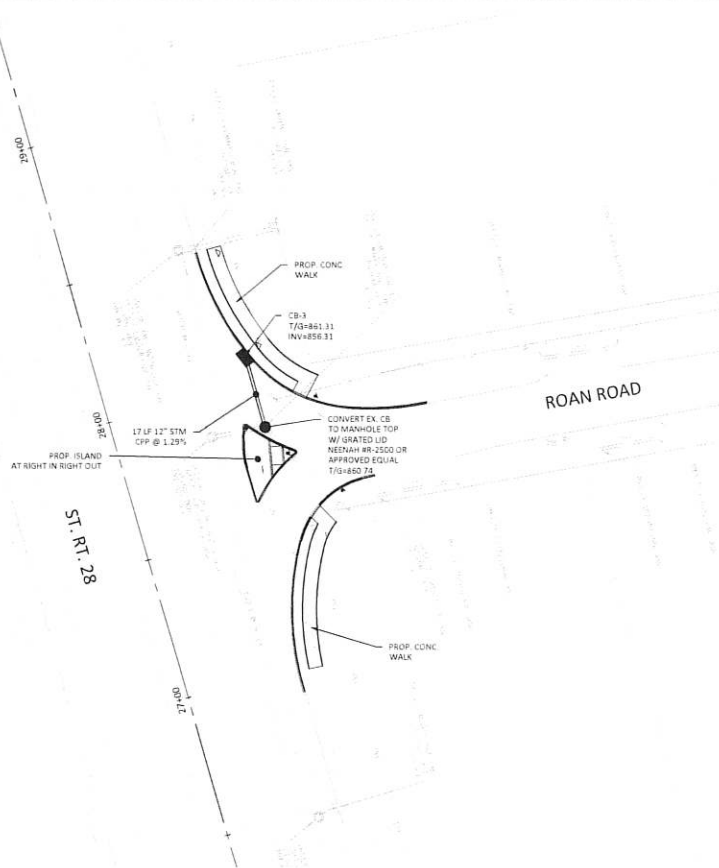
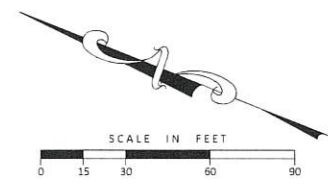
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Project Manager: JMR
Drawn By: DCA
DWG: 18441004-ROAD-EXT
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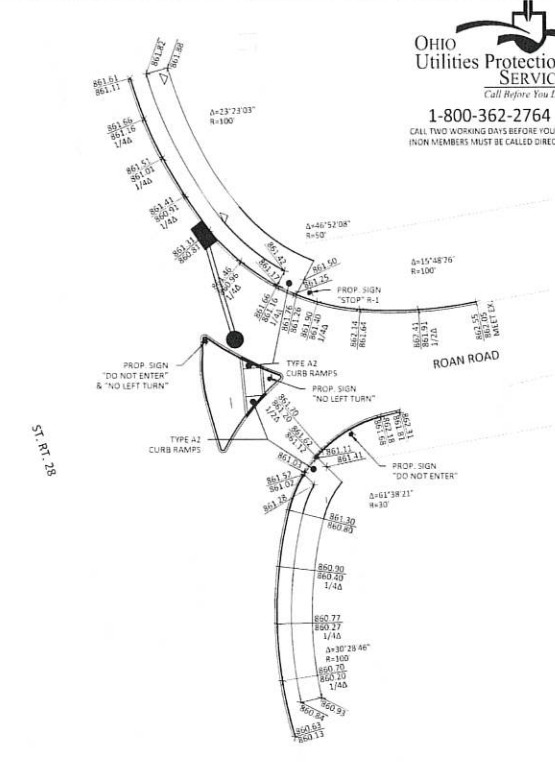
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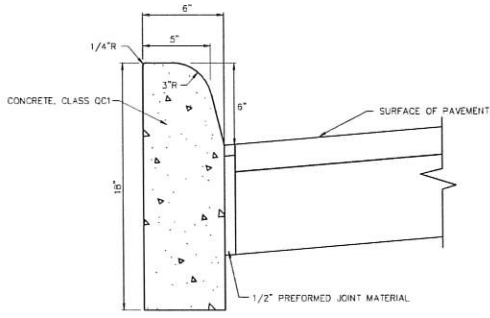
**RIGHT-IN RIGHT-OUT DEMOLITION PLAN
ST. RT. 28 &
ROAN ROAD**



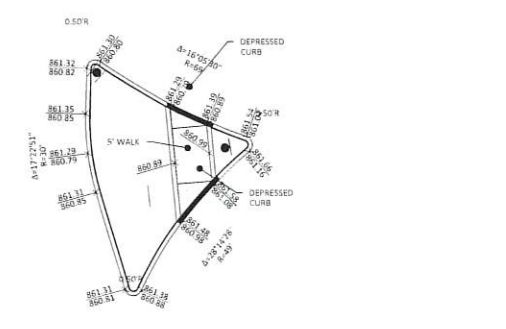
**RIGHT-IN RIGHT-OUT LOCATION PLAN
ST. RT. 28 &
ROAN ROAD**



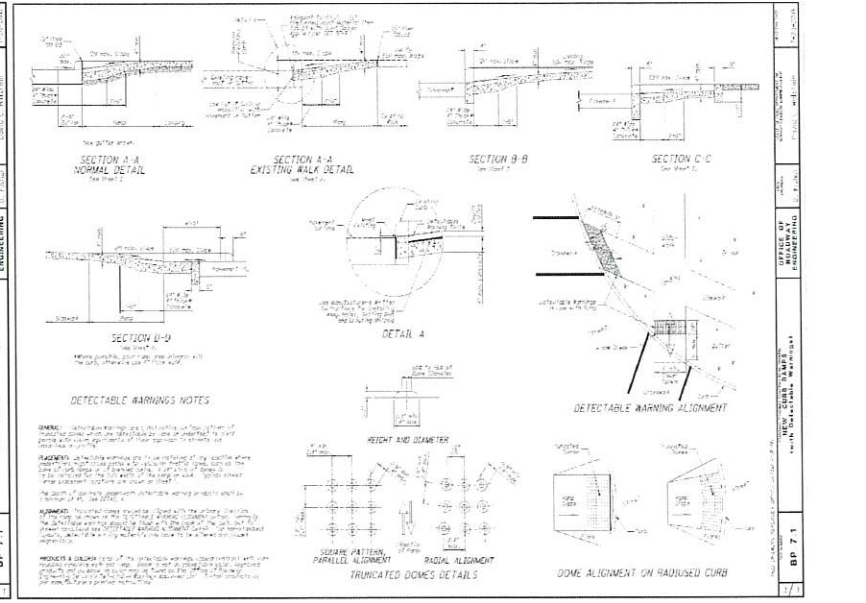
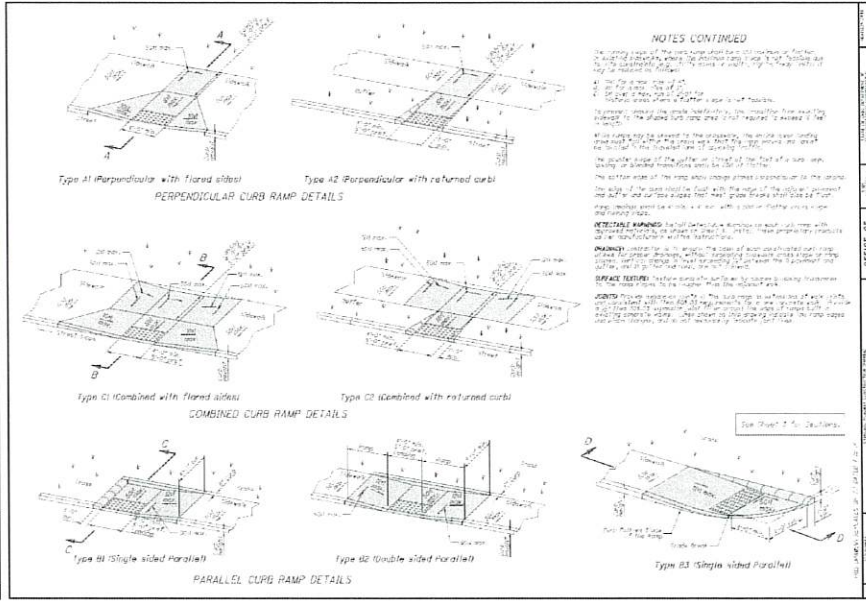
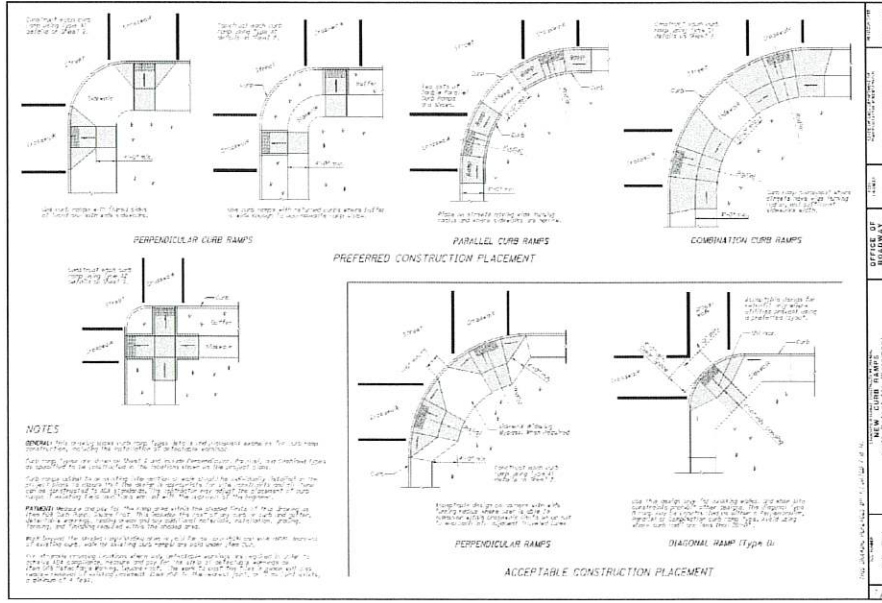
**RIGHT-IN RIGHT-OUT GRADING PLAN
ST. RT. 28 &
ROAN ROAD**
SCALE: 1"=20"



**ODOT TYPE 6 CURB
N.T.S.**
NOTE: EXPANSION JOINT MATERIAL AND JOINT SEALER IS NOT REQUIRED WHEN CURB IS ADJACENT TO FLEXIBLE TYPE PAVEMENT.



**ISLAND AT RIGHT-IN RIGHT-OUT
SCALE: 1"=10"**



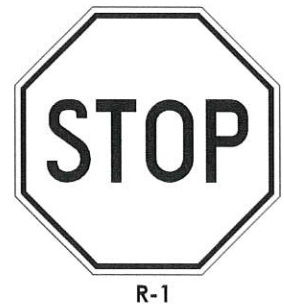
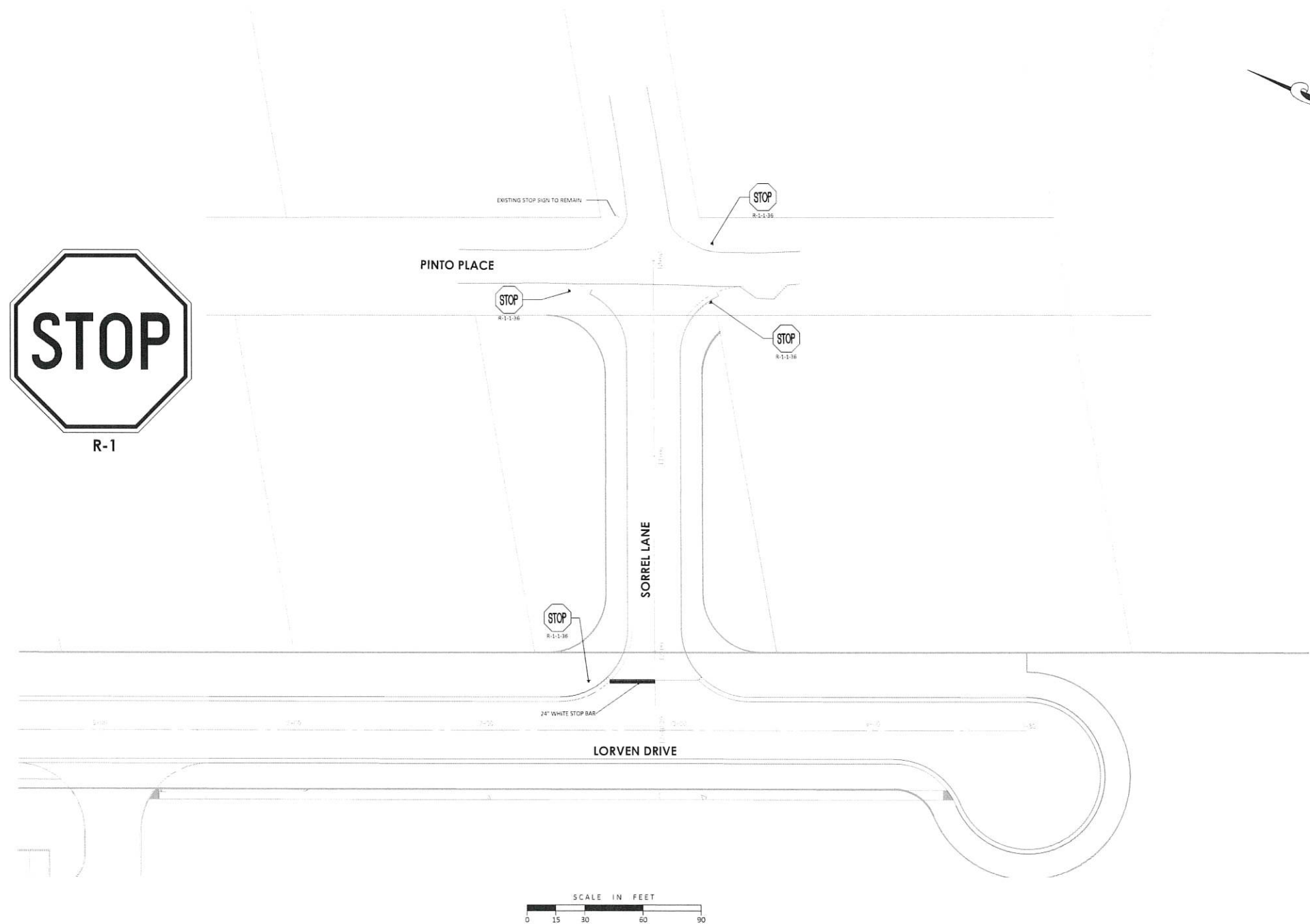
**LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO**

Sheet Title: **RIGHT IN RIGHT OUT**
Project Number: 18441.03
Drawing Scale: AS NOTED
Sheet Number: 9/12
File Number: 18441

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

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*NOTE: ALL PAVEMENT MARKINGS AND STRIPING
MUST BE THERMOPLASTIC



**LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION**
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

Sheet Title

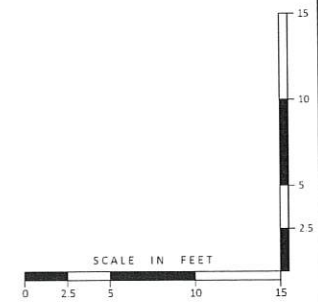
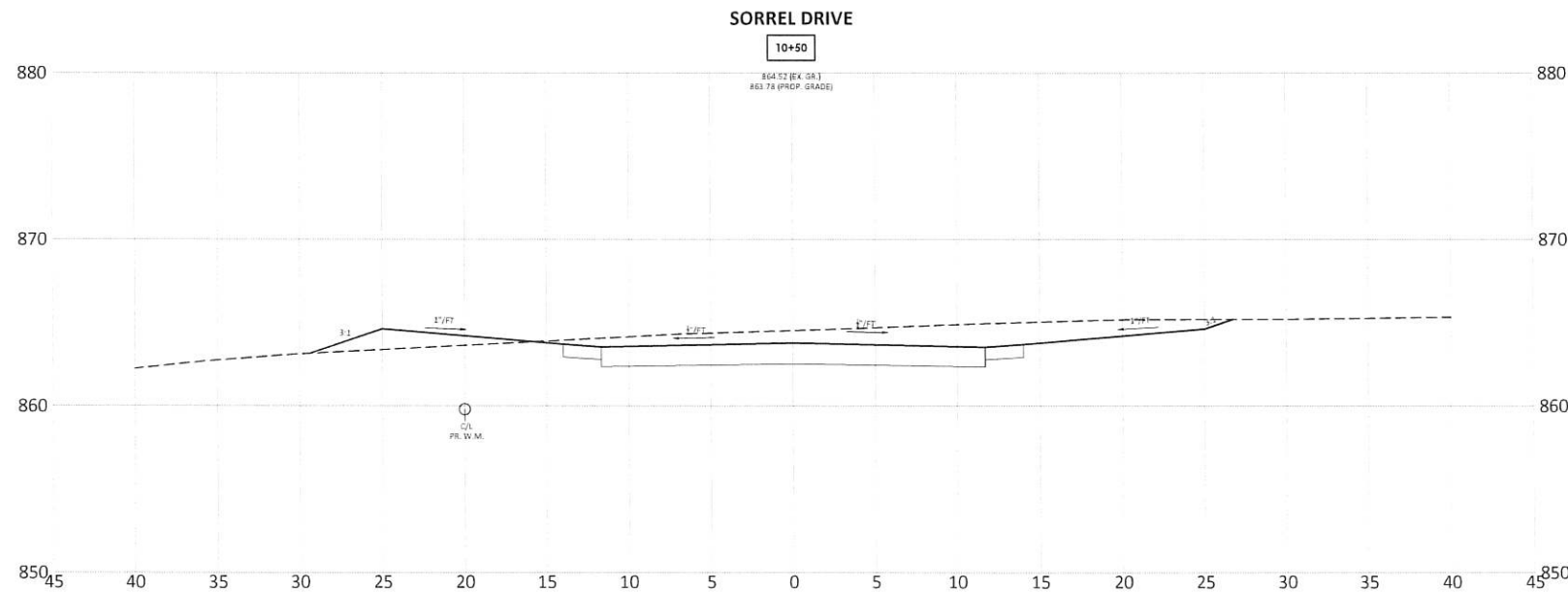
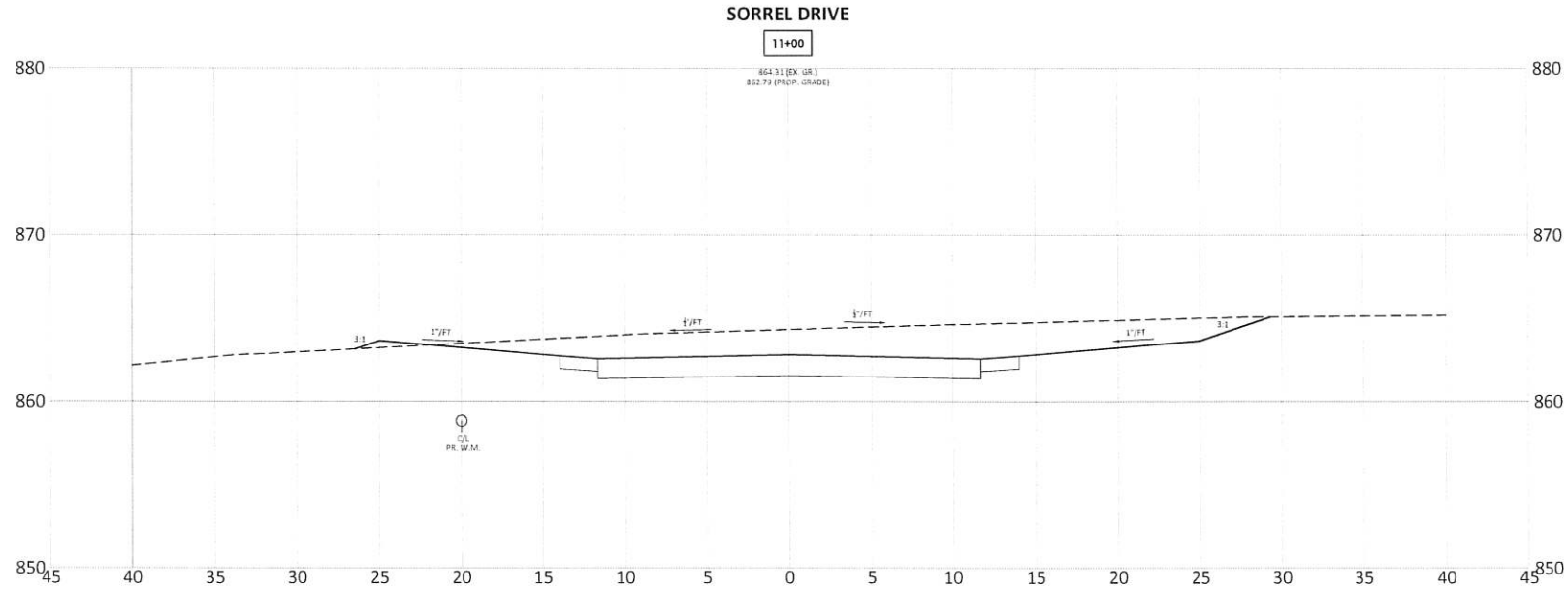
TRAFFIC CONTROL PLAN

Project Number	18441.03
Drawing Scale	AS NOTED
Sheet Number	10/12
File Number	18441

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

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Sheet Title

CROSS SECTIONS

Project Number 18441.03
Drawing Scale AS NOTED
Sheet Number 11/12
File Number 18441

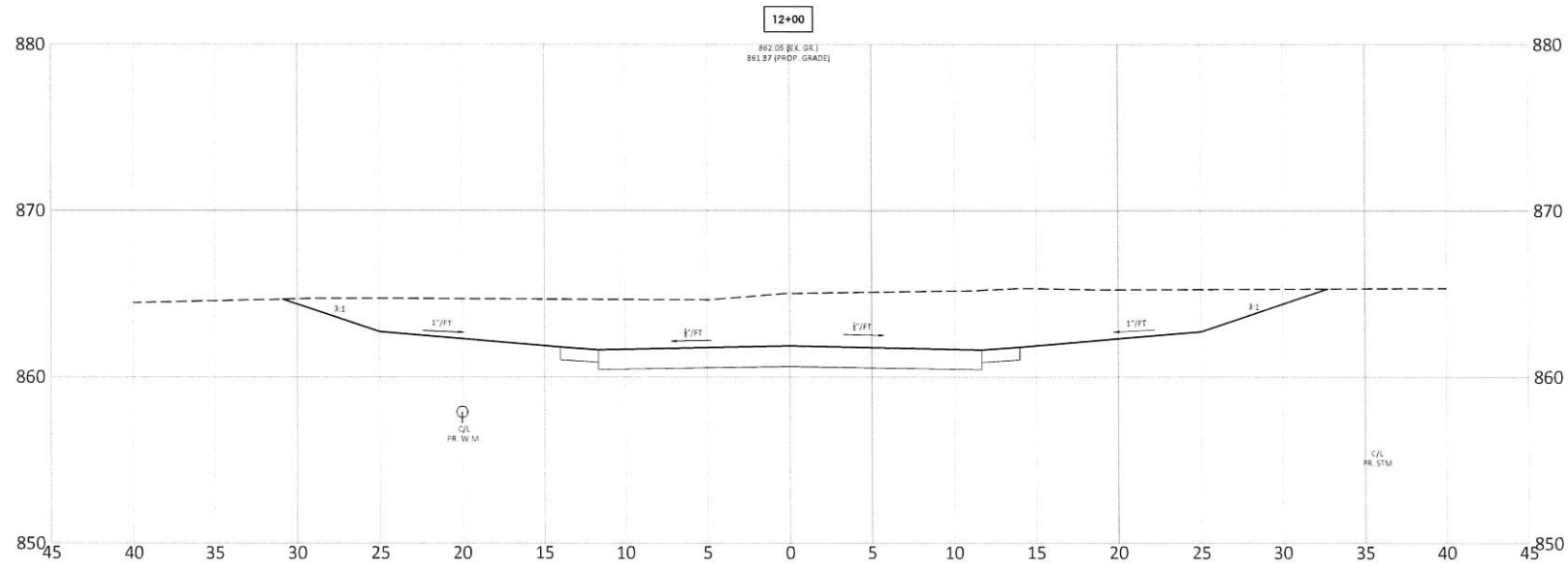
LORVEN DRIVE - PHASE 2B
SORREL LANE EXTENSION
& SR-28 INTERSECTION
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

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

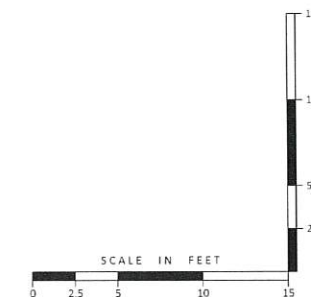
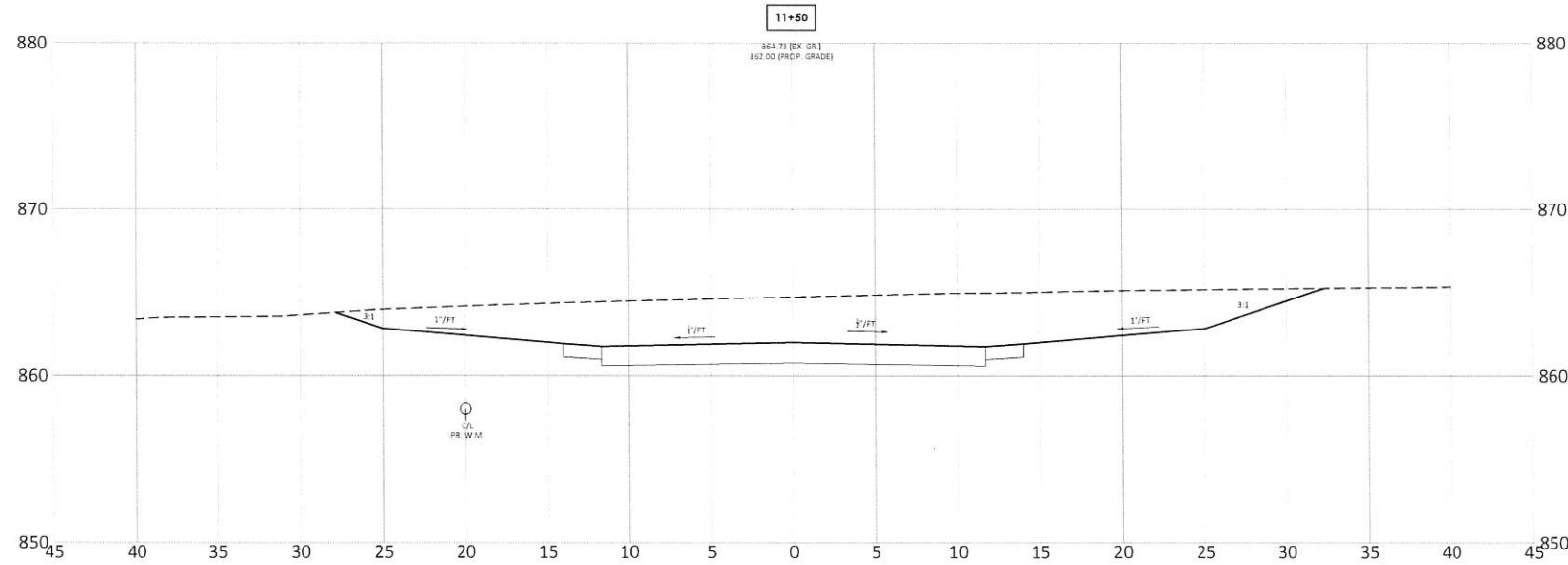
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SORREL DRIVE



SORREL DRIVE



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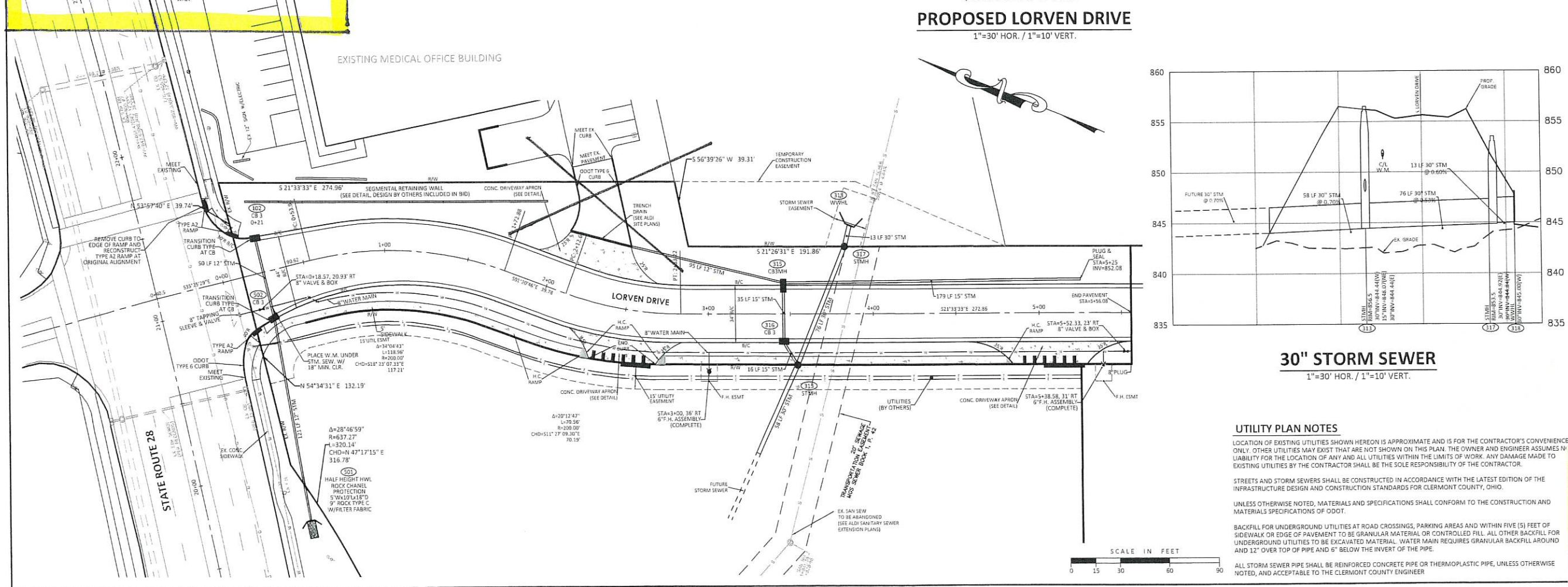
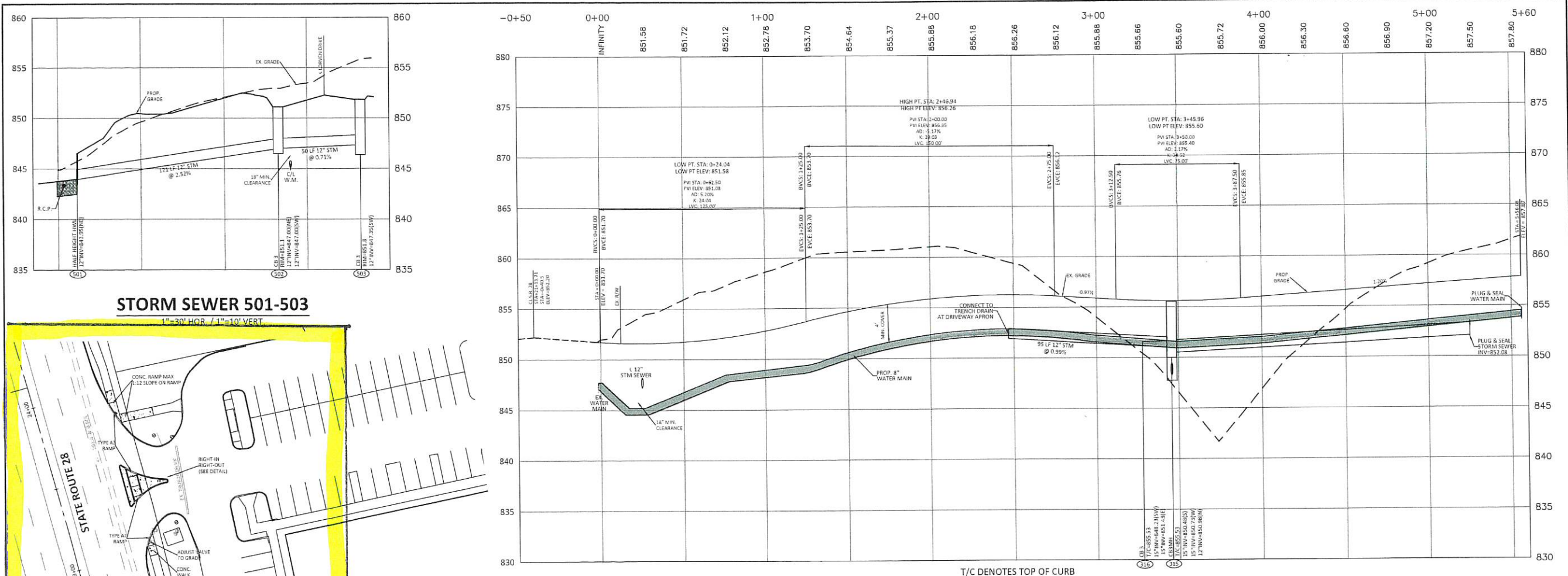
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SORREL LANE EXTENSION
& SR-28 INTERSECTION
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

Sheet Title _____

CROSS SECTIONS

Project Number 18441.03
Drawing Scale AS NOTED
Sheet Number 12/12
File Number 18441

Issue/Revision	No.	Date
ISSUE		09/24/22
ODOT COMMENTS		12/16/22
REVISED INTERSECTION		02/10/23
ODOT COMMENTS		04/06/23

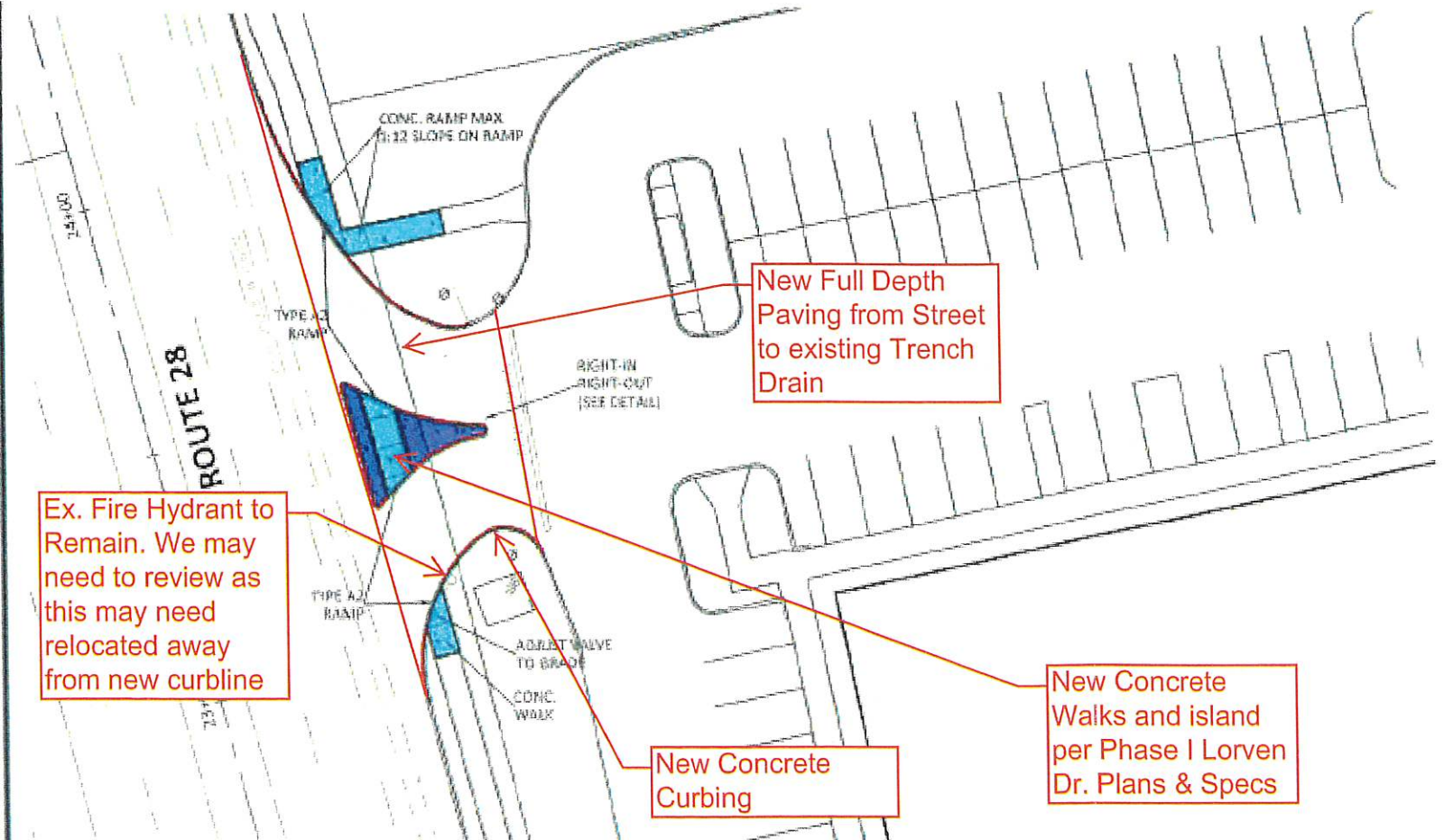


LORVEN DRIVE
PUBLIC ROADWAY IMPROVEMENTS
JONES MILITARY SURVEY No. 991
MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO



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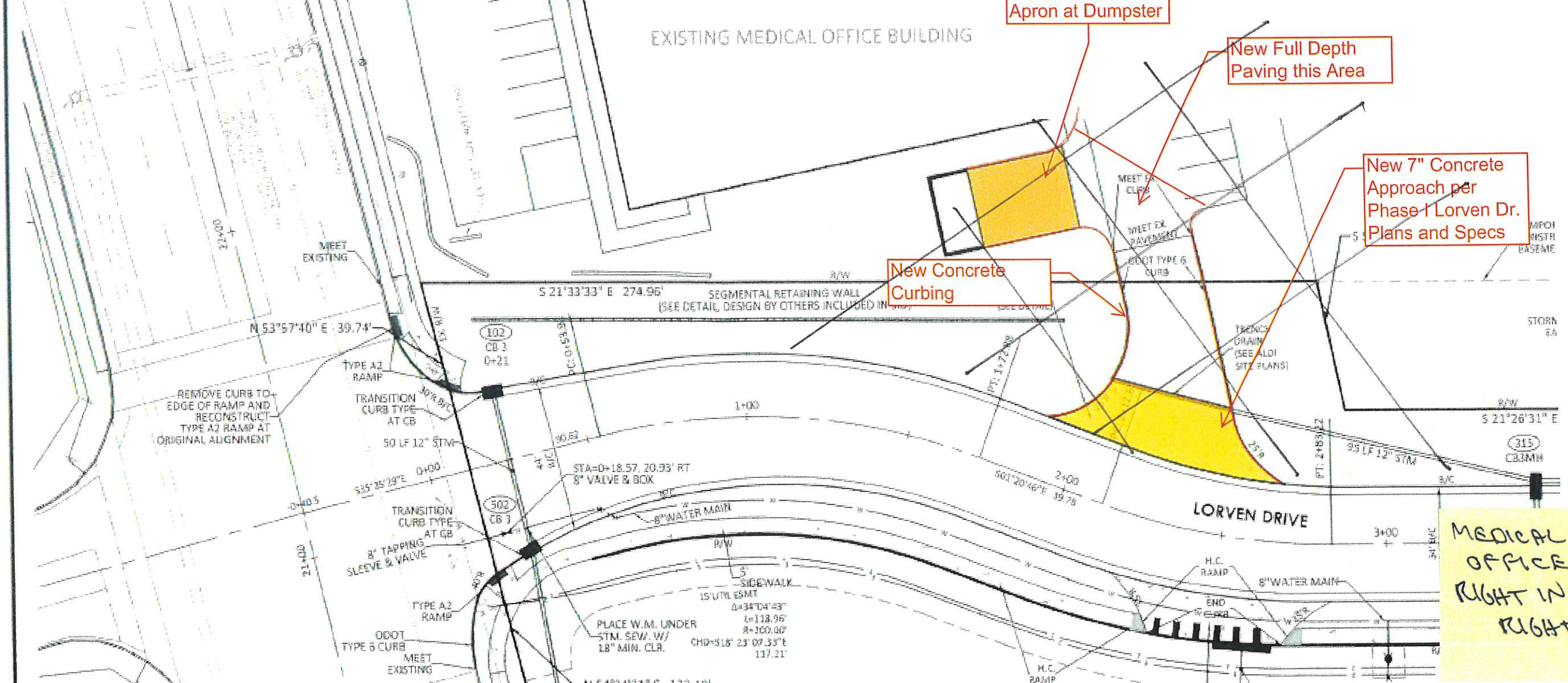
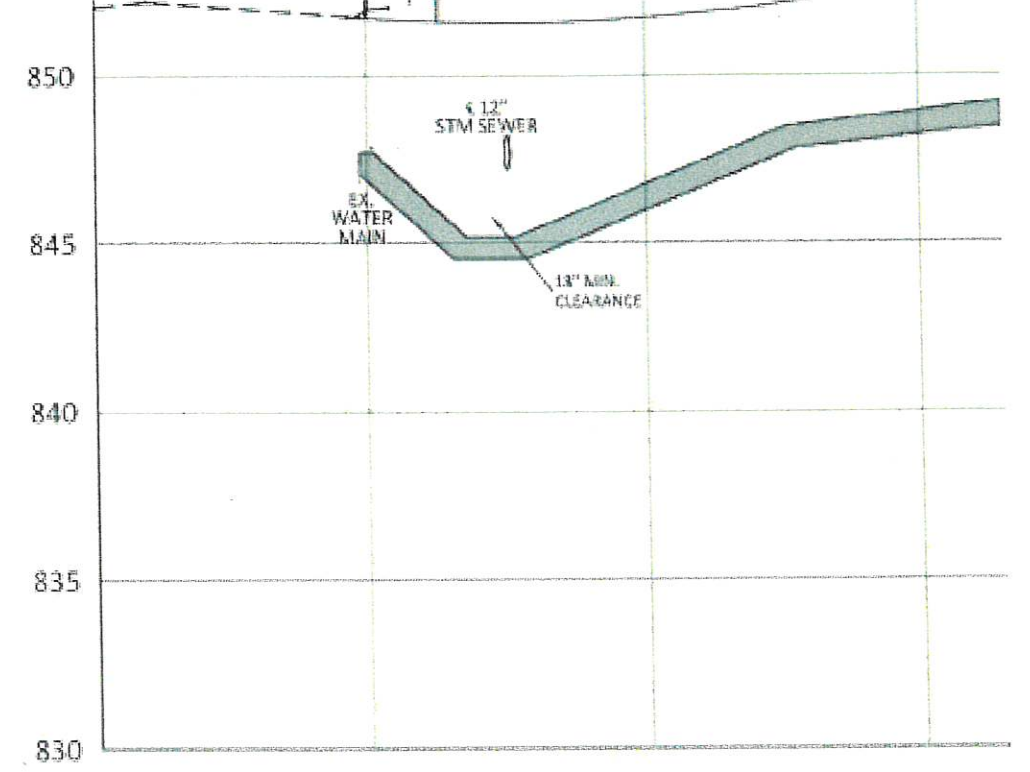
MEDICAL OFFICE RIGHT IN RIGHT OUT #1



Ex. Fire Hydrant to Remain. We may need to review as this may need relocated away from new curbline

New Concrete Curbing

New Concrete Walks and island per Phase I Lorven Dr. Plans & Specs



MEDICAL OFFICE RIGHT IN RIGHT OUT #2