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## **LEGAL DESCRIPTION**

PROVIDED BY GEOPOINT SURVEYING, INC.

A PARCEL OF LAND LYING IN SECTIONS 7, 8 AND 18, TOWNSHIF 18 SOUTH, RANGE 34 EAST, CITY OF EDGEWATER, VOLUSIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHEAST CORNER OF SAID SECTION 18, RUN THENCE ALONG THE NORTH BOUNDARY OF SAID SECTION 18, N.89'44'25"W., A DISTANCE 1614.76 FEET; THENCE N.0015'35"W., A DISTANCE OF 49.03 FEET TO THE POINT OF BEGINNING; THENCE N.00'00'00"E., A DISTANCE OF 769.83 FEET; THENCE N.05'54'18"E., A DISTANCE OF 769.44 FEET; THENCE N.14'01'24"W., A DISTANCE OF 733.07 FEET; THENCE N.00'00'00"E., A DISTANCE OF 430.90 FEET; THENCE N.38'59'00"E., A DISTANCE OF 231.85 FEET; THENCE S.80'26'15"E., A DISTANCE OF 151.00 FEET;
THENCE NORTHERLY, 122.73 FEET ALONG THE ARC OF A
NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 870.00 FEET AND A CENTRAL ANGLE OF 08'04'58" (CHORD BEARING N.05'31'15"E., 122.63 FEET); THENCE A DISTANCE OF 203.40 FEET; THENCE N.71'01'02"E.,

S.88'31'14"E., A DISTANCE OF 87.63 FEET; THENCE S.79'24'23"E., A DISTANCE OF 251.83 FEET; THENCE S.41'04'30"E., A DISTANCE OF 1143.30 FEET; THENCE S.29'11'51"W., A DISTANCE OF 336.21 FEET; THENCE S.59'39'57"E., A DISTANCE OF 541.72 FEET: THENCE S.16'39'52"E., A DISTANCE OF 332.33 FEET; THENCE S.72'32'59"W., A DISTANCE OF 148.10 FEET; THENCE S.19'12'37"E., A DISTANCE OF 771.09 FEET; THENCE S.35'18'35"W., A DISTANCE OF 227.62 FEET; THENCE S.68'26'21"W., A DISTANCE OF 1133.26 FEET; THENCE N.81'12'41"W., A DISTANCE OF 820.34 FEET TO THE POINT OF BEGINNING. CONTAINING 106.777 ACRES, MORE OR LESS.

DEERING PARK 1, LLC 14025 RIVEREDGE DRIVE, SUITE 175

528 NORTHLAKE BLVD, SUITE 1040 ALTAMONTE SPRINGS, FLORIDA 32701

MARK DOWST & ASSOCIATES, INC 536 NORTH HALIFAX AVENUE DAYTONA BEACH, FLORIDA 32118

334 CORDOVA STREET, SUITE A ST. AUGUSTINE, FLORIDA 32084

ENGLAND, THIMS & MILLER, INC. 1411 EDGEWATER DRIVE, SUITE 200

ORLANDO, FLORIDA 32804

ML+H MARQUIS LATIMER + HALBACK, INC.

TAMPA, FLORIDA 33637 770-203-9355

GEOPOINT SURVEYING, INC.

(321) 270-0440

(386) 258-7999

(904) 825-6747

(407) 536-5379

**ENGINEER:** 

UTILITY SERVICE PROVIDERS			
POTABLE & RECLAIMED WATER:	CITY OF EDGEWATER 104 NORTH RIVERSIDE EDGEWATER, FLORIDA 32132 (386) 424–2400		
SANITARY SEWER:	CITY OF EDGEWATER 104 NORTH RIVERSIDE EDGEWATER, FLIRDA 32132 (386) 424–2400		
TELEPHONE:	AT&T CONTACT: KIRBY SPENCER (386) 281-6957		
ELECTRIC:	FLORIDA POWER & LIGHT 700 UNIVERSE BOULEVARD JUNO BEACH, FLORIDA 33408 (321) 453–2489		
GAS:	FLORIDA PUBLIC UTILITIES CO.		

CITY OF EDGEWATER 104 NORTH RIVERSIDE EDGEWATER, FLORIDA 32132 (386) 424–2400	
CITY OF EDGEWATER 104 NORTH RIVERSIDE EDGEWATER, FLIRDA 32132 (386) 424–2400	
AT&T CONTACT: KIRBY SPENCER (386) 281-6957	
FLORIDA POWER & LIGHT 700 UNIVERSE BOULEVARD JUNO BEACH, FLORIDA 33408 (321) 453–2489	
FLORIDA PUBLIC UTILITIES CO. CONTACT: COLIN DUNN (386) 785–4554	
	-

DEERING PARK
CENTER - SINGLE

FAMILY CITY OF EDGEWATER, FLORIDA

PREPARED FOR

# DEERING PARK 1, LLC

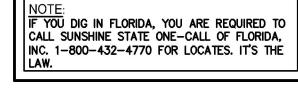
14025 RIVEREDGE DRIVE, SUITE 175 TAMPA, FLORIDA 33637 770-203-9355

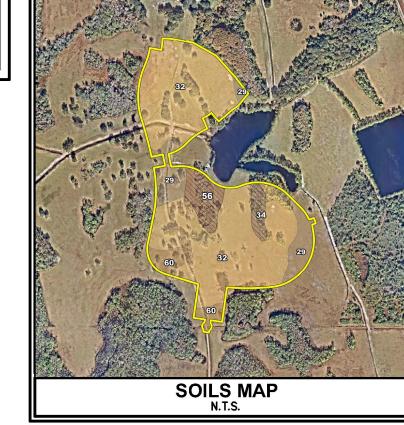


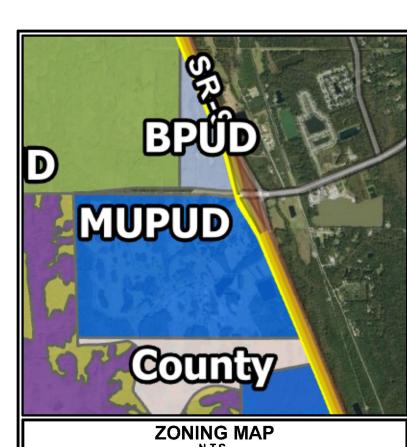
## England-Thimy & Miller, Inc.

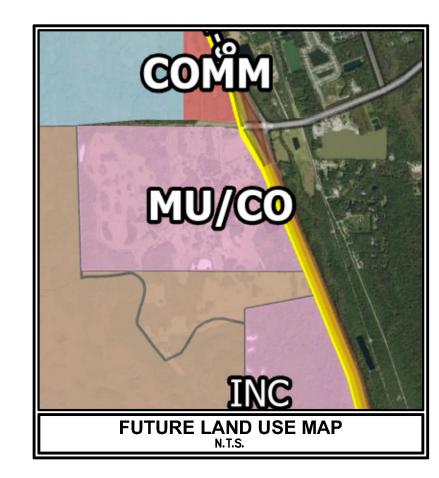
**1411 EDGEWATER DRIVE, SUITE 200** ORLANDO, FL 32804 TEL: (407) 536-5379 CA - 00002584 LC - 0000316

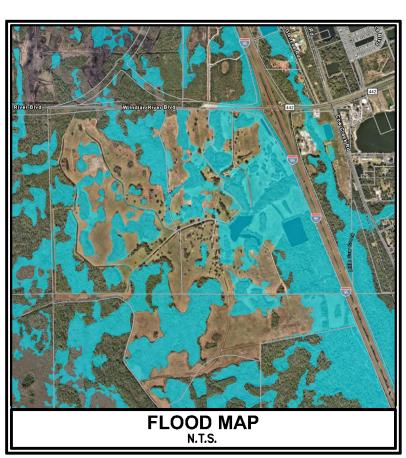
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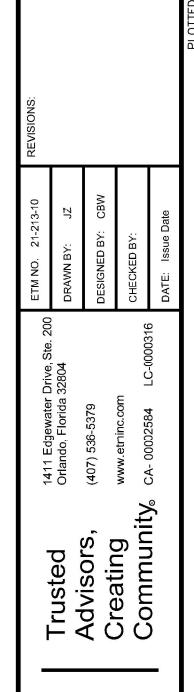






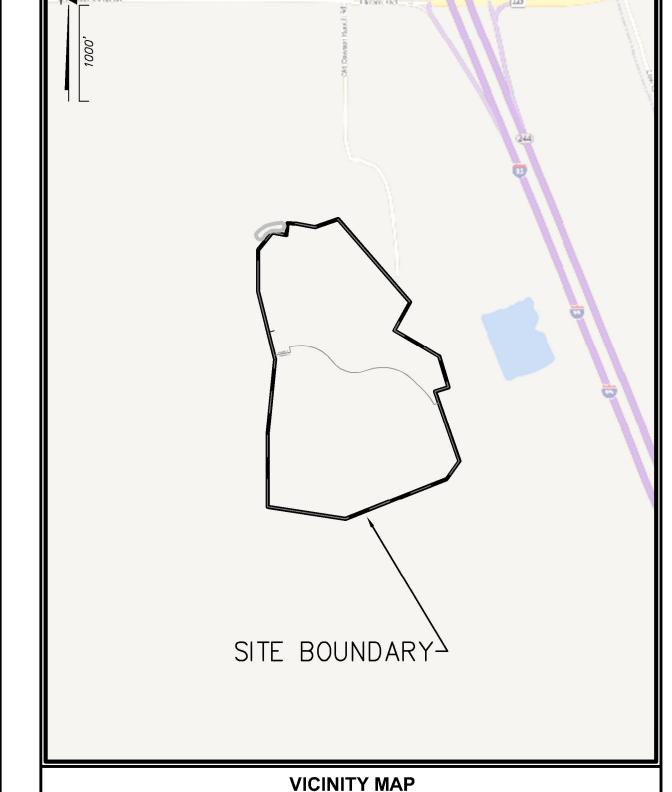
**THIS PROJECT: NAVD 88** 

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COVER SHEET	DEERING PARK CENTER - SINGLE FAMIL	POR DEERING PARK 1, LLC	2\00 012 10\1 cm.dD\Deci:\Deci:\Deci:.\Deci:.\Deci:.\Deci:.\Deci:.\Deci:
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**VERTICAL DATUM USED FOR** 

### **GENERAL SITE NOTES**

- ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES TO HIS EMPLOYEES, AND FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS. EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION CONTRACT. THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA (811) FOR UTILITY LOCATES IN ACCORDANCE WITH STATE LAW PRIOR TO EXCAVATING. THE CONTRACTOR IS ALSO URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF OR WITHIN THE PROJECT TO RECORD EXISTING CONDITIONS. PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE ISSUES THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES, IMPROVEMENTS, UTILITIES, PROPERTY LINES, AND CONFIRM ALL PROPOSED DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION OR ORDERING ANY MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER PRESIDING JURISDICTIONAL STANDARDS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSISTANCE REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL THAT WILL REQUIRE REMOVAL AND/OR TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED. FAILURE OF THE CONTRACTOR TO IDENTIFY/QUANTIFY THE AMOUNT OF UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED DURING THE BID PROCESS WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION
- ALL MATERIALS AND WORKMANSHIP ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY
- THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY TO THE ACTUAL LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY THIS DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITIES AND IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR AND SHALL REPAIR OR PAY FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH HE SHALL CONNECT, AND NOTIFY THE OWNER AND ENGINEER OF RECORD OF ANY DISCREPANCIES.
- UNLESS DIRECTED OTHERWISE BY THE OWNER OR THE ENGINEER OF RECORD, THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH PRESIDING JURISDICTIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT, INCLUDING CITY OF EDGEWATER RIGHT-OF-WAY PERMITS FOR WORK WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENT CONTRACTOR IS RESPONSIBLE FOR CONTROL OF SEDIMENTATION AND RUNOFF RESULTING FROM RAINFALL EVENTS DURING THE CONSTRUCTION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REGULATORY PERMITS ISSUED FOR THE PROJECT.
- THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN CITY OF EDGEWATER, CITY OR STATE RIGHT-OF-WAY WITH THE APPROPRIATE AGENCIES FOR MAINTENANCE OF RAFFIC AND METHOD OF CONSTRUCTION & REPAIR.
- 11. IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL WATER MANAGEMENT DISTRICT IN WHICH THIS PROJECT IS LOCATED IN. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND THE ENGINEER OF RECORD FOR APPROVAL OF ALL DEWATERING OPERATIONS PRIOR TO COMMENCEMENT.

PAVING AND DRAINAGE LEGEND

PROPOSED

S 45'34'23" E

1.8 AC.±

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—X——X—

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25.5

SPOT ELEVATION

DRAINAGE DIVIDE

STORM SEWER AND SIZE

STORM SEWER MANHOLE

DRAINAGE FLOW ARROWS

MITERED END SECTION

DITCH FLOW ARROWS

STRUCTURE NUMBERS

SOIL BORING LOCATION

CONCRETE SIDEWALK

CONCRETE CURB AND GUTTER

JURISDICTIONAL WETLANDS

DRAINAGE AREA

UNDERDRAIN

SILT FENCE

HAY BALES

STORM SEWER INLET

CONTOURS

BOUNDARY

EXISTING

## GENERAL SITE NOTES:

- PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO. WETLANDS. SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62-621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.
- ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH CITY OF EDGEWATER (HAVING JURISDICTION) STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- 14. CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, BERMS, RIGHTS-OF-WAYS AND EASEMENTS (INCLUDING ELECTRIC EASEMENTS) ARE INCLUDED IN
- 15 ALL ACCESS EASEMENTS ARE TO BE STABILIZED AND DRIVABLE.
- ALL DEBRIS SHALL BE CONTAINED IN ONE OR MORE DUMPSTER WHICH ARE REQUIRED TO BE ONSITE DURING ALL PHASES OF CONSTRUCTION, BEING EMPTIED AT AN APPROPRIATELY PERMITTED LANDFILL AND RETURNÉD TO THE SITE AS OFTEN AS NEEDED TO AVOID SPILLS AND CONTAMINATION.
- BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH CITY OF EDGEWATER (HAVING JURISDICTION) FIRE MARSHAL AND ALL OTHER PERMITTING AUTHORITIES BY THE CONTRACTOR.
- UNSUITABLE MATERIALS UNDER UTILITY OR STORM PIPE, STRUCTURES, PAVEMENT, BUILDING PADS. OR HARDSCAPE ELEMENTS SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH
- THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT. 20. ALL UNDERGROUND UTILITIES TO BE INSTALLED UNDER PAVEMENT MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
- 21. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL MATERIALS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY OR STORM PIPE OR STRUCTURE.
- 23. AUGER BORINGS PROVIDED BY PROFESSIONAL SERVICE INDUSTRIES, INC., DATED: April 12,
- 24. FLOOD ZONE BASED UPON FEMA INSURANCE RATE MAPS PANEL NOS. 12127C0700J,
- 25. FOR SEDIMENT AND EROSION CONTROL PLANS, DETAILS AND NOTES REFER TO DRAWINGS 16 - SEDIMENT AND EROSION CONTROL PLAN. CONTRACTOR TO COORDINATE WITH
- AUTHORITY FOR INSPECTIONS PRIOR TO CLEARING OPERATIONS. 26. ELEVATIONS ARE BASED ON NAVD 88.
- 27. TOPOGRAPHIC INFORMATION BASED ON SURVEY PROVIDED BY MARK DOWST & ASSOCIATES, INC., DATED: August 2023.
- 28. BOUNDARY INFORMATION BASED ON SURVEY PROVIDED BY GEOPOINT SURVEYING, INC.,
- 29. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF THE STANDARD SPECIFICATIONS AND ALL THE CURRENT STANDARD DETAILS PERFORMED AND TESTED IN ACCORDANCE WITH THÉ RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORT PROVIDED FOR THIS PROJECT, IF MORE STRINGENT THAN CITY REQUIREMENTS.
- 30. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CIVIL ENGINEER OF RECORD TO DETERMINE THIS PROJECT'S JURISDICTION FOR INSPECTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) FOR PRE-CONSTRUCTION MEETING AND INSPECTIONS.

WATER AND SEWER LEGEND

PROPOSED

SANITARY SEWER LINE

REUSE WATER MAIN

FIRE HYDRANT

FLUSHING HYDRANT

BACKFLOW PREVENTER

FIRE PROTECTION MAIN

CLEANOUT

SANITARY SEWER SERVICE

SANITARY SEWER MANHOLE

31. FOR BOUNDARY, ROADWAY AND LOT GEOMETRY INFORMATION SEE PLAT.

EXISTING

- 32. PROJECT LOCATION: CITY OF EDGEWATER, FLORIDA.
- 33. THESE PLANS WERE GENERATED UTILIZING AUTOCAD CIVIL 3D 2022.

## PAVING AND DRAINAGE NOTES:

- ALL DRAINAGE STRUCTURES WITHIN PAVEMENT/CONCRETE AREAS TO HAVE TRAFFIC BEARING GRATES, UNLESS OTHERWISE SPECIFIED.
- 2. ALL DRAINAGE PIPE JOINTS ARE TO BE FILTER FABRIC WRAPPED.
- 3. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRECAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR REDDI-MIX CONCRETE WITH #57
- ALL PIPE LENGTHS ARE SCALED DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) REQUIREMENTS AND SHALL BE CONSTRUCTED TO CONFORM WITH CURBING, PROPERTY LINES AND LOW POINTS AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
- "AS-BUILT" DRAWINGS DRAINAGE AS-BUILTS PROVIDED TO CITY OF EDGEWATER (HAVING JURISDICTION) AND THE WATER MANAGEMENT DISTRICT (HAVING JURISDICTION) ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH THE CURRENT CITY OF EDGEWATER (HAVING JURISDICTION) STANDARDS AND SPECIFICATIONS AND THE WMD (HAVING JURISDICTION) REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROCESS THE AS-BUILT DRAWINGS FOR APPROVAL CITY OF EDGEWATER (HAVING JURISDICTION). IN ADDITION TO THE DRAINAGE SYSTEM THE "AS-BUILTS" SHALL SHOW THE ELEVATIONS AND LOCATION OF THE TOP OF BANK, WATER LEVEL, ANY POINTS OF CHANGE IN SLOPE, TOE OF SLOPE AND POND BOTTOM AT 100' MAXIMUM INTERVALS ALONG POND BANK FOR ALL POND CONSTRUCTION. ALL DIMENSIONS AND ELEVATIONS ON THE CONTROL STRUCTURE DETAILS SHALL BE SHOWN ON AS-BUILT DRAWINGS. ADDITIONAL INFORMATION MAY BE REQUIRED ACCORDING TO THE JURISDICTION HAVING AUTHORITY; CONTRACTOR/SURVEYOR SHALL VERIFY ALL PROPER AS-BUILT INFORMATION IS PROVIDED. ALL DEVIATIONS FROM PLANS SHAL BE CLEARLY INDICATED ON THE AS-BUILT DRAWINGS AND THE ENGINEER OF RECORD SHALL BE NOTIFIED.
- THE CONTRACTOR SHALL PROVIDE ACCESSIBLE CURB RAMPS AT ALL SIDEWALK AND CURB CONNECTIONS. RAMPS SHALL MEET ALL APPLICABLE ADA REQUIREMENTS.
- 8. FOR SPECIAL PAVING AND DRAINAGE DETAILS SEE THE APPROPRIATE SHEETS WITH THIS PLAN SET (REFER TO THE COVER SHEET FOR PAGE NAME AND NUMBER). CONTRACTOR SHALL REFER THE CITY OF EDGEWATER (HAVING JURISDICTION) FOR ALL STANDARD DETAILS AND SPECIFICATIONS, LATEST REVISION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING SILT FENCE, COIR BALES. AND FILTER FABRIC INSIDE DRAINAGE STRUCTURES SHALL BE REMOVED PRIOR TO FINAL INSPECTION, UNLESS OTHERWISE DIRECTED BY THE OWNER OR THE ENGINEER OF RECORD.
- 10. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN ON THE PLANS AND DETAIL
- ANY REQUIRED TEMPORARY MARKINGS MUST BE IN PLACE BEFORE OPENING LANES OF TRAFFIC. PAY ITEMS FOR TEMPORARY PAVEMENT MARKINGS ARE TO BE INCLUDED THE TABULATION OF QUANTITIES.
- THE REMOVAL OF EXISTING PAVEMENT MARKINGS WILL BE CONSIDERED AN INCIDENTAL ITEM WITH NO ADDITIONAL COMPENSATION PROVIDED.
- 13. ALL PERMANENT PAVEMENT MARKINGS IN RIGHT-OF-WAY SHALL BE EXTRUDED THERMOPLASTIC AND MEET THE CURRENT CITY OF EDGEWATER (HAVING JURISDICTION) SPECIFICATIONS AND/OR FDOT STANDARD SPECIFICATIONS, LATEST EDITION.
- THERMOPLASTIC PAVEMENT MARKINGS ARE TO BE PLACED NO SOONER THAN 30 CALENDAR DAYS AFTER THE COMPLETION OF THE FINAL PAVEMENT LAYER. UNLESS OTHERWISE REQUIRED BY THE CITY OF EDGEWATER (HAVING JURISDICTION).
- 15. A BITUMINOUS REFLECTIVE PAVEMENT MARKER (RPM) ADHESIVE MEETING CURRENT CITY OF EDGEWATER (HAVING JURISDICTION) AND/OR FDOT SPECIFICATIONS SHALL BE USED ON ASPHALT ROADWAYS.
- 16. THE CONTRACTOR SHALL USE CLASS-B REFLECTIVE PAVEMENT MARKERS (RPM'S) INSTALLED TO MEET THE CURRENT CITY OF EDGEWATER (HAVING JURISDICTION) SPECIFICATIONS AND/OR FDOT STANDARD SPECIFICATIONS.
- 17. REFLECTIVE PAVEMENT MARKERS THAT DO NOT CONFLICT WITH PERMANENT SURFACES IMMEDIATELY AFTER THE TEMPORARY PERMANENT STRIPING IS IN PLACE.

18.a. PAINT BLACKOUT METHOD OF PAVEMENT MARKINGS REMOVAL IS NOT ACCEPTED.

18.b. GRINDING OR HYDRO BLAST METHODS SHALL BE USED ON WEATHERED ASPHALT

18. PAVEMENT MARKINGS REMOVAL

- 18.c. REMOVAL ON NEW ASPHALT SURFACES SHALL BE BY HYDRO BLAST METHOD
- 19. 48 HOURS PRIOR TO INSTALLING ANY PAVEMENT MARKINGS ON ANY CITY OF EDGEWATER ROADWAY OR STREET, THE CONTRACTOR SHALL CONTACT THE CITY OF EDGEWATER (HAVING JURISDICTION) INSPECTOR.

## WATER, REUSE, & SEWER REQUIREMENTS

- ALL WATER, REUSE WATER, SANITARY SEWER AND STORM SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES. THE CONTRACTOR SHALL FURNISH A COPY OF THE CURRENT LICENSE AND QUALIFIERS TO THE DESIGN ENGINEER PRIOR TO START OF CONSTRUCTION. ALL WATER, REUSE WATER AND SEWER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) STANDARDS. DETAILS AND MATERIALS MANUAL(S) (LATEST REVISIONS) UNLESS MORE STRINGENT STANDARDS ARE SPECIFIED.
- FIRE PROTECTION MAINS (IF APPLICABLE TO THIS PROJECT) SHALL BE C-900 PVC DR18 PIPE AND SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA REQUIREMENTS BY A FLORIDA LICENSED CONTRACTOR QUALIFIED TO INSTALL FIRE PROTECTION MAINS. LOCAL PERMITTING AND INSPECTION OF FIRE PROTECTION SYSTEM INSTALLATION, FLUSHING AND TESTING IS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR LOCAL PERMIT, NOTICE, AND COMPLIANCE WITH PERMIT.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER (AND THE CITY OF EDGEWATER (HAVING JURISDICTION) IF REQUIRED) ON ALL STRUCTURES AND MATERIALS, FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OR FABRICATION OF ANY UTILITY PIPE OR
- UNSUITABLE MATERIALS UNDER UTILITY PIPES AND STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED IN ACCORDANCE WITH THE
- MECHANICALLY RESTRAINED JOINTS ARE REQUIRED ON PRESSURE MAINS AT VALVES, FITTINGS AND DEAD ENDS IN ACCORDANCE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) STANDARDS.
- CONTRACTOR SHALL FURNISH AND INSTALL LOCATE WIRING ON ALL PVC WATER MAINS. REUSE MAINS, FORCE MAINS, POLYETHYLENE AND PVC WATER SERVICES, INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) STANDARDS, DETAILS AND MATERIAL MANUAL(S), LATEST EDITION.
- ALL POINTS OF CONNECTION FOR WATER, REUSE WATER AND SEWER MUST BE IN ACCORDANCE WITH THE AVAILABILITY RESPONSE FROM THE CITY OF EDGEWATER (HAVING JURISDICTION).
- F.D.E.P. PERMITS SUBMITTED THROUGH THE DEPARTMENT FOR PROCESSING SHALL BE IN CONFORMANCE WITH BOTH THE DESIGN PLANS AND THE WATER AND SEWER AVAILABILITY RESPONSE. ANY MINOR OR MAJOR DEVIATIONS BETWEEN THE PRELIMINARY DESIGN AND FINAL DESIGN SUBMITTAL SHALL REQUIRE REVISED F.D.E.P. PERMITS REFLECTING THESE CHANGES.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE CITY OF EDGEWATER (HAVING JURISDICTION) PERSONNEL TO SCHEDULE THIS CONFERENCE AND NOTIFY THE DEVELOPER/OWNER AND THE
- 10. A UNDERGROUND UTILITY PERMIT (OR SIMILAR) MAY BE REQUIRED FROM THE CITY OF EDGEWATER (HAVING JURISDICTION) PRIOR TO COMMENCEMENT OF ANY UTILITY CONSTRUCTION. ANY CONSTRUCTION OF UTILITY IMPROVEMENTS PRIOR TO RECEIVING SAID PERMIT MAY BE SUBJECT TO ADDITIONAL PERMIT FEES/FINES AND AN ISSUING OF A STOP WORK ORDER.
- THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS AND MAINTAIN ANY EXISTING WATER AND SEWER SERVICE TO MEET THE SYSTEM DEMANDS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF AFFECTED CUSTOMERS AND UTILITY A MINIMUM OF 48 HOURS IN ADVANCE OF ANY INTERRUPTION OF SERVICE.
- 12. CONTRACTOR SHALL OBTAIN A COPY OF THE F.D.E.P. OR CITY OF EDGEWATER (HAVING JURISDICTION) WATER AND SEWER PERMITS FROM THE ENGINEER PRIOR TO START OF CONSTRUCTION AND MUST COMPLY WITH ALL CONDITIONS OF PERMIT(S).
- 13. ALL ELECTRICAL CONDUIT WORK SHALL BE COMPLETED PRIOR TO THE PRESSURE TESTING OF WATER MAINS, REUSE MAINS AND SEWAGE FORCE MAINS. ALL PRESSURE TESTING AND PUMP TESTING SHALL BE WITNESSED BY THE ENGINEER OF RECORD (OR A REPRESENTATIVE AUTHORIZED BY THE ENGINEER). THE CITY OF EDGEWATER (HAVING JURISDICTION) SHALL BE NOTIFIED OF SAID pressure tests and shall witness these tèsts at their own discretion.

- 14. UNLESS OTHERWISE INDICATED, ALL WATER MAINS AND REUSE MAINS WILL BE PVC DR18, C-900/C-905 (AS APPROPRIATE) PIPE. ALL 2" MAINS SHALL BE HDPE CTS SDR 11, C-906.
- 15. WATER MAINS AND REUSE MAINS SHALL HAVE A MINIMUM OF 36" COVER FROM FINISHED GRADE UNLESS OTHERWISE SHOWN. ADDITIONAL COVER MAY BE REQUIRED FOR VALVE INSTALLATION CLEARANCE FOR PIPE GREATER THAN 8 INCHES IN DIAMETER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT INSTALLED PIPING UNTIL FINAL ACCEPTANCE BY F.D.E.P AND THE CITY OF EDGEWATER (HAVING JURISDICTION).
- ALL WATER MAINS AND REUSE MAINS SHALL BE FLUSHED IN ACCORDANCE WITH, AND UNDER THE DIRECTION OF THE CITY OF EDGEWATER (HAVING JURISDICTION).
- HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAINS AND REUSE MAINS AND HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAINS AND REUSE MAINS TO OTHER UTILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) AND F.D.E.P. REQUIREMENTS.
- 18. ALL GATE VALVES SHALL BE CITY OF EDGEWATER (HAVING JURISDICTION) STANDARD. VALVES SHALL BE MECHANICAL JOINT, CAST IRON, BRONZÈ FITTED WITH RESILIENT SEAT. ALL VALVES SHALL OPEN BY TURNING TO THE LEFT. VALVES SHALL BE RATED AT 200 PSI WORKING PRESSURE AND 400 PSI TEST PRESSURE.
- 19. ALL NEW AND / OR RELOCATED WATER MAIN AND REUSE MAIN PIPE AND FITTINGS SHALL NOT CONTAIN MORE THAN EIGHT PERCENT LEAD, AND ALL PACKING AND JOINT MATERIALS USED IN THE JOINTS SHALL CONFORM WITH ALL APPLICABLE AWWA STANDARDS. ALL NEW AND / OR relocated services and plumbing shall contain no more than eight percent léad and ALL SOLDERS AND FLUX SHALL CONTAIN NO MORE THAN 0.2 PERCENT LEAD.

### WATER. REUSE. & SEWER REQUIREMENTS

- 21. ALL FIRE HYDRANTS SHALL BE STANDARD PER THE CITY OF EDGEWATER (HAVING JURISDICTION). FIRE HYDRANTS LOCATED WITHIN CITY OF EDGEWATER (HAVING JURISDICTION) RIGHT OF WAYS OR EASEMENTS SHALL BE PAINTED IN ACCORDANCE WITH LOCAL REQUIREMENTS PER THE CITY OF EDGEWATER (HAVING JURISDICTION).
- 22. ALL FIRE HYDRANTS (PUBLIC OR CITY OF EDGEWATER OWNED) SHALL BE TAGGED AND NUMBERED PER THE CITY OF EDGEWATER (HAVING JURISDICTION) REQUIREMENTS. CONTRACTOR TO COORDINATE WITH THE APPROPRIATE PERSONNEL OF THE CITY OF EDGEWATER (HAVING JURISDICTION) FOR REQUIRED
- ALL NEW FIRE HYDRANT INSTALLATIONS, PUBLIC AND PRIVATE, SHALL HAVE A BLUE F.D.O.T. TYPE REFLECTIVE PAVEMENT MARKER INSTALLED IN THE CENTER OF THE TRAFFIC LANE NEAREST THE NEW
- 24. ALL WATER MAINS SHALL BE BACTERIOLOGICAL AND PRESSURE TESTED AT 150 PSI FOR 2 HOURS IN ACCORDANCE WITH AWWA STANDARDS AND CITY OF EDGEWATER STANDARD REQUIREMENTS. NO CONNECTION TO THE EXISTING POTABLE WATER SYSTEM SHALL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN PRESSURE TESTED. DISINFECTED. AND CLEARED FOR SERVICE. THE ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO PERFORMING THE PRESSURE TEST. DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA-C-651. REUSE MAINS REQUIRE PRESSURE TEST ONLY.
- 25. ALL BACKFLOW PREVENTORS SHALL BE IN ACCORDANCE WITH THE CITY OF EDGEWATER (HAVING JURISDICTION) CROSS CONNECTION CONTROL PROGRAM. BACKFLOW PREVENTORS MUST BE TESTED AFTER INSTALLATION BY A CERTIFIED TESTER AND ANNUALLY THEREAFTER.
- 26. THE WATER TAPS DEPICTED ON THESE DESIGN PLANS SHALL BE CONSTRUCTED AS FOLLOWS: ALL POTABLE, REUSE, AND IRRIGATION WATER TAPS, FIRE LINE SERVICES AND FIRE HYDRANT INSTALLATIONS SHALL BE PERFORMED BY A LICENSED MASTER PLUMBER OR UNDERGROUND UTILITY CONTRACTOR UNDER THE FOLLOWING CONDITIONS: 1.) THE TAPS ARE TO BE SCHEDULED 48 HOURS IN ADVANCE WITH CITY OF EDGEWATER. 2.) TAPS REQUIRING METER INSTALLATIONS OF SIZE 2" AND BELOW MUST INCLUDE THE SERVICE PIPE, METER BOX, AND CORP. STOP SIZED READY TO ACCEPT THE METER INSTALLATION BY CITY OF

3.) CITY OF EDGEWATER FORCES WILL INSTALL THE METER UPON APPLICATION AND PAYMENT BY LICENSED MASTER PLUMBER OR UTILITY CONTRACTOR AT CITY OF EDGEWATER WATER AND SEWER, 515 4.) ALL TAPS REQUIRING METER INSTALLATIONS OF SIZE 3" AND ABOVE SHALL TERMINATE SIZED RÉADY FOR VAULT. METER AND BYPASS INSTALLATION. VAULT FURNISHED BY CONTRACTOR.

27. WATER METERS SHALL NOT BE LOCATED WITHIN PAVEMENT, CURB AND GUTTER OR DRIVEWAYS.

INSTALLATION BY CITY OF EDGEWATER FORCES. SPECIAL ESTIMATE REQUIRED.

28. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATERPROOF COVERING. THE PROPER AUTHORITIES WILL BE NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL.

- 29. ALL SEWER MAINS, SERVICES, AND FITTINGS SHALL BE PVC (ASTM-3034) SDR 26 UNLESS OTHERWISE INDICATED. FORCE MAINS SHALL BE PVC DR 18 PIPE UNLESS OTHERWISE INDICATED. FORCE MAINS SHALL BE PRESSURE TESTED THE SAME AS WATER AND REUSE MAINS.
- 30. SANITARY SEWER SERVICES SHALL BE 4" PVC WITH A MINIMUM SLOPE OF 0.02 FEET PER FOOT AND SHALL BE TERMINATED AT THE RIGHT-OF-WAY LINE WITH A DEPTH OF 30" TO 60" UNLESS OTHERWISE DETAILED OR RESTRICTED DUE TO DEPTH OF SEWER MAIN. EACH RESIDENTIAL UNIT SHALL BE SERVED BY A SINGLE SEWER LATERAL TO THE CITY'S SEWER GRAVITY MAIN. FORCE MAINS SHALL HAVE A MINIMUM COVER OF 30 INCHES IN UNPAVED AREAS AND 36 INCHES IN PAVED AREAS UNLESS OTHERWISE INDICATED. SEE FORCE MAIN PROFILE SHEET(S).
- 31. SEWER LINES AND FORCE MAINS ARE DESIGNED TO FINISHED GRADES AND SHALL BE PROTECTED UNTIL WORK IS COMPLETED AND ACCEPTED BY F.D.E.P AND CITY OF EDGEWATER.
- 32. PRIOR TO THE PLACEMENT OF THE LIMEROCK BASE COURSE, THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY MANHOLES. THIS SCHEDULE SHALL BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS-BUILT" DRAWINGS FOR
- THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL AIR RELEASE VALVES AT CHANGES IN ELEVATION OF 2 FT. DUE TO ACTUAL FIELD CONDITIONS OR CONFLICTS NOT IDENTIFIED ON THESE DESIGN
- TELEVISION INSPECTION SHALL BE REQUIRED ON ALL GRAVITY SEWER MAINS. INSPECTION SHALL BE RECORDED ON VIDEO TAPE OR DVD. ALL LINES ARE TO BE CLEANED AND FLUSHED PRIOR TO INSPECTION. A FULL WRITTEN REPORT AS TO THE CONDITION OF THE PIPE WITH PERTINENT DATA SUCH AS DISTANCE BETWEEN MANHOLES, LOCATION OF SERVICES, ETC. SHALL BE SUBMITTED TO THE OWNER AND ENGINEER PRIOR TO ACCEPTANCE AND ONE COPY OF THE VIDEO INSPECTION SHALL B SUBMITTED TO THE CITY OF EDGEWATER. ALL DEFECTIVE AREAS AND ITEMS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL ACCEPTANCE. ALL REPAIRED SECTIONS MUST BE REINSPECTED PRIOR TO ACCEPTANCE. THE MAXIMUM DEFLECTION SHALL NOT EXCEED 7.5% OF THE NOMINAL DIAMETER IN ACCORDANCE WITH CITY OF EDGEWATER STANDARDS. INFILTRATION AND/OR EXFILTRATION TESTING OF GRAVITY SEWERS MAY BE REQUIRED IF DEEMED NECESSARY BY THE ENGINEER. THE MAXIMUM ALLOWABLE INFILTRATION-EXFILTRATION RATE WILL BE 50 GALLONS PER INCH DIAMETER PER MILE PER

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## NEIGHBORHOOD GRADING LEGEND

NATURAL GRADE PROPOSED SPOT ELEVATION **EXISTING SPOT ELEVATION** EXISTING TOPOGRAPHY LOT NUMBER S 45'34'23" E SUBDIVISION BOUNDARY DRAINAGE FLOW ARROWS DITCH FLOW ARROWS

## NEIGHBORHOOD DRAINAGE & GRADING NOTES



FINISHED FLOOR ELEVATION AND APPROXIMATE BUILDING LOCATION AND LETTER DENOTES LOT TYPE GRADING ALL PROPOSED LOT CORNERS SHALL BE AS FOLLOWS:

A. BACK CORNER LOT ELEVATIONS ARE AT NATURAL GROUND UNLESS OTHERWISE NOTED OR WHERE FILLING IS REQUIRED TO OBTAIN 1% SLOPE.

DENOTES STD. LOT TYPE GRADING. EXACT LOCATION OF "A OR B" SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET (BY OTHERS)

PROPOSED GRADE AT LOT CORNERS

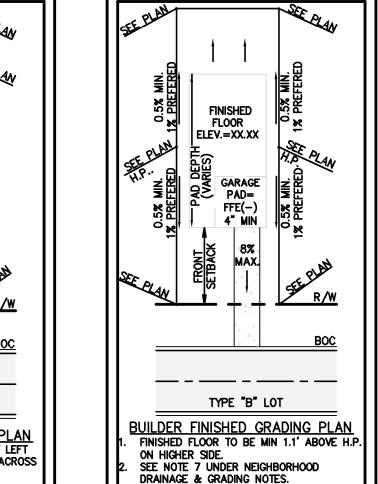
FINISHED FLOOR ELEVATIONS GIVEN ON PLAN ARE MINIMUM. EXACT ELEVATION SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET (BY OTHERS).

CONTRACTOR TO REMOVE UNSUITABLE MATERIAL UNDER HOUSE PADS IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT

GRADE BREAK HIGHPOINT SHALL NOT BE MORE FORWARD THAN THE BUILDING CORNER OF THE STRUCTURE FACING THE STREET ON EITHER SIDE. IF THE HIGHPOINT IS AT THE FRONT OF THE BUILDING PAD AND THE SUBSEQUENT VERTICAL BUILDING CORNERS ARE SET BEHIND THIS LOCATION, LOT REGRADING WILL BE REQUIRED BY THE VERTICAL BUILDING CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE

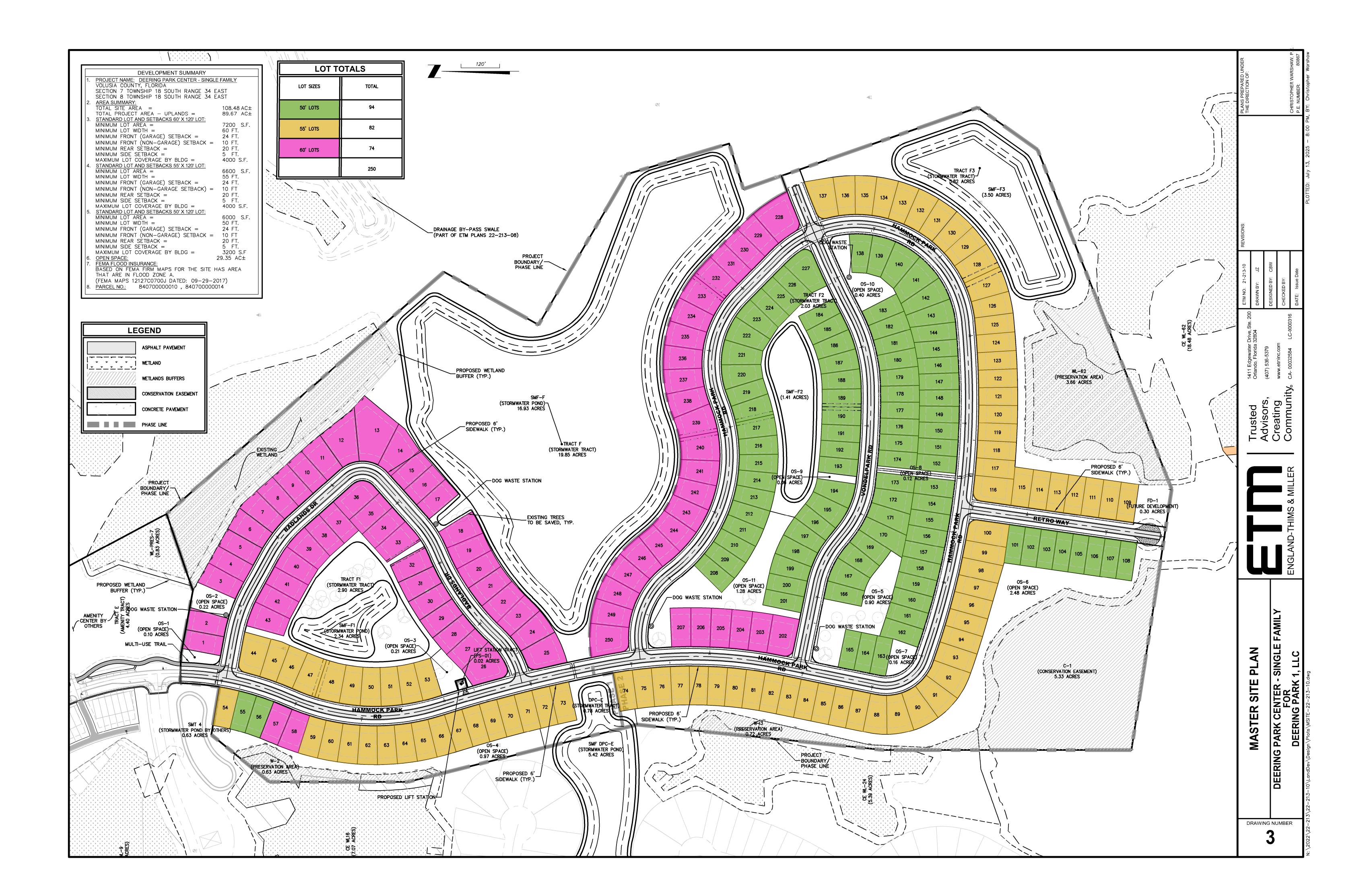
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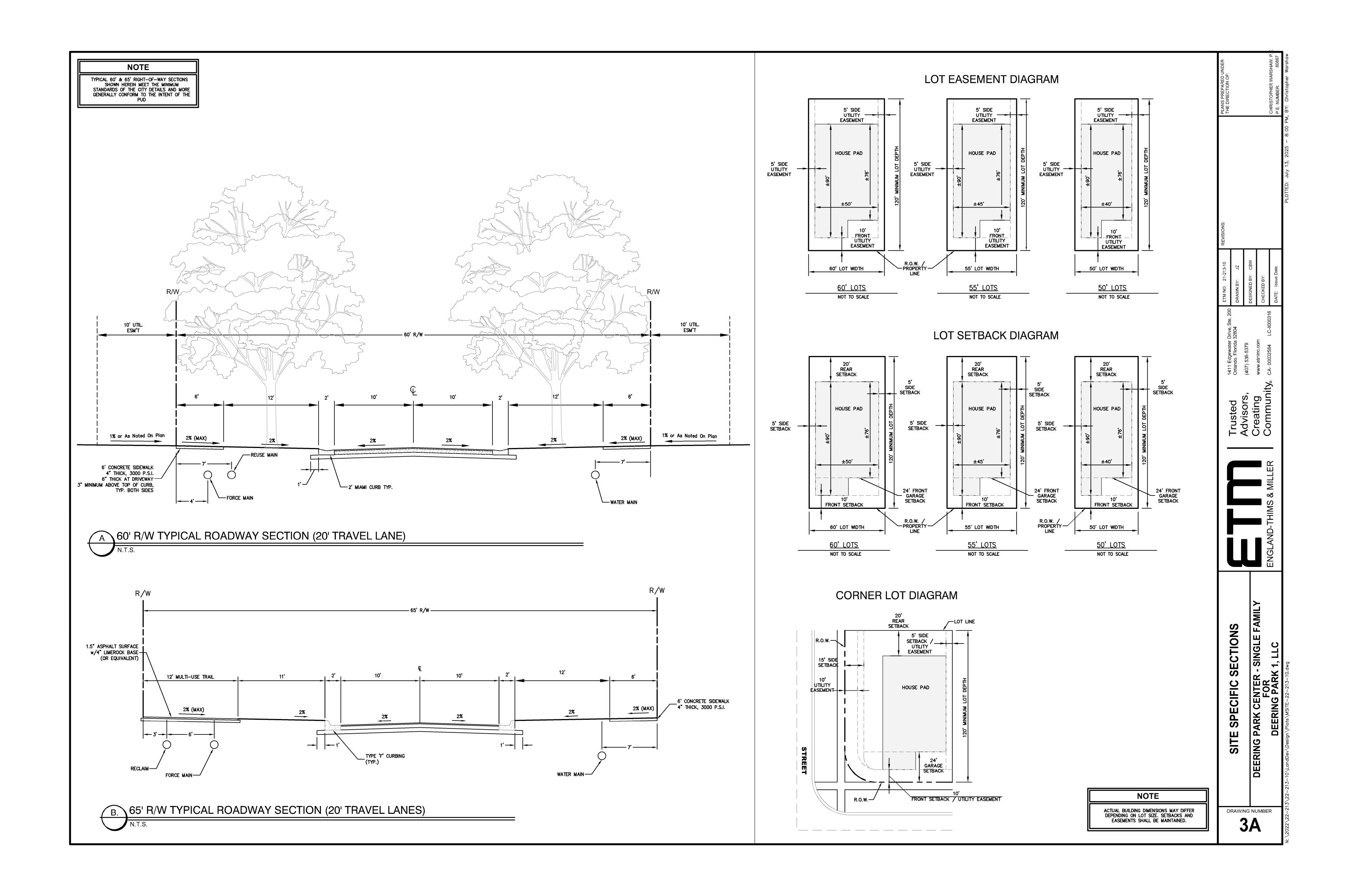
ELEV.=XX.XX \_\_\_\_\_\_\_ TYPE "A" LOT BUILDER FINISHED GRADING PLAN HIGH POINT BEHIND PAD MAY SHIFT LEFT OR RIGHT DEPENDING ON GRADING ACROSS

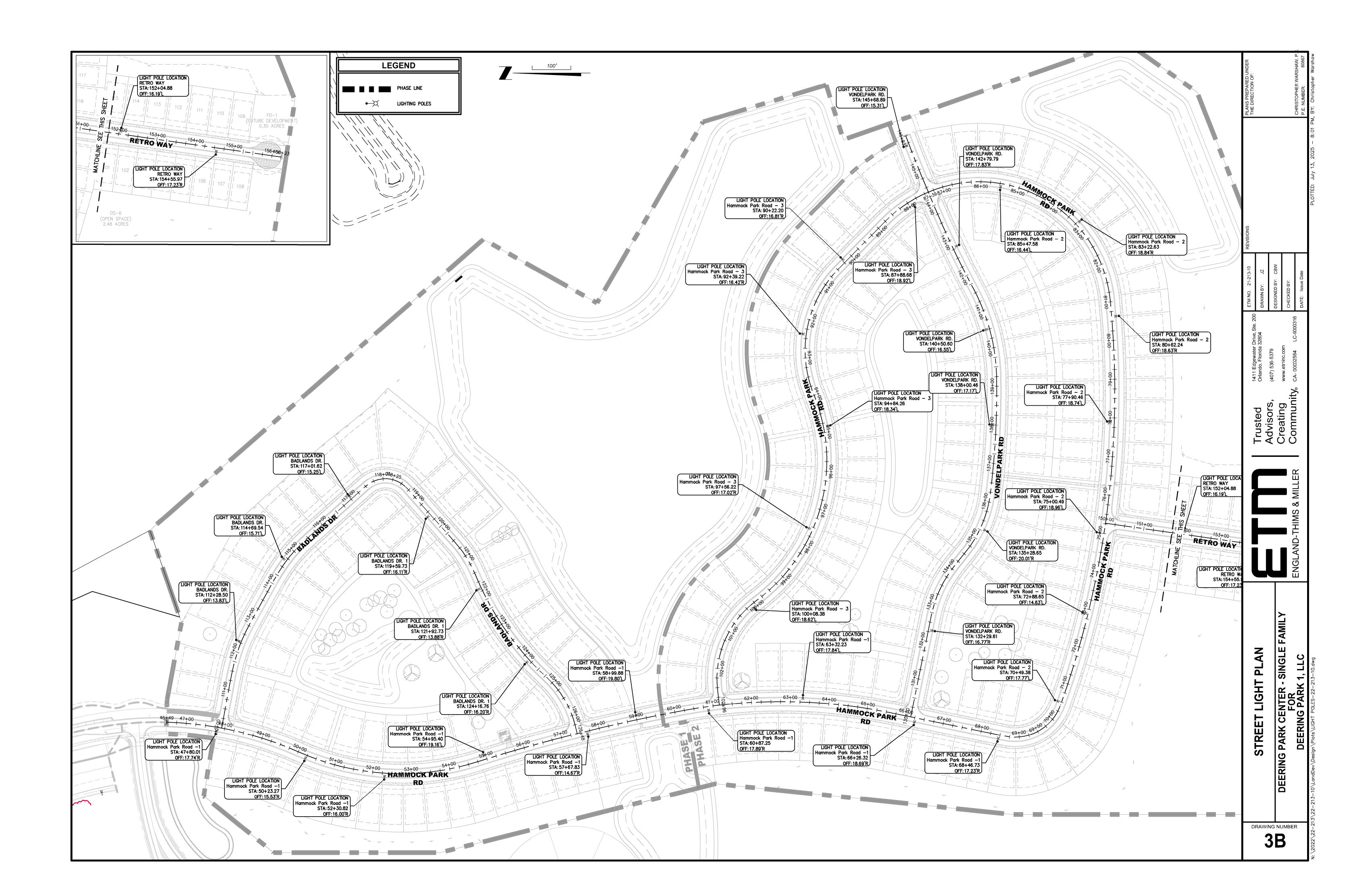


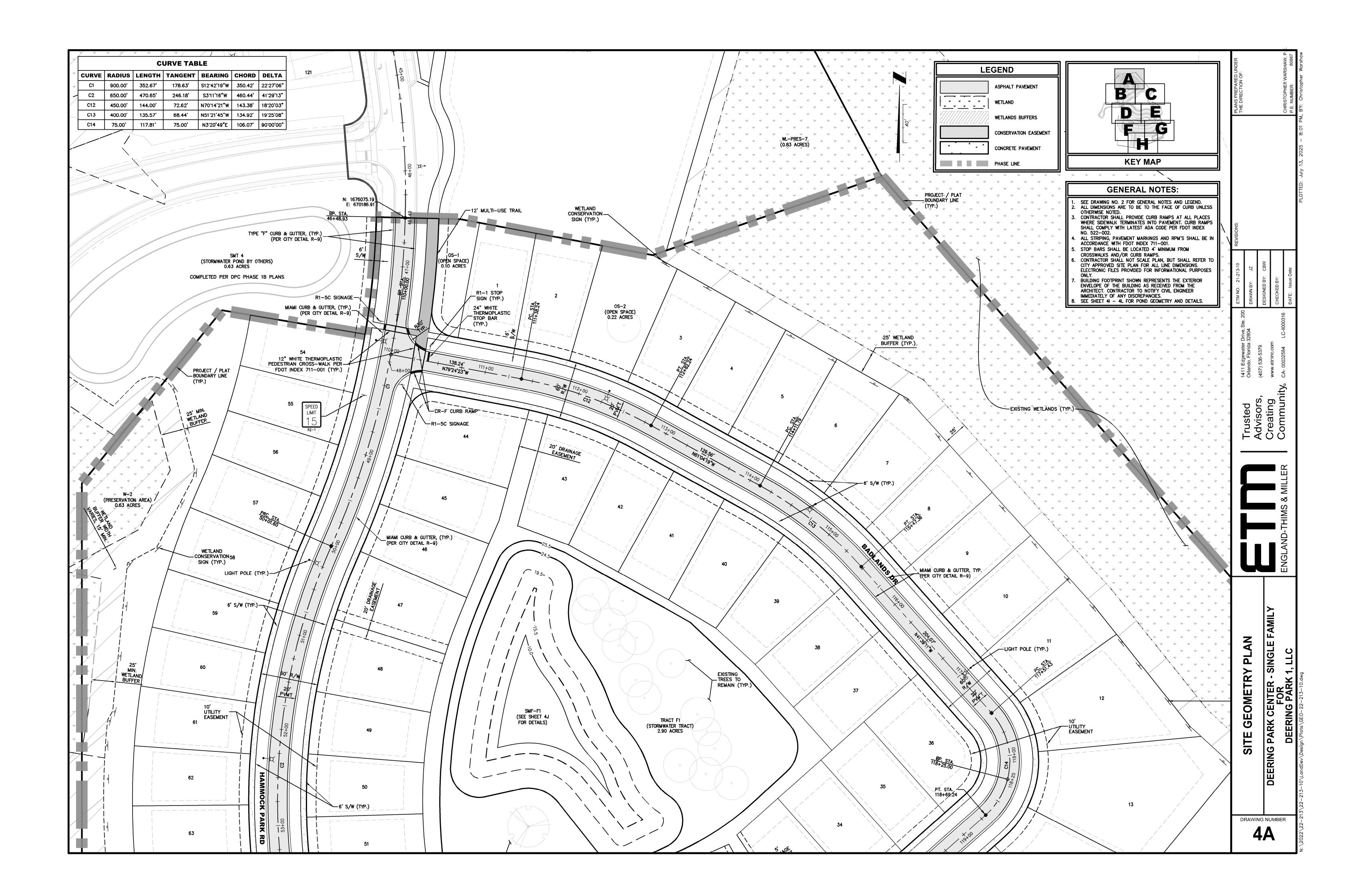
10.5% MIN 1 2 G.B. PLAN

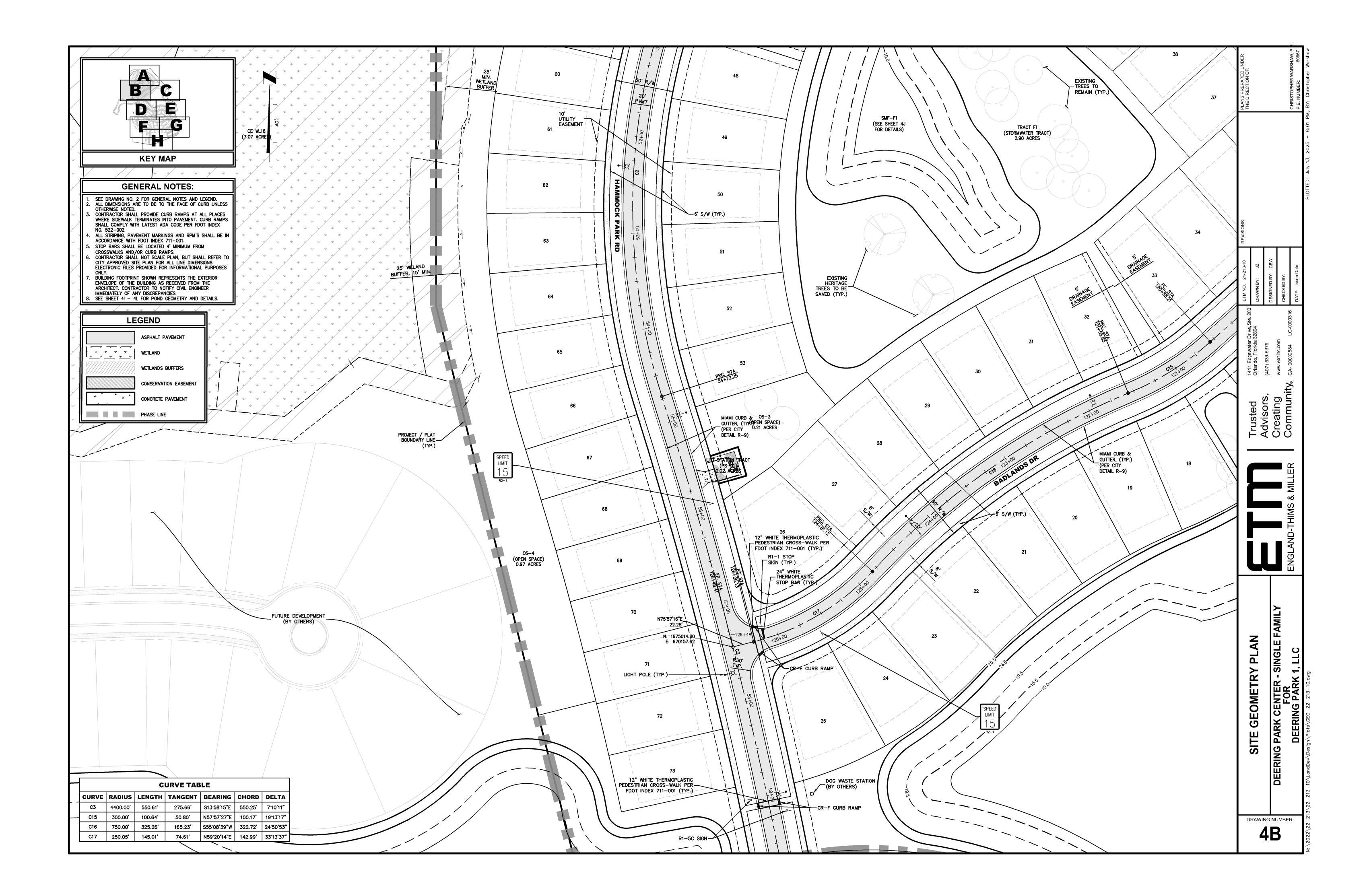
DRAWING NUMBER

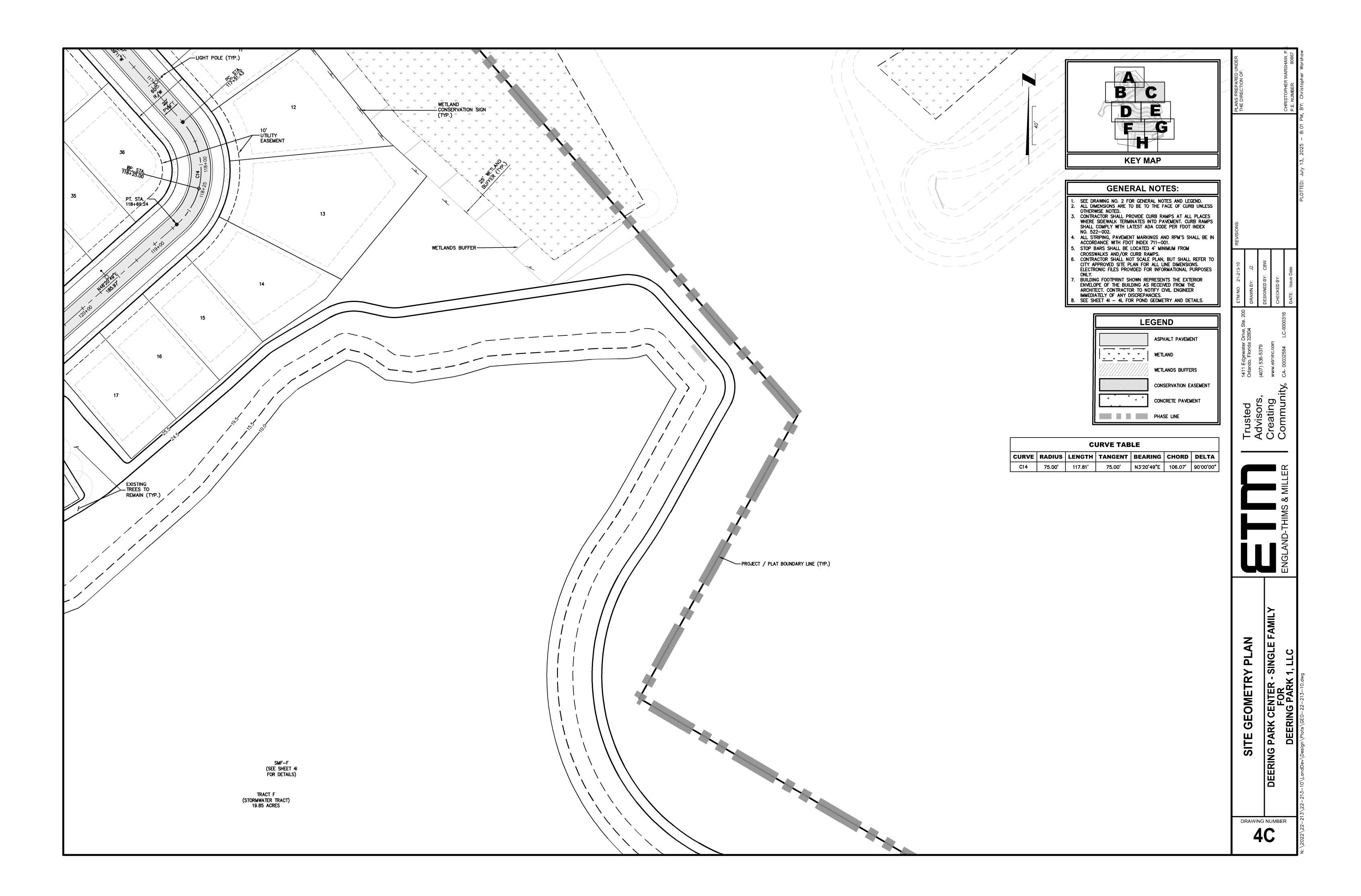


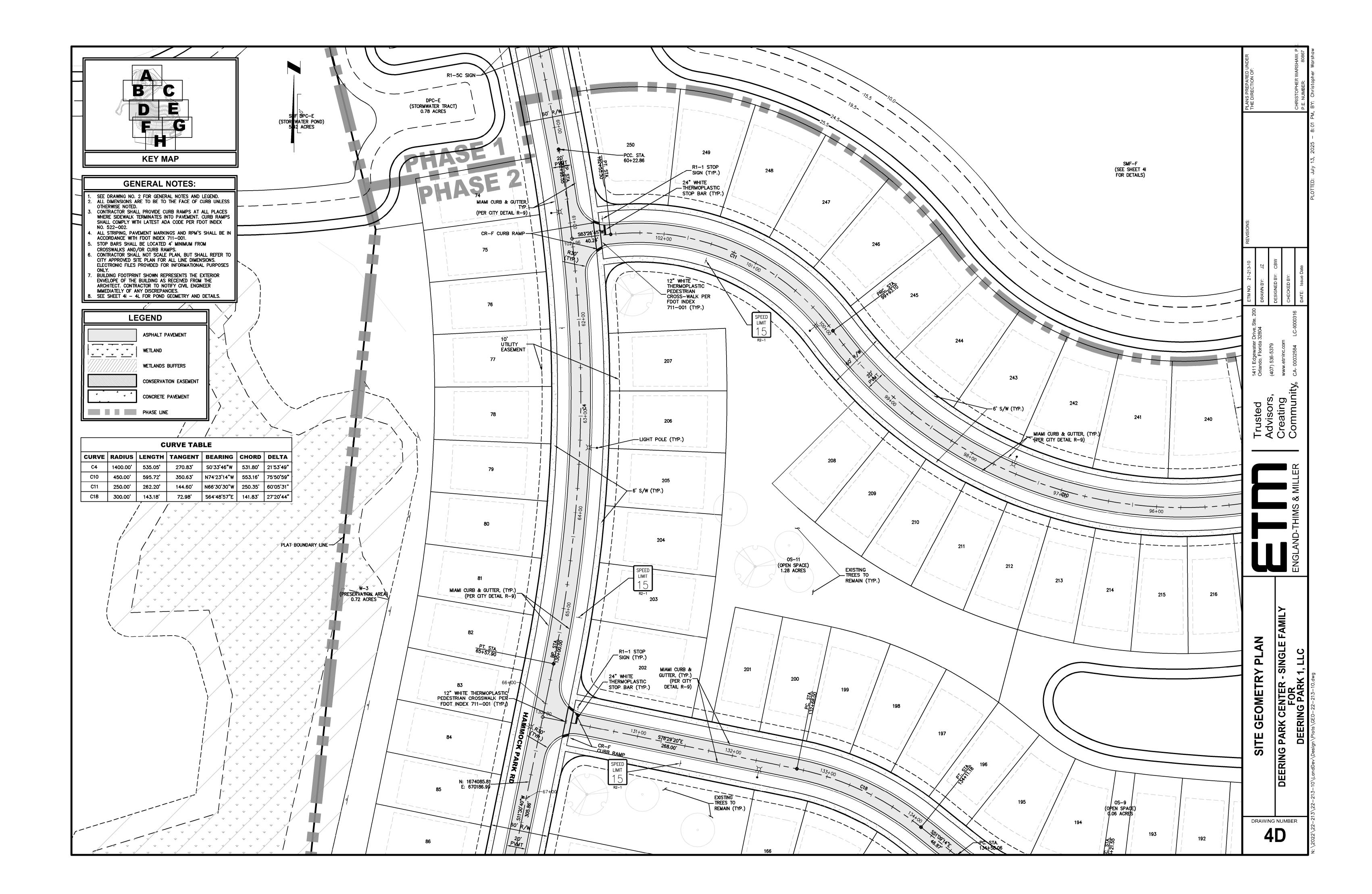


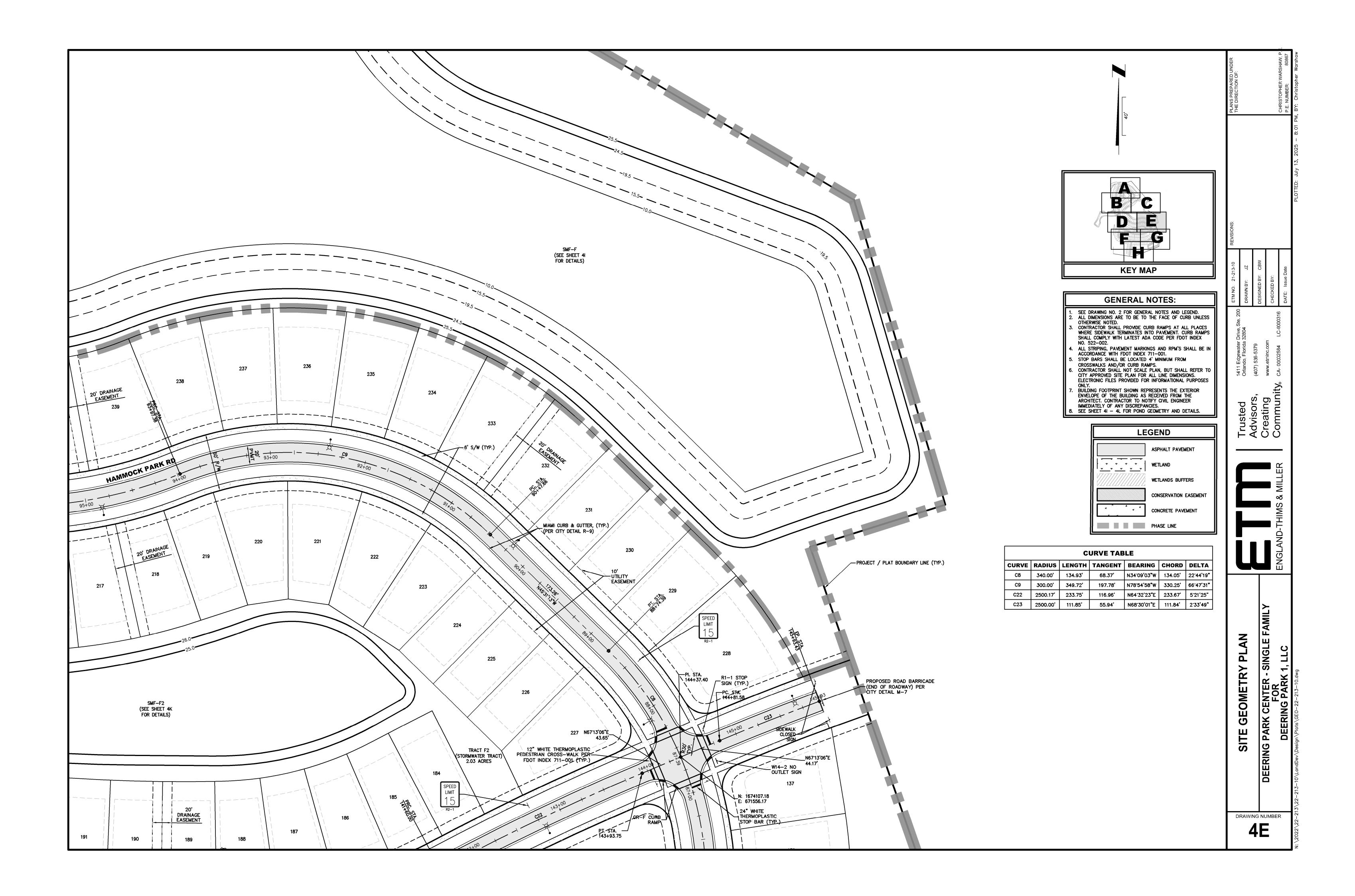


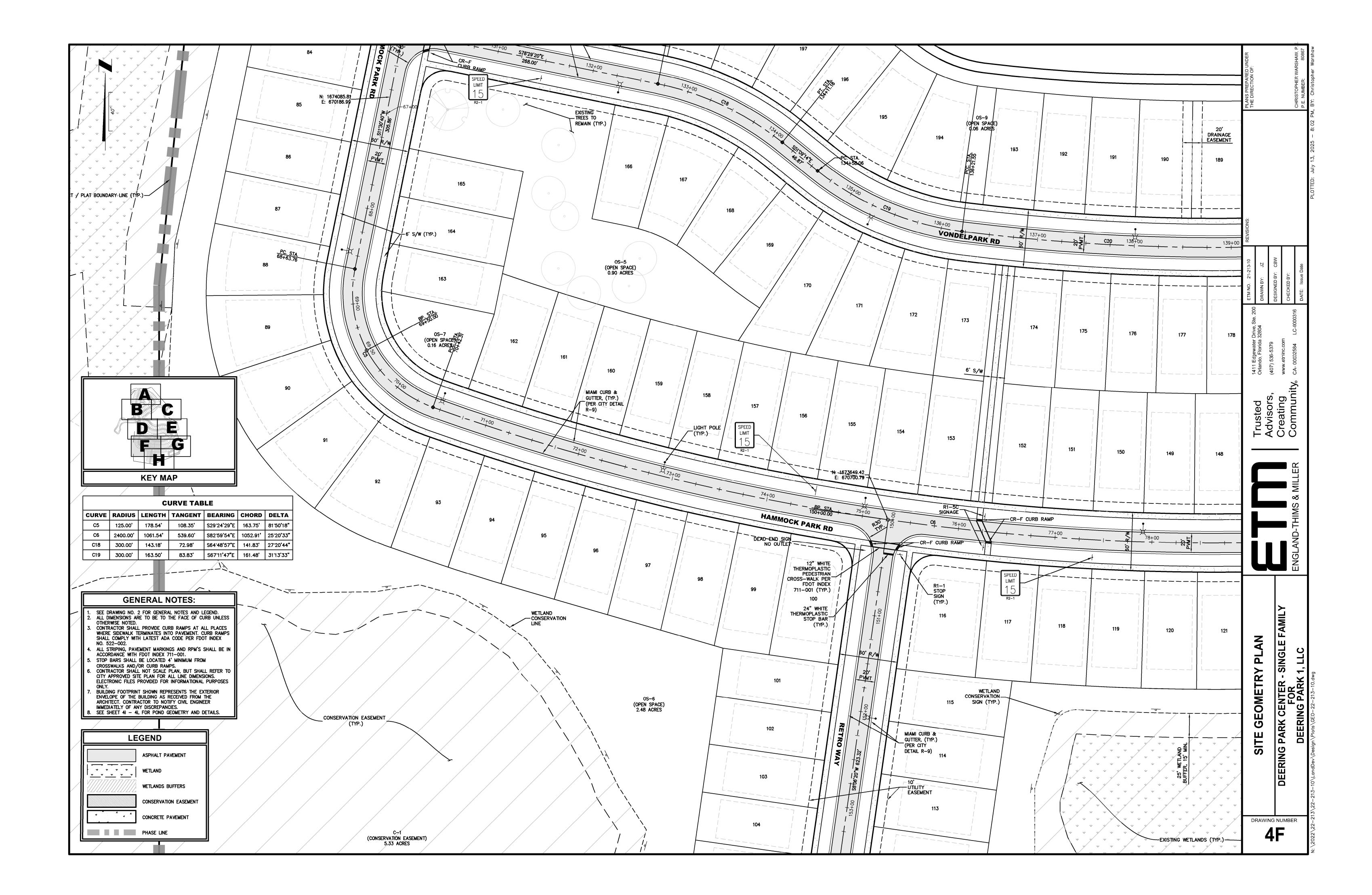


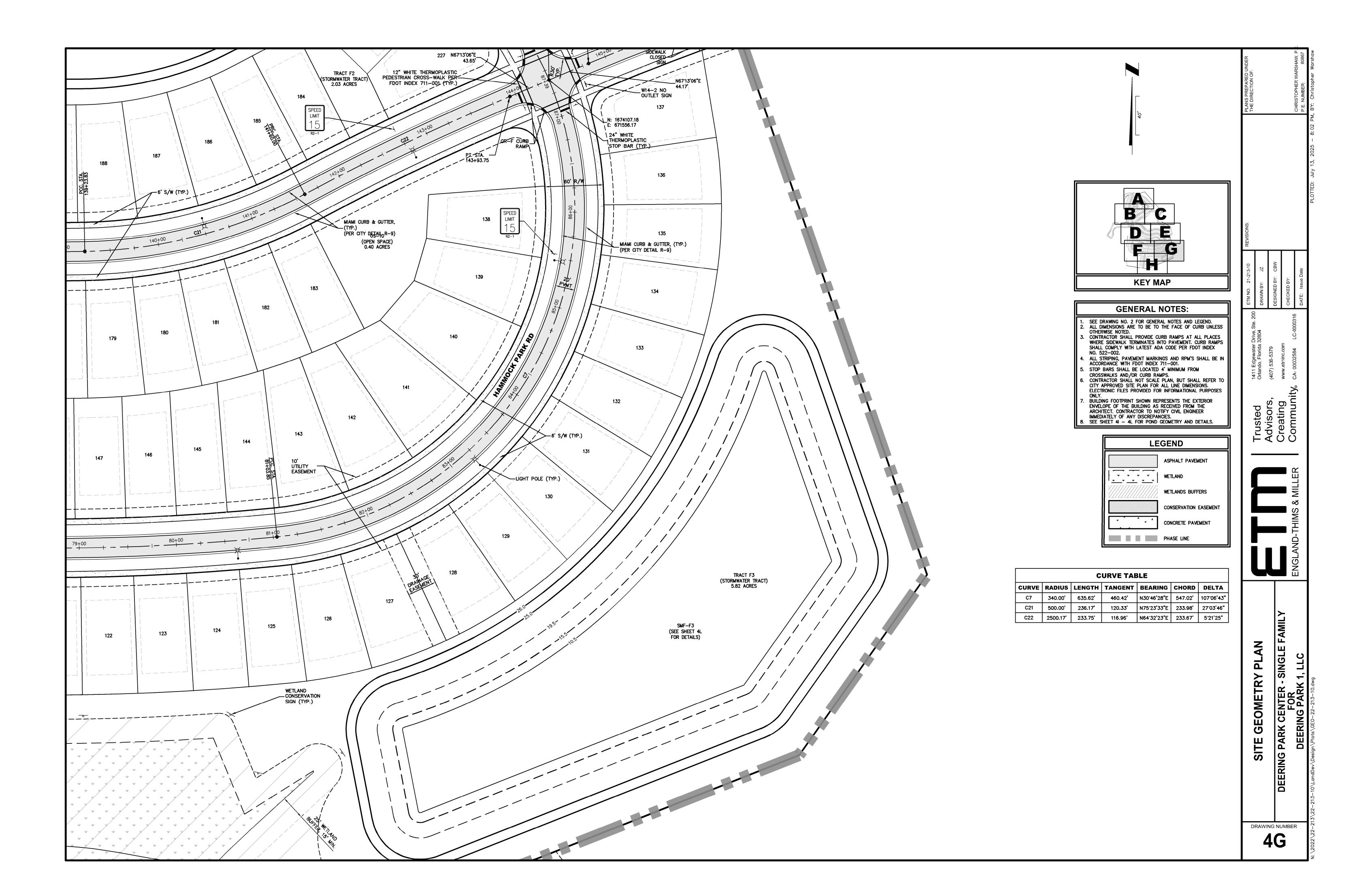


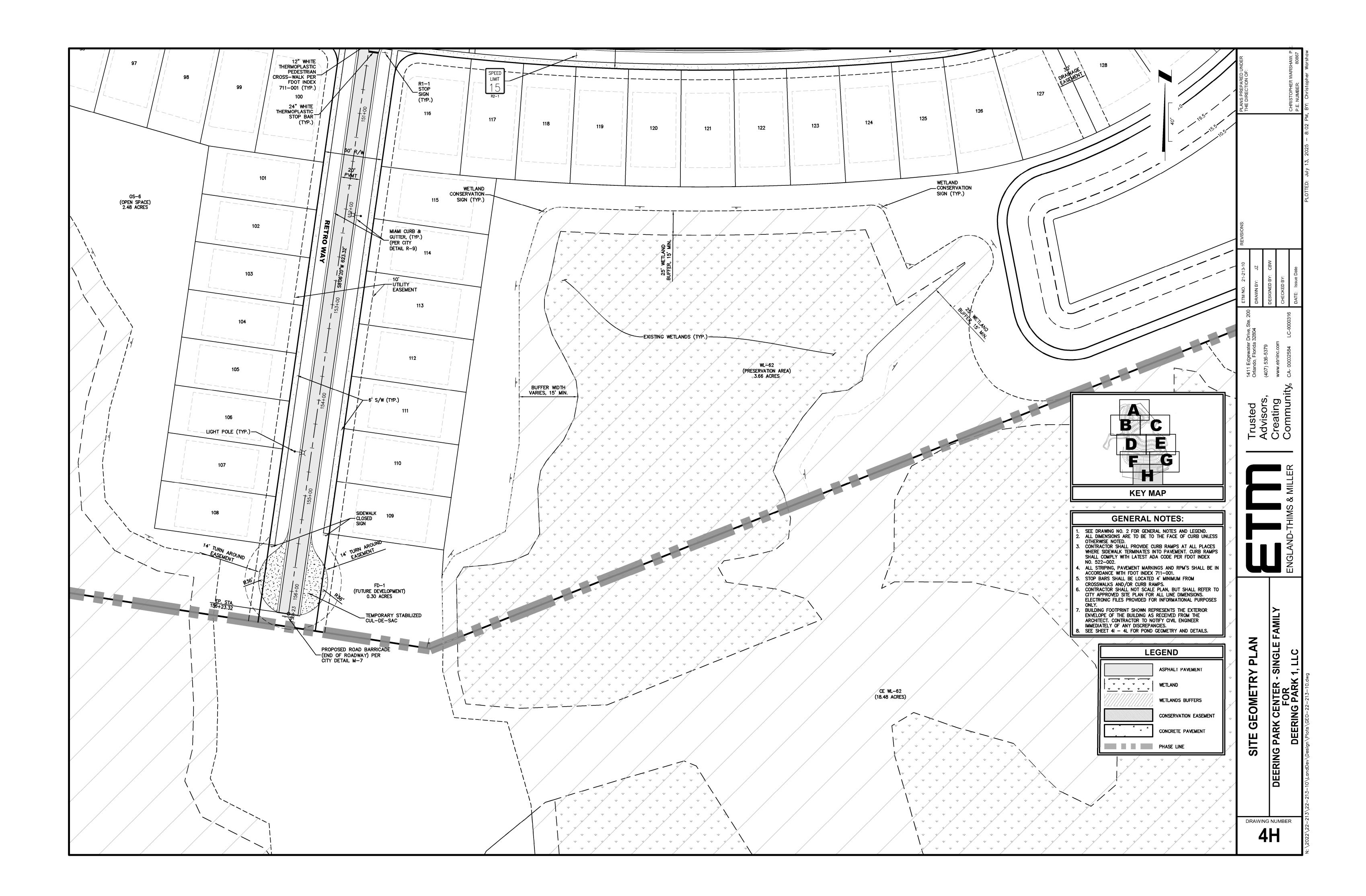


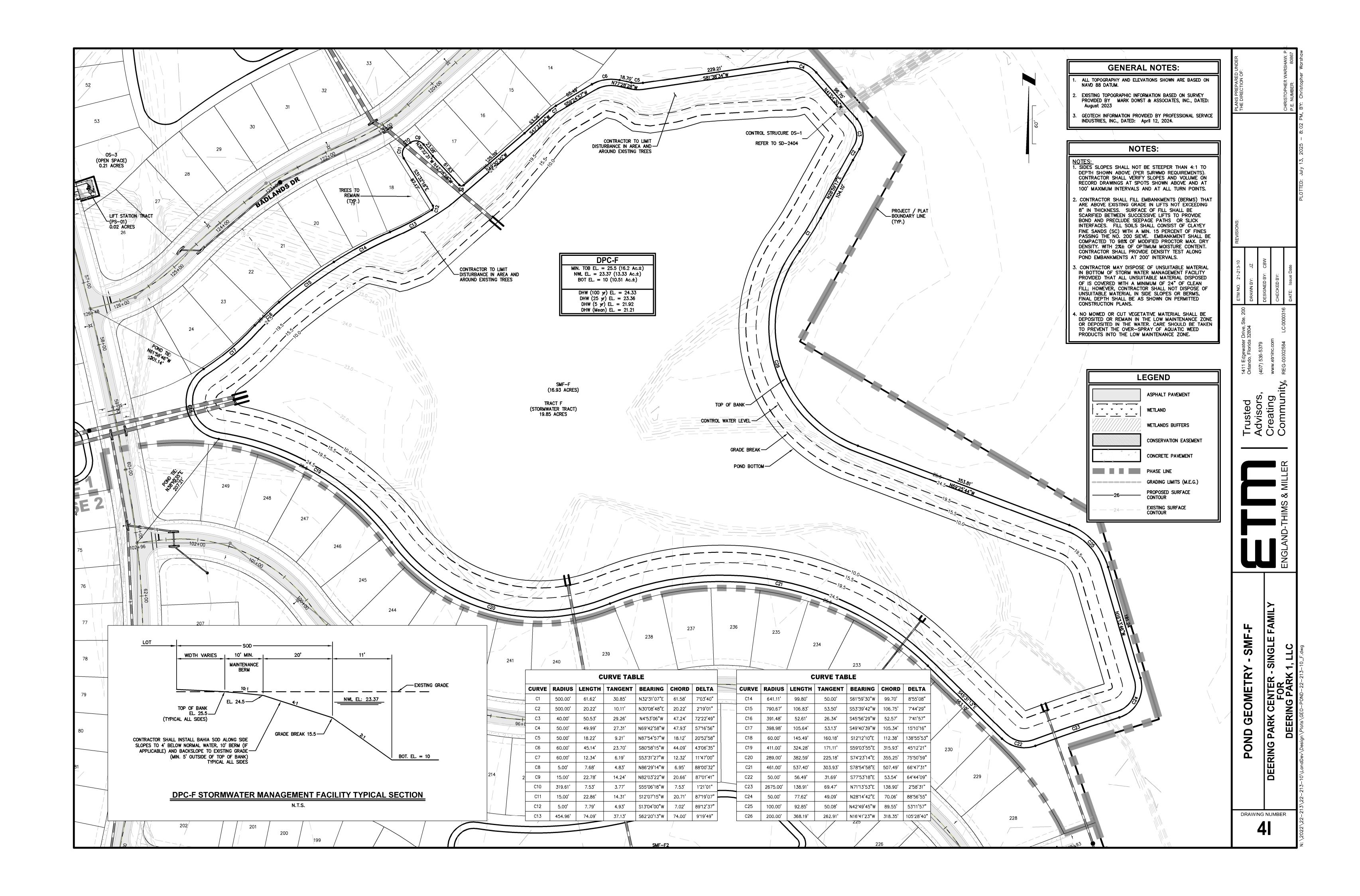


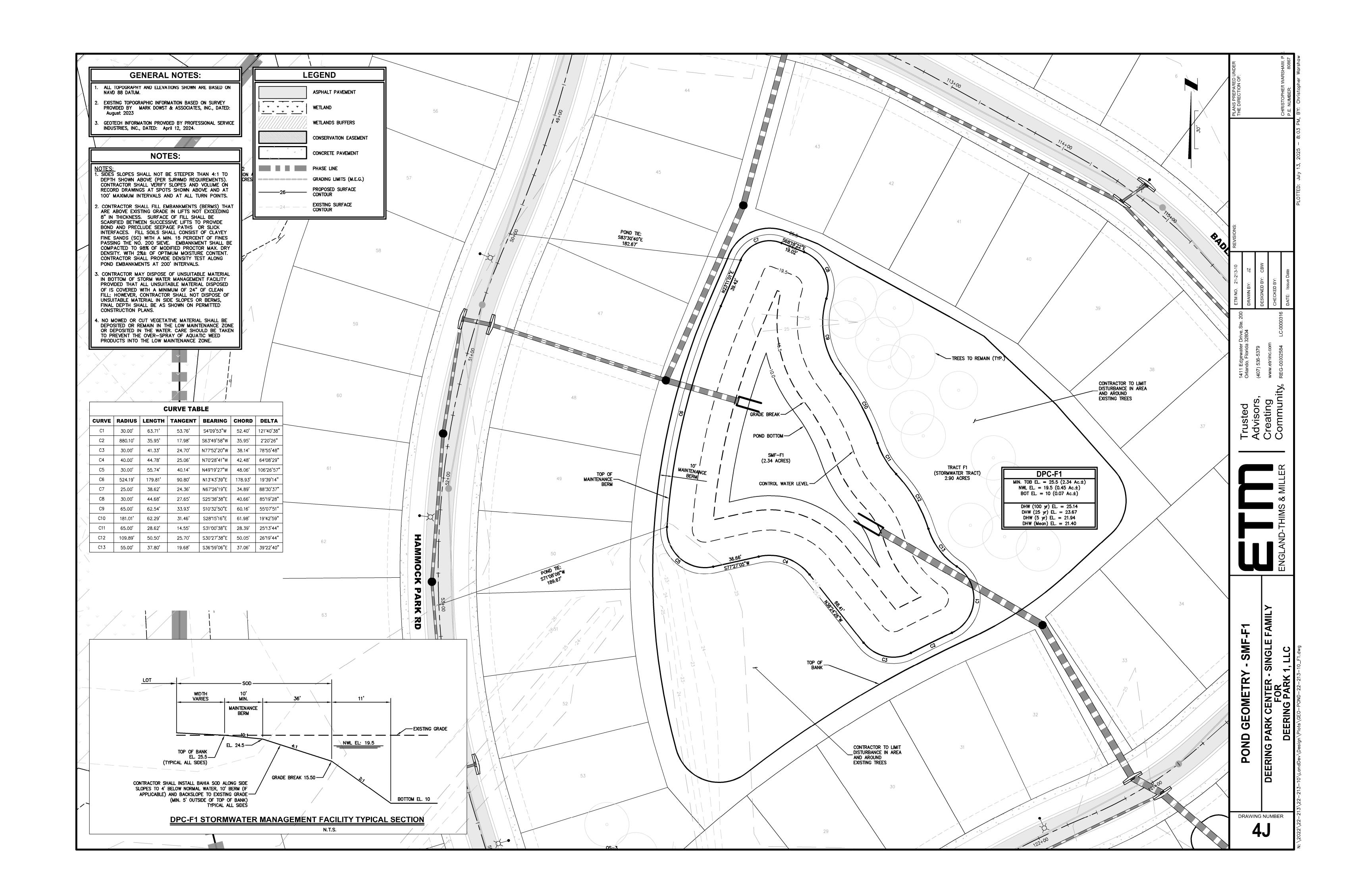


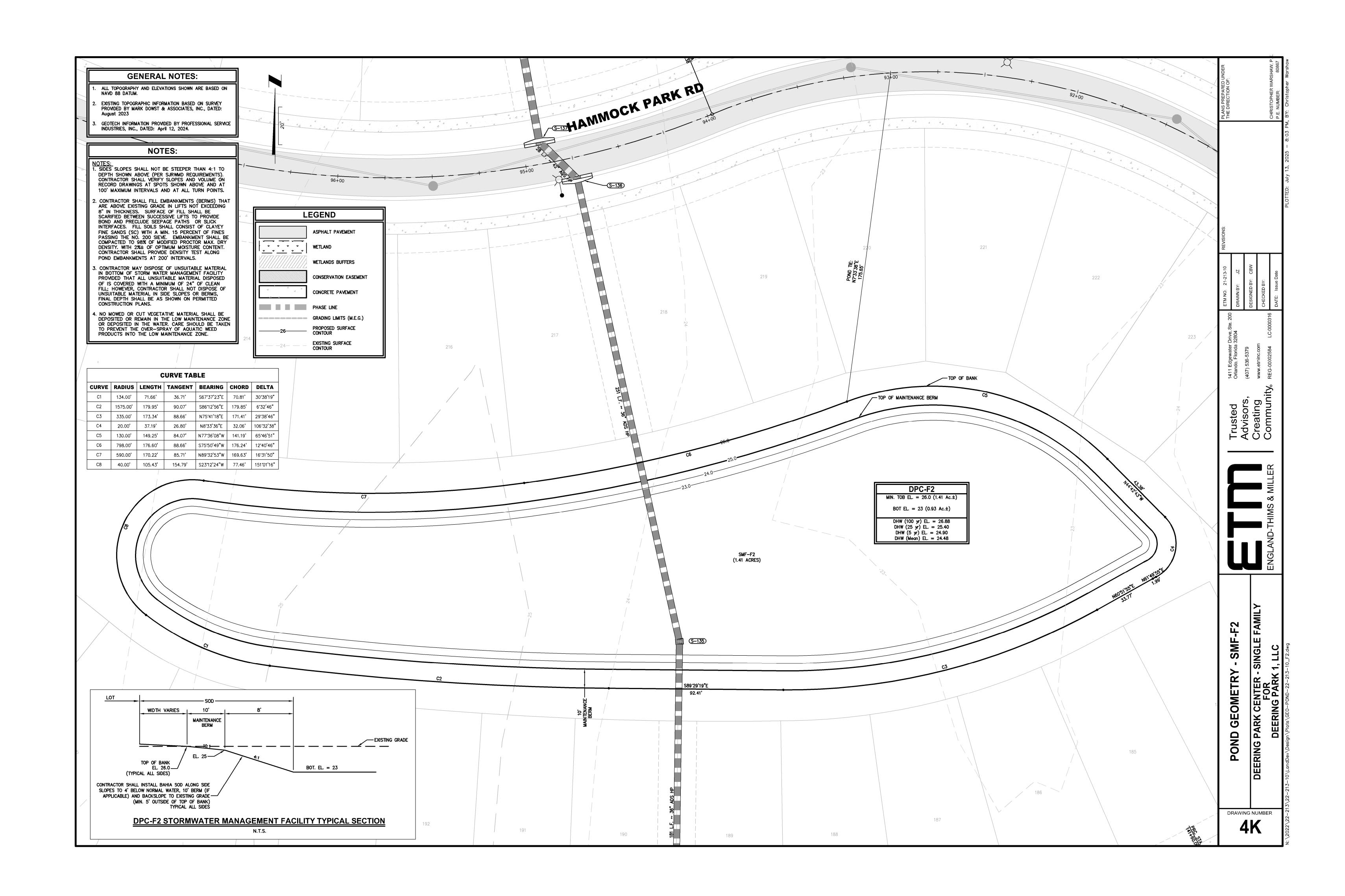


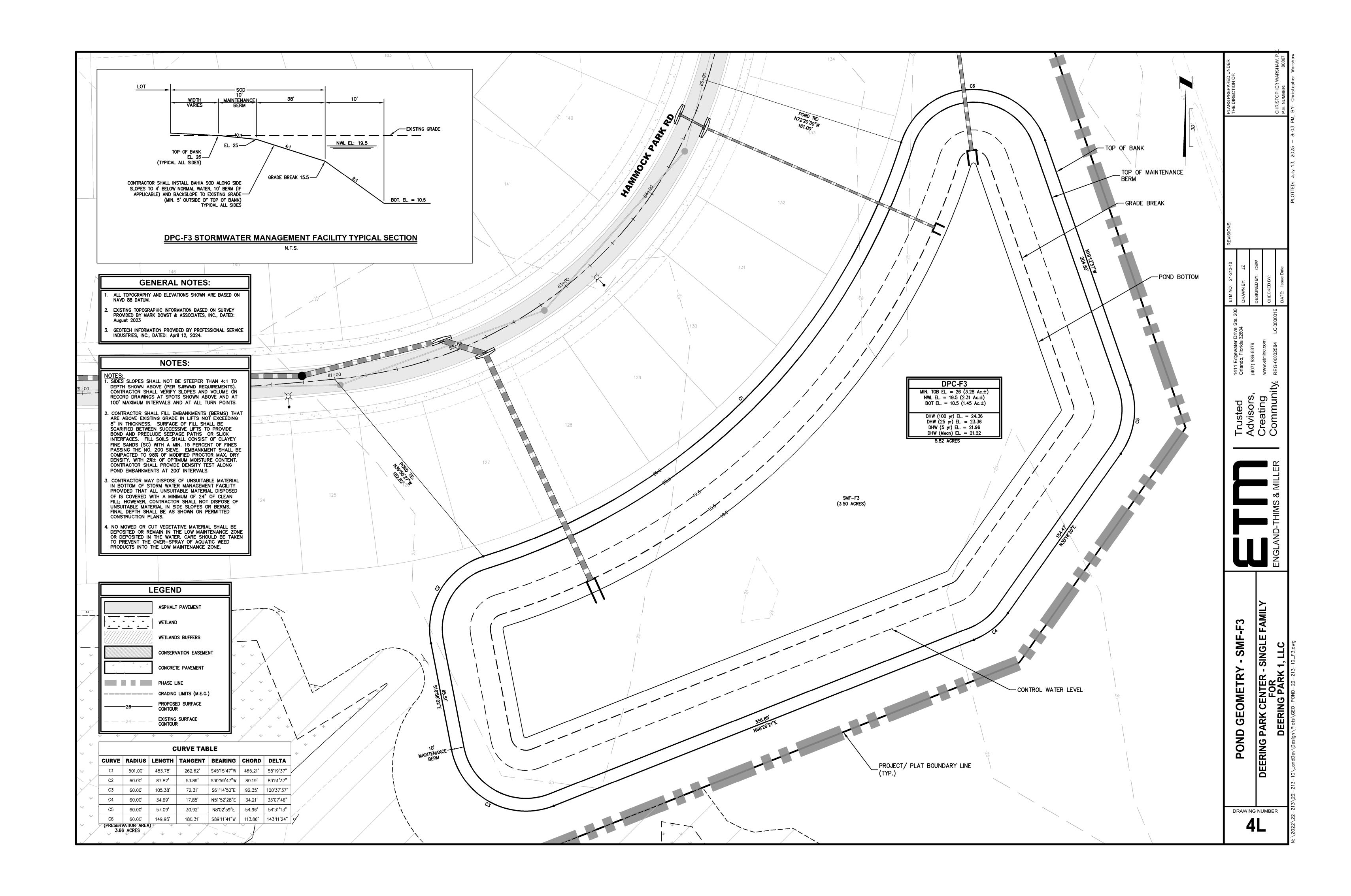


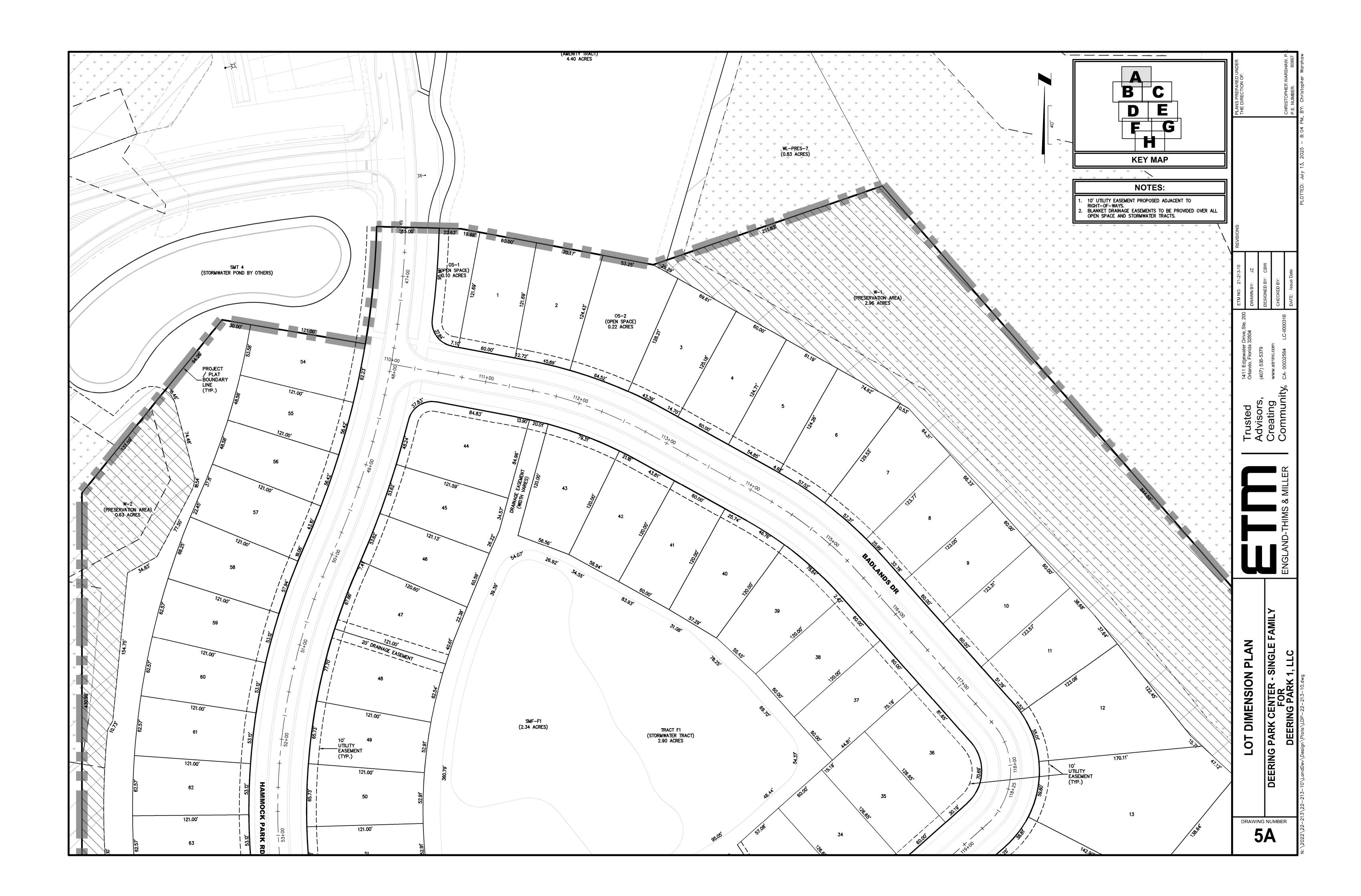


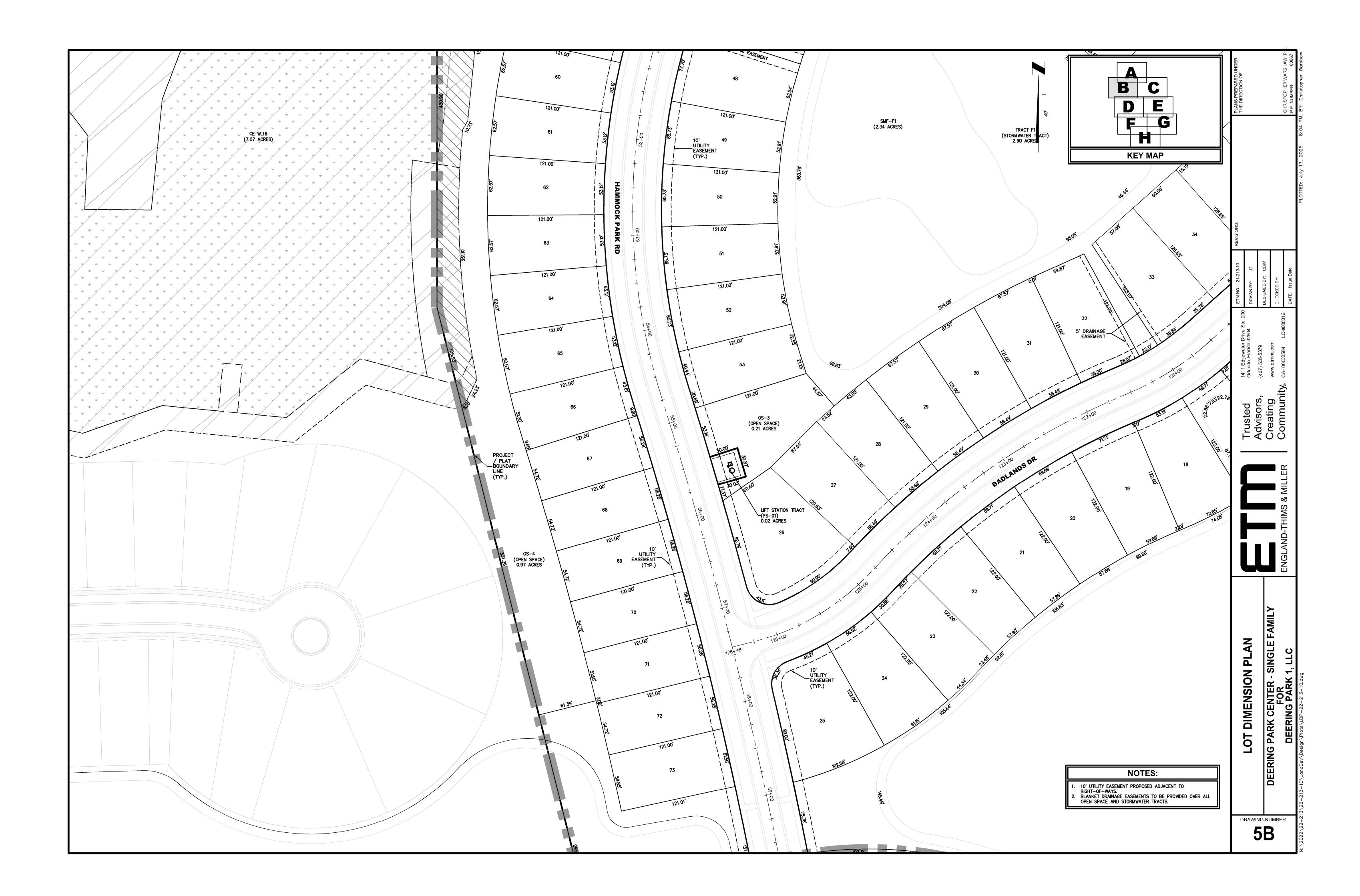


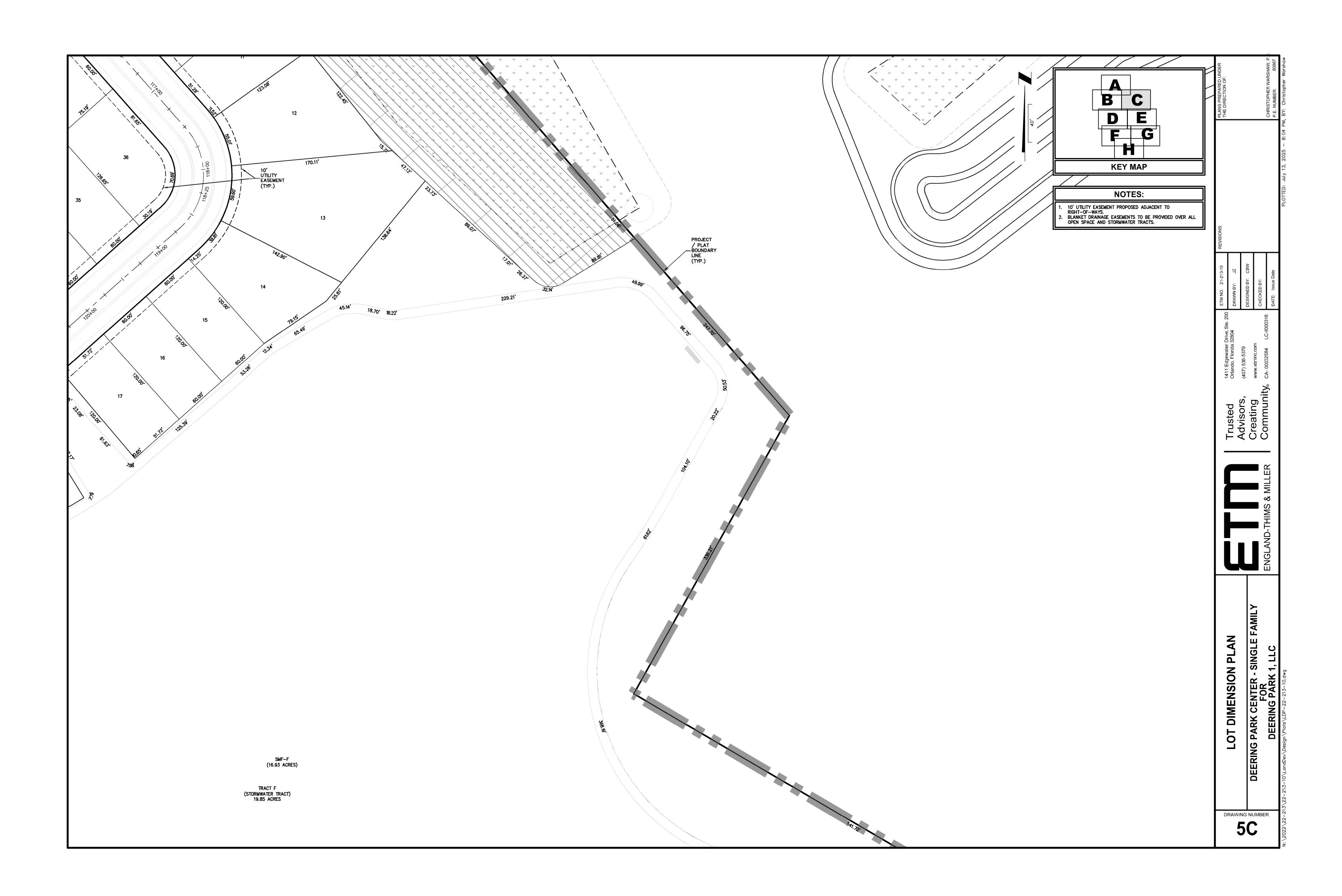




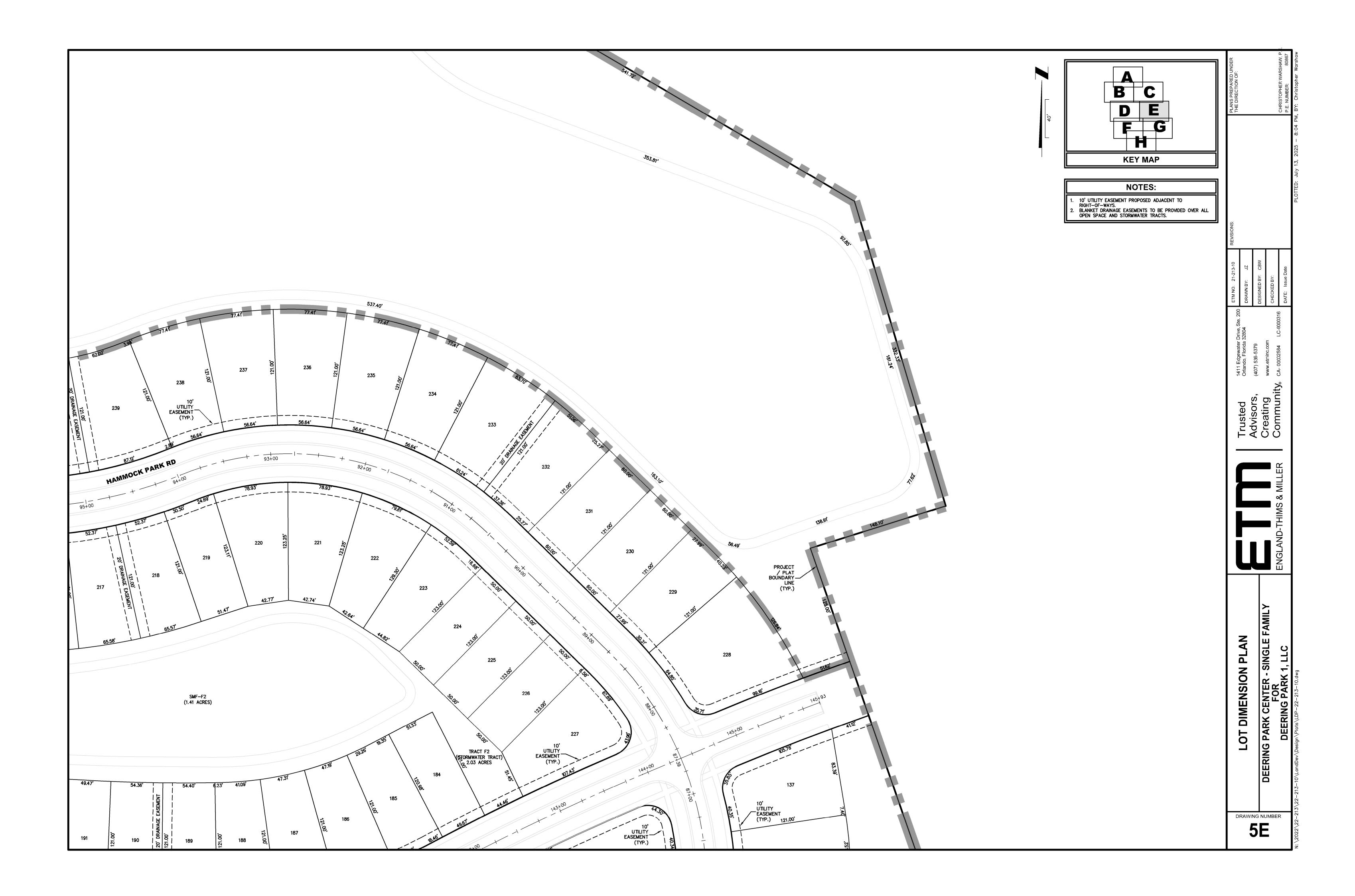


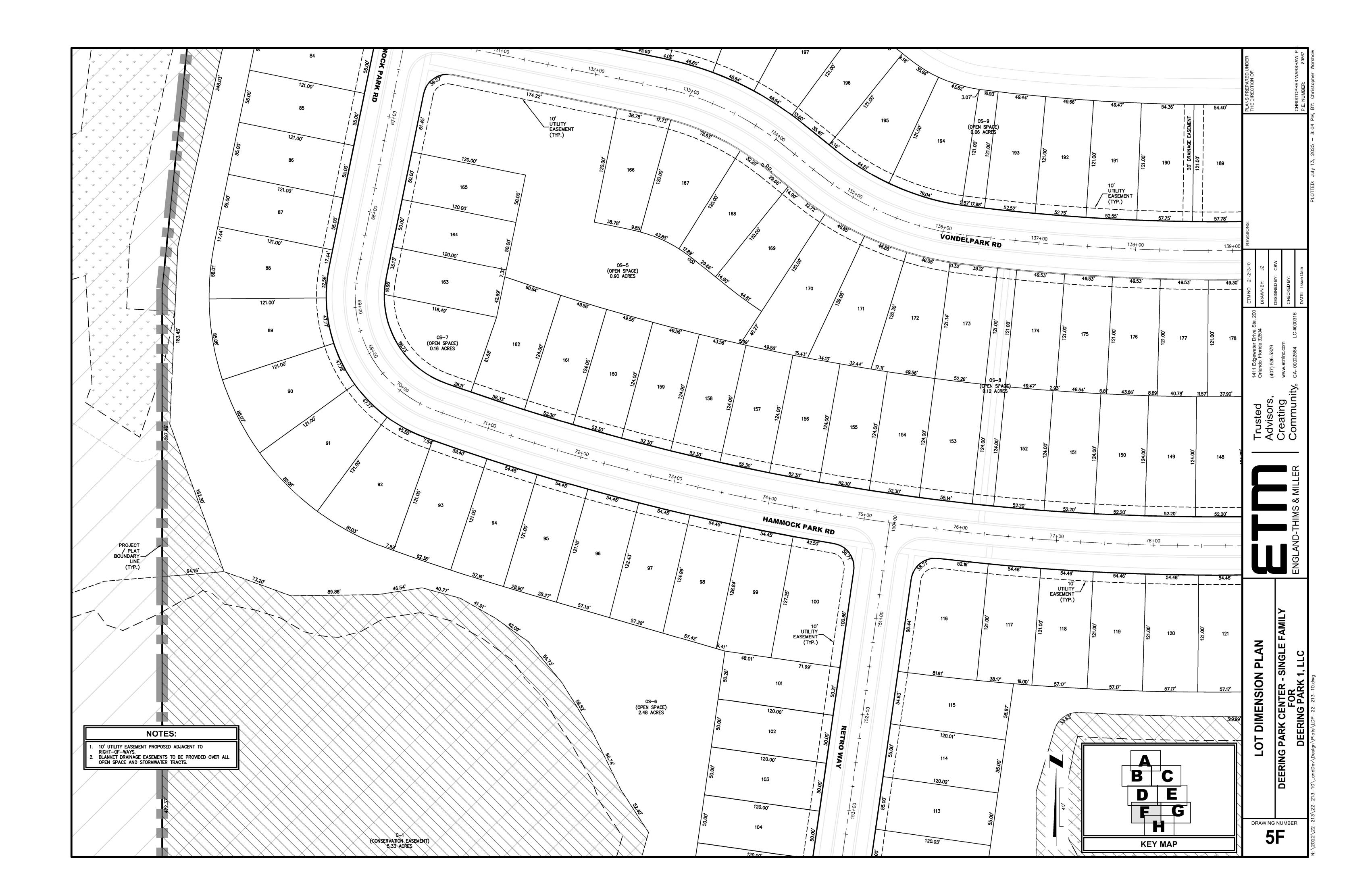


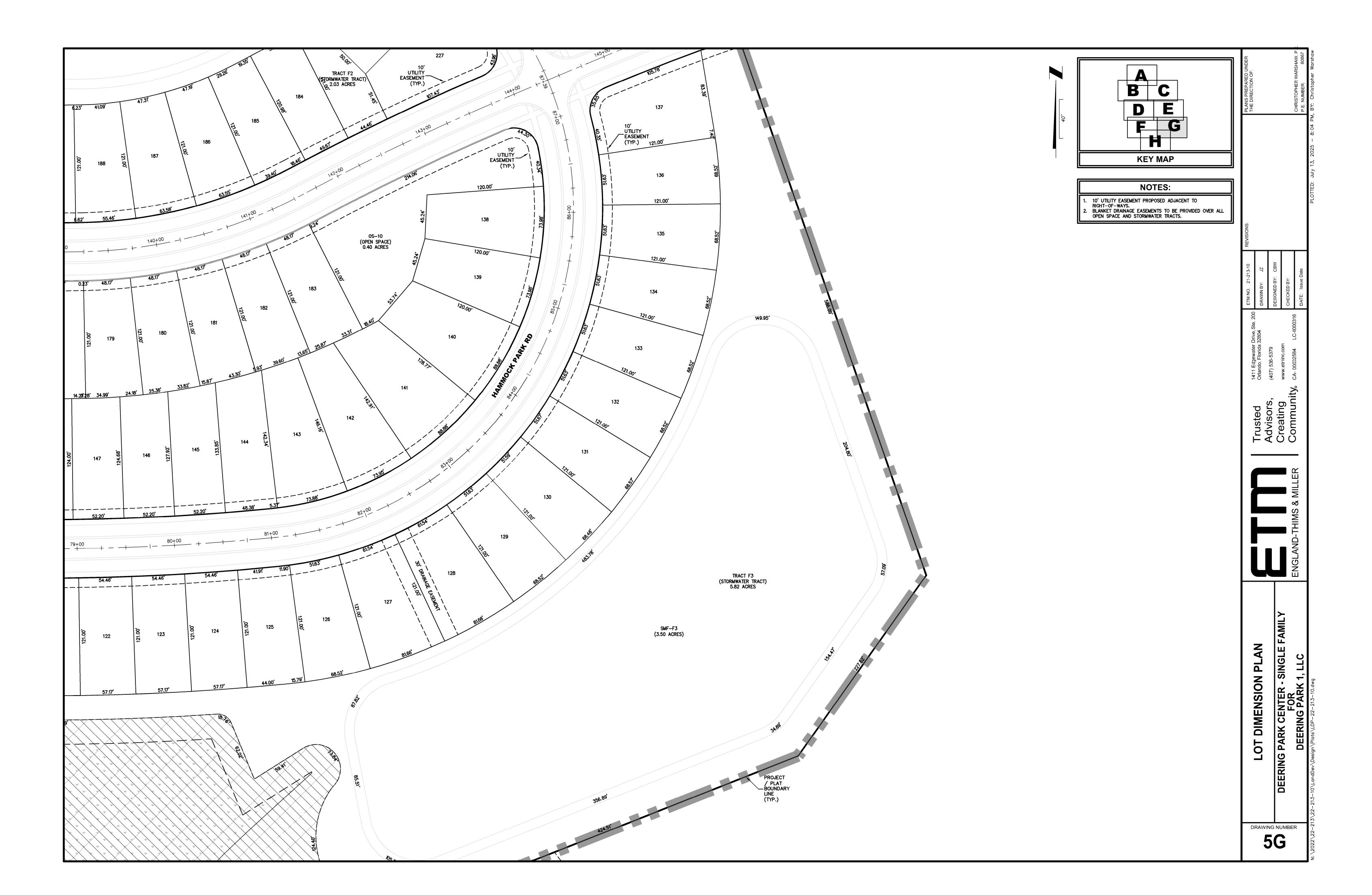


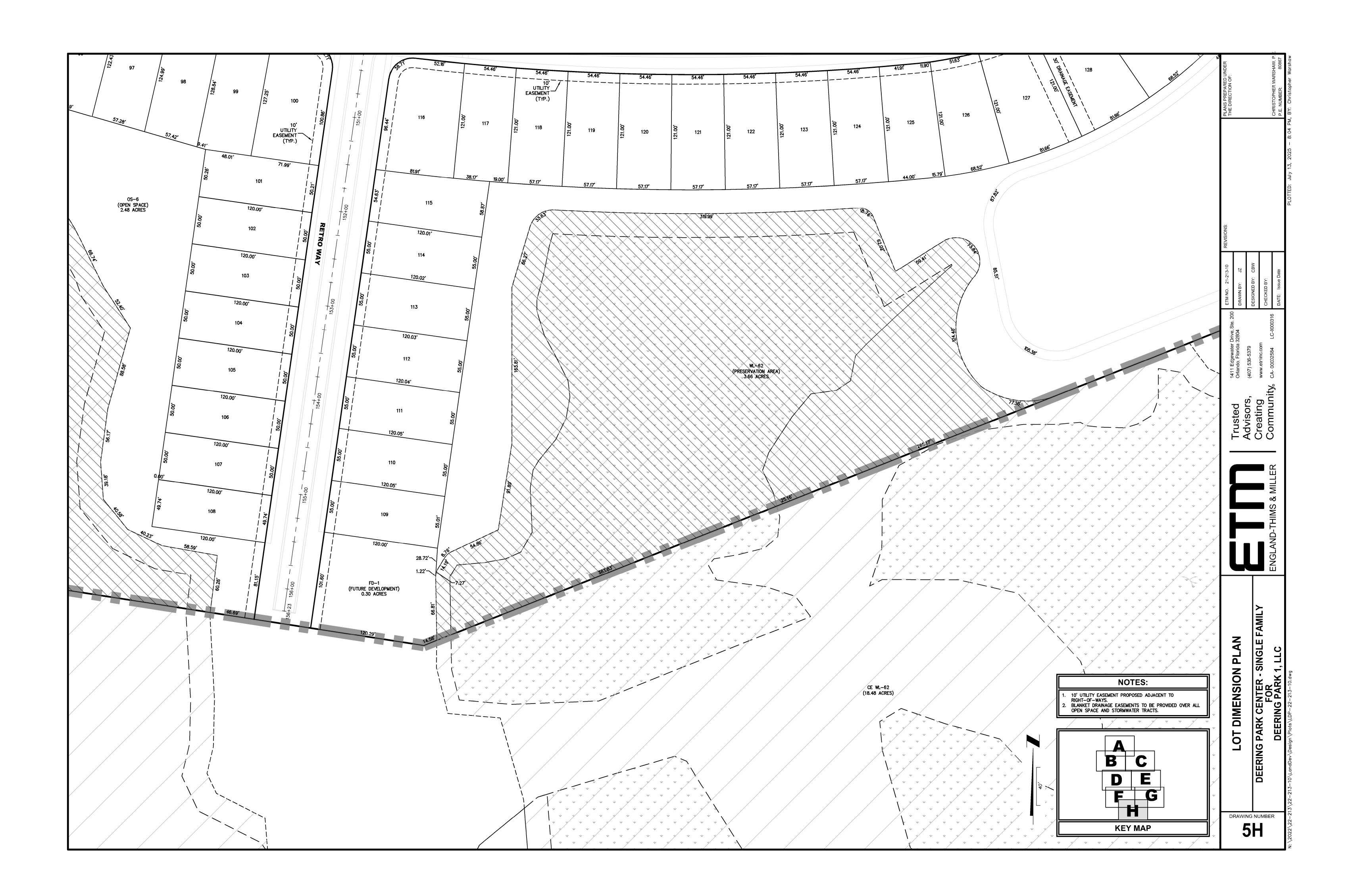


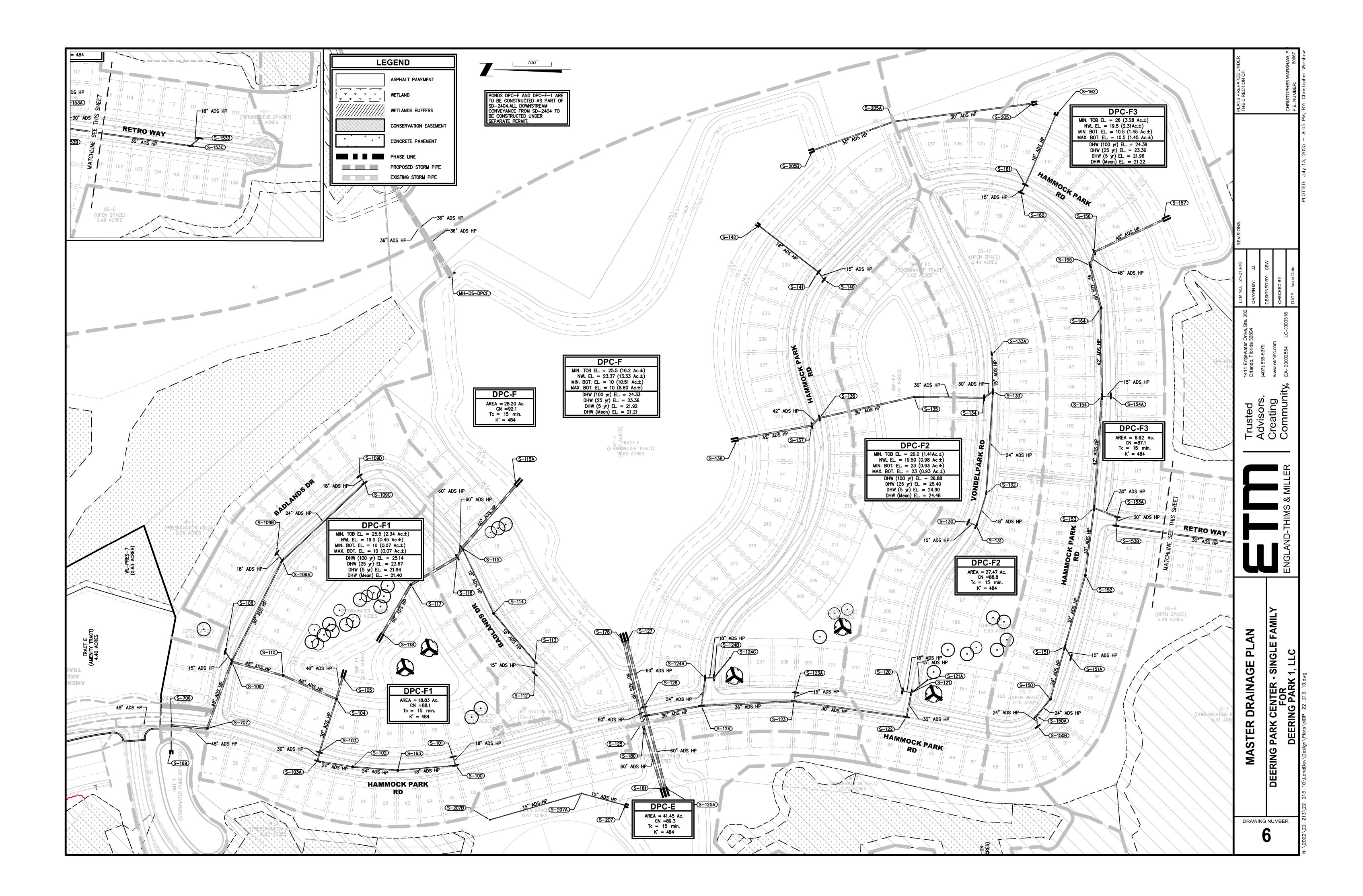


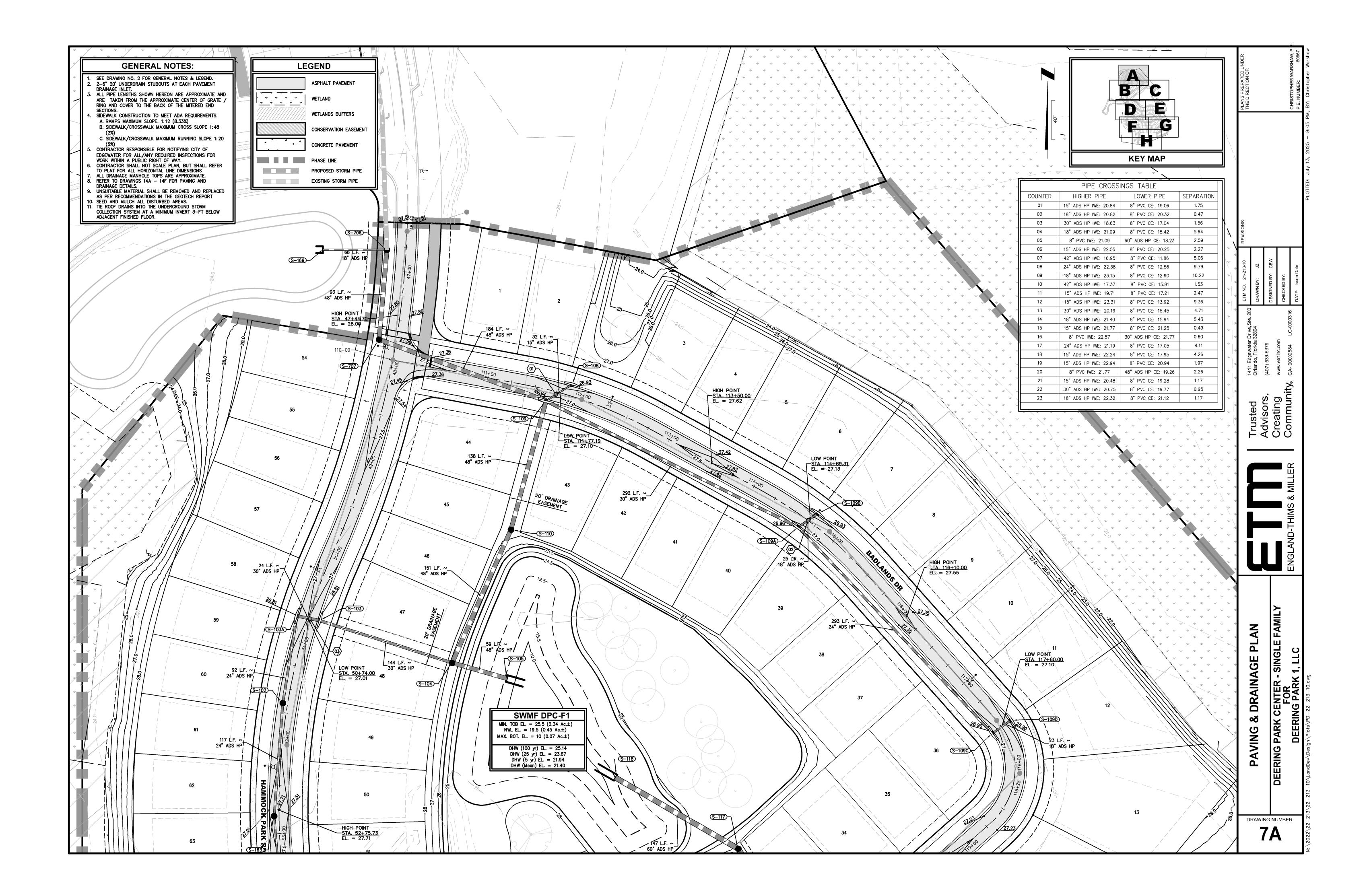


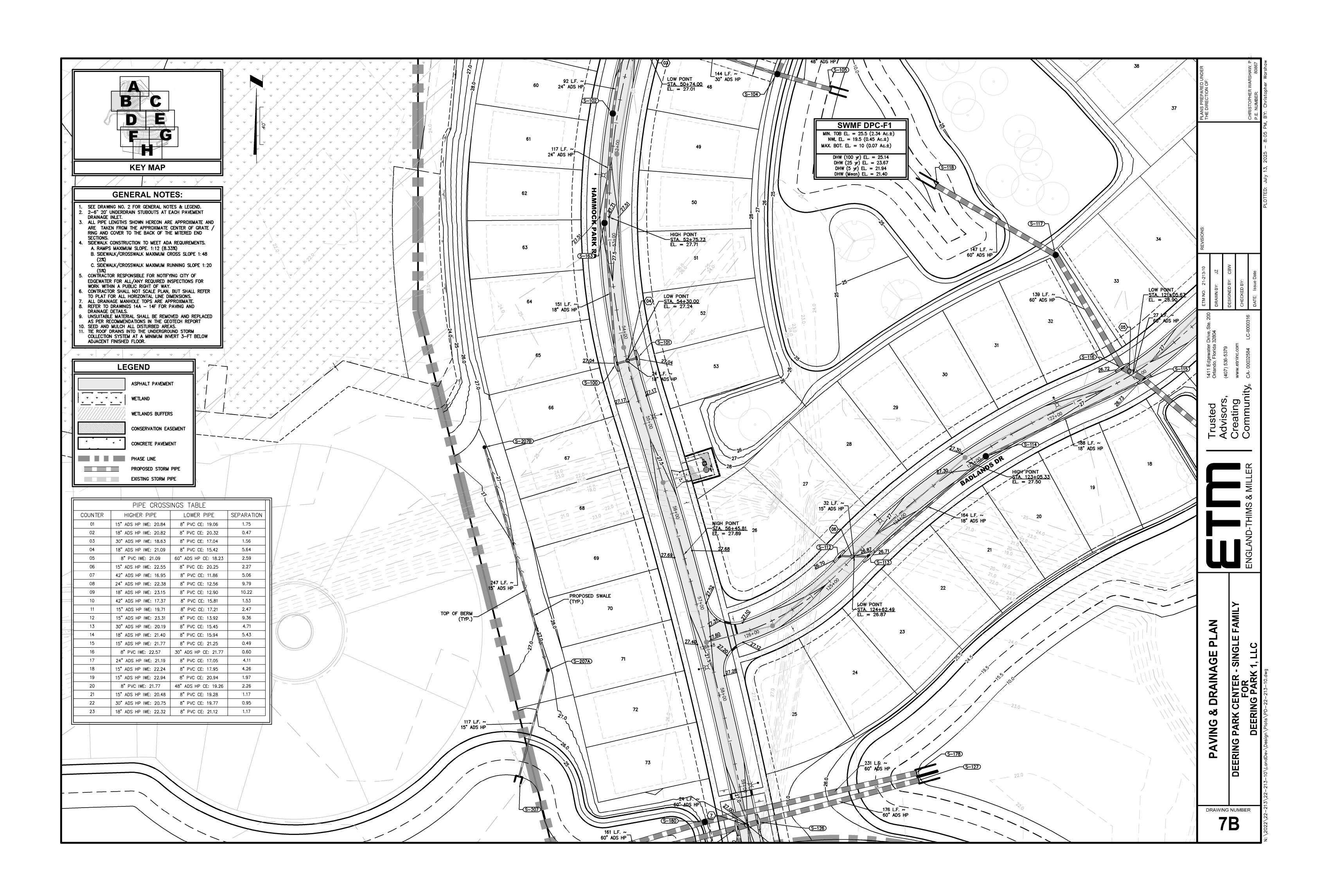


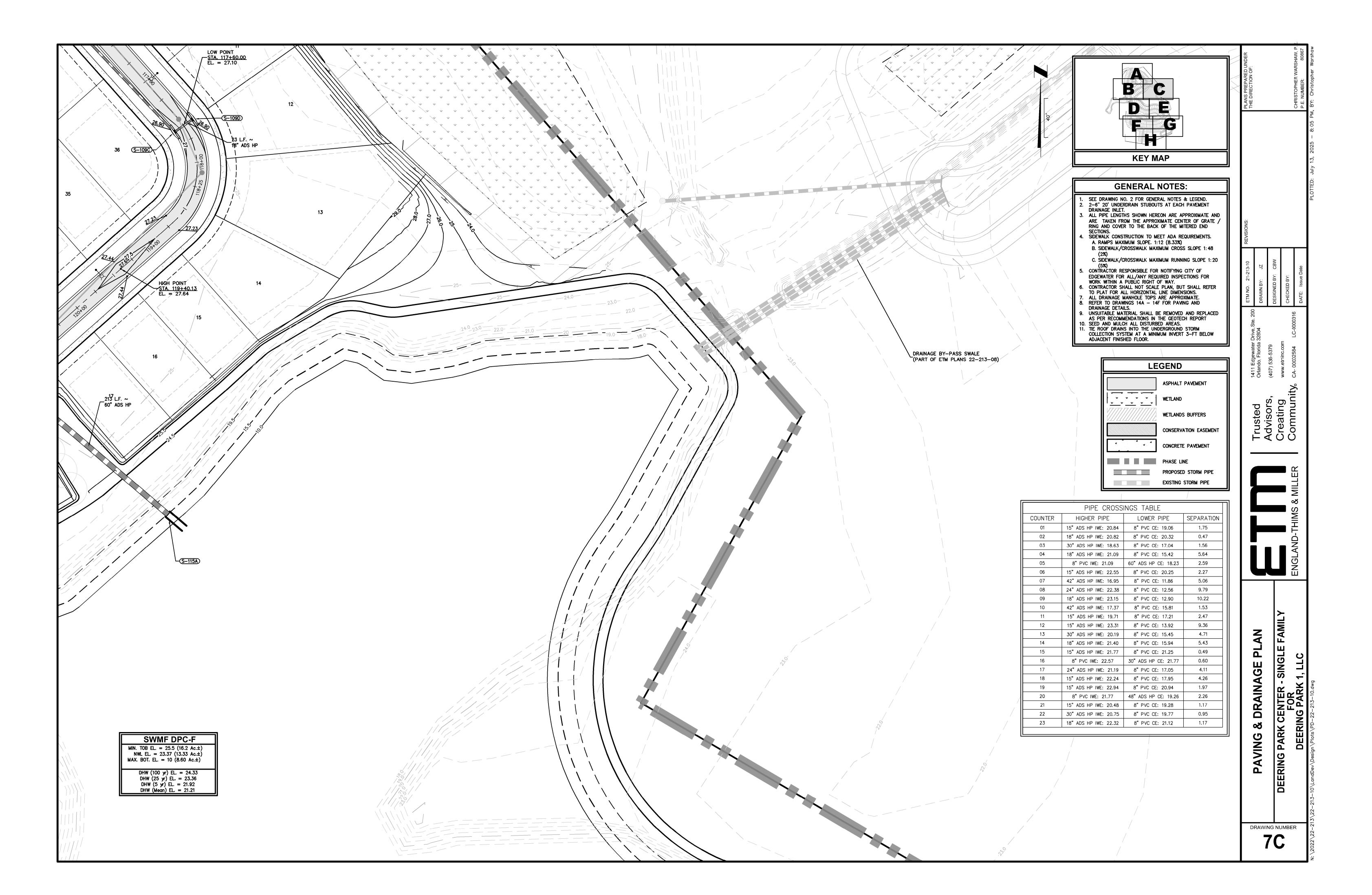


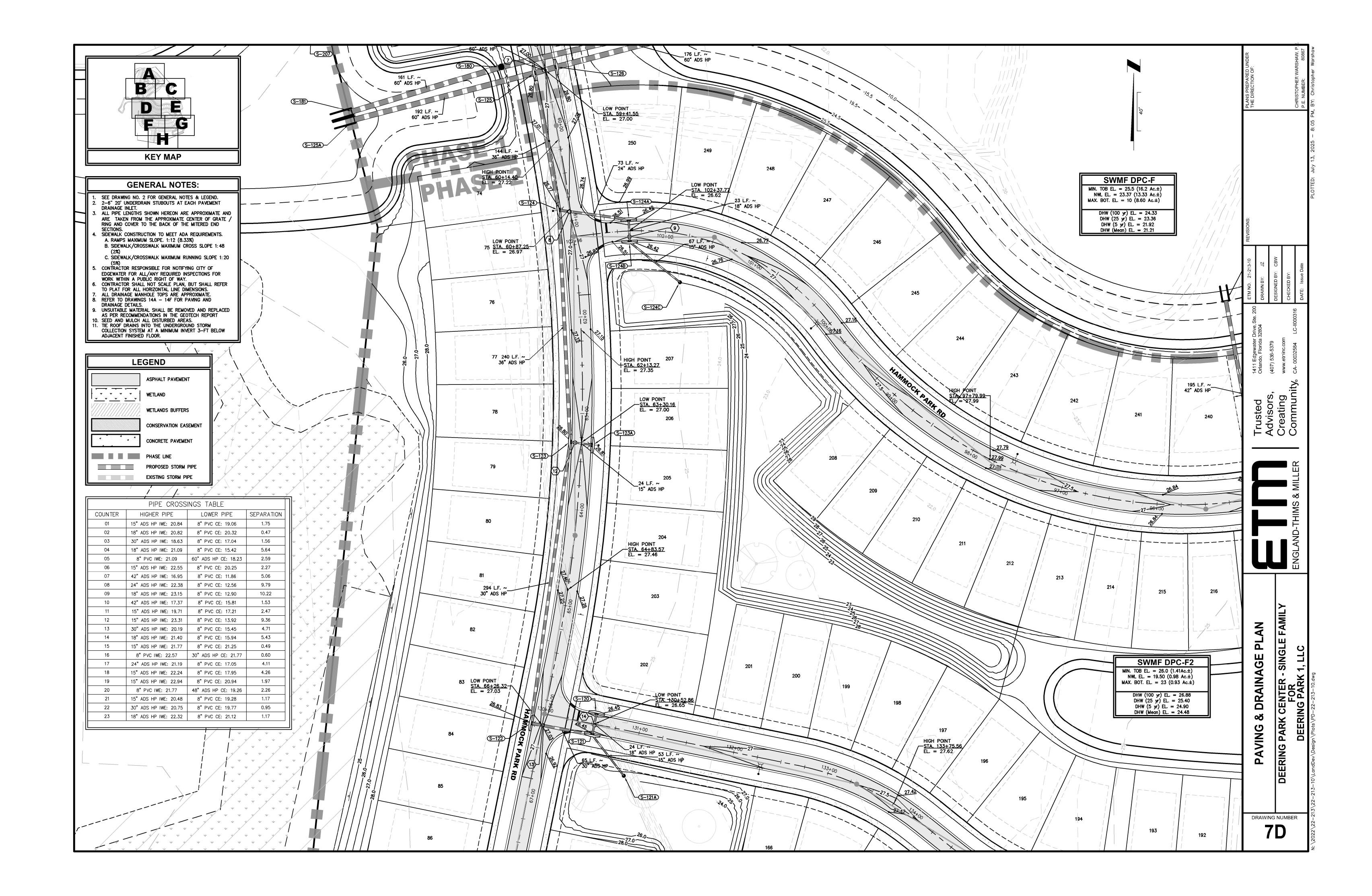


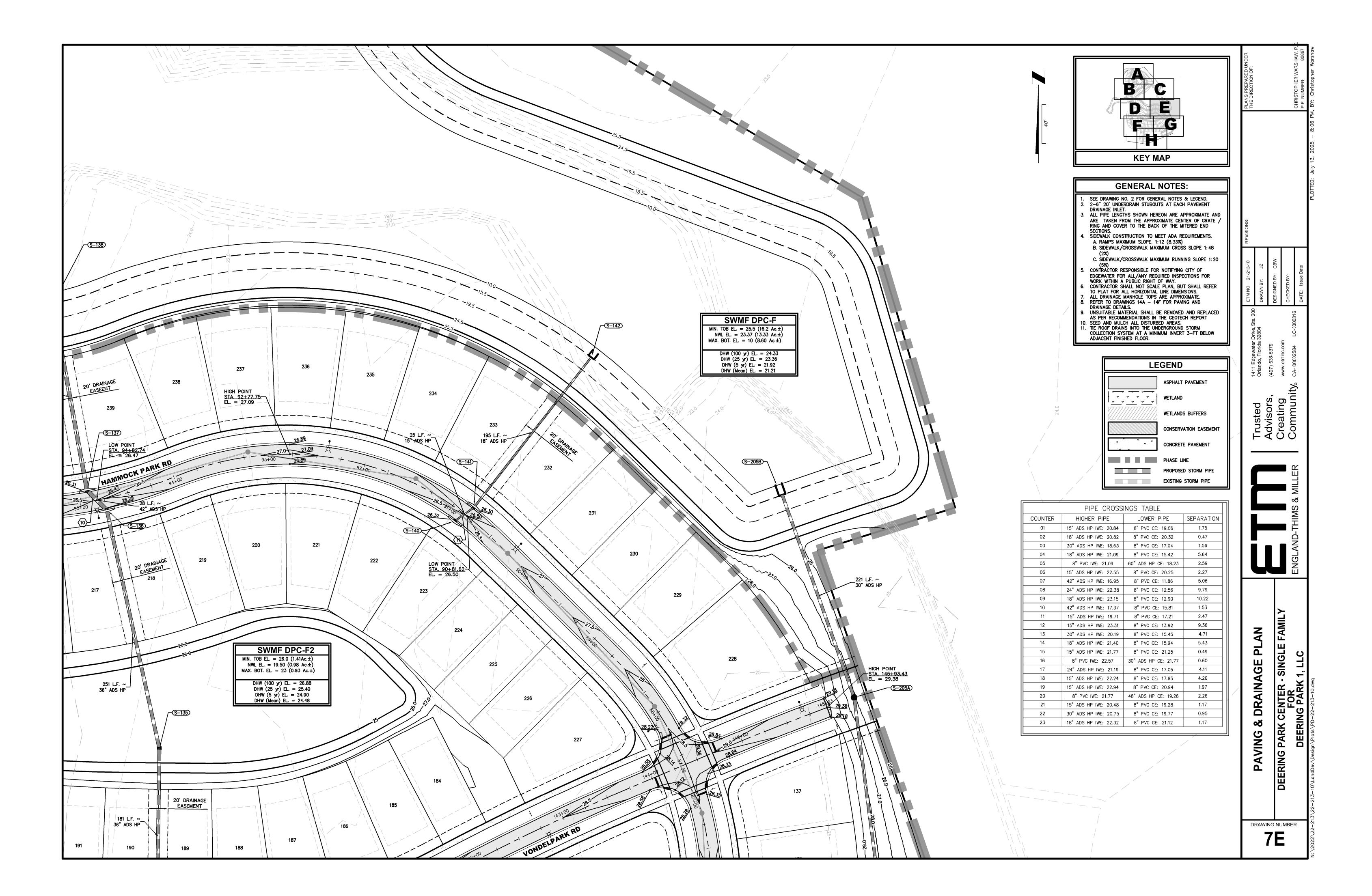


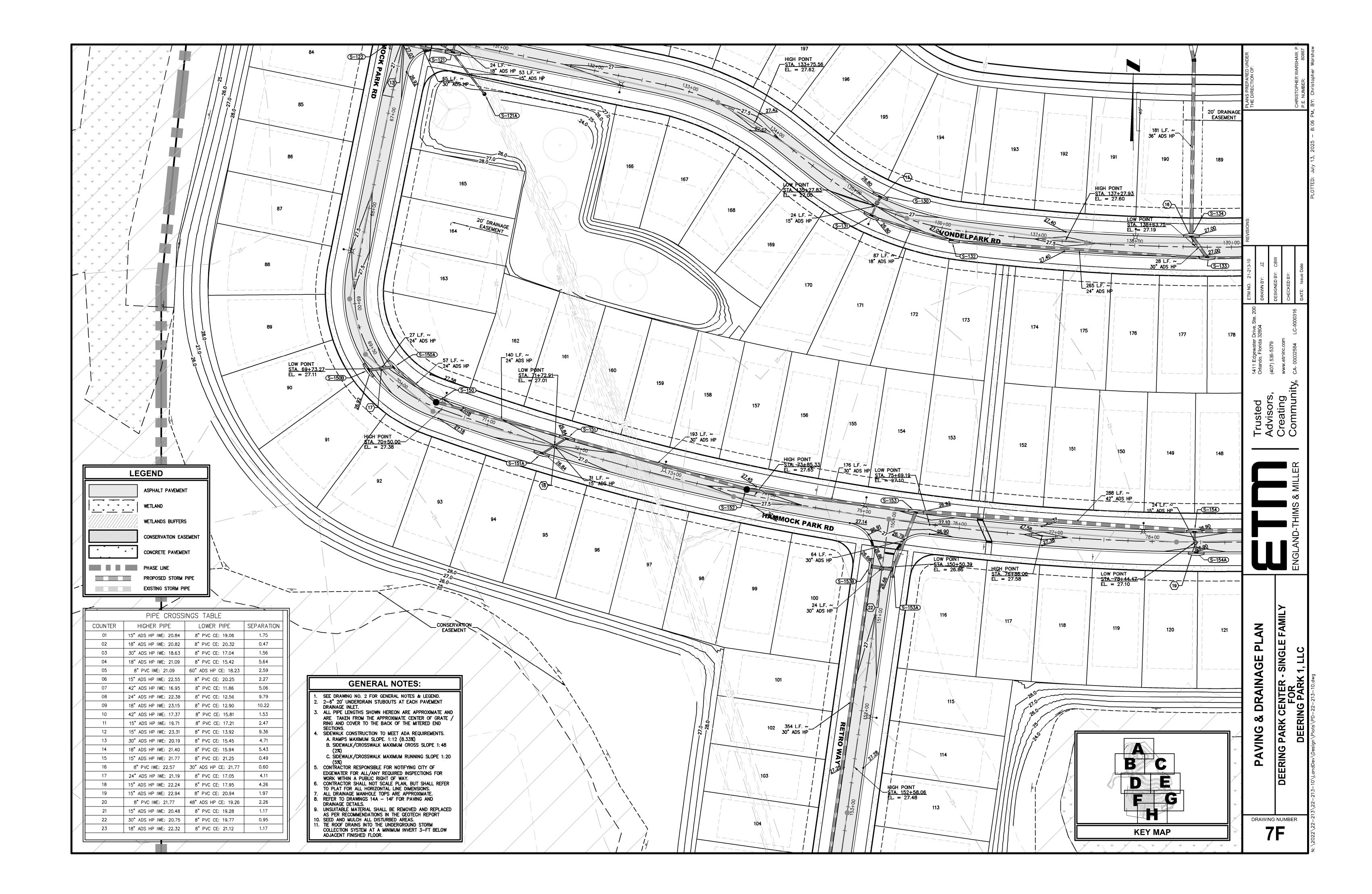


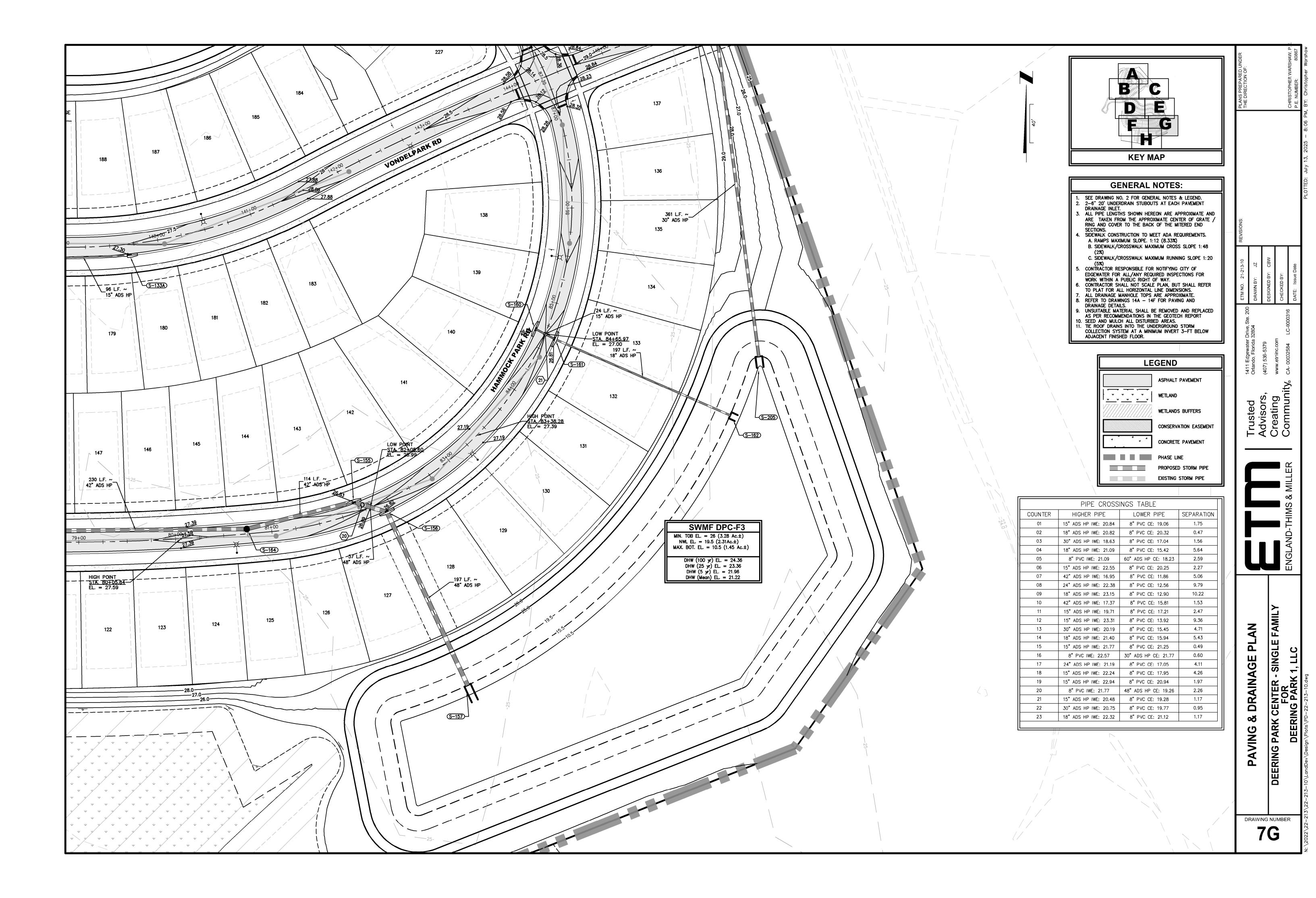


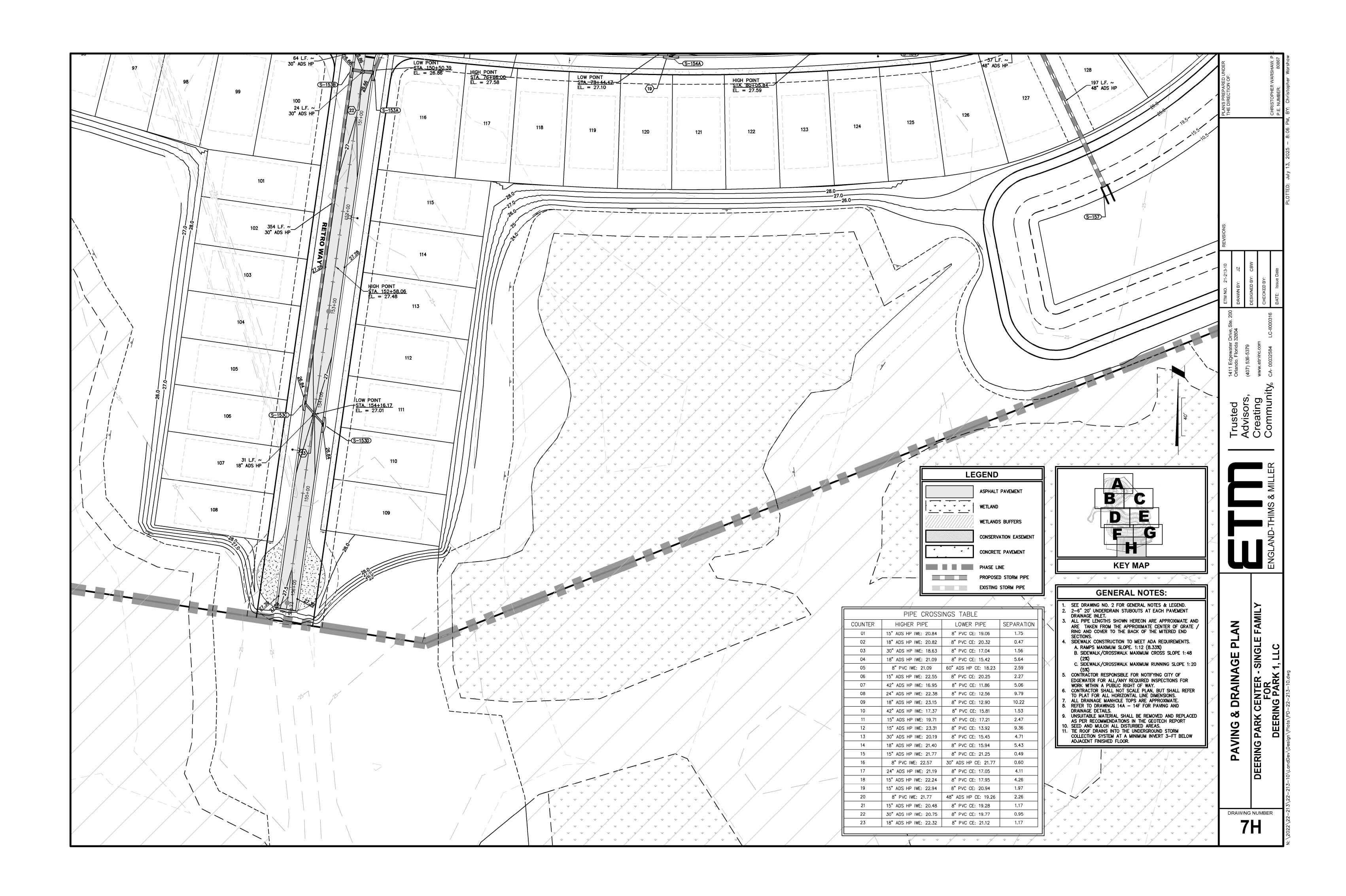












DRAINAGE STRUCTURE TABLE						
STR. NO.	STRUCTURE TYPE	TOP/ GRATE EL.	INVERT EL.			
100	FDOT TYPE 6	27.45	18" ADS HP - 21.00 (E) 18" ADS HP - 21.00 (N)			
101	FDOT TYPE 6	27.44	18" ADS HP - 21.40 (W)			
102	MANHOLE TYPE J-1	27.23	24" ADS HP - 19.80 (S) 24" ADS HP - 19.80 (N)			
103	FDOT TYPE 6	27.22	30" ADS HP - 18.75 (W) 30" ADS HP - 18.75 (E)			
103A	FDOT TYPE 6	27.22	24" ADS HP - 19.45 (S) 30" ADS HP - 18.95 (E)			
104	MANHOLE TYPE J-1	26.77	30" ADS HP - 18.55 (W) 48" ADS HP - 10.80 (NE) 48" ADS HP - 10.80 (E)			
105	48" MES		48" ADS HP - 10.60 (W)			
108	FDOT TYPE 6	27.33	15" ADS HP - 21.00 (SW)			
109	FDOT TYPE 6	27.35	15" ADS HP - 20.90 (NE) 30" ADS HP - 19.70 (SE) 48" ADS HP - 11.40 (W) 48" ADS HP - 11.40 (S)			
109A	FDOT TYPE 6	27.36	18" ADS HP - 20.90 (NE) 24" ADS HP - 20.80 (SE) 30" ADS HP - 20.30 (NW)			
109B	FDOT TYPE 6	27.33	18" ADS HP - 21.00 (SW)			
109C	FDOT TYPE 6	27.31	18" ADS HP - 23.40 (NE) 24" ADS HP - 21.30 (NW)			
109D	FDOT TYPE 6	27.29	18" ADS HP - 23.50 (SW)			
110	MANHOLE TYPE J-1	27.60	48" ADS HP - 11.10 (N) 48" ADS HP - 11.10 (SW)			
112	FDOT TYPE 6	27.11	15" ADS HP - 22.70 (E)			
113	FDOT TYPE 6	27.12	15" ADS HP - 22.60 (W) 18" ADS HP - 22.60 (NE)			
114	MANHOLE TYPE J-1	27.32	18" ADS HP - 22.30 (SW) 18" ADS HP - 22.00 (NE)			
115	FDOT TYPE 6	27.14	18" ADS HP - 21.70 (SW) 60" ADS HP - 13.20 (NW) 60" ADS HP - 13.20 (SE)			
115A	60" MES		60" ADS HP - 12.00 (NW)			
116	FDOT TYPE 6	27.12	60" ADS HP - 13.30 (SE) 60" ADS HP - 13.80 (NW)			

DRAINAGE STRUCTURE TABLE

27.01

27.59

26.63

29.26

INVERT

42" ADS HP - 18.60 (W)

15" ADS HP - 23.00 (S)

42" ADS HP - 18.60 (E)

15" ADS HP - 23.10 (N)

42" ADS HP - 17.40 (W)

48" ADS HP - 15.40 (E)

48" ADS HP - 15.00 (W)

48" ADS HP - 14.00 (SÉ)

48" ADS HP - 12.00 (NW)

15" ADS HP - 20.30 (NW)

18" ADS HP - 15.80 (SE)

18" ADS HP - 12.00 (NW)

18" ADS HP - 20.65 (S)

24" ADS HP - 20.15 (N)

42" ADS HP - 18.30 (W)

60" ADS HP - 10.00 (W)

60" ADS HP - 13.00 (E)

60" ADS HP - 13.00 (W)

60" ADS HP - 10.00 (E)

30" ADS HP - 21.70 (N)

30" ADS HP - -0.50 (S)

30" ADS HP - -0.50 (N)

30" ADS HP - -0.50 (S)

15" ADS HP - 12.00 (N)

15" ADS HP - 20.30 (N)

15" ADS HP - 16.30 (S)

26.90 | 15" ADS HP - 20.90 (S)

42" ADS HP - 17.80 (E) 18" ADS HP - 14.00 (E)

26.91 | 15" ADS HP - 20.90 (SE)

STR. NO. STRUCTURE TYPE GRATE EL.

FDOT TYPE 6

18" MES

60" MES

60" MES

30" MES

18" MES

207B 24" ADS INLET

24" ADS INLET

205B 30" MES

MANHOLE TYPE J-1

MANHOLE TYPE J-1

MANHOLE TYPE J-1

MANHOLE TYPE J-1

162 18" MES

48" MES

155

156

157

163

16<del>4</del>

169

178

180

181

205

205A

207

207A

DRAINAGE STRUCTURE TABLE						
STR. NO.	STRUCTURE TYPE	TOP/ GRATE EL.	INVERT EL.			
117	MANHOLE TYPE J-1	27.24	60" ADS HP - 13.30 (SE) 60" ADS HP - 13.30 (NW)			
118	60" MES		60" ADS HP - 13.00 (SE)			
120	FDOT TYPE 6	26.86	18" ADS HP - 21.80 (S)			
121	FDOT TYPE 6	26.86	18" ADS HP - 21.30 (N) 15" ADS HP - 21.30 (SE) 30" ADS HP - 20.80 (W)			
121A	YARD DRAIN	26.30	15" ADS HP - 22.50 (NW)			
122	FDOT TYPE 6	27.24	30" ADS HP - 20.30 (E) 30" ADS HP - 19.80 (N)			
123	FDOT TYPE 6	26.91	15" ADS HP - 23.40 (E) 30" ADS HP - 19.30 (S) 36" ADS HP - 18.80 (N)			
123A	FDOT TYPE 6	26.91	15" ADS HP - 23.50 (W)			
124	FDOT TYPE 6	26.88	36" ADS HP - 18.30 (S) 24" ADS HP - 22.50 (E) 36" ADS HP - 18.30 (N)			
12 <del>4</del> A	FDOT TYPE 6	26.53	18" ADS HP - 23.20 (S) 24" ADS HP - 22.70 (W)			
12 <b>4</b> B	FDOT TYPE 6	26.53	15" ADS HP - 23.30 (SE) 18" ADS HP - 23.30 (N)			
12 <b>4</b> C	YARD DRAIN	25.02	15" ADS HP - 23.50 (NW)			
125	FDOT TYPE 6	27.21	60" ADS HP - 10.00 (W) 36" ADS HP - 17.80 (S) 60" ADS HP - 17.30 (E)			
125A	60" MES		60" ADS HP - 13.00 (E)			
126	FDOT TYPE 6	27.20	60" ADS HP - 17.10 (W) 60" ADS HP - 14.00 (E)			
127	60" MES		60" ADS HP - 10.00 (W)			
130	FDOT TYPE 6	26.90	15" ADS HP - 21.90 (SW)			
131	FDOT TYPE 6	26.90	15" ADS HP - 21.80 (NE) 18" ADS HP - 21.00 (E)			
132	FDOT TYPE 5 (L)	31.00	18" ADS HP - 20.70 (W) 24" ADS HP - 20.20 (E)			
133	FDOT TYPE 6	27.00	15" ADS HP - 19.40 (E) 24" ADS HP - 19.90 (W) 30" ADS HP - 19.40 (NW)			

DRAINAGE STRUCTURE TABLE					
STR. NO.	STRUCTURE TYPE	TOP/ GRATE EL.	INVERT EL.		
706	MANHOLE TYPE J-1	27.92	48" ADS HP - 12.10 (N) 48" ADS HP - 12.00 (S) 18" ADS HP - 16.10 (W)		
707	MANHOLE TYPE J-1	27.99	48" ADS HP - 11.60 (N) 48" ADS HP - 11.60 (E)		

		TOP/	INVERT
STR. NO.	STRUCTURE TYPE	GRATE EL.	EL.
133A	FDOT TYPE 5 (R)	27. <del>4</del> 1	15" ADS HP - 19.50 (W)
134	FDOT TYPE 6	27.11	30" ADS HP - 19.20 (SE) 36" ADS HP - 18.70 (N)
135	TYPE "C" INLET	24.00	36" ADS HP - 18.50 (S) 36" ADS HP - 18.00 (N)
136	FDOT TYPE 6	26.70	36" ADS HP - 17.70 (S) 42" ADS HP - 17.70 (NW)
137	FDOT TYPE 6	26.72	42" ADS HP - 17.60 (SE) 42" ADS HP - 14.00 (N)
138	42" MES		42" ADS HP - 12.00 (S)
140	FDOT TYPE 6	26.72	15" ADS HP - 20.00 (NE)
141	FDOT TYPE 6	26.70	15" ADS HP - 19.50 (SW) 18" ADS HP - 15.75 (NE)
142	18" MES		18" ADS HP - 12.00 (SW)
150	MANHOLE TYPE J-1	27.25	24" ADS HP - 21.17 (NW) 24" ADS HP - 21.17 (E)
150A	FDOT TYPE 6	27.33	24" ADS HP - 21.30 (W) 24" ADS HP - 21.30 (SE)
150B	FDOT TYPE 6	27.34	24" ADS HP - 21.40 (E)
151	FDOT TYPE 6	26.95	15" ADS HP - 22.30 (SW) 24" ADS HP - 20.90 (W) 30" ADS HP - 20.40 (E)
151A	FDOT TYPE 6	26.95	15" ADS HP - 22.40 (NE)
152	MANHOLE TYPE J-1	27.52	30" ADS HP - 20.20 (W) 30" ADS HP - 20.20 (E)
153	FDOT TYPE 6	27.35	30" ADS HP - 20.80 (S) 30" ADS HP - 20.00 (W) 42" ADS HP - 19.00 (E)
153A	FDOT TYPE 6	27.07	30" ADS HP - 20.90 (W) 30" ADS HP - 20.90 (N)
15 <b>3</b> B	FDOT TYPE 6	27.07	30" ADS HP - 21.00 (S) 30" ADS HP - 21.00 (E)
153C	FDOT TYPE 6	27.25	18" ADS HP - 22.40 (SE) 30" ADS HP - 21.40 (N)
153D	FDOT TYPE 6	27.24	18" ADS HP - 22.50 (NW)

## **Technical Note**

TN 2.04 Minimum and Maximum Cover Heights for HP Storm Pipe for Storm Drainage

### Introduction

The information in this document is designed to provide answers to general cover height questions; the data provided is not intended to be used for project design. The design procedure described in the Structures section (Section 2) of the Drainage Handbook provides detailed information for analyzing most common installation conditions. This procedure should be utilized for project specific designs.

The two common cover height concerns are minimum cover in areas exposed to vehicular traffic and maximum cover heights. Either may be considered "worst case" scenario from a loading perspective, depending on the project conditions.

### Minimum Cover in Traffic Applications

Pipe diameters from 12- through 48-inch (300-1200 mm) installed in traffic areas (AASHTO H-20, H-25, or HL-93 loads) must have at least one foot (0.3m) of cover over the pipe crown, while 60-inch (1500 mm) pipes must have at least 24 inches (0.6m) of cover. The backfill envelope must be constructed in accordance with the *Installation* section (Section 5) of the Drainage Handbook and the requirements of ASTM D2321. The backfill envelope must be of the type and compaction listed in Appendix A-5, Table A-5-2 of the Drainage Handbook. In Table 1 below, this condition is represented by a Class III material compacted to 95% standard Proctor density or a Class II material compacted to 90% standard proctor density, although other material can provide similar strength at slightly lower levels of compaction. Structural backfill material should extend to the crown of the pipe; the remaining cover should be appropriate for the installation and as specified by the design engineer. If settlement or rutting is a concern, it may be appropriate to extend the structural backfill to grade. Where pavement is involved, sub-base material can be considered in the minimum burial depth. While rigid pavements can be included in the minimum cover, the thickness of flexible pavements should not be included in the minimum cover.

Additional information that may affect the cover requirements is included in the Installation section (Section 5) of the Drainage Handbook. Some examples of what may need to be considered are temporary heavy equipment, construction loading, paving equipment and similar loads that are less than the design load, the potential of pipe flotation, and the type of surface treatment which will be installed over the pipe zone.

Table 1 Minimum Cover Requirements for ADS HP Storm with AASHTO H-25, H-20, or HL-93 Load

Inside Diameter, ID, in.(mm)	Minimum Cover ft. (m)	Inside Diameter, ID, in.(mm)	Minimum Cover ft. (m)
12 (300)	1 (0.3)	36 (900)	1 (0.3)
15 (375)	1 (0.3)	42 (1050)	1 (0.3)
18 (450)	1 (0.3)	48 (1200)	1 (0.3)
24 (600)	1 (0.3)	60 (1500)	2 (0.6)



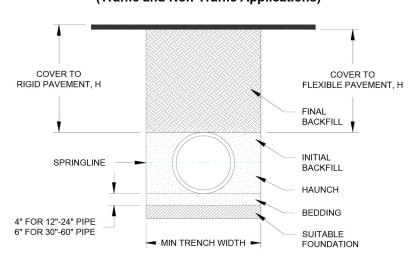
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SINGLE

**TABLES** STRUCTURE

ADS HP Storm Mechanical Properties

	ASTM	Allowable	Initial		75-Year	
Resin	Specification	Long Term Strain %	Fu (psi)	E (psi)	Fu (psi)	E (psi)
Polypropylene, Impact-modified	ASTM F2881	3.7	3,500	175,000	1,000	28,000



1. Minimum covers presented here were calculated assuming Class III backfill material compacted to 95% standard Proctor density or Class II backfill material compacted to 90% standard Proctor density around the pipe, as recommended in Section 5 of the Drainage Handbook, with an additional layer of compacted traffic lane sub-base for a total cover as required. In shallow traffic installations, especially where pavement is involved, a good quality compacted material to grade is required to prevent surface settlement and rutting. 2. The minimum covers specified do not include pavement thickness. A pavement section of 0.4' is typical.

3. Backfill materials and compaction levels not shown in the table may also be acceptable. Contact ADS for

4. Calculations assume no hydrostatic pressure and native soils that are as strong as the specified minimum backfill recommendations.

## **Maximum Cover**

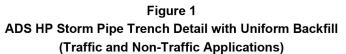
Wall thrust generally governs the maximum cover a pipe can withstand and conservative maximum cover heights will result when using the information presented in the *Structures* section (Section 2) of the Drainage Handbook. Table 2 below shows the material properties consistent with the expected performance characteristics for HP Storm materials for

The maximum burial depth is highly influenced by the type of backfill and level of compaction around the pipe. General maximum cover limits for ADS HP Storm use in storm drainage applications are shown in Tables 3 for a variety of backfill

Table 3 was developed assuming pipe is installed in accordance with ASTM D2321 and the *Installation* section (Section 5) of the Drainage handbook. Additionally, the calculations assume no hydrostatic load around the pipe, incorporate the maximum conservative AASHTO LRFD design factors represented in Structures section of the Drainage Handbook, use material properties consistent with the expected performance characteristics for HP Storm materials, as shown in Table 2, and assume the native (in-situ) soil is of adequate strength and suitable for installation. For applications requiring fill heights greater than those shown in Table 3 or where hydrostatic pressure due to groundwater is expected, contact an ADS Engineer.

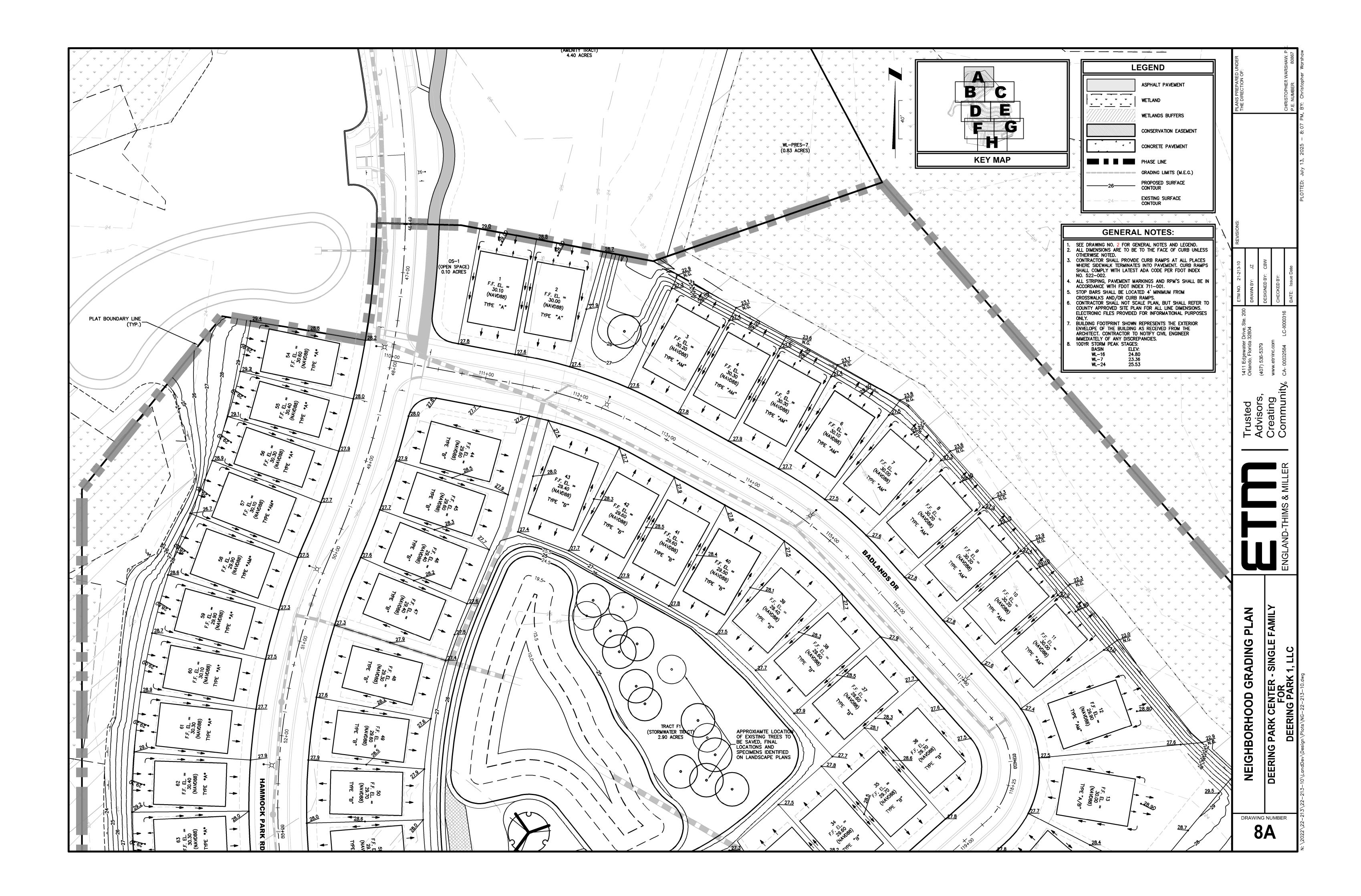
	Table 2	
ADS HD Storm	Machanical	Dropor

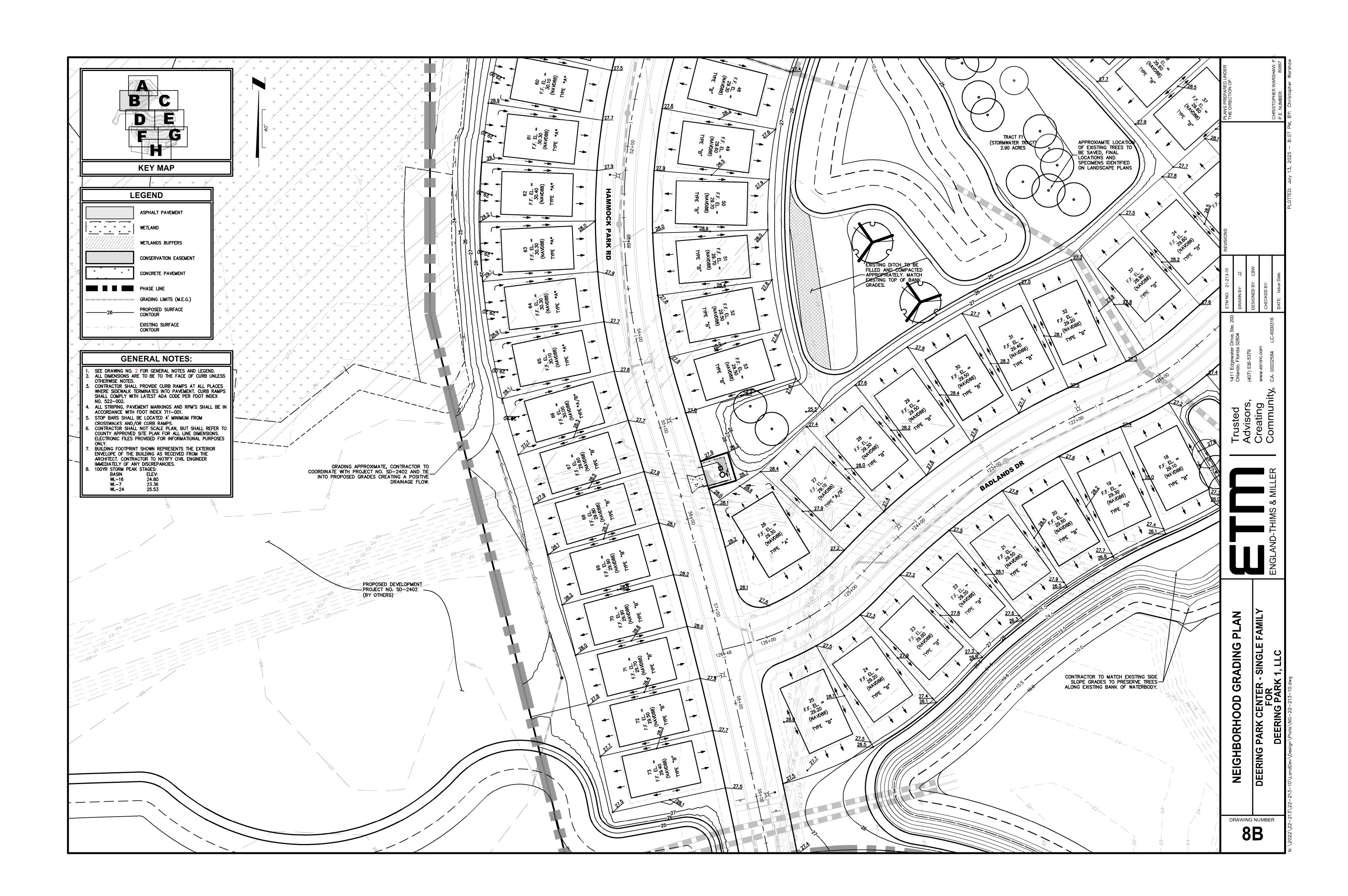
Resin ASTM Specification	ASTM	Allowable	Initial		75-Year	
	Long Term Strain %	Fu (psi)	E (psi)	Fu (psi)	E (psi)	
Polypropylene, Impact-modified copolymer	ASTM F2881	3.7	3,500	175,000	1,000	28,000

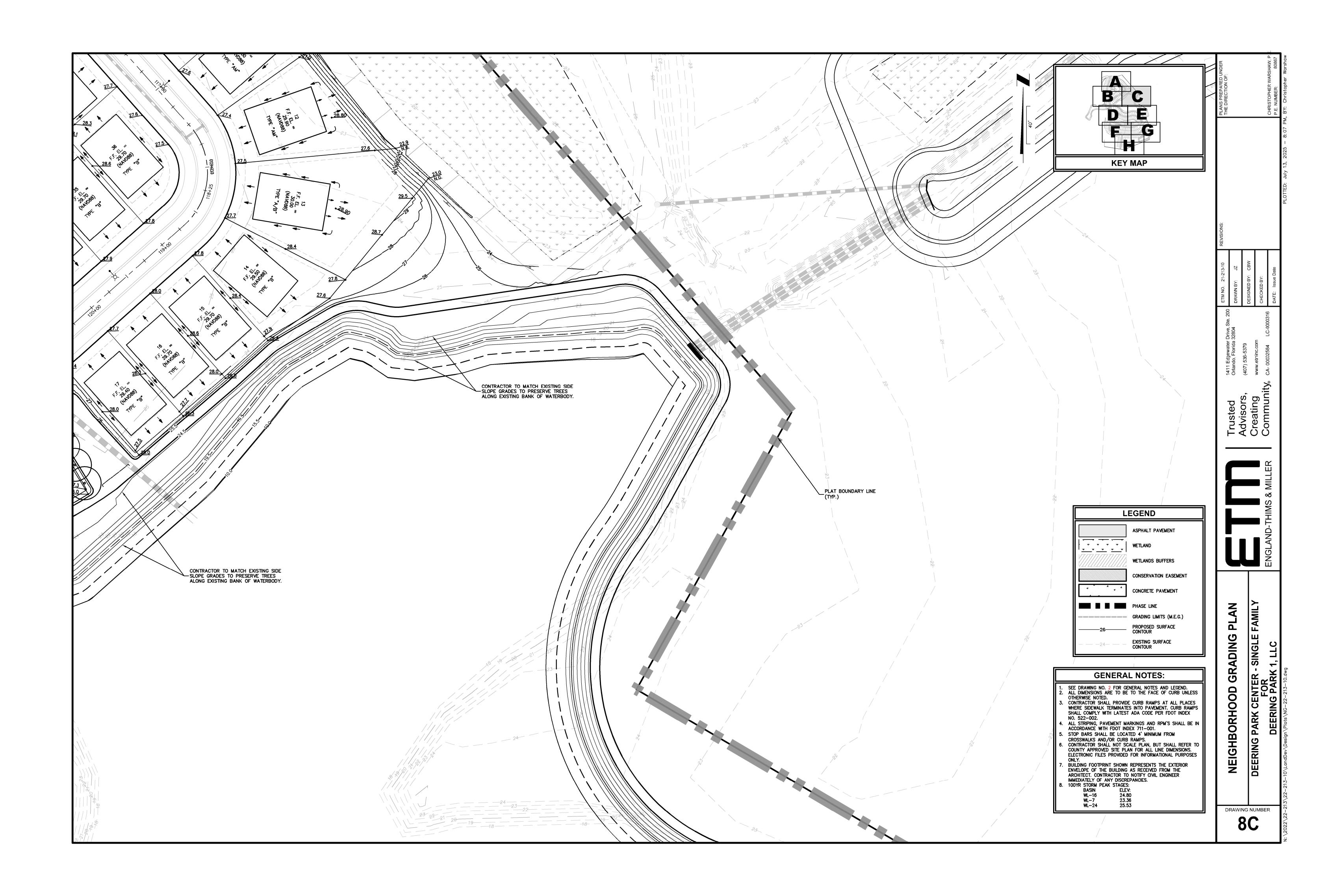


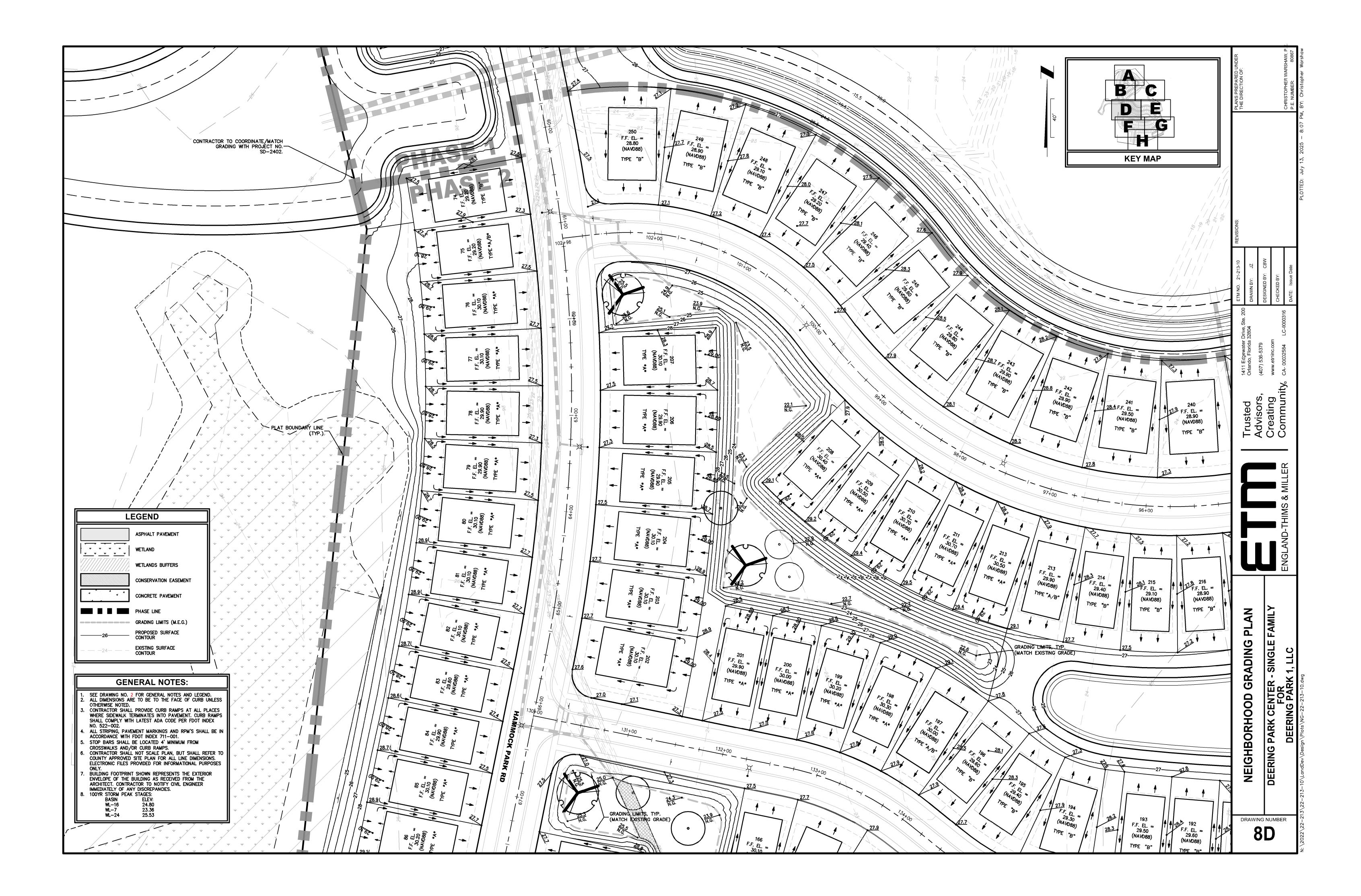
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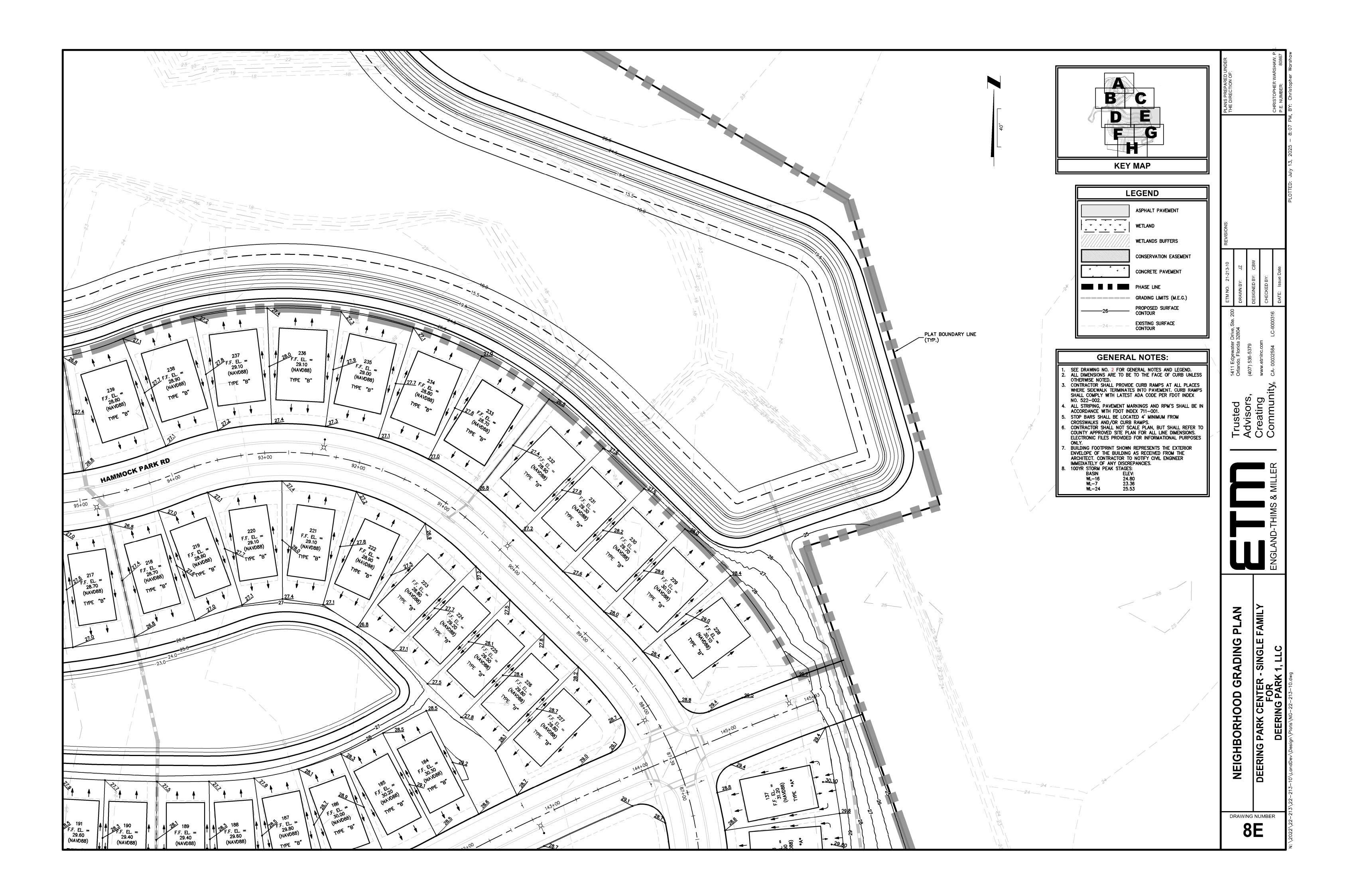
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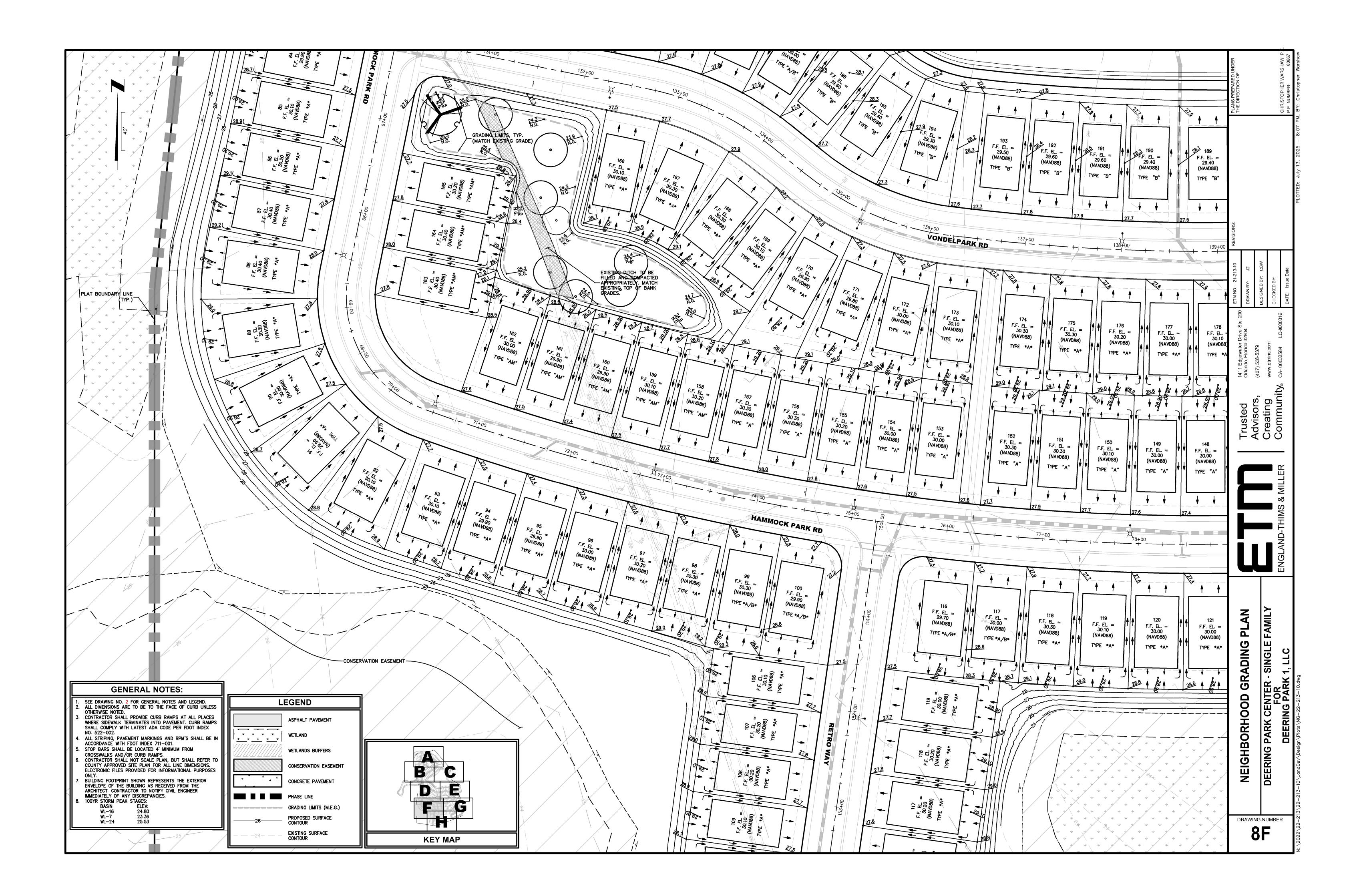


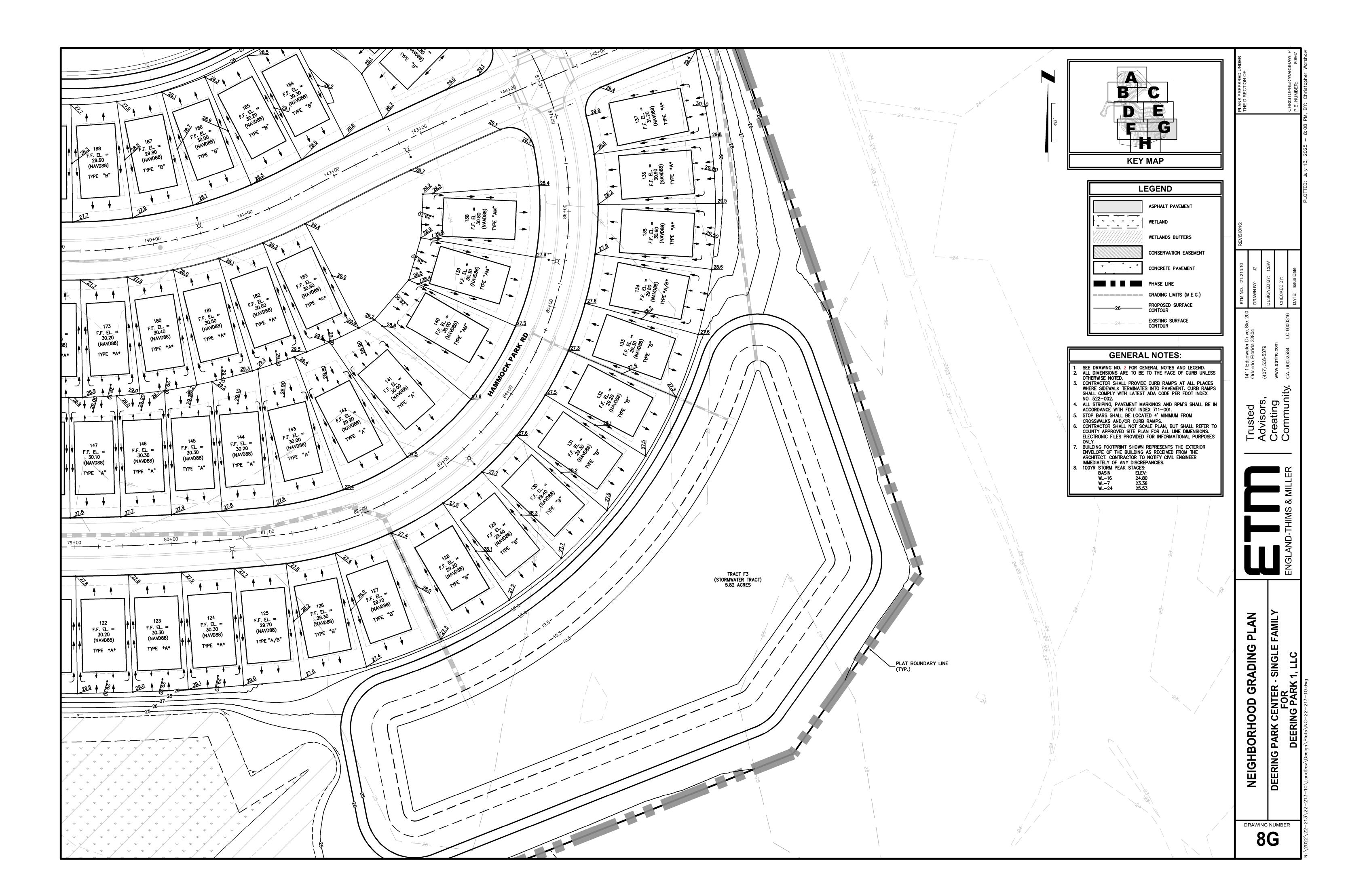


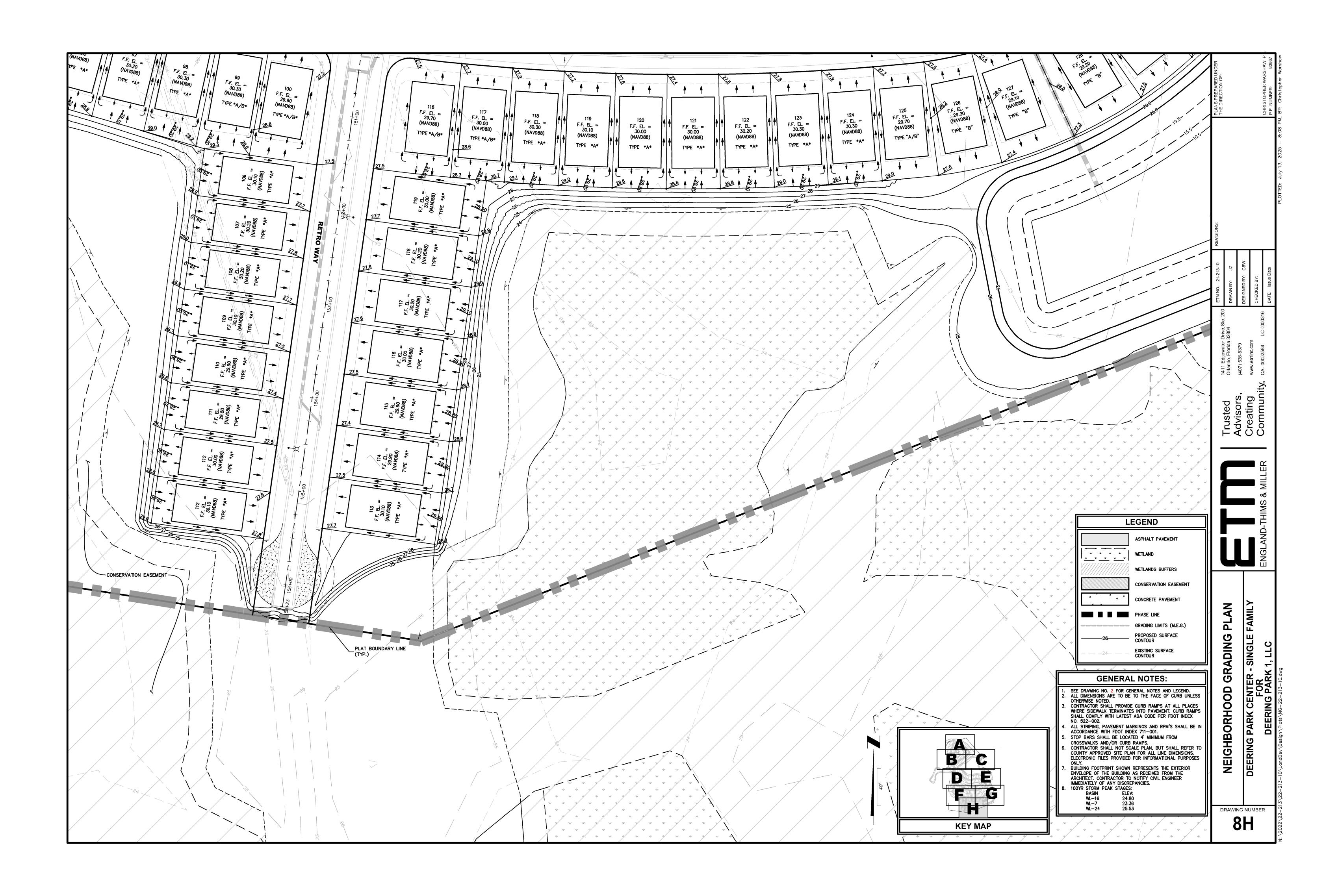


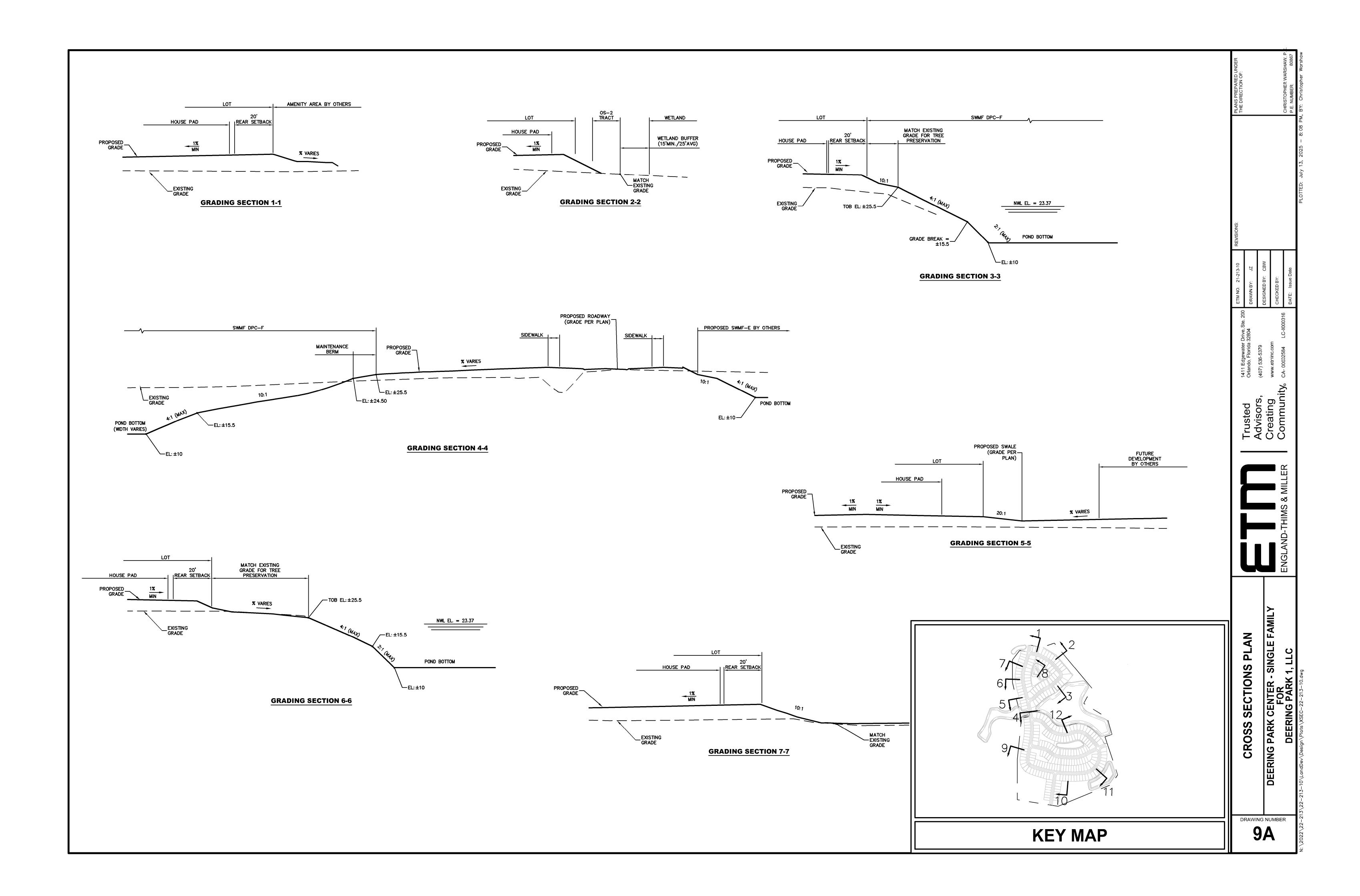


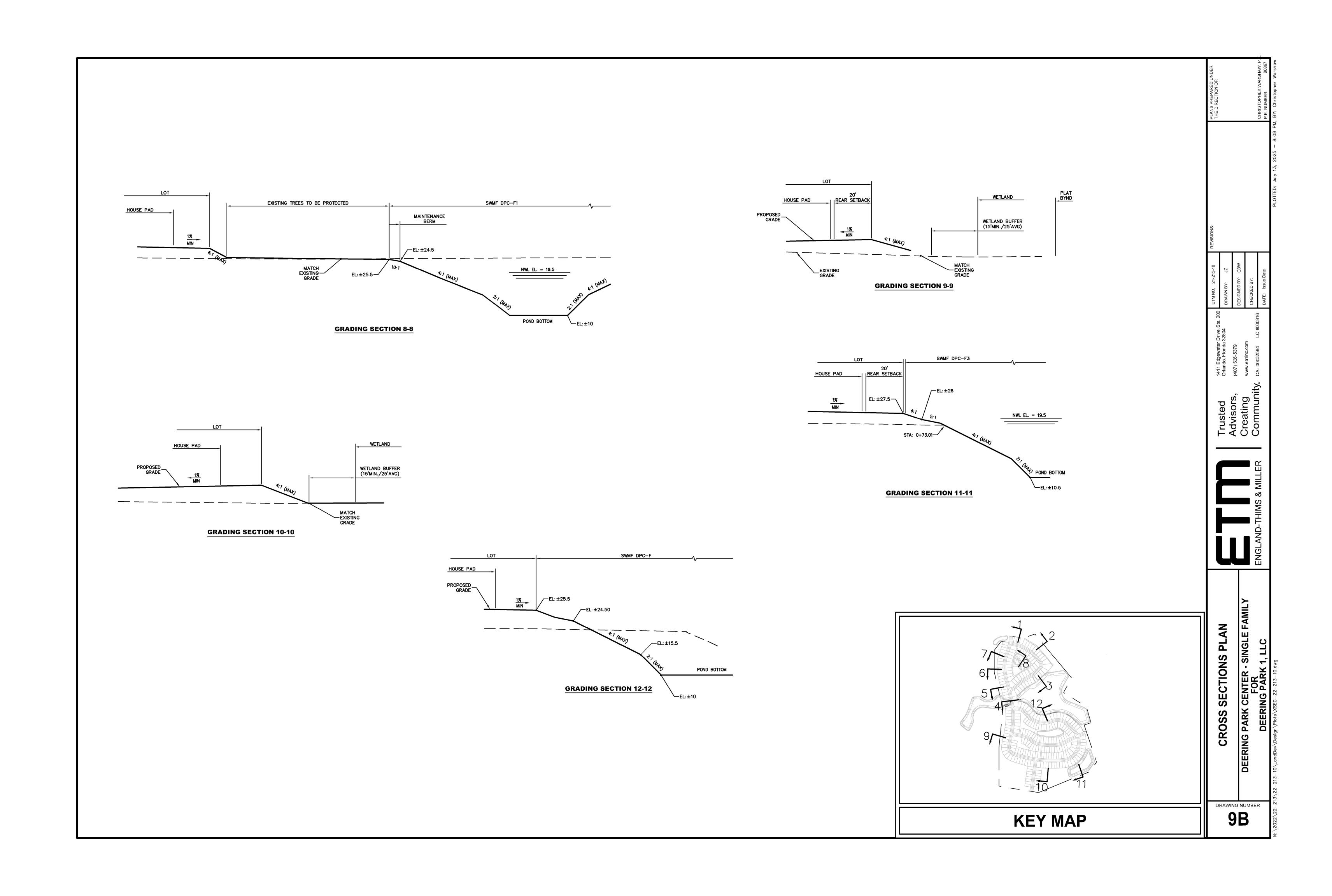


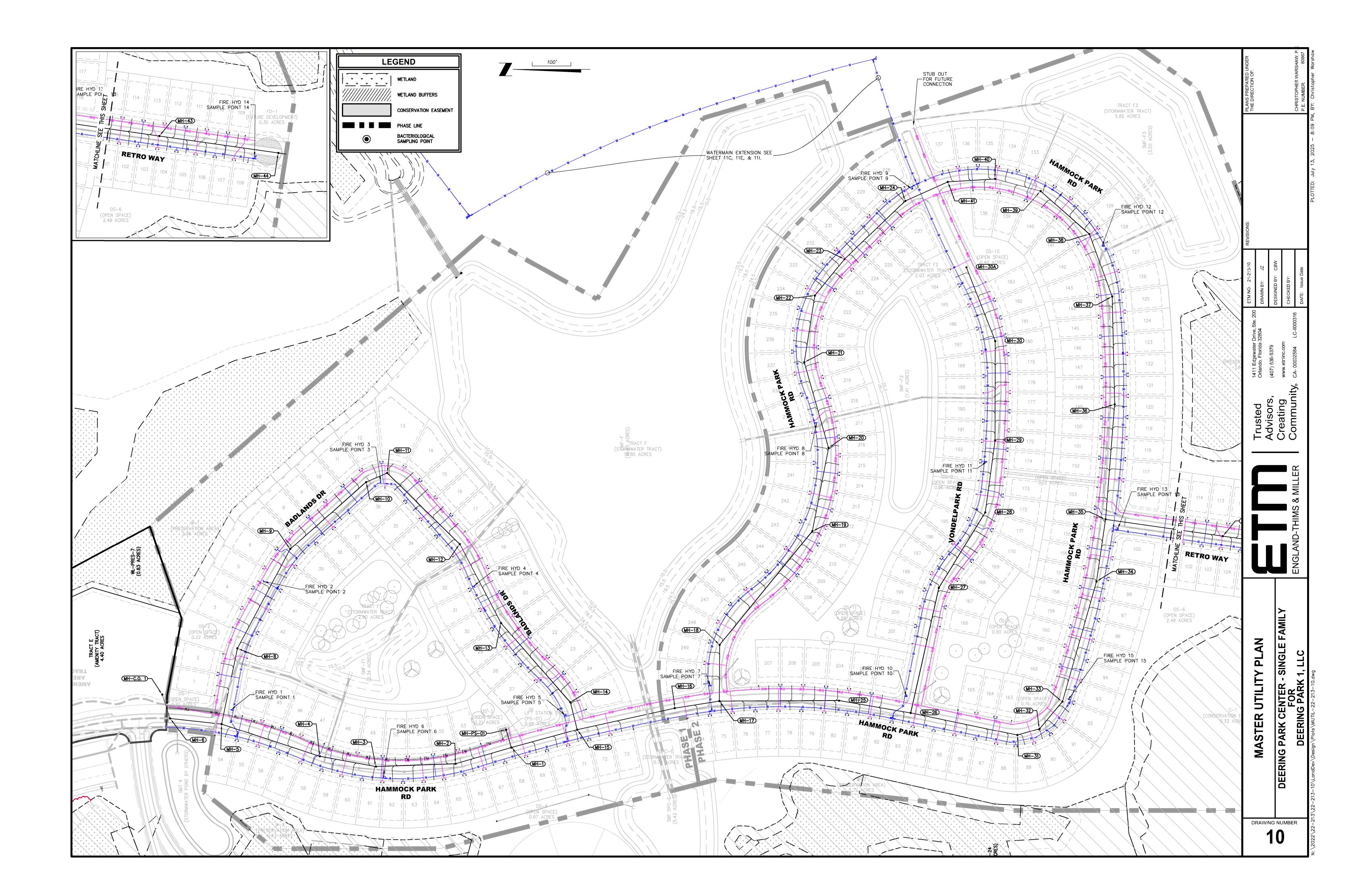


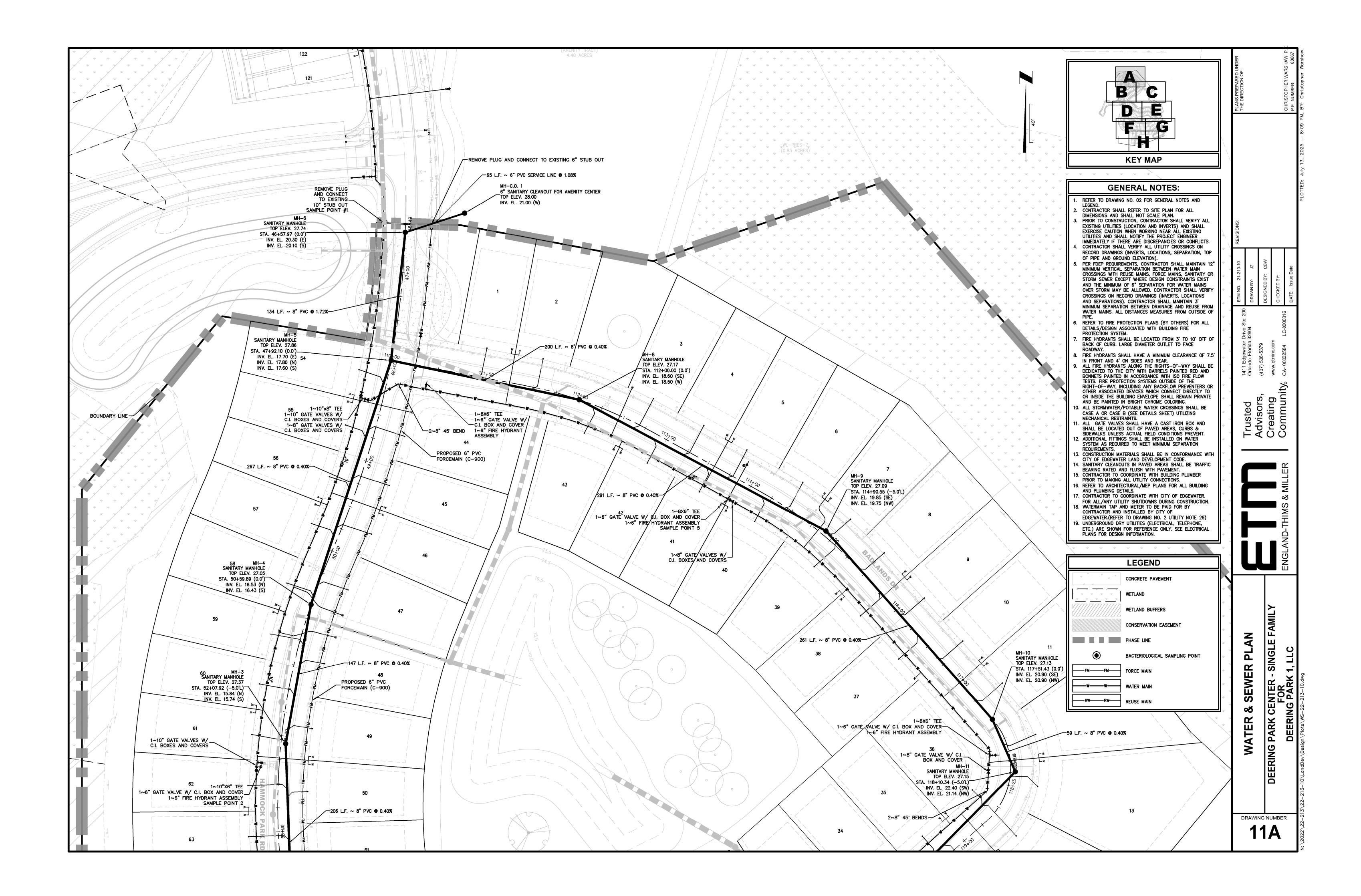


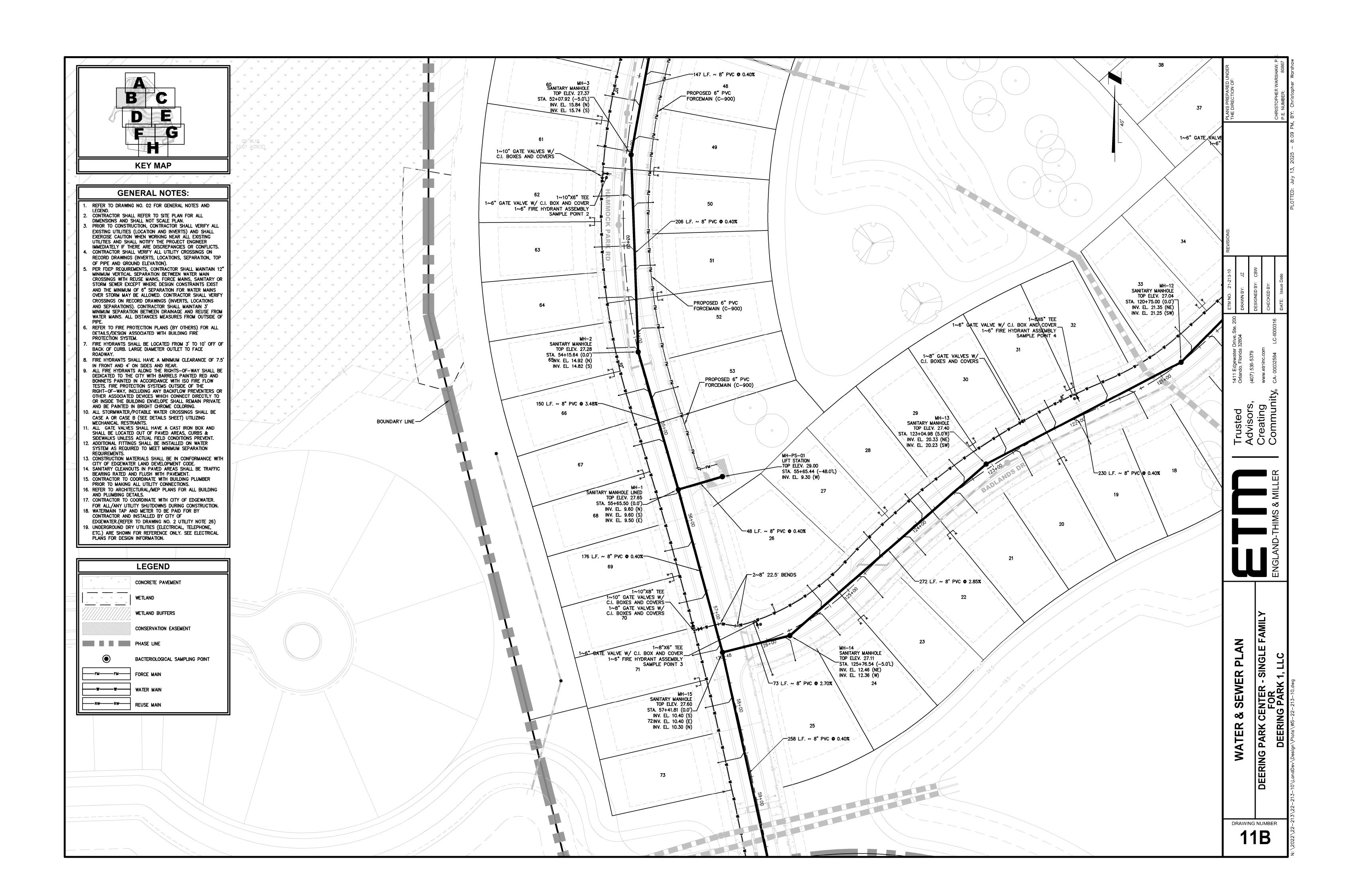


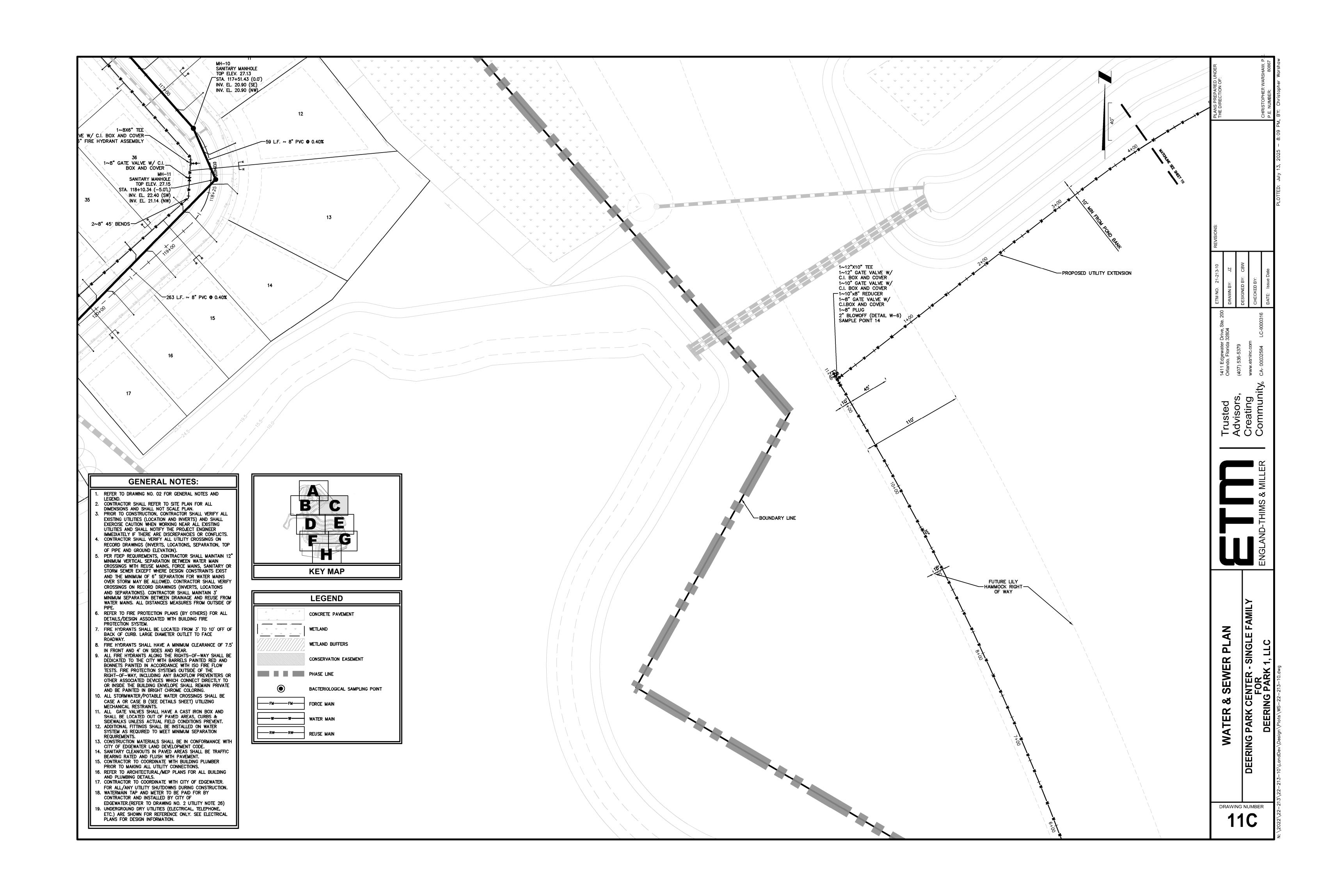


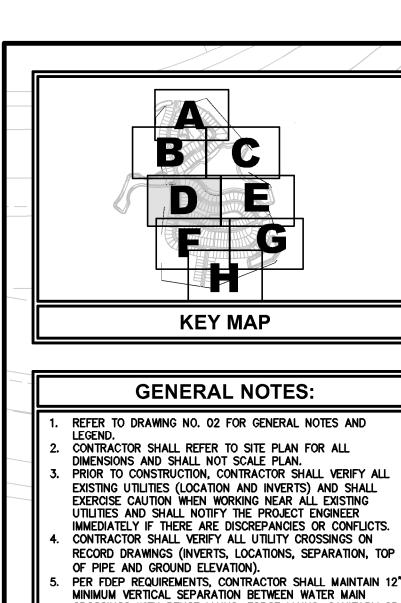












- 5. PER FDEP REQUIREMENTS, CONTRACTOR SHALL MAINTAIN 12"
  MINIMUM VERTICAL SEPARATION BETWEEN WATER MAIN
  CROSSINGS WITH REUSE MAINS, FORCE MAINS, SANITARY OR
  STORM SEWER EXCEPT WHERE DESIGN CONSTRAINTS EXIST
  AND THE MINIMUM OF 6" SEPARATION FOR WATER MAINS
  OVER STORM MAY BE ALLOWED. CONTRACTOR SHALL VERIFY
  CROSSINGS ON RECORD DRAWINGS (INVERTS, LOCATIONS
  AND SEPARATIONS). CONTRACTOR SHALL MAINTAIN 3'
  MINIMUM SEPARATION BETWEEN DRAINAGE AND REUSE FROM
- WATER MAINS. ALL DISTANCES MEASURES FROM OUTSIDE OF PIPE.
  REFER TO FIRE PROTECTION PLANS (BY OTHERS) FOR ALL DETAILS/DESIGN ASSOCIATED WITH BUILDING FIRE PROTECTION SYSTEM.
- 7. FIRE HYDRANTS SHALL BE LOCATED FROM 3' TO 10' OFF OF BACK OF CURB. LARGE DIAMETER OUTLET TO FACE ROADWAY.
- ROADWAY.

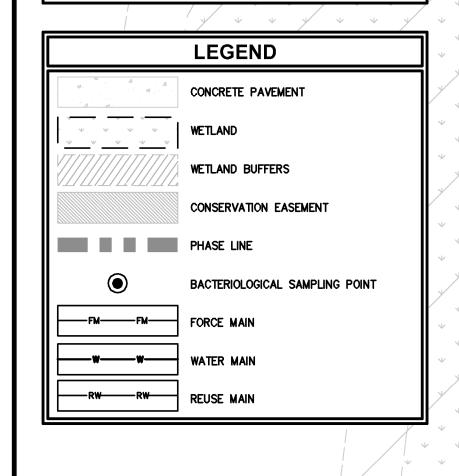
  8. FIRE HYDRANTS SHALL HAVE A MINIMUM CLEARANCE OF 7.5' IN FRONT AND 4' ON SIDES AND REAR.
- ALL FIRE HYDRANTS ALONG THE RIGHTS—OF—WAY SHALL BE DEDICATED TO THE CITY WITH BARRELS PAINTED RED AND BONNETS PAINTED IN ACCORDANCE WITH ISO FIRE FLOW TESTS. FIRE PROTECTION SYSTEMS OUTSIDE OF THE RIGHT—OF—WAY, INCLUDING ANY BACKFLOW PREVENTERS OR OTHER ASSOCIATED DEVICES WHICH CONNECT DIRECTLY TO OR INSIDE THE BUILDING ENVELOPE SHALL REMAIN PRIVATE AND BE PAINTED IN BRIGHT CHROME COLORING.
- 10. ALL STORMWATER/POTABLE WATER CROSSINGS SHALL BE CASE A OR CASE B (SEE DETAILS SHEET) UTILIZING MECHANICAL RESTRAINTS.
- 11. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUT OF PAVED AREAS, CURBS & SIDEWALKS UNLESS ACTUAL FIELD CONDITIONS PREVENT.

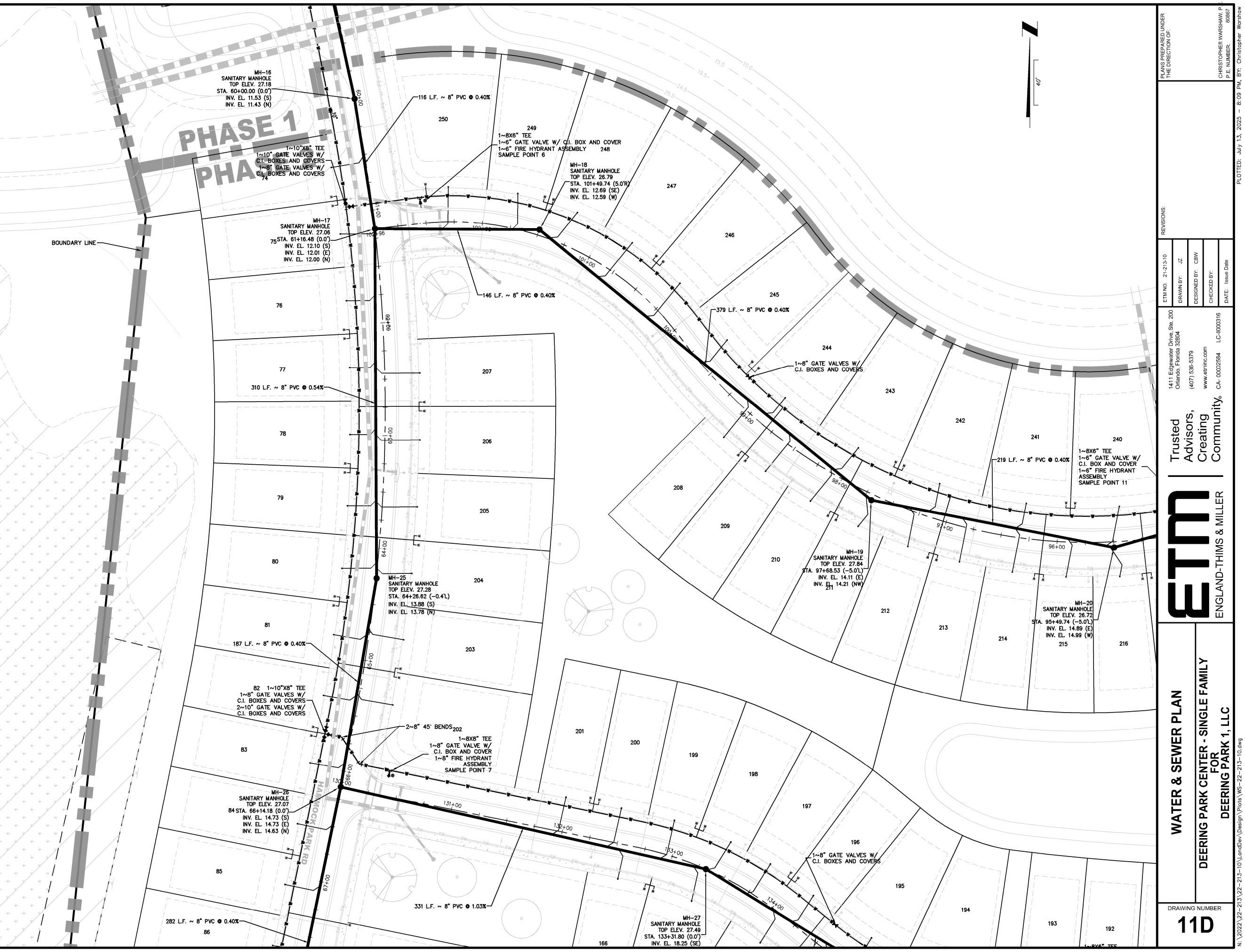
  12. ADDITIONAL FITTINGS SHALL BE INSTALLED ON WATER SYSTEM AS REQUIRED TO MEET MINIMUM SEPARATION
- REQUIREMENTS.

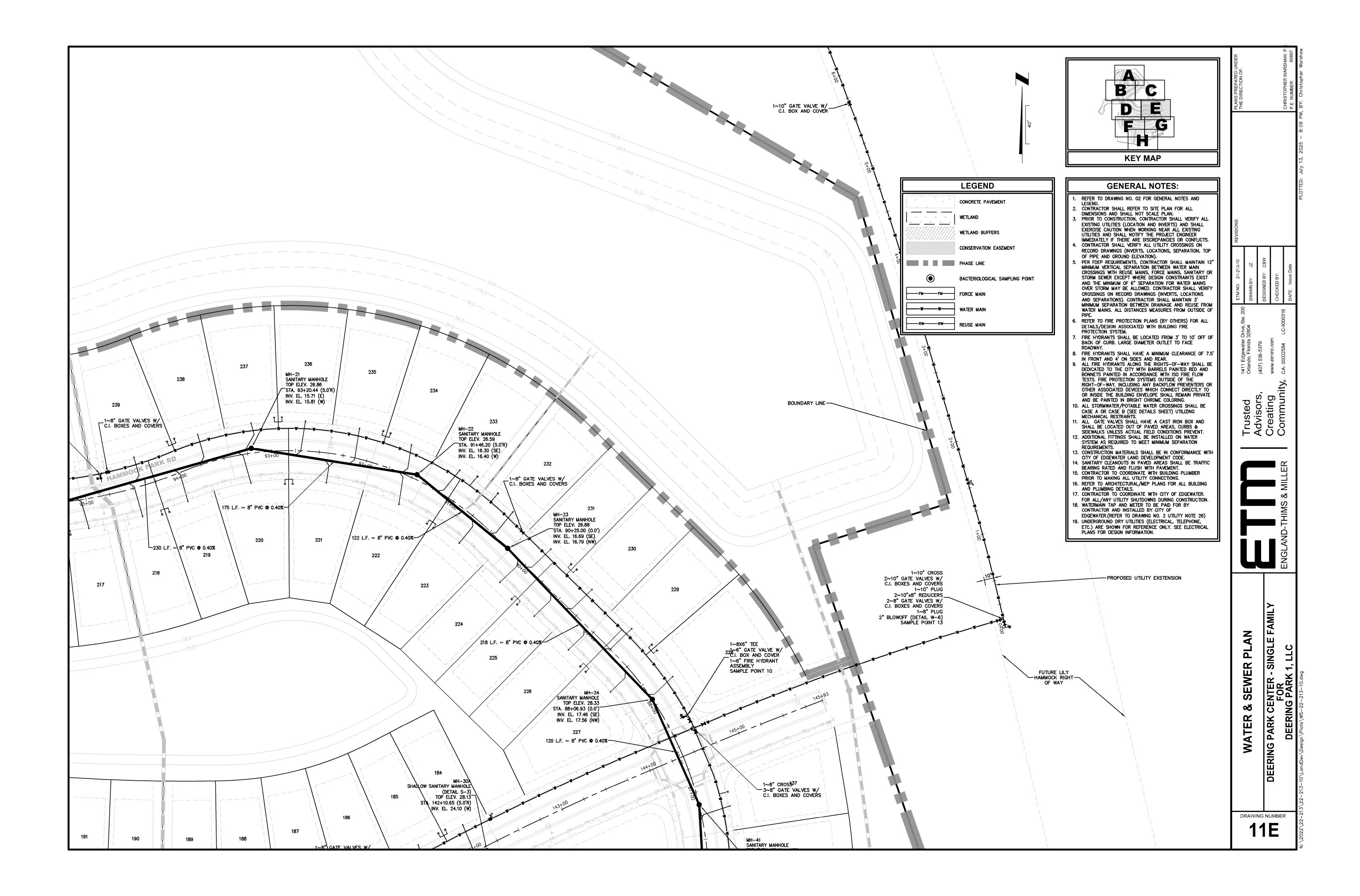
  13. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH
- CITY OF EDGEWATER LAND DEVELOPMENT CODE.

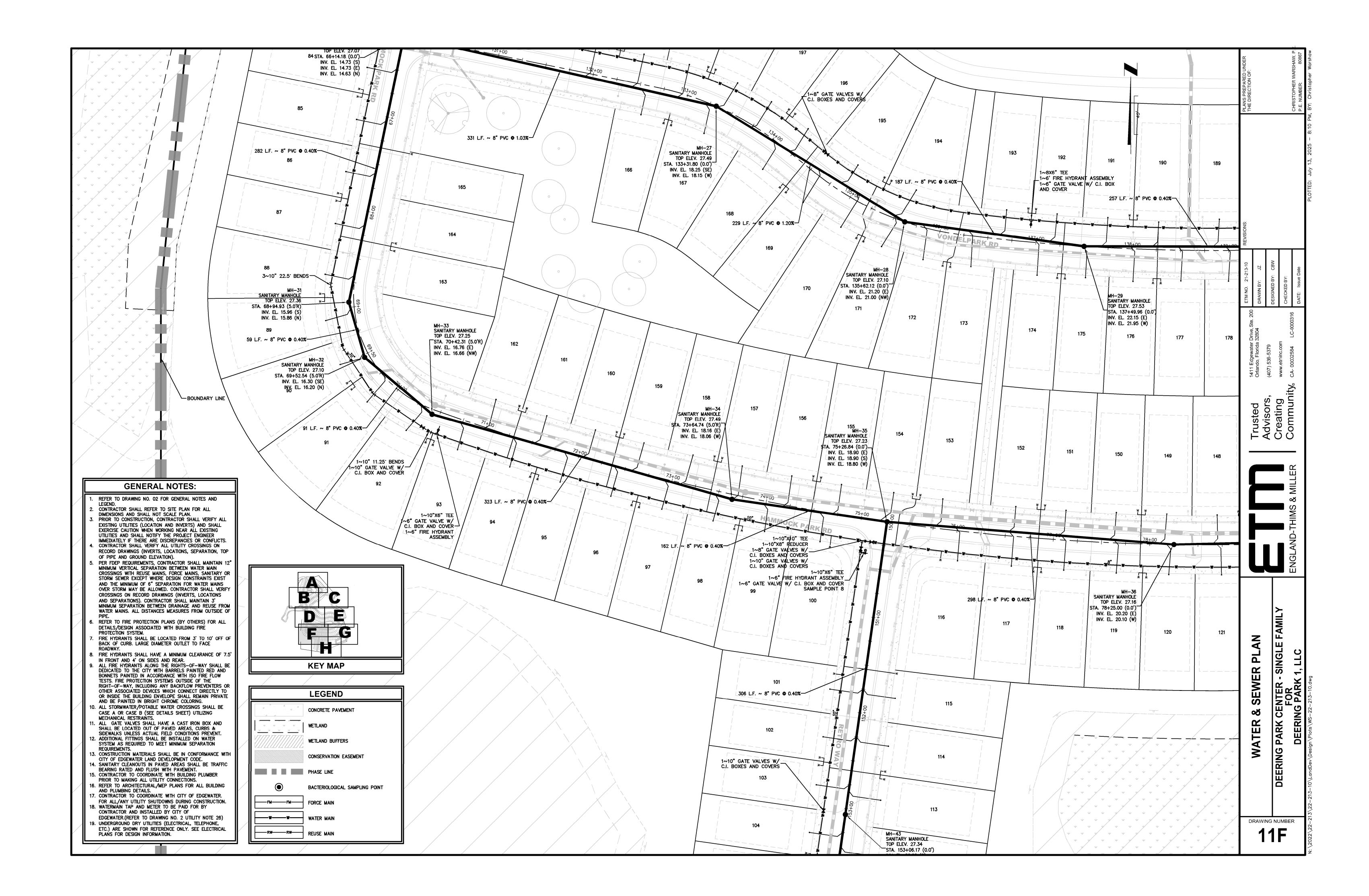
  14. SANITARY CLEANOUTS IN PAVED AREAS SHALL BE TRAFFIC BEARING RATED AND FLUSH WITH PAVEMENT.
- 15. CONTRACTOR TO COORDINATE WITH BUILDING PLUMBER PRIOR TO MAKING ALL UTILITY CONNECTIONS.
- 16. REFER TO ARCHITECTURAL/MEP PLANS FOR ALL BUILDING AND PLUMBING DETAILS.
   17. CONTRACTOR TO COORDINATE WITH CITY OF EDGEWATER. FOR ALL/ANY UTILITY SHUTDOWNS DURING CONSTRUCTION.
- 18. WATERMAIN TAP AND METER TO BE PAID FOR BY CONTRACTOR AND INSTALLED BY CITY OF EDGEWATER.(REFER TO DRAWING NO. 2 UTILITY NOTE 26)
- EDGEWATER.(REFER TO DRAWING NO. 2 UTILITY NOTE 26)

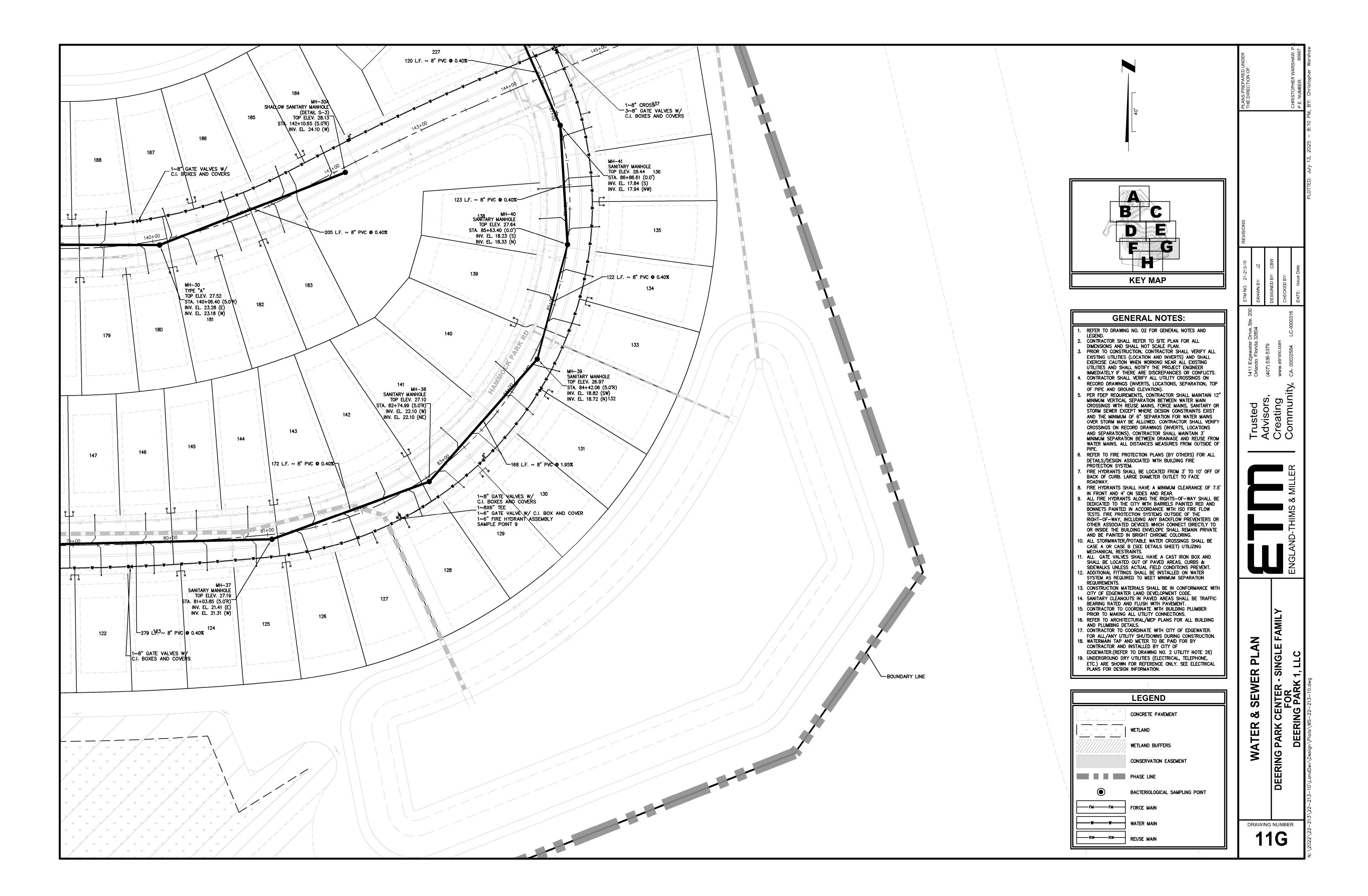
  19. UNDERGROUND DRY UTILITIES (ELECTRICAL, TELEPHONE, ETC.) ARE SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLANS FOR DESIGN INFORMATION.

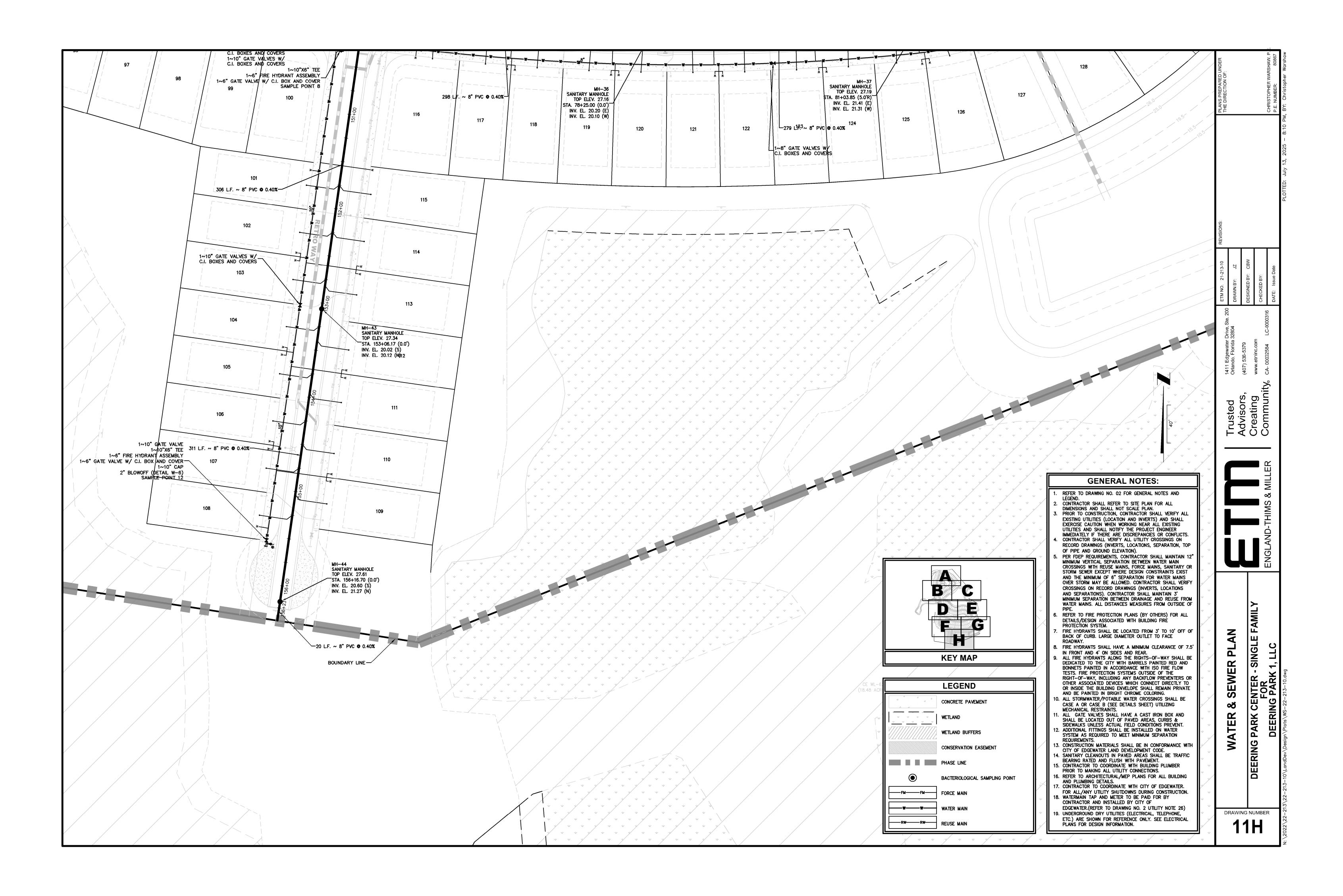


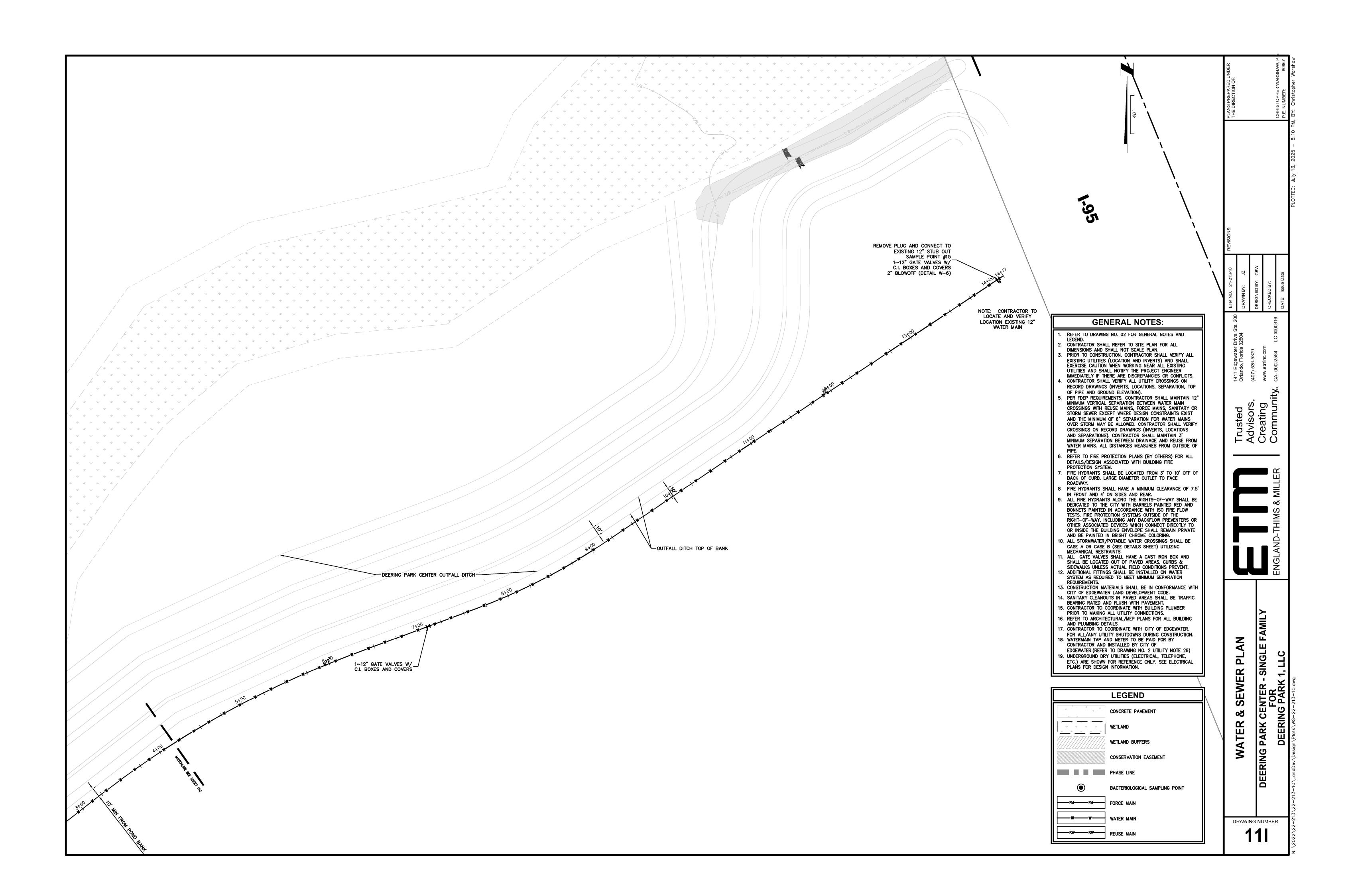


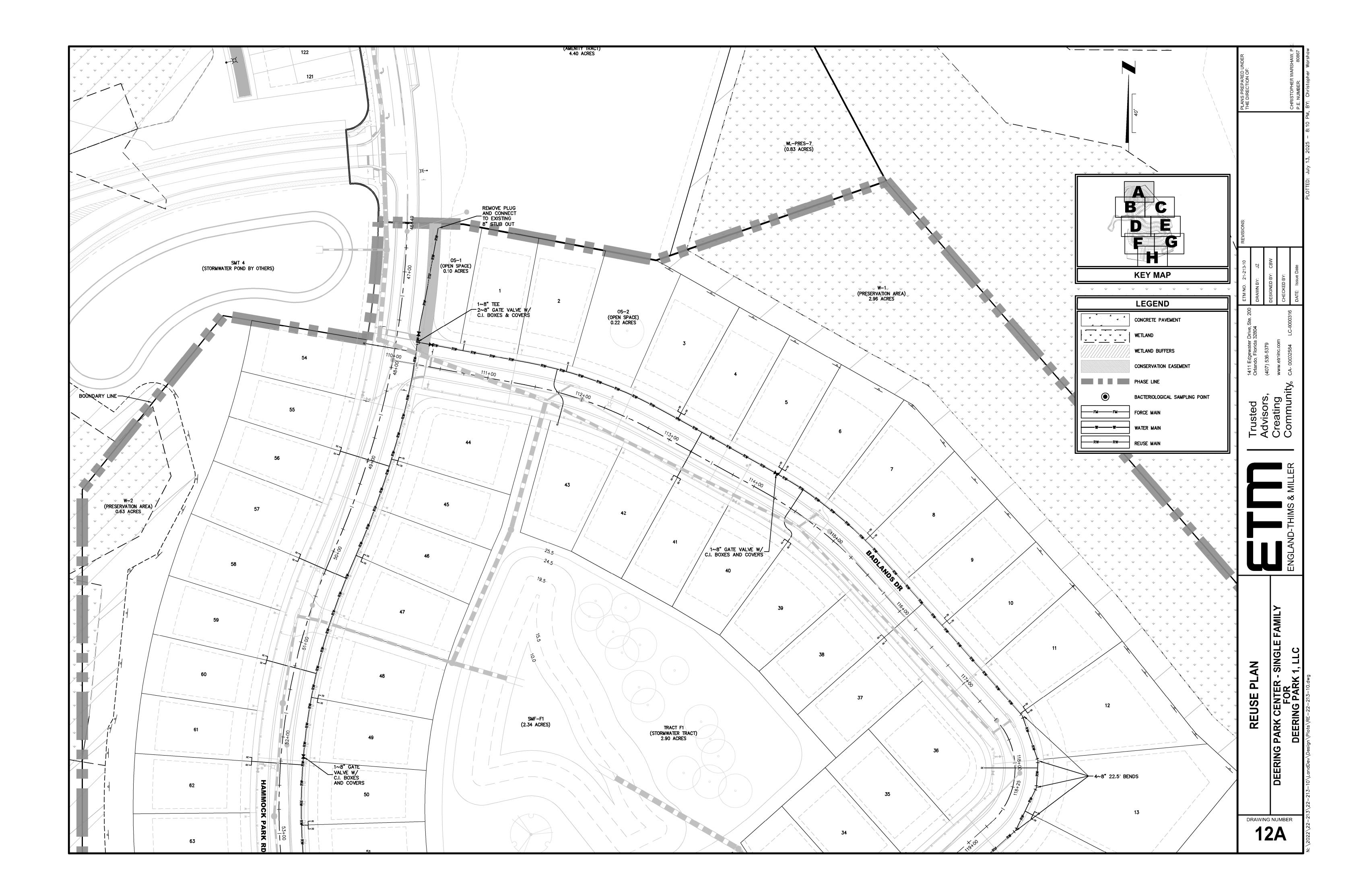




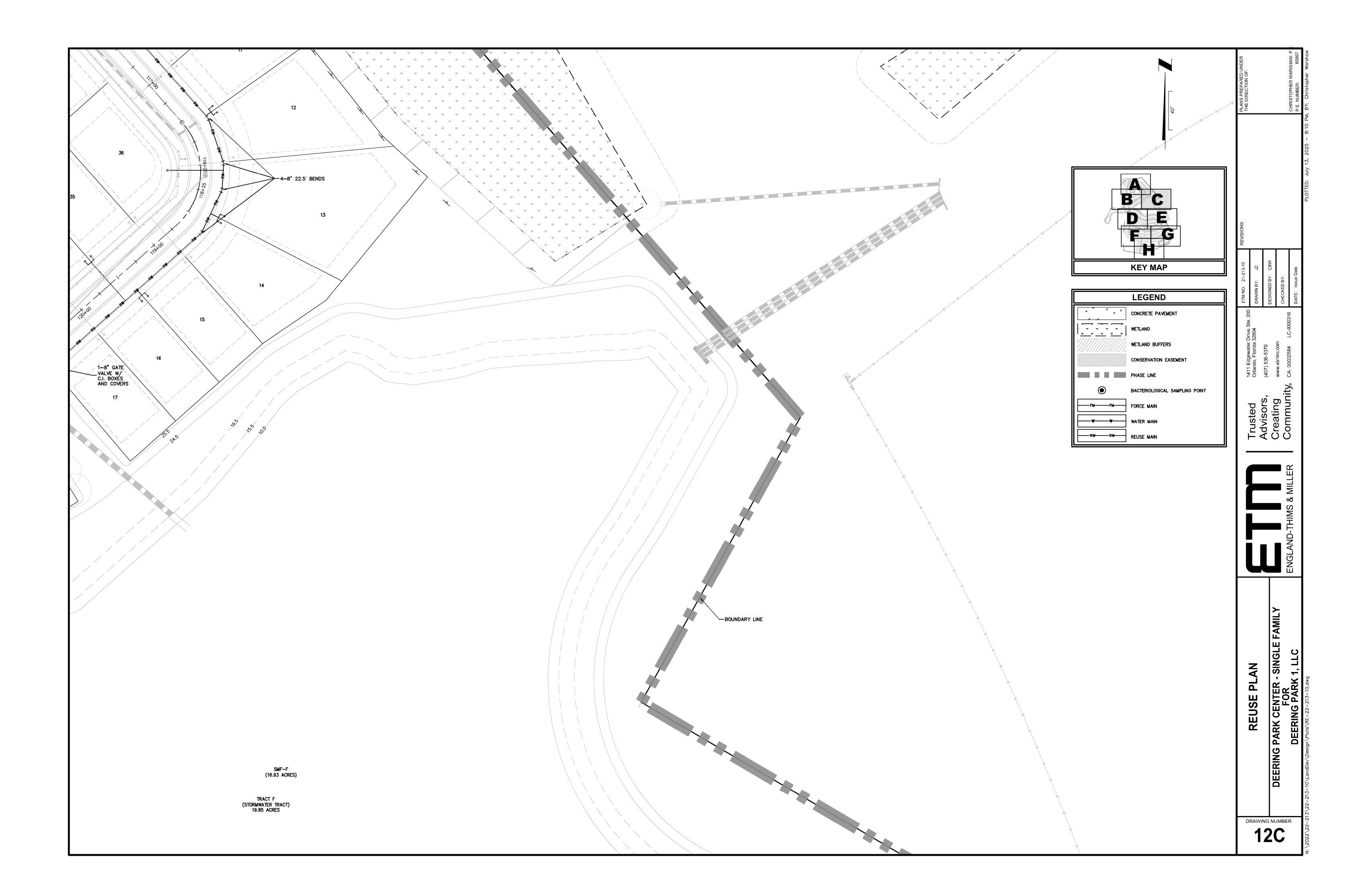


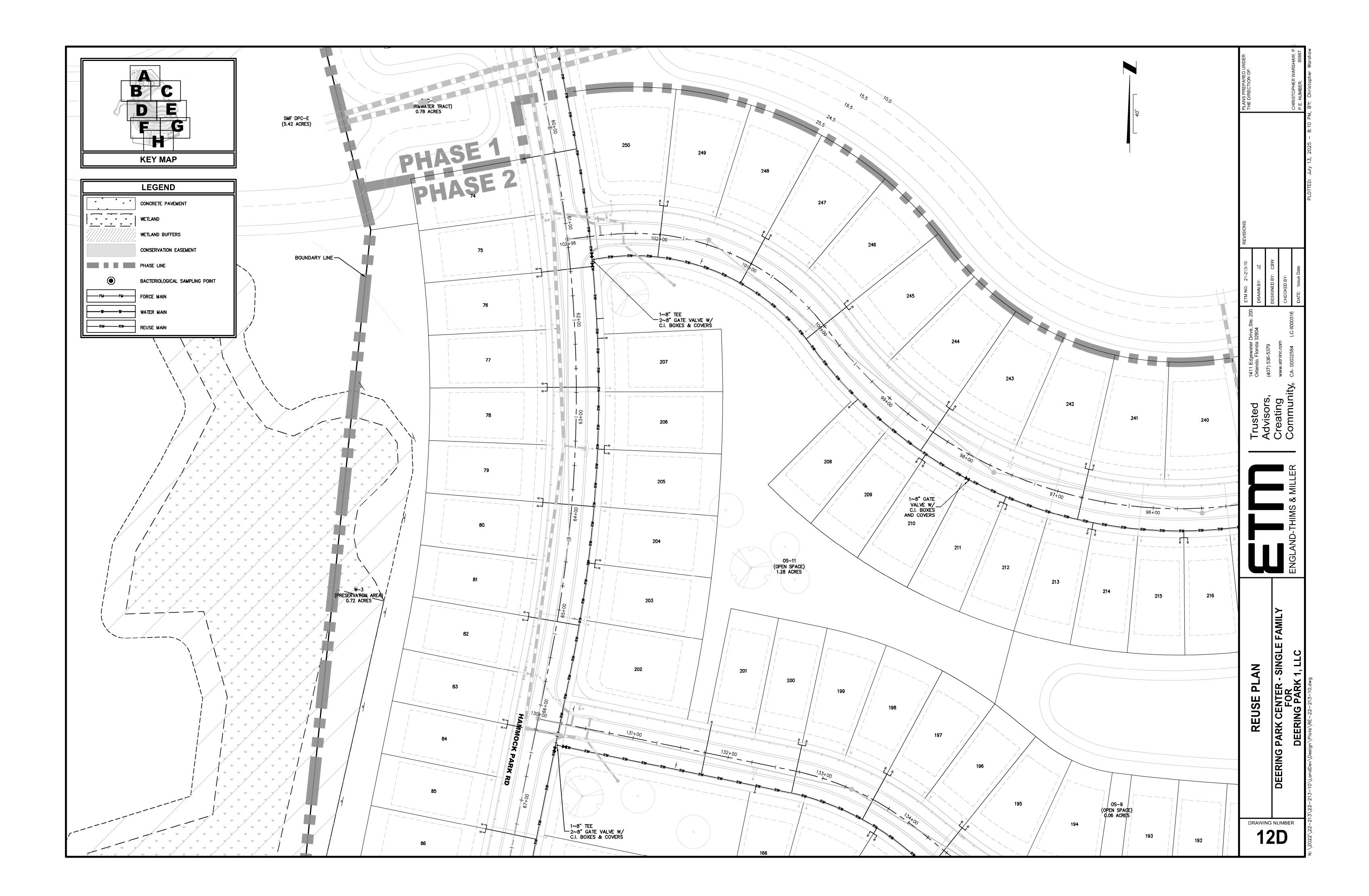


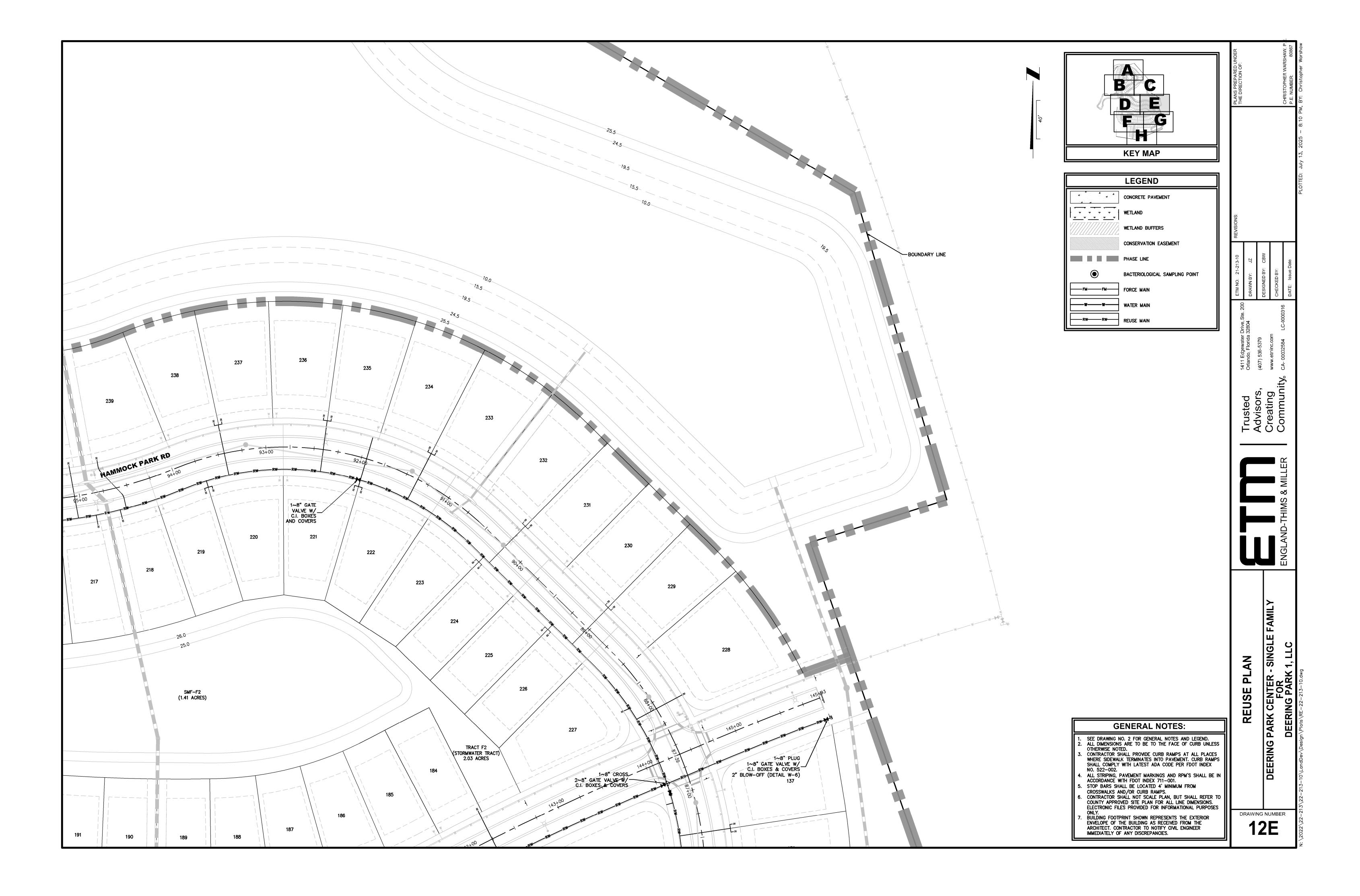


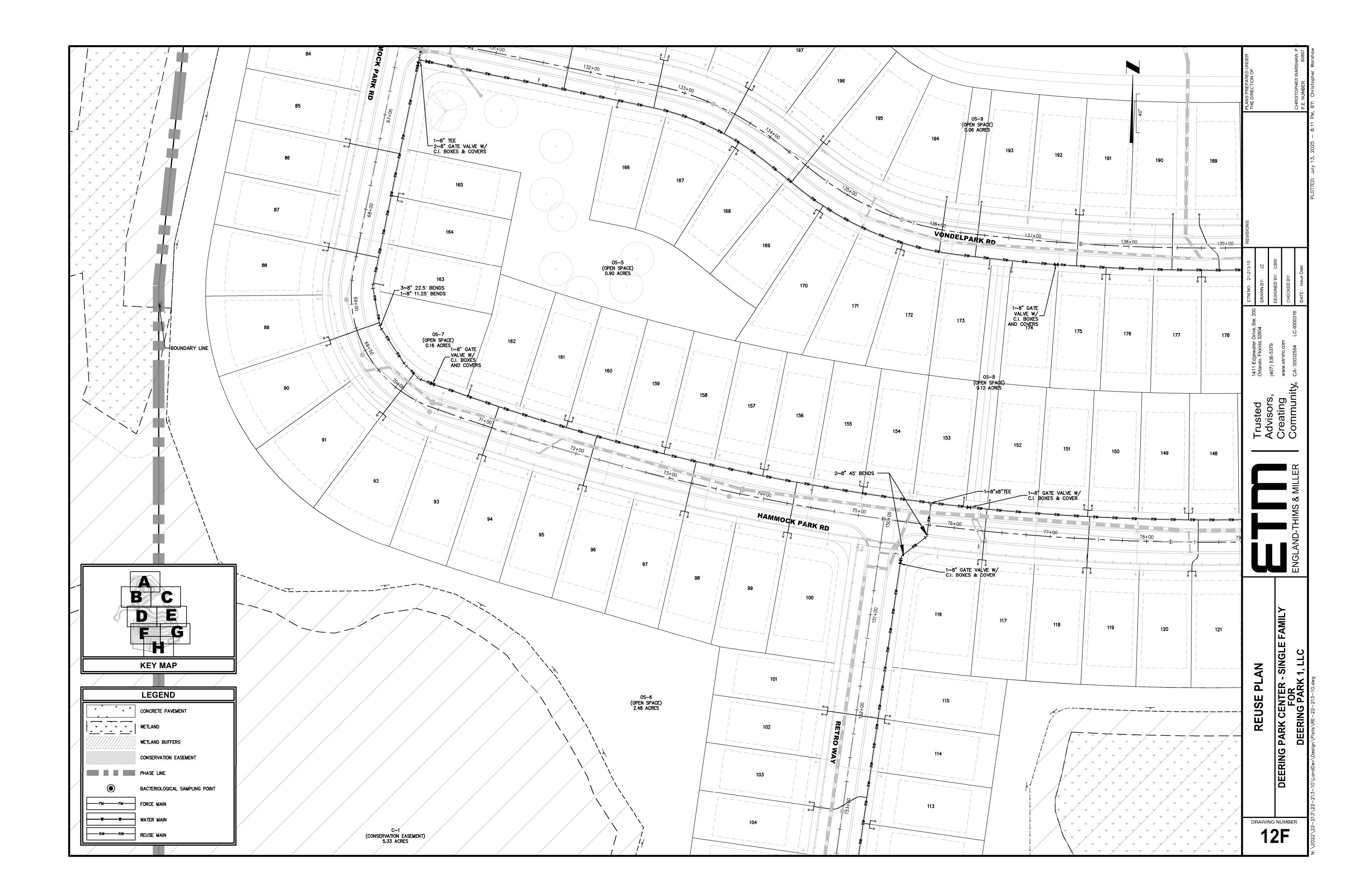


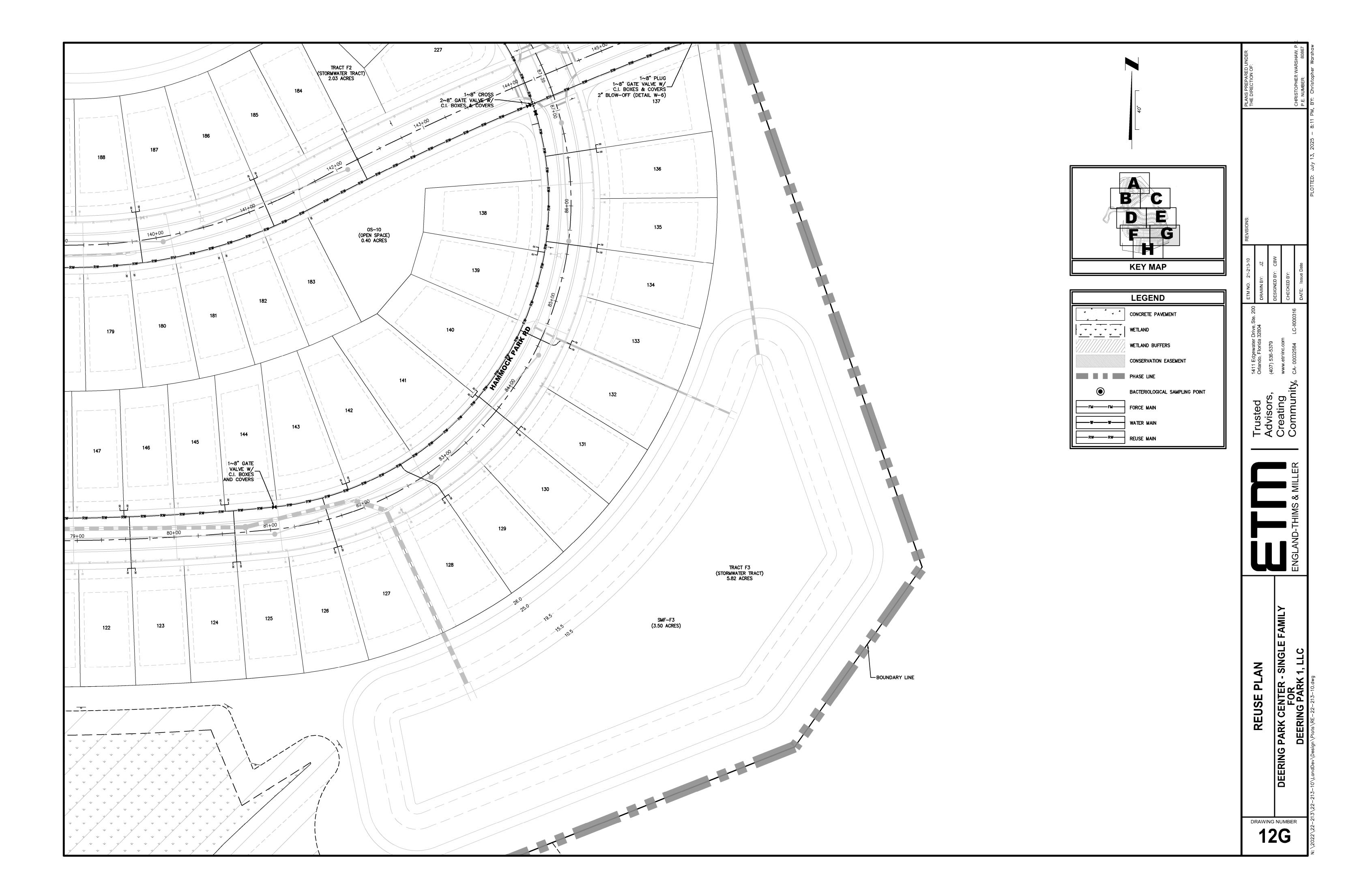


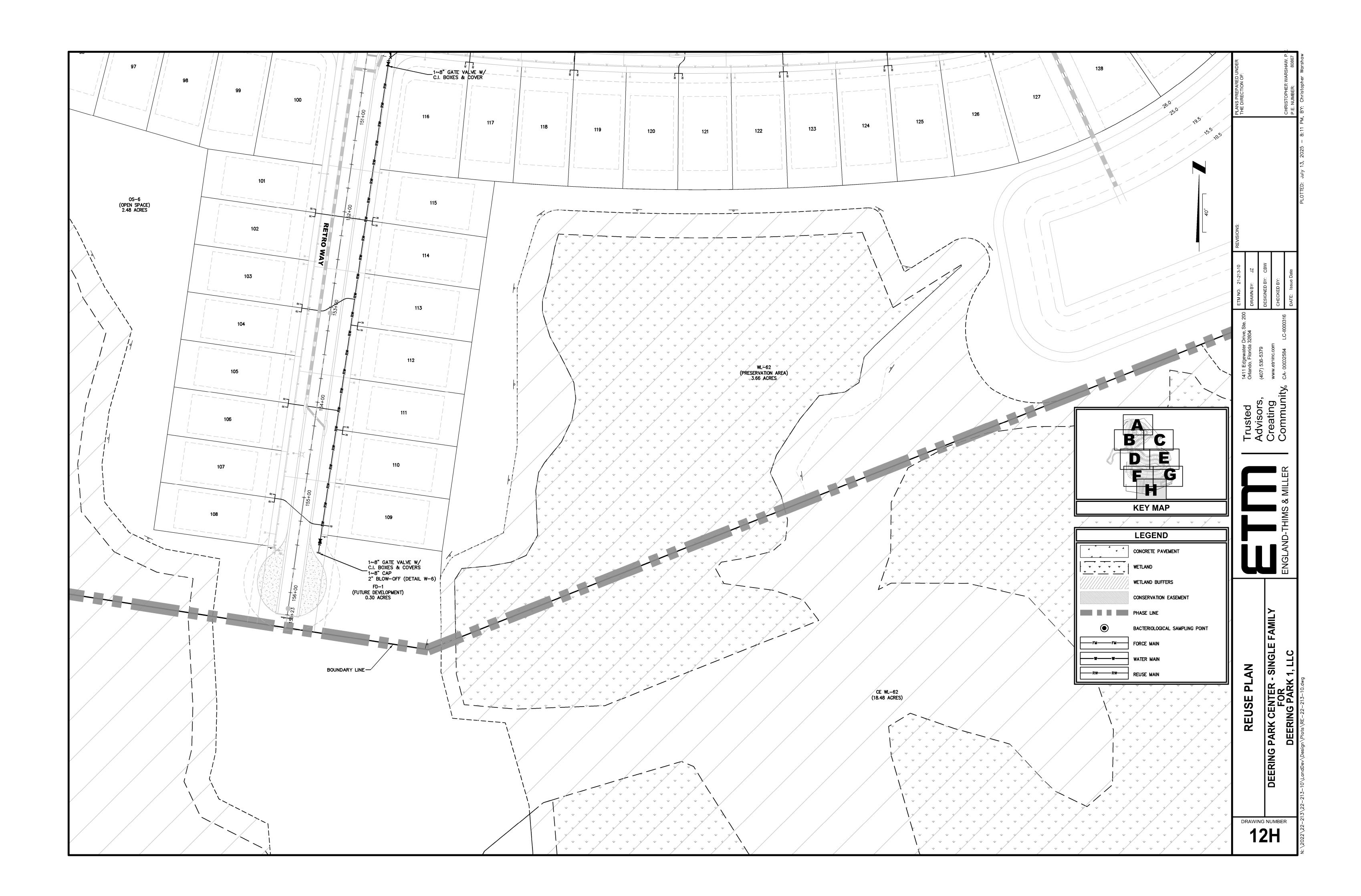


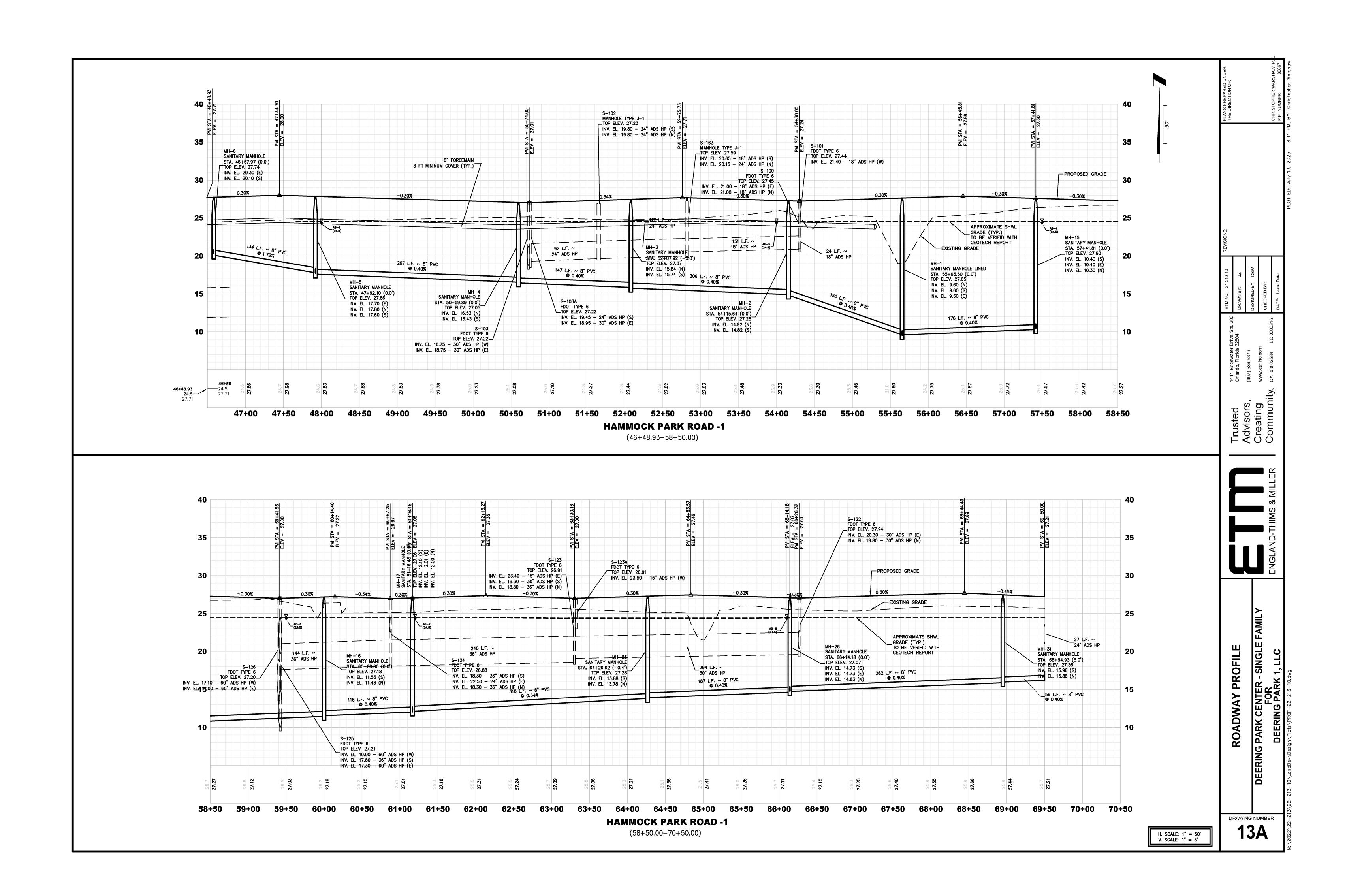


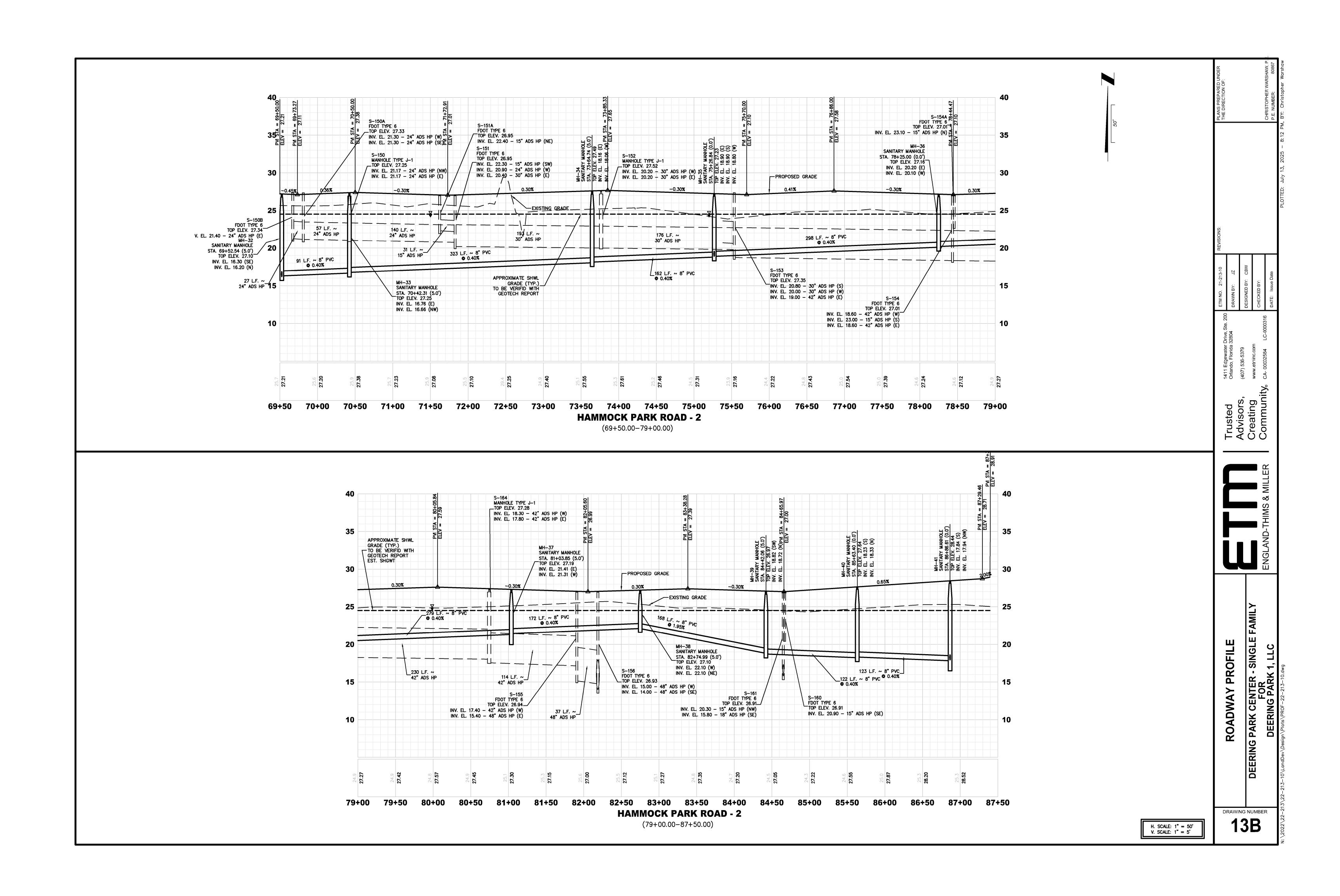


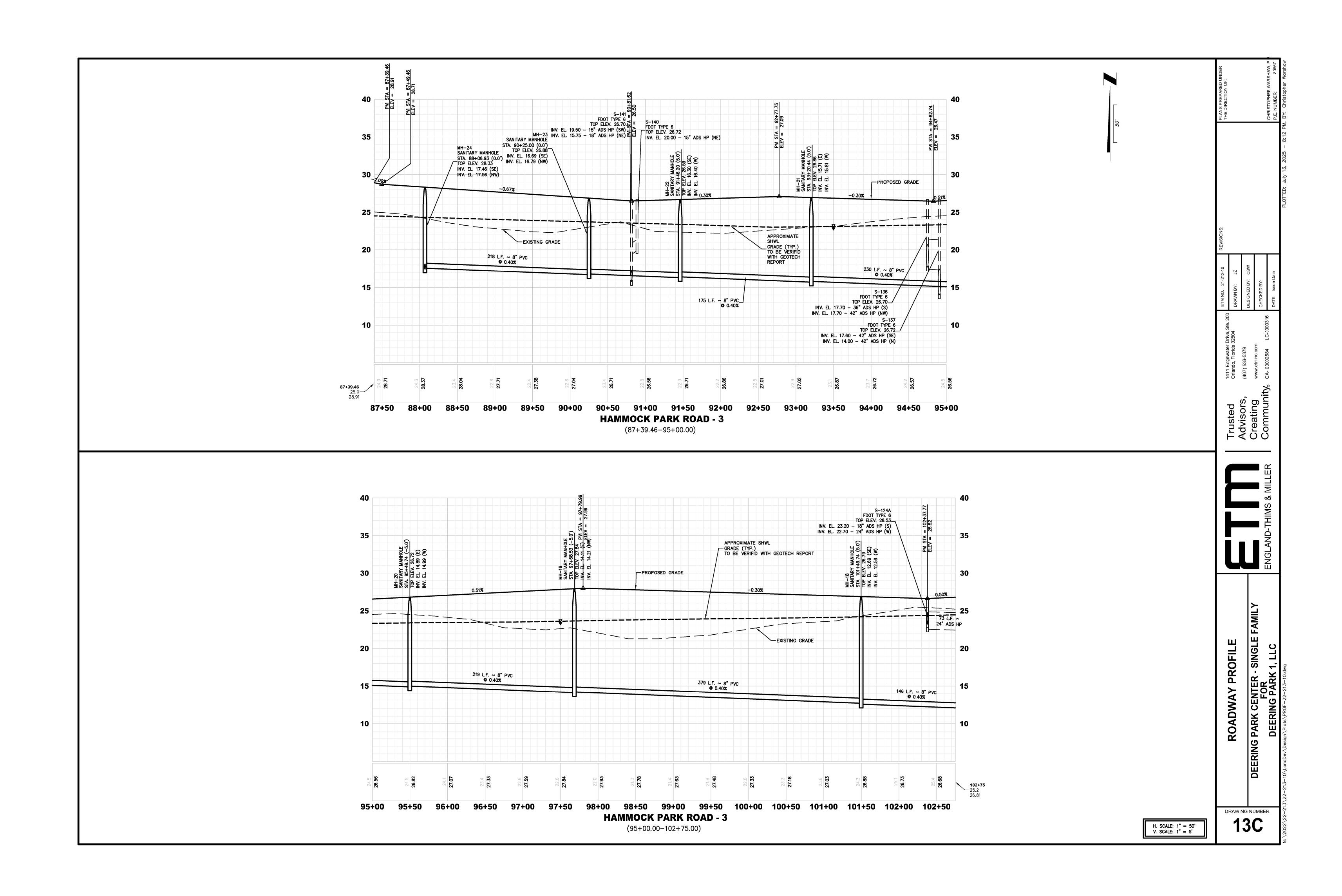


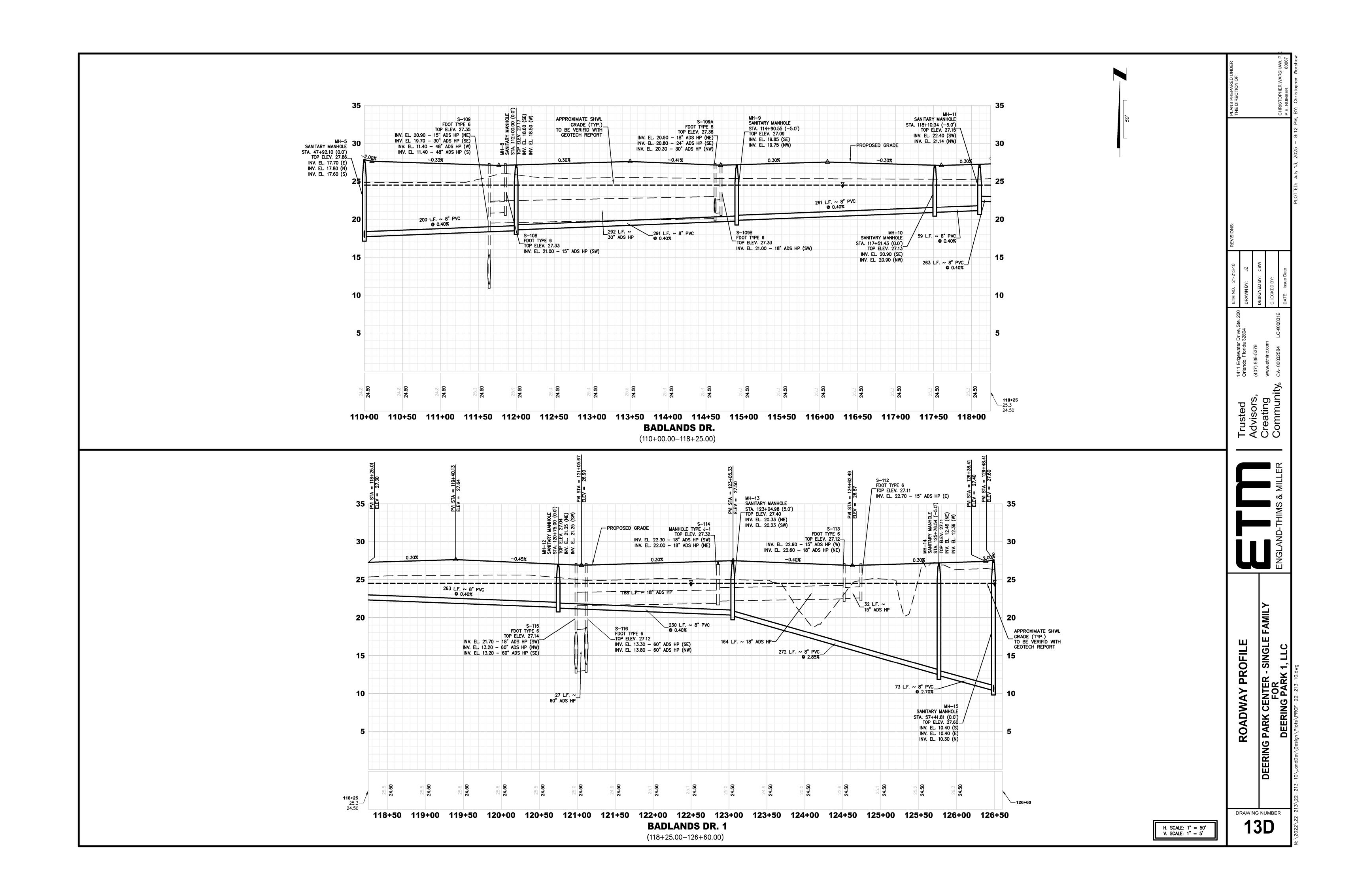


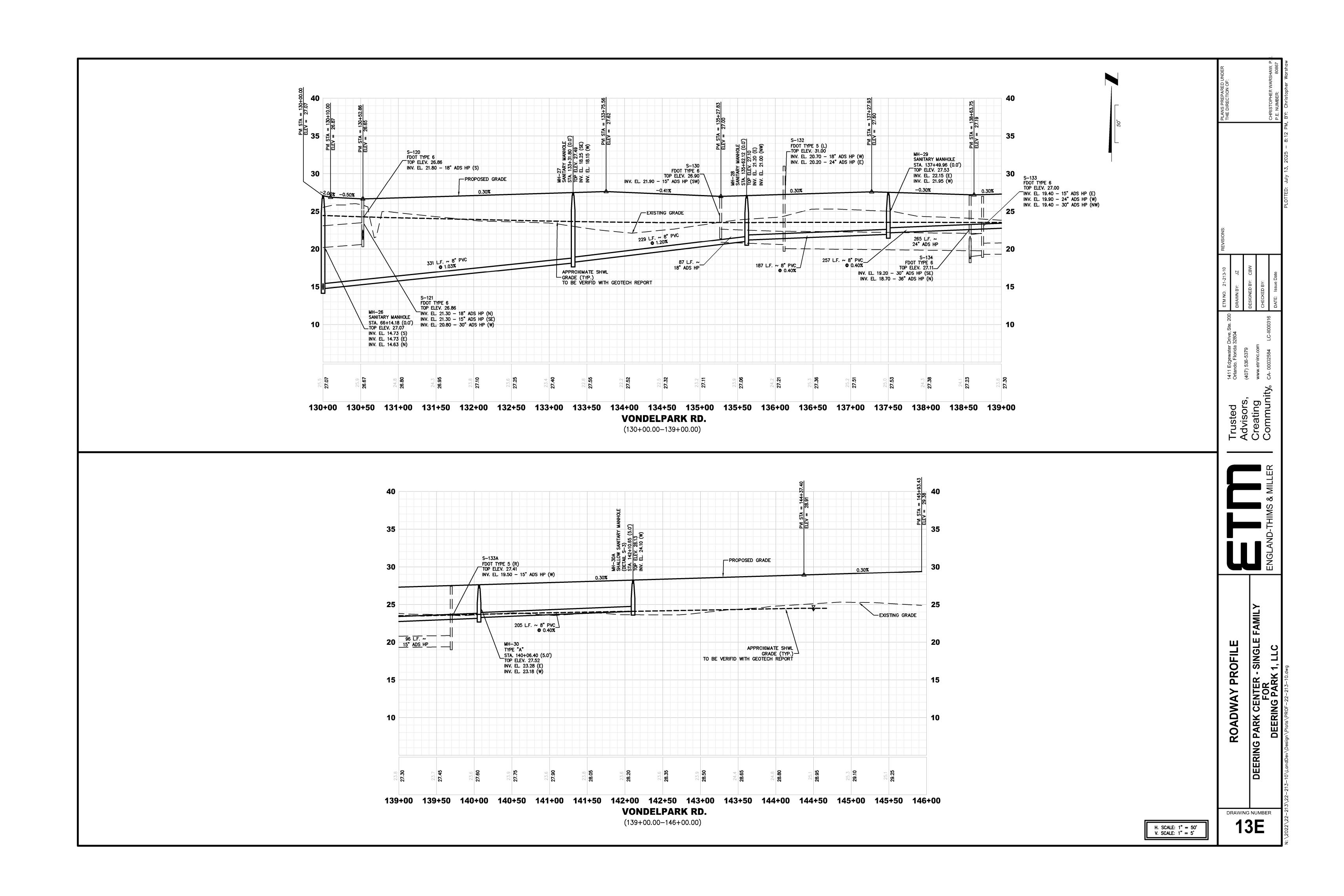


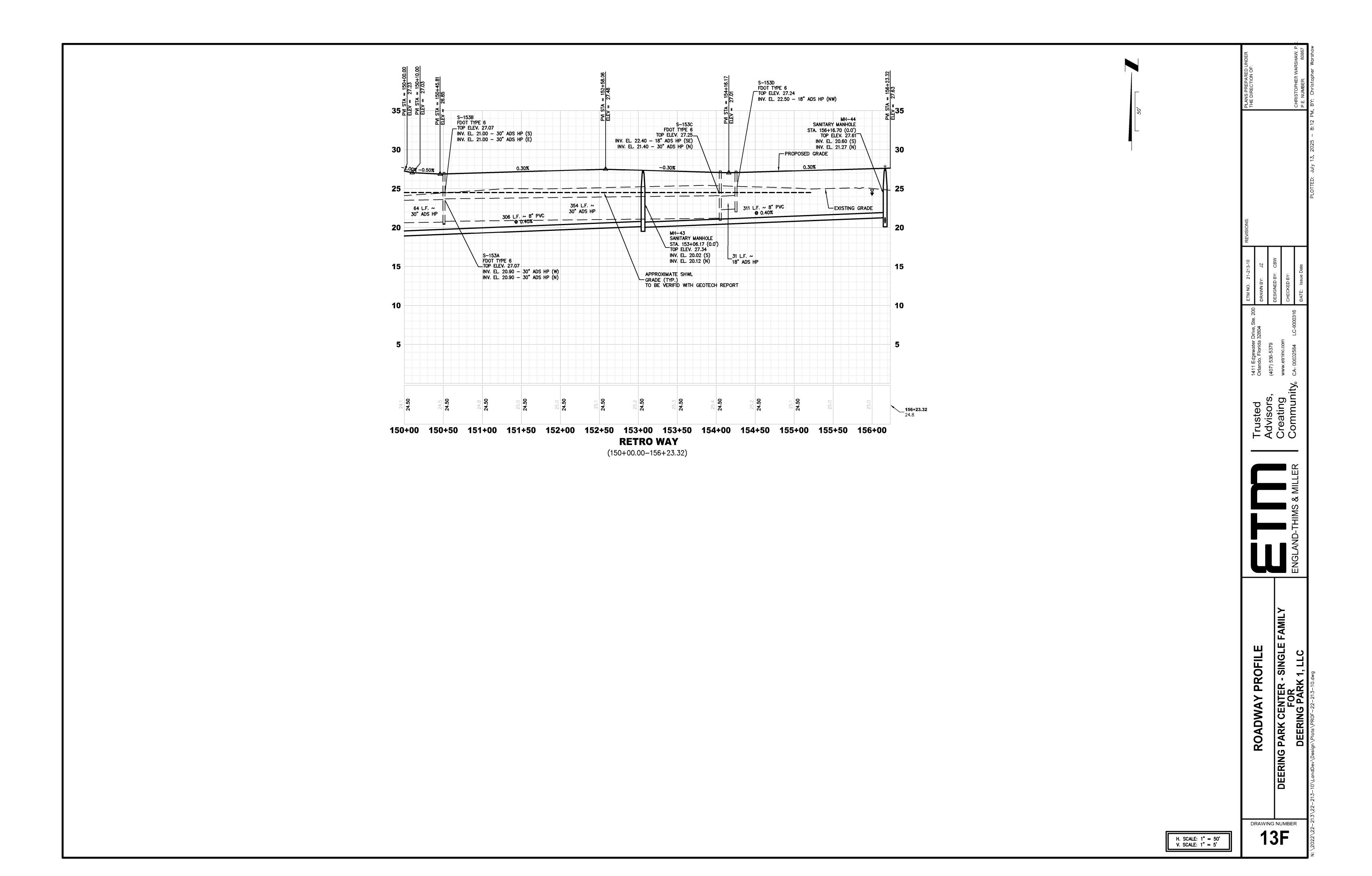


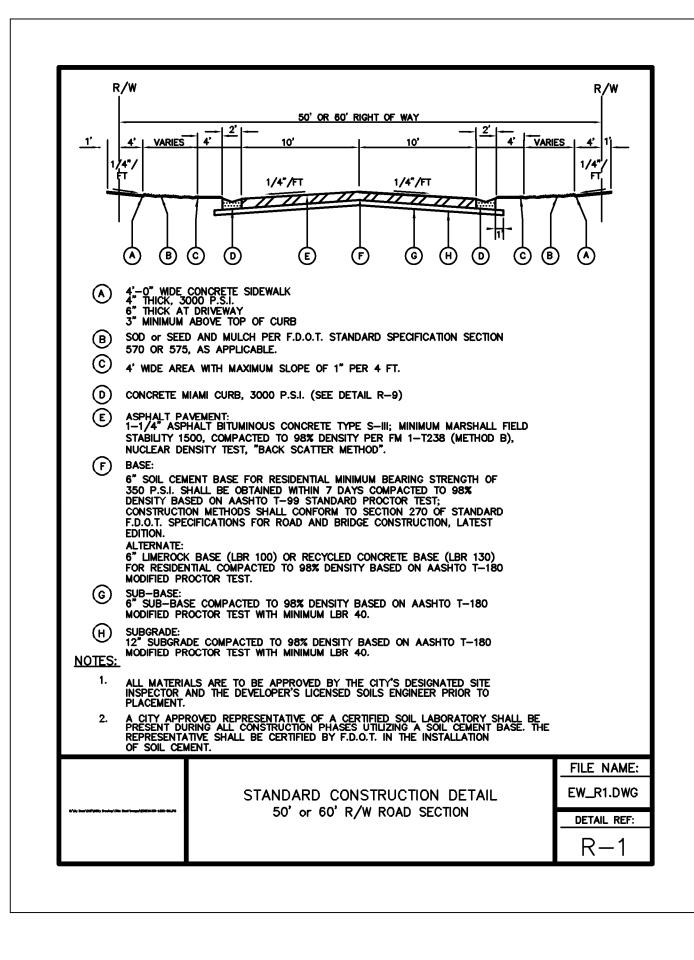


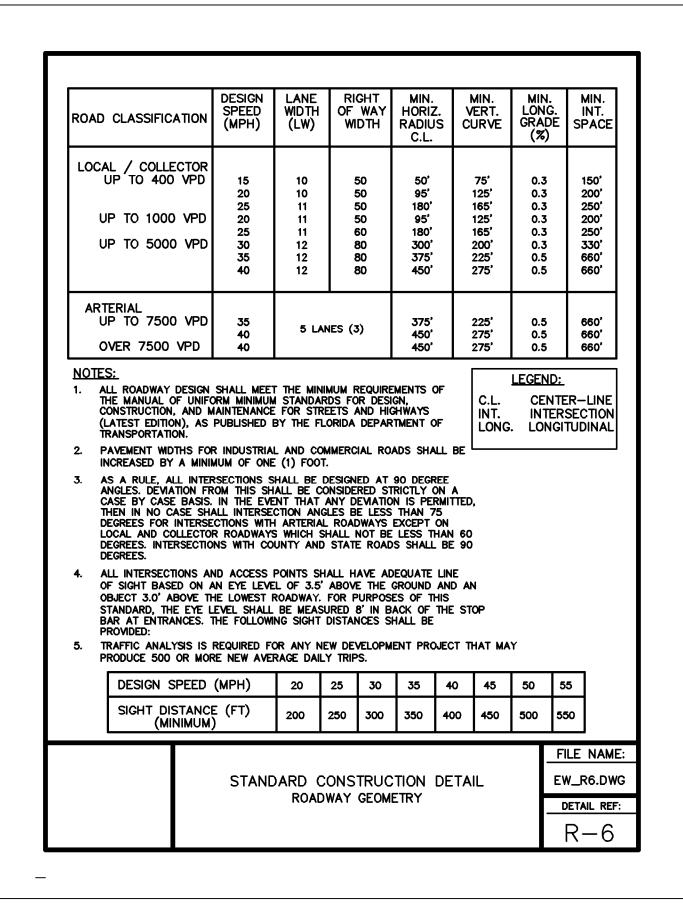


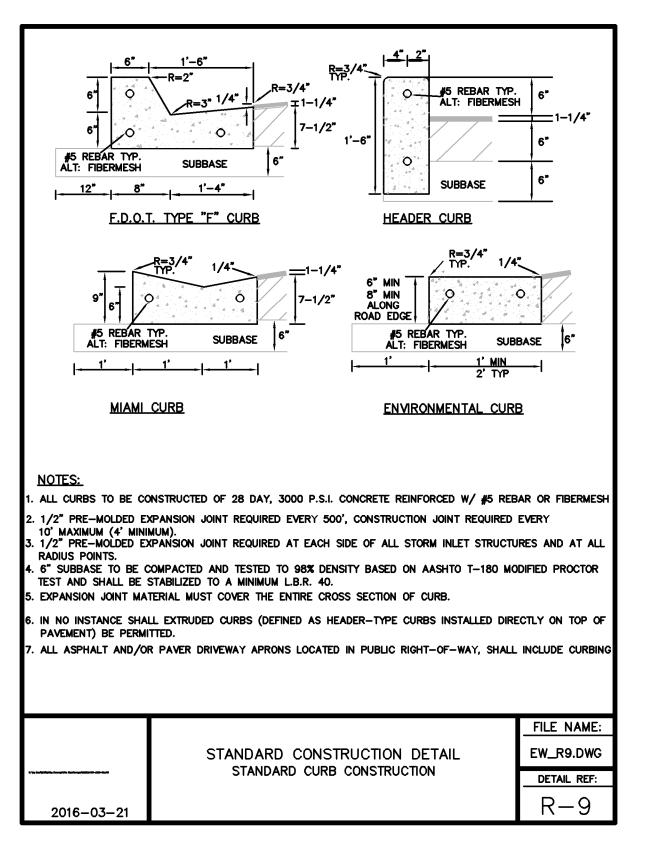












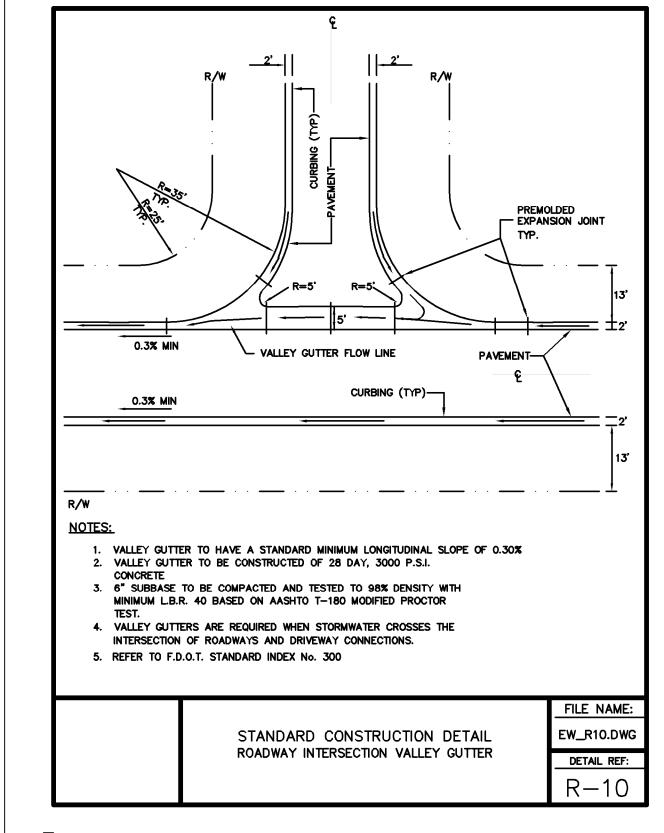
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

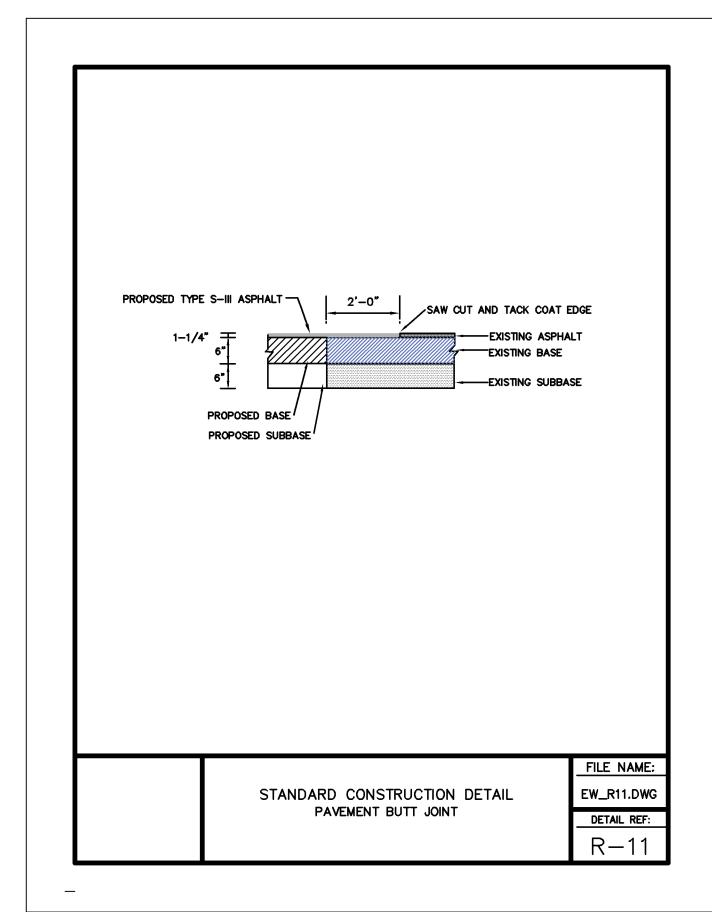
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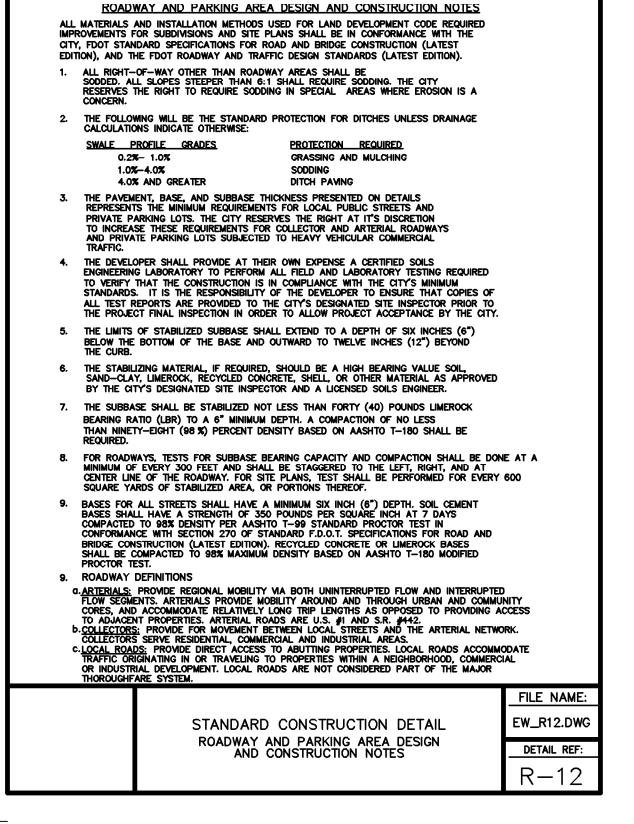
LICENSED SOILS ENGINEER TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE START OF SUBBASE PREPARATION. ALL MIX DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.

10. SOIL CEMENT AND RECYCLED CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY A

CEMENT DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE







INSPECTOR AT THE TIME OF PLACEMENT. IF THE INSPECTOR IS NOT ON SITE THROUGHOUT THE ENTIRE INSTALLATION, ACCUMULATED DELIVERY TICKETS CAN BE PROVIDED TO THE INSPECTOR BY THE CONTRACTOR ON THE FOLLOWING DAY. 12. TESTING OF THE IN-PLACE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A MOISTURE CONTENT AND COMPACTION TEST. 13. PORTLAND CEMENT CONCRETE, LIMEROCK, RECYCLED CONCRETE, OR FULL DEPTH ASPHALT PAVEMENT MAY BE USED IN PLACE OF SOIL CEMENT BASE. ALL BASE AND ROADWAY DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. 14. SOIL CEMENT BASE MATERIAL CONSTRUCTION SHALL BE CONTINUOUSLY SUPERVISED BY A SOILS TESTING LABORATORY AT THE DEVELOPER'S EXPENSE. THE TESTING LABORATORY SHALL PROVIDE AN ON-SITE TECHNICIAN CERTIFIED IN THE INSTALLATION OF SOIL CEMENT WITH THE CERTIFICATION RECOGNIZED BY F.D.O.T. 15. SOIL CEMENT PAVEMENT BASES WITH THE CURE COAT APPLIED SHALL BE ALLOWED TO CURE A MINIMUM OF SEVEN (7) DAYS UNDER NO TRAFFIC PRIOR TO PLACING ANY ASPHALT SURFACE. (TEST REPORTS ARE REQUIRED TO BE DELIVERED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO TRAFFIC USAGE.) 16. RECYCLED CONCRETE CAN BE USED AS AN ALTERNATIVE BASE MATERIAL PROVIDED THE MATERIAL IS A MINIMUM OF 60% CARBONATE OF CALCIUM AND MAGNESIUM. THE MATERIAL SHALL BE LIMITED TO MAXIMUM OF 3% OF WATER SENSITIVE CLAY MATERIAL, LIQUID LIMIT SHALL NOT EXCEED 35 AND BE NON-PLASTIC, AND THE PLASTICITY INDEX SHALL NOT EXCEED 10. THE MATERIAL SHALL NOT CONTAIN ORGANIC MATERIAL, CHERTY OR OTHER EXTREMELY HARD PIECES, LUMPS, BALLS OR POCKETS OF SAND SIZE MATERIAL OF A QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING FINISHING, OR STRENGTH OF THE RECYCLED CONCRETE BASE. FOR BASE APPLICATIONS, AT LEAST 97 % (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1" SIEVE AND FOR SUBBASE APPLICATIONS, AT LEAST 97 % (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1-1/2" SIEVE. FOR BOTH APPLICATIONS, THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST AND THE MINIMUM LBR VALUES ARE TO BE NOT LESS THAN 130. COARSE AGGREGATE USED IN THE RECYCLED CONCRETE SHALL HAVE A MAXIMUM LOSS OF 45 % PER LOS ANGELES ABRASION TEST. ALL MATERIALS SHALL BE WELL GRADED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN SECTION 204, F.D.O.T., STANDARD SPEC. FOR ROAD AND BRIDGE CONSTRUCTION., (LATEST EDITION). . RECYCLED CONCRETE OR LIMEROCK FOR BASE OR SUBBASE APPLICATIONS SHALL BE ALLOWED ON CITY ROADWAYS ONLY WHERE THE LOWEST ELEVATION OF THE ROADWAY SUBBASE IS A MINIMUM OF 6" ABOVE THE SEASONAL HIGH GROUNDWATER TABLE AS CERTIFIED BY A FLORIDA LICENSED PROFESSIONAL SOILS ENGINEER AND SUBSEQUENTLY APPROVED FOR BY THE CITY. IN AREAS NOT MEETING THESE STANDARDS A SOIL CEMENT BASE WILL BE REQUIRED. ALL CRUSHING OF RECYCLED CONCRETE SHALL BE DONE PRIOR TO THE MATERIAL BEING PLACED IN THE ROADWAY. TESTING SHALL HAVE THE SAME REQUIREMENTS AND BE PERFORMED AT THE SAME LOCATION AND INTERVALS AS REQUIRED FOR LIMEROCK. FILE NAME: EW\_R13.DW STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN DETAIL REF: AND CONSTRUCTION NOTES

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 18. DESIGN MIXES AND PRODUCT GRADATION INFORMATION FOR ALL MATERIALS TO BE INSTALLED AS PART OF THE LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR ACCEPTANCE BY THE CITY. THE INFORMATION SHALL BE SUBMITTED NO LESS THAN THREE (3) WORKING DAYS PRIOR TO ANY CONSTRUCTION. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO. INFORMATION TO EVALUATE THE MATERIALS PROPOSED FOR INSTALLATION AS SUBBASE, BASE, AND PAVEMENT FOR ALL ROADWAY AND PARKING AREA SURFACES AS WELL AS SIMILAR INFORMATION FOR ALL OTHER CONCRETE SIDEWALKS, CURBING, AND COMPARABLE STRUCTURES AND APPLICATIONS. PRIOR TO PLACEMENT FLORIDA STATE CERTIFIED BATCH PLANTS MUST CERTIFY TO THE CITY'S RESIDENT PROJECT INSPECTOR THAT THE ASPHALT DELIVERED TO THE SITE IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. 20. EXTRACTION AND GRADATION TESTS ON ASPHALT MIXES SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR EVERY 2500 SQUARE YARDS OF ASPHALT, OR PART THEREOF, TO ENSURE THAT DESIGN MIXES MEET THE CITY STANDARD FIELD TESTING OF THE ASPHALT PAVEMENT SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A COMPACTION TEST. ASPHALT PAVEMENT SHALL BE COMPACTED TO 98% DENSITY PER FM 1-T238 (METHOD B), NUCLEAR DENSITY TEST, "BACKSCATTER METHOD". 22. IN ADDITION TO THE FIELD DENSITY TESTS NOTED, THE CITY RESERVES THE RIGHT TO REQUIRE CORE SAMPLES OF PAVEMENT SECTIONS EXTRACTED AND TESTED BY A CERTIFIED SOILS ENGINEERING LABORATORY AT THE DEVELOPER'S EXPENSE. THE CITY'S DESIGNATED SITE INSPECTOR SHALL DESIGNATE THE LOCATIONS OF THE TEST CORE LOCATIONS. 23. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT 24. ALL ROADWAYS WITH CURB AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MINIMUM LONGITUDINAL SLOPE OF 0.30%. THE ROADWAY CENTERLINE SHALL BE CLEARLY MARKED ON THE DESIGN PLANS. AT A MINIMUM, DESIGN ROADWAY CENTERLINE ELEVATIONS SHALL BE NOTED AT ALL GRADE CHANGES AND AT 100' INTERVALS ALONG THE ROADWAY PROFILE ON BOTH THE DESIGN PLANS AND AS-BUILT DRAWINGS. 25. THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER INCH (1/4") ABOVE THE ADJACENT CONCRETE CURB FOR CURBS COLLECTING AND CONVEYING STORMWATER. 26. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND ALL CONCRETE CURBS SHALL BE CONSTRUCTED WITH 3000 P.S.I. CONCRETE AT 28 DAYS. FILE NAME: EW\_\_R14.DW0 STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN DETAIL REF: AND CONSTRUCTION NOTES

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# ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

- 27. CONCRETE CURBING, SIDEWALKS, PAVEMENT AND SIMILAR CONCRETE AREAS SHALL BE SAW CUT WITHIN 4 TO 18 HOURS OF PLACEMENT. SAW CUTS SHALL BE 1/4" IN WIDTH TO A DEPTH OF 1/4 OF THE TOTAL DEPTH OF CONCRETE OR 1-1/2", WHICHEVER IS LESS. SAW CUTS SHALL BE LOCATED AT INTERVALS OF TEN FEET (10') WITH EXPANSION JOINTS AT STREET INTERSECTIONS, RADIUS POINTS, STRUCTURES, AND ALONG CURVES AT SIXTY FEET (60') INTERVALS. ALL EXPANSION JOINT MATERIAL IS REQUIRED TO BE INSTALLED THROUGH THE ENTIRE DEPTH OF THE CONCRETE CURB. FOR LINEAL SECTIONS OF CURBS, EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF FIVE-HUNDRED FEET (500') AND SHALL BE 1/2" IN WIDTH.
- 28. AN "X" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION
- 29. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEWER SERVICES.
- 30. A "L" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER
- 31. A "A" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL POTABLE WATER
- 32. BLUE REFLECTORS SHALL BE PLACED IN THE MIDDLE OF THE DRIVING LANE ON THE SIDE OF THE ROADWAY AND IN FRONT OF WHERE FIRE HYDRANTS ARE LOCATED.
- 33. THREE (3) CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED (1 IN 14 DAYS AND 1 IN 28 DAYS) FOR EVERY SEVENTY-FIVE (75) CUBIC YARDS OF CONCRETE OR LESS PLACED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AS THEY BECOME AVAILABLE.
- 34. A CONCRETE SLUMP TEST SHALL BE REQUIRED WITHIN THE FIRST 30 CUBIC YARDS OF CONCRETE. THEREAFTER, SLUMP TESTS SHALL BE REQUIRED FOR EVERY THIRTY (30) CUBIC YARDS OF CONCRETE, OR FRACTION THEREOF, WITH COPIES OF THE RESULTS PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR. THE SLUMP TEST SHALL MEET THE REQUIRED MIX DESIGN ON EACH LOAD DELIVERED.
- 35. THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAVEMENT MARKINGS ON ALL ROADWAYS PER CITY, COUNTY, AND STATE REQUIREMENTS. CENTERLINE STRIPES SHALL BE PROVIDED ON EXTENSIONS OF CITY COLLECTOR OR ARTERIAL ROADS, COUNTY ROADS, STATE HIGHWAYS, AND ALONG LOCAL STREETS IN THE VICINITY OF THEIR INTERSECTION WITH THE ABOVE MENTIONED ROADWAYS.
- 36. A FDOT APPROVED STOP SIGN AND A 24"-WIDE WHITE THERMOPLASTIC STOP BAR ARE REQUIRED AT ALL ROADWAY INTERSECTIONS.
- 37. ALL TRAFFIC CONTROL DEVICES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE MAINTENANCE-OF-TRAFFIC (MOT) INSTALLATION AND SUBSEQUENT OPERATION SHALL BE OVERSEEN BY A CONTRACTOR CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, OR EQUIVALENT CERTIFICATION

STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

EW\_R15.DWG DETAIL REF:

FILE NAME:

#### ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

- 38. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR TRAFFIC CONTROL DEVICES TO THE CITY FOR INSTALLATION. STREET SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL INTERSECTIONS, INCLUDING BUT NOT LIMITED TO PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS.
- 39. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY.
- 40. FOUR FOOT (4') WIDE SIDEWALKS SHALL BE PROVIDED ON BOTH SIDES OF ALL
- RESIDENTIAL STREETS. (SEE DETAIL, INDEXES M-2 AND M-3) 41. BIKE PATHS SHALL BE CONSTRUCTED AT A MINIMUM OF SIX-FOOT WIDTH, PREFERABLY EIGHT-FOOT WIDTH AS DIRECTED BY THE CITY IN ACCORDANCE WITH
- THE BICYCLE AND PEDESTRIAN TRAIL MASTER PLAN. 42. STANDARD TURNING RADII FOR INTERSECTIONS:

RESIDENTIAL STREETS WITH STATE & COUNTY ROADWAYS OR MAJOR THOROUGHFARES WITHIN THE CITY

ENTRANCES TO COMMERCIAL SITES OFF OF CITY STREETS INTERSECTIONS INTERIOR IN SUBDIVISIONS

SHOULD VOLUSIA COUNTY OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) DETERMINE THAT LARGER RADII ARE WARRANTED WITHIN THEIR

- RIGHT-OF-WAY, THE LARGER RADII SHALL PREVAIL. 43. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST
- 44. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS (INCLUDING WATER MAINS, SANITARY SEWER MAINS, RECLAIMED WATER MAINS, STORM WATER PIPES AND INLETS, ROADWAYS, AND PARKING FACILITIES) SHALL BE CERTIFIED WITH THE STATE OF FLORIDA BOARD OF PROFESSIONAL REGULATIONS (BPR) FOR THE TYPE OF WORK THAT THEY PERFORM.
- 45. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION WORK OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE LICENSED BY THE STATE OF FLORIDA AND REGISTERED WITH THE CITY. THE LICENSE AND REGISTRATION
- 46. EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT CODE, ALL ELECTRIC, TELEPHONE, TELEVISION LINES AND SIMILAR UTILITIES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE EXPENSE OF THE OWNER, DEVELOPER, AND BUILDER.

STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

EW\_R16.DWG DETAIL REF:

FILE NAME:

W\_R21A.DW

DETAIL REF:

FILE NAME:

# ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

## 47. UTILITY DEPTH:

- A. HIGH VOLTAGE UTILITIES SUCH AS POWER (FEEDER, SERVICE, AND DROPS) SHALL BE BURIED A MINIMUM OF 30 INCHES IN DEPTH.
- B. LOW VOLTAGE UTILITIES SUCH AS PHONE AND CABLE TV SHALL BE BURIED A MINIMUM OF 24 INCHES IN DEPTH FOR FEEDER AND SERVICES. SERVICE DROPS SHALL BE BURIED A MINIMUM OF 18 INCHES IN DEPTH.
- C. IN NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30" FROM FINISHED GRADE TO THE TOP OF PIPE FOR POTABLE WATER MAINS, SANITARY SEWER MAINS, AND RECLAIMED WATER MAINS. HOWEVER, IN THE EVENT THAT THIS CONDITION CANNOT BE MET DUE TO UNANTICIPATED CONFLICTS DURING THE CONSTRUCTION PROCESS, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY PUBLIC UTILITIES
- 48. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.

#### TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING

#### A. <u>MATERIALS</u>

THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTIONS OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION

- LABORATORY CONTROL AND CERTIFICATES
- SPECIFICATIONS . SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OR TENTATIVE SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST.
- TEST & CERTIFICATES. THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDITIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR, AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES.
- A. SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION. B. PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS.
- C. SOIL CEMENT MIX DESIGNS AND COMPRESSIVE STRENGTH TESTS (FOR SOIL CEMENT ROAD BASE ONLY).
- D. SUPERVISION OF ALL SOIL CEMENT BASE CONSTRUCTION. ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION. ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD
- STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES. CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT,
- CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS.
- H. COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE. INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS.
- CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS. J. PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.

STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING

FILE NAME: W\_R18.DWG DETAIL REF:

### SUBDIVISION TECHNICAL SPECIFICATIONS: SODDING. SEEDING AND MULCHING

- SCOPE OF WORK THE WORK IN THIS SECTION CONSISTS OF FURNISHING AND COMPLETELY INSTALLING SOD, OR SEED AND MULCH OVER THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM SPECIFICATIONS OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AS OUTLINED IN SECTIONS 570 (GRASSING BY SEEDING) AND 575 (SODDING). IN ADDITION, ALL WORK SHALL MEET THE MINIMUM REQUIREMENTS OF THE CITY.
- B. MATERIALS GRASS SEED SHALL BE A MIXTURE OF: PENSACOLA BAHIA

(USE 50 % SCARIFIED SEED)

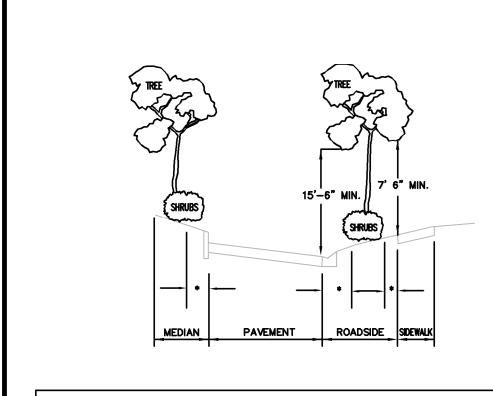
IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET. SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED ABOVE, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED PROJECT LANDSCAPE INSPECTOR PRIOR TO USE. MULCH USED SHALL BE STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR

OF PANGOLA, PEANUT, COASTAL BERMUDA, OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM UNDESIRABLE WEED AND OTHER UNDESIRABLE GRASS. METHODS. GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL

SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE.

APPROXIMATELY ONE INCH (1"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY

> FILE NAME: EW\_R20.DWG STANDARD CONSTRUCTION DETAIL SUBDIVISION DETAIL REF: TECHNICAL SPECIFICATIONS: SODDING, SEEDING AND MULCHING



		ROADWAY	CLEAR ZONES	(*)	
	DESIGN SPEED (MPH)				
TYPE FACILITY	25 & BELOW	30	35	40	45+
DISTANCE FROM EDGE OF PAVEMENT	6'	6' LOCAL 10' COLLECTOR 14' ARTERIAL	6' LOCAL 10' COLLECTOR 14' ARTERIAL	10' COLLECTOR 14' ARTERIAL	F.D.O.T. STANDARD
DISTANCE FROM SIDEWALK	1.5	1.5	1.5	1.5	F.D.O.T. Standard

\* SEE NOTES ON SHEET R-21B \*

STANDARD CONSTRUCTION DETAIL ROADWAY AND MISCELLANEOUS LANDSCAPING DESIGN AND CONSTRUCTION NOTES

ROADWAY AND MISCELLANEOUS LANDSCAPING DESIGN AND CONSTRUCTION NOTES (CONTD.

STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA\_DESIGN

AND CONSTRUCTION NOTES

## NOTES:

- THE CLEAR ZONE MAY BE REDUCED ON A CASE BY CASE BASIS IF THE MINIMUM OFFSET CANNOT BE REASONABLY OBTAINED OR IF A NON-MOUNTABLE CURBE TYPE
- TREES IN EXCESS OF 12" CALIPER AT MATURITY AND MULTI-TRUNKED PALMS SHALL BE SET BACK TO TWICE THE MINIMUM CLEAR ZONE (2 X \*).
- WHERE PAVEMENT WIDENING IN ACCORDANCE WITH FDOT STANDARDS IS NOT PROVIDED IN HORIZONTAL CURVES, ADDITIONAL CLEAR ZONE SHALL BE PROVIDED EQUAL TO THE REQUIRED PAVEMENT WIDENING.
- 4. CLEAR ZONES ON CURBED ROADS SHALL BE MEASURED FROM THE FACE OF CURB OR FROM THE EDGE OF THE THROUGH LANE ON RURAL ROADS. CURBED STREETS ARE FOR HIGH BACK CURBS ONLY.
- SHRUBS ADJACENT TO SIDEWALKS AND WITHIN INTERSECTION SIGHT TRIANGLES CANNOT EXCEED 24" ABOVE THE LOWEST ADJACENT ROADWAY GRADE. ALL OTHER SHRUBS MUST BE LESS THAN OR EQUAL TO 30 INCHES IN HEIGHT.
- INSTALLATION OF LANDSCAPING IN PUBLIC RIGHTS-OF-WAY REQUIRES EXECUTION OF A "USE AGREEMENT" BETWEEN THE DEVELOPER AND THE CITY. FOR INSTANCES WHERE THE STREETS AND PRIVATE AND PUBLIC UTILITY EASEMENTS ARE PROVIDED, THE DEVELOPER MAY BE REQUIRED TO OBTAIN A RELEASE FROM THE FRANCHISE UTILITIES IN ORDER TO INSTALL THE LANDSCAPING IMPROVEMENTS.
- LANDSCAPING PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
- SHRUBS, UNDERSTORY, TREES AND PALMS SHALL BE ALLOWED IN THE RIGHT-OF-WAY WITH EXISTING AND PROPOSED UTILITIES. SHADE TREES, ESPECIALLY THOSE WITH AGGRESSIVE ROOT SYSTEMS, WILL REQUIRE SPECIFIC CITY APPROVAL.
- SHADE TREES MUST NOT BE PLANTED UNDER OR DIRECTLY ADJACENT TO OVERHEAD UTILITIES THAT WOULD REQUIRE EXCESSIVE PRUNING TO AVOID THE UTILITY LINES.
- . TREES WITH AGRESSIVE ROOT SYSTEMS SHALL REQUIRE SOME FORM OF ROOT GUIDING SYSTEM TO PREVENT THE UPHEAVAL OF ADJACENT ROADWAY PAVEMENT AND/OR

STANDARD CONSTRUCTION DETAIL ROADWAY AND MISCELLANEOUS LANDSCAPING DESIGN AND CONSTRUCTION NOTES

FILE NAME: W\_R21B.DW DETAIL REF: R - 21E

FILE NAME:

W\_R17.DW

DETAIL REF:

ATTACH FILTER FABRIC TO POST BACKFILL AND COMPACT ALLOWING 1 FT EXTENSION INTO EXCAVATED SOIL EXCAVATE A TRENCH THE TRENCH AS SHOWN SILT FENCE DETAIL F.D.O.T. INDEX NO. 102 1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DESIGN STANDARDS CURRENT EDITION. 2. CONTRACTOR SHALL PROVIDE SILT FENCES AND HAY BALES AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONST. 3. CONTRACTOR SHALL ROUGH GRADE STORM-WATER SWALES AND RETENTION AREAS PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS. 4. CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SJRWMD.

> STANDARD CONSTRUCTION DETAIL SILT FENCE TURBIDITY BARRIER

W\_R22.DW DETAIL REF:

FILE NAME:

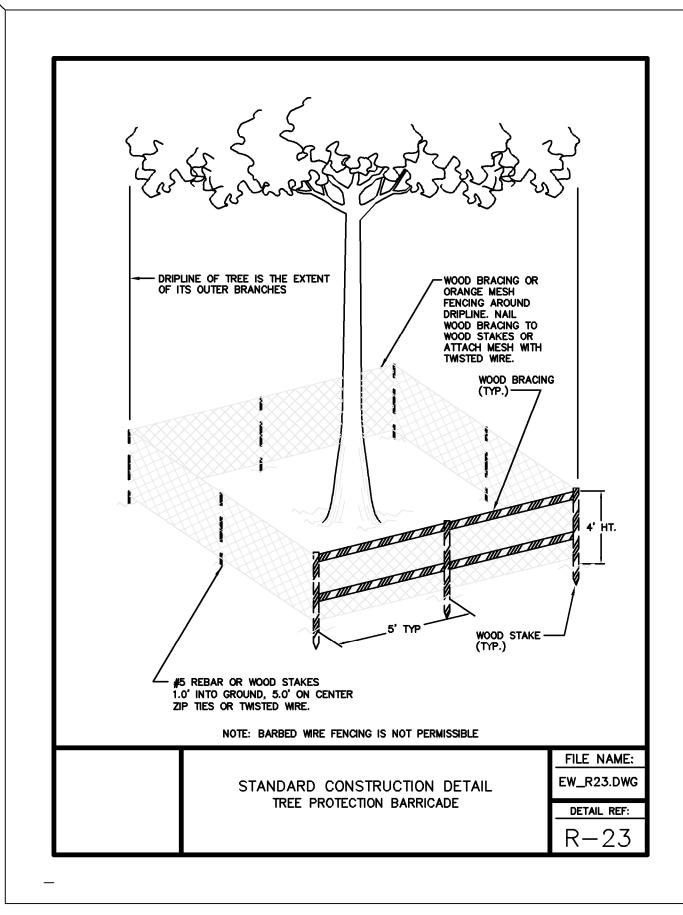
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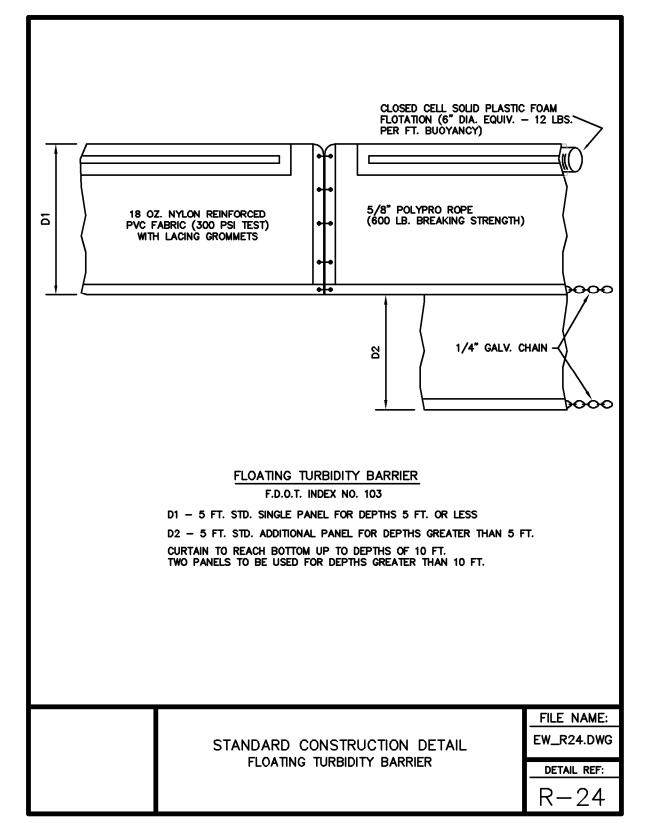
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CONTRACTOR REQUIREMENTS FOR SITE CLEARING. GRADING. AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER"

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER—STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.

2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.

3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, HAY BALES, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES.

5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, CONSERVATION EASEMENTS AND WEILANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS,

(4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY
ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL
EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES
WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED
LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES
THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL
SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE—SPECIFIC
CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION

6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE, IN LIEU OF INSTALLING EITHER WOOD BRACING OR ORANGE MESH FENCING. THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN ADDITIONAL CONSTRUCTION FENCING OR WOOD BRACING SHALL BE REQUIRED.

CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.

7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN THIRTY DAYS. - DISTURBED AREAS IN CITY RIGHT-OF-WAYS OR CITY PROPERTY SHALL BE SODDED.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN TWENTY DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.

> STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

FILE NAME: W\_R25.DW DETAIL REF:

CONTRACTOR REQUIREMENTS FOR SITE CLEARING. GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES (CONTD.)

9. FOR INDIVIDUAL CONSTRUCTION PROJECTS INVOLVING MULTIPLE PHASES, UPON COMPLETION OF EACH PHASE OF THE PROJECT, SEEDING AND MULCHING AND OR/ SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION.

10. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED.

11. ANY BURNING OF CLEARED MATERIALS MUST BE INSPECTED AND PERMITTED ON A DAILY BASIS. CONTACT THE CITY FIRE MARSHALL AT 424-2412 PRIOR TO EACH DAY OF DESIRED BURNING.

13. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE

12. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.

14. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.

15. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS

16. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.

17. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.

18. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT.

19. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.

20. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.

21. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.

FILE NAME: STANDARD CONSTRUCTION DETAIL W\_R26.DW CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DETAIL REF: DESIGN AND CONSTRUCTION NOTES

Trusted Advisors, Creating Community,

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DRAWING NUMBER

ON RESIDENTIAL PRIVATE PROPERTY TRANSVERSE LONGITUDINAL (SINGLE FAMILY OR DUPLEX) (FROM ROAD TO PROPERTY) . IMPROVING A SHELL ROAD 18' MIN - 50% R/W MAX 9' MIN - 24' MAX (CUMULATIVE) ≤ 30 MPH: MAX 10' TOTAL ≤30-45 MPH: R=25' MIN N/A (SEE NOTE 5) >45 MPH: FDOT STANDARD WIDER THAN DRIVEWAY GEOMETRY 35-45 MPH: R=25' MIN (SEE NOTE 5) >45 MPH: FDOT STANDARD ALLOWABLE ASPHALT (PER DETAIL R-1, MATERIALS: ITEMS E. F. & G) ASPHALT (PER DETAIL R-1, ASPHALT (PER DETAIL R-1, ITEMS E, F, & G) ITEMS E, F, & G) ITEMS E, F, & G) CONCRETE (PER DETAIL R-19) | CONCRETE (PER DETAIL R-19) | CONCRETE (PER DETAIL R-19) PAVERS (OR SIMILAR) THE FOLLOWING ARE BY WRITTEN CONSENT ONLY: THE FOLLOWING ARE BY WRITTEN CONSENT ONLY: TURFBLOCK (OR SIMILAR) IMPROVED GRANULAR MAT'LS
PAVED WHEELPATHS PAVERS (OR SIMILAR) PAVERS (OR SIMILAR) TURFBLOCK (OR SIMILAR) TURFBLOCK (OR SIMILAR) IMPROVED GRANULAR MAT'LS PAVED WHEELPATHS THE FOLLOWING ARE NOT ALLOWED; GRANULAR MATERIALS PAVED WHEELPATHS 1. PAVERS, GRAVEL, MILLINGS AND OTHER IMPROVED GRANULAR OR NON-UNIFORM SURFACES ARE ONLY ALLOWED IN LIMITED APPLICATIONS WITHIN THE CITY RIGHT-OF-WAY BY WRITTEN CONSENT OF THE TECHNICAL REVIEW COMMITTEE. SUCH SURFACES ARE NOT CONSIDERED EQUAL TO HARDSCAPE PAVING (I.E. CONCRETE OR ASPHALT). PROPERTY OWNERS WISHING TO INSTALL SUCH SURFACE ADJACENT TO THEIR PROPERTY SHALL EXECUTE A HOLD HARMLESS AGREEMENT INDEMNIFYING THE CITY AGAINST THE MAINTENANCE, REPAIR, AND/OR REPLACEMENT OF SIMILAR SURFACE. P. FOR ASPHALT PAVEMENT, REFER TO ITEMS E, F, & G OF DETAIL R-1. FOR CONCRETE PAVEMENT, REFER TO DETAIL R-19. CAN BE MIN 4" THICK ON RESIDENTIAL PROPERTY WITH (THE LATEST VERSION OF FDOT SPECIFICATIONS SHALL BE ACCEPTED IN LIEU OF THE ABOVE.) FOR ALL OTHER SURFACES: 12" SUBBASE COMPACTED TO 98% MAX DENSITY MODIFIED PROCTOR ASSHTO T-180 MIN LBR=40

3. FOR IMPROVED GRANULAR SURFACE (E.G. ANY GRANULAR SURFACE OTHER THAN SHELL OR DIRT):

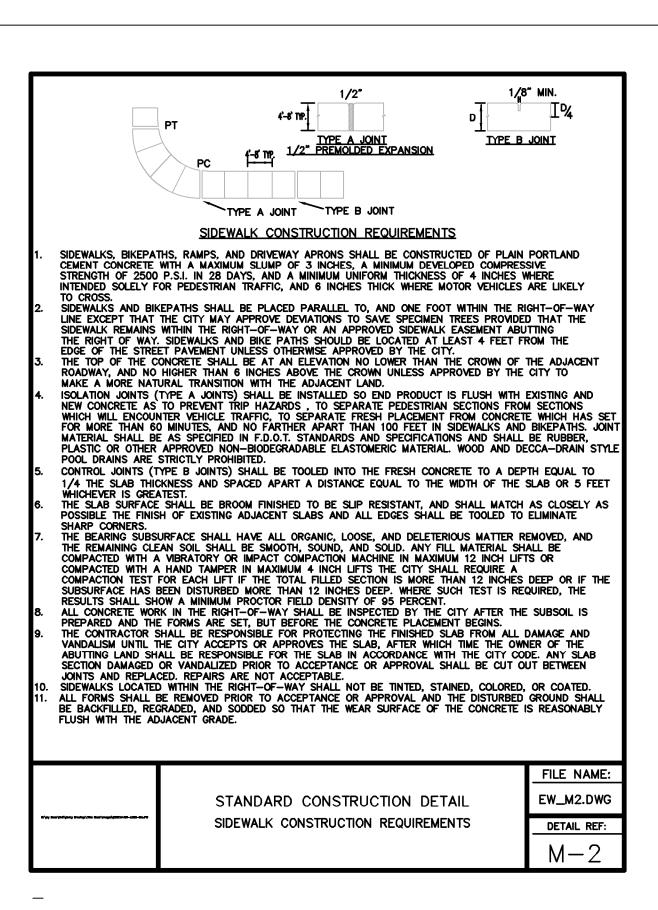
- CONSTRUCT CURBING ALONG ALL EDGES. SEE DETAIL R-9 FOR CURB OPTIONS AND SPECIFICATIONS. - FINISHED THICKNESS OF IMPROVED GRANULAR MATERIAL TO BE MIN 6". CAN BE MIN 4" THICK ON RESIDENTIAL PROPERTY.

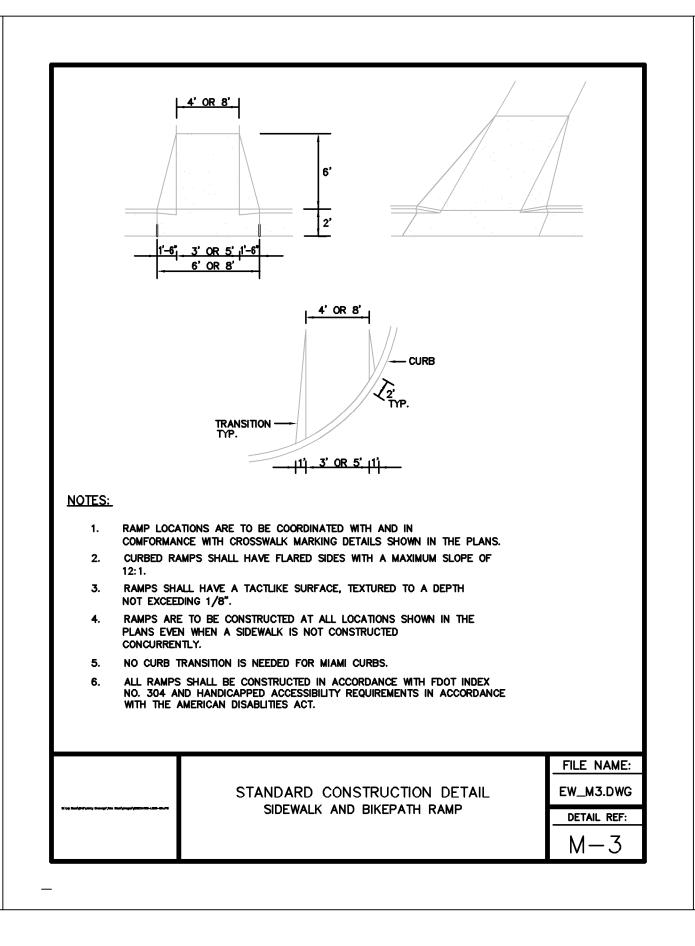
- COMPACT GRANULAR MATERIAL VIA ROLLER OR PLATE, MILLINGS MUST BE ROLLED. PAVERS, MILLINGS, AND OTHER SIMILAR SURFACES SHALL INCORPORATE A CROSS-SLOPE OF 1/4"/FT DIRECTED TO THE NEAREST ADJACENT STORMWATER FEATURE (EXISTING OR PLANNED).

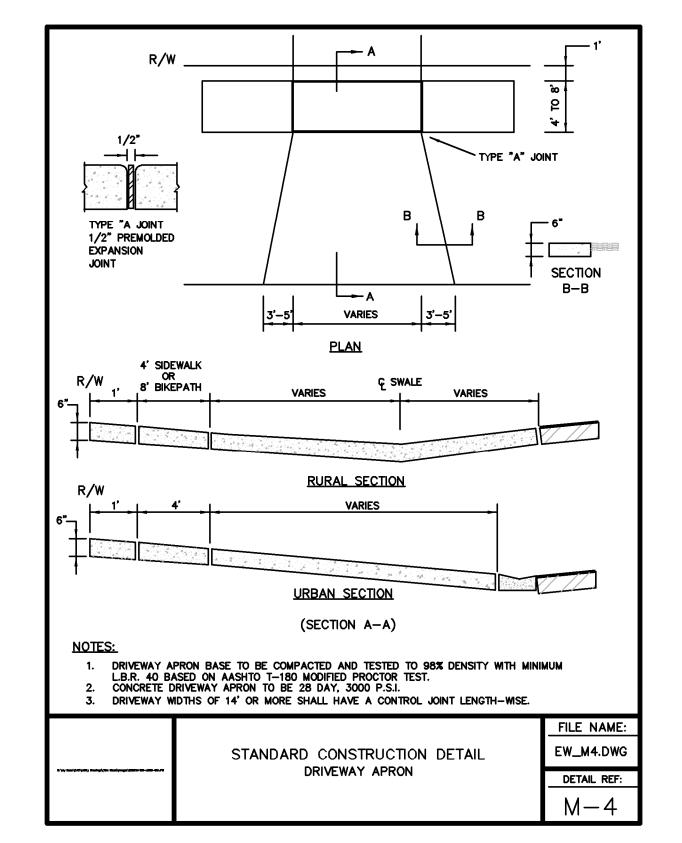
5. MINIMUM TURN-OUT RADIUS MAY BE INCREASED DUE TO ANTICIPATED TRAFFIC VOLUMES AT DISCRETION OF TECHNICAL REVIEW COMMITTEE.

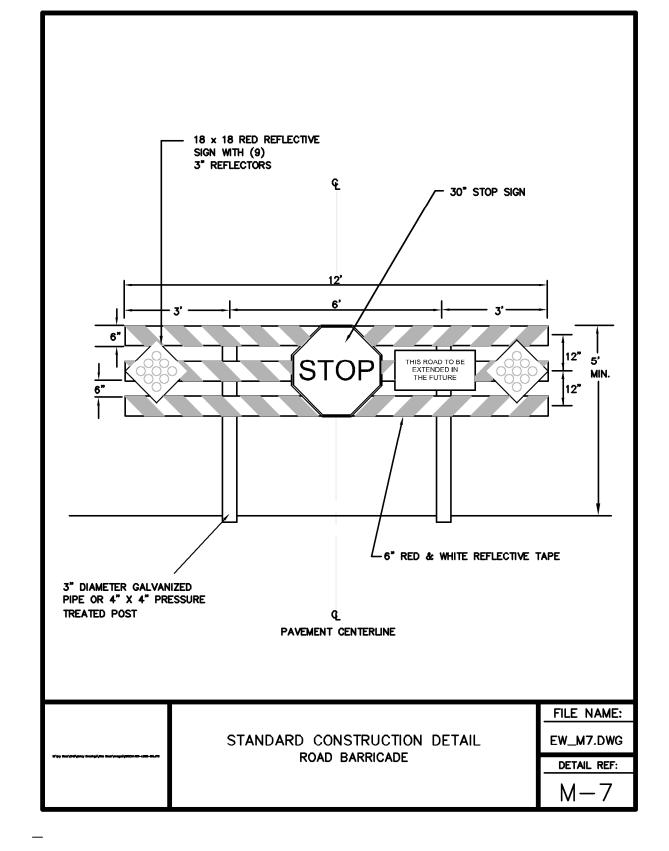
FILE NAME: EW\_R27.DWG STANDARD CONSTRUCTION DETAIL DRIVEWAY DETAIL - RESIDENTIAL DETAIL REF:

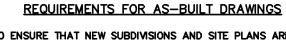
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IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVSION AS-BUILT DRAWINGS.

- PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK. (FOR SUBDIVISIONS) AND AS APPROPRIATE TO CONFIRM PAVING LIMITS (ON SITE PLANS).
- ALL RADII AT INTERSECTIONS SHALL BE VERIFIED AND DIMENSIONED. THIS INFORMATION IS TO BE CLEARLY INDICATED ON THE AS-BUILT.
- ROADWAY ELEVATIONS SHALL BE RECORDED AT ALL GRADE CHANGES, 100' INTERVALS ALONG ROADWAY, AND OTHER INTERVALS AS NEEDED ALONG ALL STREETS. STREET CENTERLINE AND CURB INVERT ELEVATIONS SHALL BE RECORDED AS NOTED. THE AS—BUILT CENTERLINE PROFILE OF ALL STREETS SHALL ALSO BE SHOWN ON THE PLAN AND PROFILE SO IT MAY BE COMPARED TO THE DESIGN PROFILE GRADE LINES. IN THE EVENT THAT THE AS—BUILT CENTERLINE LONGITUDINAL GRADE DOES NOT MEET THE CITY MINIMUM STANDARDS, ADDITIONAL LONGITUDINAL GRADES OF THE ADJACENT CURBING AND SIMILAR ROADWAY CROSS—SECTION SURVEYS TO VERIFY THE CORRECT CROSS SLOPE, SHALL BE REQUIRED TO VERIFY THAT THE SYSTEM WILL FUNCTION AS ORIGINALLY DESIGNED.
- STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND / OR DIMENSIONED FROM CENTERLINES OR LOT
- STORM DRAINAGE PIPE INVERT AND INLET ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION
- STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE MEASURED AND / OR VERIFIED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS—BUILT INFORMATION .
- ALL APPLICABLE TOPOGRAPHIC INFORMATION PERTINENT TO THE ON-SITE DRAINAGE SYSTEM, SUCH AS DITCHES, SWALES, LAKES, CANALS, ETC. THAT ARE DEEMED NECESSARY BY THE CITY TO VERIFY THE FUNCTIONAL PERFORMANCE OF THE STORMWATER SYSTEM, SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100 FEET AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES. WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
- RETENTION AREAS SHALL HAVE THEIR TOP-OF BANK AND BOTTOM ELEVATIONS RECORDED. ACTUAL MEASUREMENTS SHALL BE TAKEN AND DIMENSIONS RECORDED OF THE SIZE OF ALL RETENTION AREAS. MEASUREMENTS SHALL BE DONE FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED. SEPARATE CALCULATIONS SHALL BE SUBMITTED TO INDICATE REQUIRED AND PROVIDED RETENTION
- ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE AS-BUILT.
- . STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE AND TOP OF BANK SHALL BE RECORDED EVERY 100 FEET. SIDE SLOPES SHALL ALSO BE INDICATED.
- SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS—BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS—BUILT INFORMATION WRITTEN NEXT TO IT.
- FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN.

FILE NAME: EW\_M11.DW0 STANDARD CONSTRUCTION DETAIL REQUIREMENTS FOR AS-BUILT DETAIL REF: **DRAWINGS** 

## REQUIREMENTS FOR AS-BUILT DRAWINGS (CONTD.)

- SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS—BUILT INFORMATION.
- 14. SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
- 15. LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED, AND LABELED.
- 16. CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
- 17. POTABLE AND RECLAIMED WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. LOCATIONS OF VALVES SHALL BE TIED TO PERMANENT ABOVE GRADE FEATURES. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
- 18. POTABLE AND RECLAIMED WATER VALVES, TEES, BENDS, ALL SERVICES, AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES. SIMILARLY, FORCE MAIN VALVES, TEES, AND BENDS SHALL BE LOCATED IN THE SAME MANNER. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.
- 19. FOR PERPENDICULAR CROSSINGS OF STORMWATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE AS-BUILT PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
- 20. ANY SPECIAL FEATURES SUCH AS, CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE
- 21. IF AN APPROVED SUBDIVISION PLAT OR SITE PLAN SHOWS A CONSERVATION EASEMENT, THE PROJECT SURVEYOR SHOULD PROVIDE THE EXACT LOCATION OF THE SPECIMEN TREE(S) FROM THE RIGHT-OF-WAY OR PROPERTY LINES AND PROPOSED EASEMENT BOUNDARIES ON THE AS-BUILT DRAWING. THE AS-BUILT LOCATION OF THESE TREES WILL HELP VERIFY THE SUFFICIENCY OF THE CONSERVATION EASEMENT PRIOR TO PLAT RECORDING OR CERTIFICATE OF OCCUPANCY.
- 22. WHEN STORMWATER, POTABLE WATER, RECLAIMED WATER, OR SANITARY SEWER IMPROVEMENTS ARE ARE LOCATED WITHIN AN EASEMENT, THE AS-BUILT DRAWING SHALL ACCURATELY DEPICT THE LOCATION OF THE EASEMENT ITSELF AS WELL AS THE EXACT LOCATION OF THE IMPROVEMENTS WITHIN THE EASEMENT. THIS IS REQUIRED IN ORDER TO VERIFY THAT THE IMPROVEMENTS HAVE BEEN PROPERLY LOCATED AND TO ENSURE THAT FUTURE SUBSURFACE EXCAVATION TO PERFORM REMEDIAL REPAIR CAN BE ACCOMPLISHED WITHOUT DISTURBANCE BEYOND THE EASEMENT.

REFERENCES TO WATER SHALL MEAN BOTH POTABLE AND RECLAIMED WATER.

		FILE NAME:
	STANDARD CONSTRUCTION DETAIL	EW_M12.DWG
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## STREET AND WALKWAY LIGHTS

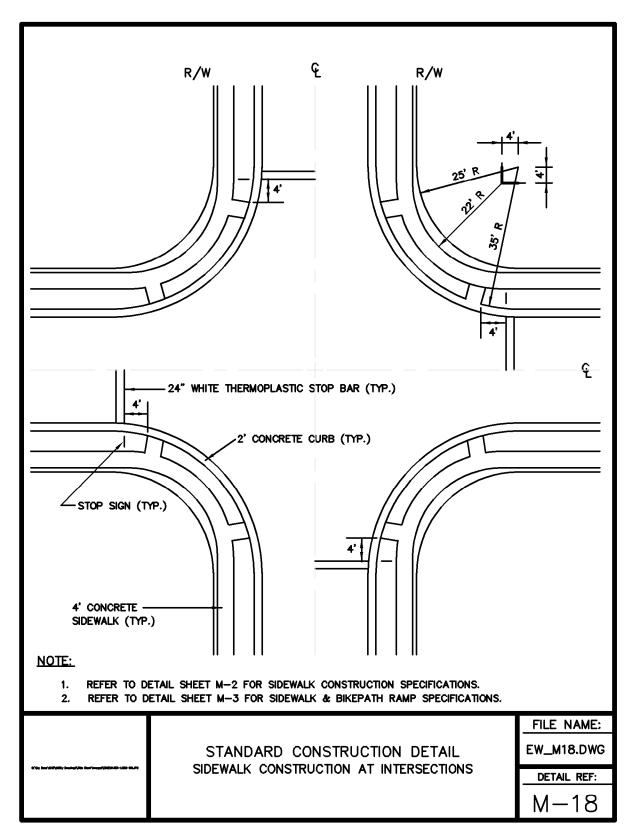
#### WALKWAY LIGHTS: (HEIGHT: 10 TO 20 FEET)

- WALKWAY LIGHTING SHALL BE PROVIDED IN ALL PUBLIC PARKING AND WALKWAY AREAS. LIGHT STYLES AND SPACING SHALL BE DETERMINED BY THE COMMUNITY DEVELOPMENT DEPT. AT THE SAME TIME OF SITE PLAN REVIEW.
- UNLESS SPECIFIED OTHERWISE, THE WALKWAY LIGHTS SHALL BE ANY OF THE THREE (3) STYLES DETAILED HEREIN OR THE FOLLOWING: STERNBERG GEORGETOWN (0650 / 4408-DFP), WILLIAMSBURG (9405-TF / 3610-T) OR COLONIAL (4620TF-LF). ALL CITY MAINTAINED WALKWAY LIGHTS ARE TO BE FLORIDA POWER AND LIGHT (FPL) SUPPLIED LIGHTS, UTILIZING 150 WATT HPS.
- SPACING SHALL BE A MAXIMUM OF 100 FEET ON CENTER.

#### STREET LIGHTS: (HEIGHT: 20+ FEET)

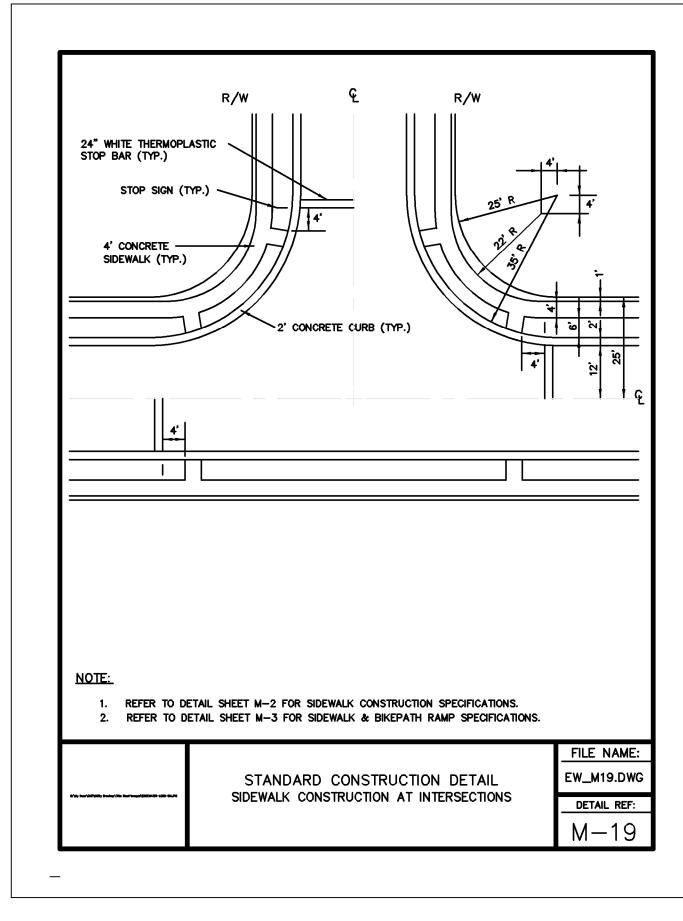
- ALL CITY MAINTAINED STREET LIGHTS ARE TO BE FPL SUPPLIED STREET LIGHTS.
- PRIVATELY MAINTAINED STREET LIGHTS SHALL BE:
  GARDCO LIGHTING EH / 26" / 1 / 3 / 150 HPS / 240 / BRA / PC (NOTE: POLE SHALL BE CONCRETE AVAILABLE THROUGH F.P.L. AND SPACED AT INTERVALS

		FILE NAME:	
	STANDARD CONSTRUCTION DETAIL	EW_M14.DWG	
(City Institutes Statistical Control City City City	STREET AND WALKWAY LIGHTS	DETAIL REF:	
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Trusted Advisors, Creating Community,

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CANAL AND WATERWAY DESIGN AND CONSTRUCTION NOTES

THIS CHAPTER WOULD DEPRIVE THE DEVELOPER OF THE REASONABLE USE OF HIS LAND.

CANALS AND WATERWAYS SHALL BE AVOIDED EXCEPT WHEN APPROVED AND DEEMED BY THE CITY TO BE UNAVOIDABLE OR NECESSARY, WHEREIN LITERAL ENFORCEMENT OF

MINIMUM OF TWENTY FEET (20") ADDITIONAL WIDTH ON EACH BANK MEASURED FROM THE TOP OF BANK AND LOCATED ALONG THE ENTIRE LENGTH OF THE CANAL FOR

3. SUCH CANALS SHALL BE A MAXIMUM OF FORTY FEET (40') IN WIDTH PLUS REQUIRED

MAXIMUM PERMISSIBLE SIDE SLOPES OF 4:1 (HORIZONTAL: VERTICAL). SHARPER SLOPES MAY BE CONSIDERED BELOW THE NORMAL WATER LEVEL PROVIDING THAT ADDITIONAL BANK STABILIZATION MEASURES ARE INSTALLED BASED UPON THE RECOMMENDATIONS OF A CERTIFIED GEOTECHNICAL ENGINEER.

WATERWAYS AFFECTED BY TIDAL ACTION SHALL HAVE A MINIMUM DEPTH OF NINE

FEET (9') BELOW SEA LEVEL REFERENCING THE NATIONAL GEODETIC VERTICAL DATUM

(N.G.V.D.). THESE WATERWAYS SHALL BE SEPARATED FROM FRESH WATER BY SALINITY

TWENTY FEET (20') WIDE DRAINAGE/MAINTENANCE EASEMENTS SHALL BE REQUIRED IN ORDER TO PROVIDE FOR THE NORMAL MAINTENANCE OF THESE WATER BODIES. THESE

EASEMENTS SHALL BE ESTABLISHED BY THE CITY BASED ON EXISTING AND FUTURE

CONDITIONS AS WELL AS THE TYPES OF MAINTENANCE EQUIPMENT AVAILABLE.

2. IN THE EVENT OF SUCH APPROVAL, THE CANALS OR WATERWAYS SHALL HAVE A

CANALS SHALL HAVE A MINIMUM BOTTOM WIDTH OF THREE FEET (3') AND

DAMS WITH SPILLWAY ELEVATIONS AS APPROVED BY THE CITY.

MAINTENANCE AREAS.

#### STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS FOR SUBDIVISIONS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE CITY, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION).

ALL STORM SEWERS AND CULVERTS LOCATED IN ROADWAY RIGHTS—OF—WAY AND ROADWAY EASEMENTS SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. PRIVATE SITES AND AREAS OUTSIDE OF ROADWAY EASEMENTS AND R.O.W., PIPE MAY BE MADE OF ALTERNATE MATERIALS INCLUDING:

B. PVC IN ACCORDANCE WITH THE PROVISION NOTED

A. SMOOTH INNER WALL HIGH DENSITY POLYETHYLENE (HDPE) IN ACCORDANCE WITH AASHTO M-294, AASHTO MP7, ASTM D3350 AND ASTM D2412 FOR SIZES UP TO 42" IN DIAMETER OR

IN THE "SEWER DETAILS" OF THESE SPECIFICATIONS.

ALL STORM SEWER PIPE JOINTS LOCATED IN ROADWAY RIGHTS—OF—WAY AND ROADWAY EASEMENTS SHALL BE ENTIRELY WRAPPED WITH FILTER FABRIC WITH A MINIMUM WIDTH OF 24" AND A MINIMUM OF 24" OVERLAP SECURED WITH PLASTIC OR STAINLESS BANDS. GASKETS ARE NOT PERMITTED AS AN EQUIVALENT SUBSTITUTE FOR MEETING THIS REQUIREMENT. THIS PRACTICE IS REQUIRED ON PRIVATE SITES

ADDITIONALLY, ALL JOINTS SHALL BE RUBBER GASKETED FOR BOTH ROUND AND ELLIPTICAL PIPE.

- DEPTH OF COVER MEASURED TO THE TOP OF PIPE (NOT INCLUDING THE BELL JOINT) SHALL BE A MINIMUM OF 1 FOOT. DEVIATION FROM THIS REQUIREMENT MAY BE ALLOWED BY INCREASING THE PIPE'S STRUCTURAL CAPACITY. THIS DEVIATION MUST BE SPECIFIED ON THE PLANS APPROVED FOR CONSTRUCTION AND SUBSEQUENTLY REFLECTED ON THE SHOP DRAWINGS AND AS-BUILT PLANS.
- ALL STORM DRAINAGE PIPES LOCATED IN ROADWAY RIGHTS-OF-WAY AND ROADWAY EASEMENTS SHALL BE A MINIMUM OF TWELVE INCH (12") DIAMETER OR EQUIVALENT AND BE DESIGNED FOR A MINIMUM OF A TWENTY-FIVE (25) YEAR STORM OF TWENTY-FOUR (24) HOUR DURATION. STORM DRAINAGE PIPES SMALLER THAN 12" ARE PERMITTED ON PRIVATE SITE PLANS PROVIDING THAT MAINTENANCE SHALL BE PERFORMED BY THE OWNER.
- STORM INLETS, MANHOLES, AND CATCH BASINS SHALL BE EITHER POURED IN PLACE OR PRECAST REINFORCED CONCRETE. STRUCTURES SHALL BE REQUIRED AT EACH CHANGE OF PIPE SIZE OR CHANGE IN PIPE DIRECTION. ALL STRUCTURES SHALL BE IN COMPLIANCE WITH ASTM C-478 AND SHALL HAVE 8" THICK WALLS. 6" THICK WALLS MAY BE PERMITTED PROVIDING THAT THE PLANS SPECIFY INCREASED REINFORCEMENT IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 201 IN ADDITION, THIS REQUIREMENT MUST BE REFLECTED ON BOTH THE SHOP DRAWING AND AS-BUILT PLANS. NOTE: INLET APRONS MAY REQUIRE EXPANSION JOINTS AROUND THE STRUCTURE AS DICTATED BY THE CITY.
- STORM INLETS SHALL BE SPACED IN SUCH A MANNER AS TO ACCEPT ONE HUNDRED (100) PERCENT OF THE DESIGN STORM RUNOFF WITHOUT IMPEDING THE FLOW OF TRAFFIC. FOR ROADWAY SECTIONS WITH DESIGN SPEEDS OF 45 MPH AND LESS AND WITHOUT FULL WIDTH SHOULDERS, SPREAD RESULTING FROM A RAINFALL INTENSITY OF FOUR INCHES (4") PER HOUR SHALL NOT EXCEED ONE-HALF OF THE TRAVEL LANE ADJACENT TO THE GUTTER. FOR SITE PLANS, INLET SPACING SHALL BE DESIGNED TO ACCEPT ONE HUNDRED (100) PERCENT OF THE RUNOFF FROM A RAINFALL INTENSITY OF FOUR INCHES (4 ") PER HOUR WITHOUT RESULTING IN PONDING OF WATER AROUND THE INLET.
- LAKE DEPTHS SHALL BE EIGHT FEET (8') MINIMUM TO TWELVE FEET (12') MAXIMUM, AS MEASUREI FROM HIGH WATER MARK. DEEPER MAXIMUM DEPTHS MAY BE APPROVED BY THE CITY ENGINEER.

		FILE NAME:
	STANDARD CONSTRUCTION DETAIL	EW_ST4.DWG
	STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES	DETAIL REF:
2024-07-20	AND CONSTRUCTION NOTES	ST-4

#### STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

- FOR CONNECTIONS BETWEEN INLETS WITH PIPING 15" IN DIAMETER AND LARGER, THE MAXIMUM DISTANCES BETWEEN INLETS AND / OR CLEAN-OUT JUNCTION BOXES SHALL BE 300 FEET. CULVERTS SHALL BE SLOPED TO MAINTAIN A MINIMUM SELF-CLEANING VELOCITY OF 3 FEET PER SECOND USING A MANNING'S 'n' OF 0.012. SPACING FOR CLEAN-OUTS AND INLETS FOR SMALLER PIPING SHALL BE REDUCED AND EVALUATED ON A CASE BY CASE BASIS.
- THE MAXIMUM PERMISSIBLE SLOPE OF ANY NEW SITE GRADING IS 4:1 (HORIZONTAL:VERTICAL). THIS LIMIT SHALL BE APPLIED TO ALL AREAS EXCEPT STORMWATER CONVEYANCE AND TREATMEN SYSTEMS WHICH MAY HAVE A MAXIMUM SLOPE OF 4:1. PERMANENTLY WETTED SOILS 2FT BELOW THE WATER NORMAL WATER TABLE MAY BE SLOPED NO STEEPER THAN 2:1 (H:V).
- ALL DEVELOPMENT SHALL CONTINUE TO ACCOMMODATE EXISTING OFFSITE CONTRIBUTING FLOW AN PASS SUCH QUANTITY TO AN APPROPRIATE DOWNSTREAM PUBLIC CONVEYANCE WITH NO INCREASE IN UPSTREAM STAGE DURING ALL DESIGN STORM EVENTS. ALL FILL SLOPES IN PROXIMITY TO PROPERTY BOUNDARIES SHALL INCLUDE AN INTERCEPTING SWALE AT THE TOE OF SLOPE.
- SWALES THAT ARE NORMALLY DRY AND INTENDED FOR CONVEYANCE OF STORMWATER RUNOFF AND ARE NOT INTENDED FOR RETENTION SHALL HAVE A MINIMUM DRAINAGE MAINTENANCE EASEMENT WIDTH MEASURING 15 FEET. SWALED AREAS INTENDED FOR RETENTION SHALL PROVIDE APPROPRIATE EASEMENT AREAS FOR ACCESS AND MAINTENANCE MEASURED UPLAND FROM THE TOP OF BANK. AT A MINIMUM, THE SAID EASEMENT SHALL
- PIPED STORMWATER SYSTEMS SHALL HAVE A MINIMUM DRAINAGE MAINTENANCE EASEMENT WIDTH OF 20 FEET, AND MAY BE INCREASED DEPENDING UPON THE SIZE
- NORMAL ROADSIDE SWALES ARE PERMITTED TO BE CONSTRUCTED TO A MAXIMUM DEPTH OF 18" BELOW THE OUTSIDE EDGE OF PAVEMENT OR CONCRETE CURB.

MEASURE 10' FEET IN WIDTH FROM THE TOP OF THE SWALE.

- CONCRETE EROSION CONTROL MUST BE PROVIDED WHERE SWALES OR CULVERTS INTERCEPT DRAINAGE DITCHES.
- WHEN A LAKE IS INCORPORATED WITHIN A SUBDIVISION AND IS ABUTTED BY LOTS, SUCH ABUTTING LOT LINES SHALL BE EXTENDED INTO THE LAKE PROPORTIONATELY ENCOMPASSING ALL OF THE LAKE AREA.
- LAKE INFLOW AND OUTLET STRUCTURES SHALL GENERALLY BE CONSTRUCTED WITH REINFORCED CONCRETE AND SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. SKIMMERS FOR WET PONDS SHALL BE CONSTRUCTED SUCH THAT THE BOTTOM EXTENDS 6" BELOW THE NORMAL WATER LEVEL AND 6" ABOVE THE OVERFLOW. FOR DRY PONDS, THE SKIMMER BOTTOM SHALL BE SET 6" BELOW THE LOWEST OVERFLOW ELEVATION AND 6" ABOVE THE HIGHEST POINT OF OVERFLOW. ALL SKIMMERS SHALL BE CONSTRUCTED OF MINIMUM 1/4" THICK ALUMINUM OR FIBERGLASS ADEQUATELY SUPPORTED TO PREVENT DEFLECTION.

		FILE NAME:
	STANDARD CONSTRUCTION DETAIL	EW_ST5.DWG
hadipidadia kumadaki kadiangadisikki kilik diseb	STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES	DETAIL REF:
2024-07-20	AND CONSTRUCTION NOTES	ST-5

15' FROM ADJACENT PROPERTY LINE,

LITTORAL ZONE

15' FROM EASEMENT LINE AND

5' FROM RIGHT-OF-WAY LINE

#### STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

- EROSION AND SEDIMENT CONTROL PLANS AS APPROVED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SHALL BE EMPLOYED AT ALL TIMES. AT A MINIMUM, BEST MANAGEMENT PRACTICES (BMP's) SHALL BE UTILIZED.
- THE CITY MAY REQUEST THAT THE DEVELOPER SUBMIT A REPORT BY A QUALIFIED HYDROLOGIST ON THE IMPACT THE LAKE WILL HAVE ON NEIGHBORING WATER TABLE ELEVATIONS BOTH DURING CONSTRUCTION AND AFTER LAKE COMPLETION. THE CITY MAY REQUIRE GROUNDWATER MONITORING DURING THE LAKE EXCAVATION.
- ADEQUATE MAINTENANCE EASEMENTS OR RIGHTS-OF-WAY AS APPROVED BY THE CITY SHALL BE PROVIDED AROUND THE ENTIRE PERIMETER OF ALL LAKES AND ASSOCIATED OUTFALLS DISCHARGING INTO AND OUT OF LAKES. APPLICABLE CROSS SECTIONS SHALL BE INCLUDED ON ALL FINAL DEVELOPMENT PLANS.
- DEVELOPMENT PLANS FOR ALL STORMWATER MANAGEMENT SYSTEMS SHALL CONTAIN POP-OFF DATA (OVERFLOW), BOTTOM ELEVATION, NORMAL WATER LEVELS, MEAN ANNUAL SEASONAL HIGH WATER TABLE ELEVATION, TREATMENT VOLUME AND CORRESPONDING ELEVATION, 100 YEAR HIGH WATER LEVELS, AND THE DESIGN
- IN GENERAL, ALL RETENTION / DETENTION SITES MUST BE CONSTRUCTED ON ALL PROJECTS PRIOR TO ANY ROAD, PARKING LOT, OR BUILDING CONSTRUCTION COMMENCING OR AS CURRENT PERMIT CONDITIONS DICTATE. SEWER AND WATER MAINS MAY BE INSTALLED PRIOR TO RETENTION/DETENTION SITE CONSTRUCTION IF DEWATERING IS NOT REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY AND ALL DEWATERING PERMITS THAT MAY BE REQUIRED.
- WHEN CULVERTS ARE INSTALLED TO MAINTAIN THE FLOW OF EXISTING DRAINAGE WAYS WHERE NEWLY PROPOSED ROADS WOULD OTHERWISE SEVER THE DRAINAGE WAY, THEN CULVERTS CROSSING RIGHTS-OF-WAY SHALL EXTEND FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE UNDER THE ROADWAY. CULVERTS SHALL BE DESIGNED TO ACCOMODATE THE FLOW FROM THE 100 YEAR - 24 HOUR STORM EVENT WITHOUT FLOODING ADJACENT PROPERTY OR SURCHARGING THE SAID
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND MAINTAIN A COPY OF THE SJRWMD PERMIT AND/ OR NPDES CONSTRUCTION PERMIT AT THE CONSTRUCTION SITE, AND ABIDE BY ALL CONDITIONS OF THE PERMIT.
- LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO
- ALL STRUCTURES SHALL BE GRADED TO HAVE POSITIVE RUNOFF PATTERNS TOWARD A STORMWATER COLLECTION AND MANAGEMENT SYSTEM. ALL NEW BUILDING SHALL BE TYPE "A" OR TYPE "B" GRADING. TYPES "C" & "D" GRADING SHALL ONLY BE APPROVED FOR RETROFITS. SEE DETAIL ST-14 FOR TYPICAL LOT GRADING.

		FILE NAME:
	STANDARD CONSTRUCTION DETAIL	EW_ST6.DWG
	STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES	DETAIL REF:
2024-07-20	AND CONSTRUCTION NOTES	ST-6

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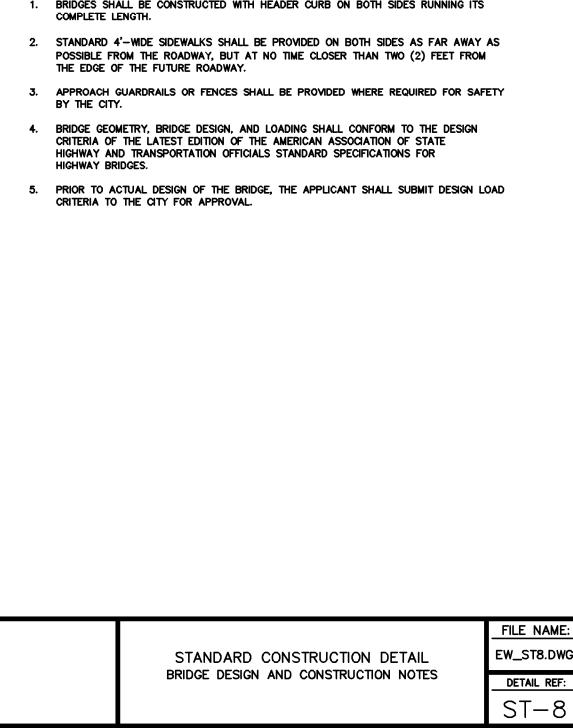
DRAINAGE

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CASE 1 TOP OF BANK FOR REQUIRED STORMWATER TREATMENT AND 100-YEAR, 24-HOUR STORM PEAK ATTENUATION

# BRIDGE DESIGN AND CONSTRUCTION NOTES



BRIDGES SHALL BE CONSTRUCTED WITH HEADER CURB ON BOTH SIDES RUNNING ITS

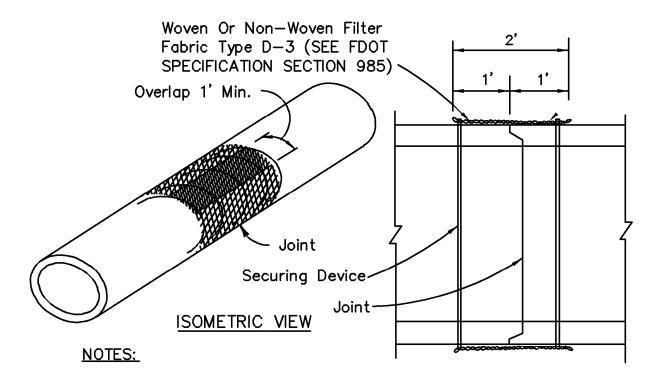
4:1 MAX MAX. SLOPE 15' FROM ADJACENT PROPERTY LINE, 15' FROM EASEMENT LINE AND 5' FROM RIGHT-OF-WAY LINE CASE 2 LITTORAL ZONE
\_\_\_\_\_VARIES TOP OF BANK FOR REQUIRED STORMWATER TREATMENT AND 100-YEAR, 24-HOUR STORM PEAK ATTENUATION 6:1 MAX. ERMANENT 4:1 MAX. FDGE OF WATER IN WET POND NOTES: SOD IS TO BE PLACED TO EDGE OF WATER.
A PLANTED LITTORAL ZONE IS NOT PERMISSIBLE FOR SLOPES EXCEEDING AS AN OPTION TO A LITTORAL ZONE, THE DESIGNER CAN EITHER: A) PROVIDE AN ADDITIONAL 50% OF THE PERMANENT POOL VOLUME, AS REQUIRED, OR
B) PROVIDE PRETREATMENT OF THE STORMWATER PRIOR TO ENTERING THE WET DETENTION POND.

CASE 1 BERM SHALL REQUIRE THE INSTALLATION OF LIMITING SOILS OR OTHER MATERIALS TO REDUCE LATERAL TRANSMISSIVITY. FILE NAME: W\_ST10.DW STANDARD CONSTRUCTION DETAIL WET RETENTION POND DETAIL REF: PLACEMENT BY R/W AND EASEMENT LINES

STANDARD CONSTRUCTION DETAIL CANAL AND WATERWAY DESIGN AND CONSTRUCTION NOTES

EW\_ST7.DWG DETAIL REF:

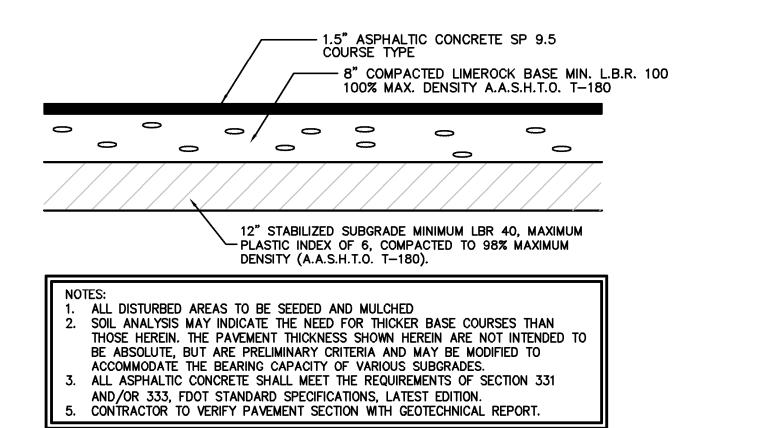
FILE NAME:



- 1. ALL DRAINAGE PIPE TO BE WRAPPED AT JOINTS. PIPE SECTION
- COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS.

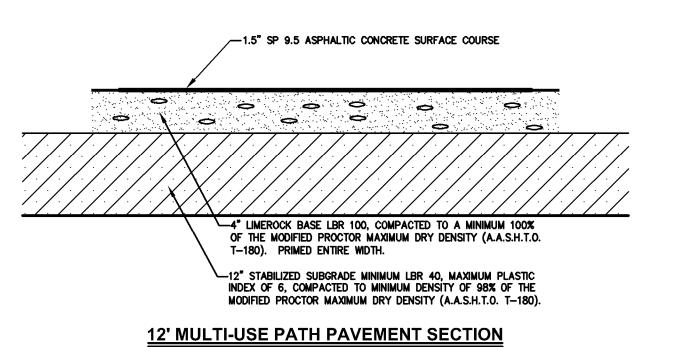
#### FILTER FABRIC JACKET

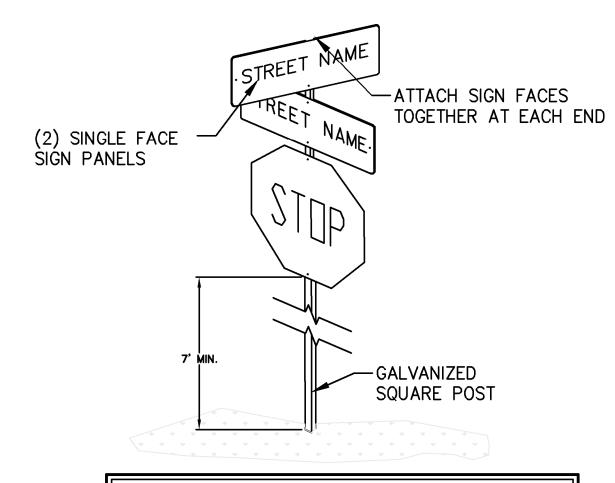
N.T.S.



## RESIDENTIAL ASPHALT PAVEMENT SECTION

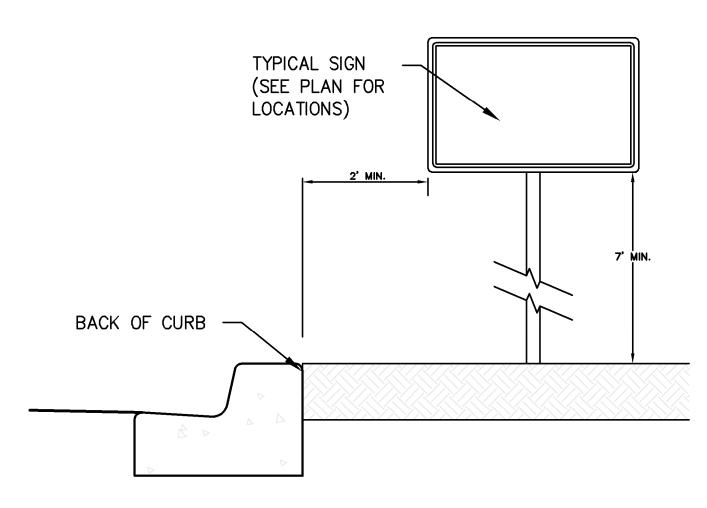
N.T.S.





1. SEE FDOT STANDARD INDEX 17349 FOR FURTHER INFO. 2. SIGNS TO BE PLACED AT 8' O.C.

STREET SIGN



# TYPICAL SIGN PLACEMENT



SIGN NOTES: SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.

CONSERVATION EASEMENT POSTED SIGN DETAIL

DRAWING NUMBER

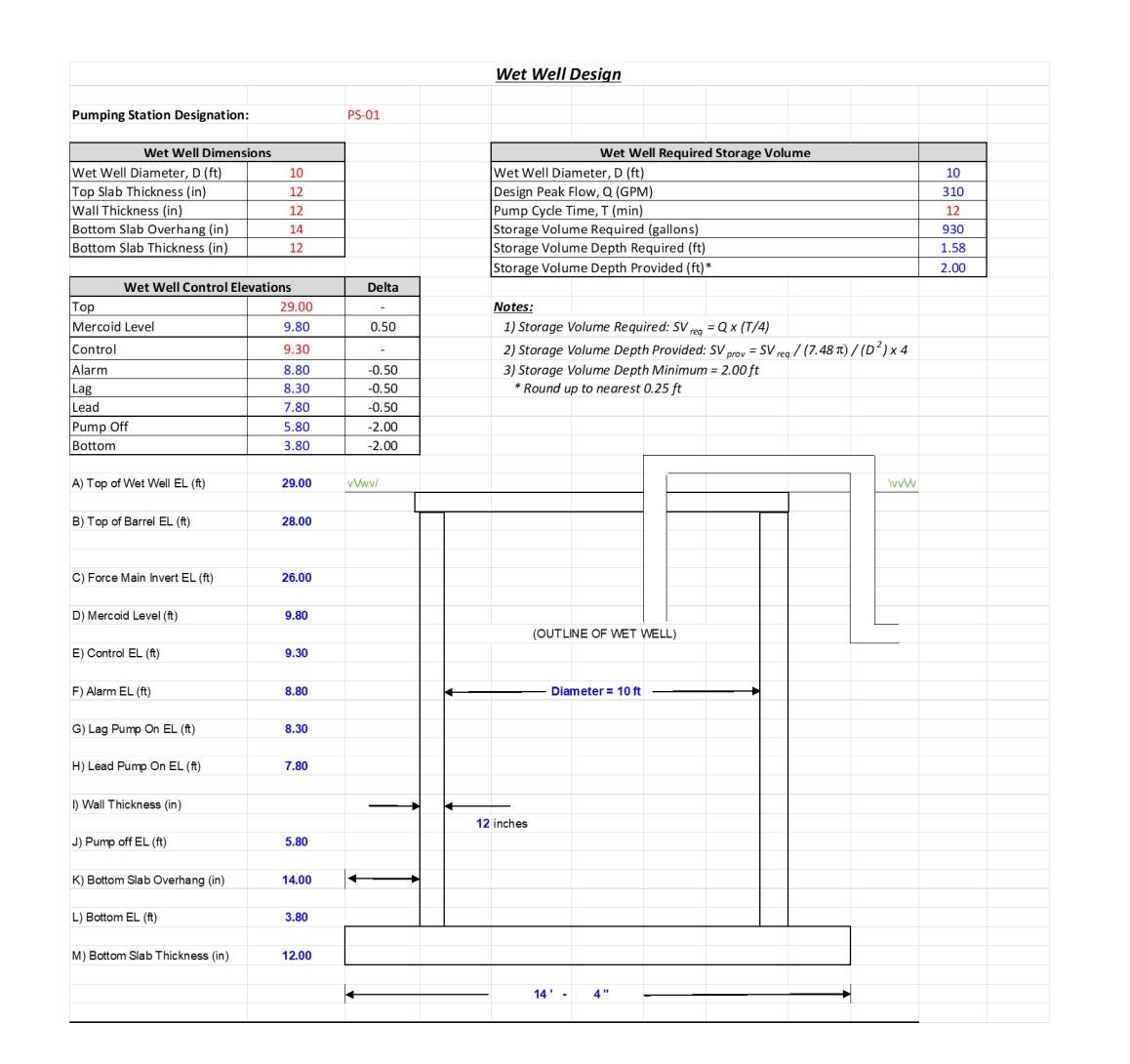
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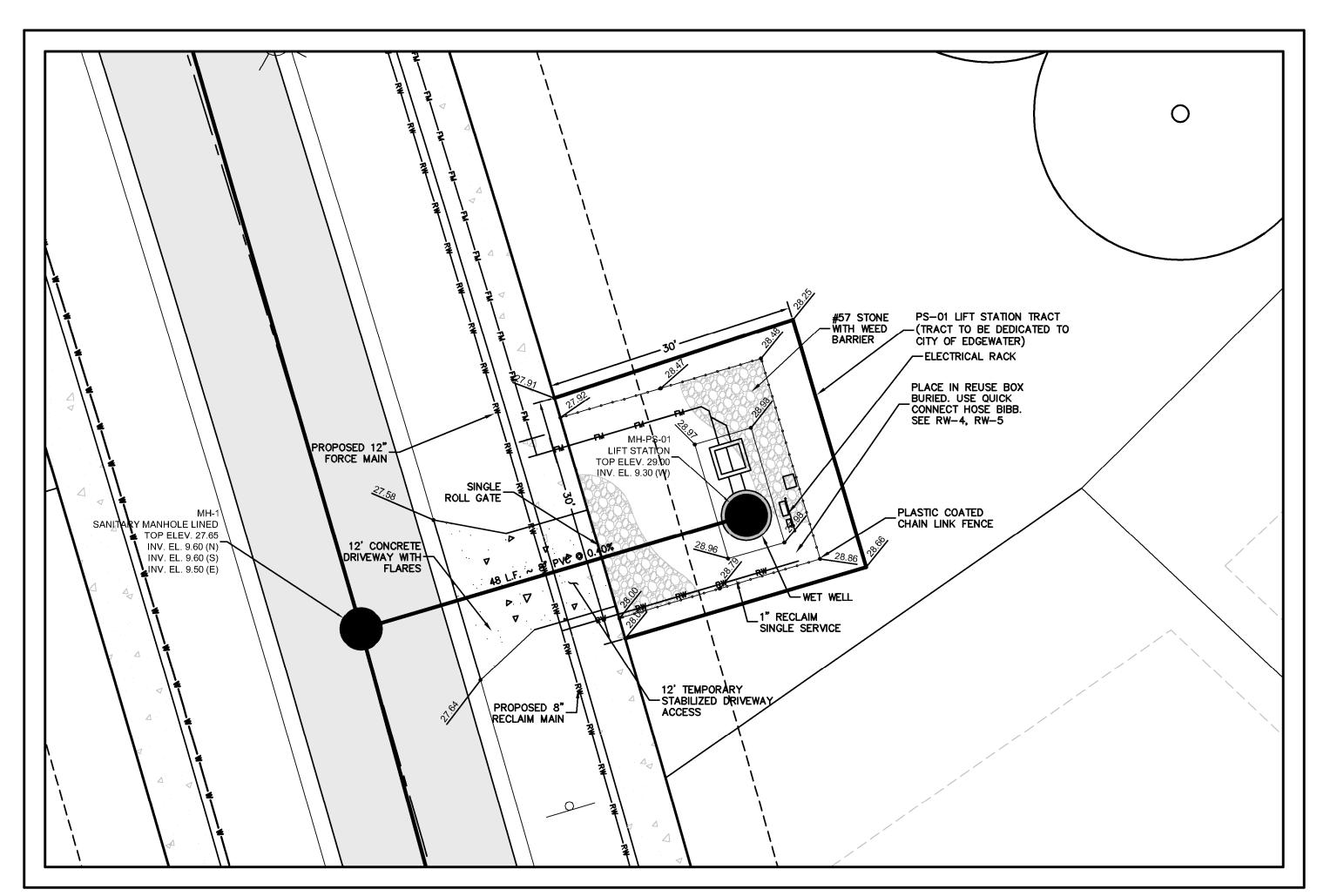
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AND

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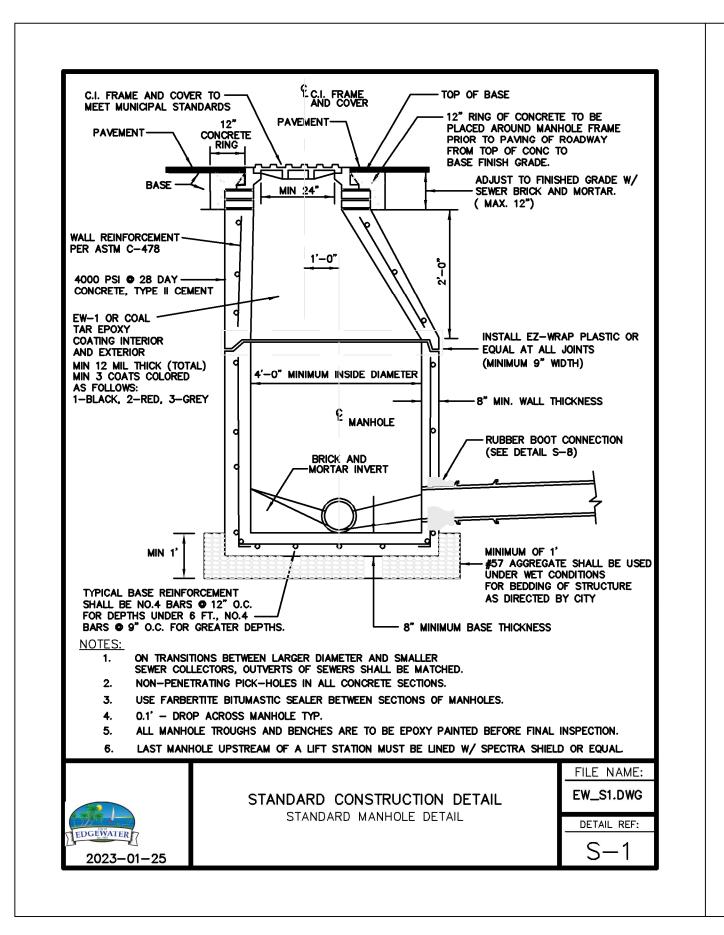


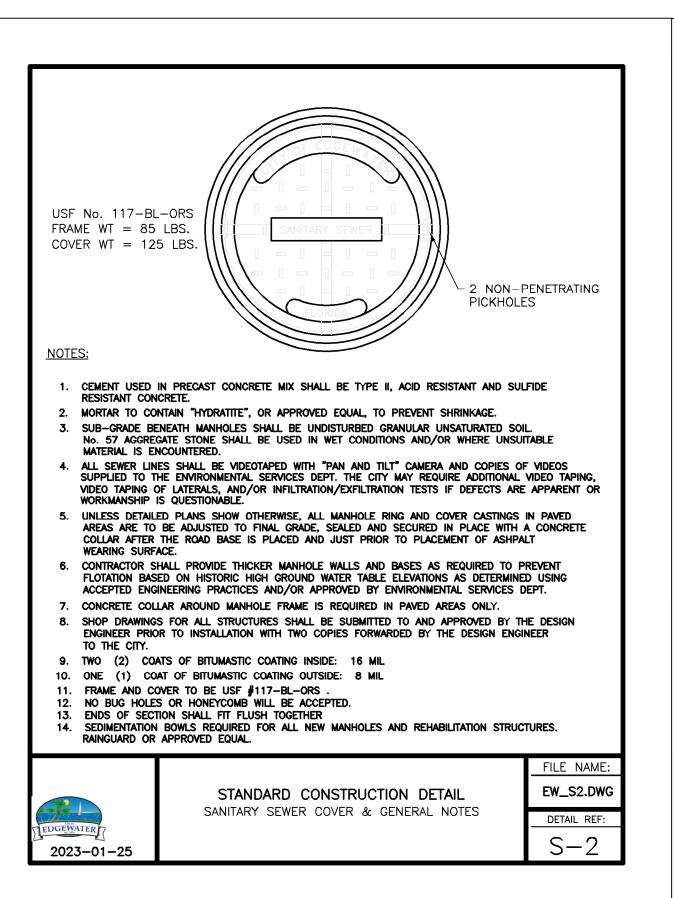
## **PS-01 LIFT STATION SITE PLAN**

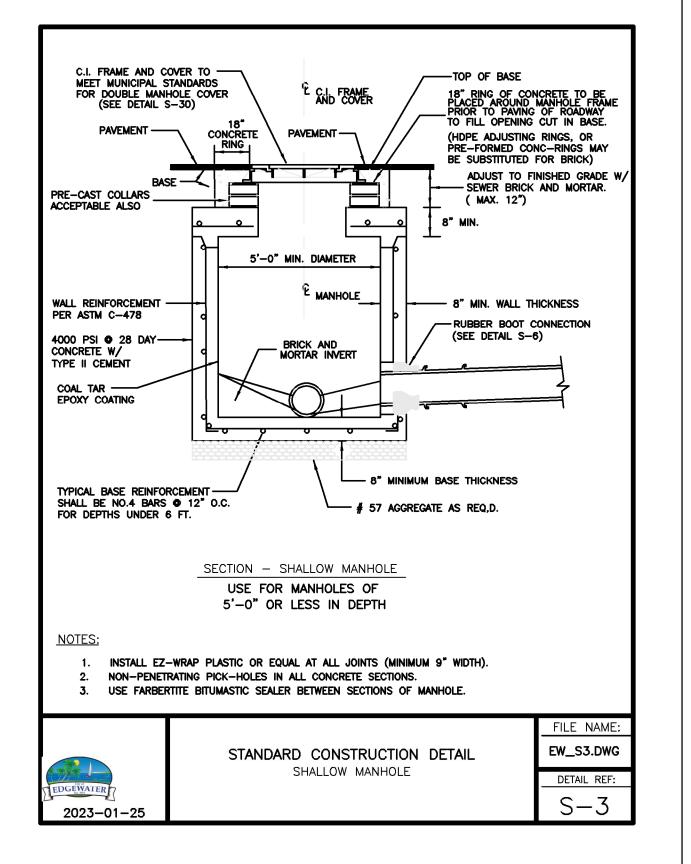
Pump Manufacturer	Wilo/E	mu	Sul	zer	Sulz	er	KSB	}	My	ers
Pump Model			XFP 100E	CB1 60 Hz						
Pump Discharge			3	II						
Impellar ID										
Impeller Diameter			195.2	6 mm						
Horsepower			7.	51						
RPM			17	71						
Voltage			46	50						
Phase			3	3						
Full Load Amps			9.8	86						
Operating Points	Flow, GPM	Head, Ft	Flow, GPM	Head, Ft	Flow, GPM	Head, Ft	Flow, GPM	Head, Ft	Flow, GPM	Head, Ft
Manifold			262	47.67						
Runout			349	42.96						

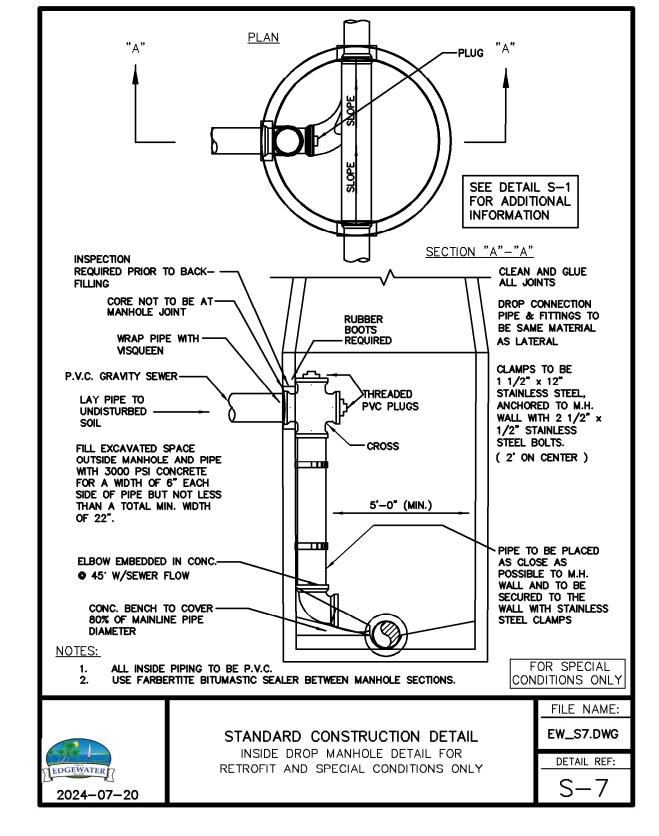
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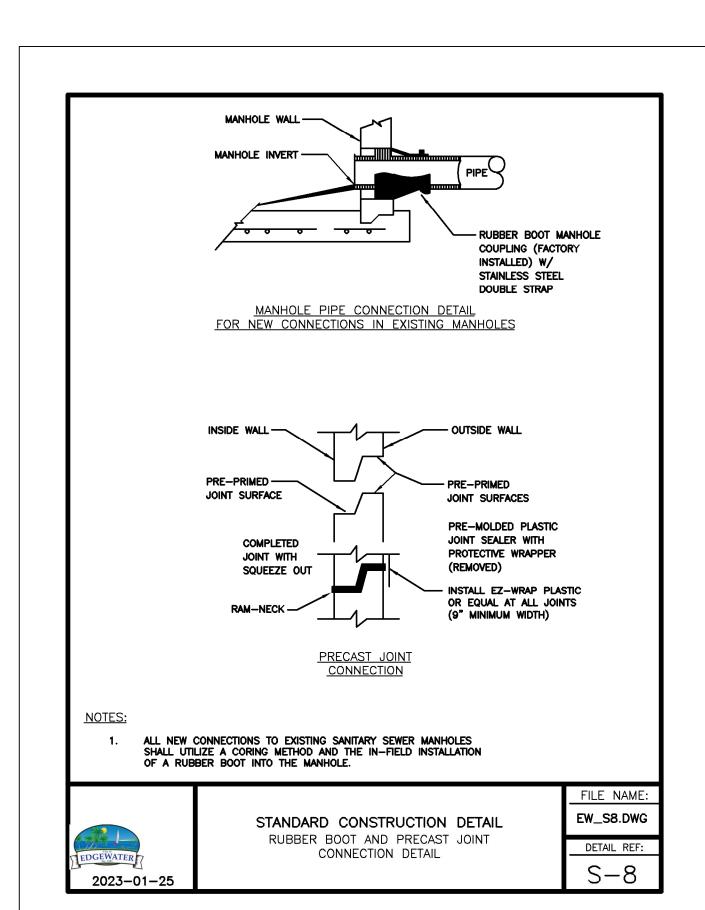
**LIFT STATION SITE PLAN** 

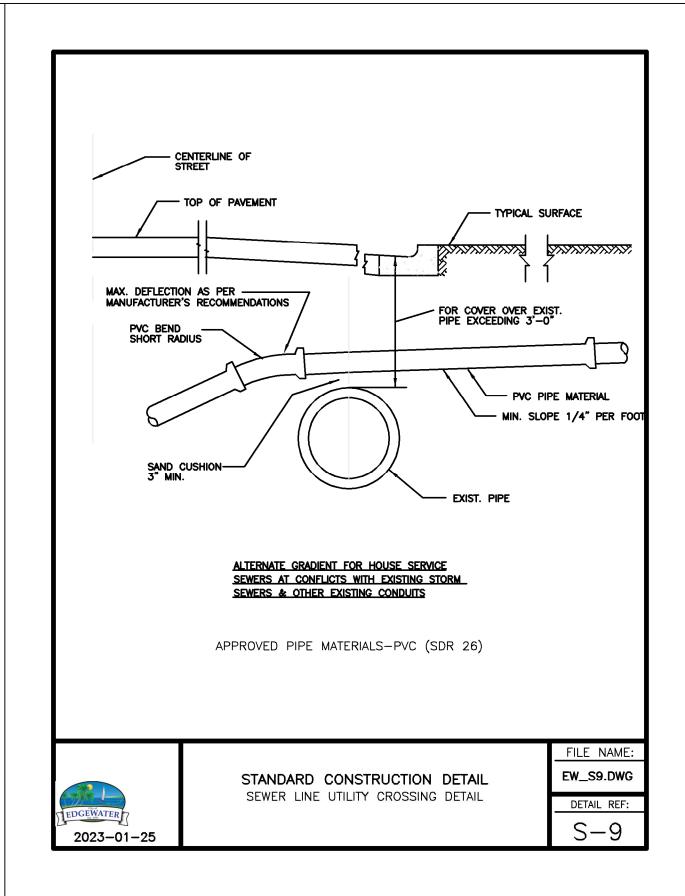


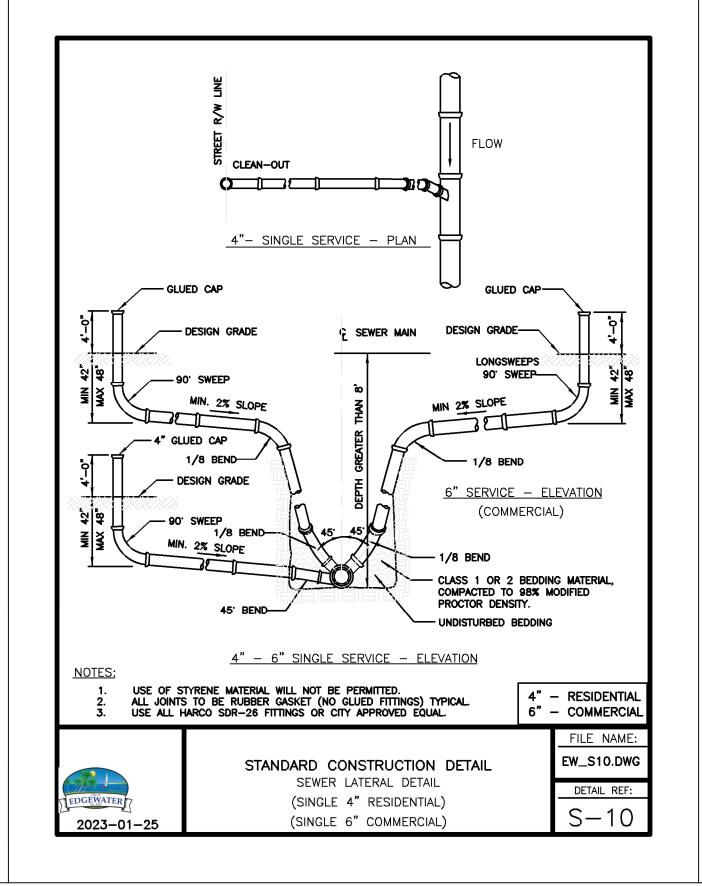


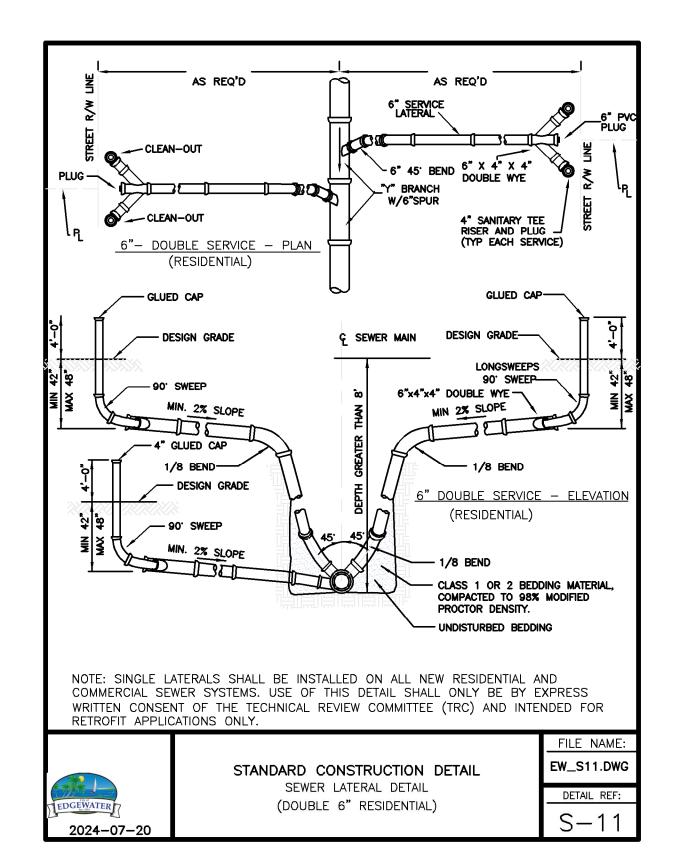




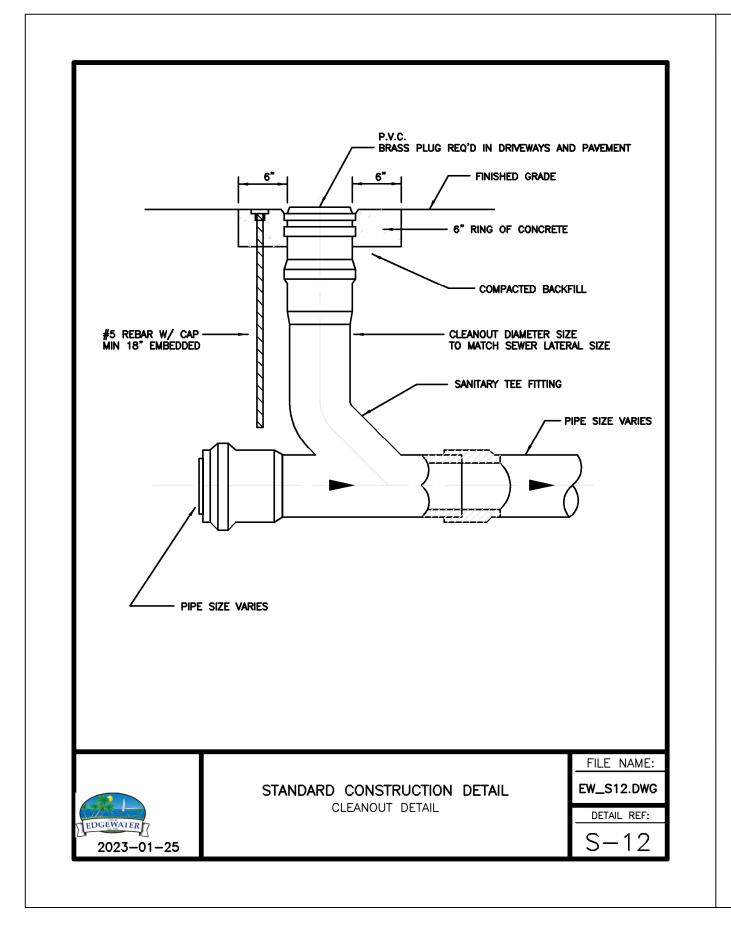


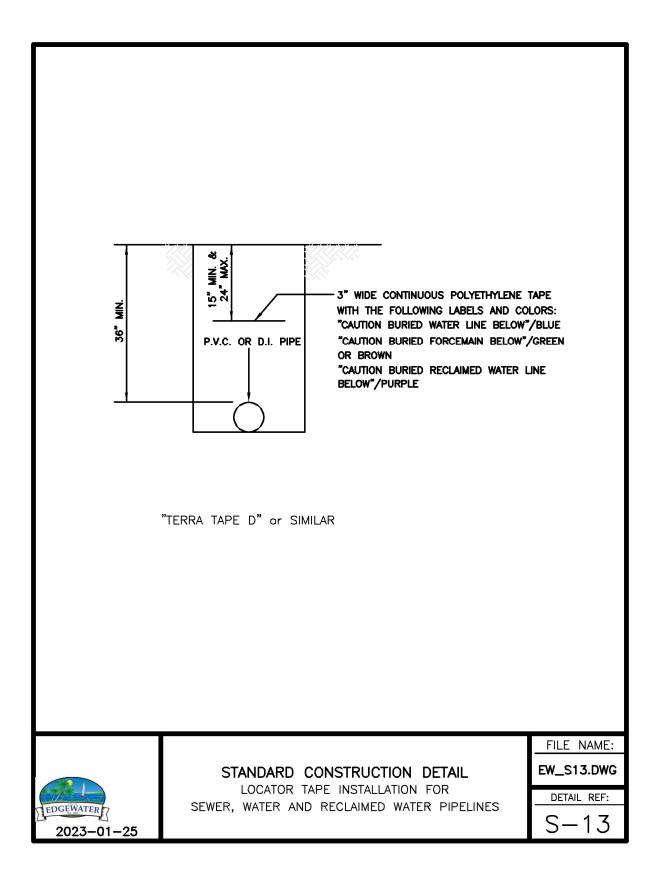


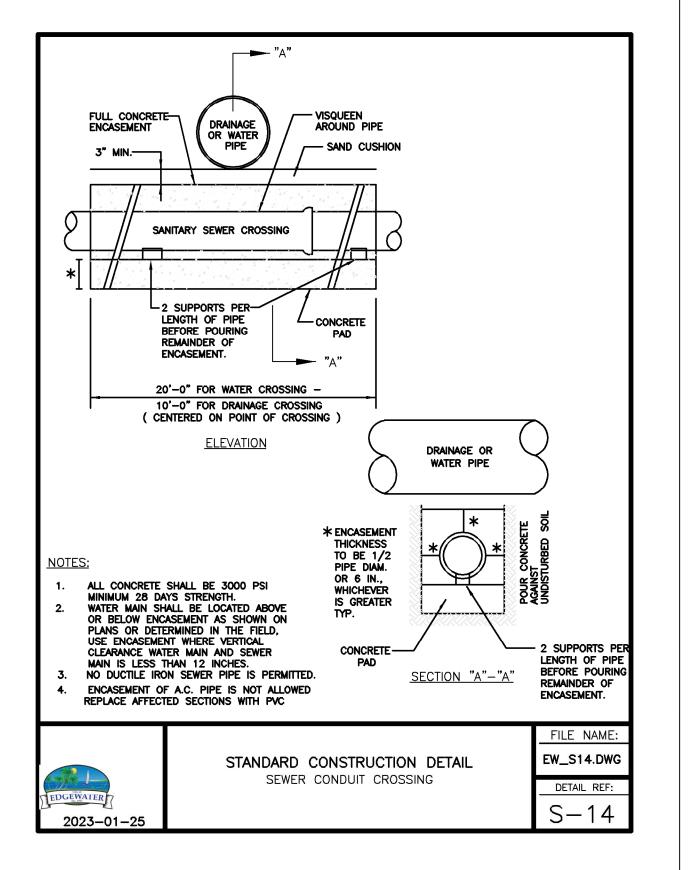


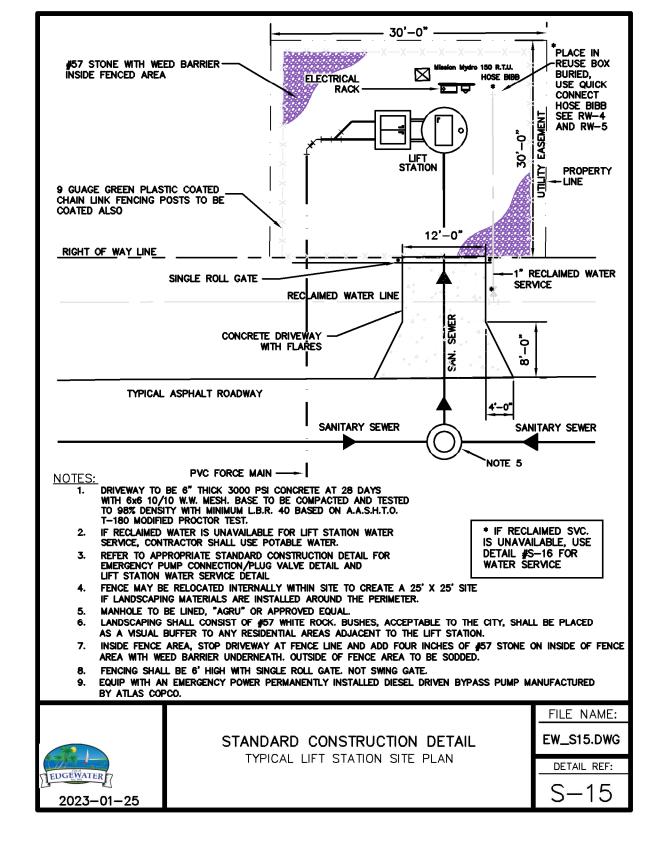


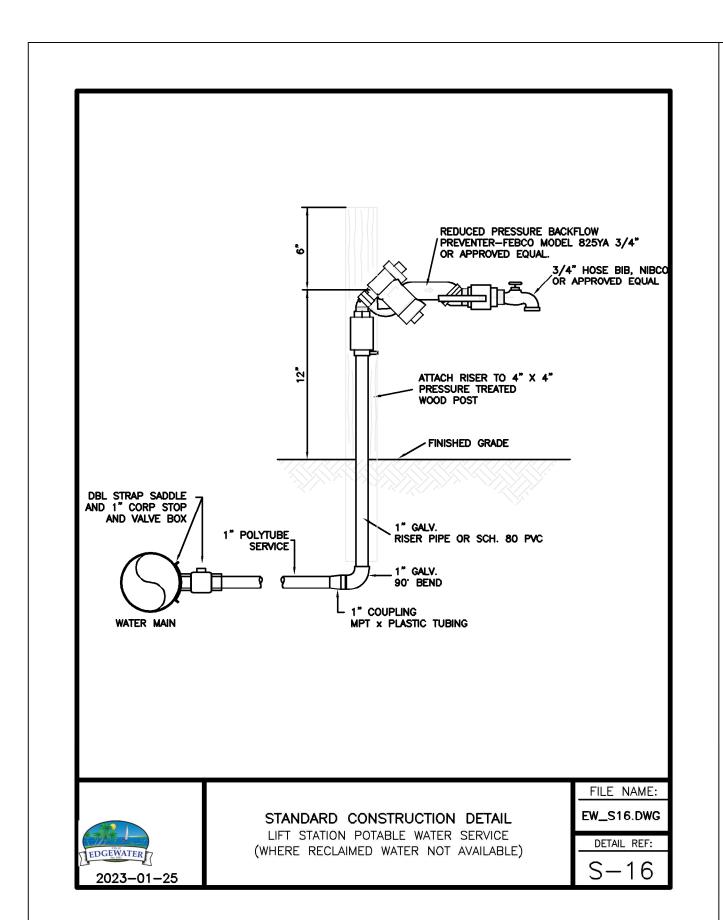


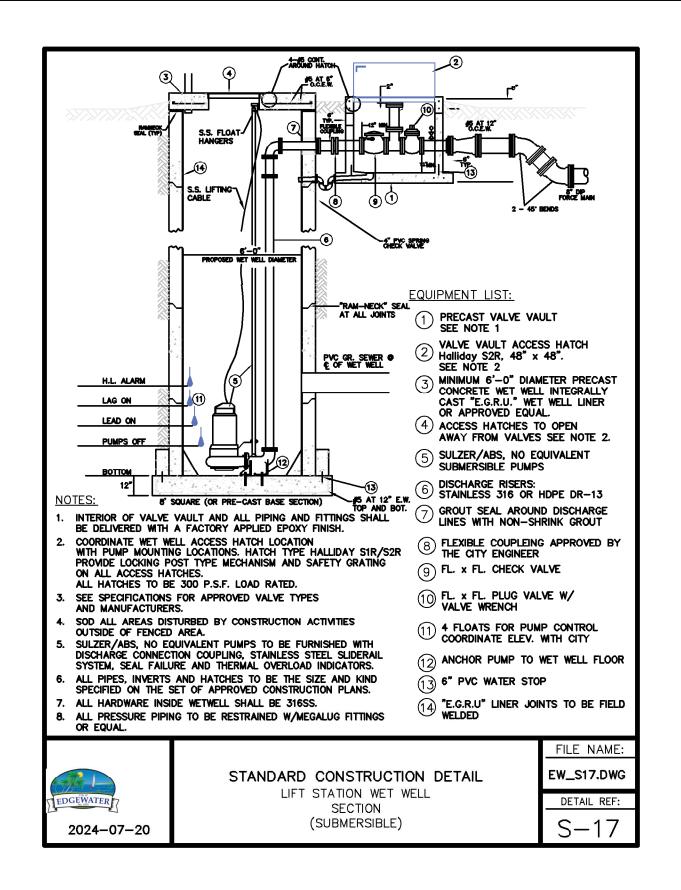


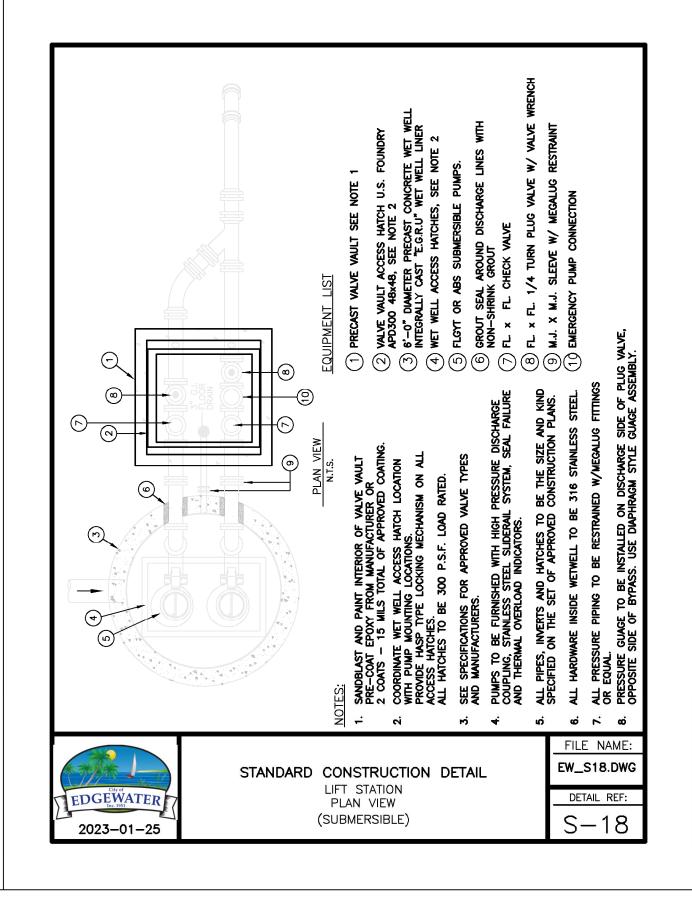


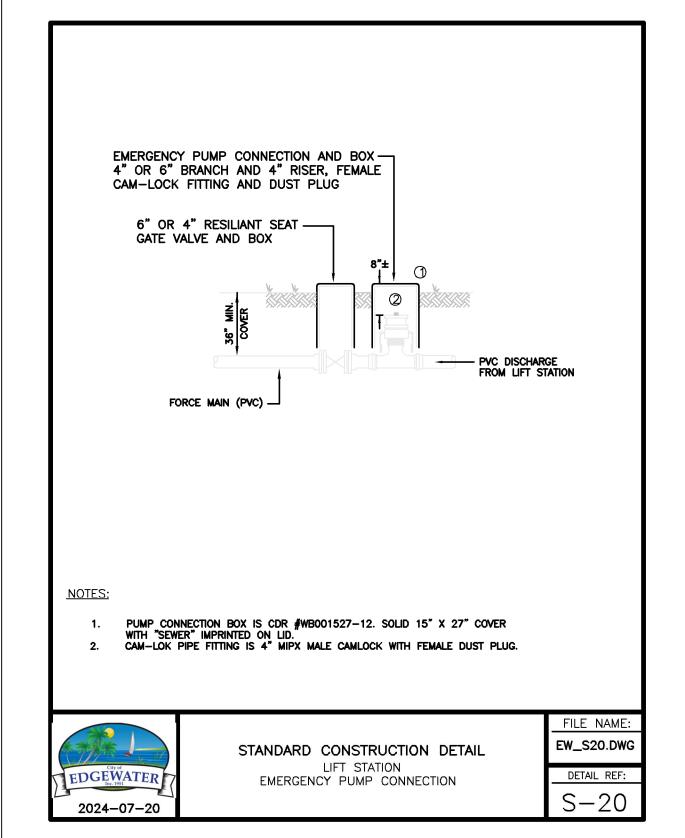


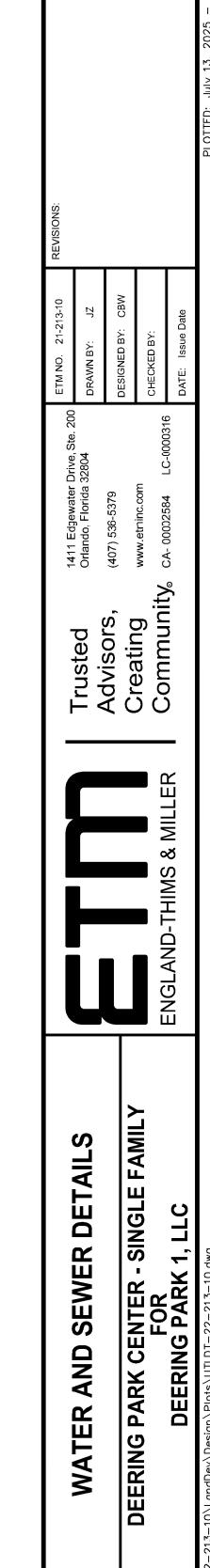






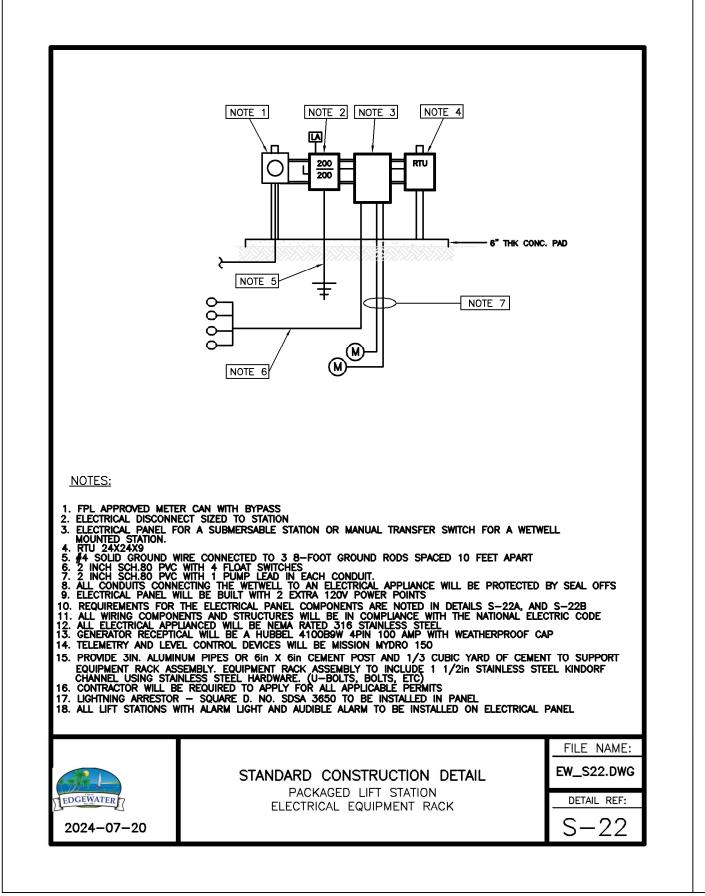


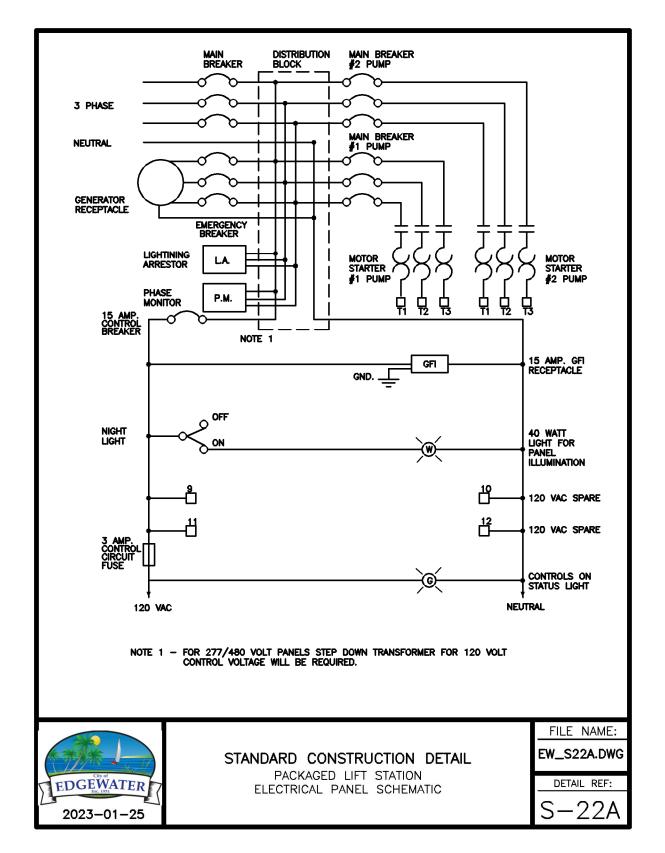




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15B





SANITARY SEWER DESIGN AND CONSTRUCTION NOTES:

13. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER.

14. ALL LOCAL COLLECTION SANITARY SEWER MANHOLES SHALL BE PRECAST WITH A

16. ALL SEWER FITTINGS TO BE "HARCO" OR CITY APPROVED EQUAL.

CLEANOUTS SHALL BE PROVIDED AS APPROVED BY THE CITY.

15. STANDARD MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 400 FEET.

17. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED

AREAS AND A MINIMUM OF 0.2 FEET AND MAXIMUM OF 0.5 FEET ABOVE GRADE

18. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE.

THE SEWER MAIN TO THE MANHOLES (SEE STANDARD MANHOLE AND BOOT DETAIL). 20. INDIVIDUAL SANITARY SERVICE CONNECTORS ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECT TO SEWER MAIN LINES BY

USE OF WYE CONNECTIONS, UNLESS OTHERWISE BE APPROVED BY THE CITY.

22. FOR MULTI-FAMILY AND COMMERCIAL SITES, SIX INCH MINIMUM SEWER SERVICES AND

23. SANITARY SEWER LIFT STATIONS AND FORCE MAINS, SIZE, MATERIAL, AND DESIGNS SHALL BE APPROVED BY THE CITY. LIFT STATIONS SHALL BE CONSTRUCTED WITH A MINIMUM WET WELL INTERIOR DIAMETER OF 6 FEET. FORCE MAINS SHALL BE A

24. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO PREPARE AND SUBMIT FLOTATION CALCULATIONS TO SIZE THE BASE OF THE WET WELL, AND ANY MANHOLES

25. SANITARY SEWER DROP MANHOLES SHALL ONLY BE USED UNDER SPECIAL CONDITIONS AS APPROVED BY THE CITY. DROPS LESS THAN 2.0' SHALL NOT BE

26. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE THE WORDS "EDGEWATER,

OR C-905 (COLOR "GREEN") (PRESSURE FITTINGS, PRESSURE CLASS 150 OR

250 EPOXY LINED DIP. THE FORCE MAIN MINIMUM DEPTH OF COVER SHALL BE 36".

28. ALL SANITARY SEWER FORCE MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION GUIDELINES

MODIFIED TO ACCOMMODATE PVC PIPE BY FOLLOWING THE RECOMMENDED INCREASE IN RESTRAINT LENGTH CORRESPONDING TO THE INSTALLATION OF POLYETHYLENE WRAP. IN

27. ALL SANITARY SEWER FORCE MAINS, SHALL BE PVC AWWA C-900,

NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.

19. RUBBER BOOTS AND STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF

21. FOR SINGLE FAMILY HOMES, SINGLE OR DOUBLE FOUR INCH SEWER SERVICES LATERALS SHALL B

CONSTRUCTED SINGLES AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. DOUBLES LOCATED ON THE LOT LINES THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS, INCLUDING DOUBLES.

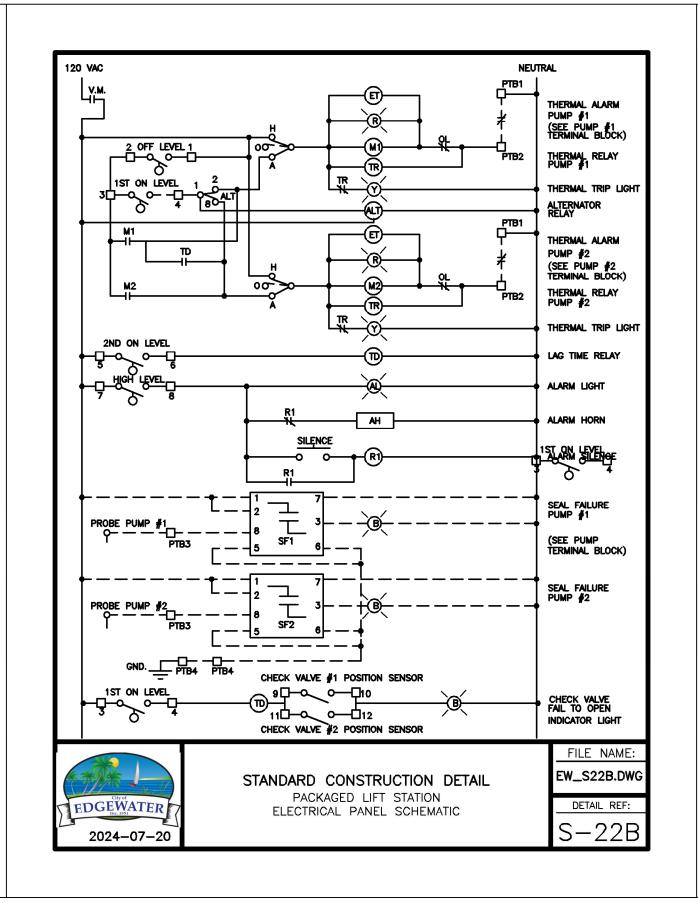
MINIMUM INSIDE DIAMETER OF 4 FEET.

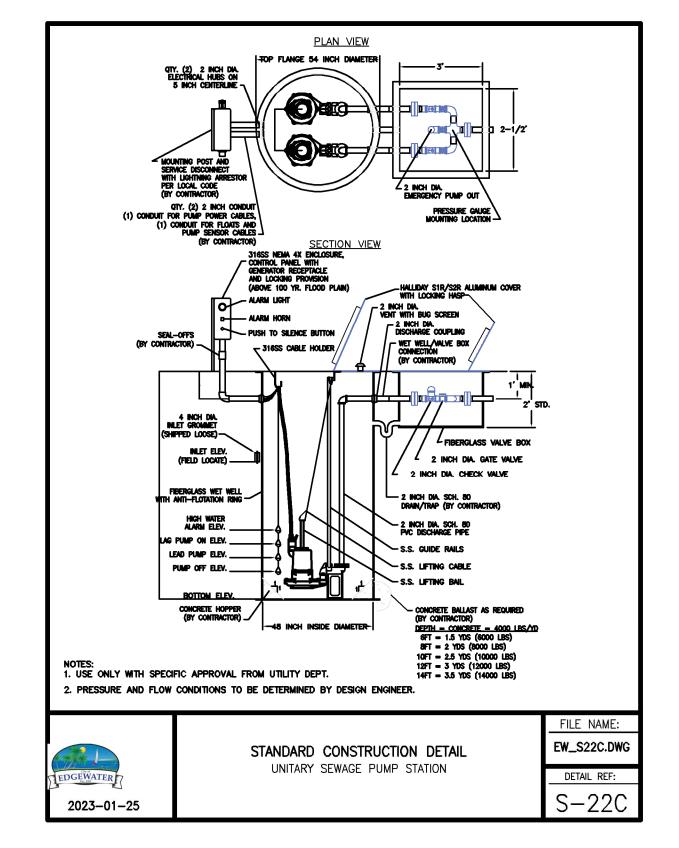
GENERALLY IN UNPAVED AREAS.

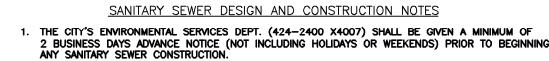
MINIMUM 6 INCH DIAMETER.

AS DEEMED NECESSARY BY THE CITY.

FLORIDA SANITARY SEWER" CAST INTO THEM.







. ALL GRAVITY SANITARY SEWER MAIN LINES SHALL BE 8" DIAMETER MINIMUM. COMMERCIAL SERVICE LATERALS WITH MULTIPLE CONNECTIONS SHALL BE GREEN 6" DIA. OR LARGER. ALL SINGLE FAMILY RESIDENTIAL SERVICE LATERALS SHALL BE 4" - SINGLE SERVICES.

3. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS.

4. MINIMUM GRAVITY SANITARY SEWER SLOPES ARE AS FOLLOWS: 8" PIPE 0.40% 10" PIPE 0.30%

5. GRAVITY SANITARY SEWER LINES SHALL BE INSTALLED WHENEVER POSSIBLE UNDER PAVED AREAS WITHIN PUBLIC RIGHTS—OF—WAY. UTILITY EASEMENTS SHALL BE PROVIDED WHENEVER PUBLICLY-OWNED SEWER LINES ARE CONSTRUCTED OUTSIDE OF A PUBLIC

6. GRAVITY SANITARY SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY THE CITY.

7. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING OPERATIONS, DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.

8. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES IS NOT ACCEPTABLE. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY.

9. ON ALL EXCAVATION AND BACKFILLING THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER.

10. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO THE SPECIFIED MINIMUM COMPACTION (95% IN UNPAVED AREAS AND 98% IN PAVED AREAS) OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED

11. THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING LABORATORY AT HIS OWN EXPENSE TO INSURE THAT COMPACTION OF ALL FILL MATERIAL IS COMPLETED PROPERLY. TESTS SHALL BE DONE ONE FOOT ABOVE THE PIPE AND THEN AT ONE FOOT VERTICAL INTERVALS UNTIL FINAL GRADE IS REACHED. TESTING SHALL BE COMPLETED AND TEST DOCUMENTS SUBMITTED TO THE CITY AT A MINIMUM FREQUENCY OF ONE SET OF TESTS BETWEEN EACH MANIMUM END ONE ADDITIONAL SET OF TESTS AT EXCEPT MANIMUM F BETWEEN EACH MANHOLE AND ONE ADDITIONAL SET OF TESTS AT EVERY MANHOLE. IDENTIFICATION OF TEST LOCATIONS SHALL BE CLEARLY INDICATED ON TEST REPORTS. TEST RESULTS SHALL BE FORWARDED PROMPTLY TO THE CITY'S DESIGNATED SITE

12. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATOR TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC SEWAGE FORCE MAINS. THIS PIPE LOCATOR AID SHALL BE INSTALLED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER. TAPE SHALL BE COLOR CODED GREEN FOR SANITARY SEWER AND FORCE MAIN. INSTALL 12 GUAGE TRACING WIRE IN TRENCH.



FILE NAME EW\_S23.DWG STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN AND DETAIL REF: CONSTRUCTION NOTES

EDGEWATER <sup>້</sup> 2023–01–25

S - 23

STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN AND CONSTRUCTION NOTES

FILE NAME W\_S24.DW DETAIL REF: S - 24

SANITARY SEWER DESIGN AND CONSTRUCTION NOTES

29. SANITARY SEWER MANHOLES WHICH HAVE SEWER FORCE MAINS DISCHARGING DIRECTLY INTO THEM SHALL BE FIBERGLASS OR POLY-ETHYLENE LINED. RETRO-FITTING OF MANHOLES WITH LINERS SHALL BE REQUIRED WHEN NEW CONNECTIONS SUCH AS THIS ARE MADE. FIBERGLASS SHALL BE A MINIMUM 1/2" THICKNESS UNLESS APPROVED OTHERWISE BY THE CITY. OTHER

30. THE CITY RESERVES THE RIGHT TO REQUIRE THE DEVELOPER TO PERFORM VACUUM

31. ALL SEWER MAINS, PRIOR TO ACCEPTANCE BY THE CITY AND PRIOR TO ANY FINAL PAVING OPERATIONS, SHALL BE CLEANED FLUSHED AND TELEVISED USING A "PAN AND TILT" CAMERA BY A CITY APPROVED CONTRACTOR. THE VIDEO SHALL BE NON-STOP WITH AUDIO DESCRIBING WHAT IS BEING REVIEWED. WRITTEN VIDEO LOGS DESCRIBING THE CONDITION OF THE LINES SHALL ACCOMPANY THE TAPE SUBMISSION TO THE CITY PRIOR TO COMMENCING ANY INSTALLATION OF ASPHALT OR CONCRETE PAVEMENT. RE-TAPING MAY BE REQUIRED BY THE CITY IF ADDITIONAL

34. SEWER LATERAL LOCATIONS SHALL BE MARKED ALONG THE OUTSIDE OF THE CURB WITH A SAW CUT "V", OR BY A METAL TAB SET INTO THE PAVEMENT.

36. EZ-WRAP PLASTIC, AS MANUFACTURED BY PRESS SEAL GASKET CORPORATION, SHALL BE USED ON THE OUTSIDE OF ALL MANHOLE AND WETWELL JOINTS. APPLY ONE LAYER OF 9" WRAP CENTERED ON EACH JOINT. A CITY INSPECTOR SHALL PERSONALLY INSPECT ALL JOINT SEALS PRIOR TO BACKFILLING OPERATIONS.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE ENVIRONMENTAL SERVICES DEPARTMENT (AS APPROPRIATE) AT LEAST 24 HOURS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING (SUBJECT TO

38. THE CITY MAY REQUIRE THE CONTRACTOR TO PIG FORCE MAINS 6" AND GREATER IN DIAMETER AND PRIMARY TRANSMISSION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR.

EDGEWATER 2024-07-20

SANITARY SEWER DESIGN AND CONSTRUCTION NOTES

W\_S25.DW DETAIL REF: S - 25 SANITARY SEWER DESIGN AND CONSTRUCTION NOTES

39. ANY TIE INTO AN EXISTING MANHOLE WILL BE COORDINATED WITH THE CITY, AND ALL CONFINED SPACE HAZARDS AND PROCEDURES WILL BE FOLLOWED.

40. ANY TIE INTO AN EXISTING SYSTEM WILL BE SWEPT IN THE DIRECTION OF FLOW. 41. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL OSHA, DOT, OR ANY OTHER RULES

& REGULATIONS THAT MAY APPLY. 42. AS A GENERAL RULE, THE NUMBER OF JOINTS SHALL BE LIMITED WHENEVER POSSIBLE. IN

SPECIAL CASES WHERE A POINT REPAIR TO AN 8"TO 12" PVC SEWER MAIN IS REQUIRED, THE PROPER RIGID WRAP AROUND SLEEVE SUCH AS A JCM-210 OVERSIZED DUCTILE IRON COUPLING OR AN APPROVED EQUAL MAY BE ALLOWED BY SPECIAL APPROVAL BY THE

43. ALL IN-LINE SANITARY SEWER FORCE MAIN VALVES SHALL BE RESILIENT SEAT (AWWA

C-509) VALVES FEATURING A LINED DUCTILE IRON BODY. 44. ALL TAPPING OF MAINS AND CORING OF MANHOLES SHALL BE COORDINATED WITH THE CITY BY AN APPROVED CONTRACTOR AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 48 HOUR NOTIFICATION (MEASURED ON NORMAL WORK DAYS) DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE ENVIRONMENTAL SERVICE DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE

45. WITH RESPECT TO TIE-IN CONNECTIONS AND CORING OPERATIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING

ON THE APPROPRIATE DAY AND TIME ESTABLISHED BY CITY

46. ALL WORK PERFORMED UPON SANITARY SEWER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A LICENSED UNDERGROUND UTILITY CONTRACTOR, OR LICENSED GENERAL CONTRACTOR, WHO IS LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.

47. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY USE OF THE

48. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE LOCATION, OF ALL FORCE MAINS MEASURED FROM THE BACK OF CURB ( OR EDGE OF PAVEMENT, IF

49. ALL HDPE PIPE INSTALLED FOR SEWAGE FORCE MAINS SHALL BE SDR 11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP TO WHICH IT IS ATTACHED.

50. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.

51. ALL UTILITY INSTALLATIONS ARE SUBJECT TO REVIEW AND APPEAL BY THE CITY OF EDGEWATER.
ALL STRUCTURES AND EQUIPMENT SUPPLIED AND/ OR INSTALLED SHALL MEET QUALITY AND
PERFORMANCE STANDARDS PRIOR TO ACCEPTANCE. SUBSTANDARD INSTALLATIONS MAY BE REJECTED, REMEMBER MEASURES ARE SUBJECT TO CITY APPROVAL.

EDGEWATER 2023-01-25

STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN AND CONSTRUCTION NOTES

W\_S26.DW DETAIL REF:

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Trusted Advisors, Creating Community,

DRAWING NUMBER

TYPES OF LINING METHODS AND MATERIALS MAY BE CONSIDERED ON A CASE BY CASE BASIS.

TESTING OF ALL SANITARY MANHOLES, AIR TEST SEWER MAINS,
AND REQUIRES THAT ALL SANITARY SEWER MAIN LINES BE TELEVISED PRIOR TO FINAL
ACCEPTANCE. LATERALS SHALL BE TELEVISED UPON DEMAND BY THE CITY PRIOR TO

37. ALL PROPOSED SEWER FORCE MAINS SHALL BE FLUSHED, PRESSURE TESTED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE

STANDARD CONSTRUCTION DETAIL

FILE NAME

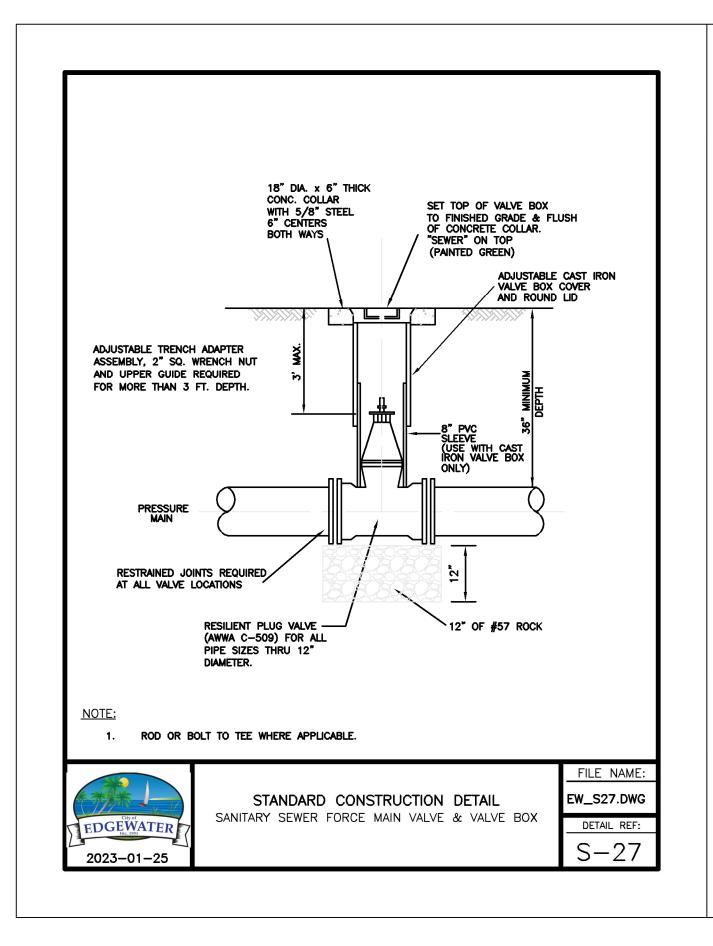
FINAL ACCEPTANCE WHEN IT IS SUSPECTED THAT A PROBLEM EXISTS.

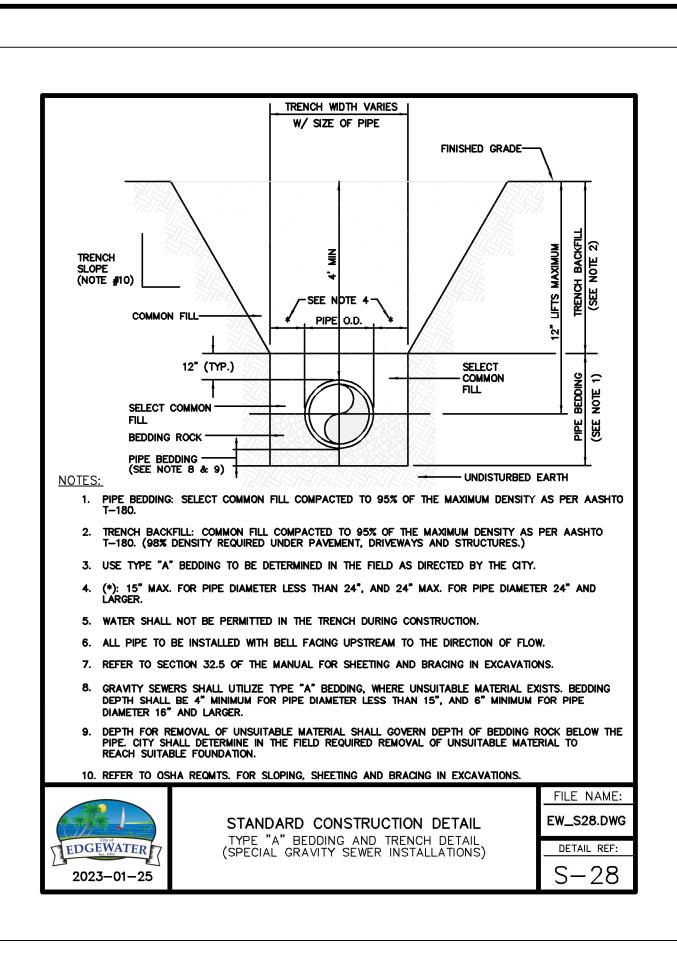
CLEARING OR CORRECTIVE ACTIONS ARE NECESSARY

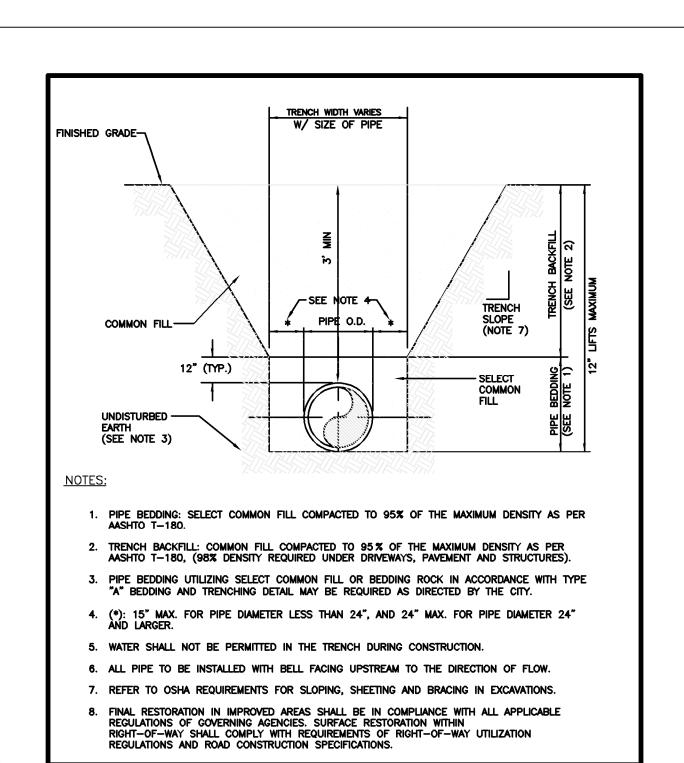
32. ALL MANHOLES WITH FORCE MAIN CONNECTIONS SHALL BE OUTFITTED WITH EGRU LINERS OR OTHER TYPES OF LINERS APPROVED BY THE CITY. IN ADDITION, THE CITY MAY REQUIRE LINERS TO BE INSTALLED IN AREAS WHERE THE ENVIRONMENTAL SERVICES DEPARTMENT BELIEVES THE

33. ALL SEWER LINES WHICH ARE CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF C-900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED.

35. CONTEC A-2000 PVC PIPE SHALL NOT BE ALLOWED FOR USE.







STANDARD CONSTRUCTION DETAIL

TYPE "B" BEDDING AND TRENCH DETAIL

(TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM

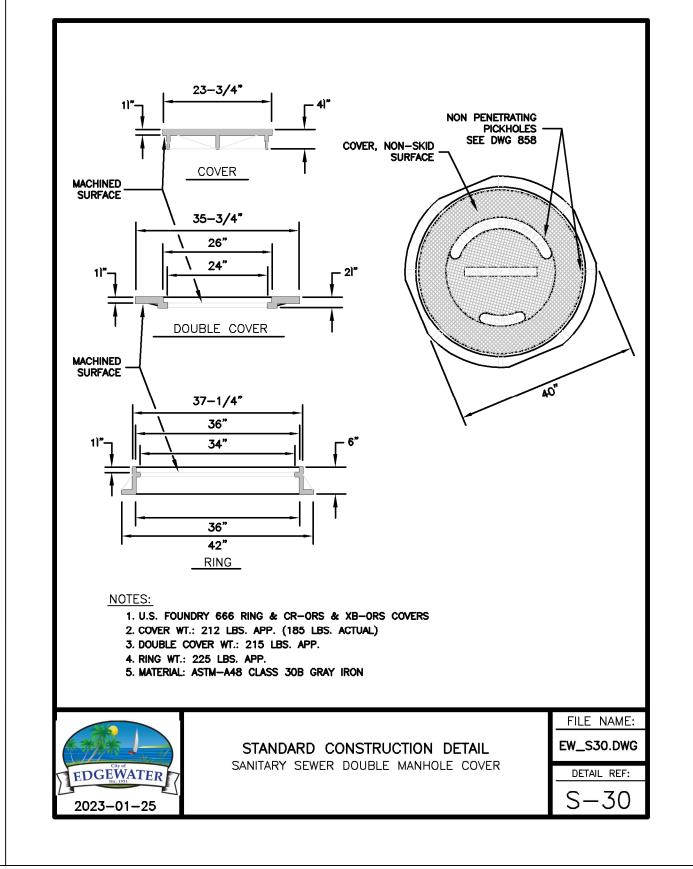
DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS)

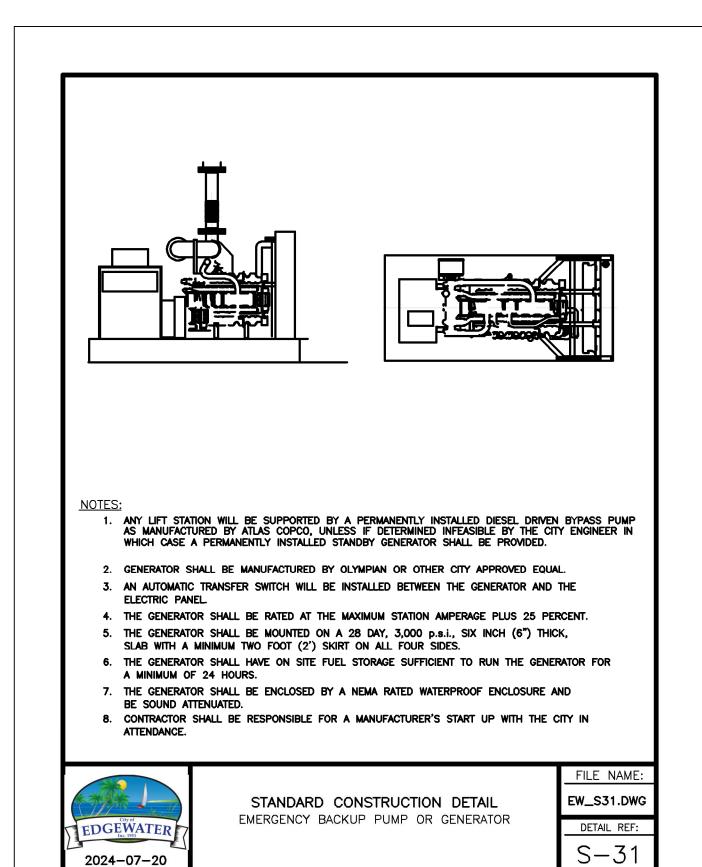
EDGEWATER Inc. 1951

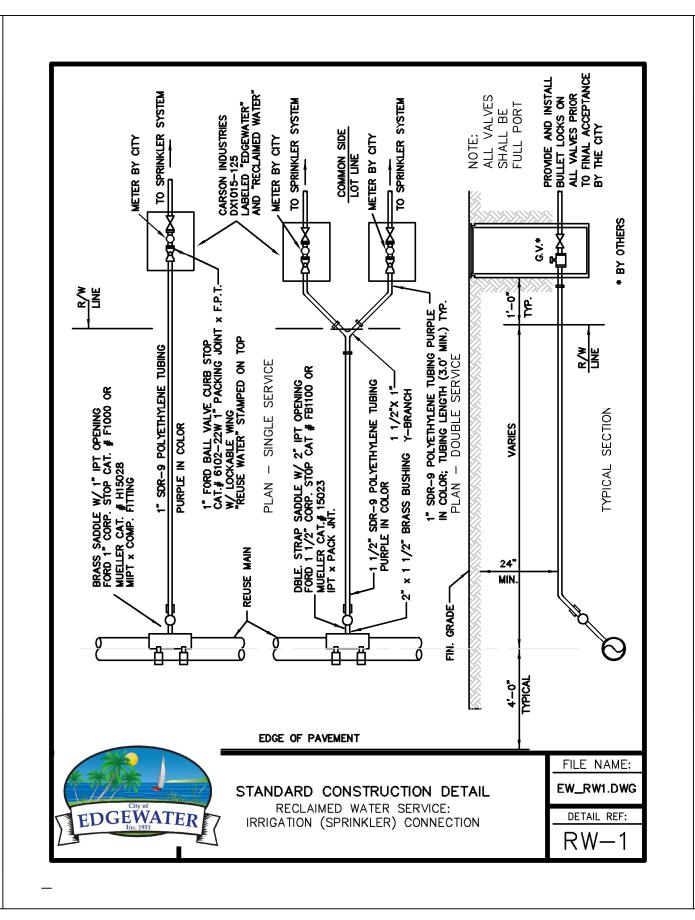
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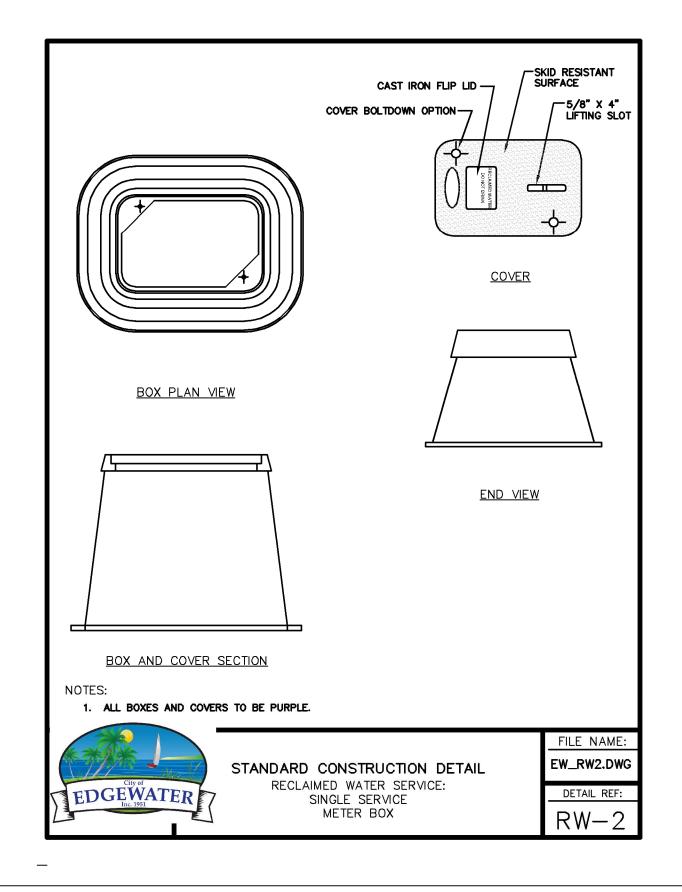
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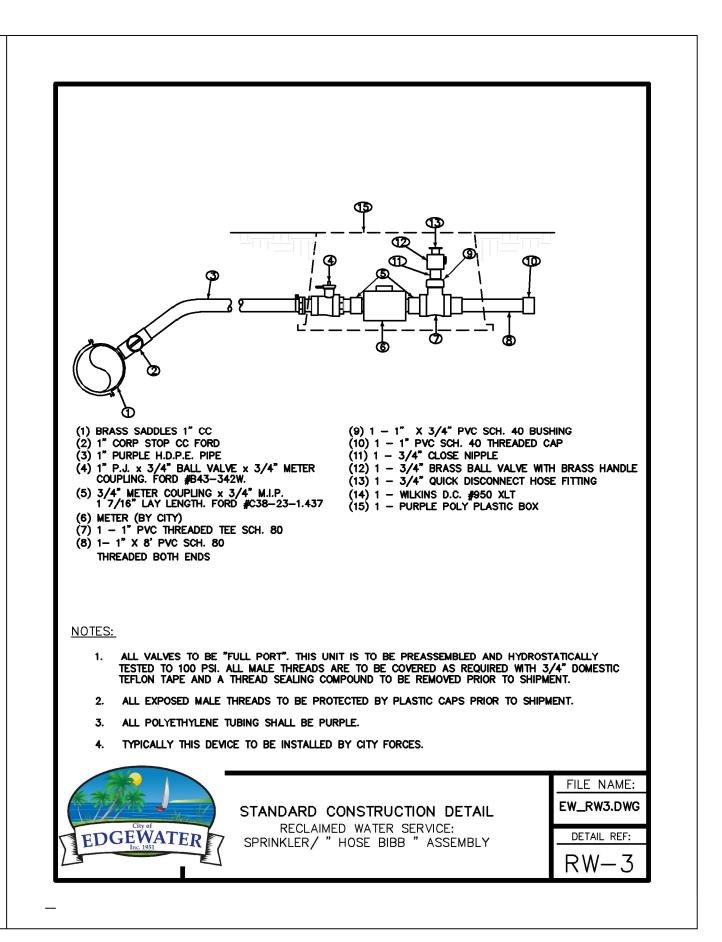
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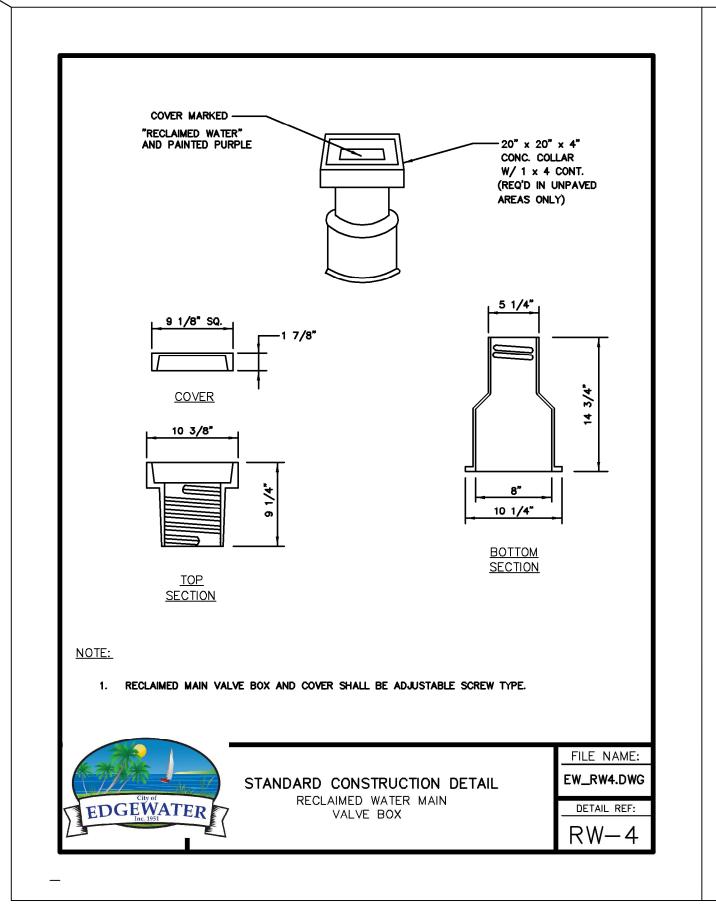


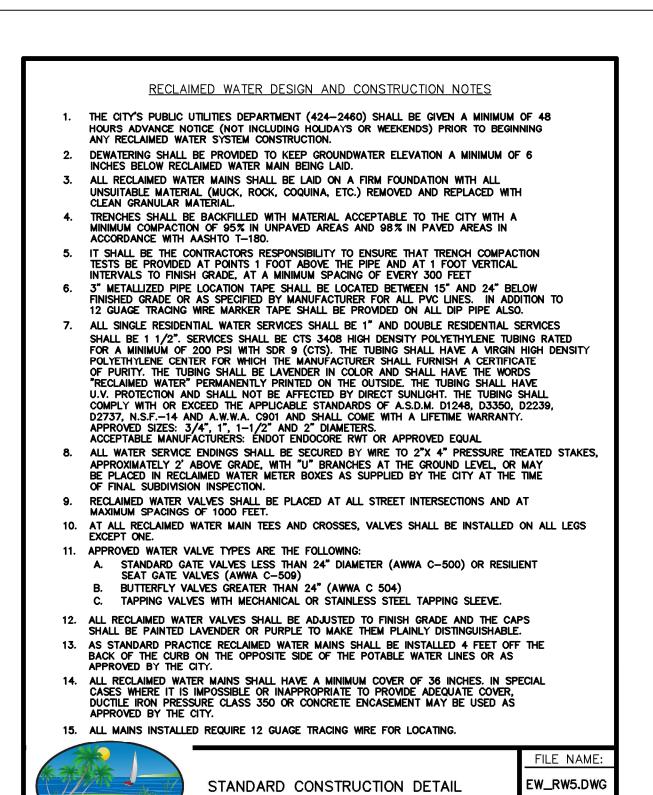




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15D





.AIMED WATER DESIGN AND CONSTRUCTION NOTES

EDGEWATER

2017-10-24

RECLAIMED WATER DESIGN AND CONSTRUCTION NOTES (CONTD.) ALL PROPOSED RECLAIMED WATER MAINS SHALL BE FLUSHED, DISINFECTED PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WASTEWATER PLANT 48 HOURS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING. 16. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL RECLAIMED MAINS IN EXCESS OF 8" IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS.

LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. RECLAIMED WATER MAINS SHALL BE PVC AWWA CLASS C-900 OR C-905, CL 150 (COLOR PANTONE PURPLE) OR DIP PRESSURE CLASS 350, STANDARD CEMENT LINED UNLESS APPROVED OTHERWISE BY THE CITY. ALL RECLAIMED WATER MAINS SHALL USE A THRUST RESTRAINED JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC FITTINGS ARE SPECIFIED, THE RESTRAINED JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINED LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE. IN NO INSTANCE SHALL THRUST BLOCKS BE 19. MEGALUGS, BOLTLESS RESTRAINED JOINTS, OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES. 20. GRIPPER RING GASKETS BY ROMAC MAY BE USED AS APPROPRIATE FOR RESTRAINING

PRESSURE PIPE TO FITTINGS, VALVES, ETC. 21. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION OR CITY OF EDGEWATER PUBLIC UTILITIES AND "AS-BUILTS" ARE PROVIDED TO THE CITY, PRIOR TO ANY USE OF THIS SYSTEM.

22. ALL RECLAIMED WATER MAINS AND SERVICE LINES SHALL BE READILY DISTINGUISHABLE BY THEIR PURPLE COLOR OR TAPE MARKINGS. DUCTILE IRON PIPE SHALL BE WRAPPED WITH PURPLE POLYETHYLENE. 23. ALL RECLAIMED WATER SERVICES SHALL BE MARKED ALONG THE OUTSIDE EDGE OF CURB

WITH AN "L" OR BY METAL TABS SET INTO PAVEMENT. VALVES AND BLOW-OFFS FOR RECLAIM WATER MAINS SHALL BE MARKED BY AN "X" SET INTO THE PAVEMENT. 24. ALL DIP PIPE SHALL HAVE 2" YELLOW STRIPES PAINTED AT 2 O'CLOCK, 6 O'CLOCK, AND 10 O'CLOCK FOR THE FULL LENGTH OF PIPE. YELLOW TRAFFIC STRIPING PAINT SHALL BE USED WITH RECLAIMED WATER CLEARLY STENCILED WITH PAINT AT TWO LOCATIONS PER STRIPE

25. RECLAIM WATER SERVICES SHALL BE NORMALLY DOUBLE 1 1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIM WATER SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 2.0'.

26. MAXIMUM OBTAINABLE SEPARATION OF PUBLIC RECLAIMED WATER MAINS, STORMWATER MAINS, AND SANITARY SEWER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND SEWAGE MAINS. WHERE RECLAIMED WATER AND SANITARY SEWAGE MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE, THE SANITARY SEWAGE MAIN SHALL BE TWENTY (20) FEET OF EITHER CONCRETE ENCASED PVC PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTERED ON THE POINT OF CROSSING



STANDARD CONSTRUCTION DETAIL .AIMED WATER DESIGN AND CONSTRUCTION NOTES

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FILE NAME:

RECLAIMED WATER DESIGN AND CONSTRUCTION NOTES (CONTD.)

27. MAXIMUM OBTAINABLE SEPARATION OF PUBLIC ACCESS RECLAIMED WATER MAINS AND POTABLE WATER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE RECLAIMED WATER AND POTABLE WATER MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE, THE RECLAIMED WATER MAIN SHALL BE TWENTY (20) FEET OF EITHER DUCTILE IRON PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTER ON THE POINT OF CROSSING.

28. ALL RECLAIMED WATER HOSE BIBBS, HAND-OPERATED CONNECTIONS AND OUTLETS SHALL BE CONTAINED IN UNDERGROUND SERVICE VAULTS AND SHALL BE APPROPRIATELY TAGGED OR LABELED TO WARN THE PUBLIC AND EMPLOYEES THAT THE WATER IS NOT INTENDED FOR DRINKING. ALL PIPING, VALVES, AND OUTLETS SHALL BE COLOR-CODED, OR OTHERWISE MARKED, TO DIFFERENTIATE RECLAIMED WATER FROM POTABLE OR OTHER WATER. OTHER WATER.

29. VAULTS FOR HOSE BIBBS AND OUTLETS SHALL BE LOCKED OR REQUIRE A SPECIAL TOOL FOR OPERATION OF HOSE BIBBS AND OUTLETS.

30. THE REUSE MAIN SHALL NOT BE PLACED IN SERVICE UNTIL A SATISFACTORY 150 PSI PRESSURE TEST AND A PASSING BACTERIOLOGICAL TEST IS PERFORMED AND RESULTS ARE FORWARDED

31. A 75 FOOT SETBACK DISTANCE SHALL BE PROVIDED FROM PUBLIC ACCESS REUSE WETTED AREAS TO ANY PUBLIC AND ANY PRIVATE POTABLE WATER SUPPLY WELLS. 32. LOW TRAJECTORY NOZZLES ARE REQUIRED WITHIN 100 FEET OF PUBLIC EATING, DRINKING

OR BATHING FACILITIES. 33. ALL TAPPING OF MAINS SHALL BE SUPERVISED BY THE CITY SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 48 HOUR NOTIFICATION (MEASURED ON NORMAL WORK DAYS) DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 7:00 A.M. AND NOON ON THE APPROPRIATE

34. WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW IN ORDER TO MINIMIZE MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS.

35. ALL WORK PERFORMED UPON RECLAIMED WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.

36. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL RECLAIMED WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT IF NO CURB EXISTS).

37. ALL H.D.P.E. PIPE RECLAIMED WATER MAINS SHALL BE S.D.R.11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.

38. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.

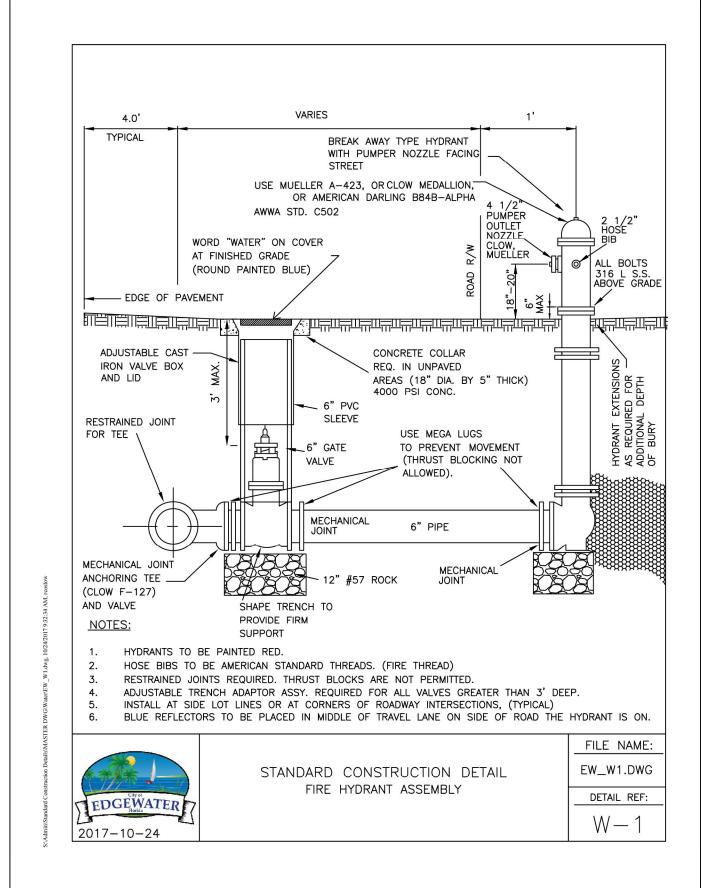


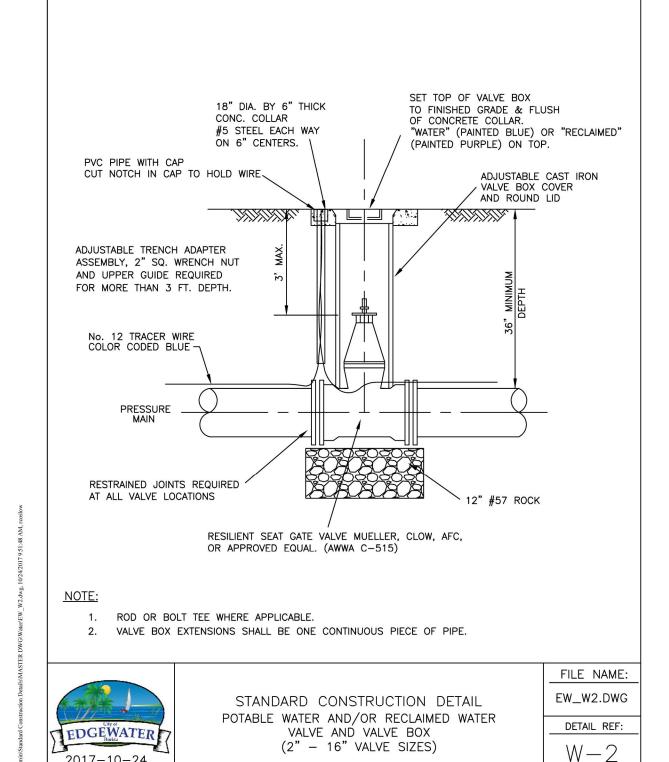
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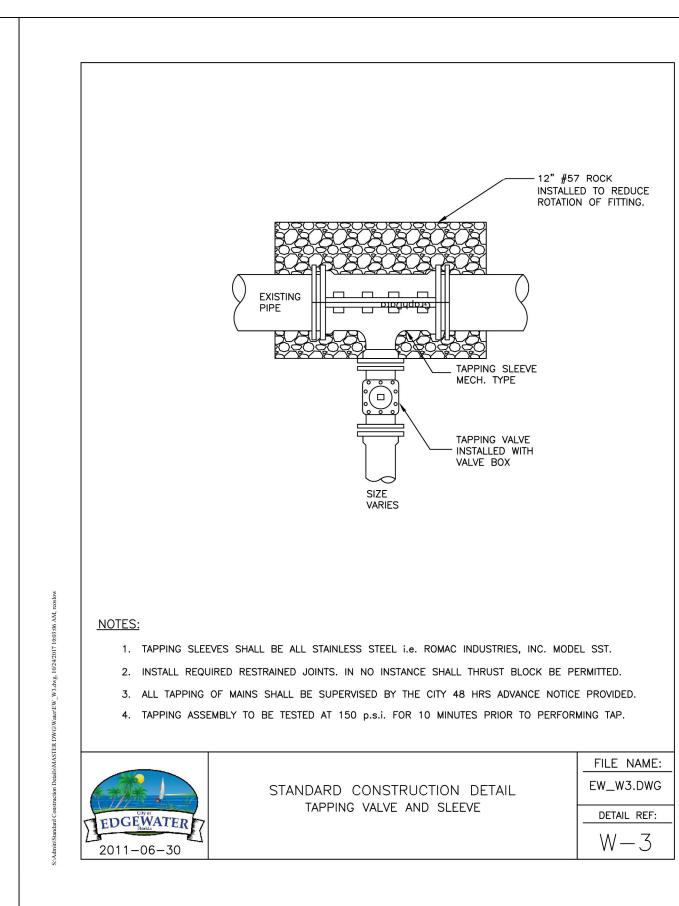
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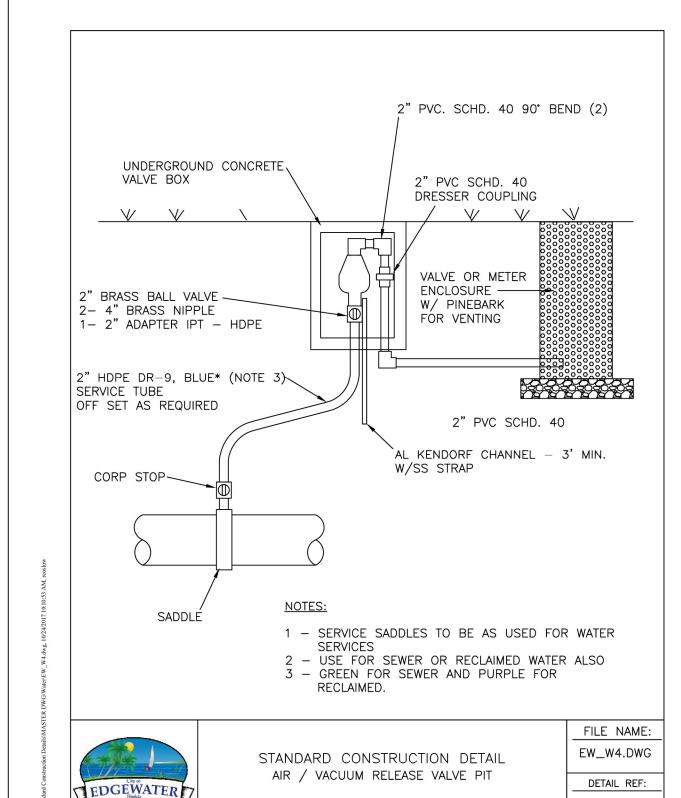
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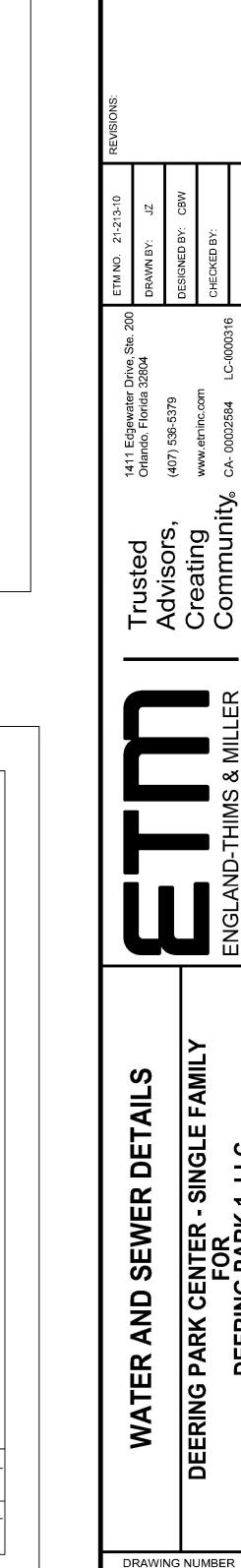
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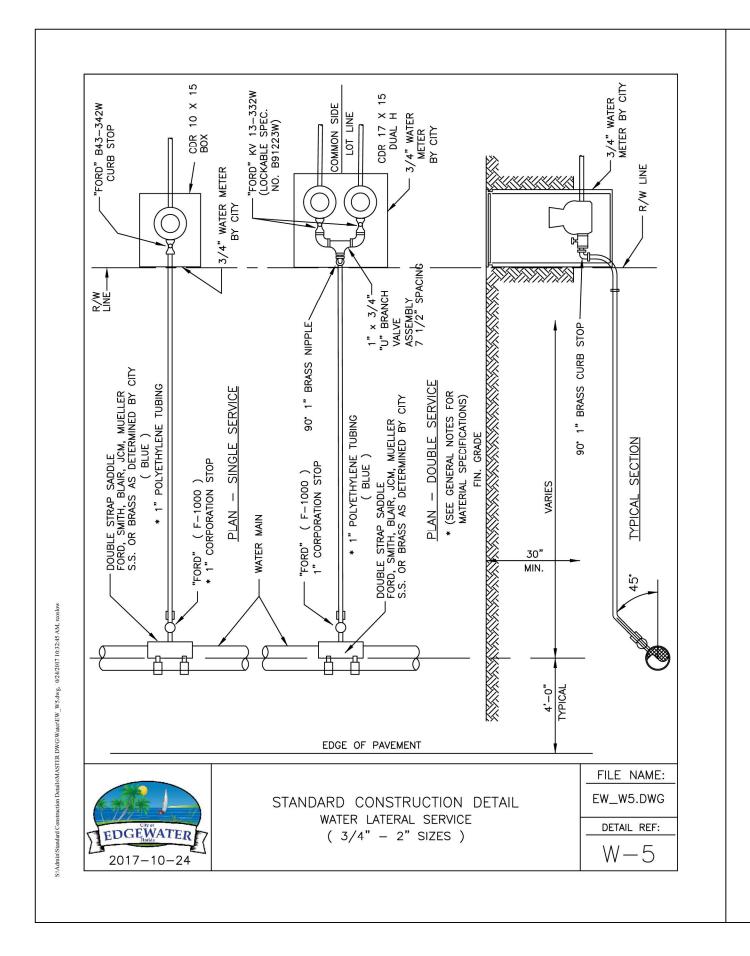


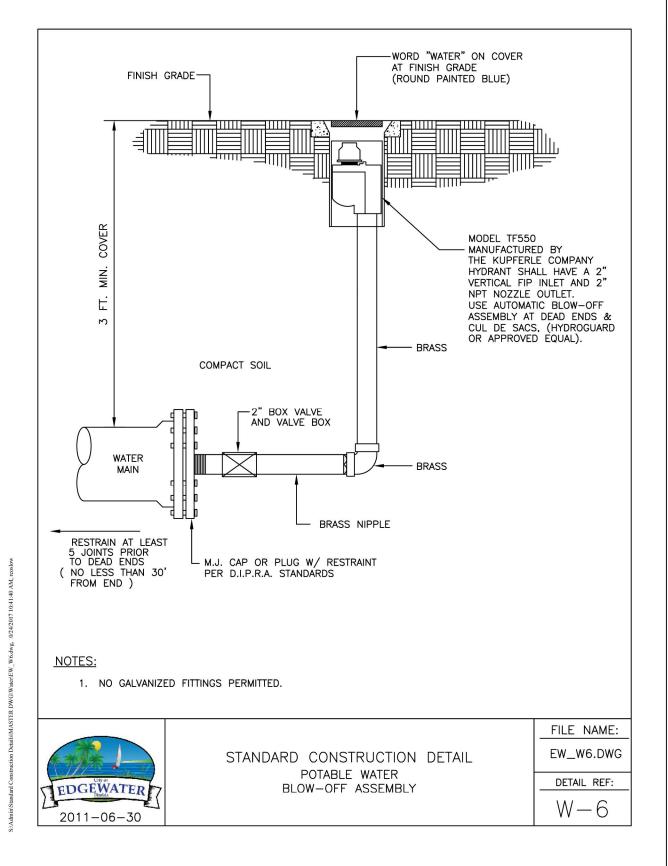


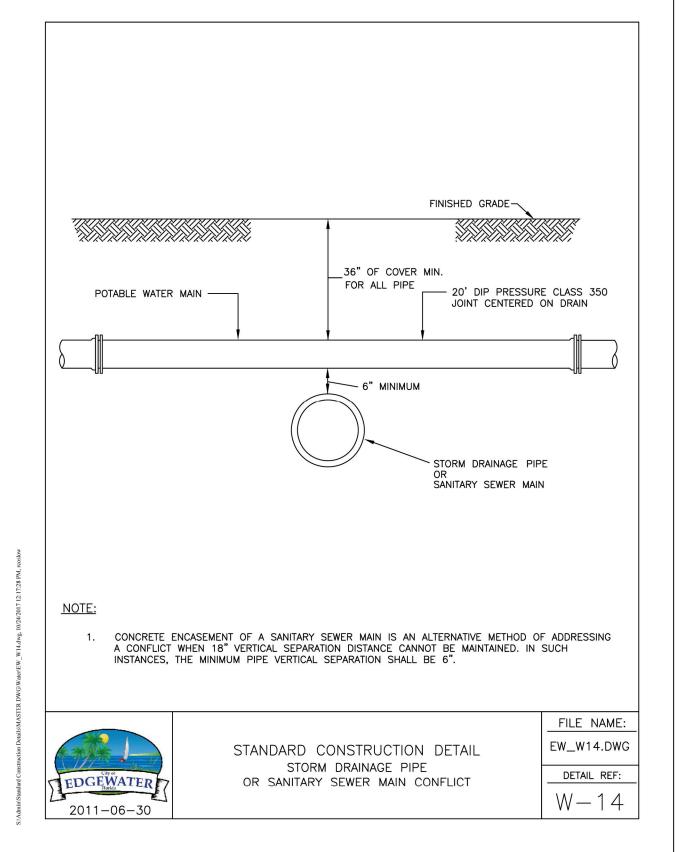


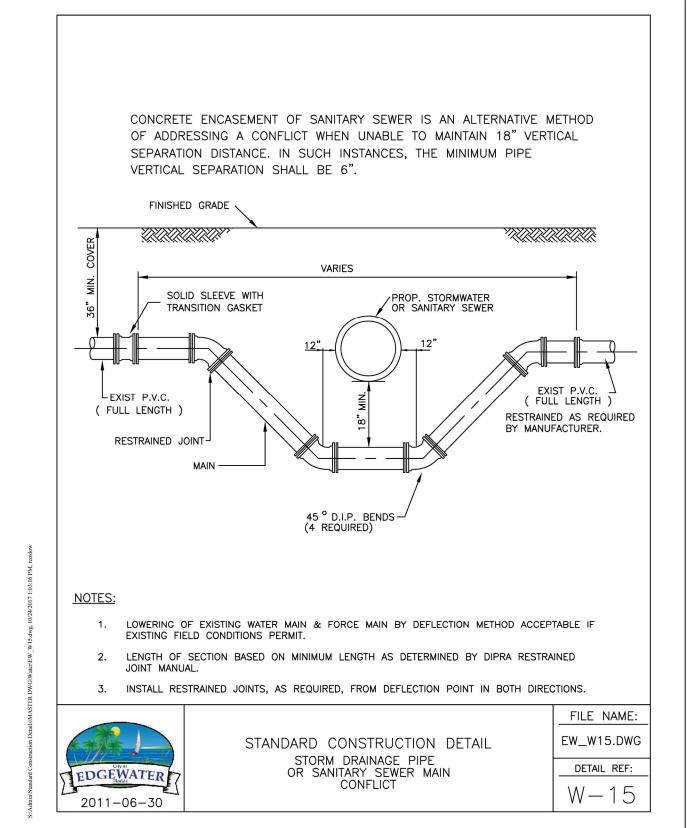
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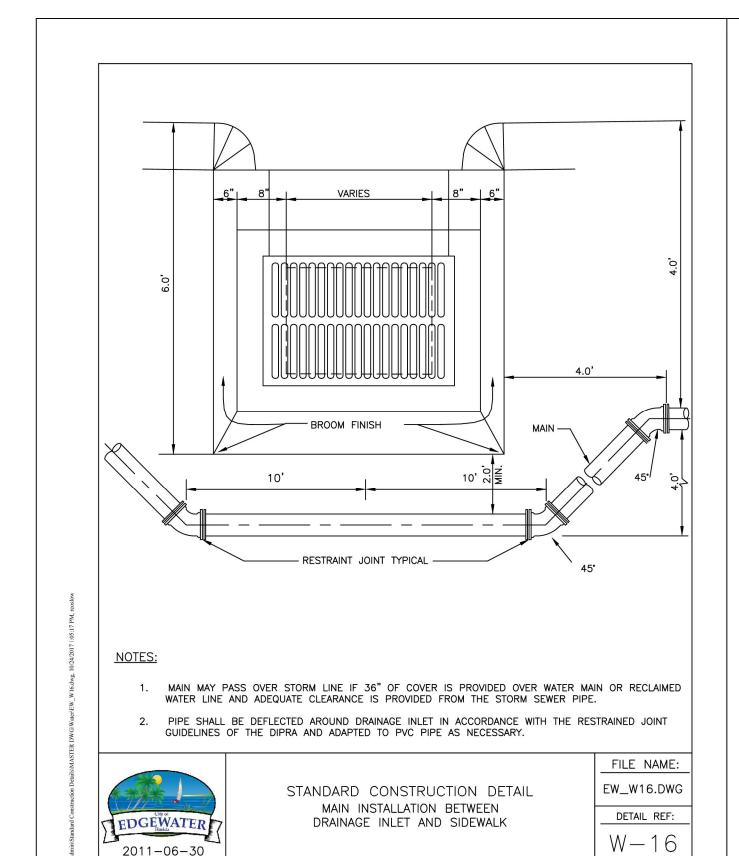
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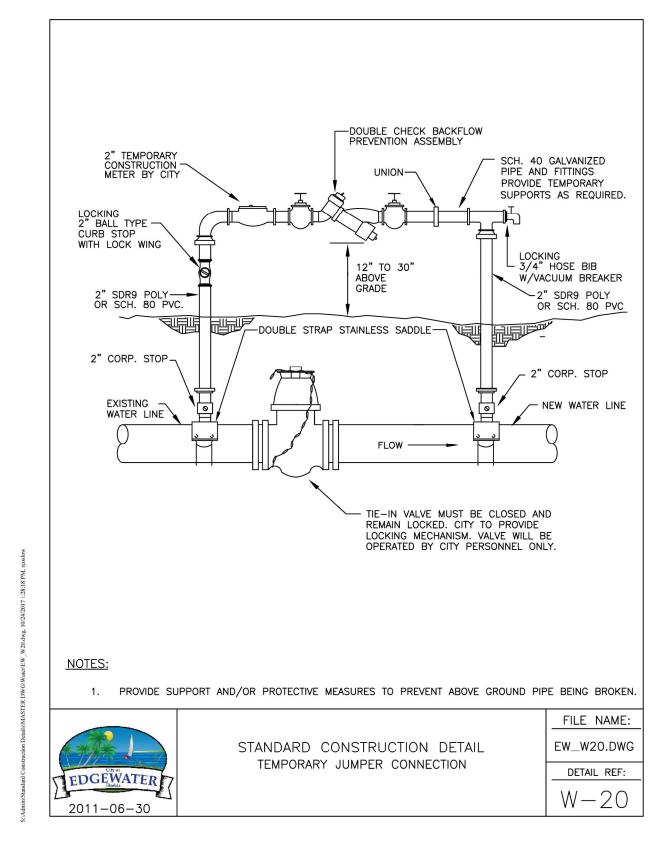
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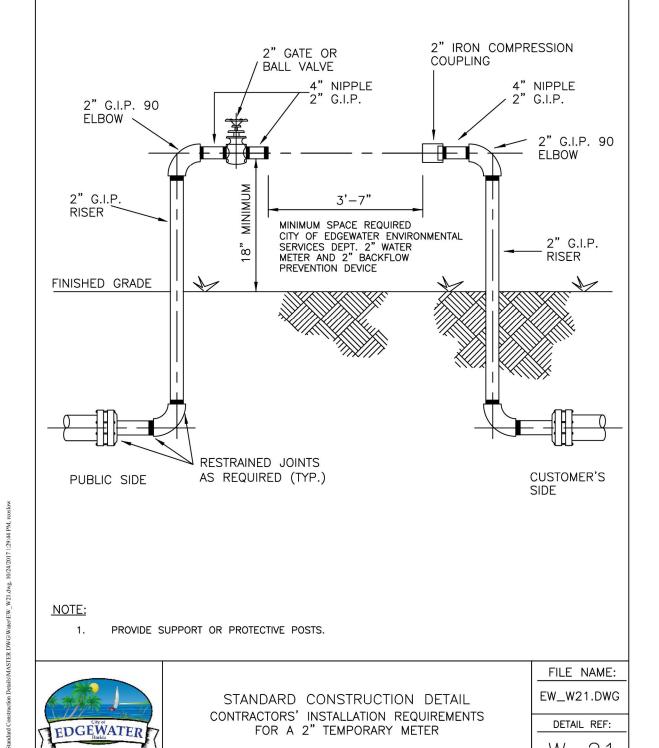
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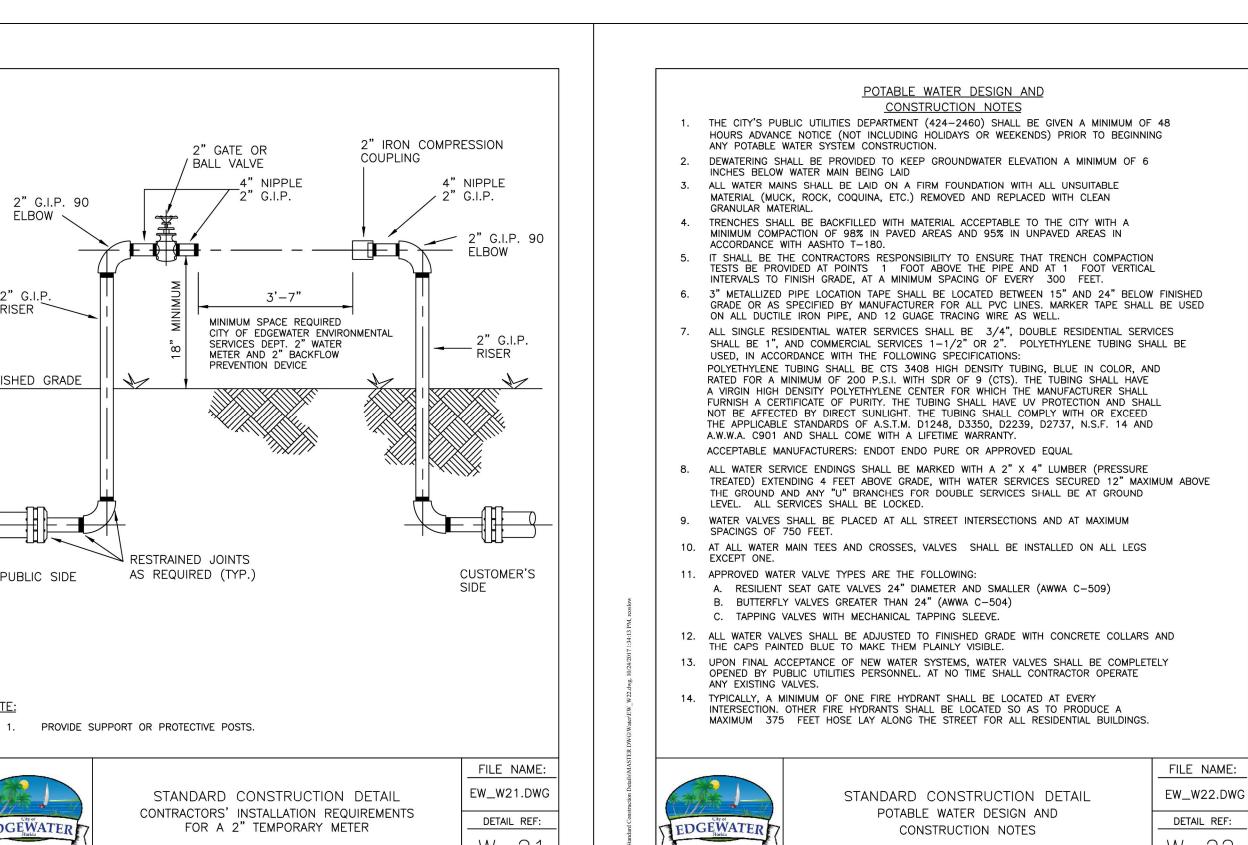
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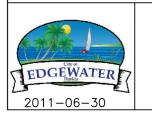
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2011-06-30

#### POTABLE WATER DESIGN AND CONSTRUCTION NOTES (CONTD.)

- 15. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE
- AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.
- 17. ALL WATER MAINS SHALL BE NSF-APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES.
- 18. ALL PROPOSED WATER MAINS SHALL BE FLUSHED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
- 19. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY. 20. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO
- THE CITY PRIOR TO ANY USE OF THIS SYSTEM . 21. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S FIRE (WATER) FLOW CODE.
- 22. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST.
- 23. IN AREAS WHERE RECLAIMED WATER IS AVAILABLE, RECLAIMED WATER WILL BE UTILIZED
- IN THE PRESSURE TESTING OF NEW RECLAIMED WATER LINES. 24. ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC FITTINGS ARE SPECIFIED, THE RESTRAINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR
- 25. MEGALUGS, BOLTLESS RESTRAINED JOINTS, GRIPPER GASKETS, OR STAR GRIPS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES.
- 26. GRIPPER RING GASKETS BY ROMAC AND OR STAR AU-GRIP MAY BE USED AS APPROPRIATE FOR RESTRAINING PRESSURE PIPE TO FITTINGS, VALVES, ETC.
- 27. WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 4 HOURS PER AWWA STANDARDS.
- 28. ALL WATER SERVICES SHALL BE MARKED WITH AN "/\" SAW CUT INTO THE CURB AND METAL TABS SET INTO THE PAVEMENT.
- 29. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB AND METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY,
- 30. WATER SERVICES SHALL BE NORMALLY DOUBLE 1" SERVICES LOCATED AT SIDE LOT LINES.
- IN INSTANCES WHERE SERVICES NEED TO BE OFFSET, 3/4" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2.0' FROM SIDE LOT LINES.
- 31. ALL TAPPING OF MAINS SHALL BE SUPERVISED BY THE CITY SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 48 HOUR NOTIFICATION (MEASURED ON NORMAL WORK DAYS) DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY.



STANDARD CONSTRUCTION DETAIL POTABLE WATER DESIGN AND CONSTRUCTION NOTES

EW\_W23.DWG DETAIL REF:

#### POTABLE WATER DESIGN AND CONSTRUCTION NOTES (CONTD.)

- 32. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 48 HOURS PRIOR TO BEGINNING FLUSH OF THE MAINS PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
- 33. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS IN EXCESS OF 8" IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS.
- LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. 34. WITH RESPECT TO TIE-IN CONNECTIONS , THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.)
- IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. 35. ALL WORK PERFORMED UPON POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY CONTRACTOR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND
- 36. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT,
- IF NO CURB IS USED). 37. POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY OF EDGEWATER. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES.
- 38. ALL H.D.P.E. PIPE UTILIZED FOR WATER, FORCE MAIN AND/OR RECLAIMED WATER MAIN EXTENSIONS SHALL BE S.D.R. 11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- 39. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
- 40. ALL VALVES 2" AND LARGER SHALL BE STANDARD 2" BOX VALVES (CORP STOPS ARE NOT ACCEPTABLE).
- 41. WHERE POTABLE WATER AND SANITARY SEWER MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE OR WHERE THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO DUCTILE IRON PIPE OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C905 SPECIFICATION) FOR A MINIMUM LENGTH OF (20) FEET, CENTERED ON THE POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF (10) TEN FEET (EDGE TO EDGE) BETWEEN POTABLE WATER MAINS AND SEWER MAINS SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10-FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 18" ABOVE THE SEWAGE MAIN. ALTERNATIVELY, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO DUCTILE IRON PIPE OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C-905 SPECIFICATION) AND PRESSURE TESTED.



STANDARD CONSTRUCTION DETAIL POTABLE WATER DESIGN AND CONSTRUCTION NOTES

EW\_W24.DWG DETAIL REF:

#### TECHNICAL SPECIFICATIONS FOR MECHANICAL JOINT DUCTILE IRON PIPE FITTINGS

ALL MECHANICAL JOINT DUCTILE IRON PIPE FITTINGS SHALL BE IN ACCORDANCE WITH ACCEPTABLE STANDARDS AND COMPLY WITH THE FOLLOWING SPECIFICATIONS:

#### MATERIAL:

A.S.T.M. A536 MINIMUM GRADE 70-50-5 IN ACCORDANCE WITH A.W.W.A. C153 (A.N.S.I. A21.53)

## CLASS 350 IN ACCORDANCE WITH A.W.W.A. C153 (A.N.S.I. A21.53) 350 PSI WATER WORKING

## IN ACCORDANCE WITH A.W.W.A. C153 (ANSI A21.53). THREE TIMES WATER WORKING PRESSURE (350 PSI). BODY CAPABLE OF WITHSTANDING HYDROSTATIC TEST OF 1050 PSI.

I.D. EQUAL TO I.D. OF CLASS 50/51 DUCTILE IRON PIPE, THUS ALLOWING THE FULL FLOW

#### LAYING LENGTH:

SHORT BODY (COMPACT)

#### CEMENT LINING:

IN ACCORDANCE WITH A.W.W.A. C104 (A.N.S.I. A21.4)

IN ACCORDANCE WITH A.N.S.I./A.W.W.A. C111/A21.11

#### MECHANICAL JOINTS:

GASKETS:

SBR IN ACCORDANCE WITH A.W.W.A. C111 A.N.S.I. A21.11

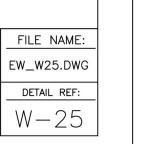
COR-TEN IN ACCORDANCE WITH A.W.W.A. C111 (A.N.S.I. A21.11)

#### ACCEPTABLE MANUFACTURERS:

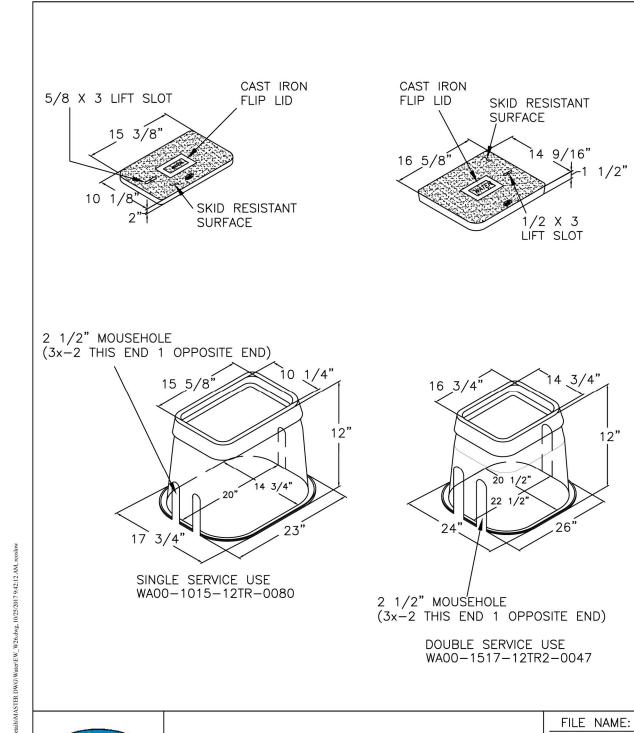
TYLER, CLOW, GRIFFIN, U.S. PIPE, UNION FOUNDRY, AMERICAN CAST IRON OR APPROVED EQUAL



STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR MECHANICAL JOINT DUCTILE IRON PIPE FITTINGS



EDGEWATER Florida



STANDARD CONSTRUCTION DETAIL

VALVE BOX

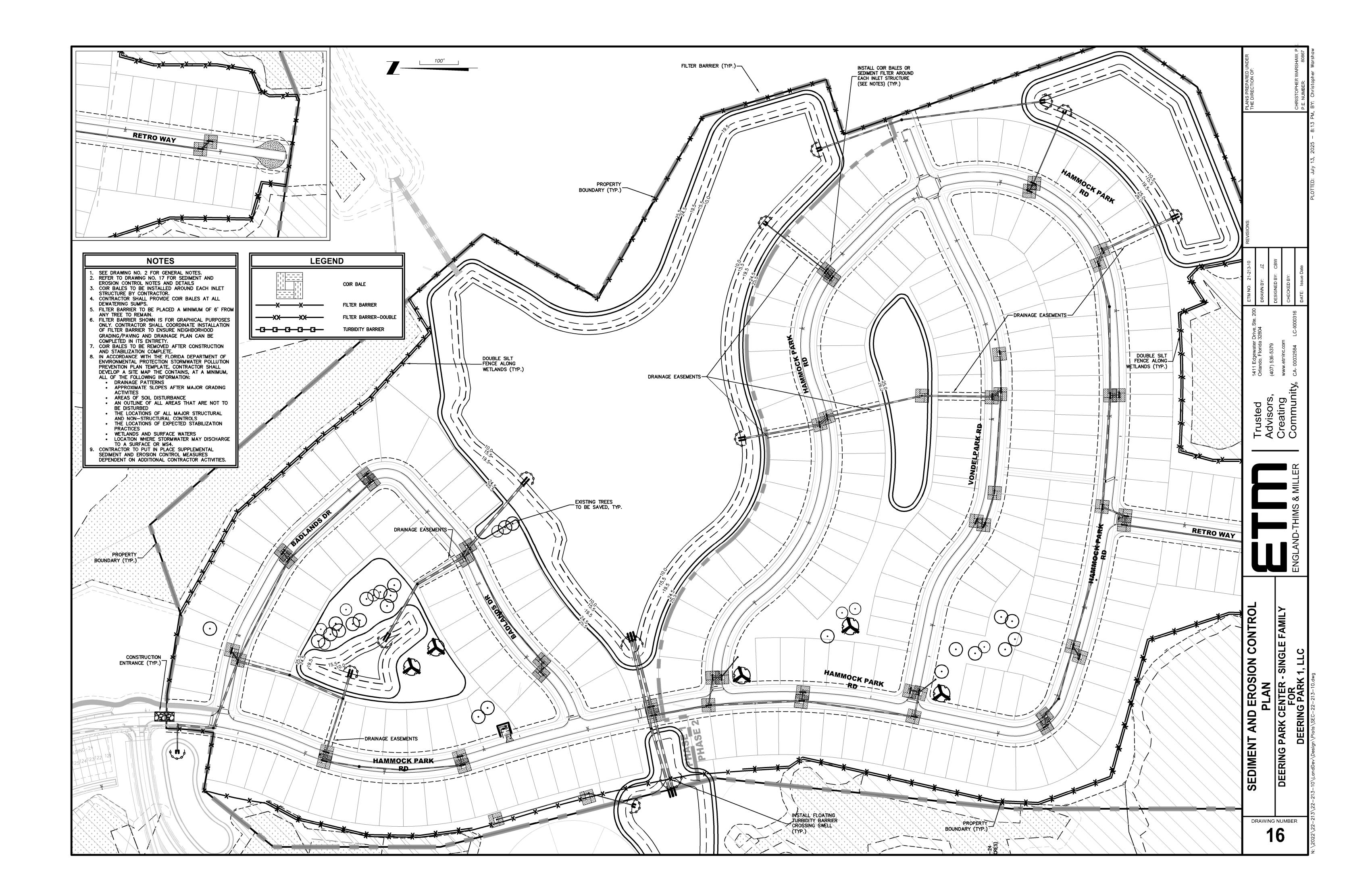
SINGLE AND DOUBLE SERVICE

EW\_W26.DWG

DETAIL REF:

Trusted Advisors, Creating Community,

WATER AND SEWER DETAILS

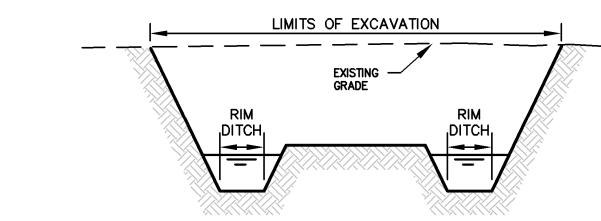


#### SEDIMENT AND EROSION CONTROL NOTES

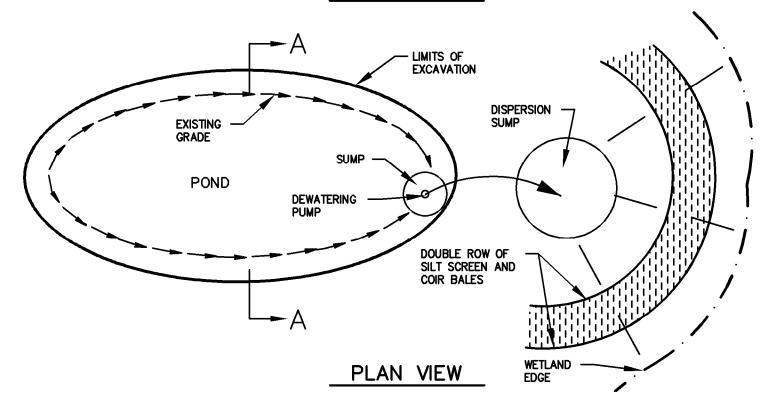
- 1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
- 2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- 3. ADDITIONAL PROTECTION ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- 4. CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
- 5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS REQUIRED, THE STRIPS SHALL BE OVERLAPPED.
- 6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES
- 7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
- 8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
- 9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
- 10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED
- 11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
- 12. LOOSE COIR SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM
- 13. COIR BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- 14. CLOSE ATTENTION SHALL BE GIVEN TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
- 15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE
- ACCOMPLISHED PROMPTLY. 16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. IT MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY
- 17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE COIR BALE OR FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE
- DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED. 18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- 19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED
- 20. STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS
- 21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- 22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT RULES AND
- 23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.P.) CHAPTER 6.
- 24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL
- 25. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
- 26. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND RANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
- 27. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER
- 28. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED AND MULCHED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR SHALL USE ADDITIONAL MEASURES TO STABILIZE DISTURBED AREAS THROUGH COMPACTION, SILT SCREENS, COIR BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
- 29. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
- 30. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
- 31. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
- 32. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
- 33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER THE CONTRACT DOCUMENTS AND MEETING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, XXXXXXXX AND NPDES FINAL STABILIZATION REQUIREMENTS.
- 34. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO

SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.

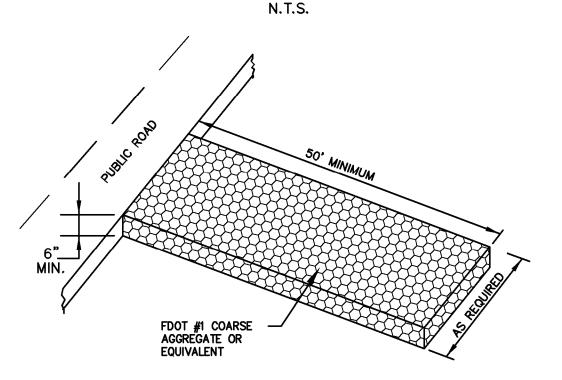
35. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)



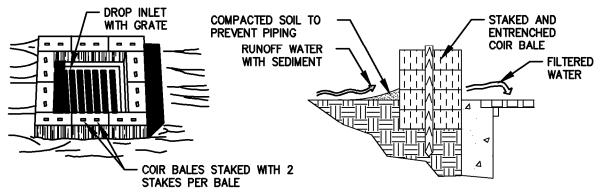
#### SECTION A-A



## TEMPORARY DEWATERING DETAIL



# STABILIZED CONSTRUCTION ENTRANCE

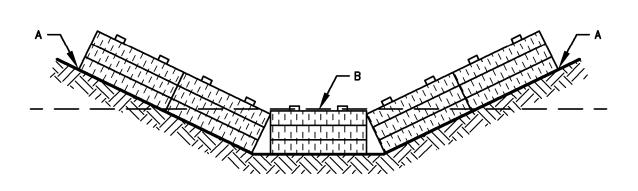


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

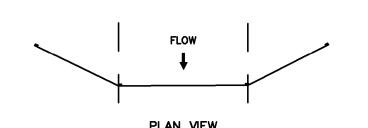
#### COIR BALE DROP INLET SEDIMENT FILTER

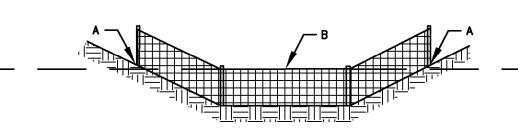
N.T.S.



## PROPER PLACEMENT OF COIR BALE IN A DRAINAGE WAY

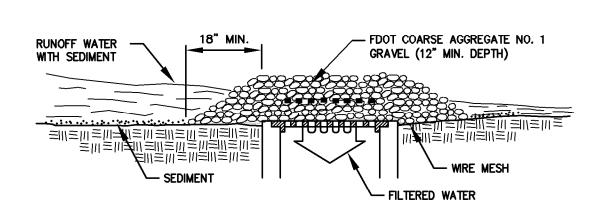
POINTS A SHOULD BE HIGHER THAN POINT B





SECTION VIEW POINTS A SHOULD BE HIGHER THAN POINT B

## PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

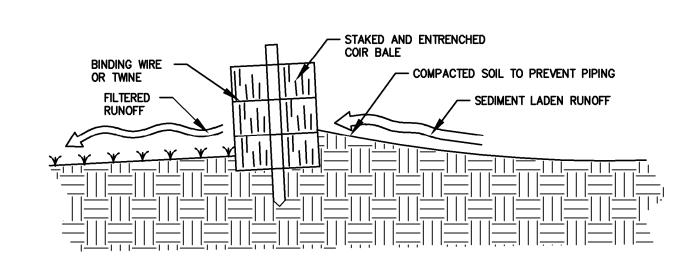


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

## GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

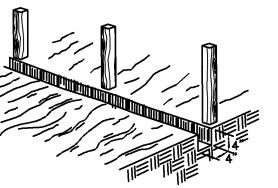
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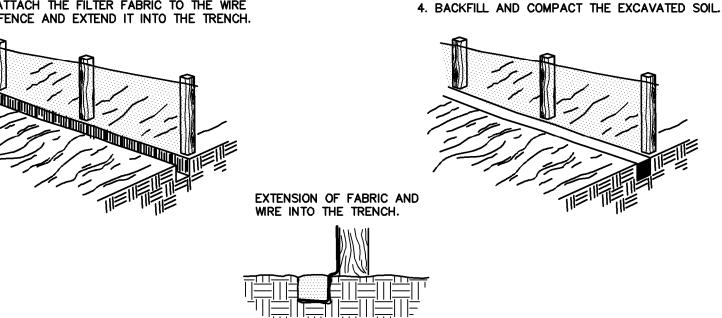
## **CROSS-SECTION OF A PROPERLY INSTALLED COIR BALE**

N.T.S.



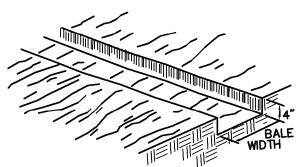


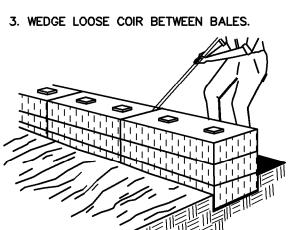
#### 3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



# **CONSTRUCTION OF SILT FENCE**

1. EXCAVATE THE TRENCH





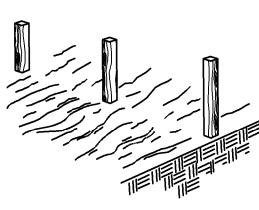
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

2. PLACE AND STAKE COIR BALES.

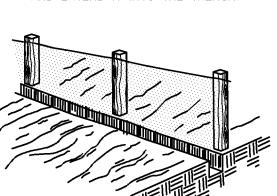
2. STAPLE WIRE FENCING TO THE POSTS.

# CONSTRUCTION OF A COIR BALE BARRIER

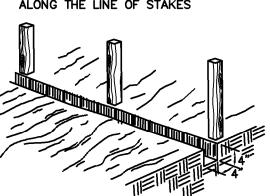
1. SET THE STAKES.



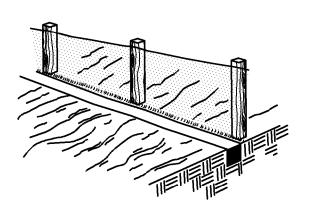
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES



4. BACKFILL AND COMPACT THE EXCAVATED SOIL



CONSTRUCTION OF A FILTER BARRIER

Ш SION

DIM

CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN

OF SEDIMENTS.

APPLICABLE, IN THE OFFICE TRAILER ONSITE.

IGNED BY: JZ

orlando, Florida 32804 107) 536-5379 /ww.etrninc.com

Advisors, Creating Community,

Trusted Advisors Creating

ENGLAND-TH

LUTION PREVENT

I ORIMWA I EK POLLUTIO PLAN DEERING PARK CENTER - 8

DRAWING NUMBER

18

DEE S I	RING PAF STORM WATE NSPECTION HE CONTRACTORS	ERING PARK CENTER - SINGLE FAMILI STORK WATER POLLUTION PREVENTION PLAN INSPECTION AND MAINTENANCE REPORT FORM THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL FIRE	ER - SINC N PREVEN INANCE RE	DEERING PARK CENTER - SINGLE FAMILY  STORM WATER POLLUTION PREVENTION PLAN INSPECTION AND MAINTENANCE REPORT FORM IIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUT	NOL
DISCHARGE FOR CONS WEEKLY AI INSPECTOR:	E ELIMINATION SYSTECTION SITES OF AFTER EVERY	STEM (NPDES), STG NVER 1.0 ACRES. T RAINFALL EVENT C	DRM WATER POI HIS CERTIFICATI DF 0.50 INCHES	DISCHARGE ELIMINATION SYSTEM (NPDES), STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OVER 1.0 ACRES. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OF 0.50 INCHES OR GREATER.	<b>Z</b> 0
INSPECTOR'S QUALIFICATIONS:	NS:				
DAYS SINCE LAST RAINFALL:		AMO	AMOUNT OF LAST RAINFALL	RAINFALL	INCHES
		STABILIZATION MEASURES	IEASURES		
INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION
STABILIZATION REQUIRED:					
TO BE PERFORMED BY:				ON OR BEFORE	
		PAGE 1 OF 4			

H.	DEERING Storn Inspe	DEERING PARK CENTER - SINGLE FAMILY storm water pollution prevention plan inspection and maintenance report form structural controls	R - SINGLE FA <i>N Prevention P.</i> Inance Report I	IMILY Lan Forw
		EARTH DIKES/SWALES	SWALES	
DIKE OR SWALE	FROM	ТО	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING
MAINTENAL	MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:	H DIKE/SWALE:		
	,			L
	TO BE PERFORMED BIT	CATCH BASIN/CURB INLET/OUTFALL	.LL TURBIDITY CONTROLS	
STRUCTURE	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL
MAINTENA!	MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:	H BASIN/CURB INLETS/	OUTFALLS TURBIDITY CO	NTROLS:
TO BE PE	TO BE PERFORMED BY:		ON OR BEFORE	EFORE

SWPP CONTRACTOR'S CERTIFICATION

DEERING PARK CENTER - SINGLE FAMILY
FOR
DEERING PARK 1, LLC