# ESTES RESERVE

# PRELIMINARY PLAT PLANS

# CITY OF EUSTIS PROJECT NUMBER 2022-S-03

#### **PROJECT TEAM**

#### CIVIL ENGINEERING

GERMANA ENGINEERING AND ASSOCIATES, LLC. CONTACT: CHRISTOPHER M. GERMANA, PE 1120 WEST MINNEOLA AVENUE CLERMONT, FLORIDA 34711 (352) 242-9329

#### **SURVEYING**

BENCHMARK SURVEYING & MAPPING, LLC. CONTACT: BILLY JOE JENKINS, PSM # 5205 POST OFFICE BOX 771065 KISSIMMEE, FLORIDA 34746 (407) 654-6183

## OWNER/DEVELOPER

**BURGLAND INVESTMENTS, LLC** CONTACT: FRANK BOMBEECK 1810 WEST KENNEDY BLDV, SUITE 232 TAMPA, FLORIDA 33606 (813) 321-1984

#### GEOTECHNICAL ENGINEERING

POINT FOUR ENGINEERING CONTACT: MICHAEL D. SIMS, PE 193 WEST NEW YORK AVENUE LAKE HELEN, FLORIDA 32744 (407) 260-9449

#### GENERAL NOTE

CONDITIONS AS THEY EXISTED AT THE TIME OF PLAN PREPARATION. THE CONDITIONS OF THI PROPERTY MAY HAVE CHANGED SINCE PROJECT DESIGN. THE CONTRACTOR SHALL VERIFY AND CONFIRM ALL EXISTING CONDITIONS AND SHALL CONTACT THE PROJECT ENGINEER IMMEDIATELY IF CONDITIONS HAVE CHANGED FROM WHEN THE PLANS WERE PREPARED.

#### ACCESSIBILITY NOTE

THE SITE SHALL COMPLY WITH THE FLORIDA BUILDING CODE (FBC) 2020 ACCESSIBILITY CODE.

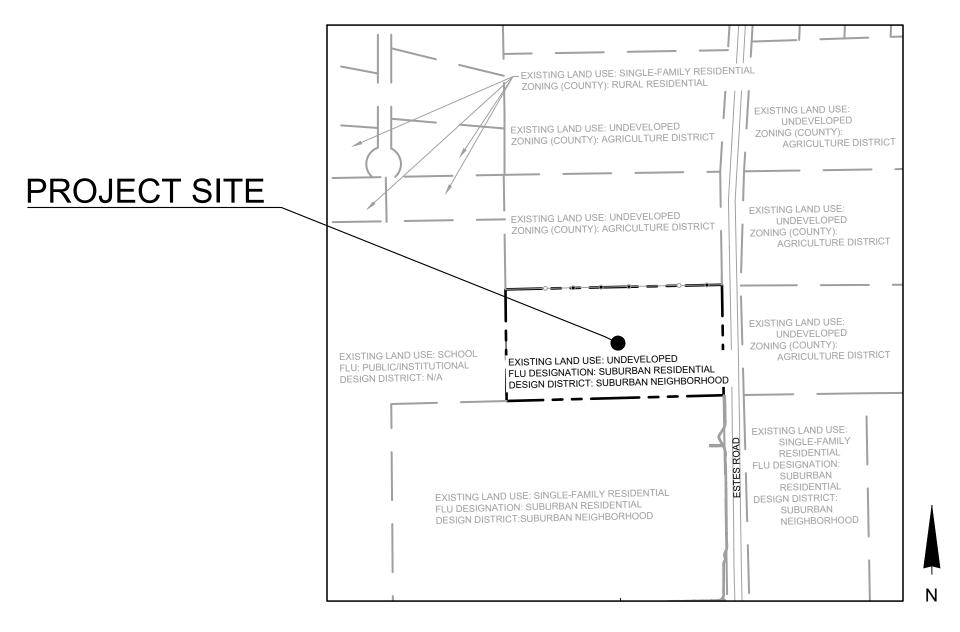
#### PROPERTY LEGAL DESCRIPTION (PER SURVEY)

PROPERTY DESCRIPTION PARCEL "D"

THAT PART OF LOTS 9 AND 10, OF R. C. TREMAIN'S SUBDIVISION, UNRECORDED, SECTION 5, TOWNSHIP 19 SOUTH, RANGE 27 EAST, IN LAKE COUNTY, FLORIDA, BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHWEST 1/4 OF SECTION 5, TOWNSHIP 19 SOUTH, RANGE 27 EAST, AND RUN NORTH 00°36'44" WEST, ALONG THE WEST LINE OF THE SOUTHWEST 1/4, A DISTANCE OF 25.01 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF BATES AVENUE, SAID RIGHT-OF-WAY BEING 50 FEET IN WIDTH; THENCE NORTH 87°38'34" EAST, ALONG THE NORTH RIGHT-OF-WAY LINE OF BATES AVENUE, A DISTANCE OF 338.51 FEET; THENCE NORTH 00°43'28" WEST, 629.69 FEET; THENCE NORTH 88°12'54" EAST, 337.19 FEET, TO THE POINT OF BEGINNING OF THIS DESCRIPTION; FROM SAID POINT OF BEGINNING; RUN NORTH 00°50'17" WEST, 325.50 FEET; THENCE NORTH 88° 30'58" EAST, 631.37 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF ESTES ROAD, SAID RIGHT-OF-WAY BEING 66 FEET IN WIDTH; THENCE SOUTH 01°09'S1" EAST, ALONG THE WEST RIGHT-OF-WAY LINE OF ESTES ROAD 322.15 FEET; THENCE SOUTH 88°12'54" WEST, 633.25 FEET TO THE POINT OF BEGINNING.

## VICINITY MAP



ESTES ROAD EUSTIS, FLORIDA 32736

SECTION 05, TOWNSHIP 19 SOUTH, RANGE 27 EAST

#### WAIVERS REQUESTED

WAIVER REQUESTED FOR LDR CHAPTER 110, SEC 4.2. REQUESTING WAIVER FOR A MINIMUM LOT WIDTH OF 42'

#### SHEET LIST

- C1 COVER SHEET
- C2 CONSTRUCTION NOTES
- EXISTING CONDITIONS PLAN
- SUBDIVISION SITE PLAN
- SUBDIVISION GRADING AND DRAINAGE PLAN
- C6 SUBDIVISION UTILITY PLAN
- OFF-SITE UTILITY PLAN
- STORMWATER POLLUTION PREVENTION PLAN
- C9 DARBY COURT PLAN AND PROFILE
- C10 SITE CROSS SECTIONS
- C11 DARBY COURT CROSS SECTIONS
- C12 CONSTRUCTION DETAILS
- C13 CITY OF EUSTIS CONSTRUCTION DETAILS

#### DATUM NOTE

ELEVATIONS SHOWN ON THE PLAN SET ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (PER SURVEY)

ENTRY WALL FEATURES

WALK-IN COOLERS

PERMIT NOTE SEPERATE PERMITS ARE REQUIRED FOR THE FOLLOWING (IF APPLICABLE):

- CONSTRUCTION TRAILERS DUMPSTER ENCLOSURES
- LIFT STATIONS SIGNS
- RETAINING WALLS
- SITE LIGHTING ACCESS GATES GENERATORS FENCES
- AWNINGS

# ETC.

FIRE NOTE

SITE TO CONFORM TO FLORIDA FIRE PREVENTION CODE 7TH EDITION (2020)

SEPERATE PERMITS ARE REQUIRED FOR THE FOLLOWING (IF APPLICABLE):

- FIRE SPRINKLERS
- FIRE ALARMS FIRE ALARM MONITORING FIRE UNDERGROUND
- DUMPSTER ENCLOSURE

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#### **EXISTING UTILITIES**

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS TO THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANY AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED

#### DRAINAGE SYSTEMS

THE CONTRACTOR SHALL PERFORM ALL WORK PERTAINING TO DRAINAGE INCLUDING EXCAVATION OF STORMWATER POND PRIOR TO THE COMMENCEMENT OF OTHER WORK INCLUDED IN THESE PLANS. THE DRAINAGE FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR DURING THE COURSE OF THIS CONTRACT. THE CONTRACTOR SHALL INCLUDE FUNDS IN THE DRAINAGE COSTS OF THE CONTRACT TO OPERATE AND MAINTAIN THE DRAINAGE SYSTEMS DURING THE WORK PROCESS.

#### PERMITS AND PERMIT REQUIREMENTS

THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL REGULATORY AND LOCAL AGENCY PERMITS. THE CONTRACTOR SHAL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE REQUIREMENTS. AND LIMITATIONS SET FORTH IN THE PERMITS. A COPY OF THE PERMI SHALL BE KEPT ON THE JOB AT ALL TIMES

#### LAYOUT AND CONTROL

UNLESS OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL PROVIDE FOR THE LAYOUT OF ALL THE WORK TO BE CONSTRUCT BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEE IMMEDIATELY.

#### QUALITY CONTROL TESTING REQUIREMENTS

ALL TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. TESTING REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE OWNER/OPERATOR'S SPECIFICATIONS AND REQUIREMENTS. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS. CONTRACTOR SHALL PROVIDE TESTING SERVICES THROUGH A FLORIDA LICENSED GEOTECHNICAL ENGINEERING FIRM ACCEPTABLE TO THE OWNER AND THE ENGINEER. CONTRACTOR TO SUBMIT TESTING FIRM TO OWNER FOR APPROVAL PRIOR TO COMMENCING TESTING.

#### SHOP DRAWINGS

SHOP DRAWINGS AND CERTIFICATIONS FOR ALL STORM DRAINAGE, WATER SYSTEM, SEWER SYSTEM, AND PAVING SYSTEM MATERIALS AND STRUCTURES ARE REQUIRED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION.

# **EARTHWORK**

#### **EARTHWORK QUANTITIES**

THE CONTRACTOR SHALL PERFORM HIS OWN INVESTIGATIONS AND CALCULATIONS AS NECESSARY TO ASSURE HIMSELF OF EARTHWOR QUANTITIES. THERE IS NO IMPLICATION THAT EARTHWORK BALANCES, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPORT FILL NEEDED. OR FOR REMOVAL AND DISPOSAL OF EXCESS MATERIALS.

## **EROSION CONTROL**

EROSION AND SILTRATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THESE MEASURES ARE TO BE INSPECTED BY THE CONTRACTOR ON A REGULAR BASIS AND ARE TO BE MAINTAINED OR REPAIRED ON AN IMMEDIATE BASIS AS REQUIRED. REFER TO WATER MANAGEMENT DISTRICT PERMIT FOR ADDITIONAL REQUIREMENTS FOR EROSION CONTROL AND SURFACE DRAINAGE. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITH SOD WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION. SOD SHALL BE THE SAME VARIETY OF EXISTING SOD

#### LIMITS OF DISTURBANCE

AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. REPAIR OR RECONSTRUCTION OF DAMAGED AREAS ON SURROUNDING PROPERTIES SHALL BE PERFORMED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED. GRADING AND/OR CLEARING ON PROPERTIES OTHER THAN SHOWN ON THE APPROVED PLANS IS PROHIBITED.

#### TREE REMOVAL

THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHEN ALL WORK IS LAID OUT (SURVEY STAKED), SO THAT DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES ON THE CONSTRUCTION PLANS AS BEING SAVED SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER AND ENGINEER.

#### **CLEARING AND GRUBBING**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING FOR SITE CONSTRUCTION INCLUDING CLEARING FOR PAVING, UTILITIES, DRAINAGE FACILITIES AND BUILDING CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FIELD STAKED AND REVIEWED BY THE OWNER AND ENGINEER PRIOR TO ANY CONSTRUCTION.

#### MATERIAL STORAGE/DEBRIS REMOVAL

1. NO COMBUSTIBLE BUILDING MATERIALS MAY BE ACCUMULATED ON THE SITE AND NO CONSTRUCTION WORK INVOLVING COMBUSTIBLE MATERIALS MAY BEGIN UNTIL INSTALLATION OF ALL REQUIRED WATER MAINS AND FIRE HYDRANTS HAVE BEEN COMPLETED, DEP APPROVAL RECEIVED FOR THE WATER MAINS, AND THE HYDRANTS ARE IN OPERATION. CONSTRUCTION WORK INVOLVING NON-COMBUSTIBLE MATERIALS, SUCH AS CONCRETE, MASONRY AND STEEL MAY BEGIN PRIOR TO THE FIRE HYDRANTS BEING OPERATIONAL.

2. ALL MATERIALS EXCAVATED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STOCKPILED AT ON-SITE LOCATIONS AS SPECIFIED BY THE OWNER. MATERIALS SHALL BE STOCKPILED SEPARATELY AS TO USABLE (NON-ORGANIC) FILL STOCKPILES AND ORGANIC (MUCK) STOCKPILES IF MUCK IS ENCOUNTERED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNSUITABLE FILL MATERIALS FROM THE SITE. ALL CLAY ENCOUNTERED SHALL BE EXCAVATED OUT AND REPLACED WITH CLEAN GRANULAR FILL MATERIALS.

#### FILL MATERIAL

ALL MATERIALS SHALL CONTAIN NO MUCK, STUMPS, ROOTS, BRUSH, VEGETATIVE MATTER, RUBBISH OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE AND ENDURING BACKFILL. FILL SHALL BE CLEAN, NON-ORGANIC, GRANULAR MATERIAL WITH NOT MORE THAN 10% PASSING THE NO. 200 SIEVE.

#### COMPACTION

FILL MATERIALS PLACED UNDER ROADWAYS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. ALL OTHER FILL AREAS ARE TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. FILL MATERIALS SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12" LIFTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND OWNER WITH ALL (PASSING AND FAILING) TESTING RESULTS. RESULTS SHALL BE PROVIDED ON A TIMELY AND REGULAR BASIS PRIOR TO CONTRACTOR'S PAY REQUEST SUBMITTAL FOR THE AFFECTED WORK.

# PAVEMENT AND/OR ROAD AND RIGHT-OF-WAY WORK

#### GENERAL DESIGN INTENT

ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION SHOWN B THE FLOW ARROWS ON THE PLANS AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT GRADES TO INTERSECTIONS WILL HAVE TO BE STAKED IN THE FIELD AT DIFFERENT GRADES THAN THE CENTERLINE GRADES TO ACCOMPLISH THE PURPOSES OUTLINED. IN ADDITION, THE STANDARD CROWN WILL HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTION TO ACCOMPLISH THE INTENT OF THE PLANS.

#### MATERIALS/CONSTRUCTION SPECIFICATIONS

MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION

#### PAVEMENT SECTION REQUIREMENTS

CONSTRUCTION OF ROADWAY, SUBGRADE PREPARATION. AND PAVEMENT INSTALLATION SHALL CONFORM TO FDOT STANDARDS AND SOILS REPORT RECOMMENDATIONS UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DOCUMENTS.

## **SIDEWALKS**

SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREA AS SHOWN ON THE CONSTRUCTION PLANS. SIDEWALK SHALL BE CONSTRUCTED OF 4 INCHES OF CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. JOINTS SHALL BE EITHER TOOLED OR SAWCUT AT A DISTANCE OF 5' LENGTHS, HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND BE IN ACCORDANCE WITH STATE REGULATIONS FOR HANDICAP ACCESSIBILITY.

## PAVEMENT MARKINGS/SIGNAGE

PAVEMENT MARKINGS AND SIGNAGE SHALL BE PROVIDED AS SHOWN ON THE CONSTRUCTION PLANS AND SHALL MEET THE REQUIREMENTS OF THE OWNER/OPERATOR. SIGNAGE SHALL BE IN CONFORMANCE WITH MUTCD (LATEST EDITION). A 48-HOUR PAVEMENT CURING TIME WILL BE PROVIDED PRIOR TO APPLICATION OF THE PAVEMENT MARKINGS. REFLECTIVE PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 17352.

#### TRAFFIC CONTROL

WHERE APPLICABLE A MOT PLAN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK. A MINIMUM OF 2-WAY, ONE LANE TRAFFIC SHALL BE MAINTAINED IN THE WORK SITE AREA, ALL CONSTRUCTION WARNING SIGNAGE SHALL BE IN PLACE PRIOR TO DEPTH. COMMENCEMENT OF CONSTRUCTION AND BE MAINTAINED THROUGHOUT CONSTRUCTION. ACCESS SHALL BE CONTINUOUSLY MAINTAINED FOR ALL PROPERTY OWNERS SURROUNDING THE WORK SITE AREA. LIGHTED WARNING DEVICES ARE TO BE OPERATIONAL PRIOR TO DUSK EACH NIGHT DURING CONSTRUCTION.

#### **CURBING**

CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "1" CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.

#### R/W RESTORATION

ALL AREAS WITHIN THE RIGHT-OF-WAYS SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL SWALES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING. ALL DISTURBED AREAS SHALL BE RAKED CLEAN OF ALL LIMEROCK AND ROCKS AND SODDED AFTER FINAL GRADING IN ACCORDANCE WITH THE CONSTRUCTION PLANS PRIOR TO FINAL INSPECTION. ALL GRASSING (SOD) SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE OWNER/OPERATOR.

#### SITE ACCESS

ALL ACCESS TO THE JOB SITE FOR CONSTRUCTION AND RELATED ACTIVITIES SHALL BE BY EXISTING STREETS AND ROADS.

#### LANDSCAPING

PROVIDE MINIMUM 5' SEPARATION FROM UTILITIES AND TREES WITH INVASIVE ROOT SYSTEMS

#### WATER PIPE MATERIALS

WATER SYSTEM SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL MEET CITY OF EUSTIS SPECIFICATIONS

POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4" THROUGH 12" SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND A DR (DIMENSION RATIO) OF 18, ALL PVC PIPE SHALL BEAR THE NSF LOGO FOR POTABLE WATER. JOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS CONFORMING TO ASTM D3139, DR18 PIPE

DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4" THROUGH 12" AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE A STANDARD THICKNESS OF CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).

PIPE DETECTOR WITH LOCATOR WIRE SHALL BE INSTALLED ON ALL WATER MAINS PER DETAIL. PIPE SIZES GREATER THAN 12" SHALL BE SEPARATELY SPECIFIED ON THE PLANS; WITH THICKNESS CLASSES TO BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS. FITTINGS FOR DUCTILE IRON PIPE AND PVC C-900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.10 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4 (LATEST EDITION)

POLYETHYLENE WRAP USED FOR CORROSION PREVENTION ON DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/ASTM D1248. THE MINIMUM NOMINAL THICKNESS SHALL BE 0.008 IN. (8 MILS). INSTALLATION OF POLY WRAP SHALL BE IN ACCORDANCE WITH AWWA C105. TRANSMISSION MAIN SHALL BE DIP RATED FOR 250 PSI.

GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509.87 WITH WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED. MANUFACTURER'S CERTIFICATION OF THE VALVES COMPLIANCE WITH AWWA SPECIFICATION C509 AND TESTS LISTED THEREIN WILL BE REQUIRED. VALVES SHALL BE CLOW, DRESSER, KENNEDY, AMERICAN

#### AIR RELEASE VALVES

AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE. LOCATION AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. AIR RELEASE VALVES SHALL BE CRISPN PRESSURE AIR VALVE TYPE.

#### WATER SERVICES

UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE THROUGH THE CURB STOP AND SET METER BOXES TO FINISHED GRADE AS SHOWN ON THE WATER SYSTEM DETAIL SHEET.

POLYETHYLENE (PE) PRESSURE PIPE FOR WATER SERVICES 1/2" THROUGH 3" SHALL CONFORM TO AWWA C901.88, MIN. 200 PSI. AND SHALL BE PHILLIPS DRISCO CTS 5100 (DR-9) ASTM D-2737, 200 PSI. ALL SERVICES SHALL INCLUDE THE FOLLOWING: LOCKING CURB STOPS, WYE BRANCHES, UNIONS AS REQUIRED, PE SERVICE PIPE AND CORPORATION STOPS. THE SERVICE SHALL BE COMPLETE THROUGH THE CURB STOP AS SHOWN ON THE DETAIL SHEET, AND SHALL BE OF THE TYPE REQUIRED FOR COMPATIBILITY WITH THE SERVICE LINES SPECIFIED, AND FITTINGS SHALL BE MANUFACTURED BY FORD.

WHERE APPLICABLE - UNLESS OTHERWISE NOTED IN PLANS, UTILITY COMPANY SHALL PROVIDE AND INSTALL IRRIGATION METERS. WHERE RECLAIM SERVICE IS NOT PROVIDED, CONTRACTOR SHALL CONSTRUCT IRRIGATION SERVICE THROUGH THE CURB STOP AND SET NEW BOXES TO FINISHED GRADE AS SHOWN ON THE WATER SYSTEM DETAIL SHEET.

# PIPE INSTALLATION

PIPE INSTALLATION OF PVC WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE WATER MAIN SHALL BE IN CONFORMANCE WITH AWWA C600.87.

COMPACTED BACKFILL SHALL BE TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12" MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12" MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS.

MINIMUM COVER OVER ALL PIPE SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE, SEE PLAN AND PROFILE SHEETS FOR REQUIRED

WATER MAINS ARE TO BE INSTALLED SO AS TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF 18" OR A MINIMUM HORIZONTAL CLEARANCE OF 10' FROM ALL OTHER UTILITIES. IF THE MINIMUM CLEARANCE CAN NOT BE ACHIEVED, THEN DUCTILE IRON WATER MAIN SHALL BE SPECIFIED 10 FEET EITHER SIDE OF THE CROSSING. HORIZONTAL AND VERTICAL MINIMUM SEPARATION DISTANCE REQUIREMENTS BETWEEN WATER MAIN AND ALL OTHER UTILITIES SHALL COMPLY WITH 62-555.314 (1), (2), (3) AND (4), FAC.

ALL WATER MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS.

ALL PLUGS, CAPS, TEES, BENDS, FIRE HYDRANTS, VALVES, ETC. SHALL BE MECHANICAL JOINT FITTINGS

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FLORIDA PROFESSIONAL ENGINEER # 61682 ENGINEERING FIRM REGISTRY # 29279

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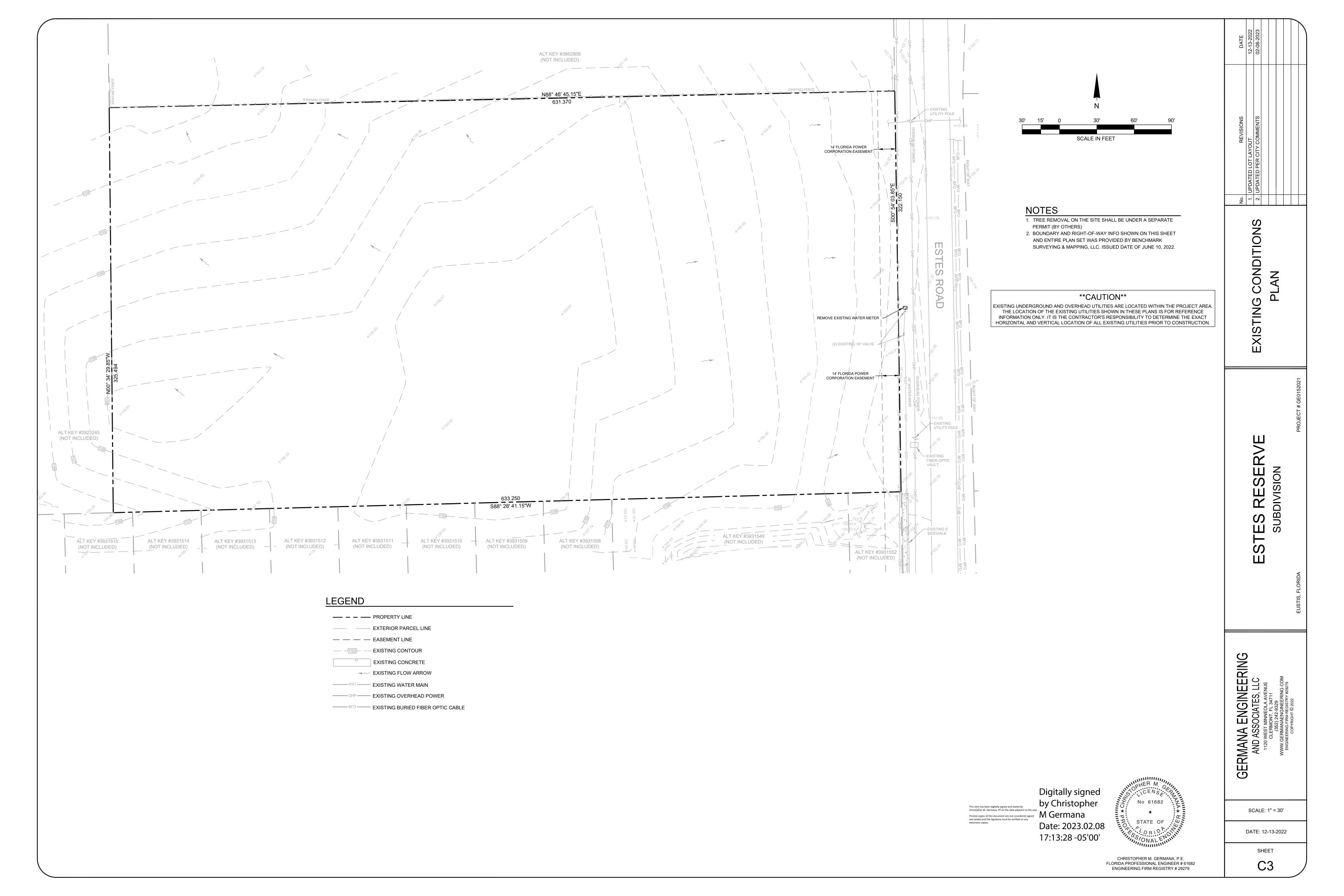
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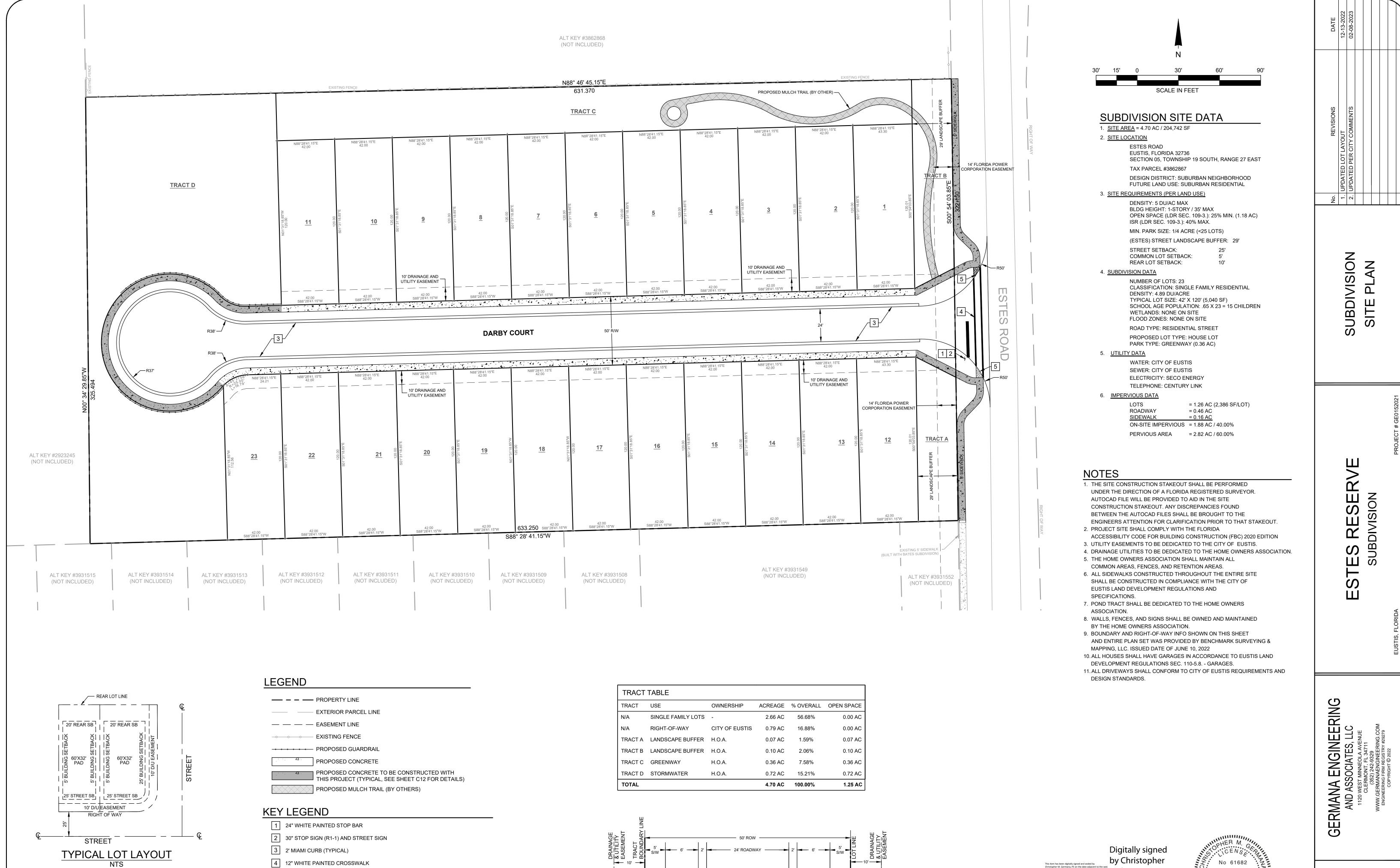
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TYPICAL 50' RIGHT-OF-WAY

5 DETECTABLE WARNING MAT IN BRICK RED

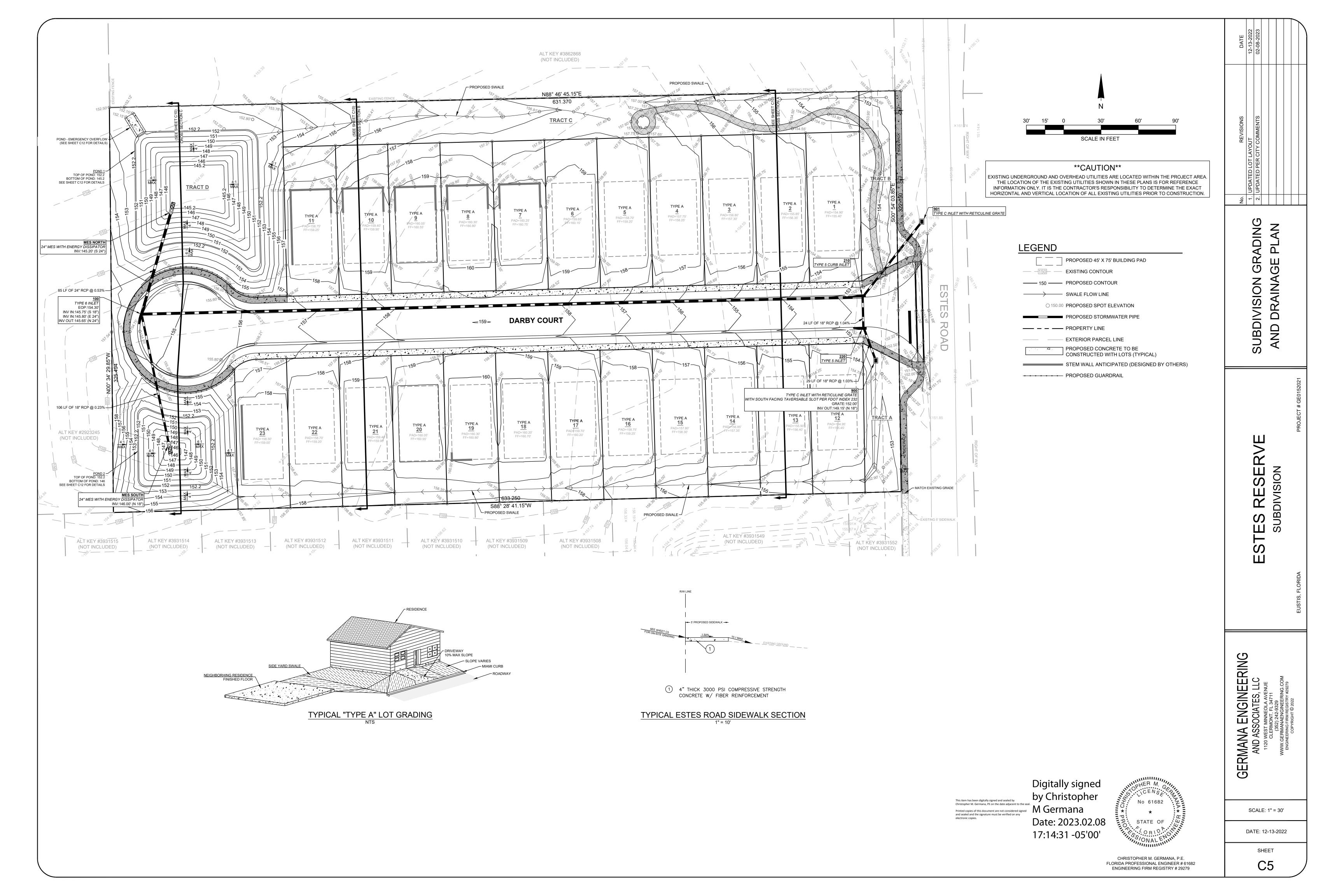
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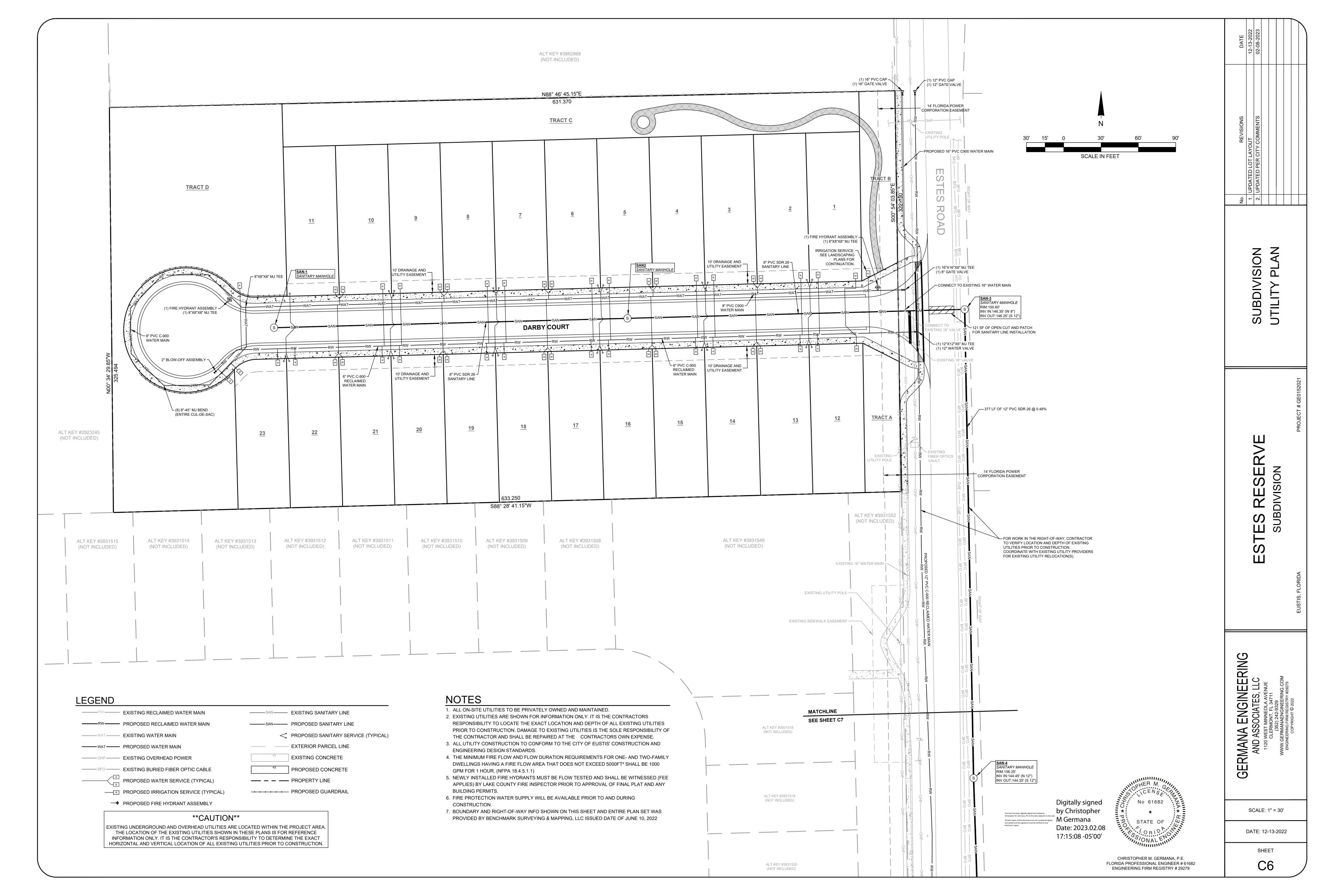
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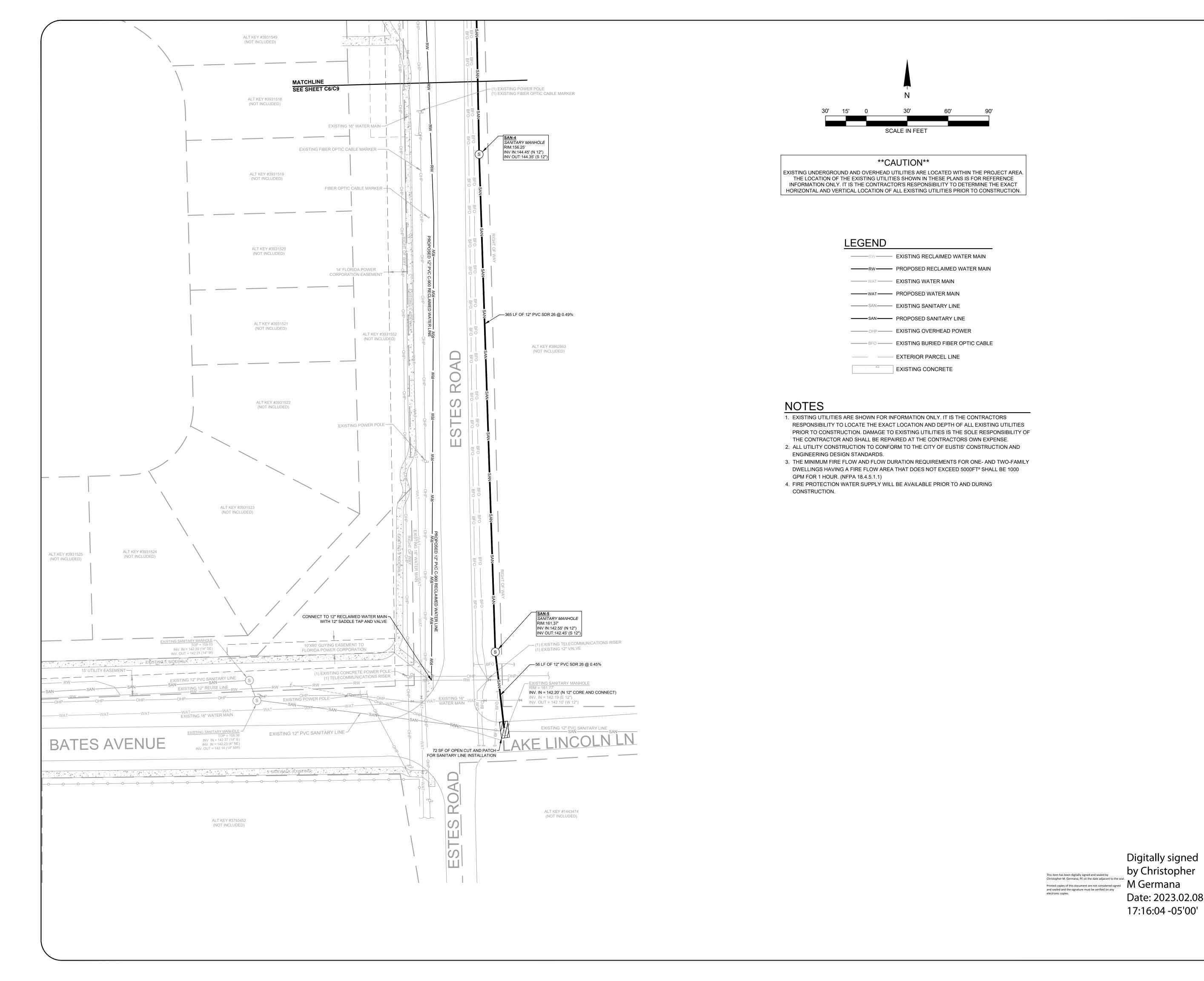
> CHRISTOPHER M. GERMANA, P.E. FLORIDA PROFESSIONAL ENGINEER # 61682 ENGINEERING FIRM REGISTRY # 29279

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SHEET







ESTES RESER

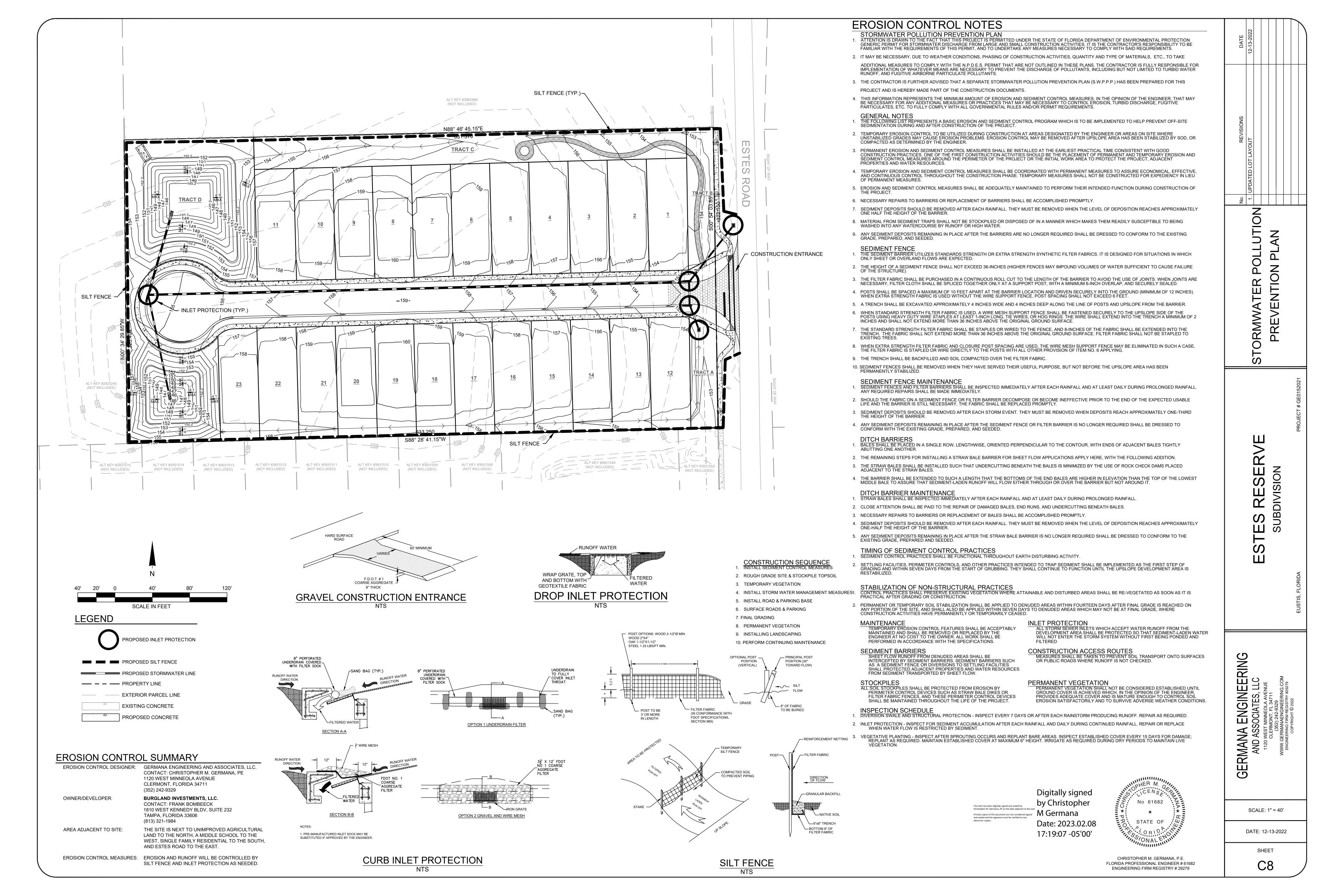
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CLERMONT, FL 34711

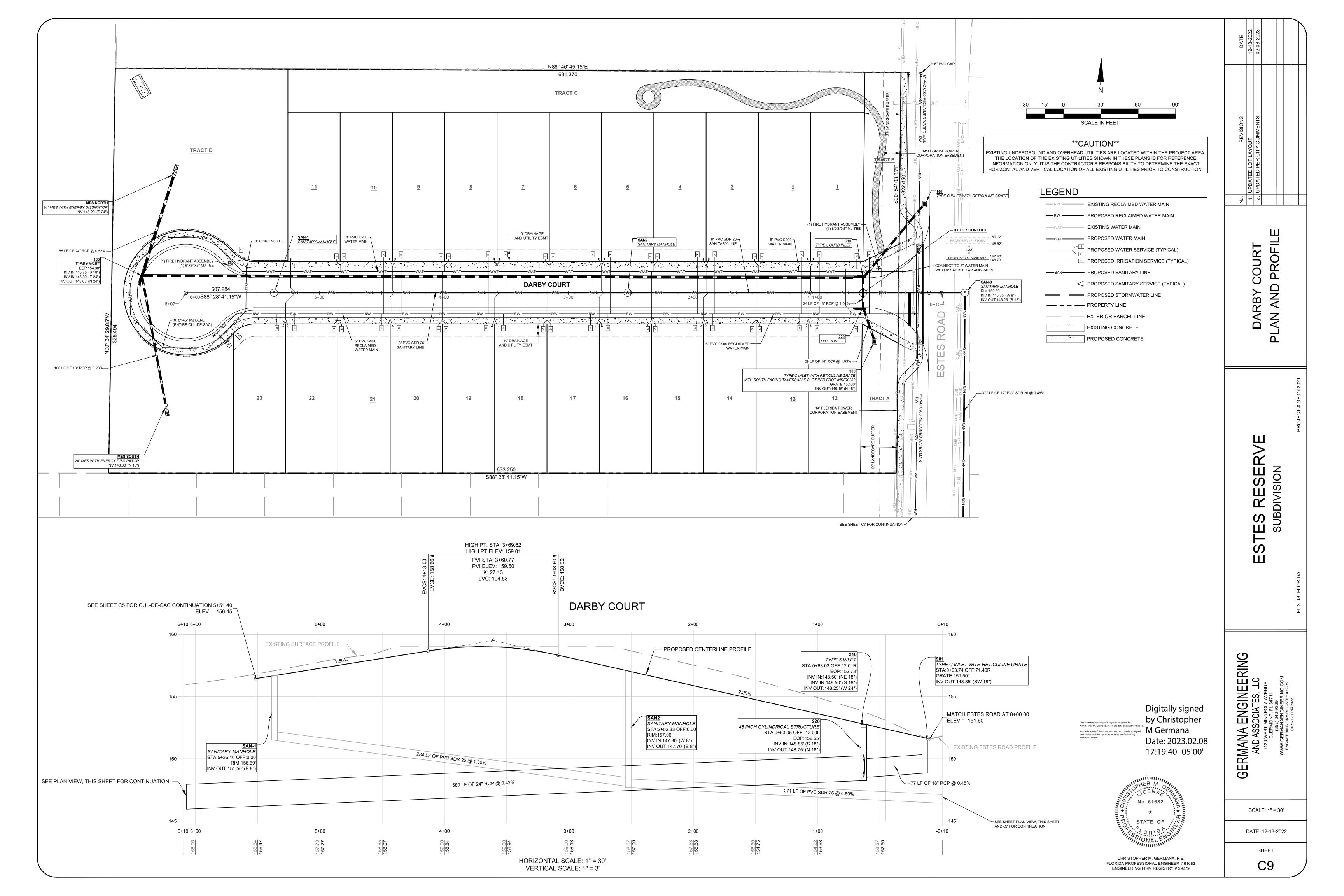
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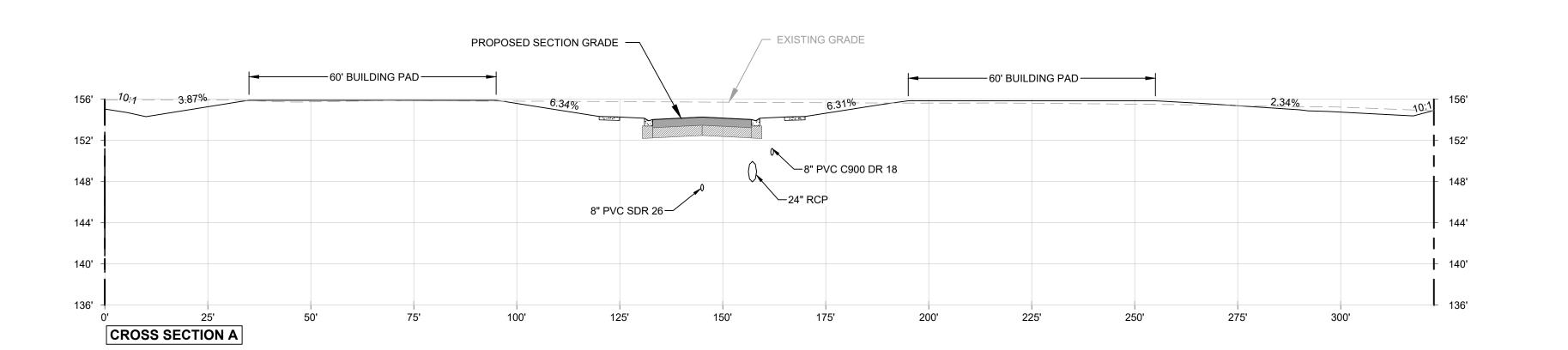
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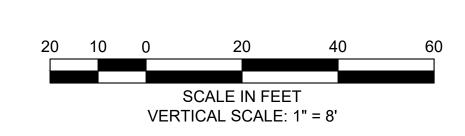
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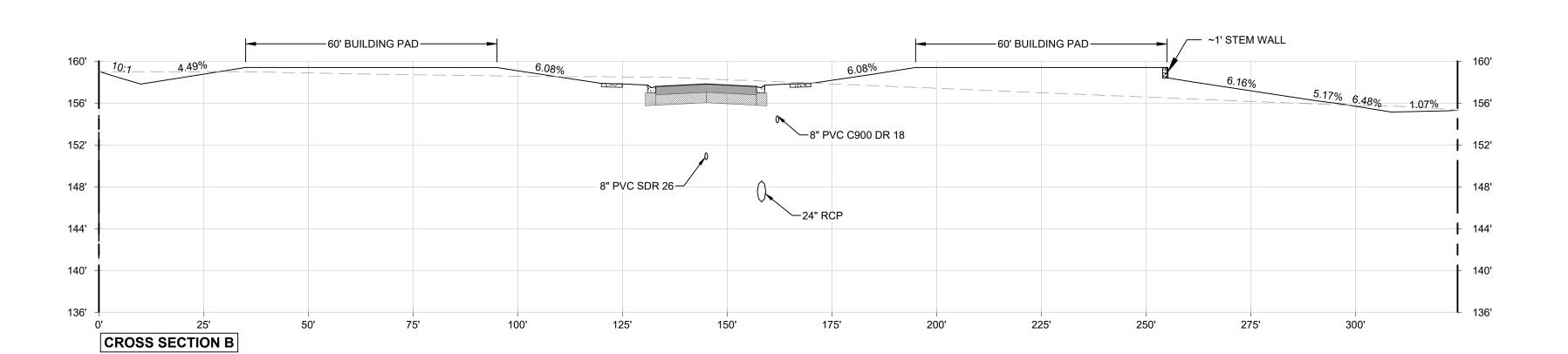
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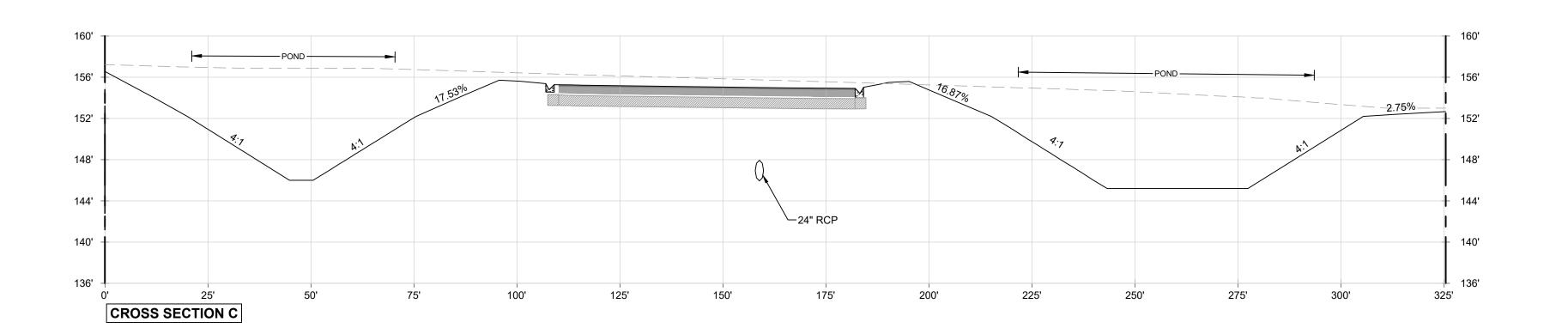












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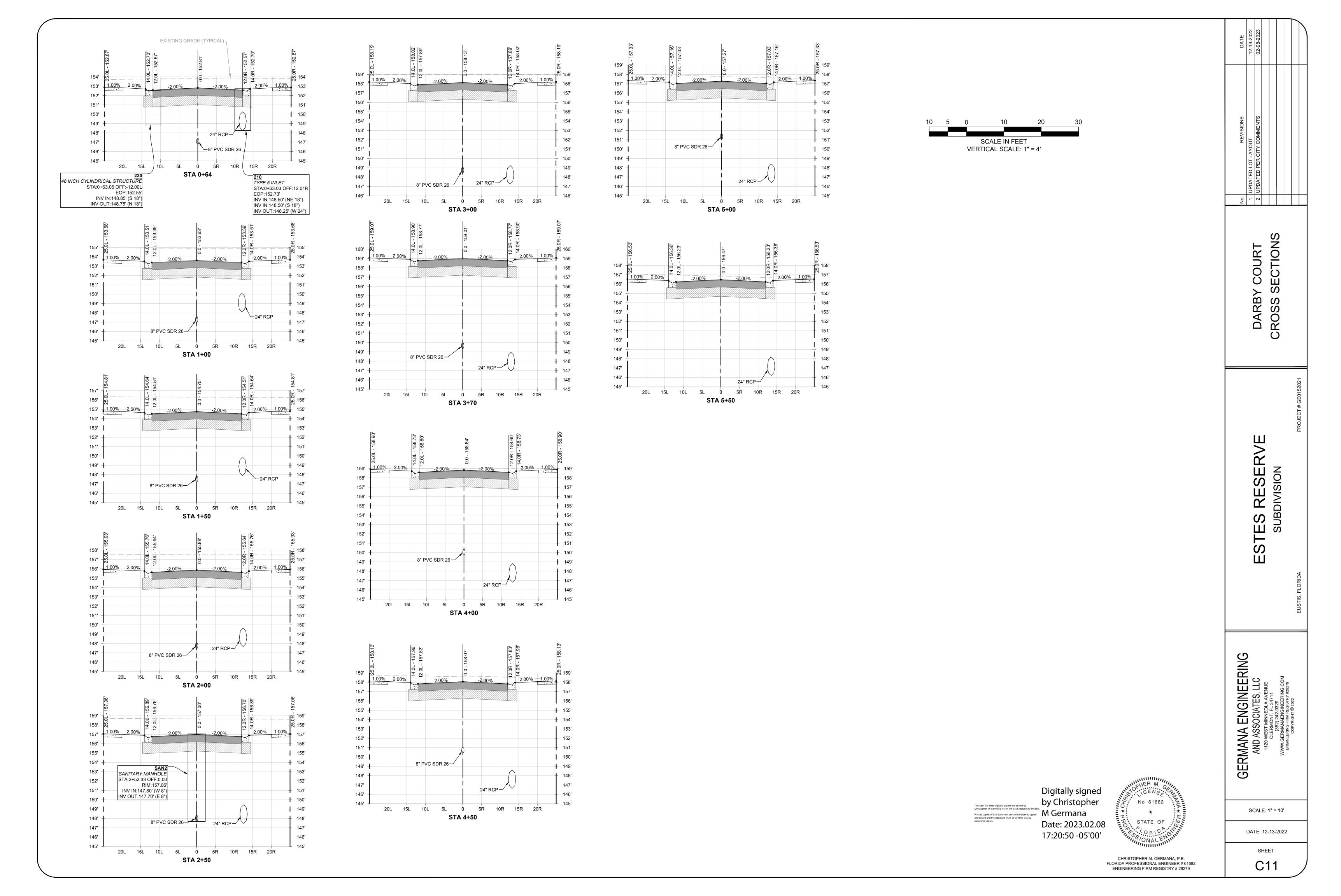
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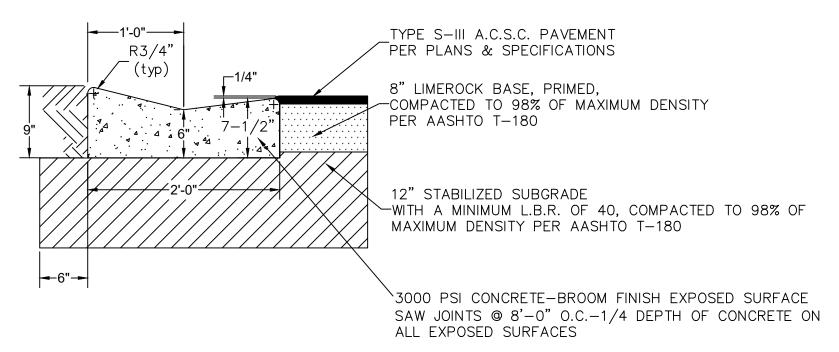
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1120 WEST MINNEOLA AVENUE
CLERMONT, FL 34711

SCALE: 1" = 20'

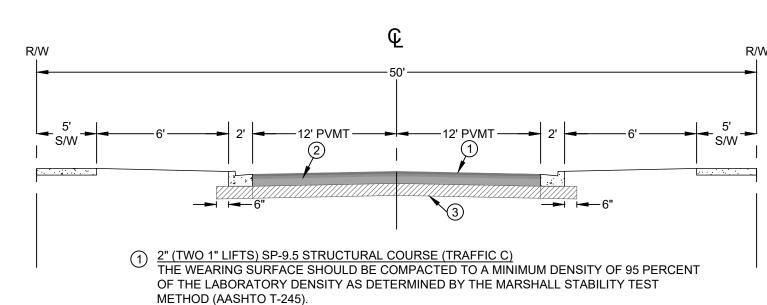
DATE: 12-13-2022

SHEET C10



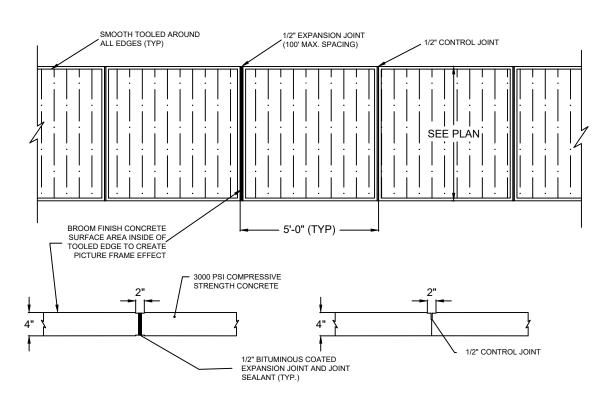


MIAMI CURB

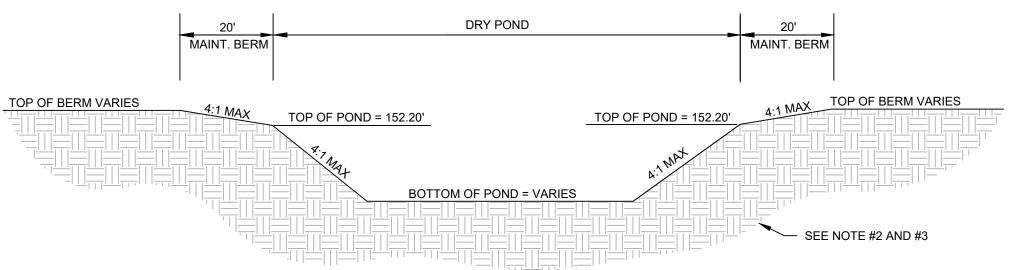


- ② 6" LIMEROCK BASE (LBR 100)
  QUALITY OF LIMEROCK TO BE IN ACCORDANCE WITH CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND COMPACTED TO A MINIMUM DENSITY EQUIVALENT TO 95 PERCENT OF THE MODIFIED PROCTOR (AASHTO T-180), PRIMED, COMPACTED TO 98% OF THE MAXIMUM DENSITY, PER AASHTO T-180.
- 3 12" TYPE B STABILIZED SUBGRADE (LBR 40)
  THE SUBGRADE SHOULD BE COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T-180) FOR A DEPTH OF 1 FOOT BELOW PAVEMENT SUBGRADE.

# TYPICAL R/W DETAIL

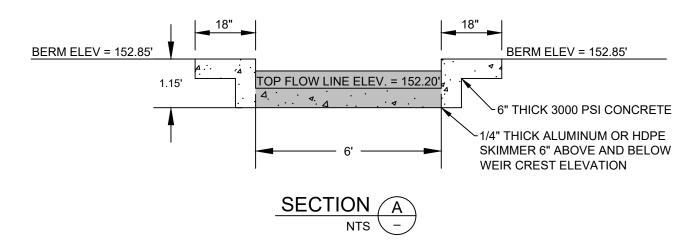


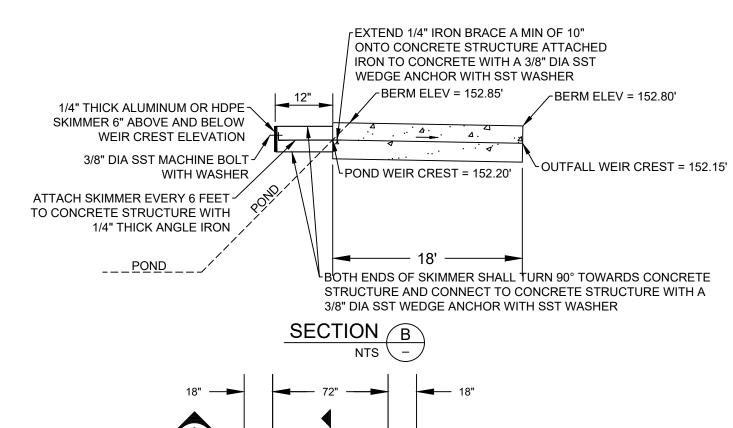
SIDEWALK DETAIL

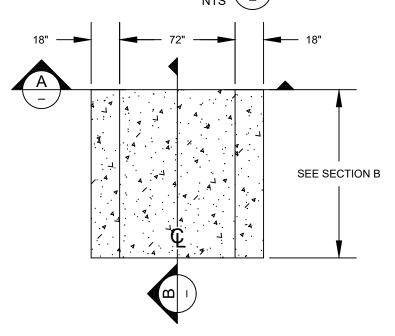


- 1. BAHIA SOD SHALL BE USED ON POND SIDE SLOPES AND BERM. NON-MUCK GROWN SOD SHALL BE INSTALLED.
- 2. THE POND BOTTOM AREA SHOULD BE STRIPPED AND CLEARED OF TREES, SURFACE VEGETATION, TOP SOIL, ROOT LADEN SOILS, DEBRIS, AND ANY DELETERIOUS OR CLAYEY MATERIAL. POND BOTTOM TO BE SEEDED WITH ARGENTINE BAHIA SEEDS.

# TYPICAL DRY POND DETAIL







POND EMERGENCY OVERFLOW WEIR DETAIL

Digitally signed by Christopher This item has been digitally signed and sealed by Christopher M. Germana, PE on the date adjacent to the seal. M Germana Date: 2023.02.08

17:21:28 -05'00'



CHRISTOPHER M. GERMANA, P.E. FLORIDA PROFESSIONAL ENGINEER # 61682 ENGINEERING FIRM REGISTRY # 29279

SHEET

DATE: 12-13-2022

SCALE: NTS

GERMANA ENGINEERING
AND ASSOCIATES, LLC
1120 WEST MINNEOLA AVENUE
CLERMONT, FL 34711

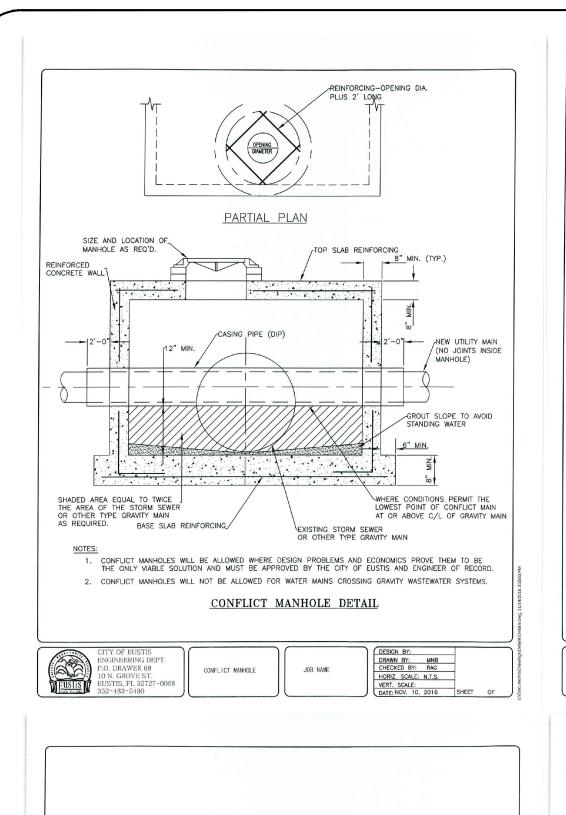
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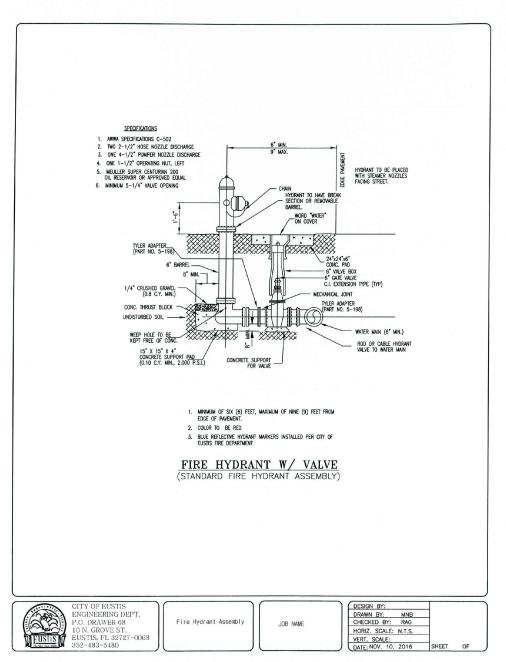
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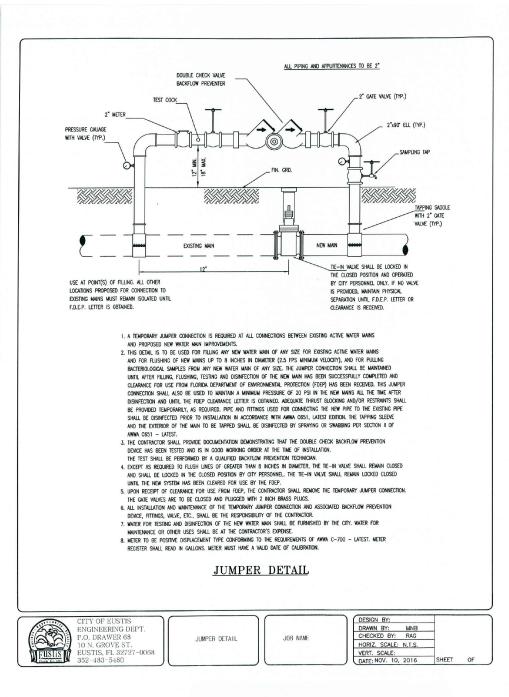
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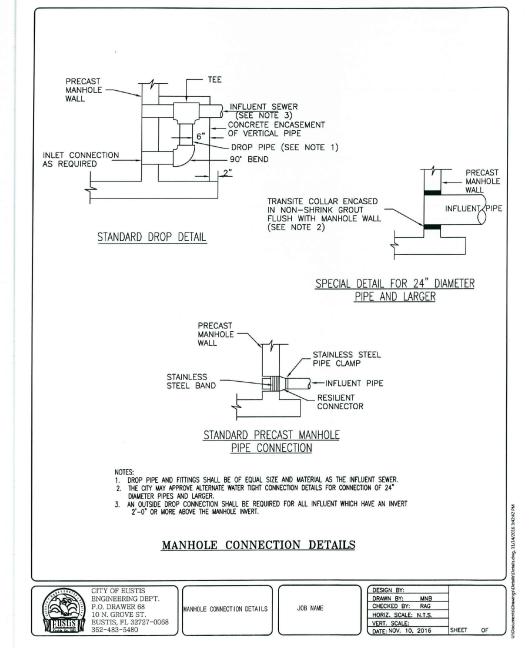
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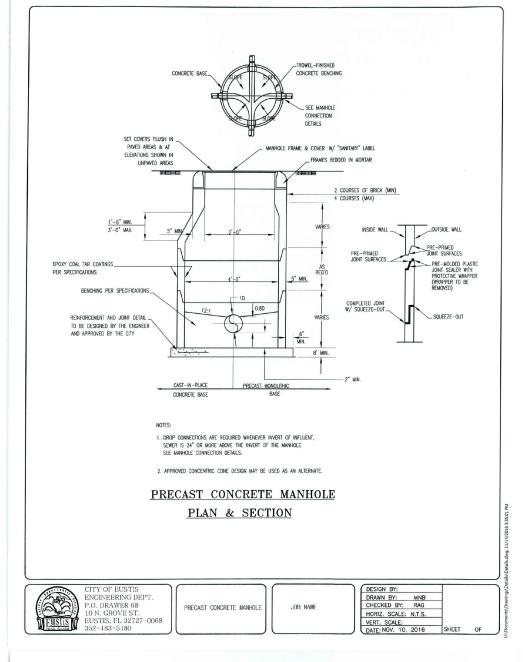
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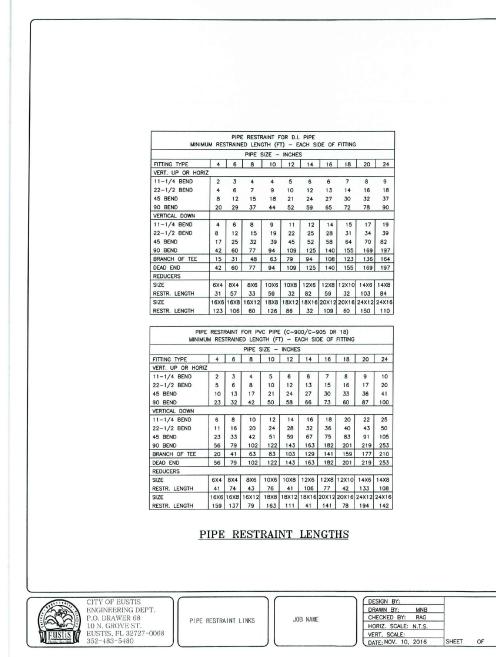


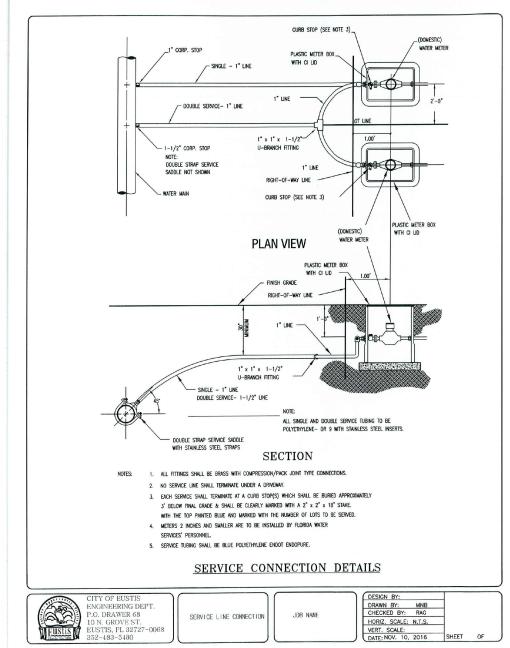


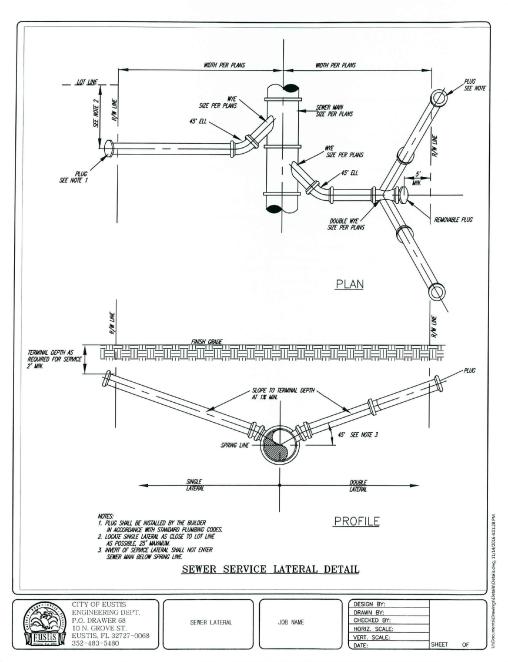


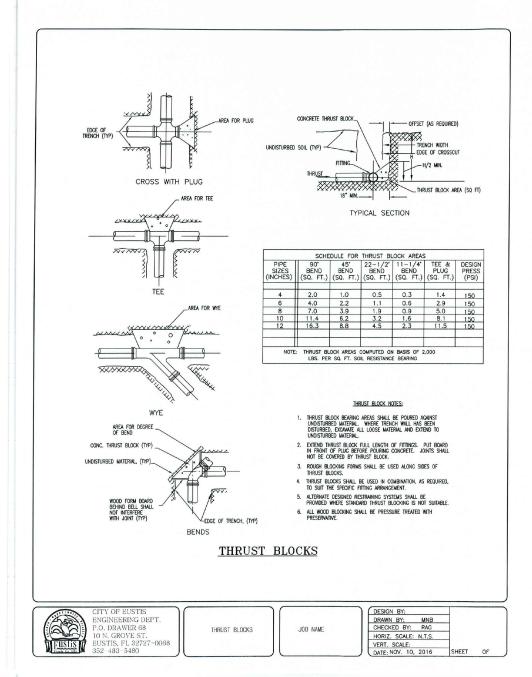


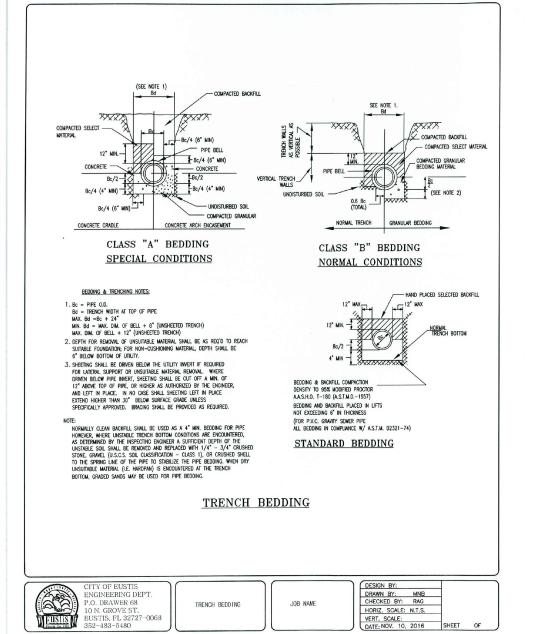


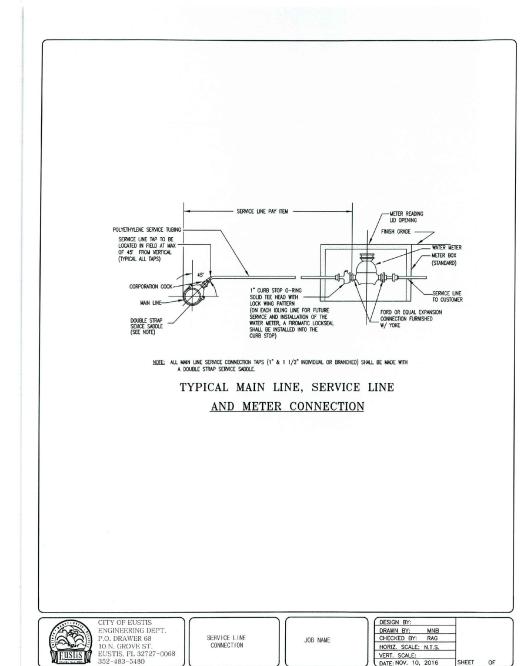


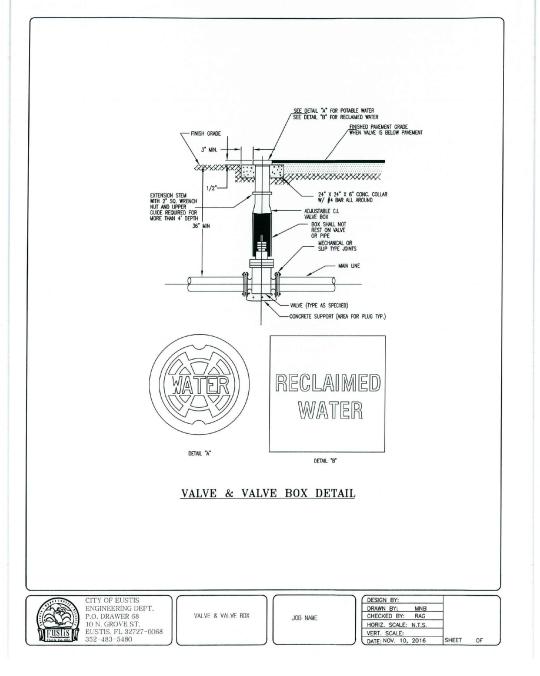


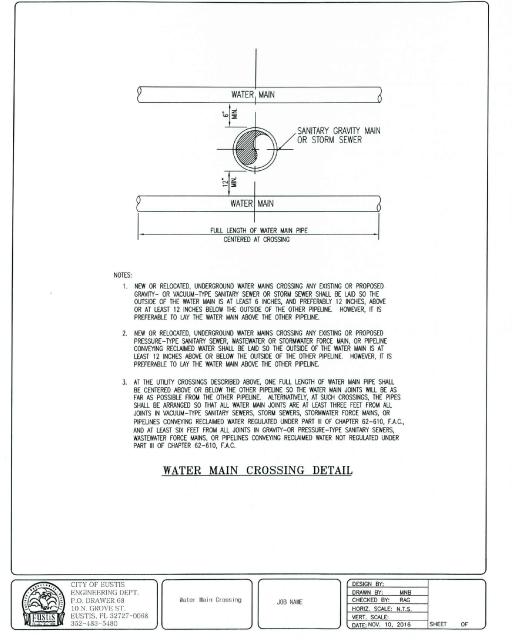


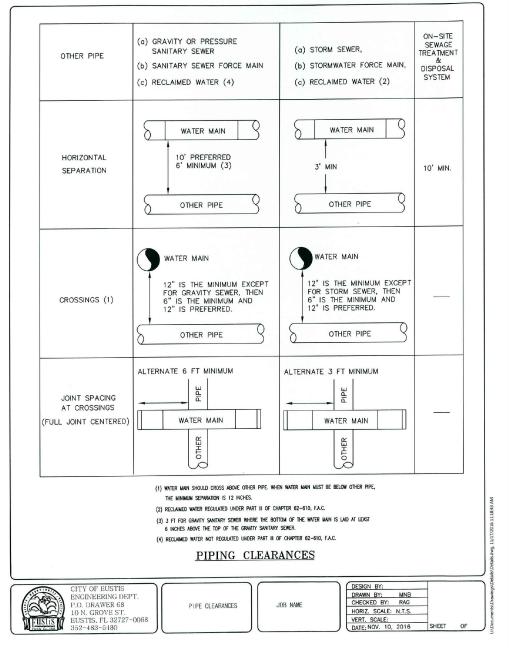


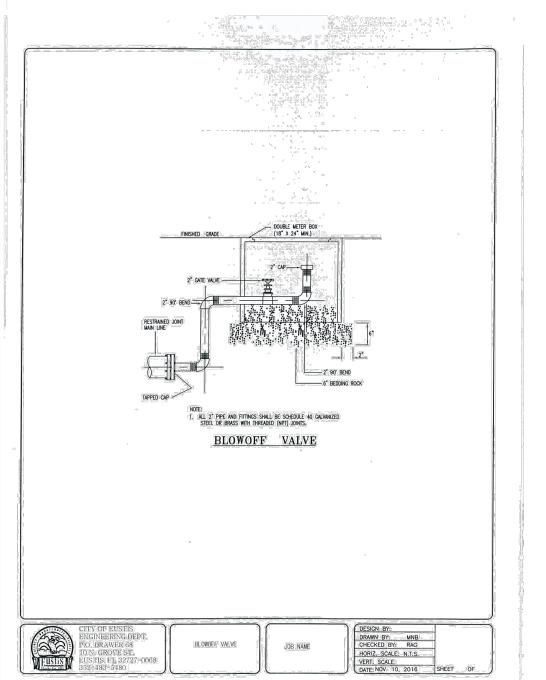


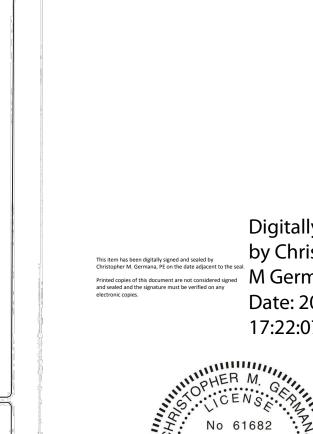


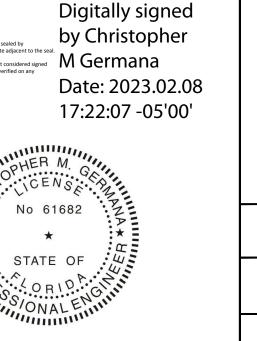












CHRISTOPHER M. GERMANA, P.E. FLORIDA PROFESSIONAL ENGINEER # 61682

ENGINEERING FIRM REGISTRY # 29279

GERMANA ENGINEERIN	AND ASSOCIATES, LLC	1120 WEST MINNEOLA AVENUE CLERMONT, FL 34711	(352) 242-9329 WWW.GERMANAENGINEERING.COM	ENGINEERING FIRM REGISTRY #29279	SOCIO EL CITATION
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